



Graco 4-Ball Pump Technology

High Performance Industrial Pumps



PROVEN QUALITY. LEADING TECHNOLOGY.

4-BALL PISTON PUMP LOWERS

Graco's positive displacement piston pumps provide low cycle rates and high flow as the pump displaces fluid in both directions of the stroke. This versatile technology is used in a wide range of applications.

Graco's new 4-ball piston pumps produce low shear output for shear-sensitive materials in low pressure, high flow applications.



TYPICAL APPLICATIONS

- Paint circulation
- Fluid transfer and supply

TYPICAL FLUIDS HANDLED

- Waterborne paints
- Solventborne paints
- Acid catalyzed varnishes, enamels and lacquers



THE LATEST IN LOW PRESSURE, HIGH FLOW TECHNOLOGY

GRACO IS MAKING IT EASIER to install and maintain your 4-ball pump. Not only can all lowers be used with pneumatic, hydraulic and electric platforms, many models have **COMMON COMPONENTS** – making cylinders and pistons easily interchangeable between pump sizes.

ADDITIONAL FEATURES also now come standard on the 4-ball lowers, such as the new enclosed wet cup, stainless steel seats and spring loaded packings.

NEW ENCLOSED WET CUP

- Minimizes operator interaction for reduced maintenance
- Maintains consistent lubrication for packings

IMPROVED COATINGS

- Standard Chromex™ Rods
Produce durable pump performance
- Available Maxlife™ Cylinders
Provide maximum abrasion and wear resistance

