L legrand®

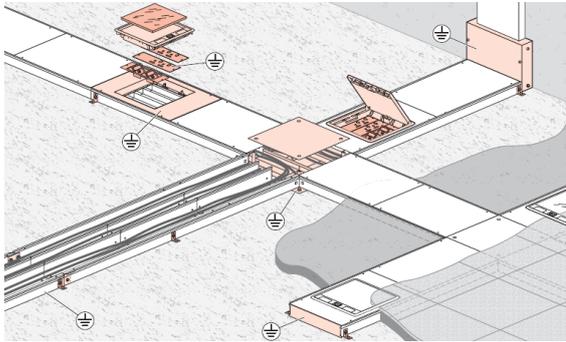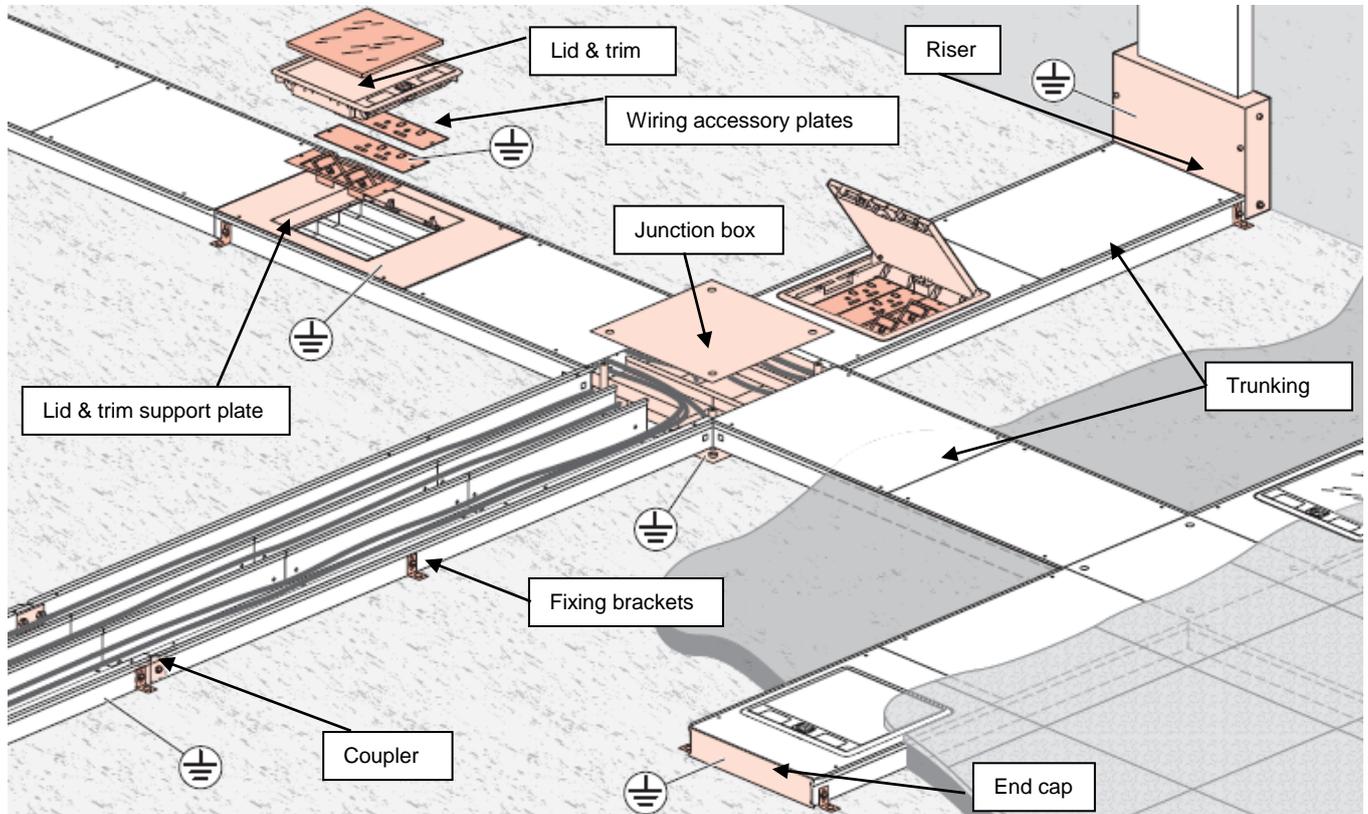87045 LIMOGES Cedex
Phone : 05 55 06 87 87 – Fax : 05 55 06 88 88

Flush Floor system

Number(s) :

6897 50/51/55/57/60/61/62/63/65/66/67/68/69,

6896 30/31/32/33/36/37/40/41/42/43/47/92/93

1 RANGE.

	Fixing brackets	Coupler	End cap	Leveling		Riser	Junction box	Lid & Trim support plate		Lid & Trim		Stainless steel Insert
								3 compt	4 compt	Rigid cable exits	Soft cable exits	
300 x 65 (mm) Metal	6897 50	6897 55	6897 65	6897 67	6897 88	6897 62	6897 60 or 6897 69 or 6897 61	6896 36	–	3 compt grey 6896 30 / beige 6896 32	6896 31 / 6896 33	6896 92
405 x 65 (mm) Metal	6897 51	6897 57	6897 66	6897 68		6897 63		6896 37	6896 47	4 compt grey 6896 40 / beige 6896 42	6896 41 / 6896 43	6896 93

Data sheet : F01022EN/01   Updated : 17/04/19   Created : 19/05/10

Flush Floor system

Number(s) :

6897 50/51/55/57/60/61/62/63/65/66/67/68/69,

6896 30/31/32/33/36/37/40/41/42/43/47/92/93

CONTENTS

1 RANGE.

1- The Flush Floor system provides adaptable power, data, audio & video distribution in screed floors.

The system to ensure a fast and simple installation.
Designed to support Cat 6 structured cabling systems.
Suitable for screed height between 65 to 90mm.
Lid & trim as IP20 rated in accordance with EN 50085-2-2 and EN 60670-23
Choice of 3 or 4 compartments lid & trim.
Self Closing lid in accordance with IEC 61534-22.
Lid & trim: plastic material ABS/PA 6.6 FV
Rigid & flexible exits: plastic material ABS/TPEE
Stainless steel insert: stainless steel material AISI 304

2- Flush Floor System.

Ambient Temperature Range:

Handling and storage -25°C minimum
During installation -5°C 60°C
Application -5°C 60°C

Metal trunking and Accessories:

Trunking and accessories: Material Pre-galvanised steel sheet (DX51D Z275 MAC)

Cleaning:

The exterior should only be cleaned using a damp cloth


Flush Floor system

1 RANGE.

3- Cable Capacity Guide.

The number and location of boxes depends on the end users requirements.
If the furniture layout is available, a lid & trim should be considered for each workstation or desk.
If the final furniture layout is not available, the minimum recommended distribution is one lid & trim for every 10m², and the maximum being one lid & trim per 4m².

Compartment 1, and 3 have the same capacity
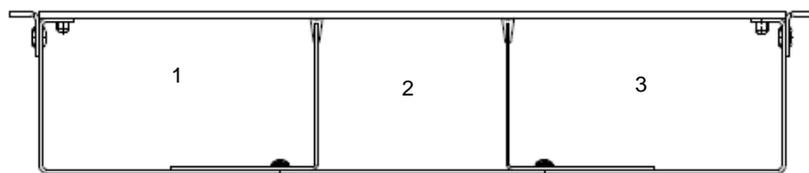
45% available cross section

for power cables			Number of PVC stranded							Twin & earth		
Metal trunking	Compt	Section 45% Fill mm²	1,5² Ø3.3 mm	2,5² Ø4 mm	4² Ø4.6 mm	6² Ø5.2 mm	10² Ø6.7 mm	16² Ø7.8 mm	25² Ø9.7 mm	2,5² Ø10.5 mm	4² Ø11.2 mm	6² Ø13.7 mm
300x65	1	2992	348	237	180	141	85	63	40	35	30	20
300x65	2	2086	243	166	126	98	59	44	28	24	21	14
300x65	3	2992	348	237	180	141	85	63	40	35	30	20
405x65	1	3389	394	269	204	160	96	71	46	39	34	23
405x65	2	4200	488	333	253	198	119	88	57	49	42	28
405x65	3	3389	394	269	204	160	96	71	46	39	34	23

| for data cables			Number of Data cables			
Metal trunking	Compartment	Section 45% Fill mm²	cat 5E UTP Ø5.5mm	cat 5E STP Ø6mm	cat 6 UTP Ø6.5mm	cat 6 STP Ø7mm
300x65	1	2992	99	83	71	61
300x65	2	2086	69	58	49	43
300x65	3	2992	99	83	71	61
405x65	1	3389	112	94	80	69
405x65	2	4200	139	117	100	86
405x65	3	3389	112	94	80	69

Flush floor system ducting complies with EN50085-1: 2005 and draft EN50085 Part 2-2.
The above table gives the available capacity units on 45% factor, applied to the internal wiring area.

