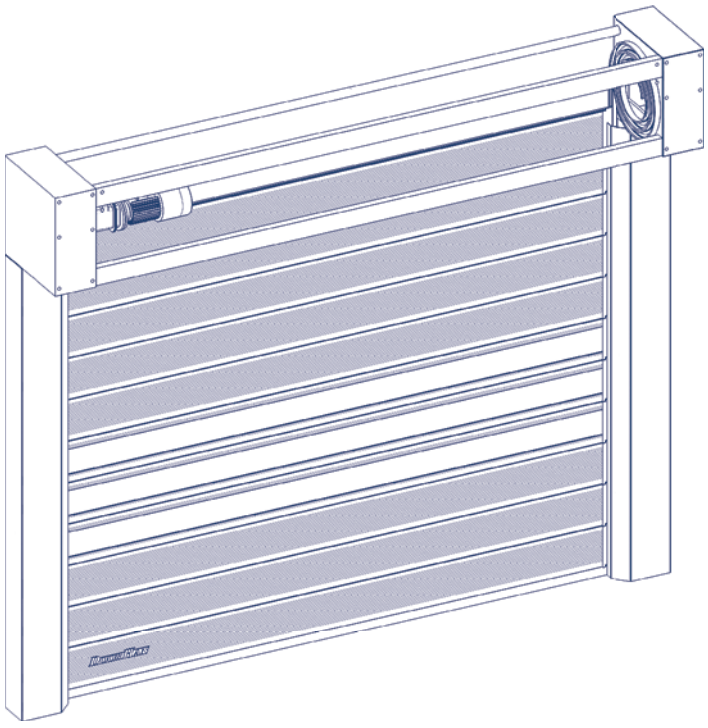
DoorHan®

High-Speed Spiral Door of HSSD Series



Installation and Operation Manual

1. GENERAL INFORMATION

This Manual provides the information required to install, troubleshoot and maintain a high-speed spiral door of HSSD series (the Product). It provides important safety related instructions which must be followed at all times while performing any recommendations detailed in this manual. The manufacturer does not directly control installation, operation and maintenance of the Product. It shall be the responsibility of the operator to comply with the instructions for safe operation and maintenance of the Product listed in this Manual.

Installation, operation and servicing of the Product is restricted to authorized personnel.

The manufacturer reserves the right to make any changes to the Product construction, structure, components and accessories without notice.

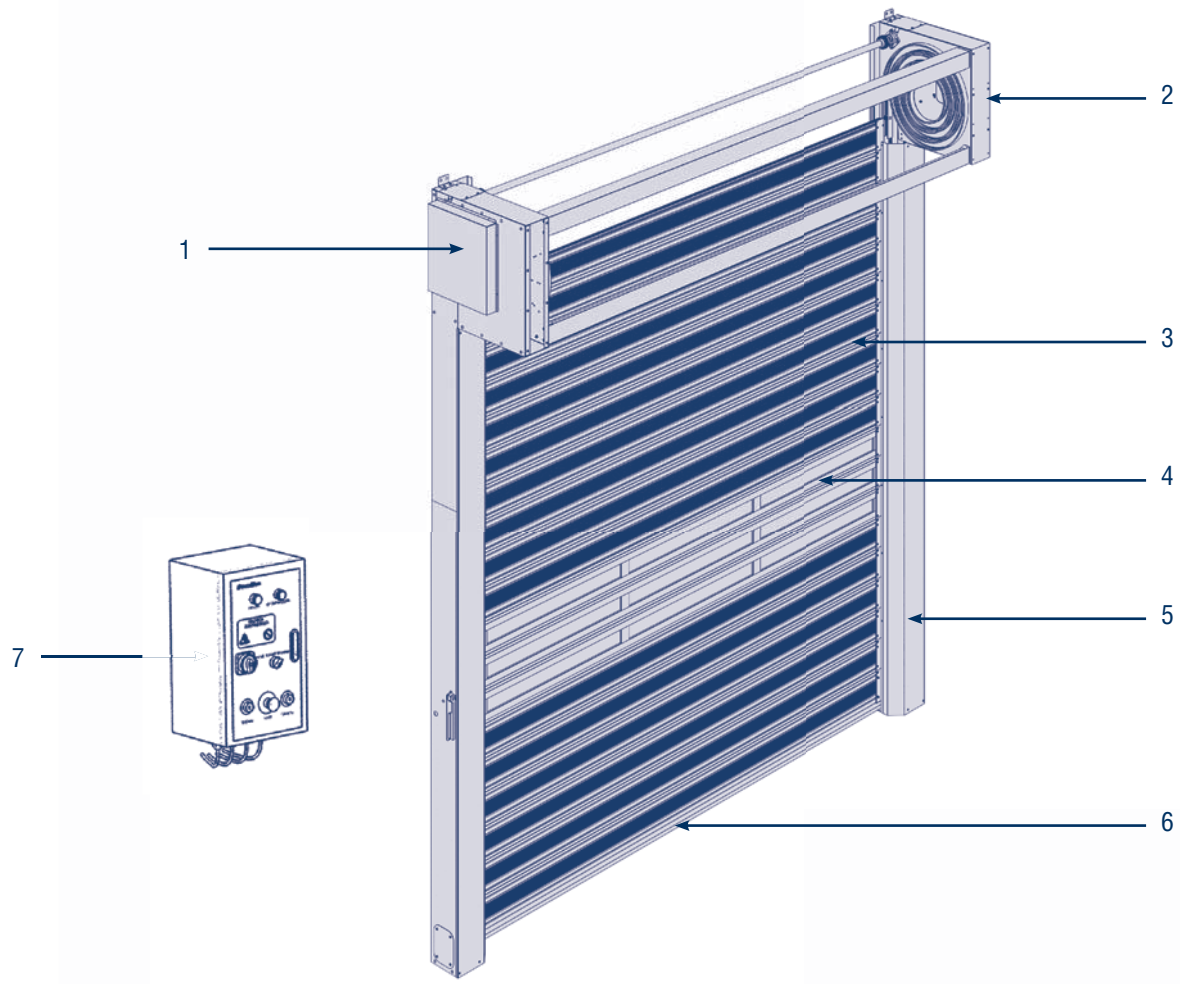
High-speed spiral door of HSSD series is operated by a control unit of HSSD series.

Table 1. Spiral door specifications

Parameter	Description
Application	universal, inside industrial, warehouse and commercial premises
Maximum dimensions, W x H	6 000 × 5 000 mm
Wind load	up to 25 sqm — class 3 (120 km/h); more than 25 sqm — class 2 (90 km/h)
Opening speed	1,5-2,0 m/sec
Closing speed	0,8 m/sec
Operating temperature	-40…+55 °C
Door design	galvanized (standard) or powder coated (optional) tracks and hoods; steel painted shaft; aluminium guides
Door curtain	40 mm thick and 185 mm high sandwich-panels; panel material — aluminium; core — polyurethane foam; panel design — V-line; standard colours: signal white (RAL 9003), white aluminium (RAL 9006), any other RAL colour (optional)
Windows	2 mm thick transparent PVC fabric, 350 × 120 mm
Control unit	two types of power supply can be connected: 220 V — one phase power supply; 380 V — one phase power supply; IP 54; with frequency converter
Drive	output power — max 3 kW; travel limits are monitored by an encoder
Safety devices	bottom safety edge; photocells; emergency opening — release; optical safety grid
Supply	220/380 V depending on door size
Service life	1 500 000 cycles

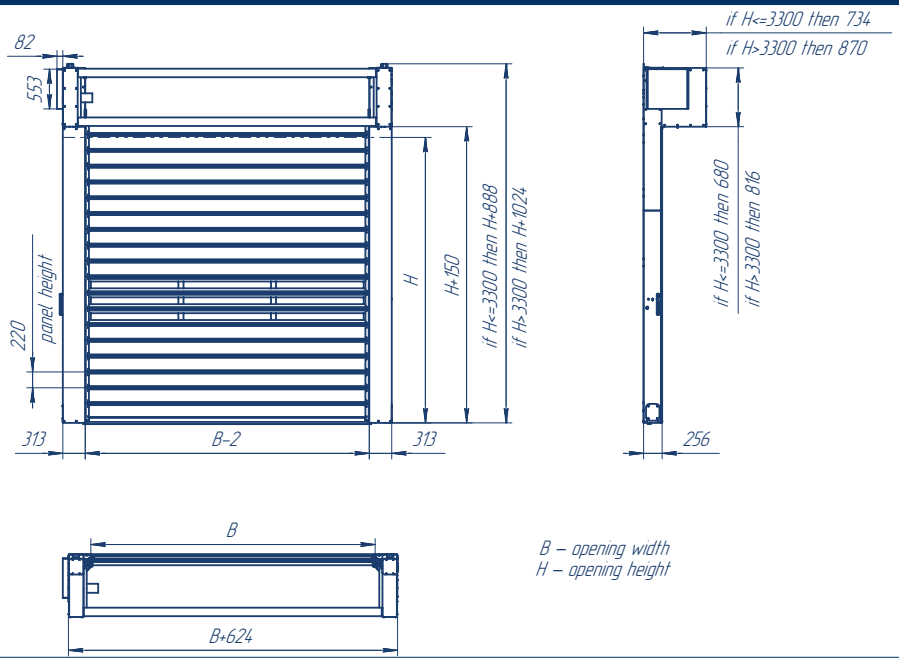
2. DESIGN

Fig. 1. General view



1. Electric drive
2. Shaft hood
3. Door curtain
4. Transparent insert (window/panel)
5. Vertical track
6. Door curtain bottom edge
7. Control unit

Fig. 2. Architectural drawing



3. SAFETY RULES

3.1. GENERAL SAFETY RULES

Perform installation works wearing appropriate personal protective equipment like overalls that do not restrict movement, hard hat and gloves. Always wear eye protection when cutting metal and drilling materials which produce flying chips. To protect the respiratory system from construction dust, use a respirator. Hammers and sledgehammers should have a smooth, slightly convex surface of the heads, without splinters, burrs, cracks or splits. Make sure the shaft length exceeds 250 mm and the heads are properly secured to the shafts. All tools that have pointed ends for the handles must have handles at least 150 mm long. Wooden handles should be tightened with bandage rings. Make sure the spanners have no cracks or splits, use wrenches with correct jaw size to avoid slippage. Never use open-ended wrenches with spread, splayed or broken jaws. Always use a special box or bag to carry your tools to the working place. Wear special tool belts to keep tools in place. NEVER carry tools in your pockets.

3.2. SAFETY RULES WHEN WORKING AT HEIGHT

Work at height is work in any place located at height of 1,3 m from the ground level and carried out from ladders, scaffolds, platforms and other devices. The state of health of the personnel working at height shall meet the medical requirements established for these works.

When working at height always use a safety belt. If it's impossible to secure the belt to a building structure than use a safety rope instead. In such a case two installers should carry out all the works. Never use safety belts with metal chain slings while working around energized wiring and equipment!

Tools and fittings should be properly secured to prevent their falling while working above energized electrical installations. To pass tools and fittings upwards an installer standing on the ground should hold a rope with tied instruments to prevent its swinging and approaching to energized electrical installations.

⚠ IT IS PROHIBITED TO:

- **stand under the ladder which is being used for work;**
- **throw any items to a person working at height. Use a strong rope to pull the items up.**

3.3. SAFETY RULES WHEN WORKING FROM LADDERS AND STEPLADDERS

Straight ladders and stepladders should be properly secured to prevent their lateral movement and overturn. Stabilize the base of the ladder using sharp-tipped feet for the ground surface and anti-slip safety shoes for smooth surfaces like metal, tile or concrete.

⚠ IT IS PROHIBITED TO:

- **work from the rung located less than one meter from the ladder top;**
- **use power tools when working from a ladder;**
- **work from the two top rungs of a stepladder which has no safety hand rails or ladder stop;**
- **allow more than one person at a time on a ladder;**
- **stand under the ladder which is being used for work;**
- **leave tools or materials on top of any ladder.**

3.4. SAFETY RULES WHEN OPERATING POWER TOOLS

Only qualified and specially trained personnel acquainted with electrical safety instructions can operate power tools. It is recommended to use power tools operating at voltage not exceeding 380/220 V. Choose power tool taking into consideration electric shock hazard of the premise. Ground metal housing of electric tool operating at voltages above 42 V AC and above 110 V DC when working in hazardous areas and outdoor installations. Tool connection plug should have a ground contact. Plug power tools only in the grounded power supply network. When using extension cords make sure they have grounded plugs and sockets. Always wear protective rubber gloves or rubber bottom shoes or sneakers when using electric instruments. Protective devices must be tested in accordance with the procedure established by law. Prior to operation:

- ensure all the components are in place and properly secured;
- check for worn out cable (wire), its protective tube and plug; damaged insulating parts of the housing, handle and brush holder covers; absent or damaged protective casings;
- make sure ground circuit between the housing and the

ground contact of the plug is whole;
- ensure the main switch works properly;
- check operation of power tools at idle.

Use only properly functioning, checked and sealed tools.

Never bend or twist electric cables or position any trailing wires where different structures and materials are stored or vehicles move. When working in rainy weather (snowfall) protect with canopies the area where cables are laid or power tools are used.

⚠ IT IS PROHIBITED TO:
- **hold the instrument by its cord;**
- **remove chips or sawdust from the cutting tool and replace the cutting tool until it stops completely. Use corresponding instruments to fasten the replaceable tool;**
- **plug the power tool in a circuit with characteristics which do not correspond to the specified in data sheet;**
- **move an electric tool with operating motor from one working place to another;**
- **leave unattended a plugged-in or operating electric instrument;**
- **leave electric instrument unattended to prevent its unauthorized use.**

3.5. SAFETY RULES AT ELECTRICAL INSTALLATION WORKS

Carry out electrical installation works in accordance with «Safety rules for electrical installations» and «Safety regulations for the operation of consumer electrical installations».

4. INSTALLATION

4.1. TOOLS

Fig. 1. Safety glasses

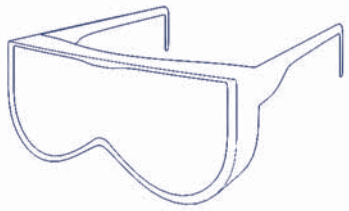


Fig. 2. Hard hat (2 pcs)

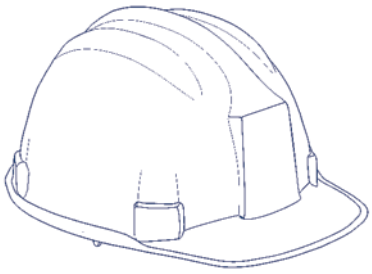


Fig. 3. Drill hammer

Fig. 4. Cordless screwdriver

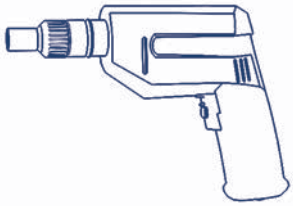


Fig. 5. Metal drill bits set

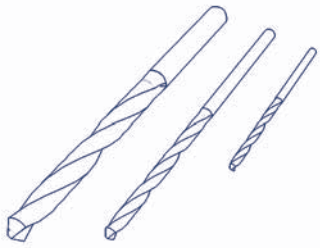


Fig. 6. Measuring tape

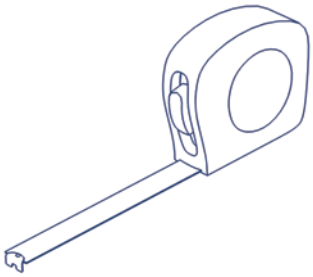


Fig. 7. Riveting tool

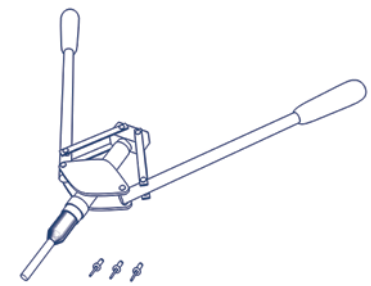


Fig. 8. Water level 1,5 m

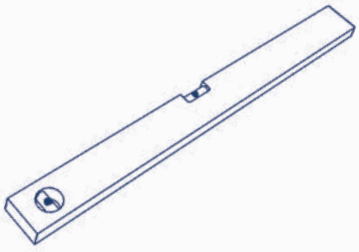


Fig. 9. Pliers

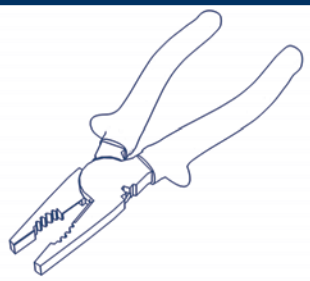


Fig. 10. Screwdriver set

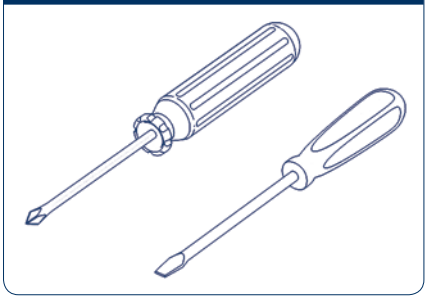


Fig. 11. Wrench set

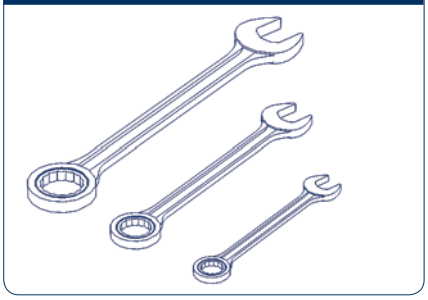


Fig. 12. Stepladder (2 pcs)

