
Technical presentation

MAX-450 [R290]

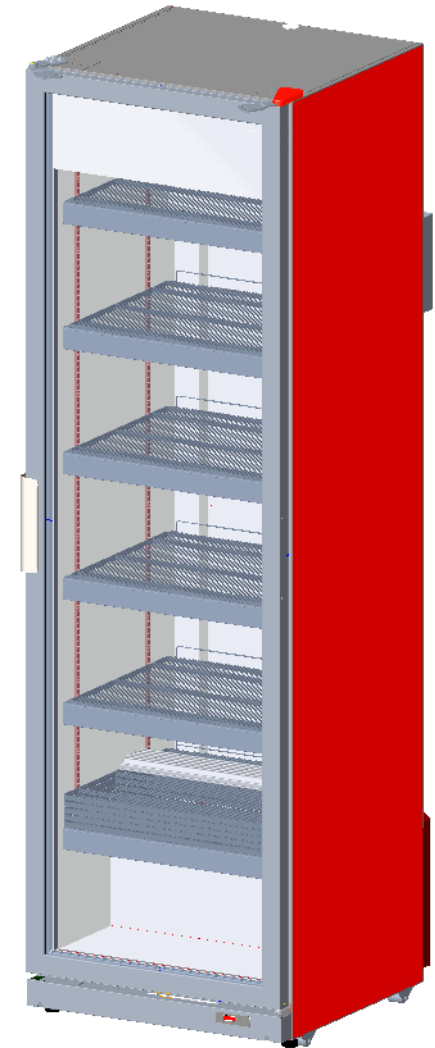


Topics

- Introducing MAX-450 [R290]
- Standard configuration
- Dimensions
- Packed cooler dimensions
- Artwork dimensions
- Loading data
- Air flow pattern
- Cooling base and door glass configuration
- Electrical data
- Technical data
- Cooling mechanism overview
- Cooling data
- Electrical layout
- Electrical components overview/layout
- Exploded view diagrams

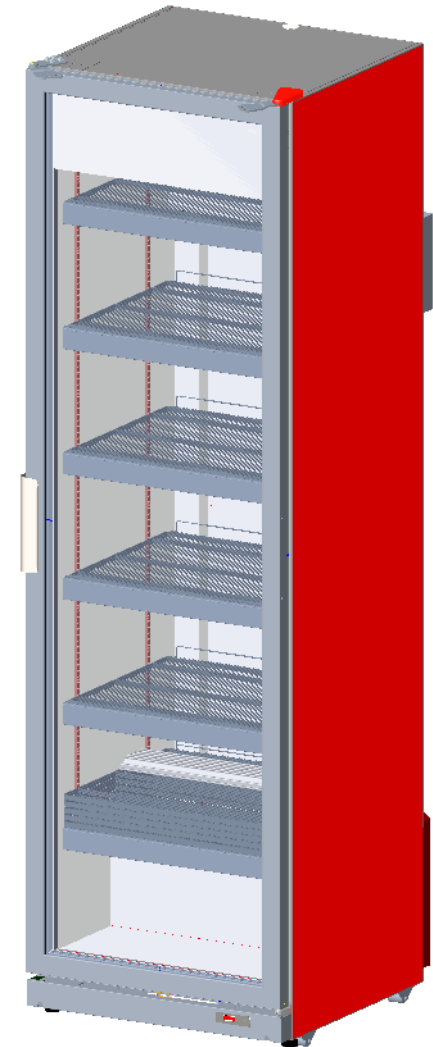
Introducing MAX-450 [R290]

- Ambient condition 32°C, 65% RH
- Standard LED lighting
- Low-maintenance WOT condenser
- Fin & tube evaporator
- Bottom mounted cooling mechanism



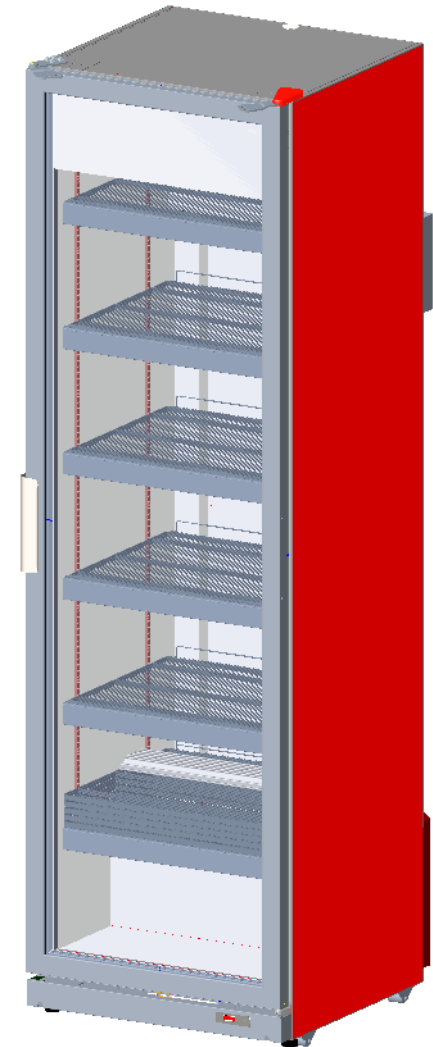
Standard configuration

- Grey RAL 7004 external cabinet color
- White inner cabinet color
- LED illumination on Cabin (Vertical)
- 6 standard shelves
- 4 rollers and 2 adjustable feet
- Stickers branding on sides
- Self closing door



Options

- FCR-22 Thermostat
- ERC112 controller
- Right and Left LED
- Right and Top LED
- Right, Left and Top LED
- Visible thermostat or controller
- Light Switch
- Compressor Switch
- RCCB
- PRCD
- Door Lock
- Door Holder
- Right/left door
- Prosa communication device
- Castor wheels



Dimensions

Dimensions	External	Internal
Width (mm)	595	521
Depth (mm)	676*	491
Height (mm)	2012**	1818
Foot print area (m ²)	0,4*	
Display area (m ²)	0,92	
Weight net (kg)	100	
Net Volume (Lt)	455	
Gross Vol. (Lt)	472	

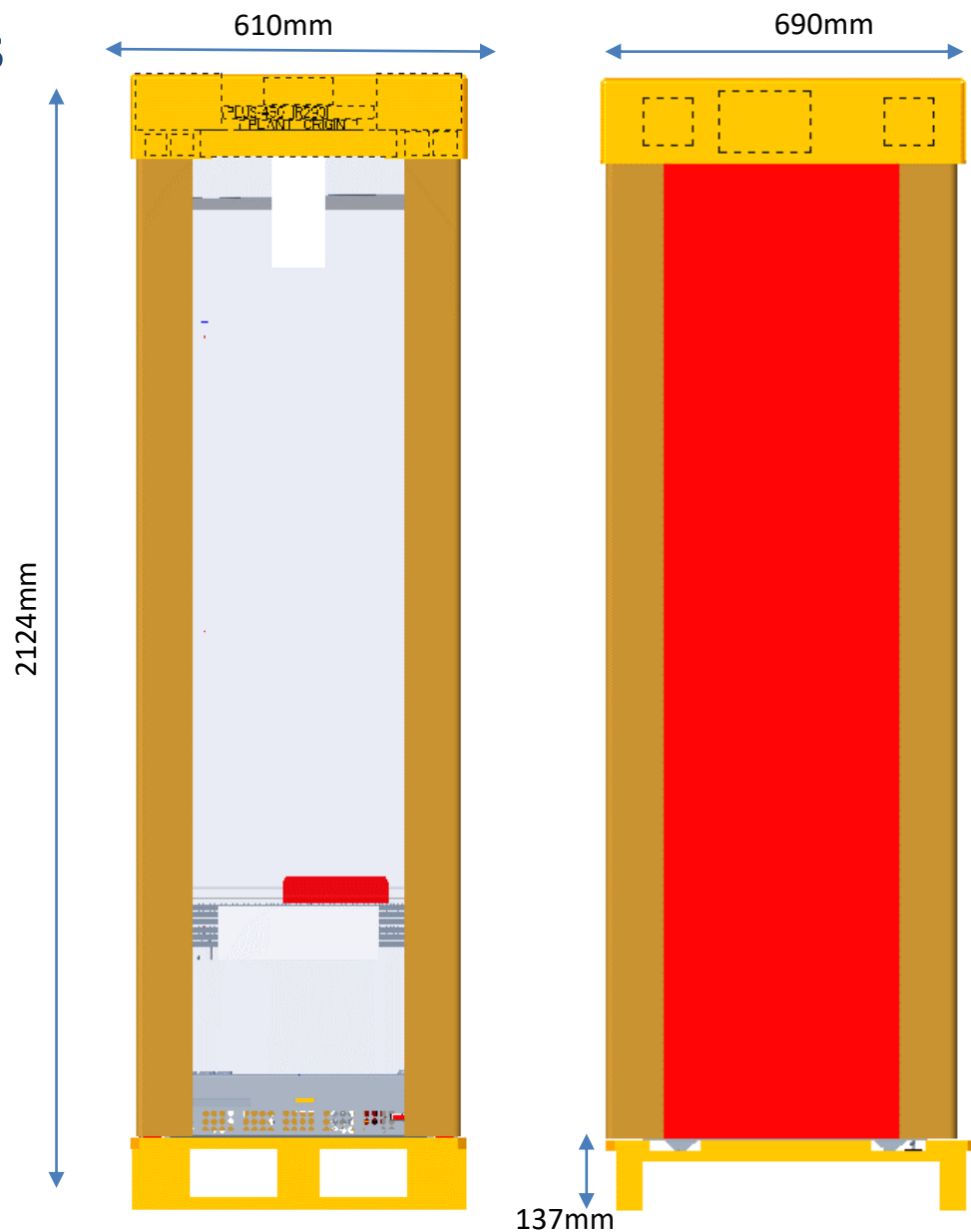
*including handle (32mm depth)

**including wheels & hinge cover

Packed Cooler Dimensions

Dimensions

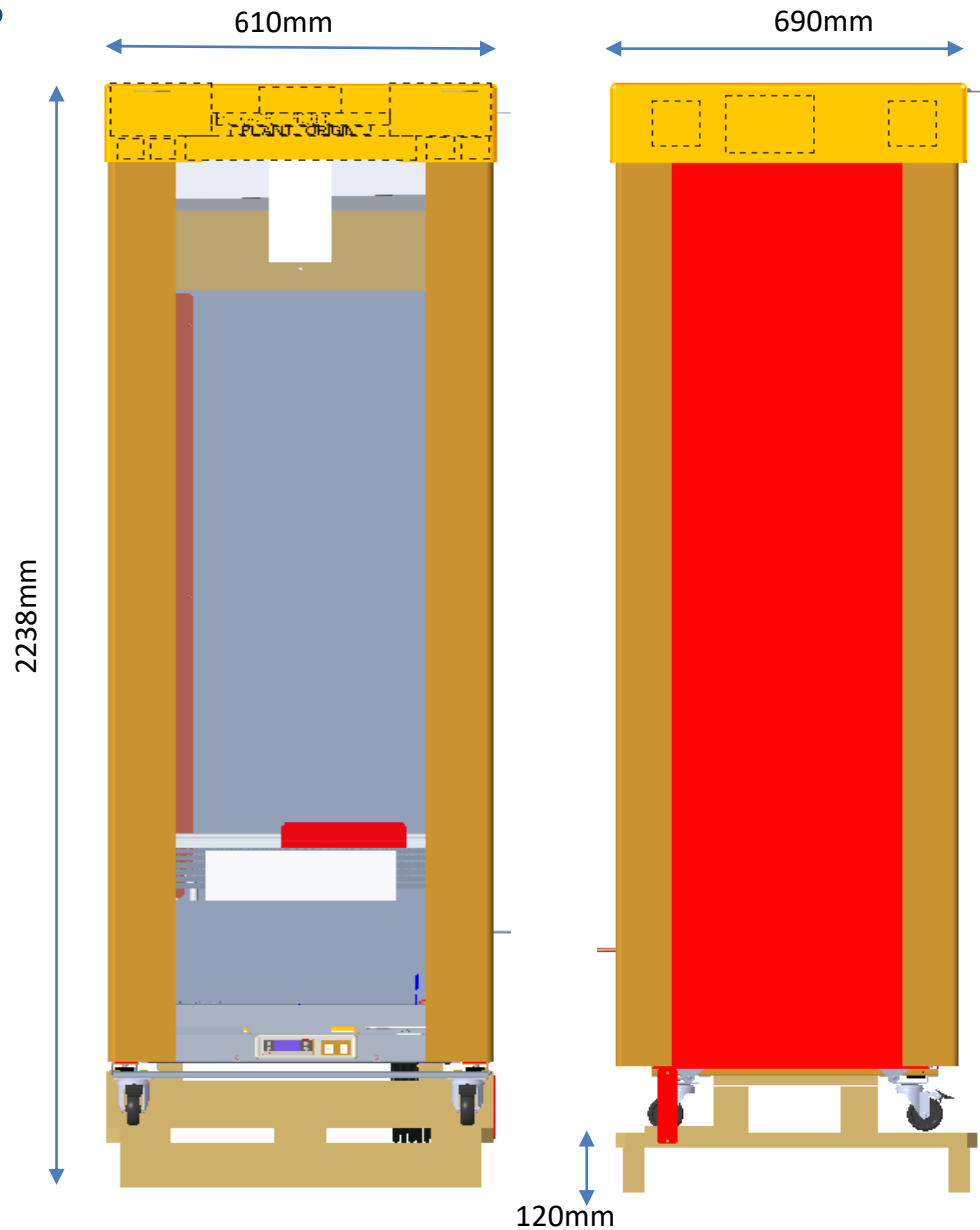
Width (mm)	610
Depth (mm)	690
Height (mm)	2124



Packed Cooler Dimensions castor wheels option

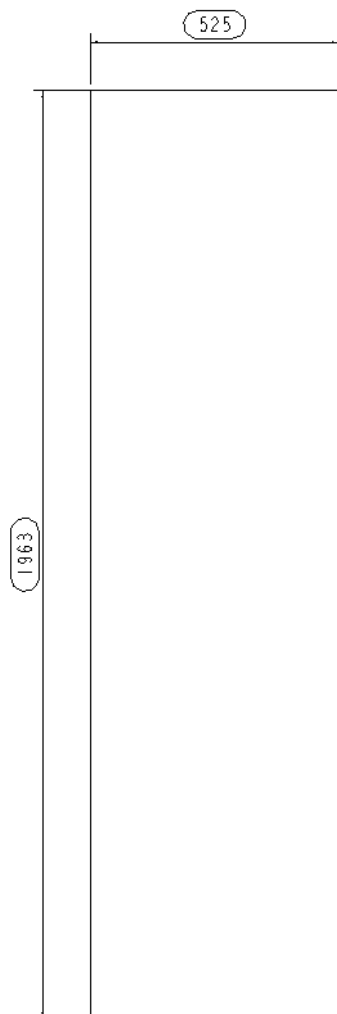
Dimensions

Width (mm)	610
Depth (mm)	690
Height (mm)	2238



Artwork Dimensions

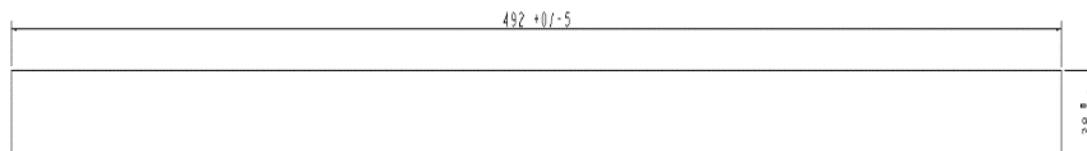
Side sticker



Door glass sticker

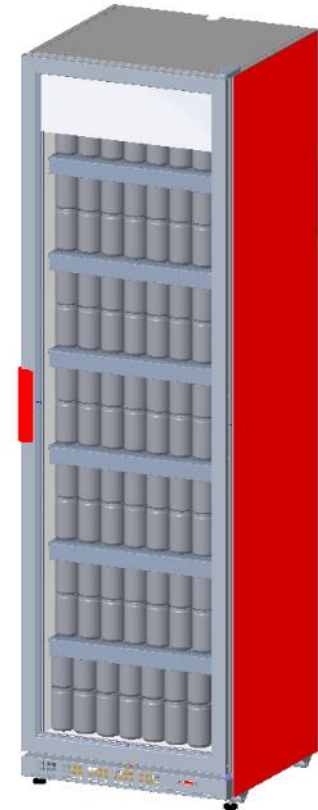


Logo strip for pricing



Loading Data (330ml Can / d:66mm / h:116mm)

