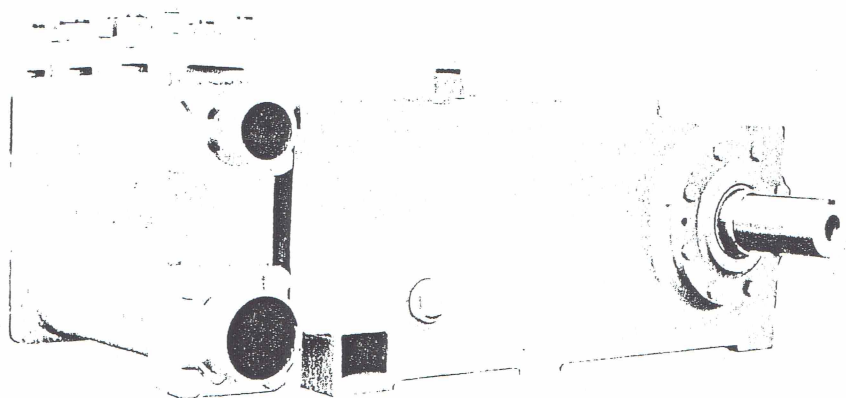


A-334 Triplex Plunger Pump



This 100-horsepower pump includes in its features the ability to function fully loaded, continuously, displacing corrosive fluids in the medium pressure ranges.

Working Pressure

Up to 3,180 psig

Displacement

4,760 bpd (138.85 gpm)
at 1,111 psig
1,663 bpd (48.48 gpm)
at 3,180 psig

Specifications

Pump Size (Max. Plunger Dia. X Stroke)	inches	3 x 4
Standard Plunger Sizes	inches	1½, 1¾, 1⅞, 2, 2½, 2¾, 2⅝, 2½, 2½, 2¾, 2⅝, and 3
Rated bhp at 450 rpm		100
Hydrostatic Test Pressure:		
Discharge	psig	5,000
Suction	psig	425
Maximum Working Pressure:		
Discharge	psig	3,180
Suction	psig	275
Two Suction Connections:		
Pipe Size	inches	4
Classification		Sch. 40
Prepared For Welding		V-Bevel
Two Discharge Connections:		
Pipe Size	inches	3
Classification		Sch. 80
Prepared For Welding		V-Bevel
Crank Shaft Extension:		
Diameter	inches	3.750
Length	inches	7½
Keyway (Width X Depth)	inches	¾, x 7/16
Pinion Shaft Extension (If Gear Unit Supplied):		
Diameter	inches	2.875
Length	inches	6¾
Keyway (Width X Depth)	inches	¾ x ¼
Accessory Gear Units (Reduction Ratios)		
		2.596:1
		3.109:1
		3.947:1
		6.192:1
Oil Capacity: Crank Case	gallons	8
Gear Unit (Capacity Varies with Gear Ratio)	gallons	
Weight: Pump Only (On Wood Shipping Skids)	pounds	1,685
Gear Unit (Weight Varies with Gear Ratio)	pounds	

Quick Maintenance Features

- Horizontal design
- Large power end access covers and doors
- Outside access for bearing adjustment
- Separate crosshead—plunger-shank construction
- Open frame cradles
- Removable stuffing boxes

Plunger Diameter (Inches)	Stuffing Box Bore (Inches)
1½ - 1⅞	2½
2 - 2¼	3
2¾ - 2⅝	3⅝
2¾ - 3	3¾

Each Pump is Standard Equipped with:	Optional Equipment	Accessory Equipment
Aluminum Bronze Fluid End Aluminum Bronze Valve Covers Aluminum Bronze Stuffing Boxes CO-HARD Plungers Style 838 General Service Packing S.S. Valve Seats Delrin Valve Discs S.S. Valve Springs Bronze Stuffing Box Bushings Bronze Lantern Rings Bronze Packing Followers Oil Level Switch-Gauge Double Extended Crank Shaft Crank Shaft Extension Cover Crank Case Breather Wooden Shipping Skids	Ceramic Plungers Titanium Valve Springs	3-Feed Stuffing Box Lubricator Assembly Cradle Covers Valve Seat Puller Assembly Suction Stabilizers Discharge Pulsation Dampeners 2.596:1 Ratio Gear Reduction Unit 3.109:1 Ratio Gear Reduction Unit 3.947:1 Ratio Gear Reduction Unit 6.192:1 Ratio Gear Reduction Unit Steel Base For Pump & Electric Motor Steel Base For Pump & Engine V Belt Drives V Belt Guards Flexible Couplings Flexible Coupling Guards

We reserve the right to change specifications without incurring any obligation for equipment previously or subsequently sold.

