

Réalisé avec 18/11/2025 avec réfrigération Xpress V 7.8.3- Central 18.2.9 base de données

Nom du projet: MPC
Adresse du projet France
Nom du client: MONOBLOC PLAFONNIER

Seules les données du databook sont valables. Ce programme utilise des approximations relatives à ces données.

1. Liste du matériel

Modèle	Qté	Description
BPC4345YA11X	1	LT monobloc

2. Groupe extérieur Système 1

2.1. Données de sélection

Référence complète du modèle		Application
BPC4345YA11X		LT monobloc
Réfrigérant		
Type		R290
GWP		3
Données de sélection		
Position		Plafonnier
Surrounding temperature		32,0°C
Données mécaniques		
Longueur		1418mm
Hauteur		772mm
Profondeur		1044mm
Poids		180,5kg

The monoblock, during its operation, is discharging a lot of heat which would need to be removed to secure the good operation of the unit. We assume that where the monoblock is situated, the surrounding air is conditioned. This can come from a separate air conditioning unit or by an additional local ventilation system. It is the designer responsibility to define the real surrounding ambient design conditions of the place where the monoblock will be installed, because this has an impact on the delivered capacity of the selected monoblock as well as the operation of it.

Important notes:

- Supervising system for remote monitoring and cloud access (3MCB001ACC (LAN only) or 3MCB002ACC (LAN + WIFI)): If you have single or multiple monoblock installed within one cold room, you only required one device. This device can be connected to all installed monoblock with the usage of a 3rd party wiring connection. Please refer to the Installation manual how to connect.

GWP = Global Warming Potential

TCO₂ eq. = Tonnes de CO₂ equivalent

L'Equivalent Carbone (TCO₂) est calculé en considérant uniquement la charge de réfrigérant de base. En fonction de longueurs de tuyauterie, une charge aditionnelle peut être nécessaire augmentant ainsi l'Equivalent Carbone de la solution.

