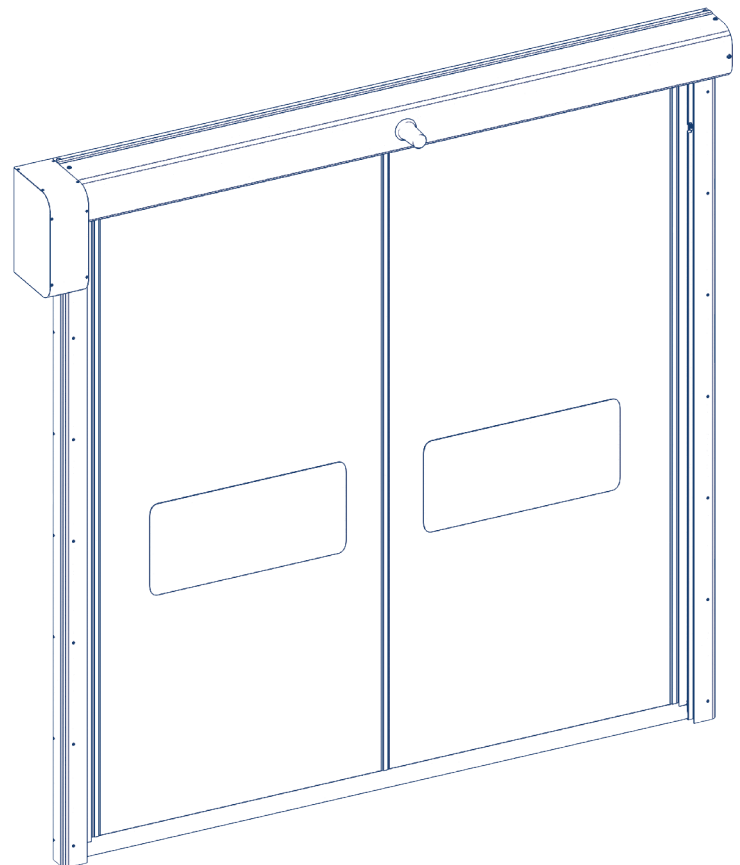


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High-Speed PVC Fabric Doors of SPEEDROLL series with DOORHAN, GFA, BMP drives



1. GENERAL INFORMATION

The information contained in this manual will familiarize you with construction, operation and maintenance of high-speed PVC fabric door (further — the product). The manufacturer does not directly control installation, operation and maintenance of the product. The operator shall be held responsible for safe operation and maintenance of the product. It shall be the responsibility

of the operator to comply with the instructions listed in this manual.

We recommend that installation, operation and maintenance be performed by a qualified technician.

The manufacturer reserves the right to modify the product without prior notice.

2. SAFETY RULES

⚠ ATTENTION!

Only trained personnel should operate or service this equipment!

Carefully follow the instructions provided in this manual when performing installation or operation of the doors.

- Always maintain proper lighting in the work area.
- Keep the work area clean of people and objects during installation and operation of the doors.
- Install control unit at such a place that operator be able

to clearly see the door when operating it. The control unit shall always be kept closed.

- Turn OFF electrical power before making any electrical connections.

3. MODIFICATIONS

- SpeedRoll doors with DoorHan drive are compatible with control units of HSDC 181900, HSDC 18191, HSDC 18192, HSDC 18193, HSDC 18191(N) series. HSDC 18191(N) control unit is used with doors opened in emergency with counterbalance mechanism.

- SpeedRoll doors with GFA drive are compatible with control units of TS 970 series (2 types).
- SpeedRoll doors with BMP drive are compatible with control units of HSD 1800, HSD 18001 series.

4. CONSTRUCTION

Fig. 1. Standard (side drive)

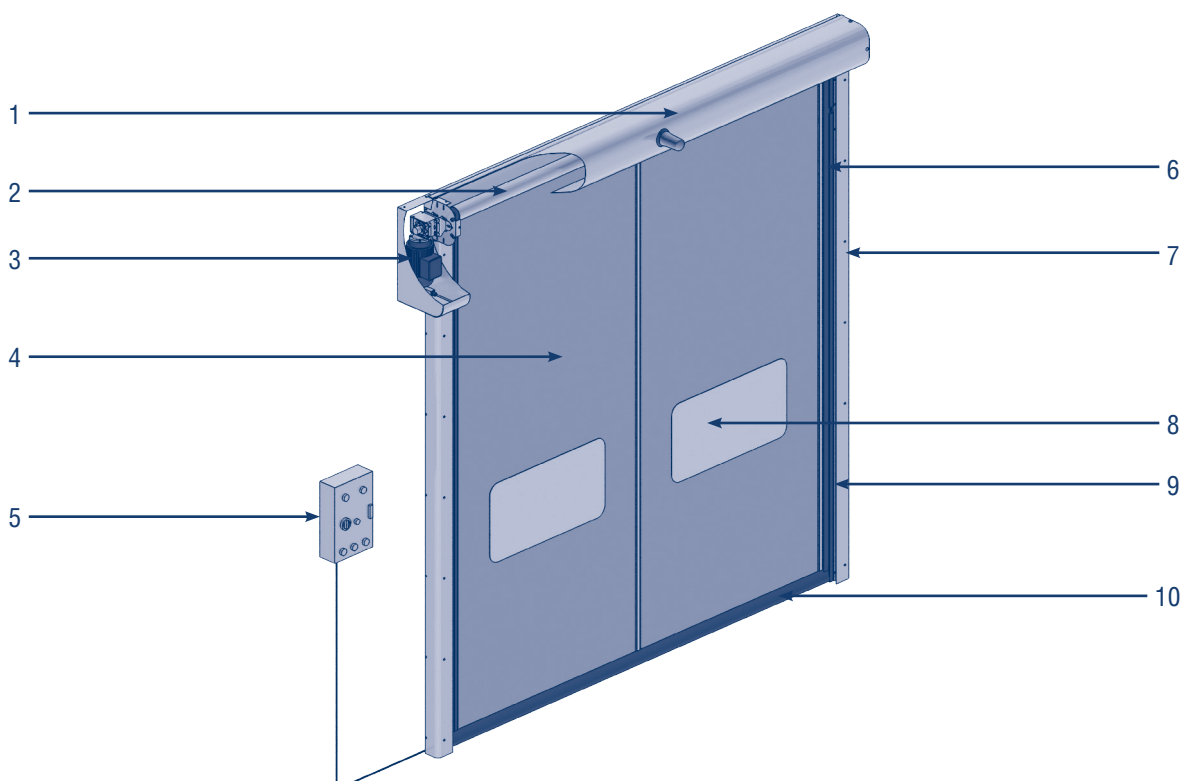


Fig. 2. Standard (front drive)

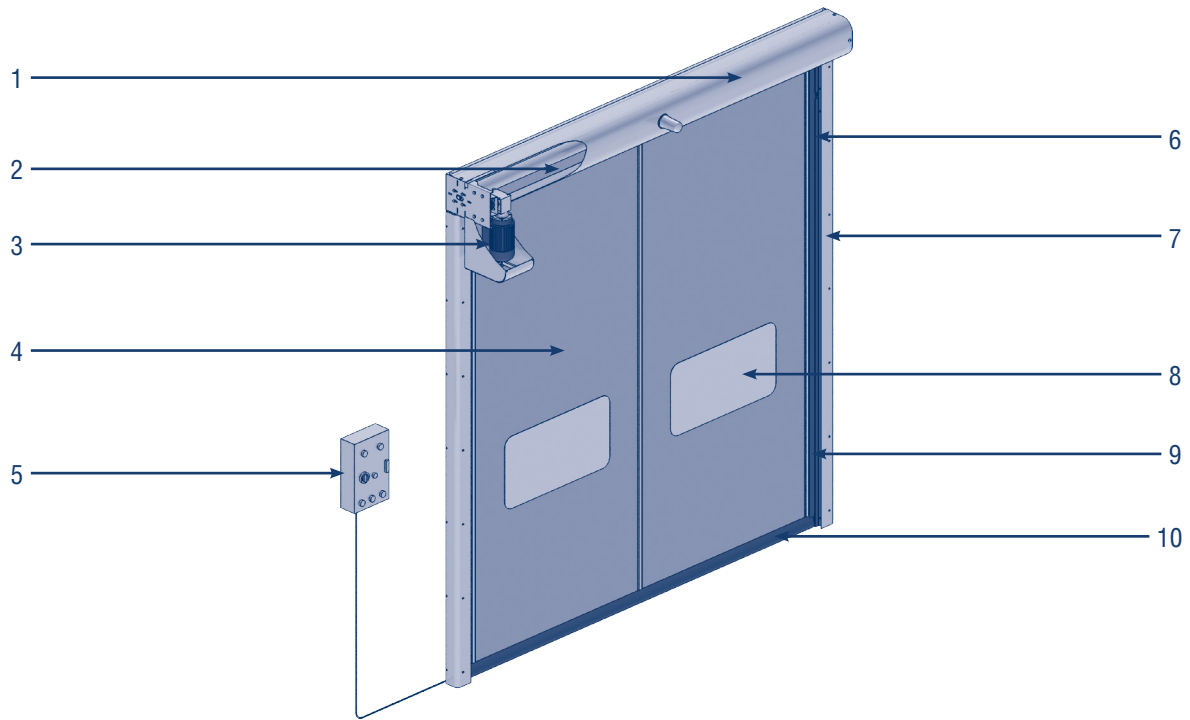
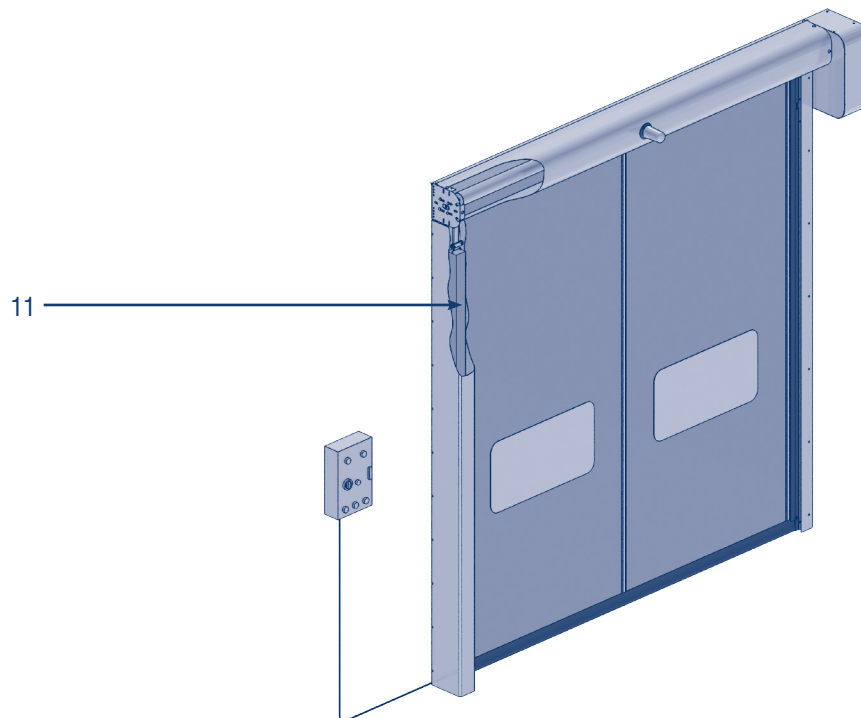


Fig. 3. Optional (counterbalance)



1. Shaft box
2. Shaft
3. Electric drive
4. Door curtain
5. Control unit
6. Door curtain guide
7. Vertical track
8. Transparent insert (window)
9. Photocells
10. Bottom bar assembly
11. Counterbalance

4.1. SPECIFICATIONS

Table 1. Technical data

Parameters	SpeedRoll SDI	SpeedRoll SDO	SpeedRoll SDC	SpeedRoll SDF
Application	interior	exterior	freezers	food industry
Maximum size, W × H	5,700 × 5,800 mm		3,500 × 4,000 mm	3,800 × 4,000 mm
Wind load	for door width <ul style="list-style-type: none"> ▪ up to 3,500 mm — CLASS3 (120 km/h) ▪ up to 4,500 mm — CLASS2 (90 km/h) 		for door width <ul style="list-style-type: none"> ▪ up to 3,500 mm — CLASS2 (120 km/h) 	for door width <ul style="list-style-type: none"> ▪ up to 3,800 mm — CLASS1 (120 km/h)
Opening speed	for door width <ul style="list-style-type: none"> ▪ up to 3,000 mm — 2.0 m/s ▪ up to 5,000 mm — 1.8 m/s 		for door width <ul style="list-style-type: none"> ▪ up to 3,000 mm — 1.0 m/s 	for door width <ul style="list-style-type: none"> ▪ up to 3,000 mm — 2.0 m/s ▪ up to 4,000 mm — 1.8 m/s
Closing speed	0.8 m/s			
Operating temperature	<ul style="list-style-type: none"> ▪ from -5 to +70 °C — drive installed outside the premise ▪ from -15 to +70 °C — drive installed inside the premise ▪ from -35 to +70 °C — with heating system 			
Control unit	<ul style="list-style-type: none"> ▪ DoorHan drive HSDC1819** — 462 × 230 × 165 mm (painted steel / stainless steel AISI304-option) ▪ GFA drive: 155 × 386 × 90 mm (plastic) ▪ BMP drive: 300 × 400 × 150 mm (painted steel) 			
Drive	<ul style="list-style-type: none"> ▪ supply voltage — 220 V/50 Hz, single phase; 380 V/50 Hz, three phase ▪ power — 1.5–2.2 kW ▪ protection class — IP65 ▪ end positions are monitored by an encoder 			
Safety devices	<ul style="list-style-type: none"> ▪ the doors comply with EN 13241 CE directive ▪ photocells are installed at 500 mm from the floor level ▪ it's possible to install a second pair of photocells at the top of vertical tracks to detect incorrect unwinding of the curtain ▪ if the sensitive lower edge touches an obstruction when the door is closing, then a signal is transmitted to the control unit to open the door (option) ▪ in case of power outage the door opens 2,000 mm automatically with a counterweight (option) 			
Durability	1,500,000 cycles			

* Wind speed is given for a closed door

** HSDC 181900, HSDC 18191, HSDC 18192, HSDC 18193, HSDC 18191(N)

4.2. COMPONENTS SET

1. Upper door part — 1 pc
2. Left track — 1 pc
3. Right track — 1 pc
4. Control unit — 1 pc
5. Connection cables
6. Technical data — 1 pc
7. Installation and operation manual for high-speed door — 1 pc
8. Installation and operation manual for control unit — 1 pc

5. INSTALLATION

5.1. UNLOADING AND RECEIVING THE PRODUCT

Unload the product using a forklift or a crane. Make sure the components delivered correspond to the list provided in Components Set section of the manual.

5.2. GENERAL RULES

Make sure you observe all applicable safety regulations during installation of the product. We recommend that installation of the product be performed by DoorHan service department or DoorHan dealer.

Check whether door dimensions correspond to opening

width, height, and diagonal before proceeding to installation.

5.3. LOADING EQUIPMENT

- Forklift: minimum load capacity — 35 kN; fork length — not less than 2,000 mm.
- Crane, minimum lifting capacity — 20 kN.

5.4. TOOLS

- Tape measure
- Water level
- Set of screwdrivers
- Set of wrenches (17, 13, 10 and 8 mm)
- Hexagon set (17, 13, 10 and 8 mm)

- Hammer
- Rotary hammer
- Electric drill
- Stone and metal bits for rotary hammer
- Multimeter
- Scissors
- Wire cutters
- Pliers
- Stepladder

5.5. OPENING DIMENSIONS

W — opening width.

H — opening height.

Fig. 1. Side drive

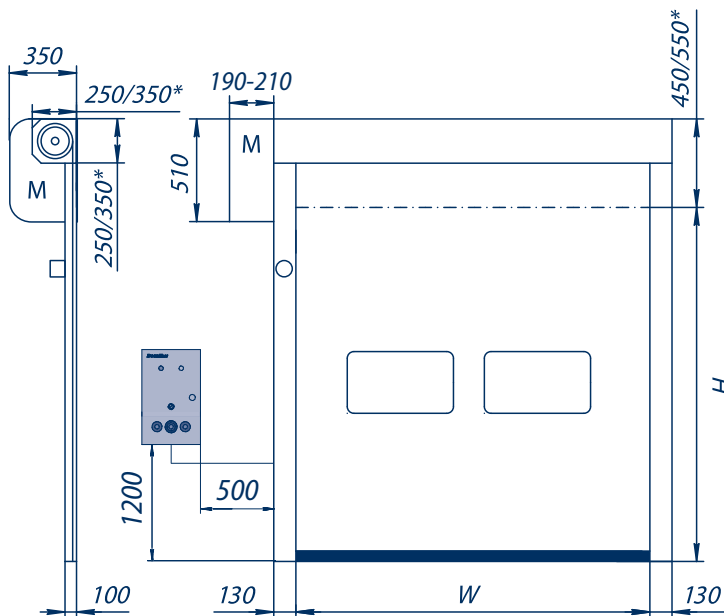


Fig. 2. Front drive

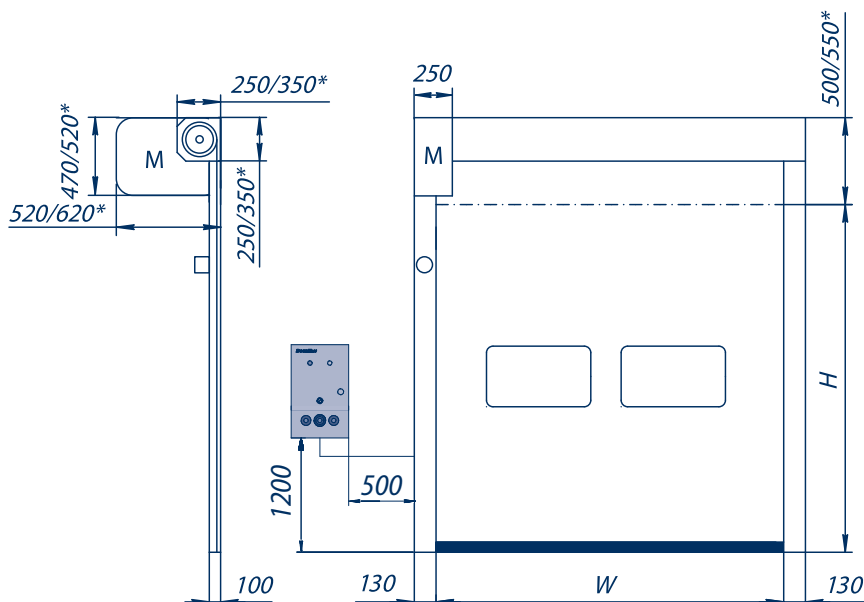


Fig. 3. Side drive, counterbalance

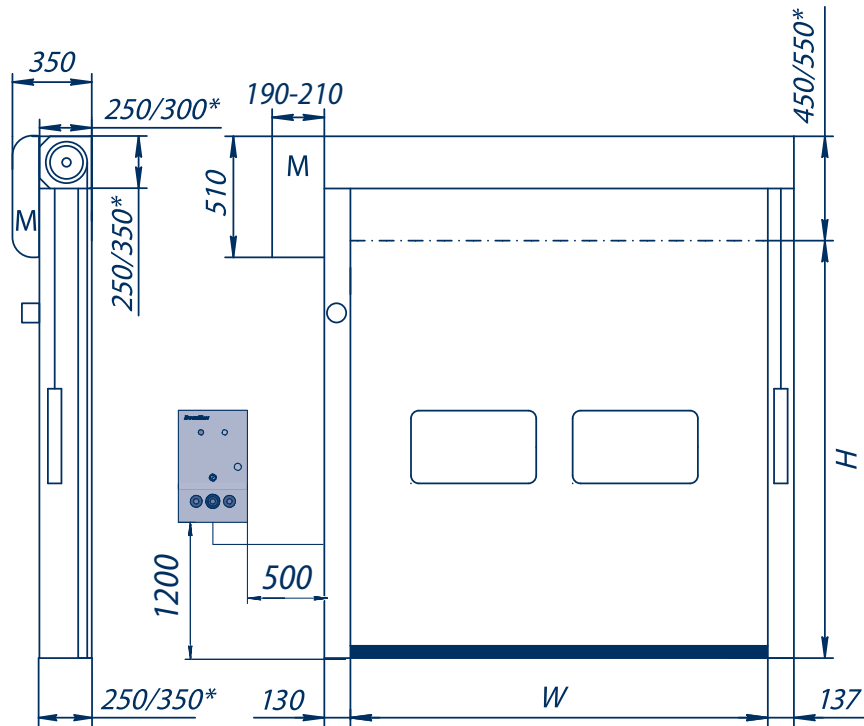
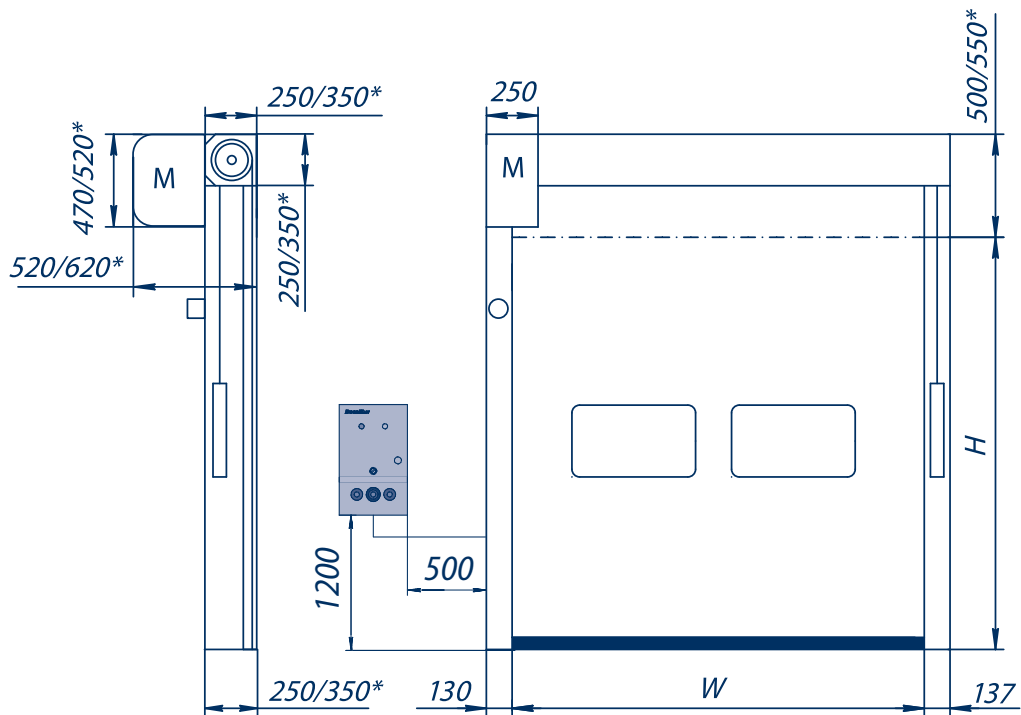


Fig. 4. Front drive, counterbalance



5.6. DOOR FRAME INSTALLATION

It is important to prepare fasteners appropriate to the type of wall before starting with the installation. Make sure the lifting equipment is able to raise the door frame to the necessary height before starting to lift it.

