



SWIMMING POOLS DEHUMIDIFIERS

SRH

SERIES



TECNICAL MANUAL

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The SRH manual, contains any information that is needed for a correct use of the equipment while safeguarding operator safety, according to what indicated in the actual directives on units safety.

AIM AND CONTENTS OF THIS MANUAL

This manual provides basic information on the installation, operation and maintenance off the SRH unit. It is addressed to machine operators and it enables them to use the equipment efficiently, even if they do not have any previous specific knowledge of it. This manual describes the characteristics of the equipment at the time it is being put on the market; therefore it may not capture later technological improvements introduced by HIDROS SRL as part of its constant endeavour to enhance the performance, ergonomics, safety and functionality of its products.

HOW TO KEEP THIS MANUAL

The manual must be always with the unit it refers to. It must be stored in a safe place, away from the dust and moisture. It must be accessible to all users who shall consult it any time they are in doubt on how to operate the equipment. HIDROS SRL reserves the right to modify its products and related manuals without necessarily updating previous versions of the reference material. The customer shall store any updated copy of the manual or parts of it delivered by the manufacturer as an attachment to this manual. HIDROS SRL is available to give any detailed information about this manual and to give information regarding the use and the maintenance of its own units.

GRAPHIC SYMBOLS



Indicates operations that can be dangerous for people and/or disrupts the correct operation of the equipment..



Indicates prohibited operations.








Indicates important information that the operator must follow in order to guarantee the correct operation of the equipment in complete safety

SAFETY LAWS

The units single components or the complete units produced by HIDROS have been designed according to the actual CE and national Directives. For the detailed list of the project technical Directives, refer to the CE declaration enclosed.

GENERAL SAFETY GUIDELINES

Before beginning to operate on SRH units every user must be perfectly knowledgeable about the functions of the equipment and its controls and must have read and understood the information container in this manual.

	<p>It's strictly forbidden to remove and/or camper with any safety device.</p>
	<p>Any routine or not-routine maintenance operation shall be carried out when the equipment has been shut down, disconnected from electric and pneumatic power source and after its pneumatic system has been discharged.</p>
	<p>Do not put your hands or insert screwdrivers, spanners or other tools into moving parts of the equipment.</p>
	<p>The equipment supervisor and the maintenance man must receive training suitable for the performance of their tasks in safety</p>
	<p>Operators must know how to use personal protective devices and must know the accident-prevention guidelines contained in national and international laws and norms.</p>

WORKERS' HEALTH AND SAFETY

The European Community has emanated some Directives about worker's safety and health which the employers have to respect and make the others respect. For the detailed list, see the CE declaration enclosed.

- | | |
|--|--|
| | <i>Do not tamper with or replace parts of the equipment without the specific consent of the manufacturer. The manufacturer shall have no responsibility whatsoever in case of unauthorised operations.</i> |
| | <i>Using components, expendable materials or spare parts that do not correspond to those recommended by the manufacturer and/or listed in this manual may be dangerous for the operators and/or damage the equipment</i> |
| | <i>The operator's workplace must be kept clean, tidy and free from objects that may hamper free movements. Appropriate lighting of the work place shall be provided so as to allow the operator to carry out the required operations safely. Poor or too strong lighting can cause risks.</i> |
| | <i>Ensure that work places are always adequately ventilated and that aspirators are working, in good condition and in compliance with the requirements of the laws in force...</i> |

PERSONAL PROTECTIVE EQUIPMENT

When operating and maintaining the SRH unit, use the following personal protective equipment.

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|--|--|
| | Equipment: people who make maintenance or work with the unit, must wear an equipment in accordance with the safety Directives. They must wear accident prevention shoes with anti-slip sole where the paving is slippery. |
| | Gloves: During the cleanings and the maintenance operations, it's necessary the use of appropriate gloves. In case of gas recharge, it's compulsory the use of appropriate gloves to avoid the risk of freezing. |
| | Mask and goggles: Respiratory protection (mask) and eye protection (goggles) should be used during cleaning and maintenance operations. |

SAFETY SIGNS

The equipment features the following safety signs, which must be complied with:

- | | |
|--|------------------------------|
| | General hazard |
| | Electric shock hazard |

TECHNICAL CHARACTERISTICS

SRH dehumidifiers series are highly performances units designed for swimming pool applications where it is necessary to control humidity and to prevent condensation to guarantee optimal comfort.

Frame

All SRH units are made from hot-galvanised thick sheet metal, painted with polyurethane powder enamel at 180°C to ensure the best resistance against the atmospheric agents. The frame is self-supporting with removable panels. All screws and rivets are in stainless steel. The colour of the units is RAL 7035

Refrigerant circuit

The refrigerant gas used in these units is R407C. The refrigerant circuit is made by using international primary brands components and according to ISO 97/23 concerning welding procedures. All units are supplied with two circuits, each refrigerant circuit is totally independent from the other. Any incorrect operation of one circuit does not influence the other circuit. The refrigerant circuit includes:

SRH liquid line manual shut-off valve, sight glass, filter drier, thermal expansion valve with external equalizer, Schrader valves form maintenance and control, pressure safety device (according to PED regulation).

SRH/WZ these versions are supplied with one refrigerant circuit identical to the SRH version, the second circuit includes: one way valves, solenoid valves, liquid receiver, water heat recovery, liquid line shut-off valve, sight glass, filter drier, thermal expansion valve with external equalizer, Schrader valves formaintenance andcontrol,pressuresafety device.

Compressors

The compressors are scroll type with crankcase heater and thermal overload protection by a klixon embedded in the motor winding. The compressors are mounted on rubber vibration dampers and they can be supplied with sound attenuation jacket to reduce the noise emission (option). The compressor crankcase heater is always powered when the unit is in stand-by. The inspection on the compressors is possible only through the unit front panel.

Condensers and evaporators

Condensers and evaporators are made of copper pipes and aluminium fins. All evaporators are painted with epoxy powders to prevent corrosion problem due to their use in aggressive environments. The diameter of the copper pipes is 3/8" and the thickness of the aluminium fins is 0,1 mm. The tubes are mechanically expanded into the aluminium fins to improve the heat exchange factor. The geometry of these heat exchangers guarantees a low air side pressure drop and then the use of low rotation (and low noise emission) fans. All units are supplied, standard, with a Stainless steel drip tray and all evaporators are supplied with a temperature sensor used as automatic defrost probe.

Heat recovery

It is supplied on the SRH/WZ, factory mounted, it is composed by a plate heat exchanger in molibdenum alloy, suitable for operation with chlorine water; the heat recovery is designed to reject on water about 50% of the total thermal load generated by the unit. When the heat recovery is activated, the supply air temperature of the unit is, basically, the same of the return air.

Fans

The fans are made of galvanized steel, centrifugal type, double inlet with forward curved blades. They are statically and dynamically balanced and supplied complete of the safety fan guard according to EN 294. They are mounted on the unit frame by interposition of rubber vibration dampers. The electric motors are 4 poles (about 1500 rpm), three-phase power supply. The motors are connected to the fans by pulleys and belts. The protection class of the motors is IP 54.

Air Filter

Supplied as standard with the unit, it is made of G3 class synthetic fibre filtering media (efficiency 85% by weight), 48 mm thickness.

Electric enclosure

The electric switch board is made according to electromagnetic compatibility norms CEE 73/23 and 89/336. The accessibility to the board is possible after removing the front panel of the unit and the OFF positioning of the main switch. The moisture protection degree is IP55. In all SRH units are installed, standard, the compressors sequence relay who disables the operation of the compressor in case the power supply phase sequence is not the correct one (scroll compressors in fact, can be damaged if they rotate reverse wise). The following components are also standard installed: main switch, magnetic-thermal switches (as a protection fans and compressors), control circuit automatic breakers, compressor contactors, fan contactors. The terminal board is supplied with voltage free contacts for remote ON-OFF and general alarm.

Microprocessors

All SRH units can be supplied with 2 kind of controls:

Basic control: it manages the following features: antifreeze protection, compressor timing, compressor automatic starting sequence, defrost cycle, alarm reset, potential free contact for remote general alarm,

Advanced control: in addition to the basic control it manages a wider range of features as: setting the priority operation mode (SRH/WZ only), managing of the main and the secondary set points, display of the alarms with historical list, time band operation, integration with hot water coil and modulating valve. Upon request the advanced control can be connected to a BMS system for the remote control and management. The technical department is available to study, together with the customer, different solutions using MODBUS; LONWORKS; BACNET or TREND protocols.

Electronic probe temperature-humidity

This sensor is supplied standard on the SRH/WZ versions supplied with advanced control.

It can be installed either in the room or in the return duct (to be specified before order) and allow the operation of the unit in the following modes:

- **Dehumidification,**
- **Heating (by hot water coil),**
- **Dehumidification + heating,**
- **Dehumidification + heat recovery.**

Control and protection devices

All units are supplied with the following control and protection devices: antifreeze protection sensor, high pressure switch with manual reset, low pressure switch with automatic reset, high pressure safety valve, compressor thermal overload protection, fans thermal overload protection.

Testing

All units are totally assembled and charged with refrigerant R407c. They are completely tested before the expedition. All units are in accordance to the European Directives and they are provided of CE branding and relative conformity certificate.

OTHER VERSIONS

SRH/WZ Unit with heat recovery;

The unit is designed to have one refrigerant circuit condensed by air, the other one condensed both by water and air. If the unit is supplied with the advanced control panel it is possible to set operation priorities (air or water).

In the SRH/WZ versions the heat recovery is designed to reject on the water about 50% of the total thermal load generated by the unit. When the heat recovery is activated, the supply air temperature of the unit is, basically, the same of the return air, so, in this case, the dehumidification is performed without air temperature increase. This operation mode is suitable during intermediate seasons when the humidity in the swimming pool has to be controlled but also the room air temperature overheating has to be avoided.

Low noise version (LS)

The low noise version LS is supplied with compressors jacket and complete acoustic insulation of the compressor vane with high density sound absorption material.

ACCESSORIES

- Basic control panel.
- Advanced control panel.
- Hot water coil.
- 3 way ON/OFF valve kit to be connected to the hot water coil.
- 3 way modulating valve to be connected to the hot water coil.
- Low noise version.
- High static pressure centrifugal fan.
- Horizontal air discharge.
- Pressure gauges.
- Air filter with frame for ducted installation.

**SWIMMING POOL DEHUMIDIFIERS
SRH
TECHNICAL DATA**

Mod.		1100	1300	1500	1800	2200	3000	
Refrigerant		R407C	R407C	R407C	R407C	R407C	R407C	
Dehumidification capacity ⁽¹⁾	l/24h	1130	1280	1490	1880	2310	3050	
Compressor input power ⁽¹⁾	Kw	14,1	16,5	19,3	23,6	27,6	37	
Partial heat recovery ⁽³⁾	kW	19	24	25	32	40	50	
Water flow	l/h	3280	4200	4300	5500	6900	8600	
Hot water coil ⁽⁴⁾	kW	72	75	94	110	125	155	
Water flow	l/h	6230	6400	7750	9580	10450	12960	
Pressure drops	kPa	18	26	16	12	19	22	
Nominal input current ⁽¹⁾	A	30,8	34,4	36,8	41,2	51,2	62,2	
Peak current ⁽¹⁾	A	119	146,8	142,8	197,2	233,4	269,8	
Maximum input current ⁽²⁾	A	37,8	43,8	47,4	57,8	68,2	87,5	
Power supply	V/Ph/Hz	400/3+N/50						
Air flow	m3/h	9500	10500	13000	15000	17000	26000	
Fans	n°	2	2	2	2	2	3	
Available static pressure	Pa	250	250	250	250	250	250	
Compressor	tipo	SCROLL						
	n°	2	2	2	2	2	2	
Refrigerant circuits	n°	2	2	2	2	2	2	
Capacity steps		2	2	2	2	2	2	
Temperature range	°C	10 – 36						
Humidity range	%	30 – 99						
Sound power level ⁽⁵⁾	Standard version	dB(A)	79	80	82	82	83	84
	(LS) Low noise version		77	78	80	80	81	82
Sound pressure level ⁽⁶⁾	Standard version	dB(A)	71	72	74	74	75	76
	(LS) Low noise version		69	70	72	72	73	74
standard Unit length	mm	1870	1870	2608	2608	2608	3608	
standard unit depth	mm	850	850	1105	1105	1105	1105	
standard unit height	mm	1270	1270	1566	1566	1566	1566	
weight	Kg	640	710	770	830	940	1290	

(1) Referred to: external temp 30 °C relative humidity 80%

(2) Referred to external temp. 35 °C relative humidity 80%

(3) Referred to water temp. in-out 25/30 °C, room temperature 30°C

(4) Referred to room temp. 32 °C water temp. in-out 80-70 °C

(5) Sound power level according to ISO 3746.

(6) Sound pressure level measured at 1 mt from the unit in free field conditions direction factor Q=2 according to ISO 3746.

**SRH 1100
PERFORMANCES DATA**

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	148,3	9,4	3,6	12,6
15°C	203,1	10,4	4,1	14,4
20°C	294,4	11,6	4,9	16,9
25°C	421,4	13,1	6,0	20,2
30°C	542,6	14,8	7,0	23,7
35°C	648,4	16,3	8,0	26,7

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	206,6	9,5	3,9	13,6
15°C	300,5	10,6	4,7	16,0
20°C	412,4	11,8	5,5	18,9
25°C	577,1	13,3	6,8	22,8
30°C	739,0	15,0	8,0	26,8
35°C	871,7	16,6	9,1	30,3

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	265,9	9,8	4,3	14,7
15°C	394,2	11,0	5,2	17,8
20°C	549,1	12,2	6,3	21,2
25°C	724,0	13,7	7,5	25,3
30°C	923,1	15,5	9,0	29,9
35°C	1045,6	17,1	10,0	33,3

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	344,6	10,0	4,7	16,1
15°C	493,9	11,1	5,7	19,4
20°C	685,6	12,4	7,0	23,4
25°C	885,7	14,0	8,4	27,9
30°C	1128,2	15,7	10,0	33,1
35°C	1260,9	17,4	11,1	36,7

NOTE: Shaded fields refer to nominal conditions capacity.

**SRH 1300
PERFORMANCES DATA**

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	185,4	10,1	3,6	13,9
15°C	247,7	10,7	4,0	15,4
20°C	351,8	11,7	4,7	17,9
25°C	497,8	13,1	5,7	21,4
30°C	640,2	14,7	6,8	25,0
35°C	784,7	16,5	7,8	28,9

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	255,2	10,1	3,9	14,9
15°C	360,3	10,7	4,5	17,0
20°C	485,2	11,7	5,3	19,8
25°C	672,4	13,1	6,4	23,9
30°C	861,4	14,7	7,7	28,2
35°C	1042,9	16,5	8,9	32,6

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	327,1	10,3	4,2	16,1
15°C	468,3	11,0	5,0	18,8
20°C	641,1	12,0	6,0	22,3
25°C	839,3	13,4	7,2	26,6
30°C	1073,4	15,0	8,6	31,6
35°C	1250,6	16,9	9,9	36,0

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	418,9	10,3	4,6	17,4
15°C	580,6	11,0	5,5	20,4
20°C	789,2	12,0	6,6	24,4
25°C	1013,9	13,4	7,9	29,1
30°C	1297,5	15,0	9,5	34,8
35°C	1492,3	16,9	10,8	39,5

NOTE: Shaded fields refer to nominal conditions capacity.

**SRH 1500
PERFORMANCES DATA**

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	204,4	11,8	3,4	16,3
15°C	276,3	13,1	3,9	18,6
20°C	395,9	14,7	4,7	21,9
25°C	561,1	16,7	5,7	26,3
30°C	717,0	19,0	6,7	30,9
35°C	855,7	21,1	7,6	34,9

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	283,6	12,1	3,7	17,7
15°C	406,7	13,5	4,4	20,8
20°C	552,1	15,1	5,3	24,5
25°C	765,5	17,1	6,4	29,6
30°C	973,0	19,4	7,6	34,9
35°C	1146,5	21,5	8,7	39,5

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	363,9	12,4	4,0	19,2
15°C	531,3	14,0	4,9	23,1
20°C	732,6	15,6	6,0	27,6
25°C	957,5	17,6	7,2	32,9
30°C	1212,5	20,0	8,6	39,0
35°C	1372,3	22,2	9,6	43,5

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	469,8	12,7	4,4	20,9
15°C	663,7	14,2	5,4	25,2
20°C	910,9	15,9	6,6	30,5
25°C	1166,9	18,0	7,9	36,3
30°C	1476,9	20,4	9,5	43,2
35°C	1649,5	22,6	10,6	47,9

NOTE: Shadowed fields refer to nominal conditions capacity.

**SRH 1800
PERFORMANCES DATA**

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	263,9	15,5	7,0	21,5
15°C	356,0	17,2	8,1	24,5
20°C	508,8	19,3	9,6	28,8
25°C	719,3	21,9	11,7	34,5
30°C	916,5	24,9	13,8	40,3
35°C	1094,7	27,6	15,7	45,6

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	365,3	15,8	7,6	23,2
15°C	522,3	17,6	9,1	27,4
20°C	707,3	19,8	10,8	32,1
25°C	978,3	22,4	13,2	38,7
30°C	1240,1	25,5	15,7	45,5
35°C	1462,6	28,2	17,8	51,5

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	468,8	16,2	8,3	25,2
15°C	681,3	18,3	10,2	30,3
20°C	937,1	20,4	12,3	36,1
25°C	1221,8	23,2	14,7	43,0
30°C	1543,2	26,3	17,6	50,7
35°C	1748,0	29,1	19,6	56,5

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	604,0	16,5	9,1	27,4
15°C	849,3	18,6	11,1	33,0
20°C	1161,7	20,9	13,6	39,8
25°C	1484,9	23,6	16,3	47,3
30°C	1874,7	26,8	19,5	56,0
35°C	2095,6	29,7	21,7	62,1

NOTE: Shaded fields refer to nominal conditions capacity li.

**SRH 2200
PERFORMANCES DATA**

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	336,2	18,4	4,0	24,2
15°C	447,3	19,6	4,5	26,9
20°C	632,8	21,4	5,3	31,4
25°C	892,0	24,0	6,4	37,6
30°C	1143,4	27,0	7,5	44,1
35°C	1398,4	30,5	8,7	51,1

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	462,0	18,3	4,3	25,9
15°C	649,4	19,5	5,0	29,7
20°C	871,5	21,4	5,9	34,6
25°C	1203,7	24,0	7,1	41,9
30°C	1537,0	27,0	8,5	49,6
35°C	1857,2	30,4	9,8	57,5

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	591,6	18,8	4,7	28,1
15°C	843,0	20,0	5,5	32,9
20°C	1150,3	21,8	6,6	39,0
25°C	1500,8	24,5	7,9	46,6
30°C	1913,7	27,6	9,5	55,5
35°C	2225,3	31,2	10,9	63,4

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	756,8	18,7	5,1	30,4
15°C	1044,2	19,9	6,0	35,6
20°C	1414,3	21,8	7,3	42,7
25°C	1811,4	24,5	8,7	50,9
30°C	2311,5	27,6	10,5	61,1
35°C	2653,7	31,2	11,9	69,4

NOTE: Shaded fields refer to nominal conditions capacity.

**SRH 3000
PERFORMANCES DATA**

Temperatura ambiente	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 50%			
10°C	449,7	23,6	3,4	30,5
15°C	597,1	25,4	3,8	34,2
20°C	841,8	28,0	4,4	39,9
25°C	1180,6	31,6	5,3	48,0
30°C	1504,4	35,8	6,3	56,3
35°C	1822,9	40,5	7,3	65,1

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 60%			
10°C	618,4	23,7	3,6	32,7
15°C	868,0	25,5	4,2	37,8
20°C	1161,0	28,1	4,9	44,2
25°C	1595,6	31,7	6,0	53,4
30°C	2025,7	35,9	7,1	63,2
35°C	2426,0	40,6	8,2	73,0

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 70%			
10°C	791,2	24,2	3,9	35,5
15°C	1126,1	26,1	4,6	41,8
20°C	1531,6	28,8	5,5	49,7
25°C	1988,2	32,6	6,6	59,3
30°C	2520,4	36,9	7,9	70,5
35°C	2904,5	41,7	9,0	80,3

External temperature	Dehumidification capacity	Input power	Air temperature increase	Thermal load in the room
	[l/24h]	[kW]	[°C]	[kW]
	Relative humidity 80%			
10°C	1012,9	24,3	4,3	38,5
15°C	1396,0	26,2	5,0	45,3
20°C	1885,6	28,9	6,1	54,3
25°C	2403,0	32,7	7,3	64,8
30°C	3049,0	37,0	8,7	77,5
35°C	3470,1	41,8	9,9	87,7

NOTE: Shadowed fields refer to nominal conditions capacity.

