



MOTOR SELECTION GUIDE

- Two fixed displacement motors 48 in³ and 55.5 in³.
- 4-Port double motors from 96 in³ to 111 in³ allowing two-speed operation with external valving.
- Starting and stall torques equal to 90-94% of theoretical torque.
- Speed to 500 RPM continuous.
- Up to 190 HP continuous.
- Modified SAE 'D' mounting specification.
- Weighs 123 lbs.



Front View Dimensions:

- Total Width: 9.28
- Flange Thickness: .75
- Shaft Diameter: 2.50 EFF. KEY
- Overall Height: 8.63
- Bolt Circle Diameter: 8.13
- Internal Bore Diameter: 6.000 / 5.998
- Keyway Depth: 2.250 / 2.248
- O-Ring Groove Width: 1.50
- Flange Inner Diameter: 8.03
- Flange Outer Diameter: 4.76

Top View Dimensions:

- Outer Square Dimension: 4.81
- Inner Circular Feature: 1.972 / 1.968
- Central Hole Diameter: 6.36
- Mounting Hole Spacing: 7.91
- Mounting Hole Diameter: .812 DIA. (4) HOLES
- Internal Features: .500 / .502

Shaft View Dimensions:

- Effective Length: 2.50 EFFECTIVE LENGTH
- Optional Splined Shaft: OPTIONAL SPLINED SHAFT
- SAE-Flat Root Side Fit: SAE-FLAT ROOT SIDE FIT 16T, 8/16 DP, 30° INVOLUTE SPLINE

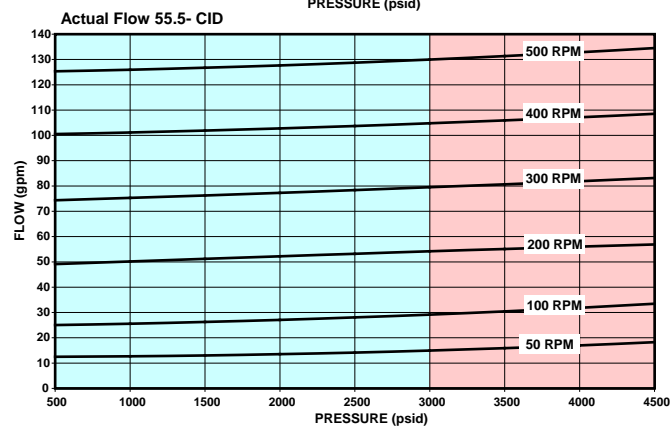
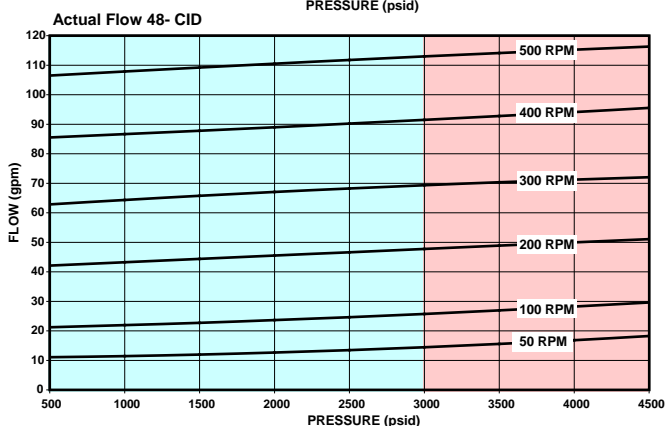
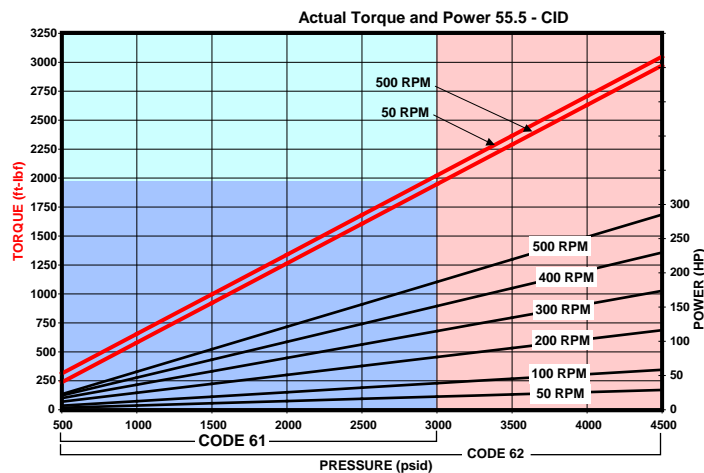
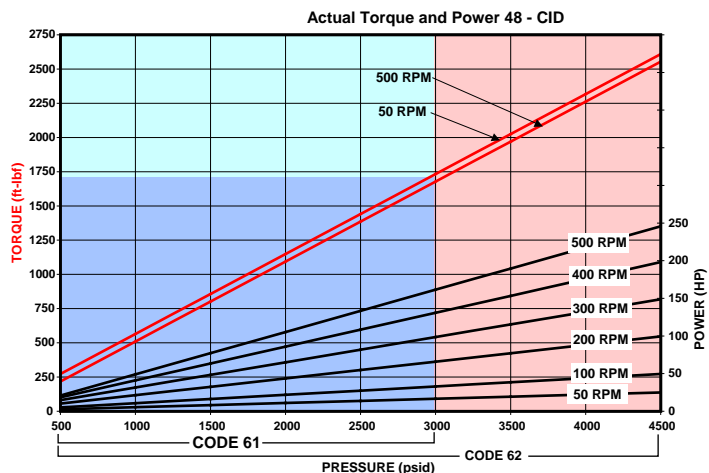
Annotations:

- STD. 1/2" O-RING BOSS CASE DRAIN (2) PLACES
- STD. 4-BOLT FLANGE CODE 61 1-1/2" DIA. PORT (2) PLACES (OPTIONAL 1-1/2" (-24) O-RING BOSS PORT)

Performance Data

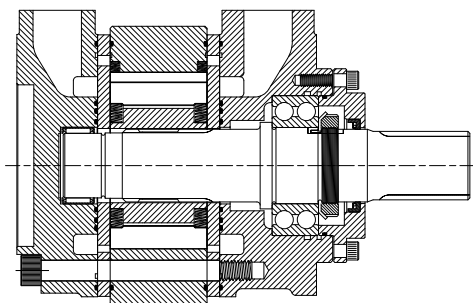
Performance data obtained at 140°F with ISO 46 (DTE 25). Code 61 and 62 data shown. Code 62 extended data applies only to Code 62 High Pressure Series motor.

VANE CROSSING VANE - With it's vane crossing vane design, the Rineer motor produces much higher volumetric and mechanical efficiencies than is possible with a standard vane type design. This design provides a sealing vane between stator cavities to improve mechanical and volumetric efficiencies.



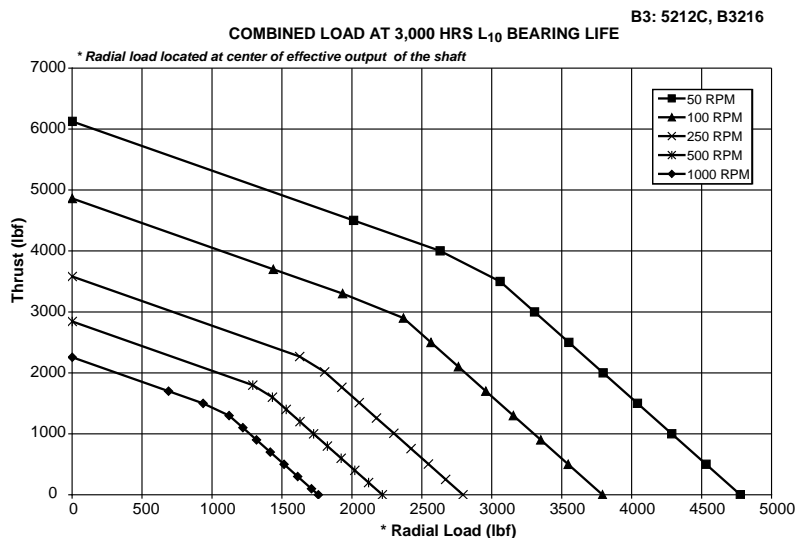
Performance of the Rineer 57 Series Motor has been greatly enhanced by internal design changes resulting in a pressure balanced rotating group. Benefits of this new design include reduced cross port leakage and increased efficiency as well as greater reliability at higher pressures. This patented design has been in effect for over 5 years.