4- Layout.
In order for the installation to perform desired flexibility, the ducting is usually laid out on either a Grid, Fishbone or a Comb Pattern of single, double or triple runs.

The **Fishbone Pattern** is ideal for a medium sized area where fewer boxes are required.
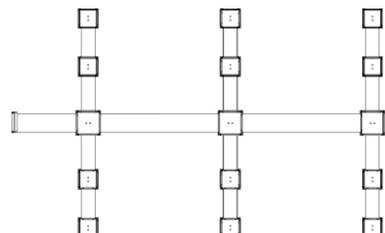
Standards: Flush System range complies with the relevant requirements of the latest edition and to EN 50085 Part 1 and EN 50085 Part 2-2.
Additionally the lid & trim also comply with EN 60670-23 Parts 1 and 23.

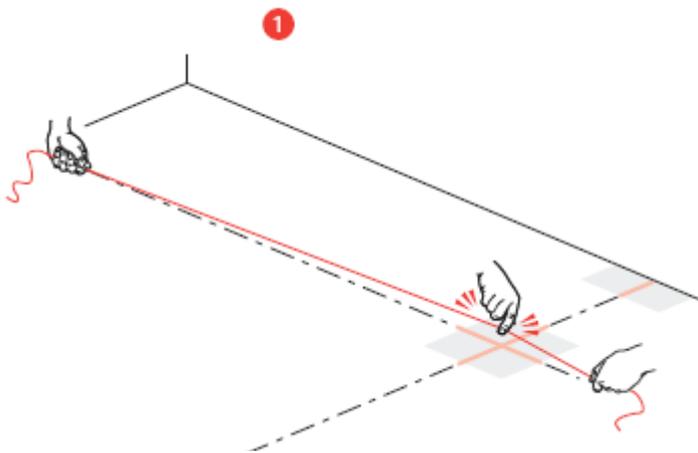Data sheet : F01022EN/01   Updated : 17/04/19   Created : 19/05/10   **L1 legrand**
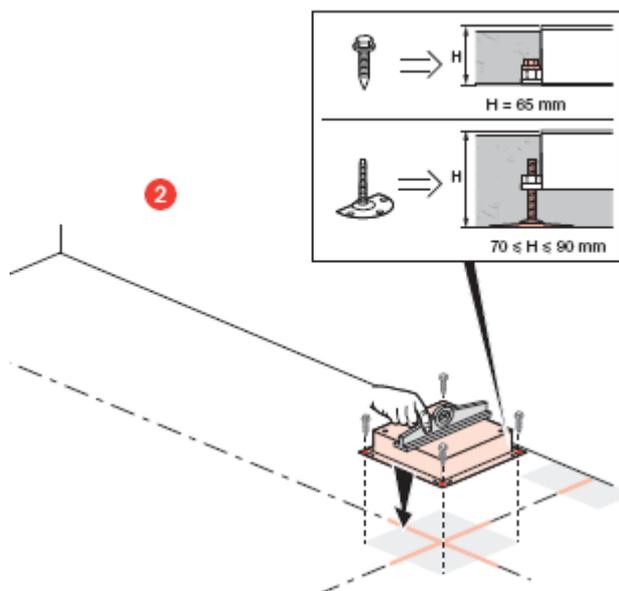
Flush Floor system
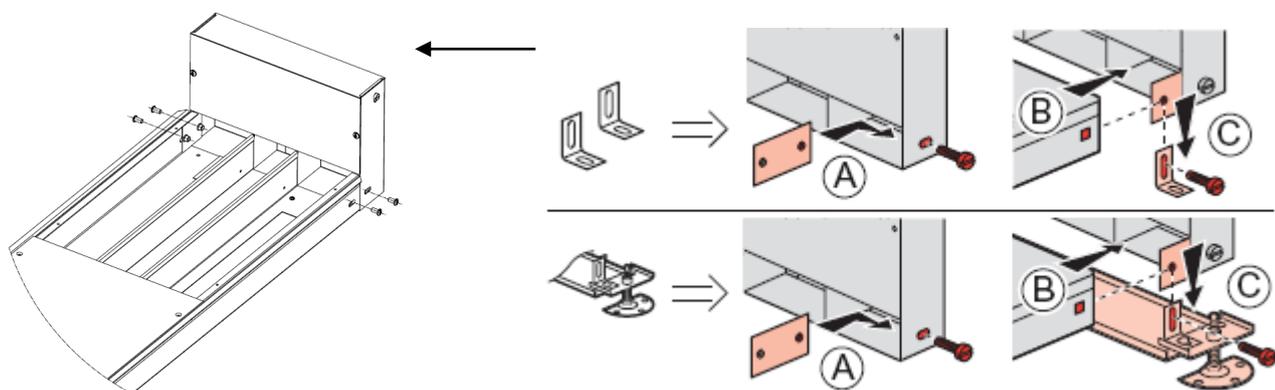
2 INSTALLATION PROCESS

1- Installation

A- Mark the pathway for trunking and junction boxes

B- Fix risers and junctions boxes on to the slab. Use leveling kit if screed level is between 70 and 90mm.

H = 65 mm

70 ≤ H ≤ 90 mm

C- Fix trunking and all accessories with fixing brackets onto the slab

Flush Floor system

2 INSTALLATION PROCESS (continued)

1- Installation

D- tape over the outside edges of the entire length of trunking to protect the screws from concrete
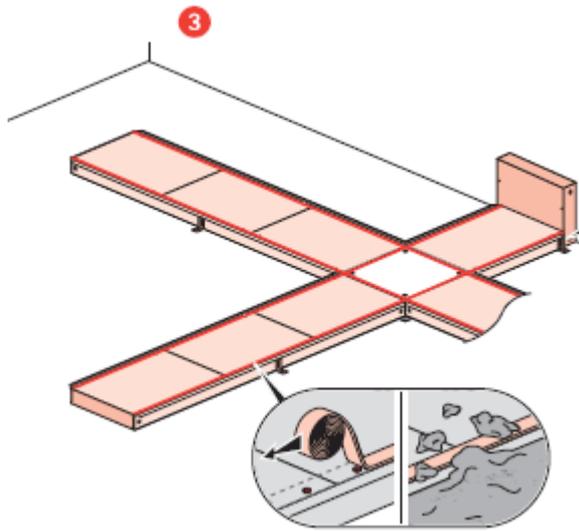
E- Execute screeding
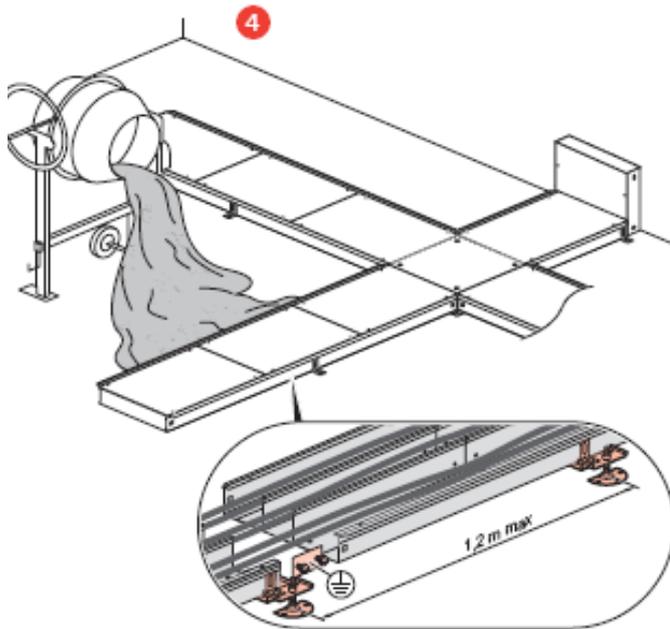
F- Once the screed is dry, remove the covers and cable the trunking
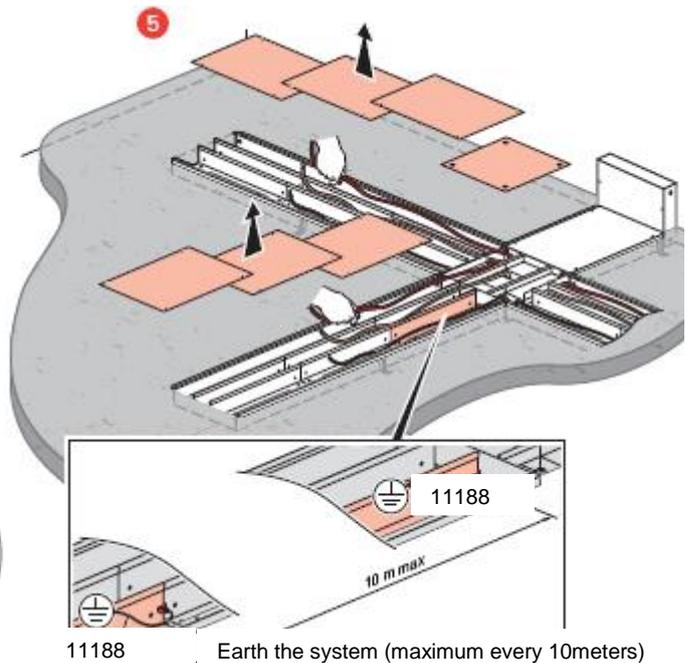
11188   Earth the system (maximum every 10meters)

If levelling is required, use levelling kit and do not exceed 1.2m between levelling brackets.

