



CLIMATE SYSTEMS

PRODUCTS 2020



Meet COPRA

We are a fully integrated HVAC supplier located on the North West Coast of Norway, established in 2005.

COPRA AS
Trohaugen 1
11-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



About COPRA

We can deliver complete HVAC plants according to class, regulations and owner's requests.

Our highly skilled team carry out calculations, engineering and procurement, installation, commissioning and delivery of complete HVAC plants. We use the best available materials and machinery and ensure air conditioned and clean air throughout the vessel, focusing on the most energy effective solutions.

Our competitive offers are based on long lasting business relationships with producers of high-quality ventilation equipment both domestic and abroad. Some of the equipment is produced according to our own drawings and specifications.

We have delivered ventilation packages to yards in Norway, Romania, Vietnam, Singapore and Brazil. In addition to this we have delivered ventilation equipment to countries like, Dubai, Indonesia, South Africa, UK, Canada etc.

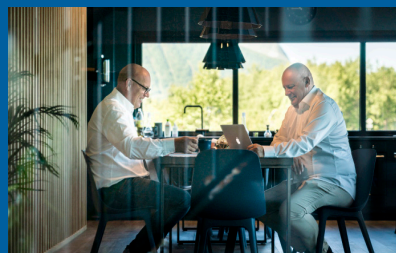
Why Choose us?

- Long reference list with a wide range of vessels (>180)
- Dedicated and solution-oriented
- Customer focused
- Reliable company with satisfied customers
- Always delivery on time
- Quick responding and highly skilled staff
- Service-minded
- Preferred by the larger offshore companies
- Well known and reliable makes and suppliers

New Offices

In April 2018 we moved into our new office building in Tomrefjord. New offices and a bigger warehouse gives us the possibility to give better service to our customers with products and spareparts on stock.

We got spareparts for most of our products on stock in Tomrefjord. We also keep a high number of products on stock, in that way we can deliver our high quality equipment without adding extra production time and expensive air freight last minute.





Our Scope

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

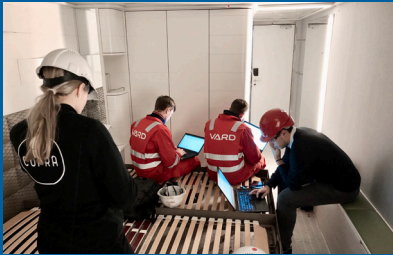
Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:

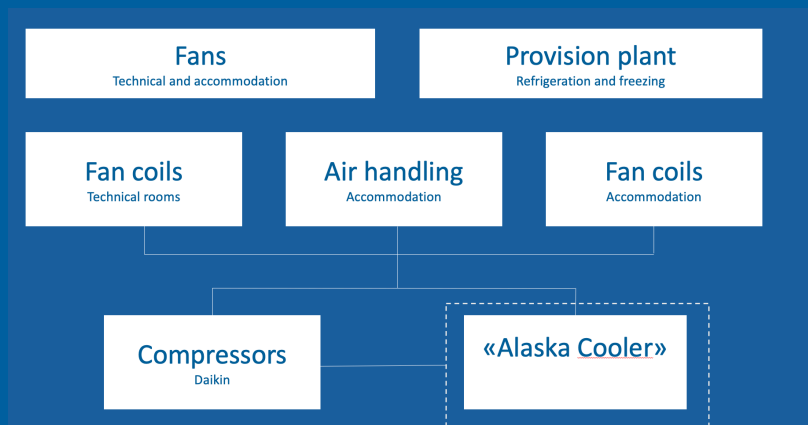


We deliver HVAC SERVICES that includes:

- Budget calculations and reviews
- Basic design
- Detail design
- Planning and project management
- Procurement (deliveries of materials)
- Installation of equipment
- Precommissioning/Commissioning: FAT, HAT and SAT
- Aftermarket
- Other services



HVAC-R Equipment Integration





Air Handling Units

We supply Air Handling Units for all applications. SAMP is one of our suppliers.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 443 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no



Standard panels are available in 28, 46, and 60mm thicknesses, and are available in a range of materials including stainless steel sheets, heat-galvanised sheets, smooth or embossed aluminium sheets, and pre-painted galvanised sheets.