▲ ATTENTION!

Maximum dimensions of the door assembled on a horizontal surface and lifted with a forklift should not exceed 3,500 (W) × 3,500 (H) mm.

If door dimensions exceed the listed above figures install vertical tracks at first, than lift the door upper part, and fix it to the vertical tracks and wall.

5.6.1. DOOR DIMENSIONS LESS THAN 3,500 × 3,500 MM

1. Place all door frame parts on a horizontal surface.
2. Dismantle tracks casing, shaft box and drive casing.
3. Fasten vertical tracks to shaft box with angles and screws.
4. Carefully raise assembled frame with a forklift and move it to the door opening.
5. Level all parts of the door frame with water level (put a pad under a track if necessary).
6. Temporarily attach the frame (vertical tracks, shaft box) to the wall with fasteners.
7. Fix the shaft box and drive casing.

Fig. 1

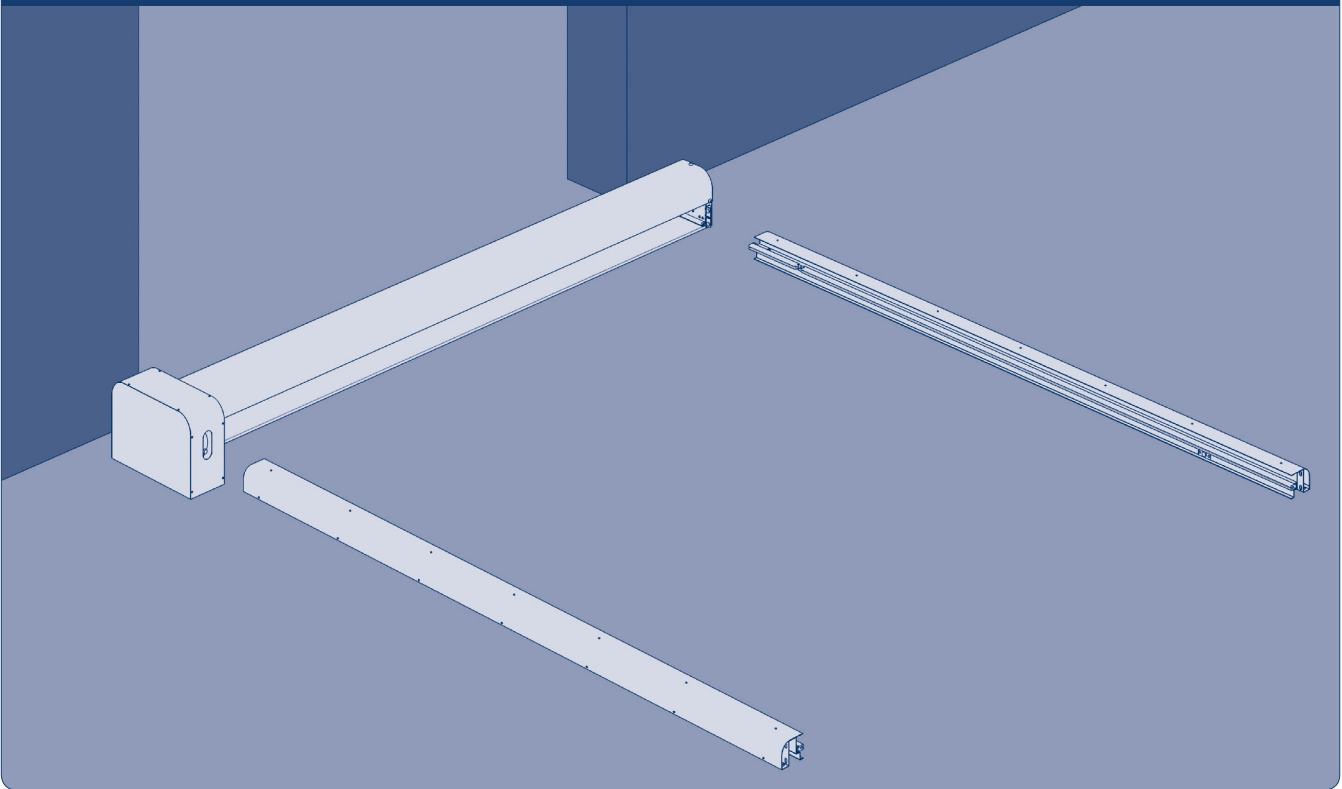


Fig. 2

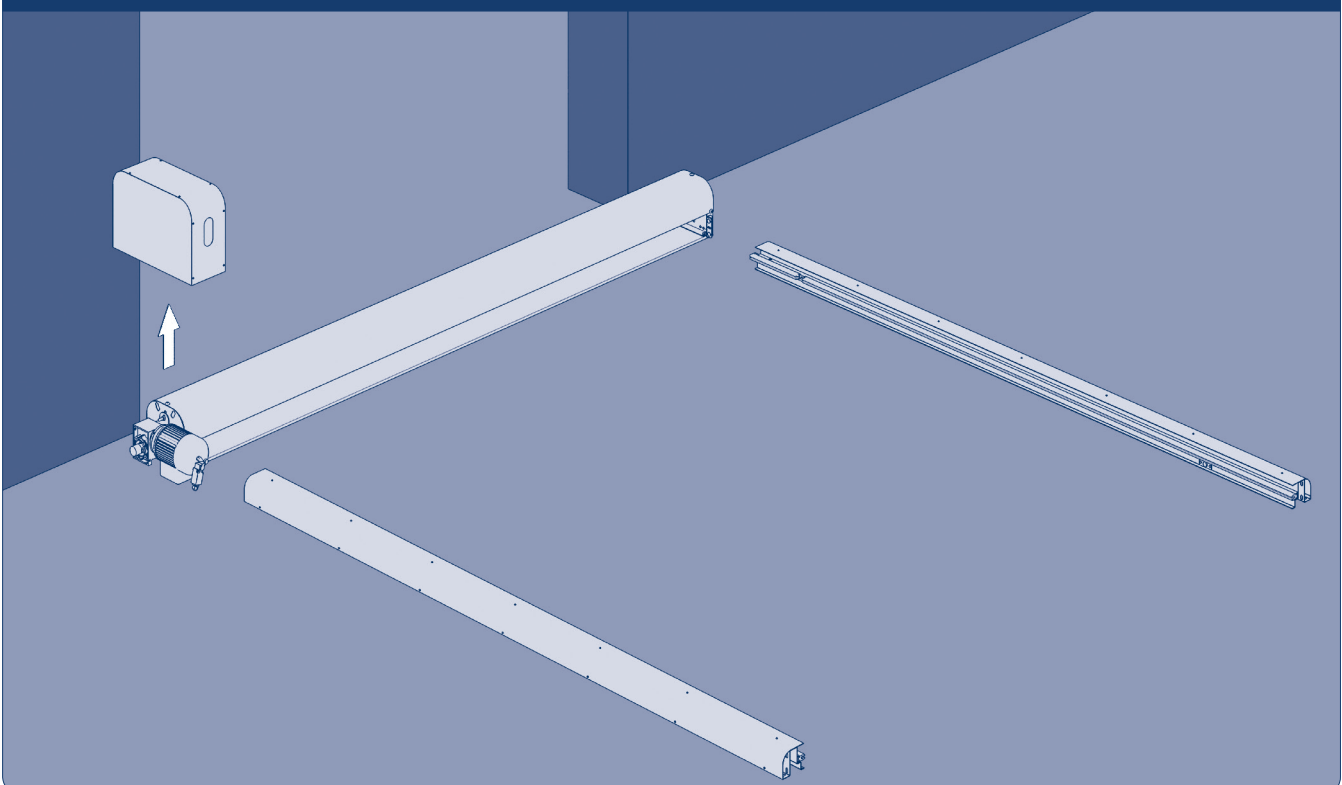


Fig. 3

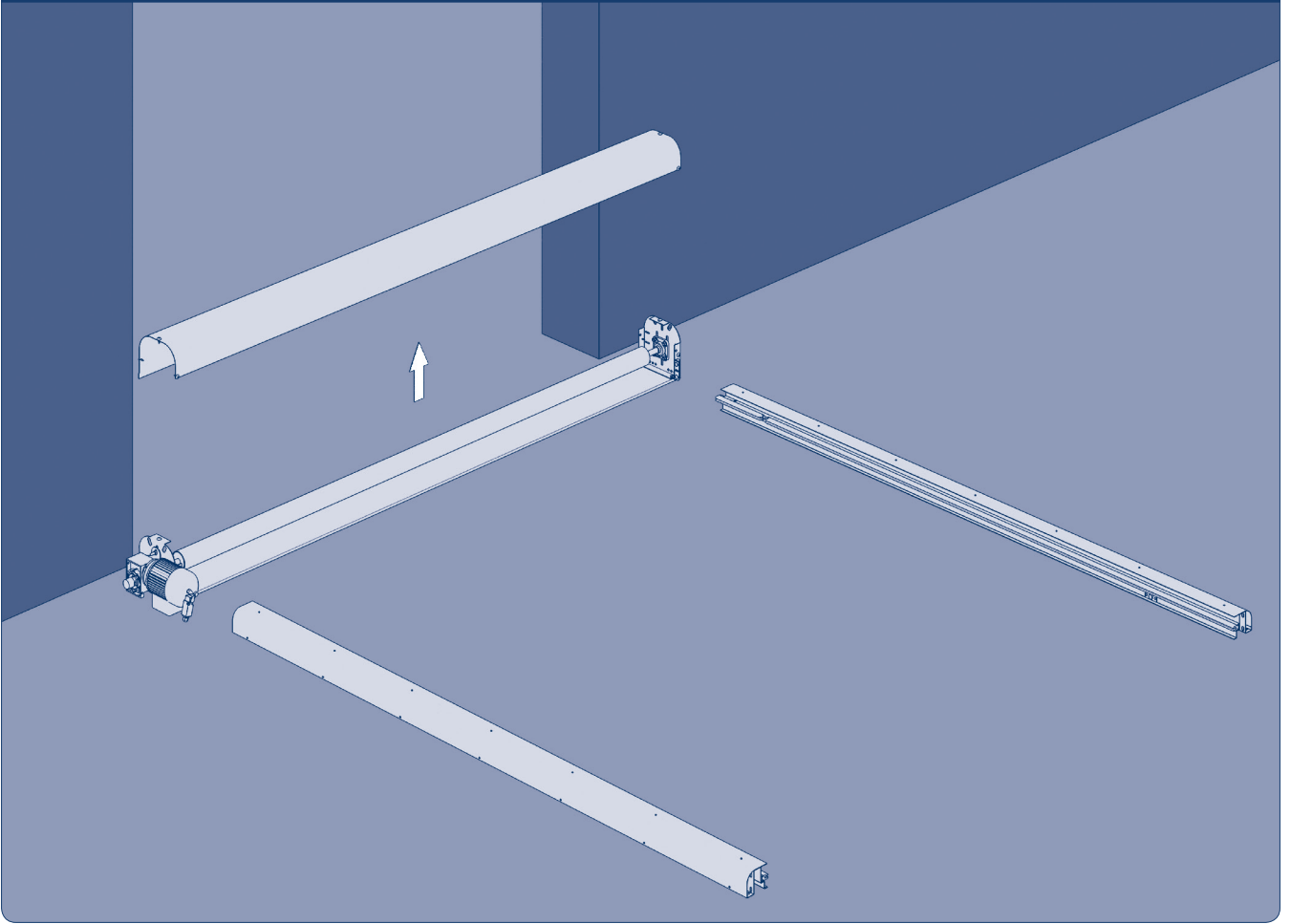


Fig. 4

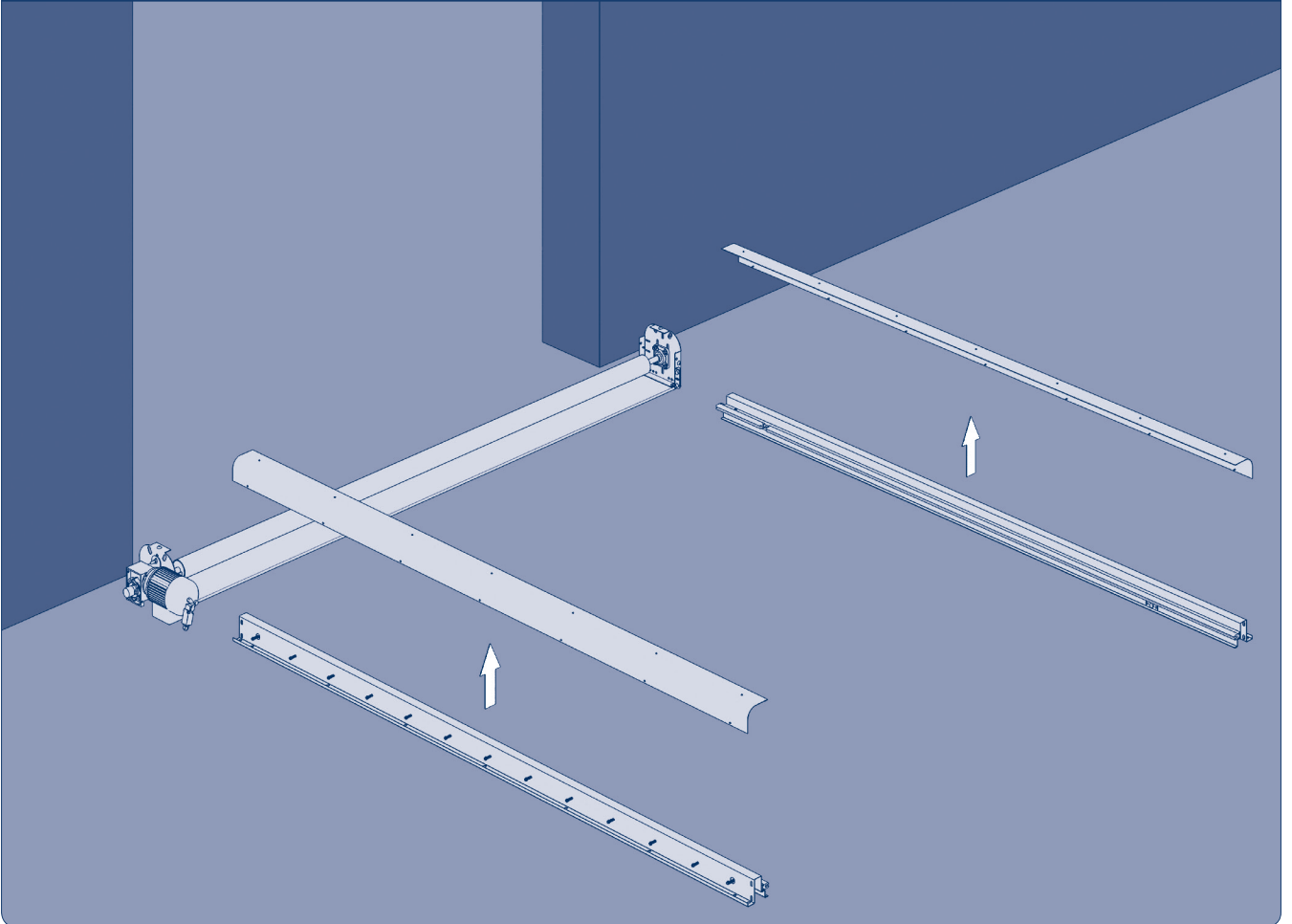


Fig. 5

