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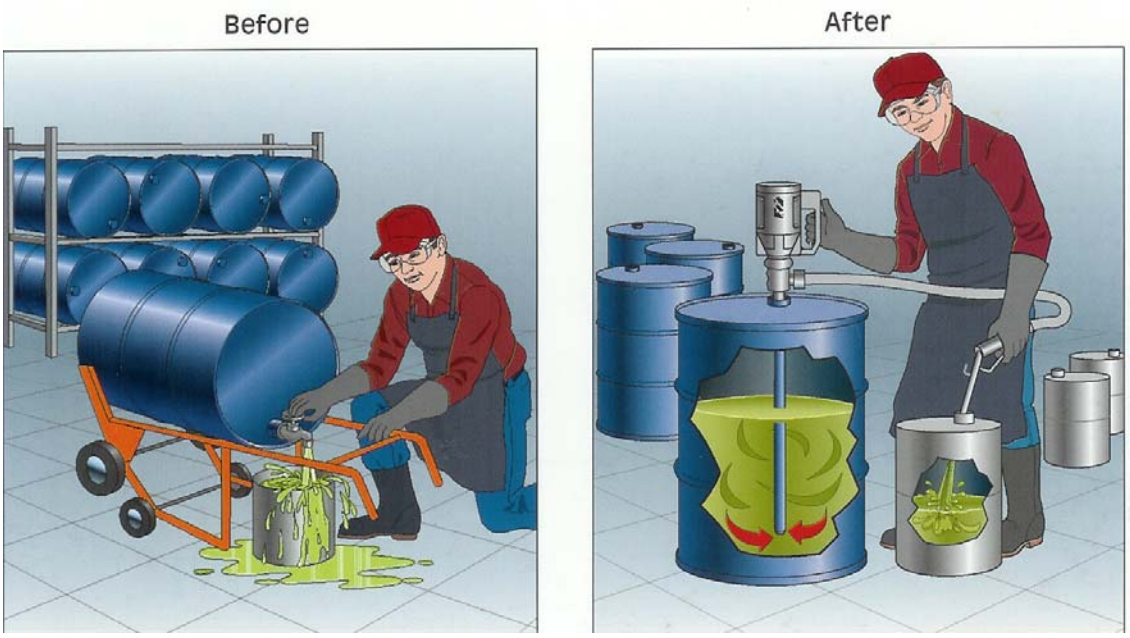
How to Select a Drum Pump

Why use an FTI Drum Pump?
Finish Thompson drum pumps are designed to provide customers with an easy and safe way to transfer virtually any chemical from drums and barrels. Many different models and tubes lengths are available to satisfy diverse customer requirements.



Step 1:
Determine application requirements:
It is important to determine how the pump is going to be used before you can select the appropriate pump series, tube construction, motor type and accessories.

- **Required head and flow** - Most drum pump applications are simple transfer but some require higher flow rates (to empty larger totes or tanks) or higher head (pressure) capabilities (transferring liquids to the top of a machine, to a second floor or to pump higher viscosity fluids).

- **Chemical name or type** – This is very important information and is required to ensure that the pump tube materials are compatible with the fluid being pumped. In addition, it is important to determine if the fluid is a flammable or combustible liquid.

- **Temperature of the fluid being pumped** – FTI pump tubes have upper temperature limits. The maximum temperature depends upon the tube series, tube construction and length.

- **Specific gravity and viscosity** – FTI drum pump series have different capabilities when pumping fluids that have a specific gravity greater than 1.0 or a viscosity greater than 1 cP. The capabilities are based upon the pump series and the motor driving the pump.

- **Container size** – The drum pump tube lengths will change depending upon the container. For example, a standard 55-gallon drum uses a 40” (102 cm) long pump tube. Totes and tanks can require longer lengths. 15 and 30-gallon containers use smaller lengths. Finish Thompson offers a wide choice of tube lengths to accommodate many container types.

- **Motor preference** – Determine if the customer has a particular motor style preference. They may prefer electric, explosion proof electric or air. In addition, if they prefer an electric motor, they may have a voltage preference.

Step 2:
Select the Correct FTI Pump Series and Tube Material
Once you have established the application requirements, you can select the correct FTI pump for the job.

- **Choose compatible pump tube materials** – Start with the outer tube material. Outer tubes are available in polypropylene, 316 stainless steel, PVDF, CPVC and pure polypropylene/PVDF.

  Use a chemical resistance guide to select an outer tube material that is resistant to the material being pumped. Chemical resistance guides can be downloaded from the Finish Thompson website www.finishthompson.com.

