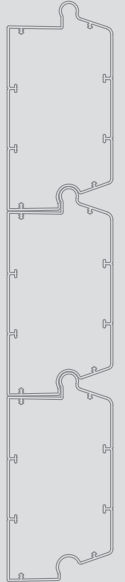


FIRE-PROOF DOORS



Catalogue

Roller shutter

**VR60**

Inside installation

Today, thanks to a high level of technicality of our products, the fire-proof doors are lighter and close to traditional doors.

Flema was established in 2004 with the purpose of developing fire-proof products (roller shutter, sectional and sliding doors) of a design very close to a traditional closing elements in order to achieve light, modern and easy to produce, assemble and install doors at very competitive prices.

To achieve this challenge, we have filed a patent. The concept is quite simple: synthetic profiles with an intumescent core.

**Mission accomplished!**

1. Plate	<b>3</b>
2. Hardware for the plate	<b>7</b>
3. Frame profiles	<b>12</b>
4. Track profiles	<b>14</b>
5. MFZ Motorisation	<b>16</b>



The roller shutter **VR60** has been approved as per the CEN1363-1 and the 1364-1 European standards.

### Our prices are :

- ex-works
- Excluding VAT
- Gross price without discount
- In Euro

### Delivery time :

- 4 weeks for the kits
- 2 weeks for the components in bulk

### Legend

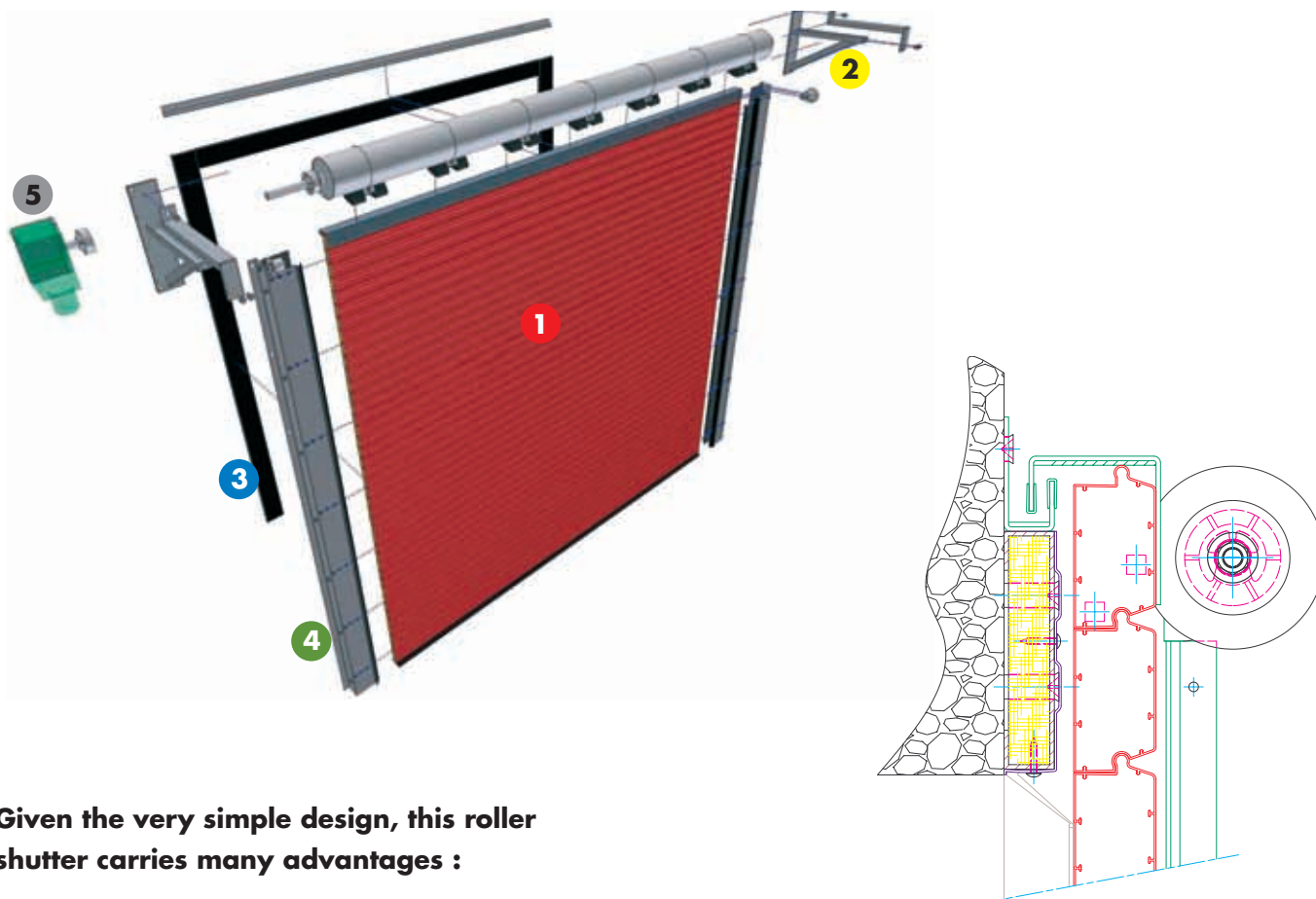
Weight	Quantity per box

**Patented**


# Roller shutter **VR60**

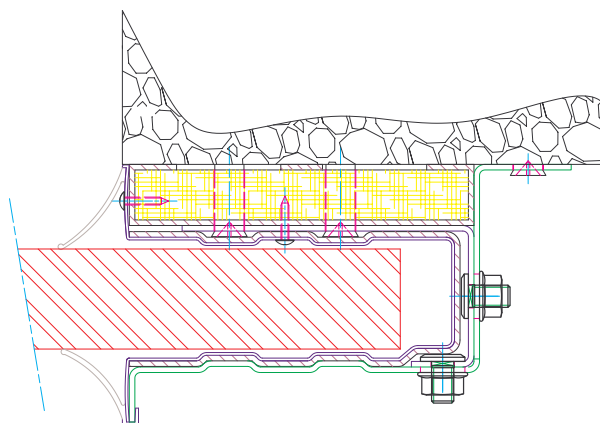
## Fire resistance : 60'

The fire resistance is obtained thanks to its patented **RF60** plate and frame. The mechanical system is close to that of a traditional door.