STAINLESS STEEL OR CARBIDE SEATS

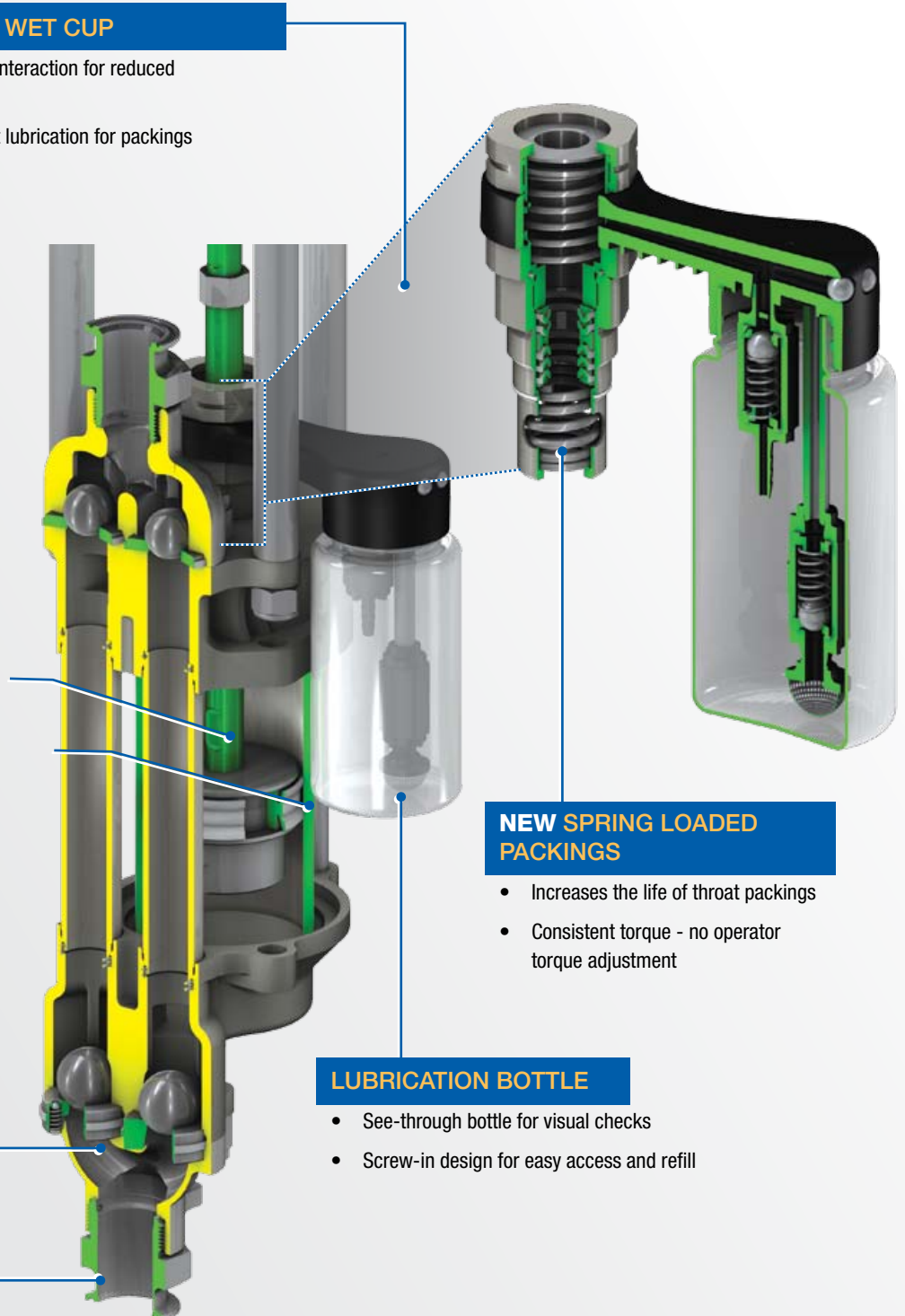
NPT OR TRI-CLAMP FITTINGS

NEW SPRING LOADED PACKINGS

- Increases the life of throat packings
- Consistent torque - no operator torque adjustment

LUBRICATION BOTTLE

- See-through bottle for visual checks
- Screw-in design for easy access and refill



ACCURATE AND DEPENDABLE MOTOR SOLUTIONS



PNEUMATIC

Pneumatic High-Flo® pumps with NXT® motor technology set the standard for long-lasting durability. These pumps are built to handle the toughest finishing applications.

- Modular design for easier maintenance
- Rugged body armor, won't rust or dent
- Highest technology air motor on the market
- De-icing controls eliminate stalling
- Integrated air control
- DataTrak™ (Optional)
 - ▶ Runaway protection
 - ▶ Pump diagnostics
 - ▶ Tracks material usage



HYDRAULIC

Field proven, energy efficient Viscount® pumps provide reliable, quiet, ice-free performance and are up to three times more energy efficient than comparable compressed air systems. With three hydraulic motor types, Graco has the right size to meet your application needs.

- Low noise
- No icing
- Up to 3 times more efficient than pneumatics
- Lower operating costs



ELECTRIC

Get the benefits of a piston pump with the energy efficiency of an E-Flo® electric drive unit. The dual lower minimizes pressure changes at the outlet of the pump. Online maintenance simplifies repair and reduces downtime. Accomplish remote monitoring of performance via computer or PLC for a higher degree of control.

- Low noise
- No icing
- Up to 3 times more efficient than pneumatics
- Process control and feedback
- Slow smooth changeovers

HIGH-FLO

Model		1.7:1	2:1	2.3:1	3:1	3.3:1	3.5:1	4:1	4.4:1	4.5:1
PUMP SPECIFICATIONS	Pump Ratio	1.7:1	2:1	2.3:1	3:1	3.3:1	3.5:1	4:1	4.4:1	4.5:1
	Output per Cycle	4000 cc	2000 cc	3000 cc	1500 cc	4000 cc	2000 cc	1000 cc	3000 cc	1500 cc
	Motor Size	3400	2200	3400	2200	6500	3400	2200	6500	3400
	Maximum Working Pressure psi (bar)	170 (11.7)	200 (13.8)	230 (15.8)	290 (20)	325 (22.4)	340 (23.4)	400 (27.6)	440 (30.3)	450 (31)
	Maximum Air Input Pressure psi (bar)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)	100 (7)
MANUALS	Output at 60 CPM gpm (lpm)	63 (238.6)	31.9 (119.3)	47.3 (179)	23.2 (87.9)	63 (238.6)	31.5 (119.3)	16.9 (64)	47.3 (179)	23.2 (87.9)
	Pump Manual	3A0538	3A0538	3A0538	3A0538	3A0538	3A0538	3A0538	3A0538	3A0538
	Lower Manual	3A0540	3A0539	3A0540	3A0539	3A0540	3A0539	3A0539	3A0540	3A0539
INLET/OUTLET SIZE	Motor Manual	311238	311238	311238	311238	311238	311238	311238	311238	311238
	Pump Inlet Size (NPT and Tri-Clamp)	2	1-1/2	2	1-1/2	2	1-1/2	1-1/2	2	1-1/2
	Pump Outlet Size (NPT and Tri-Clamp)	2	1	2	1	2	1	1	2	1