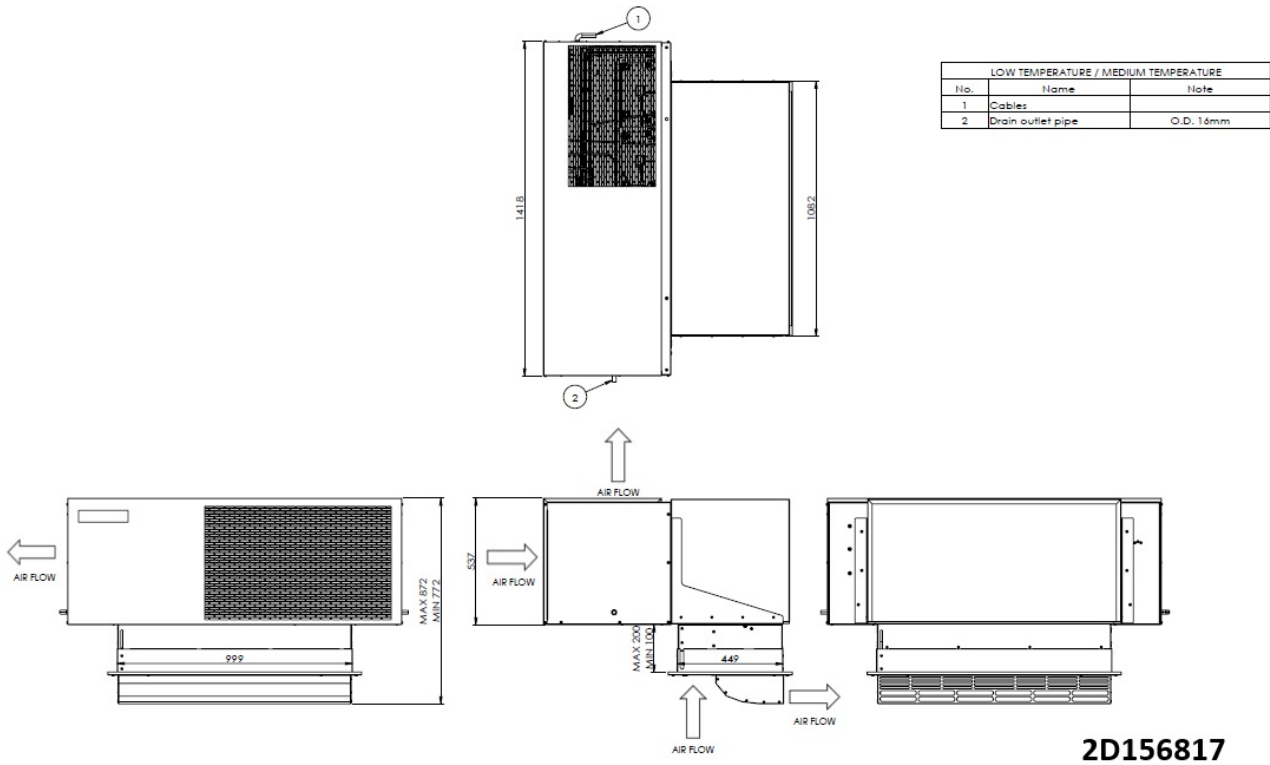
2.2. Capacity Table

T room	T surround	Max cap	Min cap	T room	T surround	Max cap	Min cap
°C	°C	kW	kW	°C	°C	kW	kW
-25,0	5,0	4,05		-15,0	5,0	6,44	
	10,0	3,78			10,0	6,06	
	15,0	3,52			15,0	5,67	
	20,0	3,25			20,0	5,29	
	25,0	2,84			25,0	4,76	
	30,0	2,80			30,0	4,60	
	32,0	2,71			32,0	4,47	
	35,0	2,53			35,0	4,22	
	40,0	2,18			40,0	3,75	
	45,0	1,88			45,0	3,33	
-20,0	5,0	5,16					
	10,0	4,84					
	15,0	4,52					
	20,0	4,20					
	25,0	3,73					
	30,0	3,63					
	32,0	3,52					
	35,0	3,31					
	40,0	2,91					
	45,0	2,55					

