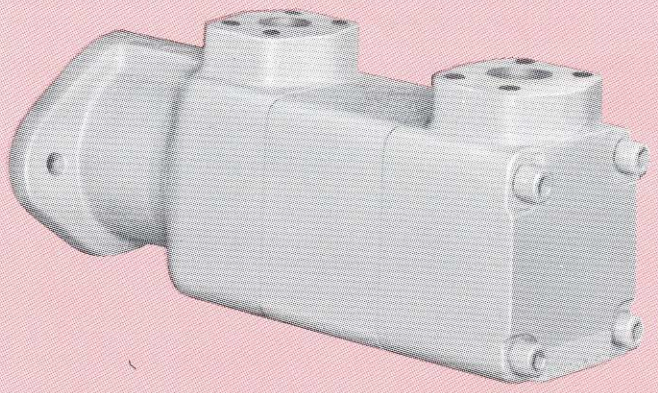
2-22 GPM **Up to 1500 PSI**

Imo™ Pump



Model 110H/210H

IMO Model 110H/210H pumps are positive displacement, rotary, screw-type pumps designed and engineered for excellent suction capability over a wide range of fluid viscosities. Flow rates (2 to 22 GPM) are proportional to rotating speed when the pump is operated within the recommended pressure range (up to 1500 PSI). The self-priming design permits both evacuation of air filled inlet lines and repriming if suction is lost.

The unique IMO design — only three moving parts — is the key to the Model 110H/210H pump performance. A precision bored housing encases the driven screw (power rotor) and intermeshing sealing screws (idler rotors). The accurately machined idler rotors conform perfectly to the threads of the power rotor and to the housing bores, confining the fluid in a succession of closures or cavities. As the screws rotate, the fluid is moved axially from the inlet port to the outlet port in a continuous, uniform flow. This uniform axial flow results in a minimum of fluid pulsation and extremely quiet operation.

The rotating idler rotors generate a hydrodynamic film of fluid which supports the idlers in the housing bores and prohibits wearing contact. The strength of this film is based on fluid viscosity, pump pressure and speed. As pressure requirements increase, the hydrodynamic film can be strengthened by increasing viscosity or speed. Both the flow rate and pressure capability of the IMO pump increase with speed; thus higher speeds generally result in better performance and longer life.

The symmetrical arrangement of the rotors (screws) eliminates the need for bearings to absorb radial loads. Axial loads are balanced hydraulically within the pump. Model 110H/210H pumps contain only one ball bearing which positions the power rotor for proper operation of the mechanical seal. This permanently grease-packed bearing is isolated from the pumpage by the mechanical seal to prevent contamination and improper lubrication.

The simple, compact design of the Model 110H/210H pump permits fast, easy installation, low maintenance, and ease of repair. The inlet head can be rotated in 90 degree increments to satisfy piping arrangement. All wearing parts are completely replaceable. Periodic inspections can be made without removing the pump, and routine mechanical seal and bearing maintenance can be performed without disturbing system piping.

Properly installed and operated, these pumps can be expected to give many years of reliable service. All pressure containing parts are hydrostatically tested to 1½ times their maximum working pressure. In addition, every 110H/210H is carefully tested for capacity and pressure prior to shipment.

Model 110H/210H pumps are offered in six flow steps. Foot or flange mounting configurations are available and complete pump/driver assemblies can be provided as required.

Applications

Model 110H/210H pumps are designed to meet the requirements for hydraulic, lubricating, and fuel oil applications. These units have been widely utilized in power plants, fuel oil burners, mechanical transmissions, lubricating and machining center cooling systems — wherever high performance and reliability in a compact design are required.

Typical applications are:

Lubrication of diesel engines, gas turbines, steam turbines, compressors, transmission gears, large centrifugal pumps, forced or induced draft fans and other rotating machinery.

Circulation of fuel oils, hydraulic oils, transformer insulating oil, and most petroleum based fluids in general.

Service as a hydraulic fluid power pump for control of machine tools, injection molding machinery, turbine governors, fluid power cylinders, shear and punch presses, die casting machines, hydraulic hoists and winches, and large fan bearing lifts.