UNIT CONFIGURATIONS

SRH units are available in 2 configurations:

SRH: The unit is designed to have both refrigerant circuits condensed by air; in this configuration the unit will always transfer the thermal load (electric input power + condensation load) to the air having so, the temperature increase reported in the performance data (see previous pages).

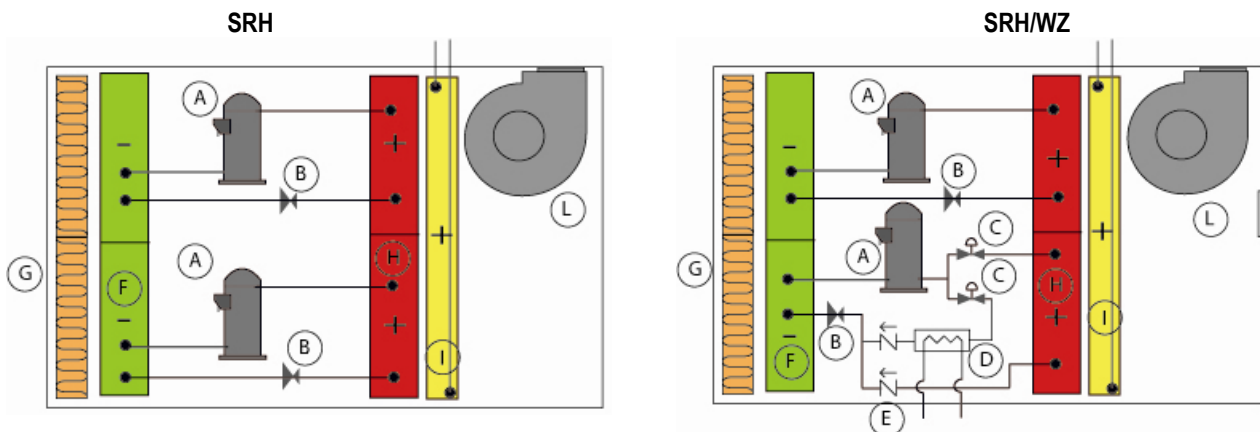
SRH/WZ: The unit is designed to have one refrigerant circuit condensed by air, the other one condensed either by water and air. If the unit is supplied with the advanced control panel it is possible to set the operation priorities:

Priority air temperature: When the priority is the air temperature the unit operates in order to keep the air temperature below the required set point; in case the air temperature tends to increase, it is activated the partial heat recovery who transfers to the water part of the thermal load of the unit. When the partial heat recovery is activated the supply air is at the same temperature of the return air.

Priority water temperature: When the priority is the water temperature the unit operates in order to keep the water temperature below the required set point; in case the water temperature tends to increase, it is activated the air condenser who transfers to the air part of the thermal load of the unit. When the partial heat recovery is activated the air discharge temperature is neutral.



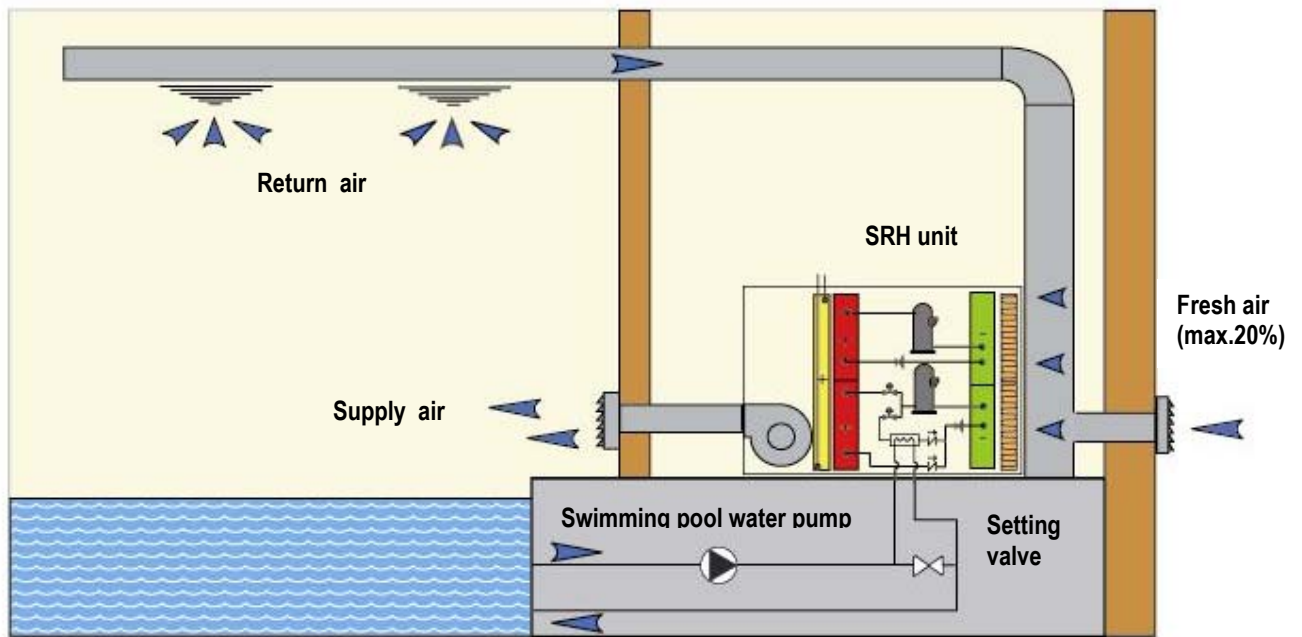
Both SRH versions can be supplied either with basic control panel or advanced control panel. Nevertheless, the priority operation modes described above are available using the advanced control panel only. SRH/WZ units supplied with basic control panel, are only available in "air temperature priority" .



LEGEND

A	Compressor	F	Evaporator
B	Expansion valve	G	Air filter
C	Solenoid valve	H	Condenser
D	Heat recovery (option)	I	Hot water coil (option)
E	One way valve	L	Supply fan

TYPICAL INSTALLATION



The picture above shows a typical installation of the SRH units;

Normally, the unit is installed in the technical room and ducted on both sides (supply and return).

In many installations it is installed a fresh air duct designed for 15-20% airflow.

Clearly, in this application also an exhaust fan has to be installed in order to avoid over pressure in the swimming pool.

The water valve present in the heat recovery hydraulic circuit has to be set in order to guarantee the nominal water flow in the heat recovery.

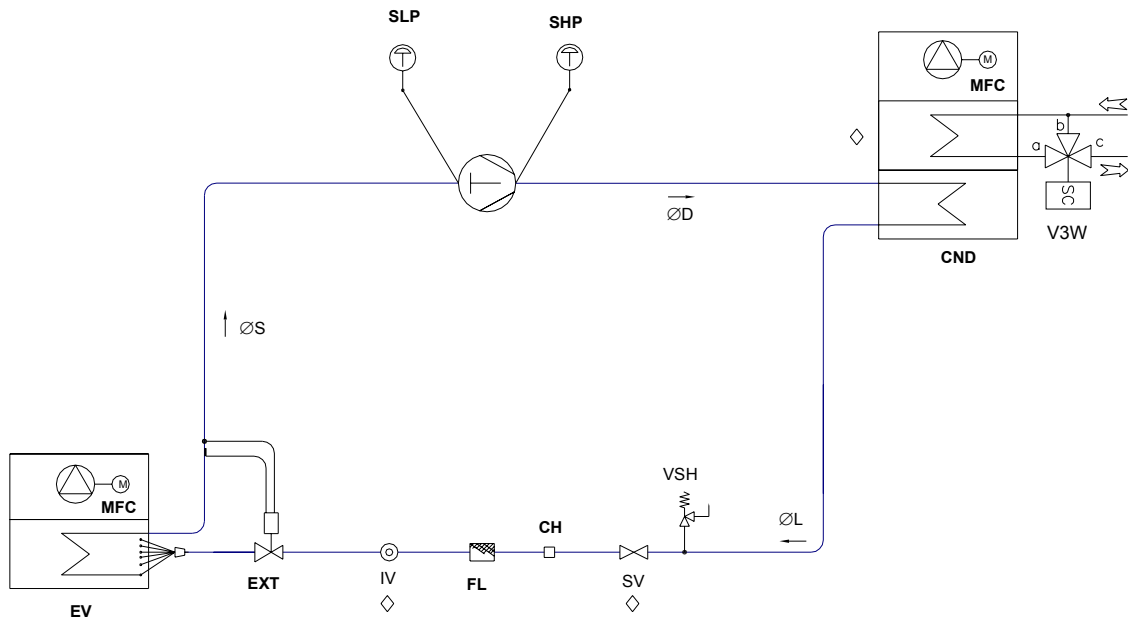
The table reported here below, calculates the quantity of evaporated water for m² of pool. It's possible to estimate approximately the total pool evaporation multiplying this value for the surface of the pool. The values reported are in kg/h and are to be intended as pure indicative. In case of use in ambient with hydromassage, it's advisable to multiply the values obtained for 2,5-3.

Water temperature	Room temperature / relative humidity											
	27°C		28°C		29°C		30°C		31°C		32°C	
	50%	60%	50%	60%	50%	60%	50%	60%	50%	60%	50%	60%
22°C	0,108	0,057	0,092	0,041	0,075	0,023	0,059	0,008	---	---	---	---
23°C	0,134	0,080	0,117	0,062	0,099	0,044	0,083	0,026	0,065	---	---	---
24°C	0,161	0,105	0,144	0,086	0,126	0,068	0,108	0,048	0,090	0,029	---	---
25°C	0,191	0,134	0,173	0,114	0,155	0,093	0,135	0,074	0,117	0,053	0,098	---
26°C	0,222	0,164	0,204	0,143	0,186	0,122	0,167	0,101	0,147	0,080	0,126	0,057
27°C	0,258	0,197	0,239	0,176	0,219	0,155	0,200	0,132	0,180	0,110	0,158	0,086
28°C	0,296	0,233	0,276	0,212	0,257	0,189	0,236	0,165	0,215	0,143	0,194	0,117
29°C	0,336	0,272	0,317	0,249	0,296	0,227	0,275	0,203	0,254	0,179	0,231	0,153
30°C	0,378	0,314	0,359	0,291	0,339	0,267	0,317	0,243	0,296	0,218	0,272	0,191

Values are intended as kg/h.

REFRIGERANT CIRCUITS

SRH

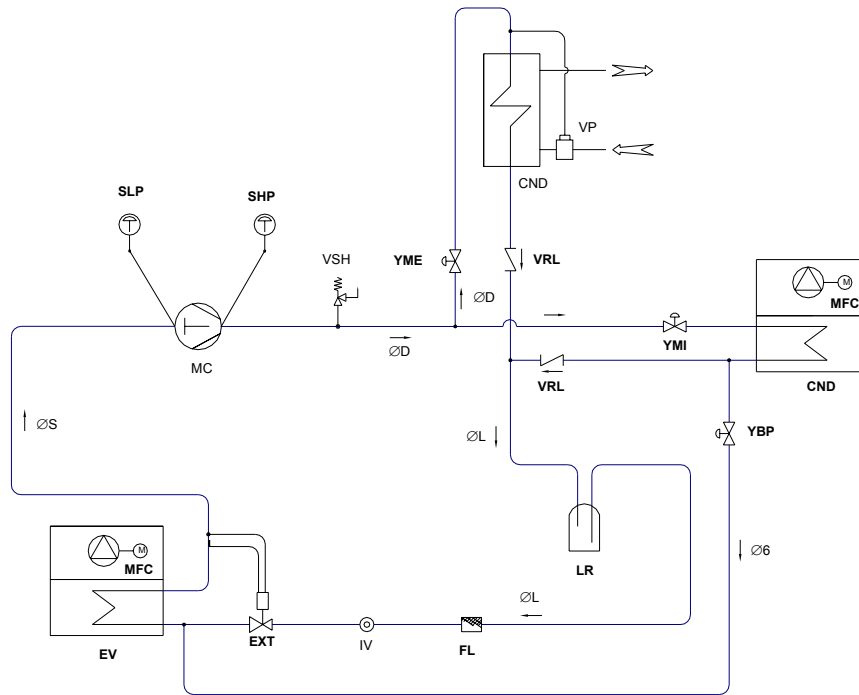


Unità/Model	Taglia/Size	ØD	ØS	ØL
SRH SRF	1100-1300	18	28	16
SRH SRF	1500-1800-2200	22	35	18
SRH SRF	3000	28	42	22

CH	Charging plug	MFC	Centrifugal fan
CND	Condenser	SHP	High pressureswitch
EV	Evaporator	SLP	Low pressure switch
EXT	Thermostatic valve	VSH	High pressuresafety valve
FL	Liquid line filter	IV	Sight glass
MC	Compressor	SV	Manual valve
		V3W	Water valve (Option)

REFRIGERANT CIRCUITS

SRH / WZ



Unità/Model	Taglia/Size	ØD	ØS	ØL
SRH-SRF	1100-1300	18	28	16
SRH-SRF	1500-1800-2200	22	35	18
SRH-SRF	3000	28	42	22

◇ OPZIONALE/OPTIONAL

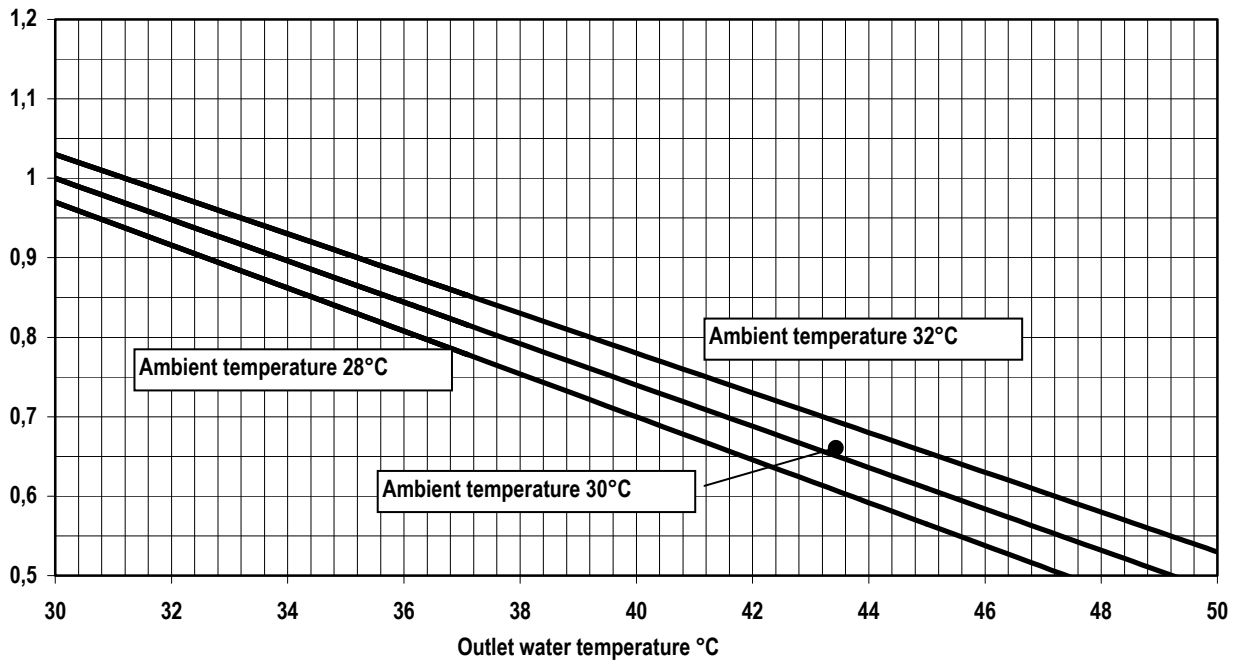
CH	Charging plug	MFC	Centrifugal fan
CND	Aircooled condenser / Heat recovery	SHP	High pressureswitch
EV	Evaporator	SLP	Low pressure switch
EXT	Thermostatic valve	VP	Pressostatic valve (Option)
FL	Liquid line filter	VRL	Liquid line one way valve
IV	Sight glass	VSH	High pressuresafety valve
LR	Liquid receiver	YBP	Hot gas by-pass solenoid valve
MC	Compressor	YME	Heat recovery solenoid valve
		YMI	Condenser solenoid valve

PARTIAL HEAT RECOVERY (OPTIONAL)

Mod.		1100	1300	1500	1800	2200	3000
Partial heat recovery nominal capacity	kW	19	24	25	32	40	50
Water flow	l/h	3280	4200	4300	5500	6900	8600

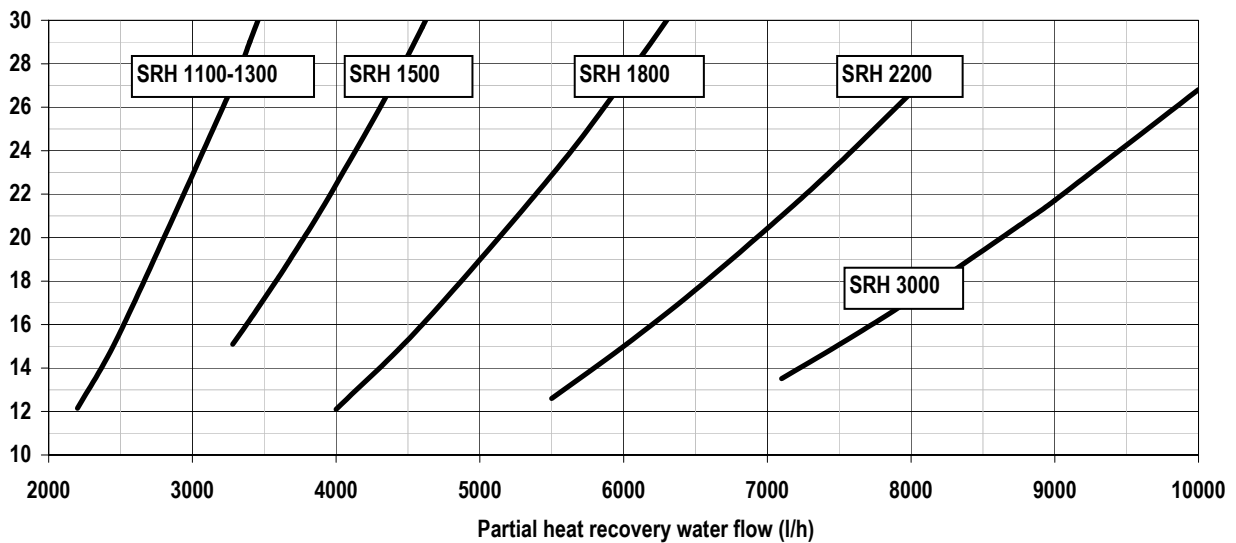
Nominal data are referred to room temperature 30°C and water outlet temperature 30°C (Dt 5°C).

The heat recovery capacity in different conditions can be obtained multiplying the nominal capacity (See above), by the correction factor indicated in the table.