		Lower Type	Cylinder	Fittings	Motor Type	DataTrak									
PUMP CONSTRUCTION	PUMP ONLY	SST	Hard Chrome	NPT	Low Noise	•	JC17L1	JC20L1	JC23L1	JC30L1	JC33L1	JC35L1	JC40L1	JC44L1	JC45L1
							JC17M1	JC20M1	JC23M1	JC30M1	JC33M1	JC35M1	JC40M1	JC44M1	JC45M1
				NPT	Low Noise	•	JS17L1	JS20L1	JS23L1	JS30L1	JS33L1	JS35L1	JS40L1	JS44L1	JS45L1
			JS17M1				JS20M1	JS23M1	JS30M1	JS33M1	JS35M1	JS40M1	JS44M1	JS45M1	
			Remote				•	JS17R1	JS20R1	JS23R1	JS30R1	JS33R1	JS35R1	JS40R1	JS44R1
				JS17S1	JS20S1	JS23S1		JS30S1	JS33S1	JS35S1	JS40S1	JS44S1	JS45S1		
		Tri-Clamp	Low Noise	•	-	JS20L5	-	JS30L5	-	JS35L5	JS40L5	-	JS45L5		
					-	JS20M5	-	JS30M5	-	JS35M5	JS40M5	-	JS45M5		
			Remote	•	-	JS20R5	-	JS30R5	-	JS35R5	JS40R5	-	JS45R5		
		-			JS20S5	-	JS30S5	-	JS35S5	JS40S5	-	JS45S5			
		Maxlife	NPT	Low Noise	•	JS17L2	JS20L2	JS23L2	JS30L2	JS33L2	JS35L2	JS40L2	JS44L2	JS45L2	
						JS17M2	JS20M2	JS23M2	JS30M2	JS33M2	JS35M2	JS40M2	JS44M2	JS45M2	
	JS17R2					JS20R2	JS23R2	JS30R2	JS33R2	JS35R2	JS40R2	JS44R2	JS45R2		
	Tri-Clamp		Low Noise	•	-	JS20L6	-	JS30L6	-	JS35L6	JS40L6	-	JS45L6		
					-	JS20M6	-	JS30M6	-	JS35M6	JS40M6	-	JS45M6		
					-	JS20R6	-	JS30R6	-	JS35R6	JS40R6	-	JS45R6		
	Remote	•	-	JS20S6	-	JS30S6	-	JS35S6	JS40S6	-	JS45S6				
			-	-	-	-	-	-	-	-	-				
	PACKAGE	SST	Hard Chrome	NPT	Low Noise	•	-	-	-	703MSN*	-	704MSN*	-	-	
					Remote	•	-	-	-	703SSN*	-	704SSN*	-	-	
				Tri-Clamp	Low Noise	•	-	-	-	703MST*	-	704MST*	-	-	
					Remote	•	-	-	-	703SST*	-	704SST*	-	-	

