

PDG, PDK, PLL

*Ideal for automated part stopping, positioning,
& lifting applications!*



Series PDG
Disappearing
Gage

Series PLL
Lite Lifter



Series PDK Crowder



Switch Options

**ISO 9001
REGISTERED**

Quality Management
System Certified

PD01E



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SOLUTIONS FOR INDUSTRIAL AUTOMATION

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ORDERING DATA: SERIES PDG DISAPPEARING GAGE

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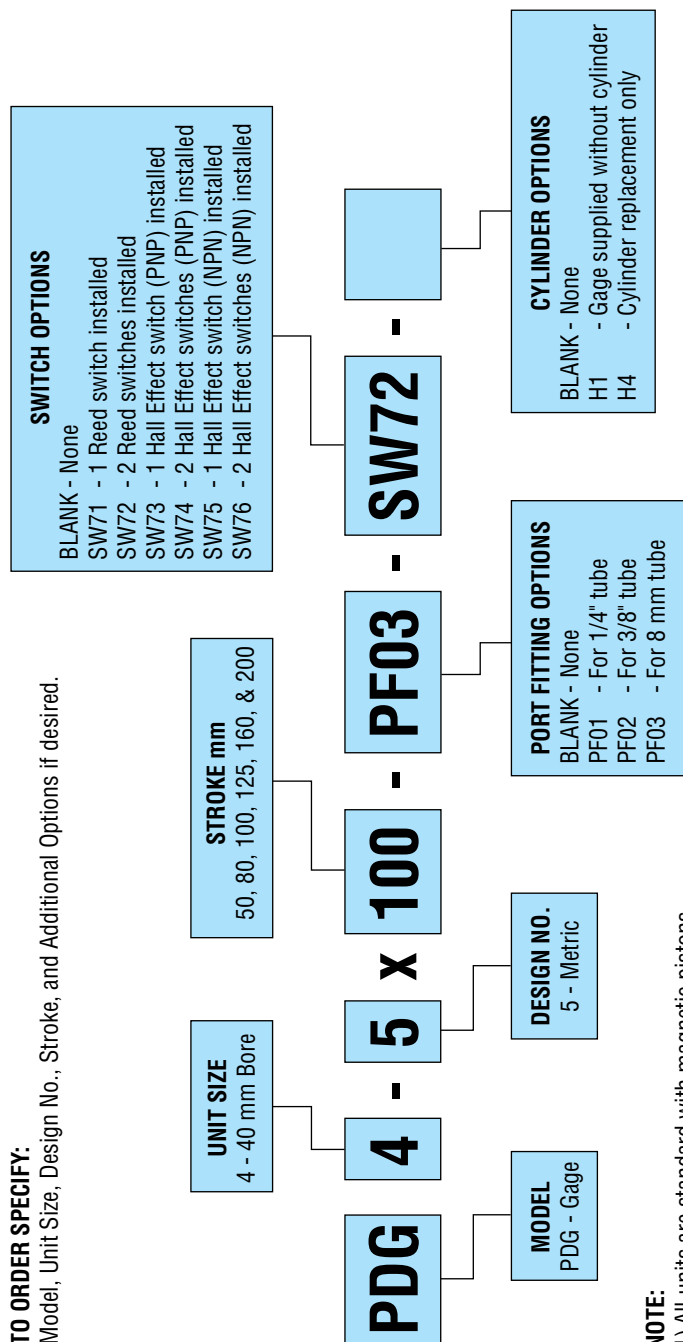
Series PDG, PDK, & PLL

Options

Pages 19 & 20

TO ORDER SPECIFY:

Model, Unit Size, Design No., Stroke, and Additional Options if desired.



NOTE:

1) All units are standard with magnetic pistons.

GM ORDERING CODE

M-1648-STROKE = PDG4-5 x STROKE

See above for available strokes.

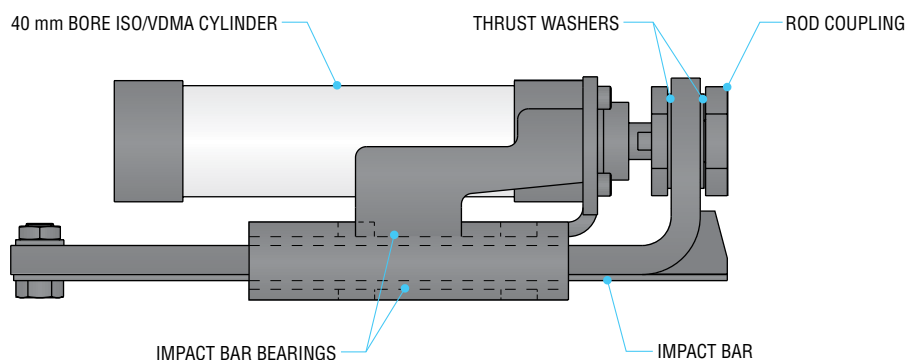
BENEFITS: SERIES PDG DISAPPEARING GAGE

BENEFITS

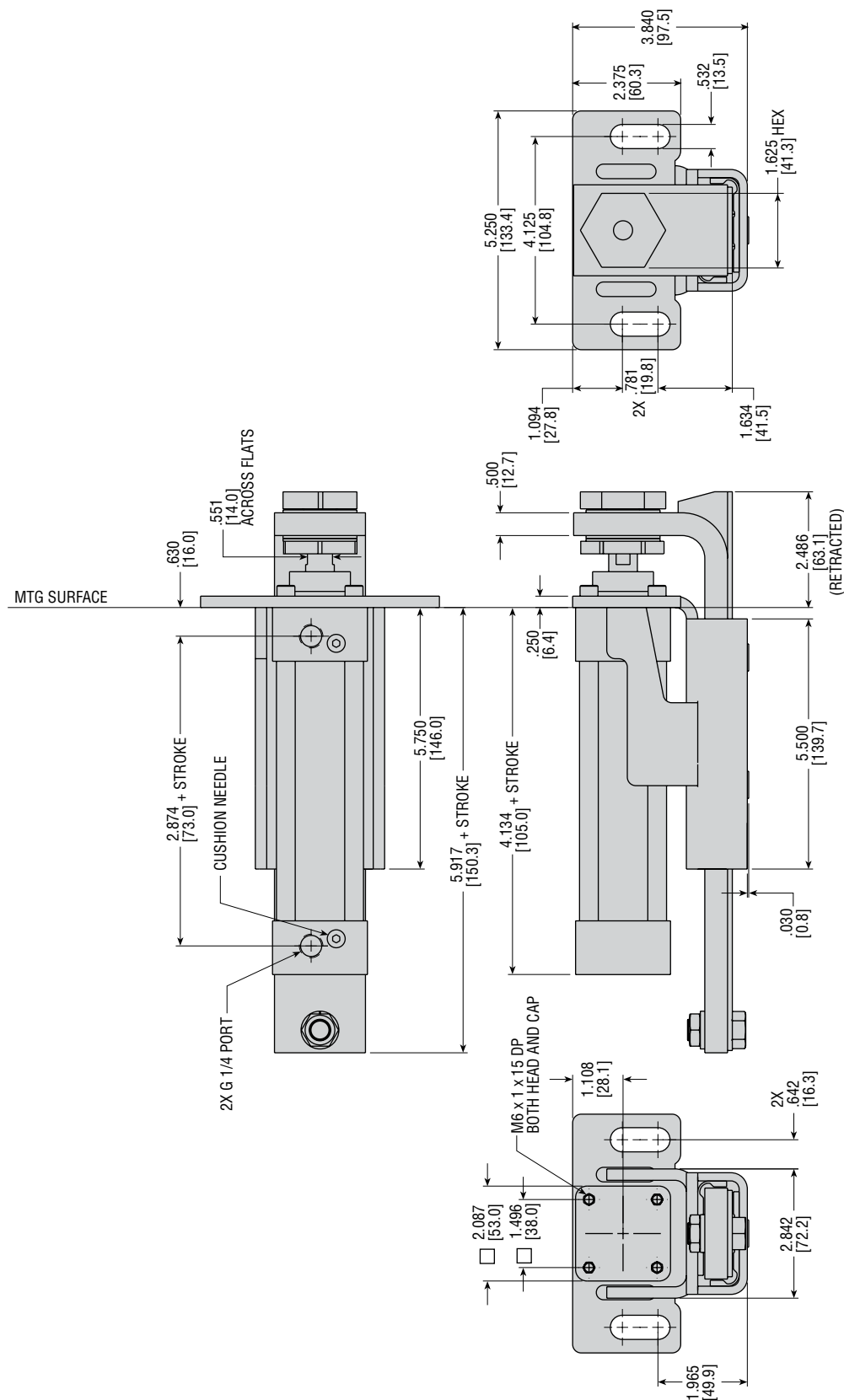
- Simple design, compact size, long life and the ability to absorb high impact forces make this gage ideal for part stopping and locating.
- ISO/VDMA cylinder is standard with adjustable cushions (reducing shock to unit) and magnetic piston for switches to provide end of stroke signal to controllers.
- Built-in rod compliance eliminates side load on cylinder piston rod which increases cylinder life.
- Hardened steel impact plate for durability.
- Unique energy absorbing, self-lubricating bearings support the impact bar, reducing bearing noise and increasing stopping capacity.
- Low cost of ownership



SPECIFICATIONS	SERIES PDG
POWER SOURCE	40 mm Bore ISO/VDMA Cylinder
WORKING PRESSURE	20 psi min - 150 psi max at zero load
LUBRICATION	Permanent for Non-Lubricated or Lubricated Air
HOUSING	Carbon Steel
IMPACT BAR	Carbon Steel with a Hardened Steel Impact Plate
IMPACT BAR BEARINGS	Urethane with Impregnated Lubrication
THRUST WASHERS	Urethane with Impregnated Lubrication
ROD COUPLING	Hardened Steel



DIMENSIONS: SERIES PDG DISAPPEARING GAGE



NOTES:
 1) ALL DIMENSIONS ARE REFERENCE ONLY UNLESS SPECIFICALLY TOLERANCED
 2) NUMBERS IN [] ARE FOR METRIC NUMBERS AND ARE IN mm

ENGINEERING DATA: SERIES PDG DISAPPEARING GAGE

SPECIFICATIONS

MODEL	BORE mm	EFFECTIVE PISTON AREA in ² [mm ²]		STROKE (mm)		TYPICAL CYCLE TIME (sec)		UNIT WEIGHT lb [kg]
		EXTEND	RETRACT	LENGTH	TOLERANCE	EXTEND	RETRACT	
PDG	40	1.95 [1257]	1.64 [1056]	50	+2/-0	0.11		9.8 [4.4]
				80		0.12		10.4 [4.7]
				100		0.15		10.8 [4.9]
				125		0.19		11.3 [5.1]
				160		0.24		12.0 [5.4]
				200		0.30		12.9 [5.9]

NOTES: 1) Cycle times are based on 1/4" air lines, valve of cv 5.1, and visually acceptable cushions.

