



# Circulation Pumps

High performance industrial pumps



PROVEN QUALITY. LEADING TECHNOLOGY.

# Minimise downtime & reduce costs

## With Graco's sealed 4-ball lower

Downtime is frustrating and costly. To help keep you up-and-running and keep expenses in check, Graco's sealed lower not only has longer maintenance cycles, but it is also easier, faster and cheaper to replace than an entire pump assembly. Because the lower is completely sealed, it can be used for every pumping application in your mix room, including catalysed coatings. Common components make it simpler to maintain your pump, and it reduces your inventory level of repair parts.

Furthermore our positive displacement piston pumps displace fluid in both directions of the stroke, providing low cycle rates and a high flow, ideal for applications using shear-sensitive materials.

### Avoid messy leaks

- A completely sealed fluid section
- Applicable for moisture sensitive materials

### Improved durability

- Longer maintenance intervals reduce costs
- Designed for abrasive materials

### UltraLife™ series ceramic coatings

- The coating is now standard on the rod & cylinder
- Resists today's harshest materials including water-borne ones

### An open wet cup version is also available

- Improved durability and includes Ultralife ceramic coating



### Added security

- The backup seal contains material within the pump in the case of a bellows leakage

### Upgrade easily

- Compatible with existing Bulldog, XL, NXT, President, Viscount, E-Flo and E-Flo DC motors

### Maintenance-free

- No TSL required



**NEW!**

### A large sealed 4-ball is available

- Horizontal checks
- Accessible pressure relief valves

# Minimise downtimes & reduce costs

## Which system is the right one for you?

No matter what your need, Graco has a pump for your circulation application. Whether it is electric, pneumatic or hydraulic, a Graco pump helps you get the job done right with superior results.

Furthermore, because our sealed 4-ball lower is compatible with most Graco motors, it is a great option for new or existing installations.

### Electric



E-FLO® DC

### Hydraulic



VISCOUNT®

### Pneumatic\*



PRESIDENT®



HIGH-FLO®



	E-flo DC	Viscount	President	High-Flo	Glutton	Endura-Flo
Proven technology	•	•	•	•	•	•
A space saving vertical design	•	•	•	•		
Low maintenance S4B	•	•	•	•		
Anti-icing	•	•		•	•	•
DataTrak™				•	•	•
Advanced display module	•					
Energy savings	•	•				
Low noise	•	•				
Integrated Paint Kitchen (IPK) ready	•			•	•	•
PLC integration	•					

# Electric piston pumps

## Make the switch to making savings

Get the benefits of a pneumatic motor with the energy efficiency of an electric drive unit!

Our E-Flo® DC (dual control) electric circulating pump has been found to be up to five times more efficient than similar sized pneumatic pumps – lowering your energy bills and saving you money. Quiet pumping technology means you get a better work environment and advanced features allow you to prevent costly material loss and reworking.



## Why choose E-Flo DC electric?

### Save energy

Up to 5 times more efficient than a pneumatic system

### Prevent material loss

Integrated runaway protection protects your pump from premature wear and prevents costly material loss

### Eliminate costly reworking

The electric motor eliminates icing – giving you smoother pump operation and a better finished product

### Improve quality

Dual Control (DC) technology gives you less pulsation and smooth, rapid changeovers – for better, more consistent finishes.

### Improve the work environment

A quiet electric motor

### Easy installation

It requires either 220 volt single phase or 380-480 volt 3-phase power. No VFD required.



**E-Flo DC**  
An output of up to 2500 cc/cycle



**Legacy E-Flo**  
An output of up to 4000 cc/cycle

# Electric piston pumps

## Achieve higher flow rates

We doubled our original 4-ball DC circulation pump technology to give you less pulsation, increased flow rates and less downtime.

Unlike competitive pumps that are linked and controlled together, Graco's lowers operate independently of each other. This allows the pump to adjust to varying pressure and flow rate demands thousands of times per second resulting in minimal pressure fluctuations.

Each pump can also run alone to keep production running if maintenance is required.



**E-Flo DC high flow rate**  
Output up to 5000 cc/cycle

## E-Flo DC supply pump

Our supply pump features an energy efficient electric motor that stalls under pressure and changes speeds to maintain a constant pressure. This 2-ball electric supply pump is ideal for your high pressure applications such as waterborne spraying or circulation of high-viscosity materials.

Reasons to buy the E-Flo DC supply pump:

- Efficiency: 5 times more efficient than an air motor
- Dual Control (DC) modes: Maintains either a constant pressure or a constant flow rate
- Local control: Easy to use control with two knobs
- Easy installation It requires either 220 volt single phase or 380-480 volt 3-phase power. No VFD required.
- Integrated runaway protection: Prevents material loss and premature wear on the pump
- Multiple sizes available: 290 cc, 220 cc, 180 cc, and 145 cc displacement lowers



**E-Flo DC supply**  
A maximum pressure of 3000 psi (206 bar)

# Boost your bottom line with energy savings and Advanced Pump Control

## An advanced motor with a control module

Efficient and smart, the E-Flo DC with the Advanced Control module gives you additional control of the pump performance and allows you to manage several pumps from a single module.

### Control module

- Integrate the pump easily into a PLC network for better visibility and control outside of the hazardous area
- Configure different operating profiles of the pump
- Up to two pressure transducers can be added for greater control
- Connect the pneumatic BPR controller to automate an “off-production” profile for even greater energy savings
- The password protects pump settings to protect against unauthorized access



### Simple to install

Basic installation requires only a single-phase 220 V, 50/60 Hz power or 3-phase 380 – 480 V 50/60 Hz power

**No VFDs required.**

### Basic motor

Operator-friendly control knobs have clear symbols making it easy to adjust pump settings. Gives you local control at the pump and runaway protection.



# Boost your bottom line with energy savings and Advanced Pump Control

## Save energy

### Five times more efficient

An electric motor means big savings when compared to similar-sized pneumatic motors – helping lower your energy bills and saving you money.

## Boost your profits

Integrated runaway protection protects your pump from premature wear and prevents costly material loss.

The electric motor eliminates icing – giving you smoother pump operation and a better finished product.

Use less energy and spend less on maintenance costs with the field-proven reliability of Graco's 2- and 4-ball pumps.

## Improve quality

The Advanced Control module allows you to easily integrate the pump into a PLC network for even greater control and visibility.

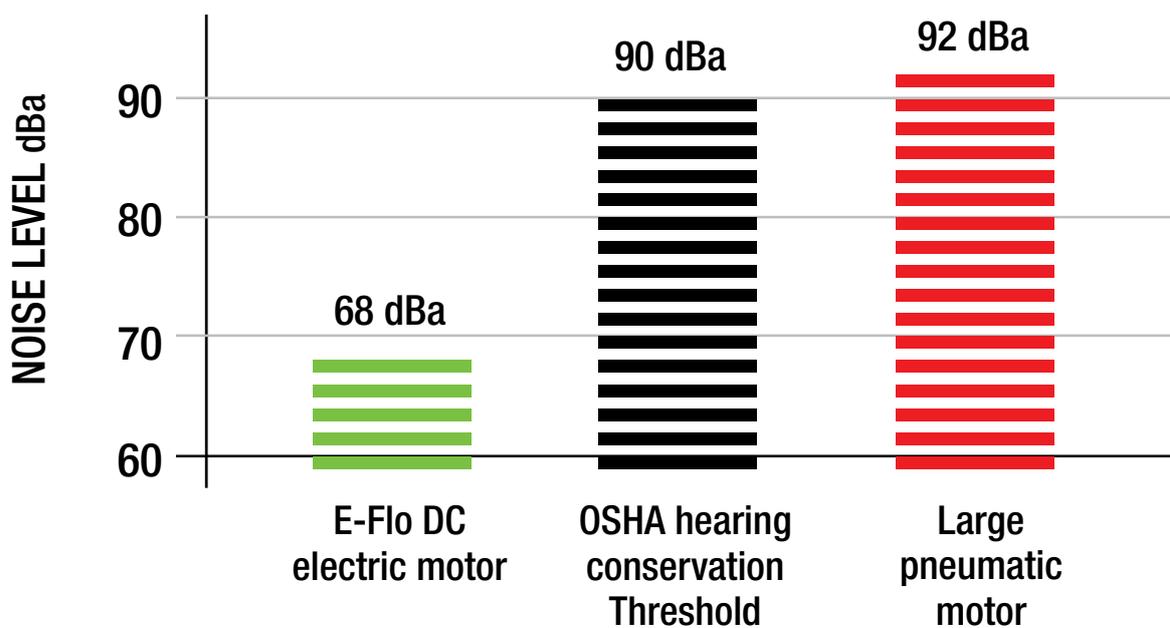
Dual Control (DC) technology gives you less pulsation and smooth, rapid changeovers – for better, more consistent finishes.

