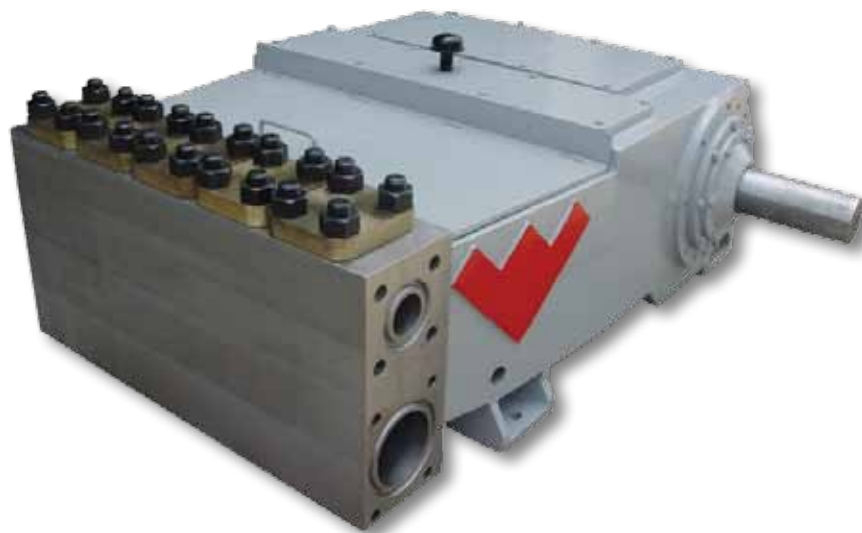




## *Model W300 Quintuplex Power Pump*

Weatherford's Model W300 is a single-acting quintuplex plunger pump rated at 300 HP in continuous duty service. This versatile pump is offered with a variety of material and design options that enable it to be used in a wide range of applications.

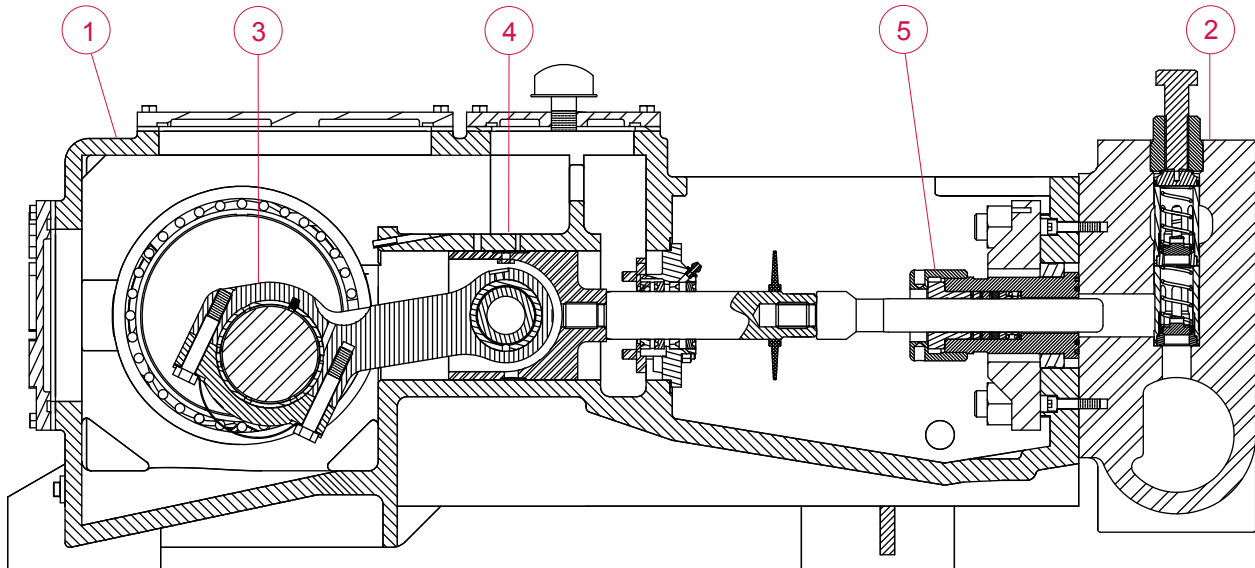


### *Applications*

- Amine gas sweetening
- Ammonia
- Chemical injection
- Core drilling
- Crude transfer
- Detergent and soap slurries
- Dust suppression
- Frac fluid recovery
- Glycol gas dehydration
- High-pressure washdown
- Horizontal directional drilling
- Hot-oil truck injection
- Hydrostatic testing
- Light hydrocarbon transportation
- Machine tool coolant
- Methanol injection
- Municipal jetting
- Oil production
- Polymer flood
- Produced water disposal
- Pulp and paper
- Reverse osmosis
- Secondary recovery
- Steam boiler feed
- Steel mill descaling
- Water injection



