

Product Data Sheet

PORTABLE - 12 Volt DC and 110 Volt AC CHEMTRAVELLER™

Description of Included Models

Model Number	Description	Shipping Weight
SS435	Basic 12 Volt DC transfer pump with Santoprene® diaphragms, 20' battery cable/battery clips, 1" X 14' EPDM discharge hose, 1" X 9' EPDM suction hose, ball-valve nozzle, 825 digital meter and low profile tubular frame.	50 lbs. 22.7 kgs.
SS465	Basic 115 Volt AC transfer pump with Santoprene® diaphragms, 1" X 14' EPDM discharge hose, 1" X 9' EPDM suction hose, ball-valve nozzle, 825 digital meter, high profile tubular frame and wheel kit.	50 lbs. 22.7 kgs.

Accessories

Part Number	Description
400F6569	Straight inlet or outlet pump flange
400F6679	90° inlet or outlet pump flange
700F3123	1" X 12' EPDM Ag (3.66m) hose
400F3140	1" X 12' (3.66 m) Polyethylene lined Chemical hose
400F6832	Heavy duty, wrap around, low profile tubular frame for Model 435
400F6892	Heavy duty, wrap around, high profile tubular frame for Model 465
445F1863	Polypropylene suction pipe with a 1" nipple that extends from 28" to 44" (71cm to 111cm) in length with bellows
400KTF1745	1" X 12' (3.66 m) EPDM hose assembly with clamps
400ACCF1755	1" X 12' (3.66 m) EPDM hose assembly and 1" ball-valve nozzle assembly; and anti-drip valve

Performance

Maximum Outlet Pressure	15 PSI (1.09 BAR)
Maximum flow rate¹	13.0 GPM (49.3 LPM)
Maximum Viscosity of fluid pumped	3000 CPS (SAE140 Gear Oil at 68°F)
Maximum ambient operating temperature	130 °F (54 °C)*
Minimum ambient operating temperature	-10 °F (-23 °C)*
Minimum dry vacuum	9 Inches of Hg.
Minimum suction lift**	10 Feet

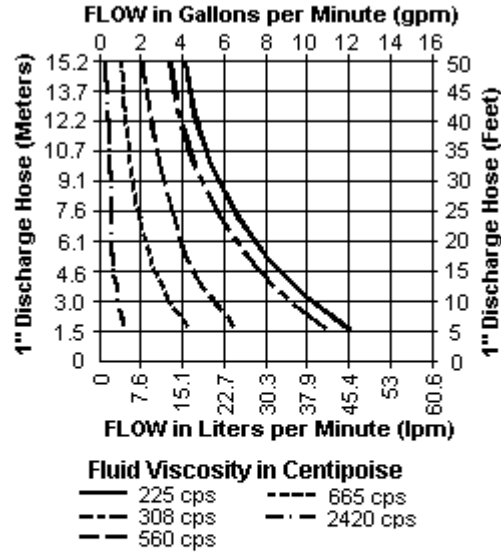
¹Nominal flow rate at nominal voltage using a standard hose and manual nozzle with low viscosity fluid.

* Consult factory for extreme temperature applications outside this range

** The lift in feet is equivalent to the vertical distance from the surface of the fluid in the tank to the inlet of the pump, PLUS the friction losses through the vertical and horizontal runs of pipe, all elbows and other fittings. The system should be designed to require a minimum amount of suction lift.

Flow Curve

400 Flow for Various Viscosities and Discharge Hose Lengths




NOTES:

1. SUCTION LOSSES - Pump mounted on 208 liter drum, 1/2 full with a standard suction pipe.
2. VERTICAL HEAD LOSSES - Hose horizontal with pump.
3. OTHER LOSSES - Additions for other in-line components
 - SureStop Disconnect - 0.15 M
 - Other disconnects - 4.0 M
 - 1" Check Valves - 2.7 M
 - 1" Elbow - 0.8 M

Fluid Compatibility

The Series 400 Diaphragm Pumps are compatible with the following fluids (all 1997 formulations): Frontier®, Lasso Micro Tech®, Dual®, Broadstrike® + Treflan®, Doubleplay®, Touchdown®, Topnotch®, Fusion®, Reflex®, Surpass 100® and GramoxoneExtra®.