Specifications and Features

CASING	High quality gray iron with pearlitic gray iron rotor housing.
ROTORS	Alloy steel power rotor with induction hardened and ground pearlitic gray iron idler rotors.
PUMP INTERNALS	Viton bellows mechanical seal with viton O-rings, carbon on NI resist seat and external permanently grease-packed deep groove ball bearing as standard.
OPERATING PRESSURE	1200 PSIG max. continuous for Model 110H with lube and hydraulic oils. 1500 PSIG max. continuous for Model 210H with lube and hydraulic oils. Up to 2000 PSIG under approved conditions. Consult IMO.
INLET PRESSURE	35 PSIG maximum.
VISCOSITY	2.0 cst (33 SSU) — 3000 SSU. The 110H/210H works equally well with petroleum based fluids, water glycols, water/oil emulsion and phosphate esters. Consult Performance Data tables for minimum allowable operating viscosity at specific speeds and pressures.
TEMPERATURE	0 — 180°F, assuming fluid viscosity is within allowed limits.
DRIVE	Direct only with a maximum of 5000 RPM, assuming minimum suction requirements can be met. Consult IMO for applications above 3500 RPM.
ROTATION	Clockwise facing pump shaft as standard. Counterclockwise available as option for all sizes except 110H-87-1.6D and 210H-118-1.6D.
MOUNTING	May be foot or flange mounted in any attitude. SAE 2-bolt "A" flange as standard. Foot mounting bracket available as option.
CONNECTIONS	SAE 4-bolt socket weld or NPT inlet and discharge flange required. (Available from IMO) Inlet housing rotatable in 90 degree increments.
FILTRATION	Inlet strainers are required to keep contaminants and abrasives out of pump, but they must be selected with consultation with strainer vendor to prevent pump starvation. Normally, 60 mesh for light oils and 1/8"-3/16" openings for heavy oils are recommended.
ACCESSORIES	Adapters for foot mounting or NEMA "C" face motors, SAE 4-bolt flanges and completely mounted pump/driver assemblies on steel bedplates. Consult IMO.

Hydraulic Motor Application

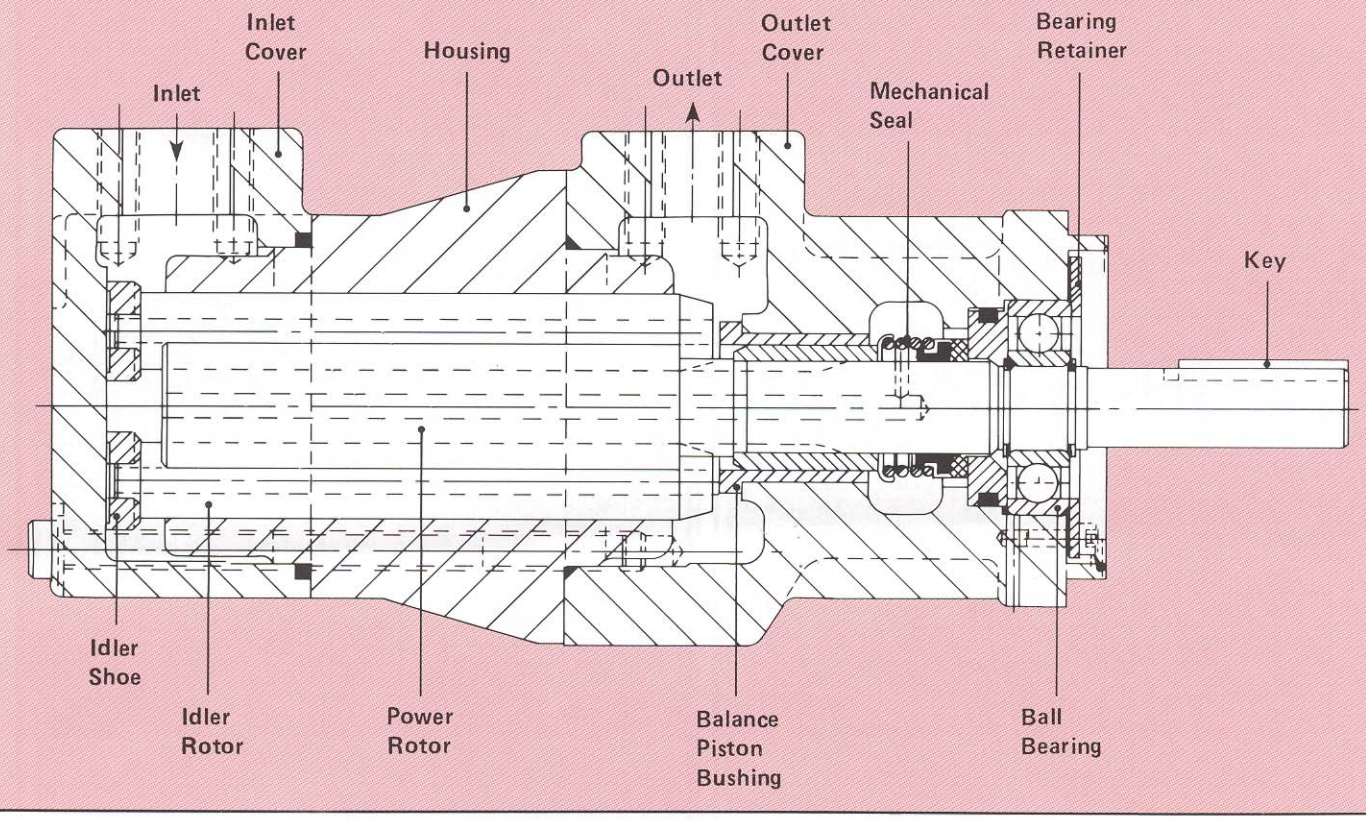
The Model 110H/210H can be used as a hydraulic motor as well as a pump. This is accomplished by reversing the normal direction of flow found when used as a pump.

