Carrier

AQUAFORCE®

30XQ
Reversible Air-to-Water Screw Heat Pump

Nominal cooling capacity:315-1480kW
Nominal heating capacity:311-1420kW

In 1998, Time magazine named Dr. Carrier one of its 20 most influential builders and titans of the 20thcentury.

Carrier is a leading global provider of innovative HVAC, refrigeration, fire, security and building automation technologies. Supported by the iconic Carrier name, the company's portfolio includes industry-leading brands such as Carrier, Kidde, Edwards, LenelS2 and Automated Logic. Carrier's businesses enable modern life, delivering efficiency, safety, security, comfort, productivity and sustainability across a wide range of residential, commercial and industrial applications.

Features

- 30XQ air to water heat pump is the premium solution for industrial and commercial applications where installers, consultants and building owners require optimal performances and maximum quality.

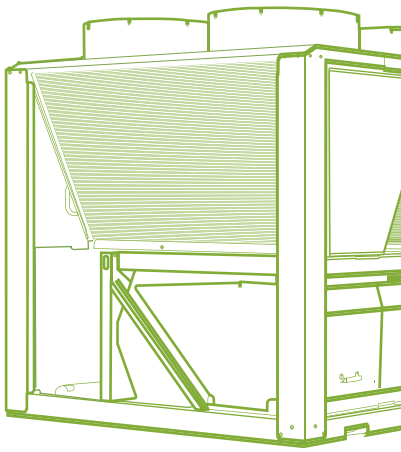
Benefits

- High efficiency at both full and part load leads to extremely low operation cost. Low operating sound with no intrusive low-frequency noise, creates a better working/living environment.
- HFC-134a of zero ozone depletion potential.
- Easy and fast installation to reduce on-site installation time.
- Exceptional endurance tests ensure superior reliability to minimize chiller down-time.

Economical operation

- High efficiency at both full and part load.
  -Twin-rotor screw compressor equipped with a high efficiency motor and a reliable slide valve that permits exact matching of the cooling capacity to the load.
  - Flooded multi-pipe evaporator to increase the heat exchange efficiency, configured with aluminium cladding (standard) to improve thermal insulation and prevent energy loss.
  - Electronic expansion device allows operation at a lower condensing pressure and improved utilization of the evaporator heat exchange surface (superheat control).
  - Economizer system with electronic expansion device permits a considerable increase in cooling capacity and contributes to optimised energy efficiency of the chiller installation.

Economizer system



Quiet operation

- Compressors
  - Discharge dampers integrated in the oil separator.
  - Acoustic compressor and oil separator enclosures (option) reduce theradiated noise.
- Condenser section
  - Condenser coils in V-shape with an open angle, allows quieter air flow across the coil.
  - Low-noise Flying Bird fans enjoy quieter operation.
  - Rigid fan mounting preventing start-up noise .

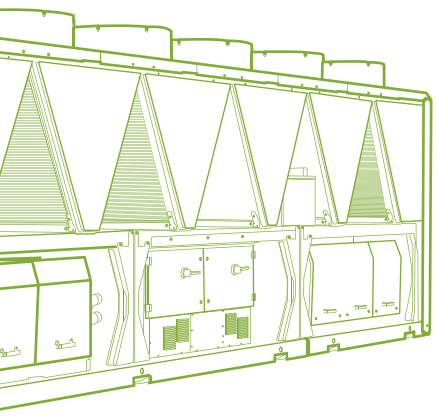
New twin screw CARRIER compressor

Flying Bird IV axial flow low noise fan

Environmental sound

- HFC-134a refrigerant
  - Refrigerant of the HFC group with zero ozone depletion potential.
- Leak-tight refrigerant circuit
  - Reduction of leaks as no capillary tubes and flare connections are used.
  - Verification of pressure transducers and temperature sensors without transferring refrigerant charge.

Easy and fast installation



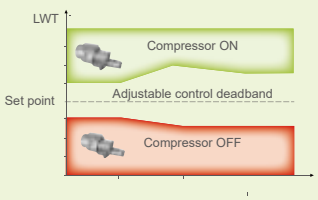
Simplified electrical connections
- Main disconnect switch with high trip capacity.
- Transformer to supply the integrated control circuit (400/24V).

Fast commissioning
- Systematic factory operation test before shipment.
- Quick-test function for step-by-step verification of the instruments, expansion devices, fans and compressors.

Absolute reliability

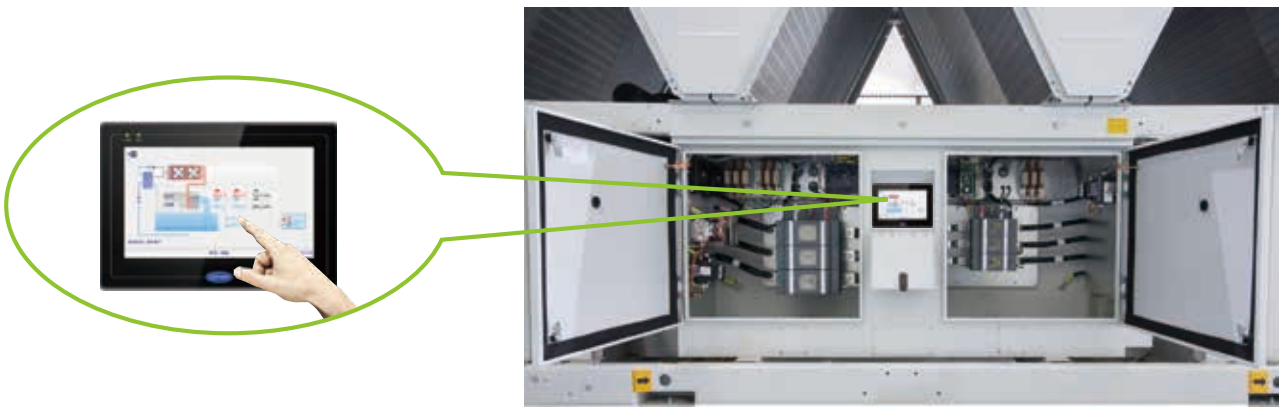
- Screw compressors
  - Industrial-type screw compressors with oversized bearings and motor cooled by suction gas.
  - All compressor components are easily accessible on site minimizing down-time.
  - Electronic motor protection against overloads and power supply faults (loss of phase, phase reversal).
- Evaporator
  - Thermal insulation with aluminium cladding for perfect resistance against outside aggression(mechanical and UV protection).
- Exceptional endurance tests
  - Partnerships with specialised laboratories and use of limit simulation tools (finite element calculation) for the design of critical components.
  - Transport simulation test in the laboratory on a vibrating table. The test is based on a military standard and equivalent to 4000 km by truck.
  - Salt mist corrosion resistance test in the laboratory for increased corrosion resistance.

Cooler aluminium protective cladding



Technical Insight

Carrier Control System



General Features

- New innovative smart control features:
  - An intuitive and user-friendly, 7” colored interface
  - Screen-shots with concise and clear information in local languages
  - Complete menu, customized for different users (end user, service personnel and Carrier-factory technicians)
  - Easy access to the controller box with touch screen mounting to ensure legibility under any lighting conditions
  - Safe operation and unit setting: password protection ensures that unauthorized people cannot modify any advanced parameters
  - Simple and “smart” intelligence uses data collection from the constant monitoring of all machine parameters to optimise unit operation
  - Night-mode: Cooling capacity management for reduced noise level.
- Energy management:
  - Internal time schedule clock controls chiller on/off times and operation at a second set-point
  - The DCT (Data Collection Tool) records the alarms history to simplify and facilitate service operations

Remote Management (Standard)

- Units with control system control can be easily accessed from the internet, using a PC with an Ethernet connection. This makes remote control quick and easy and offers significant advantages for service operations.
- Equipped with an RS485 serial port that offers multiple remote control, monitoring and diagnostic possibilities. When networked with other Carrier equipment t hrough the CCN (Carrier Comfort Network - proprietary protocol), all components form a HVAC system fully-in-tegrated and balanced t hrough one of the Carrier’snetwork system products, like the Chiller System Manager or the Plant System Manager (optional).
  Control system controller is integrated with Modbus IP, Modbus RTU & BACnet IP protocols, and also support Lon Talk, J-Bus, BACnet MSTP via optional communication gateway.
- The f ollowing commands/visualizations a re possible from remote connection:
  - Start/Stop of the machine
  - Dual set-point management: Through a dedicated contact is possible to activate a second set-point (example: unoccupied mode)
  - Demand limit setti ng: To limit the maximum chiller capacity to a predefined value
  - Water pump control: These outputs control the contactors of one/tw evaporator water pumps
  - Operation visualization: Indication if the unit is operating or if it’s in stand-by (no cooling load)
  - Alarm visualization

Remote Management (EMM option)

- The Energy Managemen Module (EMM) offers extended remote control possibilities:
  - Room temperature: Permits set-point reset based on the building indoor air temperature (if Carrier thermostat are installed)
  - Set-point reset: Ensures reset of the cooling set-point based on a 4-20 mA or 0-10 V signal
  - Demand limit: Permits limitation of the maximum chiller power or current based on 0-10 V signal
  - Demand limit 1 and 2: Closing of these contacts limits the maximum chiller power or current to two predefined values
  - User safety: This contact can be used for any customer safety loop; opening the contact generates a specific alarm
  - Ice storage end: When ice storage has finished, this input permits return to the second set-point (unoccupied mode)
  - Time schedule override: Closing of this contact cancels the time schedule effects
  - Out of service: This signal indicates that the chiller is completely out of service
  - Chiller capacity: This analogue output (0-10 V) gives an immediate indication of the chiller capacity
  - Alert indication: This volt-free contact indicates the necessity to carry out a maintenance operation or the presence of a minor fault
  - Compressors running status : Set of outputs (as many as the compressors number) indicating which compressors are running.

