CLIMAVENETA

TECHNICAL SELECTION

Engine version: 5.0.19.0
User: Robert Kozłowski
Database version: 1.9.20.0
Print data:01/10/2026 15:05
ApplyME Version: 3.6.0

HEATING
COOLING

TECHNICAL SELECTION

i-FX-W (1+i)-G05-Y /H /CA /4252

Water to water high efficiency heat pump, reversible on hydraulic side

R R513A
SCREW



Code		i-FX-W (1+i)-G05-Y /H /CA /4252
Version		CA
Size		4252
Power supply	V/ph/Hz	400/3/50
Project - Selection Code		P5CE4DA5-S01

MITSUBISHI ELECTRIC
Changes for the Better

1 TECHNICAL SELECTION pg.3

1.1 Summary pg.3

1.2 Performance pg.3

1.3 Part load data pg.4

1.4 Sepr pg.5

1.5 Main components pg.6

1.6 Other data pg.7

1.7 Accessory list pg.11

1.1 SUMMARY

SUMMARY		
UNIT DESCRIPTION		
Code		i-FX-W (1+i)-G05-Y /H /CA /4252
Version		CA
Size		4252
UNIT DESCRIPTION [General descriptions and images of the range, not specific to the choice of model]		Water to water high efficiency heat pump, reversible on hydraulic side
Power supply	V/ph/Hz	400/3/50
Production Plant		EUROPE

1.2 PERFORMANCE

COOLING		
EVAPORATOR		
Fluid type		ETHYLENE GLYCOL
Glycol	%	25
Fouling factor	m²K/kW	0.0180
Fluid inlet temperature (cooling mode)	°C	12.00
Fluid outlet temperature (cooling mode)	°C	7.00
Water flow user side heat ex (cooling mode)	l/s	81.82
Pressure drop at the user side heat ex (cooling mode)	kPa	53.3
Available unit head	kPa	0.00
CONDENSER		
Fluid		WATER
Fouling factor	m²K/kW	0.0000
Fluid inlet temperature (cooling mode)	°C	30.00
Fluid outlet temperature (cooling mode)	°C	35.00
Water flow source side heat ex (cooling mode)	l/s	89.29
Pressure drop at the source side heat ex (cooling mode)	kPa	35.1
Available unit head	kPa	0.00
COOLING (Gross value)		
Cooling capacity	kW	1571
Compressor power input	kW	302.5
Total power input (cooling mode)	kW	302.5
EER	kW/kW	5.193
Heat rejection capacity	kW	1855
Note		Efficiency parameter available on request (For any further information please contact our Sales department)
COOLING (EN 14511)		
Cooling capacity	kW	1571
Effective power input	kW	312.9
EER	kW/kW	5.020

The performance shown are obtained from theoretical calculations and tolerances will apply.Rpt.version:2.0.0.0

Heat rejection capacity	kW	1855

HEATING		
EVAPORATOR		
Fluid type		ETHYLENE GLYCOL
Glycol	%	25
Fouling factor	m²K/kW	0.0180
Fluid inlet temperature (heating mode)	°C	5.00
Fluid outlet temperature (heating mode)	°C	1.00
Water flow user side heat ex (heating mode)	l/s	71.87
Pressure drop at the heat ex 1 (heating mode)	kPa	41.2
Available unit head	kPa	0.00
CONDENSER		
Fluid		WATER
Fouling factor	m²K/kW	0.0000
Fluid inlet temperature (heating mode)	°C	40.00
Fluid outlet temperature (heating mode)	°C	45.00
Water flow source side heat ex (heating mode)	l/s	69.66
Pressure drop at the heat ex 2 (heating mode)	kPa	21.4
Available unit head	kPa	0.00
HEATING (Gross value)		
Total heating capacity	kW	1443
Compressors power input (heating mode)	kW	364.2
Total power input (heating mode)	kW	364.2
COP	kW/kW	3.962
Note		Efficiency parameter available on request (For any further information please contact our Sales department)
HEATING (EN14511)		
Total heating capacity	kW	1444
Effective power input	kW	371.2
COP	kW/kW	3.890

1.3 PART LOAD DATA

COOLING PARTIAL LOADS											
INPUT											
Load	%	100.0	90.0	80.0	70.0	60.0	50.0	40.0	30.0	20.0	10.0
Condenser output temperature	°C	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Condenser fluid flow	l/s	89.29	89.29	89.29	89.29	89.29	89.29	89.29	89.29	89.29	89.29