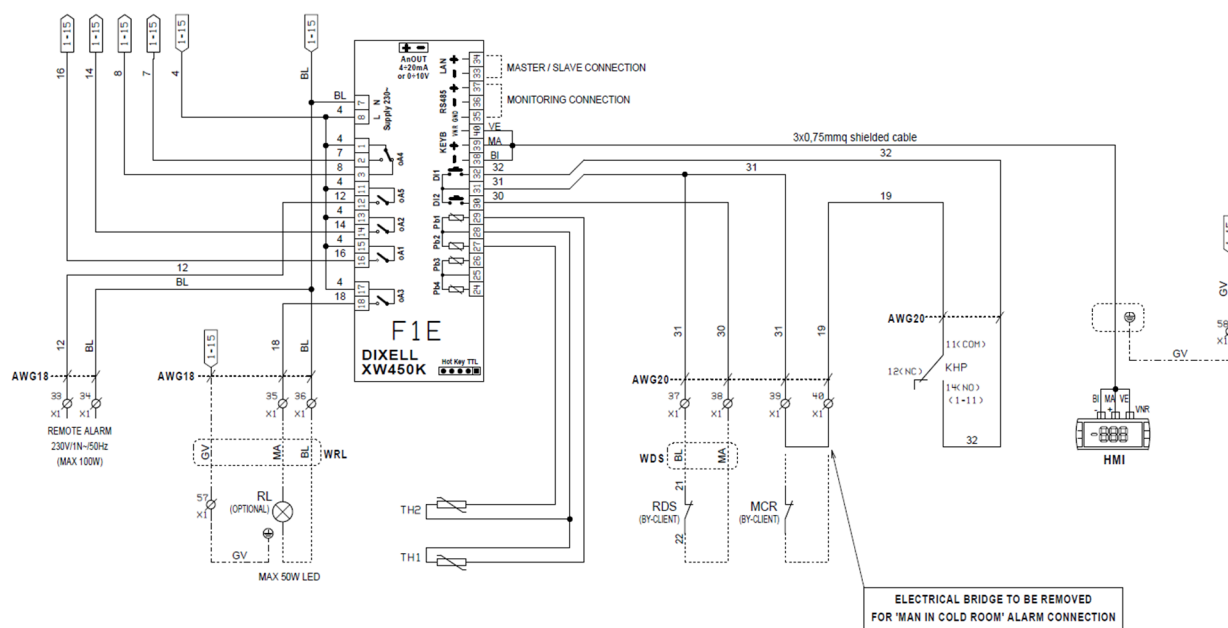
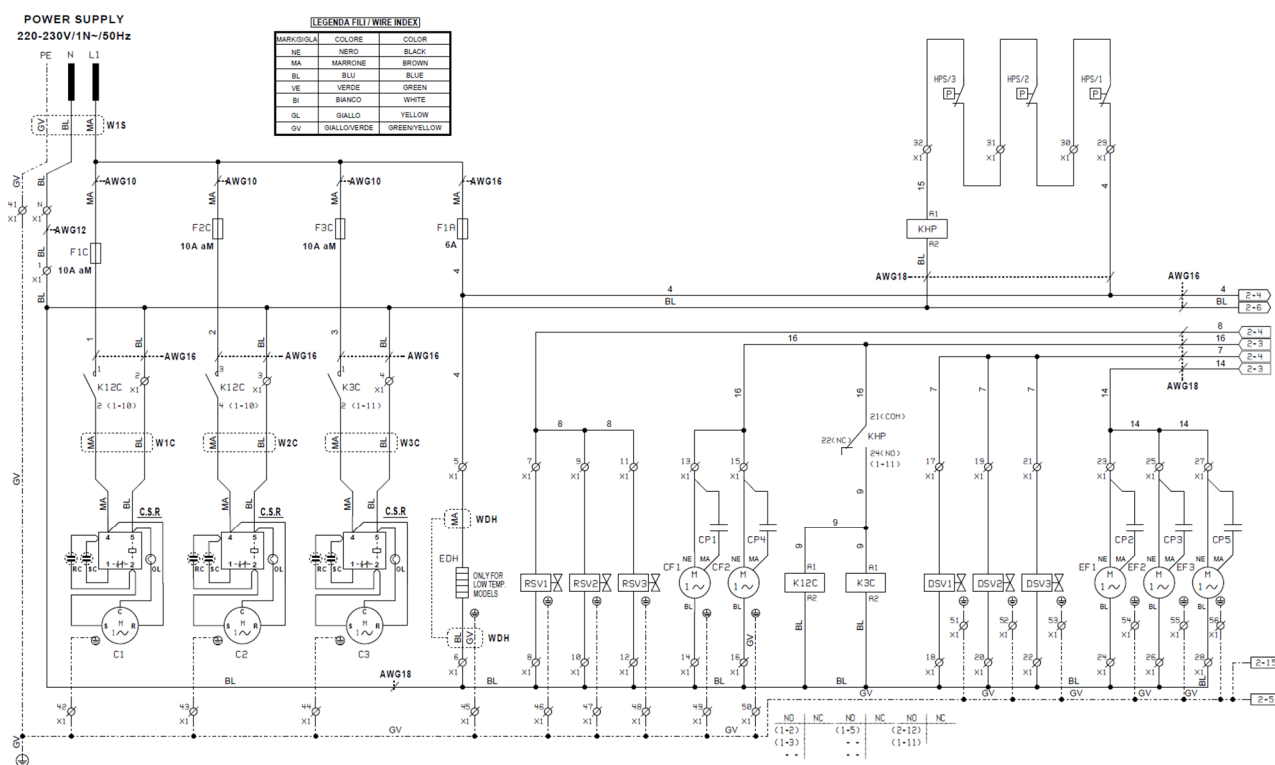
Cooling capacity and power input are based on compressor polynomes in accordance with EN12900, based on calculation method defined in EN13215.

