

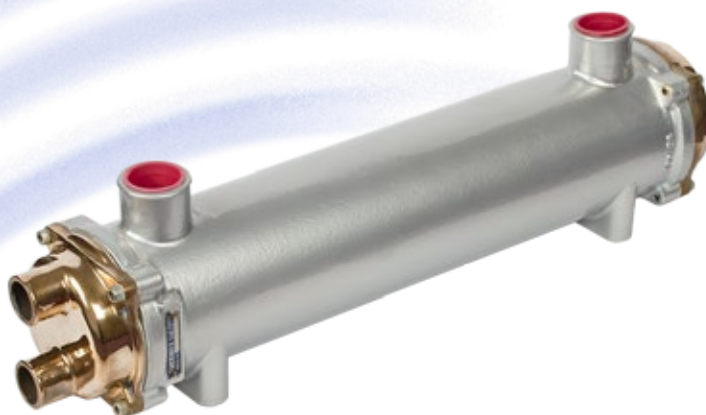


Advanced
Cooling
Technology

Thermex Charge Air Coolers



Introduction



Features and Benefits

- » Comprehensive Range
- » Shell diameters from 3" to 9"
- » Variety of threaded and flange connections
- » Floating tube stack design
- » Easy to maintain and service
- » Sacrificial anodes available on request

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 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 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 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 Shell and Tube 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 |

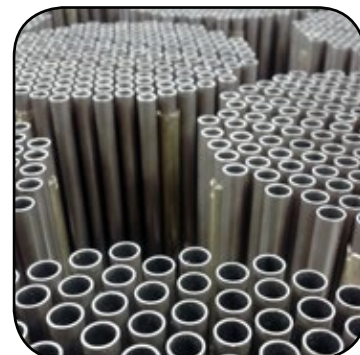
Water Boxes

| | |
|-----------------|-----------|
| Land Based: | Cast Iron |
| Marine Version: | Gunmetal |

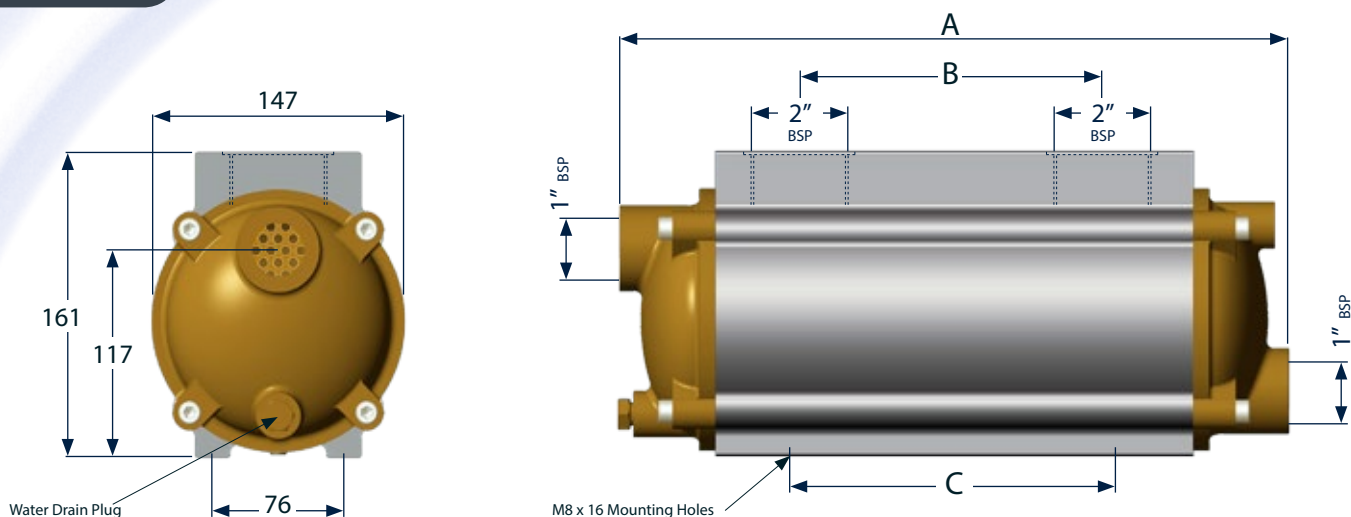
(Other materials such as Aluminium Bronze, 70/30 and Titanium available upon request)