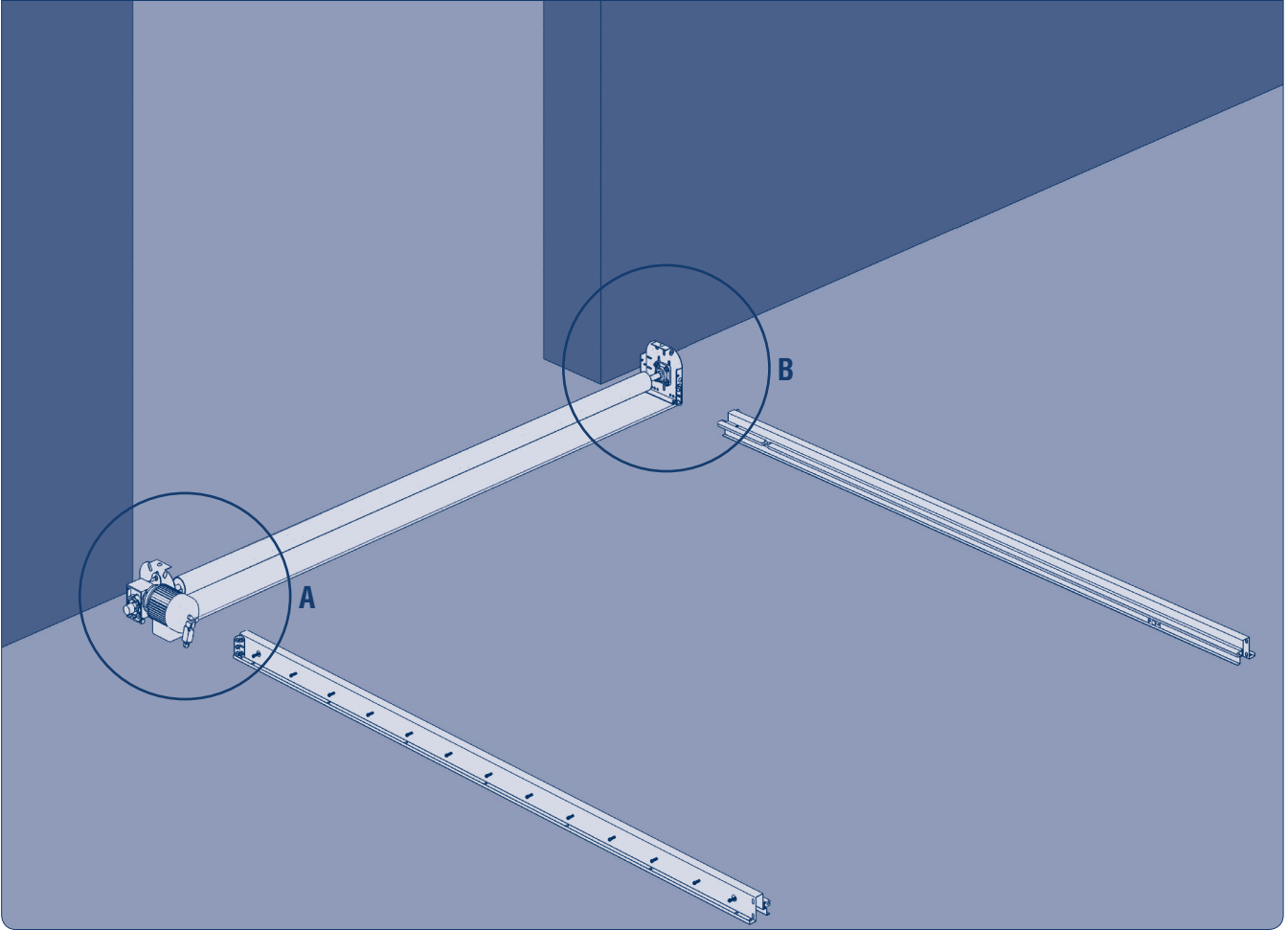


Fig. 5A.1

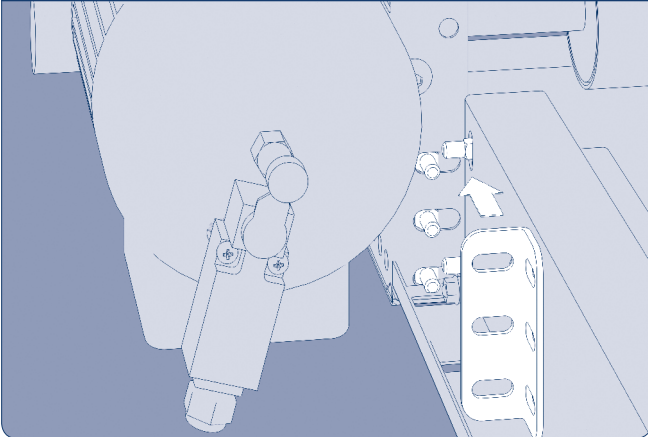


Fig. 5A.2

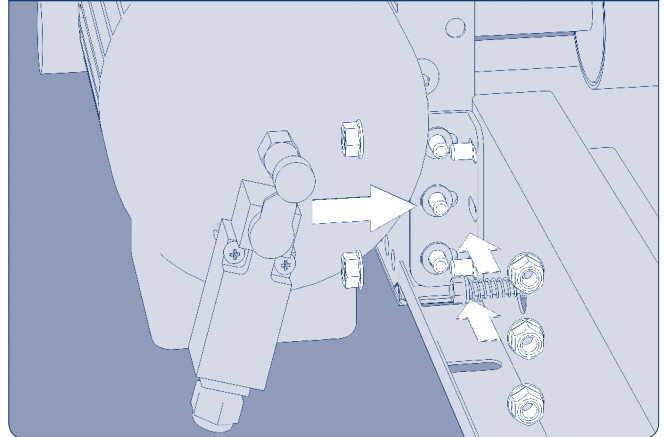


Fig. 5B.1

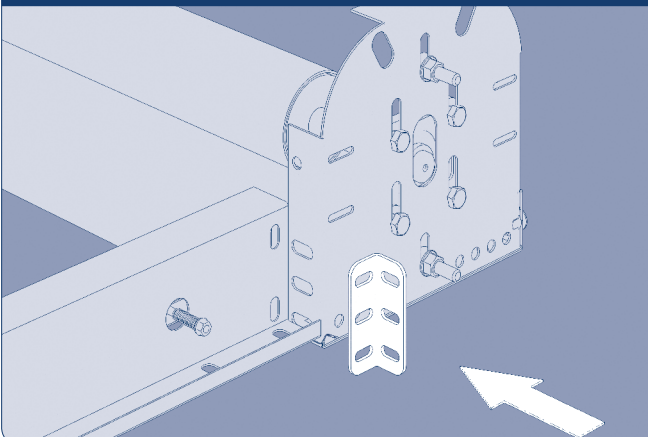


Fig. 5B.2

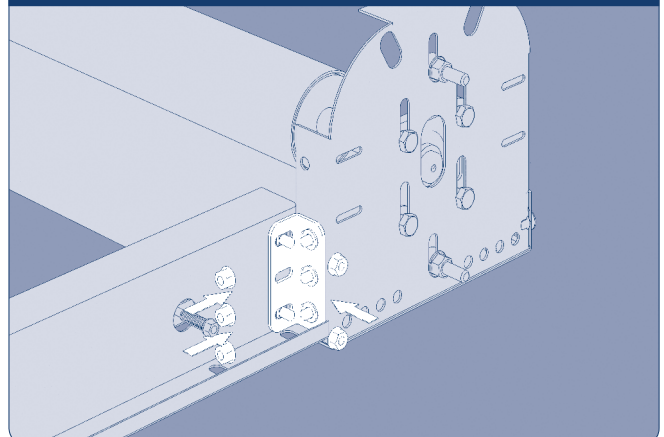


Fig. 6

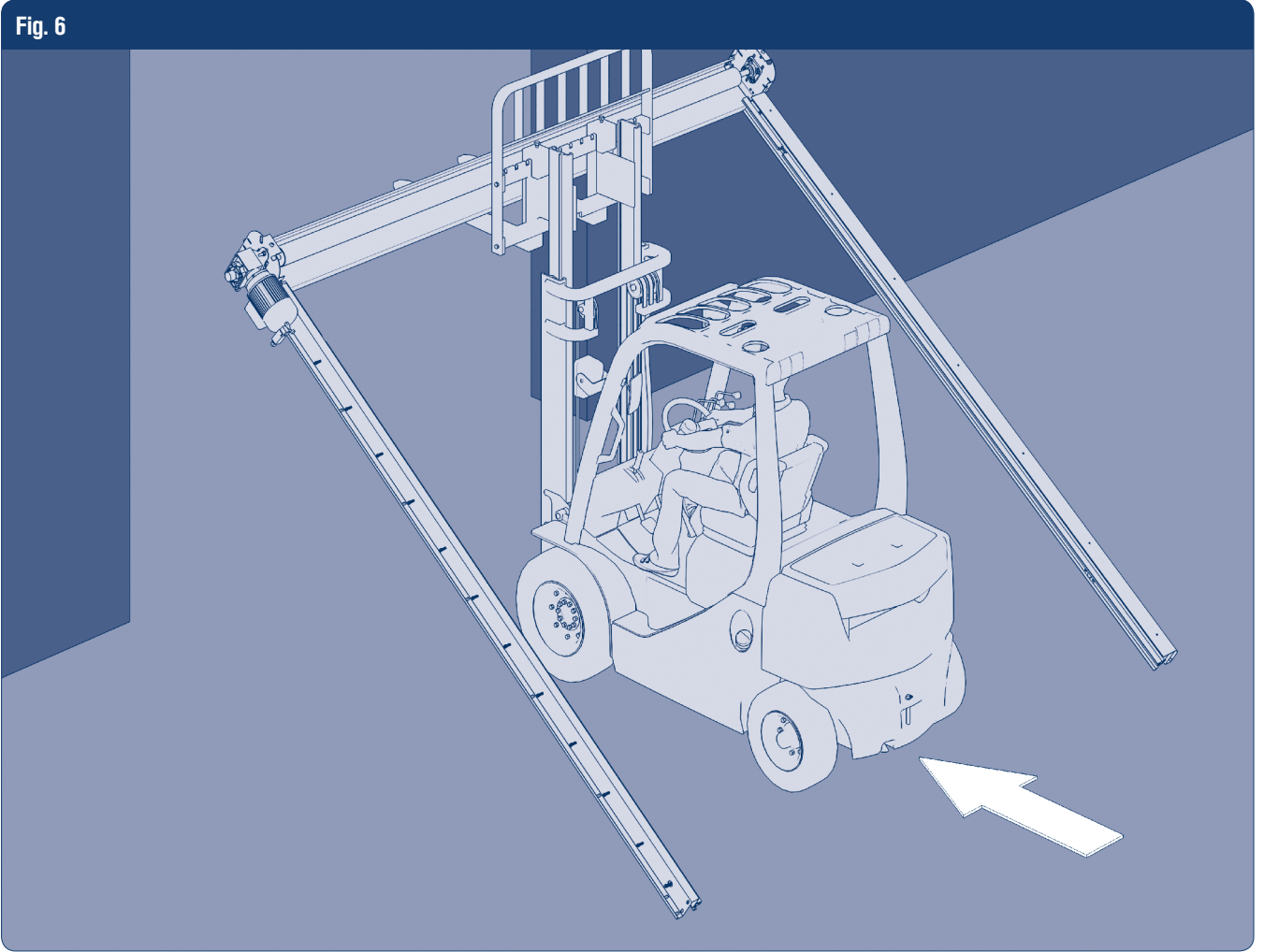


Fig. 7

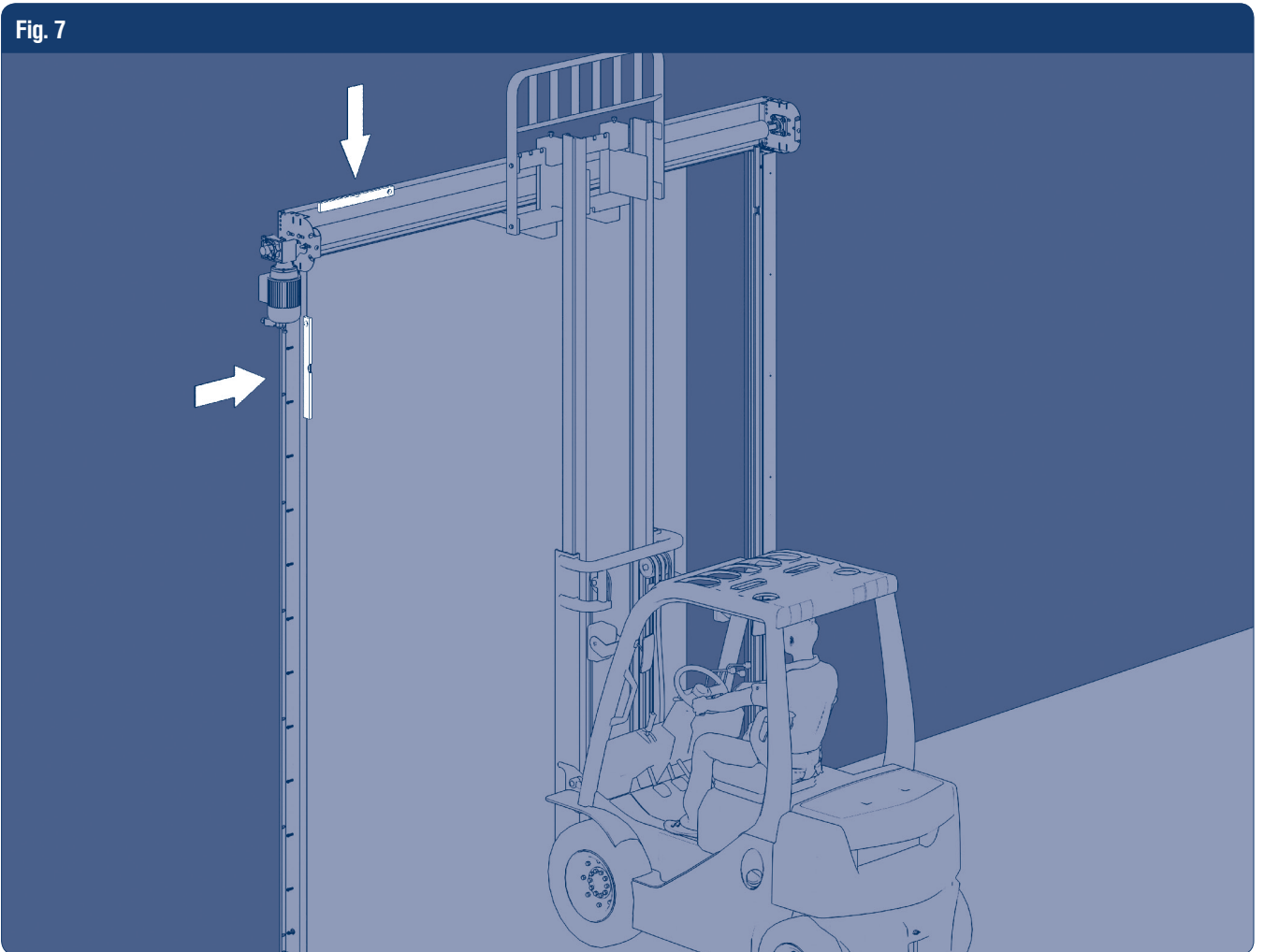


Fig. 8

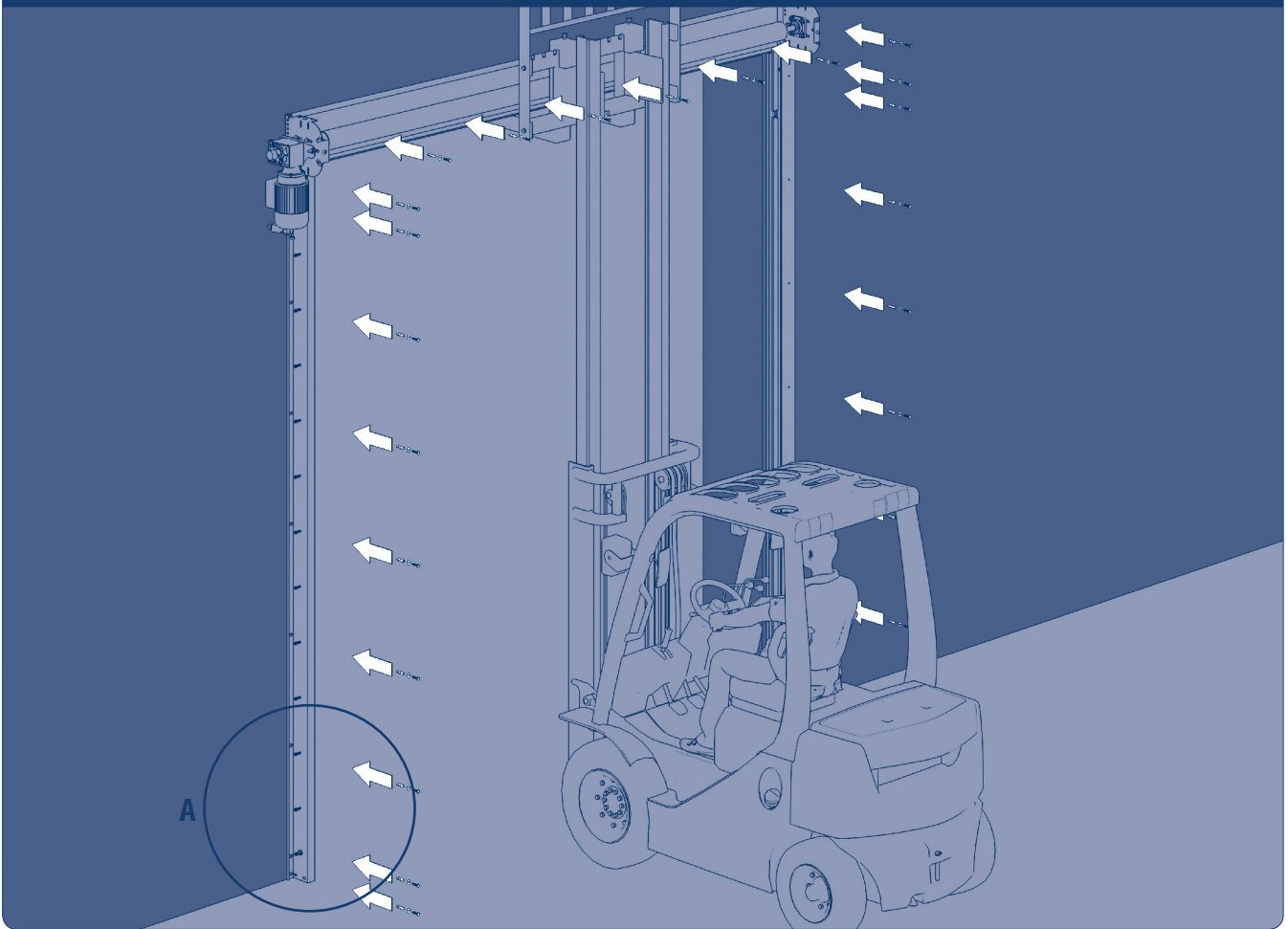


Fig. 8A

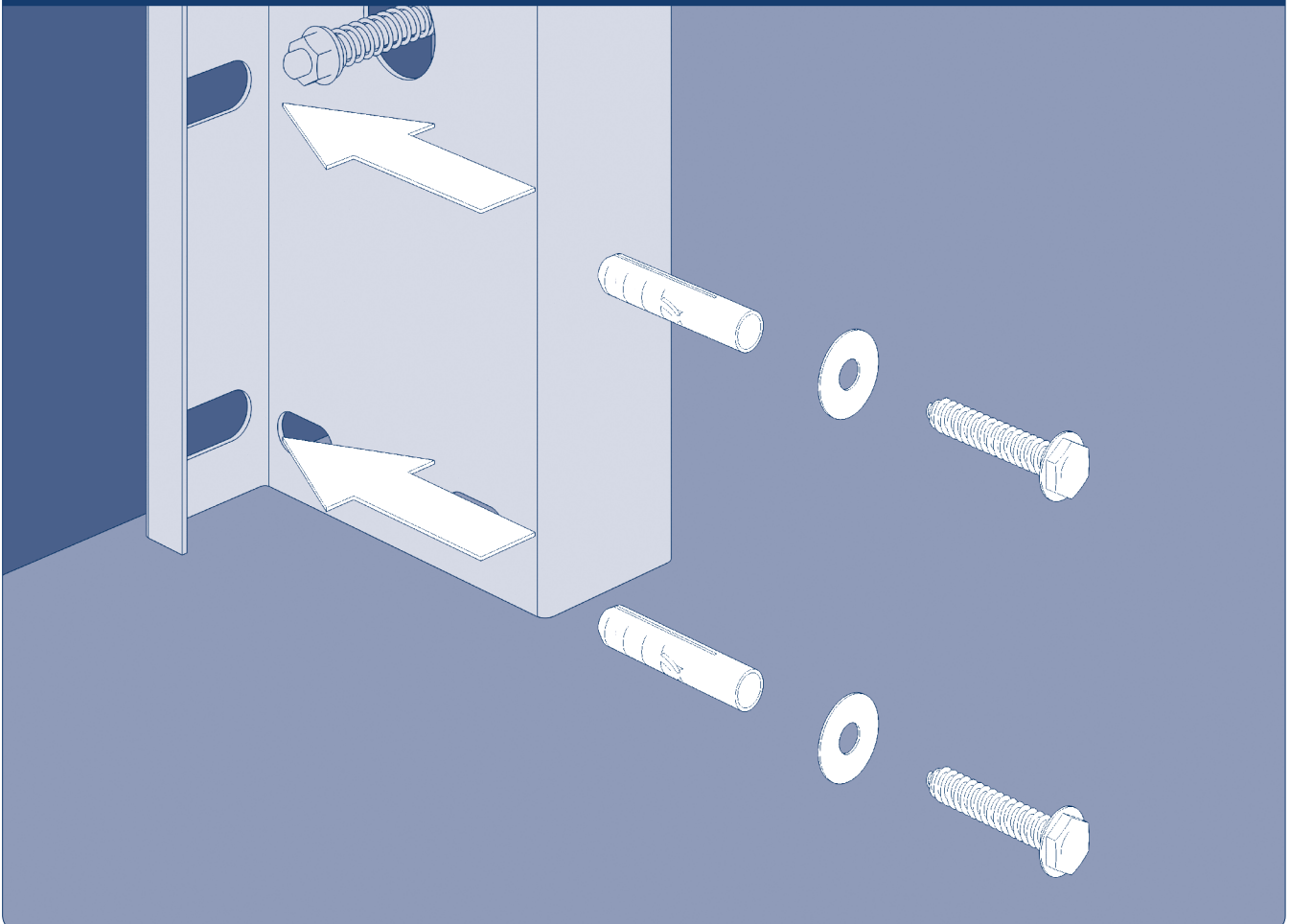


Fig. 9

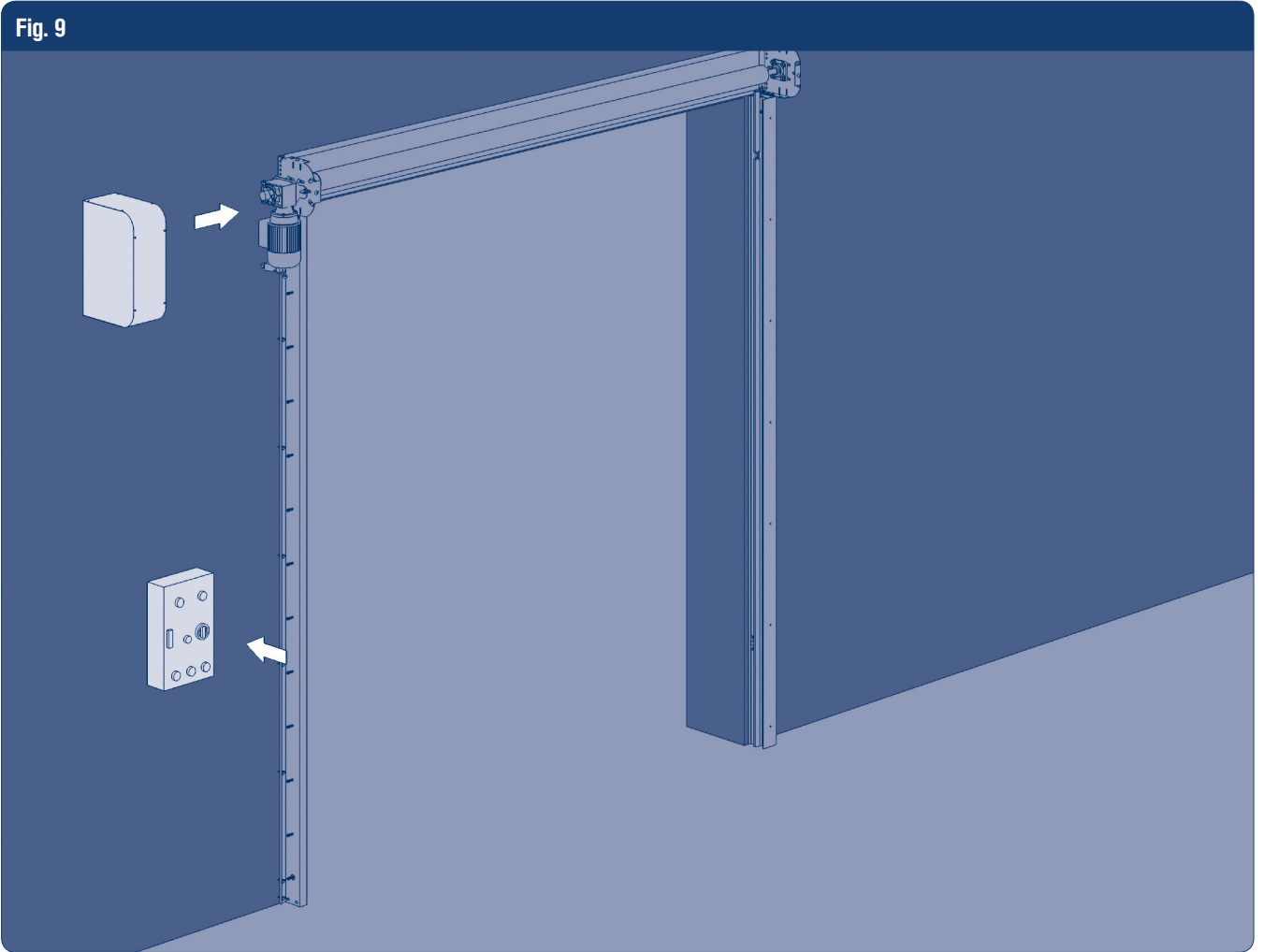


Fig. 10



5.6.2. DOOR DIMENSIONS MORE THAN 3,500 × 3,500 MM

1. Place all door frame parts on a horizontal surface.
2. Dismantle tracks casing, shaft box and drive casing.
3. Level vertical tracks with water level (put a pad under a track if necessary) and temporarily fix them to the wall with fasteners.
4. Carefully raise the door upper part with a forklift and place it on vertical tracks.
5. Fasten vertical tracks to shaft box with angles and screws.
6. Attach door upper part to the wall with fasteners.
7. Fix the shaft box and drive casing.

