

RHEEM THERMAL

EASY INTEGRATION – HIGHER EFFICIENCY – LONGER LASTING
DESIGNED AND MANUFACTURED BY RHEEM

COMMERCIAL HEAT PUMP TECHNICAL BOOKLET (LOW EVAPORATOR TEMPERATURE SERIES)



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• RTWW088	18
• RTWW180	21
• RTWW270	24

Note: Higher heating capacity available. Please consult Rheem or Rheem distributor for more information.

**subject to products*



1.0

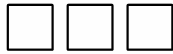
NOMENCLATURE





MODEL

- RTHP — HEATING POOL
- RTHW — HOT WATER
- RTWW — WATER TO WATER
- RTCH — CHILLER POOL
- RTCW — CHILLER WATER



KW

NOMINAL KILOWATT AT RATING CONDITIONS



EVAP.

- AIR COOLED (NO LETTER REQUIRED)
- T— ABS TITANIUM SHELL & TUBE
- S— SINGLE WALL SHELL & TUBE COPPER
- V— COAXIAL VENTED COPPER
- P— BRAZED PLATE VENTED
- B— BRAZED PLATE



REFRIG.

- A—R410a
- D—R134a
- K—R407c



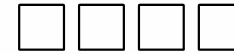
COND.

- AIR COOLED (NO LETTER REQUIRED)
- T— ABS TITANIUM SHELL & TUBE
- S— SINGLE WALL SHELL & TUBE COPPER
- V— COAXIAL VENTED COPPER
- P— BRAZED PLATE VENTED
- B— BRAZED PLATE



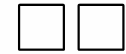
ELECTRICAL

- D— 380-420V/3Ø/50Hz
- J— 220-240V/1Ø/50Hz
- 7— 380V/3Ø/60Hz
- 3— 1 PHASE INVERTER 220-240V/50Hz
- 4— 3 PHASE INVERTER 380-420V/50Hz



OPTIONS

- E— CAREL EASY
- Q— RHEEM IQ
- R— REVERSE CYCLE
- C— CIRCULATION PUMP CONTACTOR / RELAY WITH REMOTE SENSOR
- V— VERTICAL AIR
- H— HORIZONTAL AIR
- S— SPA UNITS
- O— OPPOSITE HAND
- L— LOW TEMP.
- G— PUMP
- B— BMS CONTROL
- D— DOUBLE COATED EVAP. COIL
- F— EC FAN
- J— COMPRESSOR JACKET
- P— POWDERCOATED FINISH
- A— STACK ABLE UNITS



REVISION

1 TO 99

EXAMPLE **R T H W 0 6 5 K S - D E V - 1**



6	0353	ADDED IN OPTIONS A- STACK ABLE UNITS	30/07/19
5	0330	ADDED 3-1P INVERTER, 4-3P INVERTER, B-BMS, D-DOUBLE COATED COIL, F-EC FAN, j-COMP JACKET, P-POWDER COATED FINISH	22/02/19
4	0321	ADDED L - LOW TEMP, G - PUMP	4/12/18
3		OPPOSITE HAND	17/08/18
REV	ECN	DESCRIPTON	DATE

Note: The heat pump features can be customize according to customer requirement. All customization are subject to factory review.



43 Marigold Street
Revesby NSW 2212
Australia
Phone: 02 9684 3684

NOMENCLATURE			
REF. DWG 26793	Date 04/06/18	Drawn J.Bates	Issue 6

2.0

EQUIPMENT

SPECIFICATION SHEET,

DRAWING &

WIRING DIAGRAM



2.1

WATER TO WATER HEAT PUMP (LOW EVAP TEMP), *RTWW###BDB-DQ-1*



WATER-TO-WATER HEAT PUMP SPECIFICATIONS

Braze Plate Heat Exchanger / Rheem IQ Control **RTWW033BDB-DQ-1**

ELECTRICAL INPUT	
Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz
Full Load / Locked Rotor (Amps Per Phase)	17.8 FLA / 174 LRA
Min. Circuit Size	25.0 Amps
Refrigerant	R134a
Refrigeration effect	Heating Cooling
Nominal capacity	33.20 kW 26.73 kW
Power input	6.47 kW
COP	5.13 COP 4.13 COP
Combined COP	9.26 COP
Noise Level	61 dBa @ 3 m
Rated Load Amps @ 10°C SST / 51°C SCT	12.1 Amps

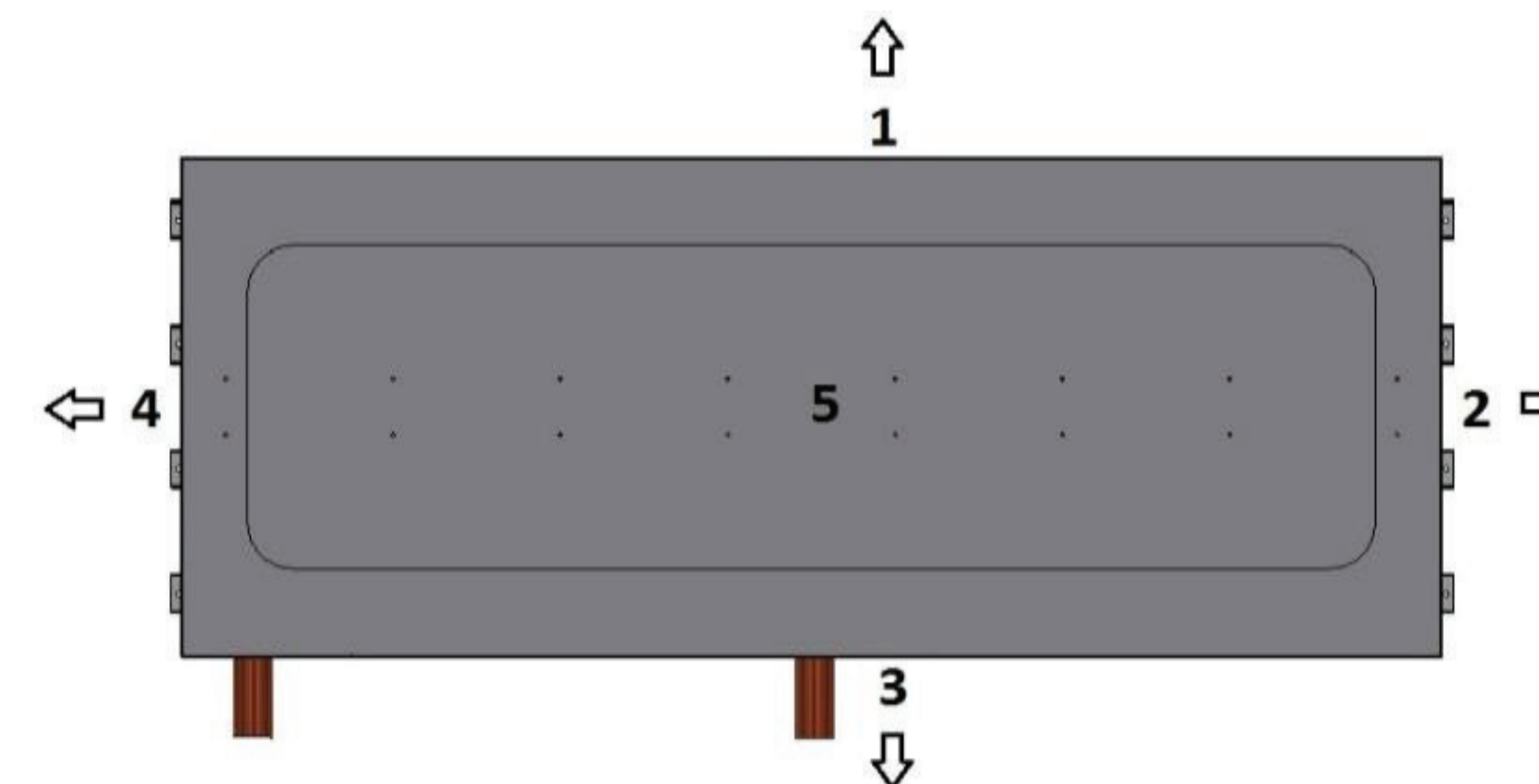
TECHNICAL DATA	
Compressor	
Make / Type	Copeland / Scroll 20018
Number Per Unit	1
FLA (Full Load Amps)	17.8 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900

HEAT EXCHANGER (Water Side)		
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Brazed Plate/Water	Brazed Plate/Water + Glycol
Flow Rate Excl. By Pass	1.32 L/s	1.28 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	50 kPa	
Max. Operating Pressure	2,450 kPa	

GENERAL INFORMATION	
Water Connections	50.8mm (2") Copper
Drain	20mm aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. shipping weight	170 kg
Size L x W x H	1500 mm x 805 mm x 8100mm

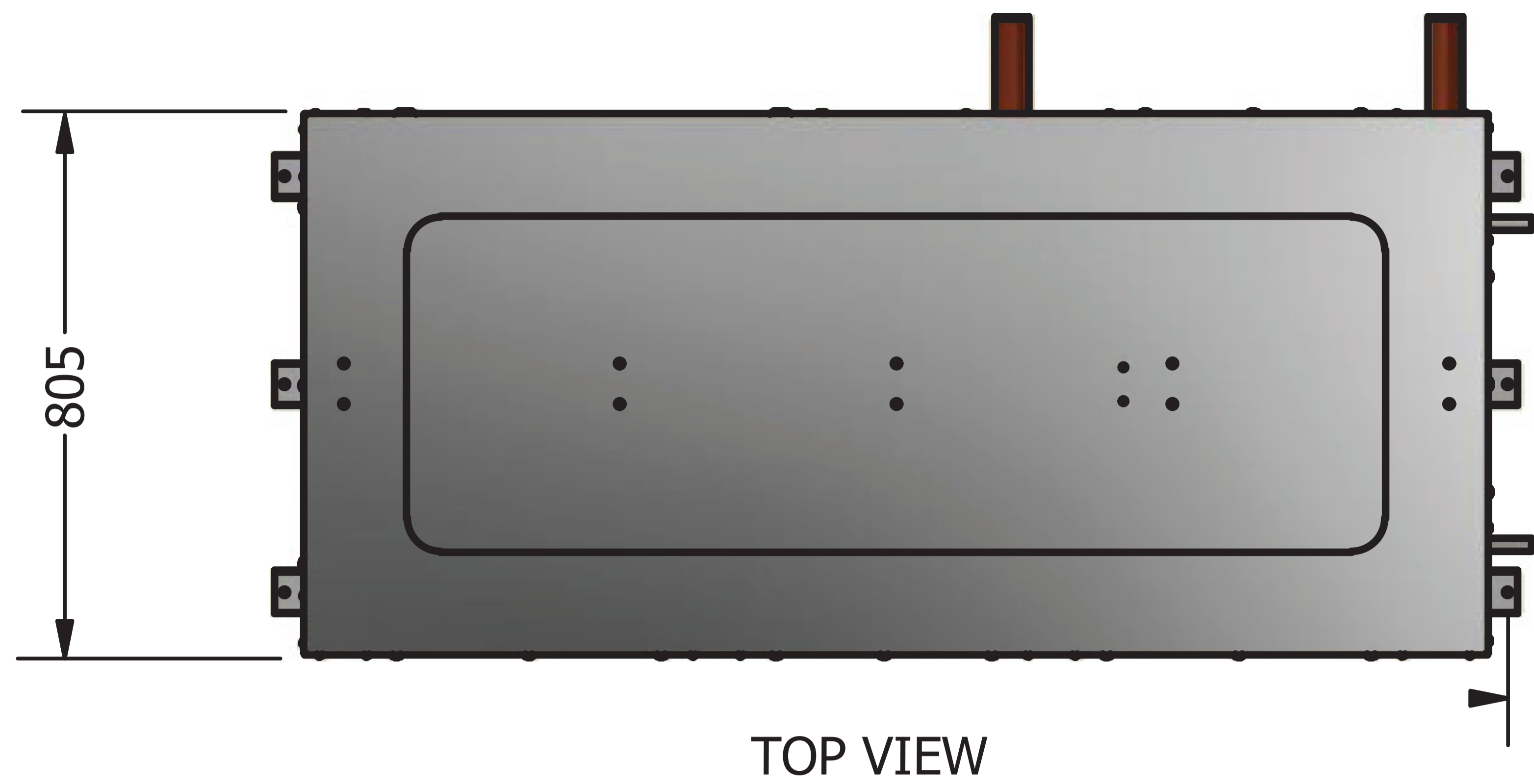
COP TABLE

Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	22.50 kW 3.49 COP	25.72 kW 3.97 COP	27.58 kW 4.26 COP	29.12 kW 4.50 COP	29.90 kW 4.62 COP	31.52 kW 4.88 COP	33.20 kW 5.13 COP	37.75 kW 5.76 COP	42.88 kW 6.32 COP
50 °C	22.01 kW 3.14 COP	25.17 kW 3.56 COP	26.97 kW 3.82 COP	28.44 kW 4.03 COP	29.20 kW 4.14 COP	30.74 kW 4.37 COP	32.34 kW 4.60 COP	36.63 kW 5.20 COP	41.44 kW 5.78 COP
55 °C	21.31 kW 2.76 COP	24.38 kW 3.12 COP	26.10 kW 3.34 COP	27.50 kW 3.52 COP	28.21 kW 3.61 COP	29.66 kW 3.81 COP	31.15 kW 4.01 COP	35.12 kW 4.55 COP	39.52 kW 5.11 COP
60 °C	20.67 kW 2.51 COP	23.66 kW 2.82 COP	25.32 kW 3.01 COP	26.66 kW 3.17 COP	27.34 kW 3.25 COP	28.71 kW 3.42 COP	30.11 kW 3.60 COP	33.81 kW 4.08 COP	37.88 kW 4.60 COP
65 °C	N/A	22.65 kW 2.49 COP	24.23 kW 2.65 COP	25.49 kW 2.78 COP	26.12 kW 2.85 COP	27.39 kW 2.99 COP	28.68 kW 3.15 COP	32.04 kW 3.56 COP	35.69 kW 4.01 COP
70 °C	N/A	21.48 kW 2.21 COP	22.98 kW 2.34 COP	24.16 kW 2.45 COP	24.74 kW 2.51 COP	25.91 kW 2.63 COP	27.09 kW 2.75 COP	30.11 kW 3.09 COP	33.33 kW 3.48 COP

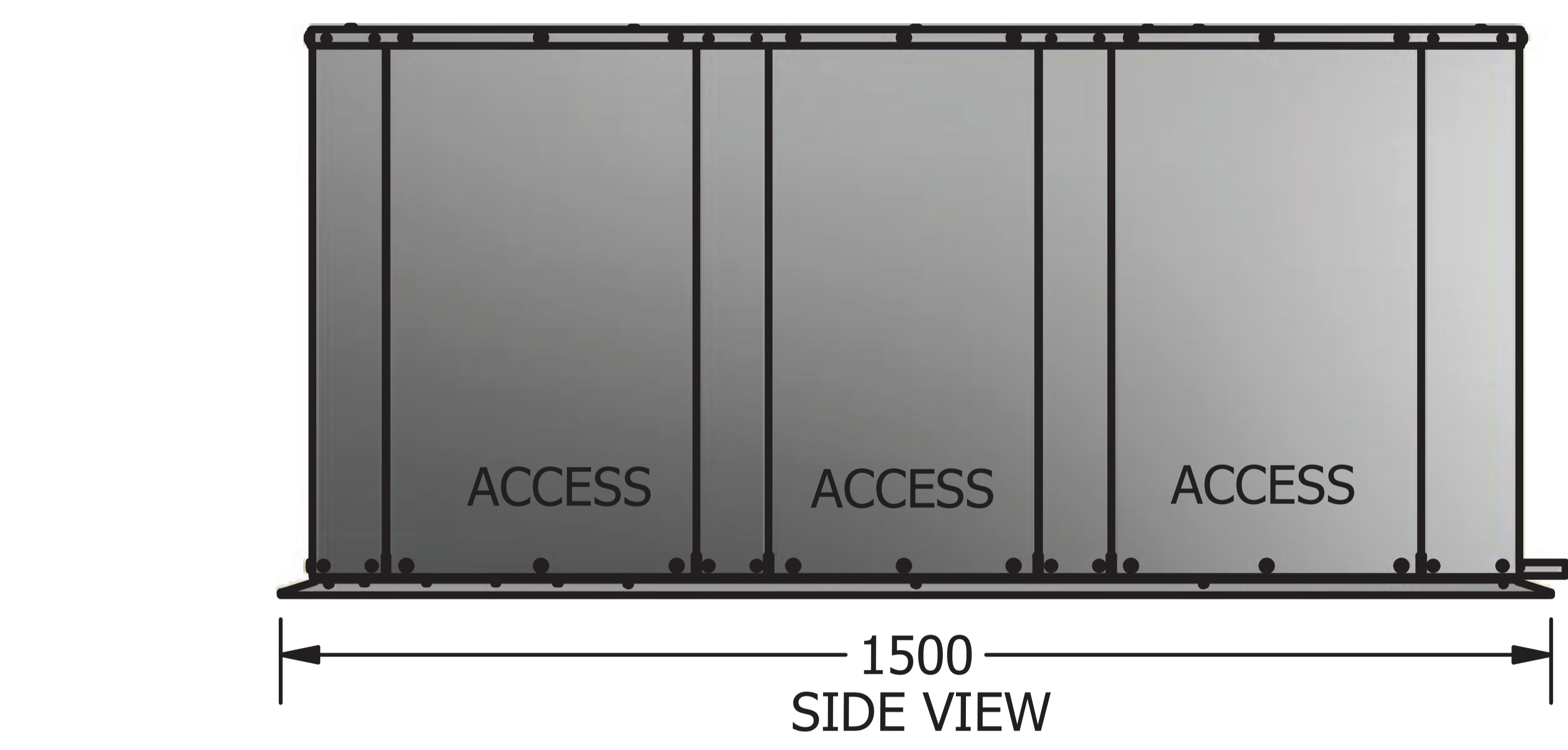


UNIT CLEARANCES		
Direction	Description	Minimum Clearance Required
1	Plain Back	200mm
2	Side Access	200mm
3	Compressor Access / Water	850mm
4	Side Access	200mm
5	Top – Height Clearance	500mm

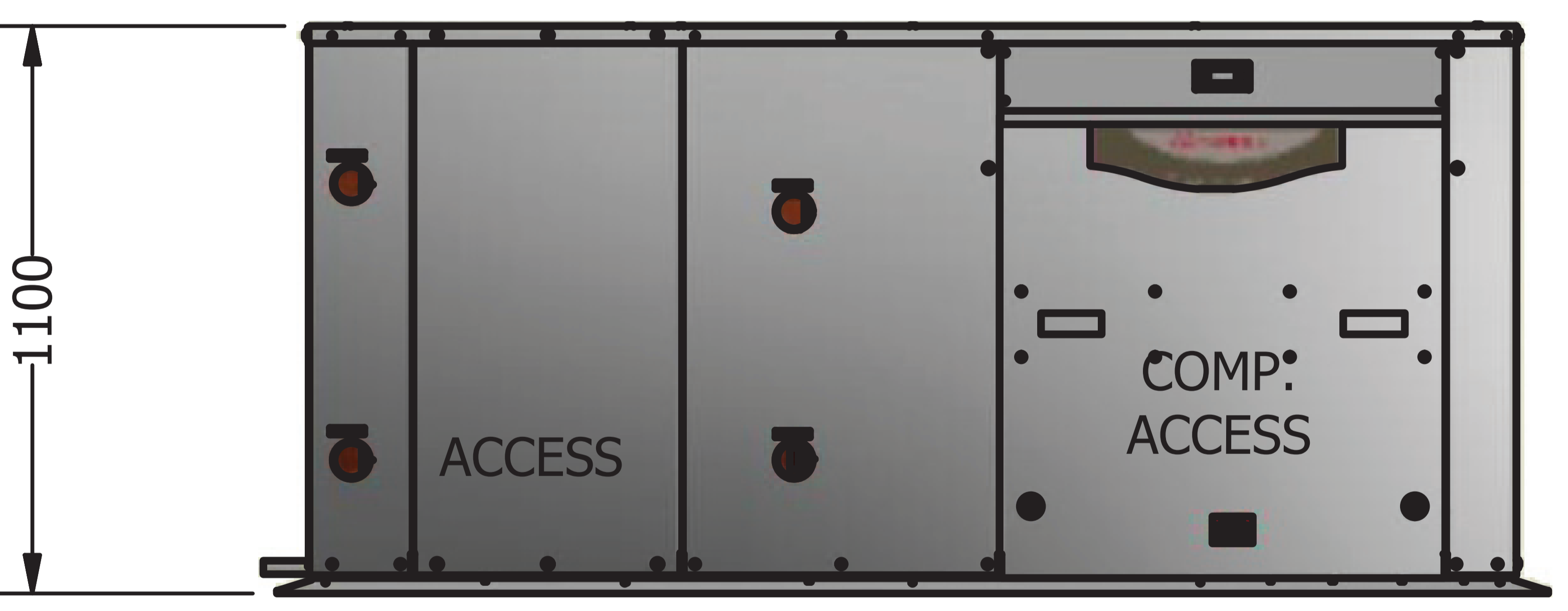
Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



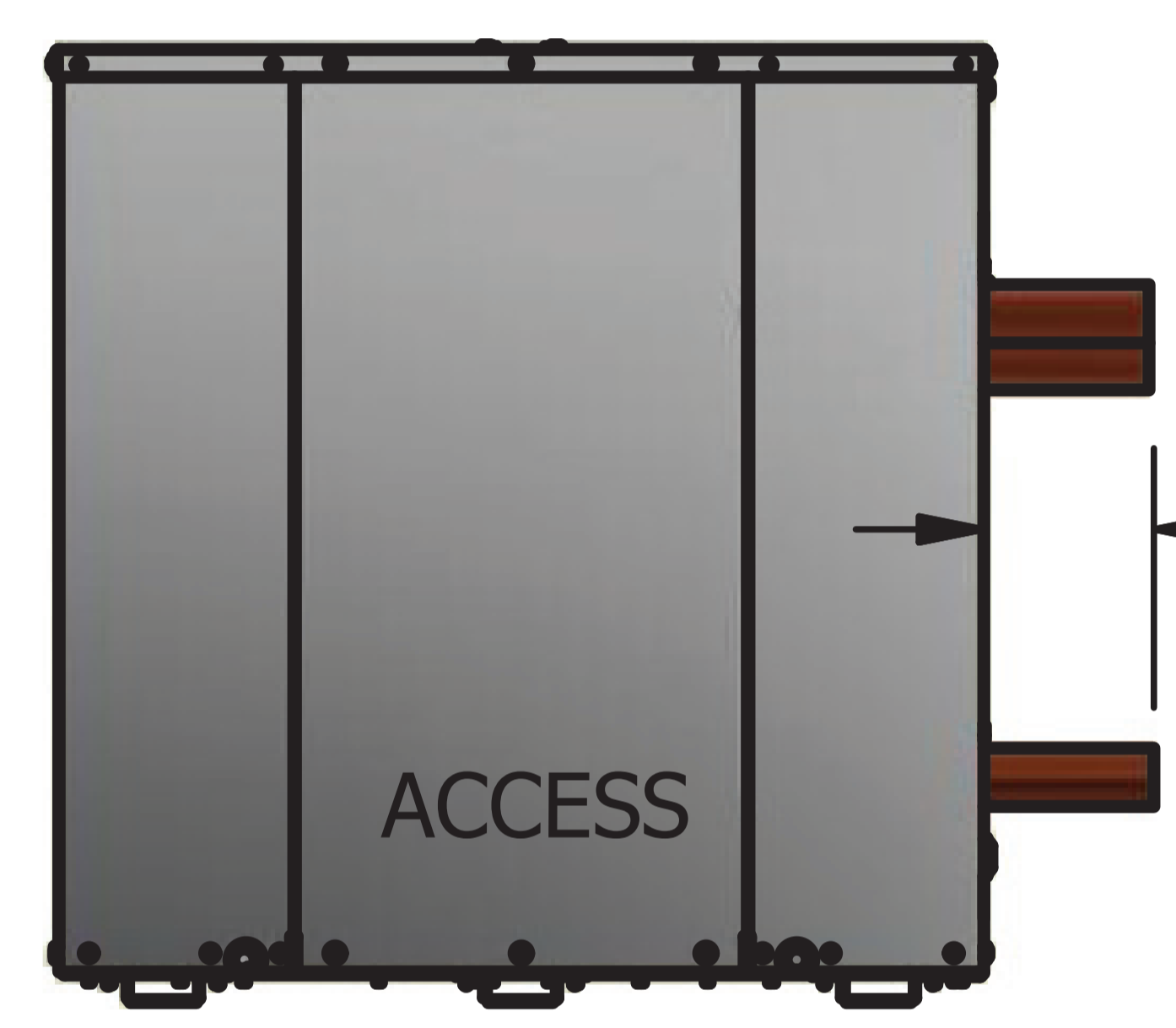
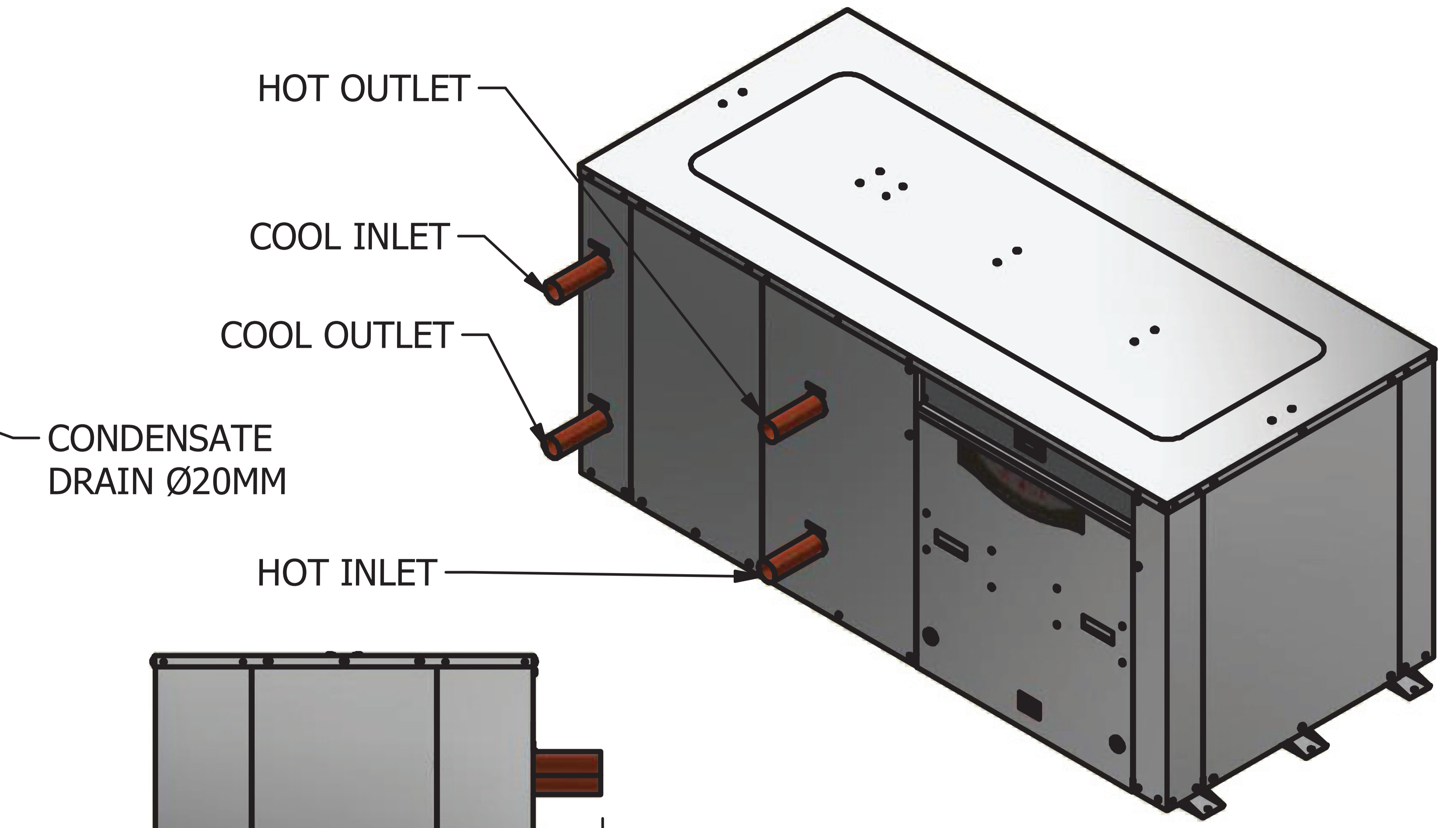
TOP VIEW



