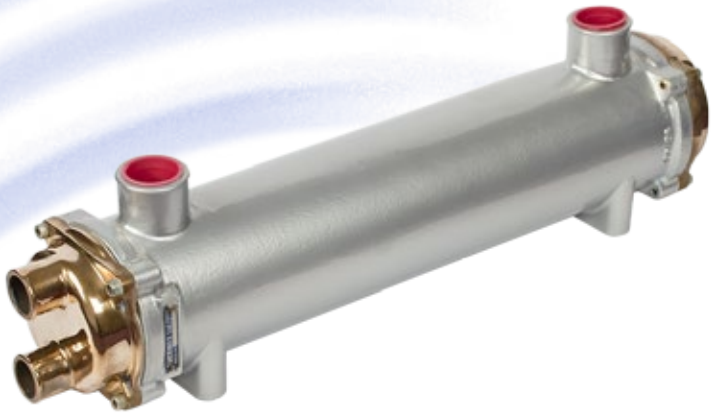
thermex

Advanced
Cooling
Technology

Marine
Charge Air Coolers

Tel: +44 (0)1527 62210 - www.thermex.co.uk

Introduction



Features and Benefits

- Comprehensive Range
- Shell diameters from 3" to 9"
- Variety of threaded and hose tail connections
- Floating tube stack design
- Easy to maintain and service
- Sacraficial anodes available on request
- Leak detection rings (2700 and 2800 series)

Founded in 1979, Thermex is now recognised as a manufacturer that delivers innovative designs and quality products to a global customer base from its extensive range of liquid and air cooled heat exchangers.

Our Charge Air Coolers are just a small part of a vast range of marine cooling products available from Thermex including; Engine and Transmission Oil Coolers, Jacket Water Heat Exchangers and Exhaust Manifold Heat Exchangers.

Performance

The figures below are based on an air temperature of 180 °C being cooled down to 50 °C at a pressure of 1.75 Bar G. The sea water temperature is 20 °C.

Note: These are only examples, for an accurate selection please send your enquiry data to sales@thermex.co.uk

Type	Air Flow Kg/min	Pressure Drop (kPa)	Water Flow (L/min)	Pressure Drop (kPa)	Heat Rejection (kW)
2510C	5	2.5	85	8	11
2520C	10	6	85	9	22
2530C	13	7.8	85	10.5	28.5
2610C	17.5	8	110	11	37
2710C	20	8	140	10	44
2810C	25	6	160	6.5	55
2910C	30	4	200	8.5	66

Materials and Configurations

The Thermex Marine Charge Air Coolers share the same materials and construction methods as our standard 2000 series oil coolers. Not only does this help to keep the costs low, but also ensures that the Charge Air Coolers will maintain the reliability and durability of our established Marine Oil Coolers.

For more demanding environments, we can supply Charge Air Coolers with more durable materials; such as 70/30 Copper-Nickel tubes. Please contact our sales and engineering teams for more information.

Construction Materials

Body

Aluminium 6063 (2500 Series)
Aluminium LM6M (2600 to 2900 Series)

Tubes

Standard	90/10 Cupro-Nickel (CN102)
Special	70/30 Cupro-Nickel (CN107)

Tube Plates

Standard	Naval Brass (CZ112)
Special	90/10 Cupro-Nickel (CN102)
Titanium	Titanium Gr.2