Flush Floor system

2 INSTALLATION PROCESS (continued)

2- Junction box ref 6897 60/61/69
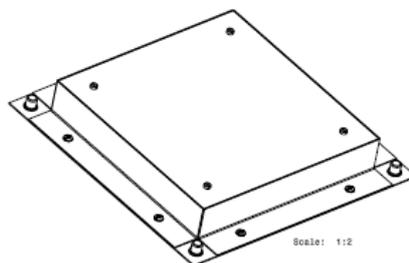
The junction box should be positioned directly on the slab and provides access to cables at the intersection of trunkings.
The junction box allows deviation of power and data cable, adjustable height from 65 to 90mm with 4 leveling brackets ref 6897 88 (details on page 4)
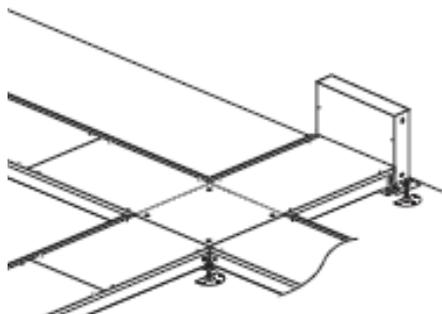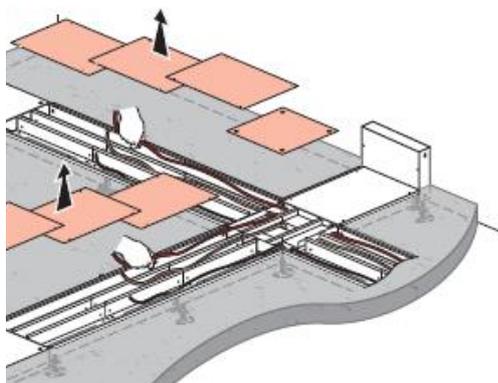Junction Boxes are supplied complete with base + lid + fly overs.

1- Fixe the junction box on the slab and unscrew the lid
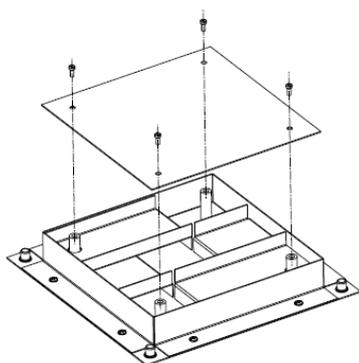
2- Pull the flyovers out of the junction
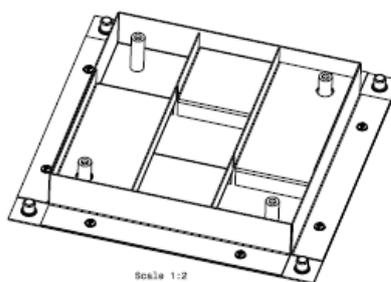
3- connect the trunking with screws

4- Once the screed is dry, remove the covers and cable the trunking

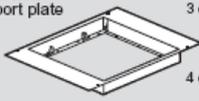4- Refix the lid of the junction box and the cover of the trunking when cabling is complete.
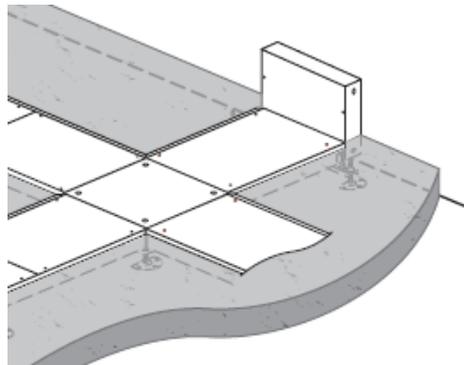
Data sheet : F01022EN/01   Updated : 17/04/19   Created : 19/05/10   **L7 legrand**

Flush Floor system

2 INSTALLATION PROCESS (continued)

3- Lid & trim support plate ref 6896 36/37/47

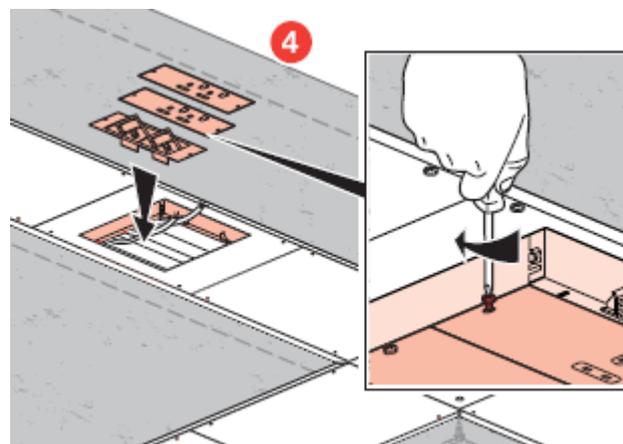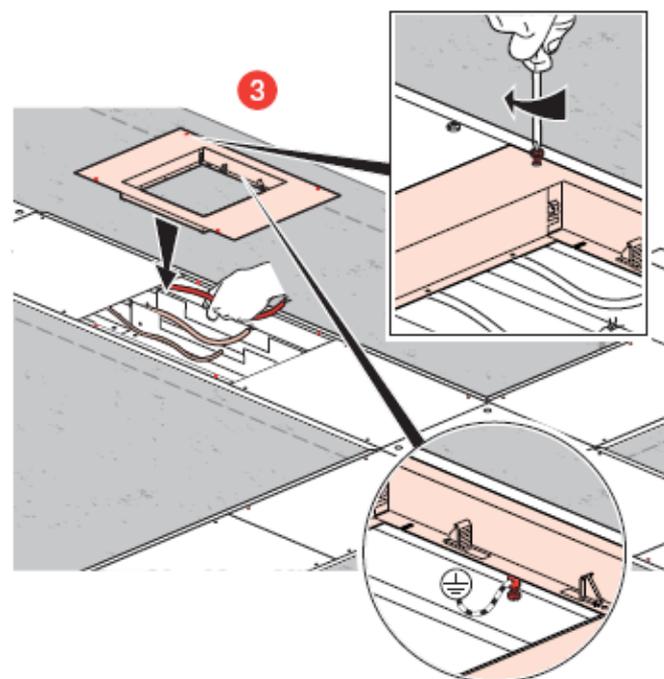|		300 x 65 (mm)	405 x 65 (mm)
		6897 50	6897 51
Lid & Trim support plate	3 compt	6896 36	6896 37
	4 compt	–	6896 47

Before installation of wiring devices plates and lid & trim

1- To fit the floor box, remove cover and the rubber gasket

2- Remove the dividers, fix them up-side-down and reposition rubber gasket
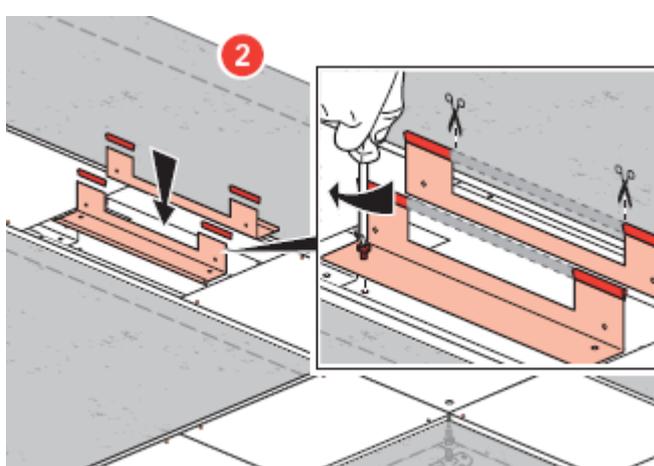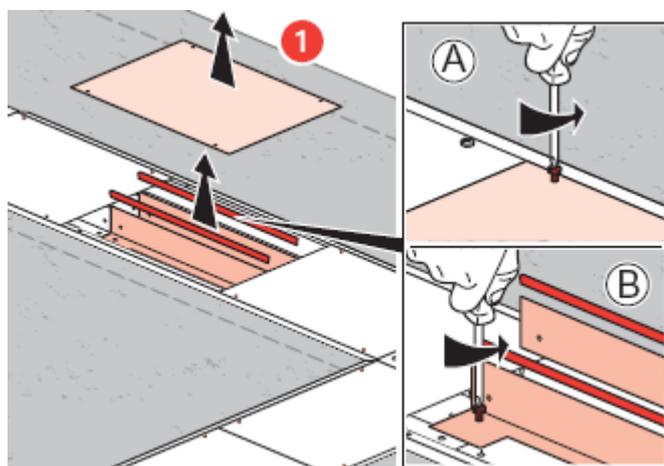
3- Fix floor box support plate, and earth it