Operating Range, 30XQ

Cooling mode

Water heat exchanger (Evaporator)	Min.temperature	Max.temperature
Entering water temperature (at start)	-	45˚C
Entering water temperature (during operation)	6.8˚C	21˚C
Entering water temperature (during stop)	3˚C	55˚C
Leaving water temperature (during operation)	4˚C	15˚C

Air heat exchanger (Condenser)	Min.temperature	Max.temperature
Outdoor air temperature	-10˚C	46˚C

Heating mode

Water heat exchanger (Condenser)	Min.temperature	Max.temperature
Entering water temperature (at start)	3.4˚C	50˚C
Entering water temperature (during operation)	25˚C	50˚C
Entering water temperature (during stop)	3˚C	55˚C
Leaving water temperature (during operation)	30˚C	55˚C

Air heat exchanger (Evaporator)	Min.temperature	Max.temperature
Outdoor air temperature	-10˚C	21˚C

when the ambient in winter is lower 0C, it should select PT041F(anti-freeze module) or interlock control customer chilled pump and electric butterfly valve (operated by Carrier service engineer).
- chiller should keep power-on in winter and solve the chiller error.
- add EG into the system loop when the chiller is out of use for long time or drain the water in heat exchange and water pipe.

Technical Specifications

Unit with Cu/Al condenser coil

Model		330	430	502	625	660	670	702
Cooling capacity	kW	315	414	490	625	647	665	700
Heating capacity	kW	311	407	460	580	622	620	655
Comp power input (cooling)	kW	90.3	117.9	138.1	173.7	186.0	187.4	197.0
Comp power input (heatling)	kW	83.9	109.7	122.1	155.4	167.9	170.4	178.1
Min load %	%	30	30	30	30	15	30	30
Refrigerant charge		HFC-134a						
Circuit A	kg	115	160	160	200	115	200	205
Circuit B	kg	-	-	-	-	115	-	-
Circuit C	kg	-	-	-	-	-	-	-
Circuit D	kg	-	-	-	-	-	-	-
Compressor		Semi-hermetic screw compressor						
Circuit A		1	1	1	1	1	1	1
Circuit B		-	-	-	-	1	-	-
Circuit C		-	-	-	-	-	-	-
Circuit D		-	-	-	-	-	-	-
Control		7 inch touch screen, electronic expansion valve (EXV)						
Air heat exchanger		Cu-Al heat exchanger						
Fan type		Axial flying bird with rotating shround						
Fan quantity		6	8	8	12	12	12	12
Air flow	l/s	27660	36112	36112	54168	54168	54168	54168
Fan speed	rpm	950	950	950	950	950	950	950
Water heat exchanger		Flooded multi-pipe						
Water content		70	79	94	101	119	119	119
Nominal flow rate(cooling)	l/s	15.4	20.1	23.3	29.8	30.8	31.7	33.3
Nominal pressure drop (cooling)	kPa	21.6	24.2	24.4	34.7	25.8	39.4	38.2
Max. water-side pressure without hydronic module	kPa	1000	1000	1000	1000	1000	1000	1000
Integrated hydronic module (option)		Pump, victaulic screen filter, safety valve, expansion tank, purge valves etc.						
External static pressure (hydronic module with low pressure)	kPa	-	106	82	-	-	-	-
External static pressure (hydronic module with high pressure)	kPa	-	266	225	262	254	221	-
Expansion tank content	l	-	50	50	150	150	150	-
Max. water-side pressure with hydronic module	kPa	-	400	400	400	400	400	-
Water connection (without Integrated hydronic module)		Victaulic						
Nominal diameter		150	150	150	150	150	150	150
Water connection (with Integrated hydronic module)		Victaulic						
Nominal diameter		-	100	100	100	100	100	-
Electrical data								
Power		380V-3Ph-50Hz						
Control power supply		24V via internal transformer						
Start-up		Star-delta start						
Fan&control power	kW	10.3	13.7	13.6	20.4	20.4	20.4	20.4
Nominal unit current draw, circuit A+B	A	178	228	259	331	368	367	371
circuit C+D	A	-	-	-	-	-	-	-
Maximum unit current draw, circuit A+B	A	243	341	390	480	485	509	509
circuit C+D	A	-	-	-	-	-	-	-
Maximum start-up current, circuit A+B	A	388	587	587	629	631	629	629
circuit C+D	A	-	-	-	-	-	-	-
Unit length	mm	3827	4798	4798	7186	7186	7186	7186
Unit width	mm	2253	2253	2253	2253	2253	2253	2253
Unit height	mm	2297	2297	2297	2297	2297	2297	2297
Shippment weight (without Integrated hydronic module)	kg	3470	4591	4682	6258	7486	6483	6671
Operation weight (without Integrated hydronic module)	kg	3360	4470	4576	6119	7605	6362	6550

* Nominal cooling mode - evaporator entering/leaving water temperature 12/7°C, outside air temperature 35°C
** Nominal heating mode - water heat exchanger entering/leaving water temperature -/45°C, outside air temperature 7°C
*** Water heat exchanger fouling factor 0.018m²K/kW

Technical Specifications

Model		745	750	810	910	1002	1035	1102	1152	1202	1232
Cooling capacity	kW	740	735	810	910	980	1035	1100	1155	1190	1230
Heating capacity	kW	710	707	760	850	920	970	1030	1097	1131	1169
Comp power input (cooling)	kW	207.3	211.0	225.3	254.4	276.2	291.8	308.9	324.6	335.2	347.6
Comp power input (heatling)	kW	194.8	190.3	206.4	230.3	244.2	263.3	281.5	300.3	310.5	322.2
Min load %	%	30	13	12	14	15	13	14	12	11	12
Refrigerant charge		HFC-134a									
Circuit A	kg	205	160	115	160	160	205	205	205	205	205
Circuit B	kg	-	115	160	140	160	140	160	160	160	160
Circuit C	kg	-	-	-	-	-	-	-	-	-	-
Circuit D	kg	-	-	-	-	-	-	-	-	-	-
Compressor		Semi-hermetic screw compressor									
Circuit A		1	1	1	1	1	1	1	1	1	1
Circuit B		-	1	1	1	1	1	1	1	1	1
Circuit C		-	-	-	-	-	-	-	-	-	-
Circuit D		-	-	-	-	-	-	-	-	-	-
Control		7 inch touch screen, electronic expansion valve (EXV)									
Air heat exchanger		Cu-Al heat exchanger									
Fan type		Axial flying bird with rotating shround									
Fan quantity		12	14	14	16	16	18	18	20	20	20
Air flow	l/s	54168	63196	63196	72224	72224	81252	81252	90280	90280	90280
Fan speed	rpm	950	950	950	950	950	950	950	950	950	950
Water heat exchanger		Flooded multi-pipe									
Water content		127	135	147	175	175	175	175	202	202	202
Nominal flow rate(cooling)	l/s	35.2	35.3	38.6	43.3	46.7	49.3	52.4	55.0	56.7	58.6
Nominal pressure drop (cooling)	kPa	41.4	44.1	47.3	68.4	77.6	85.5	95.0	49.6	52.2	55.5
Max. water-side pressure without hydronic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Integrated hydronic module (option)		Pump, victaulic screen filter, safety valve, expansion tank, purge valves etc.									
External static pressure (hydronic module with low pressure)	kPa	-	-	-	-	-	-	-	-	-	-
External static pressure (hydronic module with high pressure)	kPa	-	-	-	-	-	-	-	-	-	-
Expansion tank content	l	-	-	-	-	-	-	-	-	-	-
Max. water-side pressure with hydronic module	kPa	-	-	-	-	-	-	-	-	-	-
Water connection (without Integrated hydronic module)		Victaulic									
Nominal diameter		150	150	150	150	150	150	150	200	200	200
Water connection (with Integrated hydronic module)		Victaulic									
Nominal diameter		-	-	-	-	-	-	-	-	-	-
Electrical data											
Power		380V-3Ph-50Hz									
Control power supply		24V via internal transformer									
Start-up		Star-delta start									
Fan&control power	kW	20.4	23.9	23.9	27.2	27.2	30.6	30.6	34.0	34.0	34.0
Nominal unit current draw, circuit A+B	A	389	418	425	481	518	548	580	634	653	675
circuit C+D	A	-	-	-	-	-	-	-	-	-	-
Maximum unit current draw, circuit A+B	A	538	584	632	730	780	814	863	899	879	928
circuit C+D	A	-	-	-	-	-	-	-	-	-	-
Maximum start-up current, circuit A+B	A	629	829	829	977	977	1060	1060	1096	1126	1126
circuit C+D	A	-	-	-	-	-	-	-	-	-	-
Unit length	mm	7186	8380	8380	9574	9574	10768	10768	11962	11962	11962
Unit width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Unit height	mm	2297	2297	2297	2297	2297	2297	2297	2297	2297	2297
Shippment weight (without Integrated hydronic module)	kg	6672	8919	7806	8533	8742	9203	9406	10191	10221	10251
Operation weight (without Integrated hydronic module)	kg	6559	9054	7693	8428	8637	9078	9281	10063	10093	10123

* Nominal cooling mode - evaporator entering/leaving water temperature 12/7°C, outside air temperature 35°C
** Nominal heating mode - water heat exchanger entering/leaving water temperature -/45°C, outside air temperature 7°C
*** Water heat exchanger fouling factor 0.018m²K/kW