*Package includes pump, wall bracket, air controls and DataTrak

VISCOUNT

PUMP SPECIFICATIONS	Output per Cycle	2000 cc	1500 cc	4000 cc	1000 cc	3000 cc	750 cc	2000 cc
	Motor Size	Viscount I	Viscount I	Viscount II	Viscount I	Viscount II	Viscount I	Viscount II
	Max Working Pressure psi (bar)	167 (12)	225 (16)	300 (21)	300 (21)	400 (28)	450 (31)	460 (32)
	Max Hydraulic Input Pressure psi (bar)	1500 (103)	1500 (103)	1200 (83)	1500 (103)	1200 (83)	1500 (103)	1200 (83)
	Oil Flow at 60 CPM gpm (lpm)	3.5 (13.2)	3.5 (13.2)	12 (45)	3.5 (13.2)	12 (45)	3 (11.3)	12 (45)
MANUALS	Output at 60 CPM gpm (lpm)	31.5 (119.3)	23.2 (87.9)	63 (238.6)	16.9 (64)	47.3 (179)	9.6 (36.4)	31.5 (119.3)
	Pump Manual	3A0537	3A0537	3A0537	3A0537	3A0537	3A0537	3A0537
	Lower Manual	3A0539	3A0539	3A0540	3A0539	3A0540	3A0539	3A0539
INLET/OUTLET SIZE	Motor Manual	308330	308330	308048	308330	308048	308330	308048
	Hydraulic Fluid Inlet	3/4 in (37° flare)	3/4 in (37° flare)	3/4 npt(f)	3/4 in (37° flare)	3/4 npt(f)	3/4 in (37° flare)	3/4 npt(f)
	Hydraulic Fluid Outlet	7/8 in (37° flare)	7/8 in (37° flare)	1 npt(f)	7/8 in (37° flare)	1 npt(f)	7/8 in (37° flare)	1 npt(f)
	Pump Inlet Size (NPT and Tri-Clamp)	1-1/2	1-1/2	2	1-1/2	2	1-1/2	2
	Pump Outlet Size (NPT and Tri-Clamp)	1	1	2	1	2	1	2

		Lower Type	Cylinder	Fittings						
PUMP CONSTRUCTION	S	Hard Chrome	NPT	24E331	24E328	24E340	24E325	24E337	-	24E334
				-	-	-	-	-	24E322	-
	SST	Hard Chrome	NPT	24E491	24E489	24E341	24E487	24E338	24E485	24E493
				24E492	24E490	24E342	24E488	24E339	24E486	24E494
		Hard Chrome	Tri-Clamp	24E332	24E329	-	24E326	-	24E323	24E335
				24E333	24E330	-	24E327	-	24E324	24E336

NOTE: Graco recommends 20 cpm or less for intermittent pumping applications and 12 cpm or less for continuous pumping applications.