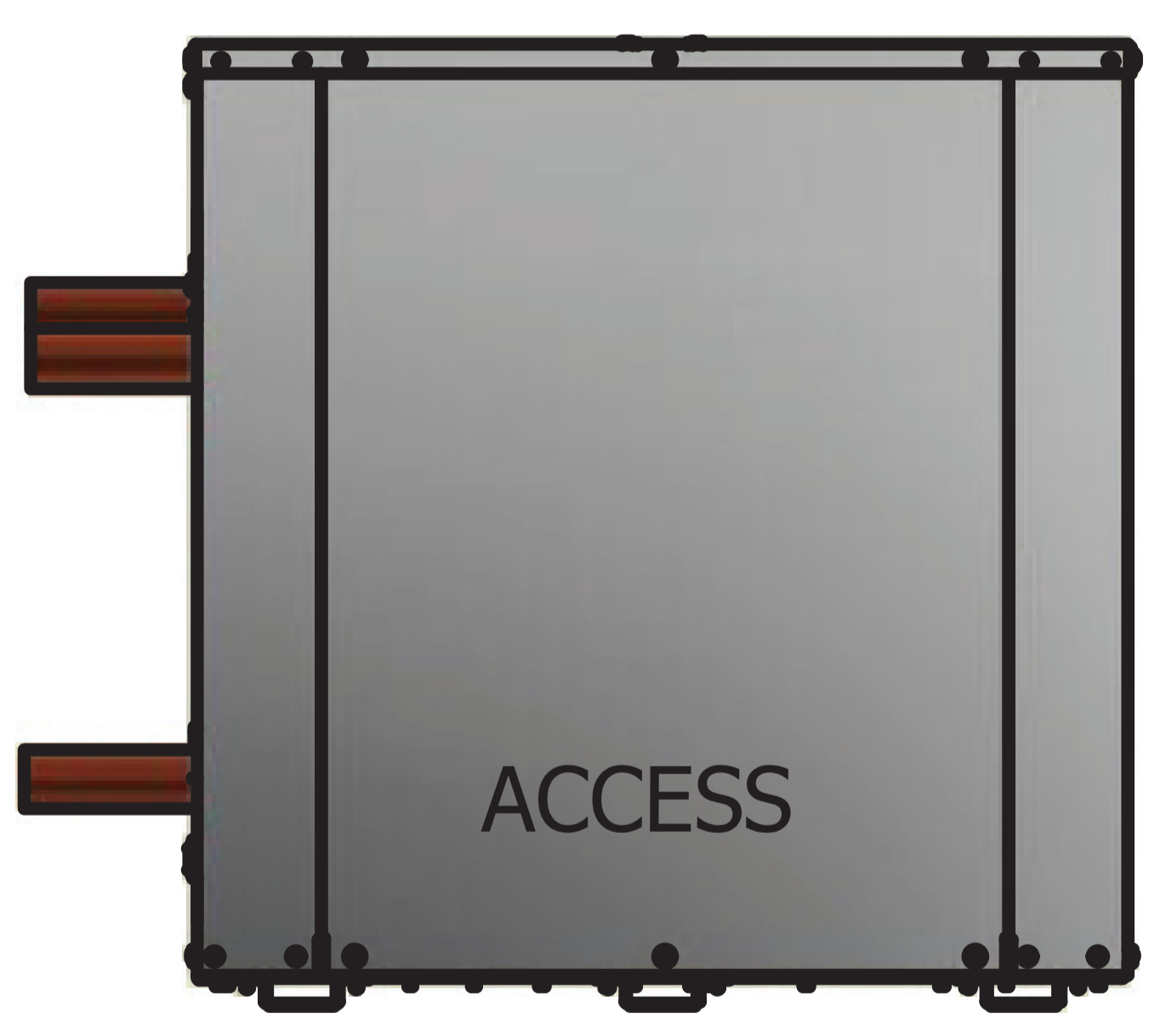
SIDE VIEW




SIDE VIEW



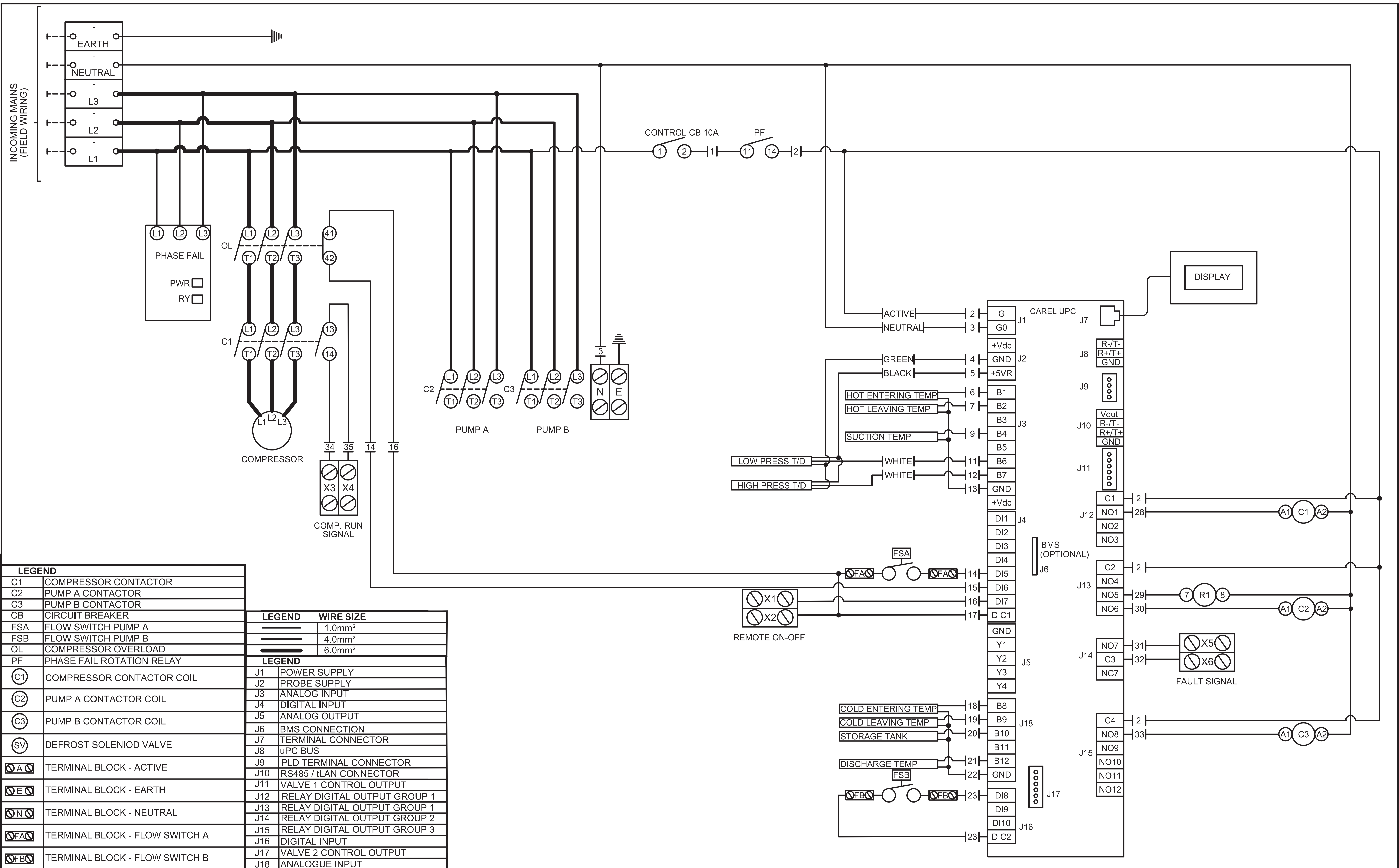
END VIEW



END VIEW

 Rheem THERMAL SYSTEMS GROUP		SHEET 1 OF 3	
		Description: RT W2W HW HP 33kW R134A	
Part No:	RTWW033BDB-DQ-1	Rev.:	
Material:		Date:	24/02/2020
Drawn By:	JPB	Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°		Scale: N.T.S

REV	ECN	DESCRIPTION	DATE



LEGEND	
C1	COMPRESSOR CONTACTOR
C2	PUMP A CONTACTOR
C3	PUMP B CONTACTOR
CB	CIRCUIT BREAKER
FSA	FLOW SWITCH PUMP A
FSB	FLOW SWITCH PUMP B
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
(C1)	COMPRESSOR CONTACTOR COIL
(C2)	PUMP A CONTACTOR COIL
(C3)	PUMP B CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A
(FB)	TERMINAL BLOCK - FLOW SWITCH B

LEGEND	WIRE SIZE
—	1.0mm ²
—	4.0mm ²
—	6.0mm ²

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	uPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / I/LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE

Rheem
THERMAL SYSTEMS GROUP

43 Marigold Street
Revesby NSW 2212
Phone: (02) 9684 3684
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Drawn By: J.Bates Date: 28/02/2020

RTWW033 on R134A

Part No: **47196E** Rev: **00**

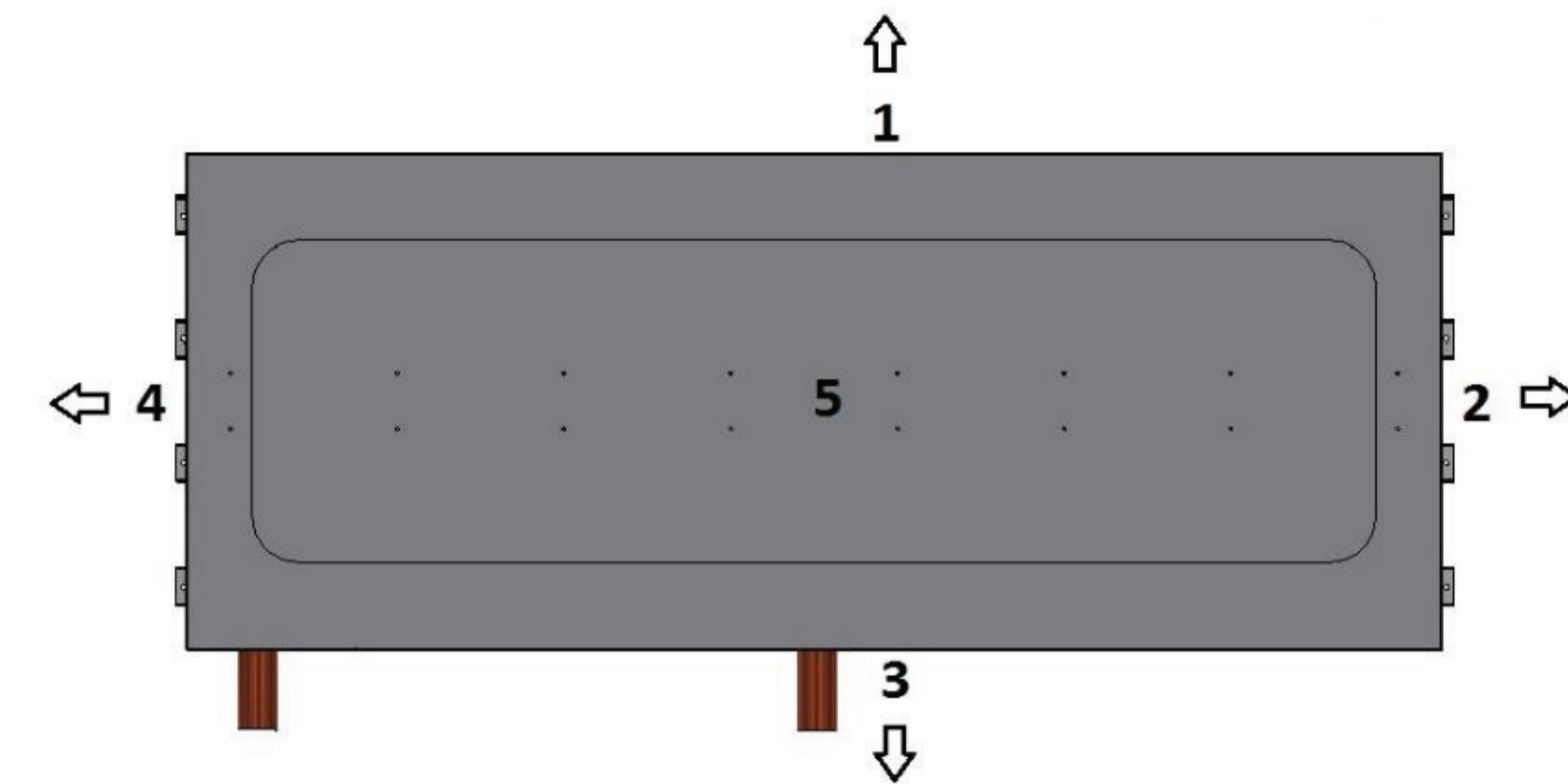
WATER-TO-WATER HEAT PUMP SPECIFICATIONS

Braze Plate Heat Exchanger / Rheem IQ Control **RTWW045BDB-DQ-1**

ELECTRICAL INPUT		
Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz	
Full Load / Locked Rotor (Amps Per Phase)	26.8 FLA / 174 LRA	
Min. Circuit Size	32.0 Amps	
Refrigerant	R134a	
Refrigeration effect	Heating	Cooling
Nominal capacity	44.59 kW	35.75 kW
Power input	8.84 kW	
COP	5.04 COP	4.04 COP
Combined COP	9.09 COP	
Noise Level	61 dBa @ 3 m	
Rated Load Amps @ 10°C SST / 51°C SCT	21.5 Amps	
TECHNICAL DATA		
	Compressor	
Make / Type	Copeland / Scroll 20056	
Number Per Unit	1	
FLA (Full Load Amps)	26.8 Amps	
Voltage / Phase	380 - 415 / 3	
Pole/RPM	2/2,900	
HEAT EXCHANGER (Water Side)		
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Braze Plate/Water	Braze Plate/Water + Glycol
Flow Rate Excl. By Pass	1.78 L/s	1.71 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	50 kPa	
Max. Operating Pressure	2,450 kPa	
GENERAL INFORMATION		
Water Connections	50.8mm (2") Copper	
Drain	20mm aluminium	
Cabinet Construction	1.2mm Stucco Aluminium	
Approx. shipping weight	300 kg	
Size L x W x H	1500mm x 805mm x 1100mm	

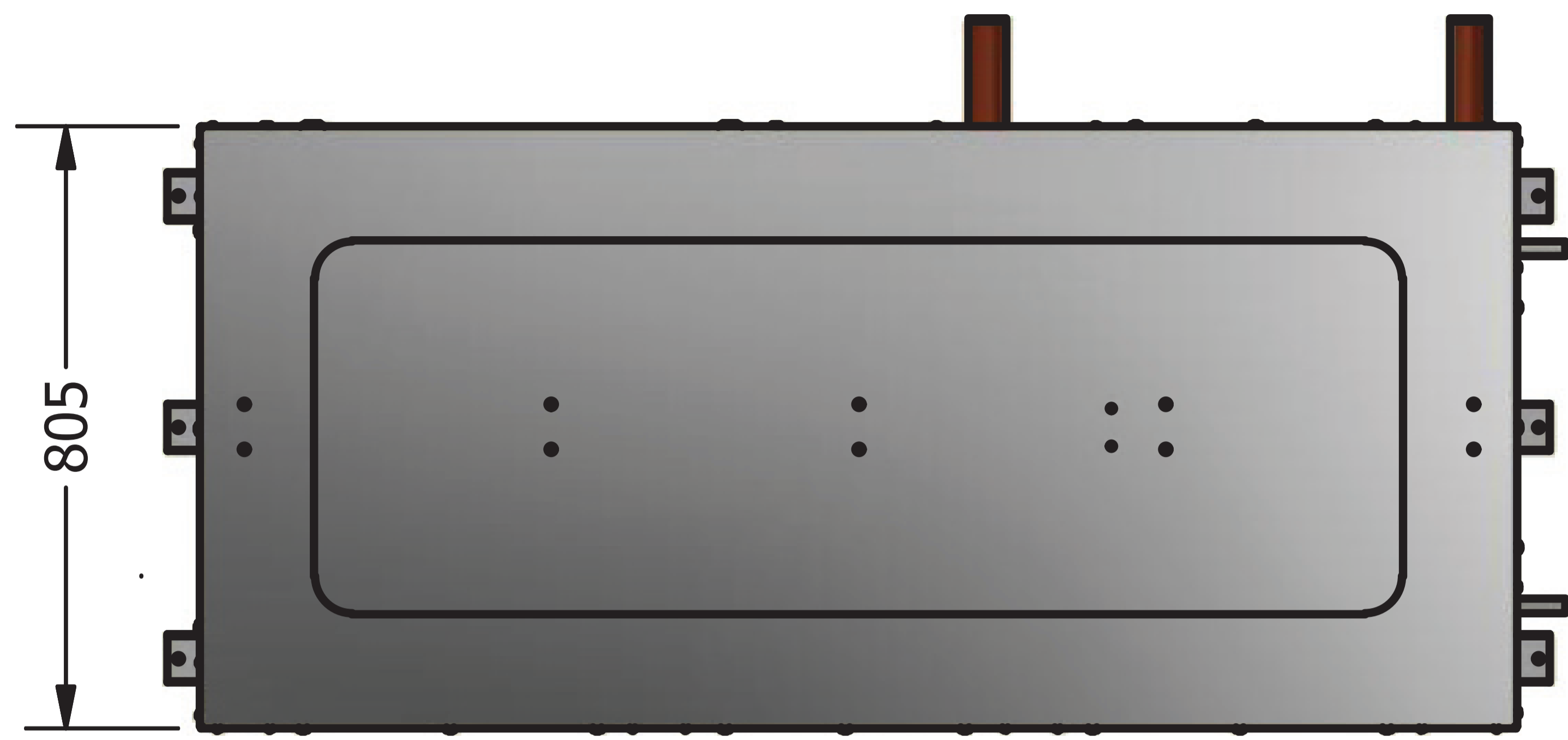
COP TABLE

Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	28.56 kW 3.27 COP	33.04 kW 3.77 COP	35.78 kW 4.08 COP	38.12 kW 4.34 COP	39.34 kW 4.47 COP	41.89 kW 4.75 COP	44.59 kW 5.04 COP	52.10 kW 5.84 COP	60.79 kW 6.70 COP
50 °C	28.08 kW 2.95 COP	32.43 kW 3.40 COP	35.09 kW 3.67 COP	37.35 kW 3.91 COP	38.53 kW 4.03 COP	40.99 kW 4.28 COP	43.60 kW 4.55 COP	50.83 kW 5.26 COP	59.21 kW 6.06 COP
55 °C	27.50 kW 2.59 COP	31.69 kW 2.98 COP	34.24 kW 3.22 COP	36.40 kW 3.43 COP	37.52 kW 3.53 COP	39.88 kW 3.75 COP	42.36 kW 3.98 COP	49.26 kW 4.61 COP	57.24 kW 5.31 COP
60 °C	27.05 kW 2.34 COP	31.12 kW 2.69 COP	33.58 kW 2.90 COP	35.66 kW 3.08 COP	36.74 kW 3.17 COP	39.01 kW 3.37 COP	41.40 kW 3.57 COP	48.02 kW 4.14 COP	55.69 kW 4.77 COP
65 °C	N/A	30.44 kW 2.36 COP	32.79 kW 2.55 COP	34.77 kW 2.70 COP	35.81 kW 2.78 COP	37.96 kW 2.95 COP	40.23 kW 3.12 COP	46.51 kW 3.61 COP	53.78 kW 4.16 COP
70 °C	N/A	29.83 kW 2.08 COP	32.06 kW 2.24 COP	33.95 kW 2.37 COP	34.92 kW 2.44 COP	36.96 kW 2.58 COP	39.11 kW 2.73 COP	45.05 kW 3.15 COP	51.92 kW 3.62 COP

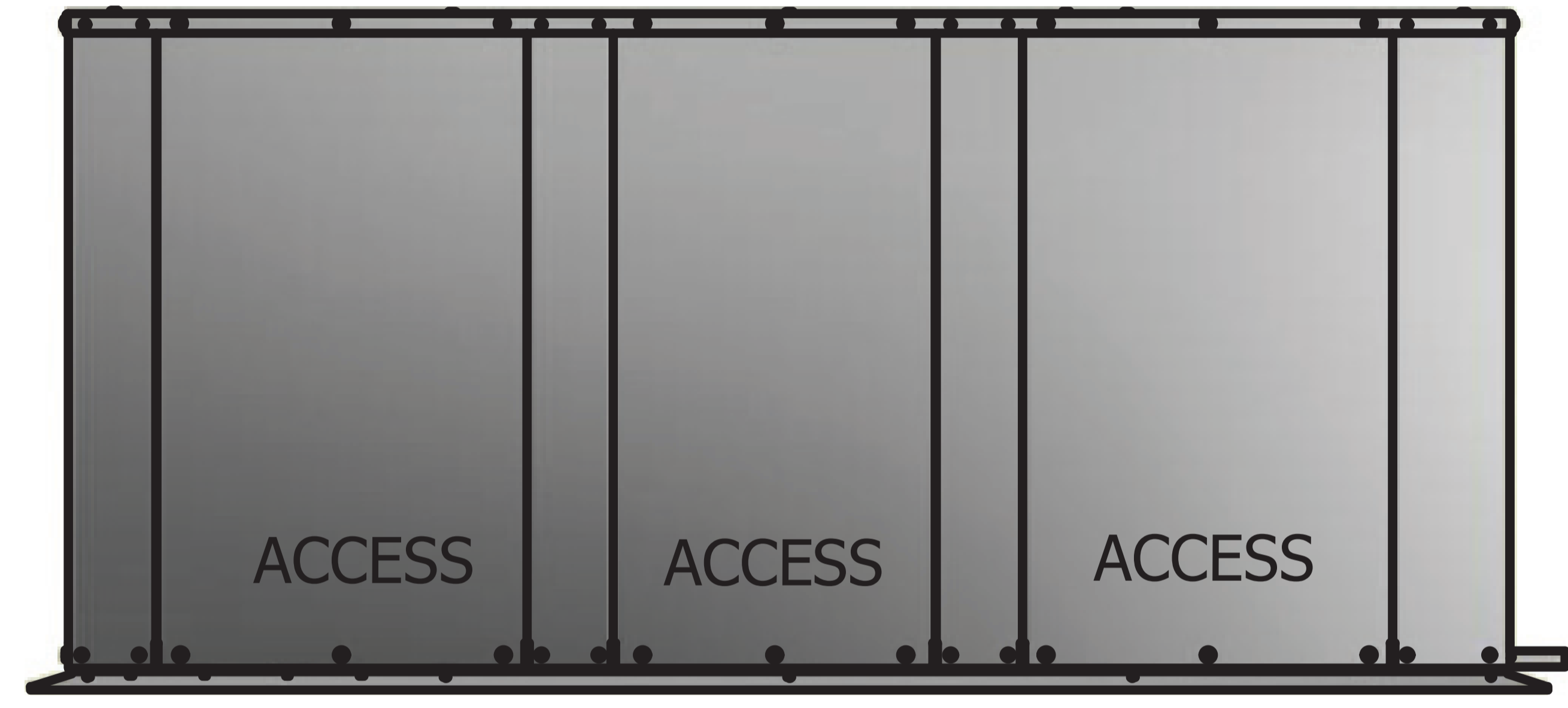


UNIT CLEARANCES		
Direction	Description	Minimum Clearance Required
1	Plain Back	200mm
2	Side Access	200mm
3	Compressor Access / Water	850mm
4	Side Access	200mm
5	Top – Height Clearance	500mm

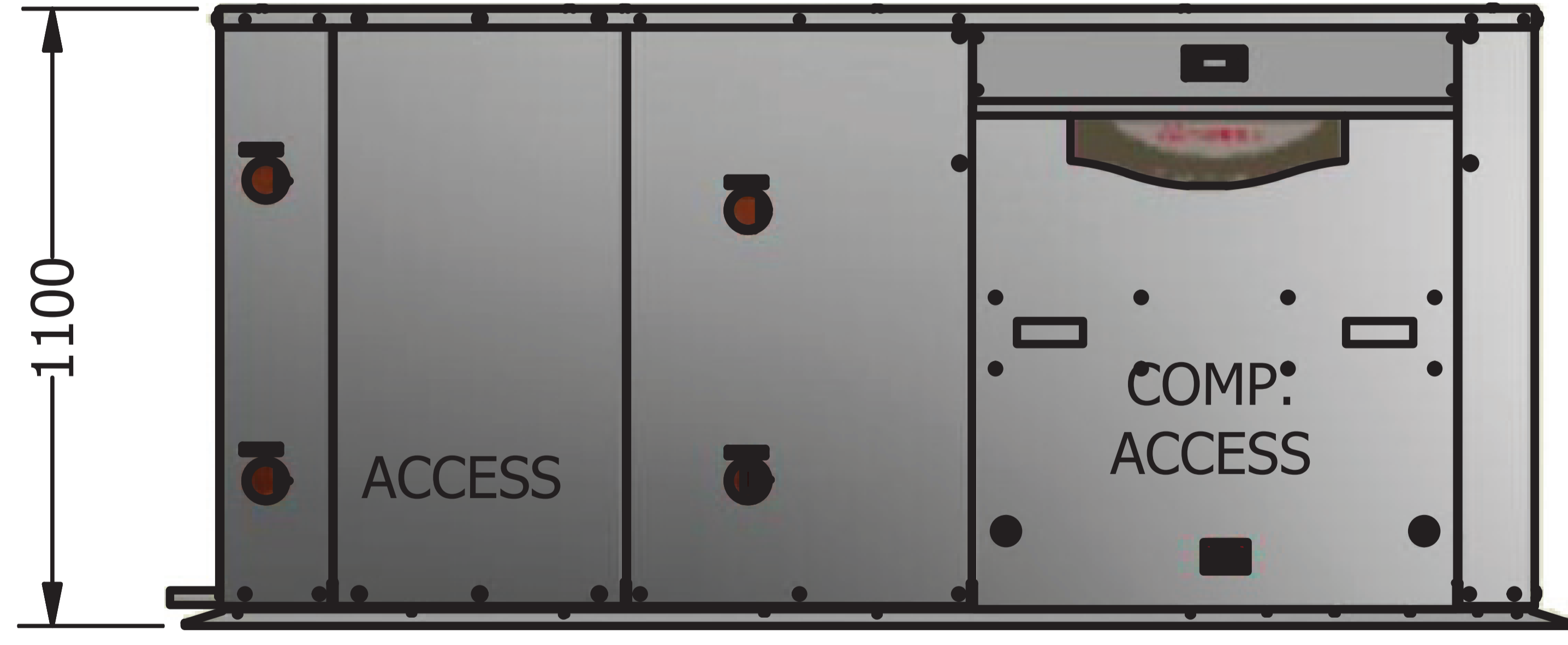
Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