Technical Specifications

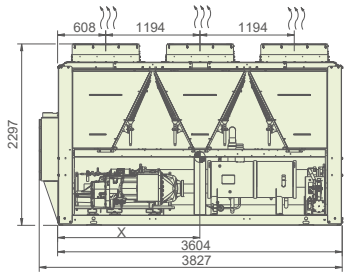
Unit with Cu/Al condenser coil

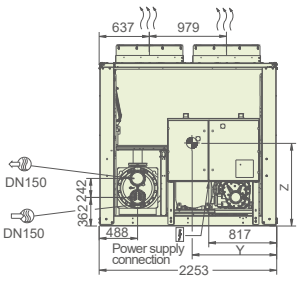
Model		1300	1340	1370	1400	1450	1502
Cooling capacity	kW	1290	1330	1365	1405	1440	1480
Heating capacity	kW	1200	1240	1275	1330	1365	1420
Comp power input (cooling)	kW	361.1	374.8	384.4	394.7	404.3	414.6
Comp power input (heatling)	kW	325.8	340.8	348.5	365.2	372.9	389.6
Min load %	%	15	15	15	14	15	15
Refrigerant charge		HFC-134a					
Circuit A	kg	200	200	205	205	205	205
Circuit B	kg	-	-	-	-	-	-
Circuit C	kg	200	200	200	200	205	205
Circuit D	kg	-	-	-	-	-	-
Compressor		Semi-hermetic screw compressor					
Circuit A		1	1	1	1	1	1
Circuit B		-	-	-	-	-	-
Circuit C		1	1	1	1	1	1
Circuit D		-	-	-	-	-	-
Control		7 inch touch screen, electronic expansion valve (EXV)					
Air heat exchanger		Cu-Al heat exchanger					
Fan type		Axial flying bird with rotating shround					
Fan quantity		24	24	24	24	24	24
Air flow	l/s	108336	108336	108336	108336	108336	108336
Fan speed	rpm	950	950	950	950	950	950
Water heat exchanger		Flooded multi-pipe					
Water content		220	238	238	246	246	254
Nominal flow rate(cooling)	l/s	29.8/31.7	31.7/31.7	31.7/33.3	31.7/35.2	33.3/35.2	35.2/35.2
Nominal pressure drop (cooling)	kPa	34.7/39.4	39.4/39.4	39.4/38.2	39.4/41.4	38.2/41.4	41.4/41.4
Max. water-side pressure without hydronic module	kPa	1000	1000	1000	1000	1000	1000
Integrated hydronic module (option)		Pump, victaulic screen filter, safety valve, expansion tank, purge valves etc.					
External static pressure (hydronic module with low pressure)	kPa	-	-	-	-	-	-
External static pressure (hydronic module with high pressure)	kPa	-	-	-	-	-	-
Expansion tank content	l	-	-	-	-	-	-
Max. water-side pressure with hydronic module	kPa	-	-	-	-	-	-
Water connection (without Integrated hydronic module)		Victaulic					
Nominal diameter		150/150	150/150	150/150	150/150	150/150	150/150
Water connection (with Integrated hydronic module)		Victaulic					
Nominal diameter		-	-	-	-	-	-
Electrical data							
Power		380V-3Ph-50Hz					
Control power supply		24V via internal transformer					
Start-up		Star-delta start					
Fan&control power	kW	40.8	40.8	40.8	40.8	40.8	40.8
Nominal unit current draw, circuit A+B	A	367	367	371	389	389	389
circuit C+D	A	331	367	367	367	371	389
Maximum unit current draw, circuit A+B	A	509	509	509	538	538	538
circuit C+D	A	480	509	509	509	509	538
Maximum start-up current, circuit A+B	A	629	629	629	629	629	629
circuit C+D	A	629	629	629	629	629	629
Unit length	mm	14372	14372	14372	14372	14372	14372
Unit width	mm	2253	2253	2253	2253	2253	2253
Unit height	mm	2297	2297	2297	2297	2297	2297
Shippment weight (without Integrated hydronic module)	kg	12741	12966	13154	13155	13343	13344
Operation weight (without Integrated hydronic module)	kg	12481	12724	12912	12921	13109	13118

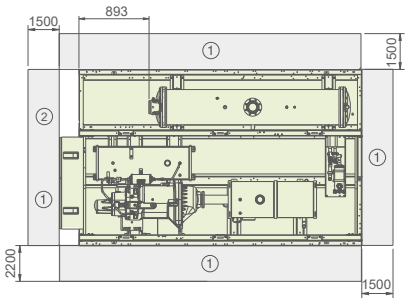
* Nominal cooling mode - evaporator entering/leaving water temperature 12/7°C, outside air temperature 35°C
** Nominal heating mode - water heat exchanger entering/leaving water temperature -/45°C, outside air temperature 7°C
*** Water heat exchanger fouling factor 0.018m²K/kW
**** For duplex models (1300-1502) the listed on the left side and right side of "/"refer to module B (circuit C+D) and module A (circuit A+B) respectively

Dimensions/Clearances

30XQ330 - Cu/Al Condenser coils





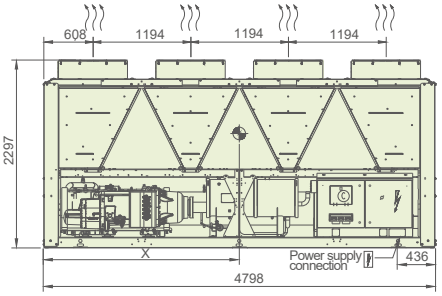


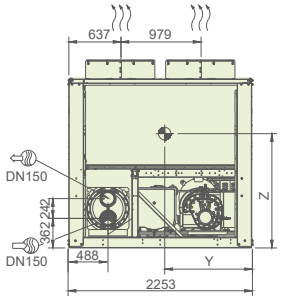
① Required clearances for maintenance
② Recommended space for evaporator tube removal
③ Safety valve
Water outlet

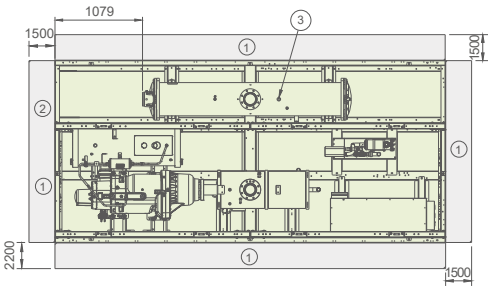
Water inlet
Air outlet
Power supply connection
Center gravity
Control circuit connection

Model	X (mm)	Y (mm)	Z (mm)
30XQ330	2023	999	737

30XQ430/502 - Cu/Al Condenser coils







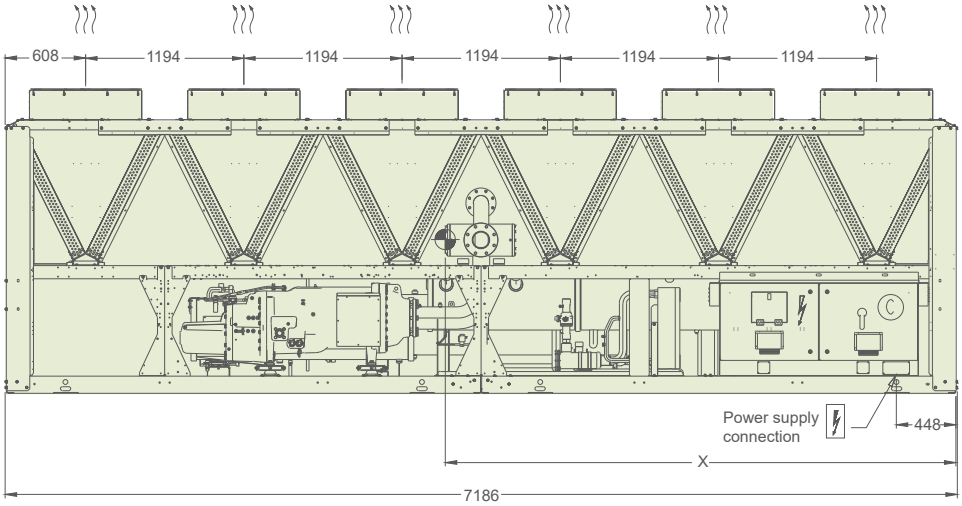
① Required clearances for maintenance
② Recommended space for evaporator tube removal
③ Safety valve
Water outlet

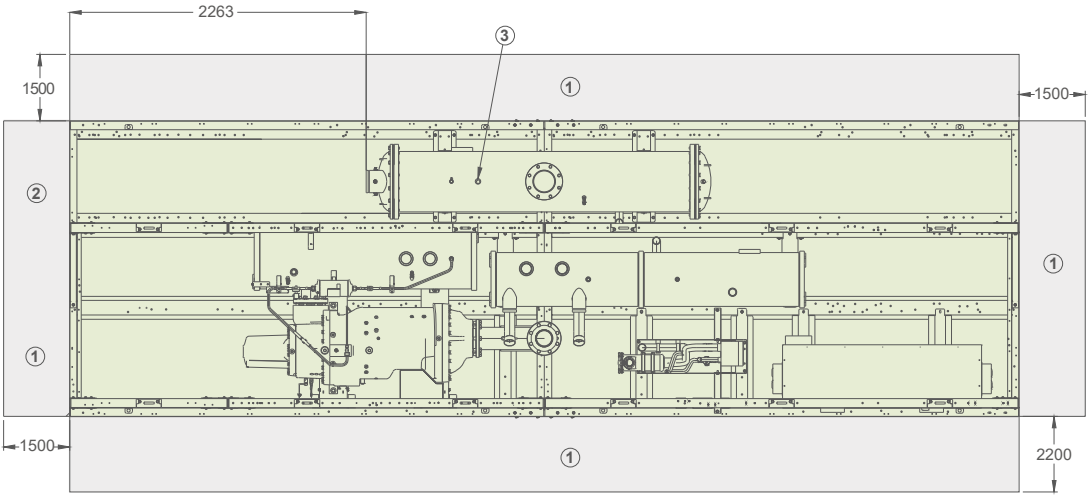
Water inlet
Air outlet
Power supply connection
Center gravity
Control circuit connection