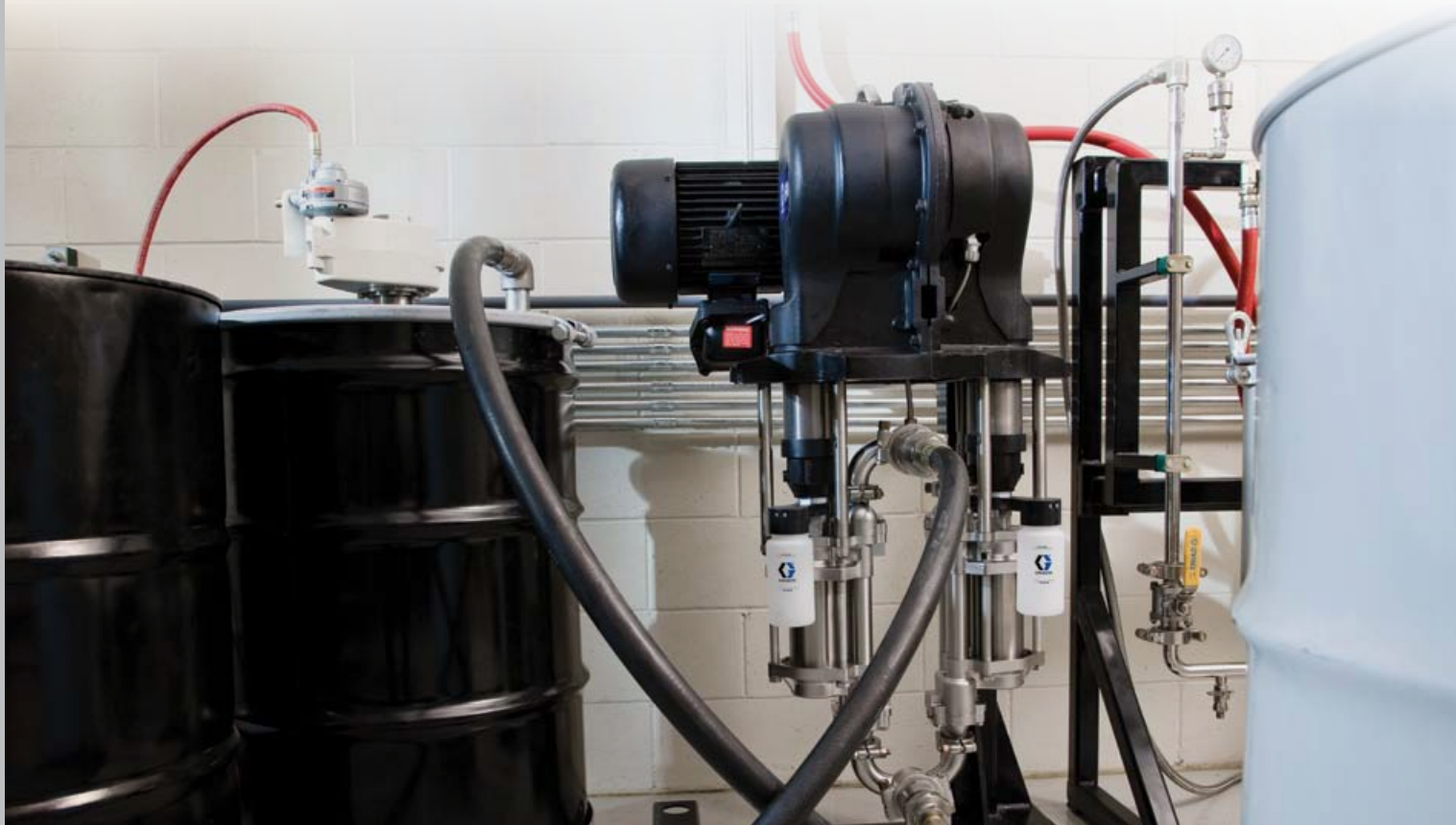
E-FLO

Model		1500	2000	3000	4000
PUMP SPECIFICATIONS	Output per Cycle	1500 cc	2000 cc	3000 cc	4000 cc
	Electric AC Motor Size	3 HP	5 HP	5 HP	5 HP
	Max Working Pressure psi (bar)	425 (29)*	460 (32)	330 (23)	250 (17)
	Output at 20 CPM gpm (lpm)	8.1 (31)	12 (45)	16.2 (61)	22.6 (85.5)
MANUALS	Pump Manual	311593	311593	311593	311593
	Lower Manual	3A0539	3A0539	3A0539	3A0539
	Motor Manual	311593	311593	311593	311593
INLET/OUTLET SIZE	Pump Inlet Size	2 in Tri-Clamp	2 in Tri-Clamp	2 in Tri-Clamp	2 in Tri-Clamp
	Pump Outlet Size	2 in Tri-Clamp	2 in Tri-Clamp	2 in Tri-Clamp	2 in Tri-Clamp