Seals

Viton



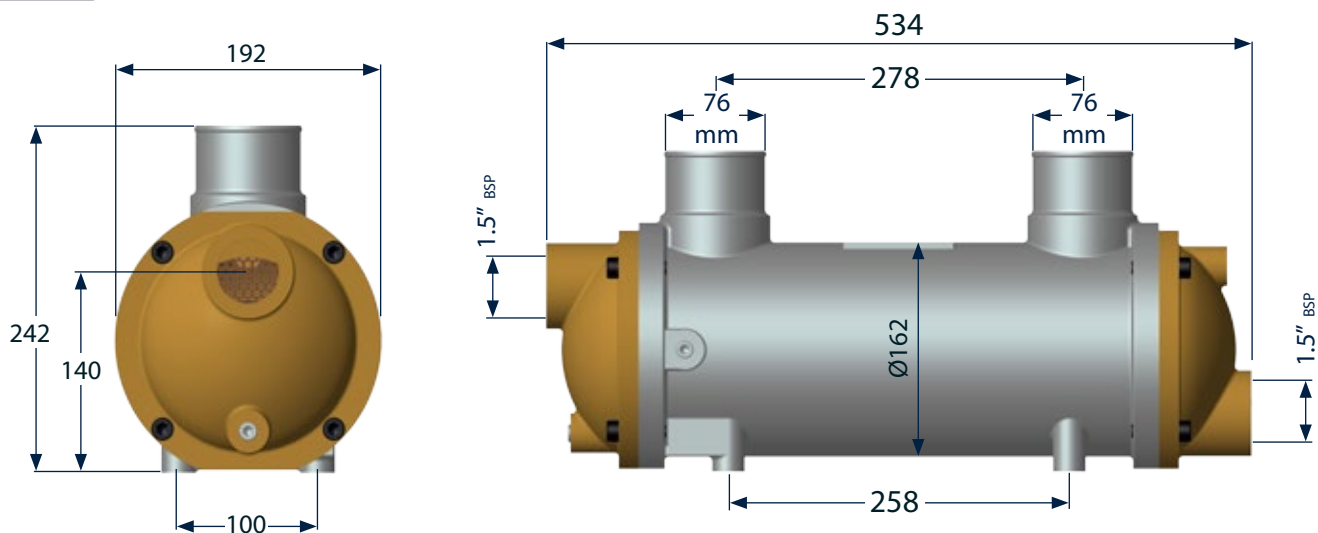
CAC 5



| Marine Part No. | Land Part No. | A (mm) | B (mm) | C (mm) | Kg | Air Vol (L) | Water Vol (L) |
|-----------------|---------------|--------|--------|--------|----|-------------|---------------|
| CAC51-M-3P | CAC51-L-3P | 291 | 83 | 75 | 11 | 1.4 | 1.4 |
| CAC52-M-3P | CAC52-L-3P | 377 | 169 | 161 | 13 | 1.9 | 1.7 |
| CAC53-M-3P | CAC53-L-3P | 480 | 285 | 260 | 14 | 2.5 | 2.1 |

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

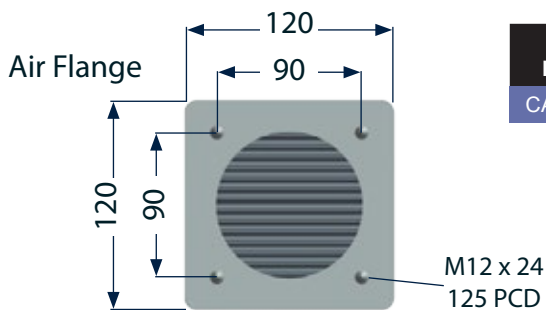
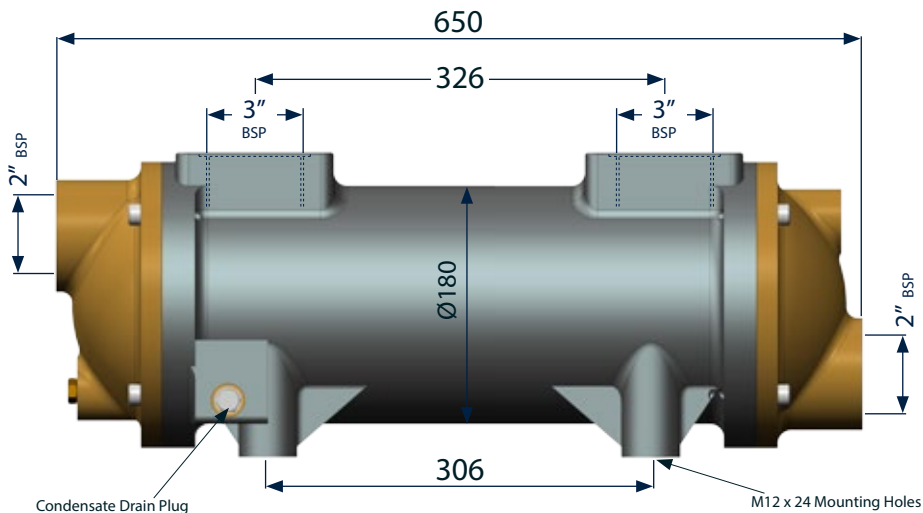
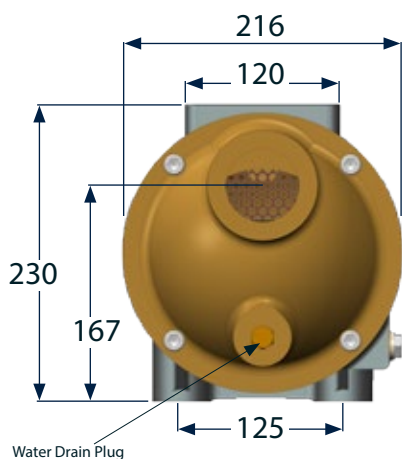
CAC 6



