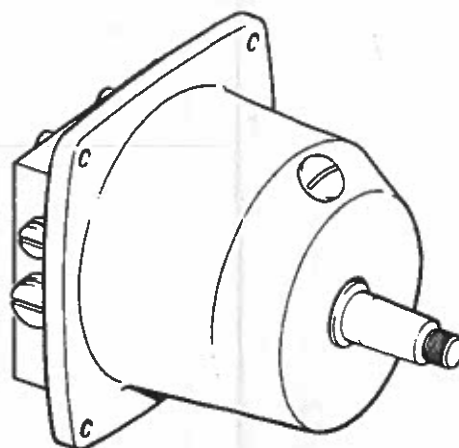


COMPONENT FACT SHEET

H-60 Series 2-Line Helm Unit

(H-60, H-61, H-62)



Description

The Hynaumatic H-60 Series Hydraulic Helm Unit is a bi-directional axial piston pump, coupled to pilot-check and make up check valving.

The patented pump section utilizes seven pistons, each stroked nine times with one shaft revolution, pushing fluid thru a porting block into the valve section.

The valve section includes holding valves to prevent feedback and to isolate the unit, and compensation valves to allow the use of unbalanced cylinders.

H-60 Series Helm Units incorporate a reservoir and a relief valve within each unit. (Relief setting is specified as 500 psi or 1000 psi.) Clockwise rotation of the shaft discharges fluid thru the "S" port; counter clockwise rotation effects "P" port discharge. The "R" port is only used on two (2) station applications. Port size is 1/4" NPTF.

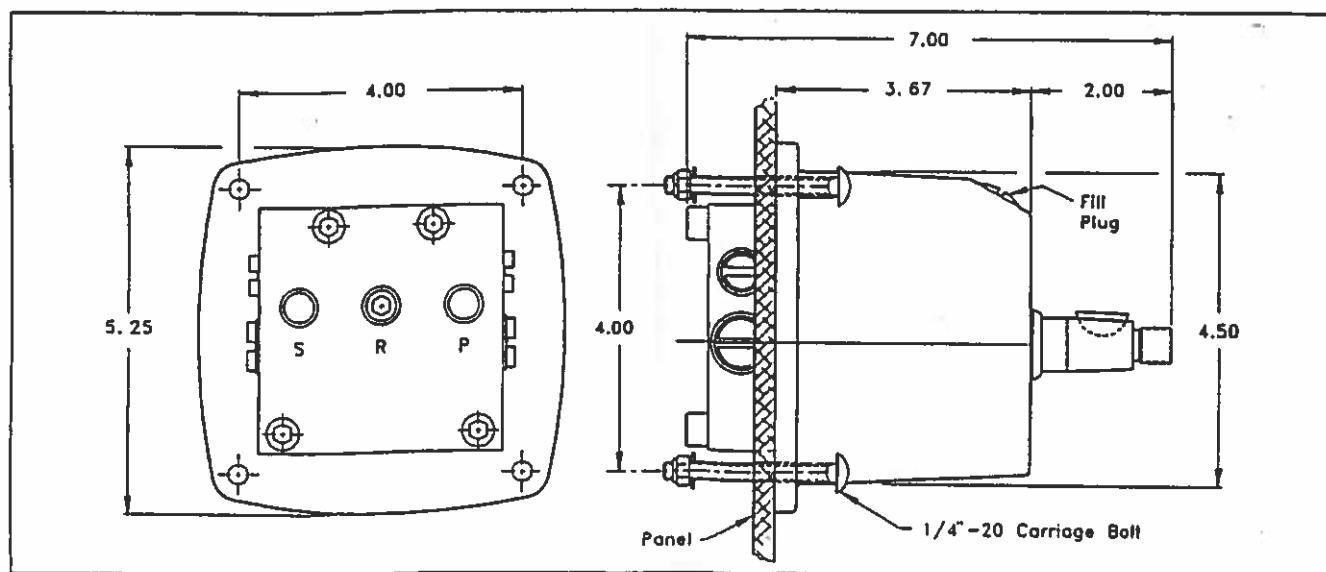
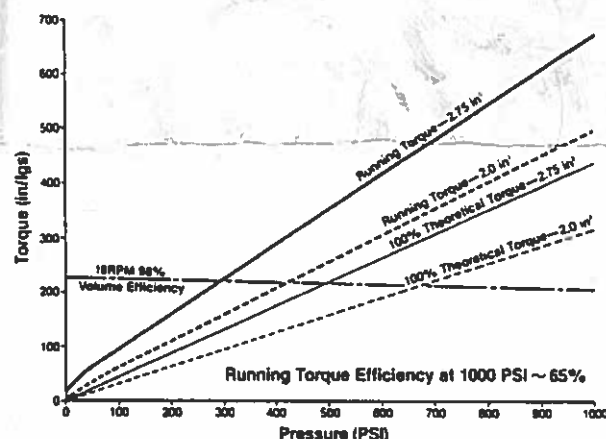
Construction

Exterior casting is 356-T6 aluminum painted with polyurethane. Shaft is stainless steel. Internal components-ferrous metal porting block and cylinder barrel with ground mating surfaces, hardened and ground steel pistons, drive keys, needle thrust bear-

ings, Buna "N" seals, TFE seal backups and piston glyd rings. Other components are of friction and wear resistance materials to reduce operating torque and prolong life.