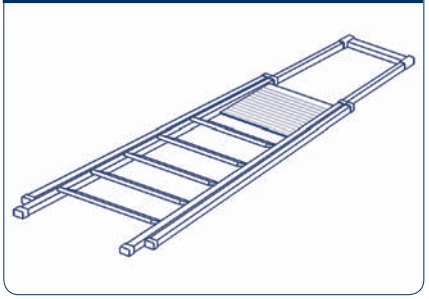


Fig. 13. Extension cable (> 30 m)

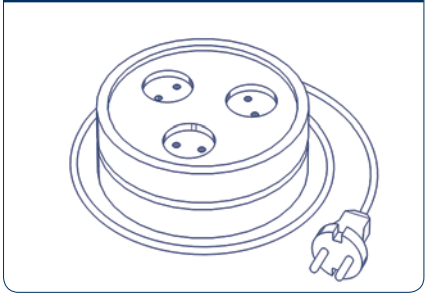


Fig. 14. Concrete drill bit set

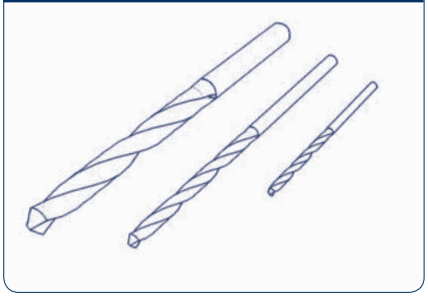
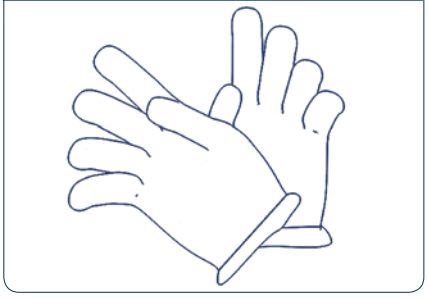


Fig. 15. Gloves

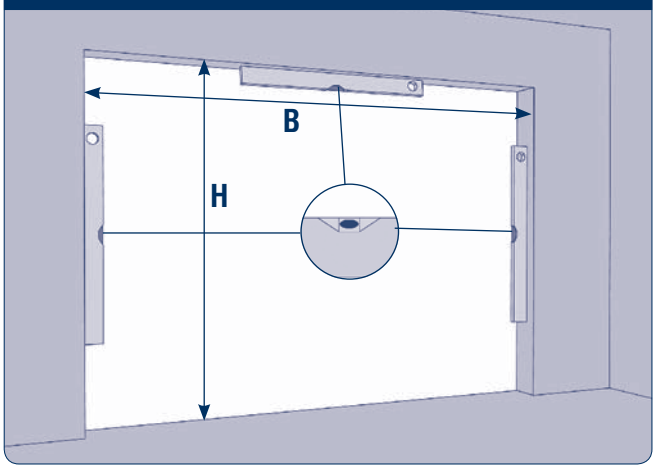


4.2. LIFTING EQUIPMENT

Forklift: minimum load capacity — 35 kN; fork length — not less than 2000 mm.
Crane, minimum lifting capacity — 20 kN.
Prior to door installation and operation carefully read these Instructions.

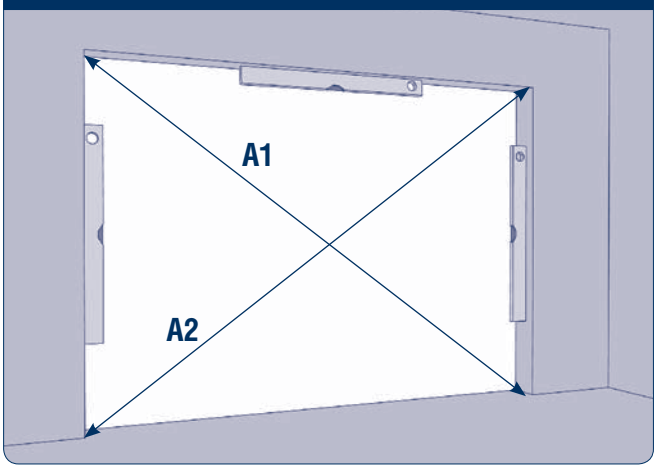
4.3. CHECKING DIMENTIONAL DETAILS

Fig. 1. Door opening



H — opening height (distance from the floor to the opening top) ± 3 mm.
B — opening width (distance between left and right side of the opening) ± 3 mm.

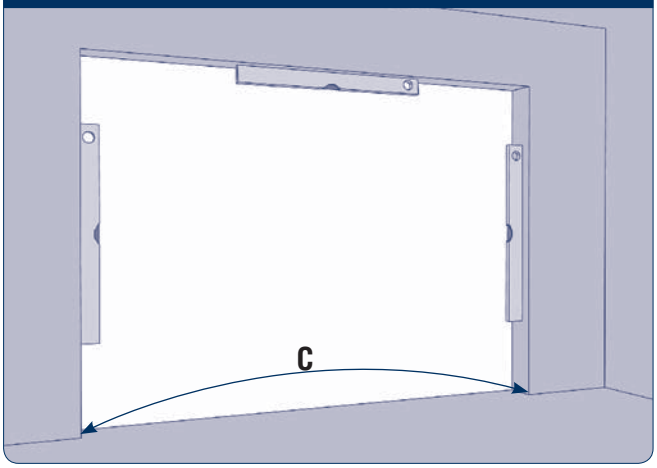
Fig. 2. Opening diagonals



Diagonal A1 — distance from the top left to the bottom right corner.
Diagonal A2 — distance from the bottom left to the top right corner.
The difference between diagonals shall not exceed 5 mm.

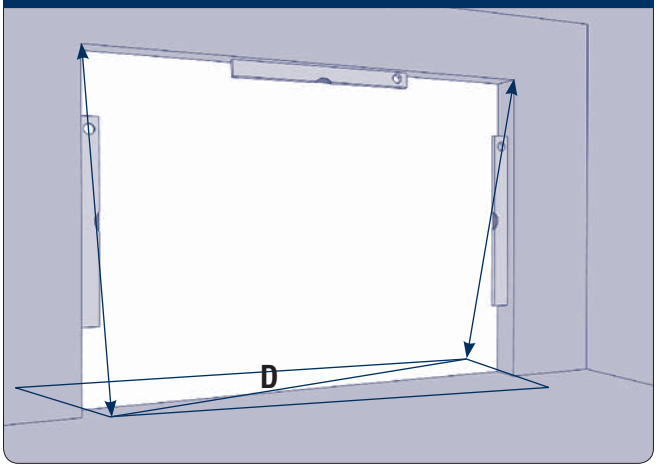
⚠ ATTENTION:
Every dimension should be taken at least in three points (in end and central positions). When measuring H and B the largest figure is taken for final dimension.

Fig. 3. Floor level



C — the floor must be level within 3 mm from side to side.

Fig. 4. Opening verticals



D — vertical deviation of the walls should not exceed 3 mm.

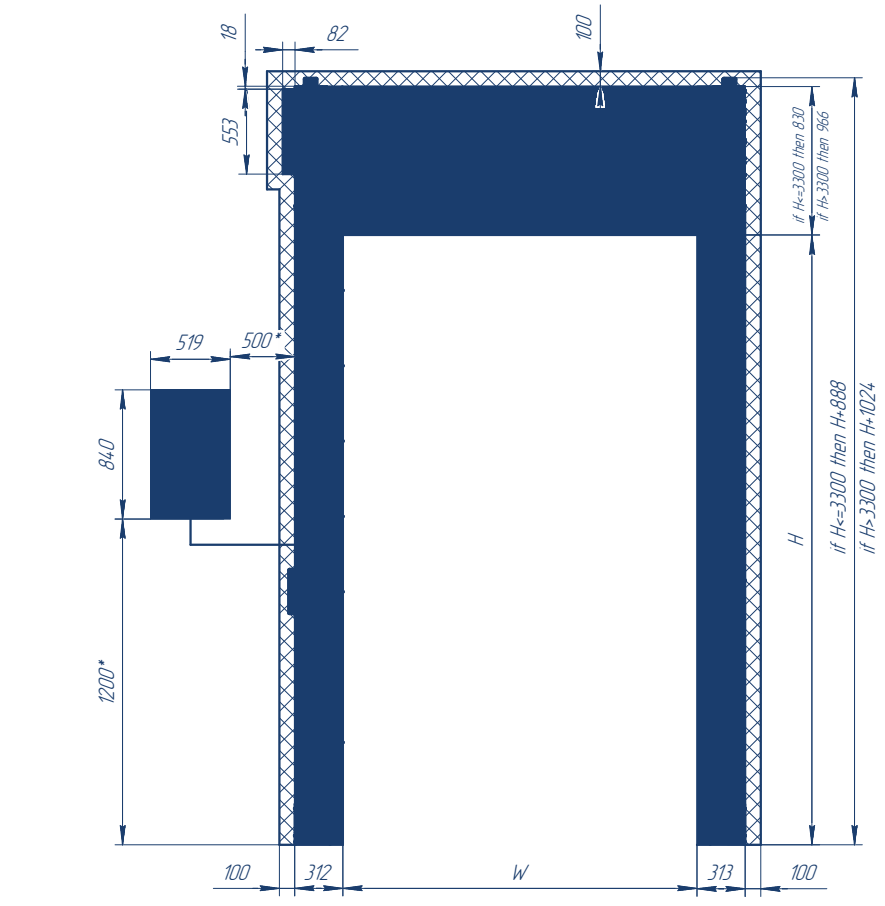
4.4. PACKAGE INVENTORY

The delivery set includes:

1. High-speed spiral door, 1 pc
2. Control unit, connection cables, 1 pc
3. Technical data, 1 pc
4. Opeartion and installation manual, 1 pc

4.5. GENERAL MOUNTING SCHEME

Fig. 1



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4.6. ASSEMBLY OF SPIRAL DOORS

