

## E-FLO DCi™

Dual Control (DC) Electric Pumps with Intelligence (i) for Liquid Finishing Appilcations



## **BOOST CAPACITY AND CONNECTIVITY**

#### FACTORY PAINT CIRCULATION AND SUPPLY

E-Flo® DCi™ dual control (DC) electric pumps with intelligence (i) raise industry standards for:

- Proven Reliability and Simplicity
- Energy Savings and Low Operation Costs
- Integration Simplicity

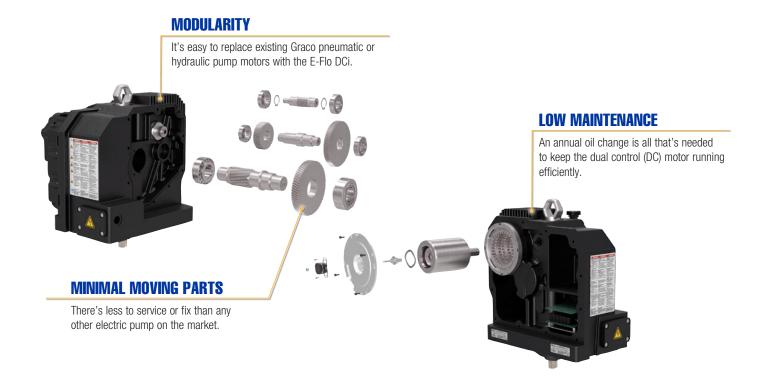
#### **DUAL CONTROL (DC)**

Dual control (DC) means that you can choose the operation mode that works best for your application.

- Flow mode drives set flow rates recommended for constant circulation.
- Pressure mode maintains a constant force that quickly changes speed. This ability to adjust according to demand is ideal for canister fill and non-circulated materials.

#### PROVEN RELIABILITY AND SIMPLICITY

Graco E-Flo DCi electric pumps exceed pneumatic and hydraulic pump performance in industrial paint mix rooms.



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#### **PUMP LOWERS**

Robust, modular lowers keep running 24 hours a day / 7 days a week / 365 days a year.

- Install the right size and construction for your liquid finishing application.
- Access and service parts without slowing down production.

#### **4-BALL CIRCULATION**

- 750 cc to 4000 cc configurations meet every flow application.
- Sealed 4-ball lower needs little to no maintenance.
- Durable ceramic Ultralife coatings extend pump life.

#### **2-BALL SUPPLY**

- 145 cc to 1000 cc Dura-Flo lower achieves 6:1 to 46:1 equivalent pressure ratios.
- Configure to up to 4500 psi.

**COMPACT FOOTPRINT:** Space-saving vertical design fits almost anywhere.



Large Sealed 4-Ball Circulation Pump



2-Ball Supply Pump



Mid-Range Sealed 4-Ball Circulation Pump



**View in 3D**Scan the QR code to see E-Flo DCi from all angles.

## ENERGY SAVINGS AND LOW OPERATION COSTS

## E-FLO DCI ELECTRIC MOTORS USE

- 80 percent less energy than similar sized pneumatic or air motors
- 30 percent less energy than comparable alternating current (AC) pumps

#### **ENERGY CONSUMPTION AND NOISE COMPARISON**

**ELECTRIC VS AIR-OPERATED** 

Dual control (DC) electric motors run 5 to 10 times more efficiently than air motors. This can lower your energy bills and improve compliance with environmental regulations.

Electric motors operate at least 20 decibels more quietly than similar-sized pneumatic motors. A quiet motor that exceeds Occupational Safety and Health Administration (OSHA) sound regulations means happier operators who produce better results.

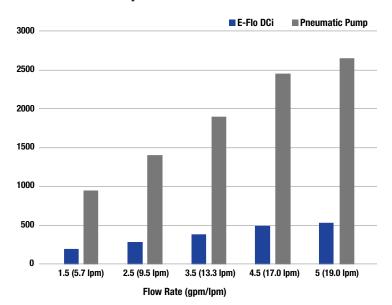


AMERICAN BUILT QUALITY —

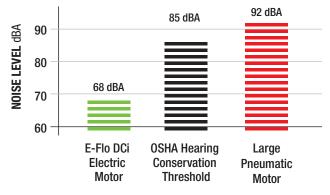
E-Flo DCi and DCi Link are designed and manufactured with globally sourced components that are assembled and factory-tested in the USA.



