



CHECK-MATE®

Ram and Uni-drum™ Package Selection Guide



SEALANTS AND ADHESIVES

PROVEN QUALITY. LEADING TECHNOLOGY.

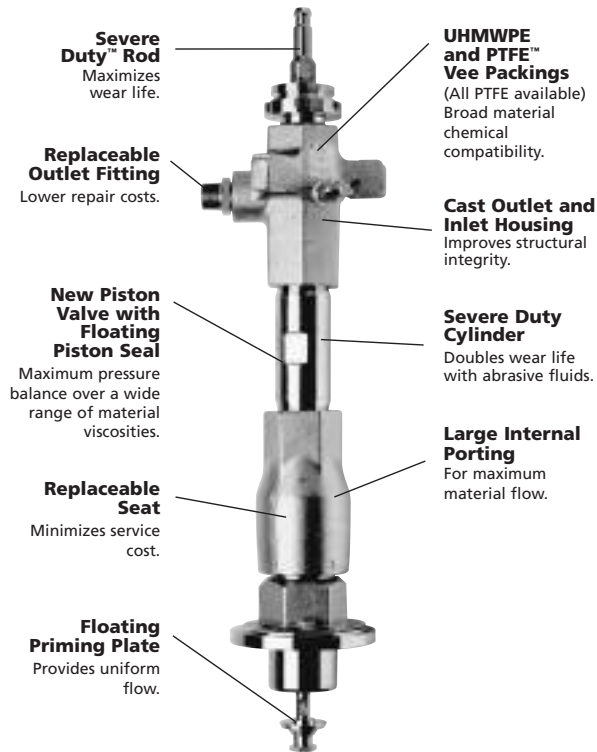
PUMP SELECTION CHART

To select the proper pump for a given sealant or adhesive material, you must know:

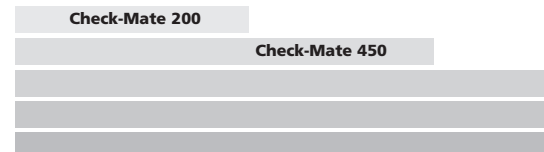
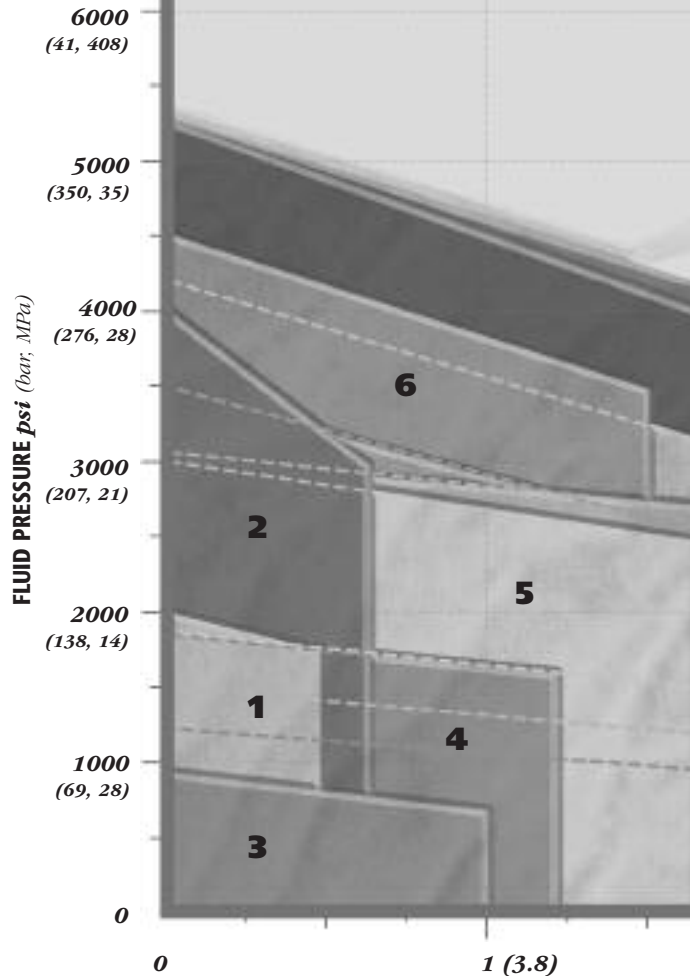
- 1) Material viscosity (cps)
- 2) Material type (urethane, epoxy, acrylic, silicone, etc.)
- 3) Flow rate

After obtaining the above information, use the pump selection chart to find the recommended pump. The chart on the right gives the air motor name, pressure ratio and lower type.

Check-Mate Features



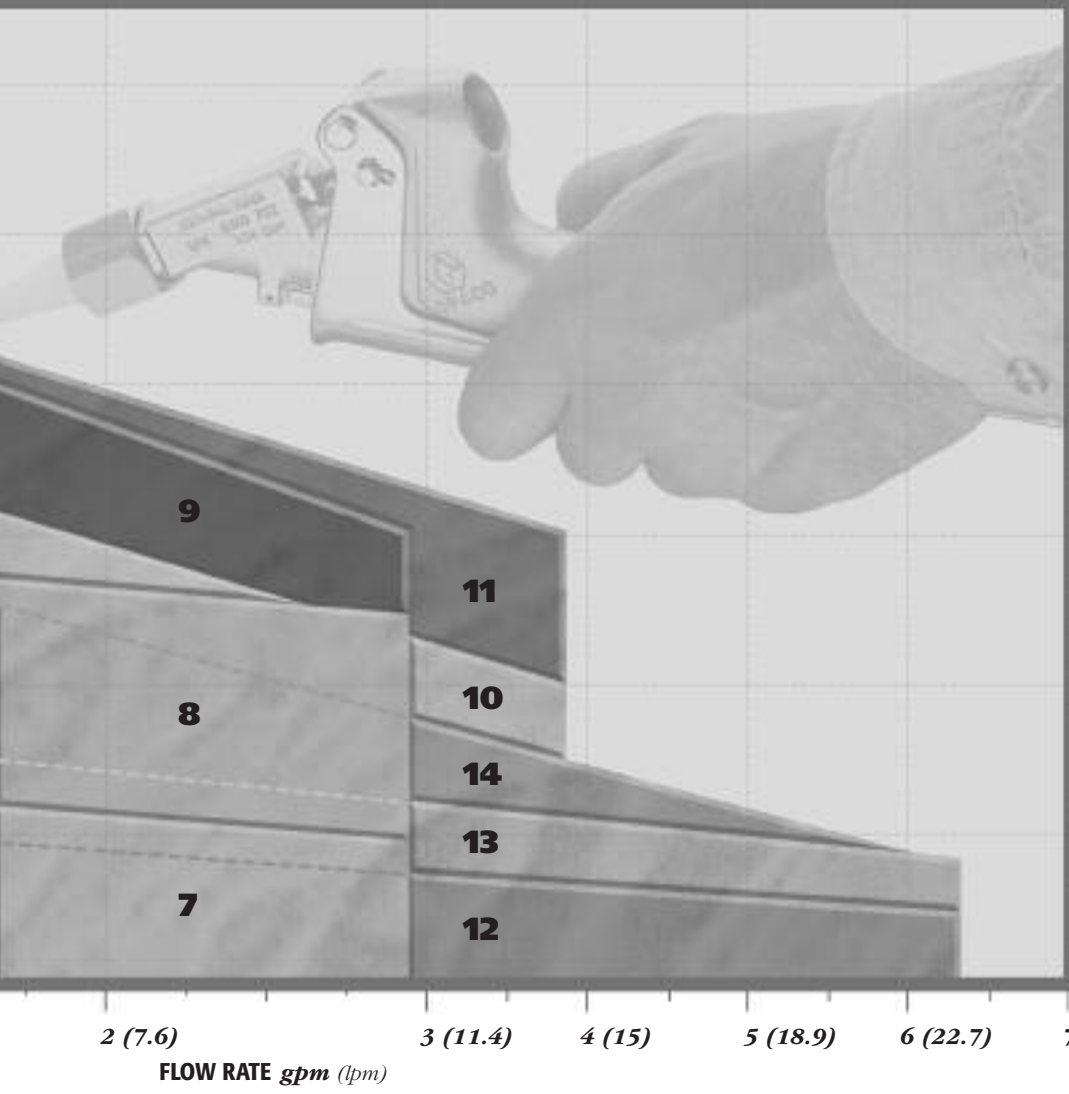
	AIR MOTOR	RATIO	LOWER
1	Monark®	23:1	CM 200
2	President®	46:1	CM 200
3	Monark	10:1	CM 450
4	President	20:1	CM 450
5	Senator®	34:1	CM 450



Use this chart as a guide only. Contact your local Graco representative for further details.

