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Bruin 5100 Series Pneumatic Chemical Injection Pump

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BR5100



Pneumatically Driven Chemical Injection Pump



Product Details

The Bruin BR5100 Chemical Injector Pump is a single acting, positive displacement plunger type pump. Equipped with a spring return, automatic switching mechanism and powered by pneumatic pressure acting against a diaphragm, it is capable of operation with supply pressures as low as 2 psig (35 psig max.) and available in 4 plunger sizes. The BR5100 can handle output volumes up to 137 Litres per day with a 1/2" head and discharge pressures up to 6000 psig with a 3/16" head. Volume is controlled based on plunger size, the stroke length selection and the speed of the pump via a speed control valve. Maximum discharge capability is governed by the packing selection, and discharge pressure can be controlled with the supply pressure via a regulator.

Highlights

- Adjustable speed (0 - 30 spm) and plunger sizes (3/16", 1/4", 3/8" & 1/2") provide an adjustable volume output up to 137 Litres per day maximum.
- Air distribution system provides greater control of the stroke rate and injection rate without stalling.
- Micro Switch system provides oilless operation.
- Contoured diaphragm plate improves diaphragm life.
- Clear acrylic lid for easy inspection of pump internals.
- Low supply pressure model allows for operation with pressures as low as 2 psig (dependant on discharge pressure and pump set up).
- Low volume model allows for variable stroke length adjustment.
- Conversion for handling of various chemicals is easily accomplished by the change out of the packing set and fluid end seals.

SPECIFICATIONS

BR5100 SERIES

Type	Pneumatically Operated
Volume	0 - 137 Litres / Day 0 - 30 Imp. Gal. / Day 0 - 36 US. Gal. / Day
Pressure	Max. 6000 psig (Hard Packing Only) Max. 41368 kPa (Hard Packing Only) Max. 3000 psig (Other Packing) Max. 20684 kPa (Other Packing)
Operating Supply Pressure	2 - 35 psig (Pressures below 8 psig are achievable /w Low Supply Pressure Model)
Plunger Sizes	3/16", 1/4", 3/8", 1/2"
Stroke Length	1/3" or 1" (Variable - Up to 1" /w Low Volume Model)
Switching System	Micro Switch (Std.) Rotary Pilot Valve (Optional)
Fluid Suction & Discharge Connection	1/4" FNPT
Supply & Exhaust Valve Connection	3/8" FNPT (Micro Switch) 1/4" FNPT (Pilot Valve)

MATERIALS OF CONSTRUCTION

Fluid Head	Ductile Iron (Std., Not Available for 3/16") Stainless Steel (Optional, Std. on 3/16")
Internal Wetted Components	Stainless Steel
Plunger	Stainless Steel (Std.) Case Hardened Stainless Steel(Optional) Ceramic (Optional)
Diaphragm	Buna w/ Nylon Reinforcement
Packing V-Style	Buna, Buna Hard, Viton, Teflon, Fluorosilicone, Brueze, Brueze FFKM, Other Material Arrangements Available
Seals	Buna, Metal-to-Metal, Viton, Teflon, Fluorosilicone, Brueze

APPLICATIONS

Methanol Injection, Chemical Injection, Soap Injection, Corrosion Inhibitors

ACCESSORIES

Bases, Tanks, Regulators, Gauges
Stainless Steel Fittings, Skid Package

Performance Specifications

	PLUNGER SIZE			
	3/16"	1/4"	3/8"	1/2"
Standard Model				
Model Number	BR5104	BR5101	BR5103	BR5105
Maximum Discharge Pressure (psig)	3000	3000	3000	3000
Maximum Discharge Pressure (kPa)	20684	20684	20684	20684
Maximum Discharge Pressure (bar)	206	206	206	206
Max. Recommended Speed (Strokes/Minute) @ 0-1500 psig Discharge Pressure	30	30	30	30
Maximum Volume				
Daily				
Maximum Volume* (litres/day)	19.3	34.4	77.4	137.6
Maximum Volume* (imp gal/day)	4.2	7.5	17.0	30.2
Maximum Volume* (US gal/day)	5.1	9.1	20.4	36.3
High Pressure Model				
Model Number	BR5114	BR5111	BR5113	BR5115
Maximum Discharge Pressure ¹ (psig)	6000	6000	6000	3500
Maximum Discharge Pressure ¹ (kPa)	41368	41368	41368	24131
Maximum Discharge Pressure ¹ (bar)	413	413	413	241
Max. Recommended Speed (Strokes/Minute) above 1500 psig Discharge Pressure	28	28	28	28
Maximum Volume				
Daily				
Maximum Volume** (litres/day)	14.4	25.6	57.6	102.5
Maximum Volume** (imp gal/day)	3.1	5.6	12.6	22.5
Maximum Volume** (US gal/day)	3.8	6.7	15.2	27.0

* Volumes shown are at 0 psig Discharge Pressure.

** Volumes shown are at 3000 psig Discharge Pressure.

1. Maximum Discharge Pressure above 3000 psig (20684 kPa, 206 bar) requires Buna Hard Packing.

Plunger Packing

	PLUNGER SIZE			
	3/16"	1/4"	3/8"	1/2"
Maximum Discharge Pressure (psig)				
Buna (Nitrile)	3000	3000	3000	3000
Buna Hard (High Pressure)	6000	6000	6000	3500
Viton (FKM)	3000	3000	3000	3000
Teflon (PTFE)	3000	3000	3000	3000
Fluorosilicone (FVMQ)	3000	3000	3000	3000
Buna / Teflon	3000	3000	3000	3000
Viton / Teflon	3000	3000	3000	3000
Bruez (FEPM)	3000	3000	3000	3000
Bruez FFKM (FFKM)	3000	3000	3000	3000