4 – Connect wiring and fix the wiring accessory plates
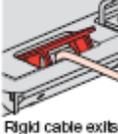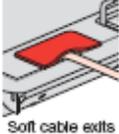
Flush Floor system

2 INSTALLATION PROCESS (continued)

4- Lid & trim ref 6896 30/31/32/33/40/41/42/43

	Lid & Trim		Stainless steel Insert
	Rigid cable exits	Soft cable exits	
3 compt grey	6896 30	6896 31	6896 92
3 compt beige	6896 32	6896 33	
4 compt grey	6896 40	6896 41	6896 93
4 compt beige	6896 42	6896 43	

After installing wiring accessory plates, push down the lid & trim onto the support plate (push & fit the system)
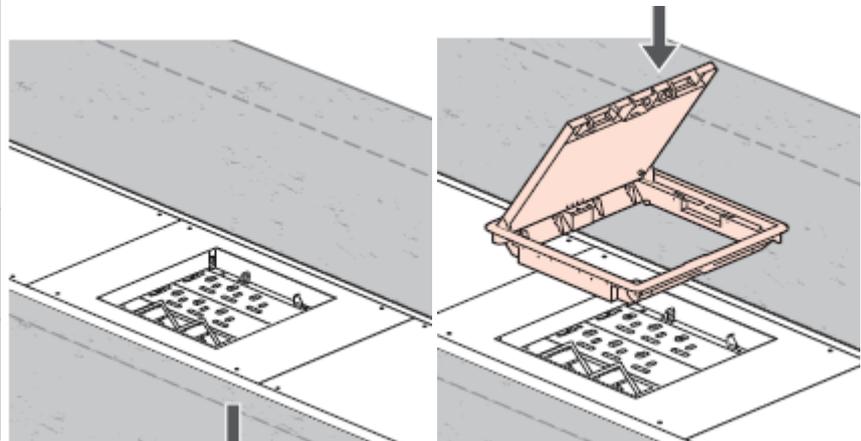
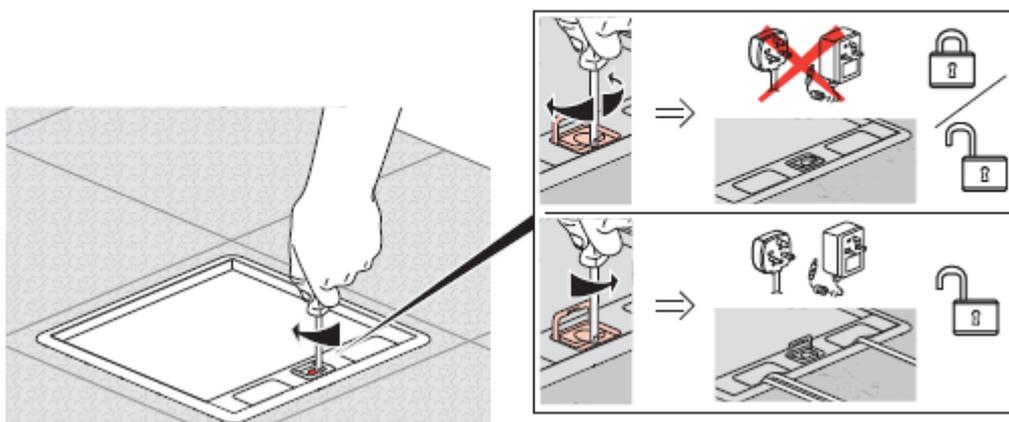Finally, to install the finish flooring:

8 mm
15 mm max.
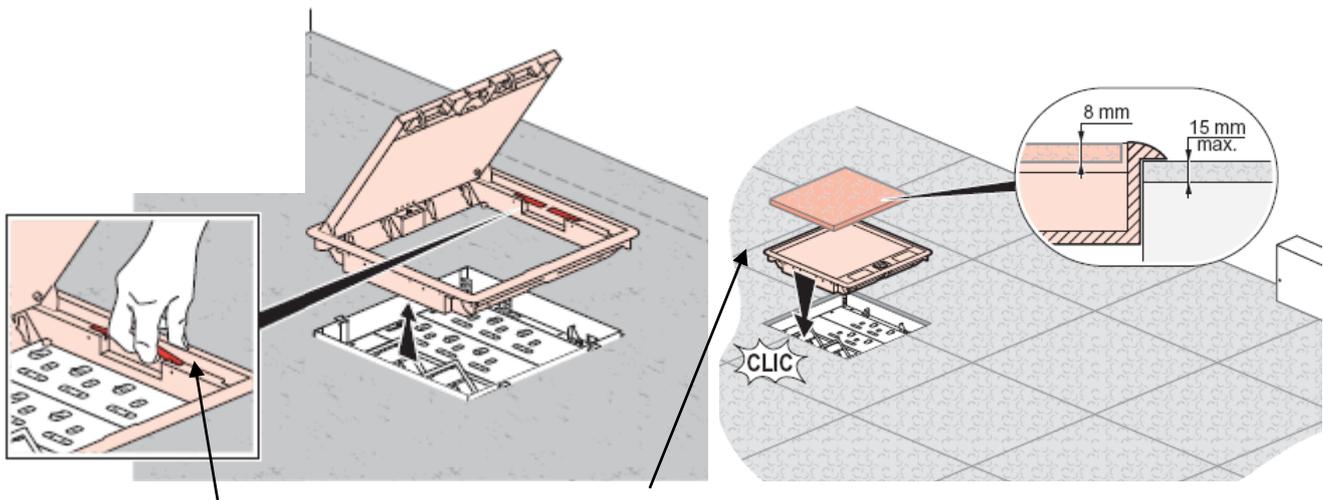
1 – To fit carpet, pull the levers upwards on both sides to take out the lid and trim.

2 – Fit the carpet and push down the lid and trim on the support plate (push and fit principle)

CLIC

Locking system:

The floor box can be locked by means of a locking system (hidden under the opening handle); For safety reasons, floor box should not be locked when in use.

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Flush Floor system

3 PRODUCT DETAILS

1- Junction Boxes ref 6897 60/61/69

The junction box is used for simple junction or connection point.
The junction box should be positioned directly on the slab and provides access to cables at the intersection of trunkings or changes of direction.
The junction box allows deviation of power and data cable, adjustable height with 4 leveling brackets ref 6897 88 (details on page 4)
Junction Boxes are supplied as a base with a lid and flyovers
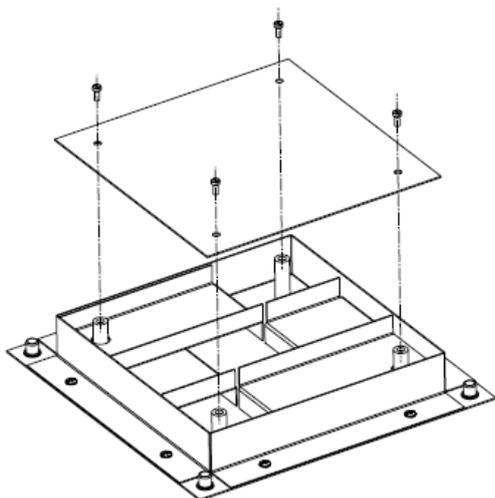
Reference	To use with junction of
6897 60	2 trunkings 300x65mm
6897 61	2 trunkings 405x65mm
6897 69	1 trunking 300x65mm and 1 trunking 405x65mm

