Chiller

INverter R513A R134a

SYSCREW 380-1260 AIR EVO HSE

366 to 1241 kW

Air Cooled Water Chillers Cooling Only and Total Heat Recovery
Engineering Data Manual

systemair

Features & Strength Points

Environmental respect, constant technological innovation, robust and trustable solutions for heavy-duty use are the leading parameters for our new **SYSCREW AIR EVO HSE** range.

An innovative generation of Systemair Air Cooled Chiller, including the latest technological releases available for the HVAC industry.

- High efficient inverter driven Screw compressors
- EC fan motors with quiet acoustic performances and low energy consumption
- Safe and low environmental impact R513A refrigerant
- Microchannel coils and pure countercurrent shell & tubes heat exchangers, minimizing refrigerant charge, operating weight and maximizing heat transfer performances
- New programmable controller including a wide range of connectivity options and implementing smart algorithms

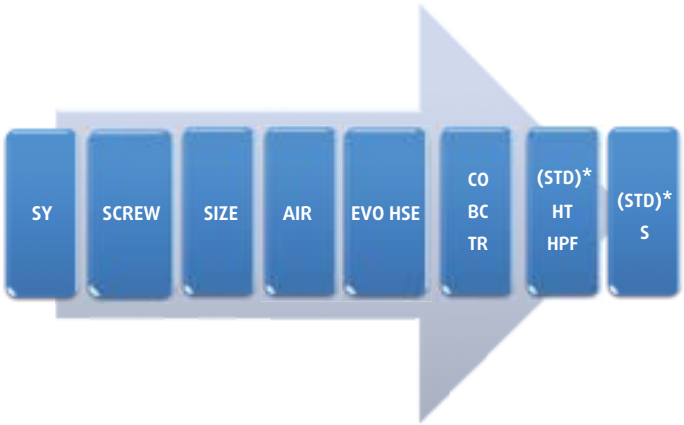
All the available versions are keeping the same basic configuration and including the following features:

- Electronic expansion valve
- Refrigerant pressure and temperature sensors
- Compressors box mounted as standard on all unit versions (with added internal sound proofing layers for the Super Low Noise execution)
- Hydronic pump kit options, variable speed capable, fitted plug & play on board of the unit with several interfacing ways with the plant
- Partial and total heat recovery options

To further extend the field of application following versions are available

- High Temperature (HT) execution to extend the operating temperature map
- High Pressure Fan (HPF) execution to provide additional static pressure air side
- Brine Cooling (BC) execution to allow application with negative temperature brines
- Super low noise (S) execution to reduce noise emission

Specifications



CO = Cooling Only; BC = Brine Cooling; TR = Totaly Heat Recovery; Version HT = High Temperature; HPF = High Pressure Fans; Version S = Super Low Noise (version S not available for HT and HPF).
* (STD) = standard, not included in the product designation

General

The new range has been designed and optimized to operate either with R513A and R134a refrigerants. Each unit consists of two independent refrigerant circuits with a hybrid combination of one inverter driven variable speed screw compressor and one fixed speed screw compressor. Pure counter-flow shell and tube direct expansion evaporator is equipped with double refrigerant circuit and common hydraulic circuit. The modular condensing section is made with long life aluminium alloy micro-channel coils, and a new optimized fan deck. All the units are equipped with electronic expansion valves, one for each circuit. The units are available in 12 sizes, with a nominal capacity range from 360 to 1240 kW.

Two acoustic options are available:

- Standard: The units are equipped with electronically commutated (EC) fan motors, providing quiet acoustic performances and stepless speed control, and a metallic compressors box further reducing the noise emission.
- Super Low Noise (S): The units are equipped with electronically commutated (EC) fan motors operating at reduced nominal speed, additional air diffuser further improving acoustic performances in both full and part load operation. Compressor box is equipped with additional acoustic insulation and flexible pipes as well as mufflers on compressor discharge lines.

To increase application field, three additional versions are available:

- High Temperature (HT): units are equipped with ventilated compressor box, and more powerful electronically commutated (EC) fan motors to ensure higher air flow rate and extend the operating map of the unit.
- High Pressure Fans (HPF): units are equipped with more powerful electronically commutated (EC) fan motors to ensure same air flow rate as the standard unit with additional external static pressure up to 120 [Pa].
- Brine Cooling (BC): same equipment as the basic CO version, with customized refrigerant circuit and control setting to extend operating envelope to negative water set-point.

Two heat recovery options are available:

- Desuperheater (D): plate type heat exchangers fitted on the compressor discharge line, to recover about 20 % of the total heat rejected to the condensers.
- Total Heat Recovery (TR): double circuit shell & tubes heat exchanger to recover the total heat rejected to the condensers. 4-way valves and field installed control sensor are also provided to ensure the cooling/heat recovery mode changeover.

Cabinet and structure

The cabinet is made of heavy gauge galvanized steel. All galvanized steel components are individually painted by a special painting process before the assembly of the unit. This painting system performs a homogeneous protection to the corrosion. The painting is a polyester powder based type, colored in RAL 7040. The units are suitable for outdoor installation, directly on the building roof or at the ground level. All parts of the structure are totally fastened with stainless steel bolts and rivets.

Refrigerant circuits

All the units are composed of two independent and separate refrigerant circuits. Each refrigerant circuit is equipped with discharge line shut-off valves, filter-drier with solid core, sight glass and electronic expansion valve. Some units are equipped with economizer circuit (ECO) to improve cooling capacity and efficiency. The functional diagram of each circuit is shown in the section “Refrigerant flow diagram”.

Semi-hermetic screw compressors
The compressors installed in the units are semi-hermetic screw type. The leading compressor is variable speed controlled, integrating frequency inverter, sensors for protection and monitoring and solenoid valves (Vi control and frequency inverter cooling) in a pre-wired package. The inverter driven compressor, in hybrid combination with a step control type screw compressor, perform a continuous capacity control and offer precision in load management and set-point regulation and enhanced seasonal performances.
All compressors are fitted with an electronic control system ensuring the following functions:
- Protection against high temperature and excessive load;
- Correct direction of rotation;
- Phase monitoring.

Besides the aforementioned functions, inverter driven compressor is also equipped as standard of the following additional features:
- Frequency inverter cooling (solenoid valve, expansion valve, regulator);
- Low / High pressure transducer;
- Oil level switch;
- V_i slider control for efficiency optimization.

Depending on unit size, step type compressors are supplied with Part-Winding or Star-Delta starting system. Start-Delta starting system is available as option for unit having Part-Winding starting system as standard. Also soft starter is available on request for step type compressors in order to reduce the global value of inrush current.

Evaporator
Evaporator is of a new generation shell and tube, of pure counter flow type heat exchanger. It is insulated with a 19 mm thick closed cell polyethylene foam material and is fitted with an electric heater on the external surface to prevent the unit from freezing at a low temperature (down to -18 °C) when the unit is off.
Water connections of heat exchanger are of Victaulic type supplied with coupling stub pipe to be welded.

Condenser coils
The condenser coils are of microchannel type, made of 100% aluminium (fins, tubes and headers) with the exception of pipe couplings which are in copper. Anti-corrosion protection treatment is available as option.

Condenser fans
For each size, all versions keep the same number of fans.
Large diameter, direct drive axial type fans with electronic brushless type motors are used in all available versions. A dedicated version of electronic brushless type with more powerful motor is used on HT and HPF versions, in order to generate higher air flow rate (HT) or additional static pressure up to 120 Pa (HPF).
Fans are equipped with externally mounted nozzle profile housing generating low sound levels.
In super low noise versions (S) an additional air diffuser is mounted on top of each fan motor to further reduce sound power level without compromising unit performances.
Thanks to electronic brushless technology, fan speed control function is standard included for all the available ranges, allowing the units to operate in cooling mode at negative ambient temperatures.

Electrical board
The electrical board is located in a metal case arranged outside the unit. The metal case has an IP54 protection rating and is complete with grilles for natural air ventilation.

Electronic control
The units are supplied with the new microprocessor-based electronic control and management system ensuring the following functions:
- Management of the operation of compressors:
  - Power on/off
  - Anti-cycle management
  - Unloading for high pressure or high compressor pressure ratio (integrated inside the curves of compressor operating limits).
- Chilled water temperature regulation (control option on inlet water temperature RWT (P+I type) or outlet water temperature LWT (neutral band type) of the evaporator.
- Control of superheating on suction line.
- Evaporator antifreeze protection.
- Management of high and low pressure alarms.
- Management of the compressors on the two circuits.
- Management of the electronic expansion valves by means of EEV controller.
- Management of external interlocks.
- Management of the remote control:
  - Unit power on/off
  - Summary alarm signals
- Remote signalling, by free contacts:
  - Voltage presence.
  - Compressors in operation.
  - Circuit alarm unit.
- Management of the on board hydro kit (fixed / variable speed pumps).
- Management of the heat recovery mode by means of inlet water temperature sensor at the heat recovery condenser.

The unit controller can also clearly show all control parameters of the machine on the liquid crystal display, such as:
- Display of superheating value.
- Display of the temperature at the evaporator inlet and outlet.
- Display of the ambient air temperature.
- Display of the circuit 1 and circuit 2 discharge pressure and suction pressure.

- Display of the set point.
- Display of opening steps of EEV.
- Display of speed control signal (voltage) of fans.
- Display of the various alarm and operation status:
  - Compressor start-up alarm (discharge pressure check).
  - Low / High pressure.
  - Low / High super-heating.
  - Evaporator antifreeze.
  - Flow switch signal for lack of water.
  - Control of the compressor operating hours.
  - Compressors in operation.
  - Pump in operation.
  - Thermal protection of compressors.
  - Thermal protection of fans.
  - Faulty sensors.

Control and safety devices

Each unit is fitted with the following devices:

Safety:

- Power disconnect switch with an emergency stop function.
- Safety valve on the discharge line (HP side) set to 22 bar.
- Safety valve on the suction line (LP side) set to 14.5 bar.
- HP switches (double on each circuit) set to 19.7 bar, manual reset to be reinitialized from control board.
- LP switches (one for each circuit) set to 0.5 bar, manual reset to be reinitialized from control board.
- Antifreeze temperature sensor (set to +4°C) on the evaporator.
- Discharge gas temperature protection, on the discharge line of each compressor.

Control:

- HP and LP transducers.
- Evaporator water inlet temperature sensor.
- Evaporator water outlet temperature sensor (with an antifreeze function).
- Suction temperature sensor for EEV control.
- Ambient air temperature sensor.
- Heat recovery condenser temperature sensor.

Conformity with standards

The following applies to all the sizes and versions of units:

- Machine Directive: 2006/42/EC.
- Low Voltage Directive: 2006/95/EC.
- Electromagnetic Compatibility Directive: 2014/30/EU.
- Pressure Equipment Directive: 2014/68/EU.

Standard equipment

- Set point timer/clock card.
- Modbus protocol kit for BMS (RS485).
- Modbus protocol kit for BMS (ETHERNET).
- Fan speed control.
- Back light display.
- Compressor envelope control.
- Double set-point.
- Sequence phase control.
- Electronic expansion valves.
- Compressor part Windings or Star/Delta starting.
- Data logger.
- Power supply without neutral.
- Main switch.
- Refrigerant R513A or R134a.
- PED approval.
- Stepless control
- Evaporator antifreeze electric heater.
- Shell and tube evaporator.
- Compressor box.
- Compressor acoustic box (S version only).
- Water pump acoustic box (S version only).
- Left hand water connection.

Optional hydro kits

On board hydro kits and remote hydro kits are available.
On board hydro kits can be supplied with pump(s) only (in standard or high pressure version), while remote hydro kits are always supplied complete with inertial tank and pump(s).

On board hydro kit, located inside the unit, are including following components:

- Single or double pump with low static pressure (100 - 150 [kPa]) or high static pressure (200-250 [kPa]),
- Expansion tank,
- Shut-off valves,
- Safety valve,
- Automatic air vent valve,
- Thermal insulation for pipes and water pump(s),

Water pump(s) are supplied with sound proof box when mounted on S version units.
Different variable speed options (inverter driven) are available to manage water flow rate according differential temperature control, differential pressure control or to set manual speed in phase of commissioning

Factory-installed options

- Bacnet protocol kit for BMS (RS485 or Ethernet).
- Compressor soft starter (valid only for fixed speed compressor).
- Power factor correction capacitors.
- Compressor Star-Delta starting system (valid only for fixed speed compressor having by default part-Winding starting system).
- Mechanical gauges kit.
- Compressor suction valve.
- Compressor liquid injection.
- Compressor oil cooler.
- Compressor oil switch (standard on inverter driven screw compressor).
- Condenser coils with E-Coating.
- Finned tubes coils.
- Chiller grilles.
- Total heat recovery.

- Desuperheater.
- On board hydro kits without buffer tank, with 1 or 2 standard or high pressure pump(s), fixed or variable speed, and relevant accessories.

Field-installed accessories

- Remote ON/OFF control.
- ModBus protocol kit for BMS (RS485 or Ethernet).
- Remote keyboard panel.
- netTune (managing a network of up to 6 units).
- Spring anti-vibration mounts for basic unit.
- Spring anti-vibration mounts for internal hydro kit.
- Flow switch.
- Water filter.
- Differential water pressure transducer.
- Modulating by-pass valve.
- Remote hydro kits with buffer tank, 1 or 2 low or high pressure pump(s), relevant accessories and with or without tank antifreeze heater.

Accessories & Options

SYSCREW 380-1260 AIR EVO HSE	Delivery	Abbreviation	Description & Benefit
Set point timer/Clock card	Std	CLK	To schedule different interval time with different active water T setpoint.
Modbus protocol kit for BMS (RS485)	Std	MBS	It allows the integration of the unit with BMS using Modbus protocol through RS485 port.
Modbus protocol kit for BMS (Ethernet)	Std	MBS/ETH	It allows the integration of the unit with BMS using Modbus protocol through Ethernet port (TCP/IP).
Fan speed control	Std	FSC	EC brushless fan motors fulfil by default stepless speed control, in accordance with condensing pressure level in relation to cooling load and external ambient temperature. Following benefits are provided: high seasonal efficiency, low noise level, envelope extension.
Back light display	Std		User Display panel mounted. Suggested for outdoor installation.
Compressor envelope control	Std		It allows to protect compressor from operation out of the allowed envelope, acting preventing actions when pressure and temperature sensor are detecting borderline conditions.
Double set point	Std	DSP	Can manage two different temperature set-point selected by remote dry contact.
Sequence phases control	Std	PHC	It allows to check the correct sense R-S-T of electric supply phases for 400/3/50 units.
Electronic expansion valves	Std	EEV	It is the device able to control the refrigerant flow on suction line trough a stepper motor in order to keep the superheat as constant as possible.
Data logger	Std	DL	Record continuously the essential thermodynamic operating parameters, during the last hours. This facilitates debug and service activity on field.
Power supply without neutral	Std	3PH	Unit to be supplied with 400/3/50. No need of Neutral cable.
Antifreeze electric heater kit	Std	EEH	Electrical Heater protects the heat exchanger from freezing.

Accessories & Options (continued)

SYSCREW 380-1260 AIR EVO HSE	Delivery	Abbreviation	Description & Benefit
Stepless control	Std	ICC	It allows to follow continuously capacity load modifications without having sensitive variation on water temperature. Thanks to the control logic this effect can be obtained even combining a multi step fixed screw compressor with an inverter driven compressor.
Compressor box	Std	CB	Metal box enclosing screw compressor and offering sound reduction and protection from atmospheric agents.
Bacnet protocol kit for BMS (RS485)	Option	BAC	It allows the integration of the unit with BMS using Bacnet protocol through RS485 port.
Bacnet protocol kit for BMS (Ethernet)	Option	BAC/ETH	It allows the integration of the unit with BMS using Bacnet protocol through Ethernet port (TCP/IP).
Softstarter for compressor	Option	SS	An electronic device that automatically starts up the compressors gradually. The starting current can be reduced by up to 40% of the direct on line value.
Power factor corrector capacitors	Option	PFC	The purpose of the power factor corrector capacitor is to minimize the input current distortion and make the current in phase with the voltage. Target is to keep Power Factor about 0,90 in any running condition.
Compressor Star Delta Start	Option	SD	It allows to reduce inrush current value in case the default compressor is using motor with Part Winding starting system.
Mechanical gauges kit (HP and LP manometers)	Option	KM	Pressure gauges that display the operating pressure in the high and low pressure sections of the refrigerant circuit.
Compressor suction valve	Option	CSV	Mounted on the suction port of the compressor, it allows to insulate the compressor from the suction refrigerant line for maintenance purposes.
Brine Version	Option	BC	Special Version with dedicate devices on refrigeration system allow the units to operate with brine (ethylenic or propylenic glycol) down to -8°C.
Compressor oil switch	Option	OD	It allows to check the proper level of oil inside compressor carter in order to protect from lack of lubrication. Inverter driven screw compressor standard include this device.
E-coating MCHX	Option	E-COAT	It is a strong anti-corrosion treatment suitable to protect MCHX coils from medium level of pollution and marine atmosphere.
Chiller grilles	Option	KG	Grilles to protect unit avoiding possible intrusion into the unit.
Polar Version	Option	PC	Special version with Electronic fans and dedicate devices on refrigeration system allow the units to operate at ambient temperature down to -18°C.
Compressor acoustic box	Option	CAB	Compressor box is additional equipped with internal sound layers offering further acoustic reduction. Standard supplied on S (Super Low Noise) versions.
Total heat recovery	Option	TR	Additional exchanger in order to recover 100% of the rejected heating capacity, suitable to produce hot water while the unit is generating cooling effect.
Desuperheater	Option	D	Additional exchanger in order to recover a portion of the rejected heating capacity, suitable to produce hot water while the unit is generating cooling effect.
Remote On/Off control	Accessory		It enables the operator to power on the unit when it is in standby mode, to display alarms and switch over cooling-heat pump. Maximum length: 50 mt.
Remote keyboard panel	Accessory		Makes it possible to control the unit through the remote terminal, up to a maximum distance of 400 mt of telephone cable.
netTune	Accessory		It allows to pilot a network of up to 6 units operating in parallel, managing load balance, unit rotation and stand-by operation.
Spring type AVM	Accessory	AVM	Multi-spring antivibrating kit, sized according the defined weight distribution, providing insulation from vibration.
Flow switch	Accessory	FS	Prevents the operation of the unit if the circulating chilled fluid is insufficient. It is recommended to install a flow switch to ensure the correct operation of the unit.
Water filter	Accessory		Filter to remove impurities from the water supply.

Accessories are supplied loose to be installed on field. Options are factory mounted on board of the unit.

EN 14511

Starting 2012 Campaign Eurovent Certification Company took decision to start certify only performances declared in according severe European Standard EN14511.

BEFORE 2012: GROSS PERFORMANCES

Before this date all capacity performances are declared, measured and certified by Eurovent, as GROSS performances.
COOLING or HEATING CAPACITY was rated without taking in account the negative contribution of the heat exchanger Pressure Drop or the positive contribution of the Head Available prevalence in example.
OWER INPUT was rated as pure sum of all power input contribution from all motors fitted on the unit. Without taking in account the correction due to power spent to win the exchanger Pressure Drop in example.

AFTER 2012: NET PERFORMANCES

After this date all data are certified according EN14511. Mainly consequences in example on Water chiller or heatpump are:
COOLING or HEATING CAPACITY is now rated taking in account the negative contribution of the heat exchanger Pressure Drop or the positive contribution of the Head Available prevalence in example. In case of Water to Water unit, in example, both exchanger Pressure Drop values are taken in account in the formula.
POWER INPUT is now rated as all power input contribution from all motors fitted on the unit taking in account also the correction due to power spent to win the exchanger Pressure Drop in example.
As an important consequence of these new rules setted by Eurovent is that EER, COP and ESEER are also affected by these correction. All efficiency index are now calculated, measured and certified according new rules setted by Eurovent according EN14511.

Air to water unit (non ducted outdoor):

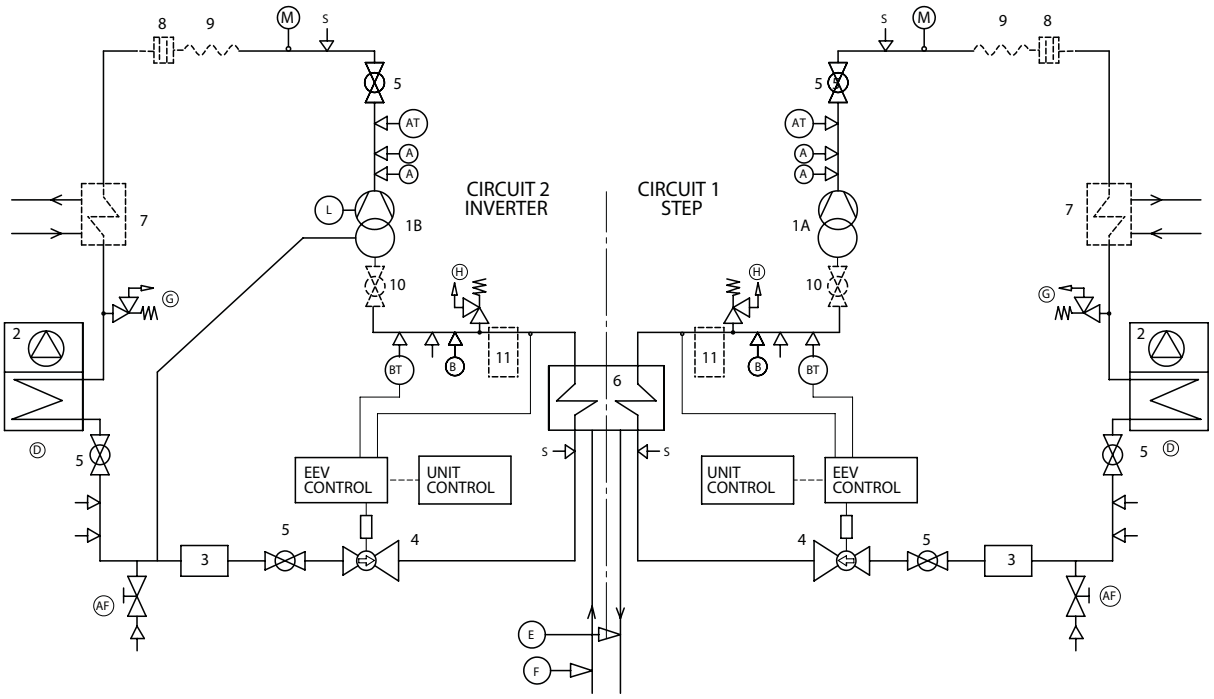
	Indoor pump is an integral part		Indoor pump is not an integral part	
	ECC 2011 (gross)	EN14511	ECC 2011 (gross)	EN14511
Ph	Ph_m (1)	$Ph_m - \frac{q_{wi}\Delta p_{e,wi}}{\eta_{pi}}(IE\text{-}h_{pi})$	Ph_m	$Ph_m + \frac{q_{wi}(-\Delta p_{i,wi})}{\eta_{pi}}(0{,}88\text{-}h_{pi})$
Pc	Pc_m (1)	$Pc_m + \frac{q_{wi}\Delta p_{e,wi}}{\eta_{pi}}(IE\text{-}h_{pi})$	Pc_m	$Pc_m - \frac{q_{wi}(-\Delta p_{i,wi})}{\eta_{pi}}(0{,}88\text{-}h_{pi})$
Pe	Pe_m (1)	$Pe_m - \frac{q_{wi}\Delta p_{e,wi}}{\eta_{pi}}$	Pe_m	$Pe_m + \frac{q_{wi}(-\Delta p_{i,wi})}{\eta_{pi}}$

(1) Measured with the indoor pump not running.

Where:
Ph = NET heating capacity.
Pc = NET cooling capacity.
Pe = electrical power input.
Ph_m = gross heat capacity, expressed in Watts.
Pc_m = gross cool capacity, expressed in Watts.
q_{wi} = nominal liquid flow rate.
$\Delta_{pe,wi}$ = measured available external static pressure.
$\Delta_{pi,wi}$ = measured internal static pressure difference.
η_{pi} = efficiency of the pump.
IE = pump motor efficiency.

Reference: Guidelines for the declaration of performances according to EN14511 (available a copy upon request for Systemair customer).

Refrigerant Flow Diagram SYSCREW AIR EVO HSE
Sizes 380-510 CO



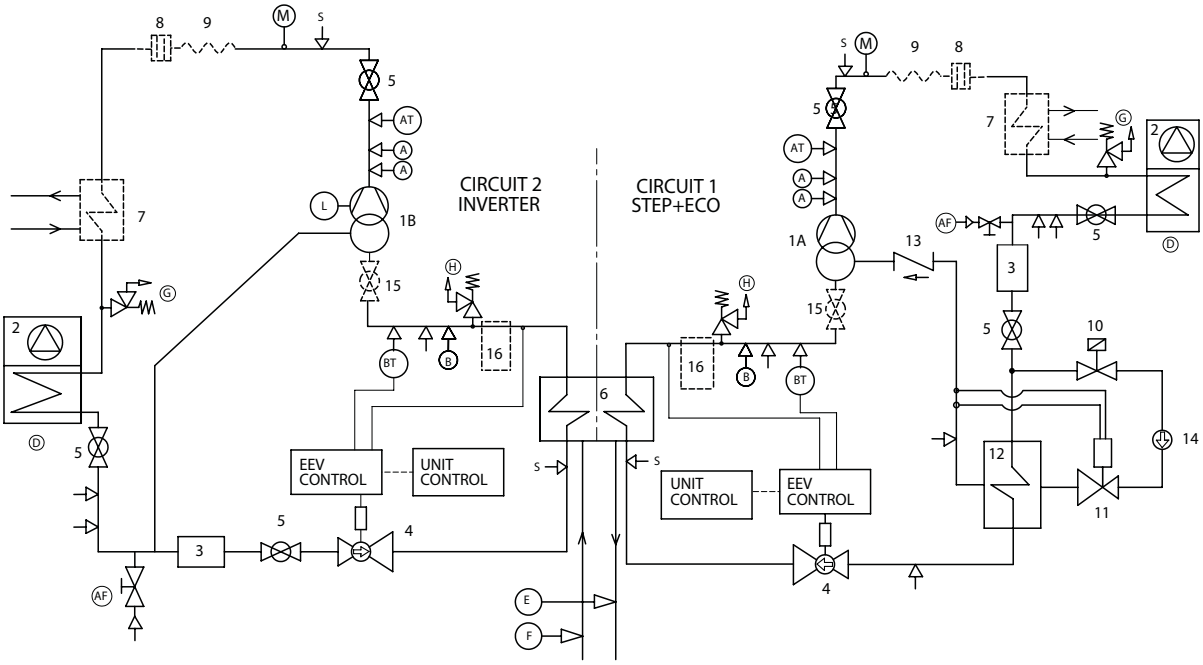
COMPONENTS

1A	Compressor (Screw Step type)
1B	Compressor (Screw Inverter type)
2	Air cooled condenser
3	Filter drier
4	Electronic expansion valve
5	Globe valve
6	Heat exchanger (Shell & Tube Type)
7	Desuperheater (Optional)
8	Muffler (Optional)
9	Anti-vibration pipe (Optional)
10	Suction compressor valve (Optional)
11	Suction accumulator (only BC version)

SAFETY/CONTROL DEVICES

A	High pressure switch
AT	High pressure transducer
B	Low pressure switch
BT	Low pressure transducer
S	5/16" Shrader connection
D	Air temperature sensor
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	PED pressure relief valve HP side
H	PED pressure relief valve LP side
M	Discharge temperature sensor
AF	Access fitting SAE FLARE 3/8"
L	Oil level switch
↓	Pressure Pipe connection with Shrader valve

Refrigerant Flow Diagram SYSCREW AIR EVO HSE
Sizes 440-590-660-730-810-900-980-1060-1160 CO



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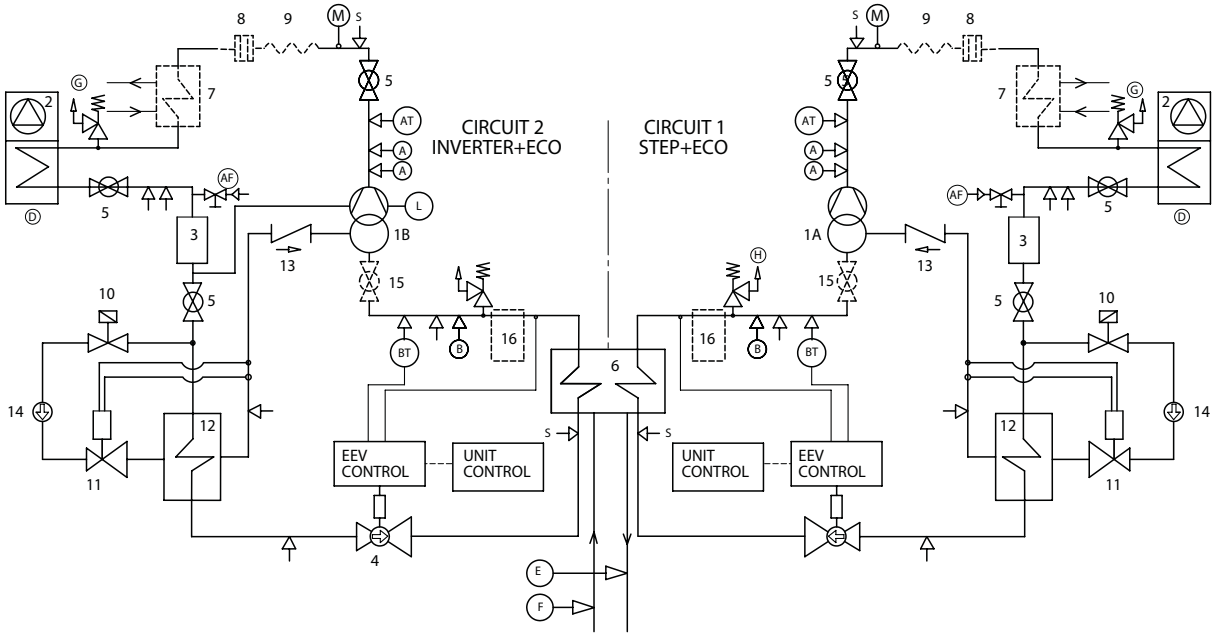
6	Heat exchanger (Shell & Tube Type)
7	Desuperheater (Optional)
8	Muffler (Optional)
9	Anti-vibration pipe (Optional)
10	Solenoid valve (ECO)
11	Thermostatic expansion valve (ECO)
12	Heat exchanger (Phetype) (ECO)
13	Non return valve (ECO)
14	Sight glass (ECO)
15	Suction compressor valve (Optional)
16	Suction accumulator (only BC version)

SAFETY/CONTROL DEVICES

A	High pressure switch
AT	High pressure transducer
B	Low pressure switch
BT	Low pressure transducer
S	5/16" Shrader connection
D	Air temperature sensor
E	Outlet water temperature sensor
F	Inlet water temperature sensor
G	PED pressure relief valve HP side
H	PED pressure relief valve LP side
M	Discharge temperature sensor
AF	Access fitting SAE FLARE 3/8"
L	Oil level switch
↓	Pressure Pipe connection with Shrader valve

Refrigerant Flow Diagram SYSCREW AIR EVO HSE
Sizes 1260 CO



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AF	Access fitting SAE FLARE 3/8"
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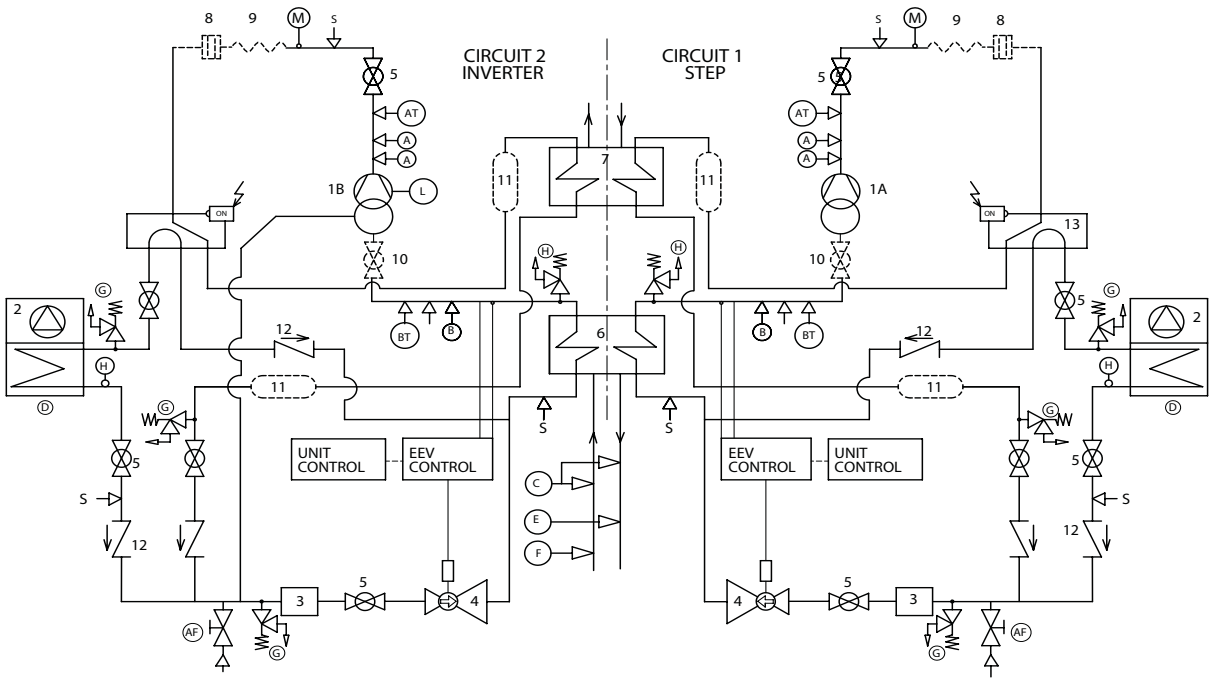
Refrigerant Flow Diagram SYSCREW AIR EVO HSE
Sizes 380-510 TR



