



Technical data

Roller Grill
RH800

HAROL®

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Harol reserves the right to make alterations of the product without prior notice.

1. Finished sizes

- **Finished width W:**
 - including guides = measured from the back side of the guides
 - without guides = curtain measure, including the clamps
- **Finished height H:**
 - with consoles = height including consoles
 - without consoles = height of the opening + rolling up (see table 6)
- Regarding to the wall in W and H, the tolerance is deducted by the client
- For a construction without consoles and with operation, you should indicate the length of the axle

Attention: depending on the chosen operation, it is possible that the position of the console varies regarding to the guide rail. See table 3 and figure 8

2. Assembly possibilities

- Can be built-in or surface mounted
- Surface mounted, there are four possibilities: mounting type 1, 2, 5 en 7: see figure 3
- Built-in, there are two possibilities: right roller and left roller: see figure 4
- The minimum lateral cut-away for the operation (from the back of the guide): see table 3 and figure 8

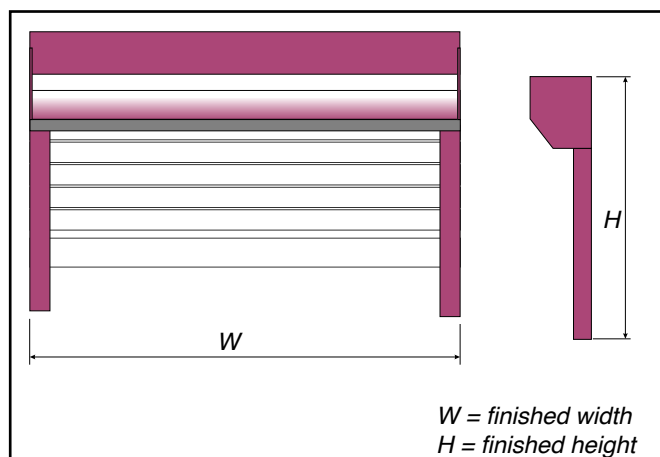


Fig. 1 : Finished sizes as surface mounted

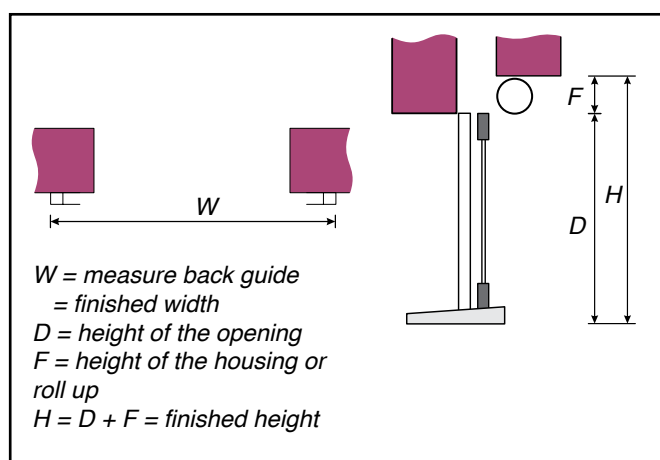


Fig. 2 : Finished sizes as built-in roller shutter

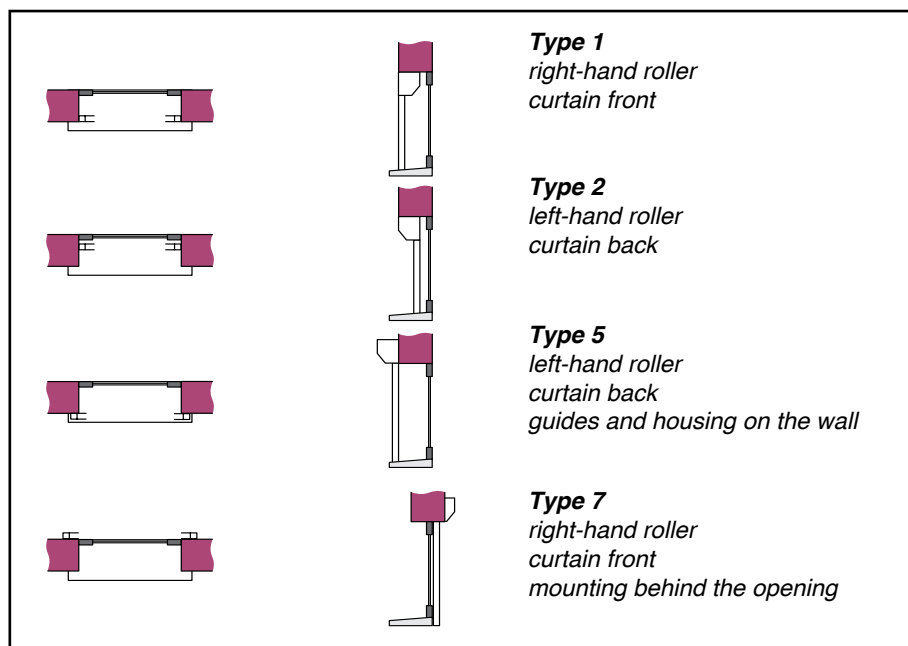


Fig. 3 : Assembly as surface mounted roller shutter

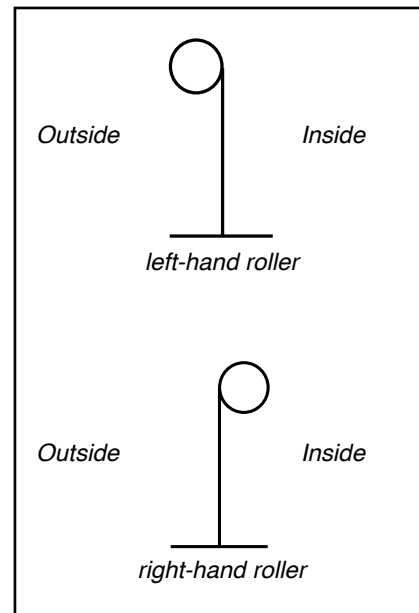


Fig. 4 : Assembly as built-in roller shutter

3. Shutter curtain

- Choice between 9 different types: see figure 5

- Curtain type 1 up to and including 4, 10 & 11:
 - At the top 5 single walled, fixed slats
 - At the bottom 3 single walled, fixed slats and final slat
- Curtain type 10 and 11: slats with grooves for extra sturdiness

- Is composed of 4 slat types: see table 1

- Material: extruded aluminium
- Colours: please consult the colour card in the price list

- Side clamps: provide the slats to slide sideward

- Fixation to the axle:

- Electrical operation: fixation to the axle with suspension plates
- Coiled spring operation: the shutter curtain is fixed directly to the axle

- Option

- Tracking washers
- Window glass (only possible with slat type 10 and 11)
- Lift security system (only possible with electrical operation)
- Coloured strip: with shutter curtain type 1 until and including 5

- Technical details of slats and curtain types: see table 1

- Shutter curtains from over 50 kg are delivered separately, rolled up turned round (simplified assembly)

- Rolling up diameters:

- See table 6
- These are net rolling up diameters, please provide a minimum tolerance of 20 mm

4. Maximum dimension

			Rod profile			Connection profile			Single-walled profile			Double-walled profile	
			OPTIONS			Slat thickness (mm)	Slat height (mm)	Covering height (mm)	Number of profiles per m height	Weight per m width (kg/m)	Net weight per m ² (kg/m ²)	Gross weight per m ² (kg/m ²)	Surface per mm profile (m ²)
			Trim	Window glass	Tracking washers								
Slat	Rod profile	A				16	26	26		0,458			0,149
	Connection profile	B				14	80	62		0,628			0,224
	Single-walled profile	C				16	87	78	12,8	0,798	10,218		0,279
	Double-walled profile	D				16	87	78	12,8	0,895	11,460		0,250
Variants	1	A+B	X	0	X	16	-	88	11,4	0,672	7,623	9,910	0,226
	2	A+B	X	0	X	16	-	88	11,4	0,672	7,623	9,910	0,226
	3	A+B	X	0	X	16	-	88	11,4	0,572	6,482	8,427	0,190
	4	A+B	X	0	X	16	-	88	11,4	0,572	6,482	8,427	0,190
	5	A+B	X	0	X	16	-	88	11,4	1,086	12,327	16,026	0,373
	6	D	0	0	X	16	-	78	12,8	0,895	11,460	14,898	0,250
	7	C	0	0	X	16	-	78	12,8	0,798	10,218	13,284	0,279
	10	C	0	XX	X	16	-	78	12,8	0,604	7,729	10,048	0,207
	11	C	0	XX	X	16	-	78	12,8	0,604	7,729	10,048	0,207
(xx) only right-hand roller													
These details are given in good faith and serve only for information. This information represents our current knowledge and cannot be used against us.													

Table 1 : Types of slat

- Depend on operation and shutter type:

- **Electric:**

Curtain type 1 and 2:

- Width: 5500 mm
- Height: 5000 mm
- Surface: 18 m²

Curtain type 3 and 4:

- Width: 5000 mm
- Height: 5000 mm
- Surface: 14 m²

Curtain type 5, 6 and 7:

- Width: 6000 mm
- Height: 5000 mm
- Surface: 24 m²

Curtain type 10 and 11:

- Width: 5500 mm
- Height: 5000 mm
- Surface: 20 m²

- **Coiled spring:**

- Width: 2000 mm
- Height: 3000 mm
- Surface: 5 m²

- The double-walled slat is also used as final slat

- Material: extruded aluminium

- Colours: always the same colour as the shutter curtain

- Provided of a rubber seal:

- Sound-insulating by closing

- Wind- and rain sealer

- Technical details: see table 1

Remark: For a shutter curtain without operation, you must provide the same measurements as for the electrical operation