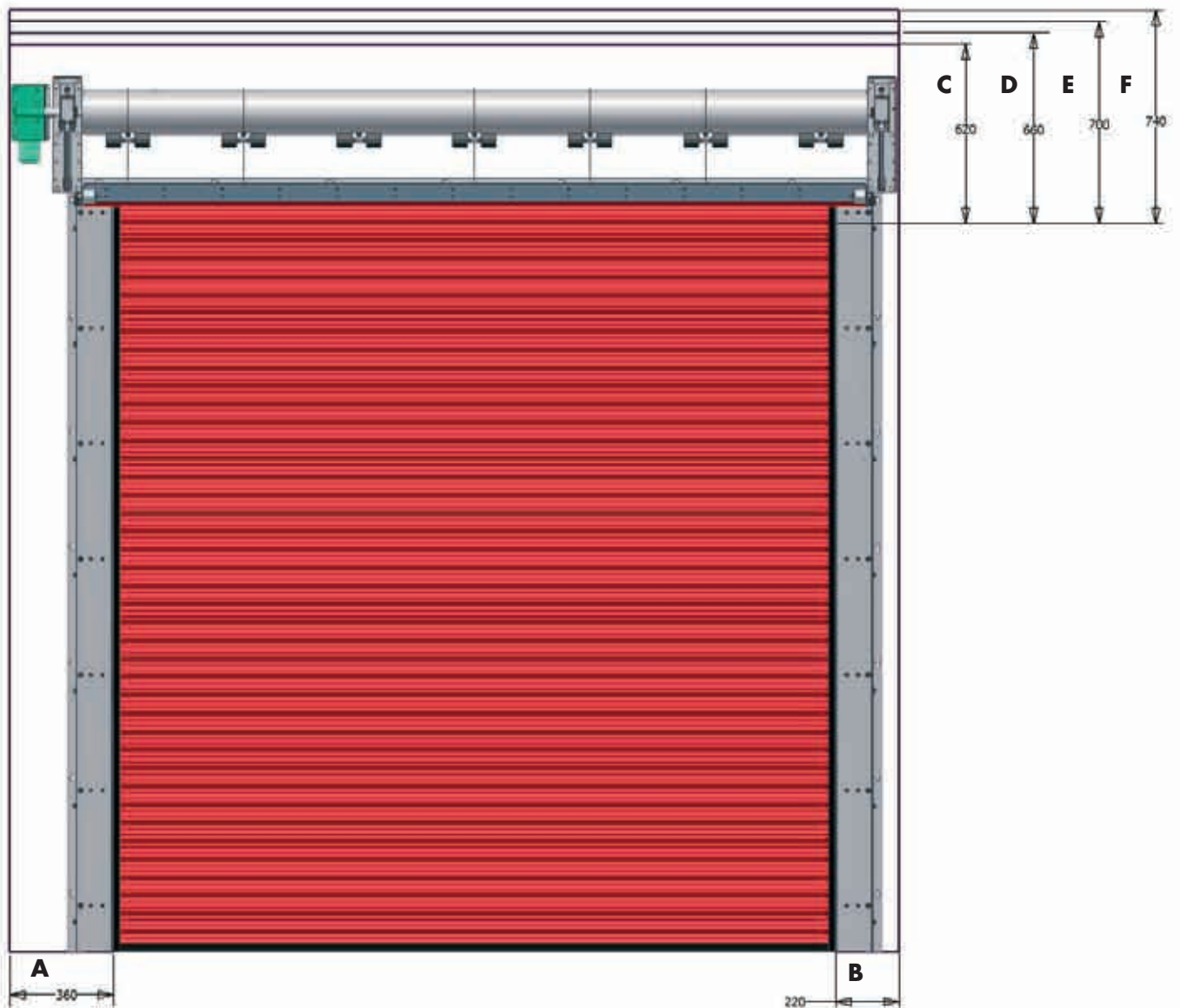
**Given the very simple design, this roller shutter carries many advantages :**

- A patented system 
- Synthetic matter: rustproof
- Mass tinted
- Close to a traditional shutter
- Easy to install
- Very light mechanism and plate
- Air and water tightness
- Reduced obstruction
- Motorisation MFZ of new generation
- Approved by the food processing and medical industries



