Section 1

Scope of Works

21 x Dock Levellers
21 x Collapsible Dock Shelter
25 x Thermadoors
21 x Dock Bumpers
21 x Traffic Lights
21 x Dock Lights
21 x Wheel Guides
10 x Personnel Doors

stertil

ELECTRICAL INSTALLATION SHEET & TEST CERTIFICATE

Installation Order No: No: 192199

DATE	COMPUTER REF No	STERTIL ENGINEER
23-JUNE-'22	10334338	

SITE NAME AND ADDRESS	LOCATION OF EQUIPMENT (BAY NO.)
PLOT 9 SEGRO PARK EM6 DERBY DE74 2DL	WAREHOUSE FASTACTION DOOR 1 & 2

Please ensure any additional checks which are required are carried out in accordance with the installation manual and spec sheets.

ELECTRICAL SUPPLY		Stertil UK assume that the requested supply for our equipment complies with current BS EN 7671 Wiring Regulations.	
1 PH 230v	3 PH 400v	PROTECTIVE DEVICE TYPE BS-EN	NOM. RATING (A)
✓		UNKNOWN	UNKNOWN

EQUIPMENT	MAX CPC CONTINUITY (OHMS)	VISUAL INSPECTION OF ELECTRICAL INSTALLATION SATISFACTORY	EQUIPMENT INCLUDING ALL SAFETY DEVICES WORKING CORRECTLY	SERIAL NUMBER
Door	0.01	✓	✓	GB725976 & GB725978
Dock leveller				
Containment				
Shelter				
Combilok				
Dock light				
Traffic light				

COMMENTS

Commision only installation by others;
2x Roller door with Dynaco 5 control.
Complete & fit for use.

INSPECTION AND TESTING

I certify that the electrical installation detailed above has been, inspected, tested and commisioned, to comply with the current edition of regulations for electrical installations and the manufacturers guidelines.

Stertil UK Signature:

Print: S. PEABODY

Test instrument Serial No.(s): A030417

I confirm the undersigned representative of Stertil UK Ltd has provided the following:

1. Provided operational training on each of the items listed above YES / NO
2. Demonstrated the operation of safety devices where fitted YES / NO

Customer print:

Sign:

Stertil UK print: S. PEABODY

Sign:

N.B. If a further/certified demonstration or training is requied please contact the installation department.

Stertil UK Ltd, Stertil House, Unit A, Brackmills Business Park, Caswell Road, Northampton NN4 7PW
Tel: 0870 770 0471 Fax: 01604 662 010 Email: info@stertil.co.uk Website: www.stertil.co.uk

COPIES TO: Green - Project File - Yellow - Customer

ELECTRICAL INSTALLATION SHEET & TEST CERTIFICATE

Installation Order No: No: 194101

DATE	COMPUTER REF No	STERTIL ENGINEER
13/7/22	10334433	Ricky woodward

SITE NAME AND ADDRESS	LOCATION OF EQUIPMENT (BAY NO.)
Plot 9 Segro East midlands gateway Derby DE74 2DL	mezzanine

Please ensure any additional checks which are required are carried out in accordance with the installation manual and spec sheets.

ELECTRICAL SUPPLY		Stertil UK assume that the requested supply for our equipment complies with current BS EN 7671 Wiring Regulations.		
1 PH 230v	3 PH 400v	PROTECTIVE DEVICE TYPE BS-EN	NOM. RATING (A)	

EQUIPMENT	MAX CPC CONTINUITY (OHMS)	VISUAL INSPECTION OF ELECTRICAL INSTALLATION SATISFACTORY	EQUIPMENT INCLUDING ALL SAFETY DEVICES WORKING CORRECTLY	SERIAL NUMBER
Door	N/A	✓	✓	9B72597A
Dock leveller	—			
Containment	N/A	✓	N/A.	
Shelter	—			
Combilok	—			
Dock light	—			
Traffic light	—			

COMMENTS

Commision Inr flexiedge door with radars WDD connected and tested OK

INSPECTION AND TESTING

I certify that the electrical installation detailed above has been, inspected, tested and commisioned, to comply with the current edition of regulations for electrical installations and the manufacturers guidelines.

Stertil UK Signature:

Print:

Test instrument Serial No.(s):

I confirm the undersigned representative of Stertil UK Ltd has provided the following:

1. Provided operational training on each of the items listed above — YES / (NO)
2. Demonstrated the operation of safety devices where fitted — YES / (NO)

Customer print:

Sign:

Stertil UK print: Ricky woodward

Sign:

N.B. If a further/certified demonstration or training is requied please contact the installation department.

Stertil UK Ltd, Stertil House, Unit A, Brackmills Business Park, Caswell Road, Northampton NN4 7PW
Tel: 0870 770 0471 Fax: 01604 662 010 Email: info@stertil.co.uk Website: www.stertil.co.uk

COPIES TO: Green - Project File - Yellow - Customer

stertil

ELECTRICAL INSTALLATION SHEET & TEST CERTIFICATE

Installation Order No: No: 192199

DATE	COMPUTER REF No	STERTIL ENGINEER
23-JUNE-'22	10334338	

SITE NAME AND ADDRESS	LOCATION OF EQUIPMENT (BAY NO.)
PLOT 9 SEGRO PARK EM6 DERBY DE74 2DL	WAREHOUSE FASTACTION DOOR 1 & 2

Please ensure any additional checks which are required are carried out in accordance with the installation manual and spec sheets.

ELECTRICAL SUPPLY		Stertil UK assume that the requested supply for our equipment complies with current BS EN 7671 Wiring Regulations.	
1 PH 230v	3 PH 400v	PROTECTIVE DEVICE TYPE BS-EN	NOM. RATING (A)
✓		UNKNOWN	UNKNOWN

EQUIPMENT	MAX CPC CONTINUITY (OHMS)	VISUAL INSPECTION OF ELECTRICAL INSTALLATION SATISFACTORY	EQUIPMENT INCLUDING ALL SAFETY DEVICES WORKING CORRECTLY	SERIAL NUMBER
Door	0.01	✓	✓	GB725976 & GB725978
Dock leveller				
Containment				
Shelter				
Combilok				
Dock light				
Traffic light				

COMMENTS

Commision only installation by others;
2x Roller door with Dynaco 5 control.
Complete & fit for use.

INSPECTION AND TESTING

I certify that the electrical installation detailed above has been, inspected, tested and commisioned, to comply with the current edition of regulations for electrical installations and the manufacturers guidelines.

Stertil UK Signature:

Print: S. PEABODY

Test instrument Serial No.(s): A030417

I confirm the undersigned representative of Stertil UK Ltd has provided the following:

1. Provided operational training on each of the items listed above YES / NO
2. Demonstrated the operation of safety devices where fitted YES / NO

Customer print:

Sign:

Stertil UK print: S. PEABODY

Sign:

N.B. If a further/certified demonstration or training is requied please contact the installation department.

Stertil UK Ltd, Stertil House, Unit A, Brackmills Business Park, Caswell Road, Northampton NN4 7PW
Tel: 0870 770 0471 Fax: 01604 662 010 Email: info@stertil.co.uk Website: www.stertil.co.uk

COPIES TO: Green - Project File - Yellow - Customer

ELECTRICAL INSTALLATION SHEET & TEST CERTIFICATE

Installation Order No: No: 194101

DATE	COMPUTER REF No	STERTIL ENGINEER
13/7/22	10334433	Ricky woodward

SITE NAME AND ADDRESS	LOCATION OF EQUIPMENT (BAY NO.)
Plot 9 Segro East midlands gateway Derby DE74 2DL	mezzanine

Please ensure any additional checks which are required are carried out in accordance with the installation manual and spec sheets.

ELECTRICAL SUPPLY		Stertil UK assume that the requested supply for our equipment complies with current BS EN 7671 Wiring Regulations.		
1 PH 230v	3 PH 400v	PROTECTIVE DEVICE TYPE BS-EN	NOM. RATING (A)	

EQUIPMENT	MAX CPC CONTINUITY (OHMS)	VISUAL INSPECTION OF ELECTRICAL INSTALLATION SATISFACTORY	EQUIPMENT INCLUDING ALL SAFETY DEVICES WORKING CORRECTLY	SERIAL NUMBER
Door	N/A	✓	✓	9B72597A
Dock leveller	—			
Containment	N/A	✓	N/A.	
Shelter	—			
Combilok	—			
Dock light	—			
Traffic light	—			

COMMENTS

Commision Inr flexiedge door with radars WDD connected and tested OK

INSPECTION AND TESTING

I certify that the electrical installation detailed above has been, inspected, tested and commisioned, to comply with the current edition of regulations for electrical installations and the manufacturers guidelines.

Stertil UK Signature:

Print:

Test instrument Serial No.(s):

I confirm the undersigned representative of Stertil UK Ltd has provided the following:

1. Provided operational training on each of the items listed above — YES / (NO)
2. Demonstrated the operation of safety devices where fitted — YES / (NO)

Customer print:

Sign:

Stertil UK print: Ricky woodward

Sign:

N.B. If a further/certified demonstration or training is requied please contact the installation department.

Stertil UK Ltd, Stertil House, Unit A, Brackmills Business Park, Caswell Road, Northampton NN4 7PW
Tel: 0870 770 0471 Fax: 01604 662 010 Email: info@stertil.co.uk Website: www.stertil.co.uk

COPIES TO: Green - Project File - Yellow - Customer

stertil®

ELECTRICAL INSTALLATION SHEET & TEST CERTIFICATE

Installation Order No: No: 192199

DATE	COMPUTER REF No	STERTIL ENGINEER
23-JUNE-'22	1033433B	

SITE NAME AND ADDRESS	LOCATION OF EQUIPMENT (BAY NO.)
PLOT 9 SEGRO PARK EMG	WAREHOUSE FASTACTION
DERBY	DOOR 1 12
DE74 2DL	

Please ensure any additional checks which are required are carried out in accordance with the installation manual and spec sheets.

ELECTRICAL SUPPLY		Stertil UK assume that the requested supply for our equipment complies with current BS EN 7671 Wiring Regulations.	
1 PH 230v	3 PH 400v	PROTECTIVE DEVICE TYPE BS-EN	NOM. RATING (A)
✓		UNKNOWN	UNKNOWN.

EQUIPMENT	MAX CPC CONTINUITY (OHMS)	VISUAL INSPECTION OF ELECTRICAL INSTALLATION SATISFACTORY	EQUIPMENT INCLUDING ALL SAFETY DEVICES WORKING CORRECTLY	SERIAL NUMBER
Door	0.01	✓	✓	GB72597C &
Dock leveller				GB72597A.
Containment				
Shelter				
Combilok				
Dock light				
Traffic light				

COMMENTS

Commision only installation by others;
2x Roller door with Dynaco 5 control.
Complete & fit for use.

INSPECTION AND TESTING

I certify that the electrical installation detailed above has been, inspected, tested and commisioned, to comply with the current edition of regulations for electrical installations and the manufacturers guidelines.

Stertil UK Signature:

Print: S. PEABODY

Test instrument Serial No.(s): A030417

I confirm the undersigned representative of Stertil UK Ltd has provided the following:

1. Provided operational training on each of the items listed above — YES / (NO)
2. Demonstrated the operation of safety devices where fitted — YES / (NO)

Customer print:

Sign:

Stertil UK print: S. PEABODY

Sign:

N.B. If a further/certified demonstration or training is requied please contact the installation department.

Stertil UK Ltd, Stertil House, Unit A, Brackmills Business Park, Caswell Road, Northampton NN4 7PW
Tel: 0870 770 0471 Fax: 01604 662 010 Email: info@stertil.co.uk Website: www.stertil.co.uk

COPIES TO: Green - Project File - Yellow - Customer

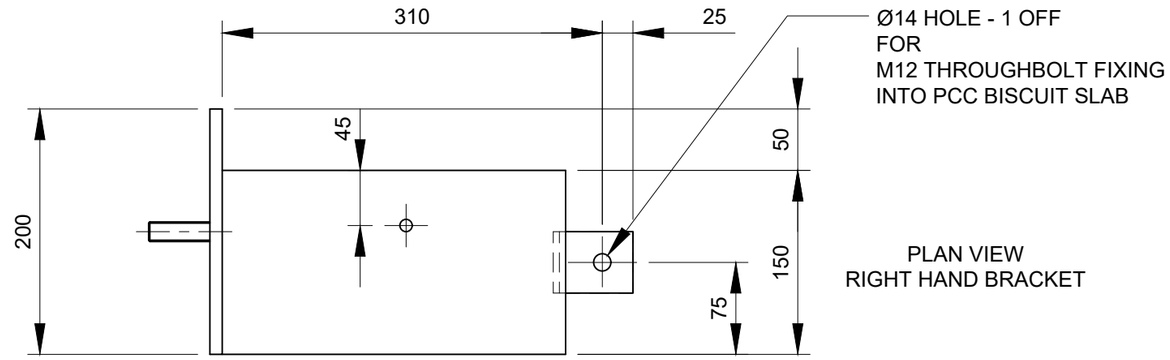
Cleaning and Maintenance Regimes

This maintenance schedule for P20-010 Bardon 2 Unit 2 to be followed from PC date (16th April 2021) year on year to ensure all plant and equipment is kept within warranty.

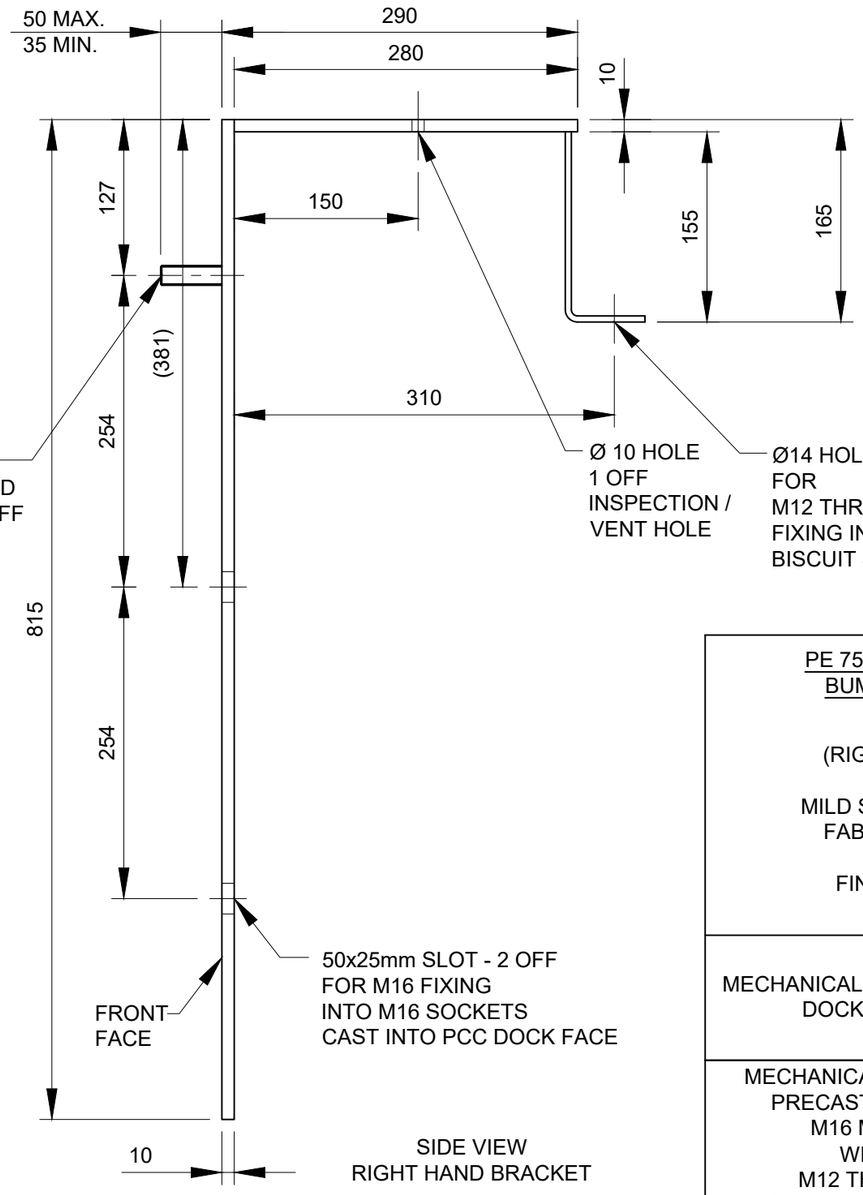
Please keep a log of these inspections so that records can be checked should an issue arise.

Code; ✓ **Blue – Recommended** ✓ **Red – To Maintain Warranty**

Item	Daily	Weekly	Monthly	3 Months	6 Months	9 Months	Annually	5 Yearly	Certificates	Regime
Docks and Doors					✓		✓			Routine Maintenance

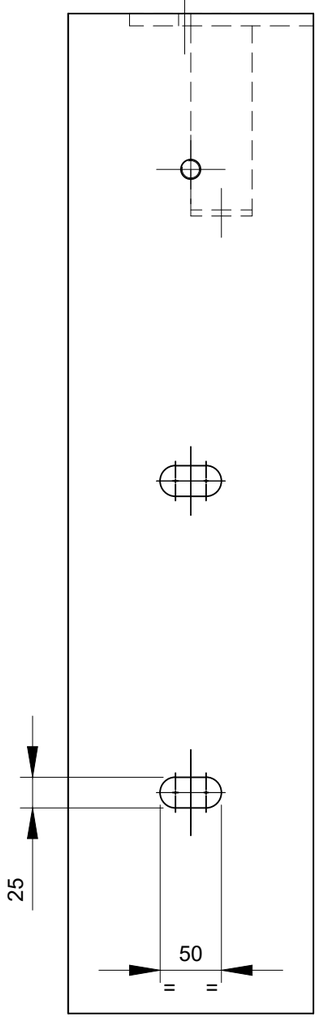


PLAN VIEW
RIGHT HAND BRACKET

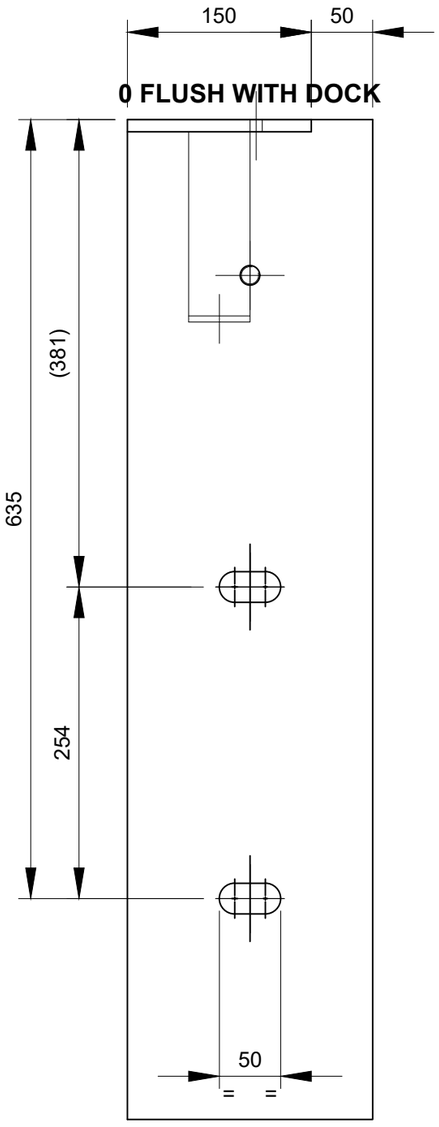


SIDE VIEW
RIGHT HAND BRACKET

0 FLUSH WITH DOCK



FRONT VIEW
RIGHT HAND BRACKET



BACK VIEW
RIGHT HAND BRACKET

PE 750 - 0 FLUSH with DOCK
BUMPER BRACKET (RH)

(RIGHT HAND BRACKET)

MILD STEEL PLATE x 10 THK.
FABRICATED & WELDED

FINISH - BLACK PAINT

MECHANICAL FIX TO PRE-CAST CONCRETE
DOCK FACE & BISCUIT SLAB

MECHANICAL FIXING FOR BRACKET TO
PRECAST CONCRETE DOCK FACE
M16 MECHANICAL FIXINGS
WITH Ø60 WASHER &
M12 THROUGHBOLT FIXINGS
INTO PRECAST CONCRETE BISCUIT SLAB

0 FLUSH WITH DOCK

IF IN DOUBT - ASK

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS MUST BE CHECKED ON SITE

REFER TO
STERTIL QUOTE / SPEC. SHEET
FOR COMPLETE DETAILS

QUANTITY

4 OFF

ISSUE	DESCRIPTION	DATE BY
P01	FIRST ISSUE	C.SCOTT 24.08.21

REVISIONS

CLIENT / CONTRACTOR

WINVIC CONSTRUCTION LTD.

PROJECT / JOB TITLE

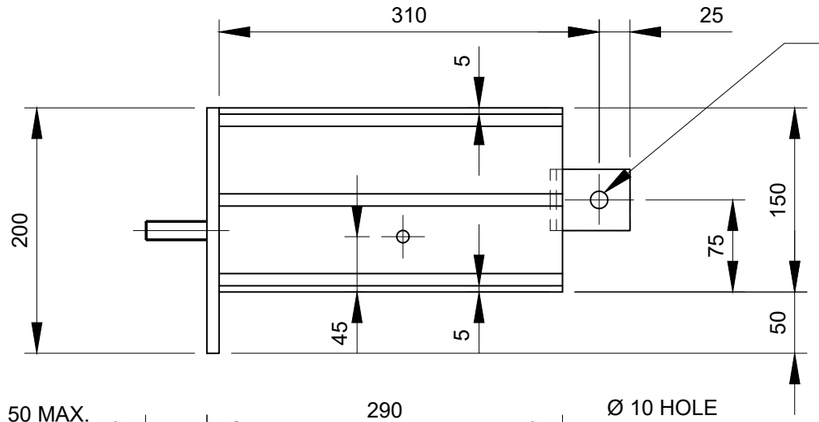
PLOT 9,
EAST MIDLANDS GATEWAY

DRAWING TITLE

BUMPER BRACKETS
for PE750 DOCK BUMPERS.
(175 DOCK SLAB)
(FLUSH with dock height)

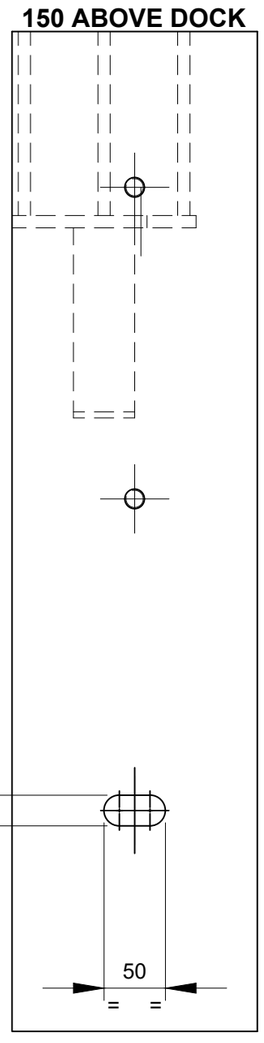
DRAWING NUMBER	REVISION
1033433-004-BB	P01
DRAWN C.SCOTT-	DATE 24.08.2021
CHECKED -	DATE .
SCALE 1:2.5 @ A1 1:5 @ A3	
UNITS METRIC (MILLIMETRES)	

STERTIL UK LIMITED.
STERTIL HOUSE
UNIT A
BRACKMILLS BUSINESS PARK
CASWELL ROAD
NORTHAMPTON
NN4 7PW
Tel:- 01604 677384 Fax:- 01604 765181

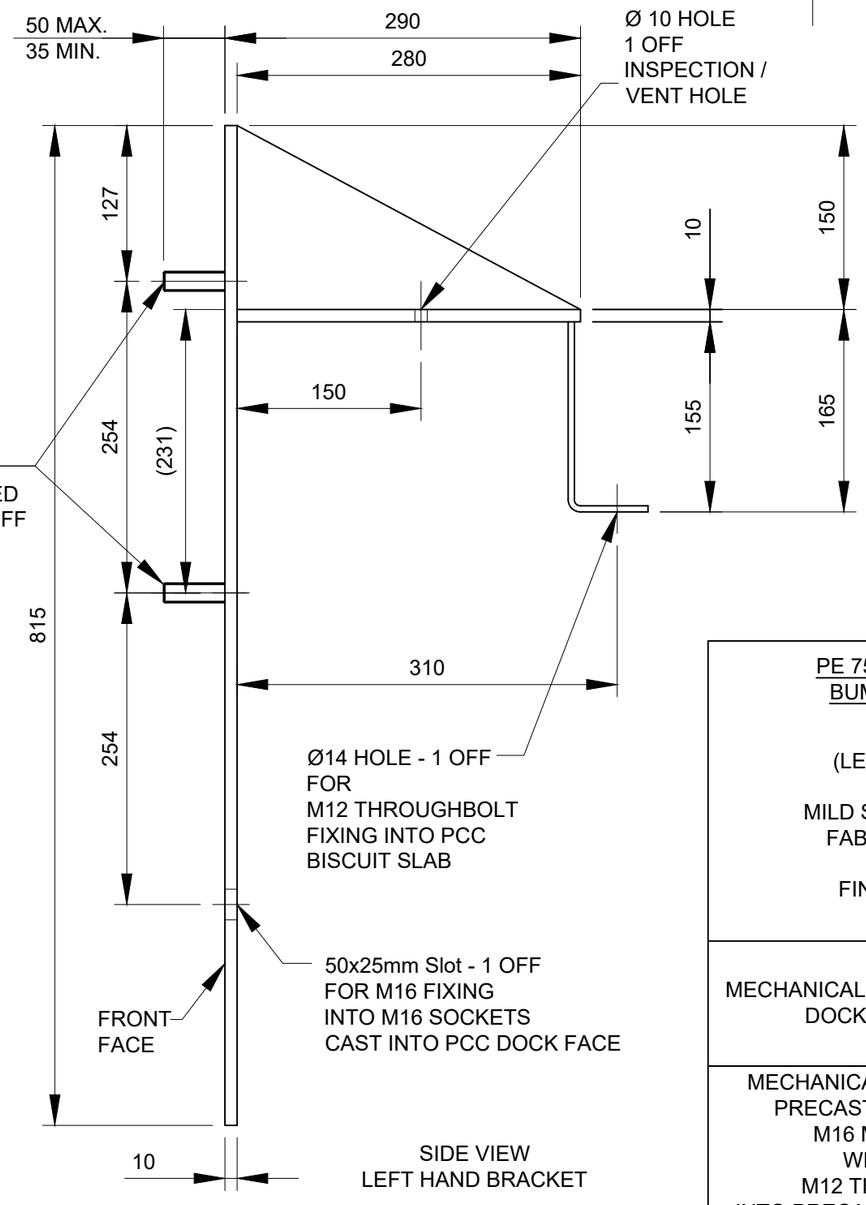


Ø14 HOLE - 1 OFF
FOR
M12 THROUGHBOLT FIXING
INTO PCC BISCUIT SLAB

PLAN VIEW
LEFT HAND BRACKET



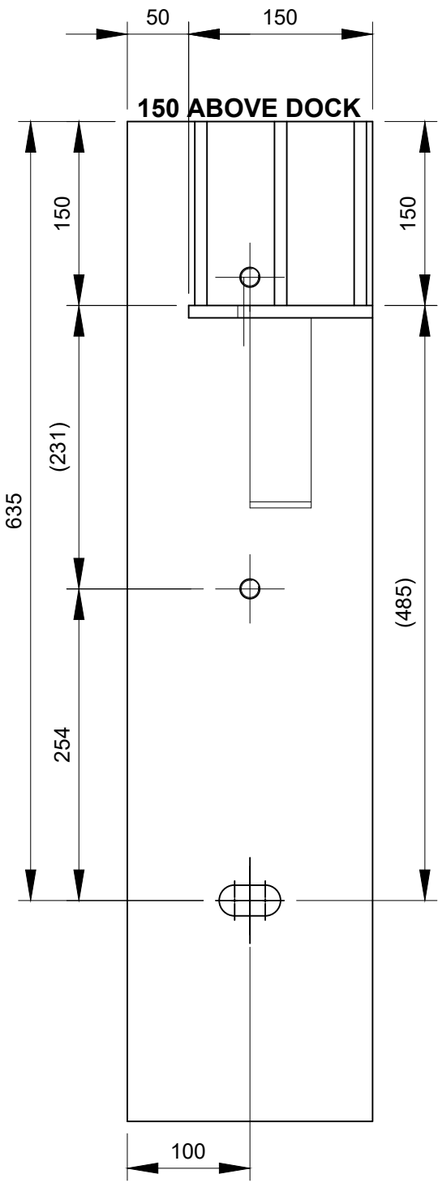
FRONT VIEW
LEFT HAND BRACKET



SIDE VIEW
LEFT HAND BRACKET

150 ABOVE DOCK

PE 750 - 150 ABOVE DOCK BUMPER BRACKET (LH)
(LEFT HAND BRACKET) MILD STEEL PLATE x 10 THK. FABRICATED & WELDED FINISH - BLACK PAINT
MECHANICAL FIX TO PRE-CAST CONCRETE DOCK FACE & BISCUIT SLAB
MECHANICAL FIXING FOR BRACKET TO PRECAST CONCRETE DOCK FACE M16 MECHANICAL FIXINGS WITH Ø60 WASHER & M12 THROUGHBOLT FIXINGS INTO PRECAST CONCRETE BISCUIT SLAB



BACK VIEW
LEFT HAND BRACKET

IF IN DOUBT - ASK

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS MUST BE CHECKED ON SITE

REFER TO
STERTIL QUOTE / SPEC. SHEET
FOR COMPLETE DETAILS

QUANTITY

4 OFF

ISSUE	DESCRIPTION	DATE BY
P01	FIRST ISSUE	C.SCOTT 24.08.2021

REVISIONS

CLIENT / CONTRACTOR

WINVIC CONSTRUCTION LTD.

PROJECT / JOB TITLE

PLOT 9,
EAST MIDLANDS GATEWAY

DRAWING TITLE

BUMPER BRACKETS
for PE750 DOCK BUMPERS.
(175 DOCK SLAB)
(RAISED +150 above dock height)

DRAWING NUMBER	1033433-005-BB
REVISION	P01
DRAWN	C.SCOTT-
DATE	24.08.2021
CHECKED	-
DATE	.
SCALE	1:2.5 @ A1 1:5 @ A3
UNITS	METRIC (MILLIMETRES)

STERTIL UK LIMITED.
STERTIL HOUSE
UNIT A
BRACKMILLS BUSINESS PARK
CASWELL ROAD
NORTHAMPTON
NN4 7PW
Tel:- 01604 677384 Fax:- 01604 765181

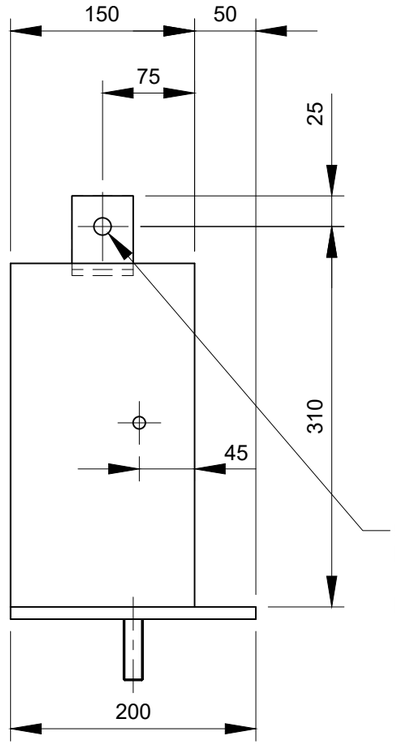
PE 450 LEFT & RIGHT HAND BRACKET - FLUSH WITH DOCK

(LEFT & RIGHT HAND BRACKET = 1 PAIR)

MILD STEEL PLATE x 10 THK.
FABRICATE & WELD

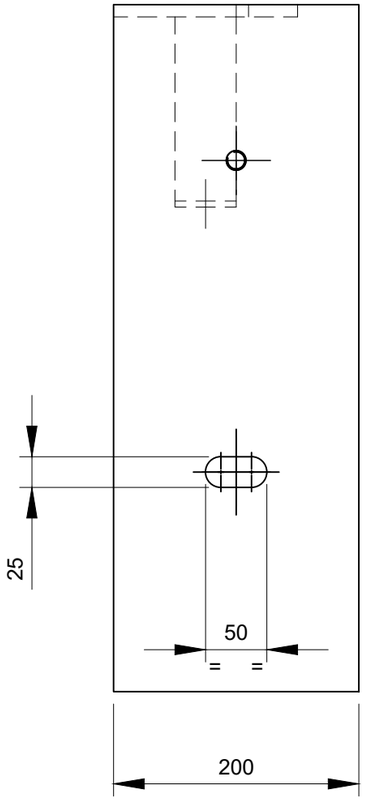
FINISH - BLACK PAINT

MECHANICAL FIX TO PRE-CAST CONCRETE
DOCK FACE & BISCUIT SLAB

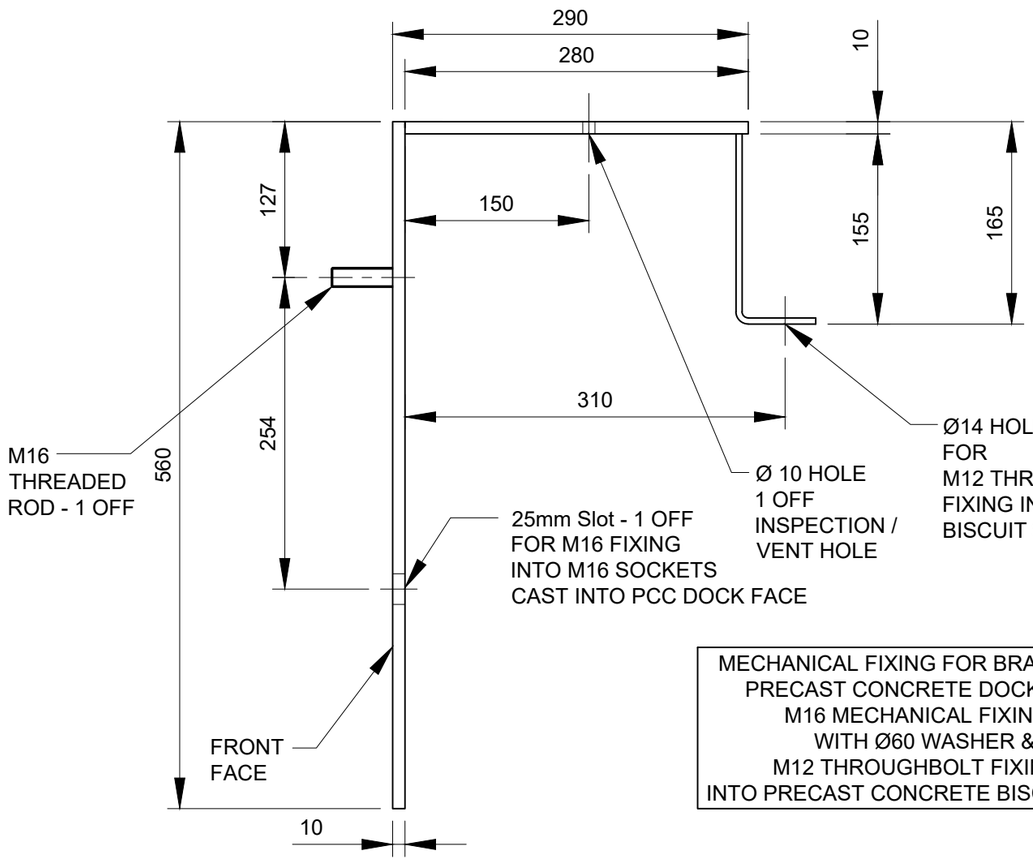


Ø14 HOLE - 1 OFF
FOR
M12 THROUGHBOLT FIXING
INTO PCC BISCUIT SLAB

0 FLUSH WITH DOCK



FRONT VIEW
LEFT HAND BRACKET



M16
THREADED
ROD - 1 OFF

Ø 10 HOLE
1 OFF
INSPECTION /
VENT HOLE

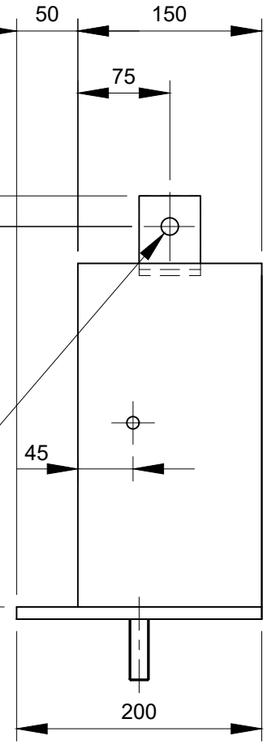
Ø14 HOLE - 1 OFF
FOR
M12 THROUGHBOLT
FIXING INTO PCC
BISCUIT SLAB

25mm Slot - 1 OFF
FOR M16 FIXING
INTO M16 SOCKETS
CAST INTO PCC DOCK FACE

FRONT
FACE

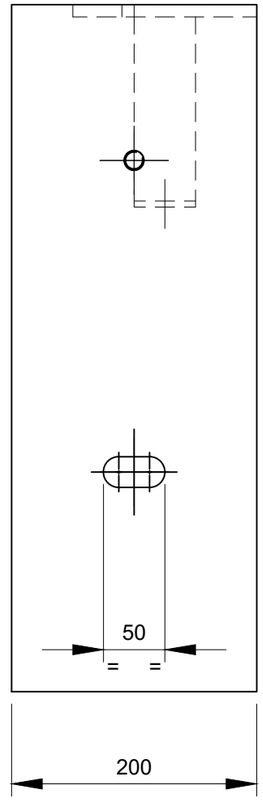
MECHANICAL FIXING FOR BRACKET TO
PRECAST CONCRETE DOCK FACE
M16 MECHANICAL FIXINGS
WITH Ø60 WASHER &
M12 THROUGHBOLT FIXINGS
INTO PRECAST CONCRETE BISCUIT SLAB

SIDE VIEW FOR
LEFT & RIGHT HAND BRACKET



Ø14 HOLE - 1 OFF
FOR
M12 THROUGHBOLT FIXING
INTO PCC BISCUIT SLAB

0 FLUSH WITH DOCK



FRONT VIEW
RIGHT HAND BRACKET

IF IN DOUBT - ASK

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS MUST BE CHECKED ON SITE

REFER TO
STERTIL QUOTE / SPEC. SHEET
FOR COMPLETE DETAILS

QUANTITY

17 PAIRS

ISSUE	DESCRIPTION	DATE BY
P01	FIRST ISSUE	C.SCOTT 24.08.2021

REVISIONS

CLIENT / CONTRACTOR

WINVIC CONSTRUCTION LTD.

