

# FLAT GAS COOLER

The reliable, efficient, and eco-friendly cooling solution for industrial and commercial applications

**GM/GN/GO/GP**

Capacities from 15 to 900KW  
PS=140 bar



ENEX TECHNOLOGIES presents the **Flat Gas Cooler** range for industrial or commercial applications. This unit was designed to meet every need: energy efficiency, ergonomics, space, etc. All ENEX TECHNOLOGIES products are designed and conceived with the levels of excellence in food preservation with a robust building developed to withstand every weather condition, including heavy snow and wind loads, guaranteeing a long lifetime.

This line of product, **ready to use in CO<sub>2</sub> transcritical installations**, consists of more than 500 models of axial gas coolers for industrial applications, available in cooling capacities between 15 and 900 KW. ENEX TECHNOLOGIES gas coolers presents a **low noise level** and a minimum energy consumption. All models are fitted with **EC fan motors** as standard. The speed of its fans can be controlled electronically to increase the energy savings.

A large choice of **configurations and accessories** are available to meet any specification, plus of our customization capability.

ENEX TECHNOLOGIES offers more than **100 different models**, which provide capacities between 15 kW and 900 kW.

This wide range of models and their accessories provide a complete portfolio that meets most of the cooling industry's needs.

## LEADING IN THE HEAT REJECTION PROFESSIONAL SOLUTIONS

The ENEX TECHNOLOGIES assessment of the flat gas coolers performance parameters under different conditions and control strategies is essential to adequately design and optimize the units for specific applications.

The present document is fully dedicated to the FLAT GAS COOLERS range which can be segmented into 4 main types:

RANGE	RATED CONDITIONS (kW)	STANDARD CONDITIONS SC20 (kW)
G450	15 - 140	16 - 150
G630	55 - 470	60 - 500
G800	105 - 640	115 - 680
G900	150 - 900	160 - 920

**Rated Conditions:** Pressure 100bar, CO2 Inlet 120°C, CO2 Outlet 40°C, Air inlet T° 38

**Standard Conditions SC20:** Pressure 90bar, CO2 Inlet 110°C, CO2 Outlet 35°C, Air inlet T° 30

## MAIN FEATURES

ENEX TECHNOLOGIES offers to customers a wide spectrum of benefits coming from an history of design, production and distribution of more than 400 years of combined experience in over 125 countries, consolidated in the following main features (non-exhaustive list):

### HIGH PERFORMANCE

- With the highest-pressure design in the market PS 140bar, the system can operate at higher pressure, with a benefit in efficiency and capacity, especially at high ambient. For example, at 45°C ambient, capacity can increase by 13% and efficiency by 4.5%.
- Optimization of circuits for maximum efficiency at each noise level.
- Also, its staggered arrangement of copper tubes across self-spaced louvered fins.
- The EC fans adapt to the needs of the installation with minimal energy consumption.

### SELECTION SOFTWARE

- The transcritical CO2 calculations are available for ENEX TECHNOLOGIES customers, for greater comfort and dynamism in the day-to-day activities.

### SAFETY

- For a PS=140bar
- Resistance and leaks tests up to 200 bar
- Burst tests up to 420 bar
- Equipment pressurized with nitrogen