Two types of panel insulation are available:

- Heat-injected polyurethane foam (average density: 45/50kg/m³ and class 1 flame resistance)
- Fibre mineral wool panels (average density: 90/100kg/m³ and class 0 flame resistance).

Profiles

Cold bridge free profiles specially constructed using two aluminium elements, joined by glass filled polyamide bars to guarantee high mechanical resistance whilst significantly reducing the thermal bridges (achieving a thermal bridge factor of TB1 in accordance with UNI EN 1886).

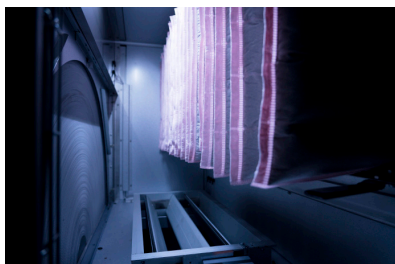
These profiles are available in 40 and 70mm sizes.

Customised Units

We can supply customised according to our clients' requirements and uses, so to achieve the best results in terms of energy consumption, acoustics and general logistics.

AHUs can be constructed directly on site with features to include all types of non-standard layouts, materials, and accessories. In particular, if requested, we can design and manufacture:

- Units up to 200,000 m³/h
- Total pressure up to 10,000 Pa
- Sandwich panels up to 100mm thick.





AFPRO Filters

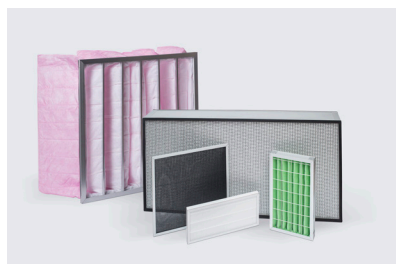
Copra have distribution rights for Scandinavia for AFPRO filters.

www.afprofilters.com

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no



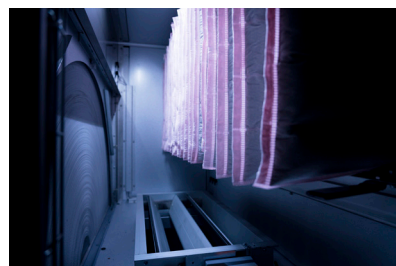
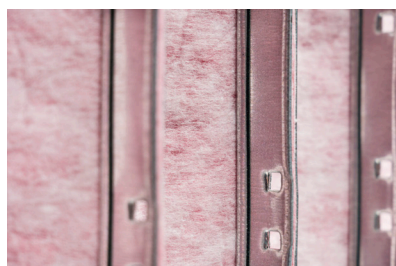
Through our cooperation with AFPRO, Copra is able to deliver filters of the highest available quality. AFPRO undertakes continuous improvement on all air filters it manufactures, ensuring compliance with ISO16890, whilst meeting and exceeding customer expectations.

AFPRO manufactures all filters in-house, which enables more efficient turnaround times. The EUROVENT "certify all" programme, employed by AFPRO ensures a consistent quality of manufacture is maintained. Filters are available in both synthetic/polymer and glass fibre variants, both generously compliant with ISO16890.

Filtration levels for AFPRO Filters range from HEPA, ePM1 through to coarse, depending on customer applications and requirements. Our filters are used for pre-filter of air condition system, clean room, spray booth, pharmaceutical factory, hospital, electronic factory, food factory or other industry filtrations and so on.

Non-Shed:

The media of the HQ bag filter (glassfibre) series consist of a new generation super fine fibers. The material is finished with a dense membrane that prevents fiber migration. The HQ-series is ranked the best energy ratings with A-label performance.