# Roller shutter **VR60**

## Opening preparation details



**A = 360mm motor side**

**B = 220mm free side**

**C = 620mm door height < 2750mm**

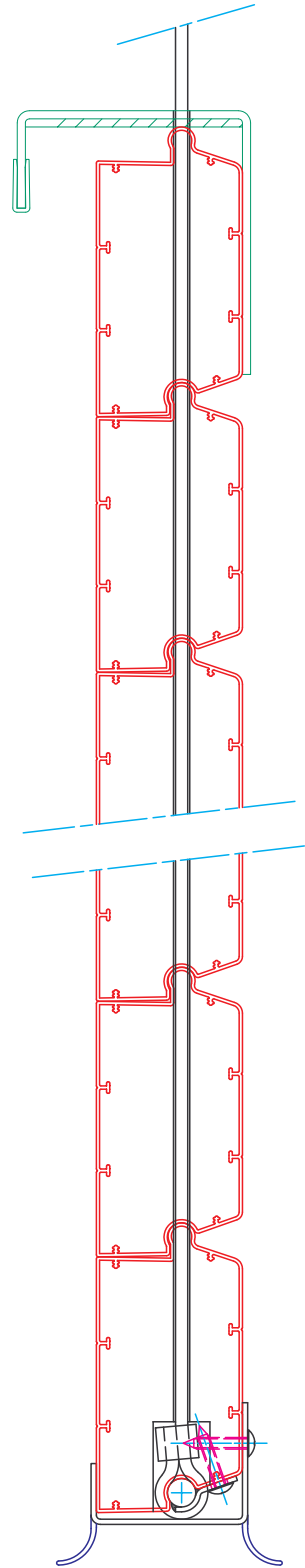
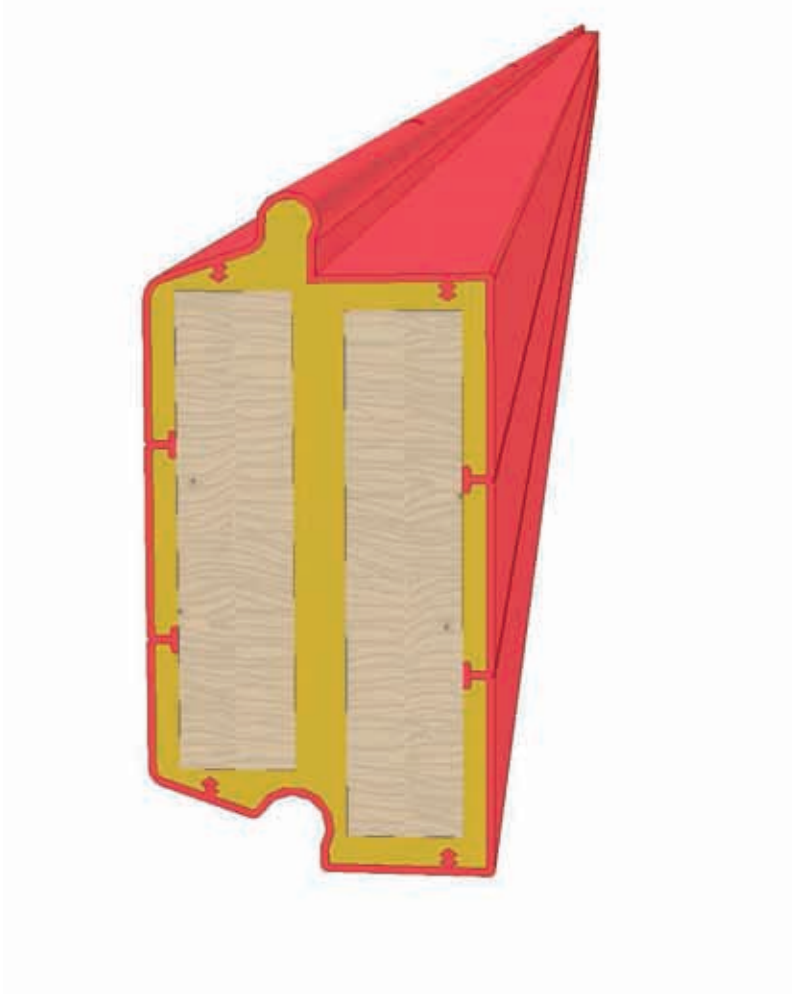
**D = 660mm door height < 4000mm**

**E = 700mm door height < 5250mm**

**F = 740mm door height < 6500mm**



The door frame of the roller shutter consists of synthetic profiles with an intumescent core. The slats are assembled together each 40cm with a 3mm cable.





