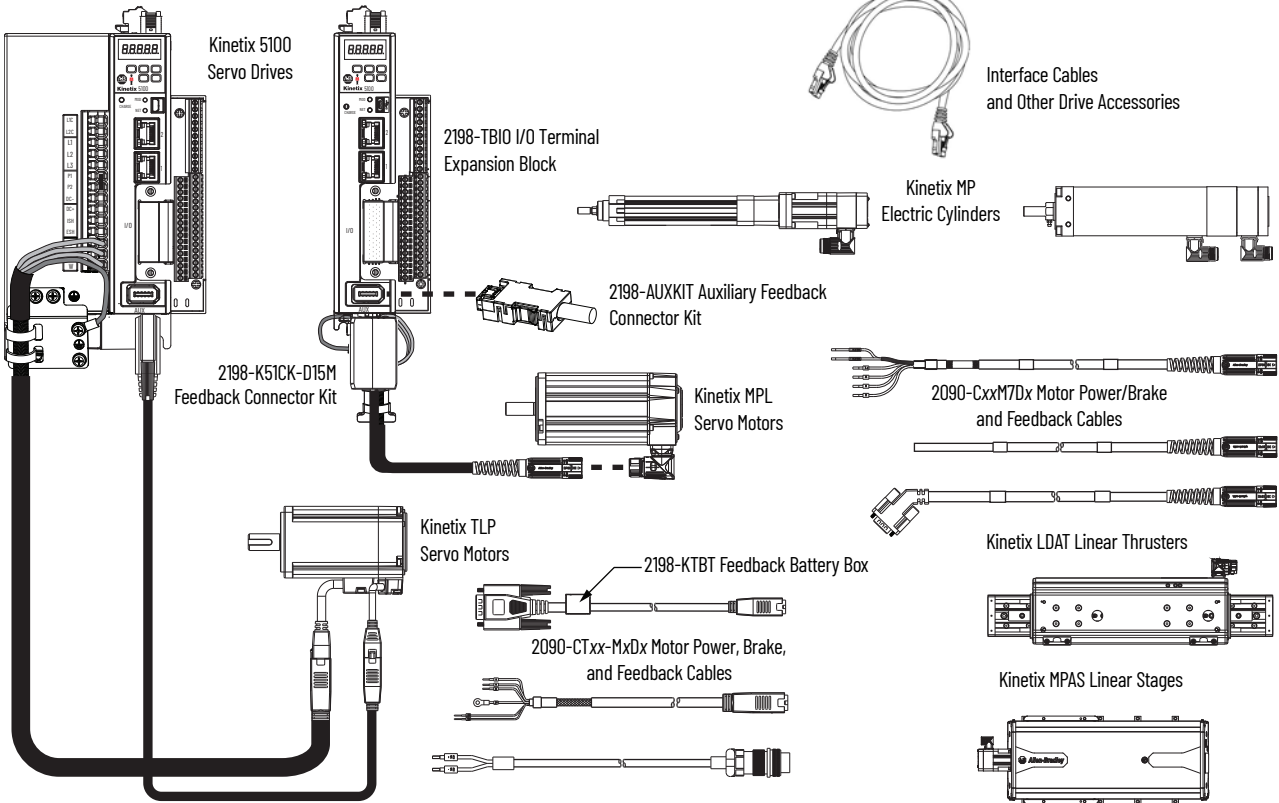


## Kinetix 5100 Drive Systems

Catalog Numbers 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, 2198-E1020-ERS, 2198-E2030-ERS, 2198-E2055-ERS, 2198-E2075-ERS, 2198-E2150-ERS, 2198-E4004-ERS, 2198-E4007-ERS, 2198-E4015-ERS, 2198-E4020-ERS, 2198-E4030-ERS, 2198-E4055-ERS, 2198-E4075-ERS, 2198-E4150-ERS

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# Summary of Changes

This manual contains new and updated information as indicated in the following table.

| Topic                                                                                                                         | Page |
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| Updated Kinetix MPL Motor Performance Specifications with Kinetix 5100 (200V-class) Drives for MPL-A540K and MPL-A560F motors | 25   |
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| Added performance specifications for Kinetix LDC (400V-class) Linear Motors.                                                  | 103  |
| Added performance specifications for Kinetix LDL (200V-class) Linear Motors.                                                  | 108  |

## Introduction

Use this publication if your application includes the Kinetix® 5100 drive family and Kinetix TLP servo motors or any of the other compatible Allen-Bradley® motors. The 2198-K51CK-D15M feedback connector kit is available for use when Kinetix MPL, MPM, MPF, MPS or Kinetix TL and TLY rotary motors and linear actuators are used with flying-lead cables. For more Kinetix drive and motor information, see the Kinetix Motion Control Selection Guide, publication [KNX-SG001](#), or Motion Analyzer software.

The purpose of this publication is to assist you in identifying the drive system components and accessory items that you need for your Kinetix 5100 drive and motor combination. Diagrams in this publication illustrate how many of the common drive accessory items are used in a typical system. See the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#), for detailed accessory descriptions and specifications.

Drive/motor system combinations also include the following:

- Motor/cable combinations table
- Drive and motor performance specifications table
- Torque/speed curves with each motor matched to the drive that provides optimum performance

Performance specification data and curves reflect nominal system performance of a typical system with motor and drive at the rated ambient temperature and line voltage. For additional information on ambients, line conditions, and valid combinations that are not shown in this publication, refer to the Motion Analyzer system sizing and selection tool.

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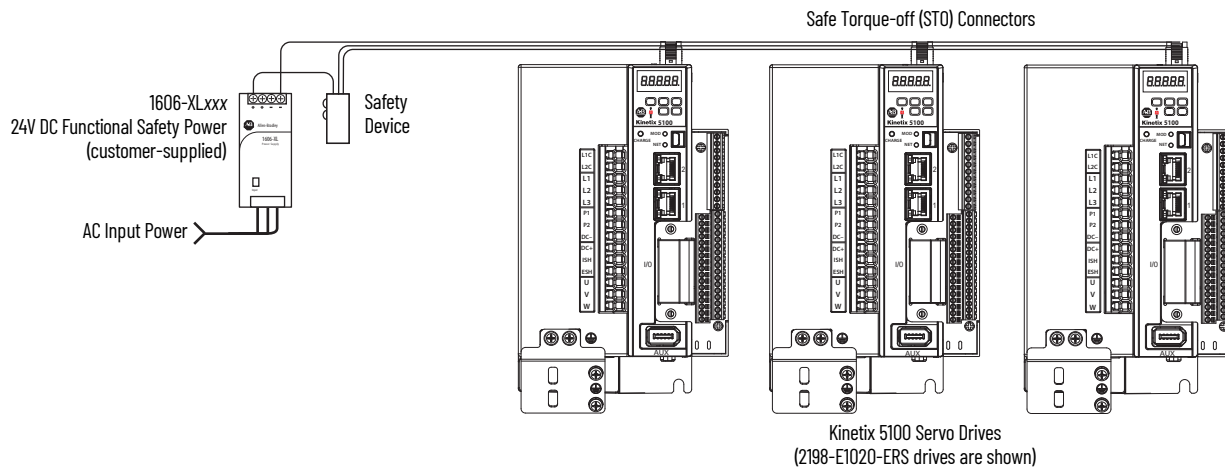
**IMPORTANT** These system combinations do not include all possible motor/drive combinations. See the Motion Analyzer system sizing and selection tool to verify compatibility. Access Motion Analyzer at <https://motionanalyzer.rockwellautomation.com>.

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# Hardwired Safety Configuration

Kinetix 5100 servo drives are capable of safe torque-off (STO) safety functions via hardwired connections. In this example, the safe torque-off (STO) connectors are wired to external safety devices with cascading hardwired safety-connections from one drive to another.

## Hardwired Safe Torque-off



## Determine What You Need

For each Kinetix 5100 drive system, the drive and servo motor catalog numbers are required to determine the motor power and feedback cable catalog numbers. A 24V DC power supply is also required for digital I/O circuitry, motor brake circuitry, and control power on 2198-E4xxx-ERS (400V-class) drives.

- For applications with Kinetix TLP servo motors, use 2090-CTFB-MxDD feedback cables with drive-end (D-sub) connector for direct connection to the Kinetix 5100 drive. If you build your own flying-lead cables, 2198-K51CK-D15M feedback connector kits are available.
- For applications with Kinetix MPL, MPM, MPF, and MPS servo motors, use 2090-CFBM7DD feedback cables with drive-end (D-sub) connector for direct connection to the Kinetix 5100 drive. Use 2198-K51CK-D15M connector kits with 2090-CFBM7DF flying-lead feedback cables.
- For applications with Kinetix TLY servo motors, use 2090-CFBM6DD feedback cables with drive-end (D-sub) connector for direct connection to the Kinetix 5100 drive when battery backup is not required. When battery backup is required, use 2198-K51CK-D15M connector kits with 2090-CFBM6DF flying-lead feedback cables.
- For applications with Kinetix TL servo motors, use 2090-DANFCT-Sxx feedback cables and remove the drive-end connector. Use 2198-K51CK-D15M connector kits for making feedback connections and include a customer-supplied battery when battery-backup of position data is required.
- 2198-TBIO I/O terminal block
- 2198-USBC USB cable and 2198-USBF USB filter

Optional equipment includes the following:

- Bulletin 2198 AC line filters
- 2198-AUXKIT auxiliary feedback connector kit
- Bulletin 2097 or 2198 shunt resistors
- 1585J-M8CBBM-x (shielded) Ethernet cable

Example diagrams of the required and optional equipment are provided.

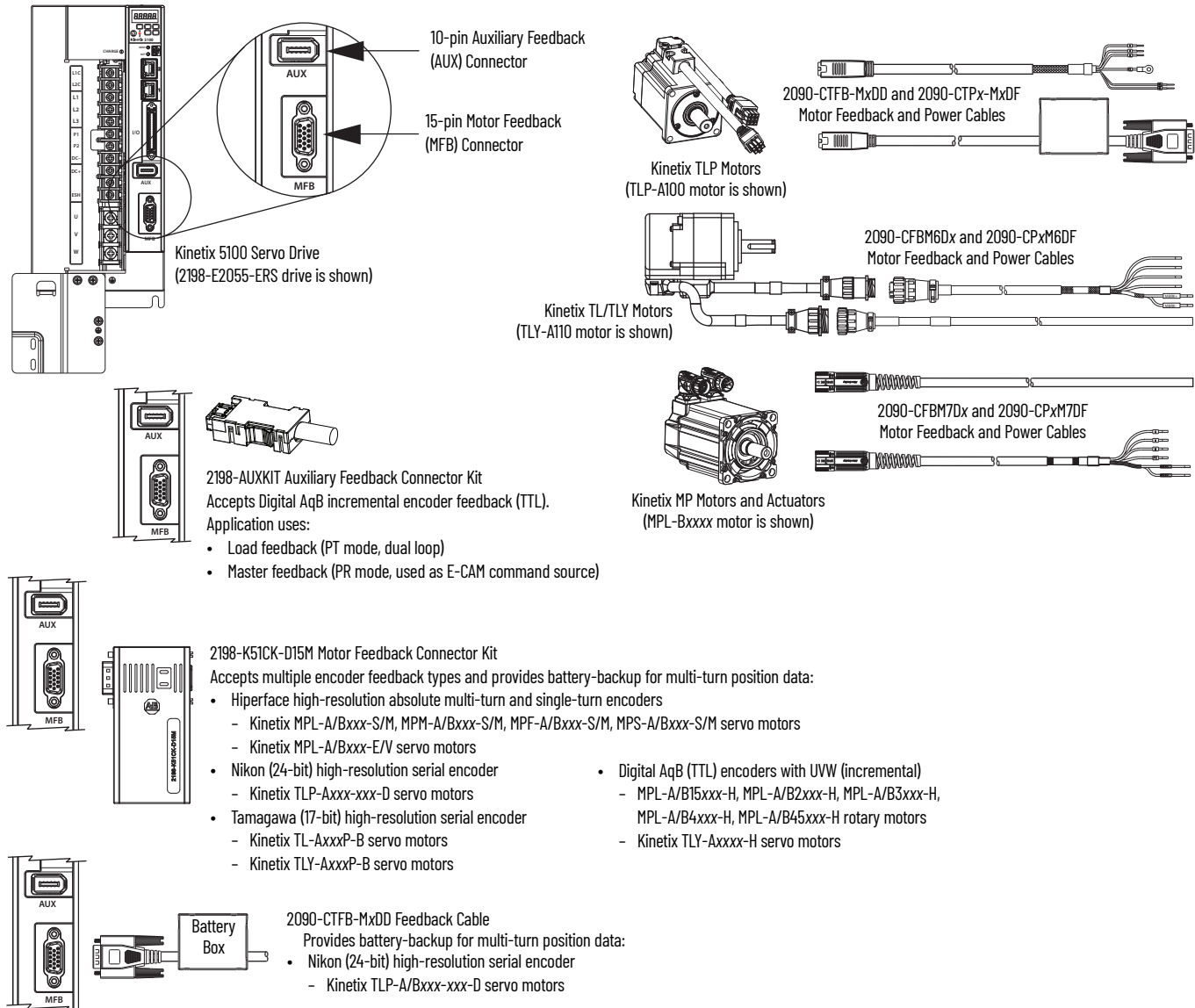
## Kinetix 5100 EtherNet/IP Indexing Servo Drives

| Drive Cat. No. | Input Voltage                                                                           | Continuous Output Power<br>kW | Continuous Output Current<br>A (rms) | Peak Output Current<br>A (rms) | Features                                                                                                                                                                                                                                        |
|----------------|-----------------------------------------------------------------------------------------|-------------------------------|--------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2198-E1004-ERS | 95...132V rms single-phase<br>170...253V rms single-phase<br>170...253V rms three-phase | 0.20<br>0.40<br>0.40          | 2.60                                 | 6.50                           | <ul style="list-style-type: none"> <li>Designed for optimum performance with Kinetix TLP servo motors</li> <li>EtherNet/IP™ Indexing</li> <li>Standalone (pulse train, Digital I/O, and analog I/O control)</li> <li>Safe torque-off</li> </ul> |
| 2198-E1007-ERS |                                                                                         | 0.375<br>0.75<br>0.75         | 5.10                                 | 15.4                           |                                                                                                                                                                                                                                                 |
| 2198-E1015-ERS |                                                                                         | 0.75<br>1.50<br>1.50          | 7.90                                 | 23.7                           |                                                                                                                                                                                                                                                 |
| 2198-E1020-ERS |                                                                                         | 1.00<br>2.00<br>2.00          | 13.4                                 | 40.6                           |                                                                                                                                                                                                                                                 |
| 2198-E2030-ERS | 170...253V rms three-phase                                                              | 3.00                          | 17.9                                 | 55.95                          |                                                                                                                                                                                                                                                 |
| 2198-E2055-ERS |                                                                                         | 5.50                          | 41.3                                 | 91.4                           |                                                                                                                                                                                                                                                 |
| 2198-E2075-ERS |                                                                                         | 7.50                          | 49.0                                 | 127.5                          |                                                                                                                                                                                                                                                 |
| 2198-E2150-ERS |                                                                                         | 15.00                         | 78.0                                 | 162.0                          |                                                                                                                                                                                                                                                 |
| 2198-E4004-ERS | 342...528V rms three-phase                                                              | 0.40                          | 1.60                                 | 5.4                            |                                                                                                                                                                                                                                                 |
| 2198-E4007-ERS |                                                                                         | 0.75                          | 3.19                                 | 8.0                            |                                                                                                                                                                                                                                                 |
| 2198-E4015-ERS |                                                                                         | 1.50                          | 6.05                                 | 15.11                          |                                                                                                                                                                                                                                                 |
| 2198-E4020-ERS |                                                                                         | 2.00                          | 7.42                                 | 20.78                          |                                                                                                                                                                                                                                                 |
| 2198-E4030-ERS |                                                                                         | 3.00                          | 13.95                                | 26.08                          |                                                                                                                                                                                                                                                 |
| 2198-E4055-ERS |                                                                                         | 5.50                          | 24.8                                 | 37.65                          |                                                                                                                                                                                                                                                 |
| 2198-E4075-ERS |                                                                                         | 7.50                          | 31.0                                 | 53.32                          |                                                                                                                                                                                                                                                 |
| 2198-E4150-ERS |                                                                                         | 15.0                          | 41.26                                | 70.14                          |                                                                                                                                                                                                                                                 |



Motor feedback connections are made at the 15-pin motor feedback (MFB) connector. These examples illustrate how you can use the 2198-K51CK-D15M connector kit for making these connections. Auxiliary feedback connections are made at the 10-pin auxiliary feedback connector (AUX) with the 2198-AUXKIT auxiliary feedback connector kit. This port supports incremental encoder types only.

## Feedback Configuration Examples



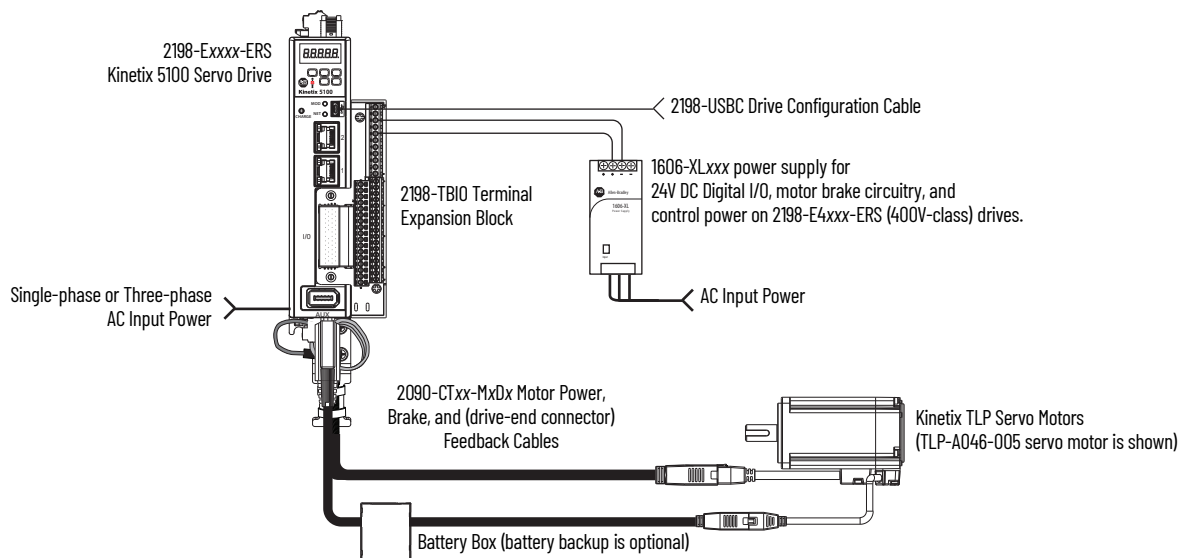
## Required Drive Accessories

| Drive Accessory              | Description                                                                                                       | Cat. No.                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Motor feedback connector kit | Motor feedback connector kit (required for flying-lead feedback cable).                                           | 2198-K51CK-D15M <sup>(1)</sup>                                                                         |
| I/O terminal expansion block | Provides termination points for 50-pin I/O connector.                                                             | 2198-TB10 <sup>(1)</sup>                                                                               |
| USB cable                    | For connection to PC with KNX5100C software to configure the drive.                                               | 2198-USBC <sup>(1)</sup>                                                                               |
| USB filter                   | To reduce interference and maintain a reliable connection to the PC.                                              | 2198-USBF <sup>(1)</sup>                                                                               |
| Motor cables                 | Kinetix TLP servo motors with high-resolution absolute encoder. <sup>(2)</sup>                                    | Refer to the specific drive/<br>motor combination for the<br>motor cables required for your<br>system. |
|                              | Kinetix MPL, MPM, MPF, and MPS servo motors with high-resolution absolute or incremental encoders.                |                                                                                                        |
|                              | Kinetix TL and TLY servo motors with high-resolution absolute or incremental encoders. <sup>(2)</sup>             |                                                                                                        |
| 24V power supply             | 24V DC for digital I/O circuitry, motor brake circuitry, and control power on 2198-E4xxx-ERS (400V-class) drives. | 1606-XLxxx                                                                                             |

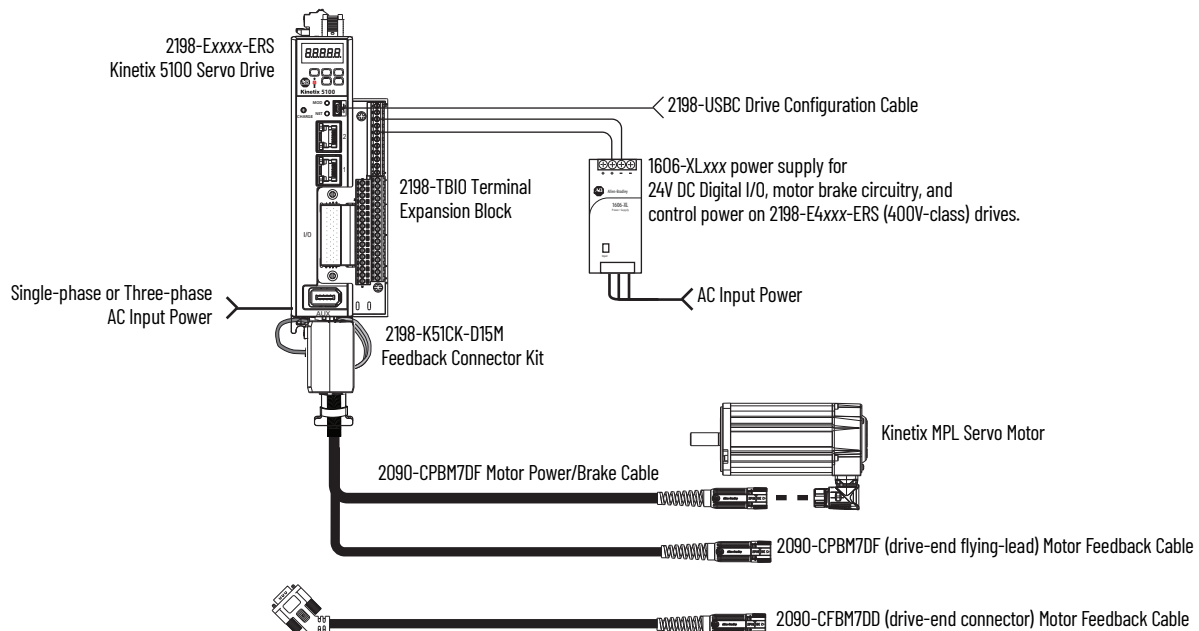
(1) Refer to the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#), for detailed descriptions and specifications for these drive accessories.

(2) battery backup required with high-resolution absolute encoders for position retention during a power loss.

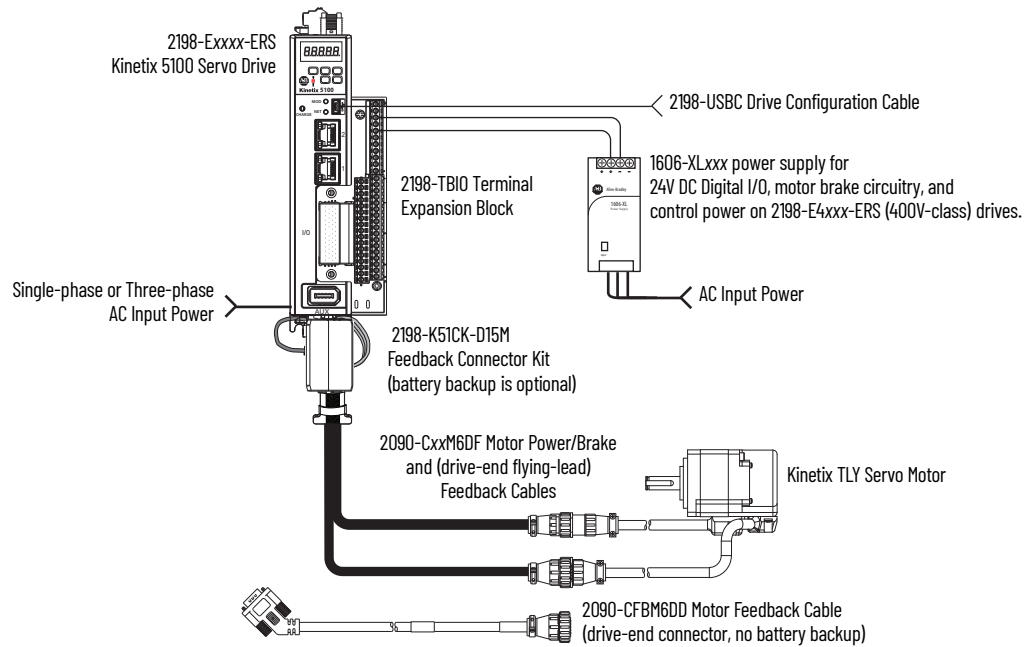
### Kinetix 5100 Drive with Kinetix TLP Servo Motor



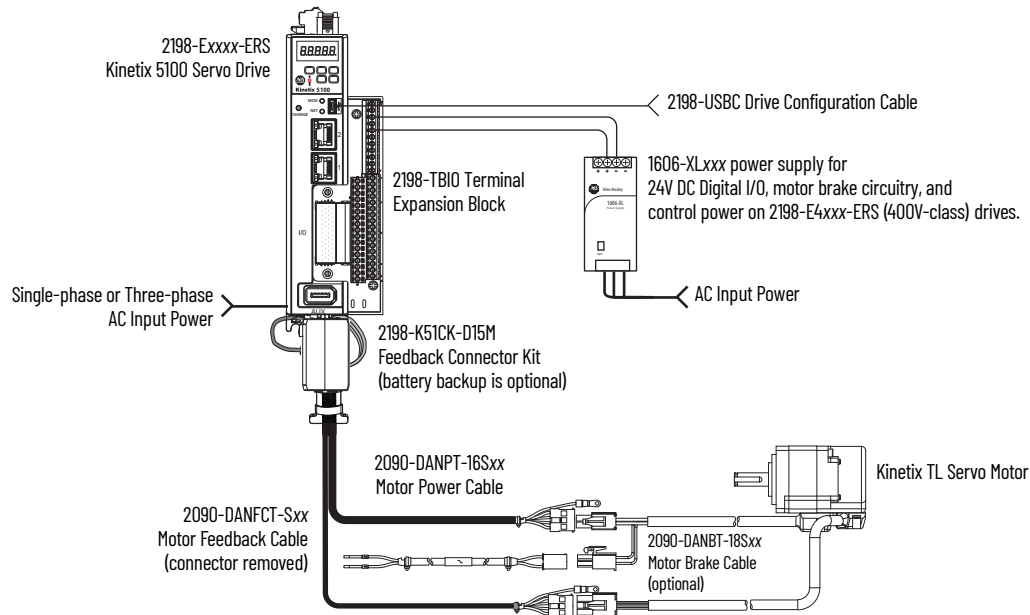
### Kinetix 5100 Drive with Kinetix MPL, MPM, MPF, and MPS Servo Motor



## Kinetix 5100 Drive with Kinetix TLY Servo Motors



## Kinetix 5100 Drive with Kinetix TL Servo Motors

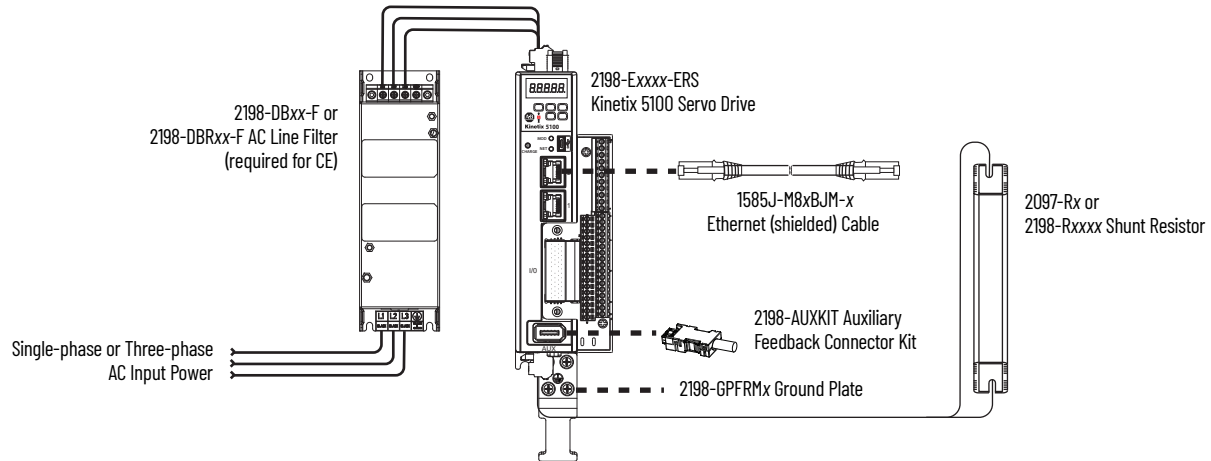


Refer to the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#), for detailed descriptions and additional specifications for the Kinetix 5100 drive family.

## Optional Drive Accessories

| Drive Accessory                        | Description                                                                                                                                                                                | Cat. No.                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Auxiliary feedback connector kit       | Provides termination points for the auxiliary feedback (AUX) connector.                                                                                                                    | 2198-AUXKIT                                                                         |
| Ethernet network cables                | Double-ended, non-flex, shielded.                                                                                                                                                          | 1585J-M8CBJM-x                                                                      |
|                                        | Double-ended, high-flex, shielded.                                                                                                                                                         | 1585J-M8UBJM-x                                                                      |
| AC line filters                        | AC line filter for CE compliance.                                                                                                                                                          | <ul style="list-style-type: none"> <li>2198-DBRxx-F</li> <li>2198-DBxx-F</li> </ul> |
| Bulletin 2097 and 2198 shunt resistors | Panel-mount shunt resistor.                                                                                                                                                                | <ul style="list-style-type: none"> <li>2097-Rx</li> <li>2198-Rxxxx</li> </ul>       |
| Ground plate                           | Ground plate provides termination points for motor power ground and cable shield for better EMC performance and is included with each drive. Replacement ground plates are also available. | 2198-GPFRMx                                                                         |

## Kinetix 5100 Optional Accessories



## Replacement Drive Accessories

| Drive Accessory          | Description                                                                                                                                                | Cat. No.        |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Connector set            | Replacement input power, motor power, shunt, and STO wiring plugs (included with 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS drives).                   | 2198-CONKIT-PKG |
| Connector set (STO only) | Replacement STO wiring plug (included with 2198-E1020-ERS, 2198-E2030-ERS, 2198-E2055-ERS, 2198-E2075-ERS, 2198-E2150-ERS, and all 2198-E4xxx-ERS drives). | 2198-CONKIT-STO |

Refer to the Kinetix Servo Drives Specifications Technical Data, publication [KNX-TD003](#), for detailed descriptions and additional specifications for the Kinetix 5100 drive accessories.

# Kinetix TLP Motor Cables Overview

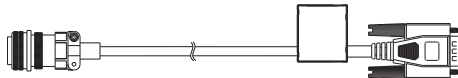
These cables apply to Kinetix TLP servo motors. For maximum motor-cable lengths with Kinetix 5100 drives, see the Kinetix 5100 EtherNet/IP Indexing Servo Drives User Manual, publication [2198-UM004](#).

## 2090-CTFB-MxxD Feedback Cables

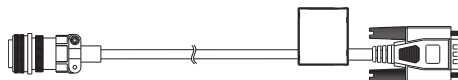
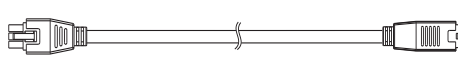
Feedback cables include the battery box wired and attached to the cable. Replacement 2198-KTBT battery boxes are also available.

2090-CTFB-MADD cables attach to on-motor rectangular motor connectors. 2090-CTFB-MFDD cables attach to military-style motor connectors.

### Feedback Cable Descriptions (standard, non-flex)

| Standard Cable<br>Cat. No. | Description                                                                                                                                                                                               | Cable Configuration                                                                |           | Motor Connector |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-----------------|
|                            |                                                                                                                                                                                                           | Motor End                                                                          | Drive End |                 |
| 2090-CTFB-MADD-CFAxx       | <ul style="list-style-type: none"> <li>Applies to TLP-x046...TLP-x100 motors (MA)</li> <li>Drive-end 15-pin connector (DD)</li> <li>With battery box attached</li> <li>Feedback wires (FB)</li> </ul>     |  |           | Rectangular     |
| 2090-CTFB-MFDD-CFAxx       | <ul style="list-style-type: none"> <li>Applies to TLP-A/B115...TLP-A/B235 motors (MF)</li> <li>Drive-end 15-pin connector (DD)</li> <li>With battery box attached</li> <li>Feedback wires (FB)</li> </ul> |  |           | Military style  |

### Feedback Cable Descriptions (continuous-flex)

| Continuous-flex Cable<br>Cat. No. | Description                                                                                                                                                                                               | Cable Configuration                                                                  |           | Motor Connector |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|-----------------|
|                                   |                                                                                                                                                                                                           | Motor End                                                                            | Drive End |                 |
| 2090-CTFB-MADD-CFFxx              | <ul style="list-style-type: none"> <li>Applies to TLP-x046...TLP-x100 motors (MA)</li> <li>Drive-end 15-pin connector (DD)</li> <li>With battery box attached</li> <li>Feedback wires (FB)</li> </ul>     |  |           | Rectangular     |
| 2090-CTFB-MFDD-CFFxx              | <ul style="list-style-type: none"> <li>Applies to TLP-A/B115...TLP-A/B235 motors (MF)</li> <li>Drive-end 15-pin connector (DD)</li> <li>With battery box attached</li> <li>Feedback wires (FB)</li> </ul> |  |           | Military style  |
| 2090-CTFB-MAET-CFFxx              | <ul style="list-style-type: none"> <li>Applies to TLP-x046...TLP-x100 motors (MA)</li> <li>Drive-end (male) connector, extension (ET)</li> <li>Feedback wires (FB)</li> </ul>                             |  |           | Rectangular     |
| 2090-CTFB-MFET-CFFxx              | <ul style="list-style-type: none"> <li>Applies to TLP-A/B115...TLP-A/B235 motors (MF)</li> <li>Drive-end (male) connector, extension (ET)</li> <li>Feedback wires (FB)</li> </ul>                         |  |           | Military style  |

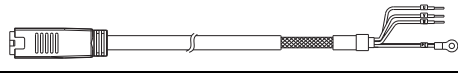
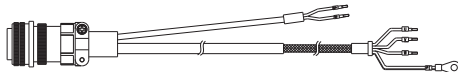
2090-CTFB-MxET extension cables provide continuous-flex cable technology between your standard (non-flex) cable and the continuous-flex application.

Motor-end cable connector kits for use when building your own cables are also available. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information.

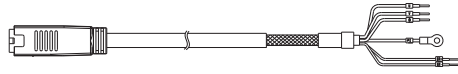
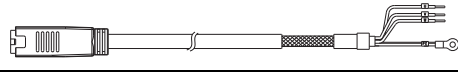
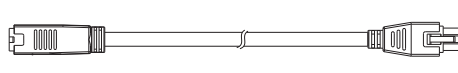
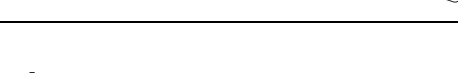
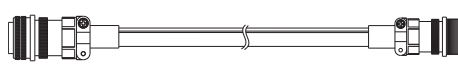
## 2090-CTPx-Mxxx Power/Brake Cables

2090-CTPx-MADF cables attach to the on-motor cable. 2090-CTPx-MC/D/E cables attach to the motor connector. Drive-end flying leads are prepared specifically for Kinetix TLP servo motors.

### Power/Brake Cable Descriptions (standard, non-flex)

| Standard Cable<br>Cat. No.                                           | Description                                                                                                                                                                                                                                                                 | Cable Configuration                                                                |           | Motor Connector |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-----------------|
|                                                                      |                                                                                                                                                                                                                                                                             | Motor End                                                                          | Drive End |                 |
| 2090-CTPB-MADF-xxAxx                                                 | <ul style="list-style-type: none"><li>• Applies to TLP-x046...TLP-x100 motors (MA)</li><li>• Drive-end flying-leads (DF)</li><li>• Power/brake wires (PB)</li></ul>                                                                                                         |  |           | Rectangular     |
| 2090-CTPW-MADF-xxAxx                                                 | <ul style="list-style-type: none"><li>• Applies to TLP-x046...TLP-x100 motors (MA)</li><li>• Drive-end flying-leads (DF)</li><li>• Power wires only (PW)</li></ul>                                                                                                          |  |           |                 |
| 2090-CTPB-MCDF-xxAxx<br>2090-CTPB-MDDF-xxAxx                         | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 (MD)</li><li>• Drive-end flying-leads (DF)</li><li>• Power/brake wires (PB)</li></ul>                                                                |  |           | Military style  |
| 2090-CTPW-MCDF-xxAxx<br>2090-CTPW-MDDF-xxAxx<br>2090-CTPW-MEDF-xxAxx | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 motors (MD)</li><li>• Applies to TLP-A/B200...TLP-A/B235 motors (ME)</li><li>• Drive-end flying-leads (DF)</li><li>• Power wires only (PW)</li></ul> |  |           |                 |

### Power/Brake Cable Descriptions (continuous-flex)

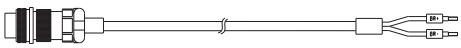
| Continuous-flex Cable<br>Cat. No.                                    | Description                                                                                                                                                                                                                                                                                | Cable Configuration                                                                  |           | Motor Connector |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|-----------------|
|                                                                      |                                                                                                                                                                                                                                                                                            | Motor End                                                                            | Drive End |                 |
| 2090-CTPB-MADF-xxFxx                                                 | <ul style="list-style-type: none"><li>• Applies to TLP-x046...TLP-x100 motors (MA)</li><li>• Drive-end flying-leads (DF)</li><li>• Power/brake wires (PB)</li></ul>                                                                                                                        |  |           | Rectangular     |
| 2090-CTPW-MADF-xxFxx                                                 | <ul style="list-style-type: none"><li>• Applies to TLP-x046...TLP-x100 motors (MA)</li><li>• Drive-end flying-leads (DF)</li><li>• Power wires only (PW)</li></ul>                                                                                                                         |  |           |                 |
| 2090-CTPB-MAET-xxFxx<br>2090-CTPW-MAET-xxFxx                         | <ul style="list-style-type: none"><li>• Applies to TLP-x046...TLP-x100 motors (MA)</li><li>• Drive-end (male) connector, extension (ET)</li><li>• Power/brake wires (PB)</li><li>• Power wires only (PW)</li></ul>                                                                         |  |           |                 |
| 2090-CTPB-MCDF-xxFxx<br>2090-CTPB-MDDF-xxFxx                         | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 motors (MD)</li><li>• Drive-end flying-leads (DF)</li><li>• Power/brake wires (PB)</li></ul>                                                                        |  |           | Military style  |
| 2090-CTPW-MCDF-xxFxx<br>2090-CTPW-MDDF-xxFxx<br>2090-CTPW-MEDF-xxFxx | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 motors (MD)</li><li>• Applies to TLP-A/B200 motors (ME)</li><li>• Drive-end flying-leads (DF)</li><li>• Power wires only (PW)</li></ul>                             |  |           |                 |
| 2090-CTPB-MCET-xxFxx<br>2090-CTPB-MDET-xxFxx                         | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 (MD)</li><li>• Drive-end (male) connector, extension (ET)</li><li>• Power/brake wires (PB)</li></ul>                                                                |  |           |                 |
| 2090-CTPW-MCET-xxFxx<br>2090-CTPW-MDET-xxFxx<br>2090-CTPW-MEET-xxFxx | <ul style="list-style-type: none"><li>• Applies to TLP-A/B115...TLP-A/B145 motors (MC)</li><li>• Applies to TLP-A/B200 motors (MD)</li><li>• Applies to TLP-A/B200...TLP-A/B235 motors (ME)</li><li>• Drive-end (male) connector, extension (ET)</li><li>• Power wires only (PW)</li></ul> |  |           | Military style  |

2090-CTPx-MxET extension cables provide continuous-flex cable technology between your standard (non-flex) cable and the continuous-flex application.

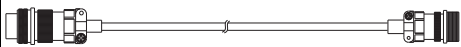
## 2090-CTBK-MBxx Brake Cables

Brake wires for TLP-A/B200-550, TLP-A/B200-750, and TLP-A/B235-xxx servo motors are in a separate cable.

### Brake Cable Descriptions (standard, non-flex)

| Standard Cable<br>Cat. No. | Description                                                                                                                                                                                | Cable Configuration                                                                |           | Motor Connector |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-----------------|
|                            |                                                                                                                                                                                            | Motor End                                                                          | Drive End |                 |
| 2090-CTBK-MBDF-20Axx       | <ul style="list-style-type: none"> <li>Applies to TLP-A/B200-550, TLP-A/B200-750, and TLP-A/B235-xxx motors (MB)</li> <li>Drive-end flying-leads (DF)</li> <li>Brake wires (BK)</li> </ul> |  |           | Military style  |

### Brake Cable Descriptions (continuous-flex)

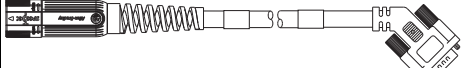
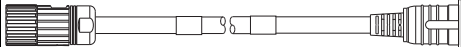
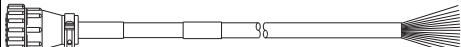
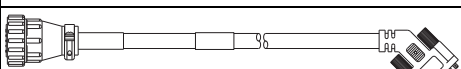
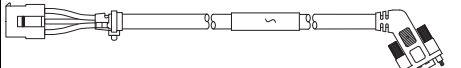
| Continuous-flex Cable<br>Cat. No. | Description                                                                                                                                                                                                 | Cable Configuration                                                                |           | Motor Connector |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|-----------------|
|                                   |                                                                                                                                                                                                             | Motor End                                                                          | Drive End |                 |
| 2090-CTBK-MBDF-20Fxx              | <ul style="list-style-type: none"><li>• Applies to TLP-A/B200-550, TLP-A/B200-750, and TLP-A/B235-xxx motors (MB)</li><li>• Drive-end flying-leads (DF)</li><li>• Brake wires (BK)</li></ul>                |  |           | Military style  |
| 2090-CTBK-MBET-20Fxx              | <ul style="list-style-type: none"><li>• Applies to TLP-A/B200-550, TLP-A/B200-750, and TLP-A/B235-xxx motors (MB)</li><li>• Drive-end (male) connector, extension (ET)</li><li>• Brake wires (BK)</li></ul> |  |           |                 |

2090-CTBK-MBET extension cables provide continuous-flex cable technology between your standard (non-flex) cable and the continuous-flex application. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for cable specifications.

## Kinetix Motor Power/Brake and Feedback Cables Overview

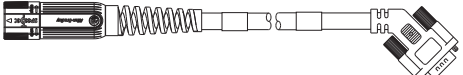
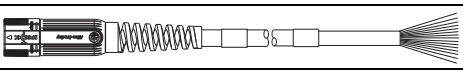
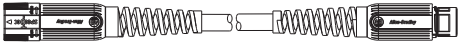
These cables apply to Kinetix MPL, MPM, MPF, MPS and Kinetix TL and TLY motors with high-resolution absolute encoders. For maximum motor-cable lengths with Kinetix 5100 drives, see the Kinetix 5100 Single-axis EtherNet/IP Servo Drives User Manual, publication [2198-UM004](#).

### Feedback Cable Descriptions (standard, non-flex)

| Standard Cable<br>Cat. No. | Description                                                                                                                                                                            | Cable Configuration                                                                  |           | Motor/Actuator<br>Connector |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|-----------------------------|
|                            |                                                                                                                                                                                        | Motor End                                                                            | Drive End |                             |
| 2090-CFBM7DF-CEAAxx        | <ul style="list-style-type: none"><li>• Drive-end flying-leads (DF)</li><li>• High-resolution or resolver applications (CE)</li></ul>                                                  |  |           | SpeedTec DIN<br>(M7)        |
| 2090-CFBM7DD-CEAAxx        | <ul style="list-style-type: none"><li>• Drive-end 15-pin connector (DD)</li><li>• High-resolution or resolver applications (CE)</li></ul>                                              |  |           |                             |
| 2090-XXNFMF-Sxx            | <ul style="list-style-type: none"><li>• Drive-end flying-leads</li><li>• High-resolution or incremental applications</li></ul>                                                         |  |           | Threaded DIN<br>(M4)        |
| 2090-CFBM4E2-CATR          | <ul style="list-style-type: none"><li>• Drive-end bayonet (E2), transition (TR) cable <sup>(1)</sup></li><li>• Motor-end threaded DIN (M4)</li><li>• All feedback types (CA)</li></ul> |  |           |                             |
| 2090-CFBM6DF-CBAAxx        | <ul style="list-style-type: none"><li>• Drive-end flying-leads (DF)</li><li>• High-resolution, battery backup or Incremental applications (CB)</li></ul>                               |  |           | Circular Plastic<br>(M6)    |
| 2090-CFBM6DD-CCAAxx        | <ul style="list-style-type: none"><li>• Drive-end 15-pin connector (DD)</li><li>• Incremental applications only (CC)</li></ul>                                                         |  |           |                             |
| 2090-DANFCT-Sxx            | <ul style="list-style-type: none"><li>• Drive-end 20-pin connector</li><li>• High-resolution applications</li></ul>                                                                    |  |           | Rectangular Plastic         |

(1) Threaded DIN connector (motor end) and bayonet connector for 2090-XXNFMF-Sxx cable.

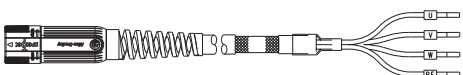
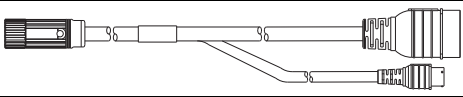
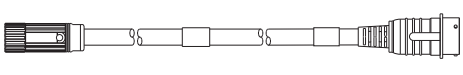
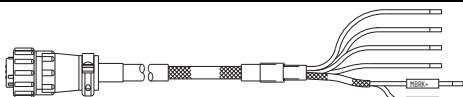
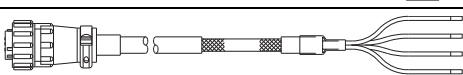
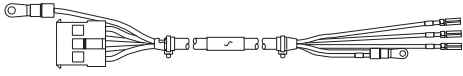
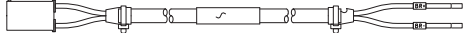
## Feedback Cable Descriptions (continuous-flex)

| Continuous-flex Cable Cat. No.             | Description                                                                                                                                                 | Cable Configuration                                                                |           | Motor/Actuator Connector |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|--------------------------|
|                                            |                                                                                                                                                             | Motor End                                                                          | Drive End |                          |
| 2090-CFBM7DF-CEAFxx                        | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>High-resolution applications (CE)</li> </ul>                                    |  |           | SpeedTec DIN (M7)        |
| 2090-CFBM7DD-CEAFxx                        | <ul style="list-style-type: none"> <li>Drive-end 15-pin connector (DD)</li> <li>High-resolution applications (CE)</li> </ul>                                |  |           |                          |
| 2090-CFBM7DF-CDAFxx                        | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>High-resolution or incremental applications (CD)</li> </ul>                     |  |           |                          |
| 2090-CFBM7E7-CDAFxx<br>2090-CFBM7E7-CEAFxx | <ul style="list-style-type: none"> <li>Drive-end (male) connector, extension (E7) <sup>(1)</sup></li> <li>Motor-end SpeedTec DIN cable plug (M7)</li> </ul> |  |           |                          |

(1) SpeedTec DIN connector (motor end) and male connector for extending SpeedTec or threaded DIN cable.

Motor-end cable connector kits, for use when building your own cables are also available. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information.

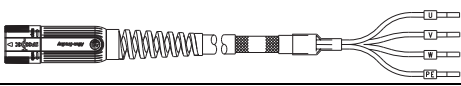
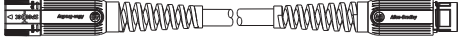
## Power/Brake Cable Descriptions (standard, non-flex)

| Standard Cable Cat. No. | Description                                                                                                                                                                         | Cable Configuration                                                                  |           | Motor/Actuator Connector |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------|--------------------------|
|                         |                                                                                                                                                                                     | Motor End                                                                            | Drive End |                          |
| 2090-CPBM7DF-xxAAxx     | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power/brake wires (PB)</li> </ul>                                                                       |    |           | SpeedTec DIN (M7)        |
| 2090-CPWM7DF-xxAAxx     | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power wires only (PW)</li> </ul>                                                                        |    |           |                          |
| 2090-CPBM4E2-xxTR       | <ul style="list-style-type: none"> <li>Drive-end bayonet (E2), transition (TR) cable <sup>(1)</sup></li> <li>Motor-end threaded DIN (M4)</li> <li>Power/brake wires (PB)</li> </ul> |  |           | Threaded DIN (M4)        |
| 2090-CPWM4E2-xxTR       | <ul style="list-style-type: none"> <li>Drive-end bayonet (E2), transition (TR) cable <sup>(1)</sup></li> <li>Motor-end threaded DIN (M4)</li> <li>Power wires only (PW)</li> </ul>  |  |           |                          |
| 2090-CPBM6DF-16AAxx     | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power/brake wires (PB)</li> </ul>                                                                       |  |           | Circular Plastic (M6)    |
| 2090-CPWM6DF-16AAxx     | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power wires only (PW)</li> </ul>                                                                        |  |           |                          |
| 2090-DANPT-16Sxx        | <ul style="list-style-type: none"> <li>Drive-end flying-leads</li> <li>Power wires only</li> </ul>                                                                                  |  |           | Rectangular Plastic      |
| 2090-DANBT-18Sxx        | Drive-end flying-lead brake wires                                                                                                                                                   |  |           |                          |

(1) Threaded DIN connector (motor end) and bayonet connector for 2090-XXNFMP-Sxx cable.



## Power/Brake Cable Descriptions (continuous-flex)

| Continuous-flex Cable Cat. No. | Description                                                                                                                                                 | Cable Configuration                                                                |           | Motor/Actuator Connector |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------|--------------------------|
|                                |                                                                                                                                                             | Motor End                                                                          | Drive End |                          |
| 2090-CPBM7DF-xxAFxx            | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power/brake wires (PB)</li> </ul>                                               |  |           | SpeedTec DIN (M7)        |
| 2090-CPWM7DF-xxAFxx            | <ul style="list-style-type: none"> <li>Drive-end flying-leads (DF)</li> <li>Power wires only (PW)</li> </ul>                                                |  |           |                          |
| 2090-CPBM7E7-xxAFxx            | <ul style="list-style-type: none"> <li>Drive-end (male) connector, extension (E7) <sup>(1)</sup></li> <li>Motor-end SpeedTec DIN cable plug (M7)</li> </ul> |  |           |                          |

(1) SpeedTec DIN connector (motor end) and male connector for extending SpeedTec or threaded DIN cable.

Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for cable specifications.

## Kinetix 5100 (200V-class) Drives with Kinetix TLP Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix TLP (200V-class) multi-purpose servo motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and optimum torque/speed curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (with 230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

### Kinetix TLP Motor and Cable Combinations

| Rotary Motor (200V-class) <sup>(1)</sup><br>Cat. No.                           | Motor Power/Brake Cable <sup>(2)</sup>                                       | Feedback Cable Cat. No. <sup>(2)</sup>                                       | Brake Cat. No. <sup>(2)</sup>                                                |
|--------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| TLP-A046-xxx,<br>TLP-A070-xxx,<br>TLP-A090-xxx, <sup>(3)</sup><br>TLP-A100-xxx | 2090-CTPx-MADF-18Axx (standard) or<br>2090-CTPx-MADF-18Fxx (continuous-flex) | 2090-CTFB-MADD-CFAxx (standard) or<br>2090-CTFB-MADD-CFFxx (continuous-flex) | Not applicable. Brake<br>conductors are included in<br>the power cable.      |
| TLP-A115-100, <sup>(4)</sup><br>TLP-A145-050, TLP-A145-100                     | 2090-CTPx-MCDF-16Axx (standard) or<br>2090-CTPx-MCDF-16Fxx (continuous-flex) | 2090-CTFB-MFDD-CFAxx (standard) or<br>2090-CTFB-MFDD-CFFxx (continuous-flex) |                                                                              |
| TLP-A115-200,<br>TLP-A145-090, TLP-A145-150, TLP-A145-250                      | 2090-CTPx-MCDF-12Axx (standard) or<br>2090-CTPx-MCDF-12Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-A200-200, TLP-A200-300, TLP-A200-350 <sup>(5)</sup>                        | 2090-CTPx-MDDF-12Axx (standard) or<br>2090-CTPx-MDDF-12Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-A200-450                                                                   | 2090-CTPx-MDDF-08Axx (standard) or<br>2090-CTPx-MDDF-08Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-A200-550, TLP-A200-750, TLP-A235-11K <sup>(6) (7)</sup>                    | 2090-CTPW-MEDF-06Axx (standard) or<br>2090-CTPW-MEDF-06Fxx (continuous-flex) | 2090-CTBK-MBDF-20Axx (standard) or<br>2090-CTBK-MBDF-20Fxx (continuous-flex) | 2090-CTBK-MBDF-20Axx (standard) or<br>2090-CTBK-MBDF-20Fxx (continuous-flex) |
| TLP-A235-15K <sup>(8) (7)</sup>                                                | 2090-CTPW-MEDF-04Axx (standard) or<br>2090-CTPW-MEDF-04Fxx (continuous-flex) |                                                                              |                                                                              |

(1) The TLP-A046...TLP-A100 frame on-motor cables include 18 AWG conductors that are compatible with 2090-CTPx-MADF-18xxx cable conductors.

(2) Refer to the Kinetix Motion Accessories Specifications Technical Data, publication [KNX-TD004](#), for cable specifications.

(3) For TLP-A090-xxx motors, use 2090-CTPx-MADF-16xxx motor power/brake cable to comply with NFPA 79 requirements.

(4) For TLP-A115-100 motors, use 2090-CTPx-MCDF-12xxx motor power/brake cable to comply with NFPA 79 requirements.

(5) For TLP-A200-350 motors, use 2090-CTPx-MDDF-08xxx motor power/brake cable to comply with NFPA 79 requirements.

(6) For TLP-A235-11K motors, use 2090-CTPx-MEDF-04xxx motor power cable to comply with NFPA 79 requirements.

(7) Only these motors have separate brake connectors and brake cables. All other motors have brake wires included with the motor power/brake connector.

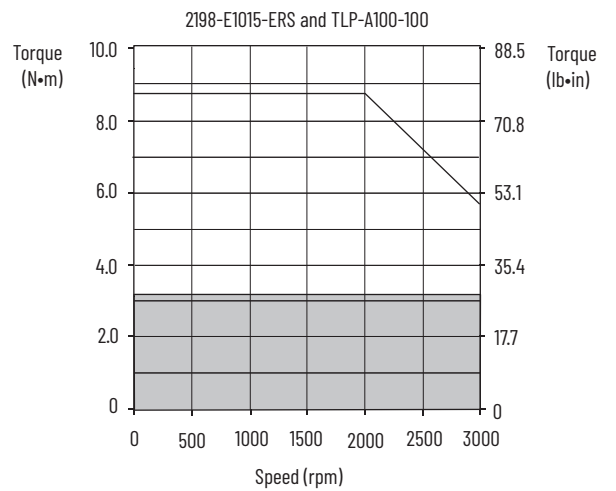
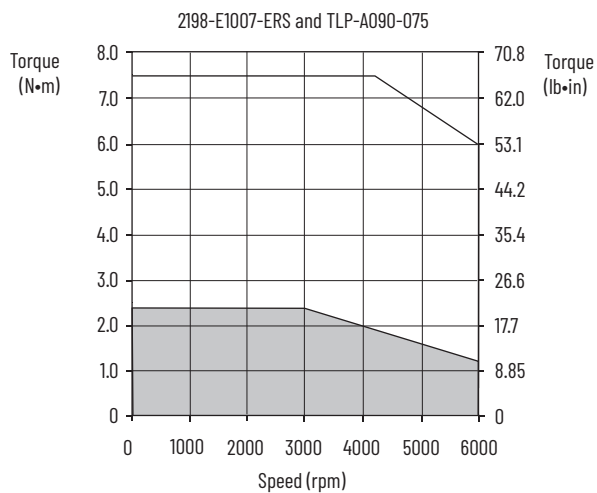
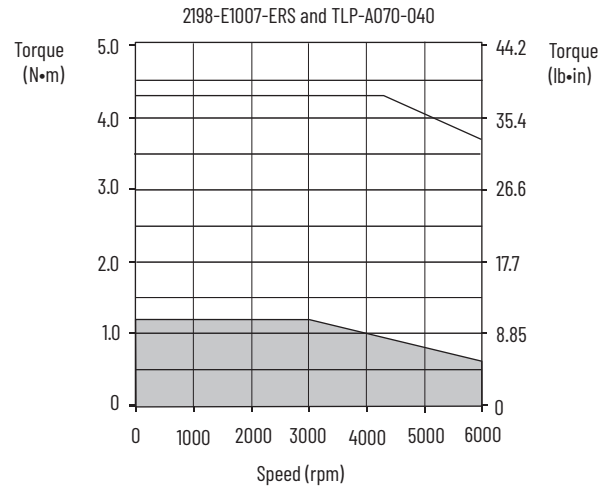
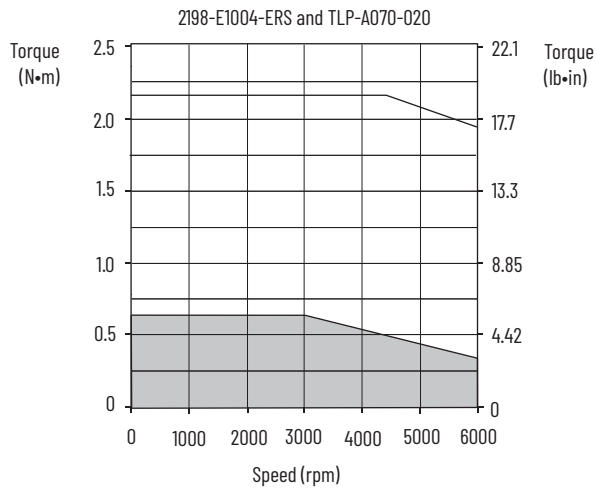
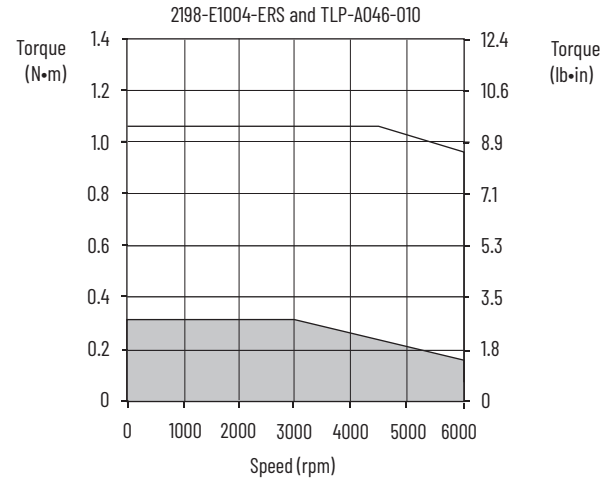
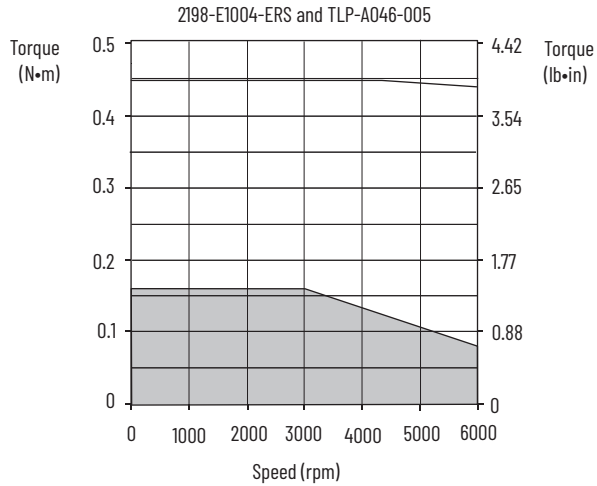
(8) For TLP-A235-15K motors, you must build your own motor power cable to comply with NFPA 79 requirements.