#### **Power Consumption**



#### Noise Comparison



Note: All pressures 100 psi

## NO AIR CONSUMPTION MEANS NO ICING

lcing is a problem inherent to all air motors. Since electric motors do not use compressed air, they do not ice.



lcing occurs when moisture in the air supply lines condenses and freezes on the pneumatic air controls. If the accumulated ice melts into material containers, it can cause contamination issues. If the melting ice drips on the factory floor, it becomes a safety hazard.



Icing never occurs on electric pumps like the E-Flo DCi. This means that paint mix room operators and maintenance staff do not need to worry about contamination or safety issues caused by air motor icing.

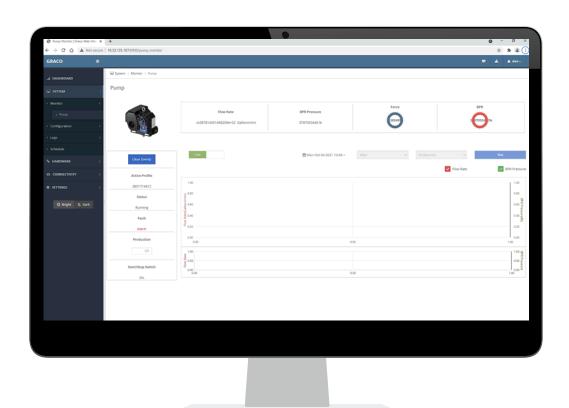
## INTEGRATION SIMPLICITY

Basic installation involves a control module and PLC (Programmable Logic Controller) connection. No VFD (Variable Frequency Drive) required.

#### **INTUITIVE WEB INTERFACE**

Ethernet access to web-based setup and programming enables real-time access to data. This can help you immediately address system issues and predict when motor or lower maintenance is needed.

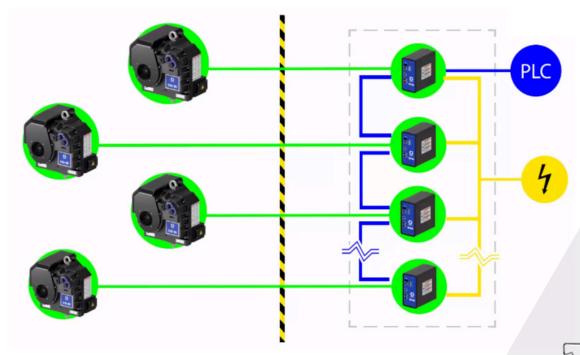
- Basic or advanced options size up or down, according to changing production demands and reporting needs.
- Access real-time data at any time from anywhere on your connected device.
- Web interface includes operations monitor, system configuration, process and alarm data.
- Easily track and report on pressure, flow, power consumption and events.
- Events include over/under pressure or flow. This can help identify and fix pump run-away conditions before they become a problem.





#### **NO EXTRA WIRING**

It shouldn't take a lot of hardware and wiring to make your factory paint mix room and paint circulation system ready for loT (Internet of Things) and Industry 4.0.

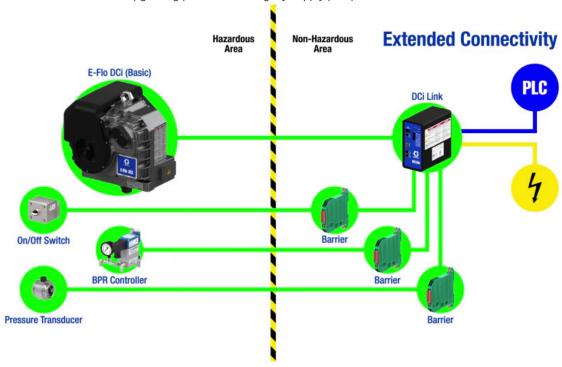


The DCi Link power line communication module requires minimal field wiring to connect to your plant's PLC. This optimizes communication and truly makes your pump intelligent.