- 7 loading levels with 330ml Can (6 levels on shelves and 1 level on cabin's bottom)
- 7 facings per loading level
- 6 rows on shelves 1-5 & 4 rows on shelf 6
- 3 rows on bottom level

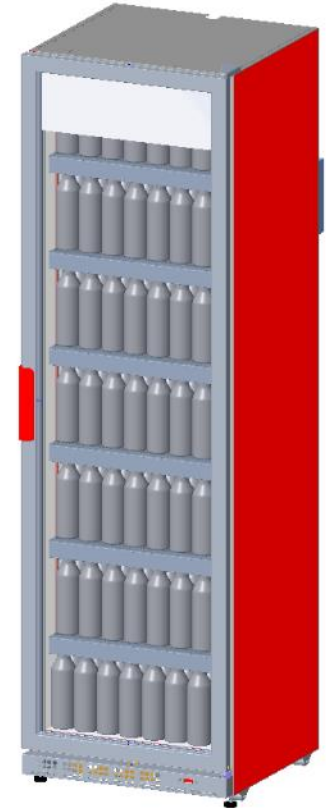


Shelf dimension & Loading data

SHELF - WIDTH x DEPTH (mm)	508 x 423
CAPACITIES WITH 330ml CAN	<p>BOTTOM (cans) : 7facings x 3rows x 2levels =42</p> <p>5 SHELVES (cans) : 7facings x 6rows x 2levels = 84 x 5 shelves = 420</p> <p>TOP SHELF (cans) : 7facings x 4rows x 2levels = 56</p>
	TOTAL : 518 cans

Loading Data (500ml Bottle / d:66mm / h:235mm)

- 7 loading levels with 500ml PET (6 levels on shelves and 1 level on cabin's bottom)
- 7 facings per loading level
- 6 rows on shelves 1-5 & 4 rows on shelf 6
- 3 rows on bottom level

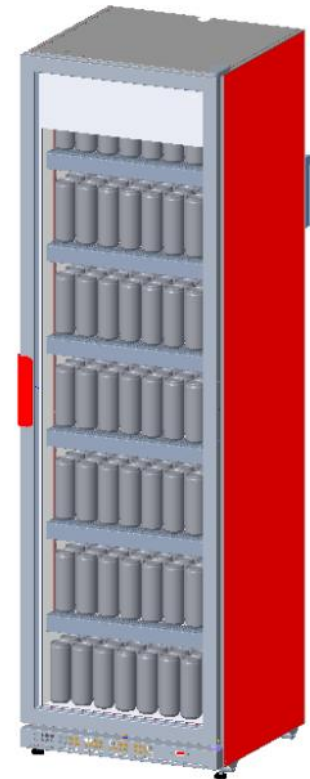


Shelf dimension & Loading data

SHELF - WIDTH x DEPTH (mm)	508 x 423
CAPACITIES WITH 500ml PET	BOTTOM : 7facings x 3rows =21 5 SHELVES : 7facings x 6rows = 42 x 5 shelves = 210 TOP SHELF (cans) : 7facings x 4rows = 28
	TOTAL : 259 PET

Loading Data (500ml Can / d:66mm / h:170mm)

- 7 loading levels with 500ml CAN (6 levels on shelves and 1 level on cabin's bottom)
- 7 facings per loading level
- 6 rows on shelves 1-5 & 4 rows on shelf 6
- 3 rows on bottom level

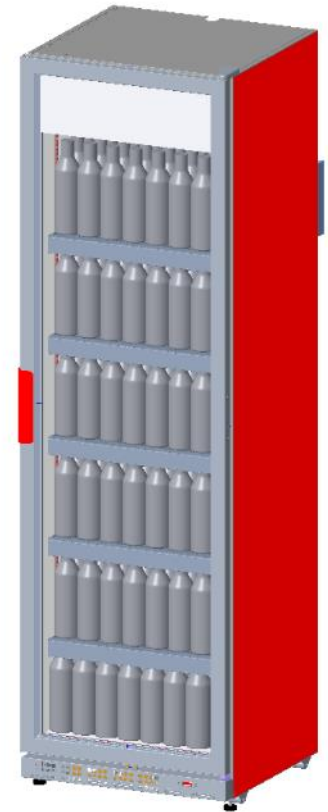


Shelf dimension & Loading data

SHELF - WIDTH x DEPTH (mm)	508 x 423
CAPACITIES WITH 500ml CAN	BOTTOM : 7facings x 3rows =21 5 SHELVES : 7facings x 6rows = 42 x 5 shelves = 210 TOP SHELF (cans) : 7facings x 4rows = 28
	TOTAL : 259 cans

Loading Data (500ml Beer Bottle / d:70.5mm / h:250mm)

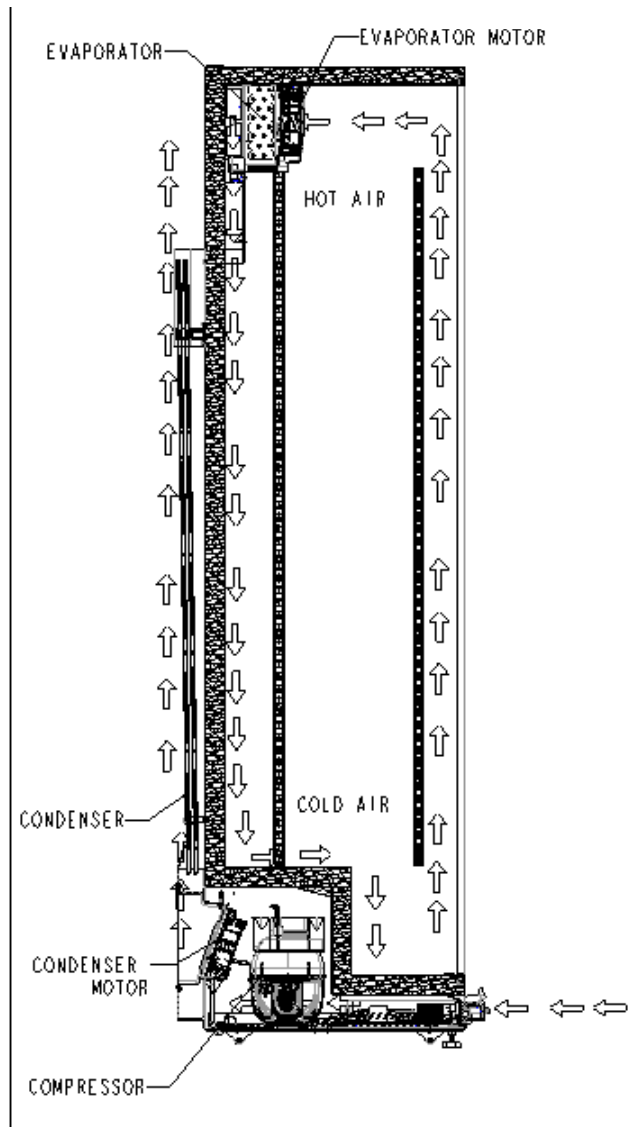
- 6 loading levels with 500ml CAN (5 levels on shelves and 1 level on cabin's bottom)
- 7 facings per loading level
- 6 rows on shelves
- 3 rows on bottom level



Shelf dimension & Loading data

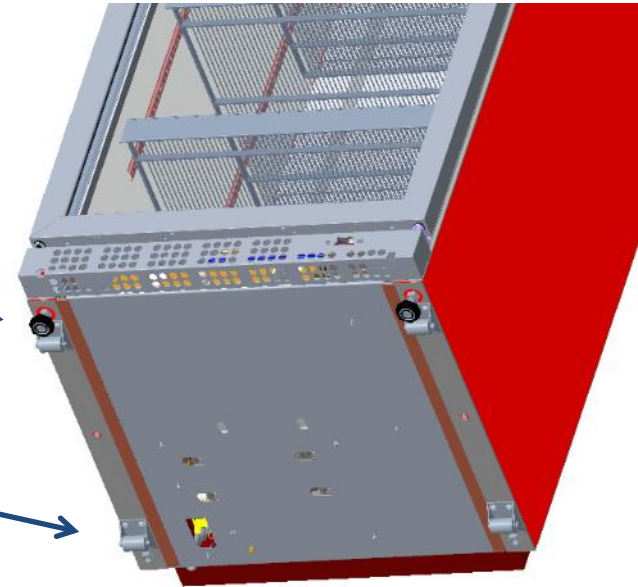
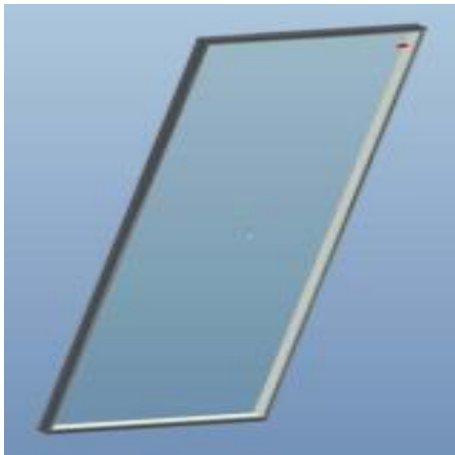
SHELF - WIDTH x DEPTH (mm)	508 x 423
CAPACITIES WITH 500ml Beer Bottle	BOTTOM : 7facings x 3rows =21 5 SHELVES : 7facings x 6rows = 42 x 5 shelves = 210
	TOTAL : 231 Beer Bottles

Air Flow Pattern



Cooling base and door glass configuration

4 rollers and 2 adjustable feet (front)



Glass panel configuration

1839*540*24 mm
(4mm TEMPERED + 16mm AIR + 4mm LOW-E)

Magnetic gasket

MAGNETIC GASKET 1874*575mm

Electrical data

<i>Electrical Data</i>		
<i>Electrical rating</i>	220-240V~50Hz	
Rated input current	1,26 A	
<i>Rated input power</i>	265 W	Average during stabilized operation
Max. input power	W	
Energy consumption	2,49 KWh/d 1,75 KWh/d	32,2°C / 65% RH 25.0°C / 60% RH
<i>Illumination</i>	Standard-Right : 1x 5,3W 1600mm led bar Right & top : 1x 5,3W 1600mm + 1x1,3W 400 led bar Right & left : 2x 5,3W 1600mm led bar Right, left & top : 2x 5,3W 1600mm + 1x1,3W 400 led bar	

Electrical data

Illumination System

Lights/LED

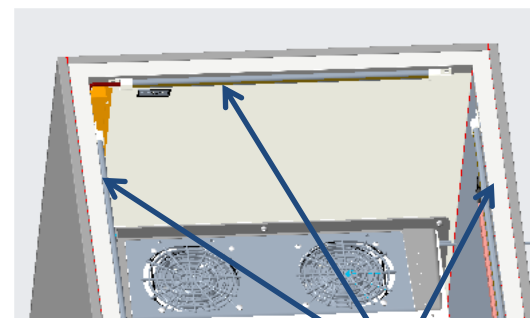
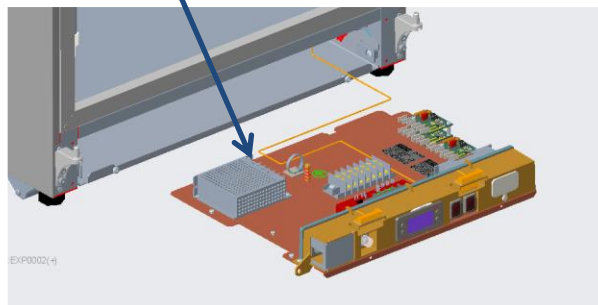
OPTOCORE LD LRB S SERIES L=1600mm 24V 5,3W (Right or Left)
OPTOCORE LD LRB S SERIES L=400mm 24V 1,3W (Top or Left)

PSU/Ballasts

PSU MEANWELL LRS 35-24V 50/60Hz



PSU (on electrical plate)



CABIN LEDS

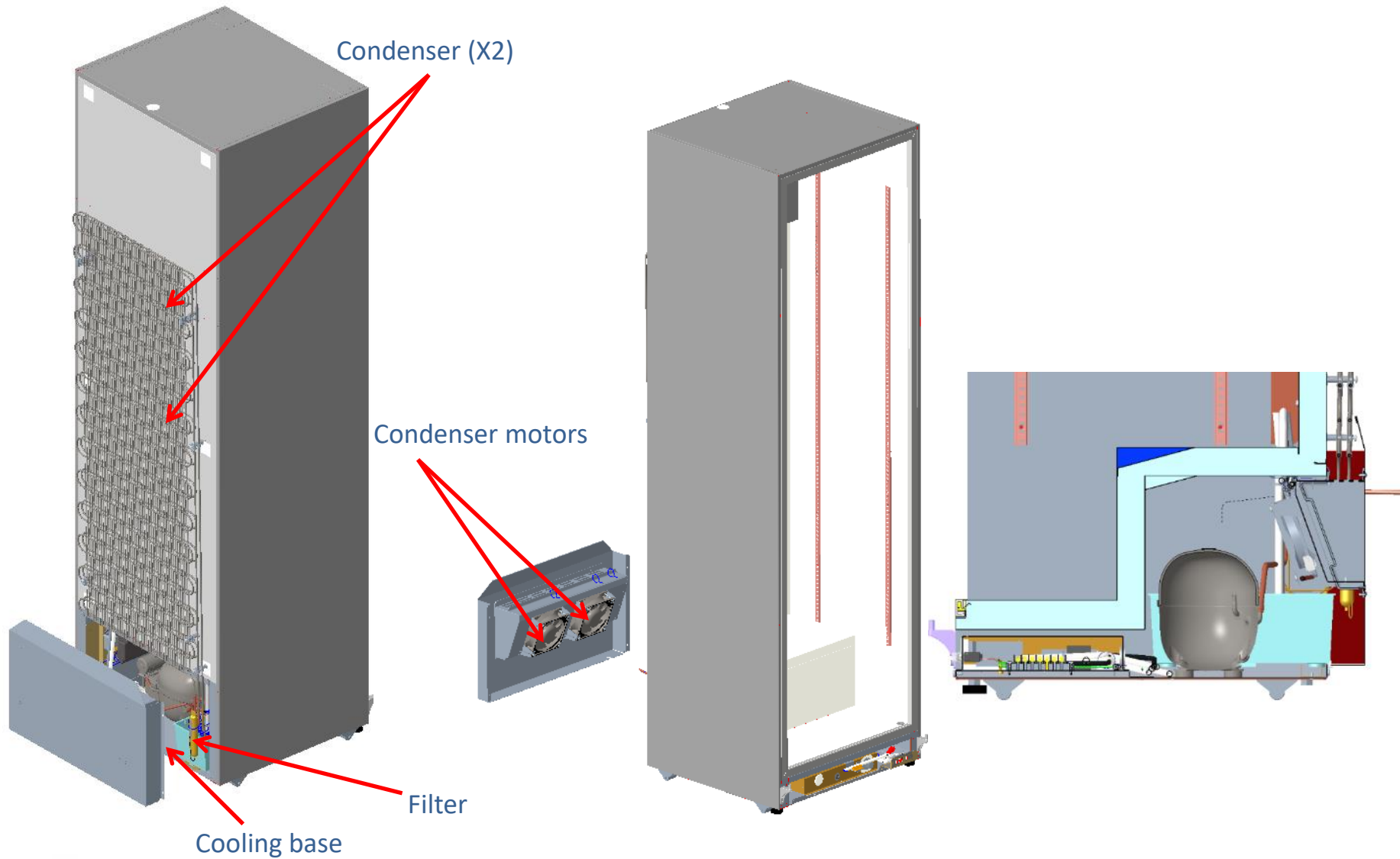
Technical Data

<i>Operating Control System ETC1H1</i>	
<i>Type & Model</i>	THERMOSTAT DANFOSS 077F ETC1H1
<i>Cold Cut out</i> <i>Warm Cut out</i> <i>Diff</i>	-1,4°C 2,6°C 3,8°C
<i>Sensors</i>	TEMPERATURE SENSOR DANFOSS 2m 077F8765