## Kinetix TLP Motor Performance Specifications with Kinetix 5100 (200V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A rms | System Continuous Stall Torque N•m (lb•in) | System Peak Stall Current A rms | System Peak Stall Torque N•m (lb•in) | Motor Rated Output kW (Hp) | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|----------------|---------------------------------------|--------------------------------------------|---------------------------------|--------------------------------------|----------------------------|-------------------------------------|
| TLP-A046-005          | 3000            | 6000           | 0.70                                  | 0.16 (1.42)                                | 2.286                           | 0.447 (3.96)                         | 0.05 (0.067)               | 2198-E1004-ERS                      |
| TLP-A046-010          | 3000            | 6000           | 0.96                                  | 0.32 (2.83)                                | 3.370                           | 1.034 (9.15)                         | 0.10 (0.134)               | 2198-E1004-ERS                      |
| TLP-A070-020          | 3000            | 6000           | 1.65                                  | 0.64 (5.66)                                | 5.500                           | 2.160 (19.12)                        | 0.20 (0.268)               | 2198-E1004-ERS                      |
| TLP-A070-040          | 3000            | 6000           | 2.60                                  | 1.22 (10.8)                                | 6.500                           | 2.91 (25.80)                         | 0.38 (0.509)               | 2198-E1004-ERS                      |
|                       |                 |                | 2.70                                  | 1.27 (11.2)                                | 9.500                           | 4.275 (37.84)                        | 0.40 (0.536)               | 2198-E1007-ERS                      |
| TLP-A090-075          | 3000            | 6000           | 4.50                                  | 2.39 (21.2)                                | 15.41                           | 7.505 (66.42)                        | 0.75 (1.005)               | 2198-E1007-ERS                      |
| TLP-A100-100          | 3000            | 3000           | 4.31                                  | 3.18 (28.2)                                | 12.37                           | 8.740 (77.36)                        | 1.0 (1.34)                 | 2198-E1007-ERS                      |
|                       |                 |                |                                       |                                            |                                 |                                      |                            | 2198-E1015-ERS                      |
| TLP-A115-100          | 3000            | 5000           | 7.45                                  | 3.18 (28.2)                                | 23.70                           | 8.455 (74.83)                        | 1.0 (1.34)                 | 2198-E1015-ERS                      |
| TLP-A115-200          | 3000            | 5000           | 12.50                                 | 6.37 (56.4)                                | 40.58                           | 17.48 (154.7)                        | 2.0 (2.68)                 | 2198-E1020-ERS                      |
| TLP-A145-050          | 2000            | 3000           | 3.26                                  | 2.39 (21.6)                                | 9.180                           | 6.81 (60.27)                         | 0.50 (0.670)               | 2198-E1007-ERS                      |
| TLP-A145-090          | 1000            | 2000           | 7.90                                  | 8.30 (73.5)                                | 21.80                           | 20.52 (181.6)                        | 0.87 (1.167)               | 2198-E1015-ERS                      |
|                       |                 |                | 8.12                                  | 8.59 (76.0)                                |                                 |                                      | 0.90 (1.206)               | 2198-E1020-ERS                      |
| TLP-A145-100          | 2000            | 3000           | 6.11                                  | 4.77 (42.2)                                | 19.73                           | 13.30 (117.7)                        | 1.0 (1.34)                 | 2198-E1015-ERS                      |
| TLP-A145-150          | 2000            | 3000           | 7.90                                  | 6.22 (55.1)                                | 23.70                           | 15.92 (140.9)                        | 1.3 (1.74)                 | 2198-E1015-ERS                      |
|                       |                 |                | 8.80                                  | 7.16 (63.4)                                | 29.13                           | 19.66 (174.0)                        | 1.5 (2.01)                 | 2198-E1020-ERS                      |
| <b>TLP-A145-250</b>   | <b>3000</b>     | <b>4500</b>    | <b>15.32</b>                          | <b>7.96 (70.5)</b>                         | <b>55.95</b>                    | <b>24.51 (216.9)</b>                 | <b>2.5 (3.35)</b>          | <b>2198-E2030-ERS</b>               |
| TLP-A200-200          | 2000            | 3000           | 12.30                                 | 9.55 (84.3)                                | 33.66                           | 21.85 (193.4)                        | 2.0 (2.68)                 | 2198-E1020-ERS                      |
| TLP-A200-300          | 1500            | 2500           | 17.90                                 | 16.81 (148.8)                              | 55.95                           | 45.62 (403.7)                        | 2.6 (3.49)                 | 2198-E2030-ERS                      |
|                       |                 |                | 20.25                                 | 19.10 (169.1)                              | 57.50                           | 47.03 (416.3)                        | 3.0 (4.02)                 | 2198-E2055-ERS                      |
| TLP-A200-350          | 2000            | 3000           | 22.16                                 | 16.71 (147.9)                              | 65.40                           | 43.23 (382.6)                        | 3.5 (4.69)                 | 2198-E2055-ERS                      |
| TLP-A200-450          | 1500            | 3000           | 37.07                                 | 28.65 (253.6)                              | 91.40                           | 64.04 (566.8)                        | 4.5 (6.03)                 | 2198-E2055-ERS                      |
| TLP-A200-550          | 1500            | 3000           | 41.13                                 | 35.01 (309.9)                              | 91.40                           | 67.67 (598.9)                        | 5.5 (7.37)                 | 2198-E2055-ERS                      |
|                       |                 |                |                                       |                                            | 108.0                           | 79.96 (707.7)                        |                            | 2198-E2075-ERS                      |
| TLP-A200-750          | 1500            | 2500           | 48.0                                  | 45.36 (401.4)                              | 127.5                           | 104.30 (923.1)                       | 7.1 (9.52)                 | 2198-E2075-ERS                      |
|                       |                 |                | 48.80                                 | 47.74 (422.5)                              |                                 |                                      | 7.5 (10.1)                 | 2198-E2150-ERS                      |
| TLP-A235-11K          | 1500            | 2000           | 57.72                                 | 70.0 (619.6)                               | 129.5                           | 144.30 (1277)                        | 11.0 (14.7)                | 2198-E2150-ERS                      |
| TLP-A235-15K          | 1500            | 2000           | 75.40                                 | 95.40 (844.4)                              | 162.0                           | 184.57 (1634)                        | 15.0 (20.1)                | 2198-E2150-ERS                      |

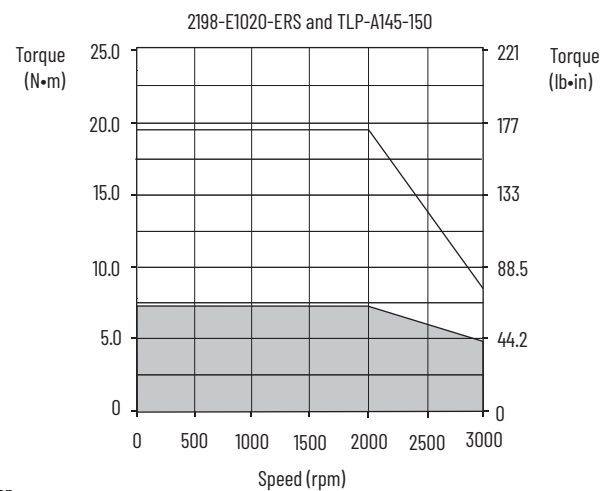
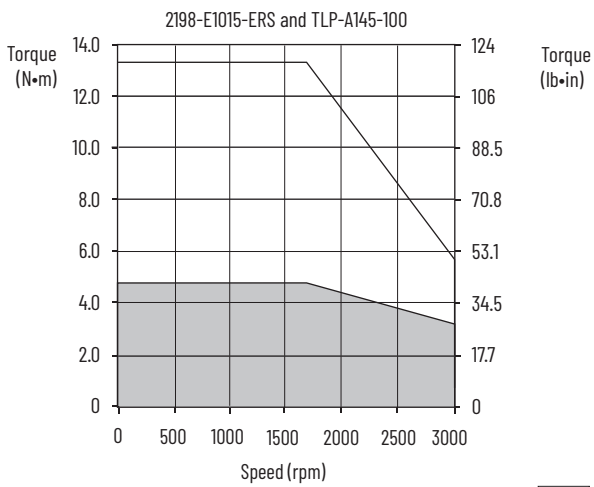
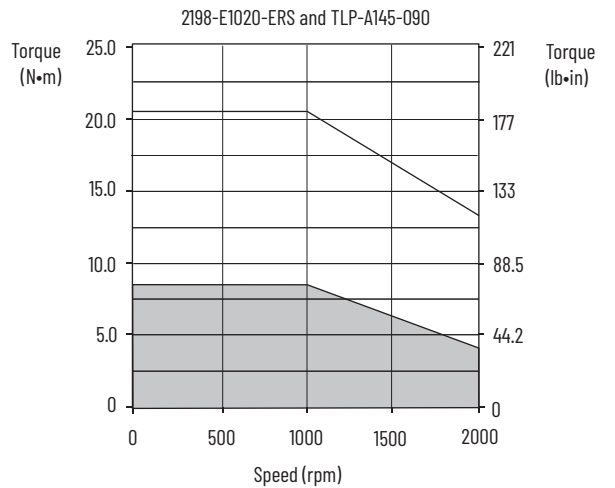
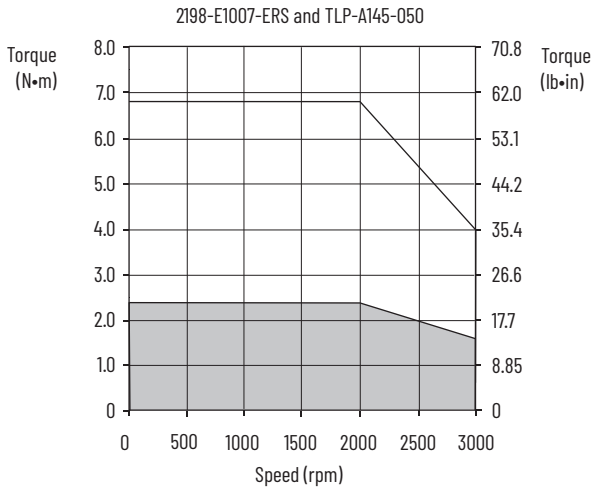
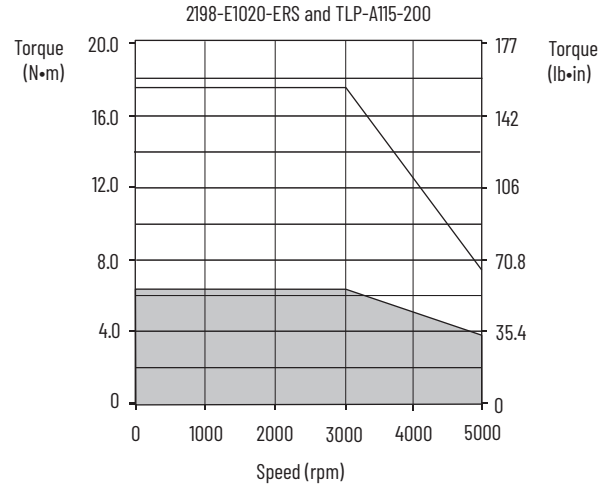
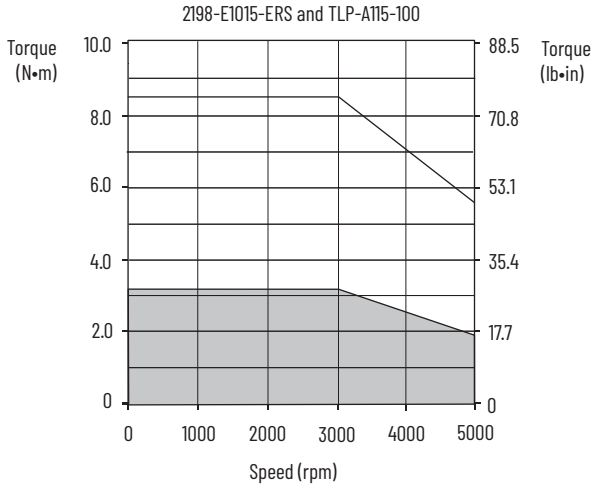
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/Kinetix TLP Servo Motor Curves



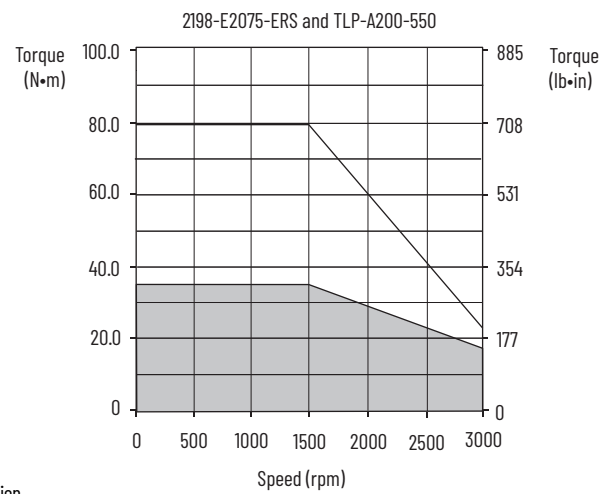
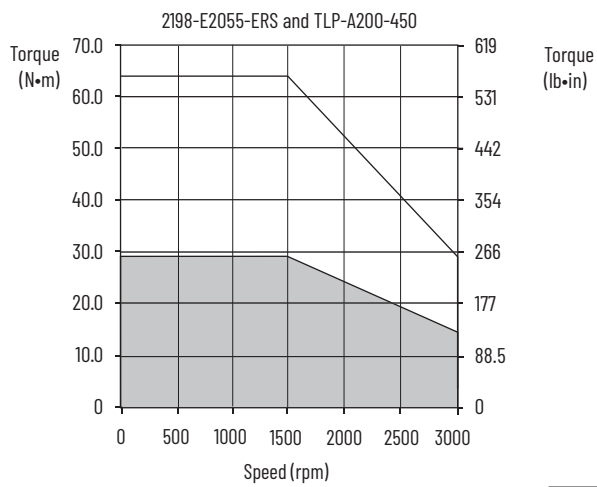
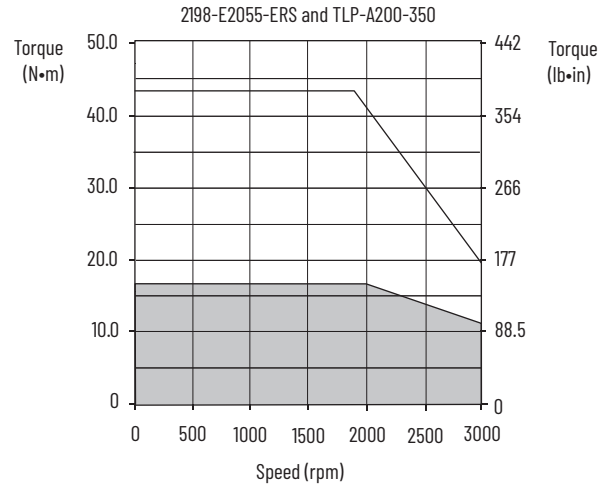
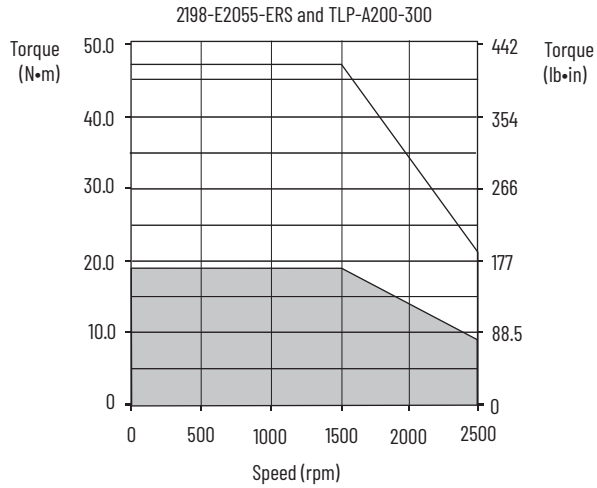
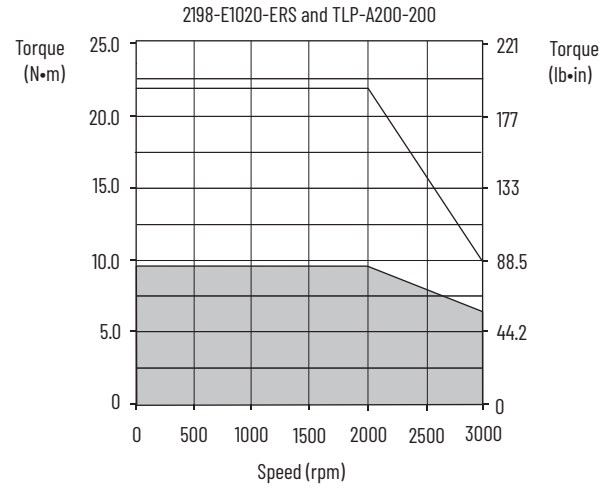
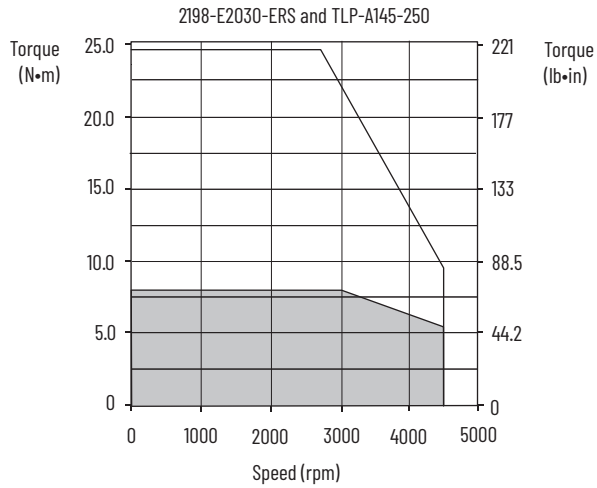
□ = Intermittent operating region  
 ■ = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix TLP Servo Motor Curves (continued)



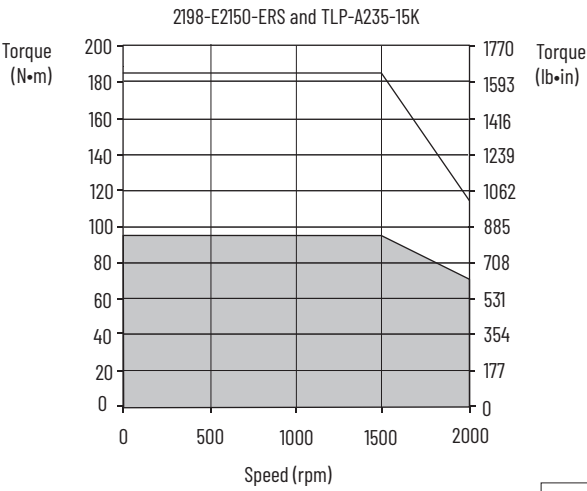
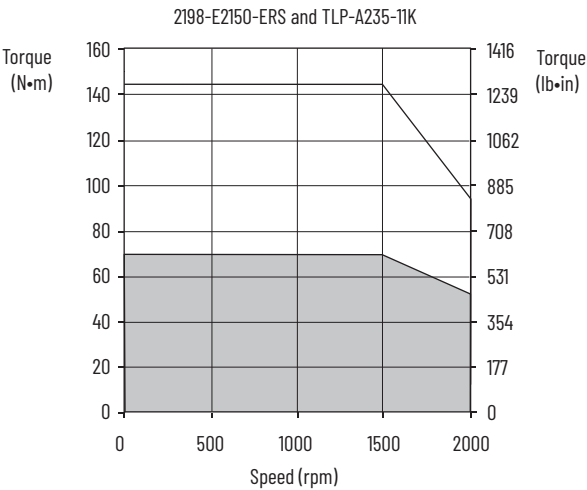
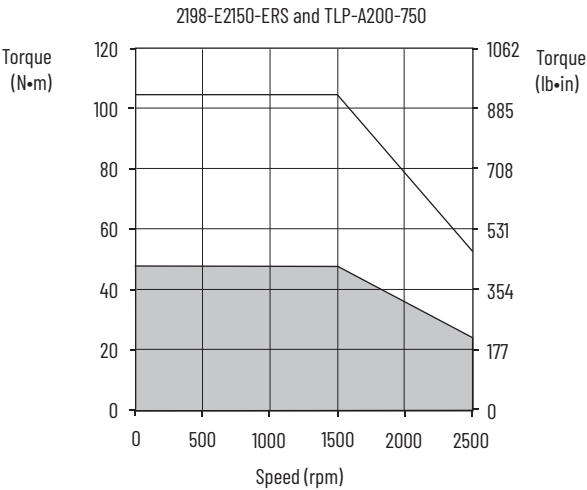
 = Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix TLP Servo Motor Curves (continued)



□ = Intermittent operating region  
 ■ = Continuous operating region

Kinetix 5100 (200V-class) Drives/Kinetix TLP Servo Motor Curves (continued)



 = Intermittent operating region  
 = Continuous operating region

# Kinetix 5100 (400V-class) Drives with Kinetix TLP Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 380 or 480V, nominal input) when matched with Kinetix TLP (400V-class) multi-purpose servo motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and optimum torque/speed curves.

## Kinetix TLP Motor and Cable Combinations

| Rotary Motor (400V-class) <sup>(1)</sup><br>Cat. No.                                                  | Motor Power/Brake Cable <sup>(2)</sup>                                       | Feedback Cable Cat. No. <sup>(2)</sup>                                       | Brake Cat. No. <sup>(2)</sup>                                                |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| TLP-B070-040<br>TLP-B090-075                                                                          | 2090-CTPx-MADF-18Axx (standard) or<br>2090-CTPx-MADF-18Fxx (continuous-flex) | 2090-CTFB-MADD-CFAxx (standard) or<br>2090-CTFB-MADD-CFFxx (continuous-flex) | Not applicable. Brake conductors are included in the power cable.            |
| TLP-B115-100, TLP-B115-200 <sup>(3)</sup><br>TLP-B145-050, TLP-B145-100<br>TLP-B145-150, TLP-B145-200 | 2090-CTPx-MCDF-16Axx (standard) or<br>2090-CTPx-MCDF-16Fxx (continuous-flex) | 2090-CTFB-MFDD-CFAxx (standard) or<br>2090-CTFB-MFDD-CFFxx (continuous-flex) |                                                                              |
| TLP-B145-250                                                                                          | 2090-CTPx-MCDF-12Axx (standard) or<br>2090-CTPx-MCDF-12Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-B200-300, TLP-B200-450                                                                            | 2090-CTPx-MDDF-12Axx (standard) or<br>2090-CTPx-MDDF-12Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-B200-550, TLP-B200-750                                                                            | 2090-CTPx-MDDF-08Axx (standard) or<br>2090-CTPx-MDDF-08Fxx (continuous-flex) |                                                                              |                                                                              |
| TLP-B235-11K, TLP-B235-14K <sup>(4)</sup>                                                             | 2090-CTPW-MEDF-06Axx (standard) or<br>2090-CTPW-MEDF-06Fxx (continuous-flex) |                                                                              | 2090-CTBK-MBDF-20Axx (standard) or<br>2090-CTBK-MBDF-20Fxx (continuous-flex) |

(1) The TLP-B070-040 and TLP-B090-075 frame on-motor cables include 18 AWG conductors that are compatible with 2090-CTPx-MADF-18xxx cable conductors.

(2) Refer to the Kinetix Motion Accessories Specifications Technical Data, publication [KNX-TD004](#), for cable specifications.

(3) For TLP-B115-200 motors, use 2090-CTPx-MCDF-12xxx motor power/brake cable to comply with NFPA 79 requirements.

(4) Only these motors have separate brake connectors and brake cables. All other motors have brake wires included with the motor power/brake connector.

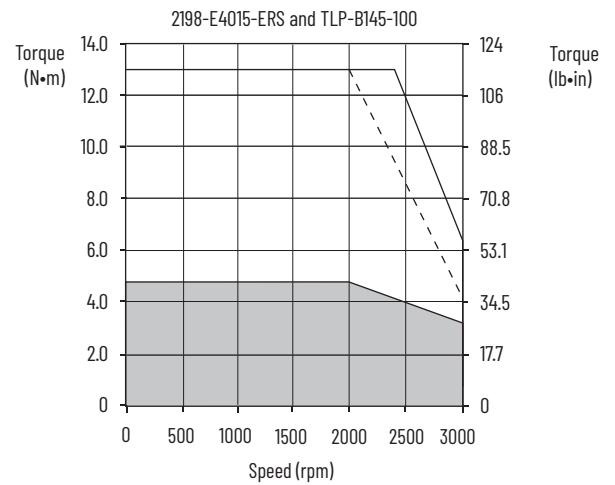
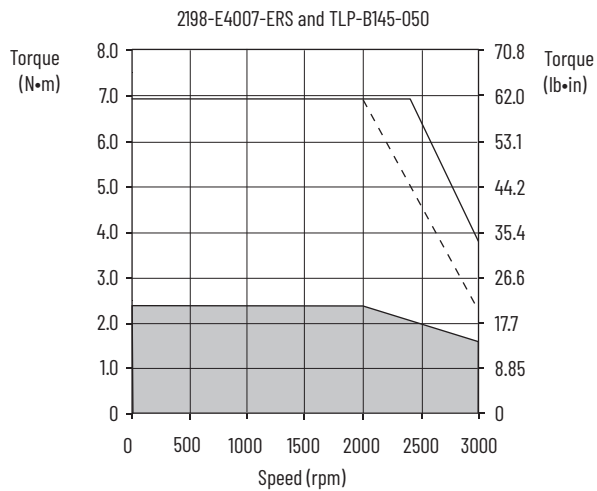
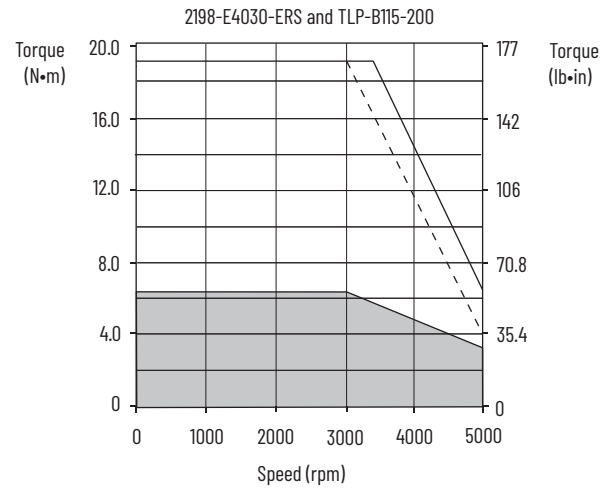
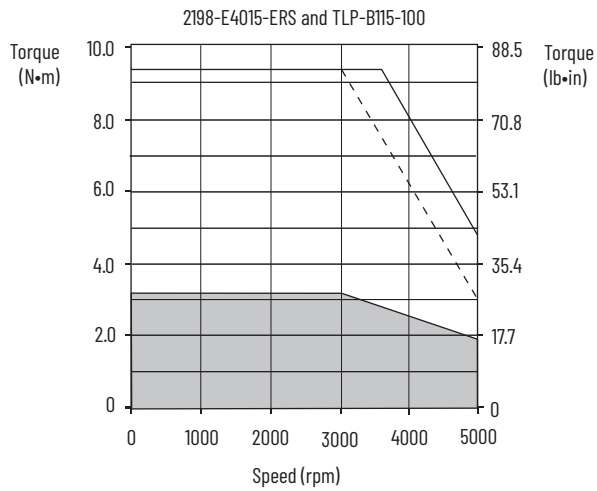
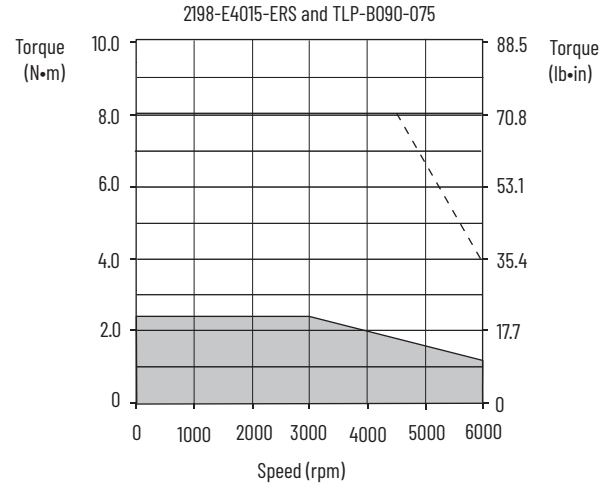
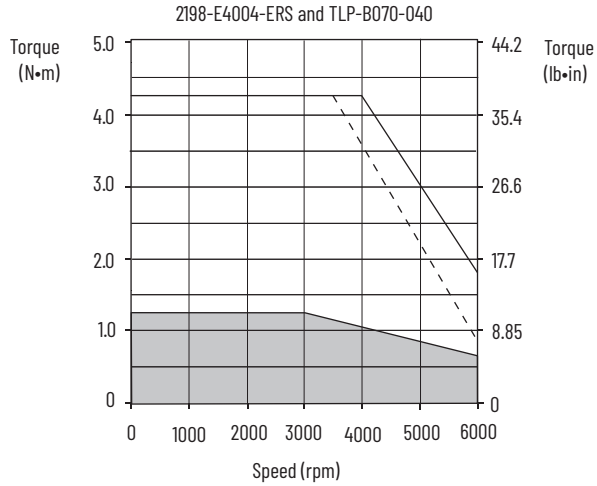
## Kinetix TLP Motor Performance Specifications with Kinetix 5100 (400V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A rms | System Continuous Stall Torque N•m (lb•in) | System Peak Stall Current A rms | System Peak Stall Torque N•m (lb•in) | Motor Rated Output kW (Hp) | Kinetix 5100 Drives (380/480V AC input) |
|-----------------------|-----------------|----------------|---------------------------------------|--------------------------------------------|---------------------------------|--------------------------------------|----------------------------|-----------------------------------------|
| TLP-B070-040          | 3000            | 6000           | 1.47                                  | 1.27 (11.2)                                | 5.30                            | 4.25 (37.6)                          | 0.40 (0.54)                | 2198-E4004-ERS                          |
| TLP-B090-075          | 3000            | 6000           | 2.99                                  | 2.39 (21.2)                                | 8.0                             | 5.94 (52.5)                          | 0.75 (1.01)                | 2198-E4007-ERS                          |
|                       |                 |                |                                       |                                            | 10.85                           | 8.05 (71.2)                          |                            | 2198-E4015-ERS                          |
| TLP-B115-100          | 3000            | 5000           | 4.30                                  | 3.18 (28.1)                                | 15.11                           | 9.34 (82.7)                          | 1.0 (1.34)                 | 2198-E4015-ERS                          |
| TLP-B115-200          | 3000            | 5000           | 7.0                                   | 6.37 (56.4)                                | 20.78                           | 15.63 (138.3)                        | 2.0 (2.68)                 | 2198-E4020-ERS                          |
|                       |                 |                |                                       |                                            | 25.40                           | 19.10 (169.0)                        |                            | 2198-E4030-ERS                          |
| TLP-B145-050          | 2000            | 3000           | 1.89                                  | 2.39 (21.2)                                | 5.49                            | 6.93 (61.3)                          | 0.50 (0.67)                | 2198-E4007-ERS                          |
| TLP-B145-100          | 2000            | 3000           | 3.54                                  | 4.77 (42.2)                                | 12.29                           | 13.03 (115.3)                        | 1.0 (1.34)                 | 2198-E4015-ERS                          |
| TLP-B145-150          | 2000            | 3000           | 5.20                                  | 7.16 (63.4)                                | 15.11                           | 16.92 (149.8)                        | 1.5 (2.01)                 | 2198-E4015-ERS                          |
|                       |                 |                |                                       |                                            | 18.34                           | 20.54 (181.8)                        |                            | 2198-E4020-ERS                          |
| TLP-B145-200          | 2000            | 3000           | 6.85                                  | 9.55 (84.5)                                | 20.78                           | 23.74 (210.2)                        | 2.0 (2.68)                 | 2198-E4020-ERS                          |
|                       |                 |                |                                       |                                            | 21.35                           | 24.40 (215.9)                        |                            | 2198-E4030-ERS                          |
| TLP-B145-250          | 3000            | 4500           | 8.60                                  | 7.96 (70.4)                                | 26.08                           | 20.54 (181.7)                        | 2.5 (3.35)                 | 2198-E4030-ERS                          |
|                       |                 |                |                                       |                                            | 33.40                           | 26.30 (232.8)                        |                            | 2198-E4055-ERS                          |
| TLP-B200-300          | 1500            | 2500           | 11.65                                 | 19.1 (169.0)                               | 26.08                           | 36.56 (323.5)                        | 3.0 (4.02)                 | 2198-E4030-ERS                          |
|                       |                 |                |                                       |                                            | 34.10                           | 47.8 (423.0)                         |                            | 2198-E4055-ERS                          |
| TLP-B200-450          | 1500            | 3000           | 21.18                                 | 28.7 (254.0)                               | 37.65                           | 43.6 (385.6)                         | 4.5 (6.03)                 | 2198-E4055-ERS                          |
|                       |                 |                |                                       |                                            | 53.32                           | 61.7 (546.1)                         |                            | <b>2198-E4075-ERS</b>                   |
|                       |                 |                |                                       |                                            | 58.41                           | 67.6 (598.3)                         |                            | 2198-E4150-ERS                          |
| TLP-B200-550          | 1500            | 3000           | 23.62                                 | 35.0 (309.8)                               | 37.65                           | 47.4 (419.3)                         | 5.5 (7.38)                 | 2198-E4055-ERS                          |
|                       |                 |                |                                       |                                            | 53.32                           | 67.1 (546.1)                         |                            | <b>2198-E4075-ERS</b>                   |
|                       |                 |                |                                       |                                            | 66.60                           | 83.8 (741.6)                         |                            | 2198-E4150-ERS                          |
| TLP-B200-750          | 1500            | 2500           | 28.90                                 | 47.7 (422.1)                               | 53.32                           | 77.2 (682.9)                         | 7.5 (10.06)                | 2198-E4075-ERS                          |
|                       |                 |                |                                       |                                            | 70.0                            | 101.3 (896.5)                        |                            | 2198-E4150-ERS                          |
| TLP-B235-11K          | 1500            | 2000           | 29.60                                 | 70.0 (620.0)                               | 70.0                            | 158.5 (1403)                         | 11.0 (14.75)               | 2198-E4075-ERS                          |
| TLP-B235-14K          | 1500            | 2000           | 40.30                                 | 89.1 (789.0)                               | 70.0                            | 143.6 (1271)                         | 14.0 (18.77)               | 2198-E4150-ERS                          |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

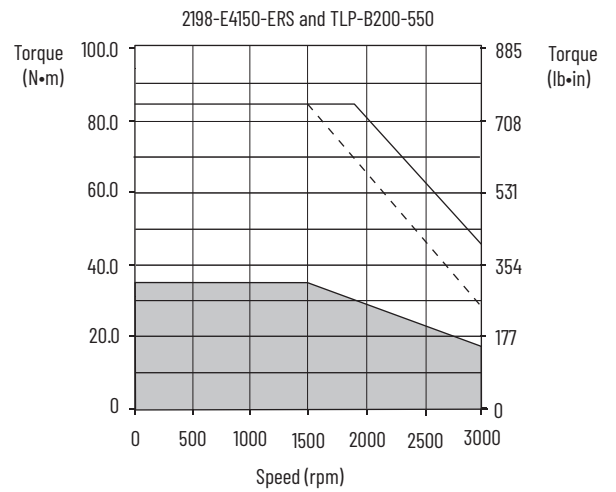
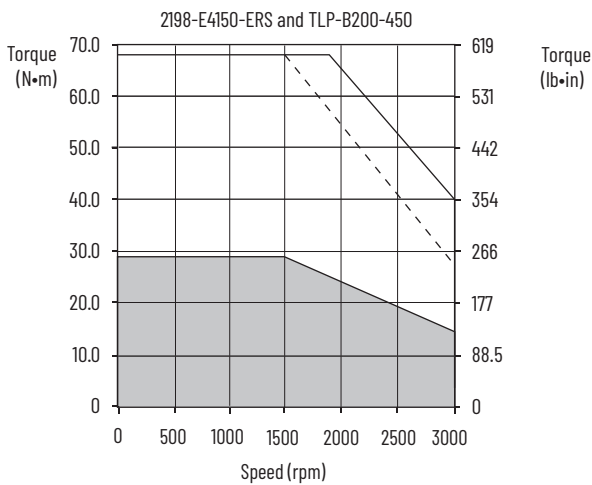
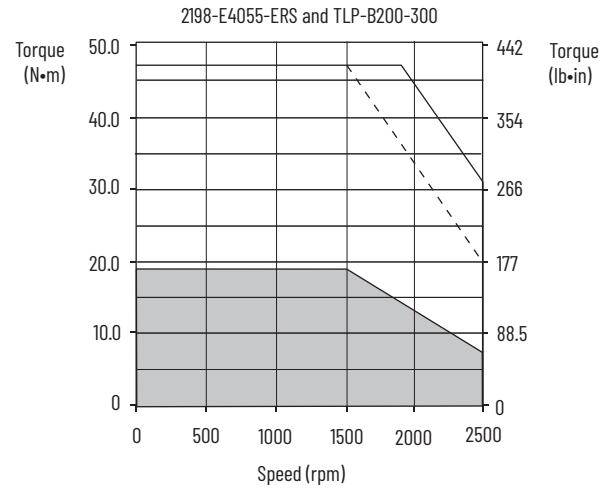
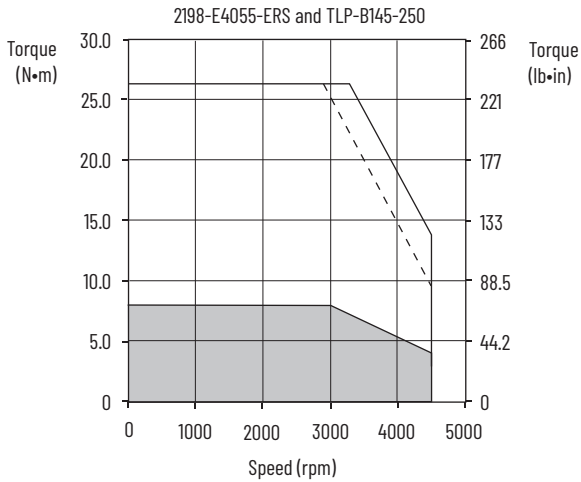
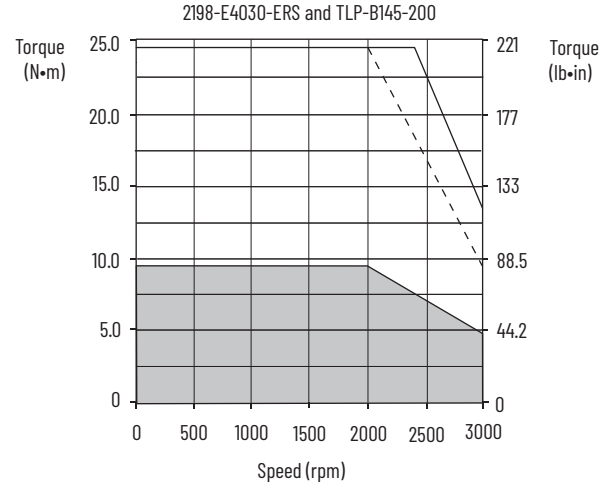
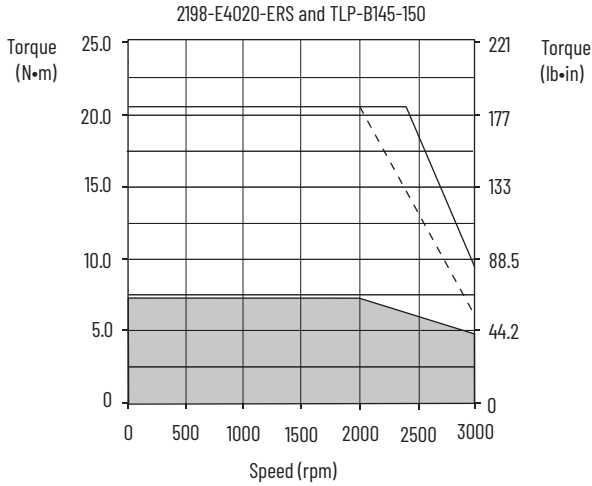


# Kinetix 5100 (400V-class) Drives/Kinetix TLP Servo Motor Curves



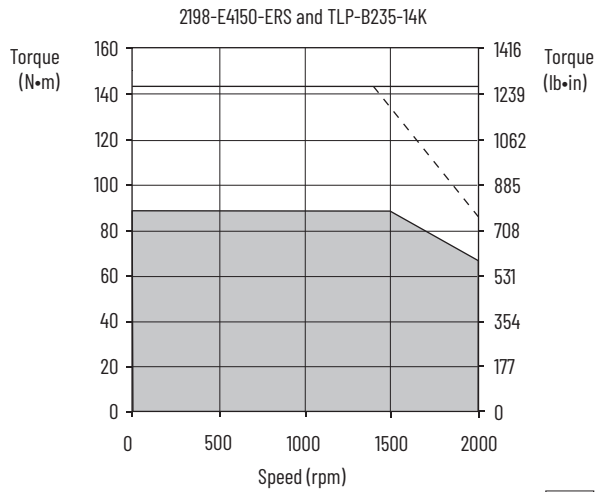
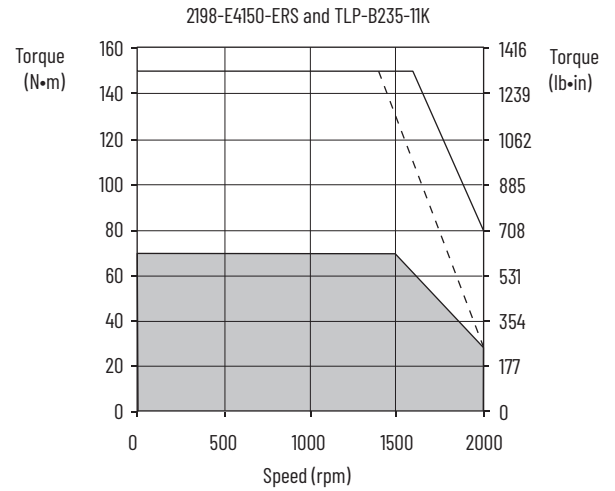
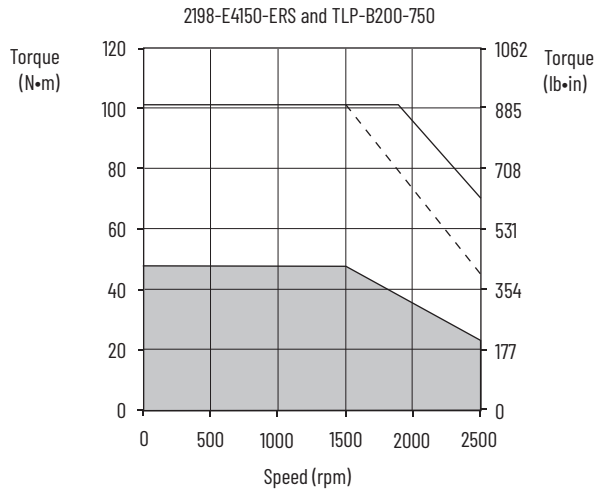
= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 380V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix TLP Servo Motor Curves (continued)



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 380V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix TLP Servo Motor Curves (continued)



-  = Intermittent operating region
-  = Continuous operating region
-  = Drive operation with 380V AC rms input voltage

## Kinetix 5100 (200V-class) Drives with Kinetix MPL Motors

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix MPL (200V-class) low-inertia servo motors with absolute high-resolution encoders or TTL incremental encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

**IMPORTANT** The Kinetix MPL low-inertia motors on this page are equipped with DIN connectors (specified by 7, for example, MPL-A310P-xx7xAA) and are **not** compatible with cables designed for motors equipped with bayonet connectors (specified by 2, for example, MPL-A310P-xx2xAA). The motors with bayonet connectors are discontinued and require 2090-XXNxMP (bayonet) cables. For help with migration or to select bayonet transition cables, contact your Rockwell Automation sales representative.

### Kinetix MPL Motor and Cable Combinations

| Rotary Motor (200V-class)<br>Cat. No.                                                       | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                                           |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPL-A1510V-xx7xAA, MPL-A1520U-xx7xAA, MPL-A1530U-xx7xAA                                     | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or <sup>(2) (3)</sup><br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPL-A210V-xx7xAA, MPL-A220T-xx7xAA, MPL-A230P-xx7xAA                                        |                                                                                   |                                                                                                                                                                                               |
| MPL-A310F-xx7xAA, MPL-A310P-xx7xAA,<br>MPL-A320H-xx7xAA, MPL-A320P-xx7xAA, MPL-A330P-xx7xAA |                                                                                   |                                                                                                                                                                                               |
| MPL-A420P-xx7xAA, MPL-A430H-xx7xAA                                                          |                                                                                   |                                                                                                                                                                                               |
| MPL-A4530F-xx7xAA, MPL-A4540C-xx7xAA                                                        | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex) <sup>(4)</sup><br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                          |
| MPL-A430P-xx7xAA                                                                            |                                                                                   |                                                                                                                                                                                               |
| MPL-A4530K-xx7xAA, MPL-A4540F-xx7xAA                                                        | 2090-CPxM7DF-12AAxx (standard, non-flex)                                          | 2090-XXNFMF-Sxx (standard, non-flex) <sup>(4)</sup><br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                          |
| MPL-A4560F-xx7xAA                                                                           | 2090-CPxM7DF-10AAxx (standard, non-flex)<br>2090-CPxM7DF-10AFxx (continuous-flex) |                                                                                                                                                                                               |
| MPL-A520K-xx7xAA                                                                            | 2090-CPxM7DF-08AAxx (standard, non-flex)<br>2090-CPxM7DF-08AFxx (continuous-flex) |                                                                                                                                                                                               |
| MPL-A540K-xx7xAA, MPL-A560F-xx7xAA                                                          |                                                                                   |                                                                                                                                                                                               |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

(2) Applies to Kinetix 5100 drives and MPL-A3xxx-M/S...MPL-A5xxx-M/S motors with absolute high-resolution feedback.

(3) Applies to Kinetix 5100 drives and MPL-A15xxx-V/E...MPL-A2xxx-V/E motors with absolute high-resolution feedback.

(4) Applies to Kinetix 5100 drives and MPL-A15xxx-H...MPL-A45xxx-H motors with incremental feedback.

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#).

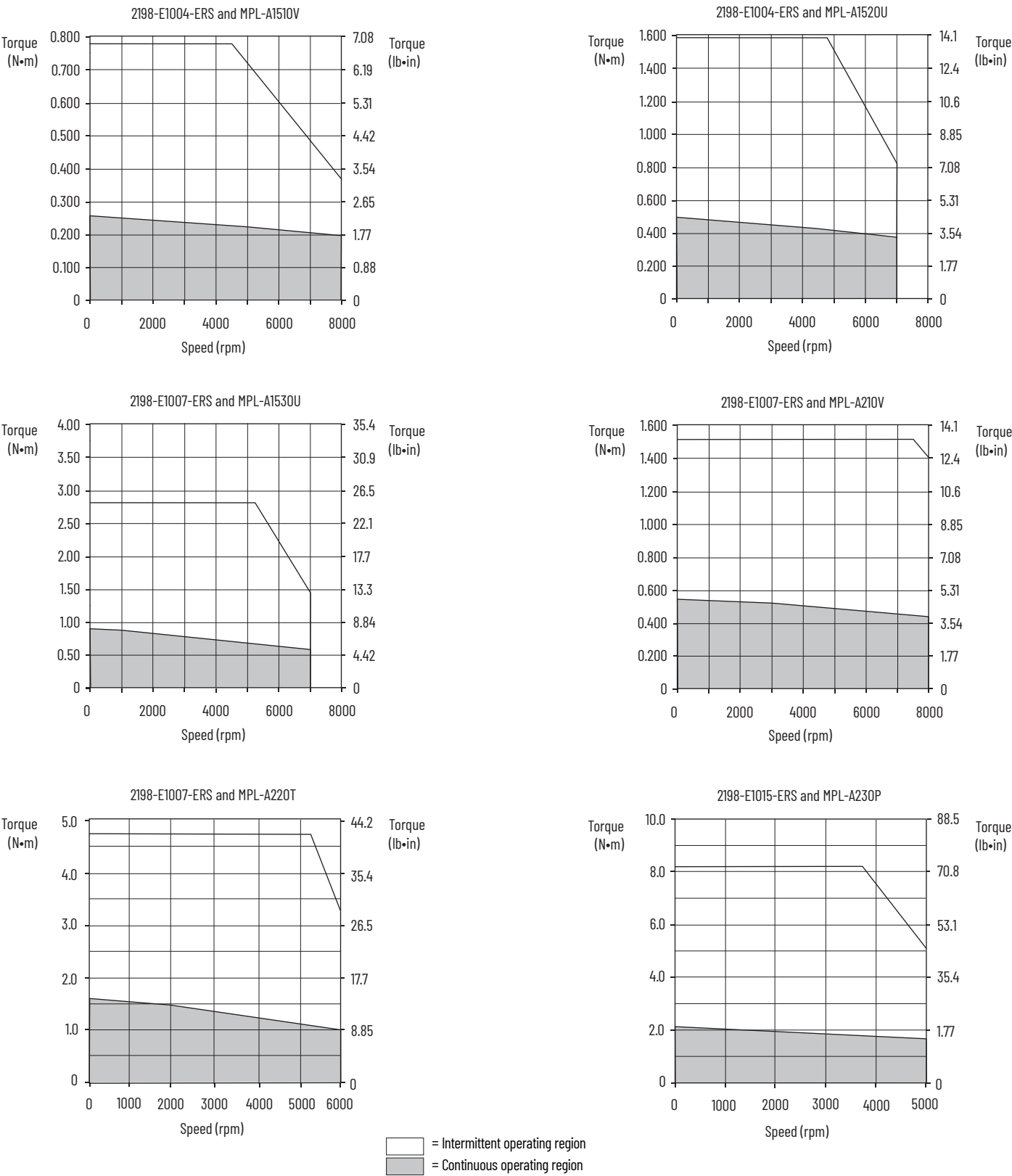
Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPL Motor Performance Specifications with Kinetix 5100 (200V-class) Drives

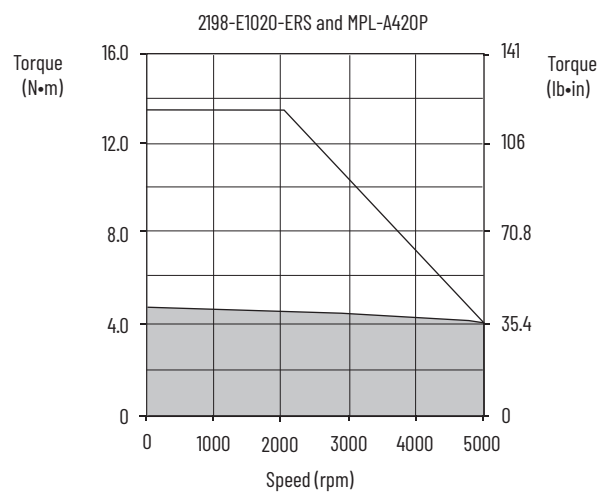
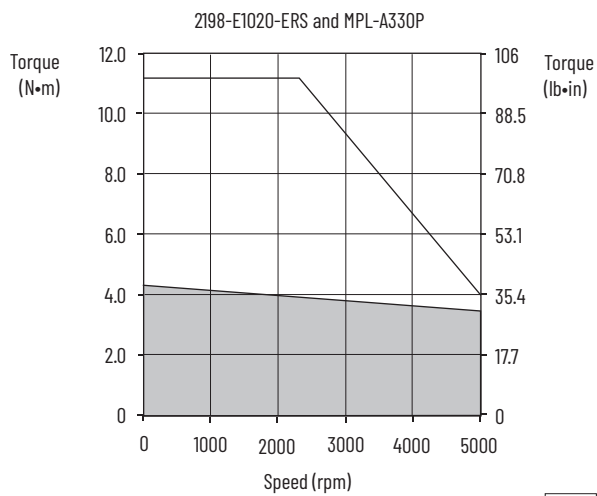
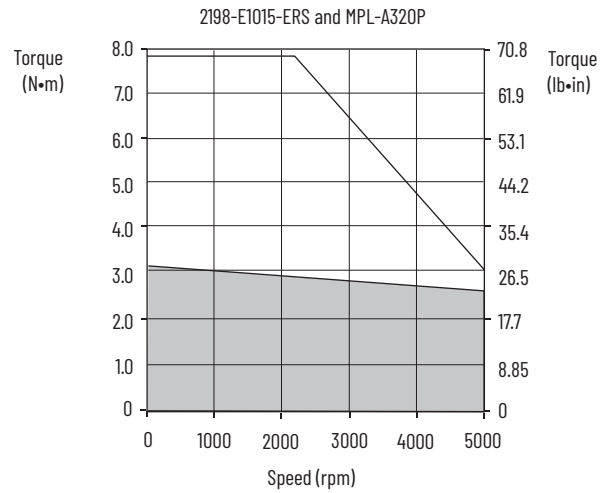
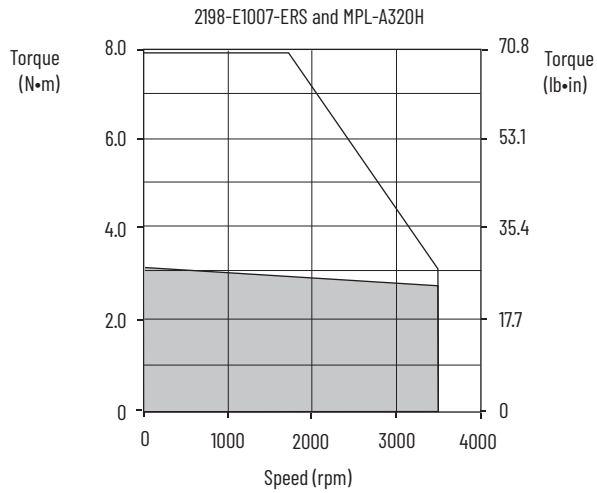
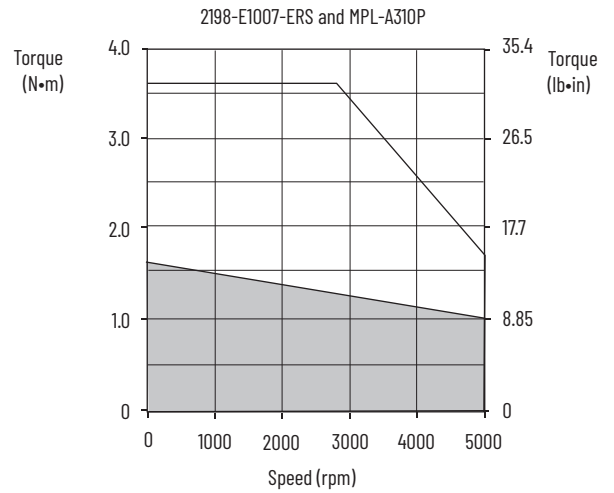
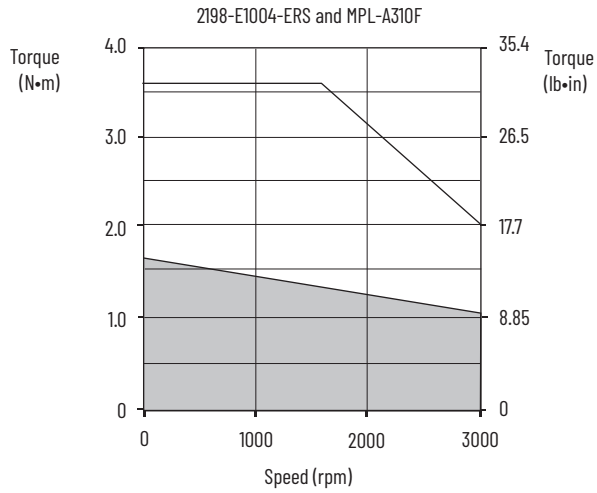
| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|----------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPL-A1510V            | 8000            | 8000           | 1.05                                   | 0.26 (2.3)                                 | 3.40                             | 0.77 (6.8)                           | 0.16                  | 2198-E1004-ERS                      |
| MPL-A1520U            | 7000            | 7000           | 1.80                                   | 0.49 (4.3)                                 | 6.10                             | 1.58 (13.9)                          | 0.27                  | 2198-E1004-ERS                      |
| MPL-A1530U            | 7000            | 7000           | 2.82                                   | 0.90 (8.0)                                 | 9.19                             | 2.57 (22.7)                          | 0.39                  | 2198-E1004-ERS                      |
|                       |                 |                |                                        |                                            | 10.1                             | 2.82 (24.9)                          |                       | 2198-E1007-ERS                      |
| MPL-A210V             | 8000            | 8000           | 3.09                                   | 0.55 (4.8)                                 | 9.19                             | 1.37 (12.1)                          | 0.37                  | 2198-E1004-ERS                      |
|                       |                 |                |                                        |                                            | 10.2                             | 1.52 (13.4)                          |                       | 2198-E1007-ERS                      |
| MPL-A220T             | 6000            | 6000           | 4.54                                   | 1.61 (14.2)                                | 15.5                             | 4.74 (41.9)                          | 0.62                  | 2198-E1007-ERS                      |
| MPL-A230P             | 5000            | 5000           | 5.40                                   | 2.10 (18.6)                                | 21.79                            | 7.77 (68.8)                          | 0.86                  | 2198-E1007-ERS                      |
|                       |                 |                |                                        |                                            | 23.0                             | 8.2 (73.0)                           |                       | 2198-E1015-ERS                      |
| MPL-A310F             | 3000            | 3000           | 3.20                                   | 1.58 (14.0)                                | 9.19                             | 3.61 (31.9)                          | 0.46                  | 2198-E1004-ERS                      |
| MPL-A310P             | 5000            | 5000           | 4.85                                   | 1.58 (14.0)                                | 14.0                             | 3.61 (31.9)                          | 0.73                  | 2198-E1007-ERS                      |
| MPL-A320H             | 3500            | 3500           | 6.10                                   | 3.05 (27.0)                                | 19.3                             | 7.91 (70.0)                          | 1.0                   | 2198-E1007-ERS                      |
| MPL-A320P             | 5000            | 5000           | 9.00                                   | 3.05 (27.0)                                | 29.5                             | 7.91 (70.0)                          | 1.3                   | 2198-E1015-ERS                      |
| MPL-A330P             | 5000            | 5000           | 12.0                                   | 4.18 (37.0)                                | 38.0                             | 11.1 (98.2)                          | 1.8                   | 2198-E1020-ERS                      |
| MPL-A420P             | 5000            | 5000           | 12.7                                   | 4.79 (42.3)                                | 46.0                             | 13.5 (120)                           | 2.0                   | 2198-E1020-ERS                      |
| MPL-A430H             | 3500            | 3500           | 12.2                                   | 6.21 (55.0)                                | 45.0                             | 19.8 (175)                           | 1.8                   | 2198-E1020-ERS                      |
| MPL-A430P             | 5000            | 5000           | 16.80                                  | 5.99 (52.9)                                | 57.39                            | 16.96 (150)                          | 2.2                   | 2198-E1020-ERS                      |
|                       |                 |                |                                        |                                            | 67.0                             | 19.8 (175)                           |                       | 2198-E2030-ERS                      |
| MPL-A4530F            | 2800            | 2800           | 13.40                                  | 8.36 (74.0)                                | 42.0                             | 20.3 (179)                           | 1.9                   | 2198-E1020-ERS                      |
| MPL-A4530K            | 4000            | 4000           | 19.50                                  | 8.13 (71.9)                                | 62.0                             | 20.3 (179)                           | 2.5                   | 2198-E2030-ERS                      |
| MPL-A4540C            | 1500            | 1500           | 9.40                                   | 10.30 (91.1)                               | 29.0                             | 27.1 (239)                           | 1.5                   | 2198-E1015-ERS                      |
| MPL-A4540F            | 3000            | 3000           | 18.40                                  | 10.19 (90.1)                               | 57.39                            | 27.1 (239)                           | 2.6                   | 2198-E1020-ERS                      |
| MPL-A4560F            | 3000            | 3000           | 22.0                                   | 14.1 (125)                                 | 66.0                             | 34.4 (305)                           | 3.0                   | 2198-E2030-ERS                      |
| MPL-A520K             | 4000            | 4000           | 23.0                                   | 10.77 (95.2)                               | 65.0                             | 24.3 (215)                           | 3.5                   | 2198-E2030-ERS                      |
| MPL-A540K             | 4000            | 4000           | 41.5                                   | 19.4 (172)                                 | 120.0                            | 48.6 (430)                           | 5.5                   | 2198-E2055-ERS                      |
| MPL-A560F             | 3000            | 3000           | 42.0                                   | 26.8 (237)                                 | 120.0                            | 61.0 (540)                           | 5.3                   | 2198-E2055-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/Kinetix MPL Servo Motor Curves

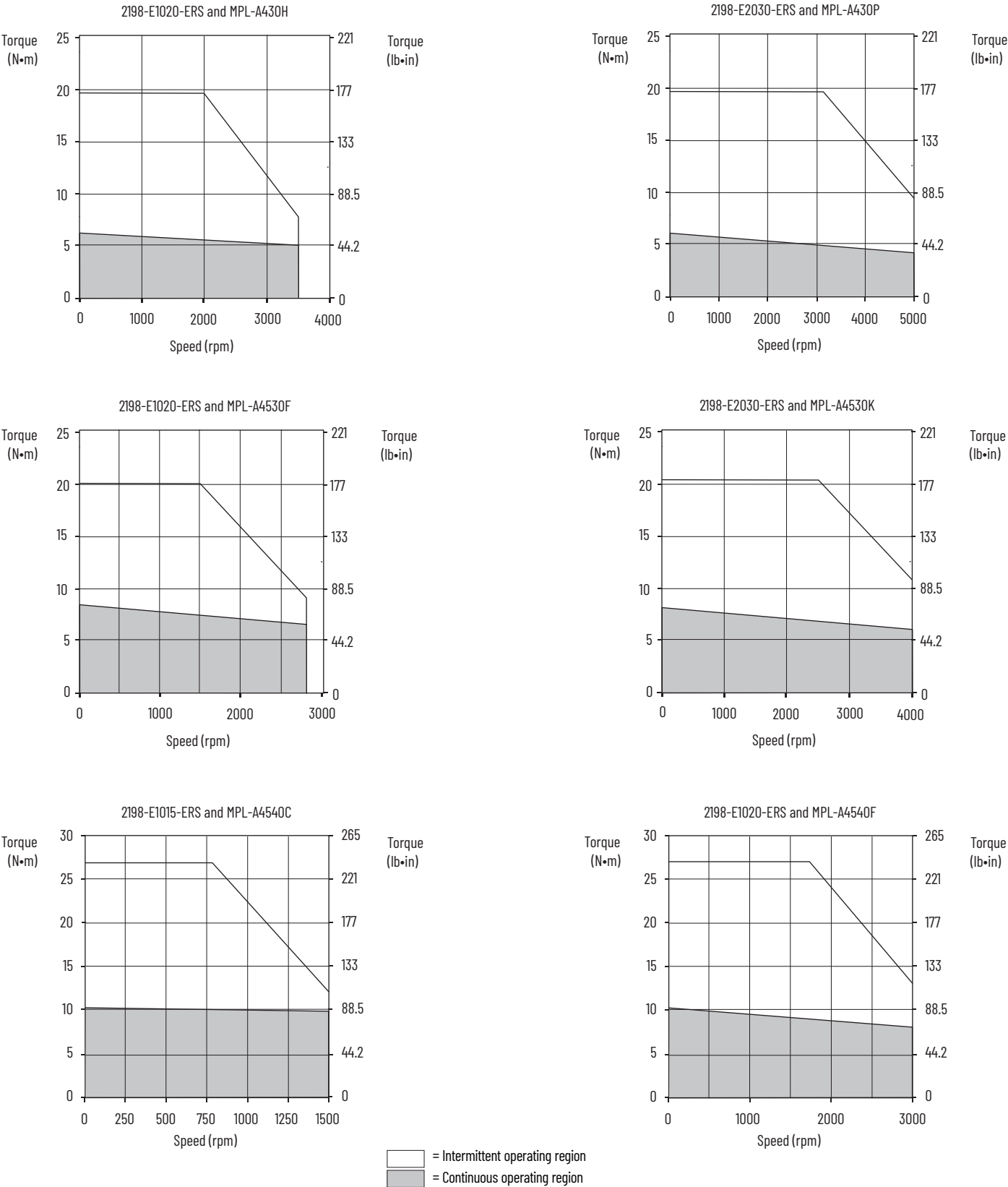


# Kinetix 5100 (200V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



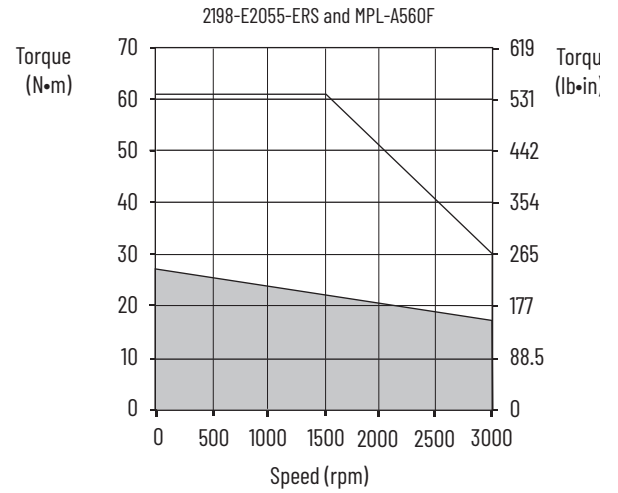
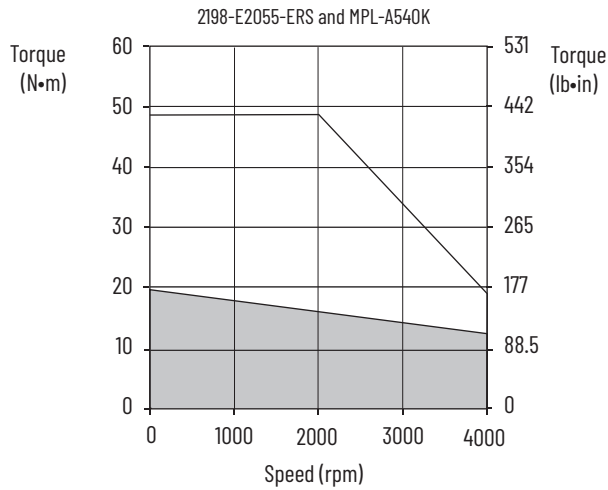
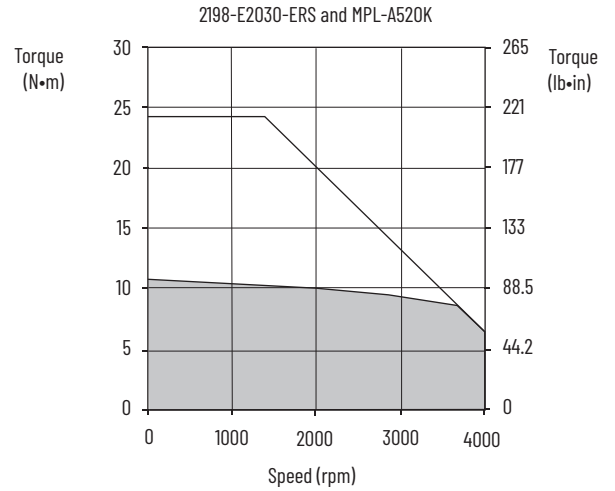
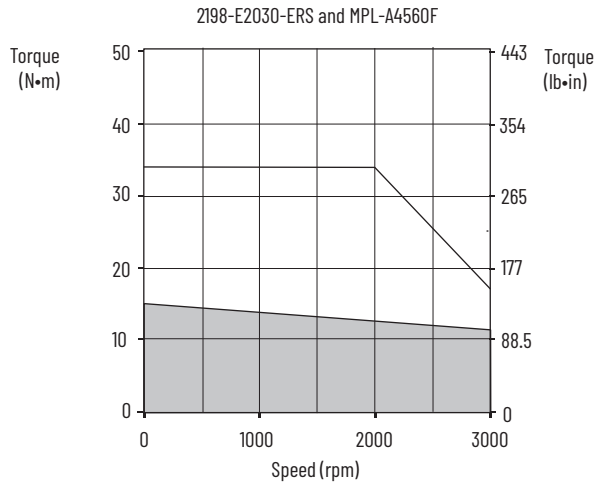
= Intermittent operating region  
 = Continuous operating region

# Kinetix 5100 (200V-class) Drives/Kinetix MPL Servo Motor Curves (continued)





## Kinetix 5100 (200V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



□ = Intermittent operating region  
 ■ = Continuous operating region

# Kinetix 5100 (400V-class) Drives with Kinetix MPL Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 400 and 480V, nominal input) when matched with Kinetix MPL (400V-class) low-inertia motors with absolute high-resolution encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

**IMPORTANT** The Kinetix MPL motors on this page are equipped with DIN connectors (specified by 7, for example, MPL-A310P-xx7xAA) and are **not** compatible with cables designed for motors equipped with bayonet connectors (specified by 2, for example, MPL-A310P-xx2xAA). The motors with bayonet connectors are discontinued and require 2090-XXNxMP (bayonet) cables. For help with migration or to select bayonet transition cables, contact your Rockwell Automation sales representative.

## Kinetix MPL Motor Cable Combinations

| Rotary Motor (400V-class)<br>Cat. No.                                                         | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPL-B1510V-xx7xAA, MPL-B1520U-xx7xAA, MPL-B1530U-xx7xAA                                       | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or <sup>(2)</sup> <sup>(3)</sup><br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPL-B210V-xx7xAA, MPL-B220T-xx7xAA, MPL-B230P-xx7xAA                                          |                                                                                   |                                                                                                                                                                                                          |
| MPL-B310P-xx7xAA, MPL-B320P-xx7xAA, MPL-B330P-xx7xAA                                          |                                                                                   |                                                                                                                                                                                                          |
| MPL-B420P-xx7xAA, MPL-B430P-xx7xAA                                                            |                                                                                   |                                                                                                                                                                                                          |
| MPL-B4530F-xx7xAA, MPL-B4530K-xx7xAA,<br>MPL-B4540F-xx7xAA, MPL-B4560F-xx7xAA                 |                                                                                   |                                                                                                                                                                                                          |
| MPL-B520K-xx7xAA                                                                              | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex) <sup>(4)</sup><br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                                     |
| MPL-B540D-xx7xAA, MPL-B540K-xx7xAA, MPL-B560F-xx7xAA                                          |                                                                                   |                                                                                                                                                                                                          |
| MPL-B580F-xx7xAA, MPL-B580J-xx7xAA,<br>MPL-B640F-xx7xAA                                       | 2090-CPxM7DF-10AAxx (standard, non-flex)<br>2090-CPxM7DF-10AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex) <sup>(4)</sup><br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                                     |
| MPL-B660F-xx7xAA, MPL-B680D-xx7xAA<br>MPL-B960B-xx7xAA, MPL-B980B-xx7xAA                      | 2090-CPxM7DF-08AAxx (standard, non-flex)<br>2090-CPxM7DF-08AAxx (continuous-flex) |                                                                                                                                                                                                          |
| MPL-B680F-xx7xAA, MPL-B680H-xx7xAA,<br>MPL-B860D-xx7xAA, MPL-B880C-xx7xAA<br>MPL-B960C-xx7xAA | 2090-CPxM7DF-06AAxx (standard, non-flex)<br>2090-CPxM7DF-06AAxx (continuous-flex) |                                                                                                                                                                                                          |
| MPL-B880D-xx7xAA<br>MPL-B980C-xx7xAA                                                          | 2090-CPxM7DF-04AAxx (standard, non-flex)<br>2090-CPxM7DF-04AAxx (continuous-flex) |                                                                                                                                                                                                          |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

(2) Applies to Kinetix 5100 drives and MPL-B3xxx-M/S...MPL-B9xxx-M/S motors with absolute high-resolution feedback.

(3) Applies to Kinetix 5100 drives and MPL-B15xxx-V/E...MPL-B2xxx-V/E motors with absolute high-resolution feedback.

(4) Applies to Kinetix 5100 drives and MPL-B15xxx-H...MPL-B45xxx-H motors with incremental feedback.

