

Conventional Pumping Unit

Long service life with reduced operating costs

APPLICATIONS

- All wells that can deploy sucker rod pumping
- Wells with deviations and high rod friction
- Unconventional shale reservoirs
- Conventional oil wells

BENEFITS

- Provides easy installation and maintenance
- Offers long service life of over 25 years with proper maintenance
- Lowers year over year operational cost

FEATURES

- High-load, easily serviced center bearing based on proven railway bearing design
- Dual-axis hinge pin style equalizer bearing for long life and reduced stress in assembly
- High-capacity gear reducer designed far beyond API requirements
 - Equipped with bearing carriers
 - Inspection cover includes dipstick for simple fill-level monitoring
 - Improved lubrication assembly enables speed changes with no intervention or adjustments
- Large low-speed shaft for long life and increased counterbalance support
- Field-serviceable gear reducer design with bolt-on cranks
- Fully enclosed horsehead for maximum strength

Conventional crank-balanced pumping units provide reliable, cost-effective performance at a competitive price. With more than 14,000 units currently pumping throughout North America, these units consistently exceed the expectations of producers.

Manufactured to API standards, these units deliver high reliability and quiet operations. These pumping units have high-capacity saddle bearings, large self-centering drive bearings, and large lubrication reservoirs, providing reliable performance for the long term. These conventional-geometry units are stocked in API sizes 80 to 1280.

Main Specifications

| Specifications | Basic Parameters | | | Gear Reducer | | | Balance Assembly |
|-----------------------|----------------------------------|-------------------|----------------------|--------------------|-----------------------------|--|-----------------------|
| Model | Rated Polished Rod Capacity, lbf | Stroke Length, in | Rated Torque, in.lbf | Reducer Gear Ratio | Oil Storage Quantity, galUS | Lubricant | Weight of Cranks, lbf |
| C80D-119-64 | 11,900 | 64 | 80,000 | 31.747 | 16 | | 827 |
| C114D-173-64 | 17,300 | 64 | 114,000 | 28.395 | 25 | ISO VG 150 winter | 1,655 |
| C228D-173-120 | 17,300 | 120 | 228,000 | 28.91 | 43 | ISO VG 220 summer | 3,106 |
| C456D-365-144 | 36,500 | 144 | 456,000 | 28.84 | 110 | | 4,699 |
| C456D-305-168 | 30,500 | 168 | 456,000 | 28.84 | 110 | | 4,699 |
| C640D-305-144 | 30,500 | 144 | 640,000 | 29.32 | 106 | | 4,699 |
| C640D-427-144 | 42,700 | 144 | 640,000 | 29.32 | 106 | | 4,699 |
| C640D-365-168 | 36,500 | 168 | 640,000 | 29.32 | 106 | | 4,699 |
| C640D-365-192 | 36,500 | 192 | 640,000 | 29.32 | 106 | | 4,699 |
| C912D-365-168 | 36,500 | 168 | 912,000 | 28.79 | 180 | | 4,699 |
| C912D-365-192 | 36,500 | 192 | 912,000 | 28.79 | 180 | | 4,699 |
| C912D-427-192 | 42,700 | 192 | 912,000 | 28.79 | 180 | | 4,699 |
| C1280D-365-192 | 36,500 | 192 | 1,280,000 | 28.672 | 185 | | 4,699 |
| C1280D-427-192 | 42,700 | 192 | 1,280,000 | 28.672 | 185 | ISO VG 150 winter ISO VG 220 summer | 4,699 |
| C1280D-365-240 | 36,500 | 240 | 1,280,000 | 28.672 | 185 | | 5,971 |