## *Model W300 Quintuplex Power Pump*



### *Features, Advantages and Benefits*

1. The graphite flake microstructure of the cast iron power frame ensures robust, fatigue-free durability and excellent wear resistance of moving surfaces.
2. All fluid cylinders are made from forged carbon steel, duplex stainless-steel, or cast nickel-aluminum-bronze material for increased durability and extended life.
3. Critical components—crankshafts, connecting rods, crossheads, and bearings—are comparatively larger than industry-standard components, enabling them to withstand continuous duty service and harsh operating conditions.
4. The oil trough is designed to evenly lubricate the crossheads and wrist-pin bearings during operation to reduce wear and extend component life. Pump vendors often exclude this critical feature to simplify the design and reduce the cost of the power end.
5. A variety of packing arrangements are available to meet the requirements of any application:
  - a. Standard, manually adjustable packing.
  - b. Optional spring-loaded packing does not require manual adjustment.
  - c. Optional stuffing-box design that minimizes fluid and vapor leakage to atmosphere for critical fluids.



## Model W300 Quintuplex Power Pump

### Specifications

Pump Model	Plunger Size (in./mm)	Displacement (gal/rev)	Rated Pressure (psi/MPa)	Rated Capacity GPM (BPD)					
				100 RPM	200 RPM	250 RPM	300 RPM	350 RPM	400 RPM
W300H	1.500 38	0.1912	5,000 34.5	19.1 (656)	38.2 (1,311)	47.8 (1,639)	57.4 (1,967)	66.9 (2,295)	76.5 (2,623)
	1.625 41	0.2245		22.4 (770)	44.9 (1,539)	56.1 (1,924)	67.3 (2,309)	78.6 (2,693)	89.8 (3,078)
	1.750 44	0.2603	4,450 30.7	26.0 (892)	52.1 (1,785)	65.1 (2,231)	78.1 (2,677)	91.1 (3,124)	104.1 (3,570)
	1.875 48	0.2988	3,880 26.8	29.9 (1,025)	59.8 (2,049)	74.7 (2,561)	89.6 (3,074)	104.6 (3,586)	119.5 (4,098)
	2.000 51	0.3400	3,410 23.5	34.0 (1,166)	68.0 (2,331)	85.0 (2,914)	102.0 (3,497)	119.0 (4,080)	136.0 (4,663)
W300M	2.000 51	0.3400	3,000 20.7	34.0 (1,166)	68.0 (2,331)	85.0 (2,914)	102.0 (3,497)	119.0 (4,080)	136.0 (4,663)
	2.125 54	0.3838		38.4 (1,316)	76.8 (2,632)	96.0 (3,290)	115.1 (3,948)	134.3 (4,606)	153.5 (5,264)
	2.250 57	0.4303	2,690 18.5	43.0 (1,475)	86.1 (2,951)	107.6 (3,688)	129.1 (4,426)	150.6 (5,164)	172.1 (5,901)
	2.375 60	0.4795	2,420 16.7	47.9 (1,644)	95.9 (3,288)	119.9 (4,110)	143.8 (4,932)	167.8 (5,753)	191.8 (6,575)
	2.500 64	0.5312	2,180 15.0	53.1 (1,821)	106.2 (3,643)	132.8 (4,554)	159.4 (5,464)	185.9 (6,375)	212.5 (7,286)
	2.750 70	0.6428	1,800 12.4	64.3 (2,204)	128.6 (4,408)	160.7 (5,510)	192.8 (6,612)	225.0 (7,714)	257.1 (8,816)
W300L	2.750 70	0.6428	1,650 11.4	64.3 (2,204)	128.6 (4,408)	160.7 (5,510)	192.8 (6,612)	225.0 (7,714)	257.1 (8,816)
	3.000 76	0.7650	1,510 10.4	76.5 (2,623)	153.0 (5,246)	191.2 (6,557)	229.5 (7,869)	267.7 (9,180)	306.0 (10,491)
	3.250 83	0.8978	1,290 8.9	89.8 (3,078)	179.6 (6,156)	224.5 (7,696)	269.3 (9,235)	314.2 (10,774)	359.1 (12,313)
	3.500 89	1.0412	1,110 7.7	104.1 (3,570)	208.2 (7,140)	260.3 (8,925)	312.4 (10,710)	364.4 (12,495)	416.5 (14,280)
	3.750 95	1.1953	970 6.7	119.5 (4,098)	239.1 (8,196)	298.8 (10,246)	358.6 (12,295)	418.4 (14,344)	478.1 (16,393)
	4.000 102	1.3600	850 5.9	136.0 (4,663)	272.0 (9,326)	340.0 (11,657)	408.0 (13,989)	476.0 (16,320)	544.0 (18,651)



