Stannah

Stannah Stairiser SX

Installation Guide

Edition 09.08.10

Stannah

Contents

Stannah

Introduction

This guide provides information for the correct installation of the Stairiser SX, highlighting key points, safety procedures and to ensure the final product runs safely, smoothly and efficiently. It should be read in conjunction with the electrical wiring manual, the specific General Arrangement Drawing and the Builders Work Drawing.

Working on lifts can be dangerous and therefore safe practises for all those working on lifts are essential.

British Standard BS7255 (1989 Code for Practice for Safe Working on Lifts) recommends safe practises for those working on all types of lifts and should be referenced for guidance.

This manual is for guidance only. Owing to our policy of continual improvement, we reserve the right to alter the contents without prior notice.

1 Arrival on Site

1.1 On arriving at the site, the installer should make their presence known to the customer. The installer must comply with any Site Safety Procedures and Regulations that are in force and make sure all relevant safety features are in place before commencing work.

1.2 Before commencing the installation, it is important to ensure that the power supply has been fitted according to the requirements of the builder's work and electrical schedule. It is important to check that:

i. The relative positions of the stairway and the power supply accord to the site plan.
ii. An adequately clear working area, free from carpets and furniture, has been provided in all areas in which the lift will travel.
iii. Piping or cables not related to the lift installation have been adequately re-routed away from the lift pathway.
iv. All décor disturbed during the building work has been adequately made good.
v. A dedicated single-phase 220v - 240v power supply, terminating in a 10 amp switched fused spur unit, has been provided.
vi. All lift parts have been received and are not damaged.

Should any of the above be incorrect or not available, consult the Installations Manager.

1.3 All carpet areas, walkways and any remaining furniture or fittings within the working vicinity of the lift is to be protected with dustsheets. Avoid any undue disruption.

Before installation begins check the overall dimensions of the staircase against the dimensions stated on the builders work drawing supplied.

2 Guide Rail Assembly Wall Mounted

(See drawing 4000447 attached for reference)

2.1 Using dimensions stated on the builders work drawing supplied; mark out the top and bottom fixing positions on the wall and drill holes to suit fixings supplied.

2.2 Lay the main top rail face down on the floor and mark hole centres for drilling between the two pre-drilled holes. Drill holes 12.0mm diameter through and 58.0mm down from datum face.

2.3 Fit the rail onto the top and bottom stud fixings, mark the wall through the holes drilled in 2.2, remove the rail and drill the wall as per 2.1.

Note: *If the rail is to be jointed, use the roll pins provided and the M8 x 20.0mm lg. hex head screws to attach the rack. To ensure the two sections are in line during assembly, clamp a length of rack to the underside of the rack in the rail.*

2.4 The rail can now be bolted to the wall, it may be necessary to use packers provided to place behind the rail if the wall is not flat and smooth.

2.5 Mark, drill and countersink the lower rail (shown on 4000447 sht.2), then position it parallel with the top rail to dimensions shown on the builders work drawing. Mark and drill the wall for the rawl plugs. The lower rail can then be screwed to the wall using the countersunk screws provided. Again it may necessary to use packers provided behind the rail.

Guide Rail Assembly Pillar Supported

(See drawing 4000448 attached for reference)

2.6 Position the top and lower pillar on the staircase as shown on the builders work drawing, bolt the rail to the pillars, then drill and fix the pillars to the floor using the fixings provided (packers can used under the base plate if required).

2.7 Position the intermediate posts as shown on the builders work drawing. Mark the rail and drill through 3.5mm diameter pilot hole into the pillar. Drill hole 12.0mm diameter through back wall of rail, and the support pillars. Bolt the pillars to the rail then drill and fix to the floor using the fixings provided. Fit end caps to pillars.

2.8 Clamp the lower rail to the pillars to the dimensions as shown on the builders work drawing. Drill right through 3.5mm diameter into the pillar. Remove the rail and drill and tap the pillars M6 thread. Drill and countersink the rail (shown on 4000448 sht.2), fit the plastic end caps to the lower rail and screw to the pillars using the fixings provided.

3 Landing Stations & Battery Back Box

3.1 Drill and fix the landing stations in position as shown on the builders work drawing and fit the conduit for the trailing cables (this is for hard wired landings only)

Note: *The battery back-up box is an option and should be fitted as shown on builders work drawing if required.*

4 Carriage Installation

Fig.4.1a fitting energy chain

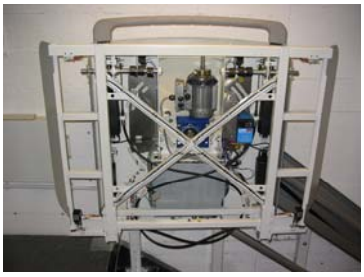

Fig.4.1b carriage fitted

Fig.4.1c fitting end stop into rail

4.1 The carriage is positioned on the top landing of the staircase. Attach approx. 300.0mm of plastic energy chain which can be found in the main rail to the skate and feed the trailing cable through it (Fig.4.1a).
The carriage can now be lifted up and 'fed' into the top of the rail and gently lowered down until the main drive gear comes to rest in the rack within the rail (Fig.4.1b).

4.2 Hand-wind the carriage in the down direction so that the drive gear engages fully into the rack.
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Check the lower guide roller assembly behind the carriage is resting against the lower guide rail. Place a spirit level on top of the carriage to ensure it is horizontal, then tighten fixings 1 & 2 (Fig.4.2a).
Take the carriage down far enough to ensure room to fit the mechanical end stop (Fig.4.1c).

4.3 Place a spirit level against the front edge of the carriage frame to ensure it is vertical and that the lower roller assembly rollers are in contact with the lower guide rail. The lower guide roller assembly can now be adjusted in and out if required using the lock nuts behind the carriage, (Fig.4.3a), when this is completed tighten bolts 3 & 4 (Fig.4.3b).

Bolts 1 & 2

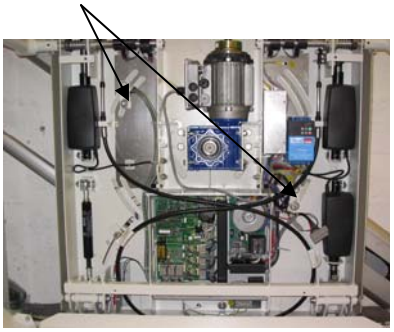


Fig.4.2a

lower guide roller lock nuts

Fig.4.3a

Bolts 3 & 4

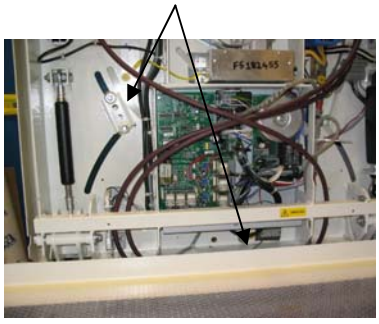


Fig.4.3b

4.4 Feed the trailing cable through the rest of the energy chain within the rail making sure the cables don't twist over each other and up through the white plastic square conduit. Join the two ends of the energy chain together (Fig.4.4a).