Fan Coil F-TYPE

Copra F-Type Fan Coils for floor mounting

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



- Fan coil unit with casing
- Heating and cooling applications
- Remote controlled operation

Copra Fan Coils are made to meet the strict requirements of the marine industry. They are highly reliable and made through close cooperation with our customers. The compact size and easy installation make them easy to fit onboard your ship.

The F-Fan Coil is available in 3 different sizes, ranging from 5.4kW to 12.6kW in cooling capacities.



Model				F5.4	F7.2	F12.6
Power Supply				220V,60Hz,1Ph		
Air Volume	H	m ³ /h		1020	1360	2380
	M			770	1020	1790
	L			510	680	1190
Cooling Capacity	H	W		5400	7200	12600
	M	W		4483	5978	10461
	L	W		3487	4649	8136
Heating Capacity	H	W		8100	10800	18900
	M	W		6393	8524	14917
	L	W		5024	6697	11721
Noise	H	OPa	dB(A)	45	46	51
Power Input	H	OPa	W	96	134	228
Water Flow Volume			m ³ /h	0,93	1,23	2,16
Water Pressure Dropping			kPa	28	30	36
Dimension of water (in & out) connection pipe		In		ZG3/4"	ZG3/4"	ZG3/4"
		Out		ZG3/4"	ZG3/4"	ZG3/4"
Coil		Type	High efficient copper pipe to wear hydrophilic aluminum coil			
Maximum Working Pressure		Mpa		1,6	1,6	1,6
Condensation Pipe Size (diameter)		mm	Ø21mm			



Fan Coil W-TYPE

Copra W-Type Fan Coils for wall mounting

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

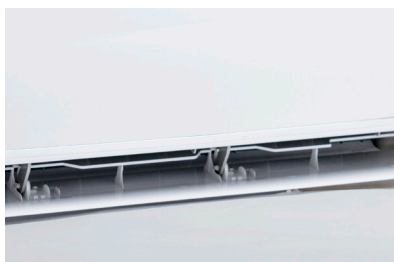
NOTE:



- Fan coil unit for wall mounting
- Heating and cooling applications
- Remote controlled operation

Copra Fan Coils are made to meet the strict requirements of the marine industry. They are highly reliable and made through close cooperation with our customers. The compact size and easy installation make them easy to fit onboard your ship.

The W-Fan Coil is available in 3 different sizes, ranging from 3.6kW to 7.2kW in cooling capacities.



Model			COPRA W 3.6	COPRA W 4.5	COPRA W 7.2
Power Supply			220V,60Hz,1Ph		
Air Volume	H	m ³ /h	680	850	1360
	M	m ³ /h	510	637,5	1020
	L	m ³ /h	340	425	680
Cooling Capacity	H	W	3618	4514	7210
	M	W	3075	3837	6129
	L	W	2352	2934	4687
Heating Capacity	H	W	5418	6767	10807
	M	W	4605	5752	9186
	L	W	3522	4399	7025
Noise Level		dB(A)	43/40/37	47/43/40	49/45/41
Fan Motor	Fan Quantity		1	1	1
	Motor Quantity		1	1	1
	Power Input	W	62	76	134
Water Flow Volume		kg/h	800	950	1390
Hydraulic Resistance		kPa	30	30	40
Max Working pressure		MPa	1,6	1,6	1,6
Dimension(W×D×H)	Net	mm	850×300×198	970×315×235	1100×330×235
	Packing	mm	885×360×270	1010×380×300	1140×390×300
Net/Gross Weight		kg	12.6/14.5	15/17	20/23
Inlet/Outlet Water Pipe			Rc1/2"(DN15)	Rc1/2"(DN15)	
Drain Pipe			Rc1/2"(DN15)	R1/2"(DN15)	



Fan Coil C-TYPE

Copra C-Type Fan Coils for ceiling

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



- Fan coil unit with diffuser for ceiling mounting
- Heating and cooling applications
- Remote controlled operation



Copra Fan Coils are made to meet the strict requirements of the marine industry. They are highly reliable and made through close cooperation with our customers. The compact size and easy installation make them easy to fit onboard your ship.