## *Model W300 Quintuplex Power Pump*

### *Specifications (continued)*

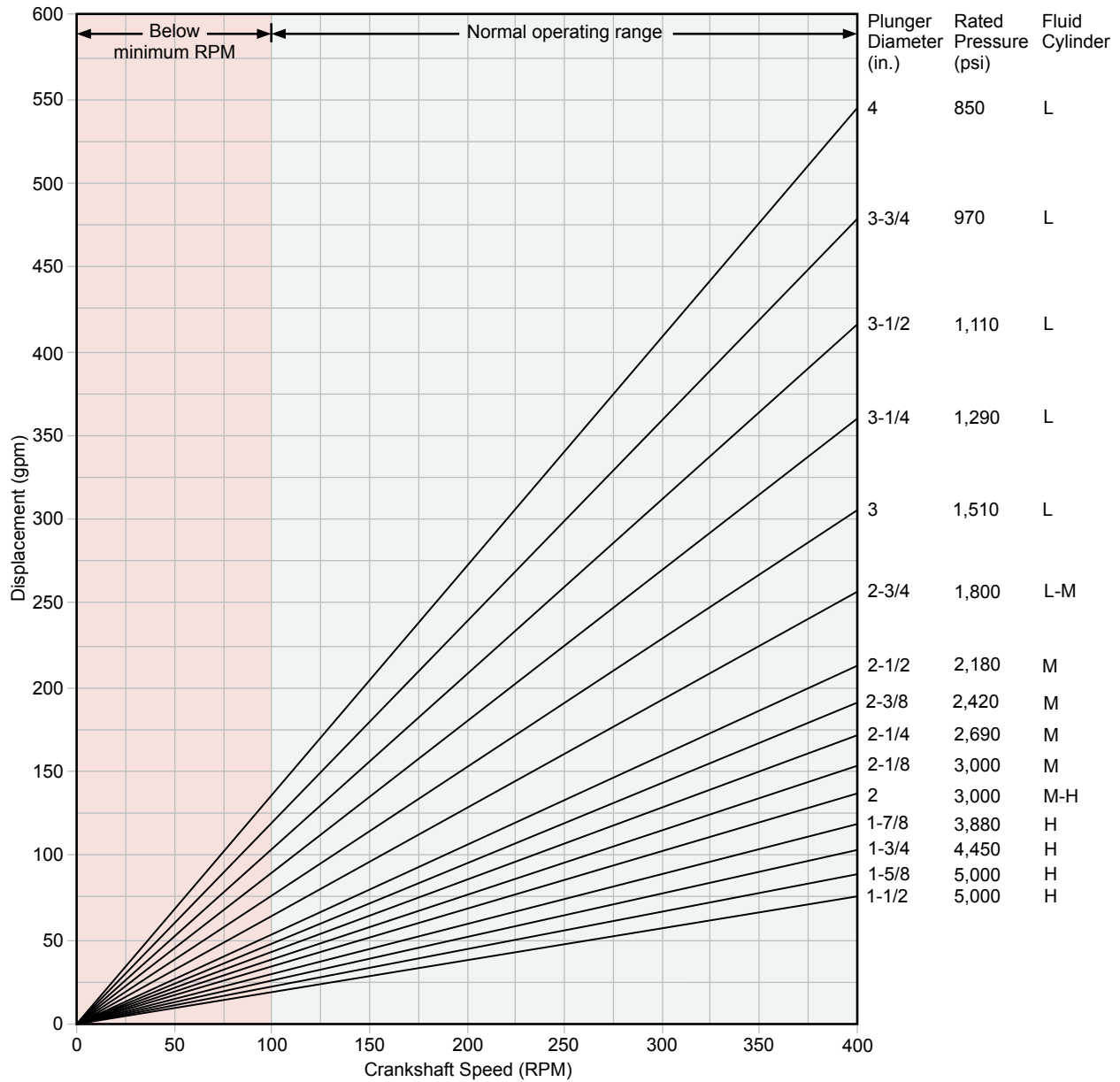
Maximum Discharge	(psi/MPa)
Model H	5,000 34.5
Model M	3,000 20.7
Model L	1,650 11.4

