



E-Flo[®] SP

ELECTRIC PUMPS + SUPPLY SYSTEMS
FOR SEALANTS AND ADHESIVES



PROVEN QUALITY. LEADING TECHNOLOGY.

E-Flo SP Electric Pump + Supply Systems



For industrial sealant and adhesive applications, Graco Electric Pumps and Supply Systems improve process performance, prevent downtime, reduce maintenance costs and increase electrical efficiency. E-Flo SP electric supply pumps are powered by an electric driver which provides real-time, integrated, closed-loop flow control. Trials have proven that the Graco solution provides superior performance and efficiency when compared to pneumatic supply pumps in constant pressure systems.

The Graco E-Flo SP enables the evolution of control strategies from constant-pressure to variable-flow. This revolutionary electric supply pump technology can be coupled with our Precision Continuous Flow (PCF) to provide real-time, closed-loop flow control.

Save Energy

More efficient than pneumatic, constant pressure systems

Prevent Downtime

The E-Flo SP lets users know how much work has been done by the pump, preventing unplanned maintenance

Lower Maintenance Costs

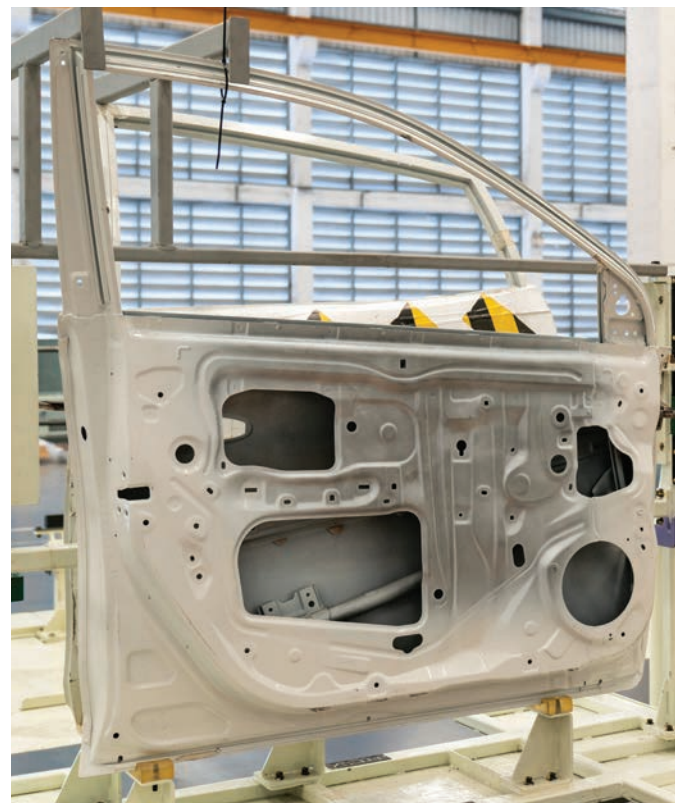
Coordinate multiple pump loads to evenly distribute load and reduce wear

Improve Quality

Smooth, rapid changeovers and consistent flow

Improve Work Environment

Quiet electric motor



Improve Your Productivity + Throughput

Energy Efficiency

The E-Flo SP provides the ability to impact process performance through a tighter control of the pump pressure and material flow rate. With real-time flow control strategies, systems can be designed and controlled to deliver only the energy that is required for the application process.

In addition to drastically increasing efficiency, these advanced control strategies also optimize process performance, reduce system downtime, and decrease total operating costs.

Quiet Electric Motor

- Reduced noise levels

High Power Electric Drive

- High Cycle Rate
- Improved Control
- No Icing

Easy to Maintain

- Improved serviceability with fewer parts, faster repairs, and lower ownership costs

Elite Construction

For systems that need to supply highly abrasive thermal interface materials (TIMs), silicones, urethanes, and epoxies, E-Flo SP configuration options include pumps and lowers with Elite construction.

- With wear-resistant seals and surfaces, Elite Check-Mate Pumps can last 170 times longer than standard equipment.*
- Elite Check-Mate Pumps with 100 cc lowers are proven to deliver 51,000 gallons (194,000 liters) of highly abrasive material across more than 1 million cycles.