2) The use of air lines greater than 1/4" will require the use of external flow controls.

PRESSURE RATINGS

All Series PDG Gages have an operating pressure range of 20 psi minimum to 150 psi maximum [1.4 to 10 bar].

BREAKAWAY

Units have less than 20 psi breakaway with zero load.

OPERATING TEMPERATURE

Series PDG Gages are designed for use in temperatures between -20° to 120°F [-29° to 49°C]. For temperatures outside this range, consult PHD.

SEALS

Series PDG Gages utilize Nitrile seals which are compatible with standard paraffin-based lubrication oils used for pneumatic cylinders. For compatibility with other fluids, consult PHD.

LUBRICATION

All units are pre-lubricated at the factory for service under normal operating conditions. Gages are designed and tested with non-lubricated air. However, the use of lubricated air will extend life. Periodically lubricating the guide bearings and thrust washers using oil will decrease wear and extend life.

LIFE EXPECTANCY

All units have been designed for millions of cycles with minimal seal and bearing wear.

IMPACT BAR CLEARANCE

The clearance between the impact bar assembly and its bearings is typically .025 in [.65 mm].

IMPACT ENERGY CALCULATION

For quick estimates, the Typical Gage Capacity chart shows the maximum weight one gage can stop. This chart assumes that the part is moving at 24 inches per second and that it impacts the gage at 2 inches from the end of the impact bar.

For specific applications, calculate the kinetic energy and use the Impact Energy Capacity graph. Use the weight of the panel and impact velocity to calculate the kinetic energy (KE). Next, determine the distance above the mounting surface that the panels impact the gage. Next, on the Impact Energy Capacity graph, plot the KE and the Impact Distance. If it is below the line, one gage is sufficient. If it is above the line, more than one gage is required to stop the part. To recalculate with two gages, divide the part weight by two and recalculate the KE. Replot on the graph to see if it is within the graph.

Application Suggestions:

- Keep the impact distance (L) as short as possible.
- Keep the impact velocity of a panel as slow as possible.
- Keep the gage close to the center of mass on the panel.
- When using more than one gage, position them so they are impacted at the same time.

TYPICAL GAGE CAPACITY

Stroke mm	Impact Distance L		Panel Weight	
	in	mm	lb	N
50	2.1	53	19	85
80	3.2	81	16	71
100	4.0	102	15	67
125	5.0	127	14	58
160	6.4	168	12	53
200	8.0	203	11	44

Impact velocity is 24 in/sec

Example:

Panel Weight = 10 lb [44 N]

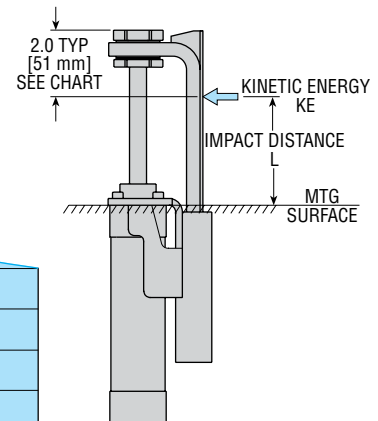
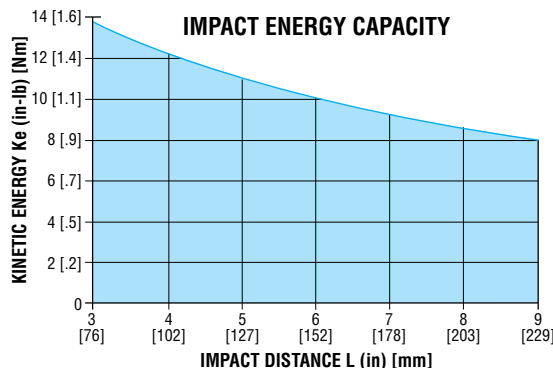
Impact Velocity = 24 in/sec [6 m/sec]

Impact Distance = 4 in [102 mm]

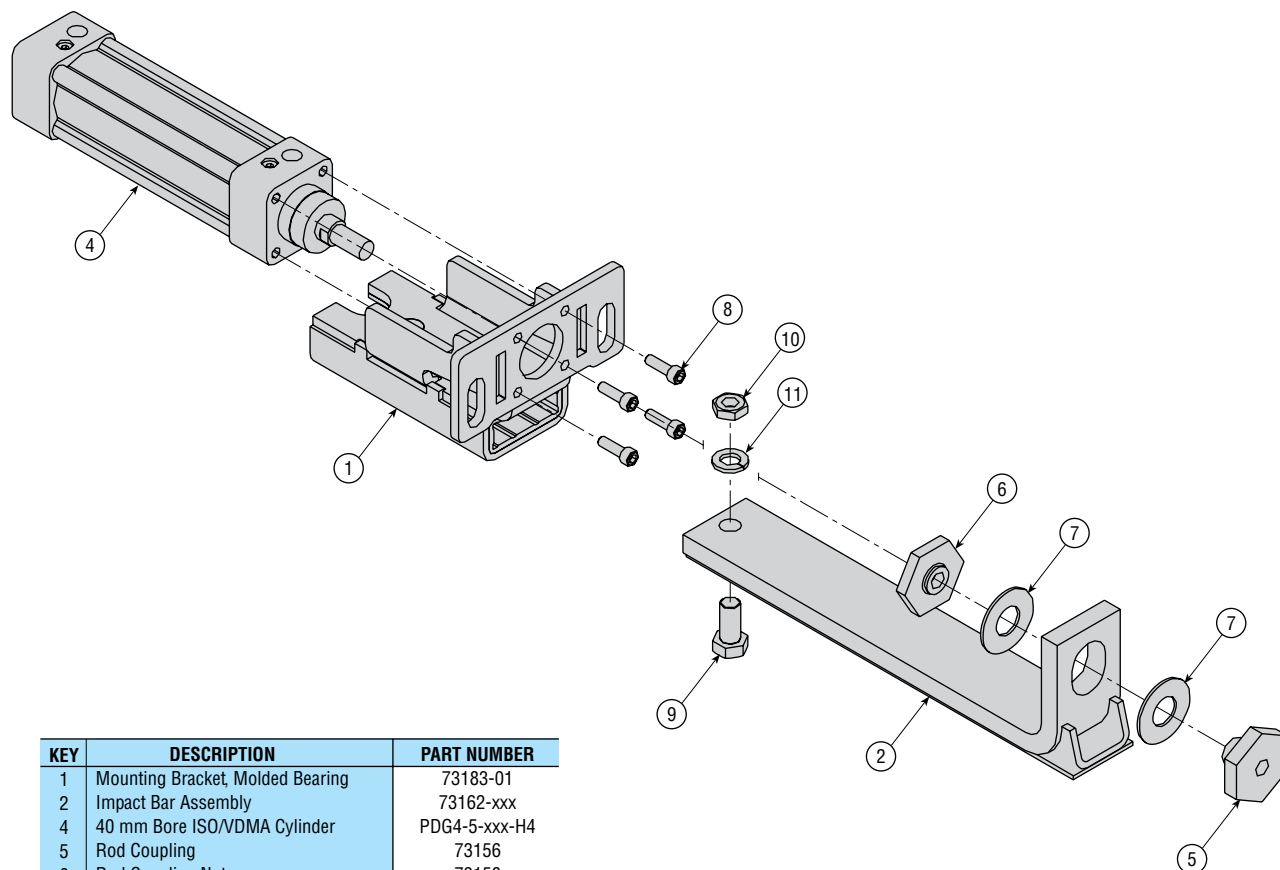
$$KE = 1/2 \times \frac{\text{Panel Weight}}{386.4} \times \text{Velocity}^2$$

$$KE = 1/2 \times \frac{10 [44]}{386.4 [98]} \times 24^2 [6^2] = 7.5 \text{ in-lb} [1.4 \text{ Nm}]$$

By plotting on the graph, at an impact distance of 4 in [102 mm], one gage can handle approximately 12 in-lb [1.4 Nm] of KE. For this application, one gage would be required to adequately stop the panel.



