VERSA-PAK REFUSE PUMP SYSTEM

The totally versatile front mount system for the refuse industry



Versa-Pak Pump

- Permco utilizes innovative thrust plates designed specifically for the refuse industry, providing for quieter operation and increased performance.
- All units are 100% factory tested.
- Dowel pin construction is standard.
- Solid one piece gear and shaft set with sealed outboard bearing which is protected with an outer shield keeping contamination away from the pump, reducing expensive downtime.
- Bleed valve built into the port end cover which eliminates the need for remote mounted bleed valves. (Dry Valve Version)
- Flows to 85 GPM / pressures to 3000 PSI.

Versa-Pak Valve

- Two configurations available: One for an unloader system and one for a dry valve system.
- The flow control portion of the Versa-Pak Valve protects the system from hydraulic overspeed thus reducing expensive repairs and downtime
- The "Unloader" configuration has both the flow control and an Unloader function. By flipping a switch on the dash, the operator can go into the "stand-by mode" when there is no need for the hydraulic system to operate.
- Individual components make it easier to maintain and less expensive to repair
- No need for special directional control valves with signal lines
- The operator never loses control of the hydraulic system unlike other systems with other types of overspeed controls
- Tamper-resistant flow regulation yet field adjustable



1500 Frost Rd, Streetsboro, OH 44241 Phone: (330) 626-2801 Fax: (330) 626-2805



The VERSA-PAK Front I

THE VERSA-PAK PUMP

We know you have choices when it comes to specifying hydraulic pumps. But with the innovative design features you'll find on the Versa-Pak Pump your decision just got easier. Like LONGER PUMP LIFE because we include a SEALED OUTBOARD BEARING with PROTECTIVE SHIELD which keeps out contamination before it gets to the bearing. Other features include 3 PIECE CAST IRON CONSTRUCTION for extreme durability. DOWEL PINS for superior protection against pressure spikes. SOLID ONE PIECE GEAR and SHAFT SET for added strength. The VERSA-PAK PUMP has

all the options as well. It comes in 5 sizes and offers a variety of shafts and mounting flanges. So whether this is the original installation or you're replacing an old worn out pump, it makes sense to install the **VERSA-PAK PUMP** from PERMCO.

The Sensible Choice

THE INSIDE STORY

Permco's newest line of mobile pumps are designed specifically for the refuse industry. Special features and components are incorporated into every VERSA-PAK unit to increase performance, reliability and smoother operation. Special designed thrust plates for dry valve and unloader applications with special sealing grooves and seals are used to extend roller bearing life and provide for quieter operation. Advanced machining techniques are utilized to provide the highest degree of accuracy to gear hubs and gear teeth profiles. State of the art machining centers and grinders contribute to achieving higher quality standards in holding closer

tolerances to machined parts allowing for higher volumetric pump efficiencies. Permco's rigorous quality control standards assures that you get the highest quality products on the market for your refuse applications. When it comes to the refuse industry for new or replacement products Permco is the "Sensible Choice".



1500 Frost Rd Streetsboro, OH 44241 Phone (330) 626-2801 Fax (330) 626-2805

Mount System from Permco

THE VERSA-PAK VALVE

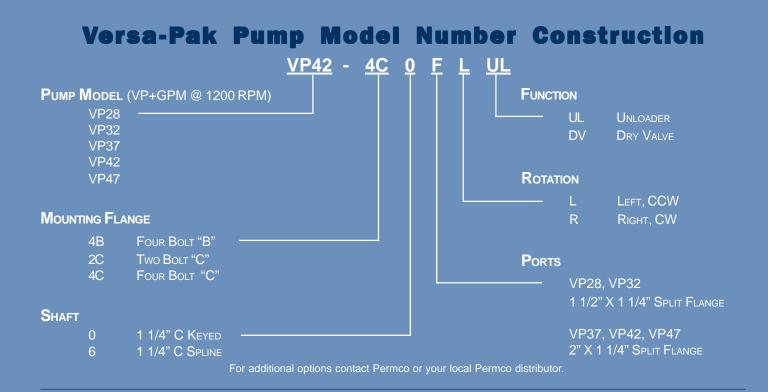
The VERSA-PAK Valve is available in two configurations. The first configuration, most commonly used with a Dry Valve System, functions as a pressure compensated **FLOW CONTROL**. This limits flow to the hydraulic system allowing a preset amount to the system with the excess flow being returned back to tank at low pressure. Because the system's main relief valve isn't flooded, it can better accomplish its function of controlling the system pressure. This reduces repairs and downtime associated with overspeeding overpressurizing the hydraulic system. Because the system never exceeds the correct flow, it doesn't have the consequential pressure spikes resulting in cylinder and component failure. Also, the excess flow is plumbed back into the Dry Valve, thus reducing the possibility of cavitating the pump at high RPM. All this means less downtime and greater cost savings.