Registered trademarks mentioned herein are the property of their respective owners.

AIR MOTOR		RATIO	LOWER	AIR MOTOR		RATIO	LOWER
6	Bulldog®	55:1	CM 450	11	Premier	80:1	CM 1000
7	Senator	19:1	CM 800	12	Bulldog	12:1	CM 2100
8	Bulldog	31:1	CM 800	13	King	24:1	CM 2100
9	King®	65:1	CM 800	14	Premier	39:1	CM 2100
10	King	50:1	CM 1000				



- *Specialty Resins*
- *Autobody Sealer*
- *300,000 Centipoise*
- *Grease*
- *Silicones*
- *200,000 Centipoise*
- *Polysulfides*
- *50,000 Centipoise*
- *Lithographic Inks*
- *Automotive Epoxy*
- *20,000 Centipoise*
- *Acrylic Caulks*
- *5,000 Centipoise*

Check-Mate 800

Check-Mate 1000

Check-Mate 2100

CHECK-MATE PUMPS

Use the following pump/ram module chart to select the desired pump package for your specific needs. You must decide:

- 1) Pressure and flow requirements.
- 2) Will you be using 5 or 55 gal (19 or 209 l) drums of material?
- 3) What is the material viscosity in cps at the application temperature?
This determines the ram type.
- 4) Do you require carbon steel (CS) or stainless steel (SST) wetted parts?
To assist with this critical decision, refer to the following guide:

Which Pump to Select

Carbon steel	Butyls, epoxies, PVC, silicones, urethanes
Stainless steel	Acrylics, waterbornes

All Check-Mate pumps have Ultra-High Molecular Weight Polyethylene (UHMWPE) and PTFE (TFE) packings. For urethanes and some silicones, an optional all-PTFE packing kit is available. Contact your local Graco distributor for assistance, if required.

Available wiper materials include: nitrile, EPDM rubber and PVC. Nitrile wipers are the most common for sealant and adhesive materials; however, some end-users prefer PVC for silicone materials.

With the above information, appropriately select the pump/ram module from the chart on page 5.



Cart-Mounted



Single-Post Ram



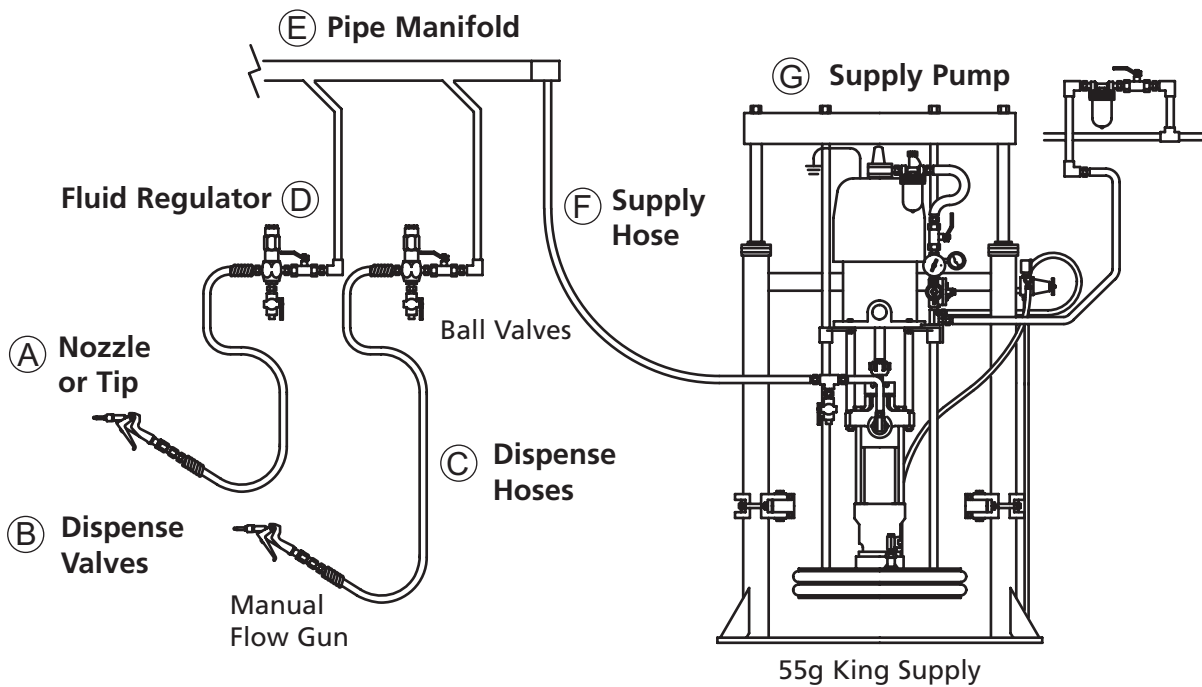
3 in Dual-Post Ram



6 1/2 in Dual-Post Ram

SYSTEM EXAMPLE

	A	B	C	D	E	F	G
Major Components	Nozzle or Tip	Dispense Valves	Dispense Hoses	Fluid Regulators	Pipe Manifold	Supply Hoses	Supply Pumps
Selection Factors	<ul style="list-style-type: none"> • Size, shape and type of fluid flow pattern 	<ul style="list-style-type: none"> • Usage <ul style="list-style-type: none"> - Manual - Automatic - Robotic - Shot • Pressure • Volume 	<ul style="list-style-type: none"> • Viscosity • Volume • Length • Pressure • Flexibility • Chemical compatibility 	<ul style="list-style-type: none"> • Viscosity • Pressure • Volume • Chemical compatibility 	<ul style="list-style-type: none"> • Volume • Pressure • Location • Drops • Chemical compatibility 	<ul style="list-style-type: none"> • Viscosity • Volume • Length • Pressure • Chemical compatibility 	<ul style="list-style-type: none"> • Container size • Volume • Viscosity • Pump location • Chemical compatibility
Equipment Options	<ul style="list-style-type: none"> • Nozzles • Tips • Extensions • Brushes 	<ul style="list-style-type: none"> • Mechanical gun • Pneumatic gun • Nozzle <ul style="list-style-type: none"> - Extrusion - Spray - Length - Orifice 	<ul style="list-style-type: none"> • Steel, SST • Pipe JIC • Flexible hoses <ul style="list-style-type: none"> - PTFE - Buna - Nylon - Moisture-Lok 	<ul style="list-style-type: none"> • Mastic regulator • Pressure compensating valve 	<ul style="list-style-type: none"> • Steel • SST • Pipe • Tubing • Sizes 	<ul style="list-style-type: none"> • Steel, SST • Pipe, JIC • Flexible hoses <ul style="list-style-type: none"> - PTFE - Buna - Nylon - Moisture-Lok 	<ul style="list-style-type: none"> • Priming piston • Double ball • Ram mount • 5 g, 55 g wiper plates • Drum empty options • Auto crossover



