



SERIES 'DP' DRUM PUMP

OPERATION AND
SERVICE GUIDE
O-175F
APRIL 1993

SEAL-LESS DP MODELS					
PP8339-1	52-1000	SS8339-1	52-2000	KY8300D-1	55-1033
PP8347-1	52-1001	SS8347-1	52-2001	KY8300C-1	55-1034

MODEL	PP83	SS83	KY83
Pump	Polypro., ETFE	316SS	PVDF, ETFE
Shaft at solution	Hastelloy C & TFE	316SS & TFE	Hastelloy C & TFE
Othersolution contact	Carbon Bushing	Carbon Bushing	Carbon Bushing
Parts List	PP-1026	PP-1126	PP-7600

SAFETY PRECAUTIONS BEFORE STARTING PUMP

1. Read Operating Instructions and instructions supplied with chemical to be used.
2. Refer to Chemical Resistance Data Chart for compatibility of materials in pump with solution to be used.
3. Note temperature and pressure limitations provided in Product Catalog.
4. Personnel operating pump should always wear suitable protective clothing, face mask or goggles, apron and gloves.
5. Always close valves slowly to avoid hydraulic shock.
6. Ensure that all fittings and connections are properly tightened.
7. **When pumping flammable or combustible liquids, only air motors and -EXP-UL motors are to be used. Pumps must be metal and a ground wire employed to avoid static discharge. Refer to page 2.**

PRE-START-UP

1. Standard hose adapter furnished with polypropylene pumps is for use with 1" I.D. hose. Check the chemical compatibility of the hose purchased with the solution to be pumped. Optional hose and hose adapters are in Product Catalog.
2. Turn pump hand wheel tight to motor until fully secure.
3. Motors are designated by the following: Note: Motor nameplate must correspond to power source used.
4. Connect hose to pump discharge adapter. Install securely to adapter and tighten hose clamp. Also be sure to tighten wing lock which locks adapter to pump.
5. When flow control nozzle is used, install hose end securely and tighten clamp.
6. Before starting or connecting motor to power supply be sure motor switch is in **OFF "0"** position.
7. Mount wall bracket at a conveniently accessible location and store pump-motor assembly on it.
8. Discharge nozzle or end of hose should be secure to the discharge container before energizing motor.
9. An operating pump-motor assembly should never be left unattended.
10. High flow rate rotor is installed in pump. Impeller is included in kit with pump and will provide high discharge head.

charge head.

ELECTRIC MOTORS- OPEN MOTORS ARE NOT TO BE USED FOR PUMPING FLAMMABLE OR COMBUSTIBLE LIQUIDS.

CD CHEMICAL DUTY MOTOR

$\frac{3}{4}$ H.P. (640 WATTS) 115V/1/50-60, in polypropylene outerhousing and inner motor sleeve.. Thermal overload protected, automatic reset. Includes 16 ft. cord w/molded plug. Not suitable for hazardous duty. For viscosities up to 3475 SSU or specific gravity up to 1.8 or for intermittent service on higher specific gravity liquids. Unique air flow forces chemical fumes away from motor while taking in clean air. Parts List P-875.

For 220V/1/50-60 motor, specify OPH50.

OPEN DRIP-PROOF MOTOR -ODP

1H.P. (800 watts) 115V/1/50-60, in aluminum housing. Thermal overload protected, automatic reset. Includes 16 ft. cord w/molded plug. Not suitable for hazardous duty. For viscosities up to 3475 SSU or specific gravity up to 1.8 or for intermittent service on higher specific gravity liquids. Parts List P-5800.

(600 watts) 220V/1/50-60, specify -ODP50

SEVERE DUTY TEFC MOTOR -ENC

$\frac{5}{8}$ H.P. (510 watts) 110V/1/60, in polypropylene coated aluminum housing. Thermal overload protected, double insulated, automatic reset. Includes 16 ft. cord, plug. For viscosities to 3475 SSU or specific gravity up to 1.8 or for intermittent service on higher S.G. liquids.

220V/1/50-60 motor, specify -ENC50(P54 Encl.)

EXPLOSION PROOF MOTOR *EXP-UL

$\frac{3}{4}$ H.P. (620 watts) 115V/1/60, in aluminum housing, C.S.A. and U.L. listed Class I, Groups C & D; Class II, Group G. Explosion-proof, thermal overload protected, automatic reset. Includes 16 ft. cord, no plug. For viscosities up to 3475 SSU or specific gravity up to 1.8 or for intermittent service on higher S.G. liquids.

