



MSAT-2 292-604

AIR COOLED CONDENSING UNIT FOR OUTDOOR INSTALLATION



MSAT-2 292 - 604 (R-407C)

Size	Cooling [kW]
292	90.1
323	106
404	121
464	137
524	152
564	162
604	174

The air-cooled units are designed for outdoor installation, optimum energy efficiency and with compact dimensions. Hermetic scroll compressors are used. The units feature an innovative controller with microprocessor for the control and optimisation of all the functions, increasing energy efficiency.

A hot-galvanized and painted plate structure with pre-painted aluminium external panelling ensures maximum weatherability. The uniform distribution of the weight of the unit is guaranteed by the base structure, made up of galvanized and painted plate section bars, featuring holes to simplify the lifting and earthing of the unit. All the units are carefully assembled and tested in the factory and are ready to start operation as soon as they are connected, significantly reducing installation costs.

Clivet is participating in the EUROVENT Certification Programme. Products are listed in the EUROVENT Directory of Certified Products and in the site www.eurovent-certification.com.



CERTIFIED QUALITY SYSTEM ISO 9001 : 2008

STANDARD UNIT SPECIFICATIONS

COMPRESSOR

Scroll compressor complete with: overload thermal protection, high refrigerant discharge temperature, rubber antivibration mounts, oil charge, acoustic and weather proof cabinet.

STRUCTURE

hot-galvanized and painted plate structure with pre-painted aluminium external panelling to ensure maximum weatherability. The uniform distribution of the weight of the unit is guaranteed by the base structure, made up of galvanized and painted plate section bars, and featuring holes to simplify the lifting and earthing of the unit.

EXTERNAL EXCHANGER

heat exchange coil with aluminium fins and copper tubes in staggered rows. The coils are complete with integral subcooling circuit which assures the correct refrigerant feeding of the expansion valve. Available in different options as per optional list.

FAN

helical fans with die-cast aluminium blades, directly coupled to a three-phase electric motor with external rotor, with built-in thermal overload protection, IP 54 index of protection. Housed inside an aerodynamically shaped nozzles to increase efficiency and minimise noise levels; fitted with safety grills.

REFRIGERANT CIRCUIT

the units are made with two independent refrigerant circuits, each with:

- high pressure safety valve
- high pressure switch
- low pressure switch
- high and low pressure gauges
- pressure probes
- compressor suction shut-off valve
- liquid line shut-off valve
- compressor discharge shut-off valve

The units are shipped with a sealed charge of nitrogen.

ELECTRICAL PANEL

the Power Section includes:

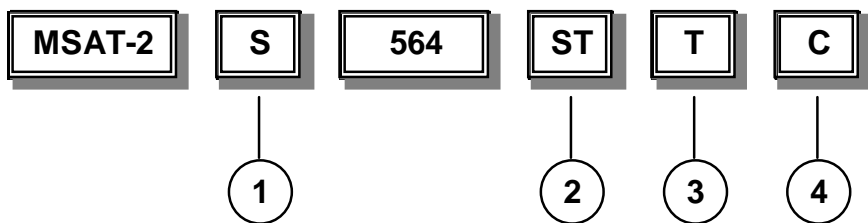
- isolating transformer for auxiliary circuit power supply
- main door lock isolator switch
- compressor fuses and thermal overload relay
- fan overload circuit breakers
- compressor control contactor

- fan control contactors
 - phase-cutting fan speed control
- the control section includes:
- ON/OFF and alarm reset buttons
 - UP and DOWN buttons to increase and decrease the values
 - interface terminal with 4 row x 20 character LCD display
 - display of the set values, the error codes and the parameter index
 - emergency stop button
 - compressor operating hour display
 - compressor overload protection and timer
 - remote ON/OFF control
 - automatic compressor start rotation control
 - Compressor timer / operation signal LED
 - remote communication serial port
 - free contacts for capacity-control step management
 - relay for remote cumulative fault signal
 - self-diagnosis system with immediate display of the error code

ACCESSORIES

- copper / aluminium condenser coils with acrylic lining
- copper / aluminium condenser coils with Fin Guard (Silver) treatment
- copper / copper condenser coils
- copper / tinned copper condenser coils
- finned coil protection grill.
- hot gas by pass
- power factor correction capacitors (cosfi > 0.9)
- compressor overload circuit breakers
- phase monitor
- remote microprocessor control unit
- spring antivibration mounts
- connection kit: thermostatic expansion valve, solenoid valve, dehydrator filter, sight glass.

CONFIGURATION CODE



(1) VERSION

Standard (S)
standard

(1) ENERGY RECOVERY

Partial Recovery (D)
made using tube bundle exchangers to recover the desuperheating heat, up to 25% of the total heat of the unit.