CHECK-MATE PUMPS

						Inductor	3" Single Post Ram	3" Dual Post Ram	3" Dual Post Ram	6.5" Dual Post Ram
						5 Gallon (20 Liter) Pail			55 Gallon (200 Liter) Drum	
		Fluid Outlet	Wetted Parts	Air Motor & Lower	Manual					
CM 200	MONARK 23:1 0.5 gpm / 1.9 lpm	1/2 npt(m)	CS	222782	308080	231134	231117		234121	
		1/2 npt(m)	SST	222839	308200	231170	231168			
	PRESIDENT 46:1 0.6 gpm / 2.3 lpm	1/2 npt(m)	CS	222783	308080	231136	231118		234120	
		1/2 npt(m)	SST	222907	308200	231172	231169			
CM 450	MONARK 10:1 1.0 gpm / 3.7 lpm	3/4 npt(m)	CS	222770	308017	231144	231113		223816	
		3/4 npt(m)	CS	222768	308017	231146	231111		223817	
	SENATOR 34:1 1.7 gpm / 6.4 lpm	3/4 npt(m)	CS	222769	308017		231112		223818	234122
		3/4 npt(m)	CS	224660	308017		231166*		224661*	
	BULLDOG 55:1 1.7 gpm / 6.4 lpm	3/4 npt(m)	CS	222813	308017			918386*		
		3/4 npt(m)	CS	222778	308017				223819	
		3/4 npt(f)	CS	237208	308017		231115			
3/4 npt(m)		CS	241570	308017		231167*		224662*		
CM 800	SENATOR 19:1 2.8 gpm / 10.6 lpm	1 npt(f)	CS	237264	308351					
		1 npt(f)	CS	237261	308351		237263	918371 pvc	686537	
	BULLDOG 31:1 2.8 gpm / 10.6 lpm	1 npt(f)	CS	237261	308351				918552 pvc	
		1 npt(f)	SST	234978	308352				234979	
		1 npt(f)	CS	240945	308351			918372 pvc	236472	918597 pvc
	KING 65:1 2.8 gpm / 10.6 lpm	1 npt(f)	CS	240945	308351				C59521	
		1 npt(f)	SST	236462	308352					918313 sst
1 npt(f)		SST	241519	308352					918314* epdm	
1 npt(f)		CS	237707	308355			918378	686965	918315 epdm	
CM 1000	KING 50:1 3.8 gpm / 14 lpm	1 npt(f)	CS	237707	308355			918379 pvc		
		1 npt(f)	CS	237707	308355					
		1 npt(f)	SST	237708	308356			918380		
CM 2100	PREMIER 80:1 3.8 gpm / 14 lpm	1 npt(f)	CS	237518	308355					918316 epdm
		1 npt(f)	SST	237520	308356					
CM 2100	BULLDOG 12:1 7.5 gpm / 28.5 lpm	1-1/2 npt(f)	CS	222828	308149				235835	
		1-1/2 npt(f)	CS	222835	308149				235836	
	PREMIER 39:1 7.5 gpm / 28.5 lpm	1-1/2 npt(f)	SST	22						918303 pvc

* Quiet Air Motor

Ram plates have nitrile (Buna-N) wipers unless otherwise noted

CS = zinc-plated carbon steel

SST = 303 stainless steel

CALCULATIONS

Calculations

Bead Size Diameter in (mm)	Gallons (Liters) per 1000 Lineal Foot	Feet (Meters) per Lineal Gallon
1/16 (1.7)	0.16 (0.1)	6000 (1829)
3/32 (2.4)	0.36 (0.3)	2700 (823)
1/8 (3.2)	0.64 (0.5)	1500 (457)
3/16 (5)	1.44 (1.2)	675 (206)
1/4 (6.3)	2.55 (2.1)	375 (114)
5/16 (8.3)	3.98 (3.3)	240 (73)
3/8 (9.5)	5.74 (4.8)	165 (50)
1/2 (12.7)	10.20 (8.5)	95 (29)
5/8 (15.8)	15.92 (13.3)	50 (15)
3/4 (19)	22.95 (19.1)	35 (11)
1 (25.4)	40.80 (34)	19 (6)

Pressure drop or ΔP

$$\Delta P = \frac{.0273 Q V L}{D^4}$$

Where:

P = Pressure drop in psi (bar, MPa)

V = Viscosity in poise (PS)

D = Diameter in inches (mm)

Q = Flow rate in gpm (lpm)

L = Length in feet (m)

Other ΔP Considerations:

* 0.094 diameter nozzle = 300 psi (21 bar, 2.1 MPa)

* Gun drop ΔP

Ultra-Lite® 6000 = 400 psi (28 bar, 2.8 MPa)

Ultra-Lite 4000 = 400 psi (28 bar, 2.8 MPa)

* Mastic Regulator ΔP = 400 psi (28 bar, 2.8 MPa)

* Straight Swivel 1/2 in (12.7 mm) = 200 psi (14 bar, 1.4 MPa)

* Z Swivel 1/2 in (12.7 mm) = 200 psi (14 bar, 1.4 MPa)

* Filters = 100-400 psi (7-28 bar, 0.7-2.8 MPa)

Example 1

Material is 2000 poise (200,000 cps) non-thixotropic acrylic latex sealant. 5 gal (4.2 l) pails, one manual gun, 25 ft x 3/8 in (7.6 m x 9.5 mm) I.D. hose, 1/4 in (6.3 mm) bead. The part is 6 in (152 mm) diameter. Need to do 3 parts per minute. Need swivel at the gun.

- 6 in (152 mm) diameter to circumference - πD or 3.14×6 in (152 mm) = 18.84 in (479 mm) (total) per part.
- 18.84 in (479 mm) x 3 (3 parts) = 57 in (1448 mm) of bead per minute
- Flow rate (gpm/lpm) = Area_{bead} x Length_{bead} = 0.049 in² (πr^2) x 57 in (1448mm) = 2.77 in³ = 0.01 gpm (231 in³ = 1 gal)

$$\Delta P = \frac{(0.0273) (0.01) (2000) (25)}{(.375)^4} = \frac{13.65}{.0198} = 689 \text{ PSI}$$

Nozzle	$\Delta P = 300$
Ultra-Lite 6000 Flow Gun	$\Delta P = 400$
Fittings & Swivel	$\Delta P = 400$

$$\Delta P_{\text{Total}} = \Delta P_{\text{Nozzle}} + \Delta P_{\text{Gun}} + \Delta P_{\text{Swivel}} + \Delta P_{\text{Hose}} \\ = (300 + 400 + 400 + 689) = 1789 \text{ psi (123.4 bar, 12.34 MPa)}$$

From the chart, we selected a 46:1 President with a 3 in single-post ram. Since the material is an acrylic, use SST wetted parts or part no. 231-169. A 46:1 pump at 90 psi of air will produce 4140 psi (46 x 90 psi) of pressure. Calculated pressure loss is only 1789 psi, so this selection will be fine for the application.

CHECK-MATE 200 PUMP/RAM PACKAGES

Flow rates to 0.6 gpm (2.3 lpm)*

Cart-Mounted Single-Post Elevator Packages for 5 Gal (19 l) Pails

- 231135** Monark 23:1 pump with carbon steel lower (222782), 5 gal (19 l) ram assembly, air regulator, cart (224137), 3/8 in npt(mbe) x 25 ft (7.6 m) nylon-lined hose and extrusion flow gun (207945). Air inlet: 1/4 in npt(f)
- 231134** Same as 231135, but without hose or gun. Air inlet: 1/4 in npt(f)
- 231171** Monark 23:1 pump with stainless steel lower (222839), 5 gal (19 l) ram assembly, air regulator, cart (224137), 3/8 in npt(mbe) x 25 ft (7.6 m) nylon-line hose and extrusion flow gun (207945). Air inlet: 1/4 in npt(f)
- 231170** Same as 231171, but without hose or gun. Air inlet: 1/4 in npt(f)
- 231137** President 46:1 pump with carbon steel lower (222783), 5 gal (19 l) ram assembly, air regulator, cart (224137), 3/8 in npt(mbe) x 25 ft (7.6 m) nylon-lined hose and extrusion flow gun (207945). Air inlet: 1/4 in npt(f)
- 231136** Same as 231137, but without hose or gun. Air inlet: 1/4 in npt(f)
- 231173** President 46:1 pump with stainless steel lower (222907), 5 gal (19 l) ram assembly, air regulator, cart (224137), 3/8 in npt(mbe) x 25 ft (7.6 m) nylon-lined hose and extrusion flow gun (207945). Air inlet: 1/4 in npt(f)
- 231172** Same as 231173, but without hose or gun. Air inlet: 1/4 in npt(f)

55 Gal (200 l) with 3 in Dual-Post Ram Packages

- 234121** Monark 23:1 pump with carbon steel lower (222782), 55 gal (200 l) ram assembly and air regulator. Air inlet: 1/2 in npt(f)
- 234120** President 46:1 pump with carbon steel lower (237205), 55 gal (200 l) ram assembly and air regulator. Air inlet: 1/2 in npt(f)