TOP VIEW



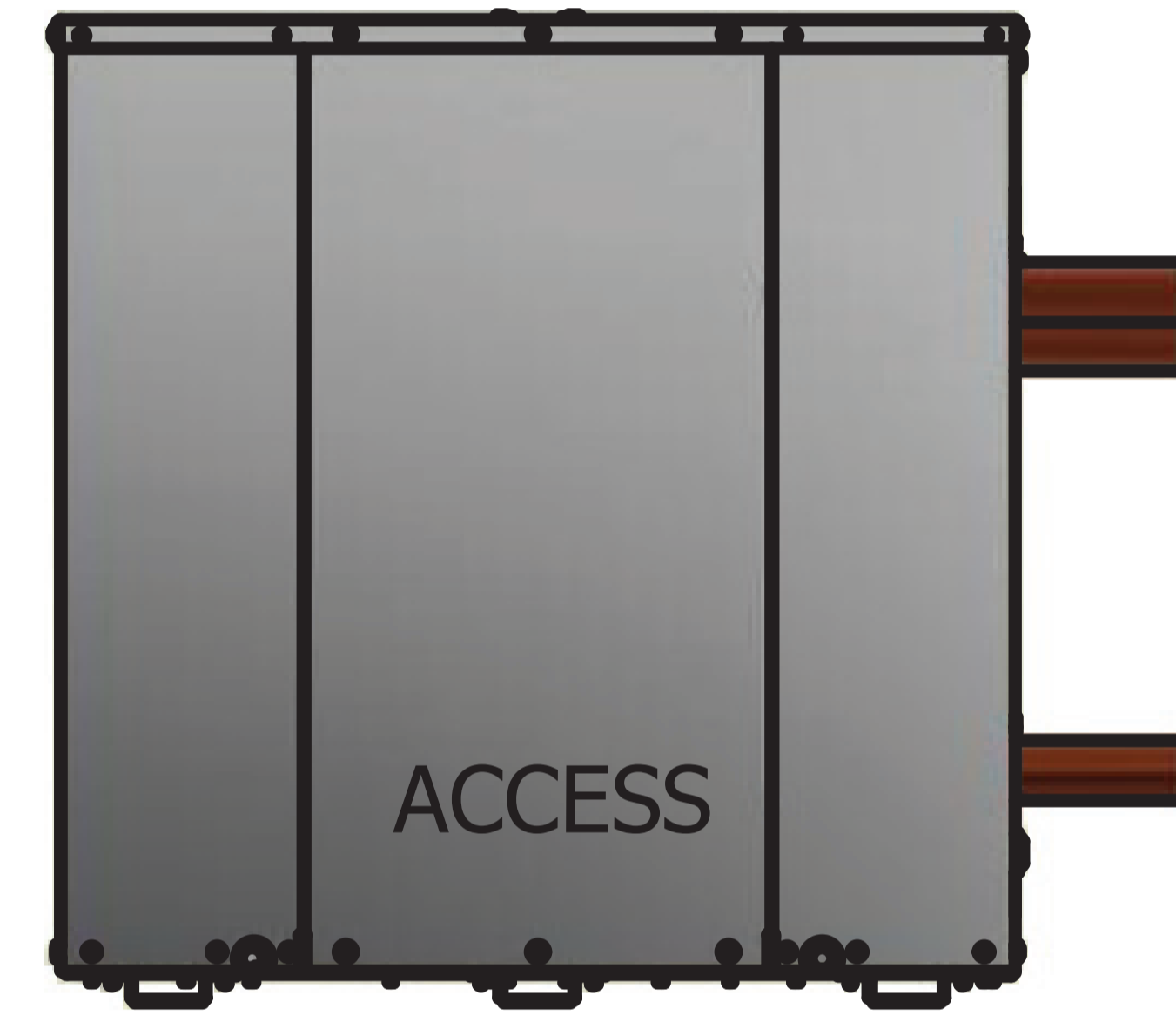
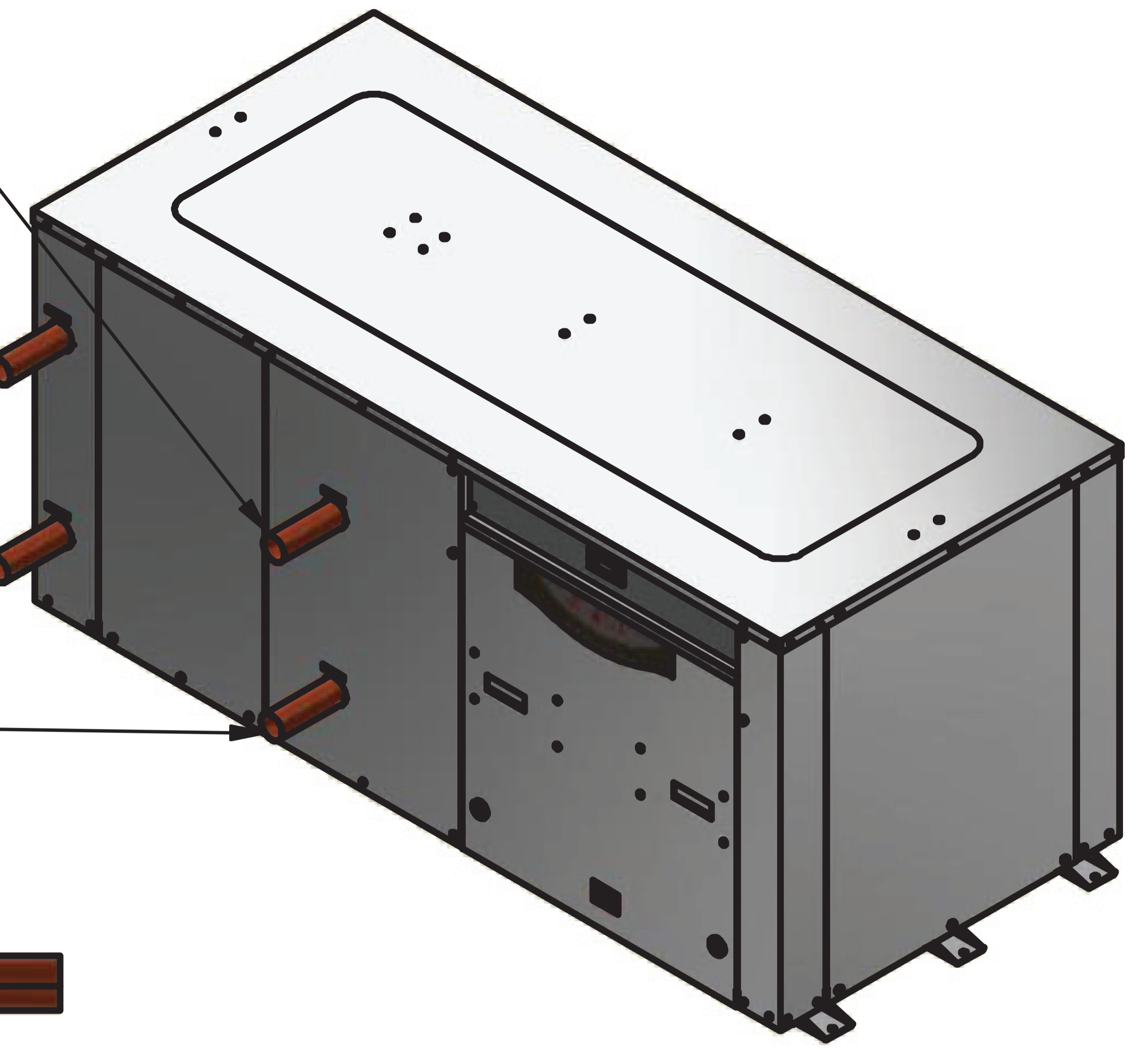
1500
SIDE VIEW



1100
SIDE VIEW

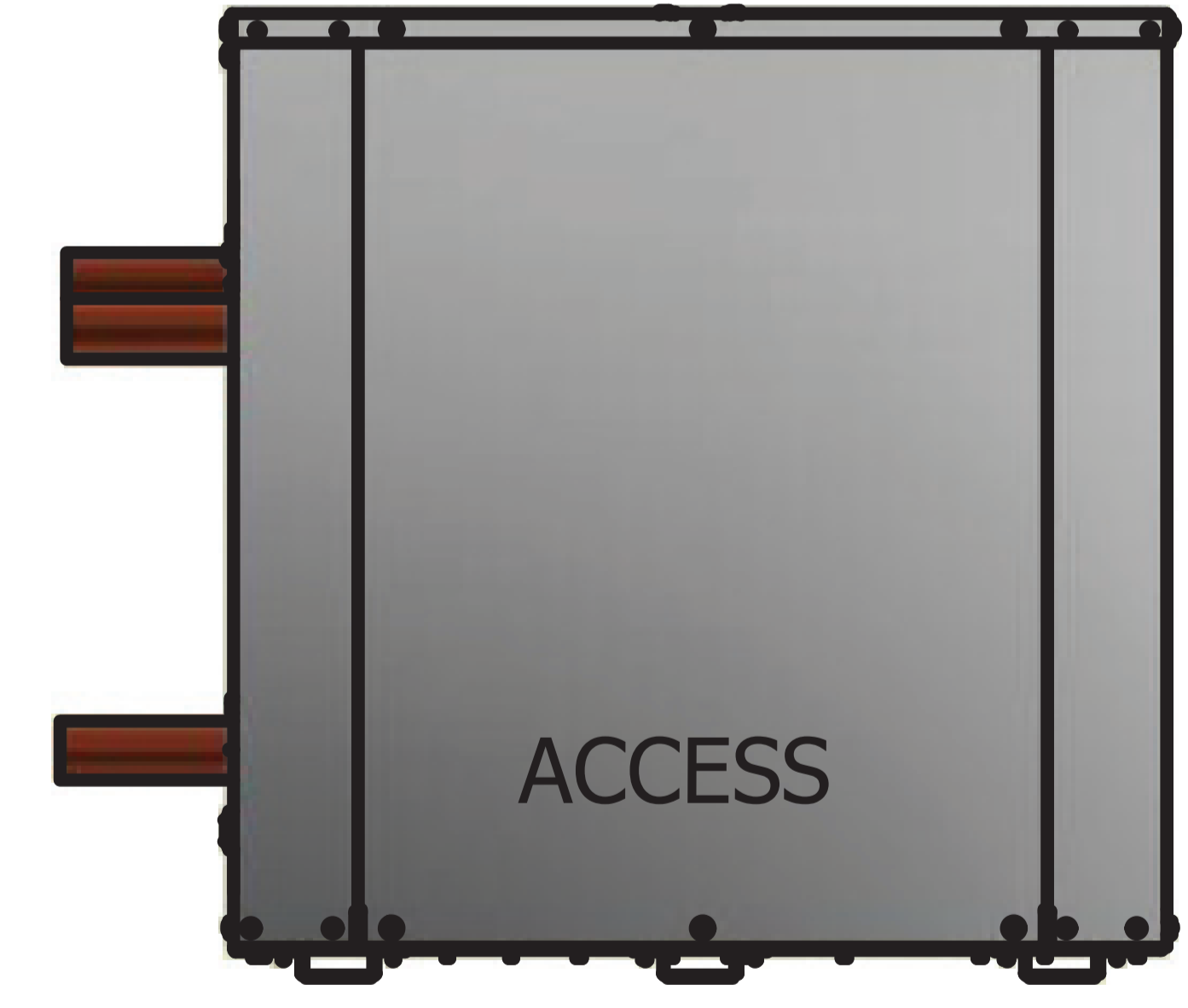
HOT OUTLET
COOL INLET
COOL OUTLET
HOT INLET

CONDENSATE DRAIN Ø20MM




END VIEW

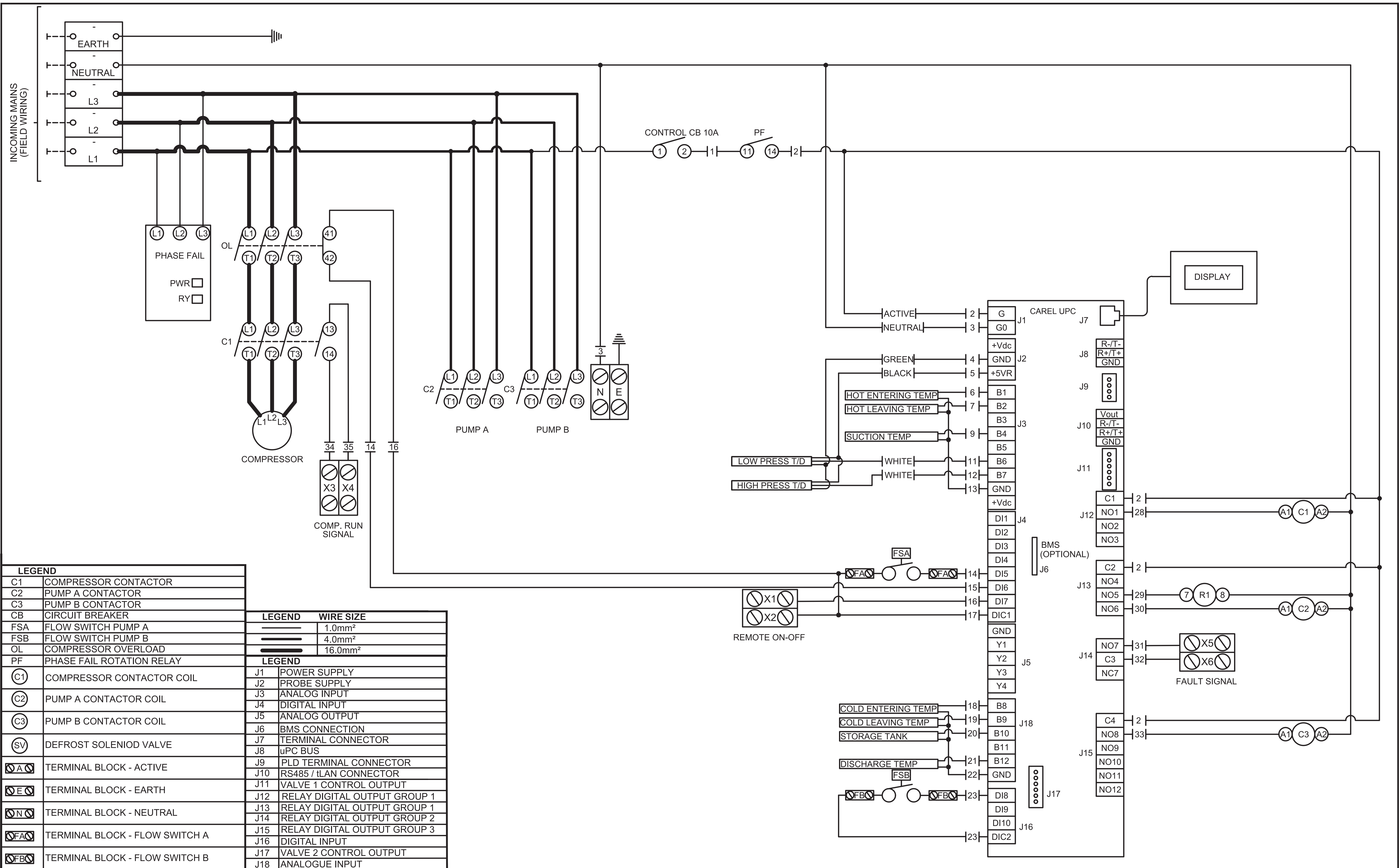
WATER CONNECTIONS
Ø50.80 COPPER



END VIEW

REV	ECN	DESCRIPTION	DATE

 Rheem THERMAL SYSTEMS GROUP		SHEET 1 OF 3	
Description:		RT W2W HW HP 45kW R134A	
Part No:	RTWW045BDB-DQ-1	Rev.	
Material:		Date:	24/02/2020
Drawn By:	JPB	Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°		Scale: N.T.S



LEGEND	
C1	COMPRESSOR CONTACTOR
C2	PUMP A CONTACTOR
C3	PUMP B CONTACTOR
CB	CIRCUIT BREAKER
FSA	FLOW SWITCH PUMP A
FSB	FLOW SWITCH PUMP B
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
(C1)	COMPRESSOR CONTACTOR COIL
(C2)	PUMP A CONTACTOR COIL
(C3)	PUMP B CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A
(FB)	TERMINAL BLOCK - FLOW SWITCH B

LEGEND	WIRE SIZE
—	1.0mm ²
—	4.0mm ²
—	16.0mm ²

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	uPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / I/LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE

Rheem
 THERMAL SYSTEMS GROUP

43 Marigold Street
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 Phone: (02) 9684 3684
 Fax: (02) 9684 3698

Drawn By: J.Bates Date: 28/02/2020

RTWW049 on R407C
RTWW045 on R134A

Part No: **47193E** Rev: **00**

WATER-TO-WATER HEAT PUMP SPECIFICATIONS
 Brazed Plate Heat Exchanger / Rheem IQ Control **RTWW058BDB-DQ-1**

ELECTRICAL INPUT	
Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz
Full Load / Locked Rotor (Amps Per Phase)	30.9 FLA / 225 LRA
Min. Circuit Size	40.0 Amps
Refrigerant	R134a
Refrigeration effect	Heating Cooling
Nominal capacity	57.26 kW 45.74 kW
Power input	11.52 kW
COP	4.97 COP 3.97 COP
Combined COP	8.94 COP
Noise Level	61 dBa @ 3 m
Rated Load Amps @ 10°C SST / 51°C SCT	21.6 Amps

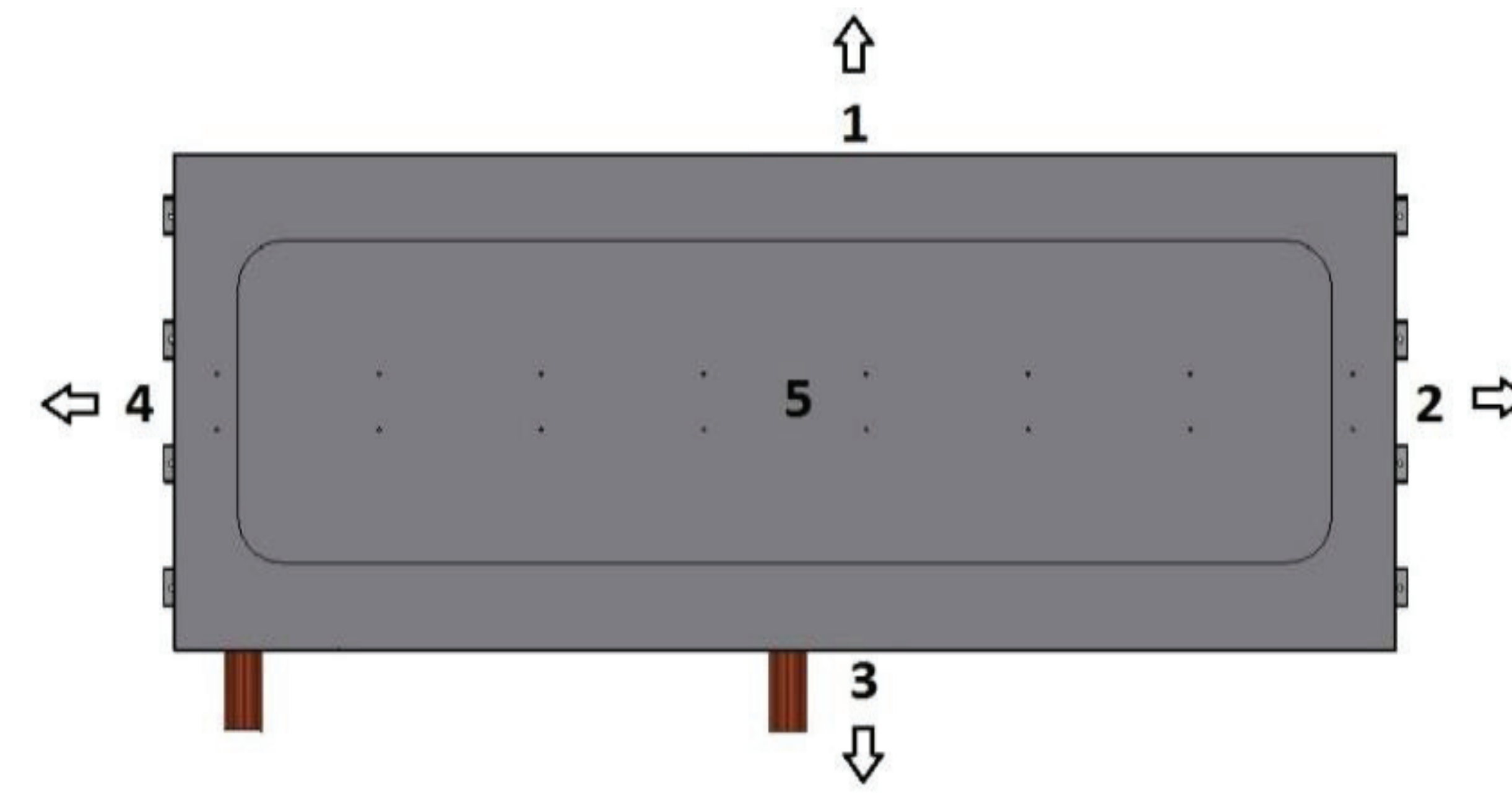
TECHNICAL DATA	
Compressor	
Make / Type	Copeland / Scroll 20092
Number Per Unit	1
FLA (Full Load Amps)	30.9 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900

HEAT EXCHANGER (Water Side)		
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Brazed Plate/Water	Brazed Plate/Water + Glycol
Flow Rate Excl. By Pass	2.28 L/s	2.31 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	50 kPa	
Max. Operating Pressure	2,450 kPa	

GENERAL INFORMATION	
Water Connections	50.8mm (2") Copper
Drain	20mm aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. shipping weight	320 kg
Size L x W x H - RTWW058BDB-DQ-1	1700 mm x 805 mm x 1100 mm

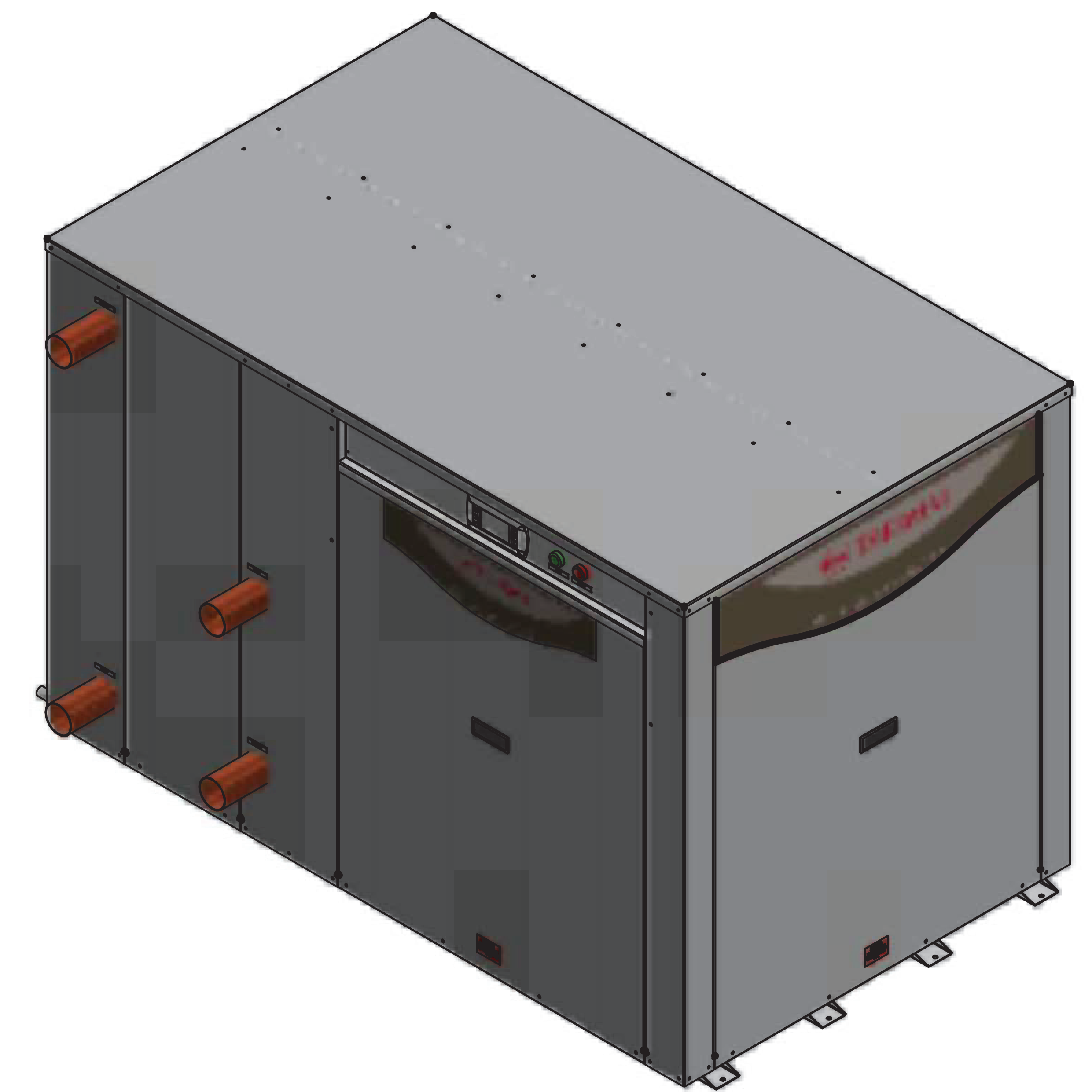
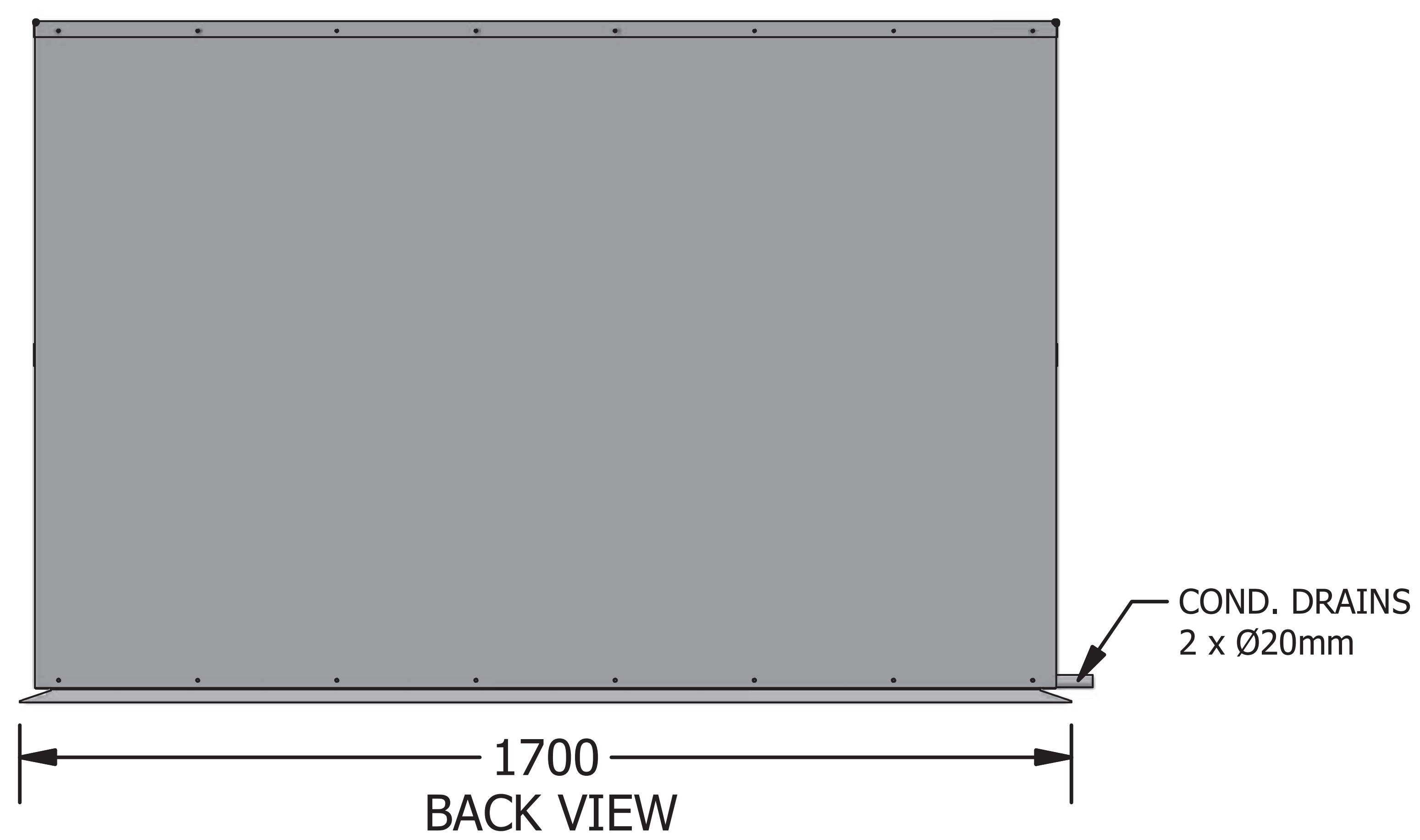
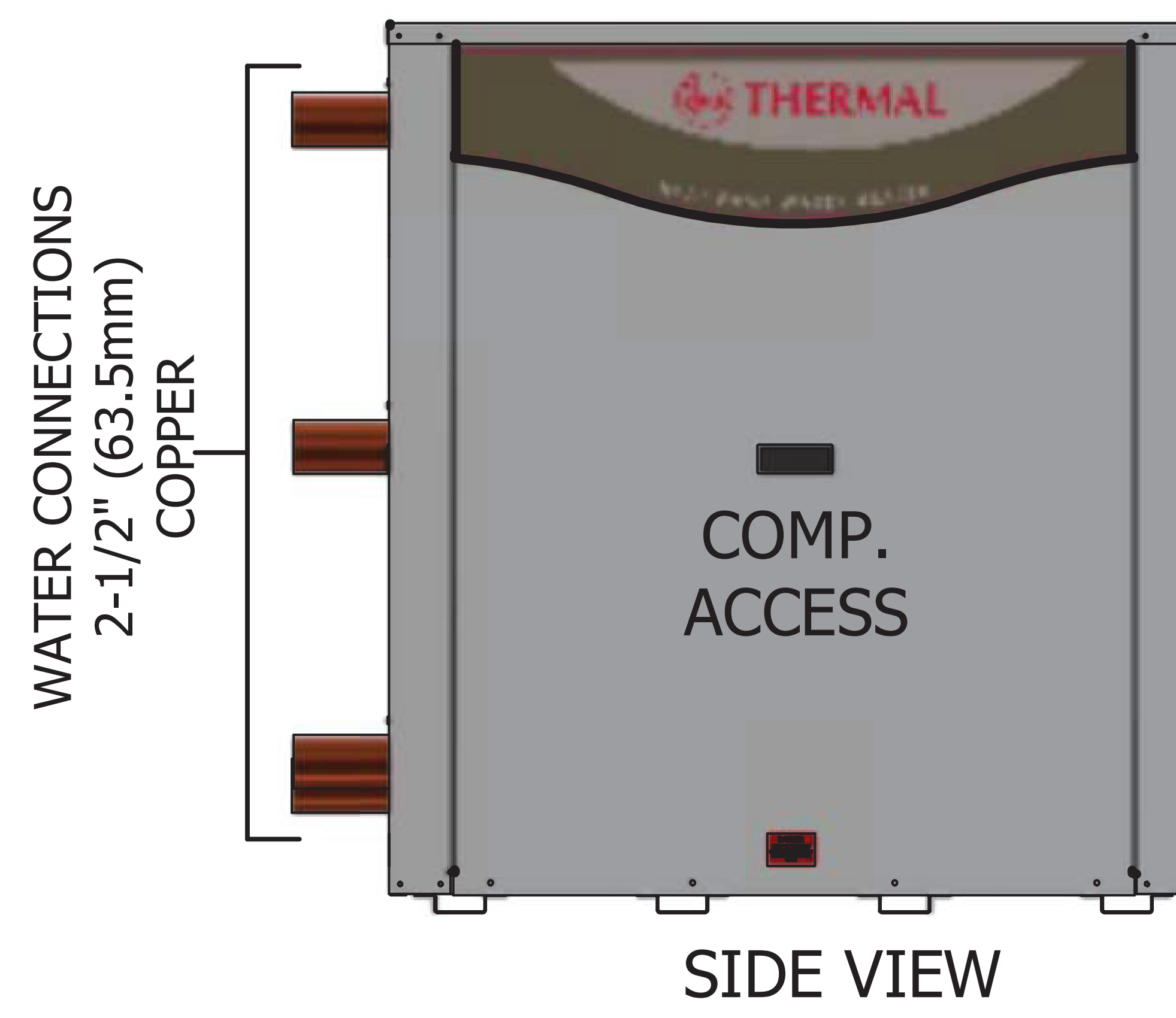
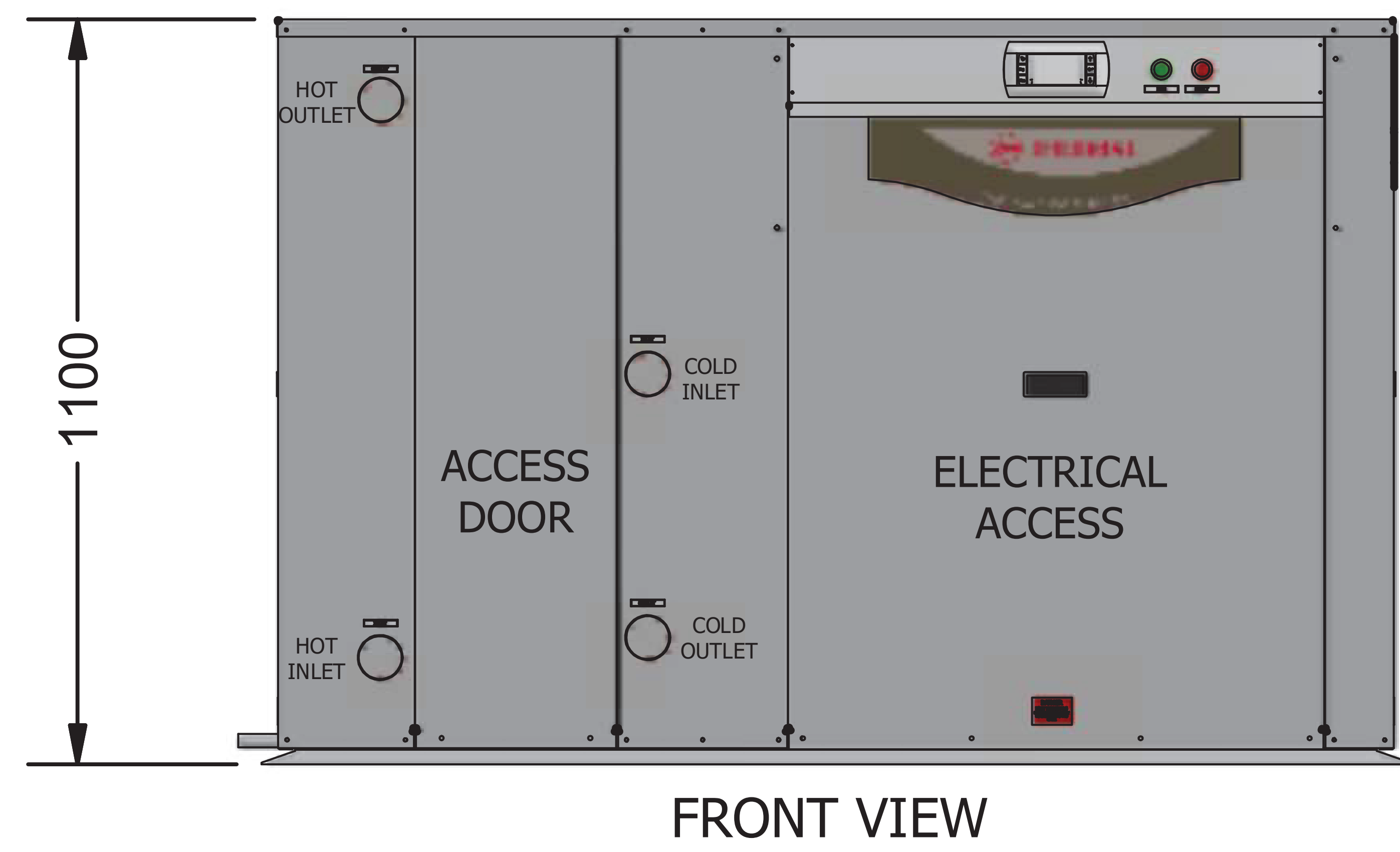
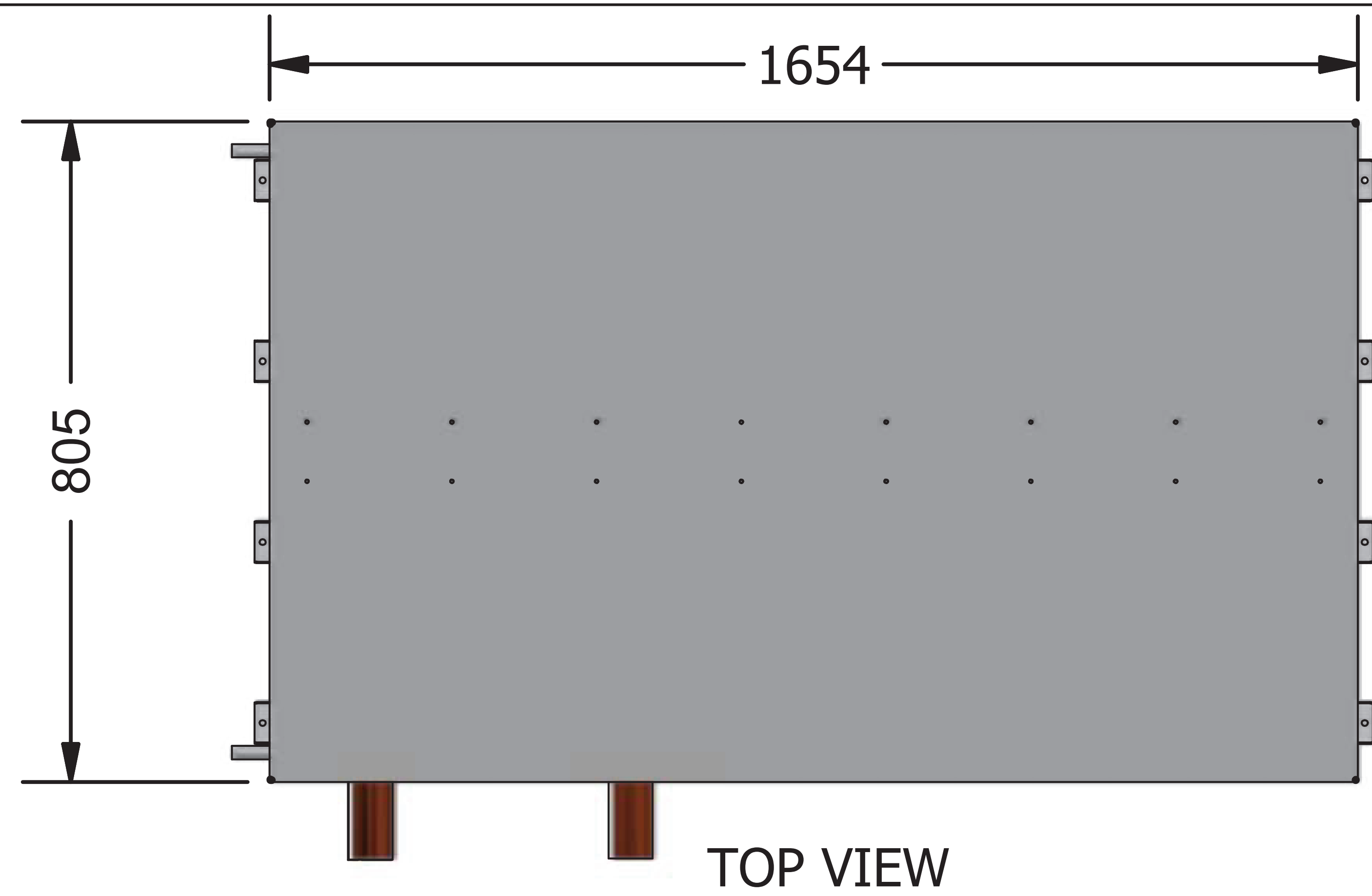
COP TABLE


Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	36.89 kW 3.31 COP	42.52 kW 3.77 COP	46.00 kW 4.05 COP	48.98 kW 4.30 COP	50.54 kW 4.43 COP	53.80 kW 4.69 COP	57.26 kW 4.97 COP	66.84 kW 5.74 COP	77.89 kW 6.60 COP
50 °C	36.55 kW 3.03 COP	41.99 kW 3.43 COP	45.34 kW 3.68 COP	48.20 kW 3.90 COP	49.70 kW 4.01 COP	52.84 kW 4.25 COP	56.16 kW 4.50 COP	65.36 kW 5.18 COP	75.96 kW 5.96 COP
55 °C	36.18 kW 2.71 COP	41.38 kW 3.05 COP	44.57 kW 3.27 COP	47.30 kW 3.45 COP	48.72 kW 3.55 COP	51.69 kW 3.75 COP	54.85 kW 3.96 COP	63.57 kW 4.55 COP	73.62 kW 5.23 COP
60 °C	35.94 kW 2.48 COP	40.94 kW 2.78 COP	44.01 kW 2.97 COP	46.62 kW 3.13 COP	47.99 kW 3.21 COP	50.83 kW 3.39 COP	53.85 kW 3.58 COP	62.19 kW 4.10 COP	71.81 kW 4.70 COP
65 °C	N/A	40.46 kW 2.48 COP	43.37 kW 2.64 COP	45.85 kW 2.77 COP	47.14 kW 2.84 COP	49.83 kW 2.99 COP	52.68 kW 3.15 COP	60.55 kW 3.59 COP	69.62 kW 4.11 COP
70 °C	N/A	40.06 kW 2.21 COP	42.81 kW 2.34 COP	45.15 kW 2.46 COP	46.36 kW 2.52 COP	48.90 kW 2.64 COP	51.58 kW 2.77 COP	58.99 kW 3.15 COP	67.51 kW 3.58 COP

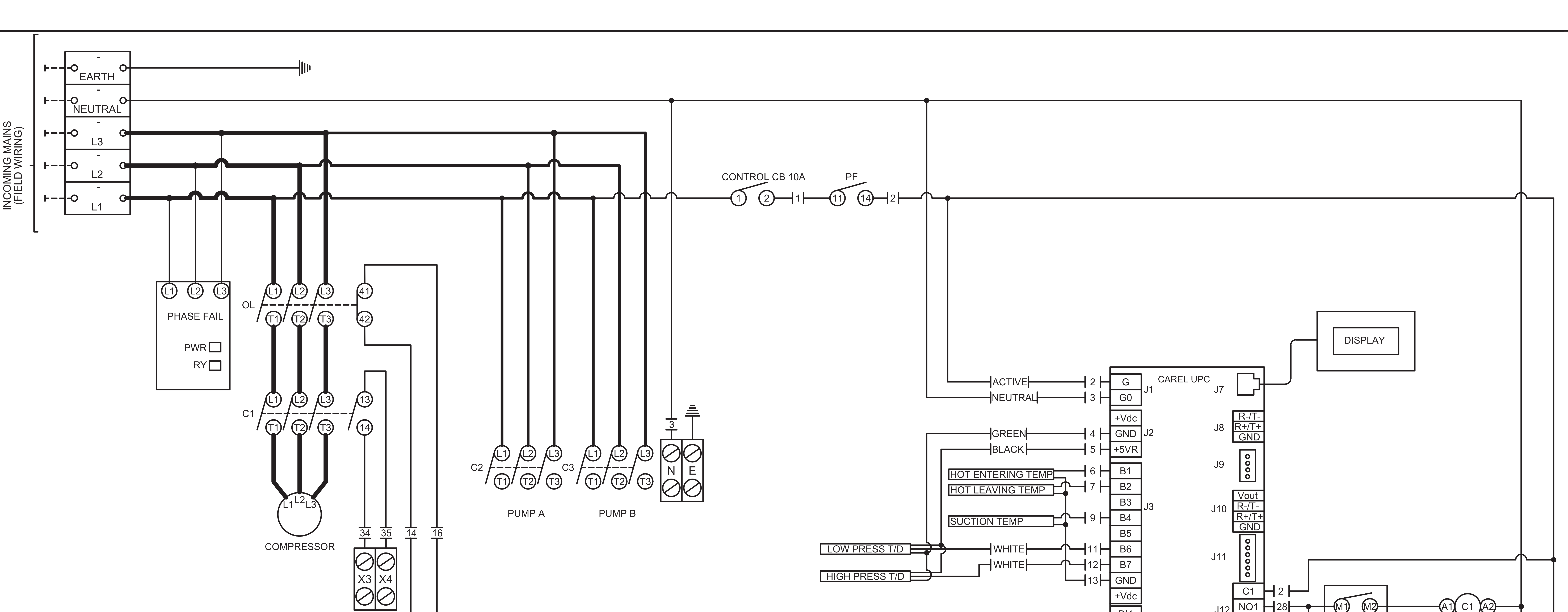


UNIT CLEARANCES		
Direction	Description	Minimum Clearance Required
1	Plain Back	200mm
2	Compressor Access	850mm
3	Water Connections	850mm
4	Side Access	200mm
5	Top – Height Clearance	500mm

Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



 Rheem THERMAL SYSTEMS GROUP		SHEET 1 OF 3	
		Description: W2W BPHX HEAT PUMP 88kW R134a	
Part No:	RTWW058BDB-DQ-1	Rev.	
Material:	As Above	Date:	10/09/2019
Drawn By:	ST	Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°		Scale: N.T.S



LEGEND	
C1	COMPRESSOR CONTACTOR
C2	PUMP A CONTACTOR
C3	PUMP B CONTACTOR
CB	CIRCUIT BREAKER
CM	COMPRESSOR MODULE
FSA	FLOW SWITCH PUMP A
FSB	FLOW SWITCH PUMP B
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
R1	AUX BOOST RELAY
VF	VOLT FREE NORMALLY OPEN (AUX BOOST)

LEGEND	WIRE SIZE
---	1.0mm ²
---	4.0mm ²
---	16.0mm ²

LEGEND	
(C1)	COMPRESSOR CONTACTOR COIL
(C2)	PUMP A CONTACTOR COIL
(C3)	PUMP B CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A
(FB)	TERMINAL BLOCK - FLOW SWITCH B

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	µPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE
01	0383	Changed unit description & cable numbers	28/02/20

Rheem
THERMAL SYSTEMS GROUP

43 Marigold Street
Revesby NSW 2212
Phone: (02) 9684 3684
Fax: (02) 9684 3698

Drawn By: J.Bates Date: 7/06/2021

RTWW085 on R407C
RTWW058/071/088 on R134a

Part No: **47316E**

Rev: **01**

WATER-TO-WATER HEAT PUMP SPECIFICATIONS

Brazen Plate Heat Exchanger / Rheem IQ Control **RTWW071BDB-DQ-1**

ELECTRICAL INPUT

Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz	
Full Load / Locked Rotor (Amps Per Phase)	40.2 FLA / 272 LRA	
Min. Circuit Size	50.0 Amps	
Refrigerant	R134a	
Refrigeration effect	Heating	Cooling
Nominal capacity	71.15 kW	56.97 kW
Power input	14.19 kW	
COP	5.02 COP	4.02 COP
Combined COP	9.03 COP	
Noise Level	61 dBa @ 3 m	
Rated Load Amps @ 10°C SST / 51°C SCT	28.1 Amps	

TECHNICAL DATA

Compressor	
Make / Type	Copeland / Scroll 20103
Number Per Unit	1
FLA (Full Load Amps)	40.2 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900

HEAT EXCHANGER (Water Side)

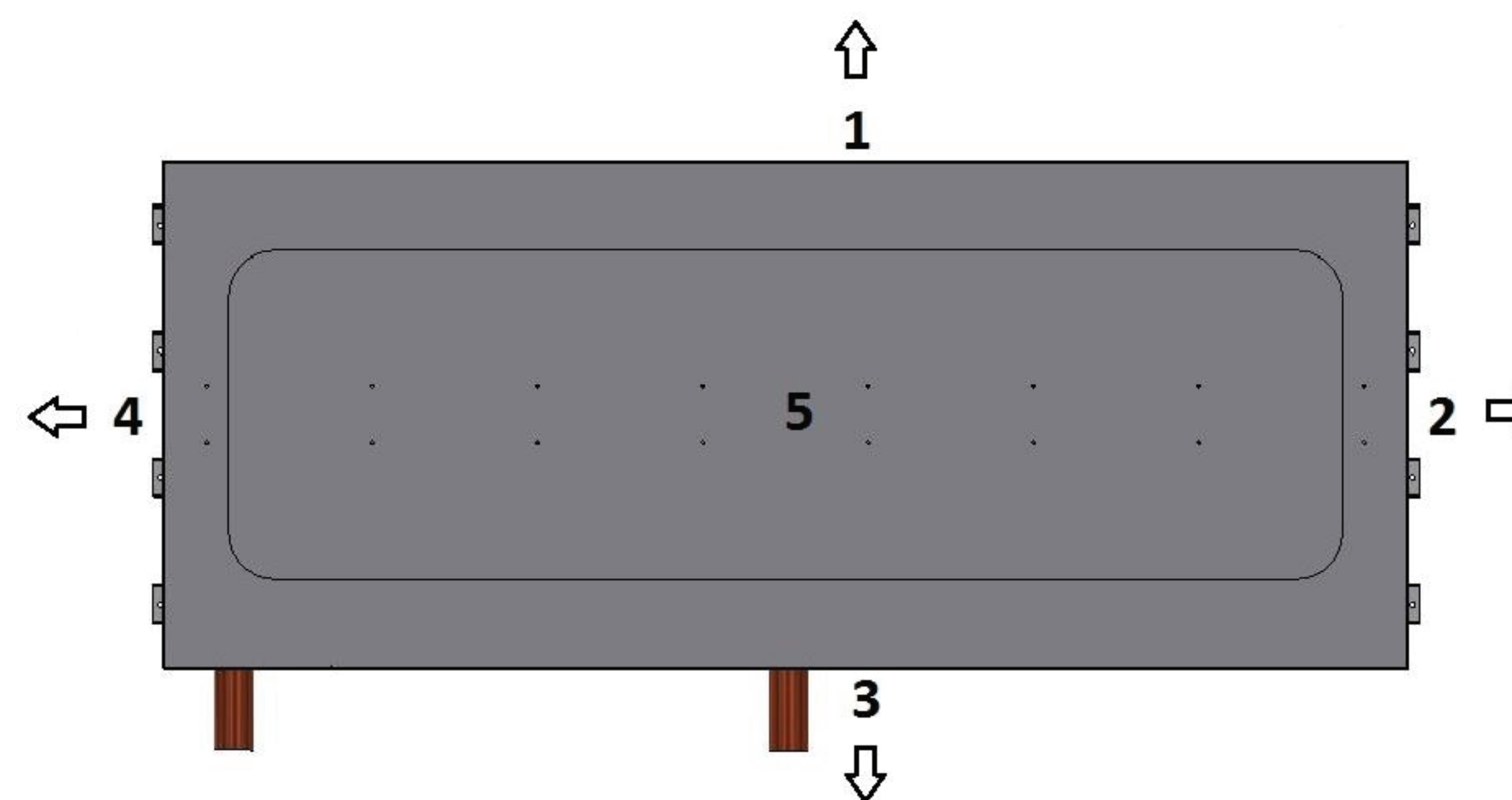
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Brazed Plate/Water	Brazed Plate/Water + Glycol
Flow Rate Excl. By Pass	2.83 L/s	2.87 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	50 kPa	
Max. Operating Pressure	2,450 kPa	

GENERAL INFORMATION

Water Connections	63.5mm (2 1/2") Copper
Drain	20mm aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. shipping weight	380 kg
Size L x W x H - RTWW071BDB-DQ-1	1700 mm x 805 mm x 1100 mm