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3	Filter drier
4	Electronic expansion valve
5	Globe valve
6	Heat exchanger (Shell & Tube Type)
7	Heat recover (Shell & Tube Type)
8	Muffler (Optional)
9	Anti-vibration pipe (Optional)
10	Suction compressor valve (Optional)
11	Liquid receiver
12	Check valve
13	4-way valve

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AT	High pressure transducer
B	Low pressure switch
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S	5/16" Shrader connection
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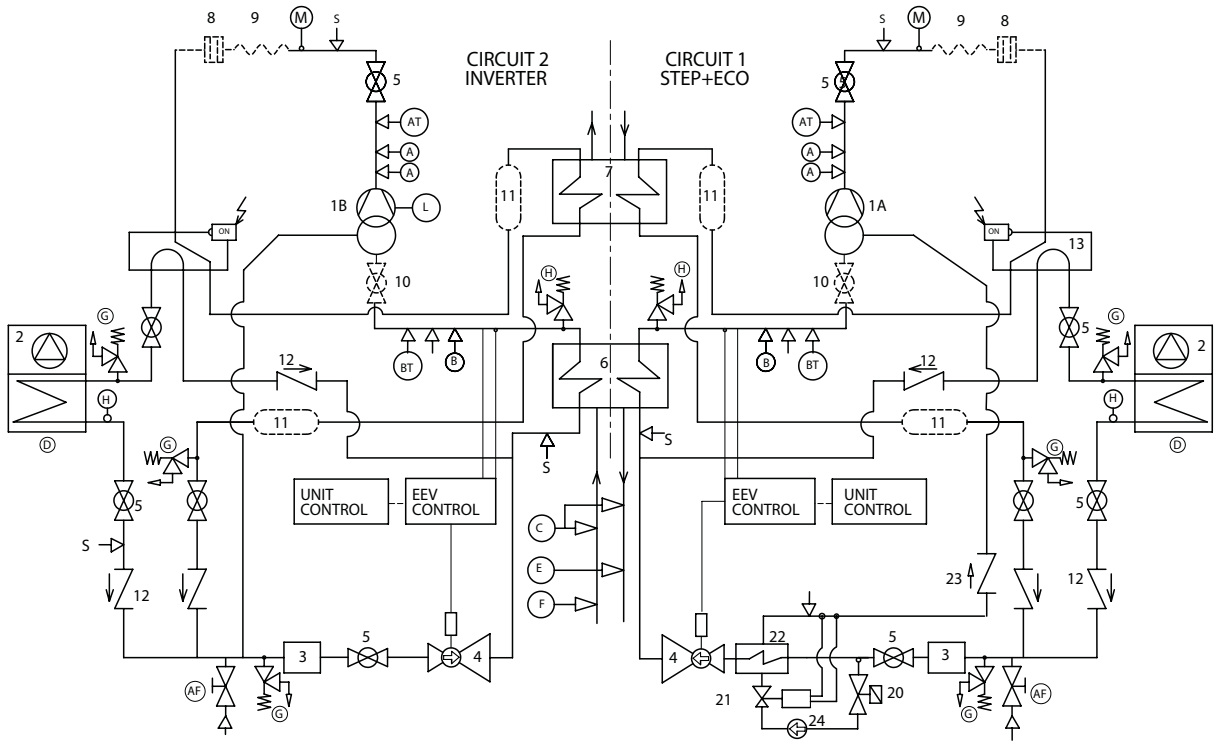
F	Inlet water temperature sensor
G	PED pressure relief valve HP side
H	PED pressure relief valve LP side
M	Discharge temperature sensor
AF	Access fitting SAE FLARE 3/8"
L	Oil level switch
↓	Pressure Pipe connection with Shrader valve

Refrigerant Flow Diagram SYSCREW AIR EVO HSE
Sizes 440-590-660 TR



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8	Muffler (Optional)
9	Anti-vibration pipe (Optional)
10	Suction compressor valve (Optional)
11	Liquid receiver
12	Check valve
13	4-way valve
20	Solenoid valve (ECO)
21	Thermostatic expansion valve (ECO)
22	Heat exchanger (Phetype) (ECO)
23	Non return valve (ECO)
24	Sight glass (ECO)

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Correction Factors

Fouling factors

EVAPORATOR			CONDENSER		
Fouling factor (m^2.°C/kW)	Cooling capacity factor	Power input factor	Fouling factor (m^2.°C/kW)	Cooling capacity factor	Power input factor
0,044	1,000	1,000	0,044	1,000	1,000
0,088	0,987	0,995	0,088	0,987	1,023
0,176	0,964	0,985	0,176	0,955	1,068
0,352	0,915	0,962	0,352	0,910	1,135

Altitude factors

Altitude (m)	Cooling capacity factor	Power input factor
0	1,000	1,000
600	0,987	1,010
1.200	0,973	1,020
1.800	0,958	1,029
2.400	0,943	1,038

System Water Volume

The minimum system water volume is calculated using the following formula:

$$V_{min} = \text{Cap} \times \text{MinCapStep} \times 28{,}8$$

Where Cap: Nominal Unit Capacity [kW] at conditions of installation
MinCapStep: Minimum unit capacity step [%] shown in Table 7

If the application is a process cooling type, the minimum system chilled water volume is generally higher than above recommended.

Operating Limits

SYSCREW 380-1260 AIR EVO HSE				380		450		510		590	
				Min	Max	Min	Max	Min	Max	Min	Max
Chilled liquid	Leaving water temperature	Water	°C	from +5 to +15							
		Brine (brine application)[1]	°C	from -8 to 0							
		Brine (std application)[2]	°C	from 0 to +5							
		Temperature spread	K	from +8 to +3							
	Flow rate[3]		mc/h	39	105	48	127	54	144	61	163
	Pressure drop[3]		kPa	7	48	9	67	7	51	9	66
	Maximum operating pressure		bar	10							
Ambient	Air entering temperature	Cooling	°C	from -10 to +46							
		Cooling (S)	°C	from -10 to +44							
		Cooling (HT)	°C	from -10 to +49							
		Minimum ext. air	°C	-10		-10		-10		-10	
	External static pressure	Standard fans	Pa	0							
		High pressure fans	Pa	< 120							
Recommended system chilled water volume[4]			l	2.345		2.345		2.345		2.345	
Minimum capacity step			%	22		18		16		14	
Power supply voltage			V	400 V+/-10%, 3 Ø, 50 Hz (nominal)*							

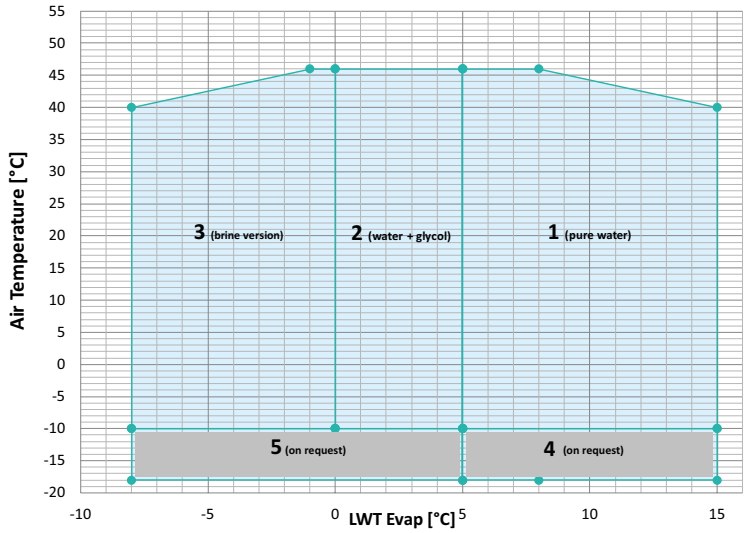
SYSCREW 380-1260 AIR EVO HSE				660		730		810		900	
				Min	Max	Min	Max	Min	Max	Min	Max
Chilled liquid	Leaving water temperature	Water	°C	from +5 to +15							
		Brine (brine application)[1]	°C	from -8 to 0							
		Brine (std application)[2]	°C	from 0 to +5							
		Temperature spread	K	from +8 to +3							
	Flow rate[3]		mc/h	69	185	76	202	84	224	97	258
	Pressure drop[3]		kPa	12	85	12	82	14	100	8	58
	Maximum operating pressure		bar	10							
Ambient	Air entering temperature	Cooling	°C	from -10 to +46							
		Cooling (S)	°C	from -10 to +44							
		Cooling (HT)	°C	from -10 to +49							
		Minimum ext. air	°C	-10		-10		-10		-10	
	External static pressure	Standard fans	Pa	0							
		High pressure fans	Pa	< 120							
Recommended system chilled water volume[4]			l	2.345		3.040		3.040		3.659	
Minimum capacity step			%	13		15		13		14	
Power supply voltage			V	400 V+/-10%, 3 Ø, 50 Hz (nominal)*							

SYSCREW 380-1260 AIR EVO HSE				980		1060		1160		1260	
				Min	Max	Min	Max	Min	Max	Min	Max
Chilled liquid	Leaving water temperature	Water	°C	from +5 to +15							
		Brine (brine application)[1]	°C	from -8 to 0							
		Brine (std application)[2]	°C	from 0 to +5							
		Temperature spread	K	from +8 to +3							
	Flow rate[3]		mc/h	106	282	113	301	124	332	134	356
	Pressure drop[3]		kPa	9	66	11	77	13	93	13	92
	Maximum operating pressure		bar	10							
Ambient	Air entering temperature	Cooling	°C	from -10 to +46							
		Cooling (S)	°C	from -10 to +44							
		Cooling (HT)	°C	from -10 to +49							
		Minimum ext. air	°C	-10		-10		-10		-10	
	External static pressure	Standard fans	Pa	0							
		High pressure fans	Pa	< 120							
Recommended system chilled water volume[4]			l	3.659		4.078		4.078		4.078	
Minimum capacity step			%	13		14		12		11	
Power supply voltage			V	400 V+/-10%, 3 Ø, 50 Hz (nominal)*							

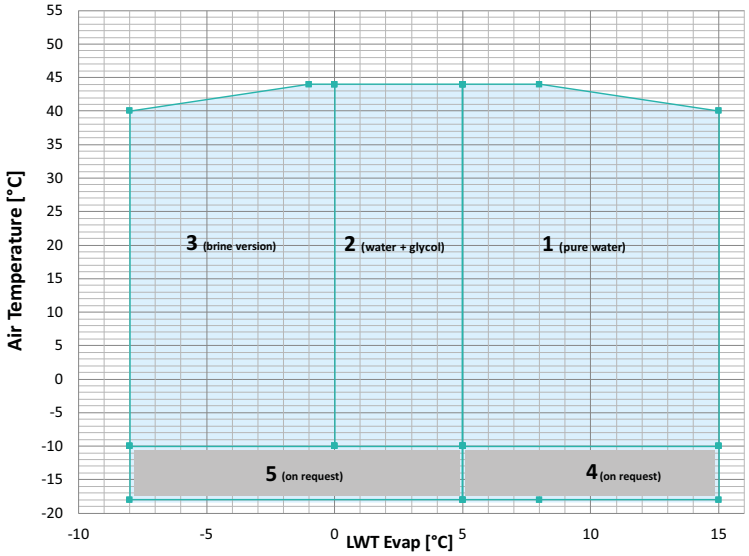
[1] Dedicated evaporator (BC unit) and additional devices.
[2] Standard evaporator (CO/TR unit).
[3] Total unit flow rate and pressure drop are given for standard evaporator (CO/TR unit).
[4] Minimum water contents at normal air conditioning applications.
* Voltage supply tolerances: +/- 10% of the nominal Voltage (400V) for short term application; +/-5% of the nominal Voltage (400V) for continuous application

Operating Limits

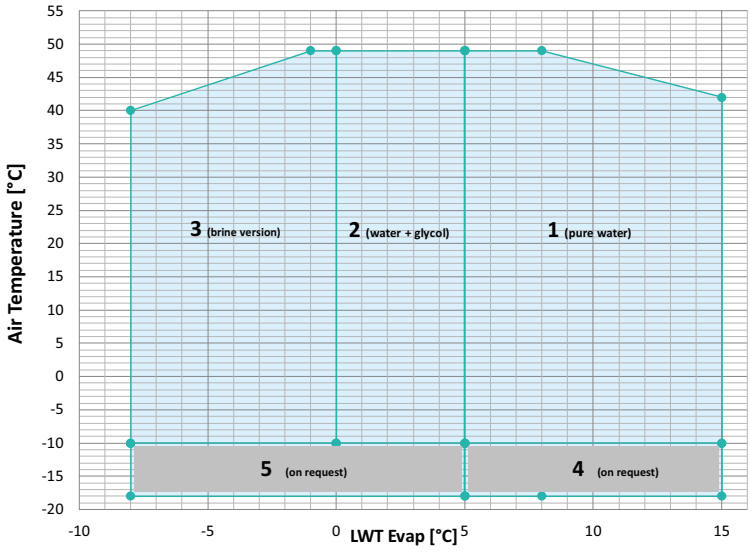
STD Version



S Version



HT Version



Technical Data - SYSCREW AIR EVO HSE R134a (STD/HT/HPF)

Model		380	440	510	590	660	730
Nominal cooling capacity[1]	kW	362,0	438,6	495,2	560,2	637,1	697,3
Input power[1]	kW	120,1	139,2	159,7	175,5	199,8	221,5
EER[1]/ Energy Efficiency Class		3,01/B	3,15/A	3,10/A	3,19/A	3,19/A	3,15/A
EER $_{CONDITION\ B}$ (74%)		4,04	4,10	4,08	4,11	4,02	4,04
EER $_{CONDITION\ C}$ (47%)		4,78	4,91	4,94	5,07	4,85	4,75
EER $_{CONDITION\ D}$ (21%)		6,24	6,41	6,43	6,77	6,74	6,34
SEER[2]		4,63	4,74	4,75	4,88	4,75	4,65
$\eta_{s,c}$ [2]	%	182	187	187	192	187	183
Number of refrigerant circuits				2			
Total capacity steps*	%	22%÷100%	18%÷100%	16%÷100%	14%÷100%	13%÷100%	15%÷100%
Compressor							
Number/ Type				2 / 1 variable speed + 1 fixed speed			
N° of loading stages				Continuous capacity control			
Evaporator							
Number/ Type				1/Shell&Tube			
Water flow	m³/h	62,4	75,6	85,3	96,5	109,9	120,2
Pressure drop	kPa	17	24	18	24	30	29
Water volume	l	149	142	246	246	228	276
Antifreeze Heater	W	200	200	300	300	300	300
Air cooled condenser							
Number of coils		8	10	10	12	14	14
Total coil face area per coil	m²			2,3			
Fans							
Number of fans		8	10	10	12	14	14
Nominal speed	rpm	900	900	900	900	900	900
Total airflow	m³/h	183.960	230.040	230.040	276.120	321.840	321.840
Total input power	kW	12,0	15,0	15,0	18,0	21,0	21,0
Total input power**	kW	20,5	25,6	25,6	30,7	35,8	35,8
Total input power***	kW	24,0	30,0	30,0	36,0	42,0	42,0
External static pressure***	Pa			0 - 120 Pa			
Water Connections (Evaporator)							
Type				Victaulic			
Inlet Diameter/Outlet Diameter	inch	6/6	6/6	8/8	8/8	8/8	8/8
Water Connections (Desuperheater)							
Type				Male GAS Threaded			
Inlet Diameter/Outlet Diameter	inch	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"
Weight							
Shipping	kg	3.747	4.117	4.651	4.995	5.392	5.931
Operating	kg	3.896	4.259	4.897	5.241	5.620	6.207
Additional weight							
Desuperheater versions	kg	76	86	100	100	114	114
Dimensions							
Length	mm	4.660	5.712	5.712	6.764	7.816	7.816
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.510	2.510	2.510	2.510	2.510	2.510
Acoustic Data							
Sound power level[3]	dB(A)	97	98	100	100	100	101
Sound power level[3]**/***	dB(A)	102	103	104	104	104	105
Sound pressure level at 10 m[4]	dB(A)	65	66	68	68	68	68
Sound pressure level at 10 m[4]**/***	dB(A)	70	71	72	72	72	72

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape
* This value can change for BC version or other special applications
** High Temperature Units (HT), data with fans at max speed (1100 Rpm)
*** HPF Units, data with fans at max speed (1100 Rpm)

Model		810	900	980	1060	1160	1260
Nominal cooling capacity[1]	kW	770,4	888,1	973,8	1037,1	1142,6	1228,2
Input power[1]	kW	245,6	281,2	312,3	321,7	358,9	395,5
EER[1]/ Energy Efficiency Class		3,14/A	3,16/A	3,12/A	3,22/A	3,18/A	3,11/A
EER $_{CONDITION\ B}$ (74%)		3,96	3,89	3,99	4,20	4,23	4,28
EER $_{CONDITION\ C}$ (47%)		4,83	4,77	4,80	5,03	5,16	5,12
EER $_{CONDITION\ D}$ (21%)		6,69	6,39	6,33	6,81	6,84	6,81
SEER[2]		4,71	4,63	4,66	4,91	4,96	4,94
$\eta_{s,c}$ [2]	%	185	182	183	193	195	195
Number of refrigerant circuits				2			
Total capacity steps*	%	13%÷100%	14%÷100%	13%÷100%	17%÷100%	15%÷100%	14%÷100%
Compressor							
Number/ Type				2 / 1 variable speed + 1 fixed speed			
N° of loading stages				Continuous capacity control			
Evaporator							
Number/ Type				1/Shell&Tube			
Water flow	m³/h	132,9	153,0	167,8	178,7	197,0	211,7
Pressure drop	kPa	36	21	23	26	32	32
Water volume	l	276	379	367	356	356	431
Antifreeze Heater	W	300	300	300	300	300	300
Air cooled condenser							
Number of coils		16	18	20	22	24	24
Total coil face area per coil	m²			2,3			
Fans							
Number of fans		16	18	20	22	24	24
Nominal speed	rpm	900	900	900	900	900	900
Total airflow	m³/h	367.920	414.000	460.080	506.160	552.240	552.240
Total input power	kW	24,0	27,0	30,0	33,0	36,0	36,0
Total input power**	kW	41,0	46,1	51,2	56,3	61,4	61,4
Total input power***	kW	48,0	54,0	60,0	66,0	72,0	72,0
External static pressure***	Pa			0 - 120 Pa			
Water Connections (Evaporator)							
Type				Victaulic			
Inlet Diameter/Outlet Diameter	inch	8/8	8/8	10/10	10/10	10/10	10/10
Water Connections (Desuperheater)							
Type				Male GAS Threaded			
Inlet Diameter/Outlet Diameter	inch	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"
Weight							
Shipping	kg	6.255	6.947	7.397	8.124	8.508	8.643
Operating	kg	6.531	7.326	7.764	8.491	8.875	9.074
Additional weight							
Desuperheater versions	kg	147	147	180	180	216	216
Dimensions							
Length	mm	8.868	9.920	10.972	12024	13.076	13.076
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.510	2.510	2.510	2.510	2.510	2.510
Acoustic Data							
Sound power level[3]	dB(A)	101	102	102	103	103	103
Sound power level[3]**/***	dB(A)	105	106	106	107	108	108
Sound pressure level at 10 m[4]	dB(A)	68	69	69	70	70	70
Sound pressure level at 10 m[4]**/***	dB(A)	72	73	73	74	75	75

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape
* This value can change for BC version or other special applications
** High Temperature Units (HT), data with fans at max speed (1100 Rpm)
*** HPF Units, data with fans at max speed (1100 Rpm)

Technical Data - SYSCREW AIR EVO HSE R513A (STD/HT/HPF)

Model		380	440	510	590	660	730
Nominal cooling capacity[1]	kW	365,7	443,0	500,2	565,8	643,5	704,3
Input power[1]	kW	123,9	142,9	165,6	181,1	206,2	228,6
EER[1]/ Energy Efficiency Class		2,95/B	3,10/A	3,02/B	3,12/A	3,12/A	3,08/B
EER $_{CONDITION\ B}$ (74%)		3,95	4,01	3,99	4,02	3,93	3,95
EER $_{CONDITION\ C}$ (47%)		4,66	4,81	4,81	5,03	4,76	4,66
EER $_{CONDITION\ D}$ (21%)		6,14	6,31	6,33	6,65	6,62	6,23
SEER[2]		4,53	4,66	4,65	4,80	4,66	4,56
$\eta_{s,c}$ [2]	%	178	183	183	189	183	179
Number of refrigerant circuits		2					
Total capacity steps*	%	22%÷100%	18%÷100%	16%÷100%	14%÷100%	13%÷100%	15%÷100%
Compressor							
Number/ Type		2 / 1 variable speed + 1 fixed speed					
N° of loading stages		Continuous capacity control					
Evaporator							
Number/ Type		1/Shell&Tube					
Water flow	m³/h	63,0	76,4	86,2	97,5	111,0	121,4
Pressure drop	kPa	17	24	19	24	31	30
Water volume	l	149	142	246	246	228	276
Antifreeze Heater	W	200	200	300	300	300	300
Air cooled condenser							
Number of coils		8	10	10	12	14	14
Total coil face area per coil	m²	2,3					
Fans							
Number of fans		8	10	10	12	14	14
Nominal speed	rpm	900	900	900	900	900	900
Total airflow	m³/h	183.960	230.040	230.040	276.120	321.840	321.840
Total input power	kW	12,0	15,0	15,0	18,0	21,0	21,0
Total input power**	kW	20,5	25,6	25,6	30,7	35,8	35,8
Total input power***	kW	24,0	30,0	30,0	36,0	42,0	42,0
External static pressure***	Pa	0 - 120 Pa					
Water Connections (Evaporator)							
Type		Victaulic					
Inlet Diameter/Outlet Diameter	inch	6/6	6/6	8/8	8/8	8/8	8/8
Water Connections (Desuperheater)							
Type		Male GAS Threaded					
Inlet Diameter/Outlet Diameter	inch	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"
Weight							
Shipping	kg	3.747	4.117	4.651	4.995	5.392	5.931
Operating	kg	3.896	4.259	4.897	5.241	5.620	6.207
Additional weight							
Desuperheater versions	kg	76	86	100	100	114	114
Dimensions							
Length	mm	4.660	5.712	5.712	6.764	7.816	7.816
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.510	2.510	2.510	2.510	2.510	2.510
Acoustic Data							
Sound power level[3]	dB(A)	97	98	100	100	100	101
Sound power level[3]**/***	dB(A)	102	103	104	104	104	105
Sound pressure level at 10 m[4]	dB(A)	65	66	68	68	68	68
Sound pressure level at 10 m[4]**/***	dB(A)	70	71	72	72	72	72

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape
* This value can change for BC version or other special applications
** High Temperature Units (HT), data with fans at max speed (1100 Rpm)
*** HPF Units, data with fans at max speed (1100 Rpm)

Model		810	900	980	1060	1160	1260
Nominal cooling capacity[1]	kW	778,1	896,9	983,5	1047,4	1154,0	1240,5
Input power[1]	kW	253,4	290,2	322,3	332,0	370,4	408,1
EER[1]/ Energy Efficiency Class		3,07/B	3,09/B	3,05/B	3,15/A	3,12/A	3,04/B
EER $_{CONDITION\ B}$ (74%)		3,89	3,82	3,98	4,10	4,14	4,20
EER $_{CONDITION\ C}$ (47%)		4,72	4,68	4,72	5,10	5,06	5,02
EER $_{CONDITION\ D}$ (21%)		6,62	6,32	6,22	6,69	6,70	6,68
SEER[2]		4,62	4,56	4,60	4,87	4,86	4,85
$\eta_{s,c}$ [2]	%	182	179	181	192	191	191
Number of refrigerant circuits		2					
Total capacity steps*	%	13%÷100%	14%÷100%	13%÷100%	17%÷100%	15%÷100%	14%÷100%
Compressor							
Number/ Type		2 / 1 variable speed + 1 fixed speed					
N° of loading stages		Continuous capacity control					
Evaporator							
Number/ Type		1/Shell&Tube					
Water flow	m³/h	134,2	154,5	169,5	180,5	199,0	213,9
Pressure drop	kPa	36	21	24	27	33	32
Water volume	l	276	379	367	356	356	431
Antifreeze Heater	W	300	300	300	300	300	300
Air cooled condenser							
Number of coils		16	18	20	22	24	24
Total coil face area per coil	m²	2,3					
Fans							
Number of fans		16	18	20	22	24	24
Nominal speed	rpm	900	900	900	900	900	900
Total airflow	m³/h	367.920	414.000	460.080	506.160	552.240	552.240
Total input power	kW	24,0	27,0	30,0	33,0	36,0	36,0
Total input power**	kW	41,0	46,1	51,2	56,3	61,4	61,4
Total input power***	kW	48,0	54,0	60,0	66,0	72,0	72,0
External static pressure***	Pa	0 - 120 Pa					
Water Connections (Evaporator)							
Type		Victaulic					
Inlet Diameter/Outlet Diameter	inch	8/8	8/8	10/10	10/10	10/10	10/10
Water Connections (Desuperheater)							
Type		Male GAS Threaded					
Inlet Diameter/Outlet Diameter	inch	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"	2"/2"
Weight							
Shipping	kg	6.255	6.947	7.397	8.124	8.508	8.643
Operating	kg	6.531	7.326	7.764	8.491	8.875	9.074
Additional weight							
Desuperheater versions	kg	147	147	180	180	216	216
Dimensions							
Length	mm	8.868	9.920	10.972	12024	13.076	13.076
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.510	2.510	2.510	2.510	2.510	2.510
Acoustic Data							
Sound power level[3]	dB(A)	101	102	102	103	103	103
Sound power level[3]**/***	dB(A)	105	106	106	107	108	108
Sound pressure level at 10 m[4]	dB(A)	68	69	69	70	70	70
Sound pressure level at 10 m[4]**/***	dB(A)	72	73	73	74	75	75

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape
* This value can change for BC version or other special applications
** High Temperature Units (HT), data with fans at max speed (1100 Rpm)
*** HPF Units, data with fans at max speed (1100 Rpm)

Technical Data - SYSCREW AIR EVO HSE S R134a

Model		380	440	510	590	660	730
Nominal cooling capacity[1]	kW	359,2	437,4	493,3	557,5	633,7	695,6
Input power[1]	kW	122,2	140,4	162,8	178,4	202,8	224,4
EER[1]/ Energy Efficiency Class		2,94/B	3,12/A	3,03/B	3,13/A	3,12/A	3,10/A
EER $_{CONDITION\ B}$ (74%)		4,00	4,11	4,08	4,10	4,05	4,07
EER $_{CONDITION\ C}$ (47%)		4,81	5,18	5,18	5,32	5,04	5,01
EER $_{CONDITION\ D}$ (21%)		6,54	6,93	6,86	7,04	7,01	6,76
SEER[2]		4,66	4,92	4,90	5,00	4,87	4,82
$\eta_{s,c}$[2]	%	184	194	193	197	192	190
Number of refrigerant circuits				2			
Total capacity steps*	%	22%÷100%	18%÷100%	16%÷100%	14%÷100%	13%÷100%	15%÷100%
Compressor							
Number				2			
Type				1 variable speed + 1 fixed speed			
N°of loading stages				Continuous capacity control			
Evaporator							
Number				1			
Type				Shell & tube			
Water flow	m³/h	61,9	75,4	85,0	96,1	109,3	119,9
Pressure drop	kPa	16	24	18	23	30	29
Water volume	l	149	142	246	246	228	276
Antifreeze Heater	W	200	200	300	300	300	300
Air cooled condenser							
Number of coils		8	10	10	12	14	14
Total coil face area per coil	m²			2,3			
Fans							
Number of fans		8	10	10	12	14	14
Nominal speed	rpm	800	800	800	800	800	800
Total airflow	m³/h	183.960	230.040	230.040	276.120	321.840	321.840
Total input power	kW	8,0	10,0	10,0	12,0	14,0	14,0
Water Connections (Evaporator)							
Type				Victaulic			
Inlet Diameter	inch	6	6	8	8	8	8
Outlet Diameter	inch	6	6	8	8	8	8
Water Connections (Desuperheater)							
Type				Male GAS Threaded			
Inlet Diameter	inch	2″	2″	2″	2″	2″	2″
Outlet Diameter	inch	2″	2″	2″	2″	2″	2″
Weight							
Shipping	kg	3.832	4.210	4.744	5.077	5.474	6.017
Operating	kg	3.981	4.352	4.990	5.323	5.702	6.293
Additional weight							
Desuperheater versions	kg	76	86	100	100	114	114
Dimensions							
Length	mm	4.660	5.712	5.712	6.764	7.816	7.816
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.590	2.590	2.590	2.590	2.590	2.590
Acoustic Data							
Sound power level[3]	dB(A)	94	94	97	97	97	98
Sound pressure level at 10 m[4]	dB(A)	62	62	65	65	65	65

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard.
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744.
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape.
* This value can change for BC version or other special applications

Model		810	900	980	1060	1160	1260
Nominal cooling capacity[1]	kW	768,3	884,2	971,2	1035,1	1139,2	1222,6
Input power[1]	kW	248,4	285,6	316,3	325,1	363,4	403,9
EER[1]/ Energy Efficiency Class		3,09/B	3,10/A	3,07/B	3,18/A	3,13/A	3,03/B
EER $_{CONDITION\ B}$ (74%)		3,98	3,91	4,13	4,25	4,25	4,29
EER $_{CONDITION\ C}$ (47%)		5,09	5,06	5,11	5,33	5,35	5,41
EER $_{CONDITION\ D}$ (21%)		6,97	6,71	6,52	7,12	7,31	7,17
SEER[2]		4,84	4,79	4,85	5,08	5,10	5,09
$\eta_{s,c}$ [2]	%	191	189	191	200	201	201
Number of refrigerant circuits				2			
Total capacity steps*	%	13%÷100%	14%÷100%	13%÷100%	17%÷100%	15%÷100%	14%÷100%
Compressor							
Number				2			
Type				1 variable speed + 1 fixed speed			
N°of loading stages				Continuous capacity control			
Evaporator							
Number				1			
Type				Shell & tube			
Water flow	m³/h	132,5	152,3	167,4	178,4	196,4	210,8
Pressure drop	kPa	36	20	23	26	32	32
Water volume	l	276	379	367	356	356	431
Antifreeze Heater	W	300	300	300	300	300	300
Air cooled condenser							
Number of coils		16	18	20	22	24	24
Total coil face area per coil	m²			2,3			
Fans							
Number of fans		16	18	20	22	24	24
Nominal speed	rpm	800	800	800	800	800	800
Total airflow	m³/h	367.920	414.000	460.080	506.160	552.240	552.240
Total input power	kW	16,0	18,0	20,0	22,0	24,0	24,0
Water Connections (Evaporator)							
Type				Victaulic			
Inlet Diameter	inch	8	8	10	10	10	10
Outlet Diameter	inch	8	8	10	10	10	10
Water Connections (Desuperheater)							
Type				Male GAS Threaded			
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
Weight							
Shipping	kg	6.341	7.033	7.485	8.212	8.596	8.731
Operating	kg	6.617	7.412	7.852	8.579	8.963	9.162
Additional weight							
Desuperheater versions	kg	147	147	180	180	216	216
Dimensions							
Length	mm	8.868	9.920	10.972	12.024	13.076	13.076
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.590	2.590	2.590	2.590	2.590	2.590
Acoustic Data							
Sound power level[3]	dB(A)	98	99	99	99	100	100
Sound pressure level at 10 m[4]	dB(A)	65	66	66	66	67	67

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard.
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744.
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape.
* This value can change for BC version or other special applications

Technical Data - SYSCREW AIR EVO HSE S R513A

Model		380	440	510	590	660	730
Nominal cooling capacity[1]	kW	362,8	441,8	498,2	563,1	640,0	702,5
Input power[1]	kW	126,1	144,9	168,0	184,0	209,3	231,5
EER[1]/ Energy Efficiency Class		2,88/C	3,05/B	2,97/B	3,06/B	3,06/B	3,03/B
EER $_{CONDITION\ B}$ (74%)		3,90	4,03	3,99	4,00	3,96	3,97
EER $_{CONDITION\ C}$ (47%)		4,69	5,04	5,05	5,21	4,95	4,91
EER $_{CONDITION\ D}$ (21%)		6,44	6,82	6,75	6,92	6,93	6,64
SEER[2]		4,56	4,82	4,79	4,89	4,78	4,73
$\eta_{s,c}$ [2]	%	180	190	189	193	188	186
Number of refrigerant circuits		2					
Total capacity steps*	%	22%÷100%	18%÷100%	16%÷100%	14%÷100%	13%÷100%	15%÷100%
Compressor							
Number		2					
Type		1 variable speed + 1 fixed speed					
N°of loading stages		Continuous capacity control					
Evaporator							
Number		1					
Type		Shell & tube					
Water flow	m³/h	62,5	76,2	85,8	97,1	110,4	121,1
Pressure drop	kPa	17	24	19	24	30	30
Water volume	l	149	142	246	246	228	276
Antifreeze Heater	W	200	200	300	300	300	300
Air cooled condenser							
Number of coils		8	10	10	12	14	14
Total coil face area per coil	m²	2,3					
Fans							
Number of fans		8	10	10	12	14	14
Nominal speed	rpm	800	800	800	800	800	800
Total airflow	m³/h	183.960	230.040	230.040	276.120	321.840	321.840
Total input power	kW	8,0	10,0	10,0	12,0	14,0	14,0
Water Connections (Evaporator)							
Type		Victaulic					
Inlet Diameter	inch	6	6	8	8	8	8
Outlet Diameter	inch	6	6	8	8	8	8
Water Connections (Desuperheater)							
Type		Male GAS Threaded					
Inlet Diameter	inch	2″	2″	2″	2″	2″	2″
Outlet Diameter	inch	2″	2″	2″	2″	2″	2″
Weight							
Shipping	kg	3.832	4.210	4.744	5.077	5.474	6.017
Operating	kg	3.981	4.352	4.990	5.323	5.702	6.293
Additional weight							
Desuperheater versions	kg	76	86	100	100	114	114
Dimensions							
Length	mm	4.660	5.712	5.712	6.764	7.816	7.816
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.590	2.590	2.590	2.590	2.590	2.590
Acoustic Data							
Sound power level[3]	dB(A)	94	94	97	97	97	98
Sound pressure level at 10 m[4]	dB(A)	62	62	65	65	65	65

