



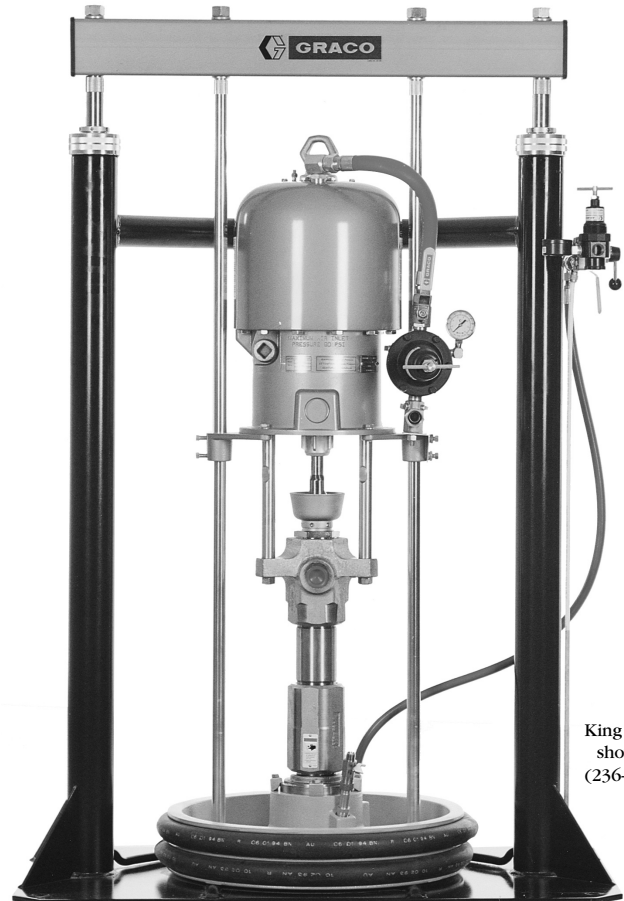
First choice when  
quality counts.

# Check-Mate® 800

## CS & SST Priming Piston Fluid Pumps

**High volume,  
high pressure  
pump for  
moving high  
viscosity  
materials**

- Available in Severe Duty Carbon Steel and Stainless Steel models
- 2.8 gpm (10.6 lpm) flow rate at 60 cpm
- 55 gal. (200 liter) or 5 gal. (20 liter) ram systems available
- Senator 19:1, Bulldog 31:1, and King 65:1 fluid power ratios
- High flow rates and high fluid pressures increase production rates
- High output per cycle reduces wear for longer life and lower repair costs
- Floating piston seal and flow-through priming plate improves pump loading of high viscosity materials



King 65:1  
shown  
(236-472)

COMPONENTS

The Check-Mate 800 pump is designed to transfer high viscosity fluids from 55 gallon (200 liter) drums or 5 gallon (20 liter) pails in high volumes to one or more locations. The internal design moves fluid from the inlet to the outlet port with the lowest pressure drop available. The metal wear parts are treated with the finest wear-resistant coatings to achieve the Graco Severe-Duty™ mark of excellence for long life. Three power ratios (19:1, 31:1 and 65:1) provide different levels of pressure up to 5850 (40.4 MPa, 404 bar) and flow rates up to 2.8 gpm (10.6 lpm) to increase production capability and capacity.

### Typical Fluids Handled

- Acrylics
- Adhesives
- Butyl
- Caulking Compounds
- Epoxy
- Inks
- Lubricants
- PVC Sealers
- Sealants
- Silicones
- Urethanes

### Typical Applications

- Feeding applicators, meters or proportioners directly from pails or drums
- Transferring sealants or adhesives to one or more operator dispensing stations
- Transferring viscous chemicals in the formulation of high viscosity materials
- Packaging drums, pails, caulking tubes or chubs