(2) ACOUSTIC CONFIGURATION

Standard (ST)

Low noise (LN)

this configuration is obtained by inserting the compressors in a soundproofed chamber and reducing the speed of the fans, with a larger condensing section.

(3) ENERGY EFFICIENCY

Temperate Climate (T)
standard

(4) HEAT EXCHANGERS APPROVALS

CE = PED (European testing)
C = CLIVET (Internal testing)

CONVERSION TABLE : DEW / MID POINT

DP (°C)	3	5	7	8	9.5	12
MP (°C)	1	3	5	6	7.5	10

THE FOLLOWING VALUES ARE REFERRED TO DEW POINT. AN INDICATION OF THE CORRESPONDING MEDIUM EVAPORATING TEMPERATURE (MID POINT) IS GIVEN IN THE TABLE.
DP = DEW POINT TEMPERATURE (C°)
MP = MEDIUM TEMPERATURE (C°)

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SOUND LEVELS

Acoustic configuration: Standard (ST)

Size	Sound Power Level (dB)								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
292	90	91	91	88	86	82	75	68	72	91
323	92	94	93	90	88	84	76	70	74	93
404	94	96	95	92	90	86	78	72	76	94
464	95	96	95	93	90	86	78	73	77	95
524	95	96	95	93	91	87	79	73	77	95
564	95	96	95	93	91	87	80	73	77	95
604	95	96	95	93	90	87	80	73	77	95

the sound levels refer to the unit at full load, in the rated test conditions.
The sound pressure level refers to a distance of 1m from the external surface of the units operating in an open field.
data referred to the following conditions :
saturated suction temperature (SST) = 9.5 °C (Dew Point)
outside air temperature 35°C

Acoustic configuration: Low noise (LN)

Size	Sound Power Level (dB)								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
292	84	83	82	79	76	72	67	57	63	81
323	86	86	84	80	78	73	67	60	65	83
404	89	89	87	83	81	76	68	63	67	86
464	89	89	87	84	81	75	69	62	67	86
524	89	89	87	85	82	75	70	62	68	86
564	89	89	87	84	81	76	71	62	68	86
604	88	88	87	83	81	77	72	62	68	86

Acoustic configuration: Standard (ST)

GENERAL TECHNICAL SPECIFICATIONS

Size	292	323	404	464	524	564	604
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COOLING

Cooling capacity	1	kW	90.1	105.6	120.8	136.6	151.9	162.2	173.9
Compressor power input		kW	25.9	29.2	32.6	38.9	45.4	49.6	53.3

COMPRESSOR

Type of compressors	2		scroll	scroll	scroll	scroll	scroll	scroll	scroll
No. of Compressors		Nr	2	3	4	4	4	4	4
Std Capacity control steps		Nr	2	3	4	4	4	4	4
Oil charge (C1)		l	6.6	6.6	3.3+3.3	3.3+3.3	3.3+3.3	3.3+3.3	6.6+6.6
Oil charge (C2)		l	6.6	3.3+3.3	3.3+3.3	3.3+3.3	3.3+3.3	6.6+6.6	6.6+6.6
Refrigerant circuits		Nr	2	2	2	2	2	2	2

EXTERNAL SECTION FANS

Type of fans	3		AX	AX	AX	AX	AX	AX	AX
Number of fans		Nr	2	2	3	3	3	3	3
Standard air flow		l/s	6800	9300	12200	12200	12200	11900	11700

CONNECTIONS

Gas connection		mm	42	42	42	42	42	42	42
Liquid connection		mm	22	22	22	22	22	22	22

STANDARD UNIT WEIGHTS

Shipping weight		kg	1225	1336	1486	1511	1534	1577	1612
Operating weight		kg	1225	1336	1486	1511	1534	1577	1612

DIMENSIONS

Length		mm	3250	3250	3250	3250	3250	3250	3250
Depth		mm	1095	1095	1095	1095	1095	1095	1095
Height		mm	2030	2030	2030	2030	2030	2030	2030

(1) data referred to the following conditions :
saturated suction temperature (SST) = 9.5 °C (Dew Point)
outside air temperature 35°C

(2) SCROLL = scroll compressor

(3) AX = axial-flow fan

Acoustic configuration: Standard (ST)

ELECTRICAL DATA

Size	292	323	404	464	524	564	604
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F.L.A. - FULL LOAD CURRENT AT MAX ADMISSIBLE CONDITIONS

F.L.A. - Compressor 1	A	29.2	29.2	19.5	19.5	25.3	25.3	29.2
F.L.A. - Compressor 2	A	29.2	19.5	19.5	19.5	25.3	25.3	29.2
F.L.A. - Compressor 3	A		19.5	19.5	25.3	25.3	29.2	29.2
F.L.A. - Compressor 4	A			19.5	25.3	25.3	29.2	29.2
F.L.A. - Single External Fan	A	4	4	4	4	4	4	4
F.L.A. - Total	A	68.6	78.4	92.2	103.8	115.4	123.2	131