OUTPUT											
Load	%	100.0	90.0	80.0	70.0	60.0	50.0	40.0	30.0	20.0	*10.0*
Temp. evaporator inlet	°C	12.00	11.50	11.00	10.50	10.00	9.50	9.00	8.50	8.00	*7.92*
Temp. evaporator outlet	°C	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	*7.00*
Evaporator water flow	l/s	81.82	81.82	81.82	81.82	81.82	81.82	81.82	81.82	81.82	*81.82*
Pressure drop	kPa	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	*53.3*
Condenser input temperature	°C	30.00	30.53	31.03	31.52	32.01	32.51	33.04	33.54	34.02	*34.10*
Condenser output temperature	°C	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	*35.00*
Condenser fluid flow	l/s	89.29	89.29	89.29	89.29	89.29	89.29	89.29	89.29	89.29	*89.29*
Pressure drop	kPa	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	35.1	*35.1*
Cooling load	kW	1571	1414	1257	1100	942.6	785.5	628.4	471.3	314.2	*157.1*
Total power input	kW	302.5	259.8	229.0	203.6	176.7	145.7	106.5	76.70	51.10	*27.80*
EER	kW/kW	5.193	5.443	5.490	5.403	5.334	5.393	5.899	6.148	6.153	*5.647*
Note		Note: italics texts mean integrated values under minimum step. For these operating points, the fluid temperatures and flow rate at the heat exchanger(s) correspond to those calculated at the minimum capacity step.									
HEATING PART LOAD											
INPUT											
Load	%	100.0	90.0	80.0	70.0	60.0	50.0	40.0	30.0	20.0	10.0
Temp evaporator outlet	°C	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Evaporator fluid flow	l/s	71.87	71.87	71.87	71.87	71.87	71.87	71.87	71.87	71.87	71.87
OUTPUT											
Load	%	100.0	90.0	80.0	70.0	60.0	50.0	40.0	30.0	20.0	*10.0*
Condenser input temperature	°C	40.00	40.50	41.00	41.50	42.00	42.50	43.00	43.50	43.77	*43.80*
Condenser output temperature	°C	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	44.77	*44.70*
Condenser fluid flow	l/s	69.66	69.66	69.66	69.67	69.67	69.67	69.67	69.66	69.66	*69.66*
Pressure drop	kPa	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	*21.4*
Temp. evaporator inlet	°C	5.00	4.62	4.23	3.81	3.39	2.98	2.63	2.23	1.82	*1.73*
Temp evaporator outlet	°C	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	*1.00*
Evaporator fluid flow	l/s	71.87	71.87	71.87	71.87	71.87	71.87	71.87	71.87	71.87	*71.87*
Pressure drop	kPa	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	41.2	*41.2*
Heating load	kW	1443	1299	1154	1010	866	722	577	433	289	*144*
Total power input	kW	364.2	321.3	282.0	252.6	221.4	188.7	136.1	100.2	68.00	*37.20*
COP	kW/kW	3.962	4.043	4.092	3.999	3.910	3.824	4.241	4.319	4.244	*3.881*
Note		Note: italics texts mean integrated values under minimum step. For these operating points, the fluid temperatures and flow rate at the heat exchanger(s) correspond to those calculated at the minimum capacity step.									

1.4 SEPR

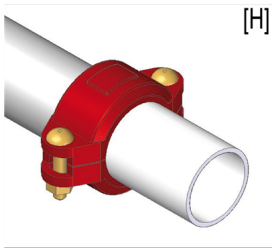
SEPR		
SEPR HT Official (Reg. EU 2016/2281)		
Type climate		Average
Temp. Plant side		High temp. (12/7)
Type flow		variable
Type Temperature		fixed
Prated,c	kW	1485
T Design	°C	35.00
SEPR HT		8.00

SEPR HT Editable		
High temp. (12/7)		
SEPR HT		0.00

1.5 MAIN COMPONENTS

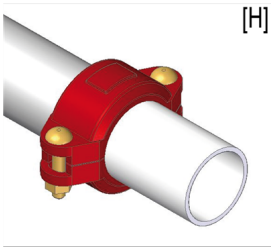
EXCHANGERS		
EVAPORATOR		
Typology		FLOODED
Quantity	N°	1
Type of connections		[H] - Grooved coupling with weld end counter-pipe user side
Diameter of connections		8"
Min flow	l/s	40.28
Max flow	l/s	97.22
Heat exchanger water content	l	370
Minimum water content admitted in the plant	l	5630

[H]



CONDENSER		
Typology		SHELL&TUBE
Quantity	N°	1
Type of connections		[H] - Grooved coupling with weld end counter-pipe user side
Diameter of connections		8"
Min flow	l/s	45.83
Max flow	l/s	111.1
Water content	l	430