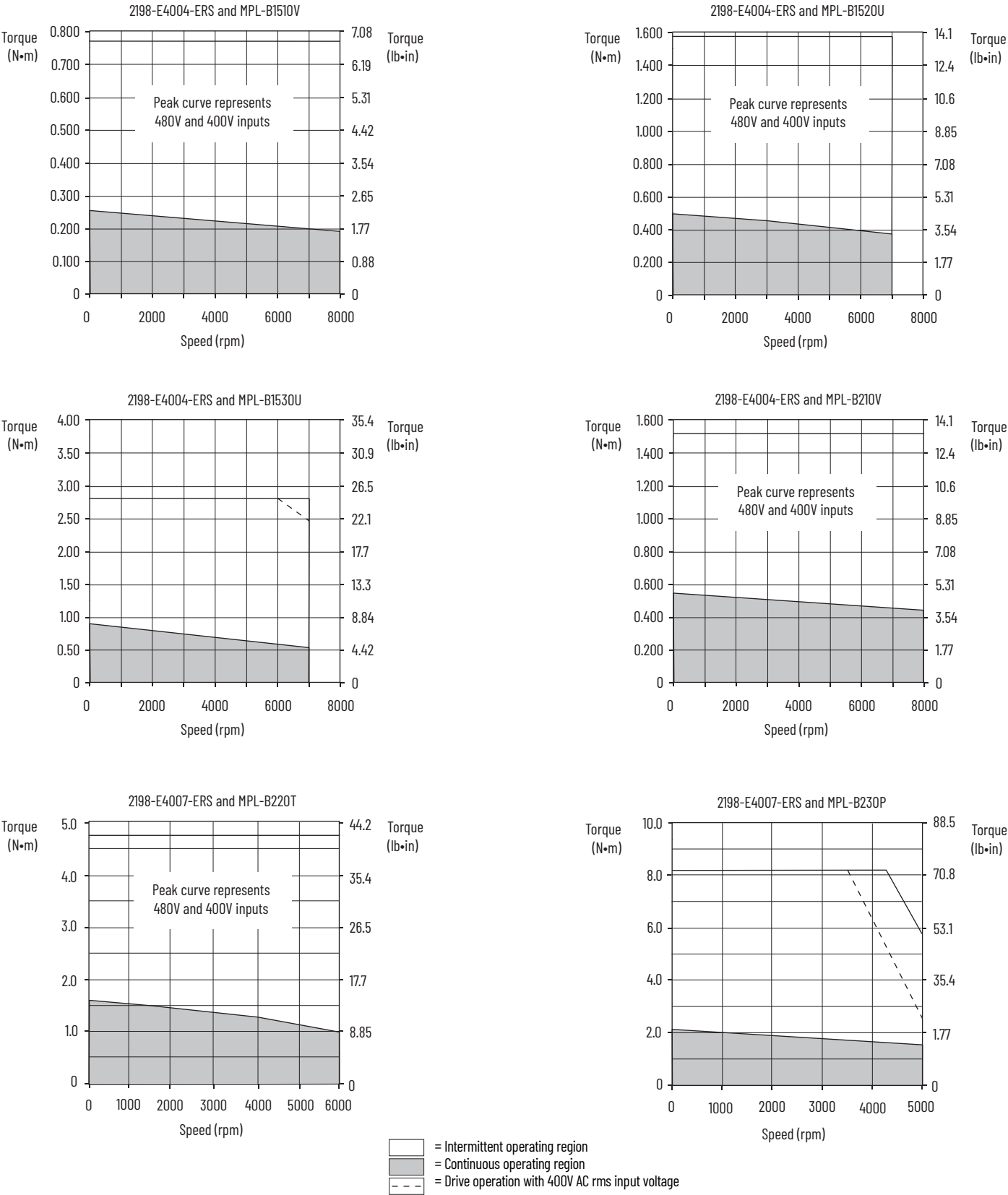
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPL Motor Performance Specifications with Kinetix 5100 (400V-class) Drives

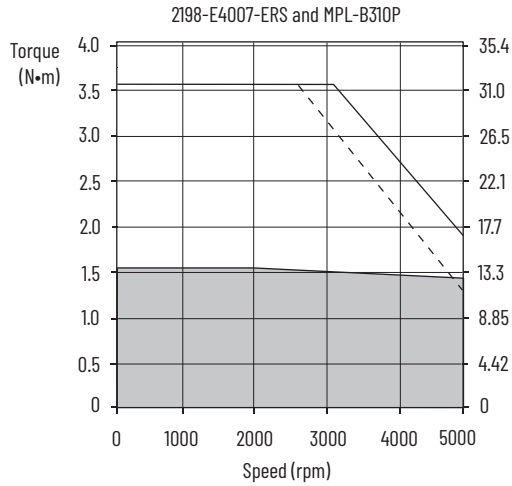
| Rotary Motor Cat. No. | Rated Speed rpm | Maximum Speed rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (480V AC input) |
|-----------------------|-----------------|-------------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPL-B1510V            | 8000            | 8000              | 0.95                                   | 0.26 (2.3)                                 | 3.10                             | 0.77 (6.8)                           | 0.16                  | 2198-E4004-ERS                      |
| MPL-B1520U            | 7000            | 7000              | 1.80                                   | 0.49 (4.3)                                 | 6.10                             | 1.58 (13.9)                          | 0.27                  | 2198-E4004-ERS                      |
| MPL-B1530U            | 7000            | 7000              | 2.0                                    | 0.90 (8.0)                                 | 7.20                             | 2.82 (24.9)                          | 0.39                  | 2198-E4004-ERS                      |
| MPL-B210V             | 8000            | 8000              | 1.75                                   | 0.55 (4.9)                                 | 5.80                             | 1.52 (13.4)                          | 0.37                  | 2198-E4004-ERS                      |
| MPL-B220T             | 6000            | 6000              | 3.30                                   | 1.61 (14.2)                                | 11.3                             | 4.74 (41.9)                          | 0.62                  | 2198-E4007-ERS                      |
| MPL-B230P             | 5000            | 5000              | 2.60                                   | 2.10 (18.6)                                | 11.3                             | 8.20 (73.0)                          | 0.86                  | 2198-E4007-ERS                      |
| MPL-B310P             | 5000            | 5000              | 2.4                                    | 1.6 (14.1)                                 | 7.10                             | 3.6 (32.0)                           | 0.77                  | 2198-E4007-ERS                      |
| MPL-B320P             | 5000            | 5000              | 4.5                                    | 3.10 (27)                                  | 11.3                             | 6.6 (58.4)                           | 1.5                   | 2198-E4007-ERS                      |
|                       |                 |                   |                                        |                                            | 14.0                             | 8.2 (72.5)                           |                       | 2198-E4015-ERS                      |
| MPL-B330P             | 5000            | 5000              | 6.1                                    | 4.18 (37)                                  | 19.0                             | 11.1 (98.2)                          | 1.8                   | 2198-E4015-ERS                      |
| MPL-B420P             | 5000            | 5000              | 6.4                                    | 4.74 (42)                                  | 21.4                             | 13.1 (116)                           | 1.9                   | 2198-E4015-ERS                      |
|                       |                 |                   |                                        |                                            | 22.0                             | 13.5 (119)                           |                       | 2198-E4020-ERS                      |
| MPL-B430P             | 5000            | 5000              | 9.2                                    | 6.55 (58)                                  | 29.4                             | 18.2 (161)                           | 2.2                   | 2198-E4020-ERS                      |
|                       |                 |                   |                                        |                                            | 32.0                             | 19.8 (175)                           |                       | 2198-E4030-ERS                      |
| MPL-B4530F            | 3000            | 3000              | 7.0                                    | 8.25 (73)                                  | 21.0                             | 20.3 (180)                           | 2.1                   | 2198-E4015-ERS                      |
| MPL-B4530K            | 4000            | 4000              | 11.0                                   | 8.25 (73)                                  | 31.0                             | 20.3 (179)                           | 2.6                   | 2198-E4030-ERS                      |
| MPL-B4540F            | 3000            | 3000              | 9.1                                    | 10.20 (90)                                 | 29.0                             | 27.1 (240)                           | 2.6                   | 2198-E4020-ERS                      |
| MPL-B4560F            | 3000            | 3000              | 11.8                                   | 14.0 (124)                                 | 36.0                             | 34.4 (304)                           | 3.2                   | 2198-E4030-ERS                      |
| MPL-B520K             | 3500            | 4000              | 11.5                                   | 10.7 (95)                                  | 33.0                             | 23.2 (205)                           | 3.5                   | 2198-E4030-ERS                      |
| MPL-B540D             | 2000            | 2000              | 10.5                                   | 19.4 (172)                                 | 23.0                             | 41.0 (362)                           | 3.4                   | 2198-E4020-ERS                      |
| MPL-B540K             | 4000            | 4000              | 20.5                                   | 19.4 (172)                                 | 53.2                             | 43.1 (381)                           | 5.4                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 60.0                             | 48.6 (430)                           |                       | 2198-E4075-ERS                      |
| MPL-B560F             | 3000            | 3000              | 20.6                                   | 26.8 (237)                                 | 53.2                             | 53.0 (469)                           | 5.5                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 68.0                             | 67.8 (600)                           |                       | 2198-E4075-ERS                      |
| MPL-B580F             | 3000            | 3000              | 26.0                                   | 34.0 (301)                                 | 53.2                             | 49.2 (435)                           | 7.1                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 94.0                             | 87.0 (770)                           |                       | 2198-E4150-ERS                      |
| MPL-B580J             | 3800            | 3800              | 32.0                                   | 34.0 (301)                                 | 53.2                             | 45.8 (405)                           | 7.9                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 94.0                             | 81.0 (717)                           |                       | 2198-E4150-ERS                      |
| MPL-B640F             | 2000            | 3000              | 32.1                                   | 36.7 (325)                                 | 53.2                             | 59.2 (524)                           | 6.1                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 65.0                             | 72.3 (640)                           |                       | 2198-E4075-ERS                      |
| MPL-B660F             | 2000            | 3000              | 38.5                                   | 48.0 (425)                                 | 75.4                             | 79.4 (703)                           | 6.1                   | 2198-E4075-ERS                      |
|                       |                 |                   |                                        |                                            | 96.0                             | 101.1 (895)                          |                       | 2198-E4150-ERS                      |
| MPL-B680D             | 2000            | 2000              | 34.0                                   | 62.8 (556)                                 | 53.2                             | 87.3 (772)                           | 9.3                   | 2198-E4055-ERS                      |
|                       |                 |                   |                                        |                                            | 94.0                             | 154.2 (1365)                         |                       | 2198-E4150-ERS                      |
| MPL-B680F             | 2000            | 3000              | 48.0                                   | 60.0 (531)                                 | 96.0                             | 108.5 (960)                          | 7.5                   | 2198-E4150-ERS                      |
| MPL-B680H             | 2000            | 3500              | 51.0                                   | 60.0 (531)                                 | 140                              | 146.9 (1300)                         | 7.5                   | 2198-E4150-ERS                      |
| MPL-B860D             | 2000            | 2000              | 47.5                                   | 83.0 (735)                                 | 95.5                             | 152.5 (1350)                         | 12.5                  | 2198-E4150-ERS                      |
| MPL-B880C             | 1500            | 1500              | 47.5                                   | 110 (973)                                  | 97.5                             | 203 (1797)                           | 12.6                  | 2198-E4150-ERS                      |
| MPL-B880D             | 2000            | 2000              | 67.0                                   | 110 (973)                                  | 96.0                             | 147 (1301)                           | 12.6                  | 2198-E4150-ERS                      |
| MPL-B960B             | 1200            | 1200              | 42.5                                   | 130 (1150)                                 | 75.4                             | 185 (1640)                           | 12.7                  | 2198-E4075-ERS                      |
|                       |                 |                   |                                        |                                            | 94.0                             | 231 (2044)                           |                       | 2198-E4150-ERS                      |
| MPL-B960C             | 1500            | 1500              | 55.0                                   | 124.3 (1100)                               | 125                              | 226 (2000)                           | 14.8                  | 2198-E4150-ERS                      |
| MPL-B980B             | 1000            | 1000              | 40.0                                   | 162.7 (1444)                               | 75.4                             | 223 (1973)                           | 15.2                  | 2198-E4075-ERS                      |
|                       |                 |                   |                                        |                                            | 94.0                             | 278 (2460)                           |                       | 2198-E4150-ERS                      |
| MPL-B980C             | 1500            | 1500              | 68.2                                   | 158.2 (1400)                               | 140                              | 271.2 (2400)                         | 16.8                  | 2198-E4150-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

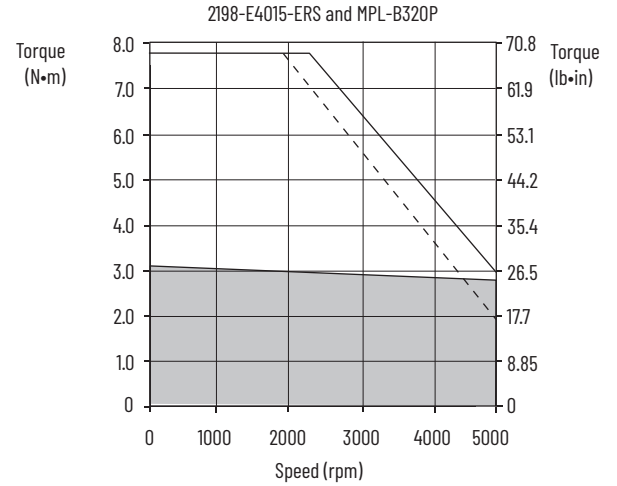
# Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves



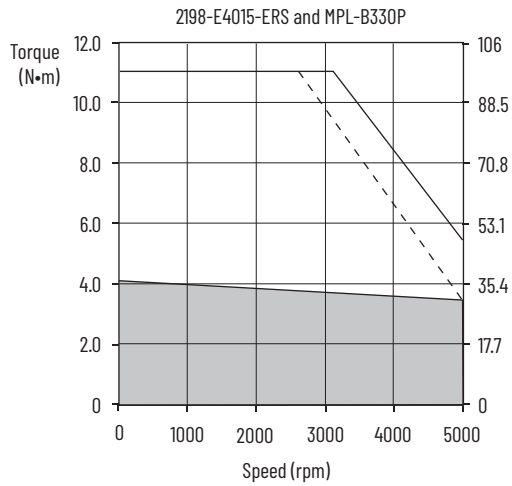
## Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



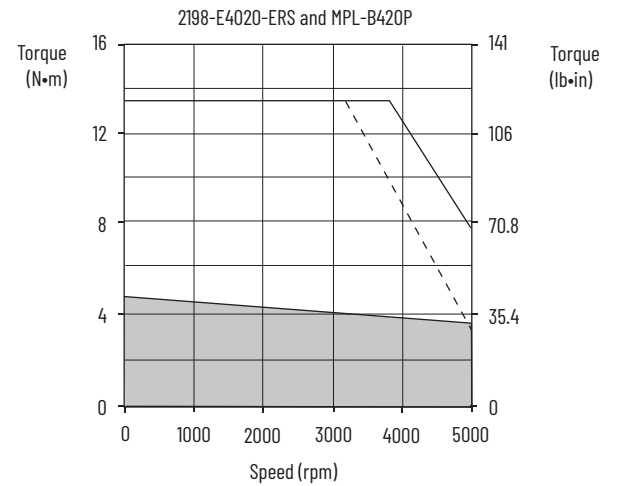
Torque  
(lb·in)



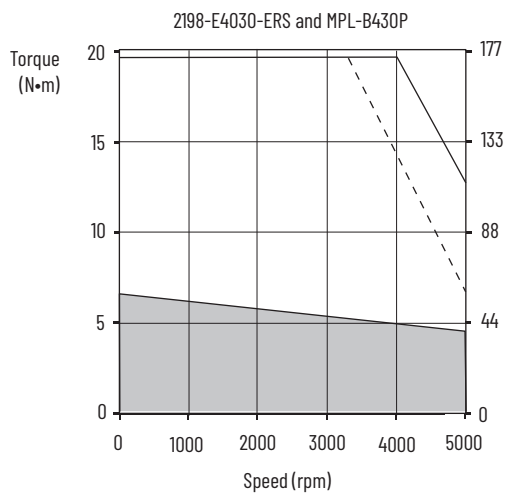
Torque  
(lb·in)



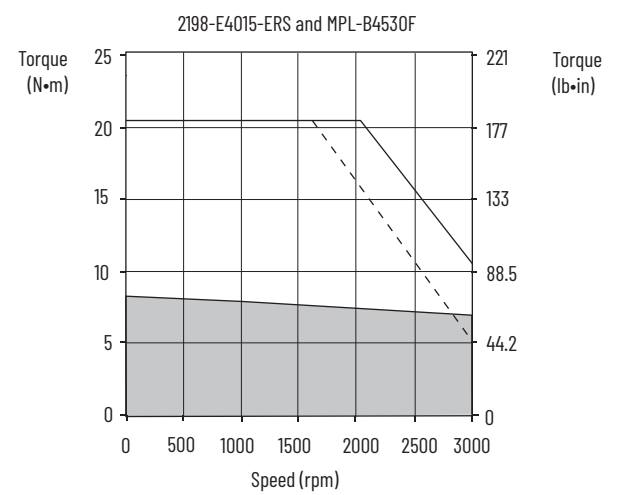
Torque  
(lb·in)



Torque  
(lb·in)



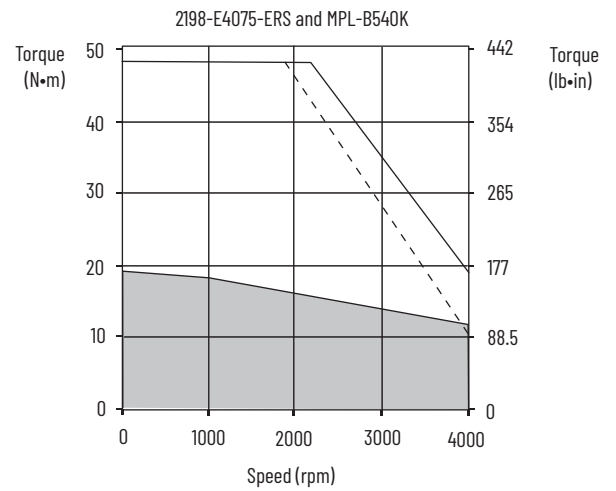
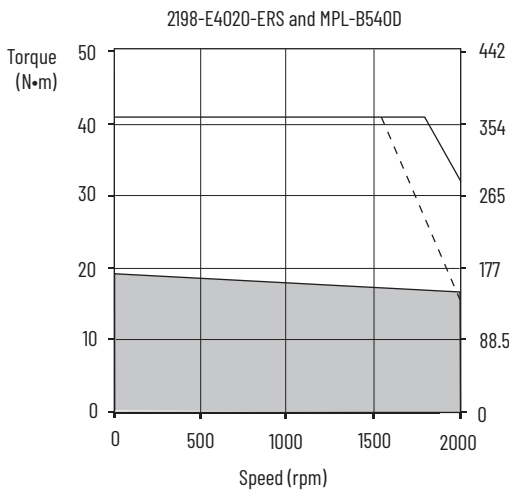
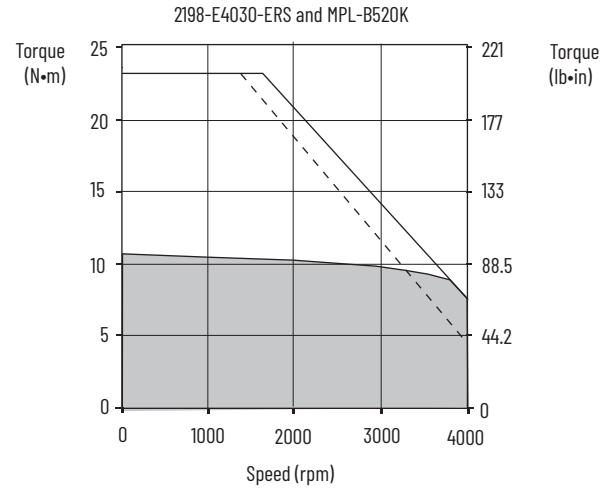
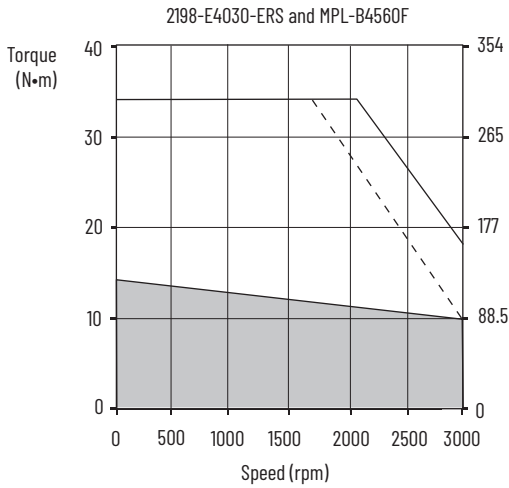
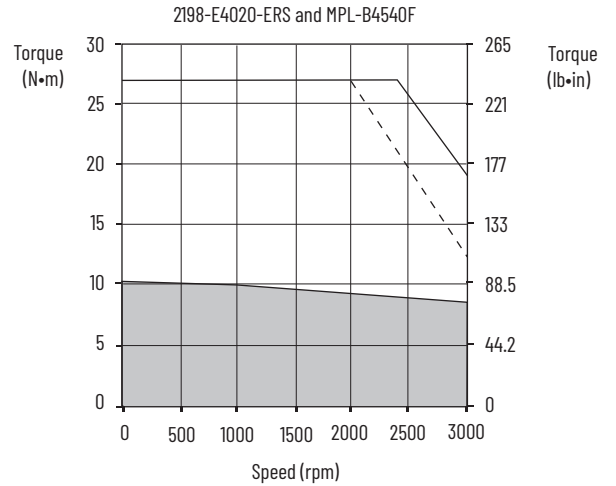
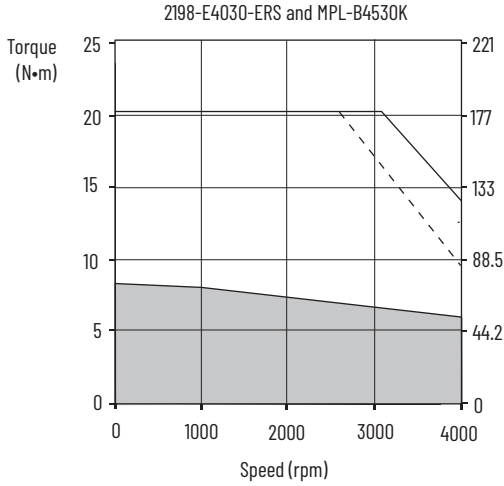
Torque  
(lb·in)



Torque  
(lb·in)

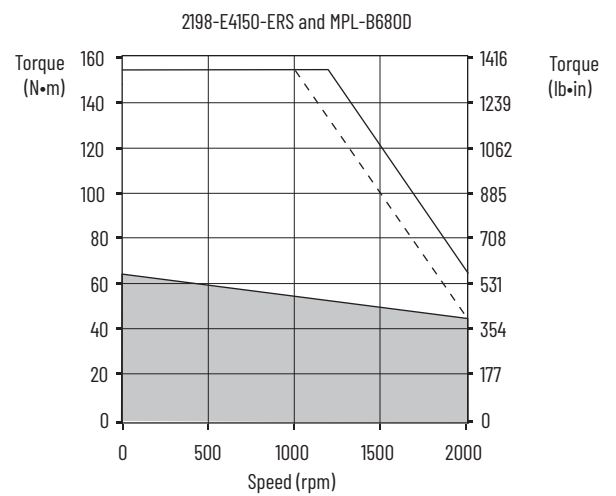
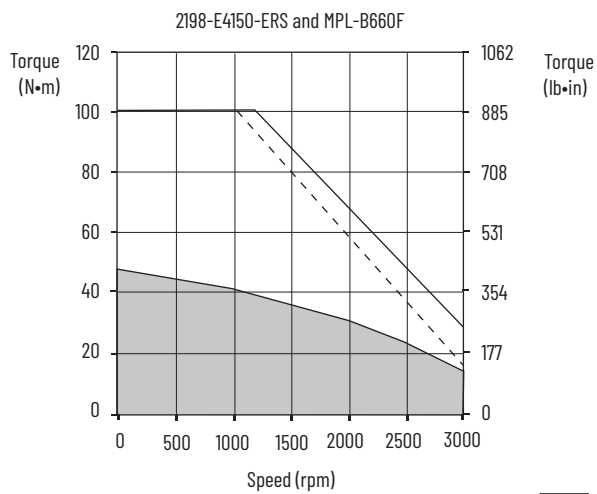
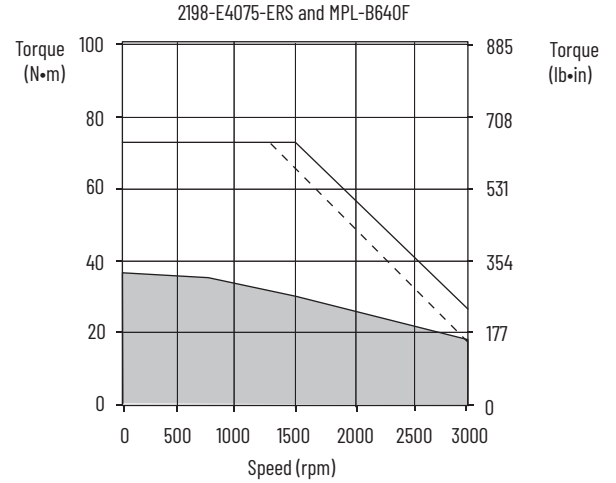
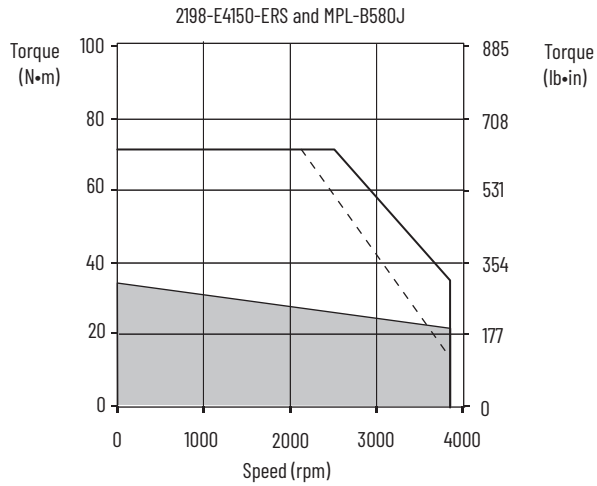
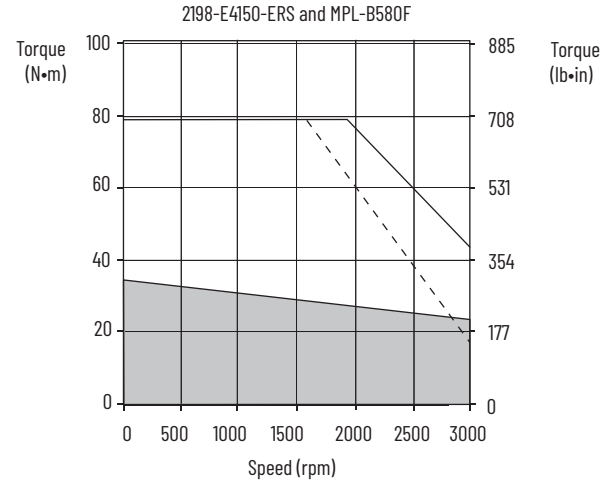
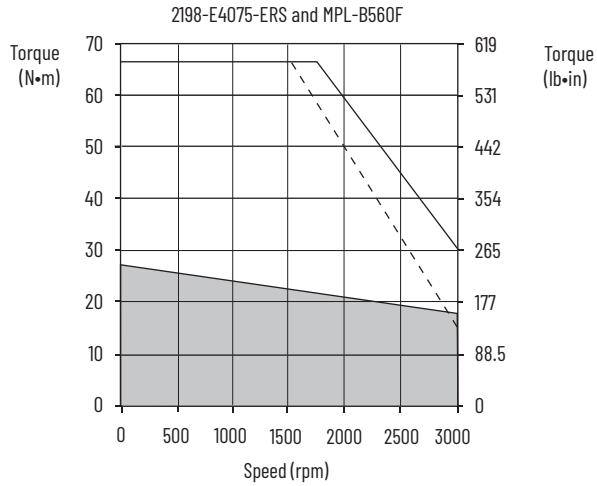
= Intermittent operating region  
 = Continuous operating region  
 - - - = Drive operation with 400V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



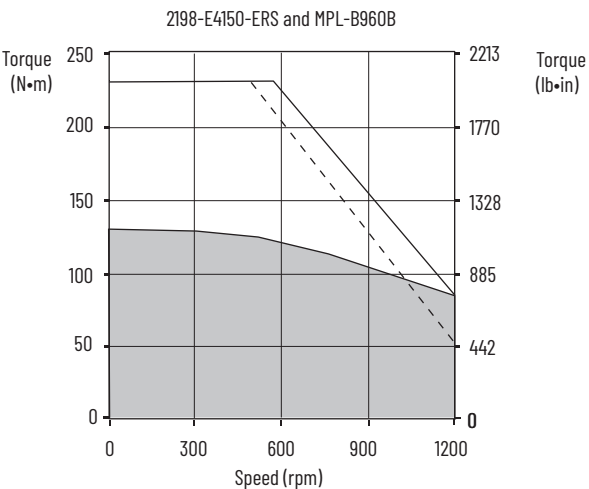
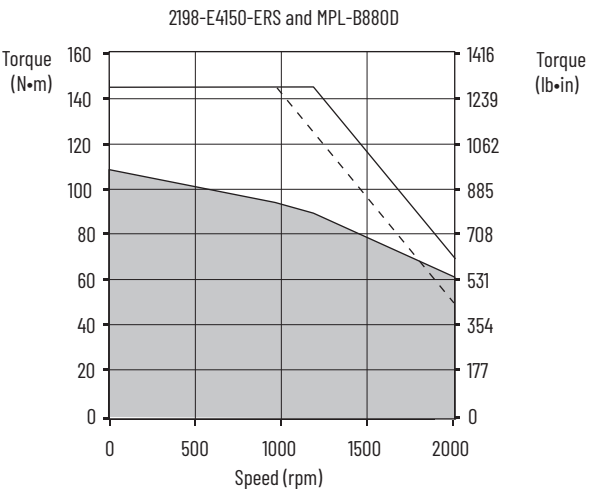
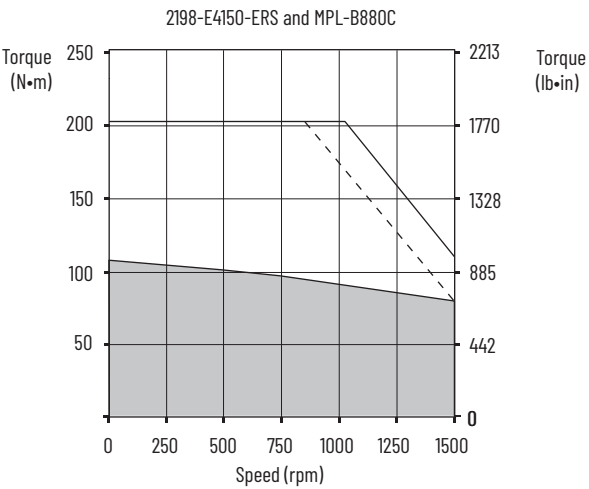
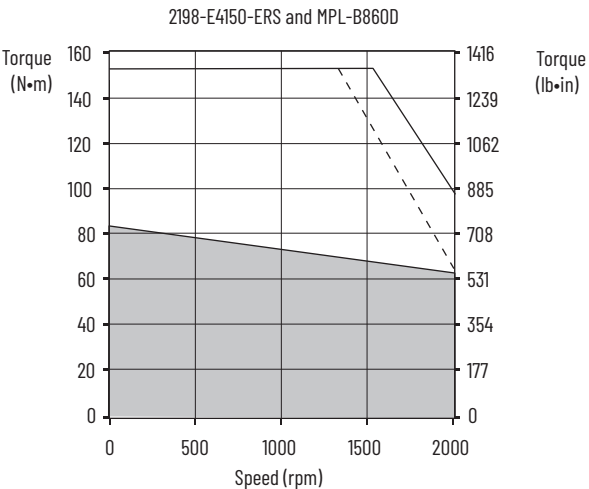
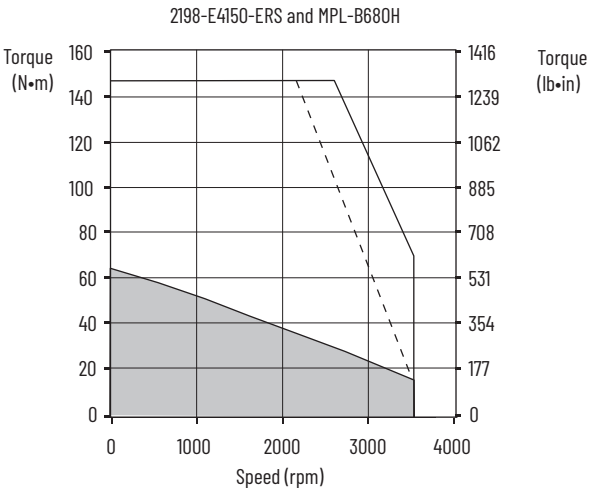
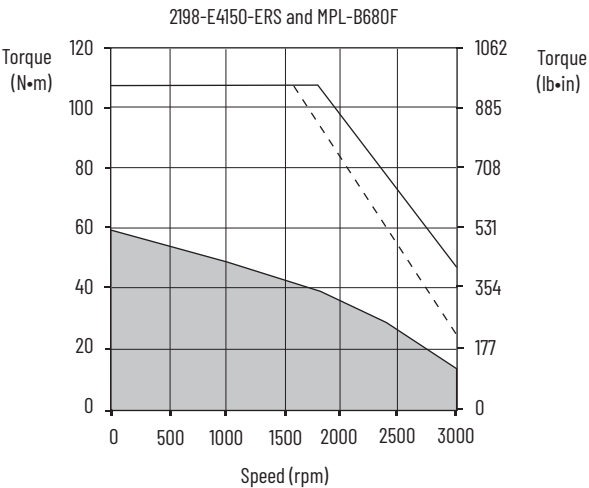
= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 400V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



— = Intermittent operating region  
 ■ = Continuous operating region  
 - - - = Drive operation with 400V AC rms input voltage

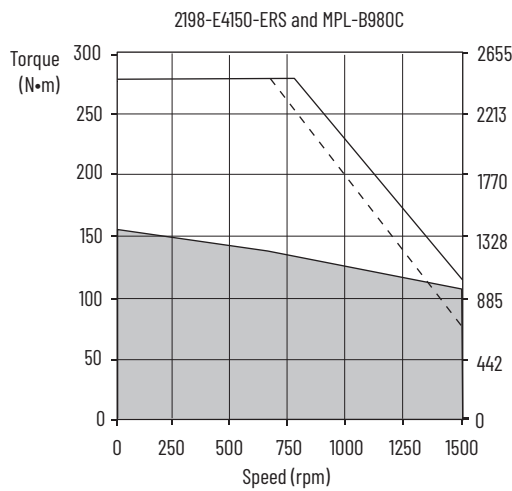
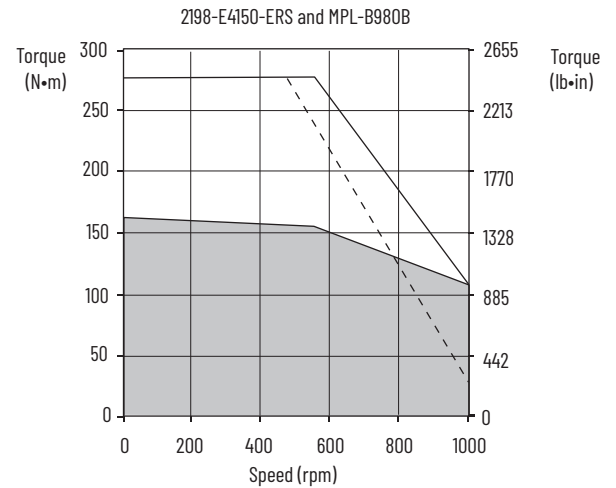
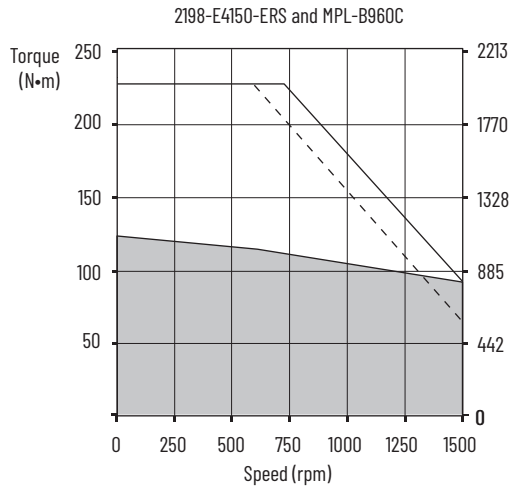
Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



□ = Intermittent operating region  
■ = Continuous operating region  
--- = Drive operation with 400V AC rms input voltage



## Kinetix 5100 (400V-class) Drives/Kinetix MPL Servo Motor Curves (continued)



- = Intermittent operating region
- = Continuous operating region
- = Drive operation with 400V AC rms input voltage

## Kinetix 5100 (200V-class) Drives with Kinetix MPM Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix MPM (200V-class) medium-inertia servo motors with absolute high-resolution encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

### Kinetix MPM Motor Cable Combinations

| Rotary Motor (200V-class)<br>Cat. No.          | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPM-A1151M, MPM-A1152F, MPM-A1153F             | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPM-A1302F                                     | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) |                                                                                                                                                                            |
| MPM-A1304F                                     | 2090-CPxM7DF-12AAxx (standard, non-flex)                                          |                                                                                                                                                                            |
| MPM-A1651F                                     | 2090-CPxM7DF-10AAxx (standard, non-flex)<br>2090-CPxM7DF-10AFxx (continuous-flex) |                                                                                                                                                                            |
| MPM-A1652F, MPM-A1653F                         | 2090-CPxM7DF-08AAxx (standard, non-flex)<br>2090-CPxM7DF-08AFxx (continuous-flex) |                                                                                                                                                                            |
| MPM-A2152F, MPM-A2153F, MPM-A2154C, MPM-A2154E | 2090-CPBM7DF-06AAxx (standard, non-flex)                                          |                                                                                                                                                                            |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

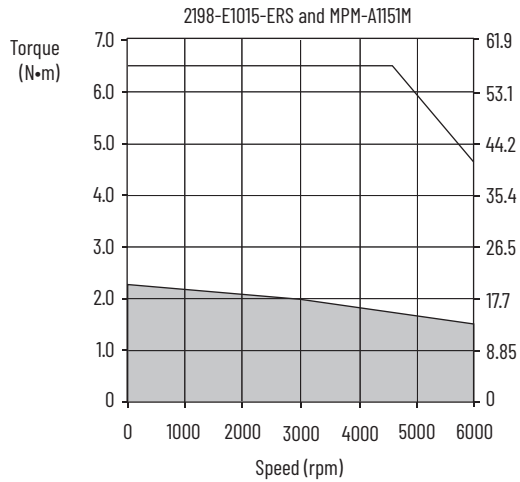
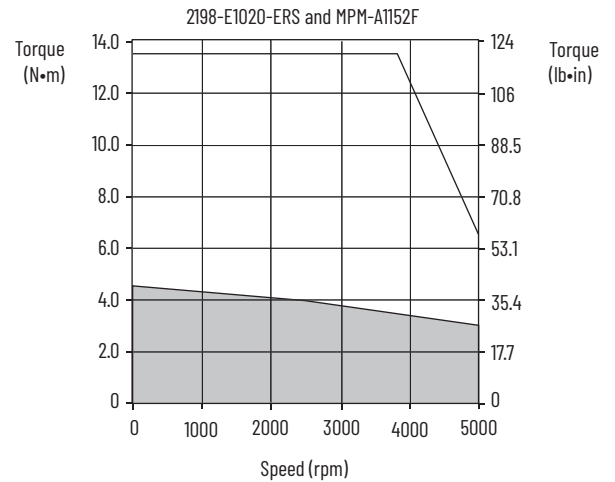
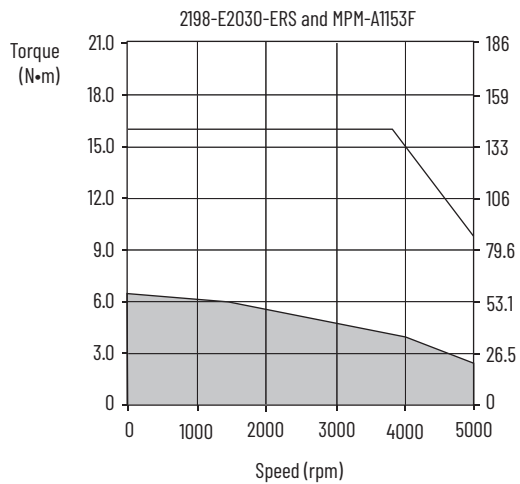
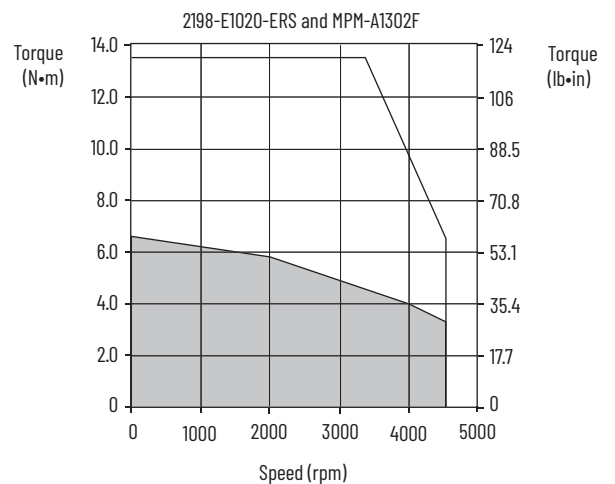
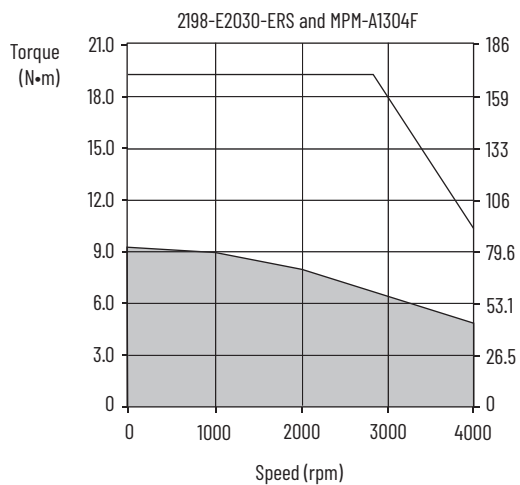
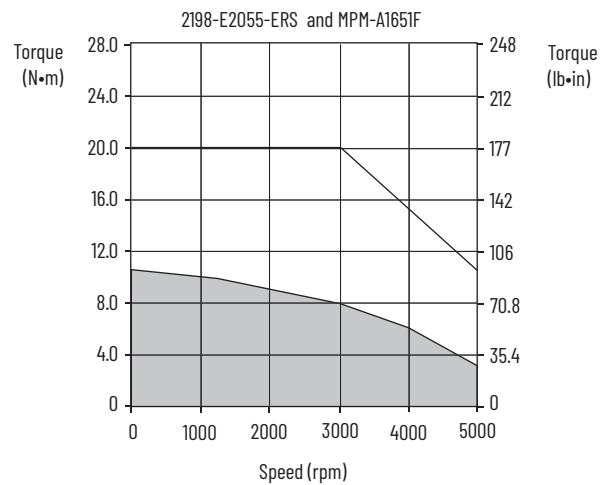
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

### Kinetix MPM Motor Performance Specifications with Kinetix 5100 (200V-class) Drives

| Rotary Motor<br>Cat. No. | Base Speed<br>rpm | Rated Speed<br>rpm | Speed, max<br>rpm | System Continuous<br>Stall Current<br>A 0-pk | System Continuous<br>Stall Torque<br>N·m (lb·in) | System Peak<br>Stall Current<br>A 0-pk | System Peak<br>Stall Torque<br>N·m (lb·in) | Motor Rated<br>Output<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|--------------------------|-------------------|--------------------|-------------------|----------------------------------------------|--------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------|----------------------------------------|
| MPM-A1151M               | 4500              | 5000               | 6000              | 7.65                                         | 2.18 (19.3)                                      | 30.5                                   | 6.6 (58.4)                                 | 0.90                        | 2198-E1015-ERS                         |
| MPM-A1152F               | 3000              | 4000               | 5000              | 11.93                                        | 4.7 (41.6)                                       | 44.8                                   | 13.5 (119)                                 | 1.40                        | 2198-E1020-ERS                         |
| MPM-A1153F               | 3000              | 4000               | 5000              | 16.18                                        | 6.5 (57.5)                                       | 57.4                                   | 17.61 (156)                                | 1.45                        | 2198-E1020-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 64.5                                   | 19.8 (175)                                 |                             | 2198-E2030-ERS                         |
| MPM-A1302F               | 3000              | 4000               | 4500              | 17.28                                        | 5.99 (53.0)                                      | 50.28                                  | 13.5 (119)                                 | 1.65                        | 2198-E1020-ERS                         |
| MPM-A1304F               | 3000              | 3500               | 4000              | 19.65                                        | 9.3 (82.0)                                       | 48.39                                  | 19.3 (171)                                 | 2.20                        | 2198-E2030-ERS                         |
| MPM-A1651F               | 3000              | 3000               | 5000              | 30.96                                        | 10.7 (94.7)                                      | 73.8                                   | 20.5 (181)                                 | 2.50                        | 2198-E2055-ERS                         |
| MPM-A1652F               | 3000              | 3500               | 4000              | 33.54                                        | 13.5 (119)                                       | 103.2                                  | 36.0 (319)                                 | 4.03                        | 2198-E2055-ERS                         |
| MPM-A1653F               | 3000              | 3000               | 4000              | 42.4                                         | 18.6 (165)                                       | 119.1                                  | 42.0 (372)                                 | 5.10                        | 2198-E2055-ERS                         |
| MPM-A2152F               | 3000              | 2000               | 4000              | 58.4                                         | 27.0 (239)                                       | 125.8                                  | 56.0 (495)                                 | 5.20                        | 2198-E2055-ERS                         |
| MPM-A2153F               | 3000              | 2000               | 3600              | 59.65                                        | 34.0 (301)                                       | 120.4                                  | 58.0 (513)                                 | 5.80                        | 2198-E2075-ERS                         |
| MPM-A2154C               | 1500              | 1750               | 2000              | 58.68                                        | 55.0 (487)                                       | 127.3                                  | 106 (938)                                  | 6.50                        | 2198-E2075-ERS                         |
| MPM-A2154E               | 2250              | 2000               | 3000              | 59.67                                        | 44.0 (389)                                       | 128.2                                  | 84.0 (743)                                 | 7.00                        | 2198-E2075-ERS                         |

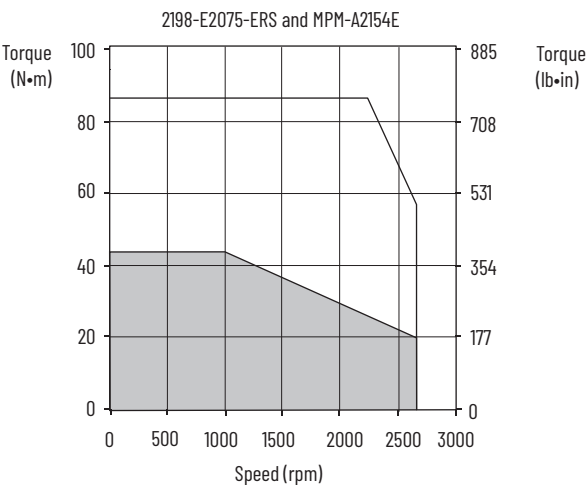
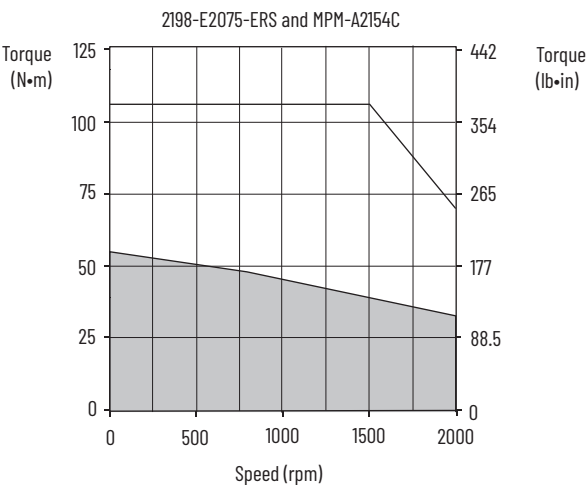
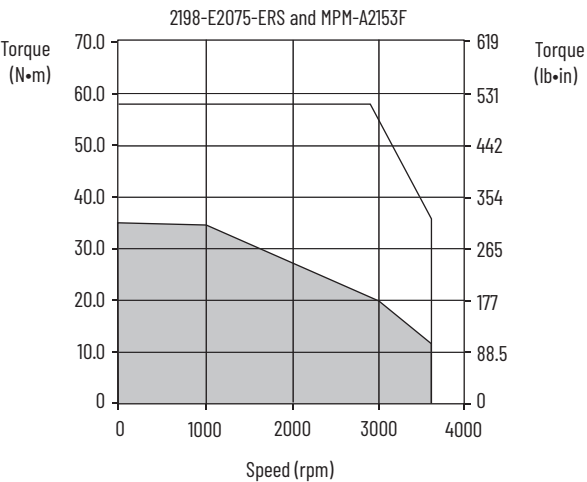
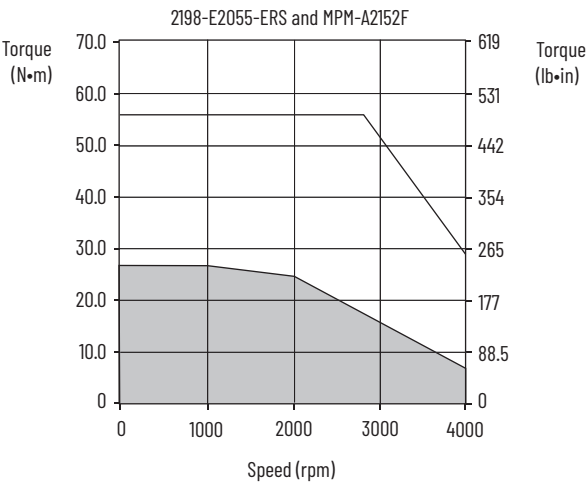
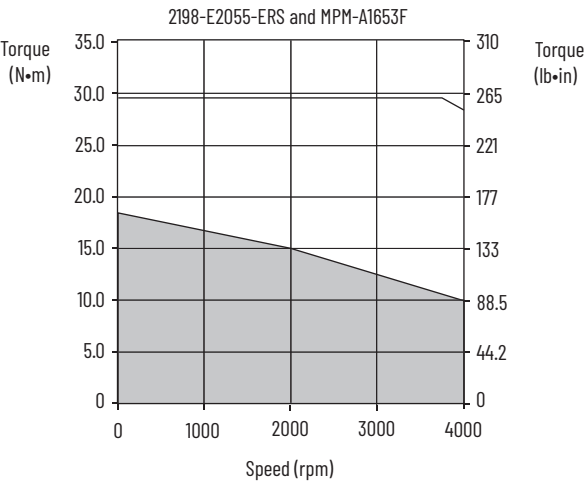
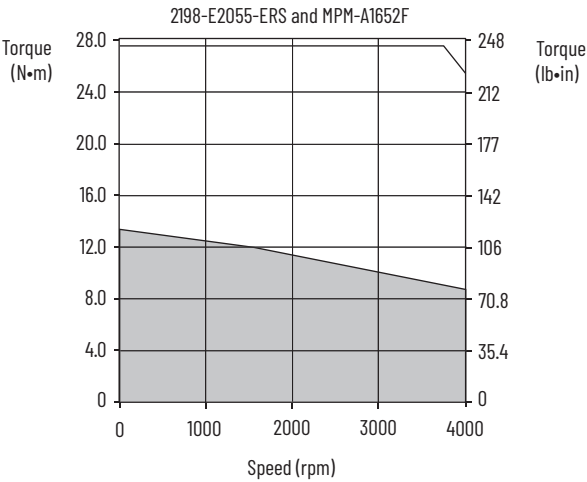
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/Kinetix MPM Servo Motor Curves

Torque  
(lb·in)Torque  
(lb·in)Torque  
(lb·in)Torque  
(lb·in)Torque  
(lb·in)Torque  
(lb·in)

□ = Intermittent operating region  
 ■ = Continuous operating region

Kinetix 5100 (200V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



□ = Intermittent operating region  
■ = Continuous operating region

# Kinetix 5100 (400V-class) Drives with Kinetix MPM Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 400 and 480V, nominal input) when matched with Kinetix MPM (400V-class) medium-inertia motors with absolute high-resolution encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

## Kinetix MPM Motor Cable Combinations

| Rotary Motor (400V-class)<br>Cat. No.          | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                                       |
|------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPM-B1151x, MPM-B1152x, MPM-B1153E, MPM-B1153F | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or <sup>(2)</sup><br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPM-B1302F, MPM-B1302M, MPM-B1304C, MPM-B1304E |                                                                                   |                                                                                                                                                                                           |
| MPM-B1651C, MPM-B1652C                         |                                                                                   |                                                                                                                                                                                           |
| MPM-B1153T                                     | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) |                                                                                                                                                                                           |
| MPM-B1302T, MPM-B1304M                         |                                                                                   |                                                                                                                                                                                           |
| MPM-B1651F, MPM-B1653C                         |                                                                                   |                                                                                                                                                                                           |
| MPM-B1651M, MPM-B1652E, MPM-B1652F, MPM-B1653E | 2090-CPxM7DF-10AAxx (standard, non-flex)<br>2090-CPxM7DF-10AFxx (continuous-flex) |                                                                                                                                                                                           |
| MPM-B2152C, MPM-B2153B                         |                                                                                   |                                                                                                                                                                                           |
| MPM-B1653F                                     | 2090-CPxM7DF-08AAxx (standard, non-flex)<br>2090-CPxM7DF-08AFxx (continuous-flex) |                                                                                                                                                                                           |
| MPM-B2152F, MPM-B2152M, MPM-B2153E, MPM-B2153F |                                                                                   |                                                                                                                                                                                           |
| MPM-B2154B, MPM-B2154E, MPM-B2154F             |                                                                                   |                                                                                                                                                                                           |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

(2) Applies to Kinetix 5100 drives and MPM-B1xxx-M/S through MPM-B2xxx-M/S motors with absolute high-resolution feedback.

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPM Motor Performance with Kinetix 5100 (400V-class) Drives

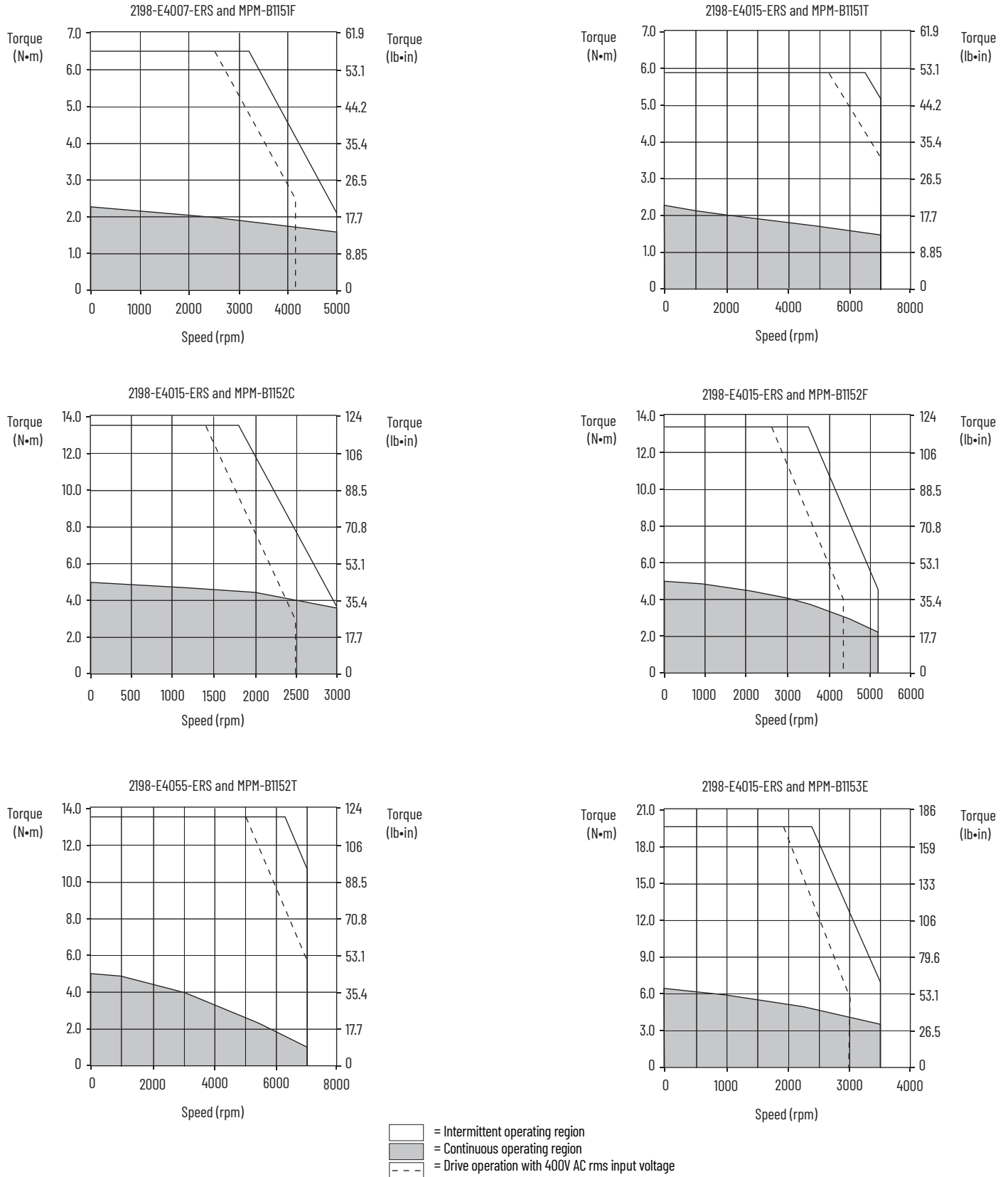
| Rotary Motor<br>Cat. No. | Base Speed<br>rpm | Rated Speed<br>rpm | Speed, max<br>rpm | System Continuous<br>Stall Current<br>A 0-pk | System Continuous<br>Stall Torque<br>N·m (lb·in) | System Peak<br>Stall Current<br>A 0-pk | System Peak<br>Stall Torque<br>N·m (lb·in) | Motor Rated<br>Output<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|--------------------------|-------------------|--------------------|-------------------|----------------------------------------------|--------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------|----------------------------------------|
| MPM-B1151F               | 3000              | 4000               | 5000              | 2.71                                         | 2.3 (20.3)                                       | 9.91                                   | 6.6 (58.0)                                 | 0.75                        | 2198-E4007-ERS                         |
| MPM-B1151T               | 6000              | 5000               | 7000              | 5.62                                         | 2.3 (20.3)                                       | 20.53                                  | 5.9 (52.2)                                 | 0.90                        | 2198-E4015-ERS                         |
| MPM-B1152C               | 1500              | 2500               | 3000              | 3.61                                         | 5.0 (44.2)                                       | 11.30                                  | 12.3 (109)                                 | 1.20                        | 2198-E4007-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 12.42                                  | 13.5 (119)                                 |                             | 2198-E4015-ERS                         |
| MPM-B1152F               | 3000              | 4000               | 5200              | 6.17                                         | 5.0 (44.2)                                       | 21.19                                  | 13.5 (119)                                 | 1.40                        | 2198-E4015-ERS                         |
| MPM-B1152T               | 6000              | 4000               | 7000              | 11.02                                        | 5.0 (44.2)                                       | 36.90                                  | 13.1 (116)                                 | 1.40                        | 2198-E4030-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 37.90                                  | 13.5 (119)                                 |                             | 2198-E4055-ERS                         |
| MPM-B1153E               | 2250              | 3000               | 3500              | 6.21                                         | 6.5 (57.5)                                       | 21.61                                  | 19.8 (175)                                 | 1.40                        | 2198-E4015-ERS                         |
| MPM-B1153F               | 3000              | 4000               | 5500              | 9.20                                         | 6.5 (57.5)                                       | 29.40                                  | 18.19 (161)                                | 1.40                        | 2198-E4020-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 32.0                                   | 19.8 (175)                                 |                             | 2198-E4030-ERS                         |
| MPM-B1153T               | 6000              | 4000               | 7000              | 15.95                                        | 6.5 (57.5)                                       | 36.90                                  | 11.0 (97.1)                                | 1.45                        | 2198-E4030-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 55.47                                  | 16.5 (146)                                 |                             | 2198-E4075-ERS                         |
| MPM-B1302F               | 3000              | 4000               | 4500              | 8.57                                         | 6.6 (58.4)                                       | 21.40                                  | 13.1 (116)                                 | 1.65                        | 2198-E4015-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 22.12                                  | 13.5 (119)                                 |                             | 2198-E4020-ERS                         |
| MPM-B1302M               | 4500              | 4000               | 6000              | 12.57                                        | 6.6 (58.4)                                       | 32.44                                  | 13.5 (119)                                 | 1.65                        | 2198-E4030-ERS                         |
| MPM-B1302T               | 6000              | 4000               | 7000              | 16.83                                        | 6.7 (59.3)                                       | 36.90                                  | 11.5 (102)                                 | 1.65                        | 2198-E4030-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 43.44                                  | 13.5 (119)                                 |                             | 2198-E4055-ERS                         |
| MPM-B1304C               | 1500              | 1870               | 2750              | 7.00                                         | 10.3 (91.1)                                      | 21.40                                  | 26.0 (230)                                 | 2.00                        | 2198-E4015-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 22.30                                  | 27.1 (240)                                 |                             | 2198-E4020-ERS                         |
| MPM-B1304E               | 2250              | 3500               | 4000              | 10.49                                        | 9.9 (87.6)                                       | 29.40                                  | 23.3 (206)                                 | 2.20                        | 2198-E4020-ERS                         |
|                          |                   |                    |                   | 10.75                                        | 10.2 (90.3)                                      | 34.25                                  | 27.1 (240)                                 |                             | 2198-E4030-ERS                         |
| MPM-B1304M               | 4500              | 3500               | 6000              | 19.02                                        | 10.4 (92.0)                                      | 36.90                                  | 16.5 (146)                                 | 2.20                        | 2198-E4030-ERS                         |
|                          |                   |                    |                   |                                              |                                                  | 60.60                                  | 27.1 (240)                                 |                             | 2198-E4075-ERS                         |
| MPM-B1651C               | 1500              | 3000               | 3500              | 10.21                                        | 11.4 (101)                                       | 29.29                                  | 23.2 (205)                                 | 2.50                        | 2198-E4020-ERS                         |

## Kinetix MPM Motor Performance with Kinetix 5100 (400V-class) Drives (continued)

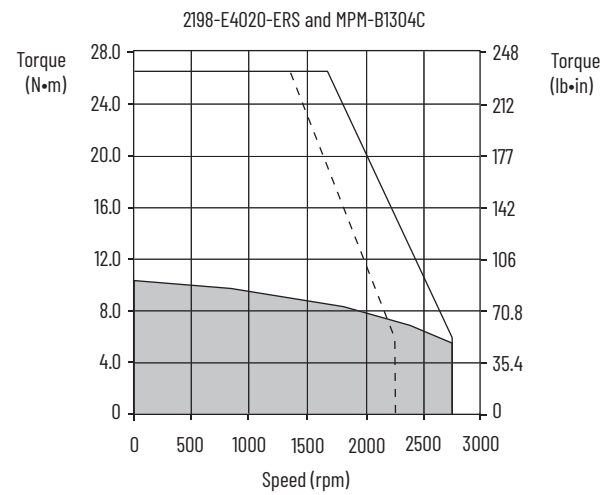
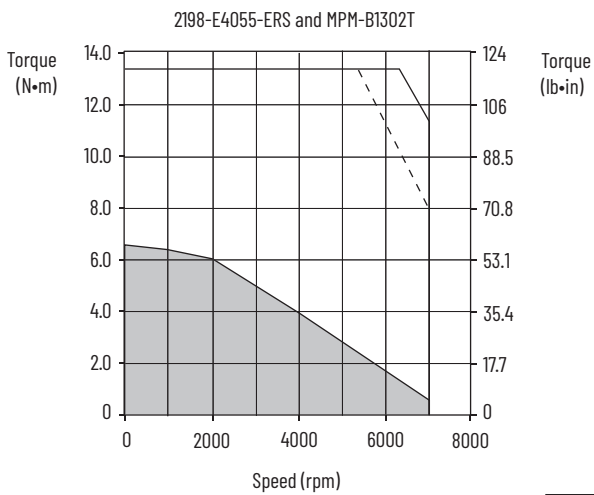
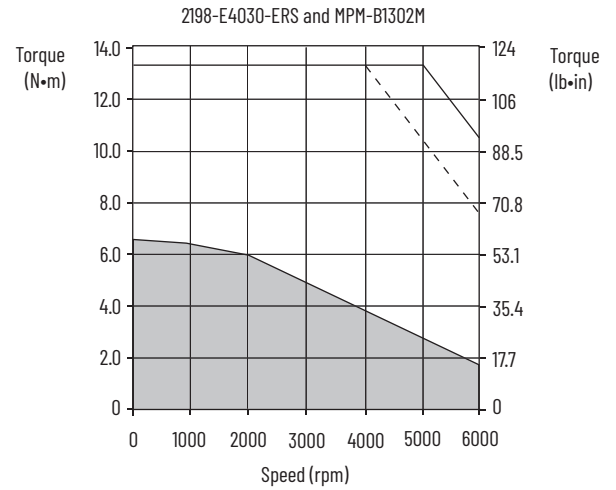
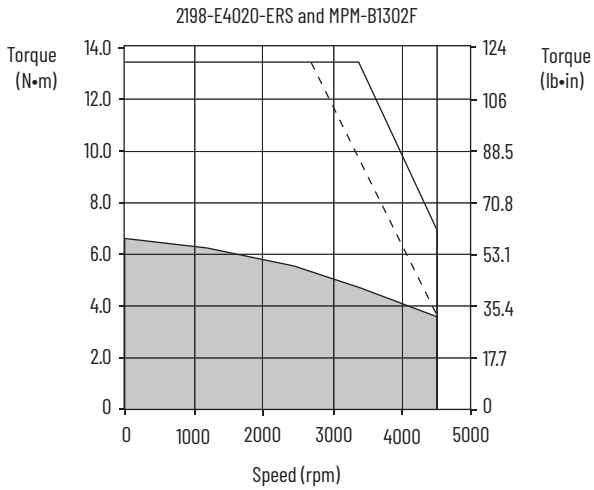
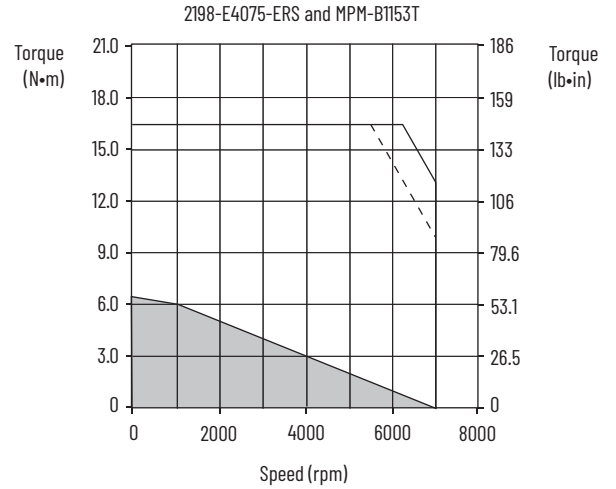
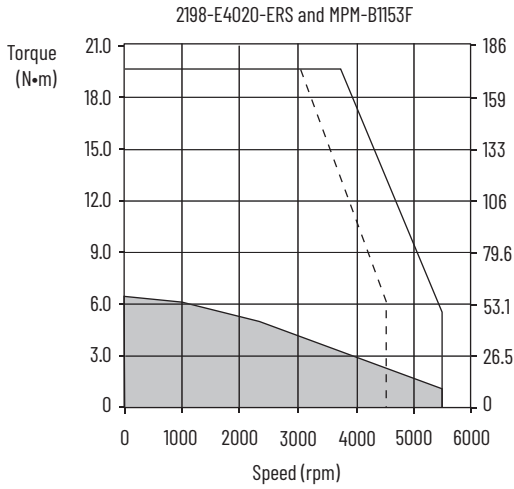
| Rotary Motor Cat. No. | Base Speed rpm | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N•m (lb•in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N•m (lb•in) | Motor Rated Output kW | Kinetix 5100 Drives (480V AC input) |
|-----------------------|----------------|-----------------|----------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPM-B1651F            | 3000           | 3000            | 5000           | 17.75                                  | 11.4 (101)                                 | 36.90                            | 16.8 (149)                           | 2.50                  | 2198-E4030-ERS                      |
|                       |                |                 |                |                                        |                                            | 50.93                            | 23.2 (205)                           |                       | 2198-E4055-ERS                      |
| MPM-B1651M            | 4500           | 3000            | 5000           | 22.46                                  | 11.4 (101)                                 | 36.90                            | 15.0 (133)                           | 2.50                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 56.89                            | 23.2 (205)                           |                       | 2198-E4075-ERS                      |
| MPM-B1652C            | 1500           | 2500            | 2500           | 11.51                                  | 16.0 (142)                                 | 33.63                            | 40.0 (354)                           | 3.80                  | 2198-E4030-ERS                      |
| MPM-B1652E            | 2250           | 3500            | 3500           | 20.94                                  | 21.1 (187)                                 | 53.20                            | 42.2 (374)                           | 4.30                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 60.53                            | 48.0 (425)                           |                       | 2198-E4075-ERS                      |
| MPM-B1652F            | 3000           | 3500            | 4500           | 28.74                                  | 21.1 (187)                                 | 75.39                            | 43.02 (381)                          | 4.30                  | 2198-E4075-ERS                      |
|                       |                |                 |                |                                        |                                            | 84.12                            | 48.0 (425)                           |                       | 2198-E4150-ERS                      |
| MPM-B1653C            | 1500           | 2000            | 2500           | 20.05                                  | 26.7 (236)                                 | 36.90                            | 42.2 (374)                           | 4.60                  | 2198-E4030-ERS                      |
|                       |                |                 |                |                                        |                                            | 59.26                            | 67.8 (600)                           |                       | 2198-E4075-ERS                      |
| MPM-B1653E            | 2250           | 3000            | 3500           | 27.00                                  | 26.8 (237)                                 | 53.20                            | 45.2 (400)                           | 5.10                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 72.97                            | 62.0 (549)                           |                       | 2198-E4075-ERS                      |
| MPM-B1653F            | 3000           | 3000            | 4000           | 34.94                                  | 31.0 (274)                                 | 53.20                            | 31.6 (280)                           | 5.10                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 94.36                            | 56.1 (496)                           |                       | 2198-E4150-ERS                      |
| MPM-B2152C            | 1500           | 2000            | 2500           | 27.40                                  | 36.7 (325)                                 | 53.20                            | 69.3 (613)                           | 5.60                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 55.49                            | 72.3 (640)                           |                       | 2198-E4075-ERS                      |
| MPM-B2152F            | 3000           | 2500            | 4500           | 43.54                                  | 34.1 (302)                                 | 98.06                            | 72.2 (639)                           | 5.90                  | 2198-E4150-ERS                      |
| MPM-B2152M            | 4500           | 2500            | 5000           | 44.58                                  | 34.1 (302)                                 | 76.37                            | 50.0 (442)                           | 5.90                  | 2198-E4150-ERS                      |
| MPM-B2153B            | 1250           | 1750            | 2000           | 24.06                                  | 48.0 (425)                                 | 53.20                            | 89.6 (793)                           | 6.80                  | 2198-E4055-ERS                      |
|                       |                |                 |                |                                        |                                            | 60.0                             | 101.1 (895)                          |                       | 2198-E4075-ERS                      |
| MPM-B2153E            | 2250           | 2000            | 3000           | 39.63                                  | 47.9 (424)                                 | 75.40                            | 77.4 (685)                           | 7.20                  | 2198-E4075-ERS                      |
|                       |                |                 |                |                                        |                                            | 98.43                            | 101 (895)                            |                       | 2198-E4150-ERS                      |
| MPM-B2153F            | 3000           | 2000            | 3800           | 43.86                                  | 45.6 (403)                                 | 98.4                             | 98.9 (875)                           | 7.20                  | 2198-E4150-ERS                      |
| MPM-B2154B            | 1250           | 1750            | 2000           | 35.46                                  | 62.7 (555)                                 | 75.40                            | 118 (1048)                           | 6.90                  | 2198-E4075-ERS                      |
|                       |                |                 |                |                                        |                                            | 98.02                            | 154 (1363)                           |                       | 2198-E4150-ERS                      |
| MPM-B2154E            | 2250           | 2000            | 3000           | 43.68                                  | 55.9 (495)                                 | 98.37                            | 112 (991)                            | 7.50                  | 2198-E4150-ERS                      |
| MPM-B2154F            | 3000           | 2000            | 3300           | 44.40                                  | 56.2 (497)                                 | 83.86                            | 87.9 (778)                           | 7.50                  | 2198-E4150-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves



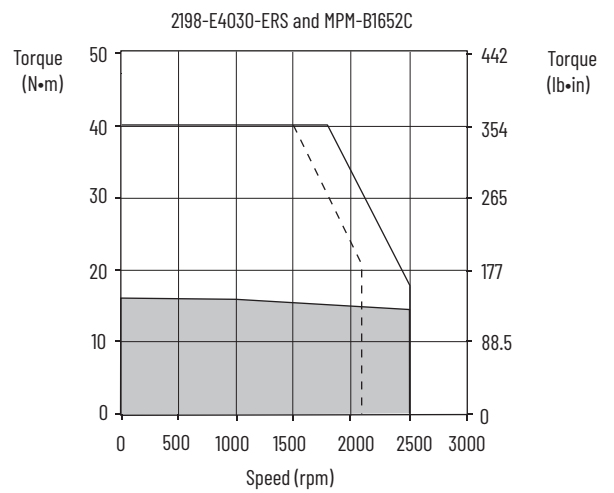
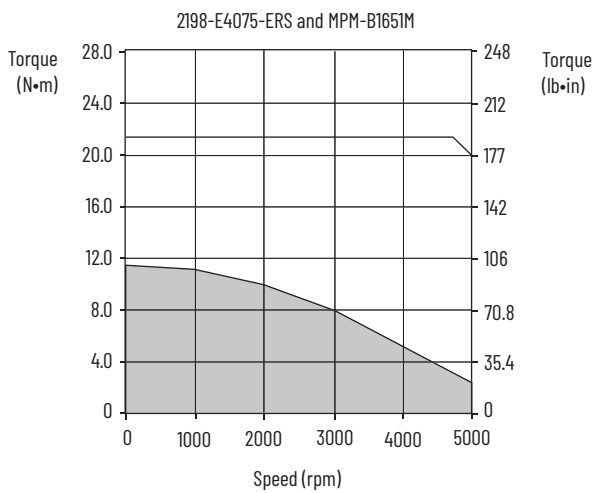
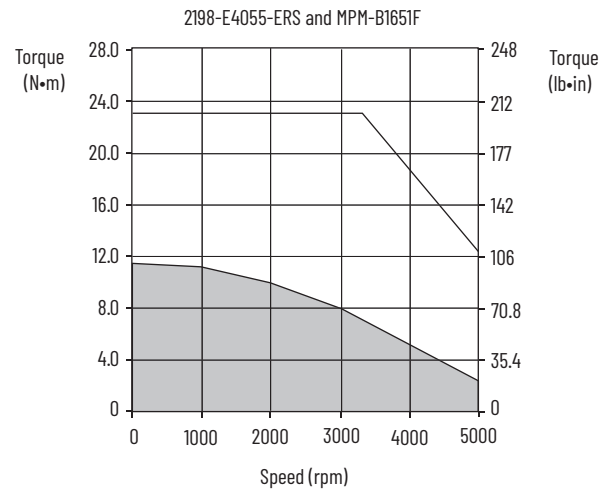
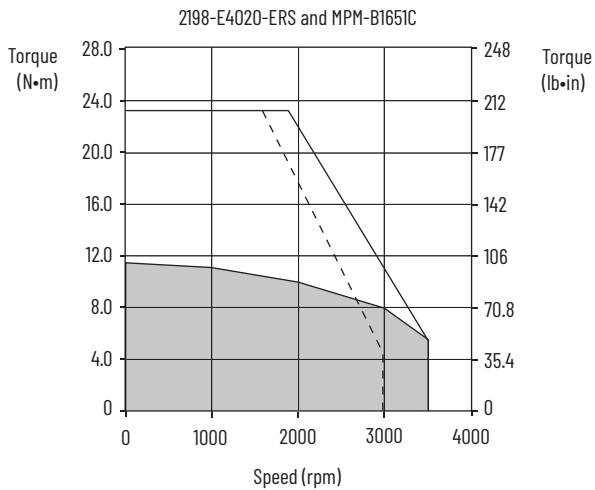
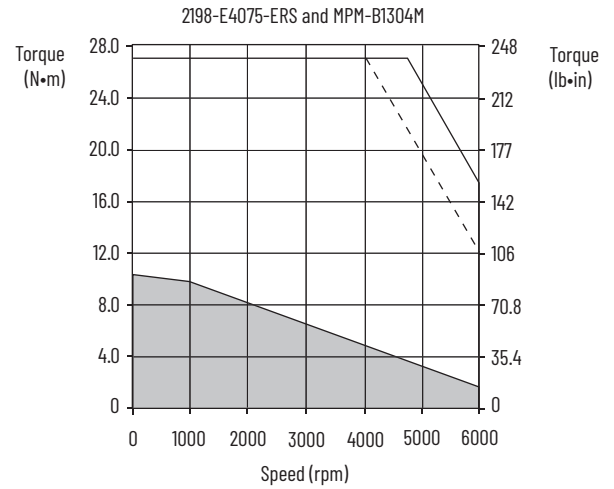
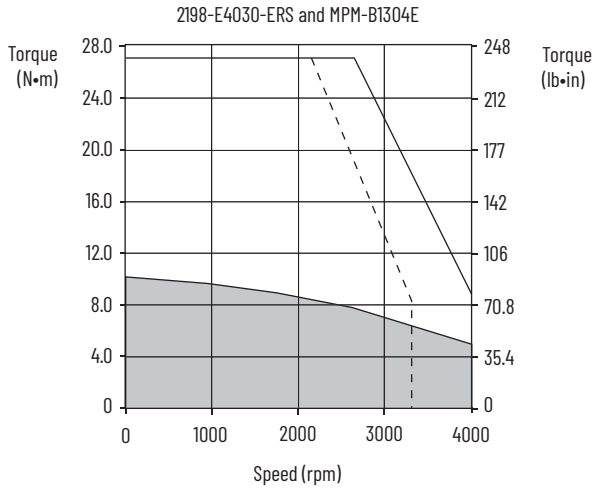
## Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 400V AC rms input voltage

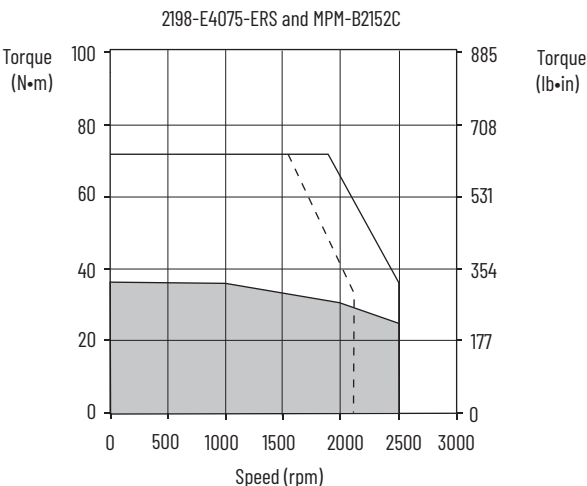
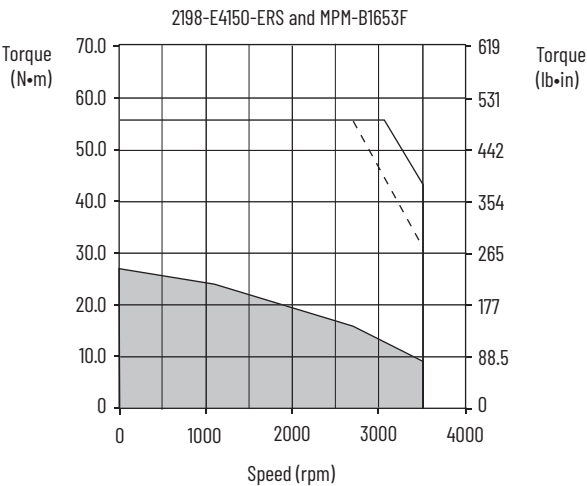
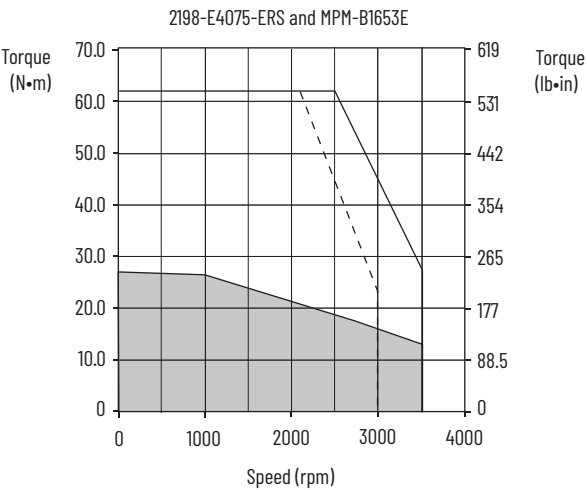
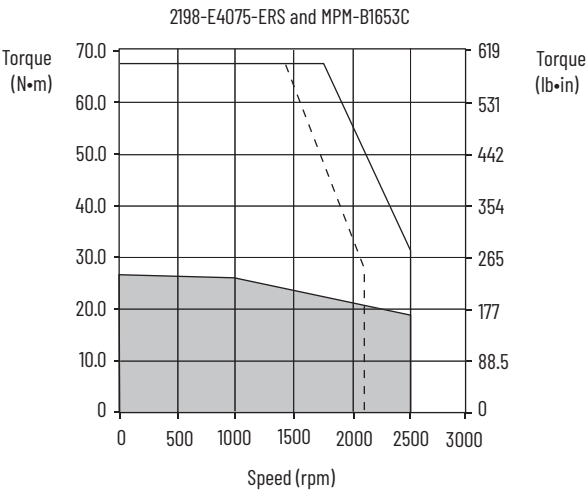
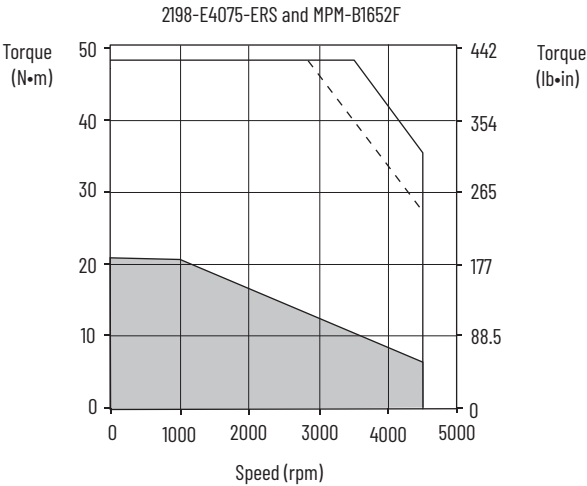
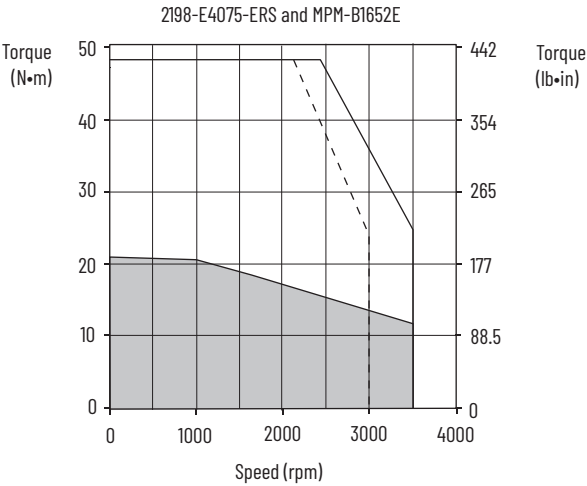


## Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



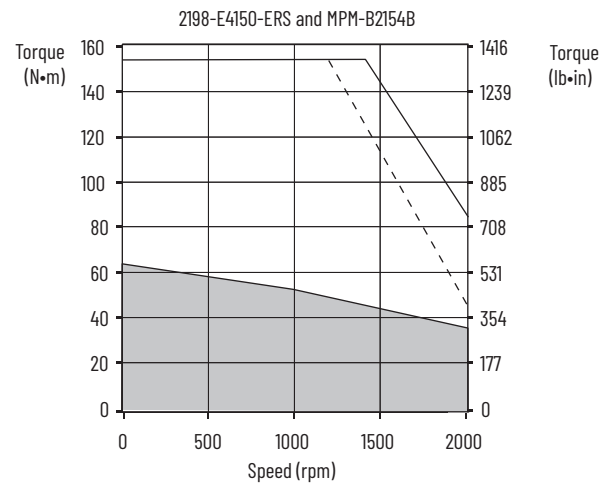
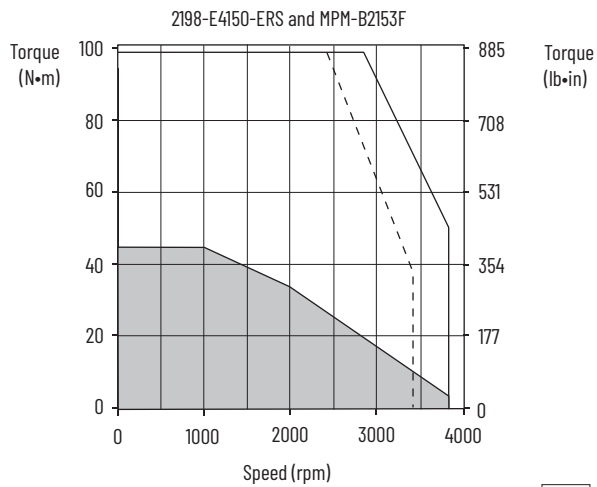
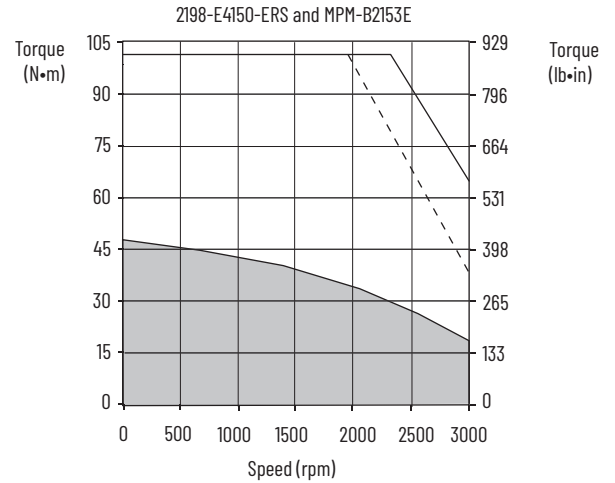
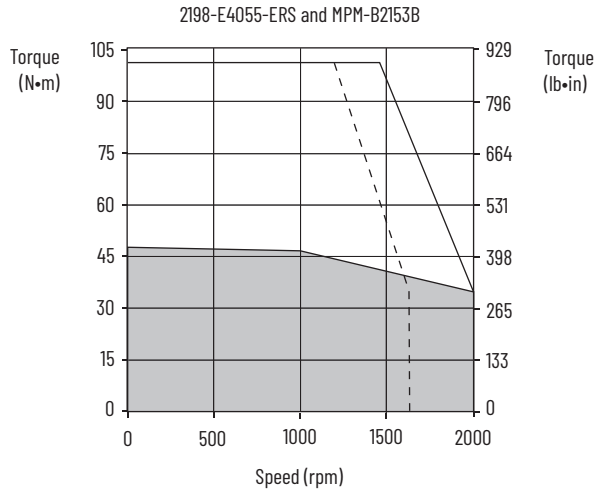
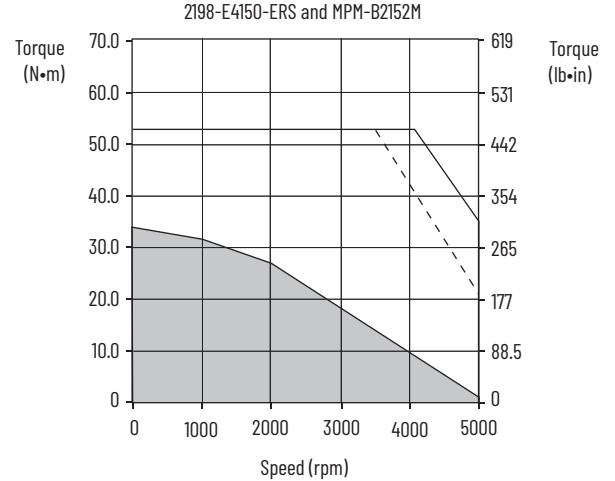
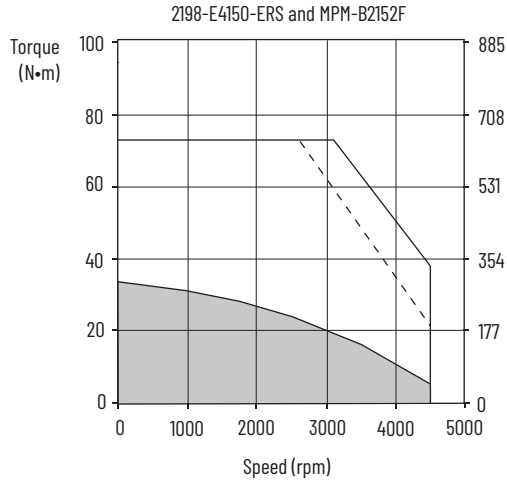
— = Intermittent operating region  
 ■ = Continuous operating region  
 --- = Drive operation with 400V AC rms input voltage

# Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



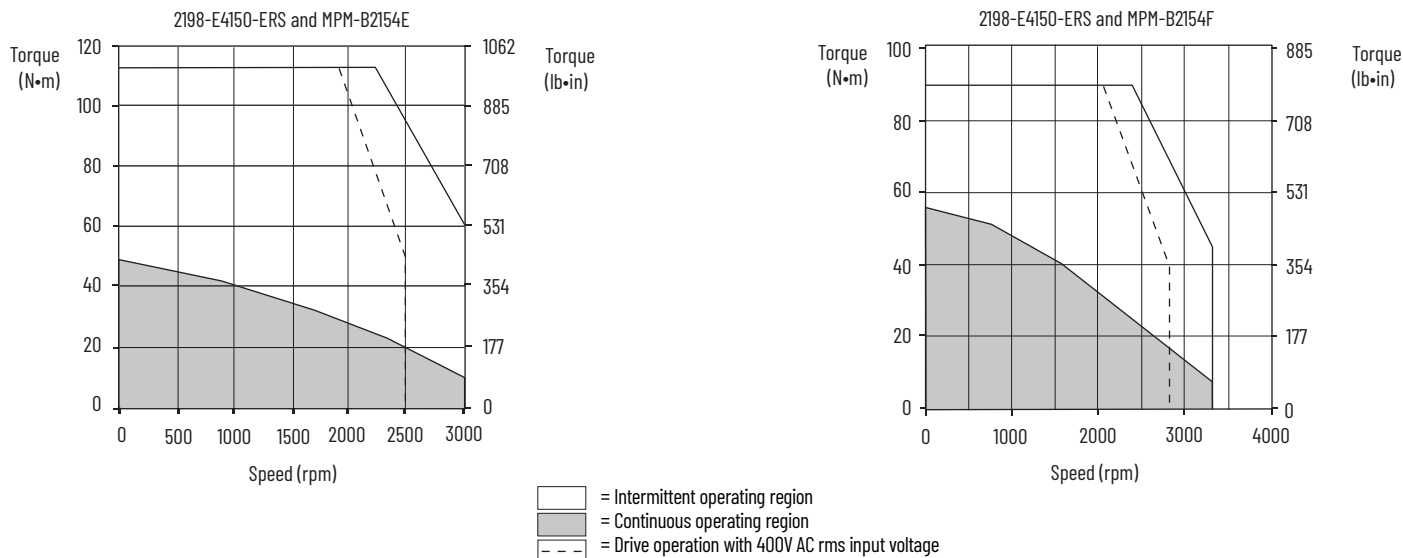
= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 400V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



— = Intermittent operating region  
 — = Continuous operating region  
 - - - = Drive operation with 400V AC rms input voltage

## Kinetix 5100 (400V-class) Drives/Kinetix MPM Servo Motor Curves (continued)



## Kinetix 5100 (200V-class) Drives with Kinetix MPF Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix MPF (200V-class) servo motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix MPF Servo Motor and Cable Combinations

| Rotary Motor (200V-class)<br>Cat. No.      | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|--------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPF-A310P, MPF-A320H, MPF-A320P, MPF-A330P | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPF-A430H                                  |                                                                                   |                                                                                                                                                                            |
| MPF-A430P                                  | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) |                                                                                                                                                                            |
| MPF-A4540F, MPF-A4530K                     |                                                                                   |                                                                                                                                                                            |
| MPF-A540K                                  | 2090-CPxM7DF-08AAxx (standard, non-flex)<br>2090-CPxM7DF-08AFxx (continuous-flex) |                                                                                                                                                                            |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

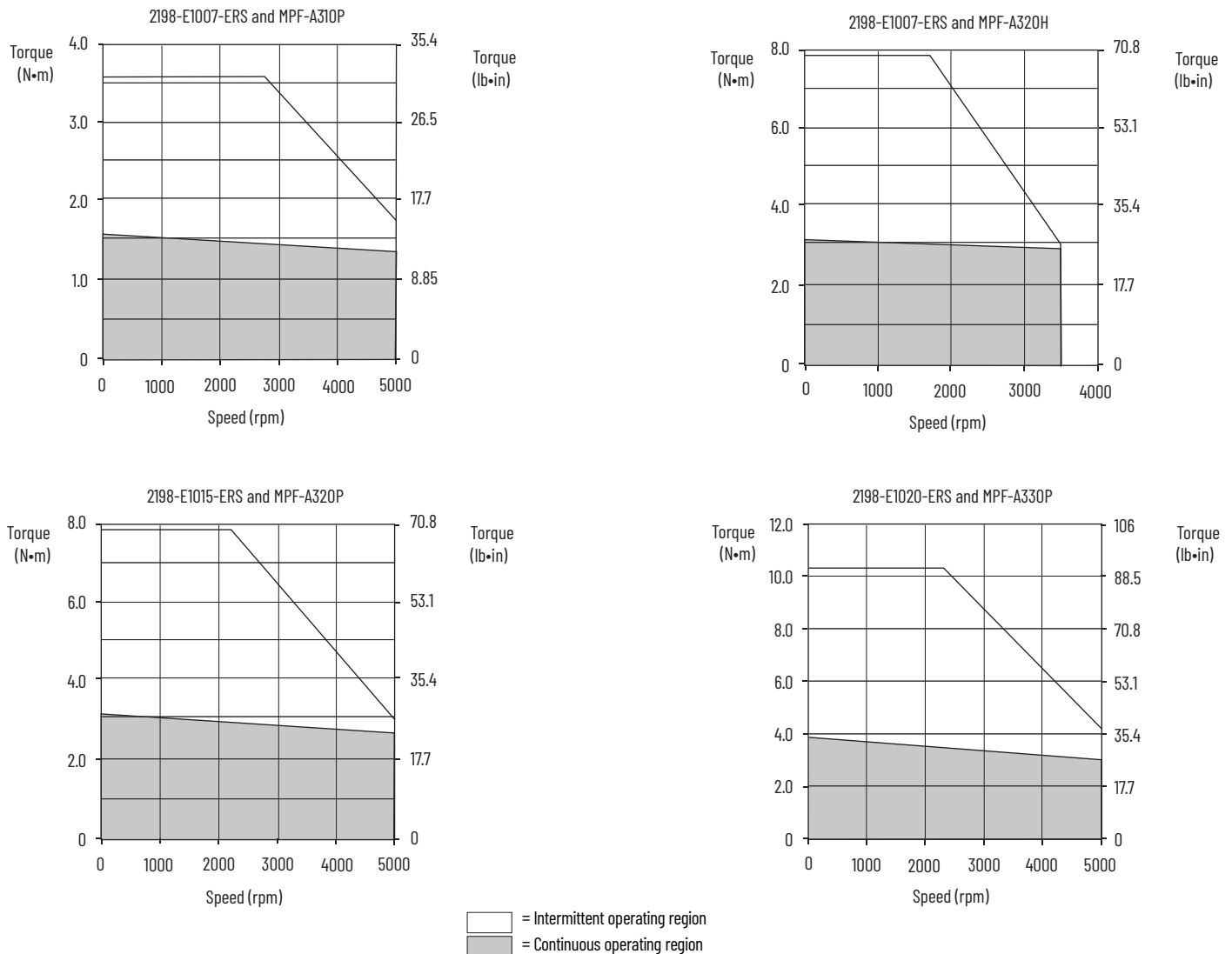
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPF Motor Performance Specifications with Kinetix 5100 (200V-class) Drives

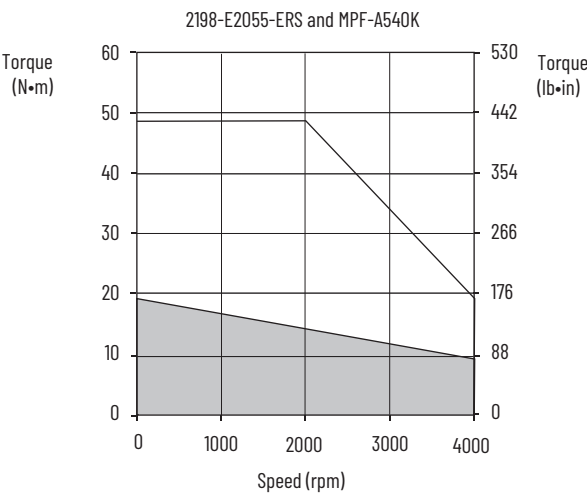
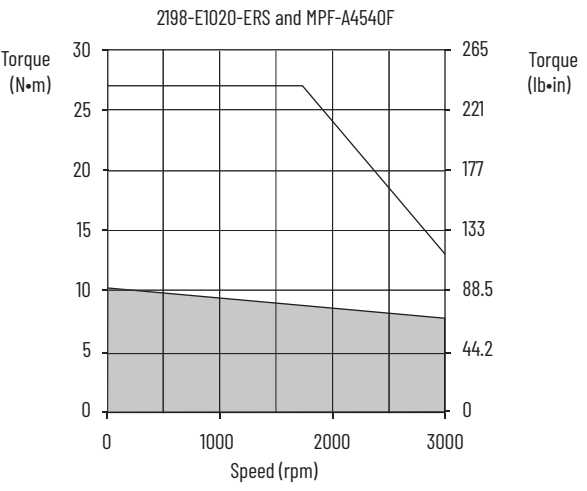
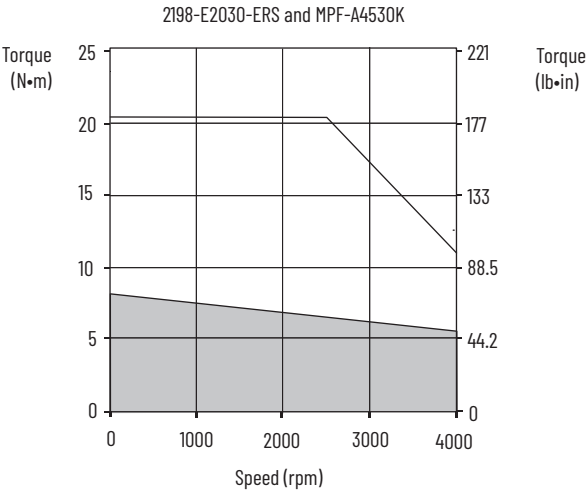
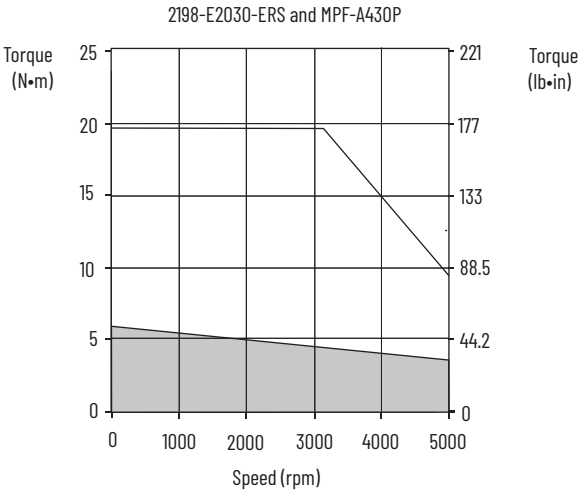
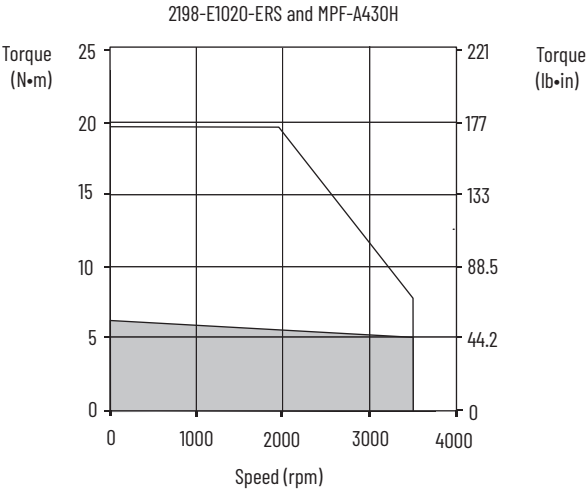
| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|----------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPF-A310P             | 4750            | 5000           | 4.85                                   | 1.58 (14.0)                                | 14.0                             | 3.61 (31.9)                          | 0.73                  | 2198-E1007-ERS                      |
| MPF-A320H             | 3350            | 3500           | 6.10                                   | 3.05 (27.0)                                | 19.3                             | 7.91 (70.0)                          | 1.0                   | 2198-E1007-ERS                      |
| MPF-A320P             | 4750            | 5000           | 9.00                                   | 3.05 (27.0)                                | 29.5                             | 7.91 (70.0)                          | 1.3                   | 2198-E1015-ERS                      |
| MPF-A330P             | 5000            | 5000           | 12.0                                   | 4.18 (37.0)                                | 38.0                             | 11.10 (98.2)                         | 1.6                   | 2198-E1020-ERS                      |
| MPF-A430H             | 3500            | 3500           | 12.2                                   | 6.21 (55.0)                                | 45.0                             | 19.80 (175)                          | 1.8                   | 2198-E1020-ERS                      |
| MPF-A430P             | 5000            | 5000           | 16.80                                  | 5.99 (53.0)                                | 57.4                             | 16.96 (150)                          | 1.9                   | 2198-E1020-ERS                      |
|                       |                 |                |                                        |                                            | 67.0                             | 19.80 (175)                          |                       | 2198-E2030-ERS                      |
| MPF-A4530K            | 4000            | 4000           | 19.50                                  | 8.13 (71.9)                                | 62.0                             | 20.30 (179)                          | 2.3                   | 2198-E2030-ERS                      |
| MPF-A4540F            | 3000            | 3000           | 18.40                                  | 10.20 (90.3)                               | 57.4                             | 27.10 (239)                          | 2.5                   | 2198-E1020-ERS                      |
| MPF-A540K             | 4000            | 4000           | 41.50                                  | 19.40 (172)                                | 120.0                            | 48.60 (430)                          | 4.1                   | 2198-E2055-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (200V-class) Drives/Kinetix MPF Servo Motor Curves



# Kinetix 5100 (200V-class) Drives/Kinetix MPF Servo Motor Curves (continued)



 = Intermittent operating region  
 = Continuous operating region

# Kinetix 5100 (400V-class) Drives with Kinetix MPF Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 400 and 480V, nominal input) when matched with Kinetix MPF (400V-class) food-grade motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

## Kinetix MPF Motor Cable Combinations

| Rotary Motor (400V-class)<br>Cat. No. | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|---------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPF-B310P, MPF-B320P, MPF-B330P       | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPF-B430P                             |                                                                                   |                                                                                                                                                                            |
| MPF-B4530K, MPF-B4540F                |                                                                                   |                                                                                                                                                                            |
| MPF-B540K                             | 2090-CPxM7DF-10AAxx (standard, non-flex)<br>2090-CPxM7DF-10AFxx (continuous-flex) |                                                                                                                                                                            |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

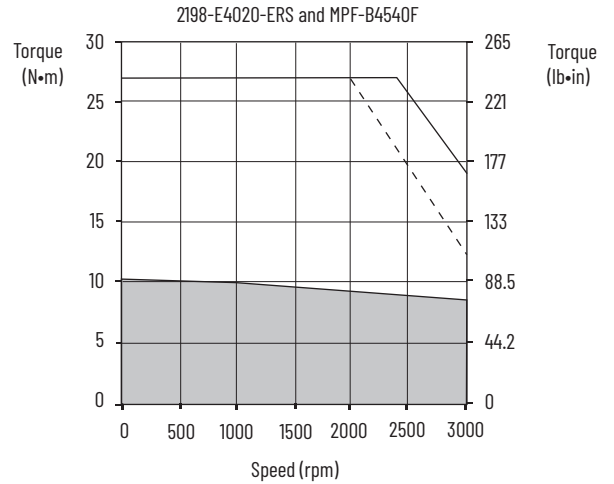
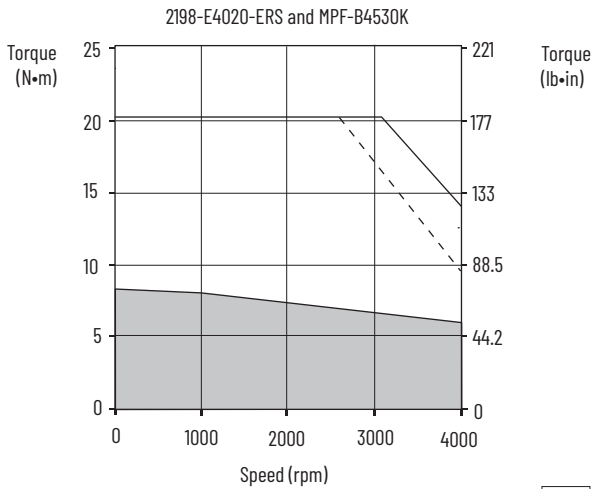
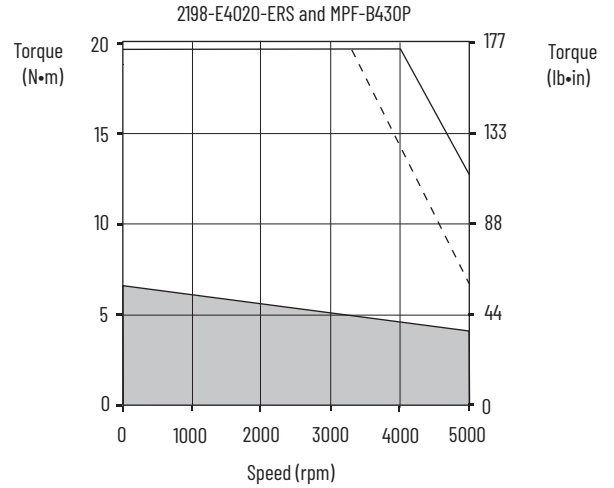
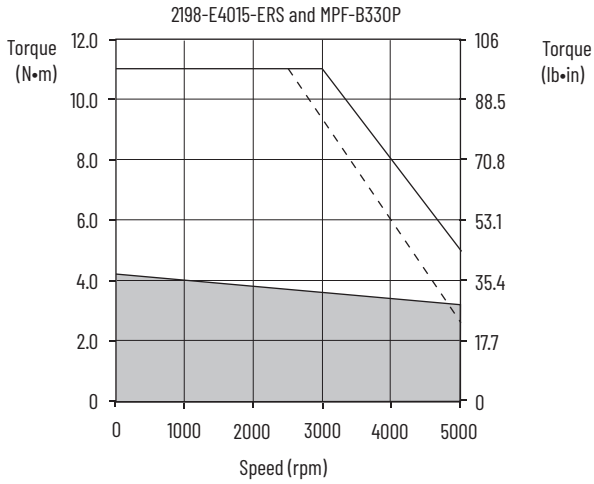
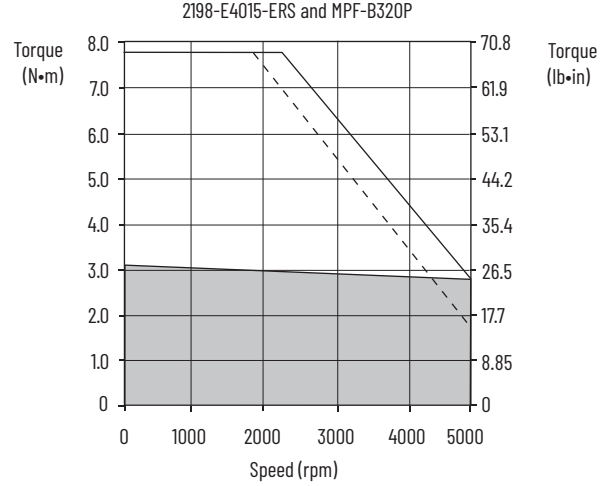
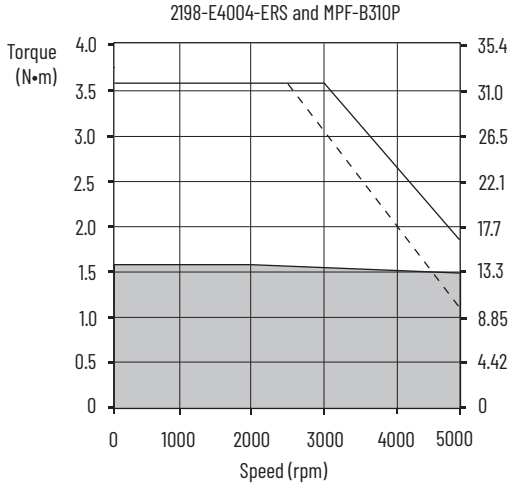
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPF Motor Performance Specifications with Kinetix 5100 (400V-class) Drives

| Rotary Motor<br>Cat. No. | Rated Speed<br>rpm | Speed, max<br>rpm | System Continuous<br>Stall Current<br>A 0-pk | System Continuous<br>Stall Torque<br>N·m (lb·in) | System Peak<br>Stall Current<br>A 0-pk | System Peak<br>Stall Torque<br>N·m (lb·in) | Motor Rated<br>Output<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|--------------------------|--------------------|-------------------|----------------------------------------------|--------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------|----------------------------------------|
| MPF-B310P                | 5000               | 5000              | 2.40                                         | 1.60 (14.2)                                      | 7.10                                   | 3.6 (31.9)                                 | 0.77                        | 2198-E4007-ERS                         |
| MPF-B320P                | 5000               | 5000              | 4.50                                         | 3.10 (27.4)                                      | 11.3                                   | 6.3 (55.7)                                 | 1.5                         | 2198-E4007-ERS                         |
| MPF-B330P                | 5000               | 5000              | 6.10                                         | 4.18 (37.0)                                      | 14.0                                   | 7.8 (69.0)                                 |                             | 2198-E4015-ERS                         |
| MPF-B430P                | 5000               | 5000              | 9.20                                         | 6.55 (58.0)                                      | 19.0                                   | 11.1 (98.2)                                | 1.6                         | 2198-E4015-ERS                         |
| MPF-B4530K               | 4000               | 4000              | 11.0                                         | 8.25 (73.0)                                      | 29.4                                   | 18.2 (161)                                 | 2.0                         | 2198-E4020-ERS                         |
|                          |                    |                   |                                              |                                                  | 32.0                                   | 19.8 (175)                                 |                             | 2198-E4030-ERS                         |
|                          |                    |                   |                                              |                                                  | 31.0                                   | 20.3 (179)                                 | 2.4                         | 2198-E4020-ERS                         |
| MPF-B4540F               | 3000               | 3000              | 9.10                                         | 10.20 (90.3)                                     | 29.0                                   | 27.1 (240)                                 | 2.5                         | 2198-E4020-ERS                         |
| MPF-B540K                | 4000               | 4000              | 20.5                                         | 19.4 (171)                                       | 53.2                                   | 43.1 (381)                                 | 4.1                         | 2198-E4055-ERS                         |
|                          |                    |                   |                                              |                                                  | 60.0                                   | 48.6 (430)                                 |                             | 2198-E4075-ERS                         |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

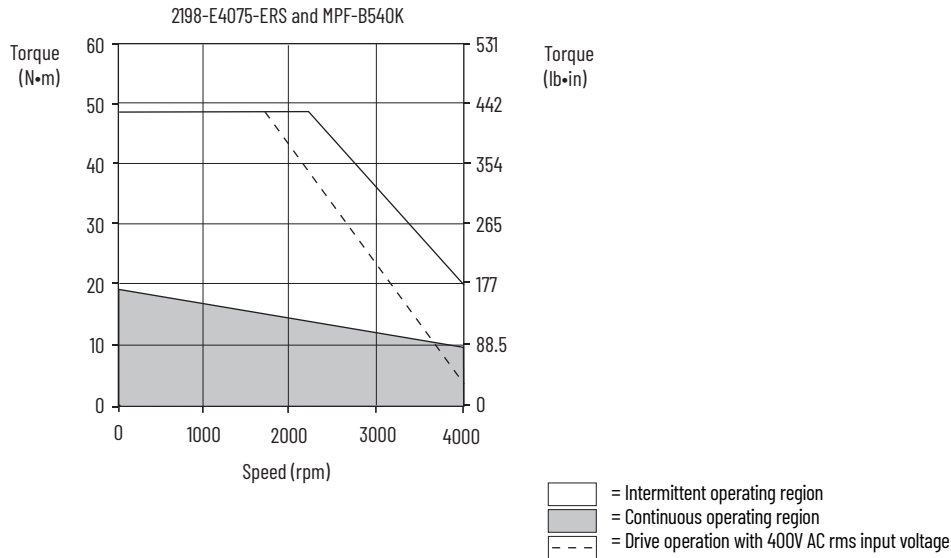
## Kinetix 5100 (400V-class) Drives/Kinetix MPF Servo Motor Curves



= Intermittent operating region  
 = Continuous operating region  
 - - - = Drive operation with 400V AC rms input voltage



## Kinetix 5100 (400V-class) Drives/Kinetix MPF Servo Motor Curves (continued)



## Kinetix 5100 (200V-class) Drives with Kinetix MPS Stainless Steel Motors

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix MPS (200V-class) servo motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

### Kinetix MPS Motor Cable Combinations

| Rotary Motor (200V-class)<br>Cat. No. | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                  |
|---------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| MPS-A330P                             | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAxx or<br>2090-CFBM7DD-CEAxx (standard, non-flex)                                     |
| MPS-A4540F                            |                                                                                   | 2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

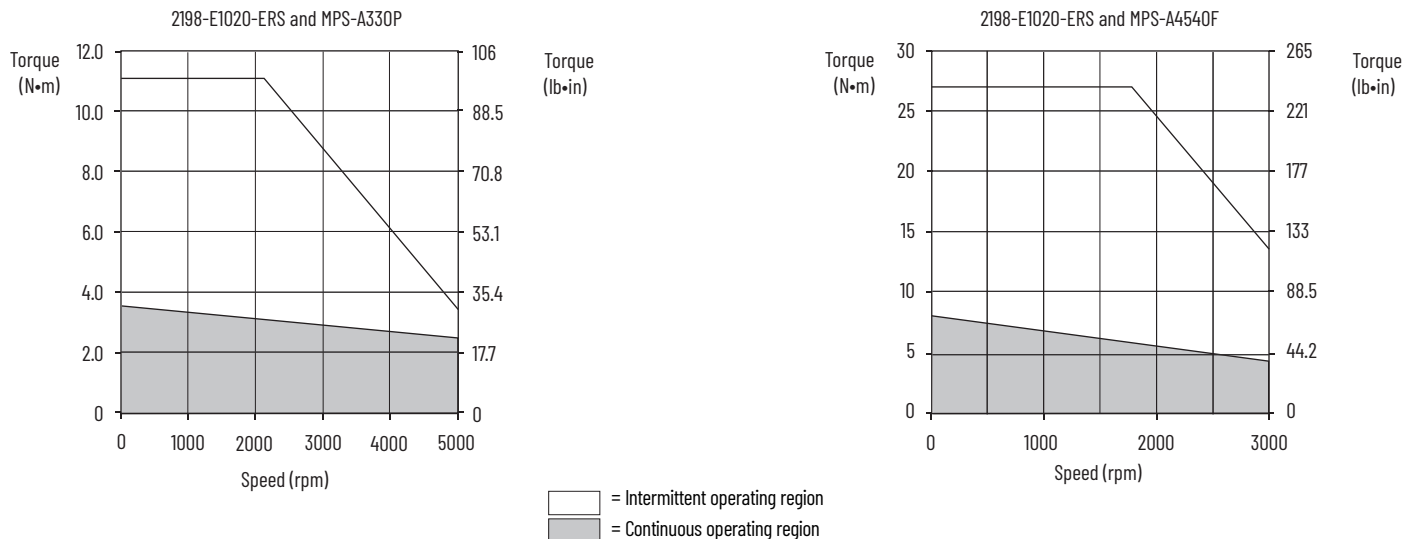
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPS Motor Performance Specifications with Kinetix 5100 (200V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|----------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPS-A330P             | 5000            | 5000           | 9.80                                   | 3.60 (32.0)                                | 33.5                             | 9.79 (86.6)                          | 1.3                   | 2198-E1015-ERS                      |
|                       |                 |                |                                        |                                            | 38.0                             | 11.10 (98.2)                         |                       | 2198-E1020-ERS                      |
| MPS-A4540F            | 3000            | 3000           | 14.4                                   | 8.1 (72)                                   | 56.0                             | 27.1 (240)                           | 1.4                   | 2198-E1020-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (200V-class) Drives/Kinetix MPS Servo Motor Curves



## Kinetix 5100 (400V-class) Drives with Kinetix MPS Servo Motors

This section provides system combination information for the Kinetix 5100 drives (with 400 and 480V, nominal input) when matched with Kinetix MPS (400V-class) stainless-steel motors. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

## Kinetix MPS Motor Cable Combinations

| Rotary Motor (400V-class) Cat. No. | Motor Power Cable                                                                 | Motor Feedback Cable <sup>(1)</sup>                             |
|------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------|
| MPS-B330P                          | 2090-CPxM7DF-16AAxx (standard, non-flex)                                          | 2090-CFBM7DF-CEAAxx or 2090-CFBM7DD-CEAAxx (standard, non-flex) |
| MPS-B4540F                         | 2090-CPxM7DF-16AFxx (continuous-flex)                                             | 2090-CFBM7DF-CEAFxx or 2090-CFBM7DD-CEAFxx (continuous-flex)    |
| MPS-B560F                          | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) | Absolute High-resolution Feedback                               |

(1) Use the 2198-K51CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

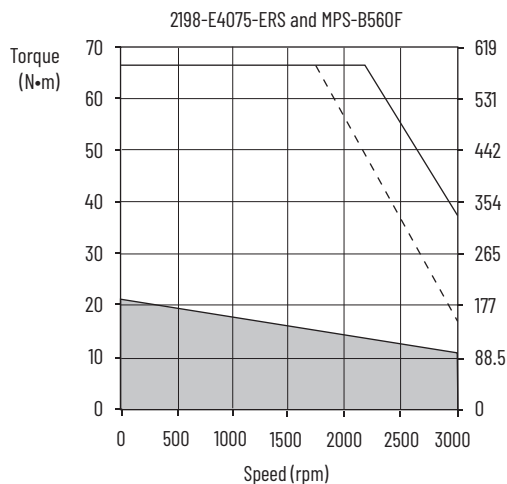
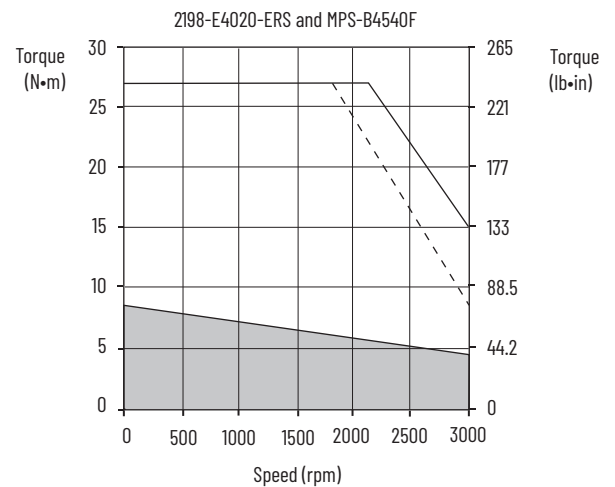
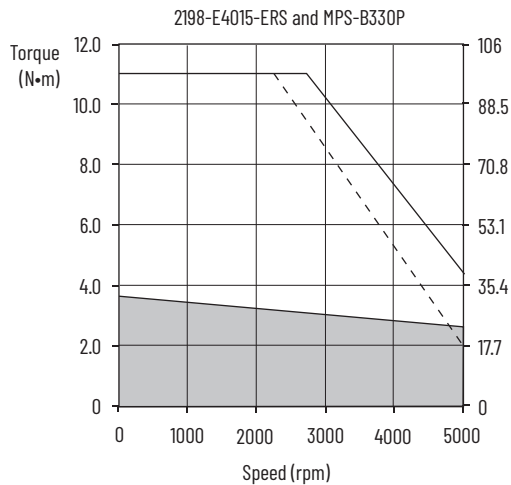
For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPS Motor Performance Specifications with Kinetix 5100 (400V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N•m (lb•in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N•m (lb•in) | Motor Rated Output kW | Kinetix 5100 Drives (480V AC input) |
|-----------------------|-----------------|----------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| MPS-B330P             | 5000            | 5000           | 4.9                                    | 3.60 (32)                                  | 19.0                             | 11.0 (97.2)                          | 1.3                   | 2198-E4015-ERS                      |
| MPS-B4540F            | 3000            | 3000           | 7.1                                    | 8.1 (72)                                   | 21.4                             | 22.3 (197)                           | 1.4                   | 2198-E4015-ERS                      |
|                       |                 |                |                                        |                                            | 26.0                             | 27.1 (240)                           |                       | 2198-E4020-ERS                      |
| MPS-B560F             | 3000            | 3000           | 17.0                                   | 21.5 (190)                                 | 36.9                             | 36.8 (326)                           | 3.5                   | 2198-E4030-ERS                      |
|                       |                 |                |                                        |                                            | 68.0                             | 67.8 (600)                           |                       | 2198-E4075-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (400V-class) Drives/Kinetix MPS Servo Motor Curves



— = Intermittent operating region  
 ■ = Continuous operating region  
 --- = Drive operation with 400V AC rms input voltage

# Kinetix 5100 (200V-class) Drives with Kinetix TLY Servo Motors

This section provides system combination information for the Kinetix 5100 drives when matched with Kinetix TLY compact servo motors. Compatible Kinetix TLY motors are equipped with absolute high-resolution or incremental encoder feedback. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

## Kinetix TLY Motor Cable Combinations

| Motor Cat. No. (200V-class)     | Motor Power/Brake Cable                                     | Motor Feedback Cable <sup>(1)</sup>                                                                                       |
|---------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| TLY-A110x, TLY-A120x, TLY-A130x | 2090-CPWM6DF-16AAxx (standard, non-flex)<br>(without brake) | 2090-CFBM6DF-CBAAxx or<br>2090-CFBM6DD-CCAAxx (standard, non-flex)<br>Absolute High-resolution or<br>Incremental Feedback |
| TLY-A220x, TLY-A230x            |                                                             |                                                                                                                           |
| TLY-A2530P, TLY-A2540P          | 2090-CPBM6DF-16AAxx (standard, non-flex)<br>(with brake)    |                                                                                                                           |
| TLY-A310M                       |                                                             |                                                                                                                           |

(1) For TLY-Axxxx-H motors with incremental encoder feedback, use 2090-CFBM6DF-CBAAxx flying-lead cables and 2198-K51CK-D15M connector kit (battery not required) or use 2090-CFBM6DD-CCAAxx (15-pin connector) cable on the drive end. Refer to Required Drive Accessories on [page 6](#) for more information.  
The TLY-Axxxx-B motors with 17-bit high-resolution encoder feedback require the 2090-CFBM6DF-CBAAxx flying-lead feedback cable and 2198-K51CK-D15M connector kit (battery required).

Kinetix TLY motors are characterized as having 1000 mm (39.4 in.) cable extensions with circular plastic connectors and TLY-Axxx catalog numbers.

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix TLP Motor Cables Overview beginning on [page 9](#).

Motor-end connector kits, and panel-mounted breakout components (drive end), are available for motor power/brake and feedback cables. Refer to Optional Drive Accessories on [page 8](#).

Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix TLY (non-brake) Motor Performance Specifications with Kinetix 5100 Drives

### Performance Specifications (non-brake) with Kinetix 5100 (200V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm      | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|---------------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| TLY-A110x             | 5000            | 6000 <sup>(1)</sup> | 0.55                                   | 0.096 (0.85)                               | 1.30                             | 0.20 (1.75)                          | 0.041                 | 2198-E1004                          |
| TLY-A120x             | 5000            |                     | 1.03                                   | 0.181 (1.60)                               | 2.50                             | 0.36 (3.20)                          | 0.086                 | 2198-E1004                          |
| TLY-A130x             | 5000            |                     | 1.85                                   | 0.325 (2.88)                               | 4.90                             | 0.76 (6.70)                          | 0.14                  | 2198-E1004                          |
| TLY-A220x             | 5000            |                     | 3.50                                   | 0.836 (7.40)                               | 7.90                             | 1.48 (13.1)                          | 0.35                  | 2198-E1004                          |
| TLY-A230x             | 5000            |                     | 5.50                                   | 1.30 (11.5)                                | 15.5                             | 3.05 (27.0)                          | 0.44                  | 2198-E1007                          |
| TLY-A2530P            | 4400            | 5000                | 10.0                                   | 2.60 (23.0)                                | 21.0                             | 5.20 (46.0)                          | 0.69                  | 2198-E1015                          |
| TLY-A2540P            | 4575            |                     | 10.0                                   | 2.94 (26.0)                                | 24.8                             | 7.10 (63.0)                          | 0.86                  | 2198-E1015                          |
| TLY-A310M             | 4000            | 4500                | 10.0                                   | 3.61 (31.9)                                | 30.0                             | 9.0 (79.6)                           | 0.95                  | 2198-E1015                          |

(1) Applies to TLY-AxxxT-H motors with incremental feedback. The TLY-AxxxT-B motors with absolute high-resolution encoders are rated for 5000 rpm.

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix TLY (brake) Motor Performance Specifications with Kinetix 5100 Servo Drives

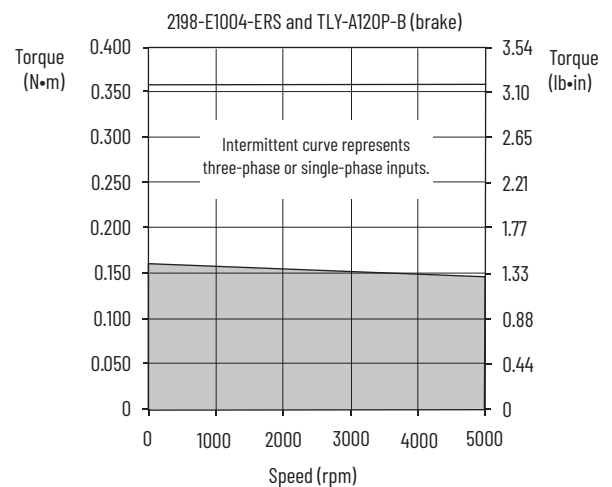
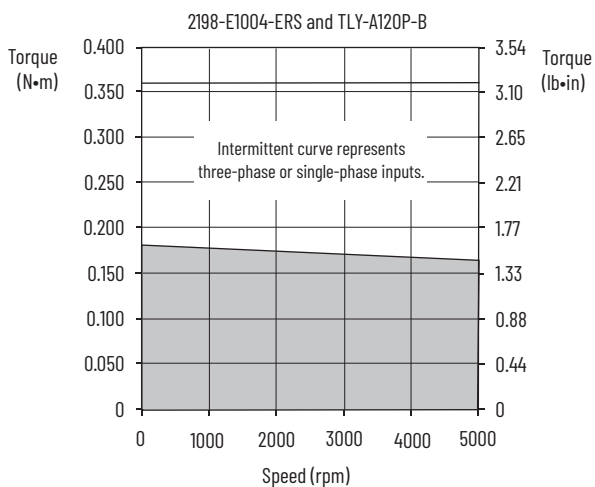
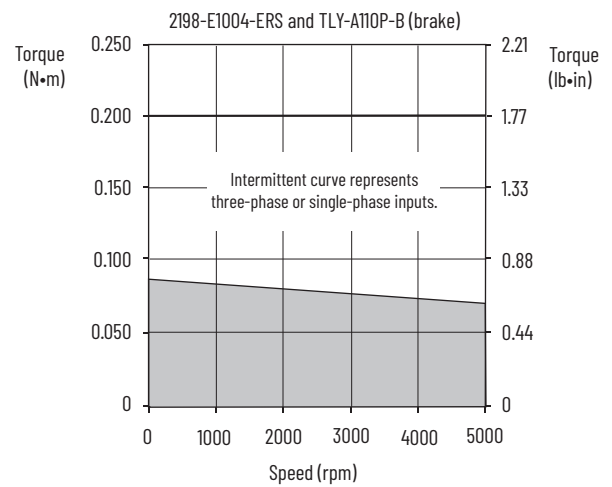
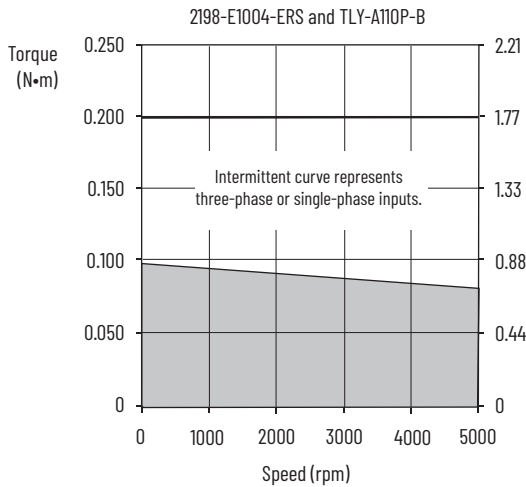
## Performance Specifications (brake) with Kinetix 5100 (200V-class) Drives

| Rotary Motor Cat. No. | Rated Speed rpm | Speed, max rpm      | System Continuous Stall Current A 0-pk | System Continuous Stall Torque N·m (lb·in) | System Peak Stall Current A 0-pk | System Peak Stall Torque N·m (lb·in) | Motor Rated Output kW | Kinetix 5100 Drives (230V AC input) |
|-----------------------|-----------------|---------------------|----------------------------------------|--------------------------------------------|----------------------------------|--------------------------------------|-----------------------|-------------------------------------|
| TLY-A110x             | 5000            | 6000 <sup>(1)</sup> | 0.50                                   | 0.086 (0.76)                               | 1.30                             | 0.20 (1.75)                          | 0.037                 | 2198-E1004                          |
| TLY-A120x             | 5000            |                     | 0.93                                   | 0.163 (1.44)                               | 2.50                             | 0.36 (3.20)                          | 0.077                 | 2198-E1004                          |
| TLY-A130x             | 5000            |                     | 1.67                                   | 0.293 (2.59)                               | 4.90                             | 0.76 (6.70)                          | 0.13                  | 2198-E1004                          |
| TLY-A220x             | 5000            |                     | 3.15                                   | 0.757 (6.70)                               | 7.90                             | 1.48 (13.1)                          | 0.24                  | 2198-E1004                          |
| TLY-A230x             | 4250            |                     | 4.95                                   | 1.16 (10.3)                                | 15.5                             | 3.05 (27.0)                          | 0.32                  | 2198-E1007                          |
| TLY-A2530P            | 3650            | 5000                | 10.0                                   | 2.60 (23.0)                                | 21.0                             | 5.20 (46.0)                          | 0.55                  | 2198-E1015                          |
| TLY-A2540P            | 3750            |                     | 10.0                                   | 2.94 (26.0)                                | 24.8                             | 7.10 (63.0)                          | 0.66                  | 2198-E1015                          |
| TLY-A310M             | 3900            | 4500                | 10.0                                   | 3.61 (31.9)                                | 30.0                             | 9.0 (79.6)                           | 0.90                  | 2198-E1015                          |

(1) Applies to TLY-AxxxT-H motors with incremental feedback. The TLY-AxxxT-B motors with absolute high-resolution encoders are rated for 5000 rpm.

