

# PVR1 SERIES VANE PUMPS

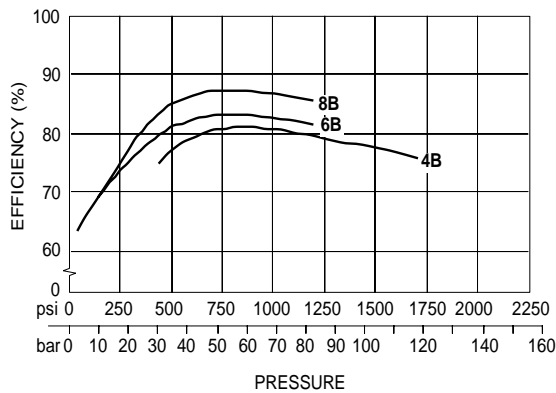
VARIABLE DISPLACEMENT PRESSURE COMPENSATED



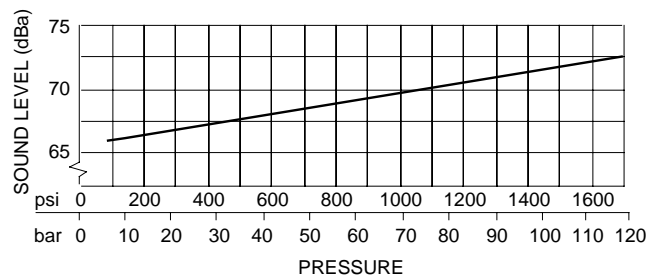
Manifold Mounted

## OVERALL EFFICIENCY

1750 rpm at Full Displacement



## TYPICAL SOUND LEVEL @ 1750 rpm



## TYPICAL PERFORMANCE SPECIFICATIONS

|   |              | PUMP SIZE            |      |       |      |     |
|---|--------------|----------------------|------|-------|------|-----|
|   |              | 4B                   | 6B   | 8B    |      |     |
| VOLUMETRIC DISPLACEMENT*                        | cu. in./rev. | 0.7                  | 0.9  | 1.2   |      |     |
|   | ml/rev.      | 11.5                 | 14.8 | 19.7  |      |     |
| PUMP DELIVERY AT 1750 RPM*                      | 91.5 psi     | gpm                  | 5    | 7     | 9.5  |     |
|   | 6.3 bar      | lpm                  | 19   | 26.5  | 36   |     |
|   | rated        | gpm                  | 4    | 6     | 8    |     |
|   | pressure     | lpm                  | 15.1 | 22.8  | 30.5 |     |
| COMPENSATED PRESSURE RANGES                     | Max.         | psi                  | 1500 | 1000  | 1000 |     |
|   |              | bar                  | 103  | 69    | 69   |     |
|   | Rated        | psi                  | 1500 | 1000  | 1000 |     |
|   |              | bar                  | 103  | 69    | 69   |     |
|   | Min.         | psi                  | 400  | 100   | 100  |     |
|   |              | bar                  | 28   | 7     | 7    |     |
| OPERATING SPEEDS**                              | Min. rpm     | 800                  |      |       |      |     |
|   | Rated rpm    | 1750                 |      |       |      |     |
|   | Max. rpm     | 3600                 |      |       |      |     |
| POWER INPUT AT RATED (1750 rpm) FLOW & PRESSURE | hp           | 5                    | 5    | 6     |      |     |
|   | kW           | 3.7                  | 3.7  | 4.4   |      |     |
| SUCTION   | Max.         | psi                  | 10   |       |      |     |
|   |              | bar                  | 0.7  |       |      |     |
|   | Min.         | in./Hg               | 7    |       |      |     |
|   |              | Specific Gravity < 1 | bar  | -0.25 |      |     |
|   | Min.         | in./Hg               | 5    |       |      |     |
|   |              | Specific Gravity > 1 | bar  | -0.17 |      |     |
| FLUID VELOCITY                                  | Max.         | ft./sec.             | 5    |       |      |     |
|   |              | m/sec.               | 1.5  |       |      |     |
| CASE CRAN                                       | Max.         | NOMINAL FLOW         | cipm | 65    | 36   | 55  |
|   |              | Pressure             | mlpm | 1065  | 600  | 900 |
|   | Min.         | NOMINAL FLOW         | cipm | 25    | 10   | 24  |
|   |              | Pressure             | mlpm | 410   | 170  | 390 |
| MAXIMUM CASE PRESSURE                           | psi          | 10                   |      |       |      |     |
|   | bar          | 0.7                  |      |       |      |     |
| WEIGHT  | lbs.         | 20                   |      |       |      |     |
|   | kg           | 9                    |      |       |      |     |