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard.
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744.
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape.
* This value can change for BC version or other special applications

Model		810	900	980	1060	1160	1260
Nominal cooling capacity[1]	kW	775,9	893,1	980,9	1045,5	1150,6	1234,8
Input power[1]	kW	256,4	294,7	326,4	335,5	375,0	416,8
EER[1]/ Energy Efficiency Class		3,03/B	3,03/B	3,01/B	3,12/A	3,07/B	2,96/B
EER $_{CONDITION\ B}$ (74%)		4,01	3,84	4,18	4,15	4,22	4,31
EER $_{CONDITION\ C}$ (47%)		4,98	4,94	5,02	5,24	5,36	5,30
EER $_{CONDITION\ D}$ (21%)		6,71	6,60	6,55	7,00	7,24	7,04
SEER[2]		4,77	4,69	4,82	4,98	5,07	5,03
$\eta_{s,c}$ [2]		188	185	190	196	200	198
Number of refrigerant circuits				2			
Total capacity steps*	%	13%÷100%	14%÷100%	13%÷100%	17%÷100%	15%÷100%	14%÷100%
Compressor							
Number				2			
Type				1 variable speed + 1 fixed speed			
N°of loading stages				Continuous capacity control			
Evaporator							
Number				1			
Type				Shell & tube			
Water flow	m³/h	133,8	153,9	169,0	180,2	198,4	212,9
Pressure drop	kPa	36	21	24	27	32	32
Water volume	l	276	379	367	356	356	431
Antifreeze Heater	W	300	300	300	300	300	300
Air cooled condenser							
Number of coils		16	18	20	22	24	24
Total coil face area per coil	m²			2,3			
Fans							
Number of fans		16	18	20	22	24	24
Nominal speed	rpm	800	800	800	800	800	800
Total airflow	m³/h	367.920	414.000	460.080	506.160	552.240	552.240
Total input power	kW	16,0	18,0	20,0	22,0	24,0	24,0
Water Connections (Evaporator)							
Type				Victaulic			
Inlet Diameter	inch	8	8	10	10	10	10
Outlet Diameter	inch	8	8	10	10	10	10
Water Connections (Desuperheater)							
Type				Male GAS Threaded			
Inlet Diameter	inch	2"	2"	2"	2"	2"	2"
Outlet Diameter	inch	2"	2"	2"	2"	2"	2"
Weight							
Shipping	kg	6.341	7.033	7.485	8.212	8.596	8.731
Operating	kg	6.617	7.412	7.852	8.579	8.963	9.162
Additional weight							
Desuperheater versions	kg	147	147	180	180	216	216
Dimensions							
Length	mm	8.868	9.920	10.972	12.024	13.076	13.076
Width	mm	2.192	2.192	2.192	2.192	2.192	2.192
Height	mm	2.590	2.590	2.590	2.590	2.590	2.590
Acoustic Data							
Sound power level[3]	dB(A)	98	99	99	99	100	100
Sound pressure level at 10 m[4]	dB(A)	65	66	66	66	67	67

[1] Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard.
[2] According to commission regulation (EU) N° 2281/2016 for comfort chillers
[3] Sound levels are at fully loaded conditions. Sound power level values refer to ISO standard 3744.
[4] Sound pressure levels refer to ISO Standard 3744, parallelepiped shape.
* This value can change for BC version or other special applications

Electrical Data

Compressors @ 400V/3/50Hz

Model	System	Frame	Com-pressor start mode	Power input nominal Cond. compressor		Nom. Cond. current compressor		Power input max. Cond. compressor	Max. running current compressor FLA	Starting current compressor LRA	Carter oil 230Vac	Nominal power factor
				kW		A		kW	A	A	W	R134a/ R513A
				R134a	R513A	R134a	R513A	R134a/ R513A	R134a/ R513A	R134a/ R513A	R134a/ R513A	
380	1	4V	PW	49	51	83	87	88	144	350	200	0,85
	2		FI	56	58	97	100	130	220	20	200	
440	1	5V	PW	61	64	100	105	93	162	423	200	0,89
	2		FI	64	66	109	112	130	220	20	200	
510	1	5V	PW	68	71	116	120	110	182	520	300	0,85
	2		FI	73	76	123	128	130	220	20	200	
590	1	6V	PW	75	79	126	132	110	182	520	300	0,86
	2		FI	81	84	135	140	130	220	20	200	
660	1	7V	SD	96	101	161	168	131	214	341	300	0,86
	2		FI	81	84	135	140	130	220	20	200	
730	1	7V	SD	96	101	161	168	131	214	341	300	0,86
	2		FI	98	102	161	167	167	260	20	200	
810	1	8V	SD	113	118	185	193	155	280	436	300	0,88
	2		FI	103	107	168	174	167	260	20	200	
900	1	9V	SD	124	129	200	208	175	310	465	300	0,90
	2		FI	124	127	199	204	198	340	20	200	
980	1	10V	SD	145	151	239	249	204	320	586	300	0,87
	2		FI	130	133	209	214	198	340	20	200	
1060	1	11V	SD	145	151	239	249	204	320	586	300	0,87
	2		FI	142	150	233	245	250	420	20	200	
1160	1	12V	SD	161	168	265	276	222	360	650	300	0,88
	2		FI	158	167	258	272	250	420	20	200	
1260	1	12V	SD	161	168	265	276	222	360	650	300	0,88
	2		FI	180	190	292	293	250	420	20	200	

Units @ 400 V/3 Ph/50 Hz

Standard Version			380	440	510	590	660	730	810	900	980	1060	1160	1260
Current input	Nominal R134a	A	200	233	263	290	330	356	392	443	497	525	581	615
	Nominal R513A	A	206	241	272	301	342	369	406	456	512	547	606	627
	Maximum	A	395	421	441	449	489	529	602	720	738	826	874	874
Power input	Nominal R134a	kW	117	140	156	174	198	215	240	275	305	319	355	377
	Nominal R513A	kW	121	145	162	181	206	224	249	283	314	334	372	394
	Maximum	kW	238	249	266	271	297	334	363	419	453	510	533	533
Max Start-up current		A	601	682	779	787	616	656	758	875	1004	1092	1164	1164
UNIT (aM) FUSES		A	500	500	500	500	630	630	800	800	800	1000	1000	1000
Phase WIRE SECTION		mm²	2x185	2x185	2x185	2x185	2x185	2x185	2x240	2x240	2x240	2x300	2x300	2x300

S Version			380	440	510	590	660	730	810	900	980	1060	1160	1260
Current input	Nominal R134a	A	194	225	256	281	319	346	380	429	482	509	564	598
	Nominal R513A	A	200	233	265	292	331	359	394	442	497	531	589	610
	Maximum	A	395	421	441	449	489	529	602	720	738	826	874	874
Power input	Nominal R134a	kW	113	135	151	168	191	208	232	266	295	308	343	365
	Nominal R513A	kW	117	140	157	175	199	217	241	274	304	323	359	382
	Maximum	kW	238	249	266	271	297	334	363	419	453	510	533	533
Max Start-up current		A	601	682	779	787	616	656	758	875	1004	1092	1164	1164
UNIT (aM) FUSES		A	500	500	500	500	630	630	800	800	800	1000	1000	1000
Phase WIRE SECTION		mm²	2x185	2x185	2x185	2x185	2x185	2x185	2x240	2x240	2x240	2x300	2x300	2x300

HT Version			380	440	510	590	660	730	810	900	980	1060	1160	1260
Current input	Nominal R134a	A	212	248	278	308	351	377	416	470	527	559	618	652
	Nominal R513A	A	218	256	287	319	363	390	430	483	542	581	643	664
	Maximum	A	400	427	447	456	497	537	612	731	750	839	888	888
Power input	Nominal R134a	kW	126	150	167	187	212	230	257	294	326	343	381	403
	Nominal R513A	kW	130	156	173	194	221	238	266	302	335	357	397	419
	Maximum	kW	242	253	270	276	303	340	370	427	462	520	544	544
Max Start-up current		A	606	688	785	794	624	664	768	886	1016	1105	1178	1178
UNIT (aM) FUSES		A	500	500	500	500	630	630	800	800	800	1000	1000	1000
Phase WIRE SECTION		mm²	2x185	2x185	2x185	2x185	2x185	2x185	2x240	2x240	2x240	2x300	2x300	2x300

HPF Version			380	440	510	590	660	730	810	900	980	1060	1160	1260
Current input	Nominal R134a	A	217	254	284	315	359	385	425	480	538	571	631	665
	Nominal R513A	A	223	261	293	326	371	398	439	493	553	593	656	677
	Maximum	A	400	427	447	456	497	537	612	731	750	839	888	888
Power input	Nominal R134a	kW	129	155	171	192	218	236	263	302	334	352	391	413
	Nominal R513A	kW	133	160	177	199	226	244	272	309	343	366	407	429
	Maximum	kW	242	253	270	276	303	340	370	427	462	520	544	544
Max Start-up current		A	606	688	785	794	624	664	768	886	1016	1105	1178	1178
UNIT (aM) FUSES		A	500	500	500	500	630	630	800	800	800	1000	1000	1000
Phase WIRE SECTION		mm^2	2x185	2x185	2x185	2x185	2x185	2x185	2x240	2x240	2x240	2x300	2x300	2x300

Fans @ 400V/3/50Hz

Model	EC fans		
	Number	Max power (kW)	Max. running current (A)
Standard Version			
380	8	2,6	3,9
440	10	2,6	3,9
510	10	2,6	3,9
590	12	2,6	3,9
660	14	2,6	3,9
730	14	2,6	3,9
810	16	2,6	3,9
900	18	2,6	3,9
980	20	2,6	3,9
1060	22	2,6	3,9
1160	24	2,6	3,9
1260	24	2,6	3,9
S Version			
380	8	2,6	3,9
440	10	2,6	3,9
510	10	2,6	3,9
590	12	2,6	3,9
660	14	2,6	3,9
730	14	2,6	3,9
810	16	2,6	3,9
900	18	2,6	3,9
980	20	2,6	3,9
1060	22	2,6	3,9
1160	24	2,6	3,9
1260	24	2,6	3,9
HT/HPF Version			
380	8	3,0	4,5
440	10	3,0	4,5
510	10	3,0	4,5
590	12	3,0	4,5
660	14	3,0	4,5
730	14	3,0	4,5
810	16	3,0	4,5
900	18	3,0	4,5
980	20	3,0	4,5
1060	22	3,0	4,5
1160	24	3,0	4,5
1260	24	3,0	4,5

Sound Data

Model	Frequency (Hz)								Sound Power dB(A)	Sound Pressure dB(A)**
	63	125	250	500	1000	2000	4000	8000		
Standard Version										
380	100	95	92	94	93	88	80	76	97	65
440	101	96	93	95	94	89	81	77	98	66
510	103	98	95	97	96	91	83	79	100	68
590	103	98	95	97	96	91	83	79	100	68
660	103	98	95	97	96	91	83	79	100	68
730	104	99	96	98	97	92	84	80	101	68
810	104	99	96	98	97	92	84	80	101	68
900	105	100	97	99	98	93	85	81	102	69
980	105	100	97	99	98	93	85	81	102	69
1060	106	101	98	100	99	94	86	82	103	70
1160	106	101	98	100	99	94	86	82	103	70
1260	106	101	98	100	99	94	86	82	103	70
S Version										
380	99	93	90	95	88	83	78	76	94	62
440	99	93	90	95	88	83	78	76	94	62
510	102	96	93	98	91	86	81	79	97	65
590	102	96	93	98	91	86	81	79	97	65
660	102	96	93	98	91	86	81	79	97	65
730	103	97	94	99	92	87	82	80	98	65
810	103	97	94	99	92	87	82	80	98	65
900	104	98	95	100	93	88	83	81	99	66
980	104	98	95	100	93	88	83	81	99	66
1060	104	98	95	100	93	88	83	81	99	66
1160	105	99	96	101	94	89	84	82	100	67
1260	105	99	96	101	94	89	84	82	100	67

* Sound data valid in max air flow rate condition.
** Sound pressure level at 10 m. Values refers to ISO Standard 3744 with parallepiped shape.

Model	Frequency (Hz)								Sound Power dB(A)	Sound Pressure dB(A)**
	63	125	250	500	1000	2000	4000	8000		
HT Version*										
380	105	100	97	99	98	93	85	81	102	70
440	106	101	98	100	99	94	86	82	103	71
510	107	102	99	101	100	95	87	83	104	72
590	107	102	99	101	100	95	87	83	104	72
660	107	102	99	101	100	95	87	83	104	72
730	108	103	100	102	101	96	88	84	105	72
810	108	103	100	102	101	96	88	84	105	72
900	109	104	101	103	102	97	89	85	106	73
980	109	104	101	103	102	97	89	85	106	73
1060	110	105	102	104	103	98	90	86	107	74
1160	111	106	103	105	104	99	91	87	108	75
1260	111	106	103	105	104	99	91	87	108	75

* Sound data valid in max air flow rate condition.
** Sound pressure level at 10 m. Values refers to ISO Standard 3744 with parallepiped shape.

Cooling Capacities - SYSCREW AIR EVO HSE R134a (STD/HT)

Model	LWT °C	Condensing Air Temperature °C														
		25			30			32			35			40		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	379,8	87,7	18,4	361,5	96,2	16,6	353,8	99,7	15,9	342,0	105,1	14,9	317,9	116,7	12,9
	6	391,1	88,6	19,5	372,0	97,3	17,6	364,3	100,8	16,9	352,1	106,3	15,8	327,5	117,9	13,7
	7	402,5	89,7	20,6	382,9	98,4	18,7	374,8	102,0	17,9	**362,4**	**107,4**	**16,7**	336,8	119,1	14,4
	8	412,6	90,8	21,7	392,7	99,5	19,6	384,4	103,1	18,8	371,5	108,6	17,6	345,4	120,3	15,2
	9	422,9	91,9	22,8	402,3	100,7	20,6	393,7	104,3	19,7	380,9	109,7	18,5	354,1	121,5	16,0
	10	433,0	93,1	23,9	412,0	101,8	21,6	403,3	105,5	20,7	390,0	111,0	19,4	362,2	122,7	16,7
	12	453,6	95,3	26,2	431,6	104,3	23,7	422,6	107,9	22,7	408,5	113,4	21,2	379,6	125,4	18,3
	15	484,5	99,0	29,9	461,3	107,8	27,1	451,5	111,6	26,0	436,2	117,3	24,2	405,7	129,3	21,0
440	5	460,0	100,5	25,9	437,9	110,4	23,5	428,6	114,4	22,5	414,3	120,5	21,0	385,1	133,8	18,2
	6	473,8	101,6	27,5	450,6	111,6	24,9	441,3	115,6	23,8	426,4	121,9	22,3	396,6	135,2	19,3
	7	487,5	102,9	29,1	463,8	112,8	26,3	454,0	117,0	25,2	**439,0**	**123,1**	**23,6**	408,0	136,6	20,4
	8	499,7	104,1	30,6	475,6	114,1	27,7	465,6	118,2	26,5	450,0	124,5	24,8	418,4	137,9	21,4
	9	512,2	105,4	32,1	487,3	115,5	29,1	476,8	119,6	27,8	461,4	125,8	26,1	428,9	139,3	22,5
	10	524,4	106,7	33,7	499,1	116,7	30,5	488,5	121,0	29,2	472,4	127,2	27,3	438,7	140,7	23,6
	12	549,4	109,3	37,0	522,7	119,6	33,4	511,8	123,7	32,1	494,8	130,0	30,0	459,8	143,8	25,9
	15	586,8	113,5	42,2	558,7	123,7	38,2	546,9	128,0	36,6	528,3	134,5	34,2	491,4	148,3	29,6
510	5	519,3	117,3	20,2	494,3	128,8	18,3	483,8	133,5	17,5	467,7	140,7	16,4	434,7	156,2	14,1
	6	534,8	118,6	21,4	508,7	130,3	19,4	498,1	135,0	18,6	481,4	142,3	17,3	447,7	157,8	15,0
	7	550,3	120,1	22,7	523,6	131,7	20,5	512,5	136,6	19,6	**495,5**	**143,7**	**18,4**	460,5	159,5	15,9
	8	564,1	121,5	23,8	536,9	133,2	21,6	525,6	138,0	20,7	507,9	145,3	19,3	472,3	161,0	16,7
	9	578,2	123,0	25,0	550,1	134,8	22,6	538,2	139,6	21,7	520,9	146,8	20,3	484,2	162,6	17,5
	10	592,0	124,6	26,2	563,4	136,2	23,7	551,4	141,2	22,7	533,3	148,5	21,3	495,2	164,2	18,3
	12	620,2	127,6	28,8	590,1	139,6	26,0	577,8	144,4	25,0	558,6	151,7	23,3	519,1	167,8	20,2
	15	662,4	132,5	32,8	630,7	144,3	29,8	617,3	149,4	28,5	596,4	157,0	26,6	554,7	173,0	23,0
590	5	587,4	127,6	25,8	559,2	140,1	23,4	547,3	145,2	22,4	529,0	153,0	20,9	491,8	169,9	18,1
	6	605,0	129,0	27,4	575,4	141,7	24,8	563,5	146,8	23,7	544,5	154,7	22,2	506,5	171,7	19,2
	7	622,5	130,6	29,0	592,3	143,3	26,2	579,7	148,5	25,1	**560,5**	**156,3**	**23,5**	520,9	173,4	20,3
	8	638,1	132,2	30,5	607,3	144,8	27,6	594,6	150,1	26,4	574,6	158,0	24,7	534,2	175,1	21,3
	9	654,1	133,8	32,0	622,3	146,6	29,0	608,9	151,8	27,7	589,2	159,6	26,0	547,7	176,8	22,4
	10	669,7	135,5	33,5	637,3	148,1	30,4	623,7	153,6	29,1	603,2	161,5	27,2	560,1	178,6	23,5
	12	701,6	138,8	36,8	667,5	151,8	33,3	653,6	157,1	32,0	631,9	165,0	29,9	587,2	182,5	25,8
	15	749,3	144,1	42,0	713,4	157,0	38,1	698,3	162,4	36,5	674,7	170,7	34,0	627,5	188,2	29,5
660	5	668,1	144,7	33,0	636,0	158,8	29,9	622,5	164,6	28,6	601,7	173,4	26,8	559,3	192,6	23,1
	6	688,1	146,3	35,0	654,5	160,6	31,7	640,9	166,4	30,4	619,4	175,4	28,4	576,1	194,6	24,5
	7	708,1	148,1	37,1	673,7	162,4	33,5	659,4	168,4	32,1	**637,6**	**177,2**	**30,0**	592,5	196,6	26,0
	8	725,8	149,8	38,9	690,8	164,2	35,3	676,3	170,2	33,8	653,5	179,2	31,6	607,7	198,5	27,3
	9	744,0	151,6	40,9	707,8	166,2	37,0	692,5	172,1	35,5	670,2	181,0	33,2	623,0	200,5	28,7
	10	761,7	153,6	42,9	724,9	167,9	38,8	709,4	174,1	37,2	686,1	183,1	34,8	637,1	202,5	30,0
	12	798,0	157,3	47,1	759,2	172,1	42,6	743,4	178,0	40,8	718,7	187,1	38,2	667,9	206,9	33,0
	15	852,3	163,4	53,7	811,5	178,0	48,7	794,3	184,1	46,6	767,4	193,5	43,5	713,7	213,4	37,7
730	5	731,2	162,3	32,0	696,1	178,1	29,0	681,3	184,6	27,8	658,5	194,5	26,0	612,2	216,0	22,4
	6	753,1	164,1	33,9	716,3	180,1	30,7	701,4	186,6	29,5	677,9	196,7	27,5	630,5	218,3	23,8
	7	774,9	166,1	35,9	737,3	182,2	32,5	721,6	188,9	31,2	**697,8**	**198,7**	**29,1**	648,5	220,5	25,2
	8	794,4	168,1	37,8	756,0	184,2	34,2	740,1	190,9	32,8	715,3	201,0	30,6	665,1	222,6	26,5
	9	814,2	170,1	39,7	774,6	186,4	35,9	757,9	193,1	34,4	733,4	203,0	32,2	681,8	224,9	27,8
	10	833,6	172,3	41,6	793,3	188,4	37,7	776,4	195,3	36,1	750,9	205,4	33,8	697,3	227,1	29,1
	12	873,4	176,5	45,7	830,9	193,0	41,3	813,6	199,7	39,6	786,6	209,8	37,0	731,0	232,1	32,0
	15	932,8	183,3	52,1	888,1	199,6	47,2	869,3	206,6	45,2	839,8	217,1	42,2	781,1	239,3	36,5

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C											
		44			46			49			51		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	303,1	124,1	11,7	288,3	131,6	10,6	271,8	138,6	9,4			
	6	312,1	125,4	12,4	296,8	133,0	11,2	280,9	140,1	10,0			
	7	321,1	126,7	13,1	305,4	134,2	11,9	291,8	141,1	10,8			
	8	329,3	127,9	13,8	313,2	135,5	12,5	294,6	141,7	11,1			
	9	337,5	129,1	14,5	321,0	136,7	13,1						
	10	345,4	130,4	15,2	328,6	138,1	13,7						
	12	361,8	133,2	16,7	344,1	141,0	15,1						
	15												
440	5	340,9	132,6	14,2	323,6	140,2	12,8	303,2	147,1	11,3			
	6	351,7	133,9	15,1	333,8	141,6	13,6	313,7	148,7	12,0			
	7	363,3	135,3	16,2	344,2	143,0	14,5	326,5	149,7	13,0			
	8	372,4	136,5	17,0	353,5	144,3	15,3	330,5	150,4	13,4			
	9	382,5	137,9	17,9	363,0	145,7	16,1						
	10	392,0	139,3	18,8	372,3	147,1	17,0						
	12	412,2	142,2	20,8	416,7	161,7	21,3						
	15												
510	5	414,4	166,2	12,8	394,1	176,1	11,6	371,7	185,5	10,3			
	6	426,8	167,9	13,6	405,8	178,0	12,3	384,0	187,5	11,0			
	7	439,1	169,6	14,4	417,6	179,7	13,0	398,9	188,8	11,9			
	8	450,2	171,2	15,2	428,2	181,3	13,7	402,9	189,7	12,1			
	9	461,5	172,8	15,9	438,9	183,0	14,4						
	10	472,2	174,6	16,7	449,3	184,9	15,1						
	12	494,8	178,3	18,3	470,4	188,7	16,6						
	15												
590	5	435,3	168,3	14,2	413,2	177,9	12,8	387,2	186,7	11,2			
	6	449,1	170,0	15,1	426,2	179,8	13,6	400,5	188,8	12,0			
	7	463,9	171,7	16,1	439,5	181,5	14,4	416,9	190,1	13,0			
	8	475,6	173,3	16,9	451,4	183,2	15,2	422,0	190,9	13,3			
	9	488,4	175,0	17,8	463,5	184,9	16,1						
	10	500,6	176,8	18,7	475,4	186,8	16,9						
	12	526,4	180,5	20,7	532,1	205,2	21,2						
	15												
660	5	495,2	190,8	18,1	470,0	201,7	16,3	440,4	211,7	14,3			
	6	510,8	192,8	19,3	484,8	203,8	17,4	455,6	214,0	15,3			
	7	527,7	194,7	20,6	499,9	205,7	18,5	474,2	215,5	16,6			
	8	540,9	196,5	21,6	513,4	207,7	19,5	480,0	216,4	17,0			
	9	555,5	198,4	22,8	527,2	209,6	20,5						
	10	569,4	200,4	24,0	540,7	211,7	21,6						
	12	598,7	204,6	26,5	605,3	232,6	27,1						
	15												
730	5	541,9	214,0	17,6	514,4	226,2	15,8	482,0	237,4	13,9			
	6	559,1	216,2	18,7	530,6	228,6	16,9	498,6	240,0	14,9			
	7	577,5	218,4	20,0	547,1	230,8	17,9	519,0	241,7	16,1			
	8	592,0	220,4	21,0	561,9	232,9	18,9	525,4	242,8	16,5			
	9	607,9	222,5	22,1	577,0	235,1	19,9						
	10	623,2	224,8	23,2	591,7	237,5	21,0						
	12	655,3	229,6	25,7	662,4	242,4	26,3						
	15												

* Only Compressors. HT Version

Cooling Capacities - SYSCREW AIR EVO HSE R134a (STD/HT)

Model	LWT °C	Condensing Air Temperature °C														
		25			30			32			35			40		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	807,8	179,1	39,1	769,0	196,6	35,4	752,7	203,7	33,9	727,6	214,6	31,7	676,3	238,4	27,4
	6	832,0	181,1	41,4	791,3	198,8	37,5	775,0	206,0	36,0	748,9	217,1	33,6	696,5	240,9	29,0
	7	856,2	183,3	43,9	814,6	201,0	39,7	797,3	208,4	38,0	**770,9**	**219,3**	**35,6**	716,4	243,4	30,7
	8	877,6	185,5	46,1	835,3	203,2	41,8	817,7	210,6	40,0	790,2	221,8	37,4	734,8	245,6	32,3
	9	899,6	187,7	48,4	855,8	205,7	43,8	837,4	213,1	42,0	810,3	224,0	39,3	753,3	248,1	34,0
	10	921,0	190,1	50,8	876,5	207,9	46,0	857,8	215,5	44,0	829,6	226,7	41,2	770,4	250,7	35,5
	12	964,9	194,7	55,7	918,0	213,0	50,4	898,9	220,4	48,4	869,0	231,6	45,2	807,6	256,1	39,0
	15	1030,6	202,3	63,6	981,2	220,3	57,6	960,4	227,9	55,2	927,9	239,6	51,5	863,0	264,1	44,6
900	5	931,1	206,2	22,5	886,4	226,4	20,4	867,5	234,6	19,5	838,5	247,2	18,2	779,5	274,5	15,8
	6	958,9	208,5	23,8	912,0	228,9	21,6	893,2	237,2	20,7	863,2	250,0	19,3	802,8	277,4	16,7
	7	986,8	211,1	25,2	938,8	231,5	22,9	918,9	240,0	21,9	**888,5**	**252,6**	**20,5**	825,7	280,3	17,7
	8	1011,5	213,6	26,5	962,7	234,0	24,0	942,5	242,6	23,0	910,8	255,4	21,5	846,9	282,9	18,6
	9	1036,8	216,1	27,9	986,4	236,9	25,2	965,1	245,4	24,1	933,9	258,0	22,6	868,2	285,8	19,5
	10	1061,5	218,9	29,2	1010,2	239,4	26,5	988,7	248,2	25,3	956,2	261,0	23,7	887,9	288,7	20,4
	12	1112,1	224,3	32,1	1058,0	245,3	29,0	1036,0	253,8	27,8	1001,6	266,7	26,0	930,7	295,0	22,5
	15	1187,8	232,9	36,6	1130,8	253,7	33,2	1106,9	262,5	31,8	1069,4	275,9	29,6	994,7	304,1	25,7
980	5	1021,0	228,9	25,6	971,9	251,3	23,2	951,2	260,4	22,3	919,5	274,4	20,8	854,8	304,7	18,0
	6	1051,5	231,4	27,2	1000,1	254,1	24,6	979,4	263,3	23,6	946,5	277,5	22,0	880,3	307,9	19,1
	7	1082,1	234,2	28,8	1029,5	256,9	26,1	1007,6	266,4	25,0	**974,3**	**280,3**	**23,4**	905,5	311,1	20,2
	8	1109,2	237,1	30,3	1055,7	259,8	27,4	1033,5	269,2	26,3	998,7	283,5	24,5	928,6	314,0	21,2
	9	1136,9	239,9	31,8	1081,6	262,9	28,8	1058,3	272,3	27,6	1024,1	286,3	25,8	952,0	317,2	22,3
	10	1164,0	243,0	33,3	1107,7	265,7	30,2	1084,2	275,5	28,9	1048,5	289,7	27,0	973,6	320,4	23,3
	12	1219,5	248,9	36,6	1160,2	272,2	33,1	1136,0	281,7	31,7	1098,3	296,0	29,7	1020,6	327,4	25,6
	15	1302,5	258,5	41,7	1240,1	281,6	37,8	1213,8	291,3	36,2	1172,7	306,2	33,8	1090,7	337,6	29,3
1060	5	1087,3	233,9	29,1	1035,1	256,8	26,4	1013,0	266,1	25,2	979,3	280,4	23,6	910,3	311,4	20,4
	6	1119,8	236,5	30,8	1065,1	259,7	27,9	1043,1	269,0	26,8	1008,0	283,6	25,0	937,5	314,6	21,6
	7	1152,4	239,4	32,7	1096,4	262,6	29,6	1073,1	272,2	28,3	**1037,6**	**286,5**	**26,5**	964,3	317,9	22,9
	8	1181,3	242,3	34,3	1124,2	265,5	31,1	1100,6	275,1	29,8	1063,6	289,7	27,8	989,0	320,9	24,1
	9	1210,8	245,2	36,1	1151,9	268,6	32,6	1127,1	278,3	31,2	1090,7	292,6	29,3	1013,9	324,1	25,3
	10	1239,6	248,3	37,8	1179,7	271,5	34,2	1154,6	281,5	32,8	1116,6	296,1	30,7	1036,9	327,4	26,4
	12	1298,8	254,4	41,5	1235,6	278,2	37,6	1209,8	287,9	36,0	1169,7	302,5	33,7	1086,9	334,5	29,1
	15	1387,1	264,2	47,3	1320,6	287,7	42,9	1292,7	297,7	41,1	1248,9	312,9	38,4	1161,6	345,0	33,2
1160	5	1198,0	261,3	35,0	1140,4	286,9	31,7	1116,1	297,3	30,4	1078,9	313,2	28,4	1002,9	347,8	24,5
	6	1233,8	264,2	37,1	1173,5	290,1	33,6	1149,2	300,6	32,2	1110,6	316,8	30,1	1032,9	351,5	26,0
	7	1269,6	267,4	39,3	1208,0	293,3	35,6	1182,3	304,1	34,1	**1143,2**	**320,1**	**31,9**	1062,4	355,2	27,5
	8	1301,5	270,7	41,3	1238,7	296,6	37,4	1212,6	307,4	35,8	1171,9	323,6	33,5	1089,6	358,5	28,9
	9	1334,0	273,9	43,4	1269,1	300,1	39,3	1241,8	310,9	37,6	1201,6	326,9	35,2	1117,0	362,1	30,4
	10	1365,8	277,4	45,5	1299,8	303,4	41,2	1272,1	314,5	39,5	1230,3	330,8	36,9	1142,4	365,8	31,8
	12	1430,9	284,2	49,9	1361,3	310,8	45,2	1332,9	321,6	43,3	1288,7	337,9	40,5	1197,6	373,8	35,0
	15	1528,3	295,2	56,9	1455,0	321,5	51,6	1424,3	332,6	49,5	1376,0	349,6	46,2	1279,8	385,4	39,9
1260	5	1287,7	291,1	40,4	1225,9	319,5	36,6	1199,7	331,2	35,1	1159,7	348,9	32,8	1078,1	387,4	28,3
	6	1326,2	294,3	42,9	1261,4	323,1	38,8	1235,3	334,8	37,2	1193,8	352,9	34,7	1110,3	391,5	30,1
	7	1364,7	297,9	45,4	1298,4	326,7	41,1	1270,8	338,7	39,4	**1228,9**	**356,5**	**36,8**	1142,0	395,6	31,8
	8	1398,9	301,5	47,7	1331,4	330,3	43,2	1303,4	342,3	41,4	1259,6	360,4	38,7	1124,4	369,3	30,8
	9	1433,9	305,0	50,1	1364,1	334,3	45,4	1334,8	346,3	43,4	1291,6	364,1	40,7	1152,7	373,1	32,4
	10	1468,1	309,0	52,5	1397,1	337,9	47,6	1367,4	350,3	45,6	1322,4	368,4	42,6	1178,8	376,8	33,9
	12	1538,1	316,5	57,7	1463,3	346,2	52,2	1432,8	358,2	50,0	1385,2	376,4	46,8	1235,8	385,1	37,2
	15	1642,8	328,7	65,8	1564,0	358,0	59,6	1530,9	370,5	57,1	1479,0	389,4	53,3	1320,6	397,0	42,5

