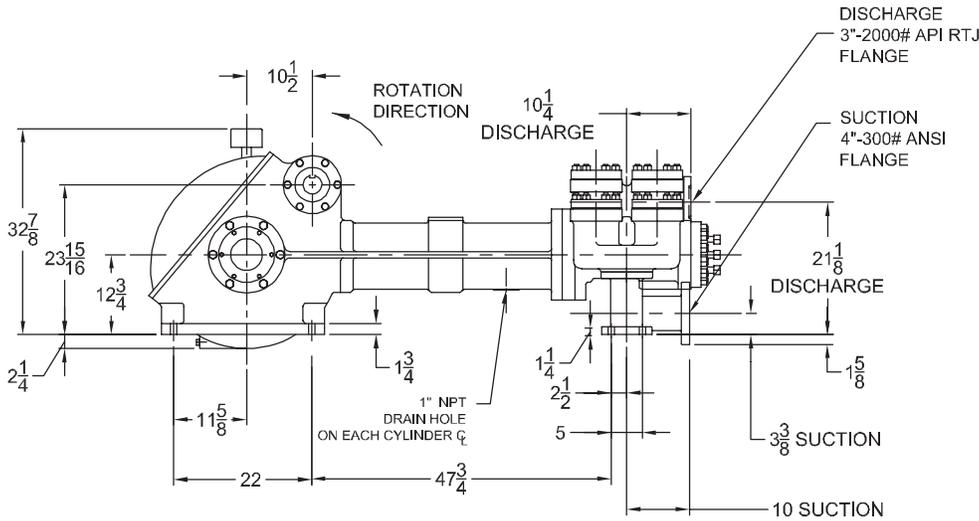
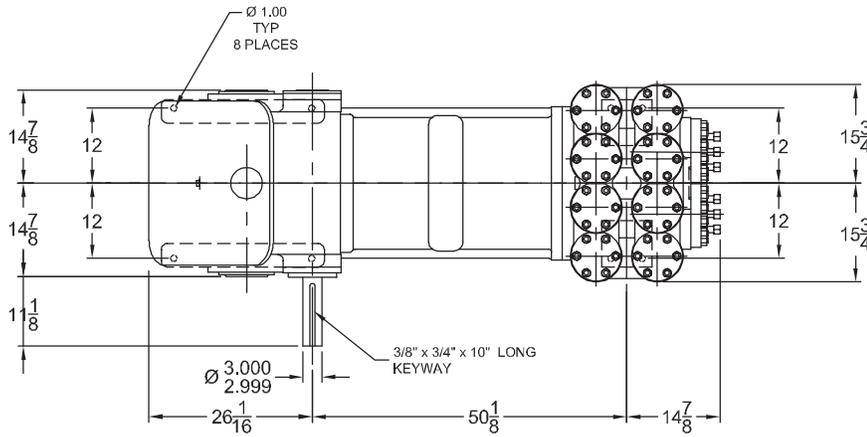


1654 Duplex Double-Acting Piston Pump



Specifications

Pump Size:

maximum piston size x stroke length, in.(mm):
5 x 8 (127.0 x 203.2)

Rated BHP (kW) at 90 RPM (Crankshaft speed):
104 (77)

Rated piston load, pounds (kg): 12680 (5752)

Maximum discharge pressure, psi (kPa):
1800 (12411)

Pinion gear ratio: 4.750:1

Pinion shaft extension:

Diameter, in.(mm): 3.000 (76.20)

Length, in.(mm): 11.000 (279.40)

Keyway width x depth, in.(mm):

3/4 x 3/8 (19.1 x 9.5)

Maximum recommended sheave diameter,
in.(mm): 44 (1118)

For larger sheave diameters:

Contact Factory

Oil Capacity, gallons (L): 12.0 (45.41)

Weight, pump only on

wood shipping skids, pounds (kg): 4475 (2030)

Standard Materials for Fluid End Bodies:

Cast Steel

Cast Ductile Iron

| Pump Model | Flange Connections | |
|------------|----------------------------|--------------------------|
| | Discharge Connection Sizes | Suction Connection Sizes |
| 1654 | 3 (76.2) API 2000 RJ | 4 (101.6) ANSI 300 FF |

