


# **DUO MODULAR DUO MAX DUO MOD. DESIGN DUO MAX DESIGN**

## **INSTRUCTIONS POUR L'INSTALLATION**

### ***INSTALLATION INSTRUCTIONS***

N° DOC. QSM000803A  
REV. "E" 02.09.15



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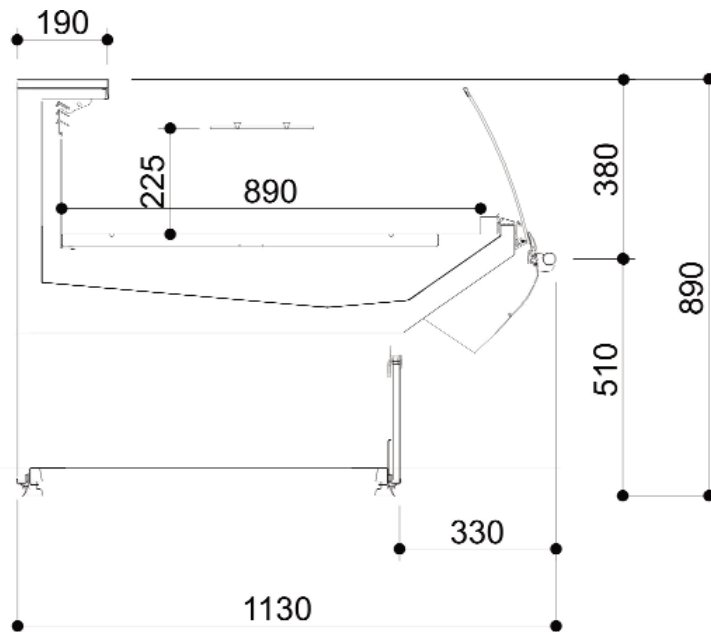
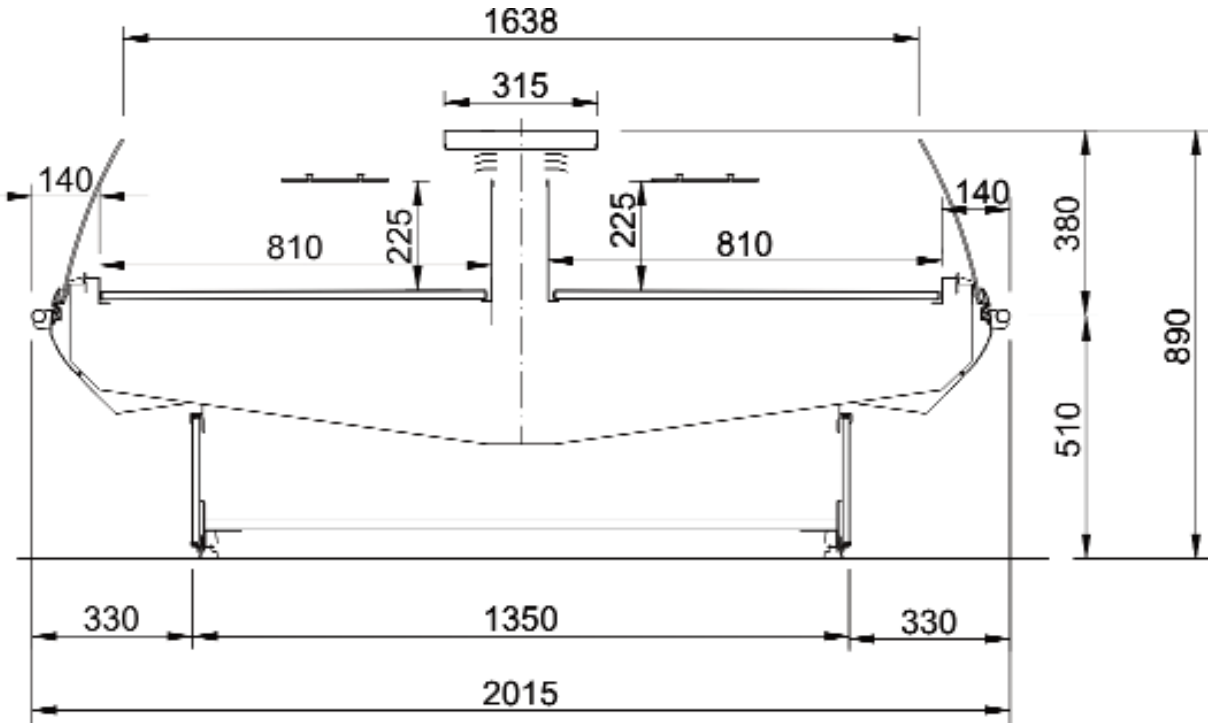
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## LÉGENDA

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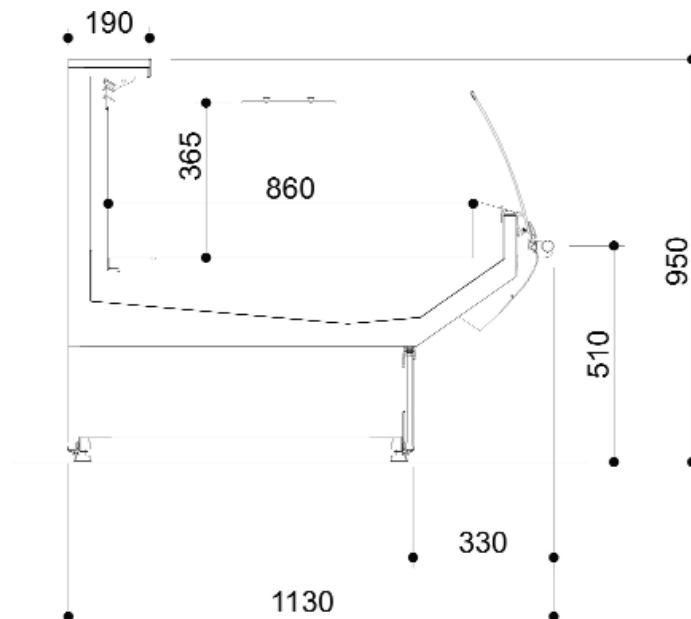
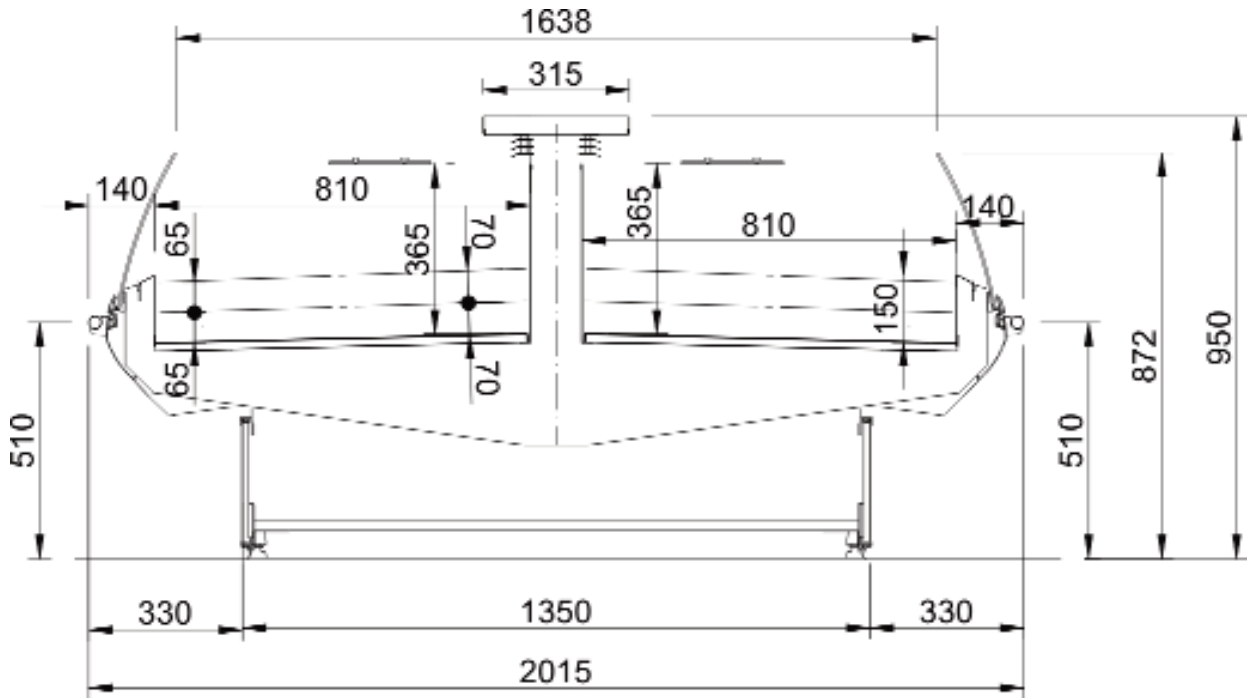
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## DUO MODULAR COUPES/CROSS SECTIONS



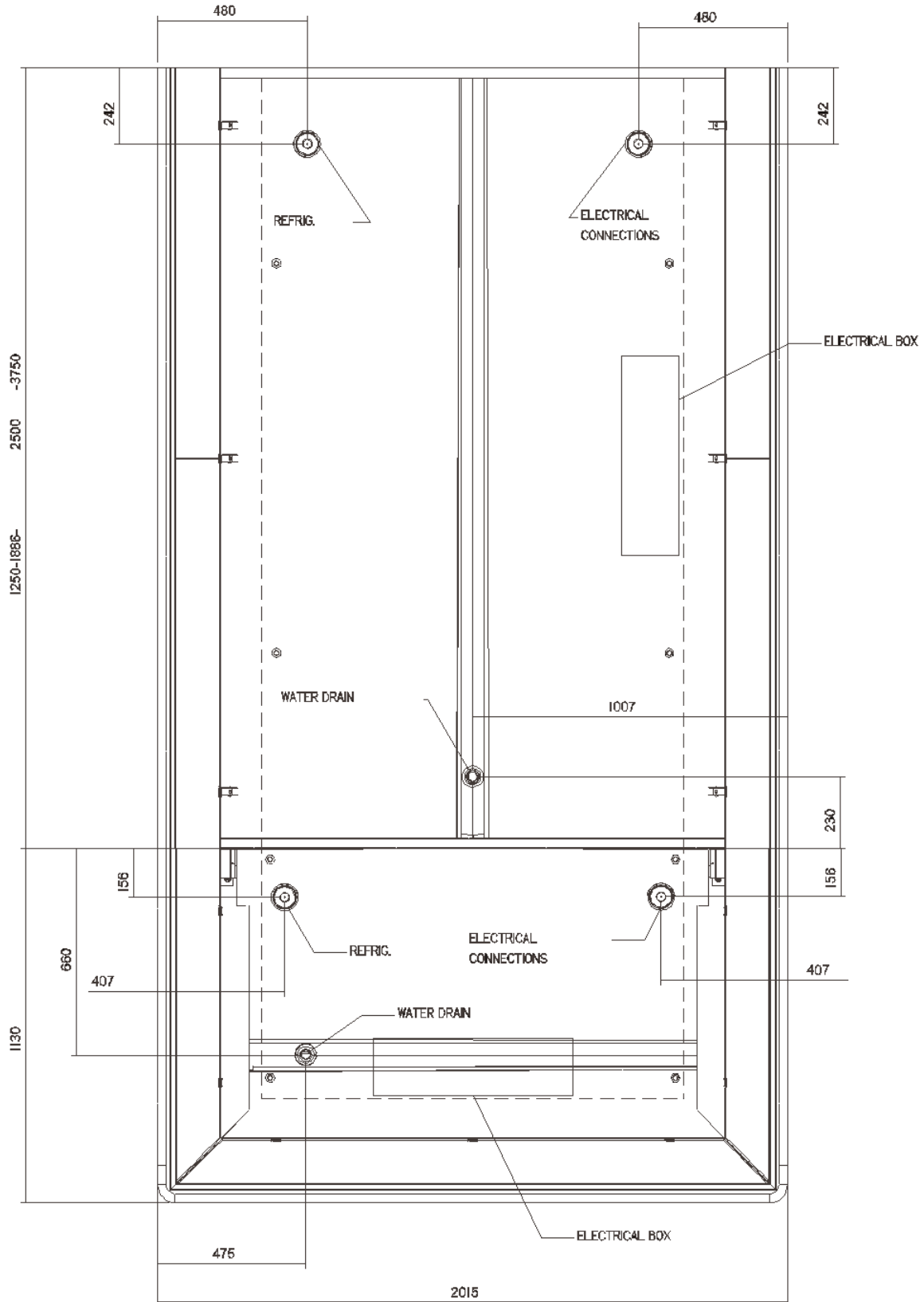
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## DUO MAX SEZIONI/CROSS SECTIONS



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# DUO MOD. - DUO MAX CLOSED BASEMENT PLAN D'IMPLANTATION POSITION OF DRAINS & CONNECTIONS

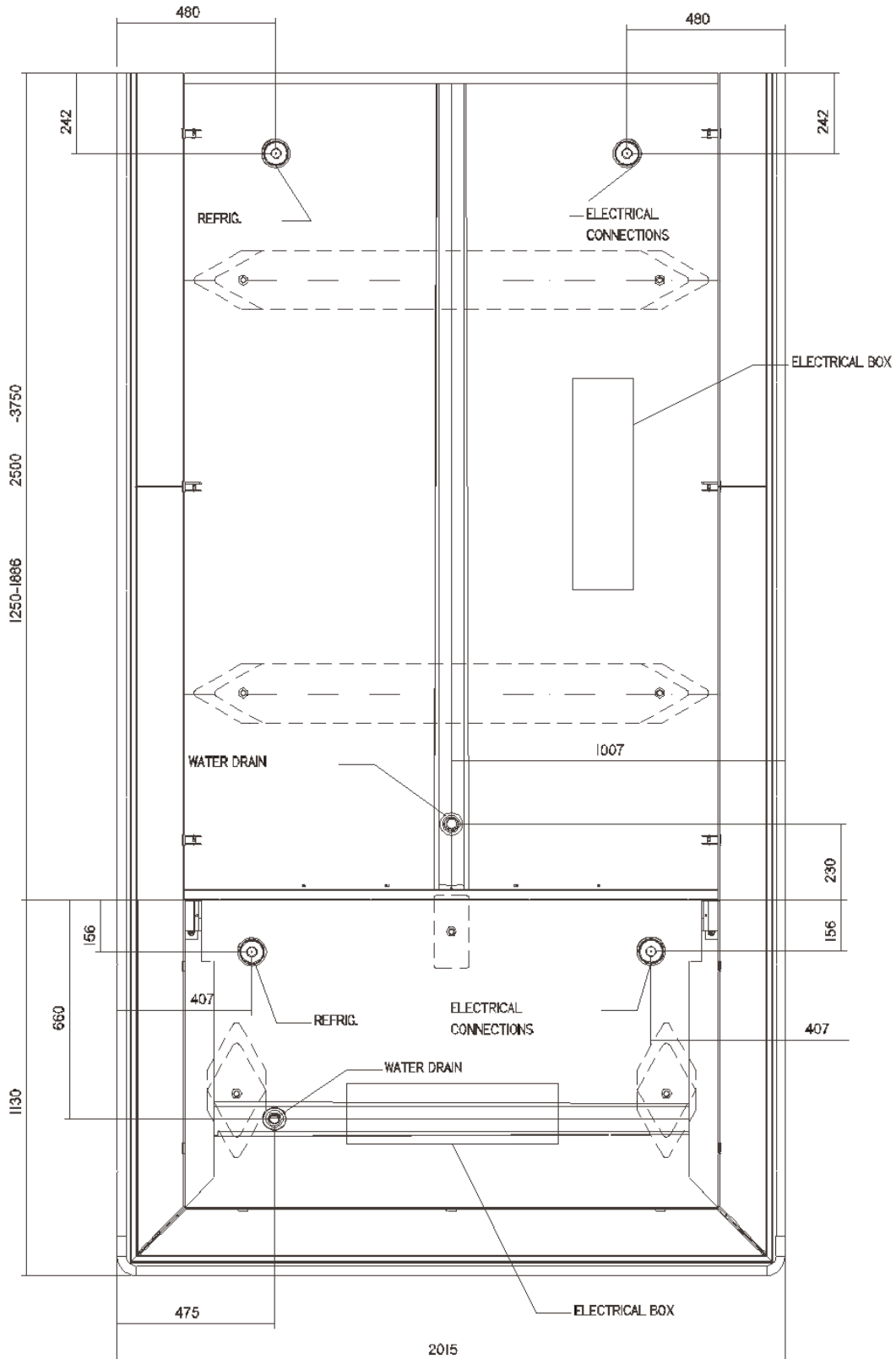


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# DUO MOD. - DUO MAX CLOSED LEGS STD

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS

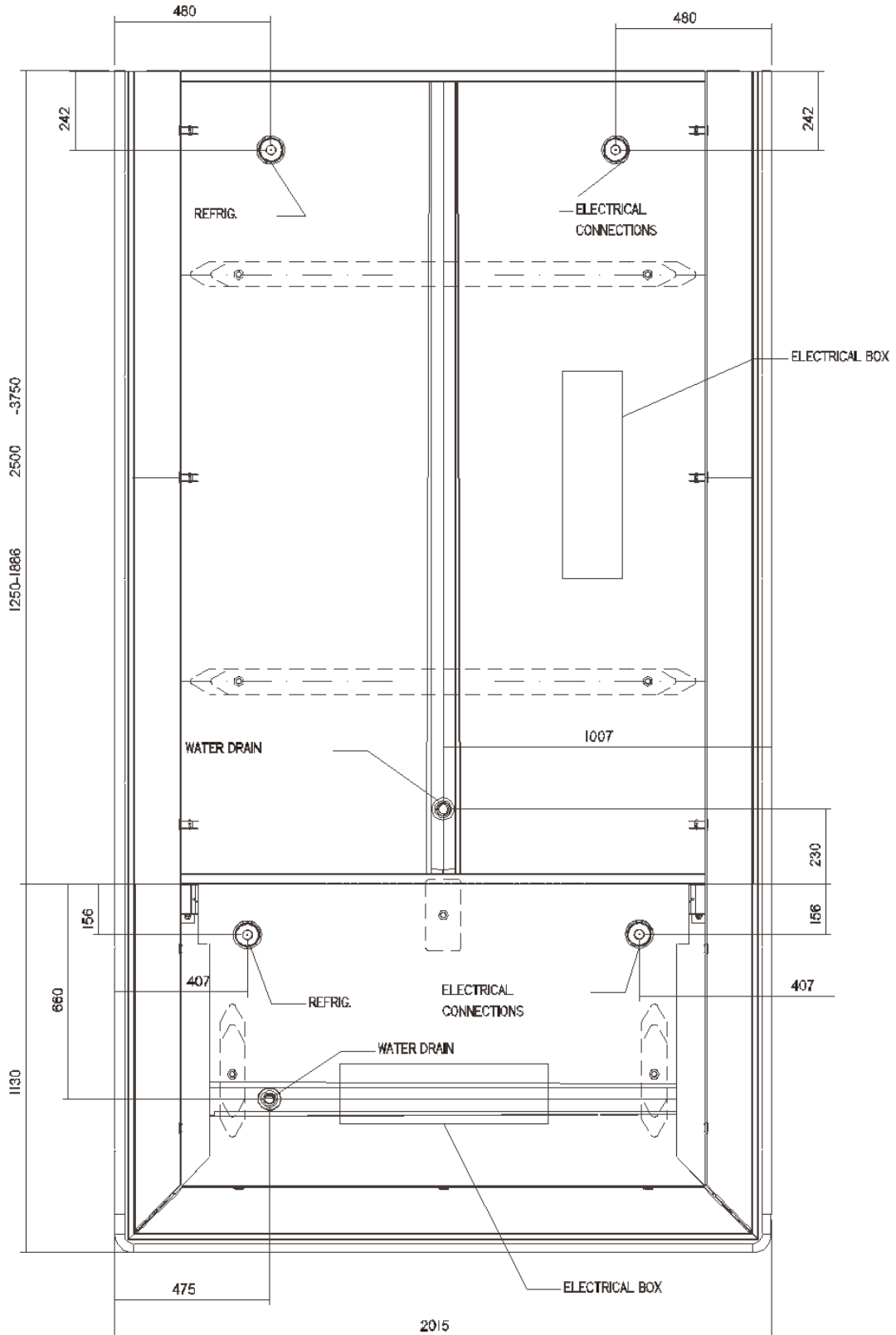



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# DUO MOD. - DUO MAX CLOSED LEGS AUCHAN

