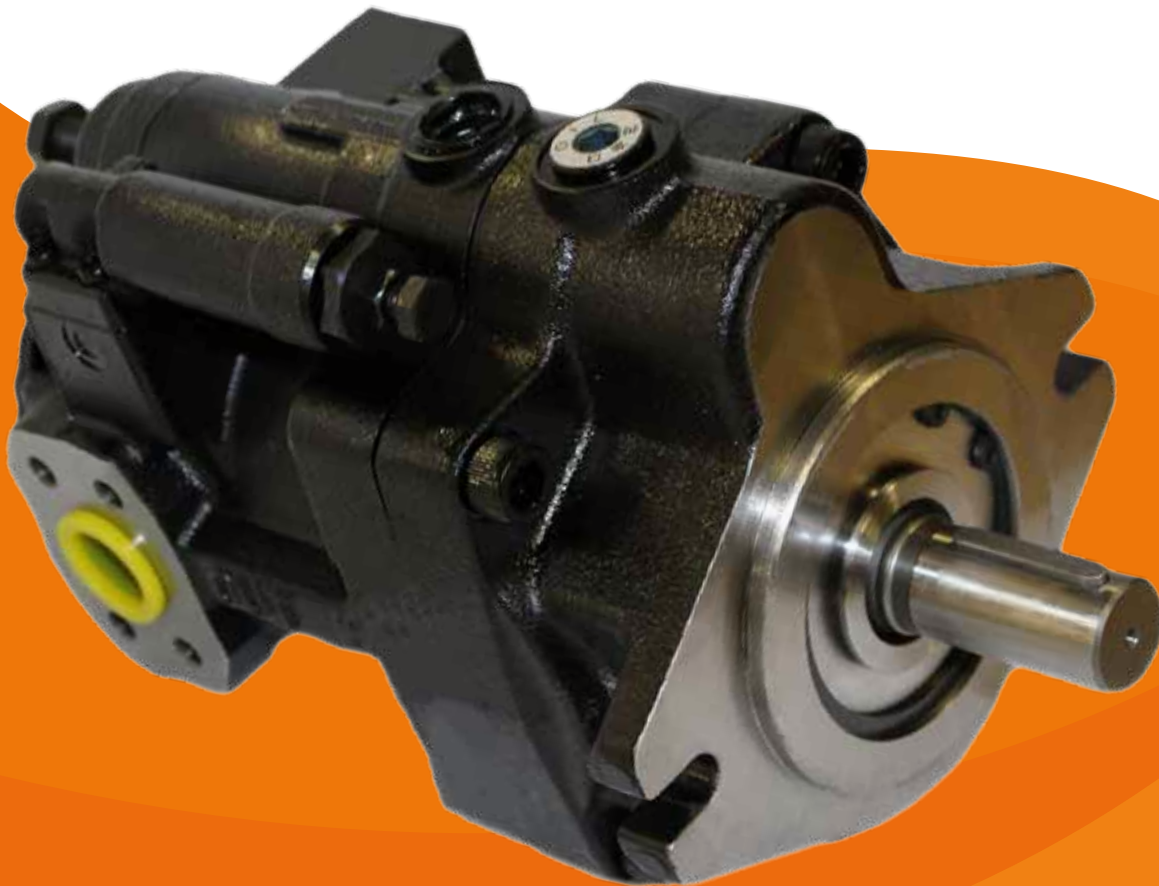


NACHI

PVS Series Piston Pump Thru Shaft Series



Key & Spline Shaft Options

Half Semi-Circular Swash Plate for **Low Noise and **Low Pulsation****

Rich Set of **Options to Enable **Highly Efficient, Energy Saving** Equipment**



PVS Series Piston Pump Features

- Multiple pressure compensation options
- Multiple spline and key shaft options
- Low friction Nachi bearings guarantee pump viability
- High operating efficiency for lower power consumption and reduced heat generation
- Semi-circular swash plate reduces power loss by ensuring a stable discharge volume
- 11 piston design minimizes flow ripple, further reducing noise

