# FACO

HEAT EXCHANGERS AND DRY COOLERS

TÜV SÜD ISO 9001

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ZEROEMISSION electricity

## CUSTOM DESIGNS TO MEET YOUR NEEDS

# DRY COOLERS AND CONDENSERS

www.linkedin.com/company/faco-s.p.a./

www.faco.it

CUSTOM DESIGN | FEA | CFD | NOISE AND VIBRATION ANALYSIS | ASME BPVC ("U") | EN 13445 | ATEX | UL/CSA | EAC | AHRI | PED MODULES H / H1

FACO
HEAT EXCHANGERS AND DRY COOLERS

# DRY COOLERS AND CONDENSERS

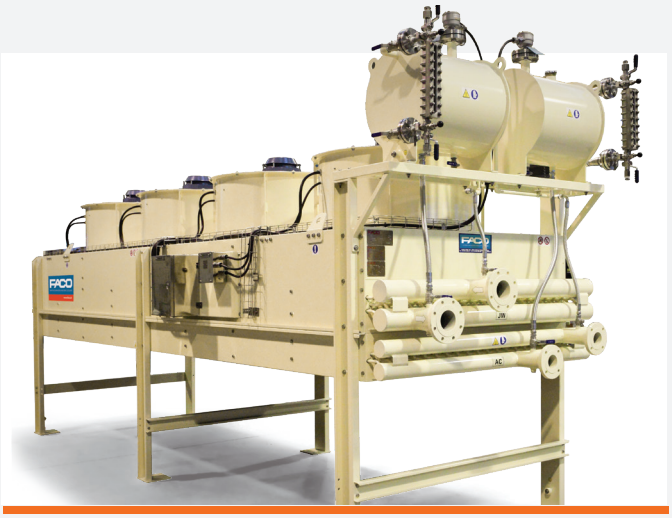
## Dry coolers
## *Aerorefrigeranti*

The availability of a wide range of materials and tube patterns for the heat exchangers, together with the high production and design flexibility, allows FACO to supply custom-made dry coolers and condensers suitable for most fluids, in the most varied operating conditions, ensuring the best results in terms of performance and noise emission.

*La disponibilità di un'ampia gamma di materiali e di geometrie per gli scambiatori, insieme all'elevata flessibilità progettuale e costruttiva, consente a FACO di fornire dry cooler e condensatori personalizzati, adatti alla maggior parte dei fluidi, nelle più diverse condizioni operative, garantendo i migliori risultati in termini di prestazioni e silenziosità.*

V type with reinforced structure and low noise design.

*Tipo V con struttura rinforzata. Soluzione a bassa rumorosità.*



Special coatings and components for harsh environments. Offshore installation.

*Verniciature e componenti speciali per ambienti estremi. Installazione su piattaforma.*

Compact design for minimal footprint. Indoor installation.

*Design compatto per minima impronta a terra. Installazione indoor.*

Three sections radiator for high and low temperature circuits and fuel cooling.

*Radiatore a tre sezioni per i circuiti di alta e bassa temperatura e raffreddamento fuel.*

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# DRY COOLERS AND CONDENSERS

## Applications
## *Applicazioni*

Power generation
Nuclear plant installations
Cogeneration and trigeneration
Offshore platforms and onshore plants
Refining and Biorefining processes
Production of vegetable oil
Heat transfer fluids processing
Turbine lube-oil cooling
Explosion proof solutions
Anti-shock and blast-resistant design
Seismic zone installations
Hydrocarbons condensation
Harsh environment operation
Food processing
Shock freezing
Industrial processes

*Produzione di energia*
*Installazione in siti nucleari*
*Cogenerazione e trigenerazione*
*Installazione su piattaforma e onshore*
*Processi di raffinazione e bioraffinazione*
*Produzione di oli vegetali*
*Trattamento fluidi termovettori*
*Raffreddamento olio turbine*
*Soluzioni anti deflagranti*
*Design anti-shock e resistenti a onda d'urto*
*Installazione in zone sismiche*
*Condensazione di idrocarburi*
*Funzionamento in ambienti estremi*
*Industria alimentare*
*Shock freezing*
*Processi industriali*

