



37 Series

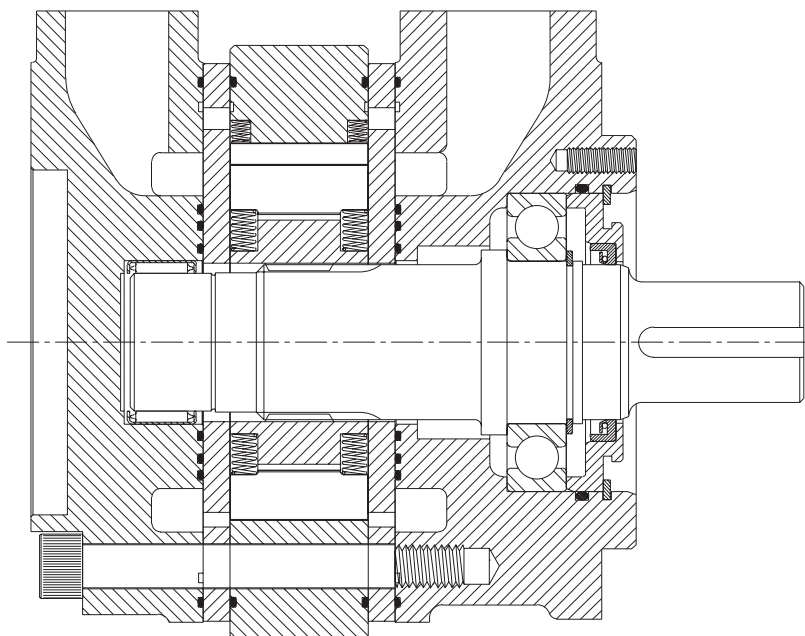
STANDARD MOTOR

Features of the Rineer 37 Series Motors:

- Six fixed displacement motors ranging from 12 in³ to 37 in³.
- Starting and stall torques equal to 90-94% theoretical torque.
- Speed to 1,000 RPM continuous.
- Up to 175 HP continuous.
- Conforms to SAE 'D' specifications.
- Weighs 106 lbs.