The Series 400 Diaphragm Pumps are NOT compatible with the following fluids: very strong acids and any fluid with a flash point below 100 °F

	DANGER
	<p>Not for use with fluids that have a flash point below 100°F (37.8 C, ie: gasoline, alcohol). Refer to NFPA 325M (Fire Hazard Properties of Flammable Liquids, Gases and Volatile Solids) for flash points of common liquids. Static electricity buildup and discharge could result in arc and explosion.</p>

If in doubt about the compatibility of a specific fluid, contact the supplier of the fluid to check for any adverse reactions to the following wetted materials:

Fluorocarbon

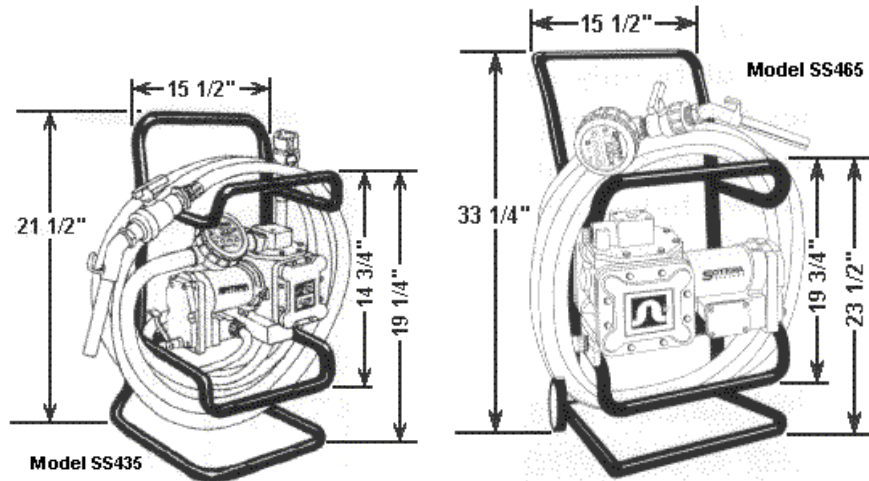
Santoprene™

Polypropylene

**300 Series
Stainless Steel**

**Buna N (captured
seal)**

Dimensions



Repair

Refer to **Parts and Technical Service Guide** packed with the pump and/or available for reference and printing in the Reference Literature section of this web page for the procedure to be followed for motor/gear assembly removal, gear assembly replacement and diaphragm assembly/check valve replacement.

Maintenance

To keep the pump running at its best, periodically perform the following procedures:

Chemical Applications -

Do not allow any chemical to remain in the pump for any extended period of time, whereby the chemicals are allowed to "dry out". Using the proper cleaning agent, thoroughly clean the diaphragm and check valve assemblies by flushing the pump with:

1. Diesel or kerosene for petroleum based chemicals
2. Water for water based chemicals

All Applications -

1. On an annual basis, check the four #10-24 X 1/2" machine screws (item 11) holding the diaphragms in place. If loose, tighten screws to prevent internal leakage.

Note: NEVER EXCEED 50 INCH-POUNDS of torque when replacing the pump covers or tightening the diaphragm screws. The threaded inserts could be stripped out.

2. Check the oil level in the pump gearbox periodically. The oil level should be level with the bottom edge of the sight cap holes located on the front of the pump body. Always check the oil level when the pump is level.
3. Replace oil with approximately 16 ounces of automotive grade SAE 30W through one of the sight cap holes if there is any indication of contamination after draining the contaminated oil. Contamination can be noted by a milky appearance to the oil or the level being above the base of the sight caps.
4. Examine the diaphragm/check valve assemblies for excessive wear annually or if oil contamination is noted, (items 7, 8, 9 and 10).

See meter's Parts and Technical Service Guide for additional recommended maintenance procedures.

Frequently Asked Questions

1. My pump only pumps for a few minutes and then stops. What is happening?

Generally "short cycling," indicates the motor is drawing too much current from the power source for some reason, and the thermal relay is opening to protect the insulation from the resulting heat build up. If this is what is happening the thermal relay will reset after 10 to 20 minutes and the motor will again operate. The causes of too high a current in this pump design are few and generally related to a motor defect such as a binding pump or motor bearing or shorted motor windings.

See the Troubleshooting Guide in your Owner's Manual packed with your unit or the copy available in the Reference Documents section of this More Info page for things to check.

2. The oil in the pump appears milky. Is there a problem?

The oil in the motor gearbox should appear clear and clean. A milky appearance or a change in color or appearance of this oil virtually always indicates a leak has developed and the pumped fluid is contaminating the oil. Drain the oil and thoroughly flush the gearbox with clean kerosene. If crankcase is contaminated, diaphragm replacement is

recommended. Replace the lubricating oil with approximately 16 ounces of SAE 30W motor oil before returning the pump to service.

See the Troubleshooting Guide in your Owner's Manual packed with your unit or the copy available in the Reference Documents section of this More Info page for more details on these procedures.

3. Why do I have to use the heavy wire supplied with the DC pump for connection to my battery?

Your pump is a commercial grade unit and as such draws a high current from your battery to do the work required. If that current were routed through a light wire, heating and possible damage of the wire, and reduced voltage at the pump would be the result. The wire supplied with your pump is sized to provide that optimum performance you demand and the pump can provide if properly installed.

It is also recommended a 30 amp slow blow fuse be installed in the power line to insure safety, should a short circuit develop in the pump wiring. Although the pump draws much less in normal operation, motor starting currents are significantly higher, necessitating the higher rating on the fuse.



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