Water side pressure drops

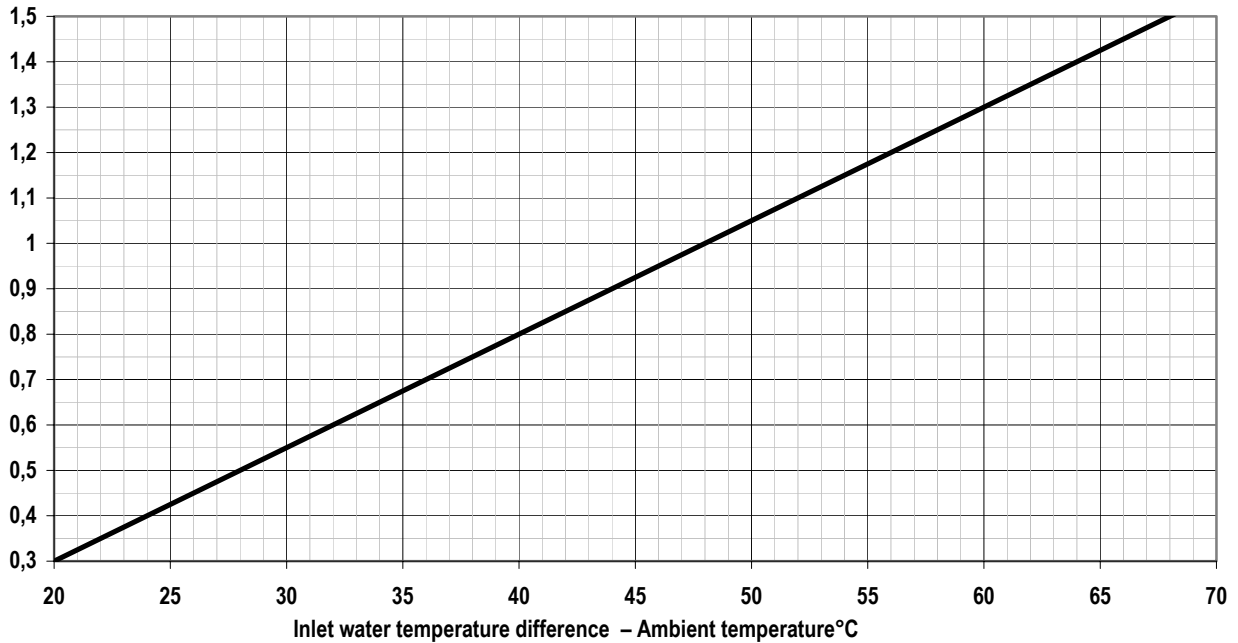
kPa



HOT WATER COIL (OPTIONAL)

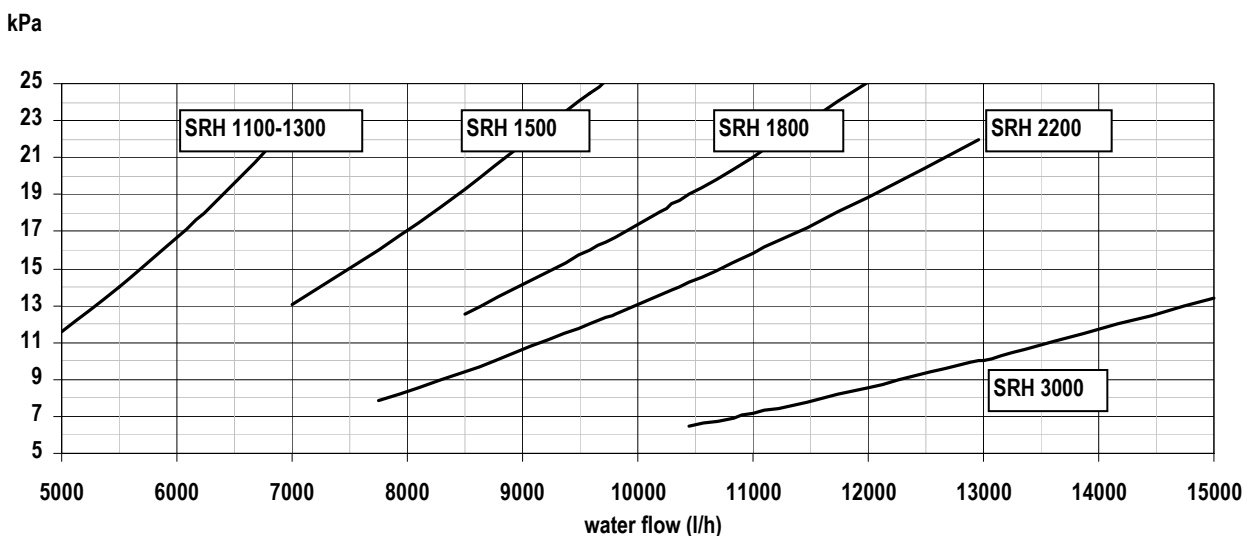
Mod.		1100	1300	1500	1800	2200	3000
Hot water coil nominal capacity	kW	72	75	94	110	125	155
Water flow	l/h	6230	6400	7750	9580	10450	12960
Water pressure drops	kPa	18	26	16	12	19	22

The nominal value refers to an ambient temperature of 32 °C and outlet water temperature of 80-70 °C

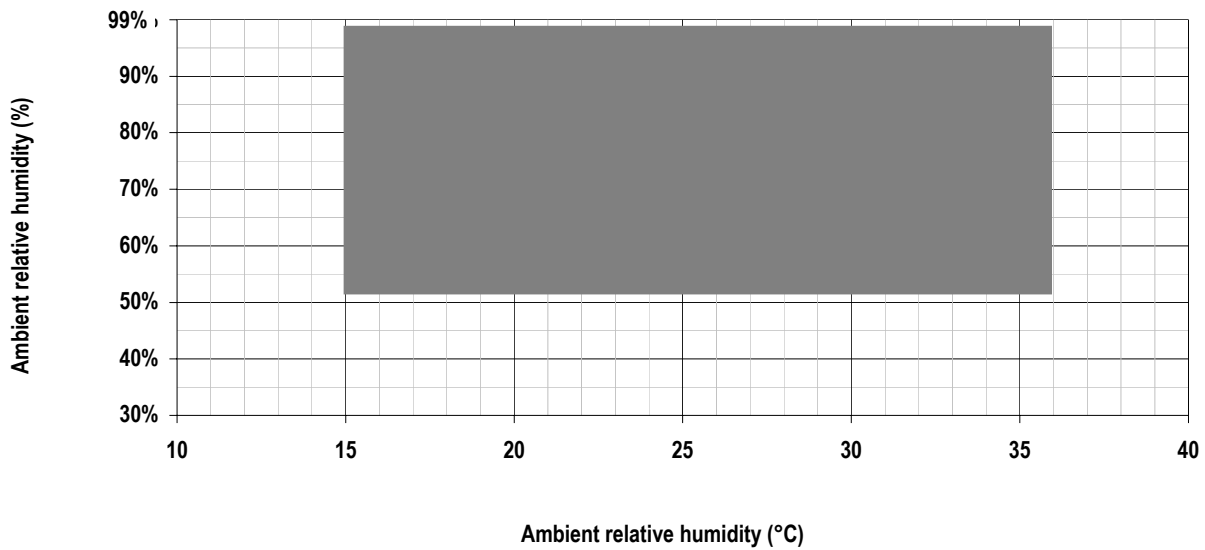


The hot water coil heating capacity in different conditions can be obtained multiplying the nominal capacity (See above), by the correction factor indicated in the table.

Water side pressure drops



OPERATION LIMITS



Ambient air humidity

The units are designed and built to operate with air temperatures from 15°C to 36°C, relative humidity from 50% to 99%.

Water temperature

The units are designed and built to operate with water temperatures produced by the heat recovery from 20°C to 50°C.

Hot water coil temperature

The maximum water temperature allowed in the hot water coils is 90°C; maximum working pressure 8 bar.



ATTENTION: The units have to be used within the operation limit indicated in the diagrams (see above). the warranty will not be valid if the units are used in ambient conditions outside the limits reported. If there is the necessity to operate in conditions external to the above limits, please, contact our technical department.

SOUND DATA

SOUND LEVELS STANDARD VERSION											
Mod.	(Hz)								Lw		Lp
	63	125	250	500	1K	2K	4K	8K	dB	dB(A)	dB(A)
	dB	dB	dB	dB	dB	dB	dB	dB			
1100	92,1	83,3	77,2	75,7	74,6	69,2	65,8	56,7	92,9	79	71
1300	93,1	84,3	78,2	76,7	75,6	70,2	66,8	57,7	93,9	80	72
1500	95,1	86,3	80,2	78,7	77,6	72,2	68,8	59,7	95,9	82	74
1800	95,1	86,3	80,2	78,7	77,6	72,2	68,8	59,7	95,9	82	74
2200	96,1	87,3	81,2	79,7	78,6	73,2	69,8	60,7	96,9	83	75
3000	97,1	88,3	82,2	80,7	79,6	74,2	70,8	61,7	97,9	84	76

SOUND LEVELS LOWNOISE VERSIONS (LS)											
Mod.	(Hz)								Lw		Lp
	63	125	250	500	1K	2K	4K	8K	dB	dB(A)	dB(A)
	dB	dB	dB	dB	dB	dB	dB	dB			
1100 LS	90,1	81,3	75,2	73,7	72,6	67,2	63,8	54,7	90,9	77	69
1300 LS	91,1	82,3	76,2	74,7	73,6	68,2	64,8	55,7	91,9	78	70
1500 LS	93,1	84,3	78,2	76,7	75,6	70,2	66,8	57,7	93,9	80	72
1800 LS	93,1	84,3	78,2	76,7	75,6	70,2	66,8	57,7	93,9	80	72
2200 LS	94,1	85,3	79,2	77,7	76,6	71,2	67,8	58,7	94,9	81	73
3000 LS	95,1	86,3	80,2	78,7	77,6	72,2	68,8	59,7	95,9	82	74

Lw: Sound power level according to ISO 3746.

Lp: Sound pressure level measured at 1 mt from the unit in free field conditions direction factor Q=2 according to ISO 3746.

SAFETY DEVICE

DEFROSTING

The frost on the coil, obstructs the air flow, reduces the available exchange area and consequently the heating capacity. This can damage seriously the system. All the units are equipped of a control which defrost automatically the heat exchanger if there is the need. This control provides a temperature probe (defrost thermostat) on the heat exchanger. When the microprocessor feel the need to act the defrost cycle (according to parameters set in advance), it does it (yellow led on)switching the compressor off, while the fan continues working. At the end of the defrost cycle, the dripping time starts(the green led blinks fastly)

HIGH PRESSURE SWITCH

The high pressure switch stops the unit when “condensing pressure ” exceed the pre-set value. The reset is manual (you need to press the button on the pressure switch) and it can be carried out only when the pressure is under the value indicated by the differential set (see table below).

LOW PRESSURE SWITCH

The low pressure switch stops the unit when the suction pressure goes lower than the pre-set value. The reset is automatic and it's possible only when the pressure is over the value indicated by the differential set (see table below).

DEFROST THERMOSTAT

It's a device which signals to the electronic control, the necessity to make the defrost cycle. Once the defrost cycle is activated, the defrost device determines also its conclusion.

SAFETY DEVICE SETTING

Device		Set-point	Differential	Reset type
Anti-freeze thermostat	°C	1	3	AUTOM.
High pressure switch	Bar	26	7,7	MANUAL
Low pressure switch	Bar	1,7	1	AUTOM.

ELECTRICAL DATA

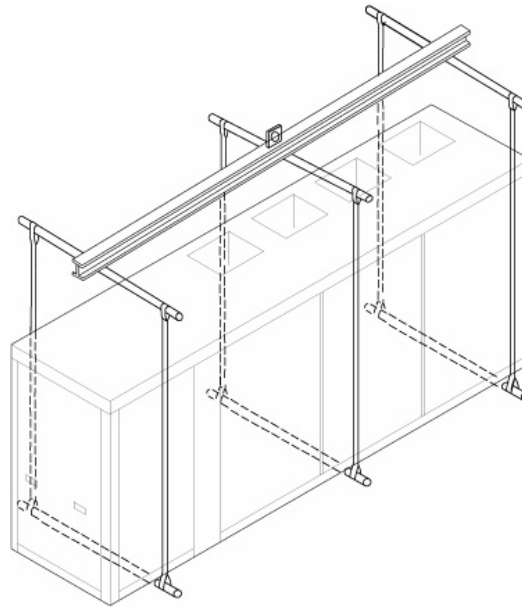
Power supply	V/~Hz	400 / 3 / 50	Control board	V/~Hz	24 / 1 / 50
Auxiliary circuit	V/~Hz	230 / 1 / 50	Fans power supply	V/~Hz	400 / 3 / 50

INSPECTION

When installing or servicing the unit, it is necessary to strictly follow the rules reported on this manual, to conform to all the specifications of the labels on the unit, and to take any possible precautions of the case. Not observing the rules reported on this manual can create dangerous situations. After receiving the unit, immediately check its integrity. The unit left the factory in perfect condition; any eventual damage must be questioned to the carrier and recorded on the Delivery Note before it is signed. HIDROS must be informed, within 8 days, of the extent of the damage. The Customer should prepare a written statement of any severe damage.

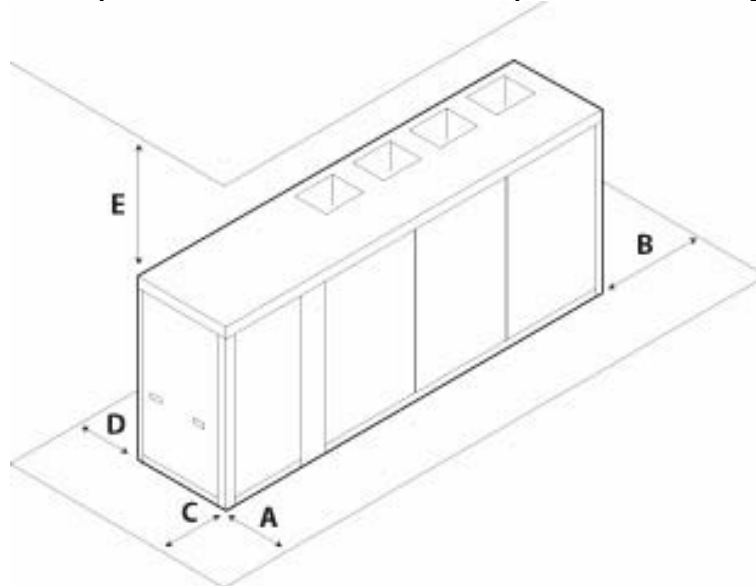
LIFTING AND HANDLING

When unloading the unit, it is highly recommended to avoid any sudden move in order to protect refrigerant circuit, copper tubes or any other unit component. Units can be lifted by using a forklift or, in alternative, using belts, being sure that the method of lifting does not damage the lateral panels and the cover. It is important to keep the unit horizontal at all time to avoid damages to the internal components.



LOCATION AND MINIMUM TECHNICAL CLEARANCES

SRH units are designed for internal installation: It is advisable to create a proper basement, with a size similar to unit foot-print. Unit vibration level is very low: it is advisable however, to fit a rigid rubber band between basement and unit base-frame. If it is the case, it is possible to install anti-vibration mounts (spring or rubber), to keep vibrations at a very low level. Absolute care must be taken to ensure adequate air volume to the condenser. Re-circulation of discharge air must be avoided; failure to observe this point will result in poor performance or activation of safety controls. For these reasons it is necessary to observe the following clearances:



Mod.	A	B	C	D	E*
1100 – 1300	1000	800	800	800	3000
1500-1800-2200	1500	800	800	800	3000
3000	1500	1000	1000	1000	3000

* Only in case of non-ducted units



WARNING: The equipment should be installed so that maintenance and/or repair services be possible. The warranty does not cover costs due to lifting apparatus and platforms or other lifting systems required by the warranty interventions



ATTENTION: All the maintenance operation must be done by **TRAINED PEOPLE** only.



ATTENTION: Before every operation of servicing on the unit, be sure that the electric supply is disconnected



ATTENZIONE: Inside the unit some moving components are present. Be very careful when operating in their surroundings even if the electric supply is disconnected.



ATTENTION: The top shell and discharge line of compressor are usually at high temperature level. Be very careful when operating in their surroundings.
ATTENTION: Aluminium coil fins are very sharp and can cause serious wounds. Be very careful when operating in their surroundings



ATTENTION: After servicing operation close the unit with cover panels, fixing them with locking screws.

CONDENSATE DRAINING CONNECTIONS

Condensate draining should be done with a rubber pipe fixed into the condensate draining connection located on the right hand side of the unit. On the condensate discharge pipe it must be installed a syphon with a minimum height equal to the suction pressure of the fan. The diameter of the condensate discharge connection is reported in the dimensional drawings.



DUCT CONNECTIONS

All the units are provided with a centrifugal fan that can be ducted. If supply only should be ducted, a flanged connection with overall dimensions larger than discharge hole located on the top of the unit should be used (please refer to unit dimensional drawing). In case also the suction side should be ducted it is necessary to connect the return duct with a flange having the same dimensions of the filter frame (See next picture).



WARNING: In case of ducted installations it is very important to check that the airflow is close to the nominal value with a maximum tolerance of +/-15%. Airflow outside these limits can compromise the correct operation.



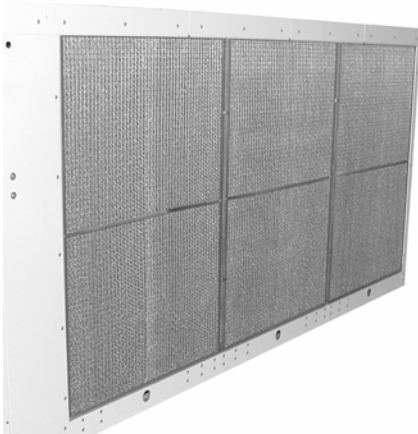
WARNING: When ductworks are connected it is **IMPORTANT** to check if the airspeed through the evaporator is around 1,5÷ 2 m/s. This parameter allow the unit to operate with the maximum efficiency; so an airspeed over than 2 m/s should never been exceeded.

AIR FILTERS



WARNING: SRH units are factory supplied with a standard filter; in case of ducted installation it can be used the filter frame (accessory); It is important to insert **ALWAYS** a filter on the suction side. If the filter is not present the unit can have serious operation problems.

STANDARD FILTER



AIR FILTER WITH FRAME FOR DUCTED INSTALLATIONS



The filter frame for ducted installation is supplied as accessory; the filter can be removed on both sides the opening the knobs present on the closing panels.

PARTIAL HEAT RECOVERY HYDRAULIC CONNECTIONS (option)

The partial heat recovery allows to reject a part of the heat produced by the unit to the swimming pool water, thus enabling neutral air temperature operation. The water connections are reported in the enclosed dimensional drawings. In the heat recovery hydraulic circuit it has to be installed a water pump (not supplied with the unit).

HOT WATER COIL HYDRAULIC CONNECTIONS (option)

The Hot water coil allows swimming pool water heating. In the hot water coil hydraulic circuit it has to be installed a circulating pump and a three way modulating valve (components available as accessories). The water connections are on the top of the unit (see enclosed dimensional drawings).

ELECTRICAL CONNECTIONS

It must be verified that electric supply is corresponding to the unit electric nominal data (tension, phases, frequency) reported on the label in the front panel of the unit. Power connections must be made in accordance to the wiring diagram enclosed with the unit and in accordance to the norms in force. Power cable and line protection must be sized according to the specification reported on the form of the wiring diagram enclosed with the unit



WARNING: The line voltage fluctuations can not be more than $\pm 5\%$ of the nominal value, while the voltage unbalance between one phase and another can not exceed 2%. If those tolerances should not be respected, please contact our Company.



WARNING: Electric supply must be in the limits shown: in the opposite case warranty will terminate immediately. Before every operation on the electric section, be sure that the electric supply is disconnected.

START UP

Before start-up

- Check that all power cables are properly connected and all terminals are hardly fixed.
- The voltage at the phase R S T is the one shown in the unit labels.
- Check that there is not any refrigerant leakage.
- Check that crankcase heaters are powered correctly.
- Check that all water connections are properly installed and all indications on unit labels are observed.
- The system must be bleed off in order to eliminate any air.
- Before proceeding to start up check that all the cover panels are re-located in the proper position and locked with fastening screws.



WARNING: Crankcase heaters must be powered at least 12 hours before start up by closing the main switch (heaters are automatically supplied when main switch is closed). The crankcase heaters are working properly if after some minutes the compressor crankcase temperature is about $10 \div 15^\circ\text{C}$ higher than ambient temperature..

Start-up

Before to proceed to start up close the main switch.

Units are provided with 2 types of microprocessor controls that manage all the various functions of the unit. The functions described below are applied both for local board control and/or remote panel control.