		Motor Type	Sensor Type	Lower Type	Stand							
PUMP CONSTRUCTION	No Motor	No Sensor	SST	•	EP0070	EP0010	EP0020	EP0030				
				•	EP0071	EP0011	EP0021	EP0031				
			MAXLIFE	•	EP0080	EP0040	EP0050	EP0060				
				•	EP0081	EP0041	EP0051	EP0061				
			ATEX/FM	SST	•	EP0170	EP0110	EP0120	EP0130			
					•	EP0171	EP0111	EP0121	EP0131			
	MAXLIFE	•		EP0180	EP0140	EP0150	EP0160					
		•		EP0181	EP0141	EP0151	EP0161					
	ATEX	No Sensor	SST	•	EP3070	EP1010	EP1020	EP1030				
				•	EP3071	EP1011	EP1021	EP1031				
			MAXLIFE	•	EP3080	EP1040	EP1050	EP1060				
				•	EP3081	EP1041	EP1051	EP1061				
		ATEX/FM	SST	•	EP3170	EP1110	EP1120	EP1130				
				•	EP3171	EP1111	EP1121	EP1131				
	FM	No Sensor	SST	•	EP4070	EP2010	EP2020	EP2030				
				•	EP4071	EP2011	EP2021	EP2031				
			MAXLIFE	•	EP4080	EP2040	EP2050	EP2060				
				•	EP4081	EP2041	EP2051	EP2061				
		ATEX/FM	SST	•	EP4170	EP2110	EP2120	EP2130				
				•	EP4171	EP2111	EP2121	EP2131				
	MAXLIFE	•	EP4180	EP2140	EP2150	EP2160						
		•	EP4181	EP2141	EP2151	EP2161						

*5 HP motor on no-motor configuration allows for 460 psi (31 bar) maximum working pressure

NOTE: Graco recommends 20 cpm or less for intermittent pumping applications and 12 cpm or less for continuous pumping applications.



AGITATORS

- 231414 Heavy-duty agitator with elevator, drum cover and siphon kit
- 231413 Same as 231414 without siphon capability
- 238157 Heavy-duty back-gearred agitator
- 240209 Same as 238157 with siphon kit

AIR SUPPLY CONTROLS

- 217074 Air Filter (40 micron)
- 181521 High Volume Air Regulator (200 cfm, 75 psi max)
- 206197 High Volume Air Regulator (200 cfm, 125 psi max)
- 207755 High Volume Air Regulator (380 cfm, 125 psi max)
- 214849 Air Lubricator (3/4 npt(f), 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 (15 gpm, 180 psi max fluid pressure, 1-1/4 npt)
- 236770 Mechanical (4.3 gpm, 180 psi max fluid pressure, 3/8 npt)
- 916154 Carbide Mechanical (15 gpm, 180 psi max fluid pressure, 1-1/4 npt)
- 288117 Pnuematic (20 gpm, 300 psi max fluid pressure, 1-1/4 npt)
- 288311 Pnuematic (20 gpm, 300 psi max fluid pressure, 1-1/2 npt)
- 288262 Pnuematic (20 gpm, 300 psi max fluid pressure, 2 in Tri-Clamp)
- 224486 Low Shear Mechanical (20 gpm, 300 psi max fluid pressure, 1-1/2 npt)
- 223824 Low Shear Mechanical (20 gpm, 300 psi max fluid pressure, 2 in Sanitary)
- 15J498 Pnuematic BPR Conversion Kit
- 24E709 BPR Kit for 750 cc Lowers
- 24E722 BPR Kit for 1000 cc to 4000 cc Lowers

FITTINGS

- 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 in Tri-Clamp to 2 npt
- 15J639 Inlet/Outlet Fitting for 1-1/2 in Tri-Clamp to 2 in Tri-Clamp