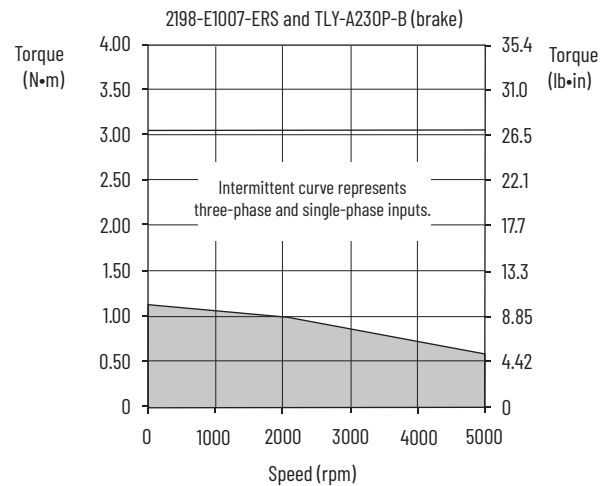
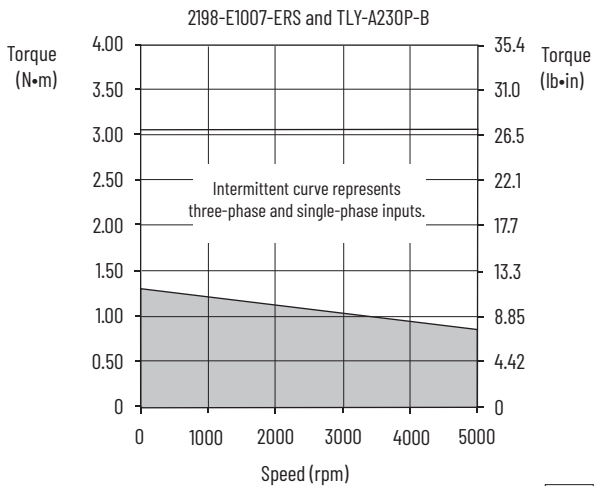
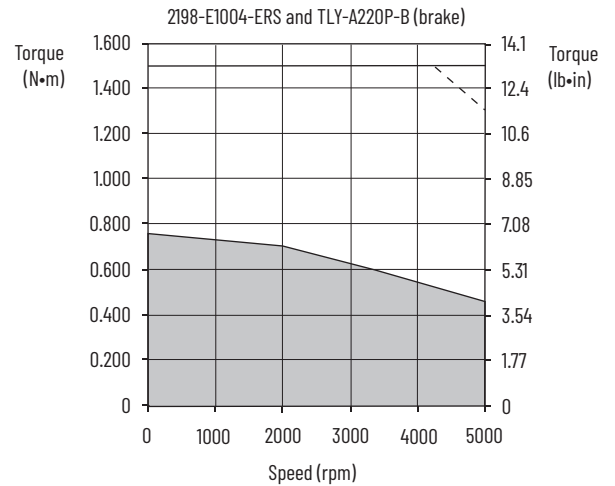
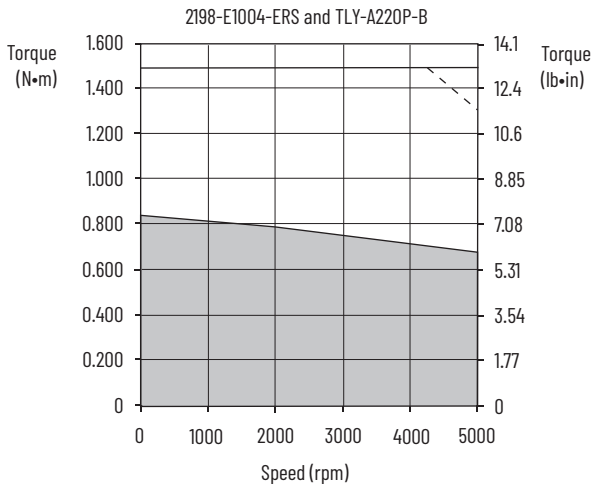
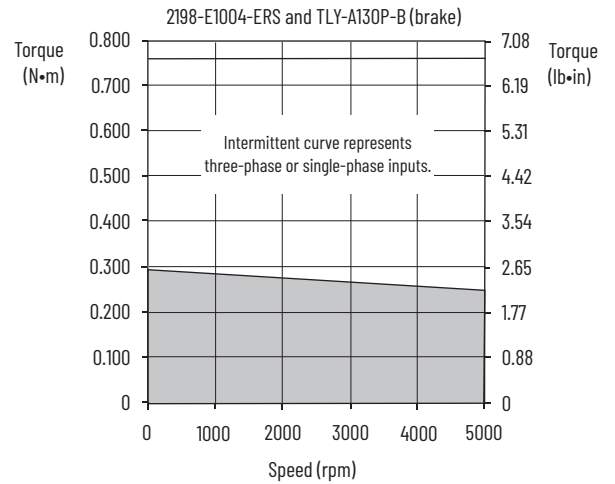
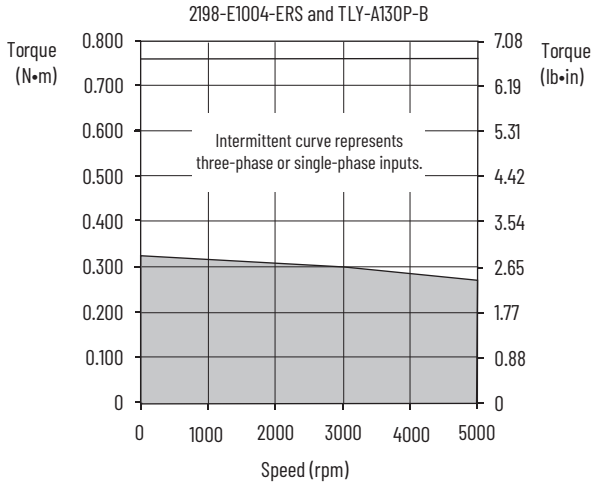
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (200V-class) Drives/TLY-AxxxP-B (absolute high-resolution) Motor Curves



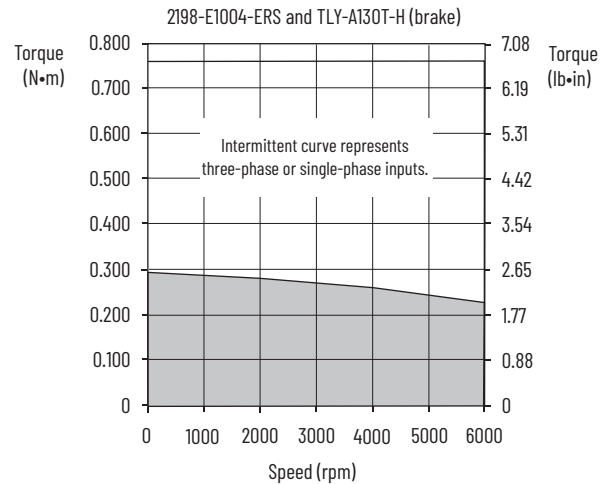
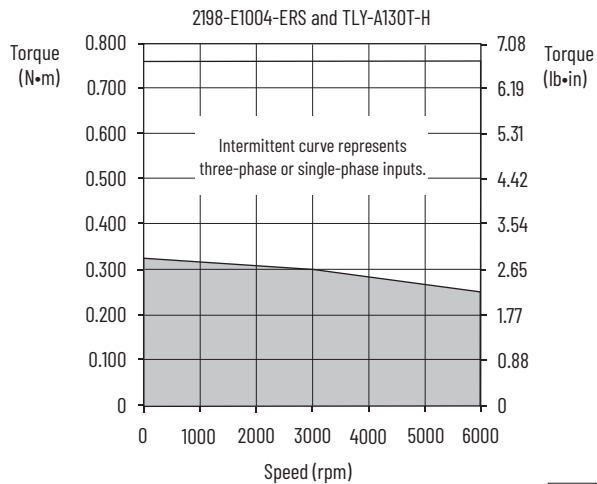
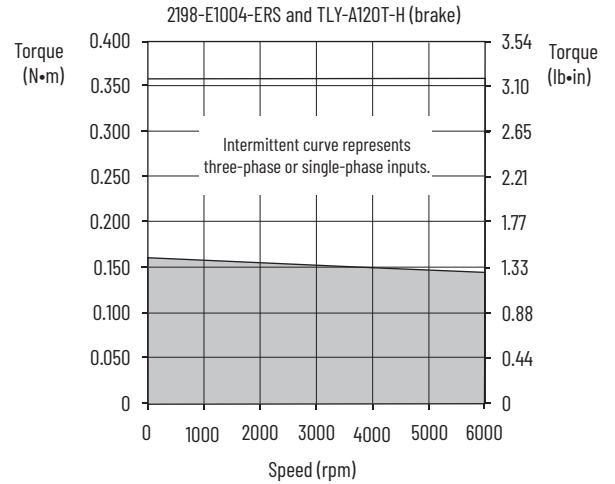
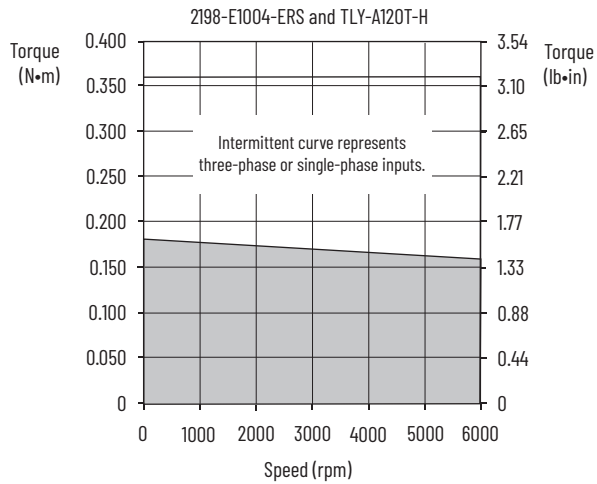
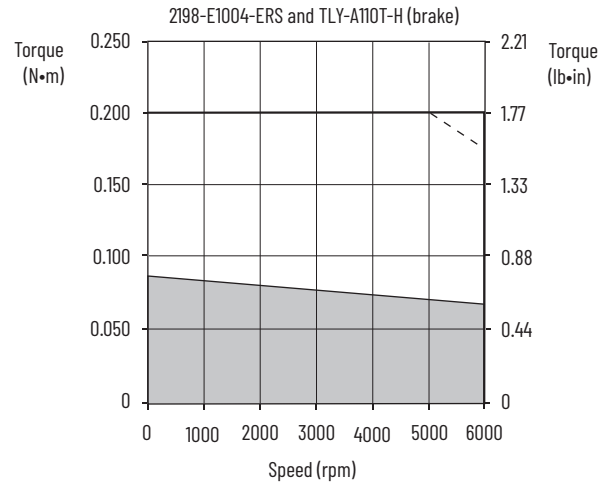
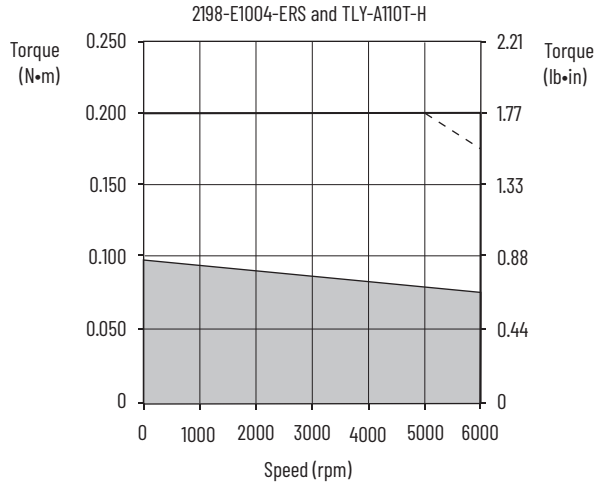
= Intermittent operating region  
 = Continuous operating region  
 = Drive operation (single-phase input)

## Kinetix 5100 (200V-class) Drives/TLY-AxxxP-B (absolute high-resolution) Motor Curves (continued)



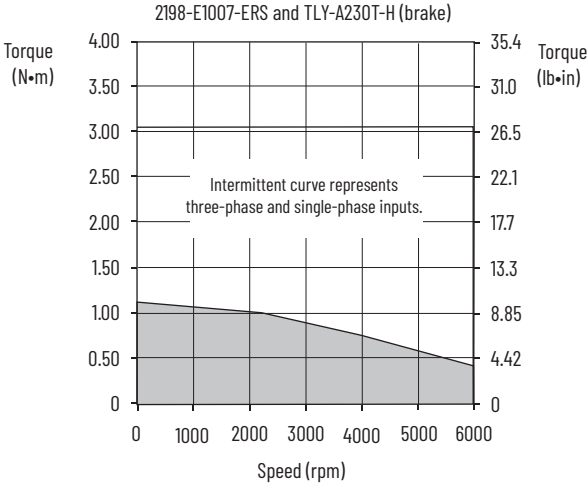
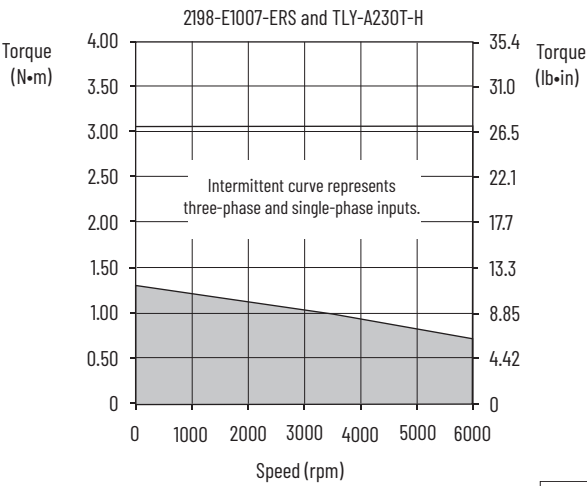
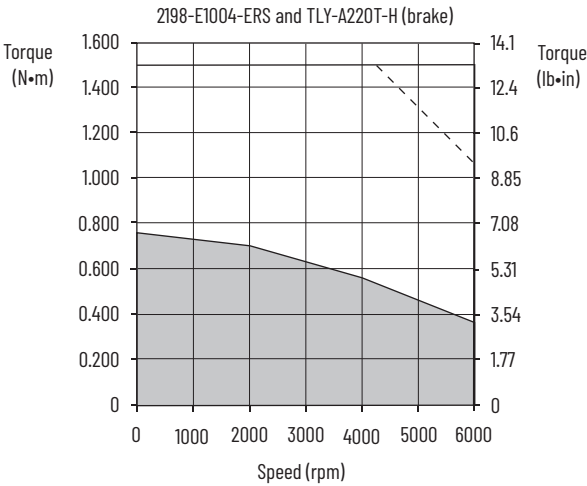
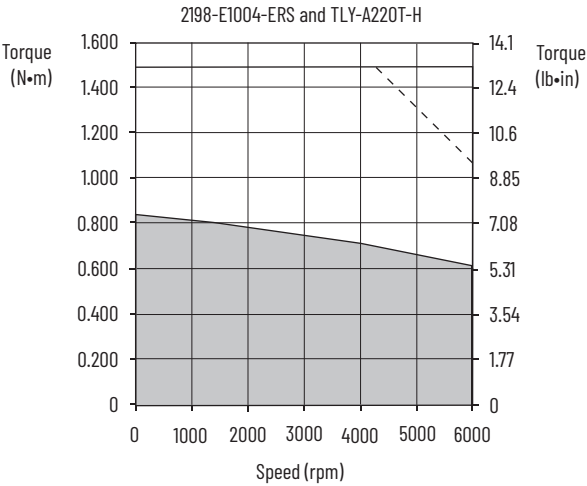
[Shaded Area] = Intermittent operating region  
 [Unshaded Area] = Continuous operating region  
 [Dashed Line] = Drive operation (single-phase input)

## Kinetix 5100 (200V-class) Drives/TLY-AxxxT-H (incremental) Motor Curves



[White box] = Intermittent operating region  
 [Gray box] = Continuous operating region  
 [Dashed line] = Drive operation (single-phase input)

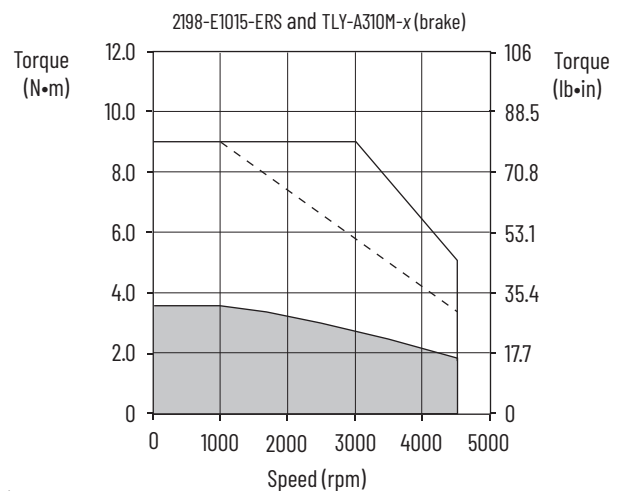
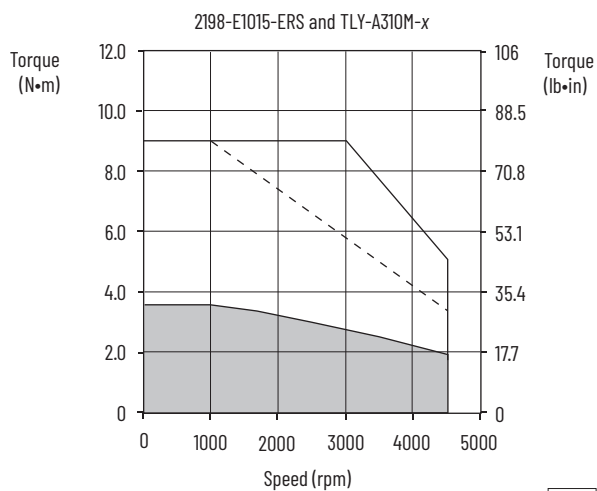
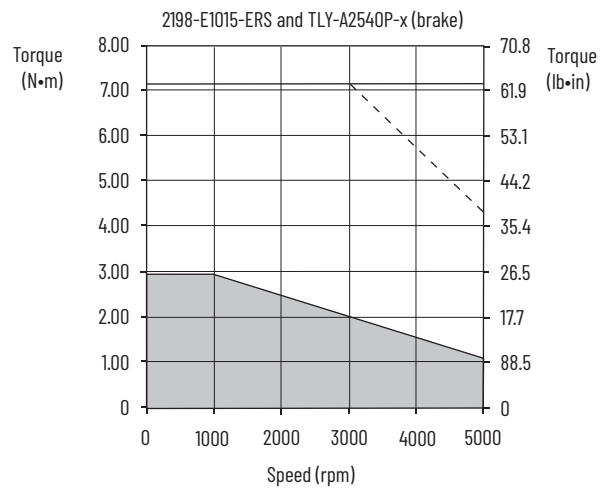
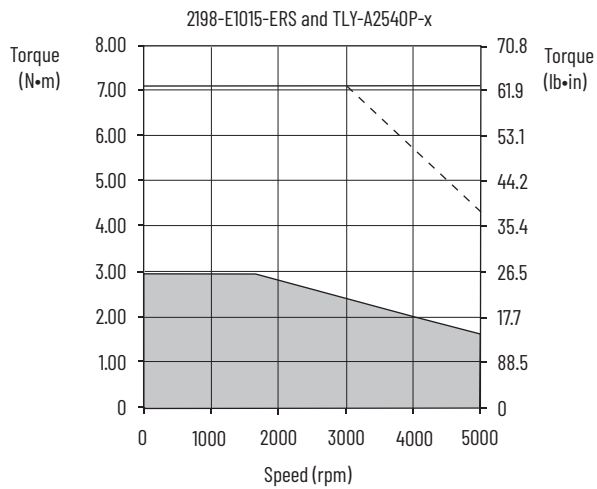
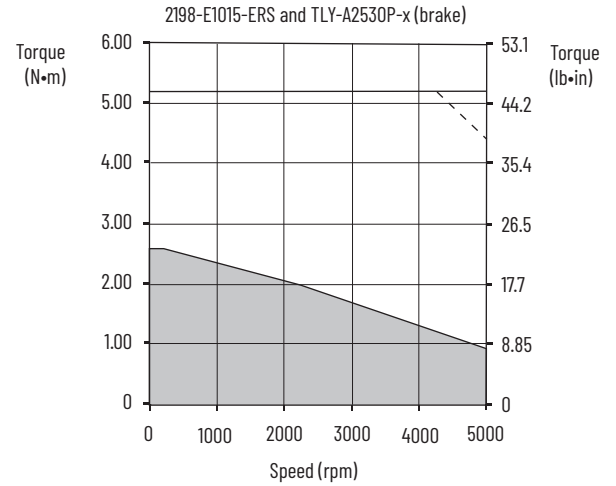
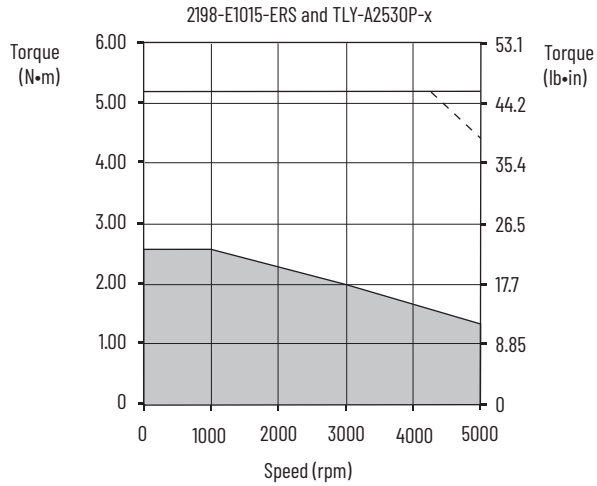
Kinetix 5100 (200V-class) Drives/TLY-AxxxT-H (incremental) Motor Curves (continued)



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation (single-phase input)



# Kinetix 5100 (200V-class) Drives/TLY-Axxxx-x Motor Curves



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation (single-phase input)

# Kinetix 5100 (200V-class) Drives with Kinetix TL Servo Motors

This section provides system combination information for the Kinetix 5100 servo drives when matched with Kinetix TL compact servo motors. Compatible Kinetix TL motors are equipped with absolute high-resolution encoder feedback. Included in this section are motor power, feedback, and brake cable catalog numbers, system performance specifications, and the optimum torque/speed curves.

## Kinetix TL Motor Cable Combinations

| Motor Cat. No.               | Motor Power Cable | Motor Feedback Cable <sup>(1)</sup> (2)     | Motor Brake Cable |
|------------------------------|-------------------|---------------------------------------------|-------------------|
| TL-A110P, TL-A120P, TL-A130P | 2090-DANPT-16Sxx  | 2090-DANFCT-Sxx<br>Absolute High-resolution | 2090-DANBT-18Sxx  |
| TL-A220P, TL-A230P           |                   |                                             |                   |
| TL-A2530P, TL-A2540P         |                   |                                             |                   |
| TL-A410M                     |                   |                                             |                   |

(1) For applications where battery backup is required use 2090-DANFCT-Sxx cable, but remove the drive-end connector and prepare flying leads for termination in the 2198-K51CK-D15M connector kit (with customer-supplied battery).

(2) For applications where battery backup is not required use 2090-DANFCT-Sxx cable and plug the drive-end connector into the 15-pin motor feedback connector.

Kinetix TL-Axxxx-B motors are characterized as having 300 mm (11.8 in.) cable extensions with rectangular connectors.

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix TL (non-brake) Performance Specifications with Kinetix 5100 (200V-class) Drives

| Rotary Motor | Rated Speed<br>rpm | Maximum Speed<br>rpm | System Continuous Stall Current<br>A 0-pk | System Continuous Stall Torque<br>N·m (lb·in) | System Peak Stall Current<br>A 0-pk | System Peak Stall Torque<br>N·m (lb·in) | Motor Rated Output<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|--------------|--------------------|----------------------|-------------------------------------------|-----------------------------------------------|-------------------------------------|-----------------------------------------|--------------------------|----------------------------------------|
| TL-A110P     | 5000               | 5000                 | 0.55                                      | 0.096 (0.85)                                  | 1.30                                | 0.20 (1.75)                             | 0.041                    | 2198-E1004                             |
| TL-A120P     |                    |                      | 1.03                                      | 0.181 (1.60)                                  | 2.50                                | 0.36 (3.20)                             | 0.086                    | 2198-E1004                             |
| TL-A130P     |                    |                      | 1.85                                      | 0.325 (2.88)                                  | 4.90                                | 0.76 (6.70)                             | 0.14                     | 2198-E1004                             |
| TL-A220P     |                    |                      | 3.50                                      | 0.836 (7.40)                                  | 7.90                                | 1.48 (13.1)                             | 0.35                     | 2198-E1004                             |
| TL-A230P     |                    |                      | 5.50                                      | 1.30 (11.5)                                   | 15.5                                | 3.05 (27.0)                             | 0.44                     | 2198-E1007                             |
| TL-A2530P    | 4400               | 4500                 | 10.0                                      | 2.60 (23.0)                                   | 21.0                                | 5.20 (46.0)                             | 0.69                     | 2198-E1015                             |
| TL-A2540P    | 4575               |                      | 10.0                                      | 2.94 (26.0)                                   | 24.8                                | 7.10 (63.0)                             | 0.86                     | 2198-E1015                             |
| TL-A410M     | 4500               |                      | 15.5                                      | 5.42 (48.0)                                   | 43.4                                | 13.0 (115.0)                            | 2.0                      | 2198-E1020                             |

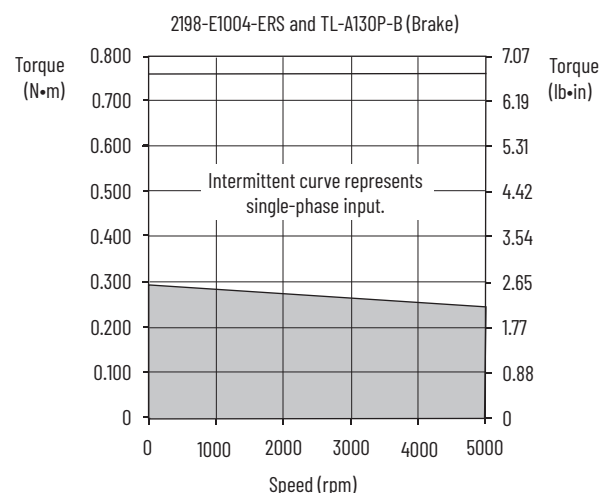
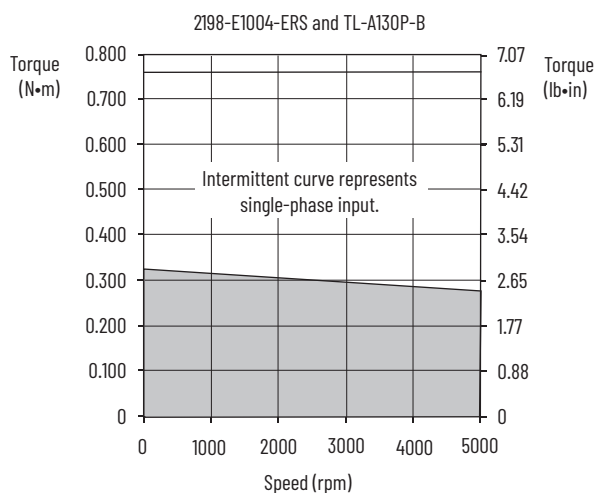
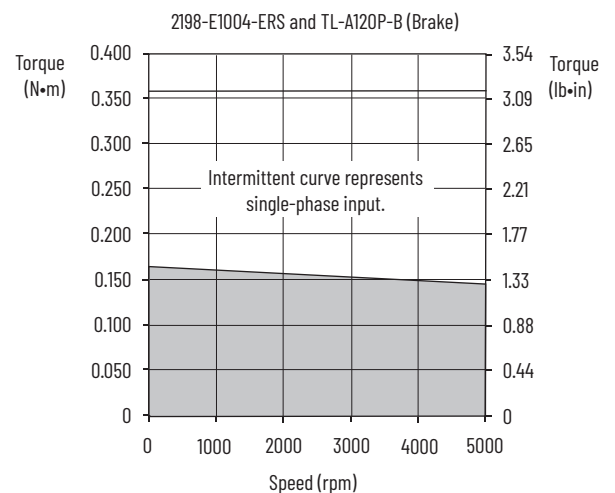
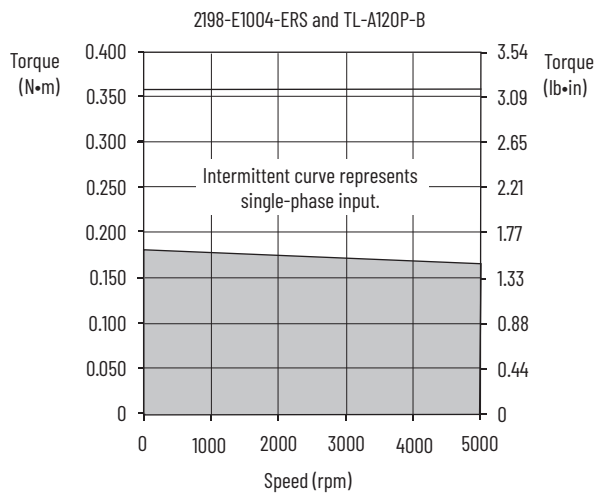
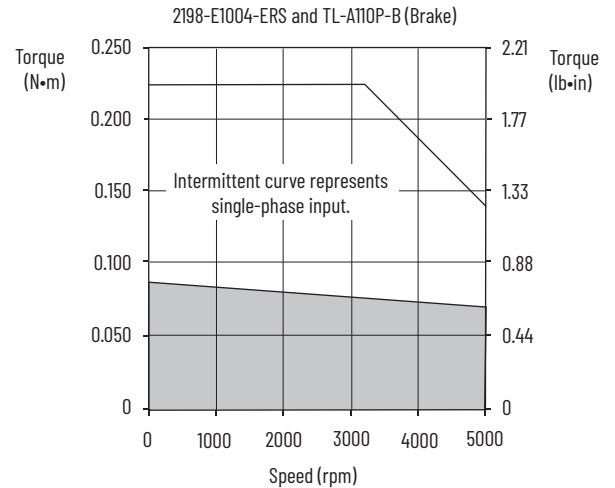
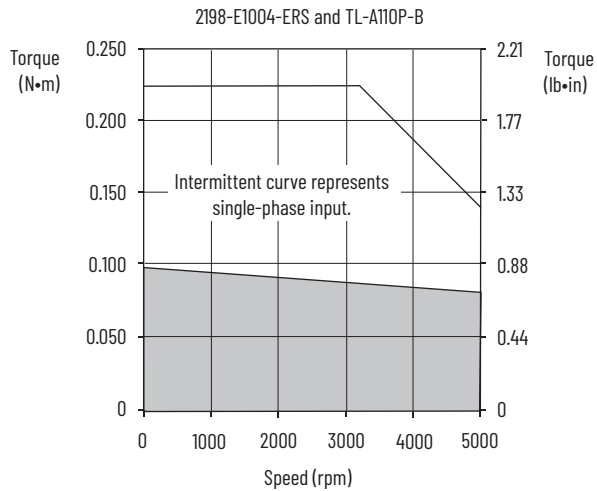
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix TL (brake) Performance Specifications with Kinetix 5100 (200V-class) Drives

| Rotary Motor | Rated Speed<br>rpm | Maximum Speed<br>rpm | System Continuous Stall Current<br>A 0-pk | System Continuous Stall Torque<br>N·m (lb·in) | System Peak Stall Current<br>A 0-pk | System Peak Stall Torque<br>N·m (lb·in) | Motor Rated Output<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|--------------|--------------------|----------------------|-------------------------------------------|-----------------------------------------------|-------------------------------------|-----------------------------------------|--------------------------|----------------------------------------|
| TL-A110P     | 5000               | 5000                 | 0.50                                      | 0.086 (0.76)                                  | 1.30                                | 0.20 (1.75)                             | 0.037                    | 2198-E1004                             |
| TL-A120P     |                    |                      | 0.93                                      | 0.163 (1.44)                                  | 2.50                                | 0.36 (3.20)                             | 0.077                    | 2198-E1004                             |
| TL-A130P     |                    |                      | 1.67                                      | 0.293 (2.59)                                  | 4.90                                | 0.76 (6.70)                             | 0.13                     | 2198-E1004                             |
| TL-A220P     |                    |                      | 3.15                                      | 0.757 (6.70)                                  | 7.90                                | 1.48 (13.10)                            | 0.24                     | 2198-E1004                             |
| TL-A230P     |                    |                      | 4.95                                      | 1.160 (10.30)                                 | 15.5                                | 3.05 (27.0)                             | 0.32                     | 2198-E1007                             |
| TL-A2530P    | 3650               | 4500                 | 10.0                                      | 2.60 (23.0)                                   | 21.0                                | 5.20 (46.0)                             | 0.55                     | 2198-E1015                             |
| TL-A2540P    | 3750               |                      | 10.0                                      | 2.940 (26.00)                                 | 24.8                                | 7.10 (63.0)                             | 0.66                     | 2198-E1015                             |
| TL-A410M     | 4500               |                      | 14.0                                      | 4.860 (43.0)                                  | 43.4                                | 13.0 (115.0)                            | 1.80                     | 2198-E1020                             |

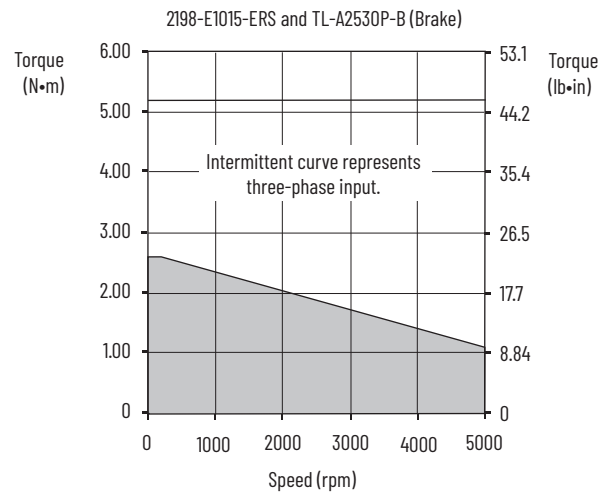
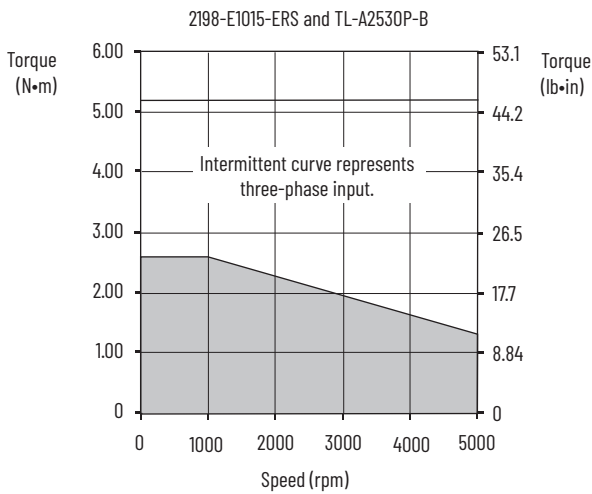
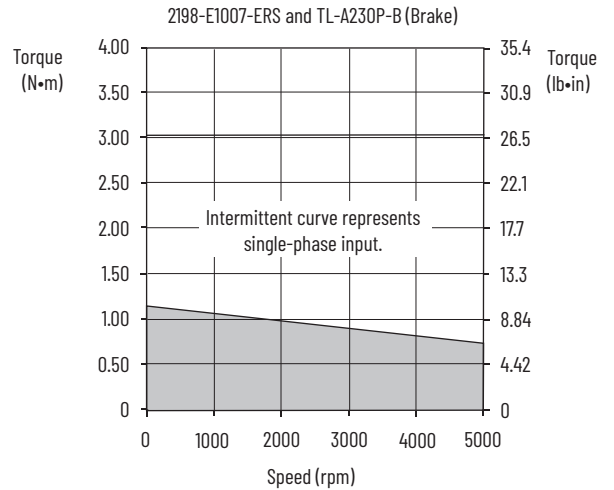
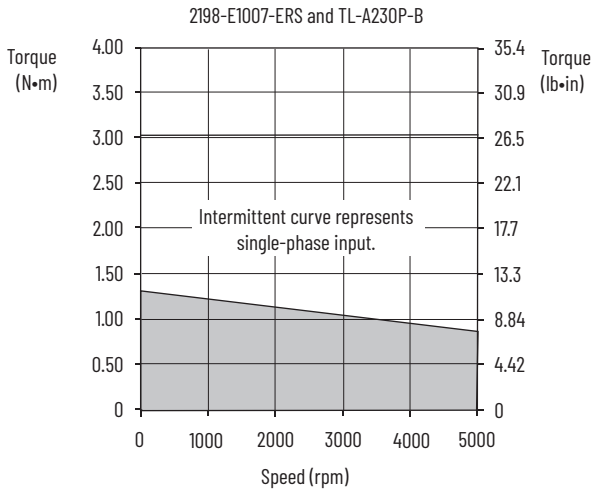
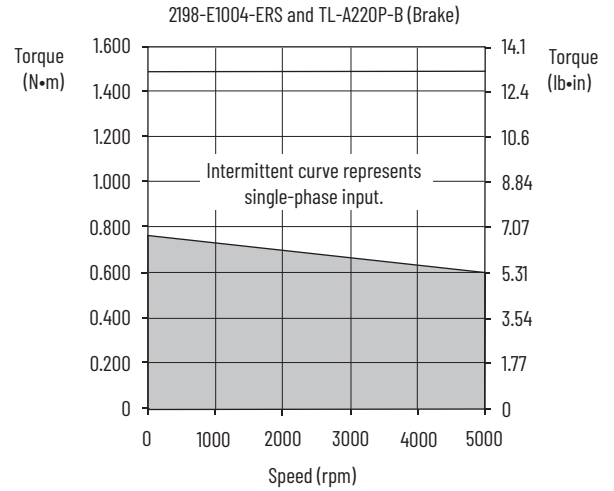
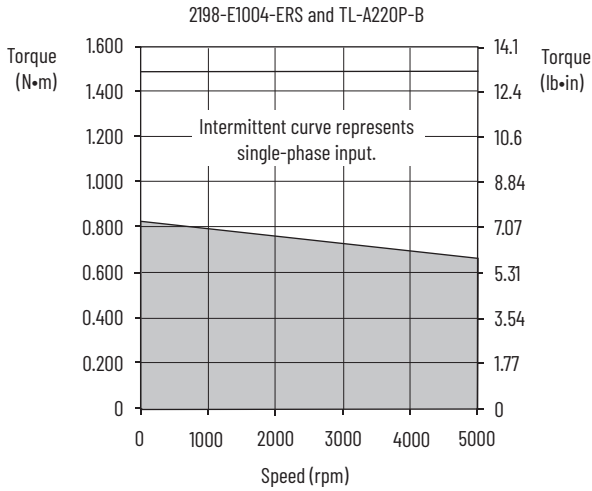
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/TL-Axxxx-B (absolute high-resolution) Motor Curves



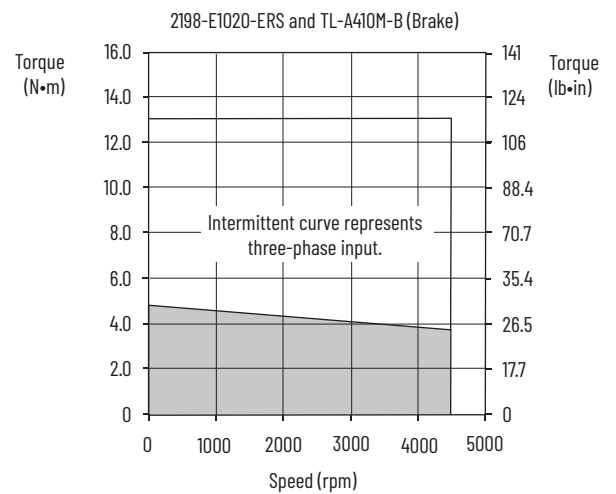
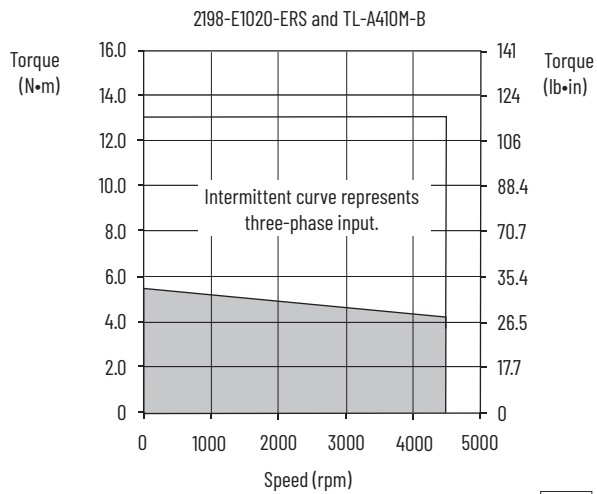
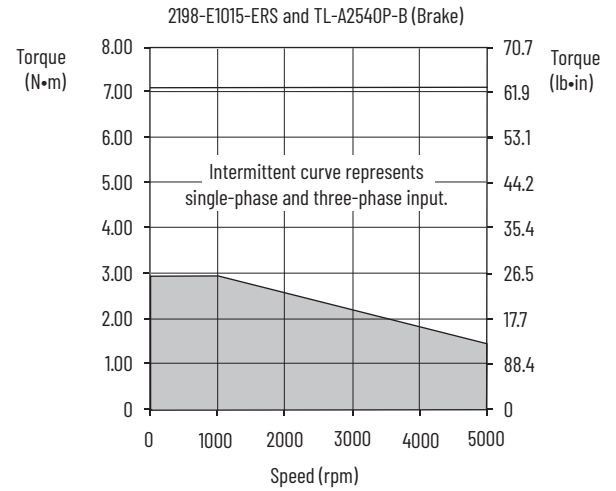
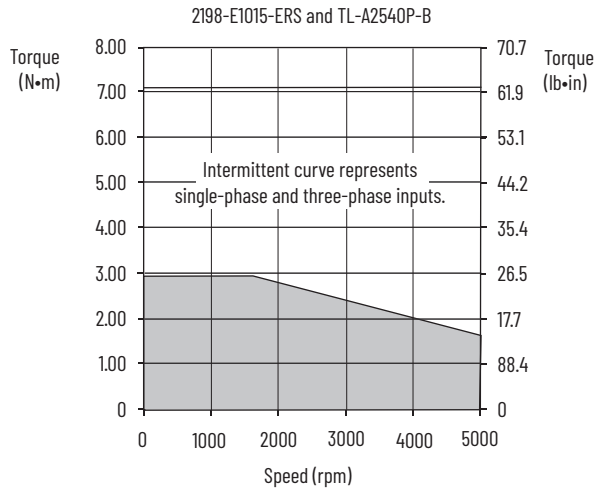
 = Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/TL-Axxxx-B (absolute high-resolution) Motor Curves (continued)



□ = Intermittent operating region  
 ■ = Continuous operating region

## Kinetix 5100 (200V-class) Drives/TL-Axxxx-B (absolute high-resolution) Motor Curves (continued)



□ = Intermittent operating region  
 ■ = Continuous operating region

# Kinetix 5100 Servo Drives with Kinetix LDAT Integrated Linear Thrusters

This section provides system combination information for the Kinetix 5100 drives (with 230V and 480V, nominal input) when matched with Kinetix LDAT integrated linear thrusters. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix LDAT Cable Combinations

| Linear Thruster Cat. No.                                               | Motor Power Cable                                                                 | Motor Feedback Cable <sup>(1)</sup>                                                                                                   |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| LDAT-S031xxx-xxx, LDAT-S032xxx-xxx, LDAT-S033xxx-xxx                   | 2090-CPWM7DF-16AAxx (standard, non-flex)<br>2090-CPWM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx (standard, non-flex) <sup>(2)</sup><br>2090-CFBM7DF-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| LDAT-S051xxx-xxx, LDAT-S052xxx-xxx, LDAT-S053xxx-xxx, LDAT-S054xxx-xxx |                                                                                   |                                                                                                                                       |
| LDAT-S072xxx-xxx, LDAT-S073xxx-xxx, LDAT-S074xxx-xxx, LDAT-S076xxx-Exx |                                                                                   |                                                                                                                                       |
| LDAT-S102xxx-xxx, LDAT-S103xxx-xxx, LDAT-S104xxx-xxx, LDAT-S106xxx-Exx |                                                                                   |                                                                                                                                       |
| LDAT-S152xxx-xxx, LDAT-S153xxx-xxx, LDAT-S154xxx-xxx, LDAT-S156xxx-Exx | 2090-CPWM7DF-14AAxx (standard, non-flex)<br>2090-CPWM7DF-14AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex) <sup>(3)</sup><br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                  |
| LDAT-S076xxx-Dxx                                                       |                                                                                   |                                                                                                                                       |
| LDAT-S106xxx-Dxx                                                       |                                                                                   |                                                                                                                                       |
| LDAT-S156xxx-Dxx                                                       |                                                                                   |                                                                                                                                       |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

(2) Applies to Kinetix 5100 drives and LDAT-Sxxxxx-xDx linear thrusters with absolute high-resolution feedback.

(3) Applies to Kinetix 5100 drives and LDAT-Sxxxxx-xBx linear thrusters with incremental feedback.

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix LDAT Performance Specifications with Kinetix 5100 (200V-class) Drives

### Performance Specifications with Frame 30 Linear Thrusters

| Linear Thruster Cat. No. | Velocity, max 230V AC m/s | System Continuous Stall Current Amps 0-pk | System Continuous Stall Force N (lb) | System Peak Stall Current Amps 0-pk | System Peak Stall Force N (lb) | Rated Output 230V AC kW | Kinetix 5100 Drives (230V AC input) |
|--------------------------|---------------------------|-------------------------------------------|--------------------------------------|-------------------------------------|--------------------------------|-------------------------|-------------------------------------|
| LDAT-S031010-Dxx         | 2.4                       | 4.8                                       | 81 (18)                              | 12.2                                | 168 (38)                       | 0.20                    | 2198-E1007-ERS                      |
| LDAT-S031020-Dxx         | 3.1                       |                                           |                                      |                                     |                                | 0.25                    |                                     |
| LDAT-S031030-Dxx         | 3.5                       |                                           |                                      |                                     |                                | 0.29                    |                                     |
| LDAT-S031040-Dxx         | 3.8                       |                                           |                                      |                                     |                                | 0.31                    |                                     |
| LDAT-S032010-Dxx         | 3.1                       | 7.4                                       | 126 (28)                             | 24.3                                | 336 (76)                       | 0.44                    | 2198-E1015-ERS                      |
| LDAT-S032020-Dxx         | 4.1                       |                                           |                                      |                                     |                                | 0.52                    |                                     |
| LDAT-S032030-Dxx         | 4.7                       |                                           |                                      |                                     |                                | 0.59                    |                                     |
| LDAT-S032040-Dxx         | 5.0                       |                                           |                                      |                                     |                                | 0.63                    |                                     |
| LDAT-S032010-Exx         | 3.1                       | 3.7                                       | 12.2                                 | 12.2                                |                                | 0.40                    | 2198-E1007-ERS                      |
| LDAT-S032020-Exx         | 4.1                       |                                           |                                      |                                     |                                | 0.47                    |                                     |
| LDAT-S032030-Exx         | 4.7                       |                                           |                                      |                                     |                                | 0.52                    |                                     |
| LDAT-S032040-Exx         | 5.0                       |                                           |                                      |                                     |                                | 0.55                    |                                     |

## Performance Specifications with Frame 30 Linear Thrusters (continued)

| Linear Thruster<br>Cat. No. | Velocity, max<br>230V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Rated Output<br>230V AC<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|-----------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S033010-Dxx            | 3.5                             | 11.1                                            | 190 (43)                                   | 36.5                                      | 504 (113)                            | 0.67                          | 2198-E1020-ERS                         |
| LDAT-S033020-Dxx            | 4.7                             |                                                 |                                            |                                           |                                      | 0.88                          |                                        |
| LDAT-S033030-Dxx            | 5.0                             |                                                 |                                            |                                           |                                      | 0.95                          |                                        |
| LDAT-S033040-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S033010-Exx            | 3.5                             | 3.7                                             |                                            | 12.2                                      | 504 (113)                            | 0.55                          | 2198-E1007-ERS                         |
| LDAT-S033020-Exx            | 4.4                             |                                                 |                                            |                                           |                                      | 0.65                          |                                        |
| LDAT-S033030-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S033040-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 50 Linear Thrusters

| Linear Thruster<br>Cat. No.                 | Velocity, max<br>230V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Rated Output<br>230V AC<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|---------------------------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S051010-Dxx                            | 2.8                             | 3.1                                             | 119 (27)                                   | 11.4                                      | 363 (82)                             | 0.31                          | 2198-E1007-ERS                         |
| LDAT-S051020-Dxx                            | 3.7                             |                                                 |                                            |                                           |                                      | 0.38                          |                                        |
| LDAT-S051030-Dxx                            | 4.1                             |                                                 |                                            |                                           |                                      | 0.42                          |                                        |
| LDAT-S051040-Dxx                            | 4.4                             |                                                 |                                            |                                           |                                      | 0.44                          |                                        |
| LDAT-S051050-Dxx                            | 4.7                             |                                                 |                                            |                                           |                                      | 0.46                          |                                        |
| LDAT-S052010-Dxx                            | 3.7                             | 6.2                                             | 251 (56)                                   | 22.7                                      | 727 (163)                            | 0.79                          | 2198-E1015-ERS                         |
| LDAT-S052020-Dxx                            | 4.8                             |                                                 |                                            |                                           |                                      | 0.97                          |                                        |
| LDAT-S052030-Dxx                            | 5.0                             |                                                 |                                            |                                           |                                      | 1.01                          |                                        |
| LDAT-S052040-Dxx                            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S052050-Dxx                            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S052010-Exx<br>...<br>LDAT-S052050-Exx | 2.6                             | 3.1                                             |                                            | 11.4                                      |                                      | 0.50                          | 2198-E1007-ERS                         |
| LDAT-S053010-Dxx                            | 4.1                             | 9.4                                             | 378 (85)                                   | 34.2                                      | 1093 (246)                           | 1.31                          | 2198-E1020-ERS                         |
| LDAT-S053020-Dxx                            | 5.0                             |                                                 |                                            |                                           |                                      | 1.53                          |                                        |
| LDAT-S053030-Dxx<br>...<br>LDAT-S053050-Dxx | 5.0                             |                                                 |                                            |                                           |                                      | 1.53                          |                                        |
| LDAT-S053010-Exx<br>...<br>LDAT-S053050-Exx | 1.7                             |                                                 |                                            | 3.1                                       |                                      | 11.4                          | 0.47                                   |
| LDAT-S054010-Dxx                            | 4.4                             | 12.4                                            | 509 (114)                                  | 45.5                                      | 1453 (327)                           | 1.87                          | 2198-E1020-ERS                         |
| LDAT-S054020-Dxx<br>...<br>LDAT-S054050-Dxx | 5.0                             |                                                 |                                            |                                           |                                      | 2.05                          |                                        |
| LDAT-S054010-Exx<br>...<br>LDAT-S054050-Exx | 2.6                             |                                                 |                                            | 6.2                                       |                                      |                               | 22.7                                   |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 70 Linear Thrusters

| Linear Thruster Cat. No.                    | Velocity, max 230V AC<br>m/s | System Continuous Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) | System Peak Stall Current<br>Amps 0-pk | System Peak Stall Force<br>N (lb) | Rated Output 230V AC<br>kW | Kinetix 5100 Drives (230V AC input) |
|---------------------------------------------|------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------|----------------------------|-------------------------------------|
| LDAT-S072010-Dxx<br>...<br>LDAT-S072070-Dxx | 3.5                          | 6.0                                          | 364 (82)                                | 22.0                                   | 1055 (237)                        | 1.03                       | 2198-E1015-ERS                      |
| LDAT-S072010-Exx<br>...<br>LDAT-S072070-Exx | 1.7                          | 3.0                                          |                                         | 11.0                                   |                                   | 0.47                       | 2198-E1004-ERS                      |
| LDAT-S073010-Dxx<br>...<br>LDAT-S073070-Dxx | 3.5                          | 9.0                                          | 554 (125)                               | 32.8                                   | 1576 (354)                        | 1.57                       | 2198-E1015-ERS                      |
| LDAT-S073010-Exx<br>...<br>LDAT-S073070-Exx | 1.2                          | 3.0                                          |                                         | 10.9                                   |                                   | 0.41                       | 2198-E1007-ERS                      |
| LDAT-S074010-Dxx<br>...<br>LDAT-S074070-Dxx | 3.5                          | 11.9                                         | 730 (164)                               | 43.5                                   | 2088 (469)                        | 2.08                       | 2198-E1020-ERS                      |
| LDAT-S074010-Exx<br>...<br>LDAT-S074070-Exx | 1.8                          | 6.0                                          |                                         | 21.7                                   |                                   | 0.95                       | 2198-E1007-ERS                      |
| LDAT-S076010-Dxx<br>...<br>LDAT-S076070-Dxx | 3.5                          | 18.2                                         | 1122 (252)                              | 66.4                                   | 3189 (717)                        | 3.17                       | 2198-E2030-ERS                      |
| LDAT-S076010-Exx<br>...<br>LDAT-S076070-Exx | 1.8                          | 9.1                                          |                                         | 33.2                                   |                                   | 1.45                       | 2198-E1015-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 100 Linear Thrusters

| Linear Thruster Cat. No.                    | Velocity, max 230V AC<br>m/s | System Continuous Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) | System Peak Stall Current<br>Amps 0-pk | System Peak Stall Force<br>N (lb) | Rated Output 230V AC<br>kW | Kinetix 5100 Drives (230V AC input) |
|---------------------------------------------|------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------|----------------------------|-------------------------------------|
| LDAT-S102010-DDx<br>...<br>LDAT-S102090-DDx | 2.6                          | 5.7                                          | 456 (103)                               | 21.0                                   | 1289 (290)                        | 0.96                       | 2198-E1007-ERS                      |
| LDAT-S102010-EDx<br>...<br>LDAT-S102090-EDx | 1.3                          | 2.9                                          |                                         | 10.5                                   |                                   | 0.42                       | 2198-E1007-ERS                      |
| LDAT-S103010-DDx<br>...<br>LDAT-S103090-DDx | 2.7                          | 8.6                                          | 702 (158)                               | 31.5                                   | 1935 (435)                        | 1.47                       | 2198-E1015-ERS                      |
| LDAT-S103010-EDx<br>...<br>LDAT-S103090-EDx | 0.9                          | 2.9                                          |                                         | 10.5                                   | 1388 (312)                        | 0.30                       | 2198-E1007-ERS                      |
| LDAT-S104010-DDx<br>...<br>LDAT-S104090-DDx | 2.7                          | 11.5                                         | 929 (209)                               | 42.0                                   | 2578 (580)                        | 2.07                       | 2198-E1020-ERS                      |
| LDAT-S104010-EDx<br>...<br>LDAT-S104090-EDx | 1.3                          | 5.7                                          |                                         | 21.0                                   |                                   | 0.86                       | 2198-E1007-ERS                      |
| LDAT-S106010-DDx<br>...<br>LDAT-S106090-DDx | 2.7                          | 17.3                                         | 1403 (315)                              | 63.0                                   | 3871 (870)                        | 2.94                       | 2198-E2030-ERS                      |
| LDAT-S106010-EDx<br>...<br>LDAT-S106090-EDx | 1.3                          | 8.6                                          |                                         | 31.5                                   |                                   | 1.28                       | 2198-E1015-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

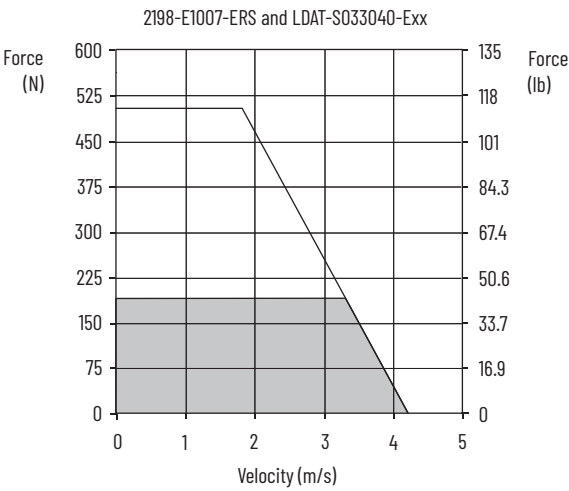
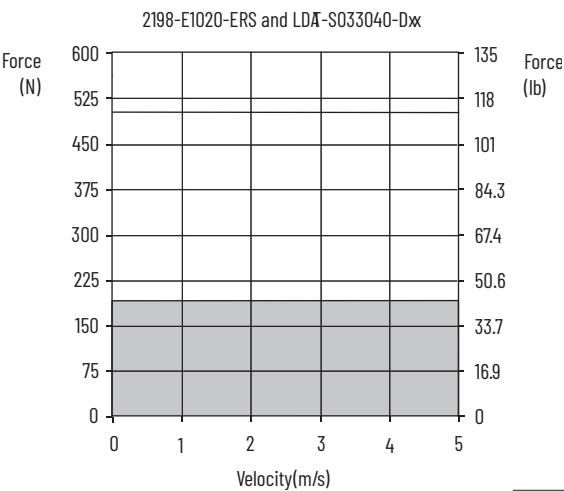
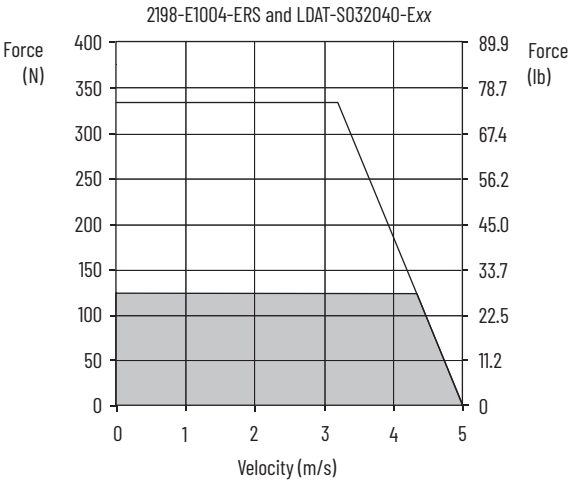
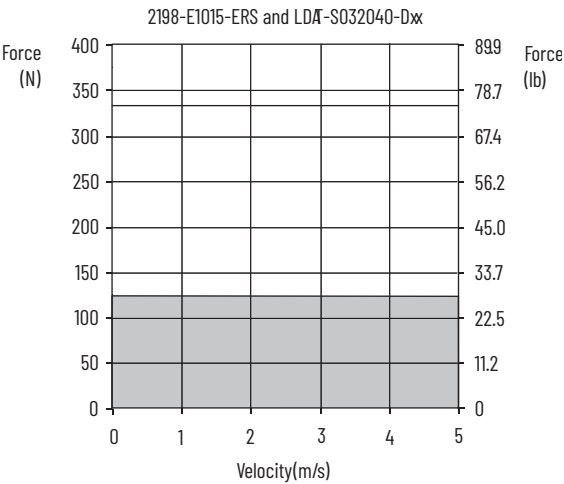
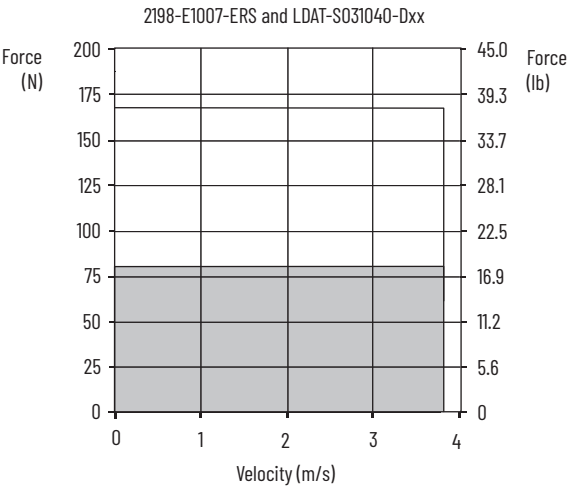


## Performance Specifications with Frame 150 Linear Thrusters

| Linear Thruster<br>Cat. No.                 | Velocity, max<br>230V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Rated Output<br>230V AC<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|---------------------------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S152010-DDx<br>...<br>LDAT-S152090-DDx | 1.8                             | 5.3                                             | 843 (145)                                  | 19.5                                      | 1799 (404)                           | 0.87                          | 2198-E1007-ERS                         |
| LDAT-S152010-EDx<br>...<br>LDAT-S152090-EDx | 0.9                             | 2.7                                             |                                            | 9.8                                       | 1679 (377)                           | 0.34                          | 2198-E1007-ERS                         |
| LDAT-S153010-DDx<br>...<br>LDAT-S153090-DDx | 1.8                             | 8.0                                             | 978 (220)                                  | 29.1                                      | 2680 (602)                           | 1.33                          | 2198-E1015-ERS                         |
| LDAT-S154010-DDx<br>...<br>LDAT-S154090-DDx | 1.8                             | 10.7                                            | 1306 (294)                                 | 39.1                                      | 3597 (809)                           | 1.78                          | 2198-E1020-ERS                         |
| LDAT-S154010-EDx<br>...<br>LDAT-S154090-EDx | 0.9                             | 5.3                                             |                                            | 19.5                                      | 3383 (761)                           | 0.70                          | 2198-E1007-ERS                         |
| LDAT-S156010-DDx<br>...<br>LDAT-S156090-DDx | 1.8                             | 16.3                                            | 1997 (449)                                 | 59.4                                      | 5469 (1229)                          | 2.71                          | 2198-E2030-ERS                         |
| LDAT-S156010-EDx<br>...<br>LDAT-S156090-EDx | 0.9                             | 8.1                                             |                                            | 19.8                                      | 5110 (1149)                          | 1.05                          | 2198-E1015-ERS                         |

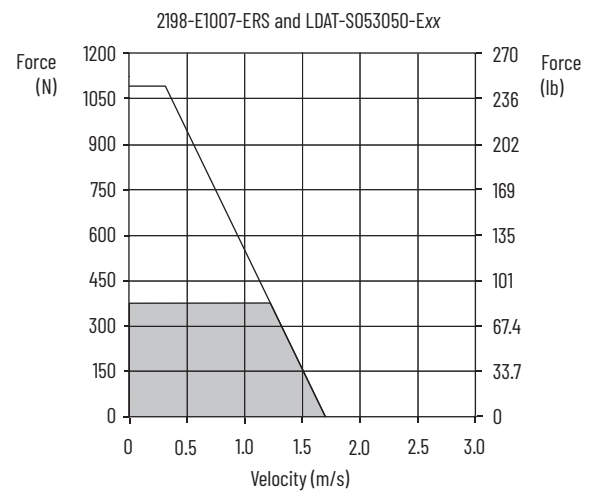
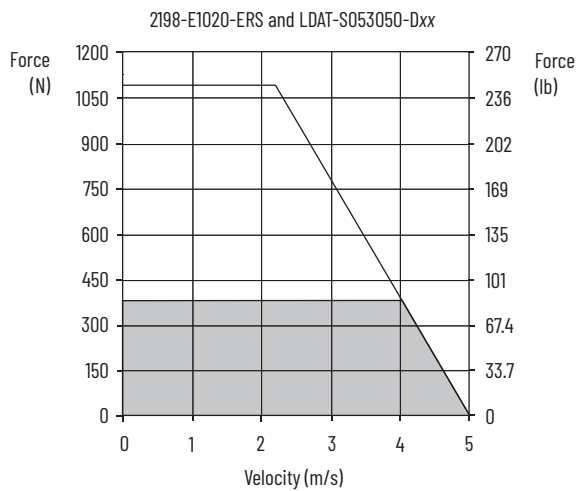
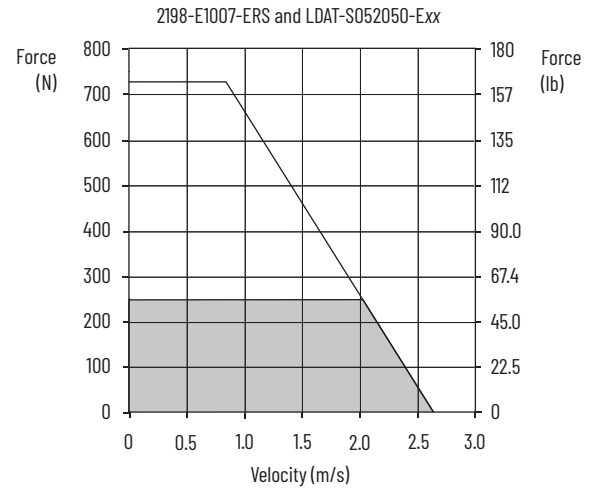
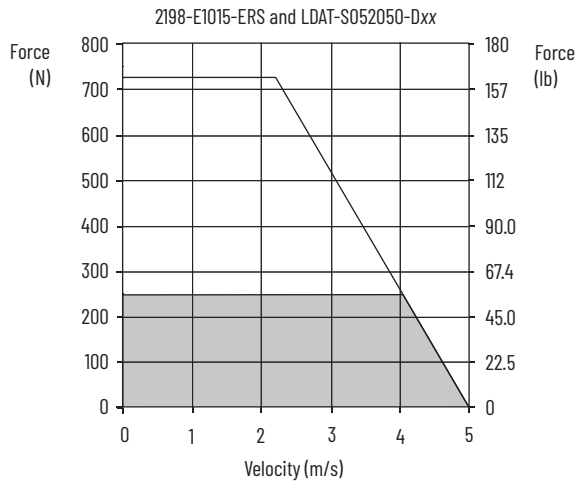
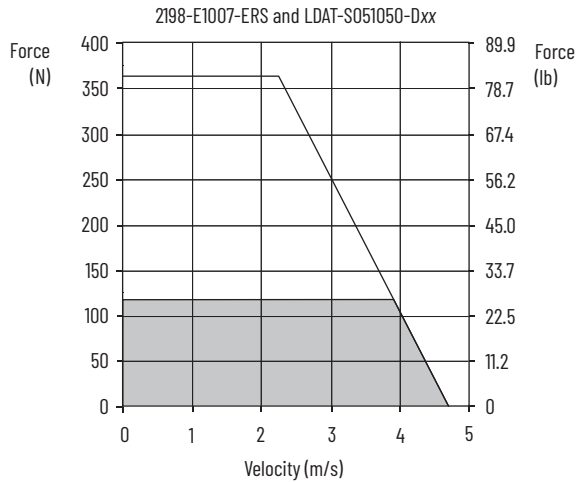
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves



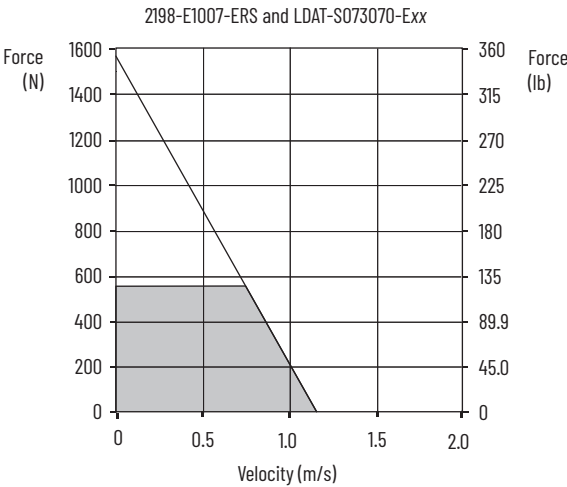
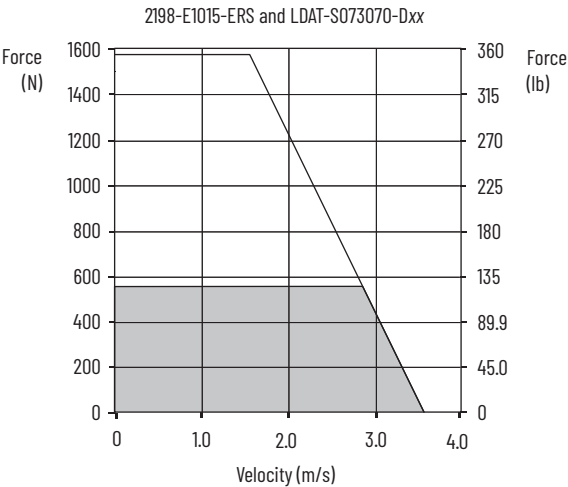
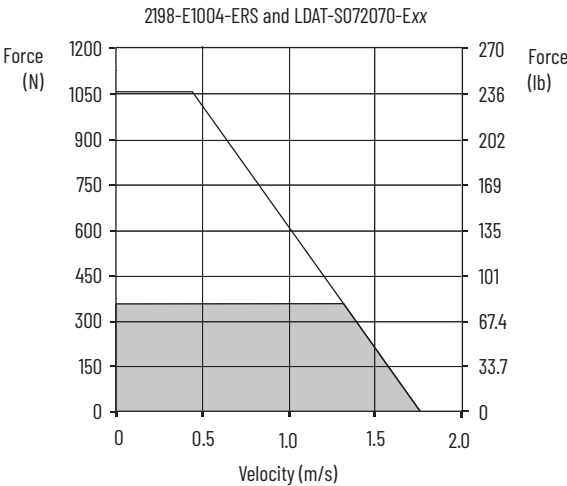
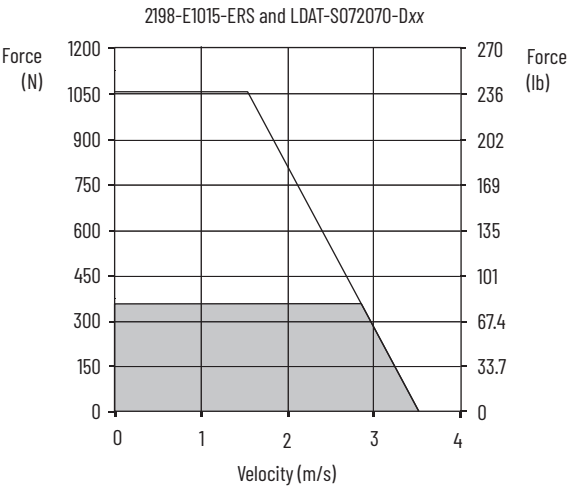
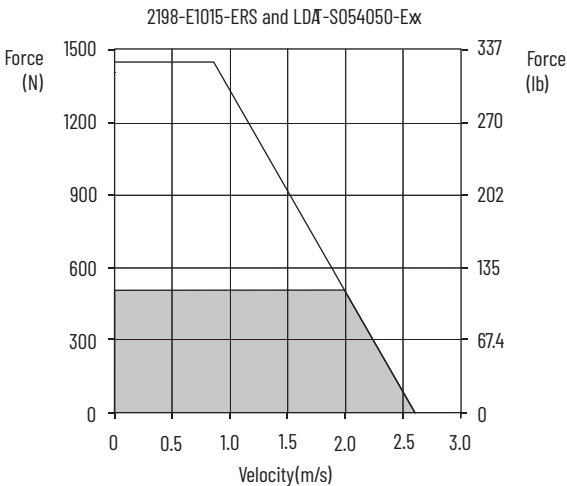
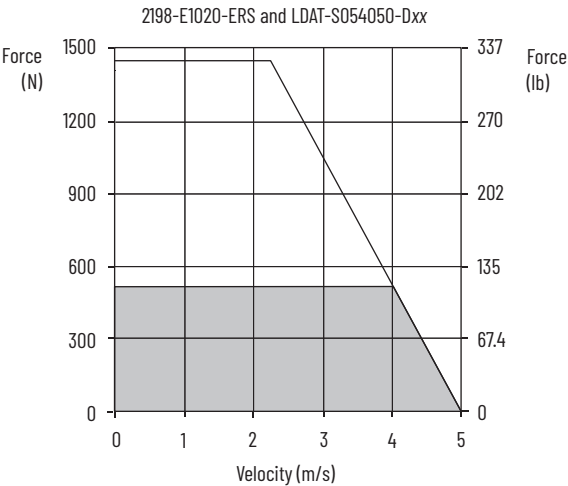
 = Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