*Data verified when pumping representative thermal interface material (TIM) in Graco test environment



Improved Control

- Accurately control system pressure and flow rate
- Integrate with PLC and robot controllers
- Local or remote commissioning, control and monitoring

Proven Pump Technology

- Available with Check-Mate® or Dura-Flo® lowers
- Volumes from 100 – 500 cc
- Delivers fluid pressures up to 6000 psi
- Available as stand-alone pump in 20L, 30L, 60L or 200L Supply System (RAM) or 300 Gallon or 1000L UniDrum



ELECTRIC PUMPS



E-Flo SP Electric Pump Ordering Information

Pump Style		Pump Type		Pump Size		Pump Material		Pump Material		Interface and Power Options				
E	Electric Pump	C	Check-Mate	100	100cc Check-Mate	C	Carbon Steel	S	SevereDuty	1	None	240 VAC		
				200	200cc Check-Mate					S	Stainless Steel	M	MaxLife	2
				250	250cc Check-Mate			E	Elite					
				500	500cc Check-Mate									
				D	Dura-Flo	115	115cc Dura-Flo	C	Carbon Steel				S	SevereDuty
						145	145cc Dura-Flo	C	Carbon Steel				S	SevereDuty
						180	180cc Dura-Flo	S	Stainless Steel					
						220	220cc Dura-Flo							
						290	290cc Dura-Flo							
						430	430cc Dura-Flo							
						430	430cc Dura-Flo			S	Stainless Steel	M	MaxLife	



E-Flo SP Electric Pump Technical Specifications

	US	Metric
Driver Thrust	4,840 lbs	21.5 kN, 2.2 kg
Stroke Length	4.75 in.	120.7 mm
Maximum fluid operating temperature	180° F	82.3° C
Maximum driver cycle rate	25 cycles per minute	
Driver line voltage rating	200-240 VAC, single phase, 50/60 Hz Transformer option available (400-480 VAC)	
Driver peak input amperage	20 A per phase @ full load*	
Input current	20 A maximum	
Fluid Outlet Size - all pump materials		
Check-Mate 100, 200, 250	1 in. NPT, female	
Check-Mate 500	1-1/2 in. NPT, female	
Dura-Flo 115, 145, 180, 220, 290	1 in. NPT, female	
Dura-Flo 430	1-1/2 in. NPT, female	

* Full load amps with all devices operating at maximum capabilities.

System Pressure

Name	Lower Size	Pump Working (Stall) Pressure			Max Dynamic (Run) Pressure		
		psi	bar	MPa	psi	bar	MPa
Check-Mate	100CS/CM/SS/SM/E	6000	414	41.4	6000	414	41.4
Check-Mate	200CS/CM/SS/SM/E	4200	290	29.0	3905	269	26.9
Check-Mate	250CS/CM/SS/SM	3400	234	23.4	2,122	215	21.5
Check-Mate	500CS/CM/SS/SM	1600	110	11.0	1487	103	10.3
Dura-Flow	145SS	5600	386	38.6	5204	359	35.9
Dura-Flow	180SS	4500	310	31.0	4164	287	28.7
Dura-Flow	220SS	3700	255	25.5	3470	239	23.9
Dura-Flow	290SS	2800	193	19.3	2602	179	17.9
Dura-Flow	430CS/SS/SM	1900	131	13.1	1735	120	12.0
Dura-Flow	115CS	6000	414	41.4	6000	414	41.4
Dura-Flow	145CS	5600	386	38.6	5204	359	35.9
Dura-Flow	180CS	4500	310	31.0	4164	287	28.7
Dura-Flow	220CS	3700	255	25.5	3470	239	23.9
Dura-Flow	290CS	2800	193	19.3	2602	179	17.9

Flow Rate Table

Name	Lower Size	Flow Rate (cc/min)	Flow Rate (gpm)	Outlet Fitting Size
Check-Mate	100CS/CM/SS/SM/E	2500	0.66	1 in. NPT female
Check-Mate	200CS/CM/SS/SM/E	5000	1.32	1 in. NPT female
Check-Mate	250CS/CM/SS/SM	6250	1.65	1 in. NPT female
Check-Mate	500CS/CM/SS/SM	12500	3.30	1-1/2 in. NPT female
Dura-Flow	145SS	3625	0.96	1 in. NPT female
Dura-Flow	180SS	4500	1.19	1 in. NPT female
Dura-Flow	220SS	5500	1.45	1 in. NPT female
Dura-Flow	290SS	7250	1.92	1 in. NPT female
Dura-Flow	430CS/SS/SM	10750	2.84	1-1/2 in. NPT female
Dura-Flow	115CS	2875	0.76	1 in. NPT female
Dura-Flow	145CS	3625	0.96	1 in. NPT female
Dura-Flow	180CS	4500	1.19	1 in. NPT female
Dura-Flow	220CS	5500	1.45	1 in. NPT female
Dura-Flow	290CS	7250	1.92	1 in. NPT female

