

CLARK**Series PA 70-400 Brass Rotary Vane Pumps**

Flow to 140 GPH, Pressure to 200 PSI

DESCRIPTION

The PA series rotary vane pumps are available in 8 displacements to achieve the desired flow rate when close coupled to a motor and operated at the motor rpm. The pump housing is brass. The rotor is AISI 303 stainless steel, and the pump chamber and vanes are carbon graphite. A built-in strainer and relief valve are available on certain models. Shaft sealing is provided by a mechanical face seal.

The inlet and outlet ports are 3/8" NPT female threaded. The pump is optionally equipped with a built-in by-pass; a special balanced by-pass (able to maintain the set pressure for variations of the inlet pressure) is available upon request.

PA pumps are NSF listed pumps for potable water and are suitable for clean, non-hazardous fluids only.

**TYPICAL APPLICATIONS**

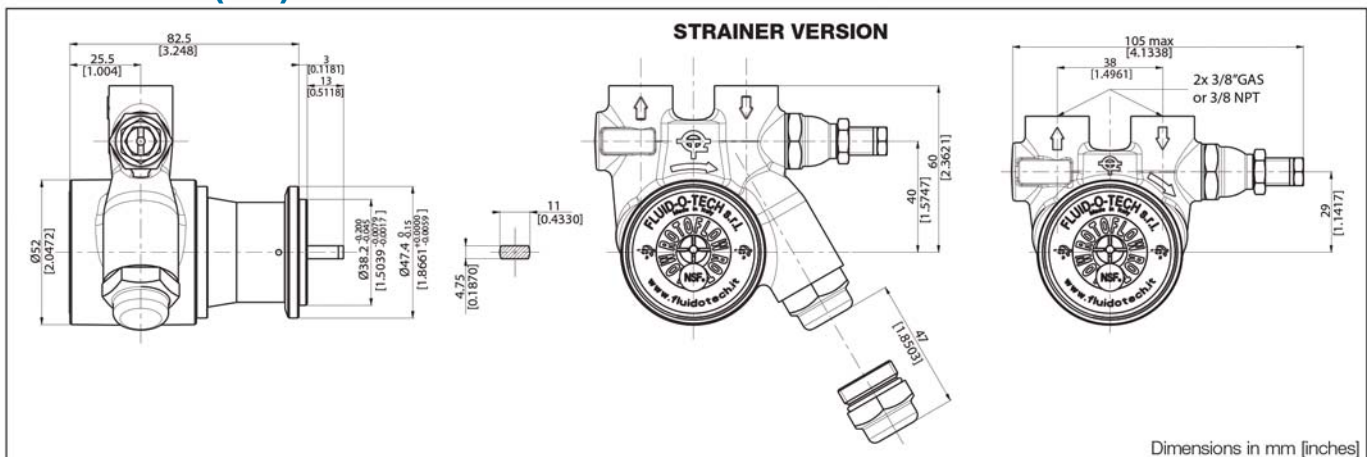
- Beverage vending machines
- Post-mix dispensers
- Soda circulation
- Reverse osmosis systems
- Cooling systems

SPECIFICATIONS

Pump Housing: Brass
 Pumping Chamber: Carbon Graphite
 Ports: 3/8" NPT
 Max Temperature : 70° C (158° F)
 Seals: NBR (Viton, EPDM upon request)
 Max Motor Speed : 1725 rpm
 Max Differential Pressure: 15.9 Bar (230 PSI)



Max System Pressure : 20 Bar (290 psi)
 Built-in Strainer: 100 mesh, see model table for availability
 Flange Mounting: Optionally available
 Pump Weight: w/o strainer- 1.1 kg (2.5 lb)
 w/strainer- 1.3 kg (2.9 lb)

DIMENSIONS (MM)

Relief valves are offered on select models of rotary vane pumps throughout the product line. Two types of relief valves are offered:

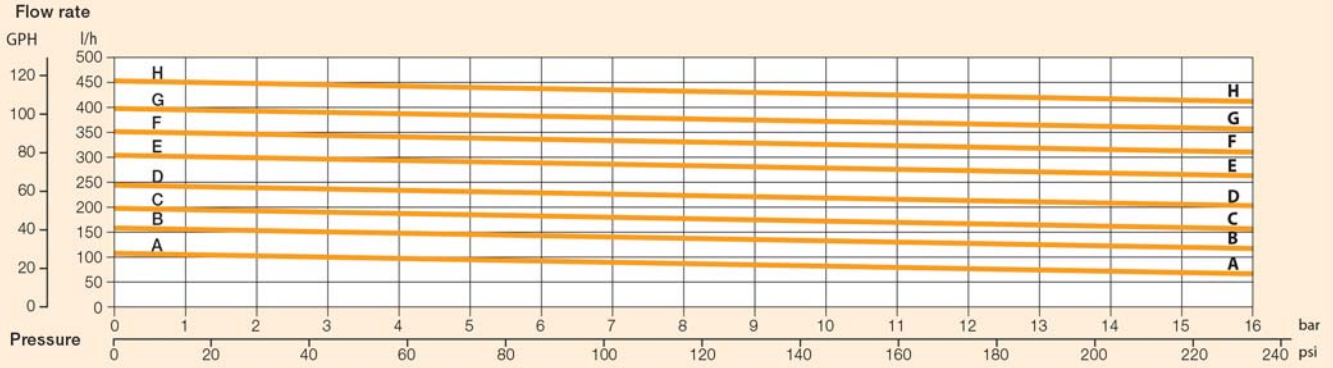
- 1) Standard Relief valve: A spring loaded bypass check valve diverts flow from the pump outlet to the pump inlet when outlet pressure exceeds setpoint (set with spring tensioning set screw).
- 2) Balanced relief valve: A pressure compensation plunger with dynamic seal and referenced (ported on one side) to atmosphere is added to the downstream side of the standard check-valve assembly. This insures that cracking pressure of the relief valve remains unchanged regardless of changes in inlet pressure (that might be a condition in a pressurized system).