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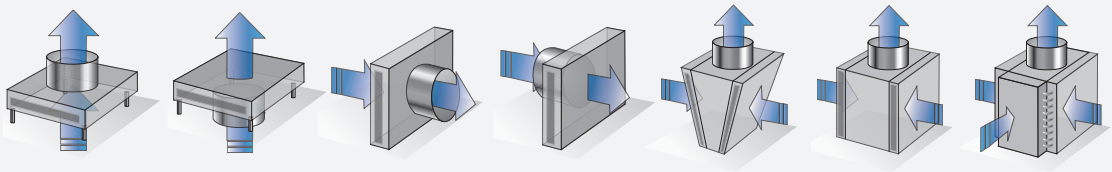
# DRY COOLERS AND CONDENSERS

## Configurations
## *Configurazioni*



**TA** **TP** **IA** **IP** **VA** **HA** **SB**

## Smartbox module
## *Modulo smartbox*

An extremely compact module that can fit at one end of the gen-set container. The SmartBox is a full-height, three-sided radiator with flush-mounted fans on top. The multi-sections version can cool several circuits such as high and low temperature and fuel.

*Un modulo estremamente compatto collocabile ad una estremità del container. Lo SmartBox è un radiatore a tutta altezza che si sviluppa su tre lati con ventilatori incassati. La versione multi sezione può gestire più circuiti come alta e bassa temperatura e fuel.*

Single section SmartBox for jacket-water cooling

*SmartBox a sezione singola per raffreddamento circuito jacket-water*

Double section SmartBox for jacket-water and after-cooler circuits.

*SmartBox a doppia sezione per raffreddamento circuiti jacket-water e after-cooler.*

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# DRY COOLERS AND CONDENSERS

## Components and accessories
## *Componenti e accessori*

### Customized components and accessories

- Finned block
- Axial fans
- Electrical connections
- Vibro switches
- Heating cables
- Protection nets
- Snow covers
- Expansion tanks and level gauges
- Isolation valves
- Defrosting systems
- Control and regulation cabinets
- Thermal probes
- Walkways, hand-rails and ladders
- Turbulators

### *Componenti e accessori personalizzabili*

- *Pacco alettato*
- *Ventilatori*
- *Impianto elettrico*
- *Vibro switches*
- *Restistenze elettriche*
- *Reti di protezione*
- *Snow cover*
- *Vasi di espansione e indicatori di livello*
- *Valvole di isolamento*
- *Sistemi di sbrinamento*
- *Quadri di controllo e regolazione*
- *Sonde di temperatura*
- *Passerelle, corrimani e scale*
- *Turbolenziatori*

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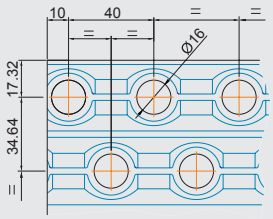
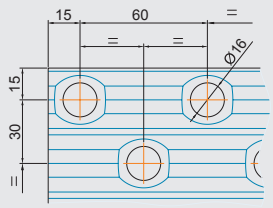
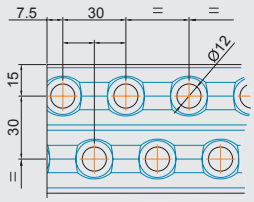
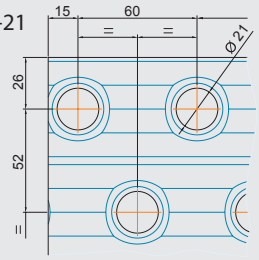
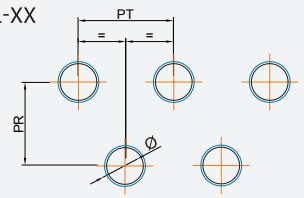
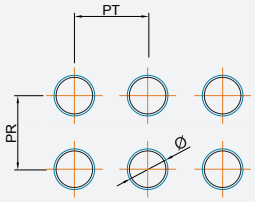
# DRY COOLERS AND CONDENSERS