## About Graco Check-Mate Pumps

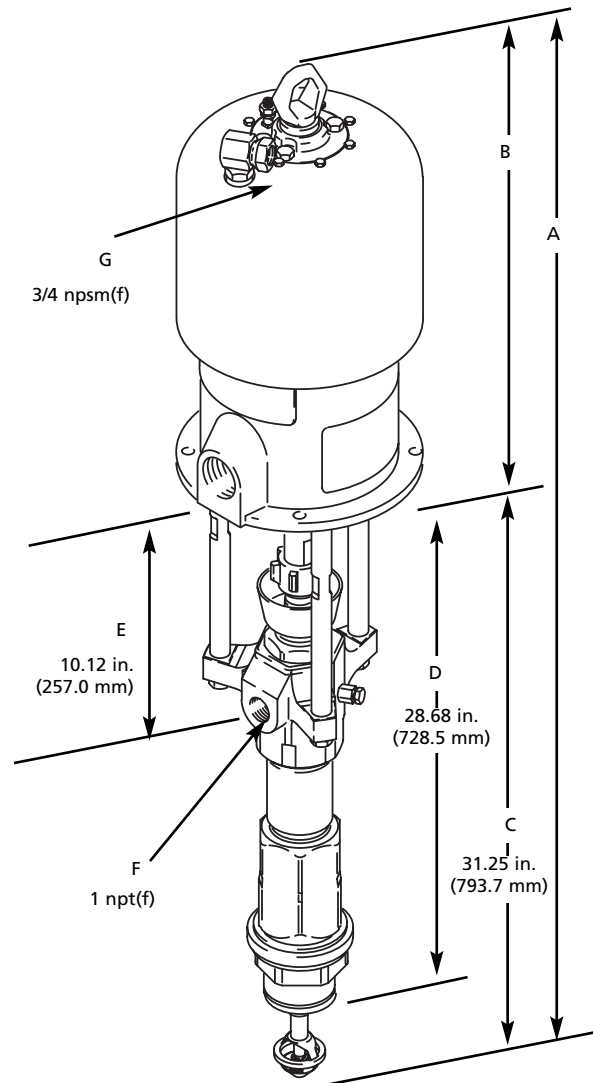
### Powerful Air Motors

The King, Bulldog and Senator air motors are utilized with the Check-Mate 800 pump lower to provide a full line of high performance pumps for different fluid pressure and flow rate applications.

### Check-Mate Pump Lower

Check-Mate 800 lowers are pressure balanced designed and have reduced internal pressure drop to provide the same fluid output on both the up and down stroke. Improved pump efficiency produces greater pressure for pumping high viscosity fluids or supplying long fluid pipe runs or lines.

## Dimensions



Model	A	B
<b>236-471</b> <b>King 65:1, CS</b>	54.20 in. (1376.7 mm)	22.95 in. (583.0 mm)
<b>237-265</b> <b>King 65:1, RIQ, CS</b>	54.33 in. (1383.0 mm)	23.21 in. 589.6 mm
<b>237-261</b> <b>Bulldog 31:1, CS</b>	52.68 in. (1338.0 mm)	21.42 in. 544.0 mm)
<b>237-274</b> <b>Bulldog 31:1, RIQ, CS</b>	54.65 in. (1388.0 mm)	23.43 in. 595.0 mm
<b>237-264</b> <b>Senator 19:1, CS</b>	52.80 in. (1341.0 mm)	21.57 in. (548.0 mm)

RIQ = Reduced Icing Quiet

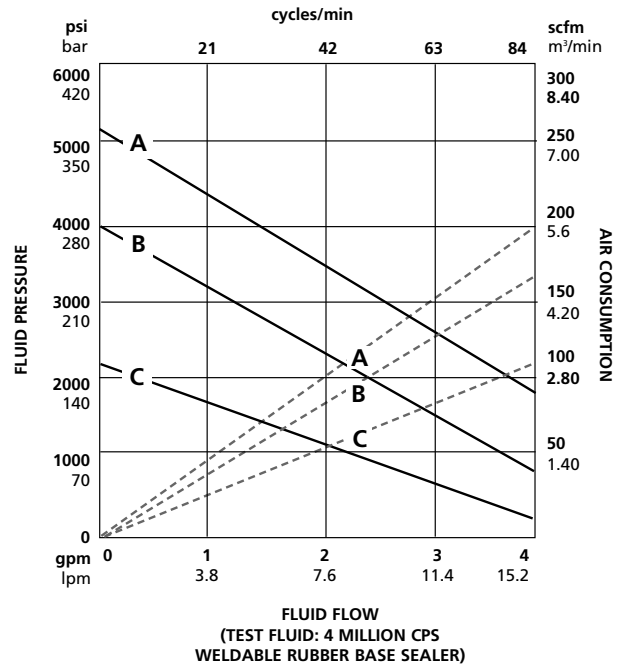
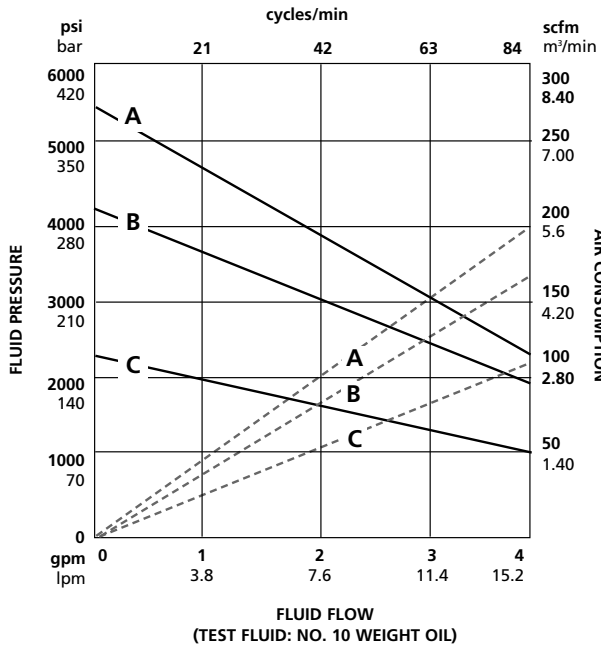
## Technical Specifications

