MEX EA - MEX HP EA

HIGH EFFICIENCY AIR-WATER CHILLERS AND HEAT PUMPS

MEX EA
Cooling capacity: 16 ÷ 50 kW

MEX HP EA
Cooling capacity: 15 ÷ 78 kW
Heating capacity: 17 ÷ 87 kW

Bring more value to your building,
CHOOSE EFFICIENCY.

High quality of the selected components

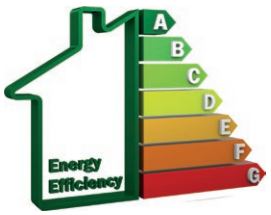
EASY
We offer easy-to-use units thanks to an advanced control system, for an optimal monitoring of hydronic system variables and for an easy access to all features of the unit.

COMPLETE
We provide all-in-one solutions for summer and winter air conditioning and for domestic hot water production thanks to the 3-way valve kit, managed by the electronic controller mounted on the unit (optional).

LIGHT AND COMPACT
We propose a compact and innovative design in terms of weight and volume, suitable for special applications or contexts characterized by architectural or aesthetic constraints.

RELIABLE
We realize reliable units equipped with standard electronic expansion valve that allows to optimize the regulation, minimizing the response time to the load variations required by the plant, for the maximum energy efficiency.

EFFICIENT AT PARTIAL LOADS
Scroll compressors in tandem configuration guarantee a better capacity adjustment to required plant loads through 2 unloading steps.



COP (30/35°C) UP TO **4,36**
COP (40/45°C) UP TO **3,40**
SCOP (AVERAGE 35°C) UP TO **3,93**
EER (12/7°C) UP TO **3,11**
SEER (FANCOIL) UP TO **4,28**

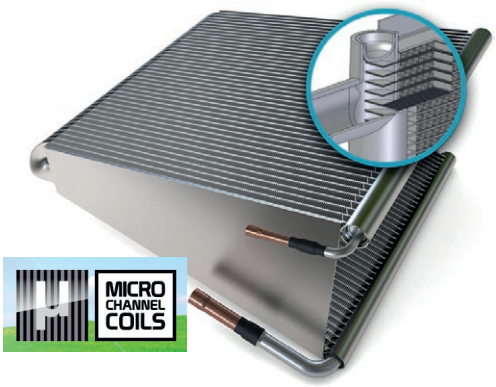
MULTISCROLL
TECHNOLOGY

Configuration for the complete MEX EA range and for the MEX HP EA range up to the model 145 ZH.
The MEX HP EA range starting from the 150 ZH model has a configuration with vertical air delivery fans.

GREEN

We design units in view of the minimization of refrigerant gas emissions, according to the principles of eco-design.

The units have a very low R410a refrigerant gas content, less than 8 kg on all the chillers thanks to the use of micro channels coils.



SILENT

To achieve high levels of acoustic comfort, the units are equipped with fans which allow to modulate the total air flow.
The fan adapts its speed according to the working conditions by reducing further the sound level.

VERSATILE

We conceive complete solutions for every need by providing hydraulic kits with pump and integrated water tank without additional dimensions, designed to simplify installation operations.

- For all models of MEX EA chiller range and only for models up to size 145 ZH for the heat pump range, the water tank is supplied loose, equipped with a connection kit to facilitate assembly under the basement of the unit.
- For all models starting from 150 ZH of the MEX HP EA range, the water tank is supplied mounted onboard without additional space requirements.

Units are also available in Low noise version equipped with compressors sound jackets which ensure a reduction in sound power level up to 4 dB compared to basic versions.

