

High-pressure pump 1000ARP

The type 1000ARP high-pressure pump provides a max. operating pressure of 390 bar and a max. flow rate of 1,680 l/min.



The ARP-series has operating pressures up to 400 bar and nominal flow rates up to approx. 1,680 l/min.

A special feature of this series is the high reliability also in the conveying of media contaminated with granular or fibrous solids up to a solids concentration of 3,000 mg/l and a grain size of up to 300 µm. This series is particularly suitable for sewer and pipe cleaning as well as descaling in the steel industry. The pump head of the ARP series consists of robust stainless steel (see figure); on request, the use of super duplex steels can also be tested for maximum resistance (deviation of the technical data, if applicable).

On request, the availability of an ATEX version can be checked.

| Technical data | | |
|---|----------------------------------|--|
| Weight | approx. | 2,610 kg |
| Inlet pressure connection | | 3,000 psi SAE 4" hole pattern M16; 130.2x77.8 |
| Pressure connection | | 6,000 psi SAE 2" hole pattern M20; 96.8x44.4 |
| Cooling water connection | | IG ½" |
| Crankshaft | max. min. | 500 1/min Depends on operation parameters |
| Drive shaft | | Diameter 75mm k6, Clutch mounting with clamping set |
| Torque at drive shaft | max. | 5,401 Nm |
| Moment of inertia J | i = 3.00 i = 3.69 i = 4.23 | 1.197 kgm ² 0.924 kgm ² 0.777 kgm ² |
| Centrifugal moment GD ² | i = 3.00 i = 3.69 i = 4.23 | 46.97 Nm ² 36.26 Nm ² 30.48 Nm ² |
| Inlet pressure | min. max. | 4.0 bar 6.0 bar |
| Pressure amplitude | max. | ± 2.0 bar |
| Flow temperature | min. max. | +5 °C +45 °C (higher temperatures on request) |
| Flow inlet requirement | min. | 1.5x nominal feed rate of the pump, dependent on the conversion set |
| Emission sound pressure level according to DIN EN ISO 11200 | | >80 dB(A) |
| Oil capacity of transmission end | approx. | 45 l |
| Oil viscosity ISO VG under DIN 51517-2 or -3 | | 320 mm ² /s |
| Oil pressure lubrication | | 2.5 – 5.0 bar |
| Oil pressure set value overflow valve | | 5.0 bar |
| Oil filter fineness | | 0.025 mm |
| Oil temperature | max. Set value | 80 °C 60 - 70 °C |
| Heat exchanger cooling water requirement | appr. | 20 - 30 l/min |
| Heat exchanger cooling water temperature | min. max. | +5 °C +45 °C |
| Heat exchanger cooling water pressure | min. max. | 1.5 bar 10 bar |

| Performance variants** | | | | | | | | | | |
|------------------------|---------------|-------------|----------|---------|---------|---------|---------|---------|---------|---------|
| Pinion shaft | | Crank shaft | P60 | | P65 | | P70 | | P75 | |
| 1,500 [1/min] | 1,800 [1/min] | | 390 bar* | | 330 bar | | 285 bar | | 250 bar | |
| Gear ratio | | [1/min] | [kW] | [l/min] | [kW] | [l/min] | [kW] | [l/min] | [kW] | [l/min] |
| 3.00 | | 500* | 766 | 1,059 | 765 | 1,251 | 770 | 1,458 | 778* | 1,679* |
| | 3.69 | 488 | 747 | 1,033 | 747 | 1,220 | 751 | 1,422 | 759 | 1,638 |
| | 4.23 | 426 | 652 | 901 | 651 | 1,065 | 655 | 1,241 | 662 | 1,429 |
| 3.69 | | 407 | 623 | 861 | 622 | 1,017 | 626 | 1,185 | 633 | 1,365 |
| 4.23 | | 355 | 543 | 751 | 543 | 887 | 546 | 1,034 | 552 | 1,191 |

* Maximum values of the pump

** Technical changes reserved

Overview pump 1000ARP