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS

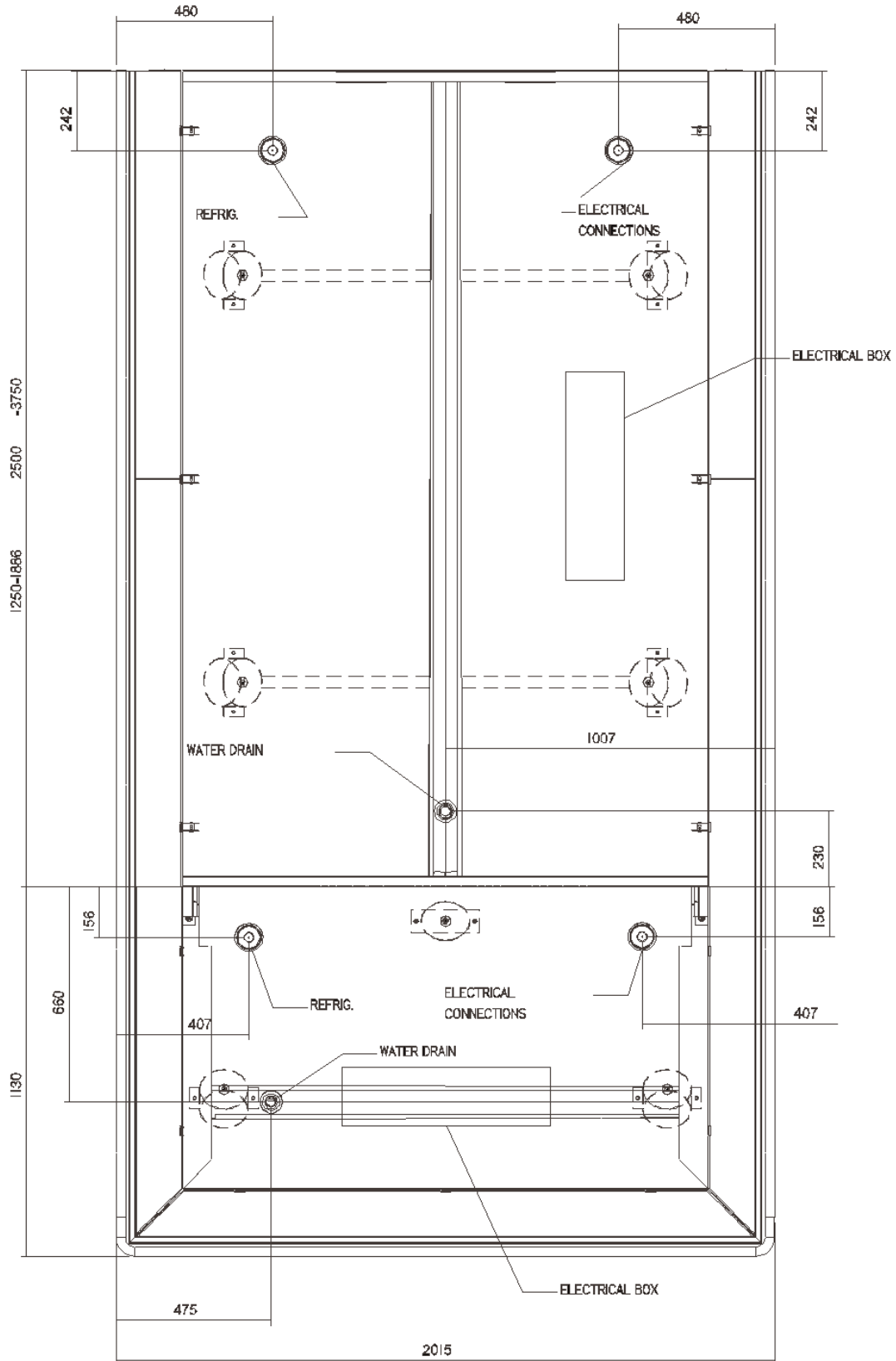


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# DUO MOD. - DUO MAX OVAL LEGS

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS



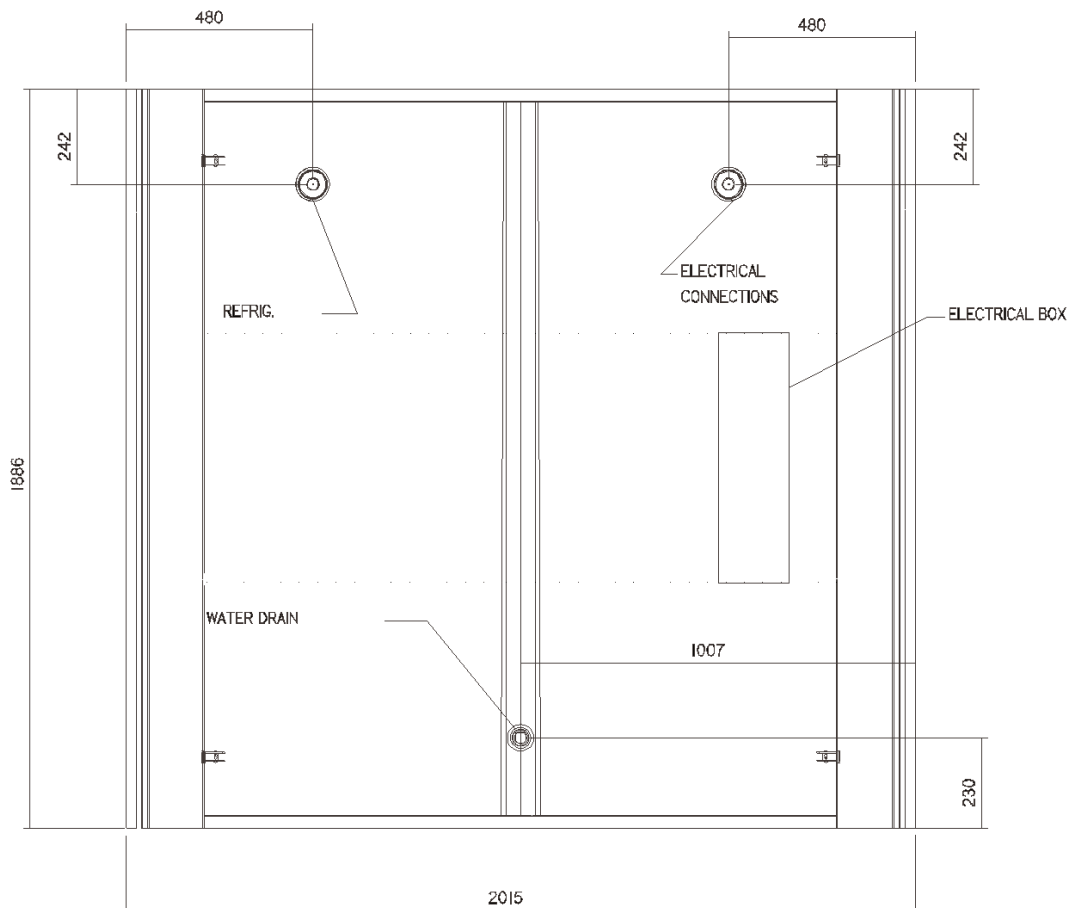
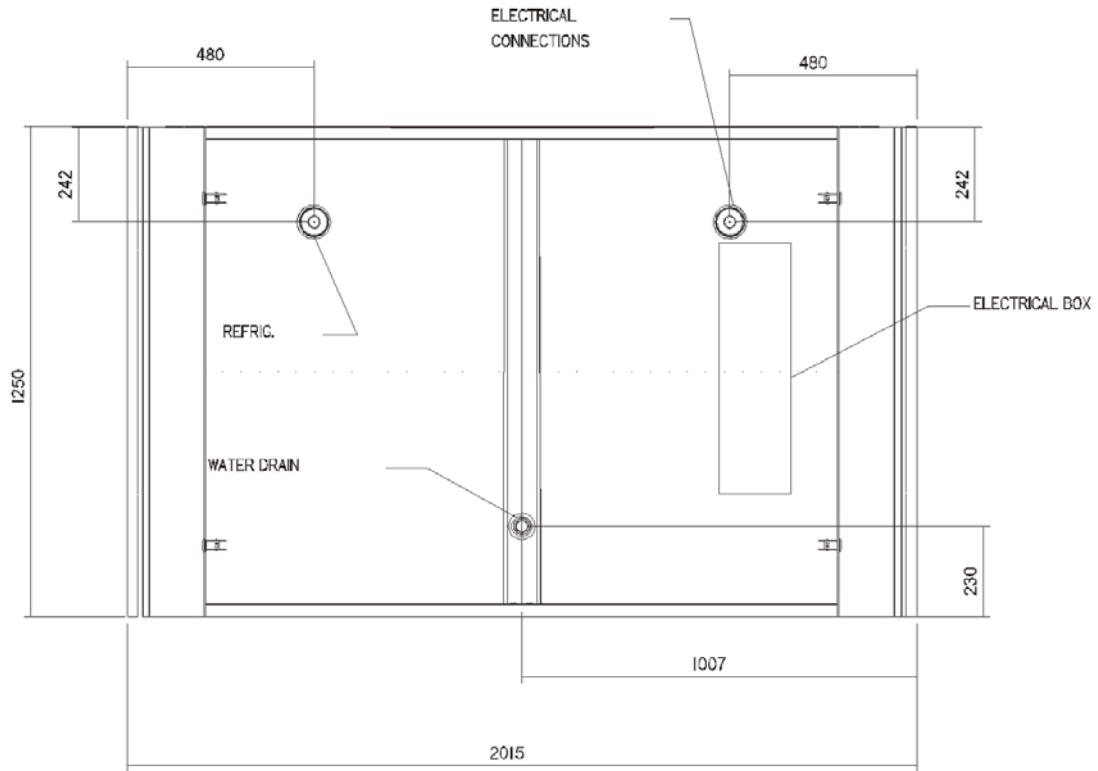



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# DUO MOD. - DUO MAX LINEAR CABINETS

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS

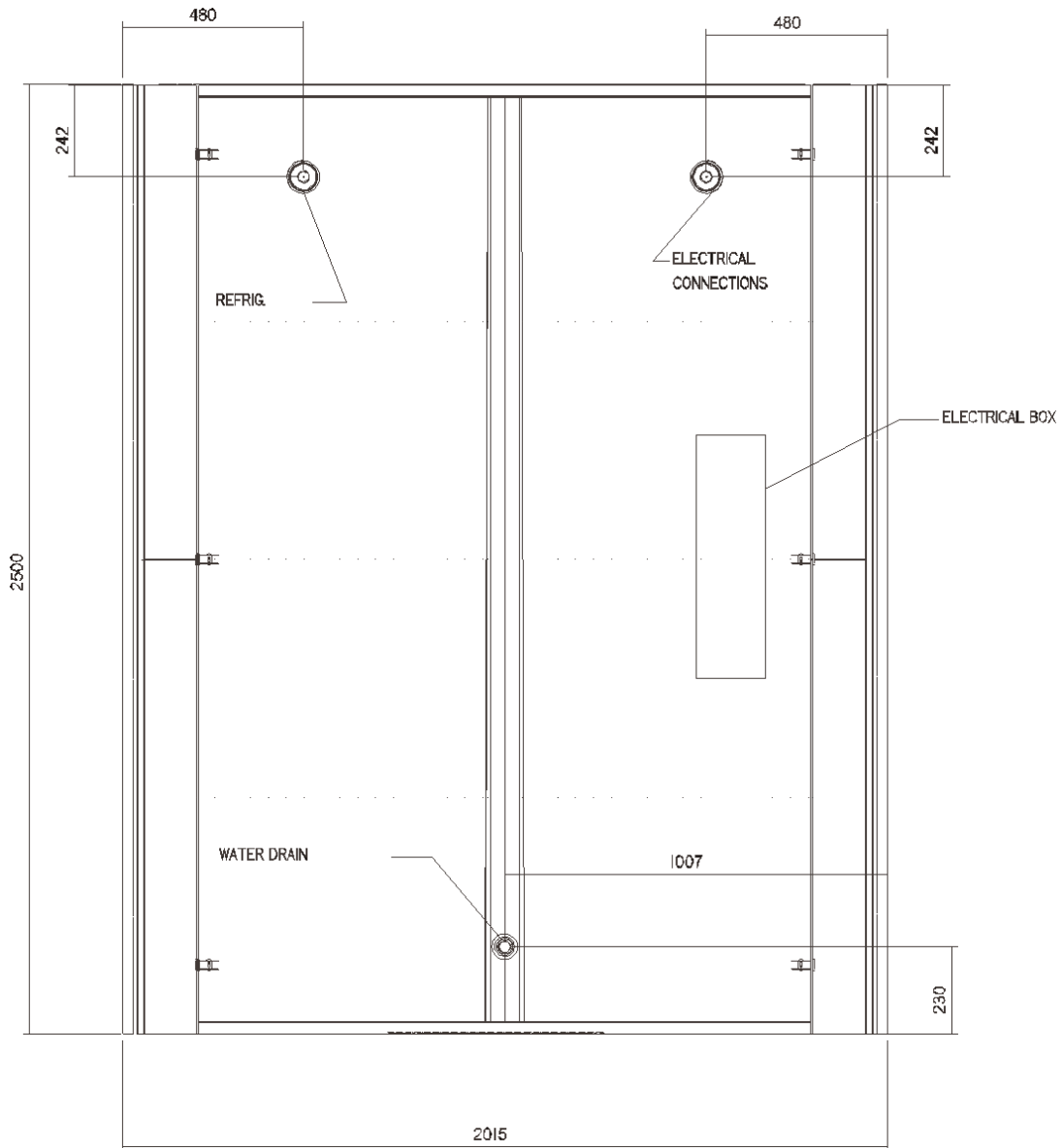


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# DUO MOD. - DUO MAX LINEAR CABINETS

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS

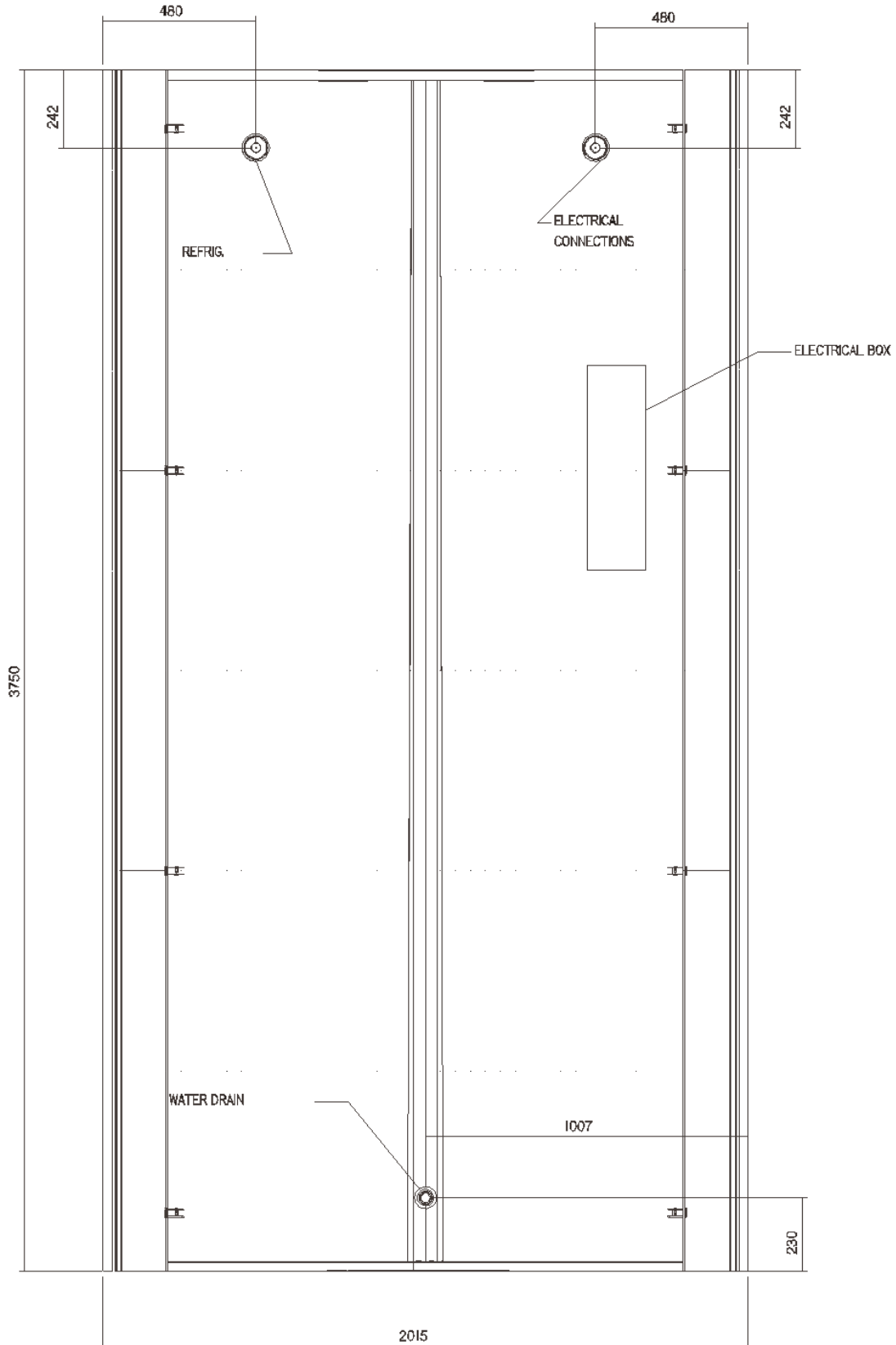



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# DUO MOD. - DUO MAX LINEAR CABINETS