PROJECT / JOB TITLE

PLOT 9,
EAST MIDLANDS GATEWAY

DRAWING TITLE

BUMPER BRACKETS
for PE450 DOCK BUMPERS.
(175 DOCK SLAB)
(FLUSH with dock height)

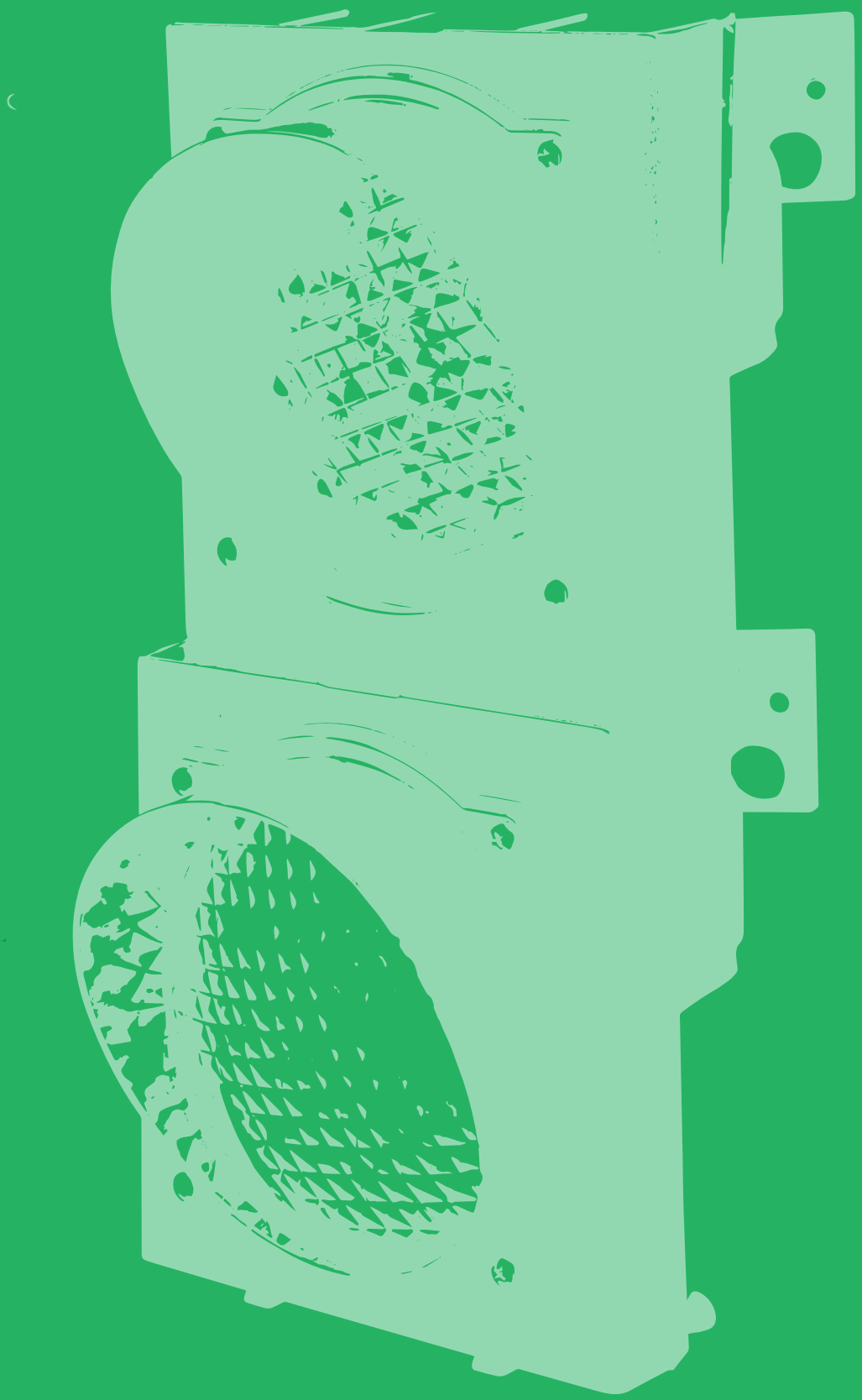
DRAWING NUMBER	REVISION
1033433-006-BB	P01
DRAWN C.SCOTT-	DATE 24.08.2021
CHECKED -	DATE .
SCALE 1:2.5 @ A1 1:5 @ A3	
UNITS METRIC (MILLIMETRES)	

Stertil®

STERTIL UK LIMITED.
STERTIL HOUSE
UNIT A
BRACKMILLS BUSINESS PARK
CASWELL ROAD
NORTHAMPTON
NN4 7PW
Tel:- 01604 677384 Fax:- 01604 765181

Verkeerslicht / Traffic light / Verkehrsampel / Feu de circulation - Pro-Line CND1

MONTAGEHANDLEIDING - ASSEMBLY MANUAL - MONTAGEANLEITUNG - MANUEL DE MONTAGE



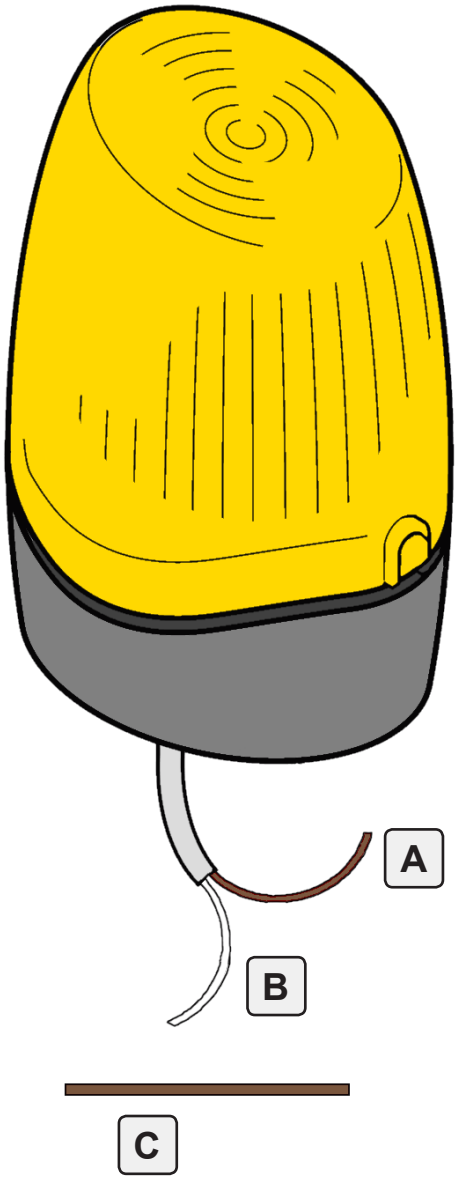
VERSION 1219

4233

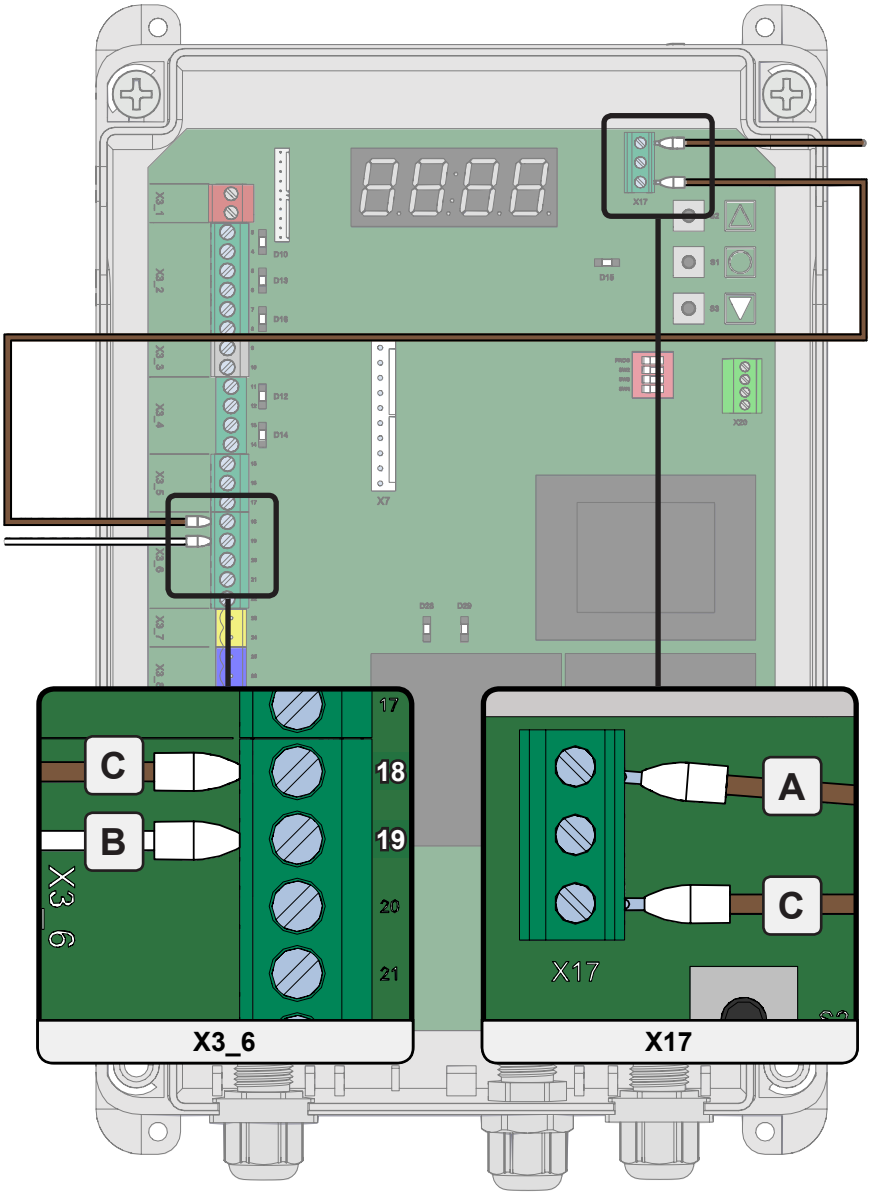
Inhoud / Inhalt / Index

Flitslicht / Flashlight / Blitzlicht / Gyrophare orange - 4283

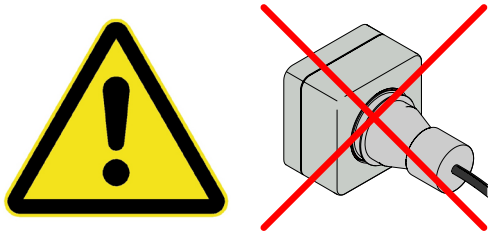
Pro-Line CND1 - Flitslicht / Flashlight / Blitzlicht / Gyrophare orange - 4283



A = 24V +
B = 24V -
C = Connector/ Verbinder / Connecteur

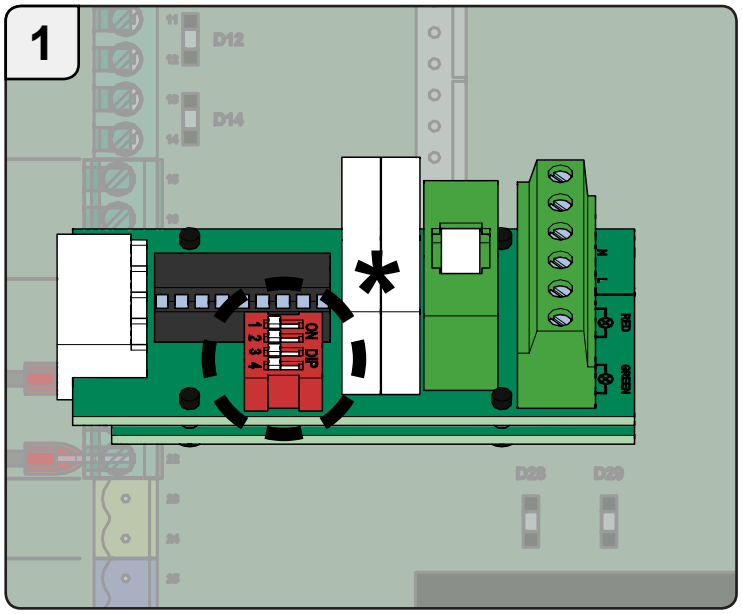


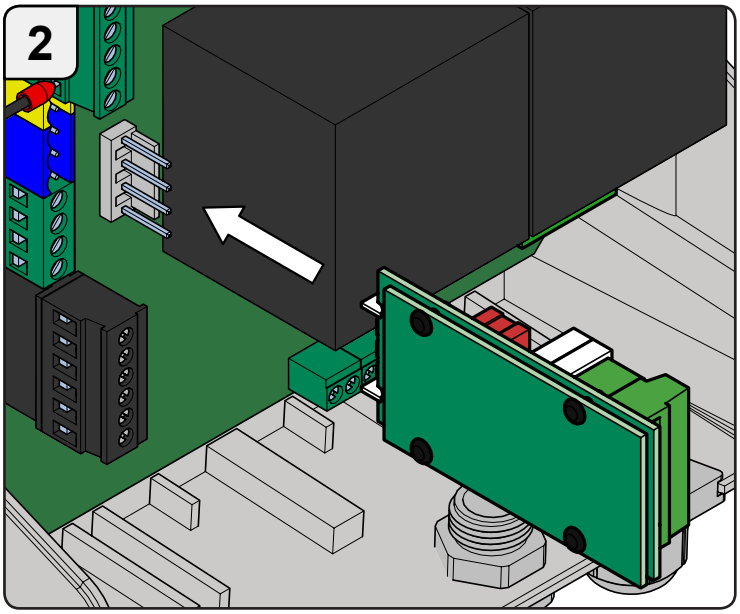
Pro-Line CND1 - Montage insteekkaart verkeerslichten NL

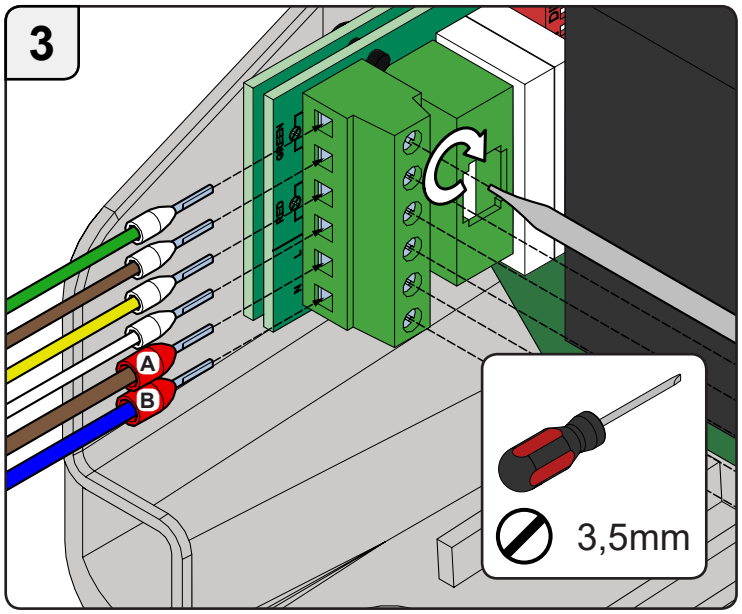


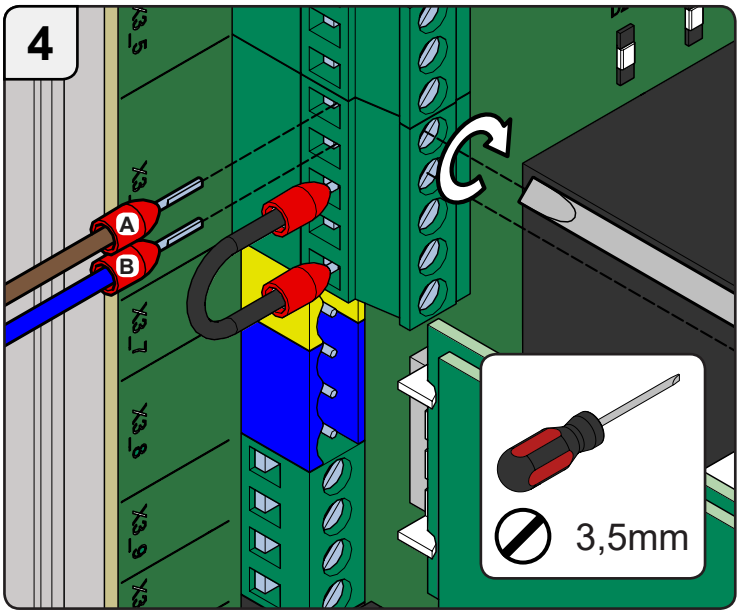
LET OP! CEE stekker niet aansluiten!

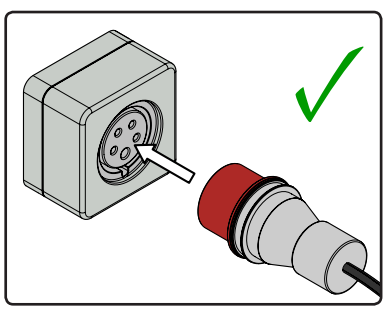
LET OP! Deze handleiding is alleen geldig voor verkeerslichten op 24V aansluiting!









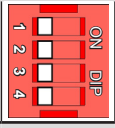
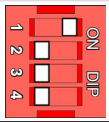
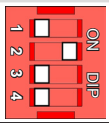
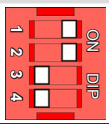
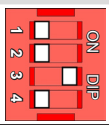
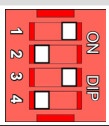
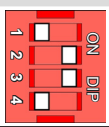
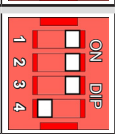
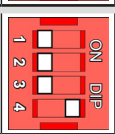
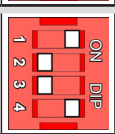
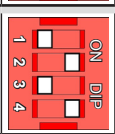
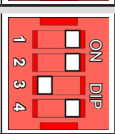
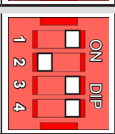
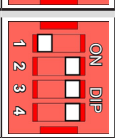
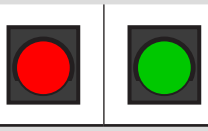
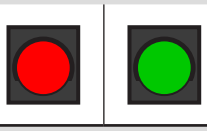
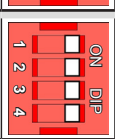


Sluit CEE stekker aan.

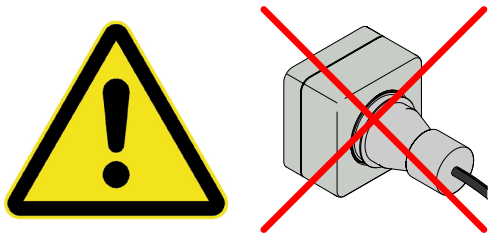
* Zie volgende pagina voor de mogelijke configuraties

Specificatie	Waarde
Stroomvoorziening	24Vdc
Vermogen voor lampen	Max. 230 Vac / 24 Vdc
Opmerking: Pas alleen LED lampen toe bij gebruik van de ,,flitsend licht" functie.	
Zekering	2A

Pro-Line CND1 - Verkeerslichten instellen NL

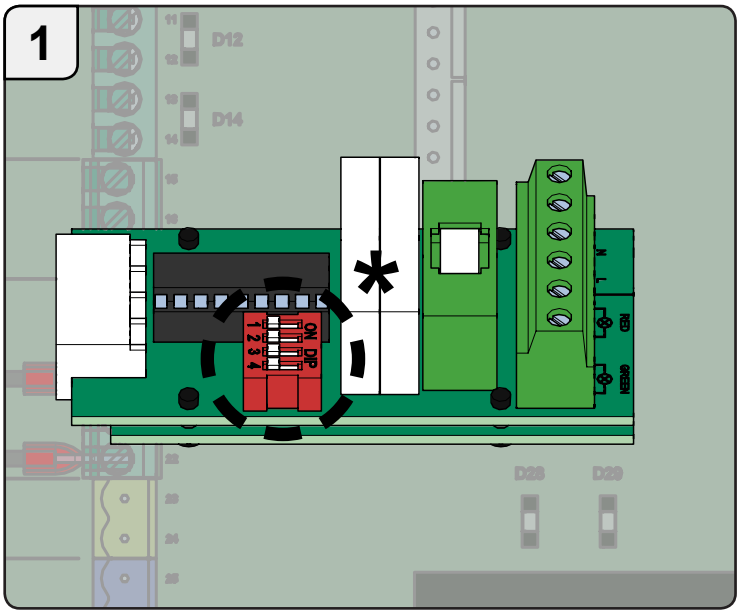
Naam	Schake-laar	Deur openend	Deur open	Deur sluitend	Deur gesloten	Overig
1 **L1**						
2 **L1G**						
3 **L1R**						
4 **L1RG**						
5 **L2**						
6 **L2G**						
7 **L2R**						
8 **L2RG**						
9 **L3**						Vertraging met sluiten vanuit open positie
10 **L3G**						Vertraging met sluiten vanuit open positie
11 **L3R**						Vertraging met sluiten vanuit open positie
12 **L3RG**						Vertraging met sluiten vanuit open positie
13 **MODE 14**						
14 **MODE 15**						
15 **LL**						

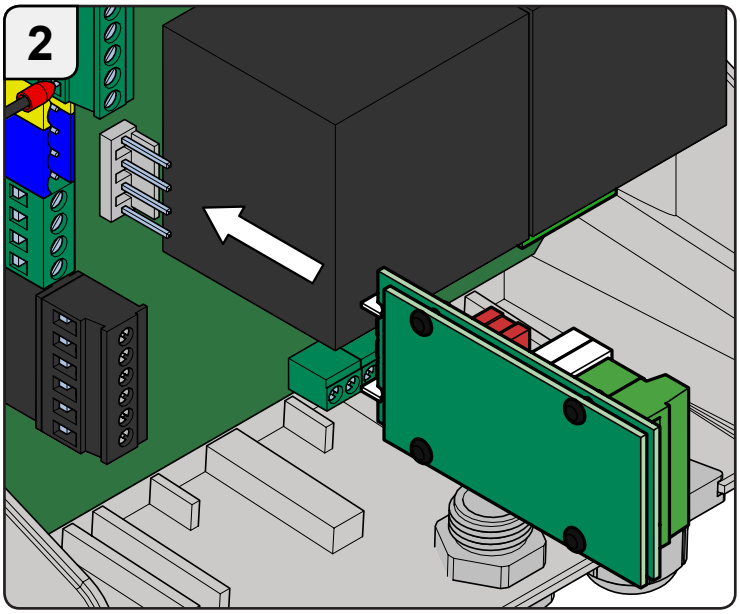
Pro-Line CND1 - Montage Steckleiterplatte Torstatus-Signalleuchten DE

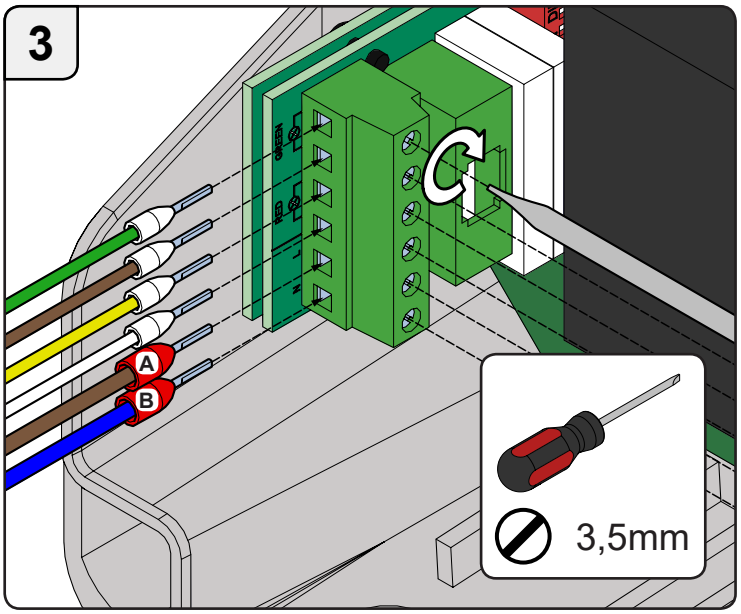


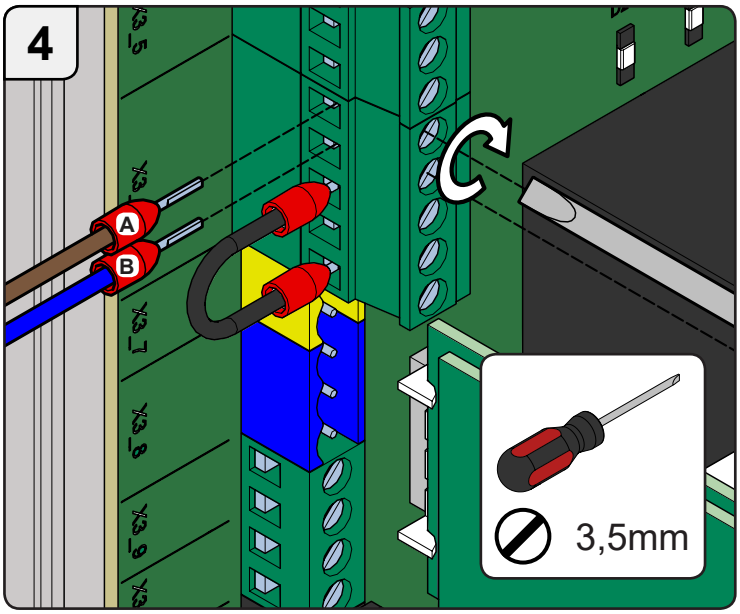
ACHTUNG! CEE-Stecker nicht anschließen!

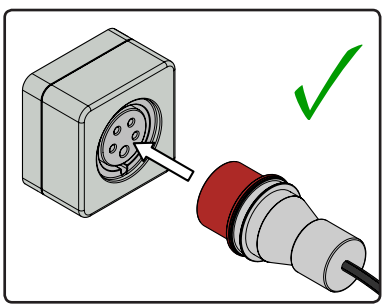
ACHTUNG! Diese Gebrauchsanweisung gilt nur für Torstatus-Signalleuchten mit einem 24 V-Anschluss!









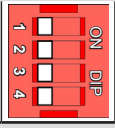
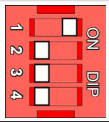
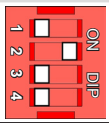
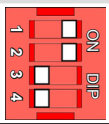
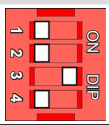
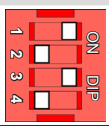
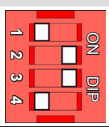
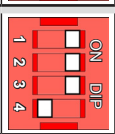
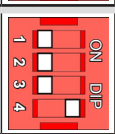
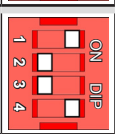
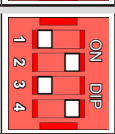
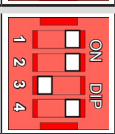
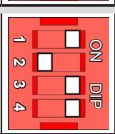
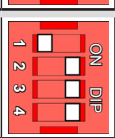
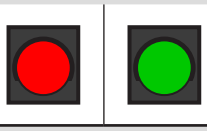
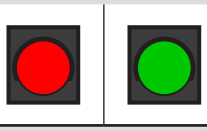
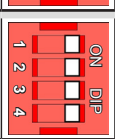


CEE-Stecker anschließen.

* Siehe nächste Seite für mögliche Konfigurationen

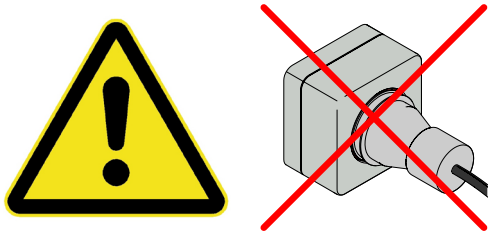
Typenspezifikation	Wert
Netzteil	24Vdc
Ausgangsleistung für Leuchten	Max. 230 Vac / 24 Vdc
Anmerkung: Bei Verwendung der „Blinklicht”-Option, nur LED-Leuchten verwenden!	
Sicherung	2A

Pro-Line CND1 - Torstatus-Signalleuchten einstellen DE

Name	Schalter	Tor öffnet sich	Tor geöffnet	Tor schließt sich	Tor geschlossen	Sonstiges
1 **L1**						
2 **L1G**						
3 **L1R**						
4 **L1RG**						
5 **L2**						
6 **L2G**						
7 **L2R**						
8 **L2RG**						
9 **L3**						Verzögerung beim Schließen in geöffneter Position
10 **L3G**						Verzögerung beim Schließen in geöffneter Position
11 **L3R**						Verzögerung beim Schließen in geöffneter Position
12 **L3RG**						Verzögerung beim Schließen in geöffneter Position
13 **MODE 14**						
14 **MODE 15**						
15 **LL**						

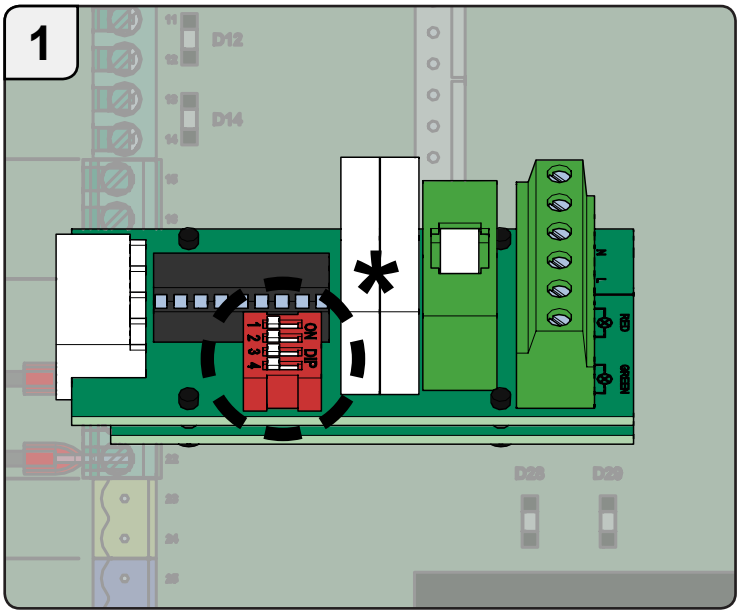
Pro-Line CND1 - Installing traffic lights - insert card

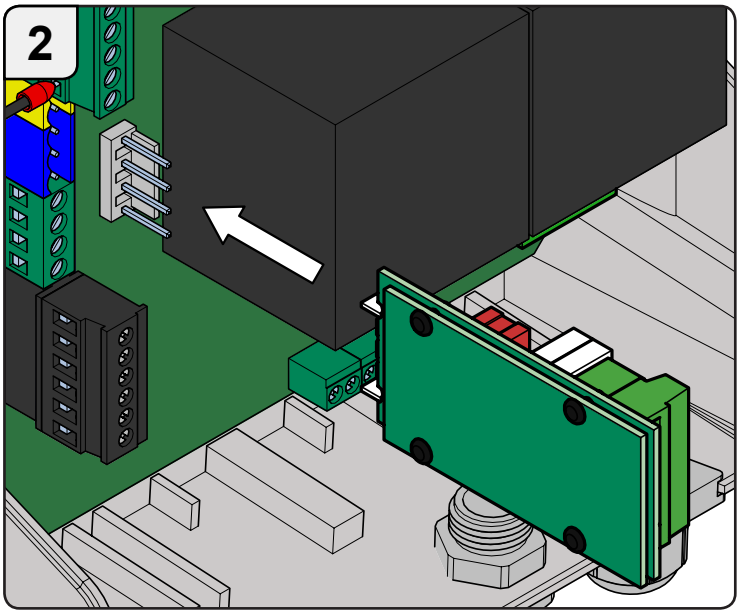
EN

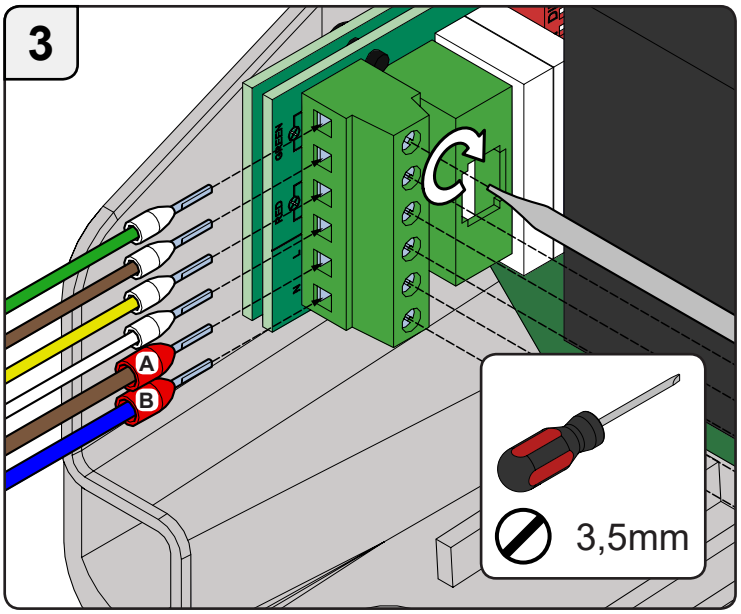


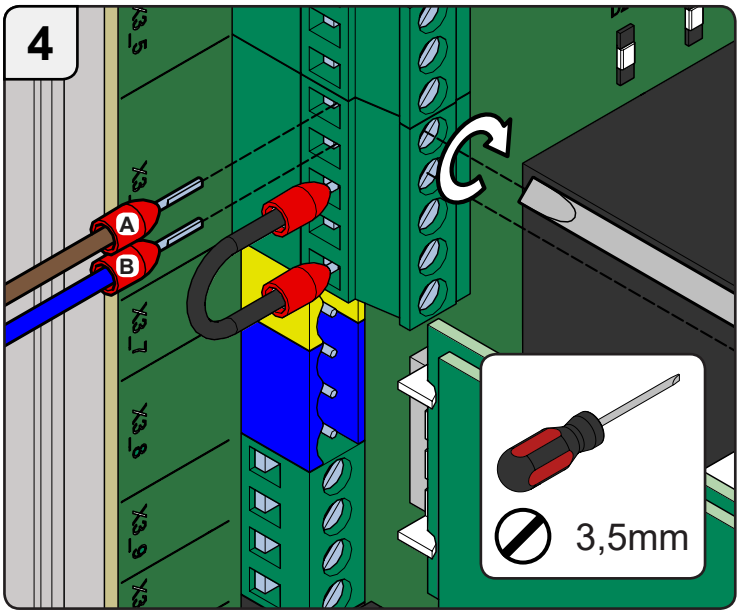
NOTE! Do not plug in CEE plug yet !

