



Refrigeration Mastery

Complete Equipment Guide for Cold Room Projects

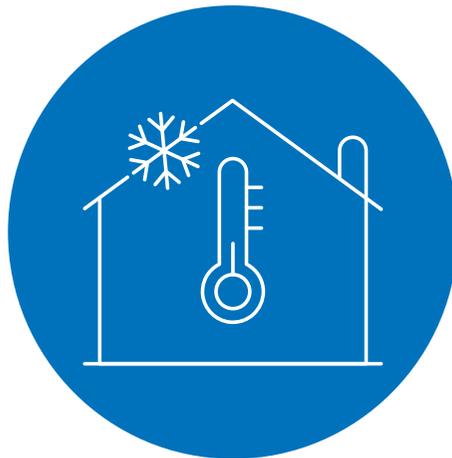


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CONDENSING UNITS

COPELAND

embraco
Nidec

 **H***ispania*

 **IR** ITALIA
REFRIGERAZIONE

Outdoor refrigeration unit - ZX RANGE

High efficiency in compact design

The best choice for small retail and food service applications

The new generation of Copeland™ ZX outdoor refrigeration units offers additional benefits for wholesalers, installers and operators.

1. Simplifying refrigeration system integration
2. Building integration with maximum space saving
3. Simple installation
4. One refrigeration unit- Multiple refrigerants at best efficiency
5. Urban environment integration through noise attenuation
6. Energy savings
7. High reliability through diagnostic protection capabilities
8. Reduced life cycle cost



Technical overview ZX

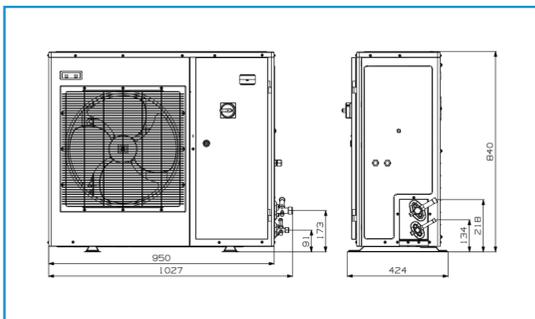
Outdoor refrigeration unit - ZX digital

The compact solution for continuous capacity modulation

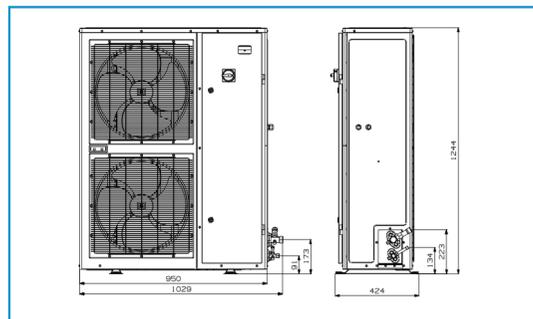
Copeland™ ZX digital refrigeration units represent the top level of the ZX product platform. The advantages of the standard models compactness, silence and efficiency are further extended by the capability of continuous capacity modulation. This makes ZX digital refrigeration units the perfect fit for applications with wide load variations.

1. Simplifying capacity modulation
2. Reducing installation effort
3. Energy savings with digital scroll technology
4. Preserving food quality
5. Reducing system downtime and lifecycle costs

Dimensions



Single Fan Units



Dual Fan Units

Model	Displacement (m³/h)	Max. Operating Current (A)	Number of Fans	Total Fan Motor Power	Connection Lines		Height (mm)	Width (mm)	Depth (mm)	Weight (kg)	Sound Level (db[A])**	
					Suc tion	Liquid					Max. Fan Speed	Reduced Fan Speed
Medium Temperature 380-420V / 50Hz / 3~												
ZXME-020E-TFD	5.9	5.0	1	116	¾	½	840	1029	424	76	39	36
ZXME-030E-TFD	8.6	6.1	1	116	¾	½	840	1029	424	79	40	37
ZXME-040E-TFD	11.7	7.5	1	116	¾	½	840	1029	424	91	40	37
ZXME-050E-TFD	14.4	9.6	2	246	¾	½	1242	1029	424	108	41	38
ZXME-060E-TFD	17.1	11.5	2	246	¾	½	1242	1029	424	112	41	38
ZXME-075E-TFD	18.8	11.9	2	246	¾	½	1242	1029	424	118	42	39
Medium Temperature 220-240V / 50Hz / 1~												
ZXME-020E-PFJ	5.9	12.8	1	116	¾	½	840	1029	424	76	39	36
ZXME-025E-PFJ	6.8	14.2	1	116	¾	½	840	1029	424	76	39	36
ZXME-030E-PFJ	8.6	16.4	1	116	¾	½	840	1029	424	79	40	37
ZXME-040E-PFJ	11.7	23.5	1	116	¾	½	840	1029	424	91	40	37
Low Temperature 380-420V / 50Hz / 3~												
ZXLE-020E-TFD	6.1	5.7	1	116	¾	½	840	1029	424	79	39	36
ZXLE-030E-TFD	8.0	6.7	1	116	¾	½	840	1029	424	81	40	37
ZXLE-040E-TFD	12.7	9.2	1	116	¾	½	840	1029	424	93	40	37
ZXLE-050E-TFD	14.4	11.9	2	246	¾	½	1242	1029	424	106	41	38
ZXLE-060E-TFD	17.1	13.7	2	246	¾	½	1242	1029	424	116	41	38
ZXLE-075E-TFD	18.8	14.6	2	246	¾	½	1242	1029	424	121	41	38
Low Temperature 220-240V 50Hz 1~												
ZXLE-020E-PFJ	6.1	14.4	1	116	¾	½	840	1029	424	79	39	36
ZXLE-025E-PFJ	7.1	16.4	1	116	¾	½	840	1029	424	80	40	37
ZXLE-030E-PFJ	8.0	18.6	1	116	¾	½	840	1029	424	81	40	37

** ISO 3744 @ 10 m

Copeland EazyCool™ outdoor refrigeration units for R744 transcritical applications

These refrigeration units are designed for operation with the natural refrigerant CO2 which has a very low global warming potential (GWP) of only 1.

The range features the latest technology in an assembly of high quality components which are adjusted for efficient and reliable operation.

The integrated frequency inverter controls the compressor speed exactly to the capacity demand of the application. EC-fans remove the heat from the gas cooler in the most efficient and silent way.

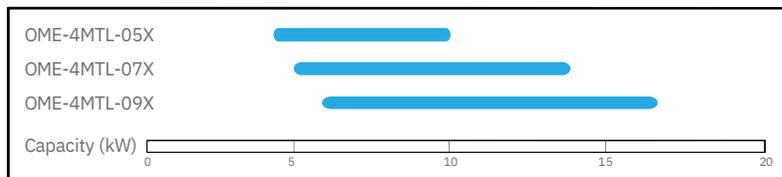
The state-of-the-art electronic controller allows for precise adjustment and control of all relevant parameters and comprises numerous electronic protection functions for highly reliable operation.



The refrigeration units are the future-proof choice for various target applications:

- Convenience stores
- Forecourt sites
- Cold rooms
- Fast food stores, bars and restaurants

Capacity Line-up



Technical Overview

Model	Displacement @ 50 Hz [m3/h]	Cooling Capacity @ 50 Hz [kW]	Receiver Capacity (l)	Suction Tube Diameter inch	Discharge Tube Diameter inch	Dimensions W / D / H (mm)	Design Pressure High/Med/Low (bar)	Net Weight [kg]	Power Supply	Nominal Current (A)	Sound Pressure 10 m dB (A)
OME-4MTL-05X	4.6	8.7	20	3/4	1/2	1574/900/1120	120/45/45	440	3/N/PE-50Hz 400/230V TN-S	19	42 - 44
OME-4MTL-07X	6.2	11.8	20	3/4	5/8	1574/900/1120	120/45/45	440	3/N/PE-50Hz 400/230V TN-S	22	42 - 44
OME-4MTL-09X	7.4	14.6	25	7/8	5/8	1574/900/1120	120/45/45	460	3/N/PE-50Hz 400/230V TN-S	27	42 - 44
OME-4MTL-05X-HP	4.6	8.7	20	3/4	1/2	1574/900/1120	120/90/90	440	3/N/PE-50Hz 400/230V TN-S	19	42 - 44
OME-4MTL-07X-HP	6.2	11.8	20	3/4	5/8	1574/900/1120	120/90/90	440	3/N/PE-50Hz 400/230V TN-S	22	42 - 44
OME-4MTL-09X-HP	7.4	14.6	25	7/8	5/8	1574/900/1120	120/90/90	460	3/N/PE-50Hz 400/230V TN-S	27	42 - 44

Features and benefits

- Future-proof solution with natural GWP 1 refrigerant, not impacted by F-Gas legislation
- Low carbon footprint
- Silent operation due to special attenuation on panels and sound optimized EC fans
- High energy efficiency through inverter controlled compressor and EC fans
- Space saving design
- Time saving commissioning by pre-set parameters
- High reliability with electronic protection against incorrect voltage, phase, current and discharge temperature
- State-of-the-art controller for precise system control
- Modbus communication functionality
- LCD Display to show the operation status
- OilWatch maintains correct system oil level
- Controller prepared for heat recovery and monitoring
- Easy access for time saving service
- Built and tested in advanced industrial processes
- Design pressure
 - 90 bar in receiver
 - 120 bar on high-pressure side

Copeland EazyCool™ High capacity outdoor refrigeration units

With this range of outdoor refrigeration units, Emerson offers a solution which responds to the increasing demand for high capacity units.

These refrigeration units are designed to match the high quality requirements of the food retail sector.



Features and benefits

- Designed to the quality requirements of the retail sector
 - High quality electrical board layout with rescue mode
 - Advanced electronic protection, alarm history
 - Remote monitoring capability (Modbus)
 - Leak detection

Minimizes operating cost

- Intelligent electronic system controller
- High efficiency scroll compressors
- Continuous capacity modulation 5...100%
- Set point optimized to the evaporator group of each circuit
- Ready for heat recovery

The range features the latest technology in an assembly of high quality components which are adjusted for efficient and reliable operation. Digital scroll compressors offer continuous capacity modulation to match exactly the demand of the application. The EC-fans remove the heat from the condenser in the most efficient and silent way.

The state-of-the-art electronic controller allows for precise adjustment and control of all relevant parameters and comprises numerous electronic protection functions for highly reliable operation.

The units are available for medium and low temperature applications and are compliant with EcoDesign Directive. The refrigeration units are the future-proof choice for various target applications:

- Supermarkets
- Convenience stores
- Forecourt sites
- Cold rooms
- Fast food stores

Wide choice of refrigerants

- Multiple refrigerant approvals: R407A/F, R448A/ R449A, R404A, R134a, R450A and R513A.
- Enabling F-Gas compliance (GWP limit 2500)

Minimizes capital investment

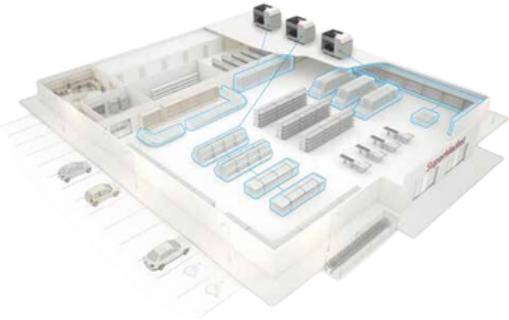
Enabling de-centralized multiple unit architecture for lower investment cost Ability to use standard installation equipment No machine room required

Quiet operation

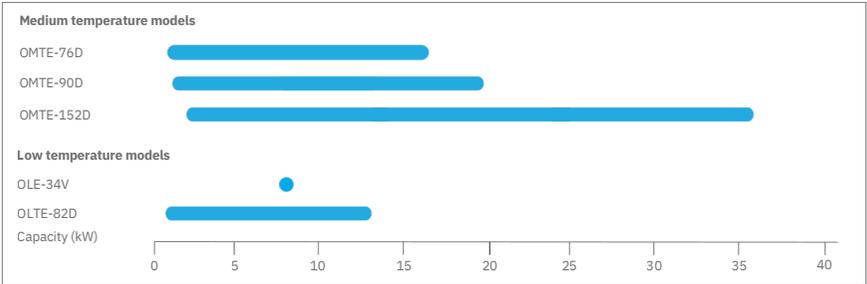
- 42-45 m dB(A) at 10m
- Low sound scroll compressors with sound attenuation
- Latest generation EC fans

Easy to install & service, “Plug & Play”

Pre-configured but also adjustable parameters Easy access to controller and components



Capacity Line-up



CONDENSING UNITS

The condensing unit HUA range is designed for commercial refrigeration at medium and low temperatures. All condensing units are complied with directives 97/23/EC Pressure Equipment (P.E.D).

The exchange coils used in the HUA range are highly efficient with special profile aluminum fins and $\varnothing 7$ mm internally grooved tubes, with a reduced internal volume to reduce the necessary refrigerant charge, meeting the needs of the different international regulations for the reduction of gases with high greenhouse effect. They are supplied clean and tested under a pressure of 30 bar.

Supported to the casing by means of a “floating” system that avoids any kind of contact between the copper tubes and the supporting end plates, assuring a long life for the condenser without leaks.

On outdoor units, Blue Fin coating helps protect the parts from corrosion.

Accessories:

- Powder coated Zinc plate highly anti-corrosion strength.
- Tropical condenser coil with copper tube and aluminum fins.
- Sound insulation.
- Hermetic scroll or reciprocating compressor.
- Dural pressure switch with automatic reset.
- Solenoid valve on liquid line.
- Filter drier on liquid line.
- Sight glass with moisture indicator.
- Liquid receiver.
- Shut-off valves for liquid and suction line.
- Ziehl-Abegg or Maer axial fan motors.
- Manometers.

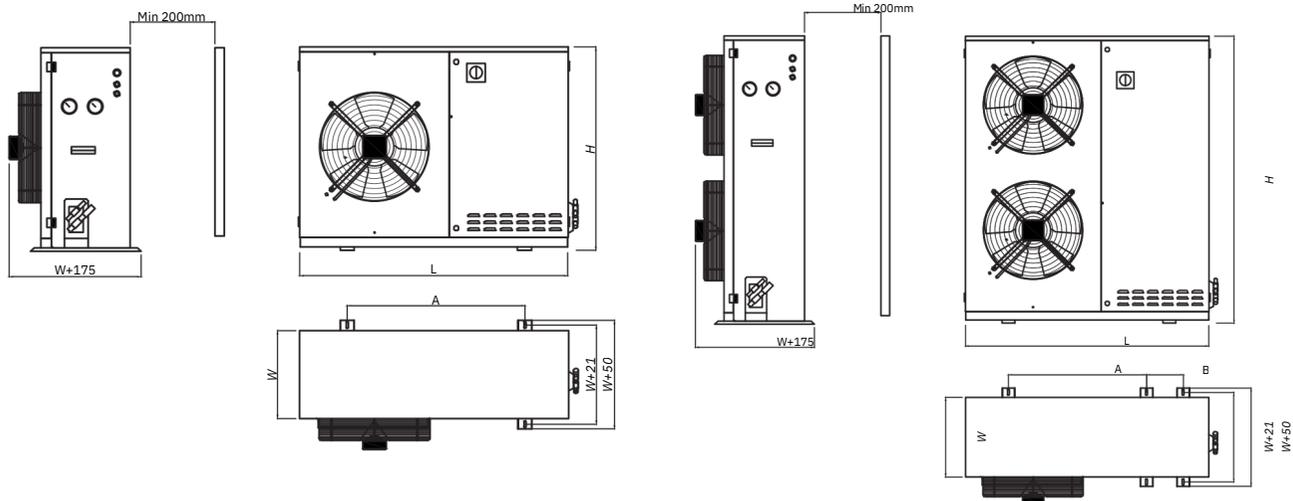
Optional items:

- Fan speed controller based on condenser pressure.
- Oil separator.
- Crankcase heater.
- Built in electric control panel.
- Suction accumulator.
- Different voltage & gas.
- Safety relief valve.



