YLCS - SA, HA & AA MODELS

ENGINEERING GUIDE	Revision 6	PC155-100 (GB 0510)

WATER COOLED LIQUID CHILLER AND REMOTE AIR COOLED CHILLER

YLCS WsPak

EUROVENT CERTIFIED PERFORMANCE

CE

R134a

YORK BY JOHNSON CONTROLS

Johnson Controls

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Features

York YLCS Water Cooled Screw Chillers are a compact design suitable for water or water-glycol cooling. Models are available in three versions:

- Standard units (SA),
- Units for applications requiring high condensing temperatures (HA)
- Units for applications where remote condensers are necessary (AA).

Semi-hermetic twin helical screw compressors are provided to ensure high operational efficiencies and reliable performance.

They are designed to be located in a plant room and require a cooling tower or dry cooler for heat rejection.

Available Models and Nominal Capacities (Table1)

SA Models

Model	0350	0415	0480	0530	0575	0620
Cooling Capacity (kW)	342	411	480	518	556	605

Model	0670	0750	0860	0980	1120
Cooling Capacity (kW)	645	743	849	966	1099
EER	4.80	4.78	4.93	5.02	5.00

Cooling capacities at 7°C leaving chilled liquid temperature and 35°C leaving condenser water temperature.

HA Models

Model	0350	0415	0480	0530	0575	0620
Cooling Capacity (kW)	282	339	397	426	456	495

Model	0670	0750	0860	0980	1120
Cooling Capacity (kW)	578	667	762	870	987

Cooling capacities at 7°C leaving chilled liquid temperature and 50°C leaving condenser water temperature.

AA Models

Model	0350	0415	0480	0530	0575	0620
Cooling Capacity (kW)	322	388	454	490	526	572

Model	0670	0750	0860	0980	1120
Cooling Capacity (kW)	628	724	828	943	1073

Cooling capacities at 7°C leaving chilled liquid temperature at 45°C saturated discharge temperature at unit.

FEATURES	BENEFITS
Manufactured to ISO 9001/EN 29001.	High standard of quality control.
High efficiency industrial type semi-hermetic twin helical screw compressors.	Energy efficient, long life, reliable compressor.
Separate power and control compartments with lockable doors and emergency stop device.	Operator safety considerations.
Power compartment optional door interlocked isolators.	Operator safety convenience.
Star/Delta compressor starter.	Reduced starting current.
Microprocessor control with visual display of temperatures, pressures, motor current, operating hours and number of starts.	System data logging and temperature reset capability. Fault diagnostics. Energy management.
Multiple Independant Refrigerant Circuits	System Stand-by Security
Full Factory Run Test	Verifies quality control and ensures that the unit operates satisfactorily prior to delivery
Unit remote alarm contacts.	Warning notification.
Optional remote water temperature reset.	Improves operating efficiency.
Building Management System interface.	For central data logging and single point system monitoring and control.

Specification

General

YLCS models shall be completely assembled with all interconnecting refrigerant piping and internal wiring, ready for field installation. SA and HA units shall be pressure tested, evacuated, and fully factory charged with refrigerant and oil in each of the independent refrigerant circuits. For AA units, the unit shall be pressure tested, evacuated, and filled with 0.35 barg pressure of nitrogen per independant circuit. After assembly, a simulated functional test shall be performed on the unit

Unit to have final overspray paint after assembly (optional) by customer request.

Compressors

Each compressor shall be direct drive, semi-hermetic, rotary twin screw type and include the following items:

- Two screw rotors, with asymmetric profiles, manufactured from forged steel.
- A cast iron compressor housing precision machined to provide optimal clearance for the rotors.
- The entire compressor, from suction to discharge shall have a design working pressure of 31 barg.
- Capacity Control: The compressors shall start at the minimum load position and provide a load control range from 100% to 15% of the full load using step control. A microprocessor controlled output pressure regulating capacity control valve shall be supplied to command compressor capacity independent of control valve input pressure and to balance the compressor capacity with the cooling load.
- An automatic spring return of capacity control valve to the minimum load position to ensure compressor starting at minimum motor load.
- An internal discharge check valve to prevent rotor backspin upon shutdown.
- Remote acoustic tuned muffler.
- Discharge and optional suction shut-off service valves.
- A reliable suction gas cooled high efficiency, accessible hermetic motor with redundant overload protection using both thermistor and current overload protection.
- A suction gas screen and serviceable, 17 micron full flow oil filter within the compressor housing.
- A 300 W compressor body heater.
- Integral oil separators with a design working pressure of 31 barg shall be the high efficiency, augmented gas impingement type to maximise oil extraction without fragile media to break down.

Motor Starting

Two types of compressor motor starting are available: star/delta open transition starter and optional star/delta closed transition starter.

The standard star/delta starter utilises 3 motor contactors and a transition delay relay. The optional closed Star/Delta starter utilises 4 motor contactors, a set of transition resistors and a transition delay relay. The star/delta start allows inrush current to be limited to approximately 33% LRA with the closed transition option reducing the transient star to delta current. When the microprocessor initiates a start signal to run a compressor, it runs in Star for 4 seconds and then transitions to Delta.

Oil Cooling

Compressor oil cooling shall be provided by refrigerant liquid, which will be injected into the rotor suction when the temperature setpoint is exceeded.

Evaporator

The evaporator is a shell and tube design with refrigerant on the tube side and water on the shell side. Tubes are formed in a "U" shape and held in a tube bundle, which is free to expand independent of the shell. An independent circuit shall be provided for each compressor.

The waterside (shell) design working pressure of the evaporator is 10 barg. The refrigerant side (tubes) design working pressure is 20 barg on models 0350 to 0750 and 24 barg on models 0860 to 1120.

The evaporator shall have water pass baffles fabricated from non metallic composite materials (0350 to 0750) and corrosion resistant galvanised steel (0860 to 1120), removable head for access to internally enhanced, seamless, copper tubes. Water vent and drain connections shall also be included.

Models 0350 to 0750 have vertical water nozzles (standard) with victaulic couplings (shipped loose) for field installation by contractor. Horizontal water nozzles with victaulic couplings (shipped loose) are available as an option.

Models 0860 to 1120 have horizontal water nozzles with victaulic grooves (victaulic couplings to be supplied by others).

Optional ISO EN1092-1 Type 0.1.A welded flanges and companion flanges, complete with nuts, bolts and gaskets are available on all models.

Condenser

For SA and HA units separate circuit condensers shall be cleanable shell & tube type with a built in sub-cooler and re-moveable water heads. The design working pressure on the water side shall be 10 barg and 30 bar on the refrigerant side which is protected by pressure relief valve(s). For AA units water cooled condensers shall be factory removed. Remote air-cooled condenser to be supplied by others.

Refrigerant Circuits

An independent refrigerant circuit shall be provided per compressor. Liquid line components shall include: manual shut-off valve with charging port, high absorption removable core filter-drier, solenoid valve, sight glass with moisture indicator, and thermostatic expansion valve. Suction lines components shall include a pressure relief valve and a service valve (optional) and shall be covered with closed-cell insulation. Discharge line components shall include a manual shut-off valve, pressure relief valve, temperature sensor and high-pressure cut-out sensors.

Power and Control Panels

All controls and motor starting equipment necessary for unit All controls and motor starting equipment necessary for unit operation shall be factory wired and function tested.

The panel enclosure shall be designed to IP42 (rain/dust tight) and be manufactured from powder painted galvanised steel. Component mounting panels are of non-painted galvanised steel to ensure optimum protective circuit (earthing).

The Power and Control Panel shall be divided into a power section for each electrical system, a control section and a common input section. Power entry is from the top of the control panel common input section. All sections shall have a separate hinged, latched, and gasket sealed door.

Each power compartment shall contain:

Compressor fuses, compressor and phase sequence failure, phase rotation and star/delta time delay relays to give overload and short circuit protection.

The control section shall contain:

On/Off switch, microcomputer keypad and display, microprocessor board, I/O expansion board, relay boards and power supply board.

Models with Standard Single Point Power Supply Connection

The common input section contains:

An incoming non-fused disconnect switch for connection of the customer provided single power supply. Internal factory wiring to two fused protected power sections. The control supply is derived internally from the incoming power supply.

The common input section also contains the control circuit switch disconnect/emergency stop device, a transformer (to provide the necessary 24V and 12V supplies for the power supply board, and I/O board), control fuses, residual current circuit breaker, and terminals for a remote emergency stop device.

Microprocessor Controls

The microprocessor shall have the following functions and displays:

- A liquid crystal 40 character display with text provided on two lines and light emitting diode backlighting for outdoor viewing.
- A colour coded, 35 button, sealed keypad with sections for Display, Entry, Setpoints, Clock, Print, Program and Unit On/Off switch.

The standard controls shall include: automatic pump down at shutdown, run signal contacts, demand load limit from external building automation system input, remote reset liquid temperature reset input, unit alarm contacts, chilled liquid pump control, automatic reset after power failure, automatic system optimisation to match operating conditions, software stored in non-volatile memory (EPROM) to eliminate chiller failure due to AC power failure.

The microprocessor can be directly connected to a YORK ISN Building Automation System via the standard on-board RS485 communication port. This option also provides open system compatibility with other communications networks.

Programmed Setpoints shall be retained in a lithium battery backed RTC memory for a minimum of 5 years.

DISPLAY – In Metric (°C and barg) or English (°F and psig) units. For each circuit, the following items shall be displayed:

- Entering and leaving chilled liquid temperature.
- Day, date and time. Daily start/stop times. Holiday and Manual Override status.
- Compressor operating hours and starts. Automatic or manual lead/lag. Lead compressor identification.
- Run permissive status. No cooling load condition. Compressor run status.
- Anti-recycle timer and anti-coincident start timer status per compressor.
- System suction (and suction superheat), discharge, and oil pressures and temperatures.
- Percent full load compressor motor current. Compressor capacity control valve input steps.
- Cut-out status and set-points for: entering chilled liquid temperature., low suction pressure, high discharge pressure and temperature, high oil temperature, high and low current, and low leaving liquid temperature.
- Unloading limit setpoints for high discharge pressure and compressor motor current.
- Liquid pull-down rate sensitivity (0.3°C to 3°C/minute in 0.05°C increments).
- Status of load and unload timers, chilled liquid pump.
- “Out of range” message.
- Up to 6 fault shut down conditions.

ENTRY – Enter set point changes, cancel inputs, advance day, and change AM/PM.

SET POINTS – Chilled liquid temperature, chilled liquid range, remote reset temperature range.

CLOCK – Time, daily or holiday start/stop schedule, manual override for servicing.

PRINT – Operating data or system fault shutdown history for last six faults, printouts via a separate printer (by others).

PROGRAM – Low leaving liquid temperature cutout, 300 to 600 second anti-recycle timer, lag compressor start time delay, average motor current unload point, liquid temperature set-point reset signal from YORK ISN or building automation system (by others) via:

- Pulse width modulated (PWM) input for up to 22°C total reset as standard.
- Optional Building Automation System interface input card for up to 11°C reset using a 4 to 20 mA, 0 to 10 Vdc input, or discrete reset input.
- [**NOTE:** The Standard microprocessor can be directly connected to a YORK ISN Building Automation System via the standard on-board RS485 communication port. This Option also provides open system compatibility with other communications networks (BACNET™, MODBUS™ & LONMARK™) via interface through standard onboard 485 or 232 port and an external YorkTalk Translator.]
- Additional functions (password protected) for programming by a qualified service technician:
- Cut-outs for low suction pressure, high discharge pressure, high oil temperature.
- High discharge pressure unload setpoint.
- Compressor motor current percent limit.

Motor Protection

The microprocessor motor protection provides high current protection to ensure that the motor is not damaged due to voltage, excess refrigerant or other problems that could cause excessive motor current.

The microprocessor also provides low motor current protection when it senses a motor current of less than 10% FLA.

A motor protector module provides thermal and current motor overload protection. The module also protects against phase to phase current imbalance, over current, under current and phase rotation.

Accessories and Options

ELECTRICAL OPTIONS

Power Supply Connection

Units are available with either single point or multi point power supply connections:

Single Point - System Fused Disconnect Switches

A non-fused disconnect switch in the common input section of the panel for connection of the customer provided single power supply. Internal factory wiring to two door interlocked fused disconnect switches mounted in the power sections. The control supply is derived internally from the terminal block.

Single Point - System Circuit Breakers

A terminal block in the common input section of the panel for connection of the customer provided single power supply. Internal factory wiring to two door interlocked circuit breakers, mounted in the power sections. The control supply is derived internally from the terminal block.

Multi-Point - System Circuit Breakers

Two door interlocked circuit breakers, mounted in the power sections, for connection of the customer provided power supplies. A non-fused disconnect switch / emergency stop device (QCSD/ESD) in the common input section with termination for the customer (400 V, 2Ø, 50 Hz) control supply.

Building Automation System (BAS) / EMS Interface

Provides a means to reset the leaving chilled liquid temperature and from the BAS / EMS (Factory Mounted):

Printed circuit board to accept 4 to 20 mA, 0 to 10 Vdc, or dry contact closure input from the BAS / EMS.

Note: A YORK ISN Building Automation System can provide a Pulse Width Modulated (PWM) signal direct to the standard control panel via the standard on-board RS485 port.

E-Link Gateway

Interface to enable communication with building control systems using BACnet, MODBUS, LON or N2 protocols. See separate York documentation.

ACCESSORIES

Anti-Vibration Mounts

Optional 25mm deflection, open spring, anti-vibration mounts with levelling screw. Supplied loose for field installation.

Optional floor mounting kit with 25 mm neoprene pads. Supplied loose for field installation.

Power Factor Correction:

Factory mounted passive (static) correction capacitors to correct unit compressor power factors to 0.95 (depending on operating conditions).

Flow Switch

Switch with 1 inch BSP thread suitable for 10 barg DWP and having gold contacts for low voltage/current, to protect unit from loss of water flow. Supplied loose for field installation,

or

Factory fitted pressure differential switch on cooler.

Suction Shut-off Valves

A ball valve in the low pressure (suction) pipework per refrigerant circuit for isolation.

Evaporator Kits

Models 0350 to 0725, horizontal water nozzles with victaulic couplings (shipped loose), vertical nozzle cooler with EN1092-1 Type 01.A welded/companion flange kit, or horizontal nozzle cooler with EN1092-1 Type 01.A welded/companion flange kit. Models 0840 to 1110, ISO EN1092-1 Type 01.A welded/companion flange kit for standard horizontal nozzle cooler (**Note**: vertical nozzle coolers are not available).

Low temperature Evaporator Kits

Low temperature evaporator configurations are identical to the standard or options detailed above.

Pressure Relief Valves Options

- Pressure Relief (CE/PED) Serviceable Valve & Dual Kit.
  High & Low side vessels' dual relief valves fitted with 3 way changeover valves and compressors' single relief valves fitted with ball valves, to assist valve replacement during maintenance without loss of refrigerant charge.
- Pressure Relief (CE/PED) Serviceable Valve & Dual Kit & Burst.
  High & Low side vessels' dual relief valves fitted with bursting disks and 3 way changeover valves and compressors' single relief valves fitted with bursting disks and ball valves, to assist valve replacement during maintenance without loss of refrigerant charge.

Dual Pressure Switch

Dual HP pressure cut-outs on both circuits.

Heat Pump Sensor Kit:

Capability of controlling condenser water off for heat pump applications.

Closed Transition Star/Delta

With the addition of closed transition contactors and resistors, the change over spike during starting can be reduced to nearer the star inrush level thus reducing the risk of electrical interference during compressor start.

Mechanical Gauge Kit

Factory fitted mechanical gauges for display of suction and discharge pressures, one complete set per system.

Double Thickness Insulation

The cooler is covered with 38 mm (1 ½ inch) flexible, UV-stable colour co-ordinated closed-cell, foam insulation to prevent sweating in humid environment.

Condenser extension / Manifold kits

Condenser extension kit simplifies connections to customer pipework. Both options come with either Victaulic coupling or welded Flange/companion flange kit.

IP54

Panel enclosure designed to IP54.

Language LCD and Keypad

Standard display language and keypad is English. French, German, Italian, Spanish, Portugese and Hungarian are available as options.

Sequence Controller:

Monitors mixed leaving chilled water or glycol temperature from two to four units and controls to maintain required mixed temperature whilst running the minimum number of units.

Printer

Hand held printer for obtaining printout of unit operating data and history data.

Paint Overspray

Complete unit finish in Carribean Blue.

Lifting Lug Kit

One set of ISO Mk5 cam locks to enable safe and easy unit handling.

Factory Witness Test:

To perform a customer functional witness test of cooling capacity only, test is carried out in factory test area.

Operating Limitations

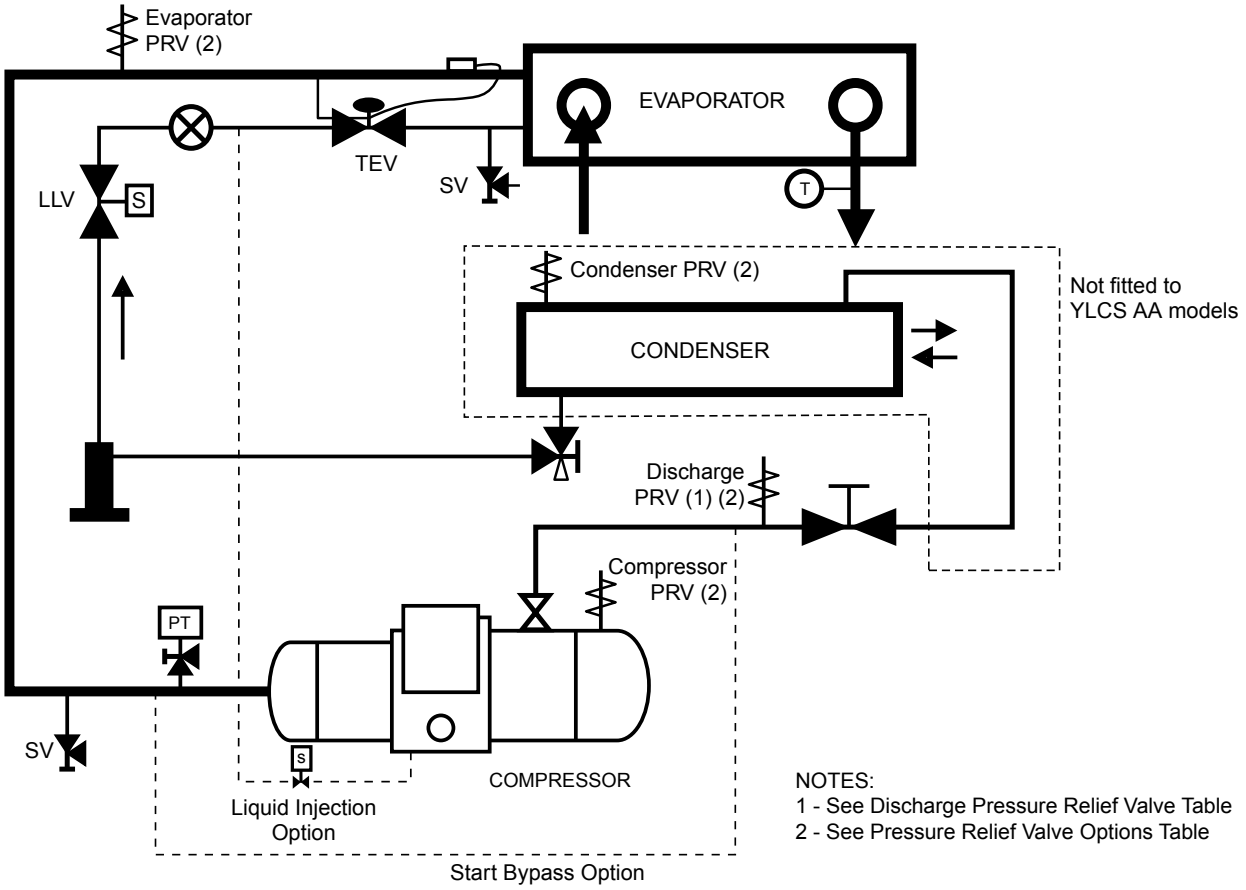
YLCS Models SA - HA - AA			0350		0415		0480		0530	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Chilled Liquid	Liquid outlet temperature (water)	°C	4.5 to 15							
	Liquid outlet temperature (glycol) (3)	°C	-12 to 15							
	Liquid outlet temperature range	°C	3.3 to 8							
	Flow rate	l/s	9.2	20.2	9.2	20.2	16.0	35.3	16.0	35.3
	Pressure drop	kPa	14.6	66.3	12.7	57.3	15.1	67.0	15.1	67.0
	Maximum working pressure	barg	10							
Cooling Liquid	Liquid outlet temperature	°C	30 to 40 (SA) / 60 (HA)							
	Liquid outlet temperature range	°C	3.3 to 8							
	Total flow rate (2)	l/s	10.0	23.8	13.6	33.9	13.6	33.9	16.1	40.6
	Pressure drop	kPa	11.8	60.0	12.5	70.0	12.5	70.0	12.0	69.0
	Maximum working pressure	barg	10							
Refrigerant System High pressure side		barg	18 (SA) / 22 (HA/AA)							
Power supply voltage 400 V, 3 Ø, 50 Hz (nominal)		V	360 to 440							
Recommended system water volume(1)		l	1400		1700		1900		2000	
Air temperature surrounding unit		°C	+4 to 46							

YLCS Models SA - HA - AA			0575		0620		0670		0750	
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Chilled Liquid	Liquid outlet temperature (water)	°C	4.5 to 15							
	Liquid outlet temperature (glycol) (3)	°C	-12 to 15							
	Liquid outlet temperature range	°C	3.3 to 8							
	Flow rate	l/s	16.0	35.3	16.0	35.3	19.8	43.6	19.8	43.6
	Pressure drop	kPa	17.6	77.0	17.6	77.0	14.7	65.0	16.6	73.0
	Maximum working pressure	barg	10							
Cooling Liquid	Liquid outlet temperature	°C	30 to 40 (SA) / 60 (HA)							
	Liquid outlet temperature range	°C	3.3 to 8							
	Total flow rate (2)	l/s	16.1	40.6	19.3	48.3	19.3	48.3	25.5	63.3
	Pressure drop	kPa	12.0	69.0	12.4	70.0	12.4	70.0	12.3	69.0
	Maximum working pressure	barg	10							
Refrigerant System High pressure side		barg	18 (SA) / 22 (HA/AA)							
Power supply voltage 400 V, 3 Ø, 50 Hz (nominal)		V	360 to 440							
Recommended system water volume(1)		l	2200		2400		2600		2900	
Air temperature surrounding unit		°C	+4 to 46							

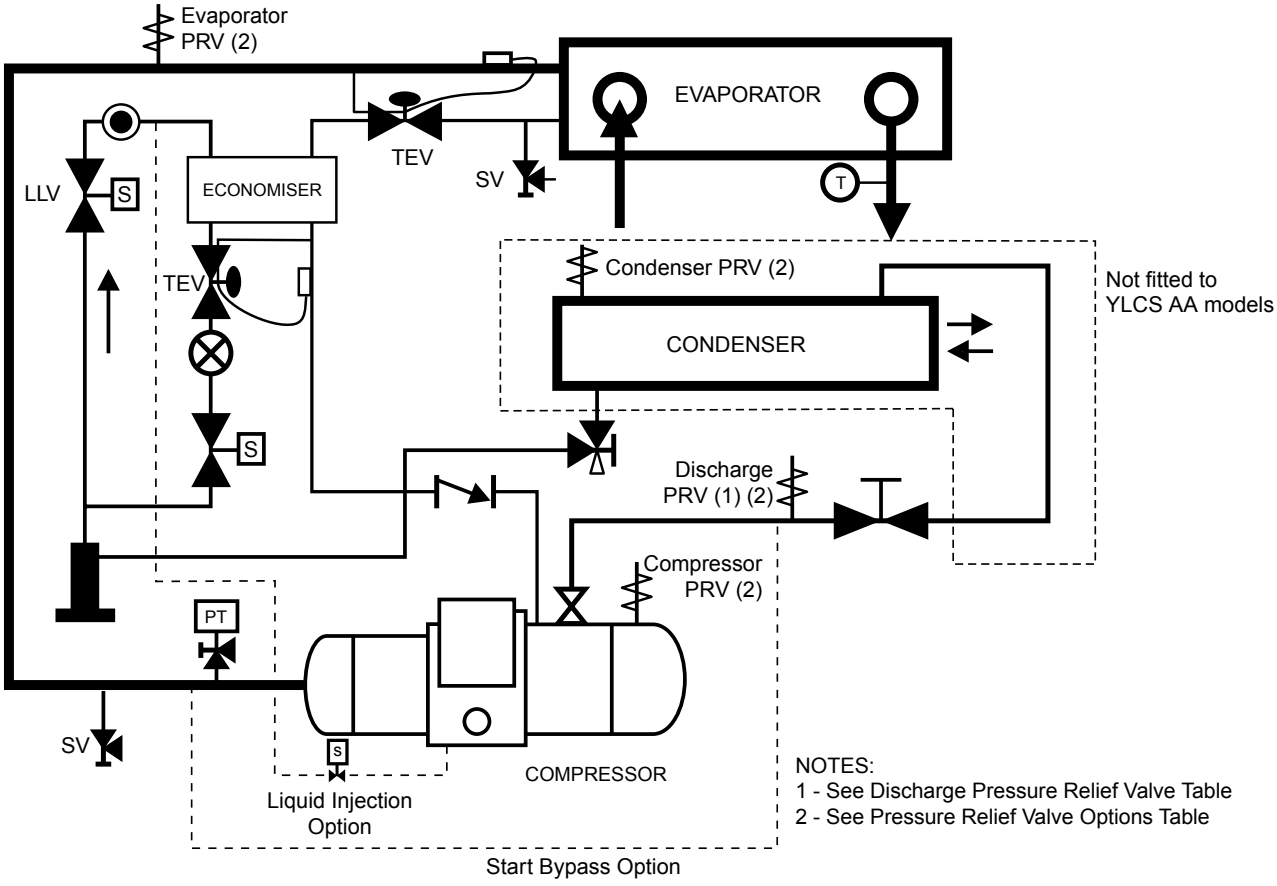
YLCS Models SA - HA - AA			0860		0980		1120	
			Min.	Max.	Min.	Max.	Min.	Max.
Chilled Liquid	Liquid outlet temperature (water)	°C	4.5 to 15					
	Liquid outlet temperature (glycol) (3)	°C	-12 to 15					
	Liquid outlet temperature range	°C	3.3 to 8					
	Flow rate	l/s	21.3	51.0	21.3	51.0	25.0	60.0
	Pressure drop	kPa	20.1	97.4	20.1	97.4	21.6	99.4
	Maximum working pressure	barg	10					
Cooling Liquid	Liquid outlet temperature	°C	30 to 40 (SA) / 60 (HA)					
	Liquid outlet temperature range	°C	3.3 to 8					
	Total flow rate (2)	l/s	25.5	63.3	25.5	63.3	25.5	63.3
	Pressure drop	kPa	12.3	69.0	16.4	92.0	16.4	92.0
	Maximum working pressure	barg	10					
Refrigerant System High pressure side		barg	18 (SA) / 22 (HA/AA)					
Power supply voltage 400 V, 3 Ø, 50 Hz (nominal)		V	360 to 440					
Recommended system water volume(1)		l	3400		3800		4400	
Air temperature surrounding unit		°C	+4 to 46					

(1) Table shows minimum water volume of system
(2) Shared equally between condensers
(3) Glycol operation only available for HA/AA models

Refrigeration Flow Diagram (YLCS 0350 to 0620 Models)



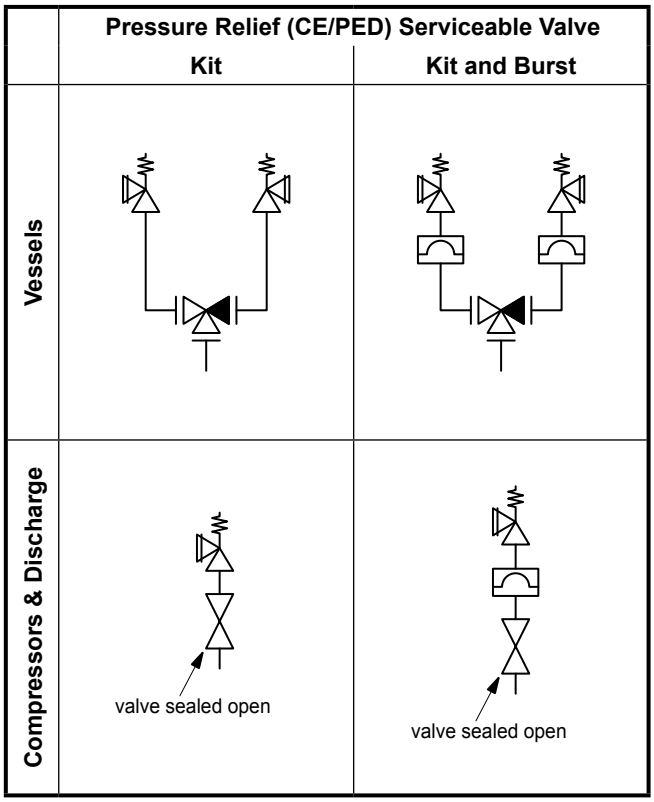
Refrigeration Flow Diagram (YLCS 0670 to 1120 Models)



Discharge Pressure Relief Valves

Model	SA		HA & AA	
	System **1**	System **2**	System **1**	System **2**
0350	No Valve	No Valve	No Valve	No Valve
0415	Valve	No Valve	No Valve	No Valve
0480	Valve	Valve	No Valve	No Valve
0530	Valve	Valve	No Valve	No Valve
0575	Valve	Valve	No Valve	No Valve
0620	Valve	Valve	No Valve	No Valve
0670	Valve	Valve	No Valve	No Valve
0750	Valve	Valve	No Valve	No Valve
0860	Valve	Valve	No Valve	No Valve
0980	Valve	Valve	Valve	No Valve
1120	Valve	Valve	Valve	Valve

Pressure Relief Valve Options



YLCS SA & HA

Low pressure liquid refrigerant enters the cooler tubes and is evaporated and superheated by the heat energy absorbed from the chilled liquid passing through the cooler shell. Low pressure vapour enters the compressor where pressure and superheat are increased. High pressure vapour is passed through the oil separator in the compressor where compressor oil is removed and reticulated to the compressor. High pressure superheated refrigerant enters the condenser shell where heat is rejected to the condenser water passing through the tubes. The fully condensed and subcooled liquid leaves the condenser and enters the expansion valve, where pressure reduction and further cooling takes place. The low pressure liquid refrigerant then returns to the cooler.