### NOTES:

\* Volumetric displacement is measured displacement at 91.5 psi (6.3 bar) and rated rpm. Volumetric displacement varies with both pressure and rpm. Flow rates at any rpm other than the rated rpm may be approximated as follows:

$$Q_2 = Q_1 (N-142)/1667 \text{ where } Q_1 = \text{Flow (gpm) at rated rpm at 91.5 psi (6.3 bar).}$$

$$Q_2 = \text{Flow (gpm) at N rpm.}$$

$$N = \text{rpm at which } Q_2 \text{ is to be determined.}$$

\*\* **6B** - Maximum rpm at full displacement - 2800 rpm. For higher rpms up to 3600 rpm, pump displacement must be reduced to limit flow to 9.5 gpm (36 lpm) maximum.

\*\* **8B** - Maximum rpm at full displacement - 2100 rpm. For higher rpms up to 3600 rpm, pump displacement must be reduced to limit flow to 9.5 gpm (36 lpm) maximum.

## PRESSURE and VOLUME ADJUSTMENT SENSITIVITY

|                     |                   | PUMP SIZE       |            |            | 6B         |            |            | 8B         |            |            |    |
|---------------------|-------------------|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|----|
|                     |                   | PRESSURE CODE   |            | 10         | 15         | 03         | 06         | 10         | 03         | 06         | 10 |
| PRESSURE ADJUSTMENT | Press Change/Turn | psi (bar)       | 255 (17.8) | 270 (18.6) | 115 (7.9)  | 210 (14.5) | 240 (16.5) | 115 (7.9)  | 210 (14.5) | 240 (16.6) |    |
|                     | Max. Torque       | ft./lbs. (kg/m) | 4.0 (0.55) | 6.0 (0.83) | 1.4 (0.19) | 2.6 (0.36) | 4.0 (0.55) | 1.4 (0.19) | 2.6 (0.36) | 4.0 (0.55) |    |
| VOLUME ADJUSTMENT   | Flow Change/Turn  | gpm (lpm)       | 3.4 (12.5) |            |            | 4.6 (17.4) |            |            | 4.6 (17.4) |            |    |
|                     | Min. Flow Adjust. | gpm (lpm)       | 1.25 (4.7) |            |            | 1.25 (4.7) |            |            | 1.25 (4.7) |            |    |
|                     | Max. Torque       | ft./lbs. (kg/m) | 2.5 (0.34) |            |            | 1.0 (0.14) |            |            | 1.0 (0.14) |            |    |

CAUTION: Turning the Maximum Volume Control in too far can force the cam ring over-center, causing damage.