COP TABLE

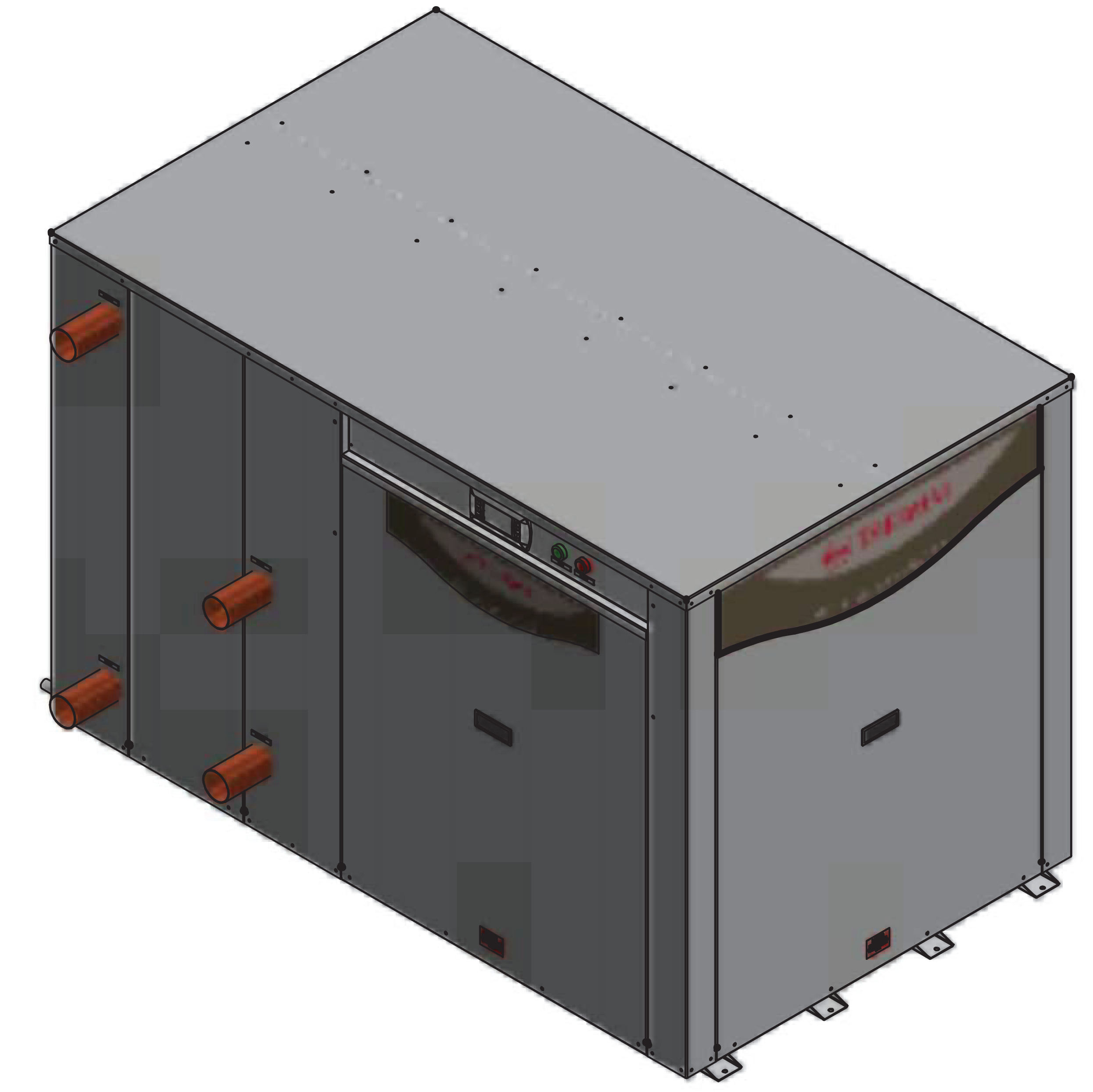
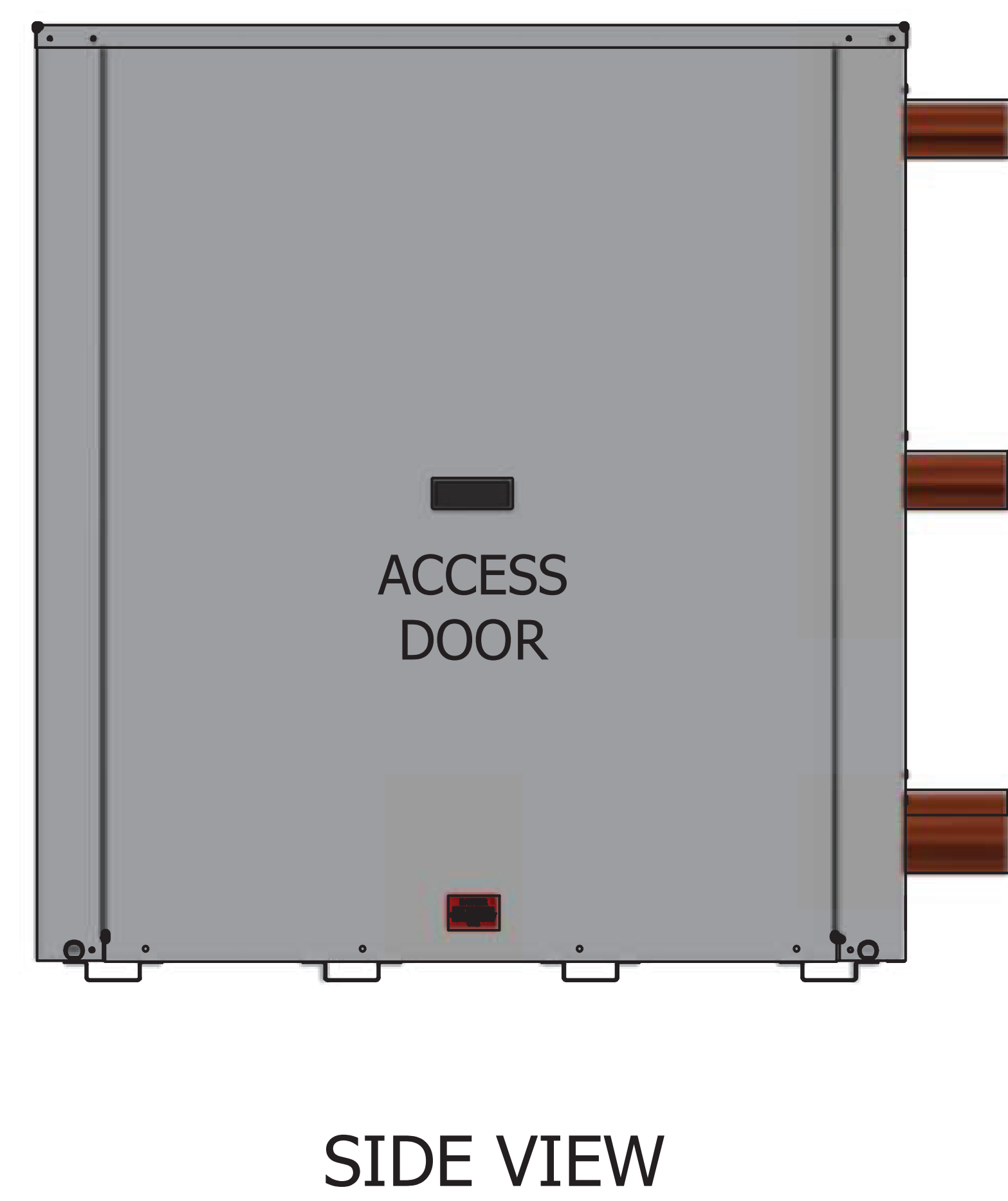
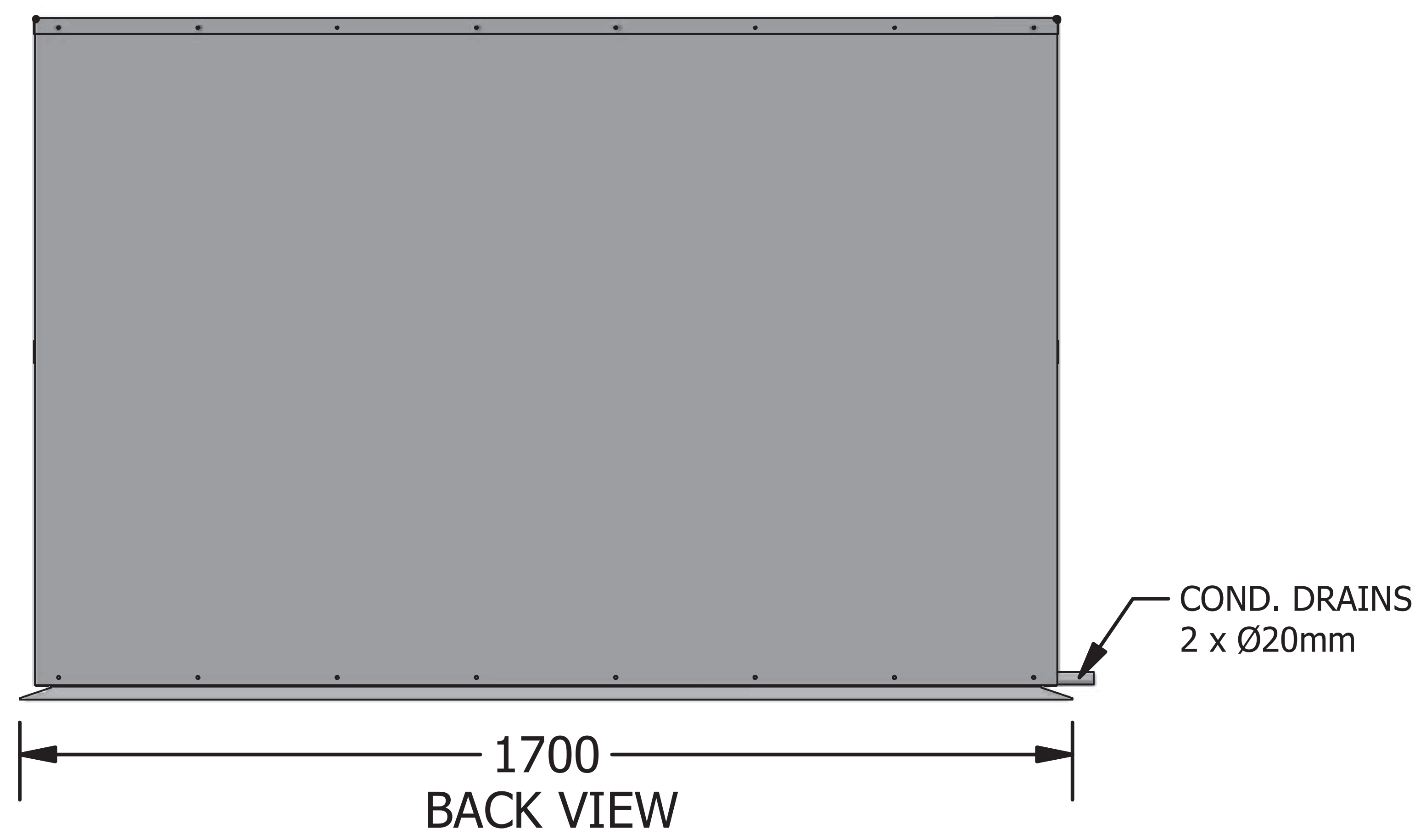
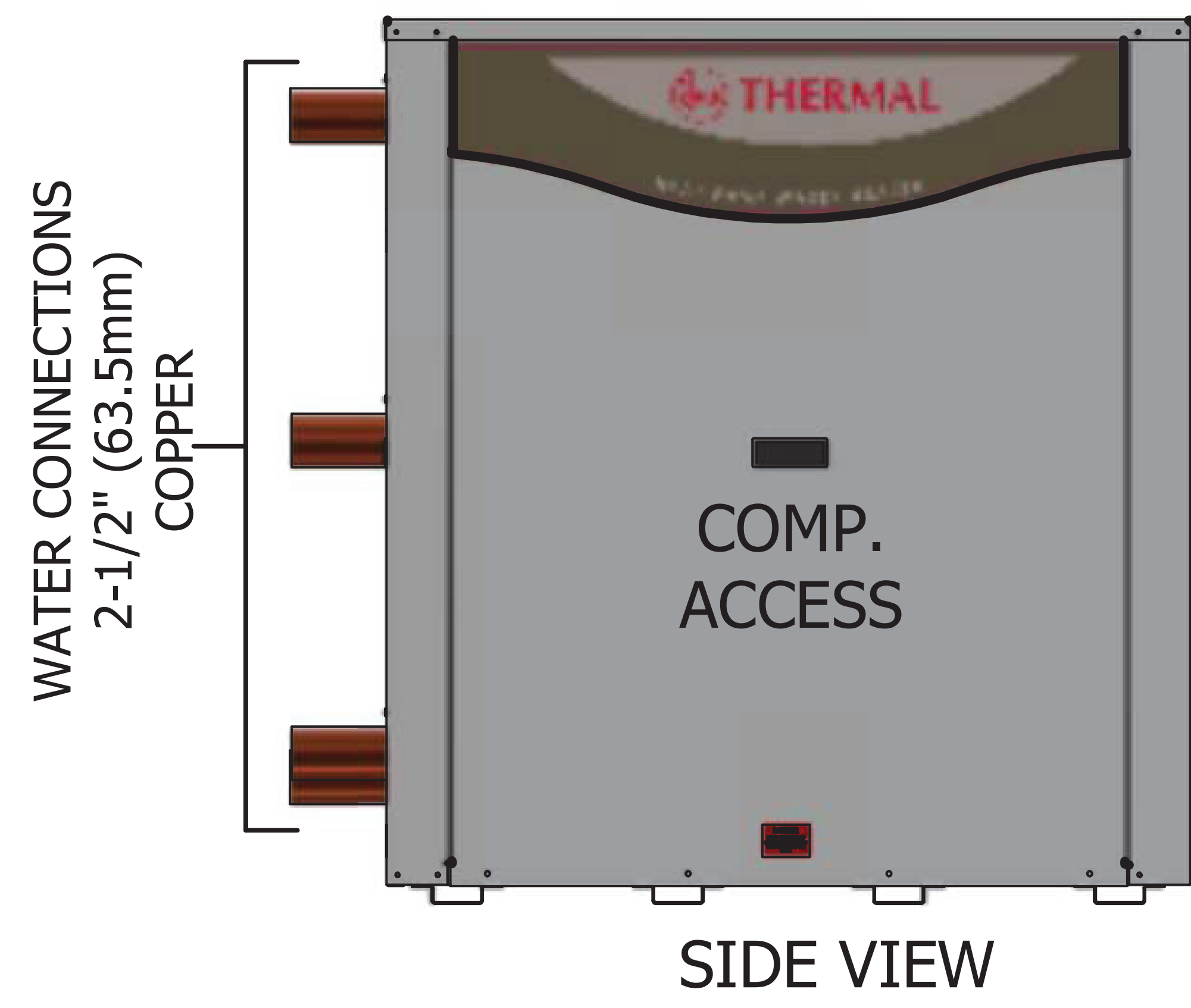
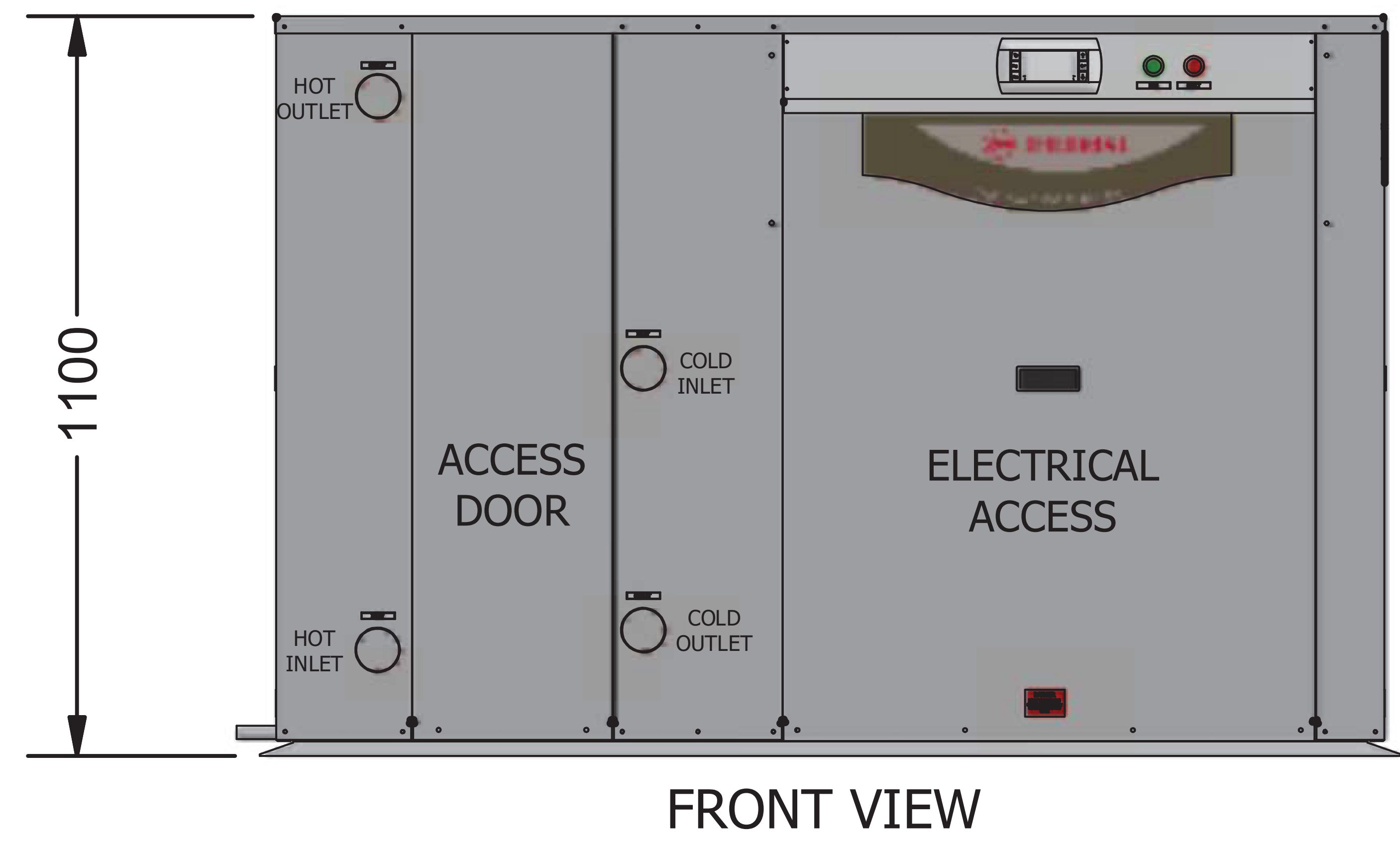
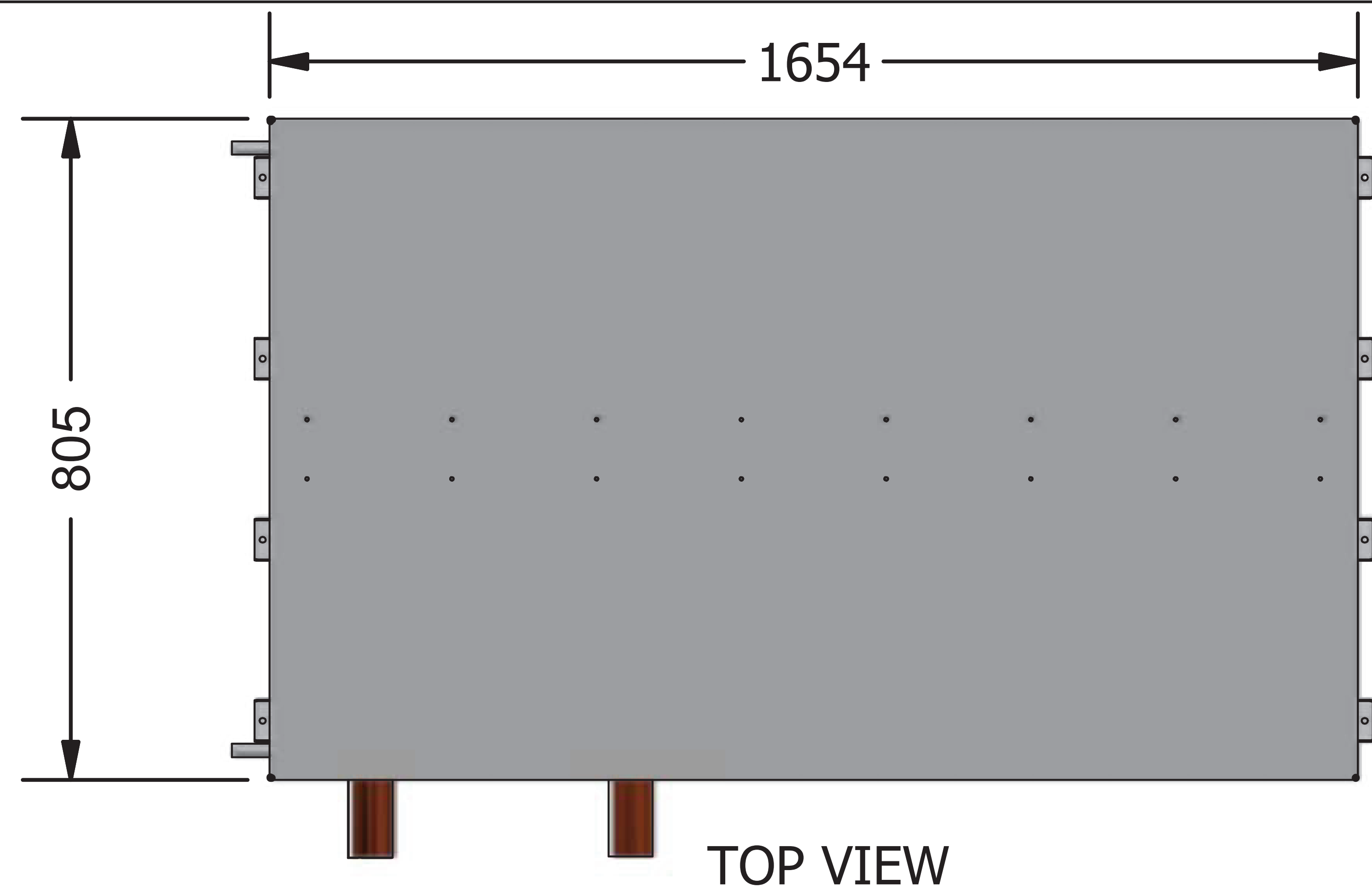
Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	45.85 kW 3.32 COP	52.87 kW 3.80 COP	57.19 kW 4.09 COP	60.88 kW 4.34 COP	62.82 kW 4.47 COP	66.86 kW 4.73 COP	71.15 kW 5.02 COP	83.07 kW 5.78 COP	96.85 kW 6.64 COP
50 °C	45.40 kW 3.02 COP	52.19 kW 3.45 COP	56.35 kW 3.71 COP	59.90 kW 3.93 COP	61.76 kW 4.04 COP	65.65 kW 4.28 COP	69.77 kW 4.54 COP	81.20 kW 5.23 COP	94.42 kW 6.01 COP
55 °C	44.92 kW 2.68 COP	51.41 kW 3.05 COP	55.38 kW 3.27 COP	58.76 kW 3.46 COP	60.53 kW 3.56 COP	64.21 kW 3.77 COP	68.12 kW 3.99 COP	78.96 kW 4.60 COP	91.48 kW 5.29 COP
60 °C	44.60 kW 2.43 COP	50.86 kW 2.76 COP	54.67 kW 2.95 COP	57.92 kW 3.12 COP	59.61 kW 3.21 COP	63.14 kW 3.40 COP	66.88 kW 3.59 COP	77.24 kW 4.13 COP	89.21 kW 4.75 COP
65 °C	N/A	50.26 kW 2.43 COP	53.88 kW 2.60 COP	56.95 kW 2.75 COP	58.55 kW 2.82 COP	61.89 kW 2.98 COP	65.42 kW 3.15 COP	75.19 kW 3.61 COP	86.47 kW 4.14 COP
70 °C	N/A	49.76 kW 2.15 COP	53.19 kW 2.29 COP	56.10 kW 2.41 COP	57.61 kW 2.48 COP	60.75 kW 2.61 COP	64.08 kW 2.75 COP	73.26 kW 3.15 COP	83.86 kW 3.60 COP




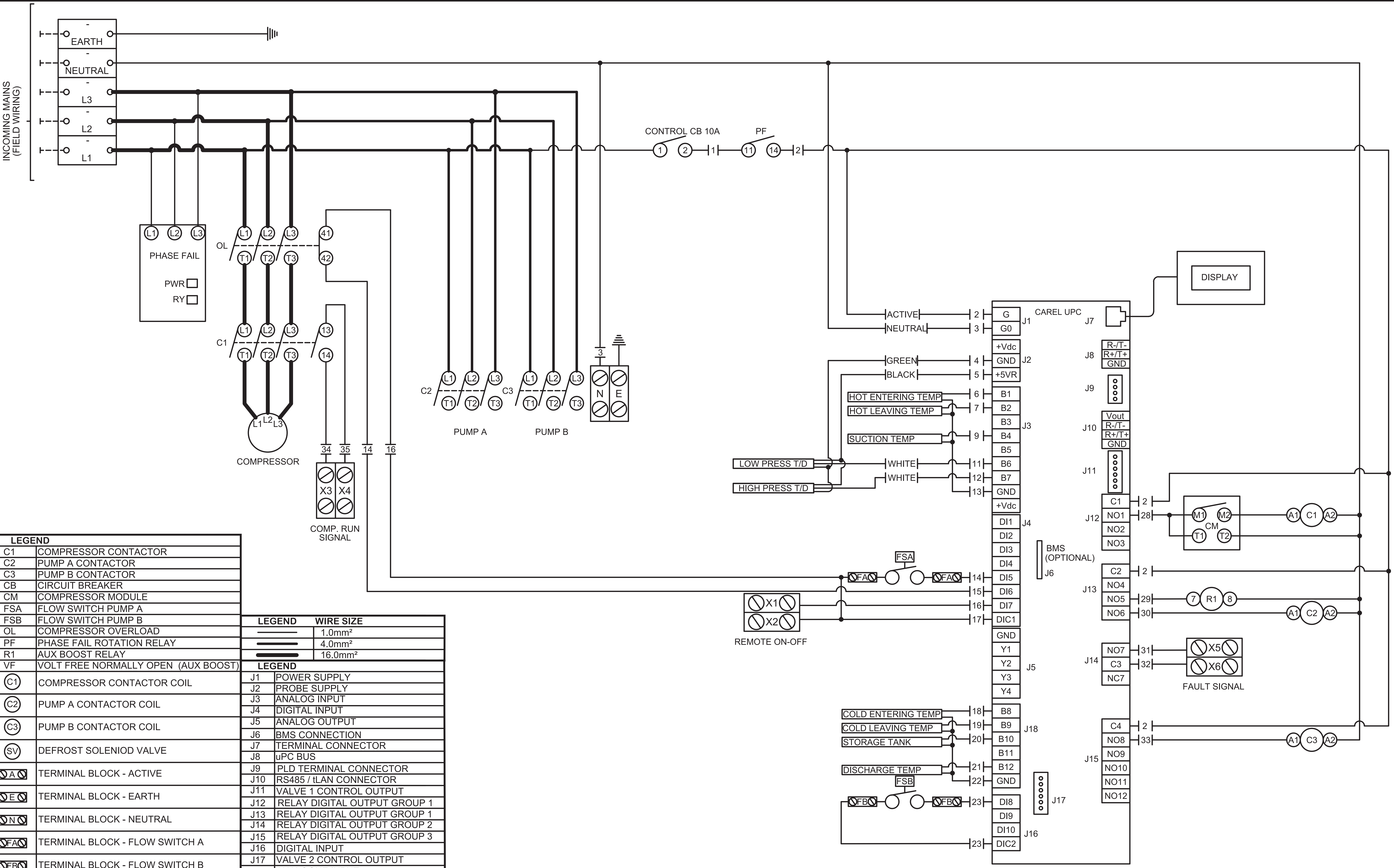
UNIT CLEARANCES

Direction	Description	Minimum Clearance Required
1	Plain Back	200mm
2	Compressor Access	850mm
3	Water Connections	850mm
4	Side Access	200mm
5	Top – Height Clearance	500mm

Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



 Rheem THERMAL SYSTEMS GROUP		SHEET 1 OF 3	
		Description: W2W BPHX HEAT PUMP 88kW R134a	
Part No:	RTWW071BDB-DQ-1	Rev.	
Material:	As Above	Date:	10/09/2019
Drawn By:	ST	Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°		Scale: N.T.S



LEGEND	
C1	COMPRESSOR CONTACTOR
C2	PUMP A CONTACTOR
C3	PUMP B CONTACTOR
CB	CIRCUIT BREAKER
CM	COMPRESSOR MODULE
FSA	FLOW SWITCH PUMP A
FSB	FLOW SWITCH PUMP B
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
R1	AUX BOOST RELAY
VF	VOLT FREE NORMALLY OPEN (AUX BOOST)

LEGEND	WIRE SIZE
---	1.0mm ²
---	4.0mm ²
---	16.0mm ²

(C1)	COMPRESSOR CONTACTOR COIL
(C2)	PUMP A CONTACTOR COIL
(C3)	PUMP B CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A
(FB)	TERMINAL BLOCK - FLOW SWITCH B

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	µPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE
01	0383	Changed unit description & cable numbers	28/02/20

Rheem
THERMAL SYSTEMS GROUP

43 Marigold Street
Revesby NSW 2212
Phone: (02) 9684 3684
Fax: (02) 9684 3698

Drawn By: J.Bates Date: 7/06/2021

RTWW085 on R407C
RTWW058/071/088 on R134a

Part No: **47316E**

Rev: **01**

WATER-TO-WATER HEAT PUMP SPECIFICATIONS

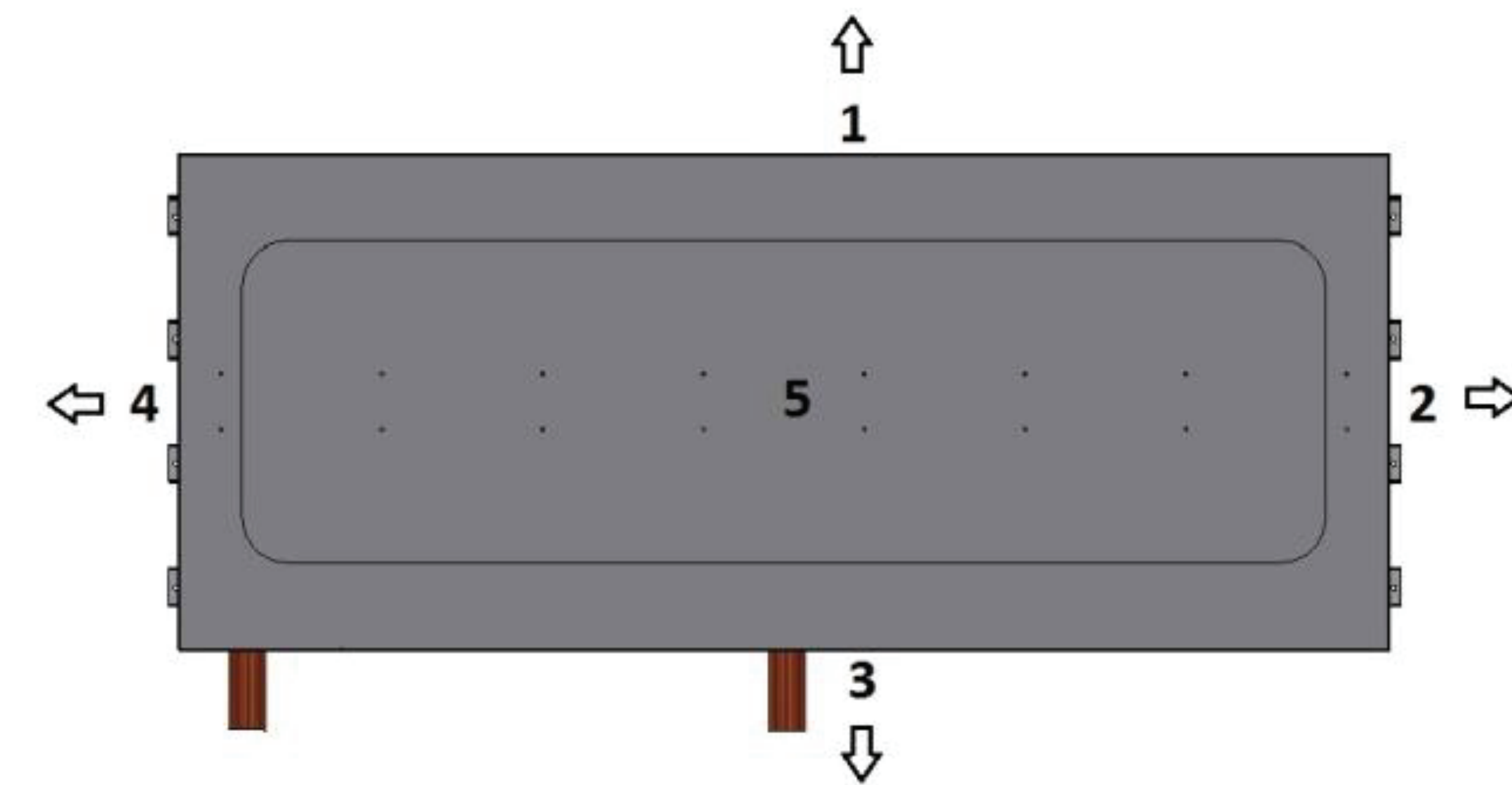
Brazen Plate Heat Exchanger / Rheem IQ Control

RTWW088BDB-DQ-1

ELECTRICAL INPUT	
Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz
Full Load / Locked Rotor (Amps Per Phase)	46.0 FLA / 310 LRA
Min. Circuit Size	63.0 Amps
Refrigerant	R134a
Refrigeration Effect	Heating Cooling
Nominal Capacity	87.79 kW 70.47 kW
Power Input	17.32 kW
COP	5.07 COP 4.07 COP
Combined COP	9.14 COP
Noise Level	61 dBa @ 3 m
Rated Load Amps @ 10°C SST / 51°C SCT	31.4 Amps
TECHNICAL DATA	
	Compressor
Make / Type	Copeland / Scroll 20105
Number Per Unit	1
FLA (Full Load Amps)	46.0 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900
HEAT EXCHANGER (Water Side)	
	Hot Side (Condenser)
	Cold Side (Evaporator)
Type of Water Tube	Single Wall
Design	Brazen Plate/Water
Flow Rate Excl. By Pass	3.49 L/s
Max. Outlet Water Temp	70°C
Min. Outlet Water Temp	N/A
Design Pressure Drop	50 kPa
Max. Operating Pressure	2,450 kPa
GENERAL INFORMATION	
Water Connections	63.5mm (2 1/2") Copper
Drain	20mm Aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. Shipping Weight	400 kg
Size L x W x H - RTWW088BDB-DQ-1	1700 mm x 805 mm x 1100 mm

