

BULLETIN 381D

Sethco

MODEL P90 SEALLESS DRUM PUMPS

**FOR SAFE AND FAST
TRANSFER OF
CHEMICALS • SOLVENTS
• CORROSIVE LIQUIDS IN
HAZARDOUS OR
NON HAZARDOUS
ENVIRONMENTS**

In Use The World Over

- SEALLESS
- EMPTIES 55 GALLON DRUMS IN LESS THAN 2 MINUTES
- SELF PRIMING
- HIGH POWER DOUBLE INSULATED 1150 WATT MOTOR
- EASY MAINTENANCE, FIELD REPAIRABLE
- ONE PIECE TUBE INSURES SAFE, LEAKPROOF OPERATION
- CHOICE OF POLYPROPYLENE, KYNAR®, OR STAINLESS STEEL PUMPS



Sethco Division

SETHCO MODEL P-90 DRUM PUMPS

THE RIGHT CHOICE FOR TRANSFERRING CORROSIVE LIQUIDS FROM CARBOYS, DRUMS, VATS, TANKS OR ANY OTHER CONTAINER

Pump Tube Features:

- **Polypropylene, Kynar or stainless steel pump construction**

Choose from 3 materials of construction to transfer most corrosive liquids.

- **Sealless construction**

Eliminates the major cause of pump failure.

- **Can run dry**

No costly damage to pump if it is run dry for short periods after drum or container has been emptied.

- **1.66" (42mm) tube diameter**

Designed to fit any bung to empty any drum or carboy around the world.

- **More effective vapor seal**

- **High quality design**

One piece tube construction, fewer pump parts and new bearing cup ensure reliability and extends pump life. New P90 pump tube is lighter and stronger than the P80 pump tube.

- **Self priming**

A flip of the switch and pumping action begins immediately.

- **Quick draining**

Pump drains quickly when removed from liquid.

- **Wide vane axial impeller**

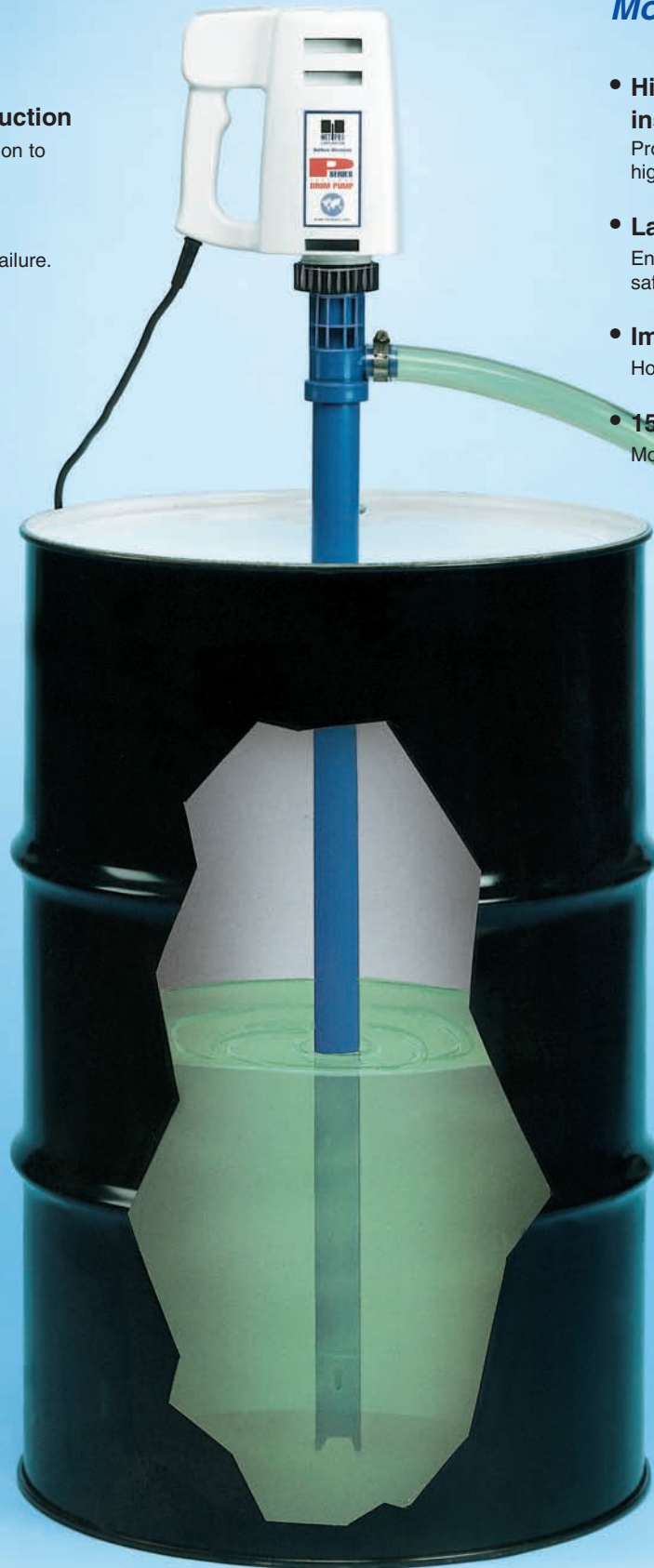
Efficiently moves high viscosity and specific gravity liquids up to 4000 ssu.