IEQ Industries

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On the Web at www.gaso.com

1654 Duplex Double-Acting Piston Pump

Performance Data

| PUMP | English Units | | | | | 30 RPM | | 45 RPM | | 60 RPM | | 75 RPM | | 90 RPM | |
|---------------------------|-----------------|---------------------|-------------|-------------|-----------------|--------|------|--------|-------|--------|-------|--------|-------|--------|-------|
| | Piston Dia. In. | Piston Area Sq. In. | BPD per RPM | GPM per RPM | Max. Press. PSI | BPD | GPM | BPD | GPM | BPD | GPM | BPD | GPM | BPD | GPM |
| | | | | | | | | | | | | | | | |
| 1654 | 2.500 | 4.9087 | 19.1177 | 0.5576 | 1800 | 574 | 16.7 | 861 | 25.1 | 1148 | 33.5 | 1434 | 41.8 | 1721 | 50.2 |
| | 3.000 | 7.0686 | 29.3760 | 0.8568 | 1794 | 882 | 25.7 | 1322 | 38.6 | 1763 | 51.4 | 2204 | 64.3 | 2644 | 77.1 |
| | 3.500 | 9.6211 | 41.4720 | 1.2096 | 1318 | 1245 | 36.3 | 1867 | 54.4 | 2489 | 72.6 | 3111 | 90.7 | 3733 | 108.9 |
| | 4.000 | 12.5664 | 55.4880 | 1.6184 | 1009 | 1665 | 48.6 | 2497 | 72.8 | 3330 | 97.1 | 4162 | 121.4 | 4994 | 145.7 |
| | 4.500 | 15.9043 | 71.3417 | 2.0808 | 797 | 2141 | 62.4 | 3211 | 93.6 | 4281 | 124.8 | 5351 | 156.1 | 6421 | 187.3 |
| | 5.000 | 19.6349 | 89.0605 | 2.5976 | 646 | 2672 | 77.9 | 4008 | 116.9 | 5344 | 155.9 | 6680 | 194.8 | 8016 | 233.8 |
| Brake Horsepower Required | | | | | | 35 | | 52 | | 69 | | 86 | | 104 | |

| PUMP | Metric Units | | | | | 30 RPM | | 45 RPM | | 60 RPM | | 75 RPM | | 90 RPM | |
|--------------------|-----------------|------------------------------|----------------------------|----------------|-----------------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|
| | Plunger Dia. mm | Plunger Area cm ² | M ³ /Hr per RPM | L/Sec. per RPM | Max. Press. kPa | M ³ /Hr | L/Sec. |
| | | | | | | | | | | | | | | | |
| 1654 | 64 | 31.669 | 0.1266 | 0.0352 | 12411 | 3.8 | 1.1 | 5.7 | 1.6 | 7.6 | 2.1 | 9.5 | 2.6 | 11.4 | 3.2 |
| | 76 | 45.604 | 0.1946 | 0.0541 | 12368 | 5.8 | 1.6 | 8.8 | 2.4 | 11.7 | 3.2 | 14.6 | 4.1 | 17.5 | 4.9 |
| | 89 | 62.072 | 0.2747 | 0.0763 | 9087 | 8.2 | 2.3 | 12.4 | 3.4 | 16.5 | 4.6 | 20.6 | 5.7 | 24.7 | 6.9 |
| | 102 | 81.073 | 0.3675 | 0.1021 | 6957 | 11.0 | 3.1 | 16.5 | 4.6 | 22.1 | 6.1 | 27.6 | 7.7 | 33.1 | 9.2 |
| | 114 | 102.608 | 0.4725 | 0.1313 | 5497 | 14.2 | 3.9 | 21.3 | 5.9 | 28.4 | 7.9 | 35.4 | 9.8 | 42.5 | 11.8 |
| | 127 | 126.677 | 0.5899 | 0.1639 | 4453 | 17.7 | 4.9 | 26.5 | 7.4 | 35.4 | 9.8 | 44.2 | 12.3 | 53.1 | 14.7 |
| Kilowatts Required | | | | | | 26 | | 39 | | 52 | | 64 | | 77 | |

For operation below 65 RPM, an auxiliary lubrication system is required.

RPM shown is Crankshaft speed. For Pinion Shaft speed, multiply RPM by Gear Ratio. Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 85% Mechanical Efficiency.

The information and data on this sheet is accurate to the best of our knowledge and belief, but are intended for general information only. Applications suggested for the materials are described only to help readers make their own evaluations and decisions, and are neither guarantees nor to be construed as express or implied warranties of suitability for these or other applications. National Oilwell makes no warranty either express or implied beyond that stipulated in National Oilwell Standard Terms and Conditions of Sale.

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