5. Final slat

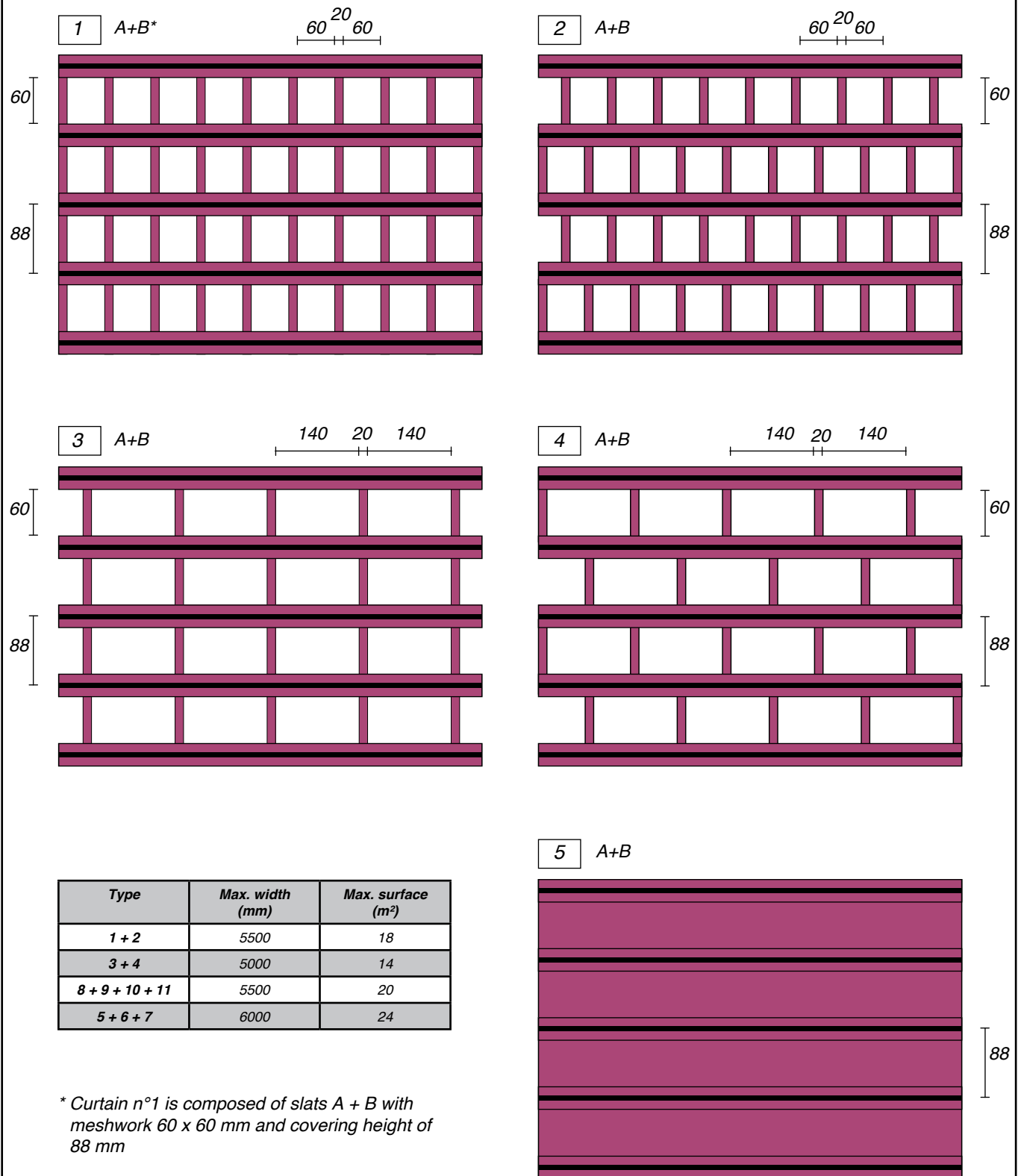


Fig. 5a : Curtain types

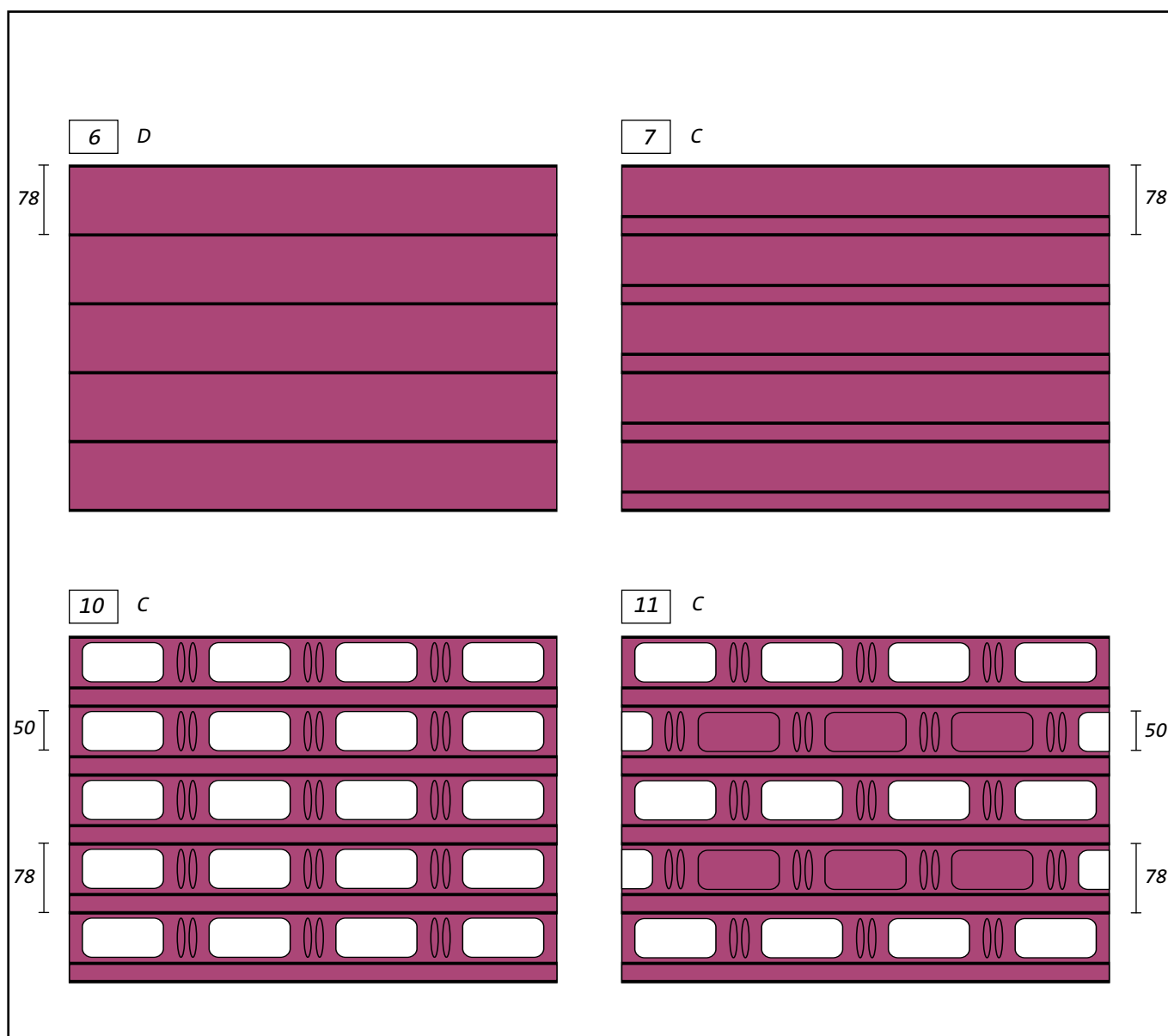


Fig. 5b : Curtain types

6. Operation

- Electrical operation:

- Standard:
 - Built-in, asynchronous tubular motor with control buttons
 - Length of electric cable: consult table 5
 - Single pole surface mounted switch (fixed) and plug
 - Technical qualities: consult table 5

- Optional:

- Without switch and plug
- Altus RTS
- Electric cable 5m and 10m (only for Sirius and Titan)
- For automation: please consult the Harol do-mot-ics catalogue

- Electrical motor with emergency control:

- Standard:
 - Built-in, asynchronous tubular motor with control buttons and emergency control
 - Length of electrical cable: consult table 5
 - Single pole surface mounted fixed switch and plug
 - With removable crank
 - Technical qualities: consult table 5

- Optional:

- Without switch and plug
- Electric cable 5m and 10m (only for Sirius and Titan)
- For automation: please consult the Harol do-mot-ics catalogue

- Electrical operation with block motor:

- For industrial use
- Always with emergency control
- 60 % operating time
- Drop down safety built-in
- Technical qualities: consult table 4

- Coiled spring operation:

- Operation by means of a built-in spring
- Always in combination with a cylinder lock

- Operating exit:

- Is always seen from the inside
- Possible operating exits: see figure 6 and table 2

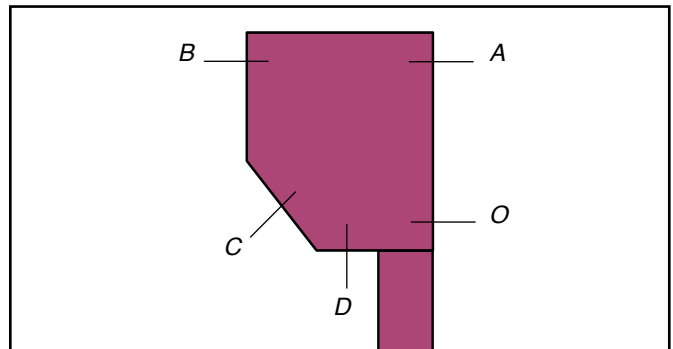


Fig. 6 : Choice operating exit tubular motor

Mounting type	1	2	5	7
Exit electric cable	B C D	A O	A O	B C D
Exit crank with emergency control RDO 60 CSI 80/12 RDO 60 CSI 100/12	A B C D O	A B C D O	A B C D O	A B C D O
Exit crank with emergency control 8.15m / 8.25m 8.35m / 8.45m	D O	D O	D O	D O