Counterbalance Data

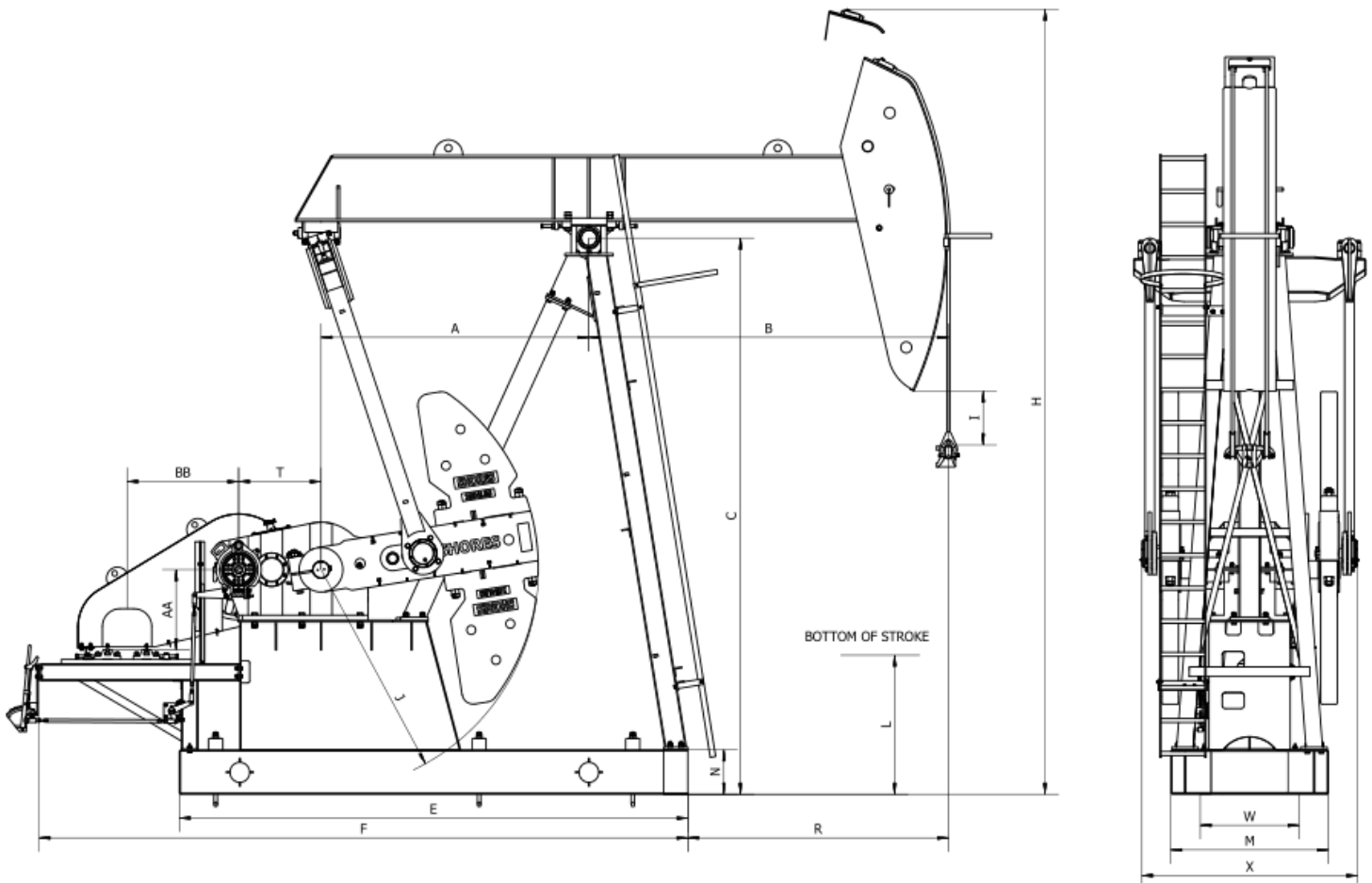
| Specifications | Structural Unbalance, lbf | Cranks | Effective Counterbalance (ECB) Cranks Only, lbf | Max. ECB, lbf |
|-----------------------|---------------------------|---------|---|---------------|
| C80D-119-64 | 60 | GRC180 | 1,399 | 5,454 |
| C114D-173-64 | 500 | GRC170 | 4,104 | 13,780 |
| C228D-173-120 | 50 | GRC130 | 5,217 | 18,394 |
| C456D-365-144 | -365 | GRC120 | 7,037 | 40,912 |
| C456D-305-168 | -1,400 | GRC120 | 4,944 | 33,977 |
| C640D-305-144 | -285 | GRC120 | 7,139 | 26,282 |
| C640D-427-144 | -365 | GRC120 | 7,037 | 40,912 |
| C640D-365-168 | -1,400 | GRC120 | 4,944 | 33,977 |
| C640D-365-192 | -1,900 | GRC120A | 3,795 | 29,623 |
| C912D-365-168 | -1,400 | GRC120 | 4,944 | 33,977 |
| C912D-365-192 | -1,900 | GRC120A | 3,795 | 29,623 |
| C912D-427-192 | -2,070 | GRC120C | 3,629 | 29,457 |
| C1280D-365-192 | -2,070 | GRC120D | 3,629 | 29,457 |
| C1280D-427-192 | -2,070 | GRC120D | 3,629 | 29,457 |
| C1280D-365-240 | -2,900 | GRC140 | 3,430 | 26,852 |