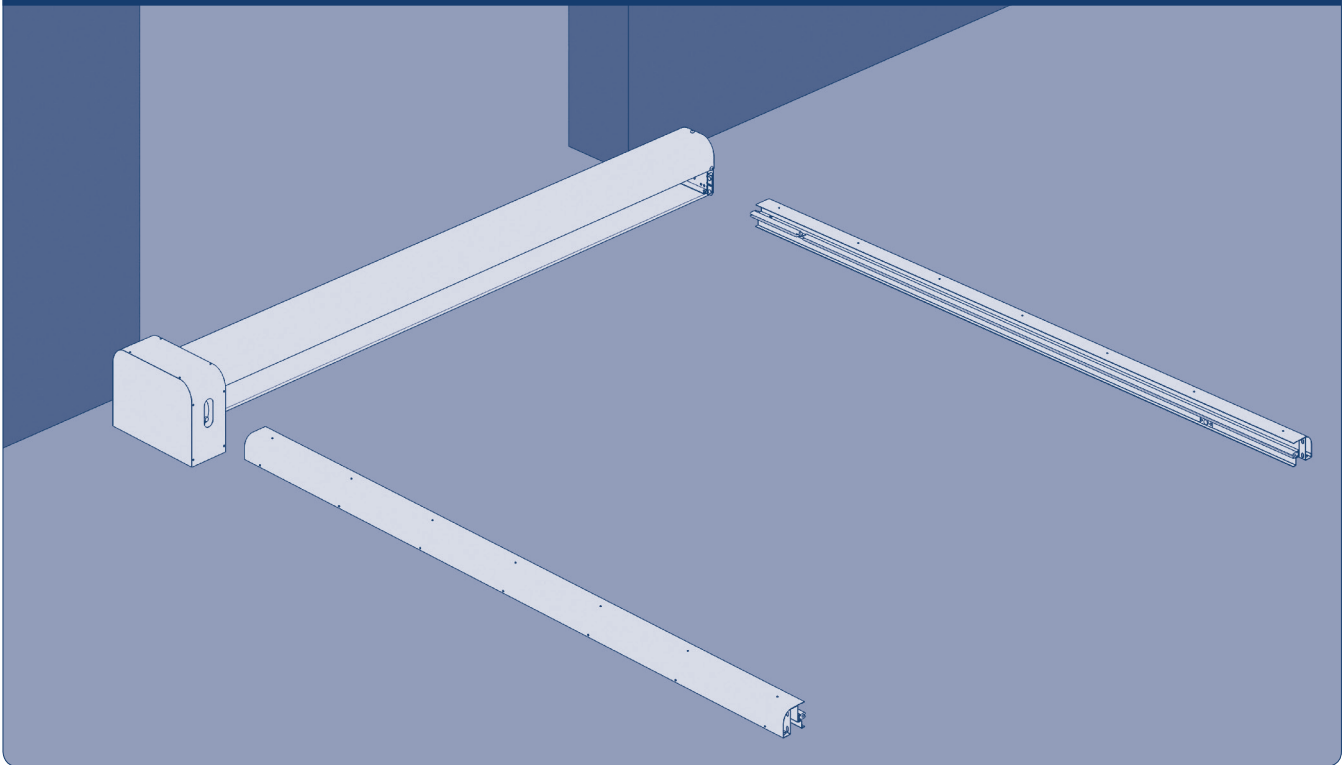
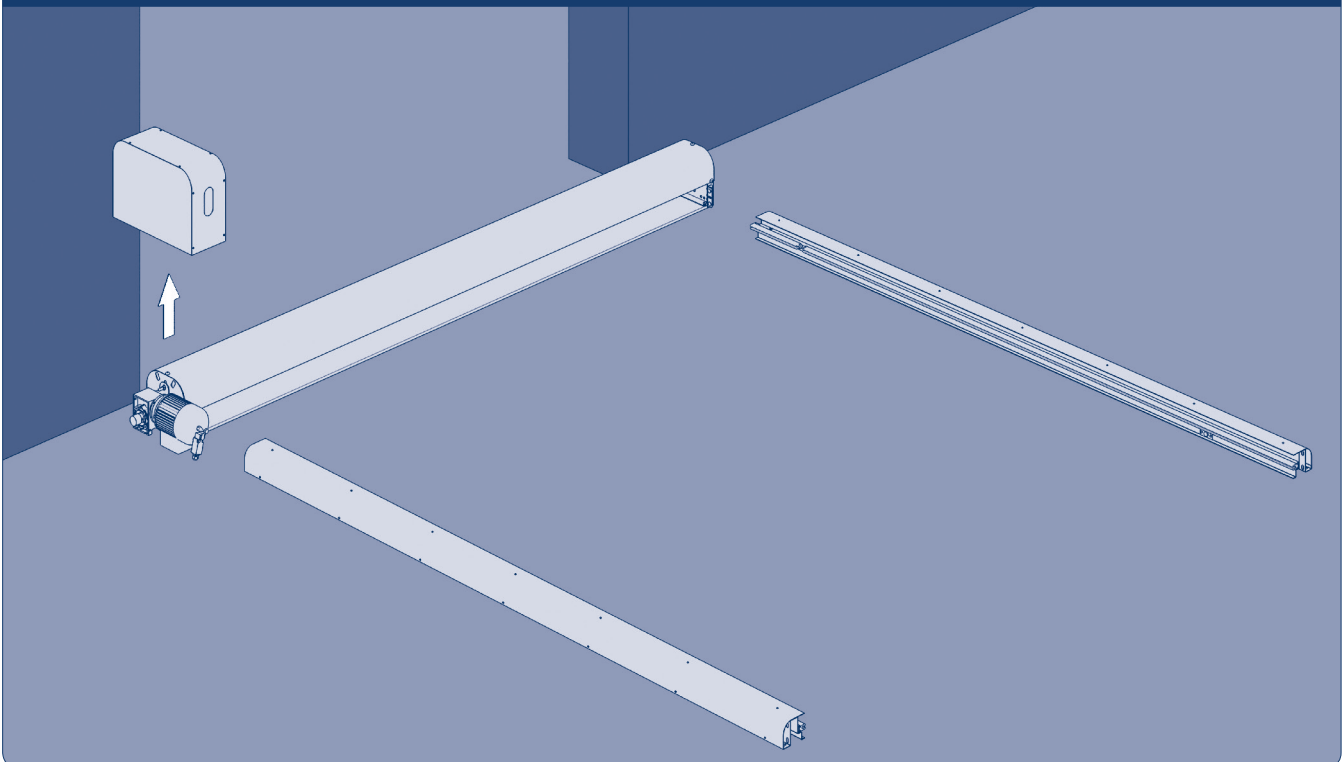
Fig. 1**Fig. 2**