Table 2 : Choice exits tubular motor

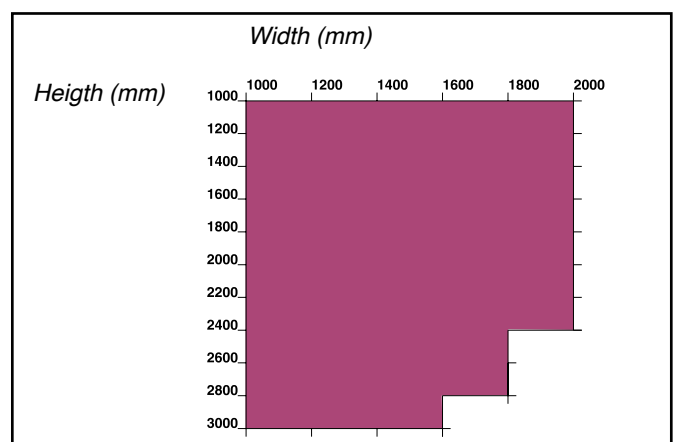


Fig. 7 : Table coiled spring

7. Consoles

- Material: aluminium (up to max. 50 kg gross curtain weight) or steel
- Colours: please consult colour card in the price list
- The use: see table 7

Remarks:

- In case of lift security system and sliding bearing, K-consoles can not be used
- K-consoles are only possible in combination with 025 guide rails

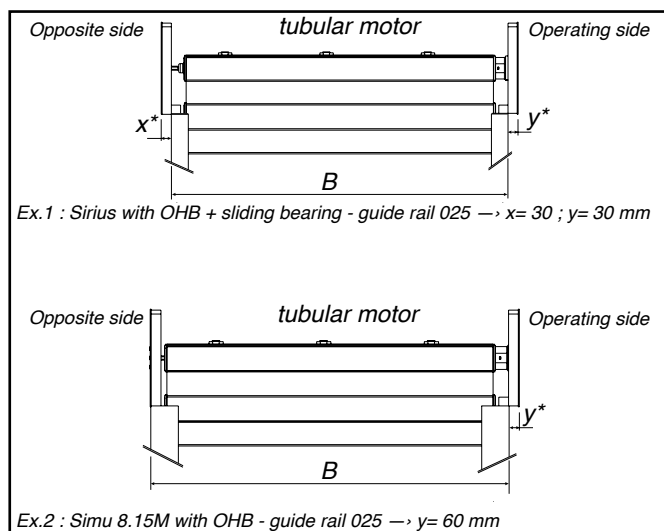


Fig. 8 : Motors (* see table 3)

		Operating side (y)			Opposite side (x)			Opposite side with unwind protection		
		025	051	060	025	051	060	025	051	060
Sirius Titan / Altus RTS	without OHB/sliding bearing	-	38	38	-	3	3	-	38	38
	with OHB	-	73	73	-	38	38	30	38	38
	with sliding bearing	-	38	38	-	38	38	x	x	x
	with OHB+sliding bearing	30	73	73	30	73	73	x	x	x
RDO 60 CSI 80/12 + 100/12 (NHB)	without OHB/sliding bearing	-	38	38	-	3	3	-	38	38
	with OHB	30	73	73	-	38	38	30	38	38
	with sliding bearing	30	73	73	-	38	38	x	x	x
	with OHB+sliding bearing	60	73	73	30	73	73	x	x	x
Simu 8.15 + 8.25	without OHB/sliding bearing	-	38	38	-	3	3	30	73	73
	with OHB	30	73	73	-	38	38	60	73	73
	with sliding bearing	30	73	73	30	73	73	x	x	x
	with OHB+sliding bearing	30	73	73	30	73	73	x	x	x
Simu 8.15M + 8.25M (NHB)	without OHB/sliding bearing	30	73	73	-	3	3	30	73	73
	with OHB	60	108	108	-	38	38	60	73	73
	with sliding bearing	60	108	108	30	73	73	x	x	x
	with OHB+sliding bearing	90	108	108	30	73	73	x	x	x
Simu 8.35 + 8.45	without OHB/sliding bearing	-	38	38	-	3	3	30	73	73
	with OHB	30	73	73	-	38	38	60	73	73
	with sliding bearing	30	73	73	30	73	73	x	x	x
	with OHB+sliding bearing	30	73	73	30	73	73	x	x	x
Simu 8.35M + 8.45M (NHB)	without OHB/sliding bearing	60	93	93	-	3	3	30	73	73
	with OHB	90	123	123	-	38	38	60	73	73
	with sliding bearing	60	108	108	30	73	73	x	x	x
	with OHB+sliding bearing	90	123	123	30	73	73	x	x	x
Blockmo- tor	without OHB	150	150	150	-	5	5	30	73	73
	OHB	185	185	185	-	40	40	60	73	73

With a blockmotor, it is recommended to foresee a play of 300 mm in order to have the possibility to take away the motor without taking apart everything
NHB = Emergency control
OHB = Lift security system

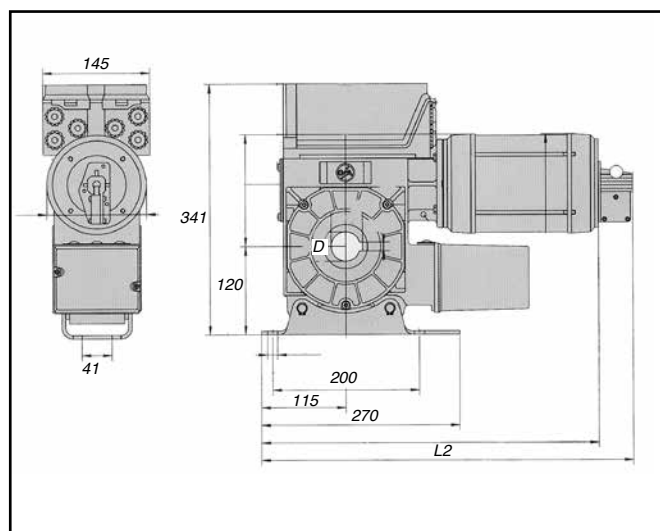


Fig. 9 : Blockmotor

Table 3 : Table for min. sidelong savings for motors (from backside guide rails)