[H]



COMPRESSORS		
COMPRESSORS		
Compressor type		SCREW
Compressors nr.	N°	2
No. Circuits	N°	1
Number of capacity steps	N°	0
Min. capacity step	%	18
Regulation		STEPSLESS
Oil charge	kg	62.0
F.L.I. - Max absorbed power	kW	1x216+1x179
F.L.A. - Max absorbed current	A	1x351+1x290
L.R.A. - Locked rotor amperes for single compressor	A	1x805+1x0

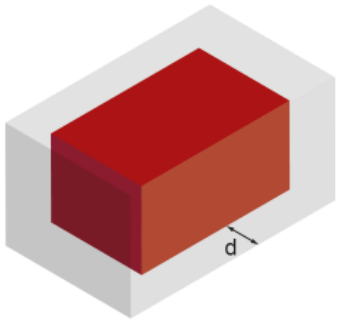
REFRIGERANT		
REFRIGERANT		
Refrigerant		R513A
Theoretical refrigerant charge	kg	372
GWP100 value (from IPCC AR5)		572
CO2 equivalent	t	213
ASHRAE Safety Classification		A1

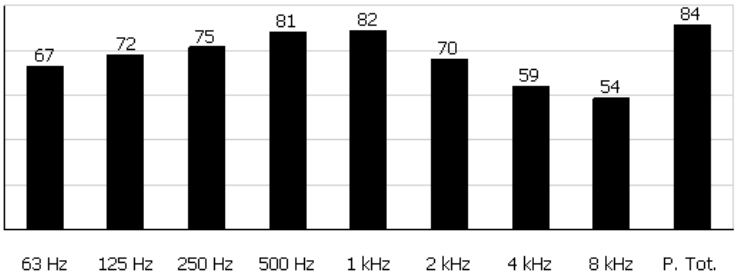
1.6 OTHER DATA

NOISE DATA									
SOUND DATA COLD									
Frequencies	Hz	63	125	250	500	1000	2000	4000	8000
Sound power (spectrum)	dB	87	92	95	101	102	90	79	74
Total sound power level in cooling	dB(A)				104				
Sound pressure level (spectrum)	dB	67	72	75	81	82	70	59	54

The performance shown are obtained from theoretical calculations and tolerances will apply.Rpt.version:2.0.0.0

Total sound Pressure	dB(A)	84





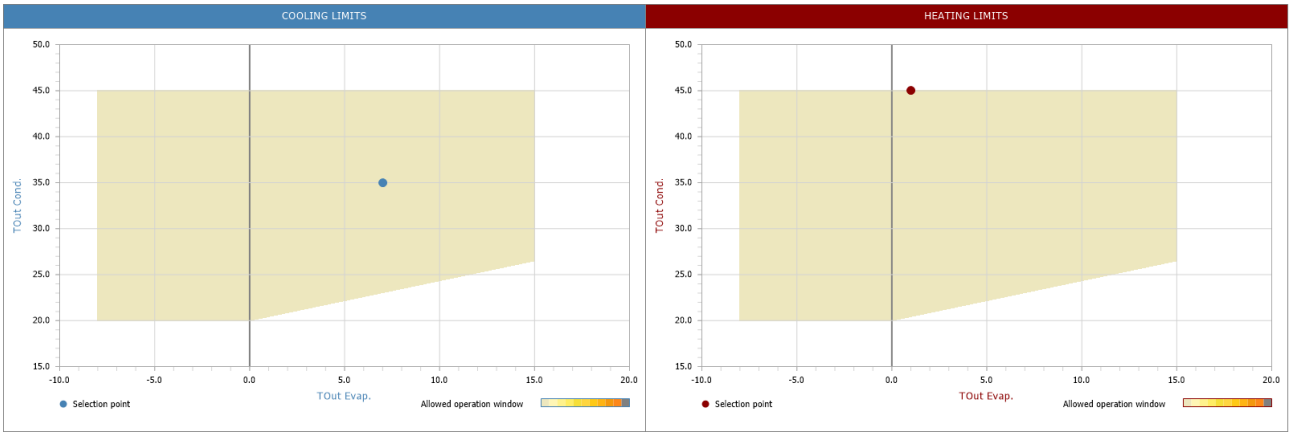
SOUND DATA INDOOR HOT		
Sound power level in heating	dB(A)	104
Note		
Distance	m	1
Note		Average sound pressure level at 1 m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level. Sound power on the basis of measurements taken in compliance with ISO 9614.

