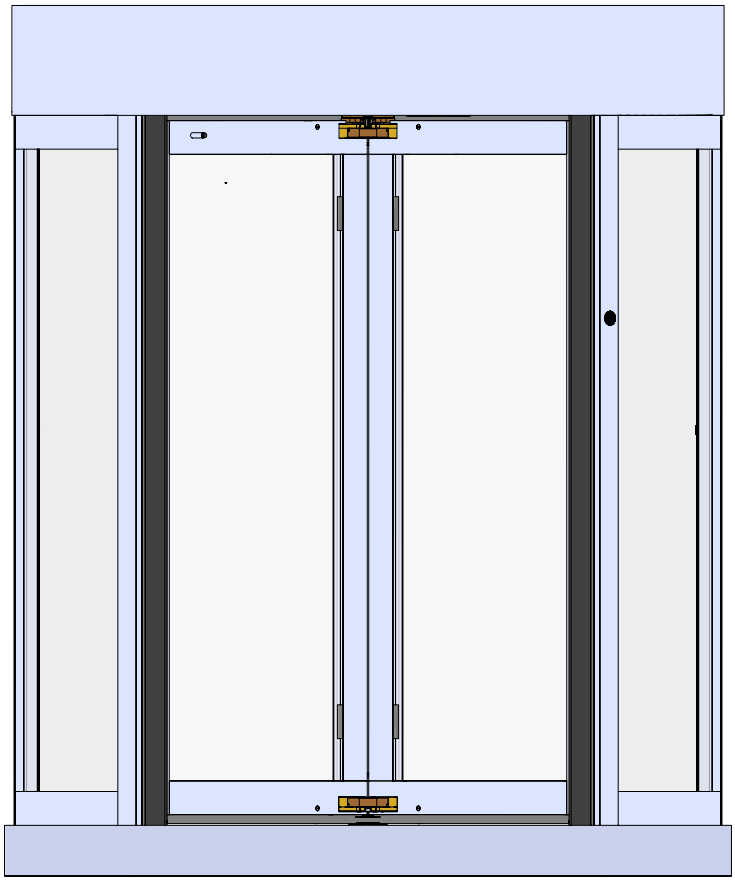
ALVARADO
dormakaba Group



S2 BULLET-RATED SECURITY REVOLVING DOOR

With Anti-tailgating

Installation Manual

RL6008-003 – 11-2026

Table of contents

1 General Information 3
2 Product Description and Technical data 4
2.1 AL2000 - S2 - BR3 4
2.2 S2 Security With Anti-tailgating Overview 4
2.4 S2 Bullet-rated Security Revolving Door Assembly Overview 5
3 Safety Information 6
3.1 General Safety Information 6
4 Ordering Replacement Parts 7
5 User Interfaces 8
5.1 User Interfaces 8
6 S2 Security Door Overview 9
6.1 S2 Security Door Control Overview 9
7 Revolving Door Assemblies and Hardware 10
7.1 S2 SRD BR Canopy Assembly 10
7.2 Reserved 11
7.3 S2 BR Canopy Soffit View 11
7.4 Assembly, Drive Unit, K9 12
7.5 Assembly, drive, K9 13
7.6 Kit, K9 Drive Mount Assembly - BR S2/S3/S4 14
7.7.1 Kit Accessories Electronics K9 – S2 16
7.8.1 Electronic Assembly, SRD K9, English Language 17
7.8.2 Electronic Assembly, SRD K9, Spanish Language 18
7.9 Shaft Assembly, 4 Wing, S2/S3/S4, BR, K9 Drive 19
7.10 Bookfold Lock Operation 20
7.11 Top Hanger Assembly – Bookfold 21
7.12 Bottom Hanger Assembly 22
7.13 Surface Mounted Pivot Bearing Assembly 23
7.14 Base Rail Assembly, 4 Wing 24
7.15 Header Rail Assembly, 4 Wing 25
7.15 Door Wing Assemblies, Bullet-rated SRD 26
7.16 Door Wing Assembly Hardware 27
7.17 Center Post RH/LH BR door assembly 28
7.18 Quarter post SRD assembly, bullet-rated 29
7.19 Quarter post manual assembly, bullet-rated 30
7.21 Surface locks 31
7.22 Optional Assembly, Floor Grill And Pan Assembly 32
7.23 Optional Assembly, Canopy Light With LED Driver 32
7.24 Optional Standby UPS 32
8 Sensor Overview 33
8.1 S2 Canopy Sensor Overview 33
8.2 Cedes TOFniva 33
8.3 Quarter Post / Bumper Assembly 34
9 Recommended Tools And Materials 35
9.1 Recommended Tools 35
9.2 Recommended Installation Materials And Installation Hardware 35
10 Entrance Opening and Floor Preparation 36
10.1 Cordon Off Work Area 36
10.2 Entrance Opening 36
10.3 Revolving door floor surface 36
11 Locate Door Position On Floor Using Templates 37
11.1 Door Building Attachment Plans 37
11.2 Installation Template 37
11.3 Mark Door Position On Floor Using Floor Templates 38
11.4 Drill Pilot And Anchor Holes For Bottom Rail Studs 39
11.5 Drill Pilot Hole At Door Centerpoint 39
12 Mounting Bracket Installation On K9 Drive Unit Assembly 40
12.1 Main Drive Adapter Coupling Installation On K9 Drive 40
12.2 Install Mounting Bracket on K9 Drive 41
13 Canopy Assembly And Installation 42
13.1 Canopy Shipped As Single Assembly – Remove Covers 42
13.3 Remove Inner Soffits And Cover Plates 43
13.4 Remove Inner Soffit Fiberglass 44
13.4 Install Cross Brace Brackets And Angle Adjustment Bracket In Canopy 45
14 K9 Drive Canopy Mounting Installation 46
14.1 Install Canopy Drive Mounting Brackets 46
14.2 Install Canopy K9 mounting plates 47
14.3 Remove Fiberglass BR Outer Soffit 48
14.4 Position K9 Drive And Mounting Bracket Assembly Under Canopy 49
14.5 Install K9 Drive And Mounting Bracket Assembly In Canopy 50

15 Electronic Assembly Canopy Installation 51
Raise Canopy Into Place 51
15.1 Electronic Assembly 51
15.2 Install Electronic Assembly In Canopy 52
15.3 Raise Canopy Into Place 54
16 Enclosure Rail Base, Rail Header And Post Numbering 55
16.1 Enclosure Rail Base, Rail Header And Post Numbering 55
17 Center Post Installation 56
17.1 Center Post Assembly 56
17.2 Center Post Push to Reverse Panel Installation 57
17.3 Attach Center Posts To Canopy 58
18 Quarter Post Installation 59
18.1 Quarter Post Assemblies 59
18.2 Quarter Post LED ring Installation 60
18.3 Attach Quarter Posts To Canopy 61
19 Enclosure Base Rail and Header Rail BR Installation 62
19.1 Bullet-rated SRD Base and Header Rail Overview62
19.2 Base Rail and Header Rail Assemblies, BR, 4 Wing Installation 63
19.3 Install Base Rail Assemblies 64
19.4 Install Header Rail Assemblies 65
19.5 Lower Canopy / Post Assemblies 66
Fasten Post Assemblies To Base Rails 66
19.6 Set Enclosure Level, Square And Plumb 67
20 Install Floor Pivot Bearing 68
Align K9 Drive Shaft With Pivot Bearing 68
20.1 Install Surface Mounted Pivot Bearing Assembly 68
20.2 Center K9 Drive Shaft Over Floor Bearing 69
20.3 Fasten K9 Turnbuckle Assembly To Its Mounting Bracket 70
20.4 Align K9 Drive Locking Disc With Quarter Post 71
21 Shaft Assembly 72
21.1 Unpack Shaft Assembly Shipping Crate 72
21.2 Install Shaft Adapter On Center Shaft Splined Shaft 73
22 Install Shaft Assembly 74
22.1 Install Shaft Assembly Bottom Adapter Into Floor Bearing, Attach Shaft Adapter To K9 Drive 74
23 Wing Installation 76
23.1 Unpack Wing Shipping Crate 76
23.2 Install Surface Locks On Interior Door Wings 77
23.4 Install Wings Onto Shaft Hangers 80
23.5 Align K9 Drive and Door Wings 81
24 Locate And Drill Holes In Canopy For LH And RH Wing Lock Bolts 84
24.1 Locate, drill holes for lock bolts 84
25 Install Enclosure Glass, Base Rail And Header Rail Covers 85
25.1 Enclosure Glass 85
25.2 Unpack Enclosure Glass Shipping Crate 85
25.3 Enclosure Glass Installation 86
25.4 Install Base Rail and Header Rail Covers 87
26 Check Wing Breakout Force, Bookfold Operation 88
26.1 Check Breakout Force 88
26.2 Check Bookfold Operation 89
27 Canopy Hardware Installation 90
27.1 Install Canopy Speakers 90
27.2 Install K9 Drive Dual USB Port 90
27.4 Canopy LED Fixture Installation (Option) 91
28 S2 Canopy – Sensor Installation 92
28.1 TOFniva Sensor Installation 92
28.2 TOFniva Sensor Installation 93
29 S2 Canopy Wiring And Bullet-rated SRD Commissioning 94

1 General Information

1.1 Installation Instructions

This document contains important instructions for installation of Alvarado S2 bullet-rated (BR) security revolving door (SRD) with anti-tailgating security.

NOTICE

SRD-S2: Bi-directional tailgate prevention and unauthorized entry on exit prevention.

SRD-S3: Same features as SRD-S2 with the addition of piggyback prevention on entry.

SRD-S4: Same features as SRD-S3 with the addition of piggyback prevention on exit.

Review these instructions thoroughly prior to installation, and follow them carefully during installation.

1.2 Manual Storage

This document must be kept in a secure place, and accessible for reference as required. If the door system should be transferred to another facility, insure that this document is transferred as well.

1.3 Dimensions

Unless otherwise specified, all dimensions are given in inches (").

1.4 Environment

Alvarado S2 security revolving doors are designed to operate on an interior or exterior building application.

1.5 Order Custom Requirements And Optional Equipment.

NOTICE

Revolving door order custom requirements.

- Installation instructions may need to be modified or replaced.
- Installation illustrations may not reflect assembly or part customization.

1.6 Ordering Replacement Parts

NOTICE

Reference NOTICE in Chapter 4 regarding ordering replacement parts and Job ID number.

1.7 Alvarado S2/S3/S4 Bullet-rated Security Revolving Door Manuals

	Function
RL6008-001	S3/S4 BR Installation Manual, 4 wing, K9
RL6008-002	S2/S3/S4 BR Owner's Manual, K9
RL6008-003	S2 BR Installation Manual, 4 wing, K9
RL6008-004	S2/S3/S4 BR Wiring Manual
RL6008-005	S2/S3/S4 BR Electrical Documentation, K9
RL6003-005	S2/S3/S4 Maintenance Manual, K9
RL6003-007	Sensor Intenta Service Manual
RL6003-008	PAVIS3 Software Manual, K9
RL6003-009	System Setup Manual
RL6003-010	K9 Checklist for SRD Commissioning and Troubleshooting

1.8 Symbols Used In These Instructions.



WARNING

This symbol warns of hazards which could result in personal injury or threat to health.

NOTICE

Draws attention to important information presented in this document.

CAUTION

This symbol warns of a potentially unsafe procedure or situation.



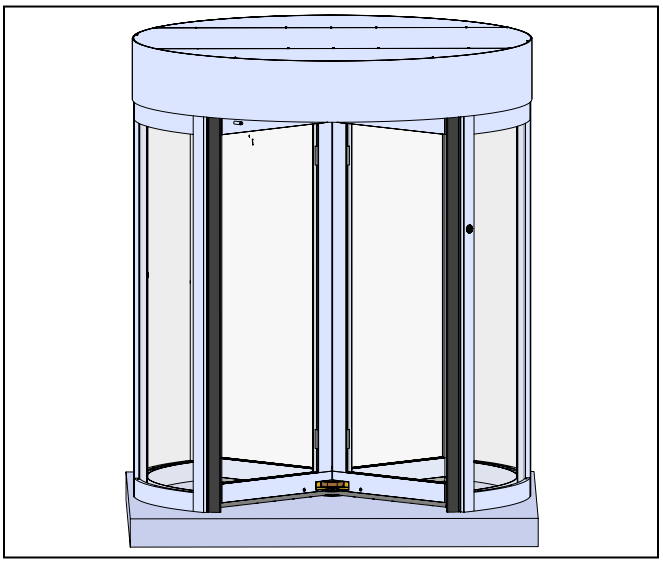
TIPS AND RECOMMENDATIONS

Clarifies instructions or other information presented in this document.

2 Product Description and Technical data

2.1 AL2000 - S2 - BR3

Fig. 2.1.1 AL2000-S3-BR3 SRD



2.1.1 AL2000

- Constructed of fully formed and welded aluminum, bronze or steel.
- Door wings fabricated from aluminum and bolted together with heavy-duty fasteners.

2.1.2 S2 security (Para. 2.2).

S2 security includes:

- Anti-tailgating

2.1.3 BR3 Bullet-rated.

The glass and fiberglass utilized in this security revolving door are bullet-rated (Certified) tested and certified to a UL752 Rating of Level #3.

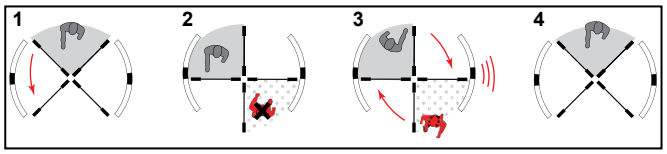
2.2 S2 Security With Anti-tailgating Overview

2.2.1 Unauthorized access in the opposite direction.

1. **Authorized person** enters compartment leaving secure area.
2. Intruder enters opposite compartment.
3. Sensors detect intruder's presence.
- Door stops.
- Intruder alert sounds.
- Door reverses direction.
- Occupants then exit where they entered from.

4.. **Authorized person** re-enters door compartment, then exits.

Fig. 2.2.1 S3 security – unauthorized access in opposite direction

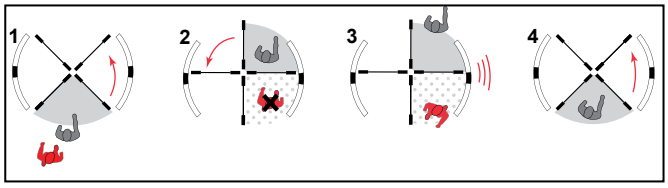


2.2.2 Anti-tailgating.

1. **Authorized person** swipes card and enters door compartment.
2. Intruder enters next available compartment.
3. Sensors detect intruder's presence.
- Door stops.
- Intruder alert sounds.
- Door reverses direction.
- Intruder exits initial door entry point.

4. Authorized person re-enters secured area.

Fig. 2.2.2 S3 security – unauthorized access in next compartment (Anti-tailgating)



2.4 S2 Bullet-rated Security Revolving Door Assembly Overview

Fig. 2.4.1 Four wing BR revolving door assembly

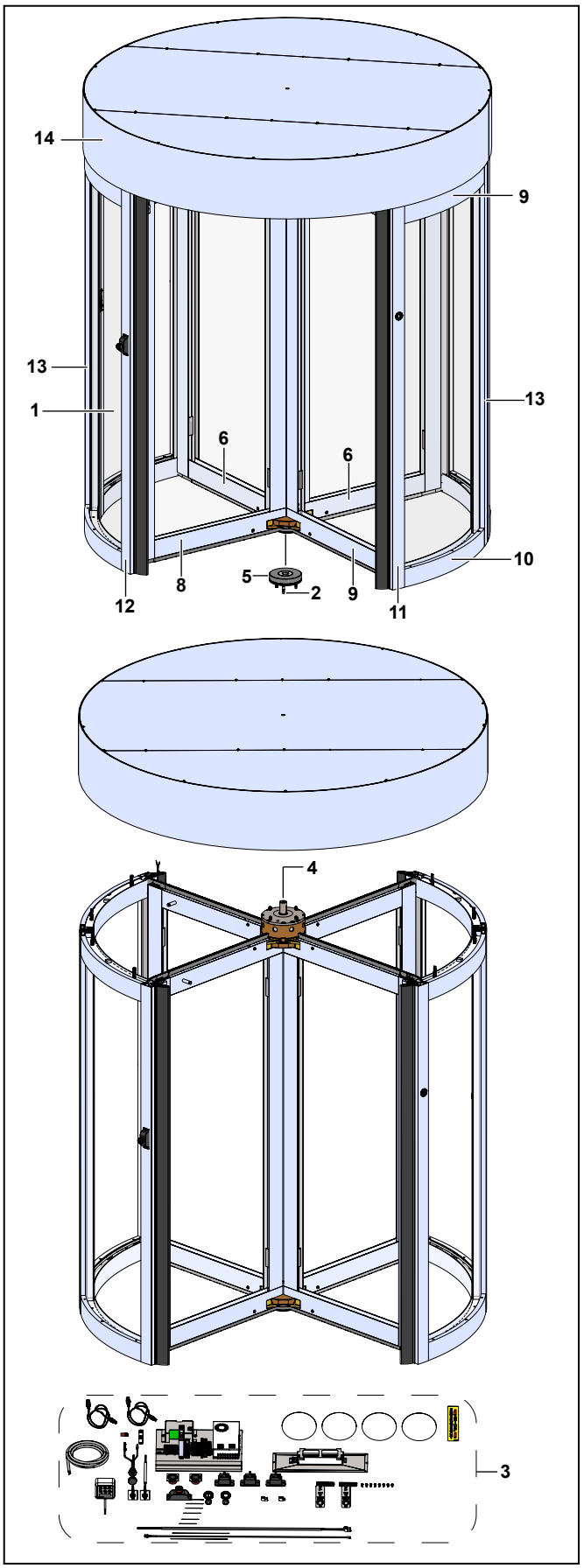


Table 2.4.1 S2 revolving door assemblies

Item	Part Number	Description	Qty
			S3
1	RC6627-010	Bent glass-bullet-rated	4
2	RF6076-010	Concrete stud w/ washer/nut	3
3	RK6017-002	Kit, Accessories, S3, Intenta S9	1
3	RK6017-003	Kit, Accessories, S4, Intenta S9	0
4	RS6102-002	Shaft assembly, 4 wing, bookfold lock, K9 drive	1
5	RS6126-001	Surface-mounted pivot bearing	1
6	RS6265-01X	Wing assembly, bullet-rated, no lock, no push, bookfold	2
7	RS6265-03X	Wing assembly, bullet-rated, top RH lock, no push, bookfold	1
8	RS6265-02X	Wing assembly, bullet-rated, top LH lock, no push, bookfold	1
9	RS6266-020	Rail header assembly, bullet-rated door, 4W	4
10	RS6266-010	Rail base assembly, bullet-rated door, 4W	4
11	RS6267-01X	Quarter post assembly, SRD, bullet-rated door	2
12	RS6267-02X	Quarter post assembly, Man, bullet-rated door	2
13	RS6268-01X	Center post assembly, RH, LH, bullet-rated door	2
14	RS6269-01X	Canopy assembly, 4 wing, S2, K9, bullet-rated door	1

3 Safety Information

3.1 General Safety Information

3.1.1 Safety instructions.

NOTICE

Observe safety warnings as they are presented in this manual.

3.1.2 Safety warnings.

⚠ WARNING

Damage to equipment or incorrect equipment operation may result from an incorrect installation.

⚠ WARNING

Hazard to mechanical processes by use of control settings, elements, or procedures not documented in this manual!

⚠ WARNING

Electric shock hazard!
By use of control elements, settings, or procedures not documented in this manual!

⚠ WARNING

Work on electrical equipment and 110-240 Vac wiring installation must be performed only by qualified personnel!

⚠ WARNING

Metallic doors must be grounded per national and local codes!

⚠ WARNING

Hand pinch point and crushing hazards!

⚠ WARNING

Crushing hazards!

3.1.3 Residual hazards.

⚠ WARNING

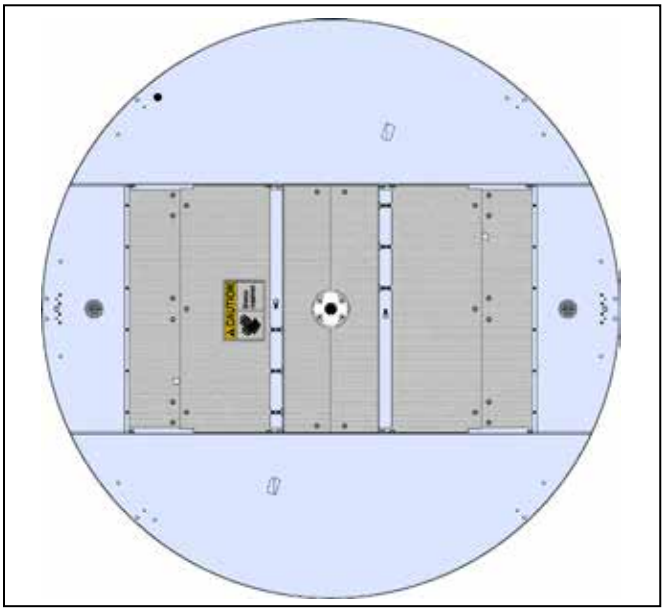
After installation, hazards such as minor crushing, impact with limited force, and risk to unsupervised children may exist depending on structural design of door area, type of door, and any safeguards that have been implemented.

3.1.4 Fiberglass panels.

⚠ WARNING

Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the fiberglass panels.
Failure to follow proper safety precautions may result in personal injury.

Fig. 3.1.1 Soffit fiberglass panels - example

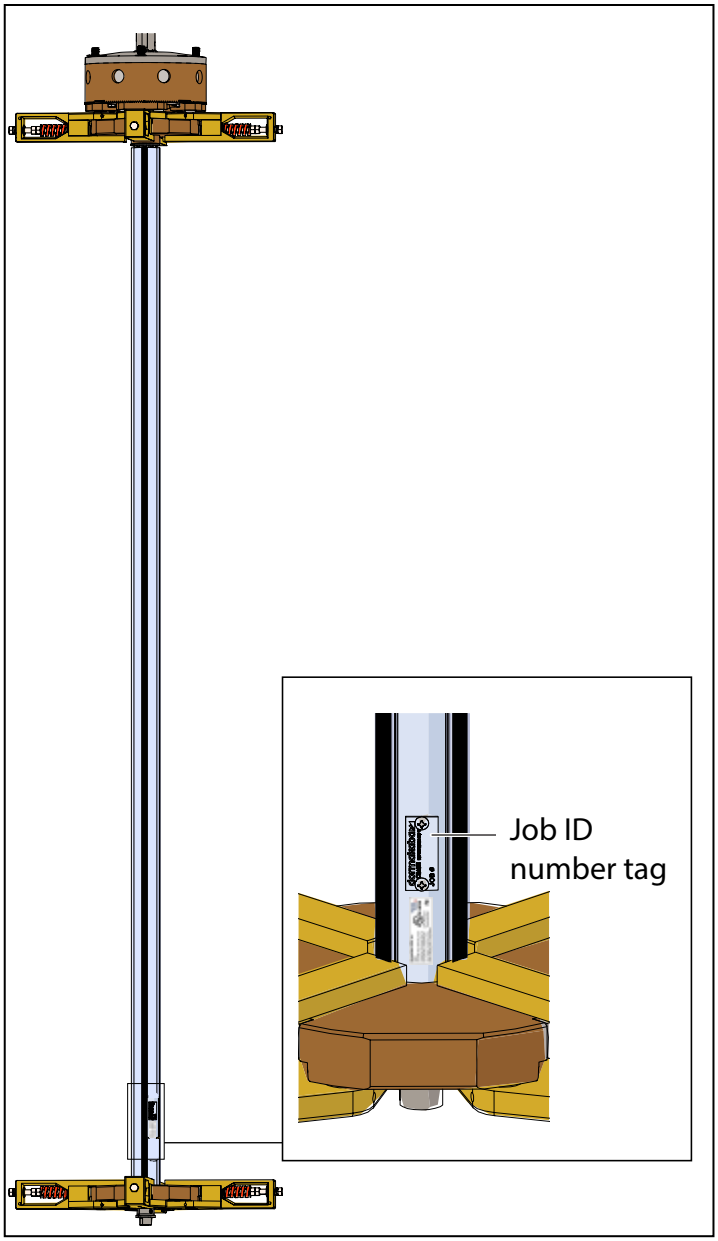


4 Ordering Replacement Parts

NOTICE

Ordering replacement parts - Job ID number. Part numbers for specific assemblies will vary depending on door height and width, finish requirements, and possible custom order requirements.
When ordering replacement parts, refer to the job number on the **Job number ID Tag** to ensure that the correct part(s) will be delivered.

Fig. 4.1.1 Shaft assembly Job number ID tag



5 User Interfaces

5.1 User Interfaces

5.1.1 Door user interfaces.

NOTICE

The MODE LOCK switch (8), E-Stop (1), door traffic status LEDs (5) and operating unit (4) are shown on the leading post for illustrative purposes only. These are field installed. They may be mounted elsewhere from the leading post based on customer needs.

The POWER switch (9) is field installed and located at the discretion of the installer.

TABLE 5.1.1 Door user interfaces
Reference Para. 7.7: Electronic Accessories Kit RK6017

ID#	Part no.	Function
1	RX3413-035	E-Stop, SRD K9 drive, 100" cable
2	RX3413-020	E-Stop mounting housing
3	RS7060-020	Push to Reverse assembly, security
4	RX6043-001	Unit, operating, OPL-05, K9 S2/S3/S4
5	RC7007-001	Door traffic status LEDs
6	RX6027-001	Speaker, voice module, canopy
7		Card reader, by others
8	RS6125-010	Assembly, MODE LOCK, 2-position K9 S2/S3 /S4
9	RS6125-020	Assembly, , POWER, 2-position K9, S2/S3/S4

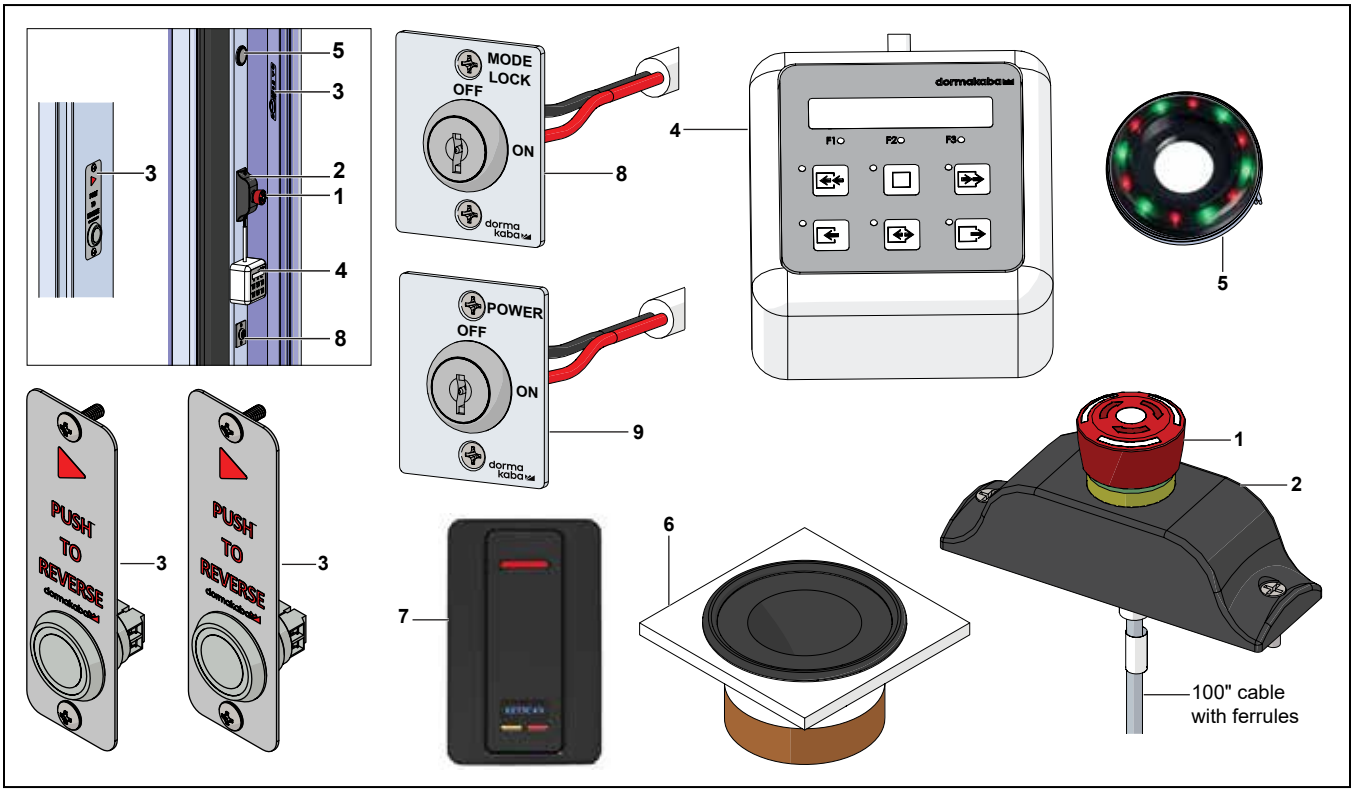
5.1.2 POWER ON/OFF switch.

The Power On/Off switch controls the main line power to the door's K9 drive and the bookfold lock controller.
Switch OFF:
1) The door will not operate ,the rotation of the center shaft will be limited by the K9 lock bolts.
2) The bookfold lock will be disengaged, allowing the door panels to be folded. To secure the entrance, manual locks (if available) should be engaged.
Switch ON:
1) The door will function in the mode set by the operator on the OPL-05 (4).
2) The bookfold lock will be engaged, restricting the manual folding of the door panels.

5.1.3 MODE LOCK OFF/ON switch.

Switch OFF:
No change can be make to OPL-05 (4) mode setting.
Switch ON:
OPL-05 (4) mode setting can be changed.

Fig. 5.1.1 S3 and S4 door assembly user interfaces



6 S2 Security Door Overview

6.1 S2 Security Door Control Overview

6.1.1 Security door system.

The security door revolving door system is designed to provide limited access for pedestrian traffic between two separate areas.

NOTICE

Intended use.
Security doors are intended for use only by persons trained in their proper use.

6.1.2 Controls

1. Supply line power.
- 120 Vac, single phase, circuit breaker protection.
2. K9 drive
3. Bookfold lock.
4. Passage control.
- Two independent inputs for activation devices, e.g. card readers (supplied by others) and an entry point and presence detection system.

6.1.3 Bookfold lock operation.

1. The wings will be held in their respective positions under normal conditions by an electro-magnetic bookfold lock.
2. Bookfold lock released when building fire alarm system signal, emergency stop signal or power failure occurs, allowing the wings to be manually pivoted in the direction of egress.

6.1.4 Manual wing locking.

1. The two door wings that face the interior when at the Home position (Fig. 6.1.1) are each equipped with a surface lock that, when engaged, will lock the door. To prevent damage to the controls and motor, put the OPL05 to General Release or engage an ESTOP button.

6.1.5 Safety.

1. Quarter post/end wall sensor will detect an obstruction between the rotating wings and the leading edge of the enclosure. Sensor shall be active within 2 inches [51 mm] of the floor and at least 60 inches [1520 mm] from the floor. Sensors will pause door operation with the door wing at any opening angle. Presence detection system will provide protection against entrapment.

6.1.6 Acceptable door speed.

NOTICE

K9 drive is set up to regulate door speed as specified in ANSI/BHMA A156.27, Section 8.2.

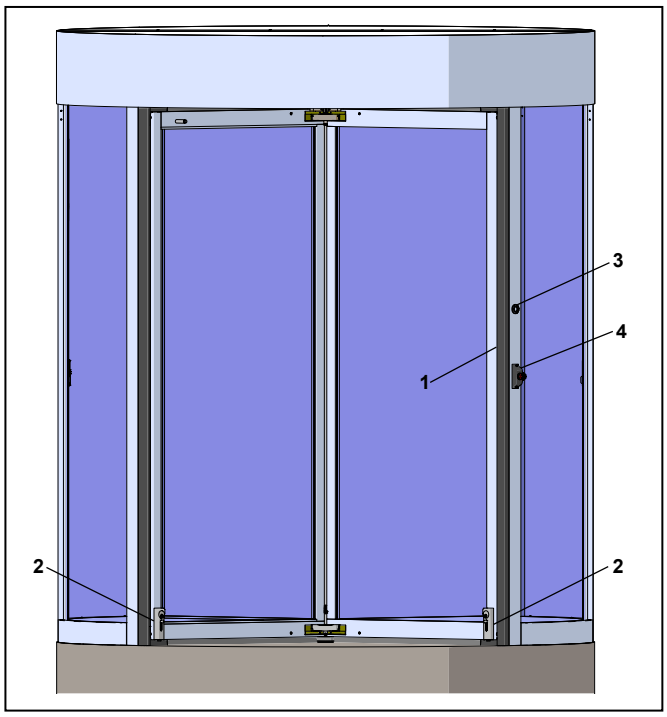
TABLE 6.1.1 Door user interfaces

ID#	Part no.	Function
1	RS6104-03X	Assembly, quarter post RH with sensor and resistor, 96"
2	RS6080-010	Surface lock and lock cylinder (lock cylinder by others)
3	RC7007-001	Door traffic status LEDs
4	RX3413-030	*Switch, Emergency Stop

* ESTOP location determined at installation.

Reference Chapter 5 for user interface overview.

Fig. 6.1.1 S2 security door interior view



7 Revolving Door Assemblies and Hardware

7.1 S2 SRD BR Canopy Assembly

NOTICE

Assembly shown is for an 6' 6" ID 4 wing aluminum S2 SRD and is for reference only. Canopy size, material, configuration may differ depending on customer order.

Fig. 7.1.1 S2 SRD BR canopy assembly

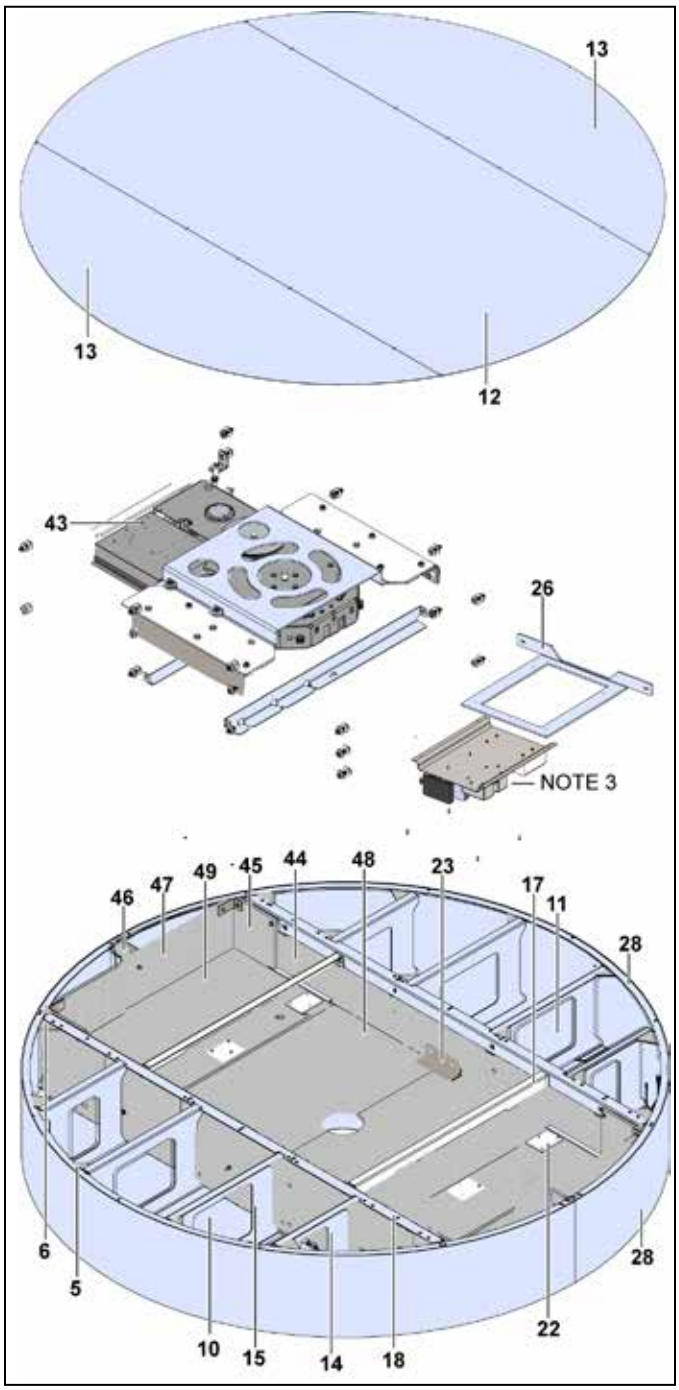


Table 7.1.1 S2 security canopy – – RS6269-01X

Item	Part number	Description	Qty
5	RC6444-010	3.5" x 3.5" canopy gusset, 1/8" AL	8
6	RC6444-040	3.75" x 3.37" canopy gusset, .06 Galv stl	12
10	RC6485-03X	Outer soffit, USB port, half, 4 wing, BR	1
11	RC6485-13X	Outer soffit, No USB port, half, 4 wing, BR	1
12	RC6486-020	Inner cover, 36" spacing, 6'6" ID door	1
13	RC6487-020	Outer cover, 36" brace spacing, 6'6" ID door	2
14	RC6558-090	Canopy support channel, 15" x 12.8"	4
15	RC6558-100	Canopy support channel, 20.8" x 12.8"	4
17	RC6599-020	Cross reinforcement bracket, 35.94"	2
18	RC6601-010	Canopy support bracket, 72.12"	2
22	RC6632-010	Fiberglass bracket joint, BR	6
23	RC6633-010	Fiberglass center angle bracket, BR	2
26	RC6645-010	Bracket, K9 control assembly attachment	1
27	RD7049-001	Label gloves required	1
28	RE6064-03X	Canopy fascia, 13"	2
29	RE6065-020	Canopy fascia rim, top	2
43	RK6014-004	Kit, drive mount assembly, K9, S4/S3/S2 BR	1
44	RM1071-010	Fiberglass BR canopy soffit, vertical outer	2
45	RM1072-010	Fiberglass BR canopy soffit, vertical inner	2
46	RM1073-010	Fiberglass BR canopy soffit, vertical outer End 1	2
47	RM1074-010	Fiberglass BR canopy soffit, vertical outer End 2	2
48	RM1075-010	Fiberglass BR canopy soffit, inner	2
49	RM1076-010	Fiberglass BR canopy soffit, outer	2

Notes

1. Reference Para.7.3 for canopy soffit views.
2. Fastener hardware not shown.
3. Electronic panel shown for illustrative purposes only. Panel is part of the RK6017 Electronics kits (Para. 7.7.1 and Para. 7.7.2).

7.2 Reserved

7.3 S2 BR Canopy Soffit View

Fig. 7.3.1 S2 Canopy soffit view

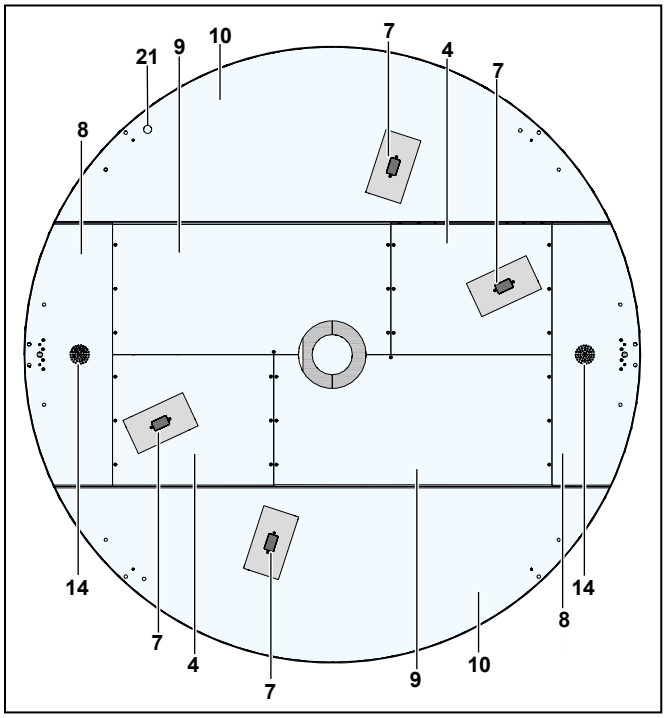


Table 7.3.1 S2 Canopy soffit view

4	RC6381-030	Cover plate w/ entry hole	1
7*	RK3500-010	Sensor, CEDES TOFNIVA	4
8	RC6483-02X	Canopy soffit, inner/outer 36" spacing BR	2
9	RC6484-02X	Canopy soffit, inner center BR	3
10	RC6485-03X	Canopy soffit, outer 4 wing BR	2
6*	RS6113-010	Assembly, bracket, Intenta sensor, K9	1
14*	RX6027-001	Speaker, voice module,	2
21*	RX6063-010	Dual USB port cable assembly, M/F	1

*Reference: Para. 7.7
RK6017-002 Electronics Accessories Kit

Notes

1. Initials "BR" stand for "bullet-rated".

7.4 Assembly, Drive Unit, K9

Fig. 7.4.1 Assembly, drive, K9 unit top view

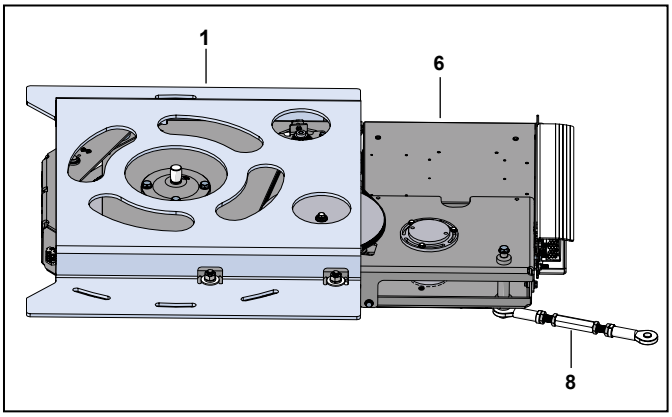


Table 7.4.1 Assembly, drive unit, K9

	RS6086-010	Assembly, drive unit, K9	
1	RC6373-010	Bracket, mount, K9 drive	1
2	RF6066-01Z	7/16-14 x 1 1/4" hex bolt, zinc plate	4
3	RF6067-01Z	7/16 x 1 1/4" OD washer, zinc plate	8
34	RF6068-01Z	7/16 lockwasher, zinc plate	4
3.2	RF6069-01Z	7/16-14 hex nut, zinc plate	4
6	RX6021-010	Assembly, drive, K9 unit	1

Fig. 7.4.2 Assembly, drive, K9 unit exploded view

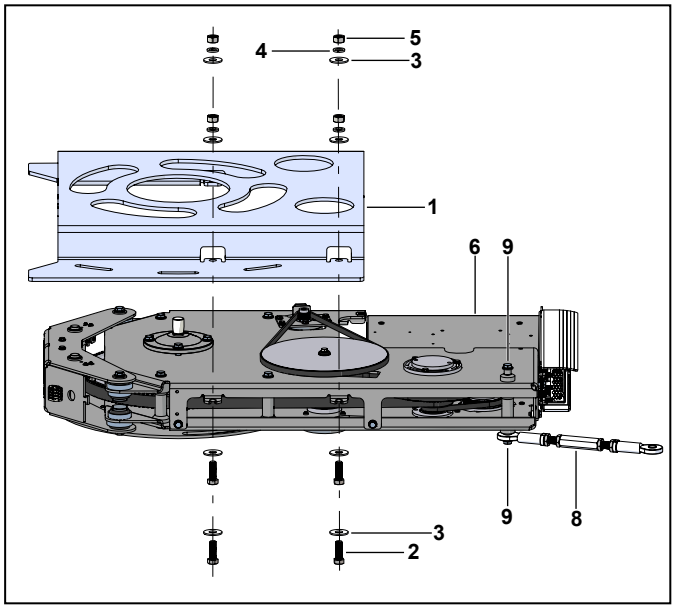
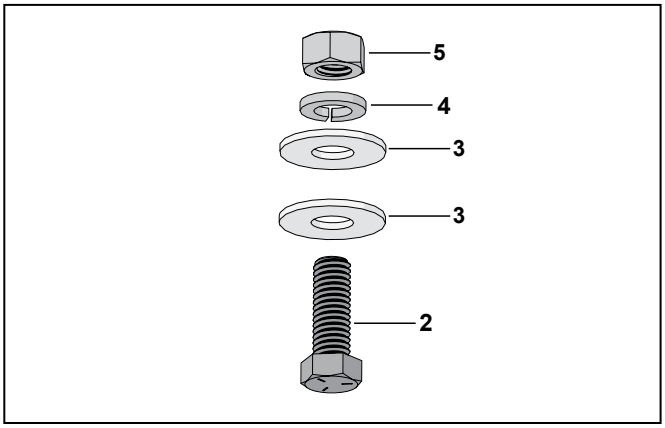


Fig. 7.4.3 Assembly, drive, K9 unit fasteners



7.5 Assembly, drive, K9

Fig. 7.5.1 Assembly, K9 drive unit, 4 wing

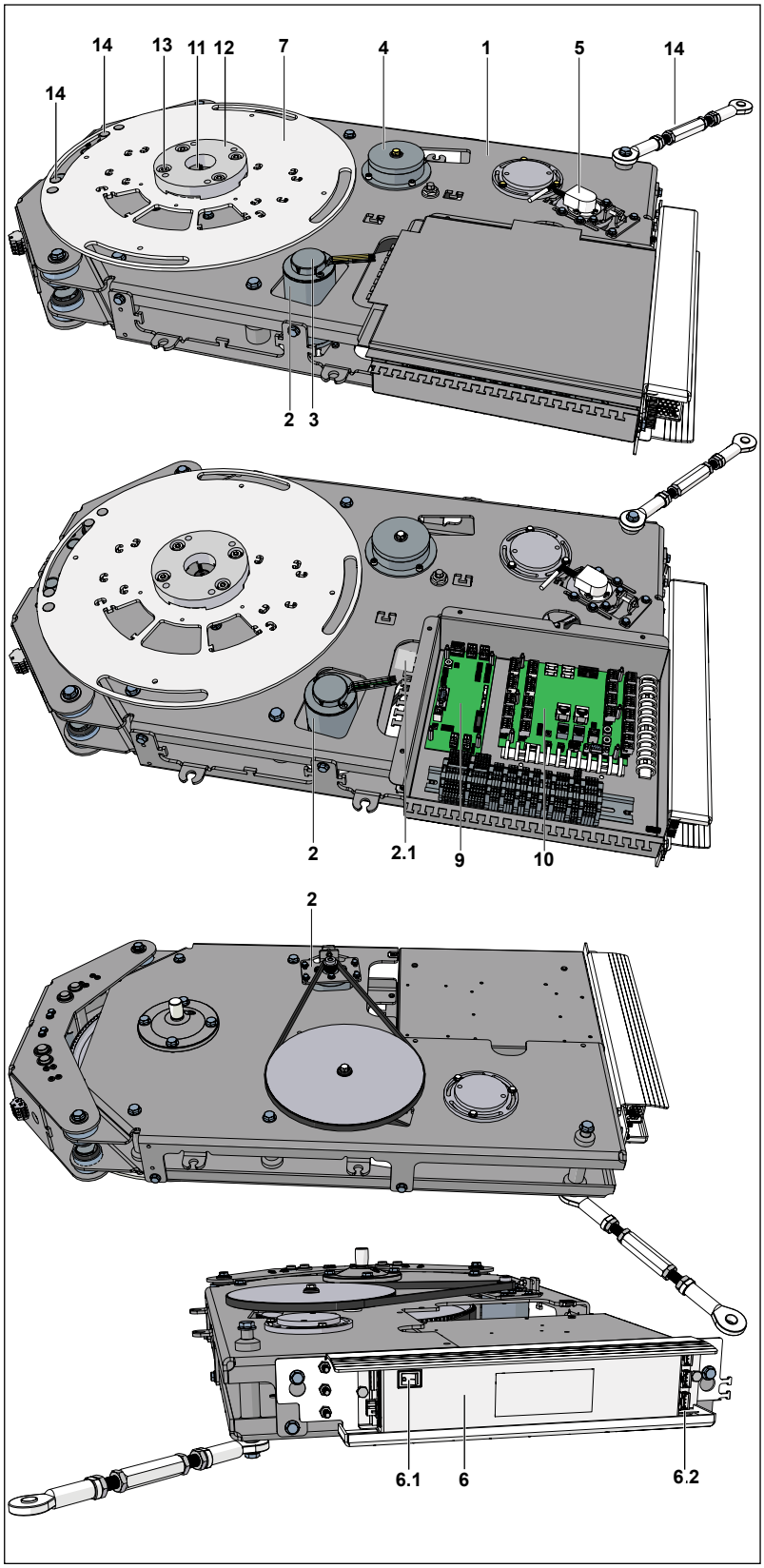


Table 7.5.1 Assembly, drive, K9 unit, 4 wing

ID#	Electrical diagram designation	Description
1	RX6021-010	K9 drive, 180 degree SRZ
2	**-M1**	Motor
2.1	**-KM**	Motor relay
3	**-B2**	Shaft encoder, speed
4	**-Y3**	Holding brake
5	**-B1**	Shaft encoder, position
6	**-G1**	Power supply
6.1	**-G1**	Main switch
6.2	**-G1**	24 VDC control voltage
7		Locking disc
8		Cover, control system boards
9	**-A2.1**	Control system, ETS22ac
10	**-A2.0**	Control system, ETS22sc
11	**-X3**	Slip ring
12	RC6379-010	Coupling, main drive adapter K9
13	RF6180-01C	M8-1.25 serrated flange socket head cap screw
14		Locking bolt
15		Turnbuckle

7.6 Kit, K9 Drive Mount Assembly - BR S2/S3/S4

Table 7.6.1 Kit, K9 drive assembly

Item	Part No.	Description	Qty
	RK6014-004	Kit, drive mount assembly, K9 S4/S3/S2	1
1	DF0939-01Z	1/4" lock washer, zinc	4
2	RC6374-010	Bracket, canopy mount, K9	2
3	RC6376-010	Bracket, cover plate support	2
4	RC6434-010	Bracket, angle adjustment, K9	1
5	RF6055-01G	1/4-20 x 1" hex head bolt, SS	5
6	RF6066-01Z	7/16-14 x 1 1/4" hex bolt, zinc plt	12
7	RF6066-02Z	7/16-14 x 1 3/4" hex bolt, zinc plt	22
8	RF6067-01Z	7/16 x 1 1/4" OD washer, zinc plt	56
9	RF6068-01Z	7/16" lockwasher, zinc plate	34
10	RF6069-01Z	7/16-14 hex nut, zinc	22
11	RF6161-01Z	Hex nut, M8 x 1.25 ZN plate steel	1
12	RF6162-01Z	Washer, flat, 1/4" oversize .56 x .26" ZN	4
13	RF6163-01C	Nut, clip-on, 10-24 black oxide	14
14	RF6167-01Z	M8-1.25 x 25 mm flanged hex head bolt, class 8.8	1
15	RF6168-01Z	M8 flat washer ZN plated steel	1
16	RF6169-01Z	M8 split lock washer ZN plated steel	1
17	RK6013-001	Kit, shaft adapter assembly, K9	1
18	RK6083-010	Assembly, side mount weldment, K9, RH	1
19	RS6083-020	Assembly, side mount weldment, K9, LH	1
20	RS6086-010	Assembly, drive unit, K9	1