- Thickness : 36mm
- Width : 63mm
- Mass tinted
- Synthetic matter
- Colours available :
  - red
  - grey

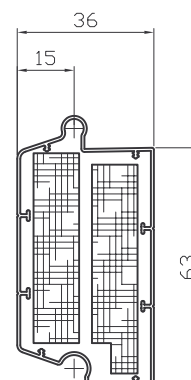


## Red slat





Ref.	Description	Unit		
3001	Lg 3300mm	pc	30kg/m <sup>2</sup>	90
3002	Lg 4300mm	pc	30kg/m <sup>2</sup>	90
3003	Lg 5300mm	pc	30kg/m <sup>2</sup>	90
3004	Lg 7300mm	pc	30kg/m <sup>2</sup>	90

Synthetic matter  
Red colour

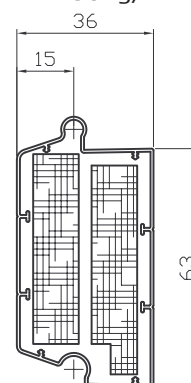


## Grey slat



Ref.	Description	Unit		
3051	Lg 3300mm	pc	30kg/m <sup>2</sup>	90
3052	Lg 4300mm	pc	30kg/m <sup>2</sup>	90
3053	Lg 5300mm	pc	30kg/m <sup>2</sup>	90
3054	Lg 7300mm	pc	30kg/m <sup>2</sup>	90

Synthetic matter  
Grey colour

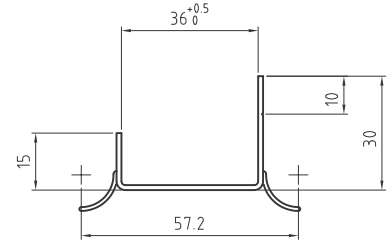


bottom seal



Ref.	Description	Unit	EM	
2001	Lg 3000mm	pc	0.63	50
2002	Lg 4000mm	pc	0.84	50

Co-extruded profile in synthetic matter  
PVC profile used as bottom seal

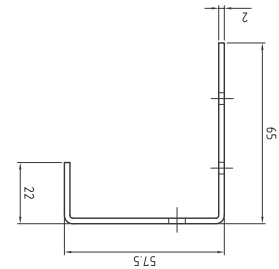


Top horizontal angle



Ref.	Description	Unit	EM	
6251	Lg 3000mm	pc	5.1	60

Profile in steel thickness 2mm  
Placed on the top of the plate  
Is used for keeping the door closed in case of fire

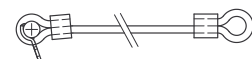
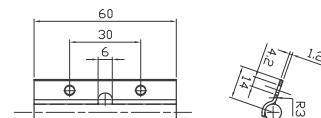


Bottom bracket  
+ inox cable



Ref.	Description	Unit	EM	
1101	Lg 4000mm	pc	0.19	50
1102	Lg 5000mm	pc	0.24	50
1103	Lg 7000mm	pc	0.34	50

Cable diameter 3mm  
Used for assembling the plate  
The fastener is fixed on the first slat  
The cable is fixed on the adjustable cable-fastener (ref 2601)



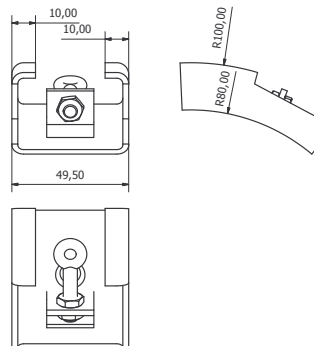


## Adjustable cable-fastener



Ref.	Description	Unit		
2601	cable-fastener	pc	0.11	180

Used for fixing the plate on the drum (ref 5020)

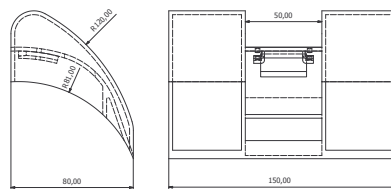


## Slats support



Ref.	Description	Unit		
2501	Slats support	pc	0.135	60

Plastic piece  
Is fixed on the adjustable cable-fastener (ref 2601)  
Allows a correct rolling up of the door