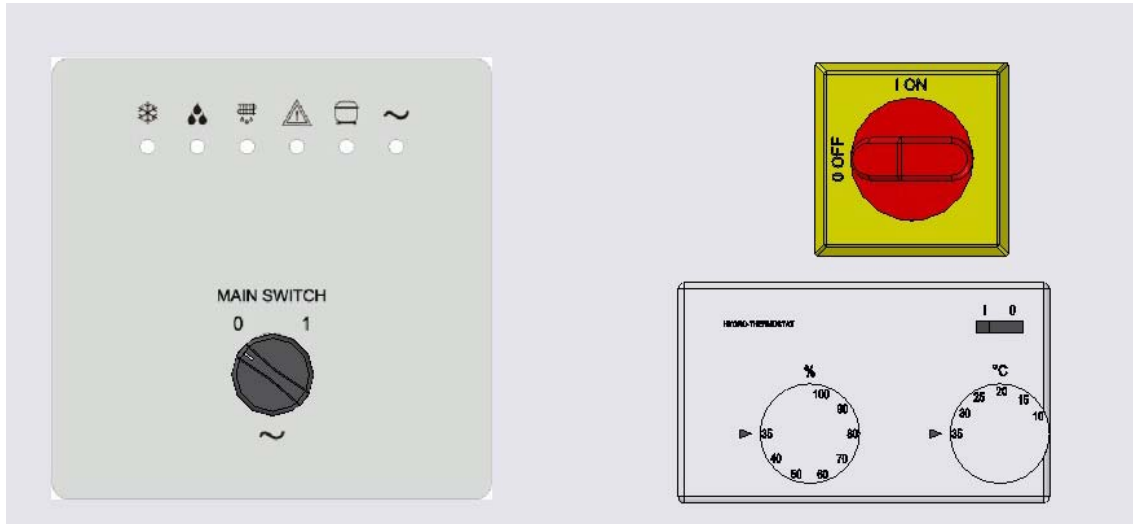
The procedure to start up the unit depends on the type of control installed; please refer to the following pages.

CONTROL PANELS

All SRH units can be supplied with 2 kind of controls:

- Basic control
- Advanced control

BASIC CONTROL PANEL



To start the unit turn the main switch in position 1, then select the operation mode:

Only dehumidification version: activate humidity switch by rotating the knob; at this point the fan will start and after a certain delay also the compressor;

Dehumidification and heating option units (with hot water coil) activate humidity and temperature switch by rotating the; At this point the fan will start and after a certain delay also the compressor.



WARNING: the thermo-hygrostat is supplied as accessory; it has to be required at the time of the order; it can be either installed on the unit or supplied loose for remote installation.



ATTENTION: if the green electrical supply led should not light up, please reverse two electrical phases on power supply line to the main switch.

Units supplied with basic control are provided with leds that indicates unit operation status; Below their meaning.



Alarm led (red): indicates the unit alarm status according to the following meanings:

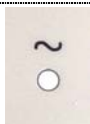
- red led ON: high pressure alarm;
- red led blinking: low pressure alarm;
- red led and compressor led ON: compressor thermal overload alarm;
- red led and defrost led blinking: maximum defrost cycle time overcome;
- red led and defrost led alternatively blinking: operating threshold limit overcome or NTC probe failure;



Defrost led (yellow): indicates that the units is executing the defrost cycle;
led fastly blinking: execution of drop cycle at the defrost end;



Dehumidification led (green): indicates that the control is requiring dehumidification operating mode;



Electrical supply (green): indicates that green switch has been turned in On position and the unit is electrically supplied with the following meanings:

- Led on: unit is working;
- led blinking slowly: Unit in stand-by; Remote On/Off from switch opened.

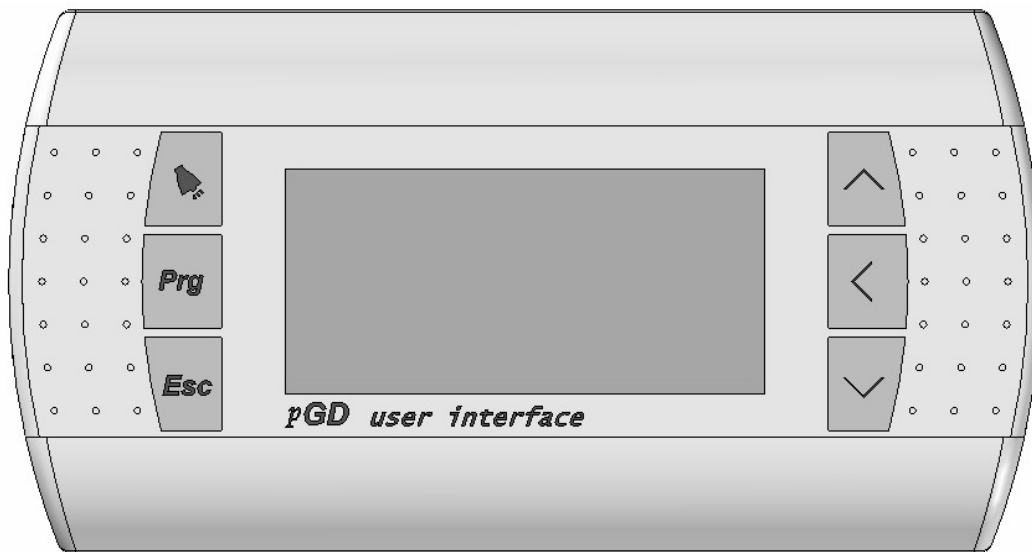


Heating led (green): it indicates that the control is requiring the heating mode (only with water coil option)



Compressor led (green): indicates compressor status with the following meanings:
led ON: compressor running;
led blinking: compressor ready to start;

ADVANCED CONTROL PANEL



These are the main visualisations:

MAIN

<p>Main_M00</p> <p>State:OFF from remote Func:STANDARD Temperature : 00.0°C Humidity : 000.0%</p> <p>Temperature H2O:</p>	<p>To start the unit, close the main switch; on the display of the microprocessor will appear the following screen. Press at the same time the buttons ↑ and ↓ Press ON to start</p>
---	---

<p>M01</p> <p>Dew point : 00.0°C Compressor 1 : OFF Compressor 2 : OFF Fan : OFF Desuperheater : OFF</p>	<p>Only visualisation: it allows to verify the state of the various components.</p>
---	---

<p>M02</p> <p>Hot water Valve :000.0% Heating coil : OFF</p>	<p>Only visualisation: it allows to verify the state of the various components.</p>
--	---

To activate the main menu press the PRG button; the following screen will appear:

MAIN MENU

<p>USER MAINTENANCE MANUFACTURER AL. HISTORY CLOCK INPUT/OUTPUT INFO</p>	<p>Scroll the arrows to select the menu; the string becomes capital when the cursor is on it. Select the menu and press ENTER.</p>
--	---

MENU CLOCK

K01 TIME AND DATE SETTINGS Time : 00:00 Date : 00/00/00 Day: ***	Set date and time; Press ENTER to modify, press ENTER to confirm.
--	---

USER MENU

The SRH units can operates with different SET POINT levels (Temperature and humidity):

- MAIN Set point: it's used when the swimming pool is normally or over crowded.
- SECONDARY Set point: it's used when the swimming pool is closed or not crowded (Low energy consumption).

P01 REGULATION Air temperature main set-point: 30.0 °C Air temperature secondary set-point: 26.0 °C	Set the air temperature required. Press ENTER to activate the field. select with ↑ and ↓ and press ENTER to confirm.
--	--

P02 REGULATION Water temperature main set-point: 28.0 °C Water temperature secondary set-point: 26.0 °C	Set the water temperature required. Press ENTER to activate the field. select with ↑ and ↓ and press ENTER to confirm.
--	--

P03 REGULATION Humidity main set-point: 60% Humidity secondary set-point: 65%	Set the humidity required. Press ENTER to activate the field. select with ↑ and ↓ and press ENTER to confirm.
--	---

P04 PRIORITY Air Water	Set the priority required (Air or water). Press ENTER to activate the field. select with ↑ and ↓ and press ENTER to confirm.
---	--

P05 OUT TIME ZONES PARAMETERS Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN	This configuration allows to personalize the modality out of the time zones already set (T:Air temperature; W: water temperature).
--	--

P06 OUT TIME ZONES PARAMETERS Set H: MAIN Diff. H: MAIN	This configuration allows to personalize the modality out of the time zones already set (H: air humidity).
--	--

OPERATION MODES

STANDARD: This operation mode abilitates the refrigerant system for dehumidification.

VENTILATION This operation mode allows the unit to work in ventilation (compressors will never start), in this modality dehumidification will not be possible. This modality is used when the unit works on heating only.

OFF: In this modality the unit is in stand-by.

The combination of the working modes reported above with the choice of the required set point (MAIN , SECONDARY), determines the various configurations of the unit;

COMFORT: The operation mode is standard; the set points are the main ones; the unit is working at full load with the control of temperature and humidity.

ENERGY SAVING: In this working combination the operation mode is standard; the set points are the secondary ones. This is the typical operation mode for nigh time or when the pool is not crowded.

HEATING: The operation mode is ventilation, the set points are the main ones; the unit is working at full load with air temperature control only (compressors will never start).

PRE-HEATING: The operation mode is ventilation, the set points are the secondary ones; the unit is working with air temperature control only.

<p>P07 CONFIG.: COMFORT Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN</p>	<p>COMFORT: It allows to work with the high performances typical of the period of high crowding. (T:Air temperature; W: water temperature).</p>
<p>P08 CONFIG.: COMFORT Set H: MAIN Diff.H: MAIN FUNCT. :</p>	<p>COMFORT: It allows to work with the high performances typical of the period of high crowding. (H: air humidity).</p>
<p>P09 CONFIG.: ENERGY SAVING Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN</p>	<p>ENERGY SAVING: It's normally used during the night or in absence of crowd. (T:Air temperature; W: water temperature).</p>
<p>P10 CONFIG.: ENERGY SAVING Set H: MAIN Diff. H: MAIN FUNCT. :</p>	<p>ENERGY SAVING: It's normally used during the night or in absence of crowd. (H: air humidity).</p>
<p>P11 CONFIG.: HEATING Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN</p>	<p>HEATING: It can be used when there is no need of dehumidification; the unit is set on heating only; compressors will never start.</p>
<p>P12 CONFIG.: HEATING Set H: MAIN Diff. H: MAIN FUNCT. :</p>	<p>HEATING: It can be used when there is no need of dehumidification; the unit is set on heating only; compressors will never start.</p>

<p>P13 CONFIG.: PRE-HEATING Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN</p>	<p>Pre-heating: It can be used when there is no need of dehumidification; the unit is set on heating only; compressors will never start. Differently from the HEATING mode the unit use the secondary set points and not the main ones.</p>
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<p>P14 CONFIG.: PRE-HEATING Set H: MAIN Diff. H: MAIN FUNCT. :</p>	<p>Pre-heating: It can be used when there is no need of dehumidification; the unit is set on heating only; compressors will never start. Differently from the HEATING mode the unit use the secondary set points and not the main ones.</p>
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<p>P15 CONFIG.: OFF Set T: MAIN Set W: MAIN Diff. T: MAIN Diff. W: MAIN FUNCT. :</p>	<p>OFF: Unit in stand-by.</p>
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<p>P16 CONFIG.: OFF Set H: MAIN Diff. H: MAIN FUNCT. :</p>	<p>OFF: Unit in stand-by.</p>
--	-------------------------------

<p>P17 TIME BAND</p> <p>Enable unit management according to time bands? YES NO</p>	<p>It allows to enable the unit with times bands. By choosing NO the time bands are disactivated and the unit works in modality P05 previously set. Select ↑ and ↓ and press ENTER to confirm.</p>
---	--

<p>P18 – P24 TIME BANDS MANAGEMENT MONDAY</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">09:00 - 12:00</td> <td>COMFORT</td> </tr> <tr> <td>14:00 - 22:00</td> <td>HEATING</td> </tr> <tr> <td>00:00 - 00:00</td> <td>OFF</td> </tr> </table>	09:00 - 12:00	COMFORT	14:00 - 22:00	HEATING	00:00 - 00:00	OFF	<p>It allows to enable the daily and weekly times zones to enable the unit to work. Select ↑ and ↓ and press ENTER to confirm.</p>
09:00 - 12:00	COMFORT						
14:00 - 22:00	HEATING						
00:00 - 00:00	OFF						

<p>P25 CHOOSE LANGUAGE LANG.: English</p>	<p>It allows to select the language; Select ↑ and ↓ and press ENTER to confirm.</p>
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MAINTENANCE MENU

<p>PW Enter password: 0000</p>	<p>It allows to set the password to enable the manufacturer menu; Select ↑ and ↓ and press ENTER to confirm.</p>
--	---

<p>A01 SET-POINT LIMITS AIR TEMPERATURE Minimum : 10.0 °C Maximum: 36.0 °C</p>	<p>It allows to set the minimum and maximum values of the air temperature set point; Select ↑ and ↓ and press ENTER to confirm</p>
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<p>A02 SET-POINT LIMITS HUMIDITY Minimum : 30.0 % Maximum: 90.0 %</p>	<p>It allows to set the minimum and maximum values of the humidity set point; Select ↑ and ↓ and press ENTER to confirm.</p>
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<p>A04 WATER TEMPERATURE REGULATION Main Differential: 02.0°C Secondary differential: 03.0°C</p>	<p>It allows to set the differential for the water temperature regulation; Select ↑ and ↓ and press ENTER to confirm..</p>
<p>A05 HUMIDITY REGULATION Main Differential: 05.0 % Secondary differential: 08.0 %</p>	<p>It allows to set the differential for the humidity regulation; Select ↑ and ↓ and press ENTER to confirm..</p>
<p>A06 AIR TEMPERATURE REGULATION Dead zone: 01.0 °C</p>	<p>It allows to set the differential dead zone within which the variation of the temperature is allowed. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A07 WATER SENSOR MANAGEMENT Water sensor : Present / Not present</p>	<p>It sets the presence of the water sensor enabling so the visualisation of the water temperature on the display. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A08 CONDENSATE DISCHARGE PUMP MANAGEMENT Present Not present</p>	<p>It sets the presence of the condensate discharge pump. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A09 DIGITAL OUTPUT DELAYS 000 s.</p>	<p>It sets the delays of the digital outputs (in seconds).</p>
<p>A10 ALARM MANAGEMENT Manual reset high press. alarm after N. times x hour:</p>	<p>It allows to set the automatic reset number of the high pressure switch before activating the manual reset. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A11 ALARM MANAGEMENT Delays for low pressure alarm Start up delay: Default: 060 s System delay: Default:060 s</p>	<p>It allows the setting of the delay of low pressure switch both during the start up and during the normal operation. Select ↑ and ↓ and press ENTER to confirm</p>
<p>A12 ALARM MANAGEMENT Manual reset low press. alarm after N. times x hour</p>	<p>It allows to set the automatic reset number of the high pressure switch before activating the manual reset. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A13 ALARM MANAGEMENT Condensate discharge pump delay: :000 s</p>	<p>It allows the setting of the delay of condensate discharge pump alarm (when present) during the normal functioning. Select ↑ and ↓ and press ENTER to confirm</p>
<p>A14 ALARM MANAGEMENT Fan thermal protection delay : 000 s.</p>	<p>It allows the setting of the delay of the fan thermal protector during the normal functioning. Select ↑ and ↓ and press ENTER to confirm</p>
<p>A15 DEFROST MANAGEMENT Delay between two sequential defrost cycles: 000 min.</p>	<p>It allows to set the period of time between two consecutive defrost cycles. Select ↑ and ↓ and press ENTER to confirm.</p>
<p>A16 DEFROST MANAGEMENT Defrost minimum duration: 060 sec. Defrost maximum duration: 012 min</p>	<p>It allows to set the minimum and maximum time of defrost. Select ↑ and ↓ and press ENTER to confirm.</p>

A17 COMPRESSOR ENABLING Enable compressor 1 to work? YES NO Enable compressor 2 to work? YES NO	It enables the compressors. Select ↑ and ↓ and press ENTER to confirm.
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A18 HISTORY MANAGEMENT Alarm history delete? YES NO	It permits to cancel the hystory management. Select ↑ and ↓ and press ENTER to confirm.
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A19 Enter new maintenance password: 0000	It permits to set the new password to enable the manufacturer menu. Select ↑ and ↓ and press ENTER to confirm
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ALARMS MENU

AL01 Alarm air humidity probe failure	Visualisation air humidity probe failure.
AL02 Alarm air temperature probe failure	Visualisation air temperature probe failure.
AL03 Alarm water temperature probe failure	Visualisation water temperature probe failure.
AL04 Alarm high pressure from presssure switch circuit 1	Visualisation high pressure from presssure switch.
AL05 Alarm low pressure from pressure switch circuit 1	Visualisation low pressure from pressure switch.
AL06 Alarm high pressure from presssure switch circuit 2	Visualisation high pressure from presssure switch.
AL07 Alarm low pressure from pressure switch circuit 1	Visualisation low pressure from pressure switch.
AL08 Alarm condensate discharge pump	Visualisation condensate discharge pump alarm (if present).
AL09 Fan overload alarm	Visualisation fan overload alarm.
AL10 Alarm max. Defrost time	Visualisation maximum defrost time alarm.

ALARM HISTORY

H01 Alarm N°00 HR 00:00 OF 00/00/00 No alarm active	It allows the visualisation of all the alarms.
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MENU INFO

N02 Cod.: SZHIDDE00 Rev.: 00 Date: 00/00/00 BIOS: 00.00 00/00/00 BOOT: 00.00 00/00/00	It shows the information relative to the software .
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If the unit should not start:

Check that the control thermostat is set to the correct value



WARNING: Do not modify internal wiring of the unit otherwise warranty will terminate immediately.

Controls during unit operation

- Check the fans rotation. If the rotation is incorrect, disconnect the main switch and change over any two phases of the incoming main supply to reverse motor rotation:
- Check that the air speed through the evaporator of the unit should not exceed 1,5 / 2 m/s in order to guarantee a correct dehumidification performance.

Refrigerant charge checking

- After few hours the unit is working, check that sight glass shows a green colour core: if the core is yellow moisture would be present in the circuit. In this case it is necessary circuit dehydration to be carried out by qualified people only. Check that at the sight glass there is no continuous vapour bubbles presence. In this case additional refrigerant charge could be required. It is however allowed the presence of few vapour bubbles.
- Few minutes after the start up, working on summer operating mode (cooling), check that condensing temperature, is approximately 15 °C higher than condenser inlet air temperature. Check moreover that evaporation temperature is about 5 °C lower than the evaporator outlet temperature.
- Check that refrigerant superheat on the evaporator is about 5-7 °C
- Check if refrigerant sub-cooling on the condenser is about 5-7 °C.

Unit switch OFF

To stop the unit, the green led must be in OFF. Also the relative internal led will be switched off



WARNING: Never switch off the unit (for temporary stop), by opening the main switch: this component should be used only to disconnect the unit from power supply when the current is not passing through, i.e. when the unit is in OFF mode. Moreover, with no supply to crankcase heater, at the unit start up, compressor could be seriously damaged.

MAINTENANCE AND PERIODIC CHECKS

It is a good rule to carry on periodic checks in order to verify the correct working of the unit:

- Check that safety and control devices work correctly as previously described (monthly).
- Check all the terminals on the electric board and on the compressor are properly fixed. Periodic cleaning of the sliding terminals of the contactors should be done.
- Verify refrigerant charge checking sight glass (monthly).
- Check there is no oil leakage from compressor (monthly).
- Check there is no water leakage in the hydraulic system (monthly).
- If the unit is to be expected to be stopped for a long period, unit hydraulic circuit should be emptied from all the tubes and heat exchanger. This operation is compulsory if, during seasonal stop, ambient temperature is expected to go down below the freezing point of employed mixture (typical seasonal operation).
- Check crankcase heater proper supply and functioning (monthly).
- Clean finned coils filters with compressed air in the opposite direction of the air flow (monthly)
- Check the colour of the sight glass core (green=no moisture, yellow=moisture present): if it has a yellow colour, change the refrigerant filter (every 4 months).

REFRIGERANT CIRCUIT REPAIR

In the case that refrigerant circuit should be discharged, all the refrigerant must be recovered with proper machines. The system must be charged with nitrogen, using a gas bottle with a pressure reducing valve, until 15 bar pressure is reached. Any eventual leakage must be searched with a bubble leak finder. In case bubbles appear discharge the circuit before welding with proper alloys.
appropriate.



WARNING: Never use oxygen instead of nitrogen: explosions may occur.