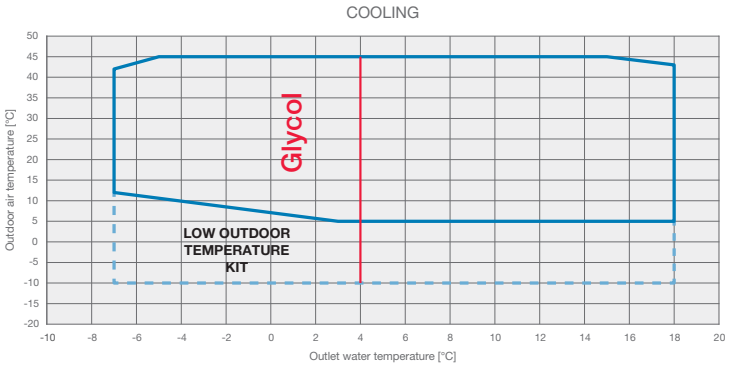
Reliable also at low outdoor temperatures

All models of MEX EA chiller range guarantee operation down to -10°C of outdoor temperature thanks to a low outdoor temperature kit.

MEXEA

Air/water chillers with scroll compressors and micro-channel coils.

17 50 kW

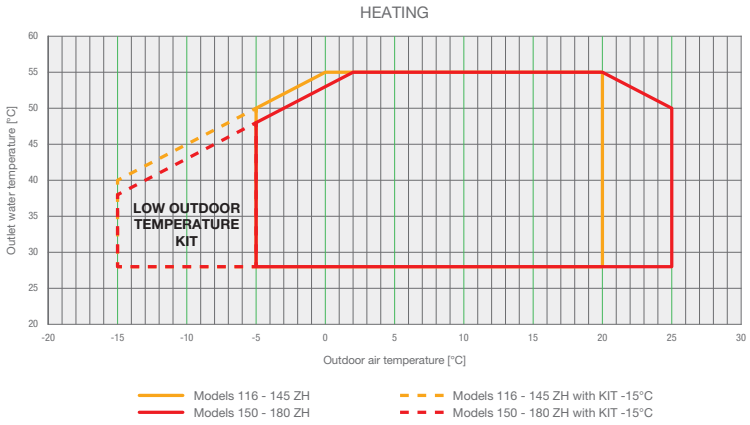


MEX HP EA heat pumps range is characterized by an extended operating map and ensures operating reliability down to -15°C of outdoor temperature thanks to a low ambient temperature kit.

MEXHPEA

Air/water heat pumps with scroll compressors.

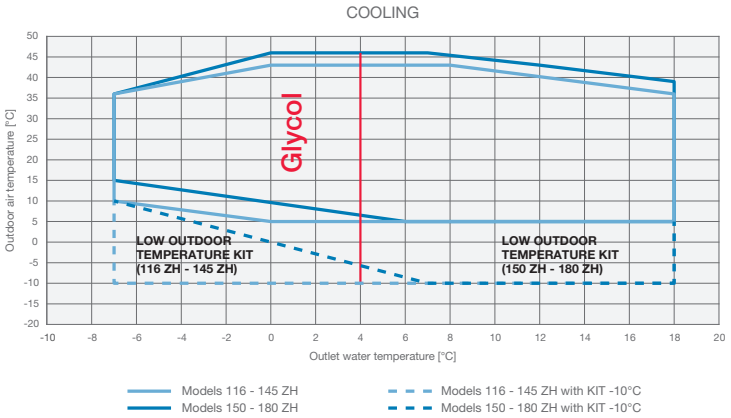
17 87 kW



MEXHPEA

Air/water heat pumps with scroll compressors.

16 78 kW



The ideal solution for residential applications

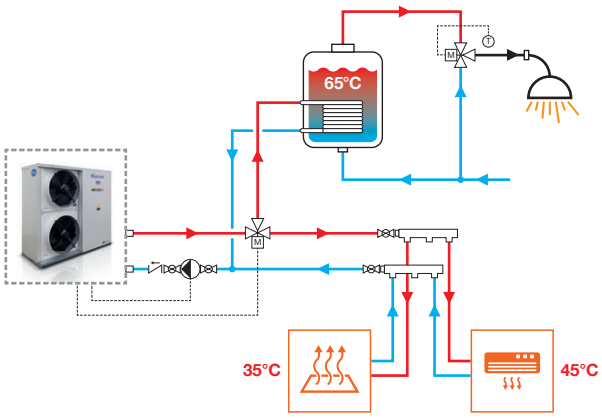
Choose a product that meets your climate comfort needs during the whole year: thanks to a three-way valve, the unit provides, in addition to summer and winter air conditioning, domestic hot water in order to be suitable for any residential application.

