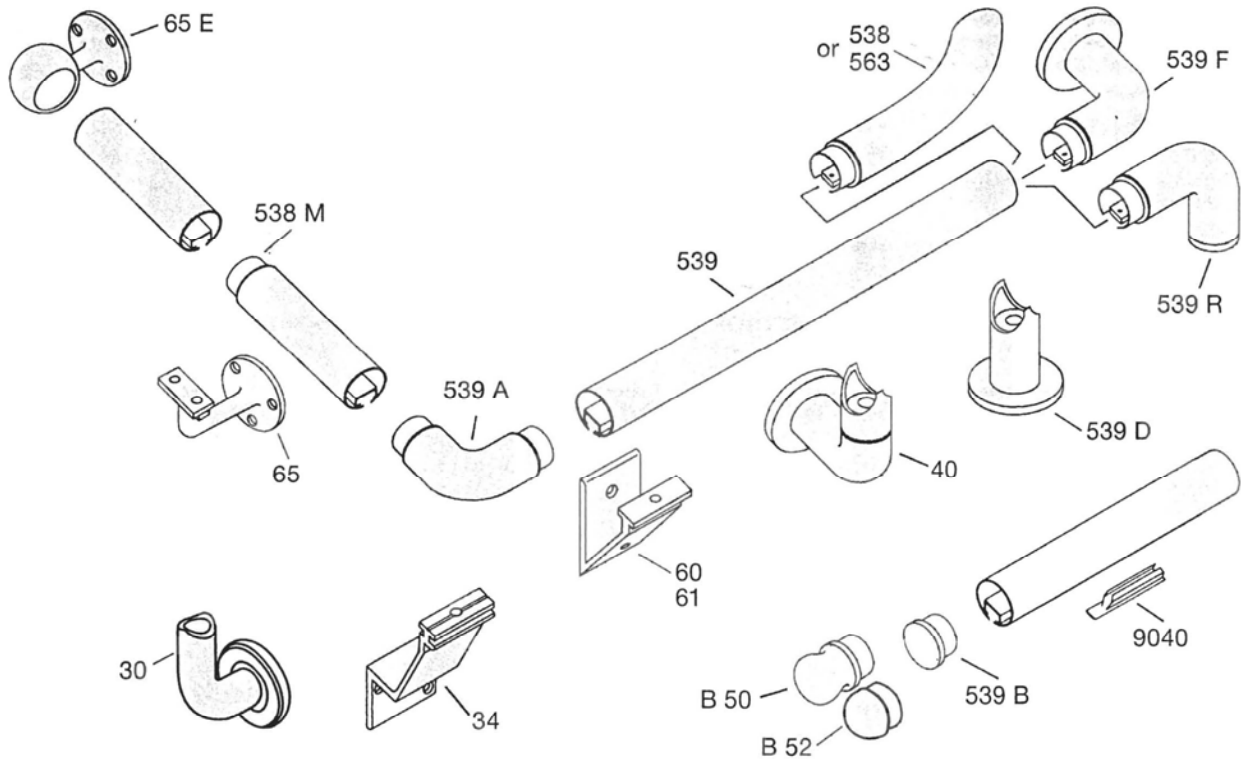


# **D. Aluminium skirting, hand railing, Balustrading**

1. Hand railing, Balustrading and Skirting systems
2. Mirror framing system, Hardware, Bed ladders and standard profiles
3. Special realizations and color chart

# 1. HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



Scale: 1

Ref.	Description	Finishes	Weight Kg
539	<b>Handrail</b> Section in lengths of 6.15 meters (anodized) or 3 meters (coated)	①	0,720/m
9040	Cover in lengths of 4 meters	Black PVC	0,040/m
	<b>Brackets</b>		
40	Adjustable wall bracket Ø 40	①	0,400
30	Adjustable wall bracket Ø 30	①	0,260
539 D	Vertical bracket	①	0,230
34	Standard bracket	①	0,150
60	Bracket type V for reduced space	①	0,140
61	Bracket type V	①	0,155
65	Bracket Ø 14	①	0,100
	<b>End conditions</b>		
539 B	End plug	①	0,060
B 50	Spherical end plug	①	0,150
B 52	Half spherical end plug	①	0,140
539 R	90° return	①	0,200
553	Bent wall return for bracket 60	①	0,300
563	Bent wall bracket for other bracket	①	0,320
539 RF	90° return with fixing flange	①	0,300
65 E	Spherical end plug with fixing flange	①	0,190
	<b>Connections</b>		
539 A	90° angle	①	0,160
540 C	Bent angle ( $\alpha$ to specify)	①	0,400
538 M	Standard connector	Black polyamid	0,020

① Aluminium anodized or coated (S)

---

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

---

## Information for specifiers

The handrailing system 540 N is particularly well adapted to corridors and staircases. The various combinations of the components and finishes allow the use of the system in all kinds of design and budgets.

For staircases, the round brackets 40 and 30 are highly recommended. These references enable a continuous grip on the handrail and a smooth contact of the hand on the bracket.

For narrow corridors, where more space is required for the circulation of passengers, the bracket n° 60, with its reduced gap, is perfectly adapted. Various end conditions with a return to the wall are offering more security. The wall returns with fixing flange allow to spare on additional bracket by the end of the handrail section.



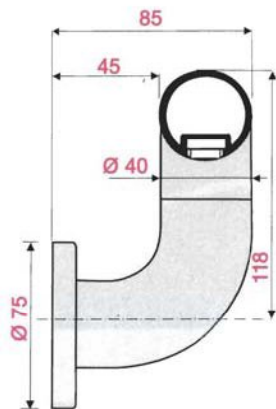
## Installation

- Engage brackets in the slot of the handrail
- Slide brackets along the rail until they are at required centres (1,200 mm maxi).

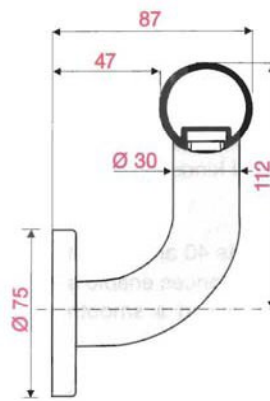
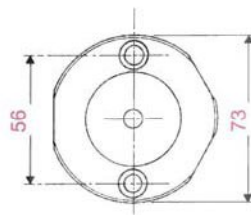
## Test reports

All our handrailing systems have been regularly tested by our quality department in our laboratory. Test results are available on request.

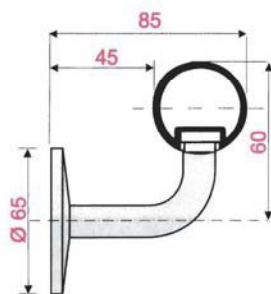
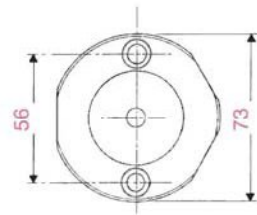
# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



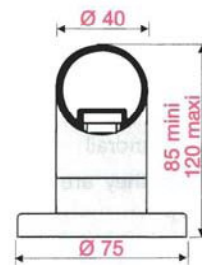
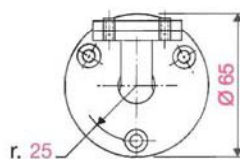
Adjustable bracket 40



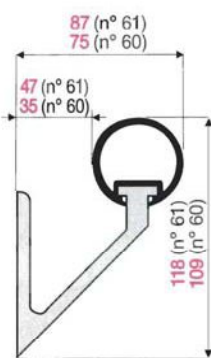
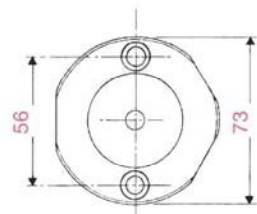
Adjustable bracket 30



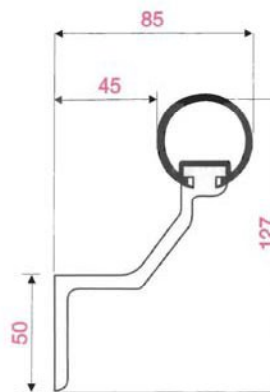
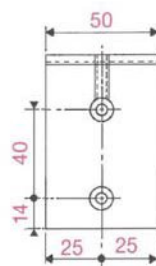
Bracket 65



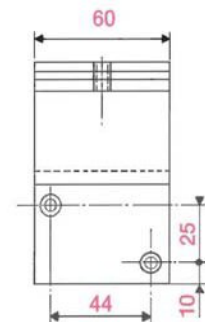
Vertical fixing bracket 539 D



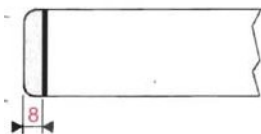
V bracket 60 et 61



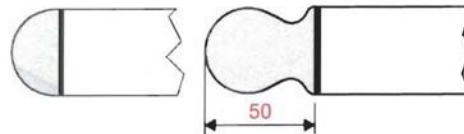
Standard bracket 34



# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

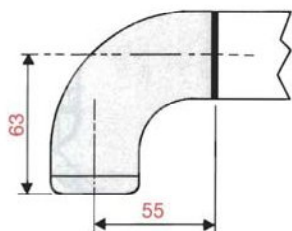


End plug **539 B**

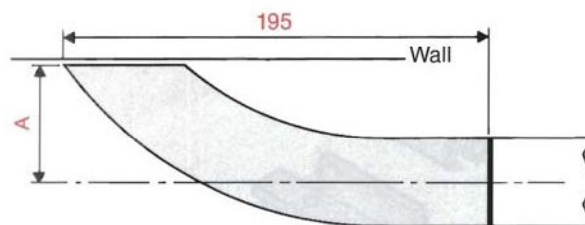


End plug **B 52**

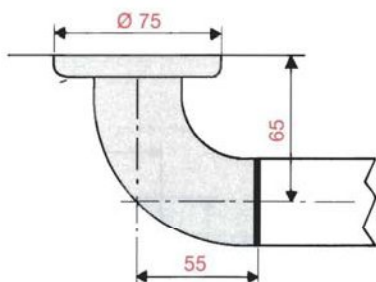
End plug **B 50**



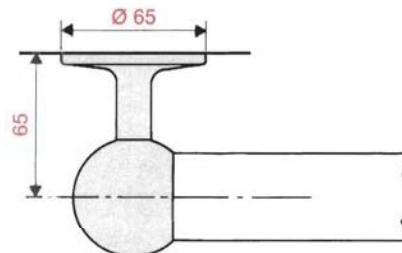
90° return with end plug **539 R**



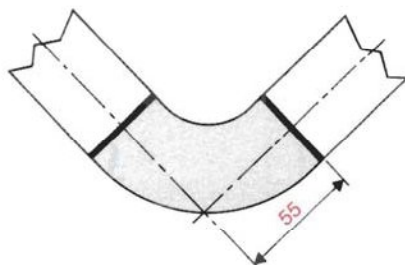
Wall return **553** for bracket 60. A = 55 mm  
**563** for other bracket. A = 65 mm