<b>Displacement pump effective area</b>	..... 1.24 in. <sup>2</sup> (8 cm <sup>2</sup> )
<b>Volume per cycle</b>	..... 11.7 in. <sup>3</sup> (192 cm <sup>3</sup> )
<b>Pump cycles per 1 gal. (3.8 liters)</b>	..... 21
<b>Fluid flow at 60 cpm</b>	..... 2.8 gpm (10.6 lpm)
<b>Max. fluid working pressure</b>	
<b>King 65:1 Check-Mate</b>	..... 5850 psi (40.3 MPa, 403 bar)
<b>Bulldog 31:1 Check-Mate</b>	..... 3100 psi (21.4 MPa, 214 bar)
<b>Senator 19:1 Check-Mate</b>	..... 2280 psi (15.7 MPa, 157 bar)
<b>Max. air input pressure</b>	
<b>King 65:1 Check-Mate</b>	..... 90 psi (0.63 MPa, 6.3 bar)
<b>Bulldog 31:1 Check-Mate</b>	..... 100 psi (0.7 MPa, 7 bar)
<b>Senator 19:1 Check-Mate</b>	..... 120 psi (0.84 MPa, 8.4 bar)
<b>Max. pump operating temperature</b>	
..... 150°F (66°C)	
<b>Air motor piston effective area</b>	
<b>King 65:1 Check-Mate</b>	..... 78.5 in. <sup>2</sup> (506 cm <sup>2</sup> )
<b>Bulldog 31:1 Check-Mate</b>	..... 38 in. <sup>2</sup> (248 cm <sup>2</sup> )
<b>Senator 19:1 Check-Mate</b>	..... 24 in. <sup>2</sup> (154 cm <sup>2</sup> )
<b>Stroke length</b>	..... 4.75 in. (120 mm)
<b>Air inlet size</b>	..... 3/4 npsm(f)
<b>Fluid outlet size</b>	..... 1 npt(f)
<b>Wetted parts</b> . *Carbon steel; chrome; zinc; and nickel-plating; 304, 316, 440, and 17-4 PH grades of SST; alloy steel; ductile iron; Teflon®; glass-filled Teflon; UHMWPE	
<b>Weight</b>	..... 160 lbs. (73 kg)
<b>Displacement pump weight</b>	..... 81 lbs. (37 kg)
<b>Instruction manual (carbon steel)</b>	..... 308-351
<b>Instruction manual (stainless steel)</b>	..... 308-352

Teflon® is a registered trademark of Du Pont.