ENVIRONMENT PROTECTION

According to European norms dealing with the use of depleting stratospheric ozone substances, it is forbidden to release refrigerants fluids in the atmosphere. They must be redelivered to the seller or to proper gathering points at the end of their operating life. Refrigerant R407C is mentioned among controlled substances and for this reason it must be subjected to said norms. **A particular care is recommended during service operations in order to reduce as much as possible any refrigerant loss.**

UNIT OUT OF SERVICE

Once the unit is arrived at the end of its life and needs to be removed or replaced, the following operations are recommended:

- the unit refrigerant has to be recovered by trained people and sent to proper collecting centre;
- compressor lubricating oil has to be recovered and sent to proper collecting centre;
- the frame and various components, if not usable any longer, have to be dismantled and divided according to their nature; particularly copper and aluminium, which are present in conspicuous quantity in the unit. These operations allow easy material recover and recycling process, reducing environmental impact.

TROUBLE SHOOTING

We list here the most common causes which can cause the arrest of the unit or at least an unusual performance. The subdivision is made according to the symptoms which can be identified rather easily



ATTENTION: Concerning the possible actions, we suggest an extreme attention on the operations: an excessive security may cause grave accidents to inexperienced people. We suggest, once found the cause, to ask for our intervention or the one of qualified technicians.



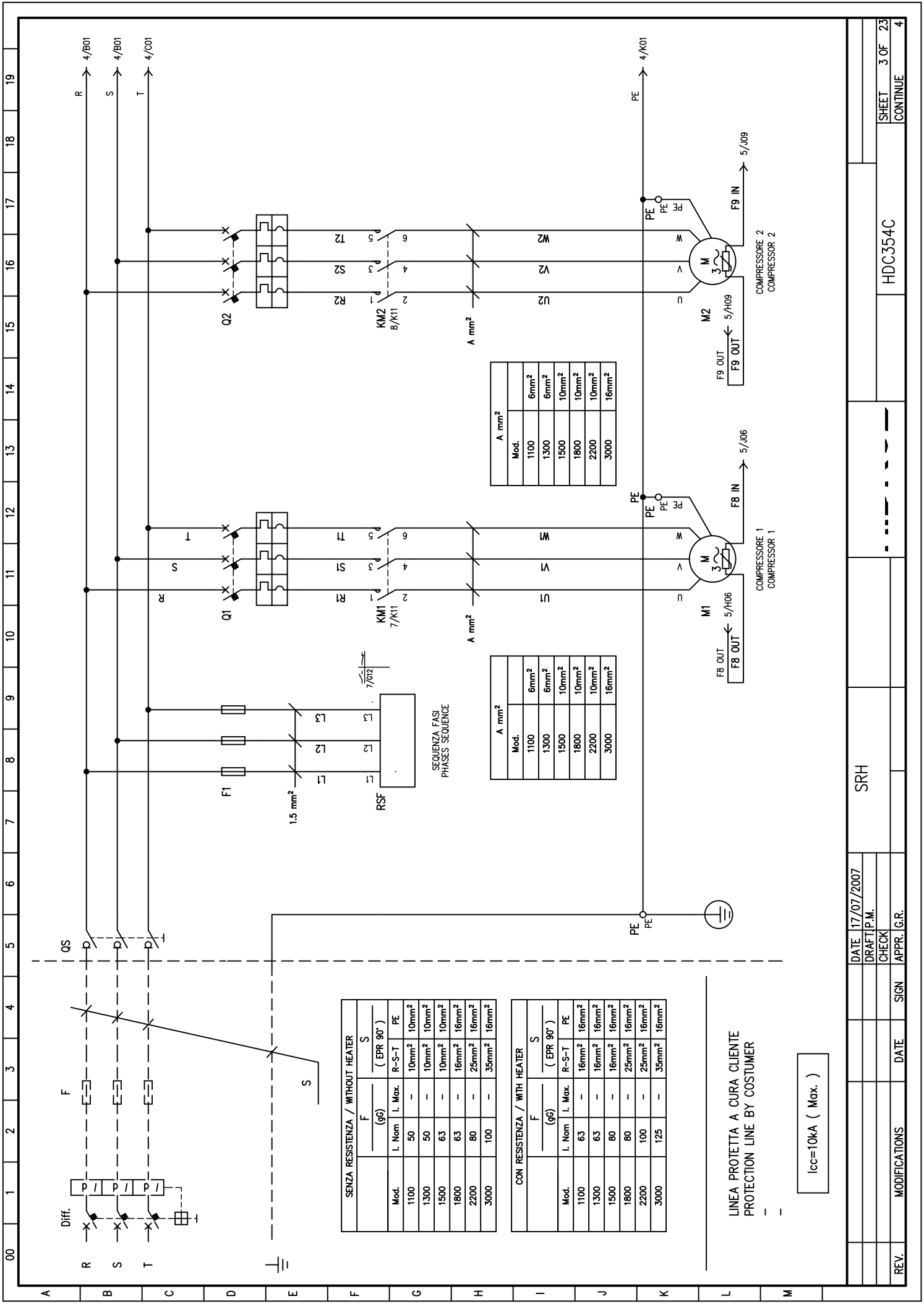
ATTENTION: The situation of alarm of the unit is shown by the red led and by the stop of the unit. The unit will start to work again only after removing the cause of the arrest and after resetting the unit, switching off and on the general switch. If the red led is still blinking, please contact our Company.

UNITS SUPPLIED WITH BASIC CONTROL

Problem	Led on	Probable cause	Corrective action
A) Unit does not start but alarm red led is off	None	Power supply missing Fuses open	Provide power supply replace fuses
	Power supply led	Humidistat on set	Set a lower set point
	Power supply led Dehumidification led	Compressor thermal protection enabled Compressor defective	Let the compressor cool down, replace compressor defective
	Power supply led Antifreeze led	Compressor thermal protection enabled compressor defective	Let the compressor cool down, replace compressor defective
	Any led	Electronic board or led board defective	Replace defective board
B) Fan Starts, compressor does not start but red alarm led is off	Power supply led Dehumidification led	Compressor thermal protection enabled, compressor defective	Let the compressor cool down Replace compressor defective
	Any led	Electrical board on led Board defective	Replace detective board
C) Fan starts, compressor does not start, but red alarm led is on	Red alarm led	Air filters clogged	Clean filter and reset unit
	Red alarm led	Low refrigerant charge	Charge the system
	Red alarm led	Open panel, low airflow, suction side obstructed, high pressure switch on	Close the panel, clear suction side, reset high pressure switch
	Any led	Electronic board on led board defective	Replace detective board
D) Fan starts, compressor does not start but red alarm led is blinking	Red alarm led	Defrost thermostat detective, low refrigerant charge	Replace thermostat, charge the system
	Any led	Electronic board on led, board defective	Replace detective board

UNITS SUPPLIED WITH ADVANCED CONTROL

Problem	Led on	Probable cause	Corrective action
Unit does not start	Display OFF	Lack of power supply	Connect the unit to power supply ; replace main fuses
	Display ON	Unit in humidity set	Set a lower set point
	Display OFF	Power phase reversed	Reverse 2 power phases
AL05 High pressure alarm	Insufficient airflow	Dirty air filters	Clean air filters
	Insufficient airflow	Open panels, obstructed suction side, not enough fan static pressure	Close the panels,remove eventual obstruction from the ducts, increase fan static pressure
	Insufficient airflow	Broken fan belt	Replace fan belt
AL06 Low pressure alarm	Low refrigerant charge	Possible refrigerant leakages	Repair and re-charge
AL07 Alarm condensate discharge pump	High condensate water level	Defect discharge pump	Replace discharge pump
AL08 Compressor thermal protection	Too high input current	Compressor defect	Replace compressor



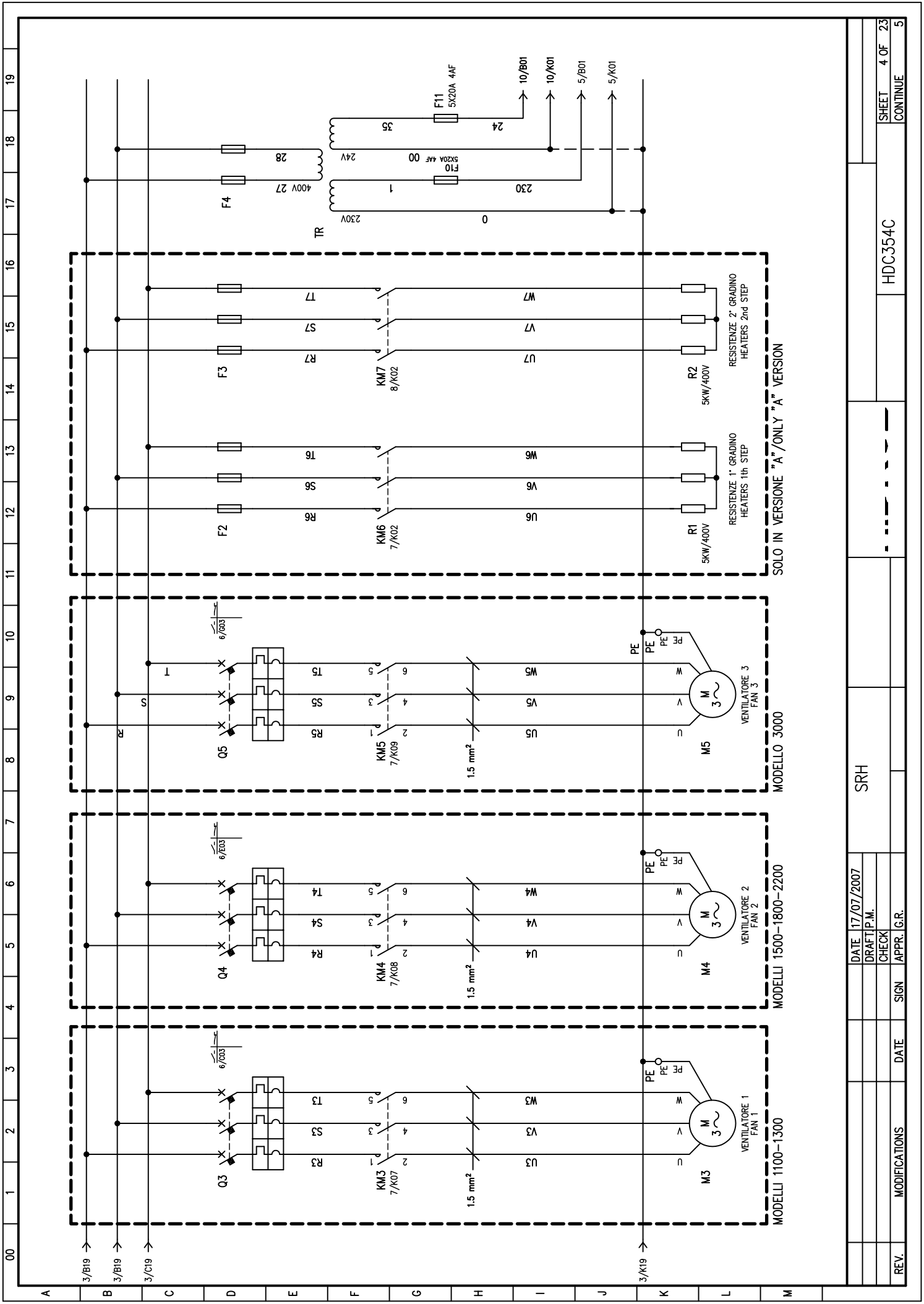
SENZA RESISTENZA / WITHOUT HEATER			
Mod.	I. Nom	S (EPR 90°)	
		R-S-T	PE
1100	50	10mm ²	10mm ²
1300	50	10mm ²	10mm ²
1500	63	10mm ²	10mm ²
1800	63	16mm ²	16mm ²
2200	80	25mm ²	16mm ²
3000	100	35mm ²	16mm ²

CON RESISTENZA / WITH HEATER			
Mod.	I. Nom	S (EPR 90°)	
		R-S-T	PE
1100	63	16mm ²	16mm ²
1300	63	16mm ²	16mm ²
1500	80	16mm ²	16mm ²
1800	80	25mm ²	16mm ²
2200	100	25mm ²	16mm ²
3000	125	35mm ²	16mm ²

LINEA PROIETTA A CURA CLIENTE
PROTECTION LINE BY COSTUMER

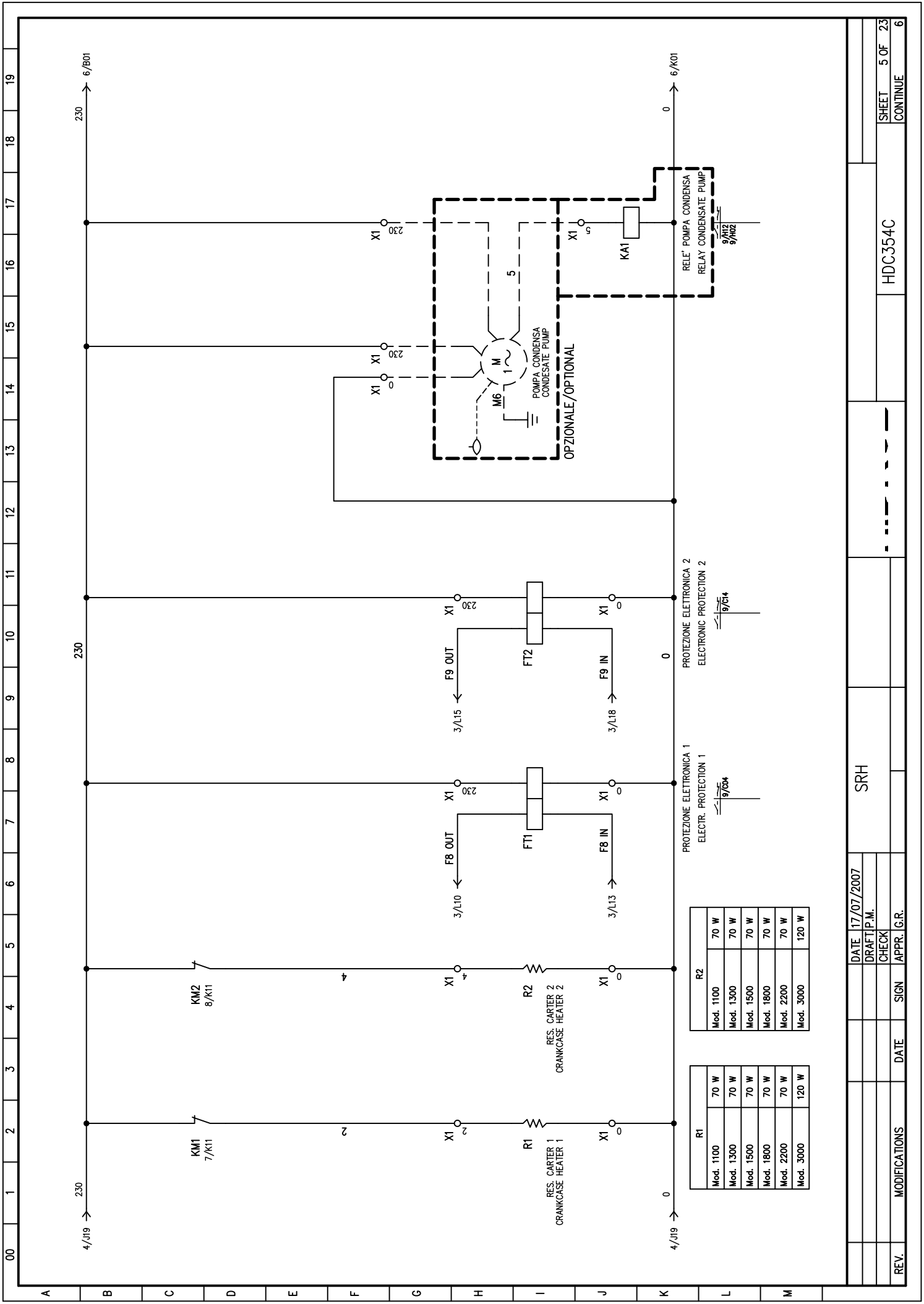
icc=10kA (Max.)

REV.	MODIFICATIONS	DATE	SIGN	APPR. I.G.R.	CHECK	DRAFT P.M.	DATE 17/07/2007	SRH	HDC354C	SHEET 3 OF 23	CONTINUE
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APPR. G.R.