The second configuration includes both the flow control and an "**UNLOADER**". The Unloader, normally used without a Dry-Valve, diverts 100% of the flow back to tank at extremely low pressure. By activating a switch, the operator can go into the "stand-by mode" when there is no need for the hydraulic system. Even though the pump sees full flow at all times, the horse power consumption is greatly reduced compared to what is normally associated with "wet" systems. Additionally, with the VERSA-PAK System, the operator, though unable to overspeed the hydraulic system, is ALWAYS in control, unlike other systems which have electronic or hydraulic overspeed controls. All this adds up to INCREASED REVENUES and REDUCED OPERATING COSTS!

DRY VALVES

Permco's air operated Dry Valve permits solid waste compaction while the vehicle is underway, creating maximum efficiency of the operator and equipment. It also reduces fuel consumption during the "off" mode. At the same time, it eliminates heat build-up in the hydraulic system associated with large flows when the system is not in use. The Dry Valve is easily operated by a dash mounted electric over air switch or manual air valve. It is available in either 11/2" or 2" four bolt split flange and includes breather vent, tubing and fittings.





Versa-Pak Valve Model Number Construction

<u>VP100</u> - <u>U</u> <u>45</u> <u>S</u> <u>H1</u>

Valve Model VP10			SE K IT	
Unloader			— H1	Excess Flow Hose Kit
U C	Unloader Installed Flow Control Only		H2	3/4" (Use with Dry Valve) Solenoid Drain Hose Kit 3/8" (Use with Unloader)
K	Kit Only (Non-Functional - Does not include Solenoid, Solenoid Plug, T1 Port Plug, or Regulated Flow Orifice)		X1	No Hose Kit Included
FLOW CONTROL SETTING (GPM)		Sv	итсн К іт	
BL =	No Orifice		— S	Switch Kit Included for Unloader Option Only
	0, 65, 70, 75, 80		Х	No Switch Kit Included