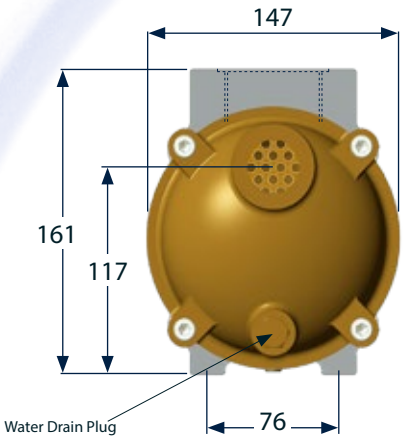
Water Boxes

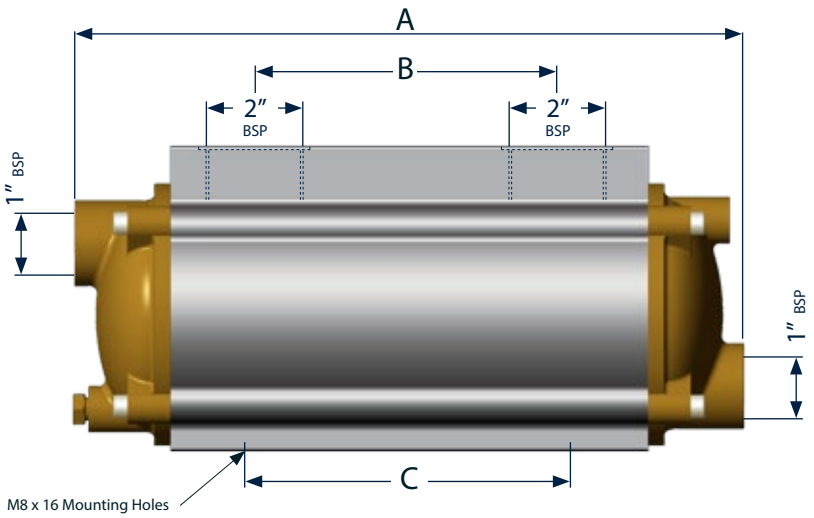
Gunmetal LG2
(Other materials such as Aluminium Bronze, 70/30 and Titanium available upon request)

Seals

Viton

2500 Series



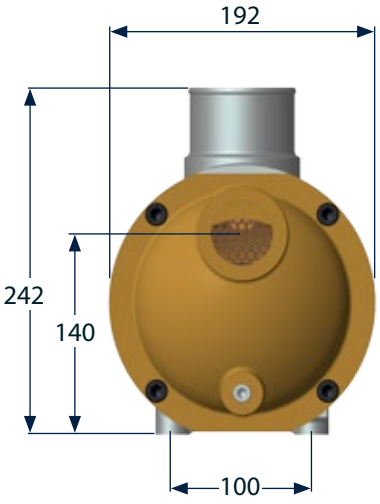


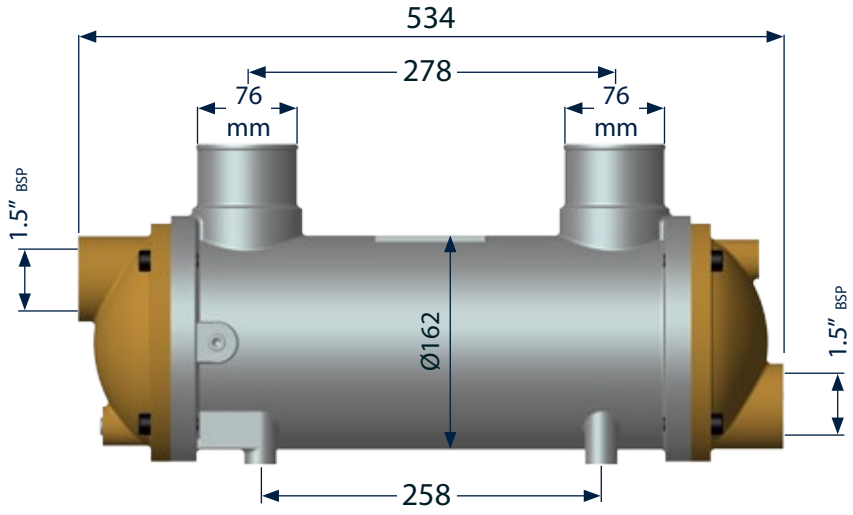
Type	A (mm)	B (mm)	C (mm)	Kg	Air Vol (L)	Water Vol (L)
2510C	291	83	75	11	1.4	1.4
2520C	377	169	161	13	1.9	1.7
2530C	480	285	260	14	2.5	2.1

For 1.5″ BSP water connections add Suffix H to part number
For 70/30 CuNi tube stack change last number to 6 e.g. 2510C becomes 2516C

Minimum Sea Water Flow Rate	3 Pass Cooler - 50 L/min
Maximum Sea Water Flow Rate	3 Pass Cooler - 120 L/min

