

LIQUID SPECIFIC PRODUCT LINE: STAINLESS STEEL CHEMICAL TANKER PUMPS

RTPe Series™

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RELATED PRODUCTS

Stainless Steel, RTP® Series: Catalog Section 1727



RTPe

SERIES DESCRIPTION

The RTPe Series™ rotary lobe pump is the ideal solution for your chemical tanker system. This stainless steel pump can handle caustics, corrosives, fertilizers, and more without fear of compromising the integrity of the chemicals. It can handle flows up to 264 GPM (60m³/h).



FEATURES & BENEFITS

- **Cleanability**
 - » The simple design behind the rotor makes strip cleaning easy and fast
 - » Choose the cleaning process that fits your needs: COP (Clean Out of Place) or CIP (Clean In Place)
- **Ease of Maintenance**
 - » Innovative front loading seal design enables quick inspection and easy servicing
 - » Sealed gearcase with long-life lubrication eliminates oil inspection and filling
 - » Easy to service design requires no special tools for disassembly and eliminates need for end clearance adjustments
- **Performance**
 - » Wide range of chemical compatibility
 - » Efficiently handles both low and high viscosity liquids with improved pressure capabilities for faster loading and unloading
 - » Excellent displacement/weight ratios, which means more in the tank and less in the cabinet (1 l/rev. / 0.264 USG/rev.)
 - » Precision helical gears, rotors and shaft design, with optimized bearing position, minimize overhung load – extending seal & bearing life

OPERATING RANGE

| SERIES | NOMINAL FLOW | | MAXIMUM PRESSURE | | TEMPERATURE | | VISCOSITY RANGE* | |
|--------|--------------|--------|------------------|-----|-------------|--------|------------------|------------|
| | GPM | m³/h | PSI | Bar | °F | °C | SSU | cSt |
| RTPe | 0 - 264 | 0 - 60 | 145 | 10 | to 230 | to 110 | to 910,000 | to 200,000 |

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STANDARD MATERIALS OF CONSTRUCTION

| Component | Standard Material |
|---------------------------------|----------------------------------|
| Rotors | 316L Stainless Steel |
| Rotorcase | 316L Stainless Steel |
| Shafts | 316L Stainless Steel |
| Front Cover | 316L Stainless Steel |
| Rotor Retainer | 316L Stainless Steel |
| Gearbox Housing | Grade 220 Grey Cast Iron, Coated |
| Wetted End O-Ring | FDA FKM or PTFE/FFKM |
| Composite O-Ring Seal | PTFE/Carbon Fiber Filler |
| Component Mechanical Seal Faces | Silicon Carbide/Silicon Carbide |

MODEL NUMBER KEY

R T P e 2 0 / 0 1 0 0 / 1 0

Pump Model Model Size: Displacement (1 Ltrs/Rev.) Max Pressure (Bar)