## Finned block
## *Pacco alettato*

| Tube pattern<br>*Geometrie* | Features<br>*Caratteristiche* | Tube materials and thickness<br>*Materiale tubi e spessori* | Fin materials and thickness<br>*Materiale alette e spessori* |
|---|---|---|---|
| P40-16<br>  <br> | tube external diameter<br>*diametro esterno tubo* — 16.5 mm<br>corrugated plate type fins<br>*alette continue ondulate*<br>fin pitch<br>*passo alette* — min 1.6 mm, max 12 mm<br>defrosting rods holes available<br>*possibilità di fori resistenze* | Cu 0.4 0.5 0.7 1.0<br>CuSn 0.4 0.5 0.7 1.0<br>CuNi10 1.0<br>CuNi30 1.0<br>Fe 1.5<br>Aisi304 0.6 1.0<br>Aisi316 0.6 1.0<br>Al 1.0 1.5 | Al 0.13 0.20 0.25 0.40<br>Cu 0.11 0.20<br>CuSn 0.11 0.20<br>Aluver 0.13 0.25 0.40<br>AlMg2.5 0.13 0.25<br>Aisi304 0.15<br>Aisi316 0.15 |
| P60-16<br>  <br> | tube external diameter<br>*diametro esterno tubo* — 16.5 mm<br>corrugated plate type fins<br>*alette continue ondulate*<br>fin pitch<br>*passo alette* — min 1.6 mm, max 12 mm<br>defrosting rods holes available<br>*possibilità di fori resistenze* | Cu 0.4 0.5 0.7 1.0<br>CuSn 0.4 0.5 0.7 1.0<br>CuNi10 1.0<br>CuNi30 1.0<br>Fe 1.5<br>Aisi304 0.6 1.0<br>Aisi316 0.6 1.0<br>Al 1.0 1.5 | Al 0.13 0.20 0.25 0.40<br>Cu 0.11 0.20<br>CuSn 0.11 0.20<br>Aluver 0.13 0.25 0.40<br>AlMg2.5 0.13 0.25<br>Aisi304 0.15<br>Aisi316 0.15 |
| P30-12<br>  <br> | tube external diameter<br>*diametro esterno tubo* — 12.2 mm<br>corrugated plate type fins<br>*alette continue ondulate*<br>fin pitch<br>*passo alette* — min 1.6 mm, max 5 mm | Cu 0.35 0.5<br>CuSn 0.35 0.5 | Al 0.10 0.13 0.20 0.25<br>Cu 0.11 0.20<br>CuSn 0.11 0.20<br>Aluver 0.13<br>AlMg2.5 0.13 |
| P60-21<br>  <br> | tube external diameter<br>*diametro esterno tubo* — 22 mm<br>corrugated plate type fins<br>*alette continue ondulate*<br>fin pitch<br>*passo alette* — min 2.0 mm, max 12 mm | Fe 1.5<br>Aisi304 1.0 1.5<br>Aisi316 1.0 1.5 | Al 0.25 0.40<br>Cu 0.20<br>CuSn 0.20<br>Aluver 0.25 0.40<br>AlMg2.5 0.25<br>Fe 0.25 |

PFL-XX




### Finless heat exchangers

This finless pattern allows to freely select the pitch, diameter and configuration of the tubes according to heat exchanger service and design requirements.

### *Batteria senza alette*

*Questa geometria senza alette consente di selezionare liberamente il passo, il diametro e la disposizione dei tubi in funzione dei requisiti di progetto e di servizio dello scambiatore.*

### Explore more technical documentation
### *Esplora le altre documentazioni tecniche*

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**HEAT EXCHANGERS AND ECONOMIZERS**

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