Features of OILWELL Standard Units

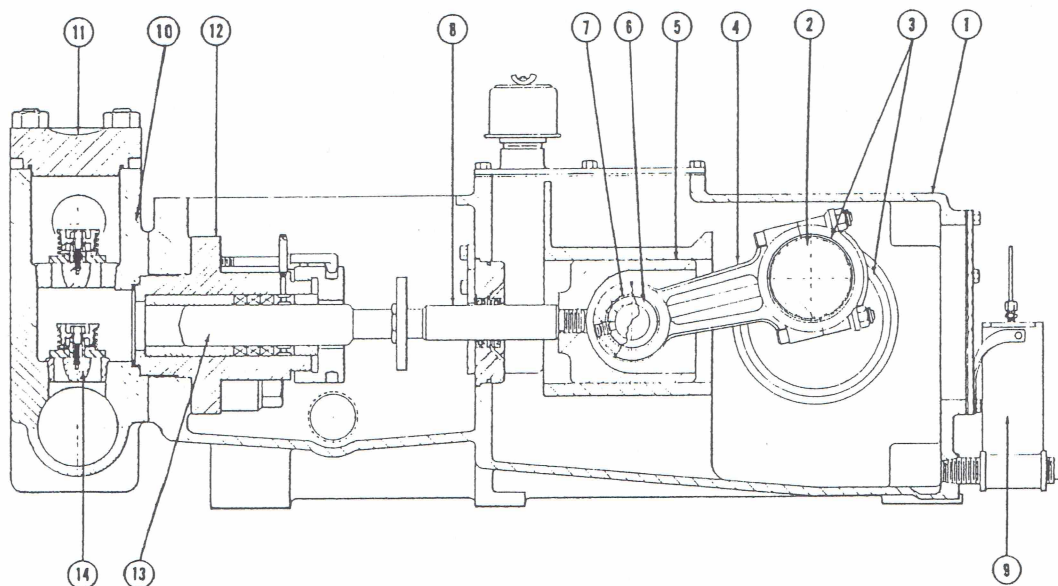
POWER END

- (1) **POWER FRAME** — One-piece . . . fully enclosed . . . rib reinforced . . . close grained . . . iron casting.
- (2) **CRANKSHAFT** — Ground journals . . . polished throws . . . fully heat-treated . . . ductile iron (extended on both sides of power frame to provide for either right-hand or left-hand drive).
- (3) **BEARINGS** — (crankshaft) — shim adjusted . . . heavy-duty . . . tapered roller bearings.
(crankpin) — steel backed . . . babbitt lined . . . precision type.
- (4) **CONNECTING RODS** — Marine type (enclosed eye at crosshead end and with separate cap at crank end) . . . ductile iron.
- (5) **CROSSHEADS** — Cylindrical . . . foreward and reverse oil grooves . . . cast iron.
- (6) **CROSSHEAD PINS** — Case hardened . . . finished ground . . . alloy steel.
- (7) **CROSSHEAD PIN BUSHINGS** — Press fitted into crossheads . . . bearing bronze.
- (8) **EXTENSION RODS** — Removable from crossheads . . . chrome plated . . . alloy steel.
- (*) **LUBRICATION** — Flooded sump . . . splash distribution.
- (9) **OIL LEVEL SWITCH-GAUGE** — Type L-129 . . . high and low contacts . . . one amp . . . 24 volt.

FLUID END

- (10) **FLUID CHAMBER** — One-piece . . . integral suction and discharge passages . . . aluminum bronze.
- (11) **VALVE COVER** — Bolted type . . . aluminum bronze.
- (12) **STUFFING BOXES** — Bolted type . . . individually removable . . . screw type glands . . . aluminum bronze.
- (13) **PLUNGERS** — Stub type . . . knurled wrench surface . . . threaded to extension rods.
- (14) **PACKING** — General service . . . lip type . . . minimum cross-section.
- (14) **VALVES AND SEATS** — Self contained . . . s.s. valve seat . . . delrin valve disc . . .
s.s. valve spring . . . s.s. valve guard.

(*) Not Detailed In This Drawing.



Plunger Pump

Performance Data

Stroke lgth. 4" — Max. Pressure 3,180 psi (1,663 bpd 48.48 gpm) — Max. Vol. 4,760 bpd 138.85 gpm (1,111 psi) — Max Speed 450 rpm — Max Frame Load 6,600 lbs.

