



*First choice when
quality counts.™*

Bulldog® 21:1 and 28:1 Air-Powered Pumps

- **More durable than ever before with longer life packing design**
- **Higher pump pressure and flow performance handles a broader range of paints and coatings**
- **Improved serviceability means fewer parts, faster repair and lower overall maintenance and ownership costs**

**For durability
and power
under tough
working
conditions**

The Bulldog pumps are designed to supply paint and coatings to multiple spray outlets. The Bulldog motor offers 62% more power than the Senator motor to develop the pressure needed to atomize difficult-to-spray paints and coatings. The large ported, built-in 4-way air valve and efficient check valves in the pump reduce pulsation in the spray pattern for uniform coating thickness.

Downtime is minimized by the rugged displacement pump with long life Severe Duty™ rods and cylinders. Simple construction makes service and repair fast and easy.

Typical Fluids Handled

- Solventborne paints and coatings
- Waterborne paints and coatings

Typical Applications

- Multiple gun heated airless spray systems
- Multiple gun air-assisted airless spray systems

Technical Specifications

Maximum fluid working pressure

- Bulldog 21:1 2100 psi (14.5 MPa, 145 bar)
- Bulldog 28:1 2800 psi (19.3 MPa, 193 bar)

Maximum air input pressure 100 psi (0.7 MPa, 7 bar)

Fluid flow at 60 cpm

- Bulldog 21:1 4.8 gpm (18 lpm)
- Bulldog 28:1 3.4 gpm (13 lpm)

Max. pump operating temperature 180°F (82°C)

Air inlet size 3/4 npsm(f)

Fluid inlet size 2 npt(f)

Fluid outlet size 1 npt(f)

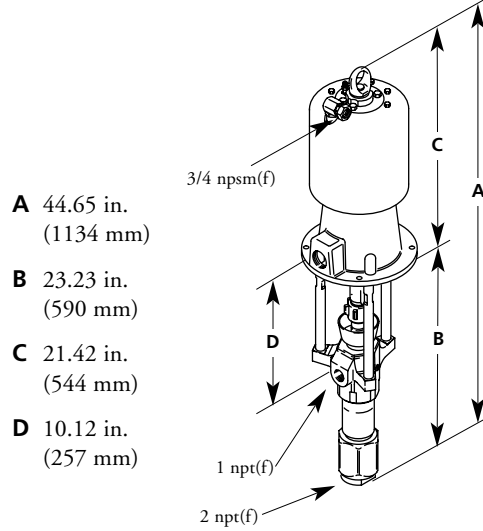
Weight 150 lbs. (68 kg)

Instruction manuals

- Bulldog 21:1 CS model 308-359
- Bulldog 21:1 SST model 308-360
- Bulldog 28:1 CS model 308-353
- Bulldog 28:1 SST model 308-354

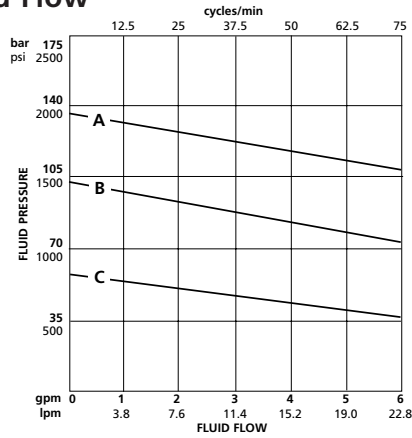
Teflon® is a registered trademark of Du Pont.
Severe Duty™ is a trademark of Graco Inc.

Dimensions



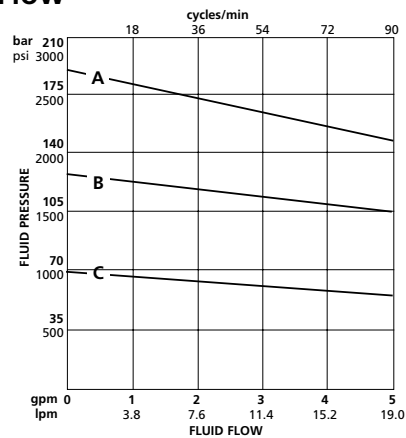
Bulldog 21:1 Performance

Fluid Flow

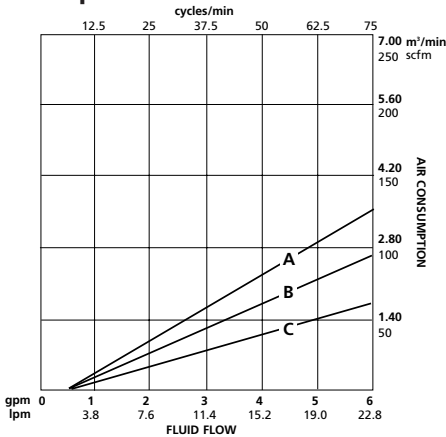


Bulldog 28:1 Performance

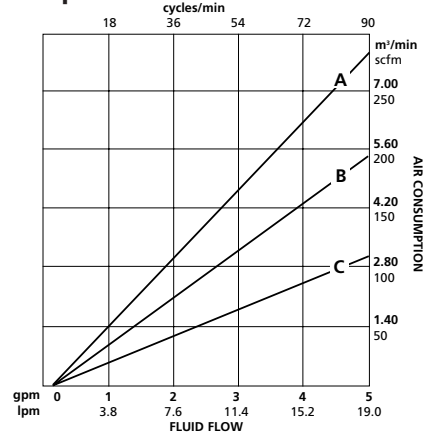
Fluid Flow



Air Consumption



Air Consumption



Air Pressures
 A = 100 psi (0.7 MPa, 7 bar)
 B = 70 psi (0.49 MPa, 4.9 bar)
 C = 40 psi (0.28 MPa, 2.8 bar)