For performance at work points other than those in this catalog, use the “xShark HISPANIA” software. For special applications and additional information consult our Technical Department.

Model	Dimensions / Dimensiones (mm)				
	L	W	A	B	H
HUA 4001...	1000	395	541	-	525
HUA 4501...	1000	395	541	-	675
HUA 4501P...	1150	395	646	-	875
HUA 5001...	1150	395	646	-	975
HUA 5002...	1300	400	786	-	1275
HUA 5002P...	1500	445	986	-	1275
HUA 5502P...	2180	550	1200	500	1475



HMBP	Compressor/ Compresor		Condenser/ Condensador		Axial Fan Motor/ Ventilador con motor axial					Noise/ Ruido		Pipe Fittings/ Tuberías		N.W./ Peso Neto	*MOC	Liquid Receiver/ Receptor de Líquido	Performance/ Rendimiento (kW)			
	Model/Modelo	Hp	Capacity/ Capacidad ΔT=15K	Surface/ Superficie	N°xØ	m³/h	Poles	Voltage/Voltaje (V/50Hz)	Absorption/ Absorción		*†1st=10m dB(A)	L	S				Evaporating Temperature/ Temperatura de evaporación (°C)			
									W	A				-5°C	-10°C	-15°C	-20°C			
	kW	m²									inch	inch	Kg	A	L					
HUA 4501Z03 MS	ZB11KNE-PFZ	1.5	7.45	15	1x450	3062	6	1~230	260	1.20	48	3/8"	3/4"	55	9.8	2	2.67	2.21	1.81	1.47
HUA 4501Z03 MT	ZB11KNE-TFD	1.5	7.45	15	1x450	3062	6	1~230	260	1.20	48	3/8"	3/4"	55	4.7	2	2.63	2.18	1.79	1.45
HUA 4501Z04 MS	ZB15KQE-PFJ	2	8.23	20	1x450	2706	6	1~230	260	1.20	49	3/8"	3/4"	58	14.0	4	3.61	3.01	2.48	2.02
HUA 4501Z04 MT	ZB15KQE-TFD	2	8.23	20	1x450	2706	6	1~230	260	1.20	49	3/8"	3/4"	58	6.1	4	3.21	2.56	2.00	1.49
HUA 4501Z03P MS	ZB19KQE-PFJ	2.5	11.01	27	1x450	3981	6	1~230	260	1.20	49	3/8"	3/4"	70	13.6	4	3.92	3.19	2.56	2.03
HUA 4501Z03P MT	ZB19KQE-TFD	2.5	11.01	27	1x450	3981	6	1~230	260	1.20	49	3/8"	3/4"	70	7.7	4	4.09	3.33	2.67	2.13
HUA 5001Z03 MS	ZB21KQE-PFJ	3	12.38	31	1x500	4475	6	1~230	290	1.30	49	1/2"	3/4"	75	17.7	4	5.02	4.08	3.27	2.60
HUA 5001Z03 MT	ZB21KQE-TFD	3	12.38	31	1x500	4475	6	1~230	290	1.30	49	1/2"	3/4"	75	8.5	4	4.92	3.99	3.21	2.54
HUA 5001Z04 MT	ZB26KQE-TFD	3.5	13.99	41	1x500	4232	6	1~230	290	1.30	49	1/2"	3/4"	77	10.2	4	5.75	4.67	3.75	2.97
HUA 5001Z04 MT	ZB29KQE-TFD	4	13.99	41	1x500	4232	6	1~230	290	1.30	49	1/2"	7/8"	99	11.3	6	7.44	6.07	4.91	3.91
HUA 5002Z03 MT	ZB38KQE-TFD	5	22.03	51	2x500	8489	6	1~230	580	2.60	52	1/2"	7/8"	104	15.4	6	8.42	6.83	5.49	4.35
HUA 5002Z04 MT	ZB45KQE-TFD	6	25.28	69	2x500	7932	6	1~230	580	2.60	52	1/2"	7/8"	108	15.7	8	9.83	8.00	6.42	5.10
HUA 5002Z04 MT	ZB48KQE-TFD	7	25.28	69	2x500	7932	6	1~230	580	2.60	52	1/2"	7/8"	108	16.6	8	10.83	8.80	7.06	5.60
HUA 5002Z04P MT	ZB58KQE-TFD	8	29.07	88	2x500	8659	6	1~230	580	2.60	54	5/8"	1 1/8"	121	18.5	10	13.12	10.55	8.22	6.07
HUA 5002Z05P MT	ZB76KQE-TFD	10	30.92	110	2x500	8259	6	1~230	580	2.60	53	5/8"	1 1/8"	130	23.0	10	17.51	14.22	11.31	8.81

																	-10°C	-15°C	-20°C	-25°C	-30°C
HUA 4501Z04 LS	ZSI06KQE-PFS	2	8.23	20	1x450	2706	6	1~230	260	1.20	50	3/8"	3/4"	57	14.8	4	2.91	2.34	1.87	1.48	1.16
HUA 4501Z04 LT	ZSI06KQE-TFP	2	8.23	20	1x450	2706	6	1~230	260	1.20	50	3/8"	3/4"	57	6.9	4	2.79	2.22	1.75	1.36	1.03
HUA 4501Z03P LS	ZSI08KQE-PFS	2.5	11.01	27	1x450	3981	6	1~230	260	1.20	49	3/8"	3/4"	67	16.8	4	3.46	2.79	2.22	1.75	1.36
HUA 4501Z03P LT	ZSI08KQE-TFP	2.5	11.01	27	1x450	3981	6	1~230	260	1.20	49	3/8"	3/4"	67	7.3	4	3.39	2.72	2.17	1.71	1.35
HUA 4501Z03P LT	ZSI09KQE-TFP	3	11.01	27	1x450	3981	6	1~230	260	1.20	49	1/2"	3/4"	69	7.9	4	3.75	3.03	2.41	1.87	1.40
HUA 5001Z04 LT	ZSI11KQE-TFP	3.5	13.99	41	1x500	4232	6	1~230	290	1.30	50	1/2"	7/8"	77	8.8	4	4.86	3.94	3.18	2.52	1.92
HUA 5001Z05 LT	ZSI14KQE-TFP	4	14.85	51	1x500	4027	6	1~230	290	1.30	51	1/2"	7/8"	95	10.5	6	6.18	4.96	3.95	3.11	2.42
HUA 5002Z02 LT	ZSI15KQE-TFP	5	17.76	34	2x500	9143	6	1~230	580	2.60	53	1/2"	7/8"	97	14.5	6	6.98	5.70	4.62	3.67	2.80
HUA 5002Z04 LT	ZSI18KQE-TFP	6	25.28	69	2x500	7932	6	1~230	580	2.60	53	1/2"	7/8"	105	15.8	8	8.48	6.88	5.54	4.42	3.47
HUA 5002Z04 LT	ZSI21KQE-TFP	7	25.28	69	2x500	7932	6	1~230	580	2.60	53	1/2"	7/8"	105	17.2	8	9.50	7.70	6.19	4.93	3.89
HUA 5002Z04P LT	ZFI20KQE-TFD	4	29.07	88	2x500	8659	6	1~230	580	2.60	53	1/2"	7/8"	112	11.6	6	8.49	7.09	5.83	4.48	3.15
HUA 5002Z05P LT	ZFI26KQE-TFD	6	30.92	110	2x500	8259	6	1~230	580	2.6	53	1/2"	7/8"	117	16.3	8	11.95	10.10	8.43	6.64	4.88
HUA 5502Z03P LT	ZFI36KQE-TFD	8	38.00	86	2x550	13996	6	3~400	590	1.38	52	5/8"	7/8"	165	17.4	10	14.45	12.45	10.55	8.58	6.63
HUA 5502Z04P LT	ZFI39KQE-TFD	10	43.64	114	2x550	13429	6	3~400	590	1.38	54	5/8"	7/8"	178	19.5	15	16.95	14.60	12.35	10.03	7.73

The noise levels refer to the average value recored during 24h of daily functioning with fan motors controlled speed, standard housing sound absorption and compressor jacket (optional items). Alternative conditions may produce different results.

Condensers are designed at ambient temperature 32°C.

MOC: Max Operating Current.

Test condition: Ambient temperature: 35°C, Condensing temperature: 50°C/ Condiciones de prueba: temperatura ambiente: 35°C, temperatura de condensación: 50°C

US

Low noise Condensing Units



MT: Capacity from 1,0 to 45K Watt
 LT: Capacity from 0,9 to 40K Watt
 From 1 to 4 compressors
 Hermetic, Scroll, Scroll Digital, Scroll EVI, Semihermetic

UF



Housed Condensing units

MT: Capacity from 1,0 to 60K Watt
 LT: Capacity from 0,9 to 47K Watt
 From 1 to 4 compressors
 Hermetic, Scroll, Scroll Digital, Scroll EVI, Semihermetic

UR

Indoor Condensing Units



MT: Capacity from 10 to 45K Watt
 LT: Capacity from 6,0 to 35K Watt
 From 2 to 4 compressors
 Scroll, Scroll Digital, Scroll EVI

OCU



Standard Condensing units

MT: Capacity from 1,0 to 60K Watt
 LT: Capacity from 0,9 to 30K Watt
 Scroll, Scroll Digital, Hermetic and Semi-hermetic



CTE

Compact Multicompressor pack with remote condenser



MT: Capacity from 40 to 100K Watt
 LT: Capacity from 10 to 60K Watt
 Scroll, Scroll Digital and Semi-Hermetic

CE



Multicompressor pack with remote condenser

MT: Capacity from 10 to 400K Watt
 LT: Capacity from 5,0 to 120K Watt
 From 3 to 4 compressors
 Hermetic, Scroll, Scroll Digital, Scroll EVI, Semi-hermetic

CP

Customized Products

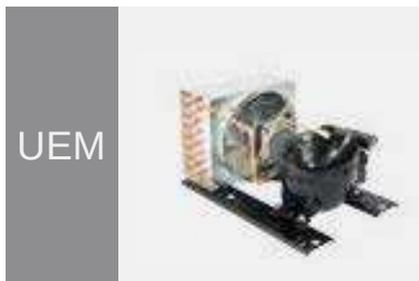


EMBRACO is a global cooling specialist and leader in the refrigeration market, aiming to combine technology and services, engineered around customers' needs.

Their mission is to provide innovative solutions for a better quality of life. They are passionate about technology and constantly investing in new developments, energy efficiency improvements, sustainability of our products and processes, combined with premium quality, operational excellence, and business knowledge to support our customers to reach their goals and even exceed the most restrictive international standards.

What makes the difference when you choose Embraco?

Thanks to their wide range of products combining hermetic and scroll compressors, condensing units and electronics, they can provide ultimate solutions for Household, Light Commercial and Aftermarket segments.



- Low noise
- High efficiency level
- Wide application range
- Compact size

- Low noise
- Low vibrations
- High reliability in severe working conditions

- High efficiency level
- Very low sound level
- High cooling capacity at low evaporating temperatures

- Small size platform
- High energy efficiency
- Reduced noise level

AVAILABLE FOR:
R134a R404A/R507/R452A R290
APPLICATION:
LBP, M/HBP
COMPRESSORS FROM:
3,4 CC TO 7,69 CC

AVAILABLE FOR:
R134a R404A/R507/R452A R290
APPLICATION:
LBP, M/HBP
COMPRESSORS FROM:
6,2 CC TO 16,8 CC

AVAILABLE FOR:
R134a R404A/R507/R452A
APPLICATION:
LBP, M/HBP
COMPRESSORS FROM:
14,5 CC TO 27,8 CC

AVAILABLE FOR:
R134a R404A/R507/R452A
APPLICATION:
LBP, M/HBP
COMPRESSORS FROM:
21,7 CC TO 34,4 CC

COMPRESSORS

COPELAND

embraco

Nidec



Tecumseh

SINGLE SPEED COMPRESSORS

EM		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • Robustness • Wide application range • Small size • Low noise • Best in class up to 11 cm³ 	Refrigerators and freezers Water cooler; Beer dispenser; Reach-in; Chest freezer Vending machine; Wine coolers; Small dispenser; Food exhibitor Beverage cooler; Ice maker
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
LBP: 75 - 390 HBP: 250 - 800	LBP: 1.8 HBP: 2.62	1.17 - 11.14	R134a/R513A; R404A; R290; R600a;

NE		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • Robustness • Wide application range • Low noise 	Beverage cooler; Ice maker Beer dispenser; Reach-in; Chest freezer Upright cabinets; Professional kitchen Slushy machine; Show cases Refrigerators and freezers;
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
LBP: 187 - 950 HBP: 516 - 2292	LBP: 1.56 HBP: 2.79	4.40 - 16.80	R134a/R513A; R404A/R507/R452A/R449A/R448A; R290

F		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • Robustness • Wide application range • Small size 	Water cooler; Beverage coolers; Ice maker Beer dispenser; Reach-in; Chest freezer Professional Kitchen; Vending machine Wine coolers; Heat pumps Food exhibitor; Refrigerated island; Show cases
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
LBP: 115 - 490 HBP: 670 - 1575	LBP: 1.58 HBP: 2.92	6 - 12.92	R134a/R513A; R290

NT		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • Robustness • Wide application range • Low noise • Best in class up to 27.80 cm³ • Designed for Medical & Scientific ULT 	Beverage coolers; Ice maker Beer dispenser; Reach-in; Chest freezers Upright cabinets Ultra low temperature refrigerators; Professional kitchen Slushy machine
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
LBP: 576 - 1670 HBP: 1607 - 3885	LBP: 1.47 HBP: 2.81	12.60 - 27.80	R134a/R513A; R404A/R507/R452A/R449A/R448A; R290

NTU		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • High robustness level for severe application • Continuous liquid return acceptance • Wide application range • Smallest size in this cooling capacity 	Beverage coolers; Ice maker Beer dispenser; Reach-in Upright cabinets Ultra low temperature refrigerators Professional kitchen Chest freezers
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
HBP: 2424 - 5333	HBP: 3.09	20.40 - 27.80	R134a/R513A; R404A/ R507/R452A/R449A/R448A

NJ		FEATURES	APPLICATIONS
		<ul style="list-style-type: none"> • High efficiency • Robustness • Wide application range • Low noise • Up to 2 hp 	Beverage cooler; Ice maker Reach-in; Chest freezer Ultra low temperature Upright cabinet (air curtain) Cold rooms
CAPACITY W	MAX EFFICIENCY W/W	DISPLACEMENT cm ³	REFRIGERANTS
LBP: 568 - 2164 HBP: 2547 - 5914	LBP: 1.50 HBP: 2.92	21.60 - 37.9	R134a/R513A; R404A/ R507/R452A/R449A/R448A



PISTON
MODEL



NEW GENERATION HIGH-EFFICIENCY COMPRESSOR

SPECIFICATIONS

Evaporation Ranges :

High Back Pressure : -15 °C to 15 °C (5° F to 59 °F)

Low Back Pressure : -40 °C to -10 °C (-40° F to 14 °F)

Refrigerants :

R134a, R404A, R290

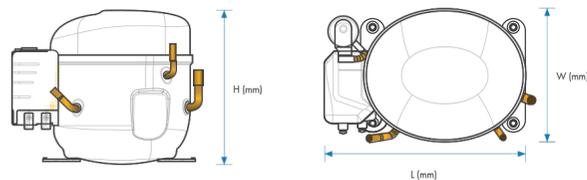
Capacity :

From 1,50 W to 1,600 W [EN 12900]

AE² Compressors for 50 Hz Range

Dimension Specification for AE²

Specification drawing is for reference only, for detail information please refer to our staffs.



