



GRACO
First choice when
quality counts.™

Bulldog 4:1 High-Flo Pump

- **Pressure output capacity of 400 psi (2.8 MPa, 28 bar)**
- **Excellent abrasion and corrosion resistance using Graco Severe Duty™ wear parts**
- **Large porting for excellent priming and handling of high viscosity fluids without cavitation**
- **High volume displacement pump lower: few cycles per gallon for reduced wear, and long intervals between packing seal replacement**

**Reliable, low
shear 4-ball
paint circulating
pumps**

Graco has the best medium volume, low pressure performers for circulating supply of light to medium viscosity fluids. Driven by the reliable Quiet Bulldog air motor, life tested to 10,000,000 cycles, these high volume circulating pumps allow you to handle larger flow volume at low cycle rates. This will extend pump life and minimize the intervals for maintenance and repair. Overall cost of ownership is reduced by this extended pump life. A small piston rod diameter reduces the sealing area to minimize throat leakage. These are all great reasons for choosing High-Flo pumps for your circulating and transfer applications.

Typical Fluids Handled

Stainless steel models

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

Carbon steel models

- Solventborne paints

Typical Applications

- Paint circulation, supply and transfer



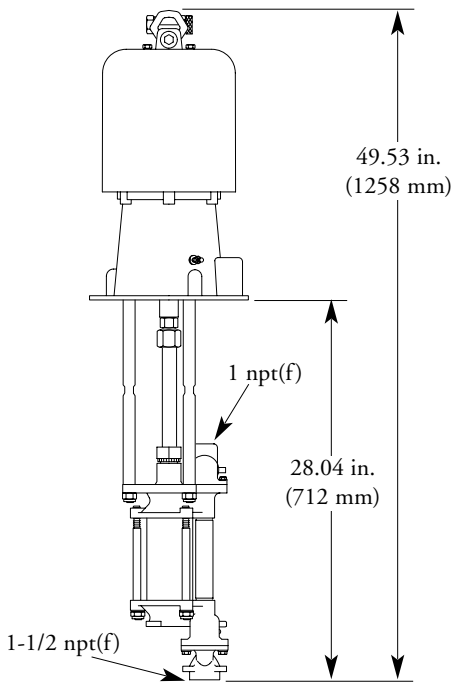
COMPONENTS

220-578

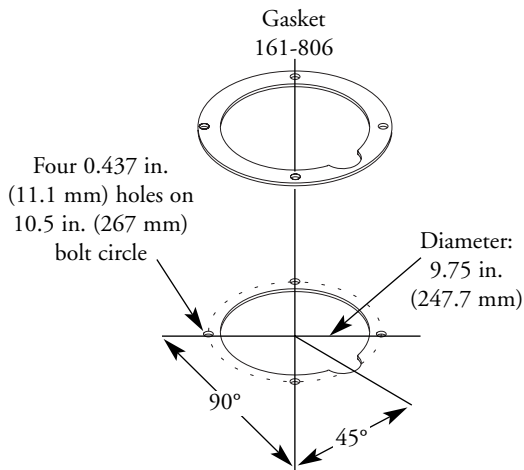
Technical Specifications

Maximum working pressure . . . 400 psi (2.8 MPa, 28 bar)
 Max. air input pressure 100 psi (0.7 MPa, 7 bar)
 Fluid flow at 60 cpm 24 gpm (91 lpm)
 Volume per cycle 51.2 oz. (1.4 liter)
 Air inlet size 3/4 npsm(f)
 Fluid inlet size 1-1/2 npt(f)
 Fluid outlet size 1 npt
 Instruction manual 308-793