SUPPLY SYSTEMS



E-Flo SP Supply System Ordering Information

Supply System Style		Pump Type		Ram Size		Platen and Seal Options		Interface and Power Options		
EM	Electric Supply System	C1	Check-Mate 100cc, CS	1	D60	1	No Platen	1	None	240 VAC
		C2	Check-Mate 100cc, CM	2	D200	2	20l (5-gal), F, SW, CS, Nitrile	2	None	480 VAC
		C3	Check-Mate 100cc, SS	3	D200s	3	20l (5-gal), F, SW, CS, Polyurethane	3	ADM	240 VAC
		C4	Check-Mate 100cc, SM			4	20l (5-gal), F, DW, CS, Nitrile	4	ADM	480 VAC
		C5	Check-Mate 200cc, CS			5	20l (5-gal), F, DW, CS, Polyurethane			
		C6	Check-Mate 200cc, CM			6	20l (5-gal), F, SW, SS, PTFE Coated			
		C7	Check-Mate 200cc, SS			7	200l (55-gal), DR, PTFE Coated AL, EPDM			
		C8	Check-Mate 200cc, SM			8	200l (55-gal), DR, AL, EPDM			
		C9	Check-Mate 250cc, CS			9	200l (55-gal), DR, AL, Neoprene			
		CA	Check-Mate 250cc, CM			A	200l (55-gal), DR, AL, EPDM Hose			
		CB	Check-Mate 250cc, SS							
		CC	Check-Mate 250cc, SM							
		CD	Check-Mate 500cc, CS							
		CE	Check-Mate 500cc, CM							
		CF	Check-Mate 500cc, SS							
		CG	Check-Mate 500cc, SM							
		CJ	Check-Mate 200 cc, SS, Elite							
		CH	Check-Mate 100 cc, SS, Elite							
		D1	Dura-Flo 115cc, CS							
		D2	Dura-Flo 145cc, CS							
		D3	Dura-Flo 145cc, SS							
		D4	Dura-Flo 180cc, CS							
		D5	Dura-Flo 180cc, SS							
		D6	Dura-Flo 220cc, CS							
		D7	Dura-Flo 220cc, SS							
		D8	Dura-Flo 290cc, CS							
		D9	Dura-Flo 290cc, SS							
		DA	Dura-Flo 430cc, CS							
		DB	Dura-Flo 430cc, SS							
		DC	Dura-Flo 430cc, SM							



Not all supply system configurations are listed. Please contact your Graco representative for a comprehensive list of available options.

E-Flo SP Supply System Technical Specifications

	US	Metric
Driver Thrust	4,840 lbs	21.5 kN, 2.2 kg
Stroke Length	4.75 in.	120.7 mm
Maximum fluid operating temperature	180° F	82.3° C
Maximum driver cycle rate	25 cycles per minute	
Driver line voltage rating	200-240 VAC, single phase, 50/60 Hz	
Driver peak input amperage	20 A per phase @ full load*	
Air inlet size (supply system)	3/4 npt(f)	
Ambient operating temperature range (supply system)	32-120°F	0-49°C
Fluid Outlet Size - all pump materials		
Check-Mate 100, 200, 250	1 in. NPT, female	
Check-Mate 500	1-1/2 in. NPT, female	
Dura-Flo 115, 145, 180, 220, 290	1 in. NPT, female	
Dura-Flo 430	1-1/2 in. NPT, female	

* Full load amps with all devices operating at maximum capabilities.

System Pressure

Name	Lower Size	Pump Working (Stall) Pressure			Max Dynamic (Run) Pressure		
		psi	bar	MPa	psi	bar	MPa
Check-Mate	100CS/CM/SS/SM	6000	414	41.4	6000	414	41.4
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Check-Mate	250CS/CM/SS/SM	3400	234	23.4	3,122	215	21.5
Check-Mate	500CS/CM/SS/SM	1600	110	11.0	1487	103	10.3
Dura-Flo	145SS	5600	386	38.6	5204	359	35.9
Dura-Flo	180SS	4500	310	31.0	4164	287	28.7
Dura-Flo	220SS	3700	255	25.5	3470	239	23.9
Dura-Flo	290SS	2800	193	19.3	2602	179	17.9
Dura-Flo	430CS/SS/SM	1900	131	13.1	1735	120	12.0
Dura-Flo	115CS	6000	414	41.4	6000	414	41.4
Dura-Flo	145CS	5600	386	38.6	5204	359	35.9
Dura-Flo	180CS	4500	310	31.0	4164	287	28.7
Dura-Flo	220CS	3700	255	25.5	3472	239	23.9
Dura-Flo	290CS	2800	193	19.3	2602	179	17.9