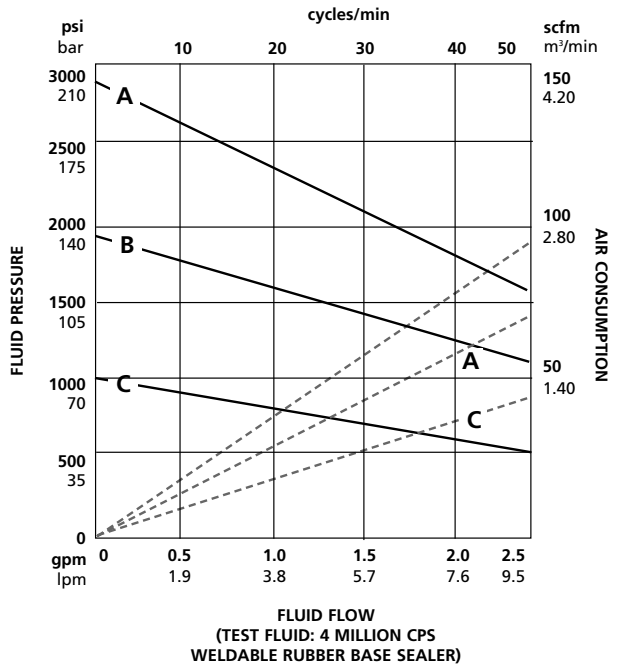
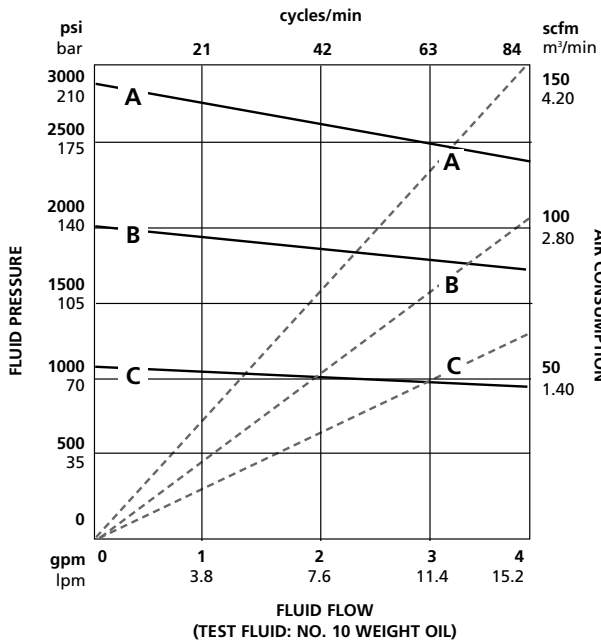
\* Not included in Stainless Steel Pump.

# King 65:1 Check-Mate 800 Pump Performance



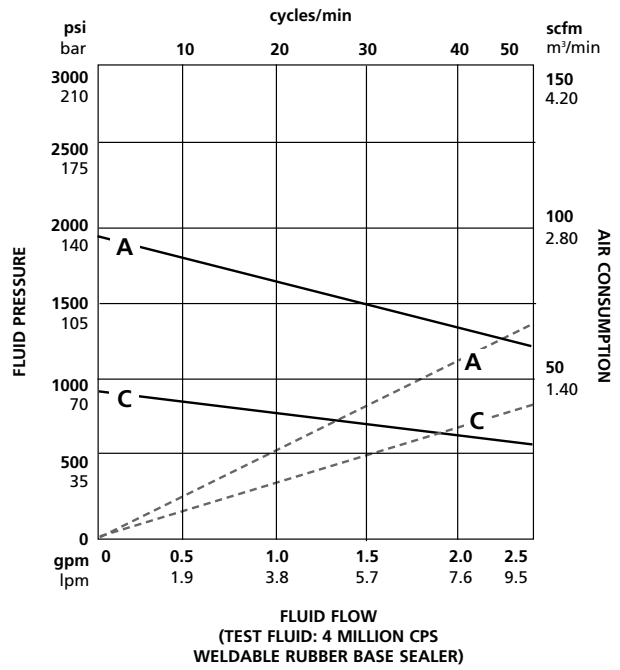
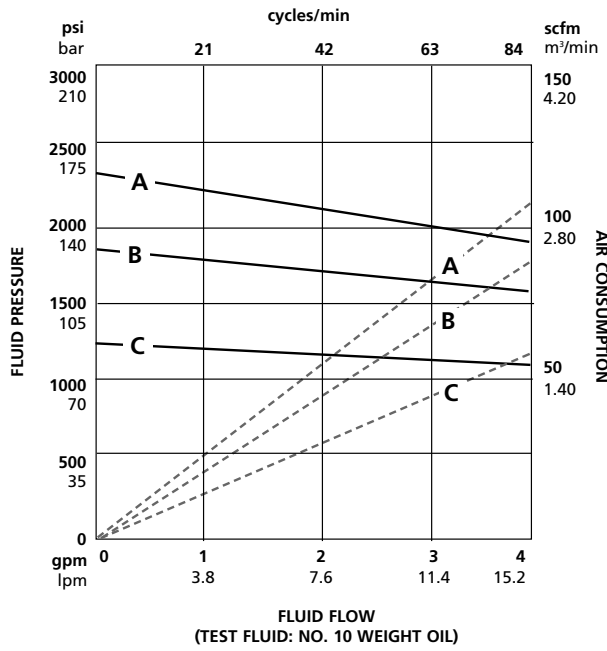
Key: Fluid Outlet Pressure – Black Solid Curves  
 Air Consumption – Gray Dotted Curves  
 A = 90 psi (6.3 bar) air pressure  
 B = 70 psi (4.9 bar) air pressure  
 C = 40 psi (2.8 bar) air pressure