Dimensions (mm):
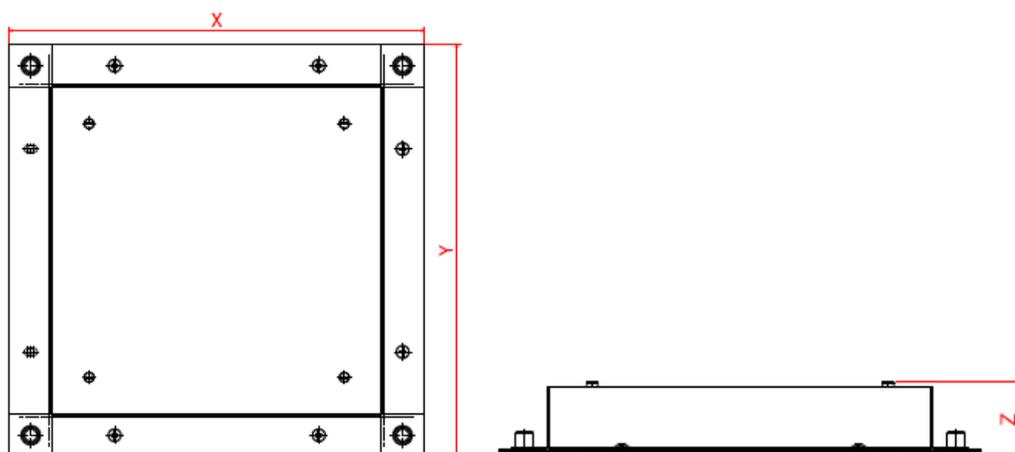
Reference	X	Y	Z
6897 60	360	360	66.6
6897 61	465	465	66.6
6897 69	360	465	66.6

Flush Floor system

3 PRODUCT DETAILS (continued)

2- Lid & trim support plate ref 6896 36/37/47
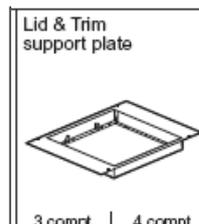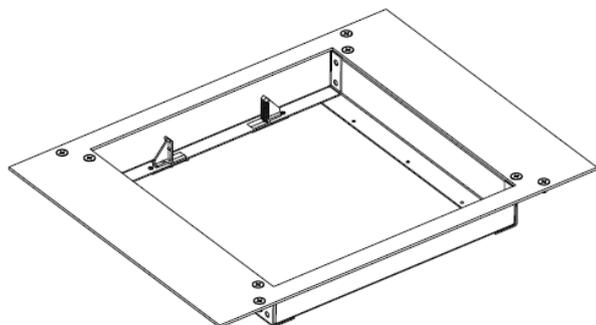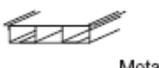
|		3 compt	4 compt
Lid & Trim support plate			
300 x 65 (mm) Metal	6897 50	6896 36	–
405 x 65 (mm) Metal	6897 51	6896 37	6896 47
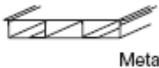
- Allows the installation of wiring accessory plates and lid & trim
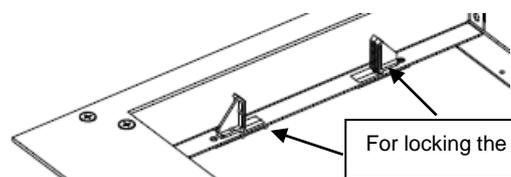- Fix to trunking by means of screws
Note: dimensions of the position of the support plate in the backbox can be found on the page 19 (technical characteristics)

Reference	To use with trunking
6896 36	300x65mm
6896 37	405x65mm
6896 47	405x65mm
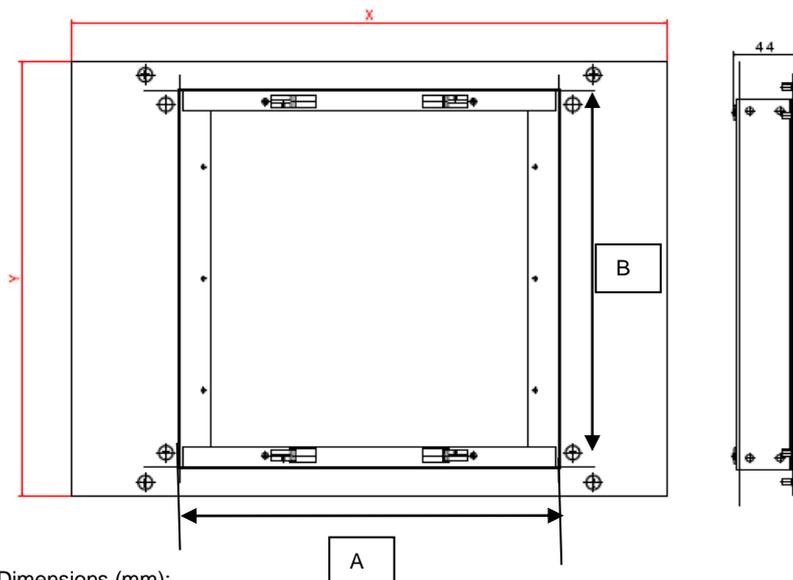
Dimensions (mm):

Reference	X	Y	A	B
6896 36	406.5	300	264	264
6896 37	406.5	405	264	264
6896 47	406.5	405	264	343

For locking the lid & trim on the support plate

Flush Floor system

3 PRODUCT DETAILS (continued)

3- Trunkings ref 6897 50/51

|		Fixing brakets	Coupler
300 x 65 (mm) Metal	6897 50	6897 55	6897 57
405 x 65 (mm) Metal	6897 51		
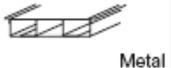
Provides EMC Screening
Manufactured from pre-galvanised sheet steel
Delivered in standard length 2.44m
Number of compartments: 3 compartments
Standard thickness: 1.5mm for body/2.5mm for covers/1mm for dividers
Standard depth: 65mm

Metal trunking allows:

- distributing power data in a concrete floor.

The trunking has 6 removable covers 406.5mm long
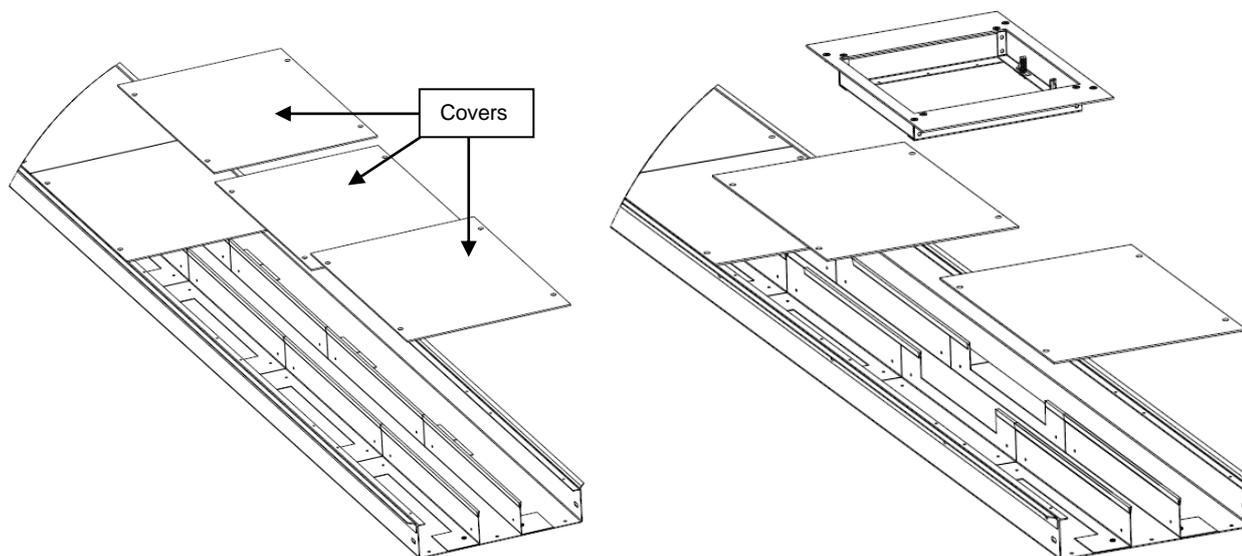
Covers

3 PRODUCT DETAILS (continued)
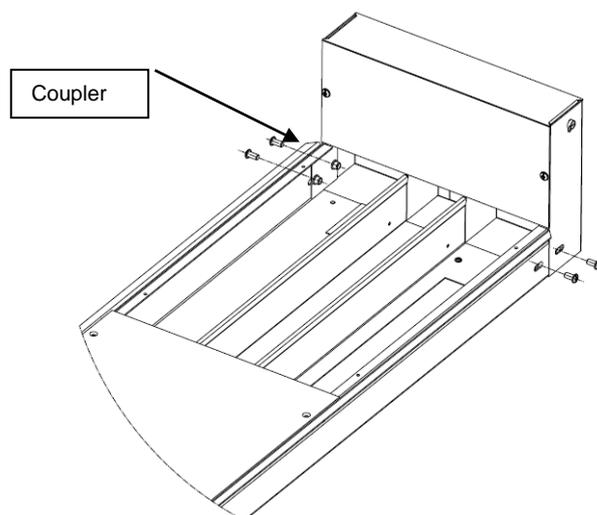
4- Riser ref 6897 62/63

The riser allows the change of direction (vertical to horizontal)
Conduit or trunking can be run vertically or horizontally from the riser

