

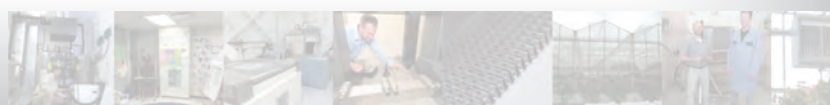


# HEAT EXCHANGERS & COOLERS FOR OIL & GAS APPLICATIONS

Coiltech<sup>®</sup> industrial  
heat transfer



A04



# HEAT EXCHANGERS & COOLERS FOR OIL & GAS APPLICATIONS

Modine has been manufacturing heat exchangers and coolers for many different industries and for many different applications, including the oil and gas industry, for quite some time. In addition to delivering highly-specialised, high-quality heat exchanger and cooler solutions, Modine is your full service project manager in managing the volumes of paperwork and regulations often associated with these types of installations. For this intensely regulated market we include the necessary quality verifications, certifications and administrative support to make meeting the industry's stringent requirements easier on you.

## PROJECT MANAGEMENT

To meet the highly complex and often unique demands of the oil and gas sector, Modine provides each customer with a dedicated project manager. Each project manager leads a larger team of engineering, quality, sales and purchasing competences. This streamlines communications and provides customers with one central point of contact who oversees and coordinates the many intricate details of the project.

## INQUIRY AND QUOTATION

Inquiries for equipment operating onshore or offshore in the oil and gas sector are often accompanied with a long list of specifications. Modine has extensive resources on-hand to analyse these specifications and project requirements to make a comprehensive quotation for the optimal solution. The quotation defines the exact deliverables and includes the proposed dimensional drawings, inspection and test plans, and product listings. Even customers unclear on exact specifications or requiring quick quotations can be supported with budget quotations based on many years of experience making similar deliveries.

## ENGINEERING

Each design is customised according to the requirements and site specific conditions by using Modine proprietary COILS software. Input parameters of the software are based on practical testing performed in our own laboratories. Together with our partners,

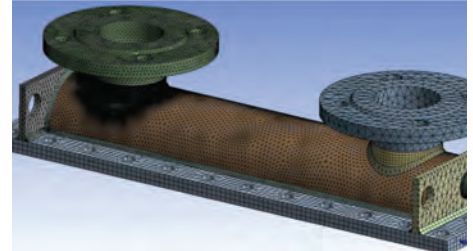
Modine can perform shake tests and also validate products' strength calculations according to EN and ASME standards. More extensive load evaluations and reports e.g. combined cases of seismic, wind and snow loads are also available.

## QUALITY

The manufacturing of each unit is monitored according to the project's specific inspection and test plan (ITP) with possible witness and hold points. A wide range of non-destructive testings (NDTs) and functional checks are also available for qualification. A pneumatic pressure test is always performed on all products.

## MATERIAL SELECTION

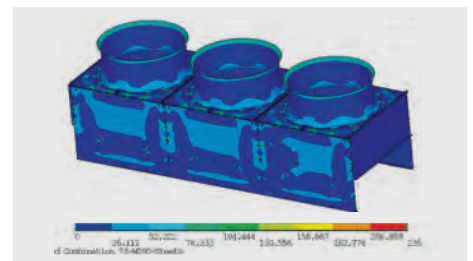
Modine has extensive experience in working with a wide variety of materials, for example titanium, stainless steel, acid proof steel, painted steel, galvanized steel, copper, copper/nickel, aluminum, aluminium/magnesium, and brass. Each product is available in a variety of combinations, with or without coatings. All pressure retaining parts can be delivered with material certificate according to EN 10204-3.1 or similar ASME material certificate. If required, other parts can also be delivered with material certification.



3D model of chamber with meshing.



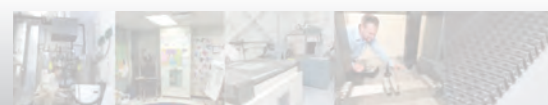
Penetrant testing is one of many possible NDT's for welds.



Advanced Finite Element Method (FEM) analysis is used for structural verification and risk assessment.

## PROCESS FLOW:

1. Inquiry
2. Review of specifications
3. Quotation
4. Order
5. Pre-approval documentation
6. Manufacturing following ITP
7. Final acceptance test
8. Final documentation





## AIR BLAST COOLERS FOR OIL & GAS PROJECTS

The Modine air blast cooler offers a wide range of options such as vibration sensors, temperature transmitters and flow measurement devices. For oil or gas projects, Modine can prepare a complete package that combines the wide range of accessories and options into a completely customised air blast cooler design. The complete package, with recommended accessories, is included in the quotation and it's all defined in the detailed dimensional drawings.

### OPTIONS & ACCESSORIES

- ATEX design
- Fan & Motor position
- Corrosion protection
- Steel structure & maintenance deck
- Cabling
- Junction box
- Earthing/Grounding
- Safety switch
- Temperature transmitter
- Vibration sensor
- Flow measurement device
- Silencer
- Expansion tank
- Level switch/Magnetic level switch
- Level glass
- Pressure cap etc.



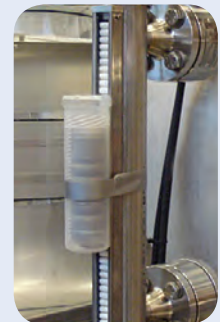
Temperature transmitter



Expansion tank



Level switch



Magnetic level switch

## MOTOR & GENERATOR COOLERS FOR OIL & GAS PROJECTS

Modine motor/generator coolers are designed to meet the specific requirements concerning material selection, tightness control and strength specified by the oil and gas sector. A wide range of materials in both single and double tube designs are available.





A cooler with copper fins resists a saline environment very well. Coolers with titanium or stainless steel tubes are also available.

### BUILT-IN FLEXIBILITY, VALUE-ADDED CUSTOMIZATION

With our extensive list of products, combined with a wide range of available options, we provide flexibility in building the exact solution for the exact industrial application. And if this flexibility isn't enough, our experienced design and engineering department will provide a specified quotation for a customized solution that does. Afterall, no two applications are often exactly the same.



To learn more, visit  
[www.modine.com](http://www.modine.com)

 Follow us @ModineHVAC  
 See us at [YouTube.com/ModineHVAC](https://www.youtube.com/ModineHVAC)

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#### About Modine

Modine specializes in thermal management systems and components, bringing highly engineered heating and cooling components, original equipment products, and systems to diversified global markets through its three complementary business units: Vehicular Thermal Solutions (VTS); Commercial & Industrial Solutions (CIS); and Building HVAC Systems (BHVAC).

Modine is a global company headquartered in Racine, Wisconsin (USA), with operations in North America, South America, Europe, Asia and Africa.

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