Fig. 7.6.1 Kit, Drive mount assembly K9 S2/S3/S4

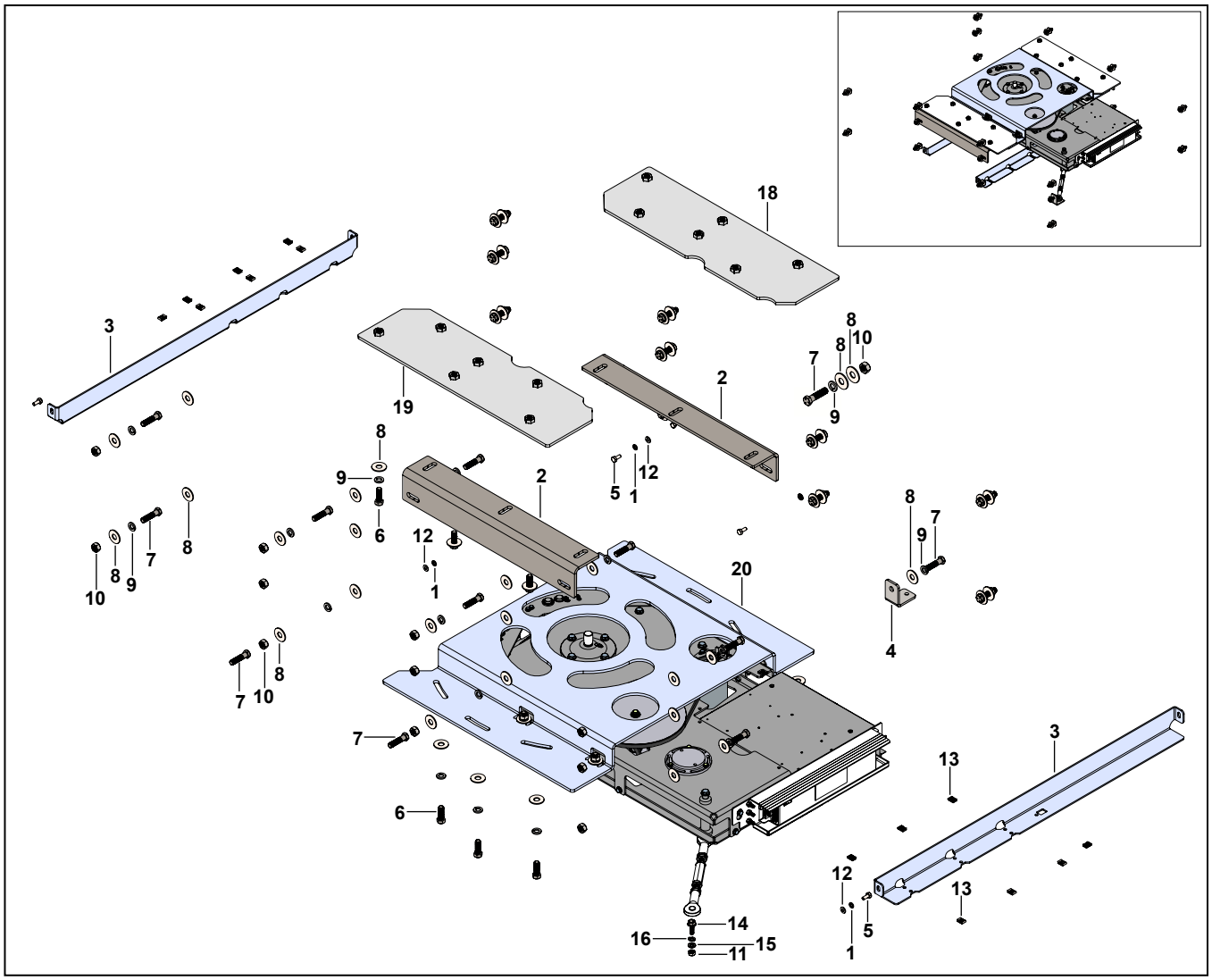
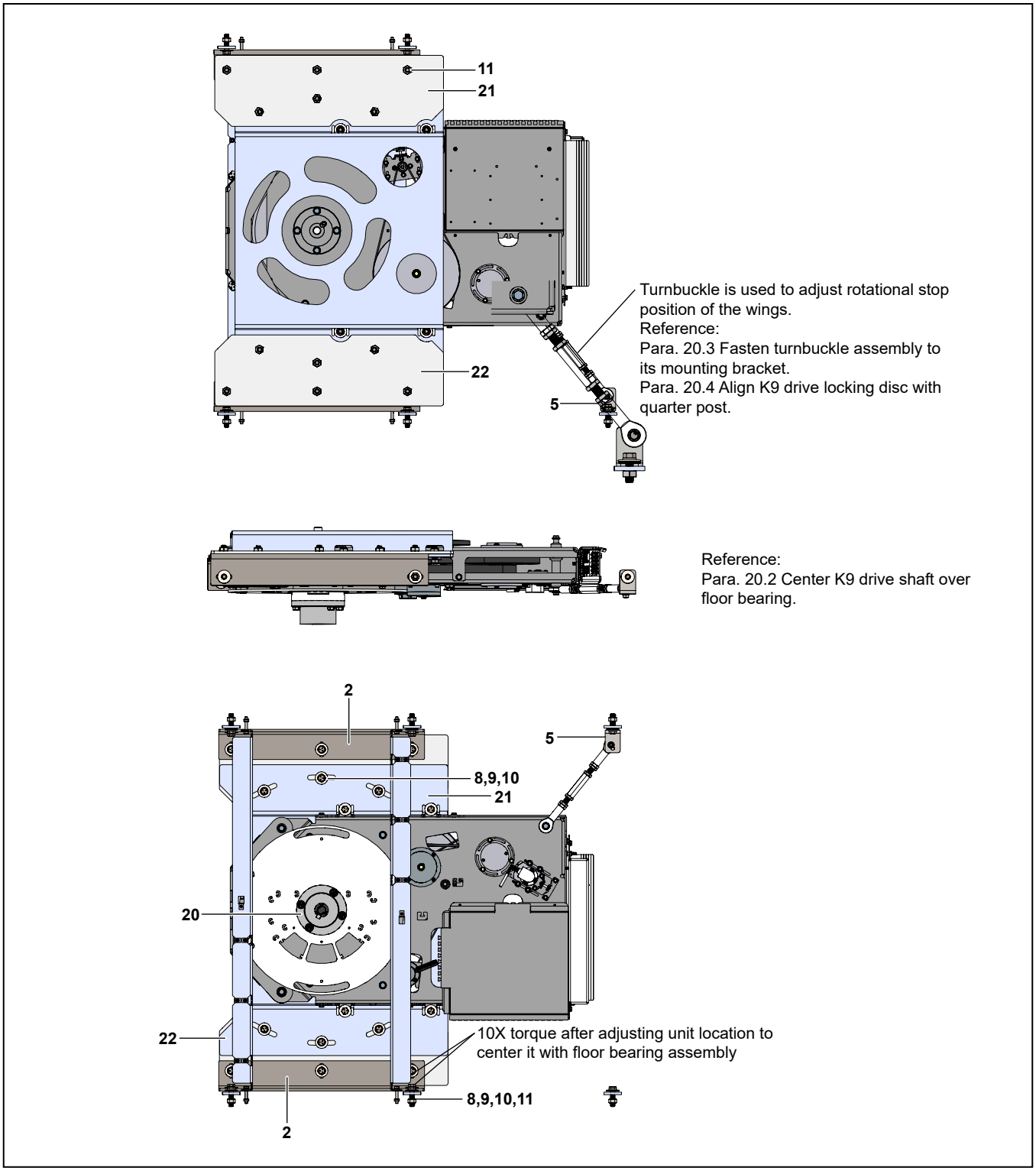


Table 7.6.2 K9 drive mount assembly adjustment hardware

2	RC6374-010	Bracket, canopy mount, K9	2
5	RC6434-010	Bracket, angle adjustment, K9	1
6	RF6055-02G	1/4-20 x 1" hex head bolt, SS	4
7	RF6066-01Z	7/16-14 x 1 1/4" hex bolt, zinc plt	33
9	RF6067-01Z	7/16 x 1 1/4" OD washer, zinc plt	33
10	RF6068-01Z	7/16" lockwasher, zinc plate	33
11	RF6069-01Z	7/16-14 hex nut, zinc	21
20	RK6013-001	Kit, shaft adapter assembly, K9	1
21	RS6083-010	Assembly, side mount weldment, K9, RH	1
22	RC6083-020	Assembly, side mount weldment, K9 , LH	1
23	RS6086-010	Assembly, drive unit, K9	1

Fig. 7.6.2 Kit, Drive mount assembly K9 S2/S3/S4

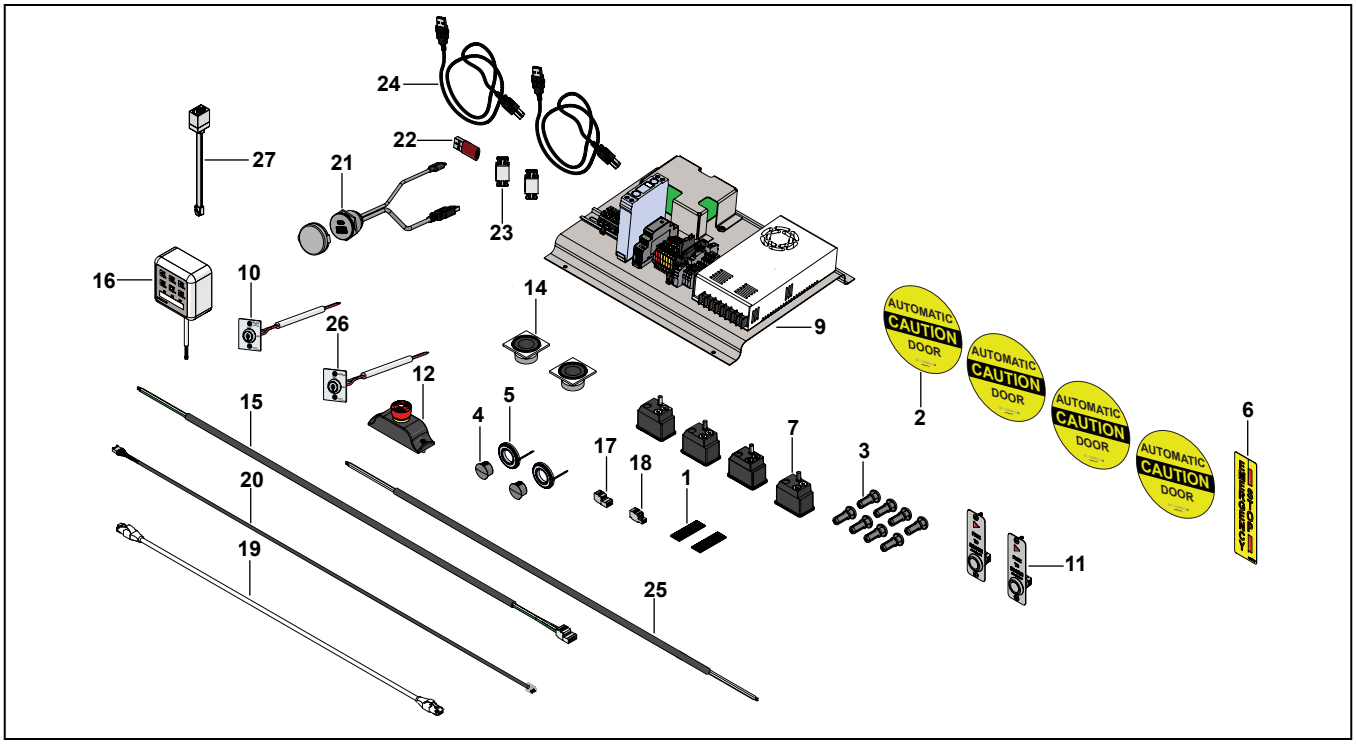


7.7.1 Kit Accessories Electronics K9 – S2

Table 7.7.1 S2 Kit Accessories Electronics K9 - RK6017-001

ID	Part number	Description	QTY
1	DC3103-010	Velcro, w / adhesive back	2
2	DD0586-010	Decal, AUTO CAUTION DOOR	4
3	RC6534-001	Rivet, push-in NVA sesnor mounting	8
4	RC6535-001	Plug, dome Halo indicator	2
5	RC7007-001	Door traffic status LED	2
6	RD3500-010	E-STOP label	1
7	RK3500-010	Sensor, CEDES TOFNIVA	4
9	RS6124-001	Assembly, Electronic SSR SRD K9 S3/S4 English	1
10	RS6125-010	Assembly, KEY LOCK 2-position K9 S3/S4	1
11	RS7060-020	Assembly, Push to Reverse	2
12	RX3413-030	Switch, E-STOP SRD K9	1
	RX3413-020	E-STOP mounting housing	1
14	RX6027-001	Speaker, voice module Veinland K9	2
15	RX6039-001	Assembly, power cable, bookfold lock SRD K9	1
16	RX6043-010	Operating unit, OPL-05, K9 S3/S4	1
17	RX6045-001	Connector, male, 2 pole, K9 bookfold lock	1
18	RX6046-001	Connector, female, 2 pole, K9 bookfold lock	1
19	RX6047-001	Cable, CAT-5 Ethernet K9 Intenta, 7 feet	1
20	RX6055-001	Cable, voice module board, K9, 5 feet	1
21	RX6063-010	Dual USB port cable assy, M/F	1
22	RX6069-010	Adaptor, USB-C to USB-A F/M	1
23	RX6070-010	Adaptor, USB-A to USB-A, F/F	2
24	RX6071-010	Cable, USB-A plug to B plug	2
25	RX6042-001	3 conductor cable, 60", 16 AWG, black jacket, Blk, Wht, Grn Electronic panel to K9 drive	1
26	RS6125-020	Assembly. POWER 2-position switch	1
27	RX6084-001	Cable, EXT RJ12 Jack to Plug, K9, 84"	1

Fig. 7.7.1 Kit Accessories Electronics K9, S2

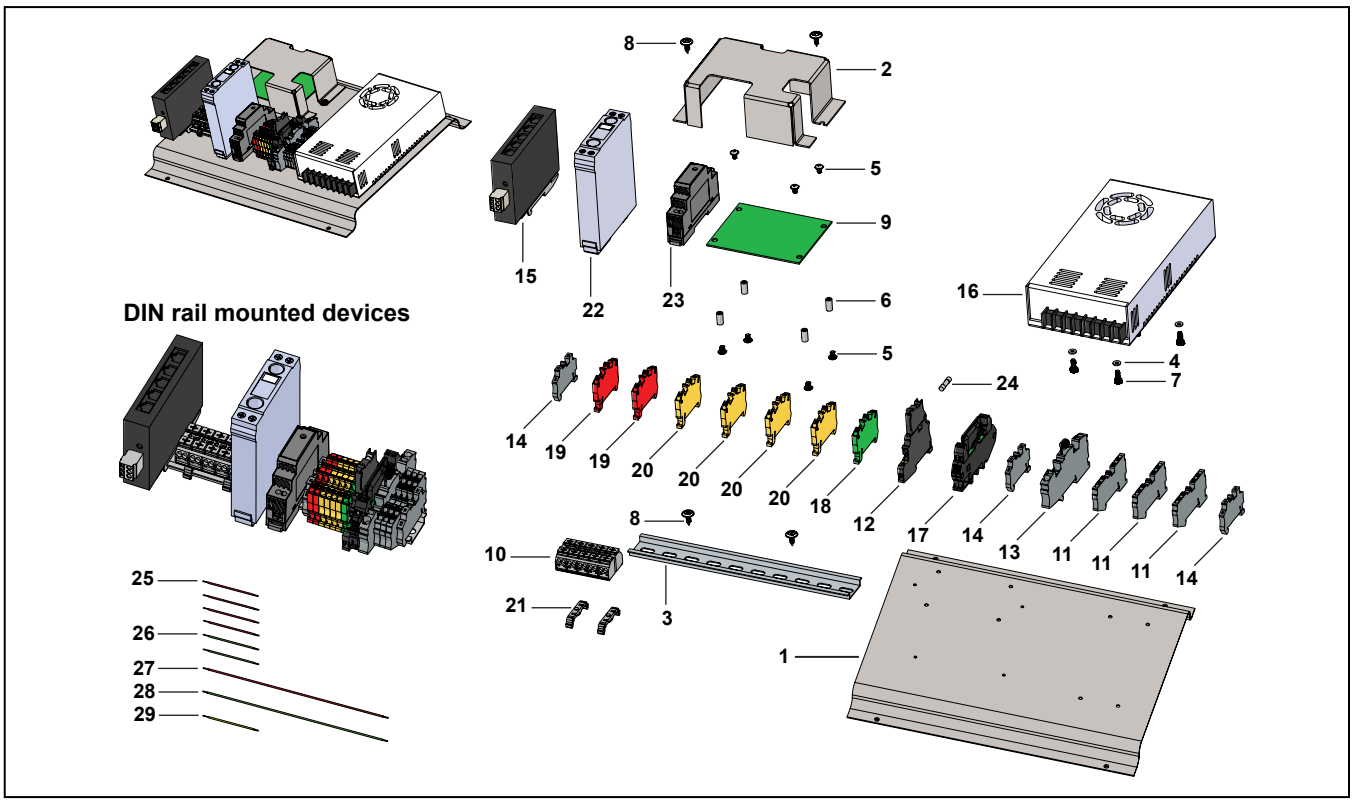


7.8.1 Electronic Assembly, SRD K9, English Language

Table 7.8.1 Electronic Assembly, SSR, SRD K9 RS6124, English

No.	Part no.	Description	S4	S3
			-001	-002
1	RC6435-01G	Module, voice base, K9	1	1
2	RC6436-01G	Module, voice cover, K9	1	1
3	RC6488-010	Rail, DIN	1	1
4	RF6155-01G	Washer, #4, flat	4	4
5	RF6156-01Z	8-32 x 1/4" Phillips pan head screw, zinc	8	8
6	RF6157-01Z	Standoff, 8-32 x 1/2", zinc	4	4
7	RF6165-01Z	SHCS, M4-0.7 X 7mm, ZN, power supply mounting,	4	4
8	RF6166-010	#8 x 5/8" rounded head screw with washer for sheet metal	4	4
9	RX6026-011	Board, voice module, English	1	1
10	RX6028-001	5-terminal block, quick connect, 12-20ga wires	1	1
11	RX6029-001	Terminal block, bookfold feed-thru, K9	2	2
12	RX6030-001	Terminal block, bookfold fuse module, K9	1	1
13	RX6031-001	Terminal block with diode, bookfold	1	1
14	RX6032-001	Bracket, snap-on, K9	3	3
15	RX6033-001	Switch, Ethernet, SRD, K9	1	0
16	RX6034-001	Power supply, bookfold lock, K9	1	1
17	RX6035-001	Assembly, relay, DIN rail SSR, K9	1	1
18	RX6050-002	Block, terminal, feed-thru, K9, Grn	1	1
19	RX6050-004	Block, terminal, feed-thru, K9, Red	2	2
20	RX6050-005	Block, terminal, feed-thru, K9, Yel	4	4
21	RX6058-001	DIN rail adapter, quick disconnect	2	2
22	RX6059-001	Solid state relay, DIN rail mount	1	1
23	RX6060-001	Power supply, DIN rail mount	1	1
24	RX7006-001	Fuse, 6.3A, 5 mm x 20 mm	1	1
25	RX7042-001	Wire, 22 AWG, Strd, Red, 3'	4	4
26	RX7042-002	Wire, 22 AWG, Strd, Grn, 3'	2	2
27	RX7042-003	Wire, 22 AWG, Strd, Red, 10'	1	1
28	RX7042-004	Wire, 22 AWG, Strd Grn 10'	1	1
29	RX7042-005	Wire, 22 AWG, Strd, Yel, 3'	1	1

Fig. 7.8.1 Electronic Assembly SSR SRD K9, English

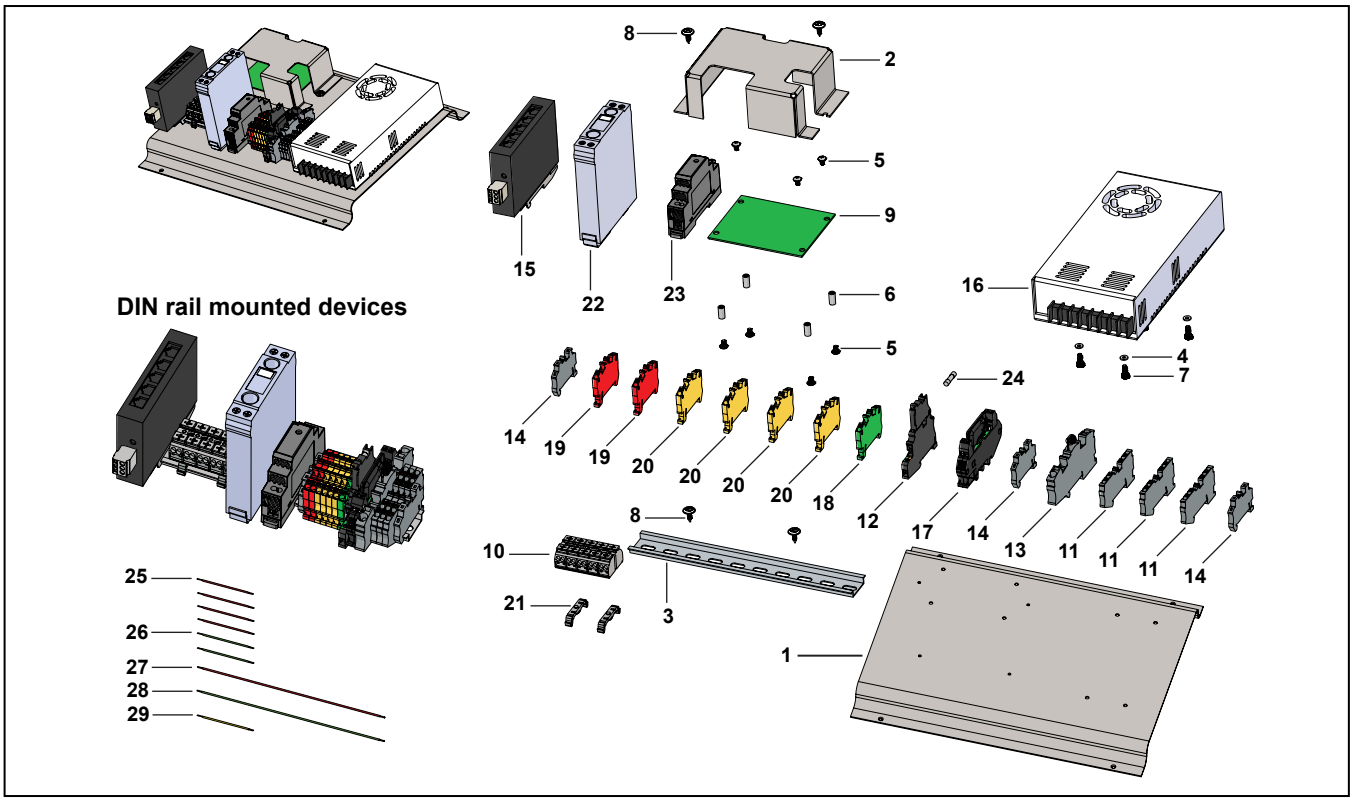


7.8.2 Electronic Assembly, SRD K9, Spanish Language

Table 7.8.2 Electronic Assembly, SSR, SRD K9 RS6124, Spanish

No.	Part no.	Description	S4 -003	S3 -004
1	RC6435-01G	Module, voice base, K9	1	1
2	RC6436-01G	Module, voice cover, K9	1	1
3	RC6488-010	Rail, DIN	1	1
4	RF6155-01G	Washer, #4, flat	4	4
5	RF6156-01Z	8-32 x 1/4" Phillips pan head screw, zinc	8	8
6	RF6157-01Z	Standoff, 8-32 x 1/2", zinc	4	4
7	RF6165-01Z	SHCS, M4-0.7 X 7mm, ZN, power supply mounting,	4	4
8	RF6166-010	#8 x 5/8" rounded head screw with washer for sheet metal	4	4
9	RX6026-012	Board, voice module, Spanish	1	1
10	RX6028-001	5-terminal block, quick connect, 12-20ga wires	1	1
11	RX6029-001	Terminal block, bookfold feed-thru, K9	2	2
12	RX6030-001	Terminal block, bookfold fuse module, K9	1	1
13	RX6031-001	Terminal block with diode, bookfold	1	1
14	RX6032-001	Bracket, snap-on, K9	3	3
15	RX6033-001	Switch, Ethernet, SRD, K9	1	0
16	RX6034-001	Power supply, bookfold lock, K9	1	1
17	RX6035-001	Assembly, relay, DIN rail SSR, K9	1	1
18	RX6050-002	Block, terminal, feed-thru, K9, Grn	1	1
19	RX6050-004	Block, terminal, feed-thru, K9, Red	2	2
20	RX6050-005	Block, terminal, feed-thru, K9, Yel	4	4
21	RX6058-001	DIN rail adapter, quick disconnect	2	2
22	RX6059-001	Solid state relay, DIN rail mount	1	1
23	RX6060-001	Power supply, DIN rail mount	1	1
24	RX7006-001	Fuse, 6.3A, 5 mm x 20 mm	1	1
25	RX7042-001	Wire, 22 AWG, Strd, Red, 3'	4	4
26	RX7042-002	Wire, 22 AWG, Strd, Grn, 3'	2	2
27	RX7042-003	Wire, 22 AWG, Strd, Red, 10'	1	1
28	RX7042-004	Wire, 22 AWG, Strd Grn 10'	1	1
29	RX7042-005	Wire, 22 AWG, Strd, Yel, 3'	1	1

Fig. 7.8.2 Electronic Assembly SSR SRD K9, Spanish



7.9 Shaft Assembly, 4 Wing, S2/S3/S4, BR, K9 Drive

Fig. 7.9.1 Shaft assembly, 4 wing, S2/S3/S4, BR K9 drive

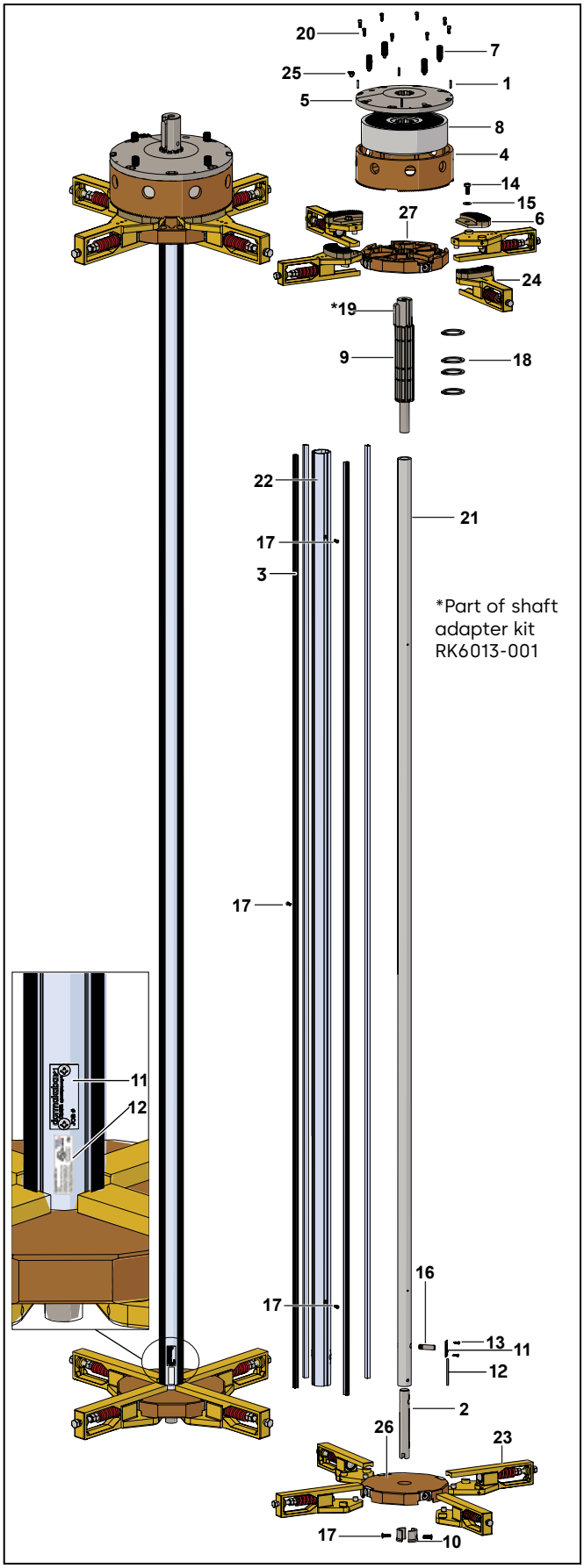
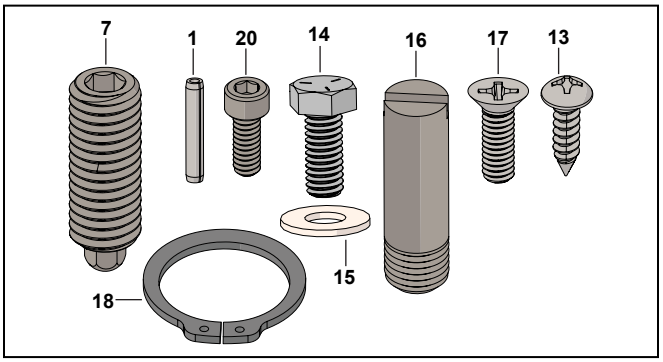


Table 7.9.1 Shaft assembly, 4 wing, S3/S3/S4, K9 drive

	RS6102-002	Shaft assembly, 4 wing, S2/S3/S4, BR, K9	
1	DF2708-01Z	Ø1/8 x 3/4" slotted spring pin - zinc	4
2	RC6178-010	Bottom shaft adapter	1
3	RC6311-010	Steel shaft pile sweep	4
4	RC6331-01F	Bookfold lock disc, 4 wing, dull chrome	1
5	RC6332-010	Top bookfold lock plate, splined,	1
6	RC6337-01F	Serrated bookfold lock plate dull chrome	4
7	RC6338-010	Bookfold spring plunger	4
8	RC6339-020	Bookfold lock coil housing assembly, 45V	1
9	RC6372-01G	S2-S3 shaft, splined shaft	1
10	RC6417-001	Bottom shaft collar, half, SRD	2
11	RD6001-001	Shaft ID tag	1
12	RD7045-001	Label, U/L approval certificate, SRD,K9	1
13	RF6008-01G	#6 x 1/2" Phillips pan head sheet metal screw	2
14	RF6012-01G	5/16-18 x 3/4" hex bolt, SS	4
15	RF6019-01G	5/16 flat washer SS	4
16	RF6052-010	7/16-20 1 1/2" steel shaft cross pin,	1
17	RF6054-01G	8-32 x 1/2" Philips FHMS, SS	5
18	RF6061-010	Snap-ring, bookfold lock, 1 3/4" OD	4
19	RF6151-01G	Key, 10 mm x 10 mm x 54 mm, SS, K9	1
20	RF7006-02C	10-24 x 1/2" long socket head cap screw	8
21	RM1200-003	SRD steel center shaft	1
22	RM1210-001	4 wing steel center shaft cover	1
23	RS6071-01F	Hanger, HD SS Pin Dull chrome	4
24	RS6071-02F	Hanger, HD Bkfld SS Pin Dull chrome	4
25	RS6109-010	Bookfold lock cable tie assembly	1
26	RC6233-01F	Disc assembly 4W, SShft DC	1
26	RC6233-03F	Bookfold lock disc assembly, 4W, DC	1

Fig. 7.9.2 Shaft assembly fasteners



7.10 Bookfold Lock Operation

7.10.1 Building alarm or security interface.

1. Building alarm or security system provides signal (N.C. dry contact).

7.10.2 Bookfold lock operation.

1. Bookfold lock is normally engaged (Fig. 7.10.3) increasing the amount of force required to fold the door wings. Power from the bookfold lock power supply energizes the bookfold coil.

- Bookfold lock body serrations engage hanger serrated plates.

2. When bookfold lock released, steel cover plate/bookfold body is moved away from hanger serrated plates by springs in each of the four spring plungers.

Fig. 7.10.1 Bookfold lock assembly

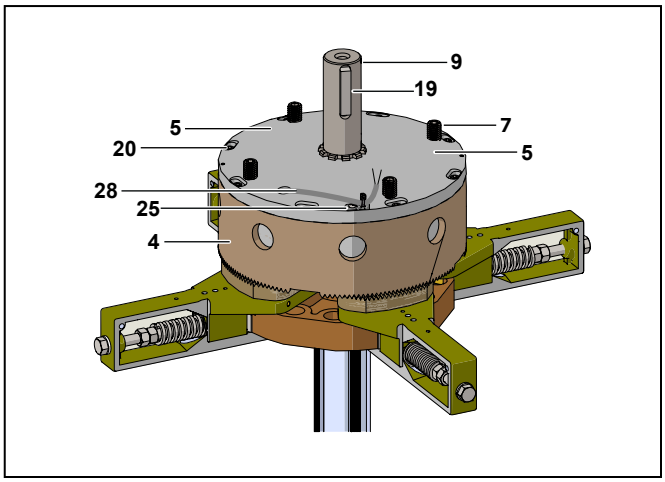


Fig. 7.10.2 Bookfold lock electromagnetic coil

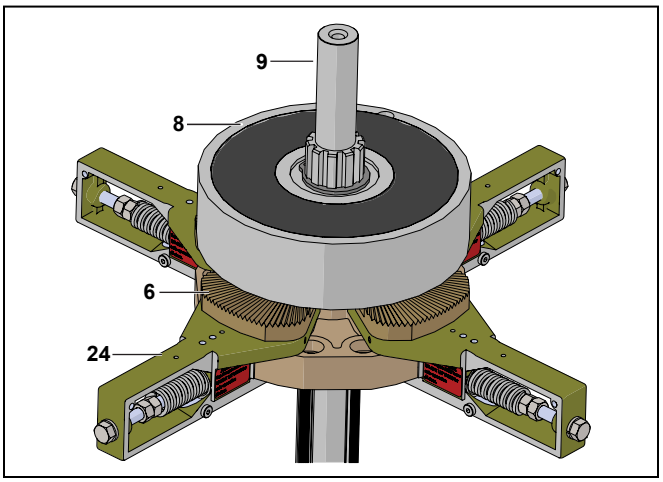
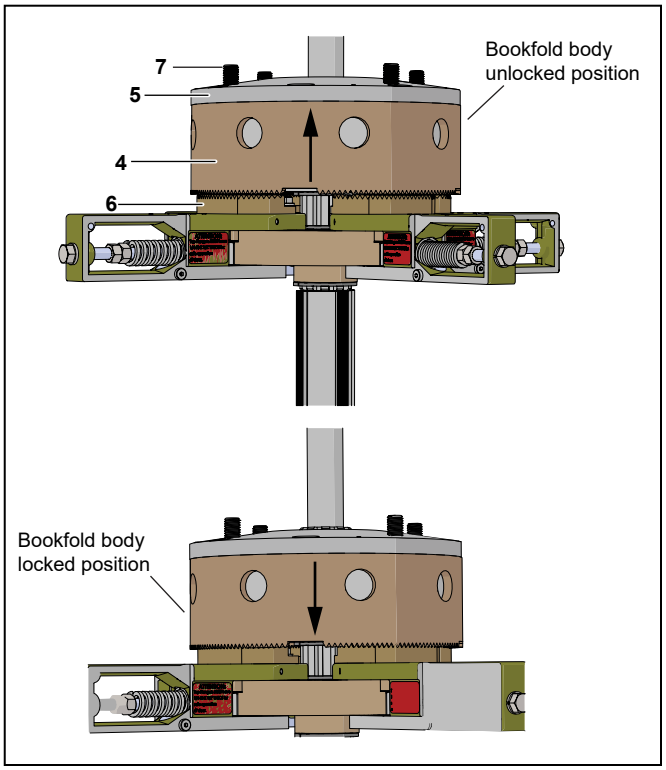


Table 7.10.1 Bookfold lock assembly

3	RS6233-03J	Assembly, disc bookfold lock 4W SRD, SB
4	RC6331-010	Bookfold lock disc, 4W
5	RC6332-010	Top bookfold lock plate, splined
6	RC6337-010	Serrated bookfold lock plate
7	RC6338-010	Bookfold spring plunger
8	RC6339-020	Bookfold lock coil housing assembly, 45V
9	RC6372-01G	S2-S3 shaft, splined shaft
19	RF6151-01G	Key, 10 mm x 10 mm x 54 mm, SS, K9
20	RF7006-02C	10-24 x1/2" socket head cap screw
24	RS6071-02F	Hanger, HD bookfold, SS Pin dull chrome
25	RS6109-001	Bookfold lock cable tie assembly
28		Bookfold Lock coil wire jacket

Fig. 7.10.3 Bookfold lock body operation



7.11 Top Hanger Assembly – Bookfold

Fig. 7.11.1 Top hanger assembly and serrated plate

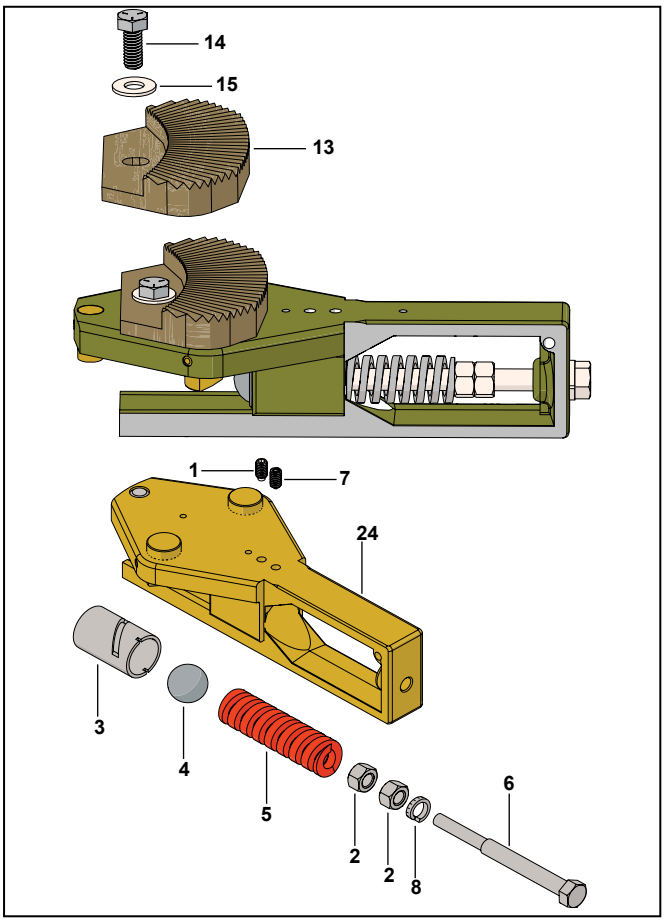


Table 7.11.1 Top hanger assembly

Item	Part No.	Description	Qty
1	DF0472-020	1/4-20 x 1/2"socket set full dog	1
2	DF0587-00G	3/8-16 hex nut , ZN plated	2
3	RC6146-010	Machined hanger sleeve	1
4	RC6149-010	7/8" diameter steel ball, grade 500	1
5	RC6154-010	Heavy duty hanger spring	1
6	RC6156-01G	3/8-16 x 4" hex head bolt SS	1
7	RF6124-01C	1/4-20 x 1/2" socket head set screw	1
8	RF6125-01Z	3/8" high collar lock washer	1
24	RS6071-02X	HD hanger w/bookfold lock pins	1

Table 7.11.2 Bookfold serrated plate and hardware

13	RC6337-010	Serrated bookfold lock plate	1
14	RF6012-01G	5/16-18 x 3/4" hex bolt, SS	1
15	RF6019-01G	5/16 " flat washer 316, SS	1

			RS6071-02X_ HD hanger assembly with bookfold lock pins					
			-02J	-02S	-02T	-02F	-02W	-02E
24	RS6071-02J	Hanger, HD bookfold SS pin, Satin/Bronze	1					
24	RS6071-02S	Hanger, HD bookfold SS pin, Mirror Bronze		1				
24	RS6071-02T	Hanger, HD bookfold SS pin, Statuarary Bronze			1			
24	RS6071-02F	Hanger, HD bookfold SS pin, Dull chrome				1		
24	RS6071-02W	Hanger, HD bookfold SS pin, Bright chrome					1	
24	RS6071-02E	Hanger, HD bookfold SS pin, Paint						1

7.12 Bottom Hanger Assembly

Fig. 7.12.1 Bottom hanger assembly

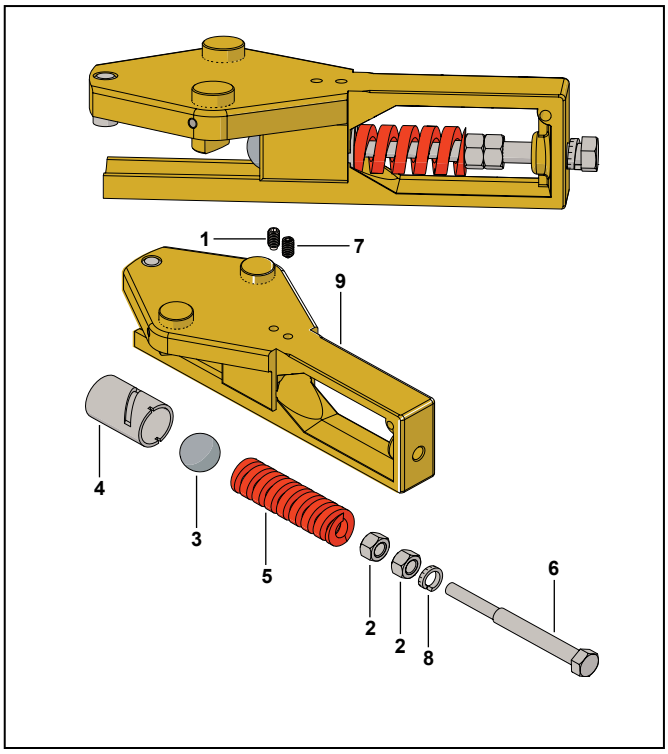


Table 7.12.1 Bottom hanger assembly

Item	Part No.	Description	Qty
1	DF0472-020	1/4-20 x 1/2"socket set full dog	1
2	DF0587-00G	3/8-16 hex nut , ZN plated	2
3	RC6146-010	Machined hanger sleeve	1
4	RC6149-010	7/8" diameter steel ball, grade 500	1
5	RC6154-010	Heavy duty hanger spring	1
6	RC6156-01G	3/8-16 x 4" hex head bolt SS	1
7	RF6124-01C	1/4-20 x 1/2" socket head set w/ screw	1
8	RF6125-01Z	3/8" high collar lock washer	1
9	RS6071-01X_	Hanger, HD	1

			RS6071--01_ HD hanger assembly					
			-01J	-01S	-01T	-03F	-03W	-03E
9	RS6071-01J	Hanger, standard with pins, Satin/Bronze	1					
9	RS6071-01S	Hanger, standard with pins, Mirror Bronze		1				
9	RS6071-01T	Hanger, standard with pins, Statuarary Bronze			1			
9	RS6071-01F	Hanger, standard with pins, Dull chrome				1		
9	RS6071-01W	Hanger, standard with pins, Bright chrome					1	
9	RS6071-01E	Hanger, standard with pins, Paint						1

7.13 Surface Mounted Pivot Bearing Assembly

Fig. 7.13.1 Surface mounted pivot bearing assembly RS6126-001

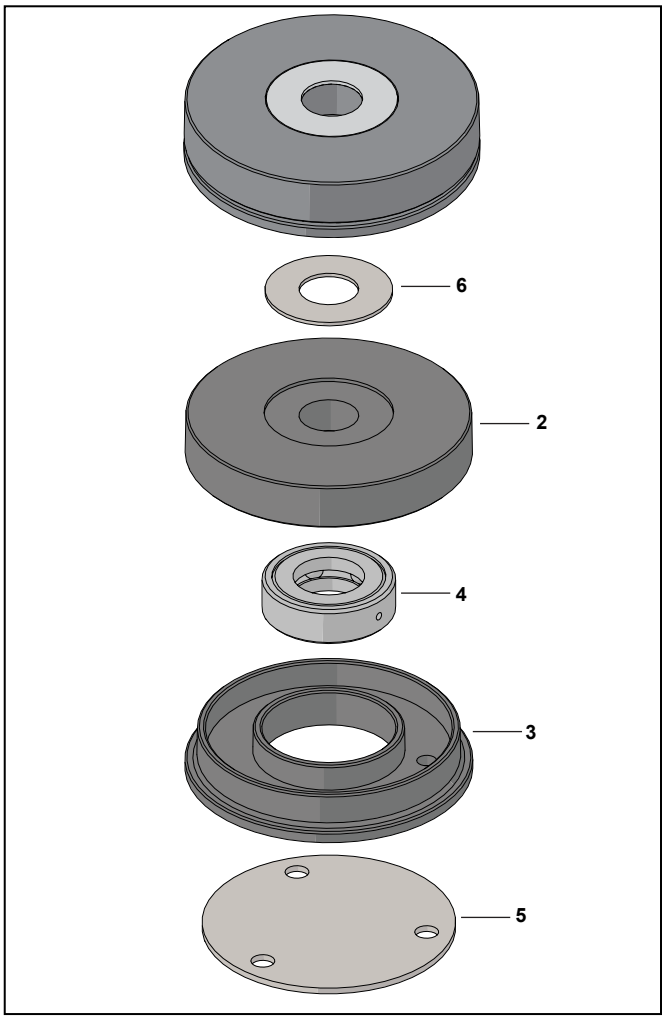


Table 7.13.1 Surface mounted bearing assembly

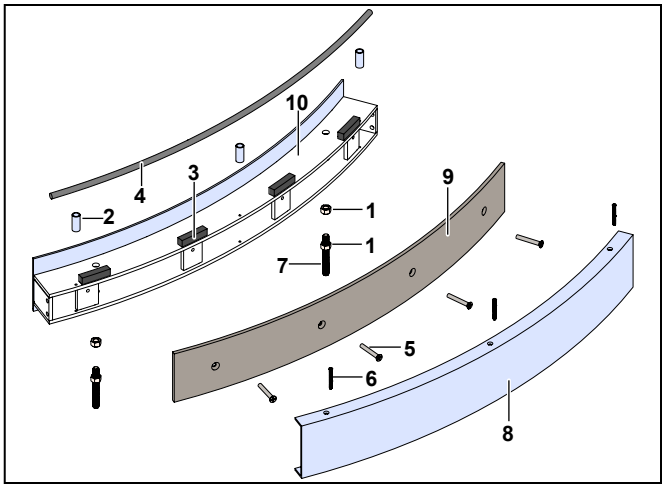
Item	Part No.	Description	Qty
1	RC6411-010	White lithium grease NLG1 #1	1 Oz.
2	RC6518-010	Floor pivot bearing cover, Nylon	1
3	RC6519-010	Floor pivot bearing base, Nylon	1
4	RC6520-010	3.094" OD x .63" thrust bearing for 1-1/8" shaft	1
5	RC6521-010	Floor pivot bearing plate	1
6	RF6112-01G	Pivot bearing washer, 15/16 x 2 x .06", SS	1

NOTICE

- Washer (5) and bearing cover (1) glued in place at factory using gasket material RC6499.
- Bearing plate (4) and bearing base (2) glued in place at factory using gasket material RC6499.