Fig.4.4a energy chain joint

Fig.4.5
showing trailing cables

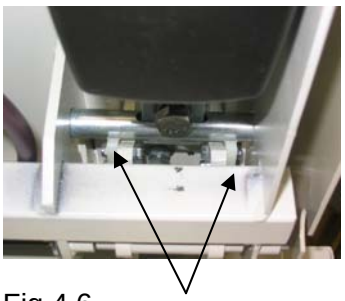


Fig.4.6
plastic knuckle joint

4.5 Using the electrical wiring diagrams the trailing cables can now be wired up to the mains supply and the landing stations.

Note: *Wireless landing controls only have one trailing cable for mains supply.*

4.6 Unfold the platform manually and snap the actuator drive pin into plastic knuckle joints, be aware, without the underpan and platform decking fitted, the force of the gas strut want to fold the platform back into the vertical position. The carriage can now be run up and down the rail using the landing controls.

Note: *Connect the front cover to the carriage to run the unit via the joystick control.*

5 Platform Assembly

Spring, washer & split pin

Fig.5.1a underpan fixing detail

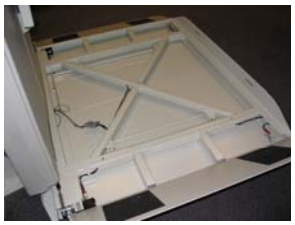


Fig5.1b earth connection

Fig.5.1c safety switch

5.1 Place the springs provided on each of the lugs on the underpan and secure the underpan onto the platform frame using the washers and split pins Fig.5.1a.

5.2 Connect the earth to the platform frame Fig.5.1b, see electrical wiring manual for reference.

5.3 The safety circuit micro-switches that are operated by the underpan and hinged end ramps should have been set in the factory but may need adjusting when under going the testing procedure Fig.5.1c.

6 Barrier Arms & Limit Switches

Roll pins

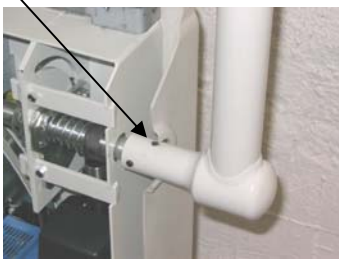


Fig.6.1a barrier arm fitting

Limit switch ramp

Fig.6.2a floor zone ramp

Lower floor limit ramp

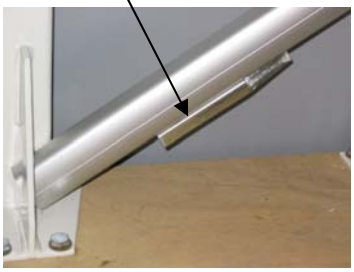


Fig.6.3a

6.1 Slide the barrier arms onto the end of the drive shaft and secure in position using the M6 x 30lg roll pins Fig.6.1a.

6.2 Drive the lift up to the top landing, stopping approximately 100.0mm from the top tread, now position the ultimate limit switch ramp so that the floor zone switch is operated at this position (Fig.6.2a).

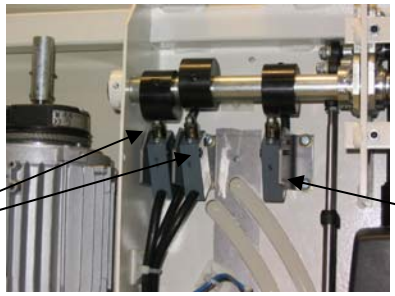
6.3 Now repeat the procedure for the bottom limit ramp, the clearance distance between the underpan and the floor should be approx.15.0mm when positioning the bottom limit. (Fig.6.3a). See drawing 4000243 for ref.

Note: *The adjusting slots on the ramps can be used re position the ultimate stopping position.*

7 Switch Calibration

All of the switches shown have been set in the factory; however, this information assists in the checking and adjustment.

Switch 1 & 2



Switch 3

Fig.7.1a barrier arm switches

7.1 Switch 1 & 2 are for the vertical and horizontal position of the barrier arms, adjustment of the appropriate cam will align the stopping position of the arms.Fig.7.1a.

7.2 Switch 3 is for the barrier arm safety. This will operate if the barrier arm is manually operated thus cutting power and stopping operation of the unit in either up or down directional travel. This should be set so that the switch operates when the barrier arm is manually raised by no more than 5 degrees angle.

7.3 Switches 4 & 5 are the platform fold and unfold limit switches and should be adjusted to set the platform vertical and horizontal (Fig.7.3a).

7.4 The platform horizontal position can be adjusted using the adjusting bolts situated behind the platform pivots, the unfold switch will also need adjusting if this levelling procedure is done.

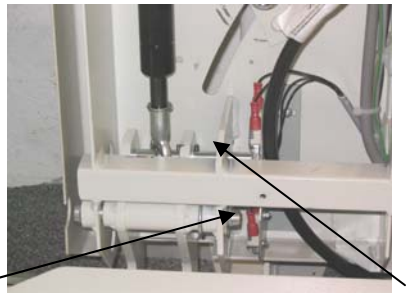


Fig.7.3a platform limit switches

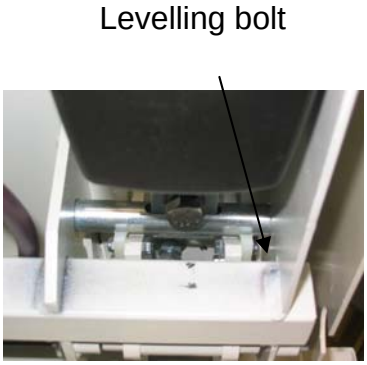


Fig.7.4 platform levelling bolt

8 Cover Fitting

Fig.8.1a rail cover fitting

8.3a platform deck fitting

8.4a front cover fitting

8.1 Fit the top rail cover in position as shown Fig.8.1a, mark 30.0mm from the end of the rail and approximately every 1000.0mm along the groove on the front face and drill through diameter 2.0mm into the circular void then countersink the front face of hole. The cover is now fixed in place using the No.4x3/8”lg self tapping countersunk screws provided (See 4000110 or 4000120 for ref.). If the cover is a jointed two-piece fit roll pins supplied in the joint.

8.2 The remaining plastic rail end caps can now be fitted using the No.10x1/2”lg self tapping screws. (See 4000447 or 4000448 for ref.)