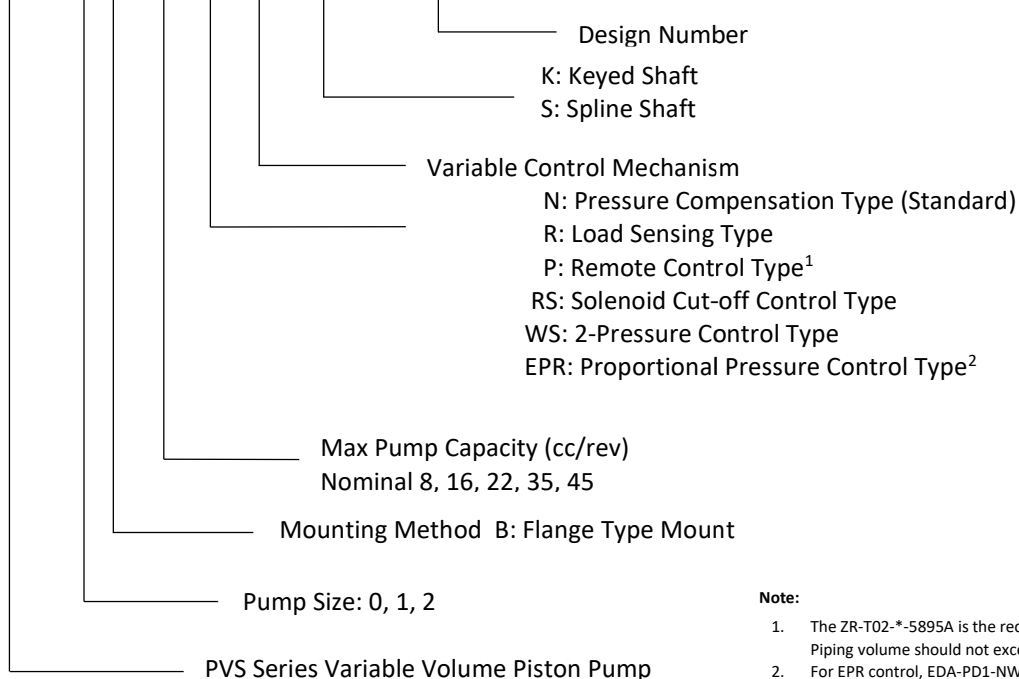


Applications

- Lathe
- Mill
- Injecting Molding Machine
- Hydraulic Press
- CNC Machine
- Metal Forming Machinery

Explanation of Model Number

PVS - * B - * - * - 1 - (*) - E5737B



Note:

1. The ZR-T02-*-5895A is the recommended remote-control valve. Piping volume should not exceed 9 cubic inches
2. For EPR control, EDA-PD1-NWZ-D-D2-11 is the recommended amplifier.

PVS Series

Allowable Torque

| Pump | Max Allowable Torque (in-lbs) | Max Rear Pump Torque (in-lbs) |
|---------------------------------------|-------------------------------|-------------------------------|
| PVS-0B-8N ⁺ -K-E5737B | 844.80 | 530.00 |
| PVS-0B-8N ⁺ -S-E5737B | 375.60 | 256.00 |
| PVS-1B-16/22N ⁺ -K-E5737B | 928.80 | 530.00 |
| PVS-1B-16/22N ⁺ -S1-E5737B | 734.40 | 530.00 |
| PVS-1B-16N ⁺ -S3-E5737B | 1176.00 | 530.00 |
| PVS-1B-22N ⁺ -S3-E5737B | 1353.60 | 530.00 |
| PVS-2B-35/45N ⁺ -K-E5737B | 2194.80 | 796.00 |
| PVS-2B-35/45N ⁺ -S3-E5737B | 1353.60 | 796.00 |
| PVS-2B-35/45N ⁺ -S5-E5737B | 2124.00 | 796.00 |