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C											
		44			46			49			51		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	598,7	236,1	21,5	568,3	249,7	19,3	532,5	262,0	17,0			
	6	617,7	238,6	22,8	586,2	252,3	20,6	550,8	264,9	18,2			
	7	638,1	241,0	24,4	604,4	254,7	21,9	573,3	266,7	19,7			
	8	654,0	243,2	25,6	620,8	257,1	23,1	580,4	267,9	20,2			
	9	671,7	245,6	27,0	637,5	259,4	24,3						
	10	688,5	248,0	28,4	653,8	262,0	25,6						
	12	723,9	253,3	31,4	687,0	267,5	28,3						
	15												
900	5	690,1	271,9	12,3	655,0	287,5	11,1	613,7	301,8	9,8			
	6	711,9	274,8	13,1	675,6	290,5	11,8	634,9	305,0	10,4			
	7	735,4	277,5	14,0	696,6	293,3	12,6	660,8	307,1	11,3			
	8	753,8	280,1	14,7	715,5	296,0	13,3	669,0	308,5	11,6			
	9	774,1	282,8	15,5	734,7	298,8	14,0						
	10	793,5	285,7	16,3	753,5	301,8	14,7						
	12	834,4	291,7	18,0	791,8	308,1	16,3						
	15												
980	5	756,7	301,8	14,1	718,3	319,1	12,7	673,0	334,9	11,1			
	6	780,6	305,0	15,0	740,8	322,5	13,5	696,2	338,5	11,9			
	7	806,4	308,0	16,0	763,9	325,5	14,4	724,6	340,9	12,9			
	8	826,6	310,9	16,8	784,6	328,6	15,1	733,6	342,4	13,2			
	9	848,9	313,9	17,7	805,7	331,6	16,0						
	10	870,1	317,1	18,6	826,3	335,0	16,8						
	12	915,0	323,8	20,6	868,3	341,9	18,5						
	15												
1060	5	805,9	308,4	16,0	764,9	326,1	14,4	716,7	342,3	12,6			
	6	831,4	311,7	17,0	789,0	329,5	15,3	741,4	346,0	13,5			
	7	858,8	314,7	18,1	813,6	332,6	16,3	771,7	348,4	14,6			
	8	880,3	317,7	19,1	835,6	335,8	17,2	781,3	349,9	15,0			
	9	904,0	320,8	20,1	858,0	338,9	18,1						
	10	926,7	324,0	21,1	879,9	342,3	19,0						
	12	974,4	330,9	23,4	924,7	349,4	21,0						
	15												
1160	5	887,9	344,6	19,2	842,8	364,3	17,3	789,7	382,4	15,2			
	6	916,0	348,2	20,5	869,3	368,1	18,4	816,9	386,5	16,3			
	7	946,2	351,6	21,8	896,3	371,6	19,6	850,2	389,2	17,6			
	8	969,9	354,9	22,9	920,6	375,1	20,7	860,8	391,0	18,1			
	9	996,0	358,4	24,2	945,3	378,6	21,8						
	10	1021,0	362,0	25,4	969,5	382,4	22,9						
	12	1073,6	369,7	28,1	1018,8	390,3	25,3						
	15												
1260	5	913,3	352,9	20,3	866,8	373,0	18,3	811,9	391,4	16,1			
	6	942,2	356,6	21,6	894,1	376,9	19,5	839,9	395,6	17,2			
	7	973,5	360,1	23,1	922,1	380,5	20,7	874,3	398,3	18,6			
	8	997,9	363,5	24,3	947,1	384,1	21,9	885,3	400,1	19,1			
	9	1024,9	367,0	25,6	972,6	387,6	23,1						
	10	1050,6	370,7	26,9	997,5	391,5	24,3						
	12	1104,9	378,6	29,8	1048,5	399,6	26,8						
	15												

* Only Compressors. HT Version

Cooling Capacities - SYSCREW AIR EVO HSE R513A (STD/HT)

Model	LWT °C	Condensing Air Temperature °C														
		25			30			32			35			40		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	383,6	90,8	18,7	365,1	99,7	17,0	357,4	128,6	16,3	345,5	108,8	15,2	321,1	120,8	13,1
	6	395,0	91,8	19,9	375,7	100,8	18,0	368,0	129,9	17,2	355,6	110,1	16,1	330,7	122,1	13,9
	7	406,5	92,9	21,0	386,8	101,9	19,0	378,5	131,2	18,2	**366,0**	**111,2**	**17,1**	340,2	123,4	14,7
	8	416,7	94,0	22,1	396,6	103,0	20,0	388,3	132,4	19,2	375,2	112,4	17,9	348,9	124,5	15,5
	9	427,1	95,1	23,2	406,3	104,3	21,0	397,6	133,7	20,1	384,7	113,6	18,8	357,7	125,8	16,3
	10	437,3	96,4	24,3	416,2	105,4	22,1	407,3	135,0	21,1	393,9	114,9	19,8	365,8	127,1	17,0
	12	458,2	98,7	26,7	435,9	108,0	24,2	426,8	137,9	23,2	412,6	117,4	21,7	383,4	129,8	18,7
	15	489,3	102,5	30,5	465,9	111,7	27,6	456,0	142,1	26,5	440,6	121,4	24,7	409,8	133,9	21,4
440	5	464,6	103,6	26,4	442,3	113,7	23,9	432,8	117,8	22,9	418,4	124,1	21,4	389,0	137,8	18,5
	6	478,5	104,7	28,0	455,1	115,0	25,4	445,7	119,1	24,3	430,7	125,6	22,7	400,6	139,3	19,6
	7	492,4	106,0	29,7	468,5	116,2	26,9	458,5	120,5	25,7	**443,4**	**126,8**	**24,1**	412,0	140,7	20,8
	8	504,7	107,3	31,2	480,4	117,5	28,2	470,3	121,8	27,1	454,5	128,3	25,3	422,6	142,1	21,9
	9	517,3	108,5	32,8	492,2	118,9	29,7	481,6	123,2	28,4	466,0	129,5	26,6	433,2	143,5	23,0
	10	529,7	109,9	34,3	504,1	120,2	31,1	493,3	124,6	29,8	477,1	131,1	27,9	443,0	145,0	24,0
	12	554,9	112,6	37,7	527,9	123,2	34,1	516,9	127,5	32,7	499,8	133,9	30,6	464,4	148,1	26,4
	15	592,7	117,0	43,0	564,3	127,4	39,0	552,3	131,8	37,3	533,6	138,5	34,9	496,3	152,7	30,2
510	5	524,5	122,2	20,6	499,3	134,1	18,6	488,6	139,0	17,9	472,3	146,4	16,7	439,1	162,6	14,4
	6	540,1	123,5	21,8	513,7	135,6	19,7	503,1	140,5	18,9	486,2	148,1	17,7	452,2	164,3	15,3
	7	555,8	125,0	23,1	528,8	137,1	20,9	517,6	142,2	20,0	**500,5**	**149,6**	**18,7**	465,1	166,0	16,2
	8	569,8	126,5	24,3	542,3	138,6	22,0	530,9	143,7	21,1	513,0	151,3	19,7	477,0	167,6	17,0
	9	584,0	128,0	25,5	555,6	140,3	23,1	543,6	145,4	22,1	526,1	152,8	20,7	489,0	169,3	17,9
	10	597,9	129,7	26,7	569,0	141,8	24,2	556,9	147,0	23,2	538,6	154,6	21,7	500,1	171,0	18,7
	12	626,4	132,9	29,4	596,0	145,3	26,6	583,5	150,3	25,5	564,2	158,0	23,8	524,3	174,7	20,6
	15	669,1	138,0	33,5	637,0	150,3	30,3	623,5	155,5	29,1	602,4	163,4	27,1	560,3	180,2	23,5
590	5	593,2	132,2	26,3	564,7	145,1	23,9	552,7	150,4	22,9	534,3	158,4	21,4	496,7	175,9	18,5
	6	611,0	133,6	27,9	581,1	146,7	25,3	569,1	152,0	24,2	550,0	160,2	22,6	511,5	177,8	19,6
	7	628,7	135,3	29,6	598,2	148,4	26,8	585,5	153,8	25,6	**566,1**	**161,9**	**24,0**	526,1	179,6	20,7
	8	644,5	136,9	31,1	613,4	150,0	28,1	600,5	155,5	27,0	580,3	163,7	25,2	539,6	181,3	21,8
	9	660,6	138,5	32,6	628,5	151,8	29,5	614,9	157,3	28,3	595,1	165,3	26,5	553,2	183,2	22,9
	10	676,3	140,3	34,2	643,6	153,4	31,0	629,9	159,1	29,7	609,2	167,3	27,8	565,7	185,0	23,9
	12	708,6	143,7	37,6	674,1	157,2	34,0	660,1	162,7	32,6	638,2	170,9	30,5	593,0	189,0	26,3
	15	756,8	149,3	42,8	720,5	162,6	38,8	705,3	168,2	37,2	681,4	176,8	34,7	633,8	194,9	30,0
660	5	674,8	149,8	33,7	642,4	164,5	30,5	628,7	170,5	29,2	607,7	179,6	27,3	564,9	199,5	23,6
	6	694,9	151,5	35,7	661,0	166,4	32,3	647,3	172,4	31,0	625,6	181,7	28,9	581,8	201,6	25,0
	7	715,1	153,4	37,8	680,4	168,2	34,2	665,9	174,4	32,8	**643,9**	**183,5**	**30,7**	598,4	203,7	26,5
	8	733,1	155,2	39,7	697,7	170,1	36,0	683,0	176,3	34,5	660,0	185,6	32,2	613,7	205,6	27,8
	9	751,4	157,1	41,7	714,8	172,1	37,8	699,4	178,3	36,2	676,8	187,4	33,9	629,2	207,7	29,3
	10	769,3	159,1	43,7	732,1	174,0	39,6	716,5	180,3	38,0	693,0	189,7	35,5	643,5	209,8	30,6
	12	806,0	163,0	48,0	766,8	178,2	43,5	750,8	184,4	41,7	725,9	193,8	38,9	674,5	214,3	33,6
	15	860,8	169,2	54,8	819,5	184,3	49,6	802,2	190,7	47,6	775,0	200,5	44,4	720,8	221,0	38,4
730	5	738,5	168,0	32,6	703,0	184,4	29,6	688,0	191,2	28,3	665,1	201,4	26,5	618,3	223,6	22,9
	6	760,6	169,9	34,6	723,4	186,5	31,3	708,4	193,3	30,0	684,6	203,7	28,1	636,7	226,0	24,3
	7	782,7	172,0	36,7	744,7	188,6	33,2	728,8	195,5	31,8	**704,8**	**205,8**	**29,7**	654,9	228,3	25,7
	8	802,3	174,0	38,5	763,6	190,7	34,9	747,5	197,6	33,4	722,4	208,1	31,2	671,7	230,5	27,0
	9	822,3	176,1	40,5	782,3	193,0	36,6	765,5	199,9	35,1	740,8	210,2	32,8	688,6	232,8	28,4
	10	841,9	178,4	42,4	801,2	195,0	38,4	784,2	202,2	36,8	758,4	212,7	34,4	704,2	235,2	29,7
	12	882,1	182,7	46,6	839,2	199,8	42,2	821,7	206,8	40,4	794,4	217,3	37,8	738,2	240,3	32,6
	15	942,1	189,8	53,1	896,9	206,7	48,2	878,0	213,9	46,1	848,2	224,8	43,1	788,9	247,8	37,3

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C											
		44			46			49			51		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	306,1	128,6	11,9	291,1	136,3	10,8	274,5	143,5	9,6			
	6	315,2	129,9	12,7	299,7	137,7	11,4	283,7	145,1	10,2			
	7	324,3	131,2	13,4	308,5	139,0	12,1	294,7	146,1	11,1			
	8	332,6	132,4	14,1	316,3	140,3	12,7	297,6	146,8	11,3			
	9	340,9	133,7	14,8	324,2	141,6	13,4						
	10	348,8	135,0	15,5	331,9	143,0	14,0						
	12	365,5	137,9	17,0									
	15												
440	5	344,3	136,6	14,5	326,8	144,4	13,1	306,2	151,5	11,5			
	6	355,2	138,0	15,4	337,1	145,9	13,9	316,8	153,2	12,3			
	7	366,9	139,3	16,5	347,6	147,3	14,8	329,7	154,2	13,3			
	8	376,1	140,7	17,3	357,0	148,7	15,6	333,8	154,9	13,6			
	9	386,3	142,0	18,3	366,6	150,0	16,5						
	10	395,9	143,5	19,2	376,0	151,5	17,3						
	12	416,3	146,5	21,2									
	15												
510	5	418,6	173,0	13,1	398,1	183,4	11,9	375,4	193,2	10,5			
	6	431,0	174,8	13,9	409,8	185,3	12,6	387,9	195,2	11,3			
	7	443,5	176,5	14,7	421,8	187,0	13,3	402,9	196,6	12,1			
	8	454,7	178,2	15,5	432,5	188,8	14,0	406,9	197,5	12,4			
	9	466,1	179,9	16,3	443,3	190,5	14,7						
	10	476,9	181,7	17,0	453,8	192,5	15,4						
	12	499,7	185,6	18,7									
	15												
590	5	439,7	174,3	14,5	417,3	184,3	13,0	391,0	193,4	11,4			
	6	453,6	176,1	15,4	430,5	186,2	13,9	404,5	195,5	12,2			
	7	468,6	177,9	16,4	443,9	188,0	14,7	421,0	196,8	13,3			
	8	480,3	179,5	17,3	455,9	189,7	15,5	426,3	197,7	13,6			
	9	493,2	181,3	18,2	468,1	191,5	16,4						
	10	505,6	183,1	19,1	480,1	193,4	17,2						
	12	531,6	187,0	21,1									
	15												
660	5	500,1	197,6	18,5	474,7	208,9	16,7	444,8	219,3	14,6			
	6	515,9	199,7	19,7	489,6	211,1	17,7	460,1	221,6	15,6			
	7	532,9	201,6	21,0	504,9	213,1	18,8	478,9	223,2	17,0			
	8	546,3	203,5	22,1	518,5	215,1	19,9	484,8	224,2	17,4			
	9	561,0	205,5	23,3	532,5	217,1	21,0						
	10	575,1	207,6	24,4	546,1	219,3	22,0						
	12	604,7	212,0	27,0									
	15												
730	5	547,3	221,5	17,9	519,5	234,3	16,2	486,8	245,8	14,2			
	6	564,6	223,9	19,1	535,9	236,7	17,2	503,6	248,5	15,2			
	7	583,3	226,1	20,4	552,6	238,9	18,3	524,1	250,2	16,4			
	8	597,9	228,2	21,4	567,5	241,2	19,3	530,6	251,4	16,9			
	9	614,0	230,4	22,6	582,7	243,4	20,3						
	10	629,4	232,7	23,7	597,6	245,9	21,4						
	12	661,8	237,7	26,2									
	15												

* Only Compressors. HT Version

Cooling Capacities - SYSCREW AIR EVO HSE R513A (STD/HT)

Model	LWT °C	Condensing Air Temperature °C														
		25			30			32			35			40		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	815,9	185,4	39,8	776,7	203,6	36,1	760,1	211,0	34,6	734,8	222,3	32,3	683,1	246,8	27,9
	6	840,3	187,5	42,3	799,2	205,9	38,2	782,7	213,3	36,7	756,4	224,8	34,2	703,5	249,4	29,6
	7	864,7	189,8	44,8	822,7	208,1	40,5	805,2	215,8	38,8	**778,6**	**227,1**	**36,3**	723,6	252,0	31,3
	8	886,4	192,1	47,0	843,6	210,4	42,6	825,9	218,1	40,8	798,1	229,6	38,1	742,1	254,4	33,0
	9	908,5	194,3	49,4	864,3	213,0	44,7	845,7	220,6	42,8	818,4	231,9	40,1	760,8	257,0	34,6
	10	930,2	196,9	51,8	885,2	215,3	46,9	866,4	223,2	44,9	837,9	234,7	42,0	778,0	259,6	36,2
	12	974,5	201,7	56,9	927,1	220,5	51,5	907,8	228,2	49,3	877,7	239,8	46,1	815,6	265,2	39,8
	15	1040,9	209,4	64,9	990,9	228,1	58,8	970,0	236,0	56,3	937,1	248,1	52,6	871,6	273,5	45,5
900	5	940,4	213,5	22,9	895,2	234,4	20,8	876,1	243,0	19,9	846,9	256,0	18,6	787,3	284,2	16,1
	6	968,5	215,9	24,3	921,1	237,1	22,0	902,1	245,6	21,1	871,8	258,9	19,7	810,8	287,2	17,0
	7	996,6	218,5	25,8	948,2	239,7	23,3	928,1	248,5	22,3	**897,4**	**261,5**	**20,9**	834,0	290,2	18,0
	8	1021,6	221,2	27,1	972,3	242,3	24,5	951,9	251,2	23,5	919,9	264,5	21,9	855,3	292,9	19,0
	9	1047,1	223,8	28,4	996,2	245,2	25,7	974,7	254,1	24,6	943,2	267,1	23,1	876,8	295,9	19,9
	10	1072,1	226,7	29,8	1020,3	247,9	27,0	998,5	257,0	25,9	965,7	270,3	24,2	896,7	298,9	20,8
	12	1123,2	232,2	32,7	1068,6	254,0	29,6	1046,3	262,8	28,4	1011,6	276,1	26,5	940,0	305,4	22,9
	15	1199,7	241,2	37,3	1142,1	262,7	33,8	1118,0	271,8	32,4	1080,1	285,7	30,2	1004,6	314,9	26,2
980	5	1031,2	237,0	26,2	981,6	260,2	23,7	960,7	269,7	22,7	928,7	284,1	21,2	863,3	315,5	18,3
	6	1062,0	239,6	27,7	1010,1	263,1	25,1	989,2	272,6	24,1	956,0	287,3	22,5	889,1	318,8	19,4
	7	1092,9	242,6	29,4	1039,8	266,0	26,6	1017,7	275,8	25,5	**984,1**	**290,3**	**23,8**	914,5	322,1	20,6
	8	1120,3	245,5	30,9	1066,2	269,0	28,0	1043,8	278,8	26,8	1008,7	293,5	25,0	937,9	325,1	21,6
	9	1148,2	248,4	32,4	1092,4	272,2	29,4	1068,9	282,0	28,1	1034,3	296,5	26,3	961,5	328,4	22,7
	10	1175,6	251,6	34,0	1118,8	275,1	30,8	1095,0	285,2	29,5	1059,0	300,0	27,6	983,3	331,7	23,8
	12	1231,7	257,7	37,3	1171,8	281,9	33,8	1147,4	291,7	32,4	1109,3	306,5	30,3	1030,8	339,0	26,1
	15	1315,5	267,7	42,6	1252,4	291,6	38,6	1225,9	301,7	37,0	1184,4	317,1	34,5	1101,6	349,5	29,9
1060	5	1098,2	242,3	29,7	1045,4	265,9	26,9	1023,1	275,6	25,8	989,0	290,4	24,1	919,4	322,5	20,8
	6	1131,0	244,9	31,5	1075,7	268,9	28,5	1053,5	278,6	27,3	1018,1	293,7	25,5	946,9	325,9	22,1
	7	1163,9	247,9	33,3	1107,3	271,9	30,2	1083,8	281,9	28,9	**1048,0**	**296,7**	**27,0**	973,9	329,2	23,3
	8	1193,0	250,9	35,0	1135,5	274,9	31,7	1111,6	284,9	30,4	1074,2	300,0	28,4	998,8	332,3	24,5
	9	1222,8	253,9	36,8	1163,4	278,2	33,3	1138,3	288,2	31,9	1101,5	303,0	29,8	1024,0	335,7	25,8
	10	1252,0	257,2	38,6	1191,5	281,2	34,9	1166,1	291,6	33,5	1127,8	306,6	31,3	1047,2	339,1	27,0
	12	1311,7	263,5	42,3	1247,9	288,1	38,3	1221,9	298,2	36,7	1181,3	313,3	34,3	1097,8	346,5	29,6
	15	1401,0	273,6	48,3	1333,8	298,0	43,8	1305,6	308,4	41,9	1261,3	324,1	39,1	1173,2	357,3	33,9
1160	5	1209,9	270,6	35,7	1151,8	297,1	32,3	1127,3	307,9	31,0	1089,7	324,4	28,9	1012,9	360,2	25,0
	6	1246,1	273,6	37,9	1185,2	300,4	34,2	1160,7	311,3	32,8	1121,7	328,1	30,7	1043,2	364,0	26,5
	7	1282,3	277,0	40,1	1220,0	303,8	36,3	1194,1	315,0	34,8	**1154,6**	**331,5**	**32,5**	1073,0	367,8	28,1
	8	1314,4	280,3	42,1	1251,0	307,1	38,2	1224,7	318,3	36,6	1183,5	335,2	34,2	1100,5	371,2	29,5
	9	1347,3	283,6	44,3	1281,7	310,8	40,1	1254,1	322,0	38,3	1213,6	338,5	35,9	1128,2	375,0	31,0
	10	1379,4	287,3	46,4	1312,7	314,2	42,0	1284,8	325,7	40,2	1242,5	342,6	37,6	1153,8	378,8	32,5
	12	1445,2	294,3	50,9	1374,9	321,9	46,1	1346,2	333,1	44,2	1301,5	349,9	41,3	1209,5	387,1	35,7
	15	1543,5	305,7	58,1	1469,5	332,9	52,6	1438,4	344,5	50,4	1389,7	362,0	47,1	1292,5	399,1	40,7
1260	5	1300,5	301,3	41,2	1238,1	330,8	37,4	1211,7	342,8	35,8	1171,3	361,2	33,4	1088,8	401,1	28,9
	6	1339,4	304,7	43,7	1274,0	334,5	39,6	1247,6	346,6	37,9	1205,7	365,3	35,4	1121,4	405,3	30,7
	7	1378,3	308,4	46,3	1311,4	338,2	41,9	1283,5	350,7	40,2	**1241,1**	**369,0**	**37,6**	1153,4	409,5	32,4
	8	1412,9	312,1	48,7	1344,7	341,9	44,1	1316,4	354,4	42,3	1272,2	373,2	39,5	1135,6	382,3	31,4
	9	1448,2	315,8	51,1	1377,7	346,1	46,3	1348,1	358,5	44,3	1304,5	376,9	41,5	1164,2	386,2	33,0
	10	1482,7	319,9	53,6	1411,0	349,8	48,5	1381,0	362,6	46,5	1335,6	381,4	43,5	1190,6	390,1	34,6
	12	1553,4	327,7	58,8	1477,9	358,4	53,2	1447,1	370,8	51,1	1399,0	389,6	47,7	1248,1	398,6	38,0
	15	1659,1	340,3	67,1	1579,6	370,7	60,8	1546,2	383,5	58,3	1493,8	403,1	54,4	1333,8	411,0	43,4

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C											
		44			46			49			51		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	604,7	244,5	21,9	574,0	258,5	19,7	537,8	271,3	17,3			
	6	623,8	247,1	23,3	592,0	261,2	21,0	556,3	274,3	18,5			
	7	644,4	249,5	24,9	610,5	263,7	22,3	579,1	276,2	20,1			
	8	660,6	251,8	26,1	627,0	266,2	23,5	586,2	277,4	20,6			
	9	678,4	254,3	27,5	643,8	268,7	24,8						
	10	695,3	256,9	28,9	660,3	271,4	26,1						
	12	731,2	262,3	32,0									
	15												
900	5	697,0	281,6	12,6	661,6	297,7	11,3	619,8	312,5	10,0			
	6	719,0	284,5	13,4	682,3	300,8	12,1	641,2	315,8	10,7			
	7	742,7	287,3	14,3	703,6	303,7	12,8	667,4	318,0	11,5			
	8	761,3	290,0	15,0	722,7	306,5	13,5	675,7	319,5	11,8			
	9	781,8	292,8	15,8	742,0	309,4	14,3						
	10	801,4	295,8	16,7	761,0	312,5	15,0						
	12	842,7	302,1	18,4									
	15												
980	5	764,3	312,5	14,4	725,4	330,4	12,9	679,7	346,8	11,4			
	6	788,4	315,8	15,3	748,2	333,9	13,8	703,1	350,5	12,2			
	7	814,5	318,9	16,3	771,5	337,0	14,6	731,8	353,0	13,2			
	8	834,9	321,9	17,1	792,4	340,2	15,4	740,9	354,6	13,5			
	9	857,3	325,0	18,1	813,7	343,4	16,3						
	10	878,8	328,3	19,0	834,5	346,8	17,1						
	12	924,1	335,3	21,0									
	15												
1060	5	813,9	319,4	16,3	772,6	337,8	14,7	723,9	354,5	12,9			
	6	839,7	322,8	17,3	796,8	341,3	15,6	748,8	358,3	13,8			
	7	867,4	326,0	18,5	821,7	344,5	16,6	779,4	360,8	14,9			
	8	889,1	329,0	19,4	843,9	347,8	17,5	789,1	362,4	15,3			
	9	913,1	332,2	20,5	866,6	351,0	18,5						
	10	935,9	335,6	21,5	888,7	354,5	19,4						
	12	984,1	342,7	23,8									
	15												
1160	5	896,7	356,8	19,6	851,2	377,3	17,7	797,5	396,0	15,5			
	6	925,1	360,6	20,9	877,9	381,3	18,8	825,0	400,3	16,6			
	7	955,6	364,2	22,3	905,3	384,9	20,0	858,7	403,0	18,0			
	8	979,6	367,6	23,4	929,8	388,5	21,1	869,3	404,9	18,4			
	9	1006,0	371,1	24,7	954,7	392,1	22,2						
	10	1031,1	374,9	25,9	979,2	396,0	23,4						
	12	1084,3	382,8	28,7									
	15												
1260	5	922,4	365,3	20,7	875,4	386,2	18,7	820,0	405,1	16,4			
	6	951,6	369,1	22,1	903,0	390,2	19,9	848,3	409,5	17,5			
	7	983,2	372,8	23,6	931,2	393,9	21,1	883,1	412,4	19,0			
	8	1007,8	376,3	24,8	956,5	397,6	22,3	894,1	414,3	19,5			
	9	1035,1	379,9	26,1	982,3	401,3	23,5						
	10	1061,1	383,8	27,4	1007,5	405,3	24,7						
	12	1115,9	391,9	30,4									
	15												

* Only Compressors. HT Version

Cooling Capacities - SYSCREW AIR EVO HSE S R134a

Model	LWT °C	Condensing Air Temperature °C											
		25			30			32			35		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	376,8	92,4	18,1	358,7	101,4	16,4	351,0	105,1	15,7	339,3	110,7	14,7
	6	388,1	93,4	19,2	369,1	102,5	17,3	361,4	106,2	16,6	349,3	112,0	15,5
	7	399,3	94,5	20,3	379,9	103,7	18,4	371,9	107,5	17,6	**359,6**	**113,1**	**16,5**
	8	409,3	95,7	21,3	389,6	104,8	19,3	381,4	108,6	18,5	368,6	114,4	17,3
	9	419,6	96,8	22,4	399,2	106,1	20,3	390,6	109,9	19,4	377,9	115,5	18,2
	10	429,6	98,1	23,5	408,8	107,2	21,3	400,1	111,2	20,4	386,9	116,9	19,1
	12	450,1	100,5	25,8	428,2	109,9	23,3	419,2	113,7	22,4	405,3	119,4	20,9
	15	480,7	104,3	29,4	457,6	113,6	26,7	448,0	117,6	25,5	432,8	123,6	23,8
440	5	458,7	105,3	25,8	436,7	115,6	23,3	427,4	119,8	22,4	413,1	126,2	20,9
	6	472,4	106,5	27,3	449,3	116,9	24,7	440,0	121,1	23,7	425,3	127,7	22,1
	7	486,2	107,8	28,9	462,5	118,2	26,2	452,7	122,5	25,1	**437,8**	**129,0**	**23,5**
	8	498,3	109,1	30,4	474,3	119,5	27,5	464,3	123,9	26,4	448,7	130,4	24,6
	9	510,8	110,4	31,9	486,0	120,9	28,9	475,5	125,3	27,7	460,1	131,7	25,9
	10	523,0	111,8	33,5	497,7	122,2	30,3	487,1	126,7	29,0	471,1	133,3	27,2
	12	547,9	114,5	36,8	521,3	125,2	33,3	510,4	129,6	31,9	493,5	136,2	29,8
	15	585,2	118,9	41,9	557,1	129,5	38,0	545,4	134,0	36,4	526,9	140,9	34,0
510	5	517,2	123,6	20,0	492,4	135,7	18,1	481,9	140,6	17,4	465,8	148,2	16,2
	6	532,7	125,0	21,2	506,7	137,2	19,2	496,2	142,2	18,4	479,5	149,9	17,2
	7	548,2	126,5	22,5	521,6	138,7	20,3	510,5	143,9	19,5	**493,6**	**151,4**	**18,2**
	8	561,9	128,0	23,6	534,8	140,3	21,4	523,6	145,4	20,5	506,0	153,1	19,1
	9	576,0	129,6	24,8	548,0	142,0	22,5	536,2	147,1	21,5	518,8	154,6	20,1
	10	589,7	131,2	26,0	561,2	143,5	23,6	549,2	148,8	22,6	531,2	156,5	21,1
	12	617,8	134,4	28,6	587,8	147,0	25,8	575,5	152,1	24,8	556,4	159,8	23,2
	15	659,9	139,6	32,6	628,2	152,1	29,5	614,9	157,3	28,3	594,1	165,4	26,4
590	5	584,6	134,4	25,6	556,5	147,5	23,2	544,7	152,9	22,2	526,5	161,1	20,7
	6	602,1	135,9	27,1	572,7	149,2	24,5	560,8	154,6	23,5	542,0	163,0	22,0
	7	619,6	137,6	28,7	589,5	150,9	26,0	577,0	156,4	24,9	**557,9**	**164,6**	**23,3**
	8	635,1	139,2	30,2	604,5	152,5	27,3	591,8	158,1	26,2	571,9	166,5	24,5
	9	651,0	140,9	31,7	619,3	154,4	28,7	606,0	159,9	27,5	586,4	168,1	25,7
	10	666,5	142,7	33,2	634,3	156,0	30,1	620,8	161,8	28,8	600,4	170,1	27,0
	12	698,3	146,2	36,5	664,3	159,9	33,0	650,5	165,4	31,6	628,9	173,8	29,6
	15	745,8	151,8	41,6	710,1	165,3	37,7	695,0	171,1	36,1	671,5	179,8	33,7
660	5	664,5	152,4	32,6	632,6	167,2	29,6	619,1	173,3	28,3	598,5	182,6	26,5
	6	684,4	154,0	34,6	651,0	169,1	31,3	637,5	175,2	30,0	616,1	184,7	28,1
	7	704,3	155,9	36,7	670,1	171,0	33,2	655,8	177,3	31,8	**634,2**	**186,6**	**29,7**
	8	721,9	157,8	38,5	687,1	172,9	34,9	672,7	179,2	33,4	650,0	188,7	31,2
	9	740,0	159,7	40,5	704,0	175,0	36,6	688,8	181,3	35,1	666,6	190,6	32,8
	10	757,6	161,7	42,4	721,0	176,9	38,4	705,6	183,4	36,8	682,4	192,8	34,4
	12	793,8	165,7	46,6	755,1	181,2	42,2	739,4	187,5	40,4	714,9	197,0	37,8
	15	847,8	172,1	53,1	807,1	187,4	48,2	790,1	193,9	46,1	763,3	203,8	43,1
730	5	729,4	169,8	31,8	694,3	186,4	28,9	679,5	193,2	27,6	656,9	203,6	25,8
	6	751,2	171,7	33,8	714,4	188,6	30,6	699,7	195,4	29,3	676,2	205,9	27,4
	7	773,0	173,8	35,8	735,4	190,7	32,4	719,8	197,7	31,0	**696,0**	**208,0**	**29,0**
	8	792,4	175,9	37,6	754,1	192,8	34,0	738,3	199,8	32,6	713,5	210,3	30,5
	9	812,2	178,0	39,5	772,7	195,1	35,7	756,0	202,1	34,2	731,6	212,5	32,0
	10	831,5	180,3	41,4	791,3	197,2	37,5	774,5	204,4	35,9	749,0	215,0	33,6
	12	871,2	184,7	45,4	828,8	202,0	41,1	811,5	209,0	39,4	784,6	219,6	36,8
	15	930,5	191,8	51,8	885,8	208,9	47,0	867,1	216,2	45,0	837,7	227,2	42,0

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C								
		40			44			46		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	315,4	123,0	12,7	300,7	130,8	11,5			
	6	324,9	124,2	13,4	309,7	132,2	12,2			
	7	334,2	125,5	14,2	318,6	133,5	12,9			
	8	342,7	126,7	15,0	326,7	134,7	13,6			
	9	351,3	128,0	15,7						
	10	359,3	129,3	16,4						
	12	376,7	132,1	18,1						
	15	402,5	136,2	20,6						
440	5	384,0	140,2	18,1	340,0	138,8	14,2			
	6	395,5	141,6	19,2	350,7	140,3	15,1			
	7	406,8	143,1	20,3	362,3	141,7	16,1			
	8	417,2	144,4	21,3	371,4	143,0	16,9			
	9	427,7	145,9	22,4						
	10	437,4	147,4	23,4						
	12	458,6	150,6	25,7						
	15	490,1	155,3	29,4						
510	5	433,0	164,5	14,0	412,8	175,0	12,7			
	6	446,0	166,3	14,9	425,1	176,9	13,5			
	7	458,7	168,0	15,7	437,4	178,6	14,3			
	8	470,5	169,6	16,6	448,5	180,3	15,0			
	9	482,3	171,3	17,4						
	10	493,2	173,0	18,2						
	12	517,1	176,8	20,0						
	15	552,6	182,3	22,8						
590	5	489,4	178,9	17,9	433,3	177,2	14,0			
	6	504,1	180,8	19,0	447,0	179,1	14,9			
	7	518,5	182,7	20,1	461,7	180,9	15,9			
	8	531,7	184,4	21,1	473,3	182,6	16,8			
	9	545,1	186,3	22,2						
	10	557,5	188,1	23,2						
	12	584,4	192,2	25,5						
	15	624,5	198,2	29,2						
660	5	556,3	202,8	22,9	492,5	200,9	17,9			
	6	573,0	204,9	24,3	508,1	203,0	19,1			
	7	589,3	207,1	25,7	524,9	205,0	20,4			
	8	604,4	209,0	27,0	538,0	206,9	21,4			
	9	619,6	211,1	28,4						
	10	633,7	213,3	29,7						
	12	664,3	217,9	32,6						
	15	709,9	224,7	37,3						
730	5	610,6	226,1	22,3	540,6	224,0	17,5			
	6	628,9	228,5	23,7	557,7	226,3	18,6			
	7	646,8	230,8	25,0	576,1	228,5	19,9			
	8	663,4	233,0	26,3	590,5	230,7	20,9			
	9	680,1	235,4	27,7						
	10	695,5	237,7	29,0						
	12	729,1	242,9	31,8						
	15	779,2	250,5	36,3						

* Only Compressors.