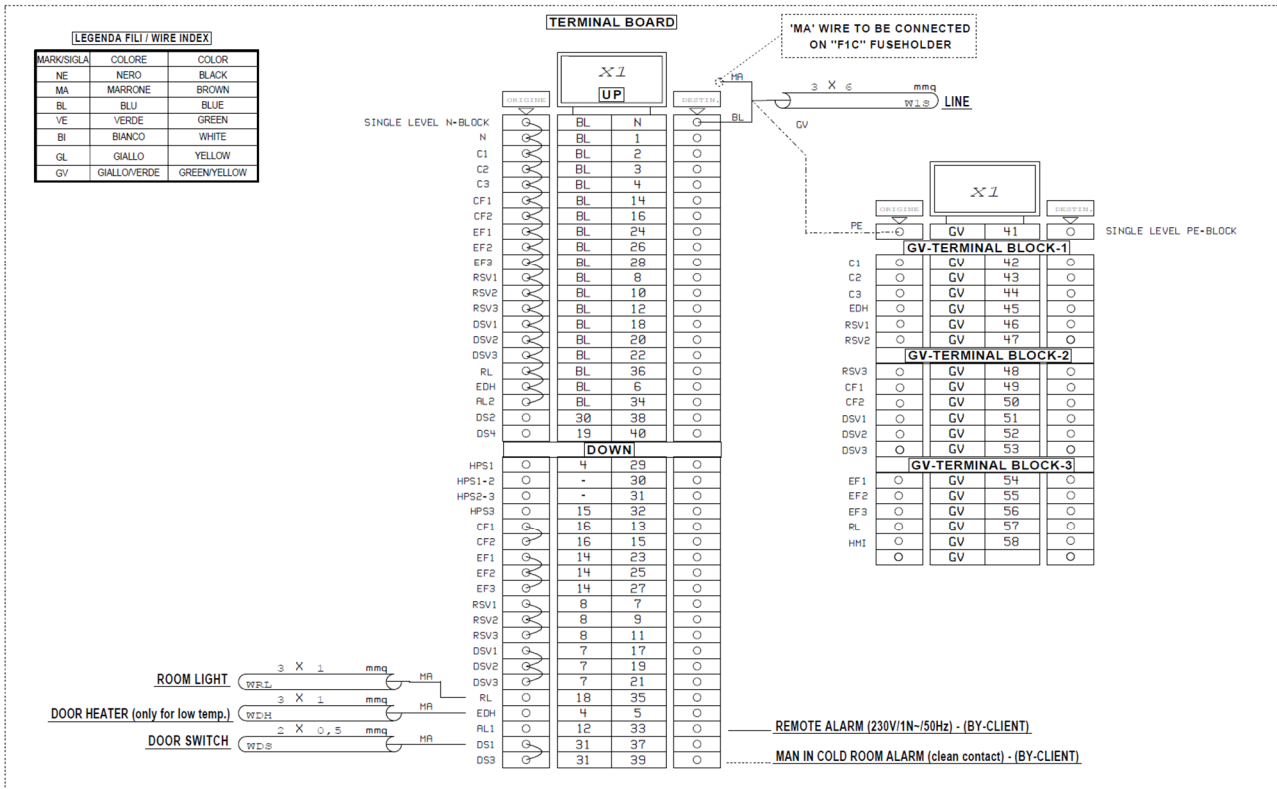
T room	T surround	Volume (m³)		
°C	°C	Wall 80mm	Wall 100mm	Wall 120mm
-25,0	5,0	46,31	52,17	58,62
	10,0	41,65	46,93	52,73
	15,0	37,10	41,79	46,96
	20,0	32,64	36,77	41,31
	25,0	25,96	29,24	32,86
	30,0	25,16	28,35	31,85
	32,0	23,77	26,77	30,08
	35,0	20,97	23,63	26,55
	40,0	15,64	17,62	19,80
	45,0	12,64	14,24	16,00
-20,0	5,0	66,34	74,73	83,97
	10,0	60,30	67,94	76,33
	15,0	54,39	61,28	68,85
	20,0	48,62	54,77	61,54
	25,0	40,49	45,61	51,25
	30,0	38,72	43,62	49,01
	32,0	36,86	41,52	46,66
	35,0	33,33	37,55	42,19
	40,0	26,74	30,13	33,85
	45,0	21,16	23,84	26,79
-15,0	5,0	91,02	102,54	115,21
	10,0	83,31	93,86	105,46
	15,0	75,77	85,36	95,91
	20,0	68,40	77,05	86,58
	25,0	58,51	65,91	74,06
	30,0	55,50	62,52	70,25
	32,0	53,06	59,78	67,17
	35,0	48,64	54,79	61,57
	40,0	40,52	45,65	51,30
	45,0	33,52	37,76	42,43