Flow Rate Table

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Check-Mate	250CS/CM/SS/SM	6250	1.65	1 in. NPT female
Check-Mate	500CS/CM/SS/SM	12500	3.30	1-1/2 in. NPT female
Dura-Flo	145SS	3625	0.96	1 in. NPT female
Dura-Flo	180SS	4500	1.19	1 in. NPT female
Dura-Flo	220SS	5500	1.45	1 in. NPT female
Dura-Flo	290SS	7250	1.92	1 in. NPT female
Dura-Flo	430CS/SS/SM	10750	2.84	1-1/2 in. NPT female
Dura-Flo	115CS	2875	0.76	1 in. NPT female
Dura-Flo	145CS	3625	0.96	1 in. NPT female
Dura-Flo	180CS	4500	1.19	1 in. NPT female
Dura-Flo	220CS	5500	1.45	1 in. NPT female
Dura-Flo	290CS	7250	1.92	1 in. NPT female



TANDEM SYSTEMS

E-Flo SP Tandem System Ordering Information

1. Configure Supply Systems			
1. A	Supply System "A"		
	Select system A with an ADM		
1. B	Supply System "B"		
	Select system B without an ADM		
2. Tandem Connection Kit		Product Number	Quantity
	Select Tandem Connection Kit - 25E595 (Quantity 1)	25E595	1
3. Accessories			
3.A	Depressurization/Recirculation Kit	Product Number	Quantity
	For Carbon Steel Pump Lower	25E618	2
	For Stainless Steel Pump Lower	25E619	2
3. B	Fluid Filter Kit	25E620	1
3. C	Extension Cables for Fluid Filter Monitoring Pressure Transducers		
	1 meter	124943	2
	2 meters	122497	2
	3 meters	124409	2
	7.5 meters	17H363	2
	16 meters	17H364	2
3. D	Low Level Sensor Kit*	25E447	2
4. Hoses			
	For Check-Mate Pump Lower sizes of 100cc, 200cc, 250cc	Maximum 5,000 psi pressure rating	
	For Check-Mate Pump Lower size of 500cc	Maximum 2,000 psi pressure rating	
	For Dura-Flo Pump Lower sizes of 115cc, 145cc, 180cc, 200cc, 220cc, 290cc	Maximum 5,000 psi pressure rating	
	For Dura-Flo Pump Lower size of 430cc	Maximum 2,000 psi pressure rating	
Notes			
* Rams come with Empty Level Sensors already installed			



UNIDRUM SYSTEMS

E-Flo SP UniDrum Technical Specifications

	US	Metric
Driver Thrust	4,840 lbs	21.5 kN, 2.2 kg
Stroke Length	4.75 in.	120.7 mm
Maximum fluid operating temperature	180° F	82.3° C
Maximum driver cycle rate	25 cycles per minute	
Driver line voltage rating	240 V, 400 VY, 480 V, 3-phase, 50/60 Hz	
Driver peak input amperage	20 A per phase @ full load	
Full load amperage	240 V	20 A
	400 V	35 A
	480 V	10 A
Input current	20 A maximum	
Fluid Outlet Size - all pump materials		
Dura-Flo 290	1 in. NPT, female	
Dura-Flo 430	1-1/2 in. NPT, female	