<i>Operating Control System FCR22</i>	
<i>Type & Model</i>	THERMOSTAT SOLLATEK FREOCOM FCR22
<i>Cut in/out</i>	TBD
<i>Sensors</i>	TEMPERATURE SENSOR SOLLATEK FCR22

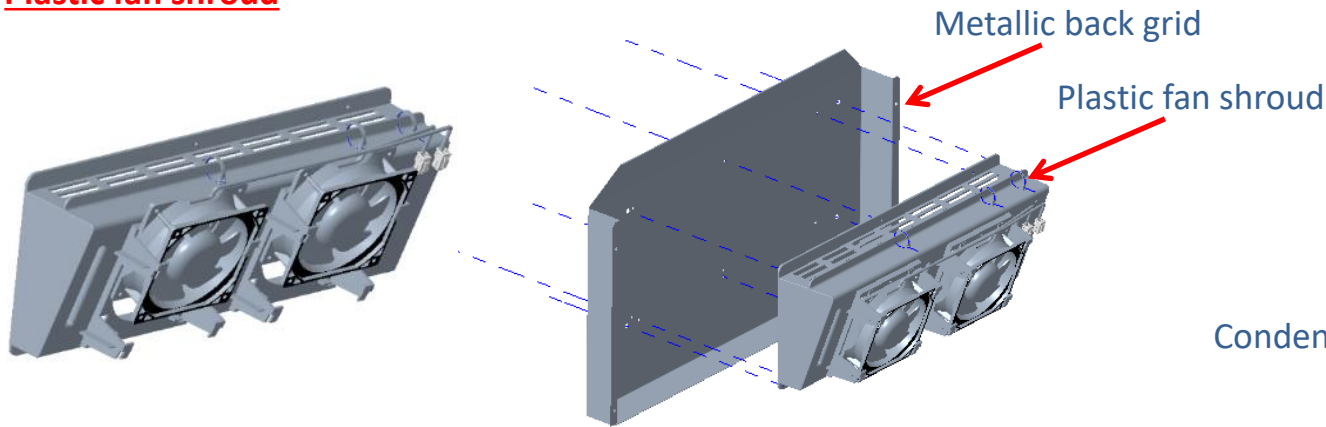
<i>Operating Control System ERC112</i>	
<i>Type & Model</i>	THERMOSTAT ERC112
<i>Cut in/out</i>	TBD
<i>Sensors</i>	SENSOR DANFOSS 2m 077F8794

Cooling mechanism Overview

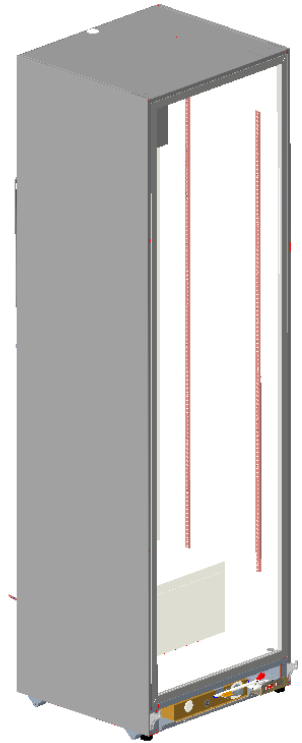
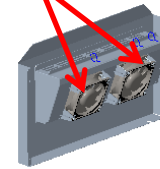


Cooling mechanism Overview

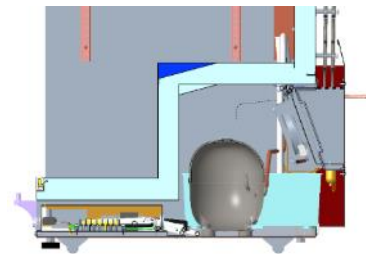
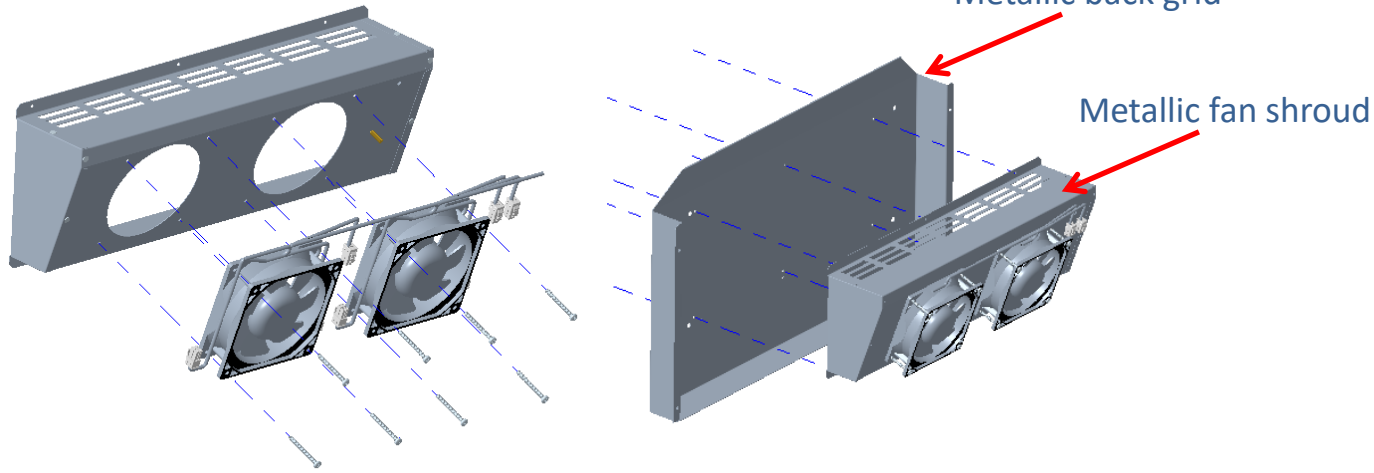
Plastic fan shroud



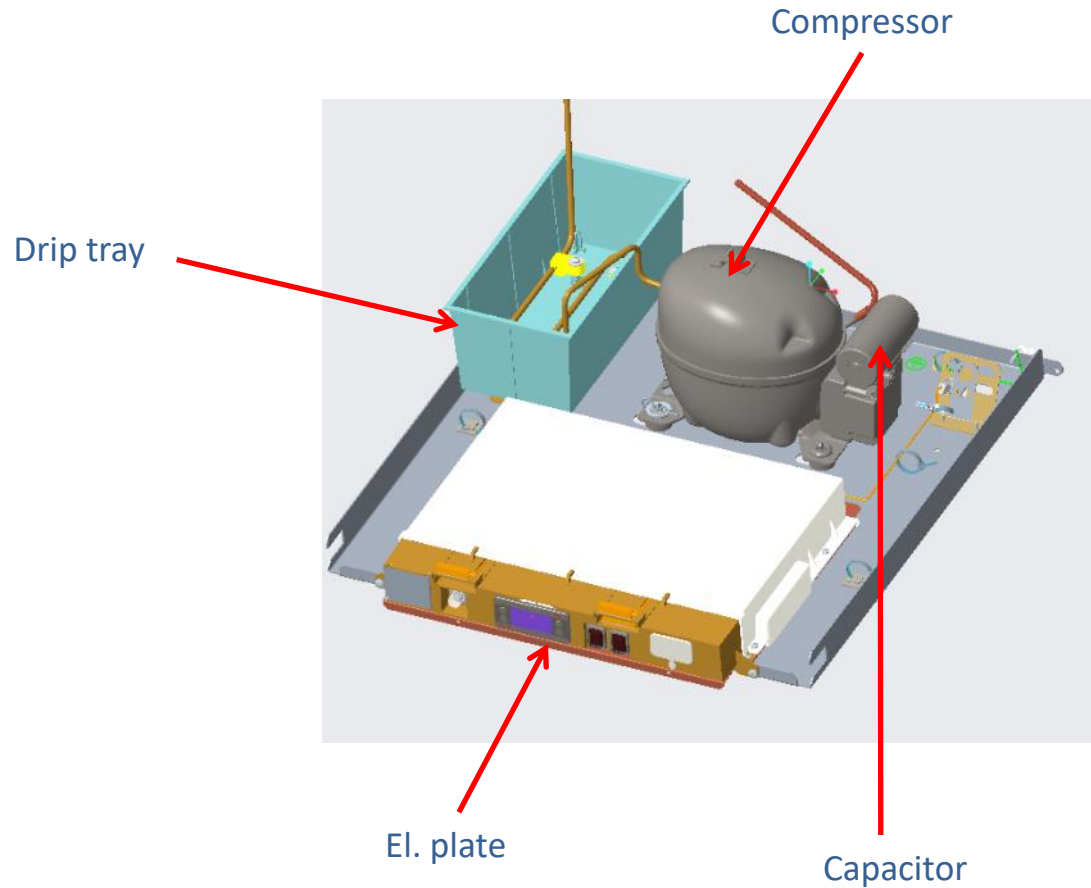
Condenser motors



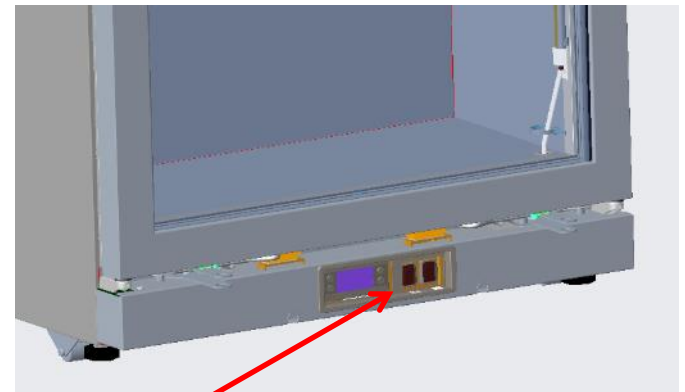
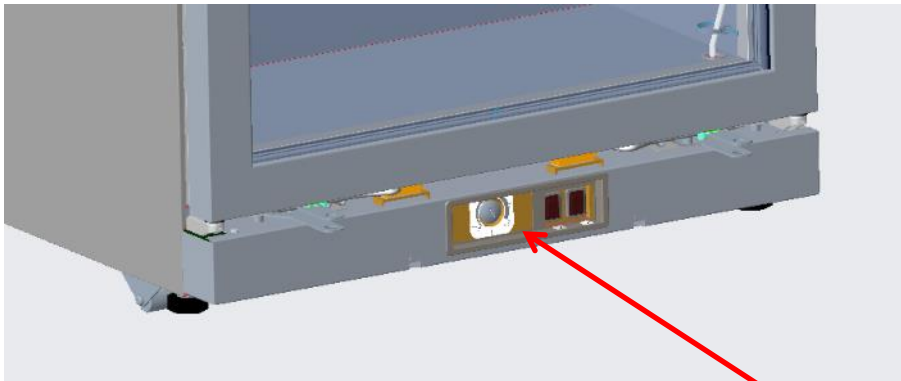
Metallic fan shroud (interim design / will be replaced by the plastic shroud)



