

INJECTION PUMP

UNIT: PUM029

PERFORMANCE

Maximum Operating Pressure	5,000 psi (34,474 kPa)*
Maximum Flow Rate	444 m ³ /day*

*Contact Roska Engineering for Detailed Specifications

INJECTION DRIVE

Model	Teco Optim HE Plus
Horse Power	200 HP
Maximum RPM	1785 RPM
Phase	3
Volts	460 V
Hertz	60 Hz
VFD	Yes

PUMP

Make	Weatherford
Model	W200-H Triplex
Plungers	3
Installed Plunger Diameter	1.875" (47.6 mm)
Maximum Input	200 HP (149 kW)
Maximum RPM	400 RPM
Stroke Length	5" (127 mm)

POWER REQUIREMENTS

Motor Only	155 kW
Building Total	170 kW
Main Disconnect	400 A
Voltage Input	480 V
Phase	3

Approximate Power Requirements

SHIPPING DIMENSIONS

Width	10 ft (3.0 m)
Length	26 ft (7.9 m)
Height	10 ft (3.0 m)
Weight Estimate	23,000 lb (10,433 kg)



CERTIFICATION

Area Classification Interior	Class I, Division II
Area Classification Exterior	General Purpose
Piping	ASME B31.3

SUCTION PIPING

Maximum Allowable Working Pressure	675 psi (kPa)
Size	3" (76.2 mm)
Connection (External)	3" CL300 RF

DISCHARGE PIPING

Maximum Allowable Working Pressure	5,000 psi (kPa)
Size	2" (50.8 mm)
Connection (External)	2" CL2500 RTJ



SHUTDOWNS

High/Low Discharge Pressure
High/Low Suction Pressure
Manual ESD
Vibration Switch
H ₂ S & LEL Detection
Standard Engine Kills

FEATURES

Nord SK 92W Gearbox
Discharge Pulsation Dampener
Exhaust Fan
Ruffneck Electric Heater
Discharge MC-III Flow Meter
460 V NEMA 3R VFD
Kenco Lube Oil Tank
Baird PSV



W200 Triplex Pump

Pump Specifications

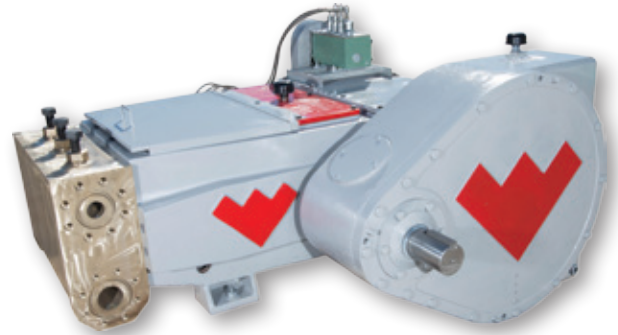
Rated (HP, kW)	200	149
Stroke length (in., mm)	5	127
Maximum discharge pressure (PSI, Bar)		
W200H	5,000	345
W200M	3,350	231
W200L	1,680	116
Rated rod load (lb, kg)	11,870	5,385
API-674 speed, RPM	310	
Maximum speed, RPM	400	
Minimum speed, RPM	100	
Crankshaft dimensions (in., mm)		
Diameter	4.875	124
Length (long)	11.75	298
Length (short)	5.62	143
Keyway, width × depth (in., mm)	1.25 × .62	32 × 16
Oil capacity (gal, l)		
Pump	6.5	24.6
Reducer (varies with ratio)	3.5 to 6.5	13 to 25
Weight (lb, kg); estimates only		
Pump		
W200H	4,707	2,135
W200M	4,792	2,174
W200L	4,842	2,196
Reducer	1,100	499
Mechanical efficiency	90%	

Flange Connections

Pump Model	Discharge Connection Sizes (in., mm)	Suction Connection Sizes (in., mm)
W200H	2 (50.8) ANSI 2500 RJ	3 (76.2) API 2000 RJ
W200M	2 (50.8) API 5000 RJ	4 (101.6) ANSI 150 FF
W200L	3 (76.2) API 2000 RJ	6 (152.4) ANSI 150 FF

Technical Support

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



Gear reducer and packing lubricator optional.

