

Offer re.: **HITEMA UNIT IN STOCK**  
Customer:  
Contact:  
Project: HITEMA STOCK

Created by - name: Francesca Albertin  
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Date: 22/03/2021

## CHILLER WITH **RECIPROCATING** COMPRESSOR

### COMPONENTS INCLUDED AS STANDARD:

**RAL7035** - standard color RAL 7035

**GALV** - galvanized and painted main frame and panels

**B1** - evaporator inlet water temperature sensor (work probe)

**B2** - evaporator outlet water temperature sensor (antifreeze probe)

**CWC** - closed water circuit configuration

**VSW** - water safety relief valve

**PDW** - differential pressure switch, it is used to shut-down the unit if an insufficient water flow is detected

**NP** - without pump

**SFA** - manual air vent

**NT** - without tank

**VSC** - water drain valve

**VTS** - thermostatic expansion valve

**FLT** - dehydrating filter

**HP** - high pressure switch with automatic reset, to allow chiller protection from high pressure events by switching off the chiller

**LIQ** - sight glass

**B7, B8** - low pressure transducers (low pressure alarm)

**OIL** - sight glass for equalisation line of oil

**RC** - crankcase heater for each compressor

**DC** - double refrigerant circuit to allow higher reliability for the chiller. Optional available only for chillers provided as standard with two compressors in one refrigerant circuit

**SCE** - air heat exchanger (condenser)

**SCR** - charge valve (schrader)

**VSAP** - high pressure safety relief valve

**VSBP** - low pressure safety relief valve

**Y4, Y8** - liquid line solenoid valve

**iCHILL** - control board (24V) from Dixell

**EV** - electrical board ventilation. Recommended if the chiller is required to work with ambient temperature higher than 40degC

**HRM** - hours run meter. Chiller function that counts the hours of operation of compressors, pumps (if present) and fans

**SN** - electrical feed 400V/3ph/50Hz without neutral

**P\_RAT** - protection rating IP54

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**QE** - one electrical box, single controller, single power supply. Standard configuration  
**Q0** - general switch of the chiller  
**RVG** - phase monitor for protection of the unit from over/under voltage and incorrect phase sequence  
**G\_ALL** - voltage free-contact for general allarm  
**REM\_ON-OFF** - voltage free-contact for remote on/off  
**NCC2** - vertical cardboard protection on unit corners, nylon covering and wooden spacers on bottom

OPTIONALS INCLUDED:

**ATS** - spring type antivibration dampers, to reduce the vibrations transmitted to the ground  
**B-ES** - brazed plate evaporator (plate material AISI 316, brazing material copper). As an alternative to coaxial or shell and tube evaporator  
**EC** - electronic commuted (EC) fans with permanent-magnet brushless DC motor. Fans speed control (inverter) according to the condensation pressure. Fans speed can be reduced down to 0% of the maximum. Optional available as an alternative to RV. It is also suggested to use EC fans in case of aggressive atmosphere (coastal atmosphere or chemical industry) and in case of ambient temperature over 45degC  
**SP** - special configuration: R407C REFRIGERANT  
RECIPROCATING COMPRESSORS  
FLANGED WATER CONNECTIONS

