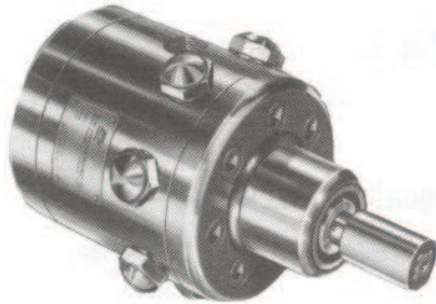




BOSCH



SYMBOL

Engineering Data

RADIAL PISTON PUMP FIXED DISPLACEMENT

MODEL 80L	2000 PSI 5.6 GPM
MODEL 80M	3000 PSI 3.4 GPM
MODEL 80H	6000 PSI 1.8 GPM

1800 RPM

SPECIFICATIONS

PRESSURE RATING — At 1800 rpm

- Model 80L: 2000 psi (137.9 bar) maximum continuous pressure.
3000 psi (206.9 bar) maximum intermittent pressure.*
- Model 80M: 3000 psi (206.9 bar) maximum continuous pressure.
5000 psi (344.8 bar) maximum intermittent pressure.*
- Model 80H: 6000 psi (413.8 bar) maximum continuous pressure.
10,000 psi (689.7 bar) maximum intermittent pressure.*

*The pump should not be subjected to the maximum intermittent pressure more than 25% of the duty cycle and not more than 10 minutes per hour. If either the pressure or time exceed the recommended maximum, consult the factory.

FLOW RATE —

- Model 80L: 5.6 gpm (21.2 l/min.) at 1800 rpm and 2000 psi (137.9 bar)
- Model 80M: 3.4 gpm (12.9 l/min.) at 1800 rpm and 3000 psi (206.9 bar)
- Model 80H: 1.85 gpm (7.0 l/min.) at 1800 rpm and 6000 psi (413.8 bar)

MAXIMUM DRIVE SPEED — 1800 rpm maximum drive speed.

MINIMUM DRIVE SPEED — 100 rpm minimum recommended speed.

OVERHUNG LOADS — Not recommended except under certain conditions. Consult the factory.

ROTATION — Standard piston pumps will operate in either direction of rotation with outlet flow remaining in the same direction.

PUMP SHAFT DESIGN — Use inline prime movers with flexible coupling alignment within 0.002" (0.05 mm) total indicator reading. The driving end of the pump shaft is splined to receive a special coupling which is furnished with each pump. It is necessary to ream a suitable hole in the drive accessory and press in the splined coupling.

PRIMING — Pump must have a positive head in the suction line and is accomplished by mounting it at least 3 feet (0.9 meters) below the oil level of the reservoir. Maximum inlet pressure for the standard pump is 10 psi (0.7 bar) which is equivalent to a head of 23 feet.

SUPERCHARGING — If the pump is supercharged from an external source, a high pressure shaft seal is required and the drain port must be vented to tank. Maximum supercharge pressure is 250 psi (17.2 bar). Supercharge flow rate should be at least .5 gpm (1.9 l/min.) greater than the normal delivery of the pump to assure a positive head but not greater than 10 gpm (37.9 l/min.) or the pistons will lift off the cam. To order this high pressure shaft seal, specify the letter "H" before the model number. Example: Model H80L.

FLUID RECOMMENDATIONS — Premium grade hydraulic fluid with 100 to 250 SUS (21 to 54 cSt) viscosity at operating temperature. Maximum allowable viscosity for cold start-up is 750 SUS (162 cSt). Minimum allowable viscosity is 60 SUS (10 cSt).

SEALS — This pump may be used with phosphate ester fluids when equipped with proper seals. Water base fluids are not recommended. When ordering for use with phosphate ester fluids, specify "F2" after the model number. Example: Model 80L-F2. For additional information refer to Racine publication S-107, "Fire Resistant Fluids."

ISO-FLO — Available as standard:

Number of Outlets	Number of Pistons Per Outlet
2	1 Piston 6 Piston
7	1 Piston

Consult the factory for ISO-FLO combinations not shown.

