

## General Information

1. Air cooled oil coolers are built for operation with maximum oil pressures of 300 PSI and temperatures of 400°F.
2. The motors furnished are specially built for fan duty. They are guaranteed by the manufacturer for operation in a maximum ambient temperature of 104°F. Consideration should be given to installation location so motors are not subjected to temperatures above this level.
3. Air/oil coolers that are to be installed for utilization of waste heat for the space heating should be mounted 7 to 14 feet above the floor depending on the structure, for proper heat distribution.

## Installation

1. "AO" and "AOF" coolers are designed for suspension by eye bolts or threaded hangar rods screwed into the upper and lower covers in 1/2"-13 threaded holes; "AOVH" coolers have 6 to 12 holes (0.56" diameter) in the base for mounting. Refer to product page for location and quantity.
2. Units should not be located in corrosive atmospheres as rapid deterioration of casing, cooling coil, fan and motor may take place resulting in reduced life.
3. For proper air flow, a minimum of 12" should be allowed between the oil cooler fan and any walls or obstructions.
4. Piping should be sized based on oil flow and pressure drop requirements and not on the oil coolers supply and return connection size. Piping should also be properly supported to prevent excessive strain to connection, manifolds, etc.
5. Filter located ahead of the cooler should be installed to trap scale, dirt or sludge that may be present in piping and equipment, or that may accumulate with use. A thermostatic or spring loaded by-pass relief valve installed ahead of the cooler may be helpful to speed warm-up and relieve the system of excessive pressure. All accessories should be considered in the original heat rejection and piping calculations.
6. Electric Motors: CAUTION To prevent possible electrical shock, it is important to make sure this unit is grounded properly. Connect motor only to a power supply of the same characteristics as shown on the motor nameplate. Voltage may vary 10% of nameplate voltage. Be sure to provide proper fusing to prevent possible motor burnout. Follow wiring diagram printed on motor nameplate or in terminal box. Before starting motor, follow motor manufacturer recommendations. Turn fan manually to eliminate possible motor burn out in the event the fan has become damaged in shipment. Observe operation carefully after motor is started for the first time.
7. Hydraulic Motors: Connect motor, port B, to inlet oil line and return line to port A for correct rotation. A filter is highly recommended upstream of the motor rated at 25 micron nominal. Controlling oil flow rate as specified on motor data sheet with cooler is very important. Maximum oil pressure to motor is 2000 PSI, minimum pressure is shown on motor data sheet. Do not allow dirty oil to enter the motor. Excessive flows will cause fan blade failure. Insufficient flows to motor will reduce cooling capacity.

## Maintenance

Inspect the unit regularly for loose bolts and connections, rust and corrosion, and dirty or clogged heat transfer surfaces (cooling coil).

## Heat Transfer Surface

Dirt and dust should be removed by brushing the fins and tubes and blowing loose dirt off with an air hose. Should the surface be greasy, the motor should be removed and the fins and tubes brushed or sprayed with a mild alkaline solution, or a non-flammable degreasing fluid. Follow with a hot water rinse and dry thoroughly. A steam hose may also be used effectively.

Casing, Fan and Motor: Dirt and grease should be removed from these parts. Rusty or corroded surfaces should be sanded clean and repainted.

## Internal Cleaning

At least once a year piping should be disconnected and a degreasing agent or flushing oil circulated through the unit to remove sludge from turbulators and internal tube surfaces to return the unit to full capacity. A thorough cleaning of the entire system in the same manner is preferable to avoid carry-over from uncleaned piping, pump and accessories. The strainer of any filtering devices should be removed and serviced following this cleaning operation.

## Electric Motor

Keep outside surface free of dirt and grease so motor will cool properly. Make sure cooling air over motor is not obstructed. Prelubricated ball bearing motors are normally furnished and require no grease for about 5 to 10 years. Sleeve bearing motors require oil after three years.

## Hydraulic Motor

Change any oil filter(s) in the motor circuit as frequently as necessary to assure that good, clean oil is maintained.

## Units with Replaceable Air Filters

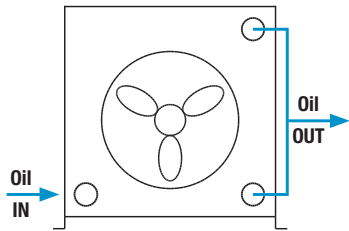
Examine filters for dirt and grease accumulation twice yearly, or more if operating conditions dictate. If disposable filters are used, replace as required. If the washable aluminum filters are used, wash with a warm water and soap solution that will remove dirt and cut grease build-up. Make sure that the aluminum filter is completely dry before replacing the unit. This filter can be made more effective if treated with a lightweight oil before placing in service. It is recommended that a spare aluminum filter be kept in stock to minimize downtime during the filter cleaning operation.

## Repair or Replacement of Parts

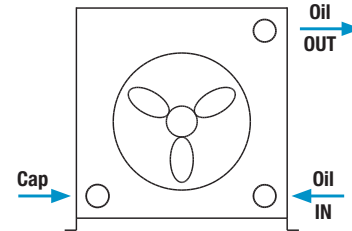
When ordering replacement parts or making inquiry regarding service, mention model number, serial number and the original purchase order number. Any reference to the motor must carry full nameplate data.

# Air / Oil Heat Exchangers

## One Pass



## Two Pass



AO, AOF & AOHM Models	One Pass Flow (GPM)	AOVH & AOVHM Models	One Pass Flow (GPM)
5	2-80	5	4-160
10	3-80	10	6-160
15	4-80	15	8-160
20	5-80	20	10-160
25	6-100	25	12-200
30	7-100	30	14-200
35	8-112	35	16-220
40	9-118	40	18-230

AO, AOF & AOHM Models	Two Pass Flow (GPM)	AOVH & AOVHM Models	Two Pass Flow (GPM)
5	2-25	5	4-50
10	2-30	10	4-60
15	2-30	15	4-60
20	2-40	20	4-80
25	2-40	25	4-80
30	2-40	30	4-80
35	3-40	35	6-80
40	4-40	40	8-80

## Gresen Hydraulic Motor Specifications

Model	Maximum Fan Speed (GPM)	Oil Flow Required (GMP)	Displacement (cu. in./rev)	Minimum Operating Pressure (PSI)
AOHM-5	1725	1.6	.22	300
AOHM-10	1725	1.6	.22	300
AOHM-15	1725	1.6	.22	300
AOHM-20	1725	1.6	.22	300
AOHM-25	1140	1.1	.22	400
AOHM-30	1140	1.1	.22	400
AOHM-35	1140	1.1	.22	900
AOHM-40	1140	1.1	.22	900
AOVHM-5	3450	3.3	.22	300
AOVHM-10	3450	3.3	.22	300
AOVHM-15	3450	3.3	.22	300
AOVHM-20	3450	3.3	.22	300
AOVHM-25	1725	3.4	.45	500
AOVHM-30	1725	3.4	.45	500
AOVHM-35	1725	5.2	.70	1000
AOVHM-40	1725	5.2	.70	1000

Maximum operating pressure 2000 PSI. Stated minimum operating pressure is at inlet port of motor. 1000 PSI allowable downstream back pressure.