PARTS LIST & REPAIR KITS: SERIES PDG DISAPPEARING GAGE



KEY	DESCRIPTION	PART NUMBER
1	Mounting Bracket, Molded Bearing	73183-01
2	Impact Bar Assembly	73162-xxx
4	40 mm Bore ISO/VDMA Cylinder	PDG4-5-xxx-H4
5	Rod Coupling	73156
6	Rod Coupling Nut	73158
7	Thrust Washer	73157
8	Cylinder Mounting Screws	59104-118
9	Hex Head Screw	16281-087
10	Nut	3204-020
11	Lock Washer	61745-003

-xxx = stroke (mm) - Available strokes: 50 mm (-050)
80 mm (-080)
100 mm (-100)
125 mm (-125)
160 mm (-160)
200 mm (-200)

ORDERING EXAMPLE:

Replacement Cylinder Only = PDG4-5x100-H4

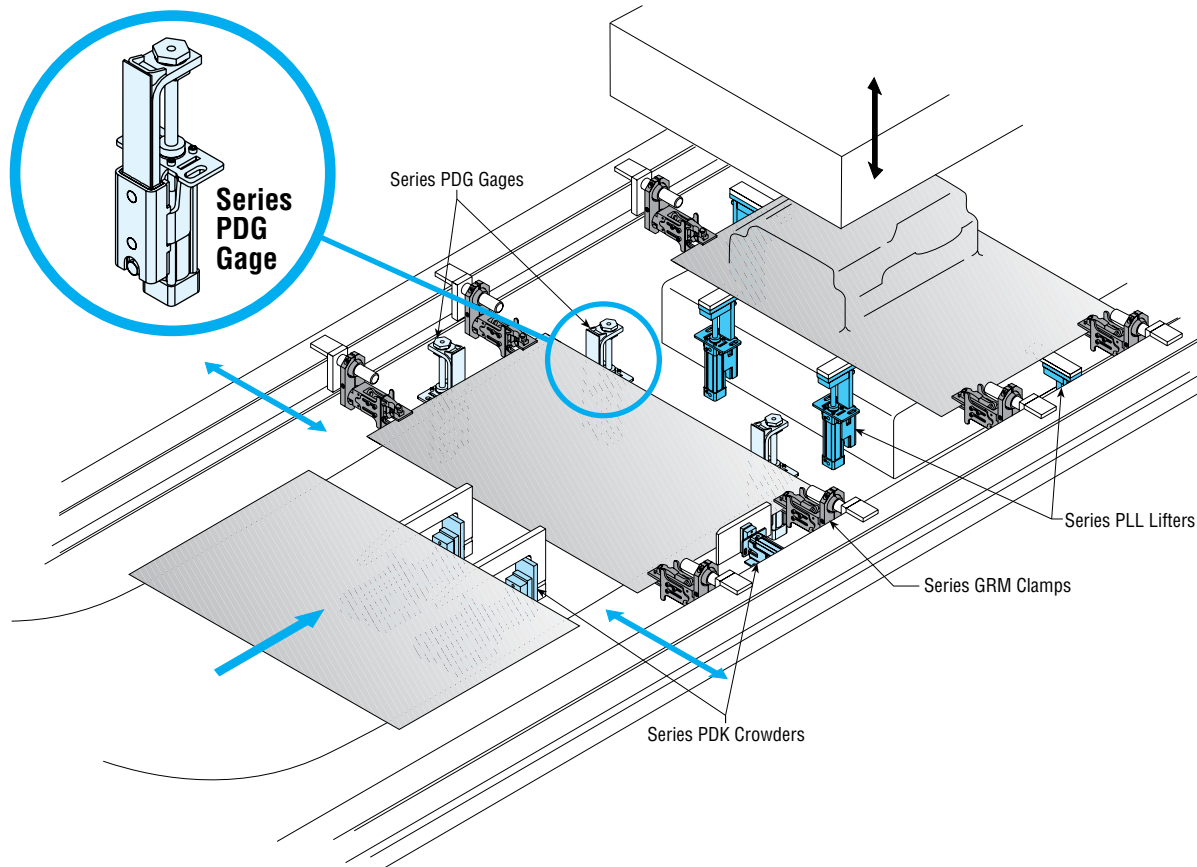
Replacement Gage Without Cylinder = PDG4-5x100-H1

KITS

KIT DESCRIPTION	KIT NUMBER
Thrust Washer Kit	73169
Fastener Kit	73171-01

APPLICATION EXAMPLE: SERIES PDG DISAPPEARING GAGE

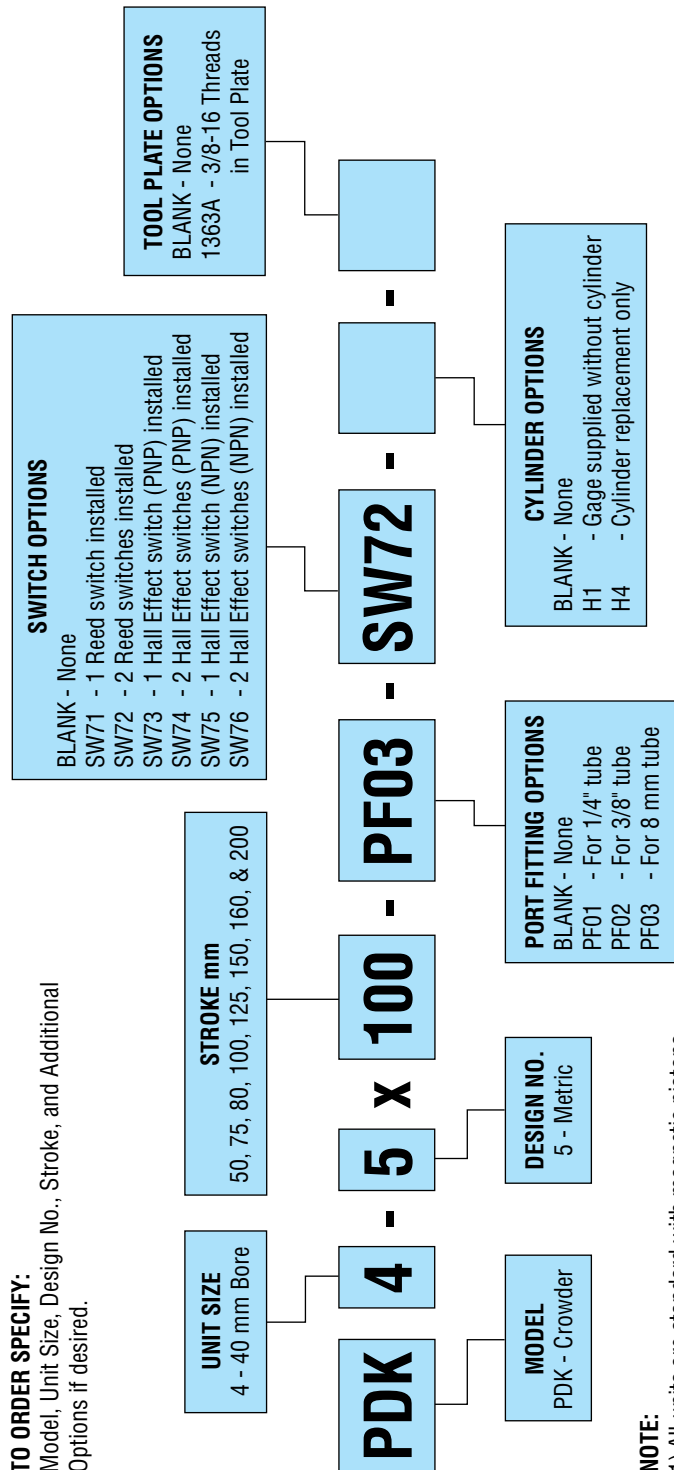
The Series PDG Gage provides an ideal solution for sheet panel stopping and positioning. During use, the sheet metal panels are fed down a ramp and impact the extended PDG Gages. Once stopped, the Series GRM Clamps grab the panel. The PDG Gages then retract and allow the gripped panel to be positioned over the die. The PDG Gages are rugged and can withstand high amounts of impact energy without damaging the piston rod of the cylinder.



ORDERING DATA: SERIES PDK CROWDER

TO ORDER SPECIFY:

Model, Unit Size, Design No., Stroke, and Additional Options if desired.



NOTE:

1) All units are standard with magnetic pistons.

GM ORDERING CODE

M-1363-A-STROKE = PDK4-5 x STROKE - 1363A

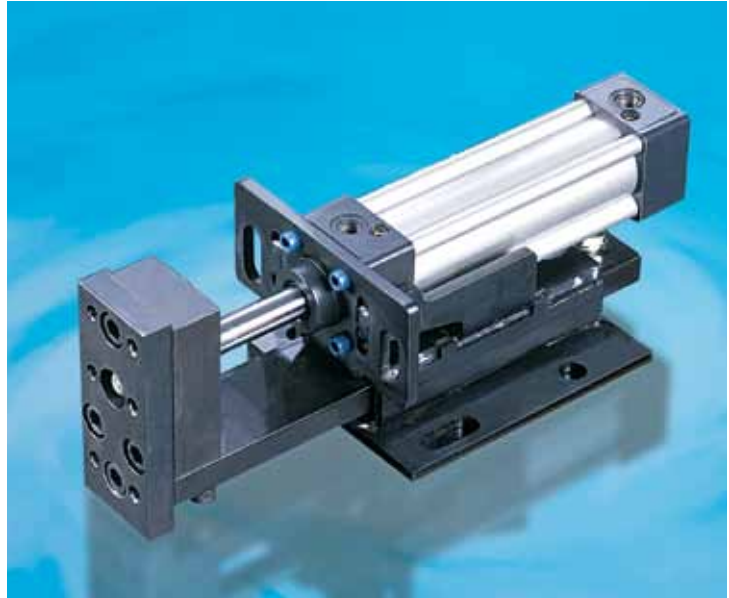
M-1649-STROKE = PDK4-5 x STROKE

See above for available strokes.