2600 Series



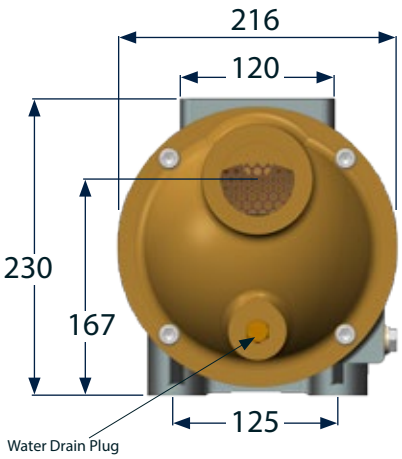


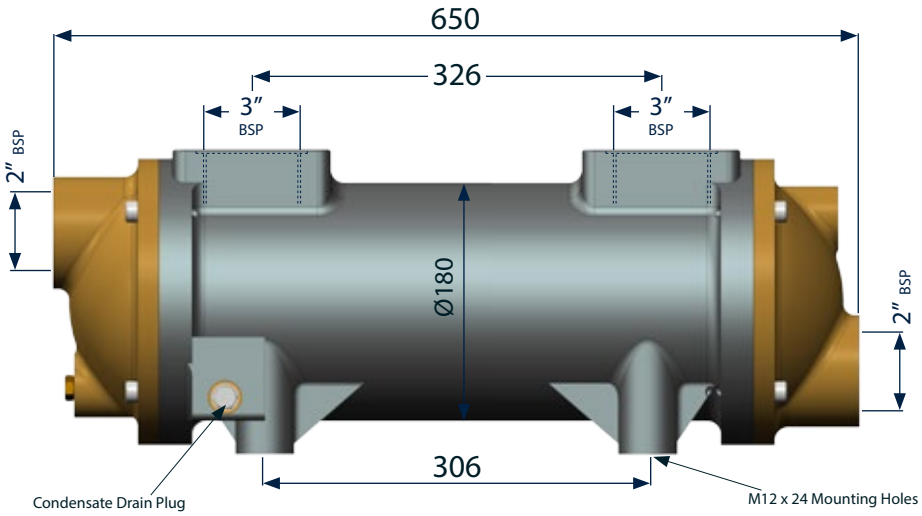
Model	Kg	Air Vol (L)	Water Vol (L)
2610C	20	3.7	2.9

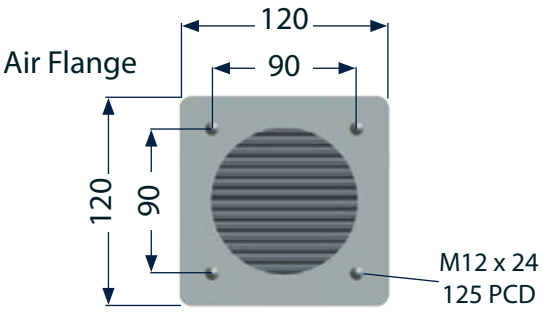
Minimum Sea Water Flow Rate	3 Pass Cooler - 95 L/min
Maximum Sea Water Flow Rate	3 Pass Cooler - 150 L/min

For 70/30 CuNi tube stack change last number to 6 e.g. 2610C becomes 2616C

2700 Series





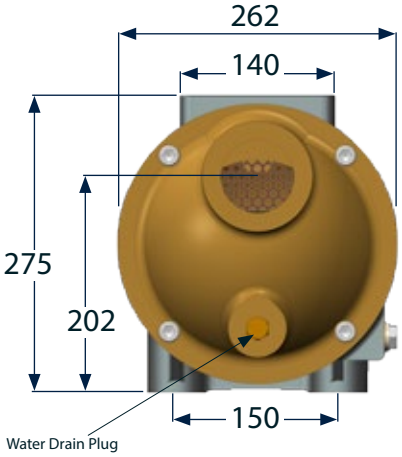


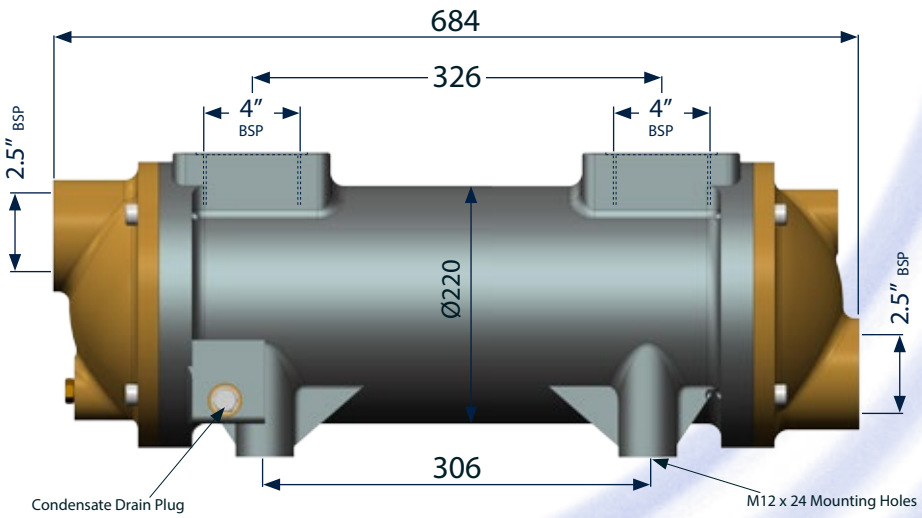
Model	Kg	Air Vol (L)	Water Vol (L)
2710C	38	5.5	5.0