2.3. Plan d'encombrement



2.4. Schéma électrique

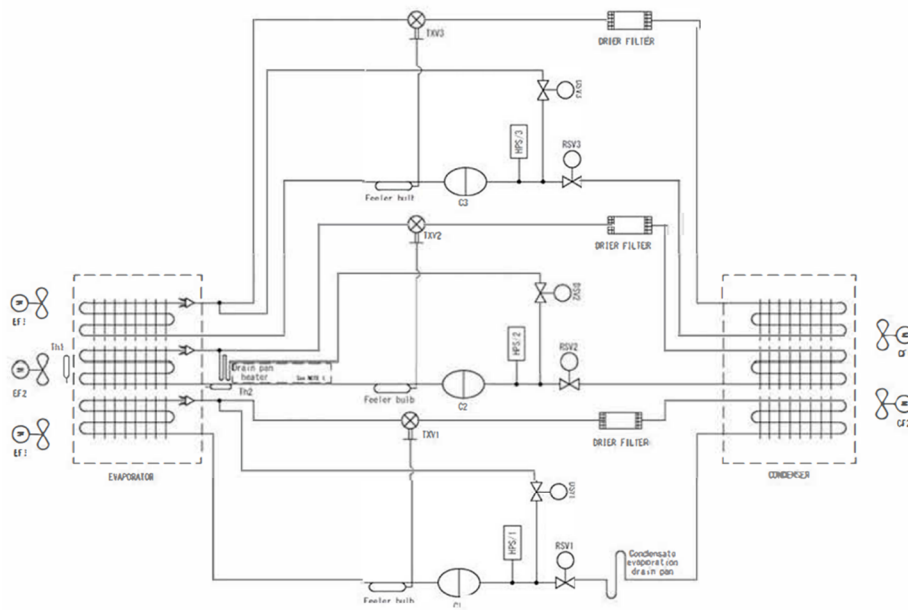




DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE
C1	COMPRESSOR 1 / COMPRESSORE 1
C2	COMPRESSOR 2 / COMPRESSORE 2
C3	COMPRESSOR 3 / COMPRESSORE 3
C.S.R.	COMPRESSOR STARTING KIT/KIT AVVIAMENTO COMPRESSORE
CF1	CONDENSER FAN 1 / VENTOLA CONDENSATORE 1
CF2	CONDENSER FAN 2 / VENTOLA CONDENSATORE 2
CP1	CONDENSER FAN1 CAPACITOR / CONDENSATORE VENTOLA 1 CAPACITA'
CP4	CONDENSER FAN2 CAPACITOR / CONDENSATORE VENTOLA 2 CAPACITA'
CP2	EVAPORATOR FAN1 CAPACITOR / EVAPORATORE VENTOLA 1 CAPACITA'
CP3	EVAPORATOR FAN2 CAPACITOR / EVAPORATORE VENTOLA 2 CAPACITA'
CP5	EVAPORATOR FAN3 CAPACITOR / EVAPORATORE VENTOLA 3 CAPACITA'
DSV1	DEFROST SOLENOID VALVE 1 / VALVOLA SOLENOIDE DI SABRINAMENTO 1
DSV2	DEFROST SOLENOID VALVE 2 / VALVOLA SOLENOIDE DI SABRINAMENTO 2
DSV3	DEFROST SOLENOID VALVE 3 / VALVOLA SOLENOIDE DI SABRINAMENTO 3
EDH	DOOR HEATER / RESISTENZA PORTA
EF1	EVAPORATOR FAN 1 / VENTOLA EVAPORATORE 1
EF2	EVAPORATOR FAN 2 / VENTOLA EVAPORATORE 2
EF3	EVAPORATOR FAN 3 / VENTOLA EVAPORATORE 3
F1C	COMPRESSOR1 FUSE / FUSIBILE COMPRESSORE1
F2C	COMPRESSOR2 FUSE / FUSIBILE COMPRESSORE2
F3C	COMPRESSOR3 FUSE / FUSIBILE COMPRESSORE3
F1A	AUXILIARY FUSE / FUSIBILE AUSILIARIO
F1E	CONTROL UNIT / UNITA' DI CONTROLLO
HPS/1	HIGH PRESSURE SWITCH 1 / PRESSOSTATO ALTA PRESSIONE 1
HPS/2	HIGH PRESSURE SWITCH 2 / PRESSOSTATO ALTA PRESSIONE 2