DIMENSION I			DIMENSION II		
Height (mm)	Width (mm)	Length (mm)	Height (mm)	Width (mm)	Length (mm)
197.0	158.0	250.0	208.0	158.0	250.0



PISTON
MODEL



THE REFERENCE PRODUCT COMBINING SILENCE, RELIABILITY AND EFFICIENCY OF COMMERCIAL COOLING

SPECIFICATIONS

Evaporation Ranges :

High Back Pressure : -15 °C to 15 °C (5° F to 59 °F)

Low Back Pressure : -40 °C to -10 °C (-40° F to 14 °F)

Refrigerants :

R134a, R404A, R290, R1234yf, R22

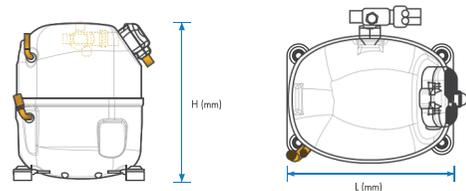
Capacity :

From 380 W to 4,700 W [EN 12900]

AJ² Compressors for 50 Hz Range

Dimension Specification for AJ²

Specification drawing is for reference only, for detail information please refer to our staffs.



DIMENSION I			DIMENSION II		
Height (mm)	Width (mm)	Length (mm)	Height (mm)	Width (mm)	Length (mm)
268.0	178.5	246.0	280.0	178.5	



PISTON
MODEL



BI-CYLINDER COMPRESSOR KNOWN FOR ITS RELIABILITY IN COMMERCIAL COOLING

SPECIFICATIONS

Evaporation Ranges :

High Back Pressure : -15 °C to 15 °C (5° F to 59 °F)

Low Back Pressure : -40 °C to -10 °C (-40° F to 14 °F)

Refrigerants :

R134a, R404A, R22

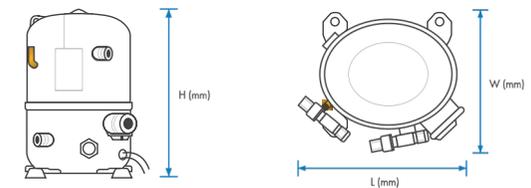
Capacity :

From 1,100 W to 8,500 W [EN 12900]

FH Compressors for 50 Hz Range

Dimension Specification for FH

Specification drawing is for reference only, for detail information please refer to our staffs.



DIMENSION I			DIMENSION II			DIMENSION III		
Height (mm)	Width (mm)	Length (mm)	Height (mm)	Width (mm)	Length (mm)	Height (mm)	Width (mm)	Length (mm)
330.0	200.0	246.0	354.0	200.0	246.0	370.0	200.0	246.0

COPELAND Scroll Compressors (REFRIGRATION)

With the launch of scroll technology in the mid 1980s, Emerson revolutionized the market setting new standards in the air conditioning industry. Since then, Copeland scroll has become the reference not only in air conditioning but in refrigeration and heating applications too. Thousands of customers trust their proprietary technology: today, over 200 million Copeland scroll compressors are installed worldwide, more than any other scroll compressor brand. Copeland scroll compressors range from 1.5 to 60 hp and are designed to work with all the main refrigerants, including CO2. With compressors built in both vertical and horizontal versions and capable of digital modulation, Emerson has expanded the capability of scroll technology to new heights.

Copeland ZB and ZBD Scroll Compressor Ranges for Medium Temperature Refrigeration Using R407A/F/C, R448A/R449A, R404A, R134a, R450A and R513A

Emerson offers ZB compressors with a wide displacement range from 5.9 m³/hto87.5m³/h. It includes ZBD digital compressors models that offer continuous capacity modulation technology.

Copeland scroll compressors have 3 times less moving parts than reciprocating compressors and feature a scroll compliance mechanism which makes them particularly robust and reliable under severe conditions including liquid slugging. They have the advantage of light weight and compactness, making them ideal for the usage in refrigeration units, compact refrigeration systems or special process units.

The summit series from 7 to 15 hp is designed to provide seasonal efficiencies 15% higher than traditional semi-hermetic compressors. These compressors are extremely quiet and can be fitted with an external sound shell for an additional 10 dBA sound reduction.

Copeland ZF and ZFD Scroll Compressor Ranges for Low Temperature Refrigeration Using R407A/F, R448A/R449A and R404A

Emerson developed the ZF range to provide the best performance in low temperature. The range has a wide application envelope as it can operate from -40°C evaporating temperature to +7°C. They have been optimized in their design to perfectly fit frozen food application requirements. Thanks to their scroll compliance mechanism, these scroll compressors feature particularly high tolerance to liquid slugging.

The range consists of:

ZF*K4E models that operate with liquid injection in order to control discharge temperature and increase the operating envelope.

ZF*KVE models that are optimized for vapor injection with use of a sub-cooler. This boosts the refrigeration system cooling capacity and efficiency.

ZF*K5E models that operate both with liquid injection or vapor injection.

These compressors are qualified for R407A/F, R448A/R449A, R404A and R134a for certain models.

ZBD Digital Scroll Compressors & ZFD Digital Scroll Compressors

Based on the unique Copeland compliant scroll design, the digital modulation operates on a simple mechanism. Capacity control is achieved by separating the scroll sets axially over a small period of time. It is a simple mechanical solution allowing precise temperature control and system efficiency and it requires no other components. Digital scroll technology provides continuous, stepless modulation from 10% to 100% with no operating envelope restriction. As a result, system pressures and temperatures are tightly controlled. These compressors provide optimum performance for refrigeration units, refrigeration packs, process and agricultural units.



ZB compressor for medium temperature refrigeration with and without sound shell



ZF compressor for low temperature refrigeration with and without sound shell

COPELAND Scroll Compressors (AIR CODNITIONING)

Copeland ZP Scroll Compressor Range for R410A

ZP Copeland scroll compressors, for R410A, for comfort and process precision cooling applications. Emerson has been the pioneer in launching the first complete line-up of R410A commercial scroll compressors.

ZP Copeland scroll compressors are perfectly suitable for **air-cooled chiller systems** up to 900kW (1100 kW if water-cooled) featuring high comfort and superior seasonal efficiency (SEER / SEPR / SCOP).

Whether used in stand-alone, tandem or trio configurations, the broad ZP Copeland scroll line-up meets today's market requirements with unmatched flexibility, efficiency and proven reliability. ZP104, ZP122 and ZP143KCE compressors for light commercial systems have a reduced footprint and weight for more compact systems. Their high efficiency helps to reduce operating costs.

Features and Benefits

- Copeland qualified tandem and trio (now also uneven configurations for superior seasonal efficiency (SEER / SEPR / SCOP)
- Copeland scroll axial and radial compliance for superior reliability and efficiency.
- Extended 5K operating envelope suitable for heat pump applications.
- Low TEWI (Total equivalent warming impact)
- Wide scroll line-up for R410A
- Low sound and vibration level
- Low oil circulation rate



ZP scroll compressor

Copeland ZR Scroll Compressor Range Range for R513A, R407C and R134a

ZR Copeland scroll compressor were developed or comfort and process/precision cooling applications using R513A, R407C and R134a.

Applied in the **air conditioning** and comfort industry for water chillers, rooftops and close control unit applications, scroll compressors are now the most used compression technology replacing reciprocating and screw compressors due to its undeniable superiority.

Several, fully Copeland qualified, multiple compressor assemblies (tandem and trio) are available to allow the use of Copeland scroll compressors into large capacity systems (ex. up to 500kW air cooled chillers) able to deliver optimal comfort, low operating cost with higher seasonal efficiency (SEER). To support the new market needs of customers, Emerson offers scroll compressors for R513A, a low-pressure refrigerant with a low GWP of 631. These ranges are able to reach 5K Superheat which allows better system performance optimization and cost.

The range of products goes from the ZR24 (2hp) to the ZR380 (30hp) for R407C and R134a and from ZR24KRE (2hp) to ZR190KRE (15hp) for R513A, R407C and R134a.

Features and Benefits

- Copeland scroll axial and radial compliance for superior reliability and efficiency.
- Wide scroll line-up for R407C, R134a and R513A
- Low TEWI (Total Equivalent Warming Impact)
- Low sound and vibration level
- Low oil circulation rate
- Copeland qualified tandem and trio configurations for superior seasonal efficiency (SEER)



ZR scroll compressor

Copeland Scroll Compressors



EVAPORATORS

ECO™ heat transfer
coolers

 MODINE



 Hispania

EVS



The EVS range was specifically designed for application in reach-in cabinets, display cases and small cold rooms.

In accordance to the room temperature this range is subdivided into two types:

- EVS for higher temperatures ($\geq -12^{\circ}\text{C}$), with 3,5/7 mm dual fin spacing and electric defrost;
- EVS/B for lower temperatures ($\geq -25^{\circ}\text{C}$), with 4,5/9 mm dual fin spacing and electric defrost.

The entire range is equipped with highly efficient coils made from special profile aluminium fins and inner grooved copper tube, suitable for new generation refrigerants.

The standard fan motors employed have the following features:

- \varnothing 200 mm, single-phase 230V/1/50-60Hz and fiberglass charged polyamide fan guard;
- IP 42 protection grade;
- class B insulation;
- internal thermal contact protection;
- operating temperature: from -40 to $+40^{\circ}\text{C}$.

The optional highly efficient EC fan motors have the following features:

- IP 65 protection grade;
- class B insulation;
- built-in electronic protection;
- operating temperature: from -40 to $+50^{\circ}\text{C}$.

The versions with standard electric defrost (ED) are equipped with stainless steel heaters with vulcanised terminals preset for 230V/1/50-60Hz connection.

The EVS/B models are equipped with internal drip tray and a junction box (IP 54) for the wiring of the fan motors and for possible electric heaters.

On request the models can be equipped with non-standard: coils, defrosting and fan motors.

GCE



The GCE unit coolers are suitable for installation in cold rooms for the preservation of fresh or frozen products. Thanks to the optimization of the heat exchangers in relation to fan motors, the particular structure of the units enables to maximise the storage space of the cold rooms.

The entire range is equipped with highly efficient coils made from aluminum fins and inner grooved tube. The new geometry allows a substantial reduction of the inner volume resulting in decreased refrigerant use. The updated coil design meets the recent guidelines governing the reduction of HFC gases with high greenhouse effect.

According to the room temperature the range is divided as follows:

- GCE G4 E4 F4 A4** for higher temperatures ($>= +1^{\circ}\text{C}$) with 4 mm fin spacing;
- GCE G6 E6 F6 A6** for medium temperatures ($\geq -15^{\circ}\text{C}$) with 6 mm fin spacing, electric defrost version (ED) is recommended;
- GCE G8 E8 F8 A8** for low temperatures ($\geq -35^{\circ}\text{C}$) with 8 mm fin spacing, equipped with electric defrost (ED).

The GCE range employs three types of standard fan motors:

- **\varnothing 250 mm** shaded pole single-phase 230V/1/50-60Hz with fiberglass charged polyamide fan guards. Operating temperature: from -40 to $+40^{\circ}\text{C}$.
- **\varnothing 315 mm** external rotor single-phase 230V/1/50-60Hz with built-in electric capacitor and epoxy coated steel fan guard. Operating temperature: from -40 to $+45^{\circ}\text{C}$.
- **\varnothing 350 mm** external rotor single-phase 230V/1/50-60Hz with built-in electric capacitor and epoxy coated steel fan guard. Operating temperature: from -40 to $+50^{\circ}\text{C}$.

The electric defrost (ED) versions are equipped with stainless steel heaters with vulcanised terminals preset for 400V/3/50-60Hz connections.

The electric parts and casing are connected to an earth terminal. The wiring of motors and heaters is carried out in separate IP 54 protection grade junction boxes.

MIC



The MIC range dual discharge unit coolers are suitable for reach-in/walk-in cabinets, display cases and small rectangular-based cold rooms.

The entire range is equipped with highly efficient coils made from special profile aluminium fins and inner grooved copper tube. Thanks to the new geometry the coils are suitable for new generation refrigerants. With 4,5/9mm dual fin spacing for the entire range (for room temperatures $\geq -25^{\circ}\text{C}$).

The updated coil design meets the recent guidelines governing the reduction of HFC gases with high greenhouse effect.

- The standard fan motors employed have the following features:
- \varnothing 230 mm single-phase 230V/1/50-60Hz and fiberglass charged polyamide fan guard;
 - IP 42 protection grade; -class B insulation;
 - internal thermal contact protection; -operating temperature: from -40 to $+40^{\circ}\text{C}$.

The optional highly efficient EC fan motors have the following features:

- IP 65 protection grade;
- class B insulation;
- built-in electronic protection;
- operating temperature: from -40 to $+50^{\circ}\text{C}$.

The versions with standard electric defrost (ED) are equipped with stainless steel heaters with vulcanised terminals preset for 230V/1/50-60Hz connection.

The electric parts and casing are connected to a earth terminal.

The wiring of the motors and heaters is carried out in separate IP 54 protection grade junction boxes.

On request the models can be equipped with non-standard: coils, defrosting and fan motors.

GDE



The dual discharge GDE range was specifically designed for cold rooms with limited height for the preservation of fresh or frozen products and for food preparation and handling. The entire range is equipped with highly efficient coils made from aluminum fins and inner grooved tube. Thanks to a new geometry there is a substantial reduction of the inner volume resulting in a decreased refrigerant use. The updated coil design responds to the recent guidelines governing the reduction of HFC gases with high greenhouse effect.

According to the room temperature the range is divided as follows:

- GDE 3 for higher temperatures ($\geq 5\text{ }^{\circ}\text{C}$) with 3 mm fin spacing, designed for work rooms with no possibility of ice/frost formation on fins;
- GDE 4 for medium temperatures ($\geq 1\text{ }^{\circ}\text{C}$) with 4 mm fin spacing;
- GDE 7 for lower temperatures ($\geq -25\text{ }^{\circ}\text{C}$) with 7 mm fin spacing, electric defrost version (ED) is recommended.

The GDE range employs three types of standard fan motors:

- $\varnothing 315$ mm external rotor single phase dual speed 230V/1/50-60Hz with built-in electric capacitor and fibreglass charged polyamide fan guards. Operating temperature: from -40 to $+30\text{ }^{\circ}\text{C}$.
 - $\varnothing 350$ mm external rotor single-phase high speed (4 poles) 230V/1/50-60Hz with built-in electric capacitor and epoxy coated steel fan guard. Operating temperature: from -40 to $+50\text{ }^{\circ}\text{C}$.
 - $\varnothing 350$ mm external rotor single-phase low speed (6 poles) 230V/1/50-60Hz with built-in electric capacitor and epoxy coated steel fan guard. Operating temperature: from -25 to $+50\text{ }^{\circ}\text{C}$.
- The standard fan motors employed have the following features:
- IP 44 protection grade;
 - class 155 insulation;
 - inner thermal contact protection;

The versions with standard electric defrost (ED) are equipped with stainless steel heaters with vulcanised terminals preset for 400V/3/50-60Hz connection.