Fig. 3

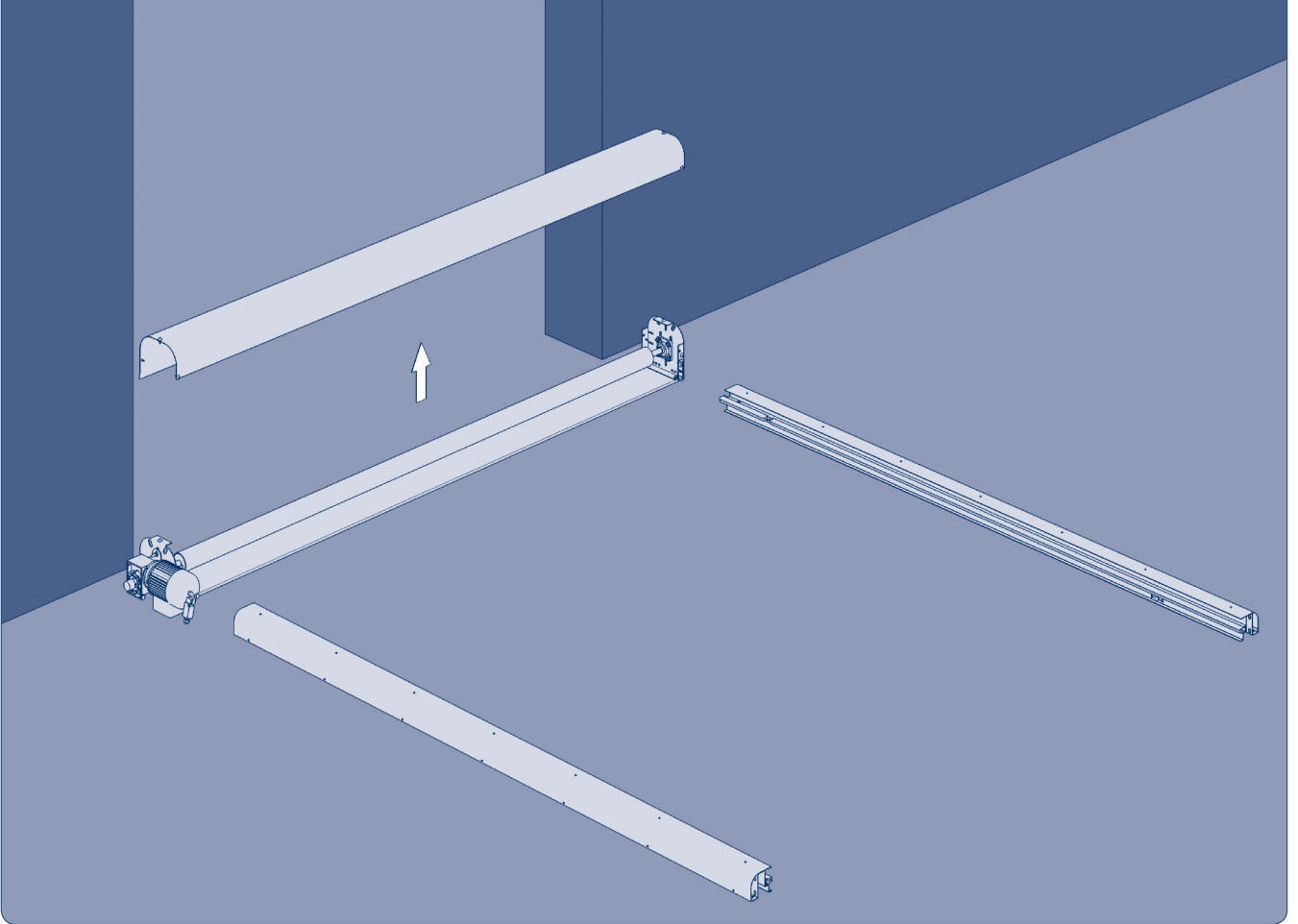


Fig. 4

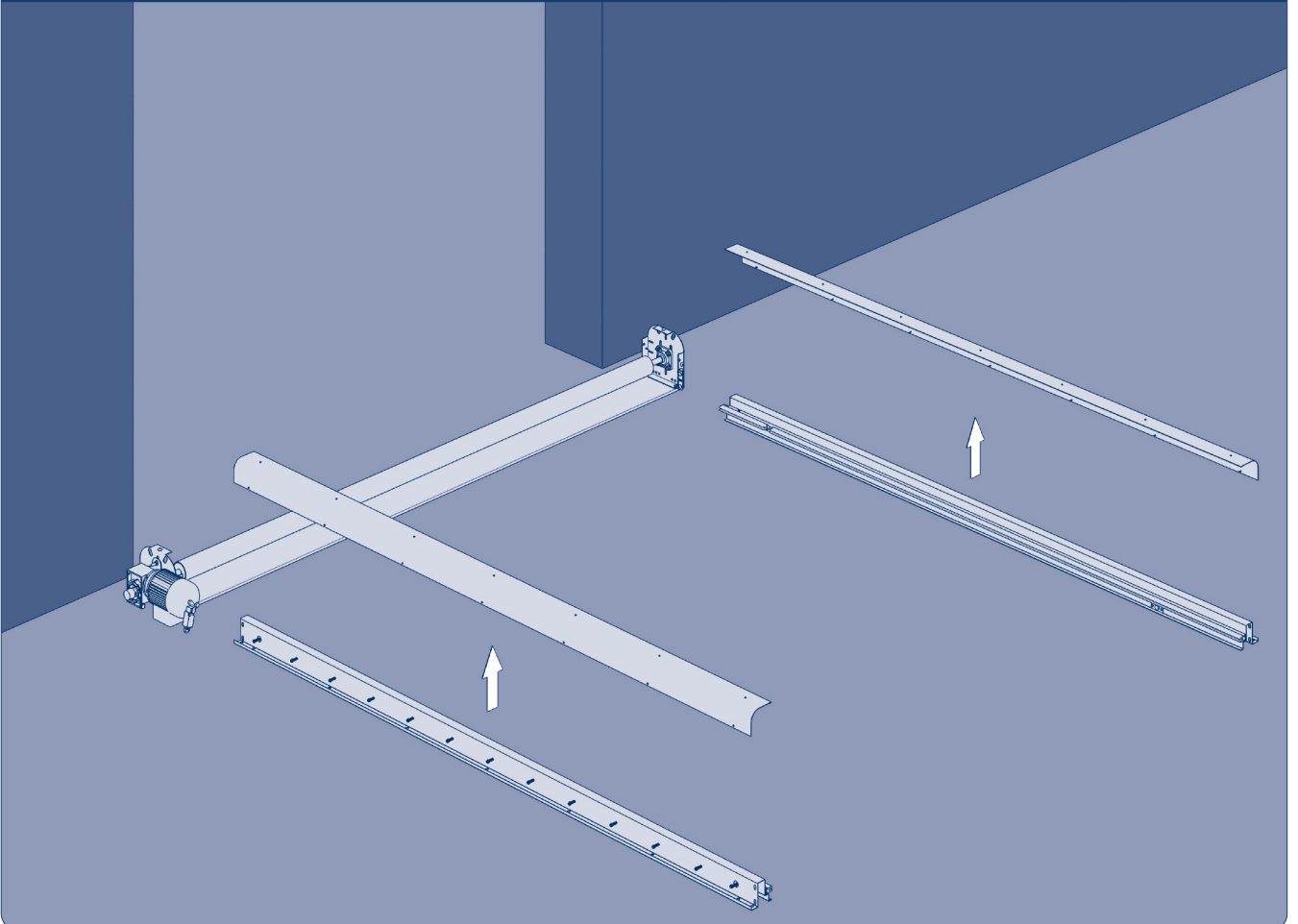


Fig. 5

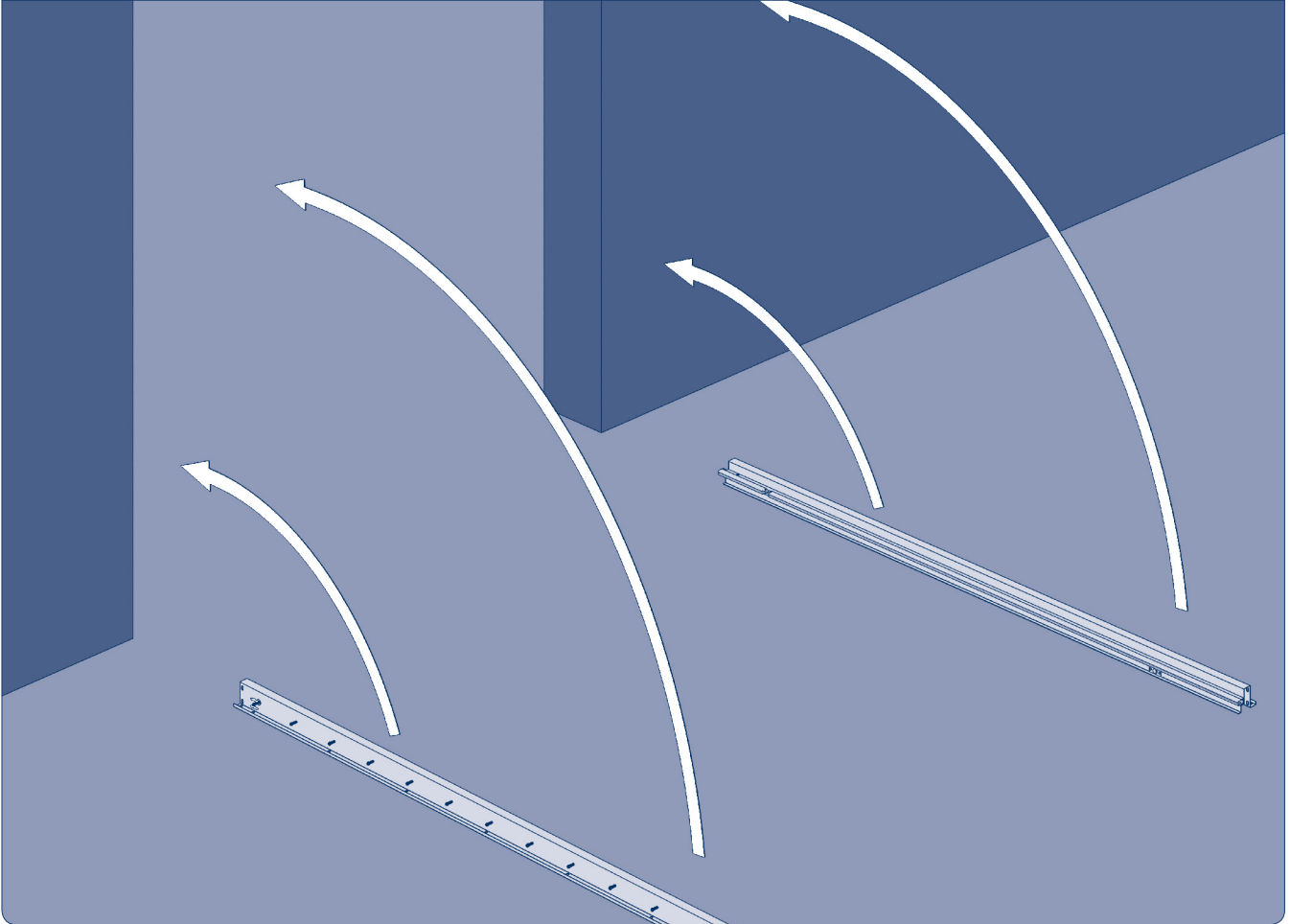


Fig. 6

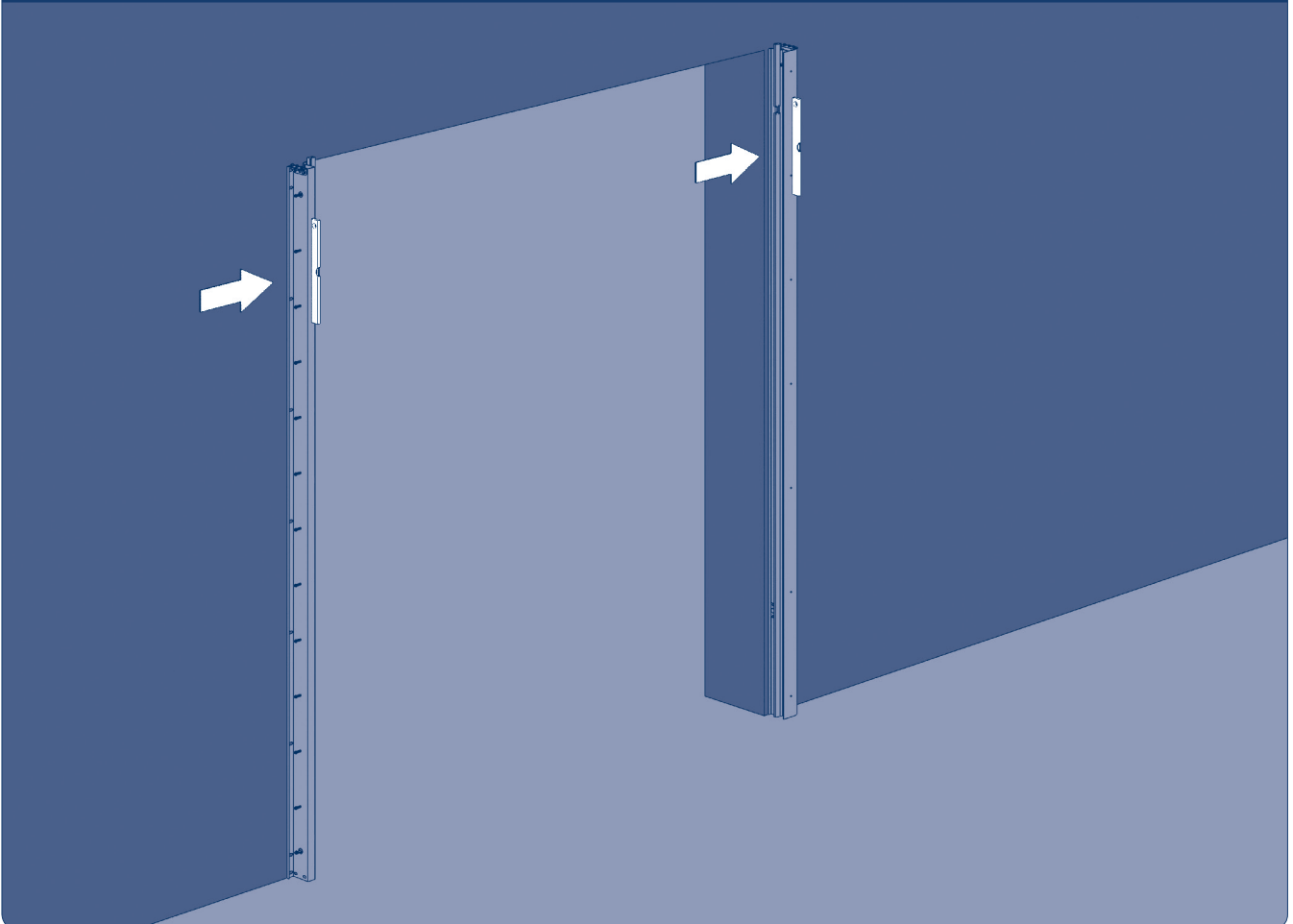


Fig. 7

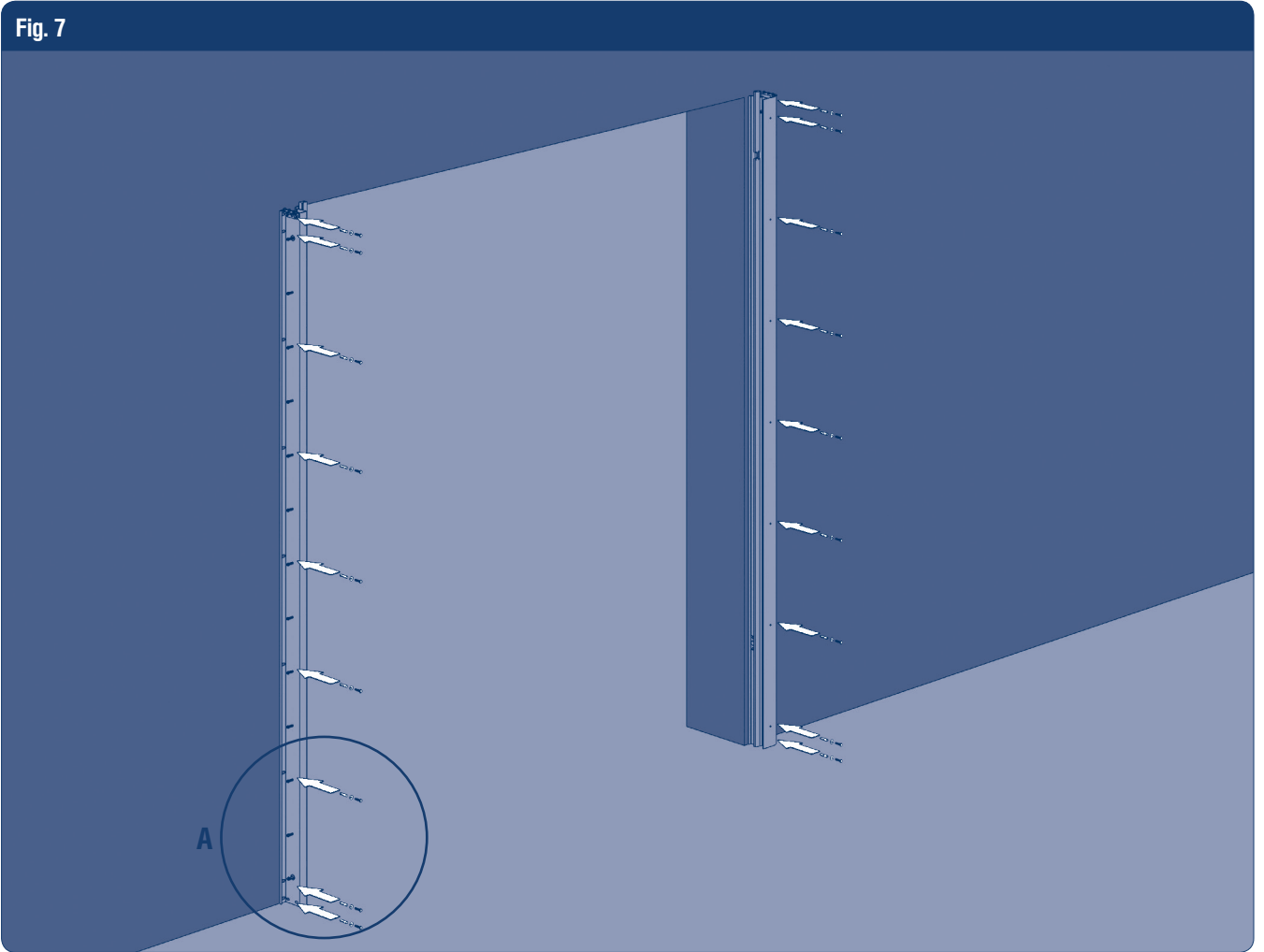


Fig. 7A

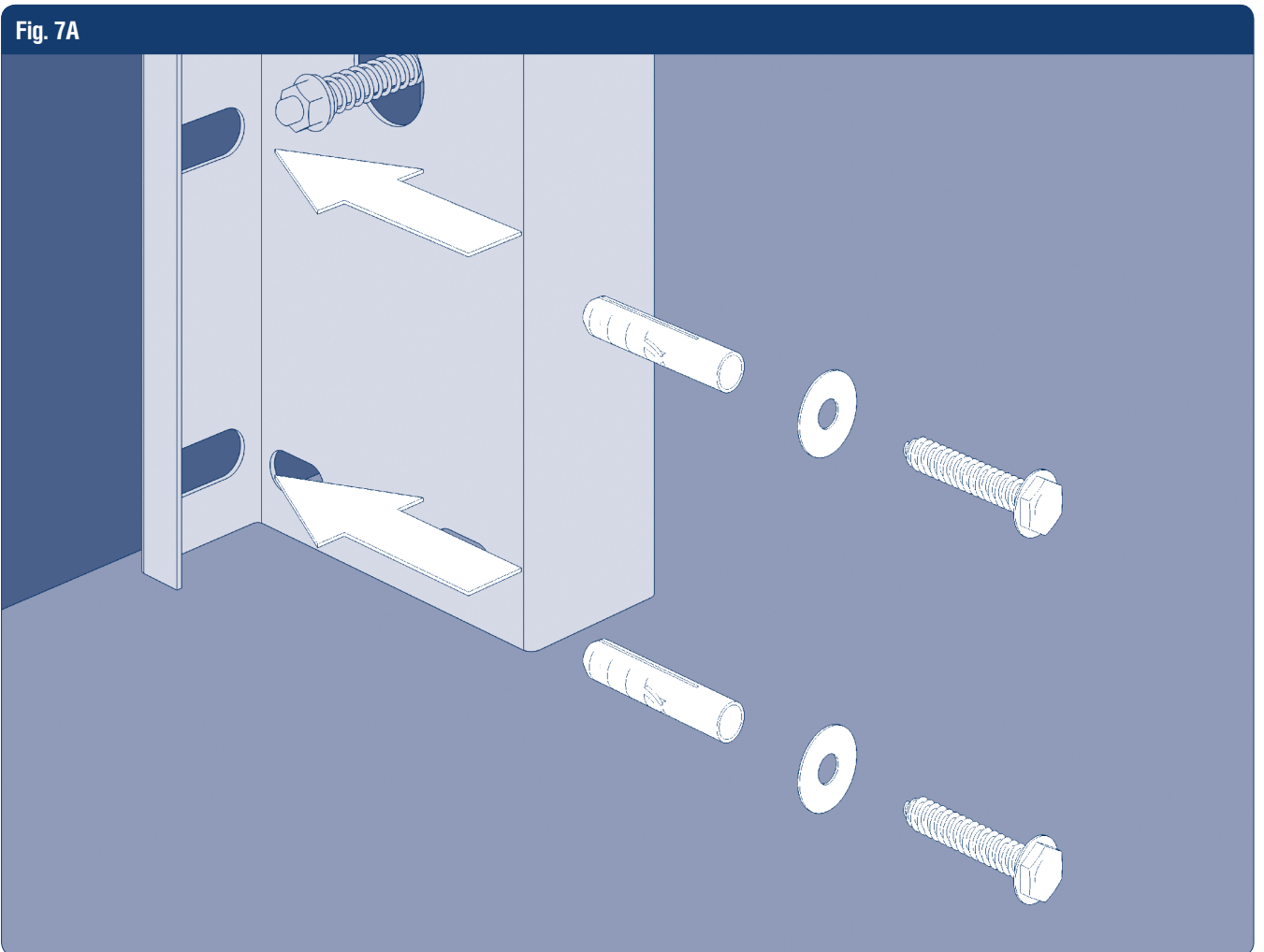


Fig. 8

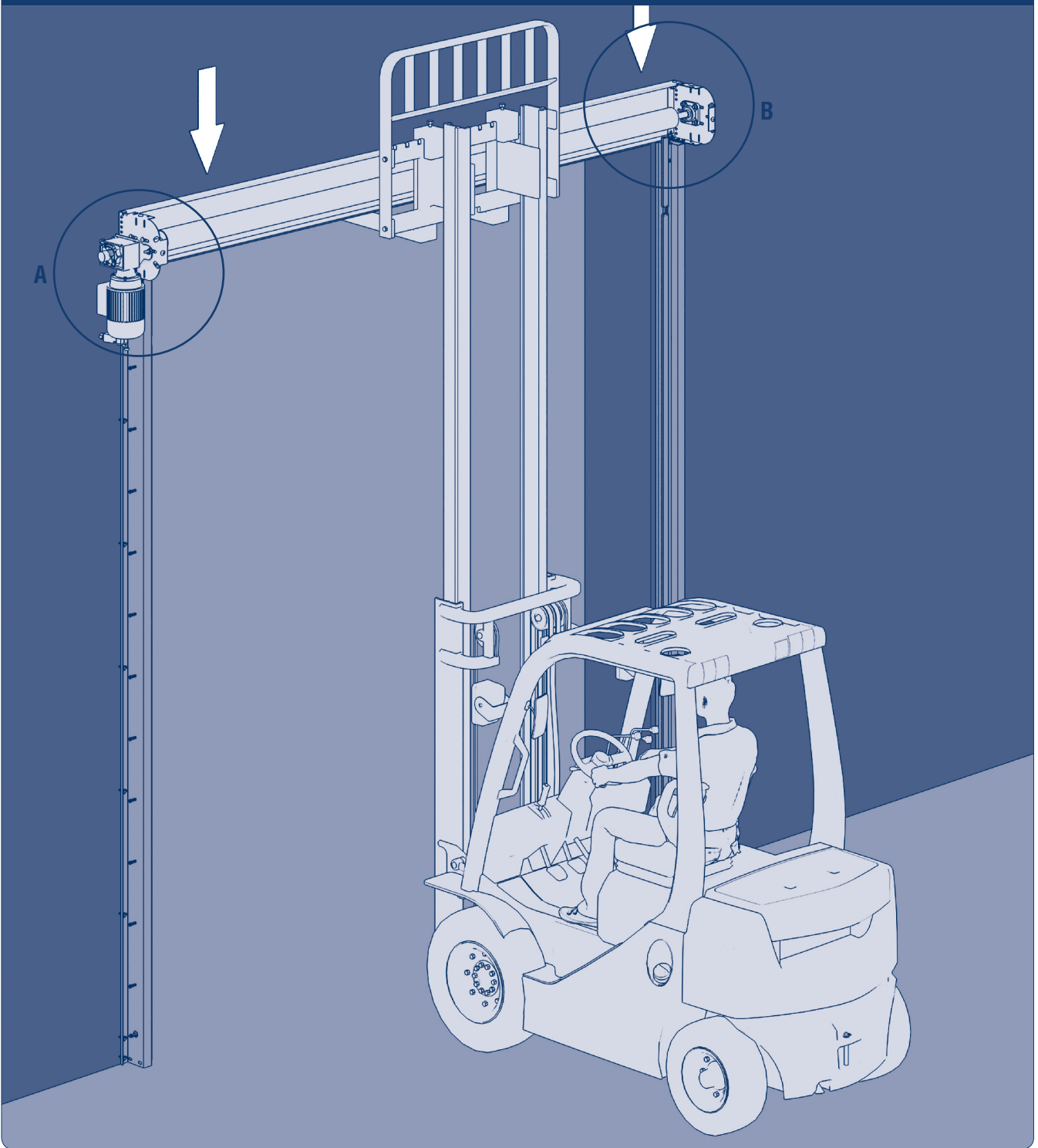


Fig. 8A

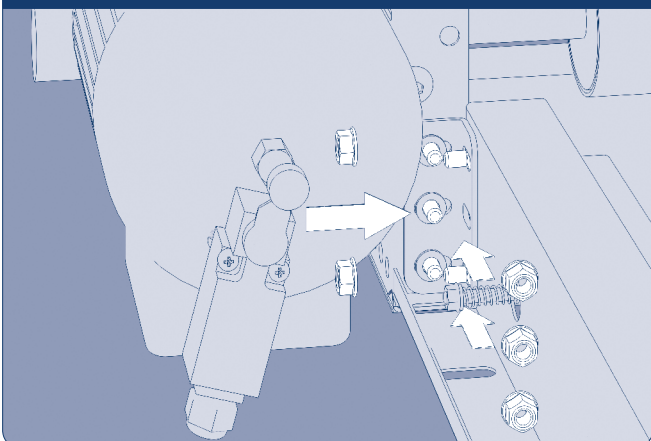


Fig. 8B

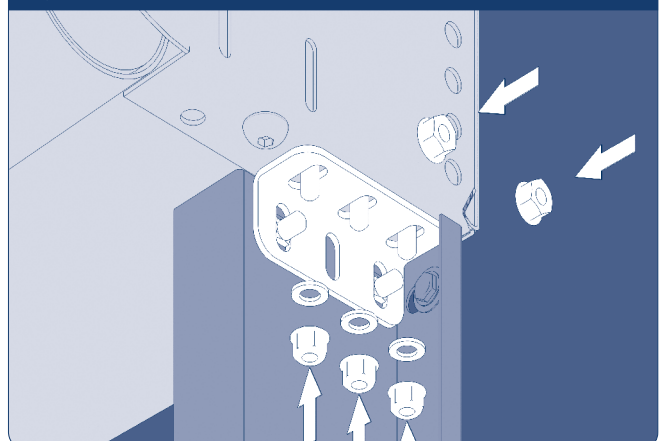


Fig. 9

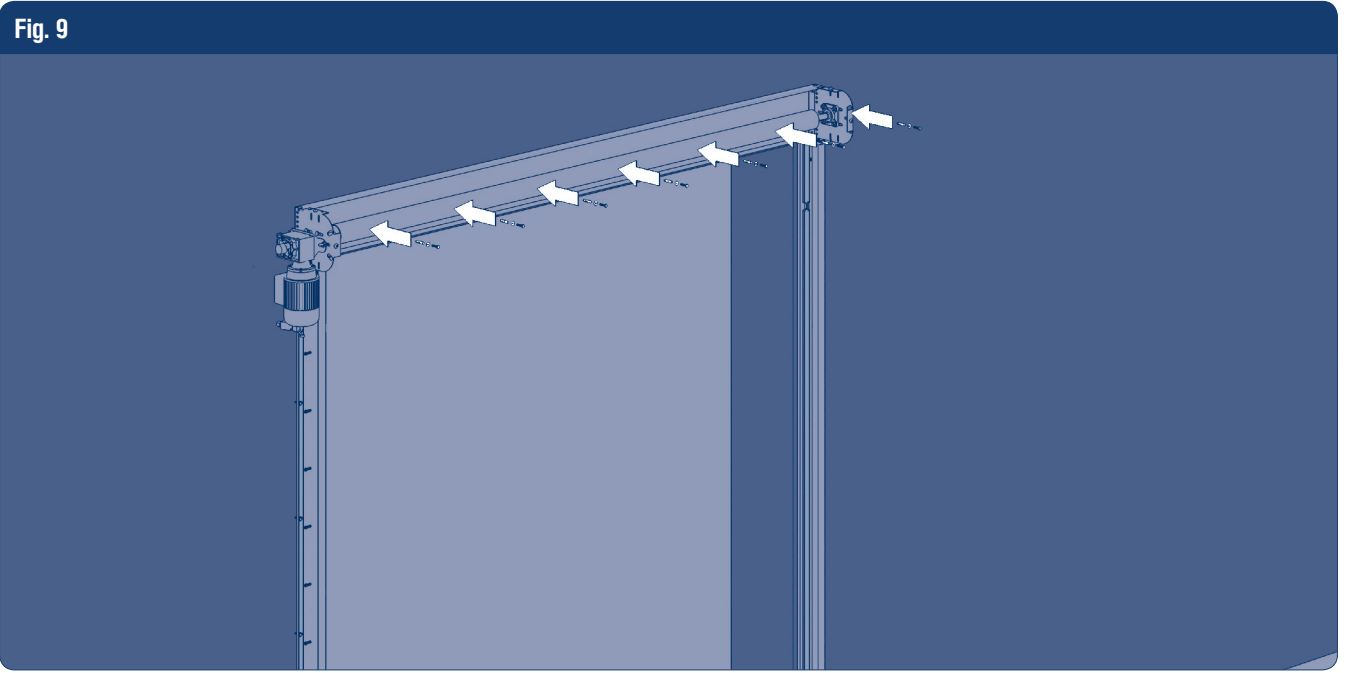
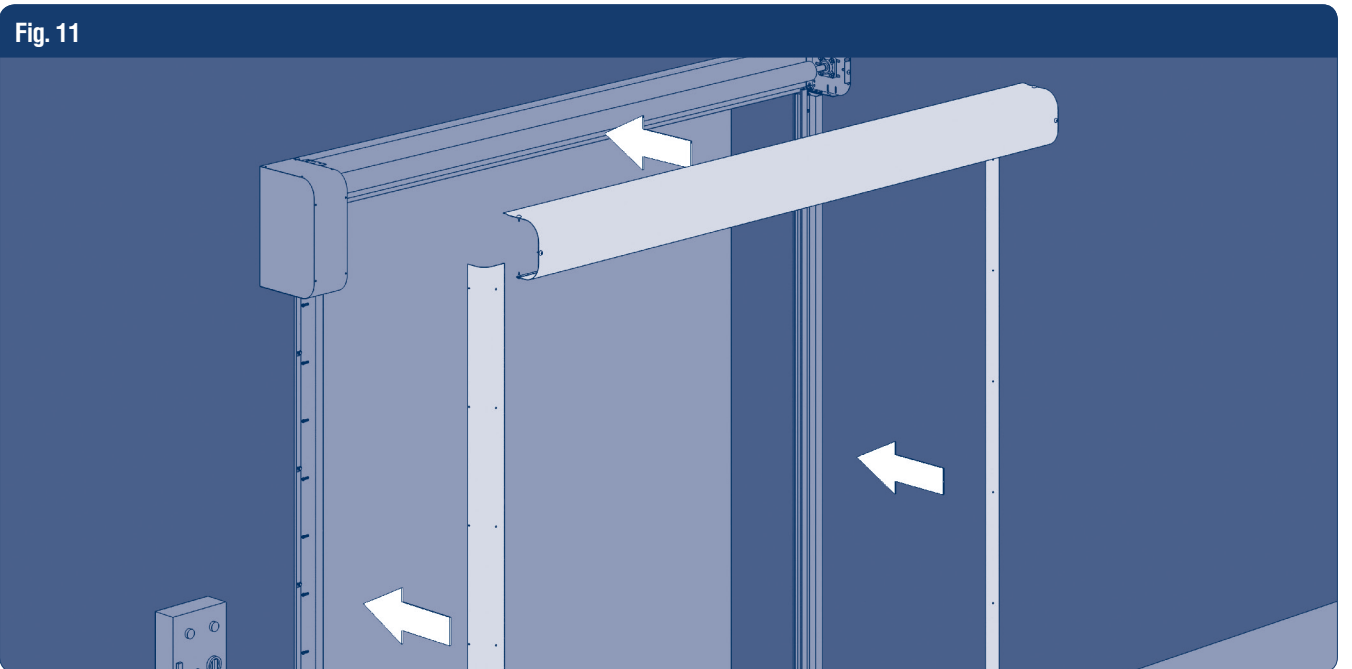


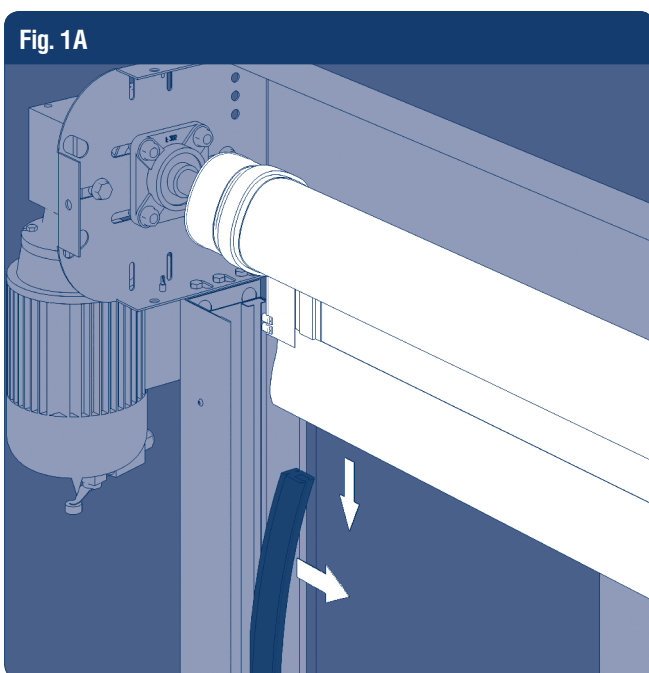
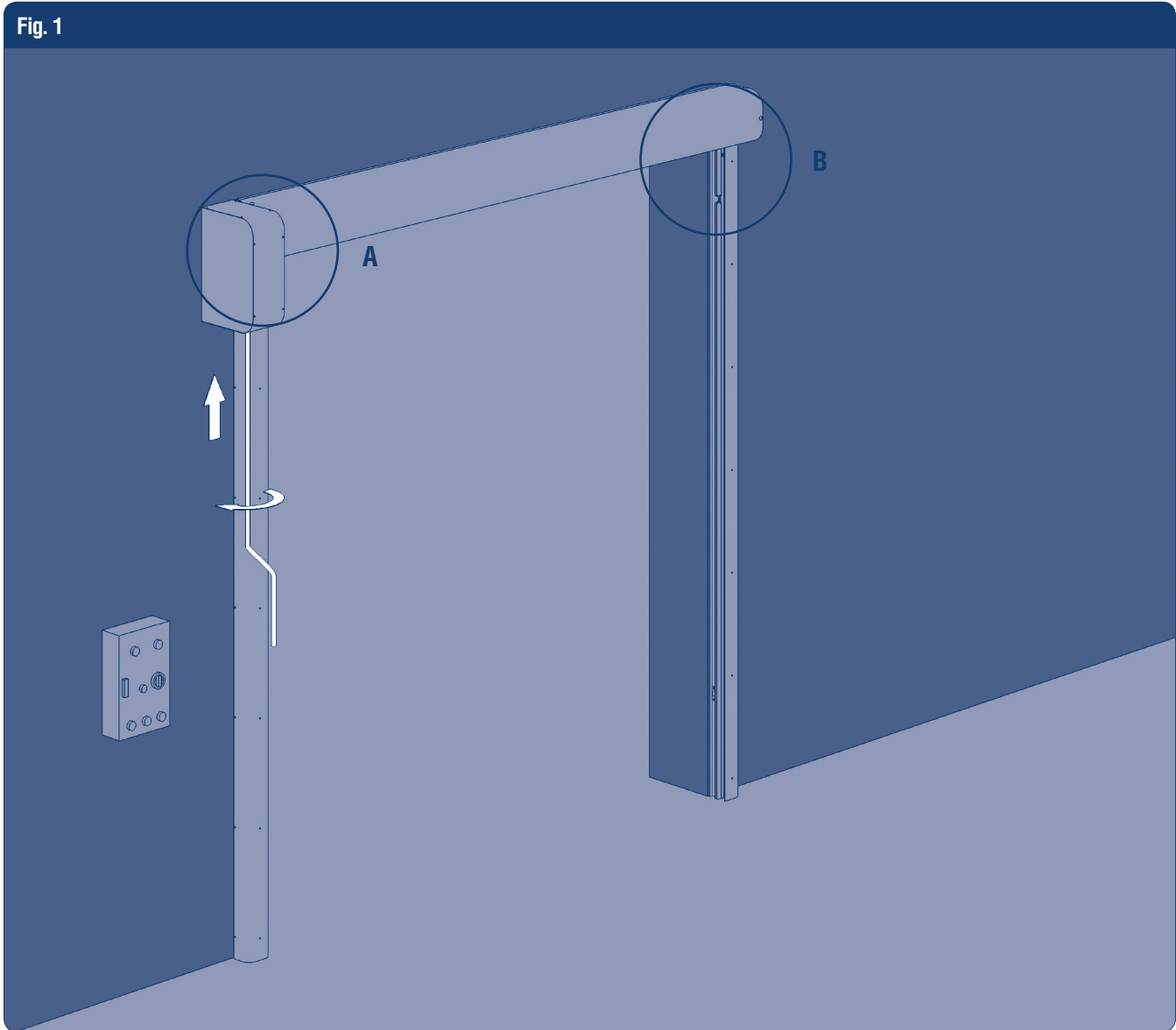
Fig. 10



Fig. 11

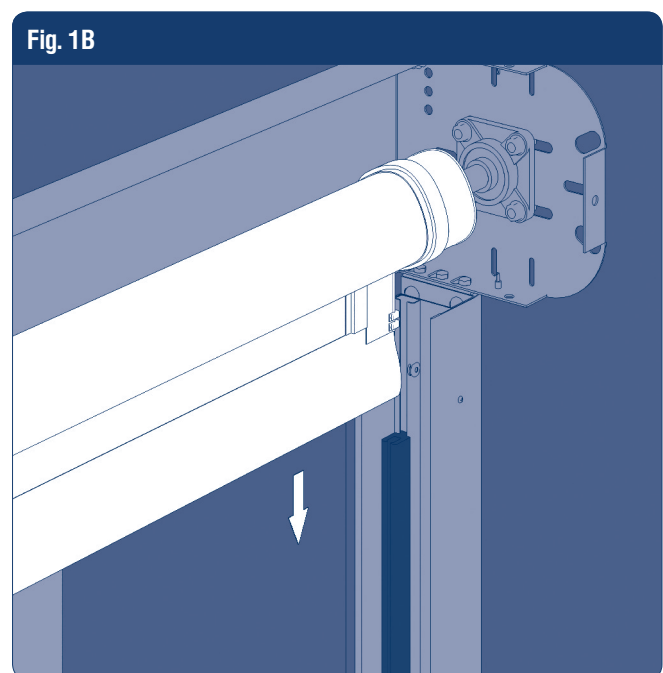


5.7. HOW TO INSERT DOOR CURTAIN INTO VERTICAL TRACKS



Left vertical track

Bend the plastic curtain guide to the right (in the upper part). Slide the curtain into the guide about 50 mm.