## PLAN D'IMPLANTATION

### POSITION OF DRAINS & CONNECTIONS



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## PUISSANCE FRIGORIFIQUE - HEAT EXTRACTION RATE

EN ISO 23953-1 EN ISO 23953-2 - CLASSE 3 : 25° C - 60% HR

M	C	IF*	Defrost	T <sub>run</sub> (°C)	Φ <sub>24-def</sub> (W)					
					W/m	Linear**				EOL***
					1250	1875	2500	3750		
DUO	3M1	HNLS	ED	-9,0	660	825	1240	1640	2475	610
		HNLS	ND							
	3M2	HNLS	ED	-7,0	630	790	1185	1575	2365	530
		HNLS	ND	-7,0	650	815	1220	1625	2440	550
	3H	HNLS	ED	-3,0	580	725	1090	1450	2175	450
		HNLS	ND	-3,0	600	750	1125	1495	2250	470
DUO MAX	3M1	HNLS	ED	-9,0	735	920	1380	1835	2760	640
		HNLS	ND							
	3M2	HNLS	ED	-7,0	700	875	1315	1750	2625	560
		HNLS	ND	-7,0	725	910	1360	1805	2720	580
	3H	HNLS	ED	-3,0	635	795	1195	1580	2385	500
		HNLS	ND	-3,0	655	820	1230	1630	2460	520

Data related to configuration with standard fans

With EC fans: -10% Φ<sub>24-def</sub> for H225, -5% Φ<sub>24-def</sub> for H365


S.L.C.								
M	Cabinet	C	Control		Defrost			
			C <sub>i</sub> (°C)	C <sub>o</sub> (°C)	Type	N/24h	T <sup>ter</sup> **** (°C)	t <sub>d</sub> (min)
DUO	Linear	3M1	-6,5	-7,5	Electric	4	6	35
	EOL	3M1	-6,5	-7,5	Electric	4	6	25
	Linear	3M1			Natural			
	EOL	3M1			Natural			
	Linear	3M2	-4,0	-5,0	Electric	4	6	30
	EOL	3M2	-3,5	-4,5	Electric	4	6	25
	Linear	3M2	-4,0	-5,0	Natural	4	6	55
	EOL	3M2	-3,5	-4,5	Natural	4	6	50
	Linear	3H	0,0	-1,0	Electric	4	6	25
	EOL	3H	1,5	0,5	Electric	4	6	20
	Linear	3H	0,0	-1,0	Natural	4	6	35
	EOL	3H	1,5	0,5	Natural	4	6	30
DUO MAX	Linear	3M1	-6,5	-7,5	Electric	4	6	35
	EOL	3M1	-6,5	-7,5	Electric	4	6	25
	Linear	3M1			Natural			
	EOL	3M1			Natural			
	Linear	3M2	-4,0	-5,0	Electric	4	6	30
	EOL	3M2	-3,5	-4,5	Electric	4	6	30
	Linear	3M2	-4,0	-5,0	Natural	4	6	55
	EOL	3M2	-3,5	-4,5	Natural	4	6	50
	Linear	3H	0,0	-1,0	Electric	4	6	25
	EOL	3H	1,5	0,5	Electric	4	6	20
	Linear	3H	0,0	-1,0	Natural	4	6	35
	EOL	3H	1,5	0,5	Natural	4	6	30

\* Linear  
EOL  
Chargement 100mm sans le grille  
Sensitive foodstuff loading 100mm without grids  
Caricamento 100mm orizzontale senza griglia

\*\* Pour les deux cotés du meuble  
For both sides of the cabinet  
Per i due lati del mobile

\*\*\* Données pour la sélection de la unité de réfrigération. Pour performances, voir le document Verification Performance le meuble EC11-10 MT et WR wk42/2013  
Data for refrigerating unit selection. For performances see Verification Performance document related to EC11-10 MT and WR wk42/2013  
Dati per la selezione della centrale frigorifera. Per le prestazioni vedere il documento Verification Performance di EC11-10 MT e WR wk42/2013

\*\*\*\* La sonde de degivrage est sur l'évaporator.  
The defrost probe is placed on the evaporator.  
La sonda di sbrinamento è posizionata sull'evaporatore.

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## ABSORPTIONS ÉLECTRIQUES / ELECTRICAL ABSORPTION

	I.	Fans (3)					Heaters					Electric Defrost			Lighting (3) (option)			
		Standard fans			Energy saving fans		Frontal glass heaters			Counter heaters (optional)					Fluorescent lamp T5 Ø16mm	Undercarriage reglette (1)	Electronic ballasts	High Efficiency
		Nr	W	A	W	A	Nr	W	A	Nr	W	A	Nr	W	A	W	A (2)	
<b>DUO</b>	<b>H225</b>	EOL	2	20	0,12	3	0,02	1	68	0,3			1	426	1,9	77	0,33	
		125	3	42	0,21	4	0,03	2	75	0,3	1	25	0,1	2	374	1,6	56	0,24
		188	5	70	0,35	7	0,05	2	117	0,5	2	36	0,2	2	597	2,6	84	0,36
		250	6	84	0,42	8	0,06	2	150	0,7	2	49	0,2	2	809	3,5	112	0,48
		375	9	126	0,63	13	0,09	2	225	1,0	2	73	0,3	2	1234	5,4	168	0,72
<b>DUO MAX</b>	<b>H365</b>	EOL	2	20	0,12	3	0,02	1	68	0,3			1	426	1,9	77	0,33	
		125	3	42	0,21	4	0,03	2	75	0,3	1	25	0,1	2	374	1,6	56	0,24
		188	5	70	0,35	7	0,05	2	117	0,5	2	36	0,2	2	597	2,6	84	0,36
		250	6	84	0,42	8	0,06	2	150	0,7	2	49	0,2	2	809	3,5	112	0,48
		375	9	126	0,63	13	0,09	2	225	1,0	2	73	0,3	2	1234	5,4	168	0,72

Tension / Tension / Tensione : 230 V Mono 50 Hz

Puissance / Capacity / Potenza : W (Watt)

Intensité / Load / Intensità : A (Ampère)

(1) Eclairage (par rangée de tubes fluorescents) / Lighting (per fluorescent lamp line)  
 Illuminazione (per fila di lampade fluorescenti)

(2) Eclairage compensé en standard / Compensated lighting in standard  
 Illuminazione standard rifasata :  $0,9 < \cos j < 1$

(3) Si ventilateur basse consommation ou ballast électronique alors courant de fuite < 10 mA sinon < 5 mA / meuble  
 If low consumption fan or electronic ballast then leakage current < 10 mA else < 5 mA / cabinet  
 Se ventilatore basso consumo o reattori elettronici allora corrente di fuga < 10 mA se no < 5 mA / mobile

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## TEV - R404A - DANFOSS

**EC11-10a**

**CARACTERISTIQUES DETENDEURS THERMOSTATIQUES MARQUE DANFOSS - SANS MOP -  
AVEC ADAPTATEUR A BRASER**  
*THERMOSTATIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS - WITHOUT MOP -  
WITH BRAZING ADAPTER*  
**CARATTERISTICHE DELLA VALVOLA TERMOSTATICA TIPO DANFOSS - SENZA MOP -  
CON ADATTATORE A BRASARE**

**Règles de sélection :**

- puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C 60% HR classe 3 ;
- pression de condensation correspondant à la température à + 35 °C ;
- sous refroidissement de 10 K.

*Selection rules :*

- useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3 ;
- condensation pressure corresponding to temperature of + 35 °C ;
- under 10 K cooling.

**Regole di selezione:**

- Potenza frigorifera utile e temperatura di evaporazione in camera di prova a 25 °C 60% UR classe 3;
- Pressione di condensazione corrispondente alla temperatura di +35 °C;
- Sottoraffreddamento di 10 K.

		R404A		
		Gamme	Range Gamma - N	
M	L	Type	Orifice Orifice Orificio	
<b>EC11-10a</b>	<b>DUO</b>	125	TES2	00
		188		01
		250		01
		375		02
		EOL	TS2	00
<b>EC11-10a</b>	<b>DUO MAX</b>	125	TES2	00
		188		01
		250		01
		375		02
		EOL	TS2	00

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.

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## TEV - R422D - DANFOSS

**EC11-10a**

**CARACTERISTIQUES DETENDEURS THERMOSTATIQUES MARQUE DANFOSS - SANS MOP -  
AVEC ADAPTATEUR A BRASER**  
*THERMOSTATIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS - WITHOUT MOP  
WITH BRAZING ADAPTER*  
**CARATTERISTICHE DELLA VALVOLA TERMOSTATICA TIPO DANFOSS - SENZA MOP -  
CON ADATTATORE A BRASARE**

**Règles de sélection :**

- puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C 60% HR classe 3 ;
- pression de condensation correspondant à la température à + 35 °C ;
- sous refroidissement de 10 K.

*Selection rules :*

- useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3 ;
- condensation pressure corresponding to temperature of + 35 °C ;
- under 10 K cooling.

**Regole di selezione:**

- Potenza frigorifera utile e temperatura di evaporazione in camera di prova a 25 °C 60% UR classe 3;
- Pressione di condensazione corrispondente alla temperatura di +35 °C;
- Sottoraffreddamento di 10 K.

		R422D		
		Gamme	Range	Gamma - N°
M	L	Type	Orifice Orifice Orificio	
<b>EC11-10a</b>	DUO	125	TEX2	00
		188		00
		250		01
		375		01
		EOL	TX2	0X
<b>EC11-10a</b>	DUO MAX	125	TEX2	00
		188		01
		250		01
		375		02
		EOL	TX2	0X

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.



## EEV - R404A - DANFOSS

**EC11-10a**

**CARACTERISTIQUES DETENDEURS ELECTRONIQUES MARQUE DANFOSS**  
*ELECTRONIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS*  
**CARATTERISTICHE DELLA VALVOLA ELETTRONICA MARCA DANFOSS**

**Règles de sélection :**

- puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C /60% HR classe 3 ;
- pression de condensation correspondant à la température à + 35 °C ;
- sous refroidissement de 10 K ;
- prise en compte de la surcapacité de 25% et du degré d'ouverture de la vanne compris entre 50 et 75% maxi conseillés par DANFOSS.

*Selection rules :*

- useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3 ;
- condensation pressure corresponding to temperature of + 35 °C ;
- under 10 K cooling ;
- provision for 25% of overcapacity and valve opening between 50 and 75% max as recommended by DANFOSS.

**Regole di selezione :**

- potenza frigorifera utile alla temperatura d'evaporazione in camera di prova a 25°C 60%UR classe3 ;
- pressione di condensazione corrispondente alla temperatura di 35°C ;
- sottoraffreddamento 10 K ;
- sovra capacità del 25% e grado di apertura compreso tra 50 e 75% massimo consigliato da DANFOSS.

			R404A	
M		L	Type	Orifice Orifice Orificio
EC11-10a	DUO	125	AKV 10	02
		188		02
		250		03
		375		04
		EOL		01
EC11-10a	DUO MAX	125	AKV 10	02
		188		03
		250		04
		375		04
		EOL		01

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.



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## EEV - R744 - DANFOSS

**EC11-10a**

**CARACTERISTIQUES DETENDEURS ELECTRONIQUES MARQUE DANFOSS**  
*ELECTRONIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS*  
CARATTERISTICHE DELLA VALVOLA ELETTRONICA MARCA DANFOSS

Règles de sélection pour transcritique applications:

- document MM20031U

*Selection rules for transcritical applications :*

- document MM20031U

Regole di selezione per applicazioni transcritiche:


- documento MM20031U

			R744
M	L	Type	Orifice Orifice Orificio
<b>EC11-10a</b>	<b>DUO</b>	125	01
		188	01
		250	01
		375	02
		EOL	01
<b>EC11-10a</b>	<b>DUO MAX</b>	125	01
		188	01
		250	02
		375	03
		EOL	01

Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.

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## EEV - R404A CAREL E<sup>2</sup>V

**EC11-10a**

**CARACTERISTIQUES DETENDEURS ELECTRONIQUES MARQUE CAREL**  
*ELECTRONIC EXPANSION VALVES REQUIREMENTS TRADE MARK CAREL*  
 CARATTERISTICHE DELLA VALVOLA ELETTRONICA MARCA CAREL

**Règles de sélection:**

- ▶ puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C 60% HR classe 3;
- ▶ pression de condensation correspondant à la température à + 35 °C;
- ▶ sous-refroidissement de 10 K;
- ▶ prise en compte de la surcapacité de 25% et du degré d'ouverture de la vanne compris entre 50 et 75% maxi conseillés par CAREL.

*Selection rules:*

- ▶ useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3;
- ▶ condensation pressure corresponding to temperature of + 35 °C;
- ▶ subcoolings 10 K;
- ▶ provision for 25% of overcapacity and valve opening between 50 and 75% max as recommended by CAREL.

*Regole di selezione:*

- ▶ potenza frigorifera utile e temperatura di evaporazione in camera di prova a 25 °C 60% UR classe 3;
- ▶ pressione di condensation corrispondente alla temperatura di +35 °C;
- ▶ sottoraffreddamento di 10 K;
- ▶ sovra capacità del 25% e grado di apertura compreso tra 50 e 75% massimo consigliato da CAREL.

			R404A	
M	L	Type	Orifice Orifice Orificio	
EC11-10a	DUO	125	E <sup>2</sup> V	05
		188		09
		250		09
		375		11
		EOL		05
EC11-10a	DUO MAX	125		05
		188		09
		250		09
		375		11
		EOL		05

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

*I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.*

ORD.	DATE	ORD.	DATE
A	02.07.13	D	
B		E	
C		F	



## MonoEthylene Glycol (MEG) & MonoPropylene Glycol (MPG) Valves - Danfoss -

**EC11-10a**

### CARACTERISTIQUES VANNES D'EQUILIBRAGE AB-QM DE DANFOSS AVEC ACTIONNEUR ELECTROTHERMIQUE ABN-A

*DANFOSS AB-QM BALANCING VALVES REQUIREMENTS  
WITH ABN-A THERMO-ACTUATOR*

*CARATERISTICHE DELLE VALVOLE DI BILANCIAMENTO AB-QM DI DANFOSS  
CON ATTUATORE ELETTROTERMICO ABN-A*

**Règles de sélection :**

- puissance frigorifique utile et température moyenne du fluide déterminés en chambre d'essai à 25°C 60% HR classe 3;
- classe de température des produits M2;
- configuration de meuble HNLS ;
- dimensionnement réalisé pour les fluides : MPG40%,MEG35% & MEG40%.

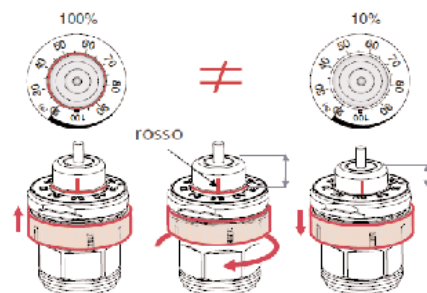
*Selection rules :*

- useful refrigeration capacity and average fluid temperature measured in test room at 25 °C 60% RH class 3 ;
- product class temperature M2 ;
- HNLS cabinet configuration ;
- selection done for MPG40%, MEG35% and MEG40% fluids.

*Regole di selezione :*

- potenza frigorifera utile e temperatura media del fluido in camera de prova a 25°C 60% UR classe 3 ;
- classe di temperatura dei prodotti M2 ;
- configurazione del mobile HNLS ;
- dimensionamento effettuato per i fluidi MPG40%, MEG35% e MEG40%.

M		L		MPG40% - MEG35% - MEG40%	
		Type		Sélection Selection Selezione	Réglage Setting Regolazione
EC11-10a	DUO	125	ABQM	DN15	45%
		188		DN15	65%
		250		DN20	45%
		375		DN20	65%
		EOL		DN15	30%
EC11-10a	DUO MAX	125	ABQM	DN15	55%
		188		DN15	80%
		250		DN20	55%
		375		DN20	80%
		EOL		DN15	35%



**Données frigorifiques établies pour des meubles ayant un écart de température maximum entre l'entrée et la sortie de l'échangeur de 4K**

*The data are given for cabinets adjusted to have a maximum temperature difference between the inlet and outlet of the heat exchanger of 4K.*

*Dati frigoriferi stabiliti per mobili con una differenza massima di temperatura tra l'entrata e l'uscita del scambiatore de 4K.*



## EEV - R134a - DANFOSS

**EC11-10a**

**CARACTERISTIQUES DETENDEURS ELECTRONIQUES MARQUE DANFOSS**  
*ELECTRONIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS*  
 CARATTERISTICHE DELLA VALVOLA ELETTRONICA MARCA DANFOSS

**Règles de sélection:**

- ▶ puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C 60% HR classe 3;
- ▶ pression de condensation correspondant à la température à + 35 °C;
- ▶ sous-refroidissement de 10 K;
- ▶ prise en compte de la surcapacité de 25% et du degré d'ouverture de la vanne compris entre 50 et 75% maxi conseillés par DANFOSS.

*Selection rules:*

- ▶ useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3;
- ▶ condensation pressure corresponding to temperature of + 35 °C;
- ▶ subcoolings 10 K;
- ▶ provision for 25% of overcapacity and valve opening between 50 and 75% max as recommended by DANFOSS.

Regole di selezione:

- ▶ potenza frigorifera utile e temperatura di evaporazione in camera di prova a 25 °C 60% UR. classe 3;
- ▶ pressione di condensazione corrispondente alla temperatura di +35 °C;
- ▶ sottoraffreddamento di 10 K;
- ▶ sovra capacità del 25% e grado di apertura compreso tra 50 e 75% massimo consigliato da DANFOSS.

			R134a	
M		L	Type	Orifice Orifice Orificio
EC11-10a	DUO	125	AKV 10	01
		188		02
		250		03
		375		04
		EOL		01
EC11-10a	DUO MAX	125	AKV 10	01
		188		03
		250		03
		375		04
		EOL		01

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.

ORD.	DATE	ORD.	DATE
A		D	
B		E	
C		F	



## EEV - R422D - DANFOSS

EC11-10a

**CARACTERISTIQUES DETENDEURS ELECTRONIQUES MARQUE DANFOSS**  
*ELECTRONIC EXPANSION VALVES REQUIREMENTS TRADE MARK DANFOSS*  
CARATTERISTICHE DELLA VALVOLA ELETTRONICA MARCA DANFOSS

**Règles de sélection :**

- puissance frigorifique utile et température d'évaporation en chambre d'essai à 25 °C /60% HR classe 3 ;
- pression de condensation correspondant à la température à + 35 °C ;
- sous refroidissement de 10 K ;
- prise en compte de la surcapacité de 25% et du degré d'ouverture de la vanne compris entre 50 et 75% maxi

**conseillés par DANFOSS.**

*Selection rules :*

- useful refrigeration capacity and test room evaporation temperature of 25 °C 60% RH class 3 ;
- condensation pressure corresponding to temperature of + 35 °C ;
- subcooling 10 K;
- provision for 25% of overcapacity and valve opening between 50 and 75% max as recommended by

**DANFOSS.**  
*Regole di selezione :*

- potenza frigorifera utile alla temperatura d'evaporazione in camera di prova a 25°C 60%UR classe3 ;
- pressione di condensazione corrispondente alla temperatura di 35°C ;
- sottoraffreddamento 10 K ;
- sovra capacità del 25% e grado di apertura compreso tra 50 e 75% massimo consigliato da DANFOSS.