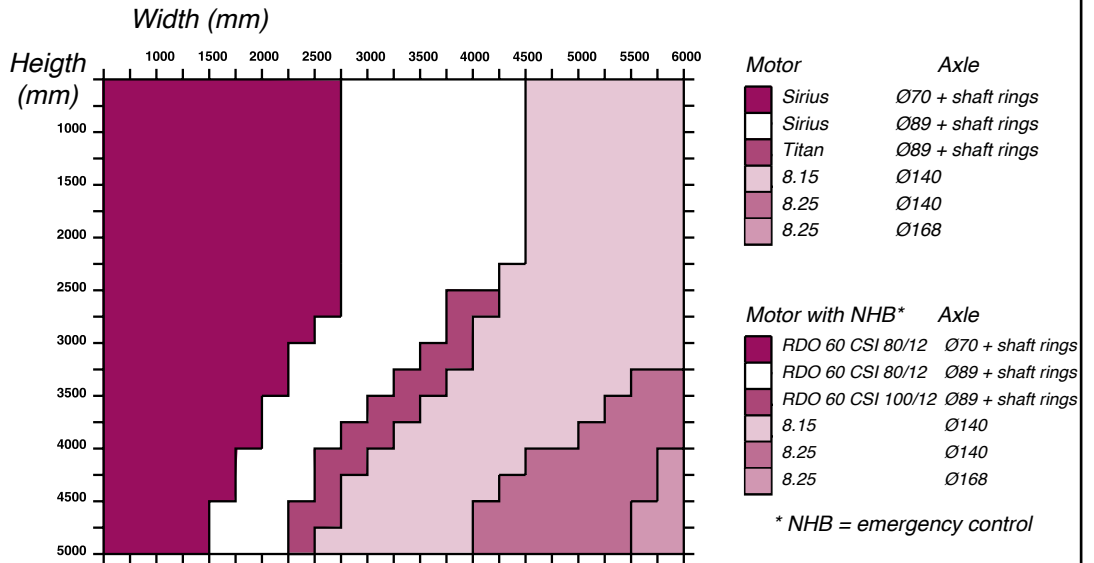
Type motor	D	L2	Max. gross roller shutter weight
SI 25.10	30	486	180 kg
SI 40.10	40	523	340 kg

Table 4 : Sizes + max. gross roller shutter weight blockmotor

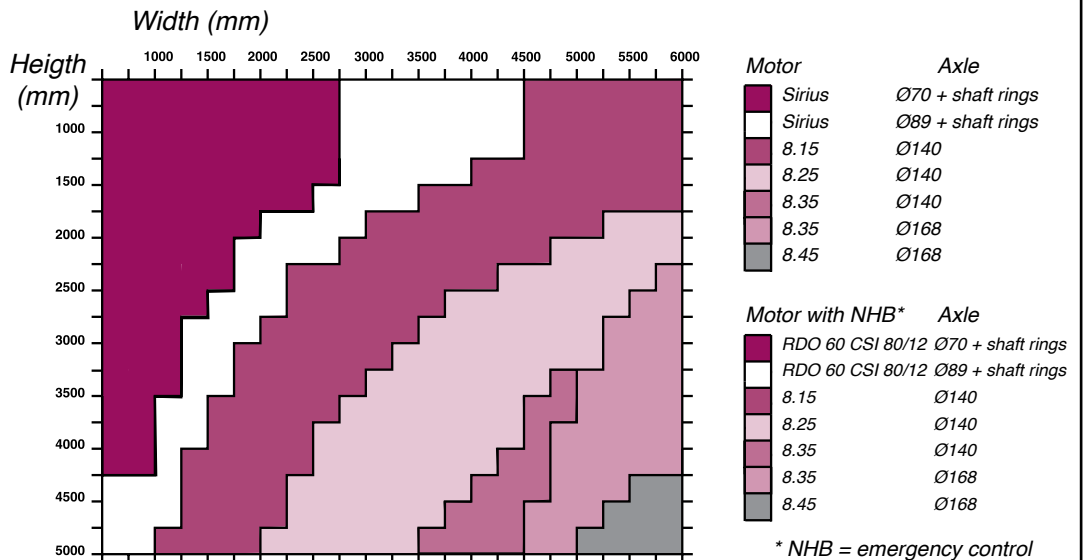
	Torque (Nm)	Speed (rev/min)	Capacity (Watt)	Charge (Volt)	Standard cable length (m)
Sirius RDO 60 CSI 80/12	80	12	320	230	2,5
Altus	85	17	450	230	5
Titan RDO 60 CSI 100/12	100	12	410	230	2,5
Altus	100	12	410	230	5
8.15	150	8	450	230	2
8.25	250	8	710	230	2
8.35	350	8	920	230	2
8.45	450	8	1280	230	2
8.15M	150	8	450	230	2,5
8.25M	250	8	710	230	2,5
8.35M	350	8	920	230	2,5
8.45M	450	8	1280	230	2,5