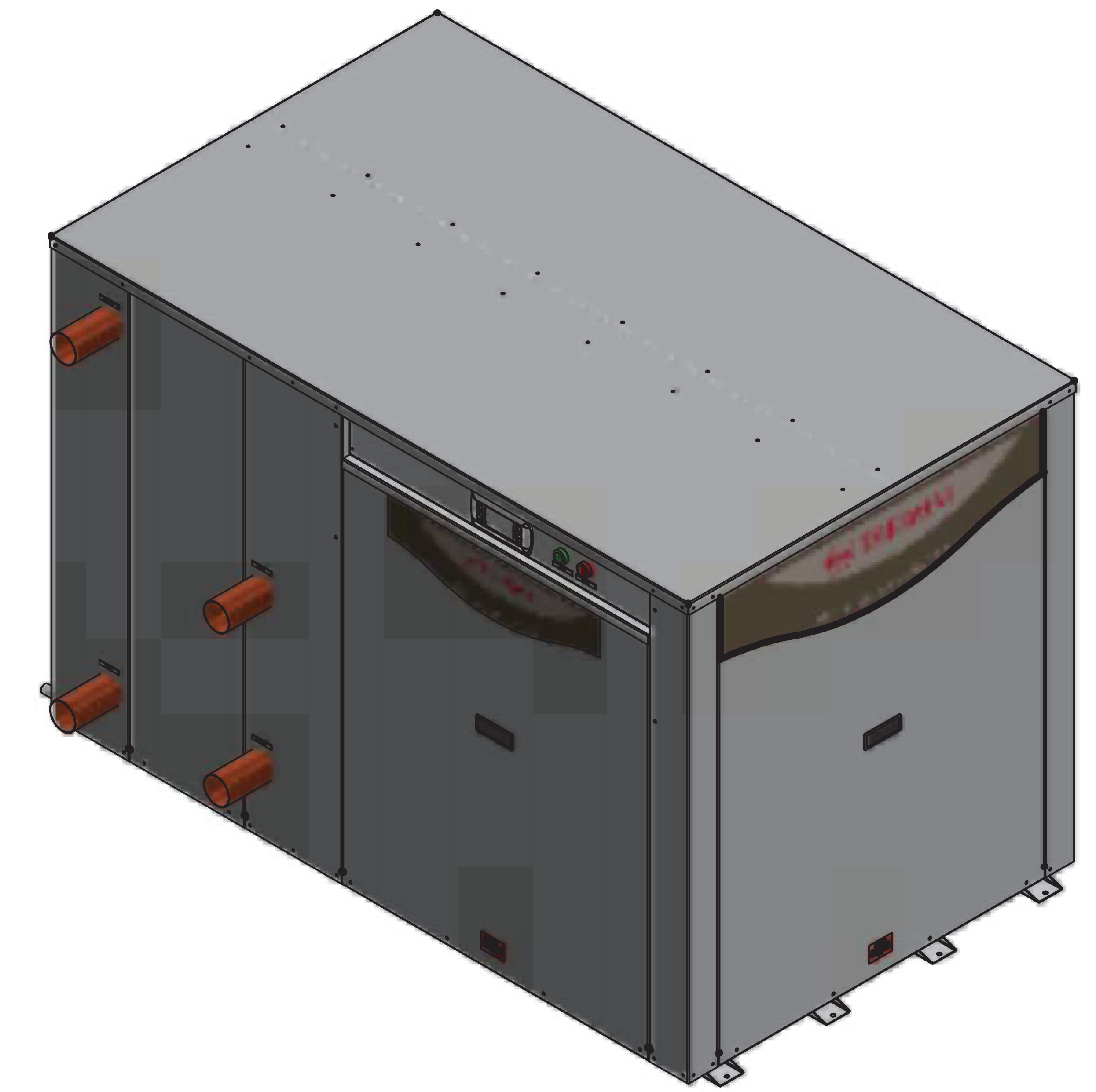
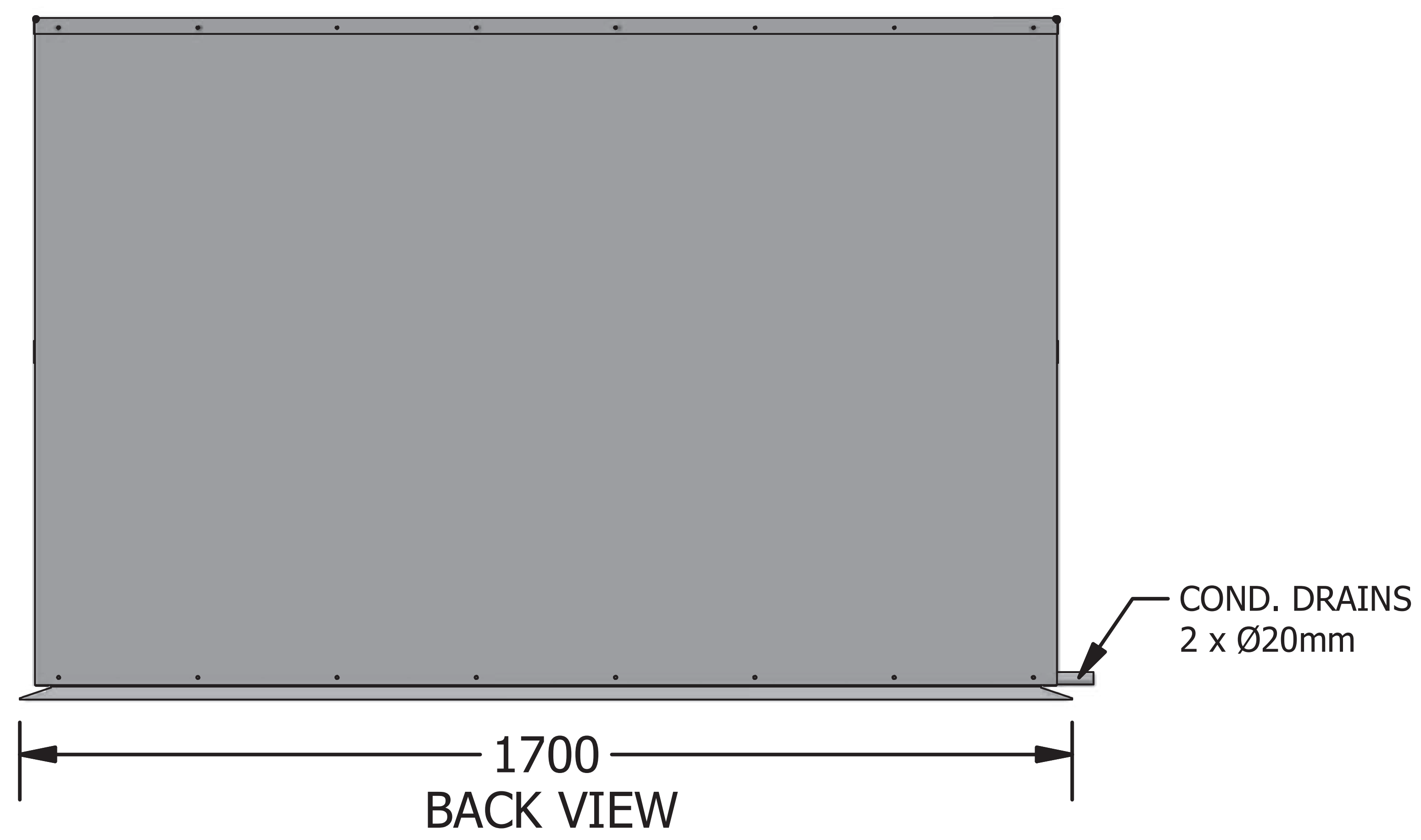
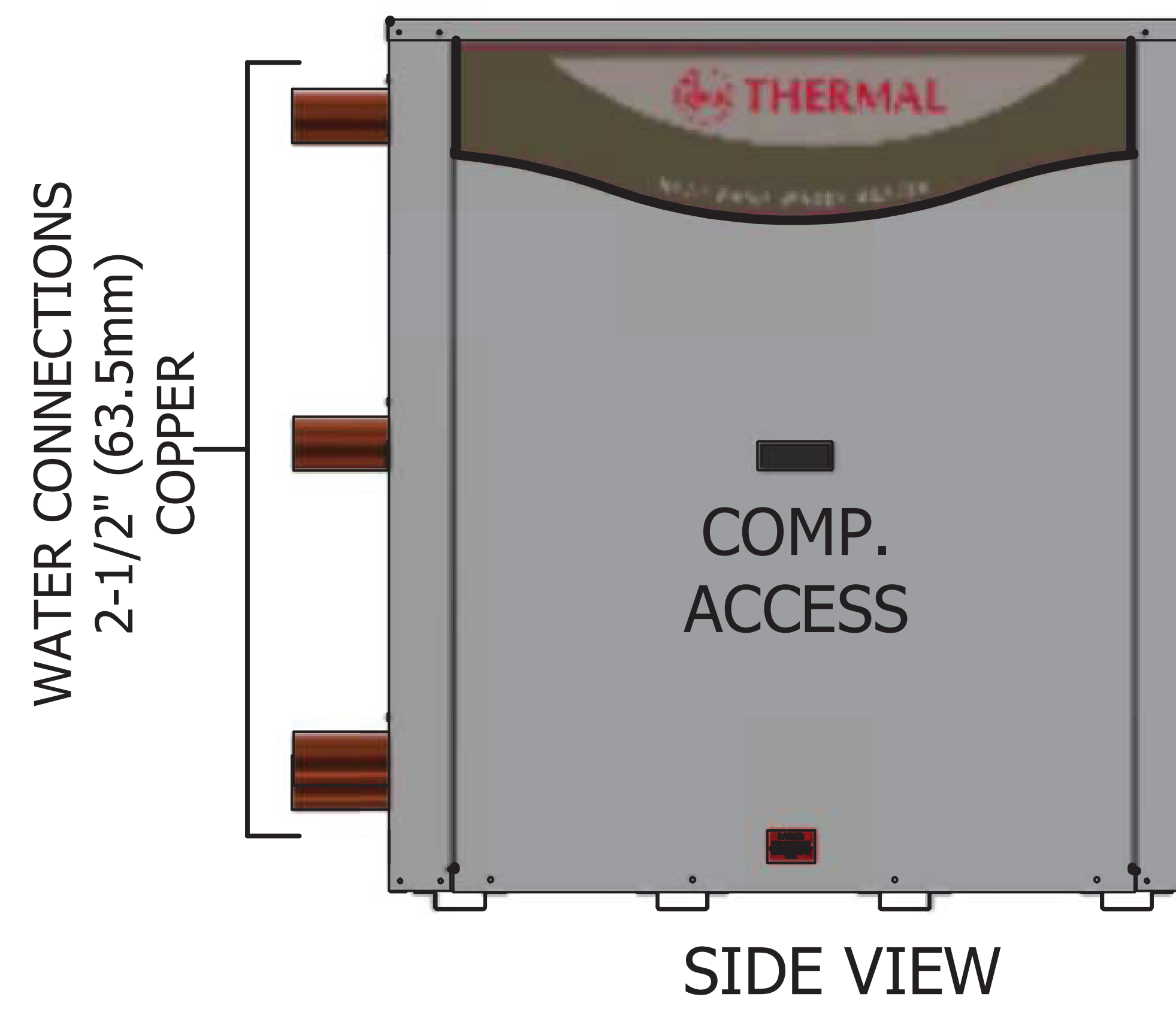
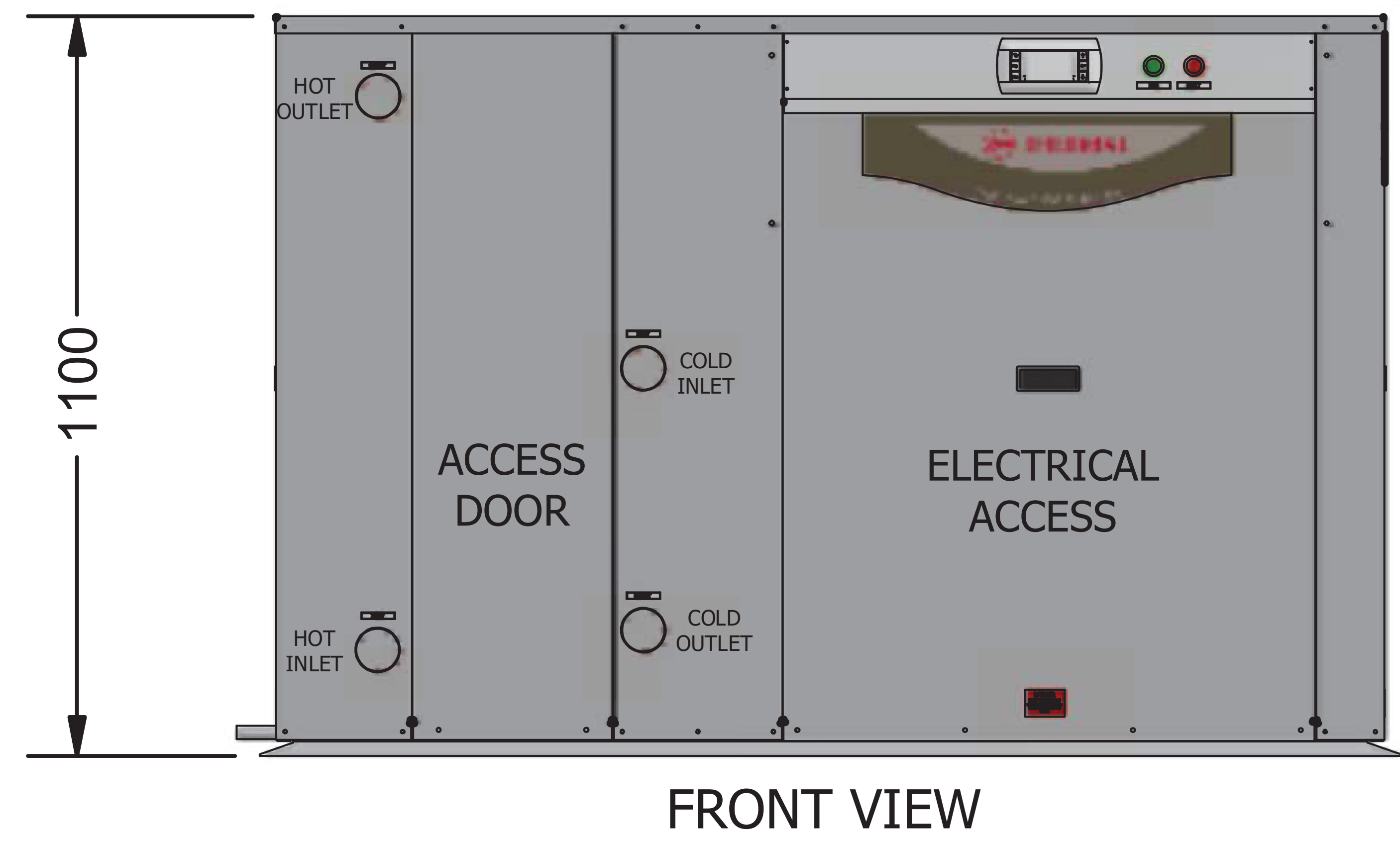
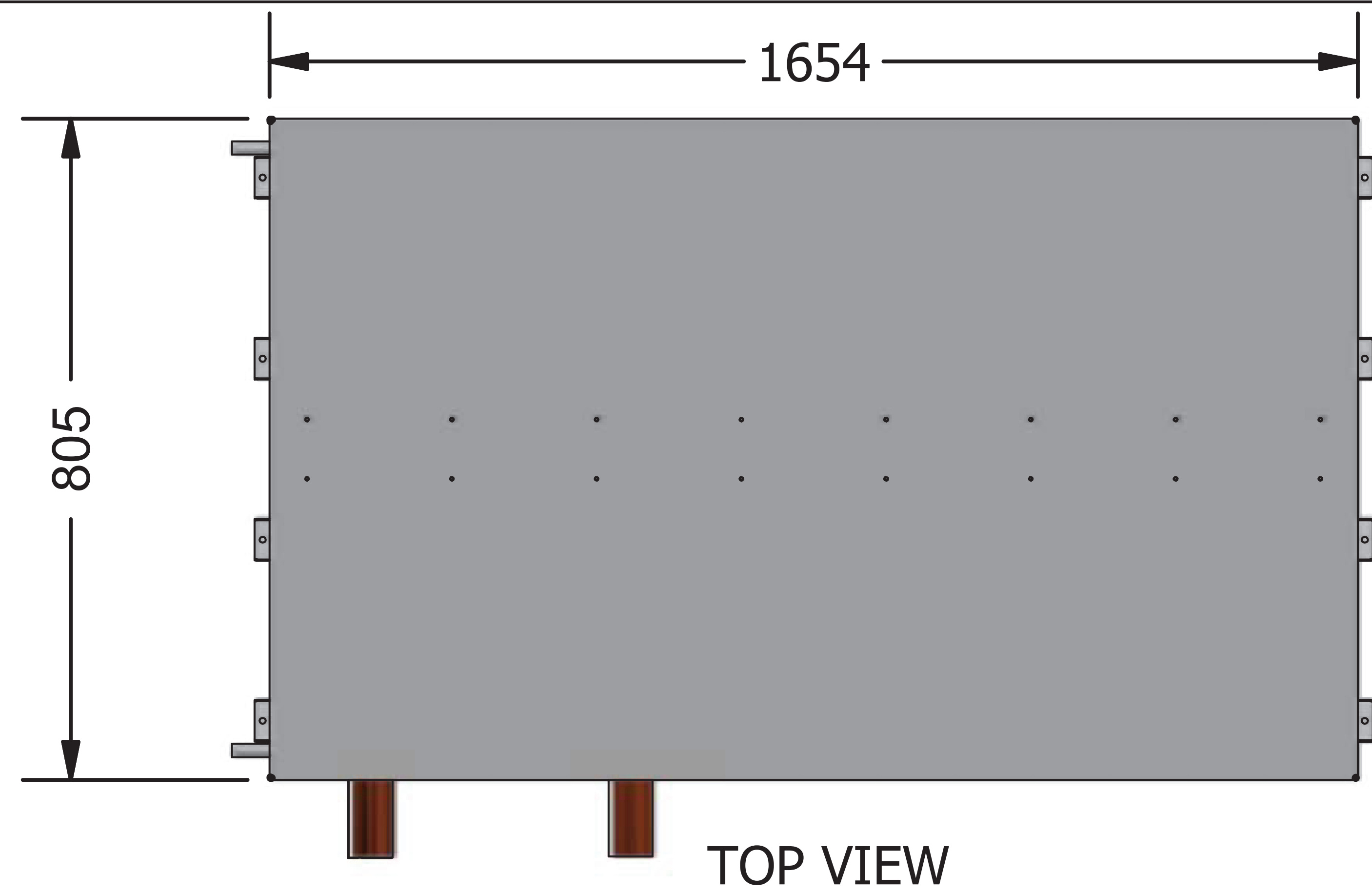
COP TABLE


Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	56.80 kW 3.43 COP	65.38 kW 3.89 COP	70.66 kW 4.17 COP	75.19 kW 4.41 COP	77.56 kW 4.54 COP	82.52 kW 4.79 COP	87.79 kW 5.07 COP	102.41 kW 5.81 COP	119.33 kW 6.62 COP
50 °C	56.26 kW 3.14 COP	64.55 kW 3.54 COP	69.65 kW 3.79 COP	74.00 kW 4.00 COP	76.28 kW 4.11 COP	81.05 kW 4.35 COP	86.10 kW 4.59 COP	100.14 kW 5.26 COP	116.38 kW 6.01 COP
55 °C	55.68 kW 2.81 COP	63.61 kW 3.16 COP	68.47 kW 3.37 COP	72.62 kW 3.55 COP	74.78 kW 3.65 COP	79.31 kW 3.85 COP	84.11 kW 4.06 COP	97.42 kW 4.64 COP	112.82 kW 5.30 COP
60 °C	55.27 kW 2.58 COP	62.93 kW 2.89 COP	67.60 kW 3.07 COP	71.58 kW 3.23 COP	73.66 kW 3.32 COP	78.00 kW 3.49 COP	82.60 kW 3.68 COP	95.35 kW 4.19 COP	110.08 kW 4.79 COP
65 °C	N/A	62.16 kW 2.59 COP	66.61 kW 2.74 COP	70.39 kW 2.88 COP	72.36 kW 2.95 COP	76.47 kW 3.10 COP	80.82 kW 3.26 COP	92.86 kW 3.70 COP	106.78 kW 4.21 COP
70 °C	N/A	61.47 kW 2.32 COP	65.70 kW 2.46 COP	69.28 kW 2.57 COP	71.15 kW 2.63 COP	75.03 kW 2.76 COP	79.14 kW 2.89 COP	90.50 kW 3.26 COP	103.61 kW 3.70 COP

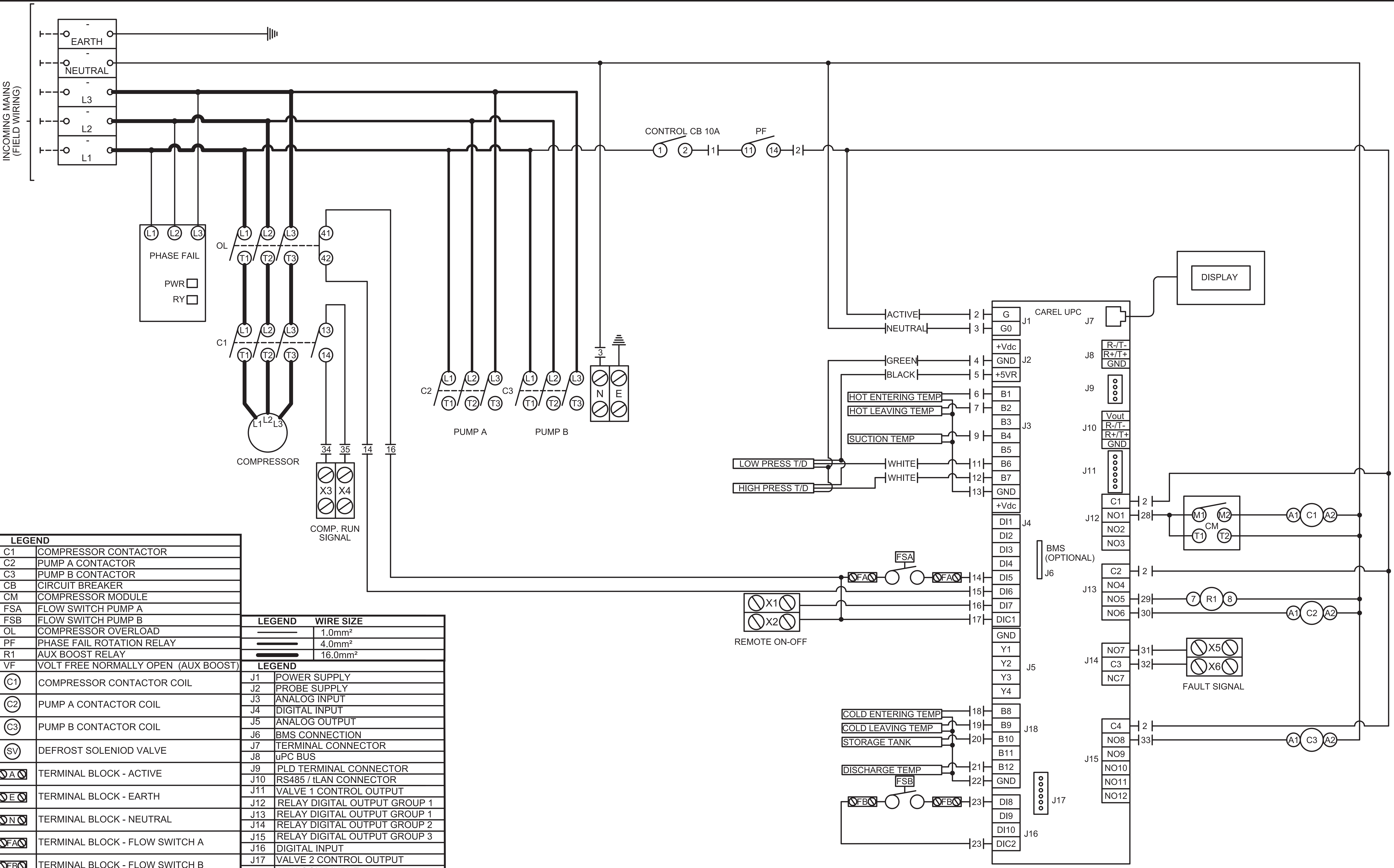


UNIT CLEARANCES		
Direction	Description	Minimum Clearance Required
1	Plain Back	200mm
2	Compressor Access	850mm
3	Water Connections	850mm
4	Side Access	200mm
5	Top – Height Clearance	500mm

Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



 Rheem THERMAL SYSTEMS GROUP		SHEET 1 OF 3	
		Description: W2W BPHX HEAT PUMP 88kW R134a	
Part No:	RTWW088BDB-DQ-1	Rev.	
Material:	As Above	Date:	10/09/2019
Drawn By:	ST	Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°		Scale: N.T.S



LEGEND	
C1	COMPRESSOR CONTACTOR
C2	PUMP A CONTACTOR
C3	PUMP B CONTACTOR
CB	CIRCUIT BREAKER
CM	COMPRESSOR MODULE
FSA	FLOW SWITCH PUMP A
FSB	FLOW SWITCH PUMP B
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
R1	AUX BOOST RELAY
VF	VOLT FREE NORMALLY OPEN (AUX BOOST)

LEGEND	WIRE SIZE
---	1.0mm ²
---	4.0mm ²
---	16.0mm ²

(C1)	COMPRESSOR CONTACTOR COIL
(C2)	PUMP A CONTACTOR COIL
(C3)	PUMP B CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A
(FB)	TERMINAL BLOCK - FLOW SWITCH B

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	µPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE
01	0383	Changed unit description & cable numbers	28/02/20

Rheem
THERMAL SYSTEMS GROUP

43 Marigold Street
Revesby NSW 2212
Phone: (02) 9684 3684
Fax: (02) 9684 3698

Drawn By: J.Bates Date: 7/06/2021

RTWW085 on R407C
RTWW058/071/088 on R134a

Part No: **47316E**

Rev: **01**

WATER-TO-WATER HEAT PUMP SPECIFICATIONS
 Brazed Plate Heat Exchanger / Rheem IQ Control **RTWW180BDB-DQ-1**

ELECTRICAL INPUT	
Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz
Full Load / Locked Rotor (Amps Per Phase)	113.8 FLA / 310 LRA
Min. Circuit Size	120.0 Amps
Refrigerant	R134a
Refrigeration effect	Heating Cooling
Nominal capacity	180.95 kW 150.19 kW
Power input	30.76 kW
COP	5.88 COP 4.88 COP
Combined COP	10.77 COP
Noise Level	66 dBa @ 3 m
Rated Load Amps @ 11°C SST / 45°C SCT	56.8 Amps

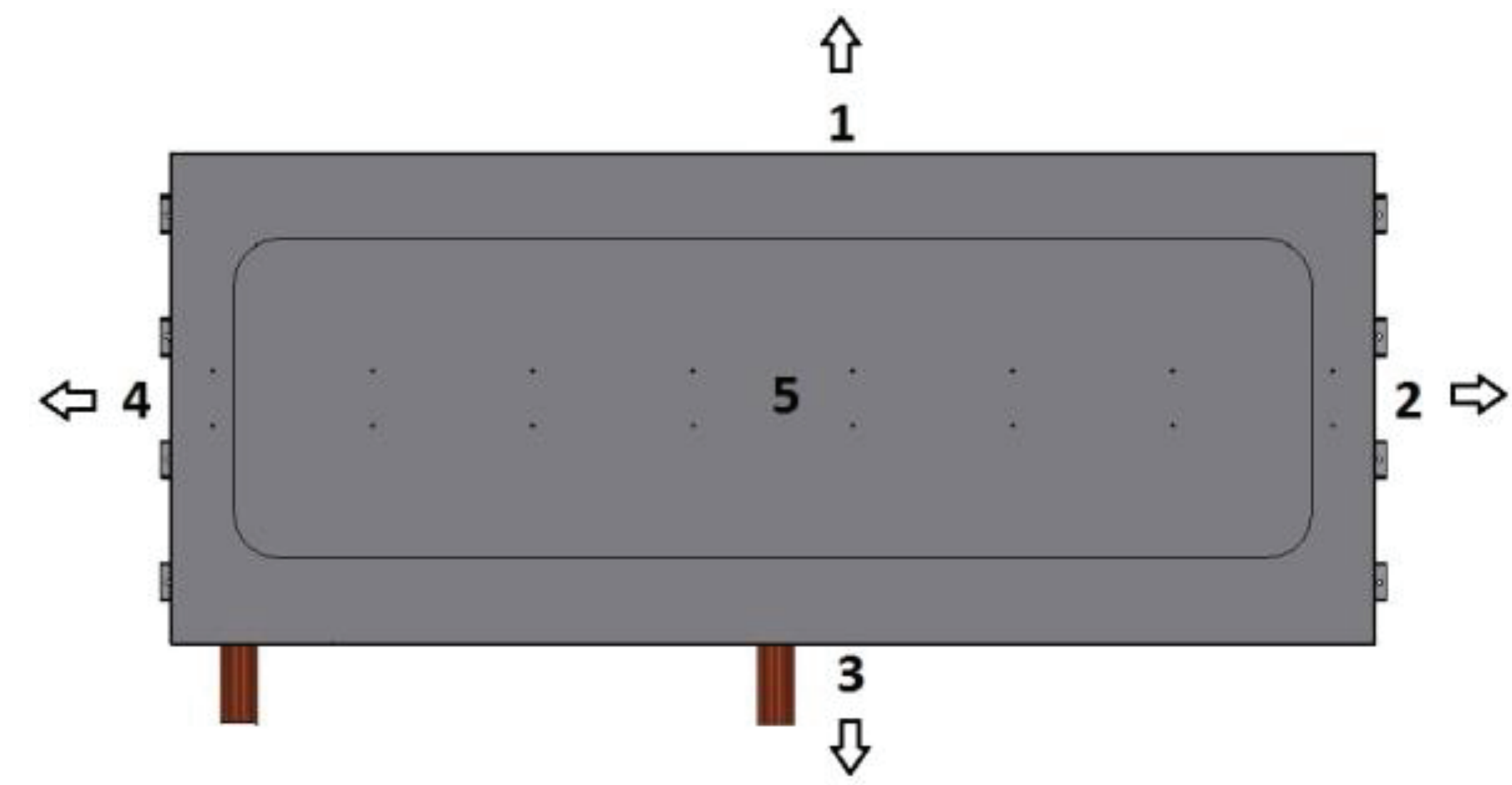
TECHNICAL DATA	
	Compressor
Make / Type	Copeland / Scroll
Number Per Unit	2
FLA per compressor (Full Load Amps, each)	56.9 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900

HEAT EXCHANGER (Water Side)		
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Brazed Plate/Water	Brazed Plate/Water + Glycol
Flow Rate Excl. By Pass	7.20 L/s	7.57 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	50 kPa	
Max. Operating Pressure	2,450 kPa	

GENERAL INFORMATION	
Water Connections	76.2mm (3") Copper
Drain	20mm Aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. shipping weight	1500 kg
Size(mm) L x W x H	2410mm x 1158mm x 1269mm