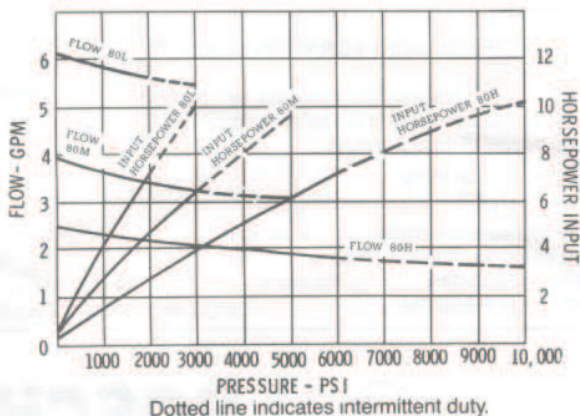
TEMPERATURE — Under normal conditions of continuous operation, fluid temperature should not exceed 130°F (54°C). In no instance, should temperature exceed 160°F (71°C).

FILTRATION — 149 micrometre inlet filtration is recommended. Consult the factory for suggested types of both inlet and return line filtration for increased component life.

MOUNTING POSITION — Not restricted.

WEIGHT (Approx.) — Standard pump 36.5 lbs (16.6 kg)
Add for foot mounting bracket 8.2 lbs (3.7 kg)

PERFORMANCE CHARACTERISTICS — 1800 RPM



PERFORMANCE CHARACTERISTICS AT 1800 RPM

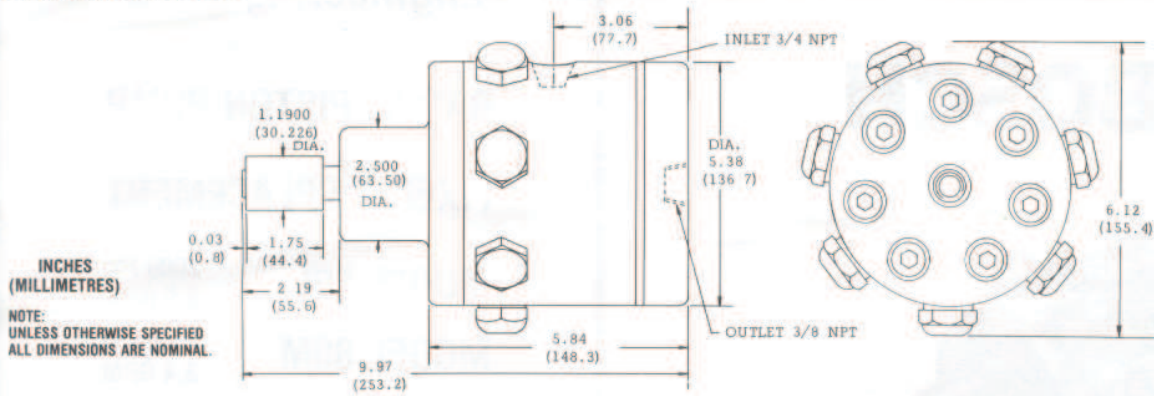
PUMP	DELIVERY — GPM										
	0 PSI	1000 PSI	2000 PSI	3000 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI	8000 PSI	9000 PSI	10,000 PSI
80L	6.1	5.8	5.6	5.4*	—	—	—	—	—	—	—
80M	4.0	3.7	3.5	3.4	3.2*	3.1*	—	—	—	—	—
80H	2.5	2.3	2.2	2.1	2.0	1.9	1.85	1.8*	1.75*	1.7*	1.65*

PUMP	HORSEPOWER INPUT										
	0 PSI	1000 PSI	2000 PSI	3000 PSI	4000 PSI	5000 PSI	6000 PSI	7000 PSI	8000 PSI	9000 PSI	10,000 PSI
80L	.3	4.2	7.3	10*	—	—	—	—	—	—	—
80M	.3	2.8	4.8	6.5	8.0*	9.7*	—	—	—	—	—
80H	.3	1.6	2.9	4.0	5.1	6.1	7.0	8.0*	8.8*	9.7*	10.2*

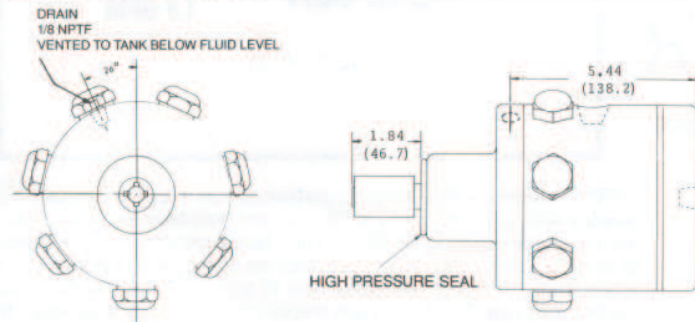
*Intermittent duty only.