7.14 Base Rail Assembly, 4 Wing

Fig. 7.14.1 Base Rail assembly, 4 wing



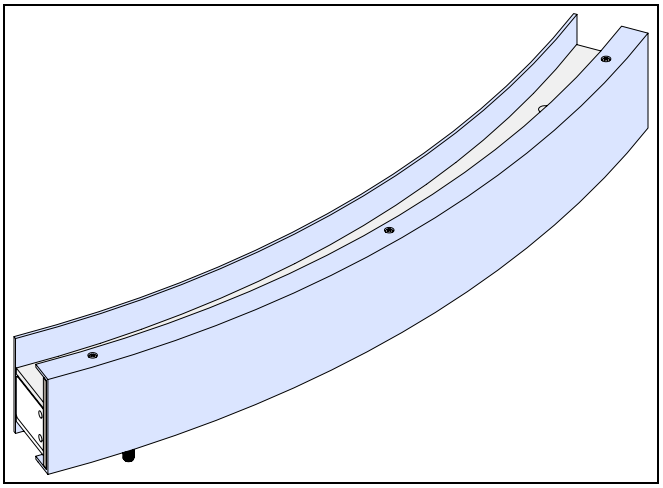


Table 7.14.1 Base rail assembly, BR, 4 wing

Item	Part No.	Description					
	RS6266-01X	Base rail assembly, BR, 4 wing	-010	-01A	-10B	-01D	-01E
1	DF0587-00G	Hex nut, 3/8-16	4	4	4	4	4
2	RC6390-020	Base rail spacer, 1/2" OD, 1-1/8" long	3	3	3	3	3
3	By installer	Glazing block, 1/8x3/8x2"	4	4	4	4	4
4	By installer	Backing rod, 4 wing, 8' door	1	1	1	1	1
5	RF6116-09G	1/4-20 x 1-3/4" long FHMS, SS	4	4	4	4	4
6	RF6123-01E	8-32 x 1-1/2" Phillips Oval head MS custom paint	-	-	-	3	3
6	RF6123-01G	8-32 x 1-1/2" Phillips Oval head MS SS	3	3	-	-	-
6	RF6123-01B	8-32 x 1-1/2" Phillips Oval head MS DBRZ	-	-	3	-	-
7	RF6144-01Z	3/8-16 x 3" fully threaded rod	2	2	2	2	2
8	RM6082-010	Enclosure rail base cover BR 4" AL	1	-	-	-	-
8	RM6082-01A	Enclosure rail base cover BR 4" Clear	-	1	-	-	-
8	RM6082-01B	Enclosure rail base cover BR 4" DBRZ	-	-	1	-	-
8	RM6082-01D	Enclosure rail base cover BR 4" custom Anodized	-	-	-	1	-
8	RM6082-01E	Enclosure rail base cover BR 4" custom paint	-	-	-	-	1
9	RM6084-010	Enclosure cover mounting plate 4", BR DR,rust resistant primer	1	1	1	1	1
10	RS6156-010	Subassembly, rail base, BR, 4W, Mill	1	-	-	-	-
10	RS6156-01A	Subassembly, rail base, BR, 4W, Clear	-	1	-	-	-
10	RS6156-01B	Subassembly, rail base, BR, 4W, DBRNZ	-	-	1	-	-
10	RS6156-01D	Subassembly, rail base, BR, 4W, Cust anodized	-	-	-	1	-
10	RS6156-01E	Subassembly, rail base, BR, 4W, cust paint	-	-	-	-	1

-010	MILL
-01A	Clear
-01B	Dark bronze
-01D	Custom Anodized
-01E	Custom paint

7.15 Header Rail Assembly, 4 Wing

Fig. 7.15.1 Header Rail assembly, 4 wing

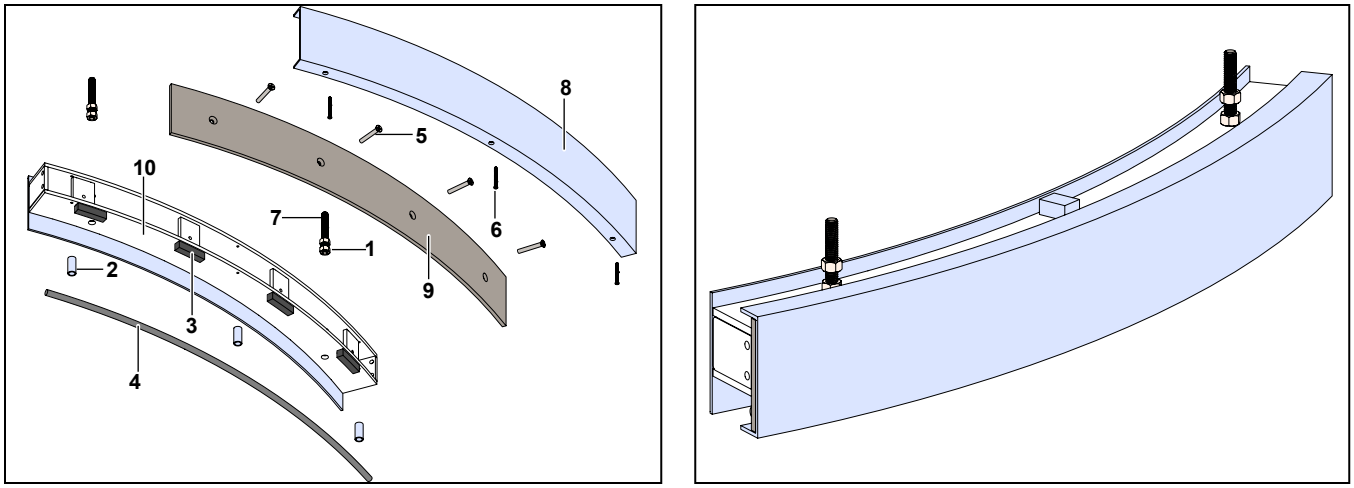


Table 7.15.1 Header rail assembly, BR, 4 wing

Item	Part No.	Description					
	RS6266-02X	Header rail assembly, BR, 4 wing	-020	-02A	-02B	-02D	-02E
1	DF0587-00G	Hex nut, 3/8-16	6	6	6	6	6
2	RC6390-020	Base rail spacer, 1/2" OD, 1-1/8" long	3	3	3	3	3
3	By installer	Glazing block, 1/8x3/8x2"	4	4	4	4	4
4	By installer	Backing rod, 4 wing, 8' door	1	1	1	1	1
5	RF6116-09G	1/4-20 x 1-3/4" long FHMS, SS	4	4	4	4	4
6	RF6123-01E	8-32 x 1-1/2" Phillips Oval head MS custom paint	-	-	-	3	3
6	RF6123-01G	8-32 x 1-1/2" Phillips Oval head MS SS	3	3	-	-	-
6	RF6123-01B	8-32 x 1-1/2" Phillips Oval head MS DBRZ	-	-	3	-	-
7	RF6144-01Z	3/8-16 x 3" fully threaded rod	2	2	2	2	2
8	RM6082-010	Enclosure rail base cover BR 4" AL	1	-	-	-	-
8	RM6082-01A	Enclosure rail base cover BR 4" Clear	-	1	-	-	-
8	RM6082-01B	Enclosure rail base cover BR 4" DBRZ	-	-	1	-	-
8	RM6082-01D	Enclosure rail base cover BR 4" custom Anodized	-	-	-	1	-
8	RM6082-01E	Enclosure rail base cover BR 4" custom paint	-	-	-	-	1
9	RM6084-010	Enclosure cover mounting plate 4", BR DR,rust resistant primer	1	1	1	1	1
10	RS6156-010	Subassembly, rail base, BR, 4W, Mill	1	-	-	-	-
10	RS6156-01A	Subassembly, rail base, BR, 4W, Clear	-	1	-	-	-
10	RS6156-01B	Subassembly, rail base, BR, 4W, DBRNZ	-	-	1	-	-
10	RS6156-01D	Subassembly, rail base, BR, 4W, Cust anodized	-	-	-	1	-
10	RS6156-01E	Subassembly, rail base, BR, 4W, cust paint	-	-	-	-	1

-020	MILL
-02A	Clear
-02B	Dark bronze
-02D	Custom Anodized
-02E	Custom paint

7.15 Door Wing Assemblies, Bullet-rated SRD

Fig. 7.15.1 Assembly, wing, no lock RS6265-01X

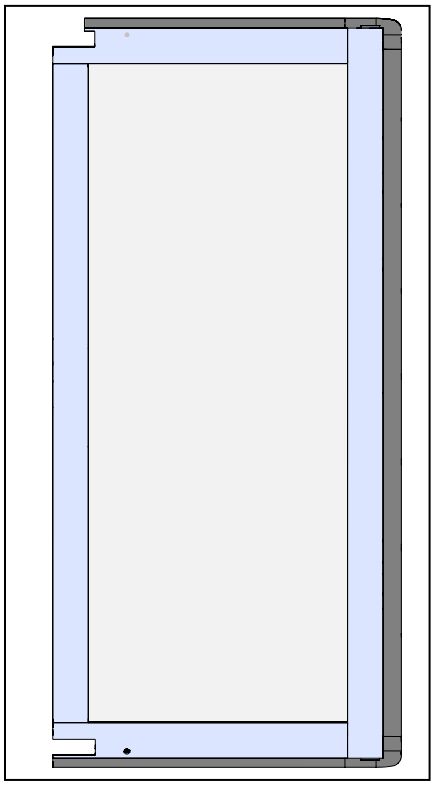


Fig. 7.15.2 Assembly, wing, left lock RS6265-02X

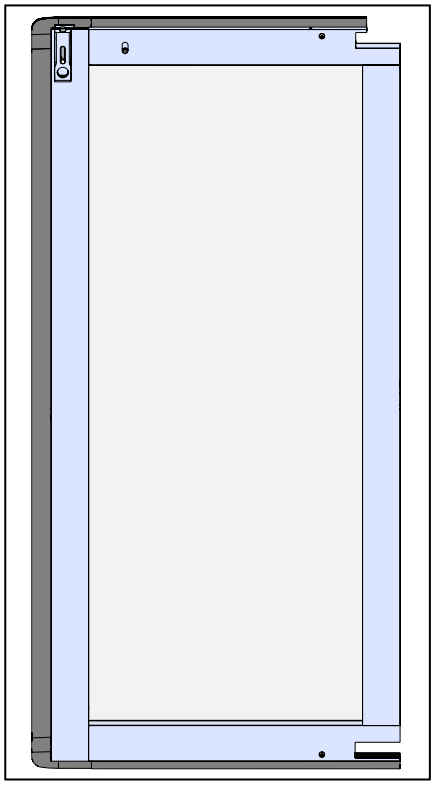


Fig. 7.15.3 Assembly, wing, right lock RS6265-03X

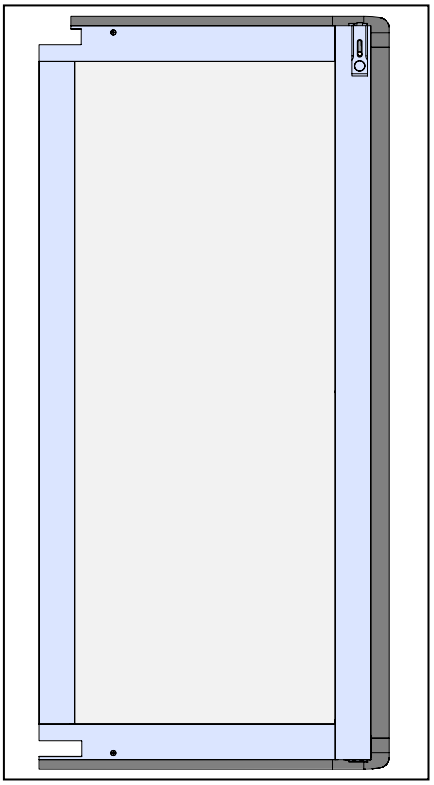


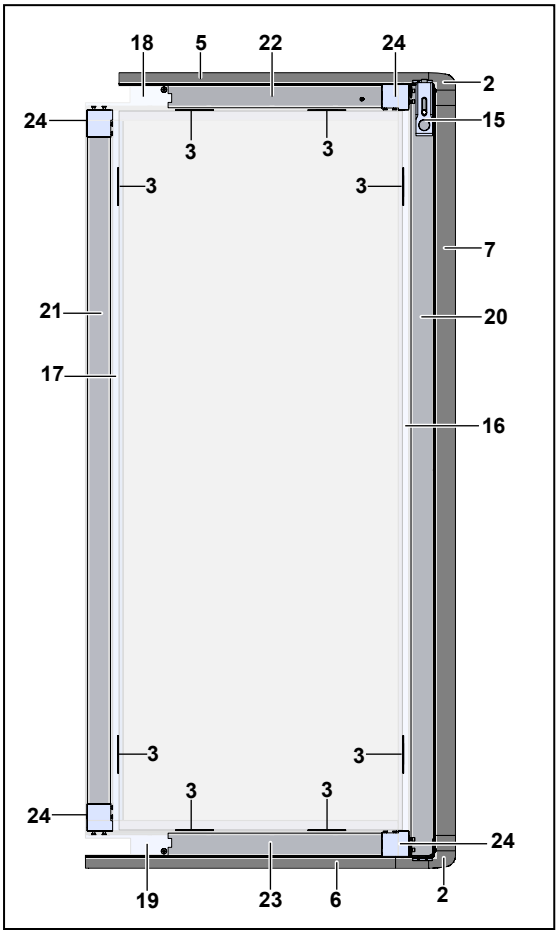
Table 7.15.1 Door wing assemblies, S2/S3/S4

Part / Assembly		Description	Qty
2	RC6299-030	Corner Horsehair sweep	2
3	RC6579-010	1/16 x 1-1/8 x 4" setting block, black silicone rubber	16
5	RC6298-040	Horsehair sweep, 29 x 2100 mm x 29.27"	1
6	RC6298-040	Horsehair sweep, 29 x 2100 mm x 32.84"	1
7	RC6298-040	Horsehair sweep, 29 x 2100 mm x 77.30"	1
15	RK6026-001	Surface lock assembly kit, clear anodized	1
16	RM1061-08X	BR wing lock stile, no push bar, top RH LK	1
17	RM1062-02X	BR wing center, no push bar, no LK	1
18	RM1063-02X	BR wing top rail, no push bar, bookfold	1
19	RM1064-01X	BR wing bottom rail, no push bar	1
20	RM1065-040	Fiberglass, BR, wing lock stile, no push bar	1
21	RM1066-020	Fiberglass, BR, wing center stile, no push bar	1
22	RM1067-010	Fiberglass, BR, wing top rail, H push bar	1
23	RM1068-010	Fiberglass, BR, wing bottom rail, H push bar	1
24	RM1069-010	Wing shear block, 1.49x2.683x2.85" BR	4

17.15.1 Notes.

1. Wing top and bottom rail, center rail and lock stile (16 through 19) shown transparent for internal detail.
2. Wing lock (15) prepared for installation at factory; shipped loose.

Fig. 7.15.4 Assembly, wing, right lock RS6265-03X detail

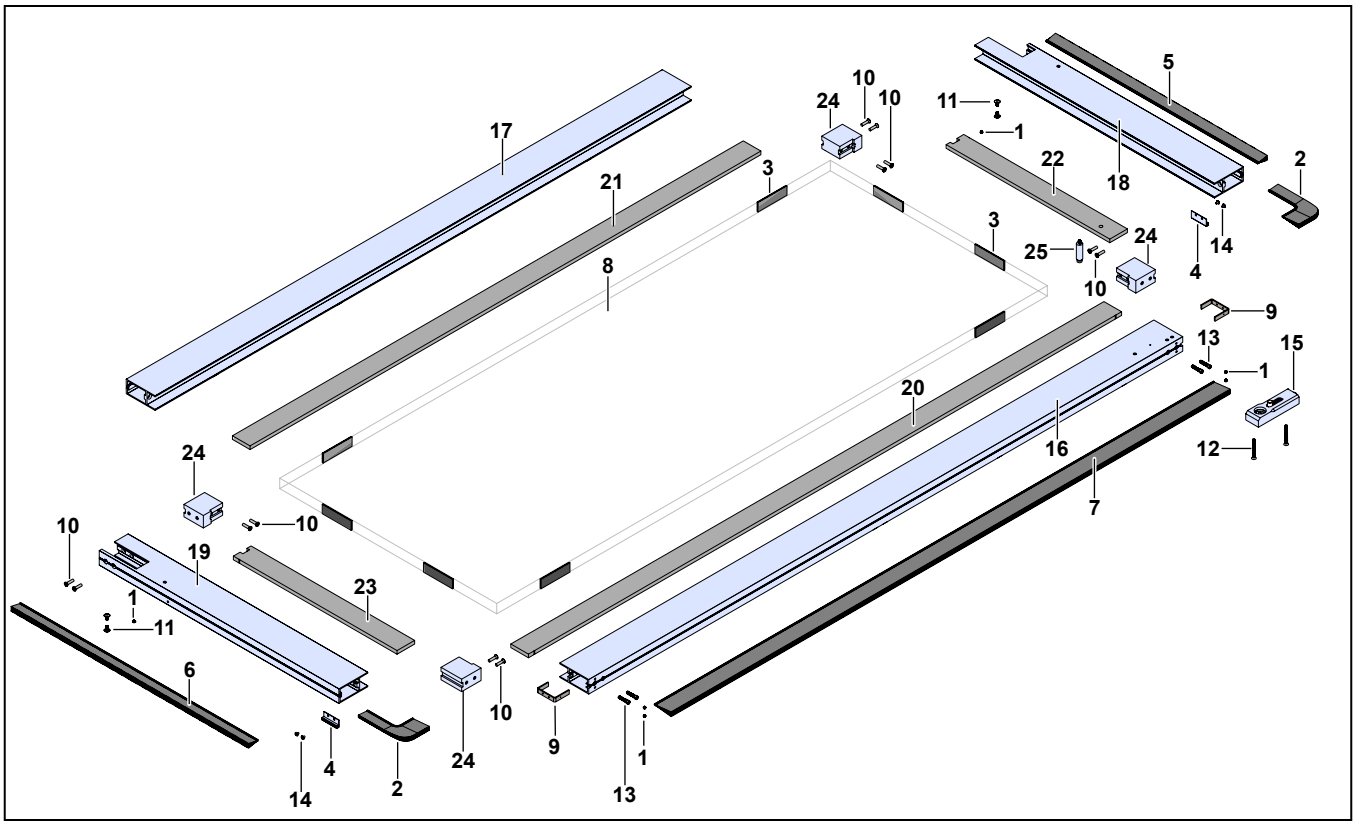


7.16 Door Wing Assembly Hardware

Table 7.16.1 Assembly, wing, right hand lock RS6265-03X example

Part / Assembly		Description	Qty
1	DF0396-01C	1/4-20 x 1/4 SHSS cone point, black oxide	6
2	RC6299-030	Corner Horsehair sweep	2
3	RC6579-010	1/16 x 1-1/8 x 4" setting block, black silicone rubber	16
4	RC6594-050	Brush sweep retainer, horiz. lock SH BR	2
5	RC6298-040	Horsehair sweep, 29 x 2100 mm x 29.27"	1
6	RC6298-040	Horsehair sweep, 29 x 2100 mm x 32.84"	1
7	RC6298-040	Horsehair sweep, 29 x 2100 mm x 77.30"	1
8	RC6626-010	Wing glass, bullet-rated door	1
9	RC6628-010	Bracket, corner sweep holder, BR	2
10	RF6116-03G	1/4-20 x 1" FHMS, SS	12
11	RF6119-01G	1/4-20 x 1/2" truss head MS	4
12	RF6120-04G	1/4-20 x 1-3/4" Phillips Oval head MS, SS	2
13	RF6145-03G	1/4-20 socket head cap screw	4
14	RF7021-04G	8-32 x 1/4" Phillips machine screw, SS	4
15	RK6026-001	Surface lock assembly kit, clear anodized	1
16	RM1061-08X	BR wing lock stile, no push bar, top RH LK	1
17	RM1062-02X	BR wing center, no push bar, no LK	1
18	RM1063-02X	BR wing top rail, no push bar, bookfold	1
19	RM1064-01X	BR wing bottom rail, no push bar	1
20	RM1065-040	Fiberglass, BR, wing lock stile, no push bar	1
21	RM1066-020	Fiberglass, BR, wing center stile, no push bar	1
22	RM1067-010	Fiberglass, BR, wing top rail, H push bar	1
23	RM1068-010	Fiberglass, BR, wing bottom rail, H push bar	1
24	RM1069-010	Wing shear block, 1.49x2.683x2.85" BR	4
25	RS6108-12A	Bumper extension assy, 1-7/8" long	1

Fig. 7.16.1 Assembly, wing, right hand lock RS6265-03X example



7.16.1 NOTES.

1. Glazing tape, Dowsil sealant, wing gasket material not shown in assembly.
2. Lock cylinder for surface lock (15) determined per job order.

7.17 Center Post RH/LH BR door assembly

Fig. 7.17.1 Center post assembly

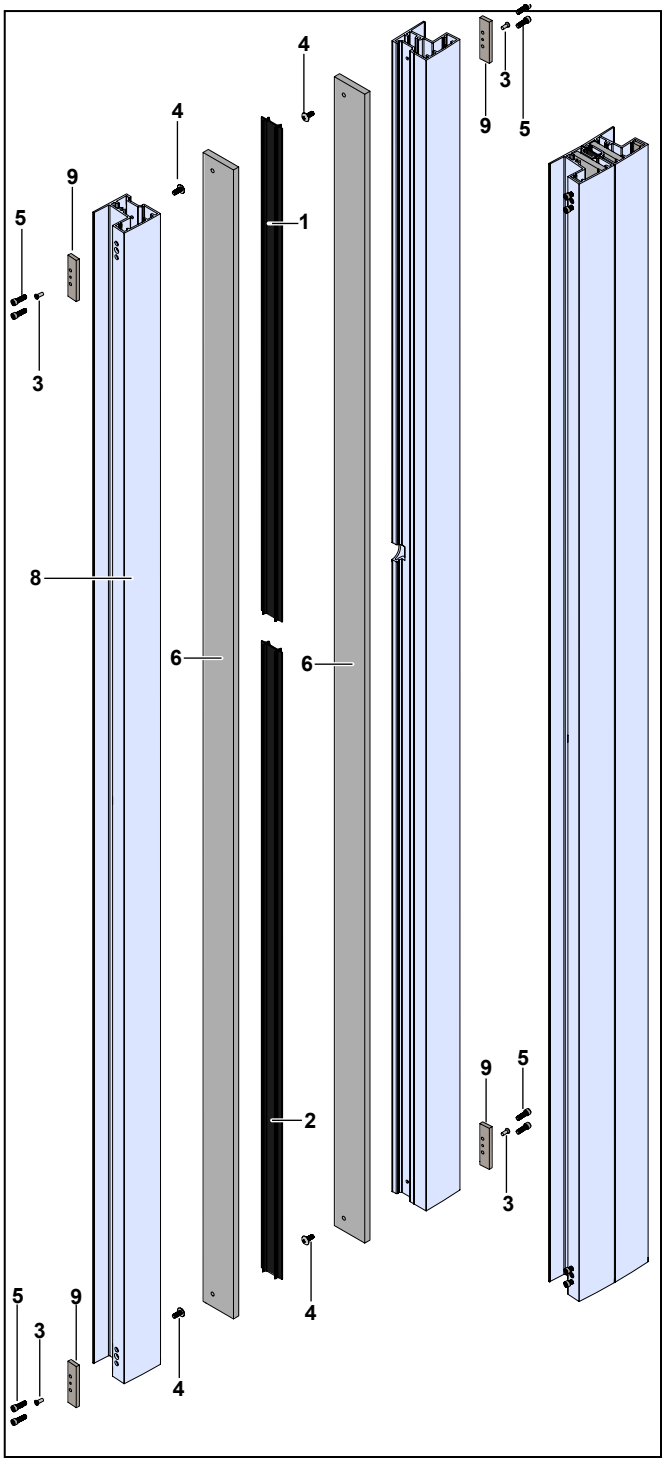
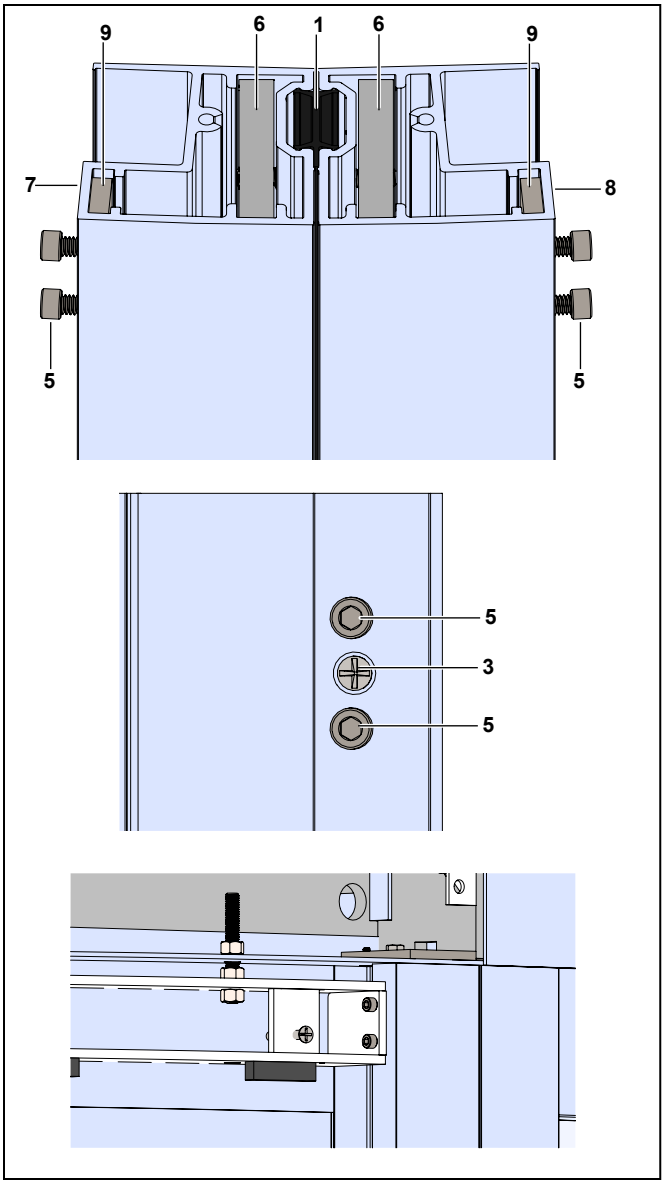


Table 7.17.1 Center post assembly RS6268-01X

Part/Assembly		Description	Qty
1	RE6078-010	Extr. Retainer, thermal break PP, black	1
2	RF6115-03G	Extr. Retainer, thermal break PP, black	1
3	RF6115-03G	10-24 x 1/2" FHMS, #8 U'Cut, 18-8 SS	4
4	RF6119-02G	1/4-20 x 5/8" truss head MS, SS	4
5	RF6145-02G	1/4-20 x 3/4" socket head cap screw, BL oxide	8
6	RM1070-010	Fiberglass, BR, post-center/quarter	2
7	RM6081-04X	Center post extrusion, BR3, LH, 6063-T6 AL	1
8	RM6081-03X	Center post extrusion, BR3, RH, 6063-T6 AL	1
9	RM6088-010	Enclosure base post attachment block, BR primer	4

Fig. 7.17.2 Center post assembly top and side views



7.18 Quarter post SRD assembly, bullet-rated

Fig. 7.18.1 Quarter post SRD assembly, bullet-rated

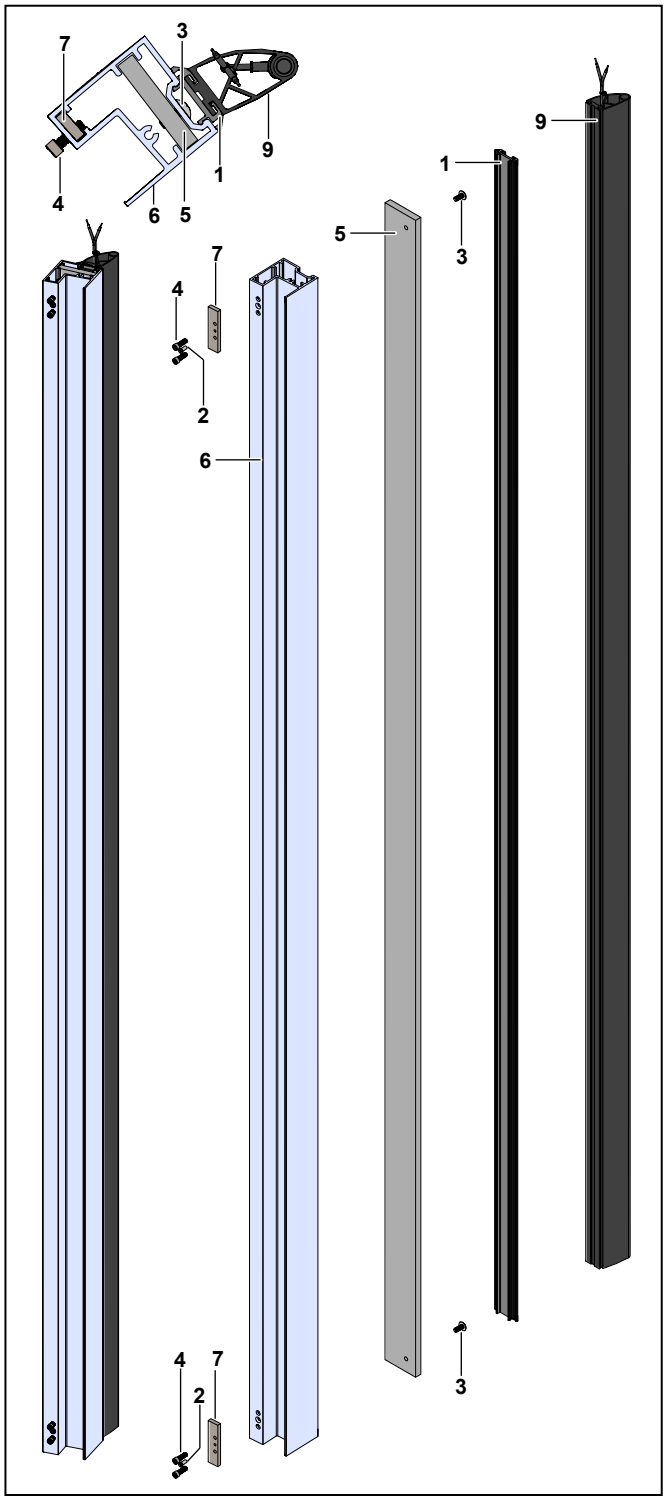


Table 7.18.1 Quarter post SRD assembly, bullet-rated

Part/assembly		Description	Qty
RS6267-01X		Quarter post SRD assembly, bullet-rated. Available finishes: Clear, dark bronze, Custom Anodized, Custom paint.	
1	RE6079-010	Extrusion, sensor retainer, PP, black	1
2	RF6115-03G	#10-24 x 1/2" FHMS, #8 U'cut, 18-8 SS	2
3	RF6119-02G	1/4-20 x 5/8" truss head machine screw, SS	2
4	RF6145-01C	1/4-20 x 3/4" socket head cap screw, black oxide	4
5	RM1070-010	Fiberglass, BR, post-center/quarter	1
6	RM6081-02X	Quarter post extrusion, BR3, SRD 6063-T6 AL	1
7	RM6088-010	Enclosure, base post attachment block, BR, primer	1
9	RX6023-007	Bumper, RH with sensor and resistor, 84"	1

7.19 Quarter post manual assembly, bullet-rated

Fig. 7.19.1 Quarter post manual assembly, bullet-rated

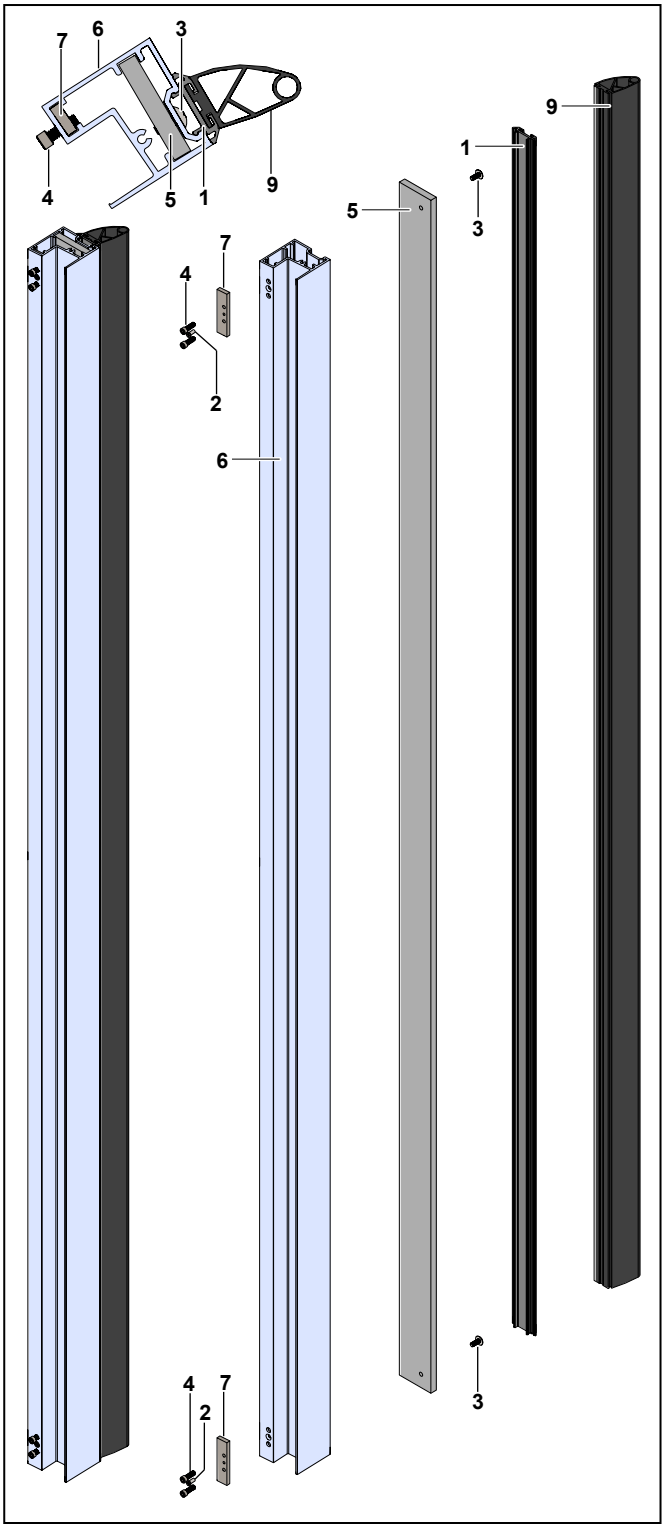


Table 7.19.1 Quarter post manual assembly, bullet-rated

Part/assembly		Description	Qty
	RS6267-02X	Quarter post manual assembly, bullet-rated. Available finishes: Clear, dark bronze, Custom Anodized, Custom paint.	
1	RE6079-010	Extrusion, sensor retainer, PP, black	1
2	RF6115-03G	#10-24 x 1/2" FHMS, #8 U'cut, 18-8 SS	2
3	RF6119-02G	1/4-20 x 5/8" truss head machine screw, SS	2
4	RF6145-01C	1/4-20 x 3/4" socket head cap screw, black oxide	4
5	RM1070-010	Fiberglass, BR, post-center/quarter	1
6	RM6081-01X	Quarter post extrusion, BR3, manual, 6063-T6 AL	1
7	RM6088-010	Enclosure, base post attachment block, BR, primer	1
9	RX6022-004	Bumper, without sensor, 84"	1

7.21 Surface locks

Fig. 7.21.1 Surface lock installation, door interior

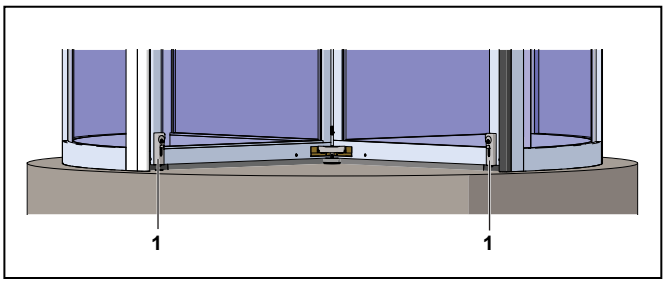
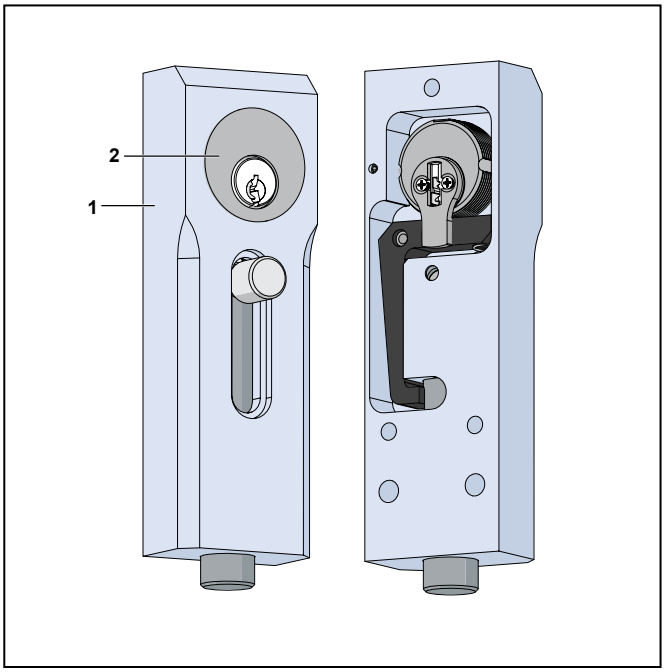


Table 7.21.1 Surface lock hardware

1	RS6080-02	Assembly, lock, external
2	RC6261-0XX	Lock cylinder by others (example shown)

Fig. 7.21.2 Surface lock assembly



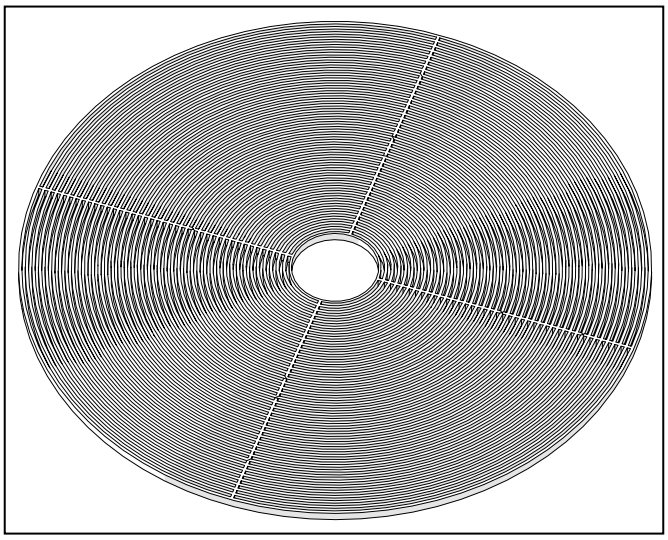
7.21.1 Surface locks.

- Two surface locks are supplied, installed in interior wing outer lock extrusions for interior locking into floor. Lock cylinder by customer.
- Surface locks are factory assembled.
- Doors over 7' high, surface locks installed in wing bottom rails unless otherwise specified.

			RS6080-02_ Assembly, lock, external								
			-02A	-02B	-02C	-02E	-02F	-02Q	-02S	-02T	-02W
1	RS6080-02A	Assembly, lock, external, Clear anodized	1								
1	RS6080-02B	Assembly, lock, external, Dark bronze anodized		1							
1	RS6080-02C	Assembly, lock, external, Black anodized			1						
1	RS6080-02E	Assembly, lock, external, Custom finish				1					
1	RS6080-02F	Assembly, lock, external, Dull chrome					1				
1	RS6080-02Q	Assembly, lock, external, Satin bronze						1			
1	RS6080-02S	Assembly, lock, external, Mirror bronze							1		
1	RS6080-02T	Assembly, lock, external, Statuary bronze								1	
1	RS6080-02W	Assembly, lock, external, Bright chrome									1

7.22 Optional Assembly, Floor Grill And Pan Assembly

Fig. 7.22.1 Floor grill and pan assembly



7.22.1 Floor grill and pan assembly.

- Fabricated from concentrically rolled bars of 1/4" x 1" stainless steel.
- Integrated into revolving door design.
- Recessed grille pan welded from 12 ga. stainless steel, a drainage fitting can be added.

7.23 Optional Assembly, Canopy Light With LED Driver

Fig. 7.22.1 LED light fixture and LED driver/junction box

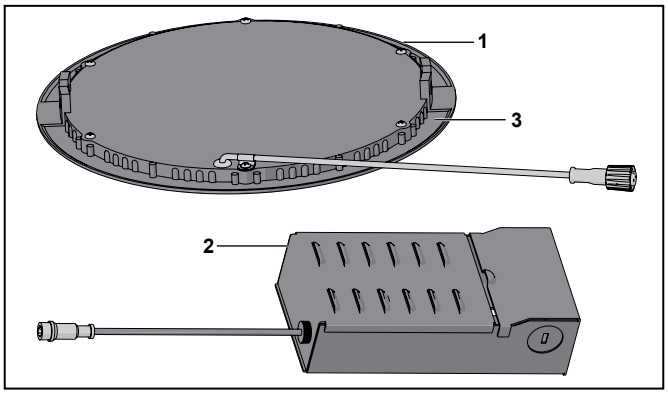


Table 7.23.1 LED light and LED driver/junction box

1	RC6320-010	Light, LED
2		Box, Junction with LED driver
3	RC7031-001	2-sided tape for securing light to canopy

7.23.1 Canopy LED and junction box with LED driver.

- Canopy light is installed in canopy at factory.
- Junction box/LED driver is installed in canopy at installation.

7.24 Optional Standby UPS

Fig. 7.24.1 UPS



Table 7.24.1 Optional standby UPS

1	RC7011-001	UPS, CyberPower, CP550SLG, 9.8" wide x 5.8" high x 3.3" deep
2		4 outlets, battery and surge protected
3		4 outlets, surge protected
4		Power off/on button
5		Power cord, 5 feet

7.24.1 UPS for K9 Power Supply.

1. Customer power connects terrminal strip on Electronic panel. Reference Wiring Manual RL6008-004.

WARNING

Work on electrical equipment and 110-240 Vac wiring installation must be performed only by qualified personnel!

8 Sensor Overview

8.1 S2 Canopy Sensor Overview

Fig. 8.1.1 S2 security canopy soffit view

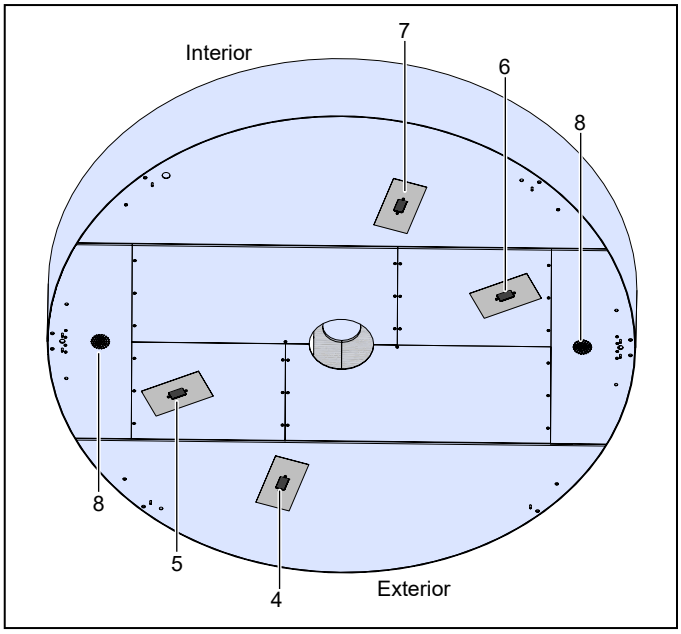
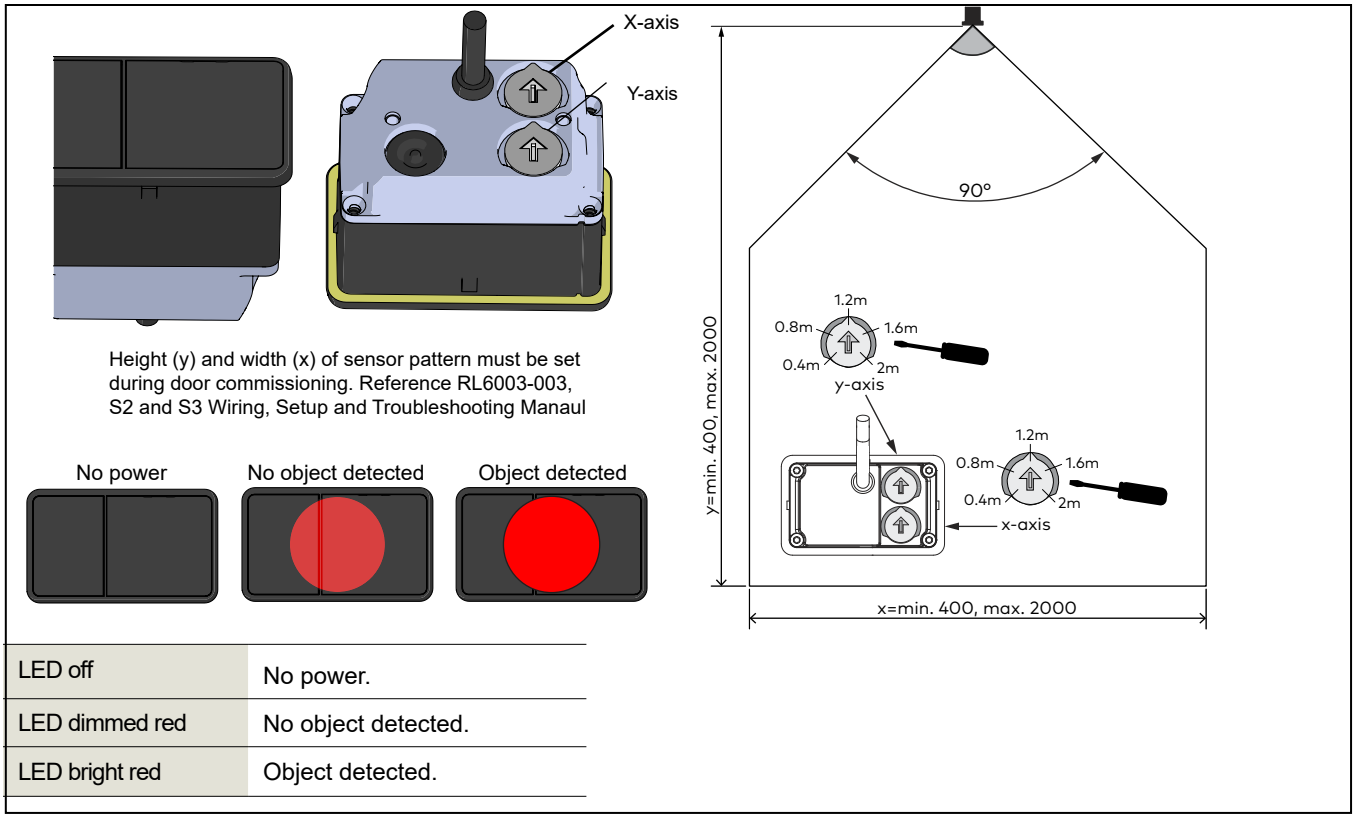


Table 8.1.1 S2 SRD canopy, sensor view

	RS6123-001	S3 Canopy assembly	
4	RK3500-010	Starting sensor, outside CEDES TOFniva	1
5	RX6025-001	Presence sensor, outside, CEDES TOFniva	1
6	RX6025-001	Presence sensor, inside CEDES TOFniva	1
7	RK3500-010	Starting sensor, inside CEDES TOFniva	1
8	RX6027-001	Voice module speaker	2

8.2 Cedes TOFniva

Fig. 8.2.1 Canopy entry point and presence sensor



LED off	No power.
LED dimmed red	No object detected.
LED bright red	Object detected.

8.3 Quarter Post / Bumper Assembly

Fig. 8.3.1 Interior view- quarter post / bumpers

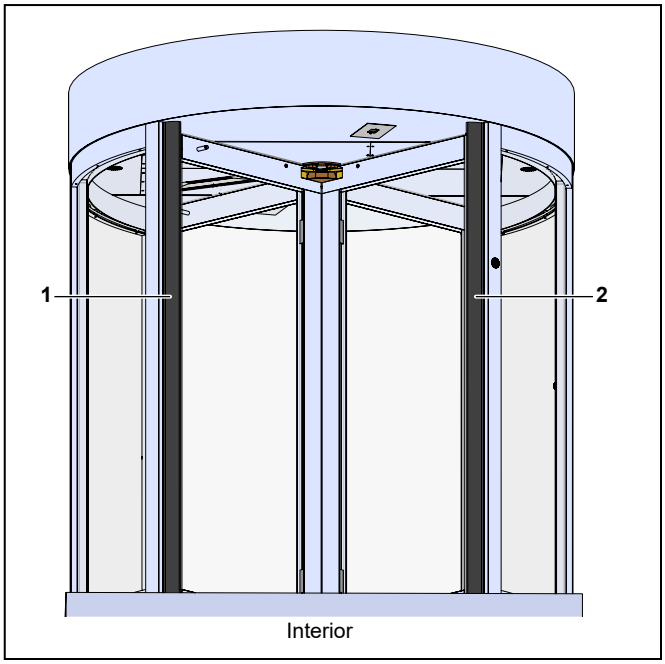
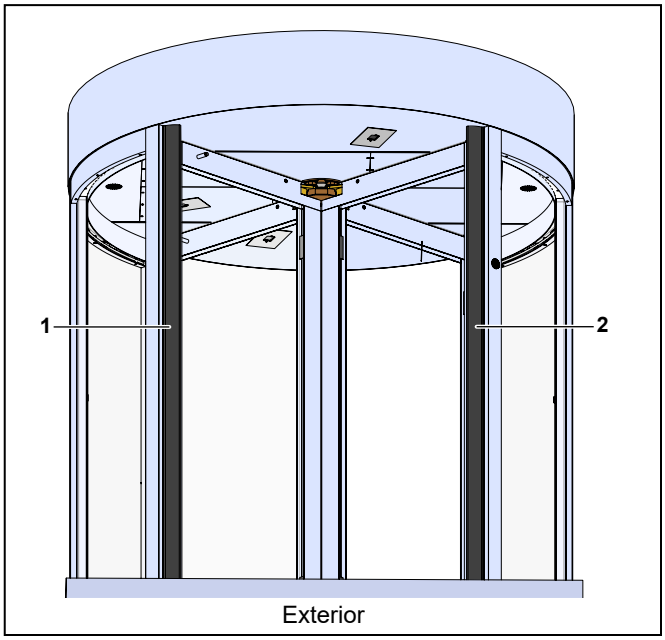


Table 8.3.1 Quarter post / bumper assembly

1	RS6104-03x	Assembly, LH quarter post without sensor
2	RS6104-04x	Assembly, RH quarter post with sensor

Fig. 8.3.2 Exterior view- quarter post / bumpers



9 Recommended Tools And Materials

9.1 Recommended Tools

Table 9.1.1 Recommended tools

1	Plumb bob with string.
2	Laser Level: Bosch GCL100-80C 100ft 12V Cross-Line Laser with Plumb Points, or equivalent
3	Tape measure
5	Screwdriver, flat blade
6	Screwdriver, Phillips #2, #3
7	Socket wrench and extensions
8	Open end wrench, 9/16"
9	Small insulated flat blade screwdriver
10	Spirit level, 72"
11	Rubber hammer
12	Needle nose pliers
13	Bent glass 9" suction cups (Wood's Pwr-Grip N5450 or equivalent) ASIN# B007IAB3TM
14	Hammer drill
15	Rotary hammer core bit, 5", Bosch or equivalent
16	Cordless drill with drill bit and socket set
17	Razor knife or box cutter
18	Angle grinder with 5" grinding wheel, ASIN# B00EMFOKSC
19	Masonry drill bits, 1 1/4" required for floor strike (if used)
20	3/4" drill bit for aluminum soffit
21	Manual deburring tool
22	Digital multimeter
23	Force gauge for breakout, Chatillon DG-200, 0 - 200 lbf, or equivalent
24	Portable work lights
24	Wire strippers, 16 AWG to 22 AWG

9.2 Recommended Installation Materials And Installation Hardware

Table 9.2.1 Recommended installation Materials

	Description
1	Neoprene setting block assortment, 1/16" to 1/2", CRL, ASIN# B001G0UG1Q
2	Backer rod, 5/8" diameter, 100' roll, CRL
3	Silicone building sealant, 6 cartridges per door. Dow Corning 795 or equivalent. ASIN# B000NY76MI
4	Glazing tape. 1/8" x 3/8", black, single sided, CRL, ASIN# B000WRZCZE
5	Wedgit 5/16" glass centering springs, CRL W516, ASIN# B006JFMQUM
6	White lithium grease - for center shaft assembly, ASIN# B06XY6QK57
7	Posi-Twist Bundle kit, ASIN# B000JP3GB6
8	Rockite quick drying cement, ASIN# B000BO9JRK

Table 9.2.2 Recommended installation hardware

	Description
10	Metaltech wall hauler 2000 series drywall cart, ASIN# BMD2131YGR
11	Genie Hoist, GH-3.8 Portable lift, 300 pound capacity, lift height 12', ASIN# B004QTPJHU
12	Genie material lift, GL-8, 400 pound capacity, lift height 10', 5"
13	Extension ladder, 13'

*ASIN: Amazon numbers

10 Entrance Opening and Floor Preparation

10.1 Cordon Off Work Area

WARNING

Cordon off installation area for the complete revolving door installation process.

10.2 Entrance Opening

10.2.1 Entrance opening requirements.

1. Documentation:
- Installation drawing package detailing revolving door attachment plan to building and required dimensions (elevation and plan views).
- Contractor or architect drawings detailing revolving door entrance opening.

2. Verify entrance opening dimensions and associated framing with documentation in (1).

CAUTION

Refer to Installation drawing package for job!

10.2.2 Determine if floor is flat.

1. Use level to check floor flatness.

CAUTION

High spots cannot be above bottom edge of adjacent work that will abut the revolving door enclosure base.

CAUTION

Any floor flatness issues must be resolved before starting door installation.

TIPS AND RECOMMENDATIONS

Laser Level
Use a Laser Level such as the Bosch GCL100-80C 100ft 12V Cross-Line Laser with Plumb Points, or equivalent.

10.2.3 Determine if floor is level.

1. Using level in 10.2.2, determine if floor is level (parallel to adjacent building work).

NOTICE

All warranties are void if door is installed on a floor that is out of level, or if proper clearances are not maintained.