The electric parts and casing are connected to a earth terminal.

The wiring of the motors and heaters is carried out in separate IP 54 protection grade junction boxes.

GSE



The GSE range was specifically designed for applications in cold rooms with limited height for the preservation of fresh or frozen products. The entire range is equipped with highly efficient coils made from aluminum fins and inner grooved tube.

Thanks to a new geometry there is a substantial reduction of the inner volume resulting in a decreased refrigerant use. The updated coil design responds to the recent guidelines governing the reduction of HFC gases with high greenhouse effect.

According to the room temperature the range is divided as follows:

- GSE H4 for higher temperatures ($\geq +2\text{ }^{\circ}\text{C}$) with 4 mm fin spacing;
 - GSE L7 for lower temperatures ($\geq -25\text{ }^{\circ}\text{C}$) with 7 mm fin spacing, electric defrost version (ED) is recommended.
- The standard fan motors employed have the following features:
- $\varnothing 315$ mm external rotor single phase 230V/1/50-60Hz with built-in electric capacitor and epoxy coated steel fan guard;
 - IP 44 protection grade;
 - class B insulation;
 - internal thermal contact protection;
 - operating temperature: from -40 to $+35\text{ }^{\circ}\text{C}$.

The optional highly efficient EC fan motors have the following features:

- $\varnothing 300$ mm
- class B insulation;
- built-in electronic protection;
- operating temperature: from -25 to $+60\text{ }^{\circ}\text{C}$.

The versions with standard electric defrost (ED) are equipped with stainless steel heaters with vulcanised terminals preset for 400V/3/50-60Hz connection.

The electric parts and casework are connected to an earth terminal, the wiring of the fan motors and heaters is carried out in separate IP 54 protection grade junction boxes.

ICE $\varnothing 450$ mm/ $\varnothing 560$ mm/ $\varnothing 630$ mm



The ICE range was specifically designed for use in large cold rooms and refrigerated storerooms suitable for the preservation of fresh and frozen products. The entire range is equipped with highly efficient coils made from special profile aluminium fins and inner grooved copper tube, suitable for new generation refrigerants.

In accordance to the room temperature the range is divided as follows:

- ICE 06 for higher and medium temperatures ($\geq -15\text{ }^{\circ}\text{C}$) with 6 mm fin spacing;
- ICE 08 - 10 - 12 for lower temp. ($\geq -35\text{ }^{\circ}\text{C}$) with 8; 10 and 12mm fin spacing, the electric defrost ED version is recommended;

The standard fan motors employed have the following features:

- $\varnothing 450$ mm external rotor three-phase 400V/3/50-60Hz dual speed, with epoxy coated steel fan guard;
 - IP 54 protection grade;
 - class B insulation;
 - internal thermal contact protection;
 - operating temperature: from -40 to $+45\text{ }^{\circ}\text{C}$.
 - $\varnothing 560$ mm external rotor three-phase 400V/3/50Hz dual speed, with epoxy coated steel fan guard;
 - IP 54 protection grade;
 - class B insulation;
 - internal thermal contact protection;
 - operating temperature: from -40 to $+50\text{ }^{\circ}\text{C}$.
 - $\varnothing 630$ mm external rotor three-phase 400V/3/50-60Hz dual speed, with epoxy coated steel fan guard;
 - IP 54 protection grade;
 - class F insulation;
 - internal thermal contact protection;
 - operating temperature: from -40 to $+60\text{ }^{\circ}\text{C}$.
- The versions with standard electric defrost (ED) are equipped with stainless steel heaters with vulcanised terminal preset for 400V/3/50-60Hz connection.

The electric parts and casework are predisposed for grounding, the wiring of the heaters is carried out in separate IP 54 protection grade junction boxes.



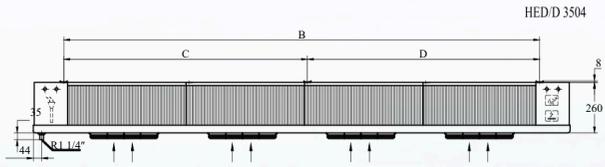
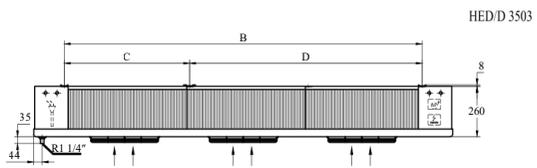
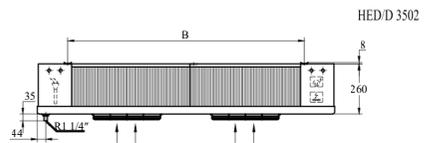
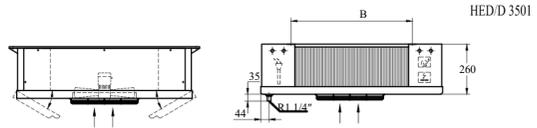
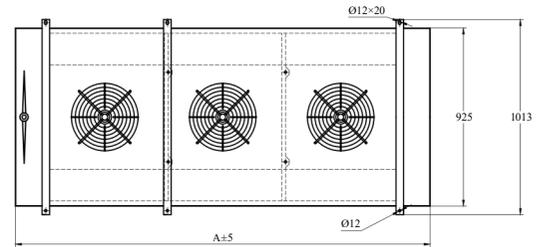
DUAL DISCHARGE CEILING AIR TYPE ECHO

The **HED range** of compact-ceiling air type evaporators has been designed for use in low/medium height cold rooms for the preservation of fresh and frozen products and processing rooms as well. The exchange coils used in the HED range are built with geometries of recognized high efficiency, with special profile aluminum fins and $\varnothing 9.52$ mm (HED 25XX) or $\varnothing 12$ mm (HED 35XX) internally grooved or $\varnothing 15$ mm (HE 40XX and above) high quality copper tubes, with high heat transfer coefficient. They are supplied clean and tested under a pressure of 30 bar.

The HED range has models with different fin pitch depending on the temperature of the cold room/processing room:

- For high temp. in the cold/processing room:
 - HED 25XX XX 4.5X: with 4.5 mm pitch ($Rt \geq 0^\circ\text{C}$)
 - HED 35XX XX 4X and above: with 4 mm pitch ($Rt \geq 0^\circ\text{C}$)
- For medium temperatures in the cold room:
 - HED 35XX XX 6X: with 6 mm pitch ($Rt \geq -18^\circ\text{C}$)
 - HED 40XX XX 7X and above: with 7 mm pitch ($Rt \geq -20^\circ\text{C}$)
- For low temperatures in the cold room:
 - HED Plus 40XX XX 9X and above: with 9 mm pitch ($Rt \geq -35^\circ\text{C}$)
 - HED 40XX XX 10X and above: with 10 mm pitch ($Rt \geq -35^\circ\text{C}$)

The standard electric fans used in this range have the following characteristics: $\varnothing 250, 350, 400$ mm : Single-phase 230V/1/50 Hz with external rotor, with type K grid and nozzle (short mouth). Operating temperature -40°C to $+40^\circ\text{C}$.
 $\varnothing 450, 500, 630, 800$ mm: three-phase 400V/3/50 Hz with external rotor, with type K grid and nozzle (short mouth). Operating temperature -40°C to $+40^\circ\text{C}$.



Model / Model	Dimensions / dimensiones(mm)			
	A	B	C	D
HED 3501...	963	6 4 0		
HED 3502...	1565	1 2 4 2		
HED 3503...	2167	1 8 4 4	640	1204
HED 3504...	2769	2 4 4 6	1242	1204

FIN SPACING 6 mm, with electrical defrost. $Rt \geq -18^\circ\text{C}$
 SEPARACIÓN ALETAS 6 mm, con desescarche eléctrico. $Rt \geq -18^\circ\text{C}$

MModel	Capacity R404A/R507A (kw)		Capacity R448A/R449A (kw)		Surface (m2)	Tube Volume (dm3)	N.W. (kg)	Connection (ømm)	
	te= -8°C	te= -25°C	te= -8°C	te= -25°C				Inlet	Outlet
	DT1=8K	DT1=7K	DT1=8K	DT1=7K					
HED 3501 11 6LD	2.32	1.66	2.37	1.68	11.7	2.9	31.8	12	22
HED 3501 11 6ND	2.87	1.96	2.96	2.07	11.7	2.9	31.8	12	22
HED 3502 22 6LD	4.7	3.39	4.79	3.42	23.5	5.7	54.2	12	22
HED 3502 22 6ND	5.84	4.04	6	4.24	23.5	5.7	54.2	12	22
HED 3503 32 6LD	7.08	5.13	7.21	5.16	35.2	8.6	76.8	15	28
HED 3503 32 6ND	8.81	6.13	9.04	6.41	35.2	8.6	76.8	15	28
HED 3504 43 6LD	9.47	6.86	9.64	6.9	47	11.5	98.3	15	28
HED 3504 43 6ND	11.78	8.22	12.07	8.58	47	11.5	98.3	15	28

Modelo / Model	Ventilador con Motor Axial / Axial Fans						Desescarche Eléctrico / Electric Defrost		
	Diámetro / Diameter (ø mm)	Nº	Voltaje / Voltage (V, 50Hz)	Potencia / Power (W)	Intensidad / Current (A)	Flujo de aire / Air Flow (m3/h)	Tiro / Air Throw (m)	Aletas / Coil (W)	Total / Total (W)
HED 3501 11 6LD	350	1	1 ~ 230	94	0.4	1276	2 x 6	4 x 320	1280
HED 3501 11 6ND	350	1	1 ~ 230	150	0.7	1883	2 x 9	4 x 320	1280
HED 3502 22 6LD	350	2	1 ~ 230	188	0.9	2554	2 x 7	4 x 585	2340
HED 3502 22 6ND	350	2	1 ~ 230	300	1.5	3766	2 x 10	4 x 585	2340
HED 3503 32 6LD	350	3	1 ~ 230	282	1.3	3832	2 x 8	4 x 850	3400
HED 3503 32 6ND	350	3	1 ~ 230	450	2.2	5650	2 x 11	4 x 850	3400
HED 3504 43 6LD	350	4	1 ~ 230	376	1.7	5110	2 x 9	4 x 1050	4200
HED 3504 43 6ND	350	4	1 ~ 230	600	2.9	7533	2 x 12	4 x 1050	4200

* HISPANIA EVAPORATORS have White powder-coated aluminium casing with high resistance to corrosion and impacts.
 In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package and in the drip tray to avoid steam problems and make easy replacement.
 The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.
 For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.



COUNTER TYPE EVAPORATORS

The HER range of countertop evaporators has been designed for use in refrigerated cabinets and display case slow for the preservation of fresh products.

The exchange coils used in the HER range are highly efficient with special profile aluminum fins and ø9.52 mm internally grooved tubes, with a reduced internal volume to reduce the necessary refrigerant charge, meeting the needs of the different international regulations for the reduction of gases with high greenhouse effect. They are supplied clean and tested under a pressure of 30 bar.

The HER range is subdivided into two series that differ only by the air outlet:

- HER T: Air outlet on one side.
- HER B: Air outlet on both sides.

The standard electric fans used in this range have the following characteristics:

- Single-phase 230V/1/50 Hz with shaded pole motor, ø120 o 150 mm, with plastic grid. Operating temperature -30°C to +40°C.

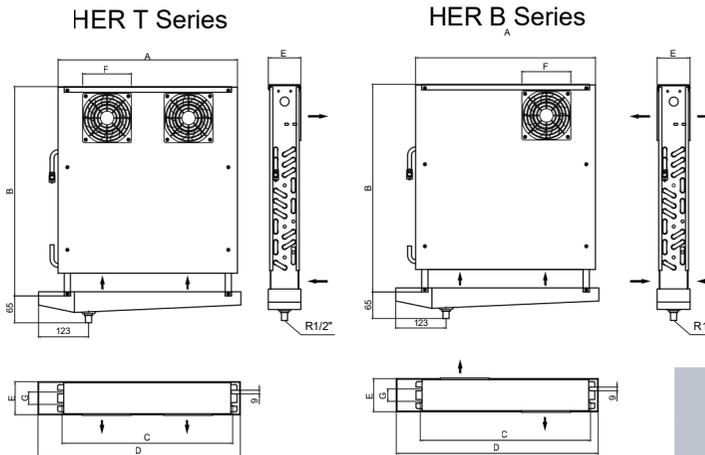


HER T
Air outlet on one side



HER B
Air outlet on both sides.

- 01 White powder-coated aluminium casing with high resistance to corrosion and impacts.
- 02 In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package to avoid steam problems and make easy replacement.
- 03 The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.
- 04 For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.



Model / Model	Dimensions / dimensiones(mm)						
	A	B	C	D	E	F	G
HER 1202 1.19 4.5	390	330	368	446	80	120	30
HER 1202 1.43 4.5	390	355	368	446	80	120	30
HER 1202 1.91 4.5	390	405	368	446	80	120	30
HER 1202 2.38 4.5	390	455	368	446	80	120	30
HER 1202 3.29 4.5	440	505	418	496	80	120	30
HER 1202 3.66 4.5	440	455	418	496	110	120	30
HER 1502 4.39 4.5	440	535	418	496	110	150	30
HER 1502 5.48 4.5	440	535	418	496	130	150	30

FIN SPACING 4.5 mm, with electrical defrost. Rt>=0°C
SEPARACIÓN ALETAS 4.5 mm, con desescarche eléctrico. Rt>=0°C

Modelo / Model	Capacity R404A/R507A (kw)	Capacity R448A/R449A (kw)	Surface (m ²)	Tube Volume (dm ³)	N.W. (kg)	Connection (ømm)	
	te=-8°C	te=-8°C				Inlet	Outlet
	DTI=8K	DTI=8K					
HER 1202 1.19 4.5T/B	0.37	0.35	1.2	0.3	3	9.52	9.52
HER 1202 1.43 4.5T/B	0.42	0.39	1.4	0.4	4	9.52	9.52
HER 1202 1.91 4.5T/B	0.46	0.45	1.9	0.5	4	9.52	9.52
HER 1202 2.38 4.5T/B	0.48	0.47	2.4	0.6	5	9.52	9.52
HER 1202 3.29 4.5T/B	0.52	0.52	3.3	0.9	6	9.52	9.52
HER 1202 3.66 4.5T/B	0.61	0.62	3.6	1	6	9.52	9.52
HER 1502 4.39 4.5T/B	0.94	0.92	4.4	1.2	8	12	12
HER 1502 5.48 4.5T/B	1.04	1.05	5.4	1.4	9	12	12

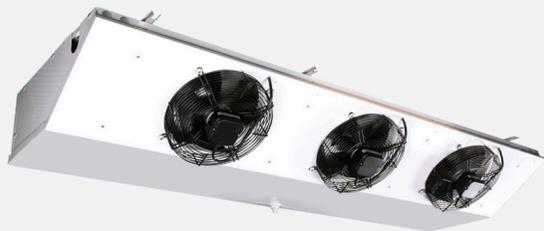
Model	Axial Fans							Electric Defrost	
	Diameter (ø mm)	Nº	Voltage (V, 50Hz)	Power (W)	Current (A)	Air Flow (m ³ /h)	Air Throw (m)	Coil (W)	Total (W)
HER 1202 1.19 4.5T/B	120	2	1~230	40	0.3	192	0.92	1×435	435
HER 1202 1.43 4.5T/B	120	2	1~230	40	0.3	180	0.85	1×435	435
HER 1202 1.91 4.5T/B	120	2	1~230	40	0.3	162	0.68	1×435	435
HER 1202 2.38 4.5T/B	120	2	1~230	40	0.3	151	0.56	1×435	435
HER 1202 3.29 4.5T/B	120	2	1~230	40	0.3	154	0.58	1×500	500
HER 1202 3.66 4.5T/B	120	2	1~230	40	0.3	193	0.49	1×500	500
HER 1502 4.39 4.5T/B	150	2	1~230	72	0.5	290	1.05	1×500	500
HER 1502 5.48 4.5T/B	150	2	1~230	72	0.5	317	0.97	1×500	500

* HISPANIA EVAPORATORS have White powder-coated aluminium casing with high resistance to corrosion and impacts.