Fig. 1

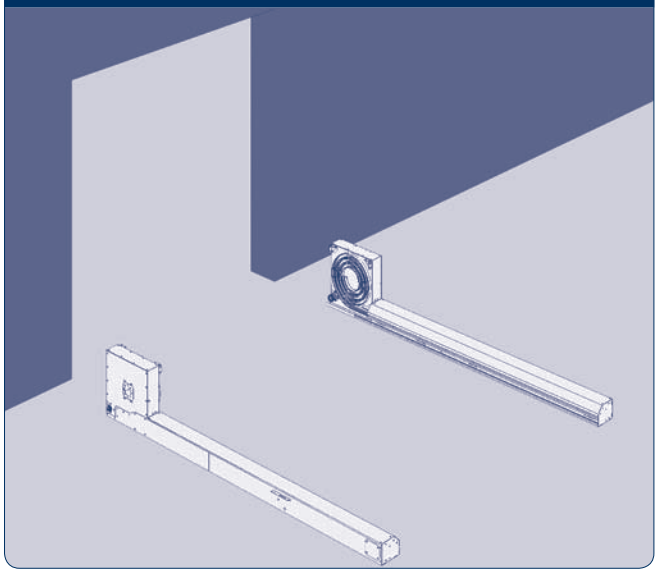


Fig. 2

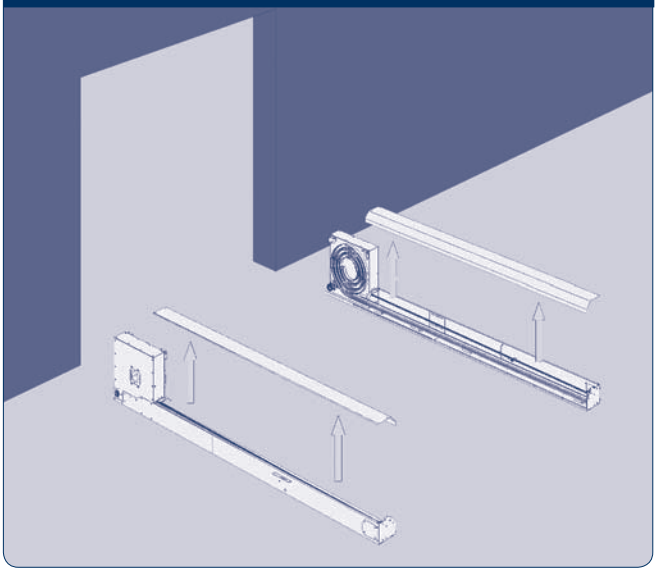


Fig. 3

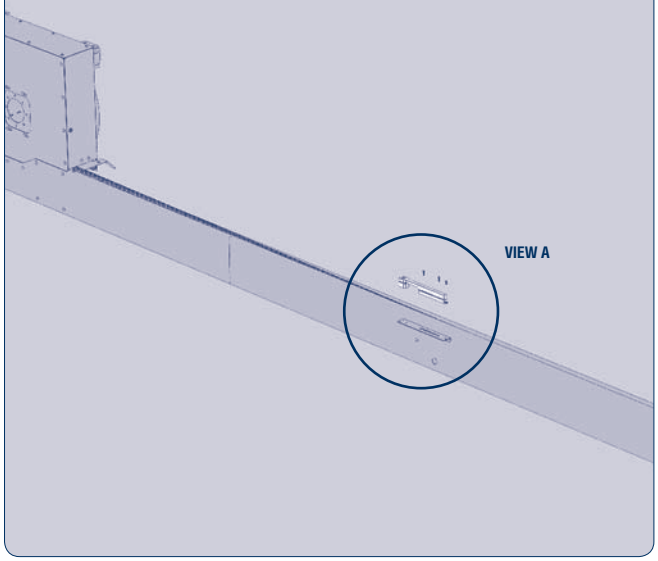


Fig. 3.1. View A

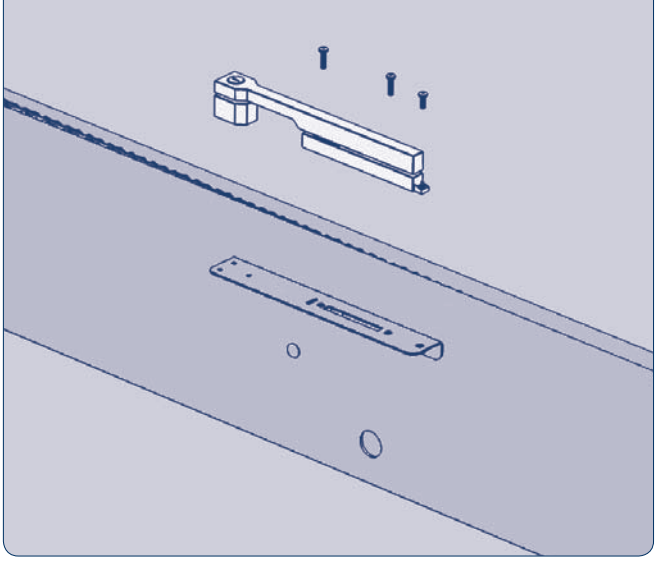


Fig. 4

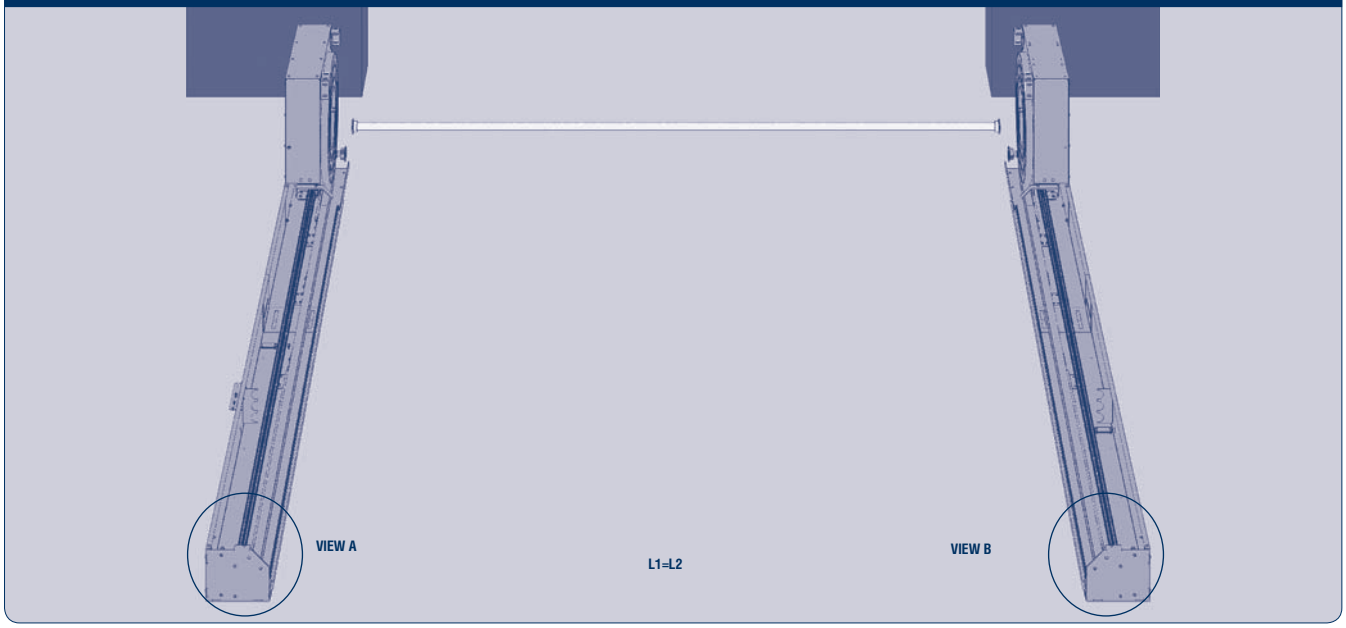


Fig. 4.1. View A

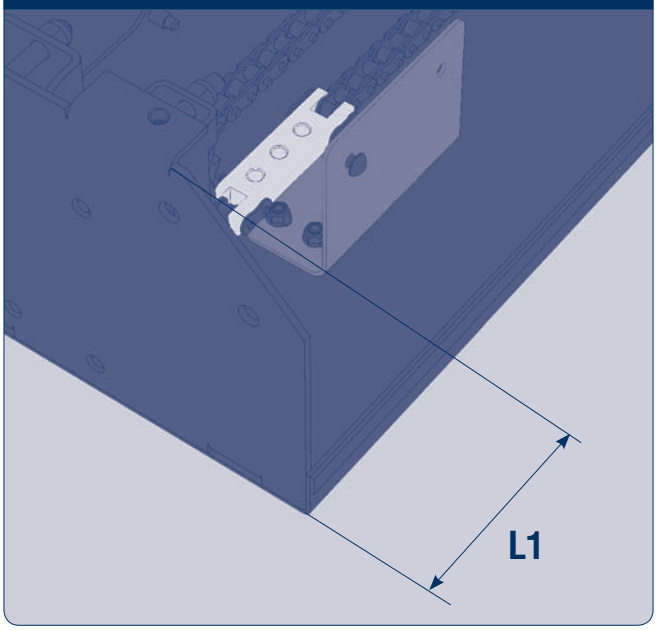


Fig. 4.2. View B

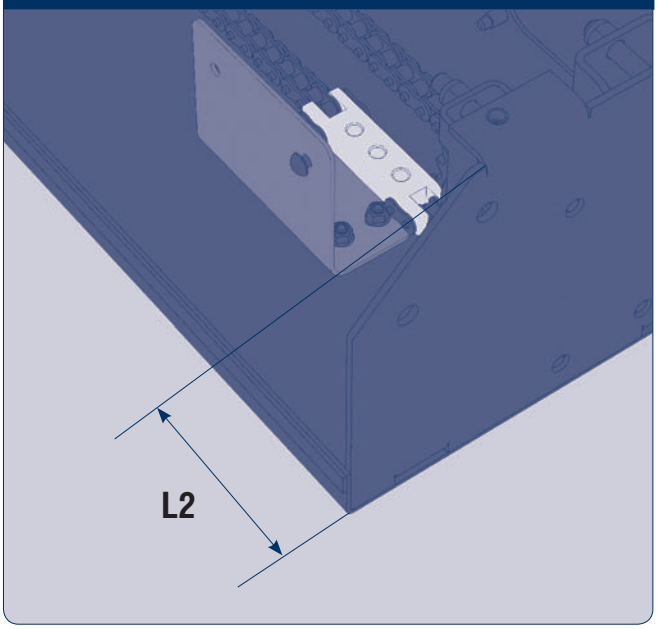


Fig. 5

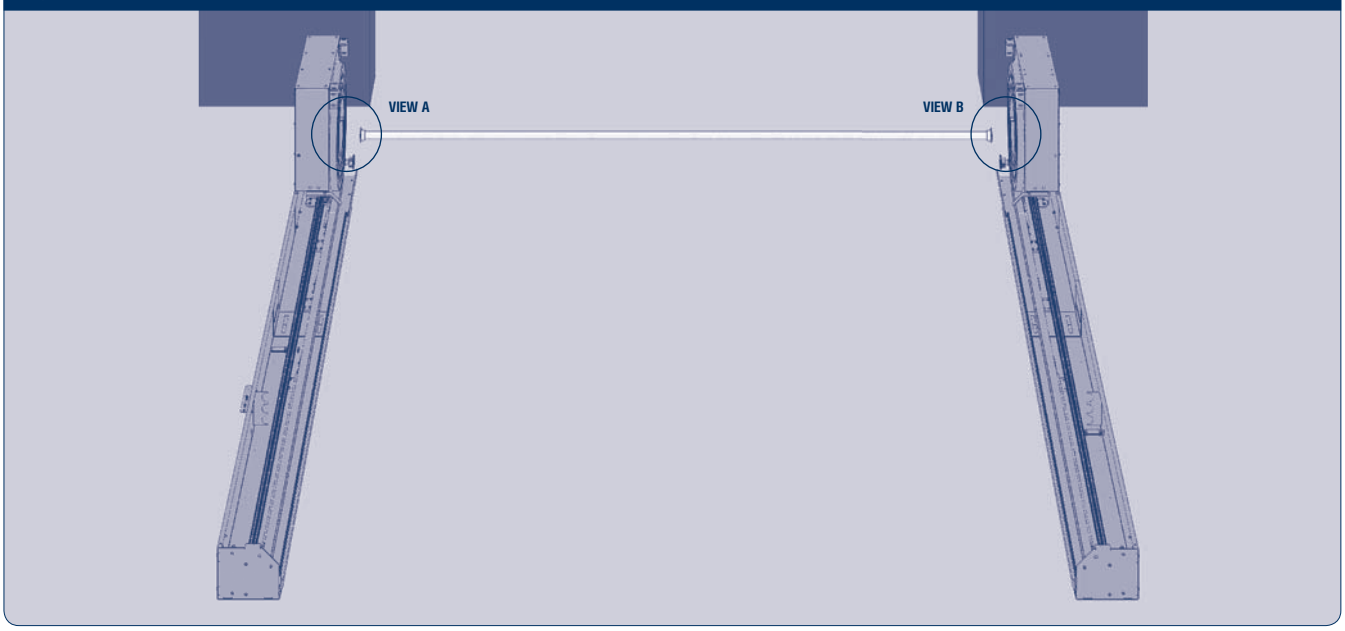


Fig. 5.1. View A

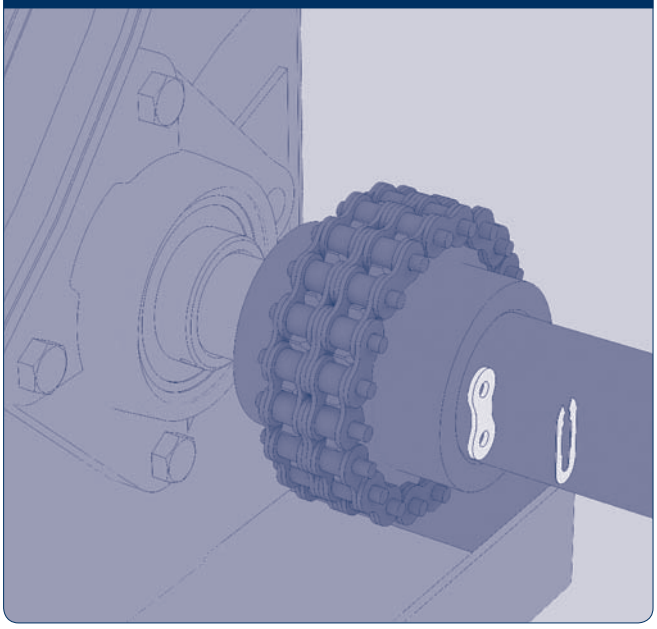


Fig. 5.2. View B

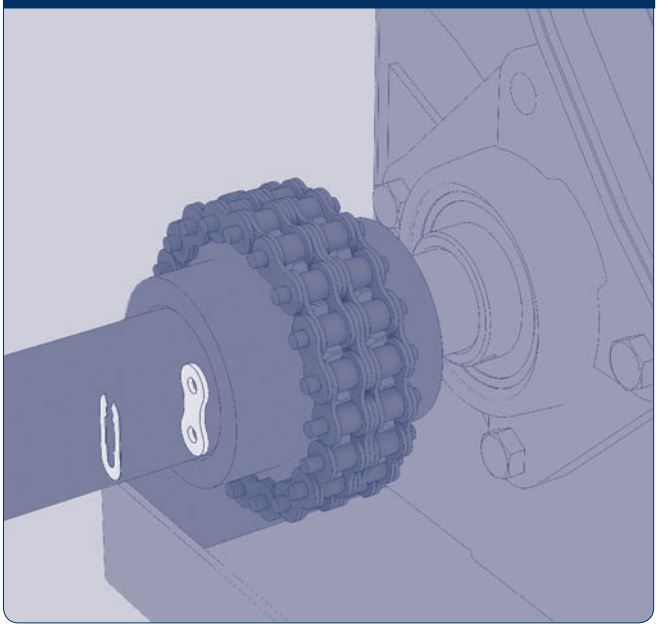


Fig. 6

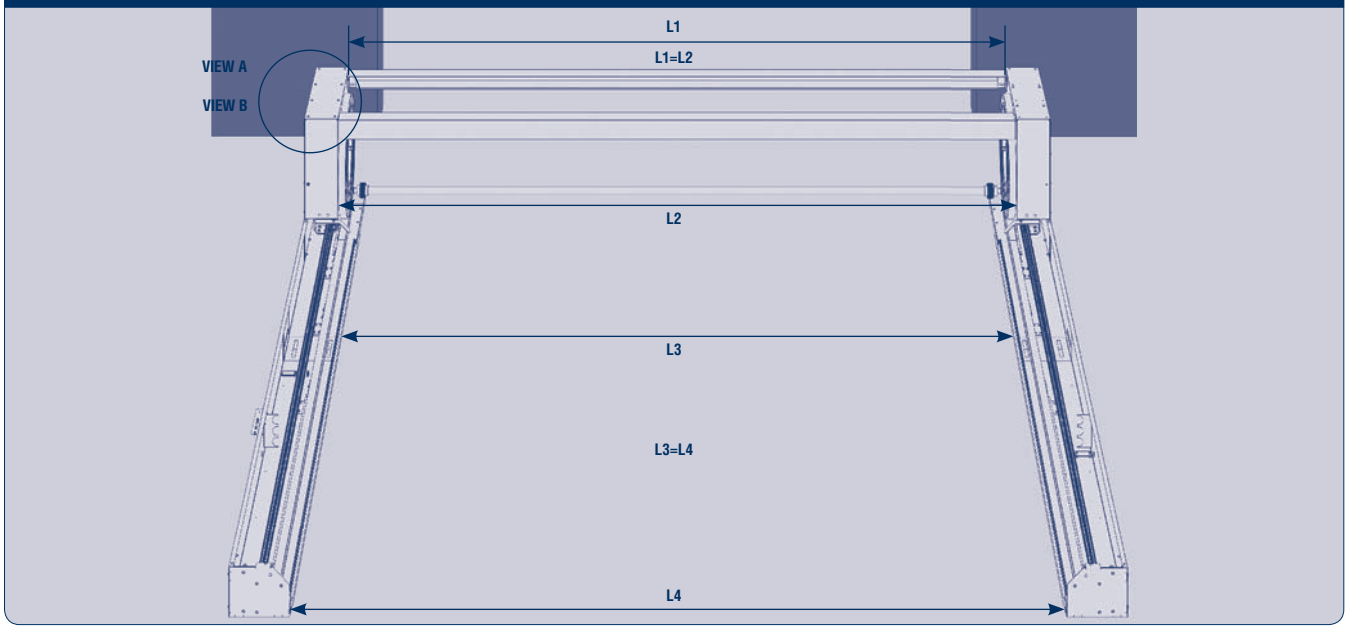


Fig. 6.1. View A