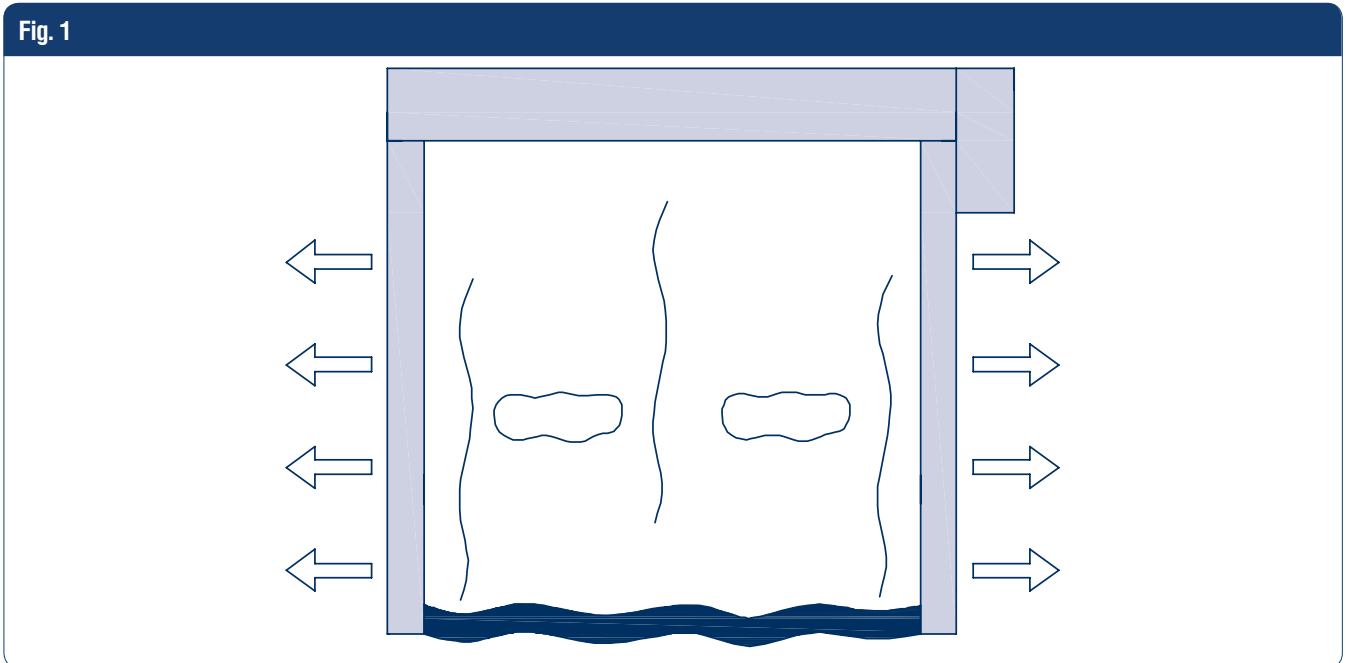


Right vertical track

Connect the crank with motor shaft. Rotate the crank and lower the curtain till it slides into the guide about 50 mm.

5.8. ADJUSTMENT OF CURTAIN TENSION

1. Moving the tracks along adjustment holes, adjust curtain tension so that the gap between the track and the guide is 5 mm.
2. Once adjustment of curtain tension is completed check whether the curtain is properly tensioned, fasten the vertical tracks firmly through all mounting holes, and install tracks casing.



Once curtain is inserted into the door guides adjust door limit positions (see Installation and Operation Manual for Control Unit).

5.9. MANUAL CLOSING/OPENING

Door drive has a special cranked used for emergency opening/closing of the door in case of power outage. Rotate the cranked clockwise to open the door, and counterclockwise to close it.

6. MAINTENANCE

1. Before door service and maintenance technician should:
 - barricade the door and its working area from any form of traffic.
 - turn OFF power supply.
 2. Maintenance and troubleshooting should only be performed by trained technicians.
 3. Read these instructions thoroughly before service and maintenance of the door.
 4. Never use open fire or heat source that may cause fire when performing maintenance.
 5. Never use solvents of any kind.
 6. No personnel should be in the immediate vicinity of the serviced door unless maintenance technician needs help.
- Service interval depends on operating conditions but it's necessary to carry out standard maintenance procedures every six months.

Table 1. Service and maintenance highlights

Service item	Procedure	Interval
General condition of the door	Visually inspect: <ul style="list-style-type: none"> ▪ door curtain (clean door curtain with water and soap) ▪ vertical tracks ▪ if necessary, clean the structure with compressed air 	every six months (more often if necessary)

Table 1. Service and maintenance highlights (continued)

Service item	Procedure	Interval
Electrical components	<ul style="list-style-type: none"> ▪ inspect wiring conduit and cables in control unit ▪ inspect wiring conduit and cables inside junction box ▪ inspect safety sensors (photocells, sensing edge and emergency stop button) ▪ verify the opening/closing system functions properly (buttons and other optional devices, if present) ▪ verify that electric cables are in good working condition ▪ clean photocells at least once a month or more often if necessary 	every six months (more often if necessary)
Mechanical components	<ul style="list-style-type: none"> ▪ inspect motor ▪ inspect motor brakes and perform their adjustment if necessary ▪ inspect reducer chain for wear and tension (front drive) ▪ inspect reducer for oil leakage; inspect mounting of the reducer to motor and to the unit for tightness ▪ inspect limit switch for: wear of toothed belt, wear and mounting tightness of pulley, correct functioning of arms and microswitches ▪ check all screws and bolts for tightness ▪ check the axial alignment of the counterweight belt coil (door with counterbalance) ▪ inspect bearings, lubricate if necessary ▪ check traks sealing for signs of wear ▪ check curtain guides alignment (can be cleaned with compressed air) 	every six months (more often if necessary)
Door curtain	<ul style="list-style-type: none"> ▪ inspect door curtain for signs of wear ▪ check curtain for damage ▪ verify that door curtain rolls up properly ▪ adjust door curtain tension; check door mounting assembly for signs of wear and tear ▪ regularly clean the door curtain with soft wet cloth and mild detergent approved for acrylic fabric 	every six months (more often if necessary)

APPENDICES

APPENDIX 1. DOOR UPPER PART (SIDE DRIVE, WITHOUT COUNTERBALANCE)

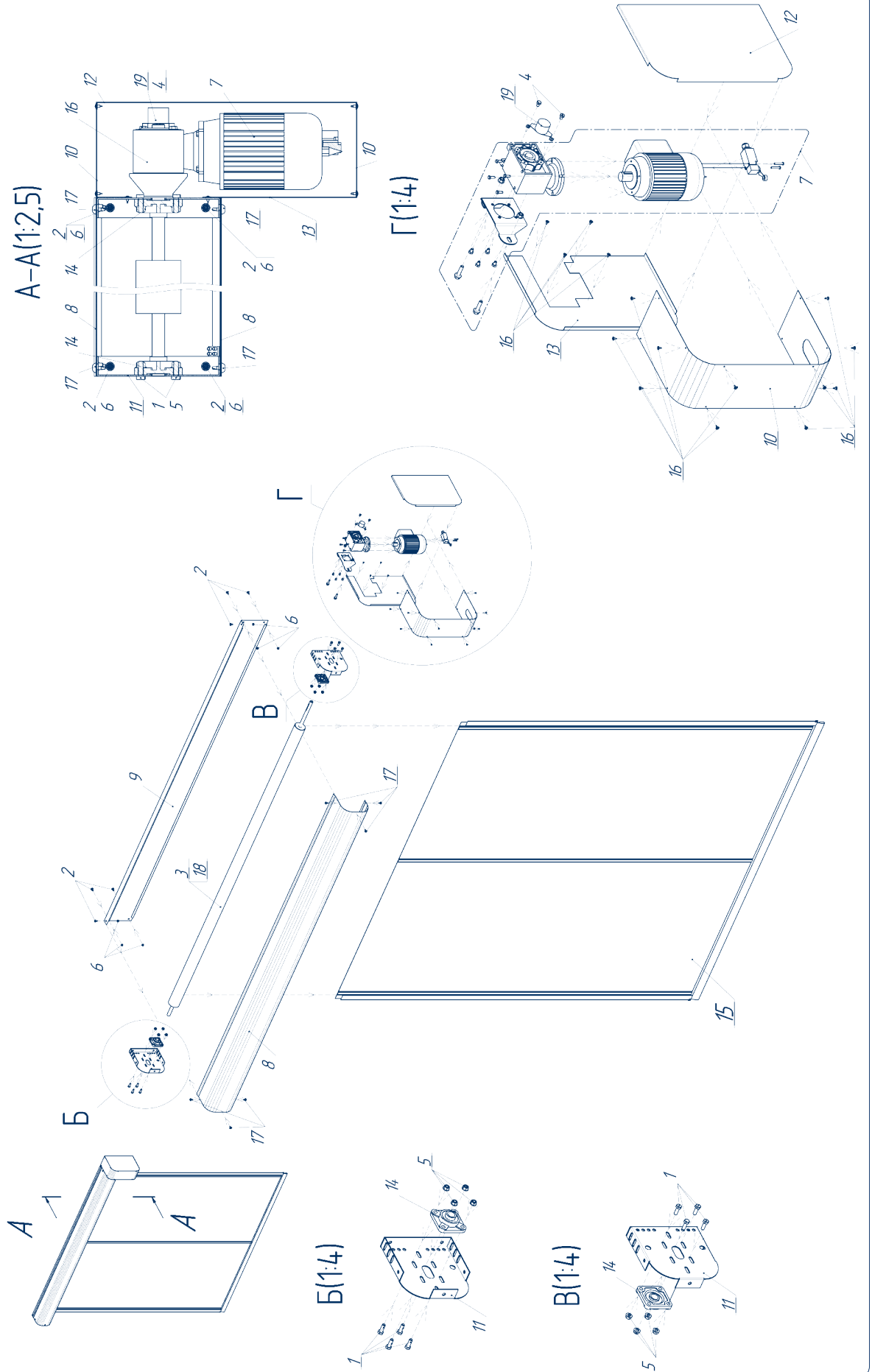


Fig. 1. Exploded view

Table 1. Parts list

#	Name	Condition	Part number	Qty	Note
1	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
2	Round head bolt (M8 × 16)		14016	6	fastening of shaft box back cover
3	Shaft assembly: D = 90 mm (side drive)	$H \leq 3,800, W \leq 3,000$	HSD112/M	1	total length = 115 + W + 285
	Shaft assembly: D = 127 mm (side drive)	$4,500 < W \leq 5,000, H \leq 3,800$ or $W \leq 5,000, H > 3,800$	HSD1114/M		
4	Screw: D = M8, L = 14 mm, hex socket cylinder head, non-galvanized		DHM0659	2	for encoder fastening
5	Nut: D = M10, self-locking, galvanized		153-17	8	for bearing support
6	Flange nut (M8)		14015	6	fastening of shaft box back cover
7	JM motor (1.5 kW) with heating	R15 reducer, part number HSDC R15	with heating $W \leq 4,000, H \leq 3,800$	HSDC 18186	1
		R30 reducer, part number HSDC R30	with heating $W \leq 4,000, H > 3,800$, or $W > 4,000$		
	JM motor with R15 reducer	$W \leq 4,000, H \leq 3,800$	HSDC 18180		
	JM motor with R30 reducer	$W \leq 4,000, H > 3,800$ or $W > 4,000$	HSDC18181		
8	Shaft box 250, L = 3,250 mm	$W \leq 3,000, H \leq 3,800$	HSD 1400/250	1	L = W + 250
	Shaft box 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1401/250		
	Shaft box 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1402/250		
	Shaft box 250, L = 4,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1400/350		
	Shaft box 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1401/350		
	Shaft box 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1402/350		
	Shaft box 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$ or $4,500 < W \leq 5,000$	HSD 1403/350		
	Shaft box 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1404/350		
	Shaft box 350, L = 7,250 mm	$6,000 < W$	HSD 1404-1/350		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
9	Shaft box, back cover 250, L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1500/250	1	L = W + 250
	Shaft box, back cover 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350, L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350, L = 7,250 mm	$6,000 < W$	HSD 1505/350		
10	Motor housing 360 × 580 mm		HSD 1830-2	1	side drive
11	End plate 250	$W \leq 4,500$ and $H \leq 3,800$	HSD 1405	2	side drive
	End plate 350	$W \leq 4,500$ and $H > 3,800$ or $W > 4,500$	HSD 1406		
12	Drive casing front cover 360 × 580 mm		HSD 1836-2	1	
13	Drive casing back cover 360 × 580 mm, left	drive to the left	HSD 1838-2 L	1	side drive
	Drive casing back cover 360 × 580 mm, right	drive to the right	HSD 1838-2R		
	Left back cover 250 of Joytech drive casing	drive to the left	HSD 1837-2L		
	Right back cover 250 of Joytech drive casing	drive to the right	HSD 1837-2R		
14	Bearing support assembly		HSD 2100	2	
15	Curtain assembly			1	for parts list refer to Table 1, Appendix 2
16	Self-tapping screw for metal 4,2 × 16		DHM0504	16	
17	Self-tapping screw for metal 6,3 × 25 mm, for door panels		14019	7	for front box
18	Key 7 × 8 × 80		HSD 2120	1	for "without counterbalance"
19	Tofi encoder		HSDC 18190	1	

APPENDIX 2. SPEEDROLL HIGH-SPEED DOOR (SIDE DRIVE)

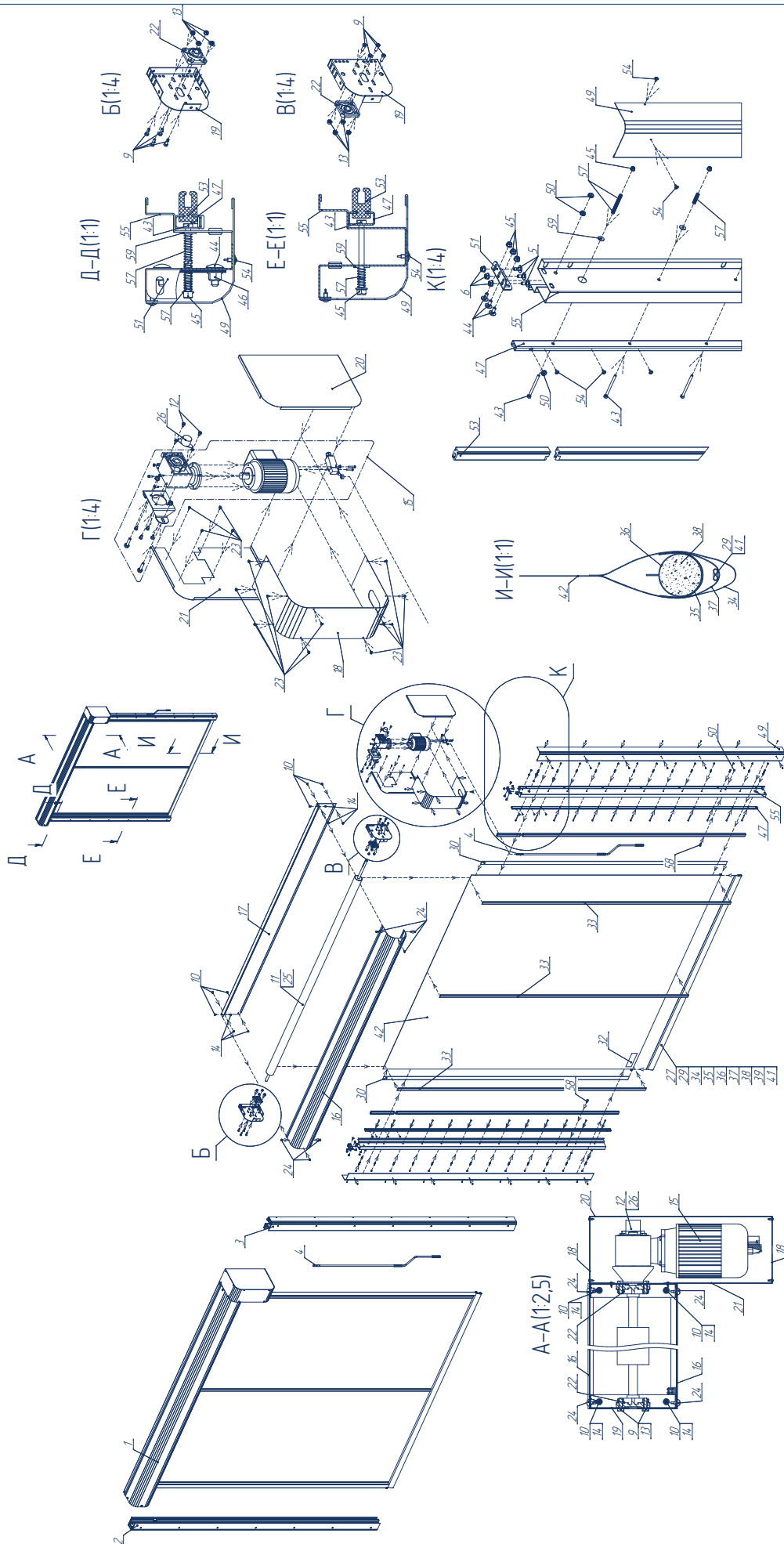


Fig. 1. Exploded view

Table 1. Parts list

#	Name	Condition	Part number	Qty	Note
1	Door upper part			1	
2	Left track assembly			1	
3	Right track assembly			1	
4	Cranck for Joytech drive L = 1,500 mm	H ≤ 3,500	147-1983	1	
	Cranck for Joytech drive L = 3,000 mm	H > 3,500	147-1984		
5	Round head bolt (M8 × 16)		14016	6	for tracks fastening to door upper part
6	Flange nut (M8)		14015	6	for tracks fastening to door upper part
7	Installation and operation manual for high-speed door		IN055	1	
8	Technical data for high-speed door		PSP25	1	
Door upper part					
9	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
10	Round head bolt (M8 × 16)		14016	6	for fastening of shaft box back cover
11	Shaft assembly, D = 90 mm (side drive)	H ≤ 3,800 and W ≤ 3,000	HSD112/M	1	total length = 115 + W + 285
	Shaft assembly, D = 127 mm (side drive)	4,500 < W ≤ 5,000 and H ≤ 3,800 or W ≤ 5,000 and H > 3,800	HSD1114/M		
12	Screw: D = M8, L = 14 mm, hex socket cylinder head, non-galvanized		DHM0659	2	for encoder fastening
13	Nut: D = M10, self-locking, galvanized		153-17	8	for bearing support
14	Flange nut (M8)		14015	6	for fastening of shaft box back cover
15	JM motor (1.5 kW) with heating	R15 reducer, part number HSDC R15	with heating W ≤ 4,000 and H ≤ 3,800	HSDC 18186	1
		R30 reducer, part number HSDC R30	with heating W ≤ 4,000 and H > 3,800 or W > 4,000		
	JM motor with R15 reducer	W ≤ 4,000 and H ≤ 3,800	HSDC 18180	1	
JM motor with R30 reducer	W ≤ 4,000 and H > 3,800 or W > 4,000	HSDC18181			
16	Shaft box 250 L = 3,250 mm	W ≤ 3,000 and H ≤ 3,800	HSD 1400/250	1	L = W + 250
	Shaft box 250 L = 3,750 mm	3,000 < W ≤ 3,500 and H ≤ 3,800	HSD 1401/250		
	Shaft box 250 L = 4,250 mm	3,500 < W ≤ 4,000 and H ≤ 3,800	HSD 1402/250		
	Shaft box 350 L = 3,250 mm	W ≤ 3,000 and H > 3,800	HSD 1400/350		
	Shaft box 350 L = 3,750 mm	3,000 < W ≤ 3,500 and H > 3,800	HSD 1401/350		
	Shaft box 350 L = 4,250 mm	3,500 < W ≤ 4,000 and H > 3,800	HSD 1402/350		
	Shaft box 350 L = 5,250 mm	3,500 < W ≤ 4,000 and H > 3,800	HSD 1403/350		
	Shaft box 350 L = 6,250 mm	5,000 < W ≤ 6,000	HSD 1404/350		
Shaft box 350 L = 7,250 mm	6,000 < W	HSD 1404-1/350			

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
17	Shaft box, back cover 250 L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1500/250	1	L = W + 250
	Shaft box, back cover 250 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350 L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350 L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350 L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350 L = 7,250 mm	$6,000 < W$	HSD 1505/350		
18	Motor housing 360 × 580 mm		HSD 1830-2	1	side drive
19	End plate 250	$W \leq 4,500$ and $H \leq 3,800$	HSD 1405	2	side drive
	End plate 350	$W \leq 4,500$ and $H > 3,800$ or $W > 4,500$	HSD 1406		
20	Drive casing front cover 360 × 580 mm		HSD 1836-2	1	
21	Drive casing back cover 360 × 580 mm, left	drive to the left	HSD 1838-2L	1	side drive
	Drive casing back cover 360 × 580 mm, right		HSD 1838-2R		
	Left back cover 250 of Joytech drive casing		HSD 1837-2L		
	Right back cover 250 of Joytech drive casing		HSD 1837-2R		
22	Bearing support assembly		HSD 2100	2	
23	Self-tapping screw for metal 4,2 × 16		DHM0504	16	
24	Self-tapping screw for metal 6,3 × 25 mm, for door panels		14019	7	for front drive casing
25	Key 7 × 8 × 80		HSD 2120	1	for drive, without counterbalance
26	Tofi encoder		HSDC 18190	1	
Door curtain					
27	Velcro closure with PVC base		SHVX008	1	for receiver fixation in door pocket and for locking of bottom pocket sides
28	COSMOFEN CA 12 glue		CA 12	0.007	
29	Set of plugs for safety edge assembly		SET_BAND	1	safety edge — optional
30	Toothed edge		HSD 1901K	2	L = H + 200 optional for freezers
	Toothed edge with reinforcement		HSD 19010		
31	DoorHan logo for high-speed door 280 × 45 mm		RP 77N	2	
32	DoorHan sticker for high-speed door		RP 77	1	

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
33	PVC reinforcement (band), double, RAL9010 pure white	W ≤ 2,100	HSD 1902/9010N	2	L = H + 700
	PVC reinforcement (band), RAL1003 signal yellow		HSD 1902/1003		
	PVC reinforcement (band), RAL6026 opal green	2,100 < W ≤ 4,250	HSD 1902/6026	3	
	PVC reinforcement (band), RAL3002 carmine red		HSD 1902/3002		
	PVC reinforcement (band), RAL2004 pure orange	4,250 < W < 6,000	HSD 1902/2004	4	
34	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-20)	curtain bottom part, cutting: (W - 20) × 400
35	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	sand pocket holder, cutting: (W - 100) × 100
36	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	sand pocket (W - 100) × 230
	Black PVC-fabric, width — 730 mm			730*(W-20)	safety edge, optional; sand pocket (W - 300) × 260
37	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	safety edge, optional; safety edge pocket, cutting (W-100) × 150
38	Quarry sand		RMC241	0.002*(W-100)	
39	Transmitter of safety edge signal		TR_BAND	1	safety edge, optional
40	Receiver of safety edge signal		REC_BAND	1	safety edge, optional
41	Rubber safety edge		BAND1	L=(W-100)	safety edge, optional
42	Awning fabric RAL9010 pure white		TT9010	1	W - 20; H + 820
	Awning fabric, RAL1003 signal yellow		HSD 1908		
	Awning fabric, RAL6026 opal green		HSD 1904		
	Awning fabric, RAL3002 carmine red		HSD 1906		
	Awning fabric, RAL2004 pure orange		HSD 1907		
	Awning fabric, RAL9006 white aluminium		TT9006		
	Awning fabric, RAL5002 ultramarine blue		TT5002		
43	Bolt (M6 × 80)	H ≤ 4,000	DHM0183	every 250 mm	
		H > 4,000		every 250 mm	
44	Round head bolt (M8 × 16)		14016	6	for perforated angles fastening
45	M6 self-locking nut (with nylon insert)	H ≤ 4,000	DHM0230	every 250 mm	
		H > 4,000		every 250 mm	
46	Flange nut (M8)		14015	6	for perforated angles fastening
47	Plastic guide holder L = 4,500 mm	H ≤ 2,050	HSD 1750	1	
		2,050 < H ≤ 4,300		2	
		H > 4,300		3	