The C-Fan Coil is available in 3 different sizes, ranging from 4.9kW to 12kW in cooling capacities.



Model				C4.9	C7.5	C12
Model of panel				MB-SD11K2	MB-SD11K3	MB-SD11K3
Power supply				230V,60Hz,1Ph	230V,60Hz,1Ph	230V,60Hz,1Ph
Air Volume	H	m ³ /h		880	1380	2200
	M			700	1100	1760
	L			530	830	1320
Static Pressure		Pa		0	0	0
Cooling Capacity	H	W		4900	7500	12000
	M	W		4150	6400	10200
	L	W		3400	5200	8300
Heating Capacity	H	W		7600	11600	18600
	M	W		6450	9850	15800
	L	W		5100	7750	12450
Noise	H	0Pa	dB(A)	42	46	51
Power Input	H	0Pa	W	70	130	210
Waterflow Volume		m ³ /h		0,83	1,28	2,04
Water Pressure Dropping		kPa		18	23	42
Dimension of water (in & out) connection pipe		in		ZG3/4"	ZG3/4"	ZG3/4"
		out		ZG3/4"	ZG3/4"	ZG3/4"
Coil		type		High efficient copper pipe to wear hydrophilic aluminum coil		
Dimension of water drain pipe		mm		ø26	ø26	ø26
Net dimension	Unit	LxWxH		750*750*242	840*840*242	840*840*292
	Panel		mm	850*850*40	950*950*40	950*950*40
Net weight	Unit	kg		22	25	27
	Panel	kg		4,2	5	5



Axial Fan Coils

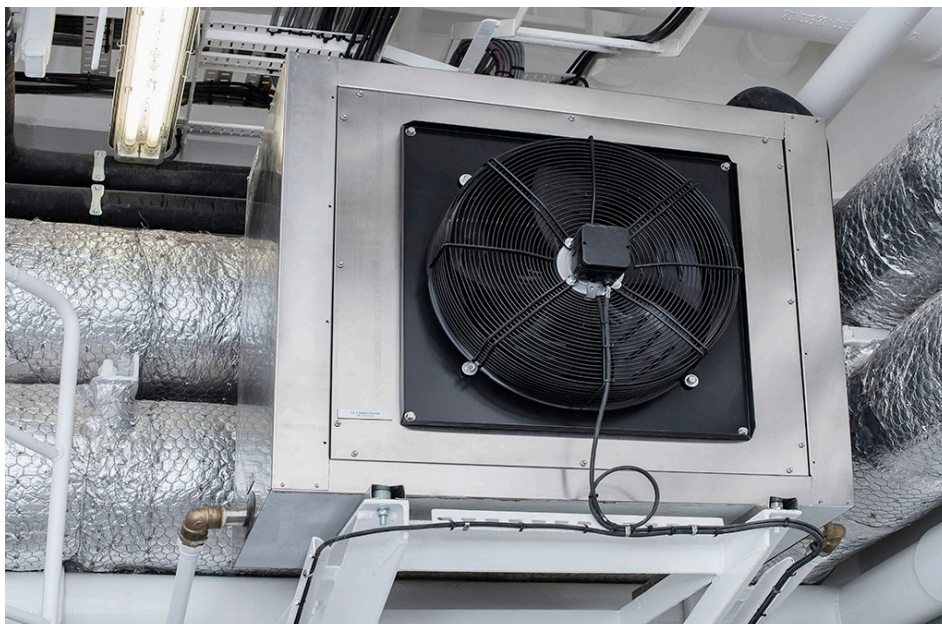
This type of fan-coil can be used in technical rooms with higher demand of cooling/heating.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



Axial Fan Coils are typically used in the Maritime Industry, specifically in technical spaces which have higher heating and cooling requirements.

The COPRA Axial fan-coil (AFC) is precision engineered and has a reputation for its lightweight design accompanied by reliable functionality.