Cooling mechanism Overview

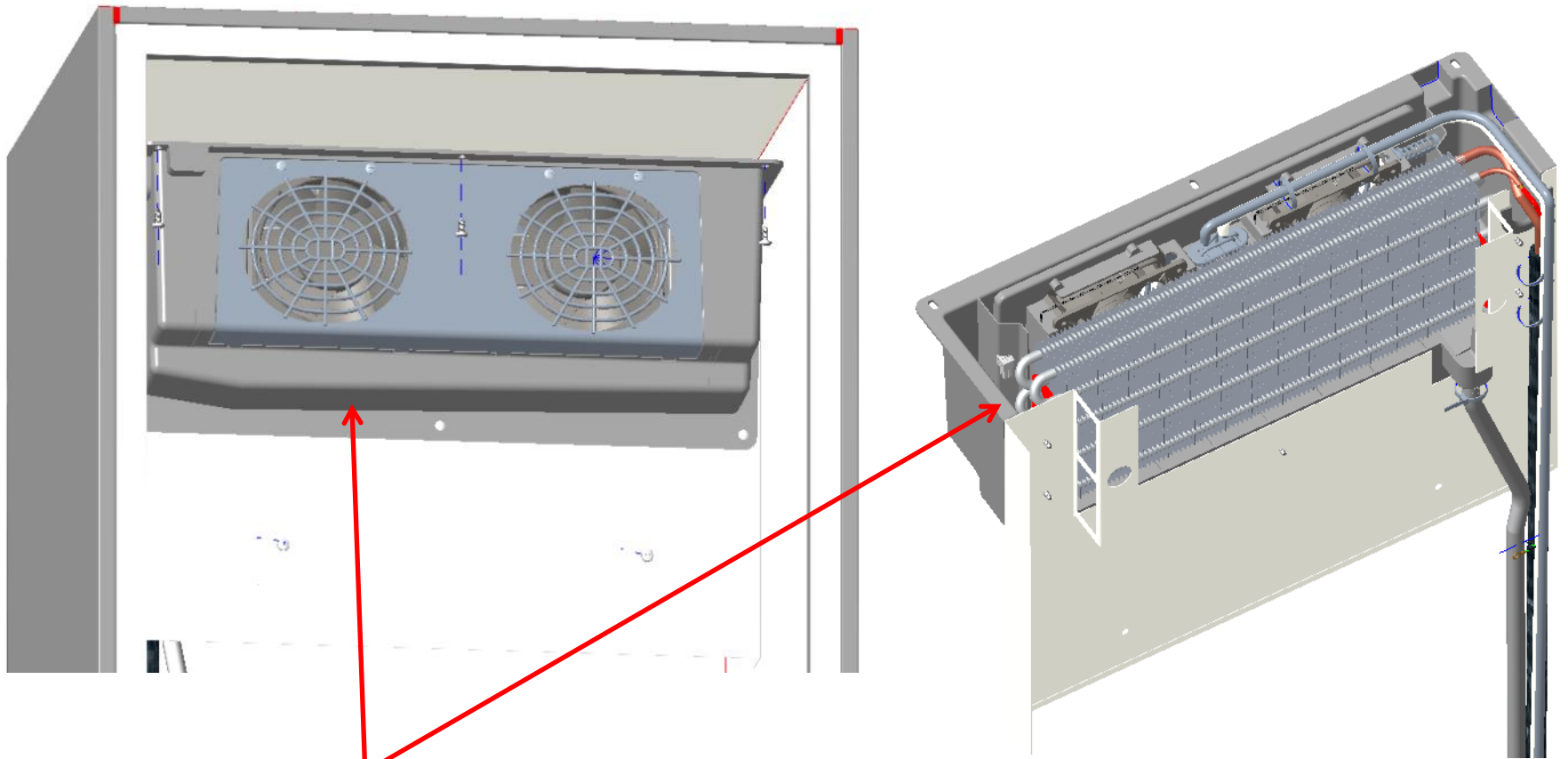


Cooling mechanism Overview



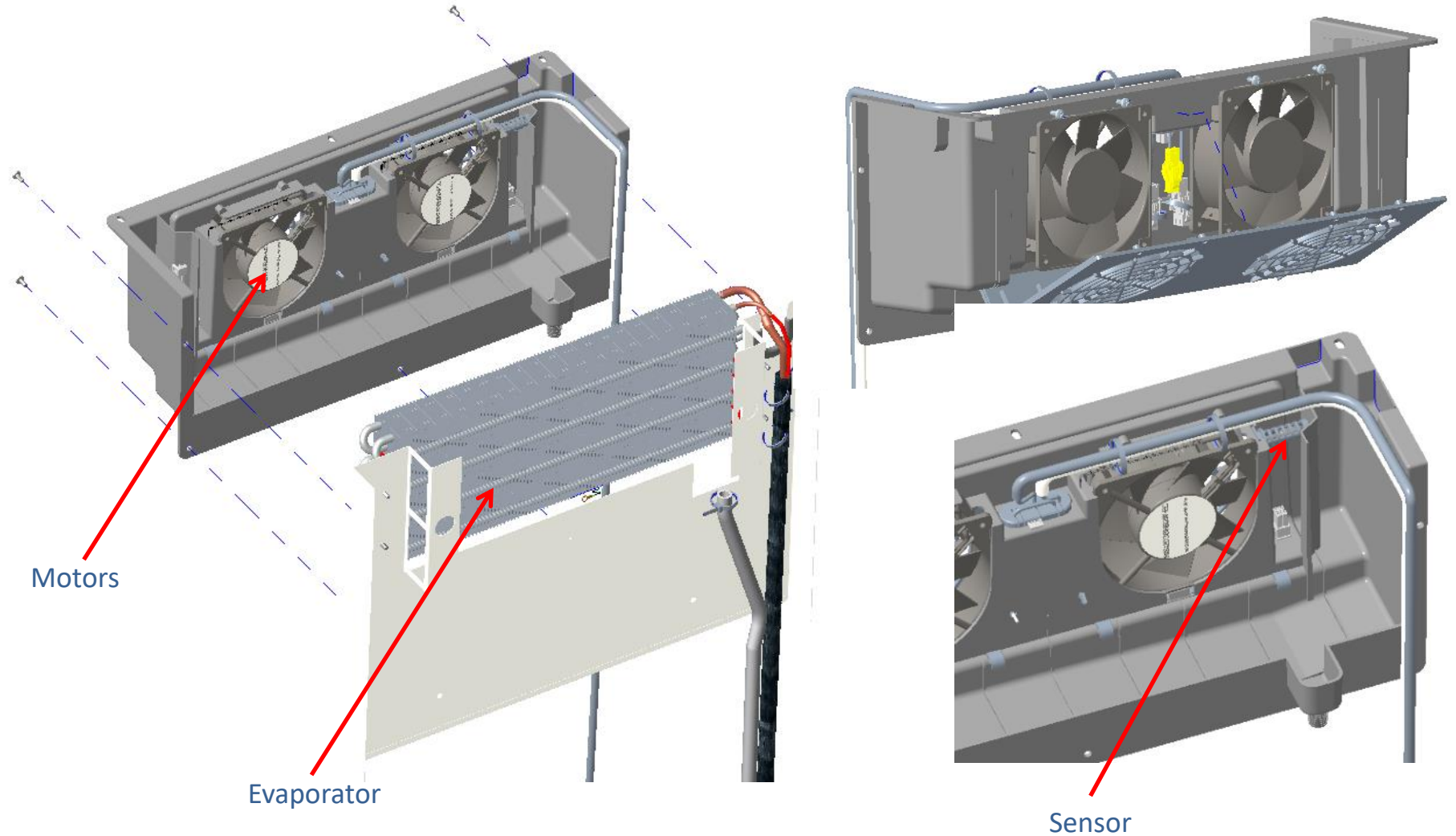
Thermostat or optional controller are visible through optional window at the front grid
(If control unit is not visible, front grid should be removed to have access on it)

Cooling mechanism Overview (PLASTIC FAN CASING)

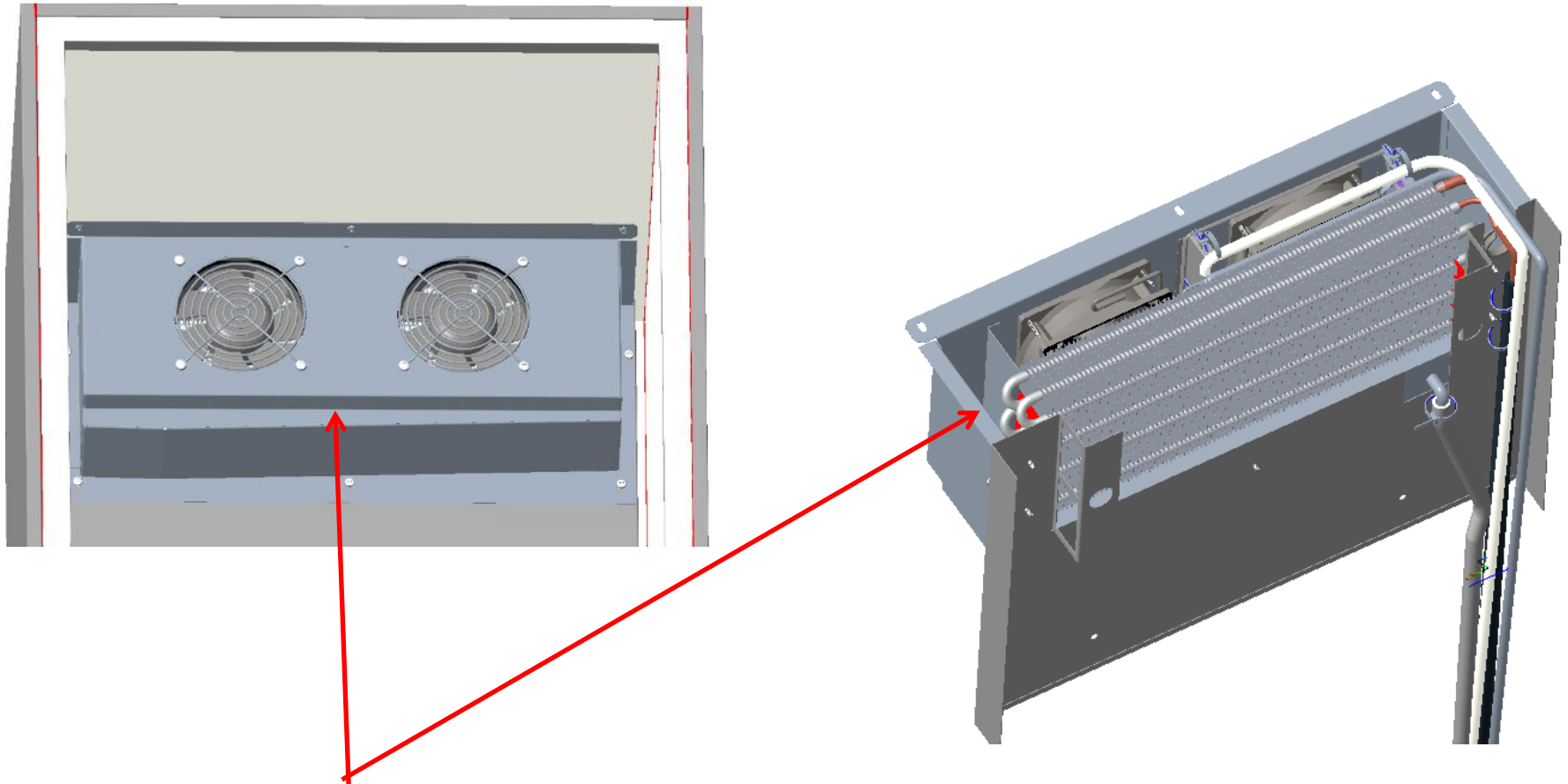


Evaporator compartment area
One piece evaporator
compartment area

Cooling mechanism Overview (PLASTIC FAN CASING)



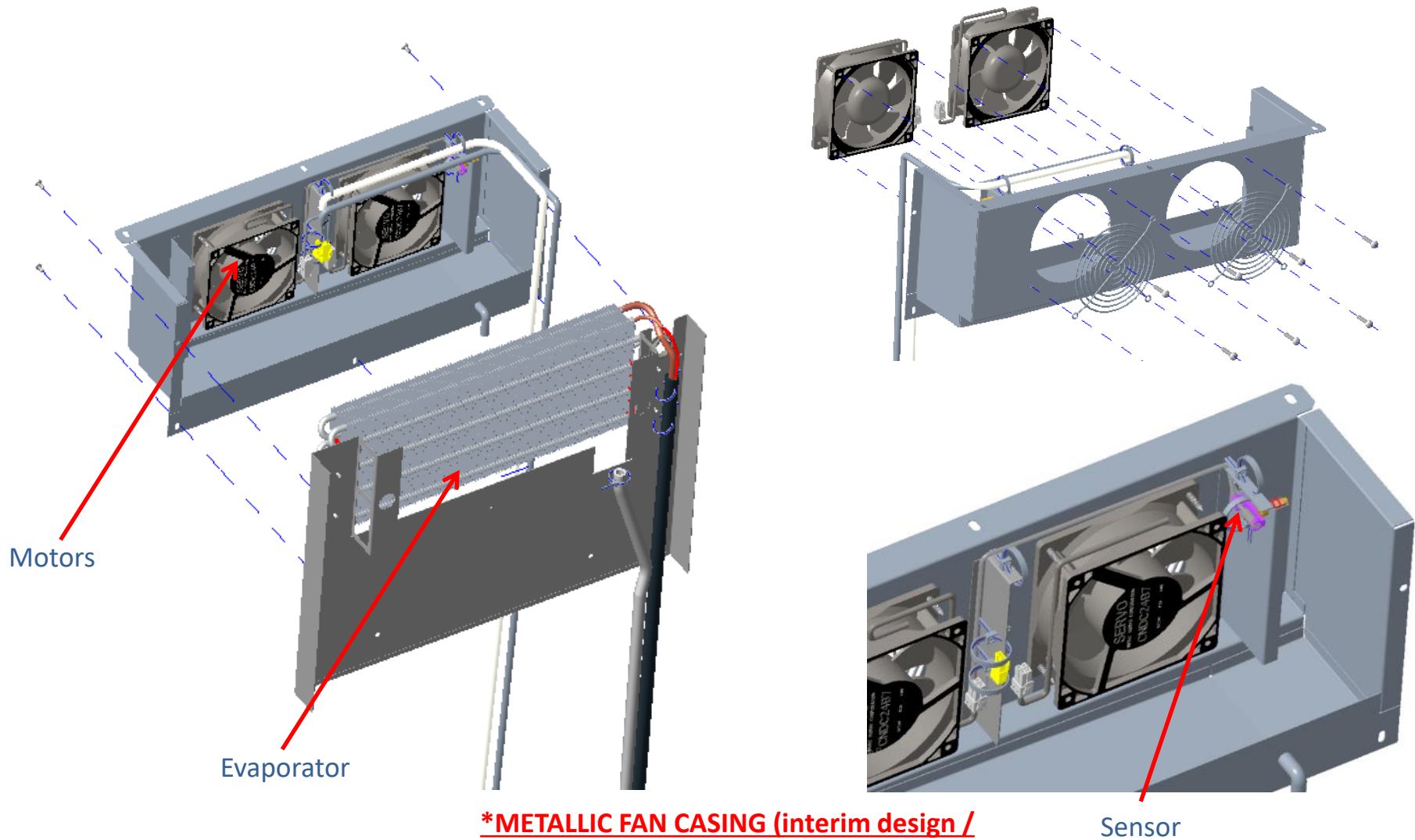
Cooling mechanism Overview (**METALLIC FAN CASING***)



Evaporator compartment area
One piece evaporator
compartment area

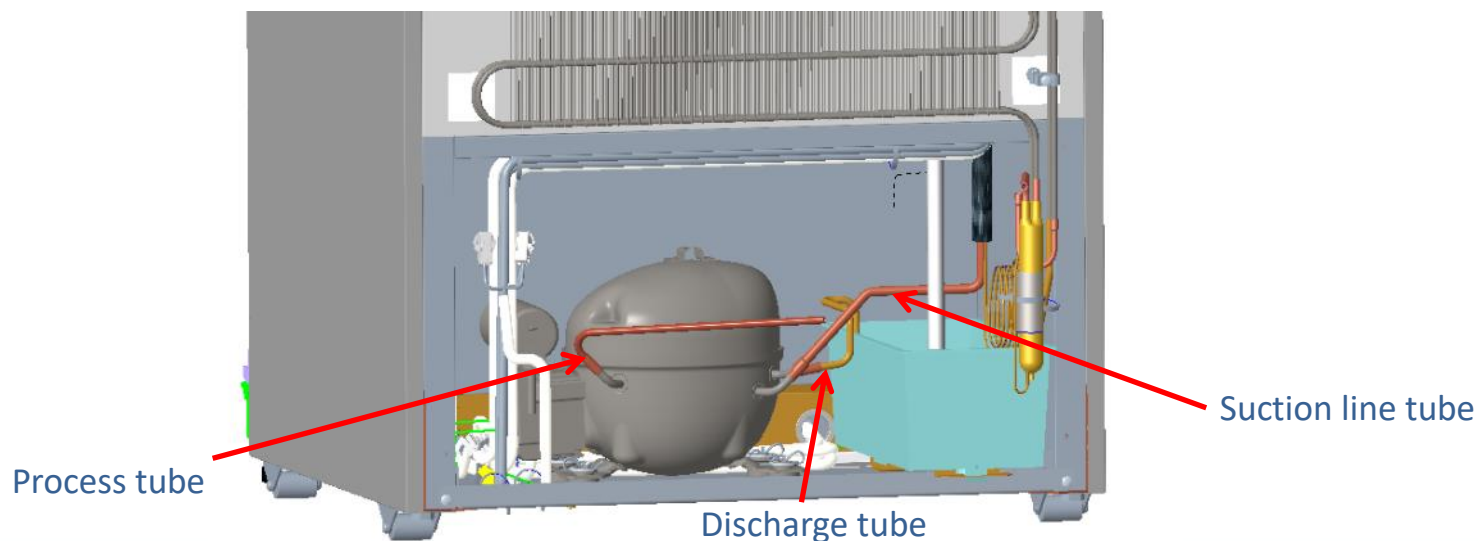
***METALLIC FAN CASING (interim design /
will be replaced by the plastic fan casing)**

Cooling mechanism Overview(**METALLIC FAN CASING***)