  The drum pump selector program found on the FTI website has an extensive list of chemicals. Simply select the chemical you wish to pump and click the "Search" button. Only pump tubes with suitable materials of construction will be displayed.

  Note: Each pump tube contains other materials that will be in contact with the fluid being pumped in addition to the outer pump tube material. Information on the materials of construction can be found on the individual series tech flier. If you have any questions concerning compatibility, contact FTI sales.

- **Select the best-fit drum pump series** – Review the information on the individual series tech fliers to determine the one that is most appropriate.

See the section at the end for a quick pump series review.

For example, if a customer has a liquid with a viscosity of 25,000 cP, the most appropriate series is HVDP. Verify that the pump series and tube material selection is capable of pumping the fluid. This includes checking the fluid temperature, specific gravity and viscosity against the information found on the tech flier.

Select the appropriate tube length for the container.

Refer to the price book for the correct part number (for example a PFP-40 has a part number of DPFP006).

Step 3:
Select the Correct FTI Motor

- **Select the appropriate motor –** Using the motor preference information supplied by the customer, choose a motor from the tech flier that best fits the requirements. Not all motors can be used on all pump series. Make sure you select a motor that is listed as appropriate for the series (this information is found both on the tech flier and in the price book).

  See the section at the end for a quick motor review.

  Make sure if the product being pumped is a flammable or combustible (or the area is a hazardous location), that you use an explosion proof electric or air drive motor on a tube manufactured from stainless steel with our static protection kit.

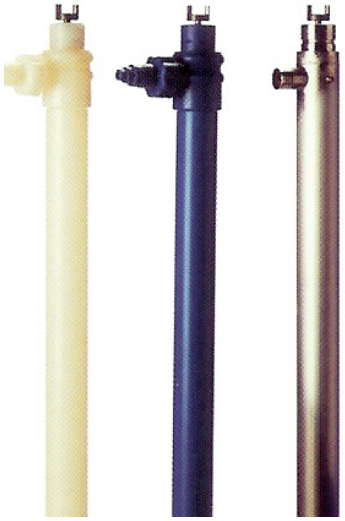
  Refer to the price book for the correct part number (for example an M3X motor has a part number of A101129).

Step 4:
Select Any Accessories

Finish Thompson offers a comprehensive selection of accessories for drum pumps. Refer to the price book for part number.

- **Hose** – Flexible PVC
- **Static Protection Kit** – For safe transfer of flammable or combustible liquids when used with stainless steel tube pumps and air or explosion proof electric motors.
- **Drum adapters** – Ensure a tight fit of the tube in the drum, available in a variety of materials of construction
- **Flow meters** – Allows the accurate measurement of the liquid being pumped
- **Filter/lubricator assembly** – Ensures a dry, lubricated air supply for air drive motors
- **Nozzles** – Allows control of liquid flow
- **Strainers** – Protects pump from damage by foreign objects

Pump Series Review



Following is a quick review of each of the pump series. Refer to the tech flier for more details.

PF Series – PF Series pumps are our best selling and most versatile drum pump series. They are sealless and provide high performance with lots of options. Outer tubes are available in polypropylene, 316 stainless steel and PVDF. 15” to 72” tube lengths are available.

EP Series – EP Series pumps are designed to provide an economical alternative to manual hand pumps. They are lightweight, ergonomic and are designed for intermittent use (15-minute duty cycle). The polypropylene outer tube is available with either stainless steel or Alloy 625 inner shafts.

TT Series - TT Series are sealed pumps with 316 stainless steel, CPVC, or sanitary 316 stainless steel construction. Screw type lifting compressors make the TT Series a good choice for liquids containing small particulate. The TTS is ideal for flammable or combustible liquids.

TBP Series - The TBP Series is a high-speed sealed pump manufactured from pure materials for use with aggressive chemicals. Outer tube is pure polypropylene/pure PVDF constructions. Construction makes it ideal for bleach (sodium hypochlorite) applications.

TBS Series – The TBS is a high-speed sealed pump manufactured from 316 stainless pump. Screw type lifting compressor makes it a good choice for liquids containing small particulate.

BT Series – The BTS is a high viscosity sealed pump manufactured from 316 stainless steel. It is ideal for viscous fluids up to 15,000 cP. Use an air drive motor if possible to reduce weight.