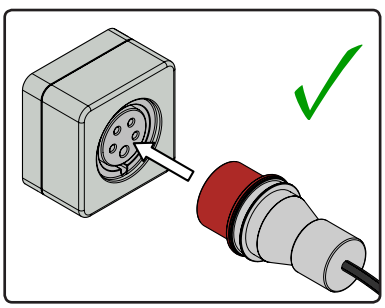
NOTE! These instructions only apply to 24V traffic lights!









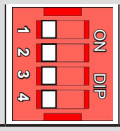
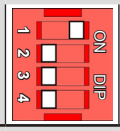
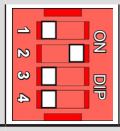
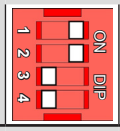
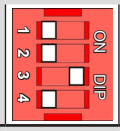
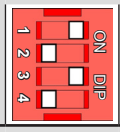
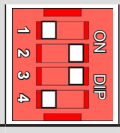
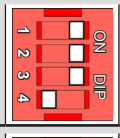
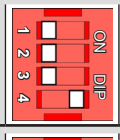
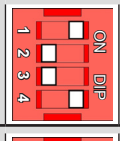
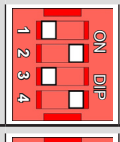
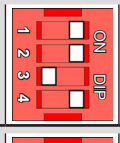
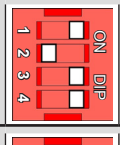
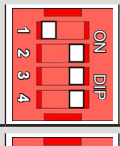
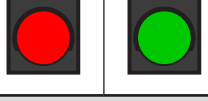
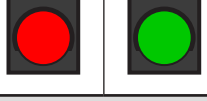
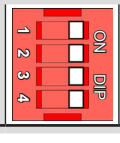


Plug in the CEE plug.

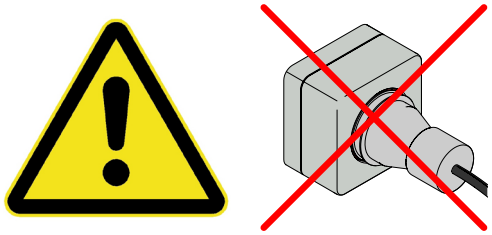
* See next page for the possible configurations

Specification type	Value
Power supply	24Vdc
Power output for lamps	Max. 230 Vac / 24 Vdc
Note: When using the ,,flashing light" option, only use LED lamps!	
Fuse	2A

Pro-Line CND1 - Programming traffic light EN

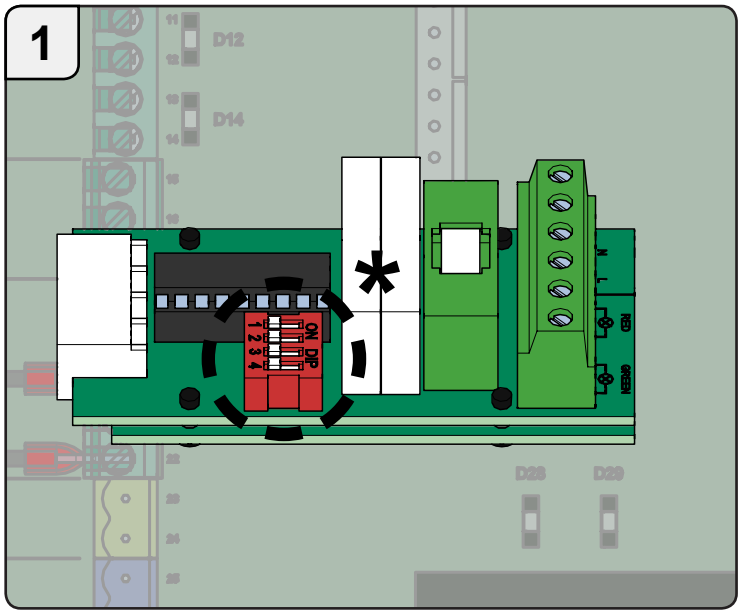
Name	Switch	Door opening	Door open	Door closing	Door closed	Other
1 **L1**						
2 **L1G**						
3 **L1R**						
4 **L1RG**						
5 **L2**						
6 **L2G**						
7 **L2R**						
8 **L2RG**						
9 **L3**						Delay when closing from an open position
10 **L3G**						Delay when closing from an open position
11 **L3R**						Delay when closing from an open position
12 **L3RG**						Delay when closing from an open position
13 **MODE 14**						
14 **MODE 15**						
15 **LL**						

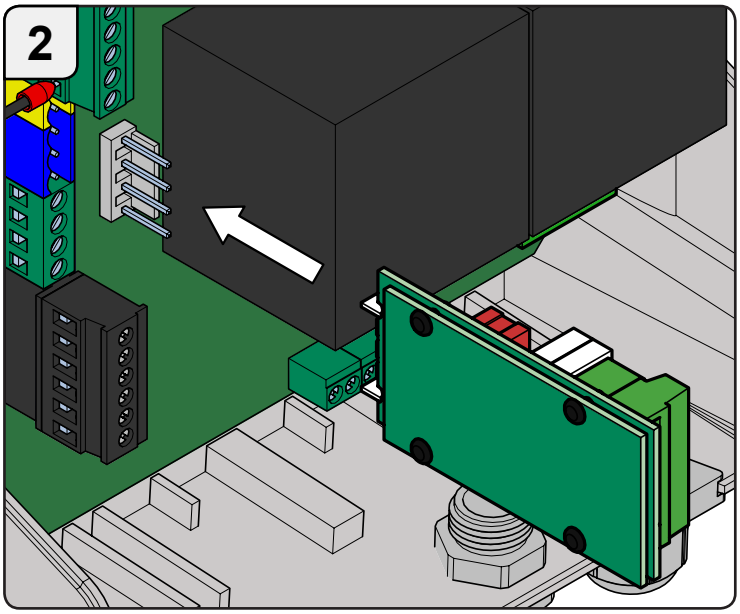
Pro-Line CND1 - Pose de la carte enfichable de feux de circulation FR

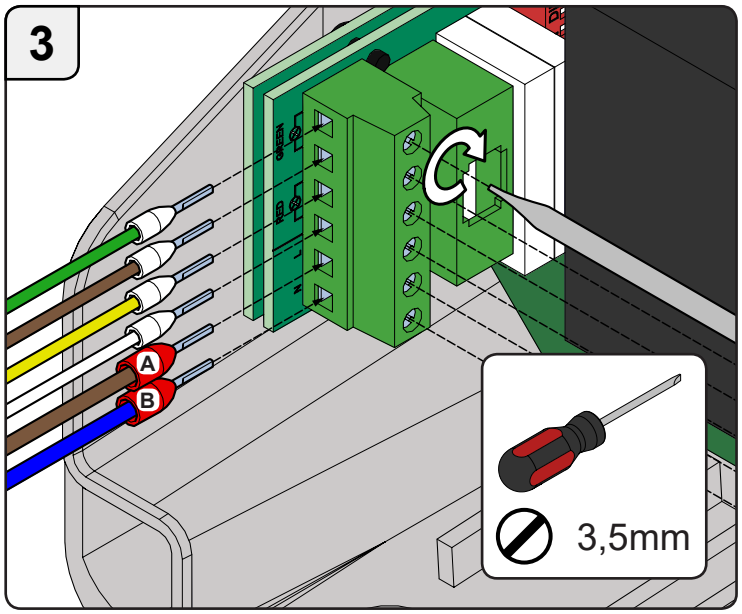


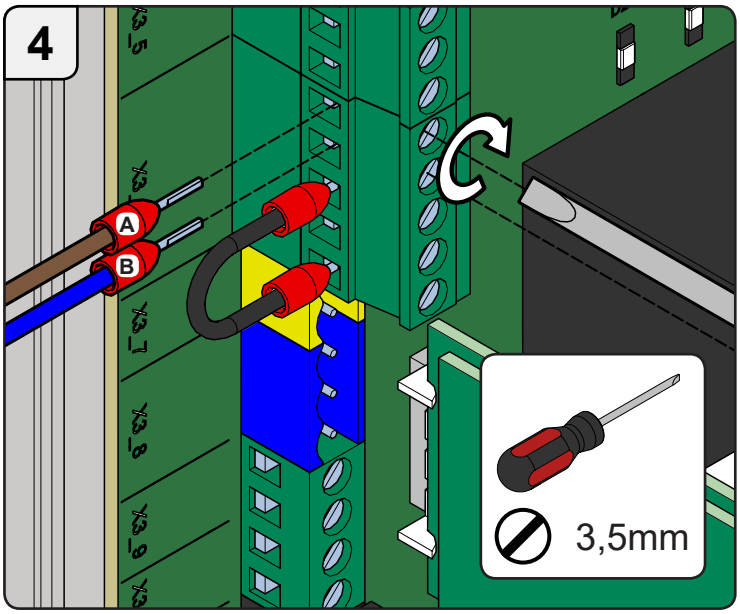
ATTENTION ! Ne pas brancher la prise CEE !

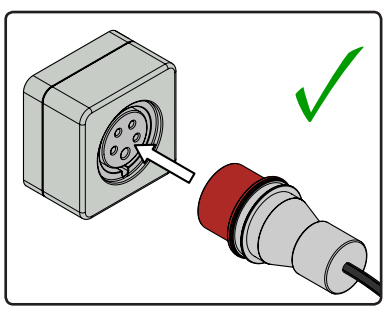
ATTENTION ! Ce manuel est valable uniquement pour les feux de signalisation fonctionnant en 24 V !









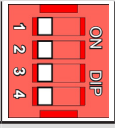
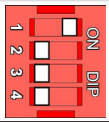
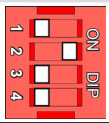
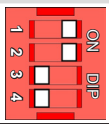
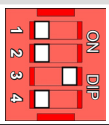
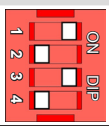
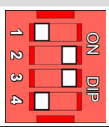
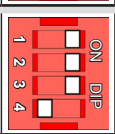
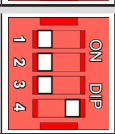
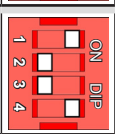
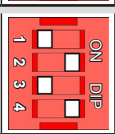
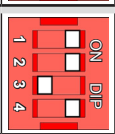
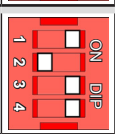
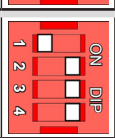
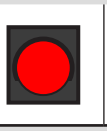
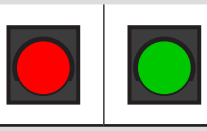
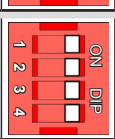


Brancher la prise CEE .

* Voir page suivante au sujet des configurations possibles

Spécifications par type	Valeur
Alimentation électrique	24Vdc
Puissance de sortie pour les lampes	Max. 230 Vac / 24 Vdc
N.B. : Pour l'option « feu clignotant », utiliser uniquement des lampes à LED !	
Fusible	2A

Pro-Line CND1 - Réglage signaux lumineux FR

Nom	Commu-tateur	Ouverture de porte	Porte ouverte	Fermeture de porte	Porte fermée	Divers
1 **L1**						
2 **L1G**						
3 **L1R**						
4 **L1RG**						
5 **L2**						
6 **L2G**						
7 **L2R**						
8 **L2RG**						
9 **L3**						Retard de fermeture depuis position ouverte
10 **L3G**						Retard de fermeture depuis position ouverte
11 **L3R**						Retard de fermeture depuis position ouverte
12 **L3RG**						Retard de fermeture depuis position ouverte
13 **MODE 14**						
14 **MODE 15**						
15 **LL**						

LED Dock Light

Our LED Dock Light consists of a bright LED lamp on a robust extendable arm. It is designed specifically for illuminating the inside of a trailer during loading and unloading.

It utilises modern and energy efficient LED six watt light heads, offers 480 lumens and a bulb life in excess of 50,000 hours. It also incorporates a 23v transformer. The lamp is mounted on powder coated articulated arms that have been designed to fold down if struck by a loading bay door.

Specifications

Type	EU 6
Light Source	LED
Power	6 * 1 W
Work Voltage	AC (85V-265V) / (50-60HZ)
Power Factor (PF)	> 0.9
Light Efficiency	> 100 lm/w
Lumens	> 480 LM
Fixture Efficiency	> 90%
View Angle	60 degrees
Colour Instruction	> 80
Colour Temperature (CCT)	6000-6500 K
Life Time	> 50,000 hrs
Luminance Decrease	Keep Lighting 1000hours Decrease 1%
IP Grade	IP65
	No UV or IR light radiation
	CE Certification

Dock Leveller

Type SF

Installation & Service Manual

06000805

A member of the Stertil Group

Contents

1 ABOUT THIS MANUAL

1.1 Copyright

1.2 Disclaimer

The English language version is the original version. All other language versions are translations of the original English language version.

Stertil B.V. reserves the right to modify the construction and/or configuration of its products at any time without any obligation to modify products which have been previously supplied. The data provided in this manual is based on the most recent information. This data may be subject to change at a later date, without prior notification. For information regarding adjustment, maintenance or repair which is not described in this document, please contact the Customer Service department of Stertil B.V.

The information in this document concentrates solely on use of the product as intended by the manufacturer. In the event that the products, parts of the products or procedures are applied in any way other than that described in this manual, then confirmation must be obtained as to the correctness and suitability of that use.

No rights may be derived from this manual or from the documentation supplied together with the product. Supplier is bound by no agreement other than the order confirmation.

This manual contains useful and important information on the correct operation and proper maintenance of the product. Furthermore, the manual contains important instructions for installing the product and instructions for preventing possible accidents and serious harm while the machine is running. We have taken all possible steps to make this manual as correct and as complete as possible. Should you discover any errors or omissions, please bring this to the attention of your local Stertil service department or distributor, see section Technical support (on page 51), so that we can make amendments. This will enable us to improve our documentation.

The instructions in this manual do not take into account different national regulations and laws. When operating the machine, it is the sole responsibility of the user to make sure that all applicable local laws and regulations are obeyed.

1.3 Guarantee and liability

Please refer to the order confirmation and the delivery terms and conditions for the applicable guarantee and liability.

1.4 Recommissioning

In the event of a recommissioning (e.g. relocation of the machine or a transfer of ownership), you MUST contact Stertil and subcontractor to discuss the procedures, terms and conditions, service contract, etc., so that the proper functioning and safety of the machine after recommissioning can be guaranteed.

If Stertil is not involved in a recommissioning, then Stertil is not liable for any claims of third parties arising from that recommissioning.

1.5 Compliance with standards

The dock leveller has been tested, certified and found to comply with:

- the 'Machinery directive' 2006/42/EC.

The control box has been tested, certified and found to comply with:

- the 'Low Voltage Directive' 2006/95/EC,
- the 'EMC Directive' 2004/108/EC.

The product complies with all applicable CE-directives and therefore bears a CE plate.

1.6 Manufacturers details

If you need any assistance, please contact your regional service center.

If you still have questions after reading this guide, we would encourage you to contact us. We appreciate all advice, feedback and suggestions from our customers. Please contact Stertil at:

Stertil B.V.

Address:	P.O. Box 23/9288 ZG Kootstertille Westkern 3/9288 CA Kootstertille The Netherlands
Phone:	+31 (0) 512 334 444
Fax:	+31 (0) 512 332 638
E-mail:	info@stertil.nl
Internet:	www.stertil.nl

1.7 Trademarks

All trademarks stated in this manual are registered trademarks of their suppliers.

1.8 Document conventions

In this manual the following signs are used to draw the reader's attention to especially important points.

Actions the operator or engineer should perform in a specific sequence are numbered:

– 1. Turn on the power switch.

– Bullets (•) are used for lists of items or actions.

– Soft keys or touch screen buttons are always shown between [brackets]:
[Start], [Enter], [2].

Note:
Provides additional information that is helpful to do a task or to avoid problems.

Caution:
Warns of a situation that may cause material damage if one does not follow the safety instructions.

Warning
Warns of a situation that may cause physical injury and/or material damage if one does not obey the safety instructions.

Danger
Warns of a situation that will cause serious physical injury and/or heavy material damage if one does not obey the safety instructions.

Bold text is used for (sub)titles or for information that needs special attention:
"Read these instructions carefully".

1.9 Who is this manual intended for?

This manual is intended for installers and service engineers of the dock leveller of type SF. All installers and engineers of the dock leveller must fully read the following chapters and follow the instructions exactly.
After you have read the manual of the machine you can use this manual for reference. Use the table of contents and the index to locate specific information in this manual.

This manual is a guide for installing, service and maintenance of the machine. Each installation, service and maintenance action is described in the relevant sections of this manual.

For service and maintenance of the machine, the engineer must:

- have enough technical knowledge and experience to carry out the assigned tasks,
- be able to recognize and prevent hazards,
- have read this manual and must understand the contents,
- have been adequately trained,
- be able to follow the procedures in this manual.

1.10 Related documents machine

This manual is part of the documentation set for the machine. This set consists of the following documents:

- Operator Manual (included with machine),
  This manual contains all required information for the operation of the machine. This manual details also operator related maintenance.
- Installation and Service and manual,
  This manual describes the procedures required for a proper installation and preventive and corrective maintenance, that must be carried out by a certified service engineer. This manual contains all the relevant system engineering drawings as well as the lists of spare parts of the machine.
- Control box manual (available on request)
  This manual contains all required information of the basic and optional control boxes.

The operator manual is a separate manual, and must at all times be available for the user when operating or maintaining the machine, see Storing the manual (on page 9). Refer to the operator manual for normal operating procedures.

1.11 Version history

Every effort has been made to make this manual as accurate and complete as possible. However, should the user(s) find any errors or omissions, it would be appreciated if these were brought to the attention of Stertil. Please report any errors or omissions to Stertil.

Also, during the lifetime of the machine, engineering improvements may result in the need to revise this manual. It is then at the discretion of Stertil, if a revision/new version of this manual is required.

The following table describes the main changes for each document version of this manual.

Version	From serial number	Changes
0	141147	Original edition
A	165561	Updated in accordance with the new Machine Directive.
B	193462	New manual organization; extra information added. CTL unit added

1.12 Supplements to the manual

If you receive any supplements to the manual from Stertil, these must be inserted into the manual immediately.

1.13 Storing the manual

Stertil expects a copy of this manual to be available to the service engineers of the machine and a copy should always be available when maintaining the machine.

2 SAFETY

- When you operate the machine or carry out maintenance on it, always follow safety guidelines to:
  - Make sure your safety is guaranteed,
  - Make sure the safety of other persons is guaranteed,
  - Prevent damage to the machine.
- Always adhere to the local safety and health procedures, protocols and any additional local rules, laws and regulations in addition to following the manufacturer's safety instructions. Read the safety instructions on a regular basis, regardless whether you work with the machine daily or occasionally.

2.1 General Safety Instructions

- Persons working with the machine must follow local safety and health procedures, protocols and any additional local rules, laws and regulations in addition to following the manufacturer's safety instructions. Additional rules and guidelines can be, but are not limited to:
  - Local health and safety regulations,
  - The guidelines provided by professional associations.
- The machine manual must be available at the machine at all times.
- Read the operating instructions before you operate or maintain the machine.
- Make sure you have obtained, read and understood all instructions.
- Make sure you have obtained, read and understood any additional instructions for special accessories for the machine.
- Carry out all work with and on the machine as described in the manual.
- Never start or operate a damaged machine.
- Always make sure that the machine is complete before operation. Operating the machine with missing components can cause severe damage.
- Observe all signs with safety and danger notes. Replace warning and / or safety signs immediately if they are missing or illegible.
- Do not perform any tasks for which you are not authorized. Only explicitly qualified and authorized personnel may operate, maintain or repair the machine.
- Personnel in training must be supervised at all times.
- Wear and use all needed personal protection equipment and safety gear appropriate for the job.
- Keep a safe working environment.

- If necessary, make sure the machine complies with federal and local standards before starting work.
- Do not use the machine for purposes other than those specified.
- All personnel working on or with the machine must be aware of possible hazards.
- Never make any changes or additions to the machine, without obtaining explicit written approval from the manufacturer / supplier.
  This also applies to the installation and adjustment of safety devices.

2.2 Hazards

2.2.1 Electrical hazards

Precautions to be taken when working with electrical equipment:

- Consider all circuits live until you have personally turned the power off and locked the main switch. Also tag the main switch with a safety sign.
- Keep your clothing, hands and feet dry.
- Do not wear rings, watches, metal-rimmed glasses or jewelry when working around electrical circuits.
- Static electricity can harm electronic parts. Always make sure that you are earthed when working on electronic parts.
- Maintenance and repair activities on the electrical system of the machine may only be performed by special trained electricians which are familiar with the common and local electrical regulations in charge.

2.2.2 Mechanical hazards

Precautions to be taken when working with mechanical equipment:

- Do not wear rings, watches, jewelery, ties or loose sleeves when working around moving mechanical parts.
- Keep long hair covered when working around moving mechanical parts.
- Stay away from moving machine parts.
- Always use spare parts of a type and part number recommended by Stertil.

2.3 Safety features

The dock leveller has the following safety features:

- Emergency stop switch (on page 12),
- Automatic safety device (on page 12),
- Cross traffic legs (on page 13),
- Toe guards (on page 13),
- Lateral tilt torsion (on page 14),
- Safety Circuit (on page 13),
- Maintenance support (on page 14),
- Safety signs (on page 15).

Warning
It is not allowed to bypass or switch off the safety systems.

Warning
If protective covers have to be removed for maintenance, cleaning or repair, they must be replaced immediately after the work has been completed.

2.3.1 Emergency stop switch

The main switch of the dock leveller functions as an emergency stop switch.
Use the emergency stop switch only in case of emergencies.

2.3.2 Automatic safety device

If the truck drives off when loading or unloading with a forklift truck on the dock leveller the automatic safety device is automatically activated.

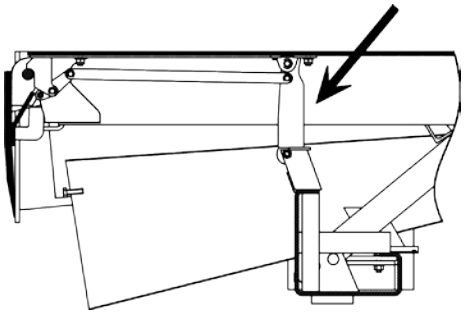
Note
The automatic safety device only activates if the actual load on the dock leveller exceeds 25% of the nominal load.

After the load has been removed, reset the dock leveller by briefly pressing on the control button.

Warning
If the automatic safety device is activated in a panic stop situation, always have the dock leveller checked for deformation by your supplier or dealer, before using it again.

2.3.3 Cross traffic legs

In the parked position (with pendant lip) the cross-traffic legs (CTL) rest on the support bearers and take the weight of all longitudinal and cross traffic.



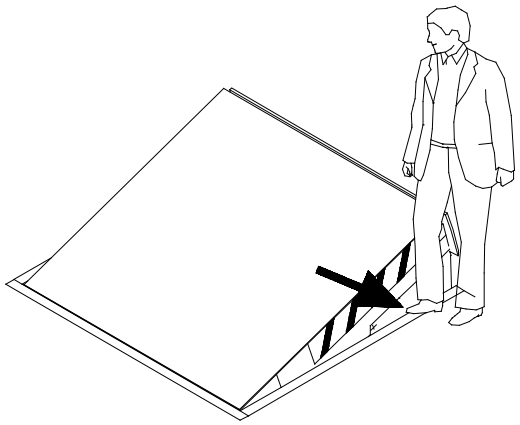
Cross traffic leg

> *Warning*
> *If the deck is not level in the parked position, this can be caused by an incorrect position of the CTL. This is a dangerous situation: immediately take the necessary action as described in The deck comes not (sufficiently) in parked position (see "The deck is not flush with the dock platform in parked position." on page **50**).*

2.3.4 Toe guards

Toe guards on both sides of the dock leveller are installed on the entire length of the dock leveller. They minimize the risk on entrapment or amputation for all persons near the dock leveller.

The toe guards are marked in yellow and black stripes to maximize visibility and to minimize tripping hazards.



Toe guards

2.3.5 Safety Circuit

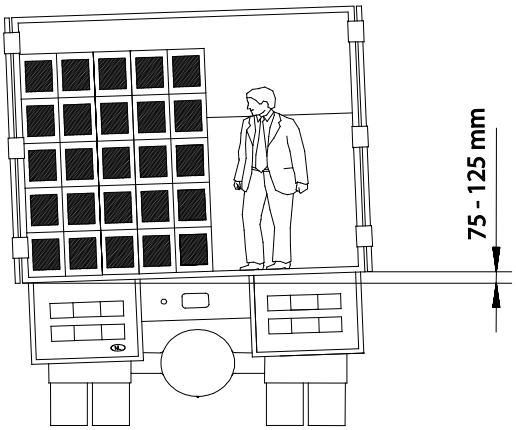
The dock leveller can only be operated with a closed safety circuit D-D.
The primary use of the safety circuit D-D is to connect a door switch, to make sure the dock leveller can only be operated when the door is opened.

Other local features can also be connected to the safety circuit D-D, such as a vehicle restraint system or barrier.

> Note
> On delivery safety circuit D-D of the dock leveller is connected with a jumper.

2.3.6 Lateral tilt torsion

The torsion flexibility of the deck ensures that the lip of the dock leveller stays in contact with the loading surface, even when the loading surface is not level.



Lateral tilt torsion

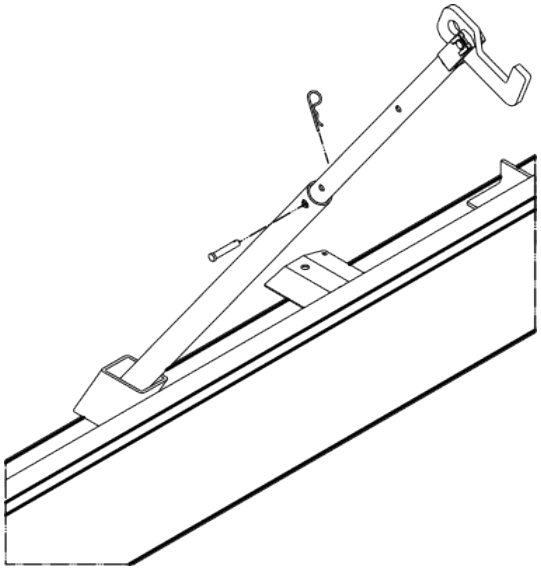
The maximum lateral tilt torsion is 75 - 125 mm: this depends on the type of dock leveller.

> Note:
> The maximum torsional flexibility is determined by the size of the dock leveller.
> With a larger dock leveller more lateral tilt torsion is possible.

2.3.7 Maintenance support

During repairs, adjustments, maintenance or cleaning of the dock leveller beneath the deck, a specific maintenance support must be placed.

Caution
If a situation occurs that you must go underneath the deck, this must be done by qualified personnel and always use the maintenance support.



Maintenance support

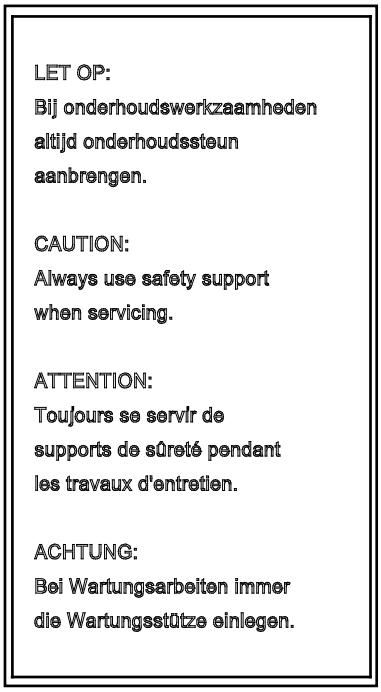
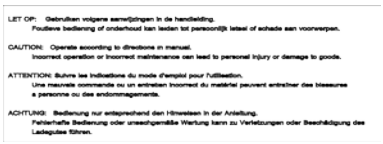
This maintenance support prevents unexpected movements of the dock leveller during activities beneath the deck, see Place the maintenance support (on page 35).

2.3.8 Safety signs

The dock leveller has safety signs.

Note
Regularly check whether all the safety signs are still present at the correct position on the dock leveller. If signs are not applied or are damaged, apply new ones. Apply at the correct position.

The table is an overview of the safety signs used on or in the machine. For each sign the location is indicated.

Pictogram	Description	Location
	Lifting point.	Centered on the lifting beam.
	Always use the maintenance support when servicing.	Underside of the deck beam, on the right side of the maintenance support, see SF operator manual for the location.
	Obstacle: risk of tripping, falling and collision.	On the toe guards.
	Operate according to directions in manual. Incorrect operation or incorrect maintenance can lead to personal injury or damage to goods.	On right side of the leveller, on the left top side of toe guard, see SF operator manual for the location.

2.4 Lock-out / tag-out

Lock-out or tag-out procedures are safety measures, designed to prevent application of power (energy) to the machine while it is being serviced.

The procedures for the application of energy control (the lock-out or tag-out procedures) must be done in the prescribed sequence.

2.4.1 Lock-out / tag-out procedure

1. Notification.
   Notify all affected employees that service or maintenance is required on the machine and that the machine must be shut down and locked out.
2. Preparation for shutdown.
   The machine may only be turned off by an authorized employee. Before turning it off, the employee must know:
   - The type and magnitude of the energy,
   - The hazards of the energy to be controlled,
   - The method or means to control the energy.
3. Shutdown.
   If the machine is in operation, shut it down by the normal shut down procedure. Refer to section Switch off.
4. Machine isolation.
   Isolate the machine from the energy source(s). The machine uses the following energy sources:
   - AC power.
     This is de-energized by removing the AC connection to the machine.
5. Lock-out (or tag-out) device application.
   Lock out the energy isolating device(s) with:
   - an individual lock(s),
   - place a warning device on the main switch.
6. Remove residual or stored energy.
   Stored or residual energy (such as that in capacitors, air pressure, etc.) must be dissipated or restrained by methods such as grounding, bleeding down, etc.
7. Verification of isolation.
   Make sure that the machine is disconnected from the energy source(s).
   First make sure that no persons are in or on the machine. Test to verify the isolation of the machine. Make certain that the machine will not operate (power cannot be turned on).

Caution

Return all operating control(s) to the OFF position after verifying the isolation of the machine.

The machine is now locked out.

2.4.2 End Lock-out/tag-out procedure

1. Make sure the service or maintenance is completed and the machine is ready to return to normal operation.
2. Check the machine and the immediate area around to make sure that all nonessential items have been removed.
3. Make sure that all components of the machine are operationally intact.

4. Make sure that all persons are at a safe distance from the machine.
5. Verify that the power switch is in the OFF position.
6. Remove the lockout devices.
7. Notify all personnel that the service or maintenance is completed and the machine is ready for use.

2.5 Environmental aspects

2.5.1 Disposal

When the machine has reached the end of its useful life, the owner and/or user is responsible for the safe disassembly of the machine and for the disposal of the components, in accordance with the local laws or regulations.

2.5.2 REACH declaration

The REACH regulation became effective on 1st June 2007. The aim of the REACH regulation is to ensure a high level of protection of human health and the environment from chemical substances.

Stertil B.V. manufactures articles in compliance with current revision of the REACH Regulation, and is downstream-user of chemical substances.

Stertil B.V. has the intention to fully comply to REACH regulation and has checked its suppliers to make sure they comply with REACH requirements for all materials and substances used in our products.

Stertil will provide relevant information e.g. Material Safety Data Sheet (MSDS) on request.

2.6 Training levels

Stertil recommends the following training levels:

- Operator:
  Lower vocational education or intermediate vocational education level and trained by the supervisor.
- Supervisor:
  Intermediate vocational education level and trained after the installation of the machine by the installation personnel.
- Maintenance engineer:
  Intermediate vocational education level.

> Note
> In case of doubt, always consult the Service Department of your supplier/dealer.

For more information about this and other possible trainings, contact your supplier/dealer.

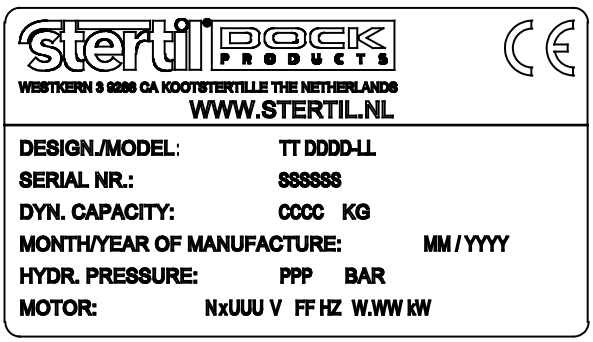
3 DESCRIPTION

3.1 Technical specifications

Specification	Value
Machine:	Dock leveller
Models:	SF 2017, SF 2217, SF 2517, SF 2817, SF 3017, SF 3517, SF 4017, SF 4517, SF 2018, SF 2218, SF 2518, SF 2818, SF 3018, SF 3518, SF 4018, SF 4518, SF 2020, SF 2220, SF 2520, SF 2820, SF 3020, SF 3520, SF 4020, SF 4520, SF 2021, SF 2221, SF 2521, SF 2821, SF 3021, SF 3521, SF 4021, SF 4521, SF 2022, SF 2222, SF 2522, SF 2822, SF 3022, SF 3522, SF 4022, SF 4522.
Capacity:	See type plate.
Mains supply:	3 x 380/415V, 50 Hz 3 x 220/240V, 50 Hz (option) Other mains supply configuration on request.
Control voltage:	24 V
Sound level:	74 dB(A)
Installation:	Indoor
Electric motor:	IP 54 in accordance with EN 60529
Control box:	IP 55 in accordance with EN 60529
Other components:	IP 55 in accordance with EN 60529
Dead weight:	See section Installation (see "Installation procedure" on page 23).
Operating temperature dock leveller:	-40 °C to +50 °C For operating the machine at extremer temperatures contact your supplier.
Operating temperature control box:	-10 °C to +40 °C For operating the machine at extremer temperatures contact your supplier.

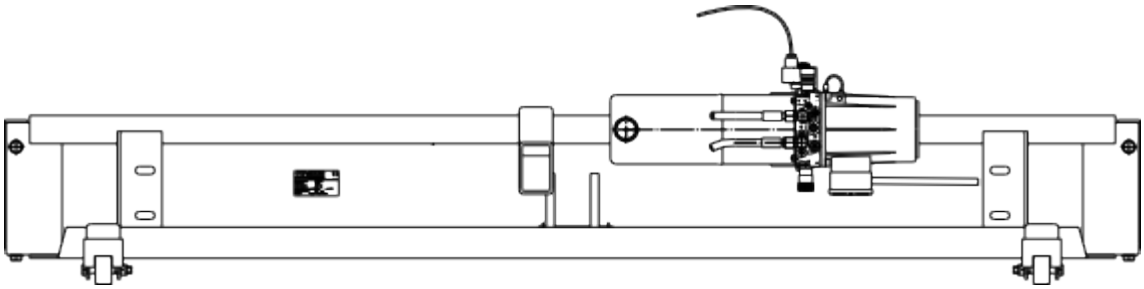
3.2 Product identification

On the type plate, information is recorded to identify the product.



Type plate

This type plate is located in the frontangle of the sub-frame.



Location of the type plate

The following data are present on the type plate:

Data	**Meaning**
TT:	Type code
DDDD:	Nominal deck length and width code
LL:	Nominal lip length code
SSSSSS:	Serial number
CCCC:	Capacity (dynamic)
MM/YYYY	Month and year of production
PPP:	Setting pressure relief valve
NxUUU	Mains voltage
FF	Mains frequency
W.WW:	Nominal power consumption

The data on the type plate is required to determine the pit dimensions and for ordering spare parts.

3.3 Intended use

The dock leveller is designed for the loading and unloading of trucks with the aid of vehicles such as forklifts or electric pallet trucks. The dock leveller may only be used for the purposes for which it is designed.
The dock leveller may never be operated above its rated load and permitted gradient of 12,5%.

> Note
> In this manual is commonly referred to trucks as the vehicle to be loaded or unloaded. When *truck* is written all common means of road transport equipment such as trucks, (semi-)trailers, swap bodies and containers are intended.

3.4 Operating principle

The dock leveller is operated with the control box.

The basic control box has one button only, if the button is pushed continuously:

1. The deck rises to the highest position.
2. The lip is extended and the cross traffic legs are retracted.
3. When the button is released, the deck lowers until the lip rests on the loading floor of the truck.