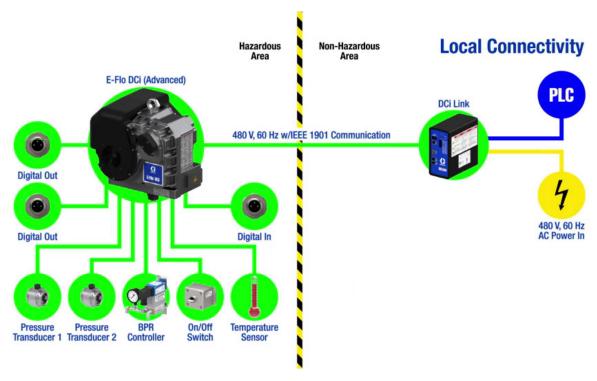


### **CHOOSE YOUR CONNECTIVITY**

**BASIC** installation involves a control module and programmable logic controller (PLC) connection. Wiring that extends outside of the paint mix room works well for upgrading pneumatic or legacy supply pumps to electric.



**ADVANCED** installation integrates intrinsically safe input/output (I/O) within the paint mix room. Wiring that connects directly sets up new or upgraded systems for success. Add more efficiency with Intelligent Paint Kitchen capabilities.



# **CIRCULATION PUMPS**

## **CHOOSE THE RIGHT PUMP FOR YOU!**

#### **HOW TO SELECT YOUR E-FLO DCI**

For more detailed information, reference manuals 3A8352, 3A7828, 3A7826 and 3A8471.

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E D	0 1011		Etru Et 11	0: II D: II
First Digit	Second Digit	Third and Fourth Digit	Fifth Digit	Sixth Digit
Y = Intelligent	B = Basic 480V	90 = 3 HP 750 cc	4 = Sealed Ultralife	0 = No Stand
	A = Advanced 480V	62 = 3 HP 1000 cc	8 = Sealed with Chrome	1 = Stand
		45 = 3 HP 1500 cc	9 = Sealed with SiNi	
		35 = 3 HP 2000 cc		
		28 = 3 HP 2500 cc		
		23 = 3 HP 3000 cc		
		17 = 3 HP 4000 cc		
		53 = 5 HP 2500 cc		
		44 = 5 HP 3000 cc		
		33 = 5 HP 4000 cc		

		750	1000	1500	2000	2500	3000	4000						
	Maximum Pressure 3 HP (bar)	900 (62.1)	600 (41.4)	450 (31.0)	350 (24.1)	280 (19.3)								
=	Maximum Pressure 5 HP (bar)					460 (31.8)	400 (27.6)	300 (20.7)						
2	Maximum Flow @ 20 cpm gpm (lpm)	4.0 (15)	5.25 (20)	8.0 (30)	10.6 (40)	13.2 (50)	15.9 (60)	21.1 (80)						
5	Volume per cycle (cc)	750	1000	1500	2000	2500	3000	4000						
5	Footprint Area in <sup>2</sup> (cm <sup>2</sup> )	338 (2180)												
Weight lb (kg) 228 (103) - 251 (114)														

PART NUMBER MATRIX

First Digit	Second and 3rd Digit	Fourth Digit	Fifth Digit	Sixth Digit
Y = Intelligent	46 = 3 HP 145 cc	B = Basic 480V	Dura-Flo	0 = No Stand
	40 = 3 HP 180 cc	A = Advanced 480V	A: 3UHMW / 2 PTFE Stainless	1 = Stand
	30 = 3 HP 220 cc		B: 3 UHMW/2 Tuffstack, Stainless	
	25 = 3 HP 290 cc		D: 3 PTFE / 2 Leather, Carbon Steel	
	15 = 3 HP 430 cc		E: 4 Leather /1 PTFE, Stainless	
	12 = 3 HP 580 cc		G: PTFE / PTFE, Stainless	
	06 = 3 HP 1000 cc		H: PTFE / Leather, Stainless	
	45 = 5 HP 290 cc		K: UHMW / Leather, Carbon Steel	
	32 = 5 HP 430 cc		Xtreme	
	23 = 5 HP 580 cc		1: 3 Xtreme / 2 Leather, Carbon Steel	
	10 = 5 HP 1000 cc			

SPECIFICATIONS

	145	180	220	290	430	580	1000					
Maximum Pressure 3 HP (bar)	4600 (317)	4000 (276)	3000 (207)	2500 (172)	1500 (103)	1200 (83)	600 (41)					
Maximum Pressure 5 HP (bar)				4500 (310)	3200 (221)	2300 (159)	1000 (69)					
Maximum Flow @ 20 cpm gpm (lpm)	0.77 (2.9)	0.95 (3.6)	1.2 (4.4)	1.5 (18)	2.3 (8.6)	3.1 (11.6)	5.3 (20)					
Volume per cycle (cc)	145	580	1000									
Footprint Area in <sup>2</sup> (cm <sup>2</sup> )	338 (2180)											
Weight lb (kg)	201 (91) - 223 (101)											