ELECTRICAL DATA

ELECTRICAL DATA		
Power supply	V/ph/Hz	400/3/50
F.L.I. - Max absorbed power	kW	395.0
F.L.A. - Max absorbed current	A	641
S.A. - Inrush current	A	951

OPERATING LIMITS

OPERATING LIMITS

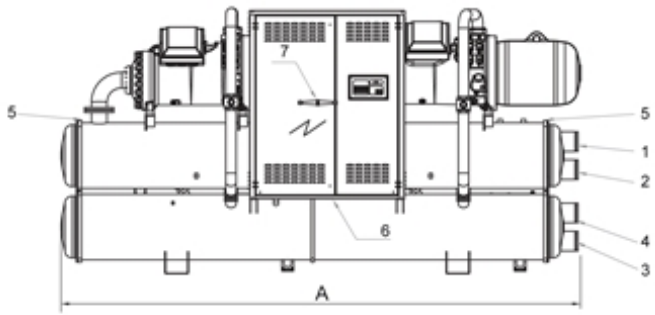


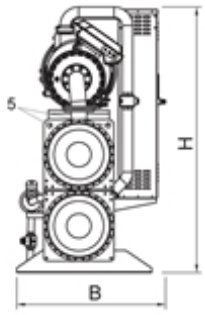
The performance shown are obtained from theoretical calculations and tolerances will apply.Rpt.version:2.0.0.0

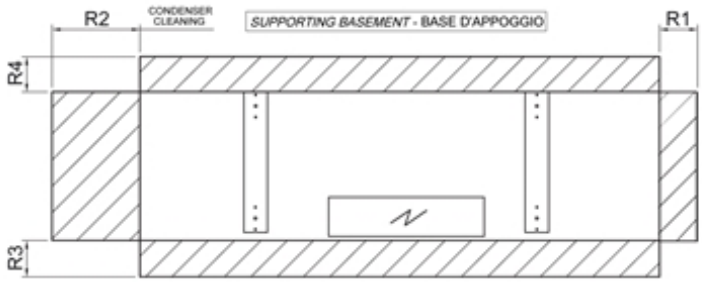
WEIGHT & DIMENSIONS

WEIGHT & DIMENSIONS

A	mm	4650
B	mm	1495
H	mm	2500
Operating weight	kg	8930
R1	mm	1000
R2	mm	4000
R3	mm	900
R4	mm	500







1 Evaporator water inlet
Entrata acqua evaporatore
2 Evaporator water outlet
Uscita acqua evaporatore
3 Condenser water inlet
Entrata acqua condensatore
4 Condenser water outlet
Uscita acqua condensatore
5 Lifting points
Punti di sollevamento
6 Power inlet
Ingresso linea elettrica
7 Main isolator
Sezionatore generale

The performance shown are obtained from theoretical calculations and tolerances will apply.Rpt.version:2.0.0.0

1.7 Accessory List

Accessory	Code	Description
REV. WA. CIR i-FX-W (1+i)/H/CA	8802	-
Reg.2016/2281 SEPR HT compliant	0112	-
R513A refrigerant	4006	-
VOLTAGE-START: 400V/3ph/50Hz S-D	331	-
COMPRESSOR OPERATION SIGNAL	3601	Allows remote signalling of compressor's activation or remote control of any auxiliary loads.
KIPlink + LARGE KEYBOARD	1444	-
GATEWAY IOT MOBILE ON BOARD	5852	-
EV - RELAY 1 PUMP + 0-10V SIG	4713	The hydronic module controls the external pumps with the unit controller logic.
EV - VPF.E	4869	The unit is set up to operate with a variable water flow in the heat exchanger (plant primary circuit). The unit controller manages the pump activation to reduce pump consumption. The pump speed is adjusted via 0-10V signal. The option provides a pump speed management based on the VPF.E function. It keeps the delta T constant on the plant side (primary circuit), thus bringing significant pump consumption reduction during part load operation. The VPF.E function is applicable in systems with only the primary circuit and with the hydraulic terminals equipped 3 way valve (by-pass). Further information available in the dedicated bulletin section.
CD - NO PUMPS, NO CONTACTS	4761	Constant water flow is to be provided by others.
2 PASS CONDENSER	1281	Inlet and outlet water connections on the same head
WITH MODULATING SIGNAL 0-10V	1246	The 0-10V signal, it allows to manage several condensing devices in order to maintain the condensing pressure in a pre-defined range in every applications: - for well water application to manage a 2 way modulating valve; - for cooling tower application to manage a 3 way modulation valve; - for dry-cooler or cooling tower application to modulate the fans' speed; - for geothermal probe to modulate the pumps' speed.
ITALIAN USER INTERFACE	1181	-
NYLON PACKING	9966	-