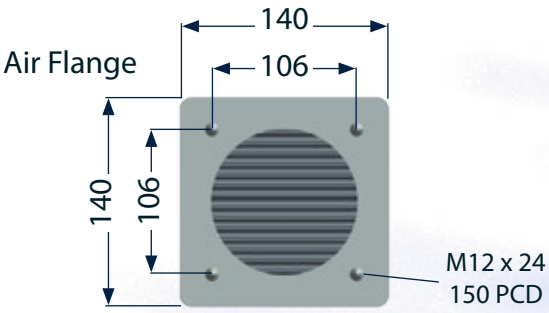
Minimum Sea Water Flow Rate	3 Pass Cooler - 100 L/min
Maximum Sea Water Flow Rate	3 Pass Cooler - 210 L/min

For 70/30 CuNi tube stack change last digit to 6 e.g. 2710C becomes 2716C

2800 Series





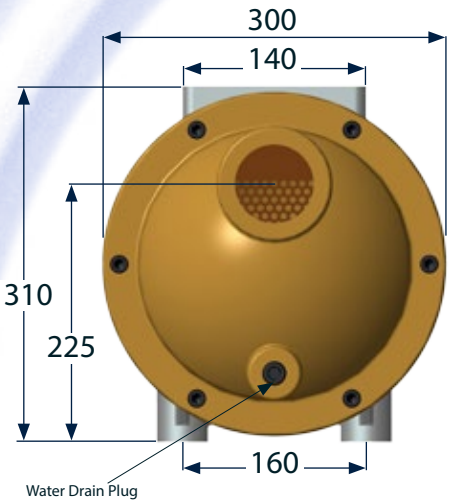


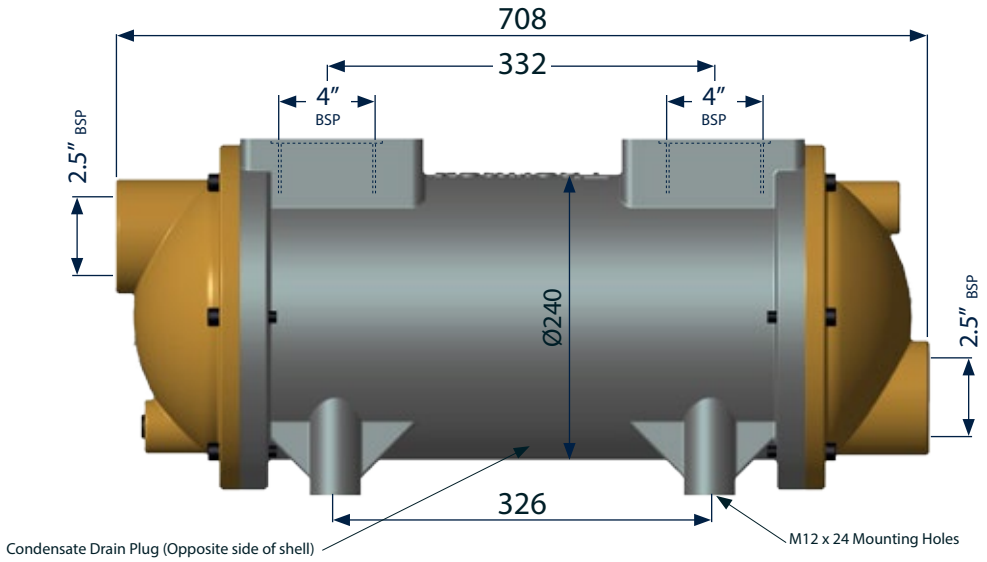
Model	Kg	Air Vol (L)	Water Vol (L)
2810C	48	9.0	7.5

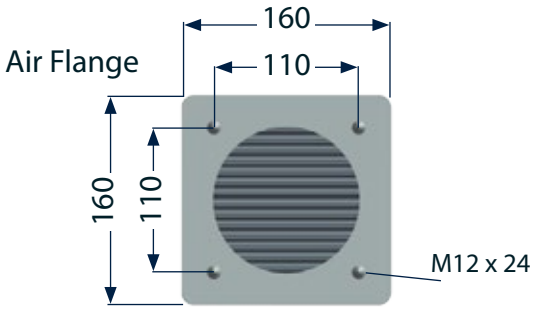
Minimum Sea Water Flow Rate	3 Pass Cooler - 140 L/min
Maximum Sea Water Flow Rate	3 Pass Cooler - 300 L/min

For 70/30 CuNi tube stack change last digit to 6 e.g. 2810C becomes 2816C

2900 Series







Model	Kg	Air Vol (L)	Water Vol (L)
2910C	60	13.6	12.2

Minimum Sea Water Flow Rate	3 Pass Cooler - 200 L/min
Maximum Sea Water Flow Rate	3 Pass Cooler - 335 L/min

For 70/30 CuNi tube stack change last digit to 6 e.g. 2910C becomes 2916C

Spare Parts

Spare parts for standard three-pass configuration coolers.