Integrated domestic hot water production

The unit is able to manage a three-way valve for domestic hot water production. The operation of the unit will optimally follow the plant load requirements, always guaranteeing priority to the DHW production.

It is possible to set two different set point temperatures, one for the space heating and another one for the domestic hot water, a perfect solution also for the most modern heating systems that operate with low temperatures.

Operating sketch



Save energy! Choose efficiency.

With MEX EA and MEX HP EA product families.

The integrated solution for residential applications

The MEX HP EA product family is perfect for residential applications such as apartments and private houses and represents a fully integrated solution for 2-pipe systems for winter space heating and summer cooling.
It also allows the production of sanitary hot water through a three-way valve.

High efficiency, low CO_2 emissions in atmosphere, reliability and flexibility are the basis of this new range that lays the foundation for a new concept of sustainable comfort.

Maximum installation flexibility

Designed as complete solutions for the comfort of people, MEX HP EA heat pumps can be used on plants with radiant panels or fan coils with extreme versatility and represent the ideal solution both for new buildings and renovation of existing plants.

If used for the renovation of buildings, these units are able to increase their energy efficiency class and give to the customers the possibility to benefit from the tax incentives in force in each European country for the modernization of existing installations.

Performances under control

Digital Defrost

An innovative defrost algorithm developed by Thermocold allows to optimize and reduce the number of defrost cycles. DIGITAL DEFROST is a digital self-adaptive defrosting system able to intervene only in case of a consistent thickness formation of ice on the coils' fins.

DIGITAL DEFROST

Dynamic Logic Control

Thanks to Dynamic Logic Control the unit adjusts the differential of the inlet water temperature according to the speed variation.
With this function the number of the compressors' start decreases compressor ensuring significant economic and energetic savings.

dLC DYNAMIC LOGIC CONTROL

Dynamic Set Point

The DSP function allows to change simultaneously the set point to achieve always achieve the best comfort and, above all, the maximum energy saving. DSP function allows hydronic terminals to work with variable water temperature according to the outdoor temperature, thanks to a customized set point regulation following a climatic curve.