231136 shown



231177 shown

Stationary Single-Post Ram Packages for 5 Gal (19 l) Pails

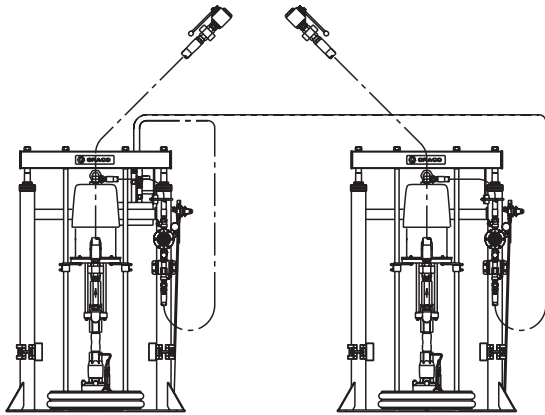
- 231117** Monark 23:1 pump with carbon steel lower (222782), 5 gal (19 l) single-post ram assembly with air regulator and ram plate. Air inlet: 1/2 in npt(f)
- 231168** Same as 231117, but with Monark 23:1 pump with stainless steel lower (222839) instead. Air inlet: 1/2 in npt(f)
- 234953** Same as 231117, but with PTFE wiper seals plate (235516). Air inlet: 1/2 in npt(f)
- 231118** President 46:1 pump with carbon steel lower (237205), 5 gal (19 l) single-post ram assembly with air regulator and ram plate. Air inlet: 1/2 in npt(f)
- 231169** Same as 231118, but with President 46:1 with stainless steel lower (222907) instead. Air inlet: 1/2 in npt(f)
- 234954** Same as 231118, but with PTFE wiper seals plate (235516). Air inlet: 1/2 in npt(f)

Cart-Mounted Single-Post Ram Packages for 5 Gal (19 l) Pails

- 232105** President 46:1 pump with carbon steel lower (237205), 5 gal (19 l) single-post cart-mounted ram assembly with air regulator and follower plate. Air inlet: 1/2 in npt(f)

CHECK-MATE 450 PUMP/55 GAL (200 L) RAM PACKAGES

Flow rates to 1.7 gpm (6.4 lpm)*



(233816 shown)

55 Gal (200 l) Tandem Packages

- 970022 Tandem 55:1 Bulldog Ram Pumps (EPDM, tire seal material) with Pneumatic Crossover**
Includes: follower plates, outlet check valves and supply hoses with shutoff valves.
Air inlet: 1/2 in npt(f)
- 970023 Tandem 55:1 Bulldog Ram Pumps (EPDM, tire seal material) with Electric Crossover**
Includes: follower plates, drum empty light kit, outlet check valves and supply hoses with shutoff valves. Air inlet: 1/2 in npt(f)

55 Gal (200 l) with 3 in Dual-Post Ram Packages

- 970024 Single 55:1 Bulldog Ram Pump (EPDM, tire seal material) with Pneumatic Low-Level Shutoff**
Includes: follower plate, outlet check valve and supply hose with shutoff valve.
Air inlet: 1/2 in npt(f)
- 224662 Single 55:1 Quiet Bulldog Ram Pump (EPDM)**
Includes: follower plate and drum clamps.
Air inlet: 1/2 in npt(f)
- C57940 Single 55:1 Bulldog Ram Pump (EPDM seals)**
Includes: follower plate, bleed handle and drum clamps. Air inlet: 1/2 in npt(f)
- 224661 Single 34:1 Quiet Senator Ram Pump (EPDM seals)**
Includes: follower plate and drum clamps. Air inlet: 1/2 in npt(f)

Dual-Post Ram Packages for 55 Gal (200 l) Drums

- 223816 Monark 10:1 pump (222770) with air regulator, 55 gal (200 l) dual-post ram with air-regulator, ram plate and drum clamps.**
Air inlet: 1/2 in npt(f)
- 223817 President 20:1 pump (222768) with air regulator, 55 gal (200 l) dual-post ram with air regulator, ram plate and drum clamps.**
Air inlet: 1/2 in npt(f)
- 223818 Senator 34:1 pump (237492) with air regulator, 55 gal (200 l) dual-post ram with air regulator, ram plate and drum clamps.**
Air inlet: 1/2 in npt(f)
- 223819 Bulldog 55:1 pump (222778) with air regulator, 55 gal (200 l) dual-post ram with air regulator, ram plate and drum clamps.**
Air inlet: 1/2 in npt(f)

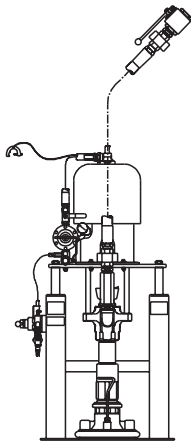
55 Gal (200 l) with 6.5 in Dual-Post Ram

- 234122 34:1 Senator Ram Pump (EPDM)**
Including follower plate, outlet check valves and air controls. Air inlet: 3/4 in npt(f)

* Maximum flow rates are for comparison purposes only. Consult a qualified Graco distributor for final recommendations.

CHECK-MATE 450 PUMP/RAM PACKAGES

Flow rates to 1.7 gpm (6.4 lpm)*



(231144 shown)



(231113 shown)

5 Gal (19 l) with 3 in Dual-Post Ram

- 918386** Single 55:1 Quiet Bulldog 5 gal. Ram Pump (Buna-N wiper)
Includes: outlet check valve.
Air inlet: 3/4 in nps(f)

Dual-Post Ram Packages for 30 L (8 gal) Drums

- 241083** Single 55:1 Quiet Bulldog Ram Pump for 30 l systems. Air inlet: 3/4 in nps(f)
- 970249** Same as 241083, but includes:
10 ft hose (521973) and ball valve (118854).
Air inlet: 3/4 in nps(f)

Cart-Mounted Elevator Packages for 5 Gal (19 l) Pails

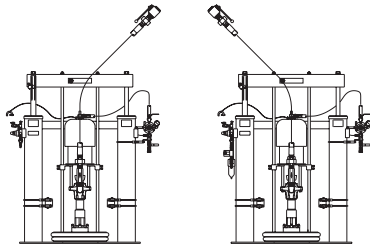
- 231144** Monark 10:1 pump (222770) with 5 gal (19 l) ram plate, air regulator, and cart (224137). Air inlet: 1/4 in npt(f)
- 231146** President 20:1 pump (222768) with 5 gal (19 l) ram plate, air regulator, and cart (224137). Air inlet: 1/4 in npt(f)
- 231145** Same as 231144 but includes 25 ft hose (215244) and gun (207945).
Air inlet: 1/4 in npt(f)
- 231147** Same as 231146 but includes 25 ft hose (215244) and gun (207945).
Air inlet: 1/4 in npt(f)

Stationary Single-Post Ram Packages for 5 Gal (19 l) Pails

- 231113** Monark 10:1 pump (222770), 5 gal (19 l) ram plate and air regulator.
Air inlet: 1/2 in npt(f)
- 231111** President 20:1 pump (222768), 5 gal (19 l) ram plate and air regulator.
Air inlet: 1/2 in npt(f)
- 231112** Senator 34:1 pump (222769), 5 gal (19 l) ram plate and air regulator.
Air inlet: 3/4 in npsm(f)
- 231115** Bulldog 55:1 pump (222778), 5 gal (19 l) ram plate and air regulator.
Air inlet: 3/4 in npsm(f)
- 231166** Quiet Senator 34:1 pump (224660), 5 gal (19 l) ram plate and air regulator.
Air inlet: 3/4 in npt(f)
- 231167** Quiet Bulldog 55:1 pump (241570), 5 gal (19 l) ram plate and air regulator.
Air inlet: 3/4 in npt(f)

CHECK-MATE 800 PUMP/RAM PACKAGES

Flow rates to 2.8 gpm (10.6 lpm)*



55 Gal (200 l) with 6.5 in Dual-Post Ram

- 970086 Tandem 65:1 King Ram Pumps (PVC, tire seal material) with Pneumatic Crossover**
Includes: follower plates, outlet check valves and supply hoses with shutoff valves.
Air inlet: 3/4 in npt(f)
- 970088 Single 65:1 Quiet King Ram Pump (PVC, tire seal material) with Pneumatic Low-Level Shutoff**
Includes: follower plate, outlet check valve and supply hose with shutoff valve.
Air inlet: 3/4 in npt(f)
- 970204 Tandem 65:1 SST Quiet King Ram Pumps (EPDM, tire seal material) with Pneumatic Crossover**
Includes: follower plates, outlet check valves and supply hoses with shutoff valves.
Air inlet: 3/4 in npt(f)
- 970205 Tandem 65:1 SST Quiet King Ram Pumps (EPDM, tire seal material) with Electric Crossover**
Includes: follower plates, drum empty light kit, outlet check valves and supply hoses with shutoff valves.
Air inlet: 3/4 in npt(f)
- 970206 Single 65:1 SST King Ram Pumps (EPDM, tire seal material) with Pneumatic Low-Level Shutoff**
Includes: follower plate, outlet check valve and supply hose with shutoff valve.
Air inlet: 3/4 in npt(f)
- 918313 SST King 65:1 Ram Pump (PVC, tire seal material)**
Includes: follower plate, air controls and drum clamp.
Air inlet: 3/4 in npt(f)
- 918314 SST Quiet King 65:1 Ram Pump (EPDM, tire seal material)**
Includes: follower plate, air controls and drum clamp. Air inlet: 3/4 in npt(f)
- 918597 King 65:1 Ram Pump (PVC tire seal material).**
Includes: Quiet air motor. Air inlet: 3/4 in npt(f)
- 246966 Bulldog 31:1 Ram Pump (EPDM)**
Includes: follower plate and air controls.
Air inlet: 3/4 in npt(f)
- 246967 King 65:1 Ram Pump (EPDM tire seal material)**
Air inlet: 3/4 in npt(f)