Cooling Capacities - SYSCREW AIR EVO HSE S R134a

Model	LWT °C	Condensing Air Temperature °C											
		25			30			32			35		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	805,6	187,4	38,9	766,9	205,7	35,2	750,6	213,2	33,7	725,5	224,6	31,5
	6	829,7	189,5	41,2	789,1	208,0	37,3	772,8	215,6	35,8	746,9	227,2	33,4
	7	853,8	191,8	43,6	812,3	210,4	39,5	795,1	218,1	37,8	**768,8**	**229,5**	**35,4**
	8	875,2	194,1	45,9	833,0	212,7	41,5	815,5	220,4	39,8	788,0	232,1	37,2
	9	897,1	196,4	48,2	853,4	215,2	43,6	835,1	223,0	41,7	808,1	234,4	39,1
	10	918,5	199,0	50,5	874,1	217,6	45,7	855,5	225,5	43,8	827,3	237,2	41,0
	12	962,3	203,8	55,4	915,5	222,9	50,2	896,4	230,7	48,1	866,6	242,3	45,0
	15	1027,7	211,7	63,2	978,5	230,5	57,3	957,8	238,6	54,9	925,3	250,7	51,3
900	5	927,0	216,5	22,3	882,5	237,7	20,2	863,7	246,4	19,3	834,9	259,5	18,1
	6	954,8	218,9	23,6	908,1	240,4	21,4	889,3	249,0	20,5	859,4	262,5	19,1
	7	982,5	221,6	25,0	934,8	243,0	22,7	914,9	252,0	21,7	**884,7**	**265,2**	**20,3**
	8	1007,1	224,3	26,3	958,5	245,7	23,8	938,4	254,7	22,8	906,8	268,1	21,3
	9	1032,3	226,9	27,6	982,1	248,7	25,0	960,9	257,6	23,9	929,9	270,8	22,4
	10	1056,9	229,9	29,0	1005,8	251,4	26,2	984,4	260,6	25,1	952,0	274,1	23,5
	12	1107,3	235,5	31,8	1053,4	257,5	28,8	1031,5	266,5	27,6	997,2	280,0	25,8
	15	1182,7	244,6	36,3	1125,9	266,4	32,9	1102,1	275,6	31,5	1064,8	289,7	29,4
980	5	1018,2	239,6	25,5	969,3	263,1	23,1	948,7	272,7	22,1	917,0	287,3	20,7
	6	1048,7	242,3	27,1	997,4	266,0	24,5	976,8	275,6	23,5	944,0	290,5	21,9
	7	1079,1	245,3	28,6	1026,7	269,0	25,9	1004,9	278,9	24,8	**971,7**	**293,5**	**23,2**
	8	1106,2	248,2	30,1	1052,8	272,0	27,3	1030,7	281,9	26,1	996,0	296,8	24,4
	9	1133,8	251,2	31,6	1078,7	275,2	28,6	1055,4	285,1	27,4	1021,3	299,8	25,7
	10	1160,8	254,4	33,1	1104,7	278,2	30,0	1081,2	288,4	28,8	1045,7	303,3	26,9
	12	1216,2	260,6	36,4	1157,1	285,0	32,9	1132,9	294,9	31,6	1095,3	309,9	29,5
	15	1299,0	270,7	41,5	1236,7	294,8	37,6	1210,5	305,0	36,0	1169,5	320,6	33,6
1060	5	1085,3	244,8	29,0	1033,1	268,8	26,3	1011,1	278,6	25,2	977,4	293,5	23,5
	6	1117,7	247,6	30,7	1063,1	271,8	27,8	1041,1	281,6	26,7	1006,1	296,8	24,9
	7	1150,2	250,6	32,5	1094,3	274,8	29,5	1071,1	285,0	28,2	**1035,7**	**299,9**	**26,4**
	8	1179,0	253,6	34,2	1122,1	277,9	31,0	1098,5	288,0	29,7	1061,6	303,2	27,7
	9	1208,5	256,6	35,9	1149,7	281,2	32,5	1124,9	291,3	31,1	1088,6	306,3	29,2
	10	1237,3	259,9	37,7	1177,5	284,2	34,1	1152,4	294,7	32,7	1114,5	309,9	30,6
	12	1296,3	266,3	41,3	1233,2	291,2	37,4	1207,5	301,3	35,9	1167,5	316,6	33,5
	15	1384,5	276,5	47,2	1318,1	301,2	42,7	1290,3	311,7	41,0	1246,5	327,6	38,2
1160	5	1194,4	274,0	34,8	1137,0	300,7	31,5	1112,8	311,7	30,2	1075,7	328,4	28,2
	6	1230,1	277,0	36,9	1170,0	304,1	33,4	1145,8	315,1	32,0	1107,3	332,1	29,9
	7	1265,9	280,4	39,1	1204,4	307,5	35,4	1178,8	318,8	33,9	**1139,8**	**335,5**	**31,7**
	8	1297,6	283,8	41,1	1235,0	310,9	37,2	1209,0	322,2	35,6	1168,4	339,3	33,3
	9	1330,0	287,1	43,1	1265,3	314,6	39,0	1238,1	326,0	37,4	1198,1	342,7	35,0
	10	1361,7	290,9	45,2	1295,9	318,0	40,9	1268,3	329,7	39,2	1226,6	346,8	36,7
	12	1426,7	297,9	49,6	1357,3	325,8	44,9	1329,0	337,2	43,1	1284,9	354,3	40,2
	15	1523,8	309,4	56,6	1450,7	337,0	51,3	1420,0	348,7	49,2	1371,9	366,5	45,9
1260	5	1281,9	306,9	40,1	1220,3	336,9	36,3	1194,3	349,2	34,8	1154,5	367,9	32,5
	6	1320,2	310,3	42,5	1255,7	340,7	38,4	1229,7	353,0	36,9	1188,4	372,1	34,4
	7	1358,5	314,1	45,0	1292,5	344,5	40,7	1265,1	357,2	39,0	**1223,3**	**375,9**	**36,5**
	8	1392,6	317,9	47,3	1325,4	348,3	42,8	1297,5	361,0	41,0	1253,9	380,1	38,3
	9	1427,4	321,7	49,7	1358,0	352,5	45,0	1328,7	365,2	43,0	1285,8	383,9	40,3
	10	1461,4	325,8	52,1	1390,8	356,3	47,2	1361,2	369,3	45,2	1316,4	388,5	42,2
	12	1531,1	333,8	57,2	1456,6	365,0	51,7	1426,3	377,7	49,6	1378,9	396,8	46,4
	15	1635,3	346,6	65,2	1556,9	377,5	59,1	1524,0	390,6	56,6	1472,3	410,6	52,8

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C								
		40			44			46		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	674,5	249,5	27,2	597,1	247,1	21,3			
	6	694,6	252,1	28,9	616,0	249,7	22,7			
	7	714,5	254,7	30,6	636,3	252,2	24,2			
	8	732,7	257,1	32,1	652,2	254,5	25,5			
	9	751,2	259,7	33,8						
	10	768,2	262,3	35,3						
	12	805,3	268,0	38,8						
	15	860,6	276,4	44,3						
900	5	776,1	288,2	15,6	687,1	285,5	12,2			
	6	799,3	291,2	16,6	708,8	288,5	13,0			
	7	822,2	294,3	17,5	732,2	291,3	13,9			
	8	843,2	297,0	18,4	750,6	294,1	14,6			
	9	864,4	300,1	19,4						
	10	884,0	303,1	20,3						
	12	926,7	309,7	22,3						
	15	990,4	319,3	25,4						
980	5	852,5	319,0	17,9	754,7	316,0	14,0			
	6	877,9	322,3	19,0	778,5	319,3	14,9			
	7	903,0	325,7	20,1	804,2	322,5	15,9			
	8	926,1	328,7	21,1	824,4	325,5	16,7			
	9	949,4	332,1	22,2						
	10	971,0	335,4	23,2						
	12	1017,9	342,7	25,5						
	15	1087,8	353,4	29,1						
1060	5	908,6	325,9	20,3	804,4	322,8	15,9			
	6	935,7	329,3	21,5	829,8	326,2	16,9			
	7	962,5	332,8	22,8	857,2	329,5	18,1			
	8	987,1	335,9	24,0	878,7	332,5	19,0			
	9	1011,9	339,3	25,2						
	10	1034,9	342,7	26,3						
	12	1084,9	350,2	29,0						
	15	1159,4	361,1	33,1						
1160	5	1000,0	364,7	24,4	885,3	361,2	19,1			
	6	1029,9	368,5	25,9	913,2	365,0	20,3			
	7	1059,3	372,3	27,4	943,4	368,6	21,7			
	8	1086,4	375,8	28,8	967,0	372,1	22,8			
	9	1113,7	379,6	30,2						
	10	1139,0	383,5	31,6						
	12	1194,0	391,8	34,8						
	15	1276,0	404,0	39,7						
1260	5	1073,2	408,5	28,1	909,1	372,1	20,2			
	6	1105,2	412,8	29,8	938,0	376,0	21,4			
	7	1136,8	417,1	31,5	969,1	379,7	22,9			
	8	1119,3	389,4	30,5	993,4	383,3	24,1			
	9	1147,4	393,4	32,1						
	10	1173,5	397,4	33,6						
	12	1230,2	406,0	36,9						
	15	1314,6	418,7	42,1						

* Only Compressors.

Cooling Capacities - SYSCREW AIR EVO HSE S R513A

Model	LWT °C	Condensing Air Temperature °C											
		25			30			32			35		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	380,6	95,5	18,4	362,3	104,9	16,7	354,6	108,7	16,0	342,7	114,5	15,0
	6	391,9	96,6	19,6	372,8	106,1	17,7	365,1	109,9	17,0	352,8	115,8	15,8
	7	403,3	97,8	20,7	383,7	107,2	18,7	375,6	111,2	18,0	**363,2**	**117,0**	**16,8**
	8	413,4	99,0	21,8	393,5	108,4	19,7	385,2	112,4	18,9	372,3	118,3	17,6
	9	423,8	100,1	22,9	403,1	109,7	20,7	394,5	113,7	19,8	381,7	119,5	18,6
	10	433,9	101,4	24,0	412,9	110,9	21,7	404,1	115,0	20,8	390,8	120,9	19,4
	12	454,6	103,9	26,3	432,4	113,6	23,8	423,4	117,6	22,8	409,4	123,5	21,3
	15	485,5	107,9	30,0	462,2	117,5	27,2	452,4	121,6	26,1	437,1	127,8	24,3
440	5	463,3	108,9	26,3	441,0	119,6	23,8	431,6	124,0	22,8	417,3	130,6	21,3
	6	477,2	110,1	27,9	453,8	120,9	25,2	444,4	125,3	24,2	429,5	132,1	22,6
	7	491,0	111,5	29,5	467,2	122,3	26,7	457,2	126,8	25,6	**442,1**	**133,4**	**23,9**
	8	503,3	112,8	31,0	479,0	123,6	28,1	469,0	128,1	26,9	453,2	134,9	25,1
	9	515,9	114,2	32,6	490,8	125,1	29,5	480,2	129,6	28,2	464,7	136,3	26,4
	10	528,2	115,7	34,2	502,7	126,5	30,9	492,0	131,1	29,6	475,8	137,9	27,7
	12	553,4	118,5	37,5	526,5	129,6	33,9	515,5	134,1	32,5	498,4	140,9	30,4
	15	591,0	123,0	42,8	562,7	134,0	38,8	550,8	138,7	37,1	532,1	145,7	34,7
510	5	522,4	127,8	20,4	497,3	140,3	18,5	486,7	145,5	17,7	470,5	153,2	16,6
	6	538,0	129,3	21,7	511,7	141,9	19,6	501,1	147,0	18,8	484,3	155,0	17,5
	7	553,7	130,8	22,9	526,8	143,5	20,8	515,6	148,8	19,9	**498,5**	**156,6**	**18,6**
	8	567,5	132,4	24,1	540,1	145,1	21,8	528,8	150,4	20,9	511,0	158,3	19,5
	9	581,7	134,0	25,3	553,4	146,8	22,9	541,5	152,1	21,9	524,0	159,9	20,5
	10	595,6	135,7	26,5	566,8	148,4	24,0	554,7	153,8	23,0	536,5	161,8	21,5
	12	624,0	139,0	29,1	593,6	152,0	26,4	581,3	157,3	25,3	562,0	165,3	23,6
	15	666,5	144,4	33,2	634,5	157,3	30,1	621,1	162,7	28,9	600,0	171,0	26,9
590	5	590,4	139,0	26,1	562,1	152,6	23,6	550,1	158,2	22,6	531,8	166,7	21,2
	6	608,1	140,6	27,7	578,4	154,4	25,0	566,4	159,9	24,0	547,4	168,6	22,4
	7	625,8	142,3	29,3	595,4	156,1	26,5	582,7	161,8	25,4	**563,5**	**170,3**	**23,7**
	8	641,5	144,0	30,8	610,5	157,8	27,9	597,7	163,5	26,7	577,6	172,2	25,0
	9	657,5	145,7	32,3	625,5	159,7	29,3	612,0	165,4	28,0	592,3	173,9	26,2
	10	673,1	147,6	33,9	640,6	161,4	30,7	627,0	167,3	29,4	606,4	176,0	27,5
	12	705,3	151,2	37,2	671,0	165,4	33,7	657,0	171,1	32,3	635,2	179,8	30,2
	15	753,3	157,0	42,4	717,1	171,0	38,5	702,0	177,0	36,9	678,2	186,0	34,4
660	5	671,2	157,6	33,3	638,9	173,0	30,2	625,3	179,3	28,9	604,5	188,9	27,0
	6	691,2	159,4	35,3	657,4	175,0	32,0	643,8	181,3	30,6	622,2	191,1	28,6
	7	711,3	161,3	37,4	676,8	176,9	33,9	662,4	183,4	32,4	**640,5**	**193,0**	**30,3**
	8	729,1	163,2	39,3	693,9	178,9	35,6	679,4	185,4	34,1	656,5	195,2	31,9
	9	747,4	165,2	41,3	711,0	181,0	37,4	695,7	187,5	35,8	673,2	197,1	33,5
	10	765,2	167,3	43,3	728,2	183,0	39,2	712,7	189,7	37,5	689,2	199,5	35,1
	12	801,7	171,4	47,5	762,7	187,5	43,0	746,8	194,0	41,2	722,0	203,8	38,5
	15	856,2	178,0	54,2	815,2	193,9	49,1	797,9	200,6	47,1	770,9	210,9	43,9
730	5	736,6	175,7	32,5	701,2	192,8	29,4	686,3	199,9	28,2	663,4	210,6	26,3
	6	758,7	177,6	34,5	721,6	195,0	31,2	706,6	202,0	29,9	682,9	213,0	27,9
	7	780,7	179,8	36,5	742,8	197,2	33,0	727,0	204,4	31,6	**703,0**	**215,1**	**29,6**
	8	800,3	181,9	38,3	761,6	199,4	34,7	745,6	206,6	33,3	720,6	217,6	31,1
	9	820,3	184,1	40,3	780,4	201,8	36,5	763,6	209,0	34,9	738,9	219,7	32,7
	10	839,8	186,5	42,2	799,2	203,9	38,2	782,2	211,4	36,6	756,5	222,4	34,3
	12	879,9	191,0	46,3	837,1	208,9	41,9	819,6	216,2	40,2	792,4	227,2	37,6
	15	939,7	198,4	52,9	894,7	216,1	47,9	875,8	223,6	45,9	846,1	235,0	42,9

* Only Compressors.

Model	LWT °C	Condensing Air Temperature °C								
		40			44			46		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
380	5	318,6	127,2	12,9	303,7	135,3	11,7			
	6	328,1	128,5	13,7	312,8	136,7	12,5			
	7	337,5	129,8	14,5	321,8	138,1	13,2			
	8	346,1	131,1	15,3	330,0	139,4	13,9			
	9	354,8	132,4	16,0						
	10	362,9	133,7	16,8						
	12	380,4	136,6	18,4						
	15	406,5	140,9	21,0						
440	5	387,9	145,0	18,4	343,4	143,6	14,4			
	6	399,5	146,5	19,5	354,2	145,1	15,4			
	7	410,9	148,1	20,7	365,9	146,6	16,4			
	8	421,4	149,4	21,7	375,1	148,0	17,2			
	9	432,0	151,0	22,8						
	10	441,8	152,5	23,9						
	12	463,1	155,8	26,3						
	15	494,9	160,7	30,0						
510	5	437,4	170,2	14,3	416,9	181,0	13,0			
	6	450,4	172,0	15,2	429,3	182,9	13,8			
	7	463,3	173,7	16,1	441,7	184,7	14,6			
	8	475,1	175,4	16,9	453,0	186,5	15,3			
	9	487,1	177,2	17,7						
	10	498,2	178,9	18,6						
	12	522,2	182,8	20,4						
	15	558,1	188,5	23,3						
590	5	494,3	185,1	18,3	437,6	183,3	14,3			
	6	509,1	187,0	19,4	451,5	185,3	15,2			
	7	523,6	189,0	20,5	466,4	187,1	16,3			
	8	537,0	190,7	21,6	478,0	188,8	17,1			
	9	550,6	192,7	22,7						
	10	563,0	194,6	23,7						
	12	590,2	198,9	26,1						
	15	630,8	205,1	29,8						
660	5	561,9	209,8	23,3	497,4	207,8	18,3			
	6	578,7	212,0	24,8	513,2	210,0	19,5			
	7	595,2	214,2	26,2	530,1	212,1	20,8			
	8	610,4	216,2	27,5	543,4	214,1	21,8			
	9	625,8	218,4	29,0						
	10	640,0	220,6	30,3						
	12	670,9	225,4	33,3						
	15	717,0	232,4	38,0						
730	5	616,7	233,8	22,8	546,0	231,6	17,8			
	6	635,1	236,3	24,1	563,2	234,1	19,0			
	7	653,3	238,7	25,5	581,8	236,4	20,3			
	8	670,0	241,0	26,9	596,4	238,6	21,3			
	9	686,9	243,4	28,2						
	10	702,4	245,9	29,5						
	12	736,4	251,2	32,5						
	15	786,9	259,1	37,1						

* Only Compressors.

Cooling Capacities - SYSCREW AIR EVO HSE S R513A

Model	LWT °C	Condensing Air Temperature °C											
		25			30			32			35		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	813,6	193,8	39,6	774,6	212,8	35,9	758,0	220,6	34,4	732,8	232,4	32,1
	6	838,0	196,0	42,0	797,0	215,2	38,0	780,5	223,0	36,5	754,3	235,0	34,1
	7	862,3	198,4	44,5	820,4	217,6	40,3	803,0	225,6	38,6	**776,5**	**237,4**	**36,1**
	8	883,9	200,8	46,8	841,3	220,0	42,4	823,6	228,0	40,6	795,9	240,1	37,9
	9	906,0	203,2	49,1	861,9	222,6	44,5	843,4	230,6	42,6	816,1	242,5	39,9
	10	927,6	205,8	51,5	882,8	225,0	46,6	864,0	233,3	44,7	835,6	245,4	41,8
	12	971,8	210,8	56,5	924,6	230,5	51,2	905,3	238,6	49,1	875,2	250,7	45,9
	15	1038,0	218,9	64,5	988,2	238,5	58,5	967,3	246,7	56,0	934,5	259,3	52,3
900	5	936,3	223,9	22,7	891,3	245,8	20,6	872,3	254,8	19,7	843,2	268,4	18,4
	6	964,3	226,4	24,1	917,2	248,6	21,8	898,2	257,6	20,9	868,0	271,5	19,5
	7	992,3	229,2	25,5	944,1	251,4	23,1	924,0	260,6	22,1	**893,5**	**274,3**	**20,7**
	8	1017,2	232,0	26,8	968,1	254,2	24,3	947,7	263,4	23,3	915,9	277,3	21,7
	9	1042,6	234,7	28,2	991,9	257,2	25,5	970,5	266,5	24,4	939,2	280,1	22,9
	10	1067,4	237,8	29,5	1015,8	260,0	26,8	994,2	269,5	25,6	961,5	283,5	24,0
	12	1118,3	243,6	32,4	1064,0	266,3	29,3	1041,8	275,6	28,1	1007,2	289,6	26,3
	15	1194,5	252,9	37,0	1137,2	275,5	33,5	1113,1	285,1	32,1	1075,4	299,6	30,0
980	5	1028,4	247,9	26,0	979,0	272,1	23,6	958,1	282,0	22,6	926,2	297,1	21,1
	6	1059,1	250,6	27,6	1007,4	275,2	25,0	986,5	285,1	23,9	953,4	300,5	22,4
	7	1089,9	253,7	29,2	1037,0	278,2	26,5	1014,9	288,5	25,3	**981,4**	**303,6**	**23,7**
	8	1117,2	256,7	30,7	1063,3	281,3	27,8	1040,9	291,5	26,7	1005,9	307,0	24,9
	9	1145,1	259,8	32,3	1089,4	284,7	29,2	1066,0	294,9	28,0	1031,5	310,0	26,2
	10	1172,4	263,1	33,8	1115,8	287,7	30,6	1092,0	298,3	29,3	1056,1	313,7	27,4
	12	1228,3	269,6	37,1	1168,6	294,8	33,6	1144,2	305,0	32,2	1106,3	320,5	30,1
	15	1311,9	279,9	42,3	1249,0	304,9	38,4	1222,6	315,5	36,8	1181,2	331,6	34,3
1060	5	1096,1	253,3	29,6	1043,4	278,0	26,8	1021,2	288,2	25,7	987,2	303,6	24,0
	6	1128,9	256,1	31,3	1073,7	281,2	28,4	1051,5	291,3	27,2	1016,2	307,1	25,4
	7	1161,7	259,2	33,2	1105,2	284,3	30,0	1081,7	294,8	28,8	**1046,0**	**310,2**	**26,9**
	8	1190,8	262,3	34,9	1133,3	287,4	31,6	1109,5	297,9	30,3	1072,2	313,7	28,3
	9	1220,5	265,5	36,6	1161,2	290,9	33,2	1136,2	301,4	31,8	1099,4	316,8	29,7
	10	1249,6	268,9	38,4	1189,2	294,0	34,8	1163,9	304,8	33,3	1125,6	320,6	31,2
	12	1309,2	275,5	42,2	1245,5	301,2	38,2	1219,6	311,7	36,6	1179,1	327,5	34,2
	15	1398,3	286,1	48,1	1331,3	311,6	43,6	1303,1	322,4	41,8	1258,9	338,8	39,0
1160	5	1206,3	283,4	35,5	1148,4	311,1	32,2	1123,9	322,4	30,8	1086,4	339,7	28,8
	6	1242,4	286,5	37,6	1181,7	314,6	34,0	1157,2	325,9	32,6	1118,3	343,6	30,5
	7	1278,5	290,0	39,8	1216,4	318,1	36,1	1190,5	329,8	34,6	**1151,2**	**347,1**	**32,3**
	8	1310,5	293,5	41,9	1247,3	321,6	37,9	1221,1	333,3	36,4	1180,0	351,0	33,9
	9	1343,3	297,0	44,0	1277,9	325,5	39,8	1250,4	337,2	38,1	1210,0	354,5	35,7
	10	1375,3	300,9	46,1	1308,8	329,0	41,8	1280,9	341,0	40,0	1238,8	358,7	37,4
	12	1440,9	308,2	50,6	1370,8	337,0	45,8	1342,2	348,8	43,9	1297,7	366,4	41,1
	15	1538,9	320,1	57,7	1465,1	348,6	52,3	1434,2	360,7	50,1	1385,5	379,1	46,8
1260	5	1294,6	317,4	40,9	1232,4	348,4	37,0	1206,2	361,1	35,5	1166,0	380,4	33,1
	6	1333,4	320,9	43,3	1268,2	352,3	39,2	1241,9	365,0	37,6	1200,2	384,8	35,1
	7	1372,1	324,8	45,9	1305,4	356,3	41,5	1277,7	369,4	39,8	**1235,5**	**388,7**	**37,2**
	8	1406,5	328,7	48,2	1338,6	360,2	43,7	1310,5	373,3	41,9	1266,4	393,0	39,1
	9	1441,6	332,6	50,7	1371,5	364,5	45,9	1342,0	377,6	43,9	1298,6	397,0	41,1
	10	1476,0	336,9	53,1	1404,6	368,4	48,1	1374,7	382,0	46,1	1329,5	401,7	43,1
	12	1546,4	345,2	58,3	1471,2	377,5	52,8	1440,5	390,6	50,6	1392,7	410,4	47,3
	15	1651,6	358,5	66,5	1572,4	390,4	60,3	1539,2	404,0	57,8	1487,0	424,6	53,9

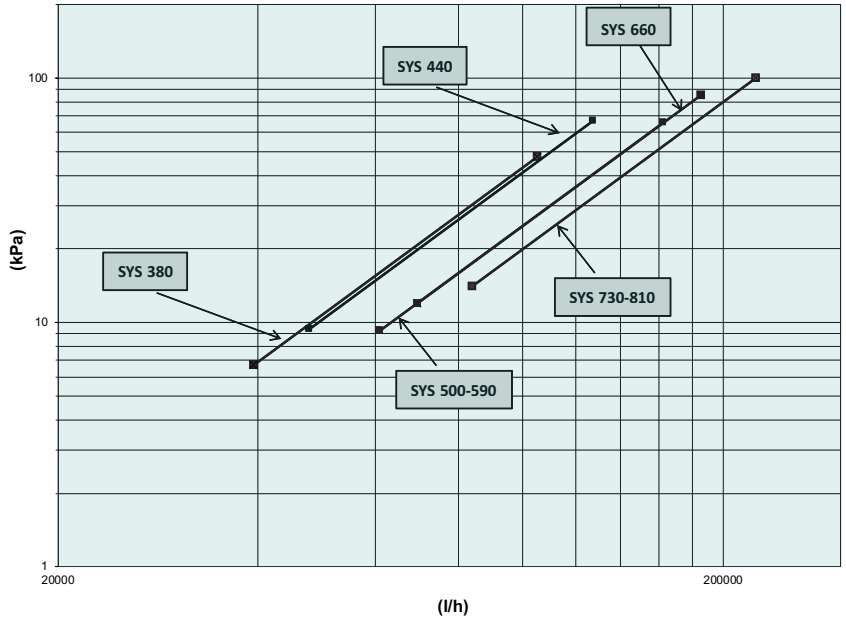
* Only Compressors.

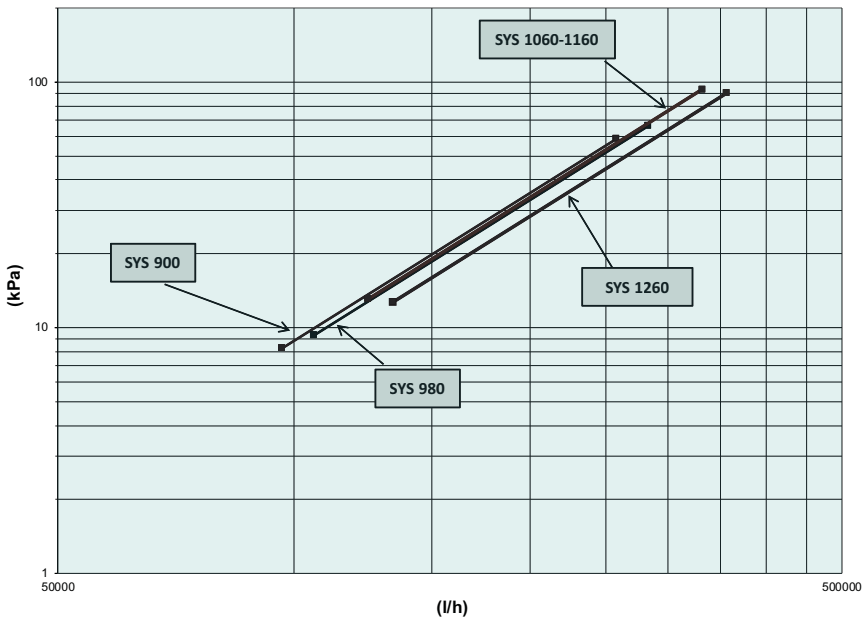
Model	LWT °C	Condensing Air Temperature °C								
		40			44			46		
		Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop	Cool	Input Power (*)	Pressure Drop
		kW	kW	kPa	kW	kW	kPa	kW	kW	kPa
810	5	681,2	258,0	27,8	603,0	255,6	21,8			
	6	701,5	260,7	29,5	622,1	258,3	23,2			
	7	721,6	263,5	31,2	642,6	260,8	24,7			
	8	740,0	265,9	32,8	658,7	263,3	26,0			
	9	758,7	268,6	34,5						
	10	775,9	271,3	36,0						
	12	813,3	277,3	39,6						
	15	869,2	285,9	45,2						
900	5	783,9	298,1	15,9	693,9	295,3	12,5			
	6	807,3	301,2	16,9	715,9	298,4	13,3			
	7	830,4	304,4	17,9	739,5	301,3	14,2			
	8	851,6	307,2	18,8	758,0	304,2	14,9			
	9	873,0	310,3	19,8						
	10	892,8	313,5	20,7						
	12	936,0	320,3	22,7						
	15	1000,2	330,3	25,9						
980	5	861,0	329,9	18,2	762,2	326,8	14,3			
	6	886,7	333,4	19,3	786,3	330,2	15,2			
	7	912,0	336,9	20,5	812,2	333,5	16,2			
	8	935,4	340,0	21,5	832,6	336,6	17,1			
	9	958,9	343,5	22,6						
	10	980,7	346,9	23,7						
	12	1028,0	354,5	26,0						
	15	1098,6	365,5	29,7						
1060	5	917,6	337,1	20,7	812,4	334,0	16,2			
	6	945,1	340,7	22,0	838,1	337,5	17,3			
	7	972,1	344,2	23,2	865,7	340,8	18,4			
	8	996,9	347,5	24,4	887,4	344,0	19,4			
	9	1022,0	351,0	25,7						
	10	1045,2	354,5	26,9						
	12	1095,7	362,3	29,5						
	15	1171,0	373,5	33,7						
1160	5	1009,9	377,2	24,9	894,1	373,7	19,5			
	6	1040,1	381,2	26,4	922,3	377,6	20,7			
	7	1069,8	385,1	27,9	952,8	381,3	22,1			
	8	1097,2	388,7	29,3	976,7	384,9	23,3			
	9	1124,8	392,7	30,8						
	10	1150,3	396,7	32,3						
	12	1205,9	405,3	35,5						
	15	1288,7	417,9	40,5						
1260	5	1083,9	422,5	28,6	918,2	384,8	20,6			
	6	1116,3	426,9	30,4	947,3	388,8	21,9			
	7	1148,2	431,3	32,1	978,8	392,7	23,4			
	8	1130,4	402,7	31,2	1003,3	396,3	24,5			
	9	1158,9	406,8	32,7						
	10	1185,2	410,9	34,2						
	12	1242,4	419,9	37,6						
	15	1327,7	433,0	43,0						

* Only Compressors.

Evaporator Pressure Drop - R134a

Model	Nom. Capacity	Qnom.	Qmax.	Qmin.	K	Dp nom	DP max	DP min
	kW	l/h	l/h	l/h	kPa/(l/h)^2	kPa	kPa	kPa
380	366	63.010	105.016	39.381	4,314E-09	17,1	47,6	6,7
450	444	76.366	127.277	47.729	4,129E-09	24,1	66,9	9,4
500	501	86.180	143.633	53.862	2,486E-09	18,5	51,3	7,2
590	567	97.512	162.519	60.945	2,486E-09	23,6	65,7	9,2
660	645	110.953	184.922	69.346	2,485E-09	30,6	85,0	11,9
730	706	121.426	202.376	75.891	1,999E-09	29,5	81,9	11,5
810	780	134.199	223.666	83.875	1,999E-09	36,0	100,0	14,1
900	898	154.539	257.565	96.587	8,812E-10	21,0	58,5	8,2
980	985	169.490	282.483	105.931	8,297E-10	23,8	66,2	9,3
1060	1050	180.531	300.885	112.832	8,459E-10	27,6	76,6	10,8
1160	1157	198.964	331.607	124.353	8,459E-10	33,5	93,0	13,1
1260	1243	213.864	356.440	133.665	7,106E-10	32,5	90,3	12,7

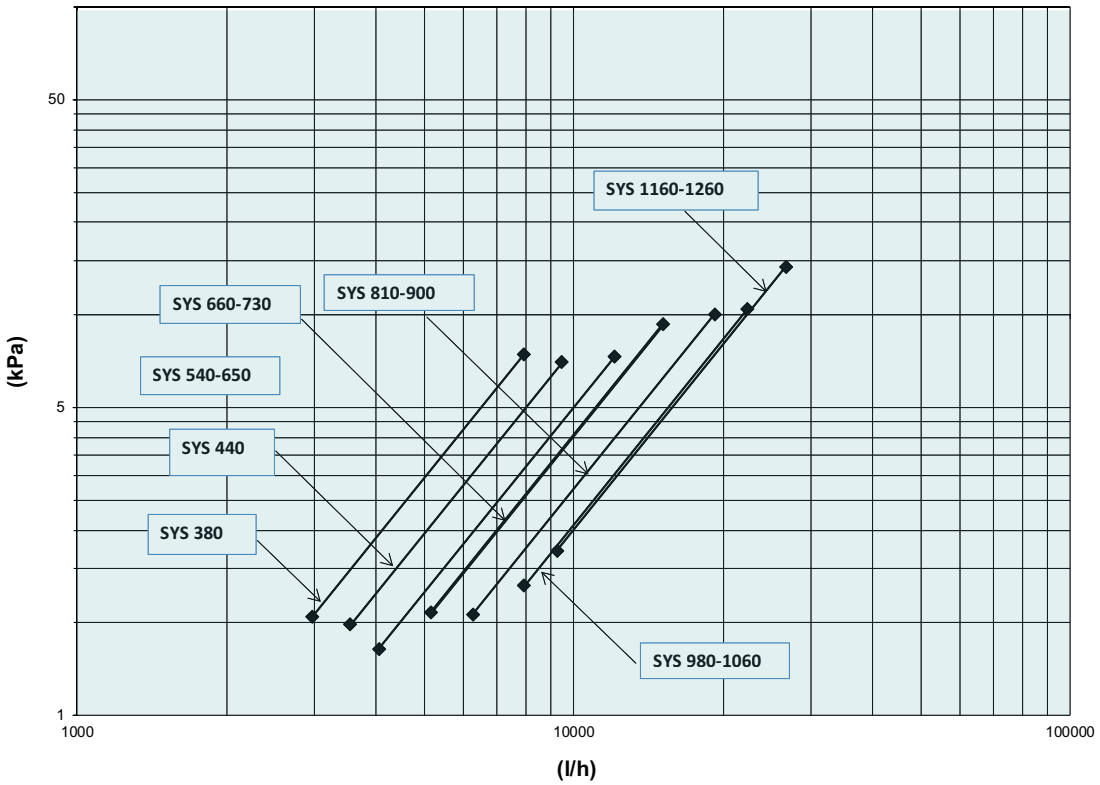




Desuperheater pressure drop

Model	Nom. Capacity	Qnom.	Qmax.	Qmin.	K	Dp nom	DP max	DP min
	kW*	l/h	l/h	l/h	kPa/(l/h)^2	kPa	kPa	kPa
380	28	4.752	7.919	2.970	1,1838E-07	2,7	7,4	1,0
440	33	5.680	9.467	3.550	7,8281E-08	2,5	7,0	1,0
510	38	6.474	10.791	4.046	5,0243E-08	2,1	5,9	0,8
590	42	7.252	12.087	4.532	5,0243E-08	2,6	7,3	1,0
660	48	8.245	13.742	5.153	4,0625E-08	2,8	7,7	1,1
730	53	9.072	15.120	5.670	4,0625E-08	3,3	9,3	1,3
810	58	10.023	16.706	6.265	2,7081E-08	2,7	7,6	1,1
900	67	11.543	19.238	7.214	2,7081E-08	3,6	10,0	1,4
980	74	12.693	21.156	7.933	2,0919E-08	3,4	9,4	1,3
1060	78	13.396	22.327	8.373	2,0919E-08	3,8	10,4	1,5
1160	86	14.808	24.681	9.255	2,0004E-08	4,4	12,2	1,7
1260	93	16.044	26.740	10.028	2,0004E-08	5,1	14,3	2,0

* Capacity referred to only one circuit.