In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package and in the drip tray to avoid steam problems and make easy replacement.

The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.

For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.



COMPACT-CEILING AIR TYPE EVAPORATORS

The **HEC range** of compact-ceiling air type evaporators has been designed for use in low height commercial cold rooms for the preservation of fresh and frozen products.

The exchange coils used in the HEC range are built with geometries of recognized high efficiency, with special profile aluminum fins and $\varnothing 12$ mm internally grooved (HEC 25XX, HEC Plus 30XX) or $\varnothing 15$ mm (HEC 30XX) high quality copper tubes, with high heat transfer coefficient. They are supplied clean and tested under a pressure of 30 bar.

The HEC range has models with different fin pitch depending on the temperature of the cold room:

For high temperatures in the cold room

- HEC 25XX XX 4X: with 4 mm pitch (Rt $\geq 0^{\circ}\text{C}$)
- HEC Plus 30XX XX 4X: with 4 mm pitch (Rt $\geq 0^{\circ}\text{C}$)
- HEC 30XX XX 4.5X: with 4.5 mm pitch (Rt $\geq 0^{\circ}\text{C}$)

For medium temperatures in the cold room

- HEC 25XX XX 6X: with 6 mm pitch (Rt $\geq -18^{\circ}\text{C}$)
- HEC Plus 30XX XX 6X: with 6 mm pitch (Rt $\geq -18^{\circ}\text{C}$)
- HEC 30XX XX 7X: with 7 mm pitch (Rt $\geq -20^{\circ}\text{C}$)

For low temperatures in the cold room

- HEC 25XX XX 9X: with 9 mm pitch (Rt $\geq -35^{\circ}\text{C}$)
- HEC Plus 30XX XX 9X: with 9 mm pitch (Rt $\geq -35^{\circ}\text{C}$)
- HEC 30XX XX 10X: with 10 mm pitch (Rt $\geq -35^{\circ}\text{C}$)

The standard electric fans used in this range have the following characteristics:

-Single-phase 230V/1/50 Hz with external rotor, with type K grid and nozzle (short mouth).

Operating temperature -40°C to $+40^{\circ}\text{C}$.

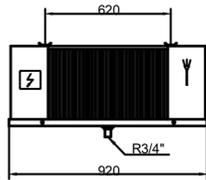
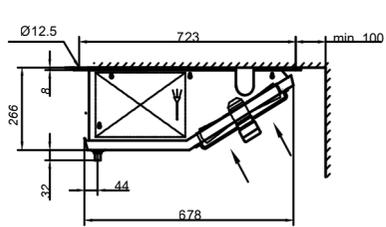
Model	Axial Fans							Coil (W)	Electric Defrost Drain Pan (W)	Total (W)
	Diámetro / Diameter (Ø mm)	Nº	Voltage (V, 50Hz)	Power (W)	Current (A)	Air Flow (m ³ /h)	Air Throw (m)			
HEC 2501 03 6D	250	1	1 ~ 230	50	0.2	747	6	1 × 400	1 × 400	800
HEC 2501 04 6D	250	1	1 ~ 230	50	0.2	660	5	1 × 400	1 × 400	800
HEC 2501 05 6D	250	1	1 ~ 230	50	0.2	889	4	1 × 550	1 × 550	1100
HEC 2501 06 6D	250	1	1 ~ 230	50	0.2	831	4	1 × 550	1 × 550	1100
HEC 2502 08 6D	250	2	1 ~ 230	100	0.5	1321	5	1 × 700	1 × 700	1400
HEC 2502 12 6D	250	2	1 ~ 230	100	0.5	1663	5	1 × 1000	1 × 1000	2000
HEC 2503 12 6D	250	3	1 ~ 230	150	0.7	1981	7	1 × 1250	1 × 1250	2500
HEC 2503 18 6D	250	3	1 ~ 230	150	0.7	2495	6	1 × 1700	1 × 1700	3400
HEC 2504 16 6D	250	4	1 ~ 230	200	0.9	2643	7	1 × 1400	1 × 1400	2800
HEC 2504 24 6D	250	4	1 ~ 230	200	0.9	3327	8	1 × 2000	1 × 2000	4000
HEC Plus 3001 09 6D	300	1	1 ~ 230	80	0.4	1050	10	2 × 750	1 × 750	2250
HEC Plus 3001 12 6D	300	1	1 ~ 230	80	0.4	935	7	3 × 750	2 × 750	3750
HEC Plus 3002 18 6D	300	2	1 ~ 230	160	0.8	2105	12	2 × 1250	1 × 1250	3750
HEC Plus 3002 24 6D	300	2	1 ~ 230	160	0.8	1871	8	3 × 1250	2 × 1250	6250
HEC Plus 3003 27 6D	300	3	1 ~ 230	240	1.2	3154	14	2 × 1700	1 × 1700	5100
HEC Plus 3003 35 6D	300	3	1 ~ 230	240	1.2	2807	10	3 × 1700	2 × 1700	8500
HEC Plus 3004 35 6D	300	4	1 ~ 230	320	1.6	4204	17	2 × 2000	1 × 2000	6000
HEC Plus 3004 47 6D	300	4	1 ~ 230	320	1.6	3742	12	3 × 2000	2 × 2000	10000

* HISPANIA EVAPORATORS have White powder-coated aluminium casing with high resistance to corrosion and impacts.

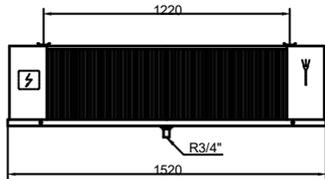
In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package and in the drip tray to avoid steam problems and make easy replacement.

The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.

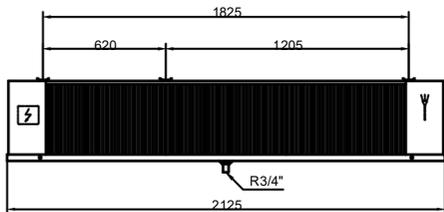
For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.



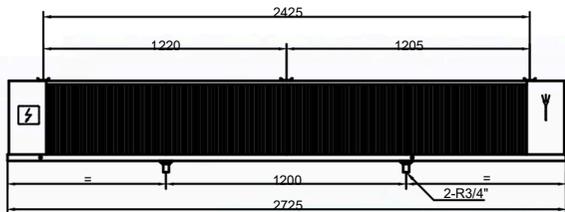
HEC/D PLUS 3001



HEC/D PLUS 3002



HEC/D PLUS 3003



HEC/D PLUS 3004

Dia. 4

Modelo / Model	Capacidad / Capacity R404A/R507A (kw)		Capacidad / Capacity R448A/R449A (kw)		Superficie / Surface (m ²)	Volumen interno / Tube Volume (dm ³)	Peso Neto / N.W. (kg)	Conexión / Connection (ømm)		Dimension / Dimensión
	te= -8°C	te= -25°C	te= -8°C	te= -25°C				Entrada / Inlet	Salida / Outlet	
	DTI=8K	DTI=7K	DTI=8K	DTI=7K						
HEC 2501 03 6D	0.82	0.63	0.78	0.6	2.9	0.7	11.4	12	12	Dia. 1
HEC 2501 04 6D	1	0.75	1	0.74	3.9	1	12.1	12	12	Dia. 1
HEC 2501 05 6D	1.13	0.82	1.14	0.82	4.4	1.1	13.7	12	12	Dia. 2
HEC 2501 06 6D	1.35	0.95	1.38	0.98	5.9	1.4	14.7	12	12	Dia. 2
HEC 2502 08 6D	2.02	1.53	2.02	1.51	7.9	1.9	20.5	12	19	Dia. 1
HEC 2502 12 6D	2.73	1.93	2.8	2	11.8	2.9	25.5	12	19	Dia. 2
HEC 2503 12 6D	3.04	2.3	3.03	2.27	11.8	2.9	28.8	12	22	Dia. 1
HEC 2503 18 6D	4.16	3.07	4.17	3.04	17.7	4.3	36.5	12	28	Dia. 2
HEC 2504 16 6D	4.07	3.08	4.06	3.04	15.7	3.8	37.4	12	28	Dia. 1
HEC 2504 24 6D	5.52	4.11	5.41	4.02	23.6	5.8	46.1	12	28	Dia. 2
HEC Plus 3001 09 6D	2.13	1.57	2.15	1.57	8.8	2.2	22	12	19	Dia. 4
HEC Plus 3001 12 6D	2.37	1.76	2.29	1.73	11.8	2.9	25.3	12	22	Dia. 4
HEC Plus 3002 18 6D	4.13	3.16	3.85	3.03	17.7	4.3	38.3	12	28	Dia. 4
HEC Plus 3002 24 6D	4.78	3.56	4.6	3.48	23.6	5.8	44.1	12	28	Dia. 4
HEC Plus 3003 27 6D	6.46	4.82	6.52	4.8	26.5	6.5	54.4	12	28	Dia. 4
HEC Plus 3003 35 6D	7.16	5.26	7.3	5.33	35.4	8.7	63.1	12	28	Dia. 4
HEC Plus 3004 35 6D	8.53	6.09	8.74	6.36	35.4	8.7	70	15	28	Dia. 4
HEC Plus 3004 47 6D	9.14	6.32	9.5	6.8	47.2	11.5	81.5	15	28	Dia. 4



COMMERCIAL CUBIC EVAPORATORS

The **HEA range** of commercial cubic evaporators has been designed for use in cold rooms for the preservation of fresh and frozen products.

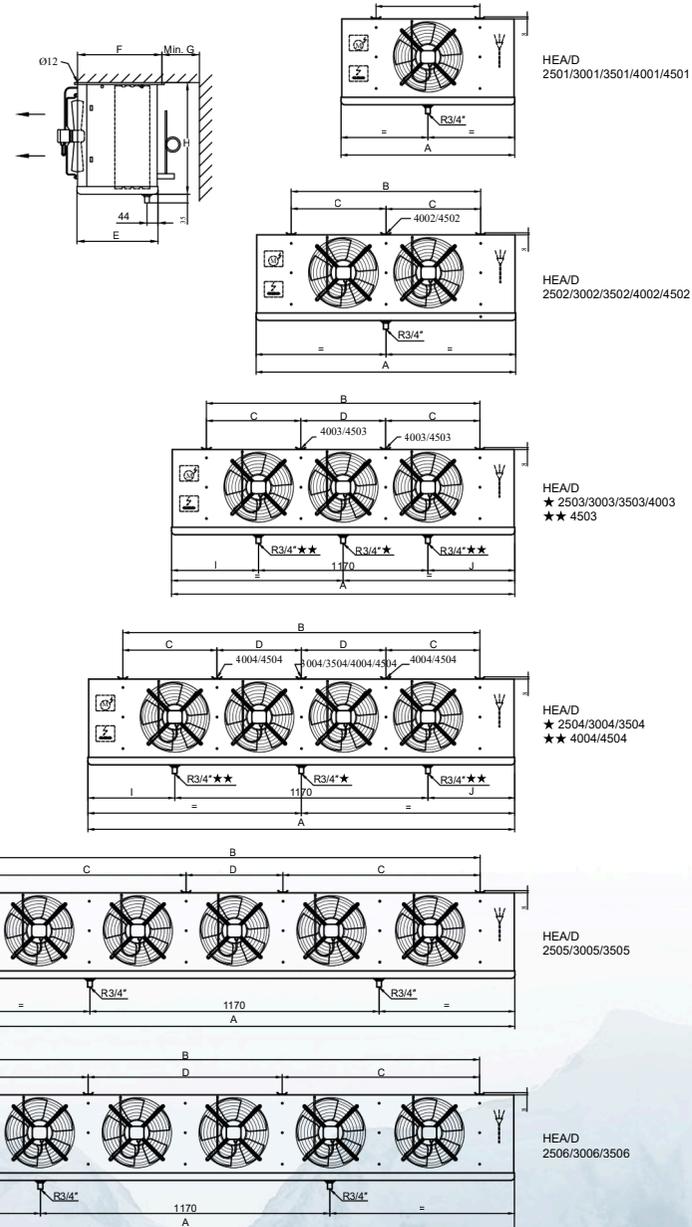
The exchange coils used in the HEA range are highly efficient with special profile aluminum fins and $\varnothing 12$ mm internally grooved copper tubes, with a reduced internal volume to reduce the necessary refrigerant charge, meeting the needs of the different international regulations for the reduction of gases with high greenhouse effect. They are supplied clean and tested under a pressure of 30 bar.

The HEA range has models with 3 different fin pitch depending on the temperature of the cold room:

- HEA XXXX XX 4X: with 4 mm pitch, suitable for high temperatures in the cold room ($Rt \geq 0^\circ\text{C}$)
- HEA XXXX XX 6X: with 6 mm pitch, suitable for medium temperatures in the cold room ($Rt \geq -18^\circ\text{C}$)
- HEA XXXX XX 9X: with 9 mm pitch, suitable for low temperatures in the cold room ($Rt \geq -35^\circ\text{C}$)

The standard electric fans used in this range have the following characteristics:

- $\varnothing 250, 300, 350, 400$ mm: single-phase 230V/1/50 Hz with external rotor, with type K grid and nozzle (short mouth). Operating temperature -40°C to $+40^\circ\text{C}$.
- $\varnothing 450$ mm: three-phase 400V/3/50 Hz with external rotor, with type K grid and nozzle (short mouth). Operating temperature -40°C to $+40^\circ\text{C}$.
- $\varnothing 500, 550, 630$ mm: three-phase 400V/3/50 Hz with external rotor, with L-type grille and nozzle (long mouth). Operating temperature -40°C to $+40^\circ\text{C}$.
- $\varnothing 630, 800$ mm: three-phase 400V/3/50 Hz with external rotor, with ZN-type grille and nozzle (long mouth). Operating temperature -40°C to $+40^\circ\text{C}$.



* HISPANIA EVAPORATORS have White powder-coated aluminium casing with high resistance to corrosion and impacts.

In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package and in the drip tray to avoid steam problems and make easy replacement.

The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.

For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.