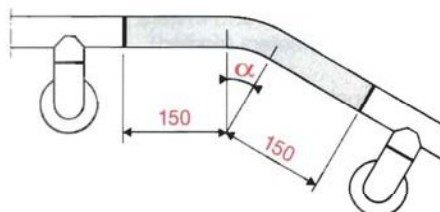
90° return with fixing flange **539 RF**



End bracket **65 E**

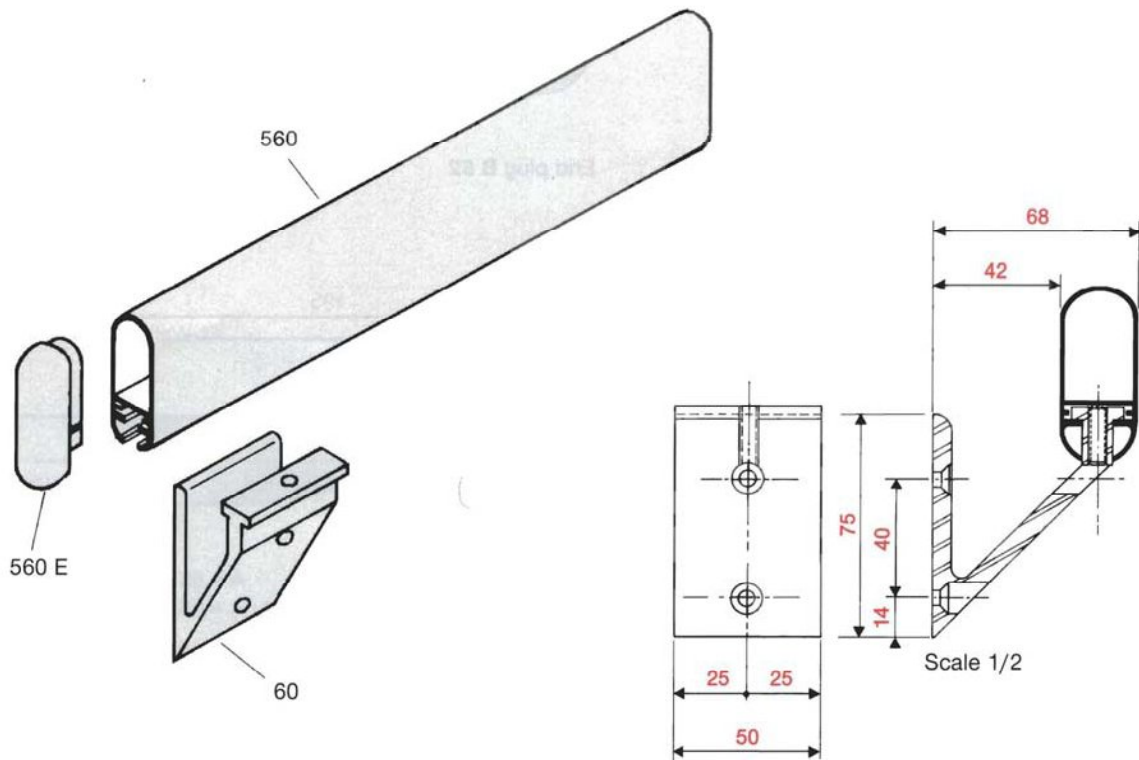


90° angle **539 A**



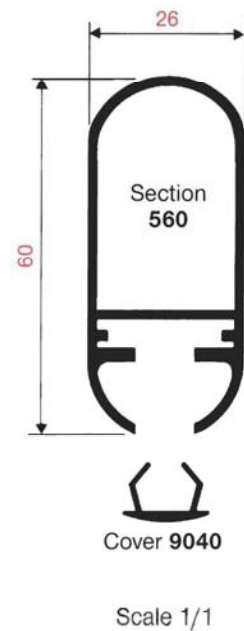
Angle joint **540 C** ( $\alpha$  : to be specified).

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



Ref.	Description	Finishes	Weight Kg
560	Section in lengths of 6.15 meters (anodized) or 3 meters (coated)	①	0,690/ml
9040	Cover in lengths of 4 meters.	Black PVC	0,040/ml
60	Bracket type V	①	0,140
560 E	End Plug	①	0,040

① Aluminium anodized or coated (S)





# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

## Specification

Oval shaped profile, ref. RI 560, in extruded aluminium with PVC sections covering the slot.

Aluminium extruded bracket, ref. RI 60, self tightened by screw in the handrail slot.

Aluminium cast end plug ref. F 560 E with fixing screw.

All components are manufactured in robust extruded or cast aluminium and are available as standard in 8 polyester and 6 anodized colours.

## Applications

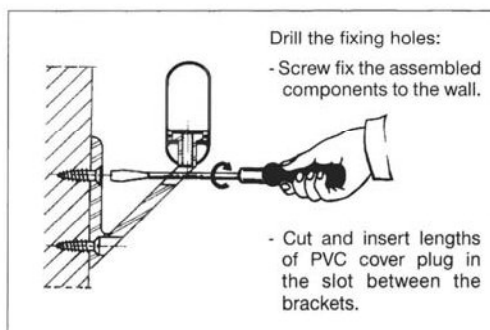
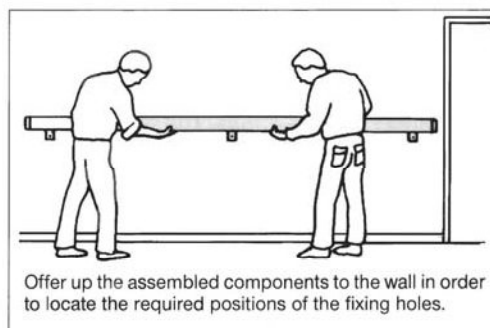
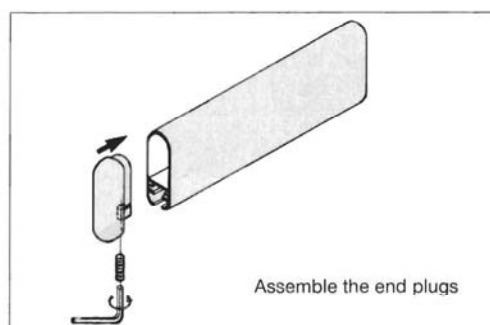
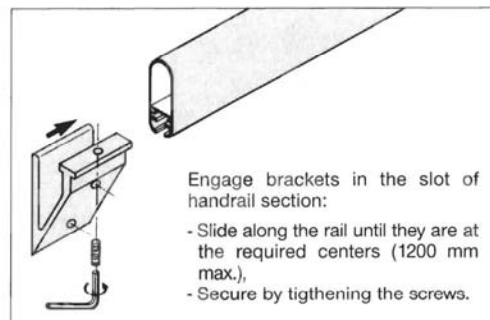
Specially designed for the corridors of the passenger vessels, the handrail 560 combines aesthetiscism and full grip requirements.

The handrail 560 is particularly well adapted for small corridor lengths between doors.

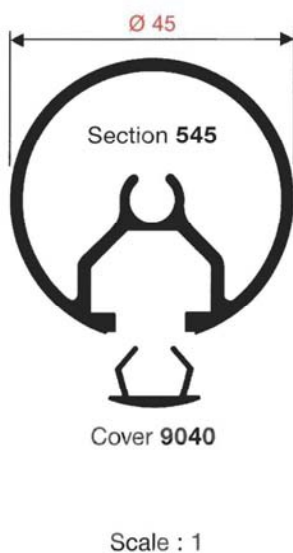
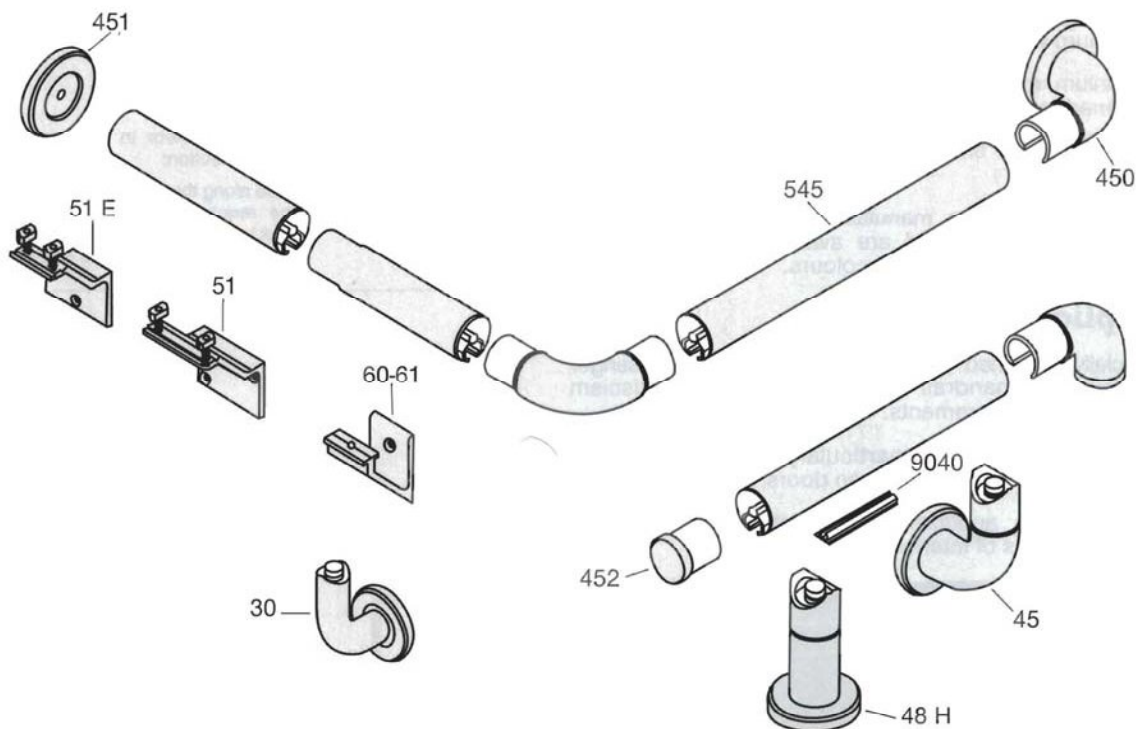
All aluminium anodized or polyester coated finishes match all kinds of interior designs.



*Sovereign of the seas*



# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



Ref.	Description	Finishes	Weight Kg
545	<b>Handrail</b> Section in lengths of 6.15 meters (anodized) or 3 meters (coated)	①	0,950/m
9040	Cover in lengths of 4 meters.	Black PVC	0,040/m
45	<b>Brackets</b> Adjustable wall bracket Ø 45	①	0,550
30	Adjustable wall bracket Ø 30	①	0,260
48 H	Vertical bracket (118 to 225 mm)	①	0,500
51	Standard bracket 78 mm	①	0,170
51 E	Standard bracket 50 mm	①	0,160
60	Bracket type V for reduced space	①	0,140
61	Bracket type V	①	0,155
450	<b>End conditions</b> 90° return with fixing flange	①	0,480
451	Fixing flange	①	0,150
452	End plug	①	0,065
453	90° return	①	0,350
454	<b>Connections</b> 90° angle	①	0,380
455	Angle joint	①	0,520
760	Standard connector	Black polyamid	0,045

① Aluminium anodized or coated (ξ)



# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

## Information for specifiers

The handrailing system 545 has been developed not only as an handrailing system but as a comprehensive system for corridors and staircases.