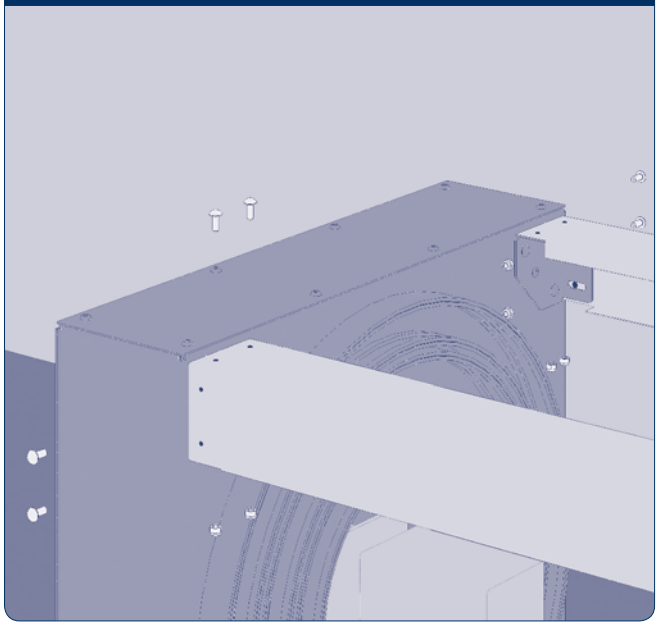


Fig. 6.2. View B

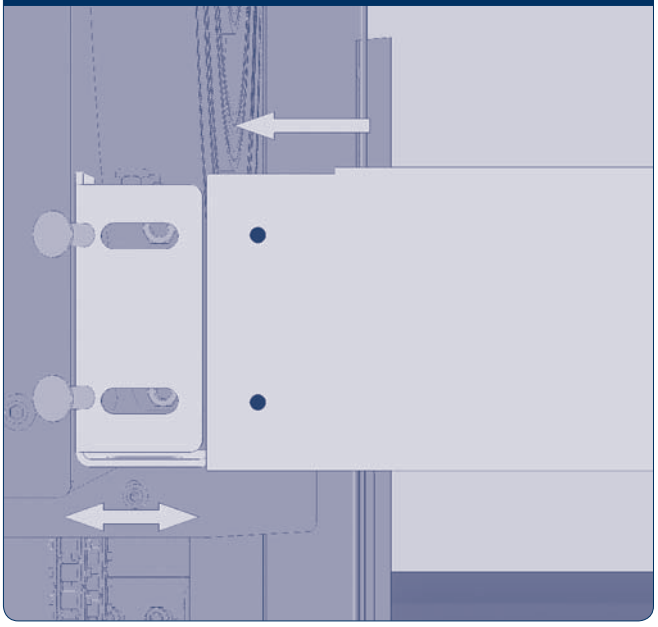


Fig. 7

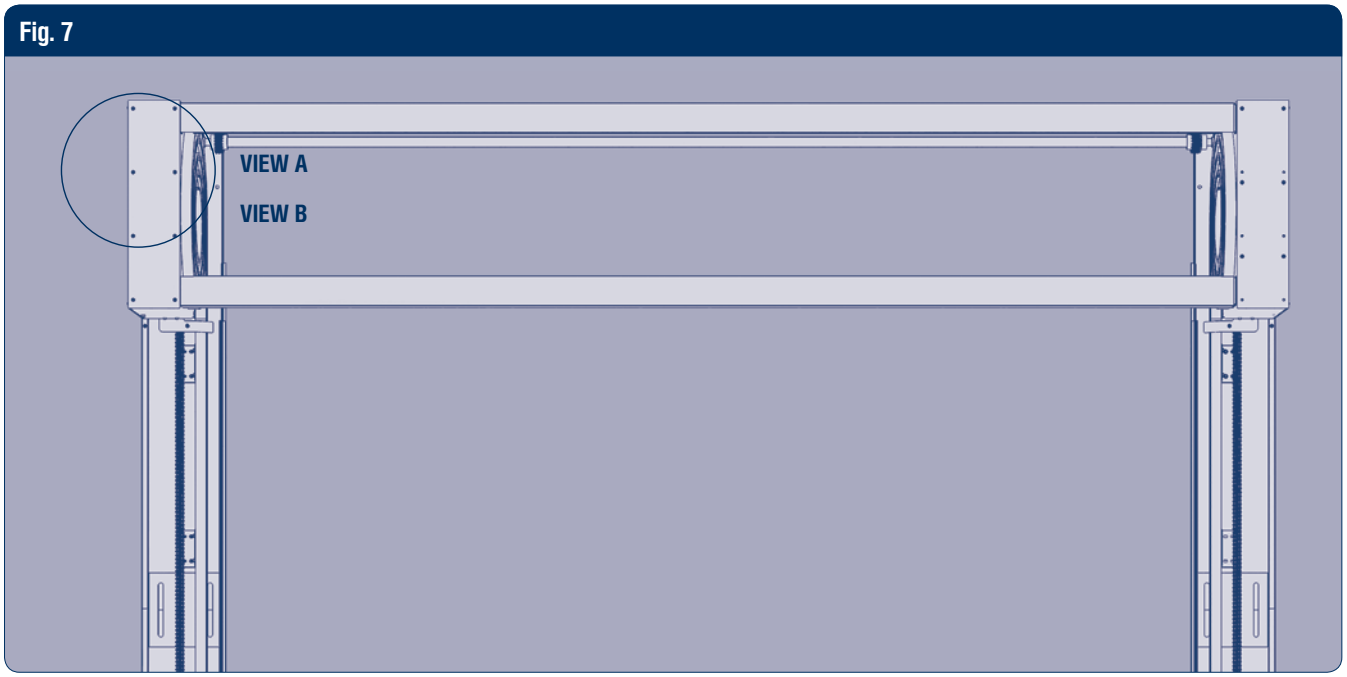


Fig. 7.1. View A

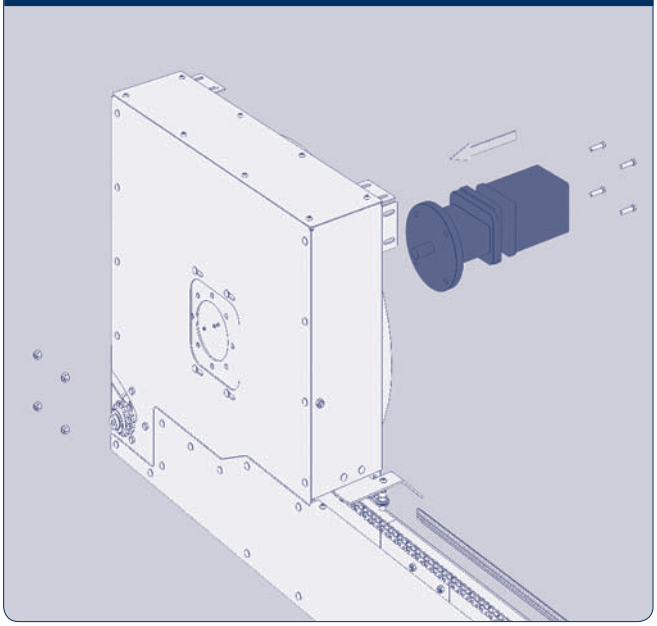


Fig. 7.2. View B

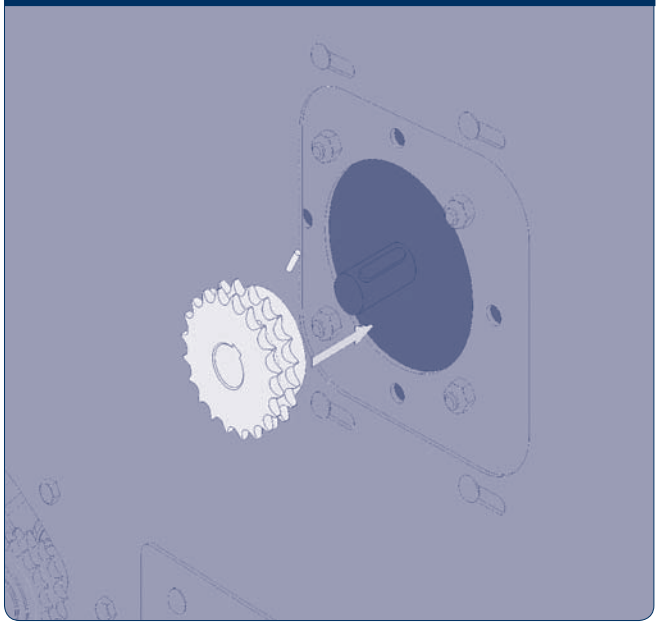


Fig. 8

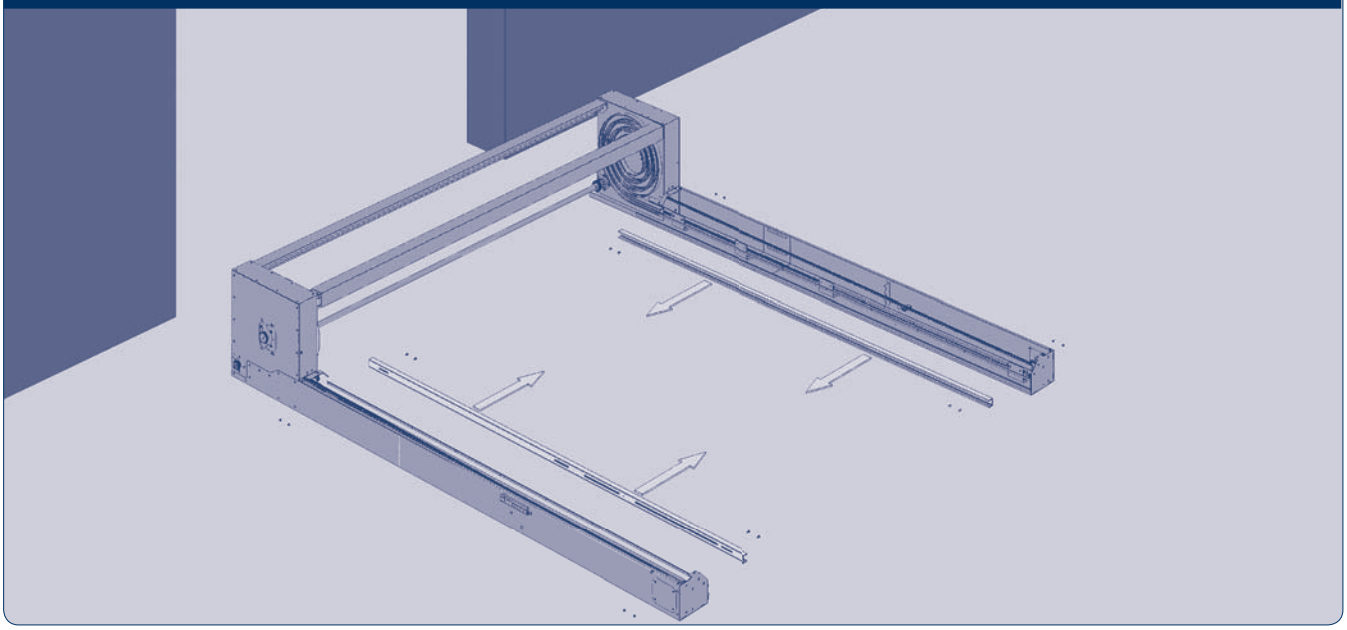


Fig. 9

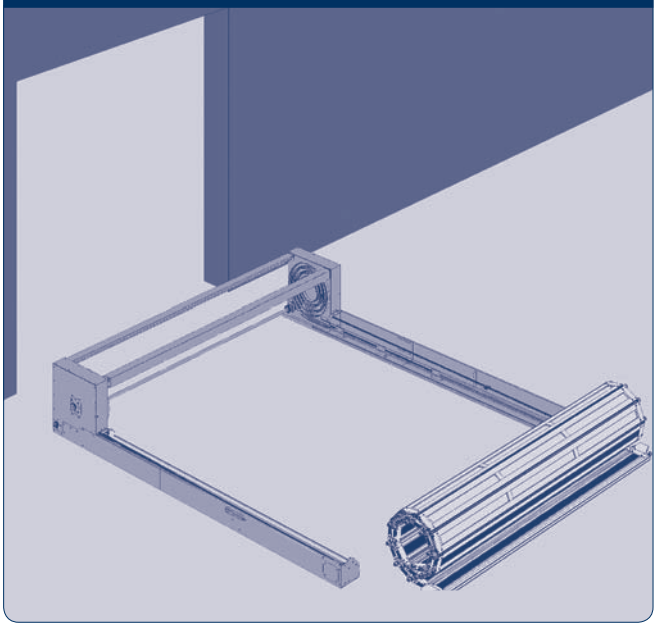


Fig. 10

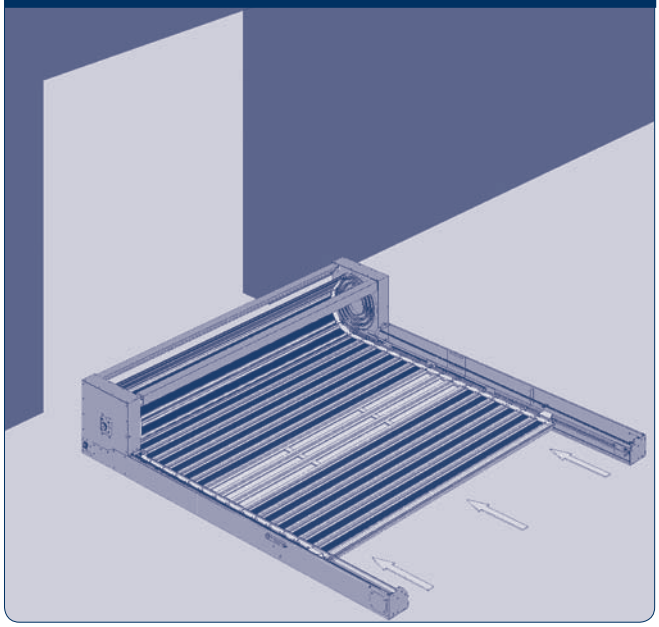


Fig. 11

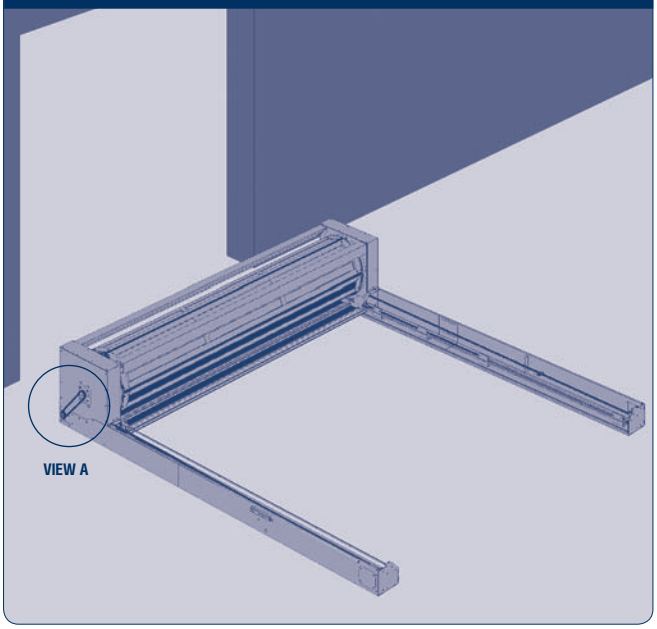


Fig. 11.1. View A

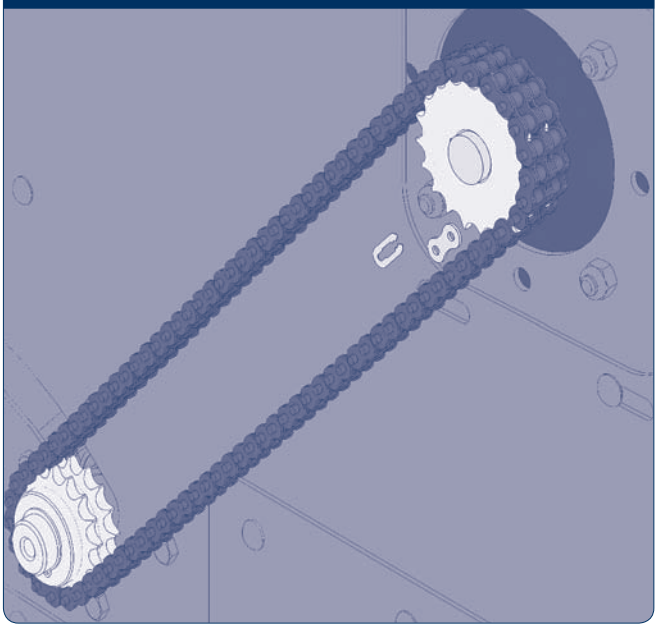


Fig. 12

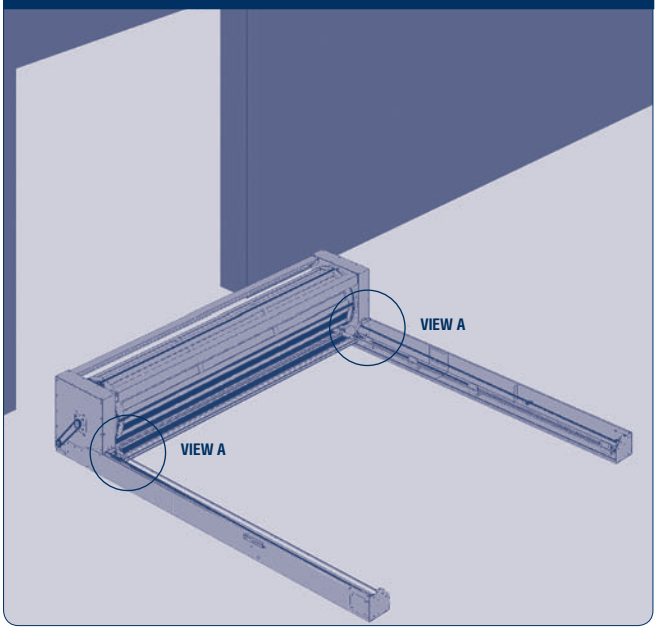


Fig. 12.1. View A