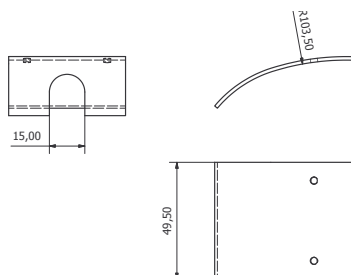


## Cap



Ref.	Description	Unit		
2701	cap	pc	0.11	180

Is fixed on the slats support (ref 2501)  
Piece of reinforcement and completion

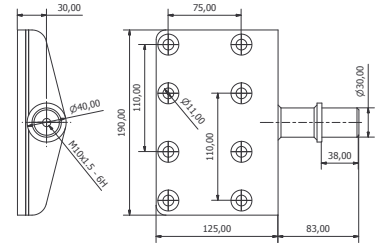


### Motor arm



Ref.	Description	Unit	EM	
4003	motor arm	pc	2.73	6

To maintain and to guide the motor on the universal support (ref 1201)

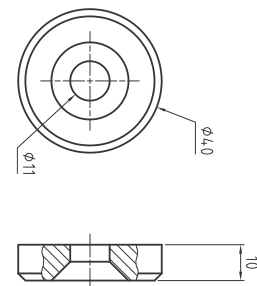


### Blocking cap



Ref.	Description	Unit	EM	
4001	Blocking cap	pc	0.85	200

Is fixed on the arm motor (ref 4003)  
Allows to maintain a bearing in position

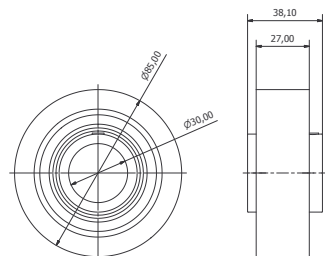


### Bearing



Ref.	Description	Unit	EM	
1301	Bearing	pc	1.81	12

Bearing for shaft diameter 30mm  
Allows the movement of the drum (ref 5020)  
and of the motor on the universal support (ref 5021)  
3 bearings/door

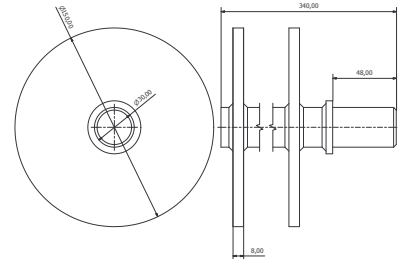


## Drum flask



Ref.	Description	Unit	EM	
4002	drum flask	pc	4.13	4

shaft diameter 30mm  
Is welded to a side of the tube dia 159mm (ref 5001) to constitute the drum (ref 5020)

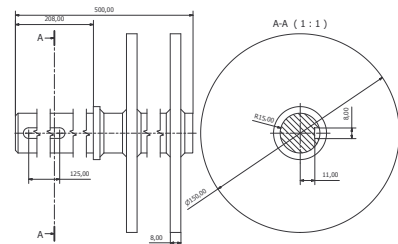


## Motor flask



Ref.	Description	Unit	EM	
4004	motor flask	pc	5.04	3

shaft diameter 30mm with key way  
Allows the connection with the motor  
Is welded to a side of the tube (ref 5001) to constitute the drum (ref 5020)

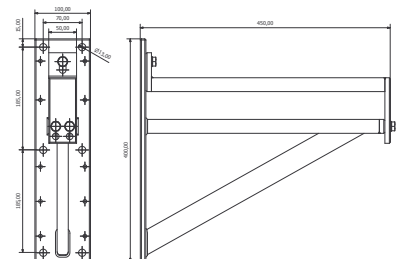


## Universal support





Ref.	Description	Unit	EM	
1201	universal support	pc	6.84	2

Support on which the drum is placed in order to allow the rolling up



### Tube





Ref.	Description	Unit		
5001	Lg 6000mm	pc	92.4	1
5002	Lg 12000mm	pc	184.4	1

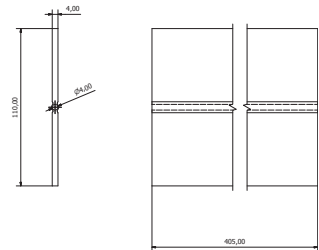
Outside diameter 159mm  
Used with a drum flask (ref 4002) and a motor flask (ref 4004) to constitute the drum (ref 5020)

### Rubber of rolling up





Ref.	Description	Unit		
5030	rubber	pc	60	0.22

Is placed around the cable (ref 1101) and is fixed on the drum.  
Allows to roll up the roller shutter without damaging the plate.