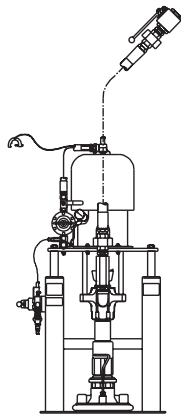
55 Gal (200 l) with 3 in Dual-Post Ram

- 970019 Tandem 65:1 King Ram Pumps (EPDM, tire seal material) with Pneumatic Crossover**
Includes: follower plates, outlet check valves and supply hoses with shutoff valves.
Air inlet: 1/2 in npt(f)
- 970020 Tandem 65:1 King Ram Pumps (EPDM, tire seal material) with Electric Crossover**
Includes: follower plates, drum empty light kit, outlet check valves and supply hoses with shutoff valves. Air inlet: 1/2 in npt(f)
- 970021 Single 65:1 King Ram Pump (EPDM, tire seal material) with Pneumatic Low-Level Shutoff**
Includes: follower plate, outlet check valve and supply hose with shutoff valve.
Air inlet: 1/2 in npt(f)
- 970074 Single 65:1 King Ram Pump (EPDM, tire seal material) /Hose/Gun**
Includes: follower plate, fluid dispense hose, straight swivel and Ultra-Lite 6000 manual dispense gun with nozzle.
Air inlet: 1/2 in npt(f)
- 236472 King 65:1 Ram Pump (EPDM, tire seal material)**
Includes: follower plate, air controls and drum clamps. Air inlet: 1/2 in npt(f)
- C59521 King 65:1 Ram Pump (EPDM, tire seal material)**
Includes: follower plate, check valve kit on pump outlet, enhanced bleed handle and blow off.
Air inlet: 1/2 in npt(f)
- 918552 Bulldog 31:1 Ram Pump (SD)**
Includes: follower plate and air controls.
Air inlet: 1/2 in npt(f)
- 686537 Bulldog 31:1 Ram Pump (EPDM)**
Includes: follower plate, air controls and drum clamps. Air inlet: 1/2 in npt(f)
- 234979 Bulldog 31:1 SS (EPDM)**
Includes: follower plate, check valve kit and air controls. Air inlet: 1/2 in npt(f)

* Maximum flow rates are for comparison purposes only. Consult a qualified Graco distributor for final recommendations.

CHECK-MATE 800 PUMP/RAM PACKAGES

Flow rates to 2.8 gpm (10.6 lpm)*

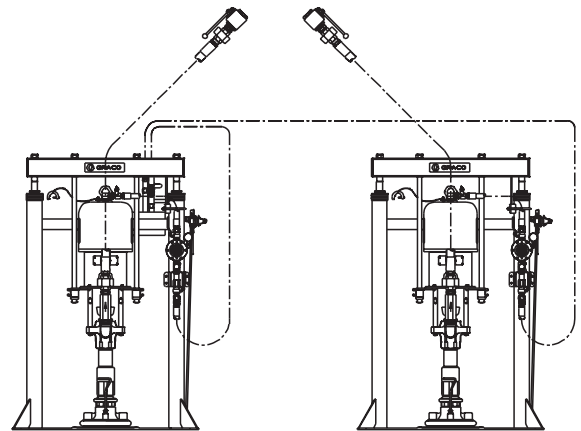


5 Gal (19 l) with 3 in Dual-Post Ram

- 970018 Single 65:1 King Ram Pump/Hose/Gun**
Includes: follower plate, fluid dispense hose, straight swivel and Ultra-Lite 6000 manual dispense gun with nozzle.
Air inlet: 3/4 in npsm(f)
- 970031 Single 65:1 Quiet King Ram Pump**
Includes: follower plate, outlet check valve and supply hose with shutoff valve.
Air inlet: 3/4 in npsm(f)
- 918372 Quiet King 65:1 Ram Pump**
Includes: follower plate and air controls.
Air inlet: 3/4 in npsm(f)
- 918371 Bulldog 31:1 Ram Pump**
Includes: tire plate and air controls.
Air inlet: 3/4 in npsm(f)
- 234977 Quiet King 65:1 Ram Pump**
Includes: follower plate, air controls and casters.
Air inlet: 3/4 in npsm(f)

30 l (8 gal) with Dual-Post Ram

- 241082 Quiet King 65:1 Ram Pump**
Includes: follower plate and air controls.
Air inlet: 3/4 in npsm(f)
- 970247** Same as 241082 except includes 4 ft hose (238715), Ultra-Lite 6000 gun (235628) and casters. Air inlet: 3/4 in npsm(f)
- 970248** Same as 241082 except includes ball valve (118854) and 10 ft hose (521973)
Air inlet: 3/4 in npsm(f)
- 234051 65:1 King (200 L) Ram Pump**
Includes: 30 l follower plate and air controls
- 234117** Same as 234051 but includes 10 ft hose (521973), ball valve (118854) and low level shut off



55/5 Gal (200/19 l) with

55 Gal. (200 l) 3 in Dual-Post Ram

- 970025 Tandem 65:1 King Ram Pumps (C59522) with Pneumatic Crossover**
Includes: 5 gal. (19 l) follower plates, outlet check valves and supply hoses with shutoff valves. Air inlet: 1/2 in npt(f)
- 970026 Tandem 65:1 King Ram Pumps (C59522) with Electric Crossover**
Includes: 5 gal. (19 l) follower plates, drum empty light kit, outlet check valves and supply hoses with shutoff valves.
Air inlet: 1/2 in npt(f)
- 970027 Single 65:1 King Ram Pumps (C59522) with Pneumatic Low-Level Shutoff**
Includes: 5 gal. (19 l) follower plate, outlet check valve and supply hose with shutoff valves. Air inlet: 1/2 in npt(f)

5 Gal (19 l) with Single-Post Ram

- 237263 Bulldog Ram Pump**
Includes: follower plate and air controls.
Air inlet: 3/4 in npsm(f)

CHECK-MATE 1000 PUMP/RAM PACKAGES

Flow rates to 3.7 gpm (14 lpm)*

55 Gal (200 l) with 6.5 in Dual-Post Ram

- 918315 King 50:1 EPDM plate, air controls
Air inlet: 3/4 in npt(f)
- 918316 Premier 80:1 EPDM plate, air controls
Air inlet: 3/4 in npt(f)
- 970187 Single Premier 80:1 Pneumatic
Low-Level Shutoff
Includes: 10 ft hose (C12433)
and ball valve (118854)
Air inlet: 3/4 in npt(f)
- 970185 Tandem Premier 80:1 Pneumatic Crossover

55 Gal (200 l) with 3 in Dual-Post Ram

- 686965 King 50:1
Air inlet: 1/2 in npt(f)

5 Gal (19 l) with 3 in Dual-Post Ram

- 918378 King 50:1 Wiper plate, air controls
Air inlet: 3/4 in npsm(f)
- 918379 King 50:1 PVC tire plate, air controls
Air inlet: 3/4 in npsm(f)
- 918380 King 50:1 SST wiper plate, air controls
Air inlet: 3/4 in npsm(f)



(686965 shown)

CHECK-MATE 2100 PUMP/RAM PACKAGES

Flow rates to 7.5 gpm (28.4 lpm)*

55 Gal (200 l) Dual-Post Ram

- 918303 Premier 39:1 Pump and 6.5 in Ram Assembly
Includes: follower plate, PVC follower seals,
ram and motor air control.
Air inlet: 3/4 in npt(f)
- 235836 King 24:1 Pump and 3 in Ram Assembly
Includes: follower plate and dual Buna-N
follower seals. Air inlet: 1/2 in npt(f)
- 235835 Bulldog 12:1 Pump and 3 in Ram Assembly
Same as 235836 but with Bulldog 12:1
instead of King 24:1. Air inlet: 1/2 in npt(f)
- 686892 Quiet Bulldog 12:1 Pump and 3 in Ram Assembly
Includes: follower plate and EPDM follower
seals. Air inlet: 1/2 in npt(f)



(918303 shown)

* Maximum flow rates are for comparison purposes only. Consult a qualified Graco distributor for final recommendations.