## Improve productivity

Electric pump functionality, with the simplicity of a pneumatic pump, means less time training.

Increased reliability means you will spend less time maintaining and more time up and running.

A quiet electric motor means happier operators and better results. Exceeds OSHA sound regulations and over 20 dbAs quieter compared to similar-sized pneumatic motors.



*Note: All pressures 100 psi*

# Boost your bottom line with energy savings and Advanced Pump Control

## Control module & cable

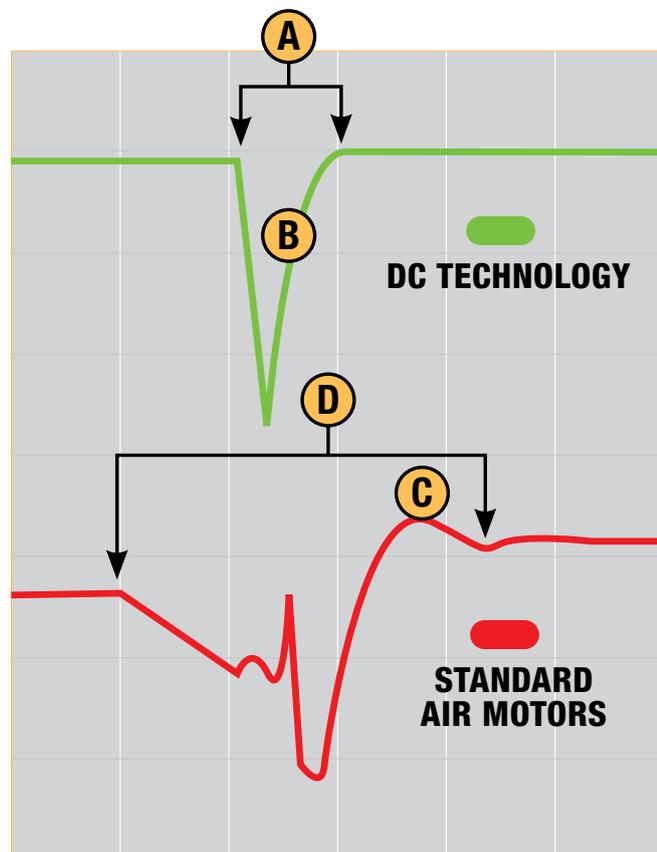
If a **Basic** motor control is desired, your pump selection is complete.

If an **Advanced** motor control is desired, a control module and CAN cable will be required. Determine the desired mounting location of the control module. The control module can be mounted directly on the pump or on a nearby wall. Select the appropriate CAN cable length from the table below.

High flow rate circulation pumps (2X) include the control module and the CAN cable.  
No additional equipment is required.

Part number	Description
24P822	Control module kit (240v)
17V232	Control module kit (480v)
16P911	1 m (3 ft) CAN cable
16P912	8 m (25 ft) CAN cable
25D600	Serial to fibre kit
16M173	30 m (100 ft) fibre cable
17B160	100 m (320 ft) (room) fibre cable

## Changeover comparison



- A** Less than 0.09 second changeover
- B** Quick changeover and recovery with less pulsation
- C** Pressure spike at changeover
- D** Longer changeover causing pulsation

# Pneumatic piston pumps

## Easy to install and maintain

Graco pneumatic pumps set the standard for long-lasting durability. These pumps are built to handle the toughest finishing applications, keep you up and running longer and give you outstanding performance! They are simple, reliable, and with a slow-moving reciprocating motion, do not damage the paint like centrifugal and other rotary pumping devices. They are also inherently safe for use at hazardous locations.



### Why choose a High-Flo pneumatic?

#### It saves time

Easy to install since most plants have air available, ready to use

#### Easy to maintain

Modular design for easier maintenance

#### Easy to use

Field-proven reliable equipment

#### Dependable

The rugged body armour will not rust or dent

#### Eliminates stalling

De-icing controls eliminate stalling

#### Safe for use at hazardous locations

No sources of electrical ignition

### DATATRAK

Efficient and smart, the E-Flo DC with the Advanced Control module gives you additional control of pump performance and allows you to manage several pumps from a single module.

- Runaway protection
- Pump diagnostics
- Tracks material usage



High-Flo®  
A variety of flow rates are available



# Pneumatic piston pumps

## Easy to install and maintain

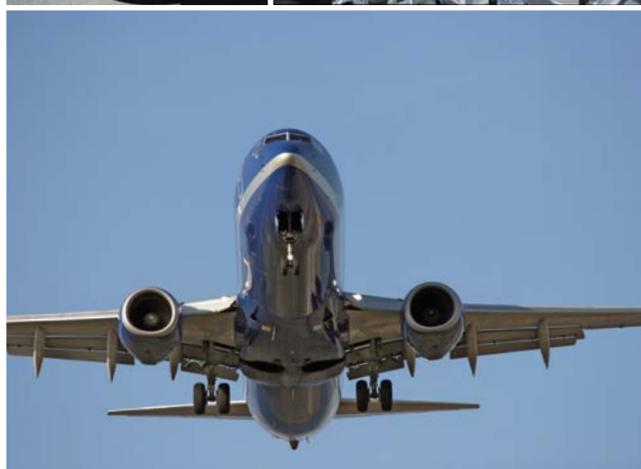
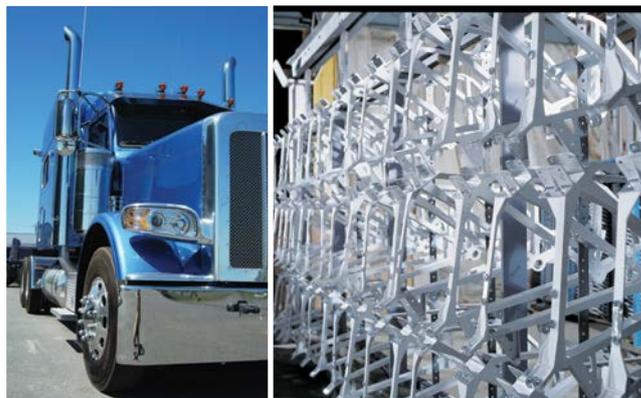
### Decades of proven reliability with the President

Graco's high volume President circulating pumps allow you to handle mid-range flow requirements while operating at low cycle rates. The pump lower requires fewer cycles per gallon and longer intervals between seal replacement.

- Excellent abrasion and corrosion resistance
- Stainless steel and carbon steel wetted parts for a wide range of fluids
- Large porting for excellent priming and handling of high viscosity fluids
- Low cost of ownership



President®  
Output up to 890 cc/cycle



#### Typical applications

- Paint circulation
- Fluid transfer and supply

#### Typical fluids handled

- Water-borne and solvent-borne paints
- Catalysed coatings
- Moisture-sensitive materials
- UV-cure coatings

# Endura-Flo™

## High pressure diaphragm pumps

Do not risk unscheduled downtime because of equipment failure. The simple design of Endura-Flo not only ensures long-lasting durability, but it also withstands runaway conditions better than other diaphragm pumps.

This easy-to-install pump offers low pulsation output and smooth changeover for excellent pressure characteristics. The simplified fluid path allows for quick colour changes, saving you time and money. Select either the Extended Pressure 4:1 models with the highest rated pressure in the industry or Extended Life with the fluid isolated air section of the 3:1 models.



### Why choose the Endura-Flo?

#### An improved design

The redesigned diaphragm lasts longer and can hold up better to extreme operating conditions

#### Easy maintenance

Easy access to critical components ensures fast online maintenance

#### Reliable

Superior durability when handling abrasive materials

#### It saves time

Minimal use of solvent to flush and a consistent start-up pressure make it ideal for multiple colour changes and piggable systems

#### Upgrade to DataTrak

DataTrak prevents runaway and tracks material usage



# Glutton™

## High pressure plunger pumps

When it comes to challenging applications, the Glutton is the go to pump. With it's bellows seal, Glutton keeps air and moisture out while managing abrasive, moisture sensitive and other materials that other pumps cannot.

The new Glutton air valve upgrades the platform to use less air, run quieter and deliver consistent results while using proven anti-icing technology.

### Why choose the Glutton?

#### An excellent performance

Easily manages any material but excels when installed in challenging applications

#### Dependable

Delivers consistent results over the long term

#### Easy to maintain

Meets tough use demands while keeping maintenance to a minimum

#### Extra control

DataTrak prevents runaway and track material use



# Hydraulic piston pumps

## A simple, proven design

Field proven, energy efficient 4-ball Viscount® piston pumps provide reliable, quiet, ice-free performance and are up to 4x more energy efficient than comparable compressed air systems.