			R422D	
M	L	Type	Orifice	Orificio
DUO	H225	125	AKVO 10	01
		188		02
		250		03
		375		04
		EOL		01
DUO MAX	H365	125	AKVO 10	01
		188		02
		250		03
		375		04
		EOL		01

**Les données frigorifiques sont établies pour des meubles ayant des détendeurs réglés pour obtenir une surchauffe de l'ordre de 5 K.**

*The data are given for cabinets having expansion valves adapted for having a superheat temperature of 5 K.*

I dati frigoriferi fanno riferimento ai mobili con valvola termostatica regolata per avere un surriscaldamento di 5K.

ORD.	DATE	ORD.	DATE
A		D	
B		E	
C		F	

**CARACTERISQUES DIMENSIONELLES DES ECHANGEURS POUR FLUIDE FRIGOPORTEUR**
**MAIN DIMENSIONS OF THE HEAT EXCHANGERS FOR GLYCOL**
**CARATTERISTICHE PRINCIPALI DEGLI SCAMBIATORI PER GLICOLE**

- $\Phi$  **Diamètre intérieur des tubes de l'échangeur.**  
*Internal diameter of the heat exchanger.*  
 Diametro interno dei tubi dello scambiatore.
- N **Nombre de circuits dans l'échangeur.**  
*Number of the circuits of the heat exchanger.*  
 Numero dei circuiti dello scambiatore.
- L **Longueur équivalente des tubes par circuit.**  
*Equivalent length of each circuit of the heat exchanger.*  
 Lunghezza equivalente di ogni circuito dello scambiatore.
- V **Volume intérieur (total) des tuyauteries.**  
*Internal volume (total) of the tubes.*  
 Volume interno totale dei tubi.
- $\Phi_{In}$  **Diamètre intérieur des tubes d'entrée.**  
*Internal diameter of the inlet tube.*  
 Diametro interno del tubo d'ingresso.
- $\Phi_{Out}$  **Diamètre intérieur des tubes de sortie.**  
*Internal diameter of the outlet tube.*  
 Diametro interno del tubo d'uscita.

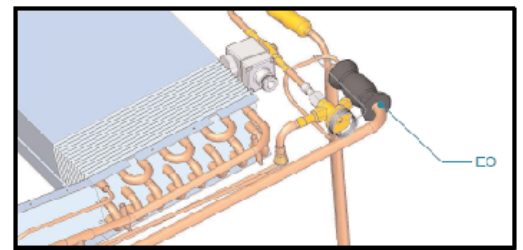
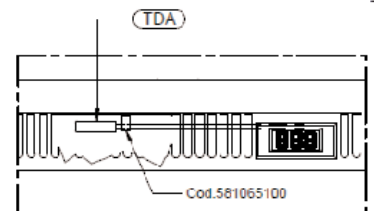
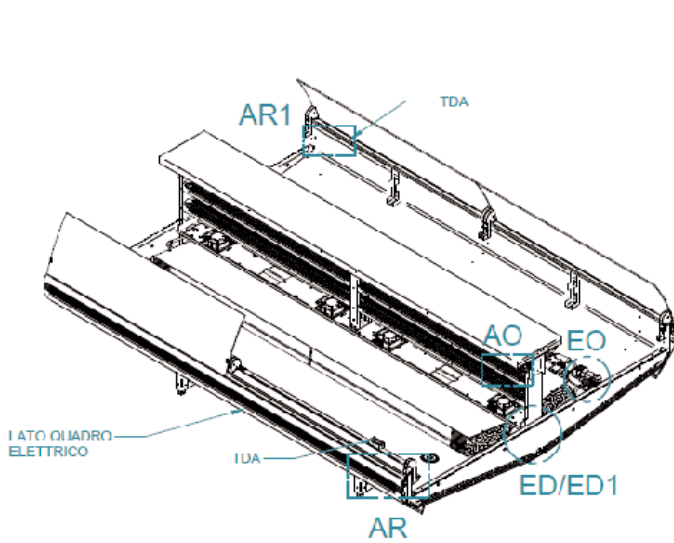
M		L	$\Phi$ (mm)	N	L (m)	V (dm <sup>3</sup> )	$\Phi_{Liq}$ (mm)	$\Phi_{SUC}$ (mm)
EC11-10a	DUO	125	11,2	3	9,6	4,6	16	16
		188	11,2	3	14,7	7,7	16	16
		250	11,2	3	19,6	10,6	16	16
		375	11,2	3	29,6	16,5	16	16
		EOL	11,3	3	9,0	2,4	16	16
EC11-10a	DUO MAX	125	11,2	3	9,6	4,6	16	16
		188	11,2	3	14,7	7,7	16	16
		250	11,2	3	19,6	10,6	16	16
		375	11,2	3	29,6	16,5	16	16
		EOL	11,3	3	9,0	2,4	16	16

## DUO - DUO MAX MOBILE LINEARE / LINEAR CABINET / MEUBLES LINEAIRE

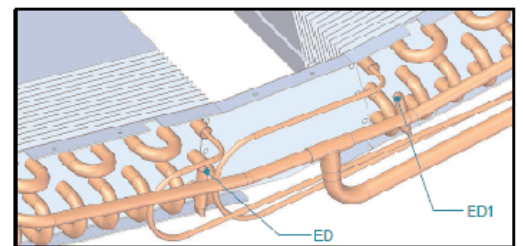
**POSITIONS SONDES ET DETENDEUR**  
 POSITION OF THE PROBES AND THE EXPANSION VALVES  
 POSIZIONE SONDE E VALVOLA DI ESPANSIONE

Emplacement <i>Location</i> Posizione	AO <b>Soufflage</b> <i>Air outlet</i> Mandata aria	AR / AR1* <b>Reprise d'air</b> <i>Air return</i> Ripresa aria	TDA <b>Reprise d'air</b> <i>Air return</i> Ripresa aria	EO <b>Sortie évaporateur</b> <i>Evaporator outlet</i> Uscita evaporatore	ED / ED1* <b>Fin degivrage évaporateur</b> <i>Evaporator end defrost</i> Fine sbrinatorio evaporatore
<b>Type</b> <i>Type</i> Type	<b>Air</b> <i>Air</i> Aria	<b>Air</b> <i>Air</i> Aria	<b>Air</b> <i>Air</i> Aria	<b>Contact tube</b> <i>Pipe contact</i> Contatto tubo	<b>Contact tube</b> <i>Pipe contact</i> Contatto tubo
<b>Fonction des sondes</b> <i>Function of sensor</i> Funzione della sonda	<b>Régulation</b> <i>Control</i> Controllo	<b>Affichage T° de reprise and alarm</b> <i>Display air return T° and Alarm</i> Visualizzazione temperatura di ripresa e Allarme	<b>Affichage T° de reprise</b> <i>Display Air return T°</i> Visualizzazione temperatura in ripresa aria	<b>Surchauffe</b> <i>Superheat</i> Surriscaldamento	<b>Fin de degivrage</b> <i>End defrost</i> Fine sbrinatorio

\*AR1 / ED1: **Prêt à monter, avec seulement certains contrôleurs** / ready to mounting, with some controllers only / predisposizione, solo per alcuni controllori



EO



ED/ED1



AR



AO



ORD.	DATE	ORD.	DATE
A		D	
B		E	
C		F	

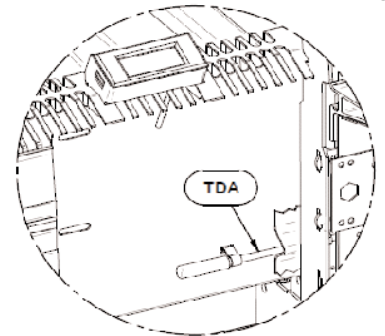
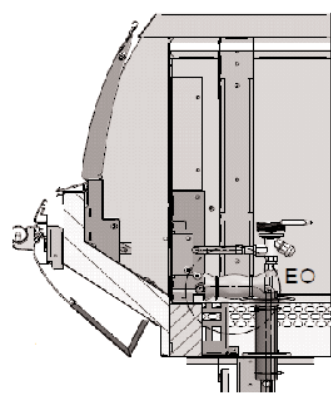
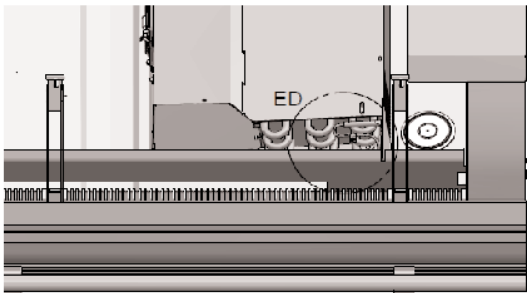
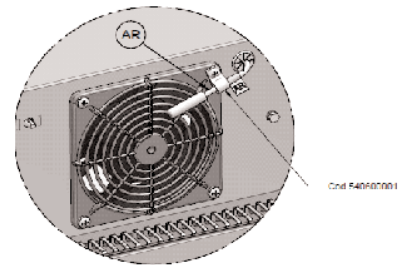
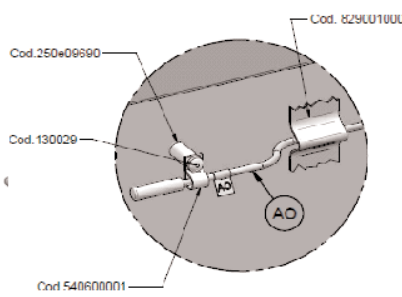
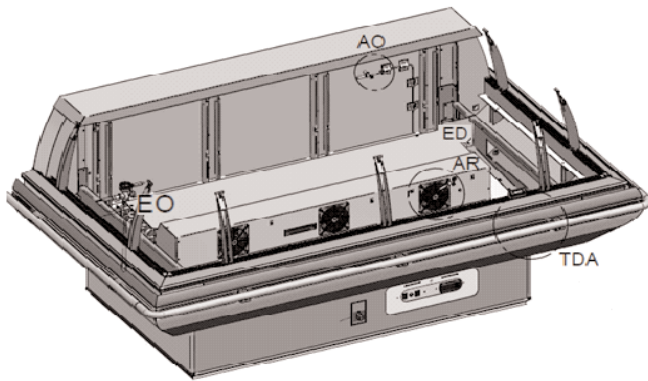
## DUO MOBILE DI TESTA / HEAD CABINET / TETE DE GONDOLE

### POSITIONS SONDES ET DETENDEUR

*POSITION OF THE PROBES AND THE EXPANSION VALVES*

POSIZIONE SONDE E VALVOLA D'ESPANSIONE

Emplacement <i>Location</i> Posizione	AO	AR	TDA	EO	ED
<b>Soufflage</b> <i>Air outlet</i> Mandata aria	<b>Reprise d'air</b> <i>Air return</i> Ripresa aria	<b>Reprise d'air</b> <i>Air return</i> Ripresa aria	<b>Sortie évaporateur</b> <i>Evaporator outlet</i> Uscita evaporatore	<b>Fin de degivrage évaporateur</b> <i>Evaporator end defrost</i> Fine sbrinatorio evaporatore	
<b>Type</b> <i>Type</i> Type	<b>Air</b> <i>Air</i> Aria	<b>Air</b> <i>Air</i> Aria	<b>Air</b> <i>Air</i> Aria	<b>Contact tube</b> <i>Pipe contact</i> Contatto tubo	<b>Contact tube</b> <i>Pipe contact</i> Contatto tubo
<b>Fonction des sondes</b> <i>Function of sensor</i> Funzione della sonda	<b>Régulation</b> <i>Control</i> Controllo	<b>Affichage T° de reprise and alarm</b> <i>Display air return T° and Alarm</i> Visualizzazione temperatura di ripresa e Allarme	<b>Affichage T° de reprise</b> <i>Display Air return T°</i> Visualizzazione temperatura di ripresa aria	<b>Surchauffe</b> <i>Superheat</i> Surriscaldamento	<b>Fin de degivrage</b> <i>End defrost</i> Fine sbrinatorio





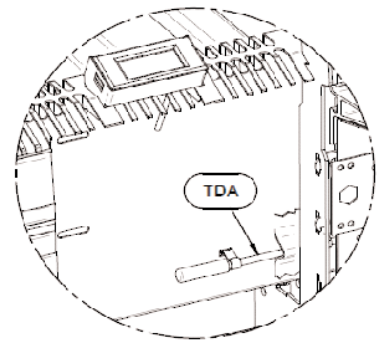
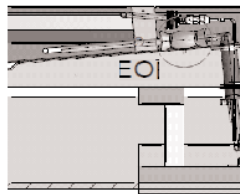
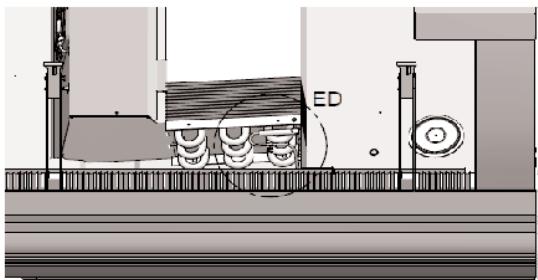
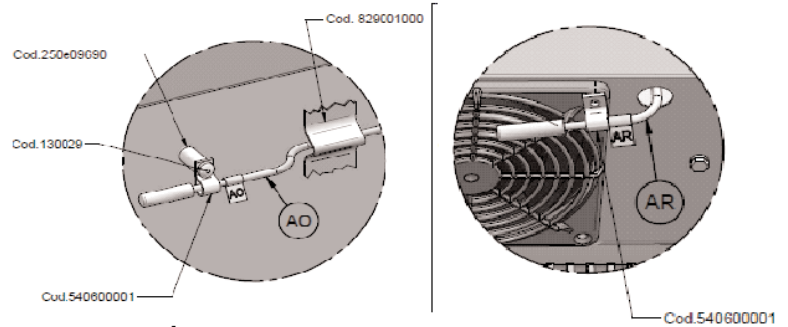
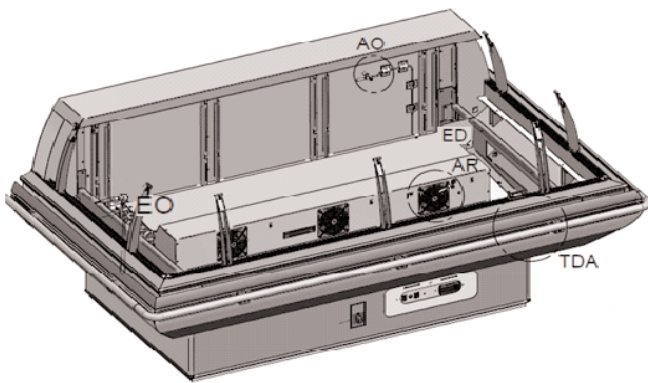
## DUO MAX MOBILE DI TESTA / HEAD CABINET / TETE DE GONDOLE

### POSITIONS SONDES ET DETENDEUR

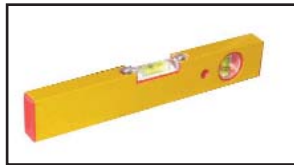
POSITION OF THE PROBES AND THE EXPANSION VALVES

POSIZIONE SONDE E VALVOLA DI ESPANSIONE

Emplacement <i>Location Posizione</i>	AO	AR	TDA	EO	ED
<b>Soufflage</b> <i>Air outlet Mandata aria</i>	<b>Reprise d'air</b> <i>Air return Ripresa aria</i>	<b>Reprise d'air</b> <i>Air return Ripresa aria</i>	<b>Sortie évaporateur</b> <i>Evaporator outlet Uscita evaporatore</i>	<b>Fin degivrage évaporateur</b> <i>Evaporator end defrost Fine sbrinatorio evaporatore</i>	
<b>Type</b> <i>Type Type</i>	<b>Air</b> <i>Air Aria</i>	<b>Air</b> <i>Air Aria</i>	<b>Contact tube</b> <i>Pipe contact Contatto tubo</i>	<b>Contact tube</b> <i>Pipe contact Contatto tubo</i>	
<b>Fonction des sondes</b> <i>Function of sensor Funzione della sonda</i>	<b>Régulation</b> <i>Control Controllo</i>	<b>Affichage T° de reprise and alarm</b> <i>Display air return T° and Alarm Visualizzazione temperatura di ripresa e Allarme</i>	<b>Affichage T° de reprise</b> <i>Display Air return T° Visualizzazione temperatura in ripresa aria</i>	<b>Surchauffe</b> <i>Superheat Surriscaldamento</i>	<b>Fin de degivrage</b> <i>End defrost Fine sbrinatorio</i>

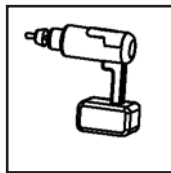


# QUICK REFERENCE INSTRUCTIONS DUO - DUO MAX CABINETS



1x10 mml  
1x30 mm

1x8 mm



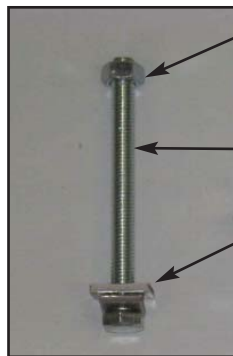
## MULTIPLEXING KIT - linear cabinet/linear cabinet