L.R.A. LOCKED ROTOR AMPERES

L.R.A. - Compressor 1	A	175	175	130	130	175	175	175
L.R.A. - Compressor 2	A	175	130	130	130	175	175	175
L.R.A. - Compressor 3	A		130	130	175	175	175	175
L.R.A. - Compressor 4	A			130	175	175	175	175
L.R.A. - Single External Fan	A	14	14	14	14	14	14	14

F.L.I. FULL LOAD POWER INPUT AT MAX ADMISSIBLE CONDITION

F.L.I. - Compressor 1	kW	17.3	17.3	11.3	11.3	14.5	14.5	17.3
F.L.I. - Compressor 2	kW	17.3	11.3	11.3	11.3	14.5	14.5	17.3
F.L.I. - Compressor 3	kW		11.3	11.3	14.5	14.5	17.3	17.3
F.L.I. - Compressor 4	kW			11.3	14.5	14.5	17.3	17.3
F.L.I. - Single External Fan	kW	2	2	2	2	2	2	2
F.L.I. - Total	kW	39.3	44.6	51.9	58.3	64.7	70.3	75.9

M.I.C. MAXIMUM INRUSH CURRENT

M.I.C. - Value	A	214.4	204.7	202.7	253.5	265.1	269	276.8
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voltage unbalance: max 2 %
power supply: 400/3/50 Hz +/-6%

Acoustic configuration: Standard (ST)

OPERATING LIMITS (COOLING)

Size	292	323	404	464	524	564	604
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EXTERNAL EXCHANGER

Max air intake temperature	1	°C	44	44	45	43.5	43.5	43	43.5
Max air intake temperature	2	°C	50	44	51	49.5	49.5	49	49.5
Min. air intake temperature	3	°C	-10	-10	-10	-10	-10	-10	-10
Min. air intake temperature	4	°C	12	12	12	12	12	12	12

- (1) unit at full load
saturated suction temperature (SST) = 9.5 °C (Dew Point)
outside air temperature 35°C
- (2) capacity-controlled unit (automatic capacity control)
- (3) with electronic low ambient temperature control, unit at partial load and motionless external air
- (4) with electronic low ambient temperature control, unit at partial load with air speed 1 m/sec

ACOUSTIC CONFIGURATION: STANDARD (ST)