Bearing Data - Standard Motor



BEARING LOADING - The bearings in the 57 Series can accept radial load per the radial capacity charts to the right. Thrust loading is permissible up to the amount shown in the chart for the standard motor. For heavier thrust-type applications, see the thrust capable motor bearing chart on the opposite page.

HORSEPOWER LIMITATION - Maximum horsepower limitation may vary with different applications. When using the 57 Series standard motor above 190HP, consult a Rineer Application Engineer.



Envelope - Double Stacked

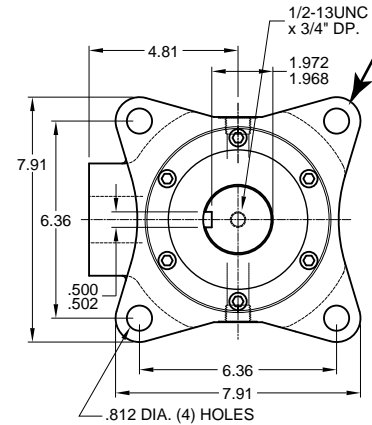
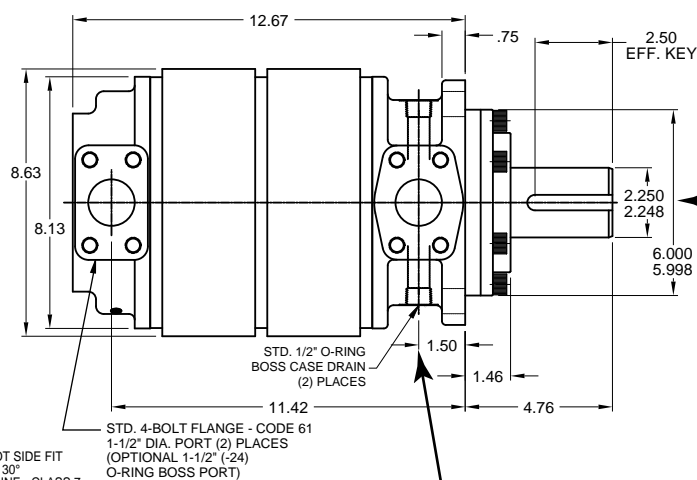
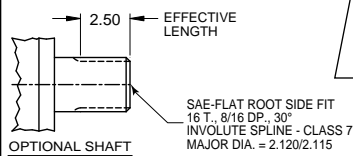
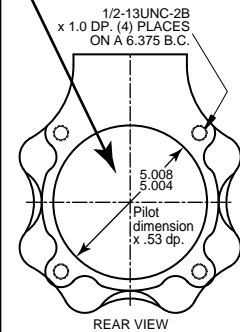
STARTING AND STALL TORQUE

The Rineer motor produces torque curves which are virtually flat, with starting and stall torque equal to approximately 90-94% of theoretical torque.

MORE POWER STROKES PER REVOLUTION

The 57 Series has four stator cavities and 10 rotor vanes. Each rotor vane works in each stator cavity once per revolution, which results in 40 power strokes per revolution. This helps produce higher mechanical efficiency and flatter torque curves.

SEALS - Viton shaft seals are supplied standard. Buna N static seals are supplied standard. Viton static seals may be ordered as an option.



ROTATION - The 37 Series motor rotates equally well in either direction and smoothly throughout its entire pressure and speed range. Looking into the end of the shaft, rotation is clockwise when oil is supplied to the port nearest the shaft.

