ROSKA
Design | Build | Operate

OPERATIONS SOLUTIONS
EQUIPMENT SPECIFICATION SHEET

INJECTION PUMP

UNIT: PUM020

PERFORMANCE

Maximum Operating Pressure @ 100% Rated Capacity	5625 psi
Maximum Flow Rate @ 100% Rated Capacity	427 m^3/day
Maximum Operating Pressure @ 80% Rated Capacity	4,500 psi
Maximum Flow Rate @ 80% Rated Capacity	378 m^3/day

INJECTION DRIVE

Model	9.0L CAT C9 ACERT
Horse Power	325 HP
Maximum RPM	2200 RPM
Fuel Type	Diesel

INJECTION PUMP

Make	Quintuplex
Model	W300-H
Plungers	5
Installed Plunger Diameter	1.625” (41.275 mm)
Maximum Input	300 HP (224 kW)
Maximum RPM	400 RPM
Stroke Length	5” (127 mm)

SUCTION PIPING

Maximum Allowable Working Pressure	400 psi (2,758 kPa)
Size	6” (168.3 mm)
Connection	CL300 RF

DISCHARGE PIPING

Maximum Allowable Working Pressure	5,000 psi (34.5 MPa)
Size	2” (60.3 mm)
Connection	CL2500 RTJ

FUEL CONSUMPTION

50% Load	29.4 L/hr
75% Load	43.8 L/hr
100% Load	56.1 L/hr

** Approximate: Will vary based on site conditions**

OPERATIONS SOLUTIONS

EQUIPMENT SPECIFICATION SHEET

EMISSIONS

NOx	6.9 g/hp-hr
CO	2.6 g/hp-hr

Meets EPA Tier 3 Emission Requirements

SHIPPING DIMENSIONS

Width	9’ (2.74 m)
Length	24’ (7.3 m)
Height	9’ (2.74 m)
Weight Estimate	22,000 lbs (9,980 kg)

POWER REQUIREMENTS

Building Total	10 kW / 750W
Main Disconnect	None On Skid
Voltage Input	208V / 120V
Phase	3Ø / 1Ø

CERTIFICATION

Area Classification	TBD
Piping	TBD
Electrical	TBD

SHUTDOWNS

High/Low Discharge Pressure
High/Low Suction Pressure
Manual ESD
Vibration Switch
Positive Air Shutdown
Low Power End Oil
Baird Adjustable Pressure Relief Valve

FEATURES

Building Equipped With Heater and Lights
Suitable For Sour Service
Pulsation Dampener
24V System (2 x 12V Batteries)
Suction Strainer On Inlet Piping
Built In Tool Box
Removable Catch Tank
Steel Building Construction
Discharge Piping Complete With MC-III Flow Meter

SOUND RATING

DISTANCE	@50%	@100%
In Building	96.1 dB(A)	105.3 dB(A)
1.2m (4ft)	76.1 dB(A)	81.5 dB(A)
7.5m (25ft)	66.3 dB(A)	72.3 dB(A)
15.2m (50ft)	61.2 dB(A)	69.8 dB(A)