COOLING PERFORMANCE

Size	SST (°C)	EXTERNAL EXCHANGER AIR INTAKE TEMPERATURE (°C)													
		25		30		32		35		40		42		44	
		kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe
292	3	81.6	20.1	77.2	22.2	75.4	23.1	72.6	24.5	67.7	27.1	65.6	28.1	63.6	29.2
	5	87.4	20.4	82.7	22.6	80.8	23.5	77.8	24.9	72.6	27.5	70.4	28.6	68.2	29.7
	7	93.4	20.8	88.4	23.0	86.3	23.9	83.1	25.4	77.6	27.9	75.3	29.0	73.0	30.1
	8	96.5	21.0	91.3	23.2	89.2	24.1	85.9	25.6	80.2	28.1	77.9	29.2	75.5	30.3
	9.5	101.1	21.3	95.8	23.5	93.5	24.5	90.1	25.9	84.2	28.5	81.7	29.5	79.2	30.7
	12	109.2	21.9	103.4	24.1	101.1	25.0	97.4	26.5	91.0	29.1	88.4	30.1		
323	3	95.1	22.8	90.0	25.3	87.9	26.3	84.6	28.0	78.9	31.0	76.5	32.3	74.1	33.6
	5	102.0	23.1	96.6	25.6	94.3	26.7	90.8	28.4	84.8	31.4	82.3	32.7	79.7	34.0
	7	109.1	23.5	103.3	26.0	101.0	27.1	97.3	28.7	90.8	31.8	88.2	33.0	85.5	34.4
	8	112.8	23.6	106.8	26.2	104.4	27.2	100.6	28.9	93.9	31.9	91.2	33.2	88.4	34.5
	9.5	118.4	23.9	112.2	26.4	109.6	27.5	105.6	29.2	98.7	32.2	95.9	33.5	92.9	34.8
	12	128.0	24.4	121.3	26.9	118.5	28.0	114.3	29.7	106.9	32.7	103.8	34.0		
404	3	108.2	25.6	102.6	28.4	100.3	29.6	96.6	31.5	90.3	34.9	87.7	36.3	85.0	37.8
	5	116.1	26.0	110.1	28.7	107.6	29.9	103.8	31.8	97.1	35.2	94.3	36.6	91.5	38.1
	7	124.2	26.3	117.9	29.1	115.3	30.3	111.2	32.1	104.1	35.5	101.2	36.9	98.2	38.4
	8	128.4	26.5	121.9	29.3	119.2	30.5	115.0	32.3	107.7	35.7	104.7	37.1	101.6	38.6
	9.5	134.8	26.8	128.0	29.5	125.2	30.7	120.8	32.6	113.2	35.9	110.1	37.3	106.9	38.8
	12	145.9	27.2	138.6	30.0	135.6	31.2	130.9	33.0	122.7	36.4	119.4	37.8	115.9	39.2
464	3	122.9	30.5	116.4	33.7	113.6	35.0	109.4	37.2	102.1	41.1	99.1	42.8	96.0	44.5
	5	131.8	31.0	124.8	34.2	121.9	35.5	117.5	37.7	109.7	41.6	106.5	43.2	103.2	44.9
	7	141.0	31.5	133.6	34.7	130.5	36.1	125.8	38.2	117.6	42.1	114.2	43.7	110.7	45.4
	8	145.7	31.7	138.1	35.0	134.9	36.3	130.1	38.5	121.6	42.3	118.1	43.9		
	9.5	153.0	32.2	145.0	35.4	141.7	36.7	136.6	38.9	127.8	42.7	124.1	44.3		
	12	165.4	32.9	156.8	36.1	153.3	37.4	147.8	39.5	138.4	43.3	134.5	44.8		
524	3	137.1	35.5	129.8	39.1	126.7	40.6	122.0	43.1	113.9	47.4	110.5	49.2	107.0	51.1
	5	146.9	36.2	139.1	39.8	135.9	41.3	130.9	43.8	122.2	48.1	118.6	49.9	115.0	51.8
	7	157.1	36.9	148.8	40.5	145.3	42.1	140.0	44.5	130.8	48.7	127.0	50.5	123.2	52.3
	8	162.3	37.3	153.7	40.9	150.2	42.4	144.7	44.8	135.3	49.0	131.4	50.8		
	9.5	170.3	37.9	161.3	41.5	157.6	43.0	151.9	45.4	142.0	49.5	138.0	51.2		
	12	184.0	38.9	174.3	42.5	170.4	44.0	164.2	46.3	153.7	50.3	149.4	51.9		
564	3	147.3	38.6	139.2	42.6	135.9	44.3	130.7	47.0	121.8	51.7	118.1	53.7	114.3	55.8
	5	157.7	39.4	149.1	43.4	145.6	45.1	140.1	47.8	130.6	52.5	126.7	54.5	122.7	56.5
	7	168.4	40.2	159.3	44.2	155.5	45.9	149.7	48.6	139.7	53.3	135.5	55.3		
	8	173.9	40.6	164.5	44.6	160.6	46.3	154.7	49.0	144.3	53.7	140.1	55.6		
	9.5	182.4	41.2	172.5	45.3	168.5	47.0	162.2	49.6	151.4	54.3	147.0	56.2		
	12	196.8	42.3	186.2	46.4	181.9	48.1	175.2	50.7	163.7	55.3				
604	3	158.3	41.3	149.6	45.6	146.0	47.5	140.4	50.4	130.7	55.5	126.7	57.6	122.6	59.9
	5	169.4	42.1	160.2	46.5	156.3	48.3	150.4	51.2	140.1	56.4	135.8	58.5	131.5	60.7
	7	180.9	43.0	171.0	47.4	166.9	49.2	160.6	52.1	149.7	57.3	145.2	59.4		
	8	186.8	43.4	176.6	47.8	172.4	49.7	165.9	52.6	154.7	57.7	150.1	59.9		
	9.5	195.8	44.0	185.1	48.5	180.7	50.4	173.9	53.3	162.2	58.4	157.4	60.6		
	12	211.2	45.2	199.7	49.7	195.0	51.6	187.7	54.5	175.2	59.6				

kWf = Cooling capacity in kW
 kWe = Compressor power input in kW
 SST = saturated suction temperature corresponds to the pressure at the compressor (°C) (dew point)

Acoustic configuration: Low noise (LN)

GENERAL TECHNICAL SPECIFICATIONS

Size	292	323	404	464	524	564	604
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COOLING

Cooling capacity	1	kW	85.8	101.9	117.1	131.4	145.3	154.9	164.2
Compressor power input		kW	27.8	30.8	34.2	41.1	48.1	52.8	57.6