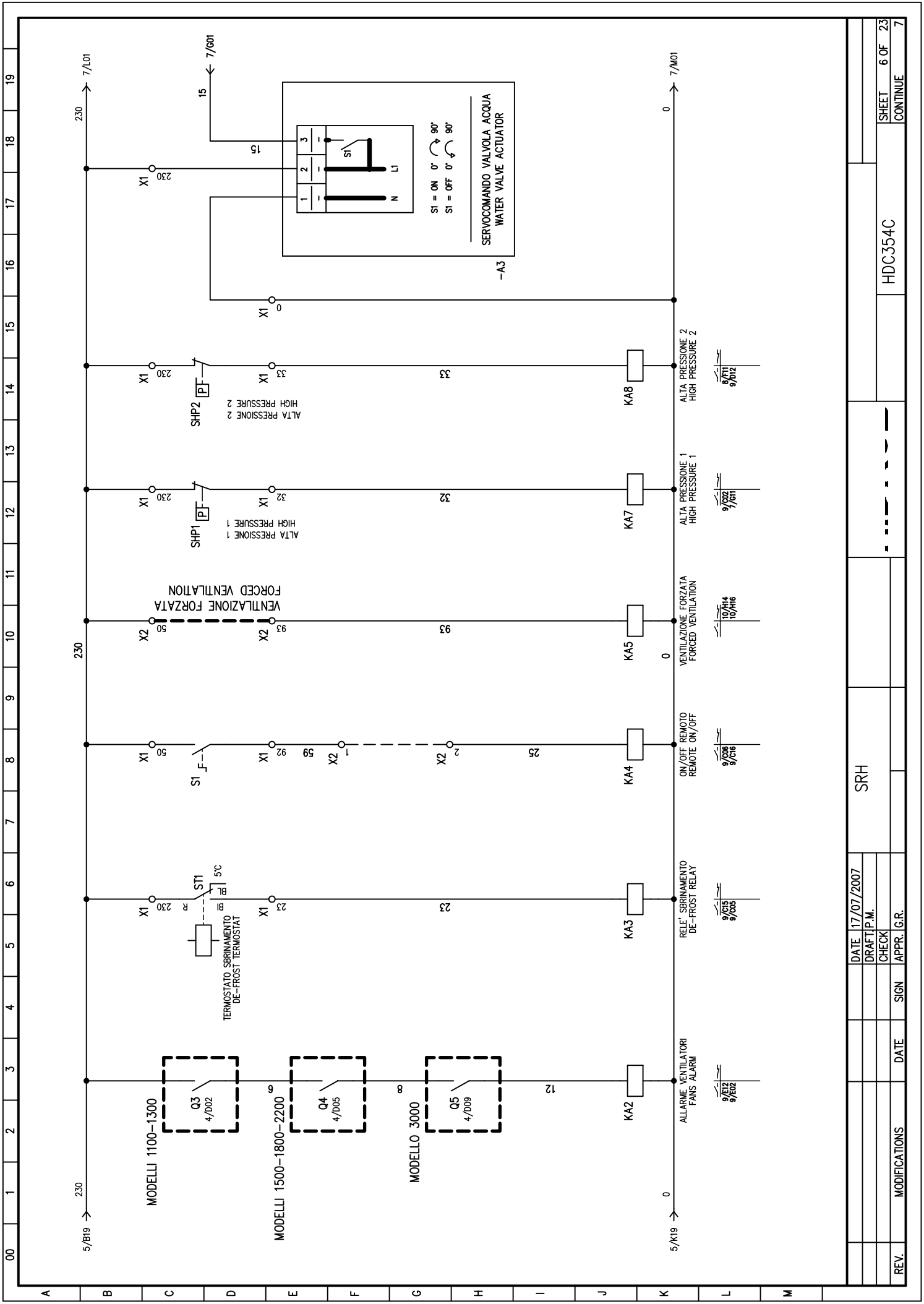
REV.	MODIFICATIONS	DATE	SIGN



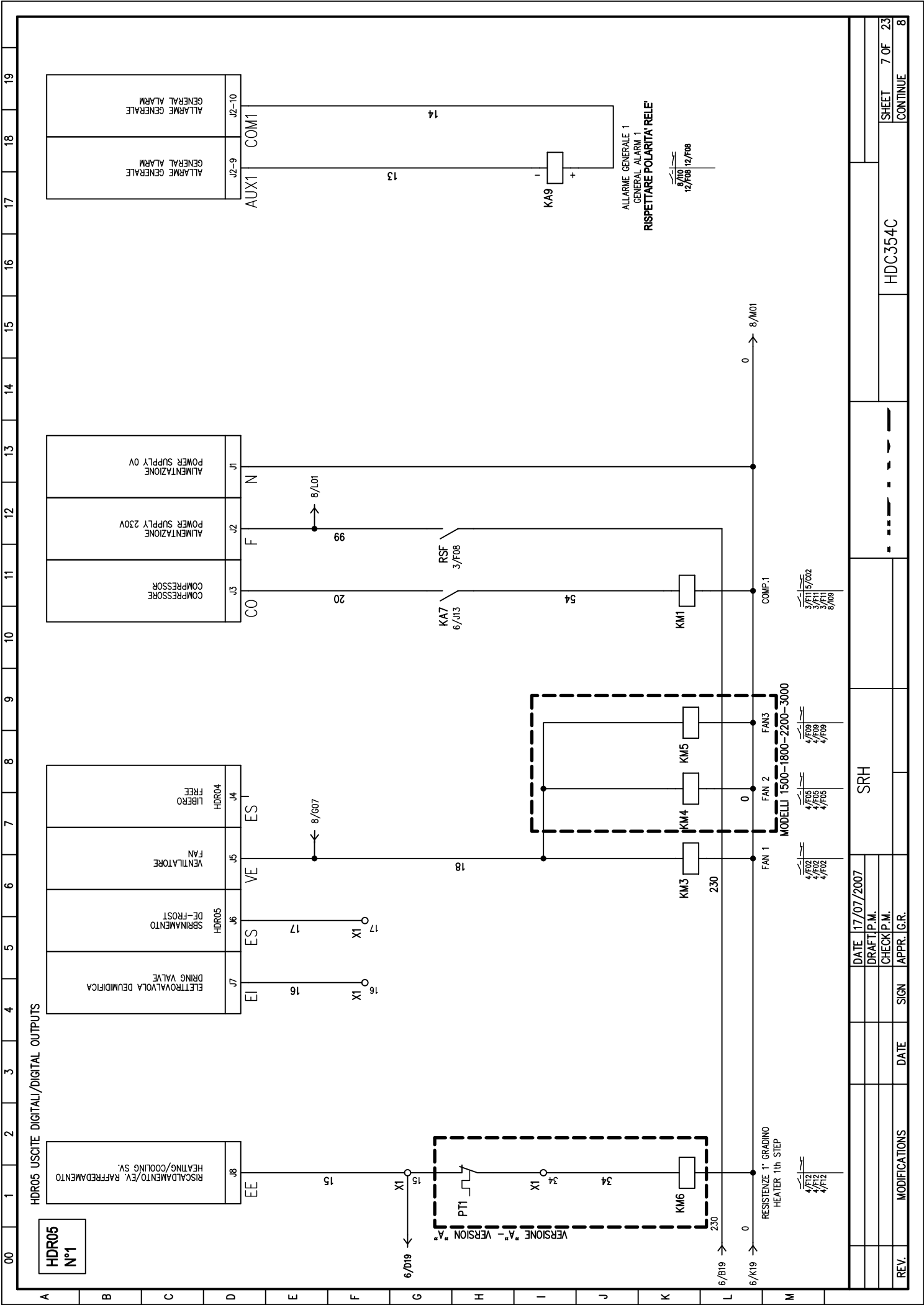
R1	
Mod. 1100	70 W
Mod. 1300	70 W
Mod. 1500	70 W
Mod. 1800	70 W
Mod. 2200	70 W
Mod. 3000	120 W

R2	
Mod. 1100	70 W
Mod. 1300	70 W
Mod. 1500	70 W
Mod. 1800	70 W
Mod. 2200	70 W
Mod. 3000	120 W

REV.	MODIFICATIONS	DATE	SIGN	APPR.	G.R.
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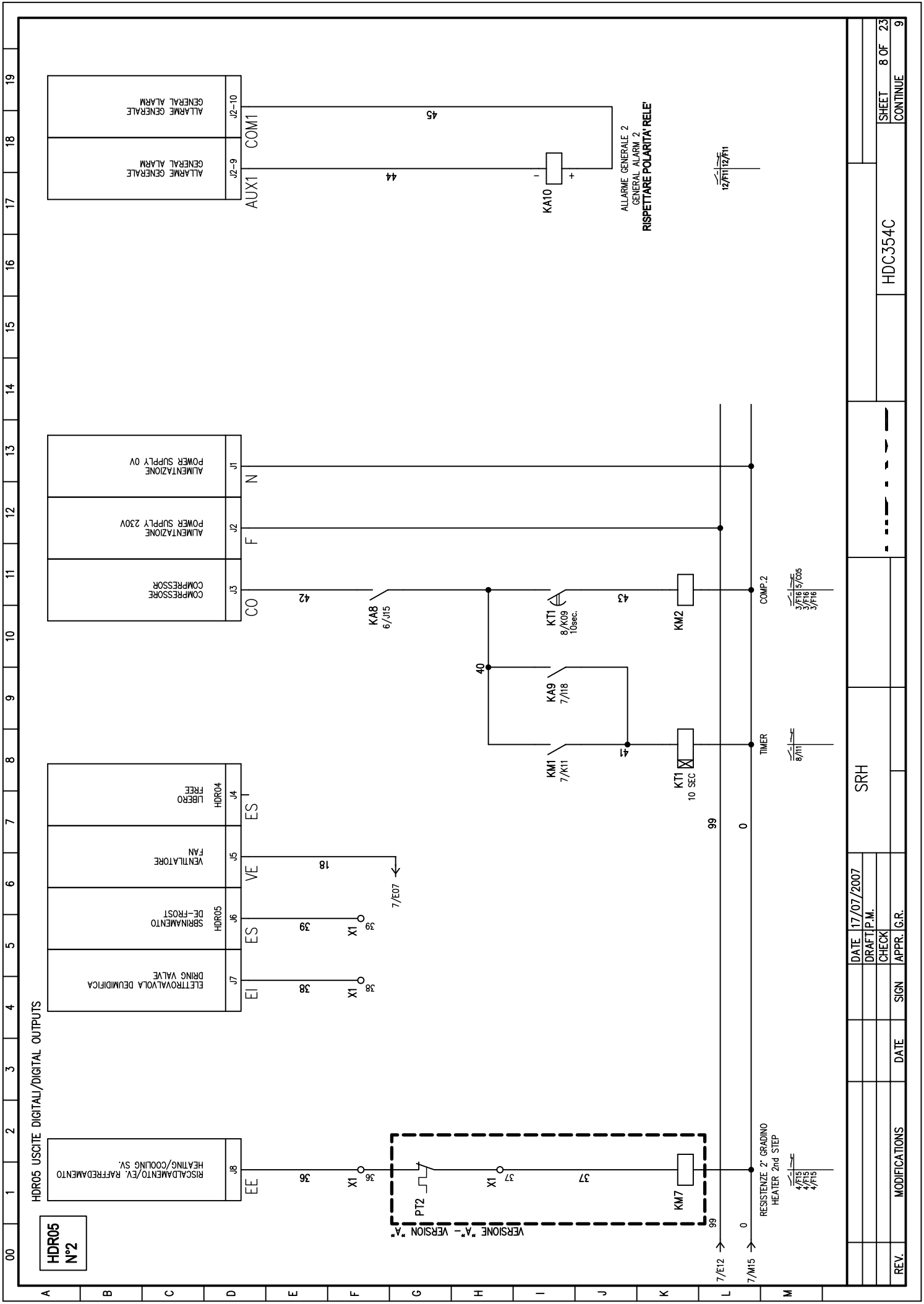
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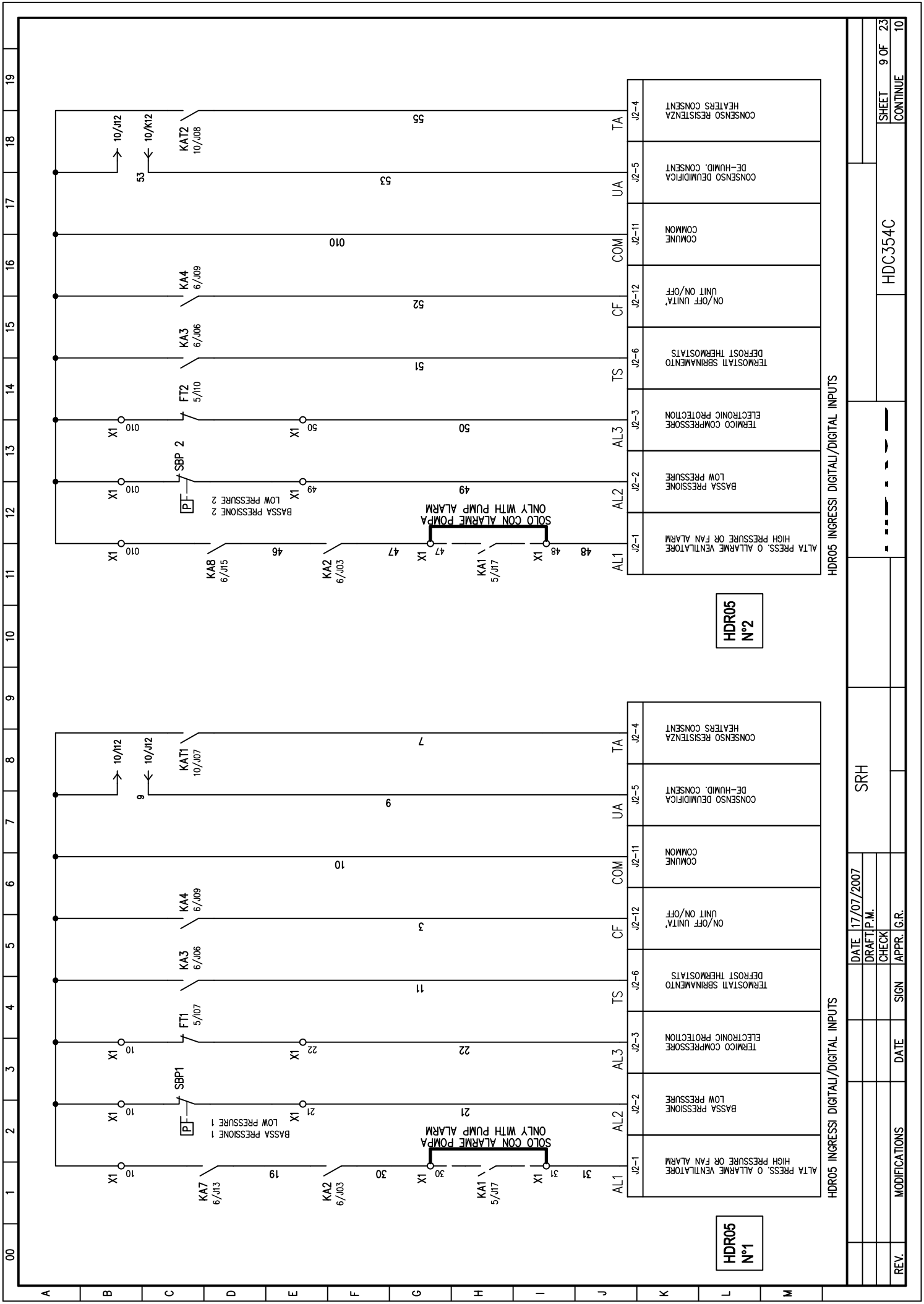
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HDR05
N°2

HDR05 USCITE DIGITALI/DIGITAL OUTPUTS

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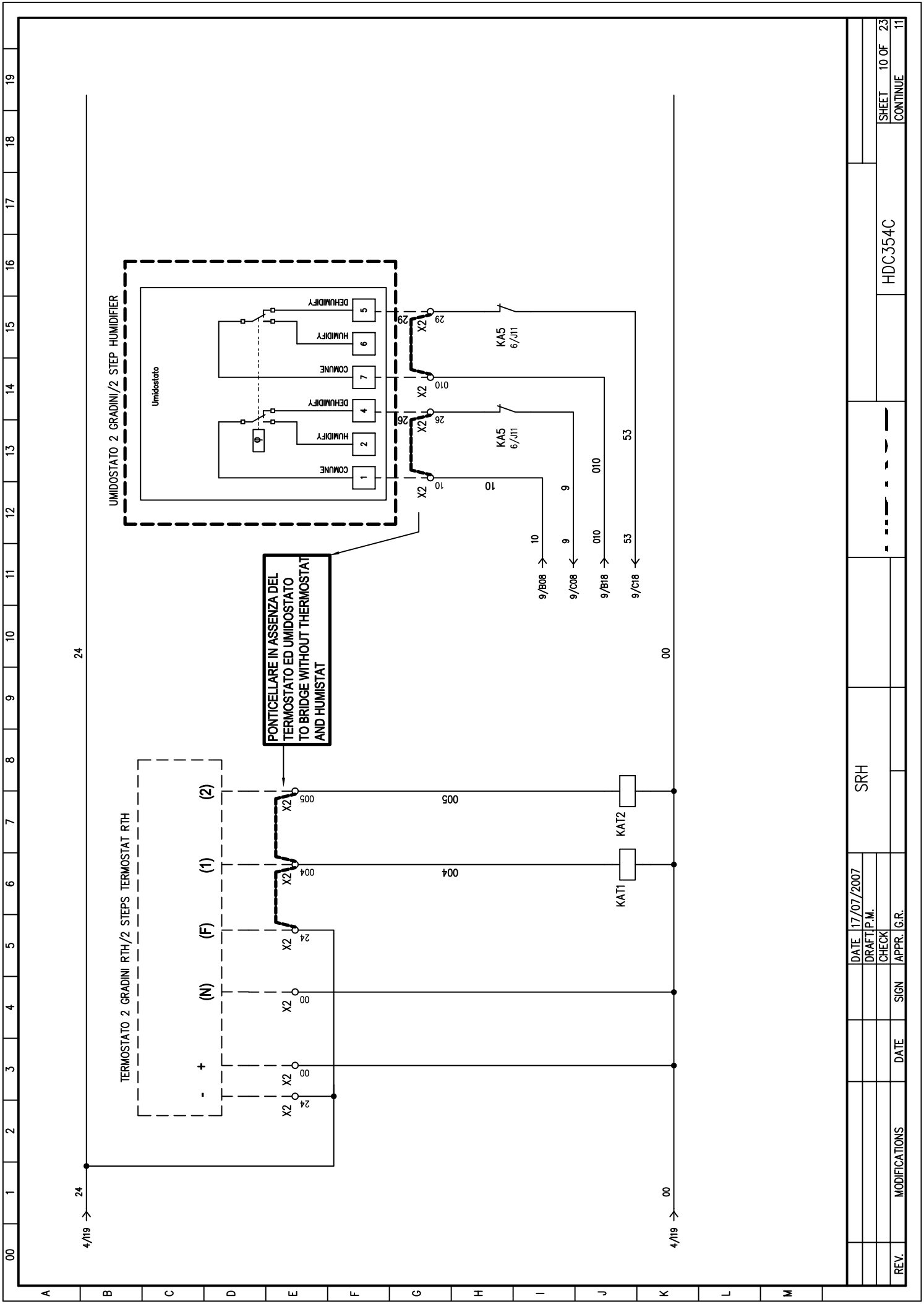
HDR05
N°2

HDR05
N°1

HDR05 INGRESSI DIGITALI/DIGITAL INPUTS

HDR05 INGRESSI DIGITALI/DIGITAL INPUTS

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		DATE 17/07/2007		DRAFT P.M.				CONTINUE	10
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SRH

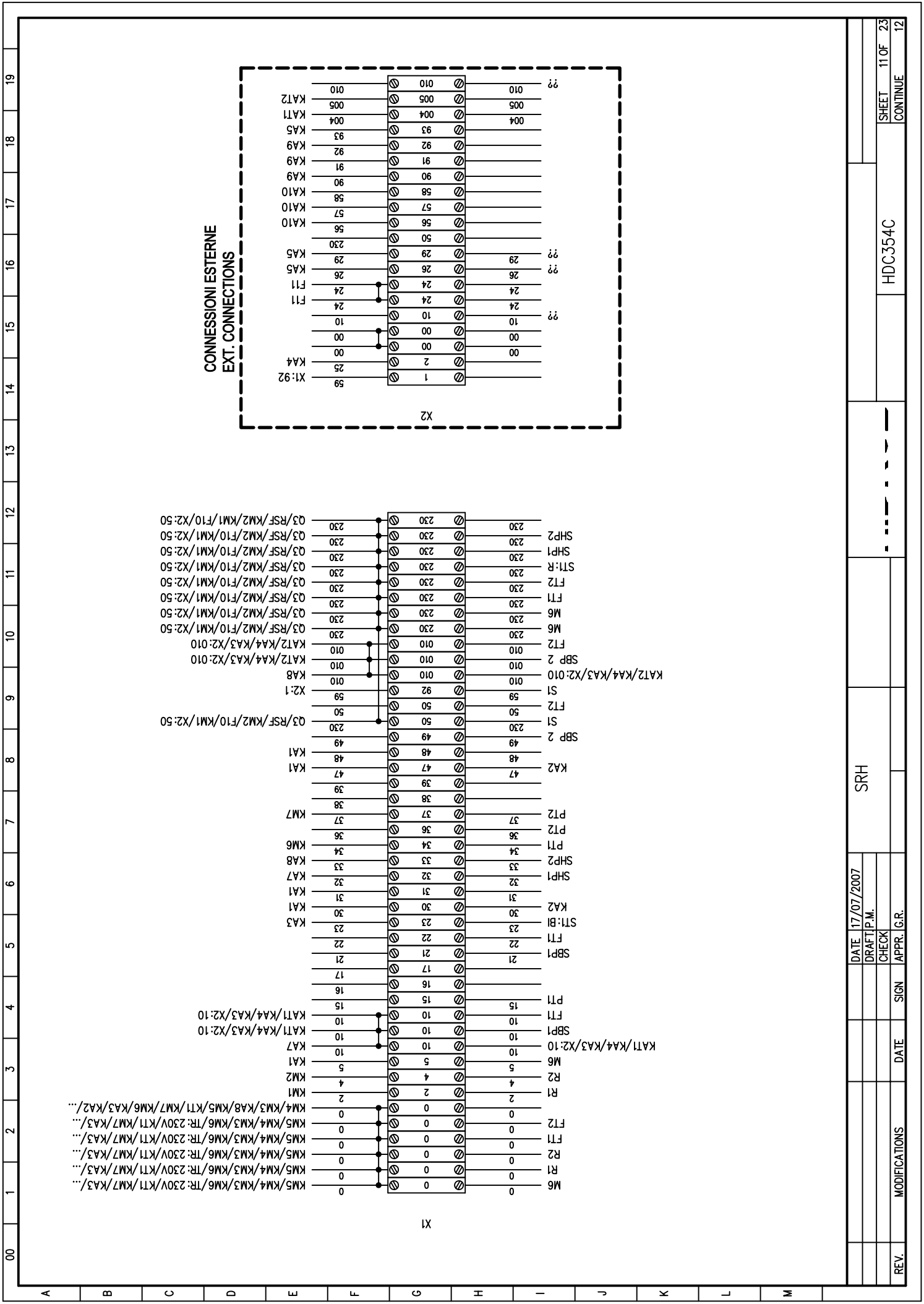
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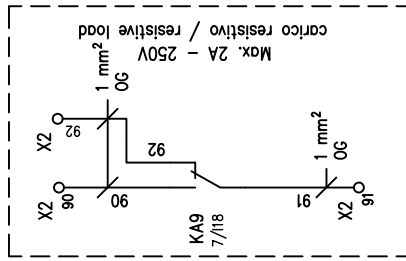
MODIFICATIONS

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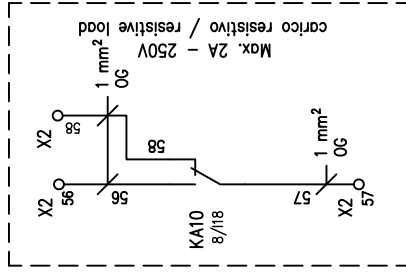