Optional advanced control boxes are available, with:

- An integrated control of the dock door
- An integrated control of an inflatable shelter.
- An Auto Return button.
- Below Dock Control.
- Traffic light control.

> Note
> For more information please refer to the specific advanced control box manual.

3.4.1 BDC (option)

When the loading floor of the truck is lower than the level of the dock platform, and is loaded to the end with cargo, there is no room for the lip to rest on the loading floor of the truck.
The optional Below Dock Control (BDC) makes it possible that the deck descends below dock level with a completely pendant lip. This makes it possible to load or unload the cargo closest to the end of the loading floor.

3.4.2 AR (option)

The optional Auto Return (AR) returns the dock leveller to the parked position after (un)loading, with a single touch of the ‘AR’ button.

This option is available with the SSC and SMC control boxes (not on the basic control box).

3.4.3 PLS (option)

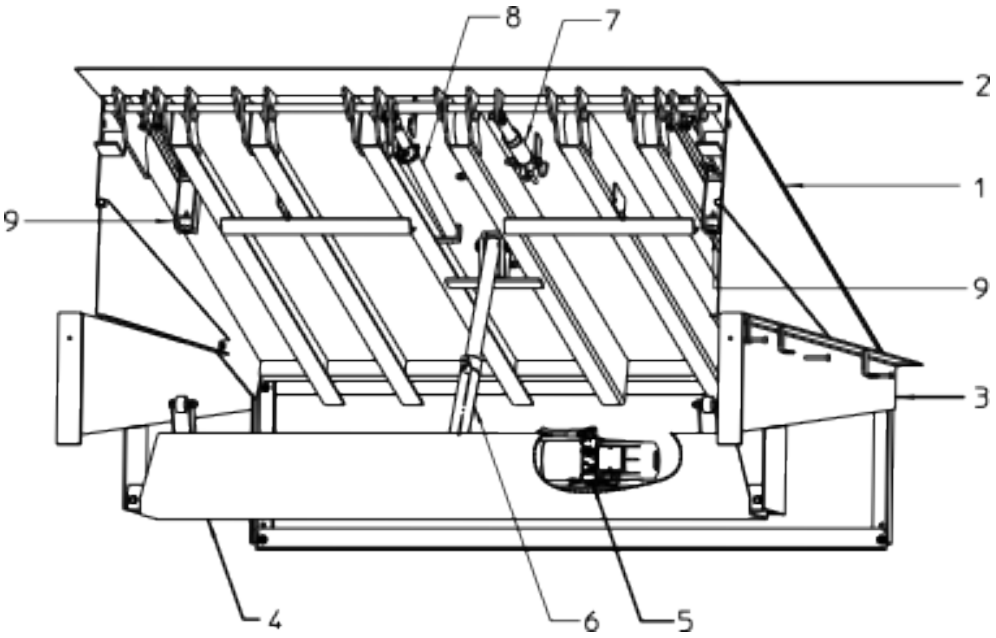
The Park Limit Switch (PLS) detects the parked position of the leveller and can be used as an extra safety device.
With the PLS it is possible to disable control of the door when the deck is not in parked position.

3.5 Functional description

The dock leveller SF-type is a leveller with a hanging type frame and a swing lip. The SF-type is designed for installation in an open pit.

The platform is positioned by means of one hydraulic cylinder at the front. The platform can twist smoothly to both sides to adapt itself to uneven loaded trucks, see Lateral tilt torsion (on page 14).

During the loading or unloading process, the leveller adjusts itself to the changing floor height of the truck.



1. Deck with toe guards
2. Lip
3. Subframe
4. Front angle
5. Hydraulic pump unit
6. Main cylinder
7. Lip cylinder
8. Maintenance support
9. Cross traffic leg

Main components of the dock leveller.

4 INSTALLATION

4.1 Installation procedure

4.1.1 Floor requirements

The construction of the building and the floor must be strong enough to carry the dock leveller with load. In case of doubt, consult an architectural specialist. It is the responsibility of the client or user that the building and the floor meet the requirements of Stertil

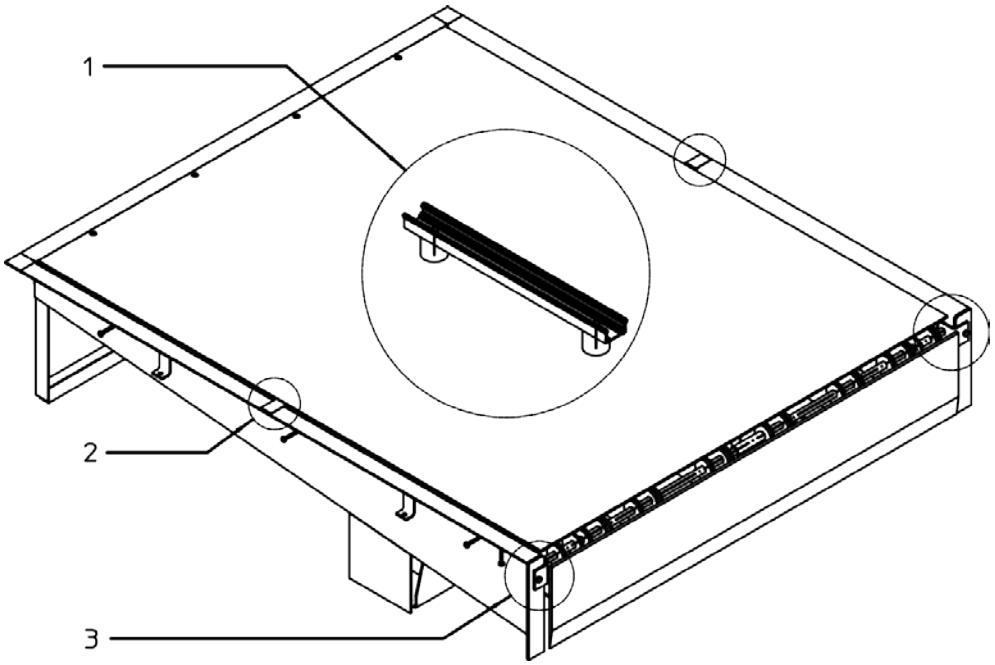
> Note
> See section Pit layout - conventional (on page 74) and Pit layout - QMS (on page 76) for the pit layout drawings.
> A drawing of the pit forces is available on request.

4.1.2 Lifting the dock leveller

For transporting the dock leveller, use a forklift with sufficient capacity. Refer to the following table to determine the dead weight of your dock leveller.

Dead weight (kg)	**Width**				
Length	**SF **17**	**SF **18**	**SF **20**	**SF **21**	**SF **22**
SF 20**	700	725	750	800	850
SF 22**	775	800	825	875	925
SF 25**	850	875	900	950	1000
SF 28**	925	950	975	1025	1075
SF 30**	1000	1025	1050	1100	1150
SF 35**	1150	1175	1200	1250	1300
SF 40**	1300	1325	1350	1400	1450
SF 45**	1450	1475	1500	1550	1600

Caution
Always use the lifting beam when lifting the dock leveller.



1. Lifting beam
2. Spacer
3. Transportation bracket

Lifting and transportation facilities

Danger
Do not stand under the dock leveller during lifting. If it drops, this may result in serious injury.

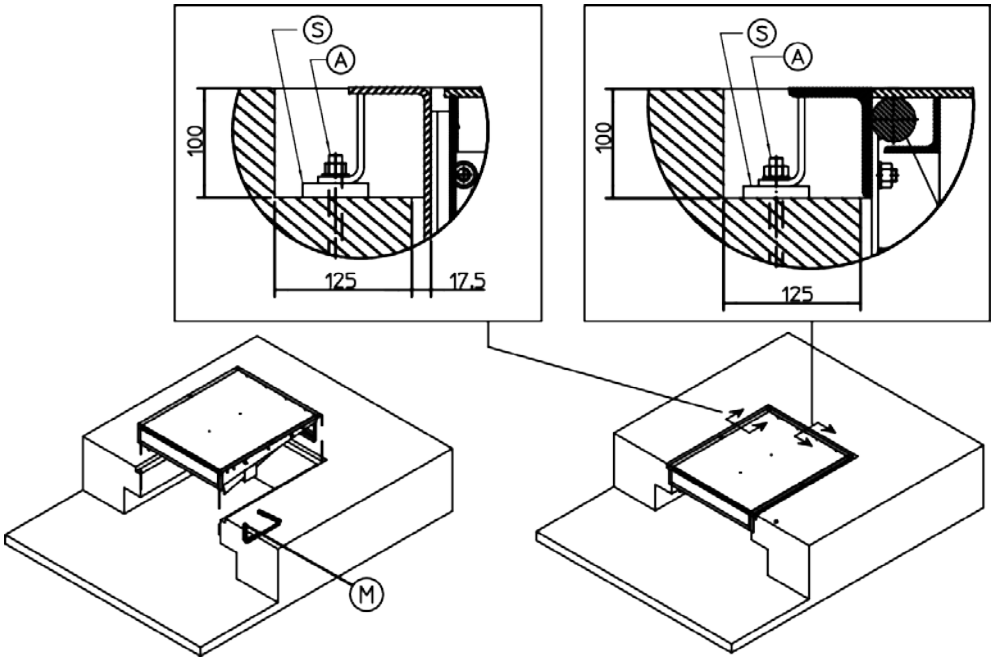
Warning
Always hoist the dock leveller at the lifting beam only.

Warning
Inexpert lifting/hoisting leads to dangerous situations.

Caution
After installation in the pit is completed, remove all lifting and transport facilities as described in the installation procedure.

4.1.3 Conventional installation

> Note
> The installation of the dock leveller may only be carried out by the service department of Stertil or by a service department or dealer certified by Stertil.



S. Shims

A. Anchor bolt

Conventional installation

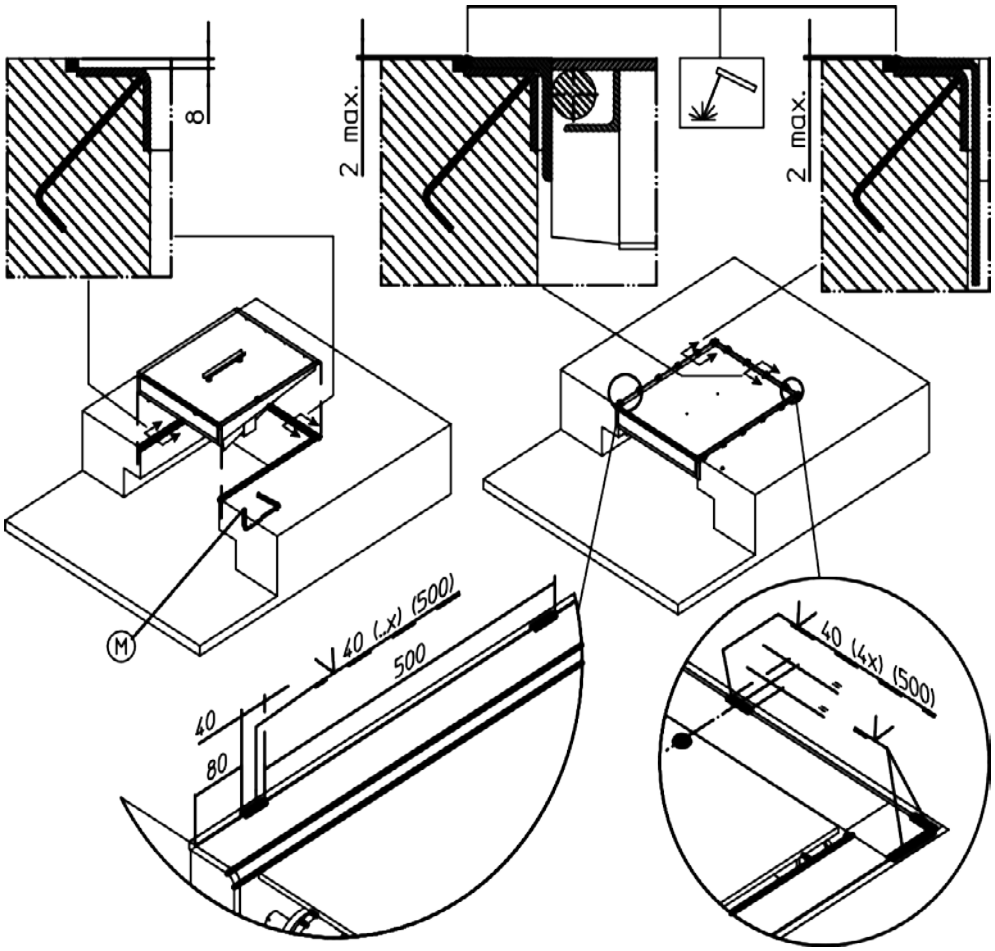
For a conventional installation:

1. Make sure that:
   - The pit is constructed according to the requirements as stated in the pit layout conventional (see List of parts and appendices (on page 53)).
   - A jacket pipe Ø 50 mm (m) is installed. Use this pipe to guide the electrical cables from the dock leveller to the control box.
   - The concrete surface in the recess of the pit edge is clean and rough. This ensures a good bond between the new mortar and the concrete.
2. Depending on the situation the control box is:
   - Already mounted on the wall.
   - Separately delivered.
   - Stowed underneath the leveller in the front angle.
     If the control box is stowed in the front angle: Remove the control box and the motor cable from underneath the leveller before installing the leveller in the pit. See Connection procedure (see "Connection procedure (S)" on page 28).
3. Use a crane or forklift to lower the dock leveller into the pit. The dock leveller will rest on the anchor plates when it is positioned correctly in the pit.

4. Adjust the height of the dock leveller with shims and ensure that the upper surface of the dock leveller is horizontal and flush with the dock platform.
5. When the dock leveller has been adjusted to the correct height, fasten the sub-frame in the pit with anchor bolts.
6. Seal all gaps between the sub-frame of the dock leveller and the recess, to avoid concrete spilling into the pit.
7. Pour mortar into the recess to secure the dock leveller. Using a synthetic resin mortar is recommended.
8. Remove the lifting and transport facilities when the mortar is set.
9. Connect the control box, see Connections (on page 28).

4.1.4 Quick mounting installation

> Note
> The installation of the dock leveller may only be carried out by the service department of Stertil or by a service department or dealer certified by Stertil.



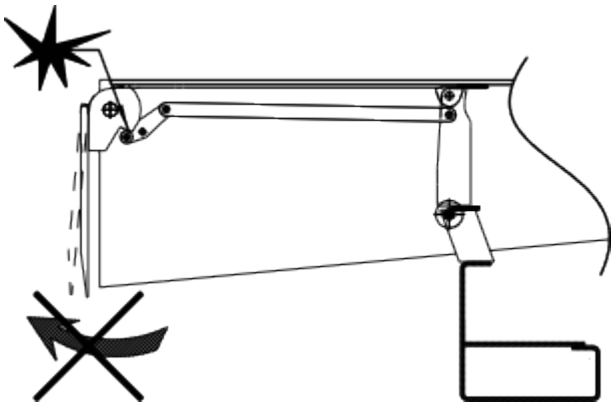
Quick mounting installation

For a quick mounting installation:

1. Make sure that:

- the pit is constructed according to the requirements as stated in the pit layout OMS (see List of parts and appendices (on page 53)).
- a jacket pipe Ø 50 mm (m) is installed. Use this pipe to guide the electrical cables from the dock leveller to the control box.

2. Depending on the situation the control box is:
   - Already mounted on the wall.
   - Separately delivered.
   - Stowed underneath the leveller in the front angle.
     If the control box is stowed in the front angle: Remove the control box and the motor cable from underneath the leveller before installing the leveller in the pit. See Connection procedure (see "Connection procedure (S)" on page 28).
3. Use a crane or forklift to lower the dock leveller into the pit. Make sure that the edges are flush with the dock platform.
4. Weld the sub-frame to the pit edge at the positions as marked in the figure (weld length must be circa 40 mm):
   - At the back side: Weld right behind the hinge screws.
   - At the sides: Start with a weld circa 80 mm from the front edge. Continue to weld every 500 mm.
5. Clean all welds with a brush and paint them with a primer and a finishing layer.
6. Remove the lifting and transport facilities.
7. Connect the control box, see Connections (on page 28).



Do not manually pull the lip

Caution
Do not manually move the lip to get underneath the dock leveller. This can cause permanent damage to the dock leveller.

4.2 Connections

4.2.1 Electric supply

Technical data:

Mains voltage:	400V - 50 HZ (380/415V) 3 phases + earth	230V - 50 HZ (220/240V) 3 phases + earth
Electrical motor connection:	λ, take-off power 0.75 kW	Δ, take-off power 0.75 kW

4.2.2 Connection procedure (S)

The leveller can be connected to 230V or to 400V. Change the electric motor control box supply voltage settings with the jumper inside the control box. See Control box (on page 66).

Note
The standard input voltage setting of the control box is 400V.

Warning
Only authorized personnel are allowed to install the machine.

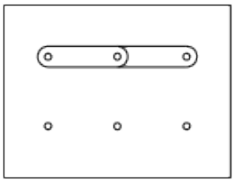
Warning
Only qualified electrical engineers are allowed to make electrical connections.

Caution
Always adhere to local safety and health procedures, protocols and any additional local rules, laws and regulations in addition to following the manufacturer's safety instructions.

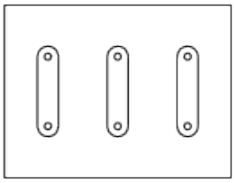
To connect the dock leveller:

1. Make sure that:
   a) The leveller is installed firmly in the pit. Correct this if necessary.
   b) The concrete and mortar are completely set. Wait if necessary.
   c) The transport and lifting facilities are removed. See Installation procedure (on page 23).

2. Check the mains power supply and the electric motor connection as stated in the figure. If the input voltage does not correspond with the jumper settings, change the jumper settings to match the input voltage.



3 PHASE ⅄
400 V



3 PHASE △
230 V

3. Raise the deck to gain access to all cables underneath the deck.
   a) Switch the main power supply off.
   b) Switch the main switch to "0".
   c) Connect the motor cable temporarily to clamps U, V, W and PE of the control box.
   d) Connect the power supply cable to mains power on the construction site and temporarily to clamps L1, L2, L3 and PE of the control box.
   e) Open the door manually.
   f) Check that all cables are connected correctly.
   g) Switch main power supply on.
   h) Switch the main switch to "1".
   i) Press [deck up] until the deck is in the highest position and place the maintenance support under the deck; see section Place the maintenance support (on page 35).
4. Disconnect the control box cables.
5. Go underneath the leveller deck.
6. Position the cables underneath the deck and sub-frame. Secure the cables every 300-500 mm with tie wraps or cable clips, ensuring slack for deck movement and clearance from moving parts.

> Note
> If the deck of the dock leveller does not rise when the motor is running, change the rotation direction by swapping the connections of clamps 2 U and V, see Control box (on page 66).

> Note
> The cables are subject to the installed options and can include motor cable and optional sensor cables. Mark the sensor cables if needed.

7. Pull the cables through the jacket pipe.

8. Install the control box on the wall and connect the cables permanently, see Control box (on page 66).

Note
It is recommended that the control box is mounted on the driver's side.

Note
If you are installing components from a third party, refer to third party documentation for details.

4.3 Operational test

Warning
All electrical components installed on the dock leveller are linked to the control box and can be subject to electrical power. This includes, but is not limited to, the hydraulic unit and switches.

1. Before testing the dock leveller, make sure that:
   - You are allowed and qualified to test the system.
   - No padlock or tag-out sign is present.
   - No persons, goods or other objects are on, or in front of the dock leveller.
   - No possible obstacles are under the dock leveller.
   - The dock leveller has no visible damage.
   - The connection procedure is completed, see Connection procedure (see "Connection procedure (S)" on page 28).
   - The door is open.
2. Switch on the main power supply.
3. Switch the main switch to "1".
4. Test all dock leveller functions, including installed optional features.

Note
Refer to Troubleshooting (on page 47) in case of malfunctions.

5. Return the dock leveller to the parked position.

5 INSPECTION AND MAINTENANCE

5.1 Aim of maintenance

Maintenance can be divided into two categories:

- preventive maintenance,
- corrective maintenance.

Preventive maintenance is all maintenance necessary to keep the machine in a good condition or returning it to that condition.

Corrective maintenance is done after malfunctions have occurred.

Warning
Only authorized personnel is allowed to carry out maintenance.

Warning
Always follow maintenance instructions.

Note
All maintenance actions described must be done on schedule. Due to load differences and environmental influences certain parts may require more or less maintenance than specified.

Note
The maintenance procedures will refer to special instructions when necessary.

5.2 When you carry out maintenance

Be aware that:

- If you are in any doubt whether you should perform an action, please contact your local Stertil service department or distributor.
- If you are allowed to perform an action but are unsure whether you have the ability to do so, please contact your local Stertil service department or distributor.
- Always observe the safety procedures when carrying out maintenance; see chapter Safety (on page 10).
- After carrying out the maintenance, always perform the final checks.

5.2.1 Recommendations for maintenance

When you do maintenance on the machine, keep these recommendations in mind:

- Keep the machine clean at all times.
- Repair damaged or worn parts immediately.
- Ensure that all fasteners are secured after maintenance.
- Do not operate defective equipment.
- Follow the safety instructions in this manual.
- Follow the safety regulations that apply to your site.
- For repairs and maintenance, always use original Stertil parts.

5.2.2 Pay attention to safety

Work on installations and devices can only be safe if:

- the corresponding instructions are carried out to the letter,
- all protection devices are left in place.

Warning
To carry out maintenance or revision work, it can be necessary to dismantle parts. This means a change in the original state of the machine or device. Make sure all steps to ensure safety are taken.

Warning
It is the responsibility of those in charge of preparing or surveying this work, to take the necessary steps to guarantee safe working conditions.

Most accidents with machines happen during maintenance and repair work. Before starting maintenance on the machine, lock the machine out, see Lock-out / tag-out (on page 16).

Warning
Always use the maintenance support during repairs, adjustments, maintenance and cleaning beneath the deck of the dock leveller.

The maintenance support prevents unexpected movements of the dock leveller during activities beneath the deck. To place the maintenance support, refer to section Place the maintenance support (on page 35).

5.2.3 Waste disposal

Remove and dispose in a correct manner lubricating agents, used chemical products and other such matter. On this subject, the local environmental recommendations should be respected: see also section Environmental aspects (on page 18).

5.2.4 Forms and administration

It is recommended to keep a record for each periodic maintenance procedure performed on your equipment. The operator/engineer responsible for the maintenance should enter:

- His or her name.
- The date when the maintenance was carried out.
- The work carried out.

Daily periodic maintenance procedures do not require a signature or date - these procedures must be completed at the start of each work day.

5.3 Preventive maintenance schedule

The following table gives an overview of all the required maintenance actions for the maintenance engineer. The references in the last column refer to the appropriate maintenance procedures which are described in the next sections.

Interval	Action	Reference
Daily	Operator: Inspection for visual damage.	Visual inspection (on page 34)
Weekly	Operator: Inspection of all the functions of the dock leveller, even if these are not used very often.	
Yearly	Service Engineer: Check for damage in general and excessive wear on slide plates, guide rollers and hydraulic hoses.	
Yearly	Service engineer: Lubricate the hinges with multipurpose lubricant. If necessary, lubricate more often.	Lubrication (on page 34)

Interval	Action	Reference
Yearly	Service engineer: Check the hydraulic oil level. If necessary, check the oil level more often.	Check the hydraulic oil level (on page 36)
Yearly	Service engineer: Clean cylinders, pump unit and control box.	Cleaning (on page 35)
Yearly	Service engineer: Check if all moving parts run smoothly.	
2 Yearly	Service engineer: Replace the hydraulic oil.	Hydraulic oil replacement (on page 39).

Note
It is strongly recommended to have a maintenance contract.
Consult your supplier/dealer about annual maintenance and repairs/adjustments.

5.3.1 Visual inspection

Warning
Operators are not allowed underneath the leveller for inspections, this may only be done by qualified personnel.

During a visual inspection:

- Check all visible wires and cables for damage.
- Check the visible part of the hydraulic system for leakage.
- Check the deck and lip for cracks and deformation.
- Check if the deck is flush with dock platform.
- Check the functioning of all moving parts (deck, lip, sliding lamel, ctl-unit).

5.3.2 Lubrication

The schedule for lubrication mentioned in the Preventive maintenance schedule (on page 33).

Caution
Do not attempt to apply oil or grease to any component not mentioned in a maintenance procedure or schedule.

Contact your supplier/dealer if you discover an irregularity with the lubrication of any part.

Components to be lubricated:

- Lip rod
- Cylinder rods
- Toe guards

5.3.3 Cleaning

Clean the hinges and pit when necessary.

Regularly clean:

- Cylinders
- Pump unit
- Control box

Warning

*Always use the maintenance support when cleaning the pit. See Pay attention to safety (on page **32**).*

Caution

Avoid hinges and electric system when pressure cleaning.

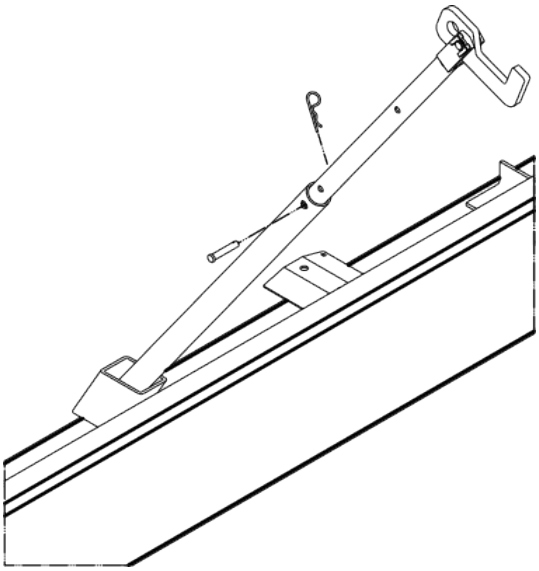
5.4 Regular preventive maintenance procedures

5.4.1 Place the maintenance support

To place the maintenance support:

1. Press [deck up] continuously to move the deck to the highest position with the lip completely extended.
2. When the deck is at the highest position, switch the main switch to "0". The deck will stay in the highest position.
3. Release [deck up].
4. Take the maintenance support out of its brace under the deck and let it hang downwards.
5. Remove the spring cotter and the locking pin.
6. Lower the movable tube until it rests in the bracket on the front angle.
7. Place the locking pin back in the best fitting hole and secure it with the spring cotter.
8. Switch the main switch to "1".

9. Press [deck up] briefly. The deck and the lip will descend until it rests on the maintenance support.



Maintenance support

5.4.2 Remove the maintenance support

To remove the maintenance support:

1. Press [deck up] continuously to move the deck to the highest position with the lip completely extended.
2. When the deck is at the highest position, switch the main switch to "0". The deck will stay in the highest position.
3. Release [deck up].
4. Remove the spring cotter and remove the locking pin.
5. Slide the movable tube of the maintenance support upwards until you have the minimum length.
6. Place the locking pin back in the best fitting hole and secure it with the spring cotter.
7. Place the maintenance support back into its brace under the deck.

5.4.3 Check the hydraulic oil level

To check the hydraulic oil level in the tank:

1. Place the maintenance supports (see "Place the maintenance support" on page 35).
2. Switch the main switch to '0'.
3. Unscrew the filler cap of the oil tank and wipe the dip stick clean.
4. Screw the filler cap on the tank opening.
5. Unscrew the filler cap and read the oil level from the dip stick.
   With both cylinders completely extended, the dip stick must be in the oil for 25 to 30 mm.

- If necessary, drain the excess of oil by unscrewing the plug at the bottom.
- If necessary, top up the hydraulic oil to the correct level.

> Note
> If there is too much oil in the system, the oil tank will overflow when both cylinders are retracting.

6. Screw the filler cap back onto the tank opening.
7. Remove the maintenance support (on page 36).

5.5 Corrective maintenance

5.5.1 Required knowledge

In order to be able to repair your machine, you must have knowledge of the following subjects:

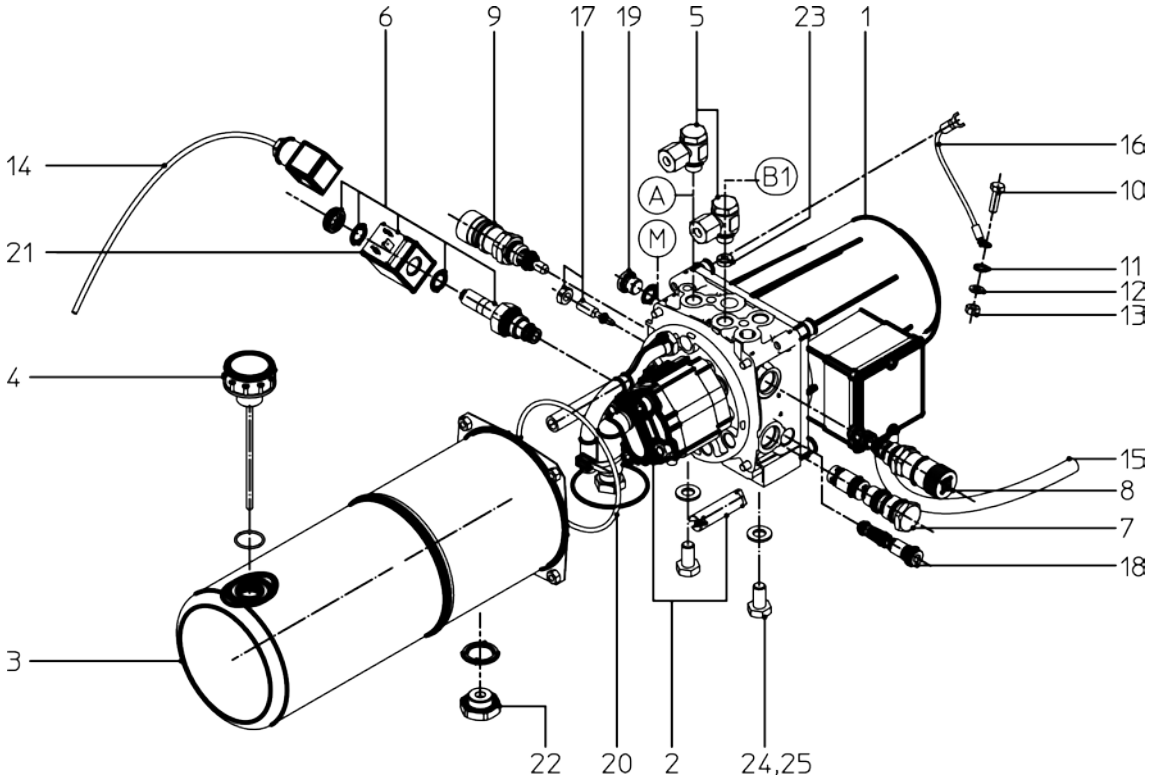
- mechanical systems,
- hydraulic systems,
- electrical systems.

Plan maintenance and repairs before you start repair works:

- Consider what procedures are necessary
- What the consequences of those actions are.
- If necessary, ask for help from third parties or consult your supplier.

5.5.2 Hydraulic unit adjustment

Pressures are measured at the measuring port M (1/4" BSP), which is located at the side of the valve block, near connecting port A (main cylinder).



Hydraulic unit

> **Note**
> Turn the valves anti-clockwise to reduce the pressure and clockwise to increase the pressure.

To adjust the pressure relief valve (9) and the sequence valve (8):

Refer to the figure for the correct adjustment of the hydraulic motor pump unit.

1. Adjust the setting of the pressure relief valve (9) circa 15 bar higher than the pressure setting of the sequence valve (8). The lip should not extend before the deck is in its highest position. This is why the setting of the sequence valve must be 15 bar higher than the maximum pressure in the main cylinder.
2. Measure the descending speed of the deck from the highest position with extended lip, to the lowest position with extended lip. This descending time must be circa 9 to 10 seconds. Other speed settings will affect the operation of the automatic safety device.
3. If required, change the speed of descent by adjusting at the throttle (17) in the motor pump unit. Turn this clockwise to decrease the speed of descent and anti-clockwise to increase the speed.

Warning
Do not turn the speed adjusting throttle (17) outwards to its maximum. This may cause the deck to plummet down.

Caution
The safety valve in the main cylinder is set at the factory and may not be altered.

Note
The automatic safety device is only activated if a load of 1500 kg or more is on the dock leveller.

5.5.3 Hydraulic oil replacement

Hydraulic oil content: 2,1 liter.
Stertil advises the use of the following types of oil:

- Hydraulic oil: Unil HVC SX 15.
- Alternative oil: Mobil DTE 10 Excel 15.
- Biological degradable oil: Panolin SYNTH 15 (only on request).
- In case of very low temperatures (≤ -50 °C): Chevron Aircraft oil 5606H.

Note
The different types of oils should not be mixed. After draining the oil from the lift and refilling the system with new oil, a low mix percentage is allowed.

Warning
Warranty will expire when not prescribed oil is used and/or different types of oils are mixed.

Replacement procedure:

1. Place the maintenance support (on page 35).
2. Disconnect the main cylinder from the deck.
3. Push the main cylinder in to collect the oil.
4. Disconnect the lip cylinder from the lip.
5. Push the cylinder in to collect the oil.
6. Remove the rear mounting bolt of the pump unit.
7. Turn the tank side of the pump unit away from the front angle, until the drain plug clears the front angle.
8. Remove the drain plug, collect the oil in a container.
9. Replace the O-ring, reinsert the drain plug and tighten.

10. Refill the tank. Use the prescribed type and quantity oil. Do not overfill.
11. Place filler cap back, and screw it on by hand.
12. Reposition the pump unit, reinsert and tighten the mounting bolt.
13. Manually pull out the cylinder rods to the required length and reconnect them to the deck and lip.
14. Remove the maintenance support (on page 36).
15. Completely raise and lower the deck and lip several times to vent the system.
16. Check the hydraulic oil level (on page 36) and top up or drain if necessary.

5.5.4 Request for repair

If the services of a Stertil engineer are required, it is necessary to have the following information:

- The serial number of the machine.
- A clear description of the fault as accurate as possible.

5.5.5 Communication

In order to make a diagnosis, locate a possible fault or suggest a solution, it is preferred to explain the fault by phone, while standing nearby the machine.

5.5.6 Spare parts

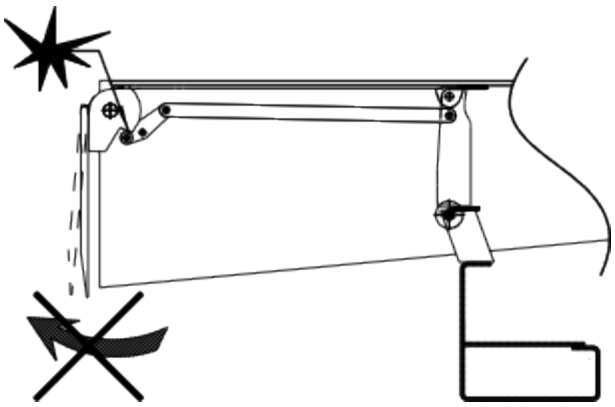
Use only the spare parts as recommended by Stertil.

When ordering spare parts, always quote the serial number of the machine and the item number.