YLCS AA (remote air cooled condenser)

Low pressure liquid refrigerant enters the cooler tubes and is evaporated and superheated by the heat energy absorbed from the chilled liquid passing through the cooler shell. Low pressure vapour enters the compressor where pressure and superheat are increased. High pressure vapour is passed through the oil separator in the compressor where compressor oil is removed and reticulated to the compressor. The high pressure superheat refrigerant enters the remote air cooled condenser where heat is rejected via the condenser coil & fans The fully condensed and subcooled liquid leaves the condenser and enters the expansion valve, where pressure reduction and further cooling takes place. The low pressure liquid refrigerant then returns to the cooler.

Selection Guide - Water

Data Required

To select a YORK YLCS chiller the following information is required:

1. Design cooling capacity.
2. Chilled water entering and leaving temperatures.
3. Condenser water entering and leaving temperature.
4. Chilled water flow (l/s) if one of the temperatures in (2) is unknown.
5. Condenser water flow (l/s) if one of the temperatures in (3) is unknown.

Determine the capacity or water flow from:

Cooling Capacity (kW) =
Range (°C) x chilled water (l/s) x 4.18

Determine the heat rejection or water flow from:

Heat Rejection (kW) =
Range (°C) x condenser water (l/s) x 4.18

NOTE: If condenser coolant is glycol solution allow 2K increase in condensing temperature to estimate the cooling capacity & power impact on your selection.

Chiller Selection Method

1. Determine the correct size of chiller by selecting the model which most closely matches the required capacity at the design conditions of leaving water temperature and condenser leaving water temperature.
2. Apply correction factors for fouling factor to the capacity and power values from the capacity tables. Ensure the corrected capacity is still sufficient for requirements.
3. Using the corrected capacity of the selected chiller adjust the design temperature range, or flow rate, to balance the formulae shown above.
4. Physical and electrical data can now be determined from the tables.
5. Always re-check that selections fall within the operating limitations.

YLCS Sample Selection

1. Confirm the system requirements

Cooling Capacity:	400 kW
Chilled Water Inlet Temperature:	12 °C
Chilled Water Outlet Temperature:	7 °C
Condenser Water Inlet Temperature:	30 °C
Condenser Water Outlet Temperature:	35 °C
Evaporator and Condenser Fouling Factors:	0

2. Select Model and Read the Performance

From the capacity table, model YLCS0415SA can be selected with the following performance.

Cooling Capacity:	411 kW
Compressor Input Power:	96 kW
Heat Rejection	502 kW.

3. Determine the Flow Rate

Cooling Capacity(kW) =
Range(°C) x chilled water(l/s) x 4.18

$$= \frac{411}{5 \times 4.18} = 19.67 \text{ l/s}$$

Heat Rejection(kW) =
Range(°C) x condenser water(l/s) x 4.18

$$= \frac{502}{5 \times 4.18} = 24.02 \text{ l/s*}$$

* Total unit flow rate.

4. Correct the Data

Fouling Factor

The cooling capacity and the compressor input should be corrected using the factors given below, if applicable. Recalculate flow rates as required.

Flow Rate

When the water Inlet/Outlet temperature difference is not 5°C, correct the flow rate by the following formula:

$$\text{Corrected Flow Rate} = \frac{5\ (°C) \times \text{Flow Rate}}{\text{Temp. Difference}(°C)}$$

The corrected Flow Rate must be confirmed to be within the working range.

5. Determine the Pressure Drops

Calculate the pressure drops using the graphs.

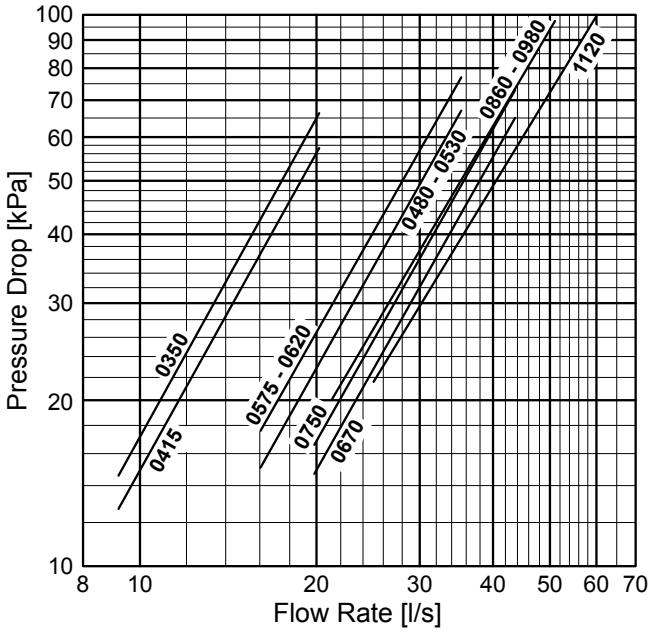
Evaporator pressure drop at a flow rate of 19.67 l/s would be 54 kPa.

Condenser pressure drop at a flow rate of 24.02 l/s would be 37 kPa.

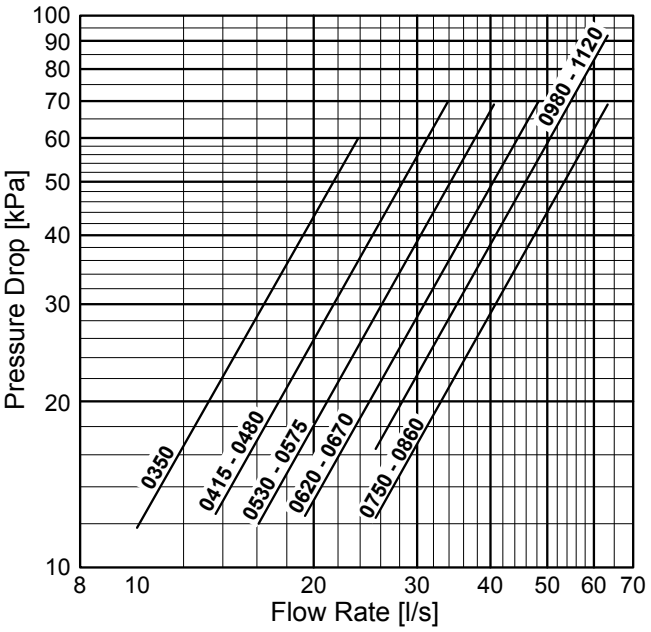
6. Check the Data is within Limits

The data is within the unit operating limitations.

Cooler Pressure Drop (figure 3)



Condenser Pressure Drop (figure 4)



Pressure Drop Calculations (Table 3)

Pressure drop calculated as following:

$\Delta p = a \cdot qv \,\hat{}\, b$

with Δp : pressure drop [kPa]
qv : flow rate [l/s]
a, b: factors (see table here below)

Model	Evaporator Pressure Drop Calculation		Condenser Pressure Drop Calculation	
	Factor **a**	Factor **b**	Factor **a**	Factor **b**
0350	0.2072	1.9192	0.1583	1.8725
0415	0.1835	1.9109	0.0903	1.8886
0480	0.0796	1.8898	0.0903	1.8886
0530	0.0796	1.8898	0.0619	1.8948
0575	0.0975	1.8719	0.0619	1.8948
0620	0.0975	1.8719	0.0461	1.8889
0670	0.0527	1.8854	0.0461	1.8889
0750	0.0608	1.8784	0.0265	1.8956
0860	0.0813	1.8027	0.0265	1.8956
0980	0.0813	1.8027	0.0354	1.8956
1120	0.0789	1.7436	0.0354	1.8956

Fouling Factors (table 4)

COOLER		
Fouling Factor m² °C/kW	**Capacity Factor**	**Comp. Input Factor**
0.044	1.000	1.000
0.088	0.987	0.995
0.176	0.964	0.985
0.352	0.915	0.962

CONDENSER		
Fouling Factor m² °C/kW	**Capacity Factor**	**Comp. Input Factor**
0.044	1.000	1.000
0.088	0.987	1.023
0.176	0.955	1.068
0.308	0.910	1.135

Selection Guide - Glycol (HA Models Only)

Data Required

To select a YORK YLCS-HA chiller the following information is required:

1. Design cooling capacity.
2. Chilled glycol entering and leaving temperatures.
3. Condenser water entering and leaving temperature.
4. Chilled glycol flow (l/s) if one of the temperatures in (2) is unknown.
5. Condenser water flow (l/s) if one of the temperatures in (3) is unknown.

Determine the capacity or water flow from:

$$\text{Cooling capacity kW} = \frac{\text{l/s chilled liquid x °C range}}{\text{Glycol Factor}}$$

Determine the heat rejection or water flow from:

$$\text{Heat Rejection (kW)} = \frac{\text{l/s condenser water x °C range}}{\text{Glycol Factor}}$$

NOTE: If condenser coolant is glycol solution allow 2K increase in condensing temperature to estimate the cooling capacity & power impact on your selection.

Chiller Selection Method

1. Determine the correct size of chiller by selecting the model which most closely matches the required capacity at the design conditions of leaving liquid temperature and condenser leaving water temperature.
2. Apply correction factors for fouling factor to the capacity and power values from the capacity tables. Ensure the corrected capacity is still sufficient for requirements.
3. Using the corrected capacity of the selected chiller adjust the design temperature range, or flow rate, to balance the formulae shown above.
4. Physical and electrical data can now be determined from the tables.
5. Always re-check that selections fall within the operating limitations.

YLCS-HA Sample Selection - Glycol Cooling

1. Confirm the system requirements

Cooling Capacity:	640 kW
Chilled Water Inlet Temperature:	0 °C
Chilled Water Outlet Temperature:	-5 °C
Condenser Water Inlet Temperature:	30 °C
Condenser Water Outlet Temperature:	35 °C
Evaporator and Condenser Fouling Factors:	0

2. Select Model and Read the Performance

From the capacity table, model YLCS0980HA can be selected with the following performance.

Cooling Capacity:	646 kW
Compressor Input Power	182 kW
Heat Rejection	819 kW.

Other design conditions applying are:

Fouling factor	0.44 °C/kW
Glycol concentration	30%

For a -5°C ethylene glycol leaving temperature the recommended concentration from table 6 is 30%.

From the design glycol concentration (30%) no corrections of capacity and power are requires (table 7).

For the glycol concentration specified and a leaving liquid temperature of -5°C the glycol factor is 0.2583 (table 5).

3. Determine the Flow Rate

$$\text{Cooling capacity kW} = \frac{\text{l/s chilled liquid x °C range}}{\text{Glycol Factor}}$$

$$\text{Chilled liquid Flow rate} = \frac{646 \times 0.2583}{5} = 33.37 \text{ l/s}$$

$$\text{Heat Rejection (kW)} = \frac{\text{l/s condenser water x °C range}}{\text{Glycol Factor}}$$

$$\text{Condenser water flow rate} = \frac{819 \times 0.2583}{5} = 42.31 \text{ l/s*}$$

* Total unit flow rate.

5. Determine the Pressure Drops

Calculate the pressure drops using the graphs.

Evaporator pressure drop at a flow rate of 33.37 l/s would be 45.3 kPa x 1.09 (table 8, pressure drop correction factor for 30% concentration) = 49.40 kPa

Condenser pressure drop at a flow rate of 42.31 l/s would be 42.8 kPa x 1.09 (table 8, pressure drop correction factor for 30% concentration) = 46.72 kPa

6. Check the Data is within Limits

The data is within the unit operating limitations.

Glycol Factors (Table 5)

LCLT °C	% by Weight				
	10	20	30	40	50
	Ethylene Glycol Factor				
10	0.2404	0.2515	0.2577	0.2734	0.2876
5	0.2399	0.2510	0.2579	0.2753	0.2906
0	0.2397	0.2505	0.2581	0.2772	0.2916
-5	0.2394	0.2501	0.2583	0.2791	0.2936
-10			0.2586	0.2800	0.2977
LCLT °C	**% by Weight**				
	10	20	30	40	50
	Propylene Glycol Factor				
10	0.2402	0.2444	0.248	0.2578	0.2683
5	0.2394	0.2435	0.2476	0.258	0.2693
0	0.2386	0.2426	0.2466	0.2572	0.27
-5		0.2414	0.2458	0.2574	0.27
-10			0.2447	0.257	0.2708

Recommended Concentrations (Table 6)

Leaving Liquid Temperature °C	Ethylene Glycol Concentration % Weight	Propylene Glycol Concentration % Weight
5	6.0	5.5
4	10.0	10.0
3	13.0	13.5
2	16.0	17.0
1	18.0	19.0
0	20.0	21.5
-1	22.0	23.5
-2	24.0	26.0
-3	26.0	28.0
-4	28.5	30.5
-5	30.0	32.0
-6	31.5	33.5
-7	33.0	35.0
-8	34.5	36.0
-9	35.5	37.0
-10	37.0	38.5
-11	38.0	39.5
-12	39.0	40.5

Glycol Concentrations Factors (Table 7)

% by Weight	Ethylene Glycol		Propylene Glycol	
	Capacity Factor	Power Factor	Capacity Factor	Power Factor
10	1.045	1.020	1.070	1.025
20	1.020	1.010	1.040	1.015
30	1.000	1.000	1.000	1.000
40	0.970	0.990	0.950	0.985

Pressure Drop Corrections (Table 8)

% by Weight	Pressure Drop Correction Factors	
	Ethylene Glycol	Propylene Glycol
10	1.03	1.05
20	1.06	1.11
30	1.09	1.20
40	1.13	1.29

Cooling Capacities (0350SA - 1120SA)

YLCS	LCLT °C	Condenser Leaving Water Temperature °C								
		30			35			40		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0350SA	4.5	333	72	402	313	80	389	298	87	380
	5	337	72	405	319	80	395	302	88	385
	6	344	73	413	330	80	407	312	89	397
	7	352	73	422	342	81	419	322	89	407
	8	366	74	436	354	81	431	335	90	420
	9	379	74	450	366	82	443	346	90	432
	10	387	75	458	374	82	452	353	90	439
	11	402	77	476	390	82	468	369	91	456
	12	415	79	490	402	83	481	382	92	469
	13	425	79	501	411	85	492	390	92	477
	14	446	80	522	427	86	508	408	93	496
	15	462	81	539	438	89	522	420	93	509
0415SA	4.5	400	85	480	377	95	467	357	103	455
	5	405	85	486	384	95	474	362	104	461
	6	416	86	498	397	95	488	375	105	475
	7	428	87	510	411	96	502	388	106	489
	8	443	87	526	425	96	517	402	107	504
	9	459	88	543	440	97	532	417	107	518
	10	468	89	553	450	97	542	426	107	528
	11	486	92	573	469	98	562	445	108	548
	12	499	94	588	484	98	578	460	109	563
	13	511	94	600	493	100	589	470	109	574
	14	533	95	624	512	102	609	491	110	596
	15	550	96	642	526	105	625	507	111	612
0480SA	4.5	466	98	559	441	109	545	416	121	531
	5	474	98	567	448	110	553	422	122	538
	6	488	99	583	464	110	569	438	122	554
	7	503	100	598	480	111	585	454	123	570
	8	521	101	617	497	112	603	470	123	588
	9	538	102	635	513	112	620	487	124	605
	10	549	103	647	525	113	632	499	124	617
	11	569	106	670	548	113	655	522	125	641
	12	583	109	687	566	114	674	538	126	658
	13	596	109	700	576	116	686	551	126	671
	14	620	110	725	597	119	710	575	127	696
	15	639	111	744	614	121	729	594	128	715

YLCS	LCLT °C	Condenser Leaving Water Temperature °C								
		30			35			40		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0530SA	4.5	500	106	601	474	118	586	447	130	571
	5	509	107	610	483	119	595	454	132	579
	6	526	108	629	500	119	614	472	132	597
	7	544	109	647	518	120	632	490	133	616
	8	563	109	667	536	121	651	508	133	634
	9	581	110	685	554	122	670	525	134	653
	10	592	112	698	567	122	683	538	134	665
	11	613	115	723	592	123	708	563	136	691
	12	630	117	741	611	124	728	581	136	710
	13	643	118	755	622	125	741	594	137	725
	14	669	119	782	645	129	767	620	138	751
	15	689	120	803	662	132	787	640	139	772
0575SA	4.5	534	115	643	507	127	628	478	140	611
	5	544	116	654	517	127	638	485	142	619
	6	564	116	675	537	128	659	506	142	641
	7	585	117	696	556	129	679	526	143	662
	8	605	118	717	576	130	700	545	143	681
	9	623	119	736	595	131	720	563	144	700
	10	636	120	750	609	131	733	577	144	714
	11	658	124	776	636	132	761	604	146	742
	12	676	126	796	656	133	783	623	147	763
	13	690	127	811	668	135	797	638	148	778
	14	718	128	840	692	139	824	664	149	806
	15	740	129	862	711	142	846	686	150	828
0620SA	4.5	580	125	699	550	138	681	522	152	666
	5	591	125	710	561	138	692	529	153	675
	6	613	125	732	582	139	715	551	154	697
	7	636	124	754	605	140	737	572	155	719
	8	653	126	773	626	141	759	592	155	739
	9	677	128	798	647	142	782	612	156	760
	10	689	130	813	661	142	796	626	156	775
	11	713	134	841	690	143	826	655	158	805
	12	732	137	862	712	144	849	676	159	827
	13	751	138	882	726	146	864	691	160	843
	14	787	139	919	751	151	894	720	161	873
	15	816	140	949	771	153	917	744	162	897

YLCS	LCLT °C	Condenser Leaving Water Temperature °C								
		30			35			40		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0670SA	4.5	609	121	724	598	133	725	581	144	718
	5	618	120	733	607	134	734	591	145	729
	6	636	119	749	625	134	753	610	147	750
	7	653	119	767	645	134	772	628	149	769
	8	670	120	784	662	134	790	647	151	791
	9	687	121	802	680	133	807	666	152	811
	10	705	122	820	698	131	823	685	153	830
	11	725	122	841	716	132	841	704	153	849
	12	746	123	863	734	133	860	723	152	868
	13	768	124	886	753	133	880	744	151	887
	14	789	125	908	773	134	901	764	150	906
	15	811	126	931	795	135	923	785	150	928
0750SA	4.5	702	140	836	690	154	836	670	167	829
	5	713	139	845	700	155	847	681	168	841
	6	734	138	865	721	155	869	703	171	865
	7	753	138	885	743	156	891	724	173	888
	8	773	139	905	764	155	911	747	175	913
	9	792	140	925	785	154	931	768	176	936
	10	813	141	947	805	152	949	790	177	958
	11	836	142	970	825	153	970	812	177	980
	12	860	143	996	846	153	992	834	176	1002
	13	885	144	1022	868	154	1015	857	175	1024
	14	910	145	1048	892	155	1039	882	173	1046
	15	935	146	1074	916	156	1065	905	174	1071
0860SA	4.5	803	155	949	789	170	951	764	184	939
	5	814	154	960	801	171	963	777	186	953
	6	838	152	982	824	172	987	802	189	982
	7	859	152	1004	849	172	1012	828	192	1010
	8	883	153	1028	873	172	1037	853	194	1037
	9	906	154	1053	897	170	1059	879	196	1064
	10	930	155	1078	921	168	1081	905	196	1092
	11	958	157	1106	946	169	1107	929	197	1116
	12	984	158	1134	969	170	1131	956	196	1142
	13	1012	159	1163	992	171	1155	980	195	1165
	14	1038	160	1190	1018	173	1182	1005	192	1187
	15	1066	161	1219	1045	174	1210	1029	194	1213

YLCS	LCLT °C	Condenser Leaving Water Temperature °C								
		30			35			40		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0980SA	4.5	912	174	1077	897	191	1078	872	205	1067
	5	925	173	1090	911	191	1092	885	207	1082
	6	952	171	1115	937	192	1120	913	210	1113
	7	977	172	1140	966	192	1148	943	213	1146
	8	1004	173	1168	992	192	1175	971	215	1176
	9	1029	174	1194	1019	190	1200	999	217	1206
	10	1055	175	1221	1046	188	1224	1028	218	1235
	11	1084	176	1251	1072	189	1251	1056	218	1263
	12	1114	177	1283	1099	190	1279	1084	217	1290
	13	1145	178	1315	1125	191	1306	1112	215	1317
	14	1176	180	1347	1152	192	1334	1138	213	1340
	15	1206	181	1378	1183	193	1367	1166	214	1369
1120SA	4.5	1039	198	1227	1019	217	1225	989	235	1212
	5	1054	197	1241	1035	218	1242	1006	237	1231
	6	1084	195	1269	1067	219	1275	1039	241	1268
	7	1113	195	1298	1099	220	1308	1073	244	1305
	8	1143	196	1330	1131	219	1339	1105	247	1339
	9	1173	198	1361	1161	217	1368	1139	249	1375
	10	1204	199	1394	1194	215	1398	1171	250	1408
	11	1240	201	1431	1224	216	1429	1205	250	1442
	12	1275	202	1466	1256	217	1462	1236	249	1473
	13	1309	203	1502	1284	218	1491	1268	247	1503
	14	1345	205	1539	1317	220	1525	1300	244	1532
	15	1379	206	1574	1352	221	1562	1332	246	1565

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection
Shared data is Eurovent Certified

Cooling Capacities (0350HA - 0480HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature °C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0350HA	***4.5***	***333***	***72***	***402***	***313***	***80***	***389***	***298***	***87***	***380***	***279***	***97***	***371***	***258***	***111***	***363***	***237***	***124***	***354***	***SQ***	***SQ***	***SQ***
	5	337	72	405	319	80	395	302	88	385	284	97	376	263	111	368	240	125	358	SQ	SQ	SQ
	6	***344***	***73***	***413***	***330***	***80***	***407***	***312***	***89***	***397***	***294***	***98***	***387***	***273***	***111***	***379***	***250***	***125***	***369***	***SQ***	***SQ***	***SQ***
	7	352	73	422	342	81	419	322	89	407	304	98	397	282	112	389	260	126	379	SQ	SQ	SQ
	8	***366***	***74***	***436***	***354***	***81***	***431***	***335***	***90***	***420***	***315***	***99***	***408***	***293***	***113***	***400***	***269***	***127***	***389***	***SQ***	***SQ***	***SQ***
	9	379	74	450	366	82	443	346	90	432	325	99	420	303	113	411	279	127	399	SQ	SQ	SQ
	10	***387***	***75***	***458***	***374***	***82***	***452***	***353***	***90***	***439***	***338***	***99***	***432***	***312***	***113***	***419***	***286***	***127***	***407***	***263***	***140***	***396***
	11	402	77	476	390	82	468	369	91	456	347	101	443	325	113	432	302	125	420	276	141	410
	12	***415***	***79***	***490***	***402***	***83***	***481***	***382***	***92***	***469***	***360***	***101***	***456***	***337***	***112***	***444***	***314***	***124***	***432***	***286***	***142***	***421***
	13	425	79	501	411	85	492	390	92	477	372	102	469	347	113	454	321	124	439	295	141	428
	14	***446***	***80***	***522***	***427***	***86***	***508***	***408***	***93***	***496***	***385***	***102***	***482***	***361***	***114***	***470***	***337***	***125***	***455***	***310***	***140***	***443***
	15	462	81	539	438	89	522	420	93	509	397	103	495	373	114	481	348	126	467	321	138	452
0415HA	***4.5***	***400***	***85***	***480***	***377***	***95***	***467***	***357***	***103***	***455***	***335***	***115***	***444***	***309***	***131***	***434***	***284***	***146***	***423***	***SQ***	***SQ***	***SQ***
	5	405	85	486	384	95	474	362	104	461	341	115	451	315	132	440	290	148	431	SQ	SQ	SQ
	6	***416***	***86***	***498***	***397***	***95***	***488***	***375***	***105***	***475***	***353***	***116***	***463***	***328***	***132***	***453***	***302***	***148***	***442***	***SQ***	***SQ***	***SQ***
	7	428	87	510	411	96	502	388	106	489	366	116	476	339	133	465	313	149	455	SQ	SQ	SQ
	8	***443***	***87***	***526***	***425***	***96***	***517***	***402***	***107***	***504***	***379***	***117***	***490***	***353***	***133***	***479***	***327***	***148***	***467***	***SQ***	***SQ***	***SQ***
	9	459	88	543	440	97	532	417	107	518	392	117	504	367	132	492	341	147	481	SQ	SQ	SQ
	10	***468***	***89***	***553***	***450***	***97***	***542***	***426***	***107***	***528***	***407***	***118***	***519***	***378***	***132***	***504***	***349***	***147***	***489***	***316***	***166***	***474***
	11	486	92	573	469	98	562	445	108	548	419	120	533	392	133	519	366	147	505	332	168	491
	12	***499***	***94***	***588***	***484***	***98***	***578***	***460***	***109***	***563***	***434***	***120***	***548***	***406***	***133***	***533***	***379***	***147***	***519***	***345***	***169***	***505***
	13	511	94	600	493	100	589	470	109	574	449	121	564	418	134	545	387	147	527	355	168	514
	14	***533***	***95***	***624***	***512***	***102***	***609***	***491***	***110***	***596***	***465***	***121***	***580***	***435***	***134***	***562***	***406***	***148***	***547***	***374***	***166***	***532***
	15	550	96	642	526	105	625	507	111	612	480	122	596	449	135	578	419	149	561	389	164	545
0480HA	***4.5***	***466***	***98***	***559***	***441***	***109***	***545***	***416***	***121***	***531***	***389***	***135***	***517***	***362***	***153***	***507***	***333***	***171***	***495***	***SQ***	***SQ***	***SQ***
	5	474	98	567	448	110	553	422	122	538	397	135	525	369	154	515	341	172	505	SQ	SQ	SQ
	6	***488***	***99***	***583***	***464***	***110***	***569***	***438***	***122***	***554***	***412***	***136***	***541***	***383***	***155***	***530***	***353***	***173***	***518***	***SQ***	***SQ***	***SQ***
	7	503	100	598	480	111	585	454	123	570	427	136	557	397	155	544	366	174	531	SQ	SQ	SQ
	8	***521***	***101***	***617***	***497***	***112***	***603***	***470***	***123***	***588***	***443***	***137***	***573***	***414***	***154***	***561***	***384***	***171***	***547***	***SQ***	***SQ***	***SQ***
	9	538	102	635	513	112	620	487	124	605	459	137	590	431	153	576	403	168	562	SQ	SQ	SQ
	10	***549***	***103***	***647***	***525***	***113***	***632***	***499***	***124***	***617***	***476***	***137***	***607***	***444***	***153***	***589***	***412***	***169***	***573***	***370***	***195***	***555***
	11	569	106	670	548	113	655	522	125	641	490	139	622	460	155	606	430	170	591	388	196	574
	12	***583***	***109***	***687***	***566***	***114***	***674***	***538***	***126***	***658***	***507***	***139***	***639***	***475***	***155***	***622***	***444***	***171***	***607***	***403***	***197***	***590***
	13	596	109	700	576	116	686	551	126	671	526	140	658	489	155	637	453	171	616	415	196	601
	14	***620***	***110***	***725***	***597***	***119***	***710***	***575***	***127***	***696***	***544***	***140***	***677***	***508***	***156***	***657***	***474***	***172***	***637***	***439***	***194***	***623***
	15	639	111	744	614	121	729	594	128	715	562	141	697	526	157	675	490	173	655	457	192	640