HPS/3	HIGH PRESSURE SWITCH 3 / PRESSOSTATO ALTA PRESSIONE 3

DEVICE DISPOSIT.	DESCRIPTION / DESCRIZIONE
HMI	HUMAN MACHINE INTERFACE
K12C	COMPRESSOR 1-2 RELAY / RELE' COMPRESSORE 1-2
K3C	COMPRESSOR 3 RELAY / RELE' COMPRESSORE 3
KHP	HIGH PRESSURE SWITCH RELAY / RELE' PRESSOSTATO ALTA PRESSIONE
MCR	MAN IN COLD ROOM ALARM / ALLARME UOMO IN CELLA
RL	ROOM LIGHT (OPTIONAL) / LUCE CELLA (OPZIONALE)
RDS	ROOM DOOR SWITCH / MICRO PORTA (BY-CLIENT)
RSV1	REFRIG. SOLENOID VALVE 1 / REFRIGER. VALVOLA SOLENOIDE 1
RSV2	REFRIG. SOLENOID VALVE 2 / REFRIGER. VALVOLA SOLENOIDE 2
RSV3	REFRIG. SOLENOID VALVE 3 / REFRIGER. VALVOLA SOLENOIDE 3
TH1	AMBIENT PROBE / Sonda AMBIENTE
TH2	DEFROST PROBE / Sonda SBRINAMENTO
WDS	DOOR SWITCH CABLE / CAVO MICRO PORTA
W1S	SUPPLY CABLE / CAVO DI ALIMENTAZIONE
W1C	COMPRESSOR 1 CABLE / CAVO COMPRESSORE 1
W2C	COMPRESSOR 2 CABLE / CAVO COMPRESSORE 2
W3C	COMPRESSOR 3 CABLE / CAVO COMPRESSORE 3
WRL	ROOM LIGHT CABLE / CAVO LUCE CELLA

2.5. Schéma frigo



PC
PIPING DIAGRAM
(3 CIRCUITS)

LEGEND	
Label	Description
C1 - C2 - C3	Compressor
CF1 - CF2 - CF3	Condenser fan
DSV1 - DSV2 - DSV3	Defrost solenoid valve
EF1 - EF2 - EF3	Evaporator fan
HPS1 - HPS2 - HPS3	High pressure switch
RSV1 - RSV2 - RSV3	Refrigerant solenoid valve
Th1	Cold room temperature probe
Th2	Defrost temperature probe
TXV1 - TXV2 - TXV3	Thermostatic expansion valve

NOTE 1: Drain pan heater is only for models BPC4336YA11X and BPC4345YA11X.