8.3 The platform decking is fitted in position using 4off M5 socket head button screws (Fig.8.3a).

8.4 The main cover is fixed in position using 4off M5 x 12.0lg pan head tamperproof screws (Fig.8.4a).

9 Seat Assembly

Seat attached with shoulder bolts

Fig.9.1a seat support lugs

Adjusting spring retainer bolt

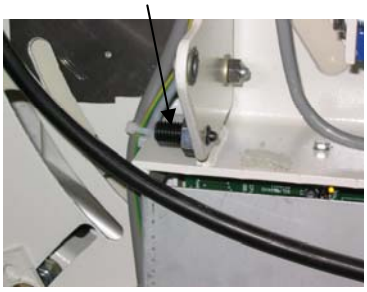


Fig.9.3a seat attachment

9.1 Protruding through the front cover are the two mounting lugs Fig.9.1a

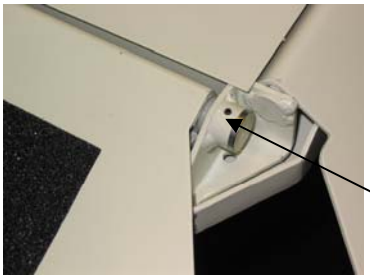
9.2 The seat is attached using the 2 socket head shoulder bolts provided

9.3 The seat when folded and stored away, should be self sustaining in this position, however if it keeps falling down it may be necessary to adjust the spring plunger retaining screws situated within the carriage Fig.9.3a.

10 Side Access Ramp Assembly

If the stairlift is to have a side access ramp, it would have been assembled and tested in the factory and then dismantled for transportation.

Fig.10a



Nylon spacer & pin

Fig.10b

Feed the ball joint shaft through the platform cut-out (Fig.10a). Remove the retaining pin from the un-attached ball joint and fit onto the ball on the pivot shaft, refit retaining pin and test the ramp is free and easy to pivot. Position the ramp between the two lugs on the side of the platform, and secure in place using the ramp pivot pins ensuring that the nylon spacers are fitted between the ramp and the platform lugs. The pivot pins can now be locked in position using the 3.0mm diameter roll pins (Fig.10b).

11 Testing

Please exercise caution when carrying out electrical tests. Dangerous voltages are present on the carriage when switched on .The test must be carried out according to ISO9386-2 Powered stairlifts Certificate of Test and Examination After Installation.

Fig.11.1a mains input voltage

11.2 Mains input voltage

Measure the mains AC input voltage across live and neutral into the Stairiser. This can be done at the most convenient place on the installation. Plug PL3 on the PSU board has L and N available to measure Fig.11.1a. Record in section 2.a on the test sheet.

11.3 Insulation resistance test

This test should be carried out using a Megger. The test is to check that there is sufficient insulation between Live and Neutral and Live and Earth. Firstly isolate the stairiser from the mains. Disconnect the mains trailers at the carriage. Measure the insulation resistance between Live and Neutral going back down the trailers. Next carry out the same test between the live trailer and Earth. The worst case reading is the one that should be documented on the test sheet. (Note the minimum acceptable). Record in section 2.c on the test sheet. After the test, replace all the items and switch the unit back on.

11.3 Check Earth continuity

Using an Earth continuity tester, ensure that the carriage, rail, platform and motor are sufficiently earthed to the incoming earth Fig11.3a. Record in section 2.d on the test sheet.

Fig.11.3a earth continuity

Fig11.4a DC control voltage

11.4 DC control voltage check

Using a DC voltmeter check and record the DC voltage on the control circuit. This can be done at any suitable location in the circuit but there is easy access on PL1 of the small CPU PCB. Place the negative probe on GND and the positive probe on VIN, Fig11.4a. Record in section 2.e on the test sheet.

Fig11.4a DC control voltage

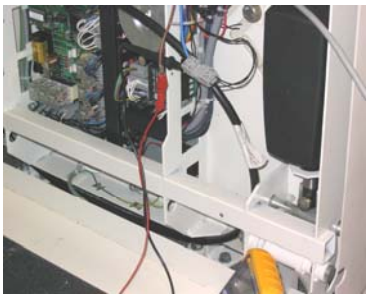


Fig11.5a running currents

11.5 Check Running currents

Using an ammeter measure the currents in the mains input as the lift is travelling up and down. At a convenient location in the mains input, place the ammeter in series with the live phase and record the AC current reading Fig.11.5a. Record in section 4.a on the test sheet.

11.6 After completing the testing and fitting of covers fit the 2 self adhesive notices supplied. The emergency lowering instruction should be fitted adjacent to the entry hole for the hand-winding handle, and the mains power label should be fitted to the RCD.

12 Commissioning

Before handing the lift over to the customer, ensure the work place is tidy, and the stairlift has been cleaned.

When handing the lift over to the customer or the person responsible for the lift, the following demonstration must be undertaken:

i. A full working demonstration of the lift and landing controls.
ii. The operation and the function of all safety edges, surfaces and features.
iii. The evacuation procedure of passengers using the manual lowering and manual release operation of the barrier arms and platform.

Note: *Particular attention should be paid to the manual lowering procedure so that lift is not lowered to low and hits the floor, the hindwinding should finish with the underpan positioned approximately 15.0mm off of the floor. If the lift is lowered onto the floor, the lower floor limit switch and limit ramp will get damaged.*

iv. The customer should be made aware of whom to contact in the case of a breakdown.

Before leaving the site you must ensure the customer is entirely satisfied with the product and has run through the operating procedure and feels competent in using the product.