COPRA AFCs are available in either double skin galvanised steel or premium grade SS316L stainless steel casing. It is built with direct driven fan, al/al or cu/cu coil. A washable air filter is located on the inlet and the drain tray featuring two drains.

Cooling:

COPRA recommends operating the AFC with a chilled water system between 6°C-12°C, at 11KW to 56KW.

Heating:

COPRA recommends operating the AFC with a Hot water system set between 80°C-60°C, at 15KW to 78KW.

See drawings and specifications on request.





Centrifugal Fan Coils

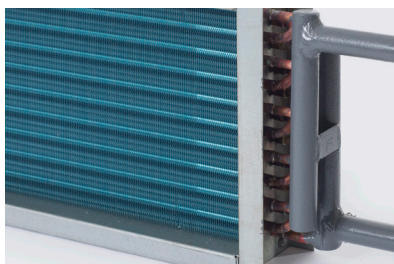
This type of fan-coil is normally used in technical rooms with raised floor and high demand of cooling.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



The COPRA Centrifugal fan coil (CFC) is constructed from painted double galvanized steel. It features a direct drive fan, Al/Al coil, high quality air filter on the inlet and an condensation drip tray.

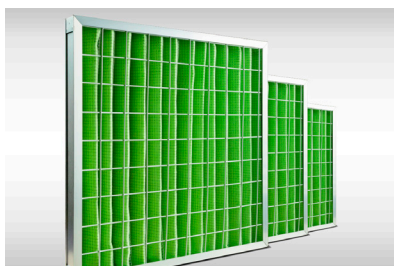
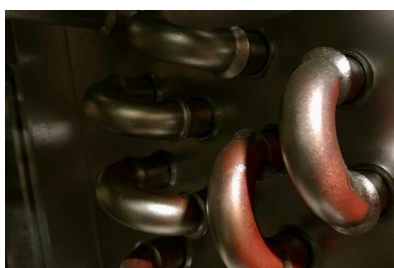
The CFC is well suited for use in raised floor switchboard rooms and other areas with sensitive electrical equipment.

The Copra CFC can be used with chilled water system (6°C-12°C), and they range from 13KW to 38KW.

The centrifugal fan coils come in 4 types:

- CFC 13
- CFC 20
- CFC 27
- CFC 38

See drawings and specifications on request.





Circular Duct Fans

The CDF is an in-line centrifugal duct fan with high capacity, low noise and excellent reliability.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



The straight through radial exhaust fan is compact and very easy to install. It can cope with high pressure and long duct runs, whilst still operating at low noise levels.

The fan speed can be controlled by voltage variation regulators. Several fans can be connected to the same controller providing the total rating of the controller is not exceeded.

The motors are an external rotor type asynchrony motor. They have maintenance free sealed ball bearings and are protected from overheating by thermo contacts.

Our fans can be supplied in either galvanized steel or flame retardant plastic.

Our stock sizes are 100, 125, 160, 200, 250, 315, 355 mm.

See drawings and specifications on request.





Rectangular Duct Fan

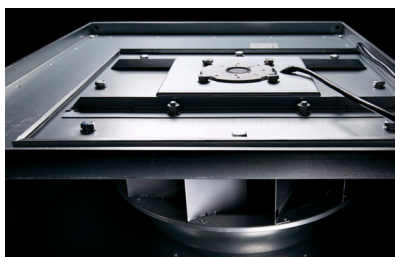
The RDF is a duct fan with high capacity, low noise and excellent reliability.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:

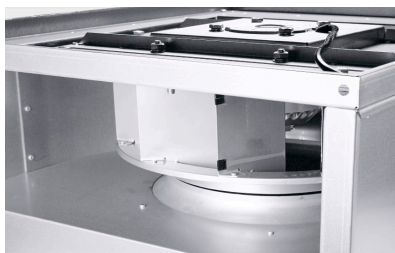


The rectangular duct fan is normally used as an exhaust fan and it can extract polluted indoor air and transport it for long distances. This makes it ideal for large ships, hotels, clubs, restaurants, offices and other places which requires exhaust air.