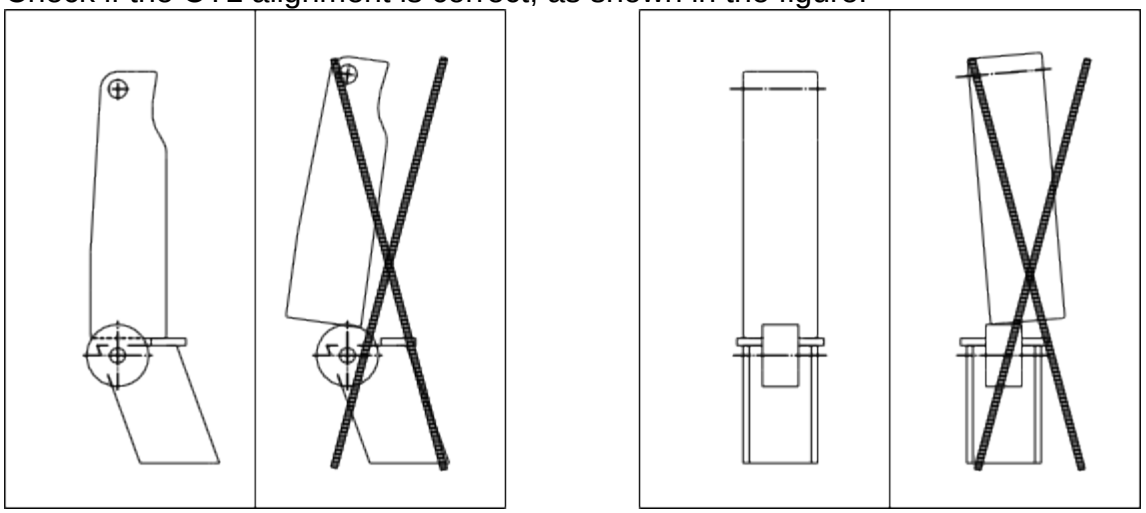
5.6 Position of the CTL

In the parked position the CTLs must rest correctly aligned on the supports. To check the position of the CTLs:

1. Look through the gap between deck and lip.

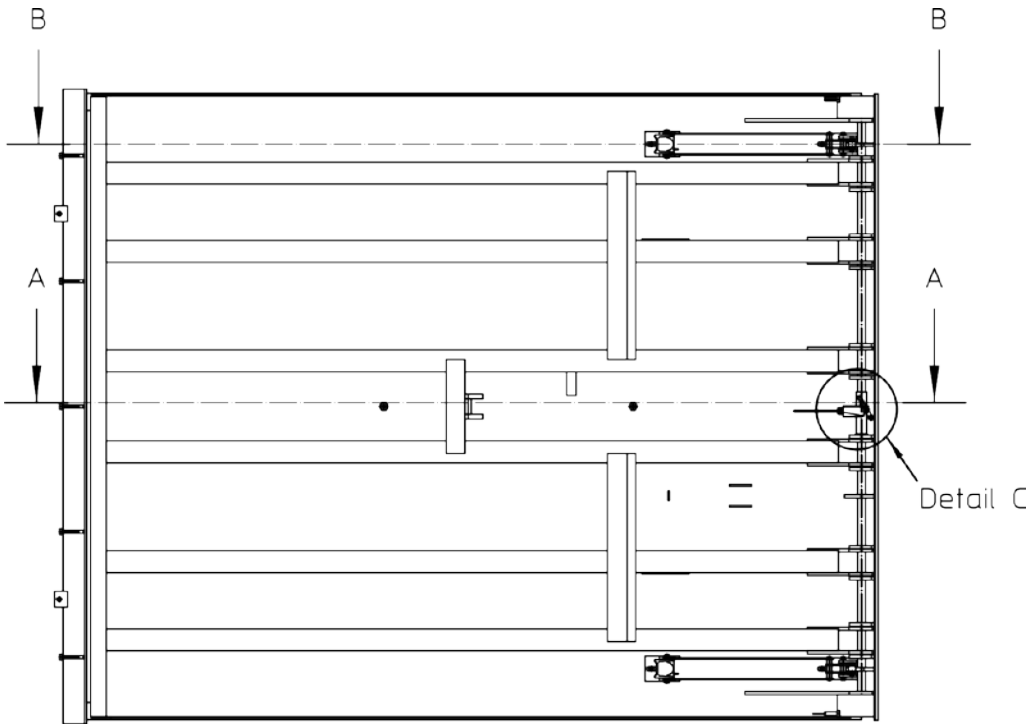


2. Check if the CTL alignment is correct, as shown in the figure.

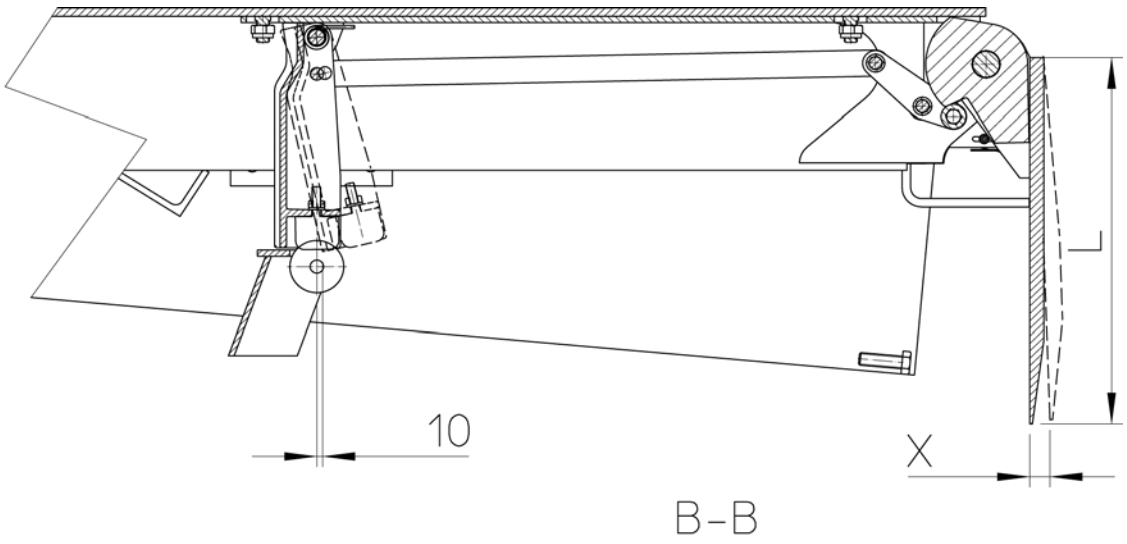


3. Adjust if necessary, see Adjusting the CTL (on page 41).

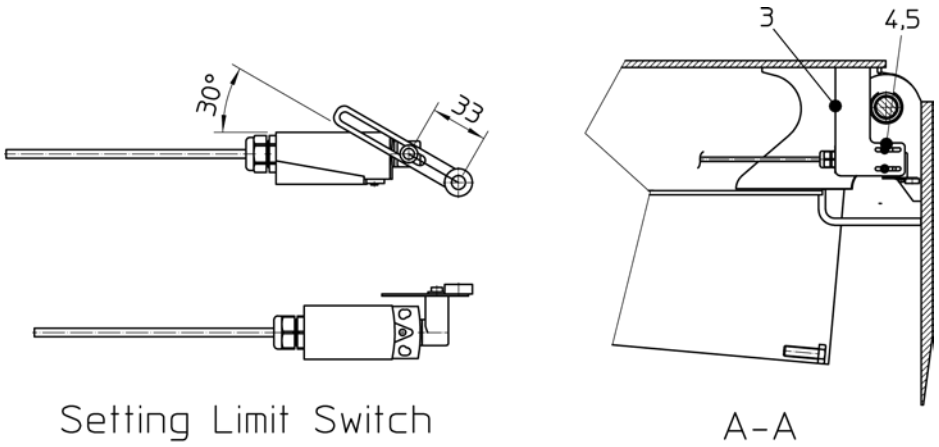
5.6.1 Adjusting the CTL

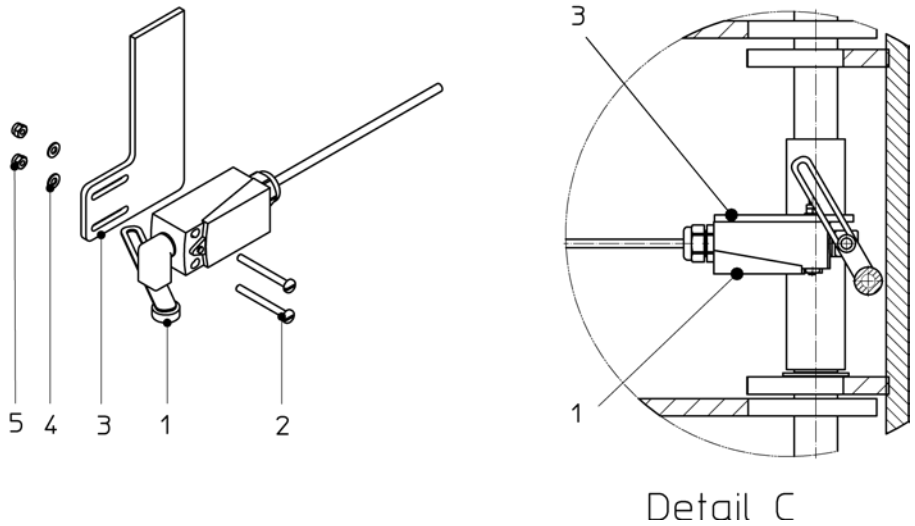


Bottom view dock leveller



Dock leveller cross-section B-B





BDC Limit Switch

To adjust the CTL:

1. Check the CTL alignment, see Position of the CTL (on page 40).
2. Press [deck up].
   When the lip starts to extend, the CTLs should start moving simultaneously as shown in view B-B.
   - X depends on lip length L (check model) Refer to table CTL configuration data.
   - The CTL displacement as shown in view B-B (10 mm from the front of CTL to center of support roller) must occur when the lip moves distance X.
3. The play should be as little as possible.
   To minimize play the roller must rest on the cam when the lip and CTL are in a vertical position.
   If it is not:
   a) Loosen the mounting bolts of the CTL-unit.
   b) Reposition the CTL-unit and re-torque the bolts.
4. To set distance X, see Adjusting the limit switch (only with optional BDC) (on page 43).
   When the lip reaches the set distance X:
   - The lip stops moving.
   - The CTLs are partially retracted and are not on the supports.
   - The deck can lower below dock level.

L (mm)	350	400	450	500	550	600
X_{min} (mm)	31	36	40	45	48	52
X_{max} (mm)	50	50	50	50	50	55

CTL configuration measurements

5.6.2 Adjusting the limit switch (only with optional BDC)

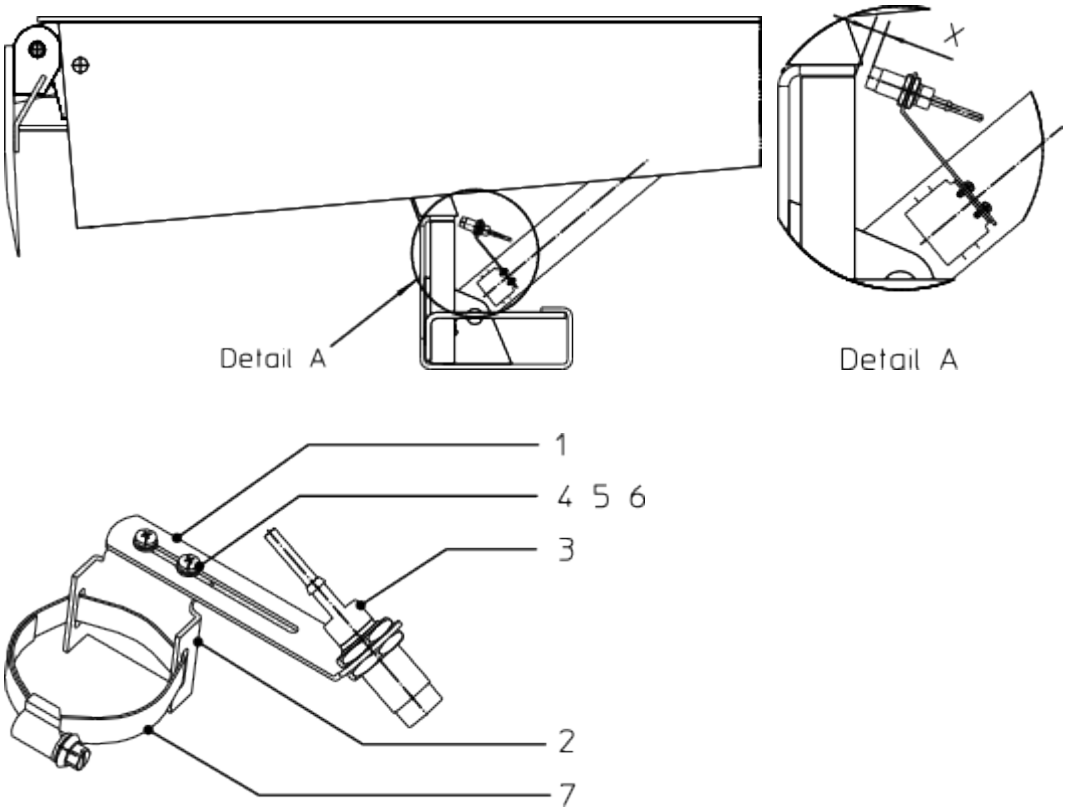
The numbers in this section refer to the figures and table in Adjusting the CTL (on page 41).

The operating principle of the limit switch:

1. When the lip extension of the lip reaches X, the limit switch (1) sends a signal to the control box. Refer to the table for applicable dimensions.
2. Based on this signal the control box stops the lip movement.
3. The limit switch is mounted on a bracket (3) with slot holes. The exact position of the limit switch has to be determined by trial and error.
   - The limit switch (normally open) is activated when the lip is in.
   - The limit switch is deactivated when dimension X is reached

5.7 AR (option)

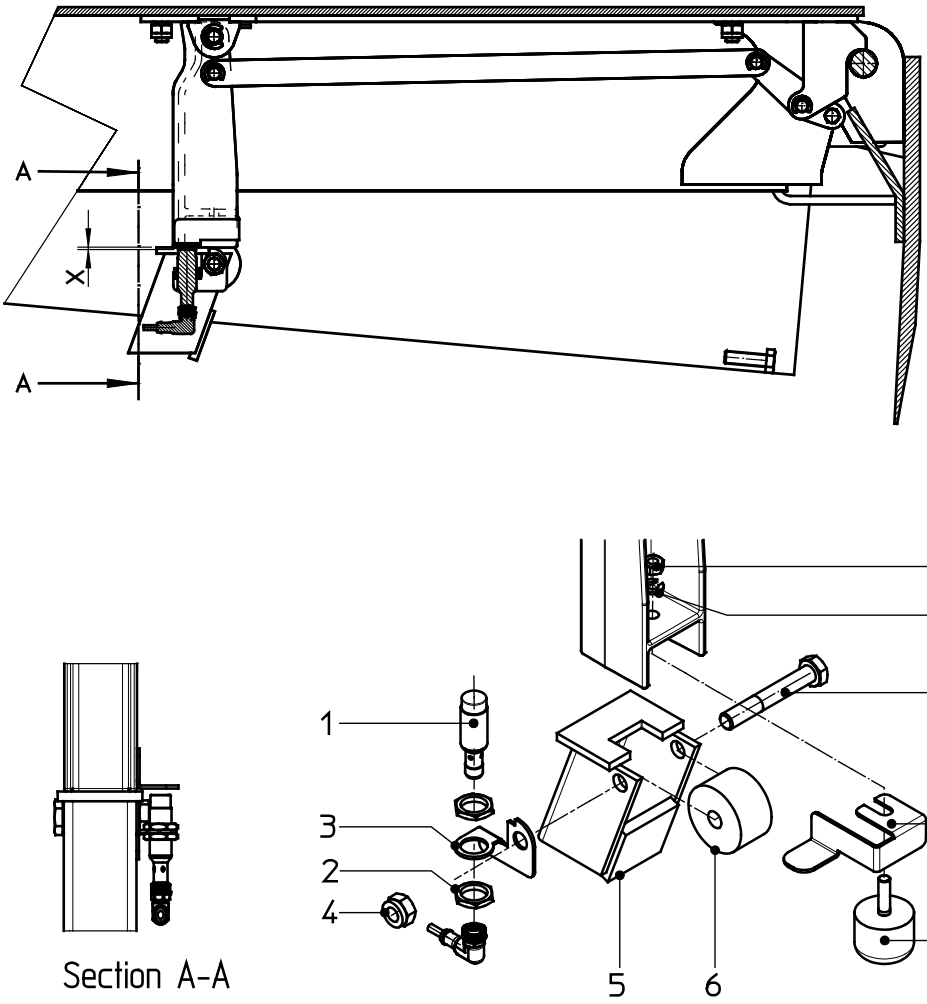
The AR system is based on a sensor which detects the edge of the front angle just before the deck reaches the highest position.
The pump shuts off as soon as the edge of the front angle is detected, the deck will now descend to the parked position.



AR (option)

5.8 PLS (option)

The PLS working principle is based on a sensor which detects if the CTLs rest on the supports and sends a signal to the control box.



PLS (option)

5.8.1 Adjusting the PLS

The numbers in this section refer to the figures in PLS (option) (on page 44).

To adjust the sensor:

1. Make sure that:
   - The CTL is positioned correctly, see Position of the CTL (on page 40).
   - The sensor functions correctly.
   - The brackets are not damaged.
2. Place the maintenance support *(on page 35).*
3. Switch the main switch to "1".
4. Push [deck up] briefly to activate control current.
5. Loosen the nuts (2) of the sensor.
6. Adjust the distance (X). To prevent damage to the sensor the distance (X) has to be 2...4 mm.

> Note
> The maximum reach of the sensor is 8 mm.
> The sensor has a LED that goes on when the sensor is activated.

7. Tighten the nuts (2).

6 TROUBLESHOOTING

6.1 Common faults and solutions

Caution
*Always use the maintenance support during all cleaning, maintenance or repairwork. See section Place the maintenance support (on page **35**).*

Consult your dealer/supplier for the correct settings.

Warning
Only authorized personnel is allowed to carry out maintenance.

Warning
Incorrect adjustments, repairs and maintenance can endanger people, goods, etc.

6.1.1 The deck does not rise when [deck up] is pressed because the motor is not running.

Cause	Solution
No mains supply.	Switch on the mains supply.
No mains voltage present.	Contact your local service department.
The door is not open, or not open enough.	Open the door.
The door sensor is defective or not set correctly.	Adjust or replace the door sensor.
If installed: is vehicle restraint system applied?	Apply vehicle restraint system.

6.1.2 The deck does not rise (sufficiently) even though the motor is running.

Cause	Solution
Load on the deck.	Remove the load from the deck.
Mechanical damage.	Check for mechanical damage.
Oil leakage.	Check the main cylinder, hose and connections for leakage.
Oil level in the hydraulic oil tank too low.	Check the hydraulic oil level (on page 36).
Not enough oil pressure.	Check whether the pump has built up any pressure. This can be indicated by enclosing the hydraulic hose of the main cylinder with your hand.
Wrong rotation direction of the electric motor.	Invert the rotation of the motor and retry. See section Connections (on page 28).
Wrong adjustment of the pressure relief valve.	Check that the pressure relief valve is set correctly.

6.1.3 The lip of the dock leveller does not (sufficiently) extend.

Cause	Solution
Oil level in the hydraulic oil tank too low.	Check the oil level with the dip-stick in the filling cap.
Not enough oil pressure.	Check whether the pump has built up pressure. This is indicated by the hydraulic hose of the lip cylinder.
Oil leakage.	Check the lip cylinder and hoses for leakage.
Wrong operation or adjustment of the sequence valve.	Check the operation and setting of the sequence valve.
Mechanical damage.	Check for mechanical damage.
Wrong adjustment of the pressure relief valve.	Check that the pressure relief valve is set correctly.
The optional BDC is switched on. The lip does not extend completely.	Switch BDC switch to '1'.

6.1.4 The lip is extended before the deck rises.

Cause	Solution
Load on the deck.	Remove the load from the deck.
Mechanical damage.	Check for mechanical damage.
Wrong operation or adjustment of the sequence valve.	Check the operation and setting of the sequence valve.

6.1.5 The deck does not descend or does not descend sufficiently.

Cause	Solution
Stop valve defective.	Check the operation of the stop valve.
The safety valve in the main cylinder is blocked.	Shortly press the control button one or more times.
The speed of descent is not set correctly.	Adjust lowering speed with adjustable throttle.
The deck descends too quickly, causing the safety valve to close.	Adjust lowering speed with adjustable throttle.
Mechanical damage or obstruction.	Check for mechanical damage or obstruction. Check that the maintenance support has been removed.
Adjustable throttle is blocked.	Turn the adjustable throttle completely in and re-adjust as described in section Hydraulic unit adjustment (on page 38).

6.1.6 The deck does not follow the truck's movements.

Cause	Solution
There is an obstruction.	Remove the obstruction.
The safety valve in the main cylinder is blocked.	Briefly press [deck up] one or more times.
There was a power loss.	1. Switch the main switch to '1'. 2. Briefly press [deck up] to activate the control current.

6.1.7 The deck is not flush with the dock platform in parked position.

Cause	Solution
There is an obstruction.	Remove the obstruction.
Cross traffic legs are not positioned correctly.	Press [deck up] to let the deck rise. Release to let the deck descend into parked position.

6.1.8 The lip does not move to the vertical (parked) position.

Cause	Solution
Mechanical damage.	Check for mechanical damage.
Orifice in port B1 is blocked. (pos 23 in Hydraulic unit adjustment (on page 38)).	Check the orifice in port B1 for blockage.

6.1.9 The optional BDC does not function correctly.

Cause	Solution
BDC switch on operating panel defective.	Check functioning of the switch.
Lip switch not correctly adjusted or defective.	Check functioning and adjustment of the lip switch.
Wiring defective.	Check wiring.
Mechanical damage cross traffic support mechanism.	Check cross traffic support mechanism for damage and correct functioning.

6.1.10 The optional AR does not function correctly.

Cause	Solution
AR is not installed.	Install option.
Sensor is not correctly aligned or broken.	See AR (option) (on page 44).

6.1.11 PLS does not function correctly.

Cause	Solution
The sensor does not detect the CTL, or does not detect the CTL correctly.	Adjust the sensor, see PLS (option) (on page 44).

6.1.12 The door does not open.

Cause	Solution
No mains supply.	Switch on the mains supply.
No mains voltage present.	Reconnect the mains voltage.
If installed: is vehicle restraint system applied?	Apply vehicle restraint system.
Check the safety circuit.	See Safety Circuit (on page 13).

6.1.13 The door does not close.

Cause	Solution
The deck is not in parked position.	Press [deck up] to let the deck rise. Release to let the deck descend into parked position.
The optional PLS does not function correctly.	See PLS does not function correctly. (on page 51)

6.2 Technical support

If the tips provided in this chapter do not answer your question or solve your problem, please contact your local Stertil service department or distributor.

For a complete list of Stertil distributors and local service departments, please refer to the website of Stertil on the internet: www.stertil.nl

7 LIST OF PARTS AND APPENDICES

7.1 Deck and lip

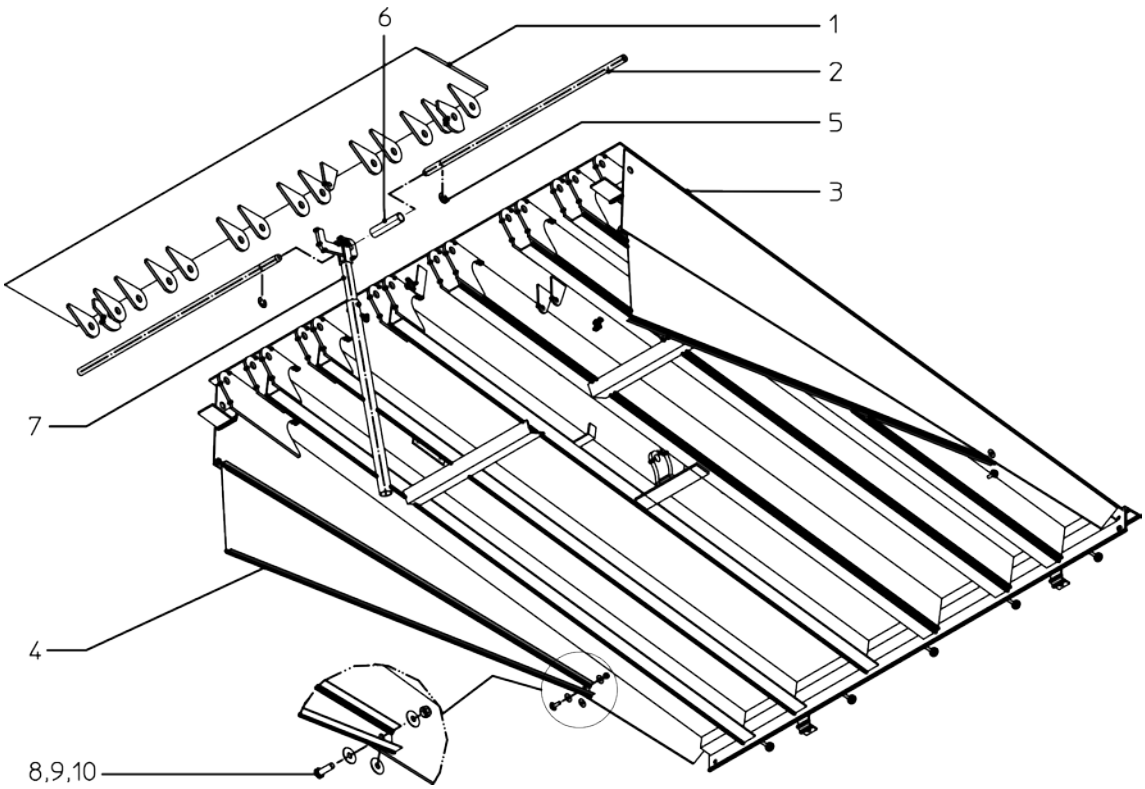


Table Lip assembly (1) (thread plate)

See section Product identification (on page 20) for more information

Width/Length	35	40	45	50	55	60	Lip rod (2)
SF ..17	06000300	06010300	06020300	06030300	06040300	06050300	06000002
SF ..18	06002300	06012300	06022300	06032300	06042300	06052300	06020002
SF ..20	06004300	06014300	06024300	06034300	06044300	06054300	06040002
SF ..21	06006300	06016300	06026300	06036300	06046300	06056300	06060002
SF ..22	06008300	06018300	06028300	06038300	06048300	06058300	06080002

Table Deck assembly (3) (thread plate)

Width/ Length	SF 20 . .	SF 22 . .	SF 25 . .	SF 28 . .	SF 30 . .	SF 35 . .	SF 40 . .	SF 45 . .
SF ..17	06000100	06010100	06020100	06030100	06040100	06050100	06060100	06070100
SF ..18	06002100	06012100	06022100	06032100	06042100	06052100	06062100	06072100
SF ..20	06004100	06014100	06024100	06034100	06044100	06054100	06064100	06074100
SF ..21	06006100	06016100	06026100	06036100	06046100	06056100	06066100	06076100
SF ..22	06008100	06018100	06028100	06038100	06048100	06058100	06068100	06078100

Table Sliding lamel (4)

Type	SF 20 . .	SF 22 . .	SF 25 . .	SF 28 . .	SF 30 . .	SF 35 . .	SF 40 . .	SF 45 . .
No.	06000215	06010030	06020030	06030030	06040030	06050030	06060030	06070030

Table Additional parts

Index	Reference	Description	Remarks
5	65062036	Retaining ring	
6	06000028	Spacer	
7	06000020	Maintenance support	
8	65025007	Button head screw	
9	65055712	Washer	
10	65051034	Self locking nut	

7.2 Frame

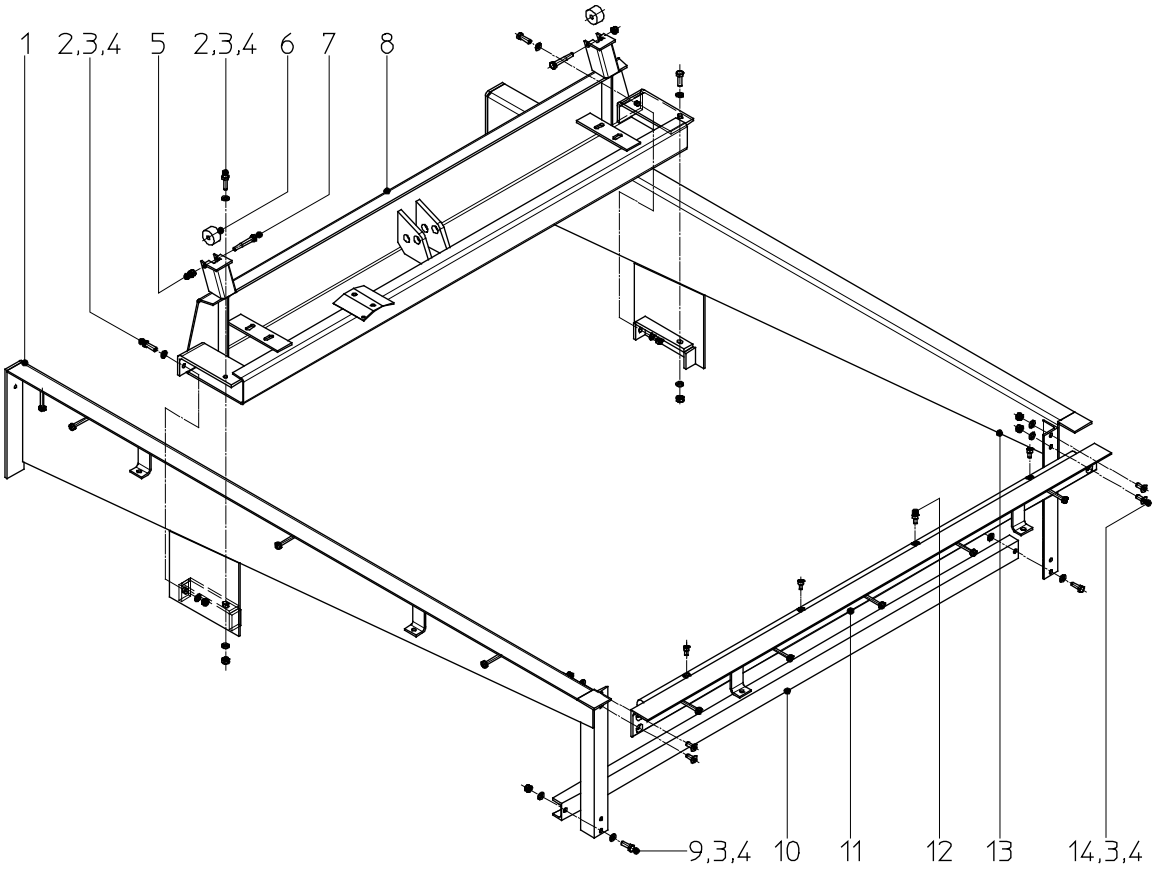


Table Side panel L/R

	SF 20 . .	SF 22 . .	SF 25 . .	SF 28 . .	SF 30 . .	SF 35 . .	SF 40 . .	SF 45 . .
Conventional R (1)	06000215	06010215	06020215	06030215	06040215	06050215	06060215	06070215
QMS R (1)	06000515	06010515	06020515	06030515	06040515	06050515	06060515	06070515
Conventional L (13)	06000210	06010210	06020210	06030210	06040210	06050210	06060210	06070210
QMS L (13)	06000510	06010510	06020510	06030510	06040510	06050510	06060510	06070510

Table Frame parts

	Rear hinge (11)		Frontangle (8)	Rear support (10)	Diagonal shore (35/40/45.. only)
	Conventional	QMS			
SF . . 17	06000225	06100225	06000220	06000230	06050235
SF . . 18	06002225	06102225	06002220	06002230	06052235
SF . . 20	06004225	06104225	06004220	06004230	06054235
SF . . 21	06006225	06106225	06006220	06006230	06056235
SF . . 22	06008225	06108225	06008220	06008230	06058235

Table Additional parts

Index	Reference	Description	Remarks
2	65003449	Screw	
3	65055021	Washer	
4	65050136	Hex nut	
5	65051036	Self locking nut	
6	02400006	Guide roller	
7	65002457	Hex head screw	
9	65003448	Hex head screw	
12	65012443	Socket head screw	
14	65025057	Countersunk head screw	

7.3 Hydraulic unit

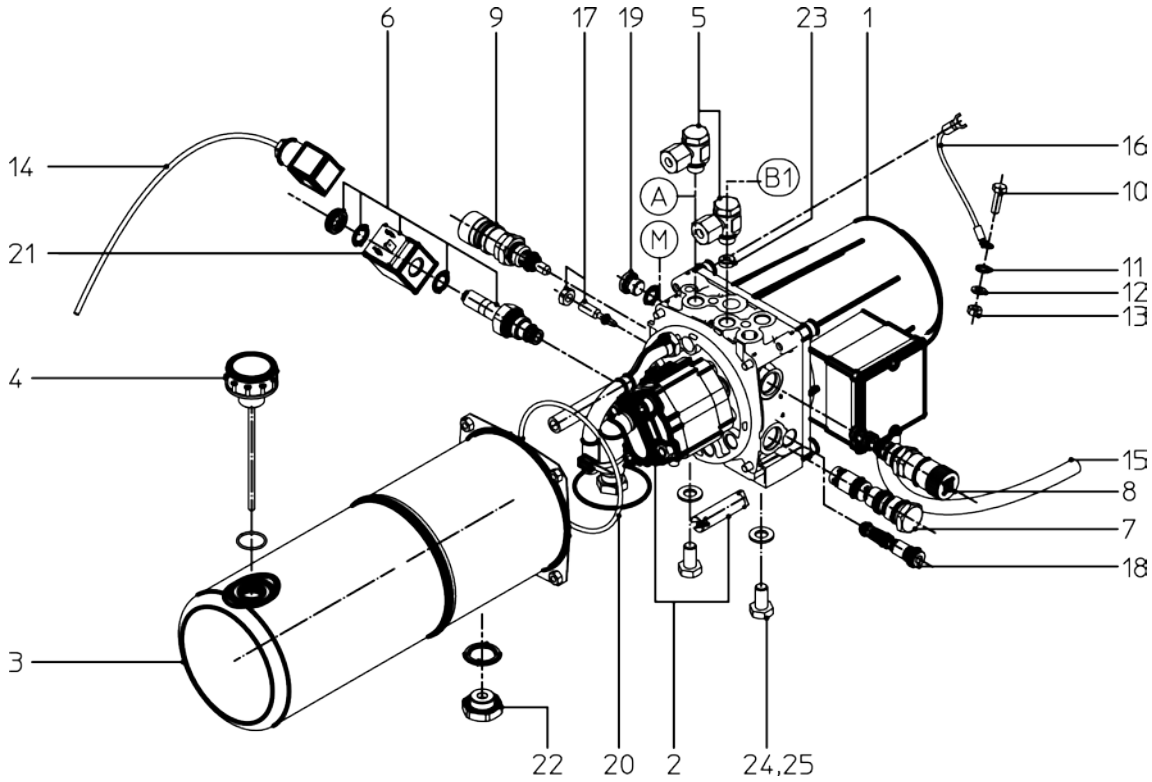
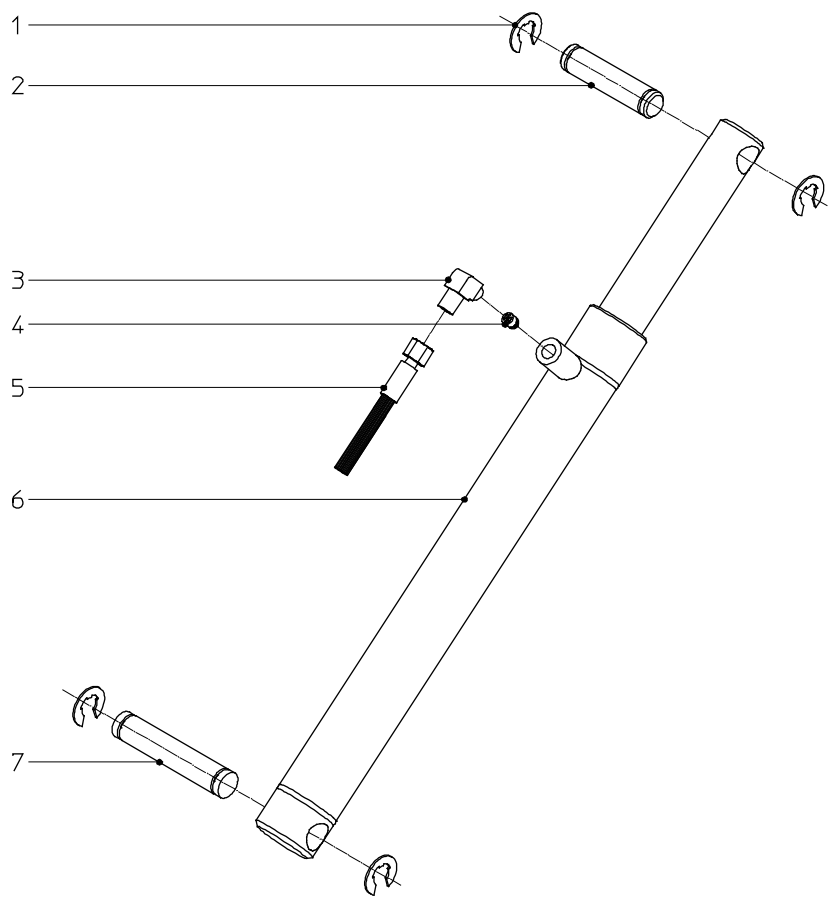