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Cooling Capacities (0530HA - 0620HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature °C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0530HA	4.5	500	106	601	474	118	586	447	130	571	419	145	557	389	166	547	360	186	536	SQ	SQ	SQ
	5	509	107	610	483	119	595	454	132	579	427	146	565	397	167	555	367	187	545	SQ	SQ	SQ
	6	526	108	629	500	119	614	472	132	597	443	147	582	412	167	570	380	188	558	SQ	SQ	SQ
	7	544	109	647	518	120	632	490	133	616	459	147	599	426	168	586	393	189	572	SQ	SQ	SQ
	8	563	109	667	536	121	651	508	133	634	476	148	617	445	167	603	413	186	589	SQ	SQ	SQ
	9	581	110	685	554	122	670	525	134	653	493	149	635	463	166	620	432	183	605	SQ	SQ	SQ
	10	592	112	698	567	122	683	538	134	665	513	149	655	476	166	633	442	184	616	400	211	600
	11	613	115	723	592	123	708	563	136	691	528	151	671	495	168	654	462	185	637	419	213	621
	12	630	117	741	611	124	728	581	136	710	548	151	691	513	168	672	478	186	654	434	214	637
	13	643	118	755	622	125	741	594	137	725	568	152	712	526	168	686	489	186	665	447	212	649
	14	669	119	782	645	129	767	620	138	751	587	153	732	548	169	709	511	187	688	471	210	671
	15	689	120	803	662	132	787	640	139	772	607	153	752	567	170	729	528	188	707	491	208	688
0575HA	4.5	534	115	643	507	127	628	478	140	611	448	156	597	417	179	587	386	201	577	SQ	SQ	SQ
	5	544	116	654	517	127	638	485	142	619	457	157	606	425	179	595	393	202	585	SQ	SQ	SQ
	6	564	116	675	537	128	659	506	142	641	474	158	624	440	180	611	407	202	599	SQ	SQ	SQ
	7	585	117	696	556	129	679	526	143	662	491	159	642	456	181	628	421	203	614	SQ	SQ	SQ
	8	605	118	717	576	130	700	545	143	681	509	160	661	475	180	646	441	200	631	SQ	SQ	SQ
	9	623	119	736	595	131	720	563	144	700	527	161	680	494	179	664	461	197	648	SQ	SQ	SQ
	10	636	120	750	609	131	733	577	144	714	550	161	702	508	179	677	472	198	660	430	227	646
	11	658	124	776	636	132	761	604	146	742	566	163	721	530	181	701	494	199	683	450	229	668
	12	676	126	796	656	133	783	623	147	763	589	163	744	550	181	722	511	200	701	466	230	685
	13	690	127	811	668	135	797	638	148	778	610	164	765	563	181	735	524	200	714	479	228	696
	14	718	128	840	692	139	824	664	149	806	630	165	787	588	183	762	548	201	739	504	225	718
	15	740	129	862	711	142	846	686	150	828	651	166	808	608	184	783	566	202	758	525	223	737
0620HA	4.5	580	125	699	550	138	681	522	152	666	488	170	649	452	194	636	417	217	623	SQ	SQ	SQ
	5	591	125	710	561	138	692	529	153	675	497	170	659	460	195	645	424	219	632	SQ	SQ	SQ
	6	613	125	732	582	139	715	551	154	697	516	171	678	478	195	663	440	219	648	SQ	SQ	SQ
	7	636	124	754	605	140	737	572	155	719	535	172	698	495	196	682	456	220	665	SQ	SQ	SQ
	8	653	126	773	626	141	759	592	155	739	554	173	718	515	196	701	475	219	684	SQ	SQ	SQ
	9	677	128	798	647	142	782	612	156	760	573	174	738	534	196	720	494	218	702	SQ	SQ	SQ
	10	689	130	813	661	142	796	626	156	775	597	174	762	549	195	734	508	218	715	465	246	699
	11	713	134	841	690	143	826	655	158	805	614	176	781	574	196	760	534	217	741	487	248	723
	12	732	137	862	712	144	849	676	159	827	638	176	805	596	196	782	554	216	760	505	249	741
	13	751	138	882	726	146	864	691	160	843	660	177	828	610	196	797	568	217	774	519	247	754
	14	787	139	919	751	151	894	720	161	873	683	178	852	638	198	825	594	218	801	546	244	778
	15	816	140	949	771	153	917	744	162	897	705	179	875	659	199	848	614	219	823	569	242	799

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Cooling Capacities (0670HA - 0860HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature °C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0670HA	***4.5***	***609***	***121***	***724***	***598***	***133***	***725***	***581***	***144***	***718***	***558***	***156***	***706***	***532***	***171***	***694***	***505***	***193***	***688***	***SQ***	***SQ***	***SQ***
	5	618	120	733	607	134	734	591	145	729	568	157	717	541	172	704	514	194	698	SQ	SQ	SQ
	6	***636***	***119***	***749***	***625***	***134***	***753***	***610***	***147***	***750***	***587***	***160***	***739***	***559***	***175***	***726***	***531***	***195***	***716***	***SQ***	***SQ***	***SQ***
	7	653	119	767	645	134	772	628	149	769	606	163	761	578	179	748	548	197	736	SQ	SQ	SQ
	8	***670***	***120***	***784***	***662***	***134***	***790***	***647***	***151***	***791***	***624***	***167***	***782***	***598***	***182***	***771***	***567***	***201***	***758***	***SQ***	***SQ***	***SQ***
	9	687	121	802	680	133	807	666	152	811	644	169	805	617	186	794	586	205	781	SQ	SQ	SQ
	10	***705***	***122***	***820***	***698***	***131***	***823***	***685***	***153***	***830***	***665***	***172***	***828***	***636***	***190***	***817***	***605***	***209***	***804***	***571***	***231***	***790***
	11	725	122	841	716	132	841	704	153	849	685	174	850	657	194	841	625	214	828	590	236	814
	12	***746***	***123***	***863***	***734***	***133***	***860***	***723***	***152***	***868***	***705***	***176***	***872***	***679***	***197***	***866***	***646***	***218***	***853***	***610***	***241***	***839***
	13	768	124	886	753	133	880	744	151	887	726	177	894	701	201	891	669	222	880	632	246	865
	14	***789***	***125***	***908***	***773***	***134***	***901***	***764***	***150***	***906***	***748***	***178***	***918***	***724***	***204***	***918***	***692***	***227***	***908***	***656***	***251***	***894***
	15	811	126	931	795	135	923	785	150	928	770	178	940	747	206	943	716	232	937	680	256	923
0750HA	***4.5***	***702***	***140***	***836***	***690***	***154***	***836***	***670***	***167***	***829***	***643***	***180***	***814***	***613***	***197***	***800***	***583***	***223***	***795***	***SQ***	***SQ***	***SQ***
	5	713	139	845	700	155	847	681	168	841	654	182	827	624	199	813	592	224	805	SQ	SQ	SQ
	6	***734***	***138***	***865***	***721***	***155***	***869***	***703***	***171***	***865***	***677***	***185***	***853***	***645***	***203***	***838***	***612***	***226***	***827***	***SQ***	***SQ***	***SQ***
	7	753	138	885	743	156	891	724	173	888	699	189	878	667	207	864	632	228	849	SQ	SQ	SQ
	8	***773***	***139***	***905***	***764***	***155***	***911***	***747***	***175***	***913***	***720***	***193***	***903***	***689***	***211***	***890***	***654***	***233***	***875***	***SQ***	***SQ***	***SQ***
	9	792	140	925	785	154	931	768	176	936	742	196	929	712	215	916	675	237	901	SQ	SQ	SQ
	10	***813***	***141***	***947***	***805***	***152***	***949***	***790***	***177***	***958***	***766***	***199***	***955***	***734***	***220***	***942***	***698***	***242***	***928***	***658***	***267***	***912***
	11	836	142	970	825	153	970	812	177	980	789	202	981	757	224	970	721	247	956	680	273	940
	12	***860***	***143***	***996***	***846***	***153***	***992***	***834***	***176***	***1002***	***813***	***204***	***1006***	***783***	***228***	***999***	***745***	***252***	***985***	***704***	***279***	***968***
	13	885	144	1022	868	154	1015	857	175	1024	837	205	1032	808	232	1029	771	257	1016	729	284	999
	14	***910***	***145***	***1048***	***892***	***155***	***1039***	***882***	***173***	***1046***	***863***	***206***	***1059***	***835***	***236***	***1059***	***799***	***263***	***1048***	***756***	***290***	***1032***
	15	935	146	1074	916	156	1065	905	174	1071	888	206	1085	862	239	1088	826	268	1081	784	297	1066
0860HA	***4.5***	***803***	***155***	***949***	***789***	***170***	***951***	***764***	***184***	***939***	***733***	***199***	***922***	***699***	***219***	***907***	***664***	***247***	***899***	***SQ***	***SQ***	***SQ***
	5	814	154	960	801	171	963	777	186	953	746	201	937	712	221	922	675	248	911	SQ	SQ	SQ
	6	***838***	***152***	***982***	***824***	***172***	***987***	***802***	***189***	***982***	***772***	***206***	***967***	***737***	***225***	***951***	***699***	***251***	***937***	***SQ***	***SQ***	***SQ***
	7	859	152	1004	849	172	1012	828	192	1010	798	210	998	762	230	980	723	253	964	SQ	SQ	SQ
	8	***883***	***153***	***1028***	***873***	***172***	***1037***	***853***	***194***	***1037***	***824***	***214***	***1027***	***788***	***234***	***1011***	***748***	***259***	***994***	***SQ***	***SQ***	***SQ***
	9	906	154	1053	897	170	1059	879	196	1064	851	218	1057	815	239	1043	772	264	1023	SQ	SQ	SQ
	10	***930***	***155***	***1078***	***921***	***168***	***1081***	***905***	***196***	***1092***	***878***	***221***	***1088***	***841***	***244***	***1073***	***799***	***269***	***1055***	***754***	***297***	***1037***
	11	958	157	1106	946	169	1107	929	197	1116	905	224	1118	869	249	1106	827	275	1088	780	304	1069
	12	***984***	***158***	***1134***	***969***	***170***	***1131***	***956***	***196***	***1142***	***931***	***227***	***1146***	***897***	***254***	***1139***	***853***	***281***	***1120***	***807***	***310***	***1102***
	13	1012	159	1163	992	171	1155	980	195	1165	958	228	1175	924	259	1170	882	287	1154	833	316	1134
	14	***1038***	***160***	***1190***	***1018***	***173***	***1182***	***1005***	***192***	***1187***	***984***	***230***	***1202***	***951***	***262***	***1200***	***909***	***292***	***1187***	***861***	***323***	***1168***
	15	1066	161	1219	1045	174	1210	1029	194	1213	1010	230	1228	978	266	1231	937	298	1220	889	330	1202

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Cooling Capacities (0980HA - 1120HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature °C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0980HA	***4.5***	***912***	***174***	***1077***	***897***	***191***	***1078***	***872***	***205***	***1067***	***836***	***222***	***1047***	***799***	***243***	***1030***	***760***	***275***	***1022***	***SQ***	***SQ***	***SQ***
	5	925	173	1090	911	191	1092	885	207	1082	851	224	1064	813	245	1046	774	276	1036	SQ	SQ	SQ
	6	***952***	***171***	***1115***	***937***	***192***	***1120***	***913***	***210***	***1113***	***881***	***228***	***1098***	***841***	***250***	***1078***	***801***	***279***	***1066***	***SQ***	***SQ***	***SQ***
	7	977	172	1140	966	192	1148	943	213	1146	910	233	1131	870	255	1112	827	281	1094	SQ	SQ	SQ
	8	***1004***	***173***	***1168***	***992***	***192***	***1175***	***971***	***215***	***1176***	***941***	***237***	***1166***	***899***	***260***	***1146***	***856***	***287***	***1129***	***SQ***	***SQ***	***SQ***
	9	1029	174	1194	1019	190	1200	999	217	1206	970	241	1199	931	265	1182	884	292	1162	SQ	SQ	SQ
	10	***1055***	***175***	***1221***	***1046***	***188***	***1224***	***1028***	***218***	***1235***	***1000***	***245***	***1232***	***961***	***270***	***1217***	***915***	***298***	***1198***	***864***	***330***	***1178***
	11	1084	176	1251	1072	189	1251	1056	218	1263	1029	248	1264	991	275	1252	944	304	1232	894	337	1214
	12	***1114***	***177***	***1283***	***1099***	***190***	***1279***	***1084***	***217***	***1290***	***1059***	***250***	***1296***	***1022***	***280***	***1288***	***974***	***310***	***1268***	***922***	***343***	***1248***
	13	1145	178	1315	1125	191	1306	1112	215	1317	1086	252	1326	1051	285	1321	1005	316	1305	952	350	1284
	14	***1176***	***180***	***1347***	***1152***	***192***	***1334***	***1138***	***213***	***1340***	***1116***	***253***	***1356***	***1081***	***289***	***1356***	***1037***	***322***	***1343***	***983***	***356***	***1322***
	15	1206	181	1378	1183	193	1367	1166	214	1369	1146	253	1386	1113	292	1390	1067	328	1378	1015	364	1360
1120HA	***4.5***	***1039***	***198***	***1227***	***1019***	***217***	***1225***	***989***	***235***	***1212***	***950***	***254***	***1191***	***904***	***278***	***1169***	***860***	***315***	***1160***	***SQ***	***SQ***	***SQ***
	5	1054	197	1241	1035	218	1242	1006	237	1231	967	256	1210	921	281	1188	876	317	1176	SQ	SQ	SQ
	6	***1084***	***195***	***1269***	***1067***	***219***	***1275***	***1039***	***241***	***1268***	***1000***	***261***	***1249***	***954***	***286***	***1226***	***906***	***319***	***1209***	***SQ***	***SQ***	***SQ***
	7	1113	195	1298	1099	220	1308	1073	244	1305	1035	267	1288	987	292	1265	937	323	1244	SQ	SQ	SQ
	8	***1143***	***196***	***1330***	***1131***	***219***	***1339***	***1105***	***247***	***1339***	***1068***	***272***	***1326***	***1022***	***298***	***1305***	***970***	***329***	***1283***	***SQ***	***SQ***	***SQ***
	9	1173	198	1361	1161	217	1368	1139	249	1375	1103	277	1365	1057	304	1346	1004	336	1323	SQ	SQ	SQ
	10	***1204***	***199***	***1394***	***1194***	***215***	***1398***	***1171***	***250***	***1408***	***1138***	***281***	***1405***	***1091***	***310***	***1386***	***1037***	***342***	***1362***	***981***	***379***	***1341***
	11	1240	201	1431	1224	216	1429	1205	250	1442	1171	285	1442	1127	317	1428	1073	349	1405	1012	387	1380
	12	***1275***	***202***	***1466***	***1256***	***217***	***1462***	***1236***	***249***	***1473***	***1207***	***288***	***1481***	***1162***	***322***	***1468***	***1107***	***357***	***1446***	***1047***	***395***	***1422***
	13	1309	203	1502	1284	218	1491	1268	247	1503	1241	290	1516	1199	328	1511	1144	364	1490	1081	403	1464
	14	***1345***	***205***	***1539***	***1317***	***220***	***1525***	***1300***	***244***	***1532***	***1274***	***291***	***1551***	***1234***	***333***	***1550***	***1180***	***371***	***1533***	***1118***	***411***	***1509***
	15	1379	206	1574	1352	221	1562	1332	246	1565	1306	291	1582	1267	337	1587	1216	379	1576	1154	419	1552

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Glycol Cooling Capacities (0350HA - 0480HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature Deg C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0350HA	***-12***	***175***	***64***	***236***	***166***	***71***	***233***	***153***	***79***	***228***	***140***	***86***	***222***	***121***	***93***	***209***						
	-11	183	66	246	173	73	242	160	81	236	147	89	231	131	96	223						
	-10	***192***	***66***	***254***	***180***	***74***	***250***	***167***	***83***	***245***	***155***	***91***	***241***	***142***	***100***	***236***						
	-9	200	67	264	187	75	259	175	83	253	162	91	248	149	99	243						
	-8	***207***	***66***	***271***	***195***	***75***	***266***	***182***	***84***	***261***	***169***	***92***	***256***	***156***	***101***	***252***						
	-7	215	66	278	202	75	273	189	84	269	176	93	265	163	102	260						
	-6	***225***	***68***	***289***	***211***	***76***	***283***	***198***	***85***	***278***	***184***	***93***	***273***	***171***	***102***	***267***	***156***	***131***	***280***			
	-5	233	67	296	219	76	291	206	85	286	192	94	281	179	103	277	163	114	271			
	-4	***245***	***66***	***308***	***230***	***75***	***301***	***215***	***84***	***294***	***200***	***92***	***288***	***185***	***101***	***281***	***170***	***115***	***279***			
	-3	258	64	318	241	74	311	224	85	305	208	95	298	191	106	291	178	116	288			
	-2	***267***	***64***	***328***	***250***	***74***	***321***	***233***	***85***	***314***	***216***	***95***	***307***	***199***	***106***	***300***	***185***	***116***	***296***			
	-1	276	65	337	259	75	330	242	86	323	225	96	316	208	107	309	193	117	304			
	0	***285***	***65***	***346***	***268***	***75***	***339***	***251***	***86***	***332***	***233***	***96***	***325***	***216***	***107***	***317***	***201***	***118***	***313***			
	1	294	65	356	277	75	348	260	86	341	243	96	334	227	106	327	209	119	321			
	2	***302***	***66***	***365***	***286***	***76***	***358***	***270***	***86***	***351***	***253***	***96***	***344***	***237***	***106***	***337***	***217***	***119***	***330***			
	3	311	67	374	295	76	367	279	86	361	263	95	354	247	105	347	225	120	339			
	4	***320***	***67***	***383***	***304***	***77***	***377***	***289***	***86***	***370***	***273***	***95***	***364***	***258***	***105***	***357***	***233***	***120***	***347***			
	5	328	68	393	313	77	386	298	86	380	283	95	373	268	104	367	241	121	356			
0415HA	***-12***	***211***	***77***	***283***	***198***	***85***	***279***	***183***	***94***	***272***	***168***	***103***	***266***	***148***	***112***	***254***						
	-11	221	78	295	207	87	290	190	96	281	177	105	277	160	115	269						
	-10	***232***	***78***	***306***	***217***	***88***	***300***	***201***	***98***	***295***	***186***	***108***	***289***	***171***	***118***	***283***						
	-9	242	79	317	226	89	311	210	99	304	195	109	298	179	118	291						
	-8	***251***	***79***	***326***	***235***	***89***	***319***	***219***	***99***	***313***	***203***	***109***	***307***	***188***	***119***	***301***						
	-7	260	79	336	244	90	329	228	100	323	212	110	316	196	120	310	178	134	305			
	-6	***273***	***80***	***349***	***256***	***90***	***341***	***239***	***100***	***334***	***221***	***111***	***327***	***204***	***121***	***319***	***187***	***144***	***323***			
	-5	285	77	358	267	89	351	249	100	344	231	112	337	213	123	330	196	136	324			
	-4	***298***	***76***	***370***	***279***	***88***	***362***	***260***	***100***	***354***	***241***	***111***	***346***	***222***	***123***	***338***	***205***	***136***	***334***			
	-3	311	75	382	290	88	374	270	100	366	250	113	358	230	126	350	214	138	344			
	-2	***322***	***75***	***393***	***301***	***88***	***385***	***281***	***101***	***376***	***261***	***113***	***368***	***240***	***126***	***360***	***223***	***138***	***354***			
	-1	332	77	405	312	89	396	291	102	388	271	114	379	251	127	371	232	139	364			
	0	***343***	***77***	***416***	***322***	***89***	***407***	***302***	***102***	***398***	***281***	***114***	***390***	***261***	***127***	***381***	***241***	***140***	***374***			
	1	355	78	428	334	90	419	314	102	410	293	114	401	273	126	392	252	140	385			
	2	***366***	***79***	***441***	***346***	***90***	***432***	***325***	***102***	***422***	***305***	***113***	***413***	***285***	***125***	***403***	***263***	***140***	***396***			
	3	378	80	454	358	91	444	337	102	434	317	113	424	296	124	414	273	140	406			
	4	***390***	***81***	***467***	***369***	***92***	***457***	***349***	***102***	***446***	***329***	***113***	***436***	***308***	***123***	***425***	***284***	***140***	***417***			
	5	401	83	480	381	93	469	361	103	458	340	113	447	320	123	436	295	140	427			
0480HA	***-12***	***246***	***89***	***331***	***231***	***99***	***325***	***214***	***109***	***318***	***197***	***119***	***310***	***175***	***130***	***299***						
	-11	259	91	345	242	101	338	225	111	331	208	122	323	188	133	315						
	-10	***271***	***91***	***357***	***253***	***102***	***350***	***236***	***114***	***344***	***218***	***125***	***337***	***201***	***137***	***331***						
	9	283	92	370	265	103	363	246	115	355	228	126	347	209	138	340						
	-8	***294***	***91***	***380***	***275***	***103***	***373***	***256***	***115***	***365***	***238***	***127***	***358***	***219***	***138***	***350***						
	-7	306	93	394	286	104	385	267	116	376	247	127	368	228	139	359						
	-6	***322***	***92***	***409***	***301***	***104***	***400***	***280***	***116***	***390***	***259***	***128***	***381***	***237***	***141***	***371***	***218***	***156***	***367***			
	-5	338	87	420	315	101	411	293	115	402	270	129	392	247	143	383	229	157	378			
	-4	***351***	***87***	***433***	***328***	***101***	***423***	***304***	***115***	***414***	***281***	***130***	***405***	***258***	***144***	***395***	***239***	***158***	***389***			
	-3	364	86	445	340	101	436	316	116	426	293	131	417	269	146	408	249	159	400			
	-2	***376***	***87***	***459***	***352***	***102***	***449***	***329***	***117***	***439***	***305***	***131***	***430***	***281***	***146***	***420***	***261***	***160***	***413***			
	-1	388	89	472	365	103	462	341	118	453	317	132	443	294	147	433	271	161	424			
	0	***401***	***89***	***485***	***377***	***103***	***475***	***353***	***118***	***465***	***330***	***132***	***455***	***306***	***147***	***445***	***282***	***162***	***436***			
	1	416	90	501	391	104	490	367	118	479	343	132	468	319	145	457	295	161	449			
	2	***430***	***92***	***518***	***406***	***105***	***506***	***381***	***118***	***494***	***357***	***131***	***481***	***332***	***144***	***469***	***309***	***160***	***461***			
	3	445	94	534	420	106	521	395	118	508	370	131	495	345	143	482	322	160	473			
	4	***460***	***95***	***551***	***435***	***107***	***536***	***409***	***119***	***522***	***384***	***130***	***508***	***359***	***142***	***494***	***335***	***159***	***486***			
	5	475	97	567	449	108	552	423	119	536	398	130	521	372	141	506	348	158	498			

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Table should also be used for 30% Propylene Glycol after reducing LCLT by 1°C

(For example the cooling capacity when using -1°C LCLT using Propylene Glycol is equivalent to -2°C LCLT using Ethylene Glycol).