20

SPECIFICATIONS

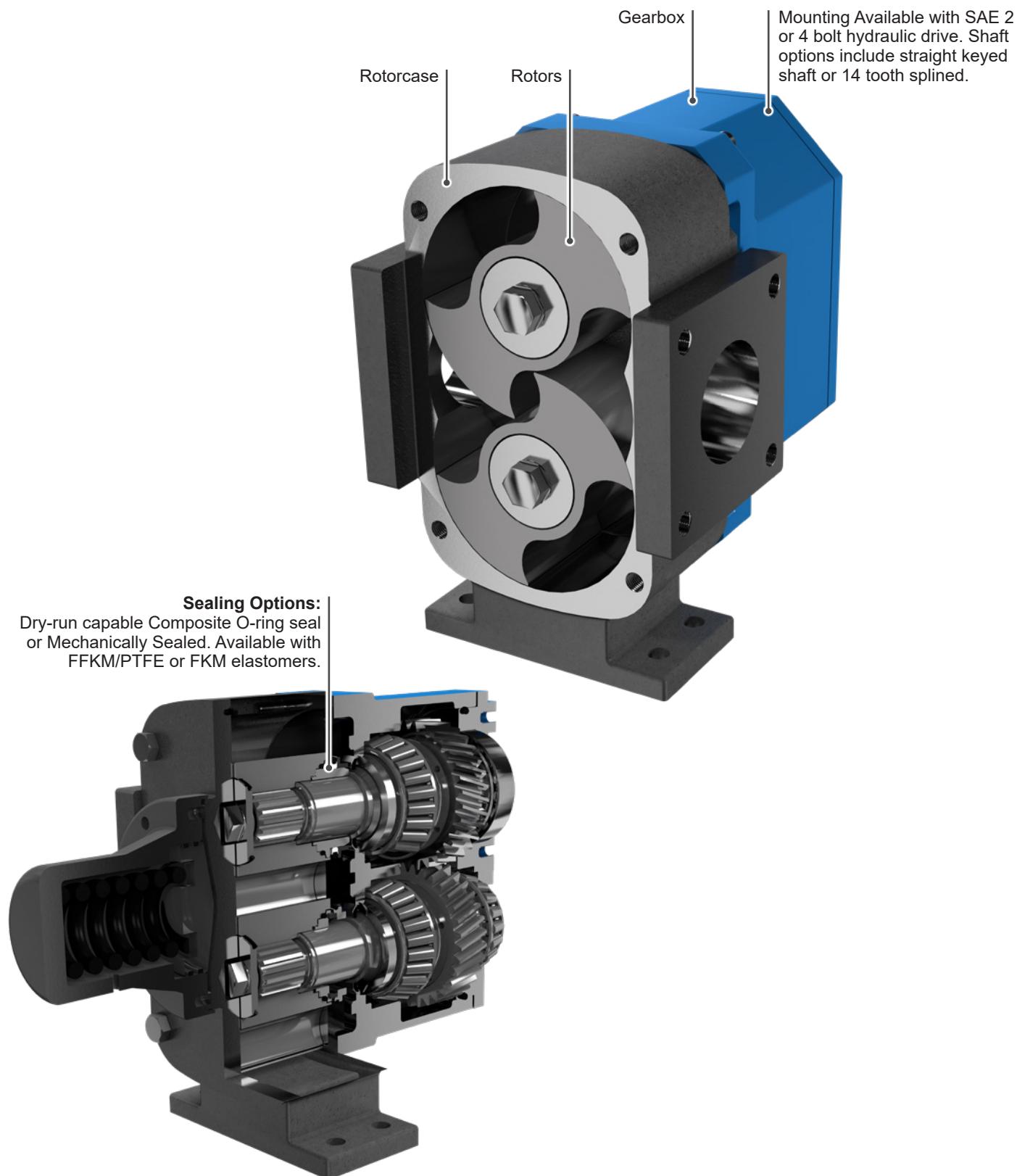
| Model Number | Standard Port Size | Nominal Pump Rating (100 SSU & below) | | | Displacement | | Maximum Differential Pressure | | Recommended Temperature for Standard Pump | | Approx. Shipping Weight with Grease | |
|--------------|--------------------|---------------------------------------|-----|-------|--------------|----------|-------------------------------|------|---|-----|-------------------------------------|------|
| | | Inches | GPM | m³/h | RPM | USG/rev. | l/rev. | PSIG | BAR | °F | °C | Lbs. |
| RTPe20 | 3 | 264 | 60 | 1,000 | 0.264 | 0.099 | 145 | 10 | 230 | 110 | 128 | 58 |

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CUTAWAY VIEW & PUMP FEATURES