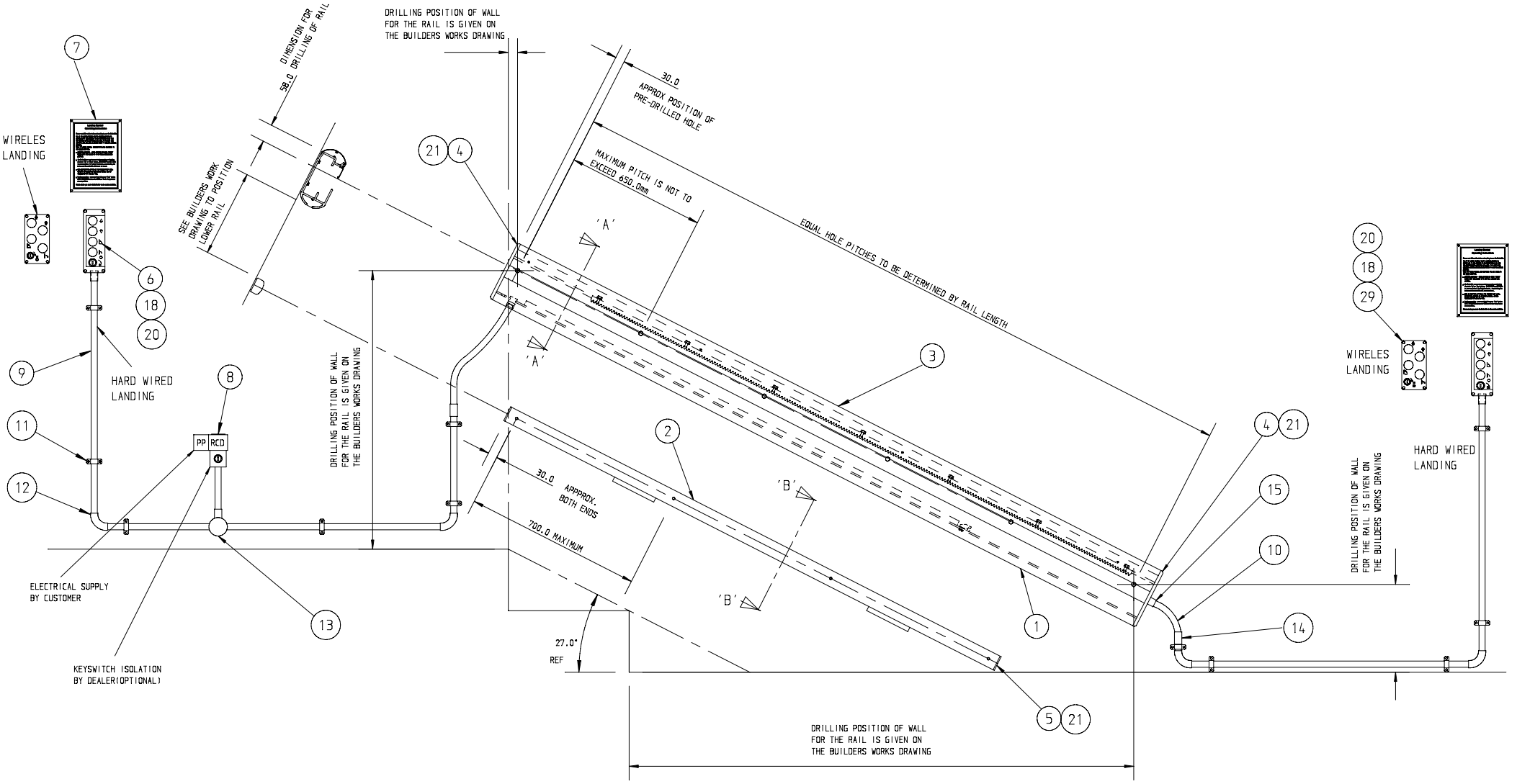
13 Trouble Shooting Guide

Problem	Possible Fault	Possible Solutions
All direction controls fail to move the stairlift. On controller: +24v indicator lit S2 indicator **not** lit	Barrier safety switch activated or Carriage stop button stuck in the activated position.	Re-position barrier arm or adjust switch accordingly. Check for free movement of stop button. Replace if required.
All direction controls fail to move the stairlift. On Controller: +24v indicator is lit S2 indicator lit	Overspeed governor has been tripped (no feed at terminal 55) or Carriage joystick not plugged in	Hand wind the carriage in the up direction to reset the overspeed governor Fit 'dummy connector or plug in front cover.
Landing control station inoperative. +24v indicator lit S2 indicator lit S3 indicator lit	Isolation keyswitch turned to the **'off'** position.	Locate key and turn keyswitch to the **'on'** position. -Green indicator light on the control station will illuminate(hard wired landings only)
Mains supply is present on the carriage but no indicators are lit on the controller.	Fuse FS1 located on pcb has blown (5amp)	Replace fuse. If fault repeats then there is a short circuit present or PCB needs replacing.
Mains switch to stairlift is energised but no power to carriage or landing stations.	RCD has tripped	Manually reset RCD.
All direction controls inoperative but all indicators are lit on the controller. Lift not at floor level.	Inverter tripping due to over current.(message displayed on inverter) or Terminal limit switch is faulty,(lift thinks it is at floor level).	Remove possible obstruction to stairlift or refer to Stannah for correct setting. Check limit/ramp assembly.
Lift will travel down but not up the stairs.	Platform upper ramp safety switch activated.	Check operation of ramp and safety switch or remove possible obstruction.
Lift will travel up but not down the stairs.	Platform lower ramp safety switch activated, or Platform underpan safety edge activated.	Check operation of ramp and safety switch or remove possible obstruction. Check for free movement of underpan or remove possible obstruction.
Alarm on carriage not working	Battery(PP3) on the controller PCB is flat, or Carriage cover is not plugged in.	Replace battery. Plug in cover to carriage.
Barrier arms reach the folded position then back drive in the opposite direction slightly.	Current limit to detect obstruction is set too fine, or Barrier arm limit switch is set past the physical stop on the barrier arm cam.	Adjust VR1 or VR3 on the controller PCB in a clockwise direction to increase the setting. Adjust the switch cam accordingly.
Platform starts to fold then back drives.	Current limit to detect obstruction is set to fine.	Adjust VR2 on the controller PCB in a clockwise direction to increase the setting.
Barrier arms stop approximately 5 degrees from horizontal. Lift will not travel.	Barrier arm safety switch is activated. Barrier arm disengaged and out of position.	Check and adjust barrier arm safety switch. Manually re-engage barrier arm drive plate to correct position.
Platform starts to fold then back drives.	Current limit to detect obstruction is set to fine.	Adjust VR2 on the controller PCB in a clockwise direction to increase the setting.

Platform drive pin disengages from platform.	Platform unfold switch is not activated at correct position.	Adjust switch so that drive pin stays in knuckle joint when the platform reaches its unfolded position.
No green ‘led’ showing when wireless landing station is operated.	Battery fitted within landing control has gone flat.	Remove lid on landing control and replace the battery.
Lift travels to ground floor, but downside barrier arm won’t raise.	Lower floor limit switch ramp set to low and carriage stops on underpan safety edge	Adjust ramp on lower guide rail so that platform stops with approx.15.0mm between floor and underpan.