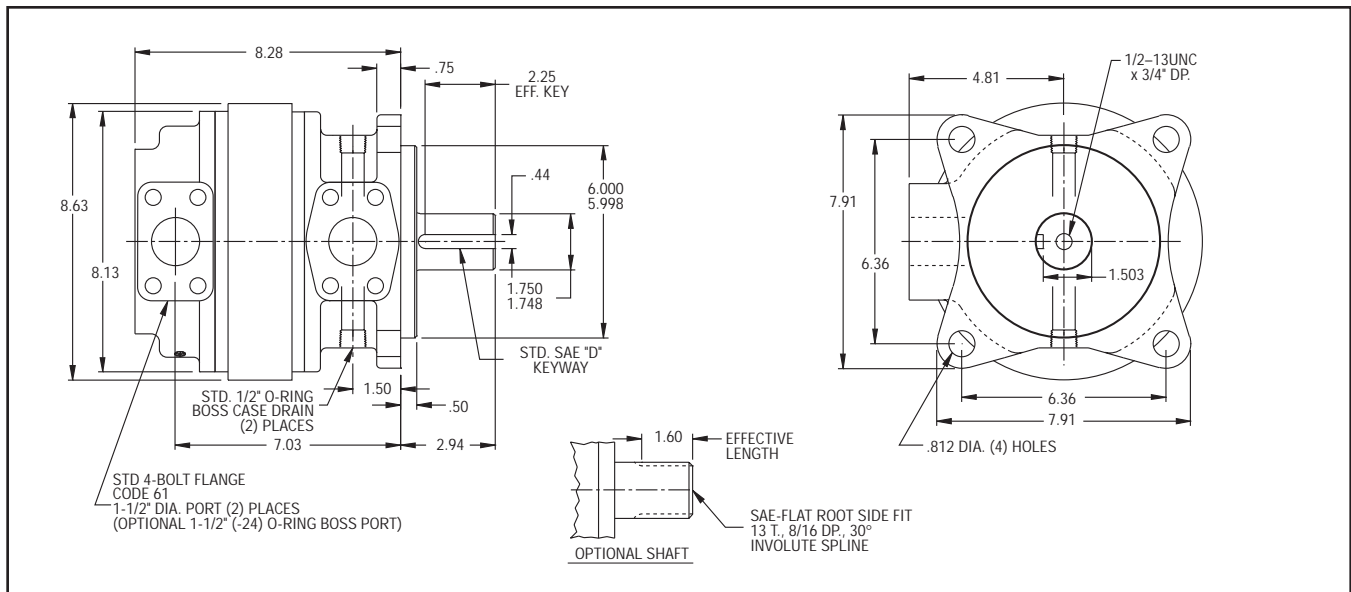
CROSS SECTION



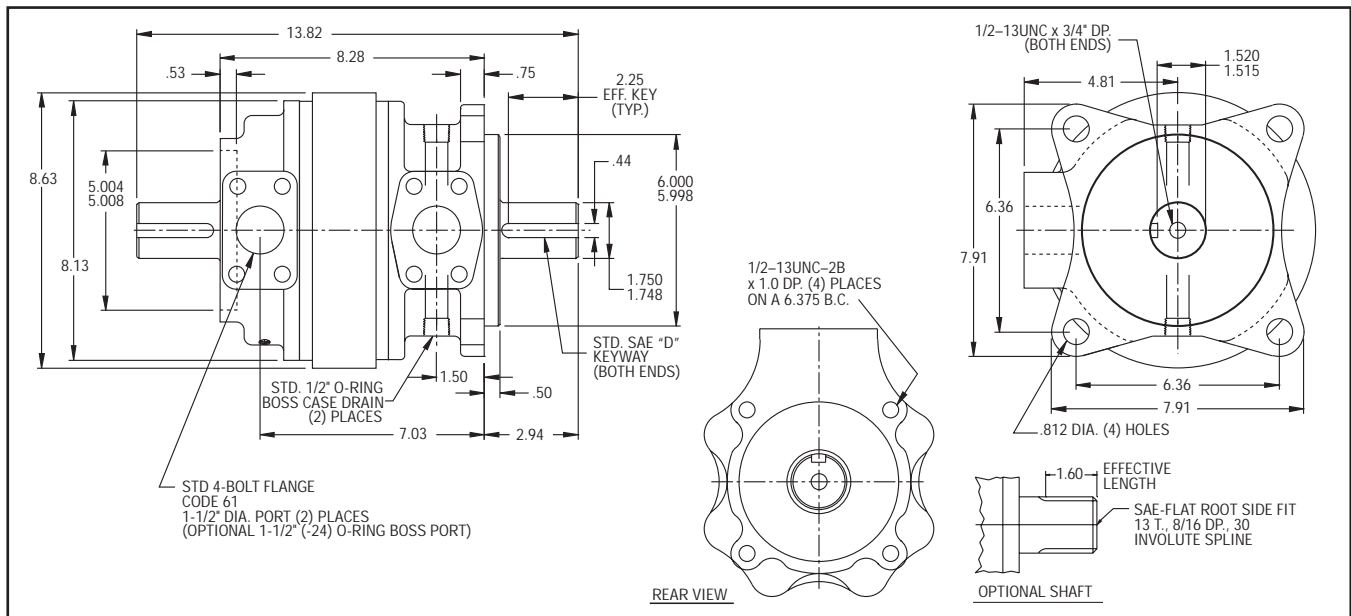
Performance Data

Model:	GA12	GA16	GA20	GA26	GA32	GA37
Displacement (cu.in./rev.)	12	16	20	26	32	37
Pressure (PSI)						
Max. Continuous	3000	3000	3000	3000	3000	3000
Max. Intermittent	3500	3500	3500	3500	3500	3500
Speed (RPM)						
Max. Continuous	1000	1000	1000	800	700	600
Max. Intermittent	1200	1200	1200	1000	950	800
Torque (ft. lbs.)						
At 3000 PSI	424	580	733	964	1196	1383
Per 100 PSI	14.1	19.3	24.4	32.1	39.9	46.1