When the direction of flow is reversed the direction of rotation is also reversed; that is, a clockwise pump will become a counterclockwise motor. Likewise, the low pressure pump inlet becomes the low pressure motor outlet and the high pressure pump outlet becomes the high pressure motor inlet. Like the IMO pump, the IMO motor is a fixed displacement unit. In all cases, the motor inlet pressure should be at least 50 PSI above the outlet pressure, and the outlet pressure should be kept to a minimum.

The IMO motor should be considered for all higher speed applications. Its very quiet operation makes it ideal for such applications as machine tool spindle drives. Although the combination of an IMO motor and gear reducer or belt drive has been successfully used, as a general rule it is not intended for low speed, high torque applications.

Replacement parts are the same for the Model 110H/210H whether it is used as a pump or motor. Since pump and motor performance will differ, the pump performance tables on the following pages should be used only for rough approximations. Consult IMO for exact hydraulic motor performance ratings.

Typical 110H/210H Assembly



Performance Data For No. 2 Fuel Oil

33-39 SSU 3500 RPM												
		PRESSURE—PSI						PRESSURE—PSI				
PUMP SIZE	GPM	100	150	200	250	300	BHP	100	150	200	250	300
110H-87-1.6D		5.2	4.9	4.5	4.2	—		0.9	1.1	1.3	1.5	—
110H-87-2D		6.7	6.2	—	—	—		1.0	1.2	—	—	—
210H-95-2D		9.0	8.5	8.0	—	—		1.2	1.5	1.9	—	—
210H-106-2D		12.7	11.9	11.3	—	—		1.7	2.1	2.6	—	—
210H-118-1.6D		14.1	13.4	12.6	11.9	11.2		1.9	2.4	3.0	3.5	4.1
210H-118-2D		18.0	17.2	16.4	—	—		2.3	2.9	3.6	—	—

*Consult IMO for speeds other than 3500 RPM for No. 2 Fuel Oil.
Performance Data for other fluids on following pages.

