# High Speed High Torque Vane Motor 45HM, 46HM Series

## Features and Handling

High speed and high-pressure motors ranging from 29.0 to 193.2 cm3/r with 172 bar of maximum pressure and 10 torques rating choices. The internal inlet chambers are equally and diametrically opposed resulting in balanced in radial loads.

Thus, the motors are hydraulically balanced which reduced wear and heat from friction.

These motors provide 90% efficiency due to dual pressure plates, which produced low internal leakage. Motors are bi-rotational, simply reversed by reversing in flow direction.



## Specification

| Model | Torque Nm/6, 9 bar (lb in/ 100 psi) | Displacement $cm^3/r$ ($in^3/r$) | Flow input / required @1200 r/min L/min (USgpm) | Maximum speeds & Pressure | Max. Torque Nm (lb.in.) @ Max. Pressure | Approx Weight kg (lb) |
|---|---|---|---|---|---|---|
| 45HM & 46HM | 14.7 (130) | 138.0 (8.42) | 165.4 (43.7) | 4000 r/min @ 34 bar (500 psi)<br>3000 r/min @ 172 bar (2500 psi) | 361.6 (3200) | 41.6 (91.5) |
| | 17.5 (155) | 163.2 (9.96) | 195.7 (51.7) | | 429.4 (3800) | |
| | 20.9 (185) | 193.2 (11.79) | 232.0 (61.3) | | 502.9 (4450) | |

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## Ordering Code

| 45 | HM | 155 | - | A | - | 1 | C | 20 |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | | 4 | | 5 | 6 | 7 |

1. Model
   - 45 -Standard bearing
   - 46 -Heavy duty bearing
   - SAE C 2 bolts mounting flange J744

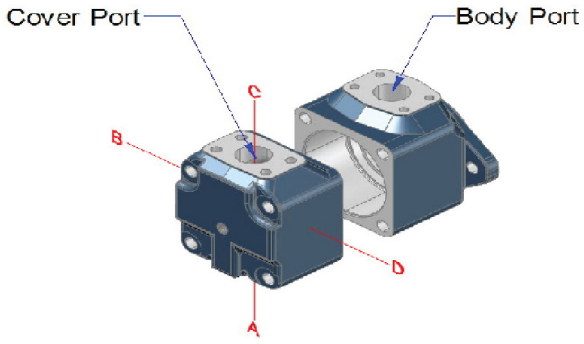
2. Series
   - HM - Vane Type Motor (Externally drained)

3. Ring size-Nominal torque Rating (lb.in./100psi)
   - 130
   - 155
   - 185

4. Mounting Flange and Port Connections
   - A - SAE type 2 - bolt mounting Flange and
     SAE 4 - bolt flange connections

5. Shaft
   - 1 - Straight keyed shaft
   - 11 - Splined shaft

6. Cover Port positions (View from cover end)
   - A - Opposite body port
   - B - 90° CCW from body port
   - C - Inline with body port
   - D - 90° CW from body port