FLUID - We suggest premium grade fluids containing high quality rust, oxidation and foam inhibitors, along with anti-wear additives. For best performance, minimum viscosity should be maintained at 100 SSU or higher. Fluid temperature should not exceed 180°F. Elevated fluid temperature will adversely affect seal life while accelerating oxidation and fluid breakdown. Fire resistant fluids may be used with certain limitations. Contact Rineer for additional information.

FILTRATION - 25 micron minimum.

CASE DRAIN AND CROSS PORT LEAKAGE

The combined case drain and cross port leakage of the 57 Series motor is approximately 1 GPM per 1,000 PSI. This will vary with the oil viscosity and internal clearance selection.

SAE 'D' MOUNTING - The 57 Series mounting configuration is a modified SAE 'D' 4-bolt specification, having a larger 2-1/4" keyed or splined shaft. The mounting position is unrestricted. The shafts, pilots, and mounting faces should be within .002 TIR.

CASE DRAIN - The 57 Series motor requires an external case drain. Two case drain ports are supplied; use the port at the highest elevation. We recommend case pressure of less than 35 PSI.

CASE DRAIN CIRCULATION - Fluid should be circulated through the two case drain ports when a temperature differential exists between the motor and the system in excess of 50°F. **Should this occur, contact a Rineer Application Engineer.**

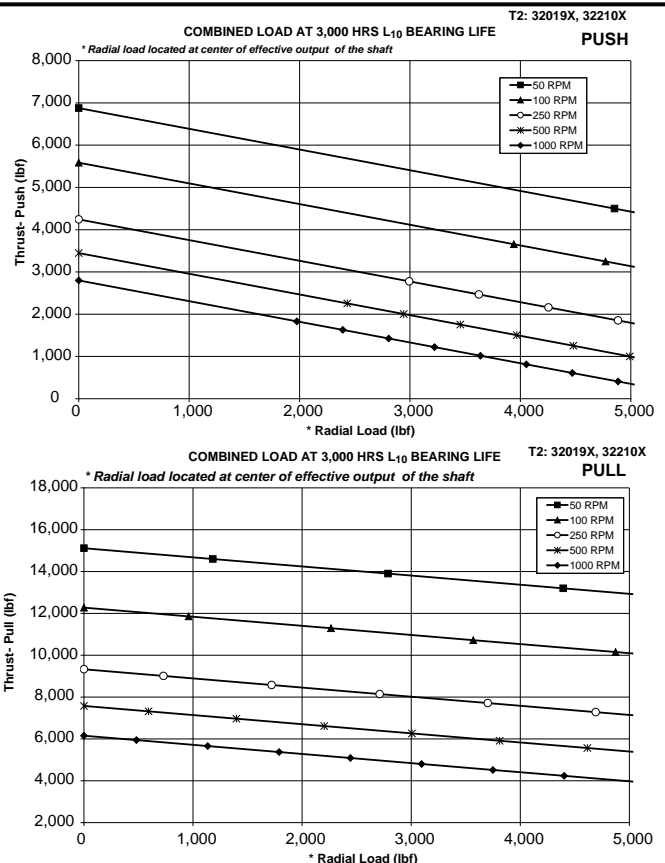
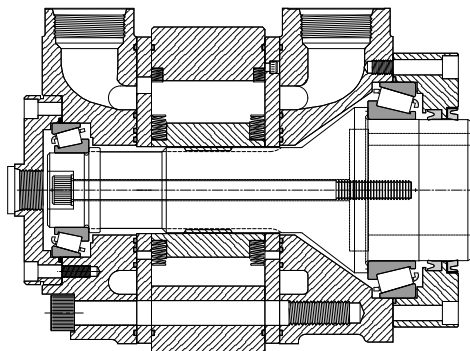
Bearing Data - Thrust Capable

BEARING LOADING THRUST CAPABLE -

The bearings in the 57 Series Thrust capable motor can accept thrust and radial load per the push/pull capacity charts to the right. Thrust loading is allowed up to the parameters indicated on the charts with shaft configurations including standard keyed and splined as well as the female shaft type shown below. For applications not requiring thrust, see the standard motor bearing charts on the opposite page.

