# COPRA

### CLIMATE SYSTEMS

PRODUCTS 2020



Org mr: 921 074 433 MVA

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

**NOTE:** 



We are a ventilation wholesaler located on the North West coast in Norway



#### Ventilation Wholesaler

COPRA AS is located in the middle of the maritime cluster on the West Coast of Norway. COPRA AS and its staff have more than 50 years of experience from the marine industry, focusing on supplying high quality ventilation equipment nationally and internationally.

#### Best quality and price

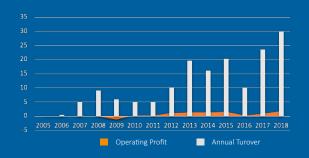
COPRA AS is working closely with its suppliers and customers to make certain that what is offered and delivered meets the highest standards at competitive prices. We are proud that we have been chosen as suppliers for some of the most prestigious maritime projects and we are now also focusing on the land market for which we have great expectations.

#### Produts

We can offer high quality Air Handling Units, Fire Dampers, Fan Coils in many variants, Cabin Units, Grills, etc. Our Air Handling Unit supplier, SAMP SpA, can boaster an impressive reference list for every kind of application. Our latest venture is supplying high quality air filters produced by AFPRO of Holland, for all kinds of use. It is worth underlining that these products have Eurovent certification, according to the new ISO16890 norm.

#### Turnover

The company has since 2010 experienced a steady growth in turnover, apart from 2016 when we were hit by the collapse in the offshore market. We managed to claw through and we can safely say that we now are back on track.









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**NOTE:** 







# Facilities

With our new office building and new warehouse we are able to deliver your product fast



#### **New Offices**

In April this year we moved into our new office building in Tomref ord. New offices and a bigger warehouse gives us the possibility to give better serives to our customers and grow as a company.

#### Spareparts

We got spareparts for most of our products on stock in Tomrefjord. Please contact us so we can help you find the right spareparts for your COPRA-product.

#### Orders and delivery

We use the combination with InSoft TouchTime and Logistra to keep track orders, stock and deliveries. With this hollistic logistics system we secure fast deliveries to all our cutomers. We also keep a high number of products on stock, in that way we can deliver our high quailty equipment without adding extra production time and expensive air freight.

#### Eco-Lighthouse

The eco-lighthouse is the first national scheme in Europe that has been recognized by the EU. It is evidence that the scheme maintains high environmental standards and quality in line with international branding schemes (EMAS and ISO 14001). Copra will be sertified in Spring 2020.



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# Air Handling Units

Copra AS have exclusive distribution rights in Scandinavia for all SAMP products. http://www.samp-spa.com



SAMP Air Handling Units, distributed by Copra, are manufactured to the highest quality and continuously developed to improve reliability, performance through innovation and attention to detail.

Air Handling Units by SAMP are highly customisable, with the standard range available in 33 sizes with nominal air flow rates ranging from 2,000 to 91,000 m3/h and a pressure range of up to 3000 Pa.

#### Structure

The precision engineered frame is constructed using heavy duty extruded aluminium alloy profiles (UNI 9006/1) in either 40x40 or 70x70mm sections.

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**

SAMP Air Handling Units can be 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.



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### AFPRO Filters

Copra have distribution rights for Scandinavia for AFPRO filters.

www.afprofilters.com



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 comp-liance 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 concist 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.





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NOTE:

# Fan Coil F-TYPE

Copra F-Type Fan Coils for floor mounting



- 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.

	Mod	el	F5.4	F7.2	F12.6		
Power Supply				220V,60Hz,1Ph			
H Air Volume M			1020	1360	2380		
		м	m³/h	770	1020	1790	
				510	680	1190	
		н	W	5400	7200	12600	
Cooling	Capacity	М	W	4483	5978	10461	
	0		W	3487	4649	8136	
		н	W	8100	10800	18900	
Heating	Heating Capacity N		W	6393	8524	14917	
		L	W	5024	6697	11721	
Noise	Н	0Pa	dB(A)	45	46	51	
Power Input	н	OPa	w	96	134	228	
Water Flow Volume			m³/h	0,93	1,23	2,16	
Water Pressure Dropping			kPa	28	30	36	
Dimensior	n of water (in	& out)	In	ZG3/4"	ZG3/4"	ZG3/4"	
connection pipe			Out	ZG3/4"	ZG3/4"	ZG3/4"	
Coil			Туре	High efficient copper pipe to wear hydrophilic aluminum coil			
Maximun	n Working Pre	essure	Мра	1,6	1,6	1,6	
Condensation Pipe Size (diameter)			mm	Ø21mm			







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NOTE:



# Fan Coil W-TYPE

Copra W-Type Fan Coils for wall mounting



- 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		
	н	m³/h	680	850	1360
Air Volume	м	m³/h	510	637,5	1020
	L	m³/h	340	425	680
	н	w	3618	4514	7210
<b>Cooling Capacity</b>	м	w	3075	3837	6129
	L	w	2352	2934	4687
	н	w	5418	6767	10807
Heating Capacity	м	w	4605	5752	9186
	L	w	3522	4399	7025
Noise Lev	el	dB(A)	43/40/37	47/43/40	49/45/41
	Fan Quantity		1	1	1
Fan Motor	Motor Quantity		1	1	1
	Power Input	w	62	76	134
Water Flow Ve	olume	kg/h	800	950	1390
Hydraulic Resi	stance	kPa	30	30	40
Max Working pressure		MPa	1,6	1,6	1,6
Discourse (ML D. 11)	Net	mm	850×300×198	970×315×235	1100×330×23
Dimension(W×D×H)	Packing	mm	885×360×270	1010×380×300	1140×390×30
Net/Gross W	kg	12.6/14.5	15/17	20/23	
Inlet/Outlet Wa		Rc1/2"(DN15)	Rc1/2"(DN15)		
Drain Pip	e		Rc1/2"(DN15)	R1/2"(DN15)	





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NOTE:







# Fan Coil C-TYPE

Copra C-Type Fan Coils for ceiling



- Fan coil unit with diffusor 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.

	Mo	odel		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
Н			880	1380	2200	
Air Vo	Air Volume M		m³/h	700	1100	1760
L		L		530	830	1320
S	tatic Pressur	е	Pa	0	0	0
	Н		W	4900	7500	12000
Cooling	Capacity	M	W	4150	6400	10200
		L	W	3400	5200	8300
	Heating Capacity H		W	7600	11600	18600
Heating			W	6450	9850	15800
			W	5100	7750	12450
Noise	Н	OPa	dB(A)	42	46	51
Power Input	Н	OPa	w	70	130	210
Waterflow Volume		m <sup>3</sup> /h	0,83	1,28	2,04	
Water	Pressure Dr	opping	kPa	18	23	42
Dimensio	on of water (	in & out)	in	ZG3/4"	ZG3/4"	ZG3/4"
	nnection pi		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	Net Unit		L×W×H	750*750*242	840*840*242	840*840*292
dimension	Pa	inel	mm	850*850*40	950*950*40	950*950*40
Net weight	U	nit	kg	22	25	27
iver weight	Panel		kg	4,2	5	5



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**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.



### Axial Fan Coils

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





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**NOTE:** 

# Centrifugal Fan Coils

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



The COPRA Centritigal has features a direct drive far drip tray. The CFC is well suited for electrical equipement.

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 equipement.

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
CEC 27

CFC 38





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**NOTE:** 

### Circular Duct Fans

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



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.





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NOTE:

# Rectangular Duct Fan

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



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.



		Static				_	
Model	Airflow	Pressure	Speed	Noise	Voltage	Frequency	Weight
	m3/h	Pa	Rpm	dB	V	Hz	Kg
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





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NOTE:







# Self Contained Units

Generate and deliver constant chilled air within technical spaces



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









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NOTE:





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 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.

Product	Copra Fire Damper					
Model	COPRA	(CFH	COPRA CFH D			
	CFH A*B	CFH DN-00	CFH D A*B	CFH DN-00		
Specification	A(60mm-350mm) *		A(300mm-1800mm)			
	B(120mm-600mm)	DN100-DN400	* B(300mm-1800mm)	DN400-DN1800		
Type of construction	Rectangle type with single	Circular type with single	Rectangle type with	Circular type with		
	blade	blade	multiple blades	multiple blades		
Temperature of	70.1	70±3°C		70.000		
melting fuse	70±3	50	70±3℃			
Fire class	A-0 - A-60 class		A-0 - A-30 class			





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NOTE:



### Grills

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



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.







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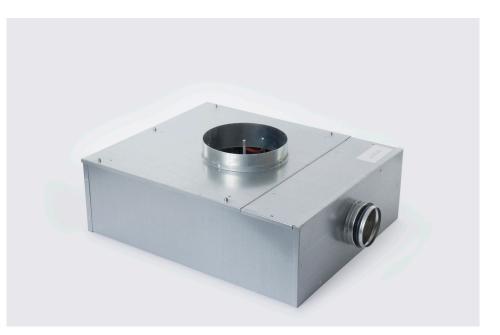
**NOTE**:





# Cabin Units

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



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 diffusor 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.





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NOTE:



## DurkeeSox

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



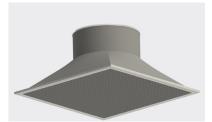
DurkeeSox is a next-generation air dispersion system which delivers multiple ventilation benefits to marine clients, when compared to traditional aliminium ducts, specifically:

- 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  $\rm `B'$  and  $\rm `D'$  certifications.

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







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**NOTE**:





### Pipe Construction and Special Parts



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.





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Mobile: + 43 934 30 133 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 wholesaler for many prestigious projects. Our clients has very high standards and are also governed by strict regulations that we must comply with.



Photo: Vard

















AkerSeafoods"



SALTHAMMER



SOLSTRAND

SIEM

**OFFSHORE** 













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

**NOTE:** 

### **Contact Information**

Contact us for spesifications and more information about our products





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



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



KORNELIA RØDAL TOMREN Marketing and Business Development +47 480 20 132 kornelia@copra.no



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



ODD ARNE HALAAS Sales Landmarket +47 920 66 067 oa@copra.no



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