

Texsteam Products Chemical Injection Pumps

Series 5100: Air or gas driven injectors



Series 5100 LP
Wt. 45 pounds (20.4 kg)

Microswitch Option Available

Description

Dresser Natural Gas Solutions 5100 Series Texsteam Chemical Injectors are single acting, positive displacement plunger-type pumps, powered by gas via a diaphragm with a spring return. *Speed control* is accomplished by regulating the exhaust gas discharge flow. *Reversal* is accomplished by a direct spring-actuated switching mechanism (rotary three-way valve). *Volume* is controlled by the speed of the pump and by the stroke length, either 1" (25.4 mm) or 1/3" (8.5 mm) lengths.

The 5100 Series is capable of pumping high pressures with gas pressure as low as 8 psig (0.6 bar) and handling volume output up to 30 gallons (113 liters) per day.

The pump is lightweight, compact and contains a minimum of working parts for easy maintenance. Each fluid pump head is equipped with a stainless steel plunger, ball checks, ball check springs, top seat, top bushing, bottom bushing, adjustable VEE type packing and a priming valve. The packing yoke is equipped with a drain to monitor for possible packing leaks. Because of the sealed bearings, the unit is oil-less.

The 5100 Series performs accurately because: (1) the head is designed for high volumetric efficiency; (2) a positive trip mechanism provides fine control of plunger stroke length; and (3) the speed is regulated by controlling the exhaust gas discharge flow which creates a rapid fluid discharge with slow suction.

This pump has ATEX certification from TÜV Rheinland.

Performance

Plunger Size in (mm)	Maximum Discharge Pressure psig (bar)	GPD = gallons per day LPD = liters per day For Operation Off Air or Gas Pressure to 33 psig (2.3 bar) Constant	
		Pressure Unit ¹	
5100 Series (Standard Packing)		Model Number	Maximum Volume GPD (LPD)
3/16" (4.763)	3000 (206.8)	5104	4.2 (15.9)
1/4" (6.35)	3000 (206.8)	5101	7.5 (28.4)
3/8" (9.525)	3000 (206.8)	5103	16.8 (63.6)
1/2" (12.70)	3000 (206.8)	5105	32.0 (121.1)
(High Pressure Packing)		Model Number	Maximum Volume GPD (LPD)
3/16" (4.763)	6000 (413.7)	5104	2.8 (10.6)
1/4" (6.35)	6000 (413.7)	5101	5.0 (18.9)
3/8" (9.525)	6000 (413.7)	5103	12.0 (45.4)
1/2" (12.70)	3500 (241.3)	5105	22.0 (83.3)

