

INJECTION PUMP

UNIT: PUM015

PERFORMANCE

Maximum Operating Pressure	5,000 psi (34.5 MPa)
Maximum Flow Rate in Maximum Operating Pressure	129.6 m ³ /day
Maximum Operating Pressure in Current Configuration	1,290 psi (9.9 MPa)
Maximum Flow Rate in Current Configuration	521 m ³ /day

INJECTION DRIVE

Model	Teco HE Plus Premium
Horse Power	75 HP
Maximum RPM	1775 RPM
Phase	3
Volts	230/460 V
Hertz	60 Hz
VFD	YES

PUMP

Make	Weatherford
Model	W80-L (W80-H available)
Type	Triplex
Plungers	3
Installed Plunger Diameter	2.50" (63.5 mm)
Maximum Input	80 HP (60 kW)
Maximum RPM	500 RPM
Stroke Length	3" (76 mm)

POWER REQUIREMENTS

Motor Only	67.8 kW
Building Total	78 kW
Main Disconnect	200 A
Voltage Input	480 V
Phase	3

Approximate Power Requirements

SHIPPING DIMENSIONS

Width	9' 6" (2.9 m)
Length	25' (7.62 m)
Height	10' (3.05 m)
Weight Estimate	16,000 lb (7,258 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 (4654 kPa)
Size	3" (88.9 mm)
Connection	CL300 RF

DISCHARGE PIPING

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

SHUTDOWNS

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

FEATURES

Pulsation Dampener
Equipped with Heater and Lights
Exhaust Fan
Two Suction Strainers On Inlet Piping
Removable Catch Tank
H2S and LEL Detection
Heated and Insulated Stainless Rib Panels
460 V NEMA 3R VFD





W80 Triplex Pump

Pump Specifications

Rated (HP, kW)	80	60
Stroke length (in., mm)	3	76
Maximum discharge pressure (PSI, Bar)		
W80H	5,000	345
W80M	4,270	294
W80L	2,020	139
Rated rod load (lb, kg)	6,336	2,874
API-674 speed, RPM	400	
Maximum speed, RPM	500	
Minimum speed, RPM	200	
Crankshaft dimensions (in., mm)		
Diameter	3.00	76
Length (both sides)	5.12	130
Keyway, width × depth (in., mm)	.75 × .38	19 × 10
Oil capacity (gal, l)		
Pump	2.0	7.6
Reducer	1.0	3.8
Weight (lb, kg); estimates only		
Pump		
W80H	1,250	1,572
W80M	1,190	544
W80L	1,150	508
Reducer	350	159
Mechanical efficiency	90%	

Flange Connections

Pump Model	Discharge Connection Sizes (in., mm)	Suction Connection Sizes (in., mm)
W80H	1.25 (31.8) ANSI 2500 RJ	2.5 (63.5) ANSI 300 FF
W80M	1.5 (38.1) API 5000 RJ	2.5 (63.5) ANSI 150 FF
W80L (flanged)	2 (50.8) API 2000 RJ	3 (76.2) ANSI 150 FF
W80L (threaded)	2 (50.8) NPT	3 (76.2) NPT



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)
 - 2.34:1
 - 2.77:1
 - 3.50:1
 - 3.03:1
- Packing lubricators
- Customized plunger packing arrangements
- Complete pump packages