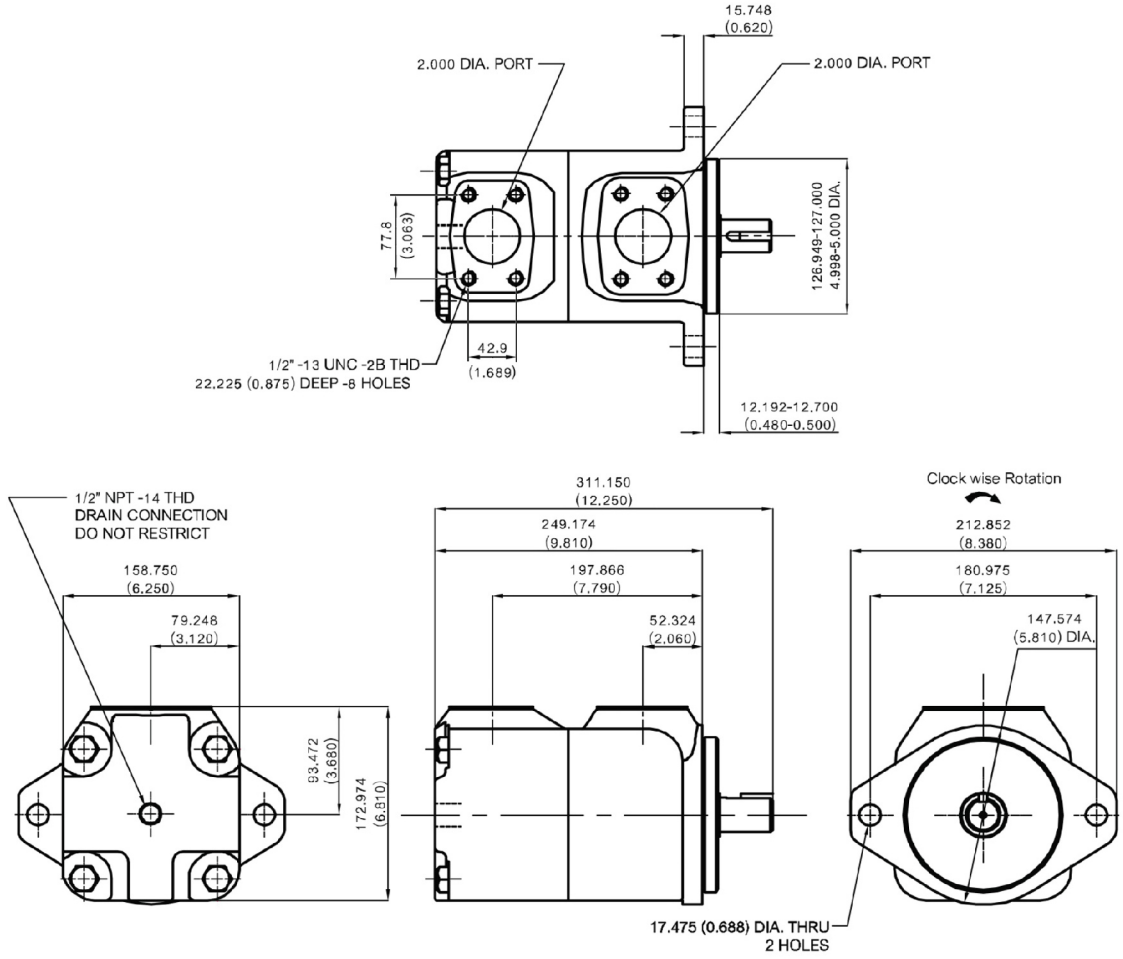



7. Design
   - Subject to change. Installation dimensions remain the same for designs - 20 through -29

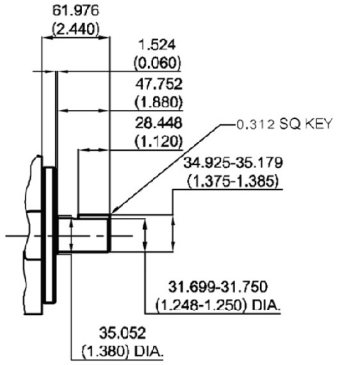
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## Installation Dimension mm (inch)