#### **ACCESSORIES**

25X675

DCi Link Communication Module

255143

**Direct Pump Mount** 

Wall Mount Bracket

253692 Floor Stand

Control Securing Kit

17W739 Active Surge Tank

		or Size & ontrols	Voltage			Pack	cings/Co	nstruc	tion					Lo	wer Si	ize		Mount		
Pressure Ratio	Motor Size	Basic Controls	380-480 VAC 3 Phase	A = 3UHMW / 2 PTFE Stainless	B = 3 UHMW/2 Tuffstack, Stainless	D = 3 PTFE / 2 Leather, Carbon Steel	E = 4 Leather /1 PTFE, Stainless	G = PTFE / PTFE, Stainless	H = PTFE / Leather, Stainless	K = UHMW / Leather, Carbon Steel	1 = 3 Xtreme / 2 Leather, Carbon Steel	145 CC	180 CC	220 CC	290 CC	425 CC	580 CC	1000 CC	No Stand	Stand
6:1	3 HP	•	•							•								•	Y06BK0	Y06BK1
6:1	3 HP	•	•					•										•	Y06BG0	Y06BG1
10:1	5 HP	•	•							•								•	Y10BK0	Y10BK1
12:1	3 HP	•	•			•											•		Y12BD0	Y12BD1
12:1	3 HP	•	•	•													•		Y12BA0	Y12BA1
15:1	3 HP	•	•			•										•			Y15BD0	Y15BD1
15:1	3 HP	•	•		•											•			Y15BE0	Y15BB1
23:1	5 HP	•	•			•											•		Y23BD0	Y23BD1
23:1	5 HP	•	•	•													•		Y23BA0	Y23BA1
25:1	3 HP	•	•								•				•				Y25B10	Y25B11
25:1	3 HP	•	•				•								•				Y25BE0	Y25BE1
30:1	3 HP	•	•								•			•					Y30B10	Y30B11
30:1	3 HP	•	•				•							•					Y30BE0	Y30BE1
31:1	2 HP	•	•								•	•							Y31B10	Y31B11
31:1	2 HP	•	•						•			•							Y31BH0	Y31BH1
32:1	5 HP	•	•			•										•			Y32BD0	Y32BD1
32:1	5 HP	•	•		•											•			Y32BB0	Y32BB1
40:1	3 HP	•	•				•						•						Y40BE0	Y40BE1
45:1	5 HP	•	•				•								•				Y45BE0	Y45BE1
46:1	3 HP	•	•						•			•							Y46BH0	Y46BH1

	or Size & ontrols	Voltage	Approvals	L	ower Typ	e/Fitting	s		Mount	t		Output per Cycle						
Motor Size	Basic Controls	380-480 VAC 3 Phase	ATEX / FM / IECEx	Sealed Stainless, Tri-Clamp, Ultralife	Sealed Stainless, Tri-Clamp Active Surge Tank	Sealed Stainless, Tri-Clamp Chrome	Sealed Stainless, Tri-Clamp, Ultralife, SiNi	No Stand	Stand	Wall Mount Bracket	750 cc	1000 cc	1500 cc	2000 cc	2500 cc	3000 cc	4000 cc	
3 HP	•	•	•	•				•			YB9040	YB6240	YB4540	YB3540	YB2840			
3 HP	•	•	•	•					•		YB9041	YB6241	YB4541	YB3541	YB2841			
3 HP	•	•	•			•		•			YB9080	YB6280	YB4580	YB3580	YB2880			
3 HP	•	•	•			•			•		YB9081	YB6281	YB4581	YB3581	YB2881			
3 HP	•	•	•				•	•			YB9090	YB6290	YB4590	YB3590	YB2890			
3 HP	•	•	•				•		•		YB9091	YB6291	YB4591	YB3591	YB2891			
5 HP	•	•	•	•				•							YB5340	YB4440	YB3340	
5 HP	•	•	•	•					•						YB5341	YB4441	YB3341	
5 HP	•	•	•			•		•							YB5380	YB4480	YB3380	
5 HP	•	•	•			•			•						YB5381	YB4481	YB3381	
5 HP	•	•	•				•	•							YB5390	YB4490	YB3390	
5 HP	•	•	•				•		•						YB5391	YB4491	YB3391	