FLUID FILTER

- 244053 Low Pressure PTFE Encapsulated Fluoroelastomer 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 Aluminum fluid filter kit
- 915515 Low Pressure Bag Filter (15 gpm, 300 psi, CS)
- 915516 Low Pressure Bag Filter (15 gpm, 300 psi, SST)
- 915517 Low Pressure Bag Filter (30 gpm, 300 psi, CS)
- 915518 Low Pressure Bag Filter (30 gpm, 300 psi, SST)
- 213057 Red Alert Low Pressure Filter (6 gpm, 30 Mesh, 3/4 npt)
- 213058 Red Alert Low Pressure Filter (6 gpm, 60 Mesh, 3/4 npt)
- 213059 Red Alert Low Pressure Filter (6 gpm, 100 Mesh, 3/4 npt)
- 213060 Red Alert Low Pressure Filter (6 gpm, 150 Mesh, 3/4 npt)
- 213061 Red Alert Low Pressure Filter (6 gpm, 200 Mesh, 3/4 npt)
- 213062 Red Alert Low Pressure Filter (20 gpm, 30 Mesh, 3/4 npt)
- 213063 Red Alert Low Pressure Filter (20 gpm, 60 Mesh, 3/4 npt)
- 213064 Red Alert Low Pressure Filter (20 gpm, 100 Mesh, 3/4 npt)
- 213065 Red Alert Low Pressure Filter (20 gpm, 150 Mesh, 3/4 npt)
- 213066 Red Alert Low Pressure Filter (20 gpm, 200 Mesh, 3/4 npt)

GAUGE

- 187875 Gauge (30 psi max, SST)
- 187874 Gauge (100 psi max, SST)
- 187873 Gauge (200 psi max, SST)
- 187876 Gauge (300 psi max, SST)

MOUNTING HARDWARE

- 255143 Wall Bracket – For all NXT and Viscount Motors
- 253692 Stand – For NXT and Viscount Motors (750-2000 cc)
- 218742 Stand – For NXT 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 – E-Flo

ELECTRIC MOTOR ACCESSORIES

- 120373 Local I/O Box
- 15J755 Sensor Circuit Kit
- 288414 Gear Box Lubricant, 12 pack carton

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 (2000 psi max, 1/2 npt (f))
- 102644 Hydraulic shutoff valve (3000 psi max, 3/4 npt (f))
- 102646 Hydraulic shutoff valve (3000 psi max, 1 npt (f))
- 169236 Hydraulic Oil 5 gal (18.9 l) 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

SUCTION KITS

- 247475 For 1-1/2 npt(f) 5 gallon (18 l) SST suction kit
- 247476 For 1-1/2 npt(f) 55 gallon (208 l) SST suction kit
- 247477 For 2 npt(f) 5 gallon SST (18 l) suction kit
- 247478 For 2 npt(f) 55 gallon (208 l) SST suction kit
- 24E709 Circulation kit (4.3 gpm, 180 psi max)
- 24E722 Circulation kit (15 gpm, 180 psi max)

SURGE TANKS

- 239858 Medium Volume (15 gpm, 600 psi, SST)
- 238987 High Volume (20 gpm, 300 psi, SST, 2 npt)
- 238988 High Volume (20 gpm, 300 psi, SST, 1-1/2 npt)
- 218509 High Volume (20 gpm, 300 psi, SST, 2 npt, carbide)
- 218742 Floor Stand

HEATER

- 239850 Vis-con HP (120 VAC)
- 239851 Vis-con HP (240 VAC)
- 239852 Vis-con HP (220/240 VAC)

RETROFIT CONNECTION KITS

- 24F308 High-Flo to Bulldog/Senator
- 24F065 High-Flo to Viscount/President/President Stubby

UPGRADE KITS

- 24E664 Upgrade Kit for Enclosed Wet Cup, SST, for 1000-2000 cc Lowers
- 24F062 Upgrade Kit for Enclosed Wet Cup,CS for, Lowers 1000-2000cc
- 24F063 Upgrade Kit Open Wet Cup, SST, for Lowers 1000-2000cc
- 24F064 Upgrade Kit Open Wet Cup, CS, for Lowers 1000-2000cc
- 24F293 Upgrade Kit, E-flo Ball cages
- 24F285 Upgrade Kit for Enclosed Wet Cup,SST, for Lowers 3000-4000cc
- 24F286 Upgrade Kit for Enclosed Wet Cup,CS for, Lowers 3000-4000cc
- 24F287 Upgrade Kit Open Wet Cup, SST, for Lowers, Lowers 3000-4000cc
- 24F288 Upgrade Kit Open Wet Cup, CS, Lowers 3000-4000cc



ABOUT GRACO

PROVEN QUALITY. LEADING TECHNOLOGY.

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.

GRACO LOCATIONS

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