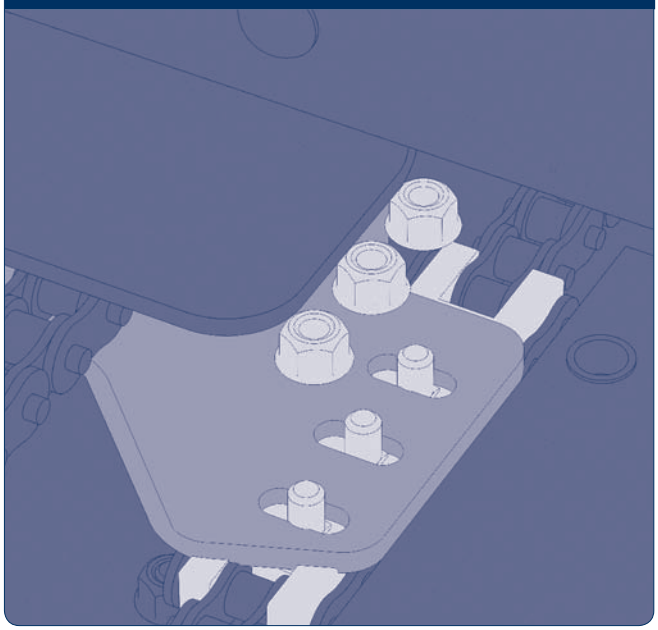


Fig. 13

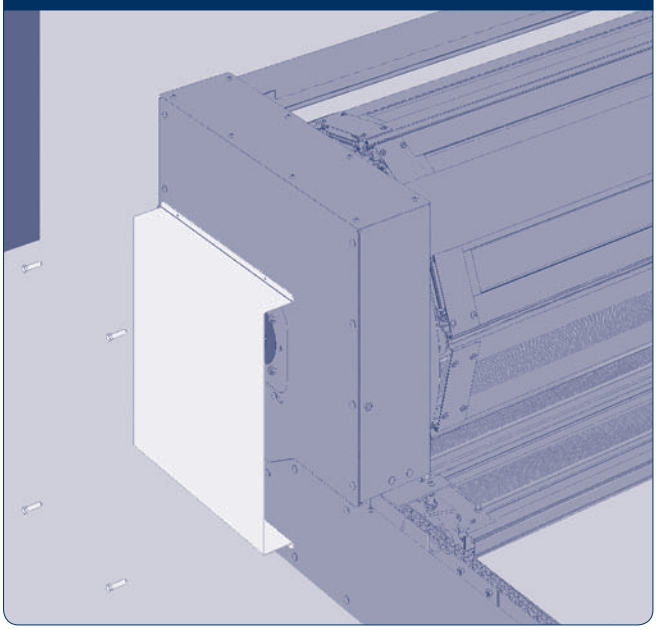
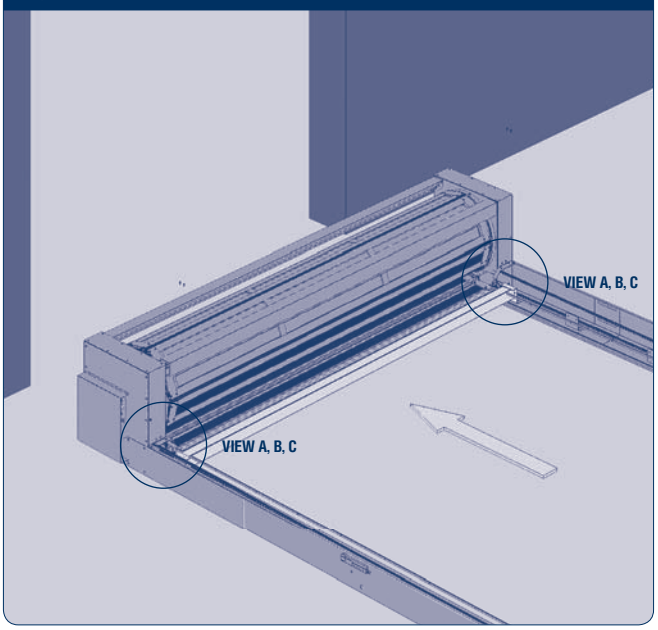


Fig. 14



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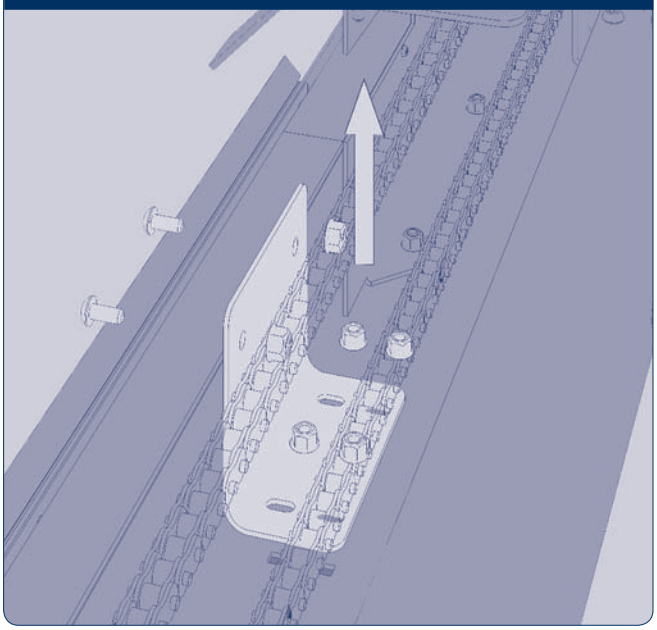


Fig. 14.2. View B

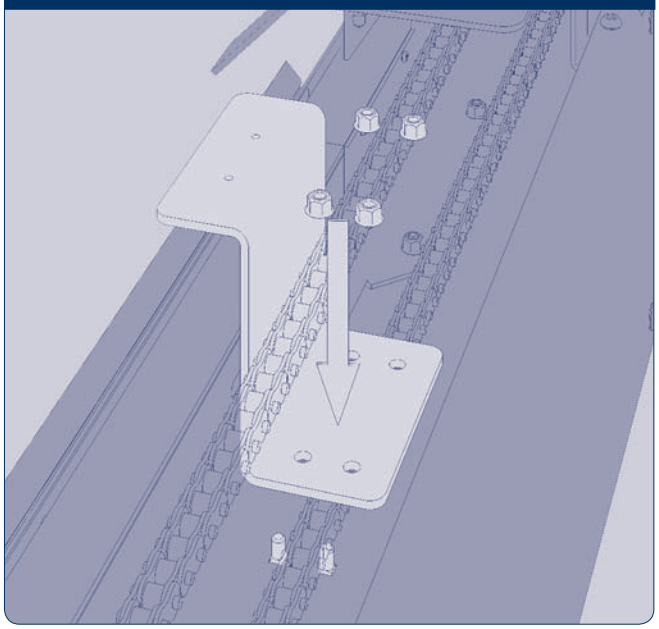


Fig. 14.3. View C

Fig. 15

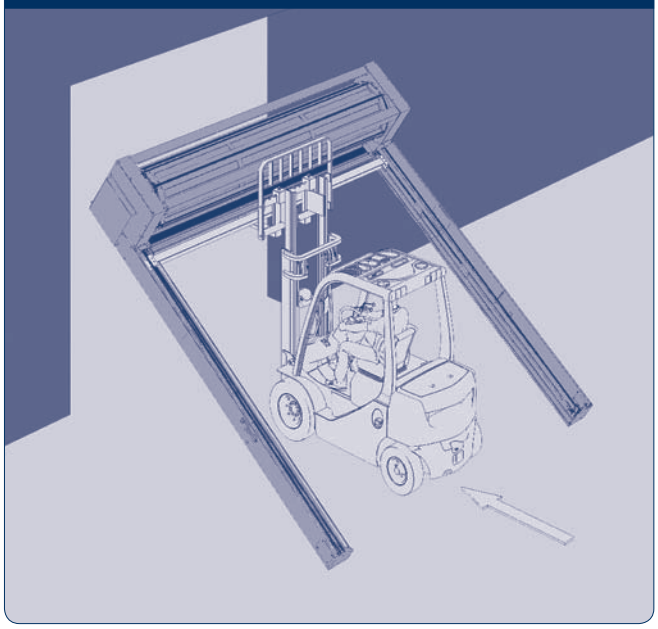


Fig. 16

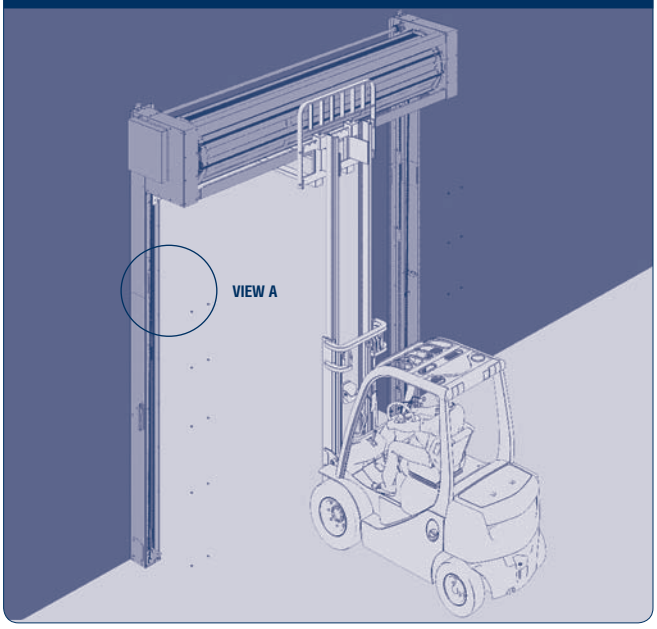


Fig. 16.1. View A

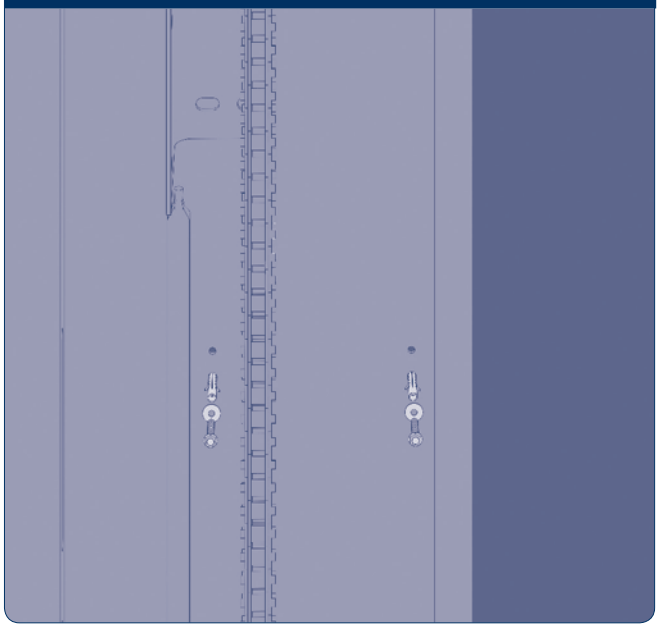
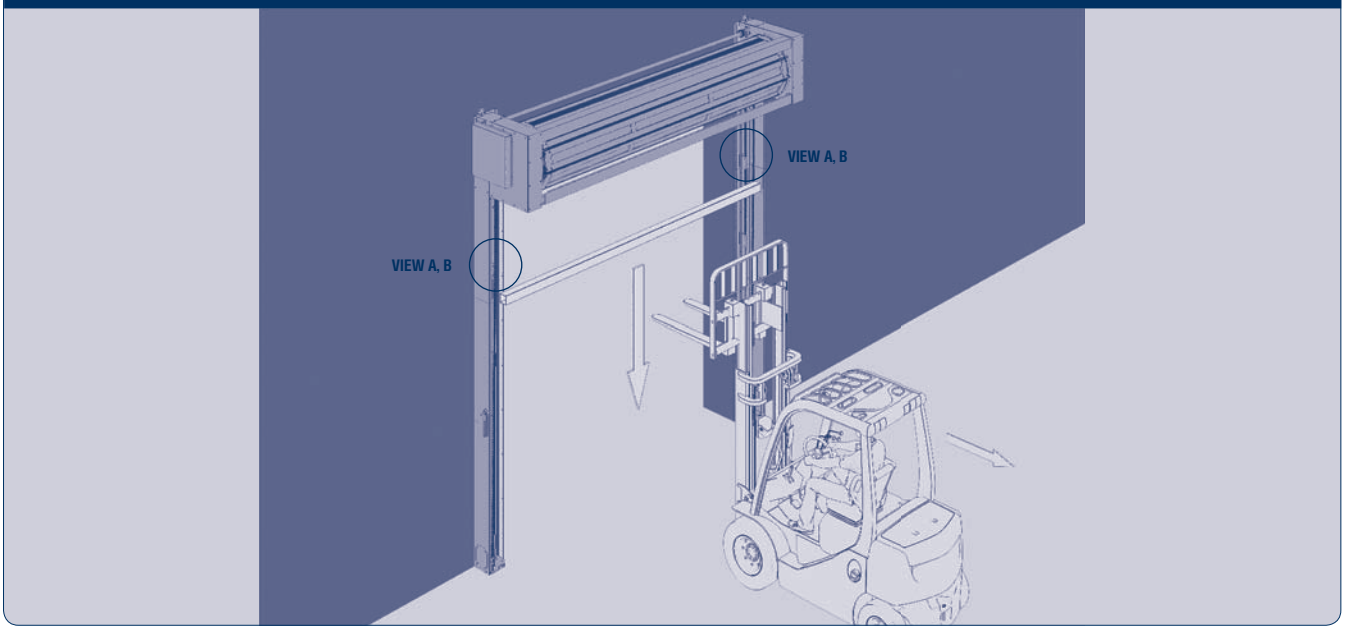


Fig. 17



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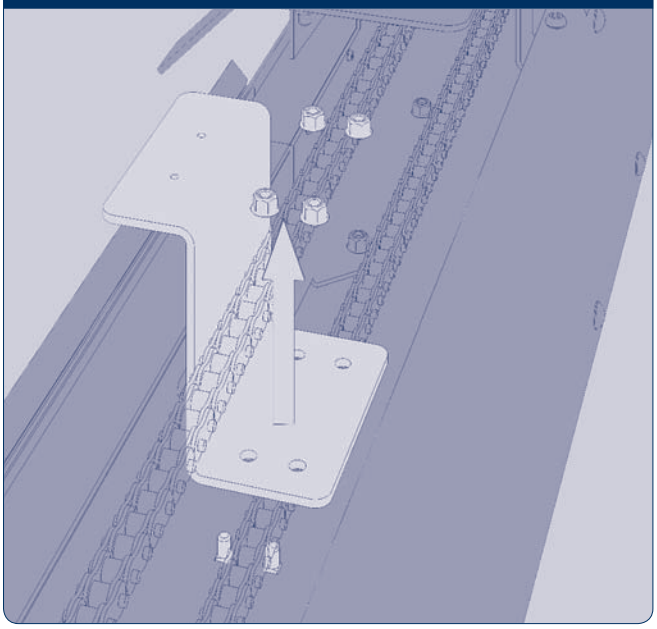