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EXT. CONNECTIONS

REV.	MODIFICATIONS	DATE	SIGN



ALLARME GENERALE 1
GENERAL ALARM 1



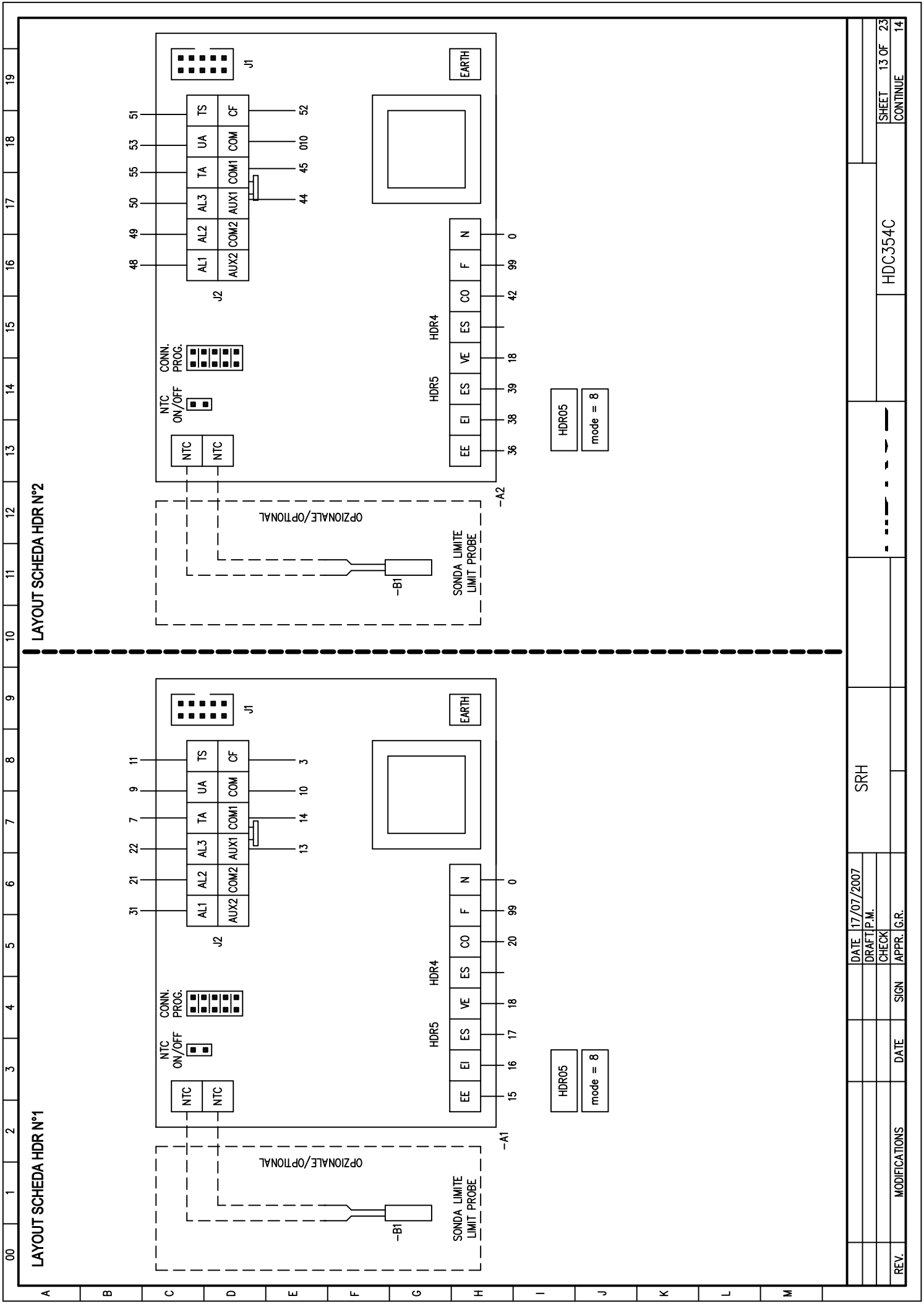
ALLARME GENERALE 2
GENERAL ALARM 2

REV.	MODIFICATIONS	DATE	SIGN	APPR.	G.R.

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LAYOUT SCHEDA HDR N°1

LAYOUT SCHEDA HDR N°2

REV.	MODIFICATIONS	DATE	SIGN	APPR.	G.R.	SRH	HDC354C	SHEET 13 OF 23	CONTINUE 14	

DATE	17/07/2007
DRAFT P.M.	
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00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
1100-1300	Sigla		Descrizione			Note tecniche			Codice articolo			Descrizione articolo				Quantità	U.M.	Posizione			
A	B1		SONDE NTC															1		10/D10	
	F1			ITALWEBER "1A" Gg						2303038				Portaf sez.BCH 10X38 32A 690V				1	PCE	2/C15	
B	F2		SOLO VERSIONE "A"					ITALWEBER "12A" Gg		2303038				Portaf sez.BCH 10X38 32A 690V				1	PCE	2/C15	
	F3		SOLO VERSIONE "A"					ITALWEBER "12A" Gg		2302038				Portaf sez.BCH 10X38 32A 690V				1	PCE	2/C15	
C	F4			ITALWEBER "10A" Gg				ITALWEBER "10A" Gg		2302038				Portaf sez.BCH 10X38 32A 690V				1	PCE	2/C15	
	F10			ITALWEBER "2A" Gg				ITALWEBER "2A" Gg		2301038				Portaf sez.BCH 10X38 32A 690V				1	PCE	2/C15	
D	KA1		POMPA SCARICO CONDENZA					FINDER		405280230				MINI RELÈ PER C.S. (CABLARE SOLO ZOCCOLO)				1	PCE	6/J17	
	KA2		ALLARME VENTILATORI					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
E	KA3		SBRINAMENTO					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
	KA4		ON/OFF REMOTO					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
	KA5		RESISTENZE ABILITAZIONE					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
F	KA6		MARCIA COMPRESSORE					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
	KA7		ALTA PRESSIONE 1					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
	KA8		ALTA PRESSIONE 2					FINDER		405280230				MINI RELÈ PER C.S.				1	PCE	6/J17	
G	KA9/KA10		ALLARME GENERALE 1/2					FINDER		405290120000				MINI RELÈ PER C.S. IN CC				1	PCE	6/J18	
	KM1/2							MOELLER		276422				DILA-XH20 CONTATTI AUS. 2NA				1	PCE	5/C12	
H	KM1/2		COMP.1/2					11KW MOELLER		277140				DILM25-01(220V50HZ,240V60HZ) CONT. 11KW				1	PCE	7/J02	
	KM3		VENTILATORI					MOELLER		276698				DILM9-10 (220V50HZ,240V60HZ) CONT. 4KW				1	PCE	7/J10	
I	KM6/7		RESISTENZE (SOLO VERSIONE "A")					MOELLER		276698				DILM9-10 (220V50HZ,240V60HZ) CONT. 4KW				1	PCE	7/J10	
	KT1		TIMER					GAVAZZI		DDA51CM24								1	PCE	7/J10	
J	RSF		SEQUENZA FASE					GAVAZZI		DPA51								1		5/H14	
	TR		TRASF.					150VA										1	PCE	7/J10	
K	QS		SEZ.					ABB		OT 63 E3								1	PCE	7/J10	
	A1/A2		CONTROLLO					HDR05										1		5/H14	
L	Q1		COMPRESSORE 1					MOELLER		242952				PLS6-C32/3				1	PCE	2/C15	
	Q2		COMPRESSORE 2					MOELLER		242952				PLS6-C32/3				1	PCE	2/C15	
	Q3		VENTILATORE 1					MOELLER		72739				PKZMO-10				1	PCE	2/C15	
M	KAT1/KAT2							FINDER		40528024000				MINI RELÈ PER C.S. IN CC				1	PCE	6/J18	
											SRH				HDC354C					SHEET 19 OF 23	
REV.	MODIFICATIONS	DATE	SIGN	APPR.	G.R.	DATE 17/07/2007	DRAFT P.M.	CHECK	APPR.	G.R.										CONTINUE	20

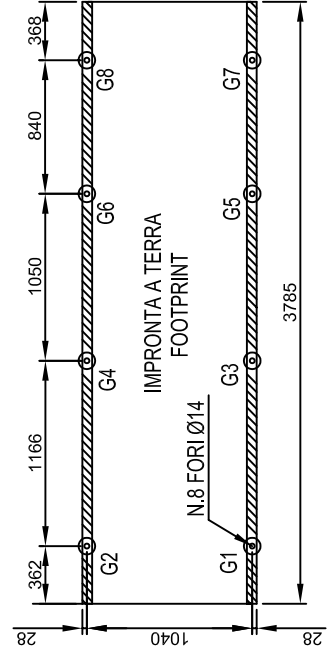
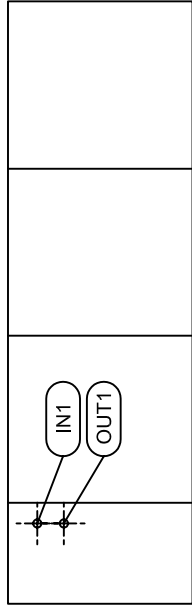
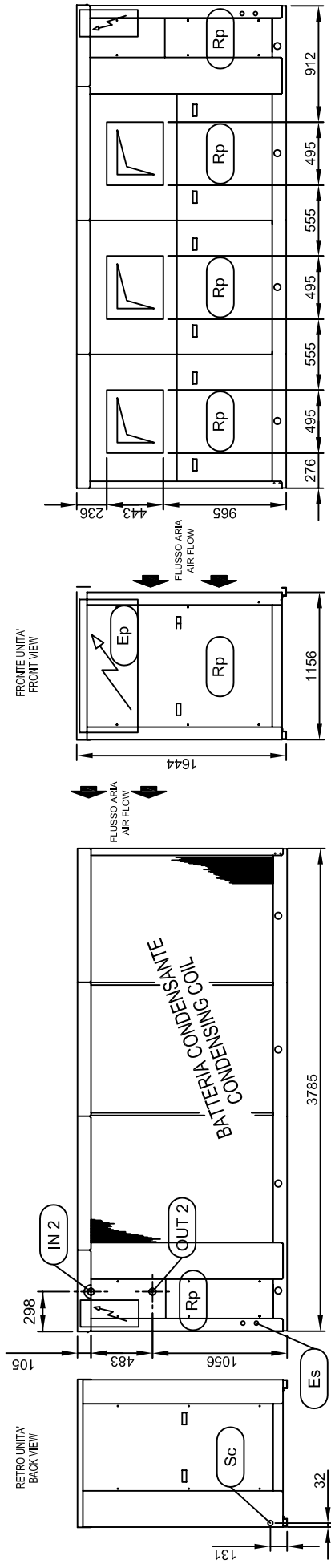
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1500..2200		Sigla	Descrizione			Note tecniche			Codice articolo	Descrizione articolo						Quantità	U.M.	Posizione							
A	B1		SONDE NTC															1		10/D10					
	F1						ITALWEBER "1A" Gg		2303038									1	PCE	2/C15					
B	F2		SOLO VERSIONE "A"				ITALWEBER "12A" Gg		2303038									1	PCE	2/C15					
	F3		SOLO VERSIONE "A"				ITALWEBER "12A" Gg		2302038									1	PCE	2/C15					
C	F4						ITALWEBER "10A" Gg		2302038									1	PCE	2/C15					
	F10						ITALWEBER "2A" Gg		2301038									1	PCE	2/C15					
D	KA1		POMPA SCARICO CONDENZA				FINDER		405280230									1	PCE	6/J17					
	KA2		ALLARME VENTILATORI				FINDER		405280230									1	PCE	6/J17					
E	KA3		SBRINAMENTO				FINDER		405280230									1	PCE	6/J17					
	KA4		ON/OFF REMOTO				FINDER		405280230									1	PCE	6/J17					
	KA5		RESISTENZE ABILITAZIONE				FINDER		405280230									1	PCE	6/J17					
F	KA6		MARCIA COMPRESSORE				FINDER		405280230									1	PCE	6/J17					
	KA7		ALTA PRESSIONE 1				FINDER		405280230									1	PCE	6/J17					
	KA8		ALTA PRESSIONE 2				FINDER		405280230									1	PCE	6/J17					
G	KA9/KA10		ALLARME GENERALE 1/2				FINDER		405290120000									1	PCE	6/J18					
H	KM1/2						MOELLER		276422									1	PCE	5/C12					
	KM1/2		COMP.1/2				15kw MOELLER		277268									1	PCE	7/J02					
I	KM3/4		VENTILATORI				MOELLER		276698									1	PCE	7/J10					
	KM6/7		RESISTENZE (SOLO VERSIONE "A")				MOELLER		276698									1	PCE	7/J10					
J	KT1		TIMER				GAVAZZI		DDA51CM24									1	PCE	7/J10					
	RSF		SEQUENZA FASE				GAVAZZI		DPA51									1		5/H14					
K	TR		TRASF.				300VA											1	PCE	7/J10					
	QS		SEZ.				ABB		OT 125 E3									1	PCE	7/J10					
	A1/A2		CONTROLLO				HDR05											1		5/H14					
L	Q1		COMPRESSORE 1				MOELLER		242954									1	PCE	2/C15					
	Q2		COMPRESSORE 2				MOELLER		242954									1	PCE	2/C15					
M	Q3		VENTILATORE 1				MOELLER		72738									1	PCE	2/C15					
	Q4		VENTILATORE 2				MOELLER		72738									1	PCE	2/C15					
	KAT1/KAT2						FINDER		40528024000									1	PCE	6/J18					
										SRH										HDC354C		SHEET 20 OF 23			
										DATE 17/07/2007												CONTINUE			
										DRAFT P.M.															
										CHECK															
REV.										MODIFICATIONS										DATE		SIGN		APPR. I.G.R.	

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3000		Sigla	Descrizione		Note tecniche		Codice articolo		Descrizione articolo		Quantità	U.M.	Posizione								
A	B1		SONDE NTC																1	PCE	10/D10
B	F1			ITALWEBER "1A" Gg			2303038			Portaf sez.BCH 10X38 32A 690V	1	PCE	2/C15								
	F2/F3		SOLO VERSIONE "A"	ITALWEBER "12A" Gg			2303038			Portaf sez.BCH 10X38 32A 690V	1	PCE	2/C15								
C	F4			ITALWEBER "10A" Gg			2302038			Portaf sez.BCH 10X38 32A 690V	1	PCE	2/C15								
	F10			ITALWEBER "2A" Gg			2301038			Portaf sez.BCH 10X38 32A 690V	1	PCE	2/C15								
D	KA1		POMPA SCARICO CONDENSA	FINDER			405280230			MINI RELÈ PER C.S. (CABLARE SOLO ZOCCOLO)	1	PCE	6/J17								
	KA2		ALLARME VENTILATORI	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
	KA3		SBRINAMENTO	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
E	KA4		ON/OFF REMOTO	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
	KA5		RESISTENZE ABILITAZIONE	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
	KA6		MARCIA COMPRESSORE	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
F	KA7		ALTA PRESSIONE 1	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
	KA8		ALTA PRESSIONE 2	FINDER			405280230			MINI RELÈ PER C.S.	1	PCE	6/J17								
G	KA9/KA10		ALLARME GENERALE 1/2	FINDER			405290120000			MINI RELÈ PER C.S. IN CC	1	PCE	6/J18								
	KM1/2			MOELLER			276422			DILA-XH20 CONTATTI AUS. 2NA	1	PCE	5/C12								
H	KM1/2		COMP.1/2	18KW MOELLER			277774			DILM40-01(220V50HZ,240V60HZ) CONT. 18KW	1	PCE	7/J02								
	KM3/4/5		VENTILATORI	MOELLER			276698			DILM9-10 (220V50HZ,240V60HZ) CONT. 4KW	1	PCE	7/J10								
I	KM6/7		RESISTENZE (SOLO VERSIONE "A")	MOELLER			276698			DILM9-10 (220V50HZ,240V60HZ) CONT. 4KW	1	PCE	7/J10								
	KT1		TIMER	GAVAZZI			DDA510M24				1	PCE	7/J10								
	RSF		SEQUENZA FASE	GAVAZZI			DPA51				1	PCE	5/H14								
J	TR		TRASF.	300VA							1	PCE	7/J10								
	QS		SEZ.	ABB						OT 200 E3	1	PCE	7/J10								
K	A1/A2		CONTROLLO	HDR05							1	PCE	5/H14								
	Q1		COMPRESSORE 1	MOELLER			242954			PLS6-C50/3	1	PCE	2/C15								
L	Q2		COMPRESSORE 2	MOELLER			242954			PLS6-C50/3	1	PCE	2/C15								
	Q3		VENTILATORE 1	MOELLER			72738			PKZMO-6.3	1	PCE	2/C15								
	Q4		VENTILATORE 2	MOELLER			72738			PKZMO-6.3	1	PCE	2/C15								
M	Q5		VENTILATORE 2	MOELLER			72738			PKZMO-6.3	1	PCE	2/C15								
	KAT1/KAT2			FINDER			405280024			MINI RELÈ PER C.S.	1	PCE	6/J17								

REV.	MODIFICATIONS	DATE	SIGN	APPR.	G.R.	SRH	HDC354C	SHEET 21 OF 23
		DATE 17/07/2007						CONTINUE
		DRAFT P.M.						
		CHECK						

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□	□	□	□	□	□

Descrizione modifica/Review description



Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTRICO ELECTRICAL BOX
Sc	SCARICO CONDENSA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET 2"
OUT1	USCITA ACQUA OUTLET WATER 2"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"

Denominazione/Denomination
SCHEMA DIMENSIONALE DEUMIDIFICATORE SRH 3000
DEHUMIDIFIER DIMENSIONAL DRAWING SRH 3000

Disegno/Drawing
SD.1SRH.3000A
 Sost. il dis./Replace draw.