**PROJECT : HITEMA UNIT IN STOCK**

**DATE : 2021 March 22**

**CREATED BY**

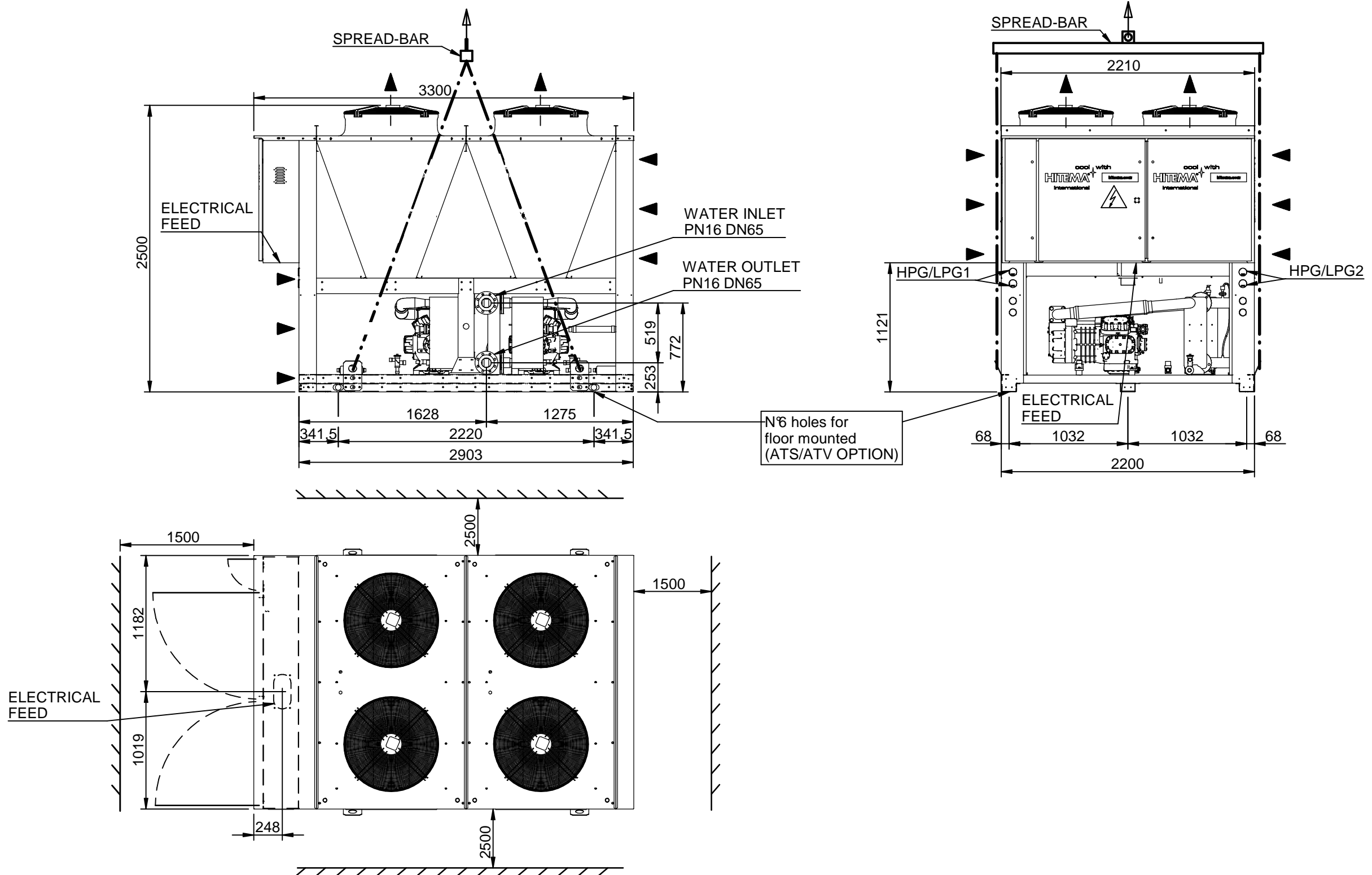
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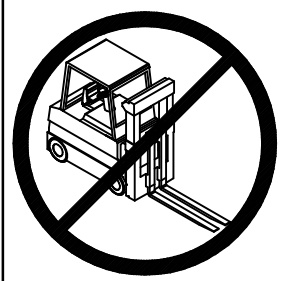
CHILLER WITH <b>RECIPROCATING</b> COMPRESSOR		<b>XXX.330</b>
Type		RECIPROCATING
System		AIR COOLED
Cooling capacity	kW	302,72
E.E.R. at design point	kW/kW	2,22
Minimum ambient temperature	°C	-20
Maximum ambient temperature	°C	37
Type of refrigerant gas	R	407C
Electrical feed according EN 60204-1	V/ph/Hz	400/3/50
Electrical cabinet	IP	54
<b>COMPRESSOR DATA</b>		
Number of compressors	N°	2
Number of circuits	N°	2
Compressor E.E.R.	kW/kW	2,39
Total Compressors Nominal Absorbed Power	kW	126,42
Total Compressor Running current (RLA)	A	222,34
Max peak start current per circuit (LRA)	A	417,00
Max absorbed working current per circuit (FLA)	A	135,70
Starting Method	Type	PART WINDING
Partition steps per compressor	%	100-75-50 %
<b>EVAPORATOR DATA</b>		
Inlet water fluid temperature	°C	14
Outlet water fluid temperature	°C	7
Fluid type	Type	WATER
Glycol percentage	%	
Number of circuits	N°	1
Number of evaporators	N°	2
Type of evaporator	Type	BRAZED PLATE
Approval	Type	CE-PED
Nominal flow rate per circuit	m3/h	37,14
Minimum flow rate per circuit	m3/h	20,00
Maximum flow rate per circuit	m3/h	56,00
Pressure drops (Evaporator + Valves + piping)	kPa	44,00
Hydraulic connections	DN	80
<b>AIR AXIAL FANS AND CONDENSER DATA</b>		