# Bulldog 31:1 Check-Mate 800 Pump Performance



Key: Fluid Outlet Pressure – Black Solid Curves  
 Air Consumption – Gray Dotted Curves  
 A = 100 psi (7 bar) air pressure  
 B = 70 psi (4.9 bar) air pressure  
 C = 40 psi (2.8 bar) air pressure

# Senator 19:1 Check-Mate 800 Pump Performance

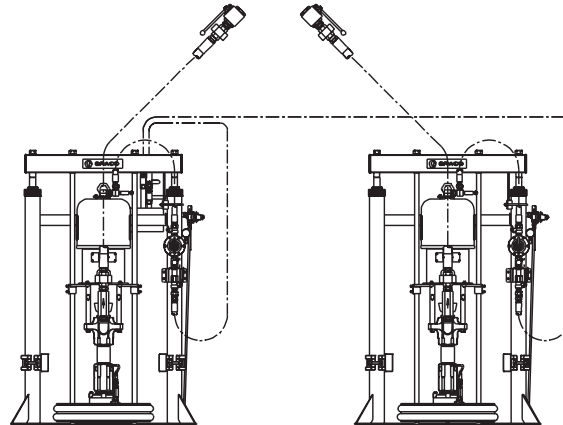
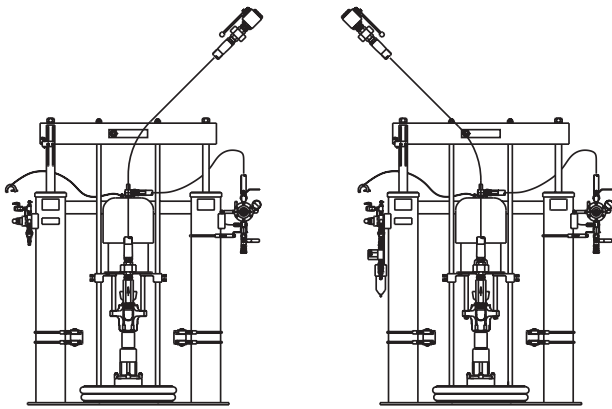


Key: Fluid Outlet Pressure – Black Solid Curves  
Air Consumption – Gray Dotted Curves  
A = 120 psi (8.4 bar) air pressure  
B = 100 psi (7 bar) air pressure  
C = 70 psi (4.9 bar) air pressure

# Ram Pump Packages Ordering Information

## 55 Gallon (200 liter) with 6.5 in. Dual Post Ram

## 55 Gallon (200 liter) with 3 in Dual Post Ram



**970-086 Tandem 65:1 King Ram Pumps (PVC) with Pneumatic Crossover**

Includes: (2) 55 gal. (200 liter) 6.5 in. dual post rams, 55 gal. (200 liter) PVC follower plates and pneumatic crossover control, outlet check valves, and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-087 Tandem 65:1 King Ram Pumps (PVC) with Electric Crossover**

Includes: (2) 55 gal. (200 liter) 6.5 in. dual post rams, 55 gal. (200 liter) PVC follower plates and electric crossover control with drum empty light kit, outlet check valves, and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-088 Single 65:1 King Ram Pump (PVC) with Pneumatic Low-Level Shutoff**

Includes: (1) 55 gal. (200 liter) 6.5 in. dual post ram with low-level shutoff, 55 gal. (200 liter) PVC follower plate, outlet check valve, and (1) 1-1/4 in. x 10 ft. (3 m) supply hose with shutoff valve.