Viscount motors have a long-life packing design and stainless steel wetted parts with neoprene packings for long-lasting durability. With two hydraulic motor types, Graco has the right size to meet your application needs.

### Why choose Viscount hydraulic?

#### Save energy

Up to 4x more efficient than pneumatics

#### Low maintenance costs

Operates in a closed system to prevent contamination

#### Quiet operation

Motors do not exhaust to atmosphere

#### High performance

A stronger performance pressure curve than pneumatics

#### Low investment costs

Greater flexibility with more reserve capacity than pneumatics

#### Space savings

Great for areas with limited floor space



**Viscount®**  
A variety of flow rates available

# Specifications

## E-Flo DC circulation pump specifications

Model	750	1000	1500	2000	2500	2000(x2)	3000(x2)	4000(x2)	5000(x2)
Output per cycle	750cc	1000cc	1500cc	2000cc	2500cc	2000cc	3000cc	4000cc	5000cc
Max working pressure 220V bar (psi)	19.7 (285)	1HP: 14.5 (210) 2HP: 27.6 (380)	20.6 (285)	14.5 (210)		27.6 (380)	20.6 (285)	14.5 (210)	
Max. working pressure 3-phase bar (psi)	24.5 (356)	1HP: 17.9 (260) 2HP: 32.8 (475)	24.5 (356)	17.9 (260)	14.5 (210)	32.8 (475)	24.5 (356)	17.9 (260)	14.5 (210)
Max flow @ 20 cpm lpm (gpm)	15 (4.00)	20 (5.25)	30 (8.00)	40 (10.50)	50 (13.2)	40 (10.50)	60 (15.90)	80 (21.10)	100 (26.4)

Max recommended continuous cycle rate (CPM)<sup>‡</sup> **Sealed 4-ball lower: 20** **Open/enclosed wet cup lower: 12**

## E-Flo pump specifications

Model	1500	2000	3000	4000
Output per cycle	1500 cc	2000 cc	3000 cc	4000 cc
Electric AC motor size	3 HP	5 HP	5 HP	5 HP
Maximum working pressure bar (psi)	29 (425)	32 (460)	23 (330)	17 (250)
Output at 20 CPM lpm (gpm)	31 (8.1)	45 (12)	61 (16.2)	85.5 (22.6)

Max recommended continuous cycle rate (CPM)<sup>‡</sup> **Sealed 4-ball lower: 20** **Open/enclosed wet cup lower: 12**

## Endura-Flo pump specifications

Model	150cc		350cc	
Maximum fluid working pressure	28 bar (400 psi)	300	28 bar (400 psi)	300
Maximum air input pressure	7 bar (100 psi)	7 bar (100 psi)	7 bar (100 psi)	7 bar (100 psi)
Ratio	4:1	3:1	4:1	3:1
Output at 20 CPM lpm (gpm)	9 (2.37)	9 (2.37)	21 (5.54)	21 (5.54)
Maximum recommended continuous cycle rate	20 cpm	20 cpm	20 cpm	20 cpm

## High-Flo pump specifications

Model	1.7:1	2:1	2.3:1	2.8:1	3:1	3.3:1	3.5:1	4:1	4.4:1	4.5:1	5.3:1
Pump ratio	1.7:1	2:1	2.3:1	2.8:1	3:1	3.3:1	3.5:1	4:1	4.4:1	4.5:1	5.3:1
Output per cycle	4000 cc	2000 cc	3000 cc	2500 cc	1500 cc	4000 cc	2000 cc	1000 cc	3000 cc	1500 cc	2500 cc
Motor size	3400	2200	3400	3400	2200	6500	3400	2200	6500	3400	6500
Maximum working pressure bar (psi)	11.7 (170)	13.8 (200)	15.8 (230)		20.0 (290)	22.4 (325)	23.4 (340)	27.6 (400)	30.3 (440)	31.0 (450)	
Maximum air input pressure bar (psi)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
Output at 60 CPM lpm (gpm)	238.6 (63)	119.3 (31.9)	179 (47.3)	150 (39.6)	87.9 (32.2)	238.6 (63)	119.3 (31.5)	64 (16.9)	179 (47.3)	87.9 (23.2)	150 (39.6)

Max recommended continuous cycle rate (CPM)<sup>‡</sup> **Sealed 4-ball lower: 20** **Open/enclosed wet cup lower: 12**

<sup>‡</sup> Graco recommends a cycle rate of 20 CPM or less with the sealed 4-ball lower and 12 CPM or less with the open/enclosed wet cup 4-ball lowers for continuous pumping applications.

# Specifications

## Glutton pump specifications

	4:1	12:1	25:1
Output per cycle	366cc	128cc	58cc
Maximum working pressure bar (psi)	28 (400)	83 (1200)	170 (2500)
Output at 60 CPM lpm (gpm)	21.9 (5.8)	7.7 (2.0)	3.4 (0.9)

Max. recommended continuous cycle rate (CPM)<sup>‡</sup> **25 cpm**

## President pump specifications

Pump ratio	2:1	3:1
Output per cycle	890 cc	610 cc
Maximum working pressure bar (psi)	32 (460)	32 (460)
Maximum air input pressure bar (psi)	12 (180)	10 (150)
Output at 60 CPM lpm (gpm)	53.5 (14.1)	36.4 (9.6)

Max recommended continuous cycle rate (CPM)<sup>‡</sup> **Sealed 4-ball lower: 20 Open/enclosed wet cup lower: 12**

## Viscount pump specifications

	2000 cc	1500 cc	4000 cc	1000 cc	3000 cc	750 cc	2000 cc	2500 cc
Output per cycle	2000 cc	1500 cc	4000 cc	1000 cc	3000 cc	750 cc	2000 cc	2500 cc
Motor size	Viscount I	Viscount I	Viscount II	Viscount I	Viscount II	Viscount I	Viscount II	
Maximum working pressure bar (psi)	12 (167)	16 (225)	21 (300)	21 (300)	28 (400)	31 (450)	32 (460)	
Maximum hydraulic pressure bar (psi)	103 (1500)	103 (1500)	83 (1200)	103 (1500)	83 (1200)	103 (1500)	83 (1200)	
Oil flow at 60 CPM lpm (gpm)	13.2 (3.5)	13.2 (3.5)	45 (12)	13.2 (3.5)	45 (12)	11.3 (3)	45 (12)	45 (12)
Output at 20 CPM lpm (gpm)	101.4 (26.8)	73.8 (19.5)	238.6 (63)	53.4 (14.1)	179 (47.3)	36.4 (9.6)	119.3 (31.5)	150 (39.6)

Max recommended continuous cycle rate (CPM)<sup>‡</sup> **Sealed 4-ball lower: 20 Open/enclosed wet cup lower: 12**

<sup>‡</sup> Graco recommends a cycle rate of 20 CPM or less with the sealed 4-ball lower, 12 CPM or less with the open/enclosed wet cup 4-ball lowers and 25 CPM for Glutton for continuous pumping applications.