CHECK-MATE ACCESSORIES

For Check-Mate packages

5 Gal (19 l) Rams

Follower Plate Assemblies

- 222812 Flat Wiper
Polyethylene
Fits Check-Mate 200 and 450.
- 222909 Flat Wiper
PTFE-coated Buna-N and UHMWPE with
SST plate.
Fits Check-Mate 200 and 450.
- 918408 Wiper Plate - No wiper
- 918409 Flat wiper
Buna-N
Standard plate and valve on blow off.
Fits Check-Mate 200 and 450.
- 237702 Flat Wiper
Buna-N
Bare assembly. No check or blow off.
Fits Check-Mate 800 and 1000.
- C58391 Hose Wiper-type Plate Assembly
PVC hose wiper.
- 235516 Flat Wiper Inductor Plate
PTFE-coated wipers.
Fits Check-Mate 200 and 450.
- C50260 Flat Wiper Plate - No wiper.

Wiper Kits

- C03064 PVC Hose Wiper Kit
For C58391.

5 Gal (20 l) Double-Post Ram Accessories

- 918430 Low-level Limit Kit with Beacon Light
- 918414 Mobile Platform Kit
- C31197 Hose Support Kit
- 918439 Ram Repair Kit
- 222781 5 gal Pail Ram with Extender Kit

30 L (8 gal) Rams

- 241081 30 L Flat Wiper Buna-N

55 Gal (200 l) Rams

For 3 in Ram

- 918478 Empty Drum Kit, Pneumatic
With pump shut-off.
- C59519 Auto Drum/Pump Crossover Kit
120 volt 50/60Hz.

For 6.5 in Ram

- C32463 Passive Drum-Centering (Saddle) Clamps
Requires two.
- 918395 Heavy-Duty Drum Clamp Kit
Band latches around drum.
- 918397 Clam Shell Drum Holder Kit
For fiber drums.
- 918393 Auto Drum Pump Crossover Kit
All pneumatic.
- 918394 Low-level Beacon Kit, 120 Volt
Includes switch, bracket, beacon, cable.
- C34220 Hose Support Kit
Large spring and bracket for cross beam.
- C32451 Vent Hood Collector Kit

Follower Plates

- 918305 Ram Plate Assembly without Drum Seals

Drum Wiper Kits

- 236726 T-Wiper Kit
For 55 gal (200 l) rams
- C03059 PVC Hose-type
- 918312 EPDM Hose-type
- 165601 White Neoprene Solid Wiper Ring

Other Accessories

- 223689 5 gal Plate Shields
- 272792 55 gal Plate Shields
- 222780 Floor Stand
- 222776 Mounting Kit

HOSES

Part Number	Pressure psi (MPa, bar)	Material	ID inches (mm)	Length feet (m)	Coupling
Buna-N					
115042	2000 (13.8, 138)	Buna-N	1 (25)	6 (1.8)	1M
218986	2000 (13.8, 138)	Buna-N	1 (25)	50 (15.2)	1M
158743	2000 (13.8, 138)	Buna-N	0.5 (13)	6 (1.8)	3/8M
205753	2250 (15.5, 155)	Buna-N	0.375 (10)	40 (12.2)	3/8M
207831	2250 (15.5, 155)	Buna-N	0.375 (10)	50 (15.2)	3/8M
109105	2250 (15.5, 155)	Buna-N	0.75 (19)	6 (1.8)	3/4M
111010	2250 (15.5, 155)	Buna-N	0.75 (19)	10 (3)	3/4M
237865	2250 (15.5, 155)	Buna-N	0.75 (19)	75 (22.9)	1/2M
237866	2250 (15.5, 155)	Buna-N	0.75 (19)	50 (15.2)	1/2M
237867	2250 (15.5, 155)	Buna-N	0.75 (19)	65 (19.8)	1/2M
237863	2750 (19, 190)	Buna-N	0.625 (16)	75 (22.9)	1/2M
109063	3000 (20.7, 207)	Buna-N	0.5 (13)	10 (3)	1/2M
110069	3000 (20.7, 207)	Buna-N	0.5 (13)	15 (4.6)	1/2M
194995	3000 (20.7, 207)	Buna-N	0.5 (13)	26 (7.9)	1/2M
220590	3000 (20.7, 207)	Buna-N	0.5 (13)	10 (3)	1/2M
220591	3000 (20.7, 207)	Buna-N	0.5 (13)	6 (1.8)	1/2M
220592	3000 (20.7, 207)	Buna-N	0.5 (13)	16 (4.9)	1/2M
220593	3000 (20.7, 207)	Buna-N	0.5 (13)	20 (6.1)	1/2M
220594	3000 (20.7, 207)	Buna-N	0.5 (13)	25 (7.6)	1/2M
220595	3000 (20.7, 207)	Buna-N	0.5 (13)	20 (6.1)	3/8M
220602	3000 (20.7, 207)	Buna-N	0.5 (13)	50 (15.2)	1/2M
220608	3000 (20.7, 207)	Buna-N	0.5 (13)	25 (7.6)	1/2M
221092	3000 (20.7, 207)	Buna-N	0.5 (13)	40 (12.2)	1/2M
221093	3000 (20.7, 207)	Buna-N	0.5 (13)	50 (15.2)	1/2M
237861	3000 (20.7, 207)	Buna-N	0.5 (13)	75 (22.9)	1/2M
237862	3000 (20.7, 207)	Buna-N	0.5 (13)	65 (19.8)	1/2M
218689	3100 (21.4, 214)	Buna-N	0.75 (19)	50 (15.2)	3/4M
214962	3500 (24.1, 241)	Buna-N	0.5 (13)	15 (4.6)	1/2M
214964	3500 (24.1, 241)	Buna-N	0.5 (13)	50 (15.2)	1/2M
109163	4000 (27.6, 276)	Buna-N	0.375 (10)	6 (1.8)	3/8M
109165	4000 (27.6, 276)	Buna-N	0.375 (10)	15 (4.6)	1/4M
109167	4000 (27.6, 276)	Buna-N	0.375 (10)	25 (7.6)	1/4M
109169	4000 (27.6, 276)	Buna-N	0.375 (10)	40 (12.2)	3/8M
109170	4000 (27.6, 276)	Buna-N	0.375 (10)	50 (15.2)	3/8M
C12383	5000 (34.5, 345)	Buna-N	1 (25)	10 (3)	1 M
51B352	5000 (34.5, 345)	Buna-N	1.25 (32)	15 (4.6)	1 1/4M
521973	5000 (34.5, 345)	Buna-N	1.25 (32)	10 (3)	1 1/4M
109150	5000 (34.5, 345)	Buna-N	0.25 (6)	6 (1.8)	1/4M
109151	5000 (34.5, 345)	Buna-N	0.25 (6)	12 (3.7)	1/4M
109152	5000 (34.5, 345)	Buna-N	0.25 (6)	15 (4.6)	1/4M
109153	5000 (34.5, 345)	Buna-N	0.25 (6)	20 (6.1)	3/8M
109154	5000 (34.5, 345)	Buna-N	0.25 (6)	25 (7.6)1	1/4M
109156	5000 (34.5, 345)	Buna-N	0.25 (6)	35 (10.7)	3/8M
109157	5000 (34.5, 345)	Buna-N	0.25 (6)	40 (12.2)	3/8M
109158	5000 (34.5, 345)	Buna-N	0.25 (6)	50 (15.2)	3/8M
626720	5000 (34.5, 345)	Buna-N	0.5 (13)	5 (1.5)	1/2M
626721	5000 (34.5, 345)	Buna-N	0.5 (13)	10 (3)	1/2M
626722	5000 (34.5, 345)	Buna-N	0.5 (13)	25 (7.6)	1/2M
626723	5000 (34.5, 345)	Buna-N	0.5 (13)	6 (1.8)	1/2M
215238	5000 (34.5, 345)	Buna-N	0.75 (19)	10 (3)	3/4M
215239	5000 (34.5, 345)	Buna-N	0.75 (19)	15 (4.6)	3/4M
215240	5000 (34.5, 345)	Buna-N	0.75 (19)	25 (7.6)	3/4M