10.3 Revolving door floor surface

10.3.1 Floor surface.

1. Finished floor at revolving door site must be finished, level and flat.

NOTICE

The operation and structural integrity of the revolving door depends on the door is mounted on a level floor. **Do not proceed if floor is not flat and level.**

11 Locate Door Position On Floor Using Templates

11.1 Door Building Attachment Plans

11.1.1 Installation drawing package.

NOTICE

Refer to Installation drawing package for specific attachment plan for job!

11.1.2 General contractor/architect drawings.

- General contractor or architect drawings detailing revolving door center point and building interface.

11.2 Installation Template

11.2.1 Locate full size installation templates.

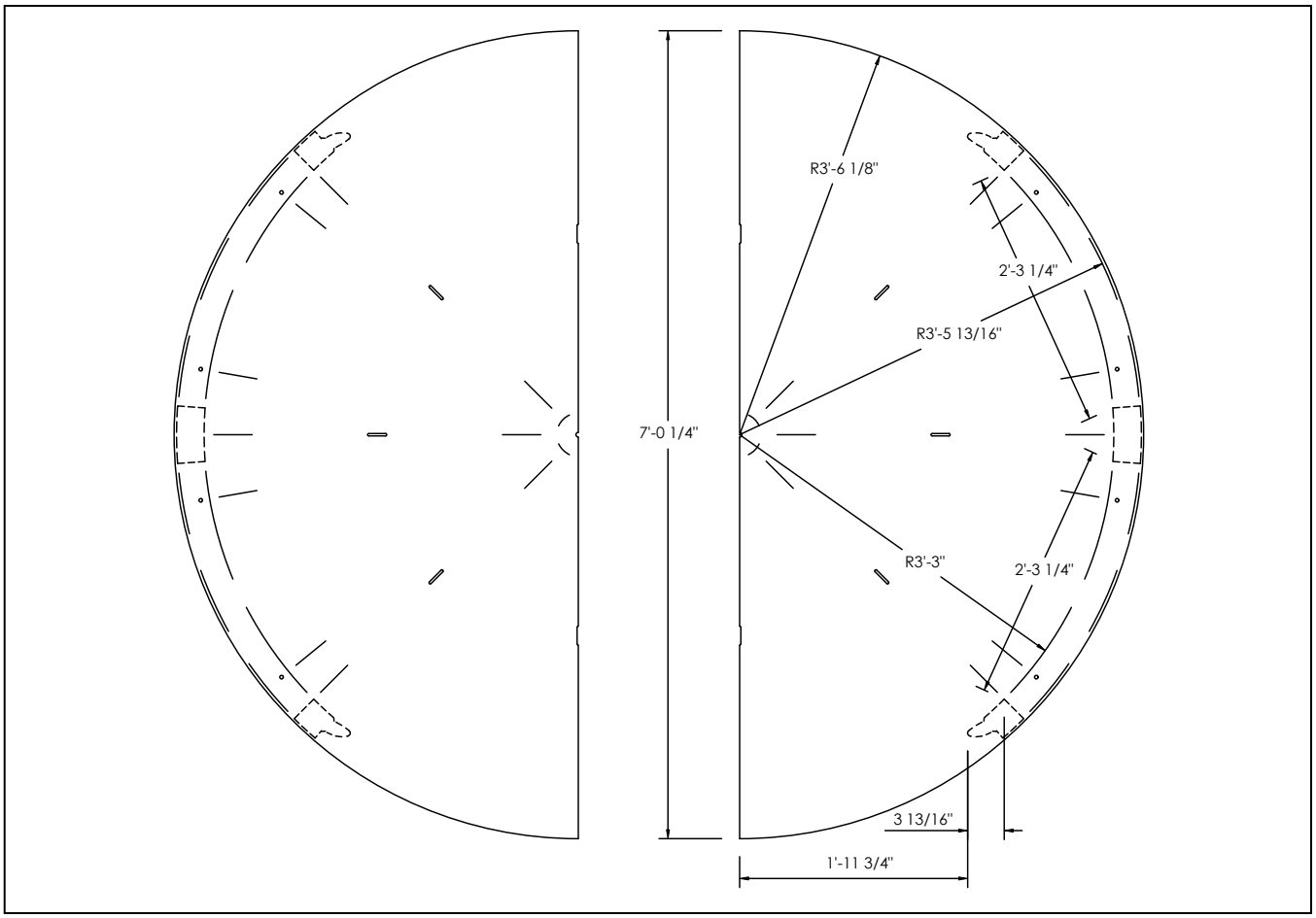
1. Locate full size Masonite templates.

- Templates shipped in canopy shipping crate.

NOTICE

Reference Installation drawing package for template orientation at building attachment.

Fig. 11.2.1 Full size installation template example



11.3 Mark Door Position On Floor Using Floor Templates

11.3.1 Position floor templates.

1. Position template at door centerpoint and orient template to building interface.

CAUTION

Use centerpoint dimensions as shown on Alvarado shop drawings and contractor documentation.

WARNING

Orient floor templates to building interface!
Refer to installation drawing packge for template to building interface position.

2. Secure template to floor.

CAUTION

Once templates secured to floor, recheck alignment with door center point and centerlines and/or quarter lines to building interface!

NOTICE

It is good practice to verify template location with general contractor or owner's representative.

11.3.2 Mark lines on floor.

1. Draw door centerlines.
2. Mark quarter post and center post centerlines.
3. Mark mounting base stud locations.
4. Trace door outside radius.

11.3.3 Remove templates.

1. Remove templates.

NOTICE

Do not discard template(s)!
Label placed on template. Reference Fig. 11.3.2

Fig. 11.3.1 Template placed on floor, example

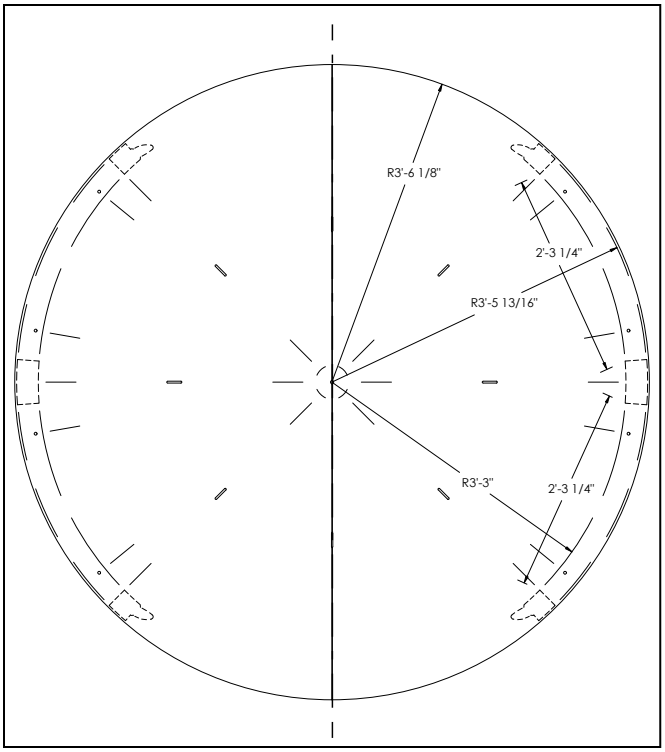


Fig. 11.3.2 Label, installation template RD7044-001



11.4 Drill Pilot And Anchor Holes For Bottom Rail Studs

11.4.1 Drill pilot holes in floor.

WARNING

Protective equipment required!
Risk of injury due to improper drilling.

11.4.2 Drill bottom rail stud pilot holes.

1. Drill pilot holes at each bottom rail stud hole location.

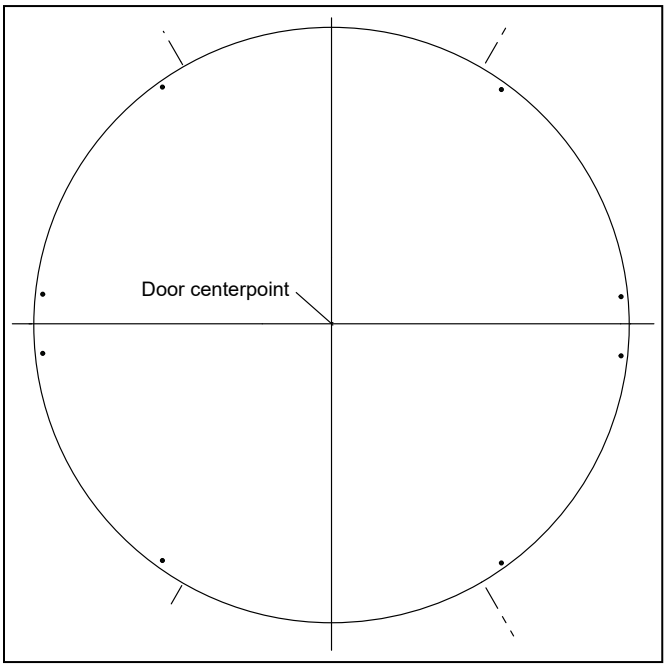
11.4.3 Drill anchor holes in floor.

1. Drill anchor holes at each pilot hole location.

TIPS AND RECOMMENDATIONS

Use 1/2" masonry drill bit with hammer drill.
Drill anchor holes to a depth of 2 1/2".

Fig. 11.4.1 Floor marked with door location and bottom rail holes



11.5 Drill Pilot Hole At Door Centerpoint

11.5.1 Drill pilot hole in floor at door centerpoint.

WARNING

Protective equipment required!
Risk of injury due to improper drilling.

1. Drill pilot hole at door centerpoint.

12 Mounting Bracket Installation On K9 Drive Unit Assembly

12.1 Main Drive Adapter Coupling Installation On K9 Drive

Fig. 12.1.1 Main drive adapter coupling fastener

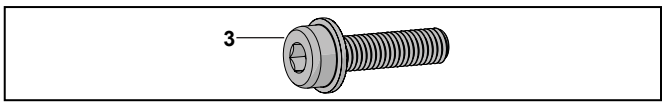


Fig. 12.1.2 K9 main drive adapter coupling

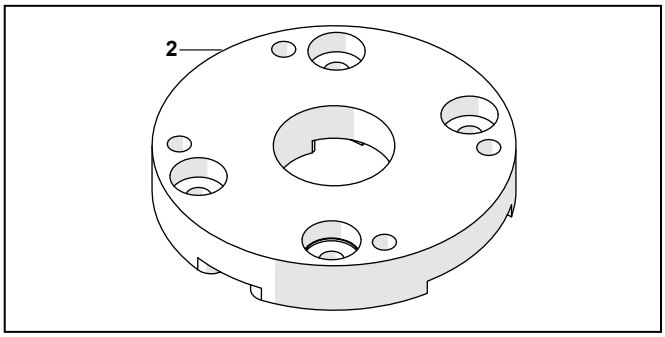


Fig. 12.1.3 K9 main drive adapter coupling and fasteners

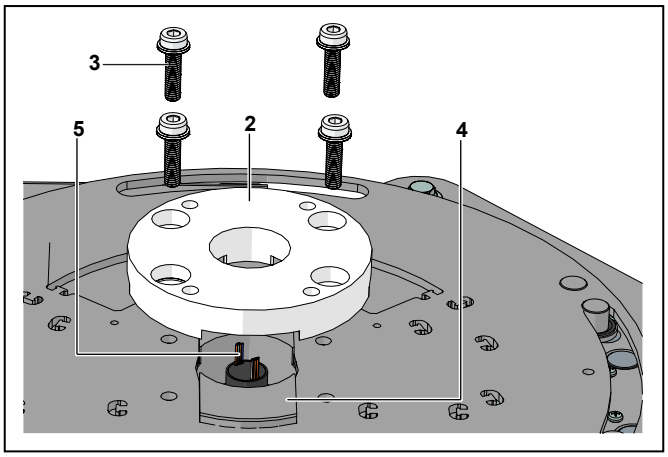
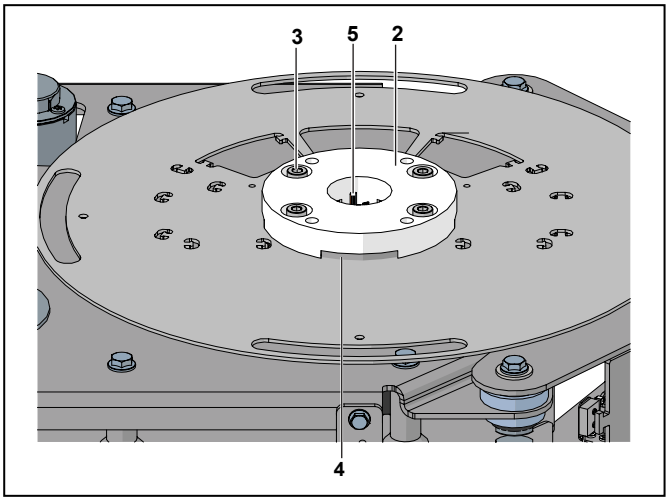


Fig. 12.1.4 K9 main drive adapter coupling installed



NOTICE

Main drive adapter coupling installation.
The main drive adapter is installed on the K9 drive from the factory.
The installation procedure and hardware are shown for reference.

Table 12.1.1 RX6021 K9 drive unit and main drive adapter coupling

1	RX6021-010	K9 drive unit assembly
2	RC6379-010	K9 Main drive adapter coupling
3	RF6180-01C	M8-1.25 x 30 mm Serrated flange SHCS
4		K9 drive shaft
5		K9 slip ring wires

12.1.1 Main drive adapter coupling installation.

1. Position coupling above K9 drive shaft, aligning slot in coupling with K9 main drive shaft flange.
2. Lower coupling onto drive shaft flange, routing slip ring wires out of slots in the coupling.
3. Secure coupling to K9 drive with four M8 x 25 mm SHCS.

12.1.2 Check M8 x 25 mm tightening torque.

1. Use torque wrench to check tightening torque on the four M8 x 25 mm SHCS.

⚠ WARNING

Danger from incorrect screw tightening torque.
- Never exceed the maximum specified tightening torque.
- Contact dormakaba for further information.

12.1.3 Maximum M8 x 25 mm tightening torque.

Screw diameter	Maximum permissable screw tightening torque
M8	12.5 Nm
	10 ft-lb

12.2 Install Mounting Bracket on K9 Drive

Fig. 12.2.1 K9 drive mounting bracket

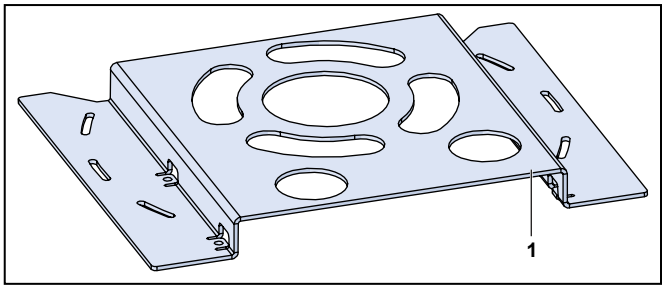


Fig. 12.2.2 Assembly, drive, K9 unit exploded view

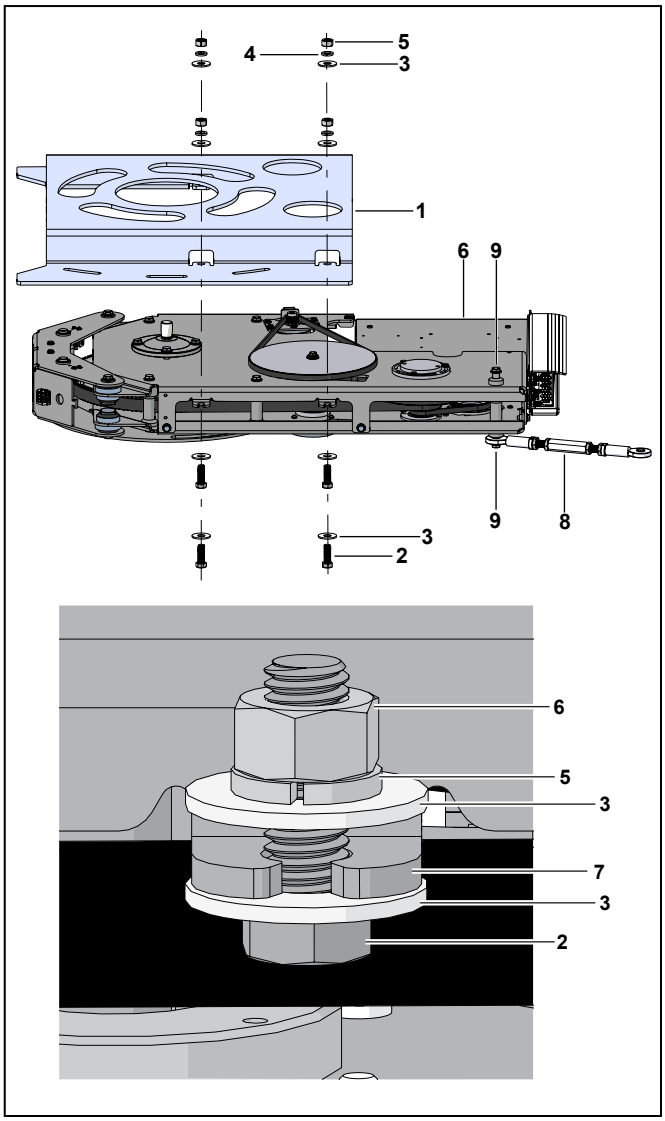


Table 12.2.1 Assembly, drive, K9 unit and mounting bracket RS6086

1	RC6373-010	Bracket, mount, K9 drive	1
2	RF6066-01Z	7/16-14 x 1 1/4" hex bolt, zinc plate	4
3	RF6067-01Z	7/16 x 1 1/4" OD washer, zinc plate	8
4	RF6068-01Z	7/16 lockwasher, zinc plate	4
5	RF6069-01Z	7/16-14 hex nut, zinc plate	4
6	RX6021-010	Assembly, drive, K9 unit	1
7		Bracket mounting tab	
8		Turnbuckle assembly	1
9		M8 flange hex head bolt	1

12.2.1 K9 drive turnbuckle (8) location.

1. Turnbuckle must be located on bottom of drive as shown in Fig. 12.2.2.
2. If turnbuckle is located on top of drive when received from factory, relocate turnbuckle to bottom of drive. Reinstall M8 fastener (**9**) in top of drive.

12.2.2 Install mounting bracket on K9 drive.

1. Orient drive and mounting bracket as shown in Fig. 12.2.2.
2. Install K9 mounting bracket on K9 drive using fastener hardware in Fig. 12.4.4.

Fig. 12.2.3 Assembly, drive, K9 unit fasteners

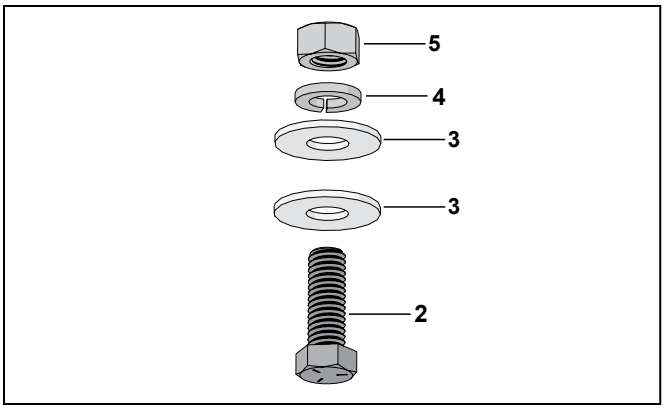
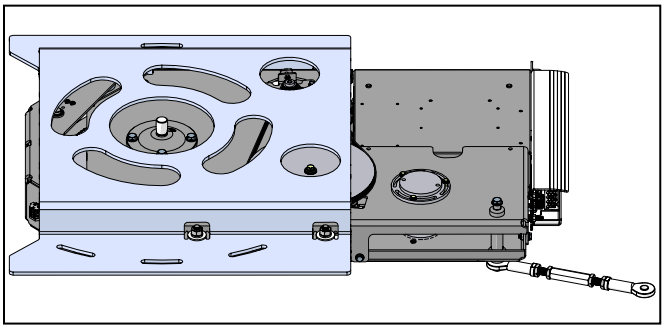


Fig. 12.2.4 Assembly, K9 drive and mounting brackdt



13 Canopy Assembly And Installation

⚠ WARNING

Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the canopy fiberglass panels.

13.1 Canopy Shipped As Single Assembly – Remove Covers

Fig. 13.1.1 Canopy assembly, cover view

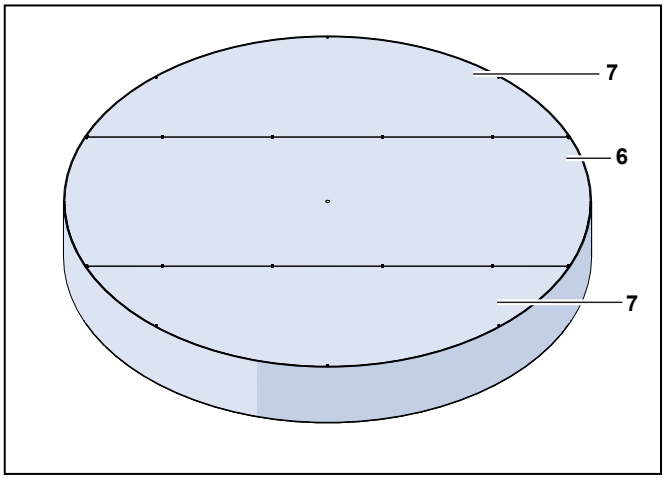


Fig. 13.1.2 Canopy assembly, covers removed

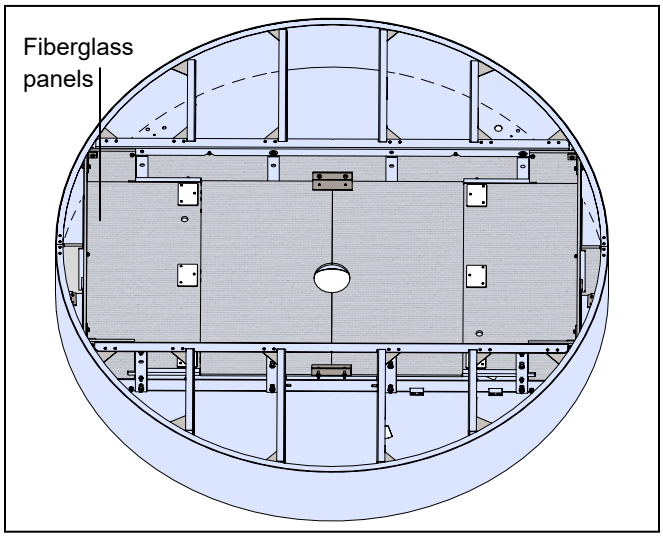
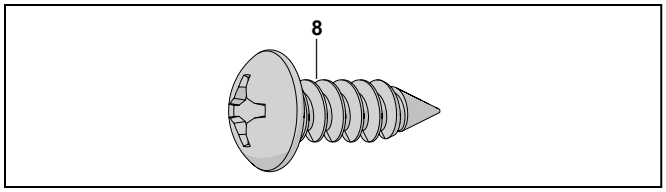


Fig. 13.1.3 Canopy cover screws



13.1.1 Installation drawing package.

NOTICE

Refer to the Installation drawing package for canopy detail for job!

13.1.2 8' and greater canopy diameters: 3 piece canopy shipped in 2 sections.

Table 13.1.1 Canopy assembly covers

6	RC6486-020	Canopy inner cover, 6' - 6" ID door, K9 AL	1
7	RC6487-020	Canopy outer cover, 6' - 6" ID door, K9 AL	2
8	RF7023-01G	8-15 X 1/2" Phillips self tapping screw	30

13.1.3 Remove covers from canopy assembly.

1. Remove all Phillips 8-15 x 1/2" self tapping screws that secure covers to canopy.
2. Remove covers.

TIPS AND RECOMMENDATIONS

Label each cover with its location on the canopy so it can be reinstalled in its original position.

13.3 Remove Inner Soffits And Cover Plates

Fig. 13.3.1 S3/S4 Canopy assembly, soffit view

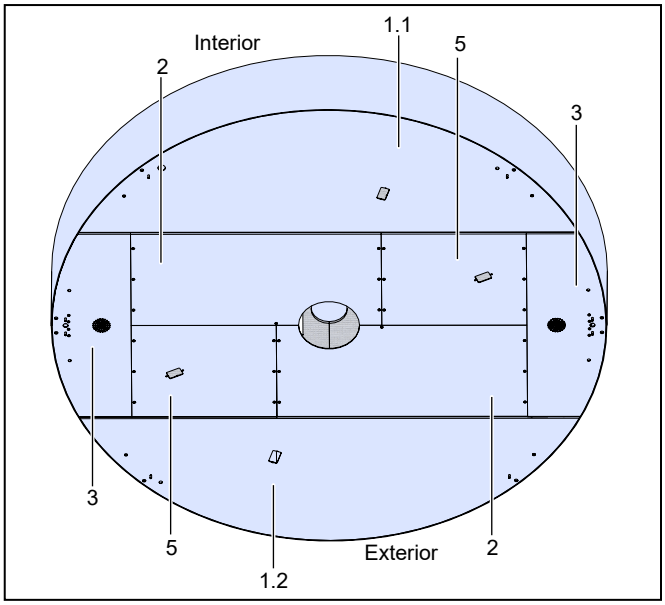


Table 13.3.1 Canopy soffit and cover plate assembly

1.1	RC6485-03X	Soffit, 0uter, w/ USB 4 W, BR, AL	1
1.2	RC6485-13X	Soffit, 0uter, no USB 4 W, BR, AL	1
2	RC6484-02X	Soffit, center inner S2-S4	2
3	RC6483-02X	Soffit, center outer, BR, AL	2
5	RC6381-030	Plate, cover, K9, w/ TOFniva sensor hole	1
6	RC6486-010	Canopy inner cover, 36" spacing, 8" door	1
7	RC6487-010	Canopy outer cover, 36" spacing, 8' door	2
8	RF6115-02G	10-24 x 3/4" Phillips FHMS, 18-8 SS	20
9	RF6055-02G	1/4-20 x 1" hex head bolt, SS	8
10	RC6376-010	Bracket, cover plate support	2
11	DF0939-01Z	1/4" lock washer, zinc	4
12	RF6162-01Z	1/4" flat washer, 0 56" OD, zinc	4
13	RF6163--01C	Nut, clipon, 10-24	12

Fig. 13.3.2 Phillips flat head machine screw

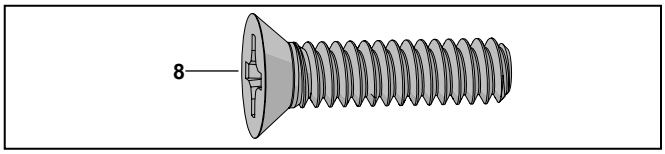
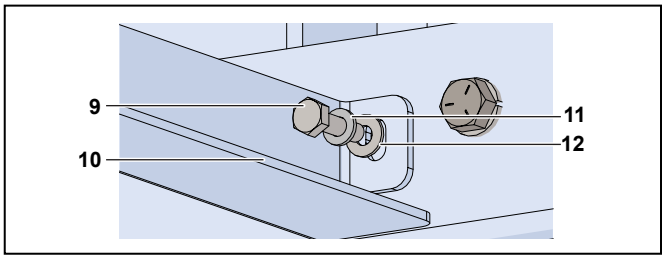


Fig. 13.3.3 Cover plate support bracket and fasteners



13.3.1 Remove canopy inner center soffits and cover plates (2,4 and 5).

1. Remove all flat head machine screws (**8**) securing each canopy inner center soffit to canopy and remove soffits.
2. Remove all flat head machine screws (**8**) securing each K9 cover plate to canopy and remove cover plates.

13.3.2 Remove cover plate support brackets.

1. Remove fasteners (**9, 11, 12**) securing two cover plate support brackets (**10**) to canopy and remove support brackets.

Fig. 13.3.4 Canopy inner soffits and cover plates removed

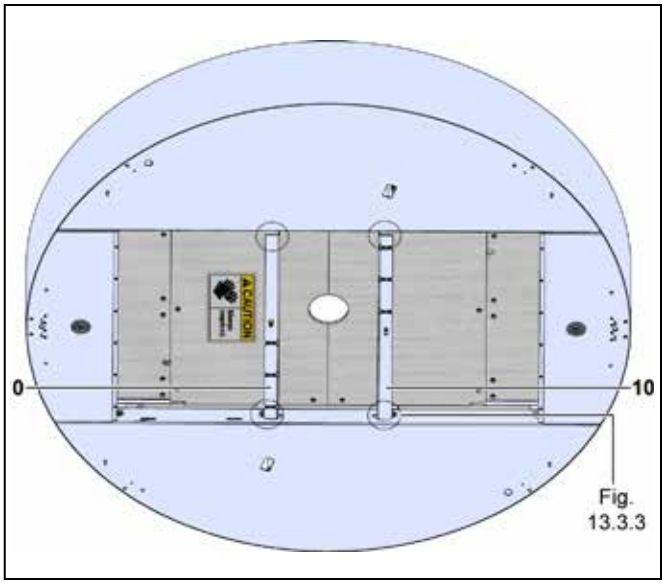
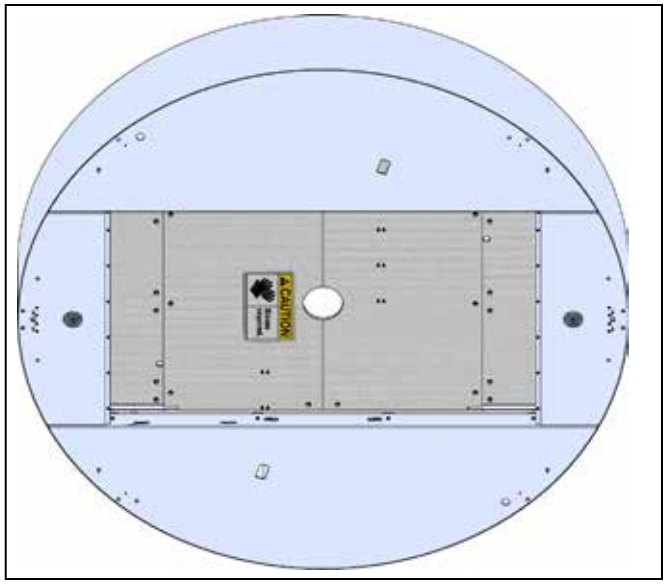


Fig. 13.3.5 Canopy cover plate support brackets removed



13.4 Remove Inner Soffit Fiberglass

Fig. 13.4.1 Canopy assembly, inner soffit fiberglass view

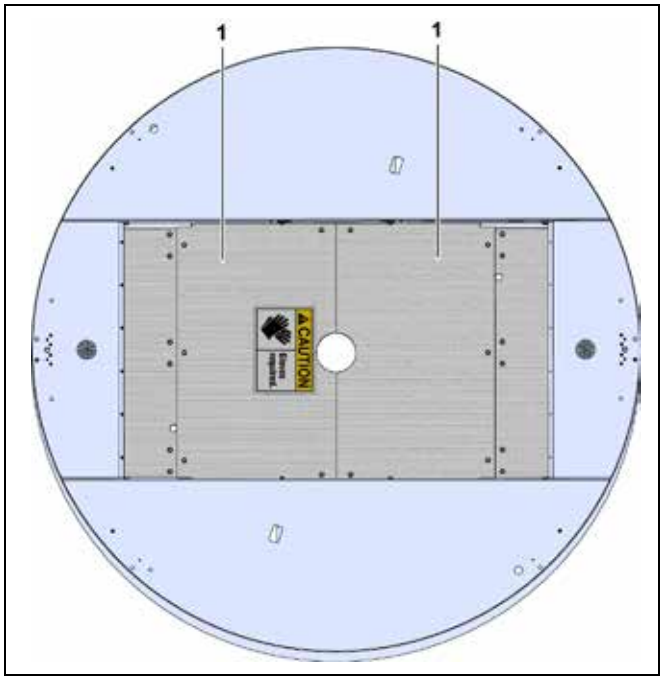


Fig. 13.4.2 Inner soffit fiberglass fasteners

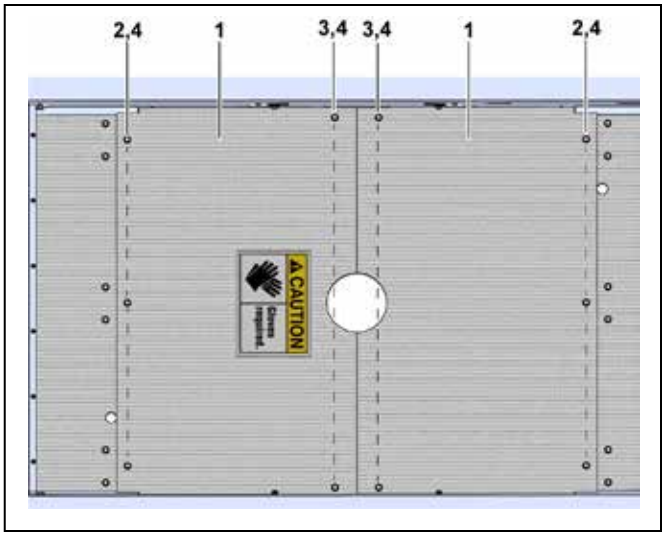


Table 13.3.1 Canopy inner soffit fiberglass

1	RM1075-010	Fiberglass, BR, canopy soffit inner	2
2	RF6055-03Z	1/4-20 x 1-1/2" hex head bolt, ZN Grd 5	6
3	RF6055-05Z	1/4-20 x 1" hex head bolt, ZN Grd 5	24
4	RF6056-01G	1/4" flat washer, 5/8" OD, 18-8 SS	102

⚠ WARNING

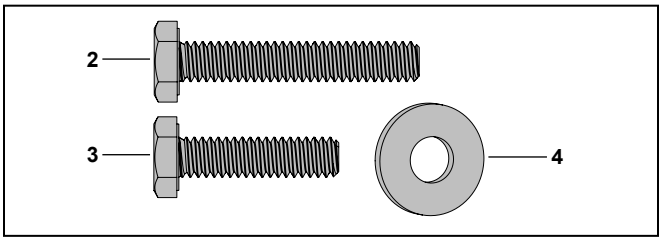
Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the fiberglass panels.
Failure to follow proper safety precautions may result in personal injury.

13.3.1 Remove hex head bolts securing canopy inner soffit fiberglass to canopy brackets.

1. Remove hex head bolts (2,3) and washers (4).
   Ref.: Fig. 13.4.2.

Note: Hex head bolts are fastened to brackets on opposite side of canopy (Fig. 13.4.4).

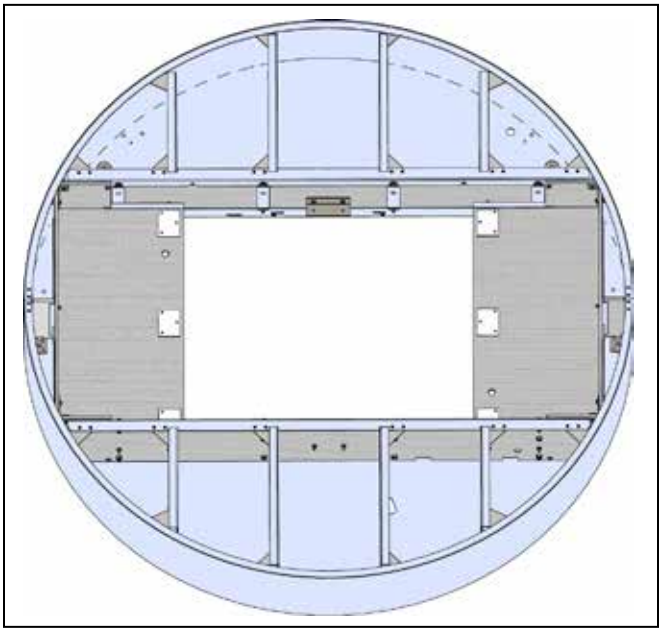
Fig. 13.4.3 Inner soffit fastener hardware



13.3.2 Remove canopy inner soffit fiberglass.

1. Remove inner soffit fiberglass panels.

Fig. 13.4.4 Inner soffit fiberglass removed



13.4 Install Cross Brace Brackets And Angle Adjustment Bracket In Canopy

Fig. 13.4.1 Cross brace brackets

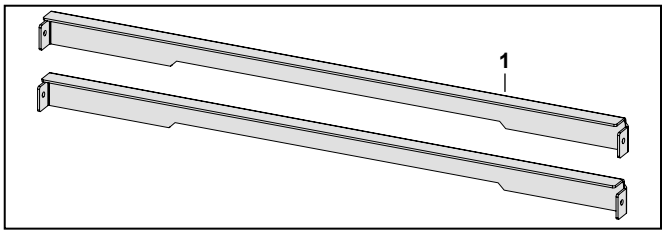


Fig. 13.4.2 Angle adjustment bracket

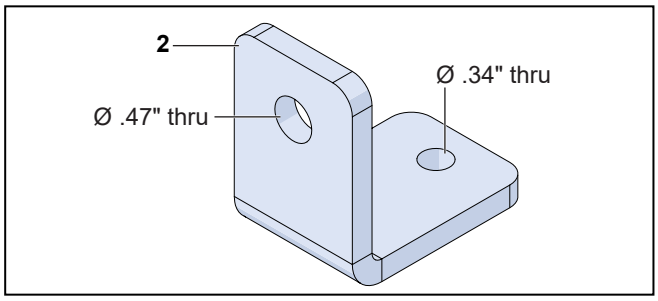


Fig. 13.4.3 Cross brace bracket, angle adjustment bracket fasteners

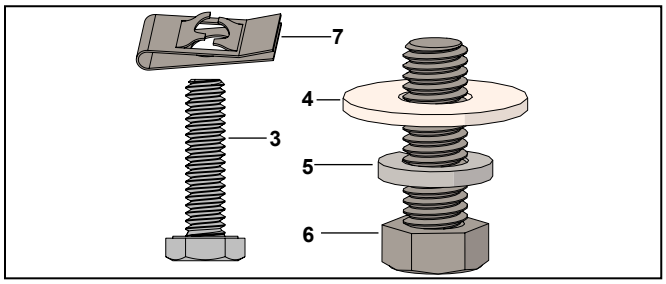


Fig. 13.4.4 Cross brace bracket and angle adjustment bracket installation

Table 13.4.1 Cross brace brackets, angle adjustment bracket

1	RC6599-020	Canopy cross reinforcement bracket	2
2	RC6434-010	Bracket, angle adjustment, K9	1
3	RF6055-05Z	1/4-20 x 1" hex head bolt, ZN Grd 5	4
4	RF6067-01Z	7/16" flat washer, 1-1/4" OD	1
5	RF6068-01Z	7/16" lock washer, 0.78" OD	1
6	RF6066-02Z	7/16-14 x 1-3/4" hex head bolt	1
7	RF6187-01C	1/4-20 No slip clip on nut, Blk oxide	

13.4.1 Install cross brace brackets.

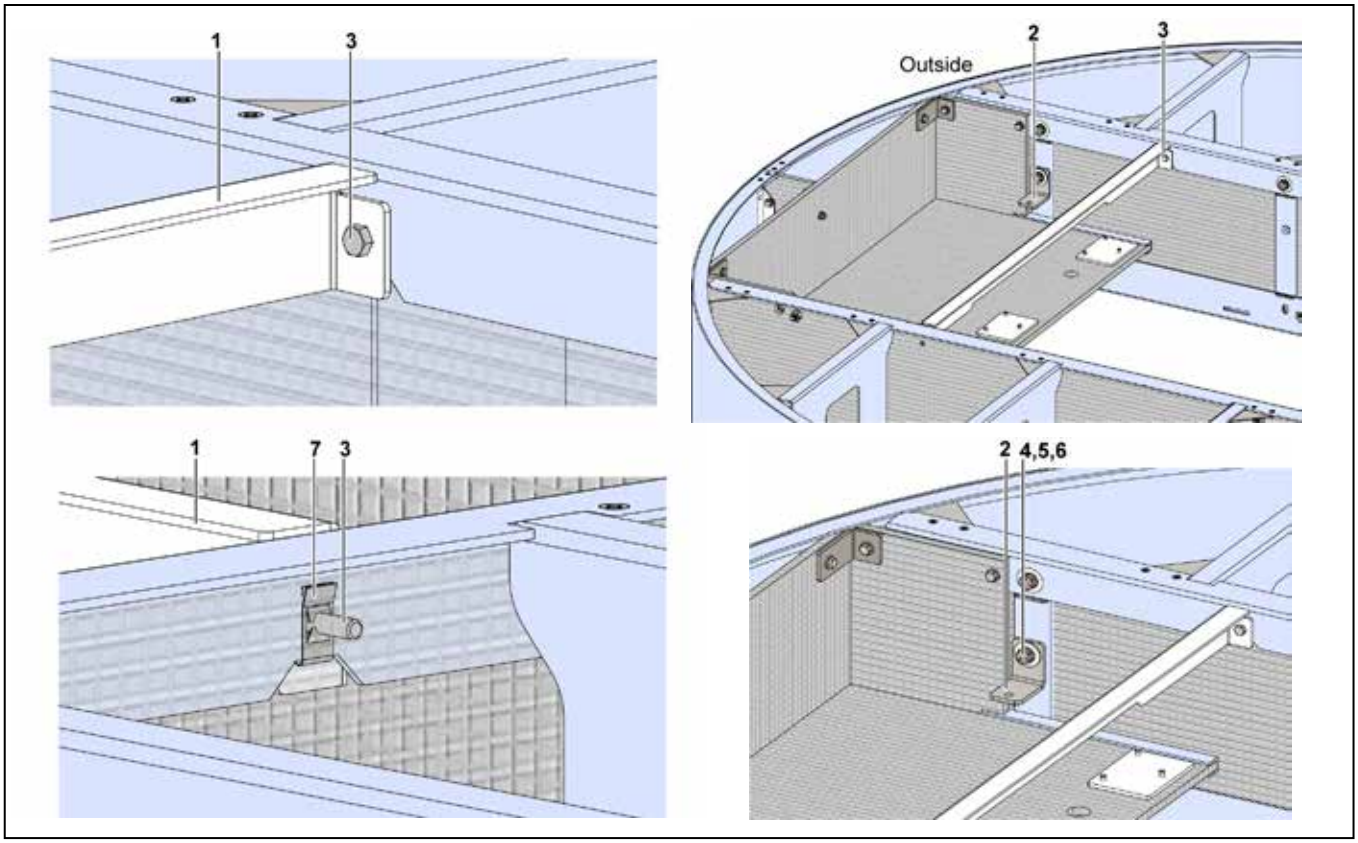
1. Install two canopy cross brace brackets (**1**) using fastener hardware in Fig. 13.4.3 (**3, 7**).

- 7/16" hex head bolts thread into weld nuts on weldment strap assembly (7).

13.4.2 Install angle adjustment bracket.

1. Install angle adjustment bracket (**2**) using fastener hardware in Fig. 13.4.3.

- Angle adjustment bracket installs on weldment strap assembly on canopy interior side.
  Reference Chapter 7, Para. 7.1 for additional canopy view with K9 installation.
- 7/16" hex head bolt thread into weld nut on weldment strap assembly (7).



14 K9 Drive Canopy Mounting Installation

14.1 Install Canopy Drive Mounting Brackets

Fig. 14.1.1 Bracket, canopy mount,K9

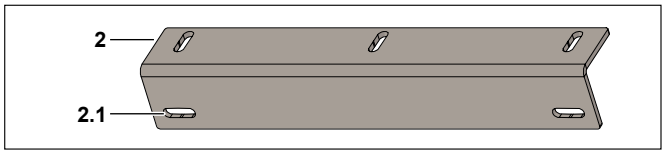


Fig. 14.1.2 Canopy mount bracket fasteners

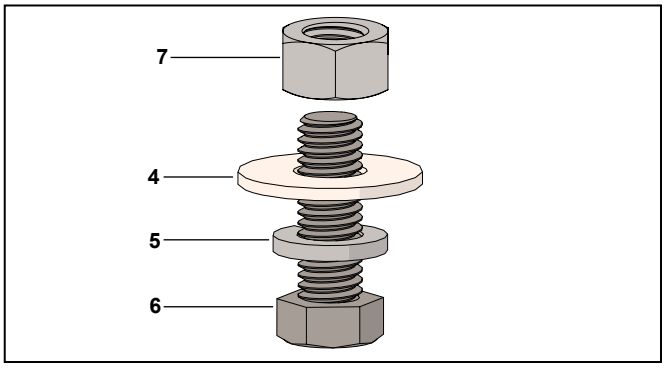


Fig. 14.1.3 Canopy mount bracket and fastener installation

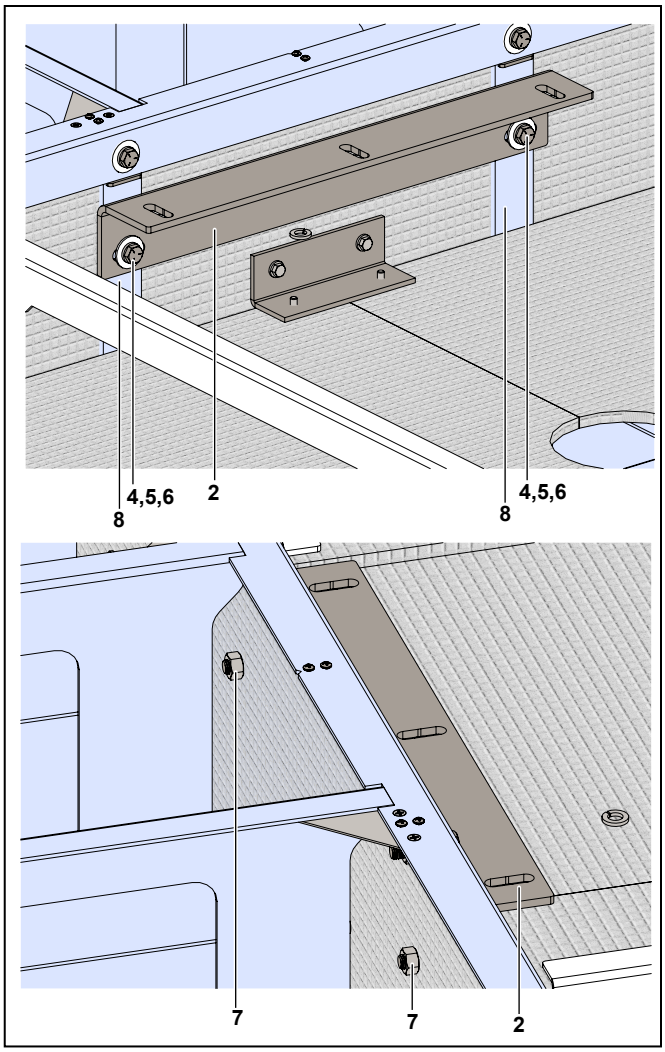


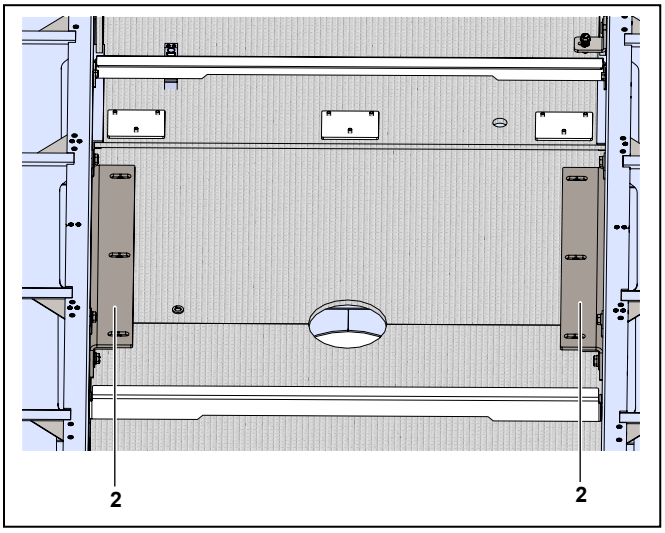
Table 14.1.1 Canopy K9 drive bracket hardware

2	RC6374-010	Bracket, canopy mount, K9	2
2.1		1" long slot	
3	RF6065-010	7/16-14 Weld nut, surface mount	
4	RF6067-01Z	7/16" flat washer, 01 1/4" OD	4
5	RF6068-01Z	7/16" lock washer, 0.78" OD	4
6	RF6066-01Z	7/16-14 x 1 1/4" hex head bolt	4
7	RF6069-01Z	7/16-14 hex nut	4
8	RC6385-010	Bracket, mounting, canopy strap K9, 3 holes	8

14.1.1 Install K9 canopy mount brackets.

1. Install two canopy mount brackets onto canopy strap brackets (8) using fastener hardware in Fig. 14.1.2.
   - Hex head bolts thread into 7/16-14 hex nut (7) on opposite side of honeycomb.
2. Center brackets in slots (2.1).
   - **Snug, do not tighten nuts.**

Fig. 14.1.4 Canopy mount bracket installation



14.2 Install Canopy K9 mounting plates

Fig. 14.2.1 Plate, brace inner bot, K9

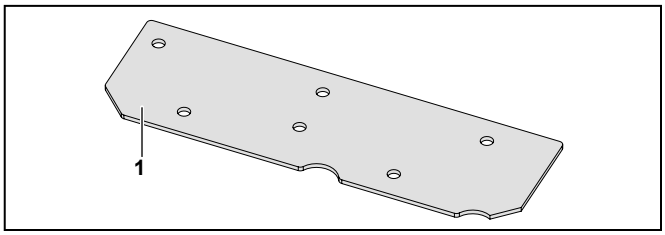


Fig. 14.2.2 Plate fasteners

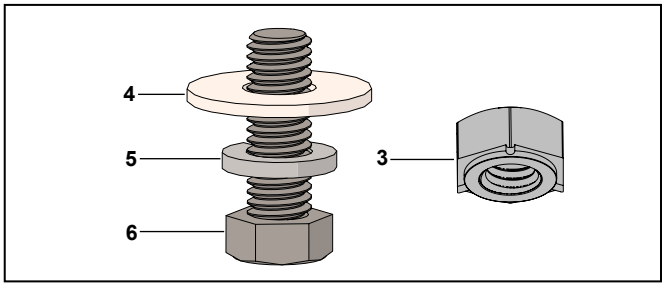


Fig. 14.2.3 K9 Plate installation

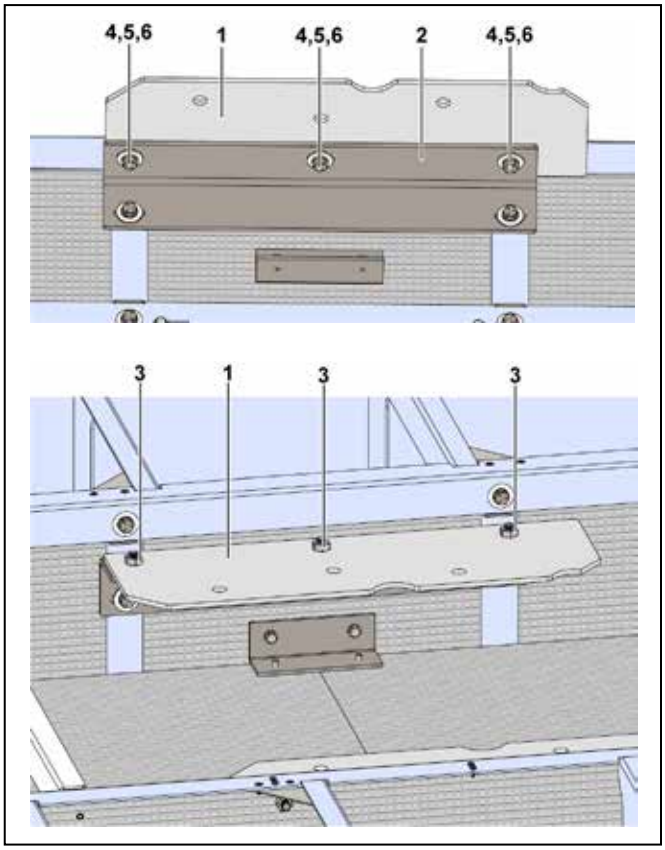


Table 14.2.1 Canopy K9 mounting plate

1	RC6380-010	Plate, brace inner bot K9	2
2	RC6374-010	Bracket, canopy mount, K9	2
3	RF6065-010	7/16-14 Weld nut, surface mount	6
4	RF6067-01Z	7/16" flat washer, 01 1/4" OD, ZN	6
5	RF6068-01Z	7/16" lock washer, 0.78" OD, ZN	6
6	RF6066-01Z	7/16-14 x 1 1/4" hex head bolt, ZN	6

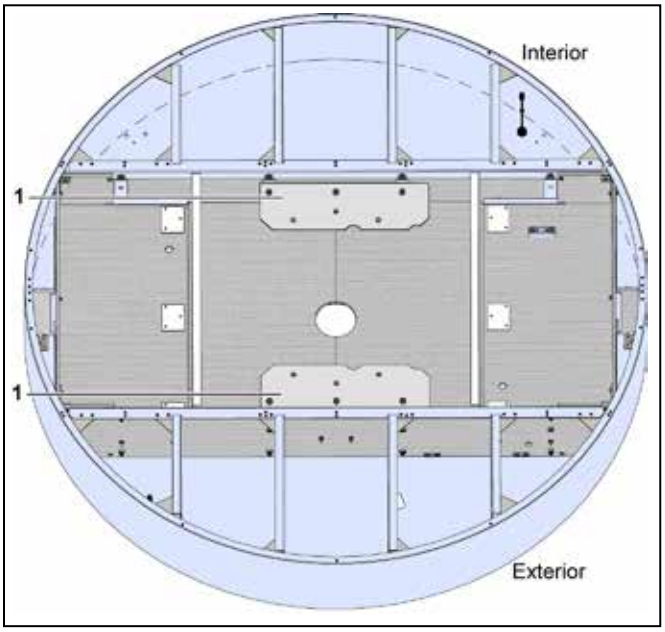
14.2.1 Install K9 mounting plates.