Table Replacement parts

Index	Reference	Description	Remarks
	06000620	Hydraulic unit 3x230/400V 50Hz	Excl. adaptor 5
	06010620	Hydraulic unit 3x230/400V 60Hz	Option
	06020620	Hydraulic unit 3x200V 50Hz	Option
	06030620	Hydraulic unit 3x200V 60Hz	Option
1	02335611	Electric motor 3x230/400V 50Hz	
2	06000612	Pump + coupling	
3	02335613	Tank	
4	02335634	Cap with dip stick (120 mm)	
5	68702212	Adaptor	
6	68308002	Stop valve (incl. coil)	See Hydraulic diagram (on page 72)
7	02335666	Special valve (A-port)	See Hydraulic diagram (on page 72)
8	02335667	Sequence valve	See Hydraulic diagram (on page 72)
9	03700529	Pressure relief valve	See Hydraulic diagram (on page 72)
10	65003287	Screw	
11	1038.27.00.64	Toothed washer	
12	65055015	Washer	
13	65050128	Nut	
14	02210021	Control cable	
15	01810763	Motor cable	
16	02335602	Earth cable	
17	-	Throttle (can not be dismounted)	See Hydraulic diagram (on page 72)
18	02335670	Special valve (B1-port)	See Hydraulic diagram (on page 72)
19	06000621	Plug (M-port)	
20	06000622	O-ring tank	
21	69481501	Coil	
22	-	Drain plug	
23	-	Orifice (B1-port)	
24	65003403	Hex head screw	
25	65055049	Washer	

7.4 Main cylinder



Type	Reference
SF 20 . .	06000625
SF 22 . .	06010625
SF 25 . .	06020625
SF 28 . .	06030625
SF 30 . .	06030625
SF 35 . .	06050625
SF 40 . .	06050625
SF 45 . .	06060625

Table Replacement parts

Index	Reference	Description	Remarks
1	65062036	Retaining ring	
2	02210019	Hinge pin (deck side)	
3	68700813	Adaptor	
4	68228015	Safety valve	
5	02406001	Hydraulic hose main cylinder	
6	See previous table	Main cylinder (incl. 3 and 4)	
7	01510021	Hinge pin (frame side)	

7.5 Lip cylinder

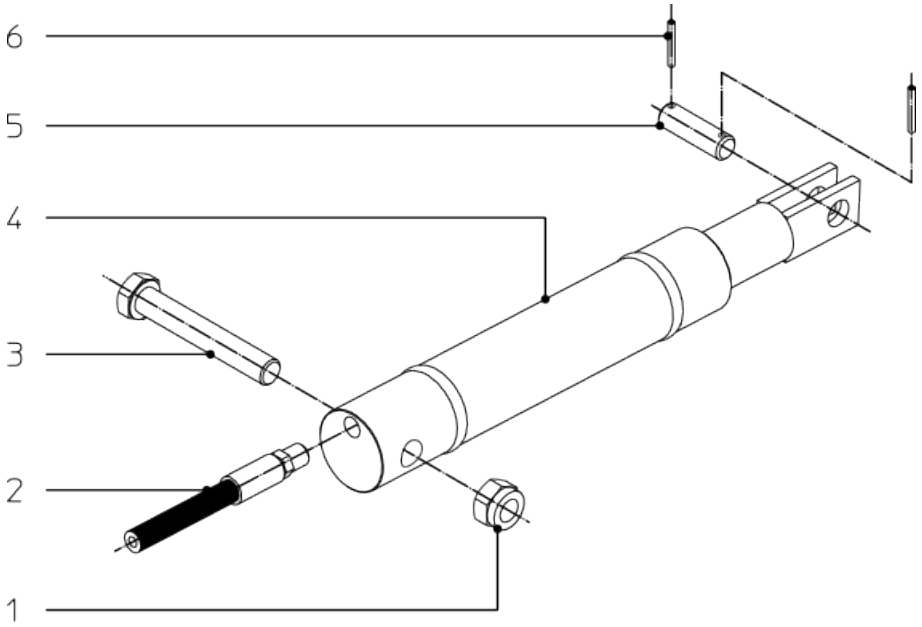


Table Replacement parts

Index	Reference	Description	Remarks
1	65051040	Self locking nut	
2	06000602	Hydraulic hose lip cylinder	
3	65002542	Hinge screw (deck side)	
4	06000680	Lip cylinder (standard)	35, 40, 45, 50 lip length
4	01510550	Lip cylinder (heavy duty)	55 and 60 lip length
5	01510020	Hinge pin (lip side)	
6	65077101	Cotter pin	Only with 01510550

7.6 Cross traffic legs

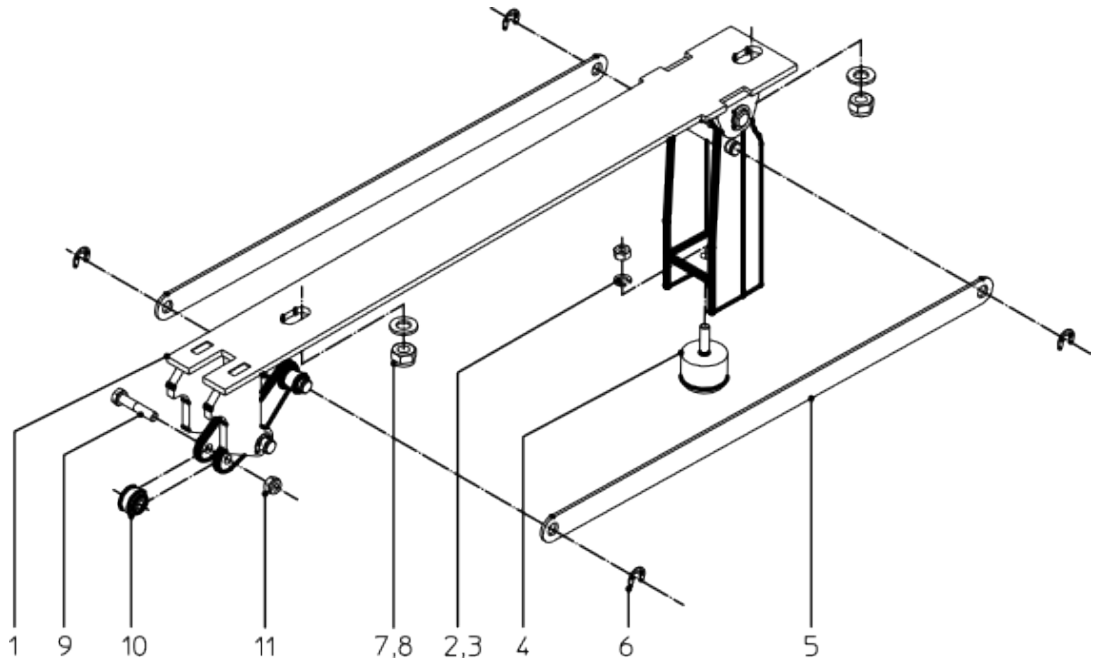


Table Replacement parts

Index	Reference	Description	Remarks
1	06000040	CTL-unit ..	20/22/25/28/30
1	06050040	CTL-unit ..	35/40/45
2	65050132	Nut	
3	65058024	Spring washer	
4	66201046	Rubber buffer CTL	
5	06000041	CTL pull rod	
6	65062026	Retaining ring	
7	65051032	Nut	
8	65002369	Bolt	
9	65051036	Nut	
10	1024.38.00.06	Roller	

7.7 BDC (option)

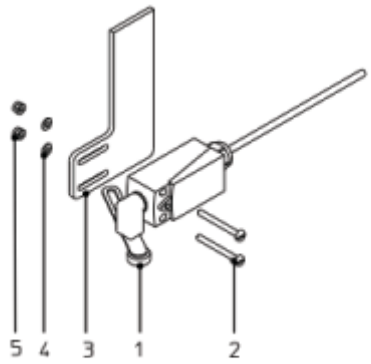


Table Replacement parts

Index	Reference	Description	Remarks
1	02409006	Limit switch (incl cable)	Limit Switch:69171021
2	65030230	Bolt	
3 (ref)	06000113	Bracket for limit switch	part of deck assembly
4	65055013	Washer	
5	65051024	Nut	

7.8 AR (option)

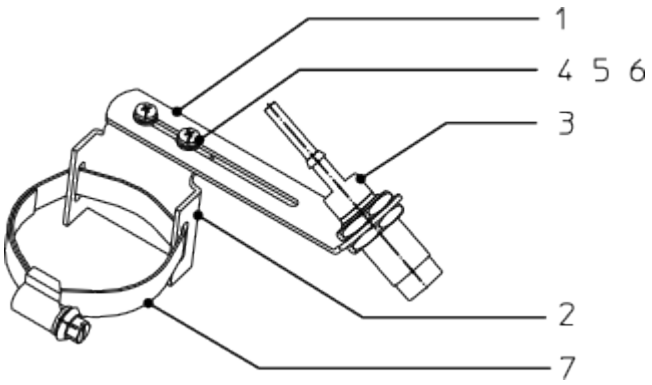


Table Replacement parts

Index	Reference	Description	Remarks
1	06000963	Mounting bracket	
2	06000964	Mounting bracket	
3	69160001	Inductive sensor.	
4	65034219	Bolt	
5	65058014	Washer	
6	65055013	Nut	
7	65099028	Hose clamp	

7.9 PLS (option)

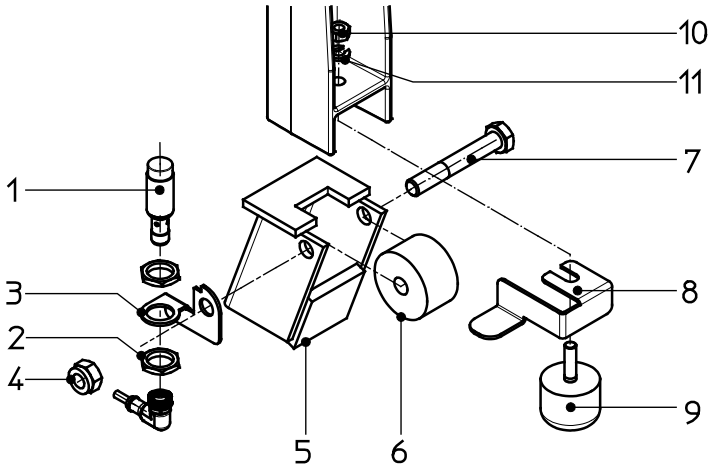
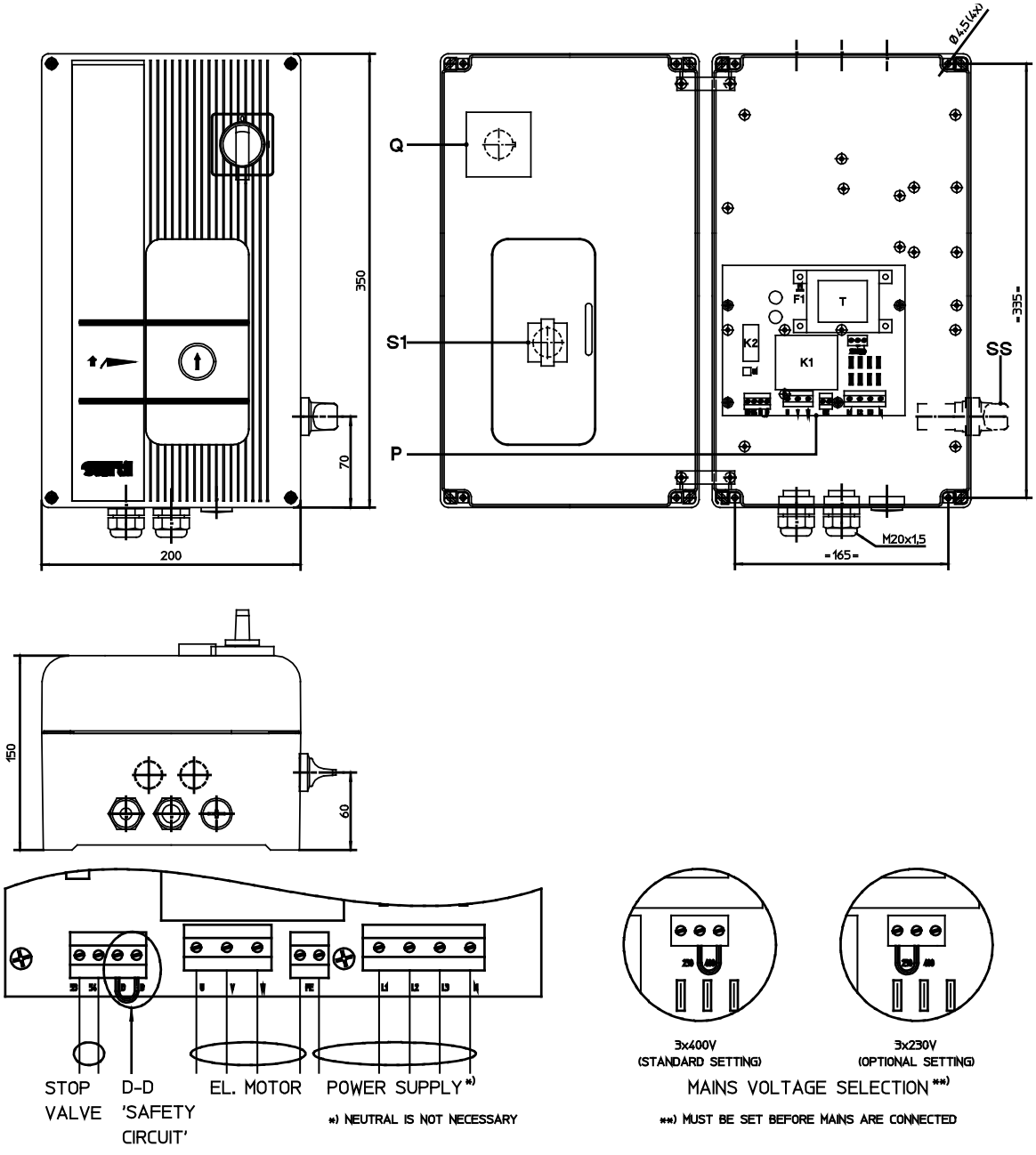


Table Replacement parts

Index	Reference	Description	Remarks
1	69160004	Inductive sensor	
2	-	Nut	
3	06000973	Mounting bracket sensor	
4 (ref)	65051036	Nut	
5 (ref)	-	Support	
6 (ref)	02400006	Roller	
7 (ref)	65002457	Bolt	
8	06000972	Bracket CTL	
9 (ref)	66201046	Rubber buffer CTL	
10 (ref)	65050132	Nut	
11 (ref)	65058024	Spring washer	

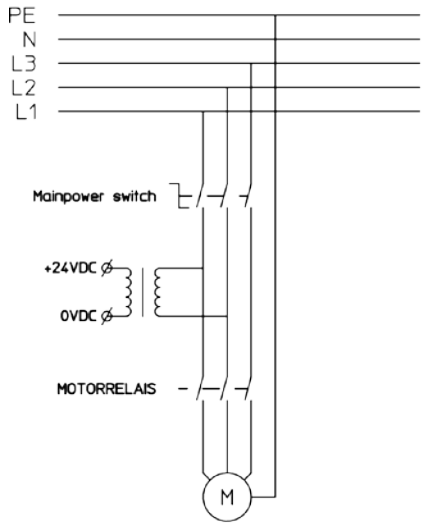
7.10 Control box



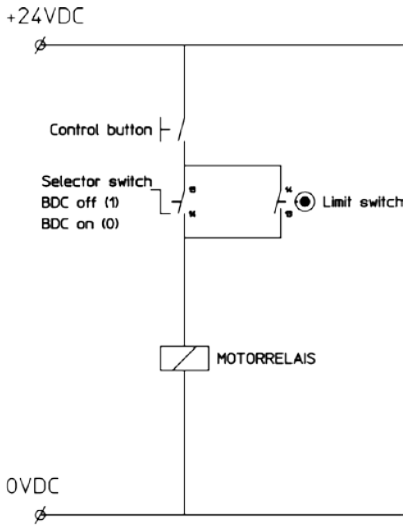
Replacement parts

Index	Reference	Description	Remarks
-	06050700	Control Box	complete
-	06050702	Cover	without Q and S1
Q	69120038	Main Switch	
K1	-	Motor Relay	
P	69900270	PCB basic 230/400V	
F1	-	Automatic fuse	
T	-	Transformer	
S1	69141131	Push button switch	comlete
SS	69141132	Selector switch	optional

7.11 Electric diagram BDC - Basic Control box (option)

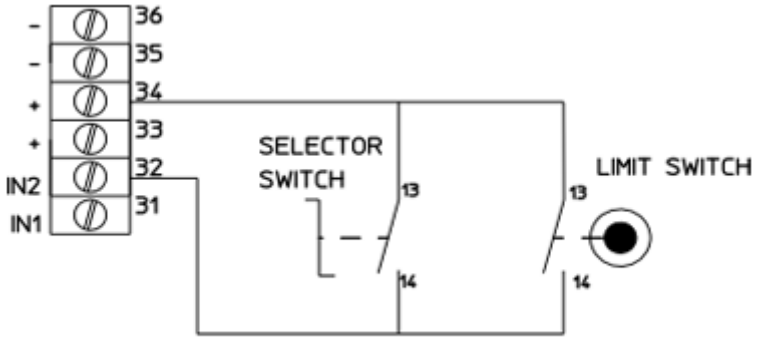


Power circuit



Control circuit

7.12 Electrical diagram BDC - SSC/SMC Control box (option)



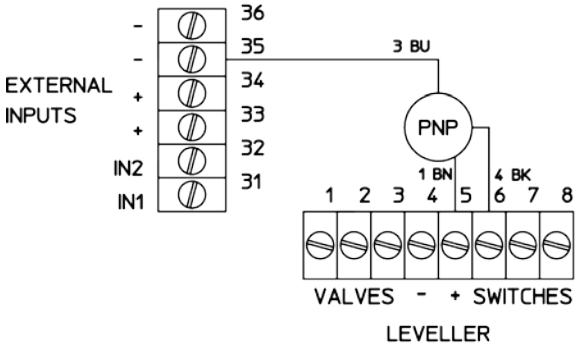
SBC/SMC Control Box connection (Schematic)

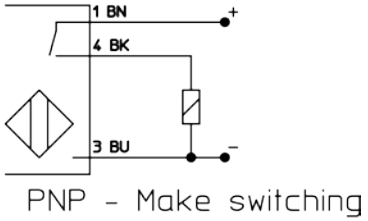
The software settings for the BDC have to be made manualy.

- Function: BDC Setting: OFF
- Function INPUT2 Setting: MOD9

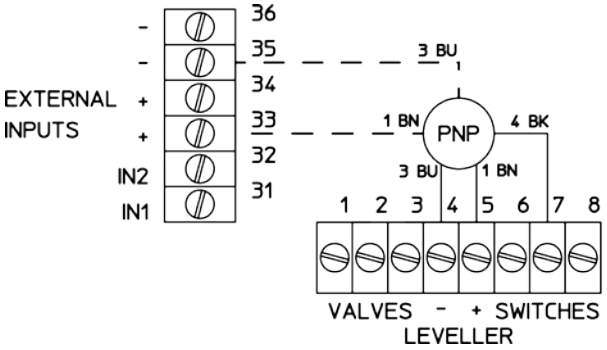
Use the Plug in Display to make the following changes, see SSC/SMC control box manual.

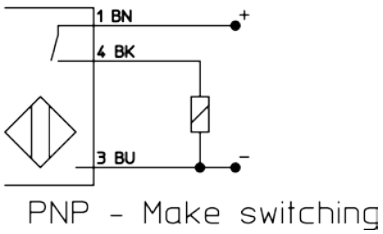
7.13 Electric diagram - AR (option)





7.14 Electric diagram - PLS (option)





7.15 Hydraulic diagram

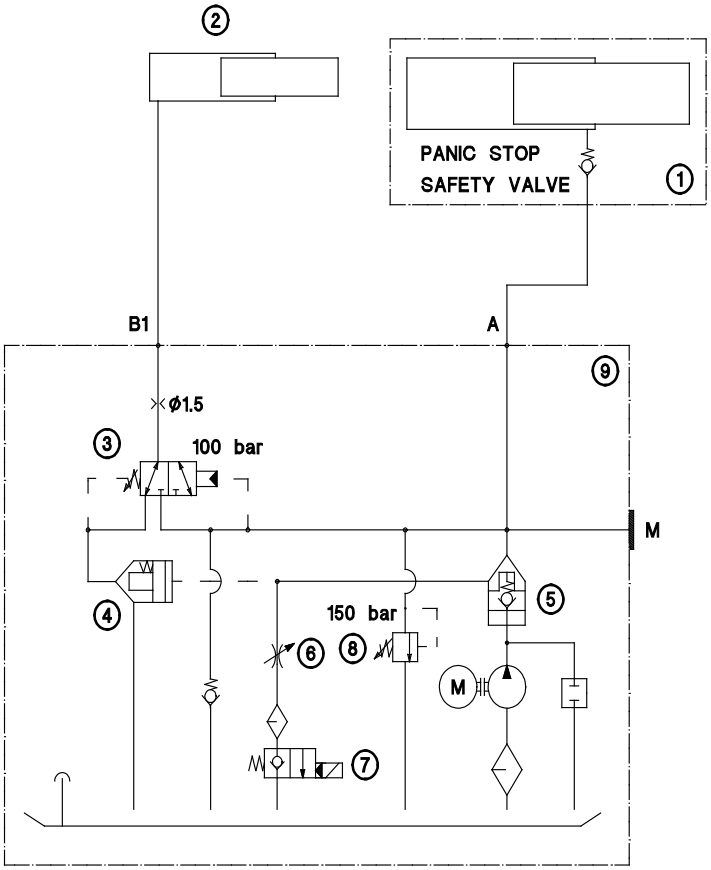


Table Replacement parts

Index	Reference	Description	Remarks
1		Main cylinder	
2		Lip cylinder	
3		Sequence valve	
4		Special valve	
5		Special valve	
6		Throttle	
7		Stop valve	
8		Pressure relief valve	
9		Hydraulic unit	
A		Connection port 1/4" BSP	
B		Connection port 1/4" BSP	
M		Measuring port 1/4" BSP	

7.16 Pit layout - conventional

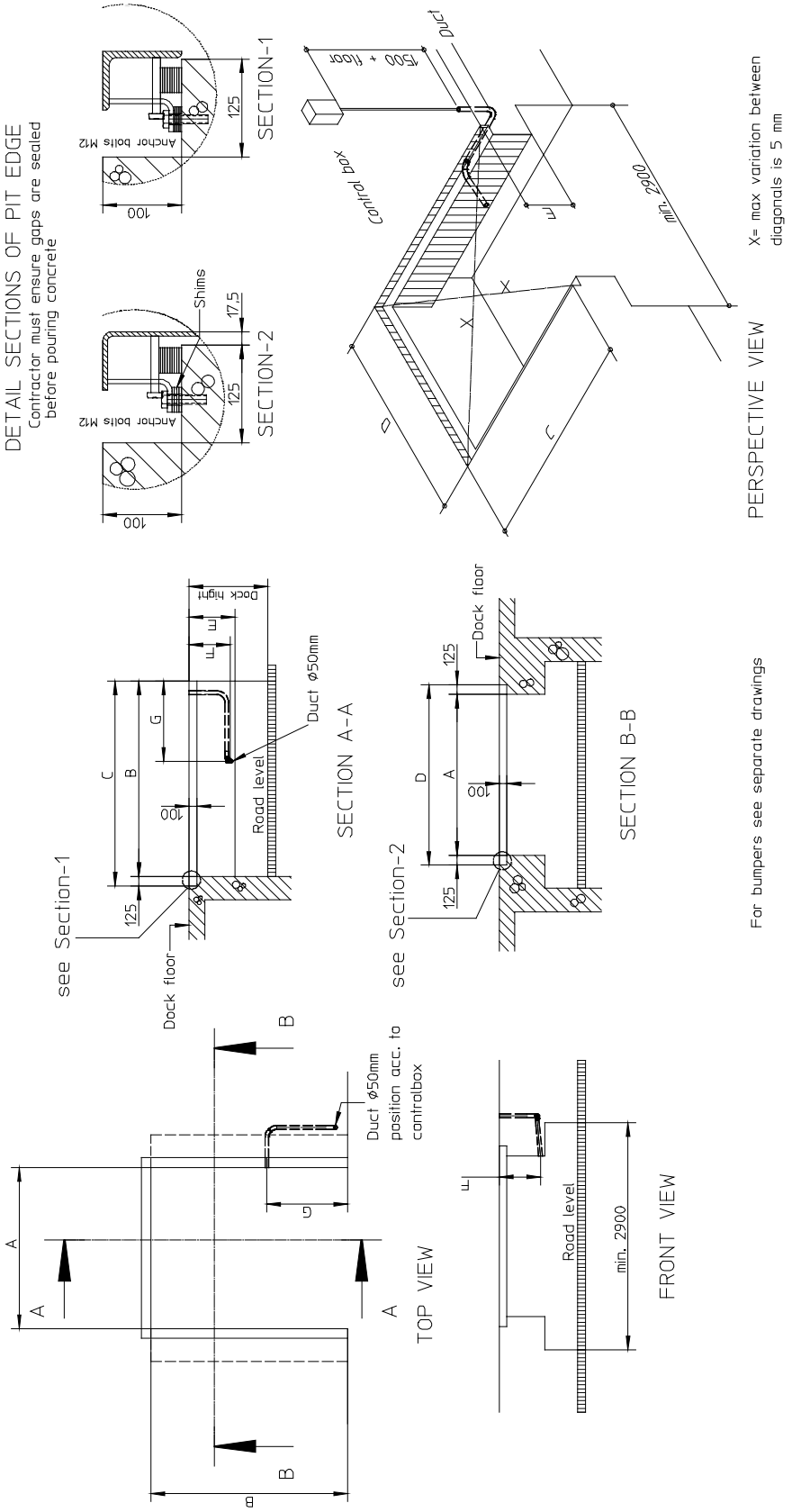


Table Width

	A (mm +0/-5)	D (mm)
SF . . 17	1810	2060
SF . . 18	1890	2140
SF . . 20	2060	2310
SF . . 21	2170	2420
SF . . 22	2310	2560

Table Length

	B (mm +0/-5)	C (mm)	E (mm)	F (mm +5/-5)	G (mm)
SF 20 . .	2000	2125	585	525	1025
SF 22 . .	2195	2320	585	525	1025
SF 25 . .	2500	2625	585	525	1025
SF 28 . .	2805	2930	585	525	1025
SF 30 . .	3000	3125	585	525	1025
SF 35 . .	3500	3625	700	640	875
SF 40 . .	4000	4125	700	640	875
SF 45 . .	4500	4625	700	640	875

7.17 Pit layout - QMS

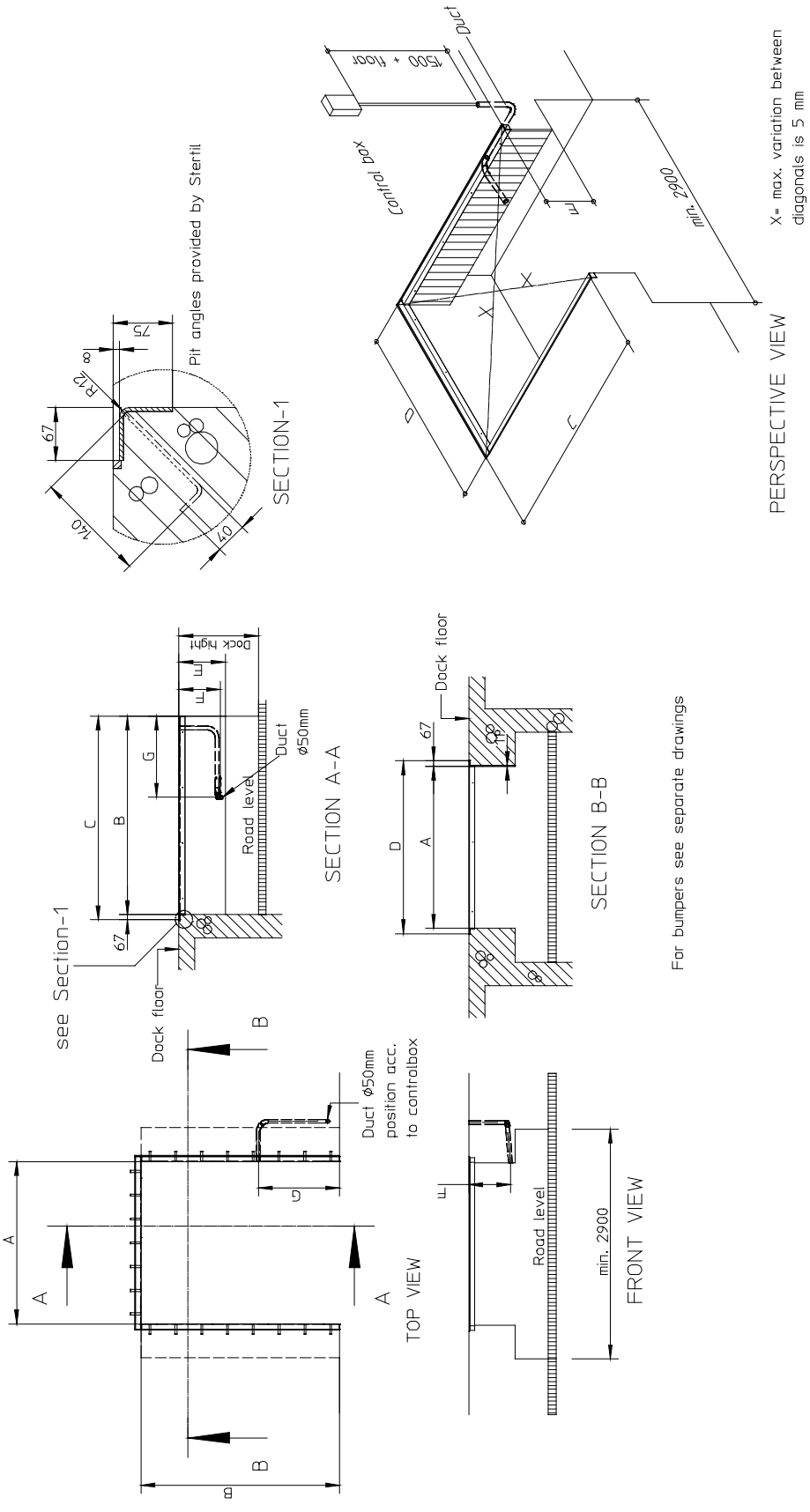


Table Width

	A (mm +4/-0)	D (mm)
SF . . 17	1796	1930
SF . . 18	1876	2010
SF . . 20	2046	2180
SF . . 21	2156	2290
SF . . 22	2296	2430

Table Length

	B (mm +5/-0)	C (mm)	E (mm)	F (mm +5/-5)	G (mm)
SF 20 . .	2000	2067	585	525	1025
SF 22 . .	2195	2262	585	525	1025
SF 25 . .	2500	2567	585	525	1025
SF 28 . .	2805	2872	585	525	1025
SF 30 . .	3000	3067	585	525	1025
SF 35 . .	3500	3567	700	640	875
SF 40 . .	4000	4067	700	640	875
SF 45 . .	4500	4567	700	640	875

Table Curb angle set

	SF . . 17	SF . . 18	SF . . 20	SF . . 21	SF . . 22
SF 20 . .	02319000	06002950	02319015	02319145	02319020
SF 22 . .	06010950	06012950	06014950	06016950	06018950
SF 25 . .	02319040	06022950	02335550	02319155	02319045
SF 28 . .	06030950	06032950	06034950	06036950	06038950
SF 30 . .	02319055	06042950	02340550	02319160	02319060
SF 35 . .	02319070	06052950	02319080	02319165	02319085
SF 40 . .	02319095	06062950	02319105	02319170	02319110
SF 45 . .	02319120	06072950	02319130	02319180	02319135

7.18 Weather seals (option)

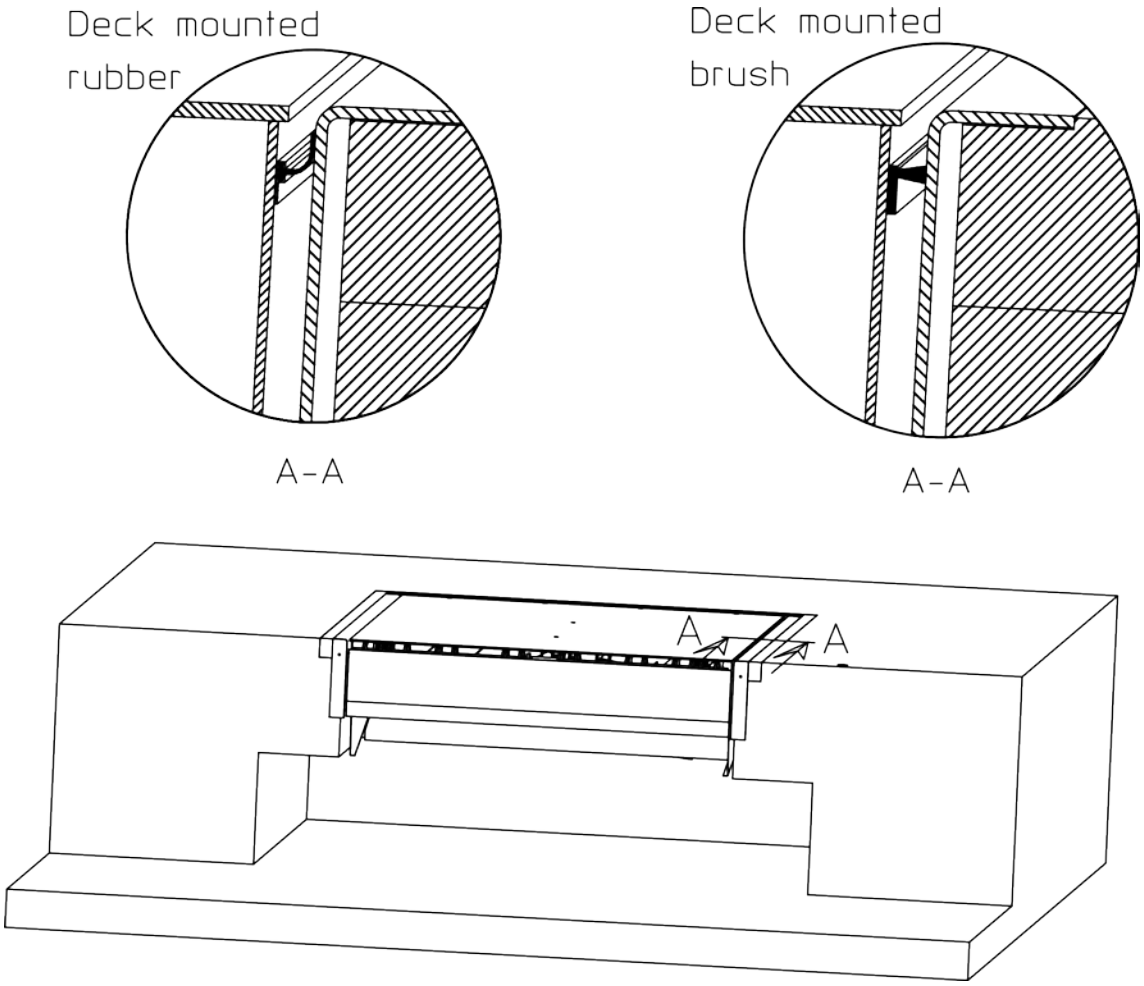


Table Brushes

Type leveller	**Brush Set reference**	**Replacement brush 15mm x 1000mm**	
		Reference	Number required
SF 20 . .	06000920	02219912	4
SF 22 . .	06010920	02219912	5
SF 25 . .	06020920	02219912	5
SF 28 . .	06030920	02219912	6
SF 30 . .	06040920	02219912	6
SF 35 . .	06050920	02219912	7
SF 40 . .	06060920	02219912	8
SF 45 . .	06070920	02219912	9

Table Rubbers

Type leveller	**Rubber Set reference**	**Replacement rubber 32mm**	
		Reference	Number required
SF 20 . .	06000925	66201087	2 x 3m
SF 22 . .	06010925	66201087	2 x 3m
SF 25 . .	06020925	66201087	2 x 3m
SF 28 . .	06030925	66201087	2 x 3m
SF 30 . .	06040925	66201087	2 x 3m
SF 35 . .	06050925	66201087	2 x 4.5m
SF 40 . .	06060925	66201087	2 x 4.5m
SF 45 . .	06070925	66201087	2 x 4.5m

INDEX

Q

R

S

T

V

W

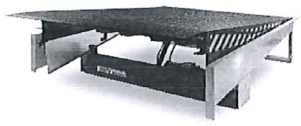
Manufactured by:

STERTIL B.V.
P.O. Box 23
9288 ZG Kootstertille (Holland)
Telephone: 31(0)512334444
Telefax: 31(0)512332099
Website: www.stertil.nl
Email: dp@stertil.nl

Specification No. 1033433 [SA:MR]

HYDRAULIC DOCK LEVELLER MODEL SF 2520

ITEM:	01.00	STATUS:	Specification	EDITED:	21.05.21
QUANTITY:	17 No.				
LOCATION:	Standard Dock Positions				
SUPPLY:	Delivered and Installed				



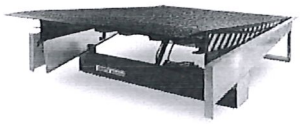
CAPACITY:	• 6000kg
DOCK HEIGHT:	• 1200mm
WORKING RANGE:	• Above + 300mm • Below - 300mm
PLATFORM:	• 2000mm (W) x 2500mm (L) excluding lip • High tensile steel, 10mm thick, single piece deck plate (not 2-3 sectioned welded together)
LIP LENGTH:	• 450mm • With Lip Degree Angle at 5.0° • Self-cleaning hinge with lifetime guarantee constructed from high tensile steel.
MOUNTING:	• Integral support frame, suspending the leveller in the pit in Galvanised curb angles to suit 175mm thick dock slab.
COLOUR:	• Lip, Deck Plate and Front Beam: Black RAL 9011 • Sub-Frame: Galvanised
OPERATION:	• SMC Composite Control Panel (included elsewhere)
ACCESSORIES INCLUDED:	1. Integral support frame, suspending the leveller in the pit, thus providing recess for vehicle tail lift if required. 2. Integral maintenance strut. 3. Push button return to parked position at dock level. 4. Toe protection guards to cover full working range 5. Galvanised Twin cross-traffic support legs. 6. Galvanised full width "gapless" rear hinge. 7. Door interlock, door to be fully open before dock leveller can be operated. 8. Brush weather seals to both long sides of the platform.
OPTIONS DECLINED:	1. n/a
NOTES:	1. The safety requirements are based on the assumption that the dock leveller(s) are regularly maintained by competent persons to the instructions of the manufacturer and that the operating person has been instructed in the use of the dock leveller (as stated in BS EN 1998:2009). 2. Final Levels for setting out Dock Levellers to be supplied by others. 3. All Stertil® Stokvis Dock Levellers comply with or exceed EN1398 which recommends that the maximum working gradient should not exceed 12.5% or 1:8. 4. All Stertil® Stokvis Dock Levellers can be supplied with an extended 5 year warranty subject to a service contract being taken out with the service dept at the time of ordering. 5. Wiring by Stertil® to clients 415v, 3 Phase neutral & earth 6 amp fused isolator via clients cable duct (minimum 75mm diameter).