3 + 3 x Ø 4,5 x 100



104329

14X TE M8X90

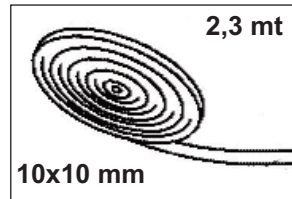


130025  
nut

130071

130266

829012010



2,3 mt

10x10 mm

33369A00



## MULTIPLEXING KIT - linear cabinet/head cabinet

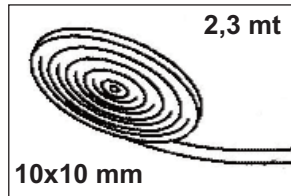
2 X TE M8X55



130076

130266

829012010



2,3 mt

10x10 mm

3 + 3 x Ø 4,5 x 100



104329

2 x TCEI M6X30 30089  
+ 2 x DIST. 12X14 250G02770



Length of the cabinets x 4

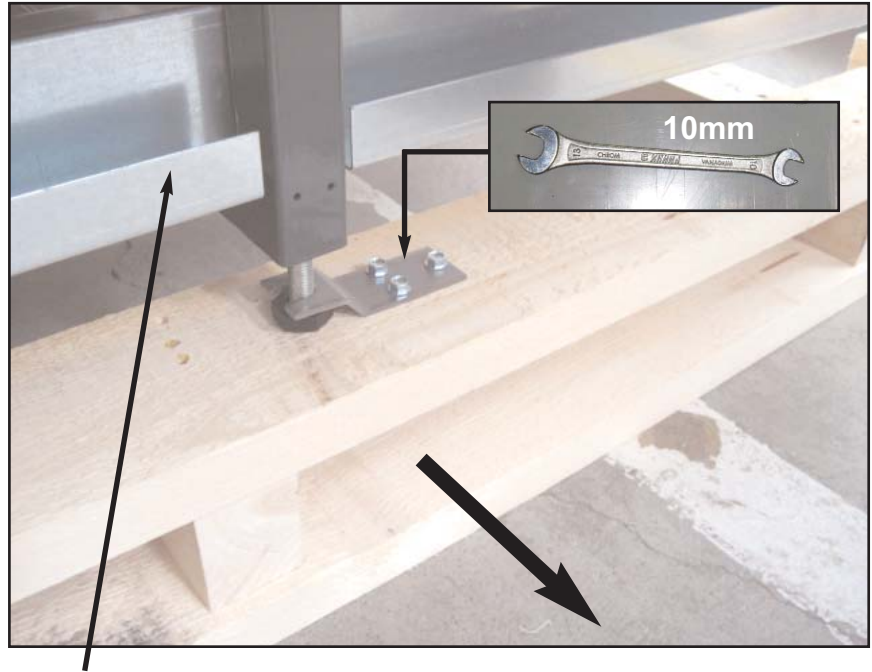


148000

optional



**A.**



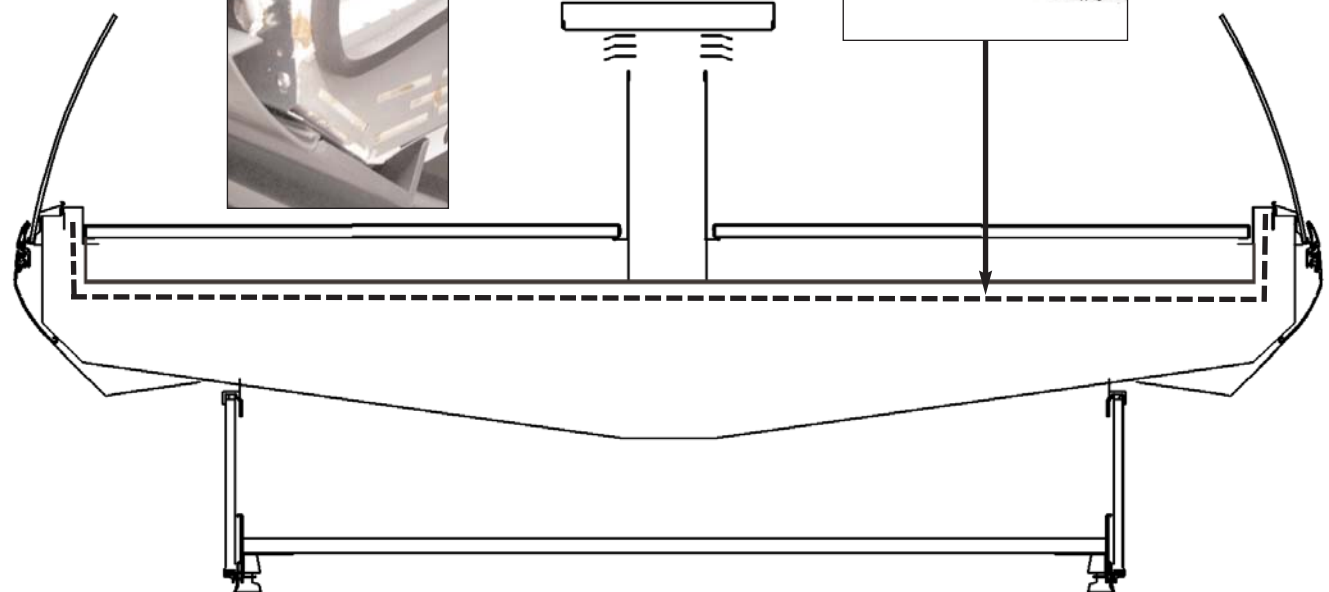
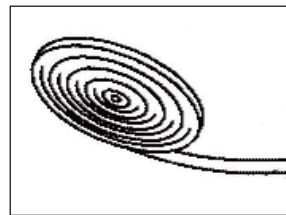
**Closed legs version  
Versione piedi carenati  
Version pieds bateaux**

**FEET LONGITUDINAL ELEMENTS ARE NEEDED FOR TRANSPORTATION PURPOSES AND THE MOVEMENT IN THE STORE. THESE NEED TO BE REMOVED ONLY AFTER THE CABINETS HAVE BEEN MULTIPLEXED**

**I LOGHERONI FISSAGGIO PIEDI SERVONO PER DARE SOLIDITA ALLA STRUTTURA PER IL TRASPORTO E LA MOVIMENTAZIONE. VANNO RIMOSSI SOLO DOPO AVER ACCOPPIATO I BANCHI.**

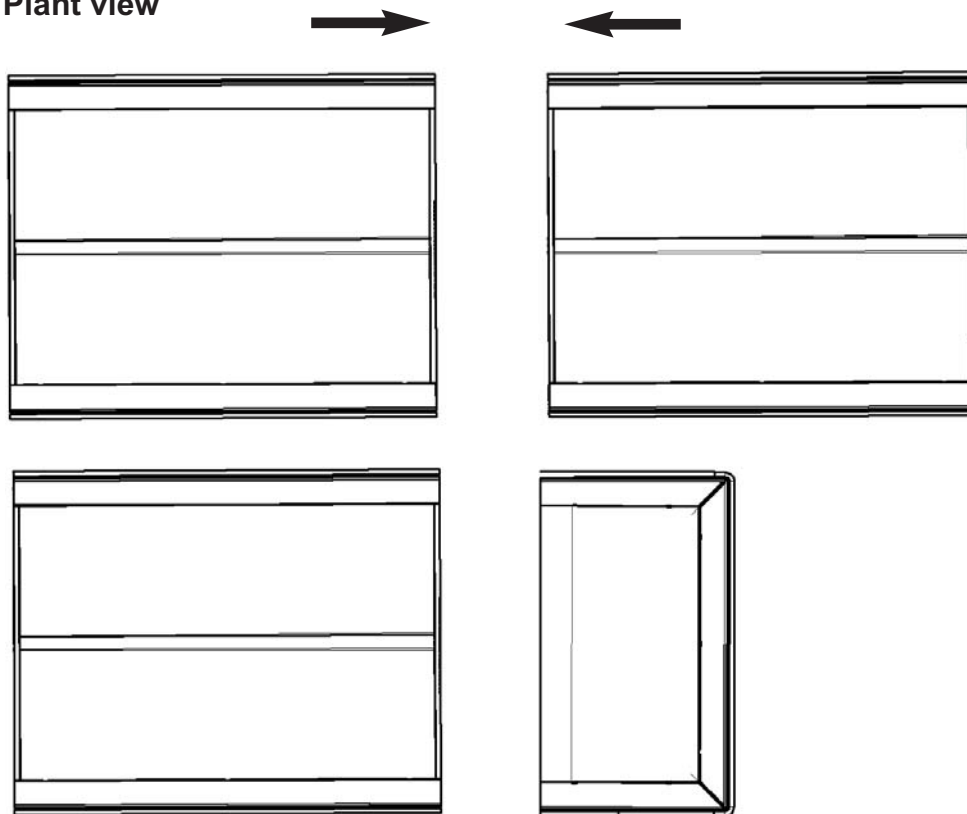
**LES LONGERONS DE FIXATION DES PIEDS SONT NÉCESSAIRES LORS DU TRANSPORT ET LE MOUVEMENT EN MAGASIN. IL FAUT LES ENLEVER SEULEMENT APRÈS L'ACCOUPEMENT DES MEUBLES.**

**B.**



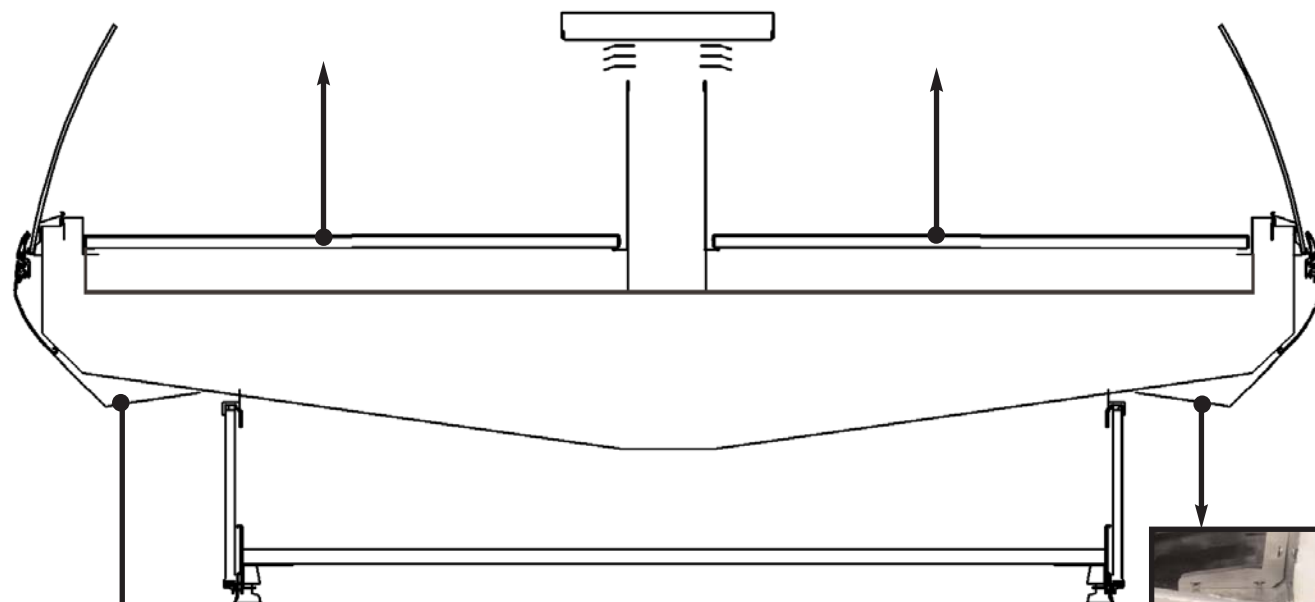
C.

Plant view



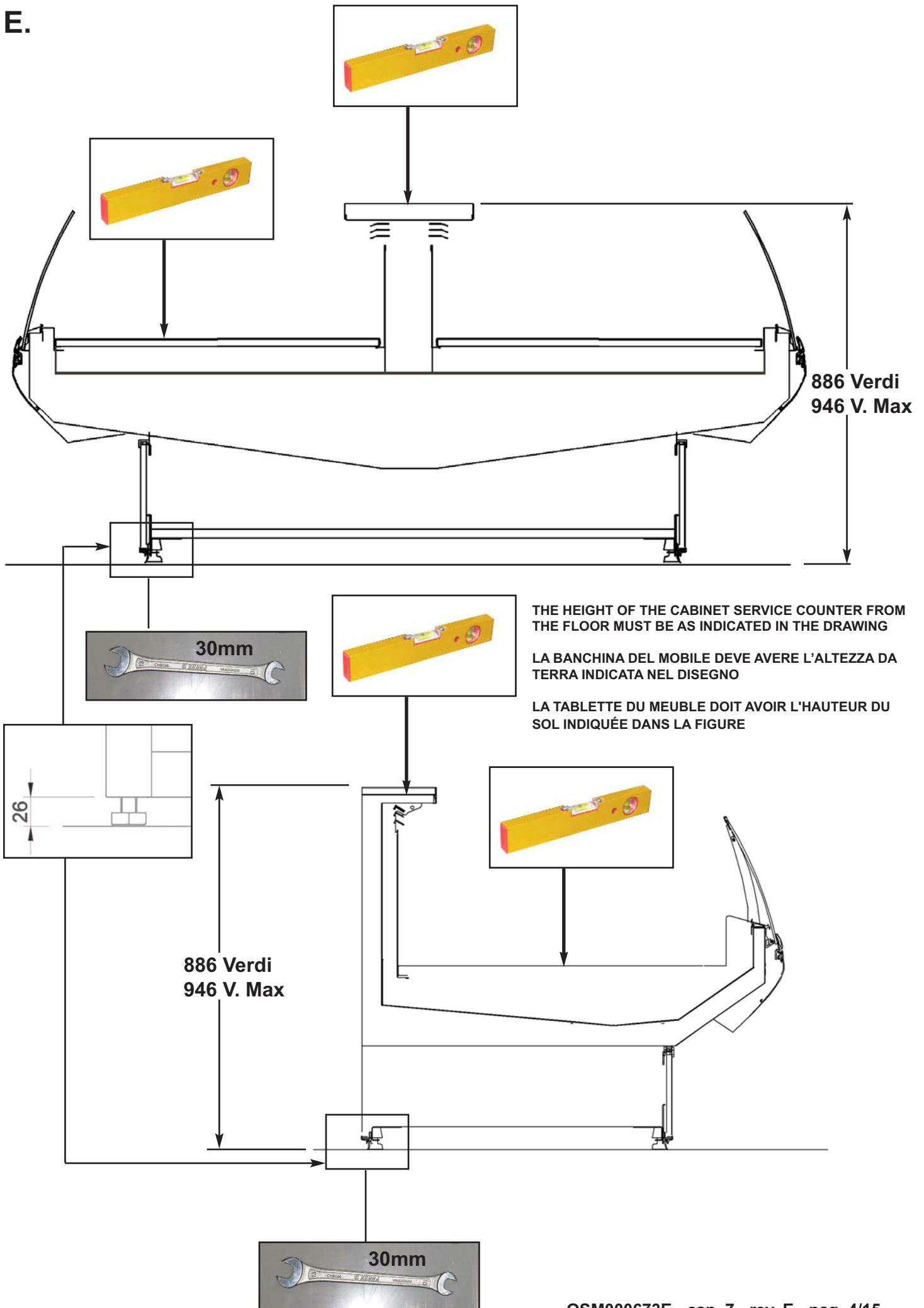
D.

All versions  
Tutte le versioni  
Toutes les versions

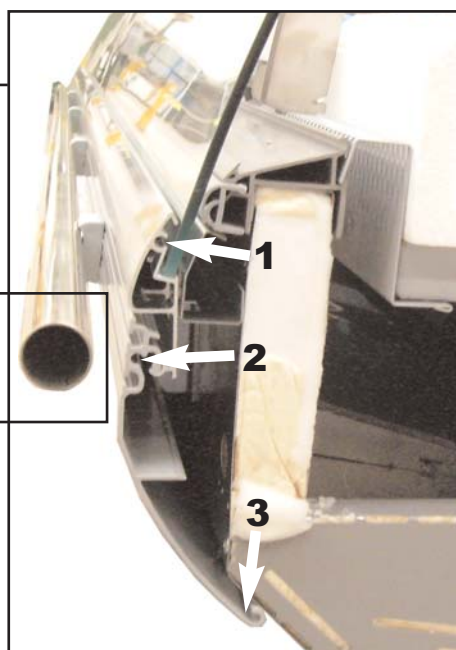
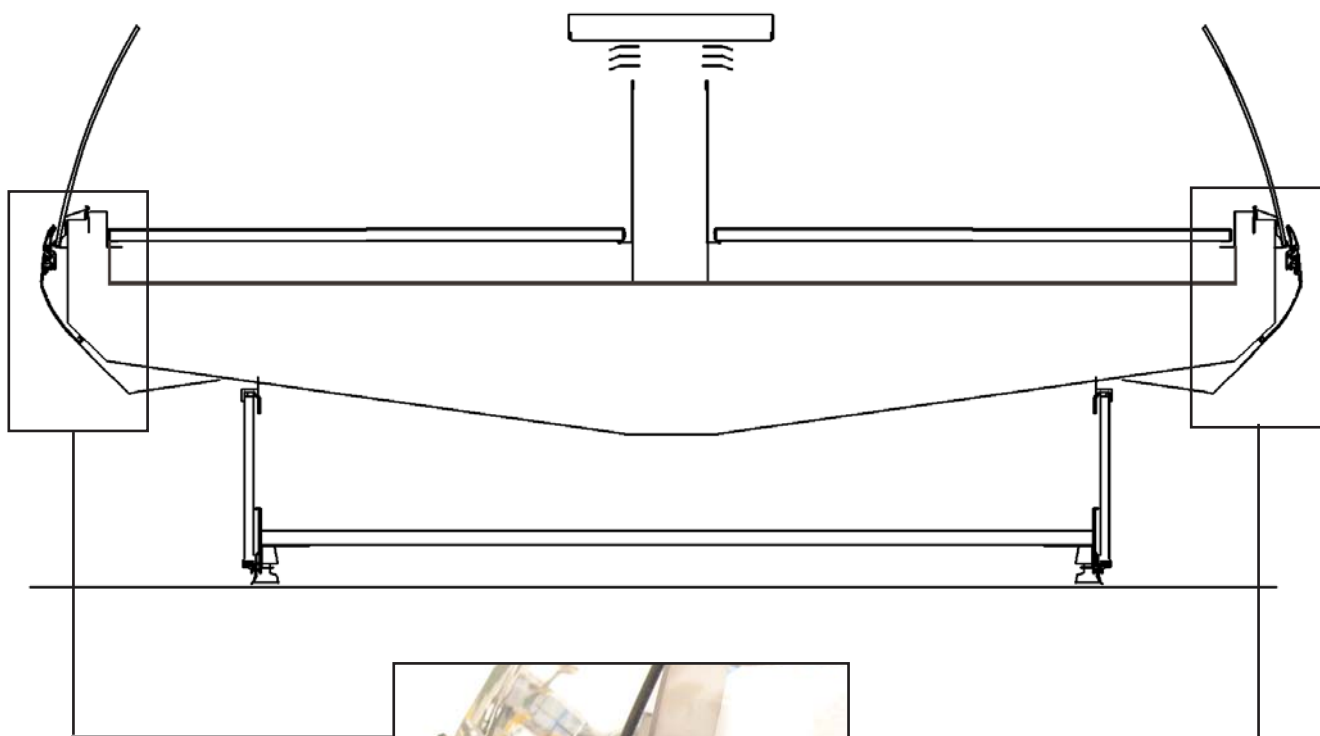


Remove - Closed legs version only  
Rimuovere - Versione piedi carenati solo  
Enlever - Version pieds bateaux seulement

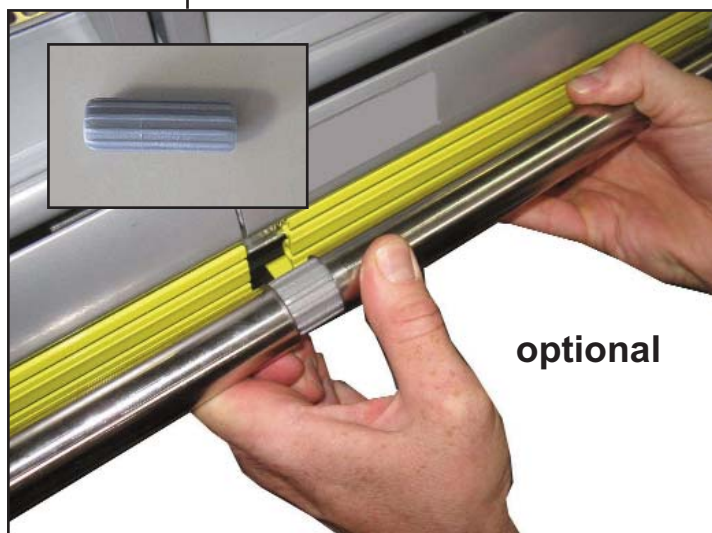
**E.**



F.