1. Install two K9 mounting plates onto drive mounting brackets using fastener hardware in Fig. 14.2.2.

- **Reference Fig. 15.2.3 for K9 plate orientation in canopy.**
- Hex head bolts thread into 7/16" weld nuts (**3**).

2. Center plates in slots.
   Snug, **do not fully tighten hex head bolts.**

Fig. 14.2.4 Canopy K9 mounting plate installation



14.3 Remove Fiberglass BR Outer Soffit

Fig. 14.3.1 Outer soffit fiberglass removal

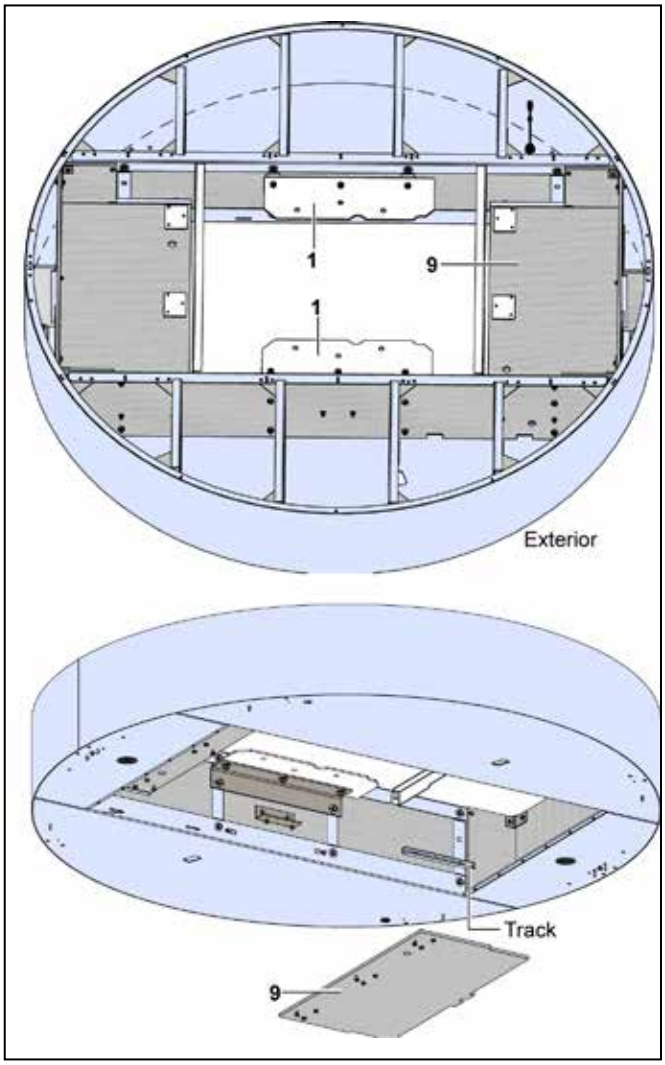


Table 14.3.1 Canopy K9 drive bracket and side mount weldment

1	RC6380-010	Plate, brace inner bot K9	2
9	RM1076-010	Fiberglass BR soffit, outer	2

⚠ WARNING

Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the fiberglass panels.
Failure to follow proper safety precautions may result in personal injury.

14.3.1 Remove fiberglass BR outer soffit.

1. Remove fiberglass BR outer soffit to enable K9 drive installation. Fiberglass slides out on canopy-mounted tracks.

14.4 Position K9 Drive And Mounting Bracket Assembly Under Canopy

Fig. 14.4.1 RS6086 K9 drive assembly

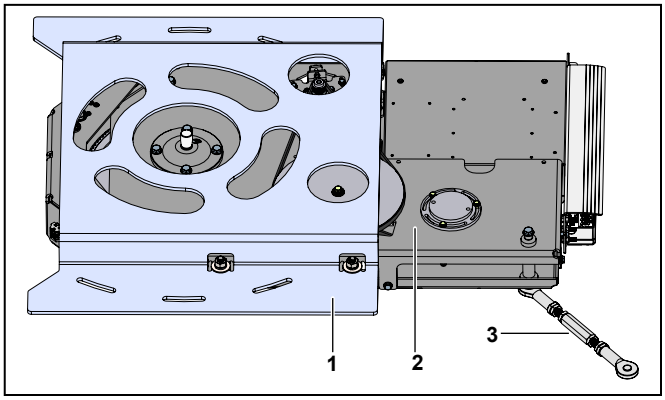


Table 14.4.1 Drive unit assembly, K9

1	RC6373-010	Mounting bracket, K9 drive, AL	1
2	RX6021-010	Drive, control unit, K9, 180 degree SRZ	1
3		Turnbuckle assembly, K9	1
4	RC6380-010	Plate, brace inner bot K9	2
5	RC6434-010	Bracket, angle adjustment, K9	1

14.4.1 K9 drive and mounting bracket assembly.

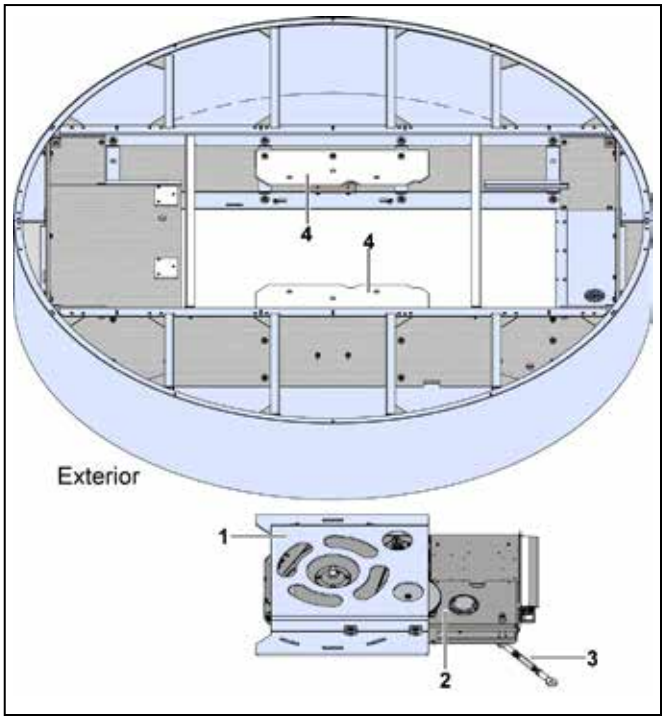
1. Reference Para. 12.2 for K9 drive and mounting bracket assembly.

CAUTION

Place canopy assembly on elevated smooth surface.

- Prevents damage to soffit surfaces.

Fig. 14.4.2 RS6086 K9 drive assembly positioned under canopy.





WARNING

Use caution when positioning K9 drive assembly!

14.4.2 Position K9 drive assembly under canopy.

1. It is recommended to install the K9 drive assembly in the canopy before positioning the canopy into its installed location.
2. It is recommended to use a Genie material lift to lift and position K9 drive assembly under canopy.
3. In Para. 14.5 K9 drive will be positioned in place under K9 mounting plates and secured to the plates.

14.5 Install K9 Drive And Mounting Bracket Assembly In Canopy

Fig. 14.5.1 K9 drive assembly mounting, below plates

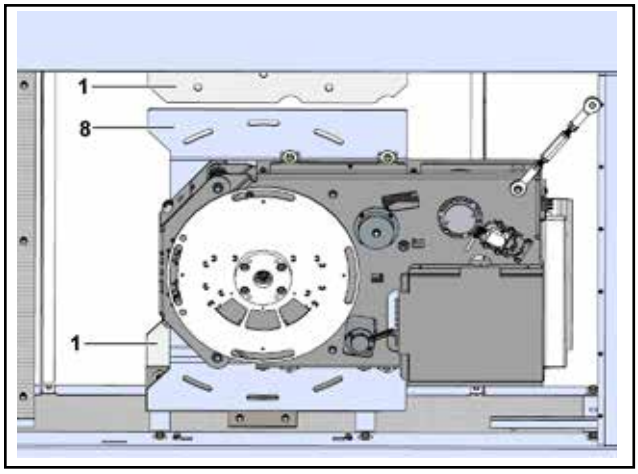


Fig. 14.5.2 K9 drive assembly mounting, bottom view

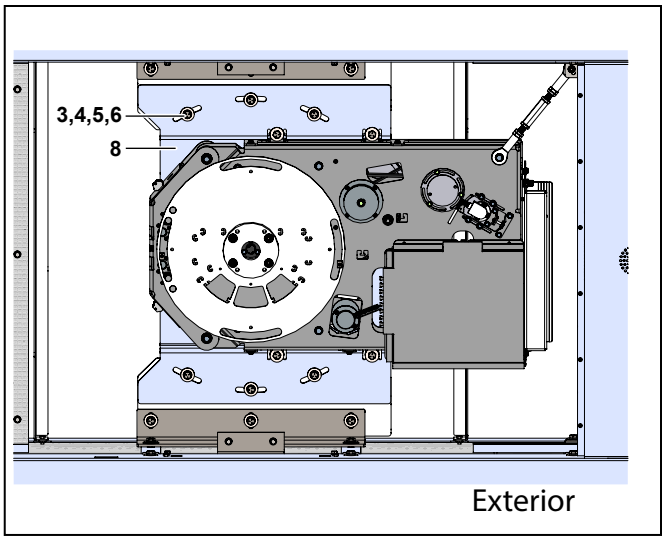


Fig. 14.5.3 K9 drive assembly installed in canopy

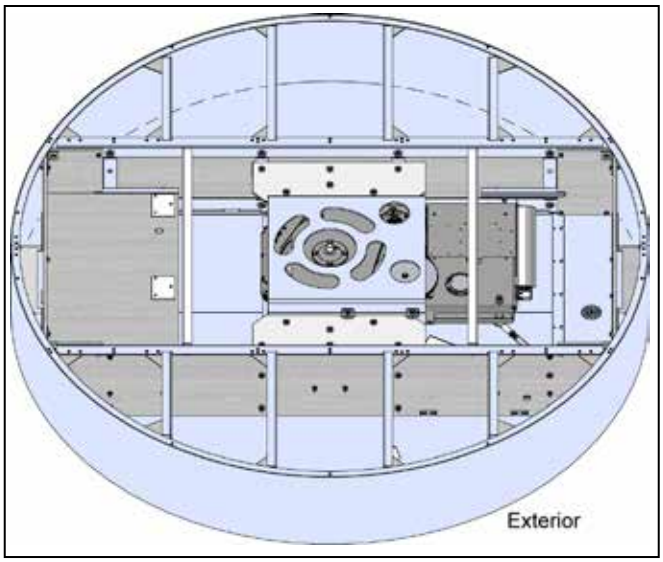
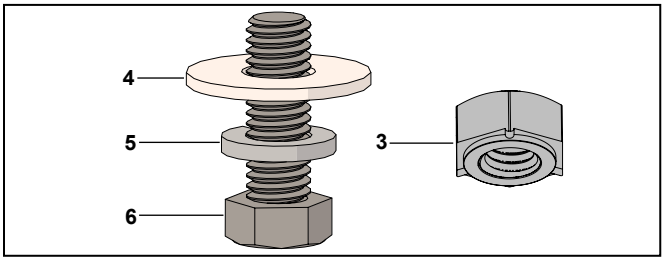


Table 14.5.1 Canopy K9 drive bracket and side mount weldment

1	RC6380-010	Plate, brace inner bot K9	2
3	RF6065-010	7/16-14 Weld nut, surface mount	5
4	RF6067-01Z	7/16" flat washer, 01 1/4" OD	6
5	RF6068-01Z	7/16" lock washer, 0.78" OD	6
6	RF6066-01Z	7/16-14 x 1 1/4" hex head bolt	6
7		Turnbuckle assembly, K9	
8	RC6373-010	Mounting bracket, K9 drive, AL	2

Fig. 14.5.4 K9 drive assembly fasteners



14.5.1 Install K9 drive and bracket assembly to drive mounting brackets

WARNING

Use caution when positioning K9 drive assembly!

1. Position K9 drive and bracket assembly directly under canopy drive mount plates (1).
2. Raise and position drive assembly until K9 drive mounting bracket (8) holes align with mounting holes in drive mount plates (Fig. 14.5.1).
3. Center K9 drive mounting bracket slots with drive mount plate holes.
4. Install 7/16" fastener hardware (Fig. 14.5.4) in drive mounting bracket mounting holes.
   - **Snug, do not fully tighten 7/16" bolts as mounting bracket positions may have to be adjusted.**
   - 7/16" bolts thread into weld nuts (3) on opposite side of K9 mounting plates.

14.5.2 Check that K9 drive is parallel to canopy rails.

NOTICE

Verify K9 drive assembly is parallel to canopy rails.
Adjust K9 drive position as required.

15 Electronic Assembly Canopy Installation Raise Canopy Into Place

15.1 Electronic Assembly

Fig. 15.1.1 S2-S3 electronic panel

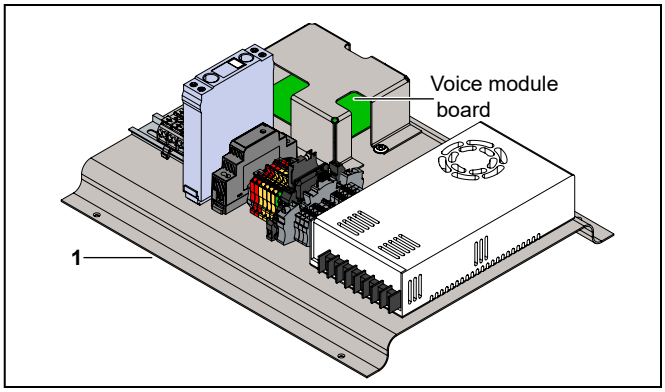


Fig. 15.1.2 S4 electronic panel

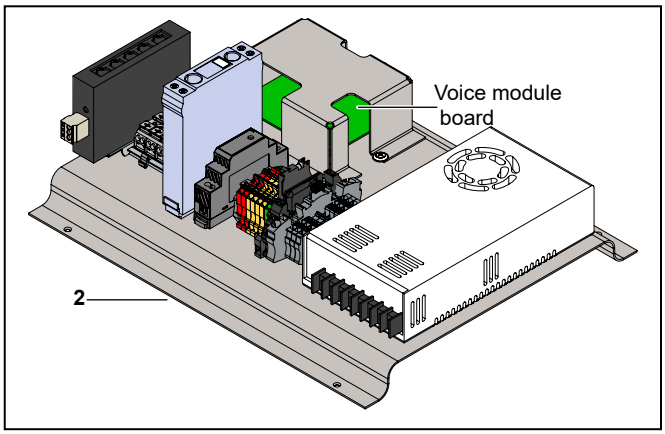


Table 15.1.1 Electronic panel RS6124-00X

1	RS6124--002	Electronic panel, SSR SRD K9 English, S2-S3
1	RS6124--004	Electronic panel, SSR SRD K9 Spanish, S2-S3
2	RS6124--001	Electronic panel, SSR SRD K9 English, S4
2	RS6124--003	Electronic panel, SSR SRD K9 Spanish, S4

TIPS AND RECOMMENDATIONS

English electronic panel assemblies.

- Voice module board RX6026-011 programmed in English.

Spanish electronic panel assemblies.

- Voice module board RX6026-012 programmed in Spanish.

Reference Para. 7.8.1 and 7.8.2 for assembly detail.

15.1.1 Electronic panel assembly and wiring.

NOTICE

Electronic panel factory assembly and wiring.
Electronic panel factory assembled and wired. Reference RL6008-004 Alvarado S2/S3/S4 Wiring Manual Appendix B- Electronic Panel Wiring.

NOTICE

Electronic panel field installation wiring:
Reference RL6008-004 Alvarado S2/S3/S4 Wiring Manual Para. 4.1 Electronic Panel Field Wiring Diagram.

15.2 Install Electronic Assembly In Canopy

Fig. 15.2.1 Bracket, electronic assembly attachment

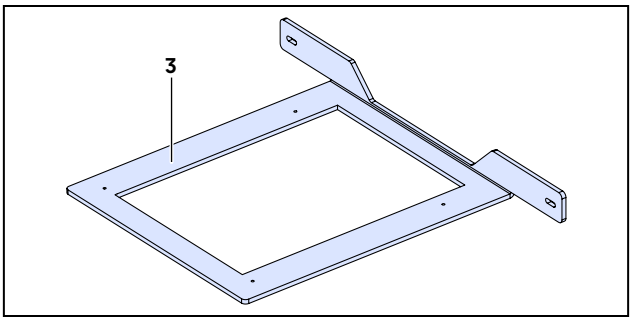


Fig. 15.2.2 Bracket fastener hardware

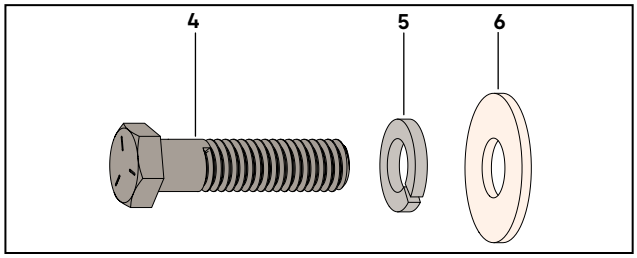


Fig. 15.2.3 Bracket canopy installation

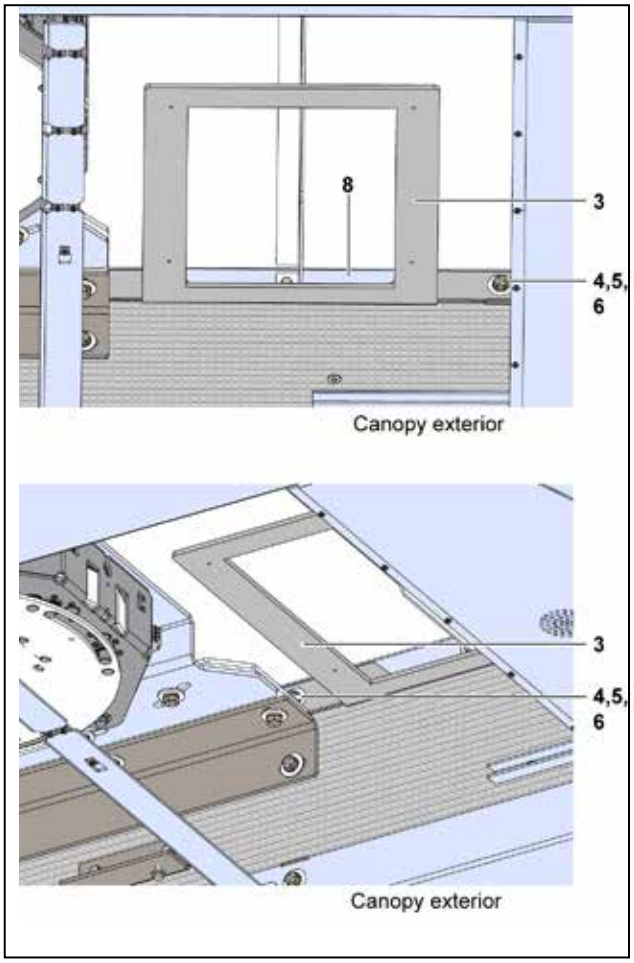


Table 15.2.1 Electronic panel mounting bracket

3	RC6645-010	Bracket, K9 electronic assembly attachment
4	RF6066-02Z	7/16-14 x 1-3/4" hex bolt, zinc plate
5	RF6068-01Z	7/16" lock washer, zinc plate
6	RF6067-01Z	7/16" flat washer, oversized, 1-1/4" OD, zinc plate
8	RC6601-0x0	Canopy support bracket S2/S3/S4, BR

15.2.1 Install bracket in canopy.

⚠ WARNING

Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the fiberglass panels.
Failure to follow proper safety precautions may result in personal injury.

1. Install bracket on canopy support bracket shown in Fig. 15.2.3 and 15.2.4 using fastener hardware in Fig. 15.2.2.

- **Bracket installs on canopy side facing the exterior.**

Fig. 15.2.4 Bracket canopy installation

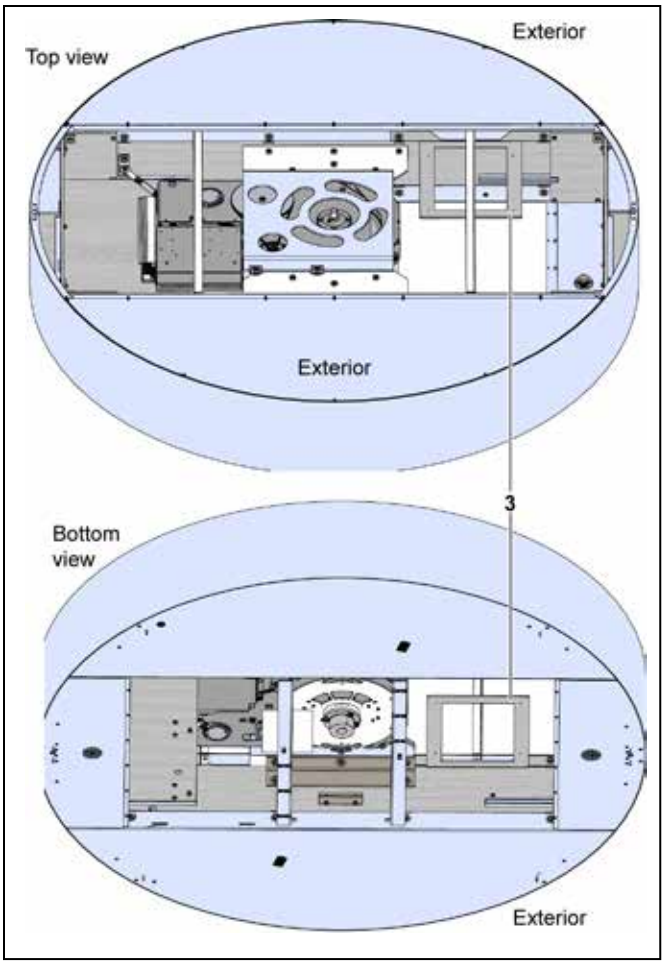


Fig. 15.2.5 Panel fastener hardware

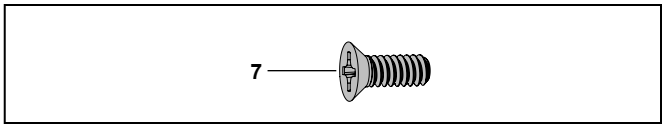


Fig. 15.2.6 Panel installation on bracket

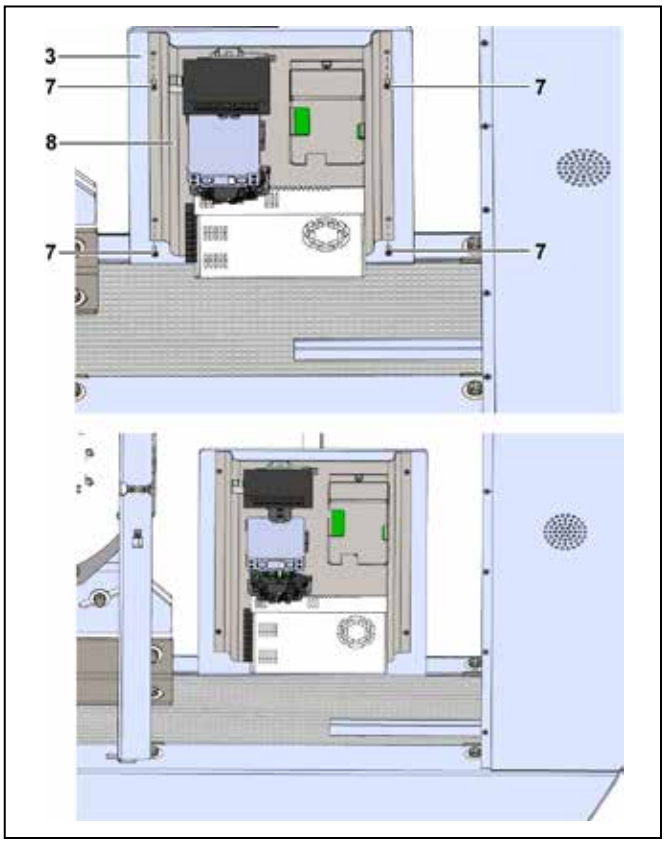


Table 15.2.2 S3/S4 Electronic panel fastener hardware

3	RC6645-010	Bracket, K9 electronic assembly attachment
7	RF6115-03G	10-24 x 1/2" Phillips flat head screw, 18-8 SS
8	RS6124--00X	Electronic panel – Reference Para. 15.1 S4 panel illustrated in Fig. 15.2.6

15.2.2 Install electronic panel on bracket.

⚠ WARNING

Wear appropriate personal protective equipment (PPE) when removing, installing, or working near the fiberglass panels.
Failure to follow proper safety precautions may result in personal injury.

Reference Para. 15.1 for electronic panel views.

1. Mount and fasten electronic panel to mounting bracket 10-24 countersunk mounting holes using four 10-24 x 1/2" Phillips flat head screws.

- Ensure that panel is orientated as shown in Fig. 15.2.6 with terminals facing K9 drive.

15.3 Raise Canopy Into Place

NOTICE

Lifting equipment requirements will depend on canopy installation height and physical space around door installation location.

WARNING

Lift equipment requirements:
- Load capacity: 300 lb [136 kg]minimum.
- Lifting height: Based on canopy installation height.
- Wheel brakes

WARNING

Cordon off canopy installation area!

15.3.1 Move canopy to approximate door centerpoint.

1. Position canopy at door centerpoint, orienting canopy to building interface (Para. 13.3).

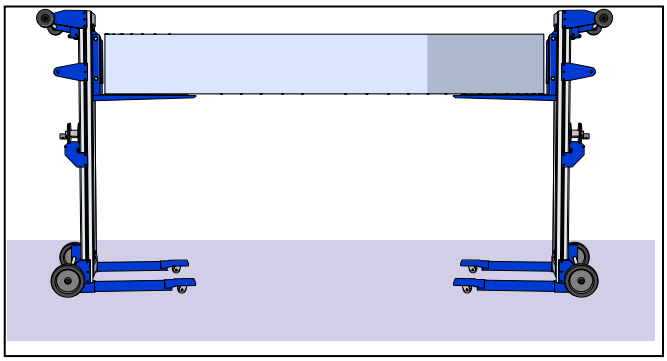
WARNING

A minimum of two persons are required when handling canopy!

WARNING

Use caution when handling canopy!

Fig. 15.3.1 Canopy on lift equipment example



15.3.2 Place canopy on lifts.

1. Place canopy on lifts.

CAUTION

Canopy installation orientation.

1. Identify canopy end wall mounting hole locations from Installation drawing package.
2. Orient canopy on lifts based on Installation drawing package and architect/contractor drawings.

CAUTION

When placing canopy assembly on lifts prevent damage to:
- Sensor surfaces.
- Optional lights.
- Soffit surfaces.

CAUTION

Canopy end wall mounting holes.
Place lift equipment between canopy end wall mounting hole areas. Reference Chapter 16.

WARNING

Lock lift wheels once lifts are in place!

15.3.3 Raise canopy to installation height.

NOTICE

Reference Installation drawing package.

Raise canopy to height for post installation (Chapters 16, 17 and 18).

WARNING

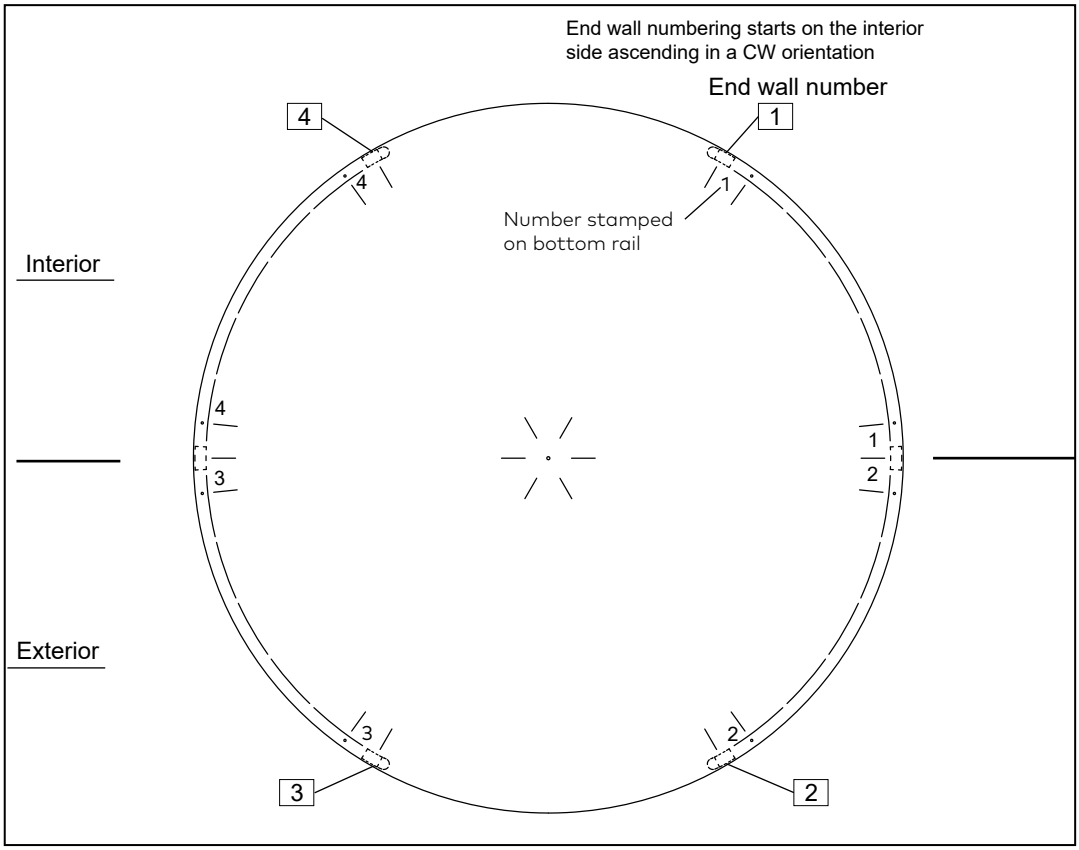
Use caution when raising canopy!

16 Enclosure Rail Base, Rail Header And Post Numbering

16.1 Enclosure Rail Base, Rail Header And Post Numbering

16.1.1 End wall numbering, single revolving door installation.

Fig. 16.1.1 Standard end wall post numbering



16.1.2 End wall numbering, multiple revolving door installation.

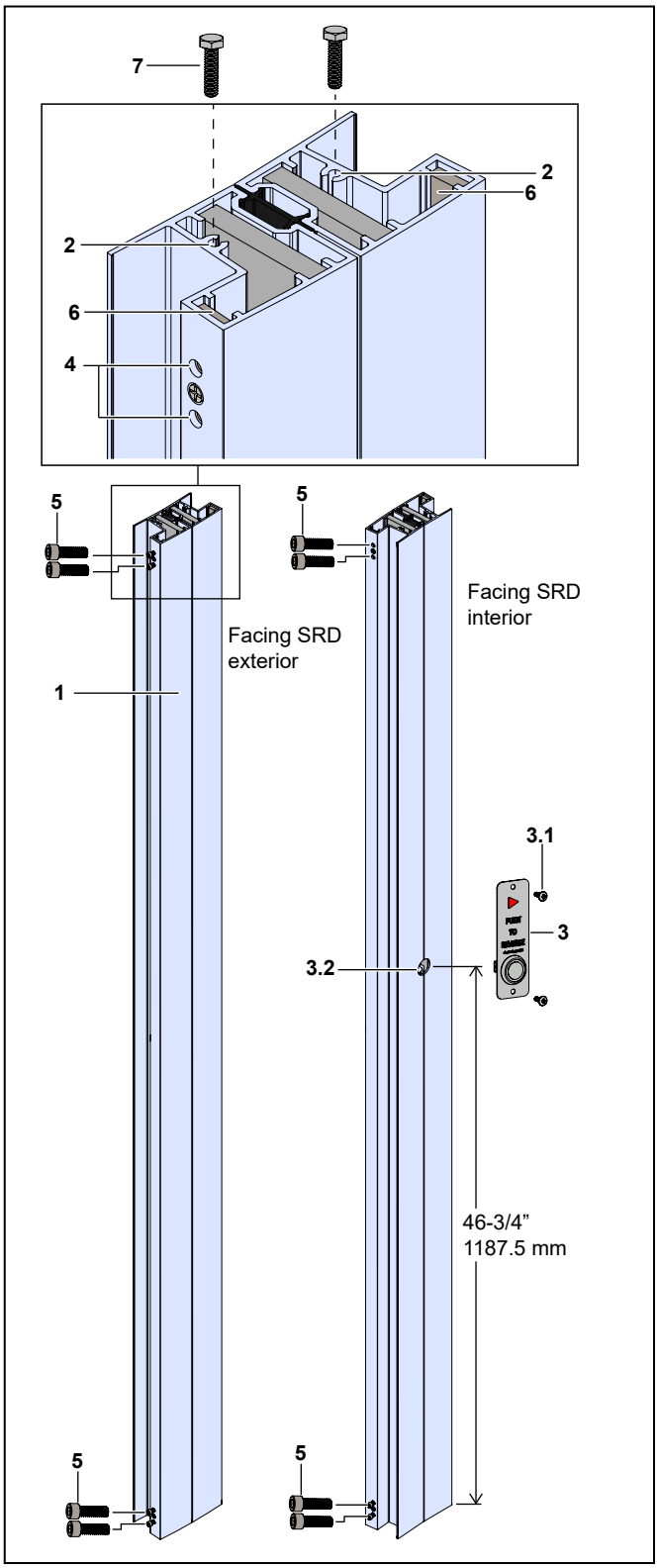
Table 16.1.1 Post numbering

Door 1	Post numbers			
	1	2	3	4
Door 2	Post numbers			
	5	6	7	8
Door 3	Post numbers			
	9	10	11	12
Door 4	Post numbers			
	13	14	15	16

17 Center Post Installation

17.1 Center Post Assembly

Fig. 17.1.1 Center post assembly



NOTICE

Reference Para. 7.17 for center post detail.

Table 17.1.1 Center post assembly

1	RS6268-01X	Center post, RH/LH BR MIL CLR, DBRZ, Cust. Anodized, Cust. Paint
2		Mounting holes for canopy-to-post fasteners
3	RS7060-020	Push to Reverse Assembly Part of Electronic Accessories Kit RK6017
3.1	RF6128-01G	8-32 x 1/2" Phillips truss head machine screw SS
3.2		Cutout for Push to Reverse switch button.
4		Mounting holes for top and bottom rails
5	RF6145-01C	1/4-20 x 3/4" Socket head cap screw BL OX
6	RM6088-010	Enclosure base post attachment block
7	RF6055-02G	1/4-20 x 1" hex head bolt, SS Canopy screws shown for reference.

NOTICE

Refer to Installation drawing package for specific center post installation detail for job!

17.1.1 Uncrate center posts and quarter posts.

1. Uncrate center posts and quarter posts/end walls from their shipping crate .

CAUTION

Refer to warning tag on shipping crate regarding unpacking procedure.

17.1.2 Center Post and Quarter Post numbering.

1. Center post and quarter post numbering.

- Refer to Chapter 16.
- Each center post and quarter post's wrapping material is marked with numbers indicating where the center posts and quarter posts are to be located in the door installation.

2. Center posts and quarter posts must be installed matching their number with number in canopy and bottom and top rails.

17.2 Center Post Push to Reverse Panel Installation

Fig. 17.2.1 Push to Reverse panel installation

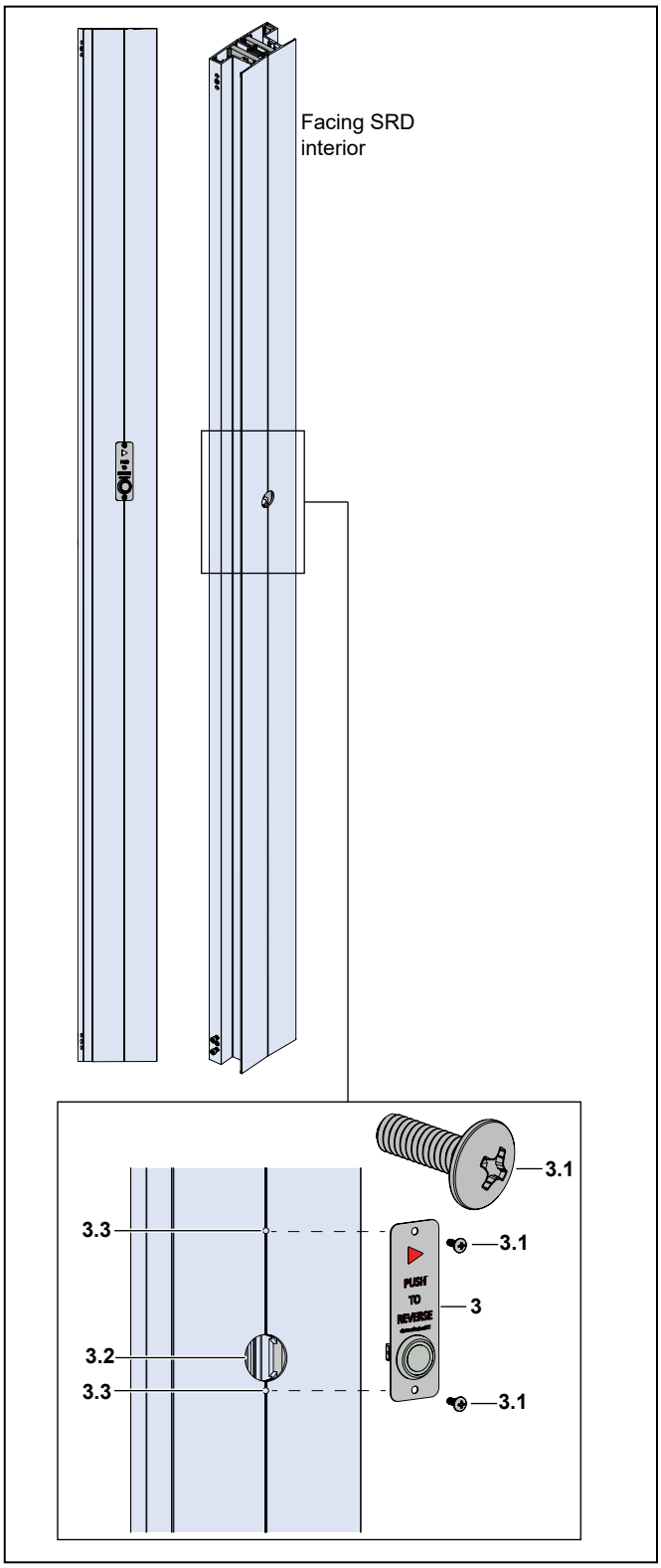


Table 17.2.1 Center post assembly

1	RS6268-01X	Center post, RH/LH BR MIL
3	RS7060-020	Push to Reverse Assembly Part of Electronic Accessories Kit RK6017
3.1	RF6128-01G	8-32 x 1/2" Phillips truss head machine screw SS
3.2		Hole for Push to Reverse switch button.
3.3		Tapped hole for 8-32 screws (by installer)

17.2.1 Mounting holes for the Push to Reverse panel.

1. Locate Push to Reverse panel assembly on center post hole for the pushbutton (3.2).
2. Ensure panel is vertical; mark the two mounting hole locations for the 8-32 screws.
3. Drill and tap the mounting holes.

Tap size	8-32 NC
Drill size	#29 0.14 decimal, 3.5 mm

17.2.2 Push to Reverse panel wiring.

CAUTION

Work on electrical wiring must be performed only by qualified personnel!

NOTICE

Push to Reverse switch wiring.
Reference S2-S4 Wiring Manual, K9 RL6003-003
Para. 3.2 ETS22sc2 Cables

1. Use 4 conductor, 20 gauge cable with color code as shown in Para. 3.2 of Wiring Manual RL6003-003.

- Cable supplied by installer:
  4 conductor, PVC jacket, 20 Ga.
  Red, Green, White, Black wires

2. Connect cable wires and 8K2 resistor to pushbutton terminals as shown in Wiring Manual RL6003-003, Para. 3.2. **Note:** Wire strip length: 3/16" [5 mm].
3. Run cable to top of center post.

- Cable length: Cable will terminate at K9 drive Sc2 board connectors. Para. 3.2 of Wiring Manual RL6003-003.

17.2.3 Install panel on Center post.

1. Thread 4 conductor cable through hole for switch in center post out through the top of the center post.
2. Install panel on center post and secure with two 8-32 x 1/2" screws ((3.1).

- Insure that panel is vertical on the center post.

17.3 Attach Center Posts To Canopy

Table 17.3.1 Center post and fasteners

Part / Assembly		Description
1	RS6268-01X	Center post, RH/LH BR MIL
2	RF6055-02G	1/4-20 x 1" Hex head bolt, 18-8 SS
3	RC6635-010	Center post brace plate, BR
4	RC6483-02X	Canopy soffit, center outer 36", BR AL
5		Push to Reverse panel 4 conductor cable (By installer) To K9 drive Sc2 board
6	RS7060-020	Push to Reverse Assembly Part of Electronic Accessories Kit RK6017

Fig. 17.3.1 1/4 -20 x 1" hex head cap screw

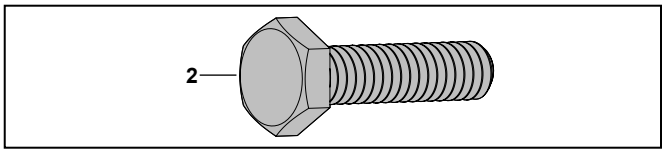
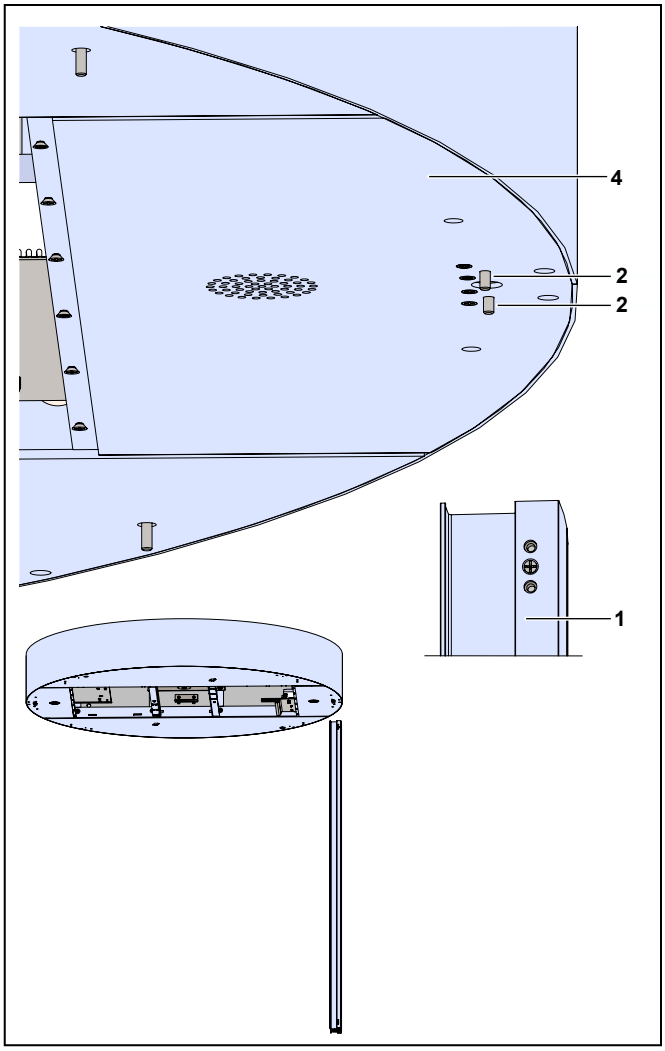


Fig. 17.3.2 Center post and canopy fasteners



WARNING

Use caution while working with the posts in the canopy area!

17.3.1 Fasten center posts to canopy.

1. Insure center post number matches number in canopy.
2. Fasten each center post to canopy using two 1/4-20 x 1" hex head screws (Fig. 17.3.2)
3. Thread cable (5) through top of center post and into canopy (Fig. 17.3.3).

Fig. 17.3.3 Canopy, center post fasteners and cable

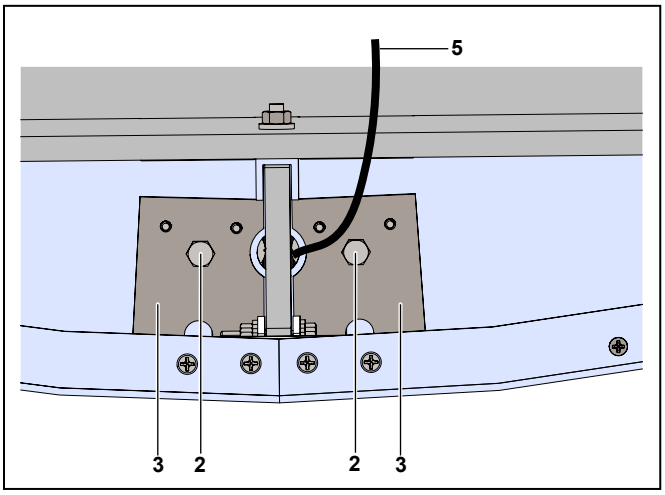
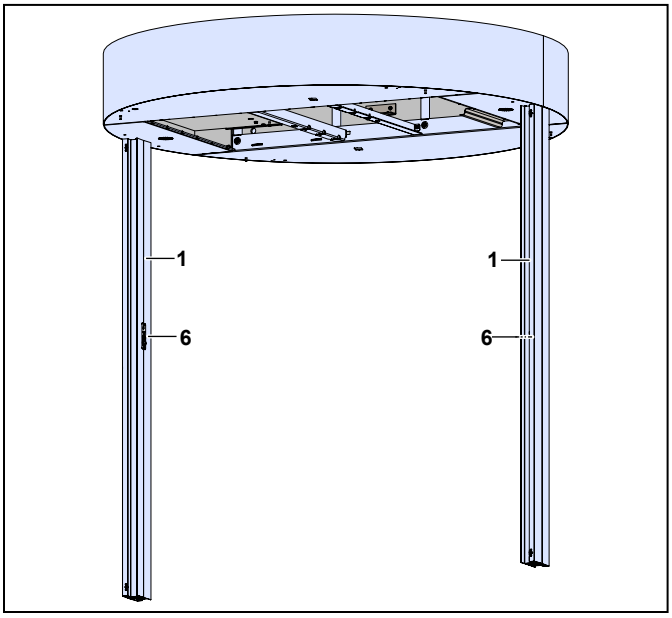


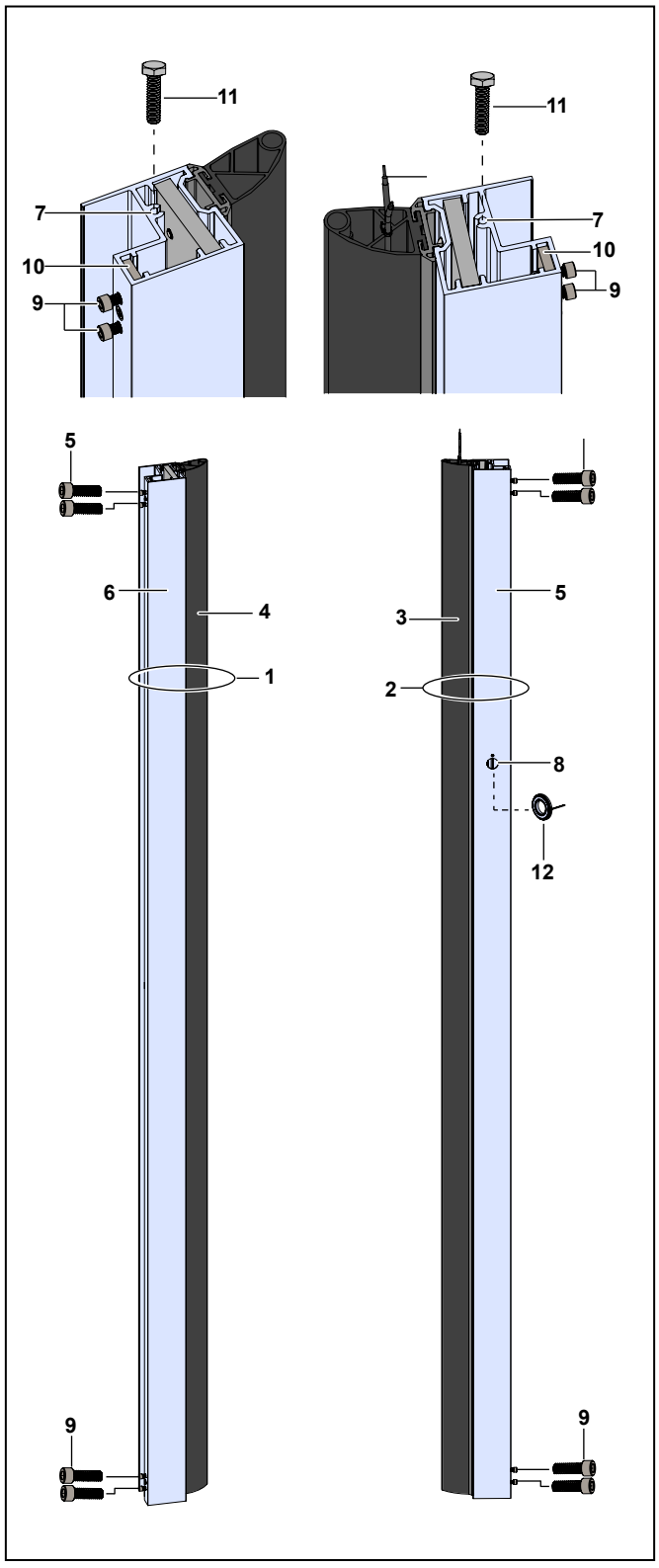
Fig. 17.3.4 Center posts fastened to canopy



18 Quarter Post Installation

18.1 Quarter Post Assemblies

Fig. 18.1.1 Quarter post assemblies



NOTICE

Refer to Installation drawing package for specific quarter post installation detail for job!