Fig. 17.2 View B

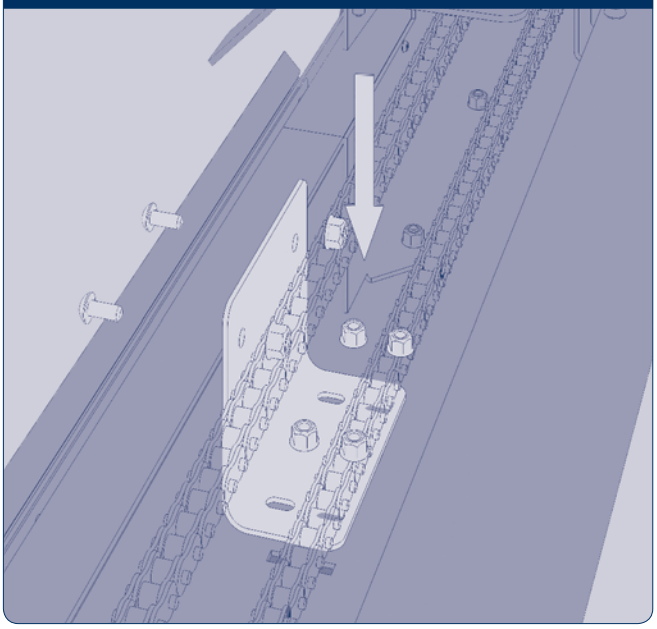


Fig. 18

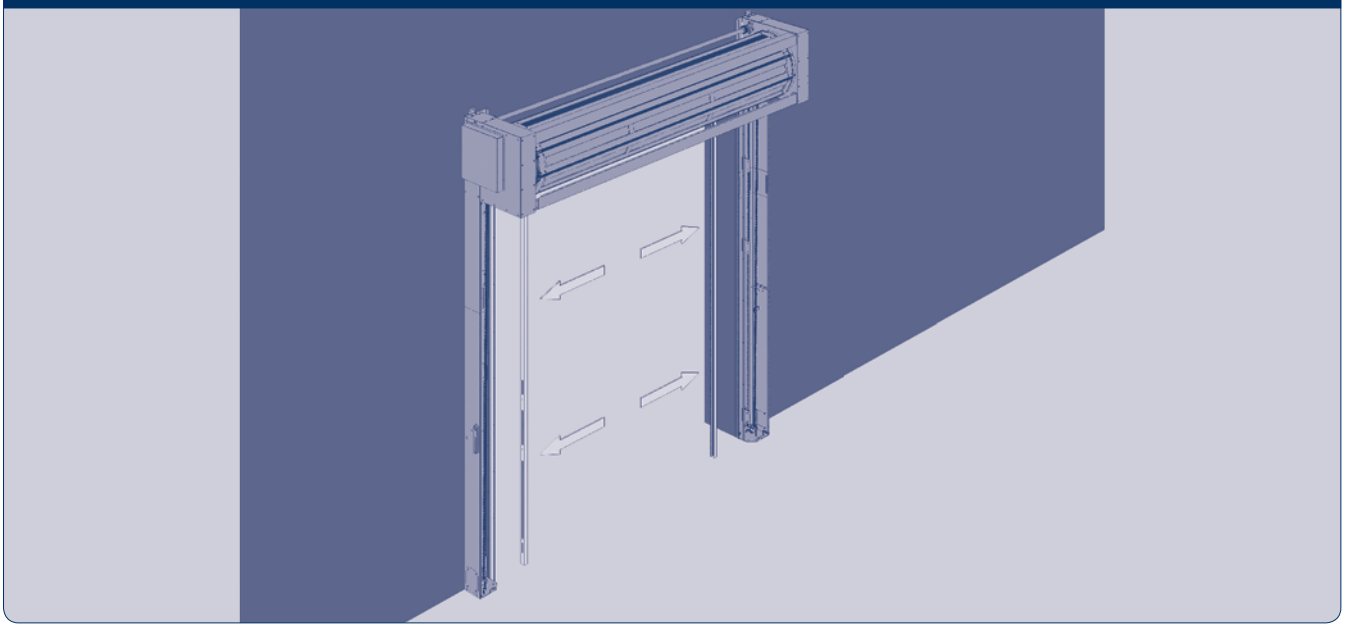


Fig. 19

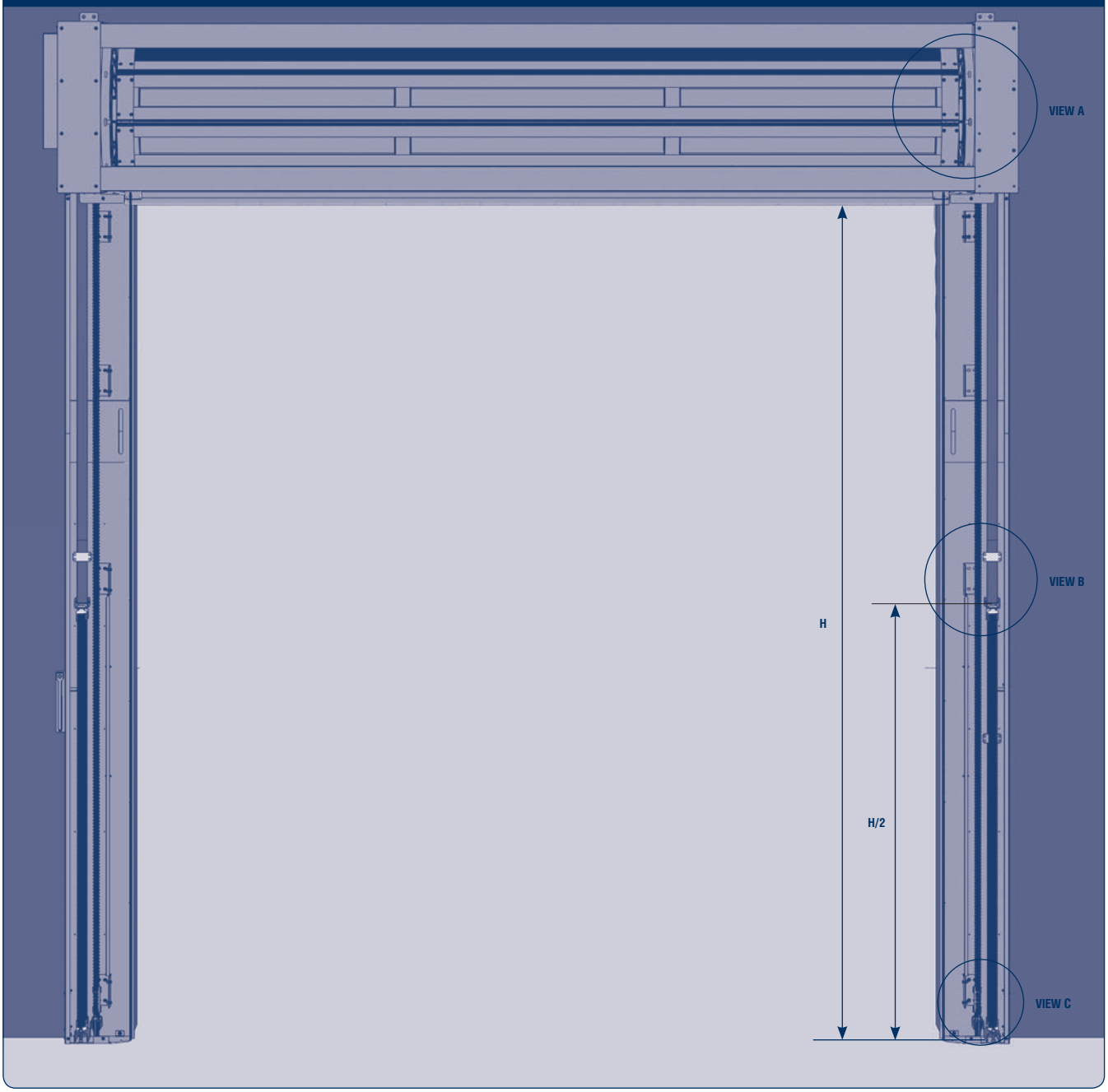


Fig. 19.1. View A

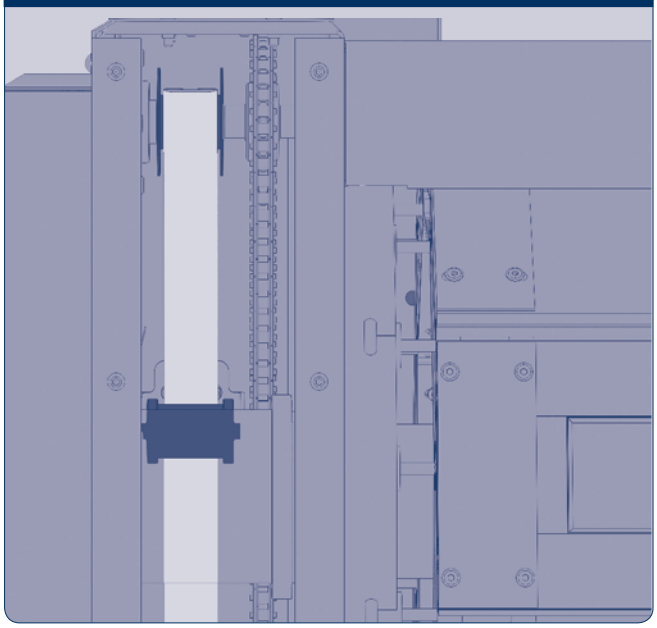


Fig. 19.2. View B

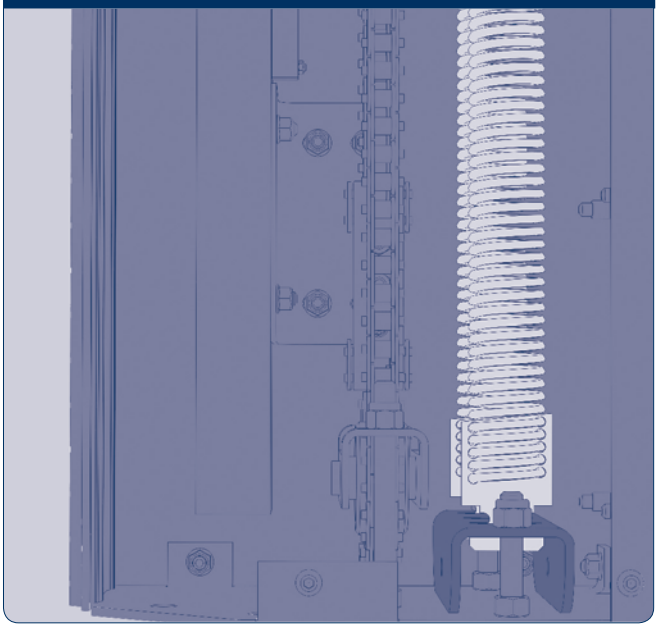


Fig. 19.3. View C

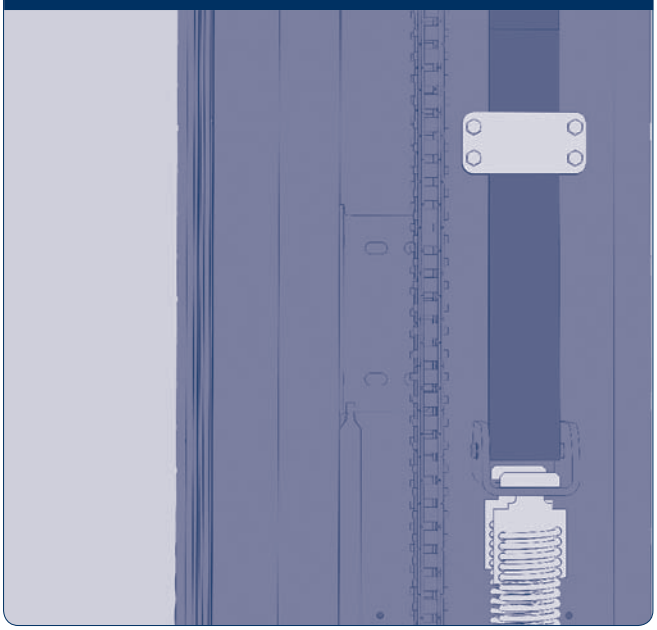


Fig. 20

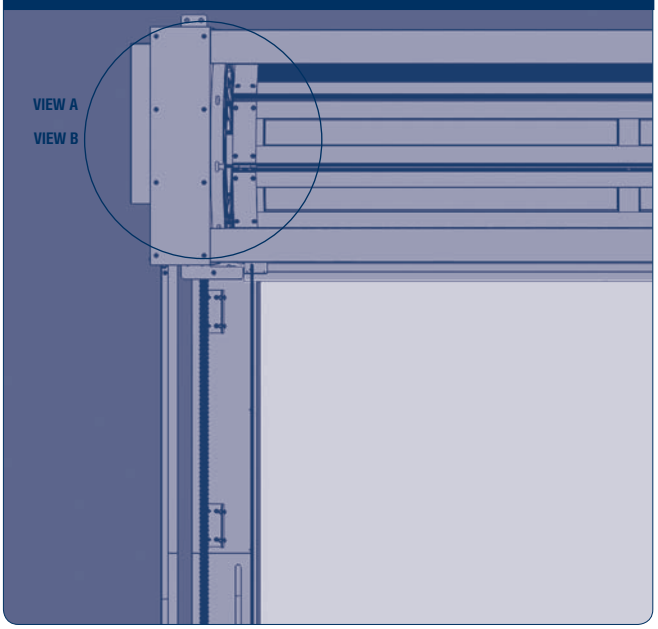


Fig. 20.1. View A

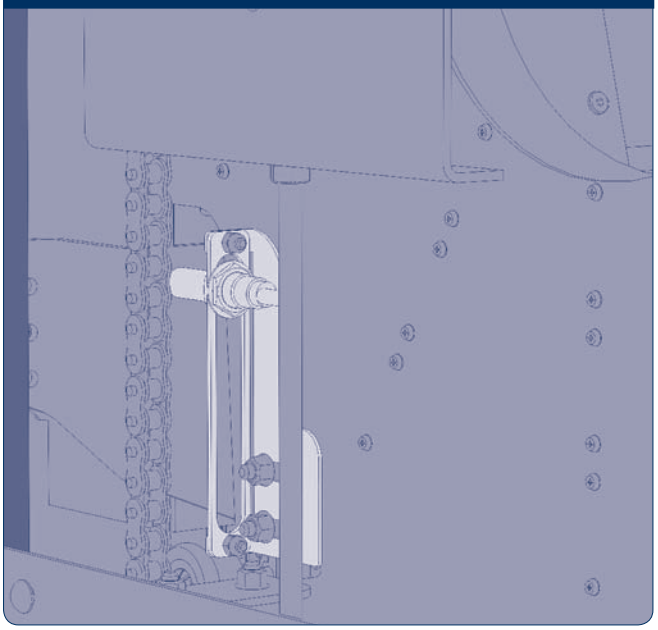


Fig. 20.2. View B

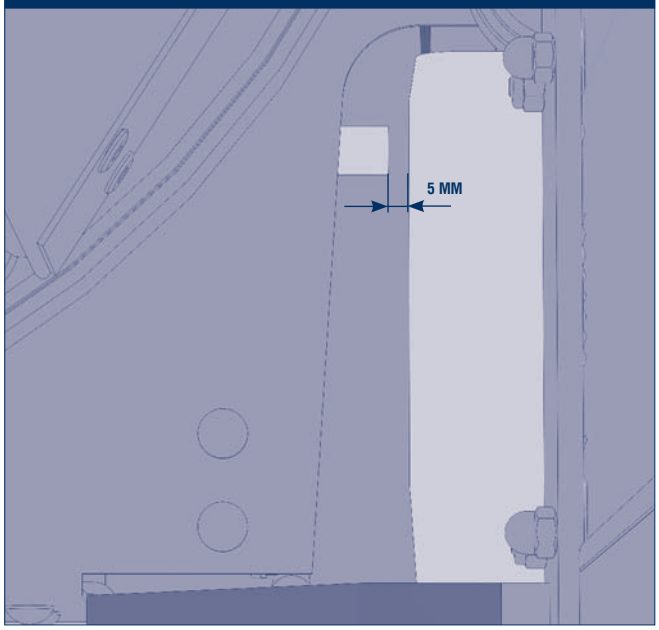


Fig. 21

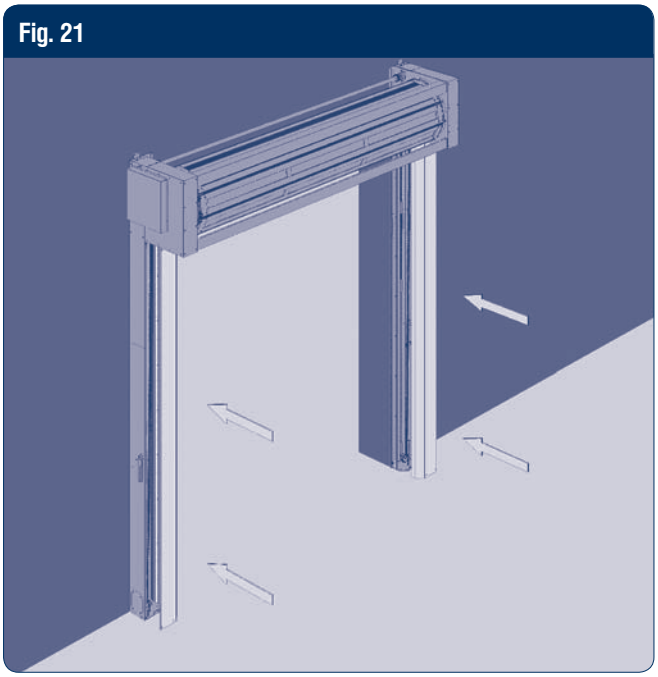
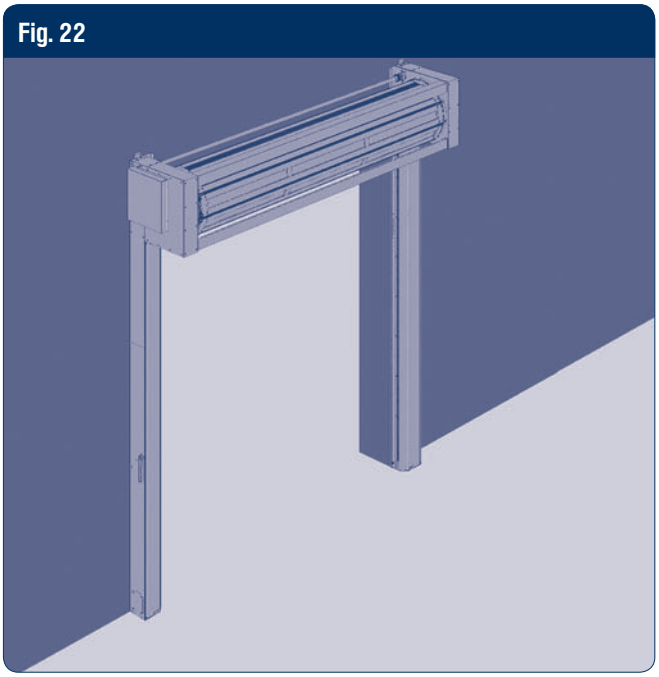


Fig. 22



4.7. CONTROL UNIT INSTALLATION

1. Lay power cable to control unit in accordance with the requirements for the control power supply.
2. Lay cables for safety devices and other accessories through the wiring tunnel in the door tracks and bring them to place of control unit installation.
3. The default installation height is 1 300 mm from the ground level.
4. Use M8 spacer bolts to fasten the unit to a concrete wall and self-tapping screws — to a steel wall.
5. For information on control unit connection please refer to Owner's Manual «Control Unit for High-Speed Door of HSSD Series».