Dimensions

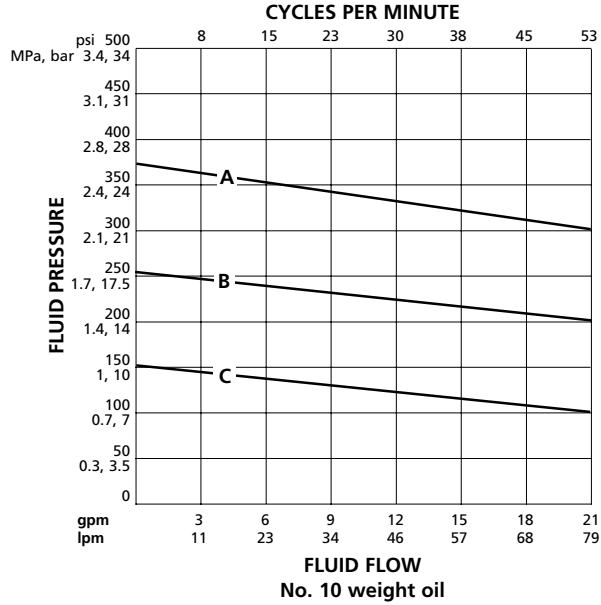


Mounting Hole Layout

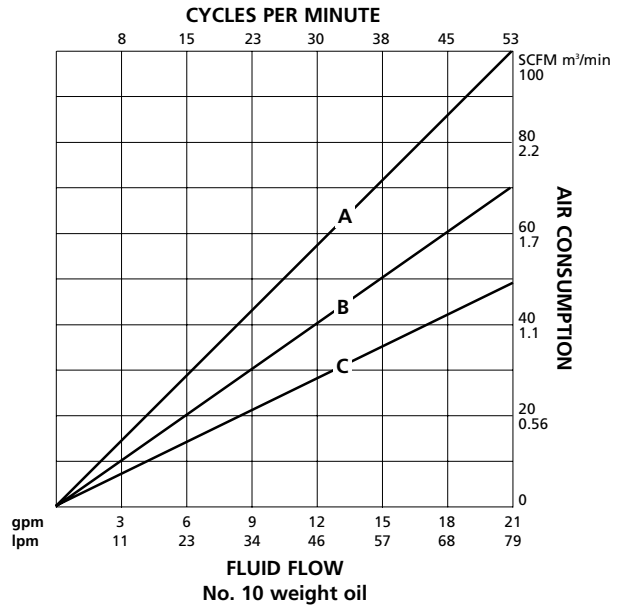


Performance Chart for Bulldog 4:1 High-Flo Pump

Fluid Pressure



Air Consumption



Air Pressures:
 A = 100 psi (0.7 MPa, 7 bar)
 B = 70 psi (0.48 MPa, 4.8 bar)
 C = 40 psi (0.28 MPa, 2.8 bar)

Ordering Information for Bulldog 4:1 High-Flo Pump

Order number includes motor and pump lower assembly

Order Nos.	220-577	220-578
Pump Lower		
Part No.	239-835	239-838
Construction	CS	SST
Standard Seal Repair Kit	220-587	220-587
Construction	UHMWPE	UHMWPE
Optional Seal Conversion Kit	224-936	224-936
Construction	Teflon®	Teflon
Throat Packing Kits, available for all pumps		239-872
Construction		UHMWPE
		239-866
		Teflon
		239-868
		Leather
Motor		
215-906: Repair Kit		

SERVICE PARTS INFORMATION

Pump Lower Part Nos.	239-835	220-557
Displacement Rod	181-898	181-898
Construction	SST	SST
Cylinder	181-900	183-048
Construction	CS	SST
Intake Valve (order separate part numbers)		
Intake Ball	101-968	101-968
Intake Valve Seat	181-686	181-686
Piston Valve (order separate part numbers)		
Outlet Ball	110-259	110-259
Piston Nut	108-528	108-528

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Accessories

237-569 Ground Wire and Clamp

Length: 25 ft. (7.6 m)

Bleed-Type Master Air Valve

Maximum working pressure: 300 psi (2.1 MPa, 21 bar)

107-141 Inlet and outlet: 3/4 npt(mxf)

107-142 Inlet and outlet: 1/2 npt(mxf)

207-651 Air Control Kit

Max. working pressure: 300 psi (2.1 MPa, 21 bar).

Max. adjustable outlet pressure: 125 psi (0.9 MPa, 9 bar). Inlet: 3/4 npsm(f) swivel; outlet: 3/4 npt(m).

Includes air regulator, gauge, bleed-type master air valve, hose, and manifold.

Air Line Filter

Maximum working pressure: 250 psi (1.8 MPa, 18 bar)

106-149 Inlet and outlet: 1/2 npt(f)

106-150 Inlet and outlet: 3/4 npt(f)

224-040 Pump Runaway Valve

Max. working pressure: 120 psi (0.84 MPa, 8.4 bar)

Air Line Lubricator

Maximum working pressure: 250 psi (1.8 MPa, 18 bar)

214-848 Inlet and outlet: 1/2 npt(f)

214-849 Inlet and outlet: 3/4 npt(f)

220-584 Riser Tube Kit

Adapts the pump outlet to motor level when the pump is drum mounted.

Fluid Supply Hose

Maximum working pressure: 500 psi (3.5 MPa, 35 bar)

1 in. ID, coupled 1-11 1/2 npt(mbe)

220-997 2 ft. (0.6 m)

214-959 6 ft. (1.8 m)

220-157 Medium Volume High-Flo Surge Tank

Inlet: 1 npt(f); outlet 1-1/2 npt(f).

218-742 Floor Mounting Kit

For mounting the surge tank to the floor.

220-581 Floor Stand Kit

For mounting the pump in a suction feed system.

207-872 Stationary Stand

206-221 Wall Bracket, Painted

218-028 Portable Cart

110-335 Packing Nut Wrench

Throat Seal Liquid

206-995 1 quart (0.9 liter)

206-996 1 gallon (3.8 liter)

Graco-Approved Hydraulic Fluid

169-236 5 gallons (20 liter)

207-428 1 gallon (3.8 liter)

102-644 Hydraulic Shutoff Valve

Hydraulic Supply and Return Hose

Maximum working pressure: 1500 psi (10.5 MPa, 105 bar)

180-091 3 ft. (0.9 m)

180-092 6 ft. (1.8 m)

Maximum working pressure: 2000 psi (14 MPa, 138 bar)

180-090 3 ft. (0.9 m)

180-093 6 ft. (1.8 m)

220-579 Pump Mounting Adapter Kits

For retrofitting existing motor to Bulldog motor (208-356). More recent series of these motors do not require this kit.

213-099 Siphon Tube Kit