### QUALITY: ROBUSTNESS + RELIABILITY

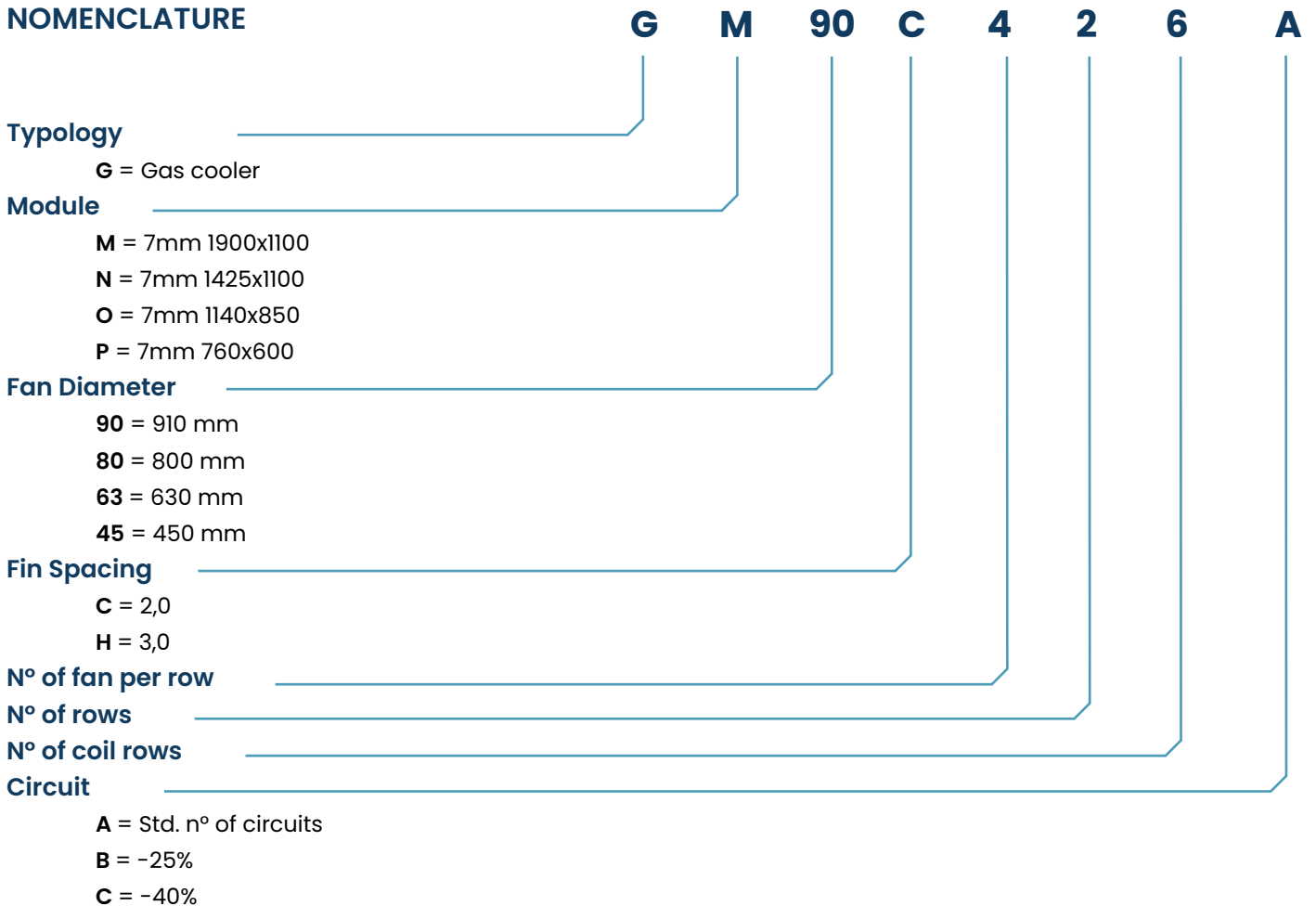
- High-quality components guarantee a long life product. Strong and robust design

### ENVIRONMENT

- With a GWP=1

## TECHNICAL FEATURES

### NOMENCLATURE



### FINNED COILS

- Built with copper tubes Ø 7mm, manufactured in compliance with the CUPROCLIMA specifications. The staggered arrangement of copper tubes across self-spaced fins, the accurate link between tubes and fins as well as the use of louvered fins, all this configuration allows our coils to reach the highest performance.
- All coils are subjected to a resistance & leakage test under a rated pressure of 200 bar and pressurized using nitrogen at 1.5 bar to avoid the corrosion of the inner surface of the copper tubes.
- Stainless steel headers with K65 finish, with the possibility of sectioning by the most suitable material for each installation.

### CASEWORK

- The case structure of the unit cooler is manufactured in pre-painted aluminium, giving it a high protection against corrosion even in extreme environmental conditions.
- Internal separators to avoid the "by-pass" effect during sequential operation of fans.
- Metallic protection on connections and return bends.
- FLOATING PACK, system that allows the coils to levitate to avoid leaks.
- Extender legs included for both positions, horizontal and vertical coil as standard.