Our company's product is designed to make the fan as effective as possible. The dimensions of inlet and outlet is according to the standard ventilation pipes on the market today, and it can be directly connected to the pipes. This makes the installation process very simple.

The duct fan is compact in size, with low weight, low noise, long life and high efficiency.

See drawings and specifications on request.



Model	Airflow <i>m³/h</i>	Static Pressure	Speed	Noise	Voltage	Frequency	Weight
		<i>Pa</i>	<i>Rpm</i>	<i>dB</i>	<i>V</i>	<i>Hz</i>	<i>Kg</i>
500x250	2273	332	1398	51	230	50	22,5
500x300	2418	378	1435	62	230	50	27,3
600x350	3383	565	1430	66	230	50	39,8

* Can also be used with 60 Hz input, please contact us for specifications



Self Contained Units

Generate and deliver constant chilled air within technical spaces

COPRA AS
Trohaugen 1
11-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:

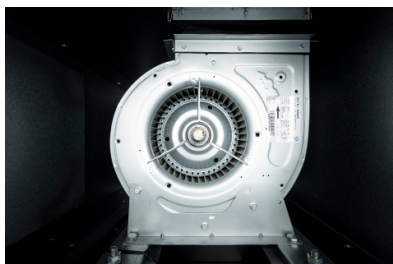
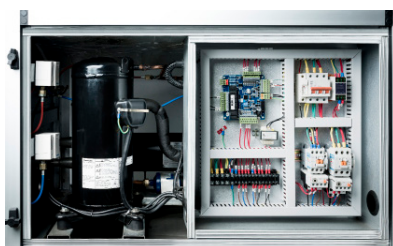


Copra's range of quality maritime Self-Contained Units are designed to generate and deliver constant chilled air within technical spaces, ensuring an cool environment is maintained.

A choice of 9 standard models, ranging from a 7kw to 45kw cooling capacity, all feature painted and aluminium casings and incorporate a compressor, condenser, evaporator and fan built into a compact casing unit. Other features include a digital display, with all electrical wiring and refrigerant piping included.

Bespoke models can be made-to-order, with options including heating batteries, subject to customer requirements.

Quality, market-leading components featured in Copra's Self-Contained Units:



Component

Compressor
Expansion Valve
Flexible Connectors
Solenoid
Filter Dryer
Evaporator
Fan
Motor
EL Control
High & Low Pressure Switch

Manufacturer/ Brand

Panasonic/ Hitachi
Emerson
Castel
Drive Castel
Emerson
Telewin
Nicotra
Siemens
Syslab
Saginomiya

Panasonic


EMERSON

NICOTRA | Gebhardt®

SIEMENS



Fire Dampers

COPRA deliver a full range of Circular and Rectangular Fire Dampers. These products are approved by all major Classification Societies, Class A0-A60, for use in marine ventilation systems.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



COPRA supplies a complete range of circular and rectangular Fire Dampers, specifically designed for the maritime industry to provide a high level of fire integrity.

COPRA Fire Dampers are precision engineered and are available for duct-, bulkhead- and deck installations. All Fire Dampers supplied are approved by the major Classification Societies, Classes A0-60 for use in marine ventilation systems.

Circular Fire Dampers can be delivered in the following standard dimensions:

- Single blade max DN400
- Multiple blade max DN1800.

Standard specification Rectangular Fire Dampers are available up to 1250x1250mm dimensions, with customised orders available as per your requirements.

All Fire Dampers can be manual with automatic fuse or automatic electrical type and can be delivered in either Galvanised, Painted steel, or 201 Stainless-steel variants.

See drawings and specifications on request.