3 + 3 x Ø 4,5 x 100





# DESIGN VERSION



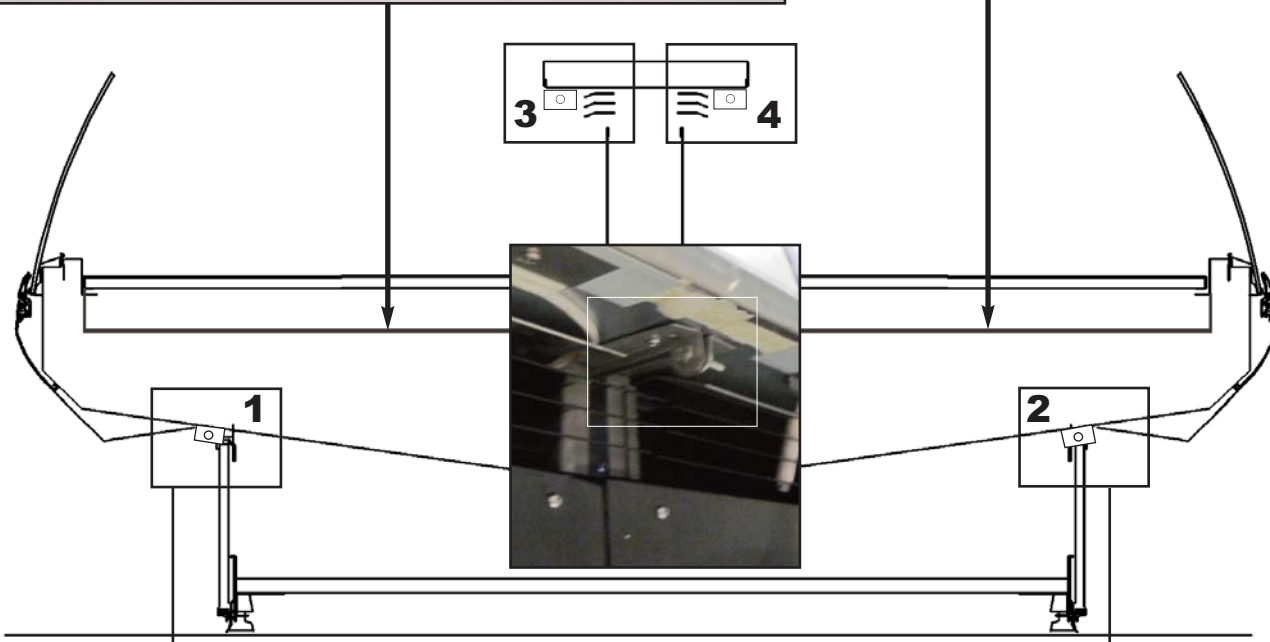
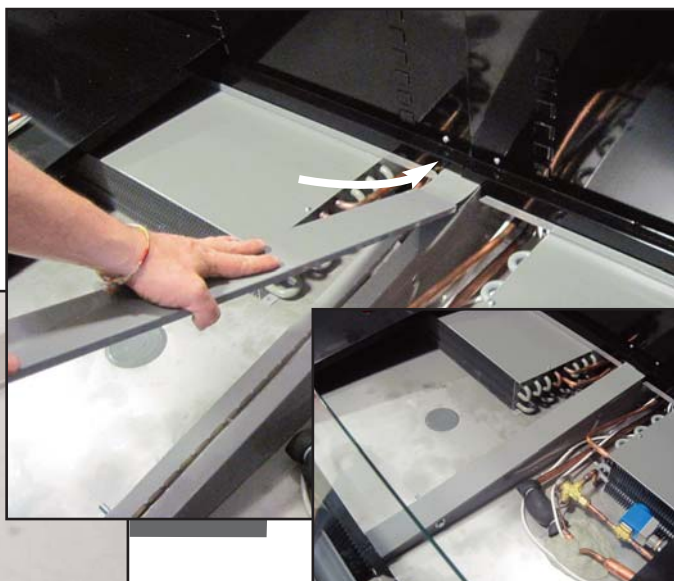
Manual folding ( $5^\circ$ ) to do during the assemblage before to insert it in the right position

Piego ( $\sim 5^\circ$ ) a mano da eseguire al montaggio prima di inserire in sede



**G. linear cabinet/linear cabinet multiplexing**  
**accoppiamento mobile lineare/mobile lineare**  
**accouplement meuble lineaire/meuble lineaire**

2 x 33369A00

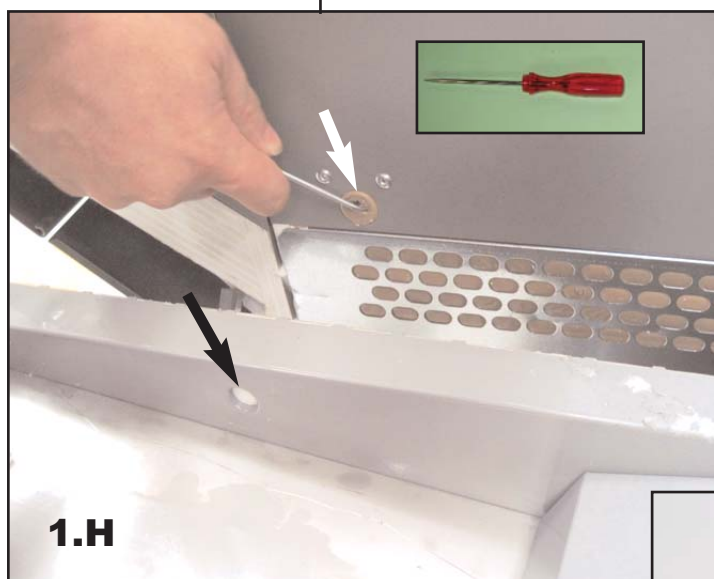
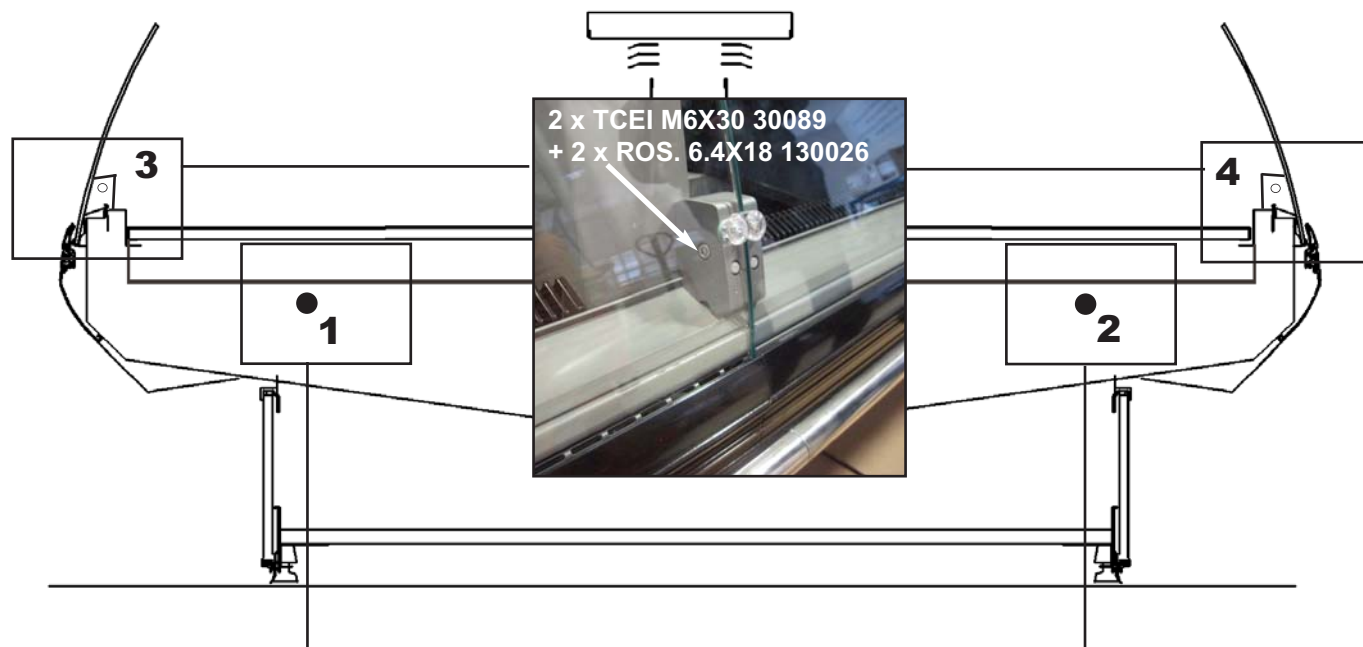


4 X TE M8X90

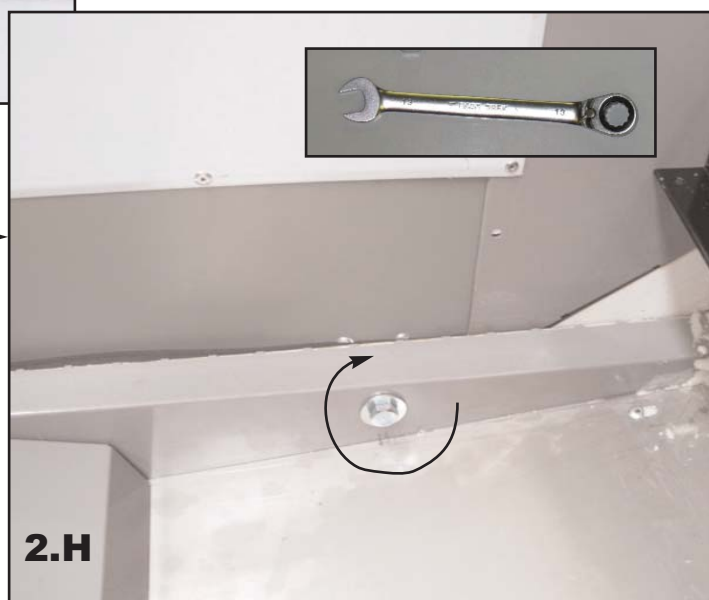




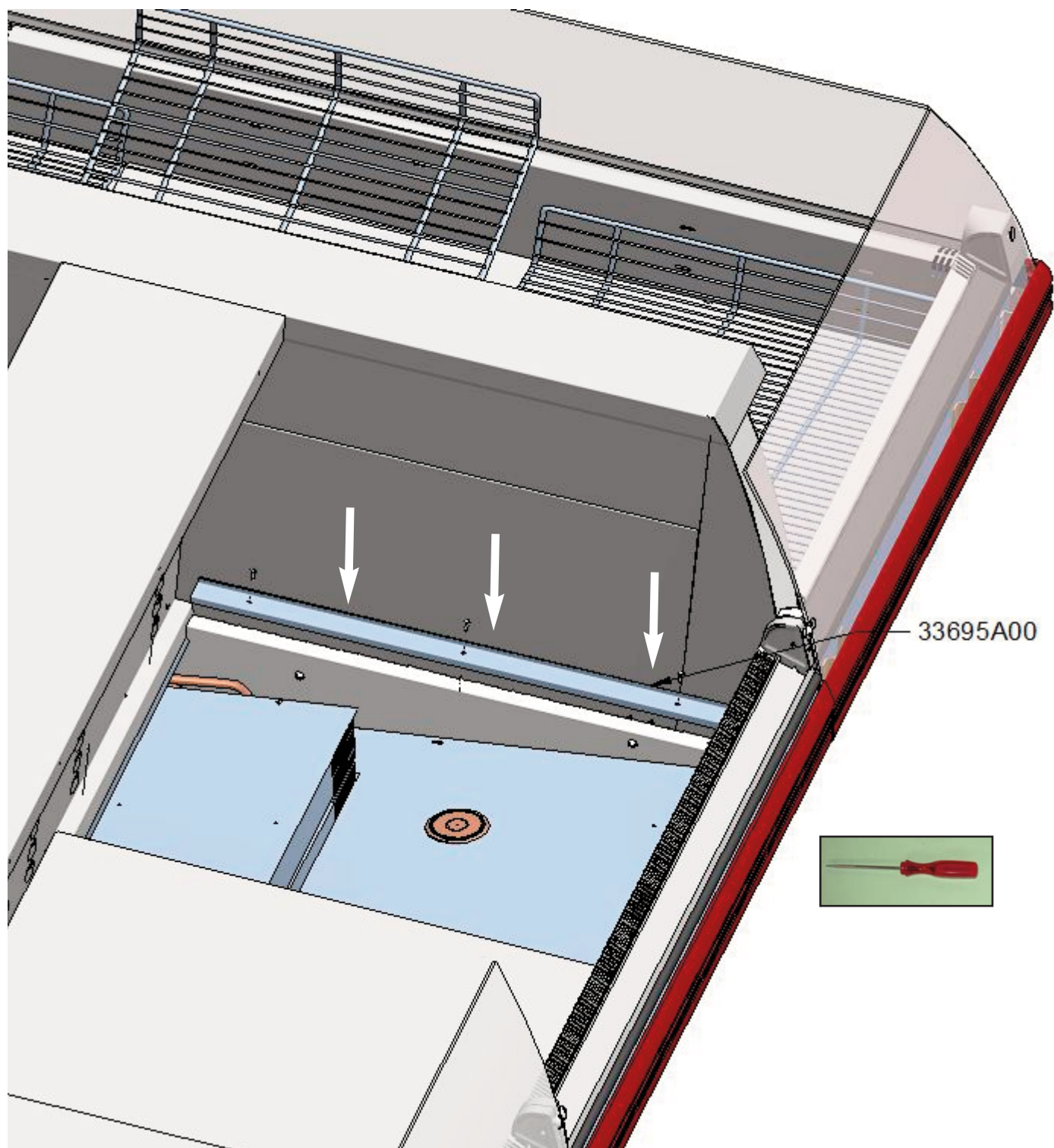
**H.** linear cabinet/head cabinet multiplexing  
accoppiamento mobile lineare/mobile di testa  
accouplement meuble lineaire/tête de gondole



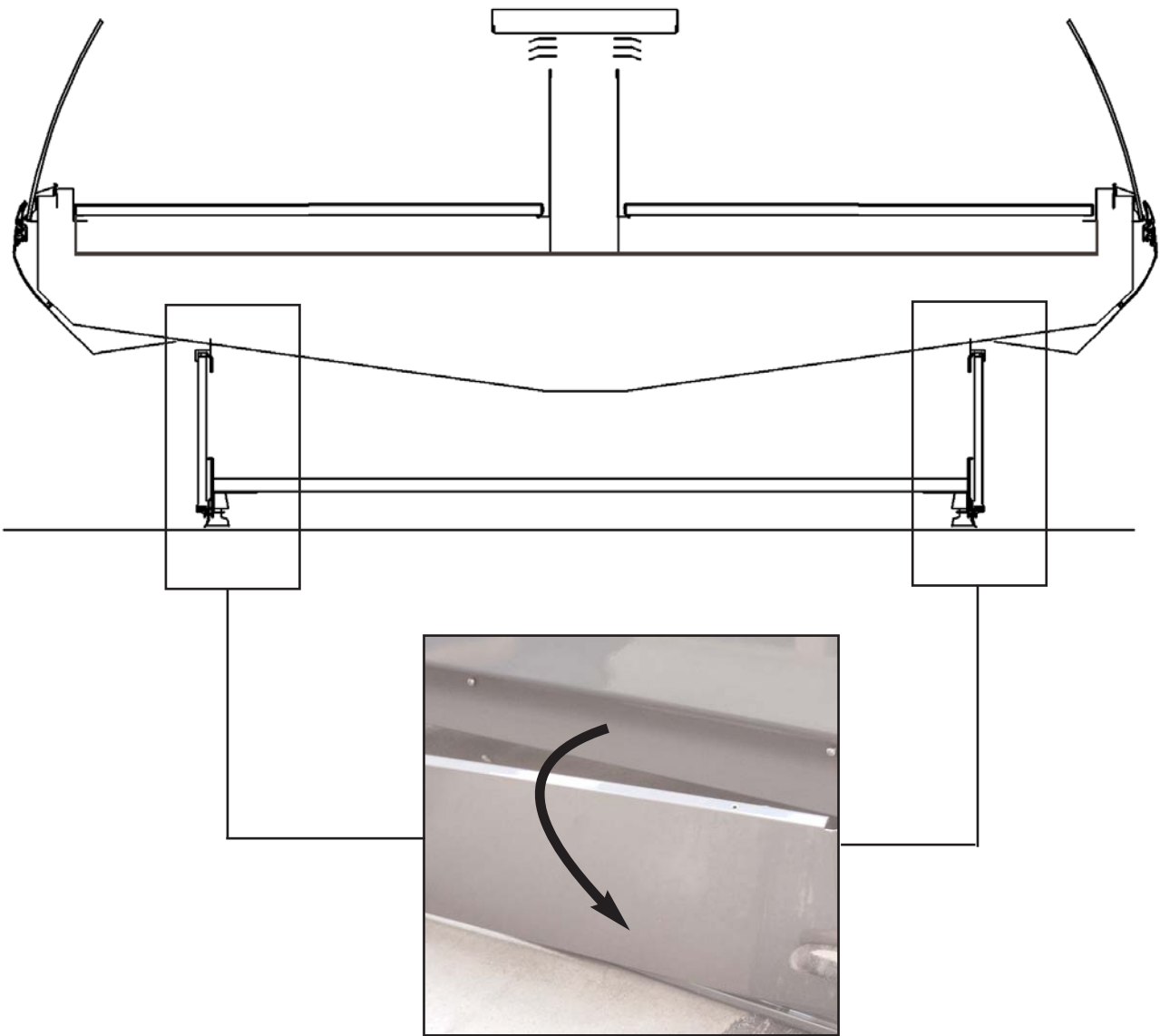
2 X TE M8X55



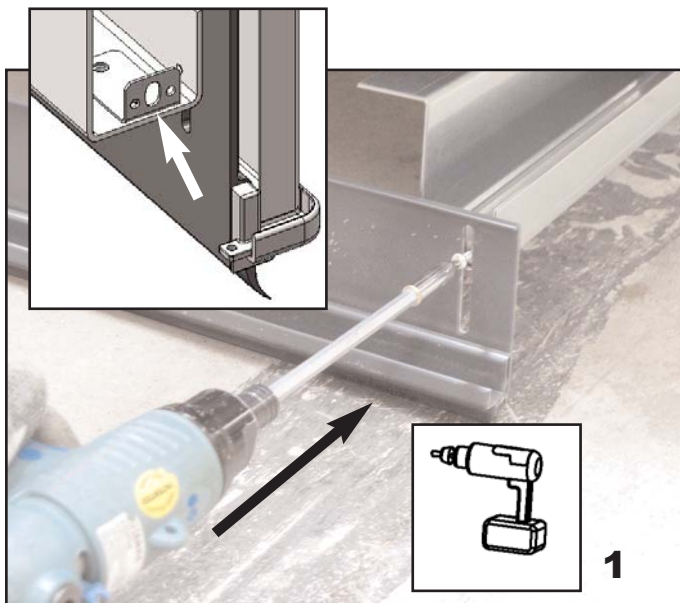
**H.** linear cabinet/head cabinet multiplexing  
accoppiamento mobile lineare/mobile di testa  
accouplement meuble lineaire/tête de gondole



I.



