Parker 4-Inch Fluid Transfer System  
Series No. FTS-400  
Electric Motor System  
Specifications and Technical Data

Description
The FTS-400 is a patent-pending two-stage pump, close-coupled to an AC motor with an SAE spline shaft. The first stage is a centrifugal impeller while the second stage is a positive displacement lobe pump. This first stage impeller provides an effective centrifugal “boost” to the suction capability of the lobe stage, resisting cavitation and allowing delivery of high pumping volume even when pumping fluids with high vapor pressure.

Benefits
- **Self-priming** – The FTS-400 is based on a positive displacement design. It will self-prime and resist vapor lock.
- **Reversible** – The FTS-400 may be operated bi-directionally, but only benefits from the centrifugal boost in the “forward” flow direction.
- **Dry run capable** – The FTS-400 is designed with dry run capability in mind. The pumping elements and material choices allow for continuous dry run between wetted pumping cycles.
- **Pumping fluids** – The FTS-400 can be used to pump fluids such as jet fuels, diesel, gasoline, water, coolant, lubricant oils, hydraulic oils, crude oil, and other similar fluids. The centrifugal boost allows the FTS-400 to avoid cavitation when pumping fluids with high vapor pressure or entrained gas.

Operating Specifications

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rating</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating temperature (non-volatile fluids) 1</td>
<td>120 (250)</td>
<td>°C (°F)</td>
</tr>
<tr>
<td>Maximum pressure rise</td>
<td>160</td>
<td>PSID</td>
</tr>
<tr>
<td>Rated speed</td>
<td>1800 (60)</td>
<td>RPM (Hz)</td>
</tr>
<tr>
<td>Maximum continuous duty 2</td>
<td>2100 (70)</td>
<td>RPM (Hz)</td>
</tr>
<tr>
<td>Maximum intermittent duty 2</td>
<td>2400 (85)</td>
<td>RPM (Hz)</td>
</tr>
<tr>
<td>Maximum viscosity 3</td>
<td>2200</td>
<td>cSt</td>
</tr>
<tr>
<td>Inlet filtration (recommended)</td>
<td>300</td>
<td>micron</td>
</tr>
</tbody>
</table>

1 – Maximum fluid temperature is dependent on the application and fluid characteristics  
2 – Maximum speed is dependent on the application, fluid characteristics, discharge pressure, and motor (frequency specifications are the electrical frequency of the motor)  
3 – Fluid viscosity over 400 cSt may require reduced operational speeds to stay within motor current ratings.

Rated flow based on calibration fluid at approximately 1.2 cSt viscosity, sea level, room temperature. Performance depends on application and fluid characteristics.
Motor Protection
The FTS-400 has an integrated intelligent motor control unit (MCU) with an independent power source such that it is always on even when the motor is not running. The MCU is designed to protect the FTS-400 from adverse operating conditions by opening the integrated contactor, stopping the flow of current to the motor and shutting down the pump. The MCU monitors motor winding temperature with integrated thermistors and motor current with integrated current sensors. Additionally, if the FTS-400 includes any safety options listed below, the MCU will also shut down the pump in the event of an adverse condition in the pump itself. This shut down must be manually reset to resume pump operation.

Pump Protection Options
The FTS-400 may be fitted with accessories from the factory if pump protection devices are desired, or it may be fitted with a block-off plate in the accessory position.
- **Temperature Sensor** – The FTS-400 Temperature Sensor option includes a thermal sensor connected to the MCU to shut down the pump in the event of an over temperature condition.
- **Pressure Sensor** – The FTS-400 Pressure Sensor option includes a transducer connected to the MCU to shut down the pump in the event of an over pressure condition.

Weight (Pounds)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>System*</th>
<th>Pump</th>
<th>Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTS-400 w/60 hp</td>
<td>915</td>
<td>220</td>
<td>600</td>
</tr>
</tbody>
</table>

*Includes base plate and all other system components.

Dimensions (Inches)*

*Dimensions are for reference only. 60 hp motor shown. Consult your product owner’s manual for installation requirements.

Information subject to change without notice. For the most current information, contact Parker Application Support at (844) 695-9590 or fts.support@parker.com.

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