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



W200 Triplex 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
W200H	1.250	0.0797	5000	8.0	273	12.0	410	15.9	546	24.7	847	27.9	956	31.9	1093
	1.375	0.0964	5000	9.6	331	14.5	496	19.3	661	29.9	1025	33.7	1157	38.6	1322
	1.500	0.1147	5000	11.5	393	17.2	590	22.9	787	35.6	1220	40.2	1377	45.9	1574
	1.625	0.1347	5000	13.5	462	20.2	693	26.9	923	41.7	1431	47.1	1616	53.9	1847
	1.750	0.1562	4930	15.6	535	23.4	803	31.2	1071	48.4	1660	54.7	1874	62.5	2142
	1.875	0.1793	4300	17.9	615	26.9	922	35.9	1229	55.6	1906	62.8	2152	71.7	2459
	2.000	0.2040	3780	20.4	699	30.6	1049	40.8	1399	63.2	2168	71.4	2448	81.6	2798
W200M	2.000	0.2040	3350	20.4	699	30.6	1049	40.8	1399	63.2	2168	71.4	2448	81.6	2798
	2.125	0.2303	3350	23.0	790	34.5	1184	46.1	1579	71.4	2448	80.6	2764	92.1	3158
	2.250	0.2582	2990	25.8	885	38.7	1328	51.6	1770	80.0	2744	90.4	3098	103.3	3541
	2.375	0.2877	2680	28.8	986	43.2	1479	57.5	1973	89.2	3058	100.7	3452	115.1	3945
	2.500	0.3187	2420	31.9	1093	47.8	1639	63.7	2186	98.8	3388	111.6	3825	127.5	4371
	2.625	0.3514	2190	35.1	1205	52.7	1807	70.3	2410	108.9	3735	123.0	4217	140.6	4819
W200L	2.750	0.3857	2000	38.6	1322	57.9	1984	77.1	2645	119.6	4099	135.0	4628	154.3	5289
	2.750	0.3857	1680	38.6	1322	57.9	1984	77.1	2645	119.6	4099	135.0	4628	154.3	5289
	3.000	0.4590	1680	45.9	1574	68.8	2361	91.8	3147	142.3	4879	160.6	5508	183.6	6295
	3.250	0.5387	1430	53.9	1847	80.8	2770	107.7	3694	167.0	5725	188.5	6464	215.5	7388
	3.500	0.6247	1230	62.5	2142	93.7	3213	124.9	4284	193.7	6640	218.7	7497	249.9	8568
	3.750	0.7172	1070	71.7	2459	107.6	3688	143.4	4918	222.3	7623	251.0	8606	286.9	9836
	4.000	0.8160	940	81.6	2798	122.4	4197	163.2	5595	253.0	8673	285.6	9792	326.4	11191

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
W200H	1.250	0.3016	345	30.2	1.8	45.2	2.7	60.3	3.6	93.5	5.6	105.6	6.3	120.6	7.2
	1.375	0.3650	345	36.5	2.2	54.7	3.3	73.0	4.4	113.1	6.8	127.7	7.7	146.0	8.8
	1.500	0.4343	345	43.4	2.6	65.1	3.9	86.9	5.2	134.6	8.1	152.0	9.1	173.7	10.4
	1.625	0.5097	345	51.0	3.1	76.5	4.6	101.9	6.1	158.0	9.5	178.4	10.7	203.9	12.2
	1.750	0.5912	340	59.1	3.5	88.7	5.3	118.2	7.1	183.3	11.0	206.9	12.4	236.5	14.2
	1.875	0.6786	296	67.9	4.1	101.8	6.1	135.7	8.1	210.4	12.6	237.5	14.3	271.5	16.3
	2.000	0.7721	260	77.2	4.6	115.8	6.9	154.4	9.3	239.4	14.4	270.2	16.2	308.9	18.5
W200M	2.000	0.7721	231	77.2	4.6	115.8	6.9	154.4	9.3	239.4	14.4	270.2	16.2	308.9	18.5
	2.125	0.8717	231	87.2	5.2	130.8	7.8	174.3	10.5	270.2	16.2	305.1	18.3	348.7	20.9
	2.250	0.9772	206	97.7	5.9	146.6	8.8	195.4	11.7	302.9	18.2	342.0	20.5	390.9	23.5
	2.375	1.0888	185	108.9	6.5	163.3	9.8	217.8	13.1	337.5	20.3	381.1	22.9	435.5	26.1
	2.500	1.2065	167	120.6	7.2	181.0	10.9	241.3	14.5	374.0	22.4	422.3	25.3	482.6	29.0
	2.625	1.3301	151	133.0	8.0	199.5	12.0	266.0	16.0	412.3	24.7	465.5	27.9	532.1	31.9
W200L	2.750	1.4598	138	146.0	8.8	219.0	13.1	292.0	17.5	425.5	27.2	510.9	30.7	583.9	35.0
	2.750	1.4598	116	146.0	8.8	219.0	13.1	292.0	17.5	425.5	27.2	510.9	30.7	583.9	35.0
	3.000	1.7373	116	173.7	10.4	260.6	15.6	347.5	20.8	538.6	32.3	608.1	36.5	694.9	41.7
	3.250	2.0389	99	203.9	12.2	305.8	18.4	407.8	24.5	632.1	37.9	713.6	42.8	815.6	48.9
	3.500	2.3647	85	236.5	14.2	354.7	21.3	472.9	28.4	733.0	44.0	827.6	49.7	945.9	56.8
	3.750	2.7145	74	271.5	16.3	407.2	24.4	542.9	32.6	841.5	50.5	950.1	57.0	1085.8	65.1
	4.000	3.0886	65	308.9	18.5	463.3	27.8	617.7	37.1	957.5	57.4	1081.0	64.9	1235.4	74.1

*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.