Glycol Cooling Capacities (0530HA - 0620HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature Deg C																					
		30			35			40			45			50			55			60			
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	
0530HA	***-12***	***267***	***97***	***359***	***247***	***107***	***348***	***231***	***118***	***343***	***214***	***130***	***337***	***196***	***142***	***330***							
	-11	281	99	375	260	109	364	243	121	358	226	133	352	208	146	346							
	-10	***290***	***99***	***384***	***273***	***112***	***379***	***255***	***124***	***373***	***238***	***137***	***368***	***220***	***150***	***363***							
	-9	304	99	398	285	112	392	267	125	386	248	138	379	230	151	373							
	-8	***317***	***99***	***411***	***298***	***113***	***405***	***278***	***126***	***398***	***259***	***139***	***391***	***240***	***152***	***384***							
	-7	330	101	426	310	114	418	290	127	410	270	140	402	252	154	398	235	171	397				
	-6	***345***	***100***	***440***	***324***	***114***	***432***	***303***	***127***	***423***	***282***	***140***	***415***	***263***	***155***	***410***	***245***	***172***	***408***				
	-5	360	98	453	338	113	445	316	127	436	294	142	428	273	157	422	254	173	418				
	-4	***376***	***96***	***468***	***353***	***112***	***459***	***329***	***127***	***450***	***306***	***142***	***441***	***285***	***158***	***435***	***265***	***174***	***430***				
	-3	392	94	482	368	111	473	343	127	463	318	143	454	296	159	447	276	175	442				
	-2	***405***	***95***	***496***	***381***	***112***	***487***	***356***	***128***	***477***	***331***	***144***	***468***	***308***	***160***	***460***	***287***	***176***	***454***				
	-1	419	97	510	394	113	501	369	129	491	344	145	482	321	160	473	299	176	466				
	0	***432***	***97***	***523***	***407***	***113***	***514***	***382***	***129***	***504***	***357***	***145***	***495***	***334***	***161***	***487***	***310***	***178***	***479***				
	1	448	99	542	423	114	531	397	129	519	371	144	508	347	161	500	323	178	493				
	2	***465***	***101***	***561***	***439***	***115***	***548***	***412***	***129***	***535***	***385***	***144***	***522***	***361***	***160***	***513***	***337***	***178***	***506***				
	3	482	103	580	454	116	565	427	130	550	399	143	535	374	160	526	350	178	519				
	4	***499***	***105***	***598***	***470***	***117***	***582***	***441***	***130***	***565***	***413***	***143***	***548***	***388***	***159***	***539***	***364***	***178***	***533***				
	5	516	107	617	486	119	599	456	131	580	426	143	562	401	159	552	377	178	546				
0575HA	***-12***	***288***	***105***	***388***	***264***	***114***	***372***	***247***	***127***	***368***	***231***	***140***	***364***	***216***	***153***	***362***							
	-11	303	107	404	278	118	390	261	131	386	244	145	381	228	158	378							
	-10	***310***	***107***	***412***	***293***	***121***	***407***	***275***	***135***	***403***	***258***	***149***	***399***	***240***	***163***	***395***							
	-9	324	107	426	306	121	421	287	136	416	269	150	411	250	165	407							
	-8	***340***	***108***	***442***	***320***	***122***	***436***	***301***	***136***	***430***	***281***	***151***	***424***	***261***	***165***	***418***							
	-7	354	109	457	334	123	451	313	138	444	293	152	437	277	169	438	262	186	438				
	-6	***368***	***108***	***471***	***347***	***123***	***464***	***326***	***138***	***457***	***305***	***152***	***450***	***288***	***170***	***449***	***271***	***187***	***449***				
	-5	382	109	486	361	124	478	339	139	471	317	154	464	299	171	461	280	188	459				
	-4	***402***	***106***	***502***	***378***	***122***	***494***	***354***	***138***	***486***	***331***	***154***	***477***	***311***	***172***	***474***	***291***	***189***	***471***				
	-3	421	103	519	396	120	510	370	138	500	344	155	491	323	173	487	303	190	483				
	-2	***435***	***104***	***533***	***409***	***121***	***524***	***383***	***139***	***515***	***357***	***156***	***506***	***336***	***174***	***501***	***314***	***191***	***496***				
	-1	449	105	549	423	122	539	397	140	530	371	157	521	349	174	514	327	191	508				
	0	***462***	***105***	***562***	***437***	***122***	***553***	***411***	***140***	***543***	***385***	***157***	***534***	***362***	***176***	***528***	***338***	***194***	***522***				
	1	481	107	583	454	123	571	427	140	560	399	157	548	375	176	542	351	195	536				
	2	***500***	***109***	***604***	***471***	***125***	***590***	***442***	***141***	***576***	***413***	***156***	***562***	***389***	***176***	***556***	***365***	***196***	***551***				
	3	519	111	625	489	126	609	458	141	592	427	156	575	403	176	570	379	196	565				
	4	***538***	***114***	***646***	***506***	***128***	***627***	***474***	***142***	***608***	***441***	***155***	***589***	***417***	***176***	***584***	***392***	***197***	***580***				
	5	557	116	667	523	129	646	489	142	624	455	155	603	431	177	598	406	198	594				
0620HA	***-12***	***307***	***116***	***417***	***284***	***124***	***402***	***265***	***137***	***395***	***246***	***150***	***389***	***216***	***165***	***373***							
	-11	323	117	434	299	128	420	280	142	415	261	156	409	236	171	398							
	-10	***334***	***116***	***444***	***314***	***132***	***439***	***295***	***147***	***434***	***275***	***162***	***429***	***255***	***177***	***424***							
	-9	348	117	459	328	132	453	308	148	448	287	163	442	267	179	437							
	-8	***364***	***118***	***475***	***342***	***133***	***469***	***321***	***148***	***462***	***300***	***164***	***456***	***279***	***179***	***450***							
	-7	378	119	491	356	134	484	335	150	477	313	165	470	291	183	465	269	202	460				
	-6	***394***	***118***	***507***	***372***	***134***	***499***	***349***	***150***	***492***	***327***	***166***	***484***	***303***	***184***	***478***	***280***	***202***	***472***				
	-5	411	119	524	387	135	516	364	151	507	340	167	499	316	185	492	291	204	485				
	-4	***432***	***116***	***542***	***406***	***133***	***532***	***380***	***150***	***523***	***353***	***168***	***513***	***328***	***186***	***505***	***303***	***204***	***497***				
	-3	453	112	560	424	131	549	396	150	538	367	169	527	340	187	518	314	205	509				
	-2	***467***	***113***	***574***	***439***	***132***	***564***	***410***	***151***	***553***	***382***	***170***	***543***	***354***	***188***	***533***	***327***	***207***	***523***				
	-1	483	114	591	454	133	580	426	152	569	397	171	559	368	189	547	339	208	536				
	0	***497***	***114***	***605***	***469***	***133***	***595***	***440***	***152***	***585***	***412***	***171***	***574***	***382***	***191***	***563***	***351***	***210***	***551***				
	1	516	116	626	487	134	614	458	152	602	429	170	591	398	191	579	367	211	568				
	2	***535***	***118***	***646***	***505***	***135***	***633***	***475***	***152***	***620***	***445***	***170***	***607***	***414***	***191***	***596***	***383***	***212***	***585***				
	3	554	119	667	523	136	652	493	153	638	462	169	623	431	191	612	399	213	602				
	4	***572***	***121***	***688***	***541***	***137***	***671***	***510***	***153***	***655***	***479***	***169***	***639***	***447***	***191***	***629***	***416***	***214***	***619***				
	5	591	123	708	559	138	690	527	153	673	495	168	655	464	192	645	432	215	636				

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Table should also be used for 30% Propylene Glycol after reducing LCLT by 1°C

(For example the cooling capacity when using -1°C LCLT using Propylene Glycol is equivalent to -2°C LCLT using Ethylene Glycol).

Glycol Cooling Capacities (0670HA - 0860HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature Deg C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0670HA	***-12***	***340***	***112***	***447***	***330***	***121***	***444***	***316***	***133***	***442***	***312***	***149***	***454***	***291***	***168***	***451***						
	-11	354	113	462	343	122	459	330	134	457	320	150	463	305	170	466						
	-10	***369***	***114***	***477***	***357***	***122***	***473***	***344***	***135***	***473***	***327***	***152***	***471***	***318***	***172***	***481***						
	-9	384	114	492	372	123	489	359	136	488	342	153	487	329	173	493						
	-8	***399***	***115***	***508***	***387***	***124***	***505***	***374***	***137***	***504***	***356***	***154***	***503***	***340***	***175***	***506***						
	-7	413	116	523	402	125	521	388	138	520	371	156	518	351	176	518	325	200	515			
	-6	***428***	***116***	***539***	***417***	***126***	***537***	***403***	***139***	***535***	***385***	***157***	***534***	***365***	***178***	***534***	***340***	***202***	***532***			
	-5	443	117	554	432	126	552	417	140	551	400	158	550	379	179	549	355	204	549			
	-4	***459***	***118***	***570***	***447***	***127***	***568***	***433***	***141***	***567***	***415***	***159***	***566***	***394***	***181***	***566***	***370***	***206***	***565***			
	-3	473	118	585	462	128	583	447	142	582	429	160	581	408	182	581	384	208	581			
	-2	***488***	***119***	***601***	***476***	***128***	***598***	***462***	***142***	***597***	***444***	***161***	***597***	***423***	***183***	***597***	***398***	***209***	***597***			
	-1	504	119	617	492	129	614	477	143	613	459	162	613	438	185	613	413	211	614			
	0	***519***	***120***	***633***	***508***	***129***	***631***	***492***	***144***	***628***	***475***	***163***	***629***	***452***	***186***	***629***	***428***	***213***	***630***			
	1	536	120	650	523	130	647	508	144	645	491	162	644	468	184	643	444	210	643			
	2	***552***	***120***	***666***	***539***	***131***	***664***	***524***	***145***	***661***	***506***	***161***	***659***	***484***	***181***	***656***	***459***	***206***	***655***			
	3	567	120	682	554	132	679	539	145	676	521	160	673	499	179	668	473	203	666			
	4	***583***	***121***	***697***	***569***	***133***	***695***	***554***	***145***	***691***	***536***	***158***	***686***	***506***	***175***	***673***	***481***	***198***	***669***	***SQ***	***SQ***	***SQ***
	5	597	121	712	583	133	710	568	145	705	549	157	698	512	172	676	487	194	671	SQ	SQ	SQ
0750HA	***-12***	***392***	***130***	***515***	***380***	***140***	***513***	***365***	***153***	***510***	***359***	***173***	***524***	***336***	***195***	***521***						
	-11	409	130	533	396	141	530	381	155	528	369	174	534	351	197	538						
	-10	***425***	***131***	***550***	***412***	***142***	***546***	***397***	***156***	***545***	***378***	***175***	***544***	***367***	***199***	***555***						
	-9	442	132	568	429	143	565	414	158	564	394	177	562	379	200	570						
	-8	***460***	***133***	***586***	***447***	***144***	***583***	***431***	***159***	***582***	***411***	***178***	***581***	***392***	***202***	***584***						
	-7	477	134	604	464	145	601	448	160	600	427	180	598	405	204	598	375	231	594			
	-6	***494***	***135***	***622***	***481***	***145***	***619***	***465***	***161***	***618***	***444***	***181***	***617***	***421***	***206***	***616***	***392***	***234***	***614***			
	-5	511	135	639	498	146	637	481	162	636	461	183	634	437	207	634	409	236	634			
	-4	***529***	***136***	***658***	***516***	***147***	***656***	***499***	***163***	***654***	***479***	***184***	***653***	***455***	***209***	***653***	***426***	***238***	***653***			
	-3	545	137	675	532	148	673	516	164	671	495	185	671	471	211	671	442	240	671			
	-2	***563***	***137***	***693***	***549***	***148***	***690***	***532***	***165***	***689***	***512***	***186***	***689***	***488***	***212***	***689***	***459***	***242***	***689***			
	-1	581	138	712	567	149	709	550	166	707	530	187	708	505	214	708	476	244	708			
	0	***599***	***139***	***731***	***585***	***150***	***728***	***567***	***167***	***725***	***547***	***188***	***726***	***522***	***215***	***726***	***494***	***246***	***728***			
	1	618	139	750	604	151	747	586	167	744	566	187	744	540	212	742	512	243	742			
	2	***637***	***139***	***769***	***622***	***152***	***766***	***604***	***167***	***763***	***584***	***186***	***761***	***558***	***210***	***758***	***529***	***239***	***756***			
	3	654	139	786	639	153	784	621	167	780	601	185	776	575	207	771	546	235	769			
	4	***672***	***139***	***805***	***656***	***154***	***802***	***639***	***168***	***798***	***618***	***183***	***792***	***584***	***203***	***776***	***554***	***229***	***772***	***SQ***	***SQ***	***SQ***
	5	688	139	821	673	154	819	655	168	814	633	181	806	591	199	780	562	224	775	SQ	SQ	SQ
0860HA	***-12***	***448***	***143***	***584***	***434***	***154***	***580***	***416***	***169***	***577***	***410***	***191***	***592***	***384***	***215***	***588***						
	-11	467	144	604	452	155	600	435	171	597	421	192	603	401	217	607						
	-10	***486***	***145***	***623***	***470***	***156***	***619***	***453***	***173***	***617***	***431***	***193***	***615***	***419***	***219***	***627***						
	-9	505	146	644	490	157	640	473	174	638	450	195	636	433	221	643						
	-8	***525***	***147***	***665***	***510***	***159***	***661***	***492***	***175***	***659***	***470***	***197***	***657***	***448***	***223***	***660***						
	-7	544	148	685	530	160	682	511	177	679	488	199	677	462	225	676	428	255	670			
	-6	***564***	***149***	***705***	***549***	***161***	***702***	***531***	***178***	***700***	***507***	***200***	***697***	***481***	***227***	***696***	***448***	***258***	***693***			
	-5	583	149	725	569	161	722	550	179	720	526	202	718	499	229	717	467	261	715			
	-4	***604***	***150***	***747***	***589***	***162***	***743***	***570***	***180***	***741***	***547***	***203***	***739***	***519***	***231***	***738***	***487***	***263***	***737***			
	-3	623	151	766	608	163	763	589	181	761	565	204	759	538	232	759	505	265	757			
	-2	***642***	***151***	***786***	***627***	***164***	***783***	***608***	***182***	***781***	***585***	***205***	***780***	***557***	***234***	***779***	***524***	***267***	***778***			
	-1	663	152	808	648	165	804	628	183	802	605	207	801	577	236	800	544	270	800			
	0	***684***	***153***	***829***	***668***	***165***	***825***	***648***	***184***	***822***	***625***	***208***	***823***	***596***	***237***	***821***	***564***	***272***	***822***			
	1	706	153	851	689	166	848	669	184	844	646	207	842	617	234	840	584	268	839			
	2	***727***	***154***	***873***	***710***	***168***	***869***	***690***	***185***	***865***	***667***	***205***	***862***	***638***	***231***	***857***	***605***	***263***	***855***			
	3	747	154	893	729	169	889	709	185	885	686	204	880	657	228	873	623	259	869			
	4	***768***	***154***	***914***	***750***	***170***	***911***	***730***	***185***	***905***	***706***	***202***	***898***	***667***	***224***	***879***	***633***	***253***	***874***	***SQ***	***SQ***	***SQ***
	5	786	154	932	768	170	930	748	185	923	723	200	913	675	220	883	641	247	876	SQ	SQ	SQ

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Table should also be used for 30% Propylene Glycol after reducing LCLT by 1°C

(For example the cooling capacity when using -1°C LCLT using Propylene Glycol is equivalent to -2°C LCLT using Ethylene Glycol).

Glycol Cooling Capacities (0980HA - 1120HA)

YLCS	LCLT °C	Condenser Leaving Water Temperature Deg C																				
		30			35			40			45			50			55			60		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0980HA	***-12***	***509***	***161***	***662***	***493***	***174***	***658***	***473***	***191***	***655***	***466***	***215***	***671***	***436***	***242***	***666***						
	-11	530	162	685	514	175	680	494	193	677	478	217	684	456	245	688						
	-10	***552***	***163***	***707***	***534***	***176***	***702***	***515***	***195***	***700***	***490***	***218***	***697***	***476***	***247***	***711***						
	-9	574	164	730	557	177	725	537	196	723	512	220	720	492	249	729						
	-8	***597***	***165***	***754***	***580***	***179***	***750***	***559***	***198***	***747***	***533***	***222***	***744***	***509***	***252***	***748***						
	-7	619	166	777	602	180	773	581	199	770	555	224	767	525	254	766	486	288	760			
	-6	***641***	***167***	***800***	***624***	***181***	***796***	***603***	***200***	***793***	***576***	***226***	***791***	***546***	***256***	***789***	***509***	***291***	***785***			
	-5	663	168	823	646	182	819	625	202	816	598	227	814	567	258	812	531	294	810			
	-4	***686***	***169***	***847***	***669***	***183***	***843***	***648***	***203***	***841***	***621***	***229***	***838***	***590***	***260***	***837***	***553***	***296***	***835***			
	-3	708	170	869	691	184	865	669	204	863	642	230	861	611	262	860	574	299	858			
	-2	***730***	***171***	***892***	***713***	***185***	***888***	***691***	***205***	***886***	***664***	***231***	***884***	***633***	***264***	***883***	***595***	***301***	***881***			
	-1	754	171	917	736	185	912	714	206	909	687	233	909	655	266	907	618	304	907			
	0	***777***	***172***	***941***	***759***	***186***	***936***	***736***	***207***	***933***	***710***	***234***	***933***	***677***	***268***	***931***	***641***	***306***	***932***			
	1	802	173	966	783	188	962	760	208	957	734	233	955	701	264	952	664	302	951			
	2	***826***	***173***	***991***	***807***	***189***	***986***	***784***	***208***	***981***	***758***	***231***	***978***	***725***	***261***	***972***	***687***	***297***	***969***			
	3	849	173	1013	829	190	1009	806	208	1004	780	230	998	746	257	991	708	292	985			
	4	***872***	***173***	***1037***	***852***	***191***	***1033***	***829***	***208***	***1027***	***802***	***228***	***1018***	***757***	***252***	***997***	***719***	***285***	***991***	***SQ***	***SQ***	***SQ***
	5	893	173	1058	873	192	1055	850	208	1048	822	226	1036	767	247	1002	729	279	994	SQ	SQ	SQ
1120HA	***-12***	***580***	***183***	***754***	***562***	***197***	***749***	***539***	***217***	***745***	***531***	***244***	***763***	***496***	***275***	***758***						
	-11	604	184	779	585	199	774	563	219	771	545	246	779	519	278	783						
	-10	***628***	***186***	***805***	***609***	***200***	***799***	***587***	***221***	***797***	***558***	***248***	***794***	***542***	***281***	***809***						
	-9	654	187	831	634	202	826	612	223	823	583	250	820	561	283	830						
	-8	***680***	***188***	***858***	***661***	***203***	***853***	***637***	***225***	***851***	***608***	***252***	***847***	***580***	***286***	***851***						
	-7	705	189	884	686	204	880	662	226	877	632	254	874	598	288	872	554	327	865			
	-6	***730***	***190***	***911***	***711***	***206***	***906***	***687***	***228***	***903***	***657***	***256***	***900***	***622***	***291***	***898***	***579***	***330***	***893***			
	-5	755	191	937	736	207	932	712	229	929	681	258	927	646	293	925	605	334	922			
	-4	***782***	***192***	***964***	***762***	***208***	***960***	***738***	***231***	***957***	***707***	***260***	***954***	***672***	***296***	***953***	***630***	***337***	***950***			
	-3	806	193	990	787	209	985	762	232	982	732	261	980	696	298	979	654	340	976			
	-2	***832***	***194***	***1016***	***812***	***210***	***1011***	***787***	***233***	***1008***	***757***	***263***	***1006***	***721***	***300***	***1006***	***678***	***342***	***1003***			
	-1	859	195	1044	839	211	1039	813	234	1035	783	265	1034	746	302	1033	704	345	1032			
	0	***885***	***196***	***1071***	***865***	***212***	***1066***	***838***	***235***	***1062***	***809***	***266***	***1062***	***771***	***304***	***1060***	***730***	***348***	***1061***			
	1	913	196	1100	892	213	1095	866	236	1090	836	265	1088	798	300	1084	756	343	1082			
	2	***941***	***197***	***1128***	***919***	***215***	***1123***	***893***	***236***	***1118***	***863***	***263***	***1113***	***825***	***296***	***1107***	***783***	***337***	***1103***			
	3	967	197	1154	944	216	1149	918	237	1143	888	261	1136	850	292	1128	807	332	1122			
	4	***993***	***197***	***1181***	***970***	***217***	***1177***	***944***	***237***	***1169***	***913***	***259***	***1159***	***863***	***287***	***1135***	***819***	***324***	***1128***	***SQ***	***SQ***	***SQ***
	5	1018	197	1205	994	218	1202	968	237	1193	936	256	1180	873	281	1140	830	317	1131	SQ	SQ	SQ

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Table should also be used for 30% Propylene Glycol after reducing LCLT by 1°C

(For example the cooling capacity when using -1°C LCLT using Propylene Glycol is equivalent to -2°C LCLT using Ethylene Glycol).

Cooling Capacities (0350AA - 0480AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0350AA	4.5	333	72	402	313	80	389	298	87	380	279	97	371	258	111	363	237	124	354	SQ	SQ	SQ
	5	337	72	405	319	80	395	302	88	385	284	97	376	263	111	368	240	125	358	SQ	SQ	SQ
	6	344	73	413	330	80	407	312	89	397	294	98	387	273	111	379	250	125	369	SQ	SQ	SQ
	7	352	73	422	342	81	419	322	89	407	304	98	397	282	112	389	260	126	379	SQ	SQ	SQ
	8	366	74	436	354	81	431	335	90	420	315	99	408	293	113	400	269	127	389	SQ	SQ	SQ
	9	379	74	450	366	82	443	346	90	432	325	99	420	303	113	411	279	127	399	SQ	SQ	SQ
	10	387	75	458	374	82	452	353	90	439	338	99	432	312	113	419	286	127	407	263	140	396
	11	402	77	476	390	82	468	369	91	456	347	101	443	325	113	432	302	125	420	276	141	410
	12	415	79	490	402	83	481	382	92	469	360	101	456	337	112	444	314	124	432	286	142	421
	13	425	79	501	411	85	492	390	92	477	372	102	469	347	113	454	321	124	439	295	141	428
	14	446	80	522	427	86	508	408	93	496	385	102	482	361	114	470	337	125	455	310	140	443
	15	462	81	539	438	89	522	420	93	509	397	103	495	373	114	481	348	126	467	321	138	452
0415AA	4.5	400	85	480	377	95	467	357	103	455	335	115	444	309	131	434	284	146	423	SQ	SQ	SQ
	5	405	85	486	384	95	474	362	104	461	341	115	451	315	132	440	290	148	431	SQ	SQ	SQ
	6	416	86	498	397	95	488	375	105	475	353	116	463	328	132	453	302	148	442	SQ	SQ	SQ
	7	428	87	510	411	96	502	388	106	489	366	116	476	339	133	465	313	149	455	SQ	SQ	SQ
	8	443	87	526	425	96	517	402	107	504	379	117	490	353	133	479	327	148	467	SQ	SQ	SQ
	9	459	88	543	440	97	532	417	107	518	392	117	504	367	132	492	341	147	481	SQ	SQ	SQ
	10	468	89	553	450	97	542	426	107	528	407	118	519	378	132	504	349	147	489	316	166	474
	11	486	92	573	469	98	562	445	108	548	419	120	533	392	133	519	366	147	505	332	168	491
	12	499	94	588	484	98	578	460	109	563	434	120	548	406	133	533	379	147	519	345	169	505
	13	511	94	600	493	100	589	470	109	574	449	121	564	418	134	545	387	147	527	355	168	514
	14	533	95	624	512	102	609	491	110	596	465	121	580	435	134	562	406	148	547	374	166	532
	15	550	96	642	526	105	625	507	111	612	480	122	596	449	135	578	419	149	561	389	164	545
0480AA	4.5	466	98	559	441	109	545	416	121	531	389	135	517	362	153	507	333	171	495	SQ	SQ	SQ
	5	474	98	567	448	110	553	422	122	538	397	135	525	369	154	515	341	172	505	SQ	SQ	SQ
	6	488	99	583	464	110	569	438	122	554	412	136	541	383	155	530	353	173	518	SQ	SQ	SQ
	7	503	100	598	480	111	585	454	123	570	427	136	557	397	155	544	366	174	531	SQ	SQ	SQ
	8	521	101	617	497	112	603	470	123	588	443	137	573	414	154	561	384	171	547	SQ	SQ	SQ
	9	538	102	635	513	112	620	487	124	605	459	137	590	431	153	576	403	168	562	SQ	SQ	SQ
	10	549	103	647	525	113	632	499	124	617	476	137	607	444	153	589	412	169	573	370	195	555
	11	569	106	670	548	113	655	522	125	641	490	139	622	460	155	606	430	170	591	388	196	574
	12	583	109	687	566	114	674	538	126	658	507	139	639	475	155	622	444	171	607	403	197	590
	13	596	109	700	576	116	686	551	126	671	526	140	658	489	155	637	453	171	616	415	196	601
	14	620	110	725	597	119	710	575	127	696	544	140	677	508	156	657	474	172	637	439	194	623
	15	639	111	744	614	121	729	594	128	715	562	141	697	526	157	675	490	173	655	457	192	640

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Cooling Capacities (0530AA - 0620AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0530AA	***4.5***	***500***	***106***	***601***	***474***	***118***	***586***	***447***	***130***	***571***	***419***	***145***	***557***	***389***	***166***	***547***	***360***	***186***	***536***	***SQ***	***SQ***	***SQ***
	5	509	107	610	483	119	595	454	132	579	427	146	565	397	167	555	367	187	545	SQ	SQ	SQ
	6	***526***	***108***	***629***	***500***	***119***	***614***	***472***	***132***	***597***	***443***	***147***	***582***	***412***	***167***	***570***	***380***	***188***	***558***	***SQ***	***SQ***	***SQ***
	7	544	109	647	518	120	632	490	133	616	459	147	599	426	168	586	393	189	572	SQ	SQ	SQ
	8	***563***	***109***	***667***	***536***	***121***	***651***	***508***	***133***	***634***	***476***	***148***	***617***	***445***	***167***	***603***	***413***	***186***	***589***	***SQ***	***SQ***	***SQ***
	9	581	110	685	554	122	670	525	134	653	493	149	635	463	166	620	432	183	605	SQ	SQ	SQ
	10	***592***	***112***	***698***	***567***	***122***	***683***	***538***	***134***	***665***	***513***	***149***	***655***	***476***	***166***	***633***	***442***	***184***	***616***	***400***	***211***	***600***
	11	613	115	723	592	123	708	563	136	691	528	151	671	495	168	654	462	185	637	419	213	621
	12	***630***	***117***	***741***	***611***	***124***	***728***	***581***	***136***	***710***	***548***	***151***	***691***	***513***	***168***	***672***	***478***	***186***	***654***	***434***	***214***	***637***
	13	643	118	755	622	125	741	594	137	725	568	152	712	526	168	686	489	186	665	447	212	649
	14	***669***	***119***	***782***	***645***	***129***	***767***	***620***	***138***	***751***	***587***	***153***	***732***	***548***	***169***	***709***	***511***	***187***	***688***	***471***	***210***	***671***
	15	689	120	803	662	132	787	640	139	772	607	153	752	567	170	729	528	188	707	491	208	688
0575AA	***4.5***	***534***	***115***	***643***	***507***	***127***	***628***	***478***	***140***	***611***	***448***	***156***	***597***	***417***	***179***	***587***	***386***	***201***	***577***	***SQ***	***SQ***	***SQ***
	5	544	116	654	517	127	638	485	142	619	457	157	606	425	179	595	393	202	585	SQ	SQ	SQ
	6	***564***	***116***	***675***	***537***	***128***	***659***	***506***	***142***	***641***	***474***	***158***	***624***	***440***	***180***	***611***	***407***	***202***	***599***	***SQ***	***SQ***	***SQ***
	7	585	117	696	556	129	679	526	143	662	491	159	642	456	181	628	421	203	614	SQ	SQ	SQ
	8	***605***	***118***	***717***	***576***	***130***	***700***	***545***	***143***	***681***	***509***	***160***	***661***	***475***	***180***	***646***	***441***	***200***	***631***	***SQ***	***SQ***	***SQ***
	9	623	119	736	595	131	720	563	144	700	527	161	680	494	179	664	461	197	648	SQ	SQ	SQ
	10	***636***	***120***	***750***	***609***	***131***	***733***	***577***	***144***	***714***	***550***	***161***	***702***	***508***	***179***	***677***	***472***	***198***	***660***	***430***	***227***	***646***
	11	658	124	776	636	132	761	604	146	742	566	163	721	530	181	701	494	199	683	450	229	668
	12	***676***	***126***	***796***	***656***	***133***	***783***	***623***	***147***	***763***	***589***	***163***	***744***	***550***	***181***	***722***	***511***	***200***	***701***	***466***	***230***	***685***
	13	690	127	811	668	135	797	638	148	778	610	164	765	563	181	735	524	200	714	479	228	696
	14	***718***	***128***	***840***	***692***	***139***	***824***	***664***	***149***	***806***	***630***	***165***	***787***	***588***	***183***	***762***	***548***	***201***	***739***	***504***	***225***	***718***
	15	740	129	862	711	142	846	686	150	828	651	166	808	608	184	783	566	202	758	525	223	737
0620AA	***4.5***	***580***	***125***	***699***	***550***	***138***	***681***	***522***	***152***	***666***	***488***	***170***	***649***	***452***	***194***	***636***	***417***	***217***	***623***	***SQ***	***SQ***	***SQ***
	5	591	125	710	561	138	692	529	153	675	497	170	659	460	195	645	424	219	632	SQ	SQ	SQ
	6	***613***	***125***	***732***	***582***	***139***	***715***	***551***	***154***	***697***	***516***	***171***	***678***	***478***	***195***	***663***	***440***	***219***	***648***	***SQ***	***SQ***	***SQ***
	7	636	124	754	605	140	737	572	155	719	535	172	698	495	196	682	456	220	665	SQ	SQ	SQ
	8	***653***	***126***	***773***	***626***	***141***	***759***	***592***	***155***	***739***	***554***	***173***	***718***	***515***	***196***	***701***	***475***	***219***	***684***	***SQ***	***SQ***	***SQ***
	9	677	128	798	647	142	782	612	156	760	573	174	738	534	196	720	494	218	702	SQ	SQ	SQ
	10	***689***	***130***	***813***	***661***	***142***	***796***	***626***	***156***	***775***	***597***	***174***	***762***	***549***	***195***	***734***	***508***	***218***	***715***	***465***	***246***	***699***
	11	713	134	841	690	143	826	655	158	805	614	176	781	574	196	760	534	217	741	487	248	723
	12	***732***	***137***	***862***	***712***	***144***	***849***	***676***	***159***	***827***	***638***	***176***	***805***	***596***	***196***	***782***	***554***	***216***	***760***	***505***	***249***	***741***
	13	751	138	882	726	146	864	691	160	843	660	177	828	610	196	797	568	217	774	519	247	754
	14	***787***	***139***	***919***	***751***	***151***	***894***	***720***	***161***	***873***	***683***	***178***	***852***	***638***	***198***	***825***	***594***	***218***	***801***	***546***	***244***	***778***
	15	816	140	949	771	153	917	744	162	897	705	179	875	659	199	848	614	219	823	569	242	799