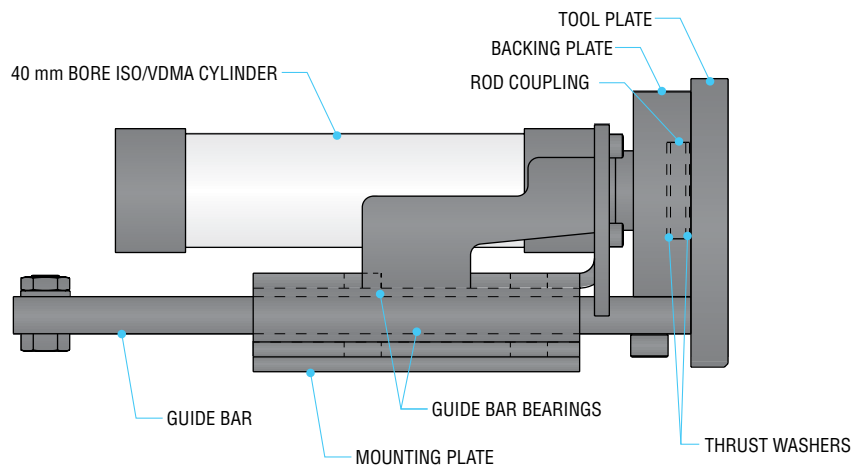
BENEFITS: SERIES PDK CROWDER

BENEFITS

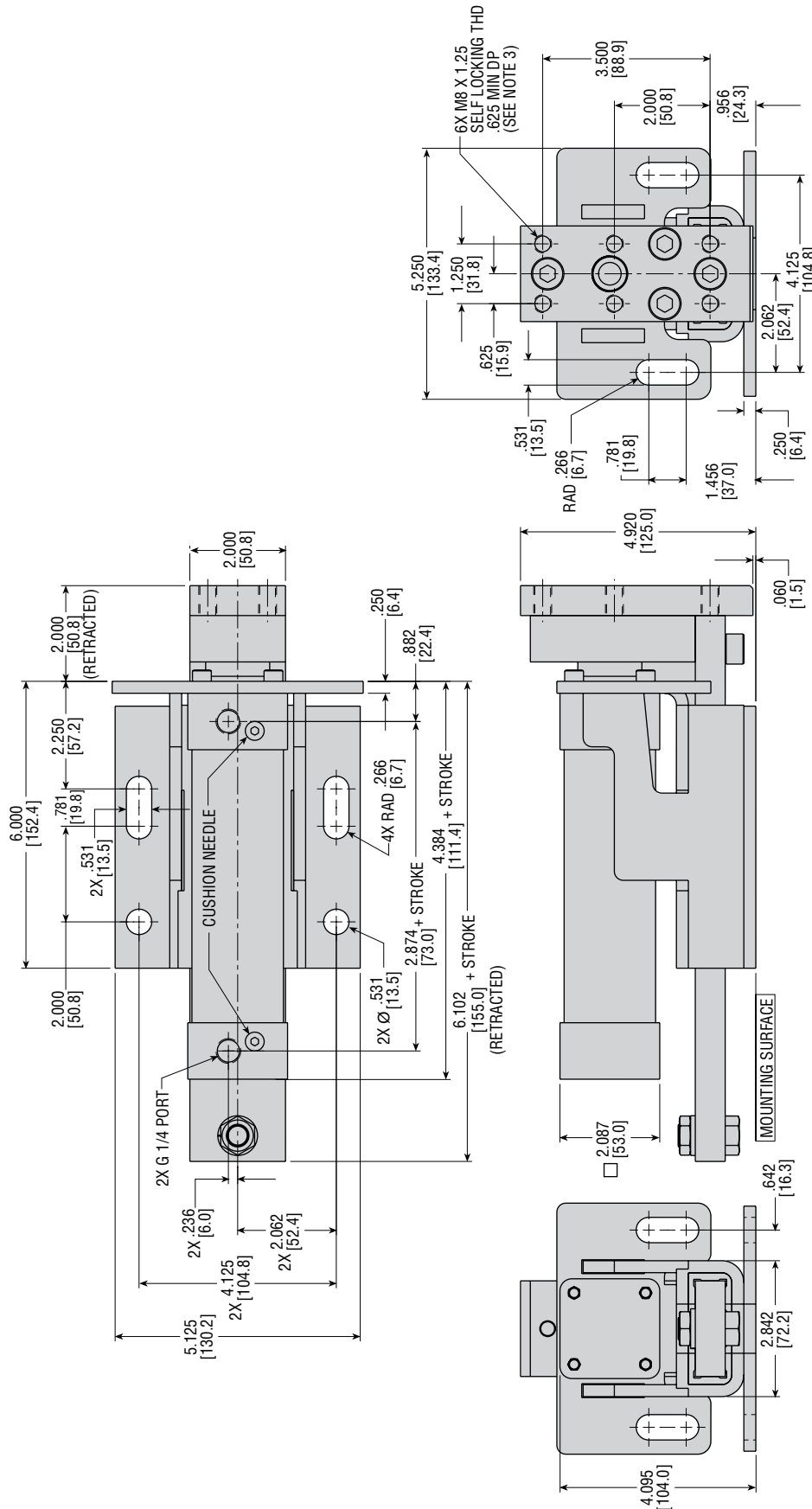
- Simple design, compact size, rugged design, and the ability to absorb high impact forces make this crowder ideal for pushing parts into location.
- Drop in replacement for GM Standard 1363A.
- ISO/VDMA cylinder is standard with adjustable cushions (reducing shock to unit) and magnetic piston for switches to provide end of stroke signal to controllers.
- Built-in rod compliance eliminates side load on cylinder piston rod which increases cylinder life.
- Unique self-lubricating energy absorbing bearings are tolerant of dirt. Support the guide bar and flex to protect the crowder during overload conditions.
- The tool plate, guide bar, and bearing are designed with a .06 inch gap to protect the crowder from damage if a panel is crushed over the tool plate.
- Low cost of ownership



SPECIFICATIONS	SERIES PDK
POWER SOURCE	40 mm Bore ISO/VDMA Cylinder
WORKING PRESSURE	20 psi min - 150 psi max at zero load
LUBRICATION	Permanent for Non-Lubricated or Lubricated Air
HOUSING	Carbon Steel
GUIDE BAR	Carbon Steel
TOOL PLATE	Urethane with Impregnated Lubrication
THRUST WASHERS	Urethane with Impregnated Lubrication
ROD COUPLING	Hardened Steel



DIMENSIONS: SERIES PDK CROWDER



- NOTES:**
- 1) ALL DIMENSIONS ARE REFERENCE ONLY UNLESS SPECIFICALLY TOLERANCED
 - 2) NUMBERS IN [] ARE FOR METRIC NUMBERS AND ARE IN mm
 - 3) PDK4-5 x STROKE - 1363A = 3/8-16 THREADS IN TOOL PLATE

ENGINEERING DATA: SERIES PDK CROWDER

SPECIFICATIONS

MODEL	BORE mm	EFFECTIVE PISTON AREA in ² [mm ²]		STROKE (mm)		TYPICAL CYCLE TIME (sec)	UNIT WEIGHT lb [kg]
		EXTEND	RETRACT	LENGTH	TOLERANCE	EXTEND / RETRACT	
PDK	40	1.95 [1257]	1.64 [1056]	50	+2/-0	0.11	14.66 [6.65]
				75		0.12	15.21 [6.90]
				80		0.12	15.32 [6.95]
				100		0.15	15.71 [7.12]
				125		0.19	16.23 [7.36]
				150		0.23	16.76 [7.60]
				160		0.24	16.97 [7.70]
				200		0.30	17.80 [8.07]

NOTES: 1) Cycle times are based on 1/4" air lines, valve of cv 5.1, and visually acceptable cushions.

2) The use of air lines greater than 1/4" will require the use of external flow controls.

PRESSURE RATINGS

All Series PDK Crowders have an operating pressure range of 20 psi minimum to 150 psi maximum [1.4 to 10 bar].

BREAKAWAY

Units have less than 20 psi breakaway with zero load.

OPERATING TEMPERATURE

Series PDK Crowders are designed for use in temperatures between -20° to 120°F [-29° to 49°C]. For temperatures outside this range, consult PHD.

SEALS

Series PDK Crowders utilize Nitrile seals which are compatible with standard paraffin-based lubrication oils used for pneumatic cylinders. For compatibility with other fluids, consult PHD.

LUBRICATION

All units are pre-lubricated at the factory for service under normal operating conditions. Crowders are designed and tested with non-lubricated air. However, the use of lubricated air will extend life. Periodically lubricating the guide bearings and thrust washers using oil will decrease wear and extend life.

LIFE EXPECTANCY

All units have been designed for millions of cycles with minimal seal and bearing wear.

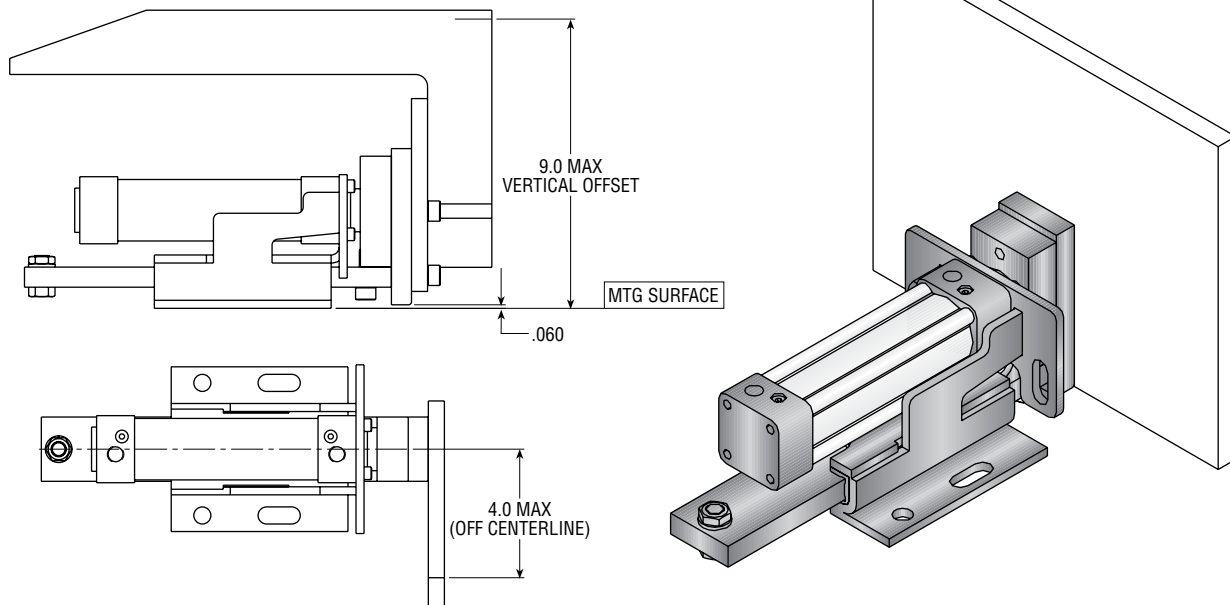
IMPACT BAR CLEARANCE

The clearance between the impact bar assembly and its bearings is typically .006 in [.15 mm].