The cracking pressure can be field set by adjusting the spring tension with the adjusting screw. If the cracking pressure is not customer specified it is factory preset at approximately 190 PSI for PA 70-400 series.

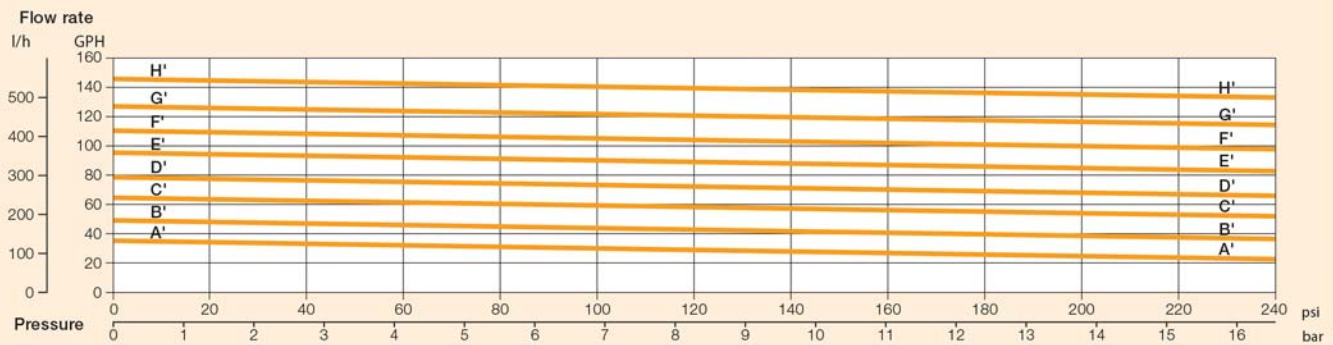
It is not recommended to use the relief/bypass valve for flow control. This will result in premature wear of the valve assembly and require frequent maintenance.

PUMP MODEL SELECTION/FLOW CURVES/NEMA 56C ADAPTER

1450 rpm (50 Hz - 4 Poles motor operation)



1725 rpm (60 Hz - 4 Poles motor operation)



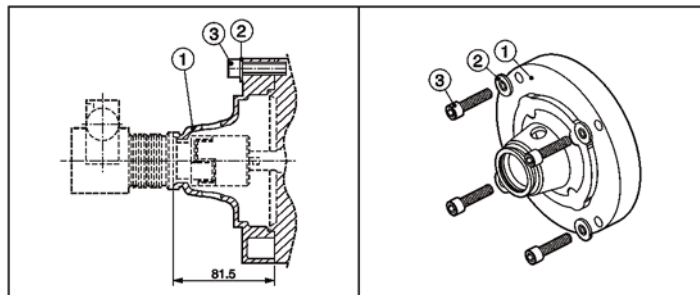
Note: Characteristics at constant motor speed, water at 20 °C (68 F) and bypass blocked.
For applications involving other fluids, high temperatures or unusual processing conditions, please consult the factory or an authorized Fluid-o-Tech distributor.

| Model | PA070 | PA071 | PA074 | PA071X | PA074X | PA100 | PA101 | PA104 | PA101X | PA104X | PA1500 | PA1501 | PA1504 | PA1601X | PA1504X | PA200 | PA201 | PA204 | PA201X | PA204X |
|--------------|-------|-------|-------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|---------|---------|-------|-------|-------|--------|--------|
| Flow Figure | A-A | | | | | B-B | | | | | C-C | | | | | D-D | | | | |
| Relief Valve | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL |
| Strainer | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES |

| Model | PA2500 | PA2501 | PA2504 | PA2501X | PA2504X | PA300 | PA301 | PA304 | PA301X | PA304X | PA3500 | PA3501 | PA3504 | PA3601X | PA3504X | PA400 | PA401 | PA404 | PA401X | PA404X |
|--------------|--------|--------|--------|---------|---------|-------|-------|-------|--------|--------|--------|--------|--------|---------|---------|-------|-------|-------|--------|--------|
| Flow Figure | E-E | | | | | F-F | | | | | G-G | | | | | H-H | | | | |
| Relief Valve | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL | NO | STD | BAL | STD | BAL |
| Strainer | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES | NO | NO | NO | YES | YES |

Model 92-80-03 NEMA 56C Adapter

| # | Description |
|---|-----------------------|
| 1 | NEMA 56C Adapter |
| 2 | 10 mm Washer |
| 3 | Screw 1 3/8-16x38 UNC |



Model 91-81-11 NEMA 56C Coupling

| # | Description |
|---|----------------------|
| 1 | Coupling w/5/8" Bore |
| 2 | M6 x 8 Set Screw |
| 3 | Spider |
| 4 | Coupling, Flat Side |