Cooling Data

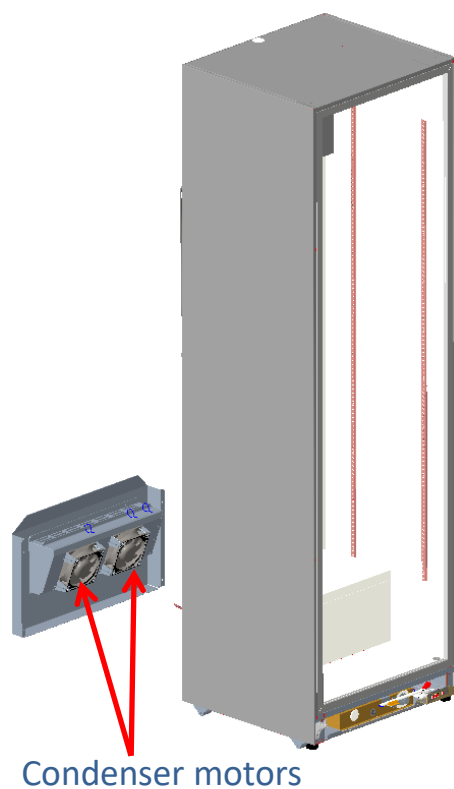
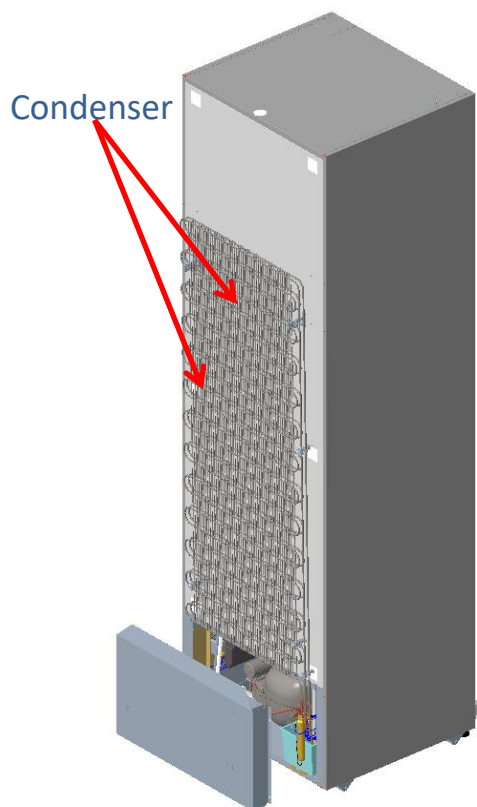
<i>Compressor</i>	
<i>Model</i>	COMPRESSOR FTA45L R290 WANBAO 220-240V 50Hz
<i>Refrigerant type</i>	R290
<i>Gas quantity</i>	0,057Kg
<i>Compressor Starting Relay</i>	QL2-5.55
<i>Compressor Overload Protector</i>	-
<i>Compressor Starting & Running Capacitors</i>	CD60/MSC-1 50 μ F, 330VAC, 50/60Hz (start capacitor)



Cooling Data

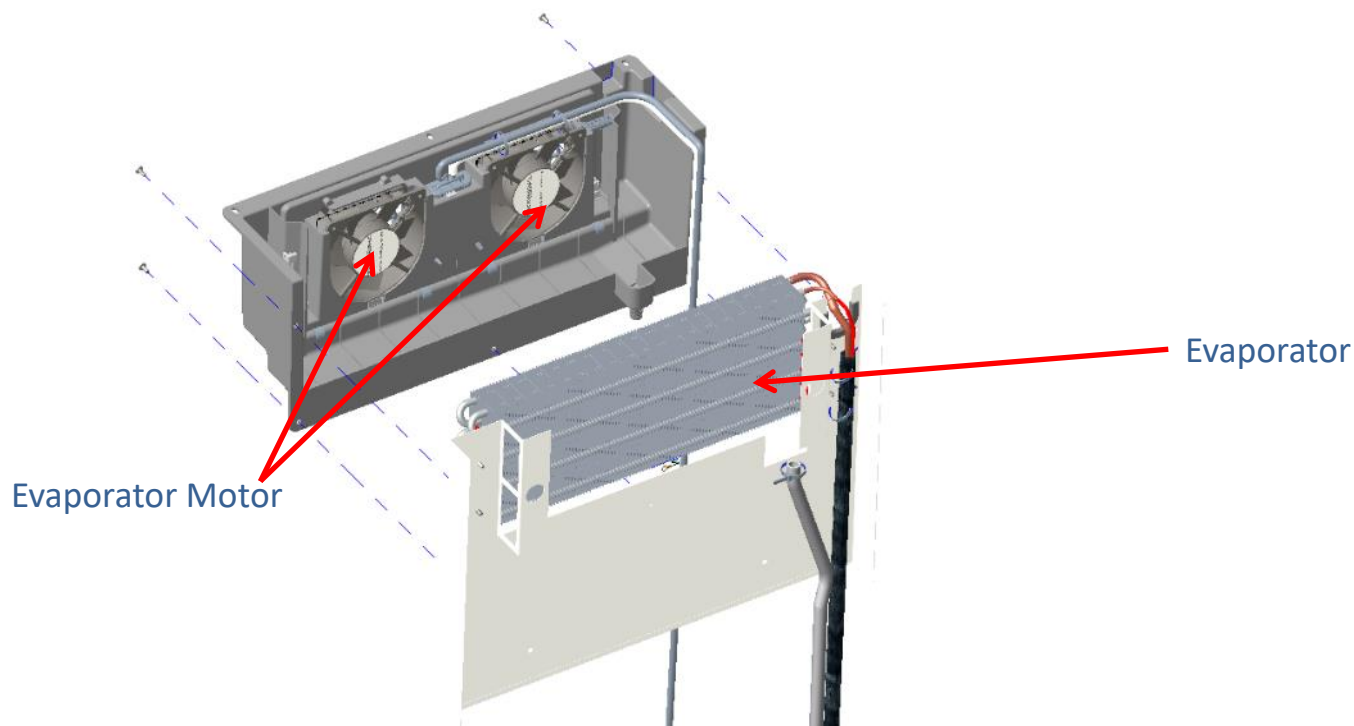
Condenser

Type	WIRE ON TUBE (D8H0500-BA-01 OR D8H0540-00-01)
Condenser fan motor	FAN MOTOR NIDEC BLOCK MOTOR CNDC24B7C-L15 4.8W 24VDC (X2)



Cooling Data

<i>Evaporator</i>	
<i>Type</i>	AI TUBE & AI FINS 376*150*50mm (FIN PACK) (D8H0500-00-01)
<i>Evaporator fan motor</i>	FAN MOTOR NIDEC BLOCK MOTOR CNDC24B7C-L15 4.8W 24VDC (X2)

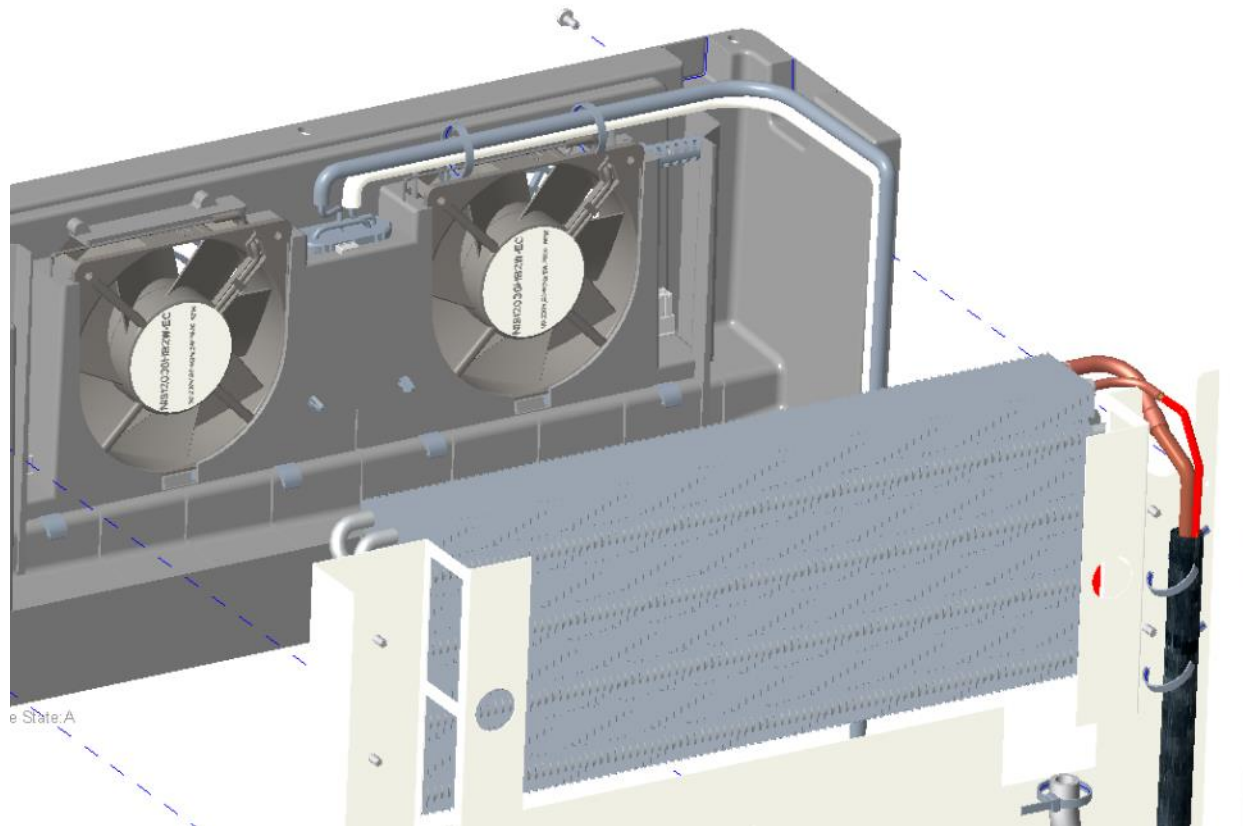


Cooling Data

Expansion System

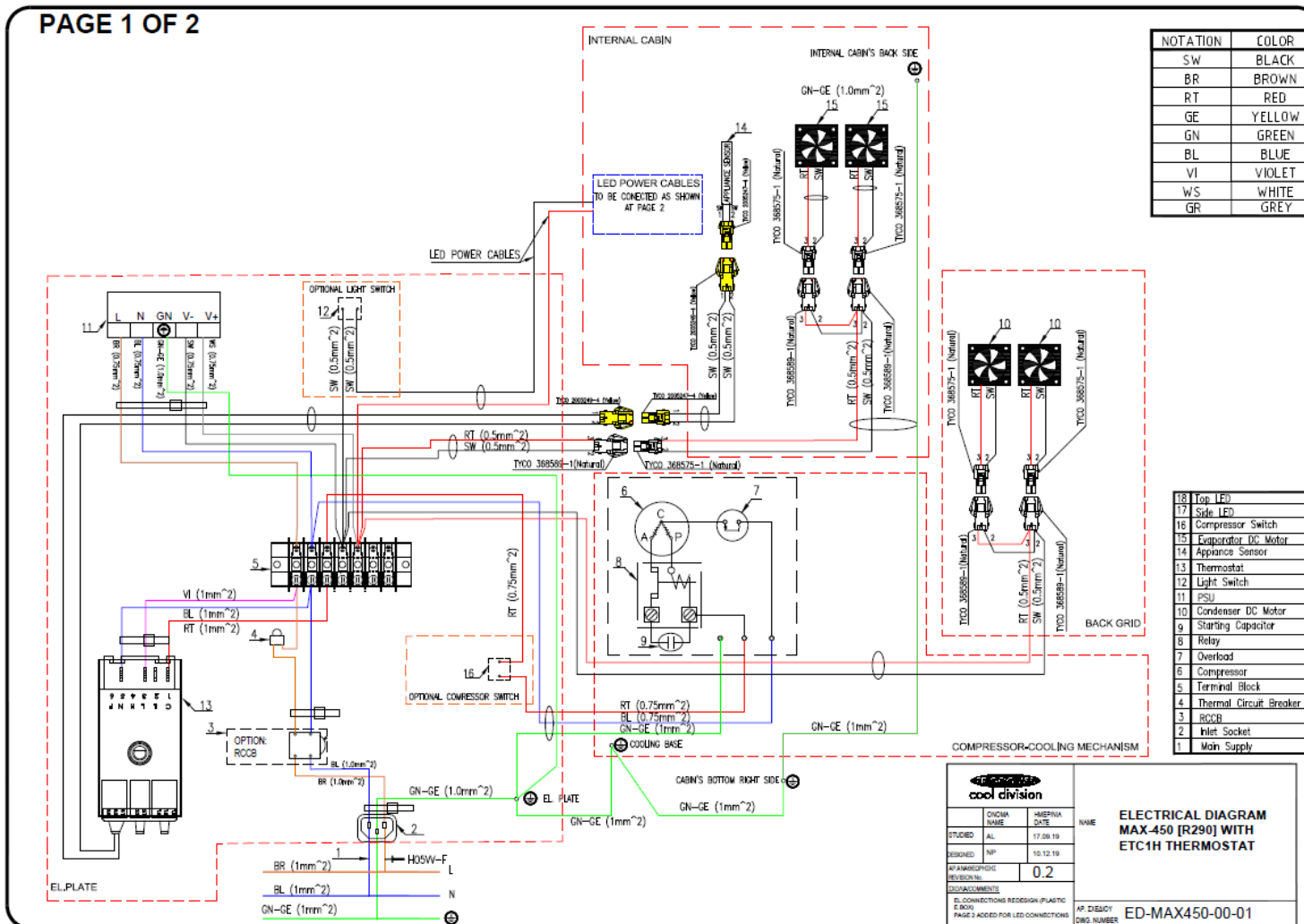
Specs (type, diameter, length)