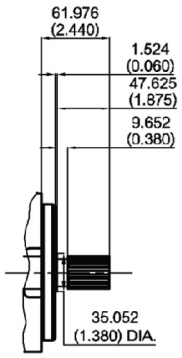
### 45HM & 46HM




**45M Series**
**No.1 Straight-keyed Shaft**




**45M Series**
**No.11 SAE Involute Spline Shaft**



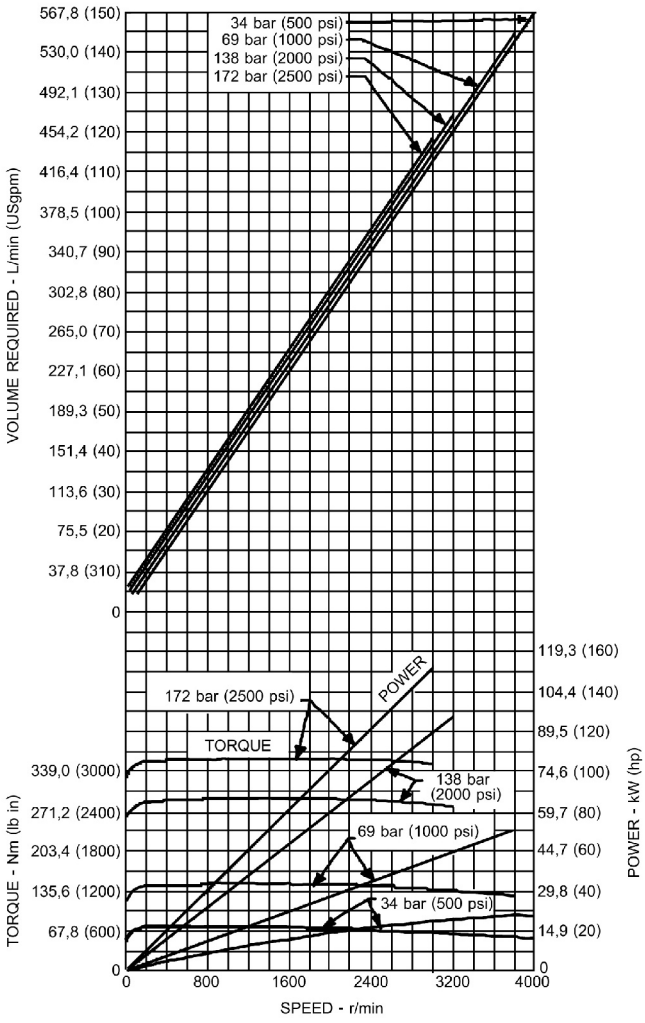

12/24" DIAMETRAL PITCH
14 TEETH 30° PRESSURE ANGLE
27.487 (1.0822) T.I.F. DIA
29.634 (1.1667) PITCH DIA
31.673-31.699 (1.247-1.248) MAJOR DIA.
26.662-26.992 (1.0497-1.0627) MINOR DIA.
CIR TOOTH THICKNESS:
MAX EFFECTIVE.....3.286 (0.1294)
MIN EFFECTIVE.....3.256 (0.1282)
MAX ACTUAL.....3.243 (0.1277)
MIN ACTUAL.....3.213 (0.1265)

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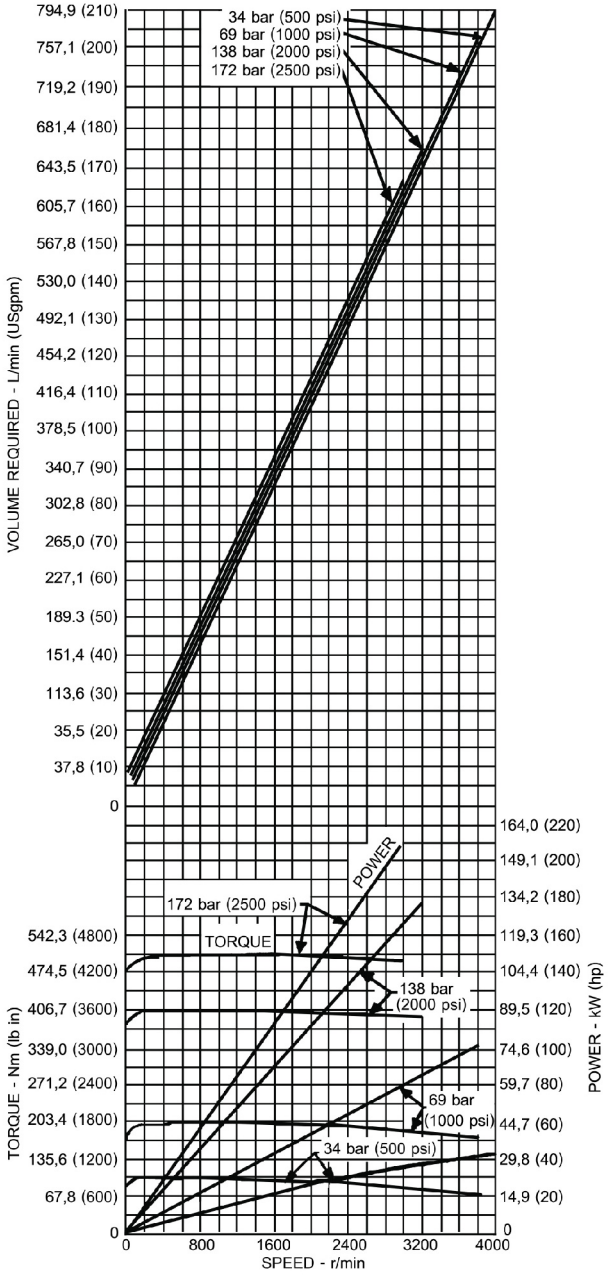
## Performance Characteristics

### 45HM & 46HM

130 LB.IN.RING SIZE




155 LB.IN.RING SIZE



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