# Ordering information

## E-FLO DC circulation part number matrix

Electric	Circulation pumps	Lower size	Motor size, controls & approvals		Pump type/fittings	Mount
<b>E =</b> Electric	<b>C=</b> C=Circulation	<b>1 =</b> 750 cc	<b>1 =</b> 1 hp motor, basic controls, ATEX/FM/IECEX	<b>A =</b> 1 hp motor 480 V, basic controls, ATEX/FM/IECEX	<b>4 =</b> Sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	<b>0 =</b> No stand
		<b>2 =</b> 1000 cc	<b>2 =</b> 1 hp motor, advanced controls, ATEX/FM/IECEX	<b>B =</b> 1 hp motor 480V, advanced controls, ATEX/FM/IECEX	<b>5 =</b> Open wet cup SST lower, Ultralife rod, Ultralife cylinder, NPT fittings	<b>1 =</b> Stand
		<b>3 =</b> 1500 cc	<b>3 =</b> 2 hp motor, basic controls, ATEX/FM/IECEX	<b>C =</b> 2 hp motor 480V, basic controls, ATEX/FM/IECEX	<b>6 =</b> Open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	<b>2 =</b> Wall mount bracket
		<b>4 =</b> 2000 cc	<b>4 =</b> 2 hp motor, advanced controls, ATEX/FM/IECEX	<b>D =</b> 2 hp motor 480V, advanced controls, ATEX/FM/IECEX		
		<b>5 =</b> 3000 cc	<b>5 =</b> 1 hp motor, basic controls, ATEX/IECEX/TIIS/KCS	<b>E =</b> 1 hp motor 480V, basic controls, ATEX/IECEX/TIIS/KCS		
		<b>6 =</b> 4000 cc	<b>6 =</b> 1 hp motor, advanced controls, ATEX/IECEX/TIIS/KCS	<b>F =</b> 1 hp motor 480V, advanced controls, ATEX/IECEX/TIIS/KCS		
		<b>7 =</b> 2500 cc	<b>7 =</b> 2 hp motor, basic controls, ATEX/IECEX/TIIS/KCS	<b>G =</b> 2 hp motor 480V, basic controls, ATEX/IECEX/TIIS/KCS		
		<b>8 =</b> 5000 cc	<b>8 =</b> 2 hp motor, advanced controls, ATEX/IECEX/TIIS/KCS	<b>H =</b> 2hp motor 480V, advanced controls, ATEX/IECEX/TIIS/KCS		
			<b>9 =</b> 2 x 2 hp motor, advanced controls, ATEX/FM/IECEX	<b>J =</b> 2 x 2 hp motor 480V, advanced controls, ATEX/FM/IECEX		
			<b>0 =</b> 2 x 2 hp motor, advanced controls, ATEX/IECEX/TIIS/KCS	<b>K =</b> 2 x 2 hp motor 480V, advanced controls, ATEX/IECEX/TIIS/KCS		

If a **Basic** motor control is desired, your pump selection is complete.

Refer to the pump selection table on the next page for your part number.

If an **Advanced** motor control is desired, a control module and CAN cable will be required.

Determine the desired mounting location of the control module.

The control module can be mounted directly on the pump or on a nearby wall.

Select the appropriate CAN cable length from the table below.

**High flow rate circulation pumps (2X) include the control module and the CAN cable.**

**No additional equipment is required.**

Part number	Description
24P822	Control module kit (240v)
17V232	Control module kit (480v)
16P911	1 m (3 ft) CAN cable
16P912	8 m (25 ft) CAN cable
25D600	Serial to fibre kit
16M173	100 ft fibre cable
17B160	320 ft (room) fibre cable

## E-FLO DC circulation part number matrix - continued

Motor size & controls			Voltage		Approvals		Pump type/fittings			Mount			Output per cycle								
Motor size	Basic controls	Advanced controls	240 VAC single phase	380-480 VAC 3 phase	ATEX / FM / IECEX	ATEX / IECEX / TIS / KCS	Sealed stainless, Tri-Clamp	Open stainless, NPT	Open stainless, Tri-Clamp	No stand	Stand	Wall mount bracket	750 cc	1000 cc	1500 cc	2000 cc	2500 cc	3000 cc	4000 cc	5000 cc	
1 hp	•		•		•		•			•			EC1140	EC2140							
1 hp	•		•		•		•				•		EC1141	EC2141							
1 hp	•		•		•		•					•	EC1142	EC2142							
1 hp		•	•		•		•			•			EC1240	EC2240							
1 hp		•	•		•		•				•		EC1241	EC2241							
1 hp		•	•		•		•					•	EC1242	EC2242							
1 hp	•		•			•	•			•			EC1540	EC2540							
1 hp	•		•			•	•				•		EC1541	EC2541							
1 hp	•		•			•	•					•	EC1542	EC2542							
1 hp		•	•			•	•			•			EC1640	EC2640							
1 hp		•	•			•	•				•		EC1641	EC2641							
1 hp		•	•			•	•					•	EC1642	EC2642							
1 hp	•			•	•		•			•			EC1A40	EC2A40							
1 hp	•			•	•		•				•		EC1A41	EC2A41							
1 hp	•			•	•		•					•	EC1A42	EC2A42							
1 hp		•	•		•		•			•			EC1B40	EC2B40							
1 hp		•	•		•		•				•		EC1B41	EC2B41							
1 hp		•	•		•		•					•	EC1B42	EC2B42							
1 hp	•			•		•	•			•			EC1E40	EC2E40							
1 hp	•			•		•	•				•		EC1E41	EC2E41							
1 hp	•			•		•	•					•	EC1E42	EC2E42							
1 hp		•	•		•		•			•			EC1F40	EC2F40							
1 hp		•	•		•		•				•		EC1F41	EC2F41							
1 hp		•	•		•		•					•	EC1F42	EC2F42							
1 hp	•		•		•			•		•			EC1150	EC2150							
1 hp	•		•		•			•			•		EC1151	EC2151							
1 hp	•		•		•			•				•	EC1152	EC2152							
1 hp		•	•		•			•		•			EC1250	EC2250							
1 hp		•	•		•			•			•		EC1251	EC2251							
1 hp		•	•		•			•				•	EC1252	EC2252							
1 hp	•		•			•	•			•			EC1550	EC2550							
1 hp	•		•			•	•				•		EC1551	EC2551							
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1 hp		•	•		•			•				•	EC1B52	EC2B52							
1 hp	•			•		•	•			•			EC1E50	EC2E50							
1 hp	•			•		•	•				•		EC1E51	EC2E51							
1 hp	•			•		•	•					•	EC1E52	EC2E52							
1 hp		•	•		•		•			•			EC1F50	EC2F50							
1 hp		•	•		•		•				•		EC1F51	EC2F51							
1 hp		•	•		•		•					•	EC1F52	EC2F52							
1 hp	•		•		•			•		•			EC1160	EC2160							
1 hp	•		•		•			•			•		EC1161	EC2161							
1 hp	•		•		•			•				•	EC1162	EC2162							
1 hp		•	•		•			•		•			EC1260	EC2260							
1 hp		•	•		•			•			•		EC1261	EC2261							
1 hp		•	•		•			•				•	EC1262	EC2262							
1 hp	•		•			•	•			•			EC1560	EC2560							
1 hp	•		•			•	•				•		EC1561	EC2561							

# Ordering information

## E-FLO DC circulation part number matrix - continued

Motor size & controls			Voltage		Approvals		Pump type/fittings			Mount			Output per cycle							
Motor size	Basic controls	Advanced controls	240 VAC single phase	380-480 VAC 3 phase	ATEX / FM / IECEX	ATEX / IECEX / TIS / KCS	Sealed stainless, Tri-Clamp	Open stainless, NPT	Open stainless, Tri-Clamp	No stand	Stand	Wall mount bracket	750 cc	1000 cc	1500 cc	2000 cc	2500 cc	3000 cc	4000 cc	5000 cc
1 hp	•		•			•		•			•	EC1562	EC2562							
1 hp		•	•			•		•	•			EC1660	EC2660							
1 hp		•	•			•		•		•		EC1661	EC2561							
1 hp		•	•			•		•			•	EC1662	EC2662							
1 hp	•			•	•			•	•			EC1A60	EC2A60							
1 hp	•			•	•			•		•		EC1A61	EC2A61							
1 hp	•			•	•			•			•	EC1A62	EC2A62							
1 hp		•		•	•			•	•			EC1B60	EC2B60							
1 hp		•		•	•			•		•		EC1B61	EC2B61							
1 hp		•		•	•			•			•	EC1B62	EC2B62							
1 hp	•			•		•		•	•			EC1E60	EC2E60							
1 hp	•			•		•		•		•		EC1E61	EC2E61							
1 hp	•			•		•		•			•	EC1E62	EC2E62							
1 hp		•		•		•		•	•			EC1F60	EC2F60							
1 hp		•		•		•		•		•		EC1F61	EC2F61							
1 hp		•		•		•		•			•	EC1F62	EC2F62							
2 hp	•		•		•		•		•				EC2340	EC3340	EC4340					
2 hp	•		•		•		•			•			EC2341	EC3341	EC4341					
2 hp	•		•		•		•				•		EC2342	EC3342	EC4342					
2 hp		•	•		•		•		•				EC2440	EC3440	EC4440					
2 hp		•	•		•		•			•			EC2441	EC3441	EC4441					
2 hp		•	•		•		•				•		EC2442	EC3442	EC4442					
2 hp	•		•		•			•	•				EC2350	EC3350	EC4350					
2 hp	•		•		•			•		•			EC2351	EC3351	EC4351					
2 hp	•		•		•			•			•		EC2352	EC3352	EC4352					
2 hp		•	•		•			•	•				EC2450	EC3450	EC4450					
2 hp		•	•		•			•		•			EC2451	EC3451	EC4451					
2 hp		•	•		•			•			•		EC2452	EC3452	EC4452					
2 hp	•		•		•			•	•				EC2360	EC3360	EC4360					
2 hp	•		•		•			•		•			EC2361	EC3361	EC4361					
2 hp	•		•		•			•			•		EC2362	EC3362	EC4362					
2 hp		•	•		•			•	•				EC2460	EC3460	EC4460					
2 hp		•	•		•			•		•			EC2461	EC3461	EC4461					
2 hp		•	•		•			•			•		EC2462	EC3462	EC4462					
2 hp	•		•			•	•		•				EC2740	EC3740	EC4740					
2 hp	•		•			•	•			•			EC2741	EC3741	EC4741					
2 hp	•		•			•	•				•		EC2742	EC3742	EC4742					
2 hp		•	•			•	•		•				EC2840	EC3840	EC4840					
2 hp		•	•			•	•			•			EC2841	EC3841	EC4841					
2 hp		•	•			•	•				•		EC2842	EC3842	EC4842					
2 hp	•		•			•		•	•				EC2750	EC3750	EC4750					
2 hp	•		•			•		•		•			EC2751	EC3751	EC4751					
2 hp	•		•			•		•			•		EC2752	EC3752	EC4752					
2 hp		•	•			•		•	•				EC2850	EC3850	EC4850					
2 hp		•	•			•		•		•			EC2851	EC3851	EC4851					
2 hp		•	•			•		•			•		EC2852	EC3852	EC4852					
2 hp	•		•			•		•	•				EC2760	EC3760	EC4760					
2 hp	•		•			•		•		•			EC2761	EC3761	EC4761					
2 hp	•		•			•		•			•		EC2762	EC3762	EC4762					
2 hp		•	•			•		•	•				EC2860	EC3860	EC4860					