Model 110H/210H Performance Data (All Fluids)

Rotor Size 87-1.6D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	5.9	5.3	4.9	4.5	4.2	3.9	
	200	6.3	5.9	5.6	5.3	5.1	4.9	
	300	6.4	6.1	5.9	5.7	5.5	5.3	
	650	6.7	6.5	6.3	6.2	6.0	5.9	
	1000	6.8	6.6	6.5	6.4	6.3	6.2	
	3000	7.0	6.9	6.8	6.7	6.7	6.6	
BHP	200	1.3	2.1	3.0	3.8	4.7	5.5	4.5
	300	1.4	2.3	3.1	4.0	4.8	5.6	4.6
	650	1.8	2.6	3.5	4.3	5.2	6.0	4.7
	1000	2.1	2.9	3.7	4.6	5.4	6.3	4.8
	3000	3.2	4.1	4.9	5.8	6.6	7.5	4.9

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	2.2	1.7	–	–	–	–	
	200	2.7	2.2	1.9	1.7	–	–	
	300	2.8	2.5	2.2	2.0	1.8	1.7	
	650	3.1	2.9	2.7	2.5	2.4	2.3	
	1000	3.2	3.0	2.9	2.8	2.7	2.6	
	3000	3.4	3.2	3.2	3.1	3.1	3.0	
BHP	200	0.5	1.0	1.4	1.8	–	–	3.6
	300	0.6	1.0	1.4	1.8	2.3	2.7	3.6
	650	0.7	1.1	1.5	1.9	2.3	2.8	3.6
	1000	0.7	1.2	1.6	2.0	2.4	2.8	3.6
	3000	1.0	1.5	1.9	2.3	2.7	3.1	3.7

Speed 2900 RPM (50 Hz)

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	4.6	4.1	3.6	3.2	2.9	2.6	
	200	5.0	4.6	4.3	4.1	3.8	3.6	
	300	5.2	4.9	4.6	4.4	4.2	4.1	
	650	5.5	5.2	5.1	4.9	4.8	4.7	
	1000	5.6	5.4	5.2	5.1	5.0	4.9	
	3000	5.8	5.6	5.6	5.5	5.4	5.4	
BHP	200	1.0	1.7	2.4	3.1	3.8	4.5	4.0
	300	1.1	1.8	2.5	3.2	3.9	4.6	4.1
	650	1.3	2.0	2.7	3.4	4.1	4.8	4.2
	1000	1.5	2.2	2.9	3.6	4.3	5.0	4.3
	3000	2.4	3.1	3.8	4.5	5.2	5.9	4.3

Rotor Size 87-2D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	7.4	6.7	6.1	5.7	5.3	4.9	
	200	7.9	7.4	7.0	6.7	6.4	6.1	
	300	8.1	7.7	7.4	7.1	6.9	6.7	
	650	8.4	8.1	7.9	7.7	7.6	7.4	
	1000	8.5	8.3	8.1	8.0	7.9	7.7	
	3000	8.7	8.6	8.5	8.4	8.4	8.3	
BHP	200	1.4	2.5	3.6	4.6	5.7	6.7	4.8
	300	1.5	2.6	3.7	4.7	5.8	6.8	4.9
	650	1.9	2.9	4.0	5.0	6.1	7.1	5.0
	1000	2.1	3.2	4.2	5.3	6.3	7.4	5.1
	3000	3.1	4.2	5.2	6.3	7.3	8.4	5.8

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	2.8	2.1	–	–	–	–	
	200	3.3	2.8	2.5	2.1	–	–	
	300	3.6	3.1	2.8	2.6	2.3	2.1	
	650	3.9	3.6	3.4	3.2	3.0	2.9	
	1000	4.0	3.8	3.6	3.5	3.3	3.2	
	3000	4.2	4.1	4.0	3.9	3.8	3.8	
BHP	200	0.6	1.2	1.7	2.2	–	–	3.8
	300	0.7	1.2	1.7	2.2	2.8	3.3	3.8
	650	0.7	1.3	1.8	2.3	2.8	3.4	3.9
	1000	0.8	1.3	1.8	2.4	2.9	3.4	3.9
	3000	1.1	1.6	2.1	2.6	3.2	3.7	4.0

Speed 2900 RPM (50 Hz)