Calculation of Torque

Equation

$$\text{Torque (in-lbs)} = \text{Pressure (psi)} \times \text{Displacement (cipr)} \div (2\pi)$$

Notes

Total torque is dependent on both the pump size and shaft style
All torque and shaft specification can be found in the PVS brochure

Example: Total allowable torque for this pump is 928.80 in-lbs

PVS-1B-16/22N⁺-K-E5737B (Front Pump)

Pressure Setting: 3000 psi

Displacement Setting: .50 cipr

Equation: (3000 psi x .50 cipr) ÷ (2π)

Result: T = 238.73 in-lbs

PVS-1B-22N-E13 (Rear Pump)

Pressure Setting: 750 psi

Displacement Setting: 1.00 cipr

Equation: (750 psi x 1.00 cipr) ÷ (2π)

Result: T = 119.37 in-lbs

• **Total Torque** = 119.37 in-lbs + 238.73 in-lbs = 358.1 in-lbs

PVS Specifications

| Model No. | Volume in ³ /rev (cm ³ /rev) | Discharge Volume at No-Load gpm | Pressure Range (psi) | Permitted Peak Pressure (psi) | Front Shaft | Rear Shaft | Port Size | Rotating Speed (rpm) | | Mass (lbs) |
|---|--|---------------------------------|----------------------|-------------------------------|---|---------------------|---|----------------------|------|------------|
| | | 1800 rpm | | | | | | Min | Max | |
| PVS-0B-8 ⁺ O-(⁻)-E5737B 1 2 3 | .18 - .48 (3.0 - 8.0) | 3.8 | 290 to 507 | 3625 | K: SAE (AH) 19-1 (3/4) S: SAE (A) 16-4 (9T) | SAE (A) 16-4 (9T) | Inlet: SAE-12 Outlet: SAE-08 | 500 | 2000 | 17 |
| | | | 290 to 1015 | | | | | | | |
| | | | 435 to 2030 | | | | | | | |
| | | | 435 to 3045 | | | | | | | |
| PVS-1B-16 ⁺ O-(⁻)-E5737B 1 2 3 | .3 - 1.0 (5.0 - 16.5) | 7.8 | 290 to 507 | 3625 | K: SAE (AH) 19-1 (3/4) S1: SAE (AH) 19-4 (11T) S3: SAE (B) 22-4 (13T) | SAE (A) 16-4 (9T) | Inlet: SAE-16 Outlet: SAE-12 | 500 | 2000 | 24 |
| | | | 290 to 1015 | | | | | | | |
| | | | 435 to 2030 | | | | | | | |
| | | | 435 to 3045 | | | | | | | |
| PVS-1B-22 ⁺ O-(⁻)-E5737B 1 2 3 | .42 - 1.34 (7.0 - 22.0) | 10.5 | 290 to 507 | 3625 | K: SAE (AH) 19-1 (3/4) S1: SAE (AH) 19-4 (11T) S3: SAE (B) 22-4 (13T) | SAE (A) 16-4 (9T) | Inlet: SAE-16 Outlet: SAE-12 | 500 | 2000 | 24 |
| | | | 290 to 1015 | | | | | | | |
| | | | 435 to 2030 | | | | | | | |
| | | | 435 to 3045 | | | | | | | |
| PVS-2B-35 ⁺ O-(⁻)-E5737B 1 2 3 | .48 - 2.1 (8.0 - 35.0) | 16.6 | 290 to 507 | 3625 | K: SAE (B-B) 25-1 (1") S3: SAE (B) 22-4 (13T) S5: SAE (B) 25-4 (15T) | SAE (AH) 19-4 (11T) | Inlet: Code 61-1 1/4" Outlet: Code 61-1" | 500 | 2000 | 46 |
| | | | 290 to 1015 | | | | | | | |
| | | | 435 to 2030 | | | | | | | |
| | | | 435 to 3045 | | | | | | | |
| PVS-2B-45 ⁺ O-(⁻)-E5737B 1 2 3 | .67 - 2.74 (11.0 - 45.0) | 21.5 | 290 to 507 | 3625 | K: SAE (B-B) 25-1 (1") S3: SAE (B) 22-4 (13T) S5: SAE (B) 25-4 (15T) | SAE (AH) 19-4 (11T) | Inlet: Code 61-1 1/4" Outlet: Code 61-1" | 500 | 2000 | 46 |
| | | | 290 to 1015 | | | | | | | |
| | | | 435 to 2030 | | | | | | | |
| | | | 435 to 3045 | | | | | | | |