- **High flow**

Empties a 55 gallon drum in less than 2 minutes. Empties a 500 gallon tank in less than 13 minutes.

- **Easy to maintain**

New bearing cup design allows fast, inexpensive, easy to do repairs. No special tools needed.



Motor Features:

- **High power, double insulated 1150 watt motor**

Protected in a corrosion resistant, high-strength, impact resistant case.

- **Large handle grip**

Ensures grasp when wearing bulky safety rubber gloves.

- **Impact resistant housing**

Holds up to rough handling.

- **15 foot cord**

Motor is equipped with a heavy duty oil and acid resistant electrical cord and molded plug.

- **On/Off switch with safety reset circuit breaker**

Unlike hazardous automatic restart units, the motor will not restart until on/off switch resets the circuit breaker. Momentary switches are available.

- **Continuous duty rated**

The powerful electric motor will pump liquids continuously drum after drum without overloading the motor, even when pumping high specific gravity solutions.

- **Hazardous duty and air motor also available**

For safe transfer of hazardous, flammable or combustible liquids.

- **Lightweight**

Weighs only 9 pounds.

SELECT FROM 3 HIGH POWER INTERCHANGEABLE MOTORS

High-Power Double Insulated 1150 Watt Motor

Lightweight, impact resistant and easy to handle, this motor is the most widely used. Select this motor when transferring liquids that are non-hazardous. Can be used with any P90 pump tube.

Hazardous Duty Electric Motor

UL Listed, 650 watt motor is specifically designed to be used with the Sethco stainless steel P90 pump to safely transfer hazardous flammable or combustible liquids. Can also be used with Sethco Kynar P90 pump to transfer non-flammable chemicals in a hazardous environment.

Hazardous Duty Air Motor

Can be used in place of electric motor when desired. Completely interchangeable on any P90 pump. Recommended for use in areas where flammable vapors or other hazardous duty conditions exist.



30", 40"
50" and 60"
Standard
Pump Tube
Lengths

**6 MONTH
WARRANTY!**

Twice the length
of most other
drum pumps

...AND 3 INTERCHANGEABLE PUMP TUBE ASSEMBLIES

POLYPROPYLENE

Economical and Dependable
Wetted Parts

Polypropylene, Hastelloy C[®], Tefzel[®], Viton[®].

Typical Applications

Hydrochloric acid, sulfuric acid, nitric acid, most electroplating solutions sodium hydroxide, alkaline solutions, chromic acid and other non flammable solutions.

Temperature Limits

32° to 130°F (0° to 55°C)

STAINLESS STEEL

Heavy Duty design for
extended life

Wetted Parts

Stainless Steel, Teflon[®], Kynar[®].

Typical Applications

Alkalies, aqueous caustic, light oils, and solvents.

Temperature Limits

0° to 250°F (-18° to 121°C)

KYNAR[®]

Superior corrosion resistance,
withstands higher temperature.

Wetted Parts

Kynar[®], Hastelloy C, Tefzel[®], Viton[®].

Typical Applications

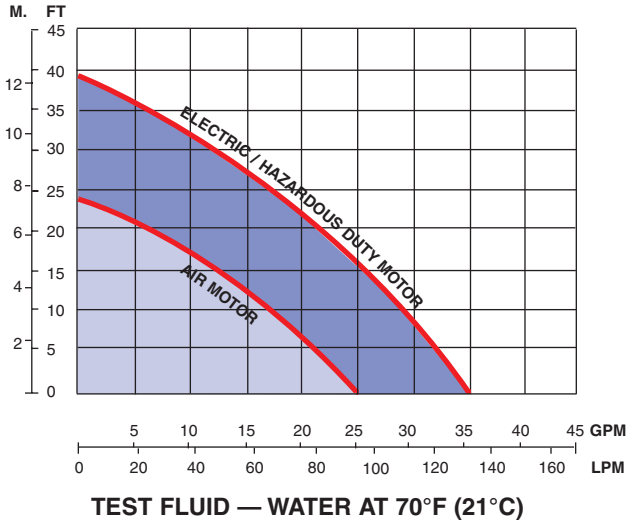
Strong mineral and oxidizing acids, alkalies, metal etchants, chlorine, aqueous caustic, organic and non-flammable solvents.