Capillary Tube 0.042" * 3500mm



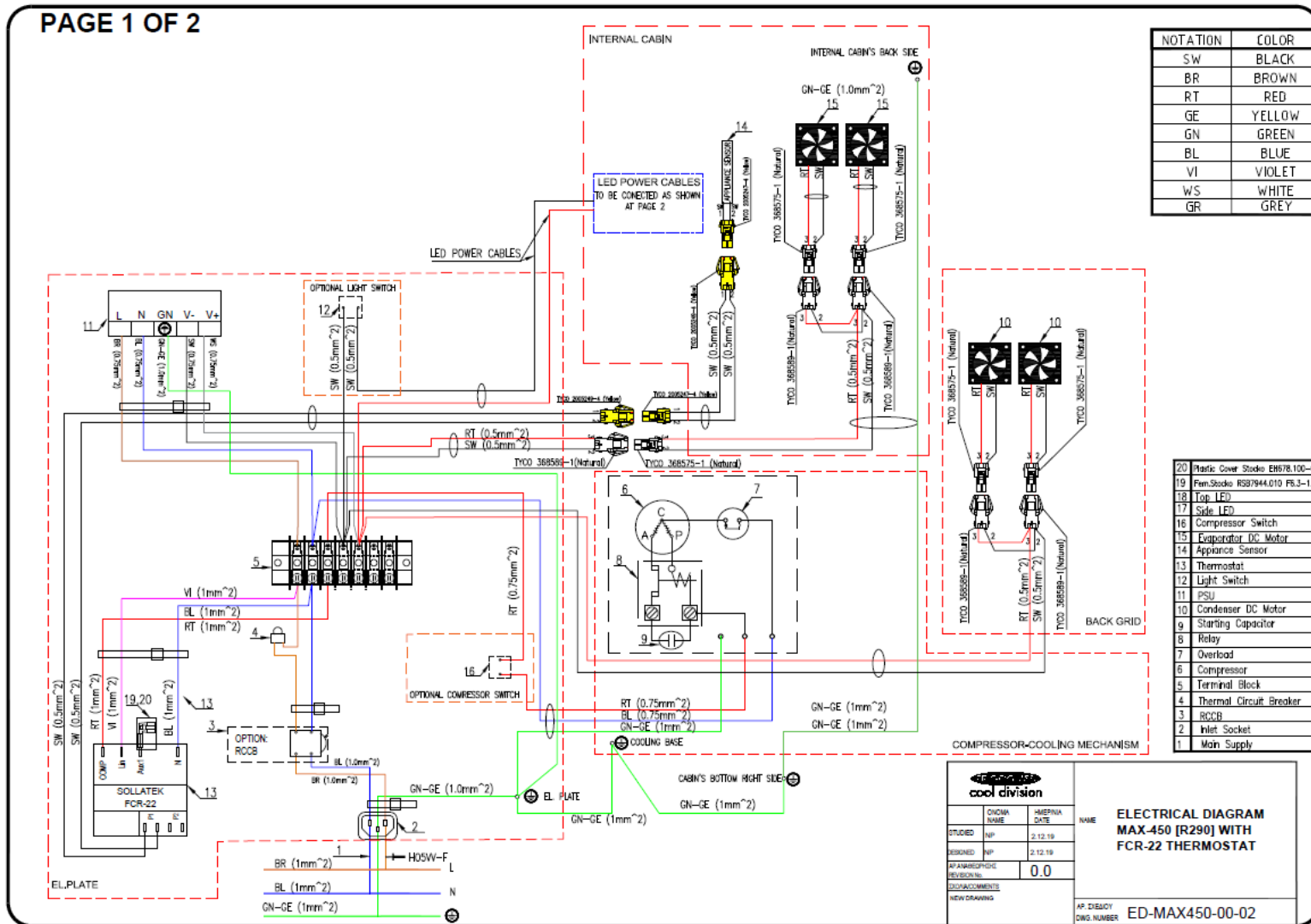
Electrical layout ETC1H1

PAGE 1 OF 2

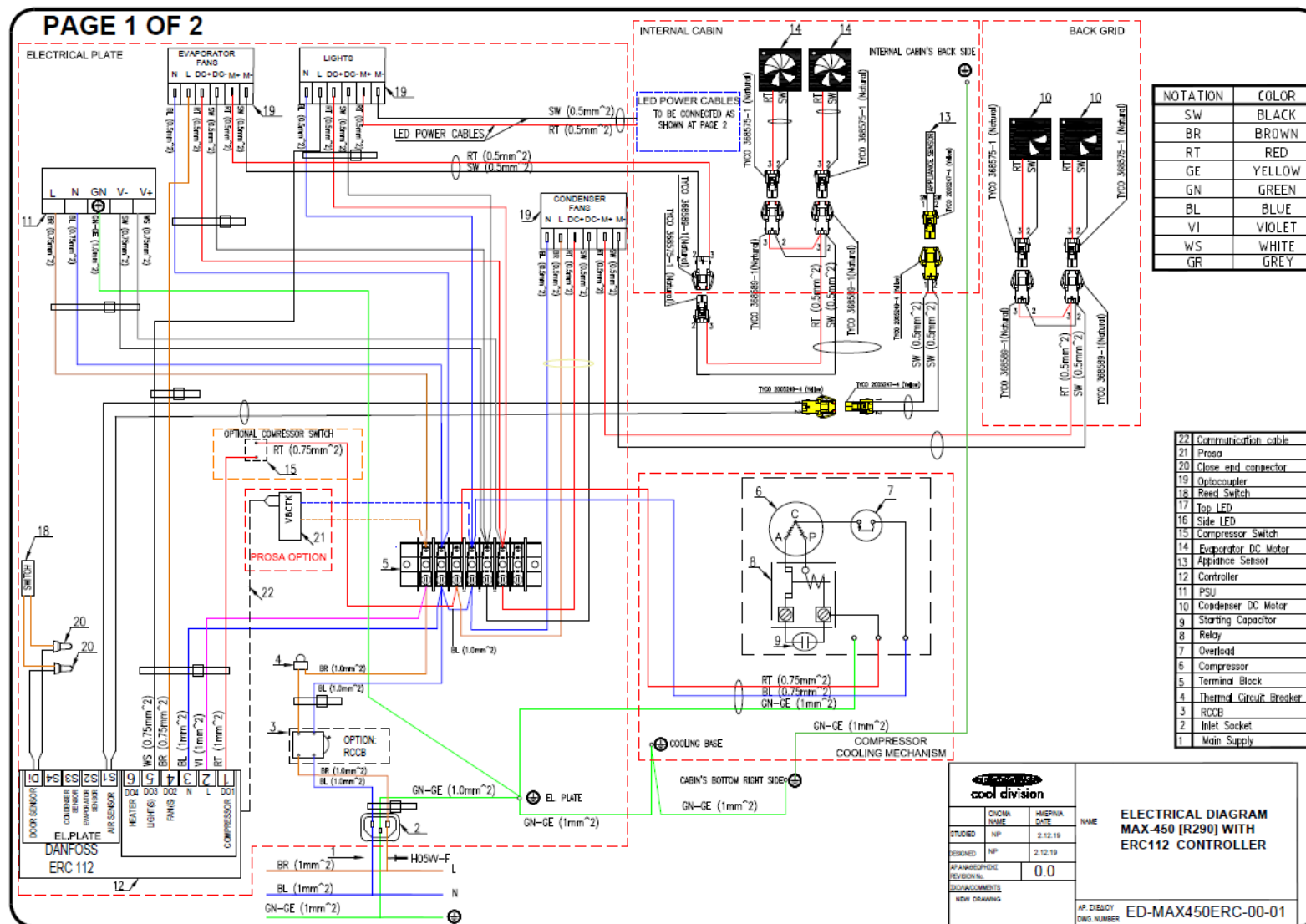


Electrical layout FCR-22

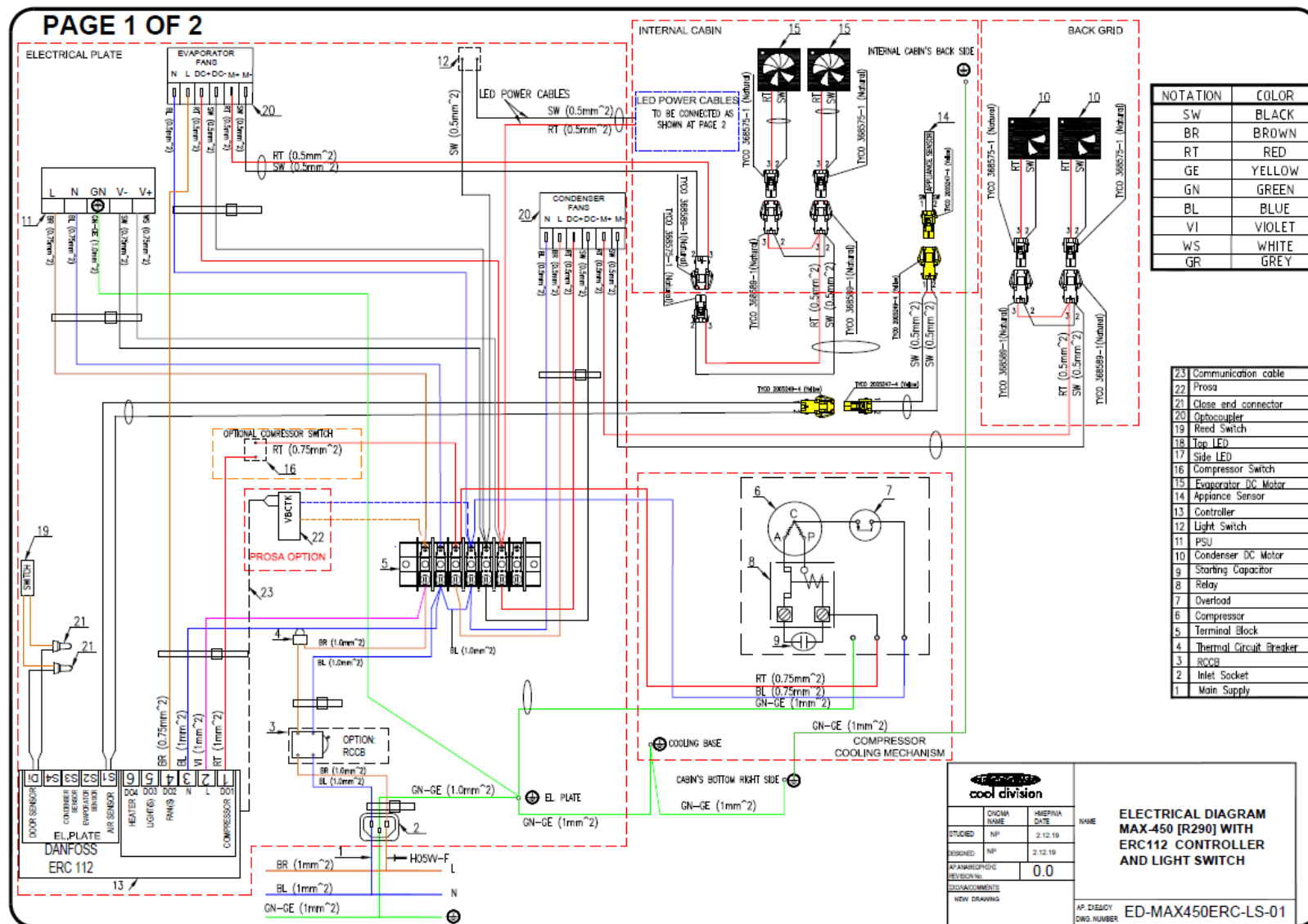
PAGE 1 OF 2



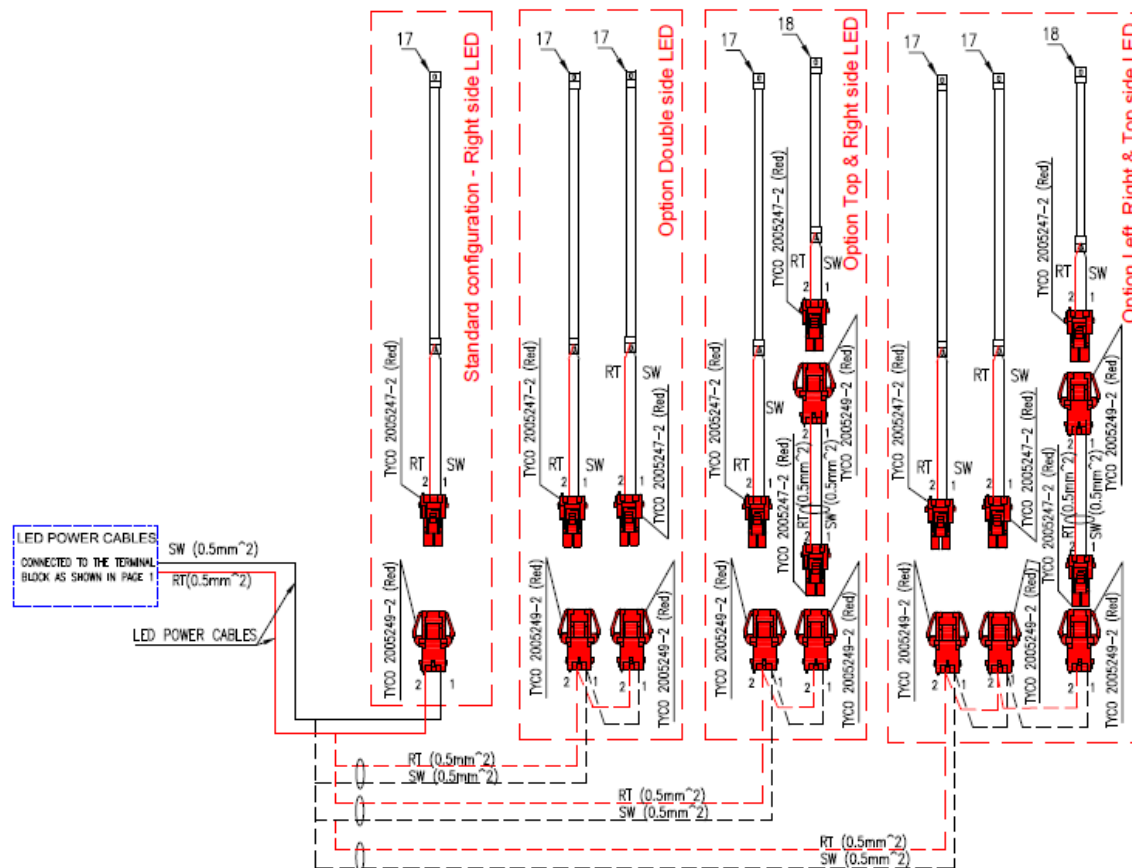
Electrical layout ERC



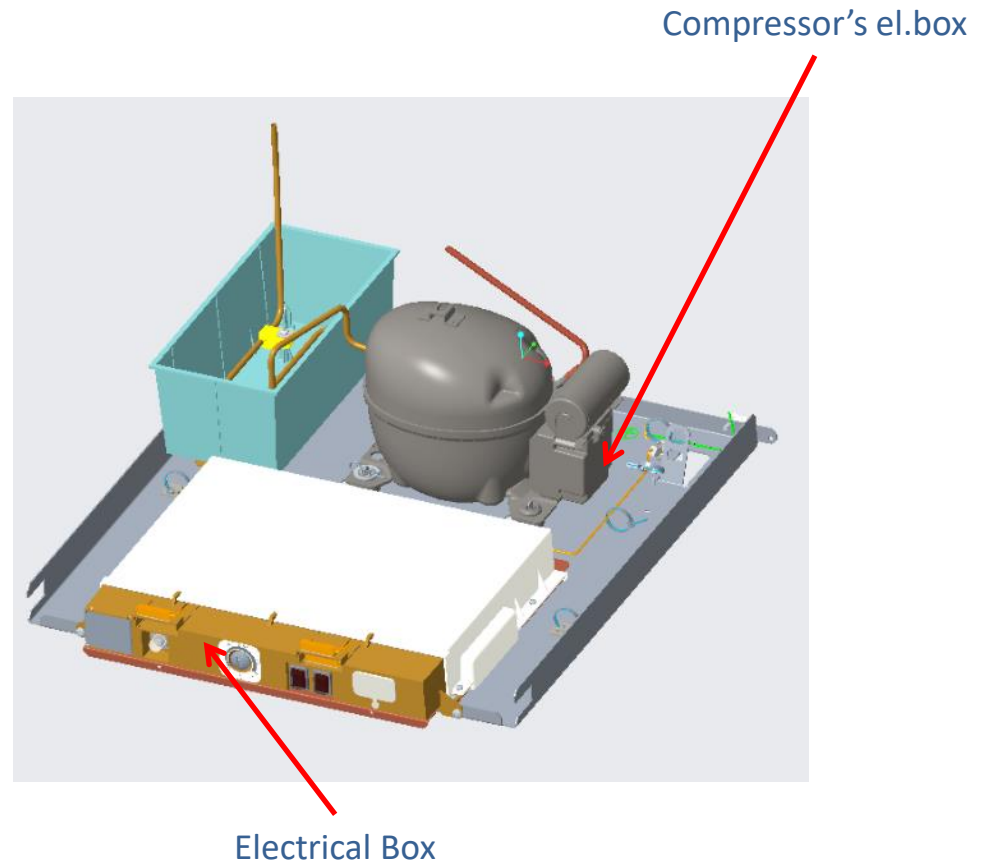
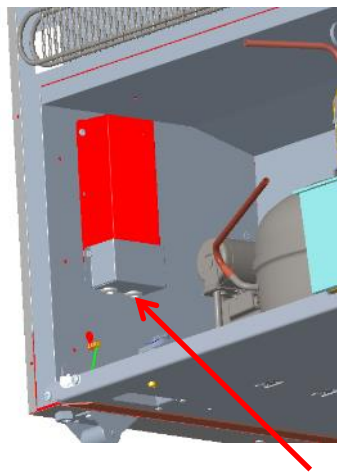
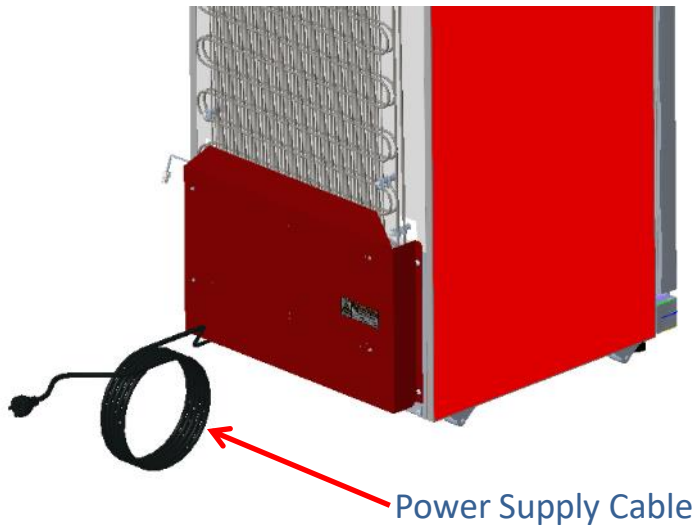
Electrical layout ERC & Light Switch