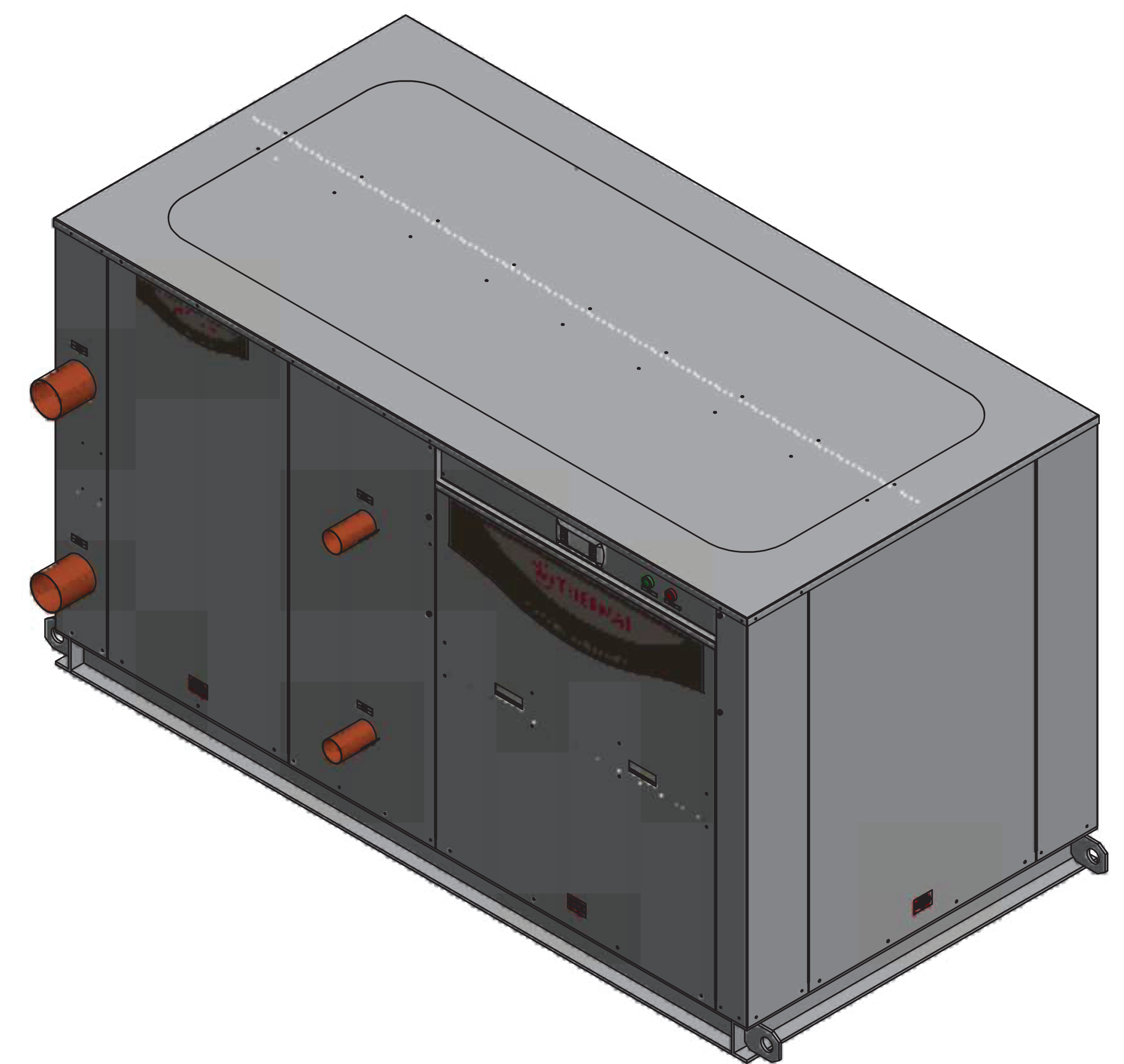
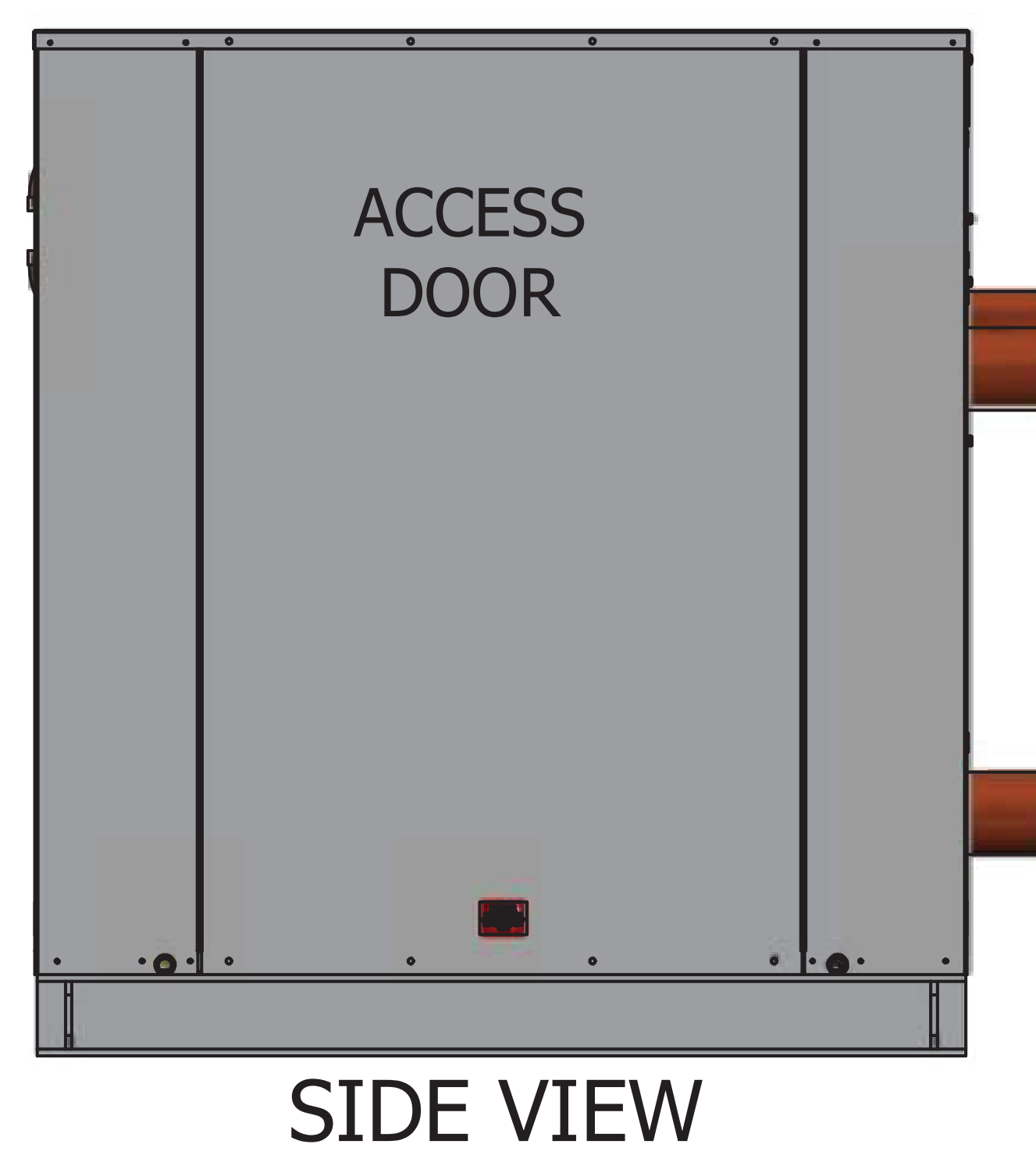
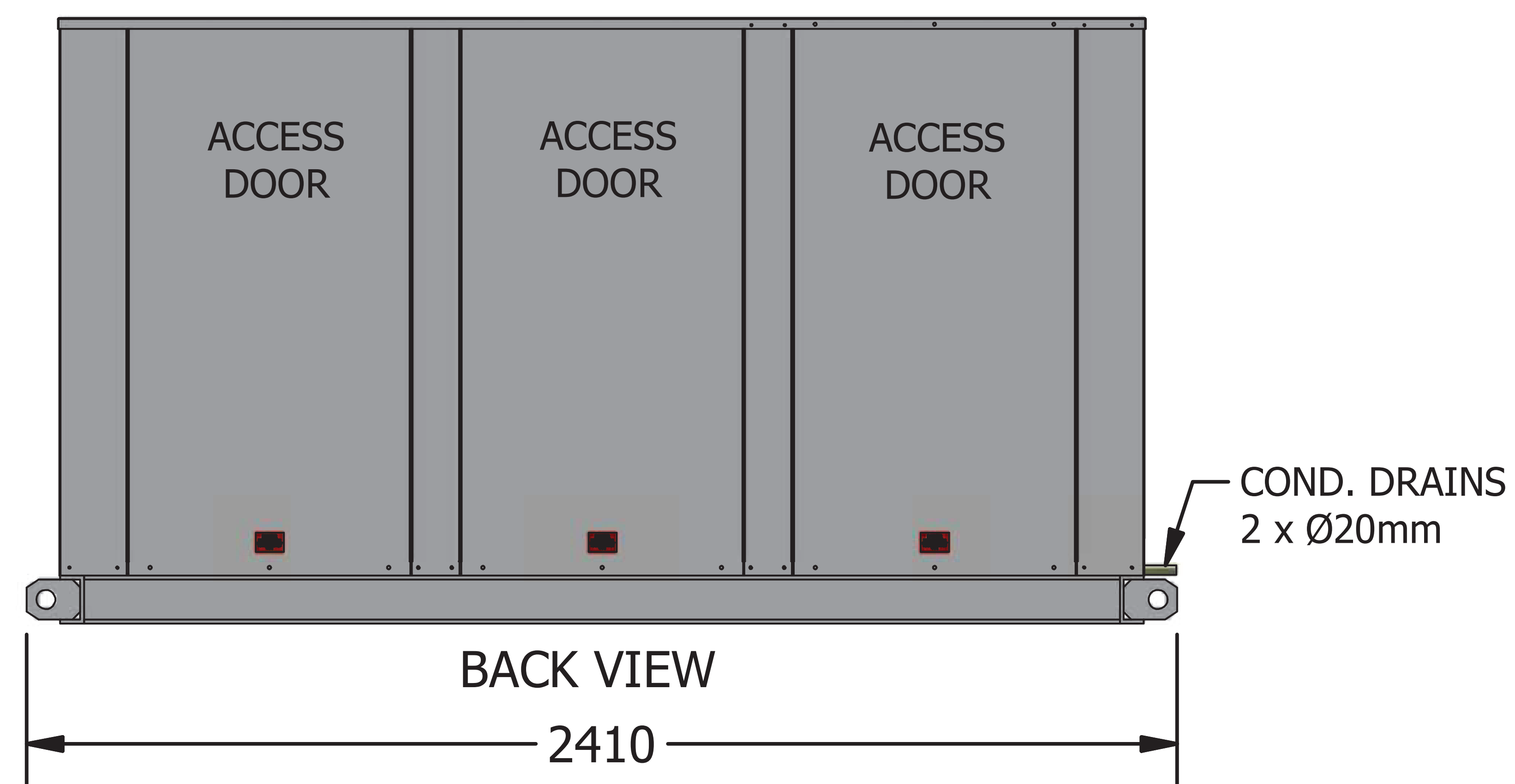
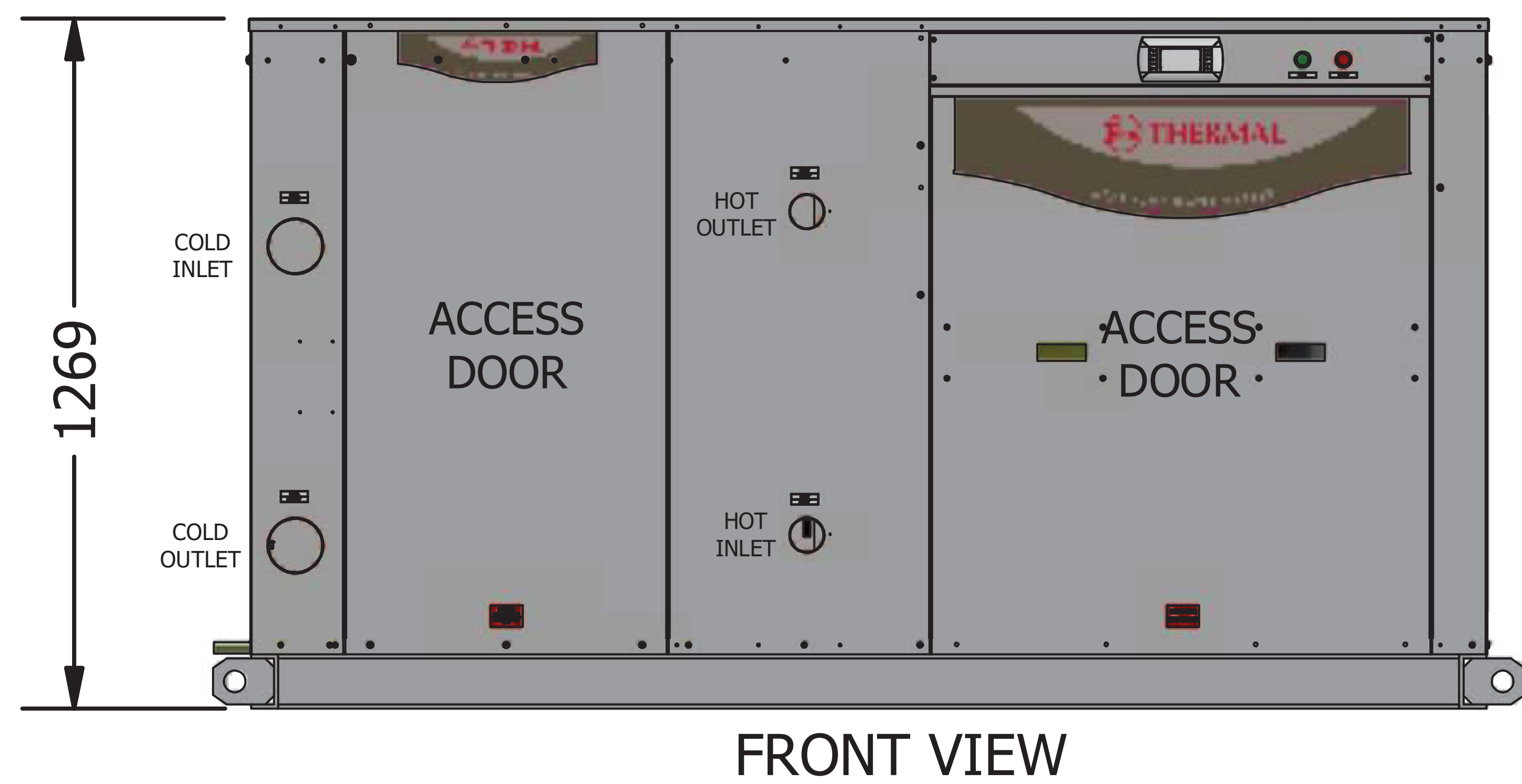
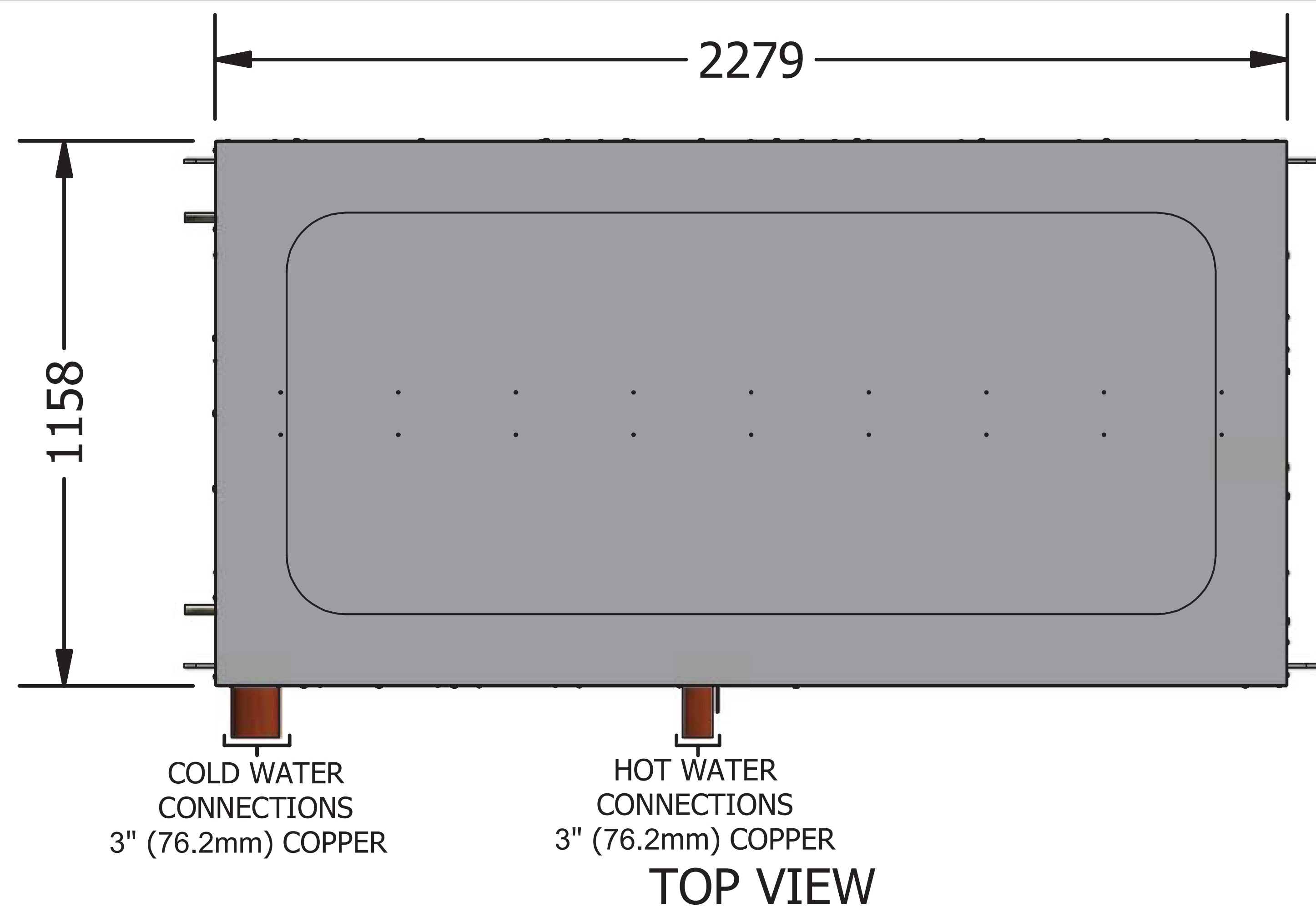
COP TABLE


Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	115.42 kW 3.95 COP	133.48 kW 4.50 COP	144.66 kW 4.83 COP	154.24 kW 5.12 COP	159.26 kW 5.26 COP	169.78 kW 5.57 COP	180.95 kW 5.88 COP	211.99 kW 6.73 COP	247.89 kW 7.63 COP
50 °C	114.02 kW 3.56 COP	131.40 kW 4.04 COP	142.13 kW 4.33 COP	151.32 kW 4.58 COP	156.13 kW 4.72 COP	166.19 kW 4.99 COP	176.88 kW 5.27 COP	206.58 kW 6.04 COP	240.93 kW 6.88 COP
55 °C	112.78 kW 3.21 COP	129.50 kW 3.63 COP	139.79 kW 3.89 COP	148.59 kW 4.11 COP	153.19 kW 4.23 COP	162.81 kW 4.47 COP	173.03 kW 4.72 COP	201.40 kW 5.41 COP	234.21 kW 6.17 COP
60 °C	111.58 kW 2.88 COP	127.58 kW 3.24 COP	137.39 kW 3.46 COP	145.77 kW 3.65 COP	150.15 kW 3.75 COP	159.29 kW 3.95 COP	169.00 kW 4.17 COP	195.91 kW 4.77 COP	227.04 kW 5.45 COP
65 °C	N/A	126.03 kW 2.92 COP	135.42 kW 3.12 COP	143.42 kW 3.28 COP	147.60 kW 3.36 COP	156.32 kW 3.54 COP	165.57 kW 3.73 COP	191.20 kW 4.26 COP	220.84 kW 4.86 COP
70 °C	N/A	124.61 kW 2.65 COP	133.60 kW 2.81 COP	141.24 kW 2.95 COP	145.22 kW 3.03 COP	153.53 kW 3.18 COP	162.33 kW 3.35 COP	186.70 kW 3.80 COP	214.86 kW 4.33 COP

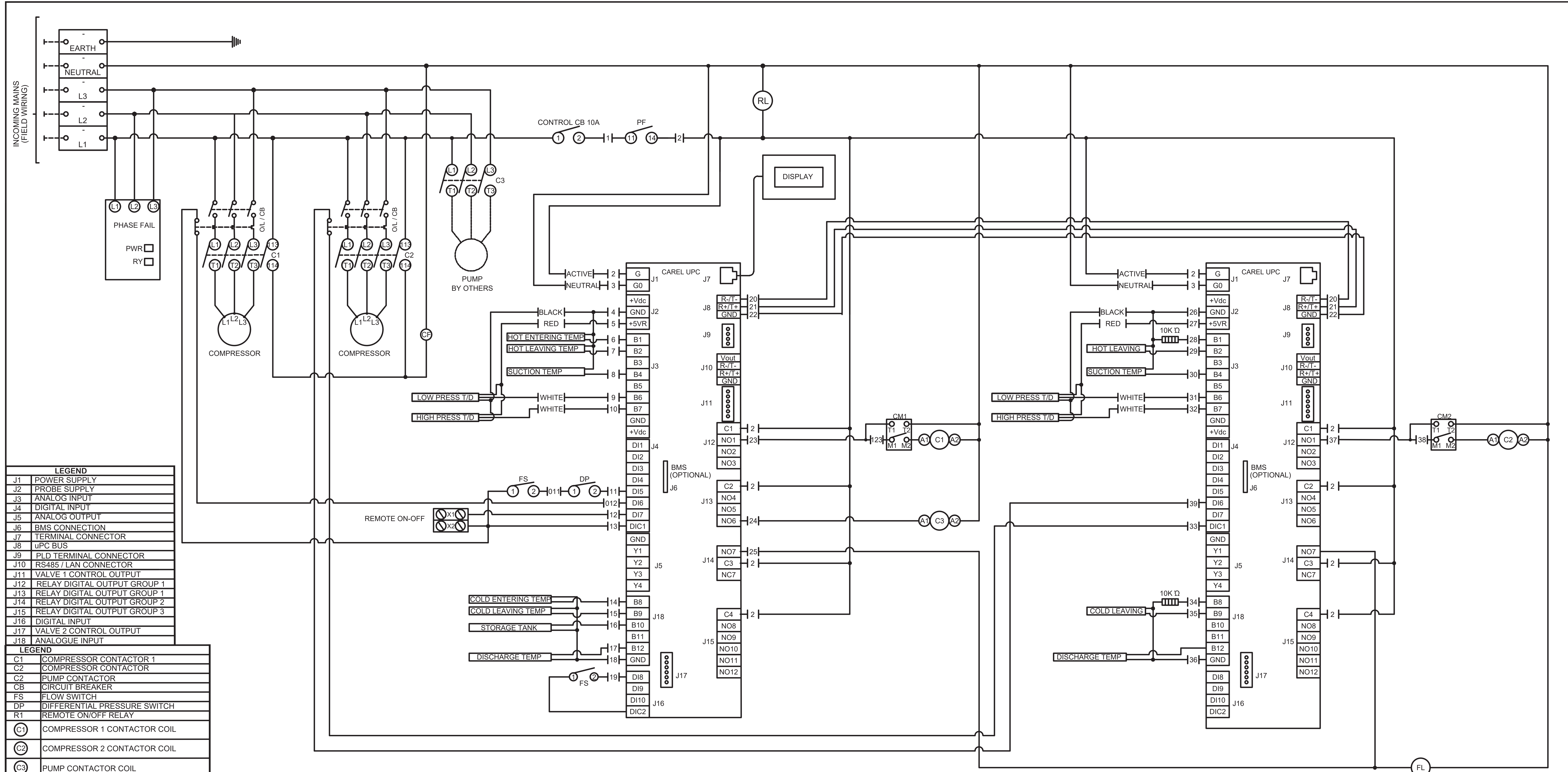


UNIT CLEARANCES		
Direction	Description	Minimum Clearance Required
1	Side Access	500 mm
2	Compressor Access	850 mm
3	Water Connections	850 mm
4	Side Access	500 mm
5	Top – Height Clearance	500 mm

Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT



 Rheem THERMAL SYSTEMS GROUP	
Description:	RT W2W HP 180kW R134a 3P
Part No:	RTWW180BDB-DQ-1
Material:	
Drawn By:	ST
Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°
Rev.	
Date:	2/03/2021
Scale:	N.T.S

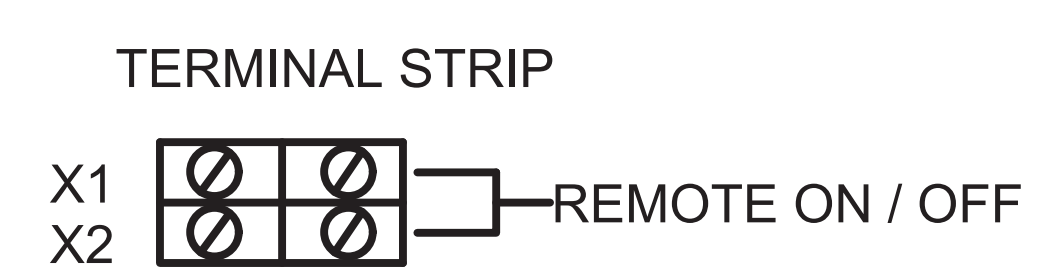


LEGEND

J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	UPC BUS
J9	PLD TERMINAL CONNECTOR
J10	RS485 / LAN CONNECTOR
J11	VALVE 1 CONTROL OUTPUT
J12	RELAY DIGITAL OUTPUT GROUP 1
J13	RELAY DIGITAL OUTPUT GROUP 1
J14	RELAY DIGITAL OUTPUT GROUP 2
J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

LEGEND

C1	COMPRESSOR CONTACTOR 1
C2	COMPRESSOR CONTACTOR
C3	PUMP CONTACTOR
CB	CIRCUIT BREAKER
FS	FLOW SWITCH
DP	DIFFERENTIAL PRESSURE SWITCH
R1	REMOTE ON/OFF RELAY
C1	COMPRESSOR 1 CONTACTOR COIL
C2	COMPRESSOR 2 CONTACTOR COIL
C3	PUMP CONTACTOR COIL
NA	TERMINAL BLOCK - ACTIVE
NA	TERMINAL BLOCK - ALARM ACTIVE
NE	TERMINAL BLOCK - EARTH
NN	TERMINAL BLOCK - NEUTRAL
FL	FAULT LIGHT
RL	RUN LIGHT
CF	CIRCULATION FAN



SANHUA PRESSURE TRANSDUCERS

REV	ECN	DESCRIPTION	DATE

Rheem
 THERMAL SYSTEMS GROUP

46 Marigold St.
 Revesby, NSW 2212
 Australia
 Phone: +61 9684 9684

Drawn By: J. Chaugule Date: 28/01/2021

RTWW180 on R134a / RTWW212 on R407C	
Part No: 47275E	Rev: 00

WATER-TO-WATER HEAT PUMP SPECIFICATIONS

Brazen Plate Heat Exchanger / Rheem IQ Control

RTWW270BDB-DQ-1

ELECTRICAL INPUT

Voltage/Phase	380 - 415 Volts / 3 Phase / 50 Hz	
Full Load / Locked Rotor (Amps Per Phase)	170.4 FLA / 310 LRA	
Min. Circuit Size	200.0 Amps	
Refrigerant	R134a	
Refrigeration effect	Heating	Cooling
Nominal capacity	271.42 kW	225.29 kW
Power input	46.13 kW	
COP	5.88 COP	4.88 COP
Combined COP	10.77 COP	
Noise Level	68 dBa @ 3 m	
Rated Load Amps @ 11°C SST / 45°C SCT	85.3 Amps	

TECHNICAL DATA

Compressor	
Make / Type	Copeland / Scroll
Number Per Unit	3
FLA per compressor (Full Load Amps, each)	56.9 Amps
Voltage / Phase	380 - 415 / 3
Pole/RPM	2/2,900

HEAT EXCHANGER (Water Side)

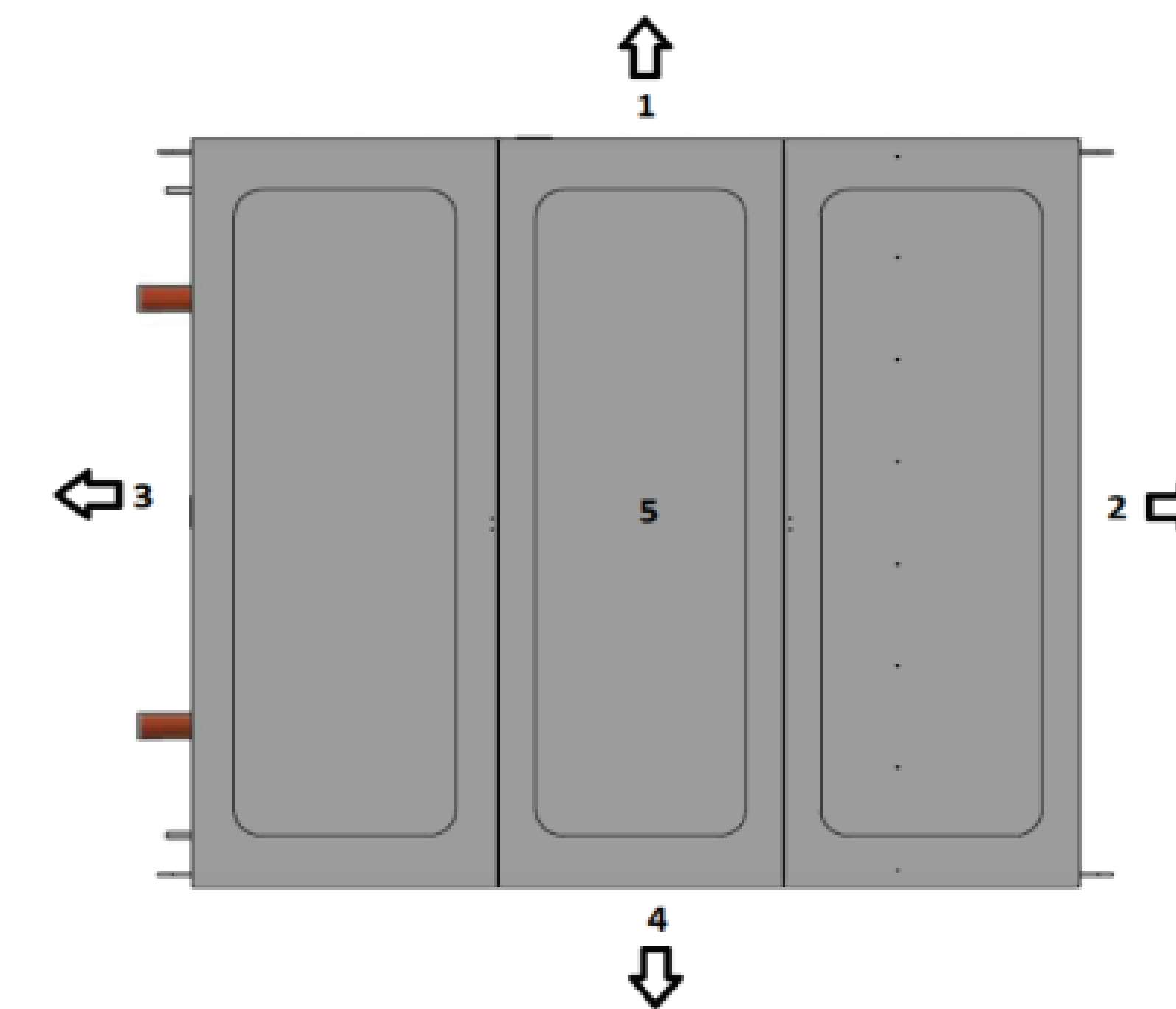
	Hot Side (Condenser)	Cold Side (Evaporator)
Type of Water Tube	Single Wall	Single Wall
Design	Brazen Plate/Water	Brazen Plate/Water + Glycol
Flow Rate Excl. By Pass	10.80 L/s	11.35 L/s
Max. Outlet Water Temp	70°C	N/A
Min. Outlet Water Temp	N/A	0 °C
Design Pressure Drop	40 kPa	45 kPa
Max. Operating Pressure	2,450 kPa	