Temperature Limits

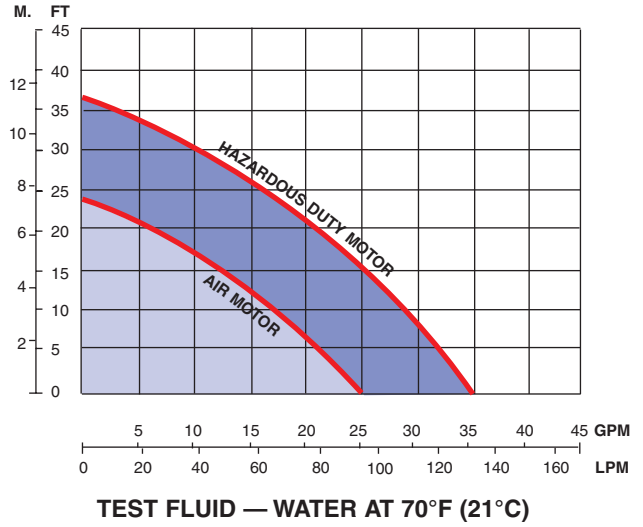
0° to 250° F (-18° to 121°C)

THE P-90 DRUM PUMP PROVIDES HIGH VOLUME PUMPING TO 35 GPM (132 LPM)

Flow curve for **Polypropylene or Kynar Pump Tube** with standard 1150 watt electric motor, air motor or hazardous duty motor.



Flow curve for **Stainless Steel Pump Tube** with electric motor, air motor and hazardous duty electric motor.



ACCESSORIES

Flow Totalizer
Accurately measures the flow of liquid. No more guessing. Easy to install and runs on 2 AAA batteries.

NEW!



Hand Flow Regulator
Safe, leakproof, automatic flow control. The “easy squeeze” hand lever permits controlled flow of corrosive liquids. Sethco hand flow regulators are optional and available in polypropylene, aluminum or stainless steel construction.



Vinyl Hose
Clear, pliable, corrosion resistant. For use with most acids and alkalis and water base solutions. 10 ft. of vinyl hose is supplied with each complete polypropylene P90 pump and motor.



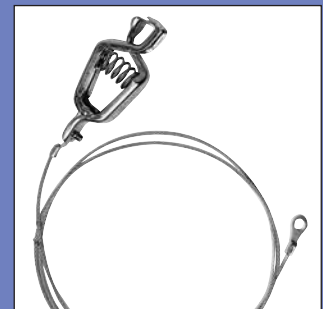
Bottom Inlet Strainer
Fits over pump tube to prevent debris from entering pump. Stainless steel pump tube has built in strainer. (Supplied with each complete P90 pump and motor).



Storage Hook
Allows the pump to be safely stored in an upright position out of the way, and insures complete drainage after use. (Supplied with each complete P90 pump and motor).



Bung Adapter
Holds pump tube securely in the bung opening (optional).



Bonding Wire
Required when pumping flammables to bond and ground equipment.

Pump and Motor Specifications

PUMP TUBES

MODEL	Tube Length* (in / cm)	Wetted Materials	Tube Diameter (at widest point) (in / cm)	Discharge (in / cm)	Maximum Flow (water at 70°F / 21°C)	Maximum Head Gravity**	Maximum Specific Gravity** (reduced flow and pressure)	Maximum Viscosity**	Net Weight (lbs. / kg)	Shipping Weight w/o Hose (lbs. / kg)
POLYPROPYLENE PUMP TUBE										
P90H-30	30 / 76	Polypropylene,	1-2/3" / 4.2 cm	for 1" I.D. Hose	35 GPM / 132 LPM	39 ft. / 1189 cm	1.86	4000 SSU (850 cks)	1.75 / .80	5 / 2.3
P90H-40	40 / 101	Tefzel®†,							2.75 / 2	5.5 / 2.5
P90H-50	50 / 127	Hastelloy C®,							2.75 / 1.25	6 / 2.7
P90H-60	60 / 152	Viton®							3.25 / 1.5	6.5 / 2.9
PVDF PUMP TUBE										
P90H-30K	30 / 76	PVDF	1-2/3" / 4.2 cm	for 1" I.D. Hose	35 GPM / 132 LPM	39 ft. / 11.5 m	1.86	4000 SSU (850 cks)	2.75 / 1.25	5 / 2.3
P90H-40K	40 / 101	Tefzel®†,							3.25 / 1.5	6.5 / 2.9
P90H-50K	50 / 127	Hastelloy C®,							3.75 / 1.7	6 / 2.7
P90H-60K	60 / 152	Viton®							4.25 / 1.9	7.5 / 3.4
STAINLESS STEEL PUMP TUBE										
P90S-40S	40 / 101	SS-316, Carp. 20, PVDF Teflon®	1-3/4" / 4.4 cm	Both 3/4" (1.9 cm) FNPT & 1-1/4" ID Hose	35 GPM / 132 LPM	40 ft. / 11.5 m	1.86	4000 SSU (850 cks)	8 / 3.6	11.5 / 5.2

* For other lengths consult factory

**With electric motor drive

† Available with Nylon in place of Teflon for nuclear service.