Model	Dimensions / dimensiones(mm)									
	A	B	C	D	E	F	I	J	G	H
HEA 2501...	702	420			325	3 7 5			200	350
HEA 2502...	1094	812			325	3 7 5			200	350
HEA 2503...	1486	1204			325	3 7 5			200	350
HEA 2504...	1878	1596	406	392	325	3 7 5			200	350
HEA 2505...	2270	1988	798	392	325	3 7 5			200	360
HEA 2506...	2662	2380	798	784	325	3 7 5			250	360
HEA 3001...	702	420			325	3 7 5			200	460
HEA 3002...	1094	812			325	3 7 5			200	460
HEA 3003...	1486	1204			325	3 7 5			250	460
HEA 3004...	1878	1596	406	392	325	3 7 5			250	460
HEA 3005...	2270	1988	798	392	325	3 7 5			300	470
HEA 3006...	2662	2380	798	784	325	3 7 5			300	470
HEA 3501...	702	420			455	5 0 7			200	460
HEA 3502...	1094	812			455	5 0 7			200	460
HEA 3503...	1486	1204			455	5 0 7			250	460
HEA 3504...	1878	1596	406	392	455	5 0 7			250	460
HEA 3505...	2270	1988	798	392	455	5 0 7			300	470
HEA 3506...	2662	2380	798	784	455	5 0 7			300	470
HEA 4001...	912	630			325	3 7 5			250	530
HEA 4002...	1486	1204	602		325	3 7 5			300	530
HEA 4003...	1878	1596	546	504	325	3 7 5			300	530
HEA 4004...	2662	2380	595	595	325	3 7 5			350	540
HEA 4501...	1094	812			325	3 7 5			300	600
HEA 4502...	1878	1596	798		325	3 7 5			300	600
HEA 4503...	2702	2380	798	784	325	3 7 5	746	786	350	610
HEA 4504...	3486	3164	798	784	325	3 7 5	746	786	350	610

Modelo / Model	Capacidad / Capacity R404A/R507A (kw)		Capacidad / Capacity R448A/R449A (kw)		Superficie / Surface (m2)	Volumen interno / Tube Volume (dm3)	Filas de serpentín / Coil Rows	Peso Neto / N.W. (kg)	Conexión / Connection (ømm)	
	te= -8°C	te= -25°C	te= -8°C	te= -25°C					Entrada / Inlet	Salida / Outlet
	DTI=8K	DTI=7K	DTI=8K	DTI=7K						
HEA 2501 06 6D	1.31	0.92	1.35	0.95	5.7	1.4		13.7	12	16
HEA 2502 11 6D	2.67	1.90	2.74	1.95	11.5	2.8		23.7	12	19
HEA 2503 17 6D	4.04	2.86	4.14	2.96	17.3	4.2		33.4	12	22
HEA 2504 23 6D	5.42	4.04	5.29	3.94	23.0	5.6		43.4	12	22
HEA 2505 29 6D	6.84	5.01	6.92	5.01	28.8	7.0		53.6	15	28
HEA 2506 35 6D	8.15	5.80	8.32	5.99	34.5	8.5		63.2	15	28
HEA 3001 08 6D	2.00	1.48	2	1.47	7.6	1.9		17.3	12	19
HEA 3002 15 6D	4.05	3.02	4.03	2.98	15.3	3.8		29.5	12	22
HEA 3003 23 6D	6.09	4.56	6.07	4.49	23.0	5.6		41.6	12	22
HEA 3004 31 6D	8.16	5.83	8.31	6.02	30.7	7.5		53.9	15	28
HEA 3005 38 6D	10.24	7.45	10.39	7.58	38.4	9.4		66.3	15	28
HEA 3006 46 6D	12.16	8.52	12.47	8.97	46.1	11.3		78.2	15	28
HEA 3501 10 6D	2.87	2.23	2.82	2.16	9.6	2.3		23.5	12	19
HEA 3502 19 6D	5.80	4.51	5.69	4.38	19.2	4.7		40.7	12	22
HEA 3503 28 6D	8.83	6.40	9.02	6.69	28.8	7.0		57.5	15	22
HEA 3504 38 6D	11.83	9.00	11.94	9.03	38.4	9.4		74.9	15	28
HEA 3505 48 6D	14.81	10.78	15.11	11.24	48.0	11.7		92.4	15	35
HEA 3506 57 6D	17.43	12.21	18.03	13.02	57.6	14.1		109.2	15	35
HEA 4001 13 6D	4.24	3.22	4.25	3.18	13.7	3.4		27.5	12	19
HEA 4002 27 6D	8.47	6.36	8.55	6.4	26.8	6.6		48.6	12	28
HEA 4003 36 6D	11.63	8.25	11.96	8.72	35.8	8.8		65.0	15	28
HEA 4004 54 6D	17.00	12.82	17.16	12.87	53.7	13.2		91.9	15	35
HEA 4501 20 6D	6.73	4.71	6.96	5.02	20.4	5.0		39.0	12	22
HEA 4502 41 6D	13.67	9.66	14.09	10.23	40.9	10.0		71.7	15	28
HEA 4503 61 6D	20.81	15.61	21.02	15.91	61.4	15.0		105.0	15	35
HEA 4504 82 6D	27.57	19.56	28.34	20.65	81.9	20.0		137.4	22	42
HEA 5001 26 6D	8.84	6.15	9.18	6.6	26.0	6.4	4	65.5	15	28
HEA 5001 39 6D	11.90	9.15	11.75	8.93	39.0	9.5	6	76.5	15	28
HEA 5001 52 6D	13.95	9.87	14.3	10.31	51.9	12.7	8	91.7	22	35
HEA 5002 54 6D	18.29	12.76	18.96	13.64	53.7	13.2	4	118.2	22	35
HEA 5002 81 6D	24.83	18.57	25.16	18.77	80.6	19.7	6	139.9	22	35
HEA 5002 108 6D	28.82	20.47	29.5	21.37	107.5	26.3	8	169.2	28	54
HEA 5003 82 6D	28.55	21.16	28.95	21.84	82.3	20.1	4	171.5	28	42
HEA 5003 122 6D	36.53	24.97	38.01	26.85	123.5	30.2	6	202.6	28	42
HEA 5003 163 6D	44.02	32.85	44.37	32.76	163	39.9	8	248.8	28	76
HEA 5004 109 6D	37.22	26	38.53	27.74	109.3	26.7	4	224.6	28	54
HEA 5004 164 6D	49.76	35.05	51.19	37	163.9	40.1	6	276.6	28	67
HEA 5004 219 6D	58.57	41.7	59.91	43.69	218.5	53.5	8	324.3	35	76



HIGH EFFICIENCY COMPACT-CEILING AIR TYPE EVAPORATORS

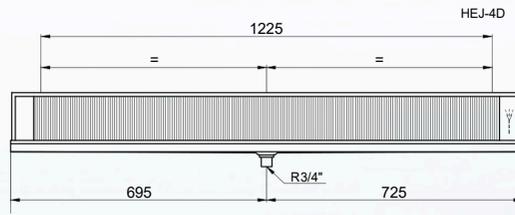
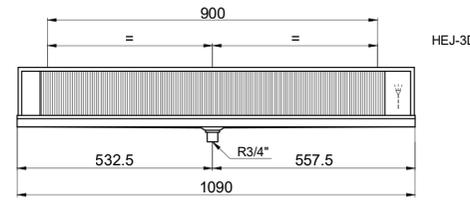
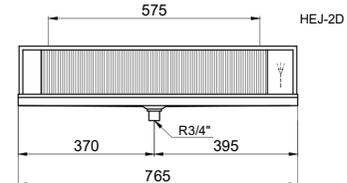
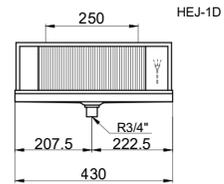
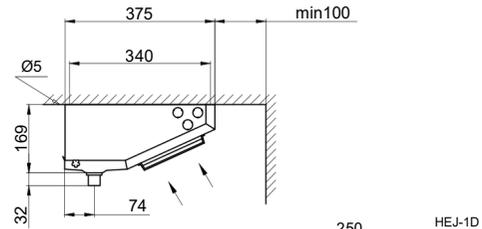
The **HEJ range** of compact-ceiling air type evaporators has been designed for use in low height commercial cold rooms for the preservation of fresh and frozen products.

The exchange coils used in the HEJ range are highly efficient with special profile aluminum fins and $\varnothing 9.52$ mm internally grooved copper tubes, with a reduced internal volume to reduce the necessary refrigerant charge, meeting the needs of the different international regulations for the reduction of gases with high greenhouse effect. They are supplied clean and tested under a pressure of 30 bar.

The HEJ range is subdivided into two series with different fin pitches depending on the chamber temperature:

- HEJ: For medium room temperatures ($R_t \geq -10^\circ\text{C}$) with alternate fin pitch 3.2/6.4 mm and electric defrost.
- HEJ Plus: For low room temperatures ($R_t \geq -25^\circ\text{C}$) with alternate fin pitch 4.5/9 mm and electric defrost.

The standard electric fans used in this range have the following characteristics: -Single-phase 230V/1/50 Hz with shaded pole motor, $\varnothing 200$ mm, with grid and short nozzle. Operating temperature -30°C to $+40^\circ\text{C}$.



Modelo / Model	Capacidad / Capacity R404A/R507A (kw)		Capacidad / Capacity R448A/R449A (kw)		Superficie / Surface (m ²)	Volumen interno / Tube Volume (dm ³)	Peso Neto / N.W. (kg)	Conexión / Connection (ømm)	
	te= 0°C	te= -8°C	te= -0°C	te= -8°C				Entrada / Inlet	Salida / Outlet
	DTI=10K	DTI=8K	DTI=10K	DTI=8K					
HE J-1D	1.15	0.79	1.19	0.82	2.9	0.6	5.5	1/2"	3/8"
HE J-2D	2.38	1.63	2.39	1.61	5.7	1.2	9.9	1/2"	1/2"
HE J-3D	3.56	2.46	3.63	2.52	8.6	1.8	14.1	1/2"	1/2"
HE J-4D	4.8	3.32	4.85	3.34	11.	2.5	18.6	1/2"	1/2"

Modelo / Model	Ventilador con Motor Axial / Axial Fans							Desescarche Eléctrico / Electric Defrost	
	Diámetro / Diameter (ø mm)	Nº	Voltaje / Voltage (V, 50Hz)	Potencia / Power (W)	Intensidad / Current (A)	Flujo de aire / Air Flow (m ³ /h)	Tiro / Air Throw (m)	Aletas / Coil (W)	Total / Total (W)
HE J-1D	200	1	1 ~ 230	38	0.2	348	5	1 × 500	500
HE J-2D	200	2	1 ~ 230	76	0.5	696	6	1 × 800	800
HE J-3D	200	3	1 ~ 230	114	0.7	1043	7	1 × 1200	1200
HE J-4D	200	4	1 ~ 230	152	0.9	1391	9	1 × 1500	1500

* HISPANIA EVAPORATORS have White powder-coated aluminium casing with high resistance to corrosion and impacts.

In models with electric defrost, stainless steel electric heaters covered by aluminum tubes are used, located in the finned package and in the drip tray to avoid steam problems and make easy replacement.

The electrical parts are connected to an earth terminal, inside a connection box with access holes equipped with cable glands with IP 65 protection.

For performance at work points other than those in this catalog, use the "Unit Selector Hybrid HISPANIA" software.



Caring for **the Earth** Caring for **Life**

Refrigeration Equipment factory

Supcool — Super cooling & Most efficient Refrigeration System

Air Coolers (Evaporators)

DL & DJ



Nomenclature

D L 29 / 45 3 A

- A: 380V/50Hz/3Phase B: 220V/50Hz/1Phase
- Quantity of Fan motor
- Dia. (cm) of Fan motor
- Cooling Capacity (kw)
- Room Temperature: L: -5~ +5°C, D: -15~ -20°C, J: Below -25°C
- Series Number: DLS means water defrosting

Product Description

- Powder painting steel body.
- Defrosting with stainless steel electric heater
- Water defrosting is optional
- Double layer drain plates keep the condensate water from frozen

Cold room with two separated spaces by a fixed dividing wall with operating temp. $-20^{\circ}\text{C}/+2^{\circ}\text{C}$

Boxcold cold rooms differ for the internal operating temperature: cold room with normal temperature (NT) and cold room with low temperature (LT).



The former is usually made in thickness 6 cm and 8 cm, with or without floor – that is optional according to the ease of use and cleaning. The latter is made instead in thickness 10-12-14 cm (also in thickness 8 cm with the addition of the door heating cable kit).

Those thicknesses guarantee a better temperature hold below zero, a stability ensured by the use of the floor that, for this type of cold room, is mandatory.

For cold rooms with floor, it is possible to customize the structure of the cold room thanks to some options supplied by Boxcold: the flush threshold and the external ramp.

When the customer needs a combination of an NT cold room and an LT one, Boxcold provides several technical solutions – i.e. the possibility to divide a cold room into two or more spaces thanks to the use of fixed dividing walls. However, the conditions required to realize this solution are: both cold rooms must be with or without floor, both must have the same thickness and the same internal height.

1. SLIDING DOOR
2. FLUSH THRESHOLD
3. STEP
4. EXTERNAL RAMPA

special corners/walls designed

Flexibility and modularity

Boxcold cold rooms can easily be installed in every space thanks to their high flexibility and modularity.

Actually, since they are designed for hotels, canteens, big restaurants, commercial spaces, but also for hospitals, drugstores and industrial environments, the cold rooms must be adapted to the structures and to the dimensions of the spaces where they must be installed.

For this reason, all Boxcold models can be customized according to the needs.

In the installation space where there are beams, pillars, special walls and/or corners, Boxcold cold rooms offer the possibility to cover or bypass the obstacle by means of “special” panels (non-standard 20 cm modularity).



One or more obstacles can be avoided at the corner or along the wall of a single cold room.



Therefore, the technical solutions that can be realized with Boxcold cold rooms are potentially infinite.

1.1

HINGED SINGLE LEAF DOOR & DOUBLE LEAVES DOOR

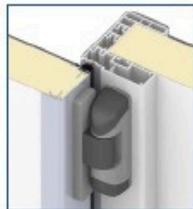
MAXIMUM DIMENSION IS 1500 X 2500 MM. COMPOSED OF FOUR MAIN PARTS AS FOLLOWING:

1 LEAF SPECIFICATIONS

- Leaf made up of two pre-painted hot dip-galvanized steel sheets thickness 0.50mm (Standard), thicker sheets available (on request), Standard sheets color RAL 9010.
- Leaf is surrounded by anodized aluminum profile.
- Leaf is Injected with Polyurethane rigid foam (PUR) materials in order to act the thermal insulation with density 40 Kg / m³ (2 ± kg.)
- Along the edge of the anodized aluminum profile inserted a special EPDM rubber gasket double density in order to avoid leakage (temperature seal). In deep freezers up to -40 degrees inserted two double density gaskets.
- Special 3 lines EPDM rubber gaskets is fixed at the bottom of the door leaf (temperature seal inside floorless rooms).