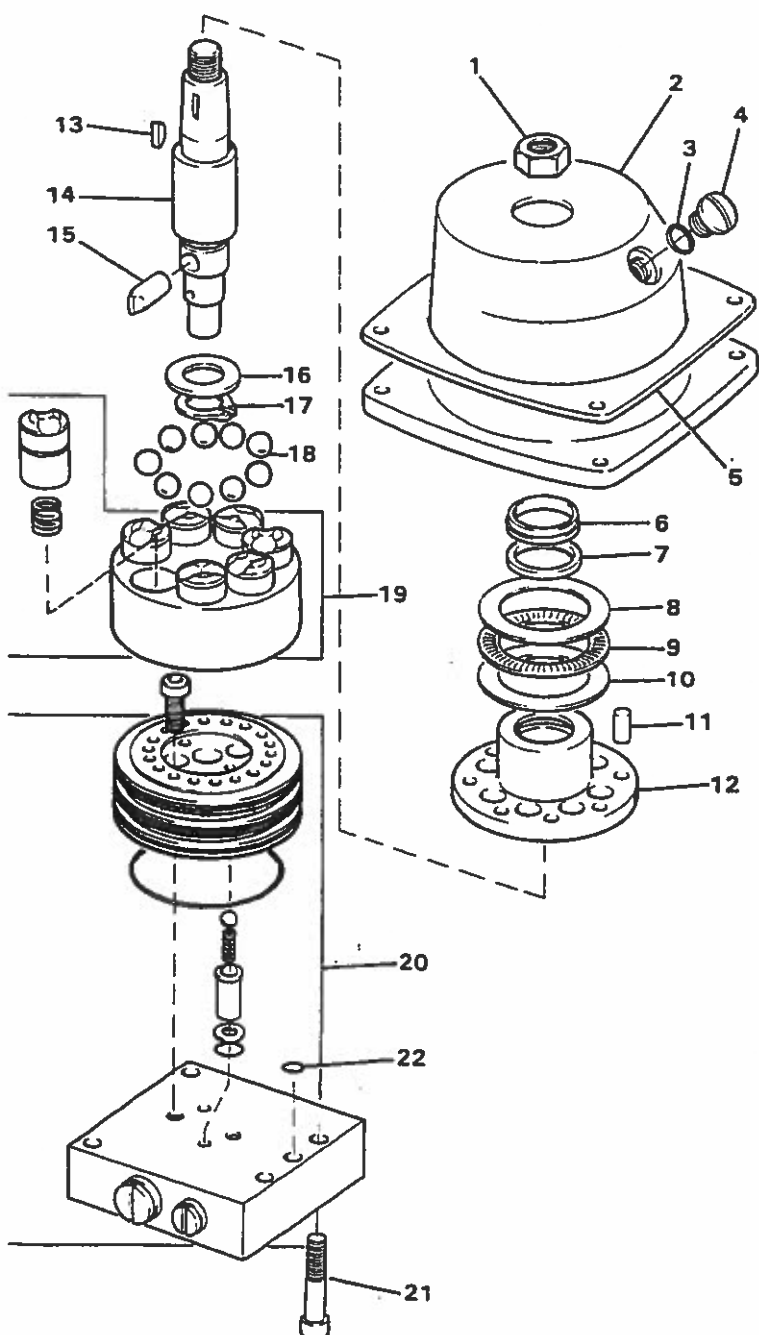
Performance

Volumetric efficiency: 90% at 1000 psi and 12 rpm. Running torque vs. pressure:



184011 REV 2

ILLUSTRATED PARTS BREAKDOWN



Parts Description

Item	Description	Helm Models	Part No.	Qty.
1.	Nut	ALL	270037	1
2.	Helm Body	ALL	901024	1
3.	O-Ring	ALL	211906	1
4.	Fill Plug	ALL	380544	1
5.	Trim Plate	ALL	520604	1
6.	Wiper	ALL	700068	1
7.	Quad-Ring Seal	ALL	224015	1
8.	Bearing Race-thin	ALL	190010	1
9.	Bearing-thrust	ALL	190011	1
10.	Bearing Race-thick	ALL	190009	1
11.	Pin	ALL	290146	9
12.	Ball Cage	ALL	620028	1
13.	Key	ALL	650027	1
14.	Shaft	ALL	400257	1
15.	Key	ALL	650026	1
16.	Washer	ALL	190012	1
17.	Retaining Ring	ALL	300046	1
18.	Ball	ALL	234066	9
19.	Cyl. Barrel Assy.	H-60	510110	1
		H-61	510120	1
		H-62	510130	1
20.	Valve Body Assy.	H-60-001	900450	1
		H-61-001	900450	1
		H-62-001	900450	1
21.	Screw	ALL	240467	4
22.	O-Ring	ALL	211009	1
A.	Seal Kit	ALL	HS-06	1
B.	Fill Kit	ALL	HF-35	1

WARNING

The Helm Units are manufactured under strict controls and testing procedures. Disassembly of item no. 20 will void any existing warranty. The Valve Body Assembly is under heavy spring load and disassembly could cause some pieces to be projectiles which could cause bodily harm.

It is recommended that the unit be returned to Hynautic or the point of purchase for authorized repair and retesting.

H-6 X - X X X

Helm Unit Model Number Color Code Relief Setting

0 = Black 1 = 1000 PSI
2 = 500 PSI

Displacement
0 = 2.0 Cu. in.
1 = 2.75 Cu. in.
2 = 1.65 Cu. in.