



Lube Oil Cooler

Each lube oil system must be equipped with a lube oil cooler to maintain the proper temperature of the lube oil before it is supplied to the bearings. Maximum allowable oil temperature to the frame is 190°F (88°C). Thermostat temperature should be set at 170°F (77°C). The cooler should be as close as possible to the compressor, and the piping of adequate size to minimize pressure drop below 10 psi.

Ariel offers an unmounted shell and tube lube oil cooler as an option. Based on 140 deg F water in the tube side at a 2:1 oil to water flow ratio the following coolers can be used. Contact Application Engineering for specific cooler applications. Less available water flow may require a larger cooler than specified.

Warmer ambient temperatures, and within enclosed engine rooms, may require a larger cooler to help dissipate the heat load. The compressor frame can account for up to one half of the heat transfer when installed in an open environment. The coolers specified below are based on an open environment.

When the coolers are provided by others, heat load data can be found in the Ariel DataBook or Ariel Performance Program. The heat load numbers are based on an open field environment. Shell and tube, radiator style (oil to air) and plate and frame lube oil cooler types are acceptable.

Frame	Cooler
JG:A:M:N:P:Q:R:J/2/4,JGH:E:K:T/2, KBE:K:T/2	single pass cooler (P/N B-1962)
JGJ/6, JGH:E:K:T/4, JGC:D:F/2/4/6, JGE:K:T/6, KBE/4,KBK:T/4/6, KBU:Z/2	single pass cooler (P/N B-2073)
KBU:Z/4/6, KBB:V/4/6	two pass cooler (P/N B-6250)

Ariel cooler material specifications:

Shell	Steel
Baffles	Steel
Mounting Brackets	Steel
Gaskets	Nitrile Rubber / Cellulose Fiber
Tubes	Copper
Fins	Aluminum
End Caps	Gray Iron
Nameplate	Aluminum
Oil in the Shell side	Water in the tubeside