HVDP Series – HVDP Series pumps are progressive cavity, positive displacement pumps capable of pumping extremely viscous fluids up to 100,000 cP. Cam-lock tube design makes clean up quick and easy. Speed reducer design allows the user of smaller, lighter motors.

TM Series – The TMS is a drum mixer manufactured from 316 stainless steel. Its non-aerating and non-vortexing circulation is ideal for drums with settled solids like paints and inks.

Motor Review

Following is a quick review of each of the motor types. Refer to the tech flier for more details.

Splash-Proof
These are high-speed motors that are protected from water splashes from all directions and are open drip-proof. They are available in 115 and 203-volt, single phase, 50/60 Hz versions.

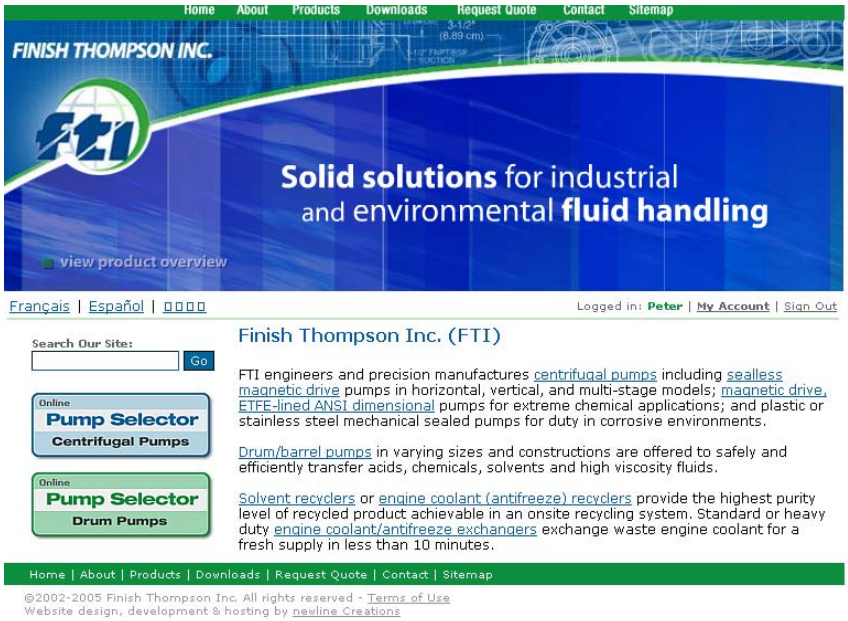
Enclosed
These motors include both high-speed brush type and slower speed induction motors. They are TEFC, are sealed to protect against dust and corrosive fumes and are protected from water splashes from all directions. Use enclosed motors on fuming chemicals like bleach (sodium hypochlorite).

Explosion-Proof
These motors include both high-speed and slower speed induction motors. They are suitable for use in hazardous areas, are sealed to protect against dust and corrosive fumes and are protected from water splashes from all directions.

Variable Speed
These are high-speed motors that are TEFC, are sealed to protect against dust and corrosive fumes and are protected from water splashes from all directions. They are suitable for use both indoors and outdoors. The most powerful high-speed motors manufactured by Finish Thompson. They have speed control that allows precise adjustment of fluid flow.

Air
Air motors are lightweight, variable speed and non-electrical operation means the possibility of igniting flammable gasses is reduced (generally considered suitable for use in hazardous locations). Customer should install a filter lubricator assembly to ensure long motor life.

Website



Finish Thompson has a comprehensive website loaded with useful information. All of our brochures, technical fliers and manuals can be found on the site. In addition, there are drum and centrifugal pump selector programs designed to aid in the proper selection of our pump products. You will need to register once to be able to use our selectors. Registration is not required to use the other features of the site. Our website address is www.finishthompson.com

- Drum Pump Selector Program – The drum pump selector is chemical based. Use Finish Thompson's Drum Pump Selector to receive pump tube and motor recommendations for many common chemicals. Simply select the chemical you wish to pump and click the "Search" button. A list of compatible Pump Series will be displayed.

Factory Assistance

FTI's application and technical service help is just a phone call, email or fax away. If you need help in selecting the right pump or have a question or problem with an existing pump, let us know.

Sales:	**800-934-9384**
Customer Service:	**814-455-4478**
Order Fax:	**814-459-3460**
Tech Service:	**800-888-3743**
E-mail:	**fti@finishthompson.com**

Custom Pump Group

FTI's Custom Pump Group quotes and builds pumps with modifications to existing designs. Some examples include special materials of construction, special connections and special length pump tubes. Contact FTI Sales with custom pump requests.