14 Reference Drawings

See following pages…



REV.	DRAWN	DATE	CHANGE	DCN No.	GRID REF.
A	NJC	15-12-05	DRG REVISED TO SHOW WIRELESS LANDING STATIONS, ITEM 29 ADDED	A3236	

DRG TITLE: RAIL INSTALLATION - WALL MOUNTED

LIMITS UNLESS OTHERWISE STATED
THREAD I.S.O. COARSE CLASS 6
WHOLE DIMENSIONS±1mm
DECIMAL DIMENSIONS±0.25mm
DRILLED HOLES-0+0.25mm
PUNCHED HOLES-0.05mm+12.5% OF PLATE THICKNESS

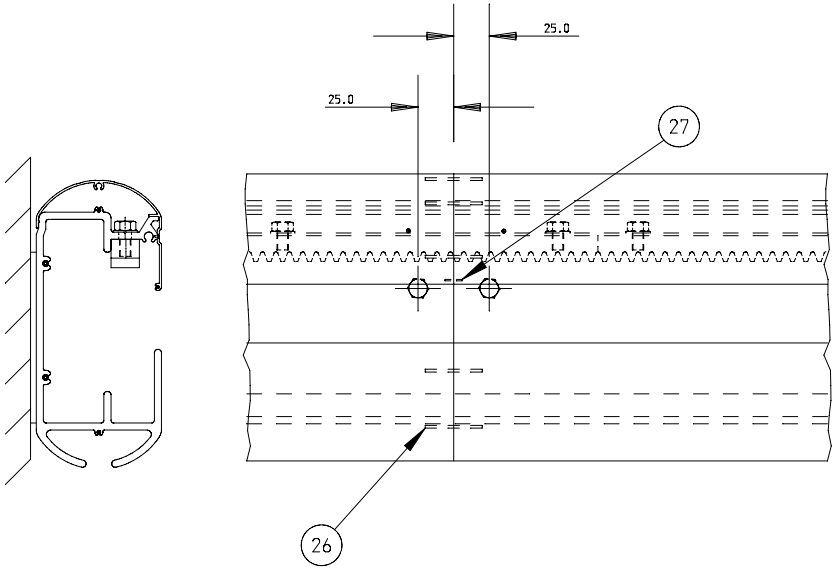
MATERIAL
BS SPEC.
FINISH
SK CODE NO.
WELDING SYMBOLS GENERALLY AS BS499

Stannah
HEAD OFFICE
ANTON MILL, ANDOVER
Hampshire SP10 2NX England
Tel:01264 339090 Fax:01264 337942

CHANGE NOTE No;
DRAWN N.CAIRA DATE 18-11-04
DRAWING NUMBER 4000447 SHEET 1 of 2
REV. A

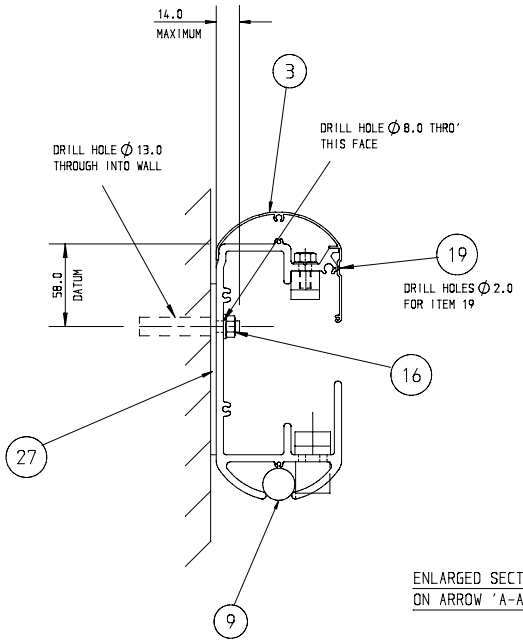
ITEM No.	PART No.	DESCRIPTION	No off
1	Contract No.	RAIL ASSEMBLY (4000000)	1
2	Contract No.	AL.LOWER RAIL (4000002)	1
3	Contract No.	AL.COVER (4000001)	1
4	4000056	RAIL END CAP	2
5	4000057	LOWER GUIDE CAP	2
6	4000361	LANDING CALL STATION ASSY	2
7	4000354	OPERATION INSTRUCTION	2
8	4000114	MAINS NOTICE	1
9	700040	Ø 20.0 CONDUIT x 'L'	A/R
10	700041	FLEXIBLE CONDUIT x 'L'	A/R
11	700048	PLASTIC SADDLE	A/R
12	700044	90° ELBOW	A/R
13	700045	'T' COUPLER	A/R
14	700043	COUPLER	A/R
15	700042	FLANGE COUPLER	A/R
16	SEE 'DONALD' FOR FIXINGS		A/R
17	510036	No 12 x 3'' LG SCREW	A/R
18	501707	No. 8 x 1 1/4''c'sk SCREW	A/R
19	501691	No. 4 x 3/8'' c'SK SCREW	A/R
20	500729	RAWLPLUG	A/R
21	502248	No.10 x 1/2'' SELF TAP	8
25	500406	M4 x 40.0LG SPIROL PIN	4
26	500033	M2 x 12.0LG SPIROL PIN	1
27	4000337-3	RAIL PACKER	A/R
28	4000337-1	RAIL PACKER	A/R
29	912281	WIRLESS LANDING CONTROL	2

FOR RAIL JOINT ONLY



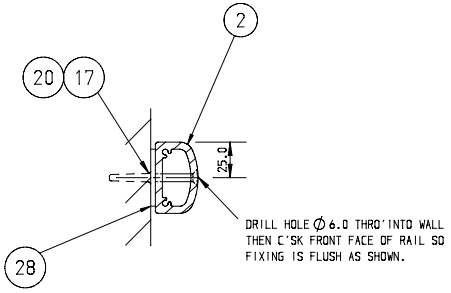
ENLARGED PART DETAIL
SHOWING RAIL JOINT

IMPORTANT NOTE:
STUDDING PROTRUSION FROM BACK OF RAIL IS TO BE A MAXMUM OF 14.0mm

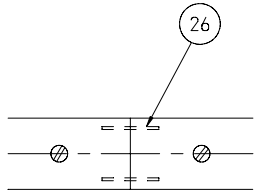


ITEM 9 IS OPTIONAL FOR LINK CABLE TO LOWER LANDING CONTROL STATION

ENLARGED SECTION
ON ARROW 'A-A'



ENLARGED SECTION 'B-B'