Design ambient temperature (dry bulb)	°C	35
Elevation a.s.l.	m	0
Number of condenser coils	N°	4
Number of fans	N°	4
Fans type	Type	EC
Total nominal power	kW	9,84
Total maximum absorbed power	kW	11,52
Total maximum absorbed current	A	17,60
Total Air Flow	m3/h	117582,84
<b>TOTAL ELECTRIC DATA (standard configuration)</b>		
Maximum absorbed power	kW	161,52
Maximum absorbed current (FLA)	A	289,00
Maximum peak current (LRA)	A	561,50
Maximum peak current with soft-start (LRA) (SF option)	A	478,10
<b>NOISE DATA</b>		
Sound pressure level at 10m according ISO3744	dB	66,68
Sound pressure level at 10m (low noise version) (LNJ OPTION)	dB	62,85
Sound pressure level at 10m (super low noise version) (SLN OPTION)	dB	62,03
<b>DIMENSIONS</b>		
Structure in galvanized steel	RAL	7035
Length	mm	3300
Width	mm	2210
Height	mm	2500
<b>WEIGHT</b>		
Empty	kg	2260
<b>FREE SPACE</b>		
Electrical Panel Side	mm	1500
Opposite Side of Electrical Panel	mm	1500
Condensing Coil Sides	mm	1500
<b>NOTE</b>		
All data subject to change		



**LIFTING AND CARRIAGE PRECAUTIONS**

- Check the weight on the CE label to select appropriate lift equipment .
- Before lifting the unit make sure that the external panel is firmly fixed in place.
- To use only lifting points provided.
- The chains or slings must be of equal length.
- To use a spread-bar to avoid damage to the unit.
- The movement must be performed with caution and avoid abrupt movements.
- Never move the unit on rollers.
- Never lift the unit using a fork-lift.