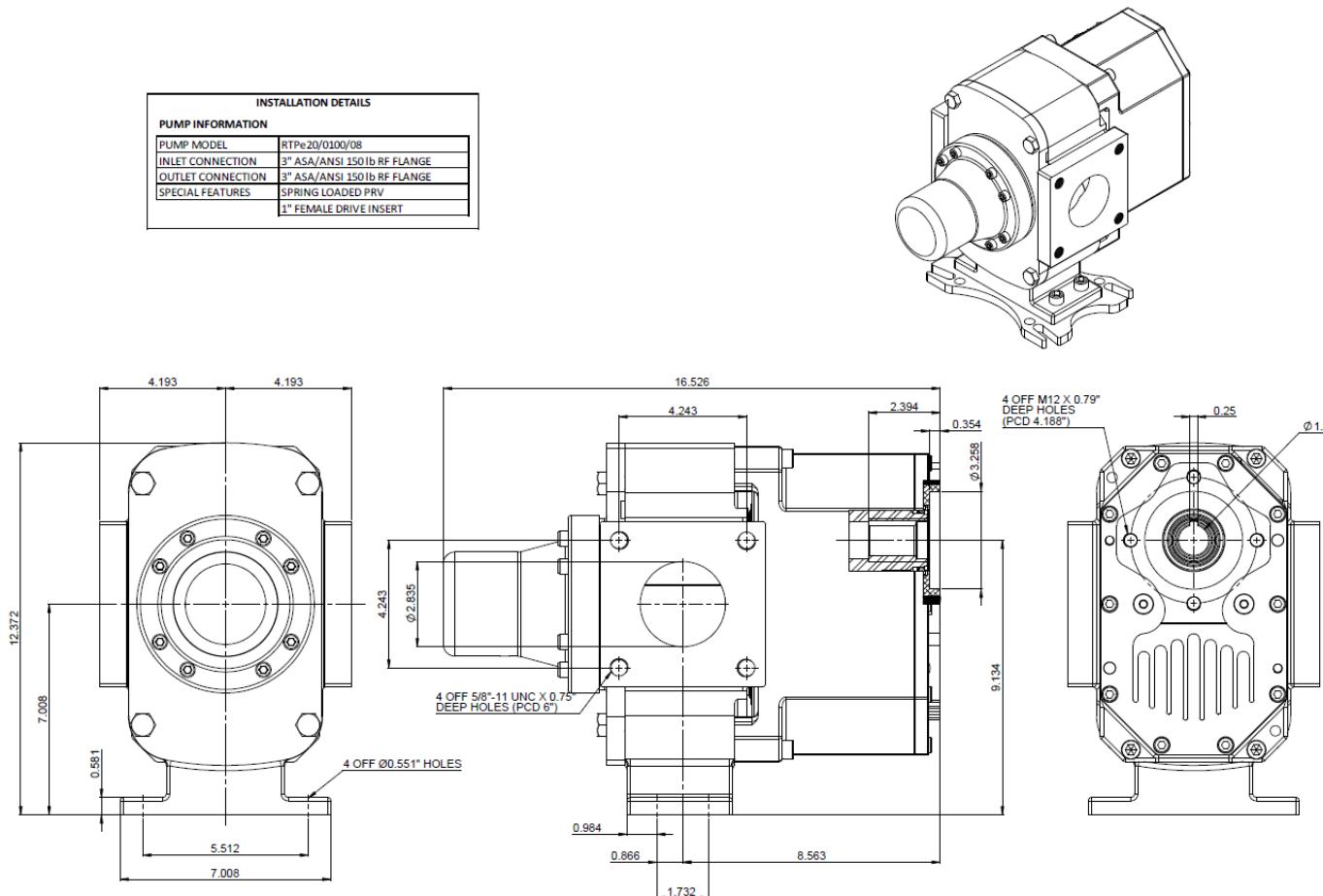


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DIMENSIONS – INCHES



Dimensions given are for guidance only and should **not** be used for installation purposes. Certified dimensions will be supplied on request.