MOTORS

Motor	Description	Net Weight (lbs. / kg.)	Shipping Weight lbs. / kg.)
A	Air Drive-100 PSI @ 18 CFM With inlet air valve for motor speed and flow control, and muffler for quiet operation	2 lbs. / .9 kg.	5 lbs. / 2.2 kg.
B	Electric - 115V, 50/60Hz, 1 ph, ODP, double-insulated with 15 feet of line cord, plug and on/off switch with built-in safety manual reset circuit breaker. Motor cannot accidentally restart after breaker trips. Switch must be manually turned back on to reset breaker.	7 lbs. / 3.2 kg.	9 lbs. / 4 kg.
C	Electric - 230V, 50/60Hz, 1 ph. ODP, as per "B" above. Plug is not provided.	7 lbs. / 3.2 kg.	9 lbs. / 4 kg.
E	Electric-Hazardous Duty U.L. Listed "Portable" Class 1, Groups C and D, 120V, 60Hz., 1 ph, with built-in-switch, and internal thermal overload, 15 feet of 3-wire grounded cord and easy carry handle.	19.5 lbs. / 8.8 kg.	21.5 lbs. / 9.7 kg.

WARRANTY

180 day warranty against defective parts and workmanship. The standard warranty does not apply when equipment is used contrary to factory recommendations.

Since the policy of Sethco is one of continual improvement, we reserve the right to change design or materials at any time without giving notice or creating any obligation to previous or future customers.

We asked our customers how they use their Sethco drum pump and this is what some of them said...



Plating Shops

- Transferring nitric, sulfuric, muriatic and hydrofluoric acid.
- Emptying spent metal finishing acids and alkalies at 32°F to 130°F.
- Emptying liquid nickel sulfate from 55 gallon drums into smaller pails.
- Transferring cyanide zinc @ 90°F safely and economically.
- Plating solutions at room temperature pumped 20 feet across and 5 feet up.
- Transferring phosphoric, nitric and sulfuric acids into small tanks.
- Mixing and transferring aluminum brighteners.
- Emptying copper, cadmium and silver cyanide; ferric chloride, copper sulfate, tin lead, ferric chloride, copper fluoborate and nickel sulfamate at 65° to 150°F.
- Reactivating anodizing solution with sulfuric and chromic acids.
- Pumping out hot cleaners with alkali.



Industrial Chemicals

- Packaging acids and alkalies in bottles.
- Pumping acids up to the floor above.
- Transferring viscous wool oil from drum to hoppers.
- Pumping out hot cleaners with alkali.
- Filling small containers of industrial chemicals from carboys and drums for retail sales.
- Mixing and transferring hot caustics.
- Emptying 55 gallon drums of hydrofluoric acid without hoisting them into 5 gallon containers.

Electronics & Printed Circuits

- Pumping acids at 70° to 130°F for printed circuit fabrication.
- Transferring acids into tanks 10-15 feet away.
- Handling ferric chloride and sodium persulfate for etching.

Grain Processing

- Moving surfactants at 90°F in grain processing.



Latex and Rubber

- Transferring styrene across the shop.
- Transferring from drums to mixer in water paint manufacture.
- Pumping 20% muriatic acid at 80°F for rubber processing.

Photo Processing

- Transferring ammonia thiosulphate for photo processing.
- Pumping ethylene glycol, methanol, ammonium, thiocyanate, NaOH.

Waste and Water Treatment

- Pumping treatment chemicals, caustic soda, sodium hypochlorite, sodium metabisulfite and sulfuric acid into reagent tanks.
- Pumping ferric chloride for flocculation of solids.

Industrial Cleaners

- Transferring sanitary chemicals, filling small containers with liquid floor polishes, liquid detergents, etc.
- Pumping alkaline cleaning chemicals.
- Mixing liquid soaps.

Pulp and Paper Manufacturing

- Pumping sulphuric acid up 8'.
- Transferring ammonia in processing pulp and paper.
- Moving ammonia and latex 15' across plant and up to 10' in paper and pulp processing.

Electrical Power and Utility Companies

- Transferring acids from drums and carboys.
- Handling 35% hydrazine for electric generators.
- Hazardous chemical disposal from 55 gallon drum to a reactor tank.



Plus hundreds of other enthusiastic replies from hospitals, institutions, laboratories, universities, photo processors, chemical suppliers, industrial cleaner packagers, food processors, beverage canners, and the manufacturers of mirrors, automotive parts, aerospace components, fiberglass and more.