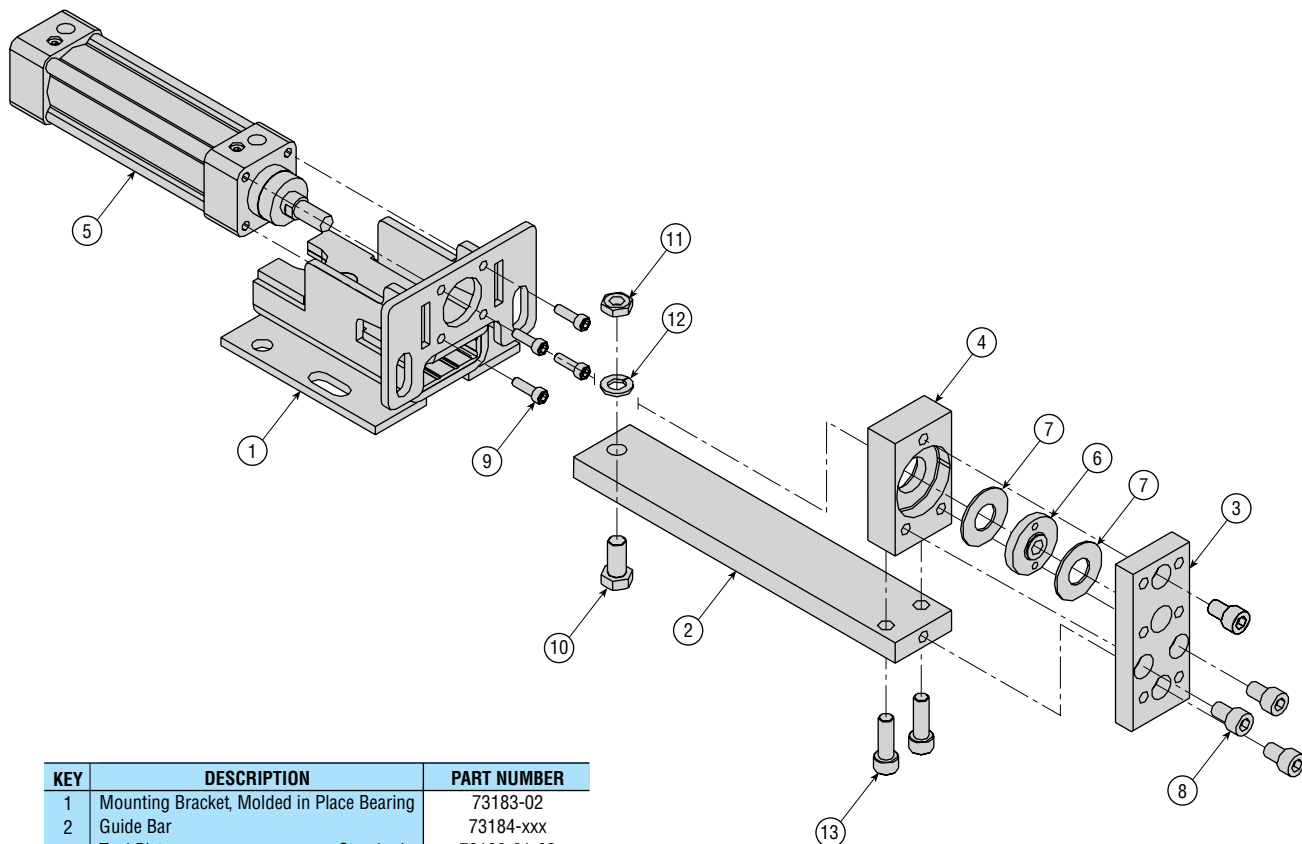
OVERLOADS

The PDK Crowders contain a self-lubricating bearing that flexes during overload conditions. Occasionally, blanks are misloaded and extend out of the die, over crowders as the press cycles. Large forces are applied as the panel is deformed over the crowder and its tooling. Normal crowders are overloaded and damaged when this happens. But with PDK Crowders, the bearing flexes and allows

the guide bar and tool plate to deflect .06 inches and contact the support surface, which carries any additional loads. When the press cycles up, and the overload is removed, the bearing, guide bar and tool plate return to normal position, ready for service.



PARTS LIST & REPAIR KITS: SERIES PDK CROWDER



KEY	DESCRIPTION	PART NUMBER
1	Mounting Bracket, Molded in Place Bearing	73183-02
2	Guide Bar	73184-xxx
3	Tool Plate	- Standard 73180-01-02 - 1363A 73180-01-01
4	Backing Plate	73188-02
5	40 mm Bore ISO/VDMA Cylinder	PDK4-5-xxx-H4
6	Cylinder Coupling	73189-01
7	Thrust Washer	73157
8	Socket Head Cap Screw (M10 x 16)	59104-162
9	Socket Head Cap Screw (M6 x 20)	59104-118
10	Hex Head Cap Screw (M12 x 25)	16281-087
11	Nut (M12)	3204-020
12	Lock Washer (M12)	61745-003
13	Socket Head Cap Screw (M10 x 30)	59104-027

-xxx = stroke (mm) - Available strokes:

- 50 mm (-050)
- 75 mm (-075)
- 80 mm (-080)
- 100 mm (-100)
- 125 mm (-125)
- 150 mm (-150)
- 160 mm (-160)
- 200 mm (-200)

ORDERING EXAMPLE:

Replacement Cylinder Only = PDK4-5x100-H4

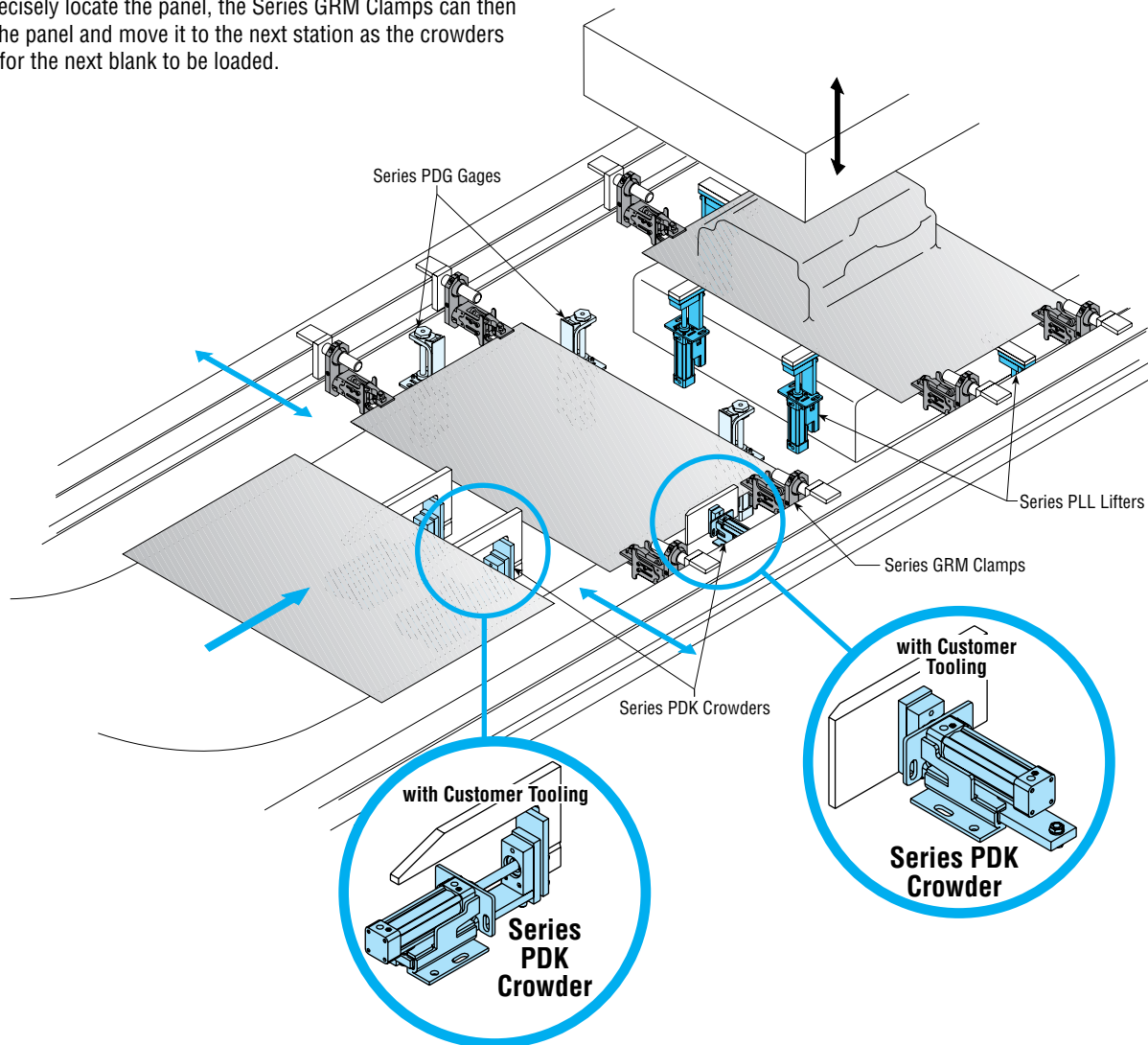
Replacement Crowder Without Cylinder = PDK4-5x100-H1