GENERAL INFORMATION

Water Connections	101.6mm (4") Copper
Drain	25mm Aluminium
Cabinet Construction	1.2mm Stucco Aluminium
Approx. shipping weight	2000 kg
Size(mm) L x W x H	2586mm x 2204mm x 1270mm

COP TABLE

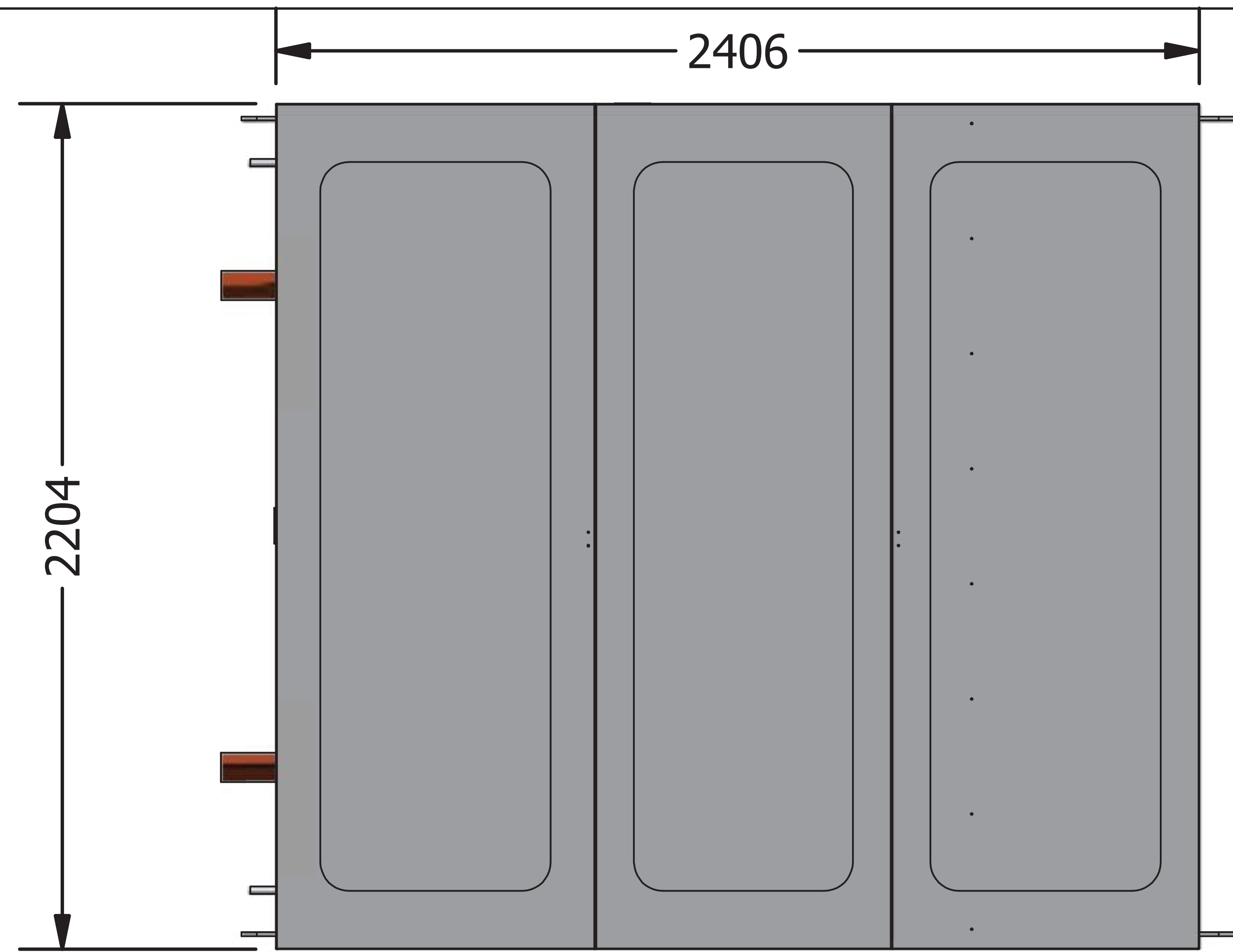
Hot Water Out °C	Cold Water In °C								
	5 °C	8 °C	12 °C	14 °C	16 °C	18 °C	20 °C	25 °C	35 °C
45 °C	173.14 kW 3.95 COP	200.22 kW 4.50 COP	216.99 kW 4.83 COP	231.36 kW 5.12 COP	238.89 kW 5.26 COP	254.66 kW 5.57 COP	271.42 kW 5.88 COP	317.99 kW 6.73 COP	371.84 kW 7.63 COP
50 °C	171.04 kW 3.56 COP	197.11 kW 4.04 COP	213.19 kW 4.33 COP	226.98 kW 4.58 COP	234.19 kW 4.72 COP	249.29 kW 4.99 COP	265.33 kW 5.27 COP	309.87 kW 6.04 COP	361.39 kW 6.88 COP
55 °C	169.17 kW 3.21 COP	194.25 kW 3.63 COP	209.68 kW 3.89 COP	222.88 kW 4.11 COP	229.78 kW 4.23 COP	244.22 kW 4.47 COP	259.55 kW 4.72 COP	302.10 kW 5.41 COP	351.32 kW 6.17 COP
60 °C	167.37 kW 2.88 COP	191.38 kW 3.24 COP	206.09 kW 3.46 COP	218.66 kW 3.65 COP	225.22 kW 3.75 COP	238.94 kW 3.95 COP	253.50 kW 4.17 COP	293.87 kW 4.77 COP	340.56 kW 5.45 COP
65 °C	N/A	189.04 kW 2.92 COP	203.12 kW 3.12 COP	215.13 kW 3.28 COP	221.40 kW 3.36 COP	234.48 kW 3.54 COP	248.36 kW 3.73 COP	286.80 kW 4.26 COP	331.26 kW 4.86 COP
70 °C	N/A	186.92 kW 2.65 COP	200.40 kW 2.81 COP	211.85 kW 2.95 COP	217.83 kW 3.03 COP	230.30 kW 3.18 COP	243.50 kW 3.35 COP	280.05 kW 3.80 COP	322.29 kW 4.33 COP



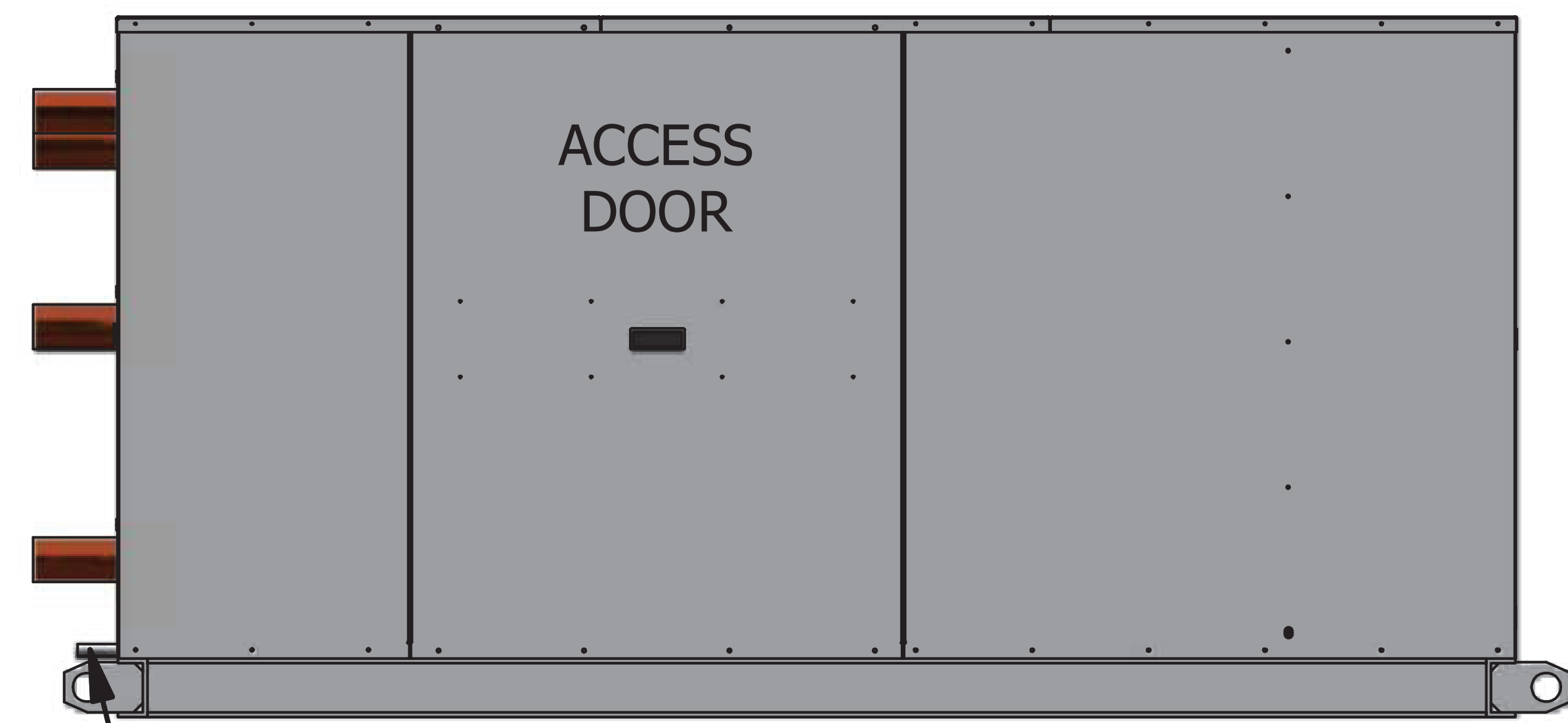
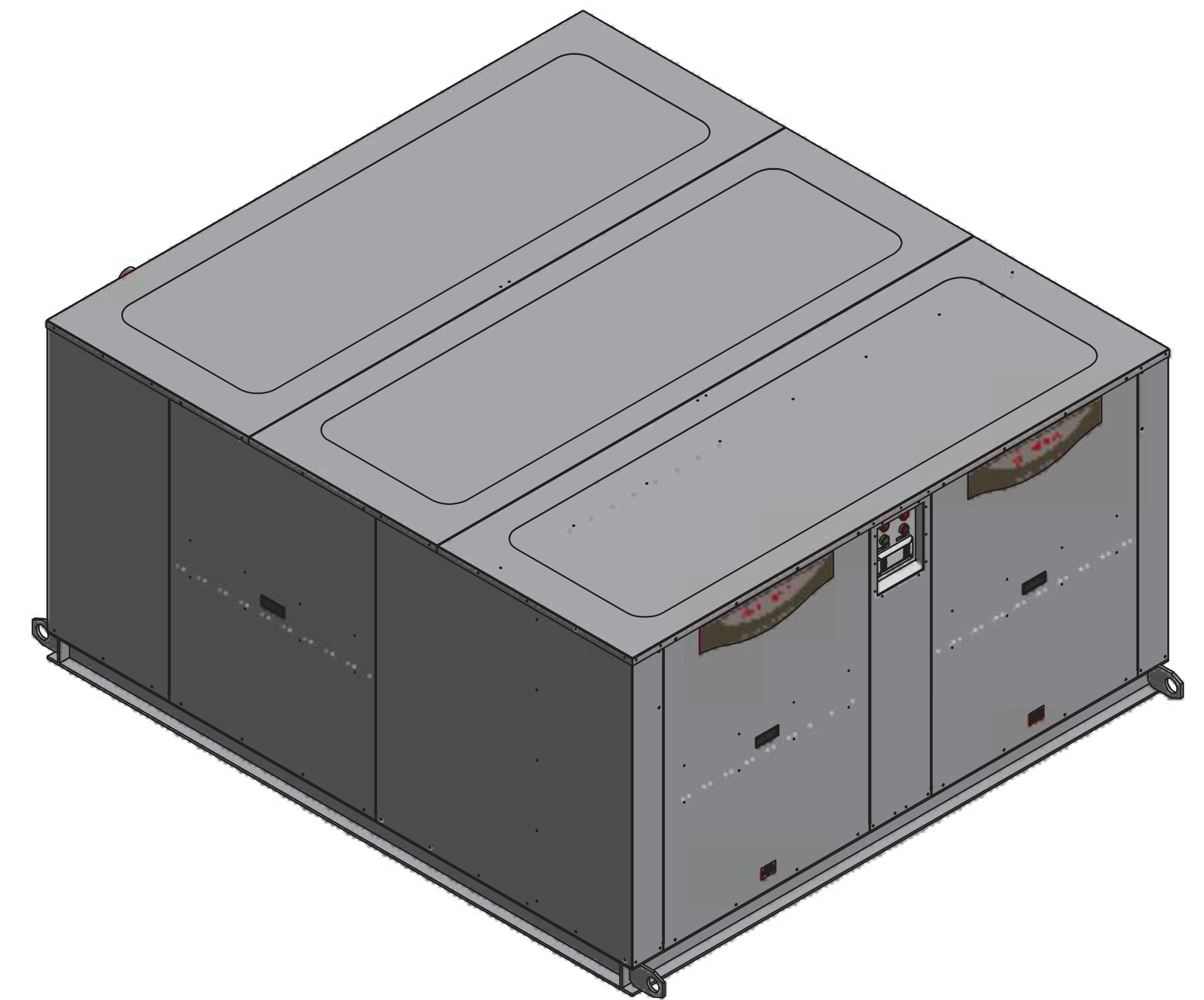
UNIT CLEARANCES

Direction	Description	Minimum Clearance Required
1	Side Access	850 mm
2	Compressor Access	1000 mm
3	Pipe Access	1000 mm
4	Side Access	850 mm
5	Top – Height Clearance	500 mm

Rating Conditions: Cooling: 20°C EWT, 15°C LWT, Heating: 39°C EWT, 45°C LWT

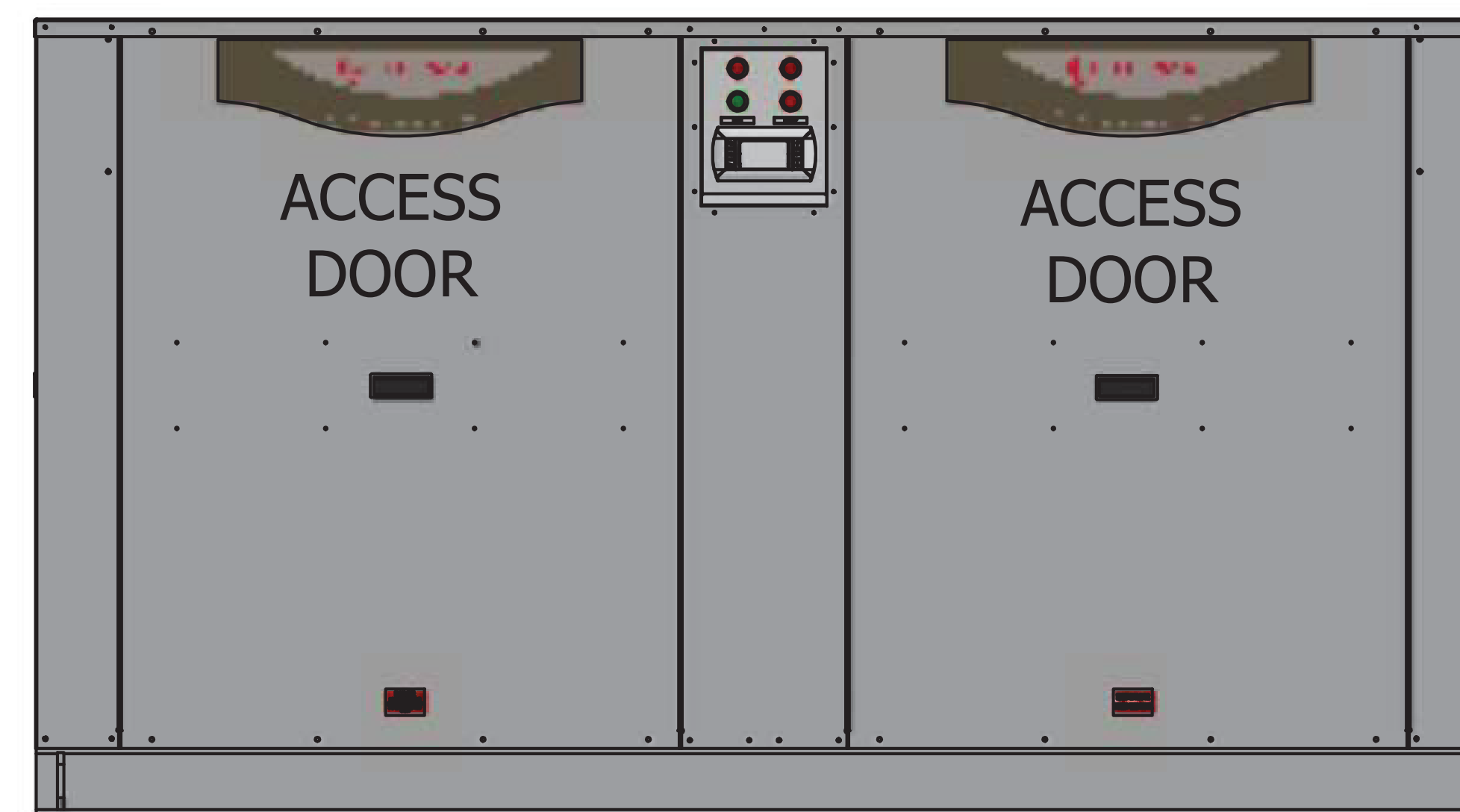


TOP VIEW

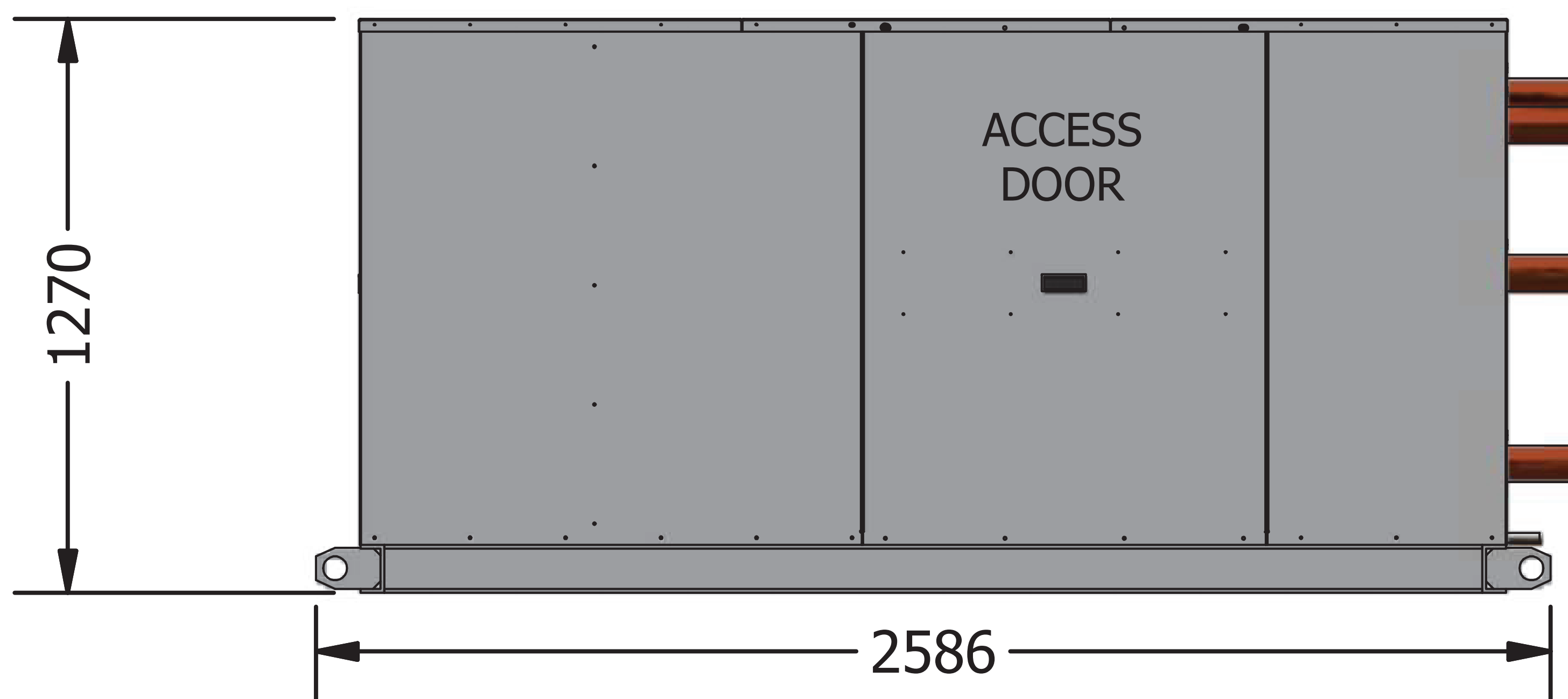


SIDE VIEW

DRAIN PIPES
2 x Ø25mm




FRONT VIEW

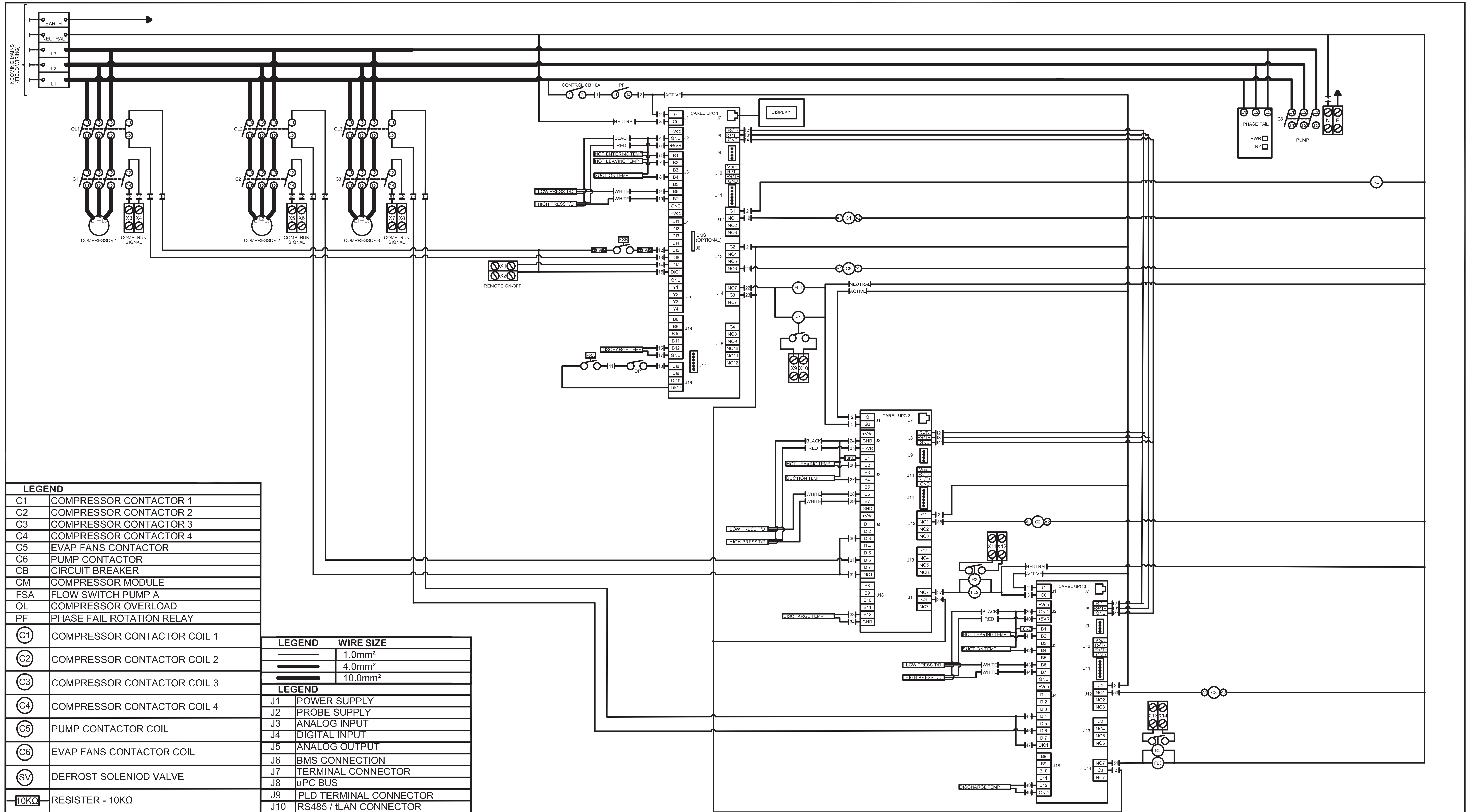


SIDE VIEW



BACK VIEW

 Rheem THERMAL SYSTEMS GROUP	
Description:	RTS W2W HWHP 270kW R134a 3P
Part No:	RTWW270BDB-DQ-1
Material:	As Above
Drawn By:	ST
Checked By:	
General Tolerance:	Sheetmetal - Cut Size - ± 0.5mm, Angle - ± 0.5°, Bend size - ± 0.3mm Tubes - Dimensions ± 2, Angle ± 2°
Scale:	N.T.S



LEGEND	
C1	COMPRESSOR CONTACTOR 1
C2	COMPRESSOR CONTACTOR 2
C3	COMPRESSOR CONTACTOR 3
C4	COMPRESSOR CONTACTOR 4
C5	EVAP FANS CONTACTOR
C6	PUMP CONTACTOR
CB	CIRCUIT BREAKER
CM	COMPRESSOR MODULE
FSA	FLOW SWITCH PUMP A
OL	COMPRESSOR OVERLOAD
PF	PHASE FAIL ROTATION RELAY
(C1)	COMPRESSOR CONTACTOR COIL 1
(C2)	COMPRESSOR CONTACTOR COIL 2
(C3)	COMPRESSOR CONTACTOR COIL 3
(C4)	COMPRESSOR CONTACTOR COIL 4
(C5)	PUMP CONTACTOR COIL
(C6)	EVAP FANS CONTACTOR COIL
(SV)	DEFROST SOLENIOD VALVE
10KΩ	RESISTOR - 10KΩ
(A)	TERMINAL BLOCK - ACTIVE
(E)	TERMINAL BLOCK - EARTH
(N)	TERMINAL BLOCK - NEUTRAL
(FA)	TERMINAL BLOCK - FLOW SWITCH A

LEGEND	WIRE SIZE
Thin line	1.0mm ²
Medium line	4.0mm ²
Thick line	10.0mm ²

LEGEND	
J1	POWER SUPPLY
J2	PROBE SUPPLY
J3	ANALOG INPUT
J4	DIGITAL INPUT
J5	ANALOG OUTPUT
J6	BMS CONNECTION
J7	TERMINAL CONNECTOR
J8	uPC BUS
J9	PLD TERMINAL CONNECTOR
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J15	RELAY DIGITAL OUTPUT GROUP 3
J16	DIGITAL INPUT
J17	VALVE 2 CONTROL OUTPUT
J18	ANALOGUE INPUT

REV	ECN	DESCRIPTION	DATE

 Rheem THERMAL SYSTEMS GROUP	43 Marigold Street Revesby NSW 2212 Phone: (02) 9684 3684 Fax: (02) 9684 3698		RTWW270BDB-DQ-1	
	Drawn By: B.Fleming	Date: 14/10/2020	Part No:	Rev: 00

RHEEM THERMAL

EASY INTEGRATION – HIGHER EFFICIENCY – LONGER LASTING
DESIGNED AND MANUFACTURED BY RHEEM



REV: JUNE 21

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