5. DOOR OPERATION

1. Supply electrical power to the control unit to operate the high-speed door.
2. Open the control unit cover and turn on the switch in the upper right corner of the controller. The switch will light red.

5.1. MANUAL MODE

1. Press and release the UP button to open the door. The door curtain will rise and remain open.
2. Press and release the DOWN button to close the door. The door curtain will lower and remain closed.

5.2. AUTO MODE

1. Press and release the UP button to open the door. The door curtain will rise and remain open till automatic closing time expires.
2. After the automatic closing time expires the door will automatically close.

5.3. EMERGENCY STOP

1. To stop the door movement in case of emergency press the emergency stop button.
2. To resume the door movement turn the emergency stop button clockwise.

APPENDIX. RECOMMENDED SPARE PARTS

Fig. 1. High-speed spiral door

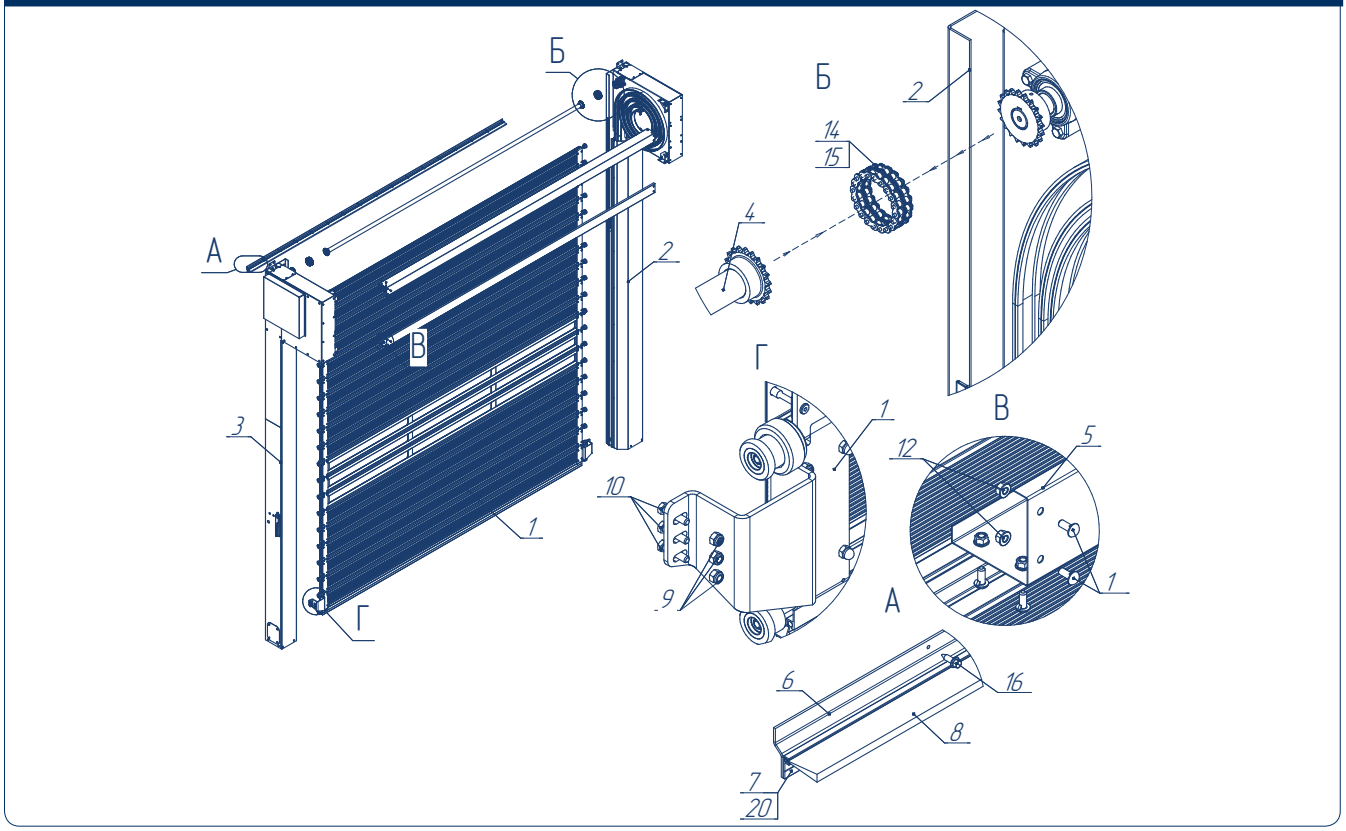


Table 1. High-speed spiral door parts list

#	Part number	Name	Qty	Note
1		Door curtain assembly	1 pc	see Fig. 2, p. 19
2		Right guide rail	1 pc	see Fig. 3, p. 21
3		Left guide rail	1 pc	see Fig. 4, p. 22
4	HSSD5.6	Synchronizing shaft assembly	rmt	depends on opening height
5	HSSD5.002-5000	Door hood, L = 5 000 mm	2 pcs	depends on opening width
	HSSD5.002-6204	Door hood, L = 6 204 mm		
6	HSSD5.0010	Brush seal plate	pcs	depends on opening width
7	DHW-2017BP/M	Un-coated aluminium profile “Corner holder for brush seal”	rmt	depends on opening width
8	DHF222	Brush seal H50, L = 1 100mm	pcs	depends on opening width
9	DHM0229	Self-locking nut M 8 (with nylon liner)	6 pcs	
10	115-152-161	Galvanized hex bolt/D=M8/L=35mm	6 pcs	
11	152-872	Galvanized bolt/D=M8/L=20mm	16 pcs	
12	14015	Flange nut (M8)	16 pcs	
13	14024	Self-tapping screw 5,5 × 19 with hex head, for metal	pcs	depends on opening width
14	1066-9	Drive chain/roller 2-row/12,07 mm/31,8 kN	0,482 rmt	
15	1279-3	Drive chain lock/2ПР-12,7-31,8	2 pcs	
16	14019	Self-tapping screw for metal 6,3 × 25 mm, for door panels	pcs	mounting hardware, depends on opening height and wall type
17	9500	Self-tapping screw (8 × 70 mm)		
18	9503	PVC dowel		
19	DHM0301	Washer 8 × 16		
20	168	Galvanized rivet/D=4,0mm/L=12mm	pcs	depends on opening width, fastening of aluminium profile to brush seal plate

Fig. 2. Door curtain assembly

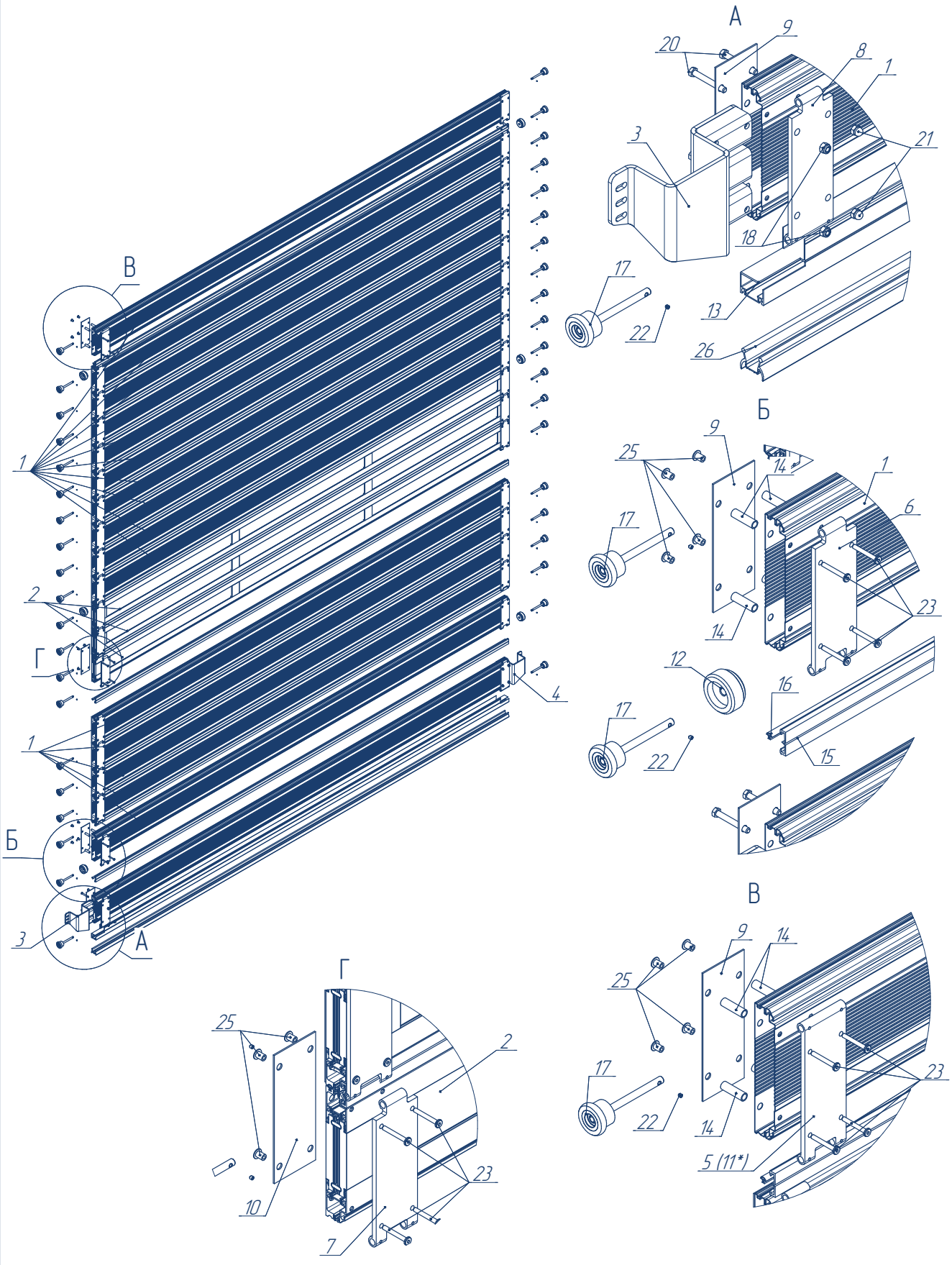


Table 2. Door curtain parts list

#	Part number	Name	Qty	Note
1	HSSD5.1013-1	Sandwich panel, RAL 9003	rmt	depends on opening height and width, and door curtain colour
	HSSD5.1013-2	Sandwich panel, RAL 9006		
	HSSD5.1013-3	Sandwich panel, primed		
2	DUS-011-9	Full-vision panels	rmt	depends on opening width and number of full-vision panels
3	HSSD5.13	Chain lock assemly, left	1 pc	
4	HSSD5.14	Chain lock assemly, right	1 pc	
5	HSSD5.101	Top plate of side lock	2 pcs	
6	HSSD5.102	Side lock plate	pcs	depends on opening height
7	HSSD5.103	Side lock plate for a full-vision panel	pcs	depends on number of full-vision panels
8	HSSD5.104	Bottom plate of side lock	2 pcs	
9	HSSD5.105	Sandwich panel rear plate	pcs	depends on opening height
10	HSSD5.106	Full-vision panel rear plate	pcs	depends on number of full-vision panels
11	HSSD5.108	Top plate of side lock for a full-vision panel	2 pcs	*for a door curtain consisting of full-vision panels only
12	HSSD5.1011	Door curtain nylon roller	6 pcs	
13	HSSD5.1012-1	Bottom bearing profile for a door curtain, RAL 9003	rmt	depends on opening width and door curtain colour
	HSSD5.1012-2	Bottom bearing profile for a door curtain, RAL 9006		
14	HSSD6.102	Bushing 12 × 40	pcs	depends on opening height
15	HSSD08	Seal	rmt	depends on opening height and width
16	HSSD09	Seal	rmt	depends on opening height and width
17	HSSD-66	PVC roller	pcs	depends on opening height
18	DHM0229	Self-locking nut M 8 (with nylon liner)	4 pcs	
19	RP 86	DoorHan logo 300 × 40 × 3 mm	1 pc	
20	152-116	Galvanized hex bolt/D=M8/L=60mm	8 pcs	
21	153-450	Galvanized cap nut/D=M8	4 pcs	
22	163-1019	Hex socket screw/D=5,0mm/L=6mm	pcs	depends on opening height
23	163-1057	Galvanized hex socket screw/D=M6/L=45mm	pcs	depends on opening height
24	168-9003	Rivet/D=4,0mm/L=12mm/RAL9003	pcs	fastening of bottom profile to door panel, depends on opening width, and door curtain colour
	168-9006	Rivet/D=4,0mm/L=12mm/RAL9006		
25	2268-3	Galvanized coupling nut	pcs	depends on opening height
26	80042	Bottom seal	rmt	depends on opening height