| Marine Part No. | Land Part No. | Kg | Air Vol (L) | Water Vol (L) |
|-----------------|---------------|----|-------------|---------------|
| CAC6-M-3P | CAC6-L-3P | 20 | 3.7 | 2.9 |

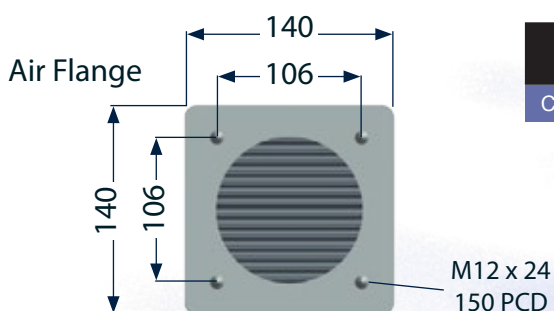
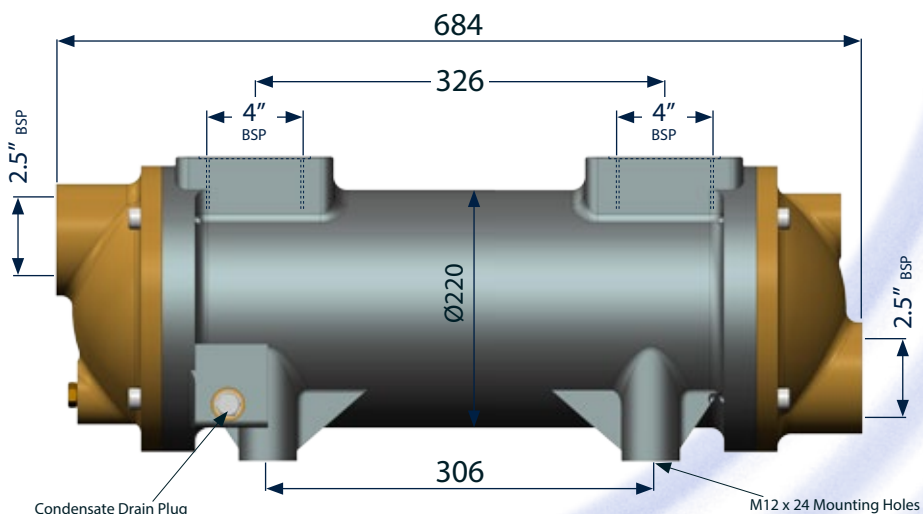
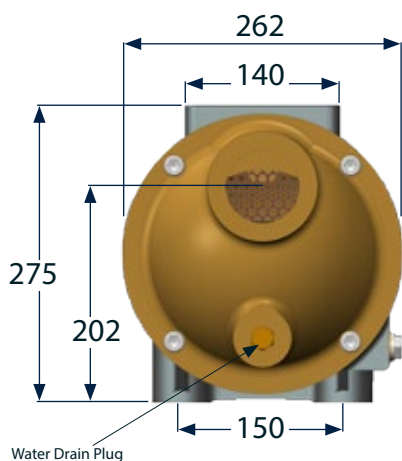
| | |
|-----------------------------|---------------------------|
| Minimum Sea Water Flow Rate | 3 Pass Cooler - 95 L/min |
| Maximum Sea Water Flow Rate | 3 Pass Cooler - 150 L/min |

CAC 7



| Marine Part No. | Land Part No. | Kg | Air Vol (L) | Water Vol (L) |
|-----------------|---------------|----|-------------|---------------|
| CAC7-M-3P | CAC7-L-3P | 38 | 5.5 | 5.0 |