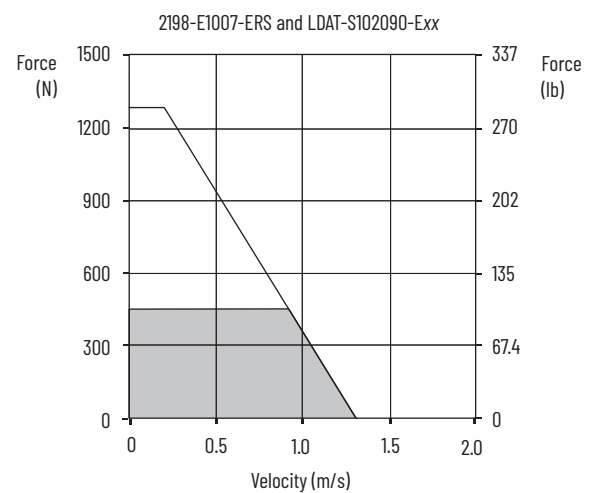
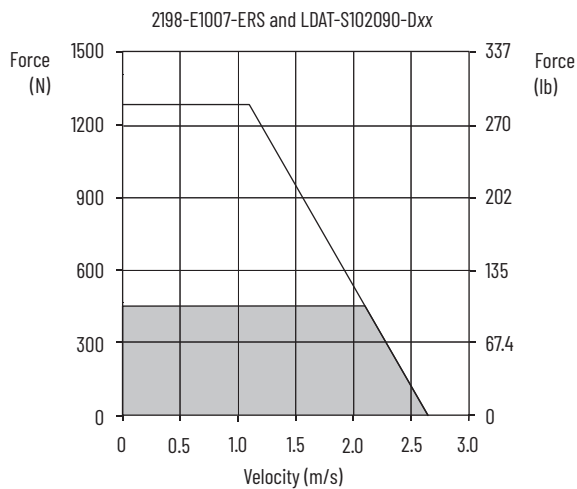
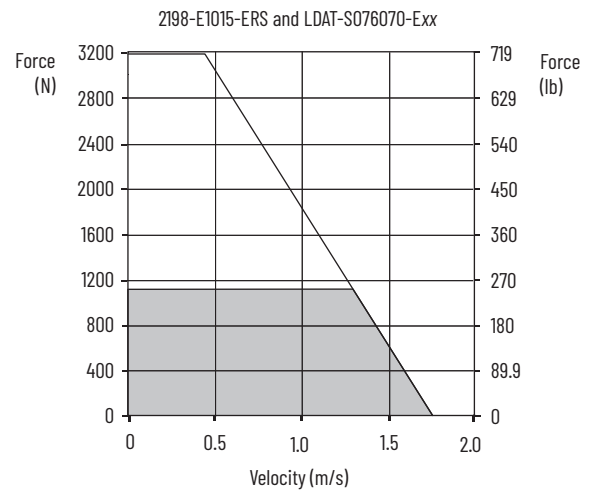
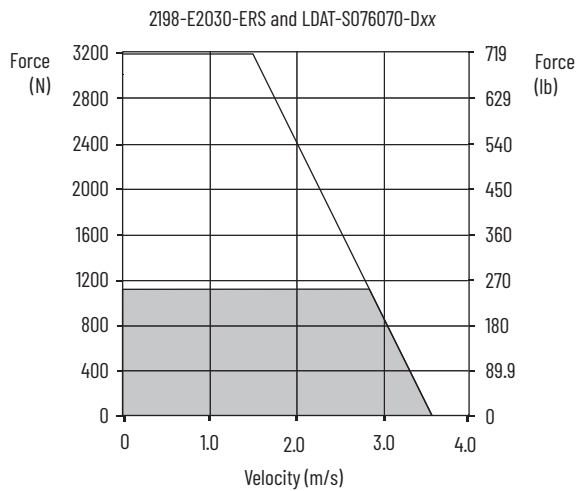
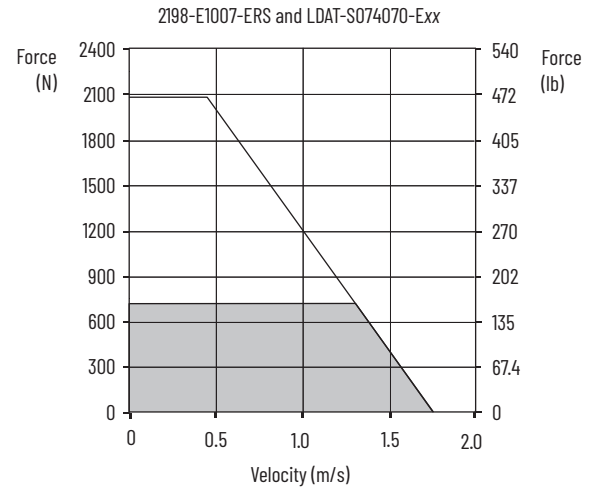
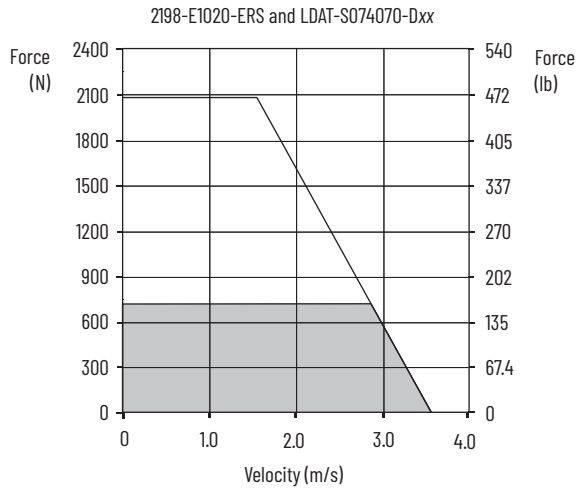
 = Intermittent operating region  
 = Continuous operating region

# Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



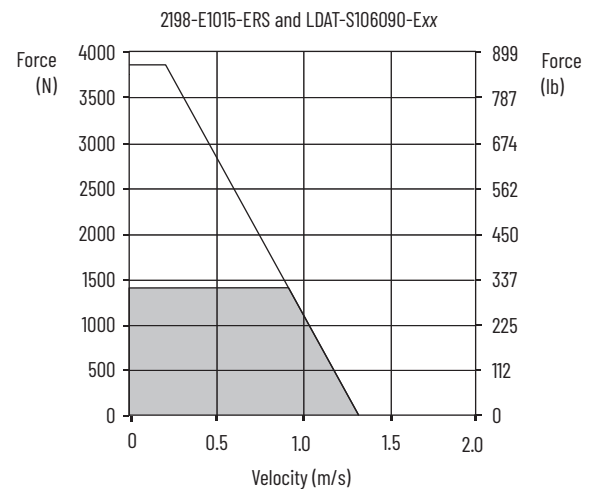
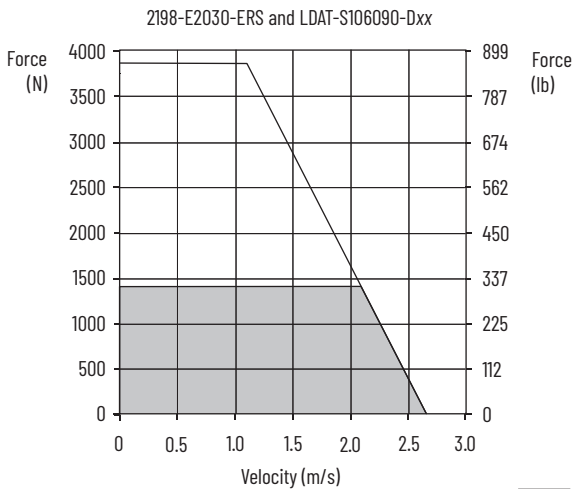
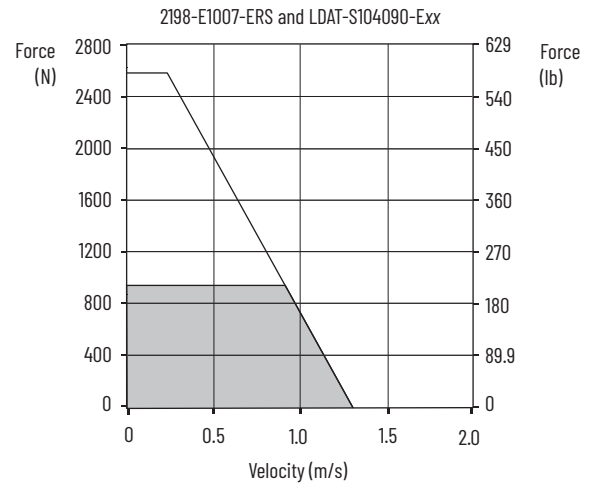
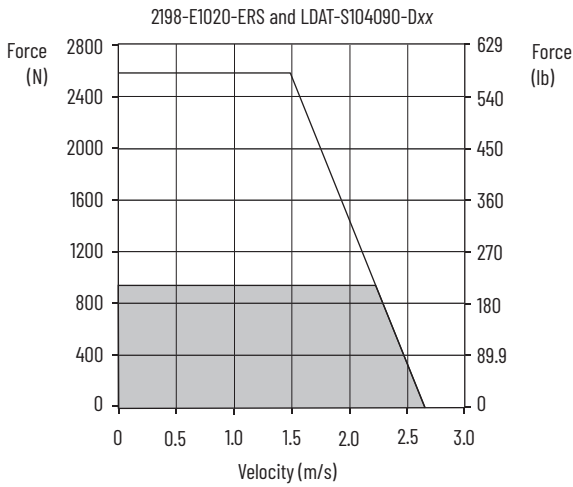
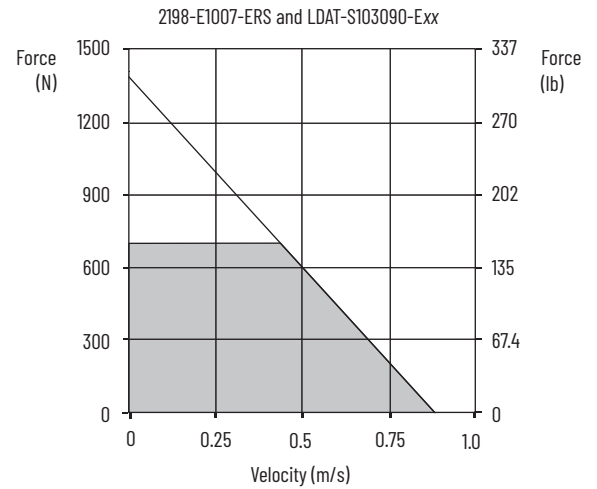
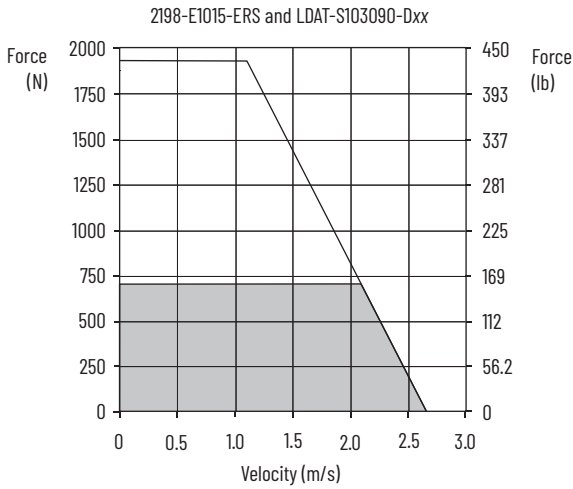
□ = Intermittent operating region  
■ = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



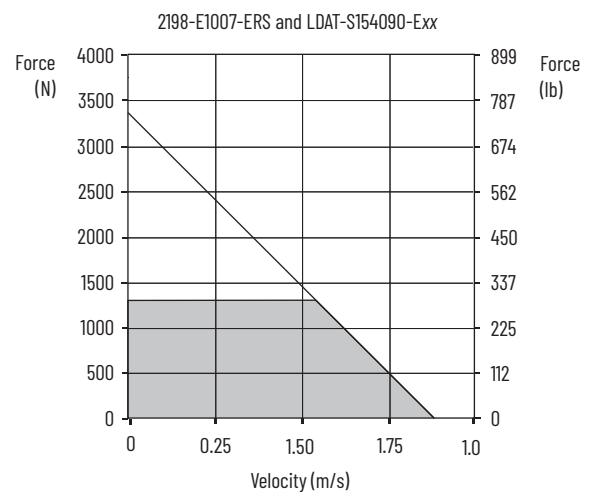
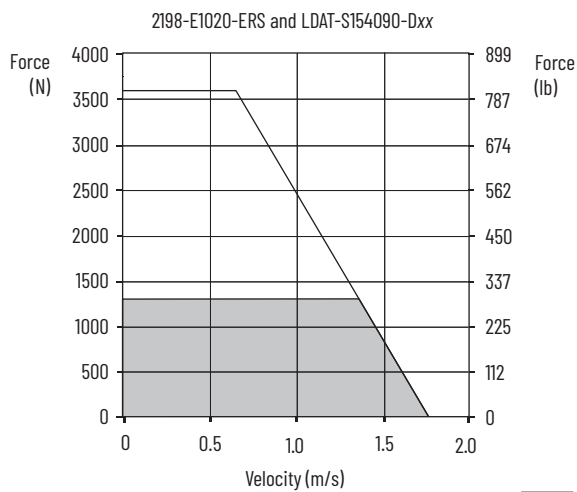
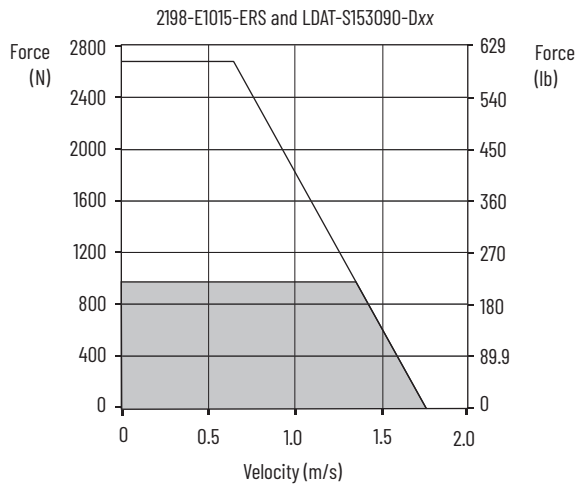
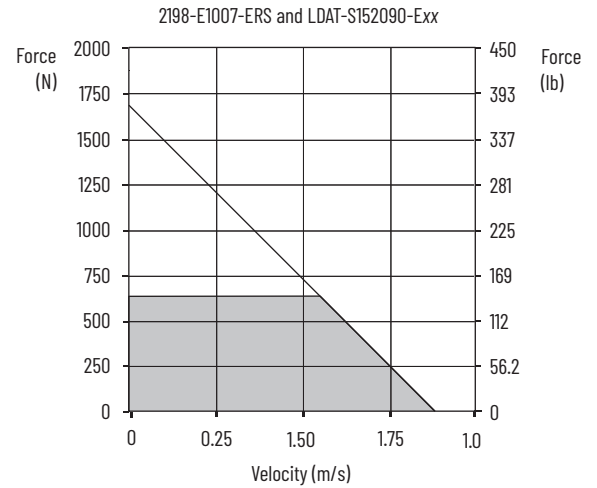
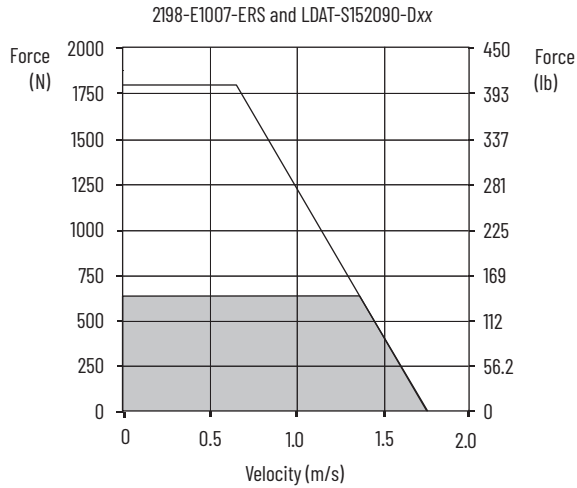
 = Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



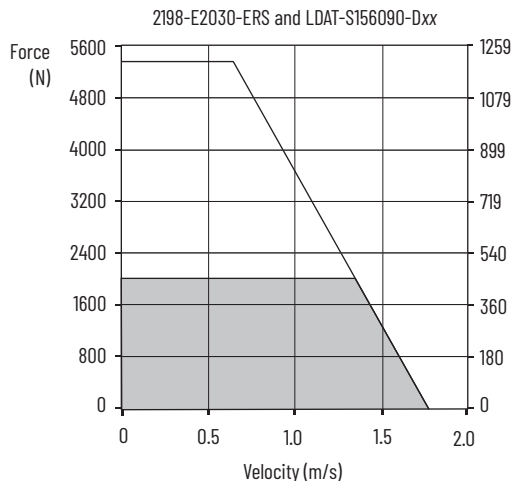
= Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)

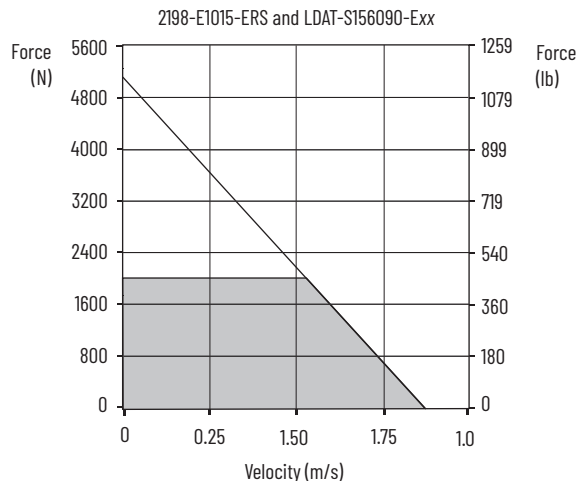


 = Intermittent operating region  
 = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)

Force  
(lb)

□ = Intermittent operating region  
 ■ = Continuous operating region



## Kinetix LDAT Performance Specifications with Kinetix 5100 (400V-class) Drives

### Performance Specifications with Frame 30 Linear Thrusters

| Linear Thruster Cat. No. | Velocity, max 460V AC m/s | System Continuous Stall Current Amps 0-pk | System Continuous Stall Force N (lb) | System Peak Stall Current Amps 0-pk | System Peak Stall Force N (lb) | Rated Output 460V AC kW | Kinetix 5100 Drives (480V AC input) |
|--------------------------|---------------------------|-------------------------------------------|--------------------------------------|-------------------------------------|--------------------------------|-------------------------|-------------------------------------|
| LDAT-S031010-Dxx         | 2.4                       | 4.8                                       | 81 (18)                              | 12.2                                | 168 (38)                       | 0.20                    | 2198-E4015-ERS                      |
| LDAT-S031020-Dxx         | 3.1                       |                                           |                                      |                                     |                                | 0.25                    |                                     |
| LDAT-S031030-Dxx         | 3.5                       |                                           |                                      |                                     |                                | 0.29                    |                                     |
| LDAT-S031040-Dxx         | 3.8                       |                                           |                                      |                                     |                                | 0.31                    |                                     |
| LDAT-S032010-Dxx         | 3.1                       | 7.4                                       | 126 (28)                             | 24.3                                | 336 (76)                       | 0.40                    | 2198-E4020-ERS                      |
| LDAT-S032020-Dxx         | 4.1                       |                                           |                                      |                                     |                                | 0.52                    |                                     |
| LDAT-S032030-Dxx         | 4.7                       |                                           |                                      |                                     |                                | 0.59                    |                                     |
| LDAT-S032040-Dxx         | 5.0                       |                                           |                                      |                                     |                                | 0.63                    |                                     |
| LDAT-S032010-Exx         | 3.1                       | 3.7                                       | 190 (43)                             | 12.2                                | 504 (113)                      | 0.40                    | 2198-E4015-ERS                      |
| LDAT-S032020-Exx         | 4.1                       |                                           |                                      |                                     |                                | 0.52                    |                                     |
| LDAT-S032030-Exx         | 4.7                       |                                           |                                      |                                     |                                | 0.59                    |                                     |
| LDAT-S032040-Exx         | 5.0                       |                                           |                                      |                                     |                                | 0.63                    |                                     |
| LDAT-S033010-Dxx         | 3.5                       | 11.1                                      | 190 (43)                             | 36.5                                | 504 (113)                      | 0.67                    | 2198-E4030-ERS                      |
| LDAT-S033020-Dxx         | 4.7                       |                                           |                                      |                                     |                                | 0.88                    |                                     |
| LDAT-S033030-Dxx         | 5.0                       |                                           |                                      |                                     |                                | 0.95                    |                                     |
| LDAT-S033040-Dxx         | 5.0                       |                                           |                                      |                                     |                                | 0.95                    |                                     |
| LDAT-S033010-Exx         | 3.5                       | 3.7                                       | 190 (43)                             | 12.2                                | 504 (113)                      | 0.67                    | 2198-E4015-ERS                      |
| LDAT-S033020-Exx         | 4.7                       |                                           |                                      |                                     |                                | 0.87                    |                                     |
| LDAT-S033030-Exx         | 5.0                       |                                           |                                      |                                     |                                | 0.91                    |                                     |
| LDAT-S033040-Exx         | 5.0                       |                                           |                                      |                                     |                                | 0.91                    |                                     |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.



## Performance Specifications with Frame 50 Linear Thrusters

| Linear Thruster<br>Cat. No. | Velocity, max<br>460V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Rated Output 460V<br>AC<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|-----------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S051010-Dxx            | 2.8                             | 3.1                                             | 119 (27)                                   | 11.4                                      | 363 (82)                             | 0.34                          | 2198-E4015-ERS                         |
| LDAT-S051020-Dxx            | 3.7                             |                                                 |                                            |                                           |                                      | 0.43                          |                                        |
| LDAT-S051030-Dxx            | 4.1                             |                                                 |                                            |                                           |                                      | 0.49                          |                                        |
| LDAT-S051040-Dxx            | 4.4                             |                                                 |                                            |                                           |                                      | 0.53                          |                                        |
| LDAT-S051050-Dxx            | 4.7                             |                                                 |                                            |                                           |                                      | 0.55                          |                                        |
| LDAT-S052010-Dxx            | 3.7                             | 6.2                                             | 251 (56)                                   | 22.7                                      | 727 (163)                            | 0.92                          | 2198-E4020-ERS                         |
| LDAT-S052020-Dxx            | 4.8                             |                                                 |                                            |                                           |                                      | 1.20                          |                                        |
| LDAT-S052030-Dxx            | 5.0                             |                                                 |                                            |                                           |                                      | 1.24                          |                                        |
| LDAT-S052040-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S052050-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S052010-Exx            | 3.7                             | 3.1                                             | 251 (56)                                   | 11.4                                      | 727 (163)                            | 0.80                          | 2198-E4015-ERS                         |
| LDAT-S052020-Exx            | 4.6                             |                                                 |                                            |                                           |                                      | 0.98                          |                                        |
| LDAT-S052030-Exx            | 4.6                             |                                                 |                                            |                                           |                                      | 1.02                          |                                        |
| LDAT-S052040-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S052050-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S053010-Dxx            | 4.1                             | 9.4                                             | 378 (85)                                   | 34.2                                      | 1093 (246)                           | 1.56                          | 2198-E4030-ERS                         |
| LDAT-S053020-Dxx            | 5.0                             |                                                 |                                            |                                           |                                      | 1.87                          |                                        |
| LDAT-S053030-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S053050-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S053010-Exx            | 3.5                             | 3.1                                             | 378 (85)                                   | 11.4                                      | 1093 (246)                           | 1.04                          | 2198-E4015-ERS                         |
| LDAT-S053050-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S054010-Dxx            | 4.4                             | 12.4                                            | 509 (114)                                  | 45.5                                      | 1453 (327)                           | 2.26                          | 2198-E4055-ERS                         |
| LDAT-S054020-Dxx            | 5.00                            |                                                 |                                            |                                           |                                      | 2.53                          |                                        |
| LDAT-S054050-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S054010-Exx            | 4.4                             | 6.2                                             |                                            | 509 (114)                                 |                                      | 22.7                          | 1453 (327)                             |
| LDAT-S054020-Exx            | 5.0                             |                                                 | 2.05                                       |                                           |                                      |                               |                                        |
| LDAT-S054050-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 70 Linear Thrusters

| Linear Thruster<br>Cat. No. | Velocity, max<br>460V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Rated Output 460V<br>AC<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|-----------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S072010-Dxx            | 3.9                             | 6.0                                             | 364 (82)                                   | 22.0                                      | 1055 (237)                           | 1.37                          | 2198-E4020-ERS                         |
| LDAT-S072020-Dxx            | 5.0                             |                                                 |                                            |                                           |                                      | 1.64                          |                                        |
| LDAT-S072030-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S072070-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S072010-Exx            | 3.5                             | 3.0                                             |                                            | 11.0                                      |                                      | 1.03                          | 2198-E4007-ERS                         |
| LDAT-S072020-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S072070-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S073010-Dxx            | 4.4                             | 9.0                                             | 554 (125)                                  | 32.8                                      | 1576 (354)                           | 2.27                          | 2198-E4030-ERS                         |
| LDAT-S073020-Dxx            | 5.0                             |                                                 |                                            |                                           |                                      | 2.50                          |                                        |
| LDAT-S073070-Dxx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S073010-Exx            | 2.4                             | 3.0                                             |                                            | 10.9                                      |                                      | 1.01                          | 2198-E4007-ERS                         |
| LDAT-S073070-Exx            |                                 |                                                 |                                            |                                           |                                      |                               |                                        |

## Performance Specifications with Frame 70 Linear Thrusters (continued)

| Linear Thruster<br>Cat. No.                 | Velocity, max<br>460V AC<br>m/s | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Rated Output 460V<br>AC<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|---------------------------------------------|---------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|-------------------------------|----------------------------------------|
| LDAT-S074010-Dxx                            | 4.7                             | 11.9                                            | 730 (164)                                  | 43.5                                      | 2088 (469)                           | 3.15                          | 2198-E4055-ERS                         |
| LDAT-S074020-Dxx<br>...<br>LDAT-S074070-Dxx | 5.0                             |                                                 |                                            |                                           |                                      | 3.30                          |                                        |
| LDAT-S074010-Exx<br>...<br>LDAT-S074070-Exx | 3.5                             |                                                 |                                            | 6.0                                       |                                      | 21.7                          | 2.08                                   |
| LDAT-S076010-Dxx                            | 5.0                             | 18.2                                            | 1122 (252)                                 | 66.4                                      | 3189 (717)                           | 5.02                          | 2198-E4075-ERS                         |
| LDAT-S076020-Dxx<br>...<br>LDAT-S076070-Dxx |                                 |                                                 |                                            |                                           |                                      |                               |                                        |
| LDAT-S076010-Exx<br>...<br>LDAT-S076070-Exx | 3.5                             | 9.1                                             |                                            |                                           | 33.2                                 |                               | 3.18                                   |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 100 Linear Thrusters

| Linear Thruster Cat. No.                                                                   | Velocity, max 460V AC<br>m/s | System Continuous Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) | System Peak Stall Current<br>Amps 0-pk | System Peak Stall Force<br>N (lb) | Rated Output 460V AC<br>kW | Kinetix 5100 Drives (480V AC input) |
|--------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------|----------------------------|-------------------------------------|
| LDAT-S102010-Dxx                                                                           | 3.4                          | 5.7                                          | 456 (103)                               | 21.0                                   | 1289 (290)                        | 1.44                       | 2198-E4015-ERS                      |
| LDAT-S102020-Dxx                                                                           | 4.4                          |                                              |                                         |                                        |                                   | 1.74                       |                                     |
| LDAT-S102030-Dxx<br>LDAT-S102040-Dxx<br>...<br>LDAT-S102050-Dxx<br>...<br>LDAT-S102090-Dxx | 5.0                          |                                              |                                         |                                        |                                   | 1.91                       |                                     |
| LDAT-S102010-Exx<br>...<br>LDAT-S102090-Exx                                                | 2.6                          | 2.9                                          |                                         | 10.5                                   |                                   | 0.96                       | 2198-E4007-ERS                      |
| LDAT-S103010-Dxx                                                                           | 3.8                          | 8.6                                          | 702 (158)                               | 31.5                                   | 1935 (435)                        | 2.41                       | 2198-E4030-ERS                      |
| LDAT-S103020-Dxx<br>LDAT-S103030-Dxx<br>...<br>LDAT-S103090-Dxx                            | 5.0                          |                                              |                                         |                                        |                                   | 2.93                       |                                     |
| LDAT-S103010-Exx<br>...<br>LDAT-S103090-Exx                                                | 1.8                          | 2.9                                          |                                         | 10.5                                   |                                   | 0.92                       | 2198-E4007-ERS                      |
| LDAT-S104010-Dxx                                                                           | 4.1                          | 11.5                                         | 929 (209)                               | 42.0                                   | 2578 (580)                        | 3.76                       | 2198-E4055-ERS                      |
| LDAT-S104020-Dxx<br>LDAT-S104030-Dxx<br>...<br>LDAT-S104090-Dxx                            | 5.0                          |                                              |                                         |                                        |                                   | 4.29                       |                                     |
| LDAT-S104010-Exx<br>...<br>LDAT-S104090-Exx                                                | 2.7                          | 5.7                                          |                                         | 21.0                                   |                                   | 2.07                       | 2198-E4015-ERS                      |
| LDAT-S106010-Dxx                                                                           | 4.5                          | 17.3                                         | 1403 (315)                              | 63.0                                   | 3871 (870)                        | 5.41                       | 2198-E4075-ERS                      |
| LDAT-S106020-Dxx<br>...<br>LDAT-S106090-Dxx                                                | 5.0                          |                                              |                                         |                                        |                                   | 5.87                       |                                     |
| LDAT-S106010-Exx<br>...<br>LDAT-S106090-Exx                                                | 2.7                          | 8.6                                          |                                         | 31.5                                   |                                   | 2.94                       | 2198-E4030-ERS                      |

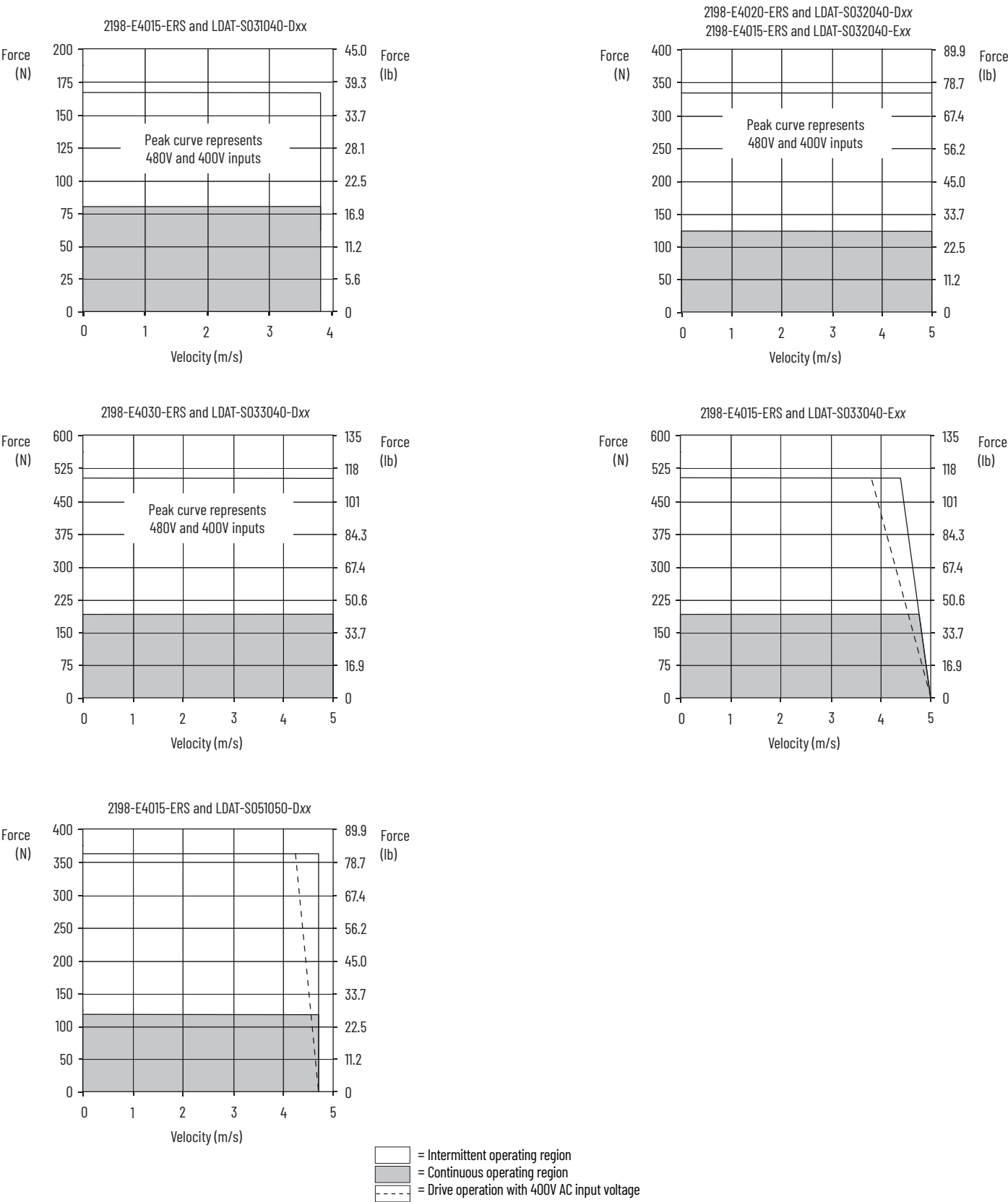
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Frame 150 Linear Thrusters

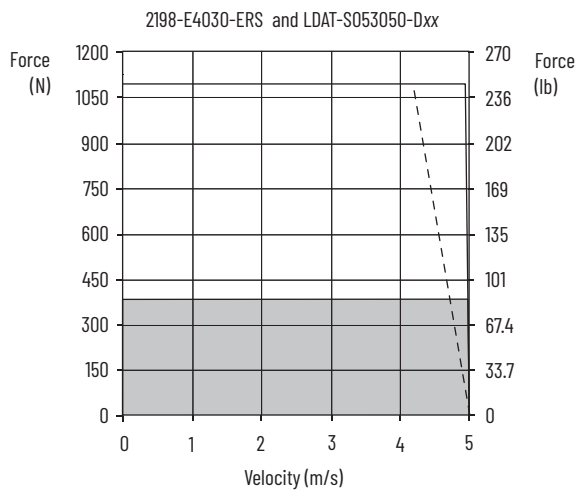
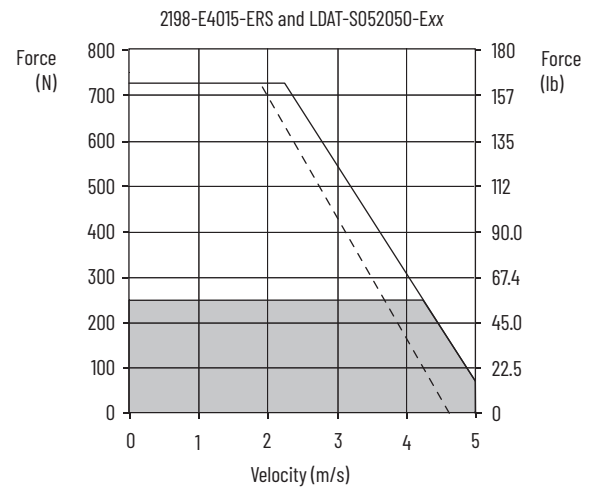
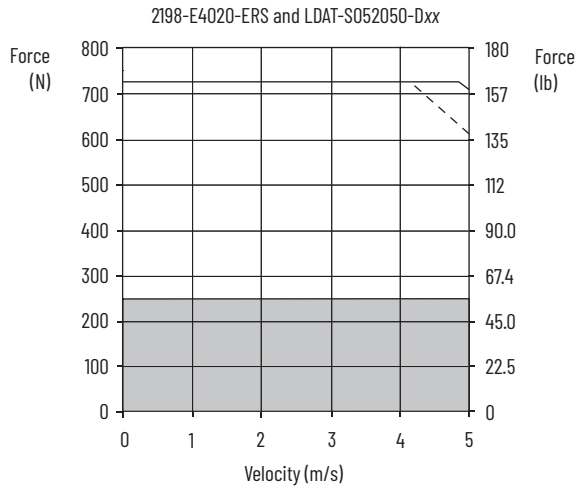
| Linear Thruster Cat. No.                    | Velocity, max 460V AC<br>m/s | System Continuous Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) | System Peak Stall Current<br>Amps 0-pk | System Peak Stall Force<br>N (lb) | Rated Output 460V AC<br>kW | Kinetix 5100 Drives (480V AC input) |
|---------------------------------------------|------------------------------|----------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------------|----------------------------|-------------------------------------|
| LDAT-S152010-Dxx                            | 3.2                          | 5.3                                          | 643 (145)                               | 19.5                                   | 1799 (404)                        | 1.76                       | 2198-E4015-ERS                      |
| LDAT-S152020-Dxx<br>...<br>LDAT-S152090-Dxx | 3.5                          |                                              |                                         |                                        |                                   | 1.89                       |                                     |
| LDAT-S152010-Exx<br>...<br>LDAT-S152090-Exx | 1.8                          | 2.7                                          |                                         | 9.8                                    |                                   | 0.87                       | 2198-E4007-ERS                      |
| LDAT-S153010-Dxx<br>...<br>LDAT-S153090-Dxx | 3.6                          | 8.0                                          | 978 (220)                               | 29.1                                   | 2680 (602)                        | 2.87                       | 2198-E4020-ERS                      |
| LDAT-S153010-Exx<br>...<br>LDAT-S153090-Exx | 1.2                          | 2.7                                          |                                         | 9.1                                    |                                   | 0.80                       | 2198-E4007-ERS                      |
| LDAT-S154010-Dxx<br>...<br>LDAT-S154090-Dxx | 3.5                          | 10.7                                         |                                         | 39.1                                   | 3597 (809)                        | 3.83                       | 2198-E4055-ERS                      |
| LDAT-S154010-Exx<br>...<br>LDAT-S154090-Exx | 1.8                          | 5.3                                          | 1306 (294)                              | 19.5                                   |                                   | 1.78                       | 2198-E4015-ERS                      |
| LDAT-S156010-Dxx<br>...<br>LDAT-S156090-Dxx | 3.6                          | 16.3                                         | 1997 (449)                              | 59.4                                   | 5469 (1229)                       | 5.85                       | 2198-E4075-ERS                      |
| LDAT-S156010-Exx<br>...<br>LDAT-S156090-Exx | 1.8                          | 8.1                                          |                                         | 19.8                                   |                                   | 2.71                       | 2198-E4020-ERS                      |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

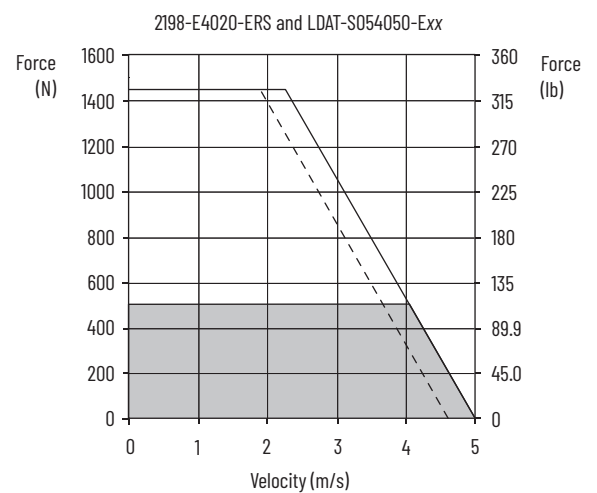
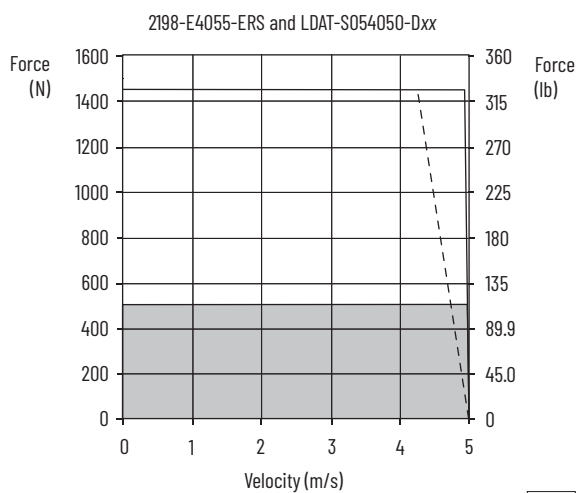
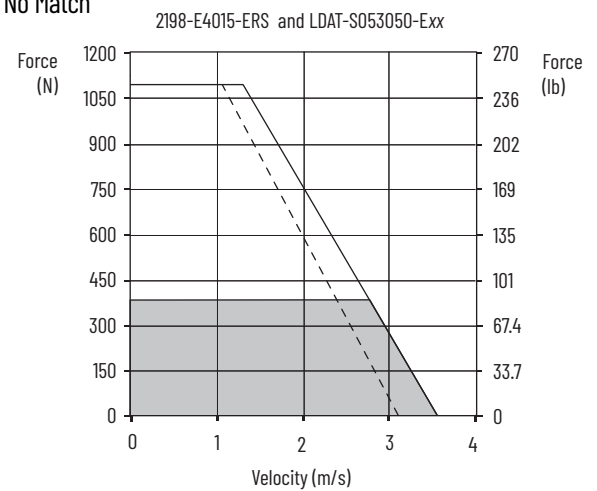
# Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves



## Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)

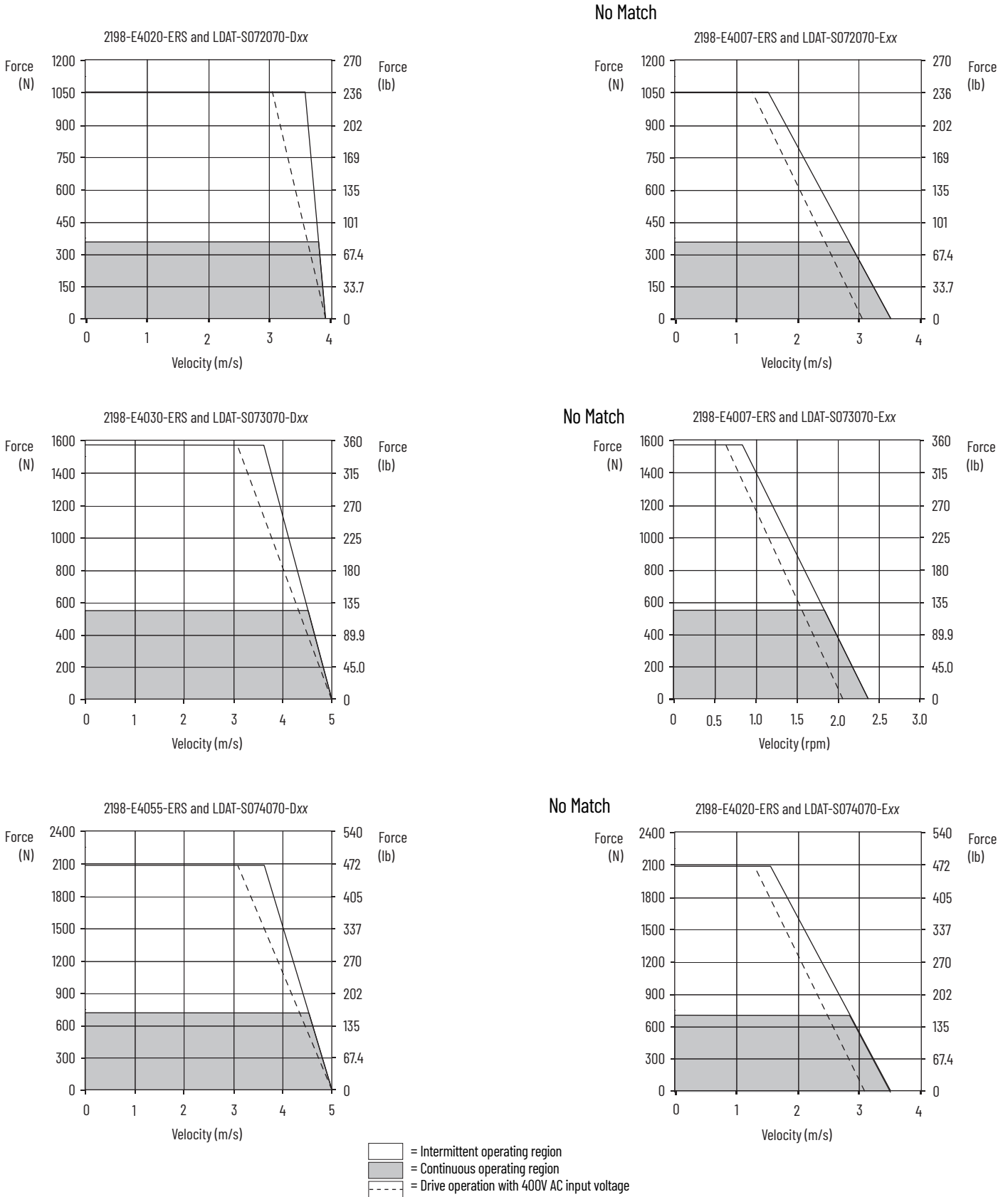


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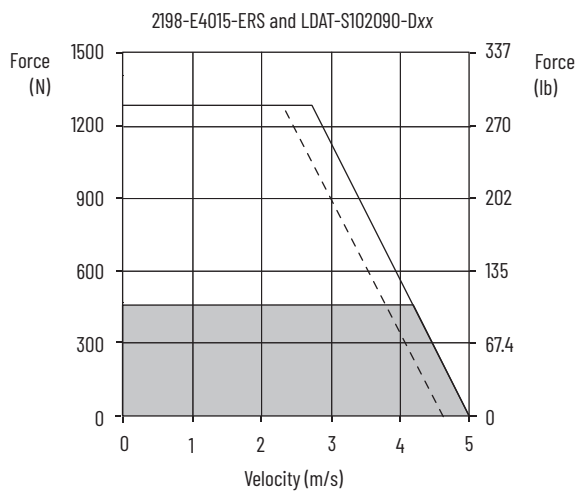
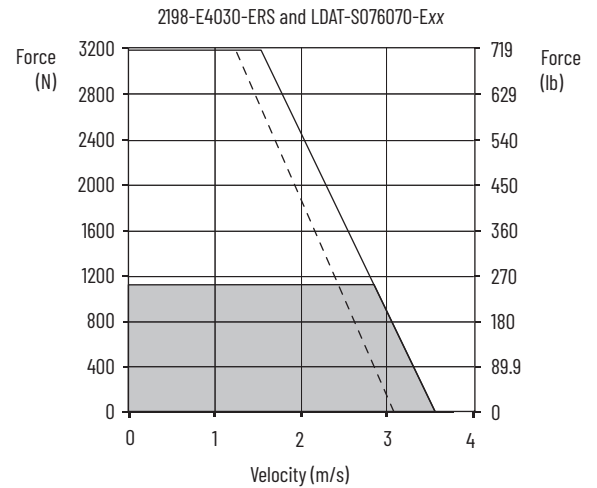
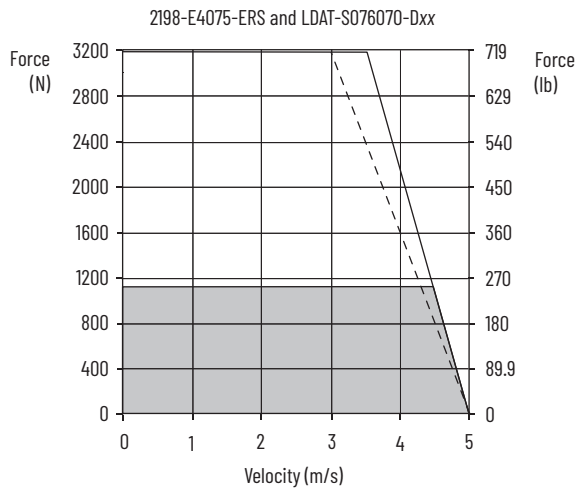


[White Box] = Intermittent operating region  
 [Gray Box] = Continuous operating region  
 [Dashed Line] = Drive operation with 400V AC input voltage

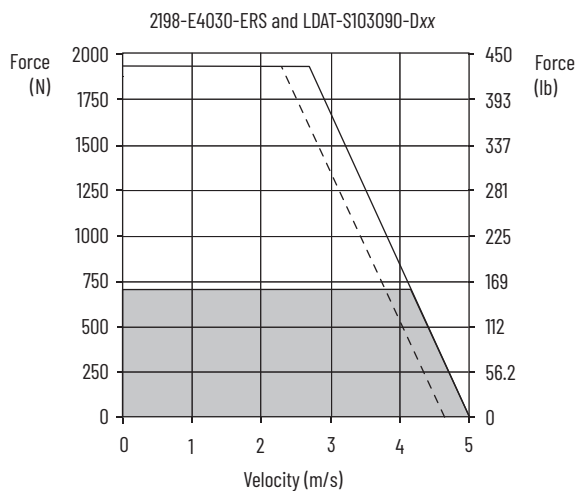
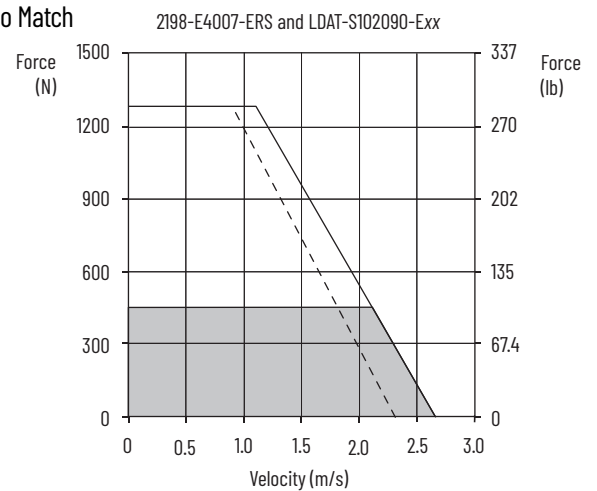
## Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



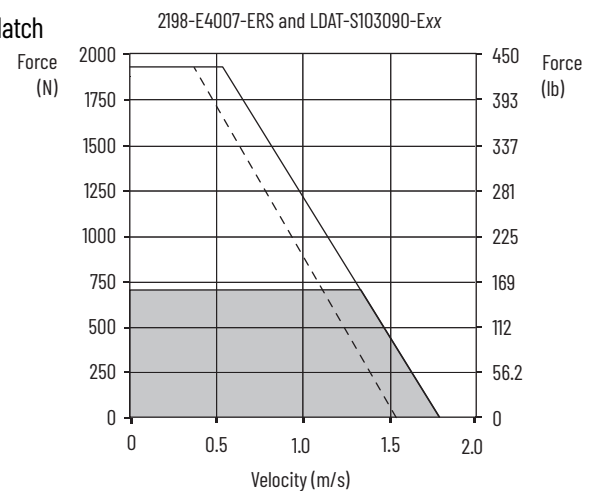
# Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



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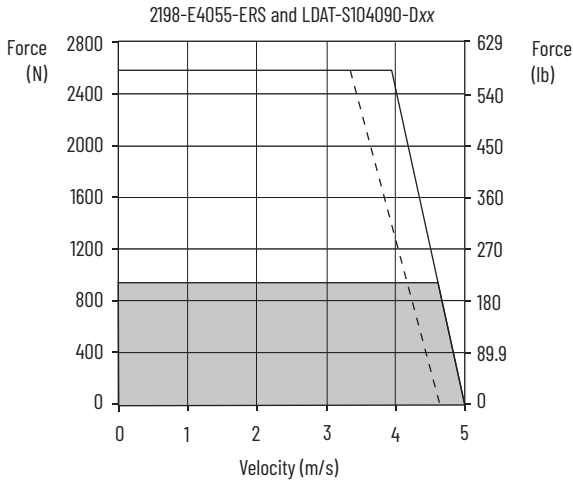


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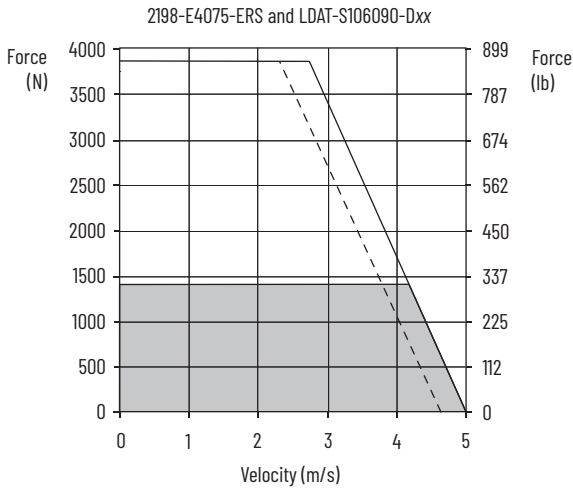
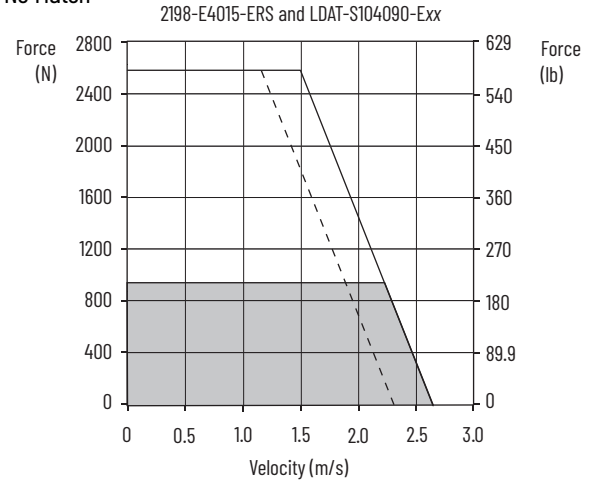


-  = Intermittent operating region
-  = Continuous operating region
-  = Drive operation with 400V AC input voltage

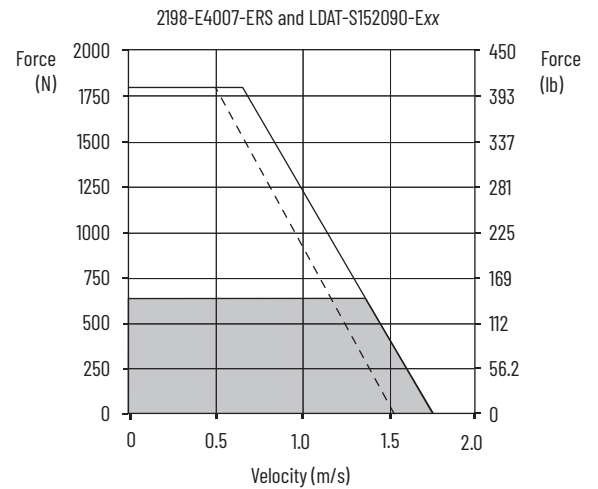
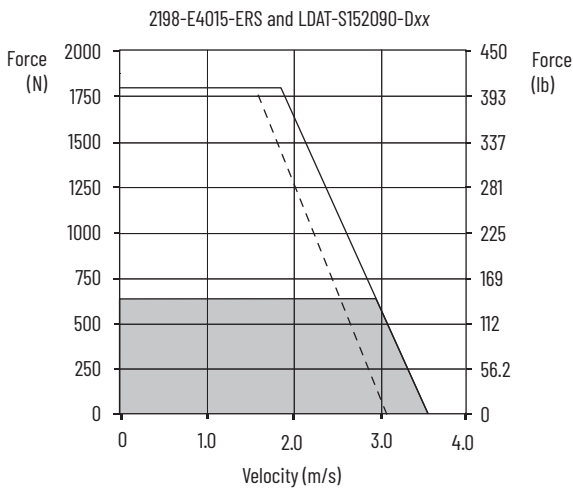
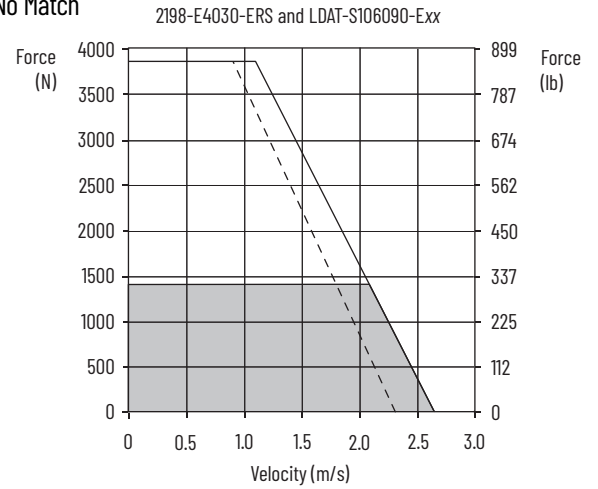
## Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



No Match



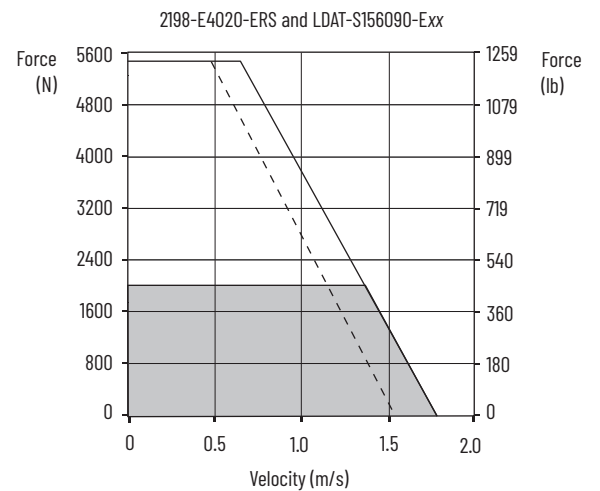
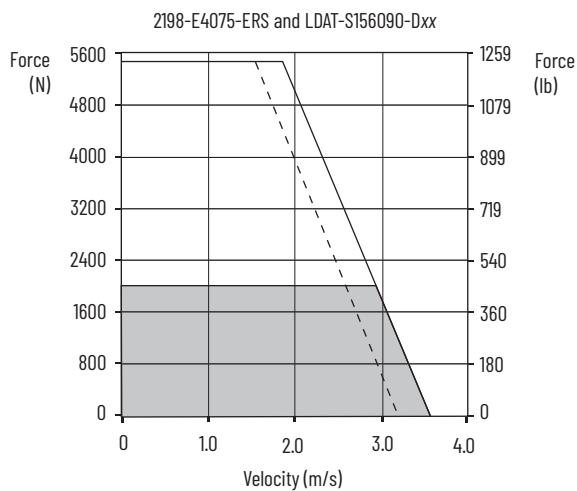
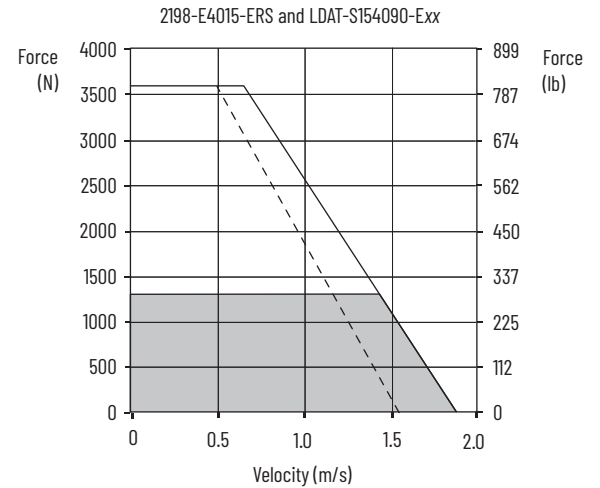
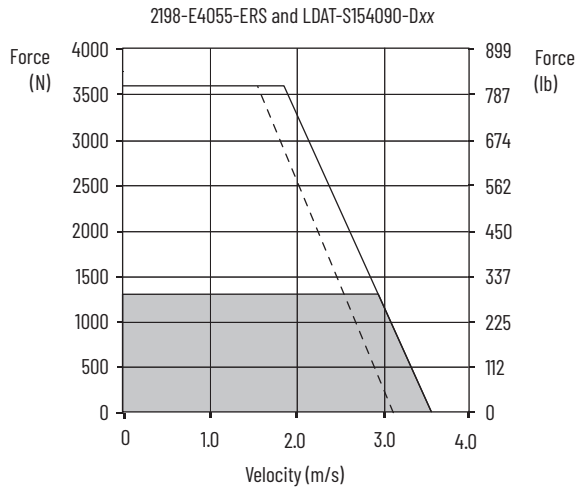
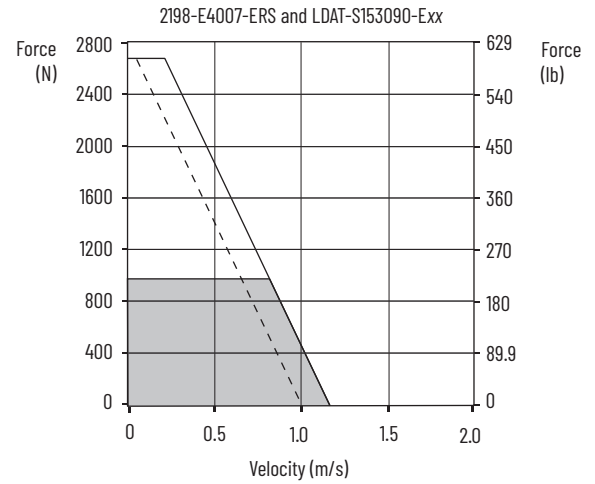
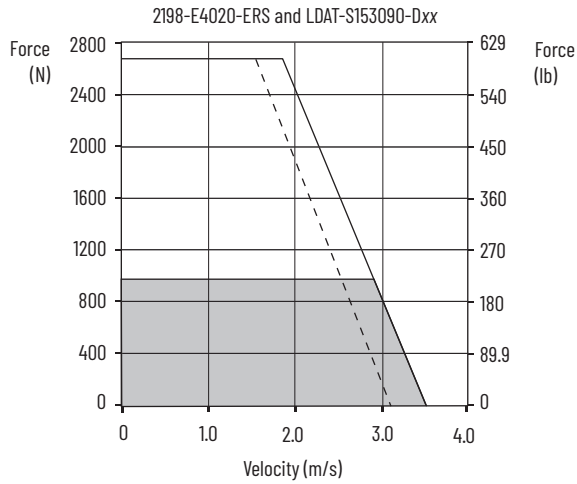
No Match



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 400V AC input voltage



# Kinetix 5100 (400V-class) Drives/Kinetix LDAT Integrated Linear Thruster Curves (cont.)



= Intermittent operating region  
 = Continuous operating region  
 = Drive operation with 400V AC input voltage

# Kinetix 5100 (200V-class) Drives with Kinetix MPAS Linear Stages

This section provides system combination information for the Kinetix 5100 drives (with 230V, nominal input) when matched with Kinetix MPAS (400V-class) integrated (ballscrew) linear stages with absolute high-resolution encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix MPAS Cable Combinations

| Linear Stage (200V-class)<br>Cat. No.                          | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPAS-Axxxx1-V05SxA,<br>MPAS-Axxxx2-V20SxA                      | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPAS-A6xxxB-ALMx2C<br>MPAS-A8xxxE-ALMx2C<br>MPAS-A9xxxK-ALMx2C |                                                                                   | 2090-XXNFMF-Sxx (standard, non-flex)<br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                      |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPAS Performance Specifications with Kinetix 5100 (200V-class) Drives

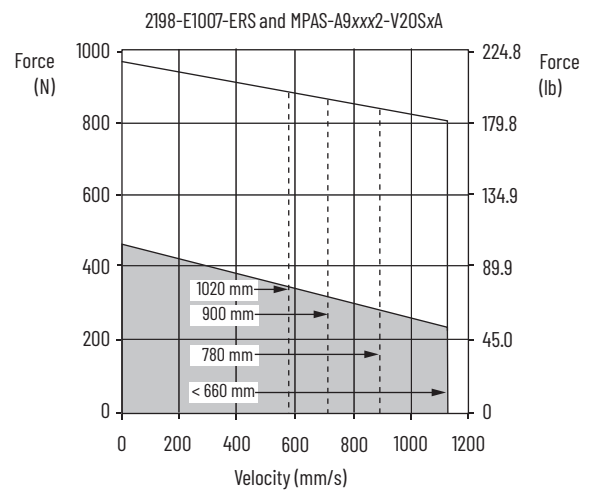
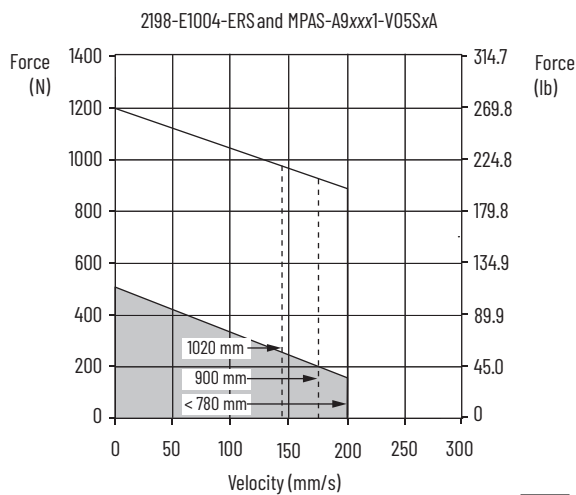
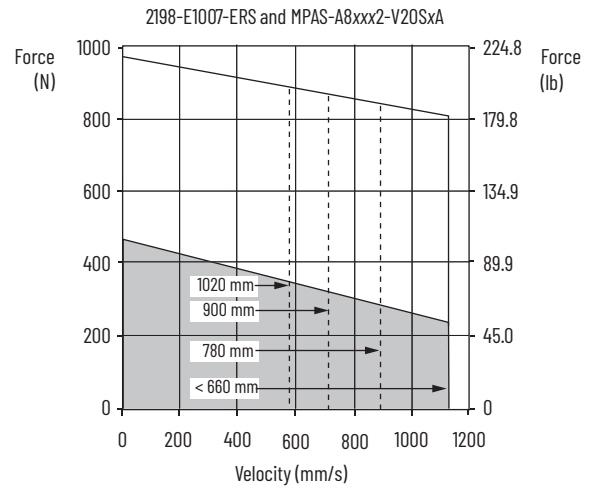
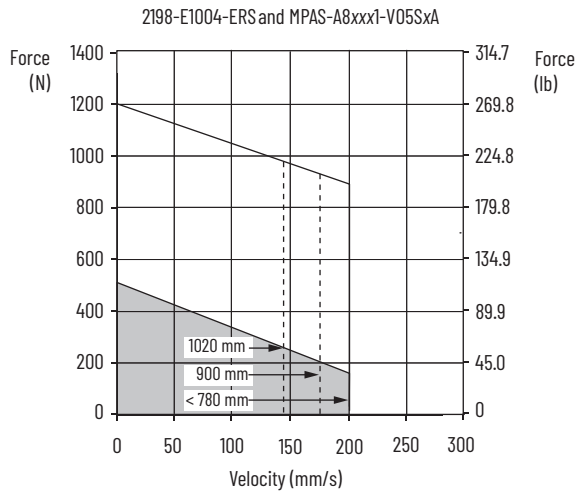
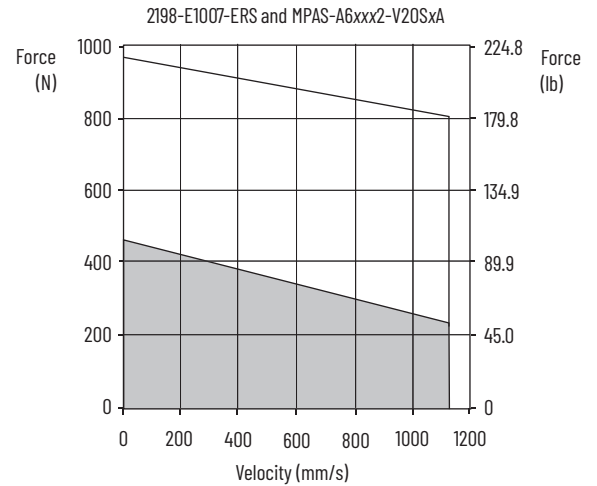
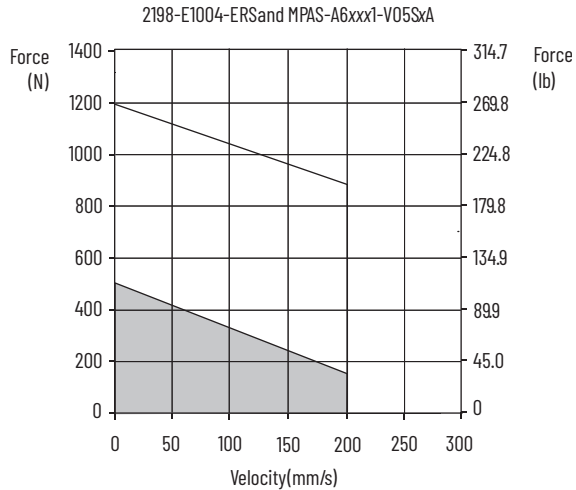
| Linear Stage<br>Cat. No. | Maximum Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|--------------------------|------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| MPAS-Axxxx1-V05SxA       | 200 (79) <sup>(1)</sup>      | 3.09                                            | 521 (117)                                  | 6.10                                      | 1212 (272)                           | 0.37                               | 2198-E1004-ERS                         |
| MPAS-Axxxx2-V20SxA       | 1124 (44.3) <sup>(2)</sup>   | 4.54                                            | 462 (104)                                  | 9.10                                      | 968 (218)                            | 0.62                               | 2198-E1007-ERS                         |
| MPAS-A6xxxB-ALM02C       | 5000 (200)                   | 5.3                                             | 105 (23.6)                                 | 15.8                                      | 359 (80.7)                           | 0.32                               | 2198-E1007-ERS                         |
| MPAS-A6xxxB-ALMS2C       |                              | 4.7                                             | 83.0 (18.7)                                | 14.2                                      | 312 (70.1)                           | 0.29                               |                                        |
| MPAS-A8xxxE-ALM02C       |                              | 7.0                                             | 189 (42.5)                                 | 18.5                                      | 456 (103)                            | 0.53                               |                                        |
| MPAS-A8xxxE-ALMS2C       |                              | 6.3                                             | 159 (35.7)                                 | 16.7                                      | 399 (89.7)                           | 0.48                               |                                        |
| MPAS-A9xxxK-ALM02C       |                              | 6.7                                             | 285 (64.1)                                 | 18.3                                      | 680 (153)                            | 0.77                               |                                        |
| MPAS-A9xxxK-ALMS2C       |                              | 6.1                                             | 245 (55.1)                                 | 16.5                                      | 601 (135)                            | 0.69                               |                                        |