KITS

KIT DESCRIPTION	KIT NUMBER
Thrust Washer Kit	73169
Fastener Kit	73171-02

APPLICATION EXAMPLE: SERIES PDK CROWDER

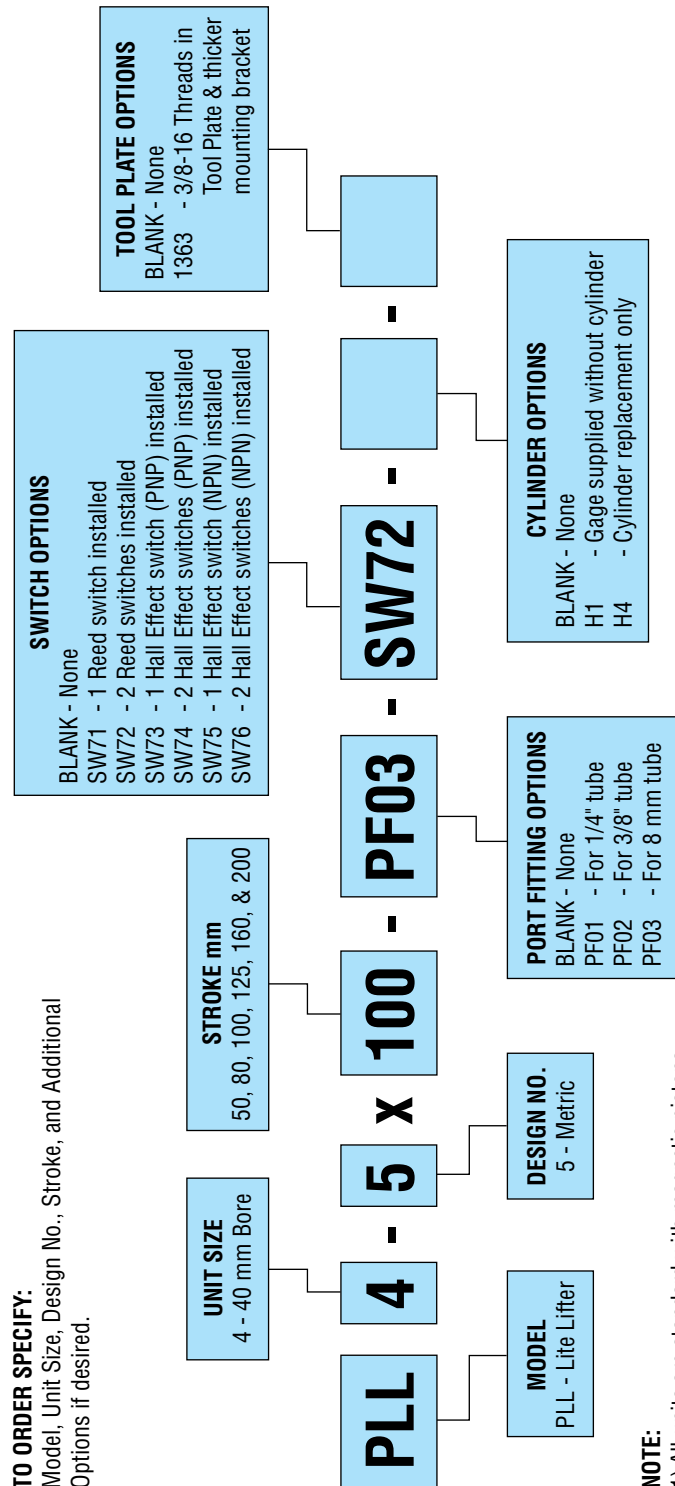
The Series PDK Crowder provides an ideal solution for pushing sheet metal panels into location. During use, the panels are fed down a ramp and stopped by gages. The PDK Crowders then extend, pushing the panel up against the gages or hard stops. Once they precisely locate the panel, the Series GRM Clamps can then grasp the panel and move it to the next station as the crowders retract for the next blank to be loaded.



ORDERING DATA: SERIES PLL LITE LIFTER

TO ORDER SPECIFY:

Model, Unit Size, Design No., Stroke, and Additional Options if desired.



NOTE:

1) All units are standard with magnetic pistons.

GM ORDERING CODE

M-1363-STROKE = PLL4-5 x STROKE - 1363

M-1670-STROKE = PLL4-5 x STROKE

See above for available strokes.

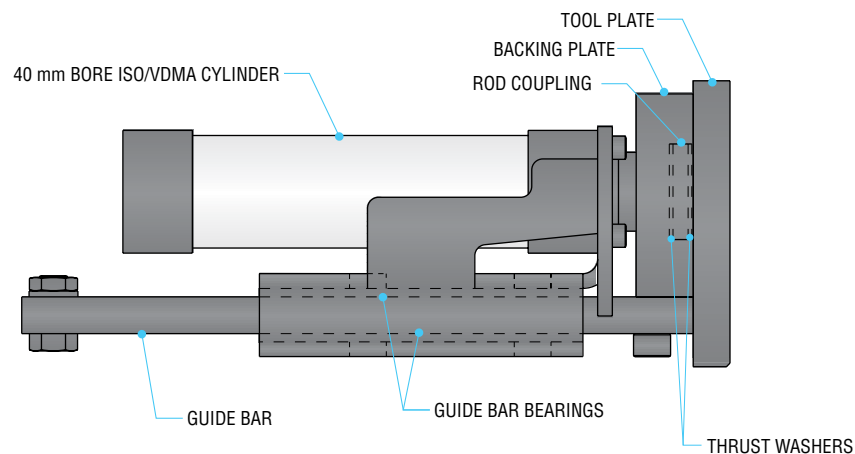
BENEFITS: SERIES PLL LITE LIFTER

BENEFITS

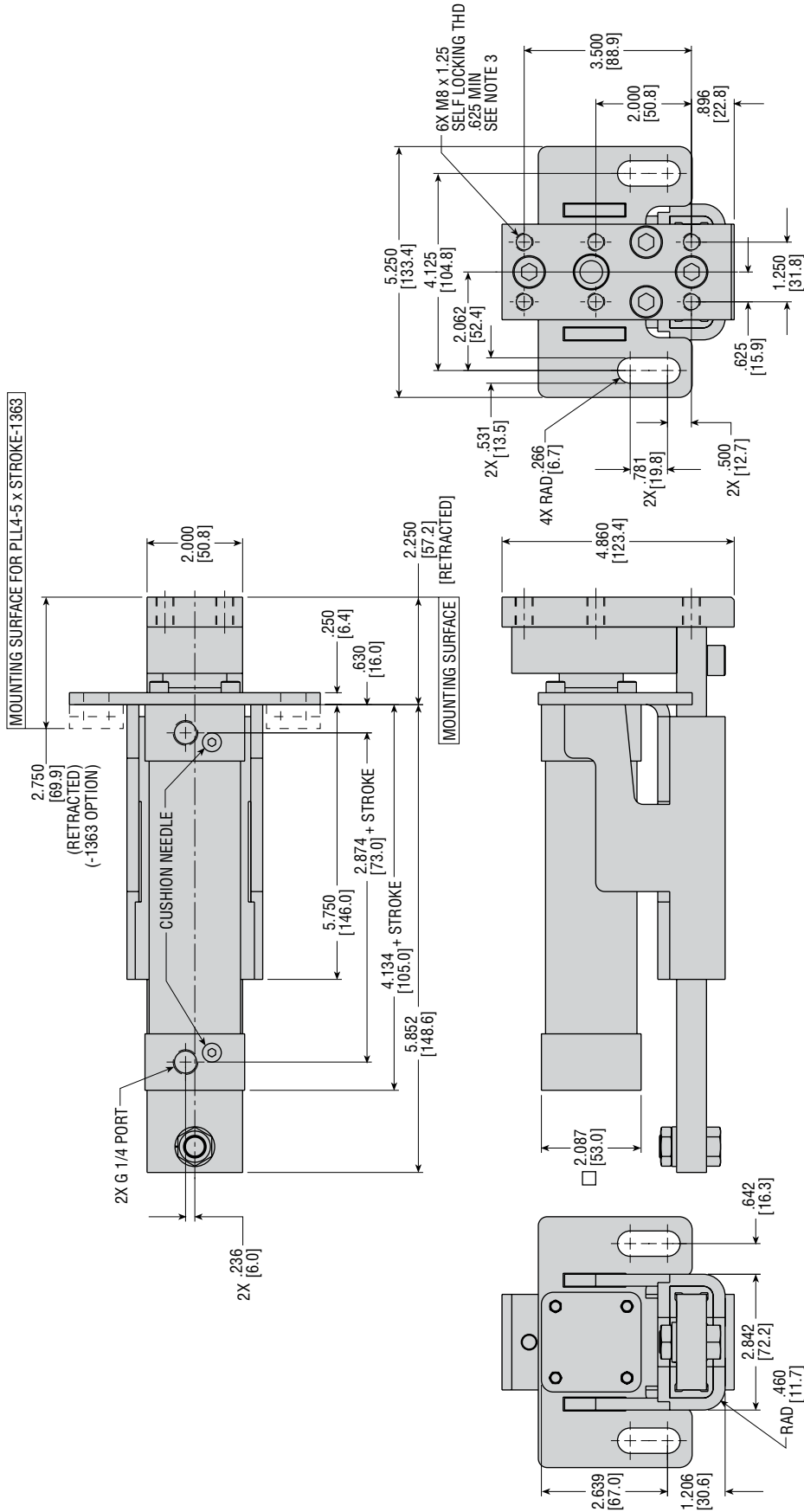
- Simple design, compact size, long life, and the ability to absorb high impact forces make this lifter ideal for lifting panels out of dies.
- Drop-in replacement for GM Standard 1363
- ISO/VDMA cylinder is standard with adjustable cushions (reducing shock to unit) and magnetic piston for switches to provide end of stroke signal to controllers.
- Built-in rod compliance eliminates side load on cylinder piston rod which increases cylinder life.
- Unique energy absorbing, self-lubricating bearings support the guide and provide long life.
- Low cost of ownership



SPECIFICATIONS	SERIES PLL
POWER SOURCE	40 mm Bore ISO/VDMA Cylinder
WORKING PRESSURE	20 psi min - 150 psi max at zero load
LUBRICATION	Permanent for Non-Lubricated or Lubricated Air
MOUNTING BRACKET	Carbon Steel
IMPACT BAR BEARINGS	Urethane with Impregnated Lubrication
THRUST WASHERS	Urethane with Impregnated Lubrication
ROD COUPLING	Hardened Steel



DIMENSIONS: SERIES PLL LITE LIFTER



NOTES:

- 1) ALL DIMENSIONS ARE REFERENCE ONLY UNLESS SPECIFICALLY TOLERANCED
- 2) NUMBERS IN [] ARE FOR METRIC NUMBERS AND ARE IN mm
- 3) PLL4-5 x STROKE - 1363 = 3/8-16 THREADS IN TOOL PLATE

ENGINEERING DATA: SERIES PLL LITE LIFTER

SPECIFICATIONS

MODEL	BORE mm	EFFECTIVE PISTON AREA in ² [mm ²]		STROKE (mm)		TYPICAL CYCLE TIME (sec)	UNIT WEIGHT lb [kg]
		EXTEND	RETRACT	LENGTH	TOLERANCE	EXTEND / RETRACT	
PLL	40	1.95 [1257]	1.64 [1056]	50	+2/-0	0.11	12.89 [5.84]
				80		0.12	13.54 [6.14]
				100		0.15	13.93 [6.32]
				125		0.19	14.46 [6.56]
				160		0.24	15.20 [6.89]
				200		0.30	16.02 [7.27]

NOTES: 1) Cycle times are based on 1/4" air lines, valve of cv 5.1, and visually acceptable cushions.
2) The use of air lines greater than 1/4" will require the use of external flow controls.