LCLT = Leaving Chilled Liquid Temperature R = Heat Rejection

Cooling Capacities (0670AA - 0860AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0670AA	*4.5*	***609***	***121***	***724***	***598***	***133***	***725***	***581***	***144***	***718***	***558***	***156***	***706***	***532***	***171***	***694***	***505***	***193***	***688***	***SQ***	***SQ***	***SQ***
	5	618	120	733	607	134	734	591	145	729	568	157	717	541	172	704	514	194	698	SQ	SQ	SQ
	6	***636***	***119***	***749***	***625***	***134***	***753***	***610***	***147***	***750***	***587***	***160***	***739***	***559***	***175***	***726***	***531***	***195***	***716***	***SQ***	***SQ***	***SQ***
	7	653	119	767	645	134	772	628	149	769	606	163	761	578	179	748	548	197	736	SQ	SQ	SQ
	8	***670***	***120***	***784***	***662***	***134***	***790***	***647***	***151***	***791***	***624***	***167***	***782***	***598***	***182***	***771***	***567***	***201***	***758***	***SQ***	***SQ***	***SQ***
	9	687	121	802	680	133	807	666	152	811	644	169	805	617	186	794	586	205	781	SQ	SQ	SQ
	10	***705***	***122***	***820***	***698***	***131***	***823***	***685***	***153***	***830***	***665***	***172***	***828***	***636***	***190***	***817***	***605***	***209***	***804***	***571***	***231***	***790***
	11	725	122	841	716	132	841	704	153	849	685	174	850	657	194	841	625	214	828	590	236	814
	12	***746***	***123***	***863***	***734***	***133***	***860***	***723***	***152***	***868***	***705***	***176***	***872***	***679***	***197***	***866***	***646***	***218***	***853***	***610***	***241***	***839***
	13	768	124	886	753	133	880	744	151	887	726	177	894	701	201	891	669	222	880	632	246	865
	14	***789***	***125***	***908***	***773***	***134***	***901***	***764***	***150***	***906***	***748***	***178***	***918***	***724***	***204***	***918***	***692***	***227***	***908***	***656***	***251***	***894***
	15	811	126	931	795	135	923	785	150	928	770	178	940	747	206	943	716	232	937	680	256	923
0750AA	*4.5*	***702***	***140***	***836***	***690***	***154***	***836***	***670***	***167***	***829***	***643***	***180***	***814***	***613***	***197***	***800***	***583***	***223***	***795***	***SQ***	***SQ***	***SQ***
	5	713	139	845	700	155	847	681	168	841	654	182	827	624	199	813	592	224	805	SQ	SQ	SQ
	6	***734***	***138***	***865***	***721***	***155***	***869***	***703***	***171***	***865***	***677***	***185***	***853***	***645***	***203***	***838***	***612***	***226***	***827***	***SQ***	***SQ***	***SQ***
	7	753	138	885	743	156	891	724	173	888	699	189	878	667	207	864	632	228	849	SQ	SQ	SQ
	8	***773***	***139***	***905***	***764***	***155***	***911***	***747***	***175***	***913***	***720***	***193***	***903***	***689***	***211***	***890***	***654***	***233***	***875***	***SQ***	***SQ***	***SQ***
	9	792	140	925	785	154	931	768	176	936	742	196	929	712	215	916	675	237	901	SQ	SQ	SQ
	10	***813***	***141***	***947***	***805***	***152***	***949***	***790***	***177***	***958***	***766***	***199***	***955***	***734***	***220***	***942***	***698***	***242***	***928***	***658***	***267***	***912***
	11	836	142	970	825	153	970	812	177	980	789	202	981	757	224	970	721	247	956	680	273	940
	12	***860***	***143***	***996***	***846***	***153***	***992***	***834***	***176***	***1002***	***813***	***204***	***1006***	***783***	***228***	***999***	***745***	***252***	***985***	***704***	***279***	***968***
	13	885	144	1022	868	154	1015	857	175	1024	837	205	1032	808	232	1029	771	257	1016	729	284	999
	14	***910***	***145***	***1048***	***892***	***155***	***1039***	***882***	***173***	***1046***	***863***	***206***	***1059***	***835***	***236***	***1059***	***799***	***263***	***1048***	***756***	***290***	***1032***
	15	935	146	1074	916	156	1065	905	174	1071	888	206	1085	862	239	1088	826	268	1081	784	297	1066
0860AA	*4.5*	***803***	***155***	***949***	***789***	***170***	***951***	***764***	***184***	***939***	***733***	***199***	***922***	***699***	***219***	***907***	***664***	***247***	***899***	***SQ***	***SQ***	***SQ***
	5	814	154	960	801	171	963	777	186	953	746	201	937	712	221	922	675	248	911	SQ	SQ	SQ
	6	***838***	***152***	***982***	***824***	***172***	***987***	***802***	***189***	***982***	***772***	***206***	***967***	***737***	***225***	***951***	***699***	***251***	***937***	***SQ***	***SQ***	***SQ***
	7	859	152	1004	849	172	1012	828	192	1010	798	210	998	762	230	980	723	253	964	SQ	SQ	SQ
	8	***883***	***153***	***1028***	***873***	***172***	***1037***	***853***	***194***	***1037***	***824***	***214***	***1027***	***788***	***234***	***1011***	***748***	***259***	***994***	***SQ***	***SQ***	***SQ***
	9	906	154	1053	897	170	1059	879	196	1064	851	218	1057	815	239	1043	772	264	1023	SQ	SQ	SQ
	10	***930***	***155***	***1078***	***921***	***168***	***1081***	***905***	***196***	***1092***	***878***	***221***	***1088***	***841***	***244***	***1073***	***799***	***269***	***1055***	***754***	***297***	***1037***
	11	958	157	1106	946	169	1107	929	197	1116	905	224	1118	869	249	1106	827	275	1088	780	304	1069
	12	***984***	***158***	***1134***	***969***	***170***	***1131***	***956***	***196***	***1142***	***931***	***227***	***1146***	***897***	***254***	***1139***	***853***	***281***	***1120***	***807***	***310***	***1102***
	13	1012	159	1163	992	171	1155	980	195	1165	958	228	1175	924	259	1170	882	287	1154	833	316	1134
	14	***1038***	***160***	***1190***	***1018***	***173***	***1182***	***1005***	***192***	***1187***	***984***	***230***	***1202***	***951***	***262***	***1200***	***909***	***292***	***1187***	***861***	***323***	***1168***
	15	1066	161	1219	1045	174	1210	1029	194	1213	1010	230	1228	978	266	1231	937	298	1220	889	330	1202

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Cooling Capacities (0980AA - 1120AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0980AA	***4.5***	***912***	***174***	***1077***	***897***	***191***	***1078***	***872***	***205***	***1067***	***836***	***222***	***1047***	***799***	***243***	***1030***	***760***	***275***	***1022***	***SQ***	***SQ***	***SQ***
	5	925	173	1090	911	191	1092	885	207	1082	851	224	1064	813	245	1046	774	276	1036	SQ	SQ	SQ
	6	***952***	***171***	***1115***	***937***	***192***	***1120***	***913***	***210***	***1113***	***881***	***228***	***1098***	***841***	***250***	***1078***	***801***	***279***	***1066***	***SQ***	***SQ***	***SQ***
	7	977	172	1140	966	192	1148	943	213	1146	910	233	1131	870	255	1112	827	281	1094	SQ	SQ	SQ
	8	***1004***	***173***	***1168***	***992***	***192***	***1175***	***971***	***215***	***1176***	***941***	***237***	***1166***	***899***	***260***	***1146***	***856***	***287***	***1129***	***SQ***	***SQ***	***SQ***
	9	1029	174	1194	1019	190	1200	999	217	1206	970	241	1199	931	265	1182	884	292	1162	SQ	SQ	SQ
	10	***1055***	***175***	***1221***	***1046***	***188***	***1224***	***1028***	***218***	***1235***	***1000***	***245***	***1232***	***961***	***270***	***1217***	***915***	***298***	***1198***	***864***	***330***	***1178***
	11	1084	176	1251	1072	189	1251	1056	218	1263	1029	248	1264	991	275	1252	944	304	1232	894	337	1214
	12	***1114***	***177***	***1283***	***1099***	***190***	***1279***	***1084***	***217***	***1290***	***1059***	***250***	***1296***	***1022***	***280***	***1288***	***974***	***310***	***1268***	***922***	***343***	***1248***
	13	1145	178	1315	1125	191	1306	1112	215	1317	1086	252	1326	1051	285	1321	1005	316	1305	952	350	1284
	14	***1176***	***180***	***1347***	***1152***	***192***	***1334***	***1138***	***213***	***1340***	***1116***	***253***	***1356***	***1081***	***289***	***1356***	***1037***	***322***	***1343***	***983***	***356***	***1322***
	15	1206	181	1378	1183	193	1367	1166	214	1369	1146	253	1386	1113	292	1390	1067	328	1378	1015	364	1360
1120AA	***4.5***	***1039***	***198***	***1227***	***1019***	***217***	***1225***	***989***	***235***	***1212***	***950***	***254***	***1191***	***904***	***278***	***1169***	***860***	***315***	***1160***	***SQ***	***SQ***	***SQ***
	5	1054	197	1241	1035	218	1242	1006	237	1231	967	256	1210	921	281	1188	876	317	1176	SQ	SQ	SQ
	6	***1084***	***195***	***1269***	***1067***	***219***	***1275***	***1039***	***241***	***1268***	***1000***	***261***	***1249***	***954***	***286***	***1226***	***906***	***319***	***1209***	***SQ***	***SQ***	***SQ***
	7	1113	195	1298	1099	220	1308	1073	244	1305	1035	267	1288	987	292	1265	937	323	1244	SQ	SQ	SQ
	8	***1143***	***196***	***1330***	***1131***	***219***	***1339***	***1105***	***247***	***1339***	***1068***	***272***	***1326***	***1022***	***298***	***1305***	***970***	***329***	***1283***	***SQ***	***SQ***	***SQ***
	9	1173	198	1361	1161	217	1368	1139	249	1375	1103	277	1365	1057	304	1346	1004	336	1323	SQ	SQ	SQ
	10	***1204***	***199***	***1394***	***1194***	***215***	***1398***	***1171***	***250***	***1408***	***1138***	***281***	***1405***	***1091***	***310***	***1386***	***1037***	***342***	***1362***	***981***	***379***	***1341***
	11	1240	201	1431	1224	216	1429	1205	250	1442	1171	285	1442	1127	317	1428	1073	349	1405	1012	387	1380
	12	***1275***	***202***	***1466***	***1256***	***217***	***1462***	***1236***	***249***	***1473***	***1207***	***288***	***1481***	***1162***	***322***	***1468***	***1107***	***357***	***1446***	***1047***	***395***	***1422***
	13	1309	203	1502	1284	218	1491	1268	247	1503	1241	290	1516	1199	328	1511	1144	364	1490	1081	403	1464
	14	***1345***	***205***	***1539***	***1317***	***220***	***1525***	***1300***	***244***	***1532***	***1274***	***291***	***1551***	***1234***	***333***	***1550***	***1180***	***371***	***1533***	***1118***	***411***	***1509***
	15	1379	206	1574	1352	221	1562	1332	246	1565	1306	291	1582	1267	337	1587	1216	379	1576	1154	419	1552

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Glycol Cooling Capacities (0350AA - 0480AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0350AA	-12	175	64	236	166	71	233	153	79	228	140	86	222	121	93	209						
	-11	183	66	246	173	73	242	160	81	236	147	89	231	131	96	223						
	-10	192	67	255	180	74	250	167	83	245	155	91	241	142	100	236						
	-9	200	66	263	187	75	259	175	83	253	162	91	248	149	99	243						
	-8	209	66	272	195	75	266	182	84	261	169	92	256	156	101	252						
	-7	218	65	280	202	75	273	189	84	269	176	93	265	163	102	260	148	112	255	135	123	251
	-6	227	66	289	211	76	283	198	85	278	184	93	273	171	102	267	156	131	280	141	124	259
	-5	236	66	299	219	76	291	206	85	286	192	94	281	179	103	277	163	114	271	147	125	266
	-4	245	67	308	230	75	301	215	84	294	200	92	288	185	101	281	170	115	279	154	126	274
	-3	253	67	317	241	74	311	224	85	305	208	95	298	191	106	291	178	116	288	161	127	282
	-2	263	67	327	250	74	321	233	85	314	216	95	307	199	106	300	185	116	296	168	128	289
	-1	273	67	337	259	75	330	242	86	323	225	96	316	208	107	309	193	117	304	175	129	298
	0	283	67	347	268	75	339	251	86	332	233	96	325	216	107	317	201	118	313	183	129	305
	1	292	68	357	277	75	348	260	86	341	243	96	334	227	106	327	209	119	321	191	130	314
	2	301	69	366	286	76	358	270	86	351	253	96	344	237	106	337	217	119	330	199	131	323
	3	310	69	376	295	76	367	279	86	361	263	95	354	247	105	347	225	120	339	206	131	331
	4	319	70	385	304	77	377	289	86	370	273	95	364	258	105	357	233	120	347	214	132	340
	5	328	71	395	313	77	386	298	86	380	283	95	373	268	104	367	241	121	356	222	133	349
0415AA	-12	211	77	283	198	85	279	183	94	272	168	103	266	148	112	254						
	-11	221	78	295	207	87	290	190	96	281	177	105	277	160	115	269						
	-10	232	80	307	217	88	300	201	98	295	186	108	289	168	118	280						
	-9	243	79	317	226	89	311	210	99	304	195	109	298	179	118	291						
	-8	254	78	327	235	89	319	219	99	313	203	109	307	188	119	301						
	-7	265	77	338	244	90	329	228	100	323	212	110	316	196	120	310	178	134	305	162	146	300
	-6	275	78	348	256	90	341	239	100	334	221	111	327	204	121	319	187	144	323	170	148	310
	-5	285	78	359	267	89	351	249	100	344	231	112	337	213	123	330	196	136	324	177	149	319
	-4	295	79	370	279	88	362	260	100	354	241	111	346	222	123	338	205	136	334	186	150	328
	-3	306	80	381	290	88	374	270	100	366	250	113	358	230	126	350	214	138	344	194	151	337
	-2	316	80	392	301	88	385	281	101	376	261	113	368	240	126	360	223	138	354	202	152	347
	-1	327	81	403	312	89	396	291	102	388	271	114	379	251	127	371	232	139	364	211	153	357
	0	337	82	415	322	89	407	302	102	398	281	114	390	261	127	381	241	140	374	220	154	366
	1	348	82	426	334	90	419	314	102	410	293	114	401	273	126	392	252	140	385	230	154	376
	2	359	83	438	346	90	432	325	102	422	305	113	413	285	125	403	263	140	396	240	155	387
	3	370	83	450	358	91	444	337	102	434	317	113	424	296	124	414	273	140	406	249	156	398
	4	381	84	461	369	92	457	349	102	446	329	113	436	308	123	425	284	140	417	259	157	408
	5	392	85	473	381	93	469	361	103	458	340	113	447	320	123	436	295	140	427	269	158	419
0480AA	-12	246	89	331	231	99	325	214	109	318	197	119	310	175	130	299						
	-11	259	91	345	242	101	338	225	111	331	208	122	323	188	133	315						
	-10	272	92	359	253	102	350	236	114	344	218	125	337	201	137	331						
	-9	285	91	371	265	103	363	246	115	355	228	126	347	209	138	340						
	-8	298	90	383	275	103	373	256	115	365	238	127	358	219	138	350						
	-7	311	89	396	286	104	385	267	116	376	247	127	368	228	139	359	208	155	355	189	169	349
	-6	322	90	407	301	104	400	280	116	390	259	128	381	237	141	371	218	156	367	199	171	361
	-5	334	90	419	315	101	411	293	115	402	270	129	392	247	143	383	229	157	378	208	173	372
	-4	346	91	433	328	101	423	304	115	414	281	130	405	258	144	395	239	158	389	217	174	383
	-3	358	92	446	340	101	436	316	116	426	293	131	417	269	146	408	249	159	400	227	175	393
	-2	369	93	458	352	102	449	329	117	439	305	131	430	281	146	420	261	160	413	237	176	404
	-1	380	95	470	365	103	462	341	118	453	317	132	443	294	147	433	271	161	424	247	177	415
	0	391	96	483	377	103	475	353	118	465	330	132	455	306	147	445	282	162	436	258	178	427
	1	405	96	496	391	104	490	367	118	479	343	132	468	319	145	457	295	161	449	269	179	439
	2	418	97	510	406	105	506	381	118	494	357	131	481	332	144	469	309	160	461	281	180	452
	3	431	97	523	420	106	521	395	118	508	370	131	495	345	143	482	322	160	473	292	181	464
	4	444	98	537	435	107	536	409	119	522	384	130	508	359	142	494	335	159	486	304	182	477
	5	457	98	550	449	108	552	423	119	536	398	130	521	372	141	506	348	158	498	315	183	489

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Glycol Cooling Capacities (0530AA - 0620AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																					
		35			40			45			50			55			60			65			
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	
0530AA	***-12***	***267***	***97***	***359***	***247***	***107***	***348***	***231***	***118***	***343***	***214***	***130***	***337***	***196***	***142***	***330***							
	-11	281	99	375	260	109	364	243	121	358	226	133	352	208	146	346							
	-10	***295***	***100***	***390***	***273***	***112***	***379***	***255***	***124***	***373***	***238***	***137***	***368***	***220***	***150***	***363***							
	-9	308	99	402	285	112	392	267	125	386	248	138	379	230	151	373							
	-8	***322***	***98***	***415***	***298***	***113***	***405***	***278***	***126***	***398***	***259***	***139***	***391***	***240***	***152***	***384***							
	-7	336	98	428	310	114	418	290	127	410	270	140	402	252	154	398	235	171	397	206	187	383	
	-6	***348***	***98***	***441***	***324***	***114***	***432***	***303***	***127***	***423***	***282***	***140***	***415***	***263***	***155***	***410***	***245***	***172***	***408***	***211***	***189***	***390***	
	-5	361	99	454	338	113	445	316	127	436	294	142	428	273	157	422	254	173	418	216	190	397	
	-4	***374***	***99***	***468***	***353***	***112***	***459***	***329***	***127***	***450***	***306***	***142***	***441***	***285***	***158***	***435***	***265***	***174***	***430***	***222***	***192***	***404***	
	-3	387	100	482	368	111	473	343	127	463	318	143	454	296	159	447	276	175	442	228	193	411	
	-2	***402***	***101***	***498***	***381***	***112***	***487***	***356***	***128***	***477***	***331***	***144***	***468***	***308***	***160***	***460***	***287***	***176***	***454***	***266***	***237***	***491***	
	-1	417	102	513	394	113	501	369	129	491	344	145	482	321	160	473	299	176	466	233	195	418	
	0	***432***	***103***	***529***	***407***	***113***	***514***	***382***	***129***	***504***	***357***	***145***	***495***	***334***	***161***	***487***	***310***	***178***	***479***	***244***	***196***	***430***	
	1	445	104	544	423	114	531	397	129	519	371	144	508	347	161	500	323	178	493	265	197	451	
	2	***459***	***105***	***559***	***439***	***115***	***548***	***412***	***129***	***535***	***385***	***144***	***522***	***361***	***160***	***513***	***337***	***178***	***506***	***285***	***198***	***473***	
	3	473	106	573	454	116	565	427	130	550	399	143	535	374	160	526	350	178	519	305	199	494	
	4	***487***	***107***	***588***	***470***	***117***	***582***	***441***	***130***	***565***	***413***	***143***	***548***	***388***	***159***	***539***	***364***	***178***	***533***	***326***	***200***	***516***	
	5	501	108	603	486	119	599	456	131	580	426	143	562	401	159	552	377	178	546	346	201	537	
0575AA	***-12***	***288***	***105***	***388***	***264***	***114***	***372***	***247***	***127***	***368***	***231***	***140***	***364***	***216***	***153***	***362***							
	-11	303	107	404	278	118	390	261	131	386	244	145	381	228	158	378							
	-10	***317***	***108***	***420***	***293***	***121***	***407***	***275***	***135***	***403***	***258***	***149***	***399***	***240***	***163***	***395***							
	-9	332	107	433	306	121	421	287	136	416	269	150	411	250	165	407							
	-8	***346***	***107***	***447***	***320***	***122***	***436***	***301***	***136***	***430***	***281***	***151***	***424***	***261***	***165***	***418***							
	-7	361	106	461	334	123	451	313	138	444	293	152	437	277	169	438	262	186	438	222	205	417	
	-6	***374***	***107***	***475***	***347***	***123***	***464***	***326***	***138***	***457***	***305***	***152***	***450***	***288***	***170***	***449***	***271***	***187***	***449***	***224***	***206***	***419***	
	-5	387	107	489	361	124	478	339	139	471	317	154	464	299	171	461	280	188	459	225	207	421	
	-4	***402***	***108***	***504***	***378***	***122***	***494***	***354***	***138***	***486***	***331***	***154***	***477***	***311***	***172***	***474***	***291***	***189***	***471***	***227***	***209***	***425***	
	-3	416	108	519	396	120	510	370	138	500	344	155	491	323	173	487	303	190	483	229	211	429	
	-2	***434***	***109***	***538***	***409***	***121***	***524***	***383***	***139***	***515***	***357***	***156***	***506***	***336***	***174***	***501***	***314***	***191***	***496***	***296***	***297***	***578***	
	-1	453	109	557	423	122	539	397	140	530	371	157	521	349	174	514	327	191	508	218	212	420	
	0	***472***	***110***	***576***	***437***	***122***	***553***	***411***	***140***	***543***	***385***	***157***	***534***	***362***	***176***	***528***	***338***	***194***	***522***	***231***	***213***	***433***	
	1	486	111	592	454	123	571	427	140	560	399	157	548	375	176	542	351	195	536	260	214	463	
	2	***501***	***113***	***608***	***471***	***125***	***590***	***442***	***141***	***576***	***413***	***156***	***562***	***389***	***176***	***556***	***365***	***196***	***551***	***289***	***215***	***494***	
	3	515	114	623	489	126	609	458	141	592	427	156	575	403	176	570	379	196	565	318	217	524	
	4	***529***	***116***	***639***	***506***	***128***	***627***	***474***	***142***	***608***	***441***	***155***	***589***	***417***	***176***	***584***	***392***	***197***	***580***	***348***	***218***	***555***	
	5	544	117	655	523	129	646	489	142	624	455	155	603	431	177	598	406	198	594	377	219	585	
0620AA	***-12***	***307***	***116***	***417***	***284***	***124***	***402***	***265***	***137***	***395***	***246***	***150***	***389***	***216***	***165***	***373***							
	-11	323	117	434	299	128	420	280	142	415	261	156	409	236	171	398							
	-10	***340***	***118***	***452***	***314***	***132***	***439***	***295***	***147***	***434***	***275***	***162***	***429***	***255***	***177***	***424***							
	-9	355	117	467	328	132	453	308	148	448	287	163	442	267	179	437							
	-8	***370***	***116***	***481***	***342***	***133***	***469***	***321***	***148***	***462***	***300***	***164***	***456***	***279***	***179***	***450***							
	-7	386	116	496	356	134	484	335	150	477	313	165	470	291	183	465	269	202	460	239	222	449	
	-6	***401***	***116***	***511***	***372***	***134***	***499***	***349***	***150***	***492***	***327***	***166***	***484***	***303***	***184***	***478***	***280***	***202***	***472***	***245***	***223***	***457***	
	-5	415	117	526	387	135	516	364	151	507	340	167	499	316	185	492	291	204	485	251	224	464	
	-4	***431***	***117***	***542***	***406***	***133***	***532***	***380***	***150***	***523***	***353***	***168***	***513***	***328***	***186***	***505***	***303***	***204***	***497***	***259***	***226***	***473***	
	-3	447	118	559	424	131	549	396	150	538	367	169	527	340	187	518	314	205	509	267	227	482	
	-2	***463***	***118***	***575***	***439***	***132***	***564***	***410***	***151***	***553***	***382***	***170***	***543***	***354***	***188***	***533***	***327***	***207***	***523***	***306***	***271***	***564***	
	-1	478	119	591	454	133	580	426	152	569	397	171	559	368	189	547	339	208	536	274	230	492	
	0	***494***	***120***	***608***	***469***	***133***	***595***	***440***	***152***	***585***	***412***	***171***	***574***	***382***	***191***	***563***	***351***	***210***	***551***	***286***	***231***	***506***	
	1	512	121	627	487	134	614	458	152	602	429	170	591	398	191	579	367	211	568	308	232	529	
	2	***529***	***123***	***645***	***505***	***135***	***633***	***475***	***152***	***620***	***445***	***170***	***607***	***414***	***191***	***596***	***383***	***212***	***585***	***329***	***234***	***551***	
	3	546	124	664	523	136	652	493	153	638	462	169	623	431	191	612	399	213	602	351	235	574	
	4	***564***	***125***	***683***	***541***	***137***	***671***	***510***	***153***	***655***	***479***	***169***	***639***	***447***	***191***	***629***	***416***	***214***	***619***	***372***	***237***	***597***	
	5	581	127	701	559	138	690	527	153	673	495	168	655	464	192	645	432	215	636	393	238	620	