Performance tested in No. 10 weight motor oil 65 cp at 68°F (20°C)

Ordering Information for Bulldog 21:1 and 28:1

Order number includes motor and pump lower assembly

Order Nos.	Bulldog 21:1		Bulldog 28:1		
	237-512	237-516	237-284	237-292*	237-287
Pump Lower					
Part No.	237-510	237-514	236-466	236-466	236-470
Construction	CS	SST	CS	CS	SST
Standard Piston Seal	237-169	237-178	237-163	237-163	237-172
Repair Kits:	Leather	Leather	Leather	Leather	Leather
Construction	237-170	237-179	237-164	237-164	237-173
	Teflon	Teflon	Teflon	Teflon	Teflon
	237-171	237-180	237-165	237-165	237-174
	UHMWPE/Leather	UHMWPE/Leather	UHMWPE/Leather	UHMWPE/Leather	UHMWPE/Leather
	237-712	237-713	237-709	237-709	237-710
	UHMWPE/Teflon	UHMWPE/Teflon	UHMWPE/Teflon	UHMWPE/Teflon	UHMWPE/Teflon
Motor					
Repair Kit	206-734	206-734	206-734	215-906	206-734

SERVICE PARTS INFORMATION

Pump Lower Part Nos.	237-510	237-514	236-466	236-470	237-287
Displacement Rod	184-487	184-487	189-316	189-316	189-316
Construction	SST	SST	SST	SST	SST
Cylinder	184-540	184-540	189-383	189-383	189-383
Construction	SST	SST	SST	SST	SST
Intake Valve (order separate part numbers)					
Intake Ball	108-001	108-001	108-001	108-001	108-001
Intake Valve Seat	222-952	236-588	222-952	222-952	236-588
Piston Valve (order separate part numbers)					
Piston Ball	100-279	102-972	100-400	100-400	101-859
Seat	222-951	222-951	236-587	236-587	236-587
Ball Guide	184-513	189-409	189-407	189-407	189-408

*CS Model with Quiet Air Motor

Accessories

220-955 Contractor Gun

With 517 RAC™ IV tip and retainer.
Inlet: 1/4 npsm(m). Outlet: 7/8 in. (22 mm).

205-591 Golden Gun

With flat tip retainer. Inlet: 1/4 npsm(m).
Inlet: 1/4 npsm(m). Outlet: 7/8 in. (22 mm).

Pole Guns

Inlet: 1/4 npsm(m). Outlet: 11/16 in. (27 mm).

205-129 3 ft. (0.9 m)

204-979 6 ft. (1.8 m)

205-130 8 ft. (2.4 m)

220-422 RAC IV SwitchTip Retainer

Inlet: 7/8 in. (22 mm).

221-xxx RAC IV SwitchTips

See your local distributor for tip size selection or reference Silver Plus Data Sheet 305-796.

238-588 Zinc Conversion Kit

Max. working pressure: 3000 psi (20.7 MPa, 207 bar).
For spraying zinc primers. Includes: circulation tee at pump outlet, shutoff valve, drain hose, nylon hose (238-396), whip hose (238-383), hose swivel (189-018) and Silver gun (238-591) with GHD-525 tip and retainer.

238-614 Hose & Gun Kit

Includes grounded nylon paint hose, whip hose, Silver HD RAC gun, and swivel.

236-074 Grounded Fluid Hose

Maximum working pressure: 3300 psi. (22.4 MPa, 224 bar). Length: 1/4 in. x 25 ft. (6 mm x 7.6 m).
Coupled: 1/4 npt(fbe). Swivel end spring guards at both ends.

113-435 Air Line Lubricator

Max. working pressure: 250 psi (1.72 MPa, 17.2 bar).
Provides automatic lubrication for the air motor. Bowl capacity: 16 oz. (0.48 liter). Inlet/outlet: 3/4 npt(f).

Air Controls

<u>Component</u>	<u>Repair Kit</u>
113-434 Filter	238-912
Sight Glass Kit	238-913
Filter Element	238-914
113-494 Regulator	238-915
113-433 Regulator	238-916
113-435 Lubricator	238-918

113-431 Quick Connector

Use to connect 113-xxx filter, regulator, or lubricator.

224-040 Pump Runaway Valve

Max. working pressure: 120 psi (0.83 MPa, 8.3 bar).
Inlet and outlet: 3/4 npt(f). Includes optional 90°, 3/4 npsm swivel outlet fitting.

235-417 Connection Kit

Kit to install lower displacement pump under existing Bulldog air motor. Includes tie rods and other connecting hardware.

Graco Throat Seal Liquid (TSL)

Non-evaporating liquid for wet cup.

206-995 1 quart (0.9 liter)

206-996 1 gallon (3.8 liter)

206-221 Wall Mounting Bracket

205-712 Air Pressure Regulating Kit