Based on a tubular section of 45 mm, the Handrail 545 complies with full grip requirement.

Round shaped brackets n° 45 and 30 offer maximum clearance for the passage of the hand along the handrail, together with a smooth contact of the hand on the bracket.

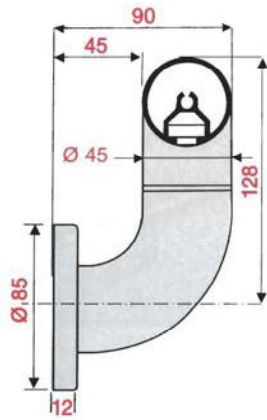
This is particularly appreciated in stairways where a continuous grip of handrail is needed.

With the same system and design, specifiers can obtain a high quality product as handrail and balustrade in stairways.

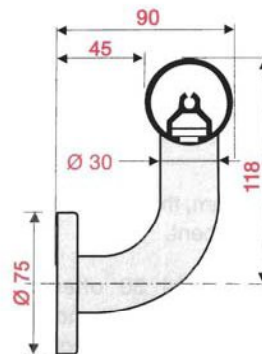
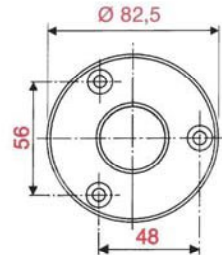
Light, flexigle, offering various combinations of brackets and end conditions, available in several anodized, polyester coated or wood veneered finishes, the Handrail 545 can easily be your signature in a corridor or in a staircase.



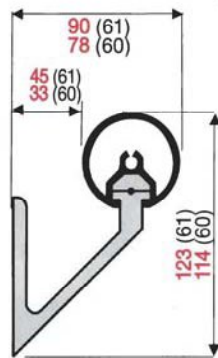
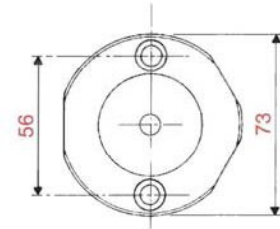
# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



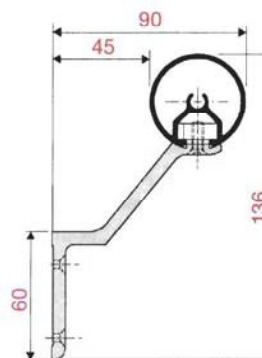
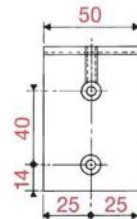
Adjustable bracket 45



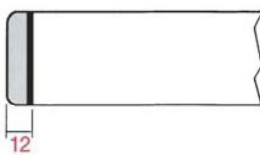
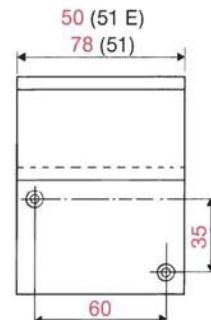
Adjustable bracket 30



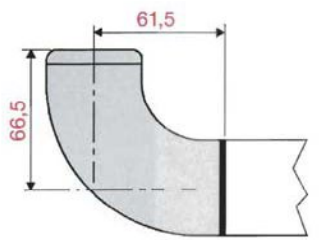
V bracket 60 & 61



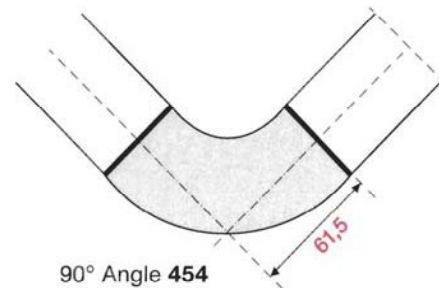
Standard brackets 51 E & 51



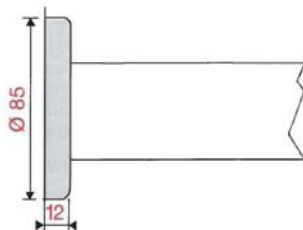
End plug 452



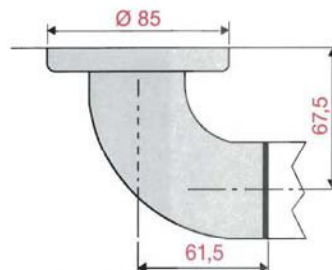
90° Return with end plug 453



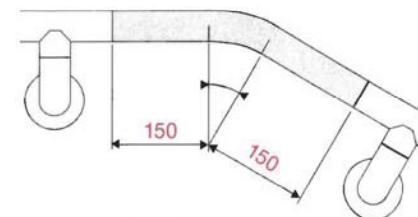
90° Angle 454



Fixing flange 451



90° Return with fixing flange 450



Angle joint 455

# HANDRAILING, BALUSTRADING AND SKIRTING SYSTEMS

---

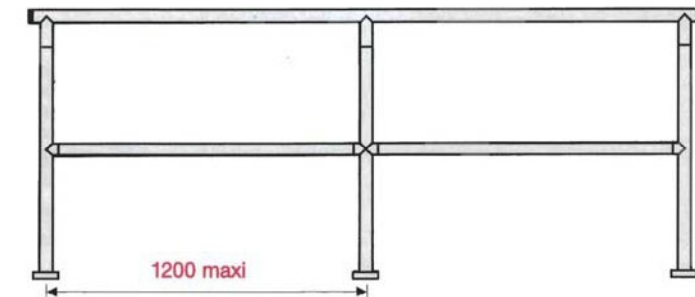


**PAGLIA ORBA**, SNCM Cruises

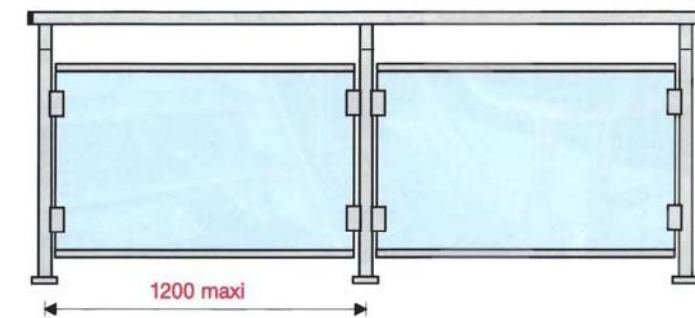




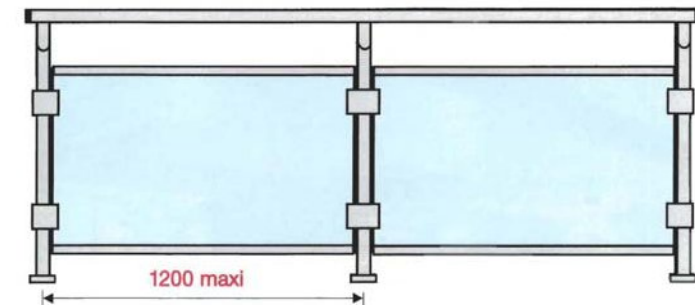
# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



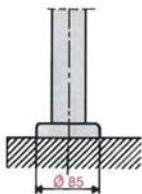
Balustrade in line / Intermediate rail



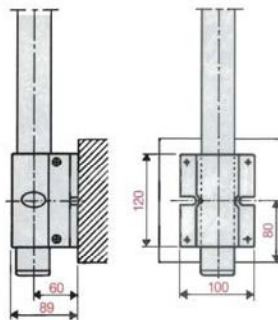
Balustrade in line « Intervalle »



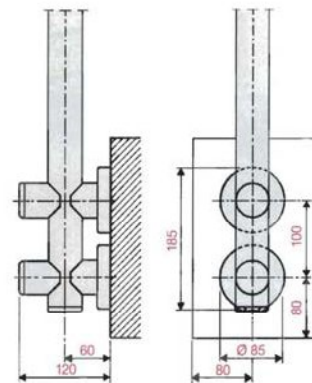
Off set balustrade « Espace »



Deck fixing 41 065



Vertical fixing compact 41 314



Vertical fixing on roses 41 063

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

## Information for specifiers

The 545 Balustrading system offers several advantages.

The 545 system is made of aluminium components (cast or extruded). The weight is then considerably lowered and the resistance to corrosion is increased.

The 545 system is pre-fabricated in our factory. The machining and surface treatment are carried out with precision and care, offering a perfect finish.

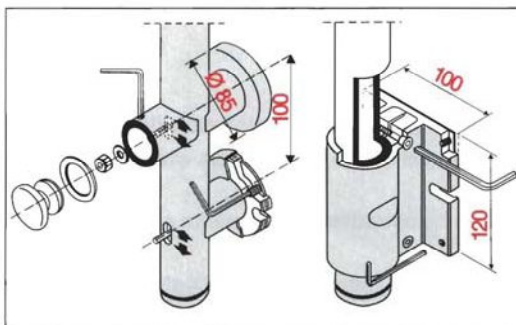
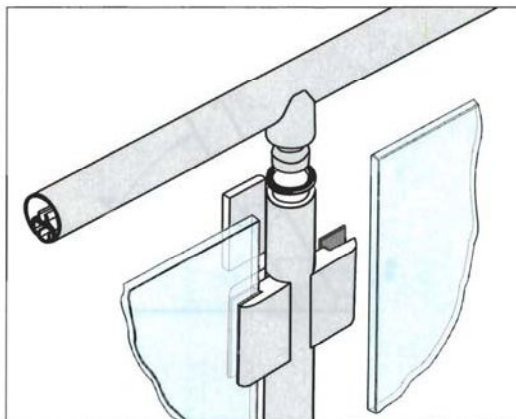
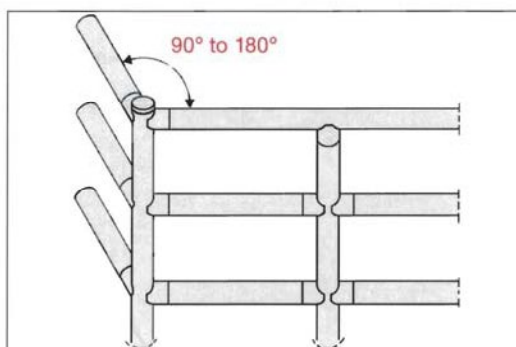
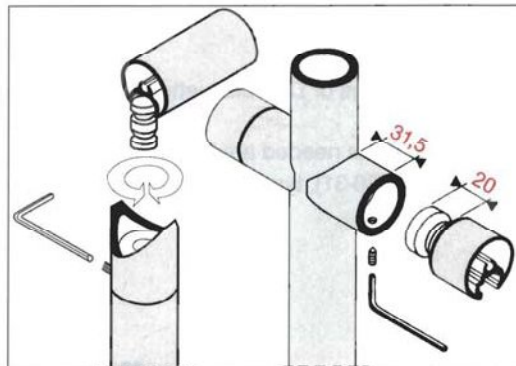
The 545 system is assembled on site by mechanical fixings, a  
t This ensures a perfect fitting and prevents from the use of toolings on board.