## E-FLO DC circulation part number matrix - continued

Motor size & controls			Voltage		Approvals		Pump type/fittings			Mount			Output per cycle								
Motor size	Basic controls	Advanced controls	240 VAC single phase	380-480 VAC 3 phase	ATEX / FM / IECEX	ATEX / IECEX / TIS / KCS	Sealed stainless, Tri-Clamp	Open stainless, NPT	Open stainless, Tri-Clamp	No stand	Stand	Wall mount bracket	750 cc	1000 cc	1500 cc	2000 cc	2500 cc	3000 cc	4000 cc	5000 cc	
2 hp		•	•			•			•		•			EC2861	EC3861	EC4861					
2 hp		•	•			•			•			•		EC2862	EC3862	EC4862					
2 hp	•			•	•		•			•				EC2C40	EC3C40	EC4C40	EC7C40				
2 hp	•			•	•		•				•			EC2C41	EC3C41	EC4C41	EC7C41				
2 hp	•			•	•		•					•		EC2C42	EC3C42	EC4C42	EC7C42				
2 hp		•		•	•		•			•				EC2D40	EC3D40	EC4D40	EC7D40				
2 hp		•		•	•		•				•			EC2D41	EC3D41	EC4D41	EC7D41				
2 hp		•		•	•		•					•		EC2D42	EC3D42	EC4D42	EC7D42				
2 hp	•			•	•			•		•				EC2C50	EC3C50	EC4C50					
2 hp	•			•	•			•			•			EC2C51	EC3C51	EC4C51					
2 hp	•			•	•			•				•		EC2C52	EC3C52	EC4C52					
2 hp		•		•	•			•		•				EC2D50	EC3D50	EC4D50					
2 hp		•		•	•			•			•			EC2D51	EC3D51	EC4D51					
2 hp		•		•	•			•				•		EC2D52	EC3D52	EC4D52					
2 hp	•			•	•				•	•				EC2C60	EC3C60	EC4C60					
2 hp	•			•	•					•	•			EC2C61	EC3C61	EC4C61					
2 hp	•			•	•							•		EC2C62	EC3C62	EC4C62					
2 hp		•		•	•					•	•			EC2D60	EC3D60	EC4D60					
2 hp		•		•	•						•			EC2D61	EC3D61	EC4D61					
2 hp		•		•	•							•		EC2D62	EC3D62	EC4D62					
2 hp	•			•		•	•			•				EC2G40	EC3G40	EC4G40	EC7G40				
2 hp	•			•		•	•				•			EC2G41	EC3G41	EC4G41	EC7G41				
2 hp	•			•		•	•					•		EC2G42	EC3G42	EC4G42	EC7G42				
2 hp		•		•		•	•			•				EC2H40	EC3H40	EC4H40	EC7H40				
2 hp		•		•		•	•				•			EC2H41	EC3H41	EC4H41	EC7H41				
2 hp		•		•		•	•					•		EC2H42	EC3H42	EC4H42	EC7H42				
2 hp	•			•		•		•		•				EC2G50	EC3G50	EC4G50					
2 hp	•			•		•		•			•			EC2G51	EC3G51	EC4G51					
2 hp	•			•		•		•				•		EC2G52	EC3G52	EC4G52					
2 hp		•		•		•		•		•				EC2H50	EC3H50	EC4H50					
2 hp		•		•		•		•			•			EC2H51	EC3H51	EC4H51					
2 hp		•		•		•		•				•		EC2H52	EC3H52	EC4H52					
2 hp	•			•		•			•	•				EC2G60	EC3G60	EC4G60					
2 hp	•			•		•				•	•			EC2G61	EC3G61	EC4G61					
2 hp	•			•		•						•		EC2G62	EC3G62	EC4G62					
2 hp		•		•		•			•	•				EC2H60	EC3H60	EC4H60					
2 hp		•		•		•				•	•			EC2H61	EC3H61	EC4H61					
2 hp		•		•		•						•		EC2H62	EC3H62	EC4H62					
2 x 2 hp		•	•		•		•				•					EC4941		EC5941	EC6941		
2 x 2 hp		•	•		•			•			•					EC4951		EC5951	EC6951		
2 x 2 hp		•	•		•				•		•					EC4961		EC5961	EC6961		
2 x 2 hp		•	•			•	•				•					EC4041		EC5041	EC6041		
2 x 2 hp		•	•			•		•			•					EC4051		EC5051	EC6051		
2 x 2 hp		•	•			•		•			•					EC4061		EC5061	EC6061		
2 x 2 hp		•		•	•		•				•					EC4J41		EC5J41	EC6J41	EC8J41	
2 x 2 hp		•		•	•			•			•					EC4J51		EC5J51	EC6J51		
2 x 2 hp		•		•	•			•			•					EC4J61		EC5J61	EC6J61		
2 x 2 hp		•		•		•	•				•					EC4K41		EC5K41	EC6K41	EC8K41	
2 x 2 hp		•		•		•		•			•					EC4K51		EC5K51	EC6K51		
2 x 2 hp		•		•		•		•			•					EC4K61		EC5K61	EC6K61		

# Ordering information

## E-FLO part number matrix

Power source	Equipment type	Motor	Sensor circuit	Lower size / type	Stand option
<b>E =</b> Electric	<b>P =</b> Pump	<b>0 =</b> No motor	<b>0 =</b> Not installed	<b>A =</b> 2000 cc, sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	<b>0 =</b> No stand
		<b>1 =</b> 230/400V, 5 HP, ATEX	<b>1 =</b> Installed	<b>B =</b> 3000 cc, sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	<b>1 =</b> Stand
		<b>2 =</b> 230/400V, 5 HP, UL/CSA		<b>C =</b> 4000 cc, sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	
		<b>3 =</b> 230/400V, 3 HP, ATEX		<b>D =</b> 2000 cc, open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	
		<b>4 =</b> 230/400V, 3 HP, UL/CSA		<b>E =</b> 3000 cc, open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	
				<b>E =</b> 4000 cc, open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	
				<b>G =</b> 1500 cc, sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	
				<b>H =</b> 1500 cc, open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings	

Motor					Sensor circuit		Stand option		Lower size/type							
No motor	230/400V, 5 HP, ATEX	230/400V, 5 HP, UL/CSA	230/400V, 3 HP, ATEX	230/400V, 3 HP, UL/CSA	Not installed	Installed	No stand	Stand	2000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	3000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	4000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	2000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	3000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	4000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	1500 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	1500 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings
•					•		•		EP00A0	EP00B0	EP00C0				EP00G0	
•					•			•	EP00A1	EP00B1	EP00C1				EP00G1	
•					•		•					EP00D0	EP00E0	EP00F0		EP00H0
•					•			•				EP00D1	EP00E1	EP00F1		EP00H1
•						•	•		EP01A0	EP01B0	EP01C0				EP01G0	
•						•		•	EP01A1	EP01B1	EP01C1				EP01G1	
•						•	•					EP01D0	EP01E0	EP01F0		EP01H0
•						•		•				EP01D1	EP01E1	EP01F1		EP01H1
	•				•		•		EP10A0	EP10B0	EP10C0					
	•				•			•	EP10A1	EP10B1	EP10C1					
	•				•		•					EP10D0	EP10E0	EP10F0		
	•				•			•				EP10D1	EP10E1	EP10F1		
	•					•	•		EP11A0	EP11B0	EP11C0					
	•					•		•	EP11A1	EP11B1	EP11C1					
	•					•	•					EP11D0	EP11E0	EP11F0		