Crankshaft Extension	(in./mm)
Diameter	4.875 124
Length (long side)	11.69 297
Length (short side)	5.62 143
Key way	1.25 × 0.62 32 × 16
Maximum recommended sheave	58 1,473
Minimum recommended sheave	36 914

Rated power (HP)	300
Maximum speed (RPM)	400
Minimum speed (RPM)	100
Stroke length (in./mm)	5.00 127
Rated rod load (lb/kg)	10,700 4,853
Model H weight (lb/kg)	6,840 3,103
Model M weight (lb/kg)	6,750 3,062
Model L weight (lb/kg)	7,000 3,175
Oil capacity (gal/L)	12 46
Maximum fluid temperature (°F/°C)	180 82
Mechanical efficiency (%)	90

## Model W300 Quintuplex Power Pump

### W300 Selection Graph

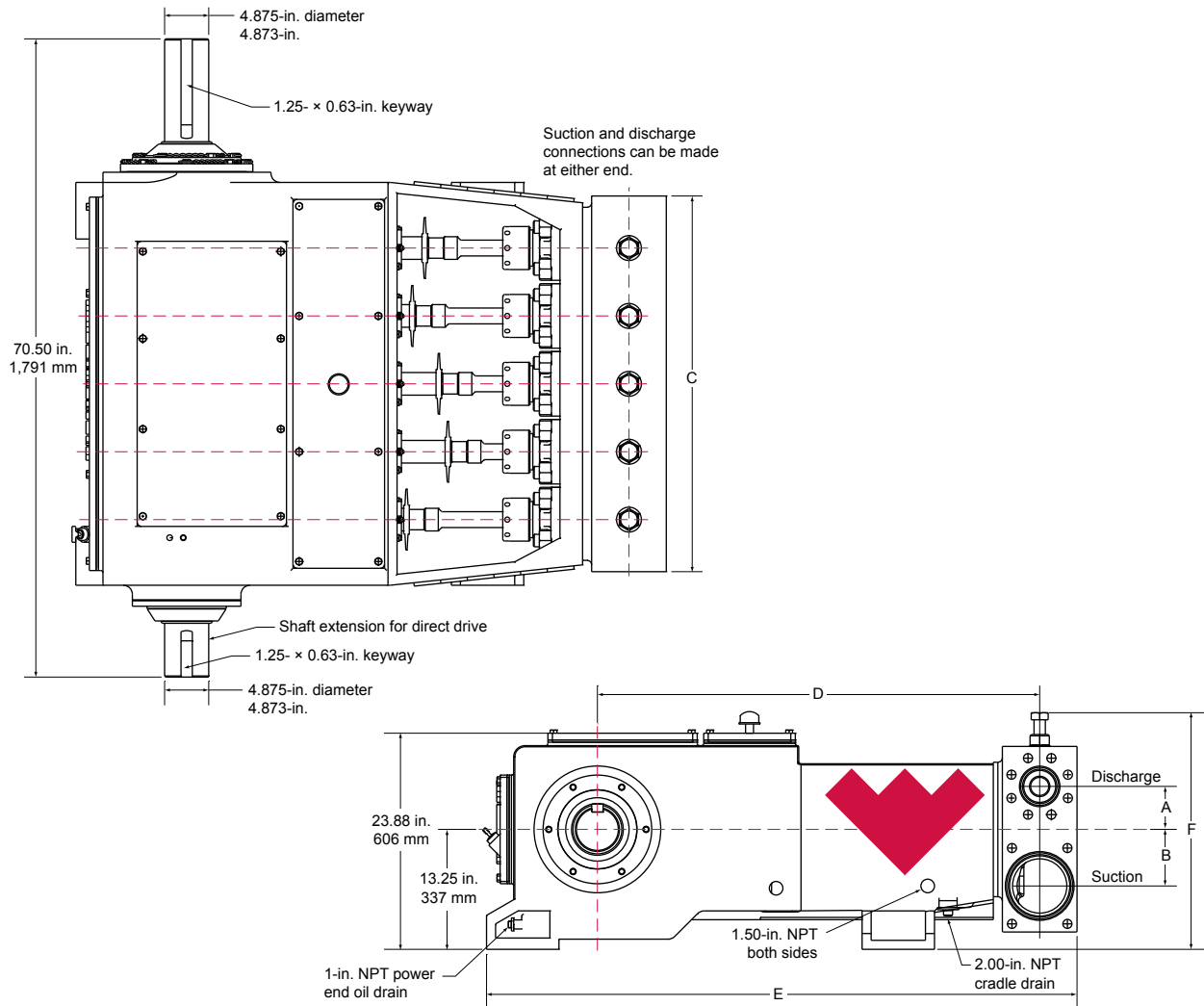


**5.00-in. stroke, maximum rod load 10,700 lb (4,853 kg)**



# Model W300 Quintuplex Power Pump

## General Dimensions



Pump Model	Flange Connections		Dimensions (in./mm)					
	Discharge Connection Sizes	Suction Connection Sizes	A	B	C	D	E	F
W300L	4 (101.6) API-2000 RJ	8 (203.2) ANSI-150 FF	6.25 159	9.12 232	43.25 1,099	49.00 1,245	68.00 1,727	25.12 638
W300M	3 (76.2) NSD-5000 RJ	6 (152.4) NSD-600 RJ	4.50 114	6.50 165	41.50 1,054	48.62 1,235	65.00 1,651	25.44 646
W300H	2 (50.8) ANSI-2500 RJ	6 (152.4) NSD-600 RJ	4.50 114	6.50 165	41.50 1,054	48.62 1,235	65.12 1,654	25.62 651



---

## *Model W300 Quintuplex Power Pump*

### *Materials of Construction*

---

**Fluid Cylinder:** The W300 pump is offered with 4140 carbon steel, 955 nickel-aluminum bronze, and 2205 duplex stainless-steel, fluid-cylinder materials as standard, with 420, 304, and 316L stainless-steel materials available on special request.

**Plungers:** Weatherford provides tungsten-carbide, coated plungers as standard on all versions of the W300 pump. Weatherford offers optional solid ceramic, or ceramic-coated plungers on request for special applications with pumping abrasive or corrosive fluids for superior durability.

**Packing:** Weatherford provides all W300 pumps with braided Teflon®-Kevlar® packing as standard. This versatile packing is suitable for a wide variety of fluids and can work with or without external lubrication in most services. Optional packing styles and materials may be available as options to provide maximum performance and durability for almost any fluid and operating condition.