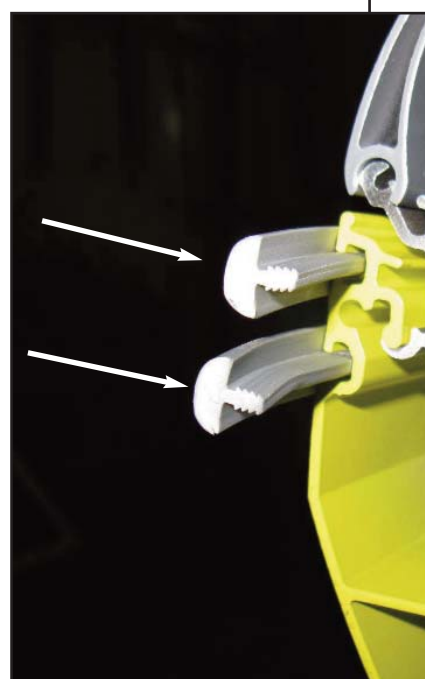
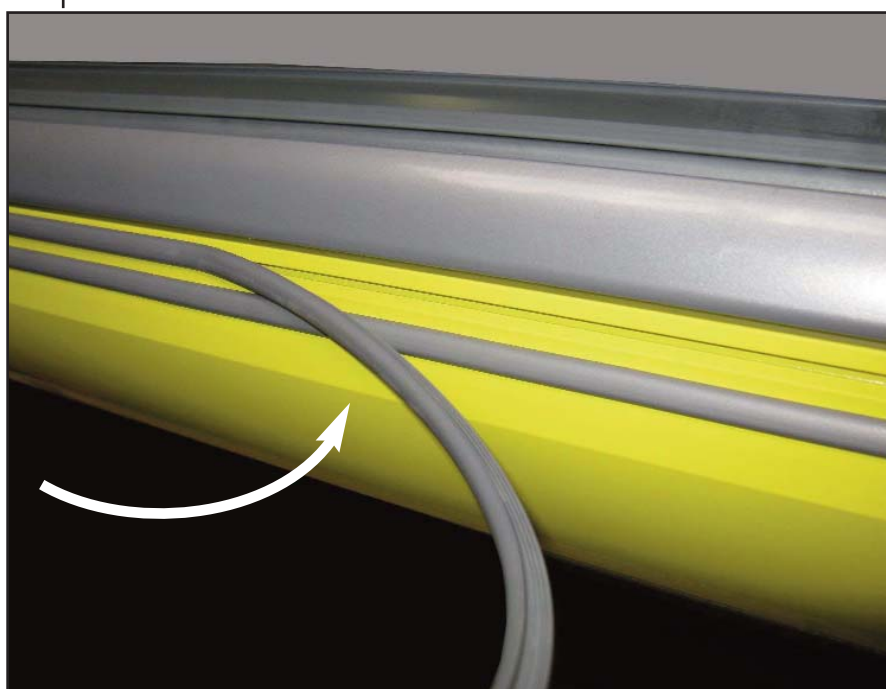
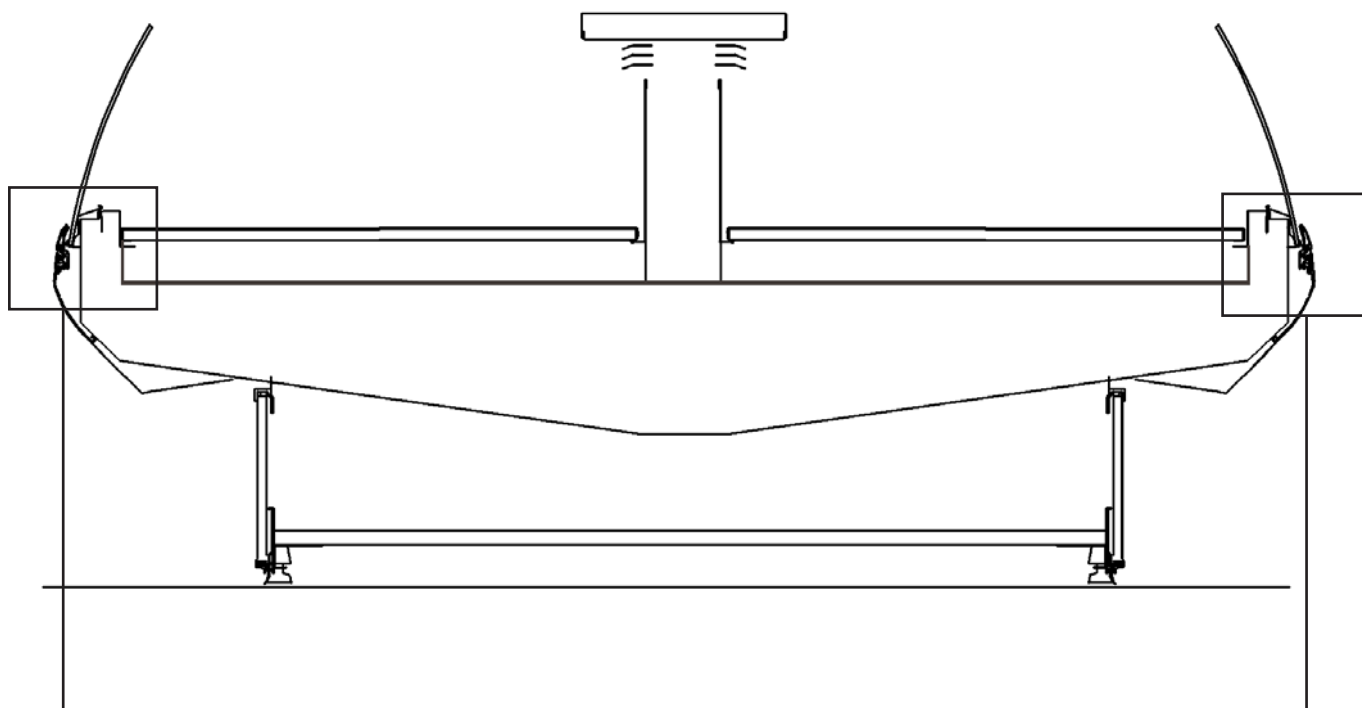
**Ends / Spalle / joues**



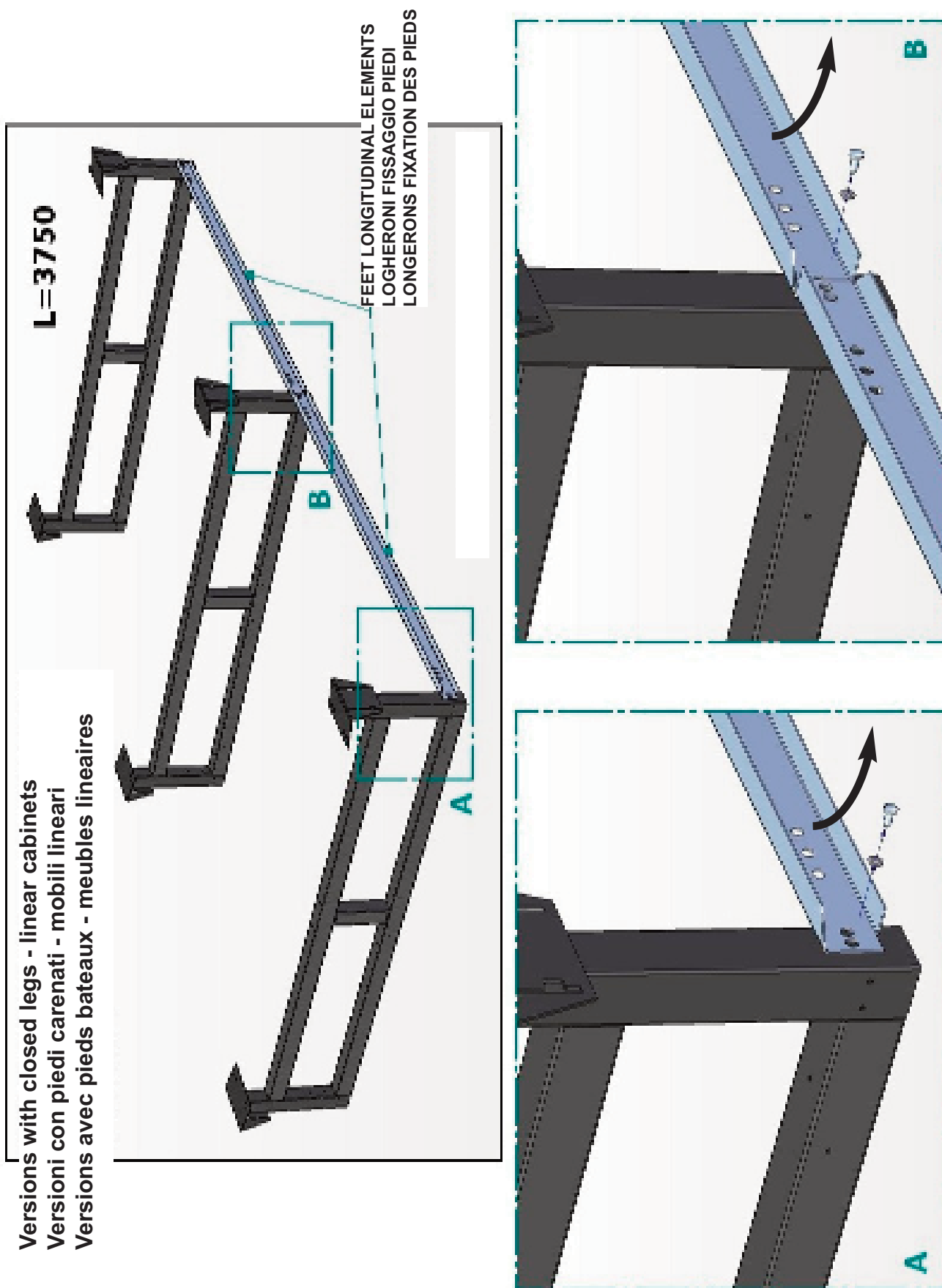
**L. Versions without steel bumper-rail**

**Versioni senza batticarrello in acciaio**

**Versions sans pare-chocs en acier**



M.



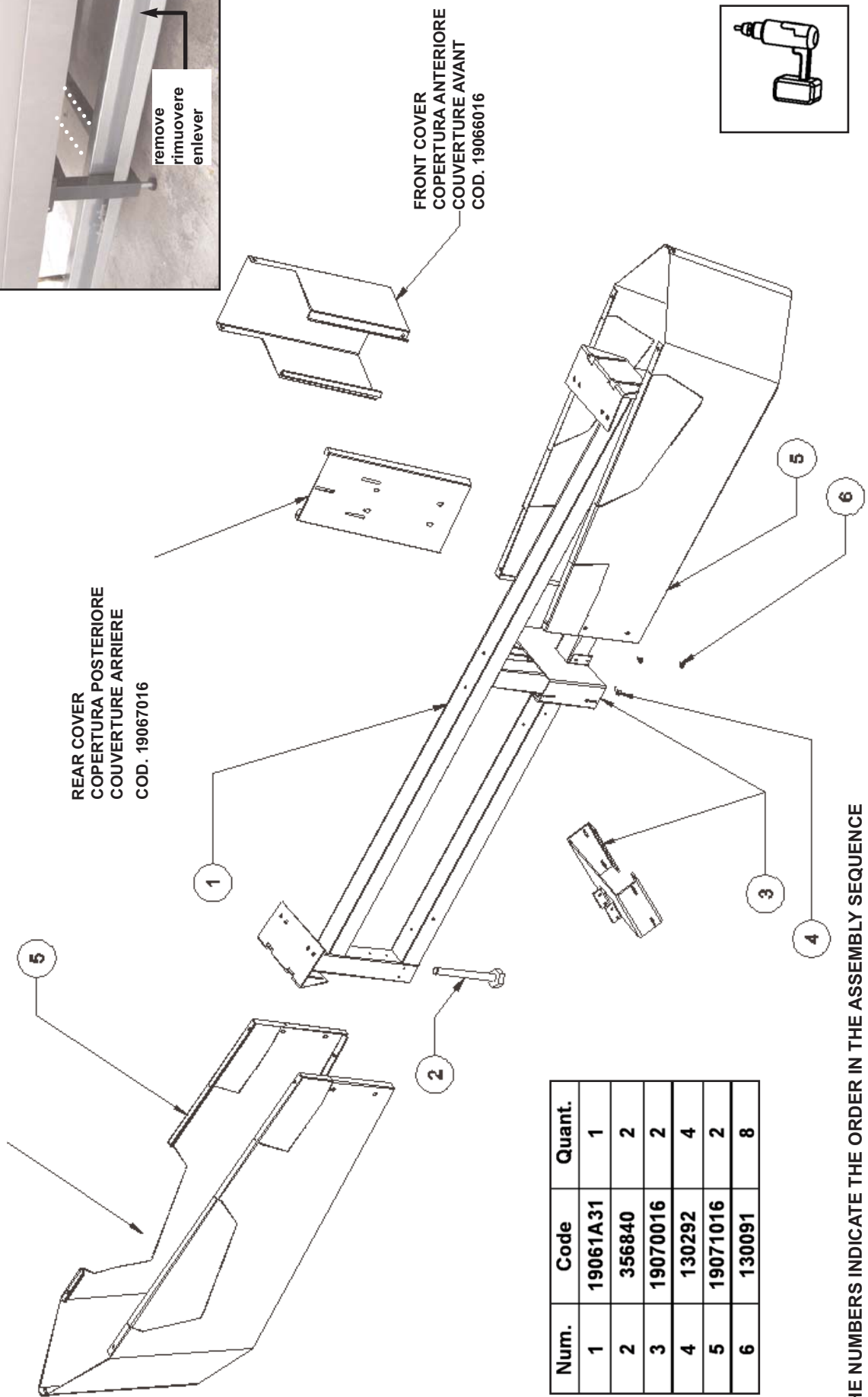


TO FIT THE COVERS ON VERSIONS 125 AND 188 OPEN THE SHEET-METAL FLAPS THAT ARE PRE-FOLDED ON THE ELECTRICAL PANEL SIDE ONLY, AND UNSCREW FOOT POS.2 BY 80MM

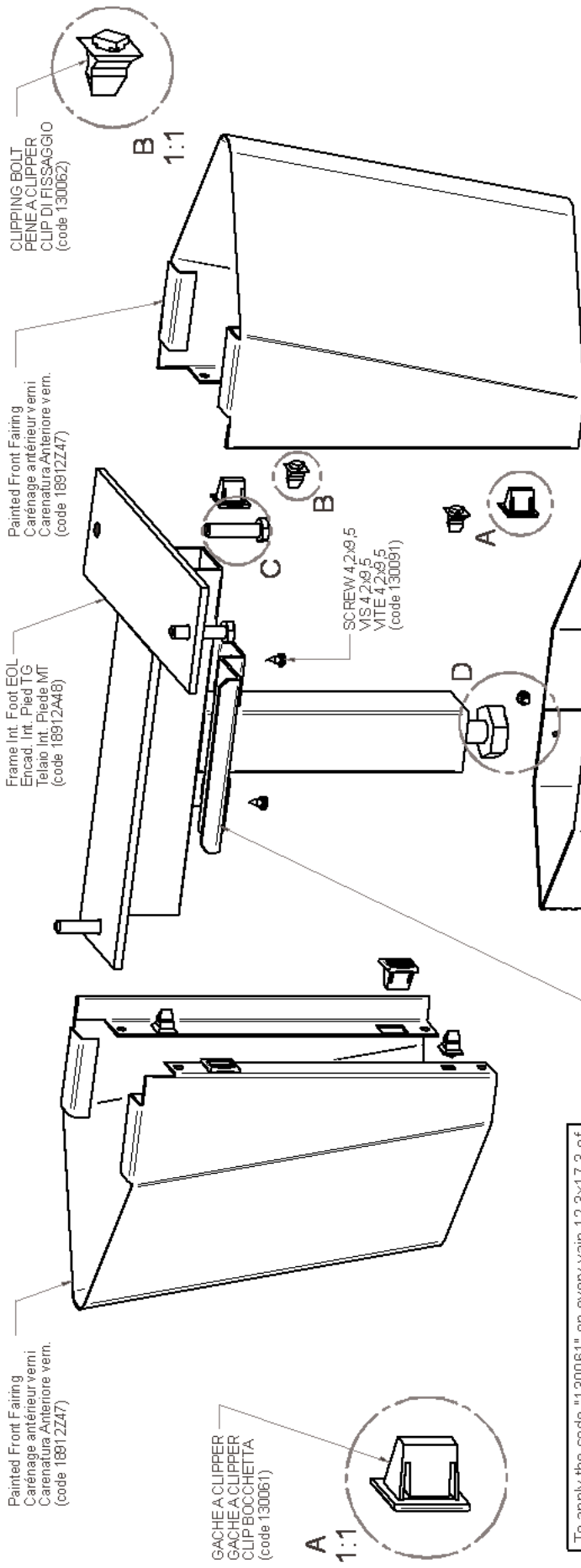
NELLE VERSIONI 125, 188 PER POSIZIONARE LE COPERTURE PIEDE APRIRE LE PONTI-CELLATURE PREDISPOSTE SOLO SU LATO

DANS LES VERSIONS 125 ET 188, POUR MONTER LES COUVERTURES DES PIEDS IL FAUT OUVRIR LES VOILETS QUI SONT PRÉ-PLIÉS SEULEMENT SUR LE CÔTÉ DU BOÎTIER ÉLECTRIQUE, ET DÉVISSER 80MM LE PIED EN POS.2

**M.**  
**Versions with closed legs - linear cabinets**  
**Versioni con piedi carenati - mobili lineari**  
**Versions avec pieds bateaux - meubles lineaires**

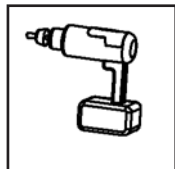
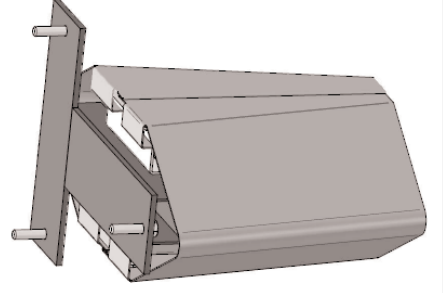


THE NUMBERS INDICATE THE ORDER IN THE ASSEMBLY SEQUENCE  
 I NUMERI INDICANO L'ORDINE DI ASSEMBLAGGIO  
 LES NUMÉROS INDIQUENT L'ORDRE DE L'ASSEMBLAGE



To introduce the code "130062" in correspondence of every vain 7x7 of the front fairing, with simple rotation.  
 Introduire le code "130062" en correspondance de chaque vain 7x7 du carenage antérieur, avec rotation simple.  
 Introdurre il codice "130062" in corrispondenza di ciascun vano 7x7 della carenatura anteriore, con semplice rotazione.

To apply the code "130061" on every vain 12,3x17,3 of the anterior fairing, through simple pressure.  
 Appliquer le code "130061" sur chaque vain 12,3x17,3 du carénage antérieur, par pression simple.  
 Applicare il codice "130061" su ogni vano 12,3x17,3 della carenatura anteriore, con semplice pressione.