NOTICE

Reference Para. 7.18 and .19 for quarter post detail.

Table 18.1.1 Quarter post assemblies

1	RS6267-01X	Quarter post assembly, SRD, BR MILL
2	RS6267-02X	Quarter post assembly, MAN, BR MILL
	1 and 2	CLR, DBRZ, Cust. Anodized, Cust. Paint
3	RX6023-007	Bumper, with sensor
4	RX6022-004	Bumper, without sensor
5	RM6081-02X	Quarter post extrusion, BR3, SRD AL
6	RM6081-01X	Quarter post extrusion, BR3, MAN AL
7		Mounting hole for canopy-to-post fasteners
8		Hole cutouts for LED indicator ring
9	RF6145-01C	1/4-20 x 3/4" Socket head cap screw BL OX
10	RM6088-010	Enclosure base post attachment block
11	RF6055-02G	1/4-20 x 1" hex head bolt, SS Canopy bolts shown for reference.
12	RC7007-001	Door traffic status LED indicator ring Part of Electronic Accessories Kit RK6017

18.1.1 Center Post and Quarter Post numbering.

1. Center post and quarter post numbering.

- Refer to Chapter 16.
- Each center post and quarter post's wrapping material is marked with numbers indicating where the center posts and quarter posts are to be located in the door installation.

2. Center posts and quarter posts must be installed matching their number with number in canopy and bottom and top rails.

18.2 Quarter Post LED ring Installation

Fig. 18.2.1 LED ring installation

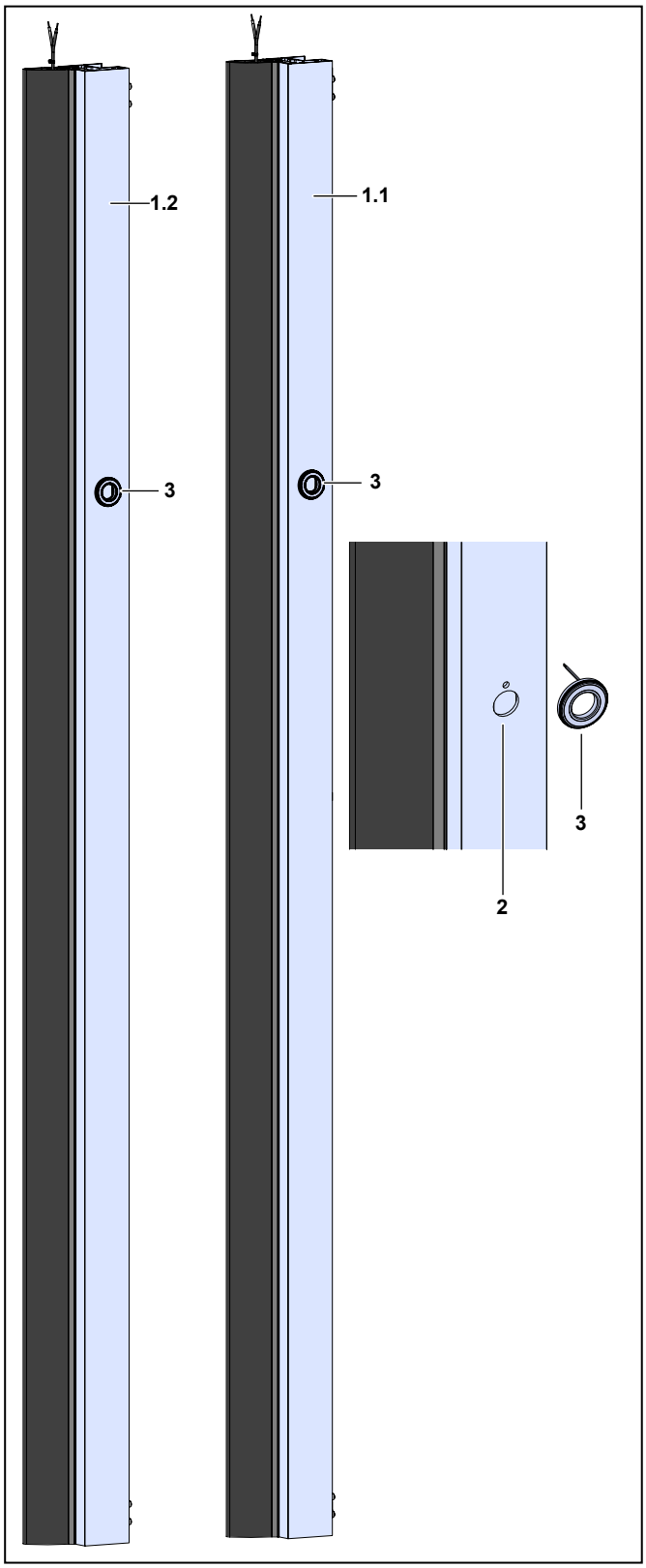


Table 18.2.1 Quarter post assembly

1.1	RS6267-01X	Quarter post assembly, SRD, BR MILL Interior
1.2	RS6267-01X	Quarter post assembly, SRD, BR MILL Exterior
2		Hole cutouts for LED indicator ring
3	RC7007-001	Door traffic status LED indicator ring Part of Electronic Accessories Kit RK6017

18.2.1 LED ring wiring.

CAUTION

Work on electrical wiring must be performed only by qualified personnel!

NOTICE

LED ring wiring.
Reference S2-S4 Wiring Manual, K9 RL6003-003
Para. 3.2 ETS22sc2 Cables

1. Use 4 conductor, 20 gauge cable with color code as shown in Para. 3.2 of Wiring Manual RL6003-003.

- Cable supplied by installer:
  4 conductor, PVC jacket, 20 Ga.
  Red, Green, White, Black wires
- Wire nuts supplied by installer.

2. Connect cable wires to LED ring cable as shown in Wiring Manual RL6003-003, Para. 3.2.
3. Cable length:

   Cable will terminate at K9 drive Sc2 board connectors. Reference Para. 3.2 of Wiring Manual RL6003-003.

18.2.2 Install LED ring on the two SRD quarter post.

1. Thread 4 conductor cable through hole for LED ring in quarter post and route cable to the top of the quarter post.
2. Install LED ring on quarter post.

18.3 Attach Quarter Posts To Canopy

Fig. 18.3.1 1/4 -20 x 1" hex head cap screw

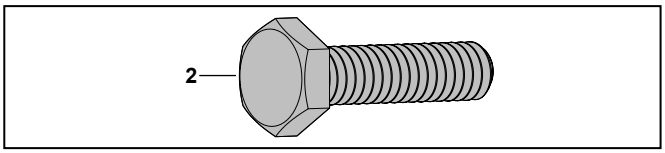


Fig. 18.3.2 Quarter post SRD assembly fastened to canopy

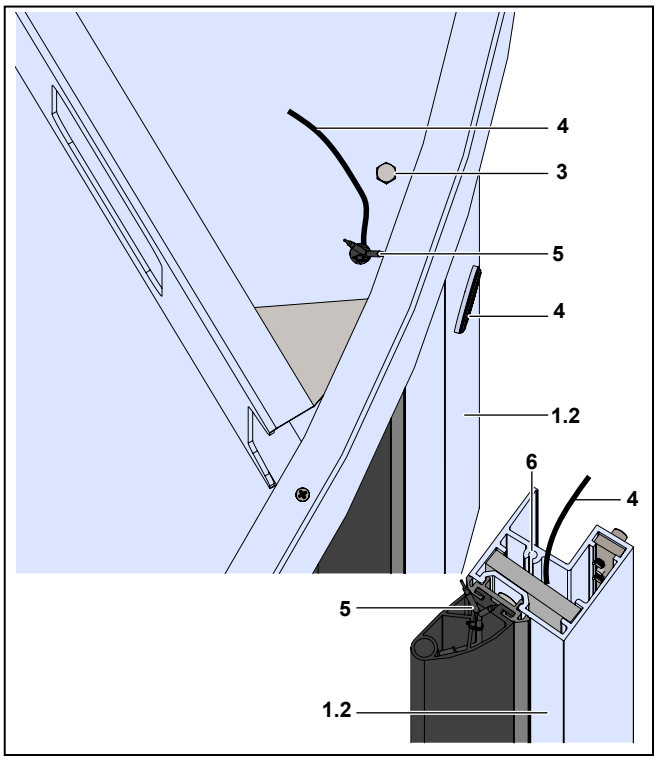
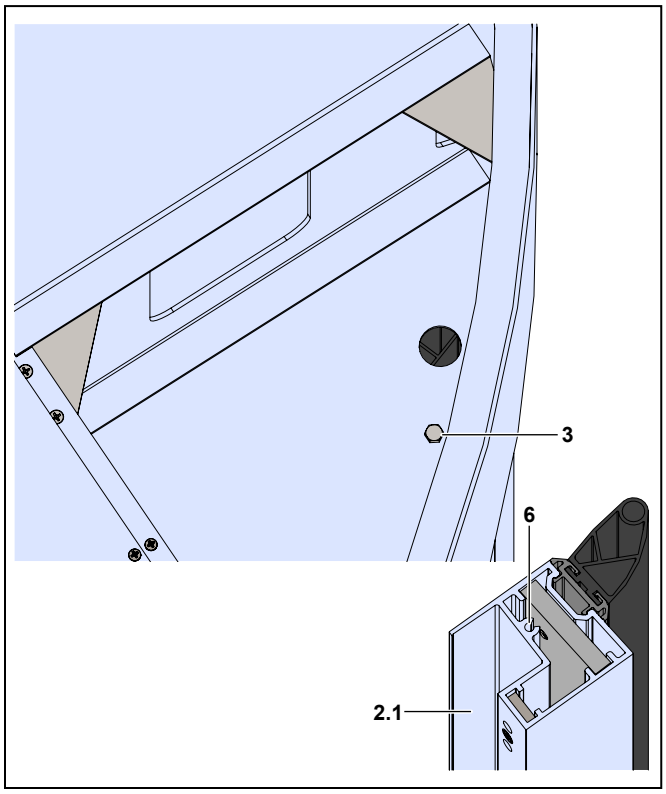


Fig. 18.3.3 Quarter post MAN assembly fastened to canopy



WARNING

Use caution while working with the posts in the canopy area!

18.3.1 Fasten quarter posts to canopy.

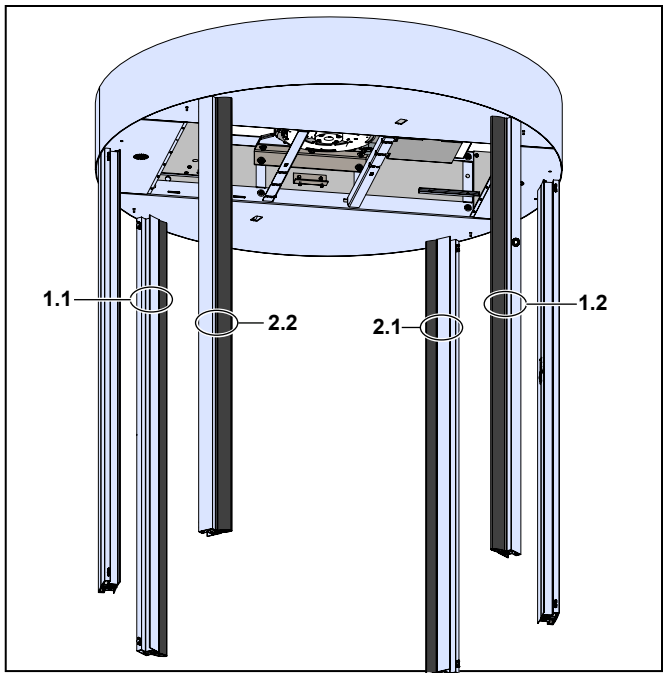
1. Insure quarter post numbers match numbers in canopy.
2. Fasten each quarter post to canopy using one 1/4-20 x 1" hex head screw (Fig. 18.3.2)
3. Two SRD quarter posts:

- Thread LED status cable (4) through top of SRD quarter post and into canopy (Fig. 18.3.3).
- Ensure SRD sensor cable (5) is routed through top of quarter post and into canopy.

Table 18.3.1 Quarter posts and fasteners

Part / Assembly		Description
1.1	RS6267-01X	Quarter post assembly, SRD, BR Interior
1.2	RS6267-01X	Quarter post assembly, SRD, BR Exterior
2.1	RS6267-02X	Quarter post assembly, MAN, BR Interior
2.2	RS6267-02X	Quarter post assembly, MAN, BR Exterior
3	RF6055-02G	1/4-20 x 1" hex head bolt, SS
4	RC7007-001	Door traffic status LED indicator ring and cable
5	RS6267-01X	Quarter post SRD sensor cable
6		Mounting hole for canopy-to-post fasteners

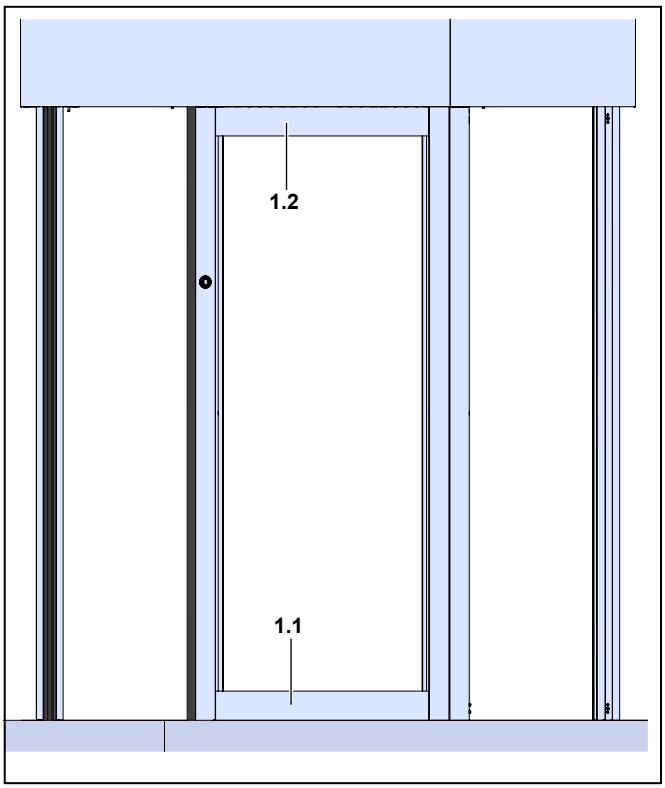
Fig. 18.3.4 Quarter posts fastened to canopy



19 Enclosure Base Rail and Header Rail BR Installation

19.1 Bullet-rated SRD Base and Header Rail Overview

Fig. 19.1.1 Base and header rails



NOTICE

Reference Para. 7.14 and 7.15 for base rail and header rail detail.

19.1.1 Base rail and header rails.
Both base rail and header rail assemblies are supplied for the bullet-rated SRD.

NOTICE

Refer to Installation drawing package for specific base rail and header rail installation detail for job!

Item	Part No.	Description
1.1	RS6266-01X	Base rail assembly, BR, 4 wing, 8' ID door
1.2	RS6266-02X	Header rail assembly , BR, 4 wing, 8' ID door

•

19.1.1 Unpack rail assemblies from shipping crate.

1. Uncrate rail assemblies from their shipping crate.

CAUTION

Refer to warning tag on shipping crate regarding unpacking procedure.

2. Base rail and header rail numbering:

- Rail wrapping material is marked with two numbers indicating where the rail is to be located in the door installation.
- Insure rail numbers match those on wrapping material.

19.2 Base Rail and Header Rail Assemblies, BR, 4 Wing Installation

Fig. 19.2.1 Rail header assembly, BR, 4 wing

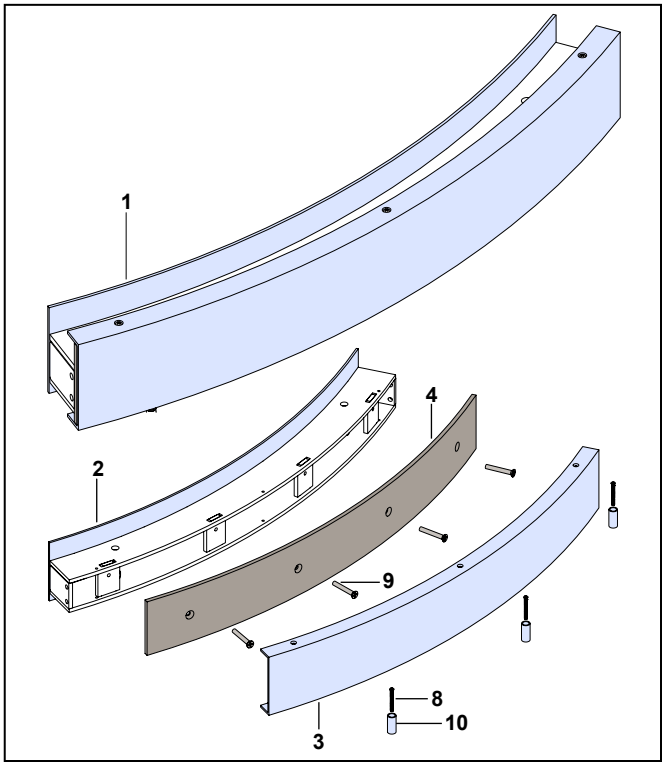


Fig. 19.2.2 Rail header hardware

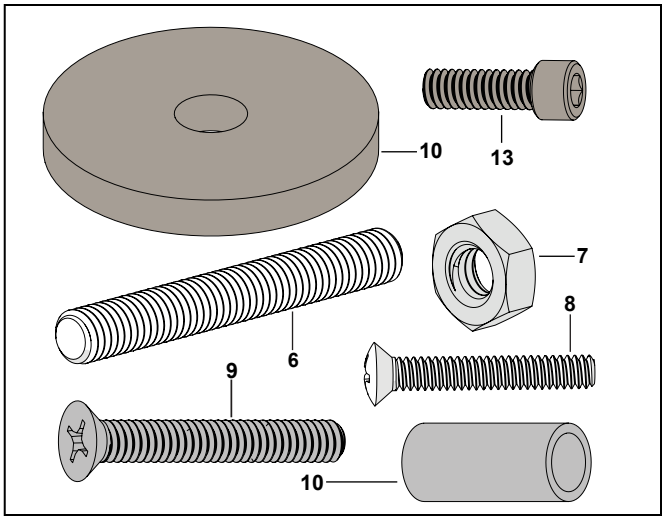


Fig. 19.2.3 header glass installation hardware

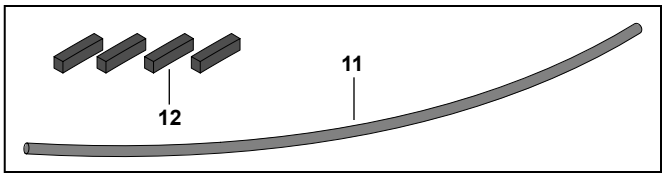


Table 19.2.1 Base rail and header rail assemblies, 4 wing

Item	Part No.	Description	Qty 02X	Qty 01X
1	RS6266-01X	Base rail assembly , BR, 4 wing, 8' ID door	-	1
1	RS6266-02X	Header rail assembly , BR, 4 wing, 8' ID door	1	-
2	RE6016-010	4" inner rail extrusion, 4 wing, 8' ID door	1	1
3	RE6015-010	4" base rail outer cover, 4 wing, 8' door	1	1
4	RM6084-010	Enclosure cover mounting plate, BR, rust resistant primer	1	1
5	RC6634-010	Canopy header anchor bolt plate. Part of canopy assembly RS6269-02/3X	2	2
6	RF6144-01Z	3/8"-16 x 3" threaded rod	2	2
7	DF0587-00G	Hex nut, 3/8-16 SS	6	4
8	RF6123-01X	8-32 x 1-1/2" Phillips oval head MS	3	3
9	RF6116-09G	1/4-20 x 1-3/4" FHMS, 316SS	4	4
10	RC6390-020	1/2" OD x 1-1/8" base rail support mounting spacer Part of canopy assembly	3	-
11	RC6423-010	Rail backing rod, 4 wing door Installed with glass installation	1	1
12	RC6422-010	Glazing block, 1/8 x 3/8 x 2" Installed with glass installation	4	4
13	RF6145-01C	1/4-20 x 3/4" SHCS BL OX Part of post assemblies	4	4

19.2.1 Remove cover from each header rail assembly.

1. Remove Phillips oval head screws (8) from each header rail assembly.
2. Remove cover and base rail support spacers from each header rail assembly.

TIPS AND RECOMMENDATIONS

Number cover and header rail (matching set).

19.2.2 Remove enclosure cover mounting plate from each header rail assembly.

1. Remove Phillips flat head machine screws (9) that secure enclosure mounting plate (4) to header railassembly.
2. Remove enclosure mounting plate.

TIPS AND RECOMMENDATIONS

Number enclosure mounting plate and header rail (matching set).

19.3 Install Base Rail Assemblies

Table 19.3.1 -01X Base rail assembly, 4 wing

Item	Part No.	Description	Qty 01X
1	RS6266-01X	Base rail assembly , BR, 4 wing, 8' ID door	-
2	RE6016-010	4" inner rail extrusion, 4 wing, 8' ID door	1
5	RC6634-010	Canopy header anchor bolt plate. Part of canopy assembly RS6269-02/3X	2
6	RF6144-01Z	3/8"-16 x 3" threaded rod	2
7	DF0587-00G	Hex nut, 3/8-16 SS	4
8	RF6123-01X	8-32 x 1-1/2" Phillips oval head MS	3
9	RF6116-09G	1/4-20 x 1-3/4" FHMS, 316SS	4
10	RC6390-020	1/2" OD x 1-1/8" base rail support mounting spacer Part of canopy assembly	-
13	RF6145-01C	1/4-20 x 3/4" SHCS BL OX Part of center and quarter post assemblies	4

Fig. 19.3.1 Base rail preparation

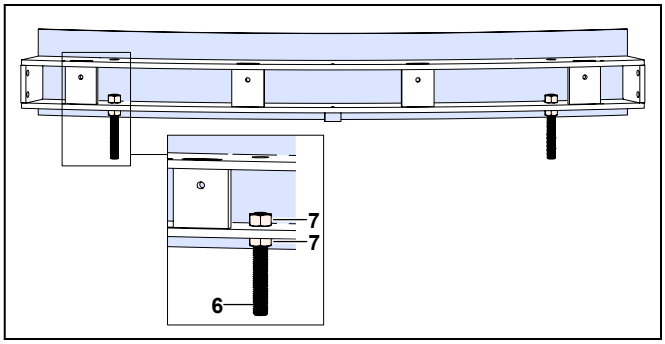
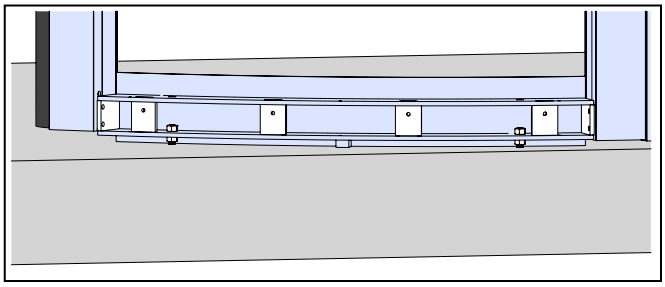


Fig. 19.3.2 Base rail floor installation



⚠ WARNING

Use caution working in door installation area.
Lift equipment in place under canopy.

NOTICE

Reference Installation drawing package for base rail and threaded rod floor installation detail.

19.3.1 Prepare threaded rod anchor holes.

- Holes for threaded rods drilled in Para. 11.4.

1. Use vacuum or blower to remove any dust or debris.

19.3.2 Install two 3" threaded rods into each base rail.

1. Install two 3" threaded rods (6) into mounting holes of each bottom rail and secure with two 3/8-16 hex nuts (7)

19.3.3 Dry fit each base rail assembly to the floor.

1. Place each base rail on floor, checking threaded rod depths in the floor mounting holes.

CAUTION

Enclosure base rail numbers must match adjacent post and quarter post numbers.

19.3.4 Verify door inside diameter.

1. Verify inside diameter at opposite quarter posts and at center posts.

19.3.5 Remove bottom rail assemblies.

1. Remove bottom rail assemblies from floor.

19.3.6 Partially fill anchor holes with anchoring epoxy.

1. Use an anchoring epoxy such as Quikrete high strength anchoring epoxy.

19.3.7 Reinstall bottom rail assemblies

1. Reinstall bottom rail assemblies onto floor, inserting threaded rods into anchor holes. Ensure rail assemblies are level with floor.

19.4 Install Header Rail Assemblies

Fig. 19.4.1 Header rail preparation

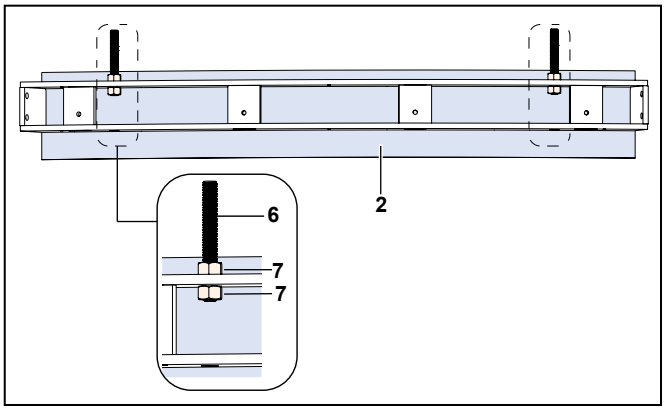


Fig. 19.4.2 Header rail installation

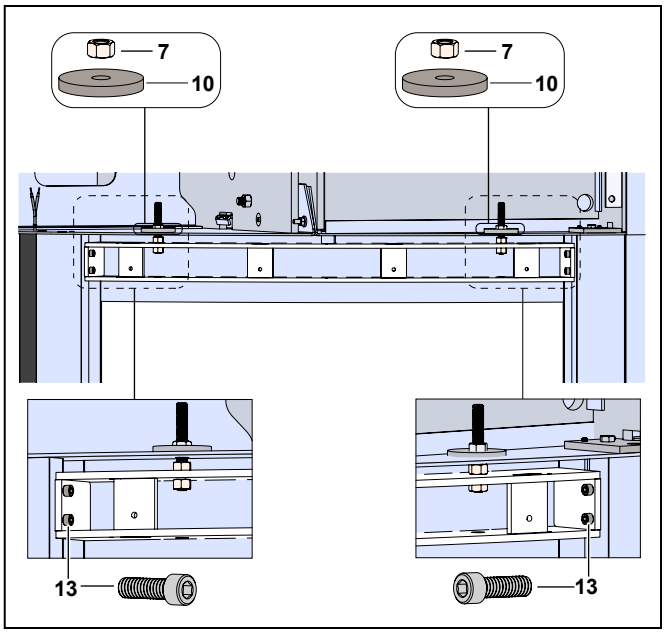


Table 19.4.1 -02X Header rail assembly, 4 wing

Item	Part No.	Description	Qty 02X
1	RS6266-02X	Header rail assembly , BR, 4 wing, 8' ID door	1
2	RE6016-010	4" inner rail extrusion, 4 wing, 8' ID door	1
5	RC6634-010	Canopy header anchor bolt plate. Part of canopy assembly RS6269-02/3X	2
6	RF6144-01Z	3/8"-16 x 3" threaded rod	2
7	DF0587-00G	Hex nut, 3/8-16 SS	6
8	RF6123-01X	8-32 x 1-1/2" Phillips oval head MS	3
9	RF6116-09G	1/4-20 x 1-3/4" FHMS, 316SS	4
10	RC6390-020	1/2" OD x 1-1/8" base rail support mounting spacer Part of canopy assembly	3
13	RF6145-01C	1/4-20 x 3/4" SHCS BL OX Part of center and quarter post assemblies	4

19.4.1 Install header rail assemblies.

NOTICE

Reference Installation drawing package for header rail and threaded rod canopy installation detail.

1. Install two threaded rods (6) into each header rail and secure with two 3/8-16 hex nuts (7) as shown in Fig. 19.4.1.

⚠ WARNING

Use caution working in door installation area. Lift equipment in place under canopy.

2. Place header rail assembly between quarter and center posts and against bottom of canopy, inserting the two threaded rods into holes in canopy.
3. Secure header rail assemblies to quarter and center posts using four 1/4-20 x 3/4" SHCS (13).
4. Secure each threaded rod to canopy using base rail support mounting spacer (10) and 3/8-16 hex nut (7).
5. Repeat for each header rail assembly.

19.5 Lower Canopy / Post Assemblies Fasten Post Assemblies To Base Rails

Table 19.5.1 Base and header rail assembly fasteners

13	RF6145-01C	1/4-20 x 3/4" SHCS BL OX Part of post assemblies

Fig. 19.5.1 Base rail installation to posts

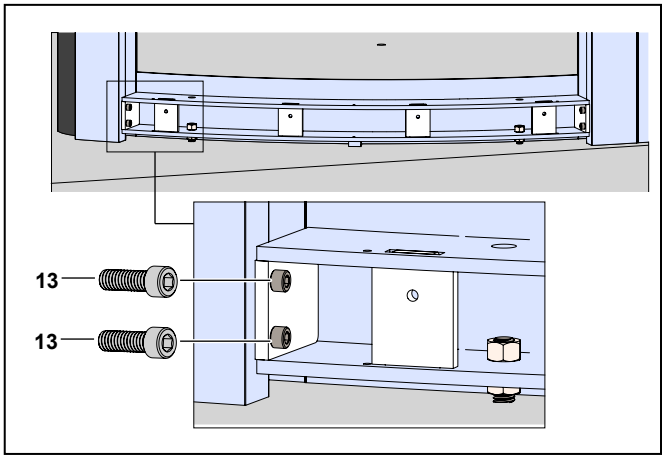
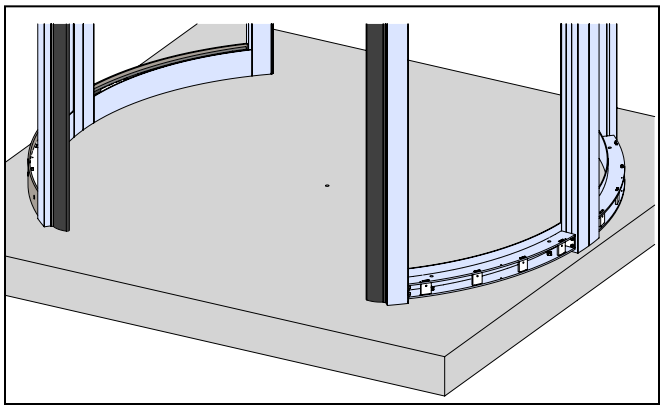


Fig. 19.5.2 Base rails installed to posts and to floor



19.5.1 Lower canopy / post assembly.

NOTICE

Reference installation drawing package for base rail to post attachment detail.

⚠ WARNING

Use caution when lowering assembly!

1. Carefully lower assembly until base rail mounting holes line up with mounting holes in center posts and quarter posts.

CAUTION

Monitor post assembly alignment with base rails as assembly is lowered.

19.5.2 Fasten center post assembles to their adjoining base rail assemblies.

1. Fasten each center post to each of its adjacent base rail using two 1/4-20 x 3/4" socket head cap screws (13).

- Snug, do not tighten fasteners.

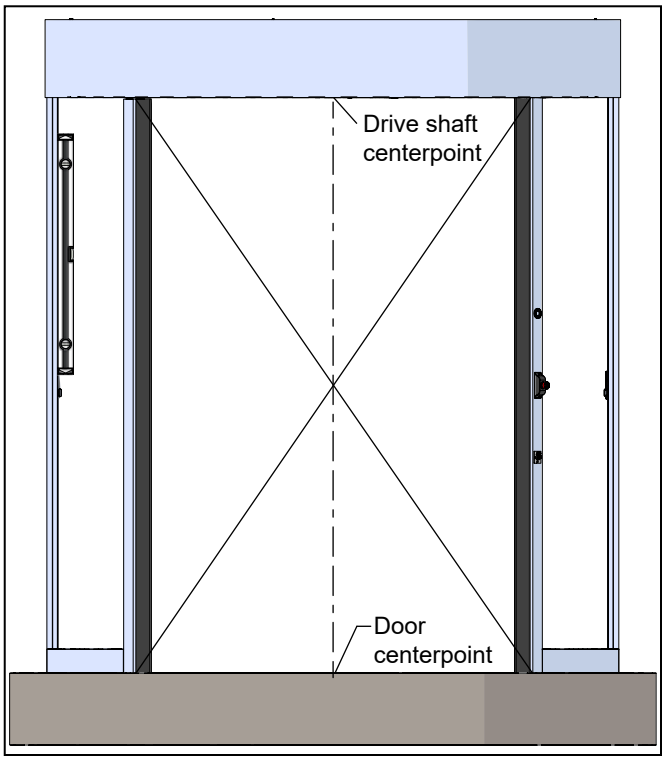
19.5.3 Fasten quarter post assemblies to their adjoining base rail assemblies.

1. Fasten each center post to each of its adjacent base rail using two 1/4-20 x 3/4" socket head cap screws (13).

- Snug, do not tighten fasteners.

19.6 Set Enclosure Level, Square And Plumb

Fig. 19.6.1 Checking enclosure posts for plumb and square



19.6.1 Set enclosure level, square and plumb.

NOTICE

Reference installation drawing package revolving door to building interface (by others).

CAUTION

Shim each base rail assembly with horseshoe shims as required to obtain level, square and plumb door installation.

CAUTION

Check revolving door to building interface!

WARNING

Using plumb bob with string, verify K9 drive shaft centerpoint is plumb with door centerpoint. Reference Chapter 11, installation template.

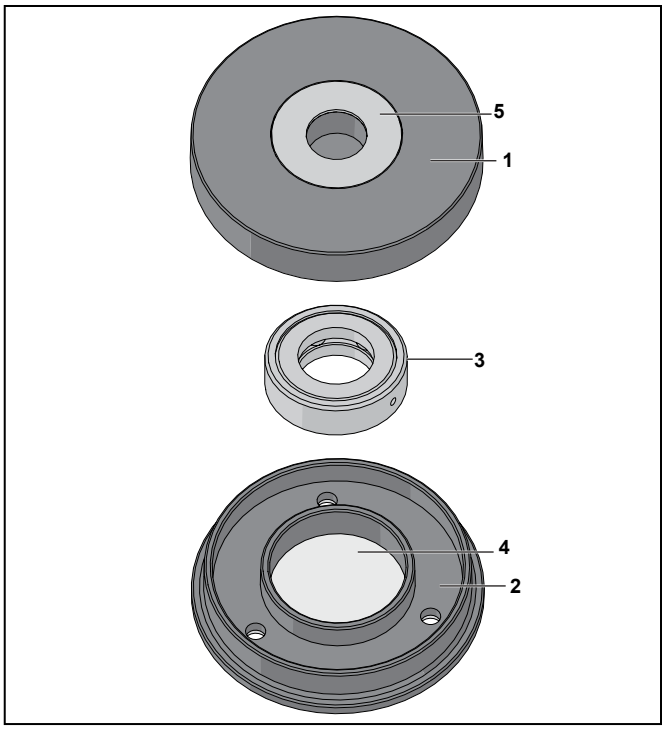
19.6.2 Tighten all base rails to post assemblies.

1. Tighten all 1/4-20 x 3/4" socket head cap screws (Fig. 19.5.1) securing base rails to center post and quarter post assemblies.

20 Install Floor Pivot Bearing Align K9 Drive Shaft With Pivot Bearing

20.1 Install Surface Mounted Pivot Bearing Assembly

Fig. 20.1.1 Surface mounted pivot bearing assembly RS6126-001



Item	Part No.	Description	Qty
1	RC6518-010	Floor pivot bearing cover, Nylon	1
2	RC6519-010	Floor pivot bearing base, Nylon	1
3	RC6520-010	3.094" OD x .63" thrust bearing for 1-1/8" shaft	1
4	RC6521-010	Floor pivot bearing plate	1
5	RF6112-01G	Pivot bearing washer, 15/16 x 2 x .06", SS	1

NOTICE

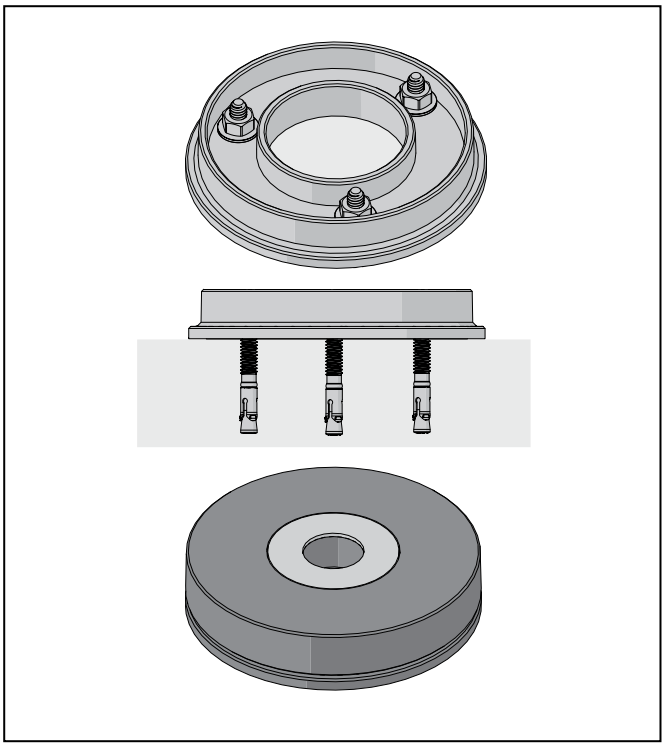
Washer (5) and bearing cover (1) glued in place at factory using gasket material RC6499-010.

20.1.1 Install floor surface-mounted pivot assembly.

NOTICE

Refer to installation drawing package for floor bearing detail.

Fig. 20.1.2 Surface mounted pivot bearing floor installation



1. Position floor pivot bearing base/plate at door centerpoint.
2. Mark 3 holes for 1/4-20 x 2-1/4" floor anchors.
   - **Bearing base/plate location must be at door centerpoint.**
3. Drill 3 holes for 1/4-20 " floor anchors and install anchors.
4. Place bearing base/plate over anchors and secure to anchors with 1/4-20 nuts..

NOTICE

Floor bearing assembly must be level and at door centerpoint.

5. Install thrust bearing (3) into floor pivot bearing base.

20.1.2 Thrust bearing lubrication.

NOTICE

A 1 oz. glob of grease (RC6411-010) is applied to bottom plate and in the center of bearing at factory.
NOTE: Verify bearing and bottom plate have been lubricated.

20.1.3 Install pivot bearing cover/washer (1,5) onto bearing base.

20.2 Center K9 Drive Shaft Over Floor Bearing

Fig. 20.2.1 Centering K9 drive shaft over floor pivot bearing

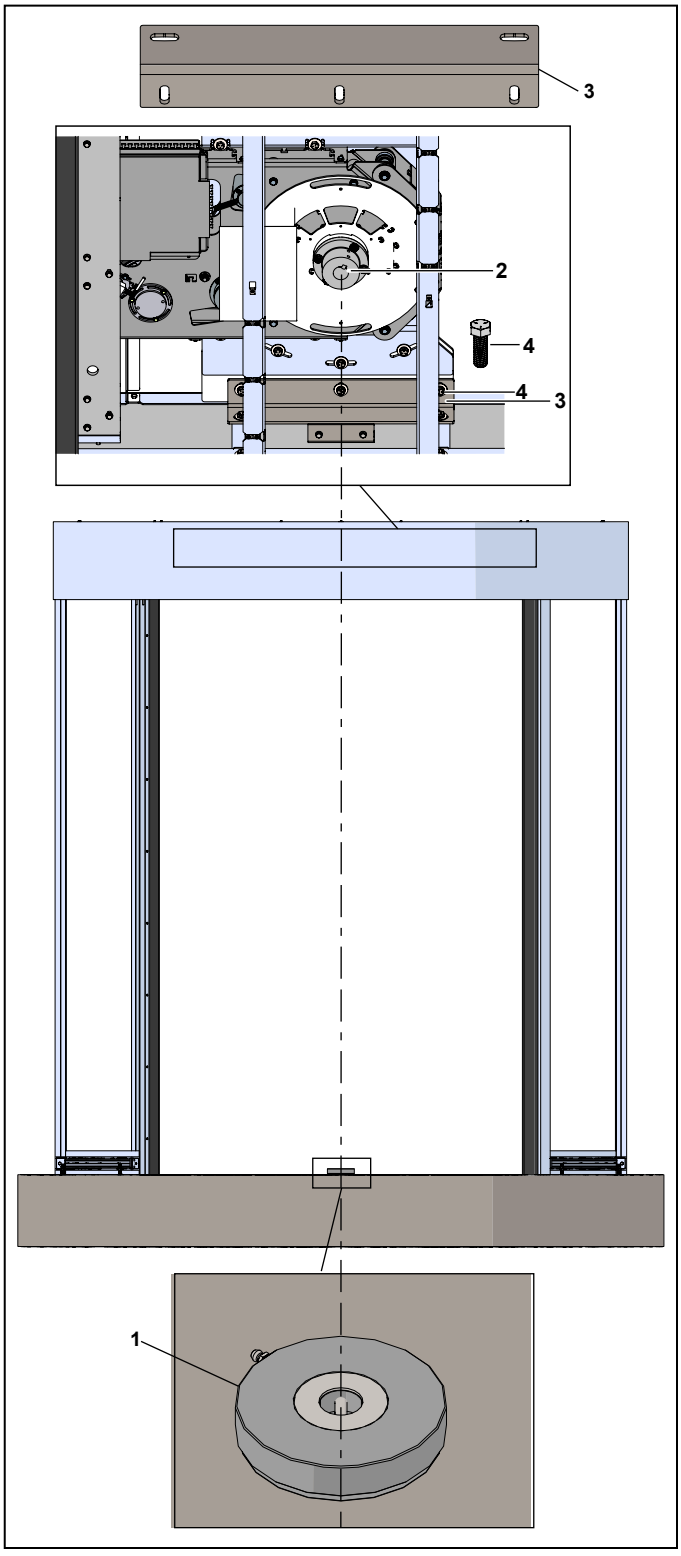


Table 20.2.1 Floor pivot bearing and K9 drive coupling

	Part / Assembly	Description
1	RS6126-001	Surface mounted pivot bearing
2	RC6378-010	K9 Center shaft adapter
3	RC6374-010	Bracket, canopy mount, K9
4	RF6066-01Z	7/16-14 x 1 1/4" hex head bolt

20.2.1 Floor and surface mount bearing installation.

1. Floor bearing installed in Para. 11.2.
2. Surface mount pivot bearing installed in Para. 20.1

20.2.2 Center K9 drive shaft coupling over floor pivot bearing.

1. Using plumb bob with string, align K9 drive adapter coupling (**2**) centerpoint with floor pivot bearing centerpoint.

NOTICE

Canopy mount bracket (3) mounting holes (Fig. 20.2.1) are slotted to allow position adjustment of K9 center shaft adapter in both directions.

20.2.3 Tighten all canopy mount bracket 7/16" hex head bolts.

2. Securely tighten the five 7/16" hex head bolts (**4**) in each canopy mount bracket (4).

20.3 Fasten K9 Turnbuckle Assembly To Its Mounting Bracket

Fig. 20.3.1 K9 turnbuckle fastener hardware

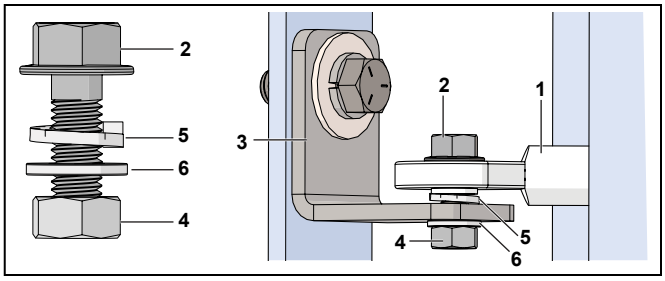


Fig. 20.3.2 K9 drive M8 x 35 flanged hex head screw and turnbuckle assembly

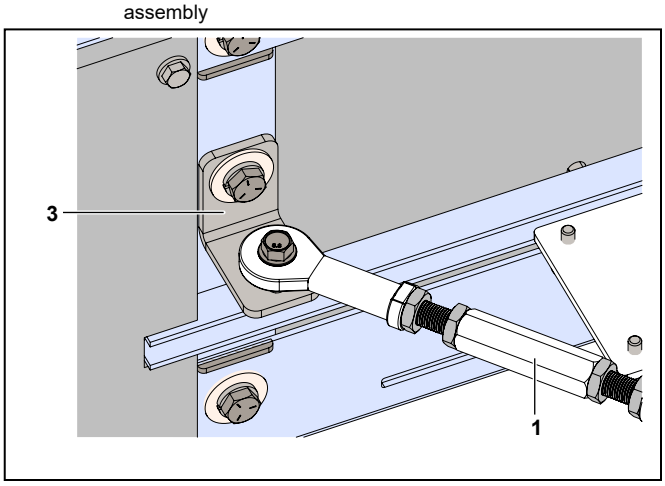


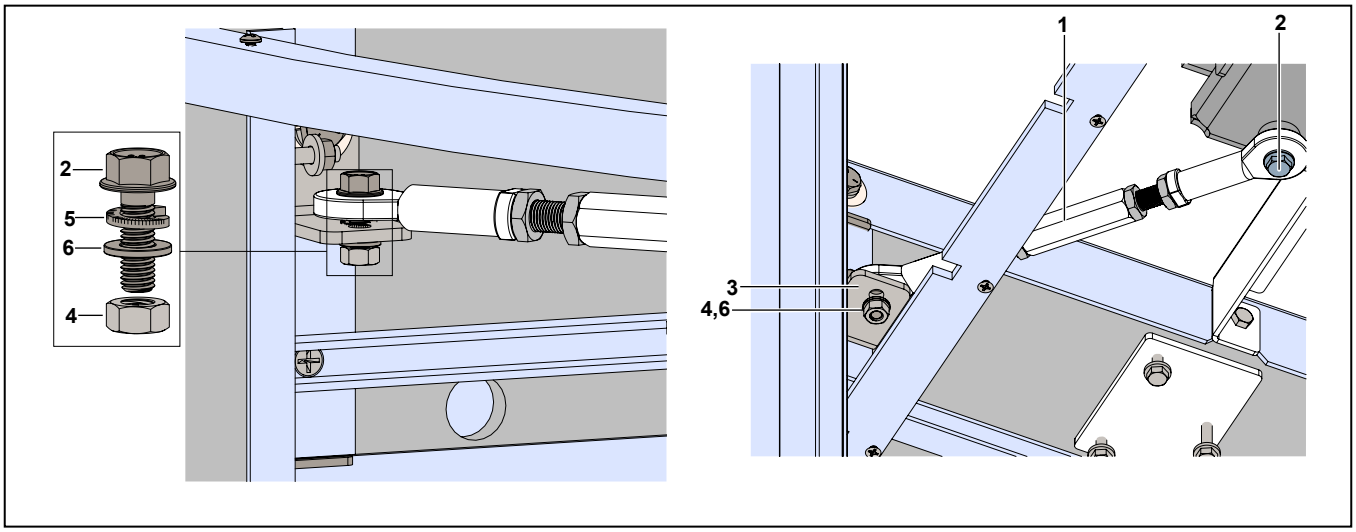
Table 20.3.1 K9 turnbuckle assembly mounting hardware

1		Turnbuckle assembly, K9	1
2	RF6167-01Z	M8-1.25 x 25 flanged hex head screw (from K9 drive)	1
3	RC6434-010	Bracket, angle adjustment, K9	1
4	RF6161-01Z	Hex nut, M8 x 1.25	1
5	RF6169-01Z	Lock washer, M8	1
6	RF6168-01Z	Flat washer, M8. 5/8" OD	1

20.3.1 Fasten K9 turnbuckle to its mounting bracket.

1. Remove top M8x 35 flanged hex head screw from K9 drive.
2. Untighten locknuts and rotate turnbuckle until turnbuckle mounting hole aligns with mounting hole in angle adjustment bracket.
3. Insert M8 x 25 flanged hex head screw through turnbuckle
4. Insert lockwasher onto screw, then insert hex head screw through angle adjustment bracket mounting hole.
5. Insert flat washer onto hex head screw, thread M8 nut and tighten.