**LEGEND**

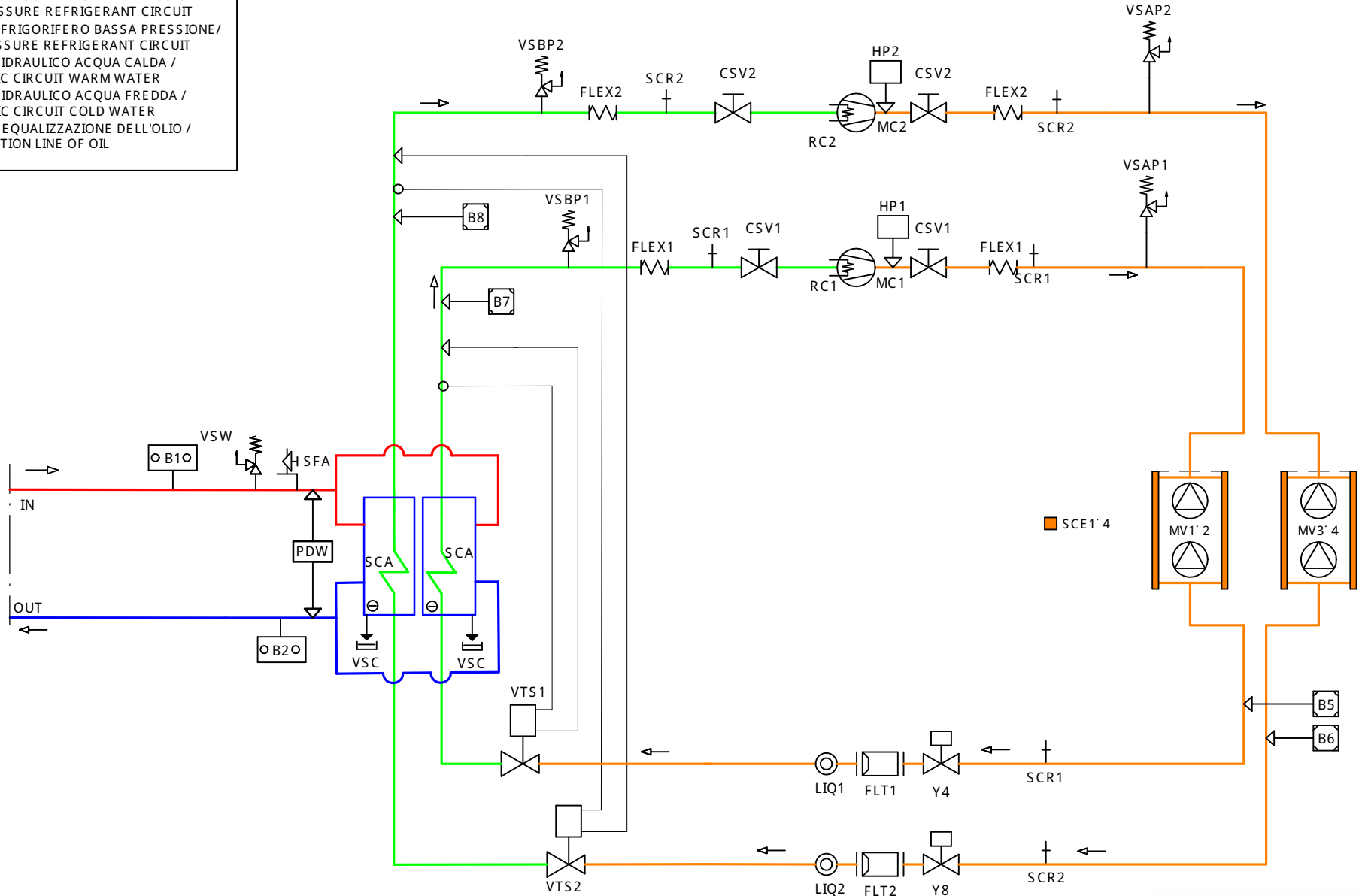
HPG	High pressure gauge
LPG	Low pressure gauge
ATS	Spring type antivibrant mounting ( Opt )
ATV	Rubber type antivibrant mounting ( Opt )

EMPTY WEIGHT	OPERATING WEIGHT	HYDRAULIC CONNECTIONS
2260 kg	2320 kg	DN65

Scala-Scale	Data-Date	Dis.to-Drawn	N°Pezzi	<b>HITEMA®</b>
	18/09/18	B.P.		
Peso-Weight Kg.	Materiali-Materials			
Denominazione-Denomination				DIS.-DRAW N.
WATER CHILLERS				DIM-SBS-240SP17
Particolare-Detail				Rev.
Overall dimension - Lift Instruction				00
REFRIGERANT				PROGRAM.N.



- CIRCUITO FRIGORIFERO ALTA PRESSIONE / HIGH PRESSURE REFRIGERANT CIRCUIT
- CIRCUITO FRIGORIFERO BASSA PRESSIONE / LOW PRESSURE REFRIGERANT CIRCUIT
- CIRCUITO IDRAULICO ACQUA CALDA / HYDRAULIC CIRCUIT WARM WATER
- CIRCUITO IDRAULICO ACQUA FREDDA / HYDRAULIC CIRCUIT COLD WATER
- - - LINEA DEI EQUALIZZAZIONE DELL'OLIO / EQUALISATION LINE OF OIL

LEGENDA /  
LEGEND




Scala-Scale	Data-Date 10/09/2018	Dis.to-Drawn G.M.	Ver.-Version	
Peso-Weight Kg	Materiali-Materials			
Denominazione-Denomination				DIS.-DRAW N. SFI-SBS.240-SP03
Particolare-Detail SCHEMA FRIGORIF./IDRAULICO HYDRAULIC/REFRIGERATING DIAGRAM				REVISIONE
FOGLIO/SHEET 1/3				PROGRAM. N.