Table 5 : Technical qualities tubular motors

1. Curtains 1+2+3+4 10+11



2. Curtains 7



3. Curtains 5+6

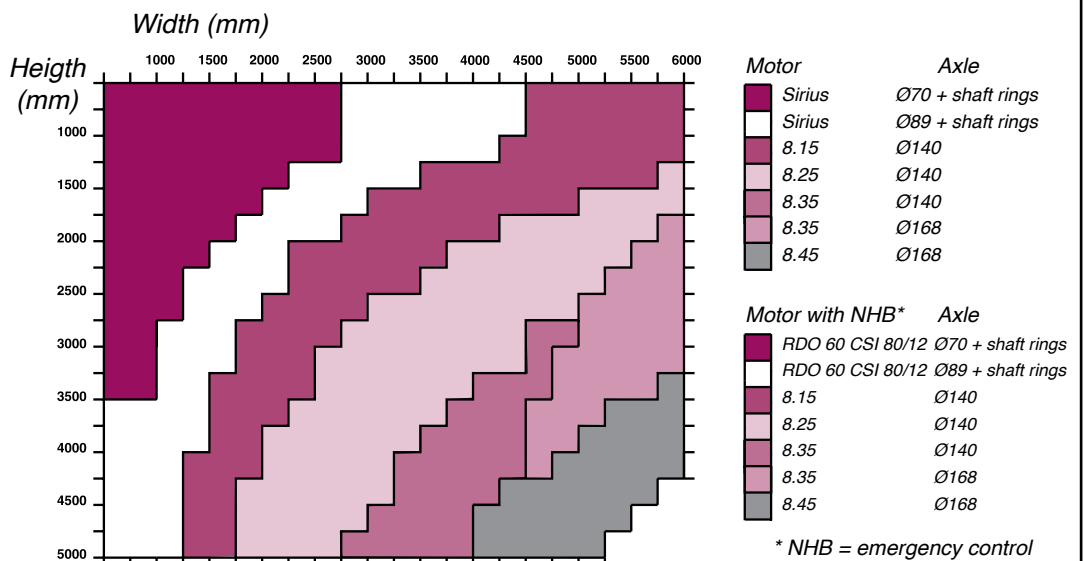


Fig. 10 : Table choice of motors and corresponding axles

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Curtain n°	1 + 2 + 3 + 4 + 5 (A + B)				7 + 10 + 11 (C)				6 (D)			
Height	Ø 70 +R **	Ø 89 +R **	Ø 140	Ø 168	Ø 70 +R **	Ø 89 +R **	Ø 140	Ø 168	Ø 70 +R **	Ø 89 +R **	Ø 140	Ø 168
1000	193	205	205	230	193	200	210	230	223	240	238	253
1250	205	215	215	243	218	218	228	248	243	250	255	258
1500	220	223	225	250	220	233	235	253	250	260	260	280
1750	230	238	238	258	230	248	258	260	260	280	285	285
2000	240	245	243	273	240	250	265	273	280	288	295	298
2250	250	250	248	275	250	258	275	273	285	300	303	315
2500	250	260	255	285	255	270	275	285	305	308	325	315
2750	268	273	270	285	263	280	280	300	310	318	330	333
3000	280	280	285	298	275	285	285	300	318	335	345	340
3250	280	280	285	300	275	300	300	305	338	345	355	350
3500	290	290	295	308	285	300	300	308	345	358	355	360
3750	295	295	300	315	290	308	305	315	355	355	360	370
4000	300	305	305	328	298	308	308	320	360	370	380	375
4250	310	310	310	330	305	315	325	328	365	370	385	380
4500	315	323	315	338	310	325	333	333	380	390	390	395
4750	320	328	328	340	315	330	338	340	385	390	395	395
5000	328	335	335	355	325	340	350	350	395	410	410	415
* to this measures, the minimum tolerance of 20 mm must be added ** Ø 70 with rings = Ø 130 mm ** Ø 89 with rings = Ø 160 mm												

Table 6 : Roll-up table per type of slat in mm (*)

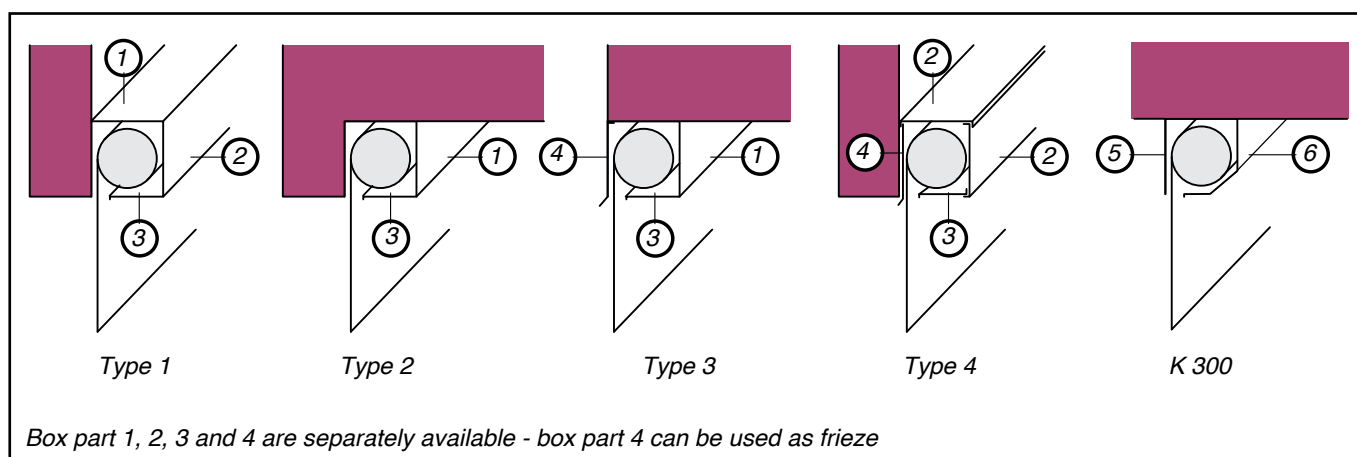


Fig. 11 : Boxes

8. Boxes

- Material:
 - Aluminium
 - Profiled and folded
- Colours: please consult colour card in price list
- Box types:
 - Choice between 5 different box types dependent on the console
 - Each box is composed of 2 or more parts
 - See figure 11
- Box sizes: see table 7
- Box types 1 up to and including 4 with a width of over 3000 mm, the use of supporting brackets is being advised (see figure 12).
- The box parts 1 up to and including 4 are separately available
- Determination of box dimensions:
 - Choose the curtain type (figure 5)
 - Determine the motor type (figure 10)
 - Determine the appropriate axle (to read off in figure 10)
 - Find the rolling up diameter (table 6), add minimum 20-mm tolerance to this value
 - Choose the appropriate box type (table 7)

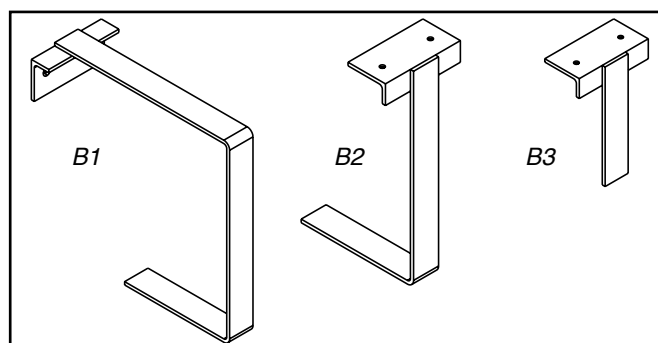


Fig. 12 : Brackets

		TYPE OF BOX				
		Type 1	Type 2	Type 3	Type 4	K 300
Box size	300 x 300	x	x	x	x	x
	350 x 350	x	x	x	x	-
	400 x 400	x	x	x	x	-
Bracket type (from 3 m width)	300 x 300	B1	B2	B2 + B3	B1	-
	350 x 350	B1	B2	B2 + B3	B1	-
	400 x 400	B1	B2	B2 + B3	B1	-
Consoles	Alu. (curtain weight max 50 kg)	-	-	-	-	x
	Steel (curtain weight > 50 kg)	x	x	x	x	x