Kockplate Low SS EOL STD  
 Plinthe Inf. Inox TG STD  
 Zoccolo Inf. Inox MT STD  
 (code 18912051)

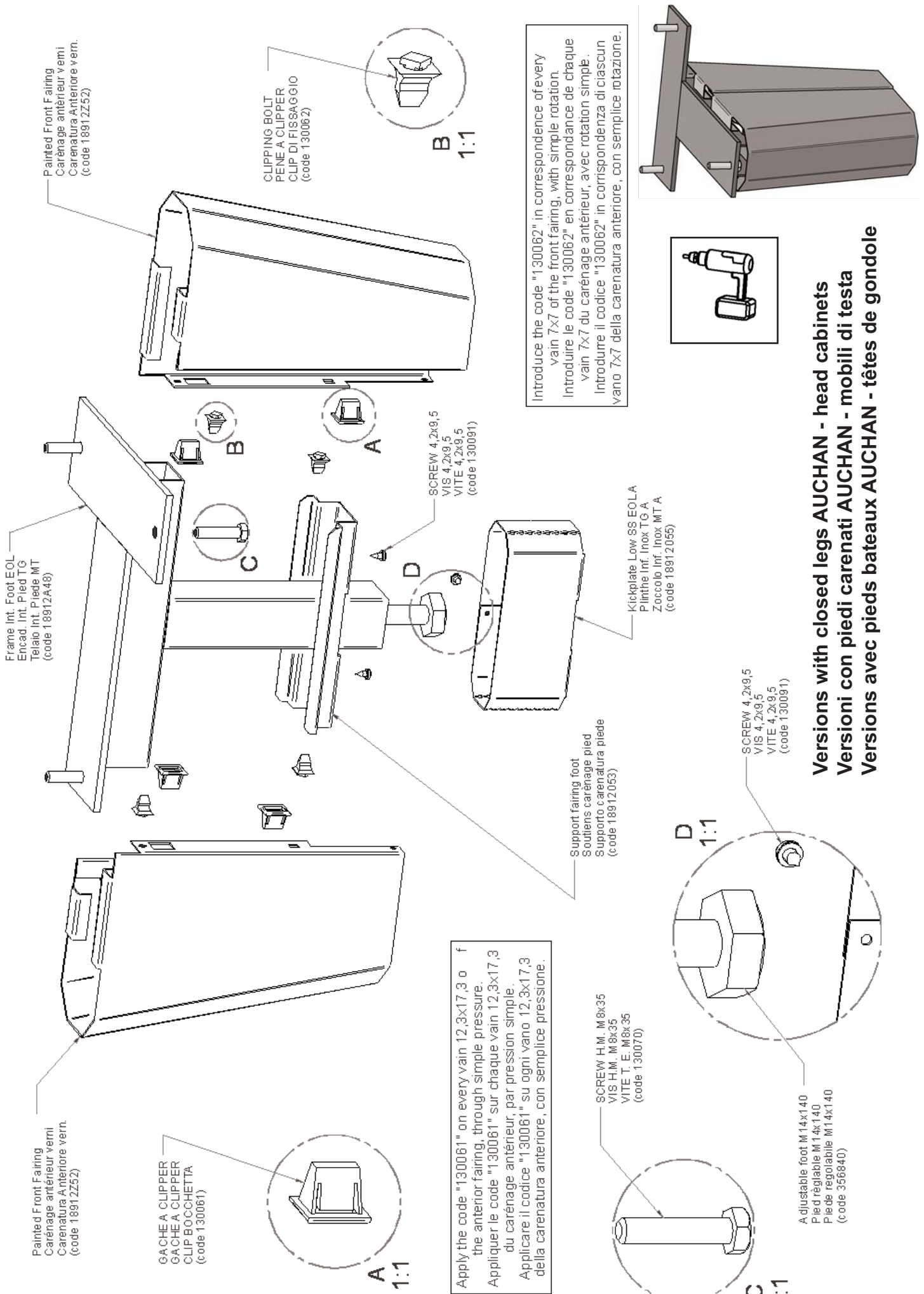
Support fairing foot  
 Soutiens carénage pied  
 Supporto carenatura piede  
 (code 18912043)

SCREW W.H. M8x35  
 VIS.H.M. M8x35  
 VITE.T. E. M8x35  
 (code 130070)

SCREW 4.2x8.5  
 VIS.4.2x8.5  
 VITE.4.2x8.5  
 (code 130091)

Adjustable foot M14x140  
 Pied réglable M14x140  
 Piede regolabile M14x140  
 (code 35684D)

**Versions with closed legs - head cabinets**  
**Versioni con piedi carenati - mobili di testa**  
**Versions avec pieds bateaux - têtes de gondole**



Frame Int. Foot EOL  
Encad. Int. Pied TG  
Telaio Int. Piede MT  
(code 18912A48)

Painted Front Fairing  
Carénage antérieur verni  
Carenatura Anteriore vern.  
(code 18912Z52)

Painted Front Fairing  
Carénage antérieur verni  
Carenatura Anteriore vern.  
(code 18912Z52)

GACHE A CLIPPER  
CLIP BOCCCHETTA  
(code 130061)

CLIPPING BOLT  
PENE A CLIPPER  
CLIP DI FISSAGGIO  
(code 130062)

B  
1:1

SCREW 4,2x9,5  
VIS 4,2x9,5  
VITE 4,2x9,5  
(code 130091)

Support fairing foot  
Soutiens carénage pied  
Supporto carenatura piede  
(code 18912053)

Kickplate Low SS EOLA  
Plinthe Inf. Inox TG A  
Zoccolo Inf. Inox MT A  
(code 18912055)

SCREW 4,2x9,5  
VIS 4,2x9,5  
VITE 4,2x9,5  
(code 130091)

D  
1:1

Apply the code "130061" on every vain 12,3x17,3 of the anterior fairing, through simple pressure.  
Appliquer le code "130061" sur chaque vain 12,3x17,3 du carénage antérieur, par pression simple.  
Applicare il codice "130061" su ogni vano 12,3x17,3 della carenatura anteriore, con semplice pressione.

SCREW H.M. M8x35  
VIS H.M. M8x35  
VITE T. E. M8x35  
(code 130070)

Adjustable foot M14x140  
Pied réglable M14x140  
Piede regolabile M14x140  
(code 356840)

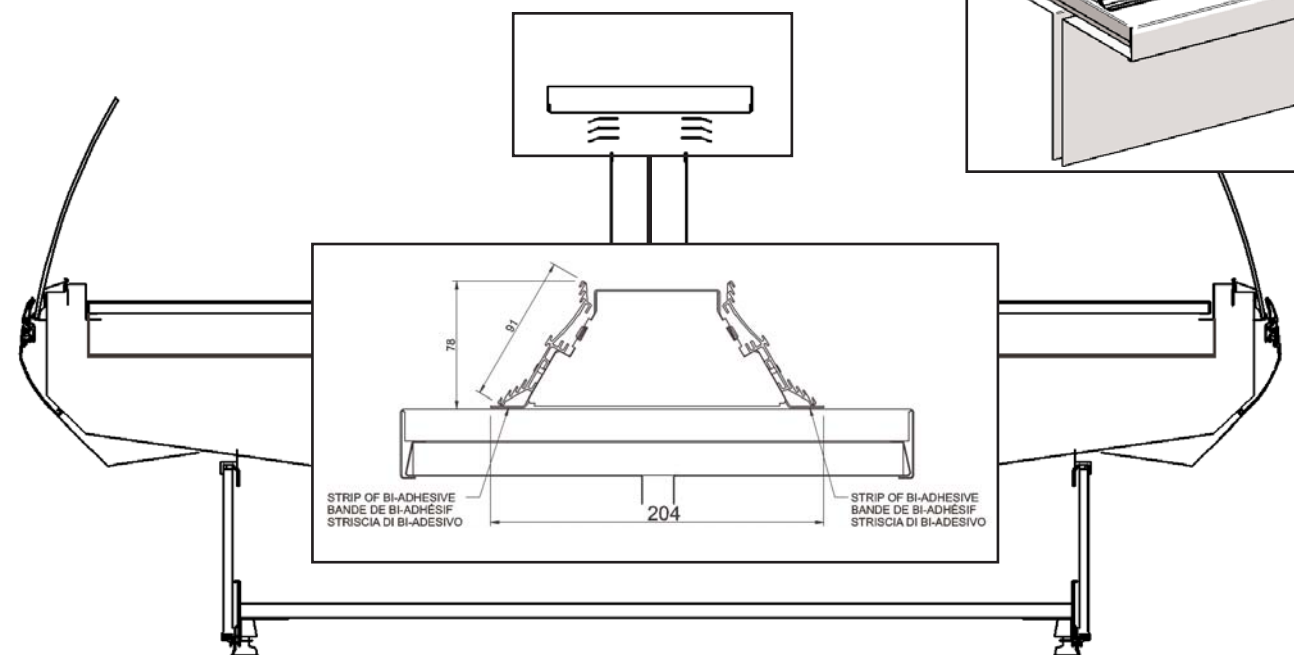
C  
1:1

Introduce the code "130062" in correspondence of every vain 7x7 of the front fairing, with simple rotation.  
Introduire le code "130062" en correspondance de chaque vain 7x7 du carénage antérieur, avec rotation simple.  
Introdurre il codice "130062" in corrispondanza di ciascun vano 7x7 della carenatura anteriore, con semplice rotazione.

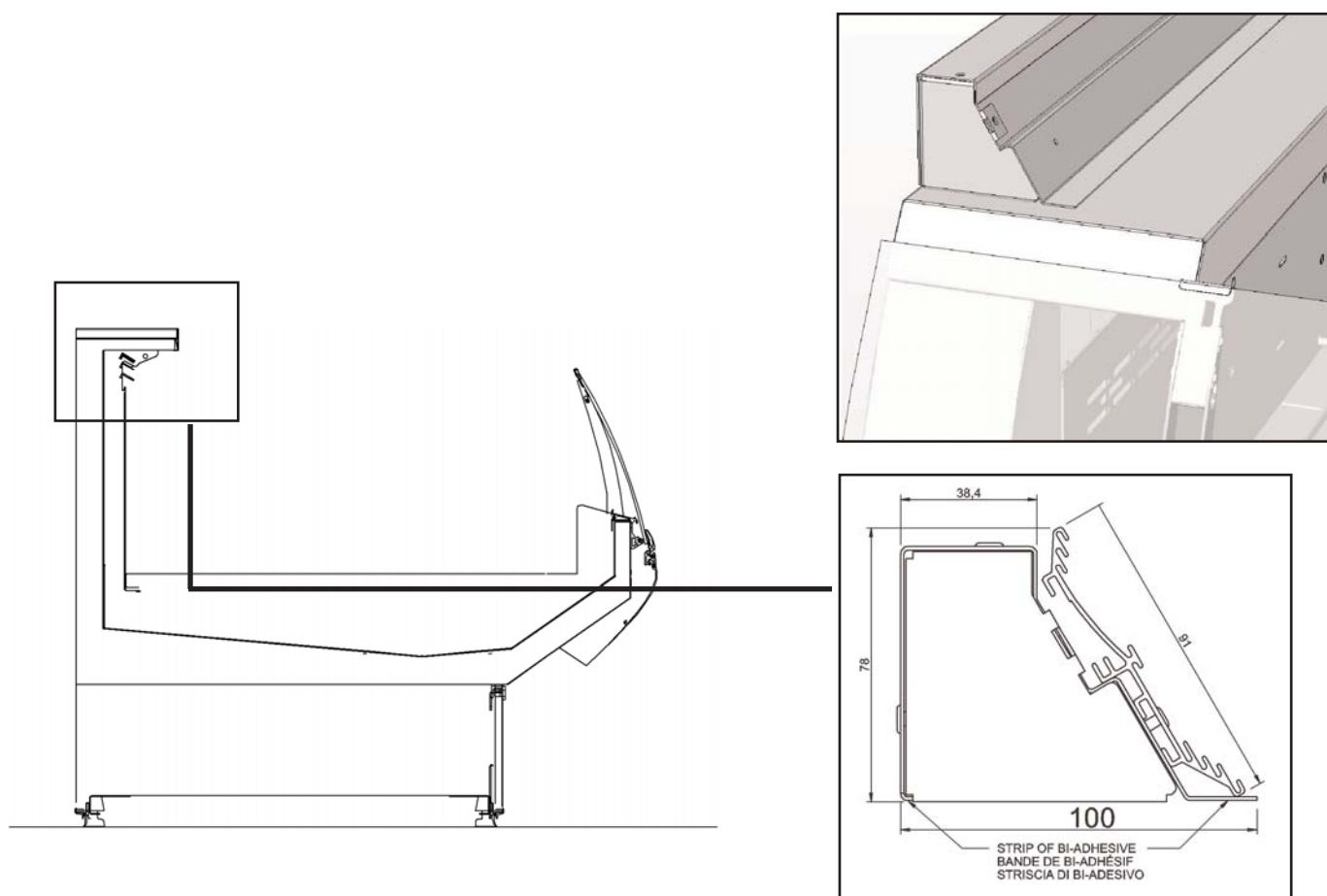
**Versions with closed legs AUCHAN - head cabinets**  
**Versioni con piedi carenati AUCHAN - mobili di testa**  
**Versions avec pieds bateaux AUCHAN - têtes de gondole**



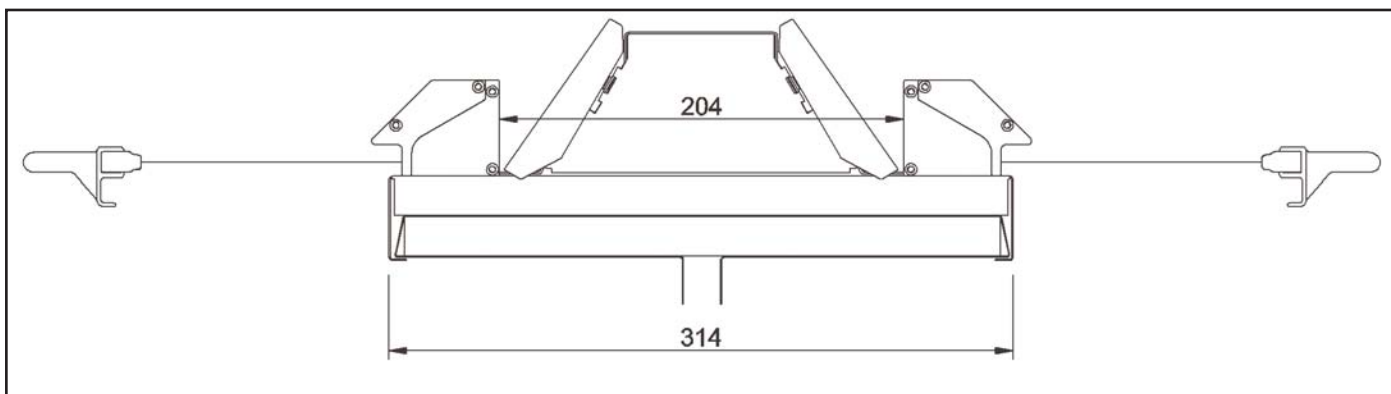
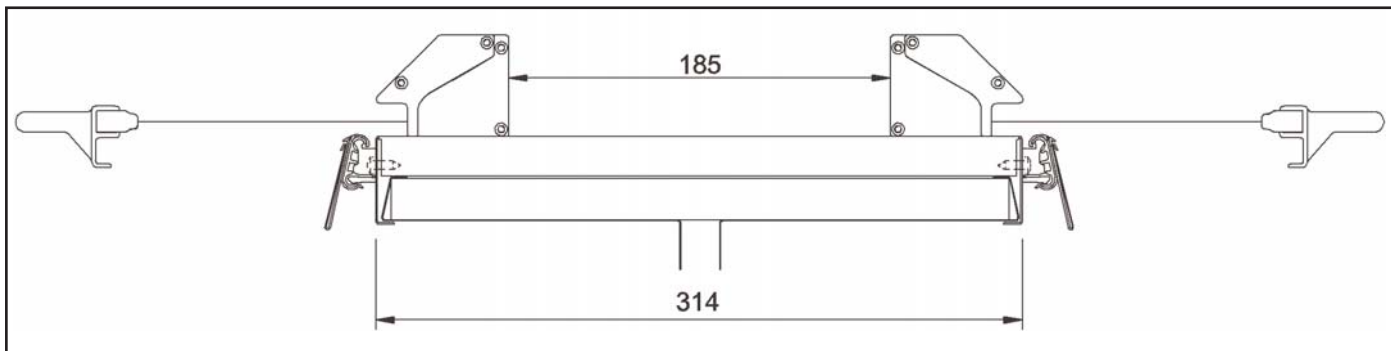
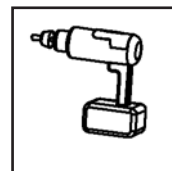
**O. Ticket holder assembly OPTIONAL - linear cabinets**  
**Montaggio portaprezzi OPTIONAL - mobili lineari**  
**Montage porte-prix OPTIONAL- meubles lineaires**



**Ticket holder assembly OPTIONAL - head cabinets**  
**Montaggio portaprezzi OPTIONAL - mobili di testa**  
**Montage porte-prix OPTIONAL- têtes de gondole**



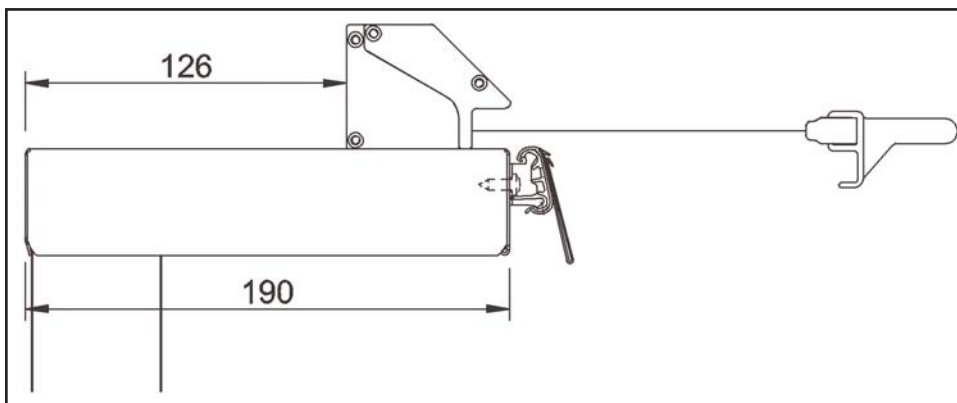
**P. Night blind assembly OPTIONAL - linear cabinets**  
**Montaggio tendina notte OPTIONAL - mobili lineari**  
**Montage rideau de nuit OPTIONAL- meubles lineaires**



Forare la banchina Ø 3,5.  
 Fissare con viti autofilettanti 4,2

**Night blind assembly OPTIONAL - head cabinets**  
**Montaggio tendina notte OPTIONAL - mobili di testa**  
**Montage rideau de nuit OPTIONAL- têtes de gondole**

Perforate the service platform Ø 3,5.  
 Fix by self drilling screws 4,2



Percer la tablette Ø 3,5.  
 Fixer par vis auto-taraudeuses 4,2