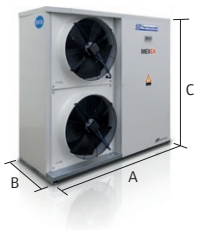
DSP DYNAMIC SET POINT

MEX EA

GENERAL TECHNICAL DATA

Mod.	Vers.		117 Z	120 Z	125 Z	128 Z	133 Z	136 Z	139 Z	145 Z	150 Z
FAN COIL - Cooling [1]											
CC	**C**	kW	16,4	19,0	24,6	28,3	32,5	35,5	38,1	44,5	49,6
PI		kW	5,60	6,70	7,90	9,20	11,0	12,8	14,1	15,4	18,2
EER			2,93	2,83	3,11	3,08	2,95	2,77	2,70	2,89	2,72
EC			B	C	A	B	B	C	C	C	C
WF		m³/h	2,82	3,26	4,23	4,87	5,59	6,10	6,56	7,65	8,53
WPD		kPa	15,1	19,6	31,3	23,1	29,6	34,7	39,6	31,7	38,5
SEASONAL EFFICIENCY IN COOLING ACCORDING TO EN 14825 [2]											
P rated		kW	16,4	19,0	24,6	28,3	32,5	35,5	38,1	45	50
ηs,c		%	166	165	167	168	155	150	149	159	163
SEER			4,22	4,20	4,24	4,28	3,96	3,83	3,79	4,06	4,15
RCN		n	1	1	1	1	1	1	1	1	1
CN		n	2	2	2	2	2	2	2	2	2
CT							Scroll				
TP							Step				
SPWL	**C**	dB (A)	74	74	77	76	77	78	78	79	79
SPL	**C**	dB (A)	48	48	51	50	51	52	52	53	53
SPWL	**LN**	dB (A)	-	-	-	74	74	74	74	76	77
SPL	**LN**	dB (A)	-	-	-	48	48	48	48	50	51
EPS		V/Ph/Hz					400/3+n/50				
Hydraulic versions											
EHP	**B1**	kPa	157	138	152	149	127	181	157	161	144
EV	**B1**	l	1	1	1	1	1	1	1	1	1
WT	**SB**	l	100	100	100	100	100	100	100	100	100
DIMENSIONS AND WEIGHTS											
Length (A)	**C LN**	mm	1807	1807	1807	2061	2061	2061	2061	2061	2061
Width (B)	**C LN**	mm	779	779	779	779	779	779	779	779	779
Height (C)	**C LN**	mm	1687	1687	1687	1687	1687	1687	1687	1687	1687
	+SB	mm	381	381	381	381	381	381	381	381	381
SW [3]	**C**	kg	287	291	324	363	374	374	376	520	530
	LN	kg	-	-	-	370	381	381	383	531	541

Configuration for all models starting from 150 ZH of the MEX HP EA range.



Configuration for all models of MEX EA range and for all models of MEX HP EA range up to 145 ZH.

(1) Outdoor temperature 35°C - chilled water temperature in/out 12/7°C. Technical data in accordance to EN 14511.

(2) Ecodesign rating for comfort chiller – fan coil application. ηs,c/SEER as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Comfort Chillers with 2 MW maximum capacity - COMMISSION REGULATION (EU) N°2016/2281 of 20 December 2016.

CC Cooling capacity
PI Total power input
EER Total EER 100%
EC Efficiency class
ηs,c Seasonal cooling energy efficiency
SEER Seasonal EER
WF Water flow
WPD Water pressure drop
RCN Number of refrigerant circuits
CN Number of compressors
CT Type of compressors
TP Type of regulation
SPL Sound pressure level (calculated according to ISO 3744 at 5 mt distance from the unit)
SPWL Sound power level measurements made in compliance with ISO 9614 for Eurovent certified units, in compliance with ISO 3744 for non-certified units.
EPS Electrical power supply
EHP External head pressure
EV Expansion vessel
WT Water tank volume
+SB Height variation with hydraulic kit
SW Shipping weight