(Volumes Indicated are Displacement of Noncompressible Fluid)

Plgr. Dia.	Plgr. Area (Sq. In.)	Displacement Gal. Per Rev.	Max. Pres. psi	100 rpm		150 rpm		200 rpm		250 rpm		300 rpm		350 rpm		400 rpm		450 rpm	
				bpd	gpm	bpd	gpm	bpd	gpm	bpd	gpm	bpd	gpm	bpd	gpm	bpd	gpm	bpd	gpm
1 5/8	2.0739	.1077	3180	369	10.77	554	16.16	739	21.55	923	26.93	1108	32.32	1293	37.71	1478	43.09	1662	48.48
1 3/4	2.4053	.1249	2740	428	12.49	643	18.74	857	24.99	1071	31.24	1285	37.48	1499	43.73	1714	49.98	1928	56.23
1 7/8	2.7612	.1434	2390	492	14.34	738	21.52	984	28.69	1229	35.86	1475	43.03	1721	50.20	1967	57.37	2213	64.55
2	3.1416	.1632	2100	560	16.32	839	24.48	1119	32.64	1399	40.80	1679	48.96	1958	57.12	2238	65.28	2518	73.44
2 1/8	3.5466	.1842	1860	632	18.42	948	27.64	1263	36.85	1579	46.06	1895	55.27	2211	64.48	2527	73.69	2843	82.91
2 1/4	3.9761	.2065	1680	708	20.65	1062	30.98	1416	41.31	1770	51.64	2125	61.96	2479	72.29	2833	82.62	3187	92.95
2 3/8	4.4301	.2301	1500	789	23.01	1184	34.52	1578	46.03	1973	57.53	2367	69.04	2762	80.55	3156	92.05	3551	103.56
2 1/2	4.9087	.2550	1340	874	25.50	1311	38.25	1749	51.00	2186	63.75	2623	76.50	3060	89.25	3497	102.00	3934	114.75
2 5/8	5.4119	.2811	1215	964	28.11	1446	42.17	1928	56.23	2410	70.28	2892	84.34	3374	98.40	3856	112.45	4338	126.51
2 3/4	5.9396	.3085	1111	1058	30.85	1587	46.28	2116	61.71	2645	77.14	3174	92.56	3703	107.99	4232	123.42	4760	138.85
2 7/8	6.4918	.3372	1017	1156	33.72	1734	50.59	2312	67.45	2891	84.31	3469	101.17	4047	118.03	4625	134.89	—	—
3	7.0686	.3672	934	1259	36.72	1888	55.08	2518	73.44	3147	91.80	3777	110.16	4406	128.52	4721	137.63	—	—
Gear Unit Pinion				260	389	519	649	779	909	1038	1168	1293	1424	1554	1684	1814	1944	2074	2204
Shaft rpm at				311	466	622	777	933	1088	1244	1399	1554	1710	1866	2021	2177	2332	2488	2644
Gear Ratios of:				395	592	789	987	1184	1381	1579	1776	1973	2170	2367	2564	2761	2958	3155	3352
				619	929	1238	1548	1858	2167	2477	2786	3095	3404	3713	4022	4331	4640	4949	5258
Brake Horsepower Required				22	33	44	56	67	78	89	100	111	122	133	144	155	166	177	188

* For operations below 100 rpm and for reverse rotation, consult manufacturer for lubrication recommendations.

** Limited to 375 rpm to maintain low fluid velocity thru valve areas. Displacement calculated at this speed.

$$\text{Brake Horsepower} = \frac{\text{gpm} \times \text{psi}}{1714 \times 90\% \text{ Mech. Eff.}}$$

$$\text{Gal. Per Rev.} = \frac{\text{Area of Plunger} \times (\text{Length of Stroke} \times \text{Number of Plungers})}{231}$$

$$\text{Barrels Per Day} = \text{gpm} \times 34.3$$

$$\text{Gal. Per Min} = \frac{\text{bpd}}{34.3}$$

$$\text{Barrels Per Day} = \text{Gal. Per Rev.} \times \text{rpm} \times 34.3$$

$$\text{Gal. Per Min.} = \text{Gal. Per Rev.} \times \text{rpm}$$

A-334 Triplex Plunger Pump

NOTE: THESE DIMENSIONS ARE ACCURATE
BUT SHOULD NOT BE USED FOR
INSTALLATION UNLESS CERTIFIED.

PUMP, AS SHOWN, CAN BE DRIVEN FROM EITHER SIDE.
LEFT HAND DRIVE IS CONSIDERED TO BE STANDARD.

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