**Trim rings:** Trim rings located inside the stuffing box can include throat bushings, lantern glands, follower rings, and adjusting nuts. Weatherford provides bronze trim rings as standard on all pumps; however, optional materials are available to meet the needs of specific fluids. All iron trim rings are offered when pumping amines or fluids that contain H<sub>2</sub>S.

**Seals:** The W300 pump is provided with EPDM O-ring seals as standard. This versatile material is compatible with a wide range of common industrial and oilfield fluids and has excellent temperature and abrasion-resistant properties. Weatherford offers Viton®, Aflas®, and HNBR compounds as options to meet specific fluid compatibility and operating temperature requirements.

#### Special Notes

1. Capacities shown are based on 100 percent volumetric efficiency. Actual capacities are lower, based on discharge pressure and fluid compressibility.
2. Operating power required by the pump is calculated by the formula:  $HP = (psi \times gpm) / 1,543$ , where psi is the actual operating pressure in psi units, and gpm is the actual pumping capacity in gpm.
3. Maximum operating speeds are based on pumping nonabrasive fluids with viscosities similar to water. Consult Weatherford for operating speed recommendations for viscous or abrasive liquids.
4. Dimensions shown are typical and should not be used for fabrication purposes. Optional flanged connections are shown for reference. Inlet and discharge connections can be on either side of the fluid cylinder.
5. Special designs and materials are available for operation above 180°F (82°C).
6. API-674 and NACE-compliant designs are available on request. Consult Weatherford for specific details and exceptions to these standards.
7. Standard plunger sizes are shown; however, other sizes may be available on request. Consult Weatherford for performance and pressure ratings.
8. Consult Weatherford for assistance with pump selection on applications where actual operating inlet pressures are greater than 10 percent of the rated discharge pressure of the pump model selected.
9. For operation below 100 RPM, an auxiliary lubrication system is required.
10. Spherical valves must be installed when the pump is fitted with 4.00-in. plungers.

Teflon, Kevlar, Viton and Aflas are registered trademarks of their respective owners.