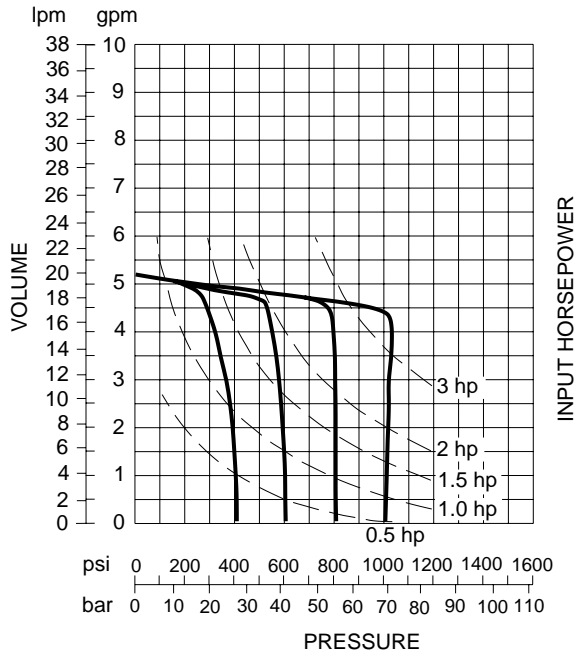
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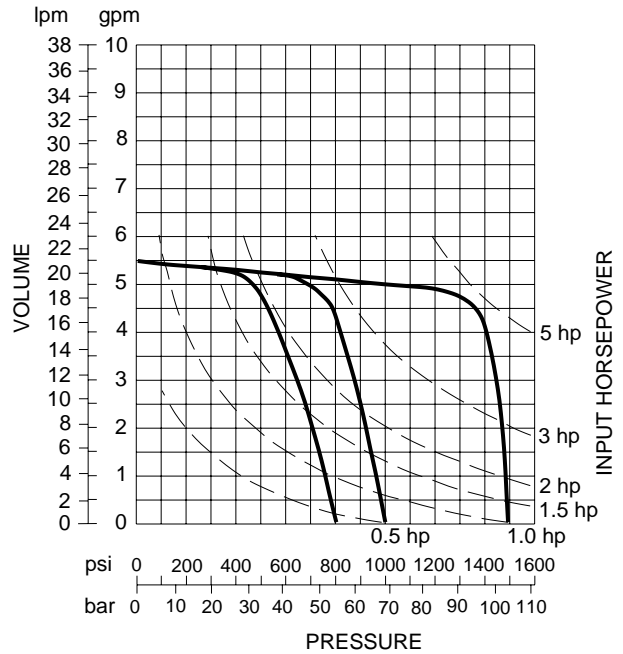
**NOTE:** Typical performance curves are based on ISO VG46 oil at 120° F. (49° C.). Above 400 SUS (84 CS), add 2% hp/100 SUS.