CIRCUITO IDRAULICO / HYDRAULIC CIRCUIT			
SIGLA / SIGN	DESCRIZIONE	DESCRIPTION	NOTE
B4	TEMPERATURA AMBIENTE	AMBIENT TEMPERATURE SENSOR	std free cooling
VSW	VALVOLA SICUREZZA ACQUA	SAFETY WATER VALVE	std
B3	TEMPERATURA ACQUA FREE COOLING	FREE COOLING WATER TEMPERATURE	std free cooling
FL	FLUSSOSTATO	FLOW SWITCH	std
Y16	VALVOLA 2 VIE EVAPORATORE	EVAPORATOR 2 WAY VALVE	std free cooling
B1	SENSORE TEMPERATURA ACQUA INGRESSO EVAPORATORE	EVAPORATOR INLET WATER TEMPERATURE SENSOR	std
SCA	SCAMBIATORE DI CALORE AD ACQUA (EVAPORATORE A PIASTRE)	WATER HEAT EXCHANGER (BRAZED PLATE EVAPORATOR)	std
VSC	VALVOLA DI SCARICO ACQUA	WATER DISCHARGE VALVE	std
SFA	SFIATO DELL'ARIA	AIR VENT	std
RAGE	RESISTENZA ANTIGELO EVAPORATORE	EVAPORATOR ANTIFREEZE HEATER	optional
B2	SENSORE TEMPERATURA ACQUA USCITA EVAPORATORE	EVAPORATOR OUTLET WATER TEMPERATURE SENSOR	std
T	SERBATOIO DI ACCUMULO	TANK	optional
RM	TAPPO DI RIEMPIMENTO MANUALE	MANUAL FILLING CAP	optional(included in the T option)
VSWS	VALVOLA SICUREZZA ACQUA	SAFETY WATER VALVE	optional(included in the T option)
VSCS	VALVOLA DI SCARICO ACQUA	DISCHARGE WATER VALVE	optional(included in the T option)
SFAS	SFIATO ARIA	AIR VENT	optional(included in the T option)
LLA	ALLARME BASSO LIVELLO ACQUA	ELECTRIC FLOAT LOW LEVEL ALARM	optional
RAGT	RESISTENZA ANTIGELO VASCA	ANTIFREEZE HEATER INTERTIAL TANK	optional
XV	VASO DI ESPANSIONE	RIEMPIMENTO AUTOMATICO CON VALVOLA DI RITEGNO E FILTRO	optional (included in the XV option)
RA	RIEMPIMENTO AUTOMATICO CON VALVOLA DI RITEGNO E FILTRO	AUTOMATIC FEEDER WITH CHECK VALVE AND FILTER INCORPORATED	optional (included in the XV option)
MP	ELETTROPOMPA DI PROCESSO	PROCESSING PUMP	optional
MW	MANOMETRO ACQUA	WATER PRESSURE GAUGE	optional
MP1-MP2	ELETTROPOMPA DI PROCESSO	PROCESSING PUMP	optional
VTP	VALVOLA DI INTERCETTAZIONE TRA VASCA E POMPA	SHUT OFF VALVE BETWEEN TANK AND PUMP	optional (included in the DP option)
VRAP	VALVOLA DI NON RITORNO ACQUA	NO RETURN WATER VALVE	optional (included in the DP option)
Y15	VALVOLA 2 VIE FREE COOLING	FREE COOLING 2 WAY VALVE	std free cooling
SFC	SCAMBIATORE ARIA ACQUA (FREE COOLING)	AIR-WATER EXCHANGER (FREE COOLING)	std free cooling
VSCF	VALVOLA DI SCARICO ACQUA FREE COOLING	FREE COOLING DISCHARGE WATER VALVE	std free cooling
SFAF	SFIATO ARIA MANUALE FREE COOLING	FREE COOLING MANUAL AIR VENT	std free cooling

	CIRCUITO IDRAULICO ACQUA CALDA / HYDRAULIC CIRCUIT WARM WATER
	CIRCUITO IDRAULICO ACQUA FREDDA / HYDRAULIC CIRCUIT COLD WATER


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Scala-Scale	Data-Date 10/09/2018	Dis.to-Drawn G.M.	Ver.-Version		
Peso-Weight Kg	Materiali-Materials				
Denominazione-Denomination				DIS.-DRAW N.	
Particolare-Detail SCHEMA FRIGORIF./IDRAULICO HYDRAULIC/REFRIGERATING DIAGRAM				REVISIONE	
FOGLIO/SHEET 2/3				PROGRAM. N.	