E-Flo SP UniDrum Ordering Information

1000 Liter Unit

Part Number	Material	Pump Size	Pump Type	Voltage	Left/Right Hand Door
26D395	Carbon Steel	290cc	CS/Severe Duty	230V	Left
26D396		290cc	CS/Severe Duty	400V/Y	Left
26D397		290cc	CS/Severe Duty	480V	Left
26D392		430cc	CS/Severe Duty	230V	Left
26D393		430cc	CS/Severe Duty	400V/Y	Left
26D394		430cc	CS/Severe Duty	480V	Left
26D398		430cc	SS/Max Life	230V	Left
26D399		430cc	SS/Max Life	400V/Y	Left
26D400		430cc	SS/Max Life	480V	Left
26D416		430cc	CS/Severe Duty	400V/Y	Left
26D401	Stainless Steel	430cc	SS/Max Life	230V	Left
26D402		430cc	SS/Max Life	400V/Y	Left
26D403		430cc	SS/Max Life	480V	Left
26D407	Carbon Steel	290cc	CS/Severe Duty	230V	Right
26D408		290cc	CS/Severe Duty	400V/Y	Right
26D409		290cc	CS/Severe Duty	480V	Right
26D404		430cc	CS/Severe Duty	230V	Right
26D405		430cc	CS/Severe Duty	400V/Y	Right
26D406		430cc	CS/Severe Duty	480V	Right
26D410		430cc	SS/Max Life	230V	Right
26D411		430cc	SS/Max Life	400V/Y	Right
26D412		430cc	SS/Max Life	480V	Right
26D417		430cc	CS/Severe Duty	400V/Y	Right
26D413	Stainless Steel	430cc	SS/Max Life	230V	Right
26D414		430cc	SS/Max Life	400V/Y	Right
26D415		430cc	SS/Max Life	480V	Right

E-Flo SP UniDrum Ordering Information

300 Gallon Unit

Part Number	Material	Pump Size	Pump Type	Voltage	Left/Right Hand Door	
26D371	Carbon Steel	290cc	CS/Severe Duty	230V	Left	
26D372		290cc	CS/Severe Duty	400V/Y	Left	
26D373		290cc	CS/Severe Duty	480V	Left	
26D368		430cc	CS/Severe Duty	230V	Left	
26D369		430cc	CS/Severe Duty	400V/Y	Left	
26D370		430cc	CS/Severe Duty	480V	Left	
26D374		430cc	SS/Max Life	230V	Left	
26D375		430cc	SS/Max Life	400V/Y	Left	
26D376		430cc	SS/Max Life	480V	Left	
26D377		Stainless Steel	430cc	SS/Max Life	230V	Left
26D378			430cc	SS/Max Life	400V/Y	Left
26D379	430cc		SS/Max Life	480V	Left	
26D383	Carbon Steel	290cc	CS/Severe Duty	230V	Right	
26D384		290cc	CS/Severe Duty	400V/Y	Right	
26D385		290cc	CS/Severe Duty	480V	Right	
26D380		430cc	CS/Severe Duty	230V	Right	
26D381		430cc	CS/Severe Duty	400V/Y	Right	
26D382		430cc	CS/Severe Duty	480V	Right	
26D386		430cc	SS/Max Life	230V	Right	
26D387		430cc	SS/Max Life	400V/Y	Right	
26D388		430cc	SS/Max Life	480V	Right	
26D389		Stainless Steel	430cc	SS/Max Life	230V	Right
26D390	430cc		SS/Max Life	400V/Y	Right	
26D391	430cc		SS/Max Life	480V	Right	

Accessories

26D318	Kit, UniDrum, Tandem, Cables
26D425**	Kit, ADM, Light Tower, UniDrum
26D426	Kit, Communications Gateway Module, UniDrum, Ethernet IP
26D427	Kit, Communications Gateway Module, UniDrum, DeviceNet
26D428	Kit, Communications Gateway Module, UniDrum, ProfiNet
26D429	Kit, Communications Gateway Module, UniDrum, ProfiBus

**You must order an ADM/Light Tower kit for one single unit, or one tandem pair system. Only one ADM/Light Tower kit is required for a tandem system.



Graco has you covered

Unmatched Quality.

Our focus on continued innovation keeps Graco Fluid Automation at the forefront of fluid handling technology. We typically reinvest three times the industry average into research and development. Our mission is to provide customers with products that result in the **lowest total cost of ownership** while maximizing product quality and business success.

Global Presence.

With facilities located in Europe, Asia Pacific and the United States, Graco provides a personalized, **end-to-end partnership experience**. Our engineers will lead the solution planning, testing and refining of your solution in our regional labs to ultimately overseeing the product installation process.

Global Support.

After installation, **in-person support** will be available from our worldwide distribution network of trained and certified distributors who offer relevant experience, product knowledge and responsive service.

There is no better reassurance than Graco technology, product innovation and the people committed to helping you succeed all day, every day.

Contact us today!

Call **800-746-1334** to speak with a Graco representative, visit **www.graco.com** for more information.



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