Deck fixing flanges are in corrosion proof treated steel and enable the welding to the deck.

The 545 balustrading system has been succesfully tested according to NORM N.F. P01.013 from Feb. 1985. (Balustrade in public areas). Tests reports are available on request.

The 545 system has now been adopted for more than 6 years in numerous ferries, freight carriers or military vessels, giving the full satisfaction to shipyards and shipowners.

A  
5

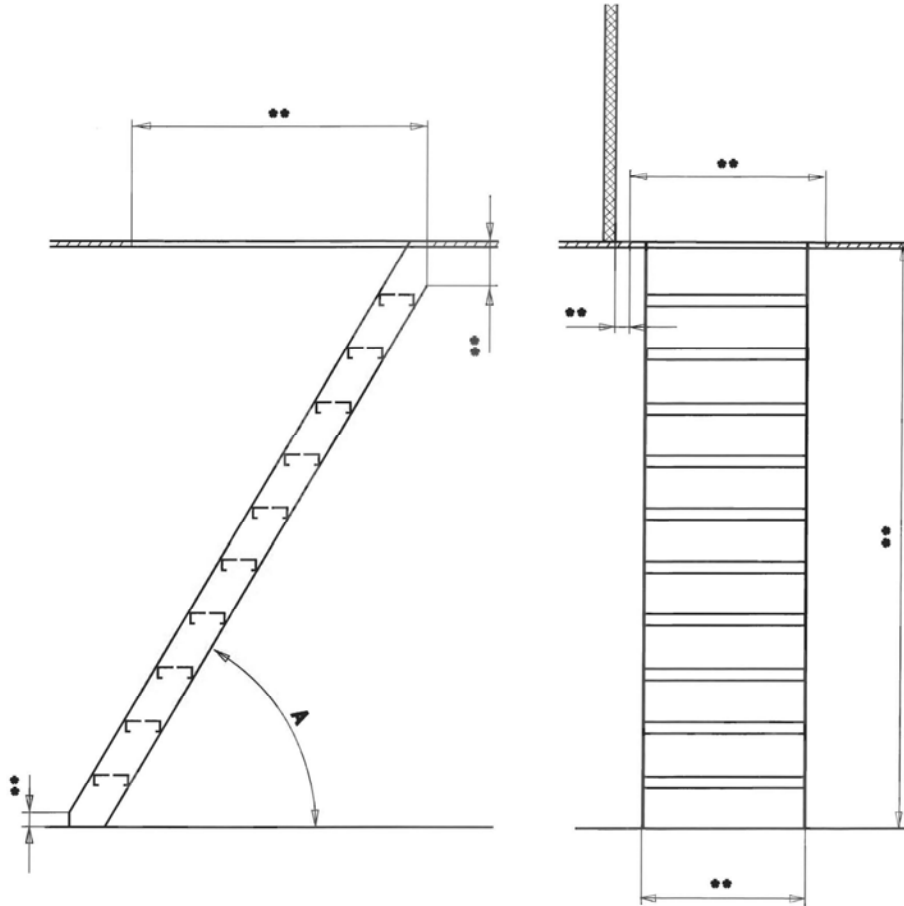




# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

## How to order

Reliable drawings or DXF disquette of the staircases will be needed to issue the installation drawings.



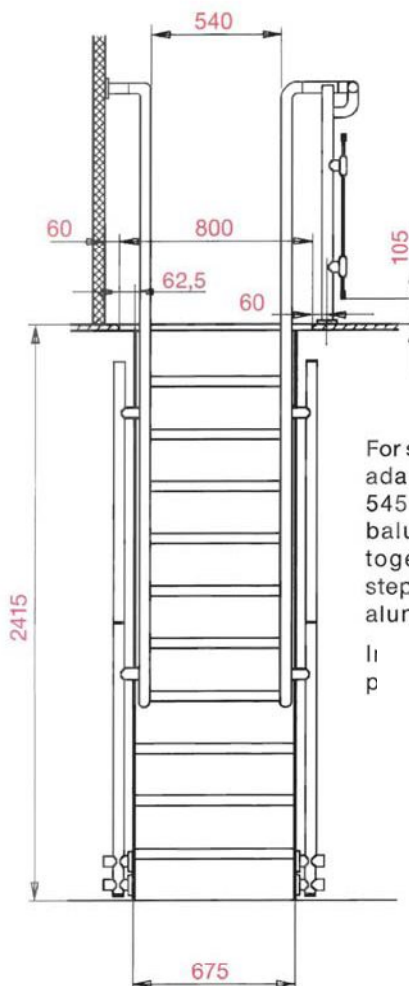
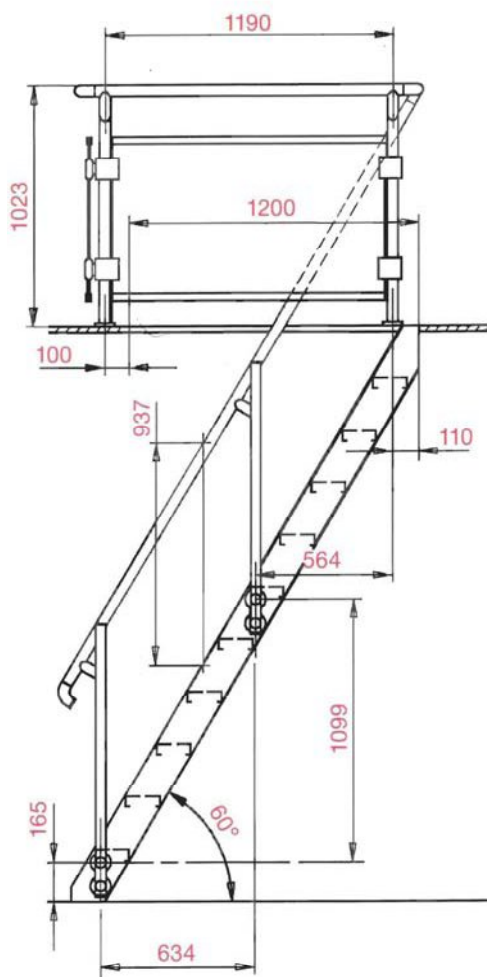
## Installation

If MSP provides the installation drawings on which all dimensions are specified. If MSP also provides the dimensions of the glass panels when necessary.

All the balustrading components are delivered clearly marked as stated in the installation drawing.

For maximum security, if we always asks for an approval on drawings dimensions prior to manufacturing the balustrade.

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

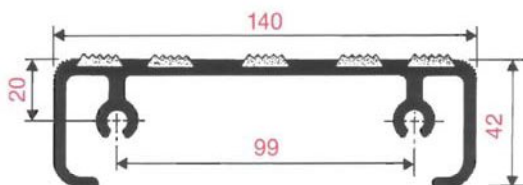


For steep stairways, a well adapted application of 545 handrailing and balustrading system, together with n° 550 steps, and prefabricated aluminium stringer.

Il  
p

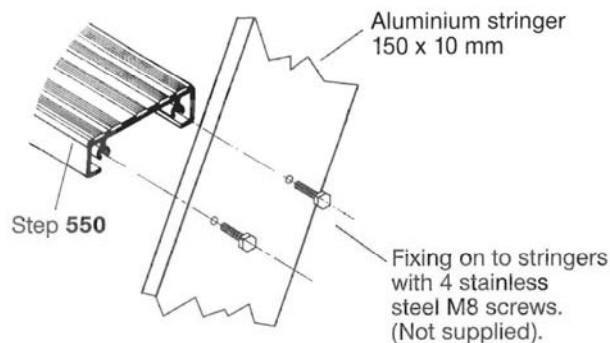
The step profile 550 can be supplied cut at dimension.

5 strips of non skid rubber Réf. 9020 are premounted with the step profile.