Fig. 20.3.3 K9 drive turnbuckle fastened to angle adjustment bracket

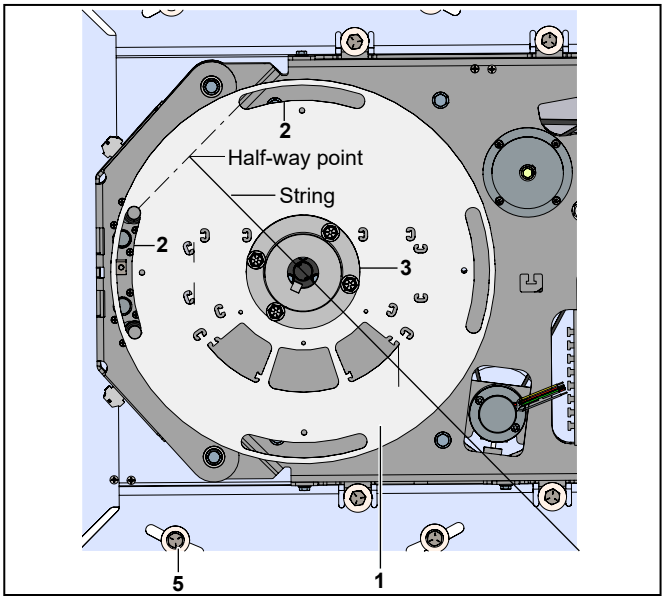


20.4 Align K9 Drive Locking Disc With Quarter Post

Table 20.4.1 K9 drive mounting hardware, turnbuckle and quarter post

1		Locking disc
2		Locking disc slots
3	RC6379-010	K9 Main drive adapter coupling
4	RC6373-010	Mounting bracket, K9
5	RF6066-01Z	7/16-14 x 1 1/4" hex head bolt
6		Turnbuckle
7		Quarter post

Fig. 20.4.1 Locking disc alignment with K9 drive adapter



20.4.1 This procedure will align the K9 drive locking disc locking bolts with the quarter post.

NOTICE

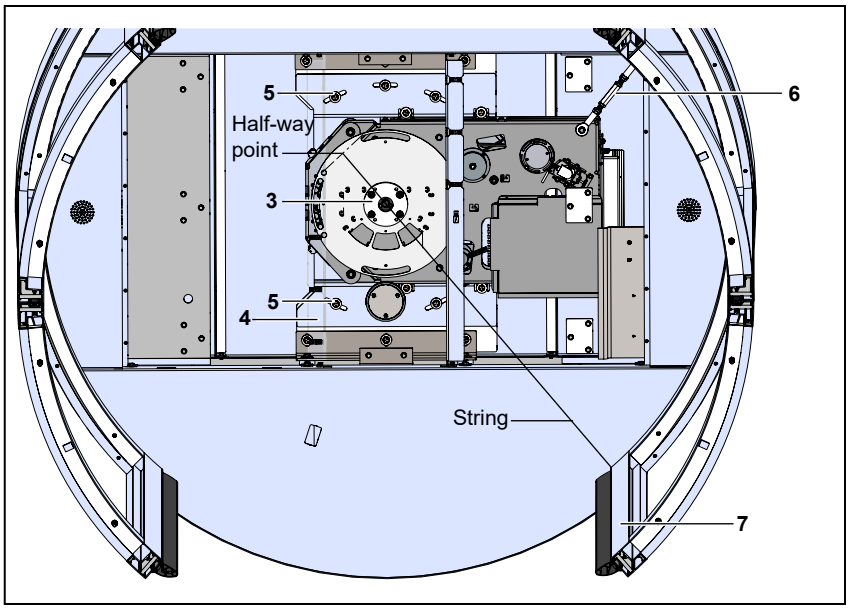
This is a "rough alignment" of the K9 with the door. Final alignment will be with wings installed. Reference Para. 23.5

1. Mark the half-way point between the two locking disc slots (2) (Fig. 20.4.1).
2. Run a string from the half-way point (step 1) across the main drive adapter coupling (3) to the quarter post edge.
3. 7/16" hex head bolts (**5**) must be untighten enough to allow mounting bracket adjustment (step 4).
4. Using the turnbuckle (Para. 20.3), rotate the K9 mounting bracket until the locking disc slot half-way point is aligned with both the K9 main drive adapter coupling center point and the quarter post edge.

20.4.2 Tighten all canopy K9 mounting bracket 7/16" hex head bolts.

1. After alignment is completed, tighten all mounting bracket 7/16" hex head bolts (**5**).

Fig. 20.4.2 Locking disc alignment with K9 drive adapter and quarter post



21 Shaft Assembly

21.1 Unpack Shaft Assembly Shipping Crate

Fig. 21.1.1 4 wing shaft assembly

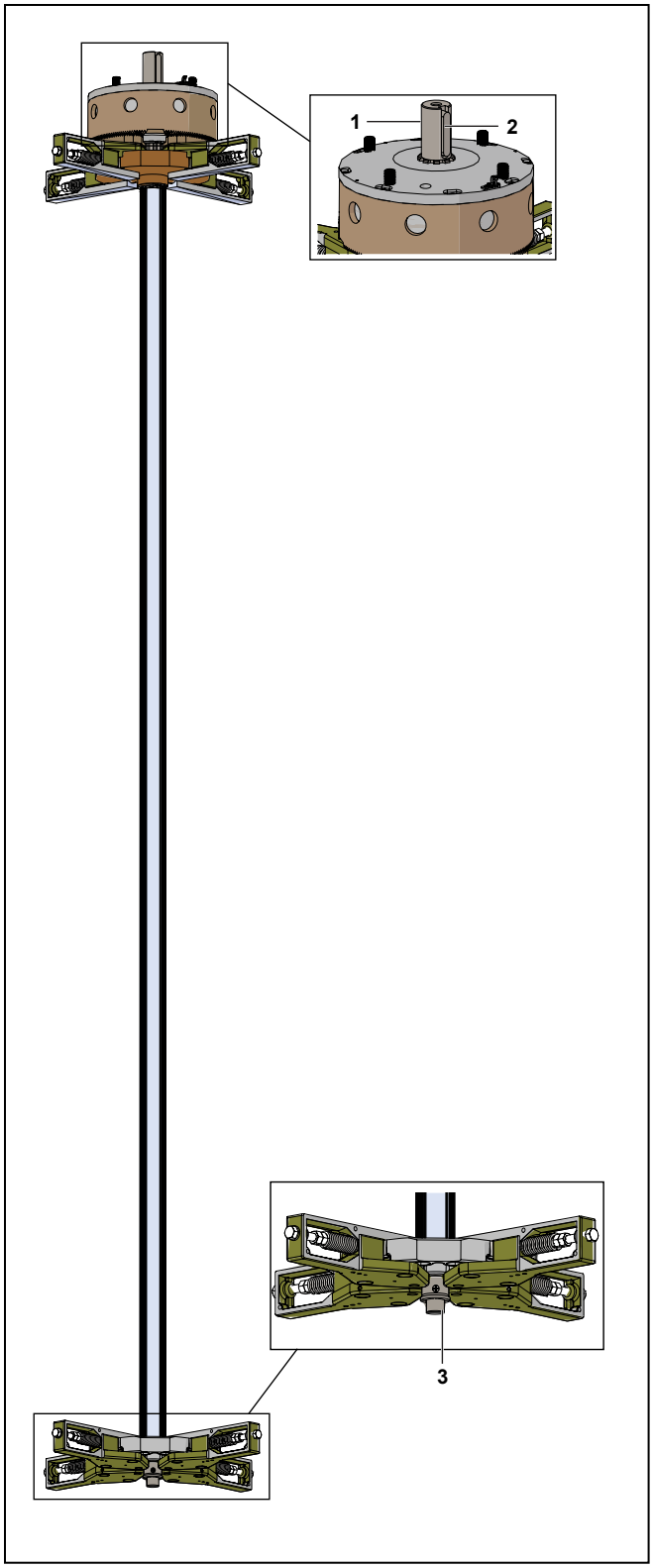


Table 21.1.1 RS6102-002 shaft assembly parts

	Part / Assembly	Description
1	RC6372-01G	S2/S3/S4 shaft, splined shaft
2	RF6151-01G	Key, 10 mm x 10 mm x 54 mm, SS, K9
3	RC6178-010	Bottom shaft adapter

NOTICE

Reference Para. 7.9 for shaft assembly detail.

21.1.1 Installation drawing package

NOTICE

Refer to installation drawing package for shaft assembly installation detail for job!

21.1.2 Uncrate shaft assembly from shipping crate.

CAUTION

Refer to warning tag on shipping crate regarding unpacking procedure.

1. Uncrate 4 wing shaft assembly.

21.2 Install Shaft Adapter On Center Shaft Splined Shaft

Fig. 21.2.1 RK6013 K9 shaft adapter assembly

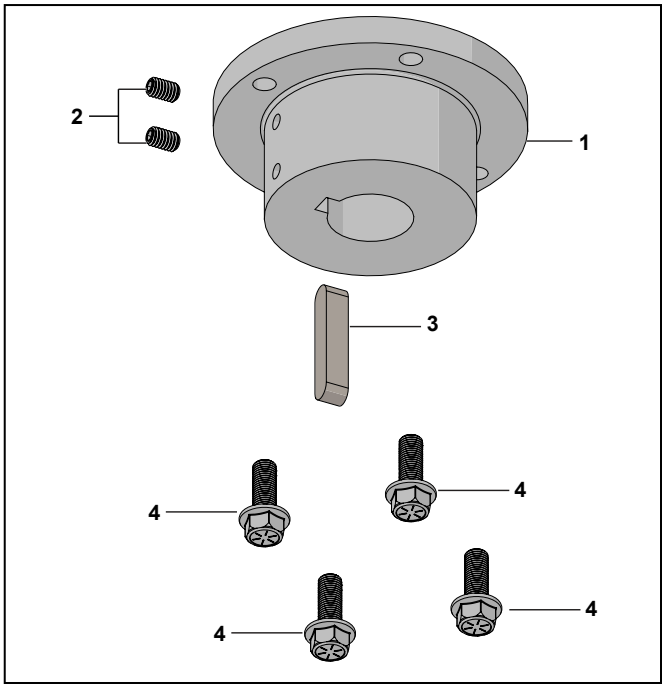


Fig. 21.2.2 Center shaft adapter above splined shaft

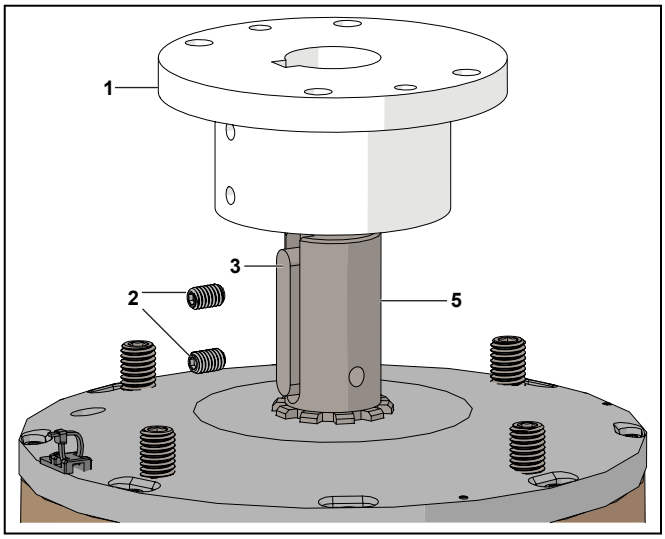


Fig. 21.2.3 Center shaft adapter installed on splined shaft

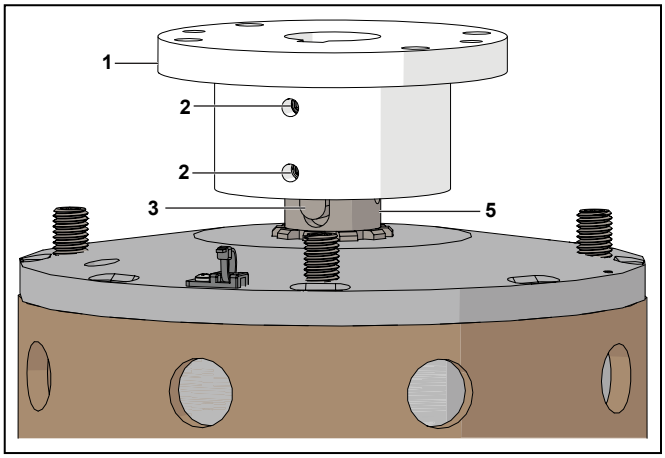


Table 21.1.1 Shaft adapter parts

	Part / Assembly	Description
1	RC6378-010	Center shaft adapter
2	RF6072-01C	5/16-18 x 1/2" cup-point set screw
3	RF6151-01G	Key, 10 mm x 10 mm x 54 mm, SS, K9
4	RF6184-01C	3/8-24 hex head flange bolt, Bl Oxide
5	RC6372-01G	S2/S3/S4 shaft, splined shaft

21.2.1 Install K9 shaft adapter.

1. Align K9 shaft adapter keyway with key in splined shaft.
2. Install K9 shaft adapter on shaft assembly shaft to an approximate location shown in Fig. 21.2.3.
3. Install two 5/16 x 1/2" cup point set screws, do not tighten.

22 Install Shaft Assembly

22.1 Install Shaft Assembly Bottom Adapter Into Floor Bearing, Attach Shaft Adapter To K9 Drive

Table 22.1.1 K9 main drive adapter coupling and set screws

	Part / Assembly	Description
1	RC6379-010	K9 Main drive adapter coupling
2	RC6378-010	Center shaft adapter
3	RF6072-01C	5/16-18 x 1/2" cup-point set screw

Fig. 22.1.1 Bottom shaft adapter inserted in floor bearing

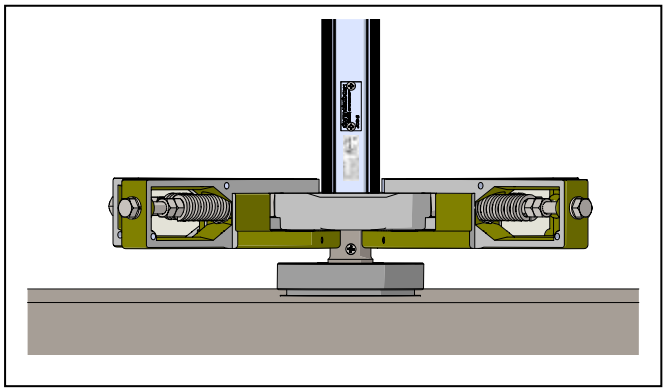


Fig. 22.1.2 K9 main drive adapter set screws loosened

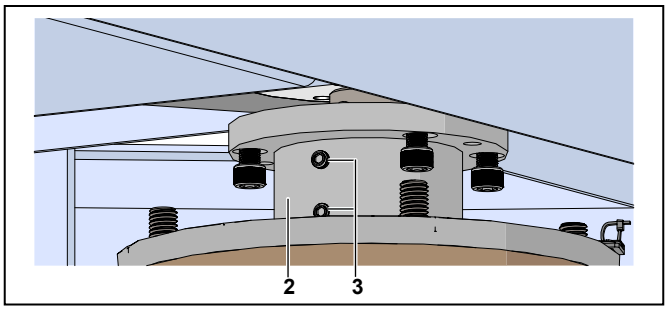
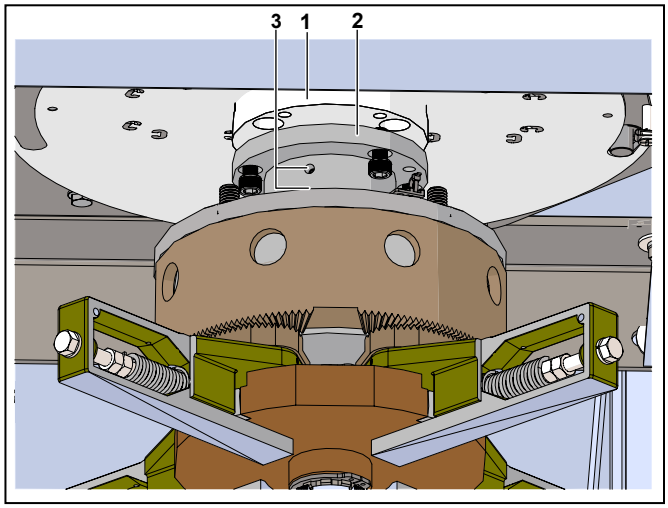


Fig. 22.1.3 Shaft positioned under K9 drive adapter bearing.



22.1.1 Loosen main drive adapter set screws.

1. Loosen the two cup point set screws in main drive adapter (Fig. 20.2.1).

22.1.2 Raise center shaft assembly, lower shaft bottom adapter into floor bearing.

WARNING

Use caution when lifting and positioning shaft assembly!

WARNING

Risk of injury from heavy loads!
The shaft assembly is lifted and moved during assembly. Improper lifting and transport operations may cause accidents with serious injuries and material damage.

- A minimum of two persons are always required to lift or move the shaft assembly.

1. Move shaft assembly under canopy and position assembly vertically under K9 shaft.
   Reference Para. 22.2.5 for slip ring wires.

CAUTION

Use caution that splined shaft does not contact canopy soffits!

1. Lower bottom shaft adapter into floor bearing, aligning shaft adapter slot with floor pivot cross pin.

Fig. 22.1.4 Slip ring wires routed through splined shaft

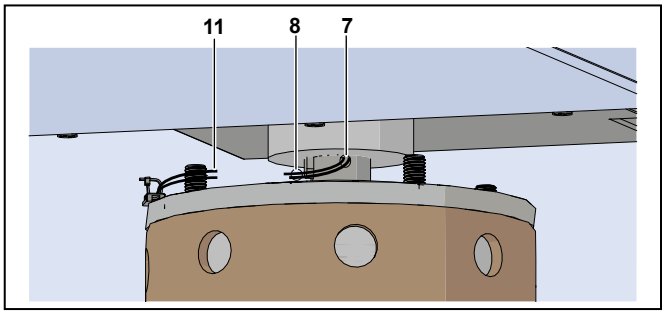


Fig. 22.1.5 Center shaft adapter secured to K9 main drive adapter

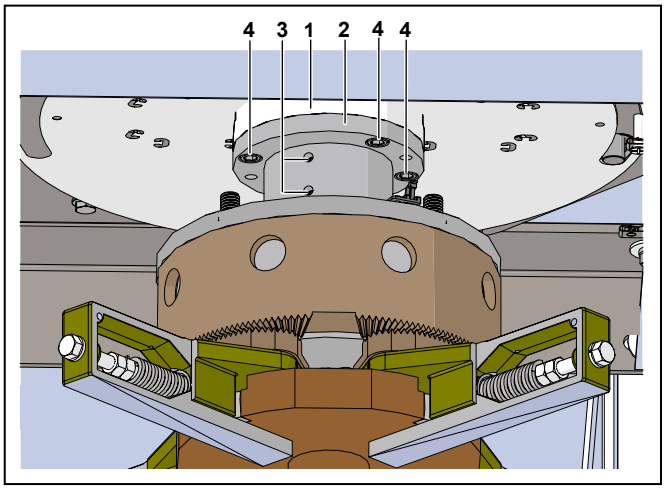


Fig. 22.1.6 Slip ring and bookfold lock coil wiring

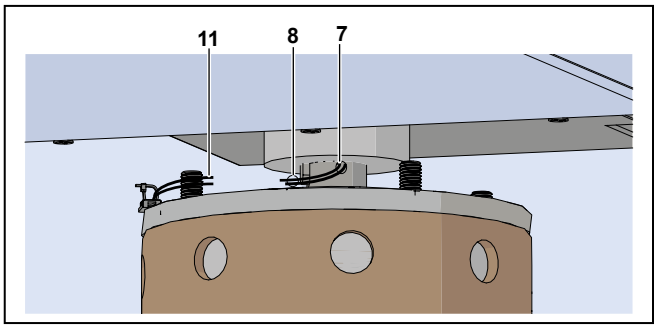


Fig. 22.1.7 Slip ring and bookfold lock coil wiring with connectors

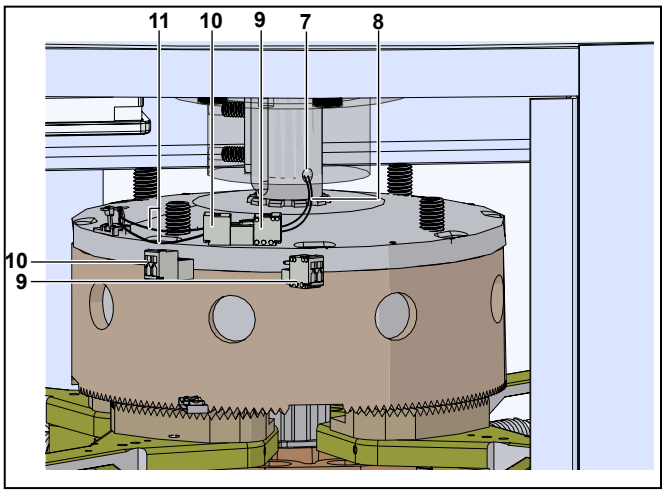


Table 22.1.2 Bookfold lock and slip ring wires

	Part / Assembly	Description
1	RC6379-010	K9 Main drive adapter coupling
2	RC6378-010	Shaft adapter
3	RF6072-01C	5/16-18 x 1/2" cup-point set screw
4	RF6184-01C	3/8-24 x 7/8" SHCS, black oxide
6	RC6372-01G	S2-S3 shaft, splined shaft
7	RC6372-01G	Splined shaft, hole for bookfold coil wires
8		Bookfold coil wires from slip ring
9	RX6046-001	Female connector, 2 pole
10	RX6045-001	Male connector, 2 pole
11		Bookfold coil wires

22.1.3 Route slip ring wires through splined shaft.

1. Route slip ring wires through hole in top of splined shaft. Wires exit in a hole at the side of the splined shaft (Fig. 22.1.6).

22.1.4 Attach shaft adapter to K9 main drive coupling.

1. Pull slip ring wires through hole in center shaft.
2. Raise shaft adapter against K9 main drive adapter coupling (Fig. 22.1.5).
3. Fasten shaft adapter to K9 main drive adapter coupling using four 3/8 x 7/8" socket head cap screws (**4**).
4. Tighten the two cup point set screws (**3**).

22.1.5 Connect wires from slip ring to bookfold coil wires.

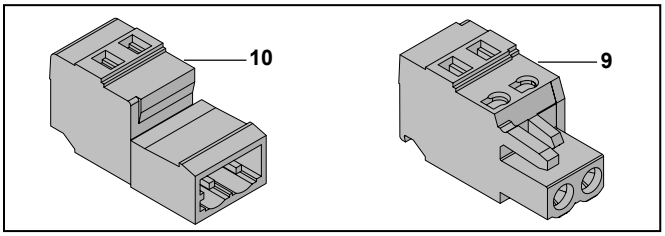
1. Connect the 2 slip ring wires to the female 2 pole connector (9).
2. Connect the 2 bookfold coil wires to the male 2 pole connector (10).
3. Plug the male connector into the female connector.

22.1.6 Check shaft assembly plumb.

NOTICE

Check that shaft is plumb!
If required, adjust K9 drive position until shaft assembly is plumb.

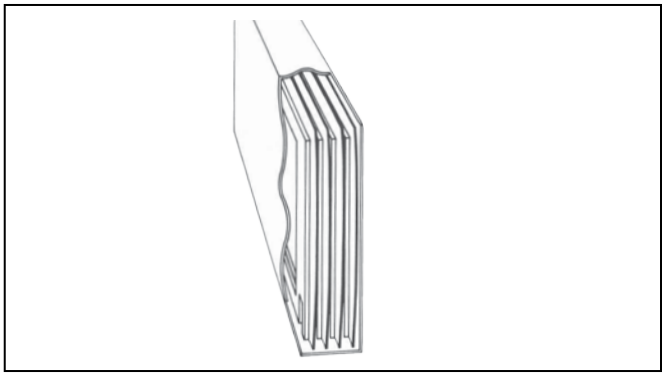
Fig. 22.1.8 Bookfold coil and slip ring 2 pole connectors



23 Wing Installation

23.1 Unpack Wing Shipping Crate

Fig. 23.1.1 Wing shipping crate



NOTICE

Reference the installation drawing package for all applicable job details.

TIPS AND RECOMMENDATIONS

Figures 23.1.3 and 23.1.4:
Wing lock installation shown as reference. Reference Para. 23.2 for wing lock installation.

23.1.1 Unpacking shipping crate.

1. Uncrate wing assemblies from shipping crate.

CAUTION

Refer to warning tag on shipping crate regarding unpacking procedure.

CAUTION

Use caution when handling wing assemblies to prevent scratching or damage to wing or glass surfaces.

WARNING

Use caution while working with wing assemblies!

WARNING

Risk of injury due to improper handling of wing assemblies!

- A minimum of two people are required to lift and transport wing assemblies!

Fig. 23.1.2 Assembly, wing, no lock RS6265-01X

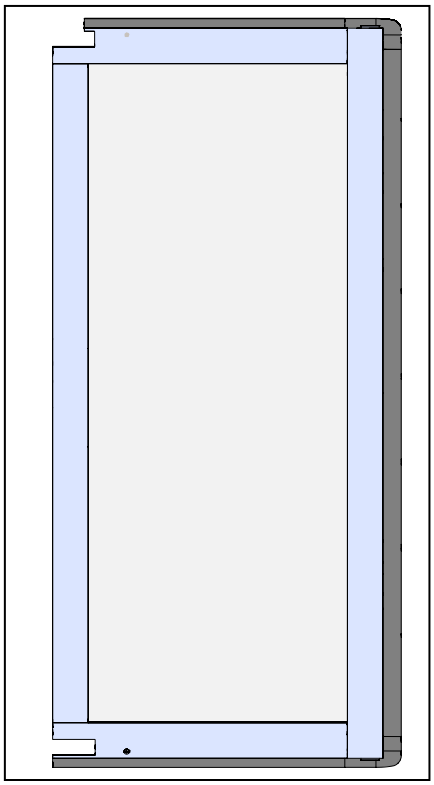


Fig. 23.1.3 Assembly, wing, left lock RS6265-02X

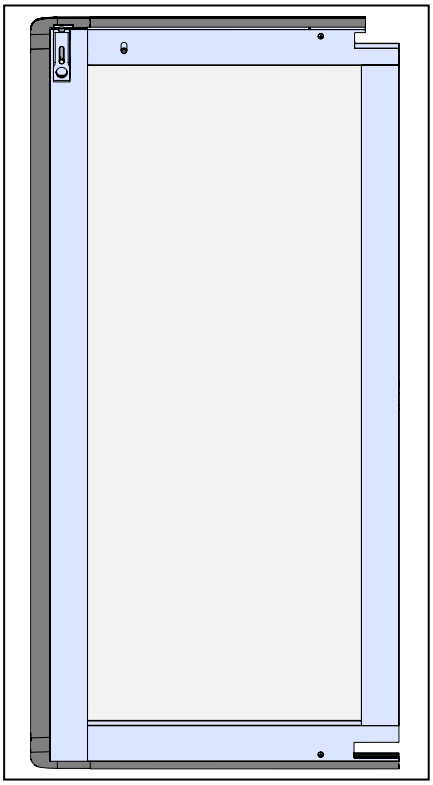
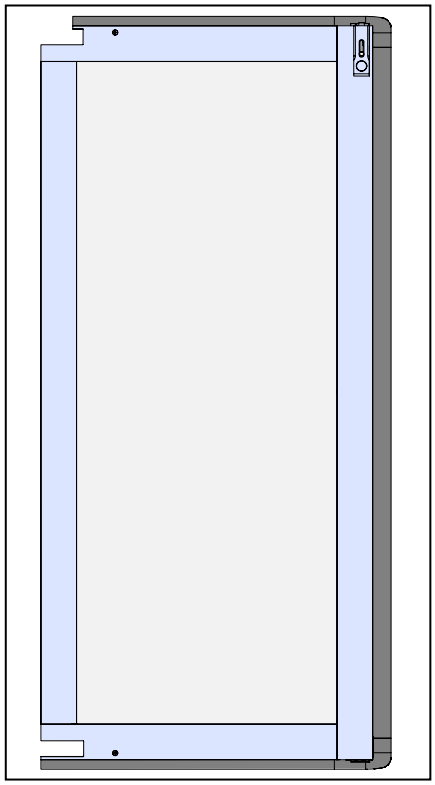


Fig. 23.1.4 Assembly, wing, right lock RS6265-03X



23.2 Install Surface Locks On Interior Door Wings

NOTICE

Reference the installation drawing package for all applicable job details.

Table 23.2.1 Surface lock assembly and fastener detail

Lock kit	Description	1/4-20 x 2" Phillips Oval head MS	Qty	8-32 x 1/2" Phillips Flat head thread cutting screw	Qty	Spring pin .258" x 1-1/4"	Qty
RK6026-001	Clear anodized	RF6120-03G	2	RF6185-01G	1	RF6053-01G	1
RK6026-002	Dark bronze anodized	RF6120-03B	2	RF6185-01G	1	RF6053-01G	1
RK6026-003	Black	RF6120-03V	2	RF6185-01G	1	RF6053-01G	1
RK6026-004	MI bronze	RF6120-03K	2	RF6185-01G	1	RF6053-01G	1
RK6026-005	Satin bronze	RF6120-03U	2	RF6185-01G	1	RF6053-01G	1
RK6026-006	Stat bronze	RF6120-03T	2	RF6185-01G	1	RF6053-01G	1
RK6026-007	MI chrome	RF6120-03W	2	RF6185-01G	1	RF6053-01G	1
RK6026-008	Satin chrome	RF6120-03G	2	RF6185-01G	1	RF6053-01G	1
RK6026-009	Custom paint	RF6120-03E	2	RF6185-01G	1	RF6053-01G	1

Table 23.2.2 Surface lock assembly hardware

	Part No.	Description
1	RK6026-00X	Surface lock assembly kit
2	RF6120-03X	1/4-20 x 2" Phillips oval head machine screw
3	RF6053-01G	.25 OD x 1.25" spring pin 0.162 ID
4	RF6185-01G	8-32 x 1/2" Phillips flat head thread cutting screw 410SS

Fig. 23.2.1 RS6080 surface lock assembly hardware

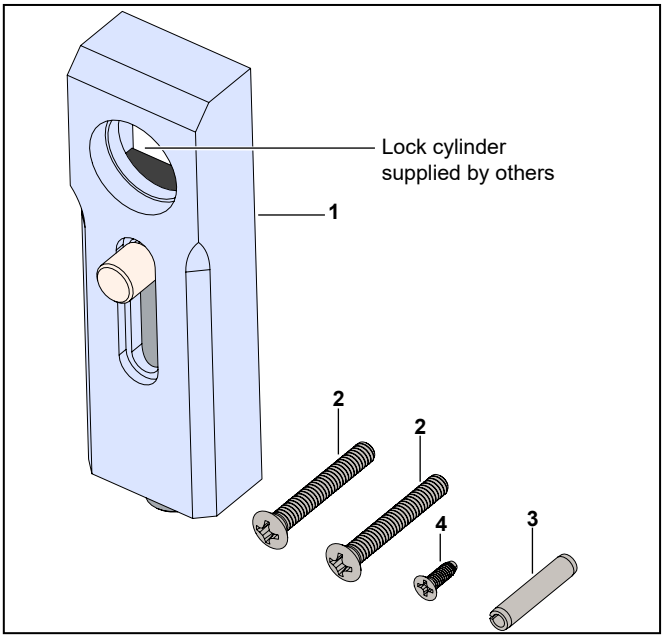


Table 23.2.3 Surface lock assembly hardware

	Part No.	Description
1	RK6026-00X	Surface lock assembly kit
1.1	RC6257-010	Lock bolt
2	RF6120-03X	1/4-20 x 2" Phillips oval head machine screw
3	RF6053-01G	.25 OD x 1.25" spring pin 0.162 ID
4	RF6185-01G	8-32 x 1/2" Phillips flat head thread cutting screw 410SS

Fig. 23.2.2 RH wing spring pin installation

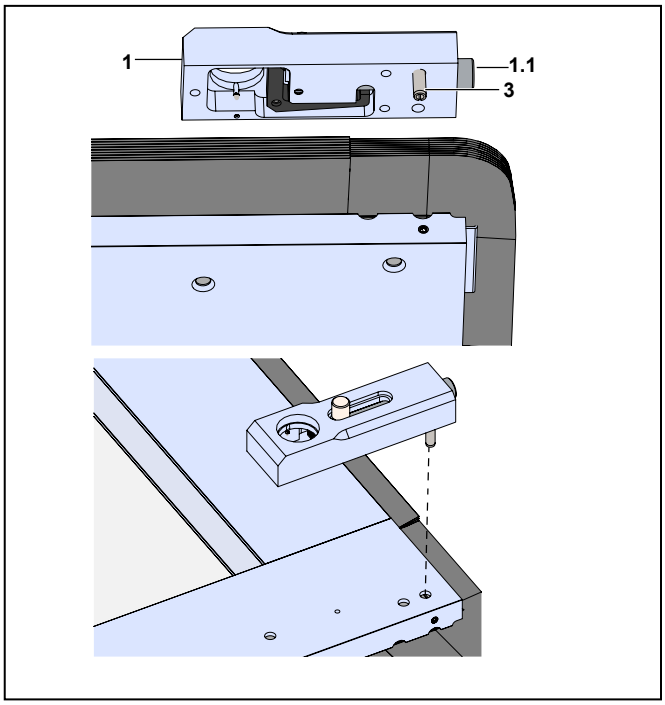
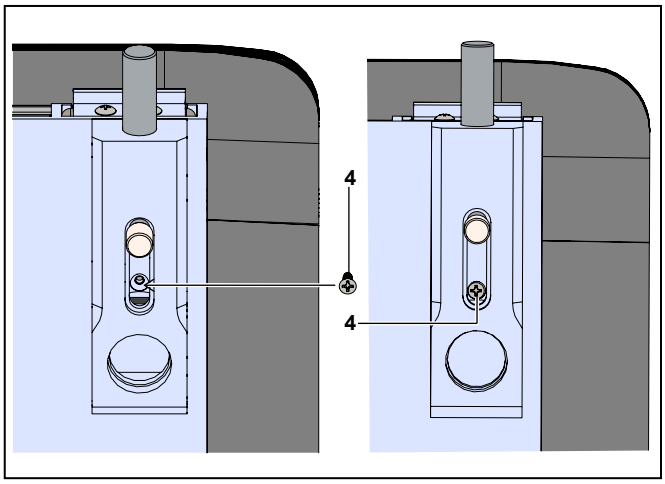


Fig. 23.2.3 RH wing 8-32 screw installation



23.2.1 Install wing lock on RH interior SRD wing.

TIPS AND RECOMMENDATIONS

Mounting holes for wing lock screws are located and pre-drilled at factory.

NOTICE

Cylinder lock and installation by others.

1. Install spring pin. Using spring insertion tool, install spring pin to wing lock hole adjacent to lock bolt (1.1).
- **Note hole location for spring pin.**

2. Place wing lock against wing lock stile.
- Press spring pin into mounting hole in wing lock stile as lock is pressed flush against wing lock stile.

3. Install 8-32 x 1/2" flat head screw.
- Slide lock strike up to access mounting hole for 8-32 x 1/2" screw.
- Thread 8-32 x 1/2" flat head screw into wing lock stile and tighten.

4. Install two 1/4-20 x 2" oval head screws.
- Slide two 1/4-20 x 2" oval head screws into back of wing lock stile mounting holes, thread into wing lock and tighten.

Fig. 23.2.4 RH wing 1/4-20 oval head screw installation

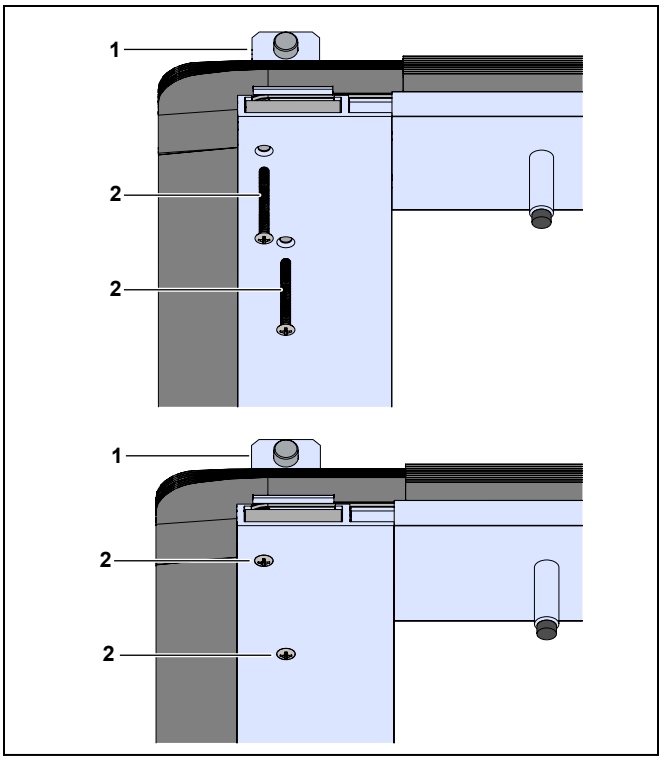


Table 23.2.4 Surface lock assembly hardware

	Part No.	Description
1	RK6026-00X	Surface lock assembly kit
1.1	RC6257-010	Lock bolt
2	RF6120-03X	1/4-20 x 2" Phillips oval head machine screw
3	RF6053-01G	.25 OD x 1.25" spring pin 0.162 ID
4	RF6185-01G	8-32 x 1/2" Phillips flat head thread cutting screw 410SS

Fig. 23.2.5 LH wing spring pin installation

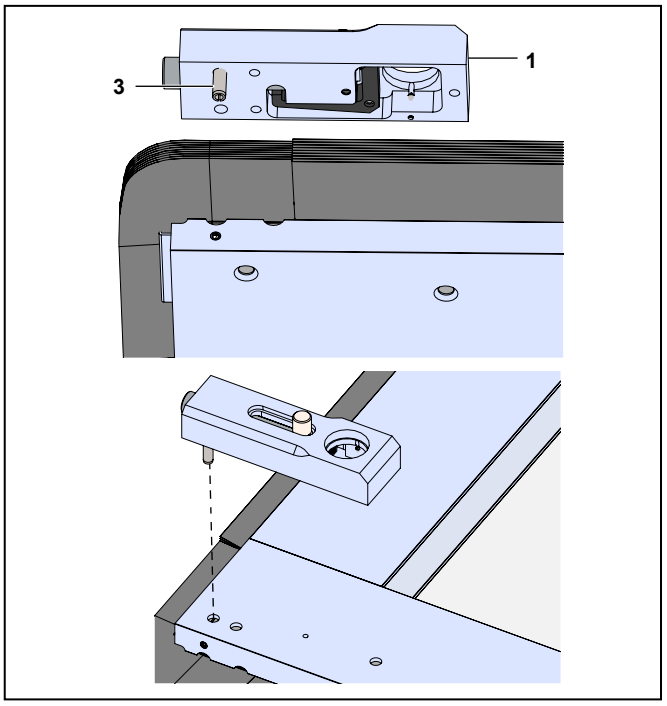
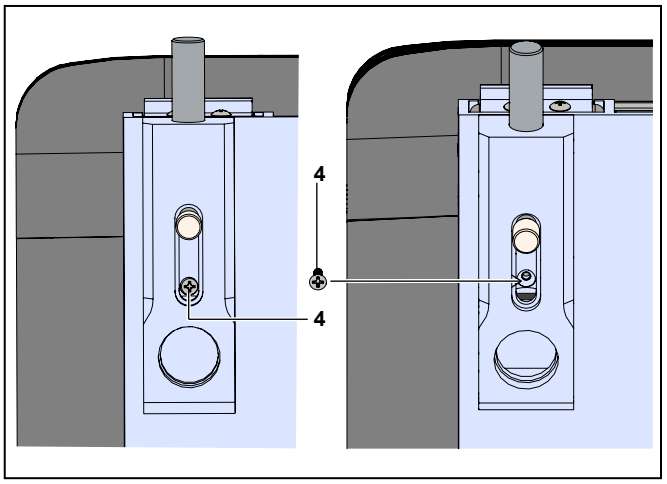


Fig. 23.2.6 LH wing 8-32 screw installation



23.2.2 Install wing lock on LH interior SRD wing.

TIPS AND RECOMMENDATIONS

Mounting holes for wing lock screws are located and pre-drilled at factory.

NOTICE

Cylinder lock and installation by others.

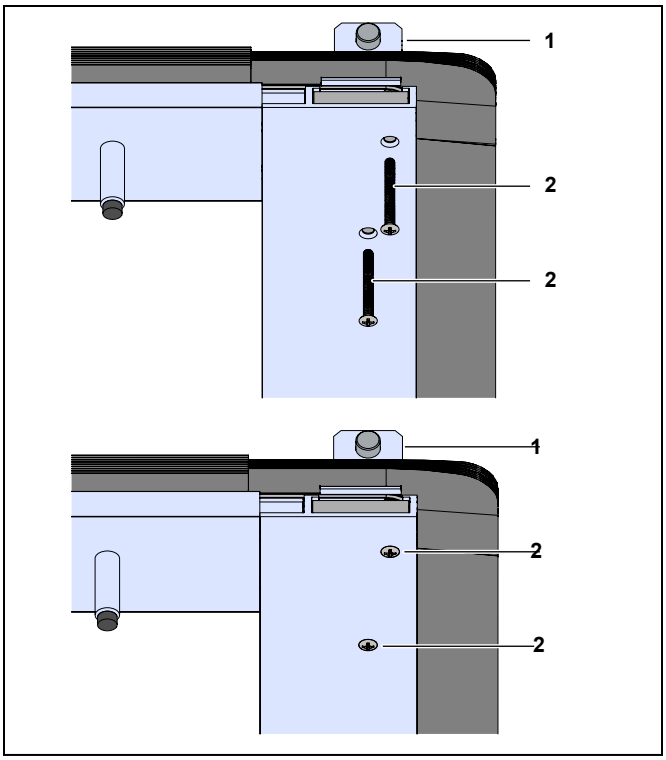
1. Install spring pin. Using spring insertion tool, install spring pin to wing lock hole adjacent to lock bolt (1.1).
- **Note hole location for spring pin.**

2. Place wing lock against wing lock stile.
- Press spring pin into mounting hole in wing lock stile as lock is pressed flush against wing lock stile.

3. Install 8-32 x 1/2" flat head screw.
- Slide lock strike up to access mounting hole for 8-32 x 1/2" screw.
- Thread 8-32 x 1/2" flat head screw into wing lock stile and tighten.

4. Install two 1/4-20 x 2" oval head screws.
- Slide two 1/4-20 x 2" oval head screws into back of wing lock stile mounting holes, thread into wing lock and tighten.

Fig. 23.2.7 LH wing 1/4-20 oval head screw installation



23.4 Install Wings Onto Shaft Hangers

Table 23.4.1 Wing mounting hardware

Part / Assembly		Description
1		Wing hanger mounting hole, both sides
2		Hanger mounting hole, both sides
3	RF6119-01G	1/4-20 x 1/2" truss head machine screw
4	RK6026-00X	Surface lock assembly kit

Fig. 23.4.1 First wing installation

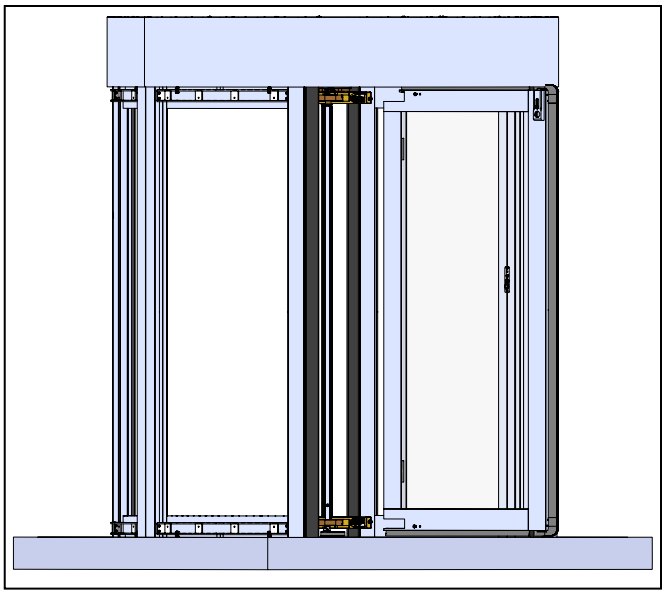


Fig. 23.4.2 Wing mounting, top view

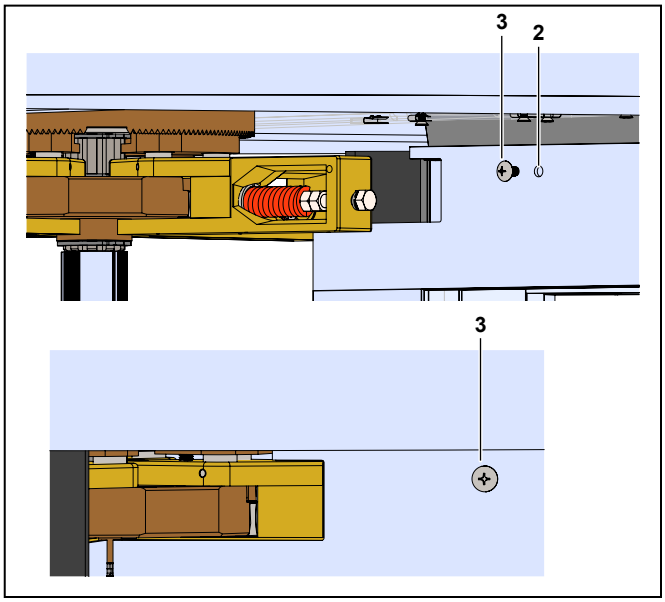
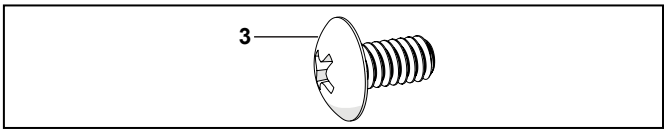


Fig. 23.4.4 Truss head machine screw



23.4.1 Install first wing on shaft hangers.

- Wings with locks installed on interior side of door.

CAUTION

Use caution when handling wing assemblies to prevent scratching or damage to wing or glass surfaces.

WARNING

Use caution installing wing assemblies!

WARNING

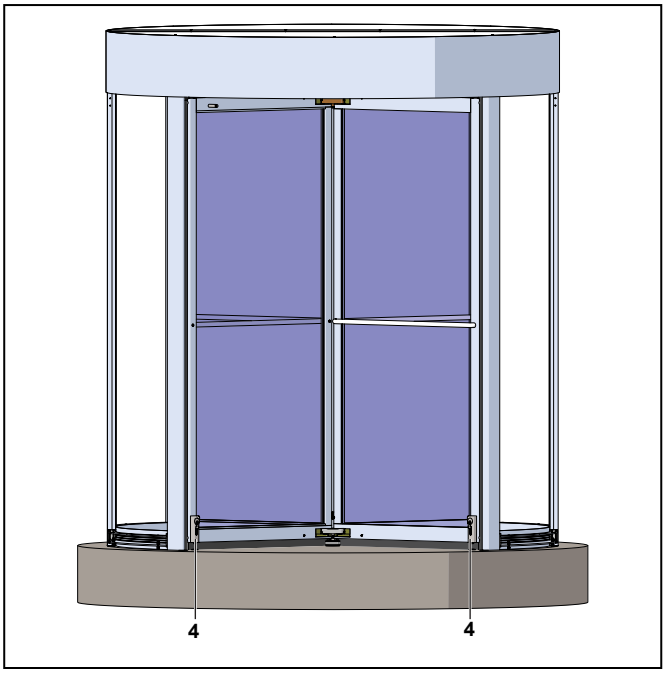
Risk of injury due to improper handling of wing assemblies!
A minimum of two people are required to lift and transport wing assemblies.

1. Slide wing over top and bottom hangers.
2. Secure wing to top hanger with two truss head machine screws.
3. Secure wing to bottom hanger with two truss head machine screws.

23.4.2 Install remaining wings on shaft hangers.

1. Install remaining wings.

Fig. 23.4.5 4 wing door – wings installed on hangers



23.5 Align K9 Drive and Door Wings

CAUTION

Risk of crushing due to misalignment of drive and door wings!

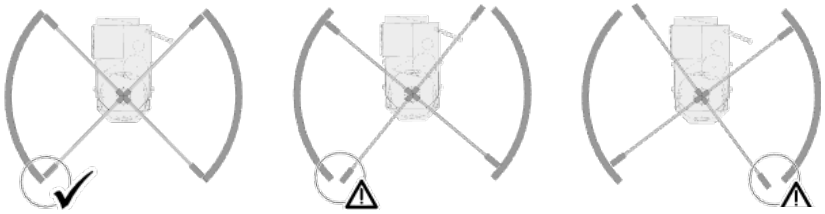
Without aligning the drive and door wings, the door wings may not close with the closing edges of the wings in the home position.

Persons may be injured.

The security features of the door system are no longer guaranteed.

- To ensure that the drive can always move to a safe position when stationary, the drive and the door wings must be aligned after door wing installation.

In the basic position, the door wings are at rest and the secondary closing edge of the end wall is aligned with one door wing.



23.5.1 Rotate door wings to home position.

1. Rotate the door wings until the home position is reached.

WARNING

Risk of injury in the area of the locking bars.

In the area of the locking bolts, injuries due to shearing or clamping are possible.

- Use a tool to push the locking latches upwards.

2. If the locking latches of the K9 drive engage and prevent the door from turning further:

   In the K9 Drive, manually lift the locking latches and continue the turning movement.

23.5.2 K9 drive alignment with wings.

Insure wings are in the home position (Para. 23.5.1).

An adjustment bolt Ø6 mm is required to align the drive and door wings, e.g. a drill with a shaft diameter of 6 mm.

The adjustment holes of the actuator are located in the locking disk and in the housing plate of the actuator (Fig. 23.5.1)

1. Insert the 6 mm adjustment bolt into the adjustment hole of the locking disk and hold it in place.
2. Carefully rotate the door wings until the two adjustment holes are on top of each other and the adjustment bolt fits into the K9 housing plate adjustment hole(**1**) (Fig. 23.5.3) If necessary, fix the adjustment bolt in this position, e.g. with an adhesive tape.

» If, in this position the secondary closing edge of the quarter post is not aligned with the door wing (Example: Fig. 23.5.2), the K9 drive rotational position in the canopy must be adjusted (Para. 23.5.3).

4. Remove the adjustment bolt.

Table 23.5.1 K9 hardware, quarter posts and door wing

Part / Assembly	Description
1	Adjustment hole, K9 housing plate
2	Adjustment hole, K9 locking disc
3	K9 locking bolt
4	6 mm drill bit (Adjustment bolt)
5	K9 drive turnbuckle
6	Quarter post, secondary closing edge
7	Door wing

Fig. 23.5.1 K9 drive and wing alignment

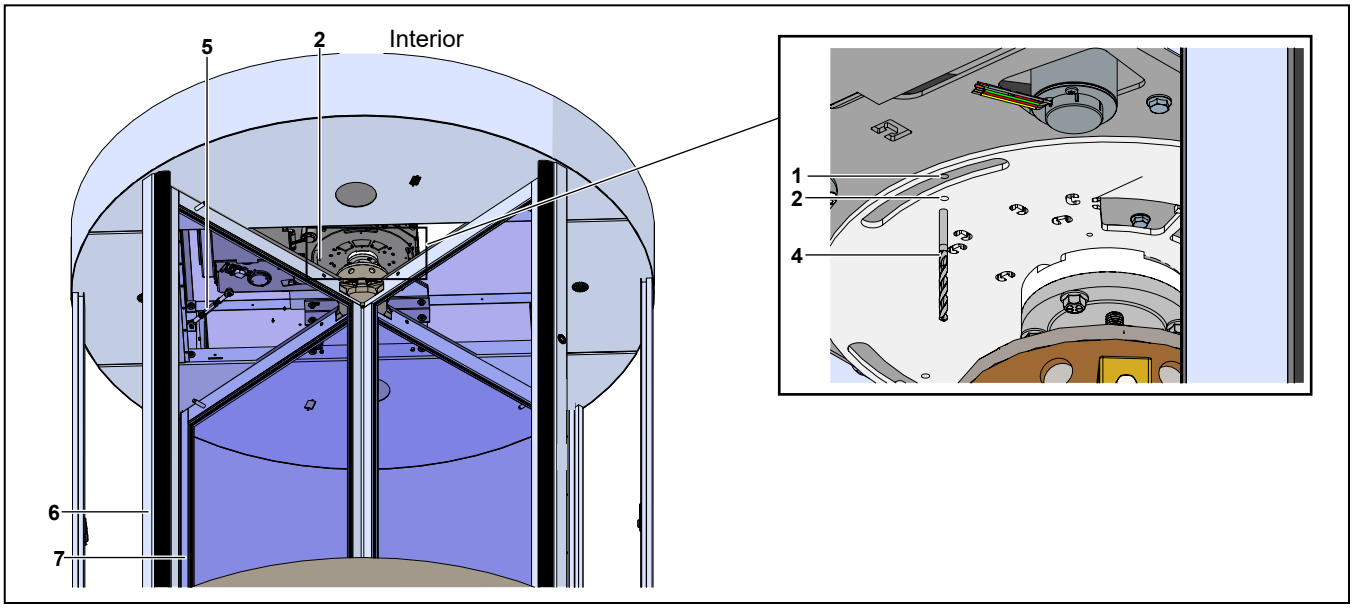


Fig. 23.5.2 Door wings not aligned with quarter post/bumpers

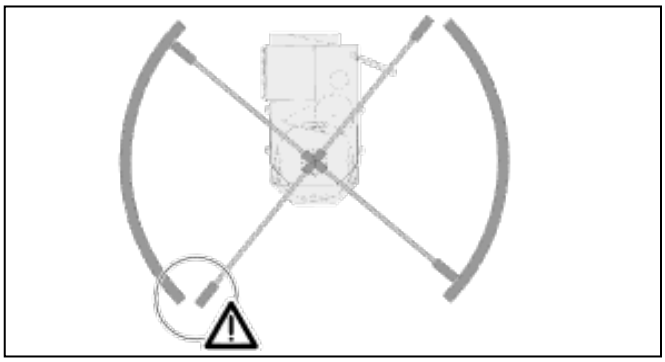
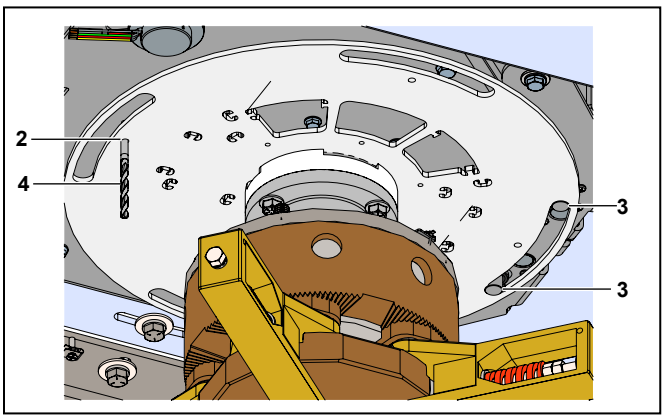


Fig. 23.5.3 Ø6 drill inserted in both K9 adjustment holes



23.5.3 Adjust door wing position adjacent to end wall.

After K9 drive alignment with door wings (Para. 23.5.2), door wing adjustment is required when the secondary closing edge of the end wall is not aligned with the door wing.