**970-204 Tandem 65:1 King Ram Pumps (EPDM) with Pneumatic Crossover**

Includes: (2) 55 gal. (200 liter) 6.5 in. dual post rams, 55 gal. (200 liter) EPDM follower plates and pneumatic crossover control, outlet check valves, and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-205 Tandem 65:1 King Ram Pumps (EPDM) with Electric Crossover**

Includes: (2) 55 gal. (200 liter) 6.5 in. dual post rams, 55 gal. (200 liter) EPDM follower plates and electric crossover control with drum empty light kit, outlet check valves, and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-206 Single 65:1 King Ram Pumps (EPDM) with Pneumatic Low-Level Shutoff**

Includes: (1) 55 gal. (200 liter) 6.5 in. dual post ram with low-level shutoff, 55 gal. (200 liter) EPDM follower plate, outlet check valve, and (1) 1-1/4 in. x 10 ft. (3 m) supply hose with shutoff valve.

**970-019 Tandem 65:1 King Ram Pumps (EPDM) with Pneumatic Crossover**

Includes: (2) 55 gal. (200 liter) 3 in. dual post rams, 55 gal. (200 liter) EPDM follower plates and pneumatic crossover control, outlet check valves and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-020 Tandem 65:1 King Ram Pumps (EPDM) with Electric Crossover**

Includes: (2) 55 gal. (200 liter) 3 in. dual post rams, 55 gal. (200 liter) EPDM follower plates and electric crossover control with drum empty light kit, outlet check valves and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-021 Single 65:1 King Ram Pump (EPDM) with Pneumatic Low-Level Shutoff**

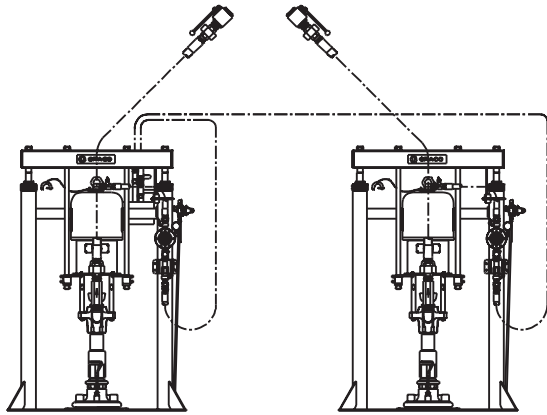
Includes: (1) 55 gal. (200 liter) 3 in. dual post ram with low-level shutoff, 55 gal. (200 liter) EPDM follower plate, outlet check valve and (1) 1-1/4 x 10 ft. (3 m) supply hose with shutoff valve.

**970-074 Single 65:1 King Ram Pump/Hose/Gun**

Includes: 55 gal. (200 liter) 65:1 King 3 in. dual post ram pump with 1/2 in. x 15 ft. (4.6 m) fluid dispense hose, straight swivel, Ultra-Lite 6000 manual dispense gun with nozzle.

# Ram Pump Packages Ordering Information (cont'd)

## 55/5 Gallon (200/20 liter) with 55 Gal. (200 liter) 3 in. Dual Post Ram

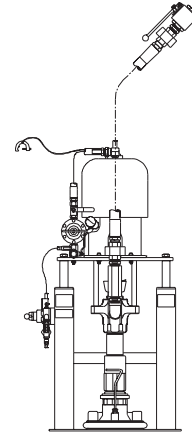


**970-025 Tandem 65:1 King Ram Pumps with Pneumatic Crossover**  
Includes: (2) 55 gal. (200 liter) 3 in. dual post rams, 5 gal. (20 liter) follower plates and pneumatic crossover control, outlet check valves and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-026 Tandem 65:1 King Ram Pumps with Electric Crossover**  
Includes: (2) 55 gal. (200 liter) 3 in. dual post rams, 5 gal. (20 liter) follower plates and electric crossover control with drum empty light kit, outlet check valves, and (2) 1-1/4 in. x 10 ft. (3 m) supply hoses with shutoff valves.

**970-027 Single 65:1 King Ram Pumps with Pneumatic Low-Level Shutoff**  
Includes: (1) 55 gal. (200 liter) 3 in. dual post ram with low-level shutoff, 5 gal. (20 liter) follower plate, outlet check valve and (1) 1-1/4 in. x 10 ft. (3 m) supply hose with shutoff valve.