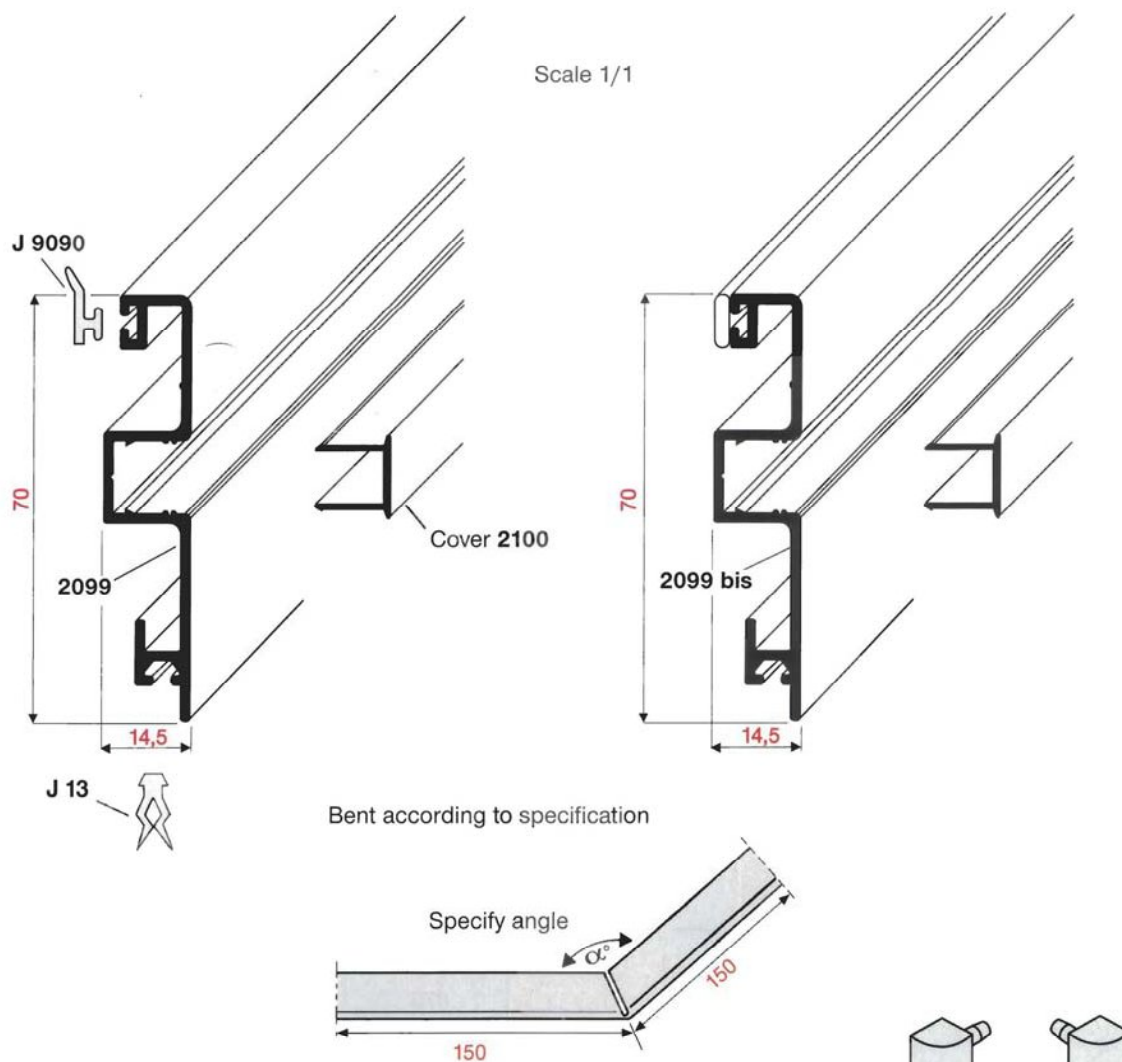


Scale 1/2

Step profile 550



# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

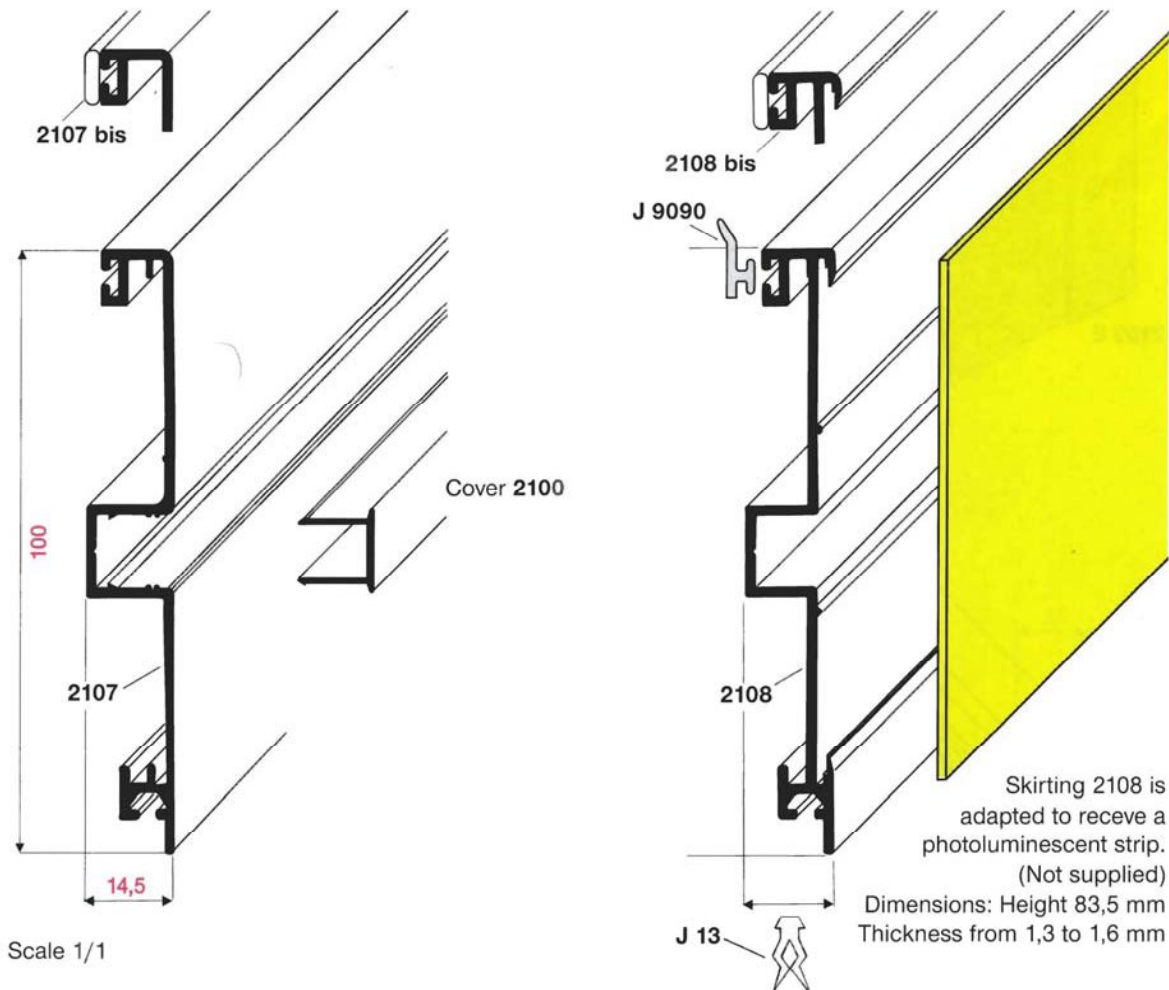


Ref.	Description	Finishes	Weight Kg
2099	Section in lengths of 5 meters	①	0.560/m
2100	Section in lengths of 5 meters	①	0.080/m
J 9090	Rubber gasket in lengths of 30 meters	Grey rubber	0.040/m
J 13	Lower joint in lengths of 50 meters	Grey rubber	0.065/m
2090 E	End plug (left or right)	①	0.045
2090 A	90° angle	①	0.050
2090 R	90° angle with radius (R10, R20 or R50)	①	0.080
2090 U	Angle (specify angle)	①	0.0170
2099 bis	Pre-drilled ② section with foam gasket	①	0.565/m

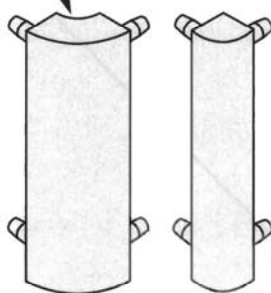
① Aluminium anodized or coated (See p. 30-31).

② Fixing holes Ø 5 mm.

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



R : 10, 20 or 50.



90° angles

Radius : 10, 20 & 50 mm  
other radius upon request.

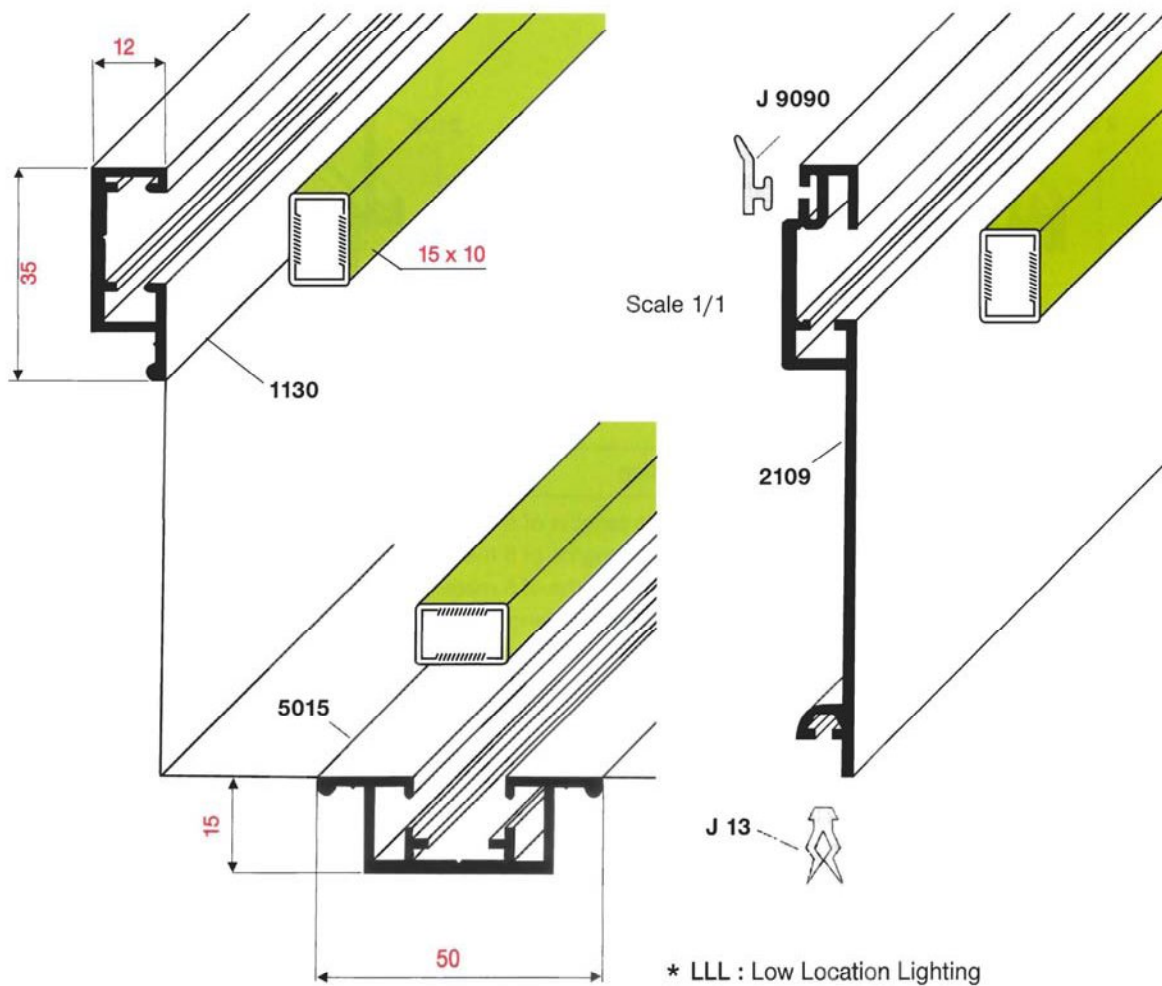
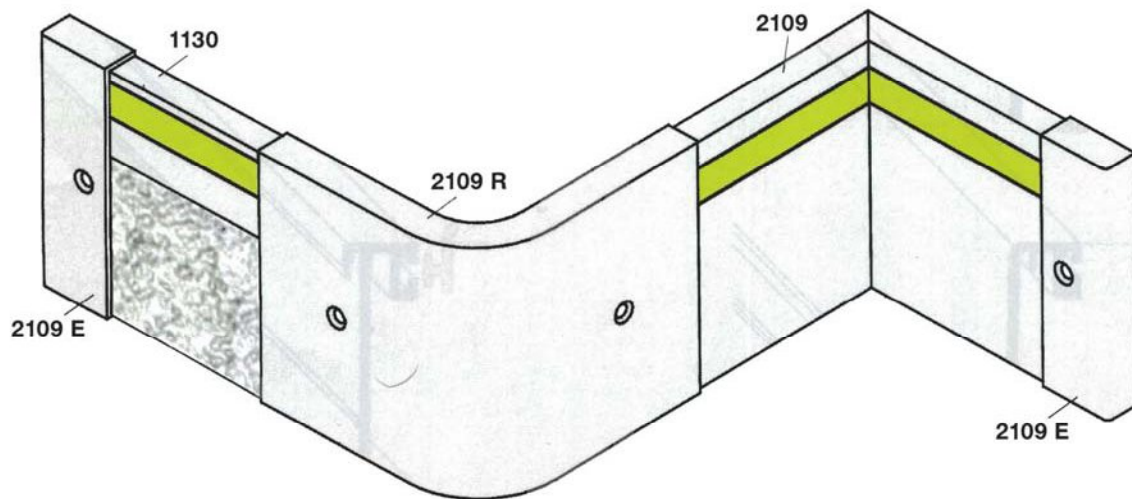
Ref.	Description	Finishes	Weight Kg
2107	Section in lengths of 5 meters	①	0.705/m
2108	Section in lengths of 5 meters	①	0.695/m
2100	Section in lengths of 5 meters	①	0.080/m
J 9090	Rubber gasket in lengths of 30 meters	Grey rubber	0.040/m
J 13	Lower joint in lengths of 50 meters	Grey rubber	0.065/m
2107 E	End plug (left or right)	①	0.055
2107 A	90° angle	①	0.060
2107 R	90° angle with radius (R10, R20 or R50)	①	0.080
2107 U	Angle 2107 (specify angle)	①	0.210
2108 U	Angle 2108 (specify angle)	①	0.210
2107 bis	Pre-drilled ② section with foam gasket	①	0.710/m
2108 bis	Pre-drilled ② section with foam gasket	①	0.700/m

① Aluminium anodized (See p. 30-31).