TYPICAL RAIL JOINT
DETAIL OF ITEM 2

REV.	DRAWN	DATE	CHANGE	DCN No.	GRID REF.
A	NJC	15-12-05	SEE SHEET 1 FOR DETAILS		

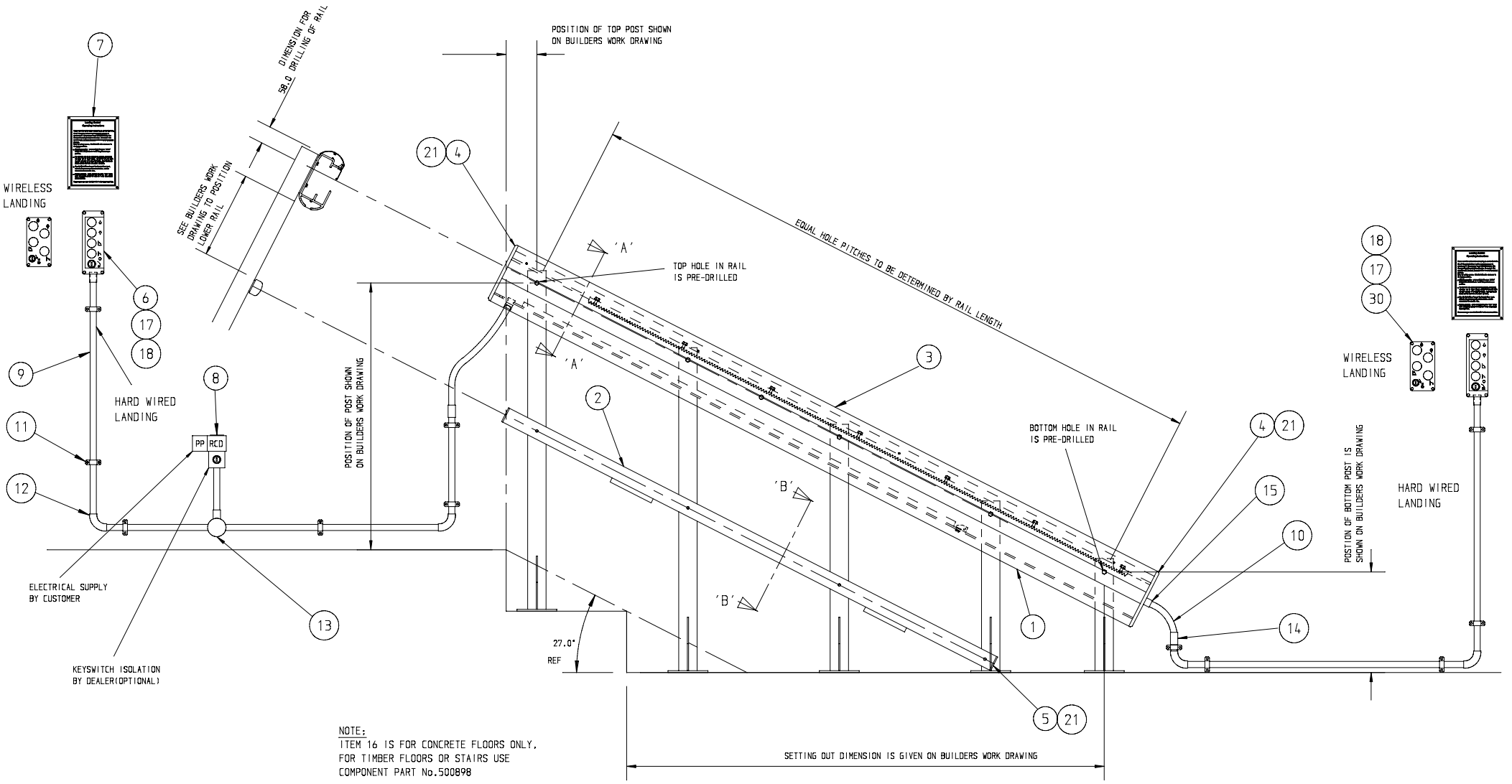
DRG TITLE: RAIL INSTALLATION - WALL MOUNTED

LIMITS UNLESS OTHERWISE STATED
THREAD I.S.O. COARSE CLASS 6
WHOLE DIMENSIONS±1mm
DECIMAL DIMENSIONS±0.25mm
DRILLED HOLES-0+0.25mm
PUNCHED HOLES-0.05mm+12.5% OF PLATE THICKNESS

MATERIAL
BS SPEC.
FINISH
SK CODE NO.
WELDING SYMBOLS GENERALLY AS BS499

Stannah
HEAD OFFICE
ANTON MILL, ANDOVER
Hampshire SP10 2NX England
Tel:01264 339090 Fax:01264 337942

CHANGE NOTE No:
DRAWN N.CAIRA DATE 18-11-04
DRAWING NUMBER 4000447
REV. A
SHEET 2 of 2



NOTE:
ITEM 16 IS FOR CONCRETE FLOORS ONLY,
FOR TIMBER FLOORS OR STAIRS USE
COMPONENT PART No.500898

REV.	DRAWN	DATE	CHANGE	DCN No.	GRID REF.
A	NJC	15-12-05	DRG REVISED TO SHOW WIRELESS LANDING STATIONS, ITEM 30 ADDED	A3236	

DRG TITLE: RAIL INSTALLATION - PILLAR MOUNTED

LIMITS UNLESS OTHERWISE STATED
THREAD I.S.O. COARSE CLASS 6
WHOLE DIMENSIONS±1mm
DECIMAL DIMENSIONS±0.25mm
DRILLED HOLES-0+0.25mm
PUNCHED HOLES-0.05mm+12.5% OF PLATE THICKNESS

MATERIAL
BS SPEC.
FINISH
SK CODE NO.
WELDING SYMBOLS GENERALLY AS BS499

Stannah
HEAD OFFICE
ANTON MILL, ANDOVER
Hampshire SP10 2NX England
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CHANGE NOTE No;
DRAWN N.CAIRA DATE 18-11-04
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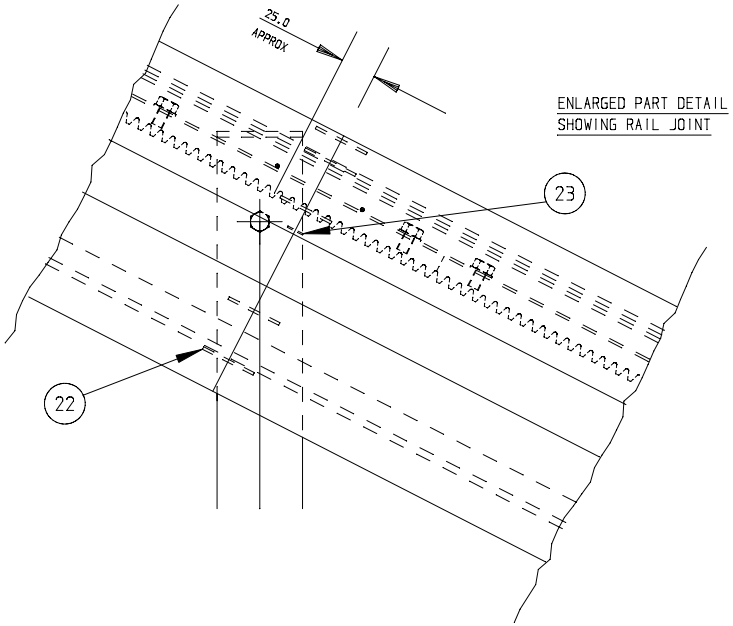
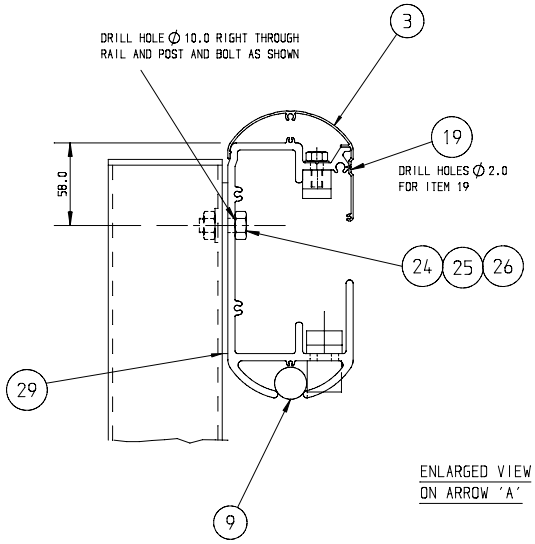
REV. A
SHEET 1 of 2