Type	Tube Stack	Header Kit	Seal Kit	Anode
2510C	720136	770121	409521	762004
2520C	721107	770121	409521	762004
2530C		770121	409521	762004
2610C	720725	770621	409622	762004
2710C	720724	770721	409722	762000
2810C		770821	409822	762000
2910C		770921	409922	762000

If you are unsure which spare parts you require, please contact us for technical support.

Installation and Maintenance

Installing

- Coolers should be mounted horizontally
- Allow access for removal of water boxes for servicing
- Water inlet should be adjacent to the air outlet (counter flow)
- Care should be taken to prevent water from freezing if the cooler is exposed to harsh winter conditions
- We recommend that sea water is filtered to 2.0mm

Servicing

- The water boxes can be removed by unscrewing the capscrews
- The tube stack should slide out of the housing, although older coolers might be more difficult to remove
- The O Rings should always be replaced after the water boxes have been removed

Contact Us

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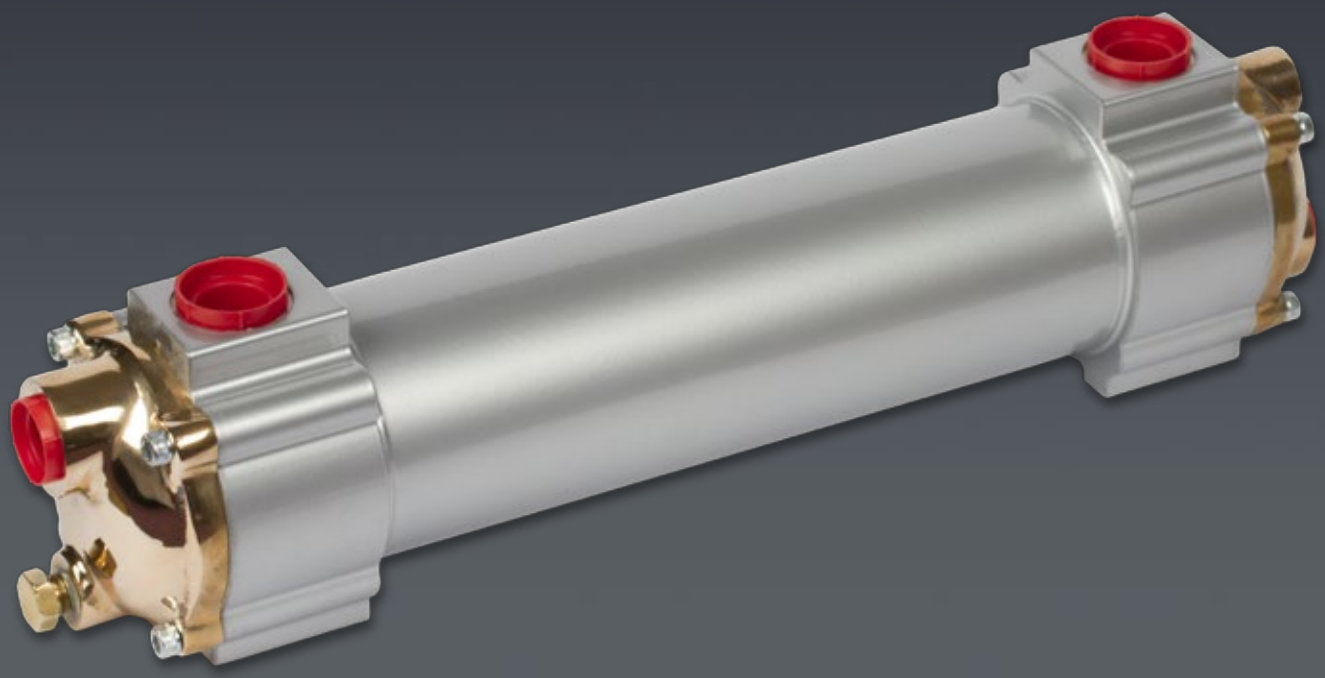

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