② Fixing holes Ø 5 mm.

\* LLL : Low Location Lighting

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS





# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS

## Information

All skirtings have been designed to receive a 15 X 10 mm Low Location Lighting System (Existalite - Glamox).

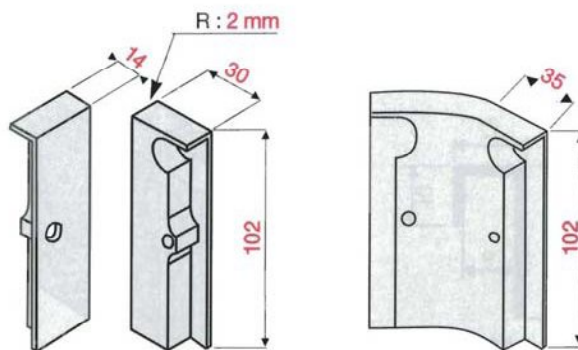
The Skirtings are delivered pre-drilled.

End plugs and corner pieces are made of solid aluminium for maximum resistance against chocks.

End plugs and corner pieces enable the passage of electrical wires.

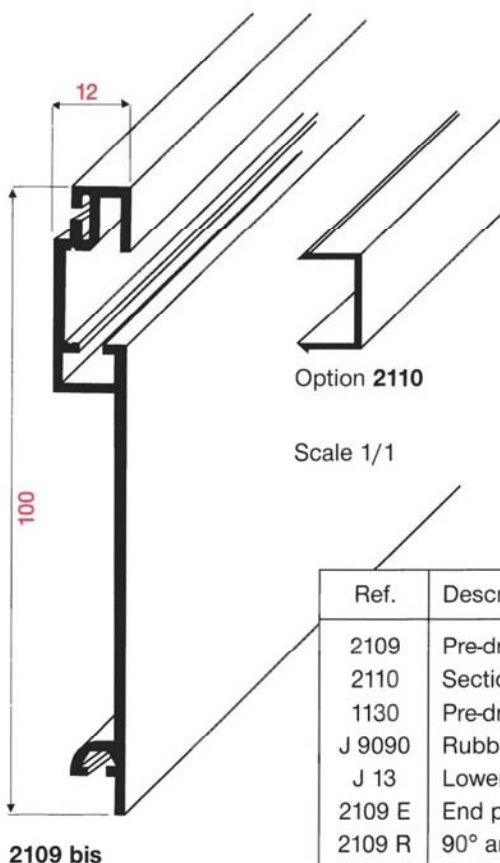
An aluminium cover ref. 2110 is also available for parts without lighting systems.

Custom made products on requirement.

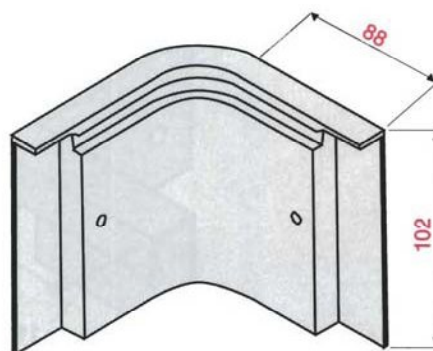


End plug

135° angle



2109 bis



90° angle

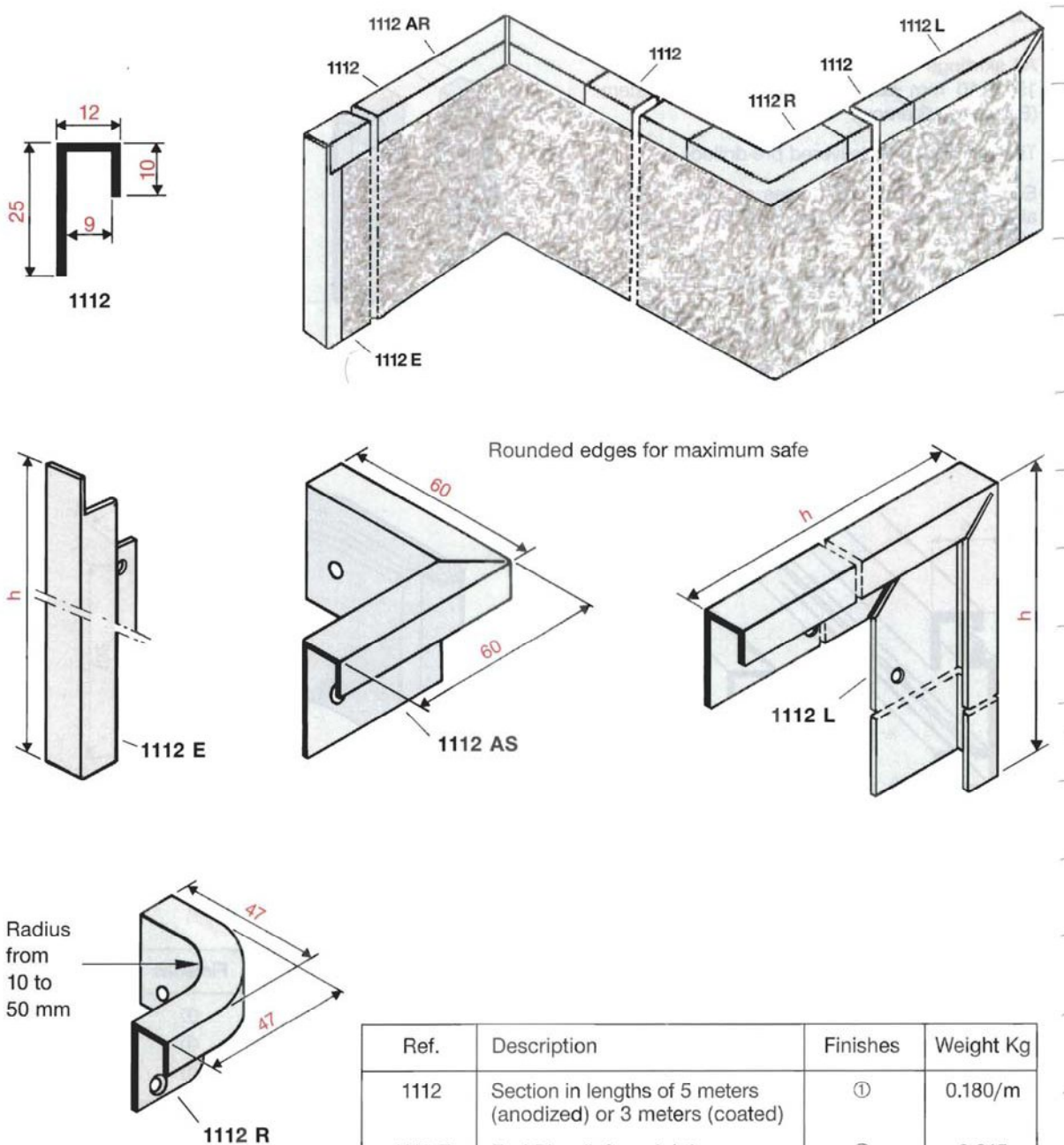
Ref.	Description	Finishes	Weight Kg
2109	Pre-drilled ② section in lengths of 5 meters	①	0.685/m
2110	Section in lengths of 5 meters	①	0.080/m
1130	Pre-drilled ② section in lengths of 5 meters	①	0.325/m
J 9090	Rubber gasket in lengths of 30 meters	Grey rubber	0.040/m
J 13	Lower joint in lengths of 50 meters	Grey rubber	0.065/m
2109 E	End plug (left or right)	①	0.080
2109 R	90° angle Radius 20 mm	①	0.505
2109 U	135° angle Radius 20 mm	①	0.210
2109 bis	Pre-drilled ② section with foam gasket	①	0.690/m
5015	Section in lengths of 5 meters	①	0.470/m

① Aluminium anodized (See p. 30-31).

② Fixing holes Ø 5 mm, half-countersunk.

\* LLL : Low Location Lighting

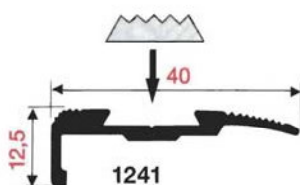
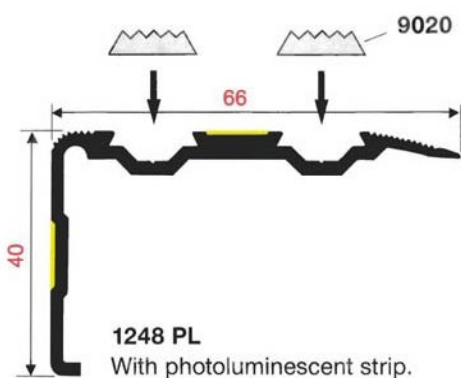
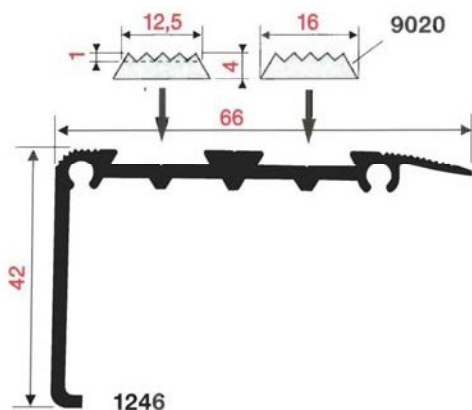
# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



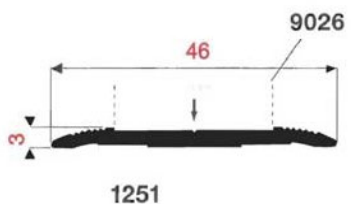
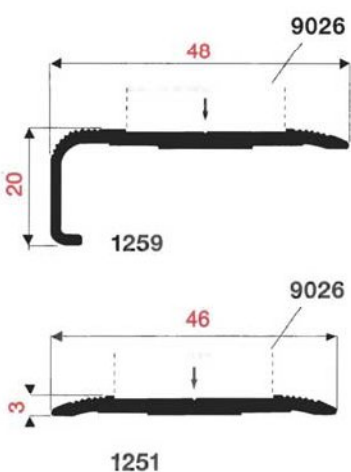
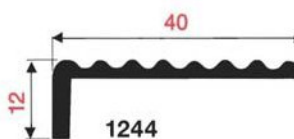
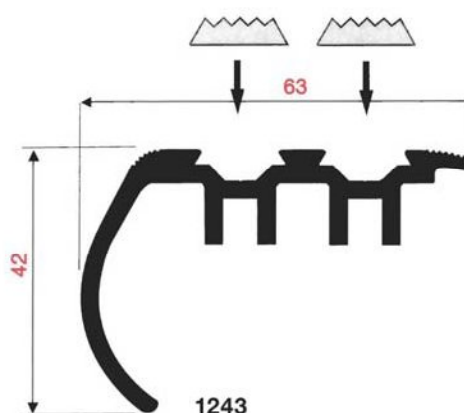
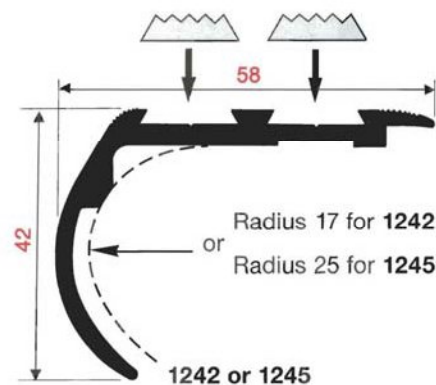
Ref.	Description	Finishes	Weight Kg
1112	Section in lengths of 5 meters (anodized) or 3 meters (coated)	①	0.180/m
1112 E	End Plug (left or right)	①	0.015
1112 L	End Plug type L	①	0.030
1112 R	90° angle (specify radius)	①	0.015
1112 AS	90° External angle	①	0.020
1112 AR	90° Internal angle	①	0.020

① Aluminium anodized or coated.