CIRCUITO FRIGORIFERO / REFRIGERATING CIRCUIT			
SIGLA / SIGN	DESCRIZIONE	DESCRIPTION	NOTE
MC1' 2	COMPRESSORE	COMPRESSOR	std
RC1' 2	RESISTENZA CARTER COMPRESSORE	COMPRESSOR CRANKCASE HEATER	std
OIL1' 2	SPIA DI FLUSSO LINEA EQUALIZZAZIONE OLIO	SIGHT GLASS FOR EQUALISATION LINE OF OIL	std
RO1' 2	RUBINETTO DELLA LINEA DI RITORNO DELL'OLIO	OIL RETURN LINE VALVE	optional
OIS1' 2	SEPARATORE D'OLIO	OIL SEPARATOR	optional
HP1' 2	PRESSOSTATO ALTA PRESSIONE	HIGH PRESSURE SWITCH	std
HPG1' 2	MANOMETRO ALTA PRESSIONE	HIGH PRESSURE GAUGE	std
SCR1' 2	VALVOLA DI CARICO SCHRADER	CHARGE VALVE (SCHRADER)	std
VSAP1' 2	VALVOLA DI SICUREZZA LINEA DI ALTA PRESSIONE	HIGH PRESSURE SAFETY VALVE	std
SCE	SCAMBIATORE DI CALORE AD ARIA (CONDENSATORE)	AIR HEAT EXCHANGER (CONDENSER)	std
GPC	GRIGLIA PROTEZIONE CONDENSATORE	CONDENSER GRID PROTECTION	std
MV	MOTOVENTILATORE ASSIALE	AXIAL FAN MOTOR	std (available EC fans option)
B5' B6	TRASDUTTORE ALTA PRESSIONE	HIGH PRESSURE TRANSDUCER	optional
RV	REGOLATORE DI VELOCITA' VENTILATORIA INVERTER	INVERTER FAN SPEED REGULATOR	optional
SCR1' 2	VALVOLA DI CARICO SCHRADER	CHARGE VALVE (SCHRADER)	std
Y4,Y8	VALVOLA SOLENOIDE LINEA DEL LIQUIDO	LIQUID LINE SOLENOID VALVE	std
FLT1' 4	FILTRO DISIDRATATORE	DEHYDRATING FILTER	std
LIQ1' 4	SPIA DI FLUSSO /INDICATORE DI LIQUIDO	LIQUID INDICATOR /SIGHT GLASS FOR LIQUID LINE	std
ETS1' 2	VALVOLA DI ESPANSIONE ELETTRONICA	ELECTRONIC EXPANSION VALVE	std
SCA	SCAMBIATORE DI CALORE AD ACQUA (EVAPORATORE A PIASTRE)	WATER HEAT EXCHANGER (BRAZED PLATE EVAPORATOR)	std
SCR1' 2	VALVOLA DI CARICO SCHRADER	CHARGE VALVE (SCHRADER)	std
LP1' 2	PRESSOSTATO BASSA PRESSIONE	LOW PRESSURE SWITCH	std
LPG1' 2	MANOMETRO BASSA PRESSIONE	LOW PRESSURE GAUGE	std
B11' 12	SENSORE TEMPERATURA ASPIRAZIONE COMPRESSORE	SUCTION COMPRESSOR TEMPERATURE SENSOR	std
B13' 14	TRASDUTTORE BASSA PRESSIONE PER LA VALVOLA DI ESPANSIONE	LOW PRESSURE TRANSDUCER FOR THE EXPANSION VALVE	std

	CIRCUITO FRIGORIFERO ALTA PRESSIONE / HIGH PRESSURE REFRIGERANT CIRCUIT
	CIRCUITO FRIGORIFERO BASSA PRESSIONE / LOW PRESSURE REFRIGERANT CIRCUIT
	LINEA DI EQUALIZZAZIONE DELL'OLIO / EQUALISATION LINE OF OIL

LEGENDA /  
LEGEND

Scala-Scale	Data-Date 10/09/2018	Dis.to-Drawn G.M.	Ver.-Version	 cool with HITEMA international hitema.com	
Peso-Weight Kg	Materiali-Materials				
Denominazione-Denomination				DIS.-DRAW N.	
Particolare-Detail SCHEMA FRIGORIF./IDRAULICO HYDRAULIC/REFRIGERATING DIAGRAM				REVISIONE	
FOGLIO/SHEET 3/3				PROGRAM. N.	