HORSEPOWER LIMITATION -

Maximum horsepower limitation may vary with different applications. When using the 57 Series standard motor above 190HP, consult a Rineer Application Engineer.



Model Code

M057 - A2 / A4

M057 = Motor Series

Port Options:

A2 = Std. 2 port w/
4-Bolt Flange ports
A4 = 4-Port model w/
4-Bolt Flange ports
C2 = Std. 2 port w/
O-Ring Boss ports
C4 = 4-Port model w/
O-Ring Boss ports

Rotary Group Designation

1S = Code 61 - Standard
1L = Code 61 Low Speed

-1S

-048

-31

-B1

-TBB

-000

Special Code Designator

Seal - Package Selection

Bearing Package Selection

Displacement Options

SINGLE STACK

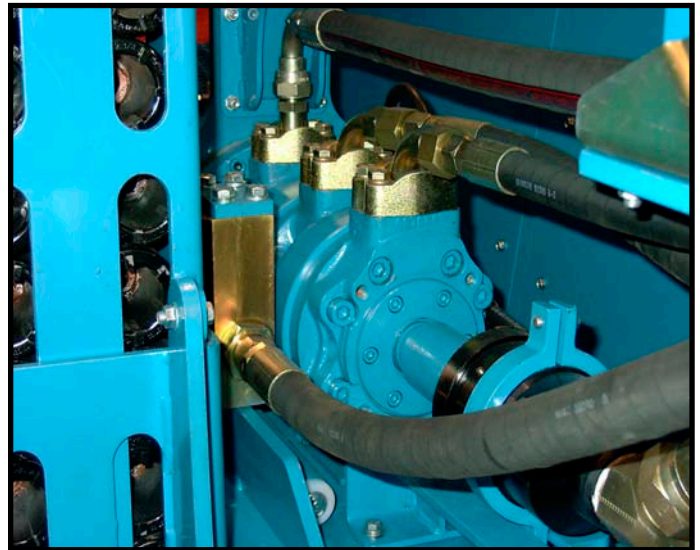
$$048 = 48 \text{ in}^3 (787\text{cc})/\text{rev.}$$
$$055 = 55.5 \text{ in}^3 (910\text{cc})/\text{rev.}$$

DOUBLE STK./4-PORT

$$0.96 = 96 \text{ in}^3 (1573\text{cc})/\text{rev.}$$
$$104 = 104 \text{ in}^3 (1705\text{cc})/\text{rev.}$$
$$111 = 111 \text{ in}^3 (1819\text{cc})/\text{rev.}$$

30 = Keyed Shaft
31 = Splined Shaft
34 = Double Key
35 = Female Key
36 = Female Spline
40 = Double Spline
41 = Tapered Thrust
42 = Keyed w/Opt
43 = Splined w/Opt
44 = Tapered w/Opt
52 = Smooth Shaft
53 = API Thread

Applications



For durable hydraulic motors that meet your demands, specify Rineer.

For over 35 years, we have specialized in only one thing - engineering the right motor for your needs. Rineer delivers the performance you can count on.

www.rineer.com

Limited Warranty Policy

Rineer Hydraulics, Inc. warrants that, at the time of shipment to Purchaser, our product will be free of defects in the material and workmanship. The above warranty is LIMITED to defective products returned by Purchaser to Rineer Hydraulics, Inc., freight prepaid within four hundred and fifty-five (455) days from date of shipment, or one (1) year from date of first use, whichever expires first. We will repair or replace any product or part thereof which is proved to be defective in workmanship or material. There is no other warranty, expressed or implied, and in no event shall Rineer Hydraulics, Inc. be liable for consequential or special damages. Dismantling the product, operation of the product beyond the published capabilities or for purposes other than that for which the product was designed, shall void this warranty.



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