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
48	5-core cable		HSD 5005	$L=(H+3,000)$	cable from drive to control unit
49	Track casing L = 3,200 mm	$H \leq 3,005$	HSD 1300	2	$L = H + 195; n = 2$ pcs
	Track casing L = 3,700 mm		HSD 1301		
	Track casing L = 4,000 mm		HSD 1375		
	Track casing L = 4,200 mm		HSD 1302		
	Track casing L = 5,200 mm		HSD 1303		
	Track casing L = 6,200 mm		HSD 1304		
50	Rubber o-ring		МПО 283	8	for photocells
51	Perforated bracket		HSD 2112	2	
52	ATTENTION sticker		МППП 026	1	
53	Plastic guide L = 4,000 mm	$H \leq 1,800$	HSD 1900K	1	$L = H + 200$
		$1,800 < H \leq 3,800$		2	
		$H > 3,800$		3	
54	Self-tapping screw for metal 4,2 × 16		DHM0504	every 250 mm	for fastening of shaft box to vertical track
55	Vertical track L = 3,200 mm	$H \leq 3,000$	HSD 1100	2	
	Vertical track L = 3,700 mm	$3,000 < H \leq 3,500$	HSD 1101		
	Vertical track L = 4,000 mm	$3,500 < H \leq 4,000$	HSD 1180		
	Vertical track L = 5,200 mm	$4,000 < H \leq 5,000$	HSD 1103		
	Vertical track L = 6,200 mm	$5,000 < H$	HSD 1104		
56	Black cable tie 9,650 mm		KCC 9-650	8	
57	Spring	$H \leq 4,000$	HSD 2122	every 250 mm	
		$H > 4,000$		every 250 mm	
58	E3FA-TP11-D photocells		HSDC 18200	1	
59	Flat galvanized washer D = 6.0 mm	$H \leq 4,000$	DHM0309	every 250 mm	
		$H > 4,000$		every 250 mm	

APPENDIX 3. DOOR UPPER PART (FRONT DRIVE, WITHOUT COUNTERBALANCE)

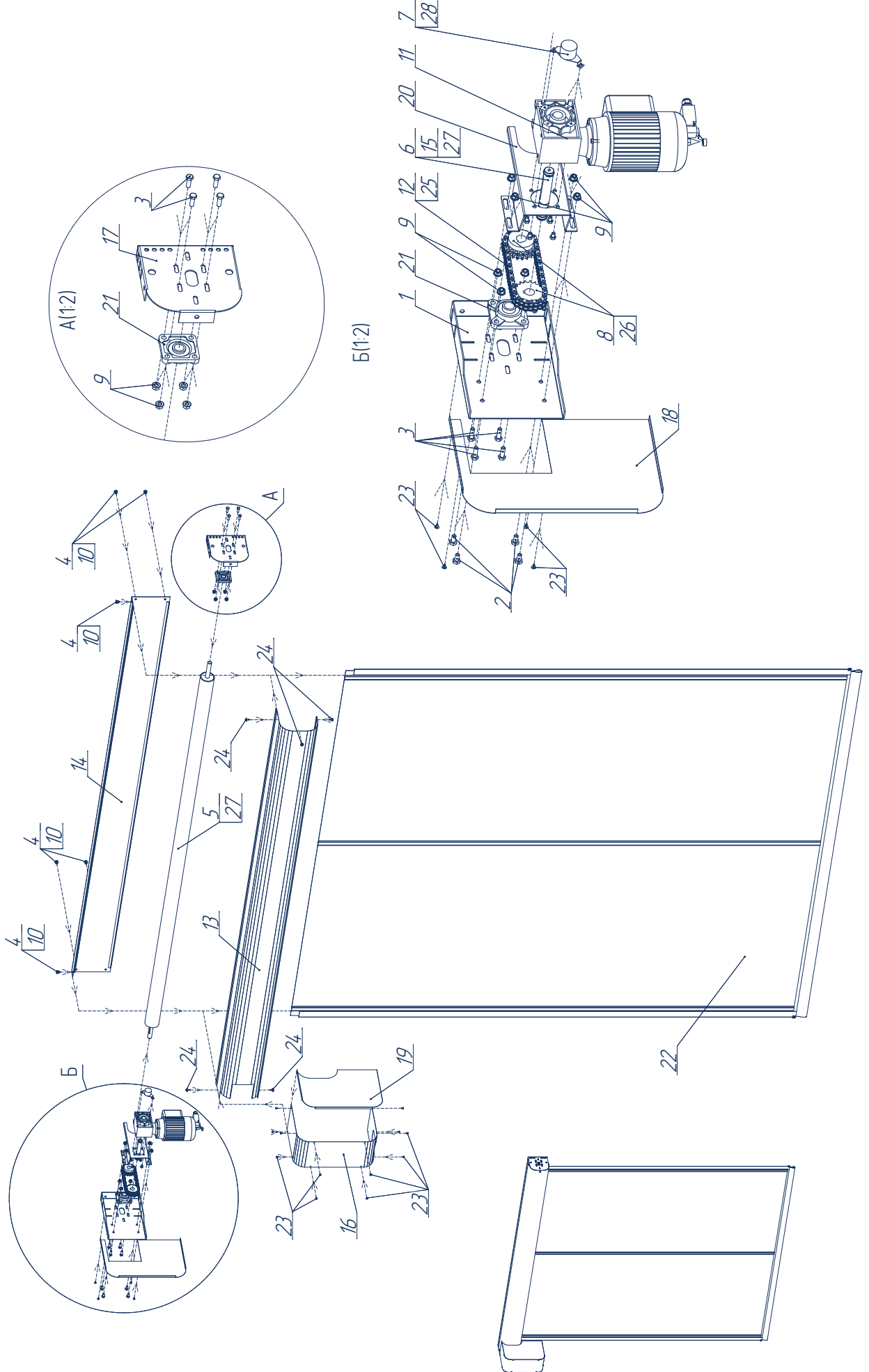


Fig 1. Exploded view

Table 1. Parts list

N ^o	Name	Condition	Part number	Qty	Note
1	Side bracket 250	$W \leq 4,000$ and $H \leq 3,800$	HSD250PMF	1	
	Side bracket 350	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD350PMF		
2	Hex bolt: D = M10, L = 20 mm, galvanized,		DHM0122	4	for bracket fastening
3	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
4	Round head bolt (M8 × 16)		14016	6	fastening of shaft box back cover
5	Shaft assembly: D = 90 mm (front drive)	$H \leq 3,800$ and $W \leq 3,000$	HSD1124/M	1	total length = 130 + W + 130
	Shaft assembly: D = 127 mm (front drive)	$4,500 < W \leq 5,000$ and $H \leq 3,800$ or $W \leq 5,000$ and $H > 3,800$	HSD1128/M		
6	Transmission shaft		HSD 1833	1	
7	Screw: D = M8, L = 14 mm, hex socket cylinder head, non-galvanized		DHM0659	2	for encoder fastening
8	Set screw (M6 × 16)		DHM 0901	2	
9	Nut: D = M10, self-locking, galvanized		153-17	12	8 for bearing support, 4 for bracket fastening
10	Flange nut (M8)		14015	6	fastening of shaft box back cover
11	JM motor (1.5 kW) with heating	R15 reducer, part number HSDC R15	with heating $W \leq 4,000$ and $H \leq 3,800$	HSDC 18186	1
		R30 reducer, part number HSDC R30	with heating $W \leq 4,000$ and $H > 3,800$ or $W > 4,000$		
	JM motor with R15 reducer	$W \leq 4,000$ and $H \leq 3,800$	HSDC 18180		
	JM motor with R30 reducer	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSDC18181		
12	Chain lock		HSD 1835	1	
13	Shaft box 250, L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1400/250	1	L = W + 250
	Shaft box 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1401/250		
	Shaft box 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1402/250		
	Shaft box 350, L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1400/350		
	Shaft box 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1401/350		
	Shaft box 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1402/350		
	Shaft box 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$ or $4,500 < W \leq 5,000$	HSD 1403/350		
	Shaft box 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1404/350		
Shaft box 350, L = 7,250 mm	$6,000 < W$	HSD 1404-1/350			

Table 1. Parts list (continued)

No	Name	Condition	Part number	Qty	Note
14	Shaft box, back cover 250, L = 3,250 mm	$W \leq 3,000$ and $H \leq 3800$	HSD 1500/250	1	L = W + 250
	Shaft box, back cover 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350, L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350, L = 7,250 mm	$6,000 < W$	HSD 1505/350		
15	External locking ring × 25		DHM0320	4	for transmission shaft
16	Front cover 250 for Joytech drive		HSD 250TLCF-J	1	front drive
17	End plate 250	$W \leq 4,500$ and $H \leq 3,800$	HSD 1405	1	front drive
	End plate 350	$W \leq 4,500$ and $H > 3,800$ or $W > 4,500$	HSD 1406		
18	End plate 250 for Joytech drive (right)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1837FR-J	1	front drive
	End plate 250 for Joytech drive (left)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1837FL-J		
	End plate 350 for Joytech drive (right)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1838FR-J		
	End plate 350 for Joytech drive (left)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1838FL-J		
19	Back cover 350 for Joytech drive (right)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1838FIR-J		
	Back cover 350 for Joytech drive (left)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1838FIL-J		
	Back cover 250 for Joytech drive (right)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1837FIR-J		
	Back cover 250 for Joytech drive (left)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1837FIL-J		
20	Drive bracket (for front installation)		HSD 18330	1	
21	Bearing support assembly		HSD 2100	2	
22	Curtain assembly			1	
23	Self-tapping screw for metal 4,2 × 16		DHM0504	16	
24	Self-tapping screw for metal 6,3 × 25 mm for door panels		14019	7	
25	25-links chain (250)	$W \leq 4,000$ and $H \leq 3,800$	HSD 2118	1	
	30-links chain (350)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 21180		
26	Gear pinion: D = 85 mm		HSD 2113	2	
27	Key 7 × 8 × 80 mm		HSD 2120	2	
28	Tofi encoder		HSDC 18190	1	

APPENDIX 4. SPEEDROLL HIGH-SPEED DOOR (FRONT DRIVE)

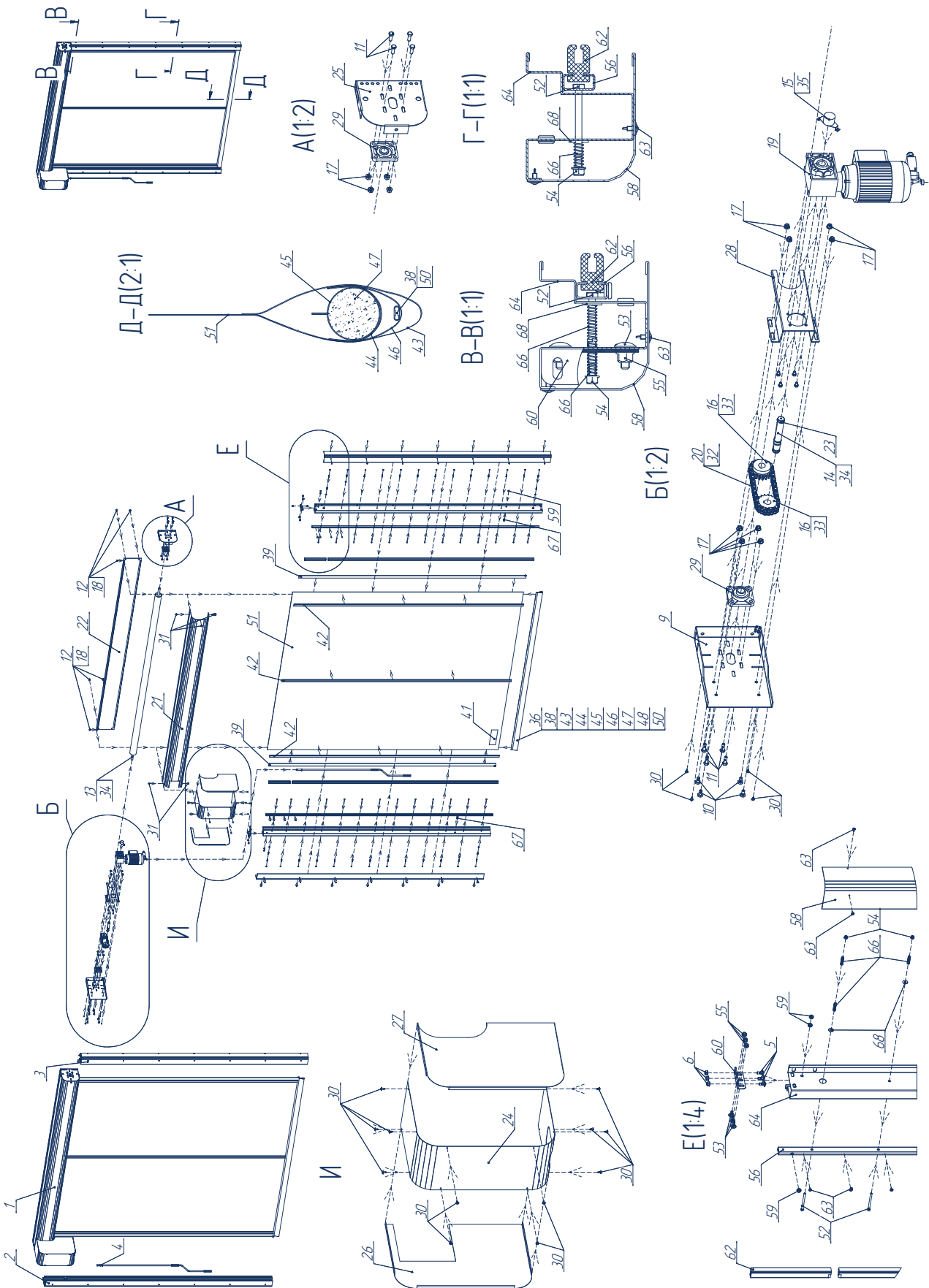


Fig. 1. Exploded view

Table 1. Parts list

#	Name	Condition	Part number	Qty	Note
1	Door upper part			1	
2	Left track assembly			1	
3	Right track assembly			1	
4	Crank for Joytech drive L = 1,500 mm	H ≤ 3,500	147-1983	1	
	Crank for Joytech drive L = 3,000 mm	H > 3,500	147-1984		
5	Round head bolt (M8 × 16)		14016	6	for tracks fastening to door upper part
6	Flange nut (M8)		14015	6	for tracks fastening to door upper part
7	Installation and operation manual for high-speed door		IN055	1	
8	Technical data for high-speed door		PSP25	1	
Door upper part					
9	Side bracket 250	W ≤ 4,000 and H ≤ 3,800	HSD250PMF	1	
	Side bracket 350	W ≤ 4,000 and H > 3,800 or W > 4,000	HSD350PMF		
10	Hex bolt: D = M10, L = 20 mm, galvanized		DHM0122	4	крепление кронштейна
11	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
12	Round head bolt (M8 × 16)		14016	6	
13	Shaft assembly D = 90 mm (front drive)	H ≤ 3,800 and W ≤ 3,000	HSD1124/M	1	total length = 130 + "W" + 130
	Shaft assembly D = 127 mm (front drive)	4,500 < W ≤ 5,000 and H ≤ 3,800 or W ≤ 5,000 and H > 3,800	HSD1128/M		
14	Transmission shaft		HSD 1833	1	
15	Screw: D = M8, L = 14 mm, hex socket cylinder head, non-galvanized		DHM0659	2	for encoder fastening
16	Set screw (M6 × 16)		DHM 0901	2	
17	Nut: D = M10, self-locking, galvanized		153-17	12	8 pcs for bearing support; 4 pcs for bracket fastening
18	Flange nut (M8)		14015	6	
19	JM motor (1.5 kW) with heating	R15 reducer, part number HSDC R15	with heating W ≤ 4,000 and H ≤ 3,800	HSDC 18186	1
		R30 reducer, part number HSDC R30	with heating W ≤ 4,000 and H > 3,800 or W > 4,000		
	JM motor with R15 reducer	W ≤ 4,000 and H ≤ 3,800	HSDC 18180		
	JM motor with R30 reducer	W ≤ 4,000 and H > 3,800 or W > 4,000	HSDC 18181		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
20	Chain lock		HSD 1835		
21	Shaft box 250 L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1400/250	1	$L = W + 250$
	Shaft box 250 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1401/250		
	Shaft box 250 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1402/250		
	Shaft box 350 L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1400/350		
	Shaft box 350 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1401/350		
	Shaft box 350 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1402/350		
	Shaft box 350 L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$ or $4,500 < W \leq 5,000$	HSD 1403/350		
	Shaft box 350 L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1404/350		
	Shaft box 350 L = 7,250 mm	$6,000 < W$	HSD 1404-1/350		
22	Shaft box, back cover 250 L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1500/250	1	$L = W + 250$
	Shaft box, back cover 250 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350 L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350 L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350 L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350 L = 7,250 mm	$6,000 < W$	HSD 1505/350		
23	External lock ring 25		DHM0320	4	for transmission shaft
24	Front cover 250 for Joytech drive		HSD 250TLCF-J	1	front drive
25	End plate 250	$W \leq 4,500$ and $H \leq 3,800$	HSD 1405	1	front drive
	End plate 350	$W \leq 4,500$ and $H > 3,800$ or $W > 4,500$	HSD 1406		
26	End plate 250 for Joytech drive (right)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1837FR-J	1	front drive
	End plate 250 for Joytech drive (left)	$W \leq 4,000$ and $H \leq 3,800$	HSD 1837FL-J		
	End plate 350 for Joytech drive (right)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1838FR-J		
	End plate 350 for Joytech drive (left)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 1838FL-J		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
27	Back cover 350 for Joytech drive (right)	W ≤ 4,000 and H ≤ 3,800	HSD 1838FIR-J	1	front drive
	Back cover 350 for Joytech drive (left)	W ≤ 4,000 and H ≤ 3,800	HSD 1838FIL-J		
	Back cover 250 for Joytech drive (right)	W ≤ 4,000 and H > 3,800 or W > 4,000	HSD 1837FIR-J		
	Back cover 250 for Joytech drive (left)	W ≤ 4,000 and H > 3,800 or W > 4,000	HSD 1837FIL-J		
28	Drive bracket (for front installation)		HSD 18330	1	
29	Bearing support assembly		HSD 2100	2	
30	Self-tapping screw for metal 4,2 × 16		DHM0504	16	
31	Self-tapping screw for metal 6,3 × 25 mm for door panels		14019	7	for front shaft box
32	25-links chain (250)	W ≤ 4,000 and H ≤ 3,800	HSD 2118	1	
	30-links chain (350)	W ≤ 4,000 and H > 3,800 or W > 4,000	HSD 21180	1	
33	Pinion gear D = 85 mm		HSD 2113	2	
34	Key 7 × 8 × 80 mm		HSD 2120	2	
35	Tofi encoder		HSDC 18190	1	
Door curtain					
36	Velcro closure with PVC base		SHVX008	1	for receiver fixation in door pocket and for locking of bottom pocket sides
37	COSMOFEN CA 12 glue		CA 12	0.007	
38	Set of plugs for safety edge assembly		SET_BAND	1	safety edge — optional
39	Toothed edge		HSD 1901K	2	L = H + 200
	Toothed edge with reinforcement		HSD 19010	2	optional for freezers
40	DoorHan logo for high-speed door 280 × 45 mm		RP 77N	2	
41	Toothed edge with reinforcement		RP 77	1	
42	Double PVC reinforcement (band), RAL9010 pure white	W ≤ 2,100	HSD 1902/9010N	2	L = H + 700
	PVC reinforcement (band), RAL1003 signal yellow		HSD 1902/1003		
	PVC reinforcement (band), RAL6026 opal green	2,100 < W ≤ 4,250	HSD 1902/6026	3	
	PVC reinforcement (band), RAL3002 carmine red		HSD 1902/3002		
	PVC reinforcement (band), RAL2004 pure orange	4,250 < W < 6,000	HSD 1902/2004	4	
	PVC reinforcement (band), RAL9006 white aluminium		HSD 1902/9006		
	PVC reinforcement (band), RAL5002 ultramarine blue		HSD 1902/5002		
	PVC reinforcement (band), double transparent	2,100 < W ≤ 4,250	HSD 1902N	1	
	4,250 < W < 6,000	2			
43	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-20)	curtain bottom part, cutting: W - 20 × 400
44	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	sand pocket holder, cutting: W - 100 × 100