Viscosity SSU		Differential Pressure—PSI						
		200	400	600	800	1000	1200	Net Inlet Pressure Required PSIA
GPM	100	5.8	5.1	4.6	4.1	3.7	3.4	
	200	6.3	5.8	5.4	5.1	4.8	4.6	
	300	6.5	6.1	5.8	5.6	5.3	5.1	
	650	6.8	6.6	6.4	6.2	6.0	5.9	
	1000	7.0	6.7	6.6	6.4	6.3	6.2	
	3000	7.2	7.0	7.0	6.9	6.8	6.7	
BHP	200	1.1	2.0	2.9	3.8	4.6	5.5	4.3
	300	1.2	2.1	3.0	3.8	4.7	5.6	4.4
	650	1.4	2.3	3.2	4.0	4.9	5.8	4.5
	1000	1.6	2.5	3.3	4.2	5.1	6.0	4.7
	3000	2.3	3.2	4.0	4.9	5.8	6.7	5.0

Rotor Size 95-2D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	9.4	8.4	7.3	7.1	6.6	6.1	
	200	10.0	9.4	8.9	8.4	8.1	7.7	
	300	10.3	9.8	9.4	9.0	8.7	8.4	
	650	10.7	10.4	10.1	9.8	9.6	9.4	
	1000	10.9	10.6	10.4	10.2	10.0	9.9	
	3000	11.2	11.0	10.9	10.8	10.7	10.6	
BHP	200	2.2	3.9	5.6	7.2	8.9	10.6	4.8
	300	2.3	4.0	5.7	7.4	9.1	10.8	4.9
	650	2.7	4.4	6.1	7.8	9.5	11.2	5.0
	1000	3.0	4.7	6.4	8.1	9.8	11.5	5.1
	3000	4.3	6.0	7.7	9.4	11.1	12.8	5.9

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	3.6	2.6	–	–	–	–	
	200	4.2	3.6	3.1	2.6	–	–	
	300	4.5	4.0	3.6	3.2	2.9	2.6	
	650	4.9	4.6	4.3	4.0	3.8	3.7	
	1000	5.1	4.8	4.6	4.4	4.2	4.1	
	3000	5.4	5.2	5.1	5.0	4.9	4.8	
BHP	200	1.0	1.8	2.7	3.5	–	–	4.0
	300	1.0	1.9	2.7	3.5	4.4	5.2	4.0
	650	1.1	1.9	2.8	3.6	4.5	5.3	4.1
	1000	1.2	2.0	2.9	3.7	4.6	5.4	4.1
	3000	1.5	2.4	3.2	4.0	4.9	5.7	4.3

Speed 2900 RPM (50 Hz)

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	7.4	6.5	5.7	5.2	4.6	–	
	200	8.0	7.4	6.9	6.5	6.1	5.7	
	300	8.3	7.8	7.4	7.0	6.7	6.5	
	650	8.7	8.4	8.1	7.9	7.7	7.5	
	1000	8.9	8.6	8.4	8.2	8.0	7.9	
	3000	9.2	9.0	8.9	8.8	8.7	8.6	
BHP	200	1.7	3.1	4.5	5.9	7.3	8.7	4.4
	300	1.8	3.2	4.6	6.0	7.4	8.8	4.4
	650	2.1	3.5	4.9	6.3	7.7	9.1	4.5
	1000	2.3	3.7	5.1	6.5	7.9	9.3	4.6
	3000	3.2	4.6	6.0	7.4	8.8	10.2	5.1

Rotor Size 106-2D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	13.0	11.7	10.6	9.8	9.0	8.3	
	200	13.9	13.0	12.3	11.7	11.1	10.6	
	300	14.4	13.6	13.0	12.5	12.1	11.7	
	650	14.9	14.4	14.0	13.7	13.4	13.1	
	1000	15.2	14.8	14.4	14.2	13.9	13.7	
	3000	15.6	15.4	15.2	15.0	14.9	14.8	
BHP	200	2.9	5.3	7.7	10.0	12.4	14.8	5.2
	300	3.1	5.5	7.8	10.2	12.6	14.9	5.3
	650	3.6	5.9	8.3	10.6	13.0	15.4	5.4
	1000	3.9	6.3	8.6	11.0	13.4	15.7	5.6
	3000	5.4	7.8	10.2	12.5	14.9	17.2	6.6