Reference	Use for trunking
6897 62	300x65mm metal
6897 63	405x65mm metal
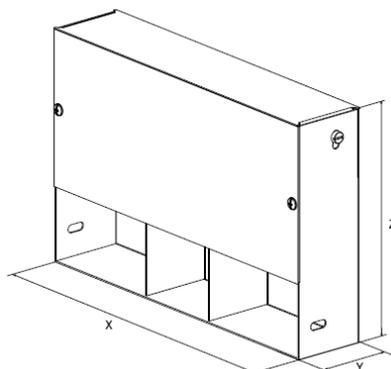
Dimensions (mm):

Reference	X	Y	Z
6897 62	300	65	201
6897 63	405	65	201

Coupler

Installation of riser:

1- Fix the riser against the wall
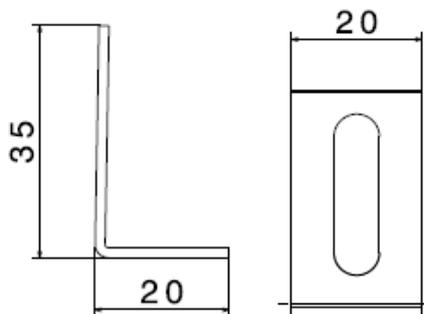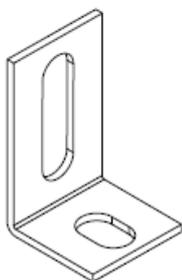2- Connect the trunking to the riser with the coupler

3 PRODUCT DETAILS (continued)

5- Fixing brackets ref 6897 55

Dimensions

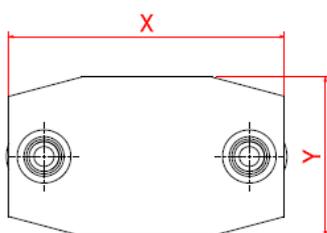To fix trunking on the slab.

Reference	Use for trunking
6897 55	300/405x65mm metal

Thickness: 1.5mm

6- Coupler ref 6897 57
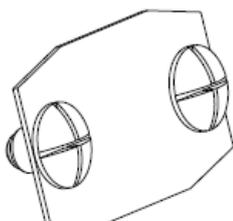
- Used to connect two trunking lenghts

Reference	Use for trunking
6897 57	300/405x65mm metal

Dimensions (mm):

Reference	X	Y
6897 57	58	55

Thickness: 1mm
Comes with 2 screws M6x10
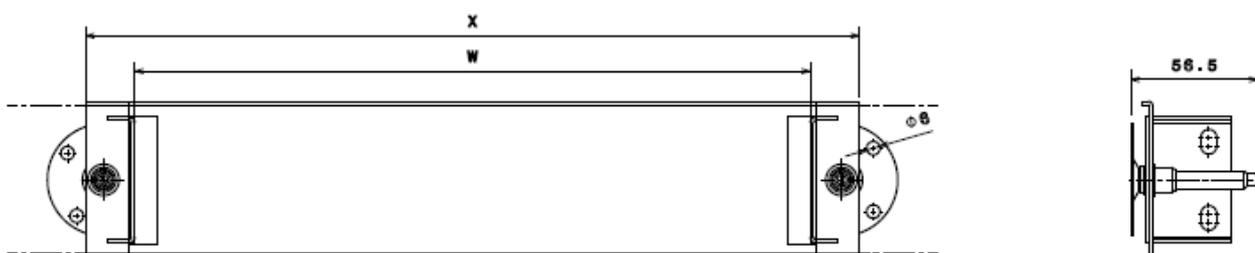
3 PRODUCT DETAILS (continued)

7- Leveling brackets ref 6897 67/68
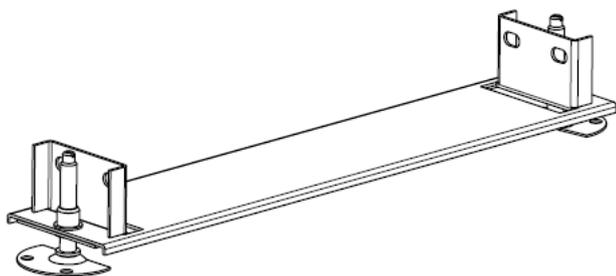
- To raise trunking level from 70 up to 90mm
- To connect two trunking lenghts

Reference	Use for trunking
6897 67	300x65mm metal
6897 68	405x65mm metal
6897 88	Foot levelling

Dimensions (mm):

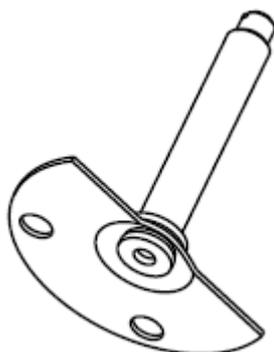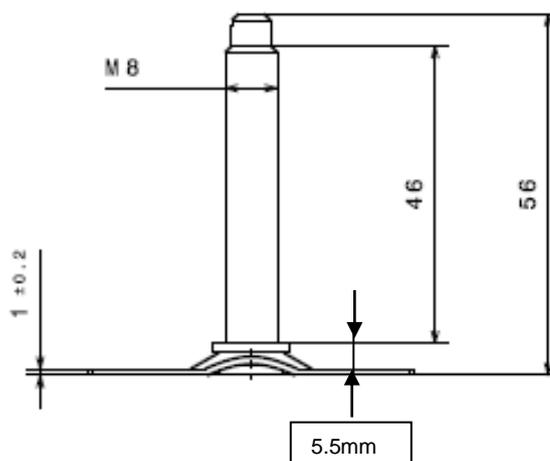| Reference	X	W
6897 67	360	300
6897 68	466	406

Thickness: 1.5mm

Leveling brackets ref 6897 88:

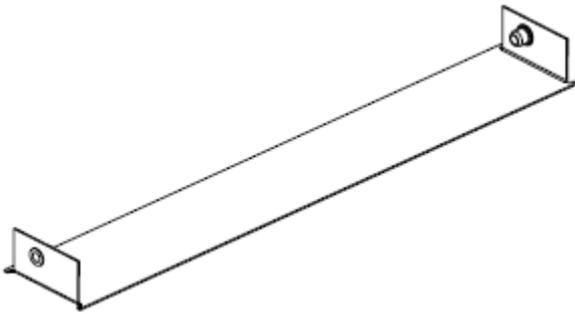To raise junction box level from 70 up to 90mm

Dimensions (mm)

Delivered in set of 4
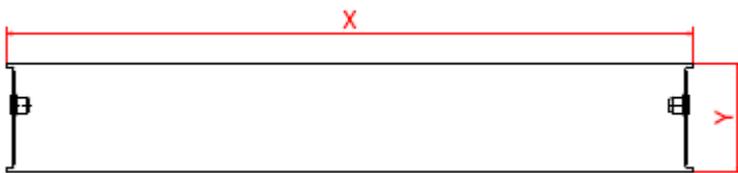
5.5mm

3 PRODUCT DETAILS (continued)

8- End cap ref 6897 65/66

- Used to close the end of the trunking
- Assembly on the trunking by means of screws

Comes with 2 screws M6x12

Reference	Use for trunking
6897 65	300x65mm metal
6897 66	405x65mm metal

Dimensions (mm):

Reference	X	Y
6897 65	300	65
6897 66	405	65

Flush Floor system

3 PRODUCT DETAILS (continued)

9- Wiring Accessory Plates

Standard Plates compatible with all backboxes.

6896 62	Wiring Accessory Plate - 77mm - blank
6896 63	Wiring Accessory Plate - 154mm - double
6896 65	Wiring Accessory Plate - 77mm - twin unswitched socket 13 A
6896 66	Wiring Accessory Plate - 77mm - twin switched socket double pole13 A
6896 67	Wiring Accessory Plate - 77mm - twin switched socket clean earth13 A
689668	Wiring Accessory Plate - 154mm - 2 twin switched sockets double pole13 A
6896 69	Wiring Accessory Plate - 77mm - twin switched socket staggered double pole
6896 70	Wiring Accessory Plate - 77mm - 2x6C knockouts
6896 71	Wiring Accessory Plate - 77mm - 4x6C knockouts
6896 72	Wiring Accessory Plate - 77mm - 2x1mod Artéor
6896 73	Wiring Accessory Plate - 77mm - 2x2mod Artéor
6896 74	Wiring Accessory Plate - 77mm - 3x2mod Artéor
6896 75	Wiring Accessory Plate - 77mm - 2x6C knockouts wave
6896 76	Wiring Accessory Plate - 77mm - 4x6C knockouts wave
6896 77	Wiring Accessory Plate - 77mm - 2x3mod Artéor
6896 78	Wiring Accessory Plate - 77mm - 2x2mod Artéor wave
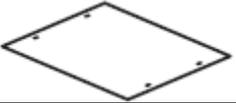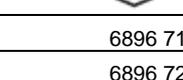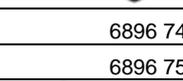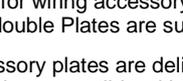
Dimensions for wiring accessory plates: single plate 237x77mm, double plate237x154mm
Single and double Plates are supplied with epoxy power coating Silver Grey colour

Wiring accessory plates are delivered with 2 screws M3x8
Designed to be compatible with Cat 6 structured cabling systems.
Earth the wiring accessory plates by using the screw on bottom side
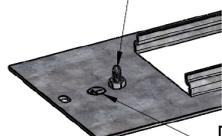
Earth marking

Technical information sockets :

- Mechanism Synergy
- 250V
- Terminal screws
- Compact mechanism for easy fitting
- British standard1363-2

Note: Staggered Wiring Accessory Plate to avoid interferance of plug cords.