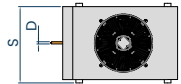
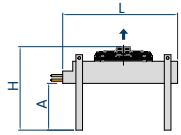
### FANS MOTORS

- Different fans' diameter available: Ø 450/630/800/910 mm.
- Axial fans with external rotor (380-480V III @ 50/60Hz).
- Equipped as standard with EC fan motors. These fans can modulate the rotation speed depending on requirements, with excellent acoustic performance. Providing the optimal operation of the installation

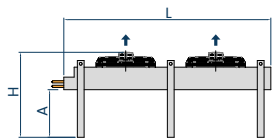
### CONSTRUCTION

- Constructions with versions for vertical air inlet and horizontal air inlet

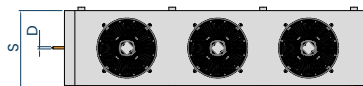
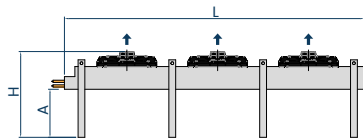
**PRODUCT RANGE OVERVIEW**



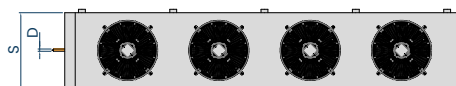
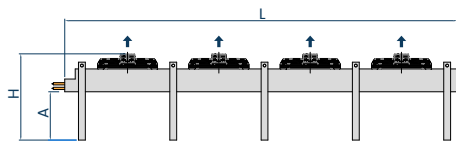
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GP45_11	1081	753	1270
GO63_11	1461	1003	1480
GN80_11	1746	1253	1901
GN90_11	1746	1253	1901
GM80_11	2221	1253	1901
GM90_11	2221	1253	1901



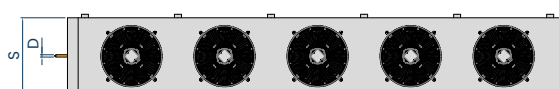
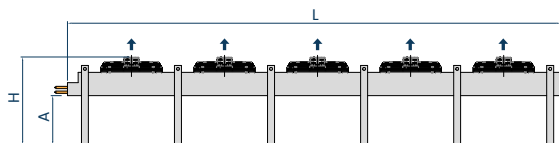
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GP45_21	1841	753	1270
GO63_21	2601	1003	1480
GN80_21	3171	1253	1901
GN90_21	3171	1253	1901
GM80_21	4121	1253	1901
GM90_21	4121	1253	1901



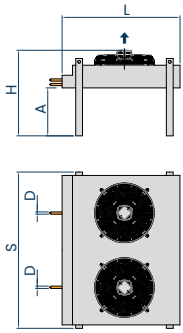
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GP45_31	2601	753	1270
GO63_31	3741	1003	1480
GN80_31	4596	1253	1901
GN90_31	4596	1253	1901
GM80_31	6021	1253	1901
GM90_31	6021	1253	1901



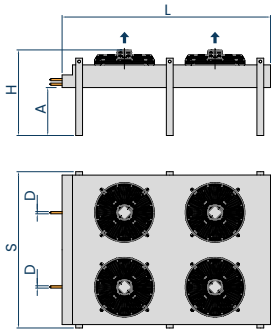
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GP45_41	3361	753	1270
GO63_41	4881	1003	1480
GN80_41	6021	1253	1901
GN90_41	6021	1253	1901
GM80_41	7921	1253	1901
GM90_41	7921	1253	1901



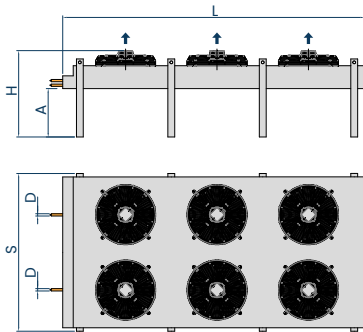
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GP45_51	4121	753	1270
GO63_51	6021	1003	1480
GN80_51	7446	1253	1901
GN90_51	7446	1253	1901