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	4.9	3.6	–	–	–	–	
	200	5.8	4.9	4.2	3.6	–	–	
	300	6.3	5.5	4.9	4.4	4.0	3.6	
	650	6.8	6.3	5.9	5.6	5.3	5.0	
	1000	7.1	6.7	6.3	6.1	5.8	5.6	
	3000	7.5	7.3	7.1	6.9	6.8	6.7	
BHP	200	1.3	2.5	3.7	4.9	–	–	4.0
	300	1.4	2.6	3.7	4.9	6.1	7.3	4.0
	650	1.5	2.7	3.8	5.0	6.2	7.4	4.2
	1000	1.6	2.8	3.9	5.1	6.3	7.5	4.3
	3000	2.0	3.1	4.3	5.5	6.7	7.9	4.6

Speed 2900 RPM (50 Hz)

Viscosity SSU		Differential Pressure—PSI						Net Inlet Pressure Required PSIA
		250	500	750	1000	1250	1500	
GPM	100	10.2	8.9	7.9	7.0	6.2	–	
	200	11.2	10.2	9.5	8.9	8.3	7.9	
	300	11.6	10.8	10.2	9.7	9.3	8.9	
	650	12.2	11.6	11.3	10.9	10.6	10.3	
	1000	12.4	12.0	11.7	11.4	11.2	10.9	
	3000	12.8	12.6	12.4	12.3	12.1	12.0	
BHP	200	2.4	4.3	6.3	8.2	10.2	12.2	4.7
	300	2.5	4.4	6.4	8.3	10.3	12.3	4.7
	650	2.8	4.7	6.7	8.7	10.6	12.6	4.8
	1000	3.0	5.0	6.9	8.9	10.9	12.8	5.0
	3000	4.1	6.0	8.0	9.9	11.9	13.9	5.6

1. For conditions between listed values, interpolate between those values. For conditions not listed or off tables, contact IMO.
2. Net Inlet Pressure Required is minimum pressure above vapor pressure at pump inlet to prevent cavitation. This assumes that the fluid is air and gas free.
3. For BHP values at viscosities below 150 SSU, use values listed for SSU.

Model 110H/210H Performance Data (All Fluids)

Rotor Size 118-1.6D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	14.6	13.2	12.1	11.1	10.3	9.6	
	200	15.6	14.6	13.8	13.2	12.6	12.1	
	300	16.1	15.3	14.6	14.1	13.6	13.2	
	650	16.7	16.2	15.7	15.4	15.1	14.8	
	1000	17.0	16.5	16.2	15.9	15.6	15.4	
	3000	17.5	17.2	17.0	16.8	16.7	16.5	
BHP	200	3.2	5.8	8.4	11.1	13.7	16.4	4.8
	300	3.4	6.1	8.7	11.4	14.0	16.6	4.9
	650	3.7	6.3	8.9	11.6	14.2	16.9	5.0
	1000	4.3	6.9	9.6	12.2	14.9	17.5	5.1
	3000	4.8	7.4	10.1	12.7	15.4	18.0	5.8

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	5.6	4.1	—	—	—	—	
	200	6.6	5.6	4.8	4.1	—	—	
	300	7.0	6.2	5.6	5.0	4.6	4.1	
	650	7.7	7.1	6.7	6.3	6.0	5.7	
	1000	8.0	7.5	7.1	6.9	6.6	6.4	
	3000	8.4	8.2	8.0	7.9	7.6	7.5	
BHP	200	1.5	2.8	4.2	5.5	—	—	4.0
	300	1.6	2.9	4.2	5.5	6.9	8.2	4.0
	650	1.7	3.1	4.4	5.7	7.0	8.3	4.0
	1000	1.9	3.2	4.5	5.8	7.2	8.5	4.1
	3000	2.4	3.7	5.0	6.4	7.7	9.0	4.4

Speed 2900 RPM (50 Hz)

Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	11.5	10.1	9.0	8.0	7.2	—	
	200	12.5	11.5	10.7	10.1	9.5	9.0	
	300	13.0	12.2	11.5	11.0	10.5	10.1	
	650	13.6	13.1	12.6	12.3	12.0	11.7	
	1000	13.9	13.4	13.1	12.8	12.5	12.3	
	3000	14.4	14.1	13.9	13.7	13.6	13.4	
BHP	200	2.7	4.9	7.1	9.3	11.5	13.7	4.4
	300	2.9	5.1	7.3	9.5	11.6	13.8	4.4
	650	3.3	5.5	7.7	9.9	12.1	14.3	4.5
	1000	3.7	5.9	8.1	10.2	12.4	14.6	4.7
	3000	5.1	7.3	9.5	11.7	13.9	16.1	5.1

Rotor Size 118-2D

Speed 3500 RPM

Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	18.6	16.9	15.7	14.6	13.6	12.8	
	200	19.8	18.6	17.7	16.9	16.3	15.7	
	300	20.3	19.3	18.6	18.0	17.4	16.9	
	650	21.0	20.4	19.9	19.5	19.1	18.8	
	1000	21.4	20.8	20.4	20.1	19.8	19.5	
	3000	21.9	21.6	21.4	21.2	21.0	20.8	
BHP	200	4.1	7.4	10.7	14.0	17.3	20.6	5.4
	300	4.3	7.6	10.9	14.2	17.5	20.8	5.5
	650	5.0	8.3	11.6	14.9	18.2	21.5	5.7
	1000	5.5	8.8	12.1	15.4	18.7	22.0	6.0
	3000	7.6	10.9	14.2	17.5	20.8	24.1	7.3

Speed 1750 RPM

Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	7.3	5.6	—	—	—	—	
	200	8.5	7.3	6.4	5.6	—	—	
	300	9.0	8.0	7.3	6.7	6.1	5.6	
	650	9.7	9.1	8.6	8.1	7.9	7.5	
	1000	10.0	9.5	9.1	8.8	8.5	8.2	
	3000	10.6	10.3	10.0	9.9	9.7	9.5	
BHP	200	1.9	3.5	5.2	6.8	—	—	4.1
	300	1.9	3.6	5.2	6.9	8.5	10.2	4.1
	650	2.1	3.7	5.4	7.0	8.7	10.3	4.2
	1000	2.2	3.9	5.5	7.2	8.8	10.5	4.3
	3000	2.7	4.4	6.0	7.7	9.3	11.0	4.5

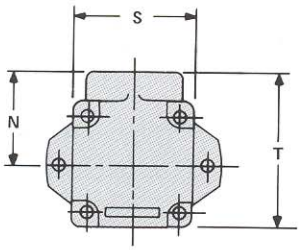
Speed 2900 RPM (50 Hz)

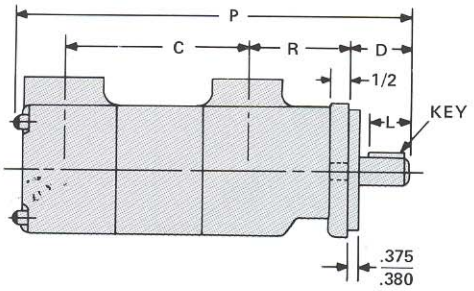
Viscosity SSU		Differential Pressure—PSI						
		250	500	750	1000	1250	1500	Net Inlet Pressure Required PSIA
GPM	100	14.7	13.1	11.8	10.7	9.8	8.9	
	200	15.9	14.7	13.8	13.1	12.4	11.8	
	300	16.4	15.5	14.7	14.1	13.6	13.1	
	650	17.2	16.5	16.0	15.6	15.2	14.9	
	1000	17.5	17.0	16.6	16.2	15.9	15.6	
	3000	18.0	17.7	17.5	17.3	17.1	17.0	
BHP	200	3.3	6.0	8.8	11.5	14.2	17.0	4.9
	300	3.4	6.2	8.9	11.6	14.4	17.1	4.9
	650	3.9	6.6	9.3	12.1	14.8	17.5	5.0
	1000	4.2	7.0	9.7	12.4	15.2	17.9	5.2
	3000	5.7	8.4	11.1	13.9	16.6	19.4	6.0

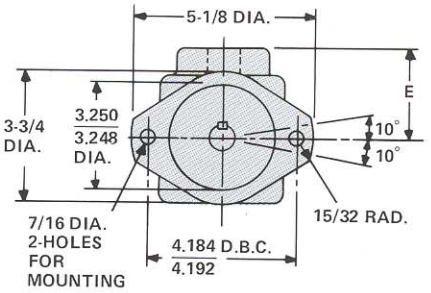
See Notes page 5.