3 PRODUCT DETAILS (continued)
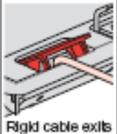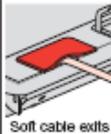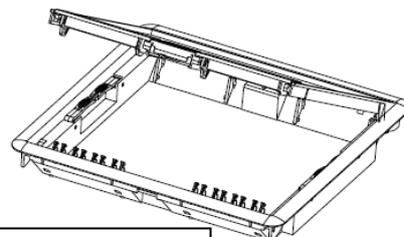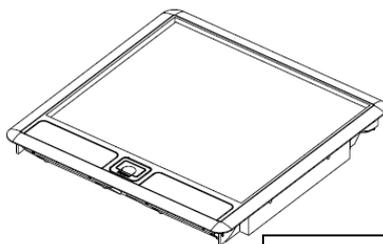
10- Lid & trim Floor box ref 6896 30/31/32/33/40/41/42/43

|		Rigid cable exits	Soft cable exits	Stainless steel insert
3 compt	grey	6896 30	6896 31	6896 92
	beige	6896 32	6896 33	
4 compt	grey	6896 40	6896 41	6896 93
	beige	6896 42	6896 43	

2 colours are available for lid & trim:

- Grey RAL 7031 (for ref 6896 30/31/40/41)
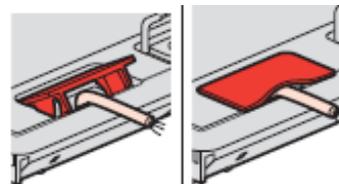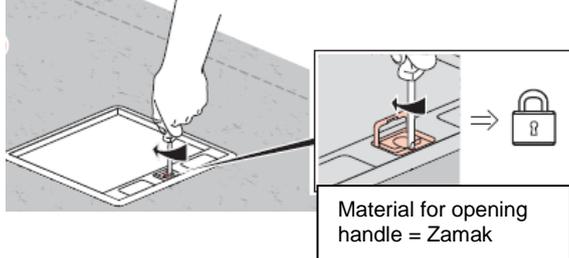- Beige RAL 1019 (for ref 6896 32/33/42/43)

3 compartments & 4 compartments

The lid is reversible (180°) to adapt to office furniture reconfiguration.
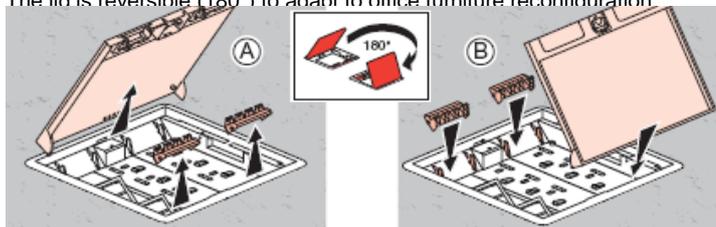
The lid & trim can be locked (floor box should not be locked when in use)

Material for opening handle = Zamak

Rigid and flexible cable exits: Maximum cable capacity 4 cables Ø 7mm + 3 cables Ø 11mm

Recess = 8mm

4.5mm
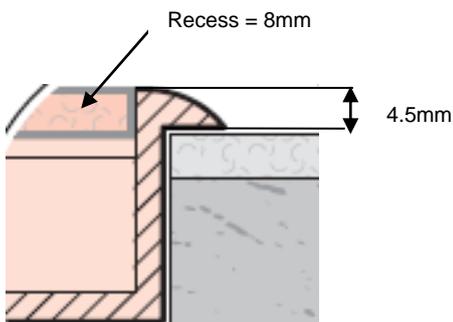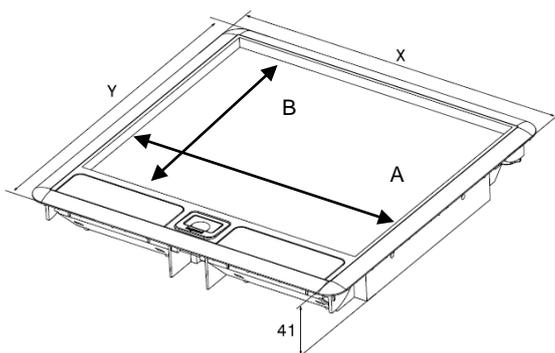
Dimensions (mm):

Reference	X	Y	A	B
6896 30/31/32/33	280	280	245.5	210
6896 40/41/42/43	357	280	322	210

3 PRODUCT DETAILS (continued)

11- Stainless steel insert ref 6896 92/93

		Rigid cable exits	Soft cable exits	
3 compt	grey	6896 30	6896 31	6896 92
	beige	6896 32	6896 33	
4 compt	grey	6896 40	6896 41	6896 93
	beige	6896 42	6896 43	

Double tape adhesive x2 to fix the insert on the lid & trim
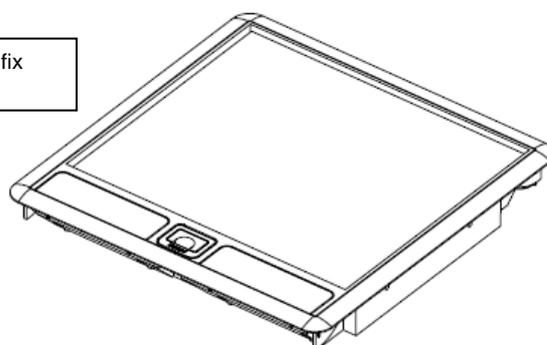
Dimensions (mm):
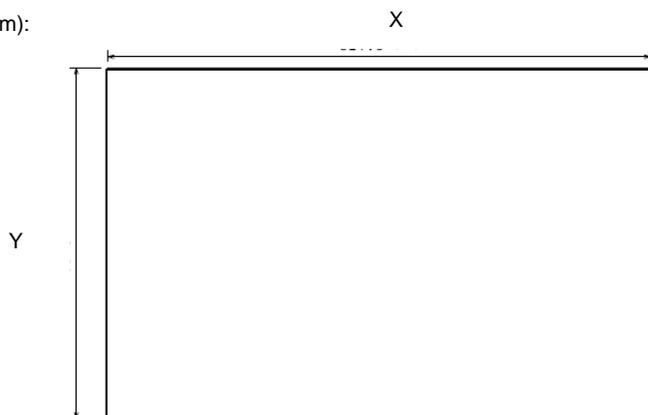
Thickness: 7mm

Reference	X	Y
Lid & trim 3 compt	245.5	210
Lid & trim 4 compt	322	210

Cleaning:

The exterior should only be cleaned using a cleaner degreaser.

4. TECHNICAL CHARACTERISTICS

Here is the full studdy on cabling capacity with 300mm wide flush trunking and 3 compt floor box:

- 4 boxes in a raw when we have up to 4 data sockets in a box (on the compartment on the side of the box)
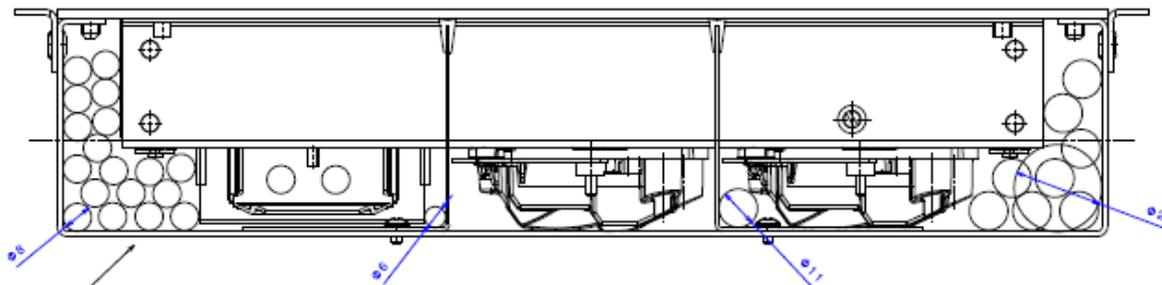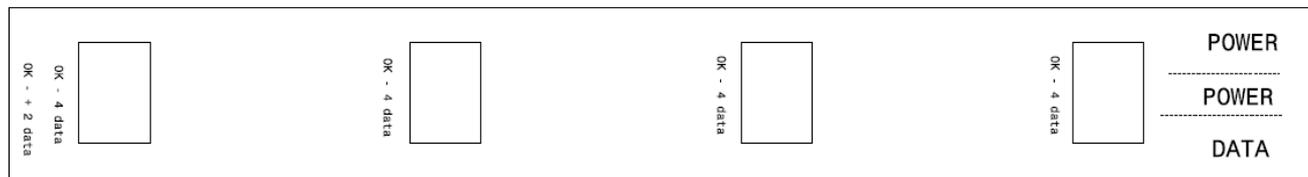
20 cables Ø 8mm