# HAND RAILING, BALUSTRADING AND SKIRTING SYSTEMS



All profiles Scale 1/1



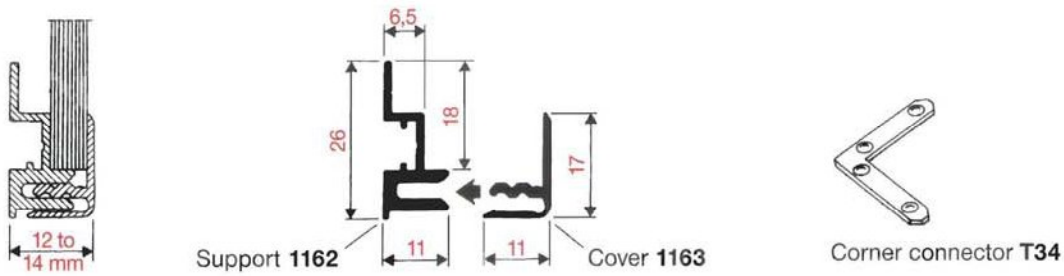
Ref.	Description	Finishes	Weight Kg
1241	Section in lengths of 4 meters	①/②	0.340/m
1242		①/②	0.820/m
1243		①/②	1.020/m
1244		①/②	0.285/m
1245		①/②	0.950/m
1246		①/②	0.750/m
1248 PL	Section in lengths of 4.10 meters with photoluminescent strip.	①	0.700/m
9020	Non-skid strip in lengths of 25 meters	Black rubber	0.060/m
9021	Non-skid strip in lengths of 25 meters	Grey rubber	0.060/m
1251	Section in lengths of 4 meters	①/②	0.260/m
1259	Section in lengths of 4 meters	①/②	0.340/m
9026	Non skid rolls of 18 meters x 25 mm	Black	

① Aluminium anodized or coated.  
② upon request : Raw finish.

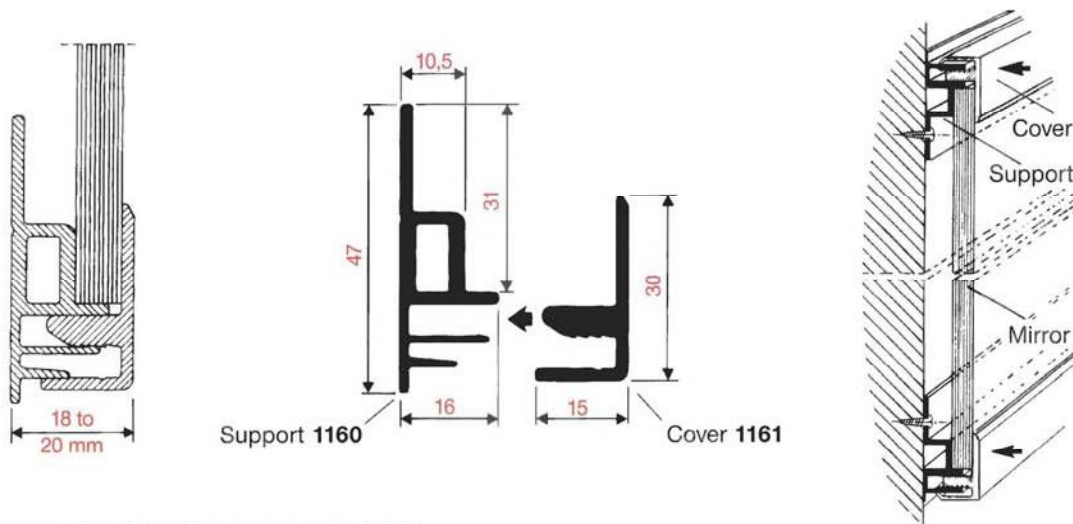
Pre-drilled upon request

## 2. MIRROR FRAMING SYSTEM

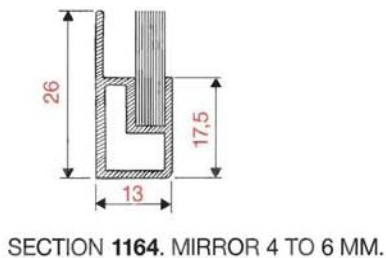
### HARDWARE, BED LADDERS AND STANDARD PROFILES



SYSTEM 146. FOR MIRROR FROM 4 TO 6 MM.



SYSTEM 168. FOR MIRROR FROM 6 TO 8 MM.



All profiles Scale 1/1

Ref.	Description	Finishes	Weight Kg
<b>146</b>	Section in lengths of 4 meters (anodized) or 2 meters (coated)	①	0.220/m
1162		①	0.120/m
1163		Steel	0.005
T 34			
<b>168</b>		①	0.495/m
1160		①	0.365/m
1161			
<b>1164</b>		①	0.260/m

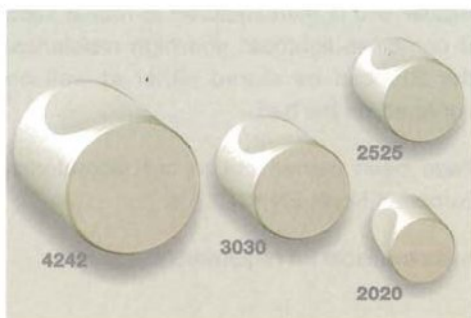
① Aluminium anodized or coated (See p. 30-31).

Upon request : realisation of frame to your dimensions.

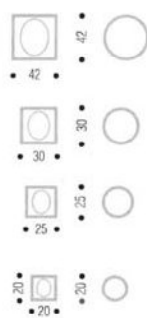


# MIRROR FRAMING SYSTEM

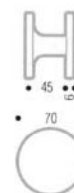
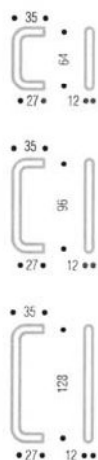
## HARDWARE, BED LADDERS AND STANDARD PROFILES



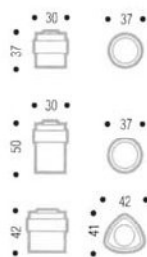
Furniture knobs



Furniture handles



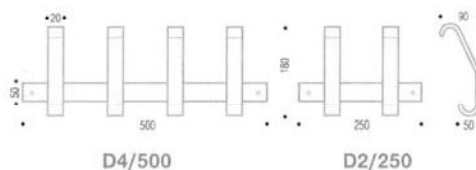
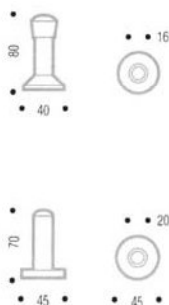
Door stops



Coat hooks



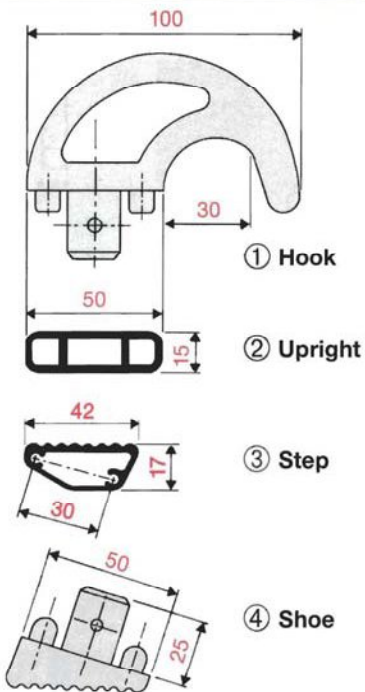
Wall stops





# MIRROR FRAMING SYSTEM

## HARDWARE, BED LADDERS AND STANDARD PROFILES



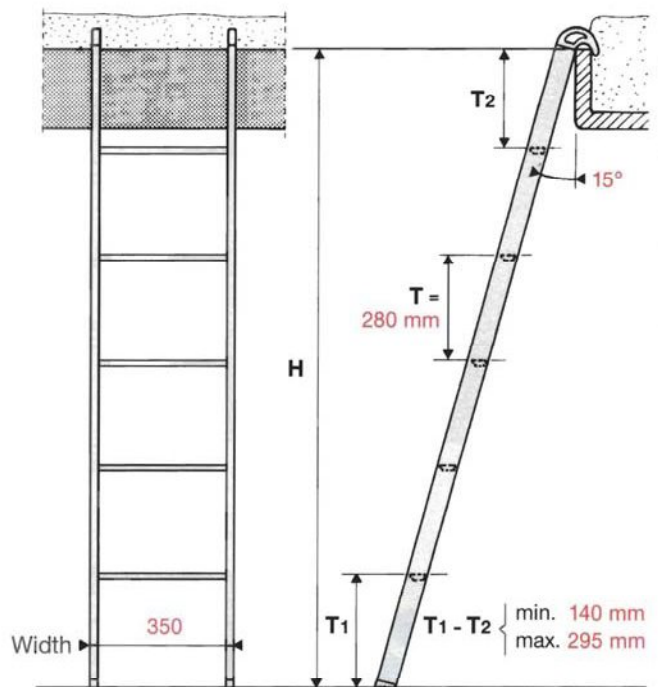
### Description / Spécification

- ① - Aluminium epoxy coated hook fixed by rivets onto the upright section.
- ② - Edge rounded upright in extruded aluminium, high resistance.
- ③ - Non skid shaped step in aluminium extruded tubular section.
- ④ - Metal cast shoe, non skid shape, fixed by rivets onto the upright section.

MSP bed-ladder 910 is manufactured in robust solid aluminium and combines lightness and high resistance. The bed ladder 910 can be stored either at wall on support 910 S or layed on the bed.

Quality tests have been carried out in our laboratories according to European Norm EN 131.2 § 4.

Quality reports are available on requirement.