Hydro options

SYSCREW 380-1260 AIR EVO HSE R134a (STD/HT)

Low head pump/s - STD / HT R134a [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	169%	177%	62.083	218	33	185	5,5	10,4
440	176%	184%	75.238	195	47	148	5,5	10,4
510	170%	179%	84.912	209	49	160	7,5	14,1
590	175%	184%	96.077	197	62	135	7,5	14,1
660	170%	179%	109.321	229	80	149	9,2	17,4
730	168%	179%	120.516	230	91	139	11,0	20,2
810	170%	181%	132.226	214	71	143	11,0	20,2
900	161%	179%	153.375	223	69	154	15,0	26,6
980	161%	182%	166.991	216	80	136	15,0	26,6
1060	165%	179%	177.008	257	90	167	18,5	32,7
1160	168%	181%	195.082	247	109	137	18,5	32,7
1260	165%	182%	209.694	283	121	162	22,0	42,2

High head pump/s - STD / HT R134a [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	161%	174%	62.083	267	33	234	7,5	13,6
440	167%	179%	75.238	295	47	248	9,2	17,2
510	170%	179%	84.912	279	49	230	9,2	17,2
590	170%	179%	96.077	304	62	242	11,0	20,2
660	166%	179%	109.321	295	80	215	15,0	26,6
730	161%	179%	120.399	336	90	245	18,5	32,7
810	161%	179%	133.838	324	73	251	18,5	32,7
900	161%	179%	153.375	312	69	244	22,0	42,2
980	161%	180%	169.190	306	82	224	22,0	42,2
1060	162%	180%	177.008	302	90	212	22,0	42,2
1160	161%	181%	197.186	383	111	271	30,0	53,5
1260	161%	180%	211.236	375	123	252	30,0	53,5

SYSCREW 380-1260 AIR EVO HSE R513A (STD/HT)

Low head pump/s - STD / HT R513A [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	163%	170%	62.704	217	34	183	5,5	10,4
440	170%	179%	76.176	194	49	145	5,5	10,4
510	165%	183%	86.179	208	50	158	7,5	14,1
590	169%	187%	97.038	196	64	132	7,5	14,1
660	167%	181%	111.222	227	83	144	9,2	17,4
730	166%	183%	123.195	226	95	132	11,0	20,2
810	167%	184%	135.177	210	74	136	11,0	20,2
900	161%	181%	156.409	221	71	150	15,0	26,6
980	161%	182%	170.717	215	84	131	15,0	26,6
1060	161%	184%	178.778	256	92	164	18,5	32,7
1160	162%	180%	197.033	245	111	134	18,5	32,7
1260	161%	180%	211.791	281	123	158	22,0	42,2

High head pump/s - STD / HT R513A [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	156%	168%	62.704	266	34	233	7,5	13,6
440	162%	179%	76.176	293	49	245	9,2	17,2
510	166%	182%	86.179	276	50	226	9,2	17,2
590	164%	185%	97.038	303	64	240	11,0	20,2
660	163%	179%	111.222	294	83	211	15,0	26,6
730	161%	180%	123.195	333	95	239	18,5	32,7
810	161%	179%	136.154	322	75	246	18,5	32,7
900	161%	180%	156.560	311	72	240	22,0	42,2
980	161%	182%	172.774	304	86	218	22,0	42,2
1060	161%	179%	178.778	301	92	210	22,0	42,2
1160	161%	179%	198.964	382	113	268	30,0	53,5
1260	161%	179%	213.556	373	125	248	30,0	53,5

* Pump with inverter mandatory

SYSCREW 380-1260 AIR EVO HSE S R134a

Low head pump/s - S R134a [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	164%	172%	61.594	218	32	186	5,5	10,4
440	175%	183%	75.033	196	47	149	5,5	10,4
510	169%	179%	84.581	210	48	161	7,5	14,1
590	174%	181%	95.624	198	62	136	7,5	14,1
660	168%	180%	108.735	230	79	150	9,2	17,4
730	165%	183%	119.336	231	89	142	11,0	20,2
810	169%	180%	131.859	215	71	144	11,0	20,2
900	161%	181%	153.084	223	68	154	15,0	26,6
980	161%	183%	166.949	216	80	136	15,0	26,6
1060	165%	182%	176.673	257	90	167	18,5	32,7
1160	169%	185%	194.500	247	108	138	18,5	32,7
1260	166%	182%	208.735	283	120	164	22,0	42,2

High head pump/s - S R134a [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	156%	169%	61.594	268	32	235	7,5	13,6
440	166%	179%	75.033	295	47	248	9,2	17,2
510	169%	179%	84.581	279	48	231	9,2	17,2
590	168%	179%	95.624	304	62	242	11,0	20,2
660	163%	180%	108.735	296	79	216	15,0	26,6
730	161%	179%	120.792	335	91	244	18,5	32,7
810	161%	181%	133.789	324	73	251	18,5	32,7
900	161%	181%	153.084	313	68	244	22,0	42,2
980	161%	182%	168.980	306	82	224	22,0	42,2
1060	162%	179%	176.673	302	89	213	22,0	42,2
1160	161%	184%	195.930	383	110	273	30,0	53,5
1260	161%	182%	209.759	376	121	255	30,0	53,5

SYSCREW 380-1260 AIR EVO HSE S R513A

Low head pump/s - S R513A [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	171%	180%	62.838	216	34	183	5,5	10,4
440	182%	192%	76.549	193	49	144	5,5	10,4
510	175%	184%	86.289	208	50	158	7,5	14,1
590	180%	190%	97.555	195	64	131	7,5	14,1
660	174%	187%	110.931	227	83	144	9,2	17,4
730	172%	184%	122.044	228	93	135	11,0	20,2
810	176%	188%	134.523	211	74	137	11,0	20,2
900	165%	185%	155.045	222	70	152	15,0	26,6
980	167%	186%	169.908	215	83	132	15,0	26,6
1060	172%	186%	180.242	255	93	162	18,5	32,7
1160	175%	192%	198.429	244	113	132	18,5	32,7
1260	172%	191%	212.952	280	125	156	22,0	42,2

High head pump/s - S R513A [50 Hz]								
Chiller model	ηs,c - ERP 2018	ηs,c - ERP 2021	Q_{nom}	H_{pump}	$\Delta p_{circuit}$	H	Pmax	F.L.A
	FW/VO	VW/VO(*)	l/h	kPa	kPa	kPa	kW	A
380	163%	179%	62.838	266	34	232	7,5	13,6
440	173%	180%	76.549	293	49	244	9,2	17,2
510	176%	182%	86.289	276	50	226	9,2	17,2
590	175%	184%	97.555	303	64	239	11,0	20,2
660	170%	179%	110.931	294	83	211	15,0	26,6
730	165%	179%	122.044	334	93	241	18,5	32,7
810	163%	182%	134.523	323	74	249	18,5	32,7
900	165%	182%	155.045	312	70	242	22,0	42,2
980	162%	184%	169.908	306	83	223	22,0	42,2
1060	168%	184%	180.242	301	93	208	22,0	42,2
1160	165%	180%	198.429	382	113	269	30,0	53,5
1260	166%	179%	212.952	374	125	249	30,0	53,5

* Pump with inverter mandatory

Hydraulic options overview

Mode		Fixed Speed	Variable Speed			
			COMMISSIONING	ΔP LOGIC	ΔT LOGIC	AUTO FLOW CONTROL
FEATURES		Constant water flow	Constant water flow	Variable water flow according to ΔP_{USER} (*)	Variable water flow according to ΔT_{WATER} (*) & $\Delta P_{AVAILABLE}$ (*) (Available Static Head)	Variable water flow according to $\Delta P_{AVAILABLE}$ (*) (Available Static Head)
BENEFITS		-	Higher efficiency than solution: Fixed speed pump + regulation valve	Pump energy savings as the user side 2-way valves close due to reduction in cooling load	Pump energy savings as the user side 3-way valves reduce the water flow to water terminals due to reduction in cooling load	Water flow optimization logic for energy saving (according to the operative mode)
		Compliant Erp 2018 (5)	Compliant Erp 2021 (5)			
SUGGESTED APPLICATIONS		-	Plants designed with fixed water flow (limited water flow regulations)	Plants designed with water terminals frequently open/close with 2-way valve	Plants designed with water terminals frequently open/close with 3-way valve	- Plants designed with water terminals frequently open/close with 3-way valve - Start-Ups and working conditions when water temperature is distant from set point
PARAMETERS TO BE SET (1)	a) Pump Frequency Set Manually		✓			
	b) ΔT_{WATER} (*)				✓	
	c) ΔP_{USER} (*)			✓		
	d) $\Delta P_{AVAILABLE}$ (*)				✓	✓
UNIT SAFETY	a) No dedicated safety features included	✓	✓			
	b) $\Delta P_{EVAPORATOR}$ control on unit heat exchanger (2)			✓	✓	✓
PLANT DEVICES ON USER SIDE	a) By-pass modulating valve (BMV) could be suggested (3)			✓	✓	✓
	b) Differential pressure transducer (DPT) mandatory (4)			✓		
	c) Water flow switch recommended	✓	✓			
SPECIAL EXECUTIONS	a) Application for Multi-Chiller Systems	✓	✓	Available on Request	Available on Request	Available on Request

(1) Parameters set via unit PLC

(2) A differential pressure transducer is installed as standard on the unit heat exchanger to ensure a minimum value of water pressure drops (corresponding to a minimum value of water flow) that avoids risk of freezing the evaporator, even in conditions strongly part loaded

(3) In case the Plant Water Flow is lower than the minim unit water flow / minimum pump water flow

(4) Supplied loose, to be installed on field

(5) Erp 2018 (FW/VO); Erp 2021 (VW/VO)

(*) Definition of parameters to be set:

ΔP_{USER} (see Figure 2) = Minimum water pressure drop guaranteed across the installation point on user plant

ΔT_{WATER} = Difference between chiller inlet water temperature and outlet water temperature (see Figure 3)

$\Delta P_{AVAILABLE}$ = Available Static Head for user side (see Figure 4) / Pump static pressure reduced by overall chiller hydraulics pressure drops (evaporator and hydraulic circuit)

Variable flow hydronic systems

The industry is now moving towards more efficient and optimized solutions with the implementation of new regulations by ECO-DESIGN DIRECTIVES, which thereby results in energy savings on the chiller and hydraulic systems.
In traditional systems, the pump power regulation are carried out only in secondary circuit while pumps in primary circuit run at fixed speeds, even when the cooling demand is very low.
Furthermore, pumps are sized for maximum design conditions and often with a margin resulting in greater power consumption than required, even when they not required working at full load as the speed is not regulated to meet the demand.
In conclusion, pumps are wasting energy and money when the pump does not adapt their speed to the demand.
Systemair has come up with smart logic of managing variable flow inverter pumps that can be applied for various installation types with ultimate goal of saving "pumping energy consumption" and improving the part load performances of the system.

MODE 1 – COMMISSIONING MODE [V2]:

Commissioning mode consists of an inverter with the hydraulic module to adjust the pump speed manually from the chiller controller in order to calibrate its flow rate based on the system load losses without the need of a mechanical modulating valve. The units equipped with an integrated hydraulic module allow to obtain a certain level of useful head (point **A**) under nominal flow conditions **Qn**. Normally, however, the actual level of system load losses (eg characteristic curve **CC2**) brings the pump to find a different equilibrium point (point **B**), with a Flow **Qb** greater than **Qn**. In this condition, besides having a different flow rate than the nominal one (therefore also a different jump of temperature), there is also a greater absorption of electric power from the pump itself.

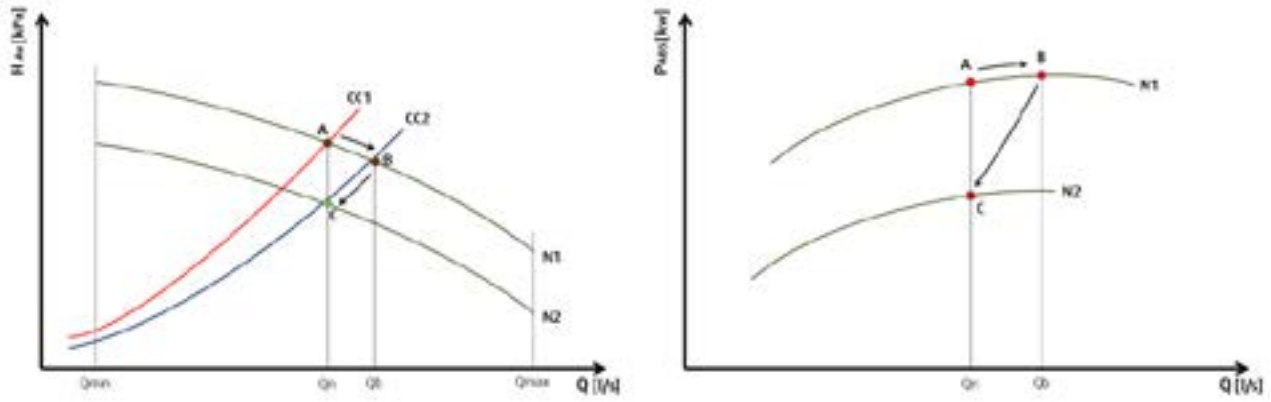


FIGURE 1 : CHARACTERISTIC CURVES & POWER ABSORPTION CURVES

Using the commissioning mode allows you to manually set the speed of the pump (example at speed N2 instead of N1) to obtain the water flow rate and the temperature jump required by the design conditions (point C). Once the adjustment procedure is finished, the pump will always work at a fixed flow rate. This mode allows to considerably reduce the electric power consumption of the pump with a consequent energy saving. As an example, when pump works at 30 Hz, the absorbed power consumption of the pump reduces by 80% compared to 50Hz pump operation.

MODE 2 – ΔP CONTROL [VD]:

VD mode provides variable flow system, consisting solely of the primary circuit on the user side.
VD mode includes the following components:

- Two pressure transducers installed at the ends of the heat exchanger ($\Delta P_{EVAPORATOR}$) factory installed.
- A dedicated system control, factory installed.
- A bypass valve with actuator supplied loose (installation by the customer).
- Differential pressure transducer (ΔP_{USER}) supplied loose as accessory (installed by the customer)

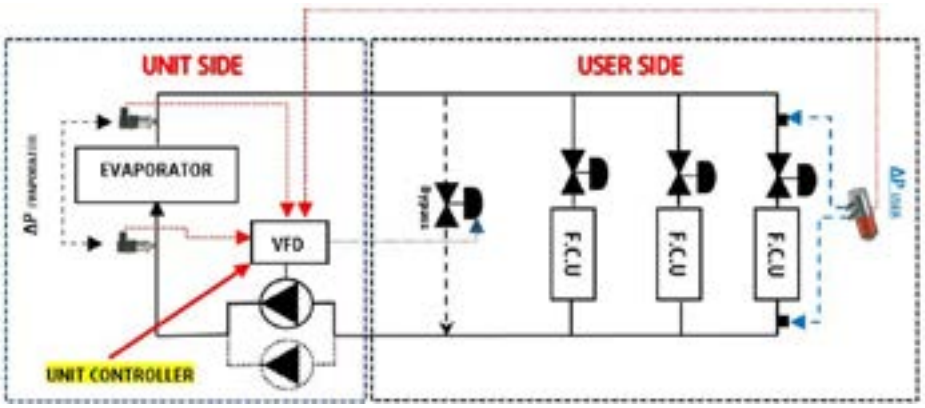


FIGURE 2: GENERAL SCHEMATICS FOR ΔP CONTROL

The option offers a complete and predefined package, guaranteeing simple selection, supply and commissioning. In particular, the unit includes an additional control system, equipped with an evolved algorithm, which interacts with the main control of the unit.
VD mode provides following advantages:

- Implement an innovative design, an alternate to the classic system based on a primary flow rate circuit plus secondary circuit.
- An ideal solution for new or completely redesigned systems particularly for comfort applications.
- A complete variable flow system with maximum energy savings.
- A simplified user circuit.
- It reduces the capital cost [CAPEX] of the user plant and the operating cost [OPEX].
- The system provides complete and reliable control of the system.
- A bypass valve, which ensures the minimum flow across the heat exchanger therefore preventing the heat exchanger from freezing.
- The pump speed will reduce automatically to save energy during low occupancy periods.

The operating principle of VD summarized as follows:

- The system controller modulates the pump speed based on the condition detected by the user side differential pressure transducer.
- The user shall define the required ΔP_{USER} from the chiller controller.
- The pump speed will decrease as the user side shut-off valve closes due to reduction in cooling load.
- The pump speed can reduce until it reaches the minimum allowable flow rate on the heat exchanger of the unit.
- Upon exceeding the minimum allowable flow threshold, the by-pass valve will open triggered by the frequency drive controller, to recirculate the flow that is not required by the plant, but which is necessary to guarantee the flow rate minimum to the exchanger.
- The by-pass valve is controlled by a 4-20 mA input signal and a power supply of 24 V.
- The differential pressure transducer of the user side provided is a 0-10 V signal, which has a PVDF connection. The transducer must be installed near the terminal of the system that suffers the greatest losses of line load or in any case in a position where it is possible to detect an adequate pressure value.

MODE 3 – ΔT CONTROL [VC]:

This mode provides variable flow system, consisting of the primary circuit / primary + secondary circuit.
VC mode includes the following components:

- Two pressure transducers installed at the ends of the heat exchanger ($\Delta P_{EVAPORATOR}$) factory installed.
- A dedicated system control, factory installed.
- A bypass valve with actuator supplied loose (installation by the customer).

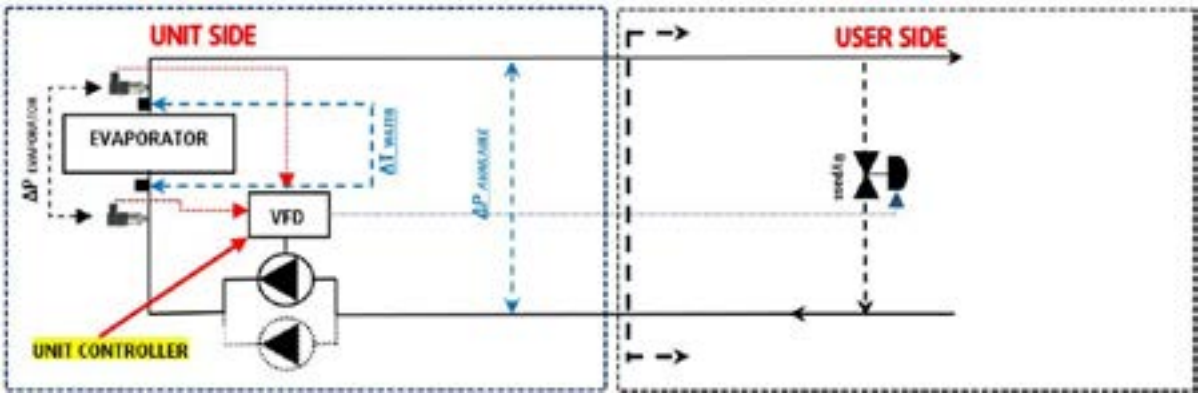


FIGURE 3: GENERAL SCHEMATICS FOR ΔT CONTROL

The option offers a complete and predefined package, guaranteeing simple selection, supply and commissioning. In particular, the unit includes an additional control system, equipped with an evolved algorithm, which interacts with the main control of the unit.
VC mode provides following advantages:

- An ideal solution for systems working on fixed Δ T.
- A complete variable flow system with maximum energy savings.
- The system provides complete and reliable control of the system.
- It reduces the operating cost of the plant [OPEX].
- The pump speed will reduce automatically to save energy during low occupancy periods.
- A bypass, which ensures the minimum flow across the heat exchanger therefore preventing the heat exchanger from freezing.

The operating principle of VC summarized as follows:

- VC mode performs an intelligent control of the flow based on the user-defined constant ΔT.
- The user defines the ΔT setpoint from the chiller controller.
- The user has a flexibility to fix the required operating head from the chiller controller.
- The pump speed can reduce until it reaches the minimum allowable flow rate on the heat exchanger of the unit.
- Upon exceeding the minimum allowable flow threshold, the by-pass valve will open triggered by the frequency drive, to recirculate the flow that is not required by the plant, but which is necessary to guarantee the flow rate minimum to the exchanger.

MODE 4 – AUTO-FLOW CONTROL [AFC]:

This mode provides variable flow system, consisting of the primary circuit / primary + secondary circuit.
AFC mode includes the following components:

- Two pressure transducers installed at the ends of the heat exchanger ($\Delta P_{EVAPORATOR}$) factory installed.
- A dedicated system control, factory installed.
- A modulating bypass valve with actuator supplied loose (installation by the customer).

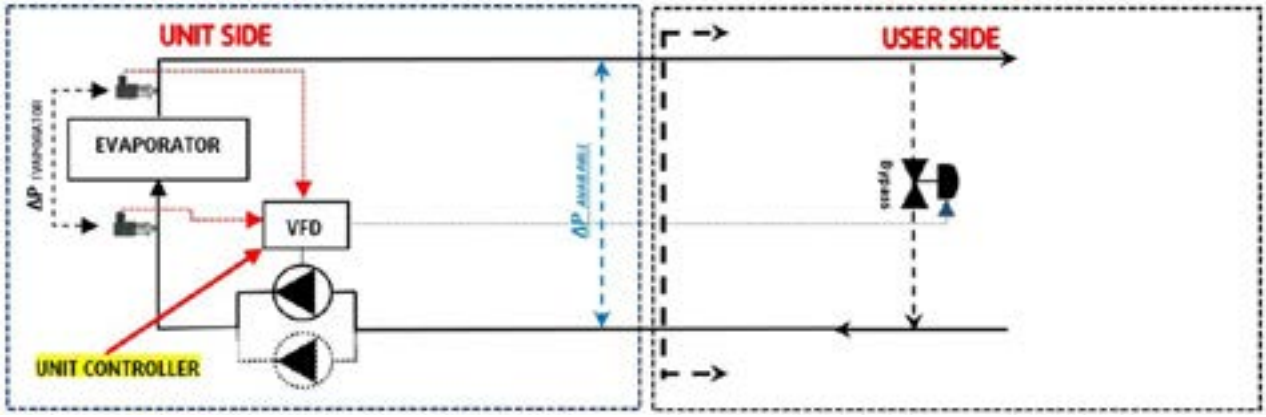


FIGURE 4: GENERAL SCHEMATICS FOR AUTO FLOW CONTROL

The option offers a complete and predefined package, guaranteeing simple selection, supply and commissioning. In particular, the unit includes an additional control system, equipped with an evolved algorithm, which interacts with the main control of the unit.
AFC mode provides following advantages:

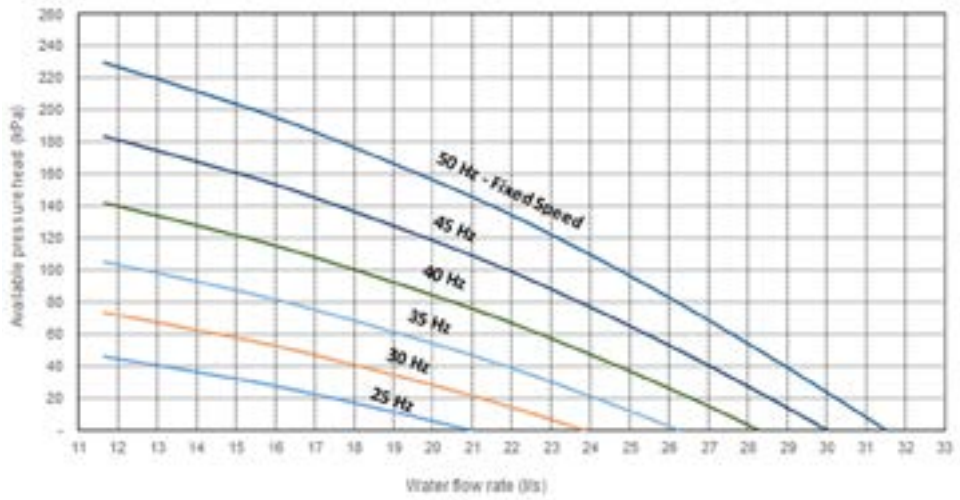
- This solution is suitable for traditional installations with constant water flow and terminal units equipped with three-way valves.
- It reduces the operating cost of the plant [OPEX].
- The system provides complete and reliable control of the system.
- When the compressor capacity is equal to zero, the pump speed will reduced automatically to save energy during low occupancy periods.
- A bypass, which ensures the minimum flow across the heat exchanger therefore preventing the heat exchanger from freezing.

The operating principle of AFC summarized as follows:

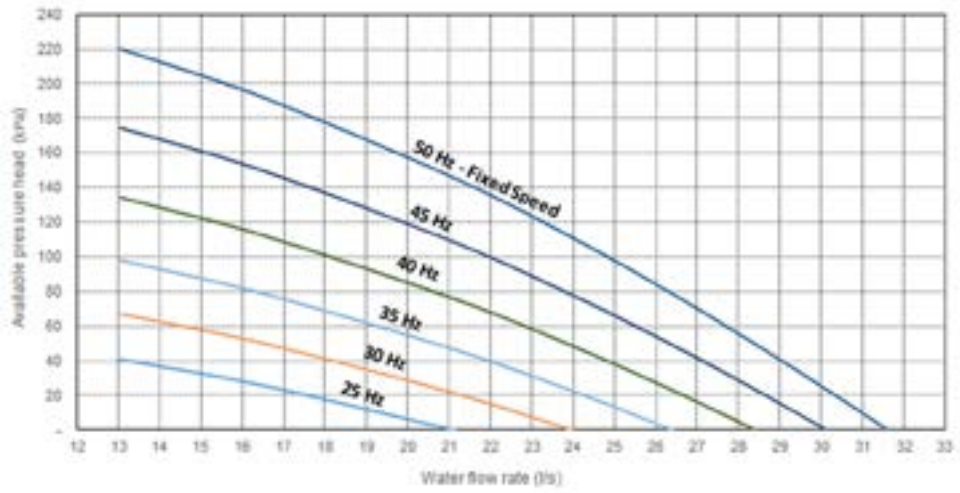
- Once the chiller has reached the water temperature set-point, the control ensures to work continuously at the best efficient pump speed.
- During transient periods to reach the chiller water temperature set-point (e.g start-up), the control optimizes the pump speed to get the lowest power consumption.
- The user has a flexibility to fix the required operating head from the chiller controller.
- The pump speed can reduce until it reaches the minimum allowable flow rate on the heat exchanger of the unit.
- Upon exceeding the minimum allowable flow threshold, the by-pass valve will open triggered by the frequency drive, to recirculate the flow that is not required by the plant, but which is necessary to guarantee the flow rate minimum to the exchanger

Available pressure head - SYSCREW AIR EVO HSE
Standard pressure pump (1/2PSP)

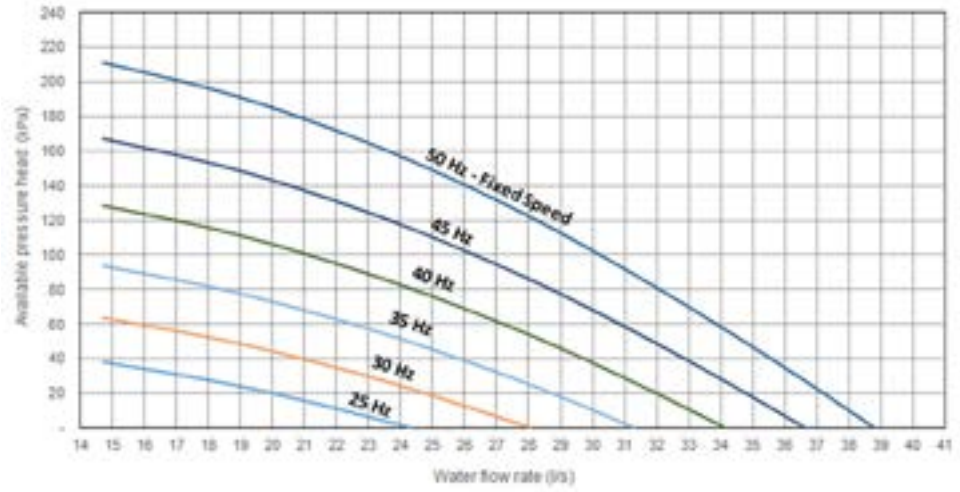
SYSCREW 380 AIR EVO HSE



SYSCREW 440 AIR EVO HSE

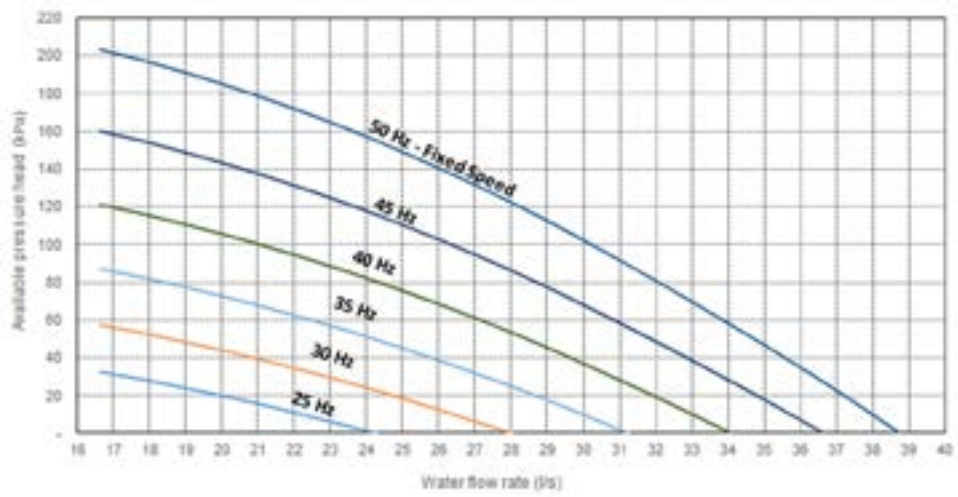


SYSCREW 510 AIR EVO HSE

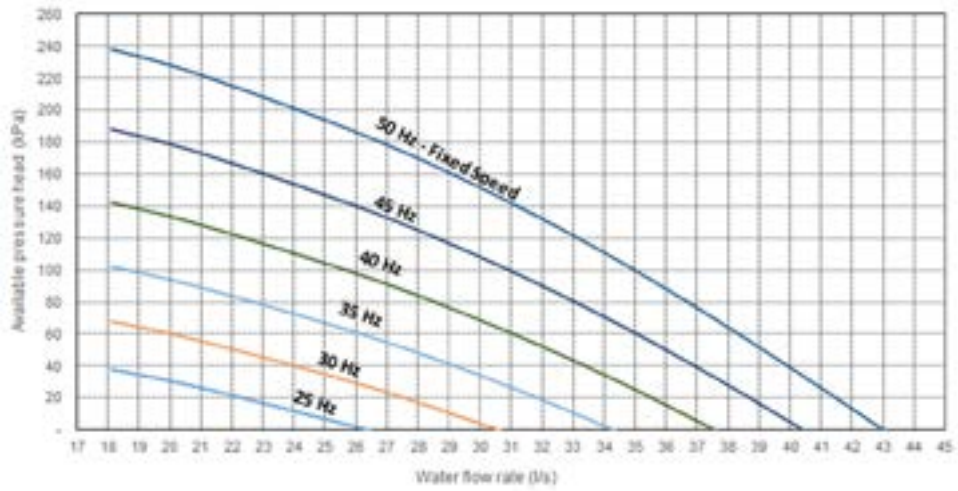


Available pressure head - SYSCREW AIR EVO HSE
Standard pressure pump (1/2PSP) (continued)