Electrical layout –LED (Valid for All)

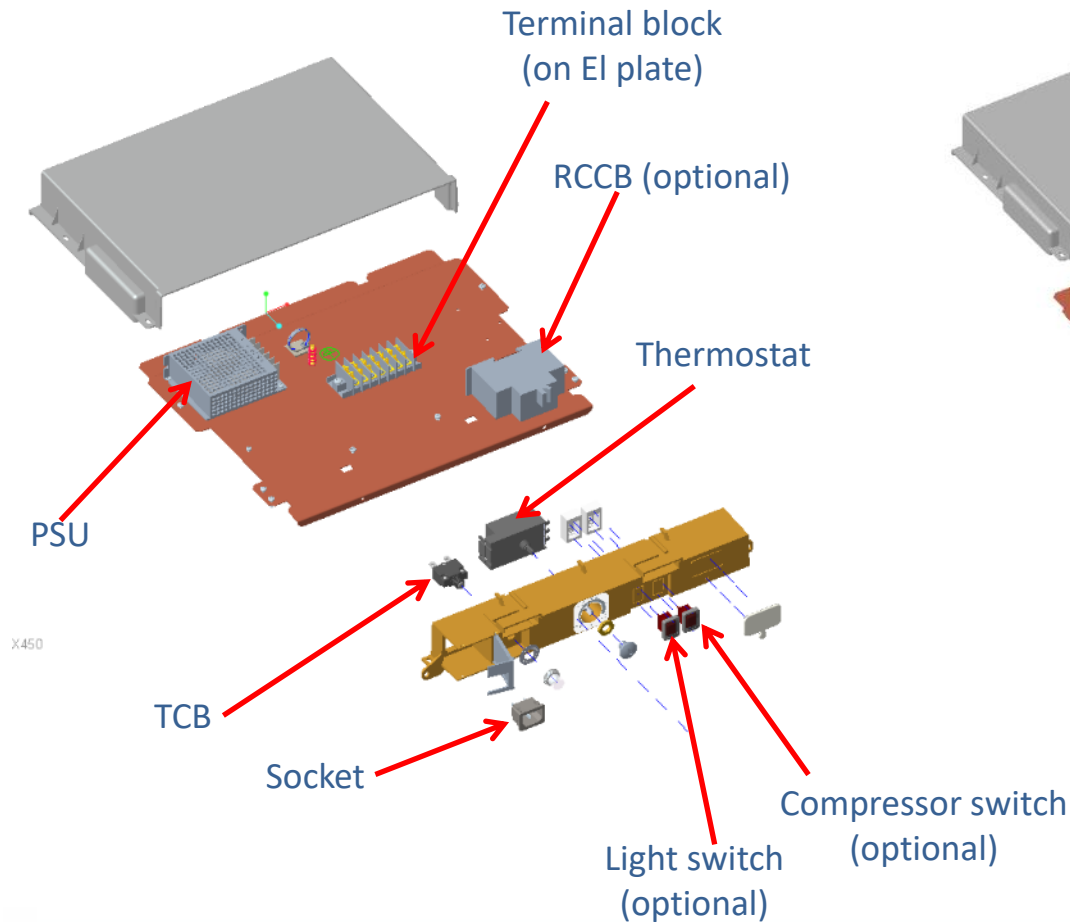


Electrical components overview/layout

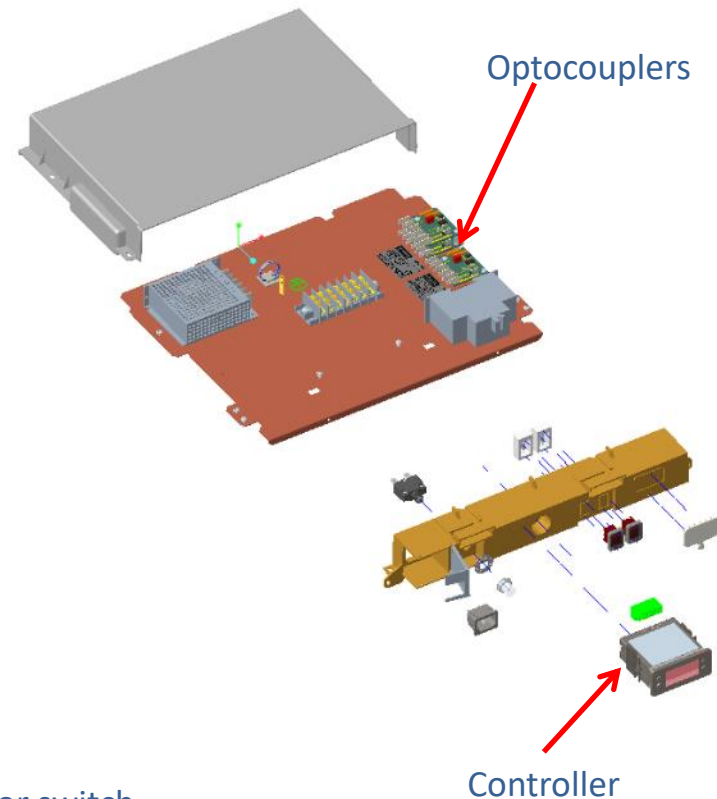


Electrical components overview/layout

Thermostat configuration

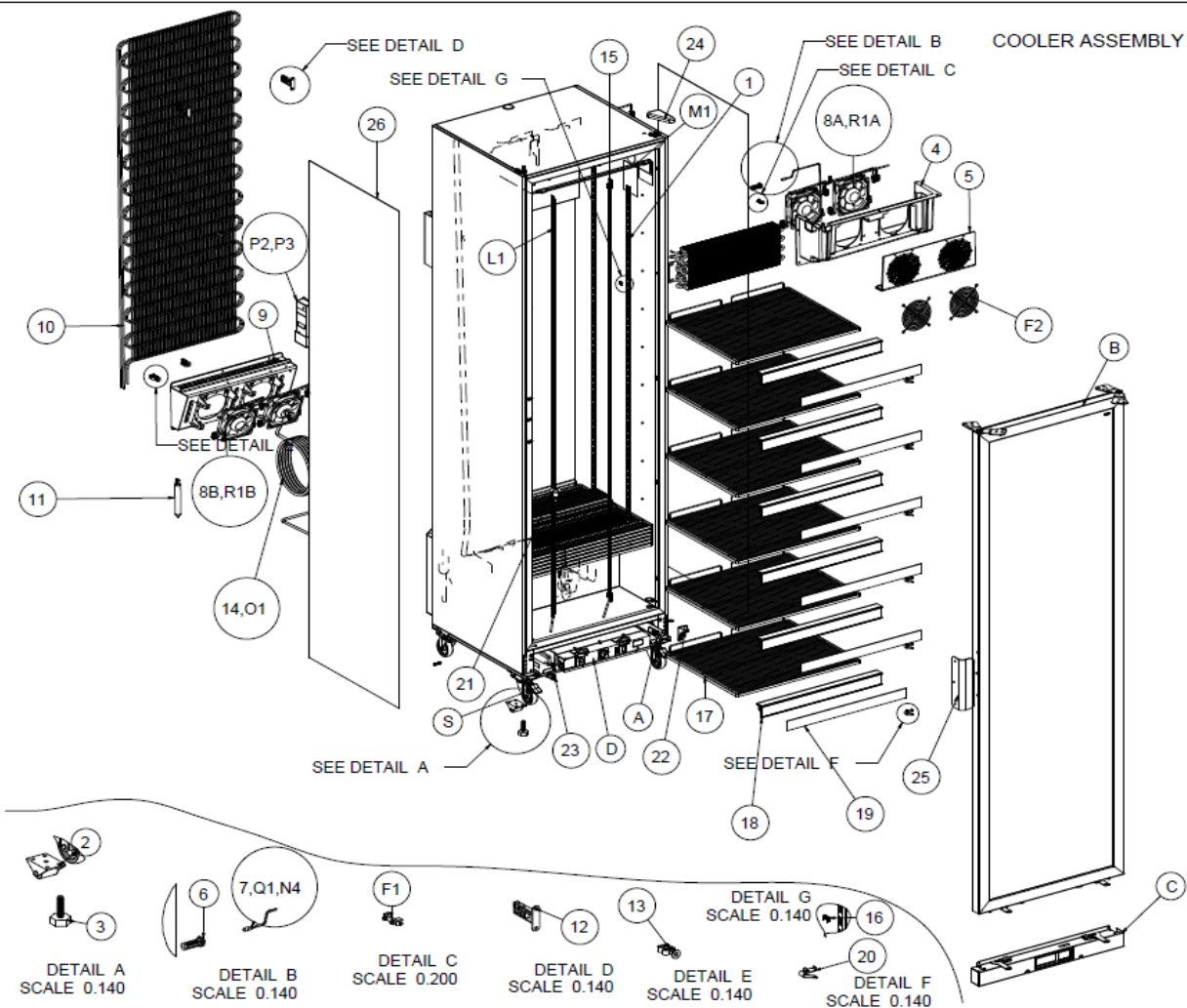


Controller configuration



Exploded view diagrams

MAX-450 [R290]



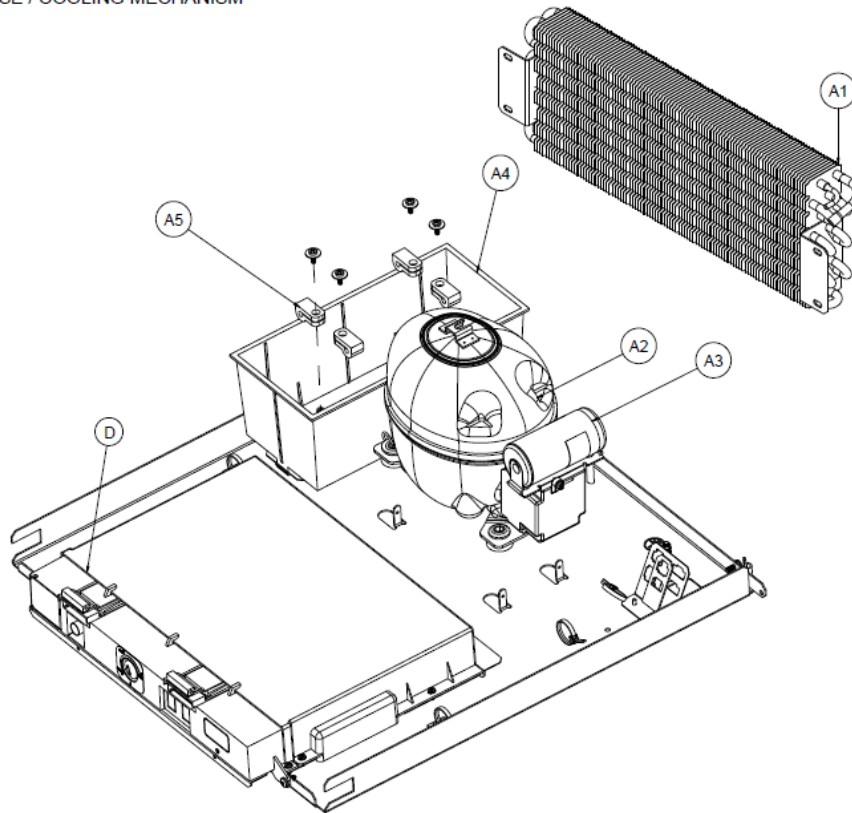
NAME	DATE	NAME	EXPLODED VIEW MAX-450 [R290]
CREATED BY: AL	23.09.19	NAME	EXPLODED VIEW MAX-450 [R290]
APPROVAL: AL	23.09.19	DWG NUMBER	EV-MAX450-01
DWG STATUS	Conceptual Design		
VER NO	CHANGE NOTE	DATE	MODIF. BY
0.3	CASTOR WHEELS OPTION ADDED	12.02.20	AL

S/N	DESCRIPTION
1	PILLASTER
2	ROLLER
3	ADJUSTABLE FOOT
4	EVAPORATOR COVER
5	EVAP. FAN CASING DOOR
6	SENSOR BAY
7	AIR SENSOR
8A	EVAPORATOR MOTOR
8B	CONDENSER MOTOR
9	PLASTIC CONDENSER MOTOR SHROUD
10	CONDENSER
11	FILTER - DRIER
12	BACK WOT CONDENSER CLIP
13	PLASTIC CLIP FOR CONDENSER
14	POWER CORD
15	LED ASSEMBLY 1600mm
16	LED CLIP
17	SHELF
18	PRICE PROFILE
19	PRICE STRIP
20	SHELF CLIP
21	DRAINAGE PLUG
22	BOTTOM HINGE
23	BASE SUPPORT
24	HINGE COVER
25	HANDLE
26	SIDE STICKER
A	COOLING BASE / COOLING MECHANISM
B	DOOR
C	FRONT GRID
D	ELECTRICAL PLATE
F	METALLIC FAN CASING OPTION
F1	SENSOR CLIP
F2	FAN SHROUD
L	LEFT SIDE LED OPTION
L1	LED ASSEMBLY 1600
M	TOP LED OPTION
M1	LED ASSEMBLY 400
N	ERC CONTROLLER OPTION
N4	SENSOR
O	PRCD OPTION
O1	PRCD POWER CORD
P	PROSA OPTION
P2	PROSA
P3	COMMUNICATION CABLE
Q	FCR THERMOSTAT OPTION
Q1	FCR SENSOR
R	AC MOTORS OPTION
R1A	EVAPORATOR MOTOR
R1B	CONDENSER MOTOR
S	CASTOR WHEELS OPTION

Exploded view diagrams

MAX-450 [R290]