ITEM No.	PART No.	DESCRIPTION	No off
1	Contract No.	RAIL ASSEMBLY (4000000)	1
2	Contract No.	AL.LOWER RAIL (4000002)	1
3	Contract No.	AL.COVER (4000001)	1
4	4000056	RAIL END CAP	2
5	4000057	LOWER GUIDE CAP	2
6	4000361	LANDING CALL STATION ASSY	2
7	4000354	OPERATION INSTRUCTION	2
8	4000114	MAINS NOTICE	1
9	700040	Ø 20.0 CONDUIT x 'L'	A/R
10	700041	FLEXIBLE CONDUIT x 'L'	A/R
11	700048	PLASTIC SADDLE	A/R
12	700044	90° ELBOW	A/R
13	700045	'T' COUPLER	A/R
14	700043	COUPLER	A/R
15	700042	FLANGE COUPLER	A/R
16	SEE 'DONALD' FOR FIXINGS		A/R
17	500279	RAWLPLUG	A/R
18	501707	No. 8 x 1 1/4''c'sk SCREW	A/R
19	501691	No. 4 x 3/8'' c'SK SCREW	A/R
20			
21	502248	No.10 x 1/2'' SELF TAP	8
22	500406	M4x40.0LG SPIROL PIN	4
23	500033	M2x12.0LG SPIROL PIN	1
24	500920	M10x25.0LG HEX HD SCREW	A/R
25	501792	M10 BINX NUT	A/R
26	500379	M10 CONTACT WASHER	A/R
27	510031	M6x40.0LG SKT HD CSK SCREW	A/R
28	4000337-1	RAIL PACKER	A/R
29	4000337-3	RAIL PACKER	A/R
30	912281	WIRELESS LANDING STATION	2

FOR RAIL JOINT ONLY

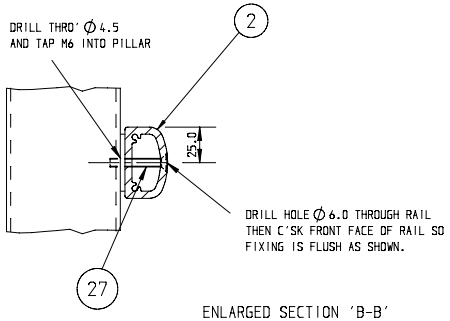


ENLARGED PART DETAIL
SHOWING RAIL JOINT

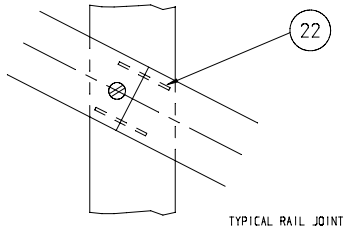


ENLARGED VIEW
ON ARROW 'A'

ITEM 9 IS OPTIONAL FOR
LINK CABLE TO LOWER LANDING
CONTROL STATION



ENLARGED SECTION 'B-B'



TYPICAL RAIL JOINT
DETAIL OF ITEM 2

REV.	DRAWN	DATE	CHANGE	DCN No.	GRID REF.
A	NJC	15-12-05	SEE SHEET 1 FOR DETAILS		

DRG TITLE: RAIL INSTALLATION - PILLAR MOUNTED

LIMITS UNLESS OTHERWISE STATED
THREAD I.S.O. COARSE CLASS 6
WHOLE DIMENSIONS±1mm
DECIMAL DIMENSIONS±0.25mm
DRILLED HOLES-0+0.25mm
PUNCHED HOLES-0.05mm+12.5% OF PLATE THICKNESS

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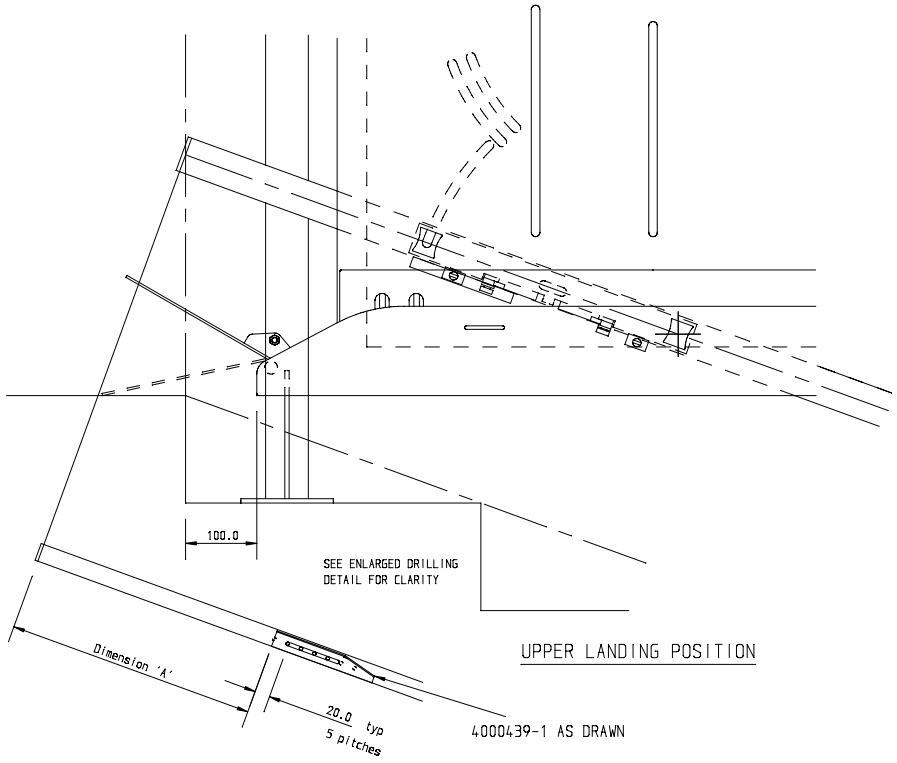
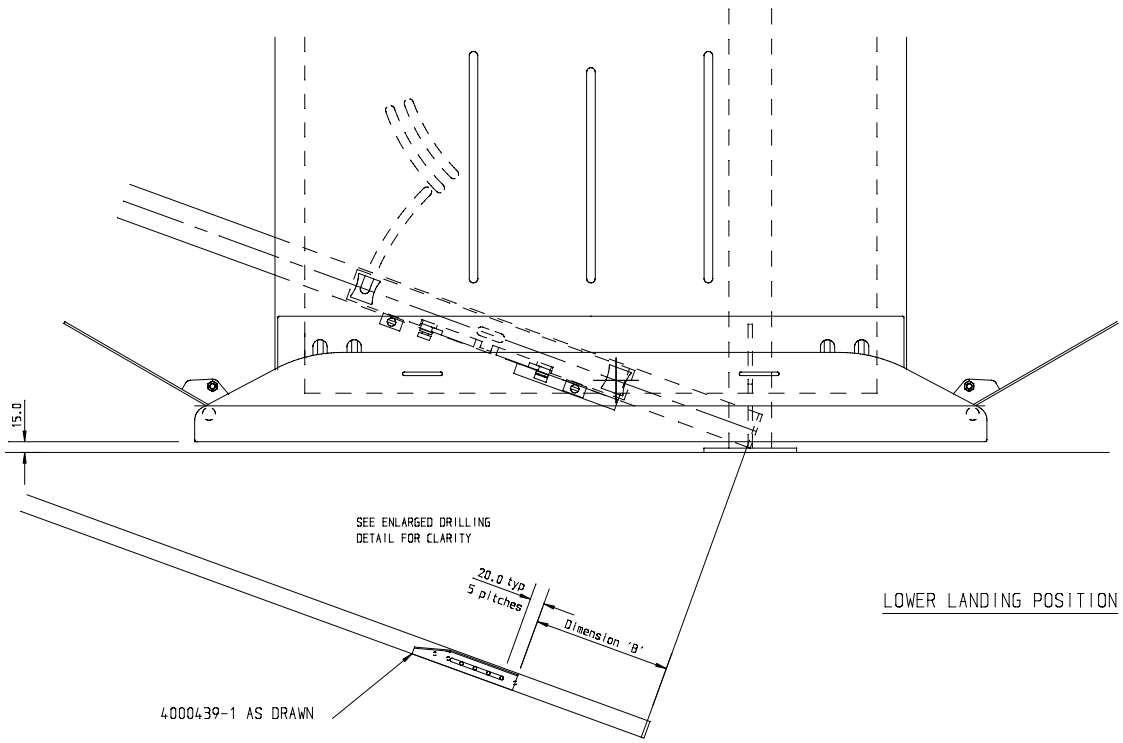
CHANGE NOTE No:
DRAWN N.CAIRA DATE 18-11-04
DRAWING NUMBER 4000448 SHEET 2 of 2
REV. A