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Glycol Cooling Capacities (0670AA - 0860AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0670AA	***-12***	***340***	***112***	***447***	***330***	***121***	***444***	***316***	***133***	***442***	***312***	***149***	***454***	***291***	***168***	***451***						
	-11	354	113	462	343	122	459	330	134	457	320	150	463	305	170	466						
	-10	***369***	***114***	***477***	***357***	***122***	***473***	***344***	***135***	***473***	***327***	***152***	***471***	***318***	***172***	***481***						
	-9	384	114	492	372	123	489	359	136	488	342	153	487	329	173	493						
	-8	***399***	***115***	***508***	***387***	***124***	***505***	***374***	***137***	***504***	***356***	***154***	***503***	***340***	***175***	***506***						
	-7	413	116	523	402	125	521	388	138	520	371	156	518	351	176	518	325	200	515			
	-6	***428***	***116***	***539***	***417***	***126***	***537***	***403***	***139***	***535***	***385***	***157***	***534***	***365***	***178***	***534***	***340***	***202***	***532***			
	-5	443	117	554	432	126	552	417	140	551	400	158	550	379	179	549	355	204	549			
	-4	***459***	***118***	***570***	***447***	***127***	***568***	***433***	***141***	***567***	***415***	***159***	***566***	***394***	***181***	***566***	***370***	***206***	***565***			
	-3	473	118	585	462	128	583	447	142	582	429	160	581	408	182	581	384	208	581			
	-2	***488***	***119***	***601***	***476***	***128***	***598***	***462***	***142***	***597***	***444***	***161***	***597***	***423***	***183***	***597***	***398***	***209***	***597***			
	-1	504	119	617	492	129	614	477	143	613	459	162	613	438	185	613	413	211	614			
	0	***519***	***120***	***633***	***508***	***129***	***631***	***492***	***144***	***628***	***475***	***163***	***629***	***452***	***186***	***629***	***428***	***213***	***630***			
	1	536	120	650	523	130	647	508	144	645	491	162	644	468	184	643	444	210	643			
	2	***552***	***120***	***666***	***539***	***131***	***664***	***524***	***145***	***661***	***506***	***161***	***659***	***484***	***181***	***656***	***459***	***206***	***655***			
	3	567	120	682	554	132	679	539	145	676	521	160	673	499	179	668	473	203	666			
	4	***583***	***121***	***697***	***569***	***133***	***695***	***554***	***145***	***691***	***536***	***158***	***686***	***506***	***175***	***673***	***481***	***198***	***669***	***SQ***	***SQ***	***SQ***
	5	597	121	712	583	133	710	568	145	705	549	157	698	512	172	676	487	194	671	SQ	SQ	SQ
0750AA	***-12***	***392***	***130***	***515***	***380***	***140***	***513***	***365***	***153***	***510***	***359***	***173***	***524***	***336***	***195***	***521***						
	-11	409	130	533	396	141	530	381	155	528	369	174	534	351	197	538						
	-10	***425***	***131***	***550***	***412***	***142***	***546***	***397***	***156***	***545***	***378***	***175***	***544***	***367***	***199***	***555***						
	-9	442	132	568	429	143	565	414	158	564	394	177	562	379	200	570						
	-8	***460***	***133***	***586***	***447***	***144***	***583***	***431***	***159***	***582***	***411***	***178***	***581***	***392***	***202***	***584***						
	-7	477	134	604	464	145	601	448	160	600	427	180	598	405	204	598	375	231	594			
	-6	***494***	***135***	***622***	***481***	***145***	***619***	***465***	***161***	***618***	***444***	***181***	***617***	***421***	***206***	***616***	***392***	***234***	***614***			
	-5	511	135	639	498	146	637	481	162	636	461	183	634	437	207	634	409	236	634			
	-4	***529***	***136***	***658***	***516***	***147***	***656***	***499***	***163***	***654***	***479***	***184***	***653***	***455***	***209***	***653***	***426***	***238***	***653***			
	-3	545	137	675	532	148	673	516	164	671	495	185	671	471	211	671	442	240	671			
	-2	***563***	***137***	***693***	***549***	***148***	***690***	***532***	***165***	***689***	***512***	***186***	***689***	***488***	***212***	***689***	***459***	***242***	***689***			
	-1	581	138	712	567	149	709	550	166	707	530	187	708	505	214	708	476	244	708			
	0	***599***	***139***	***731***	***585***	***150***	***728***	***567***	***167***	***725***	***547***	***188***	***726***	***522***	***215***	***726***	***494***	***246***	***728***			
	1	618	139	750	604	151	747	586	167	744	566	187	744	540	212	742	512	243	742			
	2	***637***	***139***	***769***	***622***	***152***	***766***	***604***	***167***	***763***	***584***	***186***	***761***	***558***	***210***	***758***	***529***	***239***	***756***			
	3	654	139	786	639	153	784	621	167	780	601	185	776	575	207	771	546	235	769			
	4	***672***	***139***	***805***	***656***	***154***	***802***	***639***	***168***	***798***	***618***	***183***	***792***	***584***	***203***	***776***	***554***	***229***	***772***	***SQ***	***SQ***	***SQ***
	5	688	139	821	673	154	819	655	168	814	633	181	806	591	199	780	562	224	775	SQ	SQ	SQ
0860AA	***-12***	***448***	***143***	***584***	***434***	***154***	***580***	***416***	***169***	***577***	***410***	***191***	***592***	***384***	***215***	***588***						
	-11	467	144	604	452	155	600	435	171	597	421	192	603	401	217	607						
	-10	***486***	***145***	***623***	***470***	***156***	***619***	***453***	***173***	***617***	***431***	***193***	***615***	***419***	***219***	***627***						
	-9	505	146	644	490	157	640	473	174	638	450	195	636	433	221	643						
	-8	***525***	***147***	***665***	***510***	***159***	***661***	***492***	***175***	***659***	***470***	***197***	***657***	***448***	***223***	***660***						
	-7	544	148	685	530	160	682	511	177	679	488	199	677	462	225	676	428	255	670			
	-6	***564***	***149***	***705***	***549***	***161***	***702***	***531***	***178***	***700***	***507***	***200***	***697***	***481***	***227***	***696***	***448***	***258***	***693***			
	-5	583	149	725	569	161	722	550	179	720	526	202	718	499	229	717	467	261	715			
	-4	***604***	***150***	***747***	***589***	***162***	***743***	***570***	***180***	***741***	***547***	***203***	***739***	***519***	***231***	***738***	***487***	***263***	***737***			
	-3	623	151	766	608	163	763	589	181	761	565	204	759	538	232	759	505	265	757			
	-2	***642***	***151***	***786***	***627***	***164***	***783***	***608***	***182***	***781***	***585***	***205***	***780***	***557***	***234***	***779***	***524***	***267***	***778***			
	-1	663	152	808	648	165	804	628	183	802	605	207	801	577	236	800	544	270	800			
	0	***684***	***153***	***829***	***668***	***165***	***825***	***648***	***184***	***822***	***625***	***208***	***823***	***596***	***237***	***821***	***564***	***272***	***822***			
	1	706	153	851	689	166	848	669	184	844	646	207	842	617	234	840	584	268	839			
	2	***727***	***154***	***873***	***710***	***168***	***869***	***690***	***185***	***865***	***667***	***205***	***862***	***638***	***231***	***857***	***605***	***263***	***855***			
	3	747	154	893	729	169	889	709	185	885	686	204	880	657	228	873	623	259	869			
	4	***768***	***154***	***914***	***750***	***170***	***911***	***730***	***185***	***905***	***706***	***202***	***898***	***667***	***224***	***879***	***633***	***253***	***874***	***SQ***	***SQ***	***SQ***
	5	786	154	932	768	170	930	748	185	923	723	200	913	675	220	883	641	247	876	SQ	SQ	SQ

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Glycol Cooling Capacities (0980AA - 1120AA)

YLCS	LCLT °C	Saturated Discharge Temperature at Unit °C																				
		35			40			45			50			55			60			65		
		Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW	Cool kW	Power kW	HR kW
0980AA	***-12***	***509***	***161***	***662***	***493***	***174***	***658***	***473***	***191***	***655***	***466***	***215***	***671***	***436***	***242***	***666***						
	-11	530	162	685	514	175	680	494	193	677	478	217	684	456	245	688						
	-10	***552***	***163***	***707***	***534***	***176***	***702***	***515***	***195***	***700***	***490***	***218***	***697***	***476***	***247***	***711***						
	-9	574	164	730	557	177	725	537	196	723	512	220	720	492	249	729						
	-8	***597***	***165***	***754***	***580***	***179***	***750***	***559***	***198***	***747***	***533***	***222***	***744***	***509***	***252***	***748***						
	-7	619	166	777	602	180	773	581	199	770	555	224	767	525	254	766	486	288	760			
	-6	***641***	***167***	***800***	***624***	***181***	***796***	***603***	***200***	***793***	***576***	***226***	***791***	***546***	***256***	***789***	***509***	***291***	***785***			
	-5	663	168	823	646	182	819	625	202	816	598	227	814	567	258	812	531	294	810			
	-4	***686***	***169***	***847***	***669***	***183***	***843***	***648***	***203***	***841***	***621***	***229***	***838***	***590***	***260***	***837***	***553***	***296***	***835***			
	-3	708	170	869	691	184	865	669	204	863	642	230	861	611	262	860	574	299	858			
	-2	***730***	***171***	***892***	***713***	***185***	***888***	***691***	***205***	***886***	***664***	***231***	***884***	***633***	***264***	***883***	***595***	***301***	***881***			
	-1	754	171	917	736	185	912	714	206	909	687	233	909	655	266	907	618	304	907			
	0	***777***	***172***	***941***	***759***	***186***	***936***	***736***	***207***	***933***	***710***	***234***	***933***	***677***	***268***	***931***	***641***	***306***	***932***			
	1	802	173	966	783	188	962	760	208	957	734	233	955	701	264	952	664	302	951			
	2	***826***	***173***	***991***	***807***	***189***	***986***	***784***	***208***	***981***	***758***	***231***	***978***	***725***	***261***	***972***	***687***	***297***	***969***			
	3	849	173	1013	829	190	1009	806	208	1004	780	230	998	746	257	991	708	292	985			
	4	***872***	***173***	***1037***	***852***	***191***	***1033***	***829***	***208***	***1027***	***802***	***228***	***1018***	***757***	***252***	***997***	***719***	***285***	***991***	***SQ***	***SQ***	***SQ***
	5	893	173	1058	873	192	1055	850	208	1048	822	226	1036	767	247	1002	729	279	994	SQ	SQ	SQ
1120AA	***-12***	***580***	***183***	***754***	***562***	***197***	***749***	***539***	***217***	***745***	***531***	***244***	***763***	***496***	***275***	***758***						
	-11	604	184	779	585	199	774	563	219	771	545	246	779	519	278	783						
	-10	***628***	***186***	***805***	***609***	***200***	***799***	***587***	***221***	***797***	***558***	***248***	***794***	***542***	***281***	***809***						
	-9	654	187	831	634	202	826	612	223	823	583	250	820	561	283	830						
	-8	***680***	***188***	***858***	***661***	***203***	***853***	***637***	***225***	***851***	***608***	***252***	***847***	***580***	***286***	***851***						
	-7	705	189	884	686	204	880	662	226	877	632	254	874	598	288	872	554	327	865			
	-6	***730***	***190***	***911***	***711***	***206***	***906***	***687***	***228***	***903***	***657***	***256***	***900***	***622***	***291***	***898***	***579***	***330***	***893***			
	-5	755	191	937	736	207	932	712	229	929	681	258	927	646	293	925	605	334	922			
	-4	***782***	***192***	***964***	***762***	***208***	***960***	***738***	***231***	***957***	***707***	***260***	***954***	***672***	***296***	***953***	***630***	***337***	***950***			
	-3	806	193	990	787	209	985	762	232	982	732	261	980	696	298	979	654	340	976			
	-2	***832***	***194***	***1016***	***812***	***210***	***1011***	***787***	***233***	***1008***	***757***	***263***	***1006***	***721***	***300***	***1006***	***678***	***342***	***1003***			
	-1	859	195	1044	839	211	1039	813	234	1035	783	265	1034	746	302	1033	704	345	1032			
	0	***885***	***196***	***1071***	***865***	***212***	***1066***	***838***	***235***	***1062***	***809***	***266***	***1062***	***771***	***304***	***1060***	***730***	***348***	***1061***			
	1	913	196	1100	892	213	1095	866	236	1090	836	265	1088	798	300	1084	756	343	1082			
	2	***941***	***197***	***1128***	***919***	***215***	***1123***	***893***	***236***	***1118***	***863***	***263***	***1113***	***825***	***296***	***1107***	***783***	***337***	***1103***			
	3	967	197	1154	944	216	1149	918	237	1143	888	261	1136	850	292	1128	807	332	1122			
	4	***993***	***197***	***1181***	***970***	***217***	***1177***	***944***	***237***	***1169***	***913***	***259***	***1159***	***863***	***287***	***1135***	***819***	***324***	***1128***	***SQ***	***SQ***	***SQ***
	5	1018	197	1205	994	218	1202	968	237	1193	936	256	1180	873	281	1140	830	317	1131	SQ	SQ	SQ

LCLT = Leaving Chilled Liquid Temperature HR = Heat Rejection

Physical Data (SA / HA / AA)

Model				0350	0415	0480	0530	0575	0620
Refrigerant circuits				2	2	2	2	2	2
Refrigerant Charge	Circuit 1		kg	30	52	52	60	62	60
	Circuit 2		kg	30	52	52	60	62	60
Oil Charge	Circuit 1		l	16	15	15	18	18	23
	Circuit 2		l	16	16	15	15	18	18
Compressor	Number			2	2	2	2	2	2
	Type (circuit 1)			YTS FAD	YTS HAE	YTS HAE	YTS IAF	YTS IAF	YTS JAG
	Type (circuit 2)			YTS FAD	YTS FAD	YTS HAE	YTS HAE	YTS IAF	YTS IAF
	Capacity Control		%	15, 27, 39, 51, 63, 75, 87, 100					
Evaporator	Number			1	1	1	1	1	1
	Type			DED315	DED350	DED535	DED535	DED585	DED585
	Water volume		l	129.5	113.5	184	184	222	222
	Victaulic connection sizes		in	5"	5"	6"	6"	6"	6"
Condenser	Number			2	2	2	2	2	2
	Type			CDEW240	CDEW300	CDEW300	CDEW360	CDEW360	CDEW450
	Water volume (each)		l	17	27.7	27.7	31.2	31.2	35.7
	BSPPint / Victaulic connection sizes		in	2.1/2"	3"	3"	3"	3"	3"
	Discharge Connection Line Size (AA models)		in	2.1/8"	2.5/8"	2.5/8"	2.5/8"	2.5/8"	2.5/8"
	Liquid Connection Line Size (AA models)		in	1.3/8"	1.3/8"	1.5/8"	1.5/8"	1.5/8"	1.5/8"
Weight	Operating (SA-HA)		kg	3420	3880	4170	4270	4370	4540
	Operating (AA)		kg	3090	3265	3555	3650	3750	3905
	Shipping (SA-HA)		kg	3100	3510	3800	3900	4000	4150
	Shipping (AA)		kg	2860	3105	3395	3470	3570	3695
	Cooler only		kg	417	570	650	650	730	730
Dimensions	Length		mm	3225	3244	3274	3274	3544	3600
	Width (1)	Vertical nozzle evaporator	mm	890	890	890	890	890	890
		Horizontal nozzle evaporator	mm	967	967	1010	1010	1010	1010
	Height		mm	2100	2100	2100	2100	2100	2100

Model				0670	0750	0860	0980	1120
Refrigerant circuits				2	2	2	2	2
Refrigerant Charge	Circuit 1		kg	68	78	81	86	86
	Circuit 2		kg	68	78	81	86	86
Oil Charge	Circuit 1		l	20	23	23	28	28
	Circuit 2		l	18	23	23	23	28
Compressor	Number			2	2	2	2	2
	Type (circuit 1)			YTS IAE	YTS JAF	YTS LAG	YTS MAH	YTS MAH
	Type (circuit 2)			YTS IAE	YTS JAF	YTS LAG	YTS LAG	YTS MAH
	Capacity Control		%	15, 27, 39, 51, 63, 75, 87, 100				
Evaporator	Number			1	1	1	1	1
	Type			DED645	DED715	M200	M200	M240
	Water volume		l	252	295	430	430	501
	Victaulic connection sizes		in	8"	8"	10"	10"	10"
Condenser	Number			2	2	2	2	2
	Type			CDEW450	CDEW550	CDEW550	CDEW550X	CDEW550X
	Water volume (each)		l	35.7	47.5	47.5	63	63
	BSPPint / Victaulic connection sizes		in	3"	4"	4"	4"	4"
	Discharge Connection Line Size (AA models)		in	3.5/8"	3.5/8"	4.1/8"	4.1/8"	4.1/8"
	Liquid Connection Line Size (AA models)		in	1.5/8"	1.5/8"	1.5/8"	1.5/8"	1.5/8"
Weight	Operating (SA-HA)		kg	4510	5010	5620	6090	6610
	Operating (AA)		kg	4010	4320	4940	5190	5710
	Shipping (SA-HA)		kg	4180	4610	5090	5530	5980
	Shipping (AA)		kg	3620	3860	4340	4580	5030
	Cooler only		kg	825	960	1200	1200	1420
Dimensions	Length		mm	3565	3645	3830	3830	3830
	Width (1)	Vertical nozzle evaporator	mm	1290	1290	NA	NA	NA
		Horizontal nozzle evaporator	mm	1290	1290	1290	1290	1290
	Height		mm	2163	2163	2148	2148	2148

1) Width includes control panel but does not include switch disconnect or circuit breaker handles

Electrical Data - Unit (SA)

	Nominal Running		Maximum Running		
	AMPS		AMPS		
	@ 380 V	@ 400 V	@360 V	@ 380 V	@ 400 V
Model YLCS SA	Without Power Factor Correction				
	With Optional Power Factor Correction fitted				
0350	136	130	162	154	146
	130	122	156	146	138
0415	165	156	195	186	176
	156	146	187	176	166
0480	194	182	228	218	206
	182	170	218	206	194
0530	207	196	245	233	221
	197	186	237	224	212
0575	220	210	262	248	236
	212	202	256	242	230
0620	239	228	285	270	257
	230	219	277	262	248
0670	232	220	274	260	247
	215	204	254	241	229
0750	269	255	317	301	286
	249	236	294	278	265
0860	297	282	353	334	318
	275	262	327	310	294
0980	332	316	390	369	351
	308	292	361	342	325
1120	379	360	448	425	403
	351	334	415	393	374

Electrical Data - System (SA)

Model YLCS SA	SYS No.	Comp's Motor	Compressor Running Conditions					
			Nominal			Maximum		
			Power kW	Current Amps @ 380 V	Current Amps @ 400 V	Power kW	Current Amps @360 V	Current Amps @ 380 V	Current Amps @ 400 V
			Without Power Factor Correction					
			With Optional Power Factor Correction fitted					
0350	**1 & 2**	YTS F-A-D	41	68	65	46.2	81	77	73
				65	61		78	73	69
0415	**1**	YTS H-A-E	56.5	97	91	63.9	114	109	103
				91	85		109	103	97
	2	YTS F-A-D	41	68	65	46.2	81	77	73
				65	61		78	73	69
0480	**1 & 2**	YTS H-A-E	56.5	97	91	63.9	114	109	103
				91	85		109	103	97
0530	**1**	YTS I-A-F	67.4	110	105	76.1	131	124	118
				106	101		128	121	115
	2	YTS H-A-E	56.5	97	91	63.9	114	109	103
				91	85		109	103	97
0575	**1 & 2**	YTS I-A-F	67.4	110	105	76.1	131	124	118
				106	101		128	121	115
0620	**1**	YTS J-A-G	79.2	129	123	89.6	154	146	139
				124	118		149	141	133
	2	YTS I-A-F	67.4	110	105	76.1	131	124	118
				106	101		128	121	115
0670	**1 & 2**	YTS I-A-E (1)	67.2	116	110	75.2	137	130	123
				107	102		127	120	114
0750	**1 & 2**	YTS J-A-F (1)	77.8	134	128	87.1	159	150	143
				124	118		147	139	132
0860	**1 & 2**	YTS L-A-G (1)	86.1	149	141	96.8	176	167	159
				138	131		163	155	147
0980	**1**	YTS M-A-H (1)	107.9	186	177	119.7	218	207	196
				172	164		202	191	182
	2	YTS L-A-G (1)	84.5	146	139	94.3	172	163	155
				135	128		159	151	143
1120	**1 & 2**	YTS M-A-H (1)	109.8	190	180	122.9	224	212	202
				176	167		208	197	187

Model YLCS SA	SYS No.	Comp's Model	Locked Rotor Conditions			
			Star for Star/Delta		DOL	
			Current Amps		Current Amps	
			@ 380V	@ 400V	@ 380V	@ 400V
350	**1 & 2**	YTS F-A-D	157	167	470	500
415	**1**	YTS H-A-E	175	187	525	560
	2	YTS F-A-D	157	167	470	500
480	**1 & 2**	YTS H-A-E	175	187	525	560
530	**1**	YTS I-A-F	215	228	645	685
	2	YTS H-A-E	175	187	525	560
575	**1 & 2**	YTS I-A-F	215	228	645	685
620	**1**	YTS J-A-G	233	248	700	745
	2	YTS I-A-F	215	228	645	685
0670	**1 & 2**	YTS I-A-E (1)	268	282	805	845
0750	**1 & 2**	YTS J-A-F (1)	288	303	865	910
0860	**1 & 2**	YTS L-A-G (1)	387	407	1160	1220
0980	**1**	YTS M-A-H (1)	467	492	1400	1475
	2	YTS L-A-G (1)	387	407	1160	1220
1120	**1 & 2**	YTS M-A-H (1)	467	492	1400	1475

Notes : Nominal: @ 7°C leaving liquid temperature and 35°C leaving condenser liquid temperature
Maximum: @ 15°C leaving liquid temperature and 40°C leaving condenser liquid temperature

(1) economised

Electrical Data - Unit (HA/AA)

	Nominal Running		Maximum Running		
	AMPS		AMPS		
	@ 380 V	@ 400 V	@360 V	@ 380 V	@ 400 V
Model	Without Power Factor Correction				
YLCS SA	With Optional Power Factor Correction fitted				
0350	174	164	252	234	222
	166	156	244	226	214
0415	210	198	307	285	269
	200	189	297	275	259
0480	246	232	362	336	316
	234	222	350	324	304
0530	263	249	386	359	339
	253	240	376	349	329
0575	280	266	410	382	362
	272	258	402	374	354
0620	305	290	444	416	394
	296	280	434	405	384
0670	282	268	467	443	421
	261	248	433	410	390
0750	327	310	541	512	487
	303	287	501	474	451
0860	362	344	601	569	541
	335	319	557	527	501
0980	402	382	662	628	596
	372	353	614	581	552
1120	460	437	744 (1)	724	687
	426	405	708	670	637

Notes: Nominal: @ 7°C leaving liquid temperature and 45°C leaving condenser liquid temperature
Maximum: @ 15°C leaving liquid temperature and 60°C leaving condenser liquid temperature

(1) electrical panel limitation

Electrical Data - System (HA/AA)

Model YLCS SA	SYS No.	Comp's Motor	Compressor Running Conditions					
			Nominal			Maximum		
			Power kW	Current Amps @ 380 V	Current Amps @ 400 V	Power kW	Current Amps @360 V	Current Amps @ 380 V	Current Amps @ 400 V
			Without Power Factor Correction					
			With Optional Power Factor Correction fitted					
0350	**1 & 2**	YTS F-A-D	52.1	87	82	69.8	126	117	111
				83	78		122	113	107
0415	**1**	YTS H-A-E	72.1	123	116	96.5	181	168	158
				117	111		175	162	152
	2	YTS F-A-D	52.1	87	82	69.8	126	117	111
				83	78		122	113	107
0480	**1 & 2**	YTS H-A-E	72.1	123	116	96.5	181	168	158
				117	111		175	162	152
0530	**1**	YTS I-A-F	85.5	140	133	115	205	191	181
				136	129		201	187	177
	2	YTS H-A-E	72.1	123	116	96.5	181	168	158
				117	111		175	162	152
0575	**1 & 2**	YTS I-A-F	85.5	140	133	115	205	191	181
				136	129		201	187	177
0620	**1**	YTS J-A-G	101	165	157	135	239	225	213
				160	151		233	218	207
	2	YTS I-A-F	85.5	140	133	115	205	191	181
				136	129		201	187	177
0670	**1 & 2**	YTS I-A-E (1)	82	141	134	128	234	221	210
				131	124		216	205	195
0750	**1 & 2**	YTS J-A-F (1)	95	163	155	148	270	256	243
				151	144		250	237	225
0860	**1 & 2**	YTS L-A-G (1)	105	181	172	165	300	285	270
				168	159		278	264	250
0980	**1**	YTS M-A-H (1)	130	225	214	203	371	351	334
				208	198		343	325	309
	2	YTS L-A-G (1)	102	177	168	160	292	276	263
				164	156		270	256	243
1120	**1 & 2**	YTS M-A-H (1)	133	230	219	210	372 (2)	362	344
				213	203		354	335	318

Model YLCS SA	SYS No.	Comp's Model	Locked Rotor Conditions			
			Star for Star/Delta		DOL	
			Current Amps		Current Amps	
			@ 380V	@ 400V	@ 380V	@ 400V
0350	**1 & 2**	YTS F-A-D	157	167	470	500
0415	**1**	YTS H-A-E	175	187	525	560
	2	YTS F-A-D	157	167	470	500
0480	**1 & 2**	YTS H-A-E	175	187	525	560
0530	**1**	YTS I-A-F	215	228	645	685
	2	YTS H-A-E	175	187	525	560
0575	**1 & 2**	YTS I-A-F	215	228	645	685
0620	**1**	YTS J-A-G	233	248	700	745
	2	YTS I-A-F	215	228	645	685
0670	**1 & 2**	YTS I-A-E (1)	268	282	805	845
0750	**1 & 2**	YTS J-A-F (1)	288	303	865	910
0860	**1 & 2**	YTS L-A-G (1)	387	407	1160	1220
0980	**1**	YTS M-A-H (1)	467	492	1400	1475
	2	YTS L-A-G (1)	387	407	1160	1220
1120	**1 & 2**	YTS M-A-H (1)	467	492	1400	1475

Notes : Nominal: @ 7°C leaving liquid temperature and 45°C leaving condenser liquid temperature
Maximum: @ 15°C leaving liquid temperature and 60°C leaving condenser liquid temperature

(1) economised
(2) electrical panel limitation

ESEER Data (0350SA - 0620SA)

YLCS 0350 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	342	311	280	243	202	130	99	65
			EP	81	72	63	55	48	31	23	16
Weighting coefficients		26	CC	358	326	294	254	211	136	104	68
25 % - 50 % - 75 % - 100 %			EP	77	68	60	52	45	29	22	15
0.23 - 0.41 - 0.33 - 0 .03		22	CC	374	340	307	266	221	142	109	71
ESEER	5.14		EP	72	64	56	49	42	27	21	14
		18	CC	390	355	320	277	230	148	113	74
			EP	68	61	53	46	40	26	20	14
			Part load	100%	75%	50%	25%				
			EER	4.22	4.87	5.21	5.52				