COMPRESSOR

Type of compressors	2		scroll	scroll	scroll	scroll	scroll	scroll	scroll
No. of Compressors		Nr	2	3	4	4	4	4	4
Std Capacity control steps		Nr	2	3	4	4	4	4	4
Oil charge (C1)		l	6.6	6.6	3.3+3.3	3.3+3.3	3.3+3.3	3.3+3.3	6.6+6.6
Oil charge (C2)		l	6.6	3.3+3.3	3.3+3.3	3.3+3.3	3.3+3.3	6.6+6.6	6.6+6.6
Refrigerant circuits		Nr	2	2	2	2	2	2	2

EXTERNAL SECTION FANS

Type of fans	3		AX	AX	AX	AX	AX	AX	AX
Number of fans		Nr	2	2	3	3	3	3	3
Standard air flow		l/s	6800	9300	12200	12200	12200	11900	11700

CONNECTIONS

Gas connection		mm	42	42	42	42	42	42	42
Liquid connection		mm	22	22	22	22	22	22	22

STANDARD UNIT WEIGHTS

Shipping weight		kg	1256	1367	1516	1544	1565	1607	1644
Operating weight		kg	1256	1367	1516	1544	1565	1607	1644

DIMENSIONS

Length		mm	3250	3250	3250	3250	3250	3250	3250
Depth		mm	1095	1095	1095	1095	1095	1095	1095
Height		mm	2030	2030	2030	2030	2030	2030	2030

(1) data referred to the following conditions :
 saturated suction temperature (SST) = 9.5 °C (Dew Point)
 outside air temperature 35°C

(2) SCROLL = scroll compressor

(3) AX = axial-flow fan

Acoustic configuration: Low noise (LN)

ELECTRICAL DATA

Size	292	323	404	464	524	564	604
F.L.A. - FULL LOAD CURRENT AT MAX ADMISSIBLE CONDITIONS							
F.L.A. - Compressor 1	A	29.2	29.2	19.5	19.5	25.3	29.2
F.L.A. - Compressor 2	A	29.2	19.5	19.5	19.5	25.3	29.2
F.L.A. - Compressor 3	A		19.5	19.5	25.3	25.3	29.2
F.L.A. - Compressor 4	A			19.5	25.3	25.3	29.2
F.L.A. - Single External Fan	A	2.3	2.3	2.3	2.3	2.3	2.3
F.L.A. - Total	A	65.2	75	87.1	98.7	110.3	125.9
L.R.A. LOCKED ROTOR AMPERES							
L.R.A. - Compressor 1	A	175	175	130	130	175	175
L.R.A. - Compressor 2	A	175	130	130	130	175	175
L.R.A. - Compressor 3	A		130	130	175	175	175
L.R.A. - Compressor 4	A			130	175	175	175
L.R.A. - Single External Fan	A	4.7	4.7	4.7	4.7	4.7	4.7
F.L.I. FULL LOAD POWER INPUT AT MAX ADMISSIBLE CONDITION							
F.L.I. - Compressor 1	kW	17.3	17.3	11.3	11.3	14.5	17.3
F.L.I. - Compressor 2	kW	17.3	11.3	11.3	11.3	14.5	17.3
F.L.I. - Compressor 3	kW		11.3	11.3	14.5	14.5	17.3
F.L.I. - Compressor 4	kW			11.3	14.5	14.5	17.3
F.L.I. - Single External Fan	kW	1.25	1.25	1.25	1.25	1.25	1.25
F.L.I. - Total	kW	37.8	43.1	49.6	56	62.4	73.6
M.I.C. MAXIMUM INRUSH CURRENT							
M.I.C. - Value	A	211	201.3	197.6	248.4	260	271.7

Acoustic configuration: Low noise (LN)

OPERATING LIMITS (COOLING)

Size	292	323	404	464	524	564	604
EXTERNAL EXCHANGER							
Max air intake temperature	1	°C	41.5	41.5	44	41	39.5
Max air intake temperature	2	°C	46.5	41.5	49	46	44.5
Min. air intake temperature	3	°C	-10	-10	-10	-10	-10
Min. air intake temperature	4	°C	12	12	12	12	12

- (1) unit at full load
saturated suction temperature (SST) = 9.5 °C (Dew Point)
outside air temperature 35°C
- (2) capacity-controlled unit (automatic capacity control)
- (3) with electronic low ambient temperature control, unit at partial load and motionless external air
- (4) with electronic low ambient temperature control, unit at partial load with air speed 1 m/ sec

ACOUSTIC CONFIGURATION: LOW NOISE (LN)