UPPER LANDING POSITION

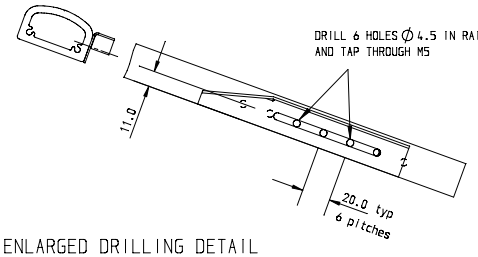
4000439-1 AS DRAWN



LOWER LANDING POSITION

4000439-1 AS DRAWN

	900 PLATFORM		1050 PLATFORM		1250 PLATFORM	
RAIL ANGLE	DIM. 'A'	DIM. 'B'	DIM. 'A'	DIM. 'B'	DIM. 'A'	DIM. 'B'
20°	233.0	167.0	313.0	156.0	419.0	157.0
21°	238.0	158.0	318.0	148.0	425.0	148.0
22°	242.0	149.0	323.0	139.0	431.0	140.0
23°	247.0	141.0	329.0	131.0	437.0	132.0
24°	252.0	134.0	334.0	124.0	444.0	127.0
25°	258.0	126.0	340.0	118.0	451.0	120.0
26°	263.0	122.0	347.0	112.0	458.0	114.0
27°	269.0	117.0	353.0	107.0	466.0	109.0
28°	276.0	112.0	360.0	102.0	474.0	104.0
29°	282.0	107.0	368.0	98.0	482.0	100.0
30°	289.0	103.0	376.0	94.0	491.0	96.0
31°	297.0	97.0	384.0	90.0	501.0	92.0
32°	305.0	95.0	391.0	86.0	511.0	88.0
33°	312.0	92.0	402.0	83.0	521.0	85.0
34°	321.0	88.0	411.0	80.0	532.0	82.0
35°	330.0	85.0	422.0	77.0	544.0	79.0
36°	339.0	83.0	432.0	74.0	556.0	76.0
37°	349.0	80.0	443.0	72.0	568.0	74.0
38°	360.0	77.0	455.0	69.0	582.0	72.0
39°	370.0	75.0	467.0	67.0	596.0	69.0
40°	382.0	73.0	480.0	65.0	611.0	67.0
41°	394.0	71.0	494.0	63.0	626.0	66.0
42°	407.0	69.0	508.0	61.0	642.0	64.0
43°	420.0	67.0	523.0	60.0	660.0	62.0
44°	434.0	66.0	539.0	58.0	678.0	60.0
45°	449.0	64.0	555.0	56.0	697.0	59.0



ENLARGED DRILLING DETAIL
TYPICAL BOTH ENDS OF RAIL

REV.	DRAWN	DATE	CHANGE	DCN No.	GRID REF.
F	NJC	23.8.05	TABLE AMMENDED TO INCLUDE 900 & 1250 PL;ATFORMS	A3108	
E	NJC	19-11-04	DRAWING UPDATED TO SHOW NEW LOWER GUIDE SWITCH ASSEMBLY AND LIMIT RAMP. TABLE OF SETTING-OUT DIMENSIONS REVISED TO SUIT	A2904	
D	NJC	17-12-03	DIMENSION 'B' LISTED IN TABLE HAS BEEN REVISED	A2580	A-3 C-1 D-2
C	NJC	20-03-03	DRAWING REVISED TO SHOW NEW SINGLE LOWER RAIL AND FLOOR ZONE LIMIT RAMP	A2335	
B	NJC	16-03-01	ADDITIONAL HOLES AND DRILLING INFORMATION ADDED		A-3 C-1 D-2
A	NJC	4/1/01	DIMENSION 'A' FOR 34°,35°,36°,37°,38°,39°,40° ANGLE REVISED	A1693	A-1

DRG TITLE FLOOR ZONE POSITION DATA SHEET-RAIL DRILLING DETAIL

LIMITS UNLESS OTHERWISE STATED
THREAD I.S.O. COARSE CLASS 6
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DECIMAL DIMENSIONS±0.25mm
DRILLED HOLES-0+0.25mm
PUNCHED HOLES-0.05mm+12.5% OF PLATE THICKNESS

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CHANGE NOTE No;
DRAWN N.CAIRA DATE 19-10-2000
DRAWING NUMBER 4000243
REV. F

Stannah

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