- 3 boxes in a raw when we have up to 8 data sockets in a box (4 x 2 compartments)
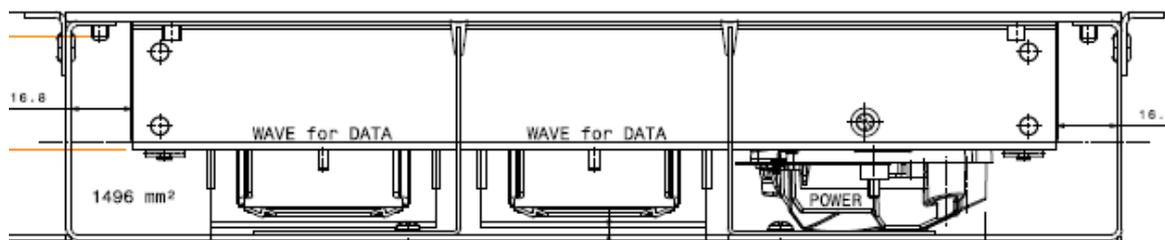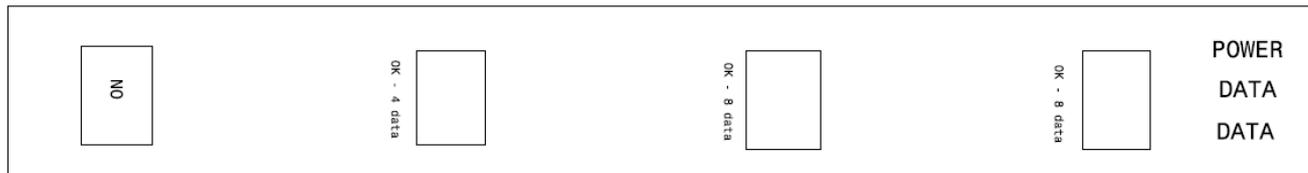
- we shoudn't position the data in the compartment in the middle (no place for cables)

4. TECHNICAL CHARACTERISTICS

Here is the full studdy on cabling capacity with 400mm wide flush trunking and 4 compt floor box:

If you use on the centre compartment one wave for Power and one wave for data, you don't have place for cables:
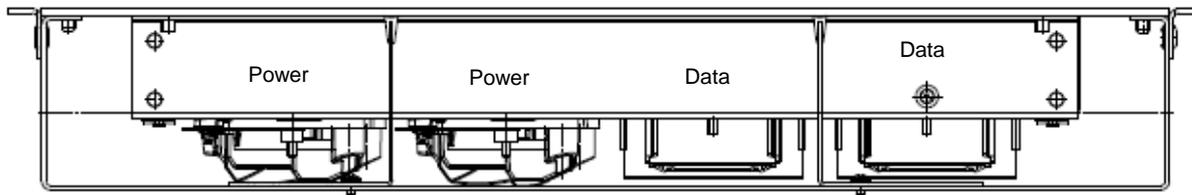
On the center compartment, if you put just one wave for data, you have the place for 20 cables Ø 8mm
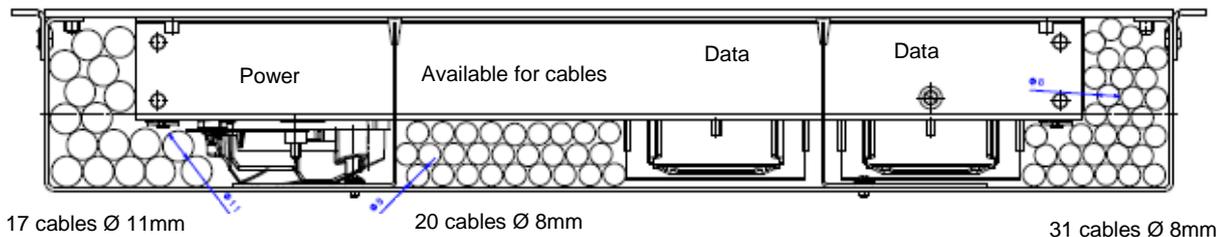
17 cables Ø 11mm   20 cables Ø 8mm   31 cables Ø 8mm

Note: assembly lid and trim support plate on the flush trunking:

4. TECHNICAL CHARACTERISTICS

Classification for Flush floor (standard EN 50085-2-2)

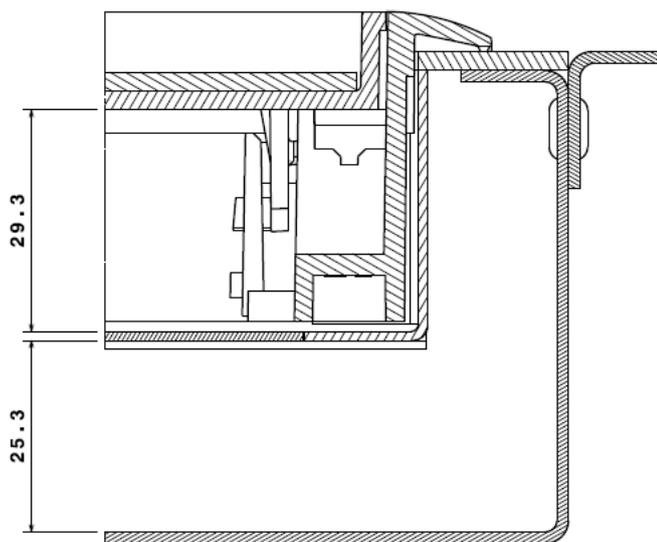|	
6.2 Resistance to impact for installation and application	2.0J
6.3 Minimum storage and transport temperature	- 25°C
6.3 Minimum installation and application temperature	- 5°C
6.3 Maximum application temperature	+ 60°C
6.4 Resistance to flame propagation	Non-flame propagating
6.5 Electrical continuity characteristic	With electrical continuity characteristic (Metal ducting & accessories)
6.6 Electrical insulating characteristic	Without electrical insulating characteristic (Metal ducting & accessories)
6.7 Degrees of protection provided by enclosure	IP 20
6.9 The system access cover retention	With a tool
6.101 Floor treatment	for dry-treatment of floor
6.102 Resistance to vertical load applied through small surface area	1500 N*
6.103 Optional classification: resistance to vertical load applied through large surface area	3 000 N
Rated voltage (PVC ducting)	500V
Protection against mechanical impact	IK08
Linear impedance in mΩ/m of trunking length	5 mΩ/m

*for 4 compartment, resistance to vertical load applied over a small surface area = 750N

Composition and functions for Flush floor system:

		Fixing brakets	Coupler	End cap	Leveling		Riser	Junction box	Lid & Trim support plate	
									3 compt	4 compt
300 x 65 (mm) Metal	6897 50	6897 55	6897 57	6897 65	6897 67	6897 88	6897 62	6897 60 or 6897 69 or 6897 61	6896 36	–
405 x 65 (mm) Metal	6897 51			6897 66	6897 68		6897 63		6896 37	6896 47

		Lid & Trim		Stainless steel Insert
		Rigid cable exits	Soft cable exits	
3 compt	grey	6896 30	6896 31	6896 92
	beige	6896 32	6896 33	
4 compt	grey	6896 40	6896 41	6896 93
	beige	6896 42	6896 43	

Important:

Every 10meters maximum, earth the system (with ref 11188)
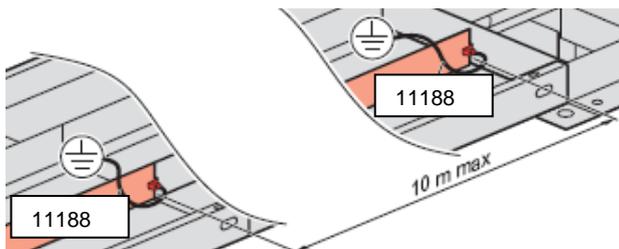
Metal trunking and Accessories:		
CAT N°	Designation	to earth the system
689750	Trunking	Yes
689751	Trunking	Yes
689636	Lid&Trim support plate 3 compt	Yes
689637	Lid&Trim support plate 3 compt	Yes
689647	Lid&Trim support plate 4 compt	Yes

Note: earth the wiring accessory plates (by using the screw on bottom side) page 16