Technical Support

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1-281-252-7867



W80 Triplex Pump Performance Ratings

Model (standard)	Plunger Diameter (in.)	Gallons Per Revolution	Maximum Pressure PSI	200 RPM		300 RPM		350 RPM		400 RPM*		450 RPM		500 RPM	
				GPM	BPD	BPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD
W80H	1.250	0.0478	5,000	9.6	328	14.3	492	16.7	574	19.1	656	21.5	738	23.9	820
	1.375	0.0579	4,270	11.6	397	17.4	595	20.2	694	23.1	793	26.0	893	28.9	992
W80M	1.375	0.0579	4,270	11.6	397	17.4	595	20.2	694	23.1	793	26.0	893	28.9	992
	1.500	0.0688	3,590	13.8	472	20.7	708	24.1	826	27.5	944	31.0	1,062	34.4	1,180
	1.625	0.0808	3,060	16.2	554	24.2	831	28.3	970	32.3	1,108	36.4	1,247	40.4	1,385
	1.750	0.0937	2,630	18.7	643	28.1	964	32.8	1,125	37.5	1,285	42.2	1,446	46.9	1,606
	2.000	0.1224	2,020	24.5	839	36.7	1,259	42.8	1,469	49.0	1,679	55.1	1,888	61.2	2,098
W80L	2.000	0.1224	2,020	24.5	839	36.7	1,259	42.8	1,469	49.0	1,679	55.1	1,888	61.2	2,098
	2.250	0.1549	1,590	31.0	1,062	46.5	1,593	54.2	1,859	62.0	2,125	69.7	2,390	77.5	2,656
	2.500	0.1912	1,290	38.2	1,311	57.4	1,967	66.9	2,295	76.5	2,623	86.1	2,951	95.6	3,279
	2.750	0.2314	1,070	46.3	1,587	69.4	2,380	81.0	2,777	92.6	3,174	104.1	3,570	115.7	3,967
	3.000	0.2754	900	55.1	1,888	82.6	2,833	96.4	3,305	110.2	3,777	123.9	4,249	137.7	4,721
	3.250	0.3232	760	64.6	2,216	97.0	3,324	113.1	3,879	129.3	4,433	145.4	4,987	161.6	5,541
	3.375	0.3486	710	69.7	2,390	104.6	3,585	122.0	4,183	139.4	4,780	156.8	5,378	174.3	5,975

Model (metric)	Plunger Diameter (in.)	Liters Per Revolution	Maximum Pressure BAR	200 RPM		300 RPM		350 RPM		400 RPM*		450 RPM		500 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
W80H	1.250	0.1810	345	36.2	2.2	54.3	3.3	63.3	3.8	72.4	4.3	81.4	4.9	90.5	5.4
	1.375	0.2190	294	43.8	2.6	65.7	3.9	76.6	4.6	87.6	5.3	98.5	5.9	109.5	6.6
W80M	1.375	0.2190	294	43.8	2.6	65.7	3.9	76.6	4.6	87.6	5.3	98.5	5.9	109.5	6.6
	1.500	0.2606	247	52.1	3.1	78.2	4.7	91.2	5.5	104.2	6.3	117.3	7.0	130.3	7.8
	1.625	0.3058	211	61.2	3.7	91.8	5.5	107.0	6.4	122.3	7.3	137.6	8.3	152.9	9.2
	1.750	0.3547	182	70.9	4.3	106.4	6.4	124.1	7.4	141.9	8.5	159.6	9.6	177.4	10.6
	2.000	0.4633	139	92.7	5.6	139.0	8.3	162.1	9.7	185.3	11.1	208.5	12.5	231.6	13.9
W80L	2.000	0.4633	139	92.7	5.6	139.0	8.3	162.1	9.7	185.3	11.1	208.5	12.5	231.6	13.9
	2.250	0.5863	110	117.3	7.0	175.9	10.6	205.2	12.3	234.5	14.1	263.9	15.8	293.2	17.6
	2.500	0.7239	89	144.8	8.7	217.2	13.0	253.4	15.2	289.6	17.4	325.7	19.5	361.9	21.7
	2.750	0.8759	74	175.2	10.5	262.8	15.8	306.6	18.4	350.4	21.0	394.2	23.6	437.9	26.3
	3.000	1.0424	62	208.5	12.5	312.7	18.8	364.8	21.9	417.0	25.0	469.1	28.1	521.2	31.3
	3.250	1.2234	53	244.7	14.7	367.0	22.0	428.2	25.7	489.3	29.4	550.5	33.0	611.7	36.7
	3.375	1.3193	49	263.9	15.8	395.8	23.7	461.7	27.7	527.7	31.7	593.7	35.6	659.6	39.6

*API Speed

General Notes

- Capacities shown are based on 100 percent volumetric efficiency. Actual capacities are lower, based on discharge pressure and fluid compressibility.
- API-674 and NACE-compliant designs are available; consult Weatherford for details and exceptions to these standards.
- For operation below 200 RPM, an auxiliary lubrication system is required.
- Standard plunger sizes are shown, however other sizes are available upon request.