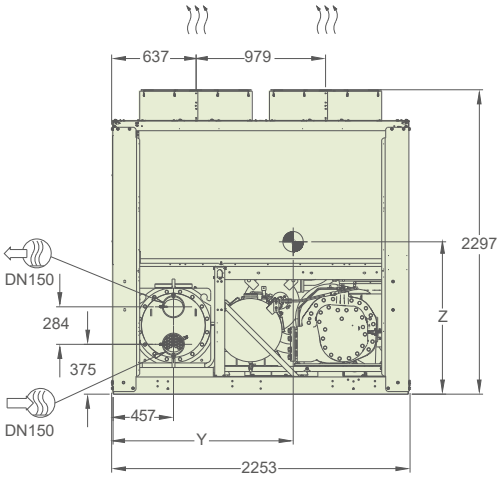
Model	X (mm)	Y (mm)	Z (mm)
30XQ502	2136	855	1034
30XQ430	2136	866	1034

Dimensions/Clearances

30XQ625/670/702/745 - Cu/Al Condenser coils







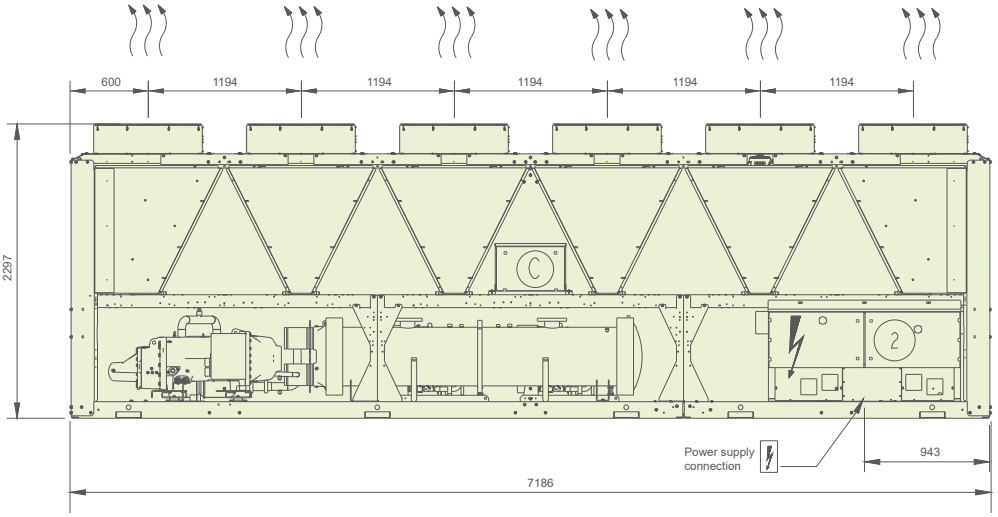
① Required clearances for maintenance
② Recommended space for evaparator tube removal
③ Safety valve
Water outlet

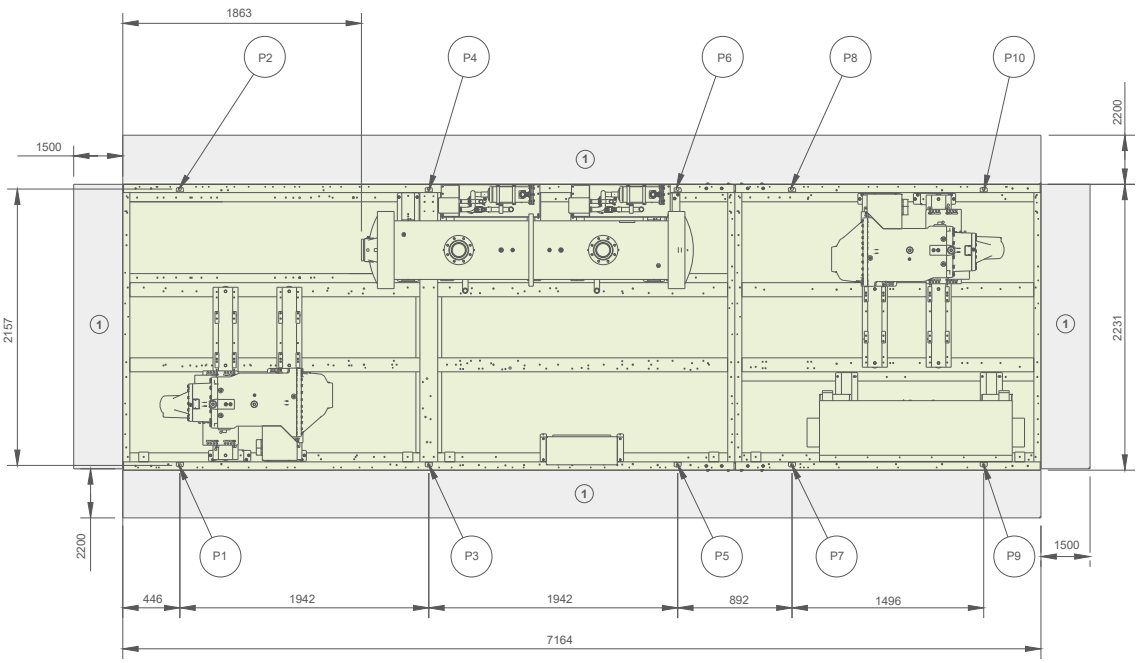
Water inlet
Air outlet
Power supply connection
Center gravity
Ⓒ Control circuit connection

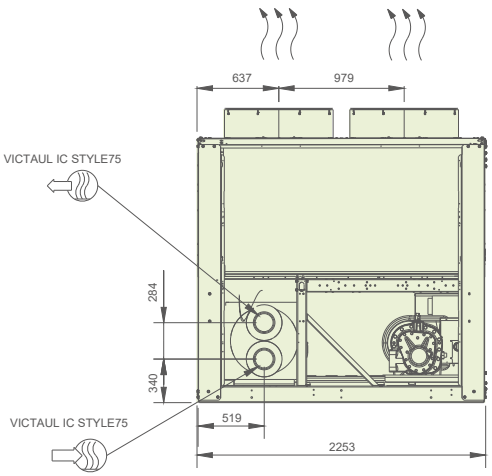
Model	X (mm)	Y (mm)	Z (mm)
30XQ625	3900	1370	890
30XQ670	3880	1360	880
30XQ702	3853	1360	875
30XQ745	3853	1360	875

Dimensions/Clearances

30XQ660 - Cu/Al Condenser coils





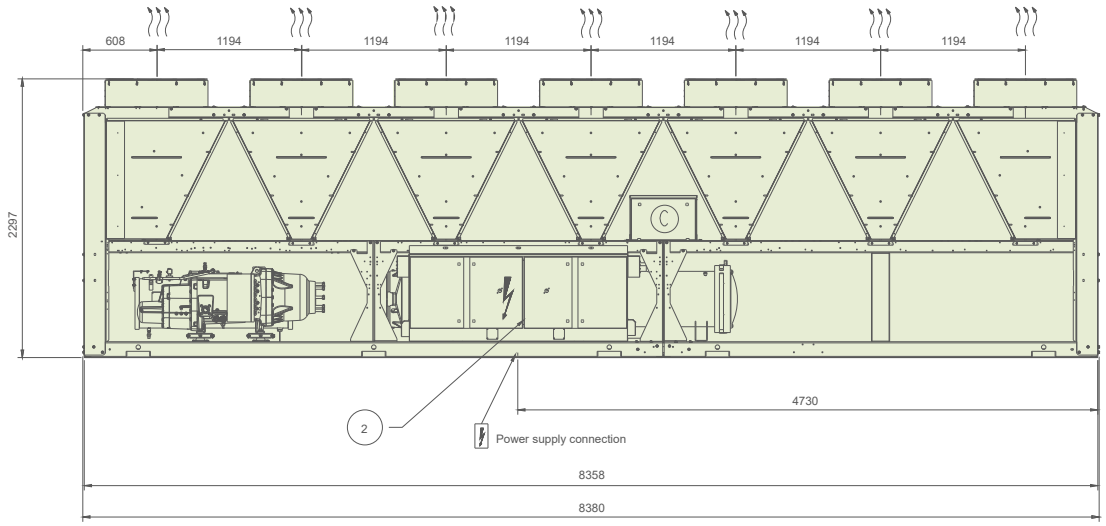


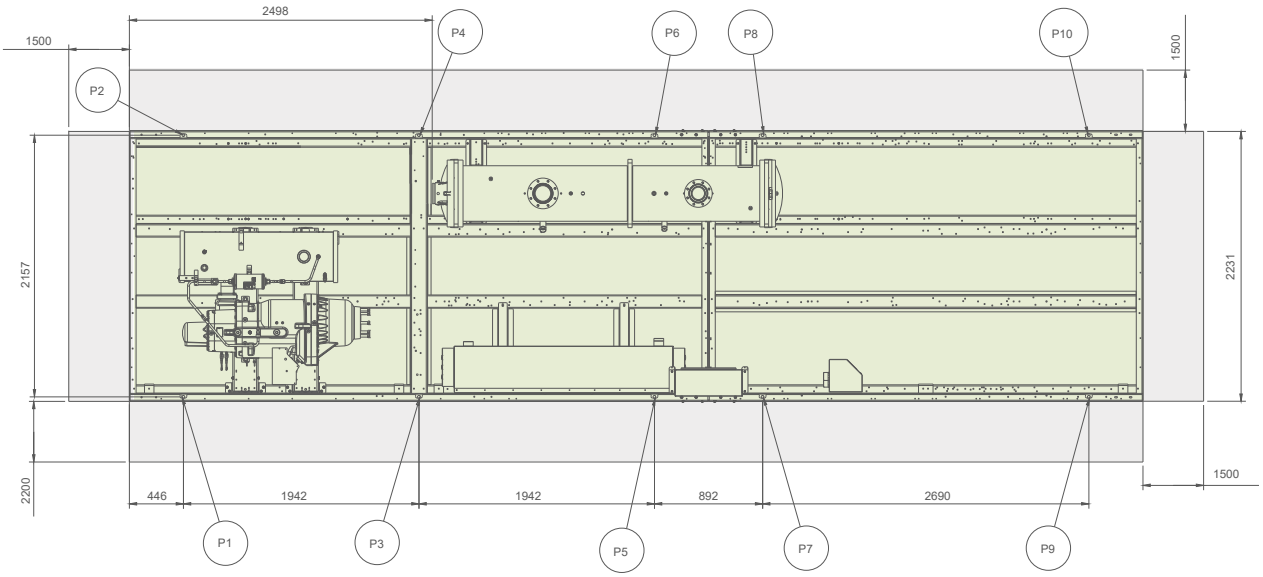
① Required clearances for maintenance
② Recommended space for evaparator tube removal
Water inlet
Water outlet
Air outlet
Power supply connection
Control circuit connection