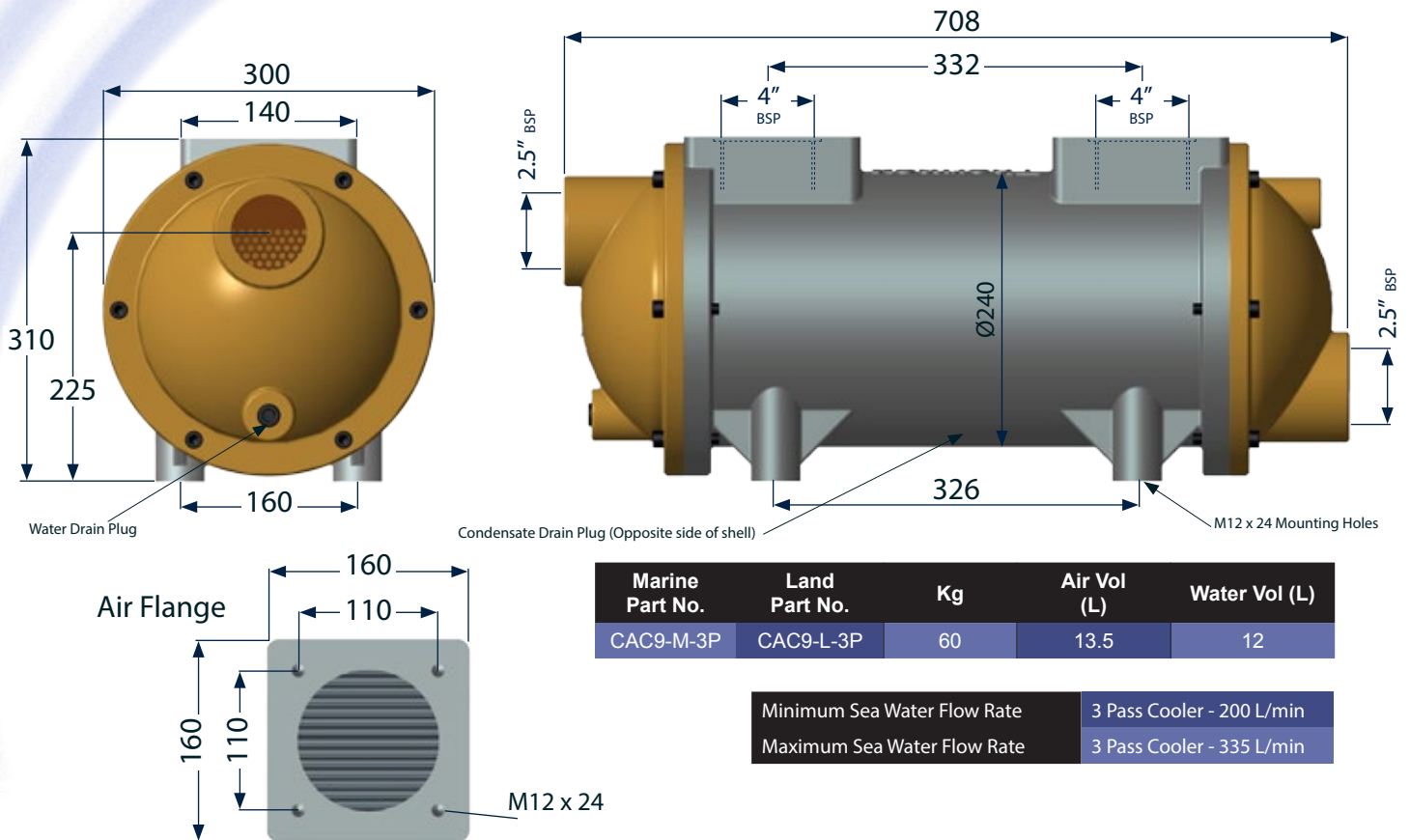
| | |
|-----------------------------|---------------------------|
| Minimum Sea Water Flow Rate | 3 Pass Cooler - 100 L/min |
| Maximum Sea Water Flow Rate | 3 Pass Cooler - 210 L/min |



| Marine Part No. | Land Part No. | Kg | Air Vol (L) | Water Vol (L) |
|-----------------|---------------|----|-------------|---------------|
| CAC8-M-3P | CAC8-L-3P | 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 |

CAC 9



| Marine Part No. | Land Part No. | Kg | Air Vol (L) | Water Vol (L) |
|-----------------|---------------|----|-------------|---------------|
| CAC9-M-3P | CAC9-L-3P | 60 | 13.5 | 12 |

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

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

Email: sales@thermex.co.uk

www.thermex.co.uk

Tel: +44 (0)1527 62210 - **Fax:** +44 (0)1527 60138

Thermex Ltd, Merse Road, North Moons Moat, Redditch, Worcestershire, B98 9HL, U.K.



Thermex Ltd

Merse Road, North Moons Moat, Redditch, Worcestershire, B98 9HL, U.K.

Tel: +44 (0)1527 62210 – Fax: +44 (0)1527 60138

www.thermex.co.uk – sales@thermex.co.uk