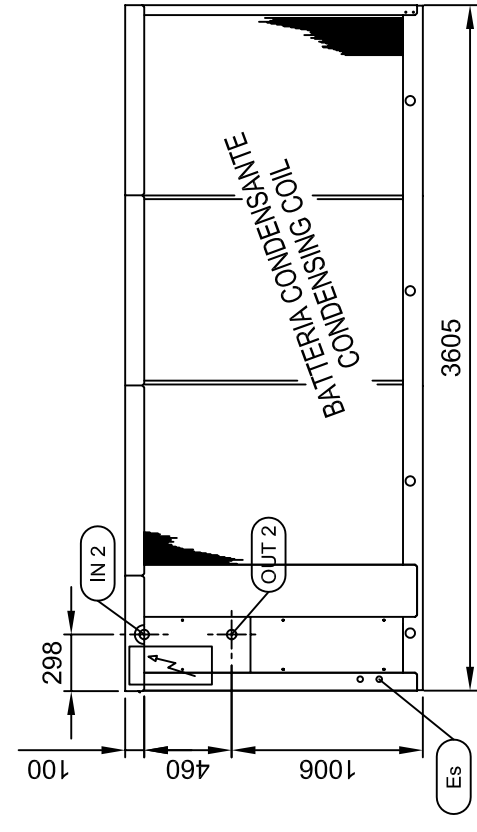
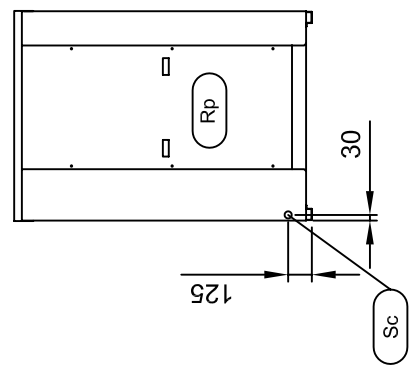
◇ OPZIONALE/OPTIONAL
 ○ SOLO SU TAGLIE/ONLY ON SIZE

Rev.	Data/Date	Foglio Sheet	N. 1 di 1	di 1	of 1	Scala/Scale	Form.	Form.	
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Sost. dal dis./Replaced by draw.								Dis./Draftsman	Visto/Checked by
								Dis./Draftsman	Ordine-Order

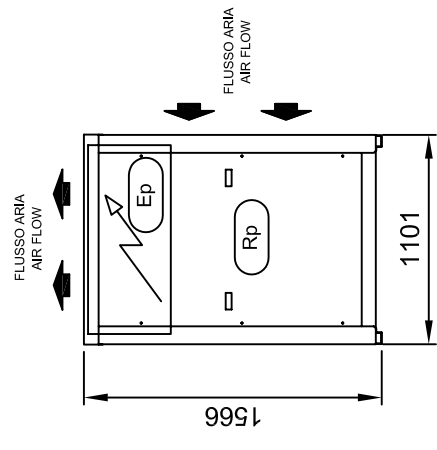
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Descrizione modifica/Review description

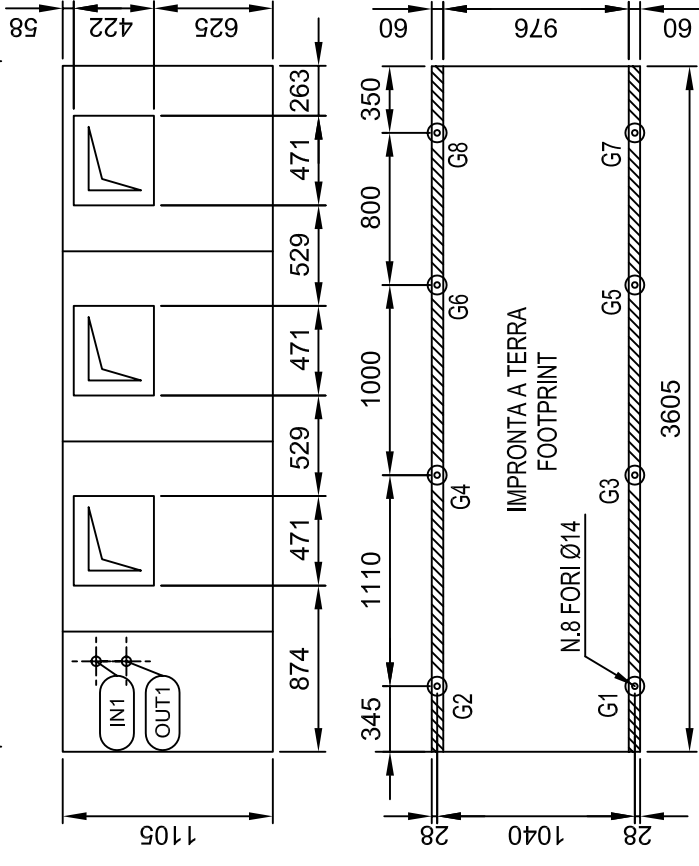
RETRO UNITA'
BACK VIEW



FRONTE UNITA'
FRONT VIEW



Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTRICO ELECTRICAL BOX
Sc	SCARICO CONDENZA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET 2"
OUT1	USCITA ACQUA OUTLET WATER 2"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"



Denominazione/Denomination
SCHEMA DIMENSIONALE DEUMIDIFICATORE SRH 3000
DEHUMIDIFIER DIMENSIONAL DRAWING SRH 3000

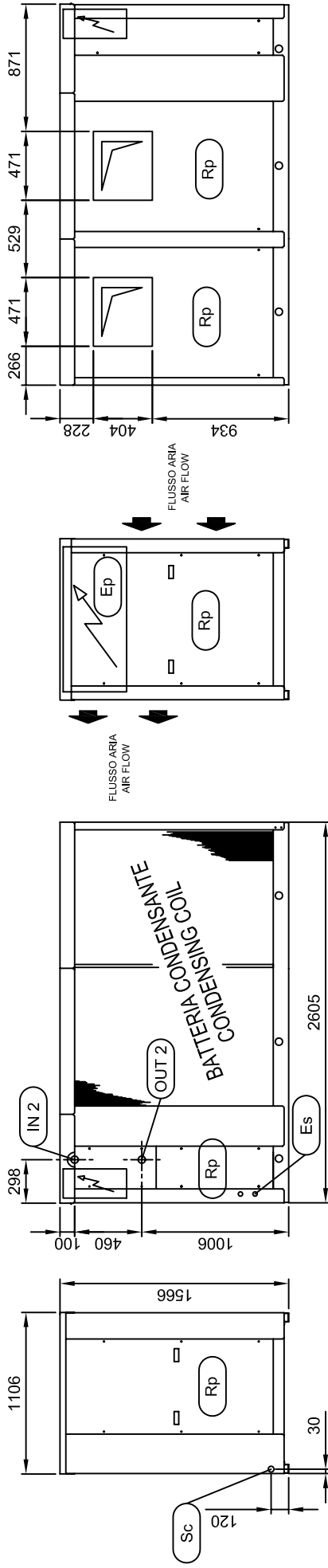
Disegno/Drawing
SD.1SRH.3000A
 Sost. il dis./Replace draw.

Rev. --
 Data/Date --
 Foglio Sheet N. 1 di 1 of 1
 Dis./Draftsman

Form. --
 Visto/Checked by

◇ OPZIONALE/OPTIONAL
 ○ SOLO SU TAGLIE/ONLY ON SIZE

Ordine-Order



Descrizione modifica/Review description

Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTTRICO ELECTRICAL BOX
Sc	SCARICO CONDENSA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET 1 1/2"
OUT1	USCITA ACQUA OUTLET WATER 1 1/2"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"

Denominazione/Denomination

SCHMA DIMENSIONALE DEUMIDIFICATORE SRH 1500-1800-2200
DEHUMIDIFIER DIMENSIONAL DRAWING SRH 1500-1800-2200

Disegno/Drawing
SD.SRH.1500

Rev. -- Data/Date -- Foglio Sheet N. 1 di 1 of 1 Scala/Scale -- Form. --

◇ OPZIONALE/OPTIONAL
○ SOLO SU TAGLIE/ONLY ON SIZE

Sost. il dis./Replace draw. Dis./Draftsman

Visto/Checked by

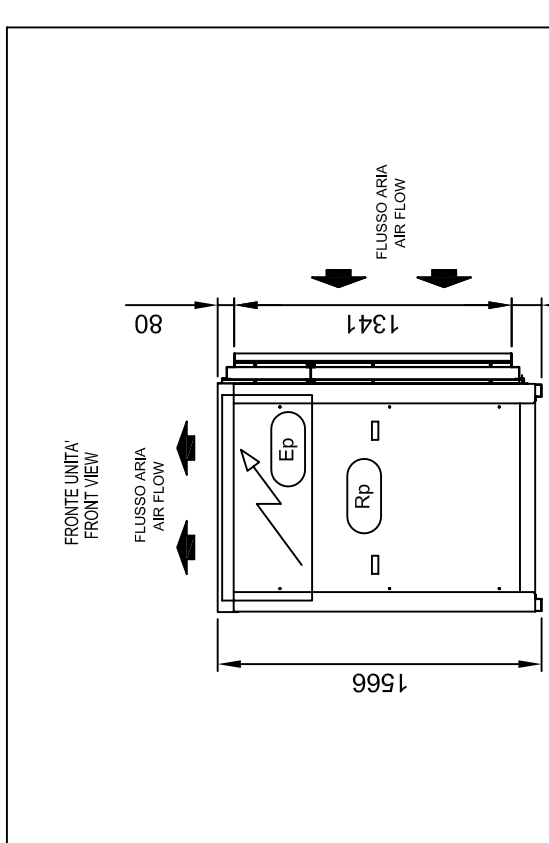
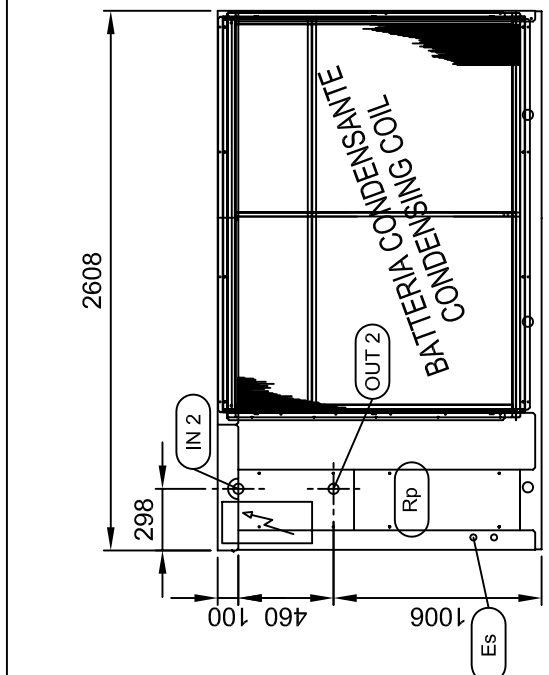
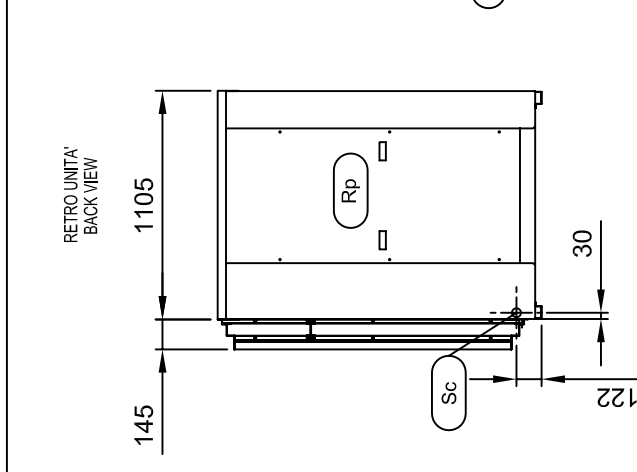
Ordine-Order

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	□	□	□	□

Descrizione modifica/Review description



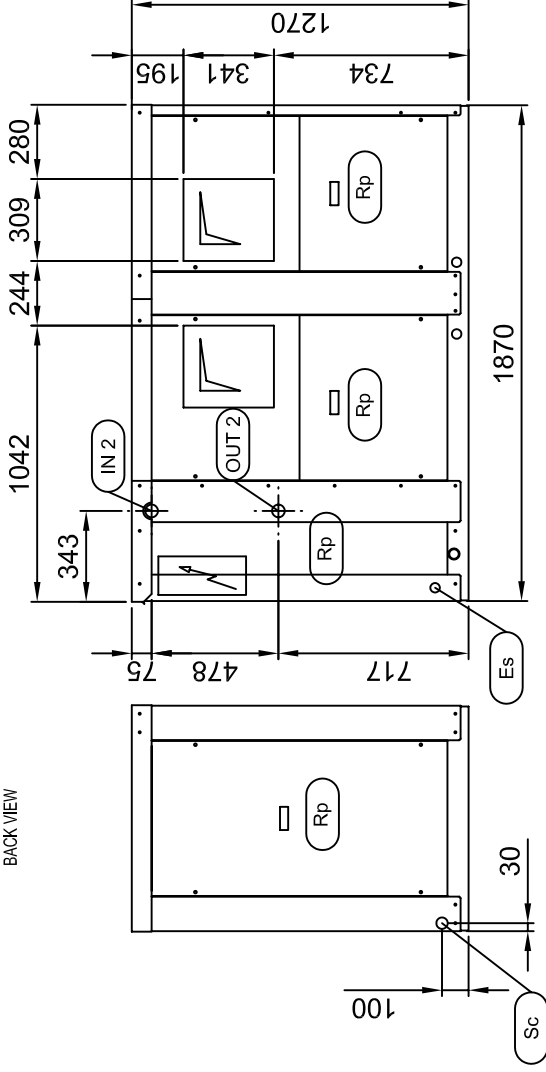
Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTRICO ELECTRICAL BOX
Sc	SCARICO CONDENSA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET R 1 1/2"
OUT1	USCITA ACQUA OUTLET WATER 1 1/2"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"

◇ OPZIONALE/OPTIONAL
○ SOLO SU TAGLIE/ONLY ON SIZE

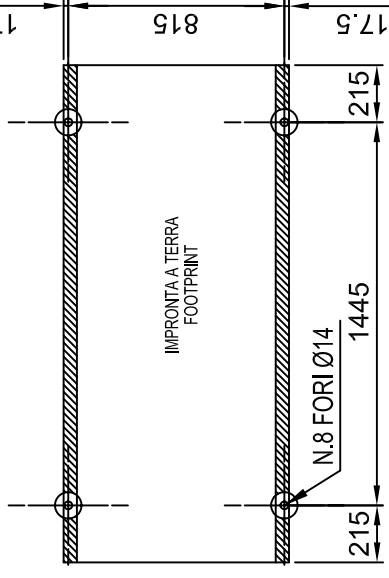
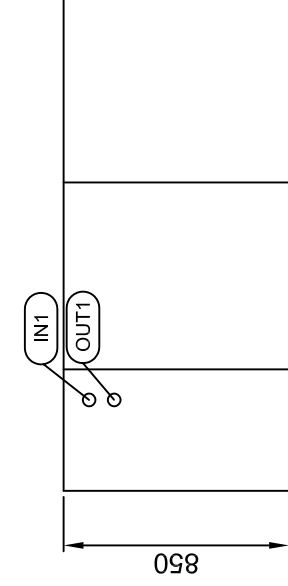
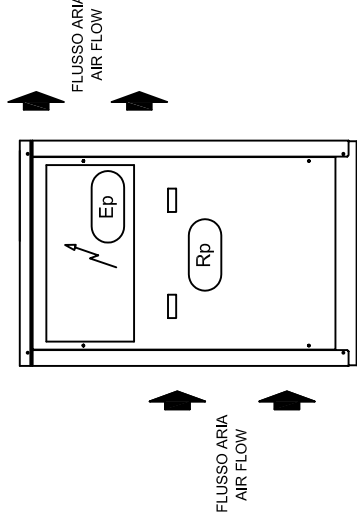
Denominazione/Denomination
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DEHUMIDIFIER DIMENSIONAL DRAWING SRH 1500-1800-2200

Disegno/Drawing SD.1SRH.1500	Rev. A	Data/Date --	Foglio Sheet	N. di N. of	1 1	di of	Scala/Scale -	Form. -
Sost. il dis./Replace draw.			Dis./Draftsman			Visto/Checked by		
						Ordine-Order		

RETRO UNITA'
BACK VIEW



FRONTE UNITA'
FRONT VIEW



Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTTRICO ELECTRICAL BOX
Sc	SCARICO CONDENZA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET 1 1/4"
OUT1	USCITA ACQUA OUTLET WATER 1 1/4"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"

- ◇ OPZIONALE/OPTIONAL
- SOLO SU TAGLIE/ONLY ON SIZE

Denominazione/Denomination

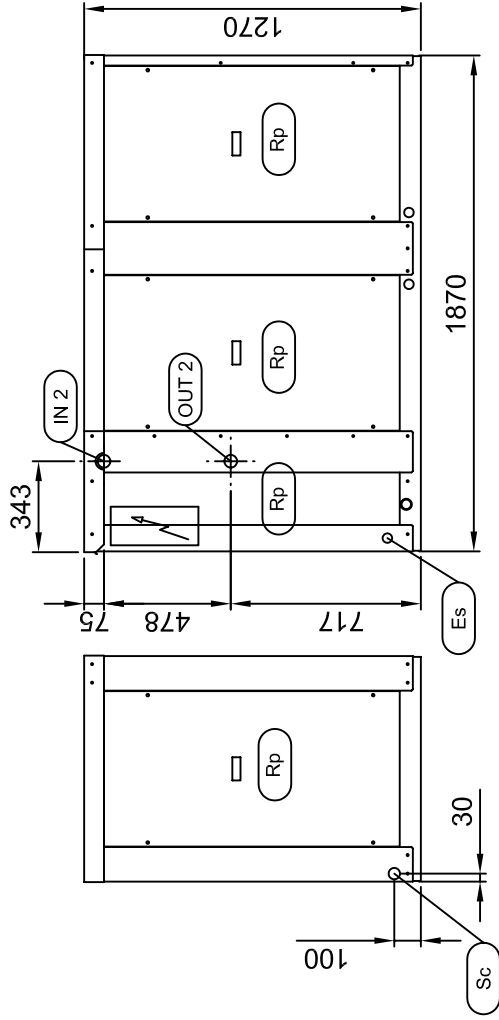
SCHEMA DIMENSIONALE DEUMIDIFICATORE SRH 1100 - 1300
DIMENSIONAL DRAWING DEHUMIDIFIER SRH 1100 - 1300

Disegno/Drawing	Rev.	Data/Date	Foglio Sheet N. 1 di 1	Scala/Scale	Form.
SD.1SRH.0005	A	19/09/06		1:40	A4
Sost. il dis./Replace draw.			Dis./Draftsman		Visto/Checked by
					Ordine-Order

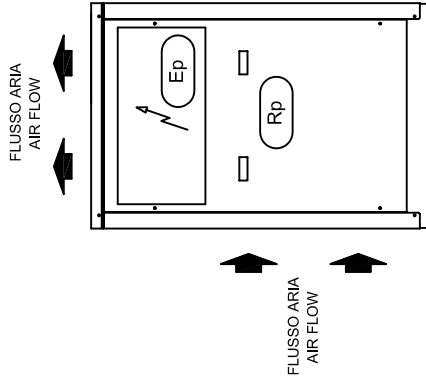
Descrizione modifica/Review description

REV.

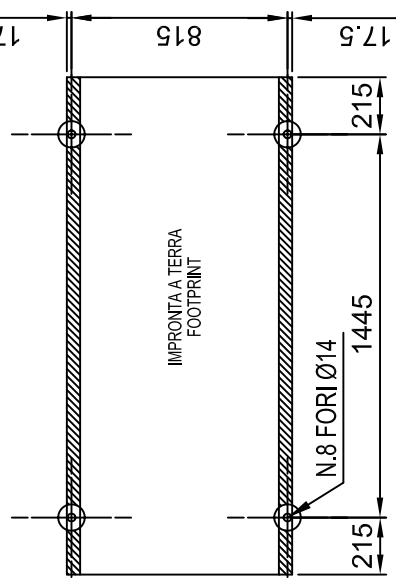
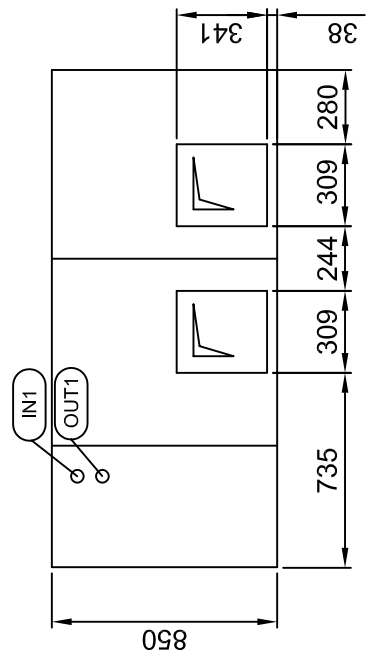
RETRO UNITA'
BACK VIEW



FRONTE UNITA'
FRONT VIEW



Rp	PANNELLI DI ISPEZIONE INSPECTION PANEL
Es	INGRESSO ALIMENTAZIONE ELETTRICA POWER SUPPLY INLET
Ep	QUADRO ELTRICO ELECTRICAL BOX
Sc	SCARICO CONDENSA CONDENSATE DRAIN
IN1	INGRESSO ACQUA WATER INLET 1 1/4"
OUT1	USCITA ACQUA OUTLET WATER 1 1/4"
IN2	INGRESSO ACQUA DESURRISCALDATORE WATER INLET DESUPERHATER 3/4"
OUT2	USCITA ACQUA DESURRISCALDATORE OUTLRT WATER DESUPERHATER 3/4"



Descrizione modifica/Review description

◇ OPZIONALE/OPTIONAL
○ SOLO SU TAGLIE/ONLY ON SIZE

Denominazione/Denomination
SCHEMA DIMENSIONALE DEUMIDIFICATORE SRH 1100 - 1300
DIMENSIONAL DRAWING DEHUMIDIFIER SRH 1100 - 1300

Disegno/Drawing SD.1SRH.0005	Rev. A	Data/Date 19/09/06	Foglio Sheet N. <u>1</u> di <u>1</u>	Scala/Scale 1:40	Form. A4	Visto/Checked by 	Ordine-Order
Sost. il dis./Replace draw.			Sost. dal dis./Replaced by draw.		Dis./Draftsman		

REV.



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HIDROS SRL shall have the right to introduce at any time whatever modifications necessary to the improvement of the product.