1. Basic pump no tank, base, regulator, gauge (shipping weight: 45 lbs (20.4 kg).

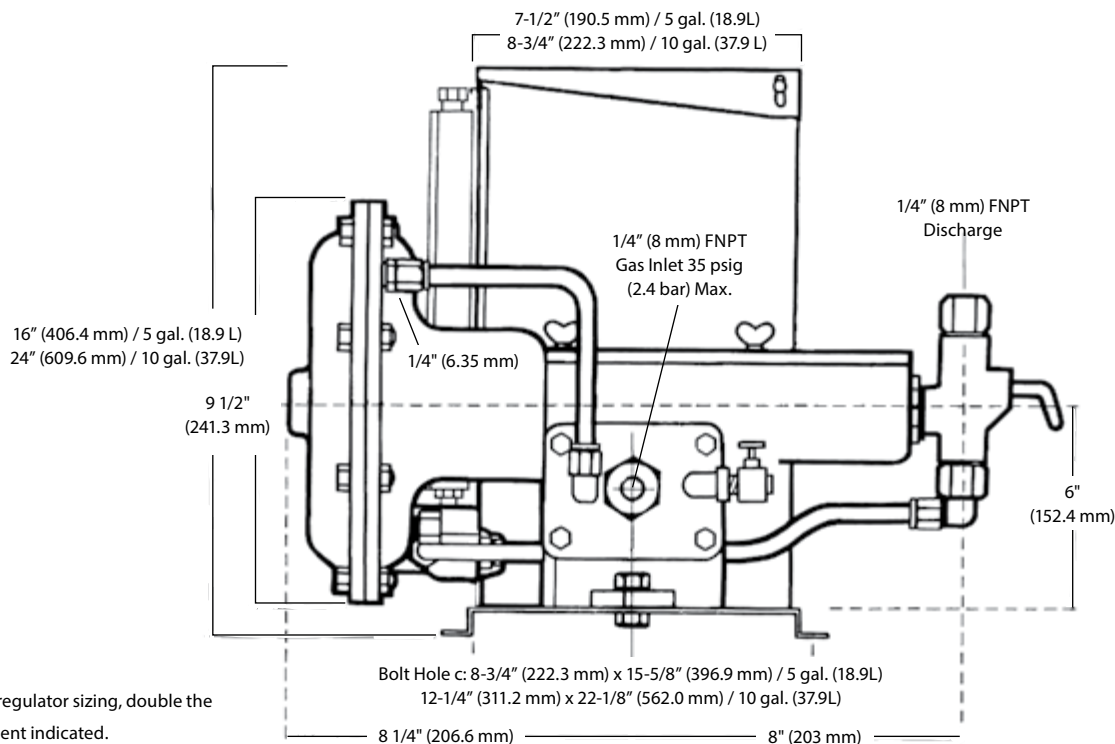
Application

- The introduction of de-emulsifiers, solvents, corrosion inhibitors, de-salting agents and flocculants in oil country operation
- High pressure bearing lubrication
- Water treatment
- Blending processes in refining and process plants
- Injection of methanol in gas pipelines
- Hydrostatic testing
- Sampling

Gas Consumption Charts

(Standard Cubic Feet of Gas Required to Pump One Gallon)

Injection Press in psig		100	200	500	1000	1500	2000	3000	3500	4000	5000	6000
1/2" Plunger 1" Stroke	5105	53	54	57	62	71	76	84	95			
1/2" Plunger 1/3" Stroke		159	162	171	186	213	228	252	285			
3/8" Plunger 1" Stroke	5103	120	126	148	164	177	185	243	278	314	355	374
3/8" Plunger 1/3" Stroke		360	378	444	492	531	555	729	834	942	1065	1122
1/4" Plunger 1" Stroke	5101	244	245	248	270	288	308	340	355	369	405	497
1/4" Plunger 1/3" Stroke		732	735	744	810	864	924	1020	1065	1107	1215	1491
3/16" Plunger 1" Stroke	5104	457	458	462	469	476	530	545	555	560	575	589
3/16" Plunger 1/3" Stroke		1371	1374	1386	1407	1428	1590	1635	1665	1680	1725	1776



For inlet regulator sizing, double the requirement indicated.

(Standard Cubic Meters of Gas Required to Pump One Liter)

Injection Pressure (bar)		6.9	13.8	34.5	68.9	103.4	137.9	206.8	241.3	275.8	344.7	413.7
12.7 mm Plunger 25.4 mm Stroke	5105	0.40	0.40	0.43	0.46	0.53	0.57	0.63	0.71			
12.7 mm Plunger 8.5 mm Stroke		1.19	1.21	1.28	1.39	1.59	1.71	1.89	2.13			
9.525 mm Plunger 25.4 mm Stroke	5103	0.90	0.94	1.11	1.23	1.32	1.38	1.82	2.08	2.35	2.66	2.80
9.525 mm Plunger 8.5 mm Stroke		2.69	2.83	3.32	3.68	3.97	4.15	5.45	6.24	7.05	7.97	8.39
6.35 mm Plunger 25.4 mm Stroke	5101	1.83	1.83	1.86	2.02	2.15	2.30	2.54	2.66	2.76	3.03	3.72
6.35 mm Plunger 8.5 mm Stroke		5.48	5.50	5.57	6.06	6.46	6.91	7.63	7.97	8.28	9.09	11.15
4.763 mm Plunger 25.4 mm Stroke	5104	3.42	3.43	3.46	3.51	3.56	3.96	4.08	4.15	4.19	4.30	4.41
4.763 mm Plunger 8.5 mm Stroke		10.26	10.28	10.37	10.53	10.68	11.89	12.23	12.45	12.57	12.90	13.29

Industrial Products Group

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