W300 Quintuplex Pump

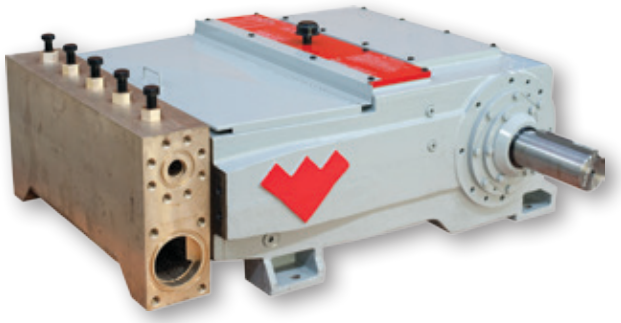
Pump Specifications

Rated (HP, *kW*)	300	*224*
Stroke length (in., *mm*)	5	*127*
Maximum discharge pressure (PSI, *Bar*)		
W300H	5,000	*345*
W300M	3,000	*207*
W300L	1,650	*114*
Rated rod load (lb, *kg*)	10,700	*4,853*
API-674 speed, RPM	310	
Maximum speed, RPM	400	
Minimum speed, RPM	100	
Crankshaft dimensions (in., *mm*)		
Diameter	4.875	*124*
Length (long)	11.62	*295*
Length (short)	5.62	*143*
Keyway, width × depth (in., *mm*)	1.25 × .62	*32 × 16*
Oil capacity (gal, *l*)		
Pump	12	*46*
Reducer (varies with ratio)	3.5 to 6.5	*13 to 25*
Weight (lb, *kg*); estimates only		
Pump		
W300H	6,840	*3,103*
W300M	6,750	*3,062*
W300L	7,000	*3,175*
Reducer	1,100	*499*
Mechanical efficiency	90%	

Flange Connections

Pump Model	Discharge Connection Sizes (in., *mm*)	Suction Connection Sizes (in., *mm*)
W300H	2 *(50.8)* ANSI 2500 RJ	6 *(152.4)* NSD 600 RJ*
W300M	3 *(76.2)* NSD 5000 RJ*	6 *(152.4)* NSD 600 RJ*
W300L	4 *(101.6)* API 2000 RJ	8 *(203.2)* ANSI 150 FF

*One blind and one weld neck flange provided



Standard Equipment

- Cast aluminum-bronze, forged duplex stainless steel, or forged carbon steel fluid ends
- Aluminum-bronze or duplex stainless steel stuffing boxes
- Various valve designs offered per fluid end style
- Tungsten carbide coated plungers over stainless steel base or solid ceramic plungers
- Double extended crankshaft
- Multiple plunger packing arrangements offered

Optional Accessories

- Weatherford bolt on gear reducers (ratios)
  - 2.27:1
  - 2.89:1
  - 3.25:1
  - 3.36:1
  - 3.69:1
  - 4.38:1
  - 4.84:1
  - 5.56:1
- Packing lubricators
- Customized plunger packing arrangements
- Power end lube system
- Complete pump packages

Technical Support

pumps@weatherford.com
1-281-252-7867

W300 Quintuplex Pump

Performance Ratings

Model (standard)	Plunger Diameter (in.)	Gallons Per Revolution	Maximum Pressure PSI	100 RPM		150 RPM		200 RPM		310 RPM*		350 RPM		400 RPM	
				GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD
W300H	1.500	0.1912	5000	19.1	656	28.7	984	38.2	1311	59.3	2033	66.9	2295	76.5	2623
	1.625	0.2245	5000	22.4	770	33.7	1154	44.9	1539	69.6	2386	78.6	2693	89.8	3078
	1.750	0.2603	4450	26.0	892	39.0	1339	52.1	1785	80.7	2767	91.1	3124	104.1	3570
	1.875	0.2988	3880	29.9	1025	44.8	1537	59.8	2049	92.6	3176	104.6	3586	119.5	4098
	2.000	0.3400	3410	34.0	1166	51.0	1749	68.0	2331	105.4	3614	119.0	4080	136.0	4663
W300M	2.000	0.3400	3000	34.0	1166	51.0	1749	68.0	2331	105.4	36.14	119.0	4080	136.0	4663
	2.125	0.3838	3000	38.4	1316	57.6	1974	76.8	2632	119.0	4080	134.3	4606	153.5	5264
	2.250	0.4303	2690	43.0	1475	64.5	2213	86.1	2951	133.4	4574	150.6	5164	172.1	5901
	2.375	0.4795	2420	47.9	1644	71.9	2466	95.9	3288	148.6	5096	167.8	5753	191.8	6575
	2.500	0.5312	2180	53.1	1821	79.7	2732	106.2	3643	164.7	5646	185.9	6375	212.5	7286
	2.750	0.6428	1800	64.3	2204	96.4	3306	128.6	4408	199.3	6832	225.0	7714	257.1	8816
W300L	2.750	0.6428	1650	64.3	2204	96.4	3306	128.6	4408	199.3	6832	225.0	7714	257.1	8816
	3.000	0.7650	1510	76.5	2623	114.7	3934	153.0	5246	237.1	8131	267.7	9180	306.0	10491
	3.250	0.8978	1290	89.8	3078	134.7	4617	179.6	6156	278.3	9542	314.2	10774	359.1	12313
	3.500	1.0412	1110	104.1	3570	156.2	5355	208.2	7140	322.8	11067	364.4	12495	416.5	14280
	3.750	1.1953	970	119.5	4098	179.3	6147	239.1	8196	370.5	12704	418.4	14344	478.1	16393
	4.000	1.3600	850	136.0	4663	204.0	6994	272.0	9326	421.6	14455	476.0	16320	544.0	18651