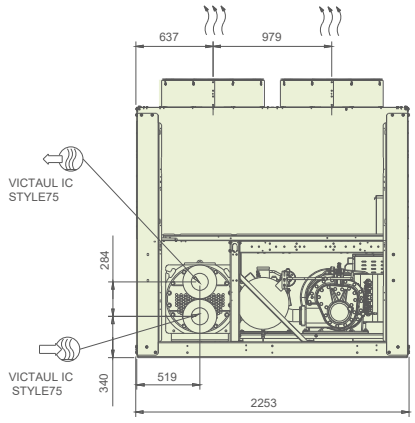
Model	Configuration	PT (Kg)	P1 (Kg)	P2 (Kg)	P3 (Kg)	P4 (Kg)	P5 (Kg)	P6 (Kg)	P7 (Kg)	P8 (Kg)	P9 (Kg)	P10 (Kg)
30XQ660	Standard UNIT	7605	764	758	765	761	760	762	761	759	760	755
30XQ660	PT041F	7605	764	758	765	761	760	762	761	759	760	755

Dimensions/Clearances

30XQ750 - Cu/Al Condenser coils





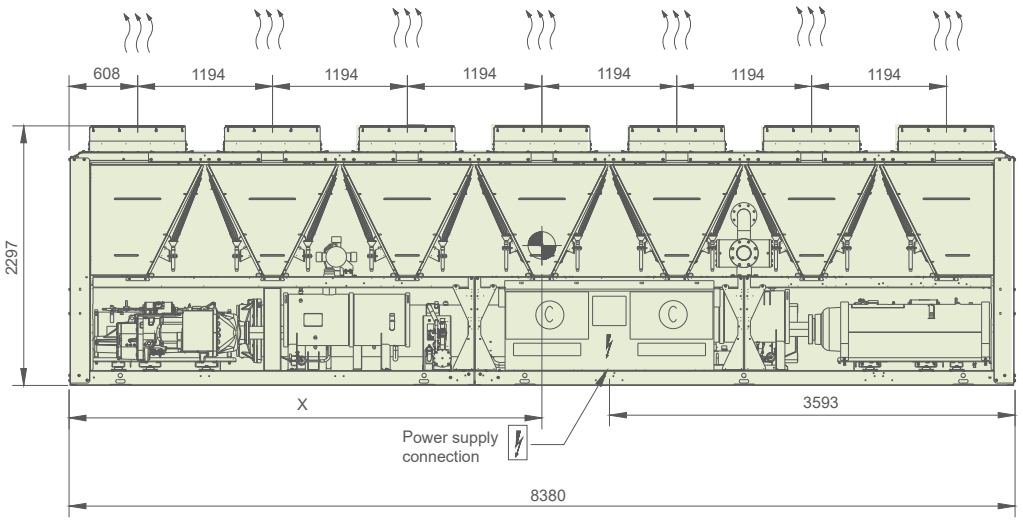


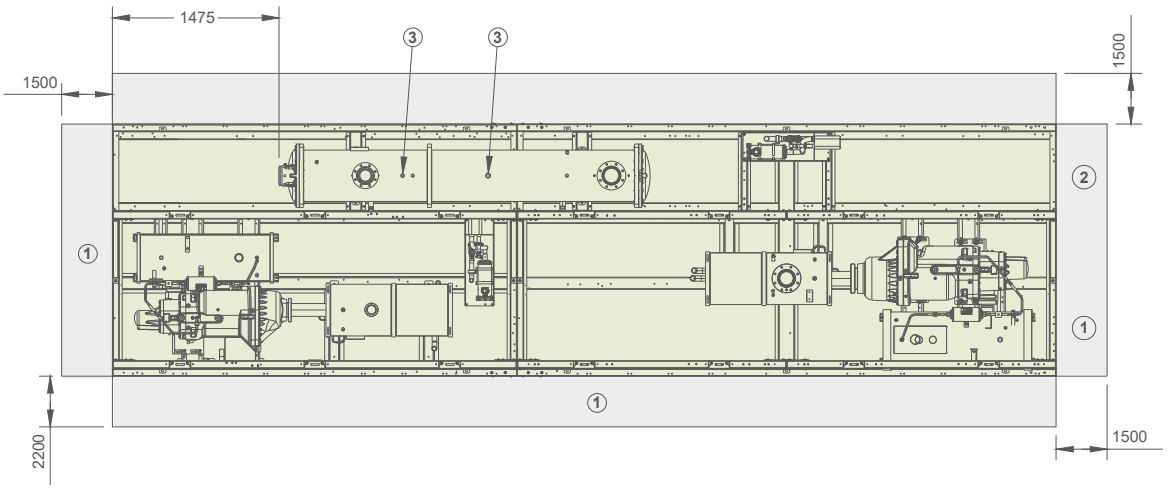
① Required clearances for maintenance
② Recommended space for evaparator tube removal
Water inlet
Water outlet
Air outlet
Power supply connection
© Control circuit connection

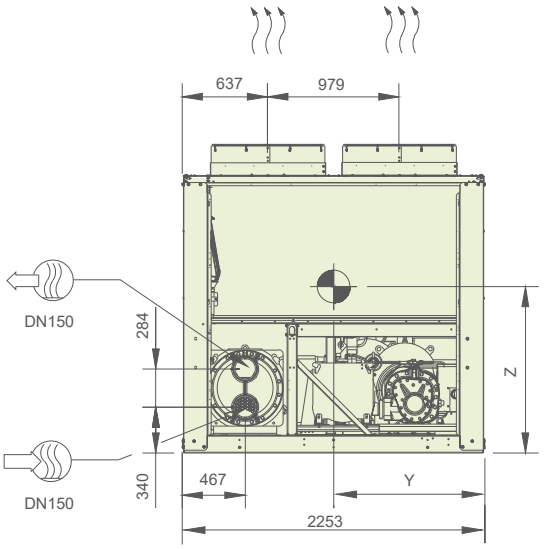
Model	Configuration	PT	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
30XQ750	Standard UNIT	9054	1017	990	963	938	910	886	886	862	812	790
30XQ750	PT041F	9054	1017	990	963	938	910	886	886	862	812	790

Dimensions/Clearances

30XQ810 - Cu/Al Condenser coils







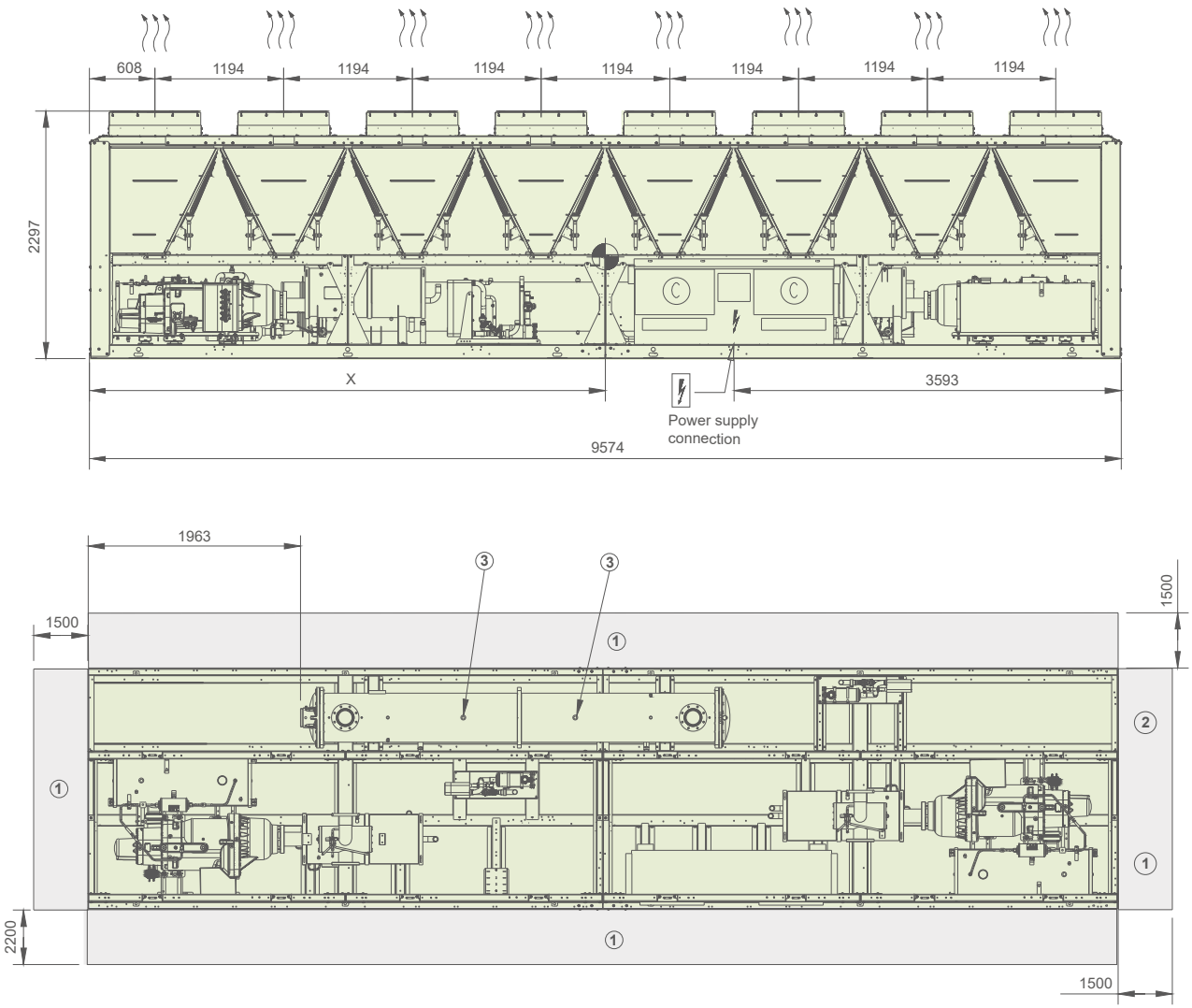
① Required clearances for maintenance
② Recommended space for evaparator tube removal
③ Safety valve
Water outlet