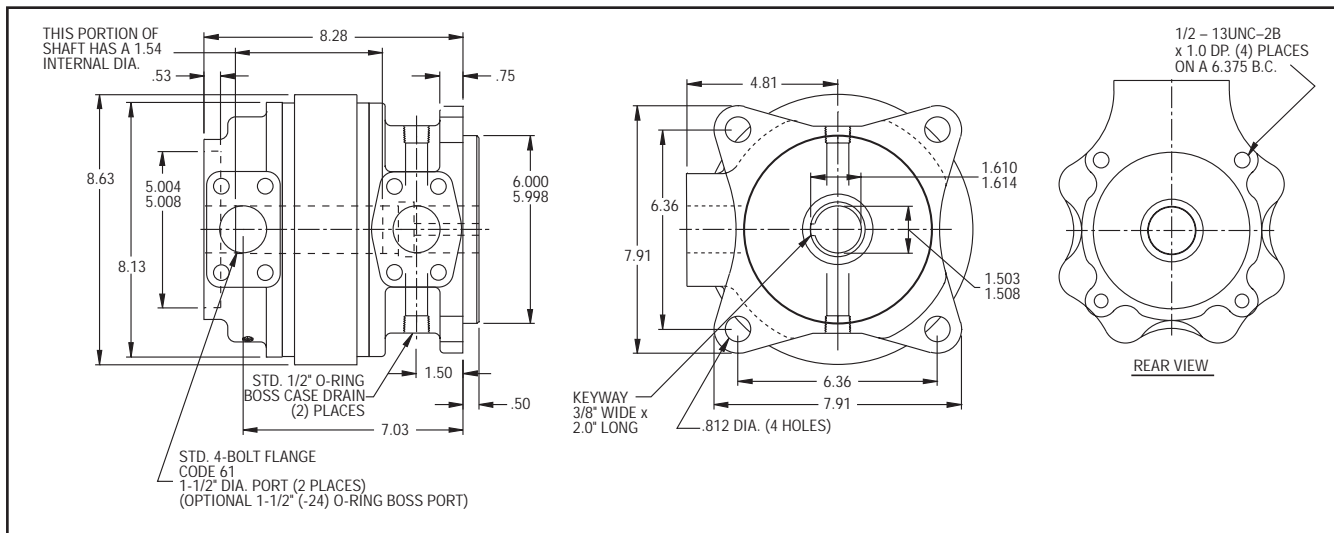
Envelope Drawing: Single Output Shaft



Envelope Drawing: Double Output Shaft



Envelope Drawing: Thru Key



Technical Information

VANE CROSSING VANE

The Rineer patented vane crossing vane design produces much higher volumetric and mechanical efficiencies than is possible with a standard vane type design. This design provides a sealing vane between cavities to improve mechanical and volumetric efficiencies.

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 37 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.

SAE 'D' MOUNTING

The 37 Series mounting configuration conforms to SAE 'D' 4-bolt specification, with the exception of the omission of the undercut on the splined shaft.

SEALS

Buna N Seals are supplied standard. Viton Seals may be ordered as an option.

BEARING LOADING

The bearings in the 37 Series can accept radial load per the radial capacity chart. **Thrust loading is not recommended.** For thrust-type applications, contact Rineer for optional bearing configurations.

THRU KEY SHAFT

The 1½ Thru Key Shaft should not be used to transmit more than 800 ft.lbs. of torque.

CASE DRAIN AND CROSS PORT LEAKAGE

The combined case drain and cross port leakage of the 37 Series Motor is approximately 1 GPM per 1,000 PSI. This will vary with the oil viscosity and internal clearance selection.

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.

HORSEPOWER LIMITATION

Maximum horsepower limitation may vary with different applications. **When using the 37 Series above 175 HP, consult a Rineer Application Engineer.**

FILTRATION

25 micron minimum.

WEIGHT

The 37 Series Motor weighs 106 lbs.

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.

CASE DRAIN

The 37 Series Motor requires an external case drain. Two case drain ports are supplied; use the port at the highest elevation. We recommend case drain 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.**

MOUNTING

The mounting position is unrestricted. The shafts, pilots and mounting faces should be within .002 TIR.

INTERMITTENT CONDITIONS

Intermittent conditions are to be less than 10% of every minute.