HOSES

Part Number	Pressure psi (MPa, bar)	Material	ID inches (mm)	Length feet (m)	Coupling
215241	5000 (34.5, 345)	Buna-N	0.75 (19)	6 (1.8)	3/4M
626724	5000 (34.5, 345)	Buna-N	0.75 (19)	10 (3)	3/4M
626725	5000 (34.5, 345)	Buna-N	0.75 (19)	15 (4.6)	3/4M
626726	5000 (34.5, 345)	Buna-N	0.75 (19)	25 (7.6)	3/4M
287887	5000 (34.5, 345)	Buna-N	1 (25)	10 (3)	1 npt
287888	5000 (34.5, 345)	Buna-N	1 (25)	15 (4.6)	1 npt
287889	5000 (34.5, 345)	Buna-N	1 (25)	20 (6.1)	1 npt
287890	5000 (34.5, 345)	Buna-N	1 (25)	25 (7.6)	1 npt
215441	5250 (36.2, 362)	Buna-N	0.5 (13)	10 (3)	1/2M
215443	5250 (36.2, 362)	Buna-N	0.5 (13)	25 (7.6)	1/2M
215444	5250 (36.2, 362)	Buna-N	0.5 (13)	50 (15.2)	1/2M
215445	5250 (36.2, 362)	Buna-N	0.5 (13)	5 (1.5)	1/2M
C12380	6015 (41.5, 415)	Buna-N	0.5 (13)	15 (4.6)	1/2M
Neoprene					
116762	3625 (25, 250)	Neoprene	.625 (16)	6 (1.8)	1 1/16F
116763	3625 (25, 250)	Neoprene	.625 (16)	10 (3)	1 1/16F
116760	4000 (27.6, 276)	Neoprene	0.5 (13)	6 (1.8)	7/8F
116761	4000 (27.6, 276)	Neoprene	0.5 (13)	10 (3)	7/8F
C12217	5000 (34.5, 345)	Neoprene	1 (25)	15 (4.6)	1 npt SS
C12218	5000 (34.5, 345)	Neoprene	1 (25)	20 (6.1)	1 npt SS
Nylon					
214697	3300 (22.8, 228)	Nylon	0.1875 (5)	50 (15.2)	1/4F
214698	3300 (22.8, 228)	Nylon	0.1875 (5)	25 (7.6)	1/4F
214699	3300 (22.8, 228)	Nylon	0.1875 (5)	6 (1.8)	1/4F
214981	3300 (22.8, 228)	Nylon	0.1875 (5)	15 (4.6)	1/4F
241812	3500 (24.1, 241)	Nylon	0.1875 (5)	25 (7.6)	1/4F
238712	4100 (28.3, 283)	Nylon	0.1875 (5)	24.6 (7.5)	1/4F
239107	4100 (28.3, 283)	Nylon	0.25 (6)	24.5 (7.5)	1/4F SS
239110	4100 (28.3, 283)	Nylon	0.25 (6)	32.8 (10)	1/4F SS
239111	4100 (28.3, 283)	Nylon	0.25 (6)	49.2 (15)	1/4F SS
H42503	4500 (31, 310)	Nylon	0.25 (6)	3 (0.9)	1/4F
H42506	4500 (31, 310)	Nylon	0.25 (6)	6 (1.8)	1/4F
H42510	4500 (31, 310)	Nylon	0.25 (6)	10 (3)	1/4F
H42525	4500 (31, 310)	Nylon	0.25 (6)	25 (7.6)	1/4F
H42550	4500 (31, 310)	Nylon	0.25 (6)	50 (15.2)	1/4F
H4251X	4500 (31, 310)	Nylon	0.25 (6)	100 (30.4)	1/4F
H43803	4500 (31, 310)	Nylon	0.375 (10)	3 (0.9)	3/8F
H43806	4500 (31, 310)	Nylon	0.375 (10)	6 (1.8)	3/8F
H43810	4500 (31, 310)	Nylon	0.375 (10)	10 (3)	3/8F
H43825	4500 (31, 310)	Nylon	0.375 (10)	25 (7.6)	3/8F
H43850	4500 (31, 310)	Nylon	0.375 (10)	50 (15.2)	3/8F
H4381X	4500 (31, 310)	Nylon	0.375 (10)	100 (30.4)	3/8F
H45010	4500 (31, 310)	Nylon	0.5 (13)	10 (3)	1/2F
H45025	4500 (31, 310)	Nylon	0.5 (13)	25 (7.6)	1/2F
H45050	4500 (31, 310)	Nylon	0.5 (13)	50 (15.2)	1/2F
H4501X	4500 (31, 310)	Nylon	0.5 (13)	100 (30.4)	1/2F
H52503	5600 (38.6, 386)	Nylon	0.25 (6)	3 (0.9)	1/4F
H52506	5600 (38.6, 386)	Nylon	0.25 (6)	6 (1.8)	1/4F
H52510	5600 (38.6, 386)	Nylon	0.25 (6)	10 (3)	1/4F
H52525	5600 (38.6, 386)	Nylon	0.25 (6)	25 (7.6)	1/4F
H52550	5600 (38.6, 386)	Nylon	0.25 (6)	50 (15.2)	1/4F
H5251X	5600 (38.6, 386)	Nylon	0.25 (6)	100 (30.4)	1/4F
H53803	5600 (38.6, 386)	Nylon	0.375 (10)	3 (0.9)	3/8F