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

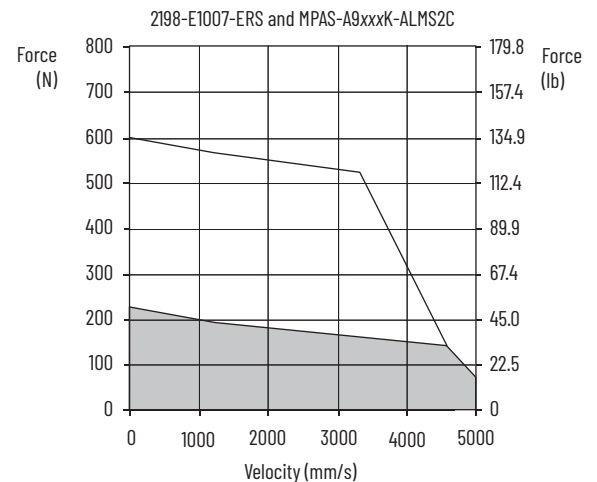
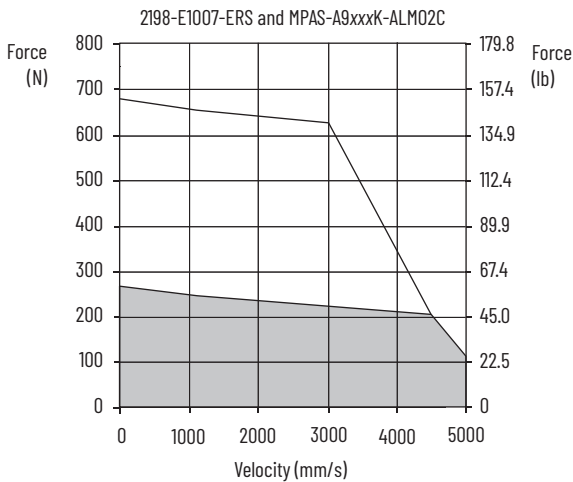
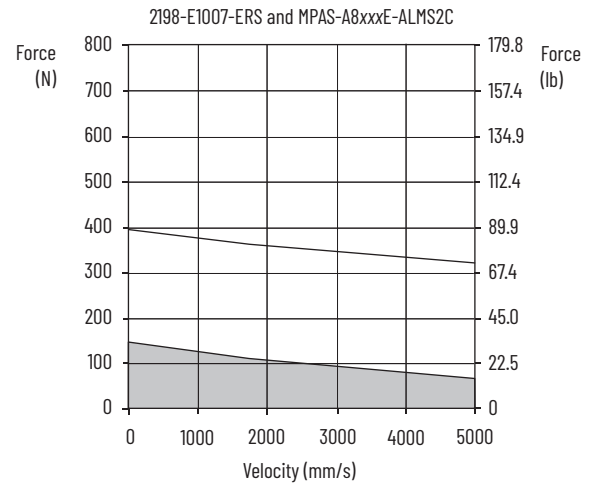
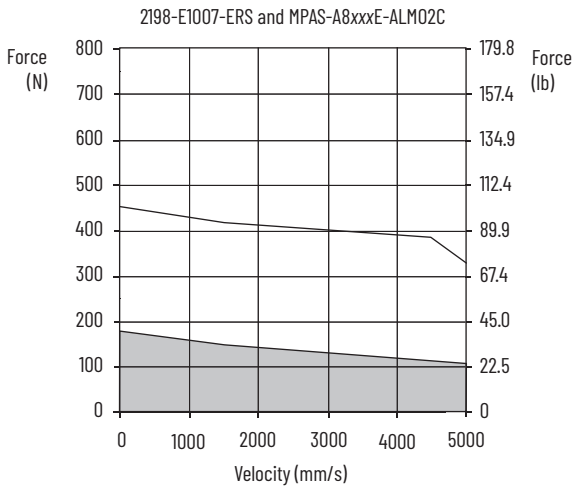
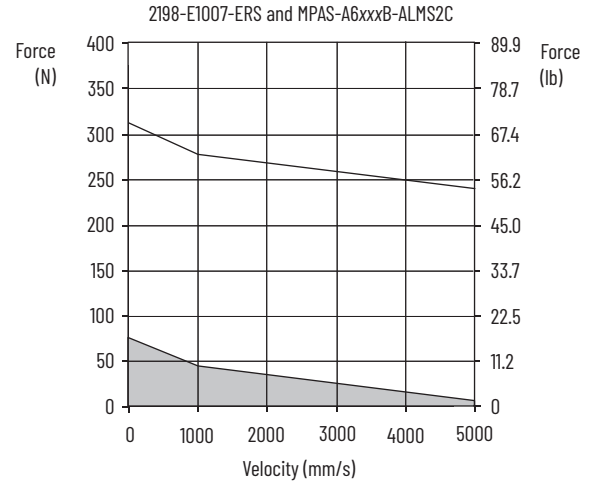
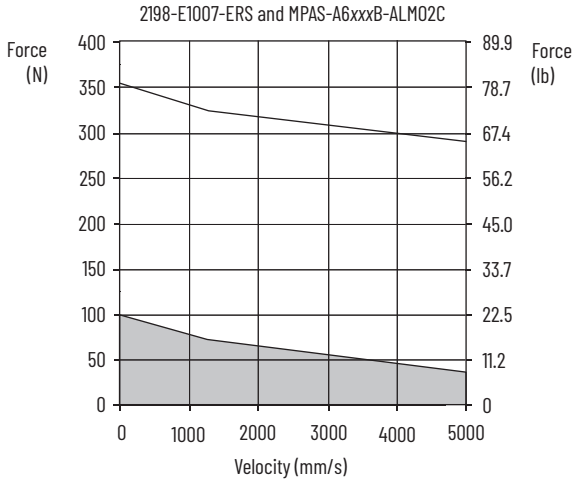
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

# Kinetix 5100 (200V-class) Drives/Kinetix MPAS Integrated Linear Stage Curves



= Intermittent operating region  
 = Continuous operating region  
 = System operation for specified stroke length

## Kinetix 5100 (200V-class) Drives/Kinetix MPAS Integrated Linear Stage Curves (continued)



= Intermittent operating region  
 = Continuous operating region  
 = System operation for specified stroke length

# Kinetix 5100 (400V-class) Drives with Kinetix MPAS Linear Stages

This section provides system combination information for the Kinetix 5100 drives (with 480V, nominal input) when matched with Kinetix MP (400V-class) integrated (ballscrew) linear stages with absolute high-resolution encoders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

## Kinetix MPAS Cable Combinations

| Linear Stage (400V-class)<br>Cat. No.    | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPAS-Bxxxx1-V05SxA<br>MPAS-Bxxxx2-V20SxA | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPAS-B8xxx-ALMx2C<br>MPAS-B9xxx-ALMx2C   |                                                                                   | 2090-XXNFMF-Sxx (standard, non-flex)<br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Incremental Feedback                                                                      |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPAS Performance Specifications with Kinetix 5100 (400V-class) Drives

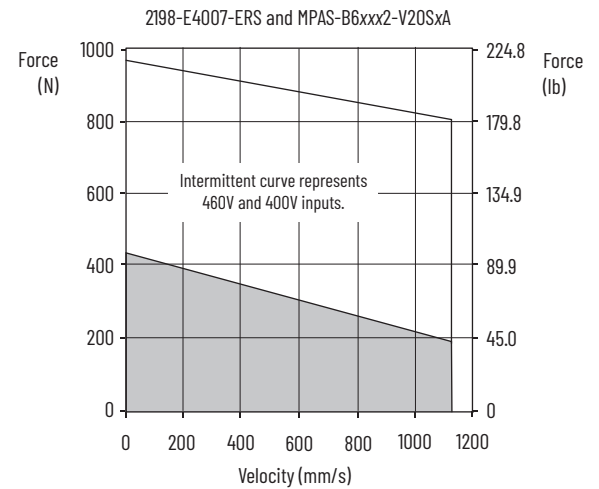
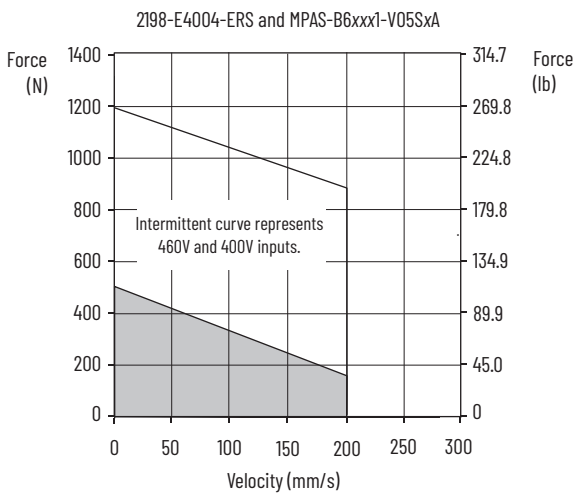
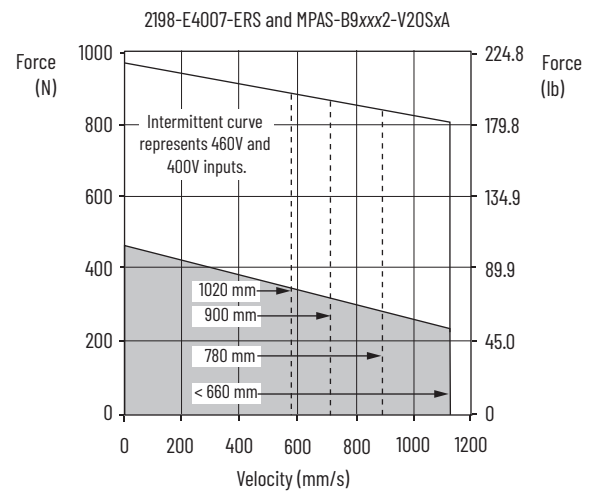
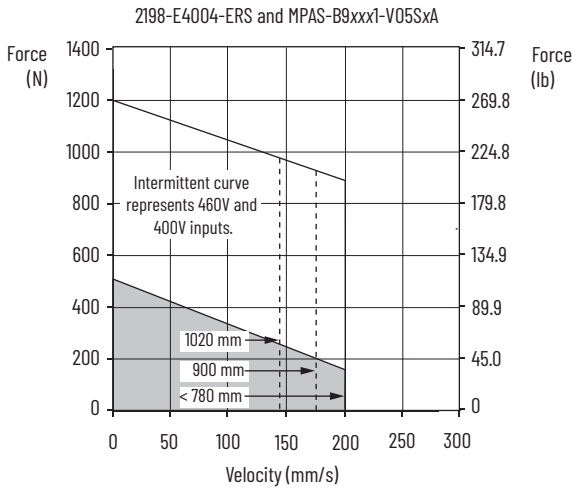
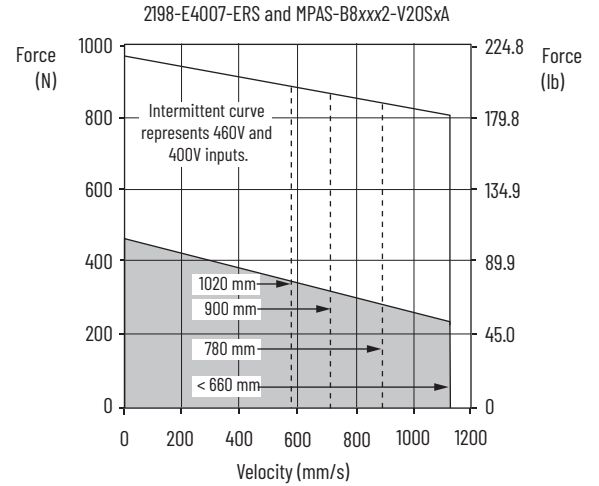
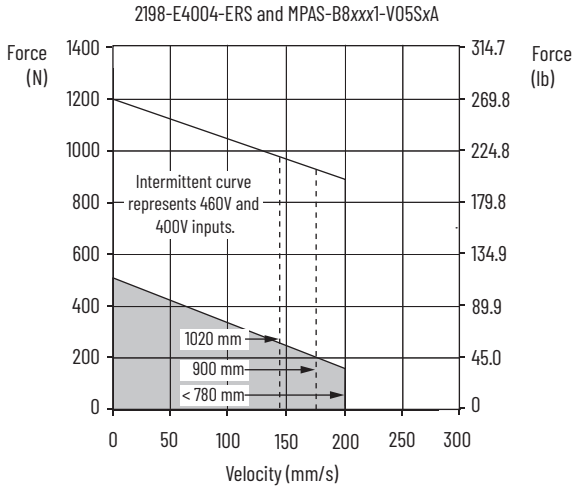
| Linear Stage<br>Cat. No. | Maximum Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|--------------------------|------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| MPAS-Bxxxx1-V05SxA       | 200 (7.9) <sup>(1)</sup>     | 1.75                                            | 521 (117)                                  | 3.50                                      | 1212 (272)                           | 0.37                               | 2198-E4004-ERS                         |
| MPAS-Bxxxx2-V20SxA       | 1124 (44.3) <sup>(2)</sup>   | 3.30                                            | 462 (104)                                  | 6.60                                      | 968 (218)                            | 0.62                               | 2198-E4007-ERS                         |
| MPAS-B8xxxF-ALM02C       | 5000 (200)                   | 3.50                                            | 189 (42.5)                                 | 9.30                                      | 456 (103)                            | 0.527                              | 2198-E4007-ERS                         |
| MPAS-B8xxxF-ALMS2C       | 5000 (200)                   | 3.15                                            | 159 (35.7)                                 | 8.37                                      | 399 (89.7)                           | 0.475                              |                                        |
| MPAS-B9xxxL-ALM02C       | 5000 (200)                   | 3.40                                            | 285 (64.1)                                 | 9.10                                      | 680 (153)                            | 0.768                              |                                        |
| MPAS-B9xxxL-ALMS2C       | 5000 (200)                   | 3.03                                            | 245 (55.1)                                 | 8.19                                      | 601 (135)                            | 0.69                               |                                        |

(1) For 900 mm stroke length, maximum speed is 176 mm/s (6.9 in/s). For 1020 mm stroke length, maximum speed is 143 mm/s (5.6 in/s).

(2) For 780 mm stroke length, maximum speed is 889 mm/s (35.0 in/s). For 900 mm stroke length, maximum speed is 715 mm/s (28.2 in/s). For 1020 mm stroke length, maximum speed is 582 mm/s (22.9 in/s).

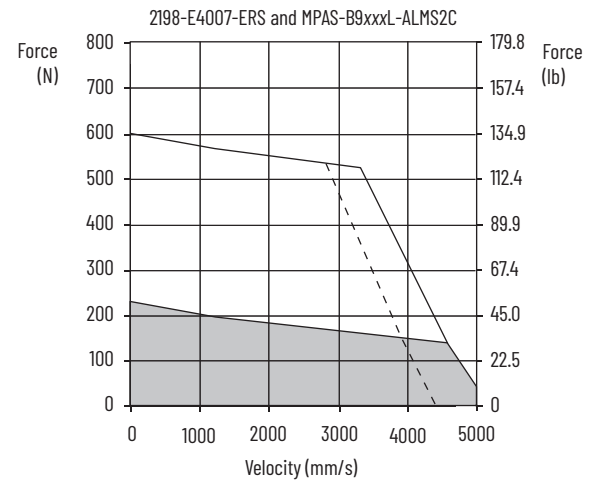
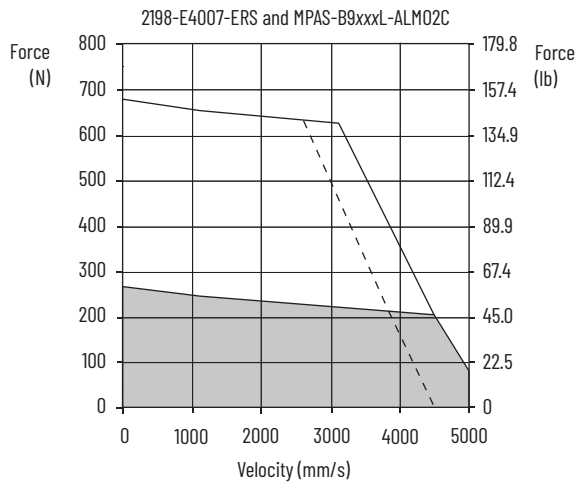
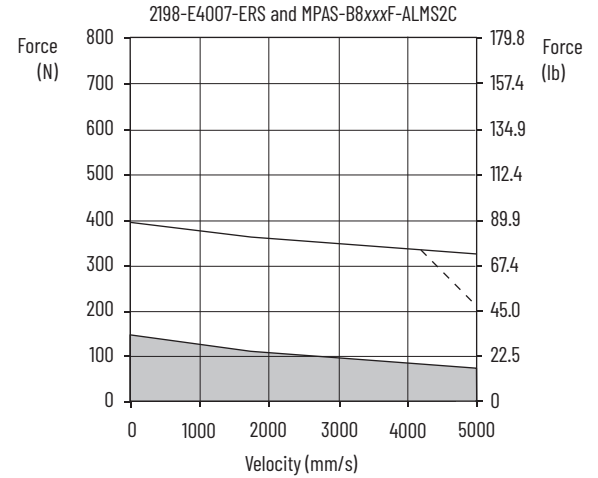
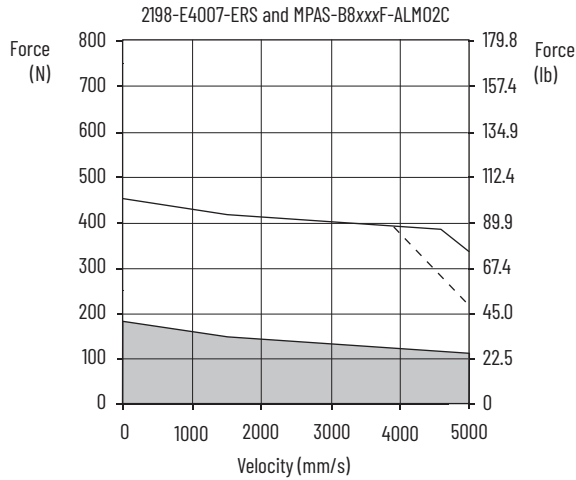
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (400V-class) Drives/Kinetix MPAS Integrated Linear Stage Curves



= Intermittent operating region  
 = Continuous operating region  
 = System operation for specified stroke length

## Kinetix 5100 (400V-class) Drives/Kinetix MPAS Integrated Linear Stage Curves (cont.)



= Intermittent operating region  
 = Continuous operating region  
 = System operation with 400V AC rms input voltage

# Kinetix 5100 Drives with Kinetix MPAR Electric Cylinders

This section provides system combination information for the Kinetix 5100 drives (with 230V and 480V, nominal input) when matched with Kinetix MPAR electric cylinders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix MPAR Cable Combinations

| Electric Cylinder (200V and 400V-class)<br>Cat. No.                              | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPAR-A1xxxB, MPAR-A1xxxE<br>MPAR-A2xxxC, MPAR-A2xxxF<br>MPAR-A3xxxE, MPAR-A3xxxH | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPAR-B1xxxB, MPAR-B1xxxE<br>MPAR-B2xxxC, MPAR-B2xxxF<br>MPAR-B3xxxE, MPAR-B3xxxH |                                                                                   |                                                                                                                                                                            |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPAR Performance Specifications with Kinetix 5100 Drives

### Performance Specifications with Kinetix 5100 (200V-class) Drives

| Electric Cylinder<br>Cat. No. | Maximum Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Motor Output Power<br>Rating<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|-------------------------------|------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| MPAR-A1xxxB                   | 150                          | 1.15                                            | 240 (53.9)                                 | 1.35                                      | 300 (67.4)                           | 0.036                              | 2198-E1004-ERS                         |
| MPAR-A1xxxE                   | 500                          | 2.16                                            | 280 (62.9)                                 | 2.48                                      | 350 (78.7)                           | 0.140                              | 2198-E1004-ERS                         |
| MPAR-A2xxxC                   | 250                          | 2.42                                            | 420 (94.4)                                 | 2.72                                      | 525 (118)                            | 0.105                              | 2198-E1004-ERS                         |
| MPAR-A2xxxF                   | 640                          | 4.54                                            | 640 (144)                                  | 5.41                                      | 800 (180)                            | 0.410                              | 2198-E1007-ERS                         |
| MPAR-A3xxxE                   | 500                          | 10.33                                           | 2000 (450)                                 | 12.34                                     | 2500 (562)                           | 1.00                               | 2198-E1015-ERS                         |
| MPAR-A3xxxH                   | 1000                         | 12.20                                           | 1300 (292)                                 | 16.40                                     | 1625 (365)                           | 1.30                               | 2198-E1020-ERS                         |

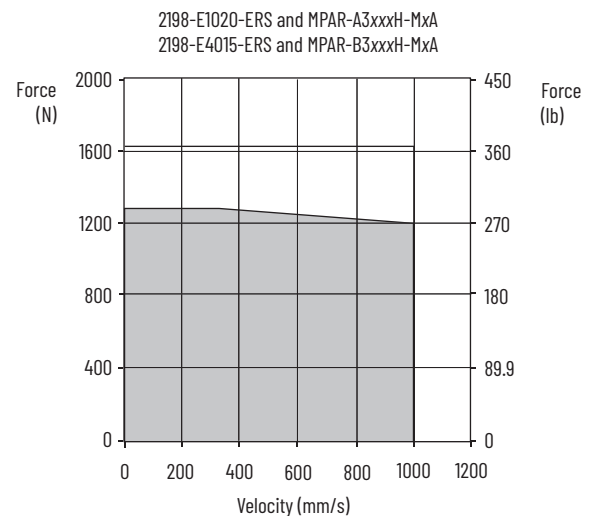
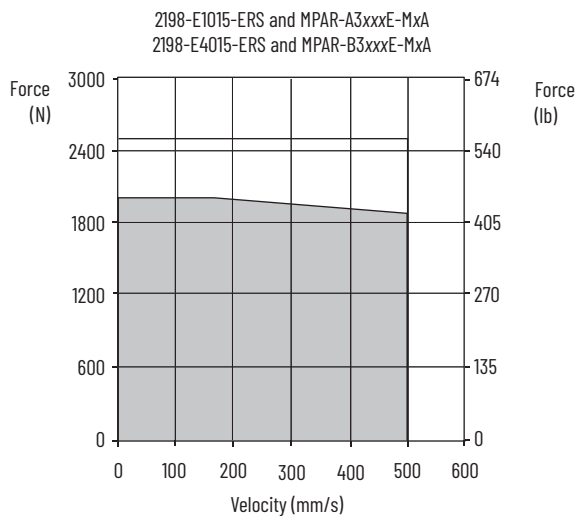
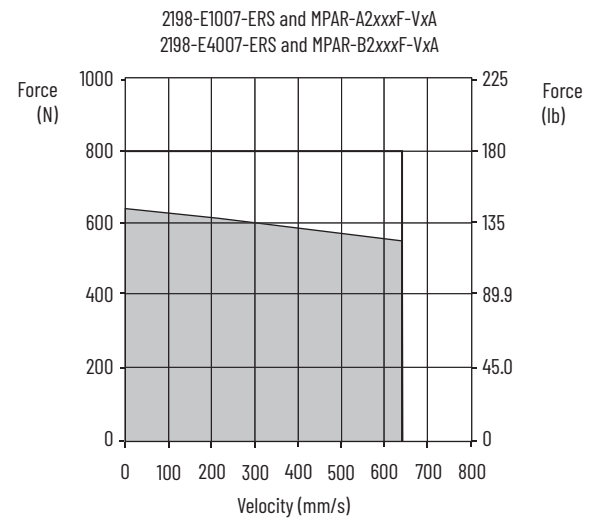
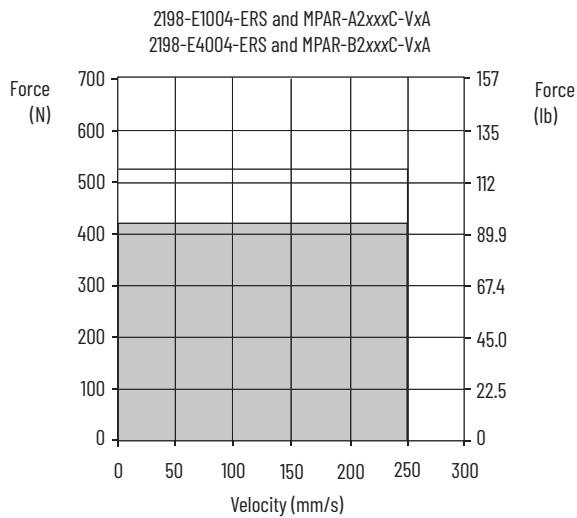
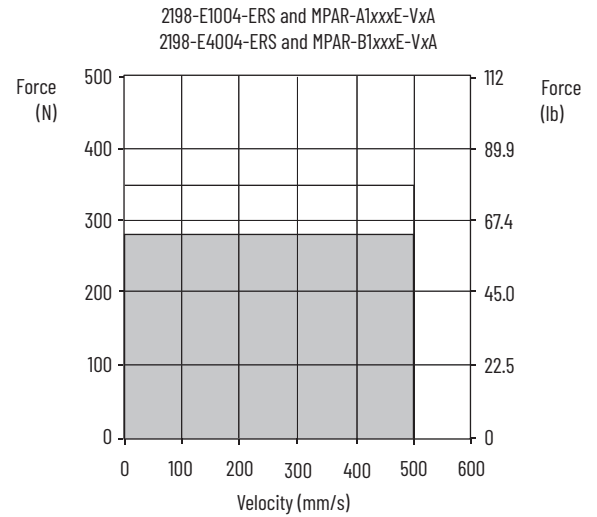
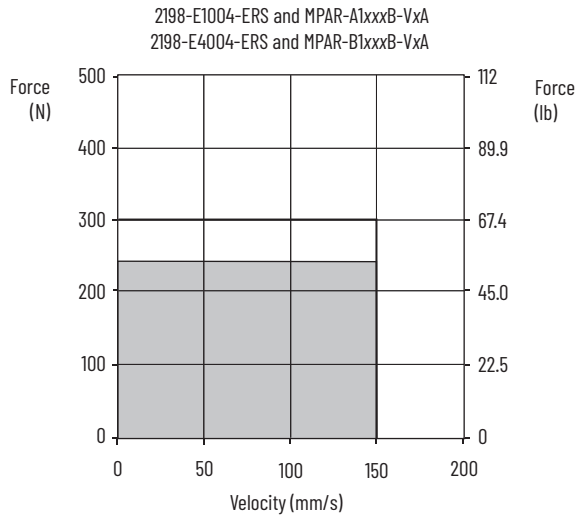
### Performance Specifications with Kinetix 5100 (400V-class) Drives

| Electric Cylinder<br>Cat. No. | Maximum Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Motor Output Power<br>Rating<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|-------------------------------|------------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| MPAR-B1xxxB                   | 150                          | 1.15                                            | 240 (53.9)                                 | 1.35                                      | 300 (67.4)                           | 0.036                              | 2198-E4004-ERS                         |
| MPAR-B1xxxE                   | 500                          | 1.49                                            | 280 (62.9)                                 | 1.71                                      | 350 (78.7)                           | 0.140                              | 2198-E4004-ERS                         |
| MPAR-B2xxxC                   | 250                          | 1.67                                            | 420 (94.4)                                 | 1.90                                      | 525 (118)                            | 0.105                              | 2198-E4004-ERS                         |
| MPAR-B2xxxF                   | 640                          | 3.29                                            | 640 (144)                                  | 3.93                                      | 800 (180)                            | 0.410                              | 2198-E4007-ERS                         |
| MPAR-B3xxxE                   | 500                          | 5.16                                            | 2000 (450)                                 | 6.17                                      | 2500 (562)                           | 1.00                               | 2198-E4015-ERS                         |
| MPAR-B3xxxH                   | 1000                         | 6.13                                            | 1300 (292)                                 | 6.79                                      | 1625 (365)                           | 1.30                               | 2198-E4015-ERS                         |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.



# Kinetix 5100 Drives/Kinetix MPAR Electric Cylinder Curves



□ = Intermittent operating region  
■ = Continuous operating region

# Kinetix 5100 Drives with Kinetix MPAI Heavy Duty Electric Cylinders

This section provides system combination information for the Kinetix 5100 drives (with 230V and 480V, nominal input) when matched with Kinetix MPAI heavy-duty electric cylinders. Included are motor power/brake and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix MPAI Cable Combinations

| Electric Cylinder (200V and 400V-class)<br>Cat. No.          | Motor Power/Brake Cable                                                           | Motor Feedback Cable <sup>(1)</sup>                                                                                                                                        |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MPAI-A/B2xxxC                                                | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-CFBM7DF-CEAAxx or<br>2090-CFBM7DD-CEAAxx (standard, non-flex)<br>2090-CFBM7DF-CEAFxx or<br>2090-CFBM7DD-CEAFxx (continuous-flex)<br>Absolute High-resolution Feedback |
| MPAI-A/B3xxxC, MPAI-A/B3xxxE<br>MPAI-A/B3xxxR, MPAI-A/B3xxxS |                                                                                   |                                                                                                                                                                            |
| MPAI-A/B4xxxC, MPAI-A/B4xxxE<br>MPAI-A/B4xxxR, MPAI-A/B4xxxS |                                                                                   |                                                                                                                                                                            |
| MPAI-B5xxxC, MPAI-B5xxxE                                     |                                                                                   |                                                                                                                                                                            |
| MPAI-A5xxxC, MPAI-A5xxxE                                     | 2090-CPxM7DF-14AAxx (standard, non-flex)<br>2090-CPxM7DF-14AFxx (continuous-flex) |                                                                                                                                                                            |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits are available for motor power/brake and feedback cables. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for more information. Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix MPAI Performance Specifications with Kinetix 5100 (200V-class) Drives

### Performance Specifications with Ball Screw Electric Cylinders

| Electric Cylinder<br>Cat. No. | Maximum<br>Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) |                | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|-------------------------------|---------------------------------|-------------------------------------------------|-----------------------------------------|----------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
|                               |                                 |                                                 | 25 °C (77 °F)                           | 40 °C (104 °F) |                                           |                                      |                                    |                                        |
| MPAI-A2076CV1                 | 305 (12)                        | 1.80                                            | 890 (200)                               | 706 (159)      | 4.50                                      | 1446 (325)                           | 0.22                               | 2198-E1004-ERS                         |
| MPAI-A2150CV3                 |                                 | 2.47                                            | 1446 (325)                              | 1147 (258)     | 6.20                                      |                                      | 0.25                               |                                        |
| MPAI-A2300CV3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A3076CM1                 | 305 (12)                        | 2.68                                            | 1624 (365)                              | 1290 (290)     | 8.90                                      | 4448 (1000)                          | 0.27                               |                                        |
| MPAI-A3076EM1                 | 610 (24)                        |                                                 | 814 (183)                               | 645 (145)      |                                           | 2570 (578)                           |                                    |                                        |
| MPAI-A3150CM3                 | 279 (11)                        | 5.61                                            | 4003 (900)                              | 3176 (714)     | 8.40                                      | 4448 (1000)                          | 0.39                               | 2198-E1007-ERS                         |
| MPAI-A3300CM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A3450CM3                 |                                 |                                                 | 188 (7.3)                               |                |                                           |                                      |                                    |                                        |
| MPAI-A3150EM3                 | 559 (22)                        |                                                 | 2002 (450)                              | 1588 (357)     | 14.14                                     | 4003 (900)                           |                                    |                                        |
| MPAI-A3300EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A3450EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A4150CM3                 | 279 (11)                        | 10.89                                           | 7784 (1750)                             | 6179 (1389)    | 17.07                                     | 8896 (2000)                          | 0.43                               | 2198-E1015-ERS                         |
| MPAI-A4300CM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A4450CM3                 |                                 |                                                 | 245 (9.5)                               |                |                                           |                                      |                                    |                                        |
| MPAI-A4150EM3                 | 559 (22)                        |                                                 | 3892 (875)                              | 3092 (695)     | 27.44                                     | 7784 (1750)                          |                                    |                                        |
| MPAI-A4300EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A4450EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |
| MPAI-A5xxxCM3                 | 200 (7.8)                       | 13.25                                           | 13,123 (2950)                           | 10,415 (2341)  | 16.70                                     | 13,345 (3000)                        | 0.55                               | 2198-E1020-ERS                         |
| MPAI-A5xxxEM3                 | 400 (15.6)                      |                                                 | 6562 (1475)                             | 5208 (1171)    | 33.40                                     | 13,122 (2950)                        |                                    |                                        |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Roller Screw Electric Cylinders

| Electric Cylinder<br>Cat. No. | Maximum<br>Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) |                | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(230V AC input) |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|---------------------------------|-------------------------------------------------|-----------------------------------------|----------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|--|--|--|--|--|--|--|--|--|--|
|                               |                                 |                                                 | 25 °C (77 °F)                           | 40 °C (104 °F) |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3076RM1                 | 305 (12)                        | 2.87                                            | 1557 (350)                              | 1237 (278)     | 8.90                                      | 4862 (1093)                          | 0.27                               | 2198-E1004-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3076SM1                 | 610 (24)                        |                                                 | 778 (175)                               | 618 (139)      |                                           | 2431 (547)                           |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3150RM3                 | 279 (11)                        | 5.61                                            | 3781 (850)                              | 3003 (675)     | 14.14                                     | 7562 (1700)                          | 0.39                               | 2198-E1007-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3300RM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3450RM3                 | 176 (6.9)                       |                                                 | 1891 (425)                              | 1499 (337)     |                                           | 3781 (850)                           |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3150SM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3300SM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A3450SM3                 | 353 (14)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4150RM3                 | 279 (11)                        | 10.89                                           | 7340 (1650)                             | 5827 (1310)    | 27.44                                     | 14,679 (3300)                        | 0.43                               | 2198-E1015-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4300RM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4450RM3                 | 196 (7.6)                       |                                                 | 3670 (825)                              | 2914 (655)     |                                           | 7340 (1650)                          |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4150SM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4300SM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-A4450SM3                 | 393 (15)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix MPAI Performance Specifications with Kinetix 5100 (400V-class) Drives

## Performance Specifications with Ball Screw Electric Cylinders

| Electric Cylinder<br>Cat. No. | Maximum<br>Speed<br>mm/s (in/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) |                | System Peak Stall<br>Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(480V AC input) |  |  |  |  |  |  |  |
|-------------------------------|---------------------------------|-------------------------------------------------|-----------------------------------------|----------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|--|--|--|--|--|--|--|
|                               |                                 |                                                 | 25 °C (77 °F)                           | 40 °C (104 °F) |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B2076CV1                 | 305 (12)                        | 0.90                                            | 890 (200)                               | 706 (159)      | 2.30                                      | 1446 (325)                           | 0.22                               | 2198-E4004-ERS                         |  |  |  |  |  |  |  |
| MPAI-B2150CV3                 |                                 | 1.29                                            | 1446 (325)                              | 1147 (258)     | 3.25                                      |                                      | 0.25                               |                                        |  |  |  |  |  |  |  |
| MPAI-B2300CV3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B3076CM1                 | 305 (12)                        | 1.35                                            | 1624 (365)                              | 1290 (290)     | 4.57                                      | 4448 (1000)                          | 0.27                               |                                        |  |  |  |  |  |  |  |
| MPAI-B3076EM1                 | 610 (24)                        |                                                 | 814 (183)                               | 645 (145)      |                                           | 2570 (578)                           |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B3150CM3                 | 279 (11)                        | 2.81                                            | 4003 (900)                              | 3176 (714)     | 4.30                                      | 4448 (1000)                          | 0.39                               | 2198-E4007-ERS                         |  |  |  |  |  |  |  |
| MPAI-B3300CM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B3450CM3                 | 188 (7.3)                       |                                                 | 2002 (450)                              | 1588 (357)     | 7.07                                      | 4003 (900)                           |                                    | 2198-E4007-ERS                         |  |  |  |  |  |  |  |
| MPAI-B3150EM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B3300EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B3450EM3                 | 376 (15)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B4150CM3                 | 279 (11)                        | 5.61                                            | 7784 (1750)                             | 6179 (1389)    | 8.68                                      | 8896 (2000)                          | 0.43                               | 2198-E4015-ERS                         |  |  |  |  |  |  |  |
| MPAI-B4300CM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B4450CM3                 | 245 (9.5)                       |                                                 | 3892 (875)                              | 3092 (695)     | 14.14                                     | 7784 (1750)                          |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B4150EM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B4300EM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B4450EM3                 | 491 (19)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |
| MPAI-B5xxxCM3                 | 200 (7.8)                       | 6.62                                            | 13,123 (2950)                           | 10,415 (2341)  | 8.48                                      | 13,345 (3000)                        | 0.55                               | 2198-E4015-ERS                         |  |  |  |  |  |  |  |
| MPAI-B5xxxEM3                 | 400 (15.6)                      |                                                 | 6562 (1475)                             | 5208 (1171)    | 16.70                                     | 13,122 (2950)                        |                                    |                                        |  |  |  |  |  |  |  |

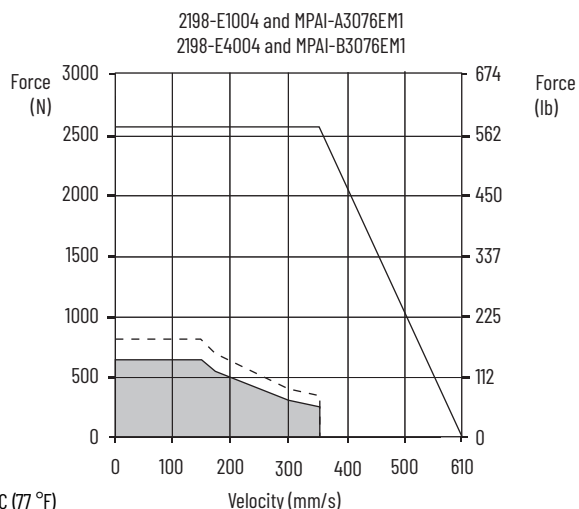
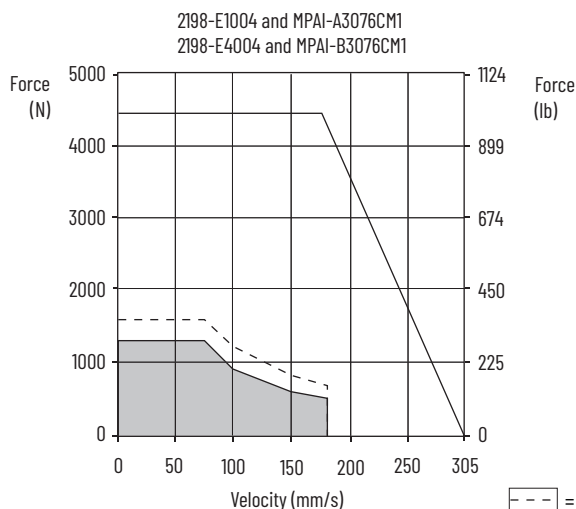
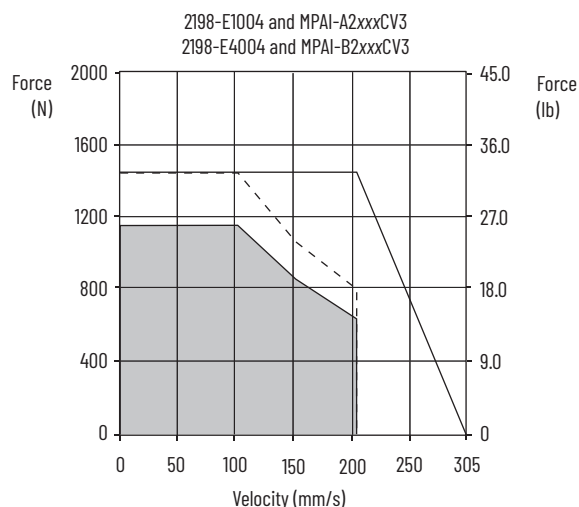
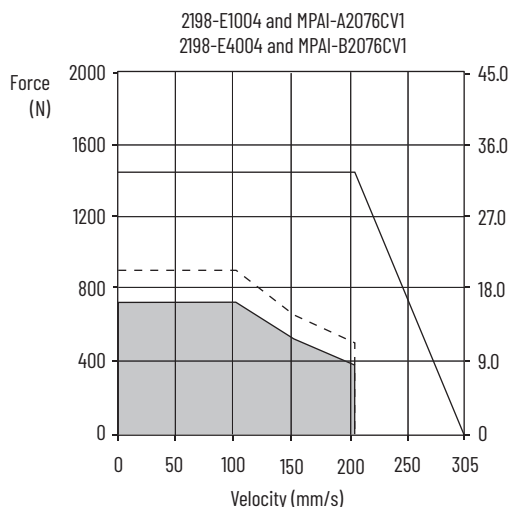
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Performance Specifications with Roller Screw Electric Cylinders

| Electric Cylinder<br>Cat. No. | Maximum<br>Speed<br>mm/s (in/s) | System Continuous Stall<br>Current<br>Amps 0-pk | System Continuous Stall Force<br>N (lb) |                | System Peak Stall<br>Current<br>Amps 0-pk | System Peak Stall<br>Force<br>N (lb) | Motor Output<br>Power Rating<br>kW | Kinetix 5100 Drives<br>(480V AC input) |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|---------------------------------|-------------------------------------------------|-----------------------------------------|----------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|--|--|--|--|--|--|--|--|--|--|
|                               |                                 |                                                 | 25 °C (77 °F)                           | 40 °C (104 °F) |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3076RM1                 | 305 (12)                        | 1.45                                            | 1557 (350)                              | 1237 (278)     | 4.57                                      | 4862 (1093)                          | 0.27                               | 2198-E4004-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3076SM1                 | 610 (24)                        |                                                 | 778 (175)                               | 618 (139)      |                                           | 2431 (547)                           |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3150RM3                 | 279 (11)                        | 2.81                                            | 3781 (850)                              | 3003 (675)     | 7.07                                      | 7562 (1700)                          | 0.39                               | 2198-E4007-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3300RM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3450RM3                 | 176 (6.9)                       |                                                 | 1891 (425)                              | 1499 (337)     |                                           | 3781 (850)                           |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3150SM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3300SM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B3450SM3                 | 353 (14)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4150RM3                 | 279 (11)                        | 5.61                                            | 7340 (1650)                             | 5827 (1310)    | 14.14                                     | 14,679 (3300)                        | 0.43                               | 2198-E4015-ERS                         |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4300RM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4450RM3                 | 196 (7.6)                       |                                                 | 3670 (825)                              | 2914 (655)     |                                           | 7340 (1650)                          |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4150SM3                 | 559 (22)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4300SM3                 |                                 |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |
| MPAI-B4450SM3                 | 393 (15)                        |                                                 |                                         |                |                                           |                                      |                                    |                                        |  |  |  |  |  |  |  |  |  |  |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

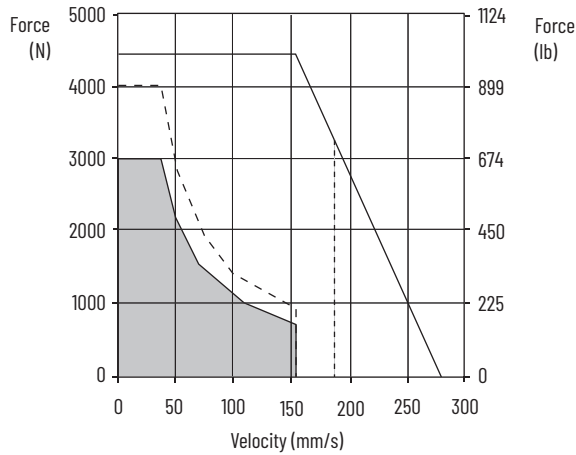
## Kinetix 5100 Drives/Kinetix MPAI (ball screw) Electric Cylinder Curves



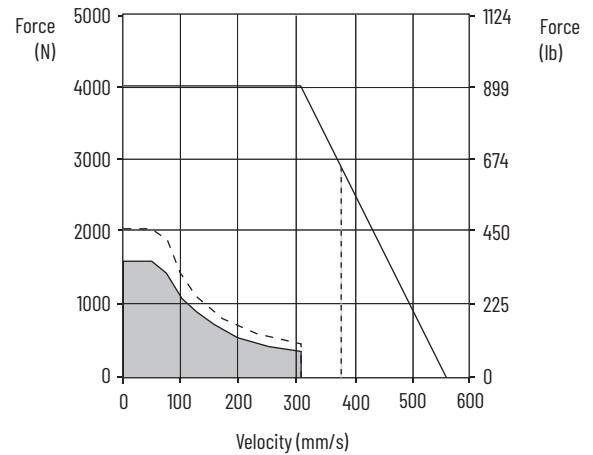
--- = Continuous operating region @ 25 °C (77 °F)  
 --- = Continuous operating region @ 40 °C (104 °F)  
 [Shaded Area] = Intermittent operating region, 076...300 mm (3...12 in.) stroke lengths

# Kinetix 5100 Drives/Kinetix MPAl (ball screw) Electric Cylinder Curves (continued)

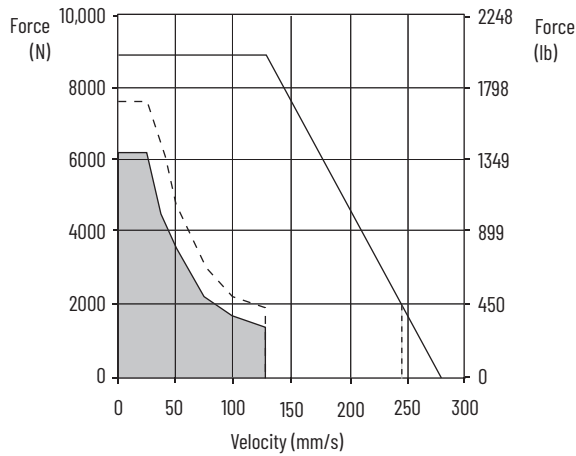
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2198-E4004 and MPAl-B3xxxCM3



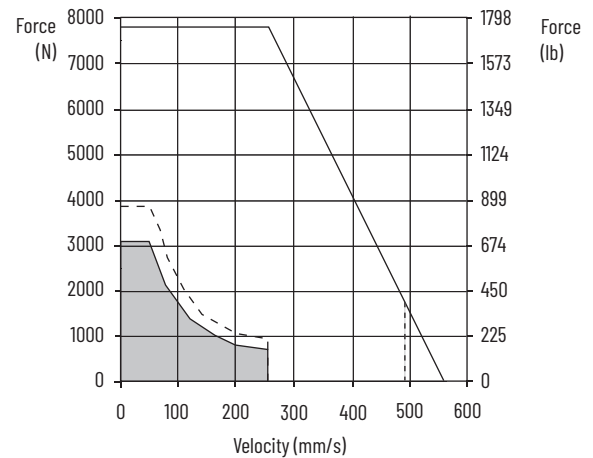
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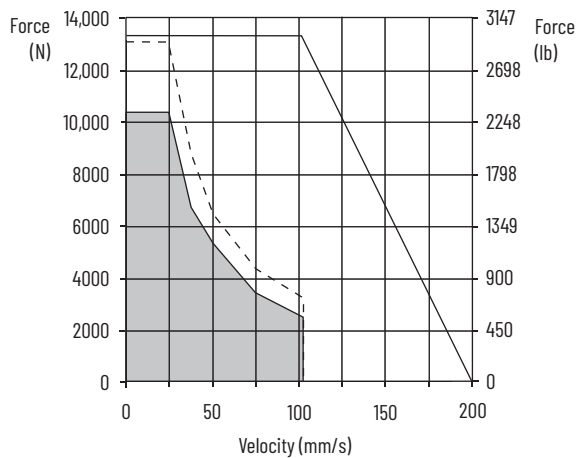
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2198-E4015 and MPAl-B4xxxCM3



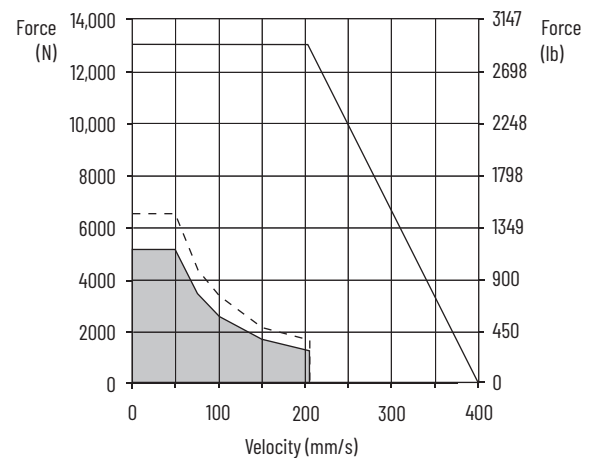
2198-E1015 and MPAl-A4xxxEM3  
2198-E4015 and MPAl-B4xxxEM3



2198-E1020 and MPAl-A5xxxCM3  
2198-E4015 and MPAl-B5xxxCM3

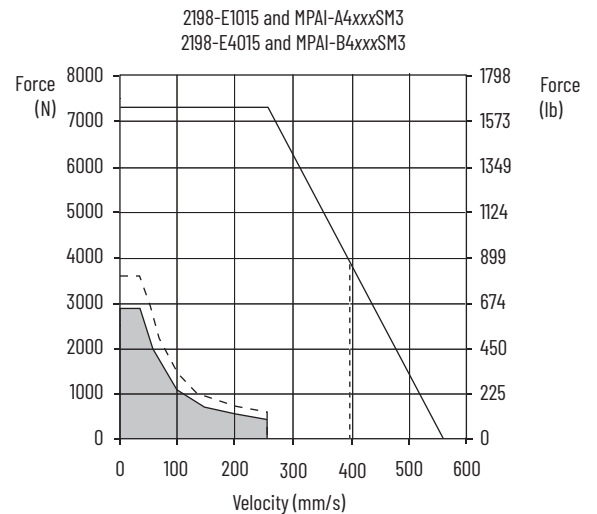
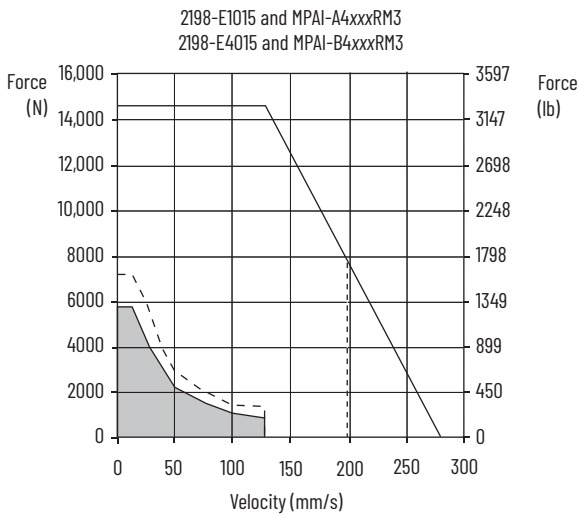
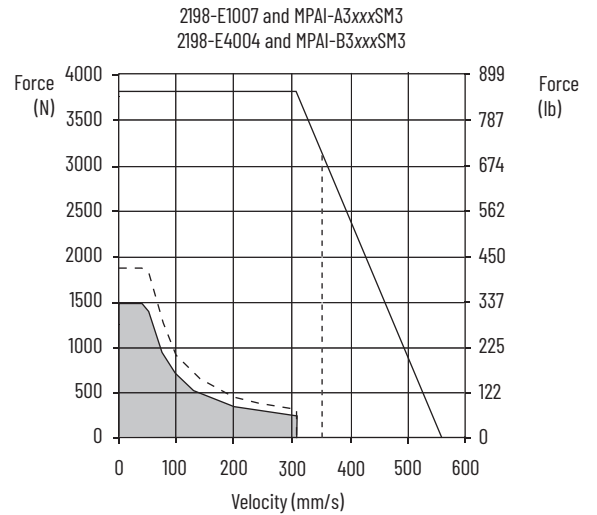
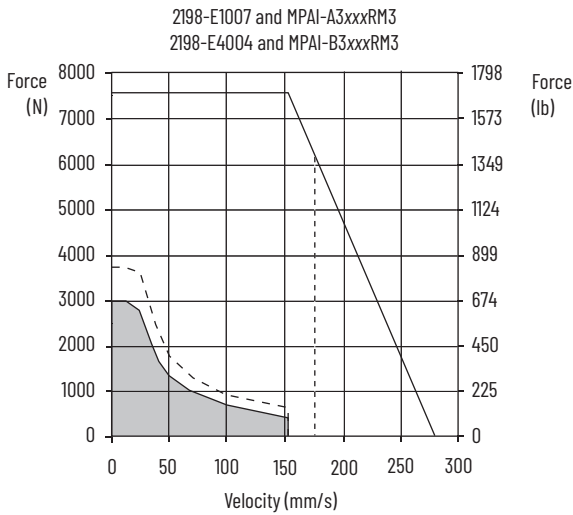
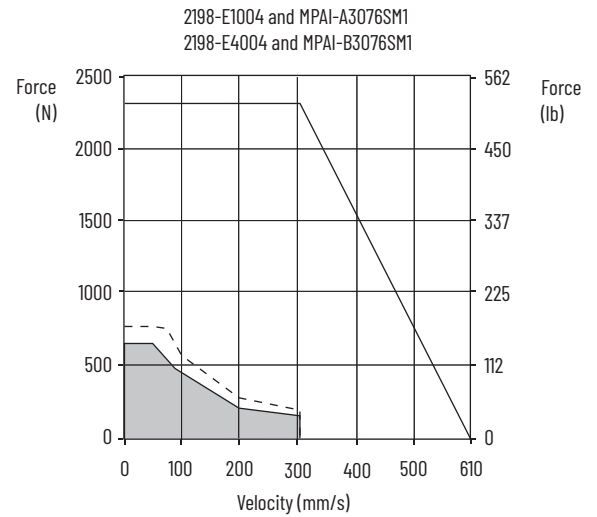
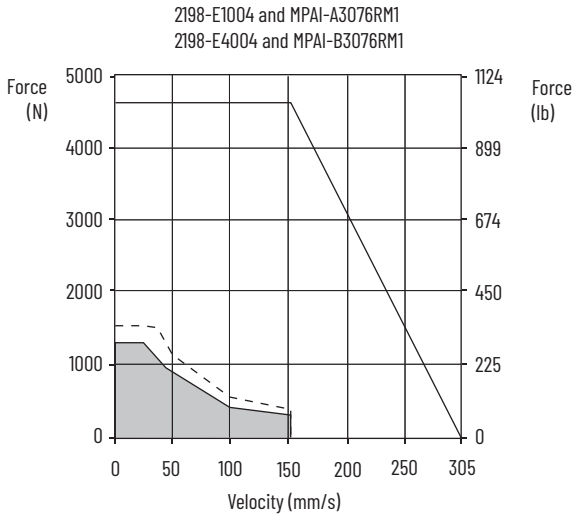


2198-E1020 and MPAl-A5xxxEM3  
2198-E4015 and MPAl-B5xxxEM3



- = Continuous operating region @ 25 °C (77 °F)
- = Continuous operating region @ 40 °C (104 °F)
- = Intermittent operating region, 450 mm (18 in.) stroke length only
- = Intermittent operating region, 076...300 mm (3...12 in.) stroke lengths

## Kinetix 5100 Drives/Kinetix MPAl (roller screw) Electric Cylinder Curves



- = Continuous operating region @ 25 °C (77 °F)
- = Continuous operating region @ 40 °C (104 °F)
- = Intermittent operating region, 450 mm (18 in.) stroke length only
- = Intermittent operating region, 076...300 mm (3...12 in.) stroke lengths

# Kinetix 5100 (200V-class) Drives with Kinetix LDC Linear Motors

This section provides system combination information for the Kinetix 5100 (200V-class) drives when matched with Kinetix LDC iron-core linear motors. Included are power and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

These system performance tables and torque/speed curves reflect single-phase and three-phase drive operation (230V, nominal input) with 200V-class motors; however, only 2198-E1004-ERS, 2198-E1007-ERS, 2198-E1015-ERS, and 2198-E1020-ERS drives are capable of single-phase operation.

## Kinetix LDC Cable Combinations

| Linear Motor Cat. No.                                                                                      | Motor Power Cable                                                                 | Motor Feedback Cable <sup>(1)</sup>                                                                              |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| LDC-C030100-DHT, LDC-C030200-DHT, LDC-C030200-EHT                                                          | 2090-CPxM7DF-16AAxx (standard, non-flex)<br>2090-CPxM7DF-16AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex)<br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Sin/Cos or TTL Encoder Feedback |
| LDC-C050100-DHT, LDC-C050200-DHT, LDC-C050200-EHT,<br>LDC-C050300-DHT, LDC-C050300-EHT                     |                                                                                   |                                                                                                                  |
| LDC-C075200-DHT, LDC-C075200-EHT,<br>LDC-C075300-DHT, LDC-C075300-EHT,<br>LDC-C075400-DHT, LDC-C075400-EHT |                                                                                   |                                                                                                                  |
| LDC-C100300-DHT, LDC-C100300-EHT,<br>LDC-C100400-DHT, LDC-C100400-EHT,<br>LDC-C100600-DHT                  |                                                                                   |                                                                                                                  |
| LDC-C150400-DHT,<br>LDC-C150600-DHT                                                                        |                                                                                   |                                                                                                                  |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits, and panel-mounted breakout components (drive end), are available for motor power/brake and feedback cables. Refer to Optional Drive Accessories on [page 8](#). Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

# Kinetix LDC Performance Specifications with Kinetix 5100 (200V-class) Drives

## Performance Specifications with Kinetix 5100 (200V-class) Drives

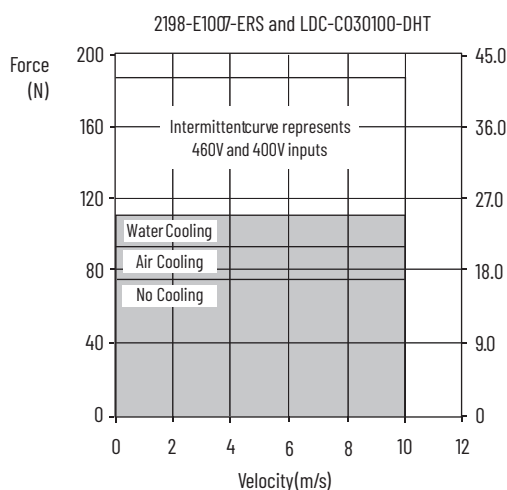
| Linear Motor Cat. No. | Speed, max<br>m/s (ft/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous <sup>(1)</sup><br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Linear Motor Rated <sup>(1)</sup><br>Output<br>kW | Kinetix 5100 Drives <sup>(2)</sup><br>(230V AC input) |
|-----------------------|--------------------------|-------------------------------------------------|-----------------------------------------------------------|-------------------------------------------|--------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| LDC-C030100-DHT       | 10.0 (32.8)              | 4.1...6.1                                       | 74...111 (17...25)                                        | 12.1                                      | 188 (42)                             | 0.37...0.55                                       | 2198-E1007-ERS                                        |
| LDC-C030200-DHT       |                          | 8.1...12.2                                      | 148...222 (33...50)                                       | 24.3                                      | 375 (84)                             | 0.74...1.11                                       | 2198-E1015-ERS                                        |
| LDC-C030200-EHT       |                          | 4.1...6.1                                       |                                                           | 12.1                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C050100-DHT       | 10.0 (32.8)              | 3.9...5.9                                       | 119...179 (27...40)                                       | 11.7                                      | 302 (68)                             | 0.59...0.89                                       | 2198-E1007-ERS                                        |
| LDC-C050200-DHT       |                          | 7.9...11.8                                      | 240...359 (54...81)                                       | 23.3                                      | 600 (135)                            | 1.20...1.79                                       | 2198-E1015-ERS                                        |
| LDC-C050200-EHT       |                          | 3.9...5.9                                       |                                                           | 11.6                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C050300-DHT       |                          | 11.8...17.7                                     | 363...544 (82...122)                                      | 35.9                                      | 941 (212)                            | 1.81...2.72                                       | 2198-E1020-ERS                                        |
| LDC-C050300-EHT       |                          | 3.9...5.9                                       |                                                           | 12.0                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C075200-DHT       | 10.0 (32.8)              | 7.7...11.5                                      | 348...523 (78...117)                                      | 22.9                                      | 882 (198)                            | 1.74...2.61                                       | 2198-E1015-ERS                                        |
| LDC-C075200-EHT       |                          | 3.8...5.7                                       |                                                           | 11.5                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C075300-DHT       |                          | 11.5...17.2                                     | 523...784 (117...176)                                     | 35.6                                      | 1368 (308)                           | 2.61...3.92                                       | 2198-E1020-ERS                                        |
| LDC-C075300-EHT       |                          | 3.8...5.7                                       |                                                           | 11.9                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C075400-DHT       |                          | 15.3...23.0                                     | 697...1045 (157...235)                                    | 47.4                                      | 1824 (410)                           | 3.48...5.22                                       | 2198-E1020-ERS                                        |
| LDC-C075400-EHT       |                          | 7.7...11.5                                      |                                                           | 23.7                                      |                                      |                                                   | 2198-E1015-ERS                                        |
| LDC-C100300-DHT       | 10.0 (32.8)              | 11.1...16.7                                     | 674...1012 (152...227)                                    | 34.3                                      | 1767 (397)                           | 3.37...5.06                                       | 2198-E1020-ERS                                        |
| LDC-C100300-EHT       |                          | 3.7...5.6                                       |                                                           | 11.4                                      |                                      |                                                   | 2198-E1007-ERS                                        |
| LDC-C100400-DHT       |                          | 14.8...22.2                                     | 899...1349 (202...303)                                    | 45.7                                      | 2356 (530)                           | 4.48...6.74                                       | 2198-E1020-ERS                                        |
| LDC-C100400-EHT       |                          | 7.4...11.1                                      |                                                           | 22.8                                      |                                      |                                                   | 2198-E1015-ERS                                        |
| LDC-C100600-DHT       |                          | 22.2...33.3                                     | 1349...2023 (303...455)                                   | 68.5                                      | 3534 (794)                           | 6.74...10.11                                      | 2198-E2030-ERS                                        |
| LDC-C150400-DHT       | 10.0 (32.8)              | 14.1...21.1                                     | 1281...1922 (288...432)                                   | 45.2                                      | 3498 (786)                           | 6.40...9.61                                       | 2198-E1020-ERS                                        |
| LDC-C150600-DHT       |                          | 21.1...31.7                                     | 1922...2882 (432...648)                                   | 67.8                                      | 5246 (1179)                          | 9.61...14.41                                      | 2198-E2030-ERS                                        |

(1) Values represent the range between no cooling (low value) and water cooling (high value).

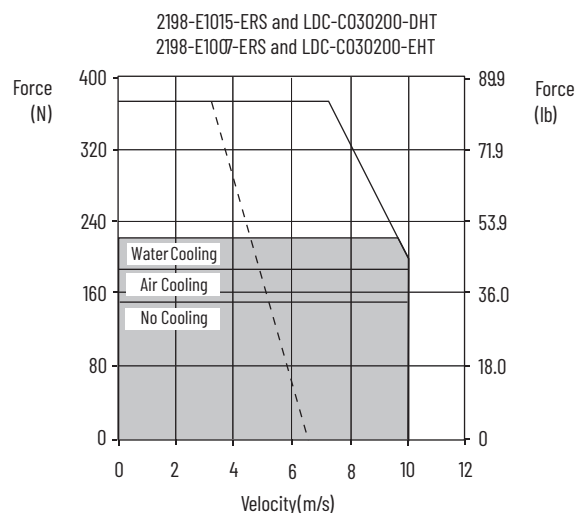
(2) Drives selected are for motors with no cooling. System current, force, and power ratings can be limited by the drive for air and water cooled motors. In those situations, use a higher power drive to achieve full-system ratings for air and water cooled motors.