3D154480

3. Device specifications

3.1. BPC4345YA11X

BPC4345YA11X				
Unit general specification	Unit	Model		BPC4345YA11X
		Type		MB
	Capacity range			4345
	Nominal Capacity	EN13215	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	W 3522.788635
		EN17432	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	kW 2,71
	Nominal Capacity	EN13215	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	kW
		EN17432	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	kW
	Cold room volume	Cooling (TCR = 0°C / Tamb = 32°C / 100 mm)		l
		Freezing (TCR = -20°C / Tamb = 32°C / 100 mm)		m³ 41.51440934
	Power input	EN13215	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	W 3273.937225
		EN17432	Cooling (TCR = 0°C / Tamb = 32°C)	kW
			Freezing (TCR = -20°C / Tamb = 32°C)	kW 3,35
	Power input	Max.		kW
Refrigerant	Refrigerant	Type		R290
		GWP		0.02
		Circuits	Quantity	3
		Charge		kg 0.15
Operation envelope	Operation range	Cold room temperature	Min.	°C -25,0
			Max.	°C -15,0
		Ambient temperature	Min.	°C 5,0
			Max.	°C 45,0
Compressor	Compressor circuit 1	Compressor	Type	Hermetic reciprocating
		Model		
		Swept volume		l/s
		Output		
		Starting method		ON/OFF
	Compressor circuit 2	Compressor	Type	Hermetic

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					reciprocating
		Model			
		Swept volume			l/s
		Output			
		Starting method			ON/OFF
	Compressor circuit 3	Compressor	Type		
		Model			
		Swept volume			l/s
		Output			
		Starting method			
Condenser/Evaporator	Condenser	Material			
		Treatment			
		Fan number			
		Air flow			l/s 694,4
	Evaporator	Material			
		Treatment			
		Fan number			
		Air flow			l/s 555,6
		Air throw (According to CECOMAF GT 6-001 (final velocity = 0,25 m/s)			m 3,0
		Defrost			Hot gas
Unit layout	Casing	Colour			White
		Material			pre-painted metal sheet.
		IP calss			IPX0
	Dimensions	Unit	Height	mm	772
			Width	mm	1418
			Depth	mm	1044
		Packed unit	Height	mm	1080
			Width	mm	1555
			Depth	mm	1115
	Weight	Unit		kg	180.46875
		Packed unit		kg	235.96875
PED	PED	Category			I
Installation	Characteristics of the hole where to accommodate the units (straddle installation)	Height			mm
		Width			mm
	Characteristics of the hole where to accommodate the units (through the wall installation)	Height			mm 1004
		Width			mm 460
Sound	Sound pressure level	Nom. (According to UNI EN ISO 3746)			dBA 51
Electrical data	Rated input	For MT (Medium Temperature) Operation.			A
		For LT (Low Temperature) Operation.			A 14.95
	Power supply	Peak current unit			A
		Max current unit			A 24.13
		Minimum circuit amps (MCA)			A
		Maximum fuse amps (MFA)			A 32,0
		Voltage range	Max.		250
			Min.		207
		Voltage			230
		Phase			1~
		Frequency			50

4. Spécifications

Général

To increase the efficiency of the system, please group all the cabinets with the same operating condition together, because it is the refrigerated cabinet or evaporator with the lowest evaporation temperature that will determine the evaporation temperature of the outdoor unit.

CVP

- Il est important de charger le Conveni Pack avec la plus grande charge frigorifique pour maximiser la récupération de la chaleur.
- La capacité de climatisation est donnée à une température ambiante du magasin de 22°C en hiver et 20°C en été, aux conditions de la température extérieure.
- La capacité de climatisation ainsi que la capacité de chauffage délivrée par les unités intérieures seront plus élevés lorsque le ratio de capacité intérieure maximale est utilisé.

ZEAS

- Aucune unité intérieure de climatisation ne peut être connectée à une unité de ZEAS.