Table 7 : Boxes

9. Guide rails

- Material: extruded aluminium, powder coated
- Colours: consult colour card
- Types: choice between 3 types (table 8)
- Dimensions: see table 8
- As a standard provided with HDPE-seals:
 - Slight and low-noise track
 - Sound-insulating with wind
 - Long-life guaranteed
- Optional:
 - Fixation angles: see table 8 and figure 13

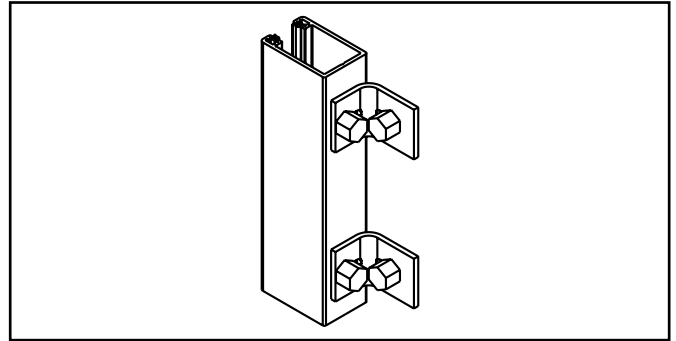


Fig. 13 : Mounting with angle bar WO1

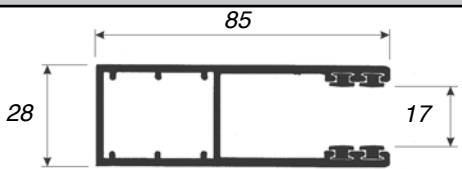
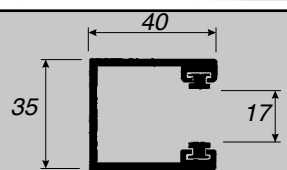
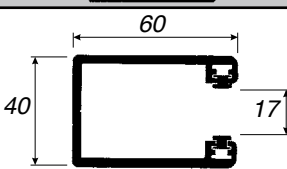
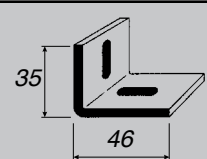
Illustration	Reference	Use	Max width (mm)	Possibility tracking washer	Fixing possibilities		
					Type 1	Type 2	Type 3
							
	025	Surface mounted	5000	Ø 23	x	x	-
	051	Built-in	3000	Ø 28	x	x	x
	060	Built-in	6000	Ø 28	x	x	x
	W01	Eventual attachment with connection 051-060	See also figure 16				

Table 8 : Guide rails

10. Supplements

- **Sliding bearing:** (see figure 14)
 - Recommended from 3000 mm height
 - The axle moves in function of the rolling up:
 - During the rolling up, the axle moves horizontally to the middle of the consoles
 - During the rolling down, the axle moves horizontally to the guide
 - Easier rolling up and a longer life guaranteed
- Attention: more cut-away is necessary: see table 3

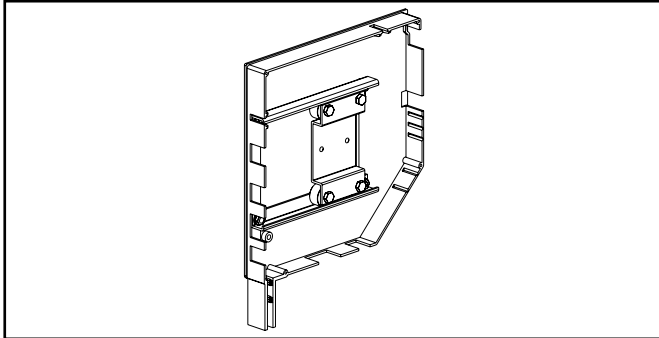


Fig. 14 : Sliding bearings

- **Lift security system:** see figure 15
 - Fixation of the curtain to the axle by means of springy suspension plates
 - The suspension plates push the top slat into the stopper system by means of holding forks
 - Only possible with motor operation
- Attention: more cut-away is necessary: see table 3

- **Unwind protection:** see figure 16
 - Replaces the standard flange bearing
 - Protects the curtain from falling down in case of a defect:
 - Motor break
 - Reduction box of the motor
 - Extra built-in space of 50 mm, console moves regarding to the back of the guide
 - Minimum diameter of the axle: 89 mm
 - Maximal charge: see table 9

- **Security for final slat:**
 - Obstacle detection with closing of the roller grill
 - Optical: function based on an infrared ray

- **Cylinder lock:**
 - Mounted in the final slat
 - Only possible in combination with coiled spring operation
 - The lock is operated from in- and outside