(3) Consult the technical catalog for additional weights of hydraulic versions

MEX HP EA

GENERAL TECHNICAL DATA

Mod.	Vers.		116 Z	118 Z	122 Z	125 Z	128 Z	131 Z	133 Z	140 Z	145 Z	150 Z	155 Z	170 Z	180 Z
RADIANT SYSTEMS - Heating [1]															
HC	**H**	kW	18,0	20,7	27,5	31,8	36,8	40,6	43,7	50,2	55,9	58,7	68,1	81,4	89,7
PI		kW	4,27	4,88	6,41	7,29	8,63	9,78	10,7	12,6	14,4	14,4	17,1	20,8	23,3
COP			4,22	4,24	4,28	4,36	4,26	4,15	4,08	3,99	3,88	4,07	3,97	3,91	3,86
RADIANT SYSTEMS - Cooling [2]															
CC	**H**	kW	20,7	23,0	30,8	34,5	38,2	42,0	44,2	54,9	60,6	69,1	79,0	98,8	108
PI		kW	6,2	7,8	9,4	11,1	13,3	16,2	17,9	18,8	22,8	19,1	23,9	26,6	30,5
EER			3,34	2,96	3,27	3,12	2,87	2,59	2,47	2,92	2,66	3,62	3,30	3,71	3,55
FAN COIL - Heating [3]															
HC	**H**	kW	17,4	20,1	26,5	31,0	35,7	39,6	42,5	48,6	54,4	57,1	66,5	79,0	87,4
PI		kW	5,4	6,1	8,0	9,1	10,5	12,0	12,9	15,0	17,0	17,4	21,2	24,9	28,0
COP			3,23	3,29	3,32	3,40	3,40	3,30	3,30	3,24	3,20	3,27	3,13	3,17	3,13
EC			A	A	A	A	A	A	A	A	A	A	B	B	B
WF		m³/h	3,00	3,46	4,57	5,32	6,14	6,81	7,32	8,36	9,36	9,82	11,4	13,6	15,0
WPD		kPa	10,5	13,6	22,8	17,4	22,6	27,4	31,4	23,6	29,1	19,3	25,4	15,2	17,4
FAN COIL - Cooling [4]															
CC		kW	15,1	17,0	22,0	25,2	28,5	31,1	33,3	40,4	45,0	50,1	57,8	71,2	78,4
PI		kW	5,80	6,90	8,40	9,90	11,9	14,0	15,5	16,6	19,7	17,8	21,8	25,0	28,5
EER			2,60	2,47	2,62	2,55	2,39	2,22	2,15	2,44	2,29	2,82	2,65	2,84	2,75
EC			D	E	D	D	E	F	F	E	F	C	D	C	C
WF		m³/h	2,59	2,93	3,79	4,34	4,90	5,34	5,73	6,95	7,74	8,62	9,93	12,2	13,5
WPD		kPa	9,14	11,4	18,1	13,4	16,7	19,5	22,1	18,7	22,9	15,0	19,5	12,5	14,3
LOW TEMPERATURE RADIATORS and/or DHW PRODUCTION [5]															
HC	**H**	kW	17,3	19,7	25,7	30,3	34,6	38,6	40,4	47,3	53,1	55,7	64,8	76,6	84,4
PI		kW	6,87	7,98	10,3	11,8	13,1	15,1	16,0	18,7	21,2	21,5	26,2	30,4	34,0
COP			2,52	2,47	2,49	2,56	2,64	2,55	2,53	2,53	2,51	2,59	2,47	2,52	2,48
SEASONAL EFFICIENCY IN HEATING ACCORDING TO EN 14825 [6]															
P rated		kW	15,0	18,0	23,0	27,0	31,0	35,0	37,0	39,8	44,7	48,6	53,5	67,7	69,6
ηs,h		%	146	146	145	143	148	149	148	154	149	132	137	127	130
SCOP			3,73	3,73	3,70	3,65	3,78	3,80	3,78	3,93	3,80	3,38	3,49	3,24	3,33
EC			A+	A+	A+	A+	A+	A+	A+	A++	A+	A+	A+	A+	A+
RCN		n	1	1	1	1	1	1	1	1	1	1	1	1	1
CN		n	2	2	2	2	2	2	2	2	2	2	2	2	2
CT									Scroll						
TP									Step						
SPWL	**H**	dB(A)	74	74	77	76	77	78	78	79	79	81	82	84	85
SPL	**H**	dB(A)	48	48	51	50	51	52	52	53	53	54	55	57	58
SPWL	**LN**	dB(A)	-	-	-	74	74	74	74	76	77	80	81	83	83
SPL	**LN**	dB(A)	-	-	-	48	48	48	48	50	51	53	54	56	56
EPS		V/Ph/Hz							400/3+n/50						
Hydraulic versions															
EHP	**B1**	kPa	169	157	172	168	155	224	208	182	170	167	157	185	173
EV	**B1**	l	1	1	1	1	1	1	1	1	1	5	5	5	5
WT	**SB**	l	100	100	100	100	100	100	100	100	100	120	120	120	120