Water inlet
Air outlet
Power supply connection
Center gravity
Ⓒ Control circuit connection

Model	X (mm)	Y (mm)	Z (mm)
30XQ810	4446	991	801

Dimensions/Clearances

30XQ910/1002 - Cu/Al Condenser coils

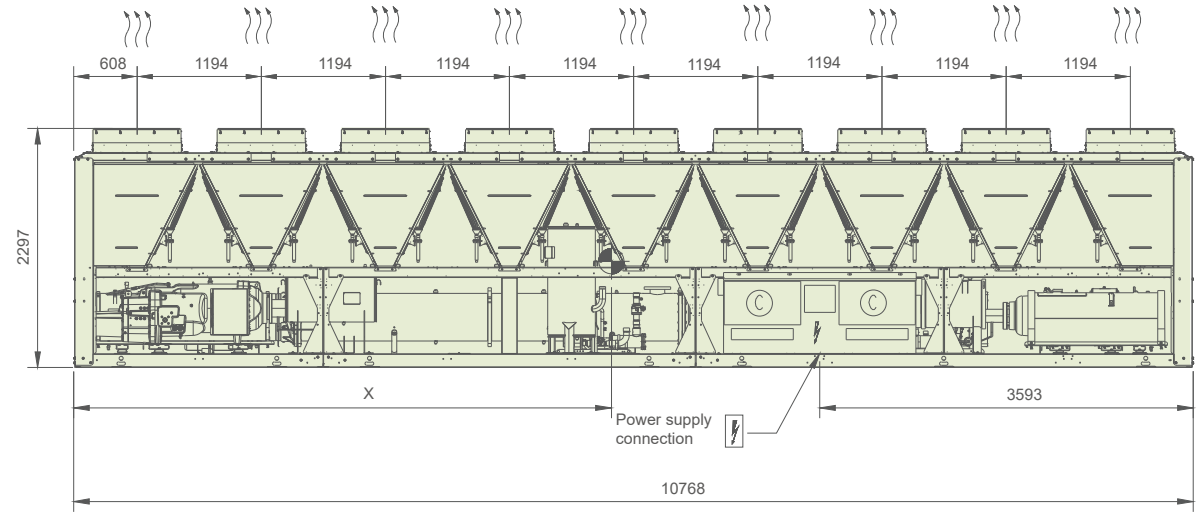


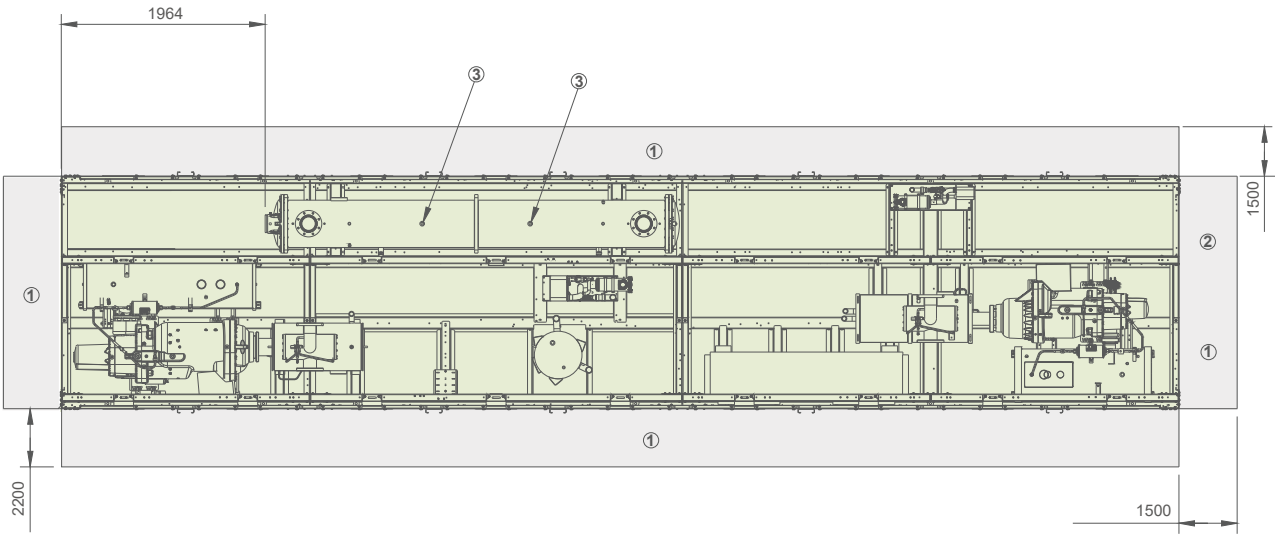
① Required clearances for maintenance
② Recommended space for evaparator tube removal
③ Safety valve
Water outlet
Water inlet
Air outlet
Power supply connection
Center gravity
Ⓒ Control circuit connection

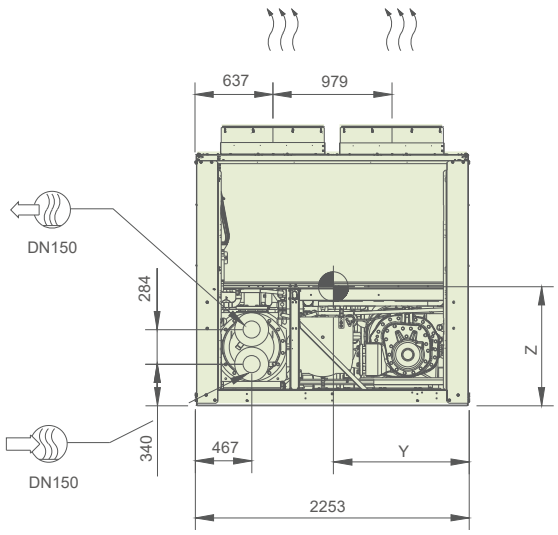
Model	X (mm)	Y (mm)	Z (mm)
30XQ910	4700	1031	809
30XQ1002	4775	1032	821

Dimensions/Clearances

30XQ1035/1102 - Cu/Al Condenser coils





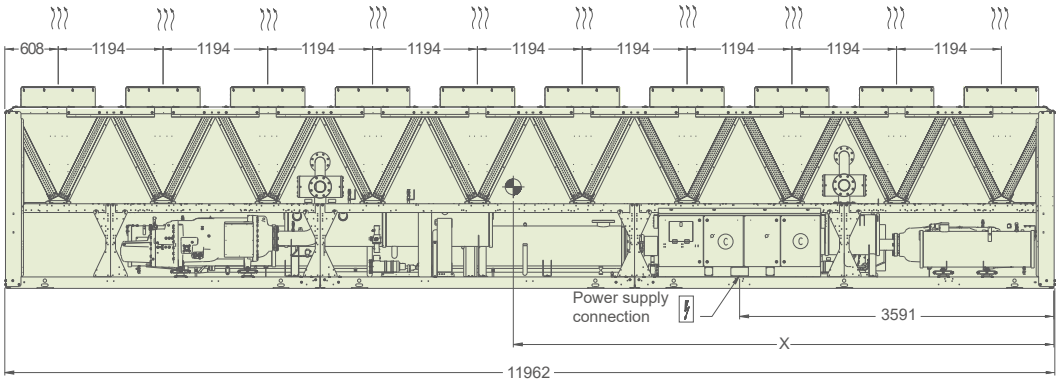


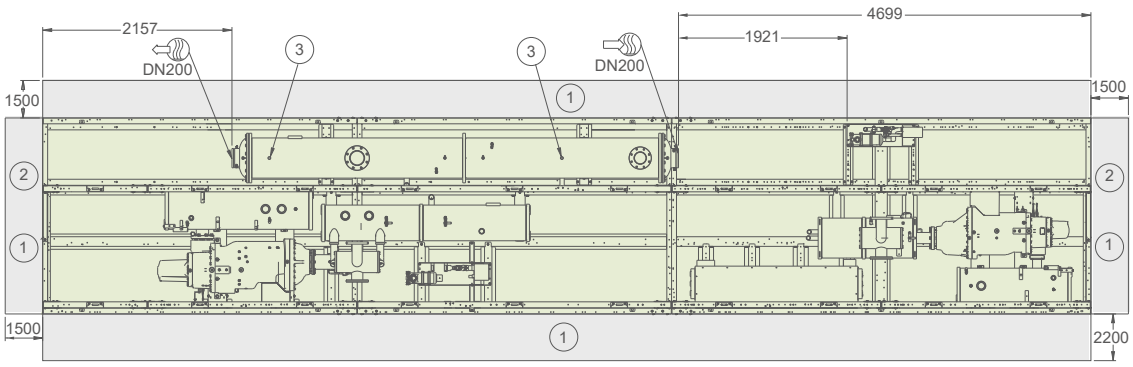
① Required clearances for maintenance
② Recommended space for evaparator tube removal
③ Safety valve
Water outlet
Water inlet
Air outlet
Power supply connection
Center gravity
Ⓒ Control circuit connection