		or Size & ontrols	Voltage			Pack	cings/Co	nstruc	tion					Lo	wer Si	ize			Mount		
Pressure Ratio	Motor Size	Basic Controls	380-480 VAC 3 Phase	A = 3UHMW / 2 PTFE Stainless	B = 3 UHMW/2 Tuffstack, Stainless	D = 3 PTFE / 2 Leather, Carbon Steel	E = 4 Leather /1 PTFE, Stainless	G = PTFE / PTFE, Stainless	H = PTFE / Leather, Stainless	K = UHMW / Leather, Carbon Steel	1 = 3 Xtreme / 2 Leather, Carbon Steel	145 CC	180 CC	220 CC	290 CC	425 CC	280 CC	1000 CC	No Stand	Stand	
6:1	3 HP	•	•							•								•	Y06AK0	Y06AK1	
6:1	3 HP	•	•					•										•	Y06AG0	Y06AG1	
10:1	5 HP	•	•							•								•	Y10AK0	Y10AK1	
12:1	3 HP	•	•			•											•		Y12AD0	Y12AD1	
12:1	3 HP	•	•	•													•		Y12AA0	Y12AA1	
15:1	3 HP	•	•			•										•			Y15AD0	Y15AD1	
15:1	3 HP	•	•		•											•			Y15AE0	Y15AB1	
23:1	5 HP	•	•			•											•		Y23AD0	Y23AD1	
23:1	5 HP	•	•	•													•		Y23AA0	Y23AA1	
25:1	3 HP	•	•								•				•				Y25A10	Y25A11	
25:1	3 HP	•	•				•								•				Y25AE0	Y25AE1	
30:1	3 HP	•	•								•			•					Y30A10	Y30A11	
30:1	3 HP	•	•				•							•					Y30AE0	Y30AE1	
31:1	2 HP	•	•								•	•							Y31A10	Y31A11	
31:1	2 HP	•	•						•			•							Y31AH0	Y31AH1	
32:1	5 HP	•	•			•										•			Y32AD0	Y32AD1	
32:1	5 HP	•	•		•											•			Y32AB0	Y32AB1	
40:1	3 HP	•	•				•						•						Y40AE0	Y40AE1	
45:1	5 HP	•	•				•								•				Y45AE0	Y45AE1	
46:1	3 HP	•	•						•			•							Y46AH0	Y46AH1	

	or Size & ontrols	Voltage	Approvals	L	ower Typ	e/Fitting	ıs		Mount	:		Output per Cycle						
Motor Size	Basic Controls	380-480 VAC 3 Phase	ATEX / FM / IECEx	Sealed Stainless, Tri-Clamp, Ultralife	Sealed Stainless, Tri-Clamp Active Surge Tank	Sealed Stainless, Tri-Clamp Chrome	Sealed Stainless, Tri-Clamp, Ultralife, SiNi	No Stand	Stand	Wall Mount Bracket	750 cc	1000 cc	1500 cc	2000 cc	2500 cc	3000 cc	4000 cc	
3 HP	•	•	•	•				•			YA9040	YA6240	YA4540	YA3540	YA2840			
3 HP	•	•	•	•					•		YA9041	YA6241	YA4541	YA3541	YA2841			
3 HP	•	•	•			•		•			YA9080	YA6280	YA4580	YA3580	YA2880			
3 HP	•	•	•			•			•		YA9081	YA6281	YA4581	YA3581	YA2881			
3 HP	•	•	•				•	•			YA9090	YA6290	YA4590	YA3590	YA2890			
3 HP	•	•	•				•		•		YA9091	YA6291	YA4591	YA3591	YA2891			
5 HP	•	•	•	•				٠							YA5340	YA4440	YA3340	
5 HP	•	•	•	•					•						YA5341	YA4441	YA3341	
5 HP	•	•	•			•		•							YA5380	YA4480	YA3380	
5 HP	•	•	•			•			•						YA5381	YA4481	YA3381	
5 HP	•	•	•				•	•							YA5390	YA4490	YA3390	
5 HP	•	•	•				•		•						YA5391	YA4491	YA3391	

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Call today for product information or to request a demonstration.

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