1. This document must be read in conjunction with the full technical specification details.
2. Offloading, safe covered storage, distribution and hoisting by others unless stated above.
3. See enclosed details ref. Stertil® terms and conditions.
4. Images shown are for identification purposes only and may vary in design

Specification No. 1033433 [SA:MR]

HYDRAULIC DOCK LEVELLER MODEL SF 4020

ITEM:	02.00 STATUS: Specification EDITED: 21.05.21
QUANTITY:	4 No.
LOCATION:	Euro dock positons
SUPPLY:	Delivered and Installed



CAPACITY:	• 6000kg
DOCK HEIGHT:	• 1200mm
WORKING RANGE:	• Above + 415mm • Below - 340mm
PLATFORM:	• 2000mm (W) x 4000mm (L) excluding lip • High tensile steel, 10mm thick, single piece deck plate (not 2-3 sectioned welded together)
LIP LENGTH:	• 500mm • With Lip Degree Angle at 5.0° • Self-cleaning hinge with lifetime guarantee constructed from high tensile steel.
MOUNTING:	• Integral support frame, suspending the leveller in the pit in Galvanised curb angles to suit 175mm thick dock slab.
COLOUR:	• Lip, Deck Plate and Front Beam: Black RAL 9011 • Sub-Frame: Galvanised
OPERATION:	• SMC Composite Control Panel (included elsewhere)
ACCESSORIES INCLUDED:	1. Integral support frame, suspending the leveller in the pit, thus providing recess for vehicle tail lift if required. 2. Integral maintenance strut. 3. Push button return to parked position at dock level. 4. Toe protection guards to cover full working range 5. Galvanised Twin cross-traffic support legs. 6. Galvanised full width "gapless" rear hinge. 7. Door interlock, door to be fully open before dock leveller can be operated. 8. Brush weather seals to both long sides of the platform.
OPTIONS DECLINED:	1. n/a
NOTES:	1. The safety requirements are based on the assumption that the dock leveller(s) are regularly maintained by competent persons to the instructions of the manufacturer and that the operating person has been instructed in the use of the dock leveller (as stated in BS EN 1998:2009). 2. Final Levels for setting out Dock Levellers to be supplied by others. 3. All Stertil® Stokvis Dock Levellers comply with or exceed EN1398 which recommends that the maximum working gradient should not exceed 12.5% or 1:8. 4. All Stertil® Stokvis Dock Levellers can be supplied with an extended 5 year warranty subject to a service contract being taken out with the service dept at the time of ordering. 5. Wiring by Stertil® to clients 415v, 3 Phase neutral & earth 6 amp fused isolator via clients cable duct (minimum 75mm diameter).

1. This document must be read in conjunction with the full technical specification details.
2. Offloading, safe covered storage, distribution and hoisting by others unless stated above.
3. See enclosed details ref. Stertil® terms and conditions.
4. Images shown are for identification purposes only and may vary in design

Specification No. 1033433 [SA:MR]

COLLAPSIBLE FRAME DOCK SHELTER MODEL: WE 574

ITEM:	03.00	STATUS:	Specification	EDITED:	21.05.21
QUANTITY:	17 No.				
LOCATION:	Standard dock positons				
SUPPLY:	Delivered and Installed				

TYPE:	• Collapsible frame system with 4 flat steel hinge arms. • Dock mounted unit fixed to building structure.
DIMENSIONS:	• Front: 3400mm wide x 3500mm high • Rear Fixing Area: 3400mm wide x 3600mm high • Head curtain drop: 1020mm • Side curtains: 675mm • Projection: 550mm
FRAME:	• Galvanised steel frame, with curtains designed for ease of maintenance
CLADDING:	• Nylon reinforced PVC, colour Black
FABRIC / COLOUR:	• Curtains manufactured from 3mm PVC which consists of a double spring-loaded monofilament polyester weave both sides coated with PVC. This combination gives a 'Unique' material with high piercing-tear-and-abrasion resistance. • Colour to be black with one heat-welded white chevron marker to assist vehicle positioning.
VEHICLE RANGE:	• Min vehicle width 2300 mm • Max vehicle width 2700 mm • Min vehicle height 3680mm • Max vehicle height 4400mm • All above dimensions are based on a dock height of 1200mm
ACCESSORIES INCLUDED:	1. Wind straps to give improved resistance to heavy wind and storms. 2. An elastic cable behind the head curtain connects two side curtains and prevents the head curtain from moving behind the side curtains.
OPTIONS DECLINED:	1. n/a
NOTES:	

1. This document must be read in conjunction with the full technical specification details.
2. Offloading, safe covered storage, distribution and hoisting by others unless stated above.
3. See enclosed details ref. Stertil® terms and conditions.
4. Images shown are for identification purposes only and may vary in design

Specification No. 1033433 [SA:MR]

STOKVIS COLLAPSIBLE FRAME DOCK SHELTER MODEL: WL 574		
ITEM:	04.00 STATUS: Specification EDITED: 21.05.21	
QUANTITY:	4 No.	
LOCATION:	Euro dock positions	
SUPPLY:	Delivered and Installed	

TYPE:	• Collapsible frame system with artificial fibre spring integrated at front and back framing. • Dock mounted unit fixed to building structure.
DIMENSIONS:	• Front: 3500mm wide x 4300mm high • Rear Fixing Area: 3540mm wide x 4400mm high • Head curtain drop: 1500mm • Side curtains: 675mm • Projection: 900mm
FRAME:	• Extruded anodised aluminium profile sections which are corrosion resistant
CLADDING:	• Nylon reinforced PVC, colour to be Black
FABRIC / COLOUR:	• Curtains manufactured from 3mm PVC which consists of a double spring-loaded monofilament polyester weave both sides coated with PVC. This combination gives a 'Unique' material with high piercing-tear-and-abrasion resistance. • Colour to be black with two heat-welded white chevron markers to assist vehicle positioning.
VEHICLE RANGE:	• Min vehicle width 2300 mm • Max vehicle width 2700 mm • Min vehicle height 4000mm • Max vehicle height 5200mm • All above dimensions are based on a dock height of 1200mm
ACCESSORIES INCLUDED:	1. Wind straps to give improved resistance to heavy wind and storms. 2. An elastic cable behind the head curtain connects two side curtains and prevents the head curtain from moving behind the side curtains. 3. **Double fjongs to suit oversized 1500mm long head curtain.**
OPTIONS DECLINED:	1. n/a
NOTES:	1.

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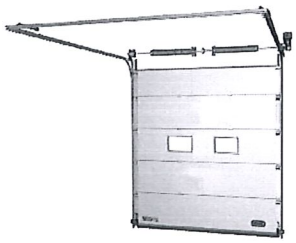
4. Images shown are for identification purposes only and may vary in design

Specification No. 1033433 [SA:MR]

THERMADOOR MODEL 640 - 2960x3000 [wxh]					
ITEM:	05.00	STATUS:	Specification	EDITED:	21.05.21
QUANTITY:	17 No.				
LOCATION:	Standard dock positons				
SUPPLY:	Delivered and Installed				



DIMENSIONS:	• Daylight Opening Size: 2860mm wide x 3000mm high • **Manufactured Door Size: 2960mm wide x 3000mm high**
PANEL:	• Composite structure: o Nominal 40mm thickness o Inner and outer skins of galvanised steel to provide additional strength o Filled with high-density polyurethane foam to provide a 'U' value of 0.43w/m^2 °C. • Approximate weight of Door & Hardware 14Kg/m^2
PANEL FINISH:	• Internal white Polyester coating. • Externally finished in Stucco architectural polyester enamel from our standard range. • RAL7016 Anthracite Grey
TRACK SYSTEM:	• Vertical Lift – (Prowall track configuration) **No hot rolled steel is required above prowall, door tracks to affix to sheeting rail at top of door track.*
OPERATION BY:	• 3 phase electric motor/gearbox unit, complete with limit switches and emergency release. Located - Right hand side.
ACTIVATION BY:	• Three button starter unit: open (single-impulse); close (dead-man); emergency stop • Buttons incorporated into SMC controller.
ACCESSORIES INCLUDED:	1. Full width panoramic vision section split into 3 panes with aluminium frame finish. 2. Anti-fall devices; Cable break fall devices 3. Non-absorbent rubber seals to combat penetration of draughts, water and dust complete with top, side seals and bottom 'D' type rubber seal. 4. Standard duty springs rated for 15,000 – 20,000 cycles. 5. Low level spring consoles. 6. Anti-lift automatic mechanical locking device 7. Slack cable micro-switch on motor side; to detect slack in cables and cut motor operation.
	OPTIONS DECLINED:
Other	1. n/a
NOTES:	1. Wiring to clients 415v, 3 phase, Neutral & Earth 10 amp fused isolator mounted internally at approximately 1700mm F.F.L. within one metre on motor side. 2. Standard Polyester colours: RAL 9010 White, RAL 9002 Bone White, RAL 5010 Gentian Blue, RAL 1021 Rape Yellow, RAL 6009 Foliage Green, RAL 9006 White Aluminium, RAL 9007 Grey Aluminium, RAL 7016 Anthracite Grey, RAL 8014 Sepia Brown, RAL 3000 Fire Red. 3. Prowall door track – low level spring console to be mounted no more than 800mm above clear door opening height. 4. Sheeting rail provided @ 6000mm u/s to affix door track.

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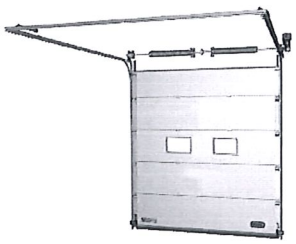
THERMADOOR MODEL 640 - 2960x3500 [wxh]		
ITEM:	06.00 STATUS: Specification EDITED: 21.05.21	
QUANTITY:	4 No.	
LOCATION:	Euro dock access positons	
SUPPLY:	Delivered and Installed	

DIMENSIONS:	• Daylight Opening Size: 2860mm wide x 3500mm high • **Manufactured Door Size: 2960mm wide x 3500mm high**
PANEL:	• Composite structure: o Nominal 40mm thickness o Inner and outer skins of galvanised steel to provide additional strength o Filled with high-density polyurethane foam to provide a 'U' value of 0.43w/m^2 °C. • Approximate weight of Door & Hardware 14Kg/m^2
PANEL FINISH:	• Internal white Polyester coating. • Externally finished in Stucco architectural polyester enamel from our standard range. • RAL7016 Anthracite Grey
TRACK SYSTEM:	• Vertical Lift – (Prowall track configuration) **No hot rolled steel is required above prowall, door tracks to affix to sheeting rail at top of door track.*
OPERATION BY:	• 3 phase electric motor/gearbox unit, complete with limit switches and emergency release. Located - Right hand side.
ACTIVATION BY:	• Three button starter unit: open (single-impulse); close (dead-man); emergency stop • Buttons incorporated into SMC controller.
ACCESSORIES INCLUDED:	1. Full width panoramic vision section split into 3 panes with aluminium frame finish. 2. Anti-fall devices; Cable break fall devices 3. Non-absorbent rubber seals to combat penetration of draughts, water and dust complete with top, side seals and bottom 'D' type rubber seal. 4. Standard duty springs rated for 15,000 – 20,000 cycles. 5. Low level spring consoles. 6. Anti-lift automatic mechanical locking device 7. Slack cable micro-switch on motor side; to detect slack in cables and cut motor operation.
	OPTIONS DECLINED:
Other	1. n/a
NOTES:	1. Wiring to clients 415v, 3 phase, Neutral & Earth 10 amp fused isolator mounted internally at approximately 1700mm F.F.L. within one metre on motor side. 2. Standard Polyester colours: RAL 9010 White, RAL 9002 Bone White, RAL 5010 Gentian Blue, RAL 1021 Rape Yellow, RAL 6009 Foliage Green, RAL 9006 White Aluminium, RAL 9007 Grey Aluminium, RAL 7016 Anthracite Grey, RAL 8014 Sepia Brown, RAL 3000 Fire Red. 3. Prowall door track – low level spring console to be mounted no more than 800mm above clear door opening height. 4. Sheeting rail provided @ 7000mm u/s to affix door track.

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Specification No. 1033433 [SA:MR]

THERMADOOR MODEL 640 - 4120x4860 [wxh] - VLIFT						
ITEM:	07.00	STATUS:	Specification	EDITED:	21.05.21	
QUANTITY:	4 No.					
LOCATION:	Level access door positons					
SUPPLY:	Delivered and Installed					

DIMENSIONS:	• Daylight Opening Size: 4000mm wide x 4800mm high • **Manufactured Door Size: 4120mm wide x 4860mm high**
PANEL:	• Composite structure: o Nominal 40mm thickness o Inner and outer skins of galvanised steel to provide additional strength o Filled with high-density polyurethane foam to provide a 'U' value of 0.43w/m^2 °C. • Approximate weight of Door & Hardware 14Kg/m^2
PANEL FINISH:	• Internal white Polyester coating. • Externally finished in Stucco architectural polyester enamel from our standard range. • RAL7016 Anthracite Grey
TRACK SYSTEM:	• Vertical Lift; overall track height = 10,240mm (h)
OPERATION BY:	• 3 phase electric motor/gearbox unit, complete with limit switches and emergency release. Located - Right hand side.
ACTIVATION BY:	• Three button starter unit: open (single-impulse); close (dead-man); emergency stop
ACCESSORIES INCLUDED:	1. 4no. Windows (663mm W x343mm H) Square corners 2. Anti-fall devices; Cable break fall devices 3. Non-absorbent rubber seals to combat penetration of draughts, water and dust complete with top, side seals and bottom 'D' type rubber seal. 4. Standard duty springs rated for 15,000 – 20,000 cycles. 5. Low level spring consoles. 6. Shoot-bolt complete with electrical interlock to motor. 7. Slack cable micro-switch on motor side; to detect slack in cables and cut motor operation. 8. Steel fixing pack.
	OPTIONS DECLINED:
Other	1. n/a
NOTES:	1. Wiring to clients 415v, 3 phase, Neutral & Earth 10 amp fused isolator mounted internally at approximately 1700mm F.F.L. within one metre on motor side. 2. Standard Polyester colours: RAL 9010 White, RAL 9002 Bone White, RAL 5010 Gentian Blue, RAL 1021 Rape Yellow, RAL 6009 Foliage Green, RAL 9006 White Aluminium, RAL 9007 Grey Aluminium, RAL 7016 Anthracite Grey, RAL 8014 Sepia Brown, RAL 3000 Fire Red.

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Accessories Table

COMPOSITE CONTROL PANEL (SWING LIP DOCK LEVELLER)

ITEM: 08.01 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 21 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- Combines all control buttons into one control box along with interlock facilities.

NOTES:
1. Affixed direct to PC concrete wall.

PE 450 DOCK BUMPERS

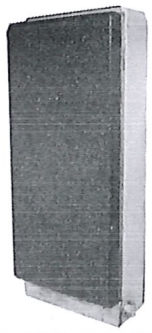
ITEM: 08.02 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 17 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- Size: 554mm high x 220mm wide x 140mm projection.
- (Front plate = 490mm high)
- 10mm thick rear mounting plates with overdock protection plate for casting into final floor slab. Black RAL9011 finish.

NOTES:
1. Specially Patented design dock bumpers only available in the UK through Stertil® UK Ltd.
2. Construction consists of a polyethylene block fixed into a steel housing frame complete with integral shock absorbers



PE 750 DOCK BUMPERS

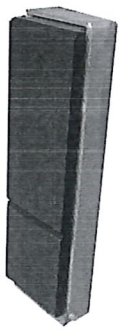
ITEM: 08.03 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 4 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- Size: 220mm wide x 815mm high x 140mm projection.
- (Front plate = 220mm wide x 750mm high)
- 10mm thick rear mounting plates with overdock protection plate for casting into final floor slab, 1no bumper fixed flush with dock height and 1no fixed +150mm above dock with tripple gusseted support.

NOTES:
1. Specially Patented design dock bumpers only available in the UK through Stertil® UK Ltd.
2. Construction consists of a polyethylene block fixed into a steel housing frame complete with integral shock absorbers



DCS24ALED TRAFFIC ARROWS

ITEM: 08.04 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 21 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- Red/Green high intensity traffic lights.
- Minimum 5 year bulb life guarantee.
- 24 LED.

NOTES:
1. Powered and controlled by SMC panel
2. Affiex to concrete PC dock wall.

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Accessories Table

K-1080-LED DOCK LIGHT

ITEM: 08.05 | STATUS: Specification | CHECKED: 21.05.21

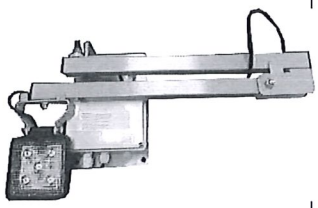
QUANTITY: 21 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- 2 arm unit,
- 240v-24v tranformer
- 24v fitting containing 6 x 1 watt LEDs
- LEDs set to eluminate with a 60 degree spread

OPTIONS: 1.

NOTES: 1. Powered and controlled by SMC panel



WHEEL GUIDES - LOW PROFILE

ITEM: 08.06 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 21 No.

SUPPLY: Delivered and Installed

DESCRIPTION:
- Essential aid to reversing vehicles, helping to reduce damage caused by misalignment.
- Flared 170mm DIA, 2633mm long, galvanized steel.
- Height above ground level 220mm (Low Profile).

NOTES: 1. Bolting down by Stertil

FREE SERVICING & MAINTENANCE 2 YEAR

ITEM: 08.07 | STATUS: Specification | CHECKED: 21.05.21

QUANTITY: 1 No.

DESCRIPTION:
- 2no Preventative Maintenance visits per year.
- Extended warranty from Developer's tennant occupancy for the same 2 year period.
- Option to extend to a maximum 5 years from occupancy at the end of two year inclusive period.

NOTES: 1. TO CLAIM YOUR FREE SERVICING & MAINTENANCE PLEASE SIGN THE MAINTENANCE AGREEMENT WITHIN 3 MONTHS OF INSTALLATION AND RETURN IT TO STERTIL UK LTD FAX: 01604 765181

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Operating instructions

SSC and SMC Control Panel

Integrated Leveller and Door control

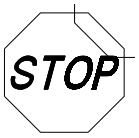
SSC

SMC

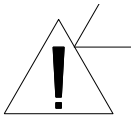
Multi-Control / Rev 0.7 / Stertil

1. Contents

2. Key to symbols



Danger of personel injury! *The safety instructions must be observed!*



Warning! Danger to property! *The safety instructions must observed!*

Information *Reference to other sources of information.*

3. General safety instructions

Guarantee
The function and safety of the equipment is only guaranteed if the warning and safety instructions included in these operating instructions are adhered to.
Stertil BV is not liable for any personal injury or damage to property that occurs as a result of the warning and safety instructions being disregarded.

Intended purpose
The Stertil Multi-Controls are designed only for controlling levellers with swing or extendable lip. Versions for controlling doors with mechanical or digital limit switches are also available.
It is only permitted to operate the equipment in dry rooms.

Target group
Only qualified and trained electricians may connect, programme and service the controls.
Qualified and trained electricians meet the following requirements:

- knowledge of the general and specific safety and accident prevention regulations,
- knowledge of the relevant electrical regulations,
- trained in the use and care of appropriate safety equipment,
- capable of recognising the dangers associated with electricity.

Instructions for installation and connection

- The controls must be disconnected from the Electricity supply before carrying out the electrical Works. It must be ensured that the electricity supply remains disconnected during service.
- Local protective regulations must be complied with.
- Mains cables and control cables must be laid separately.

Regulation and certification

For connecting , programming and servicing, the standards and regulations as mentioned in chapter 18 must be observed.
Since standards change as an ongoing process, no rights can be derived from this list .

4. Overview of products

4.1 Various options

The following package options are available for the Stertil Multi-Control:

1. Leveller with swing lip controls.
2. Leveller with extendable lip controls.
3. Leveller with swing lip controls with potential free **relays** and push buttons for door control.
4. Leveller with extendable lip controls with potential free **relays** and push buttons for door control.
5. Leveller with swing lip and intergrated door control (both mechanical and digital limit switches).
6. Leveller with extendable lip and intergrated door control (both mechanical and digital limit switches).

The controlbox is made for 3x 230/400V 50/60Hz mains power, as an option it can be supplied in 3x 208/460V 50/60Hz.

Various options are possible (order with control box):

- Inside traffic lights (2x power LED on control box)
- Relay for inflatable shelter
- Summer/winter switch for inflatable shelter

Overview of 230/400V models (overview 208/460V see attachment)	Part number
Swing lip	06060700
Swing lip & inside traffic lights	06060750
Swing lip & inside traffic lights & shelter relay & summer / winter switch	06060760
Swing lip & shelter relay & summer / winter switch	06060710
Extendable lip	06260700
Extendable lip & inside traffic lights	06260750
Extendable lip & inside traffic lights & shelter relay & summer / winter switch	06260760
Extendable lip & shelter relay & & summer / winter switch	06260710
Swing lip & **door relays**	06060720
Swing lip & **door relays** & inside traffic lights	06060770
Swing lip & **door relays** & inside traffic lights & shelter relay	06060780
Swing lip & **door relays** & shelter relay	06060730
Swing lip & **door relays** & inside traffic lights & shelter relay & summer / winter switch	06060790
Swing lip & **door relays** & shelter relay & summer / winter switch	06060740
Extendable lip & **door relays**	06260720
Extendable lip & **door relays** & inside traffic lights	06260770
Extendable lip & **door relays** & inside traffic lights & shelter relay	06260780
Extendable lip & **door relays** & shelter relay	06260730
Extendable lip & **door relays** & inside traffic lights & shelter relay & summer / winter switch	06260790
Extendable lip & **door relays** & shelter relay & summer / winter switch	06260740
Swing lip & **door control**	06070720
Swing lip & **door control** & inside traffic lights	06070770
Swing lip & **door control** & inside traffic lights & shelter relay	06070780
Swing lip & **door control** & shelter relay	06070730
Swing lip & **door control** & inside traffic lights & shelter relay & summer / winter switch	06070790
Swing lip & **door control** & shelter relay & summer / winter switch	06070740
Extendable lip & **door control**	06270720
Extendable lip & **door control** & inside traffic lights	06270770
Extendable lip & **door control** & inside traffic lights & shelter relay	06270780
Extendable lip & **door control** & shelter relay	06270730
Extendable lip & **door control** & inside traffic lights & shelter relay & summer / winter switch	06270790
Extendable lip & **door control** & shelter relay & summer / winter switch	06270740

The operation instruction describe the programming procedures and connection possibilities for the different models:

- Plug-in LCD monitor
- Outside LED traffic lights
- Outside 230V traffic lights
- Drive through photo sensor
- (shelter) Trucksensor
- Below Dock Control (option on swing lip leveller)
- Standby switch (park switch for leveller)
- Auto-return (option on swing lip leveller)

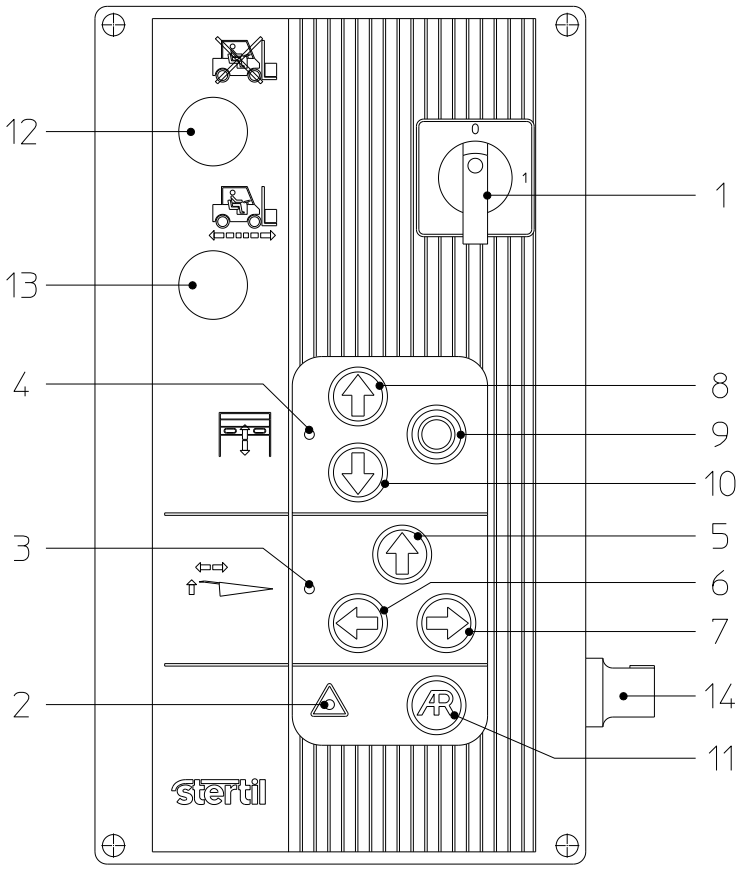
4.2 Operation

1. Main switch / Emergency stop
This is used to power up the control box. The switch can be locked with a padlock for service.

2. Fault/status LED red
This red LED will light as soon as a fault has occurred. As soon as the fault is corrected the LED will turn off.
The fault is displayed in text on the optional Plug-In display. The LED's in the control box are explained in the table Chapter 14.
Most faults can be corrected by bringing the system in a defined situation: use the front push buttons to open the door or to position the leveller in the standby (park) mode.

3. Leveller active LED green
This LED is indicating that (the door is open and) the leveller can be operated.
When the leveller buttons are pushed with the LED off, the LED will start blinking to indicate that operation is not possible.

4. Door active LED green
This LED is indicating that (the leveller is in standby (park) position and) that the door can be operated.
When the door buttons are pushed with the LED off, the LED will start blinking to indicate that operation is not possible.



5. Deck up

6. Lip out (extendable lip only)

7. Lip in (extendable lip only)

8. Door open

9. Door stop

10. Door down

11. Auto-Return (option on swing lip leveller)

Auto-return is standard on the extendable lip leveller.
When the AR button is pushed, the leveller will automatically return to the lip in position and the door will close.

The swing lip leveller can be fitted with an optional pressure switch that prevents the lip to swing out.
This option needs to be activated in the software too (see chapter 12.2).
When the AR button is pushed, the leveller will automatically return to the standby (park) position and the door will close.

Below Dock Control (option on swing lip leveller)

This function does not have a separate push button.
The extendable lip can be extended for approx. 50mm, after release of the pushbutton, the leveller will sink to the low position.

The swing lip leveller must be fitted with the optional BDC option, that consists of hydraulically operated retractable Cross Traffic Legs (CTL's). This option needs to be activated in the software too (see chapter 12.2).
The CTL's are retracted during normal operation of the leveller , so that the can be lowered to the below dock position all the time.To return the leveller to the standby (park) position the AR button must be pushed. The CTL's will extend again and after release the AR button the leveller will lower on the CTL's, The CTL's will be activated for 30 seconds after the AR button is released.

12. Inside traffic light (LED) red
This LED is indicating that loading and unloading is not allowed (door closed, leveller not in truck)

13. Inside traffic light (LED) green.
This LED is indicating that loading and unloading is allowed (door open, leveller in truck)

14. Keuzeschakelaar opblaasbaar shelter (zomer /winter).
Automatic inflation is turned off with the switch in "summer" position.

Information:
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

4.3 Printed circuit board leveller & door controls **SMC ONLY**

Explanation:

Terminal 1 - 8: swing and extendable leveller connections.

Terminal 11- 18: door sensor connections.

Terminal 21- 26: interlocks combilok-door, leveller-door and summer/winter selector connections.

Terminal 31-36: Connections for two free inputs incl.24V supply voltage for sensors.

Terminal 41 – 44: (emergency) stop connections

Terminal 51 – 56: connections for three free relay outputs

Terminal 61 – 65: outside traffic light connections

Terminal 71 - 74: connections 24vdc/230V for outside traffic lights

Terminal 81 – 83: inside traffic lights connections

Terminal D1 - D4: digital limit switch connections

Terminal E1 – E8: mechanical limit switch connections

Terminal LEVELLER: hydraulic leveller motor connection

Terminal DOOR: door drive motor connections

Terminal SHELTER: shelter relay supply connection.

Terminal L1,L2,L3,N: Three phase mains power and neutral connections.

Terminal 400/230V; Jumper for adjustment of mains voltage, factory setting is 400V.

PE: ground connections

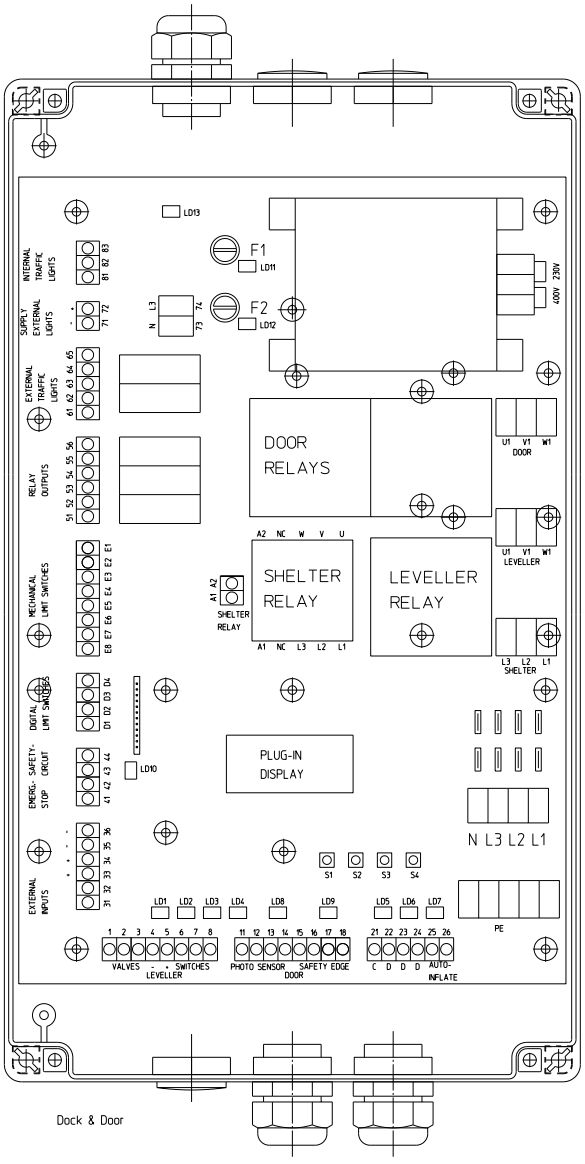
Plug In display: plug in socket for display

12 pin flatcable connector for front pushbutton panel

S1-S4: service push buttons

F1: fuse for outside traffic lights 230V

F2: fuse for outside traffic lights 24V



4.3 Printed circuit board leveller controls **SSC ONLY**

Explanation:

Terminal 1 - 8: swing and extendable leveller connections.

Terminal 21- 26: interlocks combilok-door, leveller-door and summer/winter selector connections.

Terminal 31-36: Connections for two free inputs incl.24V supply voltage for sensors.

Terminal 41 – 44: (emergency) stop connections

Terminal 51 – 56: connections for three free relay outputs

Terminal 61 – 65: outside traffic light connections

Terminal 71 - 74: connections 24vdc/230V for outside traffic lights

Terminal 81 – 83: inside traffic lights connections

Terminal LEVELLER: hydraulic leveller motor connection

Terminal SHELTER: shelter relay supply connection.

Terminal L1,L2,L3,N: Three phase mains power and neutral connections.

Terminal 400/230V; Jumper for adjustment of mains voltage, factory setting is 400V.

PE: ground connections

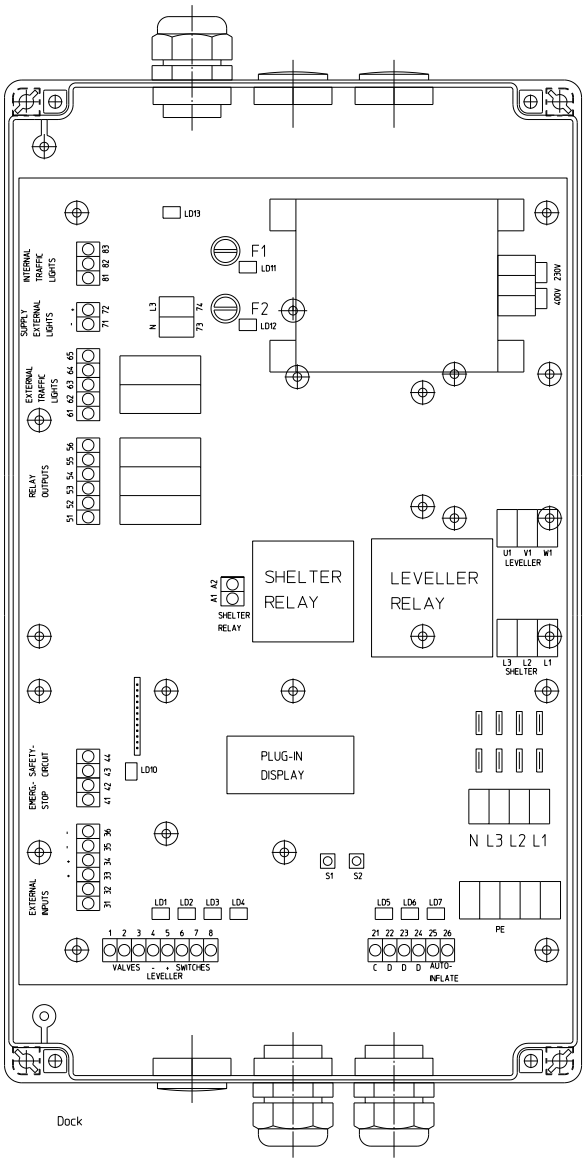
Plug In display: plug in socket for display

12 pin flatcable connector for front pushbutton panel

S1-S4: service push buttons

F1: fuse for outside traffic lights 230V

F2: fuse for outside traffic lights 24V



5. Initial operation

Warning!
To guaranty that the equipment functions properly, the following points must be ensured:
- *The leveller is installed and operational*
- *(The door incl. drive/controls is installed and operational)*
- *The Stertil Multi-Control is installed.*

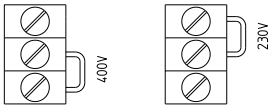
Information:
For the installation of the leveller, gate/door and door drive and controls, the relevant manufacturer's instructions are to be adhered to.