## E-FLO part number matrix - continued

Motor					Sensor circuit		Stand option		Lower size/type							
No motor	230/400V, 5 HP, ATEX	230/400V, 5 HP, UL/CSA	230/400V, 3 HP, ATEX	230/400V, 3 HP, UL/CSA	Not installed	Installed	No stand	Stand	2000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	3000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	4000 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	2000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	3000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	4000 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	1500 cc, sealed SST lower, Ultralife rod & cylinder, Tri-Clamp fittings	1500 cc, open wet cup SST lower, Ultralife rod & cylinder, Tri-Clamp fittings
	•					•		•				EP11D1	EP11E1	EP11F1		
		•			•		•		EP20A0	EP20B0	EP20C0					
		•			•		•		EP20A1	EP20B1	EP20C1					
		•			•		•					EP20D0	EP20E0	EP20F0		
		•			•			•				EP20D1	EP20E1	EP20F1		
		•				•	•		EP21A0	EP21B0	EP21C0					
		•				•		•	EP21A1	EP21B1	EP21C1					
		•				•	•					EP21D0	EP21E0	EP21F0		
		•				•		•				EP21D1	EP21E1	EP21F1		
			•		•		•								EP30G0	
			•		•			•							EP30G1	
			•		•		•								EP30H0	
			•		•			•							EP30H1	
			•			•	•								EP31G0	
			•			•		•							EP31G1	
			•			•	•								EP31H0	
			•			•		•							EP31H1	
				•	•		•								EP40G0	
				•	•			•							EP40G1	
				•	•		•								EP40H0	
				•	•			•							EP40H1	
				•		•	•								EP41G0	
				•		•		•							EP41G1	
				•		•	•								EP41H0	
				•		•		•							EP41H1	
			•			•	•								EP31H0	
			•			•		•							EP31H1	
				•	•		•								EP40G0	
				•	•			•							EP40G1	
				•	•		•								EP40H0	
				•	•			•							EP40H1	
				•		•	•								EP41G0	
				•		•		•							EP41G1	
				•		•	•								EP41H0	
				•		•		•							EP41H1	

# Ordering information

## Glutton part number matrix

Part number	Construction		Seal		Pump ratio			Output per cycle			Max working pressure			Max air inlet	Output @ 60 CPM			Pump inlet size	Pump outlet size		Basic or Advanced			
	CS	Stainless steel	UHMWPE	Nylon	4:1	12:1	25:1	58cc	128cc	355cc	400 psi (28 bar)	1200 psi (83 bar)	2500 psi (170 bar)	100 psi (7 bar)	0.9 gpm (3.4 lpm)	2 gpm (7.5 lpm)	5.6 gpm (21.2 lpm)	1.25" npt(f)	3/4 npt(f)	1" npt(f)	Basic	Advanced		
220663	•		•		•					•			•			•	•		•	•				
220664	•		•			•						•				•				•	•			
220665	•		•				•					•				•					•	•		
220666		•	•		•					•			•			•					•	•		
220667		•	•			•						•				•					•	•		
220668		•	•				•					•				•					•	•		
237008	•			•	•					•			•				•	•		•	•			
237009	•			•		•						•				•					•	•		
237011		•		•	•					•			•				•	•		•	•			
237012		•		•		•						•				•					•	•		
237013		•		•			•					•				•					•	•		
17W012		•	•		•					•			•				•	•			•		•	
17W013		•	•			•						•				•					•		•	
17W014		•	•				•					•				•					•		•	

## Endura-Flo 3D150 part numbers

Part no.	Description/size	Manifolds			DataTrak
		Tri-Clamp	NPT	BSPP	
25M739	Pump, 3:1 AODD, 150, TRI, Std	•			
25M740	Pump, 3:1 AODD, 150, NPT, Std		•		
25M741	Pump, 3:1 AODD, 150, BSP, Std			•	
25M742	Pump, 3:1 AODD, 150, TRI, Adv	•			•
25M743	Pump, 3:1 AODD, 150, NPT, Adv		•		•
25M744	Pump, 3:1 AODD, 150, BSP, Adv			•	•

## Endura-Flo 4D150 part numbers

Part no.	Description/size	Manifolds			DataTrak
		Tri-Clamp	NPT	BSPP	
24W345	ENDURA-FLO 4D150, TRI-CLAMP FITTINGS, 150 cc	•			
24W346	ENDURA-FLO 4D150, NPT FITTINGS, 150 cc		•		
24W347	ENDURA-FLO 4D150, BSPP FITTINGS, 150 cc			•	
24W348	ENDURA-FLO 4D150, TRI-CLAMP FITTINGS, DATATRAK, 150 cc	•			•
24W349	ENDURA-FLO 4D150, NPT FITTINGS, DATATRAK, 150 cc		•		•
24W350	ENDURA-FLO 4D150, BSPP FITTINGS, DATATRAK, 150 cc			•	•

## Endura-Flo 3D350 part numbers

Part no.	Description/size	Manifolds			DataTrak
		Tri-Clamp	NPT	BSPP	
25M757	Pump, 3:1 AODD, 350, TRI, Std	•			
25M758	Pump, 3:1 AODD, 350, NPT, Std		•		
25M759	Pump, 3:1 AODD, 350, BSP, Std			•	
25M760	Pump, 3:1 AODD, 350, TRI, Adv	•			•
25M761	Pump, 3:1 AODD, 350, NPT, Adv		•		•
25M762	Pump, 3:1 AODD, 350, BSP, Adv			•	•

## Endura-Flo 4D350 part numbers

Part no.	Description/size	Manifolds			DataTrak
		Tri-Clamp	NPT	BSPP	
24W351	ENDURA-FLO 4D350, TRI-CLAMP FITTINGS, 350 cc	•			
24W352	ENDURA-FLO 4D350, NPT FITTINGS, 350 cc		•		
24W353	ENDURA-FLO 4D350, BSPP FITTINGS, 350 cc			•	
24W354	ENDURA-FLO 4D350, TRI-CLAMP FITTINGS, DATATRAK, 350 cc	•			•
24W355	ENDURA-FLO 4D350, NPT FITTINGS, DATATRAK, 350 cc		•		•
24W356	ENDURA-FLO 4D350, BSPP FITTINGS, DATATRAK, 350 cc			•	•

## High-Flo part number matrix

Product identifier	Lower Material	Pump ratio	Motor type	Lower type, fittings
<b>J =</b> High-Flo pumps	<b>C =</b> Carbon steel	<b>17 =</b> 1.7:1 / 3400 cc motor / 4000 cc lower	<b>L =</b> Low noise NXT	<b>8 =</b> Sealed SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings
	<b>S =</b> Stainless steel	<b>20 =</b> 2:1 2200 cc motor / 2000 cc lower	<b>M =</b> Low noise NXT with Datatrak	<b>9 =</b> Open wet cup SST lower, Ultralife rod, Ultralife cylinder, NPT fittings
		<b>23 =</b> 2.3:1 / 3400 cc motor / 3000 cc lower	<b>R =</b> Remote exhaust NXT	<b>0 =</b> Open wet cup SST lower, Ultralife rod, Ultralife cylinder, Tri-Clamp fittings
		<b>28 =</b> 28:1 / 3400 cc motor / 2500 cc lower	<b>S =</b> Remote NXT with Datatrak	
		<b>30 =</b> 3:1 / 2200 cc motor / 1500 cc lower	<b>A =</b> Low noise XL	
		<b>33 =</b> 3.3:1 / 6500 cc motor / 4000 cc lower	<b>B =</b> Low noise w/DataTrak	
		<b>35 =</b> 3.5:1 / 3400 cc motor / 2000 cc lower	<b>C =</b> Remote exhaust XL	
		<b>40 =</b> 4:1 / 2200 cc motor / 1000 cc lower	<b>D =</b> Remote exhaust XL w/DataTrak	
		<b>44 =</b> 4.4:1 / 6500 cc motor / 3000 cc lower		
		<b>45 =</b> 4.5:1 / 3400 cc motor / 1500 cc lower		
		<b>53 =</b> 53:1 / 6500 cc motor / 2500 cc lower		