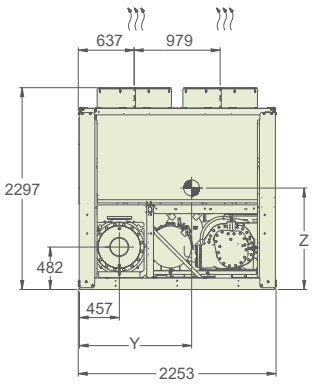
Model	X (mm)	Y (mm)	Z (mm)
30XQ1035	5097	1039	882
30XQ1102	5207	1041	893

Dimensions/Clearances

30XQ1152/1202/1232







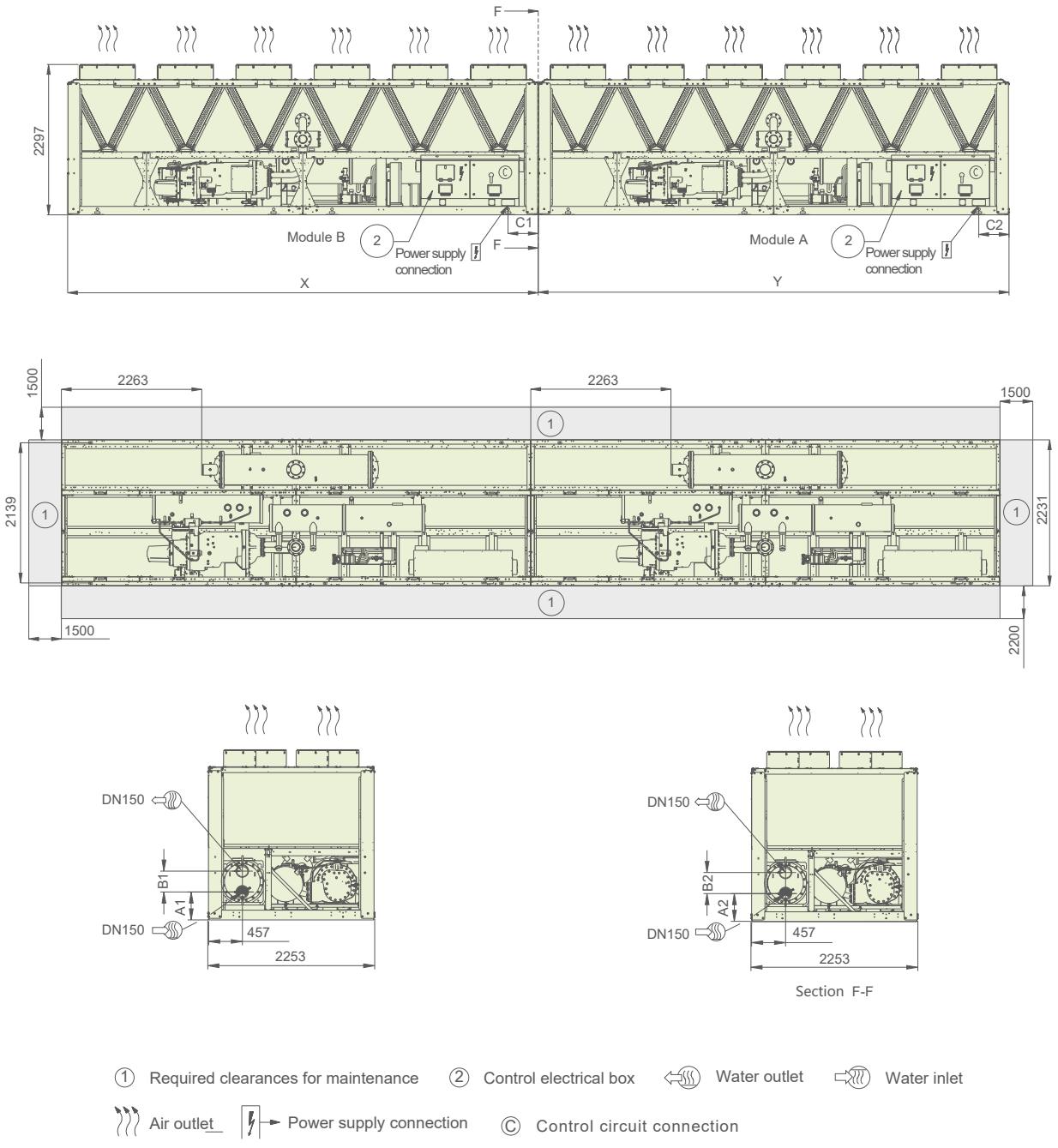
Model	X (mm)	Y (mm)	Z (mm)
30XQ1152	6067	1182	797
30XQ1202	6167	1192	887
30XQ1232	6110	1177	865

① Required clearances for maintenance
② Recommended space for evaparator tube removal
③ Safety valve
Water outlet
Water inlet
Air outlet
Power supply connection
Center gravity
Ⓒ Control circuit connection

Notes: Single power connection point,and arrive from the bottom. Reserve 120mm height space below the unit for power supply connection(unit aerial installation or cable slot arrangement inunit base).

Dimensions/Clearances

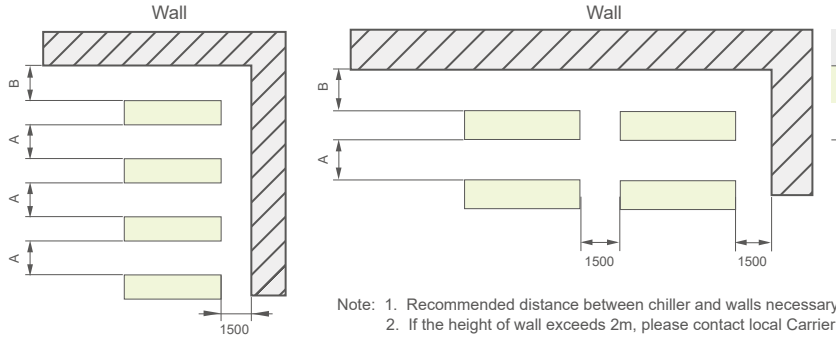
30XQ1300/1340/1370/1400/1450/1502 - Cu/Al Condenser coils



30XQ	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	X	Y
1300	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1340	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1370	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1400	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1450	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1502	375	375	284	284	448	448	1460	1460	2263	2263	7186	7186
1300PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186
1340PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186
1370PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186
1400PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186
1450PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186
1502PT041F	375	375	284	284	448	448	1460	1460	2142	2142	7186	7186

Note: Drawing for 30XQ1300-1502 Double power connection point,and arrive from the bottom Reserve 120mm height space below the unit for power supply connection (unit aerial installation or cable slot arrangement in unit base).Two water connection piping should beprepared.

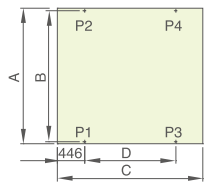
Multiple Chiller Installation



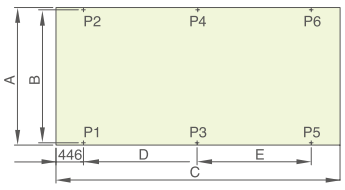
Outdoor air temperature	A	B
≤40℃	2200	2200
> 40℃	3000	1500

Note: 1. Recommended distance between chiller and walls necessary for adequate space of heat exchange.
2. If the height of wall exceeds 2m, please contact local Carrier Sales & Service Corporation.

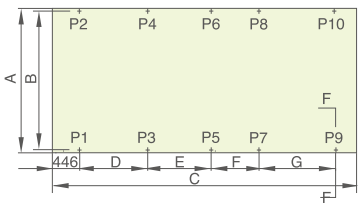
Weight Distribution, 30XQ0330~1502



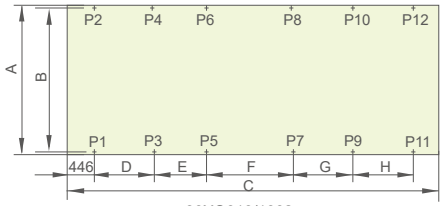
30XQ330



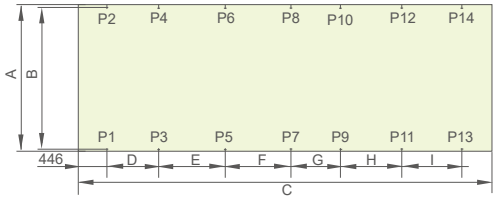
30XQ430, 30XQ502



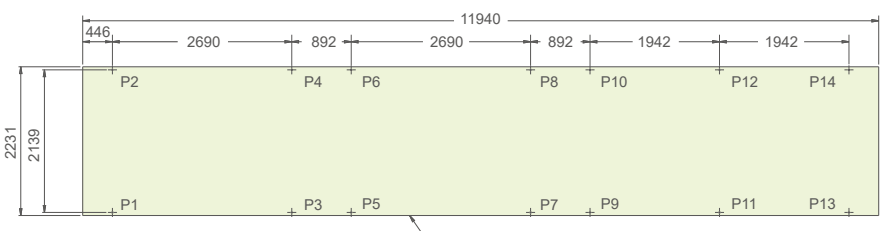
30XQ625, 30XQ660, 30XQ670, 30XQ702, 30XQ745, 30XQ750, 30XQ810, 30XQ1300 Module A/B, 30XQ1340 Module A/B, 30XQ1370 Module A/B, 30XQ1400 Module A/B, 30XQ1450 Module A/B, 30XQ1502 Module A/B