Model 110H/210H Dimensions

All Dimensions in Inches
Standard Rotation — Clockwise



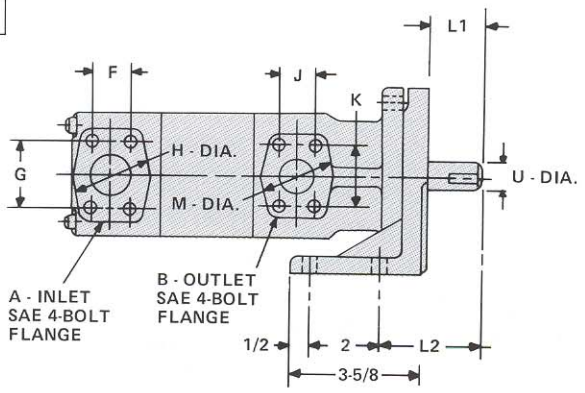


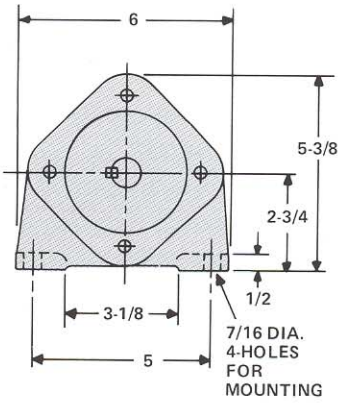


CERTIFIED BY		DATE
CUSTOMER		
TYPE		CUSTOMER ORDER
ROTATION	CASING	IMO ORDER

STANDARD FLANGE MOUNTING (SAE 2-BOLT "A" FLANGE)

Bracket may be assembled in any of 4 positions. Weight - 4 Lbs.





OPTIONAL FOOT MOUNTING (BRACKET NO. S4233E)

Pump Type	A	B	C	D	E	F	G	H	J	K	L	L1	L2
110H- 87-1.6D 87-2D	3/4	1/2	4-7/8	1-3/4	2-1/2	.876	1.876	2-1/16	.688	1.500	1	1-1/16	2-11/32
210H- 95-2D 106-2D 118-1.6D 118-2D	1	3/4	4-13/16	2-21/32	2-5/8	1.031	2.062	2-5/16	.876	1.876	1-5/8	1-31/32	3-1/4

Pump Type	M	N	P	R	S	T	U	Key	V	W	Lbs.
110H- 87.1.6D 87-1D	1-13/16	2-1/2	10-7/8	2-31/32	2-7/8	3-15/16	.5000 .4995	1/8 x 1/8	3/8-16	7/8	18
210H- 95-2D* 106-2D 118-1.6D 118-2D	2-1/16	2-5/8	12-7/16	3-17/32	3-5/8	4-7/16	* .7500 .7495	* 3/16 x 3/16	3/8-16	7/8	30

*"U" dimension for 210H-95 is .5000/.4995. Key is 1/8 x 1/8.

Typical 110H/210H Nomenclature

C XXXX – XXX – XX – XX X

Design Modification

Series
110H
210H

Rotor Size
87, 95, 106 or 118

Materials
Blank = Special
S = Standard

Rotation
Blank = Clockwise
LH = Counterclockwise

Rotor Lead
2D = Normal
1.6D = Low

Example:

C210H-95-2D-LHS (Series 210H pump with size 95 rotors, normal lead, counterclockwise rotation, standard mechanical seal and ball bearing)

*Consult IMO for optional mechanical seal materials.

CERTIFIED ISO 9001

Accredited by the Dutch Council for Certification for certification and registration activities.

Quality Management System

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