HOSES

Part Number	Pressure psi (MPa, bar)	Material	ID inches (mm)	Length feet (m)	Coupling
H53806	5600 (38.6, 386)	Nylon	0.375 (10)	6 (1.8)	3/8F
H53810	5600 (38.6, 386)	Nylon	0.375 (10)	10 (3)	3/8F
H53825	5600 (38.6, 386)	Nylon	0.375 (10)	25 (7.6)	3/8F
H53850	5600 (38.6, 386)	Nylon	0.375 (10)	50 (15.2)	3/8F
H5381X	5600 (38.6, 386)	Nylon	0.375 (10)	100 (30.4)	3/8F
H55003	5600 (38.6, 386)	Nylon	0.5 (13)	3 (0.9)	1/2F
H55010	5600 (38.6, 386)	Nylon	0.5 (13)	10 (3)	1/2F
H55025	5600 (38.6, 386)	Nylon	0.5 (13)	25 (7.6)	1/2F
H55050	5600 (38.6, 386)	Nylon	0.5 (13)	50 (15.2)	1/2F
H5501X	5600 (38.6, 386)	Nylon	0.5 (13)	100 (30.4)	1/2F
H72503	7250 (50, 500)	Nylon	0.25 (6)	3 (0.9)	1/4F
H72506	7250 (50, 500)	Nylon	0.25 (6)	6 (1.8)	1/4F
H72510	7250 (50, 500)	Nylon	0.25 (6)	10 (3)	1/4F
H72525	7250 (50, 500)	Nylon	0.25 (6)	25 (7.6)	1/4F
H72550	7250 (50, 500)	Nylon	0.25 (6)	50 (15.2)	1/4F
H7251X	7250 (50, 500)	Nylon	0.25 (6)	100 (30.4)	1/4F
H73803	7250 (50, 500)	Nylon	0.375 (10)	3 (0.9)	3/8F
H73806	7250 (50, 500)	Nylon	0.375 (10)	6 (1.8)	3/8F
H73810	7250 (50, 500)	Nylon	0.375 (10)	10 (3)	3/8F
H73825	7250 (50, 500)	Nylon	0.375 (10)	25 (7.6)	3/8F
H73850	7250 (50, 500)	Nylon	0.375 (10)	50 (15.2)	3/8F
H7381X	7250 (50, 500)	Nylon	0.375 (10)	100 (30.4)	3/8F
H75010	7250 (50, 500)	Nylon	0.5 (13)	10 (3)	1/2F
H75025	7250 (50, 500)	Nylon	0.5 (13)	25 (7.6)	1/2F
H75050	7250 (50, 500)	Nylon	0.5 (13)	50 (15.2)	1/2F
H7501X	7250 (50, 500)	Nylon	0.5 (13)	100 (30.4)	1/2F
Moisture-Lok					
947096	1500 (10.3, 103)	Polyolefin	1 (25 (6)	1.8 (25)	1 M
947091	1500 (10.3, 103)	Polyolefin	0.75 (19)	6 (1.8)	3/4M
947092	1500 (10.3, 103)	Polyolefin	0.75 (19)	10 (3)	3/4M
947093	1500 (10.3, 103)	Polyolefin	0.75 (19)	15 (4.6)	3/4M
947094	1500 (10.3, 103)	Polyolefin	0.75 (19)	25 (7.6)	3/4M
947086	2000 (13.8, 138)	Polyolefin	0.5 (13)	6 (1.8)	1/2M
947087	2000 (13.8, 138)	Polyolefin	0.5 (13)	10 (3)	1/2M
947089	2000 (13.8, 138)	Polyolefin	0.5 (13)	25 (7.6)	1/2M
947081	2250 (15.5, 155)	Polyolefin	0.375 (10)	6 (1.8)	3/8M
947082	2250 (15.5, 155)	Polyolefin	0.375 (10)	10 (3)	3/8M
947083	2250 (15.5, 155)	Polyolefin	0.375 (10)	15 (4.6)	3/8M
947084	2250 (15.5, 155)	Polyolefin	0.375 (10)	25 (7.6)	3/8M
947085	2250 (15.5, 155)	Polyolefin	0.375 (10)	50 (15.2)	3/8M
947076	2750 (19, 190)	Polyolefin	0.25 (6)	6 (1.8)	1/4F
947077	2750 (19, 190)	Polyolefin	0.25 (6)	10 (3)	1/4F
947078	2750 (19, 190)	Polyolefin	0.25 (6)	15 (4.6)	1/4F
947079	2750 (19, 190)	Polyolefin	0.25 (6)	25 (7.6)	1/4F
947080	2750 (19, 190)	Polyolefin	0.25 (6)	50 (15.2)	1/4F
PTFE					
C12288	1500 (10.3, 103)	PTFE	0.5 (13)	10 (3)	1/2M (npt)
C50262	2500 (17.2, 172)	PTFE	.375 (10)	25 (7.6)	3/8M (npt)
552041	3000 (20.7, 207)	PTFE	.188 (5)	5 (1.5)	1/8M (npt)
552042	3000(20.7, 207)	PTFE	.188 (5)	10 (3)	1/8M (npt)
552043	3000(20.7, 207)	PTFE	.188 (5)	15 (4.6)	1/8M (npt)
552045	3000(20.7, 207)	PTFE	.188 (5)	25 (7.6)	1/8M (npt)
204938	3000(20.7, 207)	PTFE	0.25 (6)	25 (7.6)	1/4F

HOSES

Part Number	Pressure psi (MPa, bar)	Material	ID inches (mm)	Length feet (m)	Coupling
205349	3000(20.7, 207)	PTFE	0.25 (6)	15 (4.6)	1/4F
206024	3000(20.7, 207)	PTFE	0.25 (6)	50 (15.2)	1/4F
C12423	3000(20.7, 207)	PTFE	1 (25)	15 (4.6)	1 5/16F JIC SS
685612	4000 (27.6, 276)	PTFE	0.25 (6)	6 (1.8)	1/4M SS
685614	4000 (27.6, 276)	PTFE	0.25 (6)	15 (4.6)	1/4M SS
222934	4000 (27.6, 276)	PTFE	0.3125 (8)	15 (4.6)	1/2F SS
685602	4000 (27.6, 276)	PTFE	0.375 (10)	15 (4.6)	3/8M SS
685603	4000 (27.6, 276)	PTFE	0.375 (10)	25 (7.6)	3/8M SS
511387	4000 (27.6, 276)	PTFE	0.75 (19)	25 (7.6)	3/4M SS
685605	4000 (27.6, 276)	PTFE	0.75 (19)	6 (1.8)	3/4M SS
685606	4000 (27.6, 276)	PTFE	0.75 (19)	10 (3)	3/4M SS
685607	4000 (27.6, 276)	PTFE	0.75 (19)	15 (4.6)	3/4M SS
685608	4000 (27.6, 276)	PTFE	0.75 (19)	25 (7.6)	3/4M SS
C12410	5000 (34.5, 345)	PTFE	1 (25)	10 (3)	1 1/16F UNF JIC 37°
C12433	5000 (34.5, 345)	PTFE	1.25 (32)	10 (3)	1 5/8F UNF JIC 37°
552013*	5000 (34.5, 345)	PTFE	.375 (10)	5 (1.5)	9/16F JIC SS
552014*	5000 (34.5, 345)	PTFE	.375 (10)	10 (3)	9/16F JIC SS
552015*	5000 (34.5, 345)	PTFE	.375 (10)	15 (4.6)	9/16F JIC SS
552016*	5000 (34.5, 345)	PTFE	.375 (10)	20 (6.1)	9/16F JIC SS
552017*	5000 (34.5, 345)	PTFE	.375 (10)	25 (7.6)	9/16F JIC SS
552018*	5000 (34.5, 345)	PTFE	0.5 (13)	5 (1.5)	3/4F JIC SS
552019*	5000 (34.5, 345)	PTFE	0.5 (13)	10 (3)	3/4F JIC SS
552020*	5000 (34.5, 345)	PTFE	0.5 (13)	15 (4.6)	3/4F JIC SS
552021*	5000 (34.5, 345)	PTFE	0.5 (13)	20 (6.1)	3/4F JIC SS
552022*	5000 (34.5, 345)	PTFE	0.5 (13)	25 (7.6)	3/4F JIC SS
552023*	5000 (34.5, 345)	PTFE	0.675 (17)	5 (1.5)	7/8F JIC SS
552025*	5000 (34.5, 345)	PTFE	0.675 (17)	15 (4.6)	7/8F JIC SS
552026*	5000 (34.5, 345)	PTFE	0.675 (17)	20 (6.1)	7/8F JIC SS
552027*	5000 (34.5, 345)	PTFE	0.675 (17)	25 (7.6)	7/8F JIC SS
552028*	5000 (34.5, 345)	PTFE	0.75 (19)	5 (1.5)	1 1/16F JIC SS
552029*	5000 (34.5, 345)	PTFE	0.75 (19)	10 (3)	1 1/16F JIC SS
552030*	5000 (34.5, 345)	PTFE	0.75 (19)	15 (4.6)	1 1/16F JIC SS
552031*	5000 (34.5, 345)	PTFE	0.75 (19)	20 (6.1)	1 1/16F JIC SS
552032*	5000 (34.5, 345)	PTFE	0.75 (19)	25 (7.6)	1 1/16F JIC SS
222935*	5000 (34.5, 345)	PTFE	0.3125 (8)	15 (4.6)	1/2M x 1/2F SS
511381*	5000 (34.5, 345)	PTFE	0.5 (13)	15 (4.6)	1/2M SS
552272*	5000 (34.5, 345)	PTFE	0.75 (19)	1.5 (0.5)	3/4M CS 90°
552033*	5000 (34.5, 345)	PTFE	1 (25)	5 (1.5)	1 5/16F JIC SS
552034*	5000 (34.5, 345)	PTFE	1 (25)	10 (3)	1 5/16F JIC SS
552035*	5000 (34.5, 345)	PTFE	1 (25)	15 (4.6)	1 5/16F JIC SS
552036*	5000 (34.5, 345)	PTFE	1 (25)	20 (6.1)	1 5/16F JIC SS
552037*	5000 (34.5, 345)	PTFE	1 (25)	25 (7.6)	1 5/16F JIC SS<12

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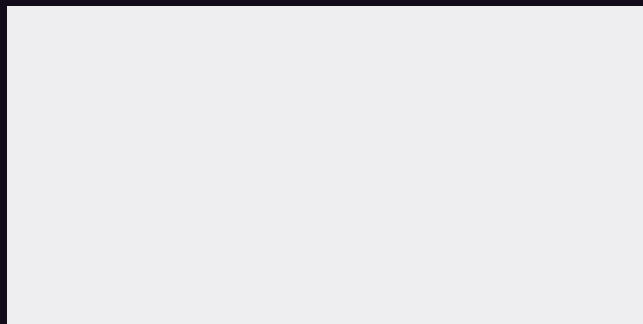
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