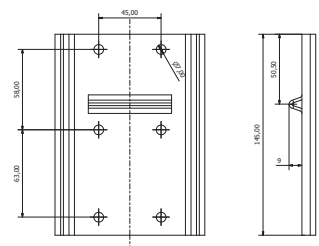


### Bottom plate




Ref.	Description	Unit		
5050	bottom plate	pc	80	0.275

Is placed on each side at the bottom of the plate.  
Allows also to fix the bottom edge safety device.

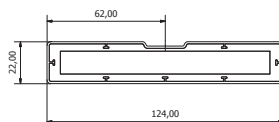


## Fire-proof frame profile




Ref.	Description	Unit	KG	
2451	profile Lg 3400mm	pc	2	10
2452	profile Lg 4400mm	pc	2,6	10

Profile in synthetic matter.  
Allows the fire, water and air resistance.  
Is placed around the opening.



## Perlau




Ref.	Description	Unit	KG	
7010	20mm/2mm	mt	0.048	400
7012	35mm/2mm	mt	0.085	200

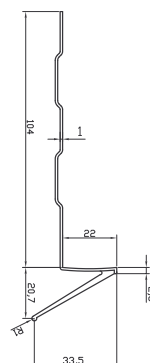
Perlau 20mm/2mm  
Placed in the s-profile of the wall.  
Perlau 35mm/2mm  
Placed in the bottom seal and the top s-profile.

## Top seal





Ref.	Description	Unit	KG	
2101	Lg 3000mm	pc	0.9	50
2102	Lg 4000mm	pc	1.2	50

Co-extruded profile in synthetic matter  
Is used as completion profile

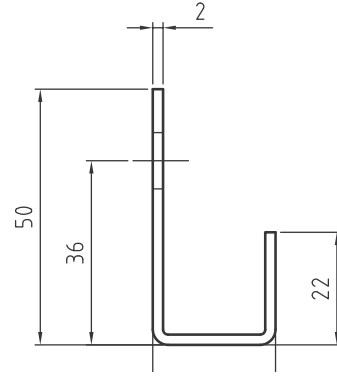


## Horizontal angle of lintel



Ref.	Description	Unit		
6201	Lg 3000mm	pc	3.3	60

Profile in galvanised steel 2mm  
 Is placed on the top of the frame  
 Allows the maintain of the plate against the fra-  
 me in case of fire

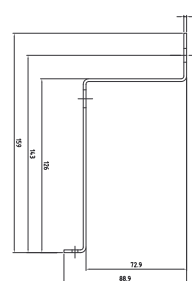


## Top external vertical angle



Ref.	Description	Unit	REF	Icon
6001	left Lg 2998mm	pc	8.74	25
6002	right Lg 2998mm	pc	8.74	25

Is bolted on the external guide (ref 6014) in order to make an U-shape  
Is used as a fixation for the tracking roller (ref 1001)

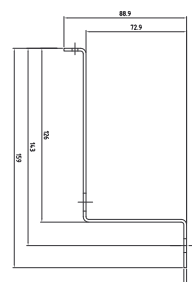


## Universal external vertical angle



Ref.	Description	Unit	REF	Icon
6051	Lg 1000mm	pc	2.92	60
6052	Lg 2000mm	pc	5.83	60
6053	Lg 2950mm	pc	8.60	60

Is placed in extension under the top angle (ref 6001 and 6002) in order to create doors up to 6 meters.