**NOTE:** Deadhead horsepower is read from curves at 0 gpm flow and pressure compensator setting psi.

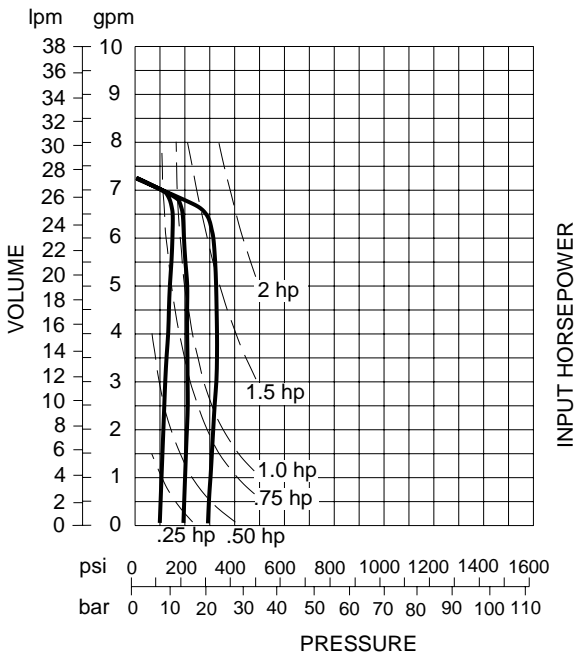
**4B10 (at 1750 rpm)**



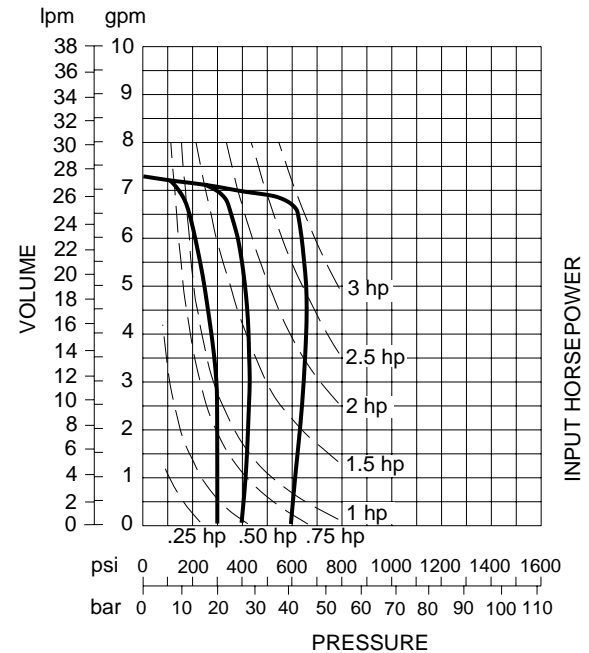
**4B15 (at 1750 rpm)**



**6B03 (at 1750 rpm)**



**6B06 (at 1750 rpm)**



# PVR1 SERIES VANE PUMPS

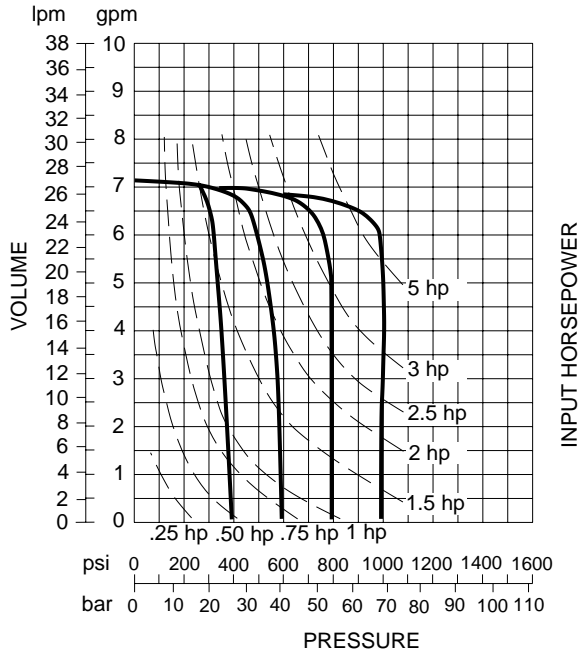
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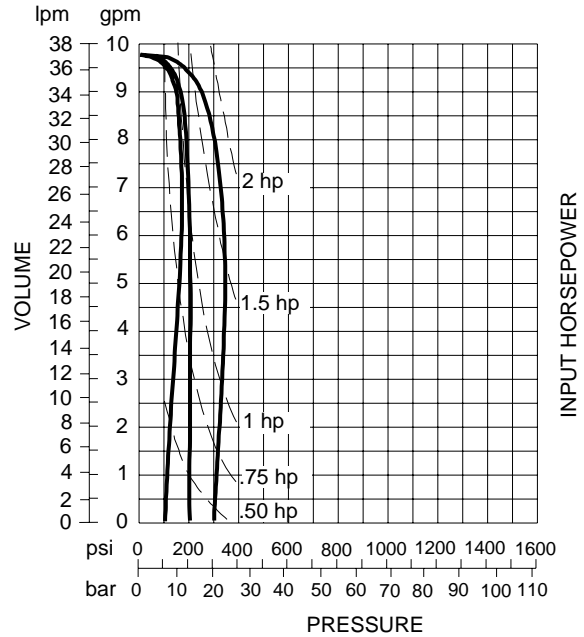
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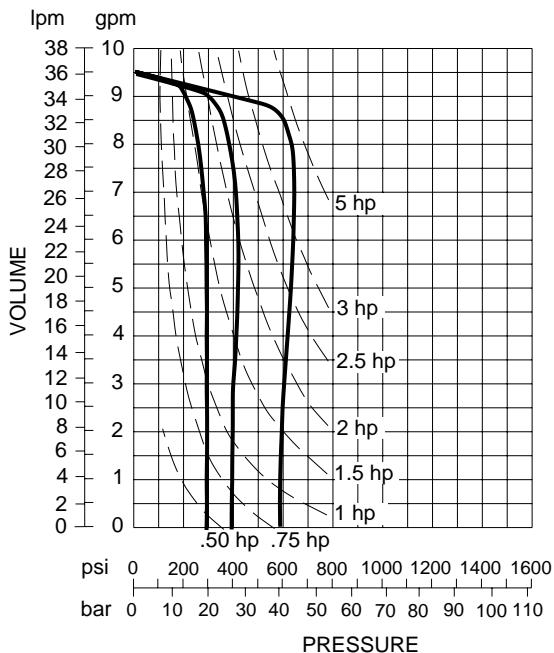
**6B10 (at 1750 rpm)**