For Ex 220V/1/50-60 motor, consult factory.

AIR DRIVEN MOTORS- SUITABLE FOR HAZARDOUS DUTY

Refer to Operating Instructions PO-260.



This label is included on ODP and EXP motors. It identifies the off/on position of the motor operation switch.

*These motors incorporate thermal overload protection with automatic reset which shuts off the motor when it is overheated. Should this occur, switch the pump into the 'OFF' position until it cools; otherwise, the pump will start automatically after the cooling period.

WARNING

When using a drum pump to fill cans, drums or other portable or fixed containers with flammable or combustible liquids such as gasoline, both the container being pumped from and the container being pumped into must be effectively BONDED and GROUNDED to prevent discharge of sparks of static electricity which could cause explosion.

GROUND WIRE. . .55-0246
BONDING WIRE. . .55-0245

GROUND WIRE

Is for use with EXP-UL motor on metal pump tubes to prevent static discharge when pumping flammables and combustibles. Secure the spade lug end to motor and attach spring clamp to a ground. Attach pump bond wire to metal drum then ground drum. Also use ground wire or bond wire to bond containers.

BONDING is the electrical interconnection between containers (such as a drum and a receiving can). Bonding must be completed before pumping begins. See diagram.

GROUNING is the electrical connection between a container and a "constant ground". A "constant ground" would be a metal pipe or rod in contact with the earth. An underground tank and piping connected to it would be inherently grounded by nature of the installation. The ground path must be less than 1 ohm.

Both BONDING and GROUNING of containers of flammable liquids are required under U.S. Government, OSHA regulations and National Fire Protection Association Code 77, Static Electricity.

Metal pump must be bonded to metal container or grounded if used with plastic container. Only metal pumps with explosion proof motors and metal hose should be used for pumping flammables and combustibles.

When pumping flammables, combustibles, or pumping in a hazardous duty environment, only a barrel adapter made of stainless may be used. Barrel adapters made on non-conductive materials such as plastics are prohibited.

START-UP

1. First use pump on water to acquaint yourself with the assembly and check motor operation, flow rate, security of all hose connections, operation of flow control nozzle, liquid velocity and pump drainage.
2. Be sure to follow all corporate, local, state and federal safety precautions when operating pump.

OPERATION TIPS

1. Use one motor and interchange with several pumps when solutions to be handled require ABSOLUTE prevention of cross contamination.
2. When finished using pump, drain pump and hose thoroughly and operate on 1-2 gallons clear water or neutral solution for 15-30 seconds to completely flush and rinse pump and hose assembly.
3. Never store the assembly in the container. Always rinse thoroughly and hang on a wall bracket.
4. Use bung adapter when vertical support of pump is required and when an auxiliary vent is provided in the drum. The bung adapter also prevents fumes from rising around the motor and possibly causing electrical or mechanical malfunction.
5. Control nozzle may be used to temporarily shut-off pump discharge.
6. Do not immerse pump into any liquid above the hose connection.
7. Do not run pump dry, or longer than 10-15 seconds after container is empty.
8. Do not run on liquid slurries or solutions containing abrasives. When large chips, etc., are present in the solution, obtain a suction strainer to protect the pump.
9. Do not rest or store pump on an angle. Pump distortion and higher motor speed can cause pump wear.
10. Do not use polypropylene pump on liquids above 150°F, except for short intervals. Combined effect of temperature and chemicals can affect the plastic.
11. Seal-less Models: Dry running will not affect the structural integrity or cause damage. However, long periods of dry running are not recommended.

TROUBLE SHOOTING & MAINTENANCE

1. If pump does not perform properly, test motor separately to verify its correct operation. Check for correct voltage or air supply. Check pump to assure frictionless rotation at upper bearing and impeller at bottom of pump.
2. At regular intervals lubricate upper bearing assembly of pump.
3. The three wire extension cord with the open motor has a ground wire which is striped.
4. For minor repair of pump or motor, refer to Parts List and order necessary items. For major repairs return pump and/or motor to factory (prepaid) with a request for a "REPAIR ESTIMATE" or instructions to "REPAIR AND RETURN".