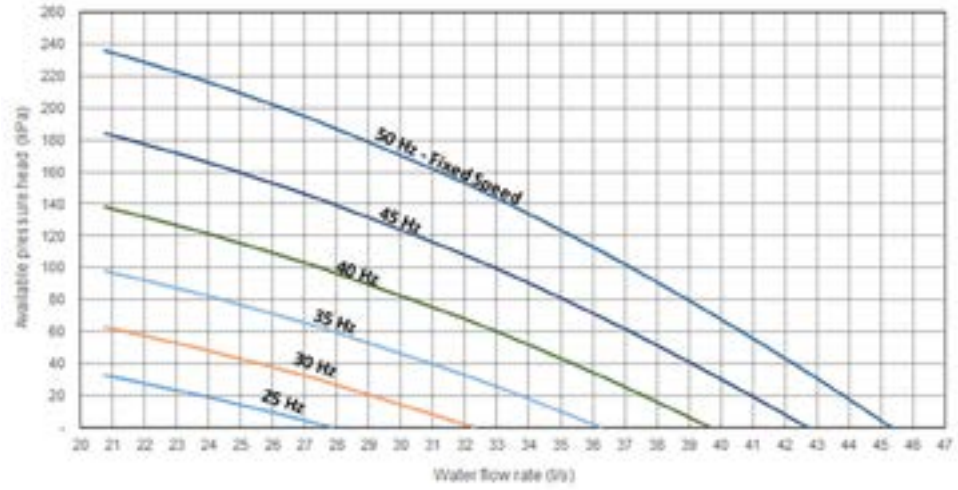
SYSCREW 590 AIR EVO HSE



SYSCREW 660 AIR EVO HSE

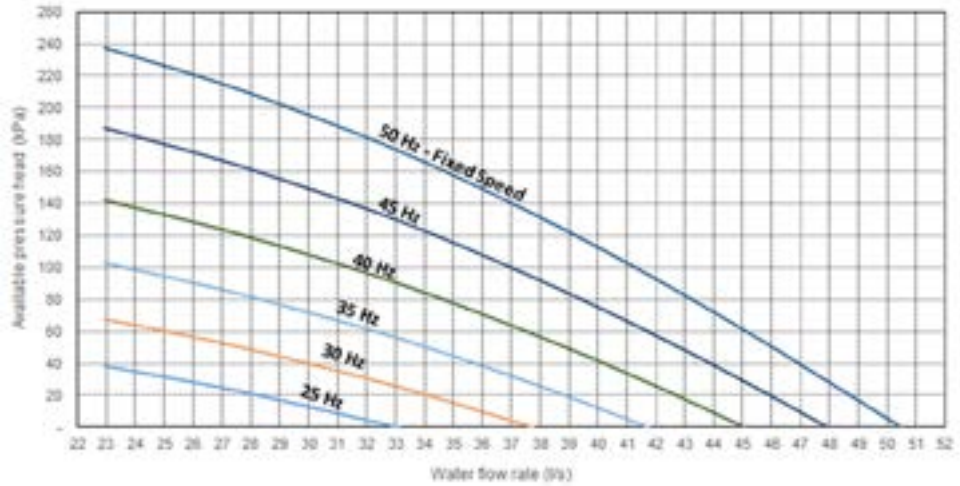


SYSCREW 730 AIR EVO HSE

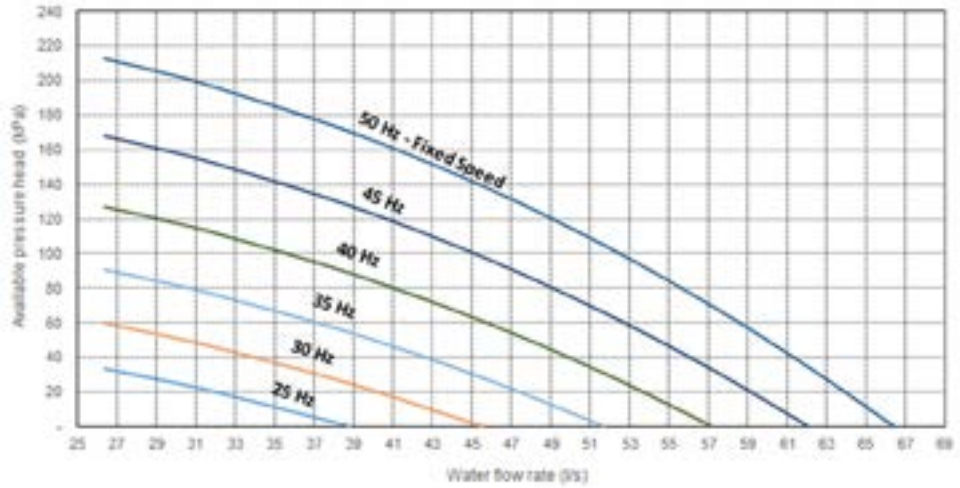


Available pressure head - SYSCREW AIR EVO HSE
Standard pressure pump (1/2PSP) (continued)

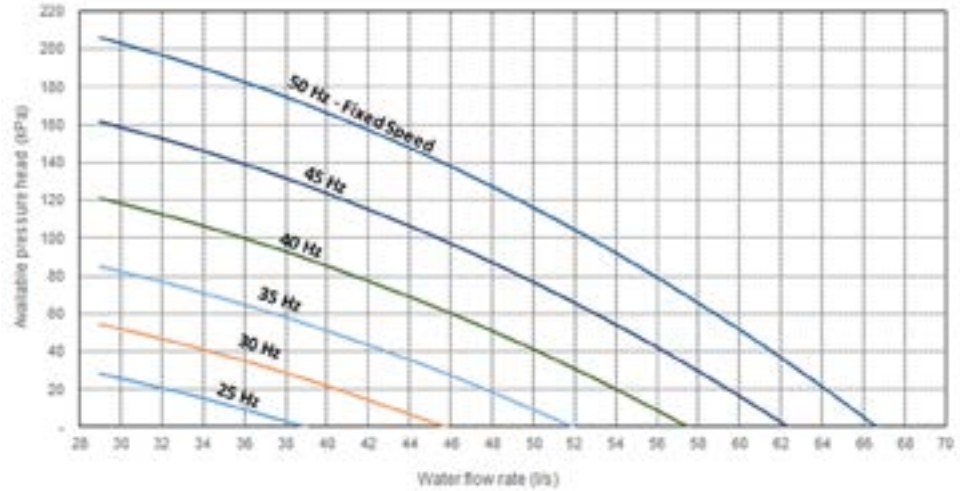
SYSCREW 810 AIR EVO HSE



SYSCREW 900 AIR EVO HSE

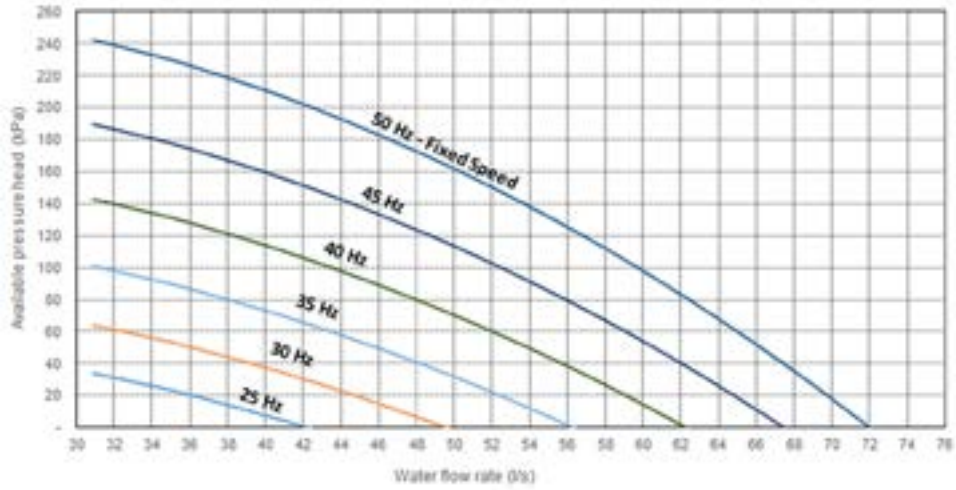


SYSCREW 980 AIR EVO HSE

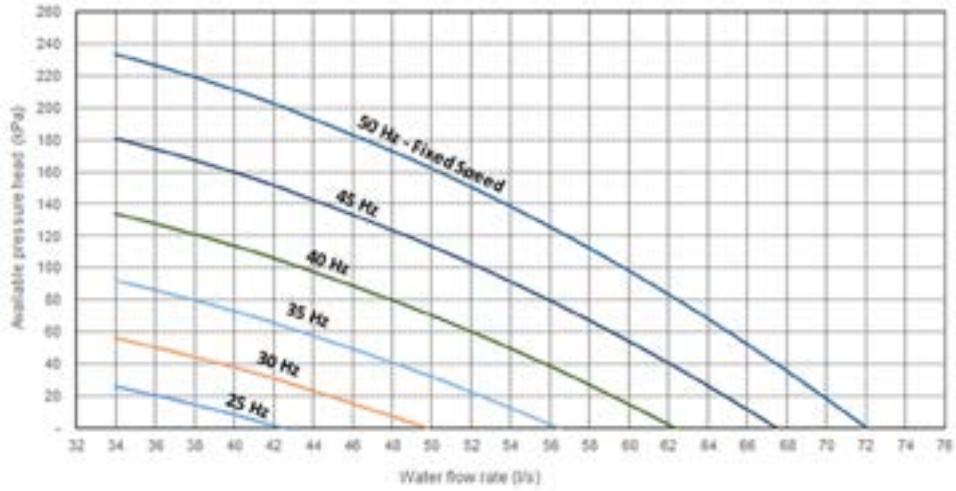


Available pressure head - SYSCREW AIR EVO HSE
Standard pressure pump (1/2PSP) (continued)

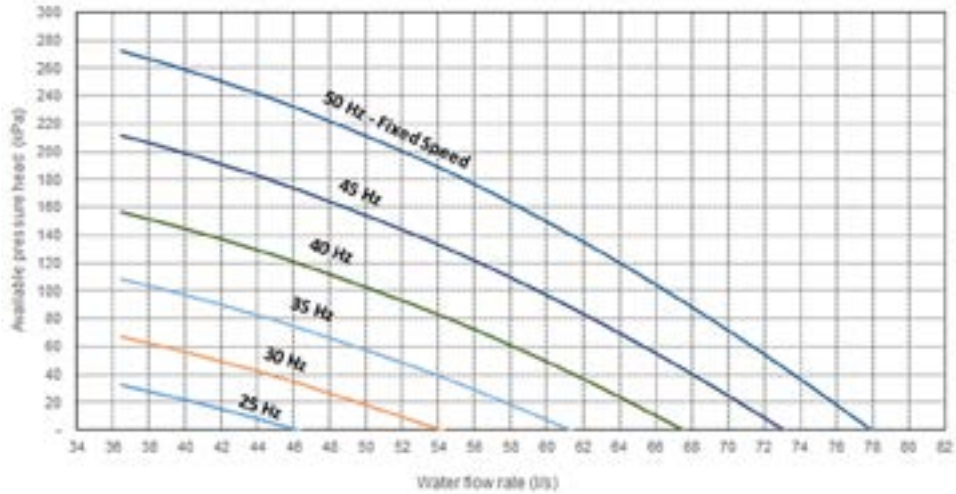
SYSCREW 1060 AIR EVO HSE



SYSCREW 1160 AIR EVO HSE

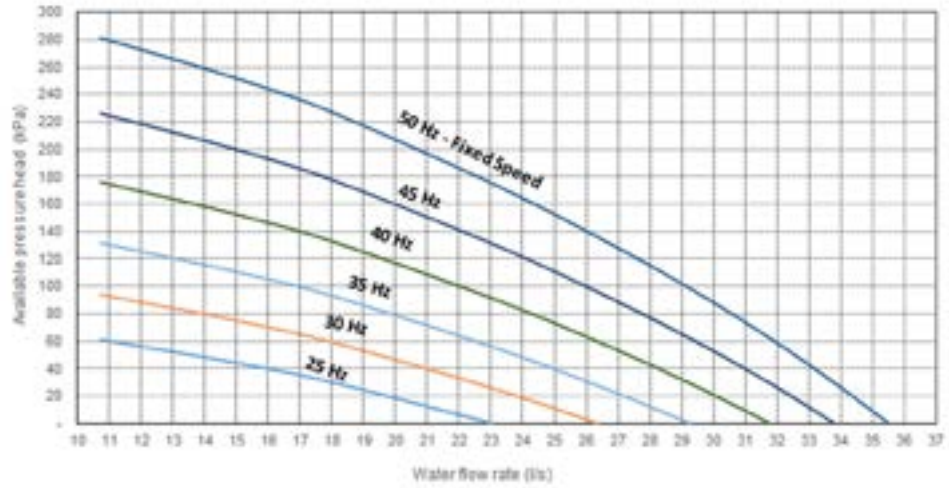


SYSCREW 1260 AIR EVO HSE

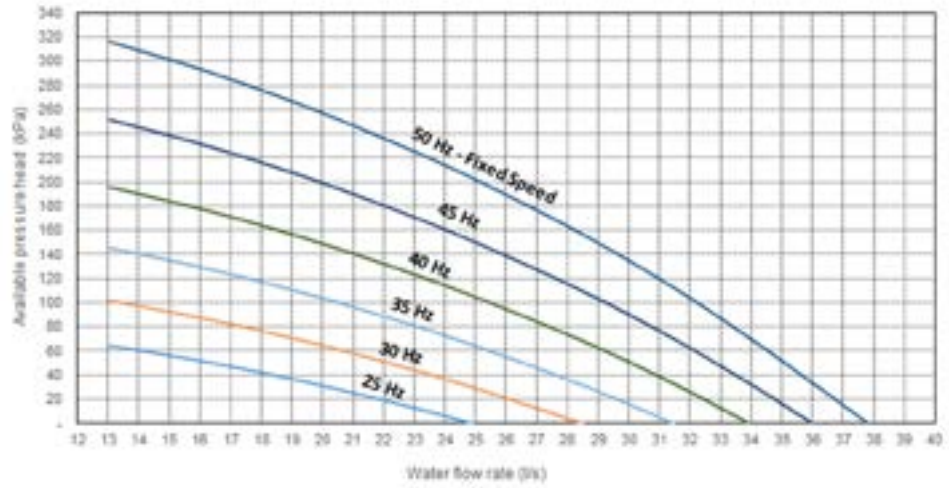


Available pressure head - SYSCREW AIR EVO HSE
High pressure pump (1/2PHP)

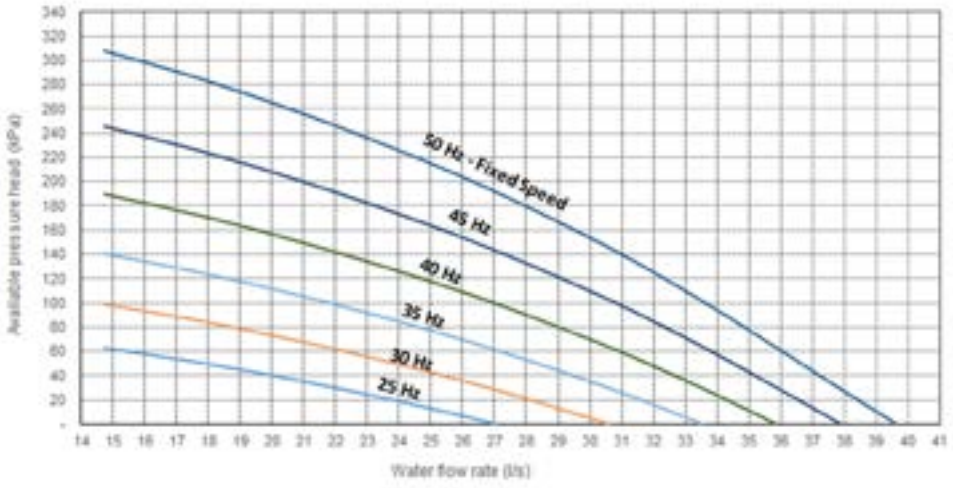
SYSCREW 380 AIR EVO HSE



SYSCREW 440 AIR EVO HS

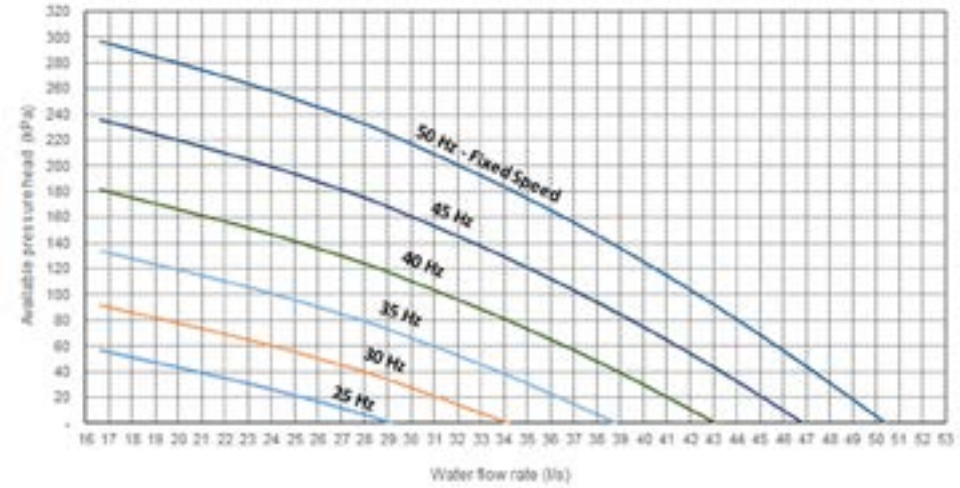


SYSCREW 510 AIR EVO HS

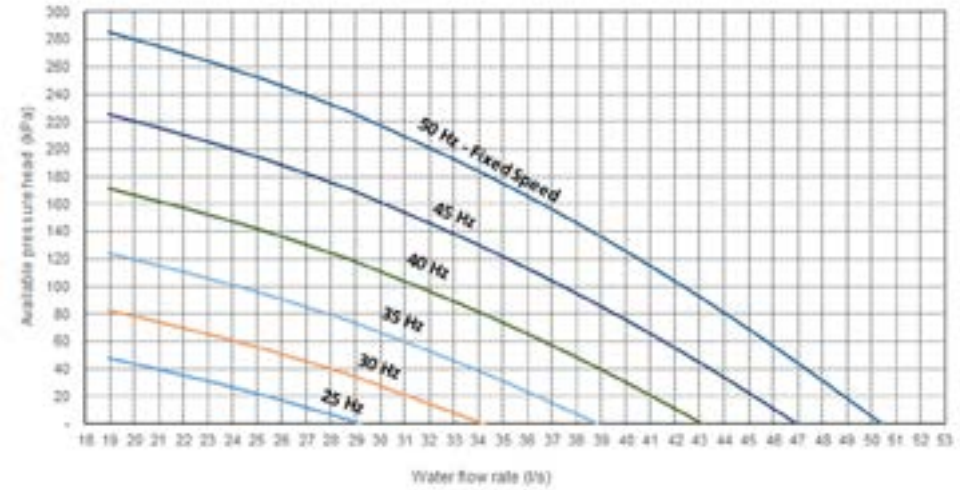


Available pressure head - SYSCREW AIR EVO HSE
High pressure pump (1/2PHP) (continued)

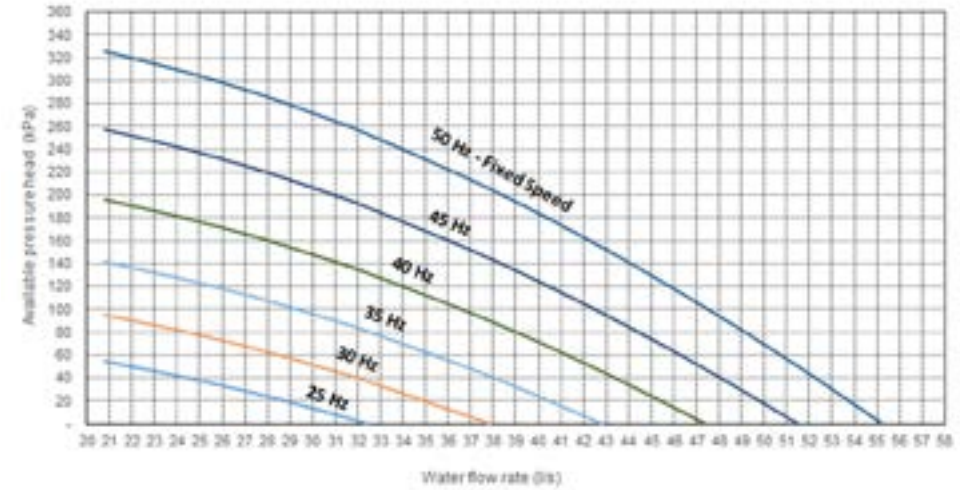
SYSCREW 590 AIR EVO HSE



SYSCREW 660 AIR EVO HSE

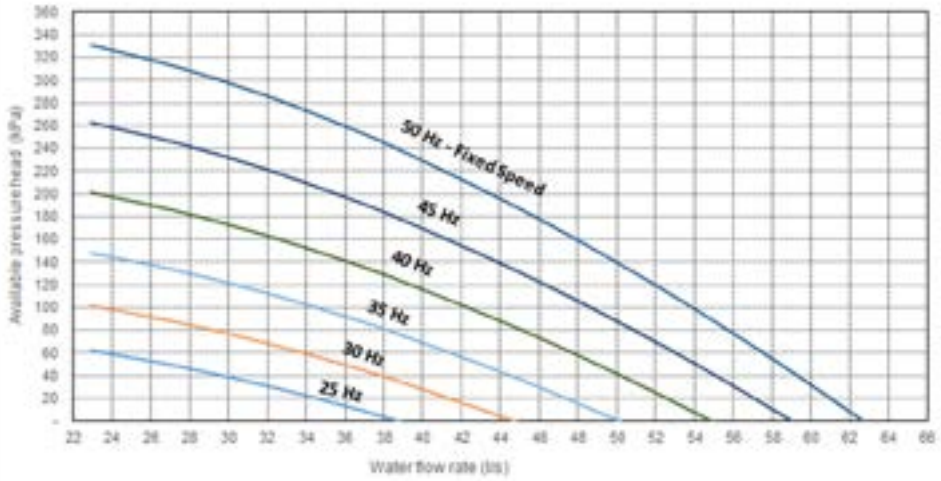


SYSCREW 730 AIR EVO HSE

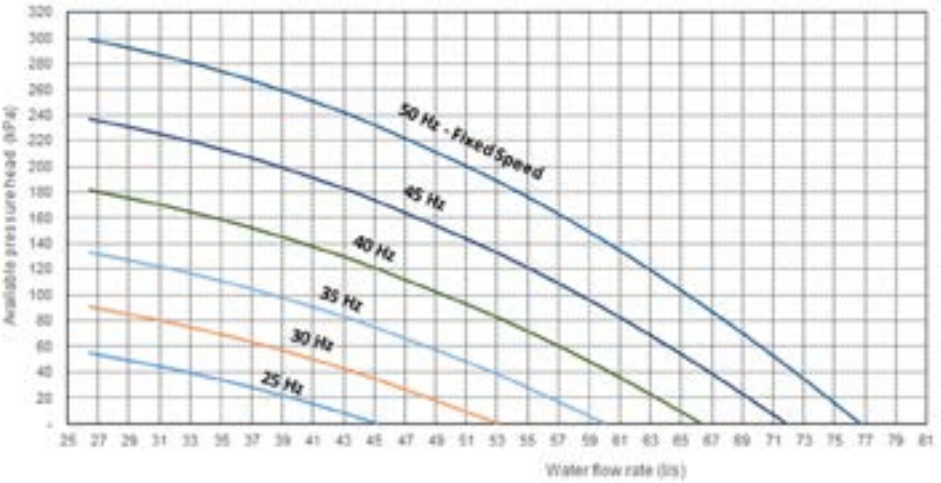


Available pressure head - SYSCREW AIR EVO HSE
High pressure pump (1/2PHP) (continued)

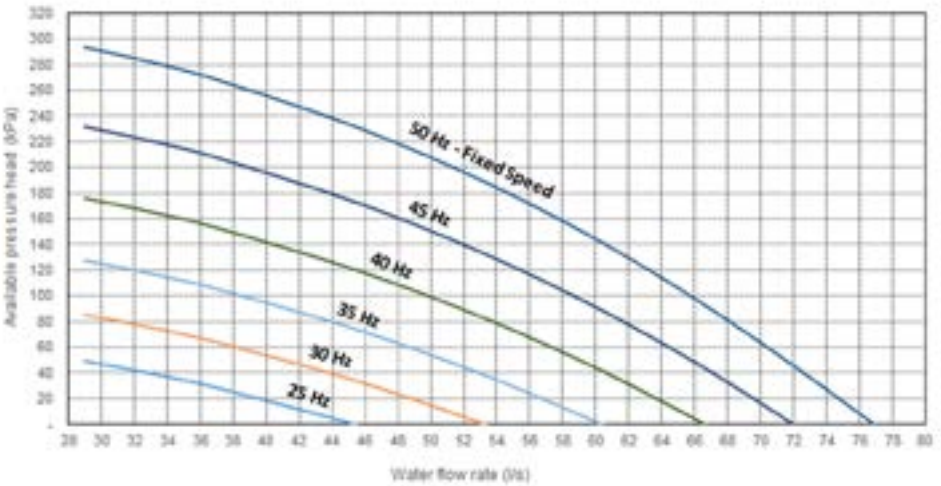
SYSCREW 810 AIR EVO HSE



SYSCREW 900 AIR EVO HSE

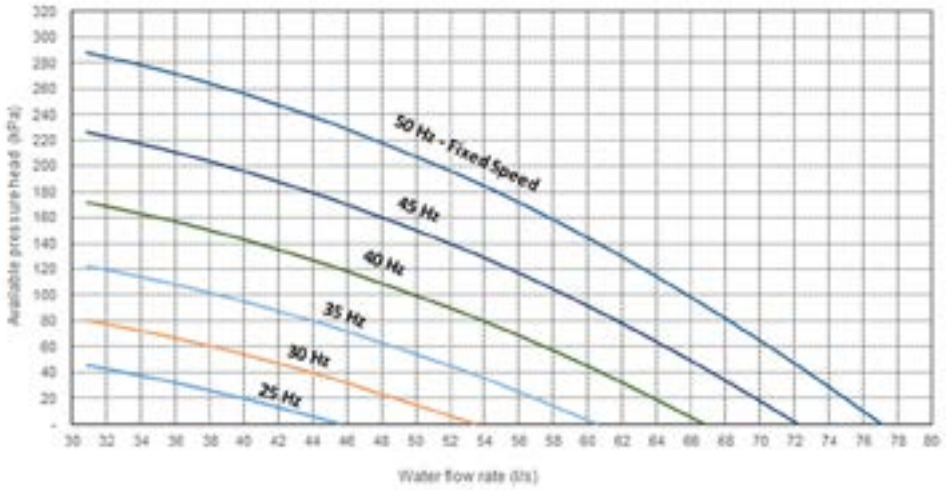


SYSCREW 980 AIR EVO HSE

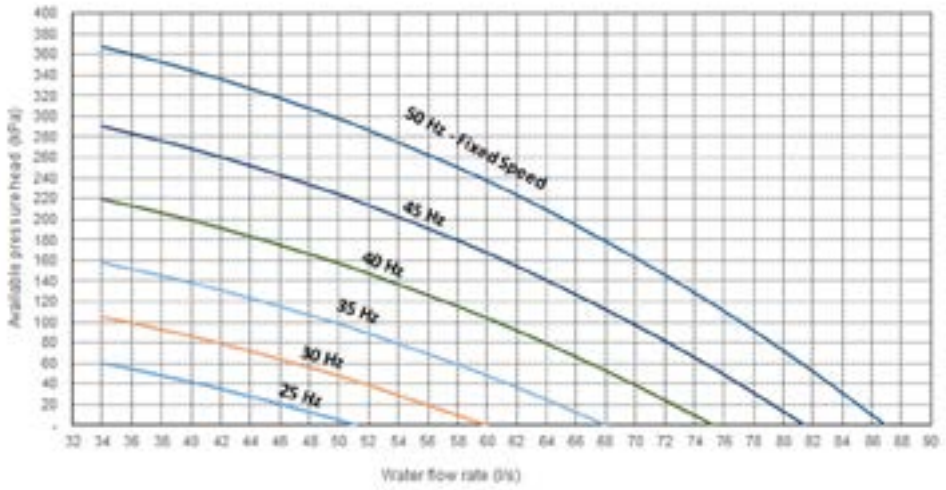


Available pressure head - SYSCREW AIR EVO HSE
High pressure pump (1/2PHP) (continued)

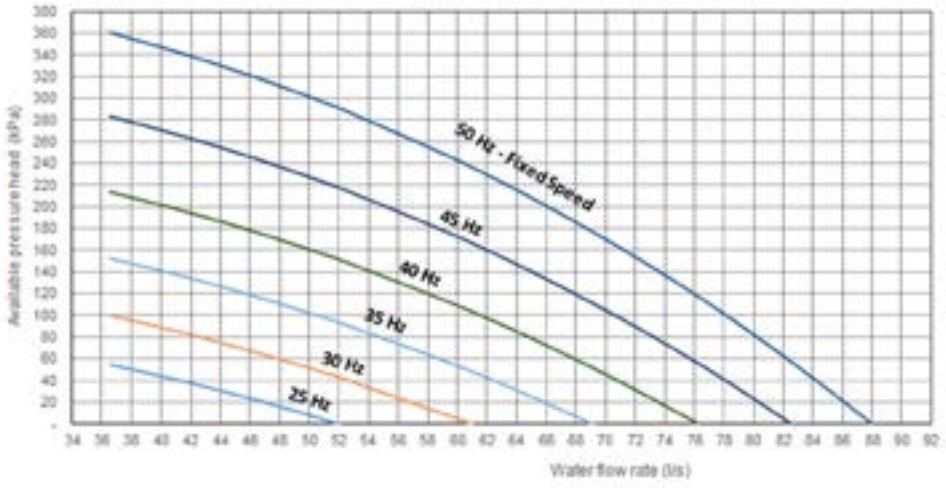
SYSCREW 1060 AIR EVO HSE



SYSCREW 1160 AIR EVO HSEE

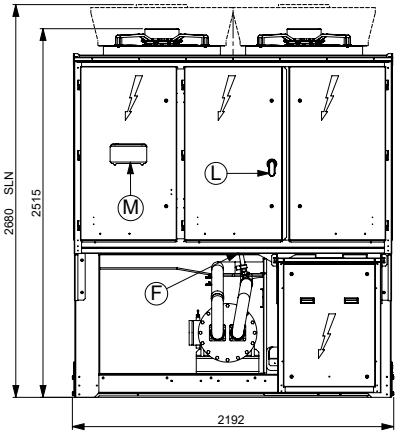


SYSCREW 1260 AIR EVO HSE

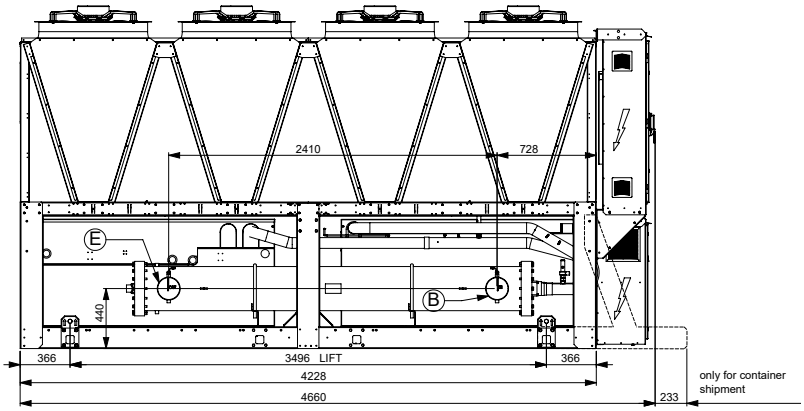


Dimensions SYSCREW 380 AIR EVO HSE

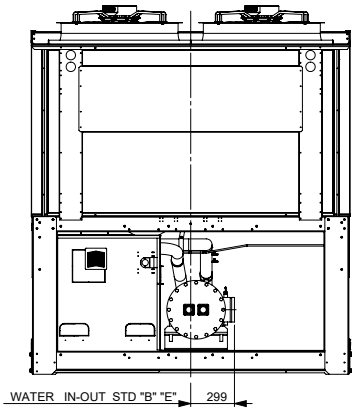
Front view



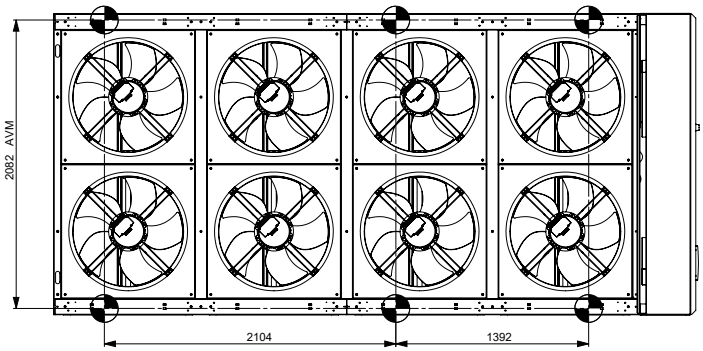
Side view



Back view



Top view



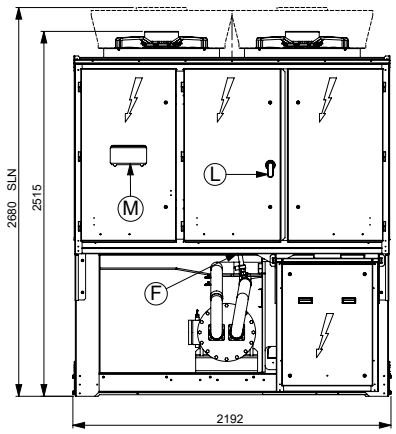
NOTES

B	Water inlet 6" Victaulic
E	Water outlet 6" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

