

DC Oil Coolers

This page describes our DC range of oil coolers which are designed for use on small marine transmissions. They have the same cupro-nickel tubes as our larger EC to PK range of oil coolers and therefore have the same long life expectancy.

The seawater connections are neoprene mouldings making them simple and easy to install and should cleaning be necessary, they can be removed using only a screwdriver. We can select by computer the appropriate oil cooler for a particular duty from the following information.

oil type or its viscosity at a specified temperature	cSt at °C
heat to be dissipated	kW
oil flow	liter/min
oil inlet temperature	°C
seawater temperature	°C
seawater flow	liter/min

If this information is not available, a selection can be made using the table below. In many cases we will have on file information which will enable us to select a suitable oil cooler for a particular engine and gearbox combination. Two oil connection sizes are available and three seawater pipe sizes which can be either in line or at right angles to the axis of the cooler. If preferred, the oil coolers can be supplied without end covers for incorporating directly into the seawater pipework.



Performance data of DC oil coolers

Typical examples of oil coolers fitted to marine transmissions with an oil inlet temperature of 80°C and a sea water temperature of 32°C.

Cooler Type	Maximum sea water flow for end cover code internal oil volume				Suitable for gearbox transmitting	
	Rc1"	Rc1 1/4"	Rc1 1/2"	Direct connector	kW	HP
	Liter/min	Liter/min	Liter/min	Liter/min		
DC 50	60	90	120	180	75	100
DC 60	60	90	120	180	120	160
DC 90	60	90	120	180	150	200
DC120	60	90	120	180	180	240

Design Parameter

Maximum working pressure on oil side: 25 bar

Maximum working pressure on water side: 3 bar, 10 bar, 15 bar

Maximum working temperature: 125°C

We produce customized applications on different working pressure and temperature.

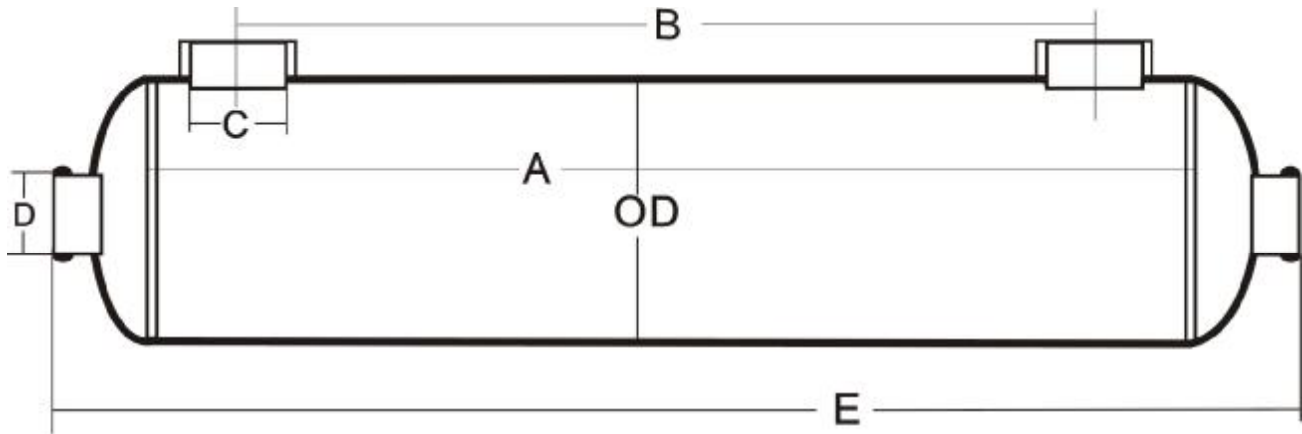
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Specification and dimension of oil coolers

	A(mm)	B(mm)	C(BSP)	D(BSP)	E(mm)	Internal oil volume(ml)	Internal water volume(ml)
DC 50	136	102	1/2" or 3/8"	1", 1 1/4", 1 1/2"	236	80	160
DC 60	176	142	1/2" or 3/8"	1", 1 1/4", 1 1/2"	276	105	200
DC 90	256	222	1/2" or 3/8"	1", 1 1/4", 1 1/2"	356	160	240
DC120	356	322	1/2" or 3/8"	1", 1 1/4", 1 1/2"	456	200	325



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Operation and Maintenance of Coolers

No oil cooler manufacturer can guarantee that his products will have an indefinite life and for this reason, we suggest that the cooling system is designed to minimise any damage caused by a leaking oil cooler.

This can be achieved as follows:

1. The oil pressure should be higher than the sea water pressure, so that in the event of a leak occurring, the oil will not be contaminated.
2. When the hydraulic system is not being used, the coolers should be isolated from sea water pressure.
3. The sea water outlet pipe from the cooler should have a free run to waste.
4. Stainless steel sea water pipes and fittings should not be used adjacent to the oil cooler.
5. Ensure maximum stated flow rates are not exceeded.