DATA SHOWN IS CHARACTERISTIC WITH OIL VISCOSITY OF 130 SSU AT 120° F. AND 1160 RPM

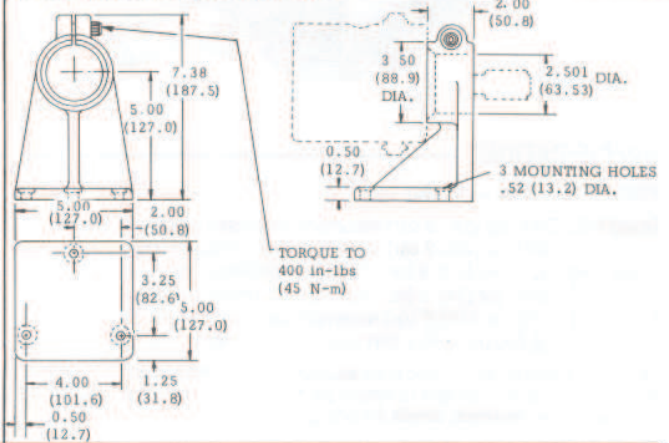
DIMENSIONAL DATA



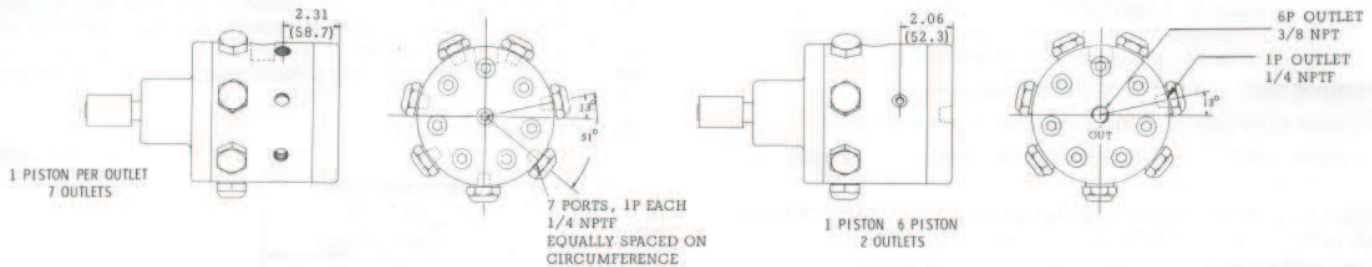
HIGH PRESSURE SEAL



FOOT MOUNTING BRACKET



ISO-FLO



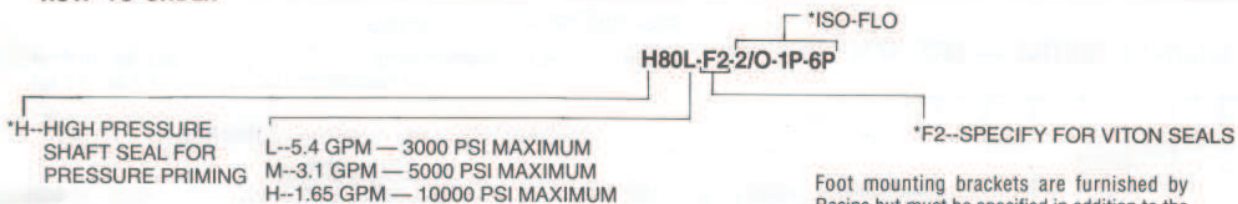
To obtain ISO-FLO single piston delivery in a model 80 pump, divide the total delivery at desired pressure by the total number of pistons (seven).

Example: Single piston flow output in gpm at 3000 psi (206.8 bar) delivered by an 80H pump.

$$\frac{2.1 \text{ GPM}}{7} = .3 \text{ GPM}$$

$$\frac{7.9 \text{ l/min.}}{7} = 1.1 \text{ l/min.}$$

HOW TO ORDER



Foot mounting brackets are furnished by Racine but must be specified in addition to the model number of the unit selected.

Example: (1) 80H Pump
(1) PF8-10S Foot mounting bracket

When foot mounting bracket is not used, any style of bracket that will clamp around the cylindrical projection of the motor end shaft plate may be substituted.

*These items are optional extras and should be specified by code when desired. Consult factory for assistance when ordering ISO-FLO modifications.

9 535 233 077
HPUS AKY 002/4 US (5.95)

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