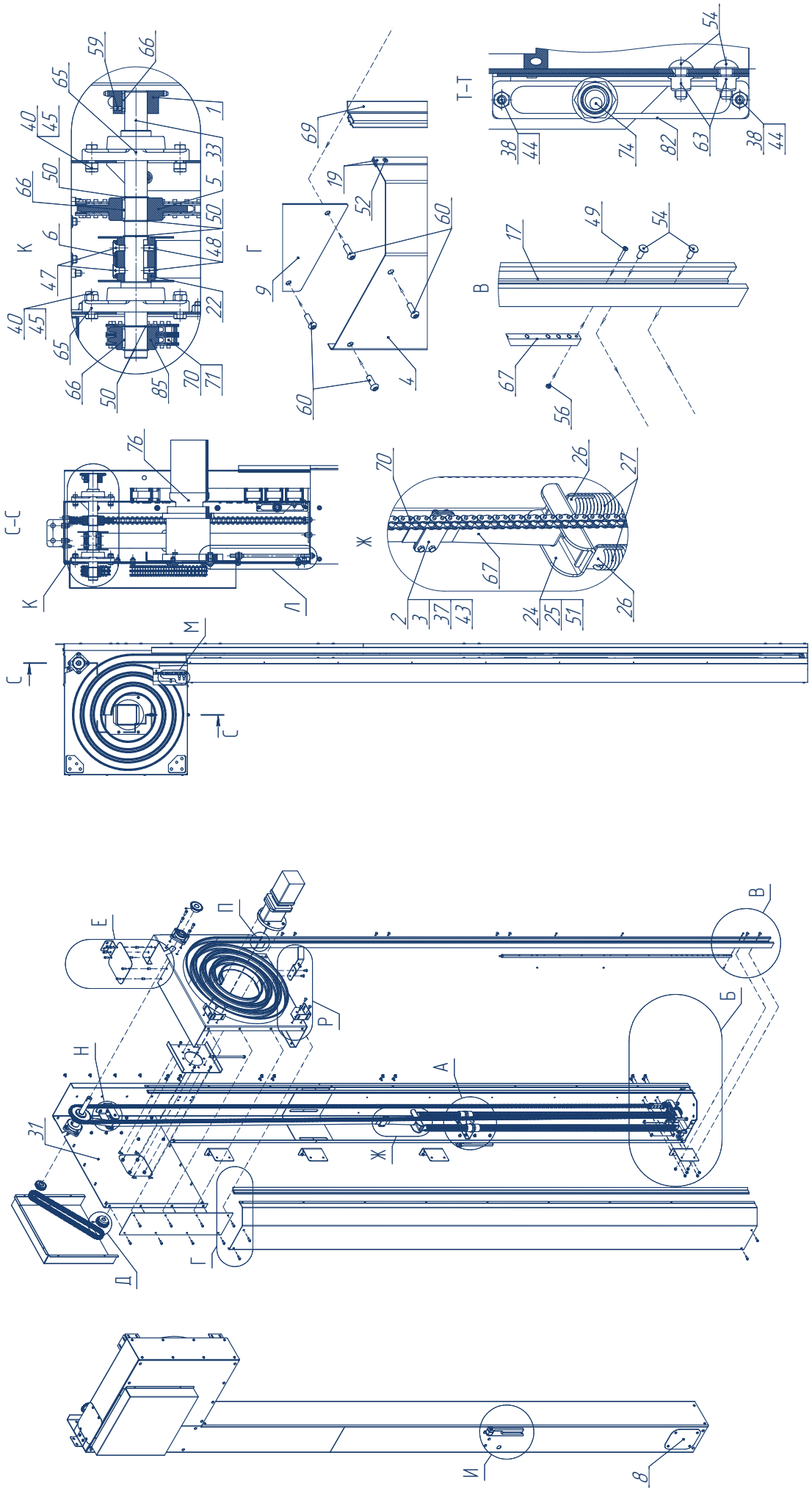


Fig. 3. Right guide rail

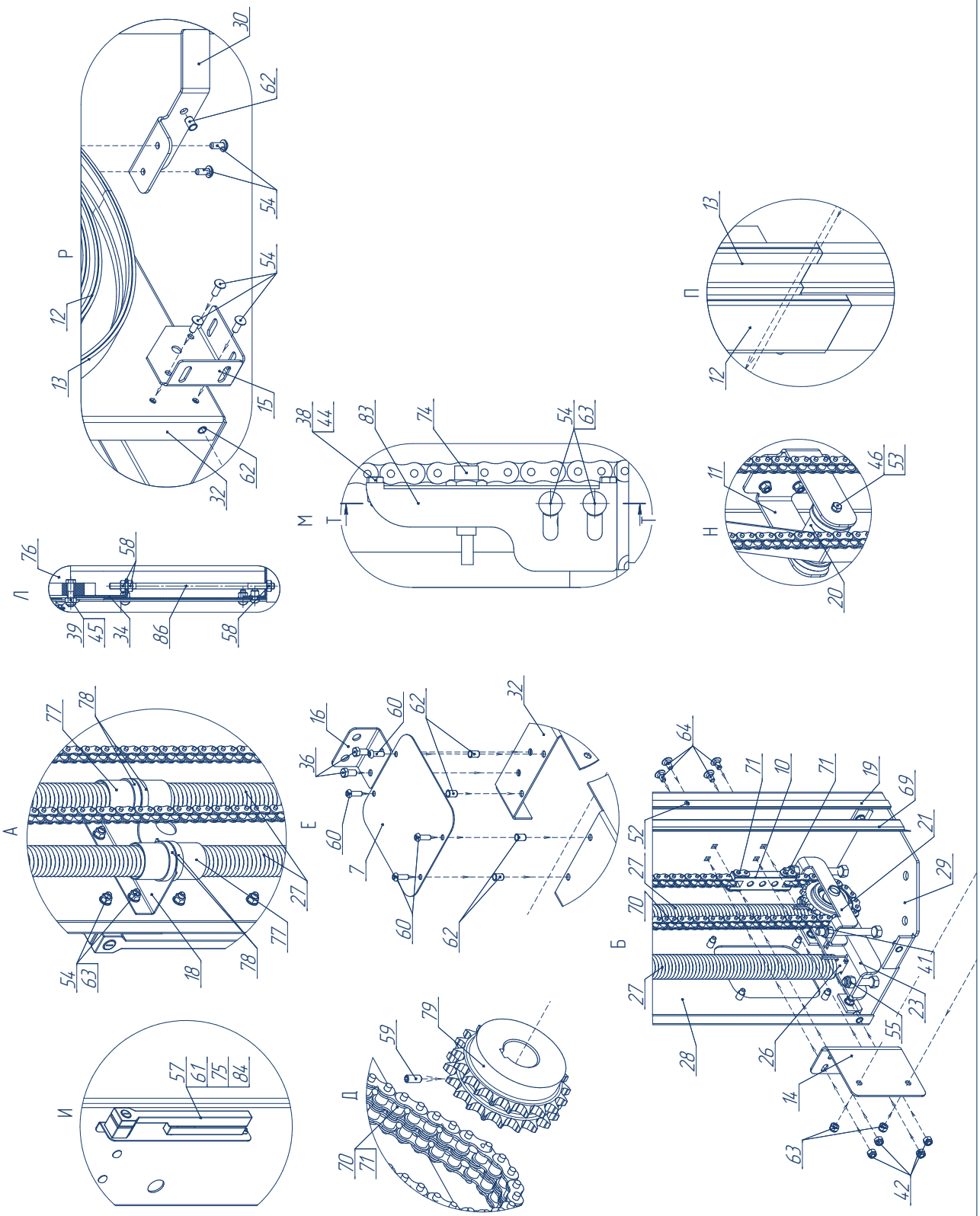


Fig. 4. Left guide rail

Table 3. Left and right guide rails parts lilst

#	Part number	Name	Qty	Note
1	HSSD5.001	Sprocket gear	1 pc	
2	HSSD5.004	Cable fixation plate, front	1 pc	
3	HSSD5.005	Cable fixation plate, rear	1 pc	
4	HSSD5.201-Zn	Guide rail cover, L = 5 084 mm, galvanized	1 pc	
5	HSSD5.203	Drive single row sprocket	1 pc	
6	HSSD5.204	Cable clamping plate	1 pc	
7	HSSD5.206	Inspection cover, top	1 pc	
8	HSSD5.207	Inspection cover, bottom	1 pc	
9	HSSD5.208-1	Inspection cover, front, dimension-type 1	1 pc	depends on opening height
	HSSD5.208-2	Inspection cover, front, dimension-type 2		
10	HSSD5.209	Chain lock	1 pc	
11	HSSD5.216	Roller bracket	1 pc	
12	HSSD5.217-1	Internal half-spiral, dimension-type 1	1 pc	depends on opening height
	HSSD5.217-2	Internal half-spiral, dimension-type 2		
13	HSSD5.218-1	External half-spiral, dimension-type 1	1 pc	depends on opening height
	HSSD5.218-2	External half-spiral, dimension-type 2		
14	HSSD5.219	Guide rail fastening bracket	pcs	depends on opening height
15	HSSD5.2110	Hood fastening angle	1 pc	
16	HSSD5.2111	Top angle	1 pc	
17	HSSD5.2112-3000	Guide rail (HSSD1), L = 3 000 mm	1 pc	depends on opening height
	HSSD5.2112-4000	Guide rail (HSSD1), L = 4 000 mm		
	HSSD5.2112-5070	Guide rail (HSSD1), L = 5 070 mm		
18	HSSD5.2016	Spring bracket	1 pc	
19	HSSD5.2017	Backing plate	pcs	depends on opening height
20	HSSD5.22	Cable roller assembly	1 pc	
21	HSSD5.23	Bottom sprocket assembly	1 pc	
22	HSSD5.24	Cable reel	1 pc	
23	HSSD5.401	Spring retainer	1 pc	
24	HSSD5.402	Spring retainer axis	1 pc	
25	HSSD5.403	Top spring retainer	1 pc	depends on opening height and width
	HSSD5.404	Spring retainer for 1 spring		
26	HSSD5.501	Door spring plate	pcs	depends on opening height and width
27	HSSD5.502	Door spring 5,5 × 42 mm	rmt	depends on opening height and width
28	HSSD5.2011	Right track assembly, dimension-type 1	1 pc	for right track, depends on opening height and drive position
	HSSD5.2012	Right track assembly, dimension-type 2		
	HSSD5.2014	Right track assembly, dimension-type 1 (drive to the right)		
	HSSD5.2015	Right track assembly, dimension-type 2 (drive to the right)		
	HSSD5.3011	Left track assembly, dimension-type 1		for left track depends on opening height and drive position
	HSSD5.3012	Left track assembly, dimension-type 2		
	HSSD5.3014	Left track assembly, dimension-type 1 (drive to the left)		
	HSSD5.3015	Left track assembly, dimension-type 2 (drive to the left)		
29	HSSD5.2013	Track plate assembly, right	1 pc	for right track
	HSSD5.3013	Track plate assembly, left		for left track
30	HSSD5.215	Cover stop, right	1 pc	for right track
	HSSD5.315	Cover stop, left		for left track

Table 3. Left and right guide rails parts lilst (continued)

#	Part number	Name	Qty	Note
31	HSSD5.213-1	Outside hood cover, right, dimension-type 1	1 pc	for right track, depends on opening height
	HSSD5.213-2	Outside hood cover, right, dimension-type 2		
	HSSD5.313-1	Outside hood cover, left, dimension-type 1		for left track, depends on opening height
	HSSD5.313-2	Outside hood cover, left, dimension-type 2		
32	HSSD5.214-1	Inside hood cover, right, dimension-type 1	1 pc	for right track, depends on opening height
	HSSD5.214-2	Inside hood cover, right, dimension-type 2		
	HSSD5.314-1	Inside hood cover, left, dimension-type 1		for left track, depends on opening height
	HSSD5.314-2	Inside hood cover, left, dimension-type 2		
33	HSSD5.302	Spiral door track shaft, L = 355 mm	1 pc	installed on the track with drive
	HSSD5.202	Spiral door track shaft, L = 295 mm		installed on the track without drive
34	HSSD5.205	Side inspection cover	1 pc	installed on the track without drive
	HSSD5.303	Drive plate	1 pc	installed on the track with drive
35	RoHC3811	Self-tapping screw for metal 3,8 × 11	pcs	fastening of half-spirals to inside cover, depends on opening height
36	DHM0122	Galvanized hex bolt/D=M10/L=20mm	2 pcs	fastening of the top angle
37	DHM0126	Galvanized hex bolt/D=M6/L=16mm	4 pcs	fastening of the belt
38	DHM0126	Galvanized hex bolt/D=M6/L=16mm	2 pcs	fastening of sensor plate to sensor angle, only from the drive side
39	DHM0138	Galvanized hex bolt/D=M10/L=40mm	4 pcs	drive fastening
40	DHM0177	Galvanized hex bolt/D=M10/L=30mm	8 pcs	support fastening
41	DHM0202	Galvanized hex nut/D=M12	4 pcs	bottom sprocket fastening
42	DHM0229	Self-locking nut M 8 (with nylon liner)	pcs	depends on opening height
43	DHM0230	Self-locking nut M 6 (with nylon liner)	4 pcs	belt fastening
44	DHM0230	Self-locking nut M 6 (with nylon liner)	2 pcs	fastening of sensor plate to sensor angle, only from the drive side
45	DHM0240	Self-locking nut M 10 (with nylon liner)	10 pcs	on the track without drive
			14 pcs	on the track with drive
46	DHM0305	Grover washer 8	2 pcs	cable roller fastening
47	DHM0613	Countersunk head with cross slot, fully threaded, stainless steel screw/D=M8/L=16mm	2 pcs	belt fastening
48	DHM0647	Black setscrew M 8 × 16	2 pcs	fixation of belt coil
49	DHM0900	Semi-secular head with cross slot, fully threaded, galvanized screw/D=M4/L=30mm	3 pcs	optical grid fastening
50	DHM0376	External retaining ring, D=30 mm	5 pcs	on the track with drive
			3 pcs	on the track without drive
51	DHM0378	External retaining ring, D=10 mm	2 pcs	
52	168	Galvanized rivet/D=4,0mm/L=12mm	pcs	depends on opening height
53	152-761	Galvanized hex bolt/D=M8/L=12mm	2 pcs	cable roller fastening
54	152-872	Galvanized hex bolt/D=M8/L=20mm	pcs	main fastening, depends on opening height
55	153-425	Galvanized self-locking nut, D=M12	2 pcs	spring retainer fastening
56	153-437	Galvanized hex nut with collar, D=M4	3 pcs	optical grid fastening
57	153-437	Galvanized hex nut with collar, D=M4	3 pcs	release mechanizm fastening
58	153-85	Galvanized hex nut, D=M10	3 pcs	drive plate fastening, only for the track with drive
59	163-991	Hex socket flat point galvanized set screw/D=5,0mm/L=12mm	1 pc	on the track without drive
			2 pcs	on the track with drive
60	163-1014	Semi-secular head with hex slot, fully threaded, stainless steel screw/D=M8/L=25mm	pcs	covers fastening, depends on opening height
61	163-1074	Semi-secular head with cross slot, fully threaded, galvanized screw/D=M4/L=20mm	3 pcs	release mechanizm fastening
62	167-170	Countersunk head open rivet nut/D=M8	pcs	depends on opening height

Table 3. Left and right guide rails parts lilst (end)

#	Part number	Name	Qty	Note
63	14015	Collar nut M8	pcs	main fastening, depends on opening height
64	14016P	Countersunk head square neck bolt/D=M8/L=16mm		
65	BSR30	Support with bearing BSR30/UCF206	2 pcs	
66	HSD 2119	Key 7 × 8 × 25 mm	3 pcs	on the track with drive
			2 pcs	on the track without drive
67	2167-103	Cedes optical grid	1 pc	
68	HSD 2115/M	Counterbalance belt	rmt	depends on opening height
69	CR-2416	Single-leaf side seal for vertcial track (Czech Republic)	rmt	depends on opening height
70	2089-22	Chain ПР-15.875-23	rmt	depends on opening height
71	1279-2	Drive chain lock/2ПР-15,875-45,4	2 pcs	
72	1066-9	Drive chain/roller 2-row/12,07mm/31,8kN	rmt	depends on opening height
73	1279-3	Drive chain lock/2ПР-12,7-31,8	1 pc	
74	2167-101	Proximity sensor for drive PE500B	1 pc	installed on the drive side
75	2167-465	Drive release for 4,5 m spiral door		
	2167-475	Drive release for 6 m spiral door		
76	2167-99	Spiral door drive PE500B (reducer 1:7.5)	1 pc	depends on opening height and width
	2167-100	Spiral door drive PE500B (reducer 1:10)		
	PE500B	Spiral door drive PE500B (reducer 1:15)		
77	PMCC168	PVC tube 50	rmt	depends on opening height and width
78	1543-123	Heat shrink black tube 80/40	rmt	depends on opening height and width
79	HSD 2113	Cable pinion D = 85 mm	1 pc	installed on the motor shaft
80	HSSD4.108	Cable clamps	pcs	depends on opening height
81	HSSD5.003	Drive cover	1 pc	
82	HSSD5.2114	Sensor fastening plate	1 pc	
83	HSSD5.2113	Right sensor fastening angle	1 pc	for right track
	HSSD5.3113	Left sensor fastening angle		for left track
84	HSSD5.006	Left bracket for the door release	1 pc	for left track
	HSSD5.007	Right bracket for the door release		for right track
85	HSSD5.304	Double row chain sprocket	1 pc	
86	HSSD5.210-1	Pin M10 L = 200 mm	1 pc	depends on opening height, installed on the drive side
	HSSD5.210-2	Pin M10 L = 270 mm		

NOTES

NOTES

DoorHan®

We very much appreciate that you have chosen the product manufactured by our company and believe that you will be satisfied with its quality.

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