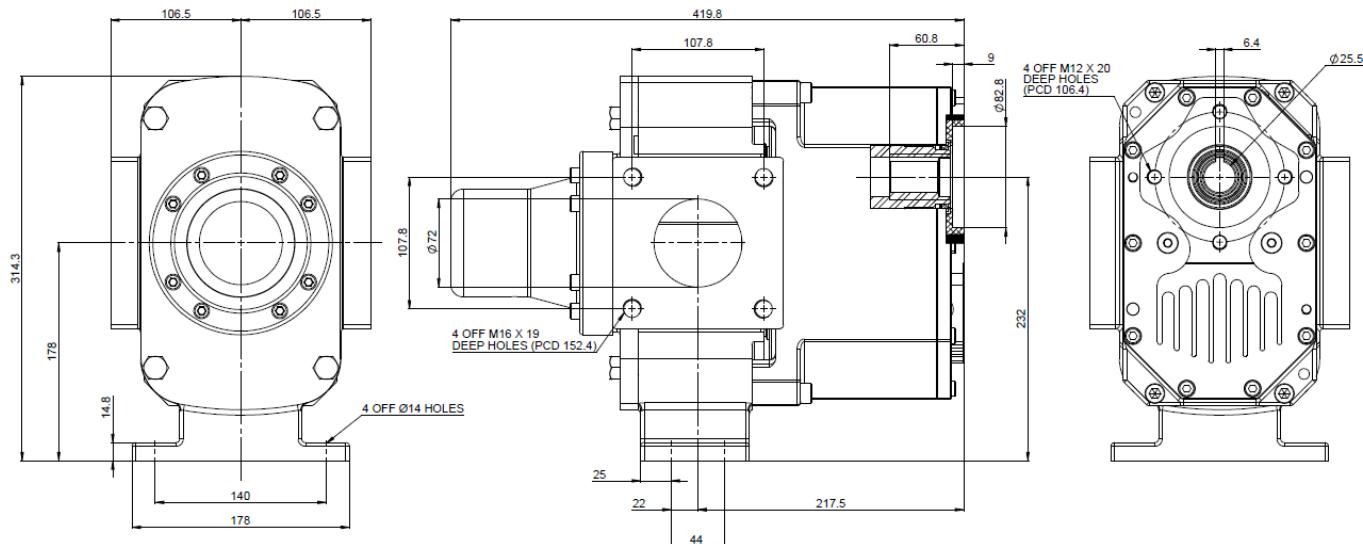
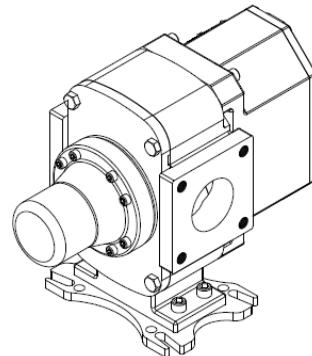
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DIMENSIONS – MILLIMETERS

| INSTALLATION DETAILS | |
|----------------------|---|
| PUMP INFORMATION | |
| PUMP MODEL | RTPe20/0100/08 |
| INLET CONNECTION | 3" ASA/ANSI 150 lb RF FLANGE |
| OUTLET CONNECTION | 3" ASA/ANSI 150 lb RF FLANGE |
| SPECIAL FEATURES | SPRING LOADED PRV 1" FEMALE DRIVE INSERT |



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NPSH REQUIRED

Application specific curves available upon request.

NPSHR data is not available on the pump selector.

NPSH (Net Positive Suction Head): The NPSH_R (Net Positive Suction Head Required by the pump) is given in the table below and applies for viscosities through 750 SSU. NPSH_A (Net Positive Suction Head – Available in the system) must be greater than the NPSH_R. For a complete explanation of NPSH, see Application Data Sheet AD-19.

FOR VISCOSITIES UP TO 750 SSU – See NPSH_R table below.

NPSH_R for high viscosities can be estimated using the following method:

1. Calculate line loss for a 1 foot long pipe of a diameter matching the pump inlet port size. Use your flow rate and max viscosity.
2. Convert this value into Feet of Liquid (S.G. 1.0)
3. Add this value to the NPSH_R value in the chart below.

| PUMPS SPEED, RPM | | | | | | |
|------------------|-----|------|------|------|------|------|
| 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 8.7 | 9.8 | 11.3 | 13.2 | 15.2 | 17.6 | 20.1 |

NPSH_R – FEET OF LIQUID (Specific Gravity 1.0), Viscosities up to 750 SSU