Lower material		Motor type					Lower material, fittings			Ratio									
Carbon steel	Stainless steel	L = Low noise NXT A = Low noise XL	M = Low noise NXT with Datatrak B = Low noise XL w/DataTrak	R = Remote exhaust NXT C = Remote exhaust XL	S = Remote NXT with Datatrak D = Remote exhaust XL w/Datatrak	8 = Sealed, Tri-Clamp	9 = Open, NPT	0 = Open, Tri-Clamp	1.7:1	2:1	2.3:1	2.8:1	3:1	3.3:1	3.5:1	4:1	4.4:1	4.5:1	5.3:1
•		•					•			JC20L9			JC30L9		JC35A9	JC40L9		JC45A9	
•			•				•			JC20M9			JC30M9		JC35B9	JC40M9		JC45B9	
	•	•				•			JS17A8	JS20L8	JS23A8	JS28A8	JS30L8	JS33A8	JS35A8	JS40L8	JS44A8	JS45A8	JS53A8
	•		•			•			JS17B8	JS20M8	JS23B8	JS28B8	JS30M8	JS33B8	JS35B8	JS40M8	JS44B8	JS45B8	JS53B8
	•			•		•			JS17C8	JS20R8	JS23C8	JS28C8	JS30R8	JS33C8	JS35C8	JS40R8	JS44C8	JS45C8	JS53C8
	•				•	•			JS17D8	JS20S8	JS23D8	JS28D8	JS30S8	JS33D8	JS35D8	JS40S8	JS44D8	JS45D8	JS53D8
	•	•					•			JS20L9			JS30L9		JS35A9	JS40L9		JS45A9	
	•		•				•			JS20M9			JS30M9		JS35B9	JS40M9		JS45B9	
	•			•			•			JS20R9			JS30R9		JS35C9	JS40R9		JS45C9	
	•				•		•			JS20S9			JS30S9		JS35D9	JS40S9		JS45D9	
	•	•						•		JS20L0			JS30L0		JS35A0	JS40L0		JS45A0	
	•		•					•		JS20M0			JS30M0		JS35B0	JS40M0		JS45B0	
	•			•				•		JS20R0			JS30R0		JS35C0	JS40R0		JS45C0	
	•				•			•		JS20S0			JS30S0		JS35D0	JS40S0		JS45D0	
	•		•										703MS8*			704MS8*			
	•			•									703SS8*			704SS8*			
	•		•										703MS9*			704MS9*			
	•			•									703SS9*			704SS9*			
	•		•										703MS0*			704MS0*			
	•			•									703SS0*			704SS0*			

# Ordering information

## President part numbers

Lower material		Configuration		Lower type				Fittings		Output per cycle	
										890 cc	610 cc
										Ratio	
Carbon steel	Stainless steel	Standard	Stubby	Enclosed wet cup lower, Chromex rod, chrome cylinder	Sealed lower, Ultra-life rod & cylinder	Open wet cup lower, Ultra-life rod & cylinder	Open wet cup lower, Chromex rod & chrome cylinder	NPT	Tri-Clamp	2:1	3:1
	•		•		•				•	17E222	17E225
	•	•				•		•		17E223	17E226
•		•					•	•		17E224	17E227
	•		•			•		•			17E228
•			•				•	•			17E229

## Lower part numbers

Lower material		Lower type, fittings						Size			
Carbon steel	Stainless steel	Sealed lower, Ultra-life rod & cylinder, Tri-Clamp fittings	Open wet cup lower, Ultra-life rod & cylinder, NPT fittings	Open wet cup lower, Ultra-life rod & cylinder, Tri-Clamp fittings	Enclosed wet cup lower, Chromex rod, chrome cylinder, NPT fittings	Enclosed wet cup lower, Chromex rod, chrome cylinder, Tri-Clamp fittings	Open wet cup lower, Chromex rod & chrome cylinder	750 cc	1000 cc	1500 cc	2000 cc
•						•		17K660	17K661	17K662	17K663
	•	•						17K656	17K657	17K658	17K659
	•		•					17K668	17K669	17K670	17K671
	•			•				17K664	17K665	17K666	17K667

## Connection kits

Motor							
Lower type	President	President Stubby	NXT/E-Flo DC	Bulldog/Senator	E-Flo	Viscount I	Viscount II
Sealed	17K523	17K523	17K525	17K517	17K524	17K519	17K520
Open/enclosed wet cup	24J185	24J186	288209	24F308	N/A	24F065	24J390

Connection kits contain all components (tie rods, adapters) required for changing to a different lower style. Refer to manual 311876 for complete information.

## Viscount part numbers

Lower Material		Lower type		Fittings		Output per cycle								
						750 cc	1000 cc	1500 cc	2000 cc	2000 cc	2500 cc	3000 cc	4000 cc	
						Motor size								
Carbon steel	Stainless steel	Sealed lower, Ultra-life rod & cylinder	Open wet cup lower, Ultra-life Rod & cylinder	Open wet cup lower, Chromex rod & cylinder	NPT	Tri-Clamp	Viscount I	Viscount I	Viscount I	Viscount I	Viscount II	Viscount II	Viscount II	Viscount II
•				•	•			17E238	17E234	17E230	17E242			
	•	•				•		17E239	17E235	17E231	17E243	25E932	25E933	25E934
	•		•		•			17E240	17E236	17E232	17E244			
	•		•		•			17E241	17E237	17E233	17E245			

# Ordering information - accessories

## Air supply controls

217074.....	Air filter (40 micron)
181521.....	High volume air regulator 5.1 bar (200 cfm, 75 psi max)
206197.....	High volume air regulator 5.1 bar (200 cfm, 75 psi max)
207755.....	High volume air regulator 8.6 bar (380 cfm, 125 psi max)
214849.....	Air lubricator (3/4 npt(f), 0.48 L (16 oz) bowl capacity)
217072.....	Air filter-regulator-lubricator (FRL) kit (2200/3400)
217073.....	Air filter-regulator-lubricator (FRL) kit (6500)
222345.....	Air filter-regulator-lubricator (FRL) kit (2200/3400/Glutton with hose, bracket, gauge and swivel adapters)
NXT011.....	Integrated air control for NXT air motors

## Back pressure regulators (BPR)

208997.....	Mechanical 57 L/min. - 12 bar (15 gpm, 180 psi max fluid pressure, 1-1/4 npt)
236770.....	Mechanical 16.2 L/min. - 12 bar (4.3 gpm, 180 psi max fluid pressure, 3/8 npt)
916154.....	Carbide mechanical 57 L/min. - 12 bar (15 gpm, 180 psi max fluid pressure, 1-1/4 npt)
288117.....	Pneumatic 76 L/min. - 21 bar (20 gpm, 300 psi max fluid pressure, 1-1/4 npt)
288311.....	Pneumatic 76 L/min. - 21 bar (20 gpm, 300 psi max fluid pressure, 1-1/2 npt)
288262.....	Pneumatic 76 L/min. - 21 bar (20 gpm, 300 psi max fluid pressure, 2 in tri-clamp)
224486.....	Low shear mechanical 76 L/min. - 21 bar (20 gpm, 300 psi max fluid pressure, 1-1/2 npt)
223824.....	Low shear mechanical 76 L/min. - 21 bar (20 gpm, 300 psi max fluid pressure, 2 in sanitary)
15J498.....	Pneumatic BPR conversion kit
24E709.....	BPR kit for 750 cc lowers
24E722.....	BPR kit for 1000 cc to 4000 cc lowers

## Fittings

26A246.....	Complete Tri-Clamp to NPT kit Contains fittings, gaskets, & tri-clamps
15J422.....	Inlet/outlet fitting for 1-1/2 Tri-Clamp to 1-1/2 NPT
17K780.....	Inlet/outlet fitting for 1-1/2 Tri-Clamp to 1 NPT
16F044.....	Inlet/outlet fitting for 1 NPT to 1 BSPP
16F045.....	Inlet/outlet fitting for 1-1/2 NPT to 1-1/2 BSPP
16F046.....	Inlet/outlet fitting for 2 NPT to 2 BSPP
15J423.....	Inlet/outlet fitting for 2 Tri-Clamp to 2 NPT
15J639.....	Inlet/outlet fitting for 1-1/2 Tri-Clamp to 2 Tri-Clamp
17K779.....	Inlet/outlet right angle adapter for 1-1/2 Tri-Clamp to 1-1/2 Tri-Clamp
118598.....	1-1/2 clamp (Tri-Clamp)
120351.....	PTFE w/elastomer sanitary gasket
680454.....	Solid PTFE sanitary gasket