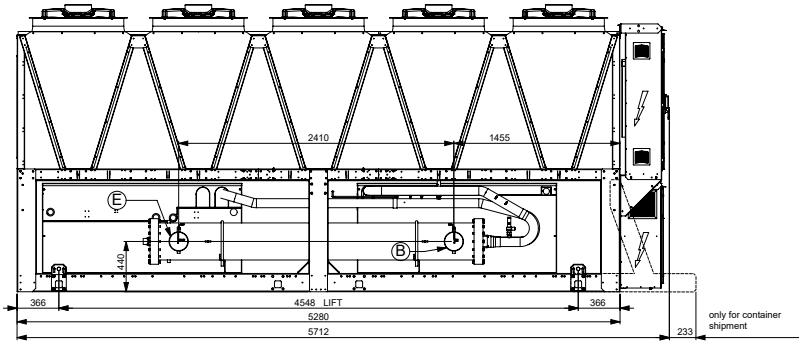
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 440 AIR EVO HSE

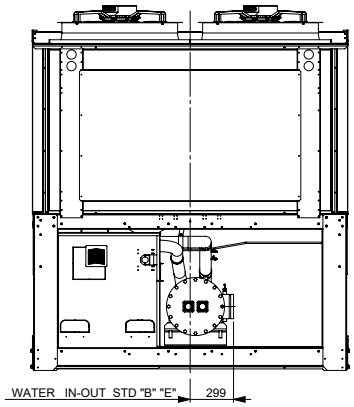
Front view



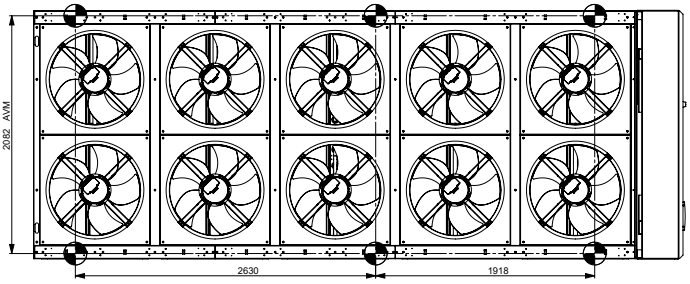
Side view



Back view



Top view



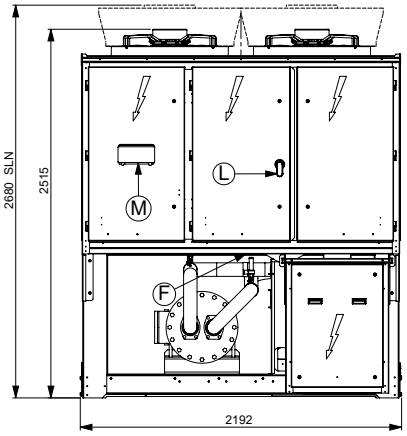
NOTES

B	Water inlet 6" Victaulic
E	Water outlet 6" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

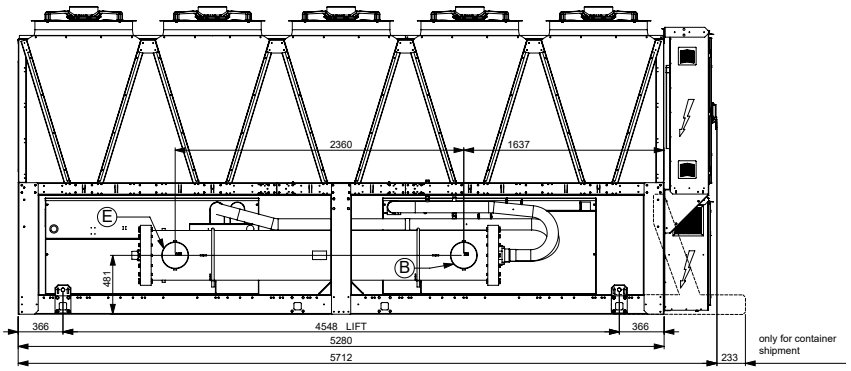
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 510 AIR EVO HSE

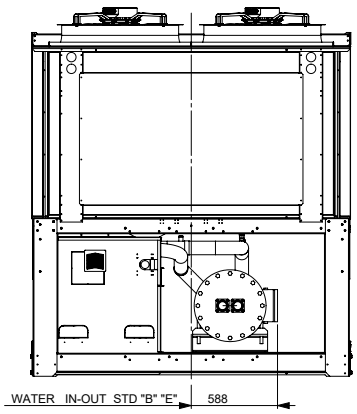
Front view



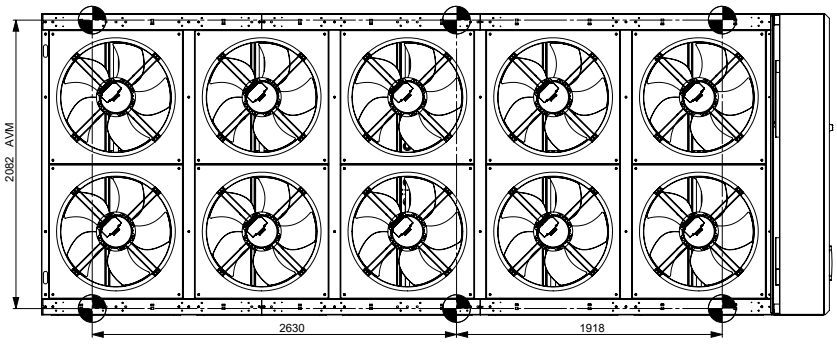
Side view



Back view



Top view



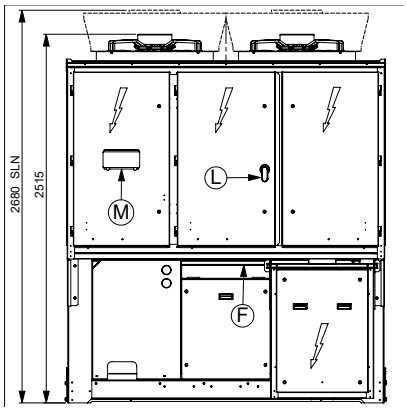
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

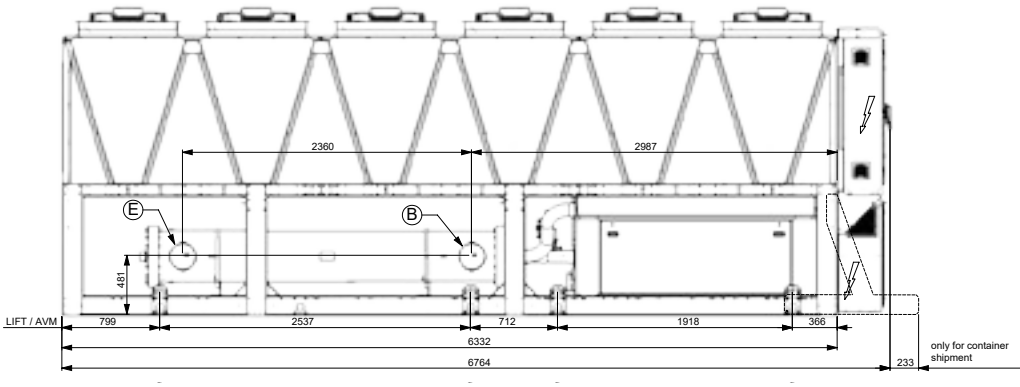
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 590 AIR EVO HSE

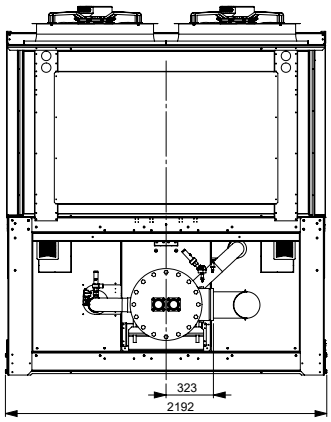
Front view



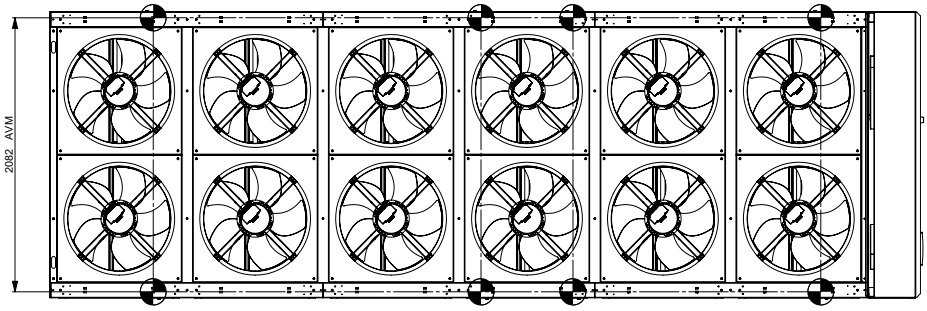
Side view



Back view



Top view



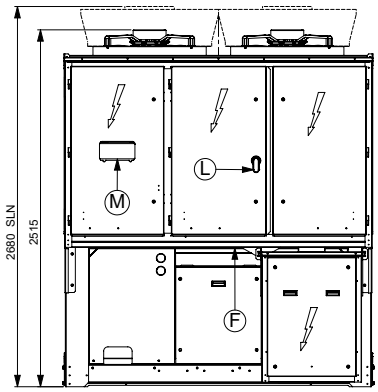
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

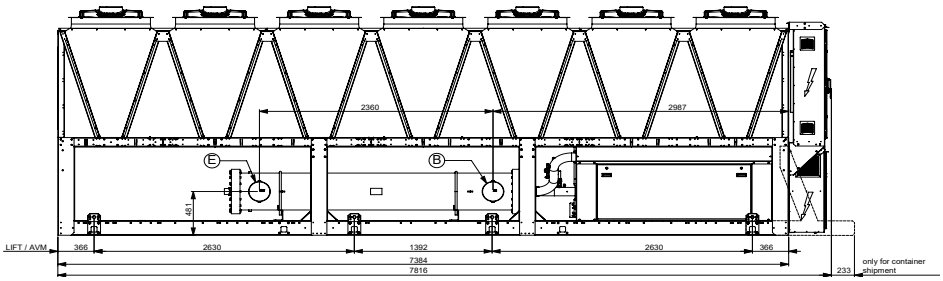
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 660 AIR EVO HSE

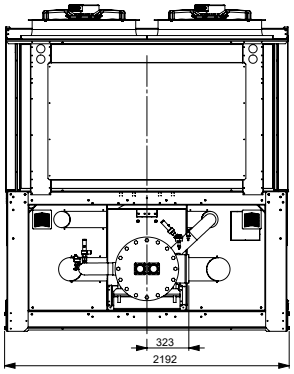
Front view



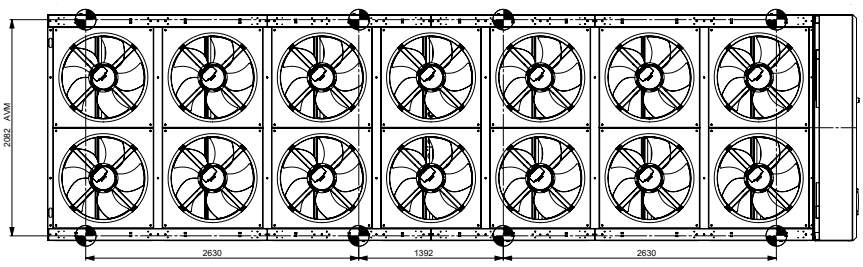
Side view



Back view



Top view



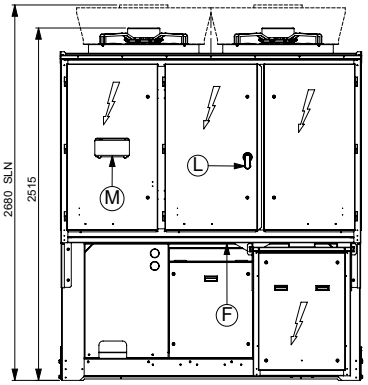
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

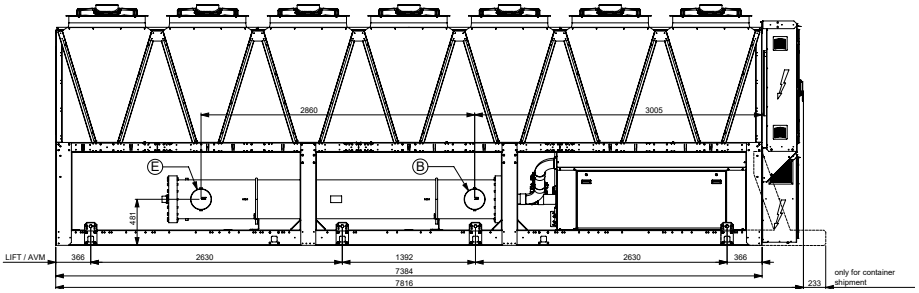
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 730 AIR EVO HSE

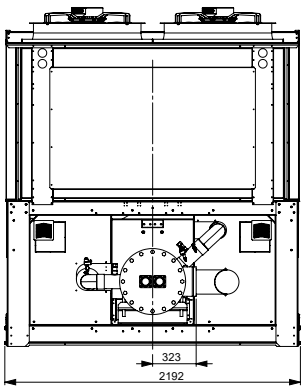
Front view



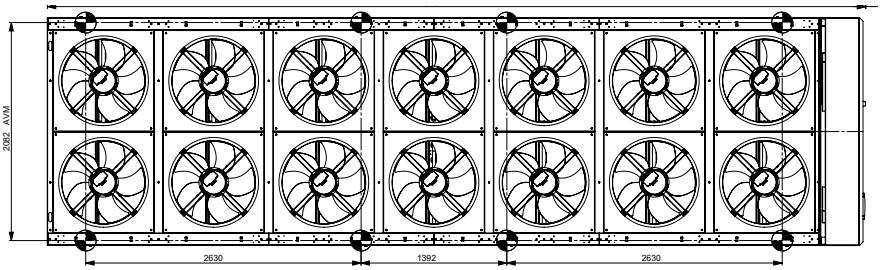
Side view



Back view



Top view



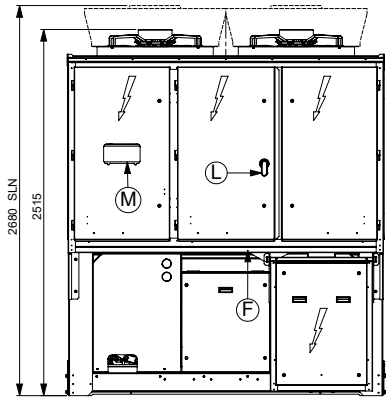
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

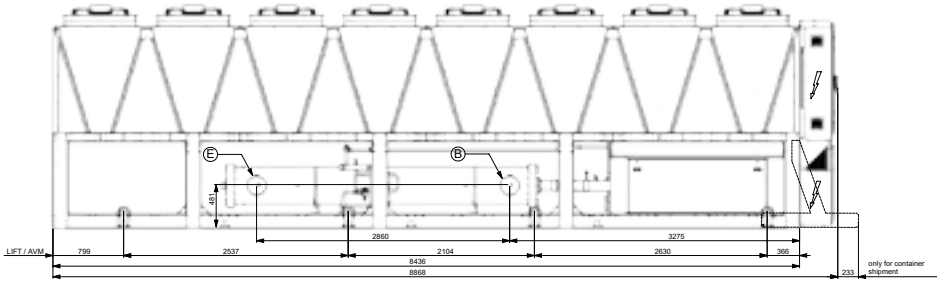
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 810 AIR EVO HSE

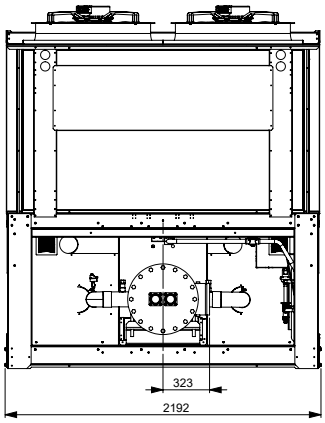
Front view



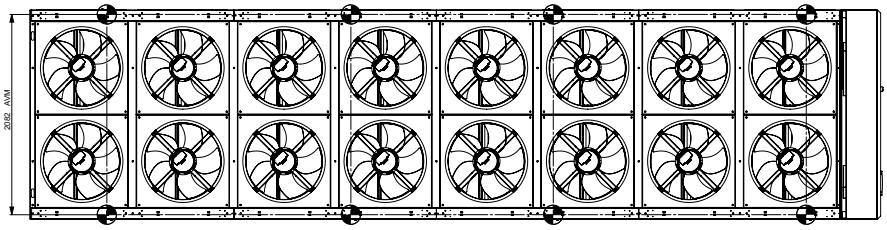
Side view



Back view



Top view



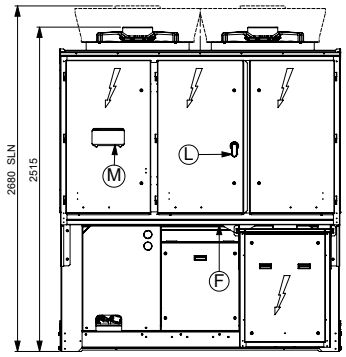
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

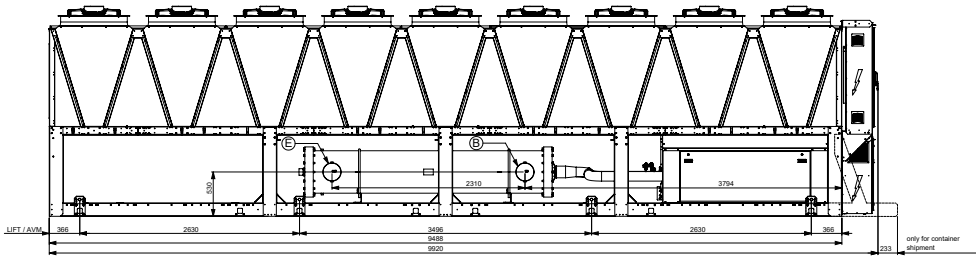
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 900 AIR EVO HSE

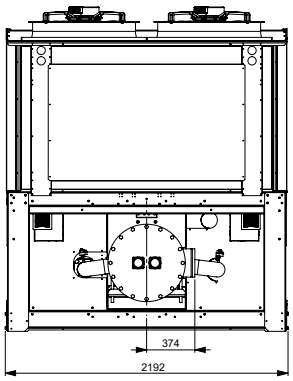
Front view



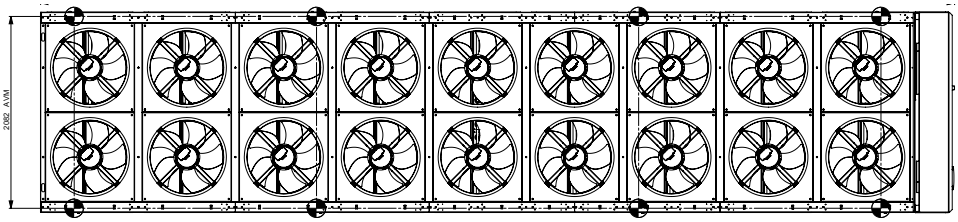
Side view



Back view



Top view



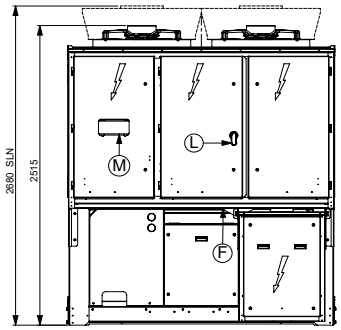
NOTES

B	Water inlet 8" Victaulic
E	Water outlet 8" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

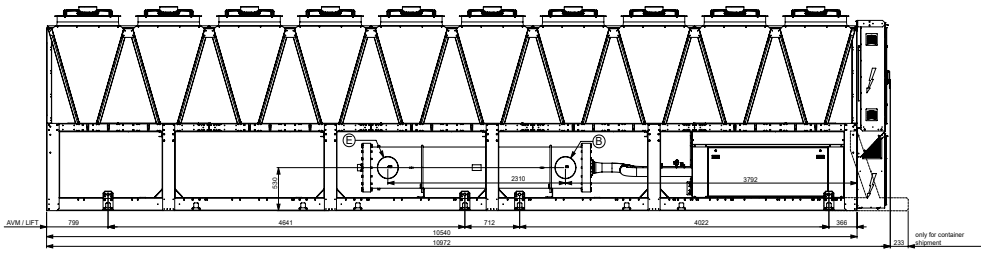
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 980 AIR EVO HSE

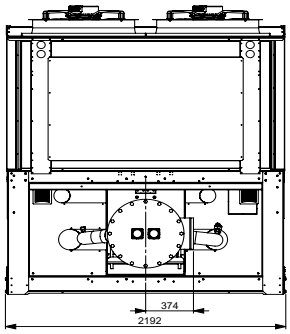
Front view



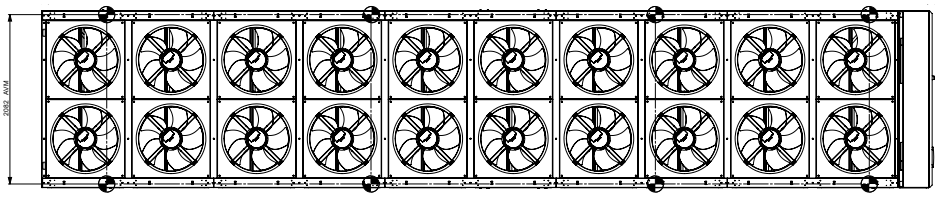
Side view



Back view



Top view



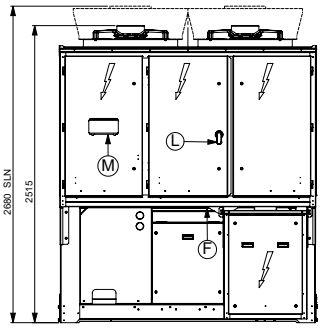
NOTES

B	Water inlet 10" Victaulic
E	Water outlet 10" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

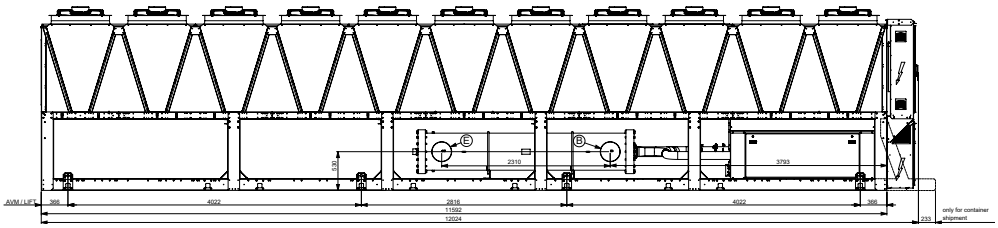
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 1060 AIR EVO HSE

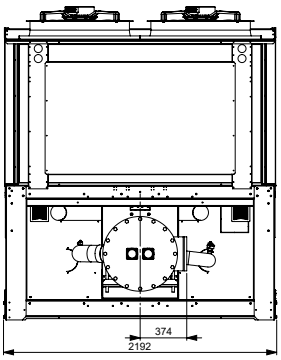
Front view



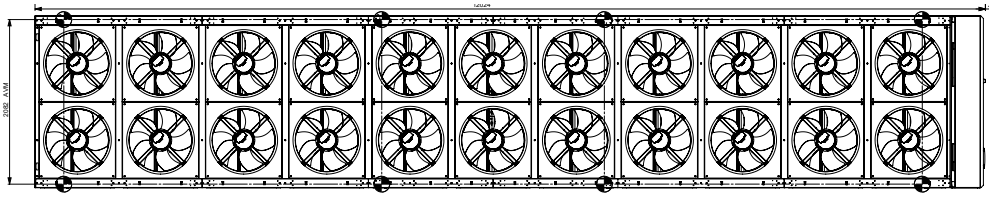
Side view



Back view



Top view



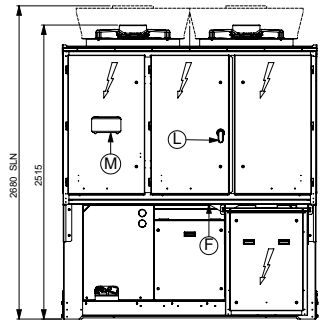
NOTES

B	Water inlet 10" Victaulic
E	Water outlet 10" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

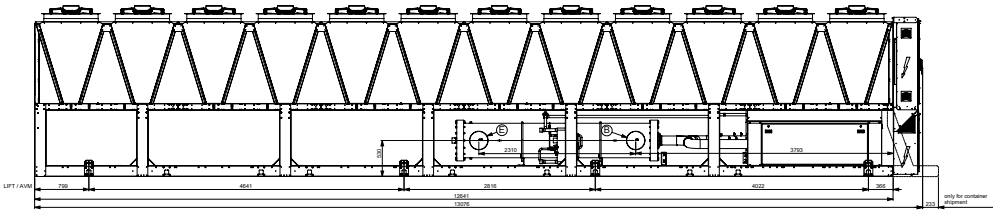
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 1160 AIR EVO HSE

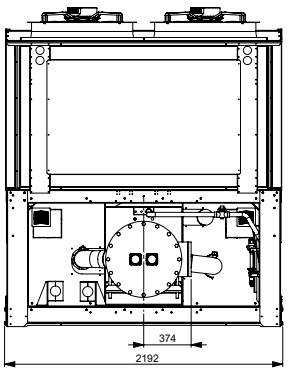
Front view



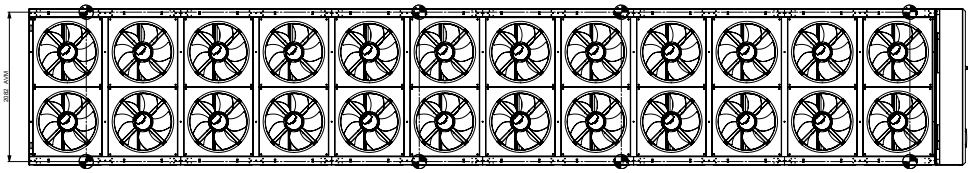
Side view



Back view



Top view



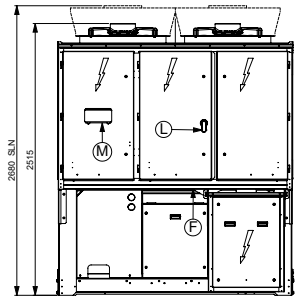
NOTES

B Water inlet 10" Victaulic
E Water outlet 10" Victaulic
F Electrical power supply
L Main switch
M Control keypad / display

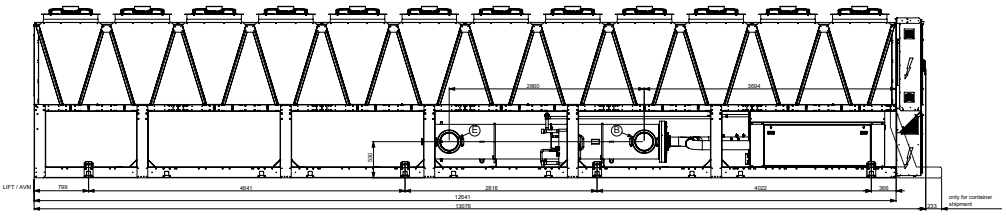
Hydraulic option	Water in	Water out
STD	B	E

Dimensions SYSCREW 1260 AIR EVO HSE

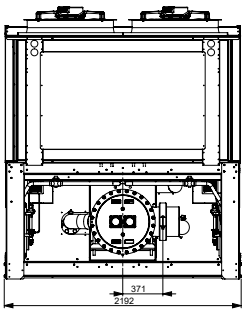
Front view



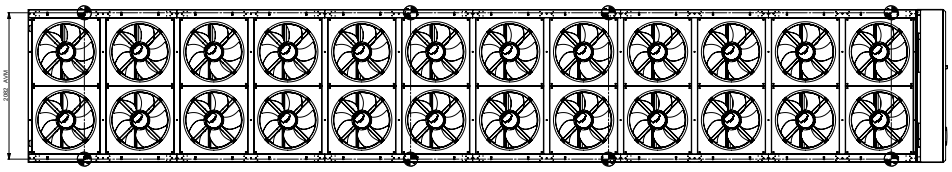
Side view



Back view



Top view

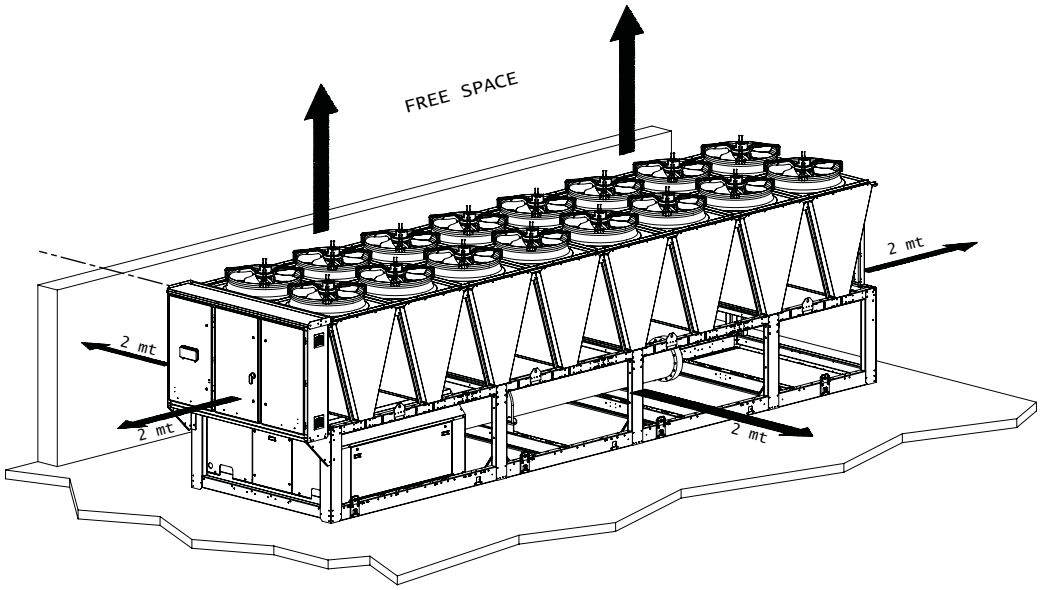


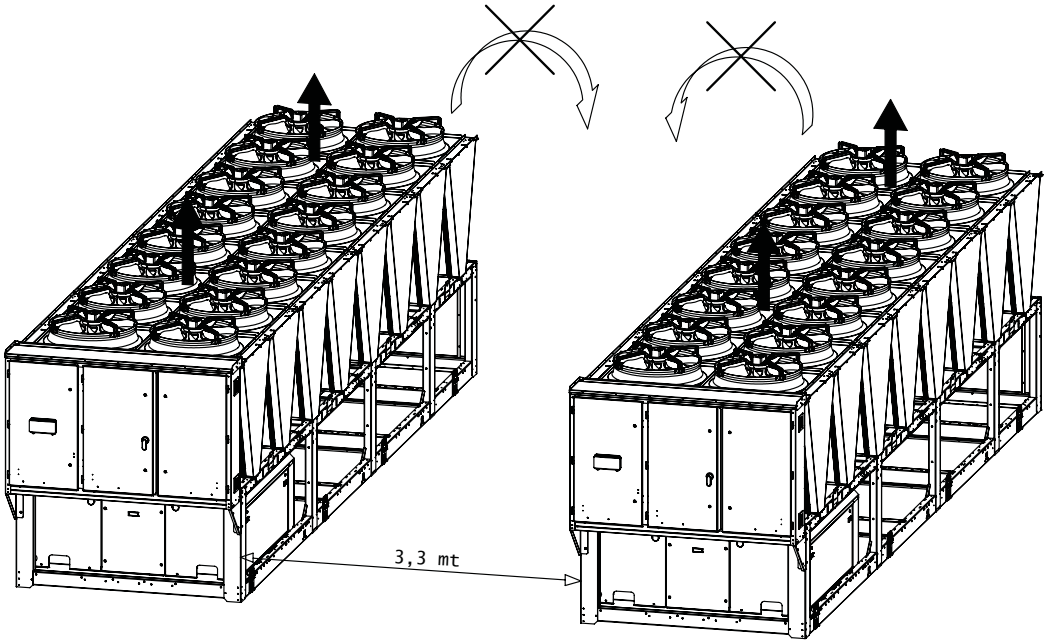
NOTES

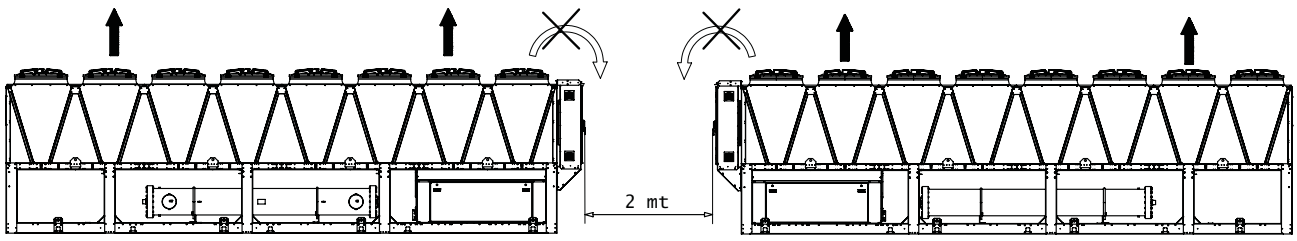
B	Water inlet 10" Victaulic
E	Water outlet 10" Victaulic
F	Electrical power supply
L	Main switch
M	Control keypad / display

Hydraulic option	Water in	Water out
STD	B	E

Space Requirements







Notes

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