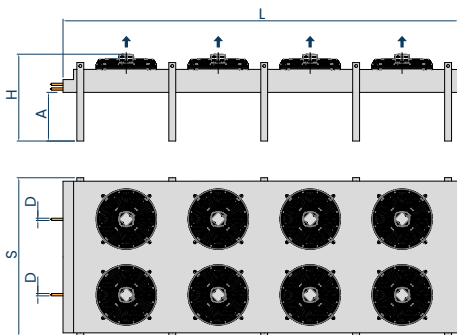
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GP45_12	1081	1353	1270
GO63_12	1461	1853	1480
GN80_12	1746	2353	1901
GN90_12	1746	2353	1901
GM80_12	2221	2353	1901
GM90_12	2221	2353	1901



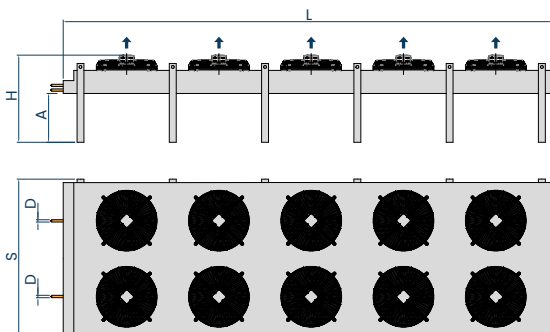
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GP45_22	1841	1353	1270
GO63_22	2601	1853	1480
GN80_22	3171	2353	1901
GN90_22	3171	2353	1901
GM80_22	4121	2353	1901
GM90_22	4121	2353	1901



	<b>L</b>	<b>S</b>	<b>H</b>
GP45_32	2601	1353	1270
GO63_32	3741	1853	1480
GN80_32	4596	2353	1901
GN90_32	4596	2353	1901
GM80_32	6021	2353	1901
GM90_32	6021	2353	1901