YLCS 0415 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	411	369	337	284	232	137	104	68
			EP	96	84	75	64	54	32	24	17
Weighting coefficients		26	CC	430	387	353	297	243	143	109	72
25 % - 50 % - 75 % - 100 %			EP	91	80	71	61	52	30	23	16
0.23 - 0.41 - 0.33 - 0 .03		22	CC	450	404	369	310	254	150	114	75
ESEER	5.22		EP	85	75	66	57	48	28	22	15
		18	CC	468	421	384	323	264	156	119	78
			EP	81	71	63	54	46	27	20	14
			Part load	100%	75%	50%	25%				
			EER	4.28	4.91	5.27	5.69				

YLCS 0480 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	480	437	393	341	283	182	139	91
			EP	111	99	87	76	66	42	32	22
Weighting coefficients		26	CC	502	457	412	357	296	191	146	95
25 % - 50 % - 75 % - 100 %			EP	105	94	82	72	62	40	31	21
0.23 - 0.41 - 0.33 - 0 .03		22	CC	525	478	430	373	310	199	152	100
ESEER	5.25		EP	99	88	77	67	58	37	29	20
		18	CC	547	497	448	388	323	208	159	104
			EP	93	83	73	63	55	35	27	19
			Part load	100%	75%	50%	25%				
			EER	4.31	4.98	5.33	5.65				

YLCS 0530 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	518	469	425	362	300	187	142	93
			EP	120	106	94	81	70	43	33	23
Weighting coefficients		26	CC	542	491	445	379	314	195	149	98
25 % - 50 % - 75 % - 100 %			EP	114	101	89	77	66	41	31	22
0.23 - 0.41 - 0.33 - 0 .03		22	CC	567	513	465	396	328	204	156	102
ESEER	5.25		EP	106	94	83	72	62	38	29	20
		18	CC	590	534	484	412	342	212	162	106
			EP	101	89	79	68	58	36	28	19
			Part load	100%	75%	50%	25%				
			EER	4.32	4.95	5.32	5.68				

YLCS 0575 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	556	506	456	395	328	211	161	106
			EP	129	115	101	88	76	49	37	26
Weighting coefficients		26	CC	582	530	478	413	344	221	169	111
25 % - 50 % - 75 % - 100 %			EP	122	109	95	83	72	46	35	24
0.23 - 0.41 - 0.33 - 0 .03		22	CC	608	554	499	432	359	231	176	116
ESEER	5.26		EP	114	102	89	78	67	43	33	23
		18	CC	634	577	520	450	374	241	184	120
			EP	108	96	84	73	64	41	31	22
			Part load	100%	75%	50%	25%				
			EER	4.30	4.99	5.33	5.66				

YLCS 0620 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	605	546	496	421	348	214	163	107
			EP	140	123	109	94	81	49	38	26
Weighting coefficients		26	CC	633	572	519	441	364	224	171	112
25 % - 50 % - 75 % - 100 %			EP	133	117	103	89	76	47	36	25
0.23 - 0.41 - 0.33 - 0 .03		22	CC	661	598	542	461	381	234	179	117
ESEER	5.26		EP	124	109	97	83	72	44	33	23
		18	CC	689	622	565	480	396	244	186	122
			EP	117	104	92	79	68	42	32	22
			Part load	100%	75%	50%	25%				
			EER	4.33	4.96	5.33	5.71				

ESEER Data (0670SA - 1120SA)

YLCS 0670 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	645	587	529	458	381	245	187	123
			EP	134	119	105	91	79	51	39	27
Weighting coefficients		26	CC	650	592	533	462	384	247	189	124
25 % - 50 % - 75 % - 100 %			EP	123	109	96	84	72	47	36	25
0.23 - 0.41 - 0.33 - 0 .03		22	CC	656	597	538	466	387	249	190	125
ESEER	5.58		EP	117	104	91	79	69	44	34	23
		18	CC	661	602	542	469	390	251	192	126
			EP	114	102	89	78	67	43	33	23
			Part load	100%	75%	50%	25%				
			EER	4.81	5.54	5.62	5.65				

YLCS 0750 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	743	676	609	528	438	282	215	141
			EP	156	139	122	106	92	59	45	31
Weighting coefficients		26	CC	749	682	614	532	442	285	217	142
25 % - 50 % - 75 % - 100 %			EP	143	127	112	97	84	54	41	29
0.23 - 0.41 - 0.33 - 0 .03		22	CC	756	688	620	537	446	287	219	144
ESEER	5.52		EP	136	121	106	92	80	52	39	27
		18	CC	762	693	625	541	449	289	221	145
			EP	133	118	104	90	79	51	39	27
			Part load	100%	75%	50%	25%				
			EER	4.76	5.48	5.56	5.59				

YLCS 0860 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	849	773	696	603	501	323	246	161
			EP	172	153	134	117	101	65	50	34
Weighting coefficients		26	CC	856	779	702	608	505	325	248	163
25 % - 50 % - 75 % - 100 %			EP	158	140	123	107	93	60	46	32
0.23 - 0.41 - 0.33 - 0 .03		22	CC	864	786	708	613	510	328	251	164
ESEER	5.72		EP	150	133	117	102	88	57	43	30
		18	CC	870	792	714	618	513	331	252	165
			EP	147	131	114	100	87	56	43	29
			Part load	100%	75%	50%	25%				
			EER	4.94	5.68	5.77	5.80				

YLCS 0980 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	966	879	792	686	570	367	280	184
			EP	192	171	150	131	113	73	56	38
Weighting coefficients		26	CC	974	886	799	691	575	370	282	185
25 % - 50 % - 75 % - 100 %			EP	176	157	137	120	104	67	51	35
0.23 - 0.41 - 0.33 - 0 .03		22	CC	983	895	806	698	580	374	285	187
ESEER	5.83		EP	167	149	130	114	99	64	49	33
		18	CC	990	901	812	703	584	376	287	188
			EP	164	146	128	111	97	62	47	33
			Part load	100%	75%	50%	25%				
			EER	5.03	5.79	5.88	5.91				

YLCS 1120 SA

Capacity stage number	8	Temp. °C		Full Load	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8
Cycling coefficient	0.9	30	CC	1099	1000	901	780	648	418	319	209
			EP	220	196	172	150	130	84	64	44
Weighting coefficients		26	CC	1108	1008	908	787	654	421	321	211
25 % - 50 % - 75 % - 100 %			EP	202	179	157	137	119	77	58	40
0.23 - 0.41 - 0.33 - 0 .03		22	CC	1118	1018	917	794	660	425	324	212
ESEER	5.79		EP	192	171	149	130	113	73	56	38
		18	CC	1127	1025	924	800	665	428	327	214
			EP	188	167	146	128	111	71	54	38
			Part load	100%	75%	50%	25%				
			EER	5.00	5.75	5.84	5.87				

Sound Data (SA/HA/AA)

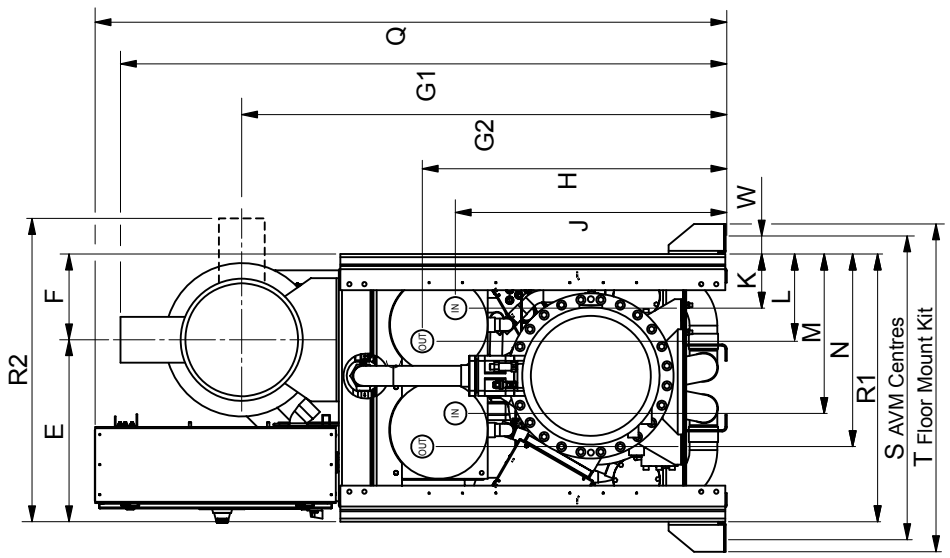
Model SA/HA/AA	dB A SWL	SOUND PRESSURE (dB)								Total (dB A) EN 292-1991
		63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	
0350	93	53	50	71	76	66	65	53	53	73
0415	93	53	50	71	76	66	65	53	53	73
0480	93	53	50	71	76	66	65	53	53	73
0530	95	57	67	66	76	74	64	54	47	75
0575	95	57	67	66	76	74	64	54	47	75
0620	95	57	67	66	76	74	64	54	47	75
0670	95	57	67	66	76	74	64	54	47	75
0750	95	57	67	66	76	74	64	54	47	75
0860	101	53	63	72	78	81	72	60	50	85
0980	101	53	63	72	78	81	72	60	50	85
1120	101	53	63	72	78	81	72	60	50	85

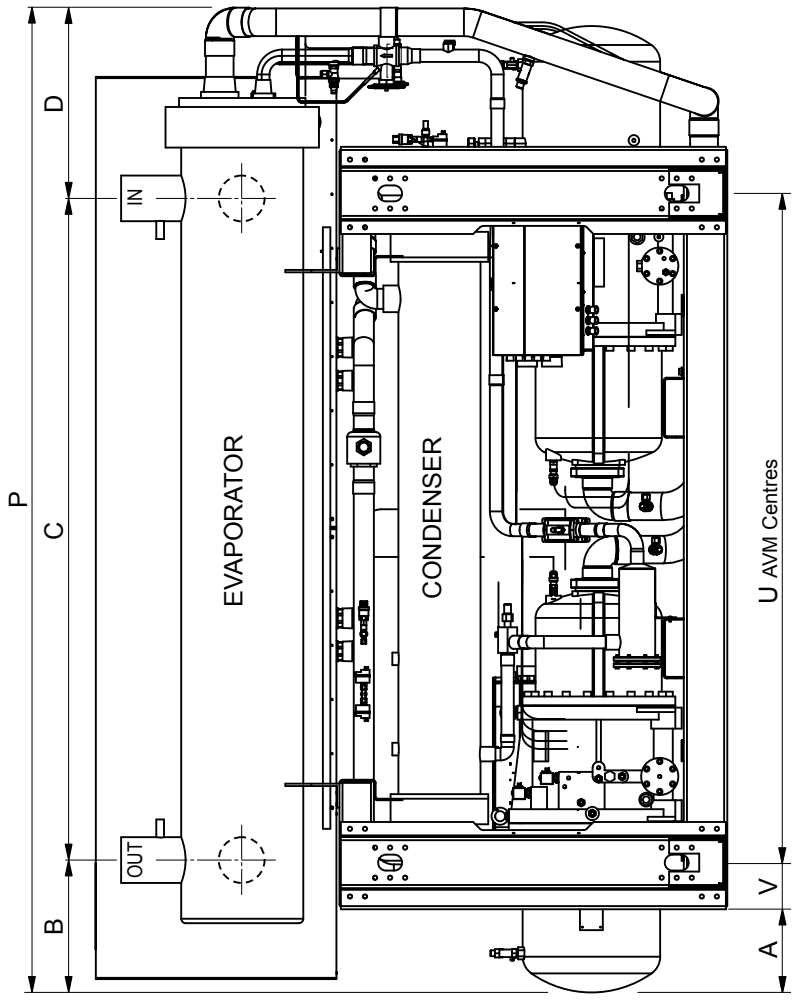
SWL = Sound Power Level

Notes:

1. Sound Power tolerance is + 3 dB as per Eurovent Specification.
2. Frequency band tolerances range from +/- 5 dB in each frequency band.
3. Sound Pressure values to ISO 3744.
4. Sound Pressure values for EN 292-1991, 1 metre from Control Panel and 1.5 metres from Ground Level.

Dimensions (0350SA/HA - 0620SA/HA)

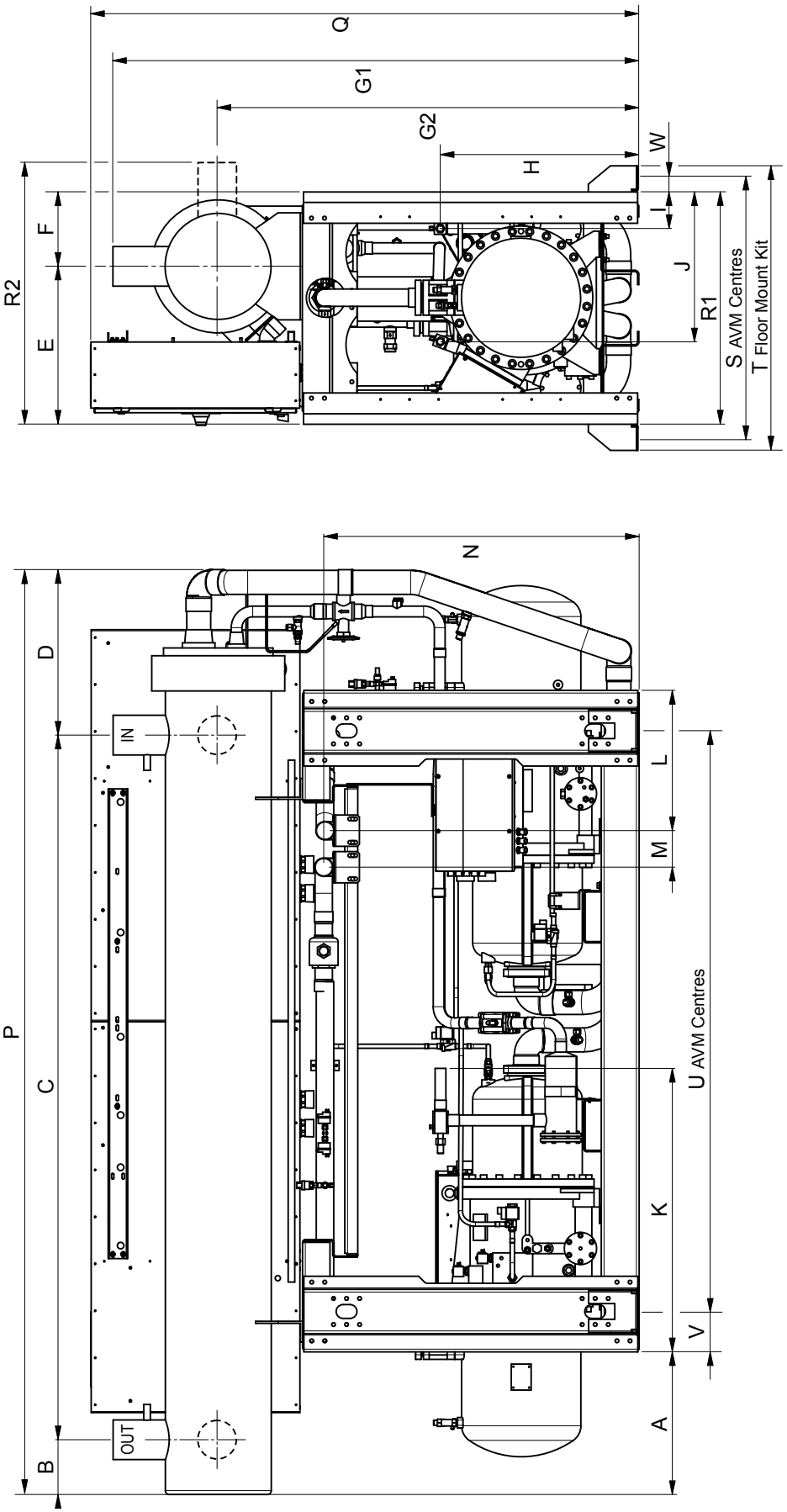




Model	A	B	C	D	E	F	G1[1]	G2[2]	H	J	K	L	M	N	P	Q	R1	R2[2]	S	T	U	V	W
350-SA & 350-HA	247	417	2250	558	605	285	1914	1550	1033	963	200	270	550	620	3225	2100	890	967	1010	1090	2225	155	60
415-SA & 415-HA	247	411	2250	583	605	285	1915	1550	1013	903	180	290	530	640	3244	2100	890	967	1010	1090	2225	155	60
480-SA & 480-HA	277	440	2200	634	605	285	2016	1615	1013	903	180	290	530	640	3274	2100	890	1010	1010	1090	2225	155	60
530-SA & 530-HA	277	440	2200	634	605	285	2016	1615	1013	903	180	290	530	640	3274	2100	890	1010	1010	1090	2225	155	60
575-SA & 575-HA	550	210	2700	634	605	285	2016	1615	1013	903	180	290	530	640	3544	2100	890	1010	1010	1090	2225	155	60
620-SA & 620-HA	550	210	2700	690	605	285	2016	1615	1013	903	180	290	530	640	3600	2100	890	1010	1010	1090	2225	155	60

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.
(1) With Vertical nozzle cooler only. (2) With horizontal nozzle cooler only

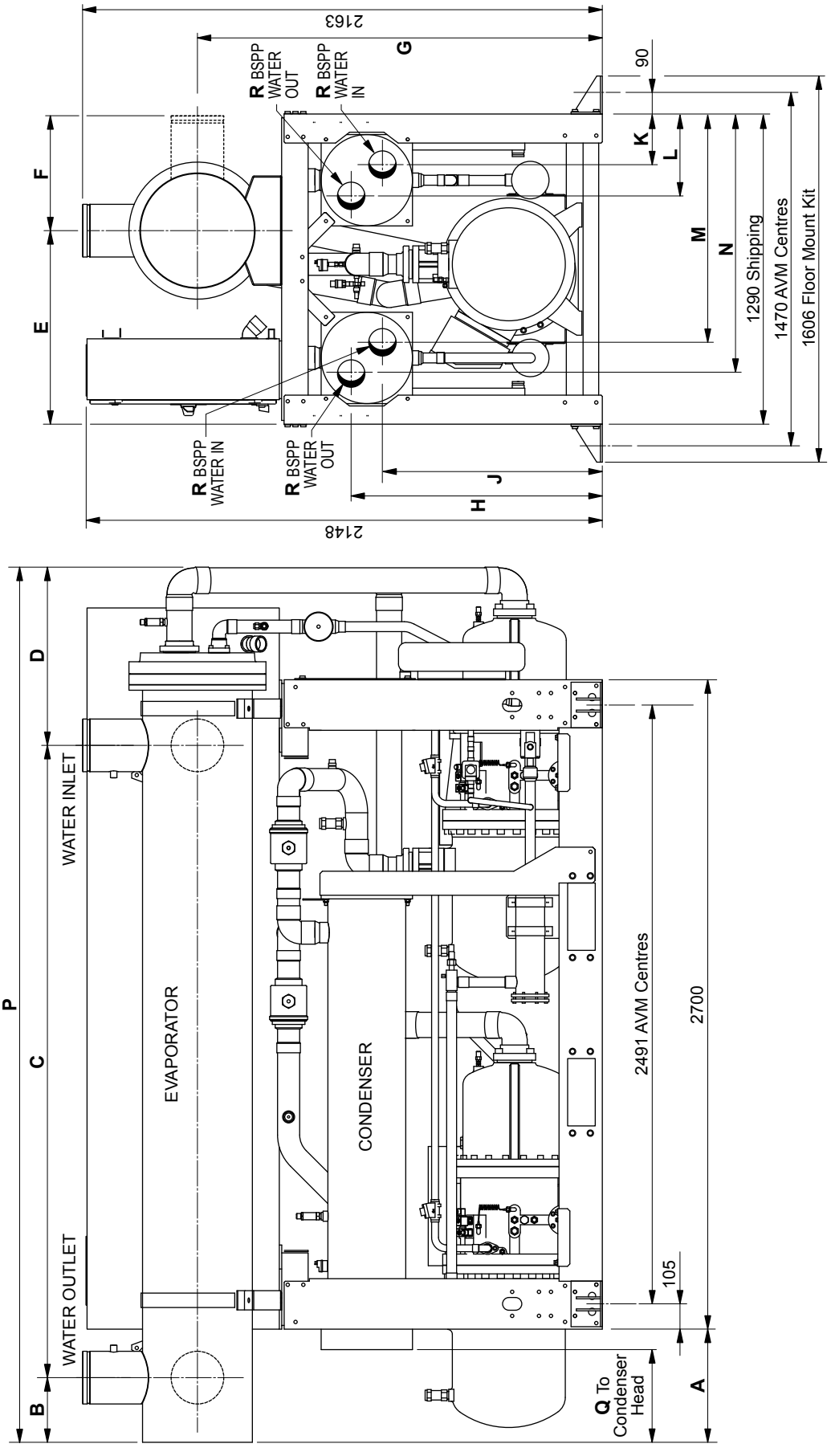
Dimensions (0350AA - 0620AA)



Model	A	B	C	D	E	F	G1(1)	G2(2)	H	I	J	K	L	M	N	P	Q	R1	R2(2)	S	T	U	V	W
350-AA	247	417	2250	558	605	285	1914	1550	761	140	573	1032	537.5	140	1200	3225	2100	890	967	1010	1090	2225	155	60
415-AA	247	411	2250	583	605	285	1915	1550	761	140	573	1032	537.5	140	1204	3244	2100	890	967	1010	1090	2225	155	60
480-AA	277	440	2200	634	605	285	2016	1615	761	140	573	1087	537.5	140	1204	3274	2100	890	1010	1010	1090	2225	155	60
530-AA	277	440	2200	634	605	285	2016	1615	761	140	573	1087	537.5	140	1204	3274	2100	890	1010	1010	1090	2225	155	60
575-AA	550	210	2700	634	605	285	2016	1615	761	140	573	1087	537.5	140	1204	3544	2100	890	1010	1010	1090	2225	155	60
620-AA	550	210	2700	690	605	285	2016	1615	761	140	573	1087	537.5	140	1204	3600	2100	890	1010	1010	1090	2225	155	60

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.
(1) With Vertical nozzle cooler only. (2) With horizontal nozzle cooler only

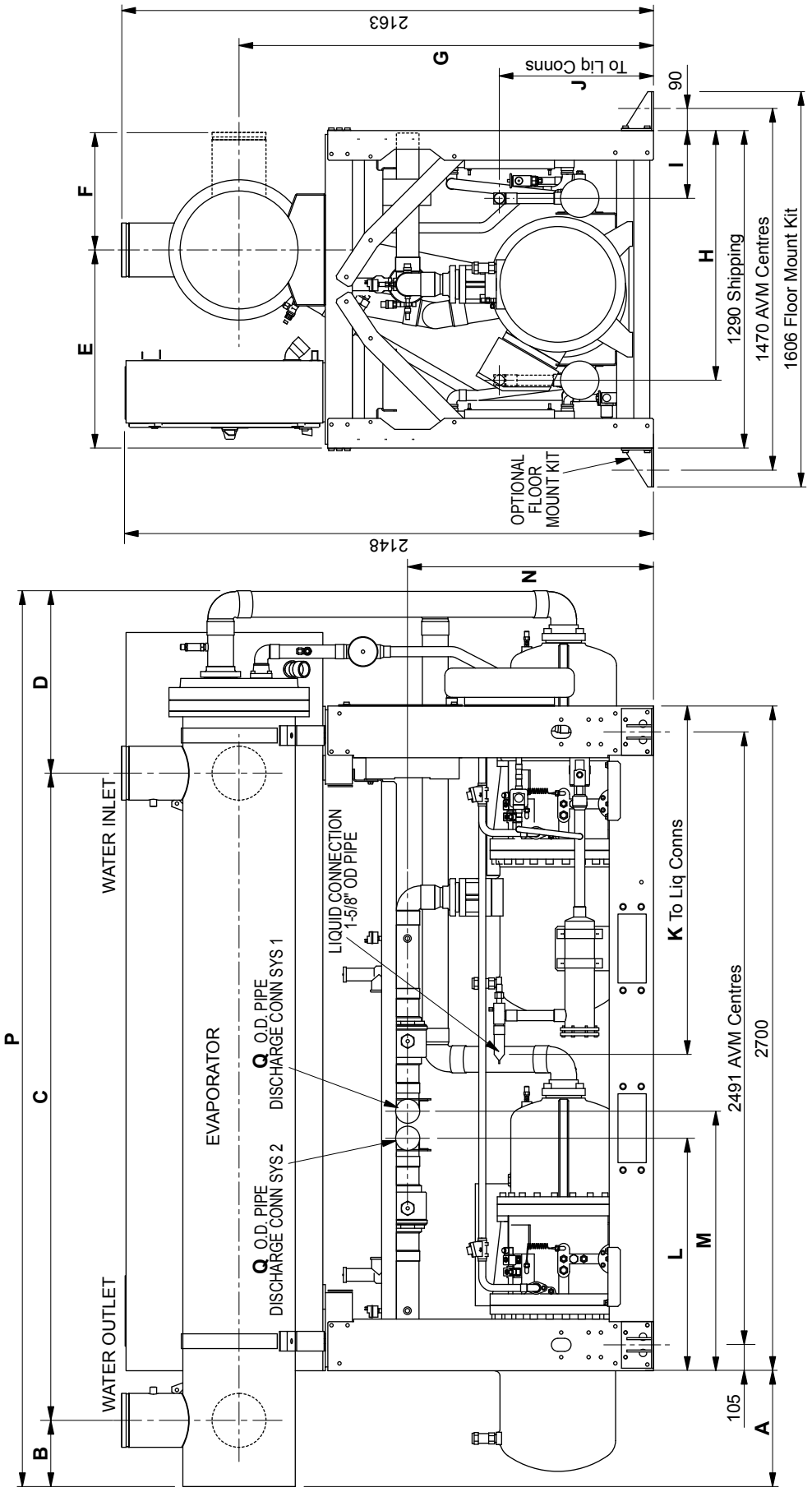
Dimensions (0670SA/HA - 0750SA/HA)



Model	A	B	C	D	E	F	G(1)	H	J	K	L	M	N	P	Q	R
670-SA & 670-HA	440	725	2130	710	805	480	1685	1035	925	193	303	987	1097	3565	357	3" BSPP
750-SA & 750-HA	470	270	2630	745	805	480	1685	1045	915	210	340	950	1080	3645	385	4" BSPP

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.
(1) With horizontal nozzle cooler only