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
45	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	sand pocket (W - 100) × 230
	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-300)	safety edge, optional; sand pocket (W - 300) × 260
46	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	
47	Quarry sand		RMC241	0,002*W	
48	Transmitter of safety edge signal		TR_BAND	1	safety edge, optional
49	Receiver of safety edge signal		REC_BAND	1	safety edge, optional
50	Rubber safety edge		BAND1	L=(W-100)	safety edge, optional
51	Awning fabric RAL9010 pure white		TT9010	1	W - 20; H + 820
	Awning fabric, RAL1003 signal yellow		HSD 1908		
	Awning fabric, RAL6026 opal green		HSD 1904		
	Awning fabric, RAL3002 carmine red		HSD 1906		
	Awning fabric, RAL2004 pure orange		HSD 1907		
	Awning fabric, RAL9006 white aluminium		TT9006		
	Awning fabric, RAL5002 ultramarine blue		TT5002		
Vertical track, 2 pcs					
52	Bolt (M6 × 80)	H ≤ 4,000	DHM0183	every 250 mm	
		H > 4,000		every 250 mm	
53	Round head bolt (M8 × 16)		14016	6	for perforated angles fastening
54	M6 self-locking nut (with nylon insert)	H ≤ 4,000	DHM0230	every 250 mm	
		H ≤ 4,000		every 250 mm	
55	Flange nut (M8)		14015	6	for perforated angles fastening
56	Plastic guide holder L = 4,500 mm		HSD 1750	1	
		2,050 < H ≤ 4,300		2	
		H > 4,300		3	
57	5-core cable		HSD 5005	L=(H+3,000)	cable from drive to control unit
58	Track casing L = 3,200 mm	H ≤ 3,005	HSD 1300	2	L = H + 195; n = 2 pcs
	Track casing L = 3,700 mm	3,005 < H ≤ 3,505	HSD 1301		
	Track casing L = 4,000 mm	3,005 < H ≤ 3,805	HSD 1375		
	Track casing L = 4,200 mm	3,805 < H ≤ 4,005	HSD 1302		
	Track casing L = 5,200 mm	4,005 < H ≤ 5,005	HSD 1303		
	Track casing L = 6,200 mm	5,005 < H	HSD 1304		
59	Rubber o-ring		МПО 283		for photocells
60	Perforated bracket		HSD 2112		
61	ATTENTION sticker		МППП 026		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
62	Plastic guide L = 4,000 mm	H ≤ 1,800	HSD 1900K	1	L = H + 200
		1,800 < H ≤ 3,800		2	
		H > 3,800		3	
63	Self-tapping screw for metal 4,2 × 16				
64	Vertical track L = 3,200 mm	H ≤ 3,000	HSD 1100	2	
	Vertical track L = 3,700 mm	3,000 < H ≤ 3,500	HSD 1101		
	Vertical track L = 4,000 mm	3,500 < H ≤ 4,000	HSD 1180		
	Vertical track L = 5,200 mm	4,000 < H ≤ 5,000	HSD 1103		
	Vertical track L = 6,200 mm	5,000 < H	HSD 1104		
65	Black cable tie 9,650 mm		KCC 9-650	8	photocell cable fixation
66	Spring	H ≤ 4,000	HSD 2122	every 250 mm	L = H + 200
		H > 4,000		every 250 mm	
67	E3FA-TP11-D photocells		HSDC 18200	1	
68	Flat galvanized washer D = 6.0 mm	H ≤ 4,000	DHM0309	every 250 mm	
		H > 4,000		every 250 mm	

APPENDIX 5. DOOR UPPER PART (GFA DRIVE)

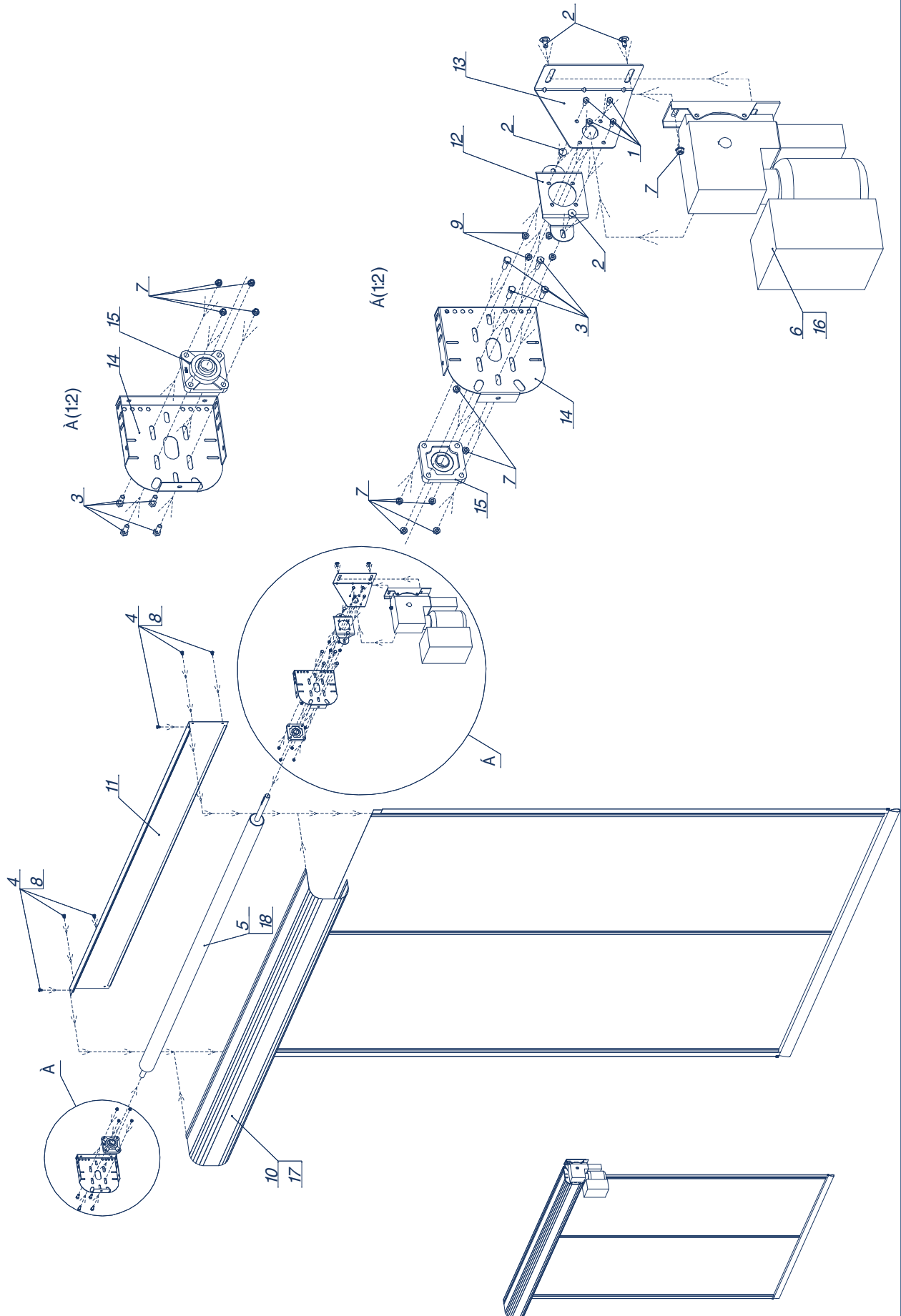


Fig. 1. Exploded view

Table 1. Parts list

#	Name	Condition	Part number	Qty	Note
1	Hex bolt: D = M8, L = 16 mm, galvanized	$W \leq 4,000$ and $H \leq 3,800$	DHM0112	4	for drive bracket fastening
2	Hex bolt: D = M10, L = 20 mm, non-galvanized		DHM0122	4	for drive fastening to bracket and side cap
3	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
4	Round head bolt (M8 × 16)		14016	6	fastening of shaft box back cover
5	Shaft assembly: D = 90 mm (GFA drive)	$W \leq 4,000$ $H \leq 3,800$	HSD 911/M	1	$130 + W + 295$
	Shaft assembly: D = 127 mm (GFA drive)	$4,000 < W \leq 5,000$ and $H \leq 3,800$ or $W \leq 5,000$ and $H > 3,800$	HSD 915/M	1	$130 + W + 296$
6	Set screw: D = 4,0 mm, L = 10 mm, with a hex socket head and cone point, galvanized		163-825	1	for encoder axis locking
7	Nut: D = M10, self-locking, galvanized		153-17	12	4 pcs for drive fastening to bracket and side cap; 8 pcs for bearing support
8	Flange nut (M8)		14015	6	fastening of shaft box back cover
9	Flange nut (M8)		14016	4	for drive bracket fastening
10	Shaft box 250, L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1400/250	1	$L = W + 250$
	Shaft box 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1401/250		
	Shaft box 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1402/250		
	Shaft box 350, L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1400/350		
	Shaft box 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1401/350		
	Shaft box 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1402/350		
	Shaft box 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$ or $4,500 < W \leq 5,000$	HSD 1403/350		
	Shaft box 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1404/350		
	Shaft box 350, L = 7,250 mm	$6,000 < W$	HSD 1404-1/350		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
11	Shaft box, back cover 250, L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1500/250	1	L = W + 250
	Shaft box, back cover 250, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350, L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350, L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350, L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350, L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350, L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350, L = 7,250 mm	$6,000 < W$	HSD 1505/350		
12	Drive bracket		HSD 1802		
13	Drive bracket SI 5.250	$W \cdot H \leq 9,000,000$	HSD 9102	1	
	Drive bracket SI 8.300	$W \cdot H > 9,000,000$	HSD11101		
14	End plate 250 (for shaft with D = 30 mm)	$W \leq 4,000$ and $H \leq 3,800$	HSD 9101	2	
	End plate 350 (for shaft with D = 30 mm)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 9103		
15	UCF 206 bearing support assembly		HSD9100	2	
16	ELEKTROMAT drive «Safedrive» SI5.250-30	$W \cdot H > 9,000,000$	SI5.250-30	1	
	ELEKTROMAT drive «Safedrive» SI8.300-30		SI8.300-30		
17	Self-tapping screw for metal 6,3 × 25 mm for door panels		14019	7	for front box
18	Key 7 × 8 × 80	HSD 2120	HSD 2120	1	

APPENDIX 6. SPEEDROLL HIGH-SPEED DOOR (GFA DRIVE)

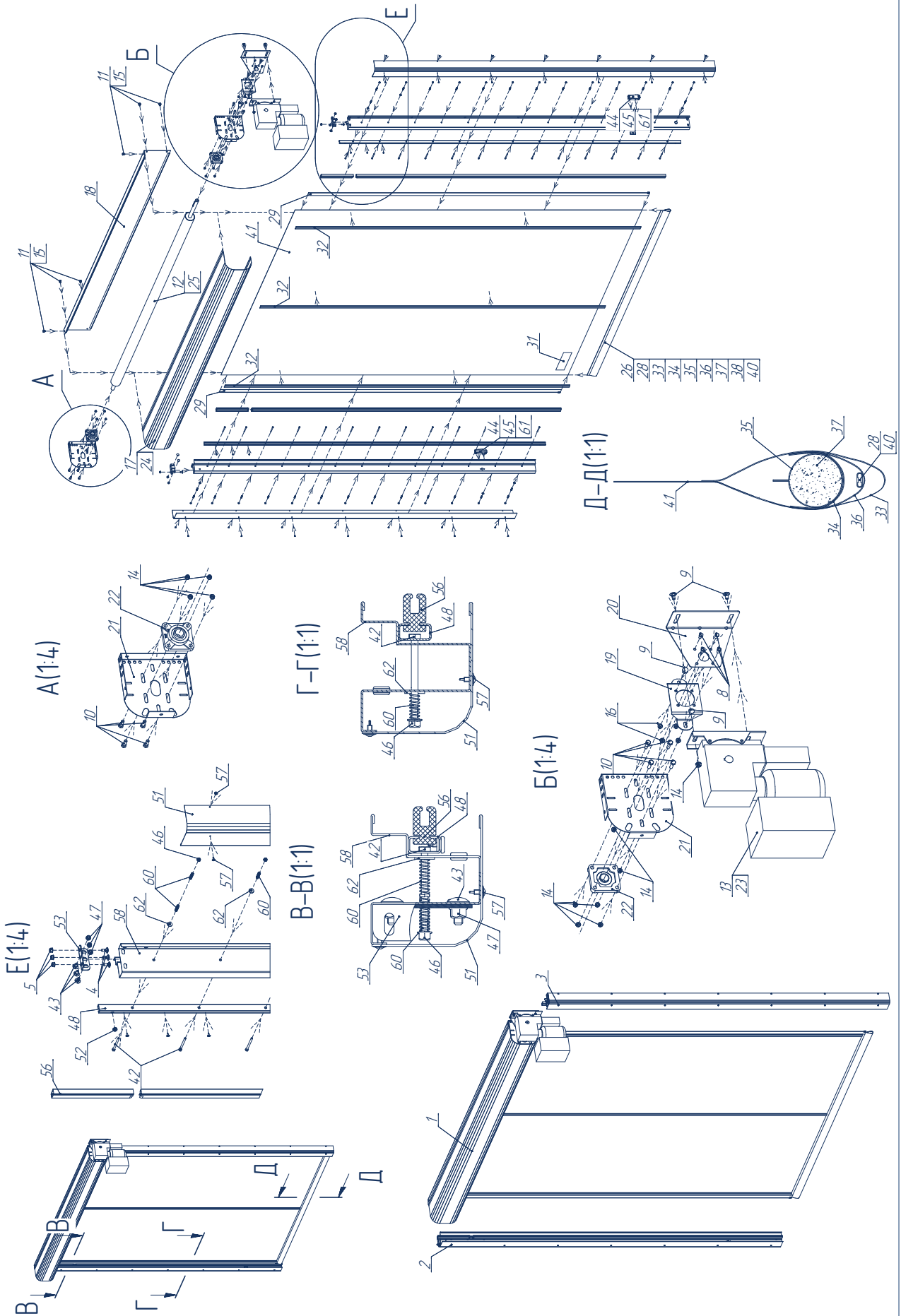


Fig. 1. Exploded view

Table 1. Parts list

#	Name	Condition	Part number	Qty	Note
1	Door upper part			1	
2	Left track assembly			1	
3	Right track assembly			1	
4	Round head bolt (M8 × 16)		14016	6	for tracks fastening to door upper part
5	Flange nut (M8)		14015	6	for tracks fastening to door upper part
6	Installation and operation manual for high-speed door		IN055	1	
7	Technical data for high-speed door		PSP25	1	
Door upper part					
8	Hex bolt: D = M8, L = 16 mm, galvanized		DHM0112	4	for drive bracket fastening
9	Hex bolt: D = M10, L = 20 mm, non-galvanized		DHM0122	4	for drive fastening to bracket and side cap
10	Hex bolt: D = M10, L = 30 mm, non-galvanized		DHM0177	8	for bearing support
11	Round head bolt (M8 × 16)		14016	6	fastening of shaft box back cover
12	Shaft assembly D = 90 mm (GFA drive)	$W \leq 4,000$ $H \leq 3,800$	HSD 911/M	1	$130 + W + 295$
	Shaft assembly D = 127 mm (GFA drive)	$4,000 < W \leq 5,000$ and $H \leq 3,800$ or $W \leq 5,000$ and $H > 3,800$	HSD 915/M	1	$130 + W + 296$
13	Set screw: D = 4,0 mm, L = 10 mm, with a hex socket head and cone point, galvanized		163-825	1	for encoder axis locking
14	Nut: D = M10, self-locking, galvanized		153-17	12	4 pcs for drive fastening to bracket and side cap; 8 pcs for bearing support
15	Flange nut (M8)		14015	6	fastening of shaft box back cover
16	Flange nut (M8)		14016	4	for drive bracket fastening
17	Shaft box 250 L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1400/250	1	$L = W + 250$
	Shaft box 250 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1401/250		
	Shaft box 250 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1402/250		
	Shaft box 350 L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1400/350		
	Shaft box 350 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1401/350		
	Shaft box 350 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1402/350		
	Shaft box 350 L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$ or $4,500 < W \leq 5,000$	HSD 1403/350		
	Shaft box 350 L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1404/350		
	Shaft box 350 L = 7,250 mm	$6,000 < W$	HSD 1404-1/350		

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
18	Shaft box, back cover 250 L = 3,250 mm	$W \leq 3,000$ and $H \leq 3,800$	HSD 1500/250	1	L = W + 250
	Shaft box, back cover 250 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H \leq 3,800$	HSD 1501/250		
	Shaft box, back cover 250 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H \leq 3,800$	HSD 1502/250		
	Shaft box, back cover 350 L = 3,250 mm	$W \leq 3,000$ and $H > 3,800$	HSD 1500/350		
	Shaft box, back cover 350 L = 3,750 mm	$3,000 < W \leq 3,500$ and $H > 3,800$	HSD 1501/350		
	Shaft box, back cover 350 L = 4,250 mm	$3,500 < W \leq 4,000$ and $H > 3,800$	HSD 1502/350		
	Shaft box, back cover 350 L = 5,250 mm	$4,000 < W \leq 4,500$ and $H > 3,800$; $4,500 < W \leq 5,000$	HSD 1503/350		
	Shaft box, back cover 350 L = 6,250 mm	$5,000 < W \leq 6,000$	HSD 1504/350		
	Shaft box, back cover 350 L = 7,250 mm	$6,000 < W$	HSD 1505/350		
19	Drive bracket		HSD 1802	1	for fastening to side cap
20	Drive bracket SI 5.250	$W \cdot H \leq 9,000,000$	HSD 9102	1	
	Drive bracket SI 8.300	$W \cdot H > 9,000,000$	HSD11101		
21	End plate 250 (for shaft with D = 30 mm)	$W \leq 4,000$ and $H \leq 3,800$	HSD 9101	2	
	End plate 350 (for shaft with D = 30 mm)	$W \leq 4,000$ and $H > 3,800$ or $W > 4,000$	HSD 9103		
22	UCF 206 bearing support assembly		HSD9100	2	
23	ELEKTROMAT drive "Safedrive" SI5.250-30	$W \cdot H \leq 9,000,000$	SI5.250-30	1	
	ELEKTROMAT drive "Safedrive" SI8.300-30	$W \cdot H > 9,000,000$	SI8.300-30		
24	Self-tapping screw for metal 6,3 × 25 mm or door panels		14019	7	for front box
25	Key 7 × 8 × 80		HSD 2120	1	
Door curtain					
26	Velcro closure with PVC base		SHVX008	1	for receiver fixation in door pocket and for locking of bottom pocket sides
27	COSMOFEN CA 12 glue		CA 12	0.007	
28	Set of plugs for safety edge assembly		SET_BAND	1	safety edge, optional
29	Toothed edge		HSD 1901K	2	L = H + 200
	Toothed edge with reinforcement		HSD 19010	2	optional for freezers
30	DoorHan logo for high-speed door 280 × 45 mm		RP 77N	2	
31	DoorHan sticker for high-speed door		RP 77	1	

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
32	PVC reinforcement (band), double, RAL9010 pure white	W ≤ 2,100	HSD 1902/9010N	2	L = H + 700
	PVC reinforcement (band), RAL1003 signal yellow		HSD 1902/ 1003		
	PVC reinforcement (band), RAL6026 opal green	2,100 < W ≤ 4,250	HSD 1902/6026	3	
	PVC reinforcement (band), RAL3002 carmine red		HSD 1902/3002		
	PVC reinforcement (band), RAL2004 pure orange	4,250 < W < 6,000	HSD 1902/2004	4	
	PVC reinforcement (band) RAL9006 white aluminium		HSD 1902/9006		
	PVC reinforcement (band), RAL5002 ultramarine blue		HSD 1902/5002		
	PVC reinforcement (band), double, transparent	2,100 < W ≤ 4,250	HSD 1902N	1	
4,250 < W < 6,000		2			
33	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-20)	curtain bottom part, cutting: (W - 20) × 400
34	ELEKTROMAT drive "Safedrive" SI8.300-30		SHVH004	730*(W-100)	sand pocket holder (W - 100) × 100
35	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	sand pocket (W - 100) × 230
	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-300)	safety edge, optional; sand pocket (W - 300) × 260
36	Black PVC-fabric, width — 730 mm		SHVH004	730*(W-100)	safety edge, optional, safety edge pocket (W - 100) × 150
37	Quarry sand		RMC241	0.002*W	
38	Transmitter of safety edge signal		TR_BAND	1	safety edge, optional
39	Receiver of safety edge signal		REC_BAND	1	safety edge, optional
40	Rubber safety edge		BAND1	L = (W - 100)	safety edge, optional
41	Awning fabric RAL9010 pure white		TT9010	1	W - 20; H + 820
	Awning fabric, RAL1003 signal yellow		HSD 1908		
	Awning fabric, RAL6026 opal green		HSD 1904		
	Awning fabric, RAL3002 carmine red		HSD 1906		
	Awning fabric, RAL2004 pure orange		HSD 1907		
	Awning fabric, RAL9006 white aluminium		TT9006		
	Awning fabric, RAL5002 ultramarine blue		TT5002		
Vertical track, 2 pcs					
42	Bolt (M6 × 80)	H ≤ 4,000 mm	DHM0183	every 250 mm	
		H > 4,000 mm		every 250 mm	
43	Round head bolt (M8 × 16)		14016	6	for perforated angles fastening
44	Screw (M4 × 10)		SH 86	4	for photocell fastening to vertical track

Table 1. Parts list (continued)

#	Name	Condition	Part number	Qty	Note
45	Hex nut: D = M4, non-galvanized		DHM0204	4	for photocell fastening to vertical track
46	M6 self-locking nut (with nylon insert)	H ≤ 4,000	DHM0230	every 250 mm	
		H > 4,000		every 250 mm	
47	Flange nut (M8)		14015	6	for perforated angles fastening
48	Plastic guide holder L = 4,500 mm	H ≤ 2,050	HSD 1750	1	
		2,050 < H ≤ 4,300		2	
		H > 4,300		3	
49	Connecting cable 2 × 0.75 (twisted pair control cable)		RMK002	2	L = 2*H - 100 + W; from photocells to drive
50	5-core cable		HSD 5005	L=(H+3,000)	cable from drive to control unit
51	Track casing L = 3,200 mm	H ≤ 3,005	HSD 1300	2	L = H + 195
	Track casing L = 3,700 mm	3,005 < H ≤ 3,505	HSD 1301		
	Track casing L = 4,000 mm	3,005 < H ≤ 3,805	HSD 1375		
	Track casing L = 4,200 mm	3,805 < H ≤ 4,005	HSD 1302		
	Track casing L = 5,200 mm	4,005 < H ≤ 5,005	HSD 1303		
	Track casing L = 6,200 mm	5,005 < H	HSD 1304		
52	Rubber o-ring		МПО 283	2	for photocells
53	Perforated bracket		HSD 2112	2	
54	Grommet		SHLS001	4	for framing of the hole for phocoell ray
55	ATTENTION sticker		МППП 026	1	
56	Plastic guide L = 4,000 mm	H ≤ 1,800	HSD 1900K	1	L = H + 200
		1,800 < H ≤ 3,800		2	
		H > 3,800		3	
57	Self-tapping screw for metal 4,2 × 16		DHM 0504	every 250 mm	for fastening of the box to vertical track
58	Vertical track L = 3,200 mm	H ≤ 3,000	HSD 1100	2	
	Vertical track L = 3,700 mm	3,000 < H ≤ 3,500	HSD 1101		
	Vertical track L = 4,000 mm	3,500 < H ≤ 4,000	HSD 1180		
	Vertical track L = 5,200 mm	4,000 < H ≤ 5,000	HSD 1103		
	Vertical track L = 6,200 mm	5,000 < H	HSD 1104		
59	Black cable tie 9,650 mm		KCC 9-650	8	photocell cable fixation
60	Spring	H ≤ 4,000	HSD 2122	every 250 mm	
		H > 4,000		every 250 mm	
61	PHOTOCELL-N photocells, operating range up to 20 m (DoorHan)		PHOTOCELL- N	2	
62	Flat galvanized washer D = 6.0 mm	H ≤ 4,000	DHM0309	every 250 mm	
		H > 4,000		every 250 mm	

DOORHAN[®]

We thank you for purchasing the DoorHan product. We hope that you will be satisfied with its quality.

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