Rail Passage



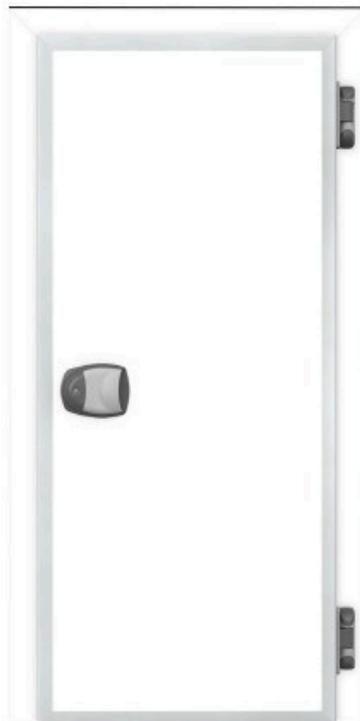
Connecting Door to the Frame



Gasket for BT Models

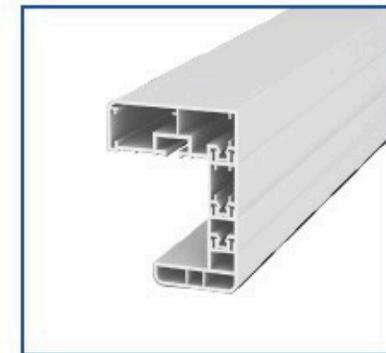


Gasket for TN Models



2 FRAME SPECIFICATIONS

- Frame is made up from extruded P.V.C profiles reinforced internally by steel and it is thermo-welded at (45°) delivered in 3 main parts:
 - Outside part: two types one to be used for positive temperature and another for negative temperature.
 - Side part: two sizes 30 and 50 mm to be connected to the outside part in order to allow fixing on different thicknesses.
 - Counter frame: L shape fixed inside of the cold rooms.
- P.V.C Frames can be fixed either on panel with different thicknesses up to 200 mm or brick wall.
- Optional/ frame can be covered by welded stainless steel 304 along with door leaf made both sides from stainless steel.
- For negative temperature, a heating cable 40 w/m powered at 220 V is inserted inside the frame covered by aluminum profile.
- For deep freezers, up to -40° heating cable 40w/m powered at 220 V is inserted in both leaf and frame.
- Inside meat processing plants where there is a rail passage for meat moving from storage to operation area a special opening for rail is done as following:
 - The opening size will be 200 x 400 mm. or as customer request.
 - The opening will be surrounded by the P.V.C counter frame.
 - Two rubber seals will be fixed on the opening to let pass the Guide way.



2.1a | INDUSTRIAL SLIDING DOOR SINGLE LEAF

MAXIMUM INDUSTRIAL SLIDING DOOR ONE LEAF IS 2800X 3800 MM, DOORS ARE COMPOSED OF FOUR MAIN PARTS AS FOLLOWING:

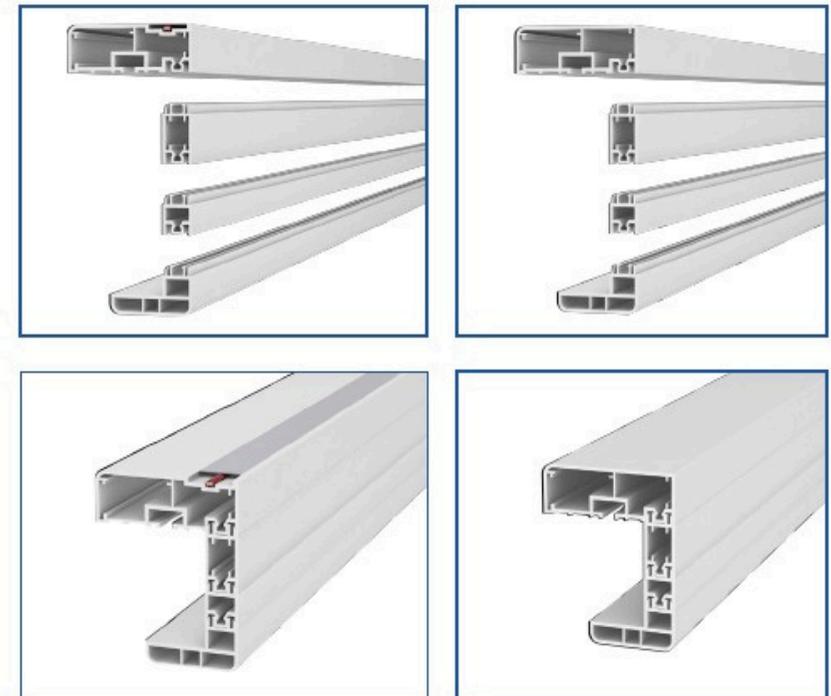
1 LEAF SPECIFICATIONS



- Leaf made up of two pre-painted hot dip-galvanized steel sheets thickness 0.50mm (Standard), thicker sheets available (on request), Standard sheets color RAL 9010.
- Leaf is surrounded by anodized aluminum profile.
- Leaf is Injected with Polyurethane rigid foam (PUR) materials in order to act the thermal insulation with density 40 Kg / m³ (2 ± kg.)
- Along the edge of the anodized aluminum profile inserted a special EPDM rubber gasket double density in order to avoid leakage (temperature seal), In deep freezers up to -40° inserted two double density gaskets
- Special 3 lines EPDM rubber gaskets is fixed at the bottom of the door leaf (temperature seal).
- Leaf is reinforced internally with metal tube connecting four sides of anodized aluminum in perfect shape and condition.
- Along the anodized aluminum internally special metal plates inserted to allow fixing sliding system parts.

2 FRAME SPECIFICATIONS

- A. Frame is made up from extruded P.V.C profiles reinforced internally by steel and it is thermo-welded at (45°) delivered in 3 main parts:
- Outside part/ fixed size - 2 types - one for positive and the other for negative temperature.
 - Side part/ in two sizes 30 and 50mm to be connected to the outside part in order to allow fixing on panel.
 - Counter frame/L shape fixed inside of the cold rooms.
- B. Frame can be fixed either on panel with different thicknesses up to 200 mm or brick wall.
- C. Optional/ framed can be covered by welded stainless steel 304 along with door leaf made both sides from stainless steel.
- D. For negative temperature, a heating cable 40w/m powered at 220v is inserted inside the frame covered by aluminum profile.
- E. For deep freezers, up to -40co heating cable 40w/m powered at 220v is inserted in both leaf and frame.
- F. Inside meat processing plants where there is a rail passage for meat moving from storage to operation area a special opening for rail is done as following:
- The opening size will be 200 x 400 mm or as customer request.
 - The opening will be surrounded by the P.V.C counter frame.
 - Two rubber seals will be fixed on the opening to let pass the Guide way.



Tonon has been in business since 1946 and is currently managed by the third generation of the Tonon family from Turin.

In large, as well as small companies related to the food sector, there is an increasingly pressing need to adopt equipment that allows easier and faster production, excellent hygienic results, better preservation of the product and, above all, the elimination of the considerable labors required by the use of inadequate systems.

To this end, TONON company, which devotes its activity to the solutions of problems inherent in the food industry, allows itself to present in this catalog its production, certain to satisfy the most diverse needs.

MODULAR SHELVING SYSTEM TOP SERIES



- Load capacity: up to 250 kg (550 lbs) per shelf
- Simple click-assembly of the shelves, ensuring ultimate flexibility and strength
- Exclusive use of stainless steel screws - none of them visible
- Eco-friendly all the way from delivery to use
- Temperature range: from -30°C (-22° F) to +90°C (+194° F)
- Flat packaging = less freight costs
- Ideal for cold and freezer rooms - No frost issues with cardboard boxes
- Approved and suitable for direct food contact
- Long Life service
- No special tools needed for assembly
- Lightweight
- Easy to clean
- Fast assembly
- International Hygiene certifications (FCMs; NSF)
- NO RUST - 20 micron anodized aluminum
- Length precision < 3 cm (1)



Linear



Add-on



Angular



"U" shape



IDEAL FOR COLD ROOMS REFRIGERATORS AND FREEZERS



The requirements for food storage are increasingly restrictive and demand a very high guarantee of hygiene and safety.

Tonon products meet the requirements as they have obtained the level of certification for food storage.

When deciding which materials to use for our items, we consider all parameters, including, of course, the safety of our customers.

		<p>High-Density Polyethylene</p> <p>The same material used for cutting boards in the kitchen.</p>
		<p>Anodized aluminum</p> <p>The same one used to preserve food.</p>

No problems with humidity



Certified Product



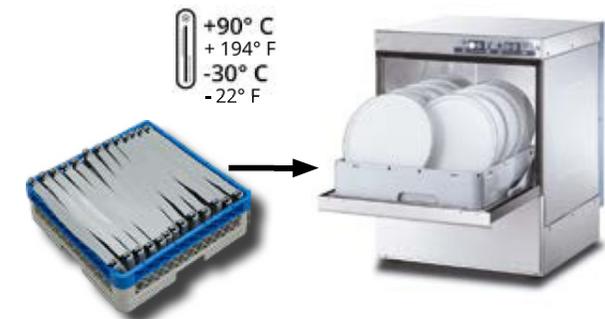
NSF International - P.O. Box 130140 Ann Arbor Michigan - USA - Standard 02

Certificate in compliance with NSF Ansi Standard 02 (America, Africa, Asia and Oceania) for easy cleaning, function, toxicological evaluation of materials.

To be renewed, the certificate requires a yearly audit at our premises.

Easy to clean

Our shelving system is easy to clean. Nuts and bolts free construction. The shelf slats are made of polyethylene (PE-HD) and they are easy to remove and dishwasher safe as requested by HACCP.



A specialized area of construction buildings covered with thermal insulated panels is that of the production storage, preservation, cold/freezing rooms for food and other sensitive products.

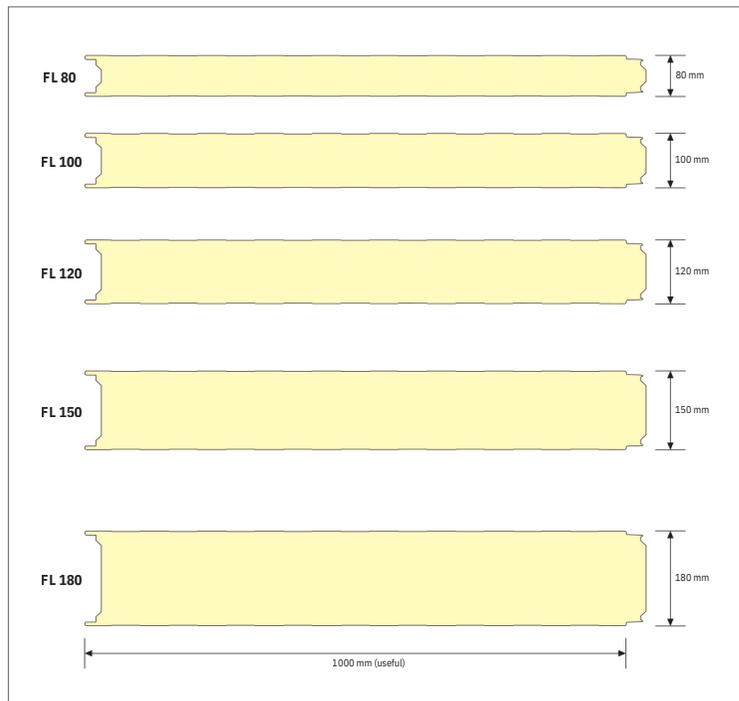
Nowadays, the need for transportation and distribution of these products over long distances is getting greater. For this reason, the European directive for the hygiene and security of food, which Greece has instituted as well, determines the specifications that must be met for the production, storage, preservation and freezing areas of food and other sensitive products. In response to the specific demands of these constructions, ELASTRON S.A. produces the range of thermal insulated panels “ECOPANEL® FL”.

ECOPANEL® FL are designed to meet the special needs and growing demands of the areas for which they are destined.

Particular attention has been given to the design of their joints as well as to the characteristics of their components such as the polyurethane insulation core and the steel sheet quality. They completely meet the current European specifications that refer to the hygiene and protection of food in the areas of its production, storage, preservation and freezing.

The panels are produced with foam core of polyurethane (PUR) or polyisocyanurate (PIR) which gives them certified class flammability B-s2,d0 and fire resistance EI-30 in accordance with the European Standard EN 14509 and bear CE mark.

ECOPANEL® FL (COLD ROOMS)



Special technical characteristics

- 1 External joints suitable for areas of high sanitary requirements that meet the specification of “HCCP”.
- 2 Specially shaped internal joints to ensure maximum high thermal insulation performance .
- 3 Removable - before installation - paper strips on both sides of the joint for better foam contact and avoidance of heat loss.
- 4 Polyurethane foam PUR or PIR of high thermal capability CFC Free & HCFC Free.
- 5 Steel sheet shape slightly corrugated or flat in both sides.

Sklejka Trade specializes in plywood supplying.

They offer a wide assortment of high quality products: standard and specialized plywood, own-made plywood cut to size.



ANTI - SLIP PLYWOOD

Sizes: 1250 mm x 2500 mm, 1220 mm x 2440 mm, 1500 mm x 3000 mm,
1500 mm x 2500 mm, 2130 x 1250 mm



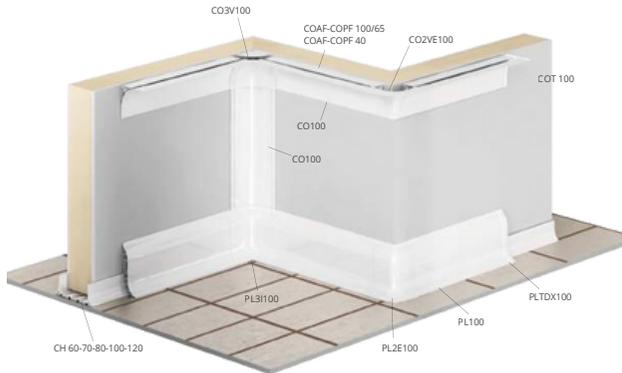
HEXA anti-slip plywood

with a hexagonal pattern on one side and smooth surface on another.

Available in throughout Birch or combi Birch+Pine construction (density 600-720 kg/m³). Bonded with adhesive based on phenol-formaldehyde resin to be used in exterior conditions according to PN-EN 636-3. Generally overlaid with Dark Brown Phenolic Film with density 220 g/m². Also available in black or grey colour.

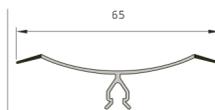
Edges are sealed with acrylic paint. Widely used in floors of semi-trailers and trailers and wherever high resistance and surface aesthetic features are required.

Basic hygienic corner with aluminium or pvc guide, with soft fins to fix it to the wall to assure hygiene. It can be used with plinth.



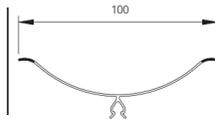
CO 65

Length 4.000 mm
Packing 25 pz / box
Colour E F O



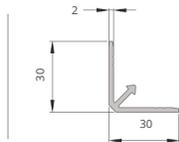
CO 100

Length 4.000 mm
Packing 25 pz / box
Colour E F O



COPF 100-65 with holes
COAF 100-65

Material COPF plastic
COAF aluminium
Length 4.000 mm
Packing COPF 100-65 25 pz / box
COAF 100-65 25 pz / bundle



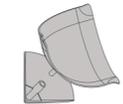
PL 100 R

Length 4.000 mm
Packing 10 pz / box
Colour E F



CO3V 65
CO3V 100

Packing 100 pz / box
Colour E F O



CO2VE 65
CO2VE 100

Packing 100 pz / box
Colour E F O



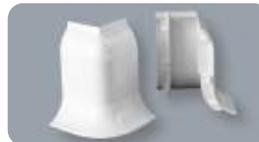
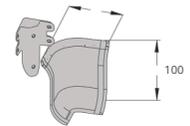
COT 65
COT 100

Packing 100 pz / box
Colour E F O



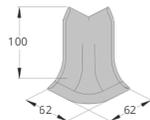
PL2I 100
PL3I 100

Packing 50 pz / box
Colour E F



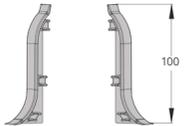
PL2E 100

Packing 50 pz / box
Colour E F



PLTDX 100
PLTSX 100

Packing 100 pz / box
Colour E F



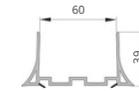
PLASTIC PROFILES/ CHANNELS

Different sizes available with rounded sides and soft fins for a good fit to the floor. Cheap models available, see CU.