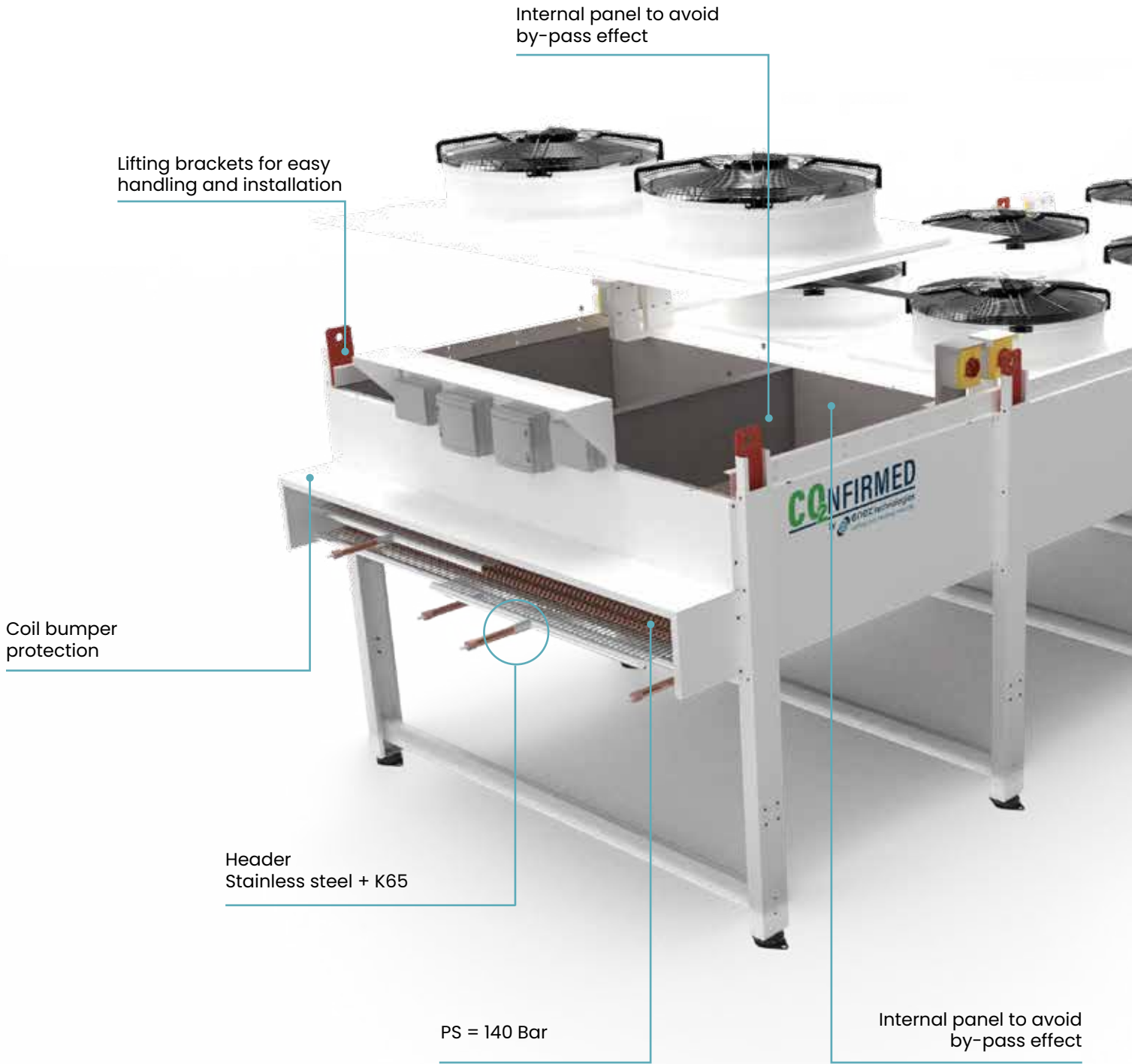


	<b>L</b>	<b>S</b>	<b>H</b>
GP45_42	3361	1353	1270
GO63_42	4881	1853	1480
GN80_42	4596	2353	1901
GN90_42	6021	2353	1901
GM80_42	7921	2353	1901
GM90_42	7921	2353	1901



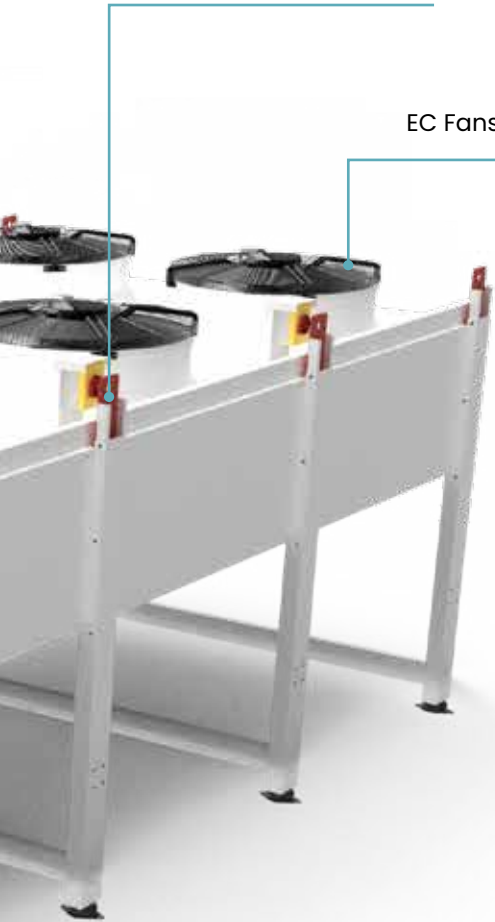
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GP45_52	4121	1353	1270
GO63_52	6021	1853	1480
GN80_52	7446	2353	1901
GN90_52	7446	2353	1901

**DISTINCTIVE TECHNOLOGICAL CHOICES OF THE RANGE**



Lifting brackets for easy handling and installation

EC Fans



**PS = 140 Bar Coil**



**Brackets**



**Header**



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Via Delle Industrie, 7 31030 Vacil Di Breda Di Piave [TV], Italy | VAT IT02328320300  
Tel +39 0422 440429 | Fax +39 0422 961021 | [info@enex.it](mailto:info@enex.it) | [www.enex.it](http://www.enex.it)

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