OTHER AVAILABLE MOTORS

For information on additional Rineer Motors, request one of the following publications:

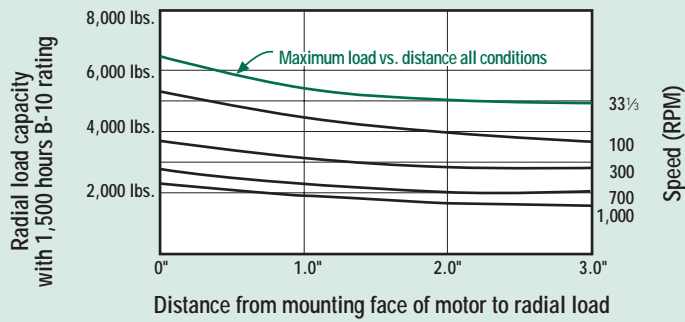
15 SeriesPublication DS151005

57 SeriesPublication DS571003

125 SeriesPublication DS1251003

125 Series 4-Ported MotorPublication DS1251009

Radial Load Capacities



If a B-10 rating is desired at other than 1,500 hours, multiply the radial load capacity obtained at your parameters from the adjacent chart by the appropriate factor below.

Desired	Factor
500	1.43
1000	1.14
3000	.80
5000	.67
7000	.60
9000	.55

Model Code - See Last Page

Applications



Limited Warranty Policy

Rineer Hydraulics 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, 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 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.



Distributor



37 SERIES MODEL CODE KEY

NOTE: Not all possible combinations of housings, shaft, bearings, and seals exist. Please consult factory for your specific requirements.

PORT SELECTION
 A2 = STD. 4-BOLT FLANGE 2 PORT
 A4 = STD. 4-BOLT FLANGE 4 PORT
 C2 = STD. O-RING BOSS 2 PORT
 C4 = STD. O-RING BOSS 4 PORT
 D2 = CODE 62 4-BOLT FLANGE 2 PORT
 D4 = CODE 62 4-BOLT FLANGE 4 PORT

ROTATING GROUP
 CONTENTS TO BE DETERMINED BY APPLICATION PARAMETERS.

BEARING SELECTION
 B = BALL BEARING PACKAGE
 T = TAPERED THRUST BEARING

 ACTUAL BEARING PACKAGE TO BE DETERMINED BY APPLICATION PARAMETERS.

1ST POSITION = SHAFT SEAL
 T = TCN
 Q = QUAD RING
 P = POLYPACK
 D = DISOGRIN
 E = EGC
2ND POSITION = MAIN BODY O-RINGS
 B = BUNA
 V = VITON
3RD POSITION = THERMAL O-RINGS
 B = BUNA
 V = VITON
 D = DISOGRIN*
 *REQUIRES VITON MAIN BODY

M037 - A2 - 1S - 032 - 31 - B1 - T B B - XXX

BASIC MOTOR SERIES

SPECIAL NUMBER, IF REQUIRED, IS ASSIGNED UPON RECEIPT OF P.O. AND APPROVAL DRAWINGS

DISPLACEMENT SELECTION

SINGLE	DOUBLE/4PORT
037 c.i.d.	074 c.i.d.
032 c.i.d.	069 c.i.d.
026 c.i.d.	068 c.i.d.
020 c.i.d.	064 c.i.d.
016 c.i.d.	058 c.i.d.
012 c.i.d.	052 c.i.d.
	046 c.i.d.
	040 c.i.d.
	036 c.i.d.
	032 c.i.d.
	024 c.i.d.

DISPLACEMENT SELECTIONS IN BOLD WILL WORK IN SERIES / PARALLEL

SHAFT SELECTION

30 = KEYED	43 = SPLINED W/OPTION
31 = SPLINED	44 = TAPERED W/OPT.
33 = DIRECT MOUNT	45 = KEYED THRUST
34 = DOUBLE KEY	46 = SPLINED THRUST
35 = FEMALE KEY	47 = THRUST PACKAGE
36 = FEMALE SPLINE	49 = SPLINE TACH DRIVE
40 = DOUBLE SPLINE	52 = SMOOTH SHAFT
41 = TAPERED THRUST	53 = API THREAD
42 = KEYED W/OPTION	55 = CUSTOMER