## Fluid filter

244053.....	Low pressure PTFE encapsulated fluoro-elastomer SST (mesh 60)
247479.....	Kit for 3/4 NPT(f) SST fluid filter kit
247480.....	Kit for 1 NPT(f) SST fluid filter kit
247474.....	Aluminium fluid filter kit
915515.....	Low pressure bag filter 57 L/min. - 21 bar (15 gpm, 300 psi, CS)
915516.....	Low pressure bag filter 57 L/min. - 21 bar (15 gpm, 300 psi, SST)
915517.....	Low pressure bag filter 113 L/min. - 21 bar (30 gpm, 300 psi, CS)
915518.....	Low pressure bag filter 113 L/min. - 21 bar (30 gpm, 300 psi, SST)
213058.....	Red alert low pressure filter 22 L/min. (6 gpm, 60 mesh, 3/4 NPT)
213059.....	Red alert low pressure filter 22 L/min. (6 gpm, 100 mesh, 3/4 NPT)
213060.....	Red alert low pressure filter 22 L/min. (6 gpm, 150 mesh, 3/4 NPT)
213061.....	Red alert low pressure filter 22 L/min. (6 gpm, 200 mesh, 3/4 NPT)
213063.....	Red alert low pressure filter 76 L/min. (20 gpm, 60 mesh, 3/4 NPT)
213064.....	Red alert low pressure filter 76 L/min. (20 gpm, 100 mesh, 3/4 NPT)
213065.....	Red alert low pressure filter 76 L/min. (20 gpm, 150 mesh, 3/4 NPT)
213066.....	Red alert low pressure filter 76 L/min. (20 gpm, 200 mesh, 3/4 NPT)

# Ordering information

## Gauge

187875.....	Gauge 2 bar (30 psi max, SST)
187874.....	Gauge 7 bar (100 psi max, SST)
187873.....	Gauge 14 bar (200 psi max, SST)
187876.....	Gauge 21 bar (300 psi max, SST)

## Torqueable wet cup kits

24F144.....	kit for 750-2000 cc lowers
187874.....	kit for 3000-4000 cc lowers

## E-Flo motor accessories

24H372 .....	ACS module
16A630 .....	TDC & position sensor barrier
16A633 .....	Pressure transducer barrier
15V331.....	Ethernet IP gateway assembly
15V963.....	DeviceNet gateway assembly
15V964.....	Profibus gateway assembly
120373.....	Local I/O box
15J755.....	Sensor circuit kit

## Endura-Flo kits

17H315 .....	Floor stand kit
17H316 .....	Endura-Flo 4D350 Datatrak air valve
17H317 .....	Endura-Flo 4D350 Standard air valve
17H318 .....	Endura-Flo 4D350 Datatrak air valve
17H319 .....	Endura-Flo 4D350 Standard air valve
24Y304 <sup>†</sup> .....	Endura-Flo 4D150 Datatrak conversion kit
24Y306 <sup>†</sup> .....	Endura-Flo 4D350 Datatrak conversion kit
24D984 .....	Conversion kit for 150
24D985 .....	Conversion kit for 350

## Hydraulic motor accessories

189305.....	Assembly tool for servicing yoke and trip rod (Viscount I)
239805.....	Intake valve seat with relief valve, carbide seat (Viscount I)
239865.....	Intake valve seat without relief valve, carbide seat (Viscount I)
237744.....	Intake valve seat, with internal pressure relief valve (Viscount II)
180529.....	Intake valve seat, without relief valve (Viscount II)
515258.....	Hydraulic pressure control valve 3/4 npt inlet, 3/4 npt outlet, 1/4 npt drain, 1/4 npt gauge
512150.....	Hydraulic shutoff valve 140 bar (2000 psi max, 1/2 NPT (fbc))
102644.....	Hydraulic shutoff valve 210 bar (3000 psi max, 3/4 NPT (fbc))
102646.....	Hydraulic shutoff valve 210 bar (3000 psi max, 1 NPT (fbc))
169236.....	Hydraulic oil 18.9 L (5 gal) size

## Pneumatic motor accessories

NXT206.....	DataTrak upgrade kit for the NXT 2200
NXT306.....	DataTrak upgrade kit for the NXT 3400
NXT606.....	DataTrak upgrade kit for the NXT 6500

## Mounting hardware

255143.....	Wall bracket for all NXT and Viscount motors
253692.....	Stand for NXT, E-Flo DC and Viscount motors (750-2000 cc)
218742.....	Stand for NXT, E-Flo DC and Viscount motors (3000-4000 cc)
247312.....	Wall mount and floor stand adapter for NXT 2200 motor
16E086.....	Wall mount and floor stand adapter for Viscount I, I+ motor
287884** .....	Heavy duty cart
287919** .....	Light duty cart
222011.....	Grounding clamps
15H884 .....	Stand for E-Flo

## Suction kits

247475.....	For 1-1/2 NPT(f) 18 L (5 gallon) SST suction kit
247476.....	For 1-1/2 NPT(f) 208 L (55 gallon) SST suction kit
247477.....	For 2 NPT(f) 18 L (5 gallon) suction kit
247478.....	For 2 NPT(f) 208 L (55 gallon) SST suction kit
24E709.....	Circulation kit 16.2 L/min. - 12.4 bar (4.3 gpm, 180 psi max)

## Surge tanks

239858.....	Medium volume 57 L/min. - 41 bar (15 gpm, 600 psi, SST)
238987.....	High volume 76 L/min. - 21 bar (20 gpm, 300 psi, SST, 2 NPT)
238988.....	High volume 76 L/min. - 21 bar (20 gpm, 300 psi, SST, 1-1/2 NPT)
218509.....	High volume 76 L/min. - 21 bar (20 gpm, 300 psi, SST, 2 NPT, carbide)
218742.....	Floor stand

## E-Flo DC motor accessories

24R050.....	Pressure transducer, NPT 34.5 bar (500 psi)
24X089.....	Pressure transducer, inline Tri-clamp 34.5 bar (500 psi)
24Y245.....	Pressure transducer, NPT 345 bar (5000 psi)
16V103.....	Transducer extension cable
24V001.....	Pneumatic BPR control system
16U729.....	Run/Stop Switch
16M172.....	15 m (50 ft) fibre optic cable
16M173.....	30 m (100 ft) fibre optic cable
17B160.....	100 m (330 ft) fibre optic cable
24R086.....	Fibre/serial converter kit
24N978.....	Single fibre optic converter (for adding additional fibre optic converters to 24R086)
15V331.....	Ethernet IP gateway assembly
17M396.....	Anybus Profinet module

## E-Flo DC motors

EM0011.....	1 hp motor, basic controls <sup>§</sup>
EM0012.....	1 hp motor, advanced controls <sup>§</sup>
EM0013.....	1 hp motor, basic controls <sup>§§</sup>
EM0014.....	1 hp motor, advanced controls <sup>§§</sup>
EM0021.....	2 hp motor, basic controls <sup>§</sup>
EM0022.....	2 hp motor, advanced controls <sup>§</sup>
EM0023.....	2 hp motor, basic controls <sup>§§</sup>
EM0024.....	2 hp motor, advanced controls <sup>§§</sup>
EM0025**.....	2 hp motor (for "2X" E-Flo DC 2000-4000cc circulation pumps), advanced controls <sup>§</sup>
EM0026**.....	2 hp motor (for "2X" E-Flo DC 2000-4000cc circulation pumps), advanced controls <sup>§§</sup>

## Glutton kits

17W667.....	Air valve conversion kit, standard
17W668.....	Air valve conversion kit, Data Trak

<sup>†</sup> Kit includes replacement air valve compatible with the solenoid

<sup>\*\*</sup> System requires two motors

<sup>§</sup> ATEX/FM/IECEX

<sup>§§</sup> ATEX/FM/IIIS/KCS



## ABOUT GRACO

Founded in 1926, Graco is a world leader in fluid handling systems and components. Graco products move, measure, control, dispense and apply a wide range of fluids and viscous materials used in vehicle lubrication, commercial and industrial settings.

The company's success is based on its unwavering commitment to technical excellence, world-class manufacturing and unparalleled customer service. Working closely with qualified distributors, Graco offers systems, products and technology that set the quality standard in a wide range of fluid handling solutions. Graco provides equipment for spray finishing, protective coating, paint circulation, lubrication, and dispensing sealants and adhesives, along with power application equipment for the contractor industry. Graco's ongoing investment in fluid management and control will continue to provide innovative solutions to a diverse global market.

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