DIMENSIONS AND WEIGHTS															
A	**H LN**	mm	1807	1807	1807	2061	2061	2061	2061	2061	2061	2524	2524	2524	2524
B	**H LN**	mm	779	779	779	779	779	779	779	779	779	1038	1038	1038	1038
C	**H LN**	mm	1687	1687	1687	1687	1687	1687	1687	1687	1687	1995	1995	1995	1995
+B	**SB**	mm	381	381	381	381	381	381	381	381	381	-	-	-	-
+C	**SB**	mm	119	119	119	119	119	119	119	119	119	-	-	-	-
SW	**H**	kg	325	328	362	381	392	392	394	570	580	720	731	799	805
	LN	kg	-	-	-	388	399	399	401	581	591	736	747	815	821
+SW	**B1**	kg	12	12	12	12	12	14	14	15	15	21	21	24	24
	SB	kg	190	190	190	195	195	195	195	195	195	180	180	180	180

(1) Outdoor temperature 7°C 90% R.H. - hot water temperature in/out 30/35°C. Technical data in accordance to EN 14511.
(2) Outdoor temperature 35°C - chilled water temperature in/out 23/18°C. Technical data in accordance to EN 14511.
(3) Outdoor temperature 7°C 90% R.H. - hot water temperature in/out 40/45°C.
(4) Outdoor temperature 35°C - chilled water temperature in/out 12/7°C.
(5) Outdoor temperature 7°C 90% R.H. - hot water temperature in/out 50/55°C.
(6) Outdoor temperature 7°C 90% R.H. - hot water temperature in/out 55/60°C.
(7) Ecodesign rating at low temperature conditions. Outdoor temperature: 7°C dry bulb/6°C wet bulb and hot water temperature in/out: 30°C/35°C. ηs,h / SCOP as defined in Directive 2009/125/EC of the European Parliament and of the Council with regard to Ecodesign requirements for Space heaters and combination heaters with Prated < 400kW - COMMISSION REGULATION (EU) N° 813/2013 of 2 August 2013.

CC Cooling capacity
HC Heating capacity
PI Total power input
EER Total EER 100%
COP Total COP 100%
WF Water flow
WPD Water pressure drop
P rated Rated heat output
ηs,h Seasonal space heating energy efficiency
SCOP Seasonal COP
EC Efficiency class
RCN Number of refrigerant circuits
CN Number of compressors
CT Type of compressors
TP Type of unoading
SPL Sound pressure level (calculated according to ISO 3744 at 5 mt distance from the unit)
SPWL Sound power level measurements made in compliance with ISO 9614 for Eurovent certified units, in compliance with ISO 3744 for non-certified units.
EPS Electrical power supply
EHP External head pressure
EV Expansion vessel
WT Water tank volume
+ B/+C/+ SW = Variation with Hydraulic versions; SW = Shipping weight

Where to install MEX EA/MEX HP EA








Solutions for your ideal comfort in:

- New buildings.
- Existing buildings with partial or total replacement of the air conditioning system.

HOTELS
RESTAURANTS
OFFICES
SHOPS
APARTMENTS
PRIVATE HOUSES
SPA
GYM
HEALTHCARE CLINIC
COMMERCIAL SECTOR
INDUSTRIAL PROCESSES

Choose the sustainable comfort!

MEX EA and MEX HP EA allow you to save energy by contributing to achieve the objectives of environmental protection.

Add more value to your property, **CHOOSE THE EFFICIENCY.**

All models are designed according to the new directive ErP 2009/125/EC. All heat pump models present COP values in class A according to Eurovent.

PREMIUM performances to guarantee the maximum energy saving!

ErP COMPLIANT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Thermocold participates in the Eurovent Certification program LCP-HP since 2014. Check the ongoing validity of the certificate at: www.eurovent-certification.com or www.certiflash.com.

Thermocold is a brand of Ingersoll Rand. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club CarR, Ingersoll RandR, Thermo KingR and TraneR—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a $13 billion global business committed to a world of sustainable progress and enduring results.

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We are committed to using environmentally conscious print practices.