COOLING PERFORMANCE

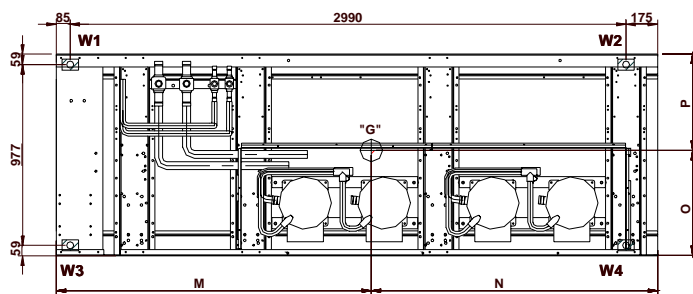
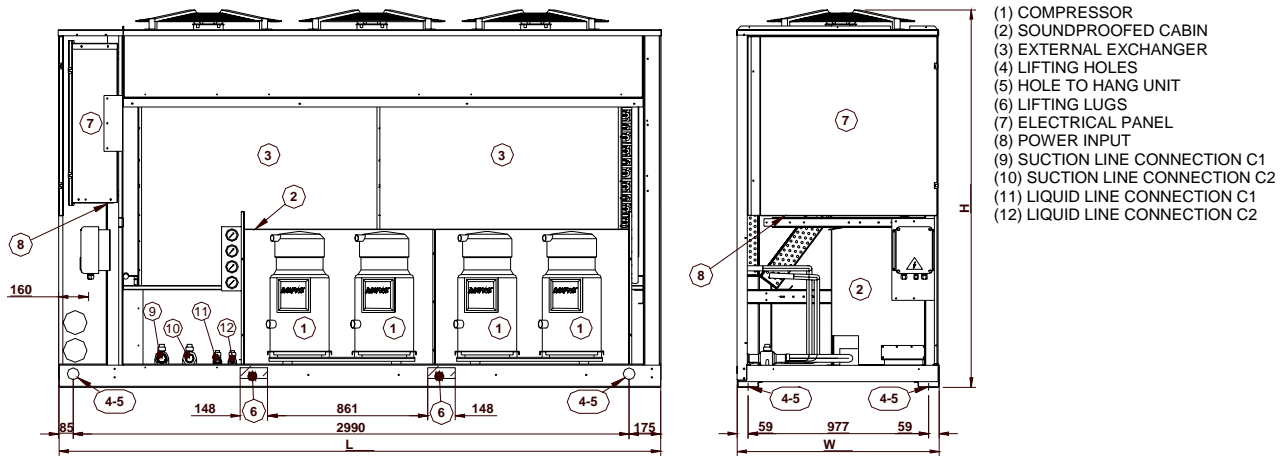
Size	SST (°C)	EXTERNAL EXCHANGER AIR INTAKE TEMPERATURE (°C)													
		25		30		32		35		40		42		44	
		kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe	kWf	kWe
292	3	78.9	21.4	74.4	23.6	72.5	24.6	69.5	26.1	64.5	28.7	62.4	29.9	60.3	31.0
	5	84.4	21.8	79.5	24.1	77.5	25.1	74.4	26.6	69.0	29.3	66.8	30.4	64.5	31.6
	7	89.9	22.3	84.8	24.6	82.6	25.6	79.3	27.1	73.7	29.8	71.3	30.9		
	8	92.8	22.6	87.5	24.9	85.3	25.9	81.9	27.4	76.1	30.0				
	9.5	97.1	23.0	91.5	25.3	89.3	26.3	85.8	27.8	79.8	30.4				
	12	104.4	23.7	98.5	26.0	96.1	27.0	92.4	28.5	86.2	31.0				
323	3	92.8	23.9	87.6	26.5	85.4	27.6	82.1	29.3	76.4	32.4	74.0	33.7		
	5	99.3	24.3	93.8	26.9	91.5	28.1	88.0	29.8	81.9	32.9	79.4	34.2		
	7	106.1	24.8	100.2	27.4	97.8	28.5	94.0	30.3	87.6	33.3	84.9	34.6		
	8	109.5	25.0	103.5	27.6	101.0	28.7	97.1	30.5	90.5	33.6				
	9.5	114.8	25.3	108.5	28.0	105.9	29.1	101.9	30.8	95.0	33.9				
	12	124.0	25.9	117.1	28.6	114.3	29.7	110.0	31.4	102.6	34.5				
404	3	106.0	26.7	100.2	29.6	97.8	30.8	94.2	32.8	87.8	36.2	85.1	37.7	82.4	39.3
	5	113.5	27.1	107.4	30.0	104.9	31.3	101.0	33.2	94.2	36.7	91.4	38.1	88.5	39.7
	7	121.3	27.6	114.8	30.5	112.2	31.7	108.0	33.6	100.8	37.1	97.9	38.6	94.9	40.1
	8	125.3	27.8	118.7	30.7	115.9	31.9	111.6	33.9	104.2	37.3	101.2	38.8	98.1	40.3
	9.5	131.5	28.1	124.5	31.0	121.6	32.3	117.1	34.2	109.5	37.6	106.3	39.1	103.1	40.6
	12	142.0	28.7	134.5	31.6	131.4	32.8	126.6	34.7	118.4	38.2	115.1	39.6		
464	3	119.6	32.0	113.0	35.4	110.2	36.8	105.9	39.1	98.6	43.1	95.5	44.7		
	5	128.1	32.7	120.9	36.0	118.0	37.5	113.5	39.7	105.7	43.7	102.4	45.3		
	7	136.8	33.3	129.2	36.7	126.1	38.1	121.3	40.3	113.0	44.2				
	8	141.2	33.6	133.4	37.0	130.2	38.4	125.3	40.6	116.7	44.5				
	9.5	148.0	34.1	139.9	37.5	136.5	38.9	131.4	41.1	122.5	45.0				
	12	159.7	35.0	150.9	38.3	147.3	39.7	141.8	41.9						
524	3	133.0	37.5	125.5	41.3	122.4	42.9	117.6	45.4	109.3	49.9	105.9	51.7		
	5	142.2	38.3	134.2	42.1	130.9	43.7	125.8	46.2	117.1	50.7	113.5	52.5		
	7	151.7	39.2	143.2	43.0	139.7	44.6	134.3	47.1	125.1	51.4				
	8	156.6	39.7	147.8	43.5	144.2	45.0	138.7	47.5	129.2	51.8				
	9.5	164.0	40.4	154.9	44.1	151.1	45.7	145.3	48.1	135.4	52.3				
	12	176.8	41.6	166.9	45.3	162.9	46.8	156.7	49.2						
564	3	142.7	40.9	134.5	45.0	131.0	46.8	125.7	49.6	116.5	54.6				
	5	152.5	41.8	143.7	46.0	140.1	47.8	134.4	50.6	124.7	55.5				
	7	162.5	42.8	153.1	47.0	149.3	48.8	143.4	51.6	133.2	56.4				
	8	167.7	43.3	157.9	47.6	154.0	49.3	147.9	52.1						
	9.5	175.5	44.1	165.2	48.4	161.1	50.2	154.9	52.8						
	12	188.9	45.4	177.6	49.9	173.2	51.6	166.7	54.2						
604	3	152.4	44.2	143.5	48.7	139.8	50.7	134.1	53.7	123.9	59.1				
	5	162.7	45.3	153.2	49.8	149.3	51.8	143.2	54.8	132.5	60.2				
	7	173.3	46.4	163.1	51.0	158.9	53.0	152.4	56.0	141.4	61.3				
	8	178.6	46.9	168.0	51.6	163.7	53.6	157.1	56.6						
	9.5	186.8	47.8	175.5	52.7	171.0	54.6	164.2	57.6						
	12	200.8	49.3	188.2	54.5	183.3	56.5	176.2	59.4						