Model (metric)	Plunger Diameter (in.)	Liters Per Revolution	Maximum Pressure BAR	100 RPM		150 RPM		200 RPM		310 RPM*		350 RPM		400 RPM	
				LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr
W300H	1.500	0.7239	345	72.4	4.3	108.6	6.5	144.8	8.7	224.4	13.5	253.4	15.2	289.6	17.4
	1.625	0.8495	345	85.0	5.1	127.4	7.6	169.9	10.2	263.3	15.8	297.3	17.8	339.8	20.4
	1.750	0.9853	307	98.5	5.9	147.8	8.9	197.1	11.8	305.4	18.3	344.9	20.7	394.1	23.6
	1.875	1.1310	268	113.1	6.8	169.7	10.2	226.2	13.6	350.6	21.0	395.9	23.8	452.4	27.1
	2.000	1.2869	235	128.7	7.7	193.0	11.6	257.4	15.4	398.9	23.9	450.4	27.0	514.8	30.9
W300M	2.000	1.2869	207	128.7	7.7	193.0	11.6	257.4	15.4	398.9	23.9	450.4	27.0	514.8	30.9
	2.125	1.4527	207	145.3	8.7	217.9	13.1	290.5	17.4	450.3	27.0	508.4	30.5	581.1	34.9
	2.250	1.6287	185	162.9	9.8	244.3	14.7	325.7	19.5	504.9	30.3	570.0	34.2	651.5	39.1
	2.375	1.8147	167	181.5	10.9	272.2	16.3	362.9	21.8	562.6	33.8	635.1	38.1	725.9	43.6
	2.500	2.0108	150	201.1	12.1	301.6	18.1	402.2	24.1	623.3	37.4	703.8	42.2	804.3	48.3
	2.750	2.4330	124	243.3	14.6	365.0	21.9	486.6	29.2	754.2	45.3	851.6	51.1	973.2	58.4
W300L	2.750	2.4330	114	243.3	14.6	365.0	21.9	486.6	29.2	754.2	45.3	851.6	51.1	973.2	58.4
	3.000	2.8955	104	289.6	17.4	434.3	26.1	579.1	34.7	897.6	53.9	1013.4	60.8	1153.2	69.5
	3.250	3.3982	89	339.8	20.4	509.7	30.6	679.6	40.8	1053.4	63.2	1189.4	71.4	1359.3	81.6
	3.500	3.9411	77	394.1	23.6	591.2	35.5	788.2	47.3	1221.7	73.3	1379.4	82.8	1576.4	94.6
	3.750	4.5243	67	452.4	27.1	678.6	40.7	904.9	54.3	1402.5	84.2	1583.5	95.0	1809.7	108.6
	4.000	5.1476	59	514.8	30.9	772.1	46.3	1029.5	61.8	1595.8	95.7	1801.7	108.1	2059.0	123.5

*API Speed

General Notes

1. Capacities shown are based on 100 percent volumetric efficiency. Actual capacities are lower, based on discharge pressure and fluid compressibility.
2. API-674 and NACE-compliant designs are available; consult Weatherford for details and exceptions to these standards.
3. For operation below 200 RPM, an auxiliary lubrication system is required.
4. Standard plunger sizes are shown, however other sizes are available upon request.
5. Spherical valves must be installed when using 4.00 in. plungers.