Product Model	COPRA Fire Damper			
	COPRA CFH		COPRA CFH D	
	CFH A*B	CFH DN-00	CFH D A*B	CFH DN-00
Specification	A(60mm-350mm) * B(120mm-600mm)	DN100-DN400	A(300mm-1800mm) * B(300mm-1800mm)	DN400-DN1800
Type of construction	Rectangle type with single blade	Circular type with single blade	Rectangle type with multiple blades	Circular type with multiple blades
Temperature of melting fuse	70±3°C		70±3°C	
Fire class	A-0 - A-60 class		A-0 - A-30 class	



Grills

Copra deliver a wide range of grills, both fixed and adjustable types.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



Copra NG Grills are designed to have a clean and minimalistic look. They are delivered in white finish, but most colors can be available at special requests.

NGF is a rectangular fixed blade position grill with square grids. It has a clean and simple look and produces minimal air flow noise. The NGF is suitable both for supply and return air.

NGA is a rectangular grill with adjustable blade positioning both horizontally and vertically. This ensures that the air flow can be adjusted in the direction most suitable for your needs. The NGA is for supply air only.



We always have a substantial amount on stock of both NGF and NGA in the dimensions 400x200 and 500x300 for quick delivery. Other sizes are also available.

Please contact us and we will find a solution to fit your needs.





Cabin Units

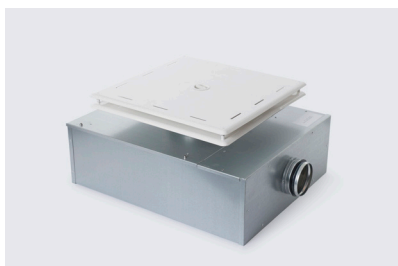
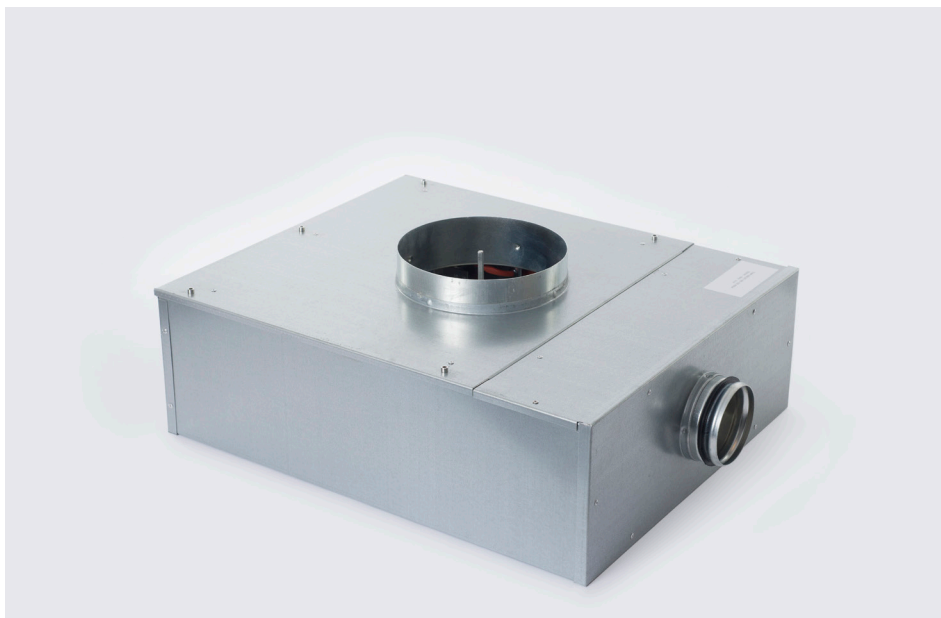
Copra Cabin units offers an easy solution for air distribution and temperature control.

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



Copra offers a range of efficient, reliable manually operated single duct Marine Cabin Units, designed for use in marine air conditioning systems and feature pre-installed heating coils.

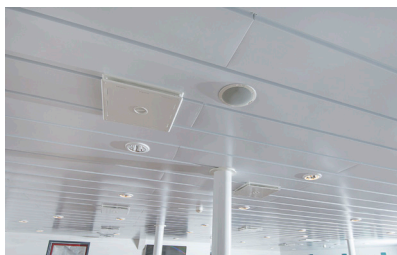
A powder coated diffuser is specifically designed to deliver and maintain even, near-silent airflow distribution throughout the cabin.

