



TXV Series

High Temperature, Rotary Vane Pumps for Asphalts and Viscous Fluids

Design

Blackmer TXV pumps provide high volume, low speed transfer of clean fluids compatible with a cast iron construction. For fluids that do not work well with mechanical seals, a TXV pump is the answer. They are well suited for thick, viscous fluids that can solidify when exposed to the air.

The TXV pump models are available in 2½ and 3 inch port sizes. Standard construction includes a special open rotor design that offers easy flushing, bronze vanes, FKM elastomers, PTFE lip seals, high temperature grease lubricated ball bearings isolated from the pumpage and high temperature gasket materials.

The TXV pump delivers more fluid per revolution than comparably ported gear pumps. And slower operating speeds mean longer service life and reduced maintenance requirements.

The TXV's internal relief valve protects the pump from build-up.

High Viscosity

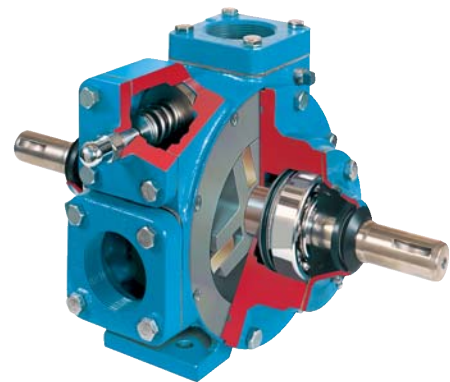
TXV pumps are ideal for handling viscous or shear sensitive fluids. The key to the TXV series' versatility is Blackmer's unique sliding vane rotor design that provides sustained, high level performance over a wide viscosity range. Slow operating speeds and non-pulsating flow minimizes shear and agitation of the fluid. Optional Heating Jackets are available if required.

Self-Priming and Dry Run Capability

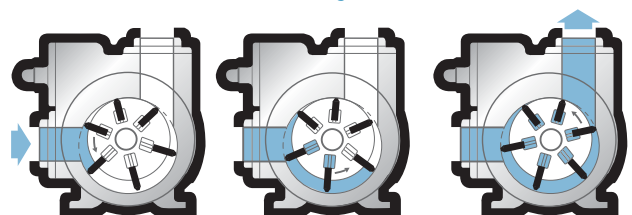
TXV pumps are self-priming, and the self-adjusting vanes help maintain this capability. TXV pumps can run dry for short periods of time for priming.

Application

Typical applications for the TXV pumps include: asphalts, greases, lube oils, resins, molasses, bunkered fuels, inks and adhesives.



How Blackmer's sliding vane action works





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Characteristic Flow Rates

| Pump Model | Pump Speed RPM | Pump Capacity @ 50 psid (345 kPa) | | | | | |
|------------|-------------------|-----------------------------------|-------|-----------------------|-----|------------------------|-----|
| | | 1,000 SSU (2,200 CST) | | 5,000 SSU (1,050 CST) | | 10,000 SSU (2,200 CST) | |
| | | GPM | LPM | GPM | LPM | GPM | LPM |
| TXV2½ | 640 | 123 | 465 | — | — | — | — |
| | 520 | 99 | 374 | 99 | 374 | — | — |
| | 420 | 80 | 302 | 80 | 302 | 80 | 302 |
| TXV3 | 640 | 268 | 1,013 | — | — | — | — |
| | 520 | 218 | 824 | 218 | 824 | — | — |
| | 420 | 175 | 661 | 175 | 661 | 175 | 661 |

*Refer to Characteristic Curves for flow rates and torque requirements at other pressures and viscosities.

Maximum Operating Limits

| Pump Model | Nominal Flowrate | | Pump Speed RPM | Viscosity | | Differential Pressure | | Working Pressure | | Temperature | |
|------------|------------------|-------|-------------------|-----------|--------|-----------------------|-----|------------------|------|-------------|-----|
| | GPM | LPM | | SSU | CST | PSI | BAR | PSI | BAR | °F | °C |
| TXV2½ | 136 | 513 | 640 | 50,000 | 10,500 | 125 | 8.6 | 175 | 12.1 | 375 | 190 |
| TXV3 | 276 | 1,043 | 640 | 50,000 | 10,500 | 125 | 8.6 | 175 | 12.1 | 375 | 190 |

Note: Optional materials of construction may be required to meet specific application requirements — refer to Blackmer Material Specification Sheet 202-091. For operating limits that exceed those listed — Consult Factory.

Pipe Flanges

| Pump Model | Standard | Optional |
|------------|-----------|-----------------|
| | Two - NPT | Two - Weld Neck |
| TXV2½ | 2½" | 2½" |
| TXV3 | 3" | 3" |

Pump Dimensions

| Pump Model | A | B | C | D | E | F | G | H | J | K | L | M | N | Approx. Wt. with Std. Flanges | |
|------------|-----|-----|---|-----|------|------|-----|-----|-----|------|-----|-----|-----|-------------------------------|----------|
| TXV2½ | in. | 1 ½ | ¼ | 8 ¾ | 9 ½ | 9 ¾ | 3 ¾ | 4 ⅞ | 1 ¾ | 12 ⅞ | 4 | 5 ⅞ | 3 | 5 ½ | 96 lbs. |
| | mm | 29 | 6 | 222 | 241 | 244 | 95 | 110 | 44 | 316 | 102 | 129 | 76 | 140 | 44 kgs. |
| TXV3 | in. | 1 ½ | ¼ | 9 ⅝ | 10 ⅝ | 12 ¼ | 4 ⅝ | 5 | 2 ½ | 15 ¼ | 5 ⅜ | 5 ¼ | 2 ½ | 6 | 138 lbs. |
| | mm | 29 | 6 | 244 | 270 | 311 | 117 | 127 | 64 | 387 | 137 | 133 | 64 | 152 | 63 kgs. |

Refer to catalog dimension sheets for pumps equipped with hydraulic motor adaptors.

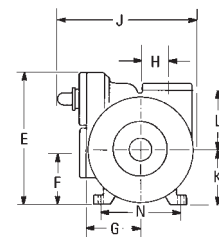
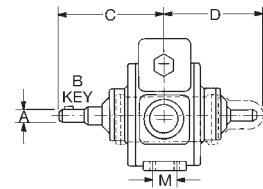
Application Assistance

In some applications, selecting the right pump may require more detailed information than can be presented in this Spec Sheet. Blackmer has a worldwide distribution network to assist you in specifying the proper pump for your application.

Please contact Blackmer's Customer Care Group at the telephone or fax number listed below for the name of your nearest Blackmer distributor.

Options

- Duravanes or Laminate vanes
- Lip Seals with PTFE elastomers or a variety of Blackmer cartridge mechanical seals (please consult factory)
- PTFE encapsulated elastomers
- Hydraulic Motor Adaptor
- 1/4" NPT head drains (Standard on 3-inch models)
- Nickel plated relief valve for corrosion resistance
- Stainless Steel relief valve spring



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