

## 125 SERIES 4-PORT DATA

### 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.

### SEALS

Buna N seals are supplied as standard on the Rineer motors. Viton seals may be ordered as an option.

### FILTRATION

25 micron minimum

### 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 125 Series Motor is designed for external case drain. Two 1/2 inch o-ring boss ports are supplied; use the port at the highest elevation. We recommend case

### MORE POWER STROKES PER REVOLUTION

The 125 Series has six stator cavities and 16 rotor vanes. Each rotor vane works in each stator cavity once per revolution, which results in 96 power strokes per revolution. This helps produce higher mechanical efficiency and flatter torque curves.

### HORSEPOWER LIMITATION

Maximum horsepower limitation may vary with different applications. When using the 125 Series 4-Ported Motor above 375 HP, consult a Rineer Application Engineer.

### 4-PORTED MOTOR CONFIGURATION

4-Ported motors have displacements normally ranging from 120 in<sup>3</sup> to 250 in<sup>3</sup> and are comprised of two rotor stator packages separated by a mid-inlet housing. This allows the packages to function individually or in parallel. Any of the standard displacement packages may be combined to satisfy total displacement requirements.

### 4-PORTED MOTOR, DOUBLE SPLINED

The 125 Series 4-Ported Motor is available with the standard splined shaft extending through both the front and rear housings.

### BEARING LOADING OPTIONS

The bearings in the standard 125 Series 4-Port motor can accept radial load per the radial capacity chart located in the BEARING section of this site. Thrust style motors are also available with tapered thrust bearings. See bearing charts for thrust loading capacities. See 125 Code 62 High Pressure series motors for additional heavy duty thrust bearing packages including drill motors. For additional thrust-type

drain pressure of 35 PSI or less when using standard seals.

#### CASE DRAIN CIRCULATION

Fluid should be circulated through the case when a temperature differential exists between the motor and the system in excess of 50° F. Should this occur, contact a Rineer Application Engineer.

#### CASE DRAIN AND CROSS PORT LEAKAGE

The combined case drain and cross port leakage of the single stacked motor is approximately 1 to 1-1/2 GPM per 1,000 PSI, while the double stacked motor is approximately 2 GPM per 1,000 PSI. This will vary with the oil viscosity and internal clearance selection.

#### ROTATION

The 125 Series Motor rotates equally well in either direction and smoothly throughout its entire pressure and speed range. Viewing the output shaft, rotation is clockwise when oil is supplied to the port nearest to the shaft.

applications, contact Rineer for optional bearing configurations.

#### 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.

#### TWO-SPEED OPERATION

The 4-Ported Motor can be used as a two-speed when combined with external valving as illustrated. (See envelope page for a diagram of a typical circuit.) The series parallel circuit can only be used when both cartridges are of equal displacement. The circuit using two-way or logic valves can be used with equal or unequal displacement cartridges. When using the logic circuit, it should be connected as illustrated to insure proper mixing of oil in the circulating cartridge. Particular attention should be given to the size and flow capacity of V2, as this valve must handle the displacement of the circulating cartridge when in the high speed mode. For example: a 125 C.I.D. + 60 C.I.D. = 185 C.I.D. with speed ratios of 3.08:1 or 1.48:1.



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	DRAWN BY	DATE				SCALE	SHEET 2 of 2
	KILTY	12/30/05					
	CHECKED BY	DATE	PROJECT			DWG. No.	Q051
JOB NUMBER		W912PB-06-R-008E					

Rev.	Forward Revisions to Engineering Description	Date	Appd.
1.			
2.			
3.			

Skid Drive Unit:

- Model: 60SD-700
- Quantity: 2
- Diesel Engine Rating: 735 bhp @ 1800 rpm Continuous
- Diesel Engine To Have Residential Grade Exhaust Silencer
- Diesel Fuel Day Tanks Will Be Provided:
  - 200 Gallon Capacity
  - Diesel Fuel Day Tank To Have 1/3 hp, 115VAC Single Phase 60 Hz Motor
  - Coupled To 2 gpm Bronze Gear Pump With Stainless Steel Shafts
- Additional Water Fuel Filter And Water Separator To Be Installed Between The Diesel Engine And The Diesel Fuel Day Tank
- Controls Shall Be Provided Allowing The Diesel Engine To Start Automatically
- (1) Portable 24V Battery Charger Shall Be Supplied For Both Drive Units
- Safety System Shall Shut Down The Diesel Engine For The Following Hydraulic System Failures:
  - Low Hydraulic Oil Level
  - High Hydraulic Oil Temperature
  - Excessive Hydraulic Pump Vacuum
- Hydraulic Hoses Shall Be Provided To Connect The Drive Unit To The Rigid Pipe. Hydraulic Hose Lengths Will Be Determined In The Field After The Drive Unit Is Installed.
- The Following Hydraulic Hoses And Components Shall Be Supplied:
  - (2) High Pressure Hose Assemblies With Male Quick Disconnects, Protective Caps, And Code B1 Straight Flange Hose Ends.
  - (2) Low Pressure Hose Assemblies With Female Quick Disconnects, Protective Plugs, And Code B1 Straight Flange Hose Ends.
  - (1) Low Pressure Hose Assembly With Female Quick Disconnect, Protective Plug, And Code B1 Straight Flange Hose End.
- \* Each Hose Assembly Shall Connect To The 4-Bolt Socket Weld Flange On The Rigid Piping With A Split Flange Kit Complete With O-Ring.

Approximate Drive Unit Weight: 22,000 lb.

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