kWf = Cooling capacity in kW
 kWe = Compressor power input in kW
 SST = saturated suction temperature corresponds to the pressure at the compressor (°C) (dew point)

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DIMENSIONAL DRAWING

DIMENSIONAL DRAWING(1)



DIMENSIONAL DRAWING

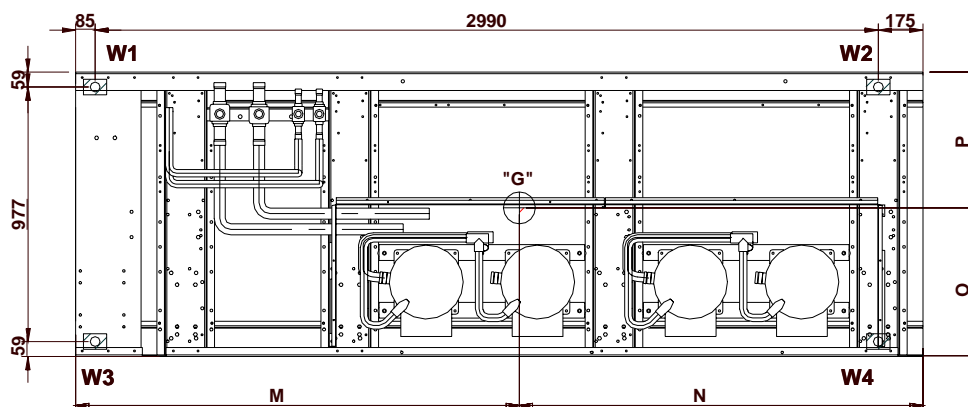
Acoustic configuration: Standard (ST)