### How to order

The ladders are ready to install :

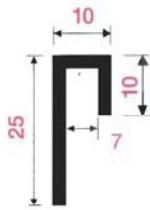
- standard width: 350 mm.
- standard interval between steps:  $T = 280$  mm
- height: according to cabin requirement.

Please indicate:

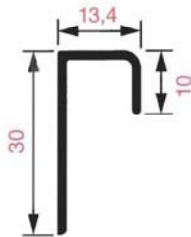
- H : Straight height between upper edge of the bed and floor.
- T1 : Straight height between upper edge of the first step and floor.
- T2 : Straight height between upper edge of the last step and upper edge of the bed.

# MIRROR FRAMING SYSTEM

## HARDWARE, BED LADDERS AND STANDARD PROFILES



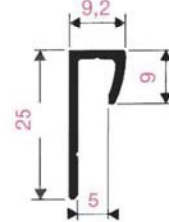
**1110**  
0,175 Kg/m  
Length: 4 m



**1111**  
0,170 Kg/m  
Length: 5 m



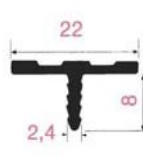
**1118**  
0,140 Kg/m  
Length: 5 m



**1324**  
0,170 Kg/m  
Length: 4 m



**1222**  
0,250 Kg/m  
Length: 4 m



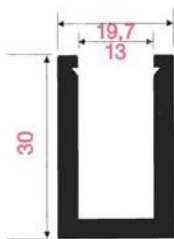
**1223**  
0,140 Kg/m  
Length: 4 m



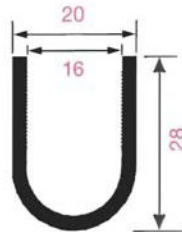
**595**  
0,220 Kg/m  
Length: 4 m



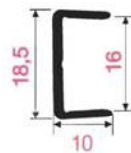
**5381**  
0,225 Kg/m  
Length: 4 m



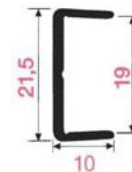
**5037**  
0,620 Kg/m  
Length: 5 m



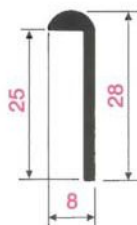
**5361**  
0,350 Kg/m  
Length: 4 m



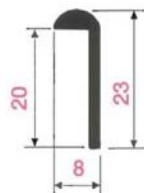
**1216**  
0,130 Kg/m  
Length: 4 m



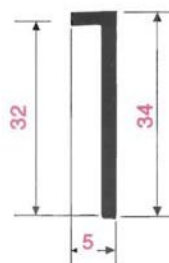
**1219**  
0,145 Kg/m  
Length: 4 m



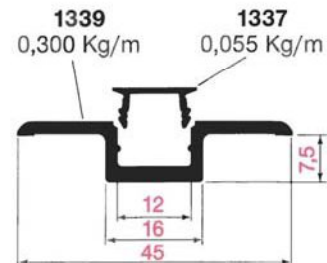
**1236**  
0,160 Kg/m  
Length: 4 m



**1237**  
0,130 Kg/m  
Length: 4 m



**1360**  
0,125 Kg/m  
Length: 4 m



**Set 1376**  
0,355 Kg/m  
Length: 4 m

### 3. SPECIAL REALIZATIONS AND COLOR CHART

SUN PRINCESS  
PRINCESS CRUISES

F

Hand railing and wall  
protection.



PAGLIA ORBA

SNCM

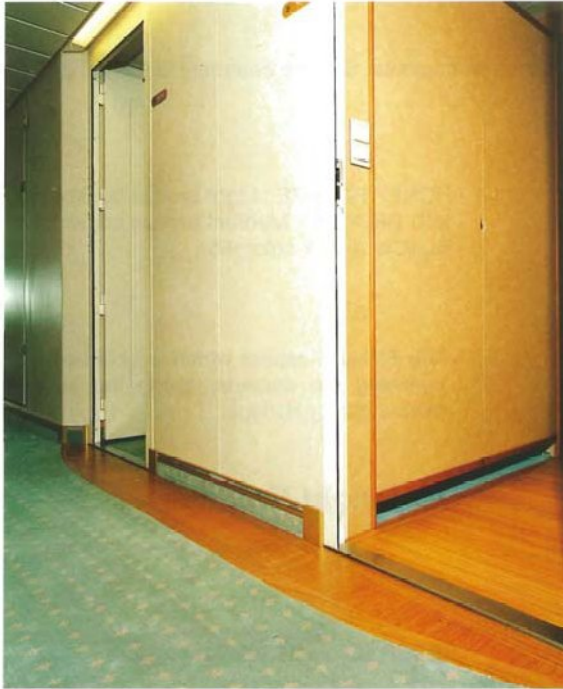
A

B.

Balustrading & Handrailing :  
System 545, polished gold anodized.



# SPECIAL REALIZATIONS AND COLOR CHART



## LEGEND OF THE SEAS

RCCL

Carpet skirting system  
for Low Location Lighting.



## LEGEND OF THE SEAS

RCCL

40 mm Handrail  
on wall bracket 65 and 65 E.

Carpet skirting 1130  
for Low Location Lighting

# SPECIAL REALIZATIONS AND COLOR CHART

## Anodised finishes and colorations

MSP aluminium products are available in following finishes and colours. Surface treatment is carried out in our factory, using the finest decorative quality materials.

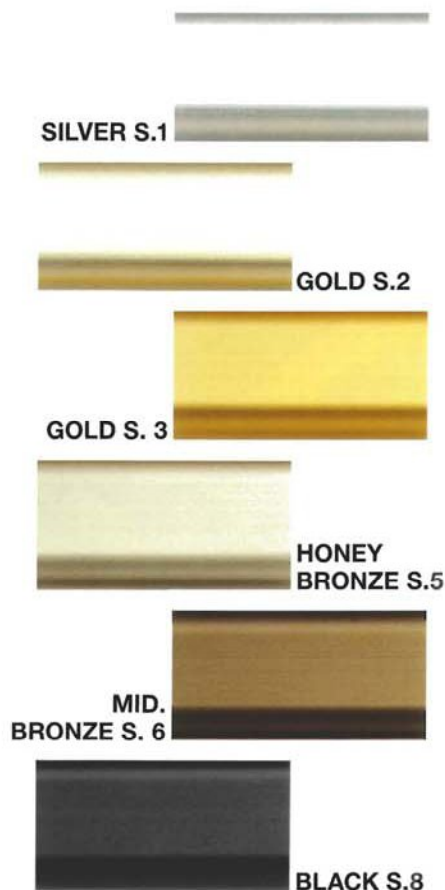
**Colours:** Six anodised colours are available:

- SILVER: Natural colour of the aluminium
- CHAMPAGNE: Light gold coloration (Gold 2)
- GOLD: Gold coloration (Gold 3)
- HONEY BRONZE : Light bronze coloration
- MID BRONZE : Medium bronze coloration
- BLACK : Black coloration

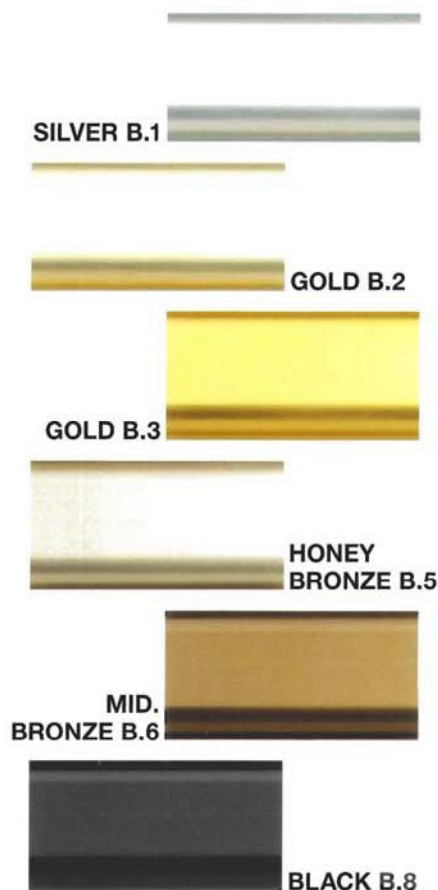
**Finishes:** Two finishes are available

- The SATIN aspect which is obtained by a chemical treatment, giving the aluminium a regular satin surface.
- The BRIGHT aspect which is obtained by polishing the material, giving the aluminium a glossy surface.

### Satin finishes



### Bright finishes



**All colorations are available in satin or bright finish**

**Maintenance:** Aluminium is maintenance free. Clean with water or soap with water.  
Do not use any abrasive cleaner.



# **HAND RAILING, BALUSTRADING, SKIRTING**

---

## **CRUISE VESSEL REFERENCES**

### **ROYAL CARIBBEAN CRUISES**

SOVEREIGN OF THE SEAS  
NORDIC EMPRESS  
MONARCH OF THE SEAS  
MAJESTY OF THE SEAS  
LEGEND OF THE SEAS  
BRILLIANCE OF THE SEAS

### **CELEBRITY CRUISES**

ZENITH  
HORIZON  
MILLENNIUM  
INFINITY  
SUMMIT  
CONSTELLATION  
CENTURY

### **HOLLAND AMERICA**

NOORDAM  
MAASDAM  
NIEUW AMSTERDAM  
RYNDAM  
STATENDAM  
WESTERDAM

### **SNCM**

PAGLIA ORBA

### **RADISSON SEVEN SEAS CRUISES**

SEVEN SEAS MARINER

### **FESTIVAL SHIPPING**

MISTRAL  
EUROPEAN VISION  
EUROPEAN STARS

### **CRYSTAL CRUISES**

CRYSTAL SYMPHONY

### **NORWEGIAN CRUISE LINE**

NORWAY  
NORWEGIAN DREAM  
NORWEGIAN WIND

### **PRINCESS CRUISES**

CORAL PRINCESS  
ISLAND PRINCESS  
STAR PRINCESS  
REGAL PRINCESS  
OCEAN PRINCESS  
GRAND PRINCESS  
SEA PRINCESS  
SUN PRINCESS  
CROWN PRINCESS



- One-stop-shop for all your Marine Spare Parts needs
- 4 complete Spare Parts catalogues on line
- Our partners: Suppliers and manufacturers worldwide
- Our clients: All Cruise lines, and so many more...
- Capability of shipping your orders to any destination
- Technical expertise for your refurbishing projects
- Service oriented, quality minded



### **Miami Headquarters:**

**155 South Miami Avenue, Suite 210  
Miami, Florida 33130  
Ph: +1 (305) 381 - 9629  
Fx: +1 (305) 381 - 9633  
Web: [WWW.MSP.WS](http://WWW.MSP.WS)  
E-mail: [sales@msp.ws](mailto:sales@msp.ws)**

### **France Office:**

**MSP – N07  
Avenue Bourdelle BP 61775  
44617 Saint Nazaire Cedex  
Ph: +33 - 251 - 109 - 484  
Fx: +33 - 251 - 109 - 995  
Web: [WWW.MSP.WS](http://WWW.MSP.WS)  
E-mail: [sales@msp.ws](mailto:sales@msp.ws)**