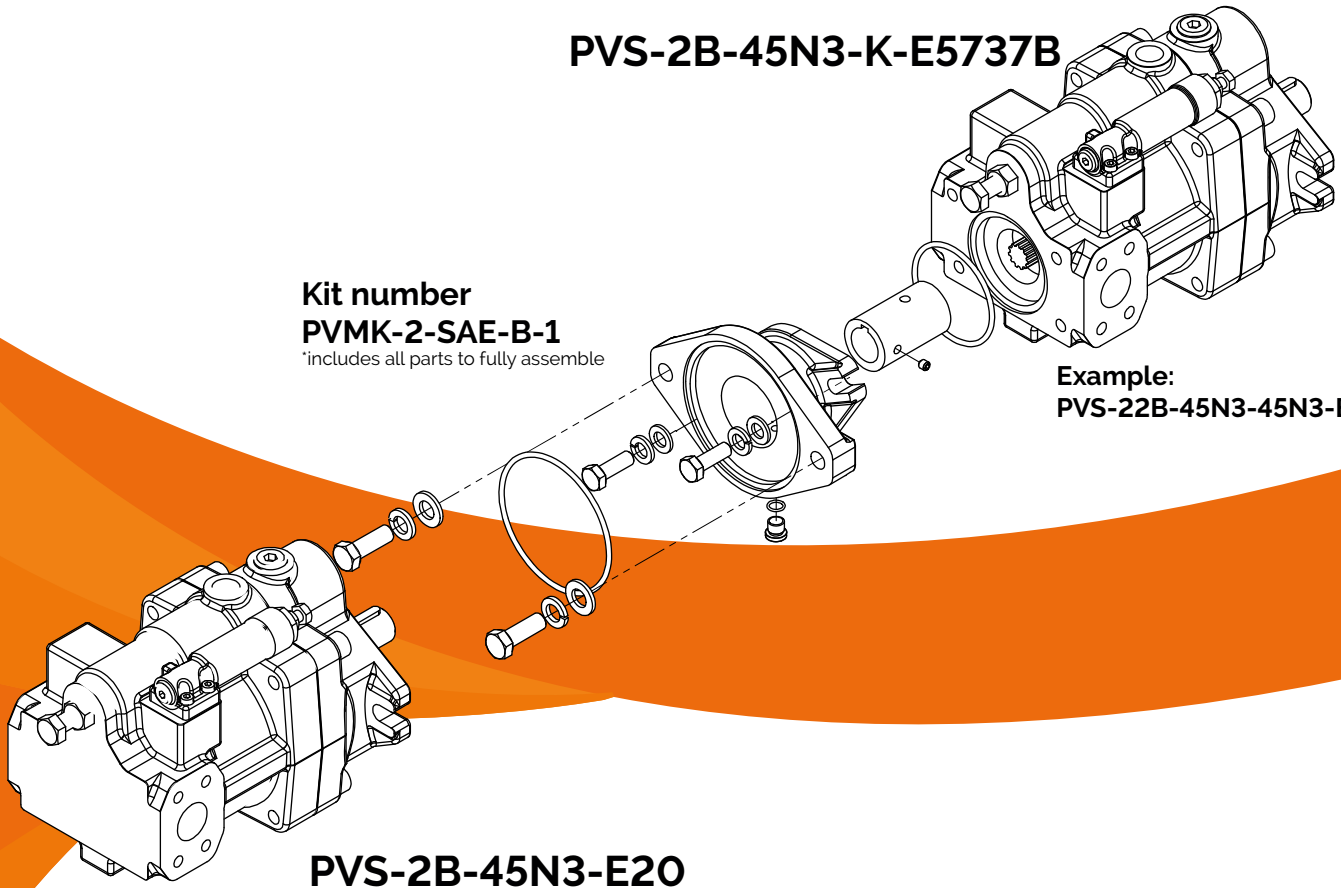
Note: Direction of rotation is clockwise when viewed from the shaft end.