1. Slightly loosen the six K9 mounting bracket 7/16 x 1 1/4" hex head bolts (**2**).
2. Loosen the two M12 lock nuts (**4**) on both sides of the torque arm in the upper body.

Note: The torque arm has opposing threads on both sides. One of the lock nuts has a left-hand thread and is therefore loosened by turning it clockwise.

3. Turn the adjusting nut of the torque arm with an open-end wrench SW16 until the door wing is aligned with the end wall secondary closing edge (Fig. 23.5.5).
4. Re-tighten the two turnbuckle lock nuts (**4**).
5. Re-tighten the six K9 mounting bracket 7/16 x 1 1/4" hex nuts (**2**).

Table 23.5.2 K9 hardware

Part / Assembly		Description
1	RC6373-010	K9 mounting bracket
2	RF6066-01Z	7/16 x 1 1/4" hex nut
3		K9 turnbuckle assembly
4		Turnbuckle M12 locknut
5		Quarter post, secondary closing edge
6		Bottom rail assembly
7		T-style sweep assembly

Fig. 23.5.4 K9 drive, mounting bracket and turnbuckle (wing glass removed for clarity)

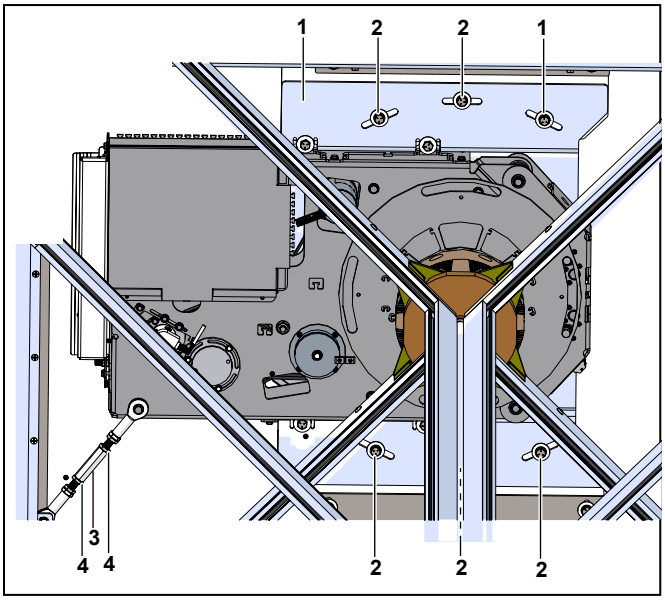
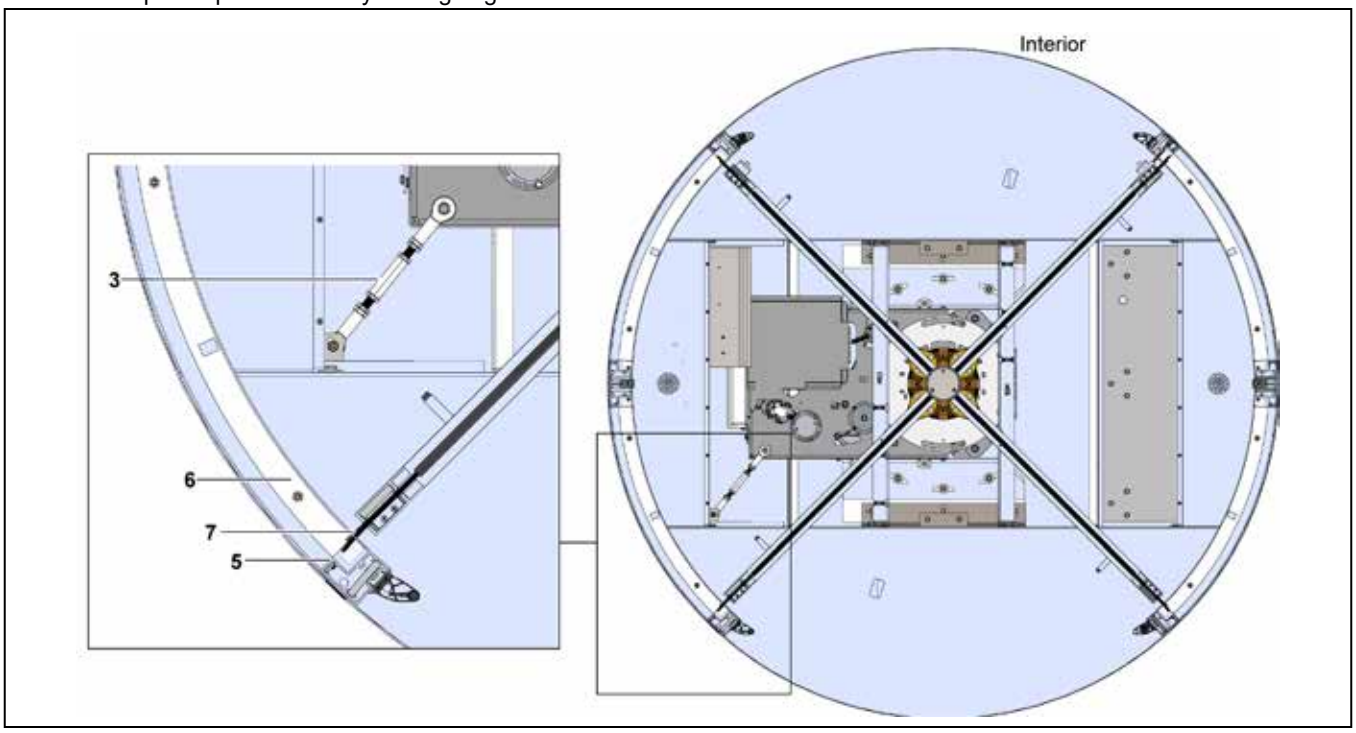


Fig. 23.5.5 Wing assembly overhead view: wing aligned with quarter post secondary closing edge



24 Locate And Drill Holes In Canopy For LH And RH Wing Lock Bolts

24.1 Locate, drill holes for lock bolts

Fig. 24.1.1 SRD LH and RH wing assemblies with top locks

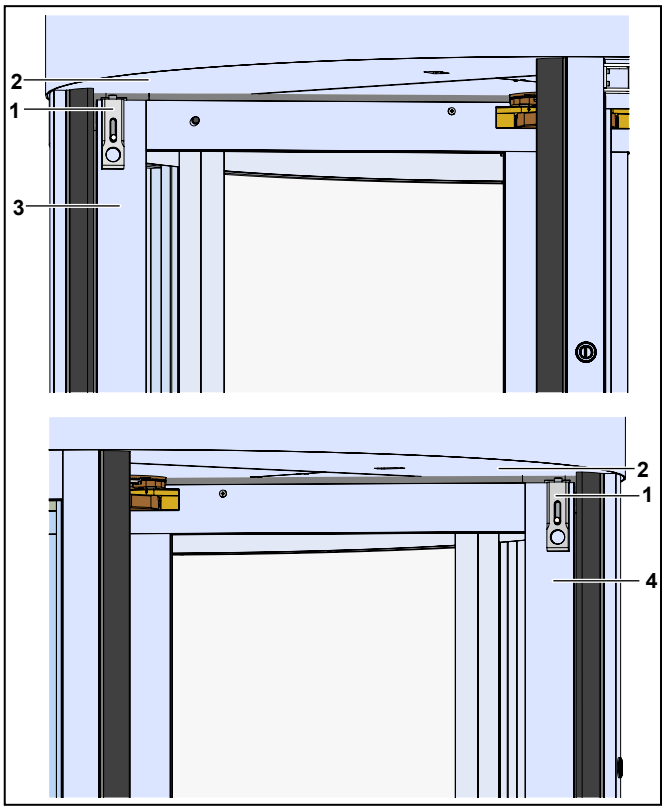


Fig. 24.1.2 Locating and drilling hole for lock bolt

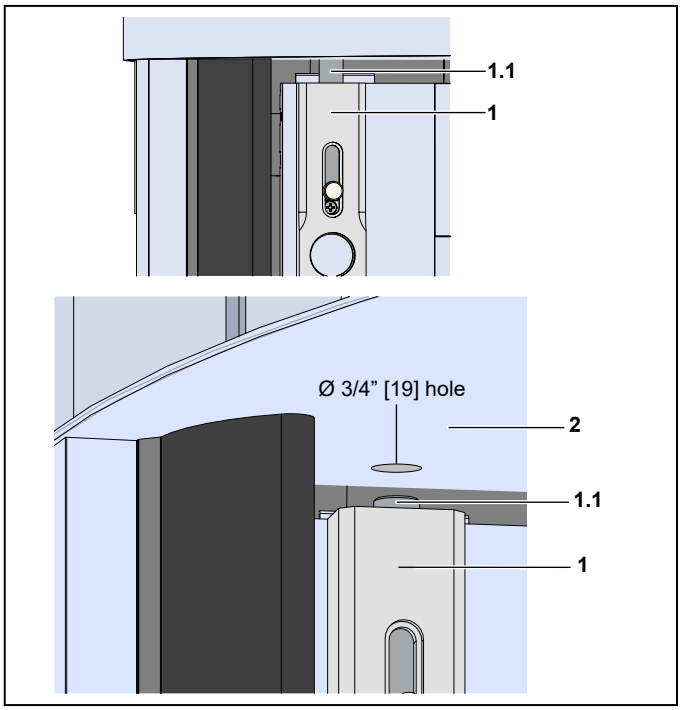


Table 24.1.1 Wing lock assembly and canopy interface

Part / Assembly		Description
1	RS6080-01X	Lock assembly
1.1		Lock bolt
2	RC6485-03X	Canopy outer soffit half, 4 wing, USB
3	RS6265-02X	Wing assembly, BR, no push, Top LH lock, bookfold
4	RS6265-03X	Wing assembly, BR, no push, Top RH lock, bookfold

NOTICE

Cylinder lock and installation by others.

The following procedure is for both RH and LH wing locks.

24.1.1 Place wings in home position.

1. Rotate wings to home (X) position.

CAUTION

Ensure home (X) wing positions have been set with K9 drive before locating wing lock bolt holes. Reference Para. 23.5.

24.1.2 Mark lock bolt hole location in canopy outer soffit (2).

1. Move lock assembly knob up until lock bolt contacts canopy soffit (2) surface.
2. Mark circumference of lock bolt on canopy soffit.
   - Lock bolt pin diameter: 5/8"
3. Lower lock bolt.
4. Mark centerpoint of wing lock bolt on canopy soffit.

24.1.3 Drill hole in canopy soffit and deburr.

- Canopy soffit is 0.125" Aluminum.

1. Center drill at hole centerpoint and drill 3/4" [19] hole in canopy soffit.
2. Use a deburring tool to smooth the edges of the 3/4" [19] hole.

CAUTION

Wear personal protective equipment.

Use a container to catch metal shavings as hole is drilled. Ensure there is no remaining metal debris.

24.1.4 Test lock assembly.

1. Test lock bolt engagement with canopy soffit lock bolt hole.

25 Install Enclosure Glass, Base Rail And Header Rail Covers

25.1 Enclosure Glass

NOTICE

Reference the installation drawing package for all applicable job details.

25.2 Unpack Enclosure Glass Shipping Crate

25.2.1 Unpack shipping crate.

1. Uncrate enclosure glass from shipping crate.

CAUTION

Refer to warning tag on shipping crate regarding unpacking procedure.

CAUTION

Use caution when handling glass to prevent scratching or damage to glass surfaces.

CAUTION

Handle curved glass with care. Do no exert force on the glass pieces.



WARNING

Use caution while working with enclosure glass!

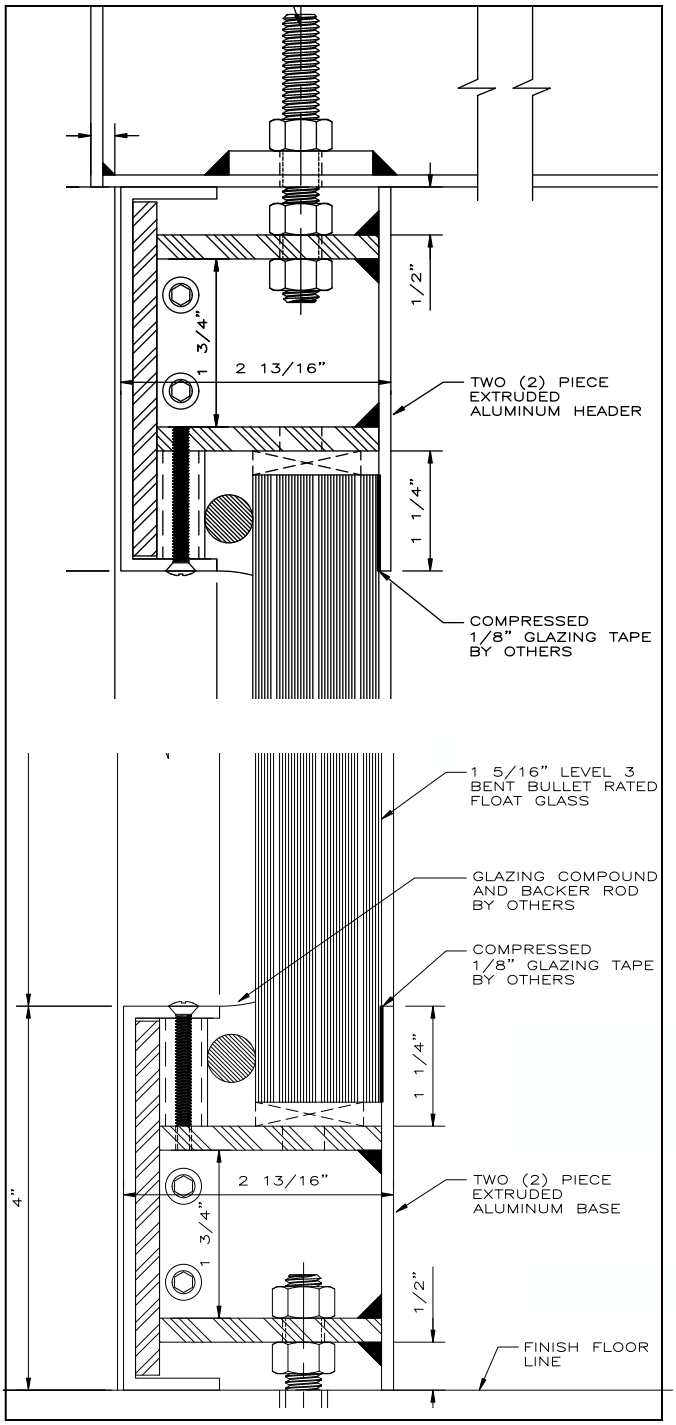
- Clean glass surfaces prior to transporting.
- Always lift and transport glass with aid of vacuum suction cup lifting tools.
- A minimum of two people are required to lift and transport glass.

25.3 Enclosure Glass Installation

Table 25.3.1 Rail base and header glazing blocks and tape

	Part / Assembly	Description
1	By others	Glazing blocks, 1/8 x 3/8 x 2"
2	By others	Glazing tape
3	RS6156-01X	Sub base/header rail assembly BR 4 wing
	RC6627-010	Bent glass, bullet-rated SRD

Fig. 25.3.1 Base / header rail assembly - installation drawing package reference. Refer to drawing package shipped with job.



NOTICE

Installer supplies (Reference Para. 9.2):
-Glazing tape
-Glazing blocks
-Backer rods

25.3.1 Install glazing tape in rail base and header.

1. Install compressed 1/8" thick glazing tape on bottom rail above glazing block.

25.3.2 Install glazing blocks in rail base and header.

1. Install 1/8 x 1/4 x 2" glazing blocks.

25.3.3 Set first enclosure glass into place.

WARNING

Hand pinch point and crushing hazards!

1. Set enclosure glass into place, centering the glass between the vertical posts / end walls. Ground top edge of glass next to canopy.

25.3.3 Install backer rods inrail base and header and posts / end walls.

1. Install backer rod into approximate positions shown in Fig. 25.3.1.

25.3.4 Apply glazing compound in rail base and headers and posts / end walls.

1. Apply glazing compound as shown in Installation drawings. Reference Figure 25.3.1 and 25.3.2.

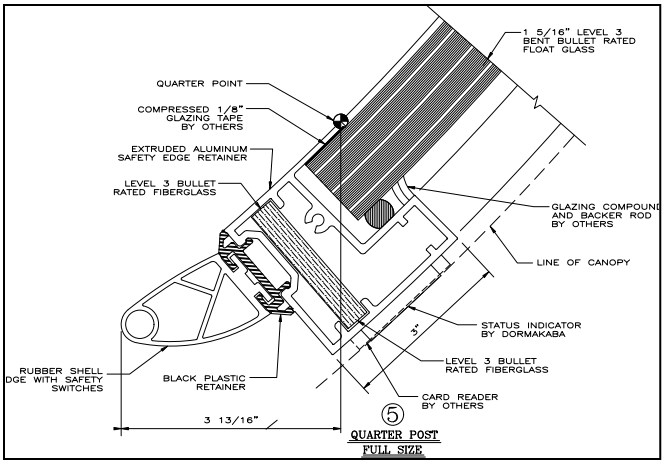
NOTICE

Reference the installation drawing package for job glazing details. Also reference Para. 9.2.

25.3.5 Install remaining enclosure glass.

1. Install remaining enclosure glass per paragraphs 25.3.1 through 25.3.4.

Fig. 25.3.2 Quarter post / end wall assembly



25.4 Install Base Rail and Header Rail Covers

Fig. 25.4.1 Header rail cover hardware installation

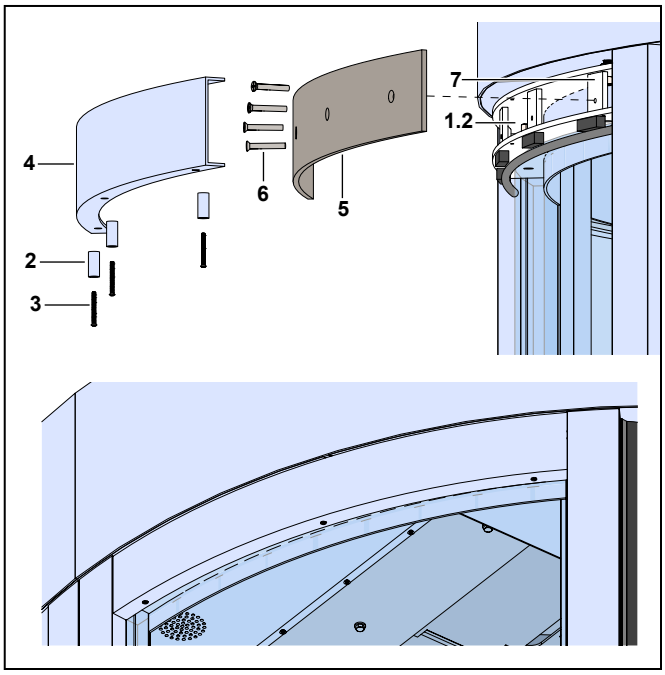


Fig. 25.4.2 Base rail cover hardware installation

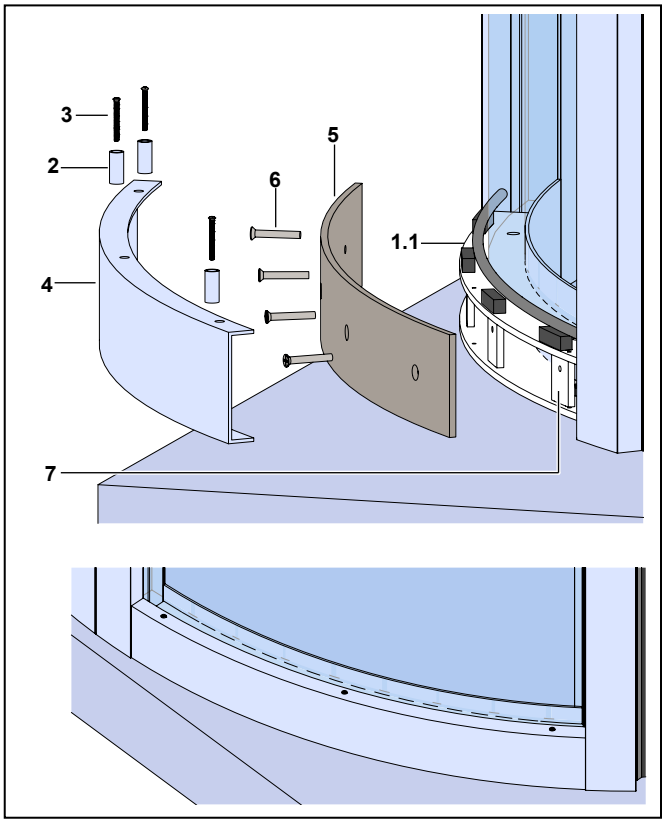


Table 25.4.1 Base rail and header rail hardware

Item	Part No.	Description
1.1	RS6266-01X	Base rail assembly, BR, 4 wing
1.2	RS6266-02X	Header rail assembly, BR, 4 wing
2	RC6390-020	Base rail cover support, 1-1/8" long
3	RF6123-01X	8-32 x 1-1/2" Phillips Oval head MS
4	RM6082-01X	Enclosure rail base cover BR 4"
5	RM6084-010	Enclosure cover mounting plate 4", BR DR,rust resistant primer
6	RF6116-09G	1/4-20 x 1-3/4" long FHMS, SS
7	RM6086	Enclosure base cover attachment block

NOTICE

Reference Para. 7.14 and 7.15 for base rail and header rail assembly details.

25.4.1 Install base rail and header rail covers.

1. Secure enclosure cover mounting plate (5) to rail assembly enclosure cover attachment blocks (7) using four 1/4-20 x 1-3/4" flat head screws (6).
2. Secure enclosure rail cover (4) to rail assemblies (1.2) using three cover supports (2) and 8-32 x 1-1/2" Phillips oval head screws (3).
3. Repeat for remaining three rail base and header assemblies.

25.4.2 Complete glazing of enclosure glass at enclosure rail base and header and quarter posts / end wall assemblies.

1. Complete glazing at each rail base and header assembly and quarter post / end wall.

NOTICE

Reference the installation drawing package for job glazing details. Also reference Para. 9.2.

26 Check Wing Breakout Force, Bookfold Operation

26.1 Check Breakout Force

Fig. 26.1.1 Wing in bookfold position

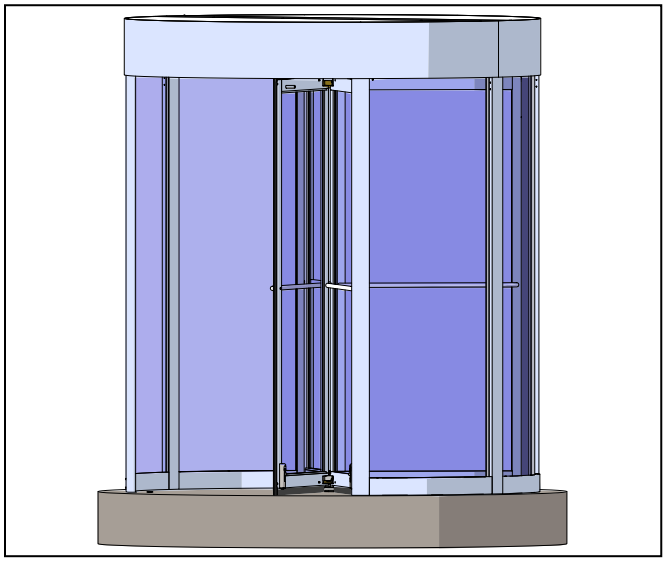


Fig. 26.1.2 Hanger tension adjustment, wing removed

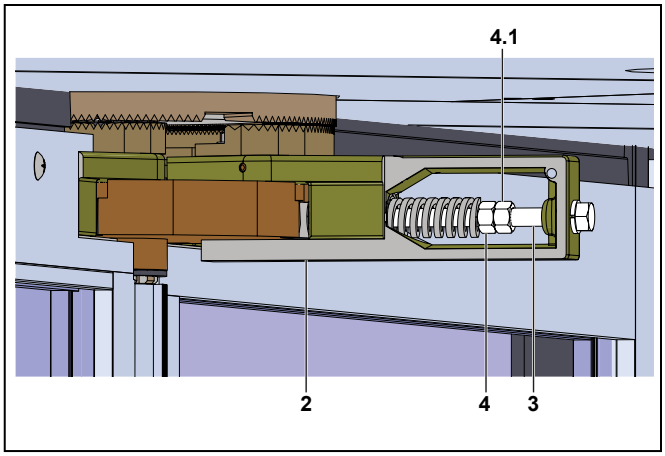


Table 26.1.1 Hanger assembly

Part / Assembly		Description
2		Bookfold with lock hanger
3	RC6156-01G	3/8-16 x 4" H bolt
4	DF0587-00G	3/8-16 hex nut
4.1	DF0587-00G	3/8-16 hex nut

Check part numbers

26.1.1 Breakout force.

NOTICE

ANSI/BHMA A15.27
Para. 10 Breakout force requirements.
Each revolving door wing shall be capable of breakout when a force of no more than 130 lb. [570 N] is applied at a point 3 inches [76 mm] from the outer edge of the outer wing stile and 40 inches above the floor.

26.1.2 Check breakout force on first wing..

1. Block one door wing. Push an adjacent wing with a force gauge until breakout occurs. Note breakout force.
2. If hanger breakout force adjustment is required, refer to Para. 26.1.3.

26.1.3 Hanger breakout force adjustment.

1. Remove wing from hangers.

CAUTION

Make the same tension adjustment to both upper and lower hangers .

- Use open end 9/16" box wrench for tension adjustment.
- Monitor number of hex nut turn adjustments made so that the same number of adjustments can be made on the lower hanger.

- **Increase hanger tension:**
- Turn hex nut (6) CW to tension spring.
- Use two 9/16" wrenches to both lock hex nuts in place.
- Repeat same tension adjustment on lower hanger.

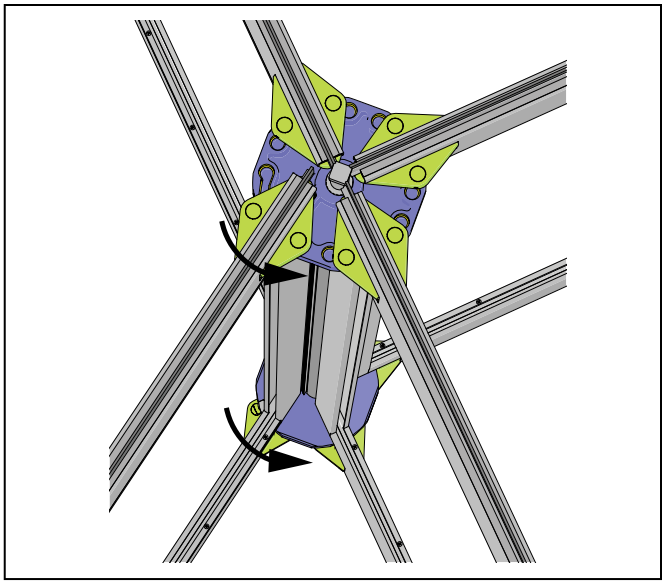
- **Decrease hanger tension:**
- Turn hex nut 6.1 CCW to allow reduced tension adjustment.
- Turn hex nut (6) CCW to reduce decrease tension on spring.
- Use two 9/16" wrenches to both lock hex nuts in place.
- Repeat same tension adjustment on lower hanger.

2. Reinstall wing and repeat breakout force test.
3. Repeat tension adjustment until breakout force requirements in Para. 26.1.1 are met.

26.1.4 Remaining wings.

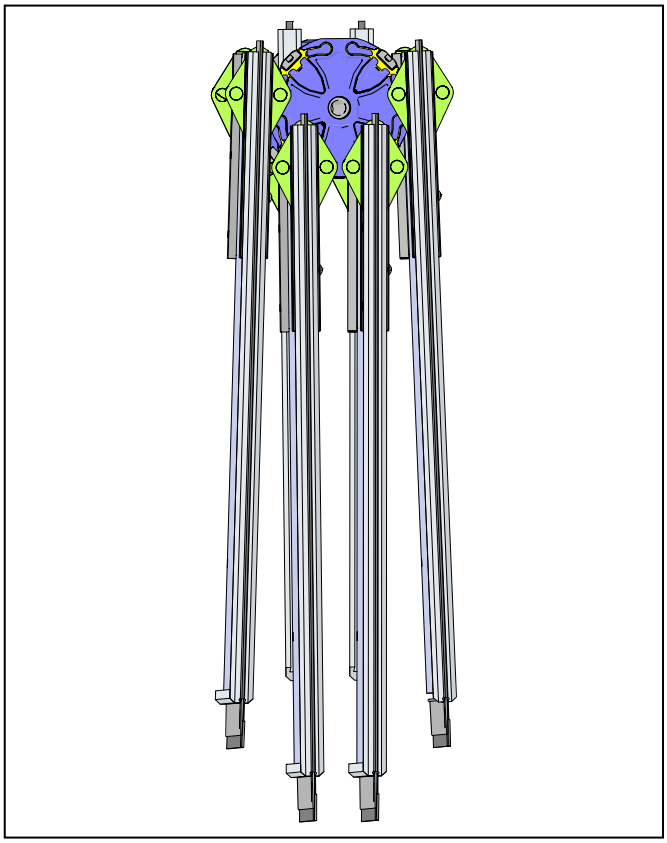
1. Check breakout force on each of the remaining wings.
2. Adjust breakout force as required on each wing to meet requirements in Para. 26.1.1.

Fig. 26.1.3 Door wing in breakout position



26.2 Check Bookfold Operation

Fig. 26.2.1 Door wings in bookfold position



26.2.1 Check wing bookfold operation

1. Check bookfold operation on all wings.

27 Canopy Hardware Installation

27.1 Install Canopy Speakers

Fig. 27.1.1 Speakers, canopy mounted

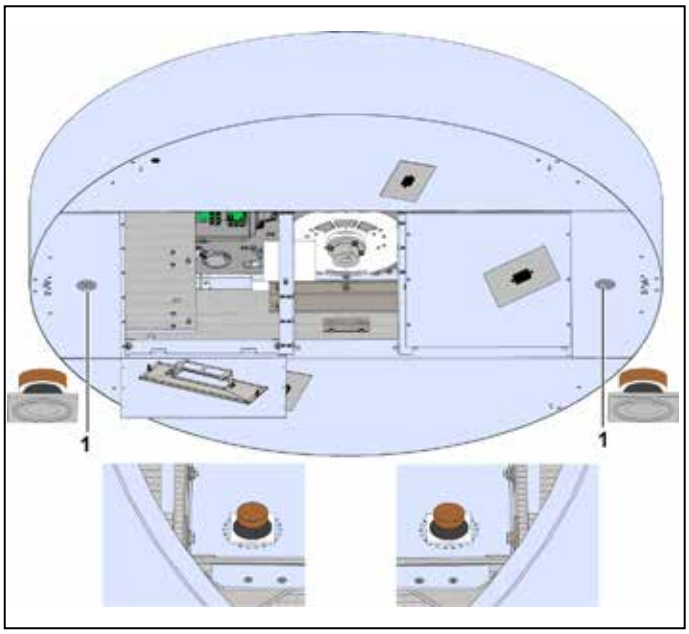


Table 27.1.1 Canopy speakers

1	RX6027-001	Speaker, voice module Veinland K9	2

27.1.1 Install canopy speakers.

TIPS AND RECOMMENDATIONS

Speakers are part of Electronic Accessories Kits RK6017-002 and -003. Ref. Para. 7.7.1 and 7.7.2.

1. Install two speakers in canopy. Speakers secured with Velcro strips.
2. Wiring: RL6008-004 Alvarado S2/S3/S4 Wiring Manual Para. 7.8.

27.2 Install K9 Drive Dual USB Port

Fig. 27.2.1 USB ports and installation location

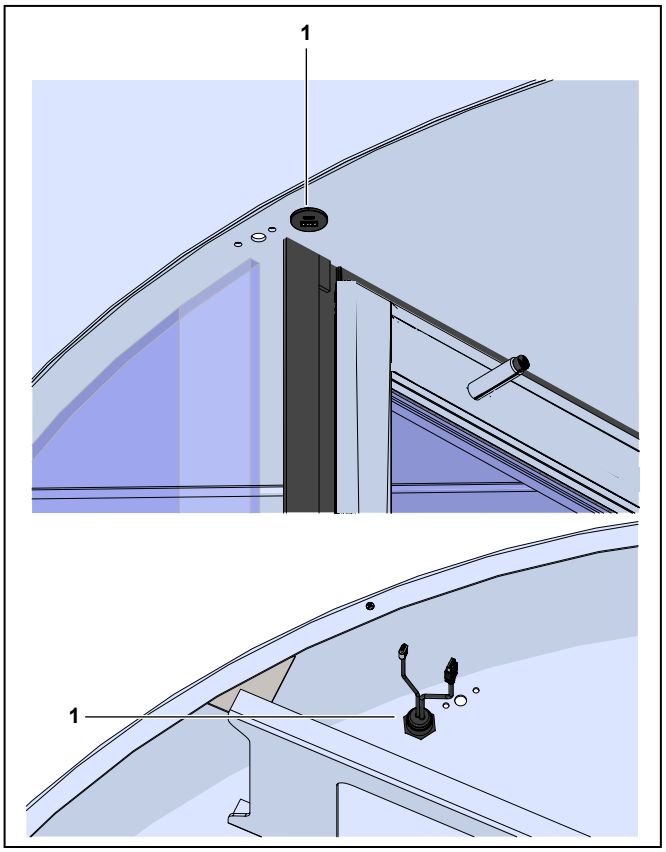


Table 27.2.1 USB dual port cable for K9 ETS circuit boards

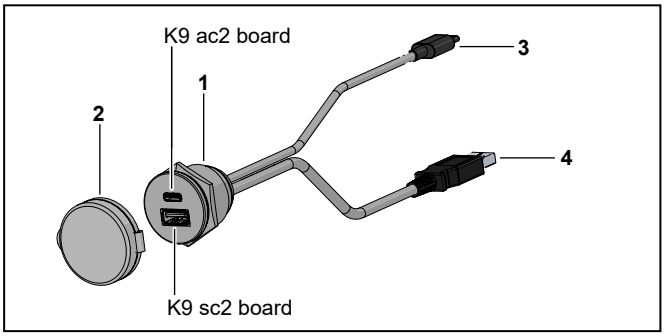
1	RX6123-010	USB port with cable (Kit RK6017-00X)
2		USB port cover
3		USB Type-A port
4		USB Type-C port

27.2.1 Install USB dual port in canopy soffit.

1. Install USB dual port cable assembly in canopy soffit USB port mounting hole near left hand interior quarter post.

Reference RL6008-004 Alvarado S2/S3/S4 Wiring Manual.

Fig. 27.2.2 USB dual port cable assembly



27.4 Canopy LED Fixture Installation (Option)

Fig. 27.4.1 LED light fixture

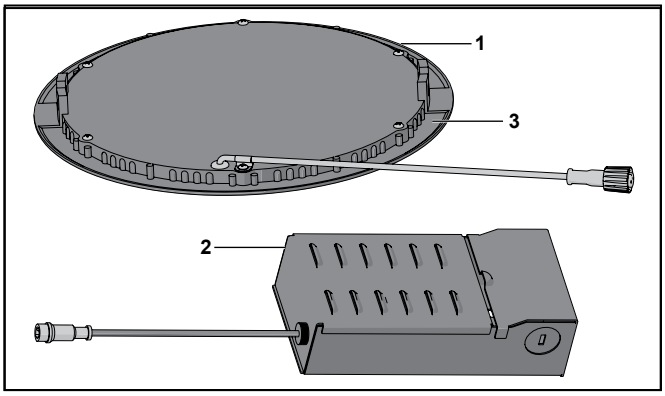


Table 27.4.1 Ceiling LED and junction box

1	RC6320-010	Light, LED
2		Box, Junction with LED driver
3	RC7031-001	2-sided tape for securing light to canopy
4		Wire nut
5		NM cable connector or equivalent

27.4.1 LED light fixtures (option).

- Each light is supplied with a junction box/LED driver (Fig. 27.4.2).

27.4.2 LED light installation.

TIPS AND RECOMMENDATIONS

LED lights are factory installed.

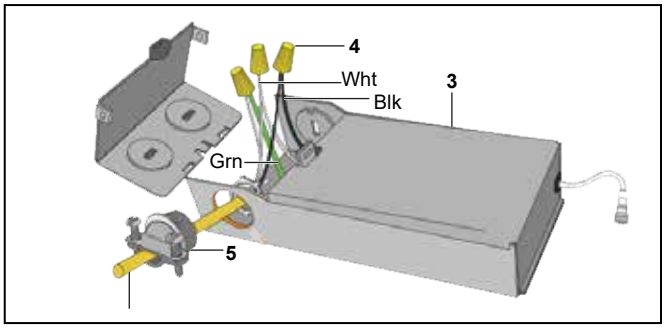
27.4.3 LED junction box/driver installation.

NOTICE

Junction box/LED driver and 115 Vac wiring installation.
It is recommended to install drivers and connect 115 Vac wiring once revolving door enclosure is fully assembled.

Connect each LED driver extension cable, if required, to its LED light.

Fig. 27.4.2 115 Vac wiring to LED driver



27.4.4 115 Vac wiring to each Junction box.

WARNING

Work on 115 Vac wiring must be performed only by qualified personnel!

1. Use 4 conductor 18 AWG cable (Blk, Red, Grn, Wht).
2. For each LED driver, spice cable wires to LED driver 115 Vac wiring inside driver junction box using three wire nuts supplied with driver.

27.4.5 Contractor-supplied junction box.

1. Contractor must supply:
- Appropriately sized junction box for all LED driver 115 Vac cables.
- All required wiring connectors for 115 Vac wiring into the junction box.
2. Junction box must be accessible for any future maintenance requirements.

27.4.6 115 Vac wiring to customer lighting circuit.

- Customer must supply 115 Vac lighting power to junction box (Para. 27.4.4).

28 S2 Canopy – Sensor Installation

28.1 TOFniva Sensor Installation

Fig. 28.1.1 S2 security canopy soffit view, sensors

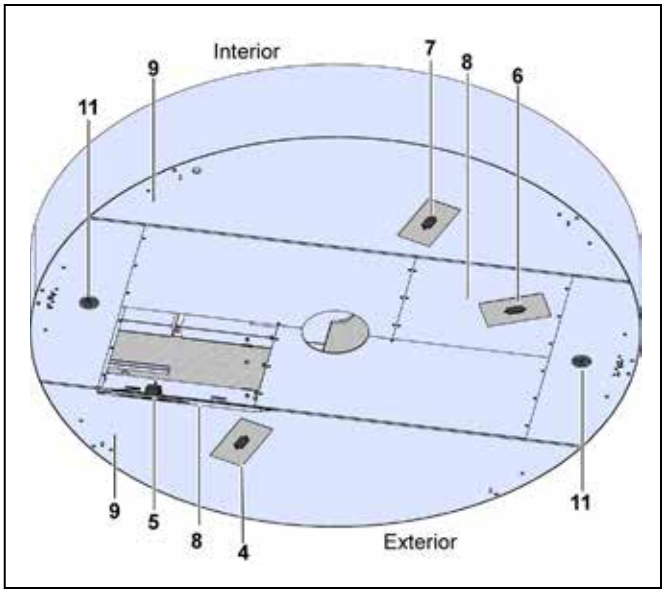


Fig. 28.1.2 TOFniva sensor and extension cable

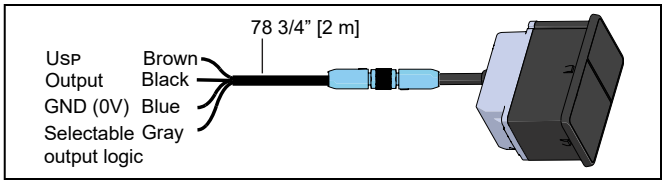


Fig. 28.1.3 RC6381-030 cover plate

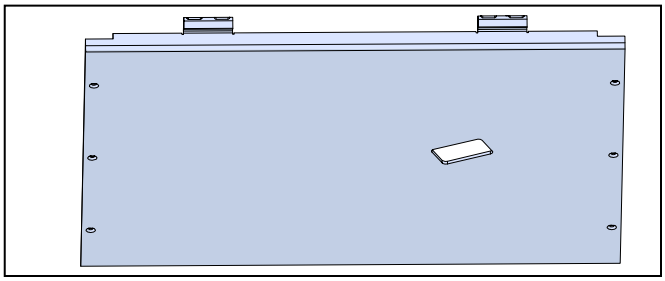


Fig. 28.1.4 TOFniva sensor installation

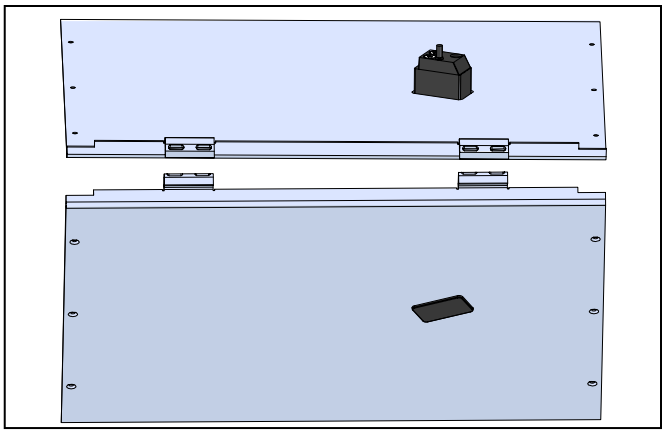


Table 28.1.1 S2 security canopy sensors

1	RS6123-001	S3 Canopy assembly, 13" 4W 8' ID
4	RK3500-010	Starting sensor, outside, TOFniva
5	RK3500-010	Presence sensor, 0utside, TOFniva
6	RK3500-010	Presence sensor, inside, TOFniva
7	RK3500-010	Starting sensor, inside, TOFniva
8	RC6381-030	Cover plate, K9, TOFniva sensor cutout
9	RC6485-010	Canopy outer soffit half, 4 wing, S2/S3
11	RX6027-001	Voice module speaker

28.1.1 TOFniva sensor installation.

Note: remainder of door not shown for sensor installation views.

Reference Para. 28.2 for sensor installation..

1. Install TOFniva sensor into interior outer soffit (9).
2. Install TOFniva sensor into interior cover plate (8).
3. Install cover plate in the canopy. Insert cover plate tabs into slots in the exterior soffit.
4. Repeat for exterior sensors.

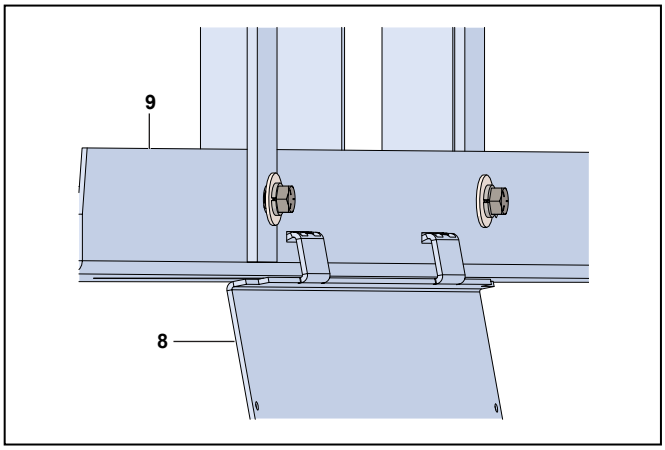
28.1.2 TOFniva sensor wiring.

1. Connect 2 m extension cable to each of the three TOFniva sensors.
2. Route each cable to K9 drive terminal strip.
3. Sensor wiring.

NOTICE

For TOFniva sensor wiring, reference RL6008-004 Alvarado S2/S3/S4 Wiring Manual

Fig. 28.1.5 Cover plate installation onto outer soffit



28.2 TOFniva Sensor Installation

Fig. 28.2.1 Canopy bottom view

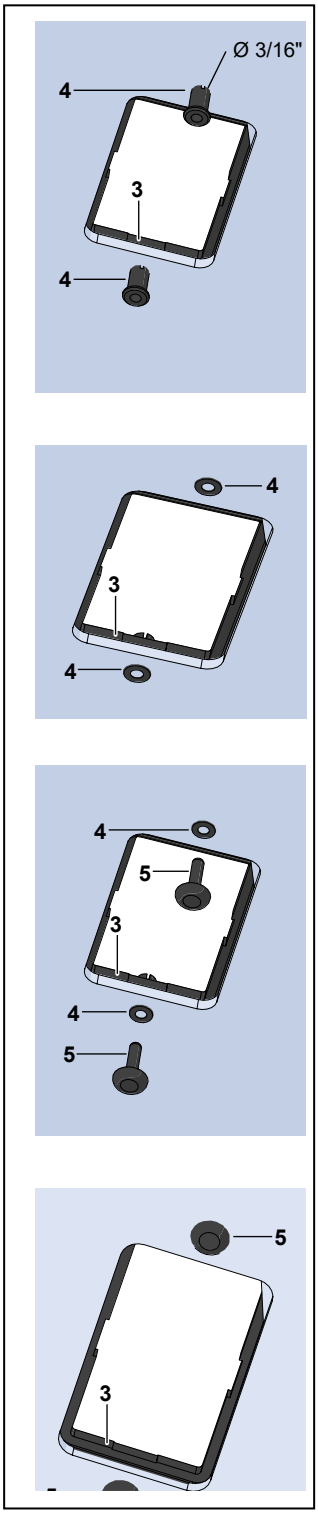


Fig. 28.2.2 Canopy top view

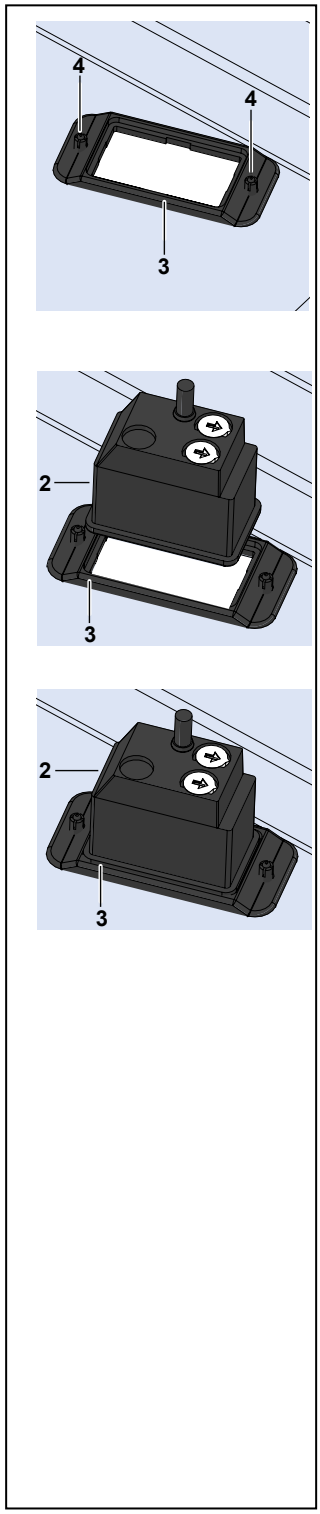
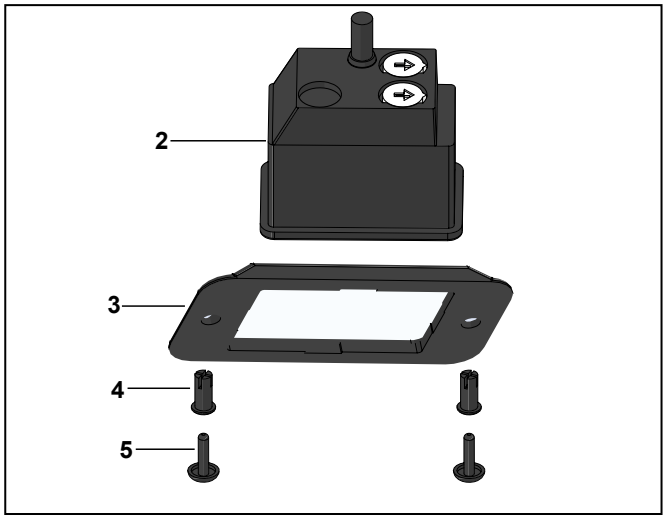


Table 28.2.1 TOFniva sensor and installation hardware

2	RK3500-010	Sensor, CEDES, TOFniva	2
		Mounting kit hardware	
3		Sensor bracket	
4		Anchor	
5		Thumb pin	

Fig. 28.2.3 TOFniva sensor and mounting hardware



28.2.1 TOFniva sensor installation.

1. Place sensor bracket (3) on the canopy soffit or cover plate over the cutout for the sensor.
2. Using mounting kit hardware (Table 28.2.1), secure the sensor bracket to the soffit or cover plate.
3. Place the sensor in the sensor bracket. Note the sensor orientation for each sensor.

29 S2 Canopy Wiring And Bullet-rated SRD Commissioning

30.1 Reference manuals.

Refer to manuals listed in Chapter 1 for canopy wiring and for S2 bullet-rated SRD commissioning.

Alvarado Manufacturing
Company, Inc.
12660 Colony Street,
Chino, CA 91710
Toll Free: 800-423-4143
Fax: 909-628-1403

www.alvarado.com