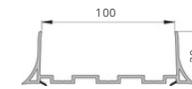
CH 60

Length **4.000 mm**
Packing **2 pz / bundle**
Colour E F



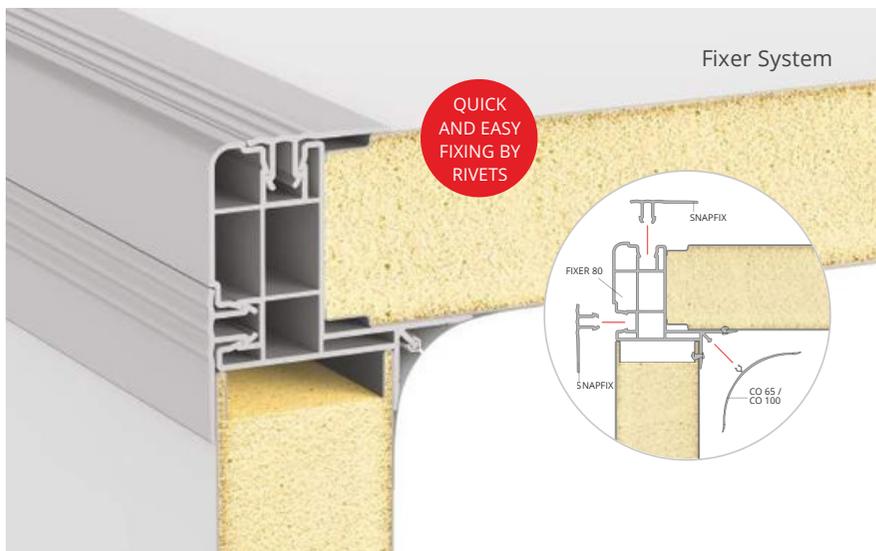
CH 100

Length **4.000 mm**
Packing **2 pz / bundle**
Colour E F



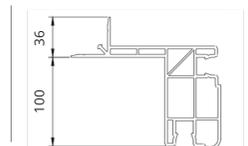
PLASTIC PROFILES/ FIXER SYSTEM

New and useful system for quick assembly of cold rooms or other buildings using continuous panels.



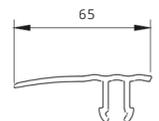
FIXER 100

Length **5.800 mm**
On request
Packing **2 pz / box**
Colour K



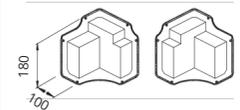
SNAPFIX
To install with **FIXER 80**
and **FIXER 100**

Length **5.800 mm**
On request
Packing **4 pz / box**
Colour K



FIT 100 DX
FIT 100 SX

Packing **4 pz / box**
Colour K



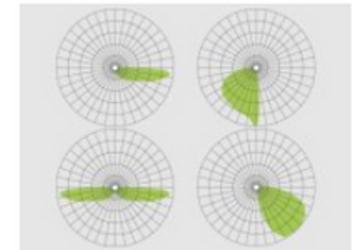
lxpro COLD ROOM LED LIGHTS

LCR series - modular use and easy installation

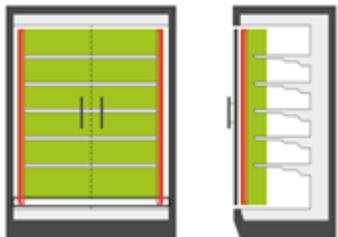
Its efficient design means that the LCR is ideal for use in plug-in self service units, refrigerated display cases and island display freezers. It can be quickly integrated and installed horizontally as well as vertically.

Thanks to the slim design, the LCR can be ideally installed as handrail lighting in refrigerated display cases and freezer islands, as well as horizontally or vertically in plug-in refrigerated cabinets. The beam angle enables uniform illumination of the entire goods display. The LCR can be easily and quickly mounted vertically and horizontally.

The economical design is ideal for use in self-service cabinets, refrigerated display cases and freezer islands. The LCR is available in neutral white, cool white and fresh meat. Depending on the prevailing conditions, as well as the contents of the refrigeration cabinet, you can match the light colour to its specific product category. Also the refrigeration effect is enhanced by cool white lighting.



- LCR-C – mounting in the furniture head, for illumination of the upper shelves.
- Refrigerated multideck cabinet (open / closed)
 - Freezer
 - Combi Freezer



- LCR-VLR – attachment to the door web (left or right), for illumination of the goods front.
- Refrigerated multideck cabinet (closed)
 - Freezer
 - Combi Freezer



Light for cold rooms

The AQL is adapted to special conditions in the industrial sector. This includes walk-in cold rooms in supermarkets, butcher shops, hotels and restaurants as well as the entire logistics area.

With its full polycarbonate housing and the associated maximum material expansion tolerance, it works perfectly even under extreme conditions, such as temperatures down to -40°C , very high humidity or heavy dust formation.

Product Details



- A lamp for extreme temperatures from -40°C to $+40^{\circ}\text{C}$
- Permanently stable, even with temperature fluctuations
- Light point-free LED light with increased protection class
- Accessories enable versatile installation variants
- Complies with standards for cold rooms
- High protection class and shock resistance



- ELECTRICAL BOARDS FOR REFRIGERATION SYSTEM
- MONITORING AND SUPERVISION SYSTEMS



ENERGY SAVING SOLUTIONS

on Refrigeration, Conditioning and Lighting for the Retail Market



WARM IDEAS





MaEr Fan Motor

Professional - Honest- Human Oriented



MaEr Fan Motor
Professional - Honest - Human Oriented

AC FAN



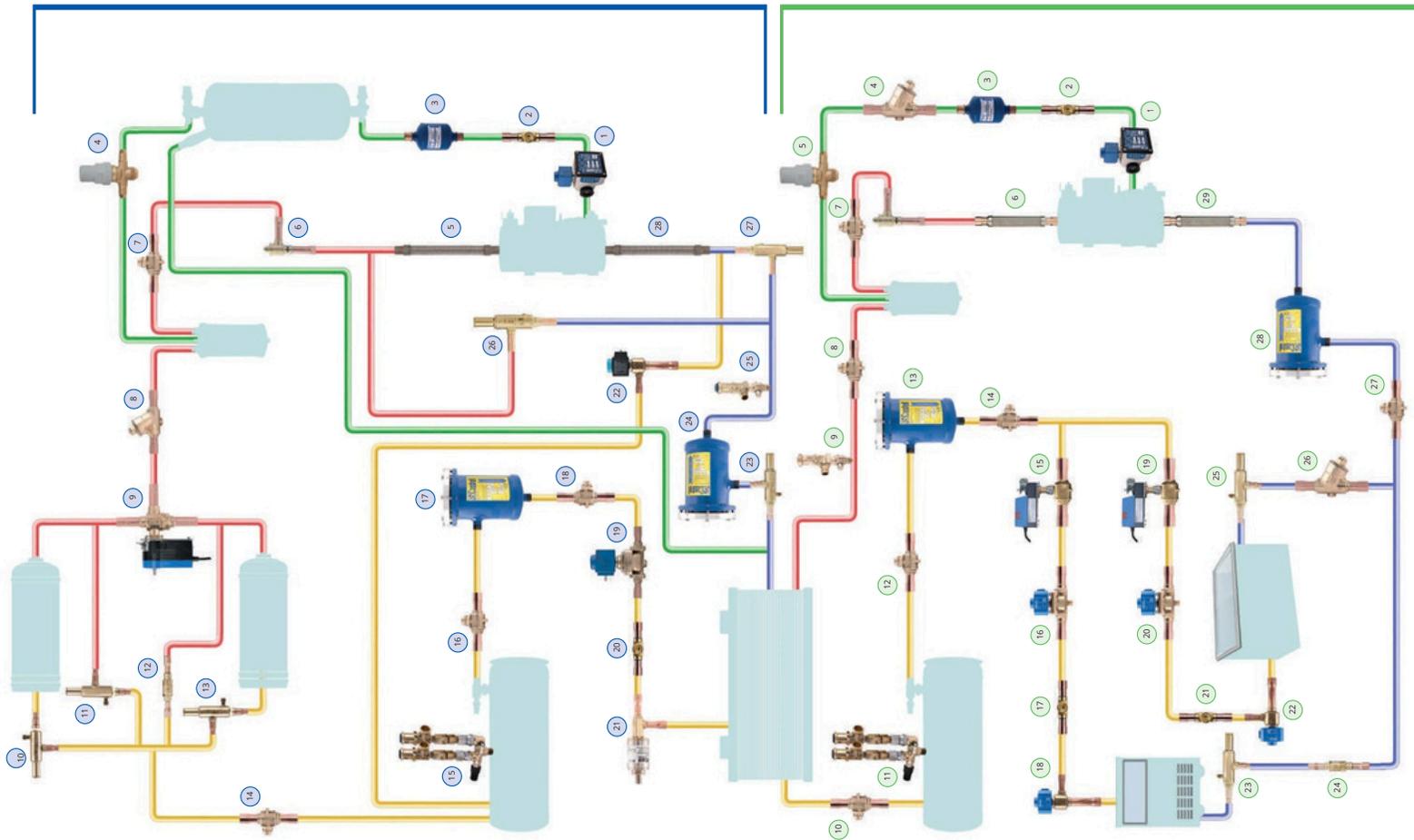
EC SMART FAN



POLYHEDRA

GOGREEN

R744 • NATURAL REFRIGERANT



- 1. Electronic oil level regulator code 5650 series
- 2. Oil/liquid indicator 3840 series
- 3. Strainer filter 4520 series
- 4. Manual valves 6110N/series
- 5. Vibration adsorber 7690N series
- 6. Angle check valve 3184W series
- 7. Ball valves 6570N series
- 8. Straight check valve 3144NW series
- 9. Three way ball valve 6690N series
- 10. Condensing pressure regulator 3340N series
- 11. Receiver pressure regulator series 3350N series
- 12. Differential check valve 3136W series
- 13. Condensing pressure regulator 3340N series
- 14. Ball valves 6570N series
- 15. Changeover valves 3032N series
- 15 bis. Safety valves 3065 series
- 16. Ball valves 6570N series
- 17. Drier filter 441x series
- 18. Ball valves 6570N series
- 19. Solenoid valve serie 10xxN series
- 20. Humidity indicator 3940-3910-3950 series
- 21. Motorized expansion valve 27xxx series
- 22. Solenoid expansion valve 2028N series Evaporating pressure regulator 3330N series
- 23. Mechanical filters with strainer core 4411xx/.CF series
- 24. Ball shut off valve 3064N series
- 25 bis. Safety valves 3061 series
- 26. Capacity pressure regulator 3310N series
- 27. Crankcase pressure regulator 3320N series
- 28. Vibration adsorber 7690N series

- 1. Electronic oil level regulator code 565xE series
- 2. Oil/liquid indicator 3740E series
- 3. Strainer filter 4520E series
- 4. Straight check valve 314xE series
- 5. Manual valves 6110N/series
- 6. Vibration adsorber 7690 series
- 7. Ball valves 657xE series
- 8. Ball valves 657xE series
- 9. Ball shut off valve 3064E series 9 bis Safety valves 3061E series
- 10. Ball valves 657xE series
- 11. Changeover valves 3032E series
- 11 bis Safety valve 3030E series
- 12. Ball valves 657xE series
- 13. Drier filter 441xE series 14 Ball valves 657xE series

- 15 Motorized Ball valves 657xE + 97xx series
- 16 Solenoid valve serie 10xxEL series
- 17 Humidity indicator 3940E - 374xE series
- 18 Solenoid expansion valve 2028E series
- 19 Motorized Ball valves 657xE + 97xx series
- 20 Solenoid valve serie 10xxEL series
- 21 Humidity indicator 3940E - 374xE series
- 22 Solenoid expansion valve 2028E series
- 23 Evaporating pressure regulator 3335EL series
- 24 Straight check valve 313xEW series
- 25 Evaporating pressure regulator 3335EL series
- 26 Straight check valve 314xEW series
- 27 Ball valves 657xE series
- 28 Mechanical filters with strainer core 4411xx/.CF series
- 29 Vibration adsorber 7690 series

REFRIGERATION COMPONENTS SOLUTIONS



Filtering - Drying - Decontamination



CCY
Interchangeable elements for the filter shells (BDCY, BCY, BBCY, ACY and BACY) ensuring the filtration, drying, or cleaning of the refrigerants of the air conditioning and refrigeration installations.



DCY
Filtering and drying of refrigerants and acid neutralization for liquid lines of refrigerating and air conditioning installations.



DDCY
Refrigerant filtering, drying and acid neutralization for refrigerating and air conditioning installation liquid lines with change over in flow direction, including heat pumps.



FACY
Permanent refrigerant filtering, compressor and regulation element protection in refrigerating and air conditioning installations. Recommended use after commissioning of the installation.



FNCY
Reinforced refrigerant circuits cleaning and decontamination in refrigerating and air conditioning installations.



VCYL
Immediate and direct monitoring of flow, condition or moisture content of the refrigerant in its liquid or diphasic phase in refrigerating and air conditioning installations.

Maintenance products



CARLYLOC is a simple, practical foaming solution, ideal for detecting leaks and thus ensuring rapid maintenance of the installation

Suction accumulator



The suction line accumulators **LCY** and **LCYE** are particularly recommended for installations that are:
 → exposed to sudden thermal load variations,
 → whose piping lengths are important,
 → operating with cycle inversions

Refrigerating valves



CRCY
The check valves ensure a one-way direction of the refrigerant flow, in refrigerating and air conditioning installations. They can be mounted on the liquid, suction, discharge or hot gases defrost line, to prevent unwanted return of refrigerant.

Oil regulation system



CCY 48 HU
Interchangeable elements for the filter shells (HCYBF) ensuring the filtration of the oil (on the oil return line to the compressor of air conditioning and refrigeration installations)



HCYF
Oil filtering on the oil return line to the compressor sumps of refrigerating and air conditioning installations.



The **TURBOIL**® oil separators limit the amount of oil within the circuit, thus allowing increasing the performances of the heat exchangers and prevent abnormal wear, even the breakage of compressors by lack of oil.



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Fieldpiece ATEX RATED TOOLS



Tube cutters



Flaring Tool & Tube Expander



Tube Bender



Manifold Gauges



The Portable Lifter is designed to lift heavy objects, such as air-conditioning equipment, indoor units, electric roll-up doors, installation of decoration items, lamps, and suspension of stage lightings, etc. The lifter is light and can be carried by a single person.

Specification Table	
Model	PL 430/ PL 490
Weight/Mast Weight	25.6kg/ 28.5kg
Dimension Platform	75x45cm
Rated Load Weight	Above 4 meters: 90Kg Under 4 meters: 120Kg
Portable Lifter Height	114cm/ 126cm
Ascension Maximum Height	427cm/ 490cm



HVACR TOOLS

Vacuum pump



Recovery Machine



Refrigeration tools



Pipe tools/HVAC instrument



Making Your Job More Enjoyable

REFRIGERANTS & COPPER TUBES





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