Cabin Unit options include either 100 or 125 diameter inlet pipes, with a 200-diameter outlet as standard. 400w, 800w and 1200w heating element options are also available, depending on client specification and requirements.

The Cabin Unit casing is constructed using high standard galvanised steel plating, complete with glass fibre and dust-proof fibre cloth inner insulation. Cabin unit air flow can be easily adjusted via an air volume adjustment function. The cabin units can also be connected to a room thermostat which activates the heating battery when needed.

The standard voltage is 230V- 60 Hz. Copra Cabin Units are available as either ceiling or floor mounted units.

See drawings and specifications on request.





DurkeeSox

Copra AS have distribution rights in Scandinavia and Europe for all DurkeeSox products.
<http://www.durkeesox.com/en/>

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:

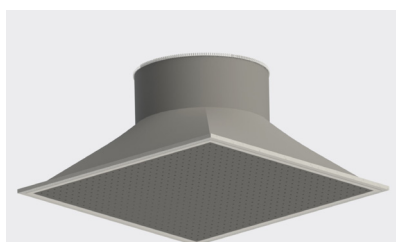


DurkeeSox is a next-generation air dispersion system which delivers multiple ventilation benefits to marine clients, when compared to traditional aluminium ducts, specifically:

- Significant reduction in weight
- Noise from air flow is significantly lower
- More economical transportation costs
- Dramatically less storage space required (DurkeeSox has ability to 'flat-pack')

DurkeeSox is the only air dispersal system with both MEDs 'B' and 'D' certifications.

DurkeeSox is available in fully round, half-round and in dimensions and colours to your requirements.





Pipe Construction and Special Parts

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



Together with our partners we can offer prefabricated pipe systems and special steel parts. Based on your documentation we can either give a fixed price or a price based on quantity. The work will be carried out by certified personnel, in workshops containing all primary and auxiliary equipment necessary for prefabrication of pipes. Our inspection team will make sure that the work is carried out in compliance with applicable standards and you will receive regular production and progress reports.

Amongst others we have delivered prefabricated pipe packages for the following systems:

- Low Pressure Hydraulic Pipes
- Engine Room System Piping
- Cargo System Piping
- Exhaust Piping



When it comes to special steel parts, we can deliver rollers, pressure vessels, structural steel, etc. Together with our partners we are dedicated to the production of high quality custom metal fabrication with on-time delivery that meets the customers expectations.





COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 921 074 433 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:

References

We have a long history as a ventilation wholesaler in the maritime industry and we have been the chosen supplier for many prestigious projects. Our clients has very high standards and are also governed by strict regulations that we must comply with.



Photo: Vard



REMØY MANAGEMENT



CORAL PRINCESS CRUISES

"Dream - Explore - Discover"



Hapag-Lloyd



VARDTM
a Fincantieri company



ISLAND OFFSHORE



SOLSTAD OFFSHORE



GOLDEN
ENERGY
OFFSHORE



BOURBON



WESTCON[®]



SOLSTRAND

NOVENCO
Marine & Offshore



SALTHAMMER



SIEM
OFFSHORE



HAVILA



Contact Information

Contact us for specifications and more information about our products

COPRA AS
Trohaugen 1
N-6393 Tomrefjord

Org nr: 988 564 435 MVA

Mobile: + 47 974 30 173
office@copra.no
copra.no

NOTE:



- Come visit us in Tomrefjord!
Trohaugen 1
N-6393 Tomrefjord



SVEINUNG TOMREN
CEO
+47 974 30 173
sveinung@copra.no



PER EINAR TOMREN
Sales and Procurement
+47 952 46 046
per.einar@copra.no



KENNETH EIK FROSTAD
Technical Manager
+47 906 67 695
kenneth@copra.no



KORNELIA RØDAL TOMREN
Business development
+47 480 20 132
kornelia@copra.no