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (200V-class) Drives/Kinetix LDC Linear Motor Curves

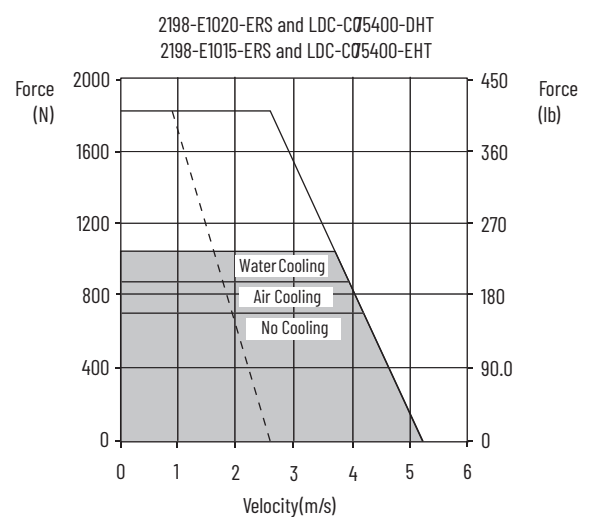
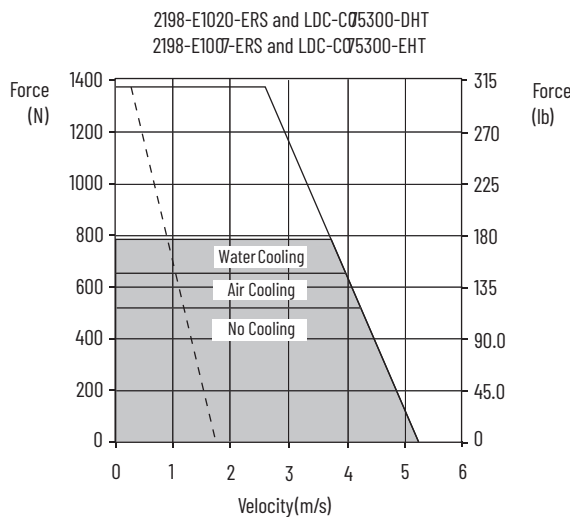
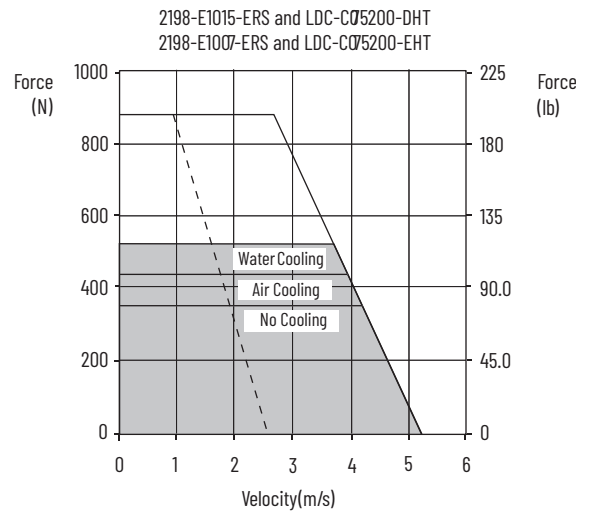
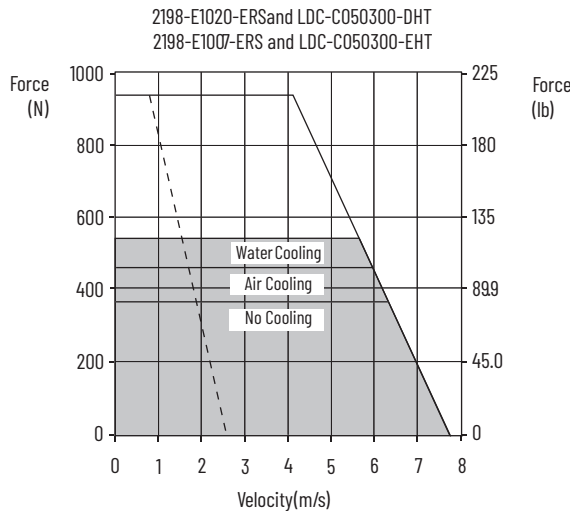
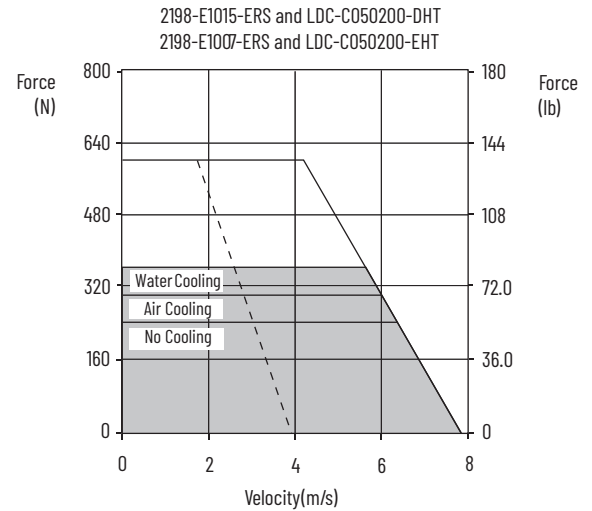
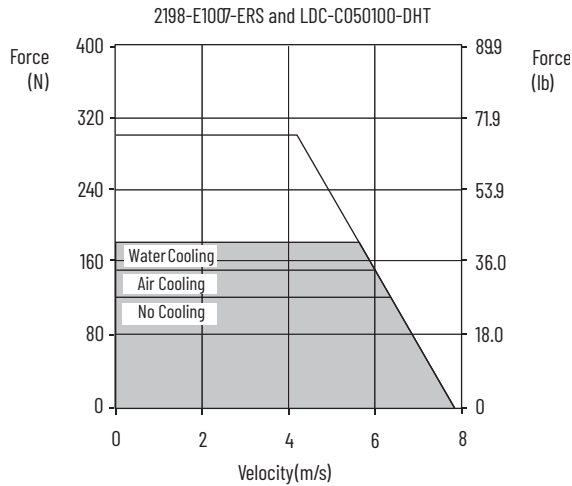


— = Intermittent operating region (LDC-xxxxxx-DHT)  
 - - - = Intermittent operating region (LDC-xxxxxx-EHT)  
 ■ = Continuous operating region



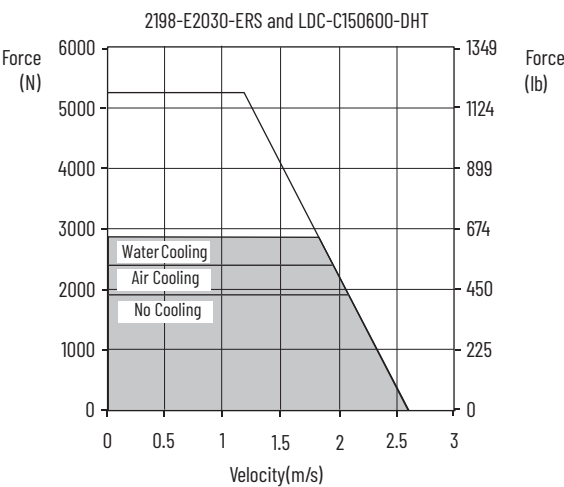
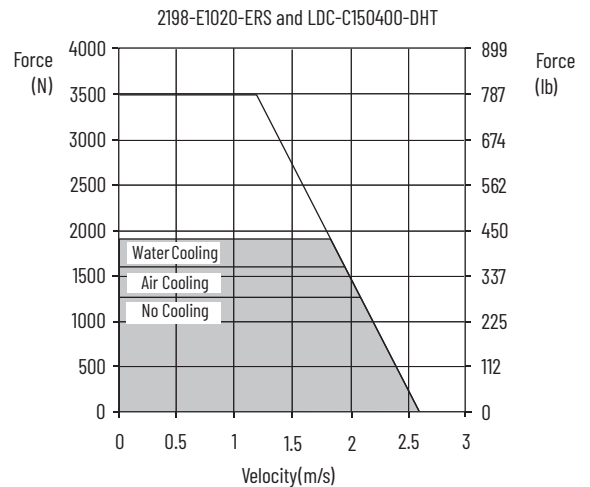
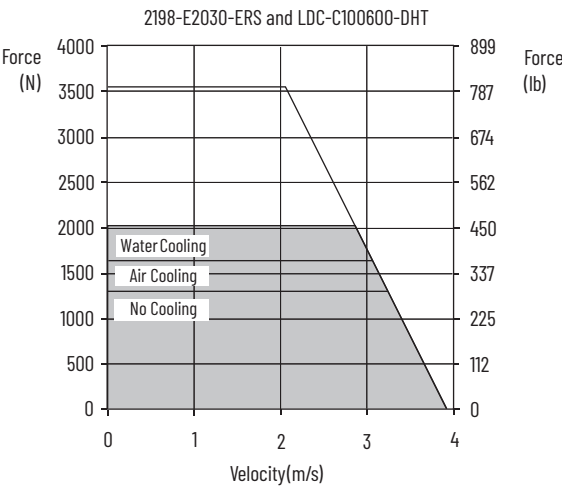
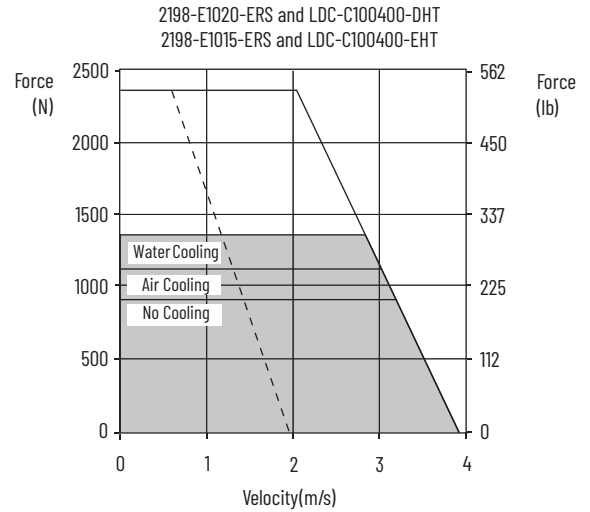
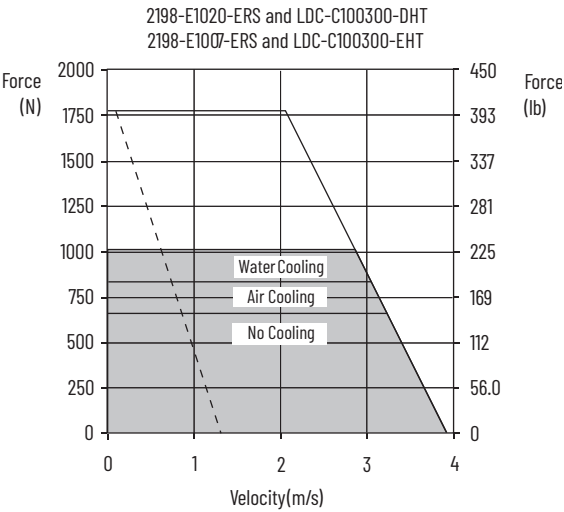


# Kinetix 5100 (200V-class) Drives/Kinetix LDC Linear Motor Curves (continued)



— = Intermittent operating region (LDC-xxxxx-DHT)  
 - - = Intermittent operating region (LDC-xxxxx-EHT)  
 ■ = Continuous operating region

# Kinetix 5100 (200V-class) Drives/Kinetix LDC Linear Motor Curves (continued)



— = Intermittent operating region (LDC-xxxxxx-DHT)  
--- = Intermittent operating region (LDC-xxxxxx-EHT)  
■ = Continuous operating region

# Kinetix 5100 (400V-class) Drives with Kinetix LDC Linear Motors

This section provides system combination information for the Kinetix 5100 (400V-class) drives when matched with Kinetix LDC iron-core linear motors. Included are power and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

## Kinetix LDC Cable Combinations

| Linear Motor Cat. No.                                                                                   | Motor Power Cable                                                                 | Motor Feedback Cable <sup>(1)</sup>                                                                              |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| LDC-C030100-DHT, LDC-C030200-DHT, LDC-C030200-EHT                                                       | 2090-CPWM7DF-16AAxx (standard, non-flex)<br>2090-CPWM7DF-16AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex)<br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Sin/Cos or TTL Encoder Feedback |
| LDC-C050100-DHT, LDC-C050200-DHT, LDC-C050200-EHT,<br>LDC-C050300-DHT, LDC-C050300-EHT                  |                                                                                   |                                                                                                                  |
| LDC-C075200-DHT, LDC-C075200-EHT, LDC-C075300-DHT, LDC-C075300-EHT,<br>LDC-C075400-DHT, LDC-C075400-EHT |                                                                                   |                                                                                                                  |
| LDC-C100300-DHT, LDC-C100300-EHT, LDC-C100400-DHT, LDC-C100400-EHT,<br>LDC-C100600-DHT, LDC-C100600-EHT |                                                                                   |                                                                                                                  |
| LDC-C150400-DHT, LDC-C150400-EHT, LDC-C150600-DHT, LDC-C150600-EHT                                      |                                                                                   |                                                                                                                  |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits, and panel-mounted breakout components (drive end), are available for motor power/brake and feedback cables. Refer to Optional Drive Accessories on [page 8](#). Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

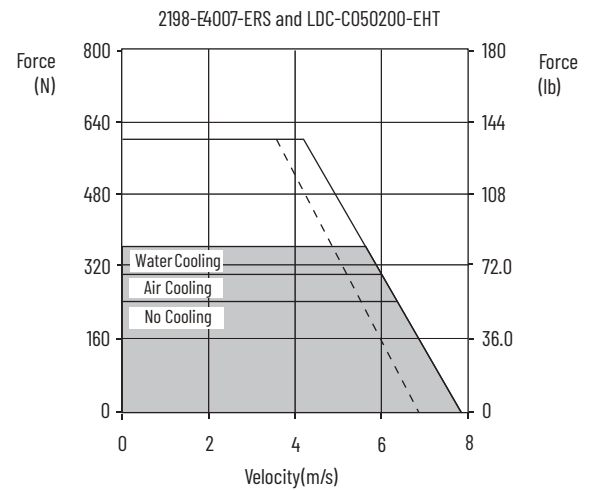
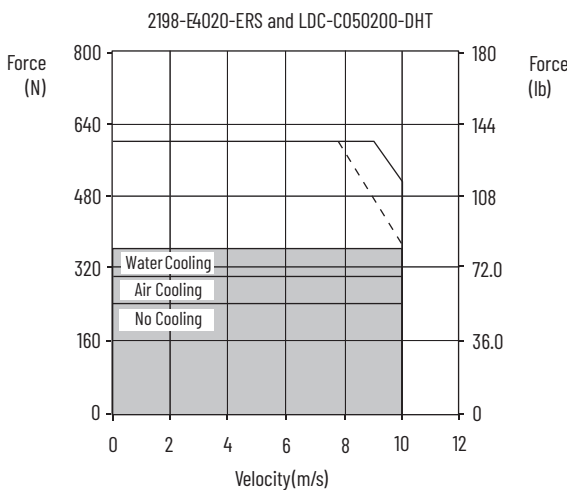
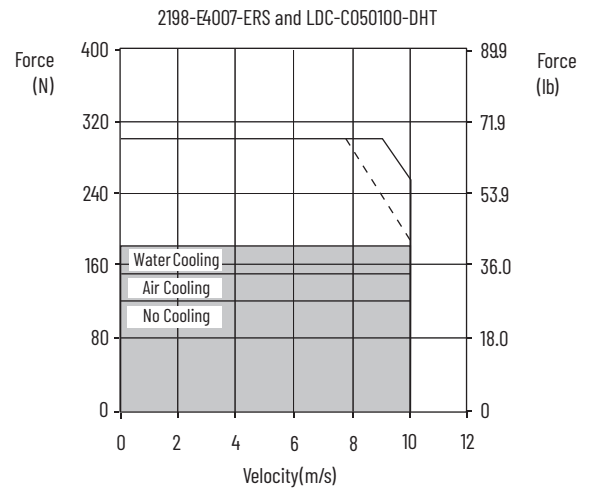
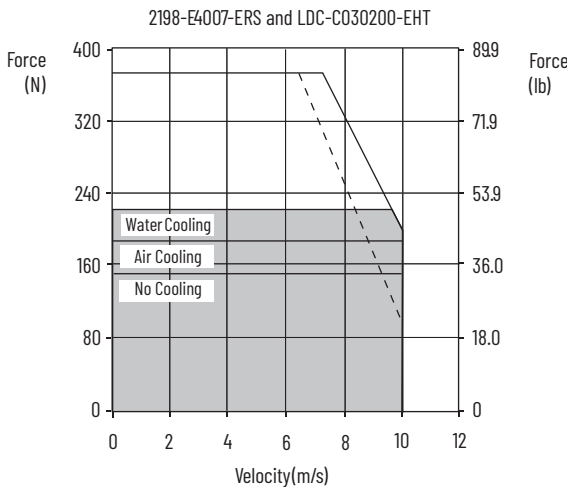
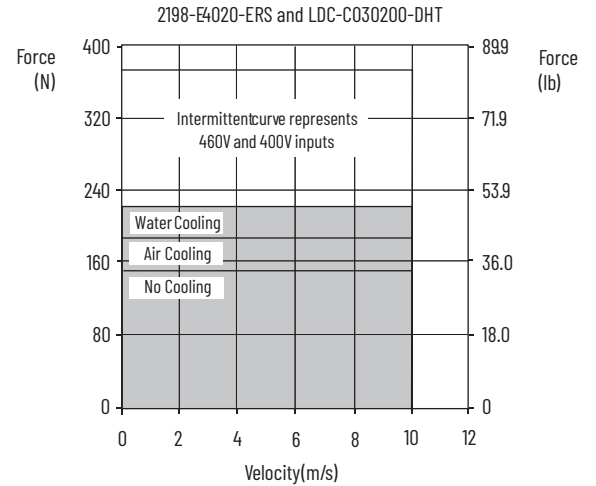
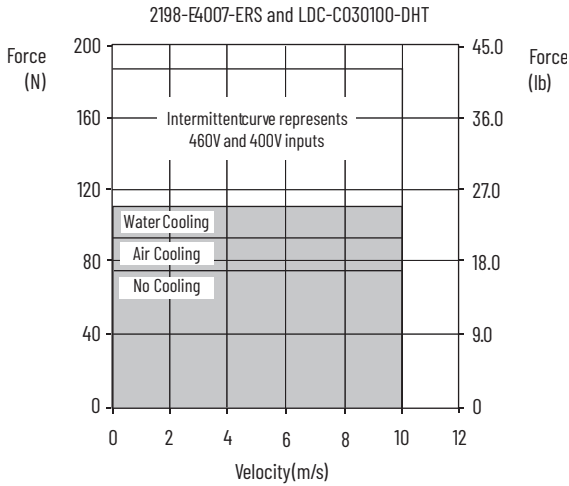
## Kinetix LDC Performance Specifications with Kinetix 5100 (400V-class) Drives

| Linear Motor Cat. No. | Speed, max<br>m/s (ft/s) | System Continuous<br>Stall Current <sup>(1)</sup><br>Amps 0-pk | System Continuous<br>Stall Force <sup>(1)</sup><br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Linear Motor<br>Rated Output<br>kW | Kinetix 5100 Drives<br>(480V AC input) |
|-----------------------|--------------------------|----------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| LDC-C030100-DHT       | 10.0 (32.8)              | 4.1...6.1                                                      | 74...111 (17...25)                                        | 12.1                                      | 188 (42)                             | 0.37...0.55                        | 2198-E4015-ERS                         |
| LDC-C030200-DHT       |                          | 8.1...12.2                                                     | 148...222 (33...50)                                       | 24.3                                      | 375 (84)                             | 0.74...1.11                        | 2198-E4020-ERS                         |
| LDC-C030200-EHT       |                          | 4.1...6.1                                                      |                                                           | 12.1                                      |                                      |                                    | 2198-E4015-ERS                         |
| LDC-C050100-DHT       | 10.0 (32.8)              | 3.9...5.9                                                      | 119...179 (27...40)                                       | 11.7                                      | 302 (68)                             | 0.59...0.89                        | 2198-E4015-ERS                         |
| LDC-C050200-DHT       |                          | 7.9...11.8                                                     | 240...359 (54...81)                                       | 23.3                                      | 600 (135)                            | 1.20...1.79                        | 2198-E4020-ERS                         |
| LDC-C050200-EHT       |                          | 3.9...5.9                                                      |                                                           | 11.6                                      |                                      |                                    | 2198-E4015-ERS                         |
| LDC-C050300-DHT       |                          | 11.8...17.7                                                    | 363...544 (82...122)                                      | 35.9                                      | 941 (212)                            | 1.81...2.72                        | 2198-E4030-ERS                         |
| LDC-C050300-EHT       |                          | 3.9...5.9                                                      |                                                           | 12.0                                      |                                      |                                    | 2198-E4015-ERS                         |
| LDC-C075200-DHT       | 10.0 (32.8)              | 7.7...11.5                                                     | 348...523 (78...117)                                      | 22.9                                      | 882 (198)                            | 1.74...2.61                        | 2198-E4020-ERS                         |
| LDC-C075200-EHT       |                          | 3.8...5.7                                                      |                                                           | 11.5                                      |                                      |                                    | 2198-E4020-ERS                         |
| LDC-C075300-DHT       |                          | 11.5...17.2                                                    | 523...784 (117...176)                                     | 35.6                                      | 1368 (308)                           | 2.61...3.92                        | 2198-E4030-ERS                         |
| LDC-C075300-EHT       |                          | 3.8...5.7                                                      |                                                           | 11.9                                      |                                      |                                    | 2198-E4015-ERS                         |
| LDC-C075400-DHT       |                          | 15.3...23.0                                                    | 697...1045 (157...235)                                    | 47.4                                      | 1824 (410)                           | 3.48...5.22                        | 2198-E4055-ERS                         |
| LDC-C075400-EHT       |                          | 7.7...11.5                                                     |                                                           | 23.7                                      |                                      |                                    | 2198-E4020-ERS                         |
| LDC-C100300-DHT       | 10.0 (32.8)              | 11.1...16.7                                                    | 674...1012 (152...227)                                    | 34.3                                      | 1767 (397)                           | 3.37...5.06                        | 2198-E4030-ERS                         |
| LDC-C100300-EHT       |                          | 3.7...5.6                                                      |                                                           | 11.4                                      |                                      |                                    | 2198-E4015-ERS                         |
| LDC-C100400-DHT       |                          | 14.8...22.2                                                    | 899...1349 (202...303)                                    | 45.7                                      | 2356 (530)                           | 4.49...6.74                        | 2198-E4055-ERS                         |
| LDC-C100400-EHT       |                          | 7.4...11.1                                                     |                                                           | 22.8                                      |                                      |                                    | 2198-E4020-ERS                         |
| LDC-C100600-DHT       |                          | 22.2...33.3                                                    | 1348...2023 (303...455)                                   | 68.5                                      | 3534 (794)                           | 6.74...10.11                       | 2198-E4075-ERS                         |
| LDC-C100600-EHT       |                          | 11.1...16.7                                                    |                                                           | 34.3                                      |                                      |                                    | 2198-E4030-ERS                         |
| LDC-C150400-DHT       | 10.0 (32.8)              | 14.1...21.1                                                    | 1281...1922 (288...432)                                   | 45.2                                      | 3498 (786)                           | 6.40...9.61                        | 2198-E4055-ERS                         |
| LDC-C150400-EHT       |                          | 7.0...10.6                                                     |                                                           | 22.6                                      |                                      |                                    | 2198-E4020-ERS                         |
| LDC-C150600-DHT       |                          | 21.1...31.7                                                    | 1922...2882 (432...648)                                   | 67.8                                      | 5246 (1179)                          | 9.61...14.41                       | 2198-E4075-ERS                         |
| LDC-C150600-EHT       |                          | 10.6...15.8                                                    |                                                           | 33.9                                      |                                      |                                    | 2198-E4030-ERS                         |

(1) Values represent the range between no cooling (low value) and water cooling (high value).

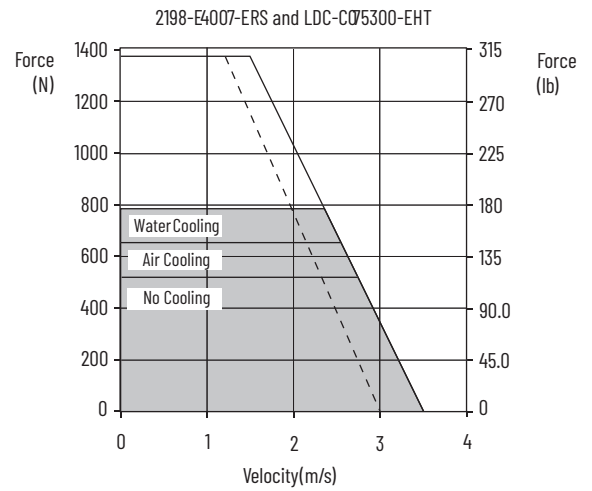
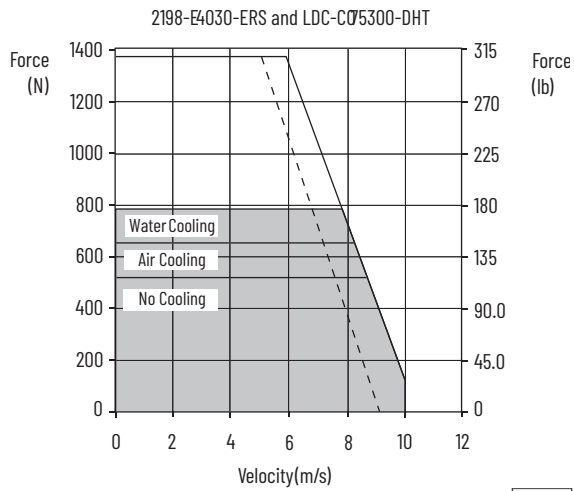
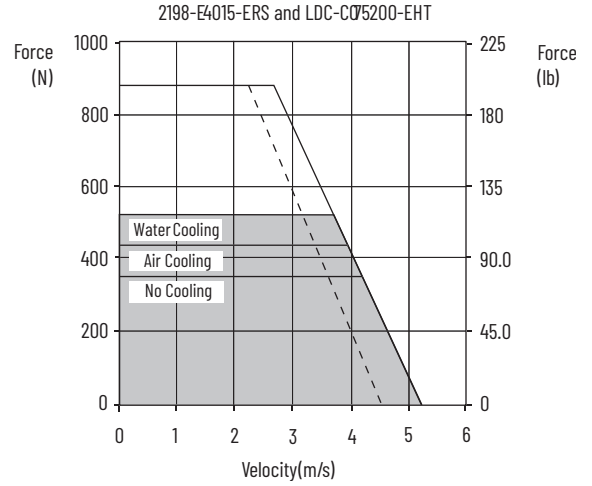
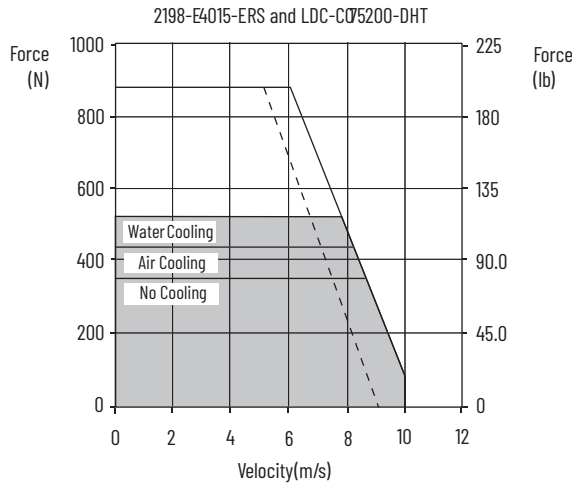
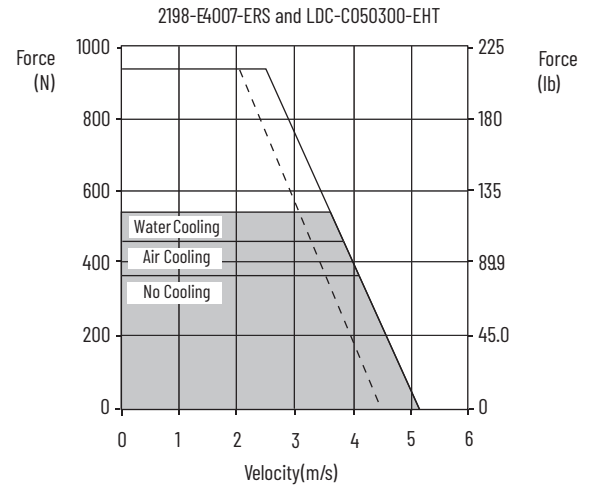
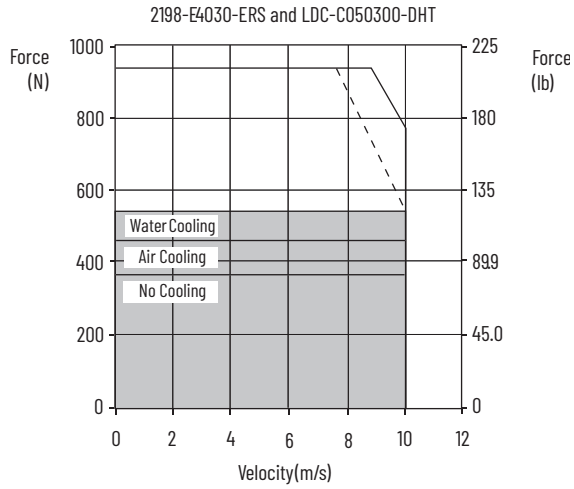
Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

## Kinetix 5100 (400V-class) Drives/Kinetix LDC Linear Motor Curves



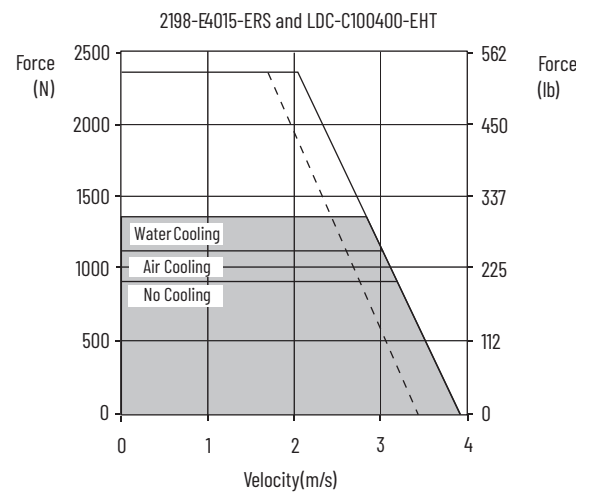
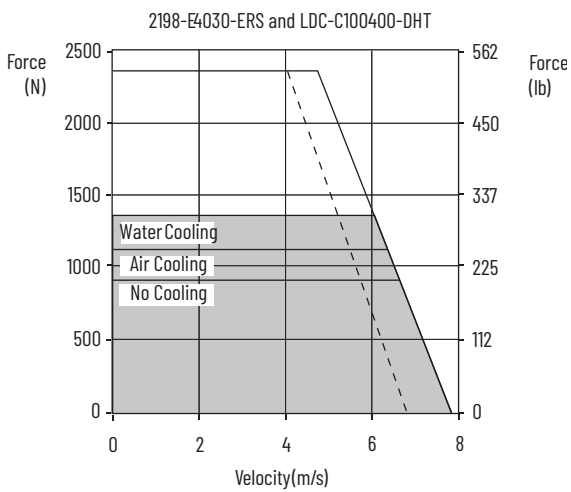
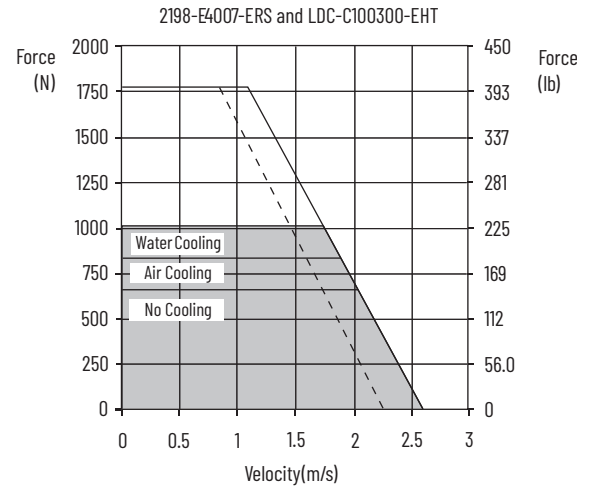
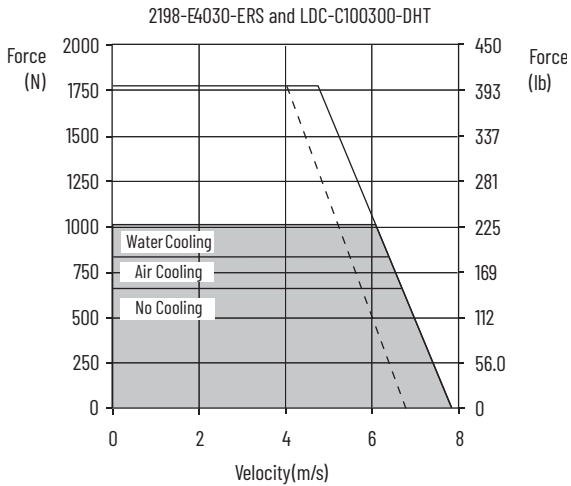
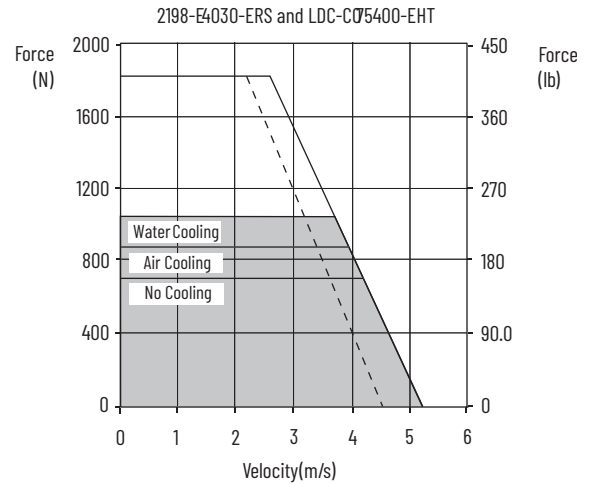
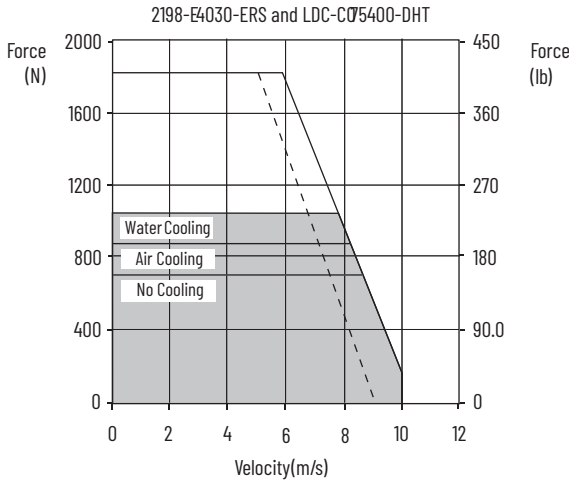
[Shaded Area] = Intermittent operating region  
 [Dashed Line] = Intermittent operating region with 400V AC rms input voltage  
 [Solid Line] = Continuous operating region

## Kinetix 5100 (400V-class) Drives/Kinetix LDC Linear Motor Curves (continued)



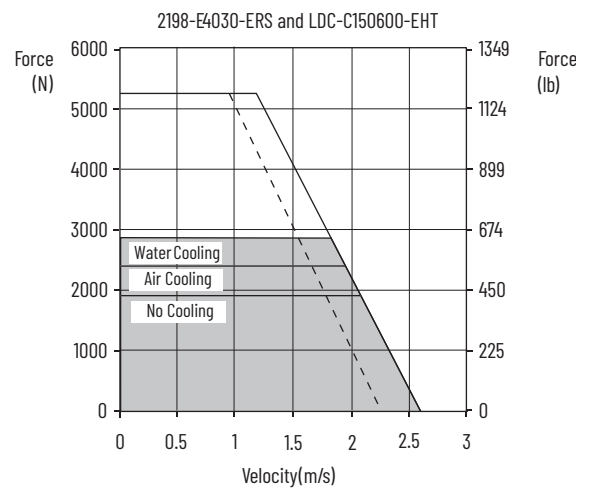
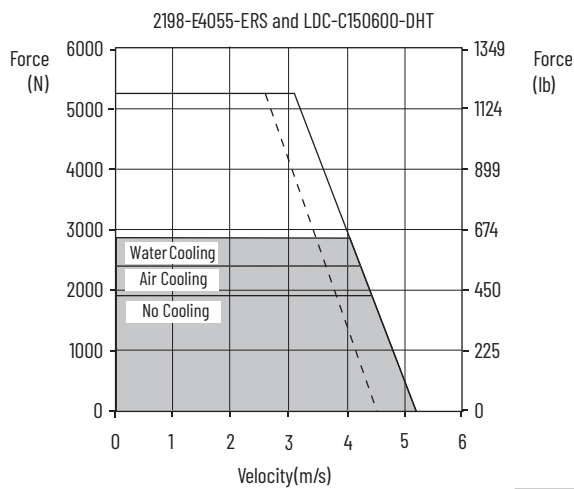
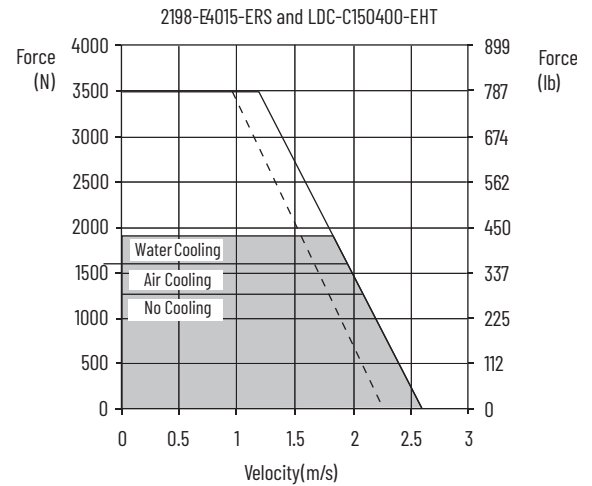
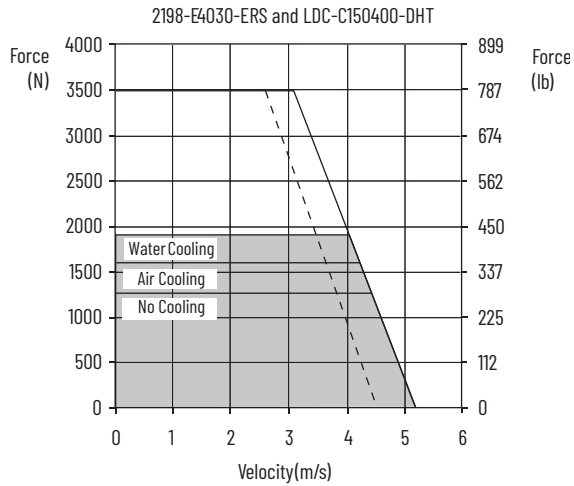
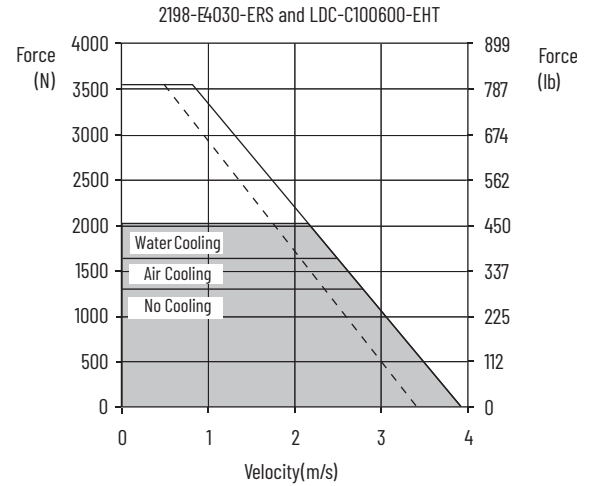
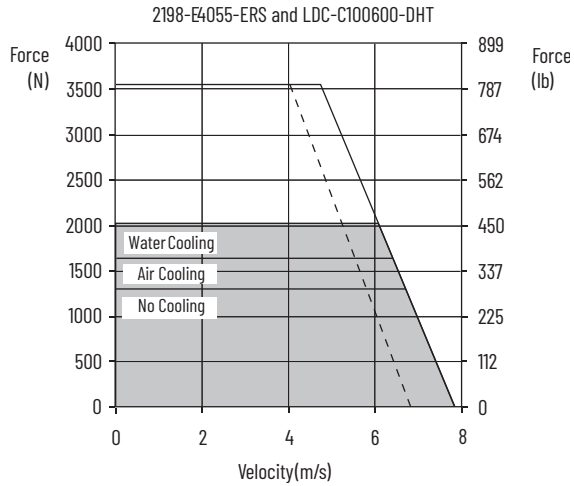
- = Intermittent operating region
- = Intermittent operating region with 400V AC rms input voltage
- = Continuous operating region

## Kinetix 5100 (400V-class) Drives/Kinetix LDC Linear Motor Curves (continued)



= Intermittent operating region  
 = Intermittent operating region with 400V AC rms input voltage  
 = Continuous operating region

## Kinetix 5100 (400V-class) Drives/Kinetix LDC Linear Motor Curves (continued)



— = Intermittent operating region  
 - - - = Intermittent operating region with 400V AC rms input voltage  
 ■ = Continuous operating region

# Kinetix 5100 (200V-class) Drives with Kinetix LDL Linear Motors

This section provides system combination information for the Kinetix 5100 (200V-class) drives when matched with Kinetix LDL ironless linear motors. Included are power and feedback cable catalog numbers, system performance specifications, and the optimum force/velocity curves.

## Kinetix LDL Cable Combinations

| Linear Motors Cat. No.                                                                                                                                                                           | Motor Power Cable                                                                 | Motor Feedback Cable <sup>(1)</sup>                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| LDL-N030120-DHT, LDL-N030240-DHT, LDL-N030240-EHT<br>LDL-N050120-DHT, LDL-N050240-DHT, LDL-N050240-EHT,<br>LDL-N050360-DHT, LDL-N050360-EHT, LDL-N050480-EHT<br>LDL-N075480-DHT, LDL-N075480-EHT | 2090-CPWM7DF-16AAxx (standard, non-flex)<br>2090-CPWM7DF-16AFxx (continuous-flex) | 2090-XXNFMF-Sxx (standard, non-flex)<br>2090-CFBM7DF-CDAFxx (continuous-flex)<br>Sin/Cos or TTL Encoder Feedback |
| LDL-T030120-DHT, LDL-T030240-DHT, LDL-T030240-EHT<br>LDL-T050120-DHT, LDL-T050240-DHT, LDL-T050240-EHT,<br>LDL-T050360-DHT, LDL-T050480-EHT<br>LDL-T075480-DHT, LDL-T075480-EHT                  |                                                                                   |                                                                                                                  |

(1) Use the 2198-K53CK-D15M feedback connector kit with flying-lead cables on the drive end. Refer to Required Drive Accessories on [page 6](#).

For cable configuration illustrations and feature descriptions, by catalog number, refer to Kinetix Motor Power/Brake and Feedback Cables Overview beginning on [page 11](#). Motor-end connector kits, and panel-mounted breakout components (drive end), are available for motor power/brake and feedback cables. Refer to Optional Drive Accessories on [page 8](#). Cable length xx is in meters. Refer to the Kinetix Motion Accessories Technical Data, publication [KNX-TD004](#), for standard cable lengths.

## Kinetix LDL Performance Specifications with Kinetix 5100 (200V-class) Drives

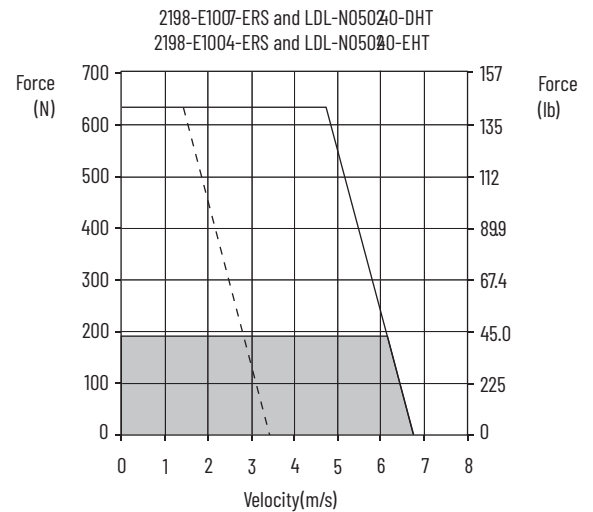
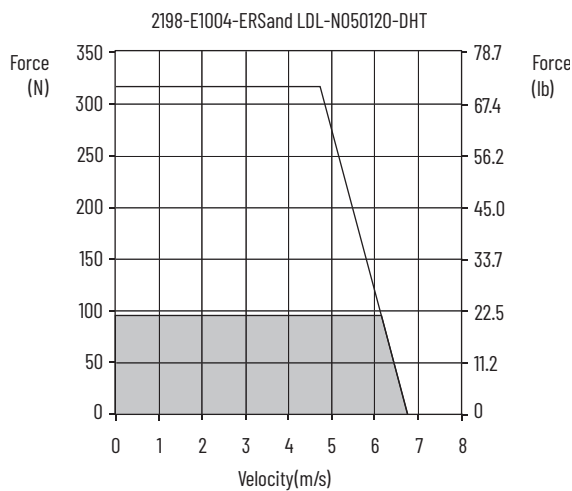
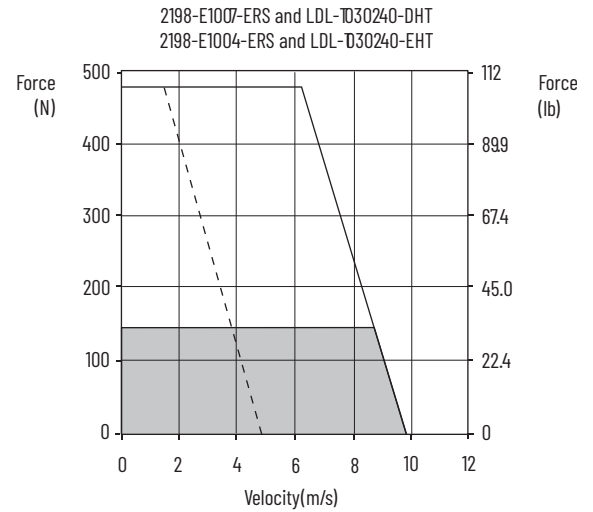
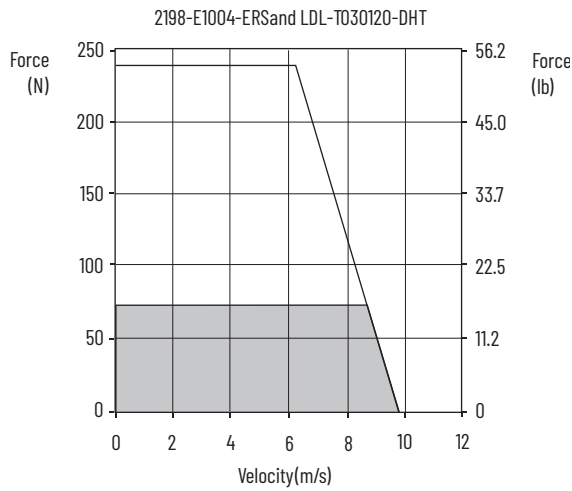
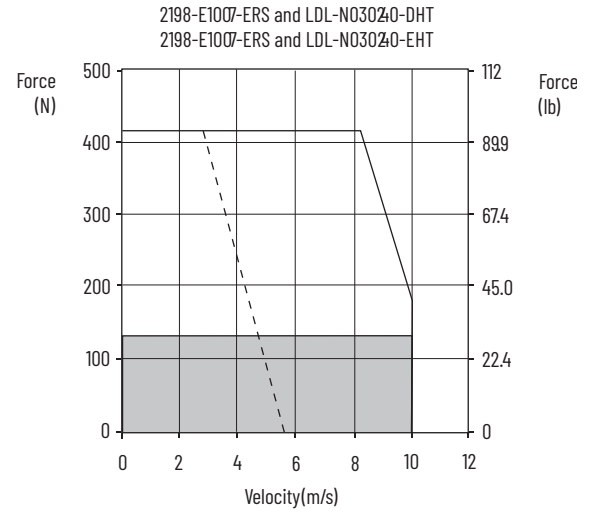
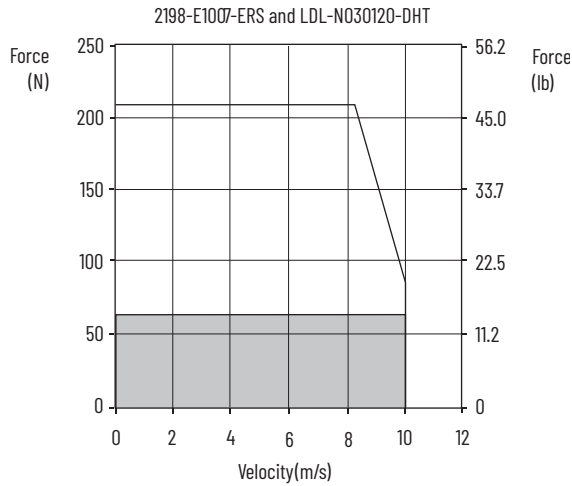
### Performance Specifications with Kinetix 5100 (200V-class) Drives

| Linear Motor Cat. No. | Speed, max<br>m/s (ft/s) | System Continuous<br>Stall Current<br>Amps 0-pk | System Continuous<br>Stall Force<br>N (lb) | System Peak<br>Stall Current<br>Amps 0-pk | System Peak<br>Stall Force<br>N (lb) | Linear Motor<br>Rated Output<br>kW | Kinetix 5100 Drives<br>(230V AC input) |
|-----------------------|--------------------------|-------------------------------------------------|--------------------------------------------|-------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| LDL-N030120-DHT       | 10.0 (32.8)              | 3.0                                             | 63 (14)                                    | 9.9                                       | 209 (47)                             | 0.31                               | 2198-E1007-ERS                         |
| LDL-N030240-DHT       |                          | 6.0                                             | 126 (28)                                   | 19.9                                      | 417 (94)                             | 0.63                               | 2198-E1007-ERS                         |
| LDL-N030240-EHT       |                          | 3.0                                             |                                            | 9.9                                       |                                      |                                    | 2198-E1007-ERS                         |
| LDL-T030120-DHT       | 10.0 (32.8)              | 3.0                                             | 72 (16)                                    | 9.9                                       | 239 (54)                             | 0.36                               | 2198-E1007-ERS                         |
| LDL-T030240-DHT       |                          | 6.0                                             | 144 (32)                                   | 19.9                                      | 479 (108)                            | 0.72                               | 2198-E1007-ERS                         |
| LDL-T030240-EHT       |                          | 3.0                                             |                                            | 9.9                                       |                                      |                                    | 2198-E1007-ERS                         |
| LDL-N050120-DHT       | 10.0 (32.8)              | 2.7                                             | 96 (22)                                    | 9.1                                       | 317 (71)                             | 0.48                               | 2198-E1004-ERS                         |
| LDL-N050240-DHT       |                          | 5.5                                             | 191 (43)                                   | 18.1                                      | 635 (143)                            | 0.95                               | 2198-E1007-ERS                         |
| LDL-N050240-EHT       |                          | 2.7                                             |                                            | 9.1                                       |                                      |                                    | 2198-E1004-ERS                         |
| LDL-N050360-DHT       |                          | 8.2                                             | 287 (65)                                   | 27.2                                      | 952 (214)                            | 1.43                               | 2198-E1015-ERS                         |
| LDL-N050360-EHT       |                          | 2.7                                             |                                            | 9.1                                       |                                      |                                    | 2198-E1004-ERS                         |
| LDL-N050480-DHT       |                          | 10.9                                            | 383 (86)                                   | 36.3                                      | 1269 (285)                           | 1.91                               | 2198-E1020-ERS                         |
| LDL-N050480-EHT       |                          | 5.5                                             |                                            | 18.1                                      |                                      |                                    | 2198-E1007-ERS                         |
| LDL-T050120-DHT       | 10.0 (32.8)              | 2.7                                             | 110 (25)                                   | 9.1                                       | 364 (82)                             | 0.55                               | 2198-E1004-ERS                         |
| LDL-T050240-DHT       |                          | 5.5                                             | 220 (49)                                   | 18.1                                      | 728 (164)                            | 1.10                               | 2198-E1007-ERS                         |
| LDL-T050240-EHT       |                          | 2.7                                             |                                            | 9.1                                       |                                      |                                    | 2198-E1004-ERS                         |
| LDL-T050360-DHT       |                          | 8.2                                             | 329 (74)                                   | 27.2                                      | 1093 (246)                           | 1.64                               | 2198-E1015-ERS                         |
| LDL-T050480-DHT       |                          | 10.9                                            | 439 (99)                                   | 36.3                                      | 1457 (327)                           | 2.19                               | 2198-E1020-ERS                         |
| LDL-T050480-EHT       |                          | 5.5                                             |                                            | 18.1                                      |                                      |                                    | 2198-E1007-ERS                         |
| LDL-N075480-DHT       | 10.0 (32.8)              | 9.9                                             | 519 (117)                                  | 32.8                                      | 1723 (387)                           | 2.59                               | 2198-E1015-ERS                         |
| LDL-N075480-EHT       |                          | 4.9                                             |                                            | 16.4                                      |                                      |                                    | 2198-E1007-ERS                         |
| LDL-T075480-DHT       | 10.0 (32.8)              | 9.9                                             | 596 (134)                                  | 32.8                                      | 1977 (444)                           | 2.98                               | 2198-E1015-ERS                         |
| LDL-T075480-EHT       |                          | 4.9                                             |                                            | 16.4                                      |                                      |                                    | 2198-E1007-ERS                         |

Performance specification data and curves reflect nominal system performance of a typical system with motor ambient at 40 °C (104 °F), drive ambient at 50 °C (122 °F), and rated line voltage. For additional information on ambient and line conditions, refer to Motion Analyzer software.

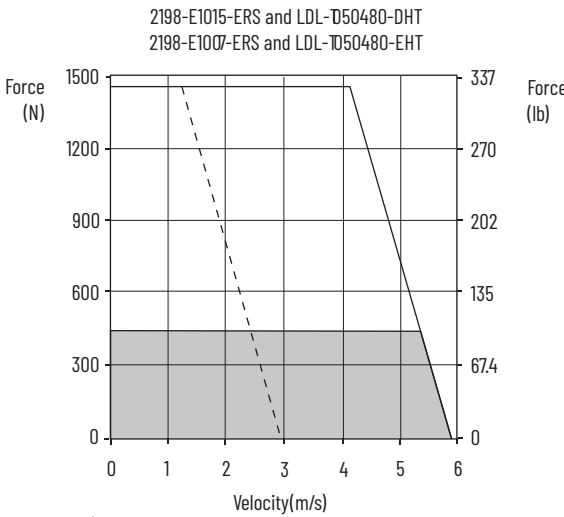
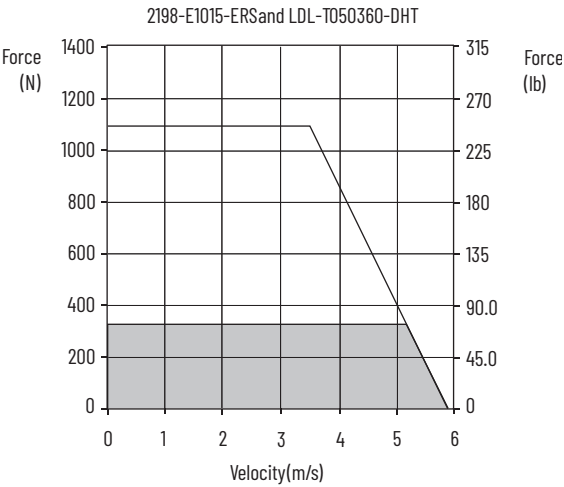
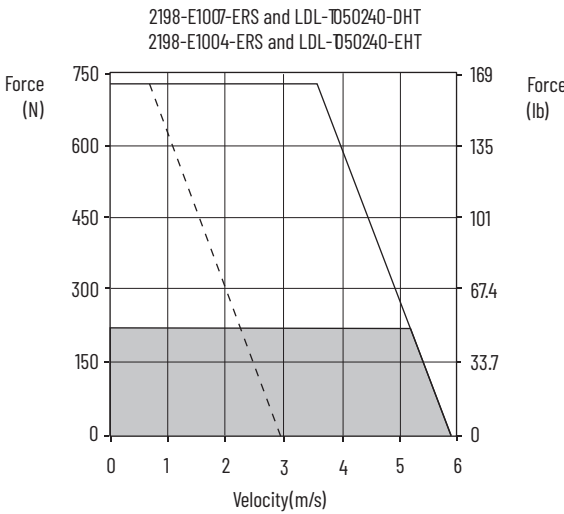
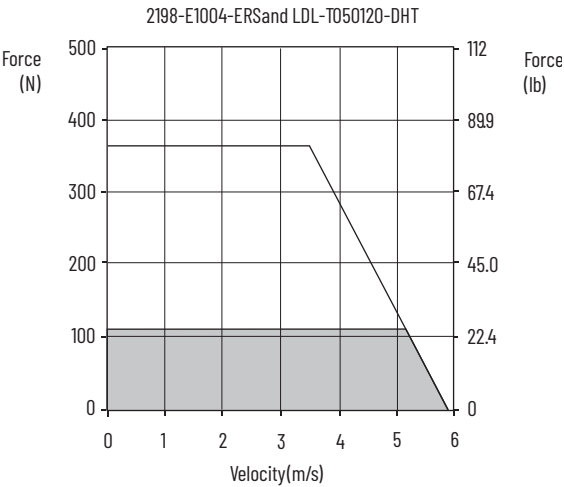
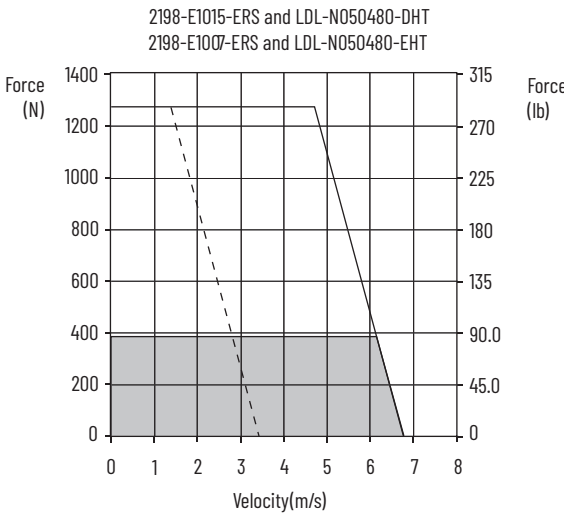
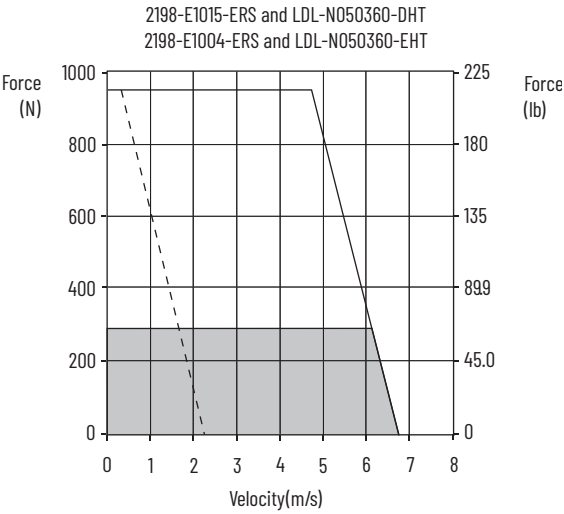


# Kinetix 5100 (200V-class) Drives/Kinetix LDL Linear Motor Curves



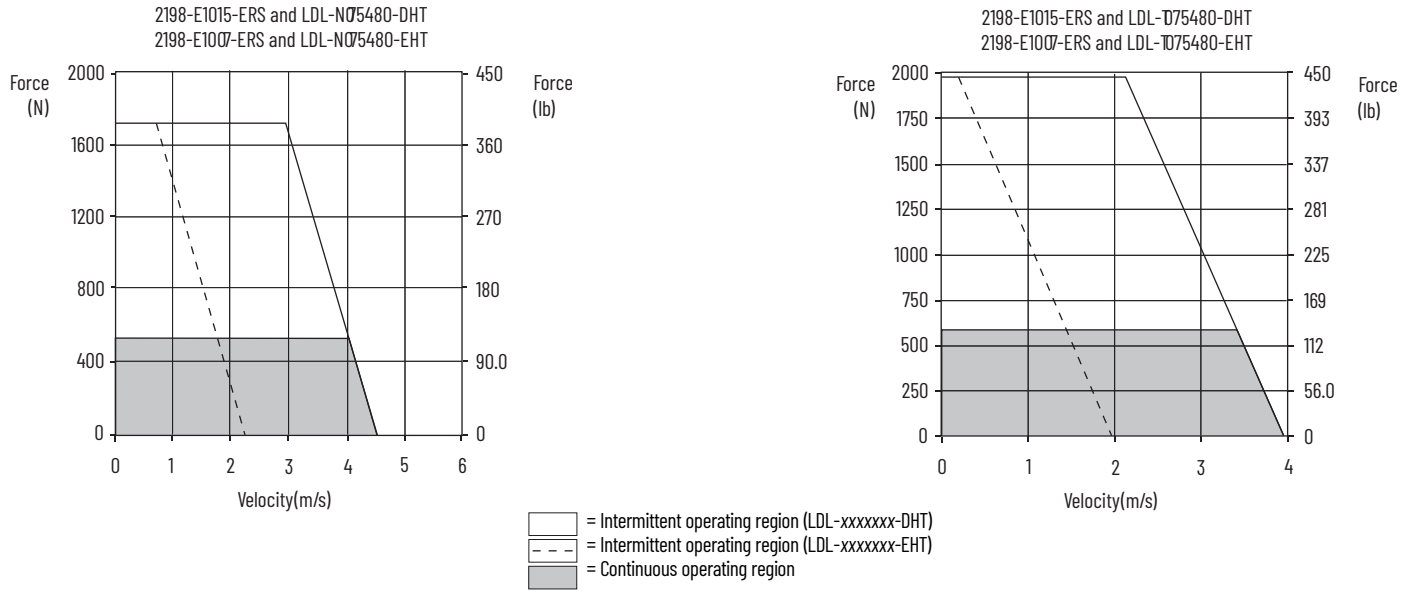
- = Intermittent operating region (LDL-xxxxxx-DHT)
- = Intermittent operating region (LDL-xxxxxx-EHT)
- = Continuous operating region

# Kinetix 5100 (200V-class) Drives/Kinetix LDL Linear Motor Curves (continued)



- = Intermittent operating region (LDL-xxxxxx-DHT)
- - - = Intermittent operating region (LDL-xxxxxx-EHT)
- = Continuous operating region

## Kinetix 5100 (200V-class) Drives/Kinetix LDL Linear Motor Curves (continued)



**Notes:**

# Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

| Resource                                                                                                                                                             | Description                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kinetix Rotary Motion Specifications Technical Data, publication <a href="#">KNX-TD001</a>                                                                           | Product specifications for Kinetix VPL, VPC, VPF, VPH, and VPS; Kinetix MPL, MPM, MPF, and MPS; Kinetix TLY and TL; Kinetix HPK; and Kinetix MMA rotary motors.                                                                                                                                                                                                                                 |
| Kinetix Linear Motion Specifications Technical Data, publication <a href="#">KNX-TD002</a>                                                                           | Product specifications for Kinetix MPAS and MPMA linear stages, Kinetix MPAR and MPAL electric cylinders, and Kinetix LDC and LDL linear motors.                                                                                                                                                                                                                                                |
| Kinetix 5700, 5500, 5300, and 5100 Servo Drives Specifications, publication <a href="#">KNX-TD003</a>                                                                | Provides product specifications for Kinetix Integrated Motion over the EtherNet/IP™ network and EtherNet/IP networking servo drive families.                                                                                                                                                                                                                                                    |
| Kinetix Rotary and Linear Motion Cable Specifications Technical Data, publication <a href="#">KNX-TD004</a>                                                          | Product specifications for Kinetix 2090 motor and interface cables.                                                                                                                                                                                                                                                                                                                             |
| Kinetix Servo Drive Performance Specifications per Ecodesign Regulation (EU) 2019/1781 technical data, publication <a href="#">KNX-TD006</a>                         | Provides energy efficiency performance data for Rockwell Automation Kinetix Servo drives. This data supports IE2 compliance of Kinetix Servo drives per EU 2019/1781.                                                                                                                                                                                                                           |
| Kinetix 5100 Single-axis EtherNet/IP Servo Drives User Manual, publication <a href="#">2198-UM004</a>                                                                | Information on installing, configuring, startup, troubleshooting, and applications for your Kinetix servo drive system.                                                                                                                                                                                                                                                                         |
| Kinetix 5700 Drive Systems, publication <a href="#">KNX-RM010</a>                                                                                                    | System design guide to determine and select the required (drive specific) drive module, power accessory, connector kit, motor cable, and interface cable catalog numbers for your drive and motor/actuator motion control system. Included are system performance specifications and torque/speed curves (rotary motion) and force/velocity curves (linear motion) for your motion application. |
| Kinetix 5500 Drive Systems, publication <a href="#">KNX-RM009</a>                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Kinetix 5300 Drive Systems, publication <a href="#">KNX-RM012</a>                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Kinetix Motion Control Selection Guide, publication <a href="#">KNX-SG001</a>                                                                                        | Overview of Kinetix servo drives, motors, actuators, and motion accessories designed to help make initial decisions for the motion control products best suited for your system requirements.                                                                                                                                                                                                   |
| System Design for Control of Electrical Noise Reference Manual, publication <a href="#">GMC-RM001</a>                                                                | Information, examples, and techniques designed to minimize system failures caused by electrical noise.                                                                                                                                                                                                                                                                                          |
| Servo Drive Installation Best Practices Application Technique publication <a href="#">MOTION-AT004</a>                                                               | Best practice examples to help reduce the number of potential noise or electromagnetic interference (EMI) sources in your system and to make sure that the noise sensitive components are not affected by the remaining noise.                                                                                                                                                                  |
| MicroLogix™ 1100 Programmable Controllers User Manual, publication <a href="#">1763-UM001</a>                                                                        | Provides information on how to install, wire, and troubleshoot the MicroLogix programmable controllers.                                                                                                                                                                                                                                                                                         |
| MicroLogix 1200 Programmable Controllers User Manual, publication <a href="#">1762-UM001</a>                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                 |
| MicroLogix 1400 Programmable Controllers User Manual, publication <a href="#">1766-UM001</a>                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Micro810® Programmable Controllers User Manual, publication <a href="#">2080-UM001</a>                                                                               | Provides information on how to install, wire, and troubleshoot the Micro800™ programmable controllers.                                                                                                                                                                                                                                                                                          |
| Micro820™ Programmable Controllers User Manual, publication <a href="#">2080-UM005</a>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Micro830®, Micro850®, Micro870™, Programmable Controllers User Manual, publication <a href="#">2080-UM002</a>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                 |
| GuardLogix 5570 Controllers User Manual, publication <a href="#">1756-UM022</a>                                                                                      | Provides information on how to install, configure, program, and use ControlLogix® controllers and GuardLogix® controllers in Studio 5000 Logix Designer® projects.                                                                                                                                                                                                                              |
| GuardLogix 5580 Controllers User Manual, publication <a href="#">1756-UM543</a>                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Compact GuardLogix 5370 Controllers User Manual, publication <a href="#">1769-UM022</a>                                                                              | Provides information on how to install, configure, program, and use CompactLogix™ and Compact GuardLogix controllers.                                                                                                                                                                                                                                                                           |
| Compact GuardLogix 5380 Controllers User Manual, publication <a href="#">5069-UM001</a>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                 |
| GuardLogix 5570 and Compact GuardLogix 5370 Controller Systems Safety Reference Manual, publication <a href="#">1756-RM099</a>                                       | Provides information on how to achieve and maintain Safety Integrity Level (SIL) and Performance Level (PL) safety application requirements for GuardLogix and Compact GuardLogix controllers.                                                                                                                                                                                                  |
| GuardLogix 5580 and Compact GuardLogix 5380 Controller Systems Safety Reference Manual, publication <a href="#">1756-RM012</a>                                       |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Industrial Ethernet Media Brochure, publication <a href="#">1585-BR001</a>                                                                                           | Information to determine which Bulletin 1585 Ethernet cable fits your application and the product specifications to help select the appropriate components.                                                                                                                                                                                                                                     |
| Rockwell Automation Product Selection website, <a href="#">rok.auto/systemtools</a>                                                                                  | Online product selection and system configuration tools, including AutoCAD (DXF) drawings.                                                                                                                                                                                                                                                                                                      |
| Motion Analyzer System Sizing and Selection Tool website <a href="https://motionanalyzer.rockwellautomation.com/">https://motionanalyzer.rockwellautomation.com/</a> | Comprehensive motion application sizing tool used for analysis, optimization, selection, and validation of your Kinetix Motion Control system.                                                                                                                                                                                                                                                  |
| Product Certifications website, <a href="#">rok.auto/certifications</a>                                                                                              | Provides declarations of conformity, certificates, and other certification details.                                                                                                                                                                                                                                                                                                             |
| Rockwell Automation Industrial Automation Glossary, publication <a href="#">AG-7.1</a>                                                                               | A glossary of industrial automation terms and abbreviations.                                                                                                                                                                                                                                                                                                                                    |

You can view or download publications at [rok.auto/literature](#).

# Rockwell Automation Support

Use these resources to access support information.

|                                                         |                                                                                                    |                                                                    |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Technical Support Center</b>                         | Find help with how-to videos, FAQs, chat, user forums, and product notification updates.           | <a href="http://rok.auto/support">rok.auto/support</a>             |
| <b>Knowledgebase</b>                                    | Access Knowledgebase articles.                                                                     | <a href="http://rok.auto/knowledgebase">rok.auto/knowledgebase</a> |
| <b>Local Technical Support Phone Numbers</b>            | Locate the telephone number for your country.                                                      | <a href="http://rok.auto/phonesupport">rok.auto/phonesupport</a>   |
| <b>Literature Library</b>                               | Find installation instructions, manuals, brochures, and technical data publications.               | <a href="http://rok.auto/literature">rok.auto/literature</a>       |
| <b>Product Compatibility and Download Center (PCDC)</b> | Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes. | <a href="http://rok.auto/pcdc">rok.auto/pcdc</a>                   |

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Publication KNX-RM011D-EN-P - September 2021

Supersedes Publication KNX-RM011C-EN-P - January 2021

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