| Rear Pump | Front Pump | Double Pump Part Number | Kit Number | |
|------------------|-----------------------|-------------------------|-------------------|-------------------|
| PVS-0B-8N'-E30 | PVS-0B-8N'-E5737B | PVS-00B-8N'-8N'-E30 | PVMK-1-SAE-A-3/4" | |
| | PVS-1B-16N'-E5737B | PVS-01B-8N'-16N'-E30 | | |
| | PVS-1B-22N'-E5737B | PVS-01B-8N'-22N'-E30 | | |
| | PVS-2B-35N'-E5737B | PVS-02B-8N'-35N'-E30 | PVMK-2-SAE-A-3/4" | |
| | PVS-2B-45N'-E5737B | PVS-02B-8N'-45N'-E30 | | |
| PVS-1B-16N'-E13 | PVS-1B-16N'-E5737B | PVS-11B-16N'-16N'-E13 | PVMK-1-SAE-A-3/4" | |
| | PVS-1B-22N'-E5737B | PVS-11B-16N'-22N'-E13 | PVMK-2-SAE-A-3/4" | |
| | PVS-2B-35N'-E5737B | PVS-11B-16N'-35N'-E13 | | |
| | PVS-2B-45N'-E5737B | PVS-11B-16N'-45N'-E13 | | |
| PVS-1B-22N'-E13 | PVS-12B-22N'-35N'-E13 | | | |
| PVS-1B-22N'-E13 | PVS-2B-35N'-E5737B | PVS-12B-22N'-45N'-E13 | PVMK-2-SAE-B-7/8" | |
| | PVS-2B-45N'-E5737B | PVS-12B-22N'-45N'-E13 | | |
| PVS-2B-35N'-E13 | PVS-2B-35N'-E5737B | PVS-22B-35N'-35N'-E13 | PVMK-2-SAE-B-7/8" | |
| | PVS-2B-45N'-E5737B | PVS-22B-35N'-45N'-E13 | | |
| PVS-2B-45N'-E20 | PVS-2B-45N'-E5737B | PVS-22B-45N'-45N'-E20 | PVMK-2-SAE-B-1" | |
| NASGP 1 Series | PVS-0B-8N'-E5737B | n/a | PVMK-1-SAE-A-3/4" | |
| | PVS-1B-16N'-E5737B | | | |
| | PVS-1B-22N'-E5737B | | PVMK-2-SAE-A-3/4" | |
| | PVS-2B-35N'-E5737B | | | |
| | PVS-2B-45N'-E5737B | | | |
| NASGP 300 Series | PVS-0B-8N'-E5737B | | PVMK-1-SAE-A-5/8" | |
| | PVS-1B-16N'-E5737B | | | |
| | PVS-1B-22N'-E5737B | | | PVMK-2-SAE-A-5/8" |
| | PVS-2B-35N'-E5737B | | | |
| | PVS-2B-45N'-E5737B | | | |

PVS-2B-45N3-K-E5737B

Kit number
PVMK-2-SAE-B-1
*includes all parts to fully assemble

Example:
PVS-22B-45N3-45N3-E20



NACHI
NACHI AMERICA INC.

877.622.4487
ml-nai.Hydraulics@Nachi.com
www.NachiAmerica.com

Nachi America Inc.
715 Pushville Road
Greenwood, IN 46143