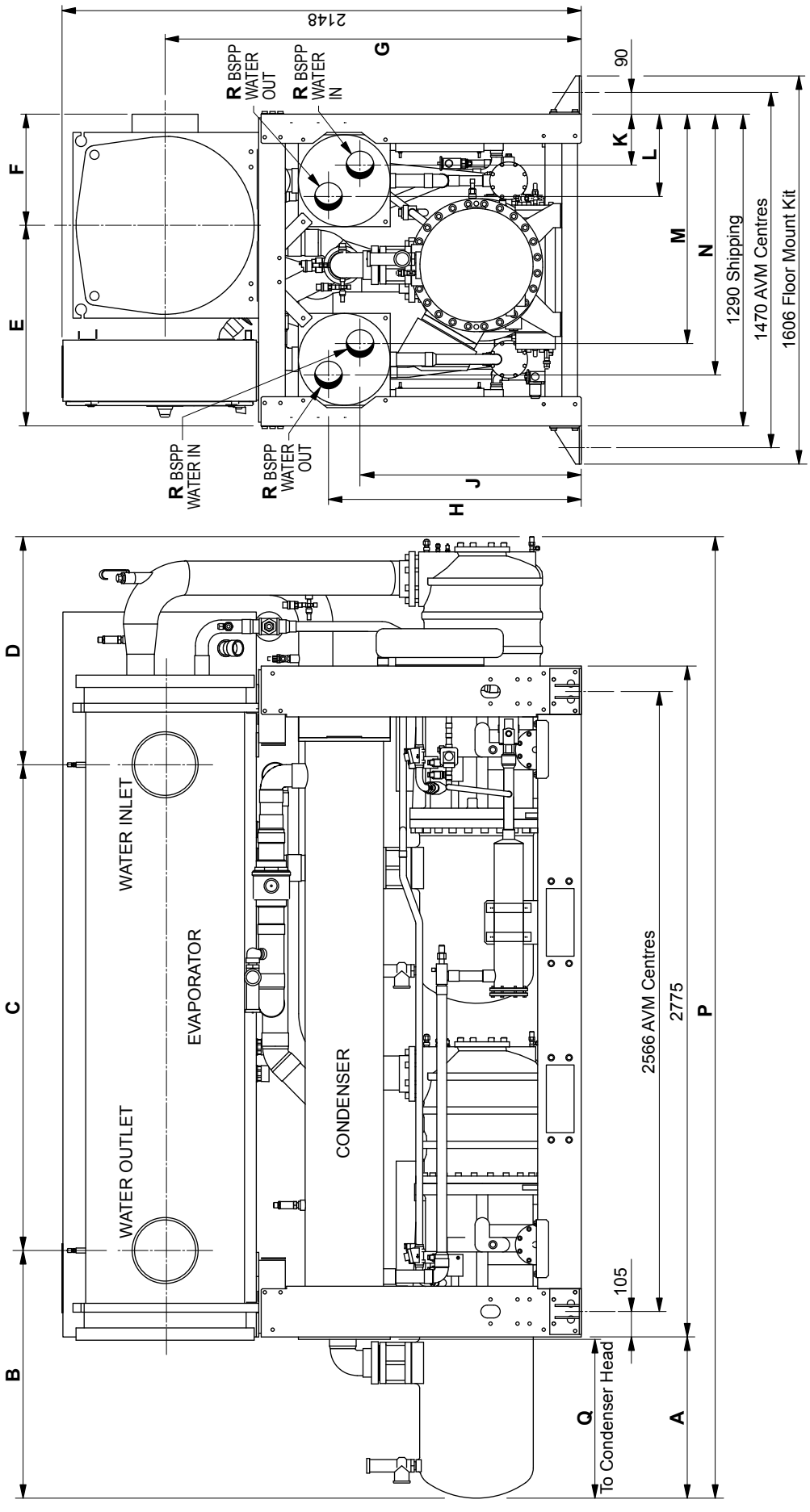
Dimensions (0670AA - 0725AA)



Model	A	B	C	D	E	F	G(1)	H	I	J	K	L	M	N	P	Q
670-AA	440	725	2130	710	805	480	1685	1043	248	760	1275	945	1055	1000	3565	3-1/8"
750-AA	470	270	2630	745	805	480	1685	1016	276	627	1415	945	1055	1000	3645	3-5/8"

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.
(1) With horizontal nozzle cooler only

Dimensions (0860SA/HA - 1120SA/HA)

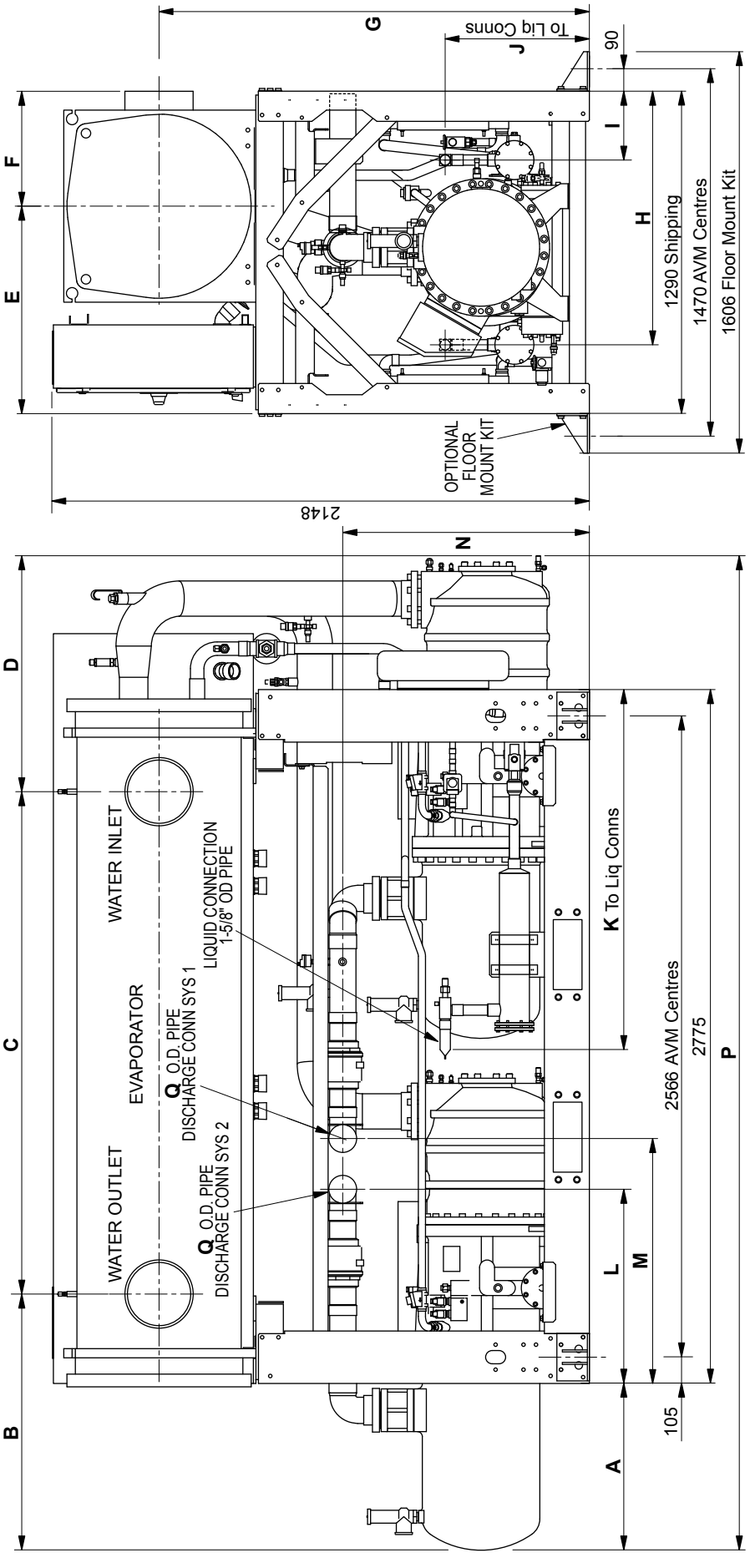


Model	A	B	C	D (1)	E	F	G	H	J	K	L	M	N	P (1)	Q	R
860-SA & 860-HA	517	780	2175	875	906	406	1705	1045	915	210	340	950	1080	3830	430	4" BSPP
980-SA & 980-HA	517	780	2175	875	906	406	1705	1045	915	210	340	950	1080	3830	507	4" BSPP
1120-SA & 1120-HA	667	1025	2010	945	830	460	1720	1045	915	210	340	950	1080	3980	657	4" BSPP

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.

(1) Add 250 millimeters if "Suction shut-off valves option" is required.

Dimensions (0860AA - 1120AA)



Model	A	B	C	D (1)	E	F	G	H	I	J	K	L	M	N	P (1)	Q
860-AA	517	780	2175	875	906	406	1705	1016	276	627	1415	777	980	986	3830	3-5/8"
980-AA	517	780	2175	875	906	406	1705	1016	276	627	1415	777	980	986	3830	4-1/8"
1120-AA	667	1025	2010	945	830	460	1720	1016	276	577	1440	777	980	986	3980	4-1/8"

All Dimensions in millimetres. Dimensions exclude insulation and options. Refer to Physical Data Section for connection sizes. For reference only, please refer to York Product drawing for complete drawing.

(1) Add 250 millimeters if "Suction shut-off valves option" is required.

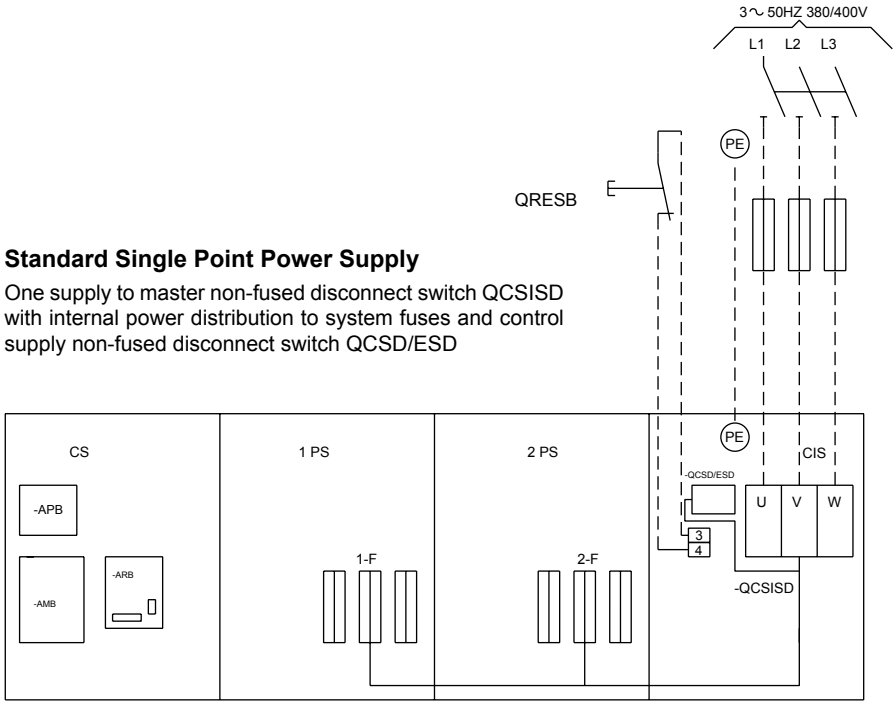
Dimensions

The following table gives dimension drawing numbers for all models, and condenser extension and manifold kits.

Model	Dimension Drawing		Condenser Extension Kit		Condenser Manifold
	Vertical Nozzles	Horizontal Nozzles	Victualic	Flanged	
350-SA & 350-HA	035L02652-000	035L02652-001	362L18512-000	N/A	362L180XX-XXX
415-SA & 415-HA	035L02653-000	035L02653-001	362L18513-000	362L18513-001	362L180XX-XXX
480-SA & 480-HA	035L02654-000	035L02654-001	362L18513-000	362L18513-001	362L180XX-XXX
530-SA & 530-HA	035L02655-000	035L02655-001	362L18513-000	362L18513-001	362L180XX-XXX
575-SA & 575-HA	035L02656-000	035L02656-001	362L18513-000	362L18513-001	362L180XX-XXX
620-SA & 620-HA	035L02657-000	035L02657-001	362L18513-000	362L18513-001	362L180XX-XXX
670-SA & 670-HA	035N02658-000	035N02658-001	362L18513-000	362L18513-001	362L180XX-XXX
750-SA & 750-HA	035N02659-000	035N02659-001	362L18514-000	362L18514-001	362L180XX-XXX
860-SA & 860-HA	N/A	035N02660-000	362L18514-000	362L18514-001	362L180XX-XXX
980-SA & 980-HA	N/A	035N02661-000	362L18514-000	362L18514-001	362L180XX-XXX
1120-SA & 1120-HA	N/A	035N02716-000	362L18514-000	362L18514-001	362L180XX-XXX

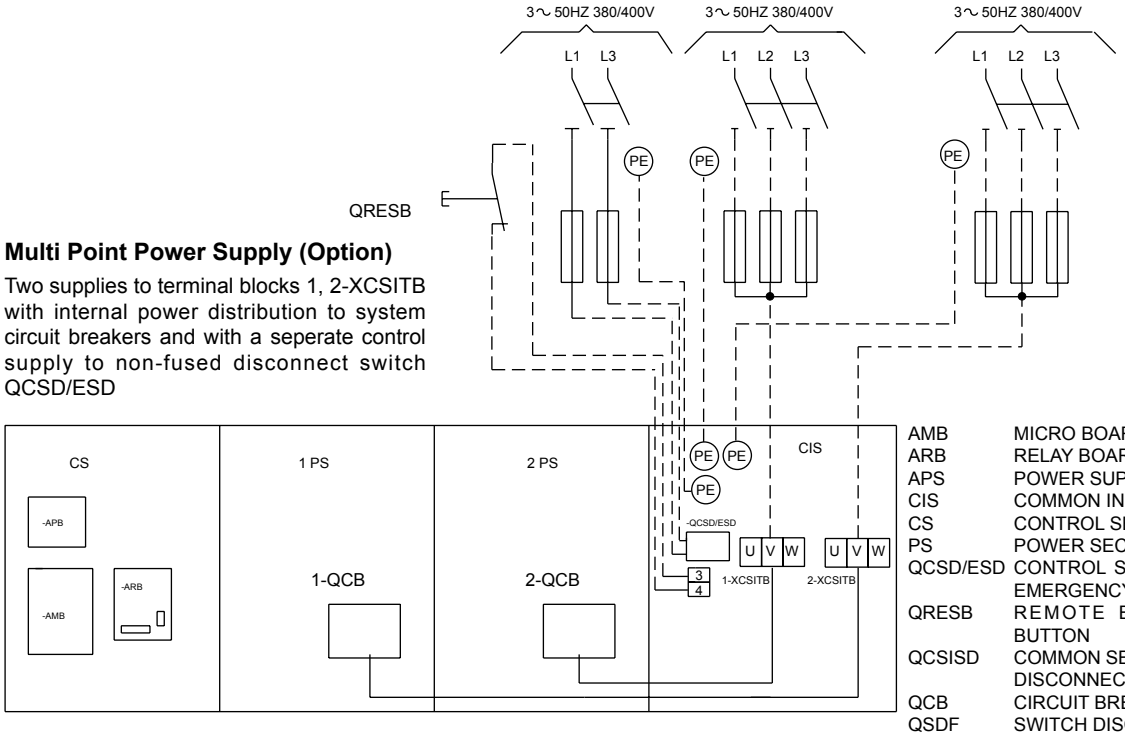
Model	Dimension Drawing	
	Vertical Nozzles	Horizontal Nozzles
350-AA	035L02723-000	035L02723-001
415-AA	035L02724-000	035L02724-001
480-AA	035L02725-000	035L02725-001
530-AA	035L02726-000	035L02726-001
575-AA	035L02727-000	035L02727-001
620-AA	035L02728-000	035L02728-001
670-AA	035N02729-000	035N02729-001
750-AA	035N02730-000	035N02730-001
860-AA	N/A	035N02731-000
980-AA	N/A	035N02732-000
1120-AA	N/A	035N02733-000

Power Supply Connection Diagrams



Standard Single Point Power Supply

One supply to master non-fused disconnect switch QCSISD with internal power distribution to system fuses and control supply non-fused disconnect switch QCSD/ESD



Multi Point Power Supply (Option)

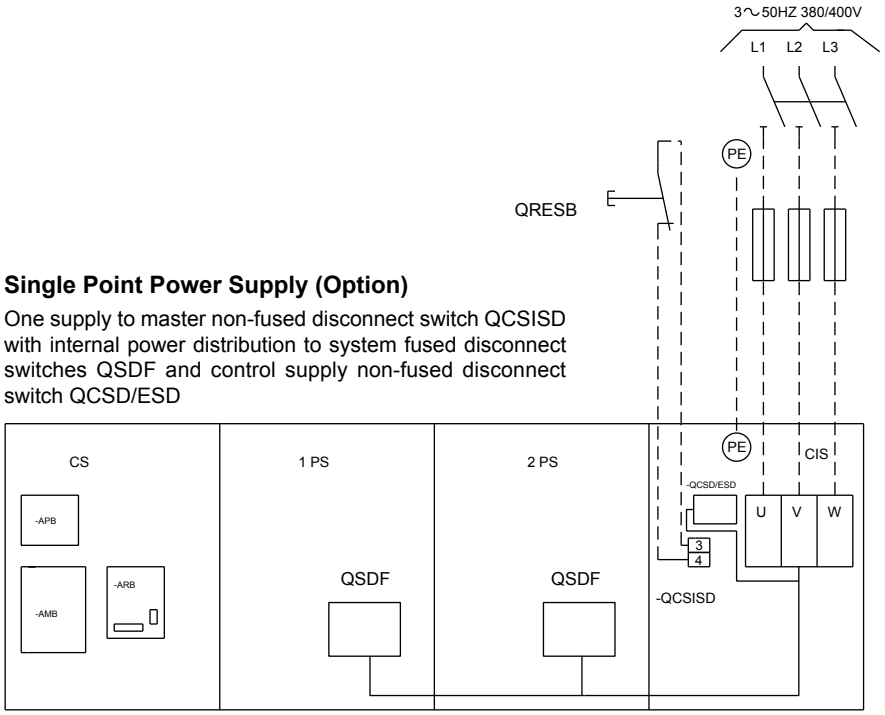
Two supplies to terminal blocks 1, 2-XCSITB with internal power distribution to system circuit breakers and with a seperate control supply to non-fused disconnect switch QCSD/ESD

AMB	MICRO BOARD
ARB	RELAY BOARD
APS	POWER SUPPLY BOARD
CIS	COMMON INPUT SECTION
CS	CONTROL SECTION
PS	POWER SECTION
QCSD/ESD	CONTROL SWITCH DISCONNECT/ EMERGENCY STOP DEVICE
QRESB	REMOTE EMERGENCY STOP BUTTON
QCSISD	COMMON SECTION INPUT SWITCH DISCONNECT
QCB	CIRCUIT BREAKER
QSDF	SWITCH DISCONNECT FUSE
XCSITB	COMMON SECTION INPUT TERMINAL BLOCK

Power Supply Connection Diagrams (Continued)

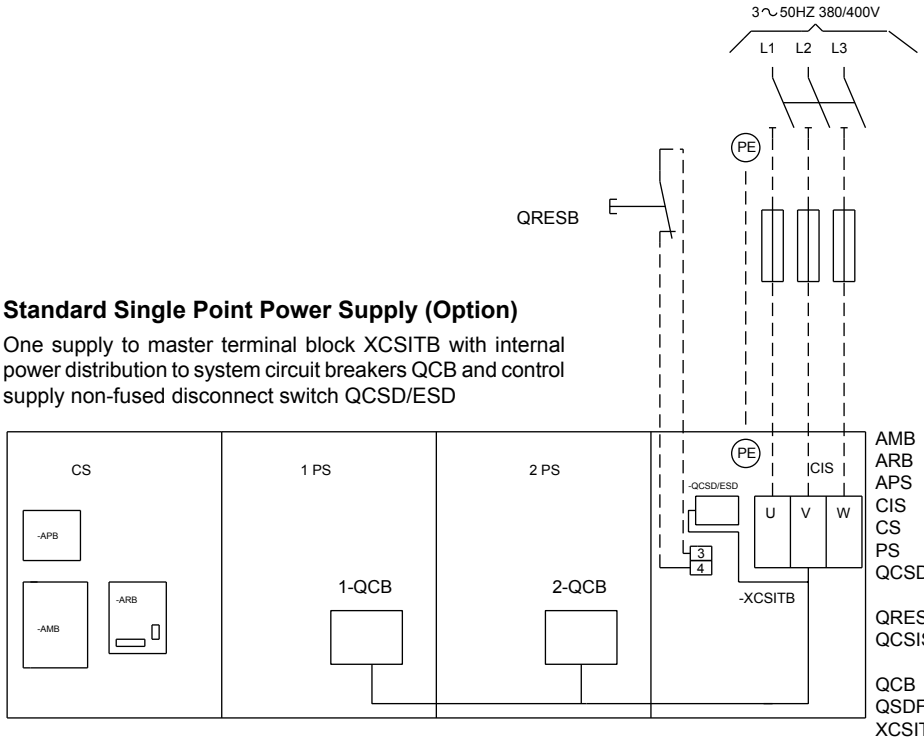
Single Point Power Supply (Option)

One supply to master non-fused disconnect switch QCSISD with internal power distribution to system fused disconnect switches QSDF and control supply non-fused disconnect switch QCSD/ESD



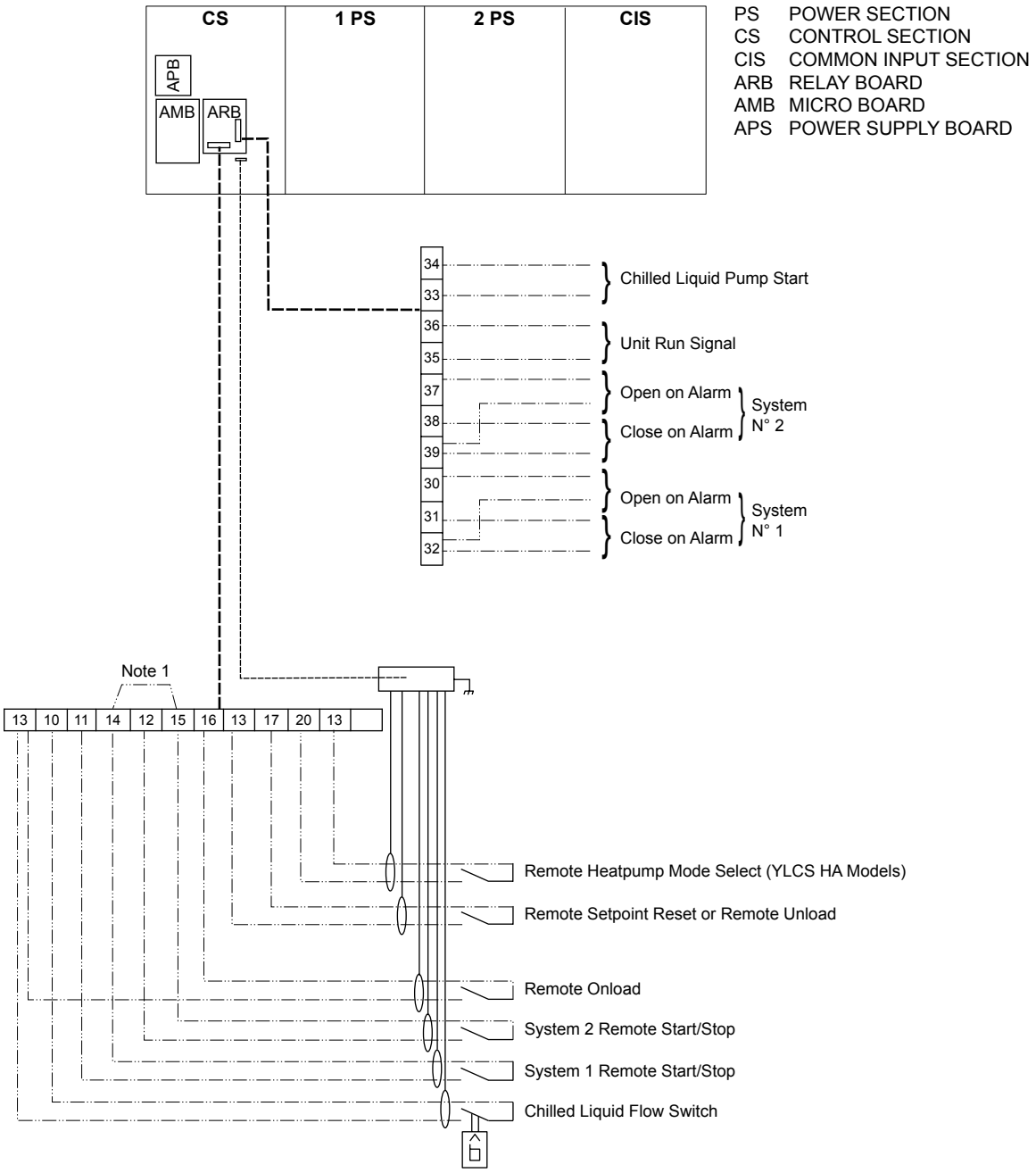
Standard Single Point Power Supply (Option)

One supply to master terminal block XCSITB with internal power distribution to system circuit breakers QCB and control supply non-fused disconnect switch QCSD/ESD



AMB	MICRO BOARD
ARB	RELAY BOARD
APS	POWER SUPPLY BOARD
CIS	COMMON INPUT SECTION
CS	CONTROL SECTION
PS	POWER SECTION
QCSD/ESD	CONTROL SWITCH DISCONNECT/ EMERGENCY STOP DEVICE
QRESB	REMOTE EMERGENCY STOP BUTTON
QCSISD	COMMON SECTION INPUT SWITCH DISCONNECT
QCB	CIRCUIT BREAKER
QSDF	SWITCH DISCONNECT FUSE
XCSITB	COMMON SECTION INPUT TERMINAL BLOCK

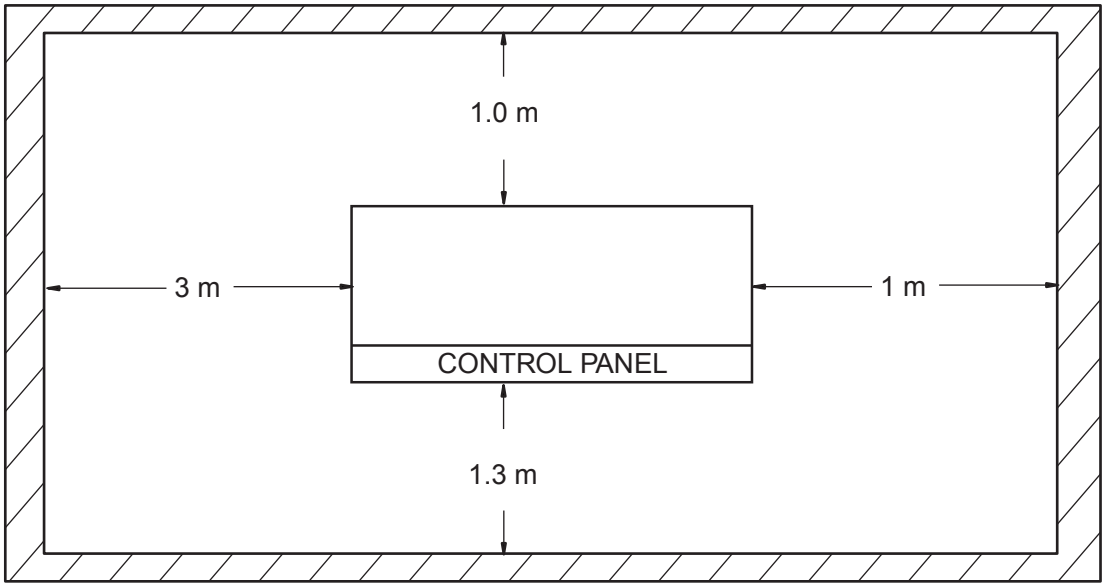
Customer Connection Diagram



Note 1: Fit link between terminals 14 and 15 and connect a voltage free contact to terminals 11 and 14 for Remote Unit Start/Stop.

Clearances

The recommended clearances below are the distances between the edge of the unit and the architectural enclosure surrounding the unit. The clearances allow for access of the control panel and for component removal.



Notes:

Clearances around the unit are recommended for safe operation and maintenance of the unit and control power panels.

Local Health & Safety regulations or practical considerations for service replacement of large components, may require larger clearances than those shown above.

Optional sound enclosure must be taken into consideration, all clearance dimensions must be taken from outside of sound enclosure. Refer to sound enclosure documentation for these dimensions.

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PC155-100 Rev.6 (0510)
Supersedes: PC155-100 Rev.5 (0609)