Conventional Pumping Unit

Dimensional Data†, in

| Model | A | B | C | E | F | H | I | J | L | M | N | R | T | W | X | AA | BB |
|----------------|--------|--------|--------|--------|--------|--------|-------|--------|-------|-------|-------|--------|-------|-------|--------|-------|-------|
| C80D-119-64 | 63.98 | 84.06 | 125.98 | 122.05 | 167.32 | 191.02 | 13.39 | 50.00 | 40.55 | 47.24 | 9.61 | 51.18 | 21.65 | 27.56 | 55.91 | 22.48 | 33.46 |
| C114D-173-64 | 84.06 | 84.06 | 165.94 | 161.81 | 273.62 | 232.48 | 26.77 | 68.11 | 64.57 | 81.89 | 15.59 | 52.95 | 25.59 | 35.43 | 71.30 | 52.48 | 94.29 |
| C228D-173-120 | 111.02 | 155.00 | 231.97 | 206.14 | 267.17 | 348.74 | 27.95 | 95.00 | 73.23 | 70.08 | 19.69 | 114.88 | 33.46 | 37.01 | 83.31 | 40.98 | 54.33 |
| C456D-365-144 | 120.00 | 180.00 | 261.97 | 239.84 | 297.32 | 399.76 | 29.33 | 109.84 | 77.56 | 81.89 | 23.62 | 132.36 | 39.37 | 46.85 | 104.02 | 50.75 | 63.94 |
| C456D-305-168 | 120.00 | 210.04 | 261.97 | 239.84 | 297.32 | 421.65 | 29.92 | 109.84 | 52.76 | 81.89 | 23.62 | 162.40 | 39.37 | 46.85 | 104.02 | 50.75 | 63.94 |
| C640D-305-144 | 120.00 | 180.00 | 260.00 | 242.20 | 299.69 | 399.76 | 28.94 | 109.84 | 75.00 | 81.89 | 23.62 | 132.36 | 41.34 | 46.85 | 102.40 | 50.75 | 64.33 |
| C640D-427-144 | 120.00 | 180.00 | 261.97 | 242.20 | 299.69 | 399.76 | 29.33 | 109.84 | 77.56 | 81.89 | 23.62 | 132.36 | 41.34 | 46.85 | 102.40 | 50.75 | 64.33 |
| C640D-365-168 | 120.00 | 210.04 | 261.97 | 242.20 | 299.69 | 421.65 | 29.92 | 109.84 | 52.76 | 81.89 | 23.62 | 162.40 | 41.34 | 46.85 | 102.40 | 50.75 | 64.33 |
| C640D-365-192 | 120.00 | 210.04 | 286.02 | 265.23 | 322.72 | 458.74 | 28.15 | 109.84 | 56.69 | 81.89 | 23.62 | 139.37 | 41.34 | 46.85 | 102.40 | 50.75 | 64.33 |
| C912D-365-168 | 120.00 | 210.04 | 261.97 | 250.16 | 307.64 | 421.65 | 29.92 | 109.84 | 52.76 | 81.89 | 23.62 | 162.40 | 48.43 | 46.85 | 106.38 | 50.75 | 65.20 |
| C912D-365-192 | 120.00 | 210.04 | 286.02 | 273.19 | 330.67 | 458.74 | 28.15 | 109.84 | 56.69 | 81.89 | 23.62 | 139.37 | 48.43 | 46.85 | 106.38 | 50.75 | 65.20 |
| C912D-427-192 | 120.00 | 210.04 | 286.02 | 273.39 | 330.87 | 458.74 | 28.35 | 109.84 | 55.12 | 81.89 | 23.62 | 139.37 | 48.43 | 46.85 | 106.38 | 50.75 | 65.20 |
| C1280D-365-192 | 120.00 | 210.04 | 286.02 | 279.88 | 337.36 | 458.74 | 28.35 | 109.84 | 55.12 | 86.61 | 23.62 | 139.17 | 56.69 | 50.00 | 119.29 | 63.43 | 50.75 |
| C1280D-427-192 | 120.00 | 210.04 | 286.02 | 279.88 | 337.36 | 458.74 | 28.35 | 109.84 | 55.12 | 86.61 | 23.62 | 139.17 | 56.69 | 50.00 | 119.29 | 63.43 | 50.75 |
| C1280D-365-240 | 127.56 | 228.35 | 331.89 | 287.44 | 344.92 | 533.86 | 29.33 | 118.11 | 55.70 | 86.61 | 23.62 | 157.48 | 56.69 | 50.00 | 119.29 | 59.02 | 63.43 |

†Pumping units can be customized to meet customer requirements.



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