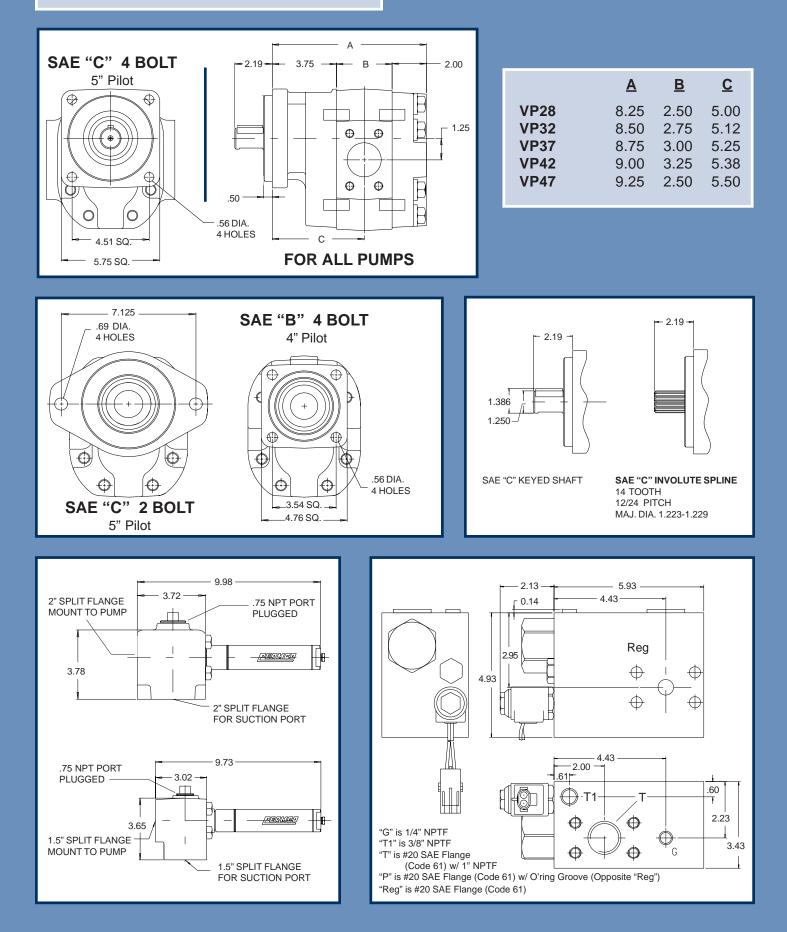
Versa-Pak Pump Specifications

Model <u>Number</u>	Displ. <u>Cu. In.</u>	Max. <u>RPM</u>	Min. <u>RPM</u>	Max. <u>PSI</u>	Inlet Port <u>SAE 4 Bolt</u>	Discharge Port <u>SAE 4 Bolt</u>
VP28	6.066	3000	600	3000	1-1/2"	1 1/4"
VP32	7.077	3000	600	3000	1-1/2"	1 1/4"
VP37	8.088	3000	600	2500	2"	1 1/4"
VP42	9.099	2500	600	2500	2"	1 1/4"
VP47	10.110	2500	600	2250	2"	1 1/4"



1500 Frost Rd Streetsboro, OH 44241 Phone (330) 626-2801 Fax (330) 626-2805





ACCESSORIES

UNLOADER APPLICATIONS

Solenoid Drain Hose Kit

PART No. 999-00946 Simplify installation of the Unloader with this hose kit. The kit consists of one 3/8" hose assembly and fittings.

DRY VALVE APPLICATIONS

Electric/Air Shift Kit for Dry Valve

PART No. 999-00954. The Switch Kit provides for easy operation and installation. The kit includes electric/air solenoid. switch/light, bracket, wire, connectors, pressure protection valve, tubing, and



Electric Switch Kit for Versa-Pak Unioader

PART No. 999-00953 The Switch Kit provides for easy operation and installation of cab controls. The kit includes switch/light, switch bracket, wire, fuse, and connectors.

Solenoid for Versa-Pak Unloader

PART No. 999-00948 Use this Solenoid to convert the Versa-Pak Valve Kit to a functional Unloader Valve. You will also need the proper orifice.



Excess Flow Hose Kit

HYDRAULIC SYSTEM

> PART No. 999-00945. Excess flow is returned to the Dry Valve for easy installation and also assists in the reduction of cavitation at high RPM. The kit consists of one 3/4" hose assembly and fittings.

Conversion Kit for Versa-Pak Flow Control

PART No. 999-00955. The Kit provides for easy conversion of Versa-Pak Valve Kit to the Flow Control Function. Kit includes solenoid port plug and T1 port plug. You will also need the proper orifice.



ADDITIONAL REFUSE INDUSTRY RELATED PRODUCTS



CH Series Gear Pumps

CH Series pumps are available in thee sizes: 3.84, 5.12, and 6.40 cubic inches. They are pad mounted with dual 1 1/8" keyed shafts. All CH Series pumps come with a 1 1/2" NPT inlet port. The CH384-15 and CH512-20 each have 3/4" ODT discharge ports and the CH640 has a 1" ODT discharge port.



Port Adapter Kit

PART No. 514-00952 1 1/2" PART No. 514-00951 Quickly and easily converts Pump without "counterbored" inlet port to fit applications where counterboring is necessary.



Permco 1500 Frost Road P. O. Box 2068 e-mail info@permco.com

Orlfice Plug

PART No. 999-00949-(XX) Last two digits represent GPM. Insert in Versa-Pak Valve Kit to



Permco TianJin Fluidpower

Fenhua Industrial Park

TEDA, China PC: 300457

Mfg. Co., Ltd.

9th Avenue

deliver proper flow to regulated port. See installation manual for proper sizing.

> Permco (TianJin) Hydraulics Inc., Ltd. 236 Jinbindadao Free Trade Zone TianJin Port, China e-mail technic@permcotj.com



P3000 and P5000 Series Roller **Bearing Pumps**

Built tough to withstand the rough service commonly associated with the refuse industry. Typical applications include recycle vehicles, compactors, roll-offs, automated side loaders, and all PTO driven pump applications. P3000's and P5000's are available in a wide variety of configurations including Dry Valve and Unloader Applications.



Copyright 2010 Permco Inc. Bulletin 10-605UL