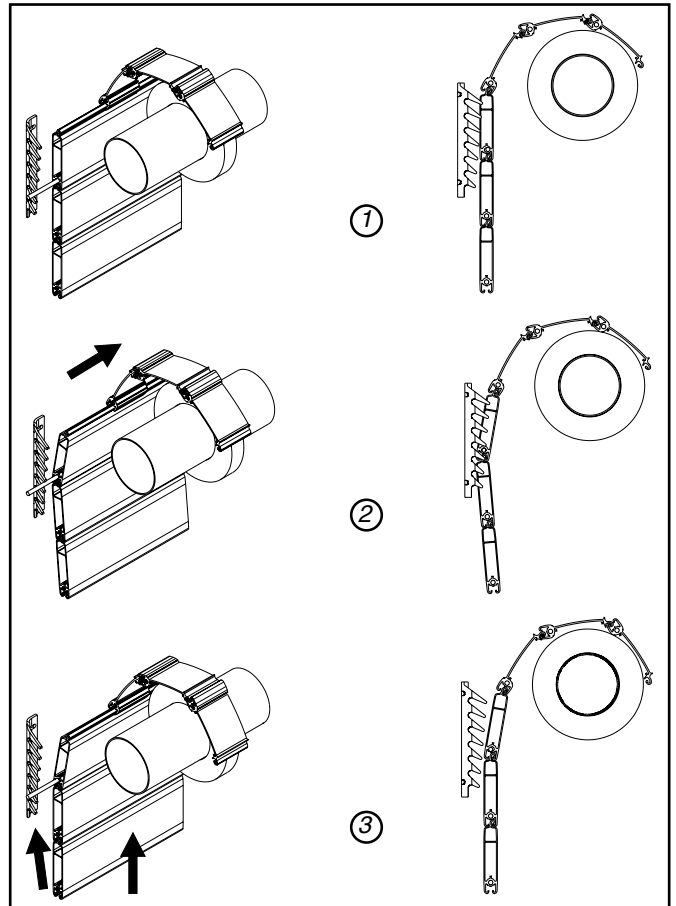


Fig. 15 : Lift security system

Tube type (mm)	Gross weight (kg)
89	520
102	460
140	390
168	360

Table 9 : Maximal charge

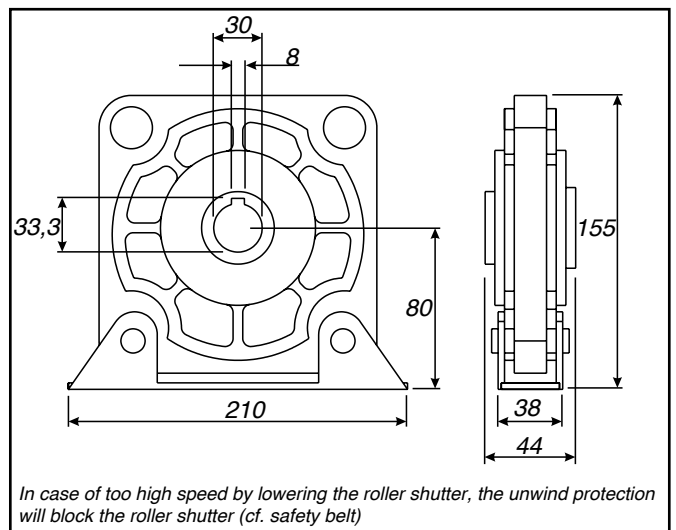


Fig. 16 : Unwind protection

- **Supporting brackets:** see figure 12 and table 7

- Recommended from 3000 mm width
- Extra fixation of the box in the middle
- Are not visible at the outside
- Prevent the box from sagging

- **Window glass:**

- Of polycarbonate (1.5 mm thick)
- Only possible with curtain type 10 and 11

Remark: Damage of the window glass as a result of friction is part and parcel of the product

- **Tracking washers:**

- Ensure the curtain not to be blown out of the guide rails

Attention: this can result in a bigger rolling up diameter

11. General remarks

- *The surface of the slats can cause slight damage as a result of friction. This phenomenon is part and parcel of the product and is, as a consequence, not covered by the guarantee.*

- *All electrical connections are to be done according to the legal provisions of the country. The installer is responsible for the connection and the function of the product.*

- *Harol does not accept any responsibility for the curtain to be ripped off by wind or storm. The installer should consider all precautions in order to deliver a product that is adapted to the mounting situation.*

- *This information represents our current knowledge and cannot be used against us.*

- *Harol reserves the right to make alterations of the product without prior notice.*

Order form Roller grill RH800

DATE: REFERENCE HAROL:

CLIENT / INVOICE				DELIVERY ADDRESS			
Name:				Name:			
Address:				Address:			
Clientn°:				Tel:			
Tel:				Fax:			
VAT:				Delivery time:			
Fax:							

POSITION	Number	FINISHED SIZES (MM)		CURTAIN		MOUNTING				OPERATION				BOX				GUIDE RAILS				CONSOLES		TRACKING WASHER	POLYCARBONATE	TRIM	SUPPLEMENTS			REF.
		WIDTH	HEIGHT	TYPE	COLOUR	TYPE	L/R	EXIT	CABLE	EXIT EM. CONTROL	TYPE	COLOUR	MEASURE	LENGTH	TYPE	COLOUR	DRILLING	LENGTH	TYPE	COLOUR	TYPE	COLOUR	TYPE							
1																														
2																														
3																														
4																														
5																														
		1		2	3	9	10				11	3	11		7	3	7		8	3	4	5	6				12			

Spaces not filled in = standard execution.

- The operating side is always seen from the **inside**.

- Please indicate all sizes in mm.

- We consider the mentioned sizes as being nett, i.e. no extra play is deducted.

- Each order is executed according to our terms and conditions of sale.

I have taken note of the technical product descriptions and take full responsibility for the indications and sizes mentioned.

PRICE:

.....

.....

REMARKS:

.....

.....

The client,

.....

.....

.....

Order form Roller grill RH800

1. Finished sizes: see fig. 1 + 2 page 4

Width = measure back guide (in mm)
Height = height including roll up or height of the housing (in mm)

2. Curtain type: see fig. 5 page 7 and 8

3. Colour: see our colour scale

Code 1 white
Code 4 brown
Code 20 (*) mill finish
Code n° RAL colour Ral.....

(*) The box is not available in mill finish, mill finished consoles are provided with printing coat.

4. Tracking washer:

The roller grill can be provided with tracking washers.
The number is calculated automatically.

5. Polycarbonate:

The roller grills 10 and 11 can be produced with polycarbonate

6. Trim:

The roller grills 1 - 2 - 3 - 4 - 5 - 8 - 9 can be finished with a trim . Choice between:

Code 1 white
Code 15 yellow
Code 8 green
Code 16 red
Code 17 black
Code 18 blue

7. Guide rails

Type: see table 8 page 14

Drilling: Code R guide rail drilled in the back
Code Z guide rail drilled at the side
Code W guide rail with angled profiles

Length: The length of the guide rails should be indicated with roller shutters "without" consoles.

8. Consoles:

Code 300 / 350 / 400 Type 300 / 350 / 400
Code K300A Type K 300 A (aluminium)
Code K300S Type K 300 S (steel)

9. Mounting: see fig. 3 page 4

10. Operating:

Type: Code 51 tubular motor
Code 52 tubular motor with emergency control
Code 57 blockmotor
Code 41 coiled spring

L/R: L operating side left
R operating side right

Exit : see fig. 6 and table 2 page 9

11. Box: see fig. 11 page 13

Plate: Box part 1 - 2 - 3 and 4 are separately available.
Box part 4 can be used as a frieze

Length: The length of the plate should be indicated if not standard.

12. Supplements:

ELECTRICAL

A1077 Altus 50/60 RTS instead of Sirius or Titan
A1117 Without Smoove RTS transmitter
A59 Without switch
A61 Security for final slat Rollixio RTS
A190 Security for final slat for industrial motor
A54 pulse switch structure instead of set switch
A1562 Security for final slat Rollixio IO

COILED SPRING

A12 Cylinder lock
A116 Orbit + tow bar

DIVERS

A113 Intermediate slat with mailbox opening
A154 Trim
A161 Polycarbonate
A171 Bracket
A181 Lift security system
A1126 Sliding bearing
A143 supportwashers
A576 PLR retouching pen
A1129 fall protection