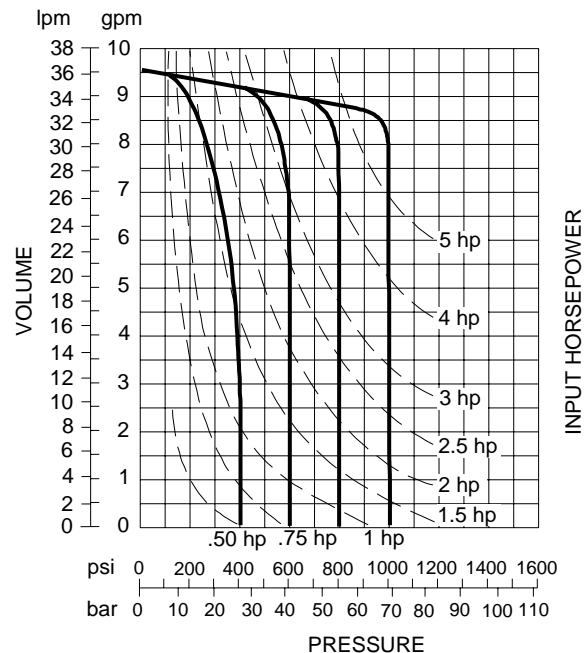
**8B03 (at 1750 rpm)**



**8B06 (at 1750 rpm)**



**8B10 (at 1750 rpm)**



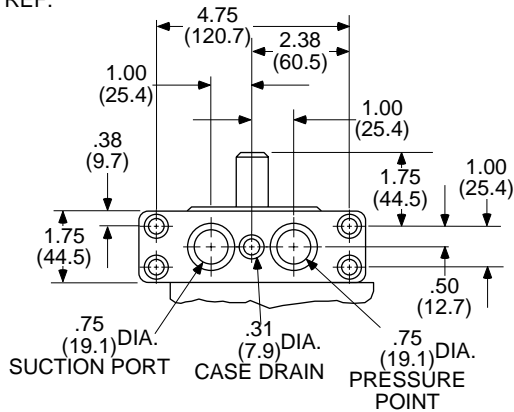
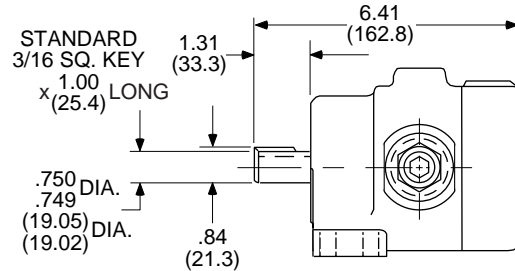
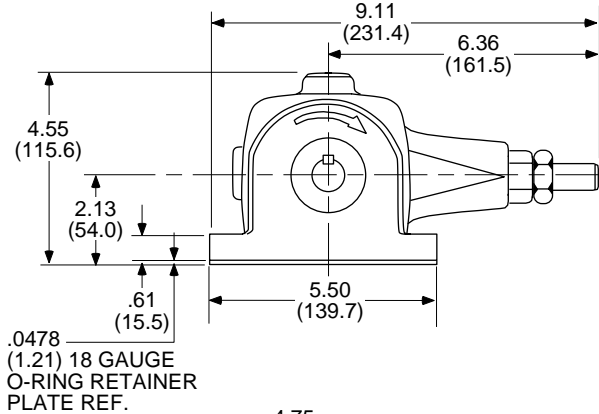


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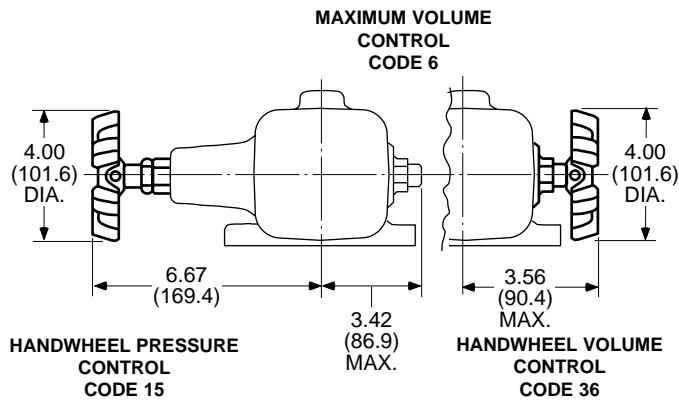
VARIABLE DISPLACEMENT PRESSURE COMPENSATED