30XQ910/1002

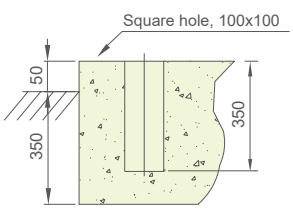


30XQ1035/1102



Chiller chossis outline dimension

30XQ1152,30XQ1202,30XQ1232



Section F-F

Models	Dimensions, mm									Weight distributions,kg														Oertating weight, kg
	A	B	C	D	E	F	G	H	I	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	
30XQ330	2231	2139	3582	2690						1113	857	785	605											3360
30XQ430	2231	2139	4776	1942	1942					1066	634	934	556	802	478									4470
30XQ502	2231	2139	4776	1942	1942					1100	640	964	562	828	482									4576
30XQ625	2231	2139	7164	2690	892	2690				1043	642	961	591	933	574	851	524							6119
30XQ670	2231	2139	7164	2690	892	2690				1070	672	990	622	964	605	884	555							6362
30XQ702	2231	2139	7164	2690	892	2690				1093	686	1018	639	994	624	919	577							6550
30XQ745	2231	2139	7164	2690	892	2690				1094	687	1020	640	995	625	920	578							6559
30XQ810	2231	2139	8358	2690	892	1942	1942			816	619	857	650	871	661	900	683	930	706					7693
30XQ910	2231	2139	9552	1942	1942	892	1942	1942		789	647	782	640	774	634	770	631	763	625	755	618			8428
30XQ1002	2231	2139	9552	1942	1942	892	1942	1942		796	652	793	651	791	649	790	648	788	647	787	645			8637
30XQ1035	2231	2139	10746	1496	892	2690	892	1942	1942	749	622	736	612	728	605	705	586	697	579	680	565	663	551	9078
30XQ1102	2231	2139	10746	1496	892	2690	892	1942	1942	750	625	740	618	735	614	720	601	715	597	705	588	694	579	9281
30XQ1152	2231	2139	11940	2690	892	2690	892	1942	1942	777	686	771	681	769	679	762	673	760	671	755	667	750	662	10063
30XQ1202	2231	2139	11940	2690	892	2690	892	1942	1942	801	694	787	682	783	679	770	667	765	663	755	655	746	646	10093
30XQ1232	2231	2139	11940	2690	892	2690	892	1942	1942	785	699	775	691	772	688	763	680	759	677	753	671	746	664	10123
30XQ1300 Module A	2231	2139	7164	2690	892	2690				1070	672	990	622	964	605	884	555							6362
30XQ1300 Module B	2231	2139	7164	2690	892	2690				1043	642	961	591	933	574	851	524							6119
30XQ1340 Module A/B	2231	2139	7164	2690	892	2690				1070	672	990	622	964	605	884	555							6362
30XQ1370 Module A	2231	2139	7164	2690	892	2690				1093	686	1018	639	994	624	919	577							6550
30XQ1370 Module B	2231	2139	7164	2690	892	2690				1070	672	990	622	964	605	884	555							6362
30XQ1400 Module A	2231	2139	7164	2690	892	2690				1094	687	1020	640	995	625	920	578							6559
30XQ1400 Module B	2231	2139	7164	2690	892	2690				1070	672	990	622	964	605	884	555							6362
30XQ1450 Module A	2231	2139	7164	2690	892	2690				1094	687	1020	640	995	625	920	578							6559
30XQ1450 Module B	2231	2139	7164	2690	892	2690				1093	686	1018	639	994	624	919	577							6550
30XQ1502 Module A/B	2231	2139	7164	2690	892	2690				1094	687	1020	640	995	625	920	578							6559

Note: (1) foot screw even hole number (far side) represent for evaporator side

(2) foot screw, M20X300

Minimum Water Loop Volume

For better control of leaving water temperature, the water loop minimum capacity is given by the formula:

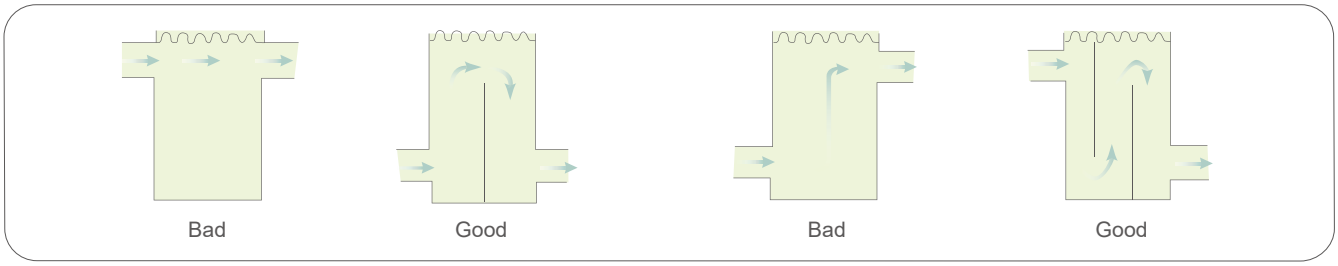
Capacity = CAP (kW) × N Liters

Application		N
Normal air conditioning	30XQ0330-1502	3.5
Process cooling	30XQ0330-1502	6.5

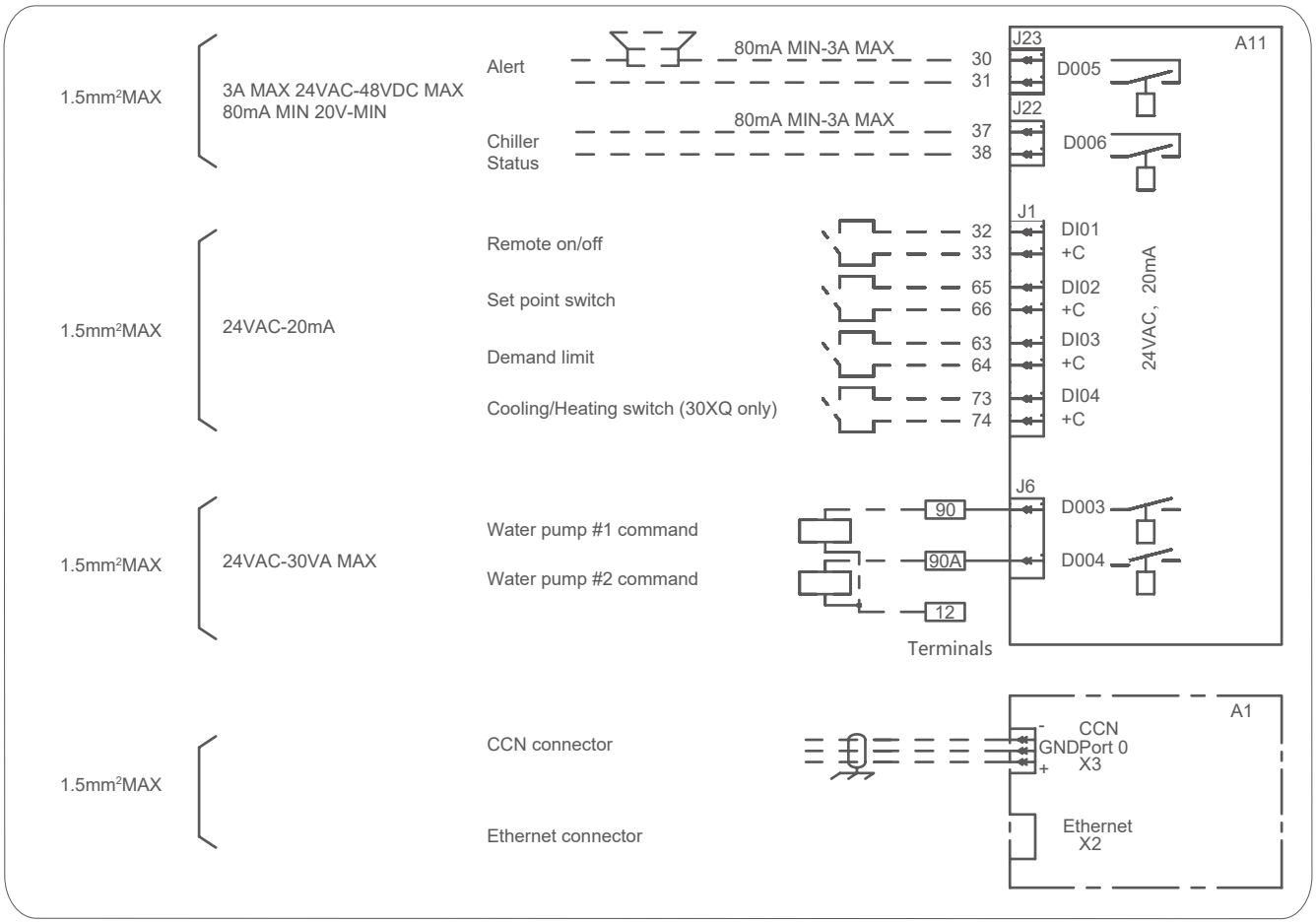
Where Cap is the nominal system cooling capacity (kW) at the nominal operating conditions of the installation.

This volume is necessary for stable operation and accurate temperature control.

It is often necessary to add a buffer water tank to the circuit in order to achieve the required volume. The tank must be internally baffled in order to ensure proper mixing of the liquid (water or brine). Refer to the examples below.



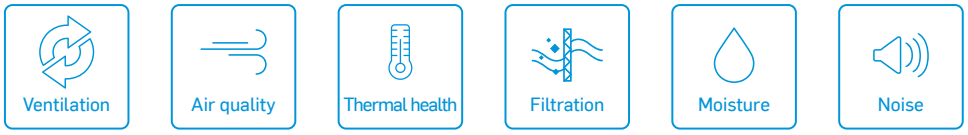
Field Control Wiring, 30XQ



HEALTHY**BUILDINGS**

As the inventors of modern air conditioning and a world leader in HVAC, refrigeration, and fire and security, solutions, Carrier has a legacy of creating safe and comfortable buildings. Our Healthy Buildings Program builds on that legacy through in-depth expertise and a holistic suite of healthy building technologies and services .to address the immediate pandemic concerns and long into the future.

6 of 9 foundations of healthy building are related closely to air conditioning system.



Primary support for the study came from Carrier.
MacNaughton P, Allen J, Satish U, Laurent J, Flanigan S, Vallarino J, Coull B, Spengler. 2016. The Impact of Working in a Green Certified Building on Cognitive Function and Health. Building and Environment DOI: 10.1016/j.buildenv.2016.11.041

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