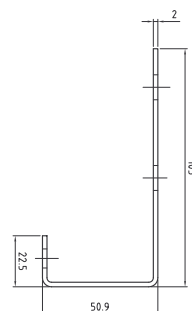


## Universal internal vertical angle





Ref.	Description	Unit	REF	Icon
6101	Lg 1000mm	pc	2.08	60
6102	Lg 2000mm	pc	4.17	60
6103	Lg 2950mm	pc	6.15	60

Is fixed on the plate in combination with the external guide (ref 6001 and 6002) in order to make an U-shape  
Symmetrical right and left

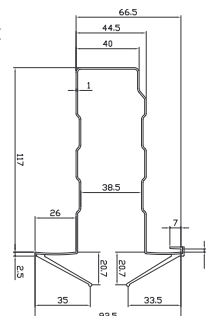


## Side profile omega

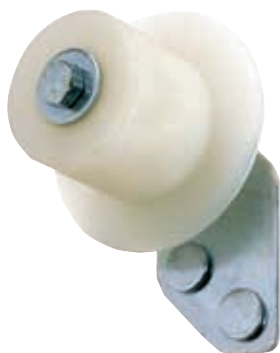




Ref.	Description	Unit		
2201	Lg 3200mm	pc	2.4	12
2202	Lg 4200mm	pc	3.15	12
2203	Lg 5200mm	pc	3.9	12

Completion profile  
 Allows the air and water tightness  
 The door frame slips in this part during the opening of the door  
 Covered with a intumescent product on the inside side to allow the fire resistance

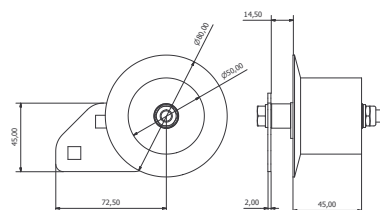


## Pair of tracking rollers





Ref.	Description	Unit		
1001	roller	pair	0.24	12

Allows the alignment of the plate during the rolling up and down of the door  
 Is fixed on the top external angle (ref 6001 and 6002)  
 1 pair/door

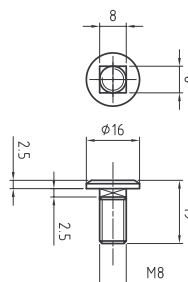


## Bolts M8x19



Ref.	Description	Unit		
4005	bolts M8x19	pc	0.15	2000

Allows the fixing of the different angles





## Motors



Ref.	Description	Unit	KG	
4501	MFZ1-221kg	pc	x	1
4502	MFZ2-431kg	pc	x	1
4503	MFZ3-615kg	pc	x	1
4504	MFZ4-769kg	pc	x	1

Under normal conditions, the Flema fire door is operated by a powerful motor (three-phase/380volts) in connection with dependable worm gear drives.

In the case of fire, an additional 24V motor, powered by a low-voltage emergency supply facility, ensures that the door closes properly. The drive motor and controls form a single unit and have been approved together with the door system.

The system is available as a roller shutter drive and as a drive for sectional doors.

## ASO13 print

Ref.	Description	Unit	KG	
4520	print ASO13	pc	x	1

For automatic control

## Shaft adapter

Ref.	Description	Unit	KG	
4521	de 40 à 30mm	pc	x	1
4522	de 50 à 30mm	pc	x	1

To connect the different motors to the diameter of the flask 30mm

## Bottom edge safety device



Ref.	Description	Unit	 KG	
4550	safety device	pair	1	x

Mobile photoelectric barrier made up of :

- a pair of unit 4 cells
- a box of connection.

Allows to ensure the safety of an automatic door.

CE tested with a maximum speed of movement of 320mm/sec.



## FLEMA sprl

rue Outre 46

7910 Anvaing

Belgium

T : +32(0)69/67.27.87

F : +32(0)69/67.27.80

TVA : BE 865.121.323

Banque : Fortis : 001 444 613 724