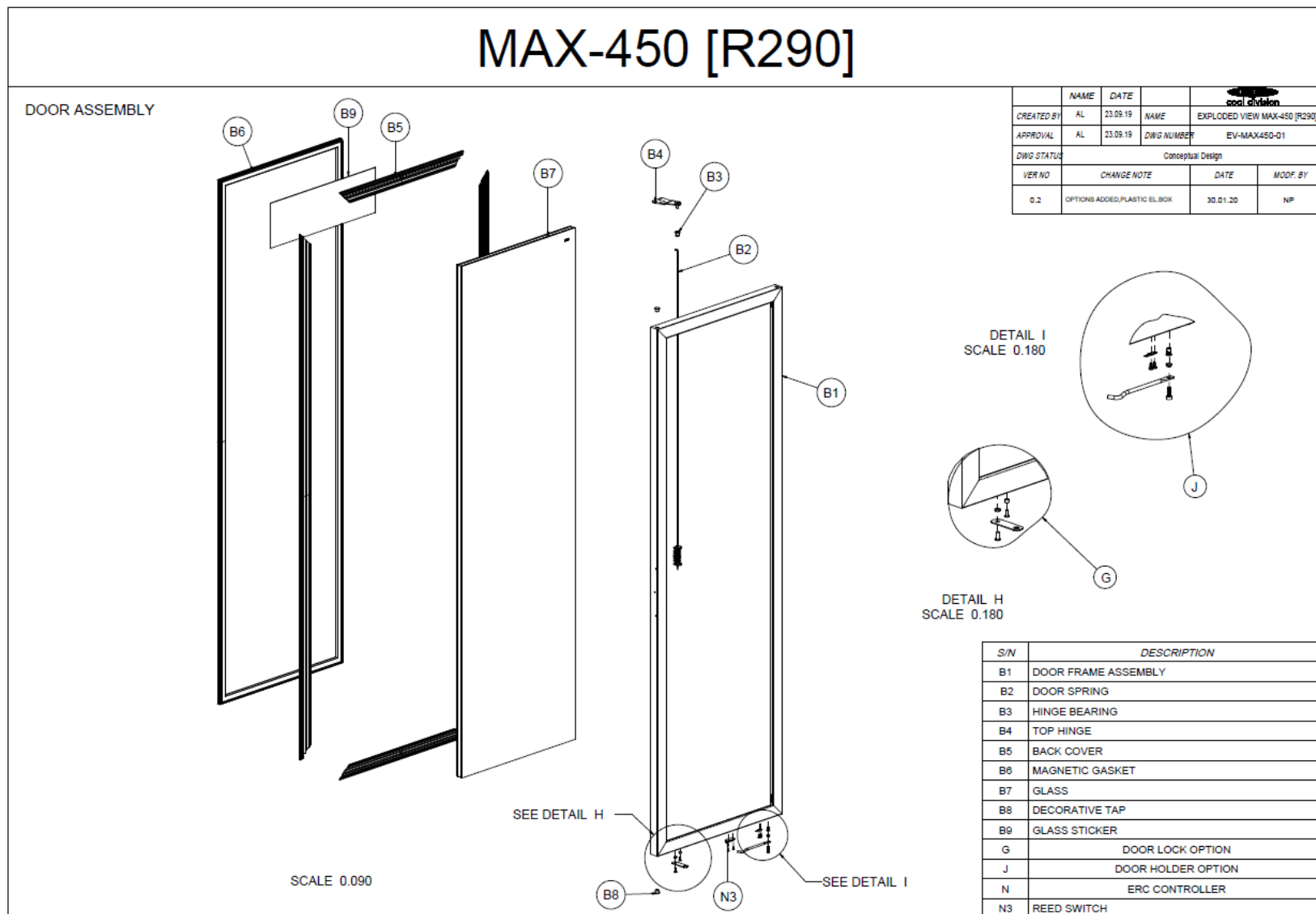
COOLER BASE / COOLING MECHANISM



	NAME	DATE		
CREATED BY	AL	23.09.19	NAME	EXPLODED VIEW MAX-450 [R290]
APPROVAL	AL	23.09.19	DWG NUMBER	EV-MAX450-01
DWG STATUS	Conceptual Design			
VER NO	CHANGE NOTE	DATE	MODIF. BY	
0.2	OPTIONS ADDED, PLASTIC EL BOX	30.01.20	NP	

S/N	DESCRIPTION
A1	EVAPORATOR
A2	COMPRESSOR
A3	START CAPACITOR
A4	DRIP TRAY
A5	GROMMET
D	ELECTRICAL PLATE

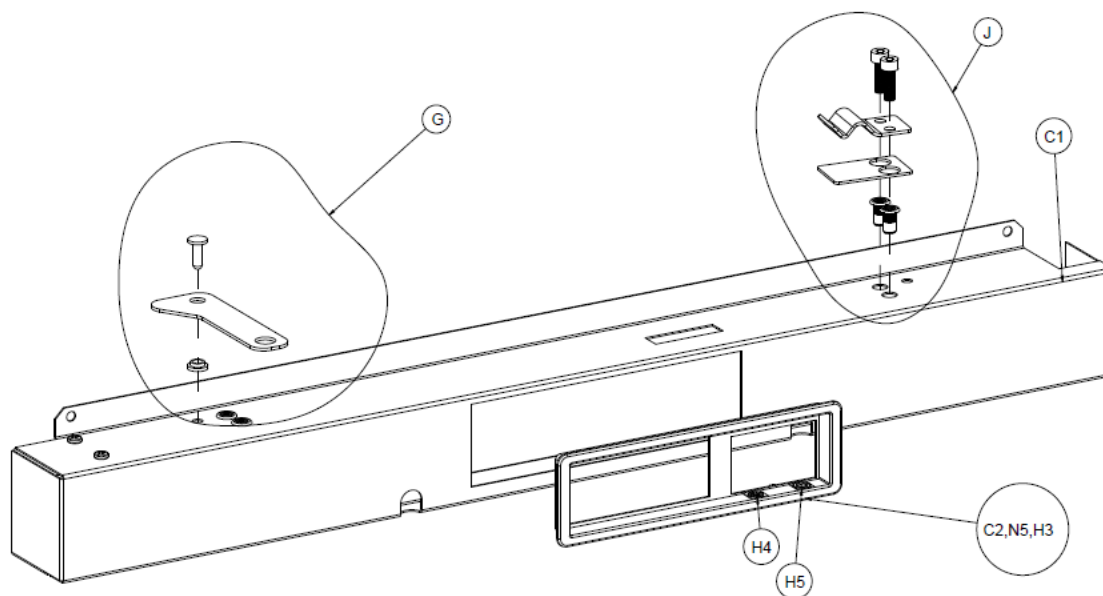
Exploded view diagrams



Exploded view diagrams

MAX-450 [R290]

FRONT GRID ASSEMBLY



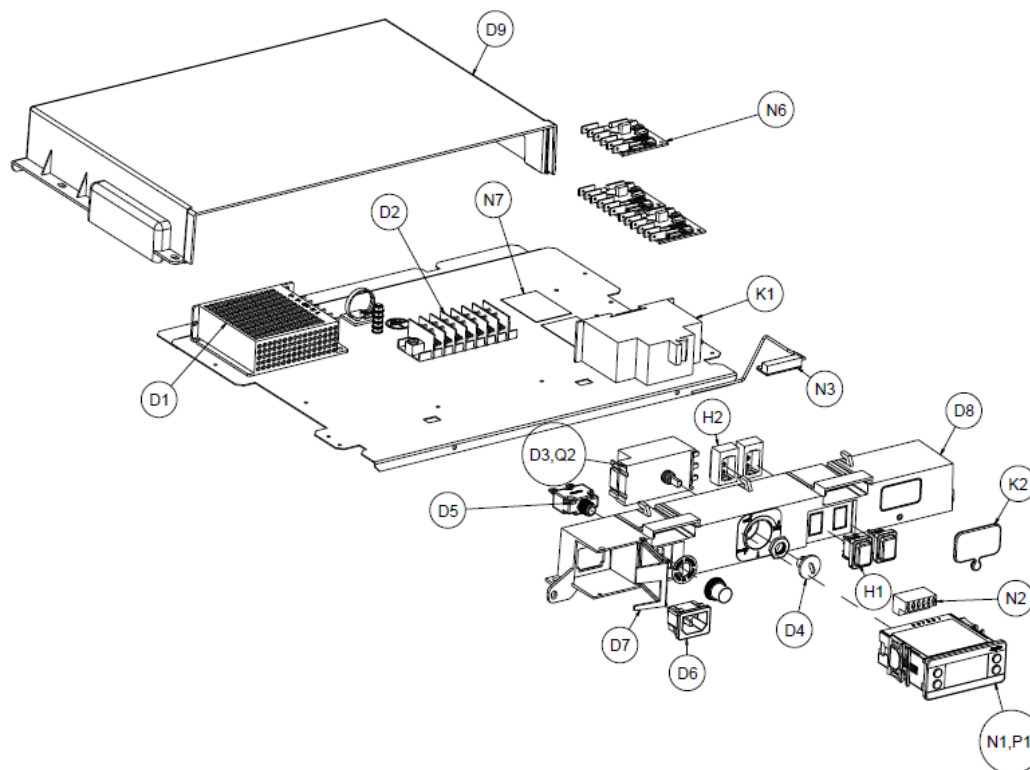
	NAME	DATE		
CREATED BY	AL	23.09.19	NAME	EXPLODED VIEW MAX-450 [R290]
APPROVAL	AL	23.09.19	DWG NUMBER	EV-MAX450-01
DWG STATUS	Conceptual Design			
VER NO	CHANGE NOTE	DATE	MODF. BY	
0.2	OPTIONS ADDED; PLASTIC EL BOX	30.01.20	NP	

S/N	DESCRIPTION
C1	FRONT GRID MAIN PART
C2	FRONT GRID DISPLAY COVER
G	DOOR LOCK OPTION
J	DOOR HOLDER OPTION
N	ERC CONTROLLER OPTION
N5	FRONT GRID DISPLAY COVER
H	LIGHT/COMPRESSOR SWITCH OPTION
H3	FRONT GRID DISPLAY COVER
H4	LIGHT SWITCH STICKER
H5	COMPRESSOR SWITCH STICKER

Exploded view diagrams

MAX-450 [R290]

ELECTRICAL PLATE



	NAME	DATE		
CREATED BY	AL	23.09.19	NAME	EXPLODED VIEW MAX-450 [R290]
APPROVAL	AL	23.09.19	DWG NUMBER	EV-MAX450-01
DWG STATUS	Conceptual Design			
VER NO	CHANGE NOTE	DATE	MODIF. BY	
0.2	OPTIONS ADDED (PLASTIC EL BOX)	30.01.20	NP	

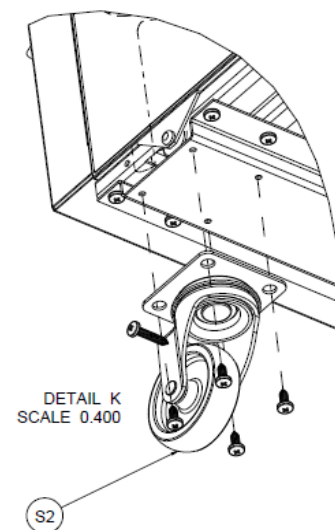
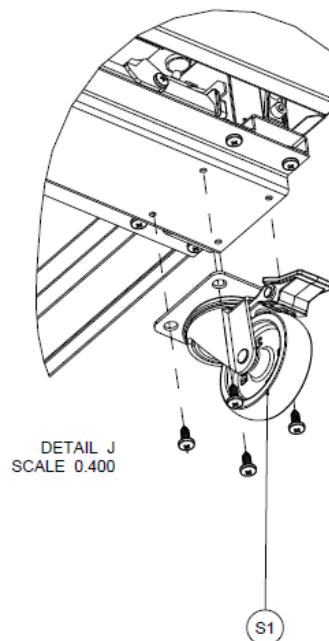
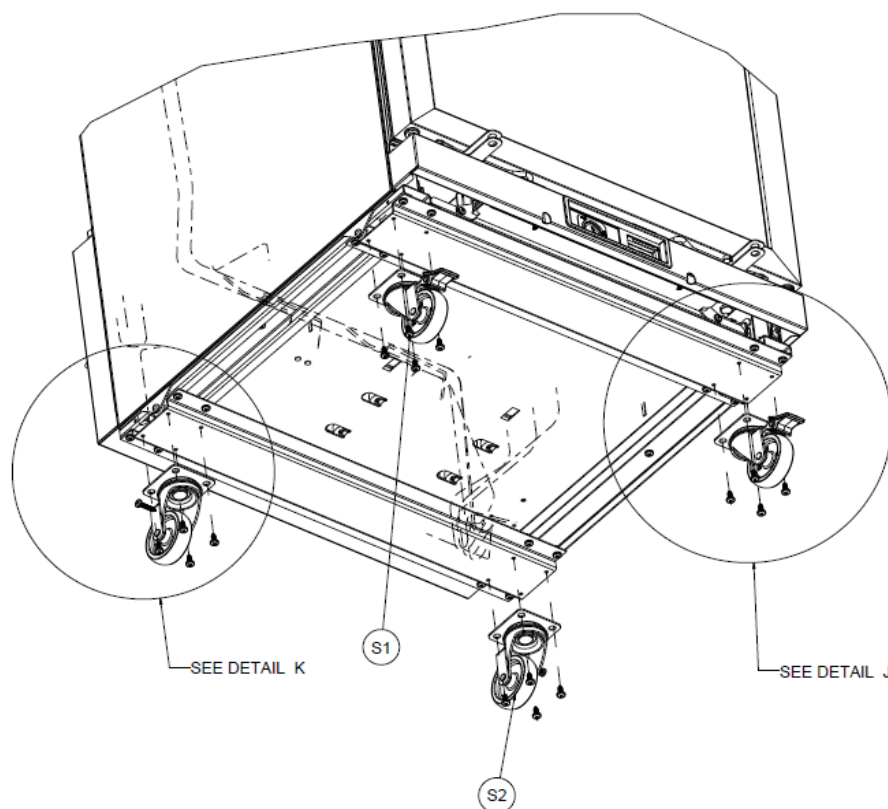
S/N	DESCRIPTION
D1	PSU
D2	TERMINAL BLOCK
D3	THERMOSTAT
D4	THERMOSTAT KNOB
D5	THERMAL CIRCUIT BREAKER
D6	POWER SOCKET
D7	PLUG DOOR
D8	ELECTRICAL PLATE FRONT PART
D9	ELECTRICAL PLATE COVER
H	LIGHT SWITCH OPTION
H1	LIGHT SWITCH
H2	SILICONE RUBBER BACK COVER FOR SWITCH
K	RCCB OPTION
K1	RCCB
K2	RCCB ELASTIC TAP
N	ERC CONTROLLER OPTION
N1	CONTROLLER
N2	CONTROLLER TERMINAL BLOCK
N3	REED SWITCH
N6	OPTOCOUPLER
N7	OPTOCOUPLER STICKER
P	PROSA OPTION
P1	ERC FOR PROSA
Q	FCR THERMOSTAT OPTION
Q2	FCR THERMOSTAT

Exploded view diagrams

MAX-450 [R290]

CASTOR WHEELS OPTION

	NAME	DATE		
CREATED BY	AL	12.02.20	NAME	EXPLODED VIEW MAX-450 [R290]
APPROVAL	AL	12.02.20	DWG NUMBER	EV-MAX450-01
DWG STATUS	Conceptual Design			
VER NO	CHANGE NOTE	DATE	MODIF. BY	
0.3	CASTOR WHEELS OPTION ADDED	12.02.20	AL	



S/N	DESCRIPTION
S	CASTOR WHEELS OPTION
S1	FIXED CASTOR WHEEL WITH BREAK
S2	SWIVEL CASTOR WHEEL