Size		292	323	404	464	524	564	604
Dimensional dwg. no.		1	1	1	1	1	1	1
H	mm	2030	2030	2030	2030	2030	2030	2030
L	mm	3250	3250	3250	3250	3250	3250	3250
M	mm	1737	1791	1804	1816	1822	1843	1853
N	mm	1513	1459	1446	1434	1428	1407	1397
O	mm	527	549	560	563	565	570	575
P	mm	568	546	535	532	530	525	520
W	mm	1095	1095	1095	1095	1095	1095	1095
Length	mm	3250	3250	3250	3250	3250	3250	3250
Depth	mm	1095	1095	1095	1095	1095	1095	1095
Height	mm	2030	2030	2030	2030	2030	2030	2030

Acoustic configuration: Low noise (LN)

Size		292	323	404	464	524	564	604
Dimensional dwg. no.		1	1	1	1	1	1	1
H	mm	2030	2030	2030	2030	2030	2030	2030
L	mm	3250	3250	3250	3250	3250	3250	3250
M	mm	1744	1796	1808	1820	1826	1847	1857
N	mm	1506	1454	1442	1430	1424	1403	1393
O	mm	534	554	564	567	570	574	578
P	mm	561	541	531	528	525	521	517
W	mm	1095	1095	1095	1095	1095	1095	1095
Length	mm	3250	3250	3250	3250	3250	3250	3250
Depth	mm	1095	1095	1095	1095	1095	1095	1095
Height	mm	2030	2030	2030	2030	2030	2030	2030

WEIGHT DISTRIBUTION



Acoustic configuration: Standard (ST)

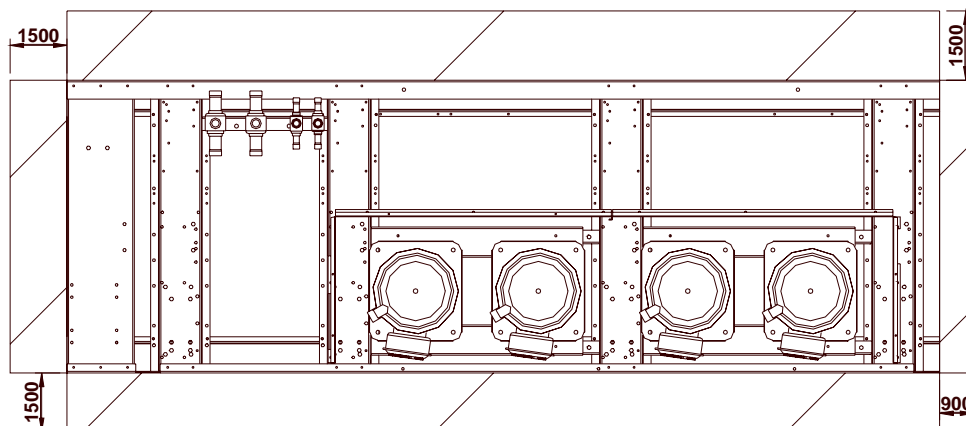
Size		292	323	404	464	524	564	604
W1	kg	285	286	308	308	310	310	311
W2	kg	352	380	416	424	429	442	450
W3	kg	263	288	324	328	333	340	348
W4	kg	325	382	438	451	462	485	503
Shipping weight	kg	1225	1336	1486	1511	1534	1577	1612
Operating weight	kg	1225	1336	1486	1511	1534	1577	1612

Acoustic configuration: Low noise (LN)

Size		292	323	404	464	524	564	604
W1	kg	287	288	310	311	312	312	314
W2	kg	359	386	422	430	435	448	456
W3	kg	271	296	332	337	342	348	356
W4	kg	339	397	452	466	476	499	518
Shipping weight	kg	1256	1367	1516	1544	1565	1607	1644
Operating weight	kg	1256	1367	1516	1544	1565	1607	1644

Particular accessories, executions or versions can bring about a great variation of the mass represented here. Please contact our Technical Department.

FUNCTIONAL CLEARANCES



BT02G001GB-01

CLIVET SPA
Feltre (BL) ITALY
Tel. + 39 0439 3131
Fax + 39 0439 313300
info@clivet.it

CLIVET ESPAÑA S.A.
(Madrid) SPAIN
Tel. + 34 91 6658280
Fax + 34 91 6657806
info@clivet.es

CLIVET UK LTD
Fareham (Hampshire) U.K.
Tel. + 44 (0) 1489 572238
Fax + 44 (0) 1489 573033
info@clivet-uk.co.uk

CLIVET NEDERLAND B.V.
Amerfoort - Netherlands
Tel. + 31 (0) 33 7503420
Fax + 31 (0) 33 7503424
info@clivet.nl

CLIVET TUNISIE S.a.r.l.
Sidi Rezig - TUNISIE
Tel. + 216 71 42 71 87
Fax + 216 71 42 92 85
clivet.tunisie@planet.tn