## PUMP DIMENSIONS

Dimensions shown in: Inches  
(millimeters)

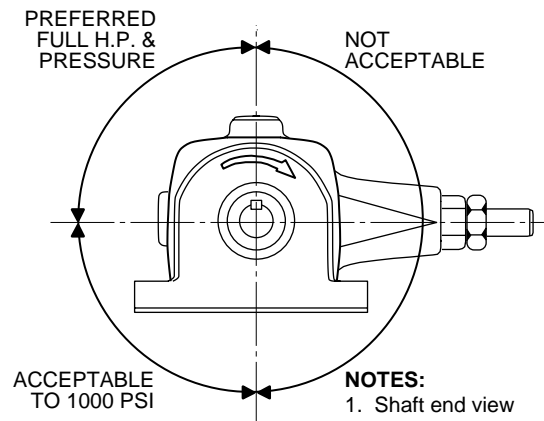


## MECHANICAL OPTIONS



## SIDE LOAD DRIVES

i.e. Belt, Chain, Gear



- NOTES:**
1. Shaft end view
  2. 1750 rpm rated
  3. Capable of full pump horsepower (load to radiate out from shaft)

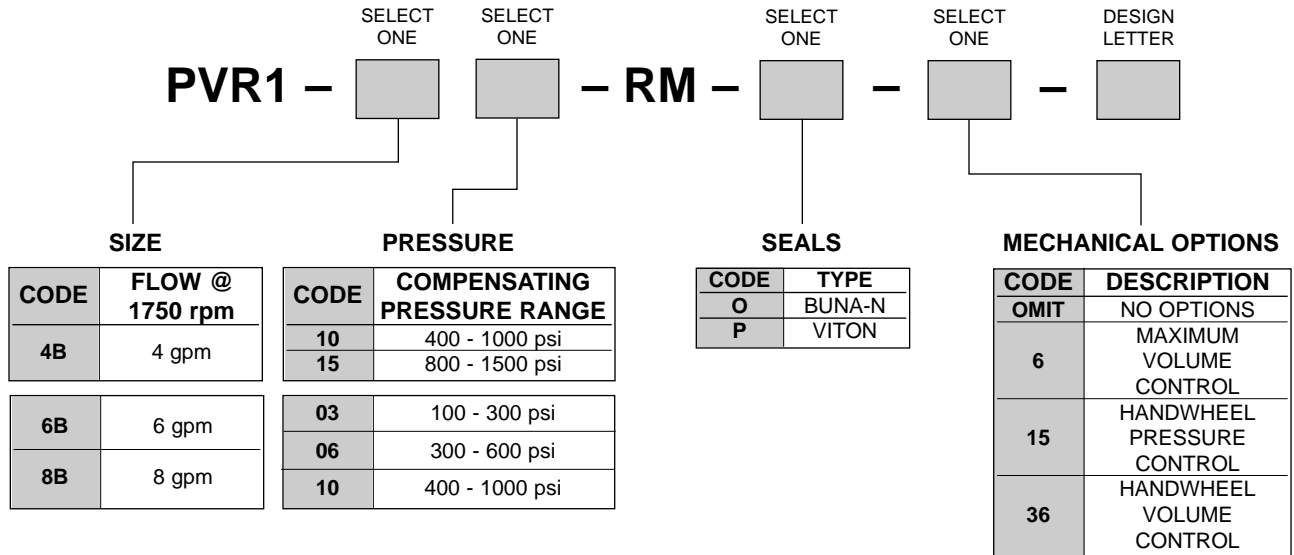
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VARIABLE DISPLACEMENT PRESSURE COMPENSATED



## ORDERING INFORMATION

Right Hand (CW) Rotation



TYPICAL ORDERING CODE:  
**PVR1-6B10-RM-0-1-I**

**For more information please contact:**



**2 Swallow Drive, Alsager, Stoke on Trent, Staffs, ST7 2GJ**

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