PRESSURE RATINGS

All Series PLL Lifters have an operating pressure range of 20 psi minimum to 150 psi maximum [1.4 to 10 bar].

BREAKAWAY

Units have less than 20 psi breakaway with zero load.

OPERATING TEMPERATURE

Series PLL Lifters are designed for use in temperatures between -20° to 120°F [-29° to 49°C]. For temperatures outside this range, consult PHD.

SEALS

Series PLL Lifters utilize Nitrile seals which are compatible with standard paraffin-based lubrication oils used for pneumatic cylinders. For compatibility with other fluids, consult PHD.

LUBRICATION

All units are pre-lubricated at the factory for service under normal operating conditions. Lifters are designed and tested with non-lubricated air. However, the use of lubricated air will extend life. Periodically lubricating the guide bearings and thrust washers using oil will decrease wear and extend life.

LIFE EXPECTANCY

All units have been designed for millions of cycles with minimal seal and bearing wear.

IMPACT BAR CLEARANCE

The clearance between the guide bar assembly and its bearings is typically .006 in [.15 mm].

DEFINITION OF TERMS

Maximum off-center overhang distance:

The maximum distance to the "maximum off-center load" or the maximum length of tooling that should be attached to the tool plate. This distance is measured as shown below.

Maximum off-center load:

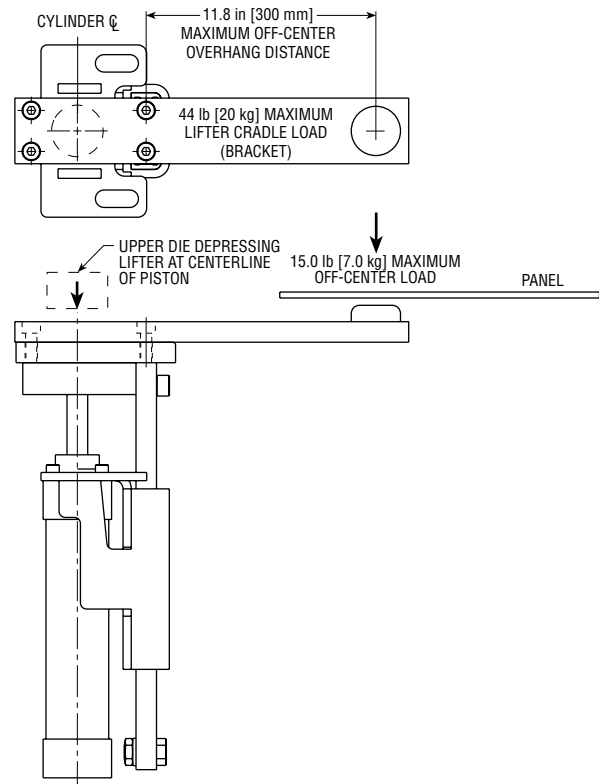
The maximum load of panel and cradle (tooling) that is not balanced.

Maximum lifter cradle assembly load:

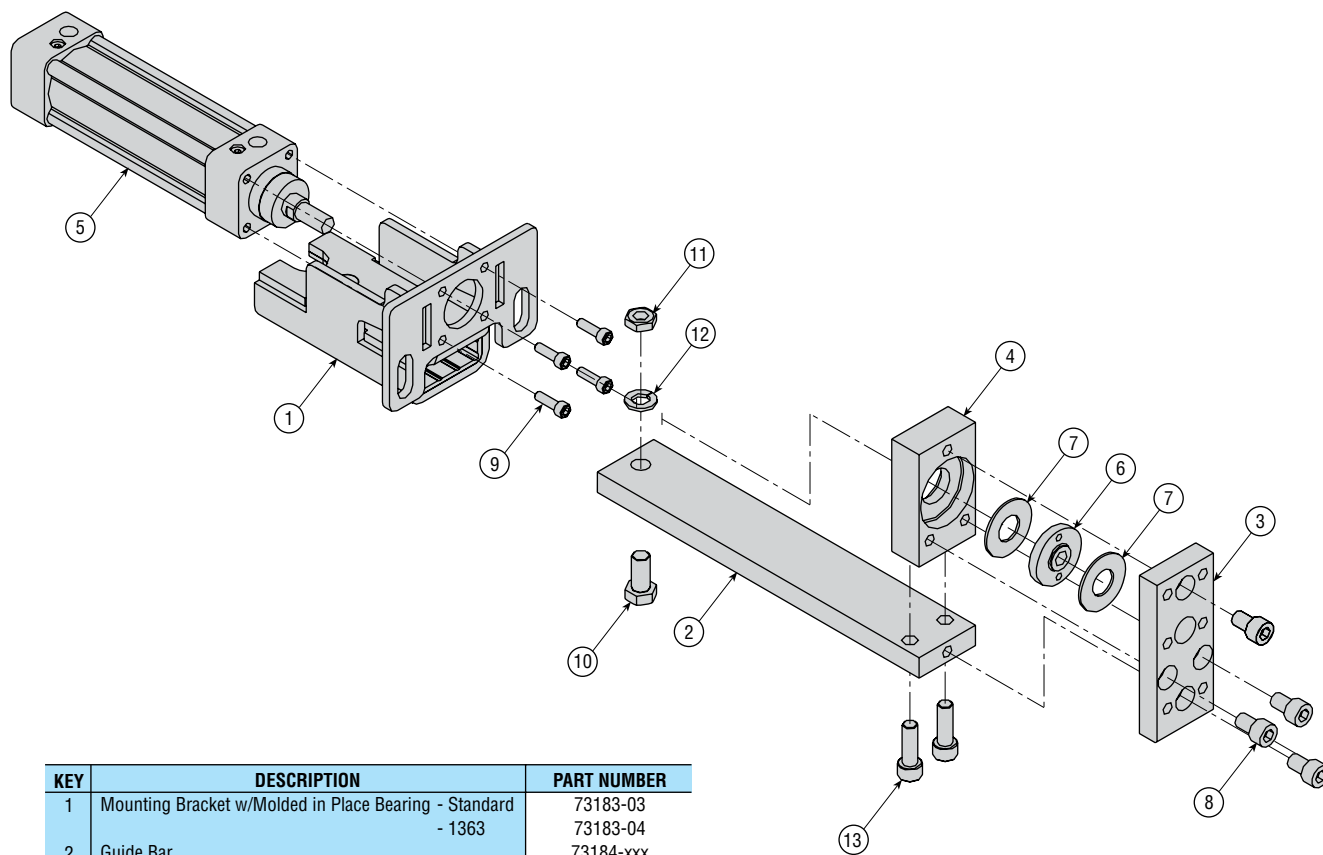
The maximum load of panel and cradle (tooling) that can be attached.

When designing the cradle or tooling, keep it short, light, and as balanced as possible. If the press is used to drive the Series PLL Lifter down, its force should be centered over the tool plate as shown. Speed controls are always recommended.

MAXIMUM OFF-CENTER OVERHANG DISTANCE	MAXIMUM OFF-CENTER LOAD	MAXIMUM LIFTER CRADLE ASSEMBLY LOAD
11.8 inches [300 mm]	15 lb [7 kg]	44 lb [20 kg]



PARTS LIST & REPAIR KITS: SERIES PLL LITE LIFTER



KEY	DESCRIPTION	PART NUMBER
1	Mounting Bracket w/Molded in Place Bearing - Standard - 1363	73183-03 73183-04
2	Guide Bar	73184-xxx
3	Tool Plate - Standard - 1363	73180-01-02 73180-01-01
4	Backing Plate	73188-02
5	40 mm Bore ISO/VDMA Cylinder	PLL4-5-xxx-H4
6	Cylinder Coupling	73189-01
7	Thrust Washer	73157
8	Socket Head Cap Screw (M10 x 16)	59104-162
9	Socket Head Cap Screw (M6 x 20)	59104-118
10	Hex Head Cap Screw (M12 x 25)	16281-087
11	Nut (M12)	3204-020
12	Lock Washer (M12)	61745-003
13	Socket Head Cap Screw (M10 x 30)	59104-027

-xxx = stroke (mm) - Available strokes: 50 mm (-050)
80 mm (-080)
100 mm (-100)
125 mm (-125)
160 mm (-160)
200 mm (-200)

ORDERING EXAMPLE:

Replacement Cylinder Only = PLL4-5x100-H4

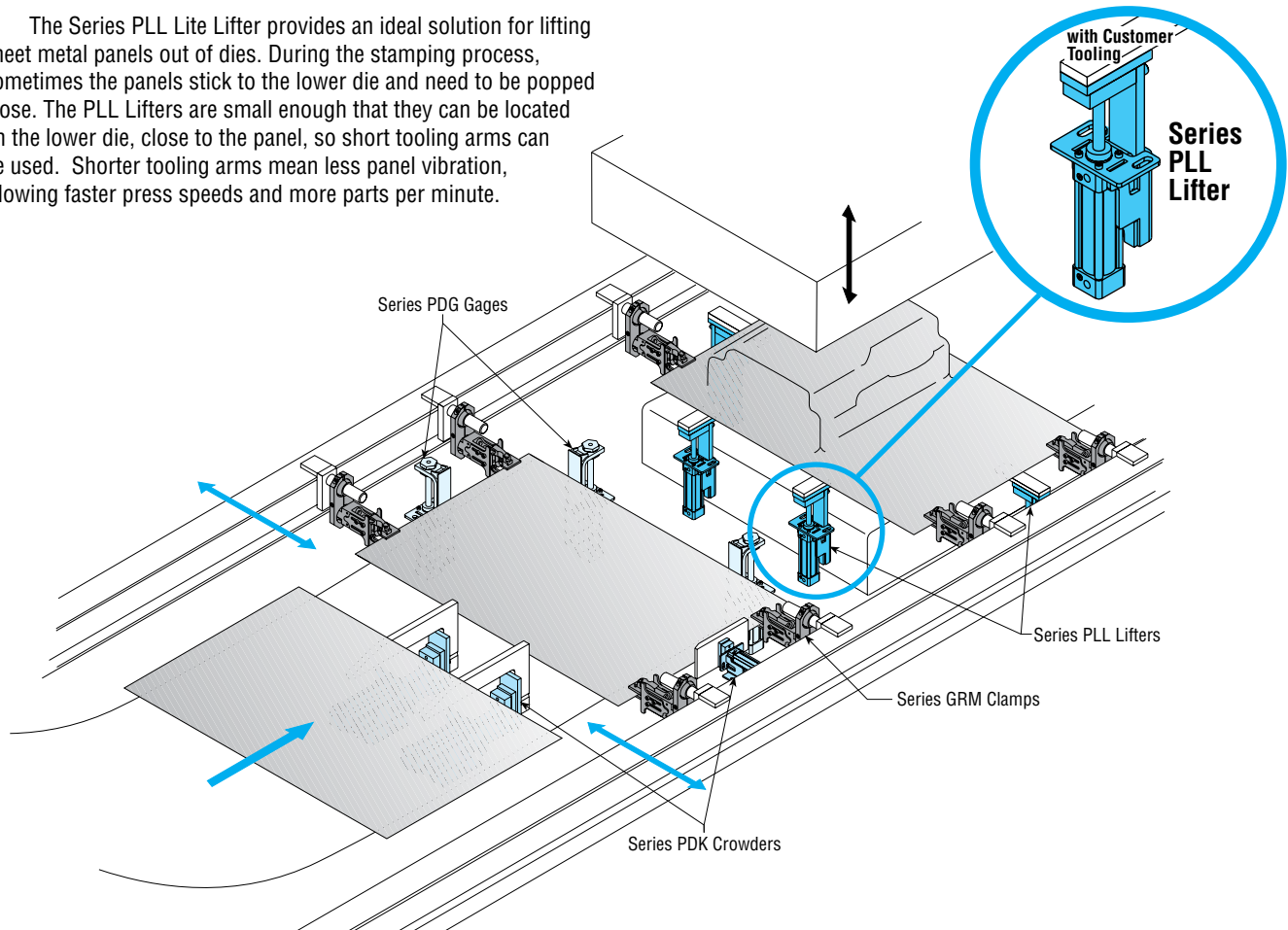
Replacement Lifter Without Cylinder = PLL4-5x100-H1

KITS

KIT DESCRIPTION	KIT NUMBER
Thrust Washer Kit	73169
Fastener Kit	73171-02

APPLICATION EXAMPLE: SERIES PLL LITE LIFTER

The Series PLL Lite Lifter provides an ideal solution for lifting sheet metal panels out of dies. During the stamping process, sometimes the panels stick to the lower die and need to be popped loose. The PLL Lifters are small enough that they can be located on the lower die, close to the panel, so short tooling arms can be used. Shorter tooling arms mean less panel vibration, allowing faster press speeds and more parts per minute.



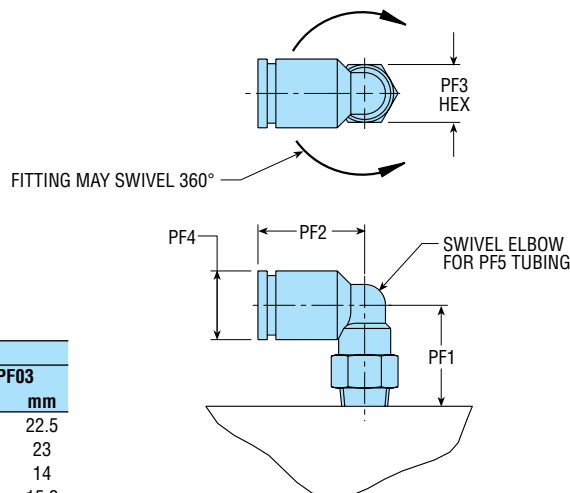
OPTIONS: SERIES PDG, PDK, & PLL

PF01 PORT FITTING - SWIVEL ELBOWS FOR 1/4" TUBING

PF02 PORT FITTING - SWIVEL ELBOWS FOR 3/8" TUBING

PF03 PORT FITTING - SWIVEL ELBOWS FOR 8 mm TUBING

Both fittings insert into the G 1/4 ports in the cylinder. Both fittings swivel 360 degrees. The use of PF02 and PF03 port fittings may require external flow controls.



TO ORDER FITTING SEPARATELY:

OPTION	FITTING PART NUMBER
PF01	62178-008
PF02	62178-010
PF03	71121-005

LETTER	PORT FITTING OPTION					
	PF01	PF02	PF03			
DIM	in	mm	in	mm	in	mm
PF1	.63	16	.77	19	.89	22.5
PF2	.89	22.5	1.1	28	.91	23
PF3	.39	10	.55	14	.55	14
PF4	.46	11.7	.64	16.3	.64	15.2
PF5	1/4	—	3/8	—	—	8

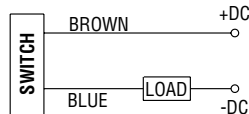
OPTIONS: SERIES PDG, PDK, & PLL

SW71
**ONE REED SWITCH
INSTALLED**
SW72
**TWO REED SWITCHES
INSTALLED**

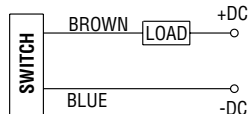
KIT NO.	DESCRIPTION
73198-01	NPN (Sink) or PNP (Source), 5-240V AC/DC, Quick Disconnect

SPECIFICATIONS	73166-01
ACTUATED BY	Moving Magnet
POWER CAPACITY	10 W Max.
OUTPUT STATE	Normally Open
OPERATING PRINCIPLE	Magnetic Reed
OUTPUT TYPE	SPST Contact Closure
OPERATING VOLTAGE	5 - 240V AC/DC
CURRENT RATING (RES.)	100mA Max.
BURDEN CURRENT	—
VOLTAGE DROP	2.5 V Max.
CIRCUIT PROTECTION	None
LED COLOR	Green
OPERATING TEMPERATURE	-10° to 70°C
ENVIRONMENTAL	IP67
CABLE TYPE	PVC

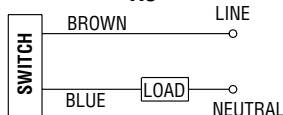
DC PNP (SOURCING)



DC NPN (SINKING)



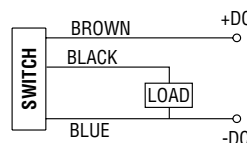
AC


SW73
**ONE HALL EFFECT SWITCH
(PNP) INSTALLED**
SW74
**TWO HALL EFFECT SWITCHES
(PNP) INSTALLED**
SW75
**ONE HALL EFFECT SWITCH
(NPN) INSTALLED**
SW76
**TWO HALL EFFECT SWITCHES
(NPN) INSTALLED**

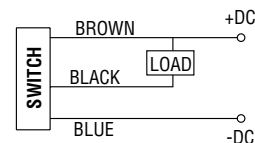
KIT NO.	DESCRIPTION
73198-02	Solid State PNP (Source) 5 - 30 DC, Quick Disconnect
73198-03	Solid State NPN (Sink) 5 - 30 DC, Quick Disconnect

SPECIFICATIONS	73168-02	73168-03
ACTUATED BY	Moving Magnet	
POWER CAPACITY	6 W Max.	
OUTPUT STATE	Normally Open	
OPERATING PRINCIPLE	Magnetic Hall Effect	
OUTPUT TYPE	Solid State PNP	Solid State NPN
OPERATING VOLTAGE	5 - 30V DC	
CURRENT RATING (RES.)	200mA Max.	
BURDEN CURRENT	13mA Max. @24 VDC	20mA Max. @24VDC
VOLTAGE DROP	.5 V Max.	
CIRCUIT PROTECTION	Power Source Reverse, Surge Suppression	
LED COLOR	Red	Green
OPERATING TEMPERATURE	-10° to 70°C	
ENVIRONMENTAL	IP67	
CABLE TYPE	PVC	

DC PNP (SOURCING)



DC NPN (SINKING)



Switches and switch brackets are installed on the cylinder as shown with SWx options. Replacement switches and switch brackets can be ordered. A switch bracket kit contains one switch bracket. A switch kit contains one switch.

DESCRIPTION	KIT NO.
REED SWITCH	73198-01
HALL EFFECT SWITCH (PNP)	73198-02
HALL EFFECT SWITCH (NPN)	73198-03
SWITCH BRACKET	73167

NOTES:

- 1) ALL DIMENSIONS ARE REFERENCE ONLY UNLESS SPECIFICALLY TOLERANCED
- 2) ONLY ONE SWITCH AND BRACKET ASSEMBLY SHOWN ON GAGE FOR CLARITY PURPOSES.