## 5 Gallon (20 liter) with 3 in Dual Post Ram



**970-018 Single 65:1 King Ramp/Pump/Hose/Gun**  
Includes: 5 gal. (20 liter) 65:1 King 3 in. dual post ram pump on casters, 1/2 in. x 15 ft. (4.6 m) fluid dispense hose, straight swivel, and Ultra-Lite 6000 manual dispense gun with nozzle.

**970-031 Single 65:1 King Ram Pump**  
Includes: (1) 5 gal. (20 liter) 3 in. dual post ram, 5 gal. (20 liter) follower plate, outlet check valve, and (1) 1-1/4 in. x 10 ft. (3 m) supply hose with shutoff valve.

## Ram Pump Modules Ordering Information

### 55 Gallon (200 liter) with 6.5 in Dual Post Ram

- 918-313 **King 65:1 Ram Pump**  
SST lower, PVC plate, air controls
- 918-314 **King 65:1 Ram Pump**  
EPDM plate, air controls

### 55 Gallon (200 liter) with 3 in Dual Post Ram

- 236-472 **King 65:1 Ram Pump**  
EPDM plate, air controls
- C59-521 **King 65:1 Ram Pump**  
EPDM plate, check valve kit on pump outlet,  
enhanced bleed handle and blow off
- 918-552 **Bulldog 31:1 Ram Pump**  
PVC plate, air controls  
(For highway joint. *See Accessories.*)

### 5 Gallon (20 liter) with 3 in Dual Post Ram

- 918-372 **King 65:1 Ram Pump**  
PVC plate, air controls
- 918-371 **Bulldog 31:1 Ram Pump**  
PVC tire plate, air controls
- 918-370 **Senator 19:1 Ram Pump**  
PVC tire plate, air controls

## Bare Pump Modules Ordering Information

- 236-471 **King 65:1** Carbon steel, Severe-Duty
- 237-265 **King 65:1** Carbon steel, Severe-Duty, RIQ\*
- 236-462 **King 65:1** Stainless steel, Severe-Duty
- 237-261 **Bulldog 31:1** Carbon steel, Severe Duty
- 237-274 **Bulldog 31:1** Carbon steel, Severe-Duty, RIQ\*
- 237-264 **Senator 19:1** Carbon steel, Severe-Duty

\*RIQ = reduced icing quiet

## Repair Kits

- 222-864 **UHMWPE/Teflon Throat Packing and Intake**  
Packing and Seal Kits for Carbon Steel Pumps
- 222-865 **All Teflon Throat Packing and Intake**  
Packing Kits for Carbon Steel Pumps
- 222-866 **UHMWPE/Teflon Throat Packing and Intake**  
Packing and Seal Kits for Stainless Steel Pumps
- C03-059 **Dual PVC 55 gal. (200 liter) Tire Kit**
- 918-312 **Dual EPDM 55 gal. (200 liter) Tire Kit**
- C03-228 **Dual Neoprene 55 gal. (200 liter) Tire Kit**

## Accessories

- 235-417 **Conversion Kit**  
Includes tie rods and parts necessary to connect  
displacement pump to existing Bulldog air motor.
- 206-995 **Throat Seal Liquid (TSL)**  
One quart (0.95 liter)
- 208-804 **Air Motor Silencer for Bulldog and King**  
Encloses motor to reduce exhaust noise.
- 224-040 **Pump Runaway Valve**  
3/4 npt(fbe)
- 947-518 **Low Level Cut-Off**
- 206-537 **Drum Clamp Kit for 3 in. dual post Ram**  
Included in some rams.
- 222-780 **Floor Stand Base**
- C32-410 **6.5 in. Bare Dual Post Ram Module**
- 918-305 **Bare 55 gal. (200 liter) Follower Plate**  
(without wiper)
- C32-438 **Two Regulator Air Control Module w/ FRL**
- C32-437 **Four Regulator Air Control Module w/ FRL**
- C32-463 **Drum Centering Guide**  
(Two required per ram.)
- 918-395 **Drum Hold Down Clamp, Heavy Duty**
- 918-309 **Pump and Plate Mounting Kit**
- C59-719 **Depressurization Kit**  
Allows depressurization of fluid supply hoses and  
header. Includes: electrical and pneumatic controls  
for depressurization, return valves, and hoses.  
120v single phase, 50/60 Hz. Requires crossover  
kit (918-393).