6. Mains - en motor connections.

Danger!
To guaranty that the controls function properly, the following points must be ensured:
- *The mains voltage must correspond to the voltage stated on the type plate.*
- *For a three phase current, a clockwise rotating field is required.*
- *For a three pole connection, only 3-way automatic circuit breakers (10A) may be used.*

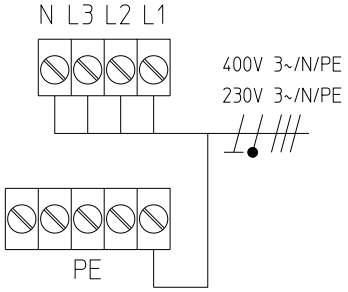
Warning!
Check all cables to the motors and control equipment for tightness prior to first time operation. Although control and power connections are galvanically separated it is advised to use control cables that are suited for at least 230V.

Mains voltage adjustment
The factory setting for the PCB is 3x 400V. Us e the jumper to the right of the transformer to change the setting to 3x 230V. This setting should be done before the control box is connected to mains.



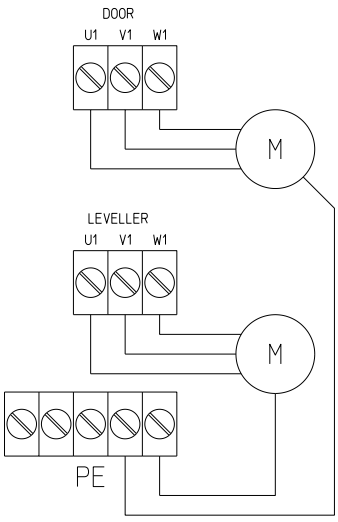
Mains voltage connection
L1, L2, L3 are to be connected to mains, the N connection is only used for the 230V outside traffic lights.

Ground connection
PE is the ground terminal (green/yellow wires) for mains, leveller & door motor, shelter fan and traffic lights.



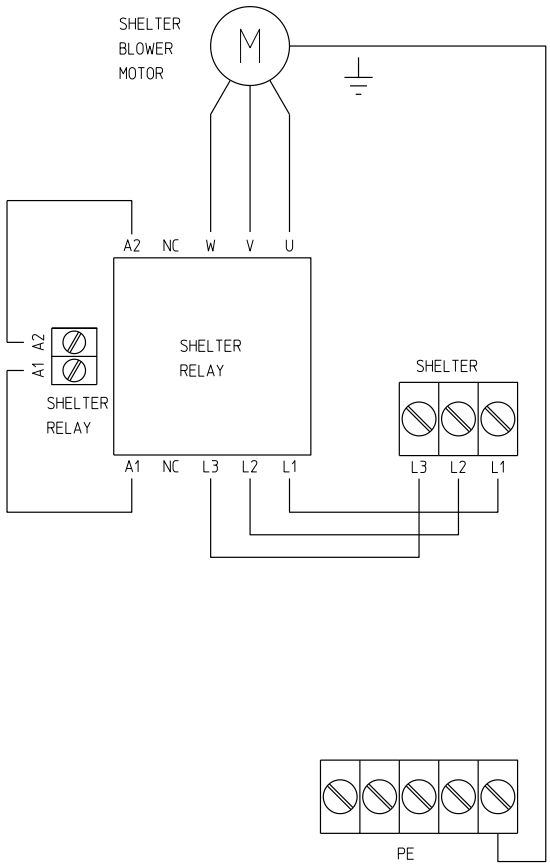
Door motor connection
The door motor is connected to U1, V1, W1 on the terminal marked "door"
The motor is grounded (yellow/green wire) on the terminal marked PE. The motor requires a clockwise rotating field.

Leveller motor connection
The leveller hydraulic motor is connected to U1, V1, W1 on the terminal marked "leveller"
The motor is grounded (yellow/green wire) on the terminal marked PE.



Shelter fan connection (relay is an option)

The terminal “shelter” is connected to L1, L2, L3 on the (optional) shelter relay. The shelter fan motor is connected to U,V,W on the shelter relay. Terminals A1 and A2 are connected to the corresponding terminals on the shelter relay.
The shelter fan motor is grounded (yellow/green wire) on the terminal marked PE.



7. Initial operation leveller **X-Serie ONLY**

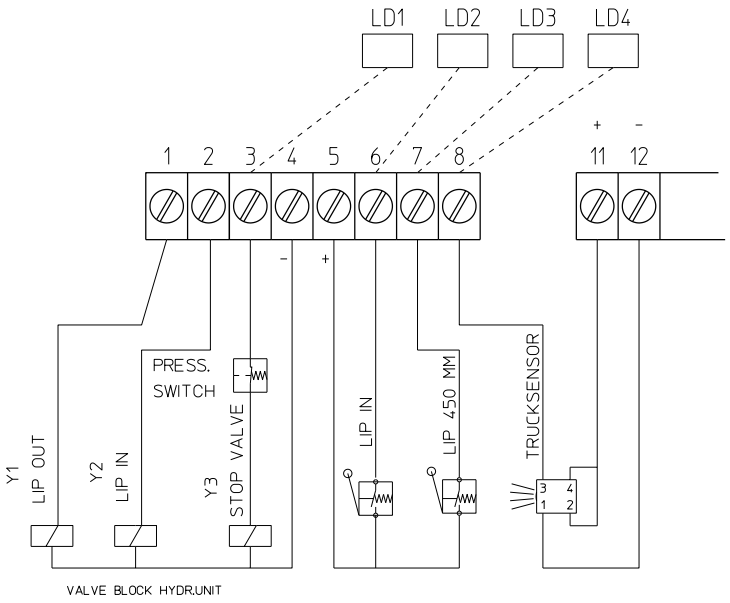
Terminal 1- 8 (and LED 1 - 4)
Extendable lip leveller

Terminal 1: lip out valve.
Terminal 2: lip in valve.
Terminal 3: stop valve (incl pressure switch for panic).
Terminal 4: common negative for the valves.

Terminal 5: common positive for the switches
Terminal 6: lip in switch
Terminal 7: lip 450 mm out switch (option on “meat” leveller)
Terminal 8 : truck sensor (option: built-in sensor in shelter for truck detection, as soon as a truck is detected the outside traffic lights will blink red).

Terminal 11: + 24VDC supply truck sensor
Terminal 12: 0 VDC connection truck sensor

LED 1 = red, stop valve disconnected
LED 2= yellow, input 6 contact closed
LED 3= yellow, input 7 contact closed
LED 4= yellow, input 8 contact closed



Information:
Use the Plug In display to set the correct
parameters for the extendable lip leveller.
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

Terminal 1- 8 (and LED 1 - 4)
Swing lip leveller

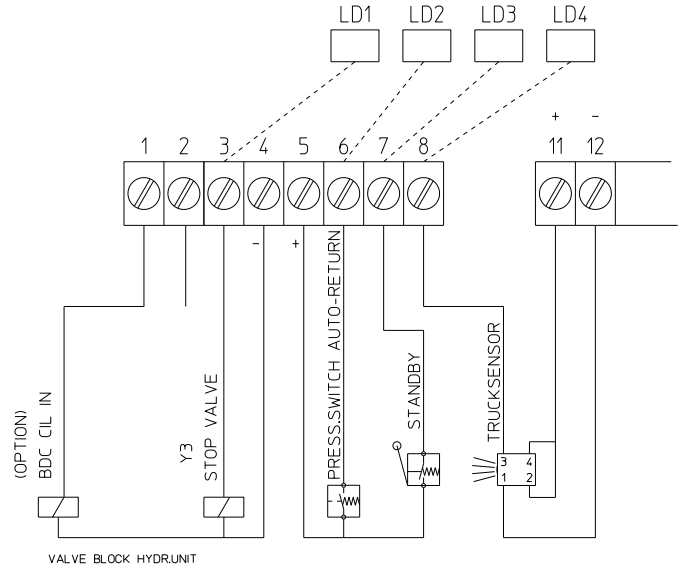
S-Serie ONLY

Terminal 1: BDC valve (option)
Terminal 2: not connected
Terminal 3: stop valve
Terminal 4: Common negative for the valves.

Terminal 5: Common positive for the switches
Terminal 6: pressure switch (option Auto-Return)
Terminal 7: standby (park) detection (standby: option icw door)
Terminal 8 : truck sensor (option: built-in sensor in shelter for truck detection, as soon as a truck is detected the outside traffic lights will blink red).

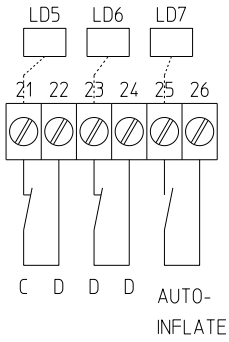
Terminal 11: + 24VDC / 500 mA supply truck sensor
Terminal 12: 0 VDC connection truck sensor

LED 1 = red, stop valve disconnected
LED 2= yellow, input 6 contact closed
LED 3= yellow, input 7 contact closed
LED 4= yellow, input 8 contact closed



Information:
A Jumper is required between
terminal 5 and 7 when the standby (park) switch is not used.
Use the Plug In display to set the correct parameters for the swing lip leveller.
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

Terminal 21 - 26
Interlocks leveller-combilok & leveller-door and summer/winter switch shelter



Terminal 21/22: interlock by combilok.
Terminal 23/23: interlock by door(when an external door control is used or when a separate door open switch is used).
Terminal 25/26: connection for summer/winter switch for inflatable shelter.
LED 5: yellow, contact C-D closed
LED 6: yellow, contact D-D closed
LED 7: yellow, contact summer/winter switch closed.

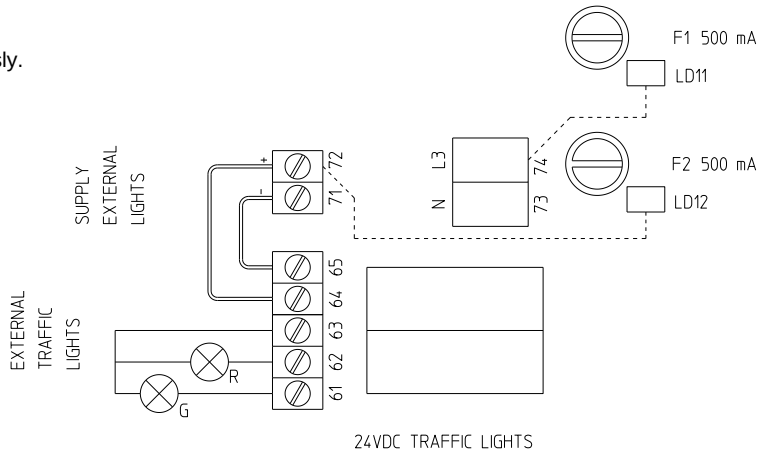
Information:
A jumper is required when input C-D and D-D are not used.

Terminal 61 – 72
Outside traffic lights
The control box is suited for both 230VAC and 24VDC LED outside traffic lights..

24VDC outside traffic lights
The max. load for the 24VDC LED output is 12W simultaneously.

Terminal 61: Green LED traffic light
Terminal 62: Red LED traffic light
Terminal 63: common negative for the LED lights
Terminal 64: supply lighting relay
Terminal 65: negative lighting relay
Terminal 71: 0 VDC
Terminal 72: 24VDC (500mA).

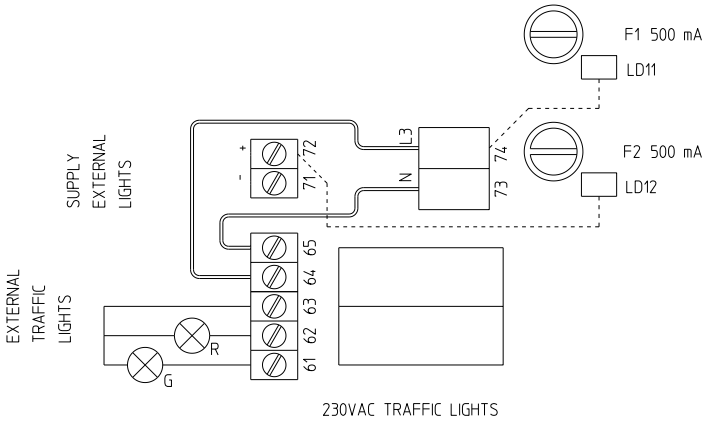
Fuse F2: fuse 24VDC/500mA
LED12: red, indicator fuse F2 defect



230VAC outside traffic lights
The max. load for the 230VAC LED output is 100W simultaneously.

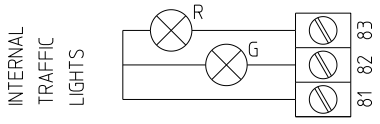
Terminal 61: Green 230VAC traffic light
Terminal 62: Red 230VAC traffic light
Terminal 63: common for the lights
Terminal 64: 230VAC supply lighting relay
Terminal 65: Neutral lighting relay
Terminal 73: Neutral mains connection
Terminal 74: phase L3 mains connection

Fuse F1: mains fuse L3/500 mA 230V traffic light
LED11: red, indicator fuse F1 defect.



Terminal 81-83
Inside traffic lights

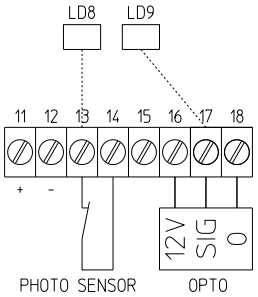
Terminal 81: common negative for LED's
Terminal 82: Green LED traffic light
Terminal 83: Red LED traffic light



Information:
Use 24V LED's only
(Siemens 3SB3400)

8. Initial operation door **SMC ONLY**

Terminal 11 – 18
Door sensor (optical)
Connections for a drive-through photo electric sensor and optical safety edge.

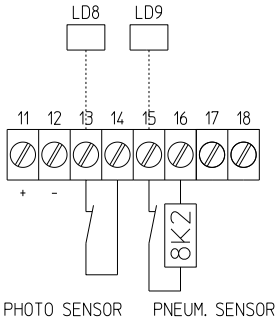


Terminal 11: 24VDC / 500 mA supply drive-through sensor
Terminal 12: 0 VDC supply drive-through sensor
Terminal 13/14: normally closed contact drive-through sensor, a jumper is required when the drive-through sensor is not used.

Terminal 15: not used
Terminal 16: 12VDC supply optical safety edge
Terminal 17: contact optical safety edge
Terminal 18 : 0 VDC supply optical safety edge

LED 8: yellow, input 13 contact closed
LED 9: yellow, safety edge not operated, door OK

Door sensor (8K2)
Connections for a drive-through photo electric sensor and 8K2 safety edge.

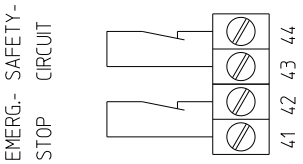


Terminal 11,12,13,14 and LED 8 and 9 same as above
Terminal 15: contact 8K2 safety edge
Terminal 16: 12VDC supply 8K2 safety edge
Terminal 17/18:not used.

Door sensor (pneumatic)
Connections for a drive-through photo electric sensor and 8K2 safety edge.

Terminal 11,12,13,14 and LED 8 and 9 same as above
Terminal 15: contact 8K2 safety edge
Terminal 16: 12VDC supply pneumatic safety edge
Terminal 17/18:not used.

Terminal 41 – 44
Safety circuit



Terminal 41/42: external emergency stop connection
Terminal 43/44: door drive motor emergency stop connection

Informatie:
A jumper is required on terminal 41/42 when an emergency stop button is not used.
A jumper is required on terminal 43/44 when the door drive motor is not connected to this control box.

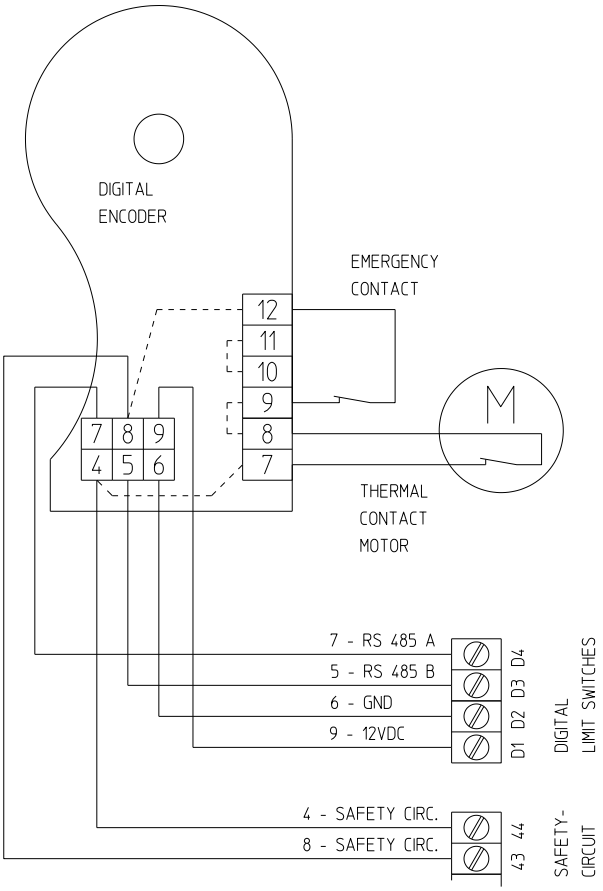
Terminal D1 – D2 **SMC ONLY**

Digital limit switches (encoder) door drive system

Mechanical limit switches are not required when a digital encoder is used.

Terminal D1: 12VDC supply encoder pin 9
Terminal D2: GND encoder pin 6
Terminal D3: RS 485 B pin 5
Terminal D4: RS 485 A pin 7

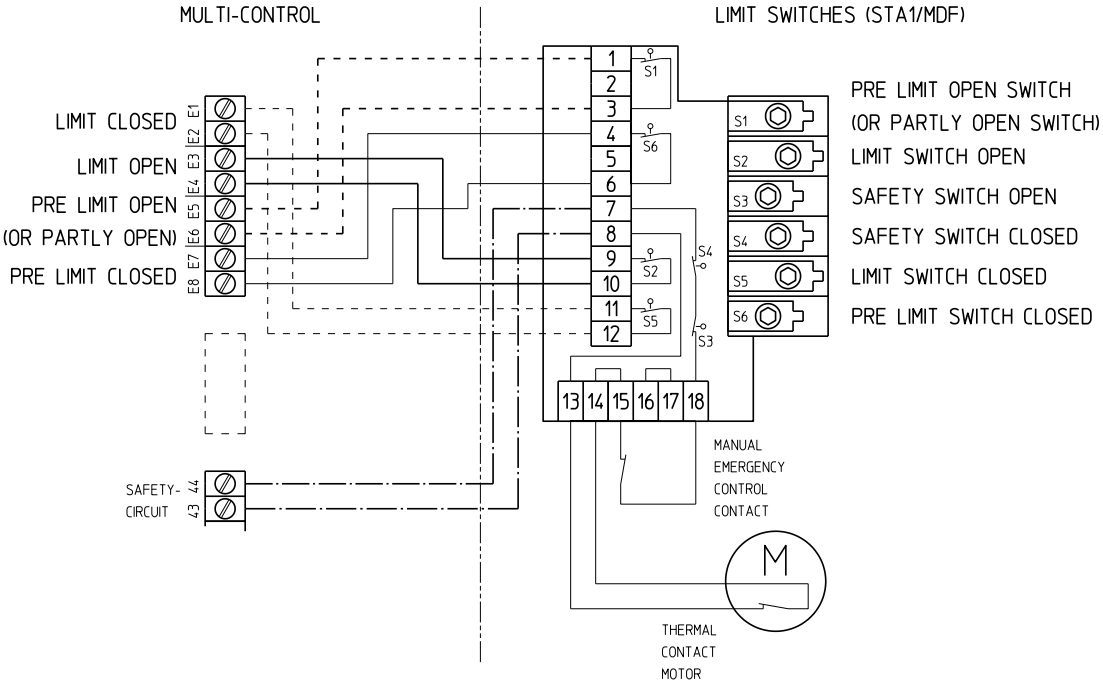
Terminal 43: safety circuit pen 8
Terminal 44: safety circuit pen 4



Terminal E1 – E8 **SMC ONLY**

Mechanical limit switches

A digital encoder is not required when mechanical limit switches are used.



Terminal E1/E2: limit switch door closed
Terminal E3/E4: limit switch door open
Terminal E5/E6: pre-limit switch (or partly) door open
Terminal E7/E8: pre-limit switch door closed

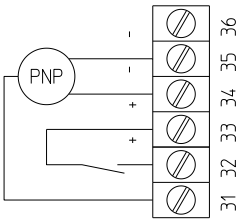
Information: *Use the Plug In display to set the correct parameters for the use of the digital encoder or the mechanical limit switches.*
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

9. Initial operation free inputs/outputs

Terminal 31 – 36
Free inputs

The control board has two free inputs. Use the Plug In Display to set the functions of these inputs.
See “Programming Plug In display” chapter 10 for adjustment of the parameters.
The inputs can be used with limit switches, sensors with PNP- or relay outputs.
Below an example for a limit switch (terminal 32/33) and a three-wire PNP sensor (terminal 31/34/35).

Terminal 31: free input 1
Terminal 32: free input 2
Terminal 33: 24VDC / 500 mA supply for sensor
Terminal 34: 24VDC / 500 mA supply for sensor
Terminal 35: 0 VDC for sensor
Terminal 36: 0 VDC for sensor

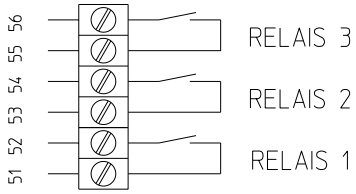


Information:
The free inputs are switched to 24VDC
That means that both limit switches (NO/NC) or sensors with PNP outputs can be used.

Information:
Use the Plug In display to set the correct parameters for the use of the free inputs.
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

Terminal 51 – 56
Free outputs (potential free relays)
The control board has three potential free outputs. Use the Plug In display to set the functions of these inputs.
See “Programming Plug In display” chapter 10 for adjustment of the parameters

Terminal 51/52: relay 1 (max. 4A/230V)
Terminal 53/54: relay 2 (max. 4A/230V)
Terminal 55/56: relay 3 (max. 4A/230V)

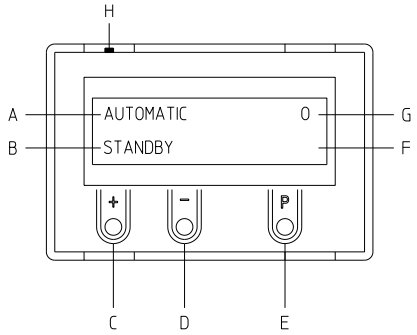


Information:
Use the Plug In display to set the correct parameters for the use of the free outputs.
The navigator in chapter 11 can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

10. Programming with the Plug In display

10.1 Overview Plug In display

The Plug In display is optional on the control box
Description:
A: Mode of operation / diagnose-info
B: Parameter / diagnostic-info
C: Button +
D: Button –
E: Button P
F: Value / status
G: Value / status
H: Jumper



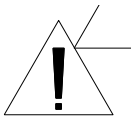
10.2 Operating modes of the Plug In display

The Plug In display has five modes of operation:

1. ADJUSTMENT
2. INPUT
3. DIAGNOSIS
4. MAINTENANCE
5. AUTOMATIC/MANUAL

When jumper H is pulled , the + button, the – button and the P button have no function. The display still functions.

Operating mode 1: ADJUSTMENT
In the ADJUSTMENT mode, the OPEN/CLOSED position settings are adjusted.



Warning!
In the ADJUSTMENT mode of operation, the drive does not switch off when the end position is reached. The door can be damaged if driven beyond the end position.

Fine adjustments can be made in the INPUT operating mode.

Display: displays the end position value.

Operation mode 2: INPUT
In the INPUT operating mode, the values of various parameters can be adjusted.

Display : displays the selected parameter and its programmed value/status.

Operation mode 3: DIAGNOSIS
In the DIAGNOSIS operating mode, system specific check scan be queried.

Display: display of the function and its status.

Operation mode 4: MAINTENANCE
In the operation mode MAINTENANCE the push buttons on the front and on the PCB are made active and operation is “Hold To Run”.

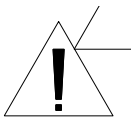
Blinking green LED’s on the front of the control box warn the user for this operation mode.
The red fault status LED is continuously on.

Display: display of the button that is pushed.

Operation mode 5: AUTOMATIC / MANUAL
In the operation mode AUTOMATIC/MANUAL door/leveller/shelter is operational.

Display: display of function/status and error messages

If the “Hold To Run” parameter is set to MOD2 or MOD3 in the input menu, the display changes from AUTOMATIC to MANUAL operation.



Warning!
The Plug In display should only be removed in AUTOMATIC or MANUAL operation mode.

11. Navigator

Information:
The navigator can be used to find a programmable adjustment quickly. The description of the programmable functions can be found in chapter 12.2.

AUTOMATIC uU STANDBY			

Push P-button > 1 sec.

ADJUSTMENT XXXX STANDBY	+ button: position DOOR OPEN	ADJUSTMENT MANUAL OPEN	Save door position: P and + button > 1 sec
	- button: Position DOOR CLOSED	ADJUSTMENT MANUAL CLOSED	Save door position: P and – button > 1 sec

Push P-button > 1 sec.

INPUT	+ en – button > 2 sec.	INPUT ENGLISH	Scroll up through the menu + button > 2 sec Scroll down through the menu: - button > 2 sec Select value: P –button > 1 sec Increase value: + button Decrease value: - button Save value P button Return to INPUT + and – button > 1sec
		INPUT LEVELLERTYP 2	
		INPUT LIP-IN DEL. 1	
		INPUT BDC OFF	
		INPUT AUTO-RETURN OFF	
		INPUT DOOR TYP MOD 1	
		INPUT LIMIT SW AWG	
		INPUT FINE OPEN 4050	
		INPUT FINE CLOSED 3950	
		INPUT PRE LIM OP 4000	
		INPUT PRE LIM CL 4000	
		INPUT RUNTIME MAX 60	
		INPUT REVERS.TIME 0,3	
		INPUT FIELD ROT R	
		INPUT REVERSE OFF 50	
		INPUT SAFETY TEST OFF	
		INPUT HOLD-TO-R. MOD1	
		INPUT PHOTOS.DOOR 1	
		INPUT SHELTER 1	
		INPUT LIGHTS IN. MOD1	
		INPUT GRN LIGHT DEL. 3	
		INPUT LIGHTS OUT OFF	
		INPUT RELAY 1 MOD1	
		INPUT RELAY 2 MOD3	
		INPUT RELAY 3 MOD10	
		INPUT FREE INP 1 MOD2	
		INPUT FREE INP 2 MOD4	
		INPUT COMBILOK OFF	

Push P-button > 1 sec.

DIAGNOSIS	.	UPPER SWITC ON LOWER SWITC OFF	Scroll up through menu: + button > 2 sec Scroll down through menu: - toets > 2 sec Scroll until DIAGNOSIS is displayed
		PRE LI. OPE OFF PRE LI. CL. OFF	
		UP-BUTTON OFF DOWN-BUTTON OFF	
		STOP-BUTTON OFF DOOR SAF.ED.TEST OFF	
		STOP INPUT ON LIGHT BAR. ON	
		DOOR CYC :0000 LEVELLER CYC :0000	
		LIP IN ON LIP 450 ON	
		TRUCK SENS ON C-D ON	
		D-D ON SHELTER SWI ON	
		DECK UP ON LIP OUT ON	
		LIP IN ON AUTO-RETURN ON	
		S1 LEVELLER ON S2 SHELTER ON	
		S3 OPE DOOR ON S4 CLO DOOR ON	
		FREE INP 1 ON FREE INP2 ON	
		ENCODER (AWG) XXXX VOLTAGE XXXX	

Push P-button > 1 sec

MAINTENANCE		MAINTENANCE S1 LEVELLER	S1, S2, S3, S4 for direct operation of leveller, door and shelter
		MAINTENANCE S2 SHELTER	
		MAINTENANCE S3 DOOR OPE	
		MAINTENANCE S4 DOOR CLO	

12. Overview of functions

12.1 Operation mode Automatic/Manual

Display		Description
AUTOMATIC XXXX	**uU**	Limit closed
AUTOMATIC XXXX	**u**	Pre limit closed
AUTOMATIC XXXX	**O**	Limit open
AUTOMATIC XXXX	**o**	Pre limit open
AUTOMATIC **STANDBY**	xx	Door closed Leveller in standby (park)
AUTOMATIC **STOP INPUT**	xx	Stop input contact is open
AUTOMATIC **OPENING**	xx	Door is opening
AUTOMATIC **CLOSING**	xx	Door is closing
AUTOMATIC **OPENING PHASE**	xx	Door is open Leveller is functional
AUTOMATIC **CLOSE AUTO**	xx	Leveller returning to standby (park) Door will close.
AUTOMATIC **TRUCK SENSOR**	xx	Truck sensor activated

12.2 Operation mode Input

Function	Description	Options	Factory setting
ENGLISH	Selection of the language	English Deutsch Nederlands	English
LEVELLERTYP	Selection of type of leveller 1= swing lip 2= extendable lip 3= extendable lip (“meat” leveller)	1 - 3	2
LIP IN DEL	Lifting time before lip retraction during Auto-Return.	0 – 3 sec	1
BDC (Below Dock Control)	Selection of the BDC function with leveller type 1 The leveller must be fitted with the optional BDC kit. In this way end cargo can be (un) loaded with a forklift truck from a position below dock level.	OFF ON	OFF
AUTO-RETURN	Selection of the Auto-Return function with levellertype**1** The leveller must be fitted with the optional pressure switch, that prevents the lip from swinging out. On leveller type 2 and 3 A-R is standard.	0 Off 1 Leveller will park and door closes 2 Only leveller will park	1 for combi 2 for leveller only
DOORTYP	Selection of type of door control system MOD1: integrated door control MOD2: free relays 1,2,3 and limit switches are wired to the free inputs. Relay1: MOD 6: OPEN Relay2: MOD7: CLOSE Relay3: MOD8: STOP Free input 1: limit switch door OPEN Free input 2: Limit switch door CLOSED (see chapter 15 for wiring diagram) MOD3: leveller control only and simple door control by means of the free relays 1,2,3 and the D-D terminal and the lip-in switch (extendable lip leveller) and or standby (park) switch (swing lip leveller) Relay 1: MOD6: OPEN Relay 2: MOD7: CLOSE Relay 3: MOD8: STOP D-D contact: interlock leveller Lip-in- or standby (park) switch: interlock door. (see chapter 15 for wiring diagram)	MOD1 integrated door control MOD2 relay door control MOD3 leveller control only (and simple relay door control)	MOD1 For SSC MOD3 NO DOOR
Function	Description	Options	Factory settings
LIMIT SWITCH	AWG = Digital encoder(Absolutwertgeber) MES= Mechanical limit switches	AWG1= Condor /MFZ /.. AWG2= GFA Elektromaten MES = Mechanical	AWG1

FINE OPEN	Fine adjustment of the door open position (only with digital encoder)	0 – 8190	4050
FINE CLOSE	Fine adjustment of the door closed position (only with digital encoder)	0 – 8190	3950
PRE LIM OP	Setting the before end postition switch OPEN (=partly open) (only with digital encoder)	0 – 8190	4000
PRE LIM CL	Setting the before end postition switch CLOSED (only with digital encoder)	0 – 8190	4000
RUNTIME MAX	Monitoring the max. run time between the open and closed position	1 – 300 sec	60
REVERSE TIME	Standing time between direction changes	0,1 – 2,0 sec	0,3
FIELD ROT	RE: clockwise LI: anti-clockwise This setting for the **digital encoder** will only be changed when the motor is reversed on the shaft (UK) Or when a GFA motor is used	RE LI **In combination with GFA**	RE
REVERSE OFF	Automatic door reverse when the door safety edge is operated will disabled from this set point.	10 – 250 mm	50
SAFETY TEST	OFF: Pressure sensor test is inactive ON: Pressure sensor test is active The testing takes place in the CLOSE end position. When opening the door the pressure sensor switch contact should be temporarily broken	OFF ON	OFF
HOLD-TO-RUN	MOD1: push 1x for UP and DOWN MOD2: hold push button UP and DOWN MOD3: push 1x for UP and hold push button for DOWN	MOD1 MOD2 MOD3	MOD1
PHOTOSENS. DOOR	MOD1: not active MOD2: door stops and opens MOD3: door stops	MOD1 MOD2 MOD3	MOD1
SHELTER	MOD1: inflatable shelter is controlled by the program, can be switched off during operation by means of the optional summer/winter selector switch MOD2: Can be manually switched on and off	MOD1 MOD2	MOD1
LIGHTS IN	MOD0: traffic lights on control box off MOD1: red during closing of door MOD2: blinking red during closing of door	MOD0 MOD1 MOD2	MOD0
GRN LIGHT DELAY	Delay for the green inside traffic light after positioning the leveller in the truck	3, 5 ,10, 15, 20 sec	3
LIGHTS OUT	OFF: outside traffic lights switched off ON: blinking red as long as the truck sensor is activated. Red during shelter, leveller and door operation.	OFF ON	ON
RELAY1	The relay contacts are closed when the function is active (except for MOD8). MOD1: door CLOSED MOD2: door not CLOSED MOD3: door fully OPEN MOD4: door not fully OPEN MOD5: fault condition is active MOD6: pushbutton UP MOD7: pushbutton DOWN MOD8: contact open when STOP button pushed MOD9: interlock Combilok MOD10: Brake on MOD11: Brake release MOD12: OFF	MOD1 – MOD12	MOD3
RELAY 2	As RELAY 1	MOD1 – MOD12	MOD1
RELAY 3	As RELAY 1	MOD1 – MOD12	MOD9
FREE INP1	MOD1: OFF MOD2: limit switch OPEN MOD3: switch partly open MOD4: limit switch CLOSED MOD5: slack cable switch door MOD6: OPEN door/ alarm input MOD7: Shoot bolt MOD8: Emergency stop for Dockleveller MOD9: BDC Pressureswitch	MOD1 – MOD9	MOD1
FREE INP 2	As FREE INPUT1	MOD1 – MOD8	MOD1
COMBILOK	ON: a combilok or wheel restraint is connected OFF: no wheel restraint connected	ON OFF	OFF
Shelter Time	0 -10 sec delay time before door opens	0 -10 sec.	0 SEC.
Presetting	1 – 40 Preselecting programs All others as per separate data sheet	1 - 40	3 for swing lip 6 for extended lip **Levellers only**

12.3 Operation mode DIAGNOSIS

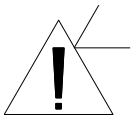
Display	Betekenis	Toestand
UPPER SWITC	Limit switch door fully open	OFF: open position reached ON: open position not reached
LOWER SWITC	Limit switch door fully closed	OFF: closed position reached ON: closed position not reached
PRE LI OPE	Pre limit switch door open	OFF: partly open reached ON: partly open not reached
PRE LI CL.	Pre limit switch door closed	OFF: partly closed reached ON: partly closed not reached
UP BUTTON	Pushbutton open door	OFF: button not pushed ON: button pushed
DOWN BUTTON	Pushbutton close door	OFF: button not pushed ON: button pushed
STOP BUTTON	Pushbutton stop door	OFF: button not pushed ON: button pushed
DOOR SAF.ED.	Door safety edge	ON: not operated /fault situation OFF: operated/fault situation
STOP INPUT	Safety circuit	ON: circuit OK OFF: onderbreking in het circuit
LIGHT BAR.	Photo sensor in door opening	ON: no obstacles in door opening OFF: obstacles in door opening
DEUR CYC.	Total number of door cycles Cycle = 1x up en 1x down	:0000
LEVELLER CYCL	Total number of leveller cycles 1 cycle = 1x lift movement	:0000
LIP IN	Lip in switch	OFF: lip not completely retracted ON: lip completely retracted
LIP 450	Lip more than 450 mm extended (option “meat” leveller type 3)	OFF: lip < 450 mm ON: lip > 450 mm
TRUCK SENS	Photo sensor in shelter opening	OFF: no truck ON: truck detected
C -D	Interlock Combilok	OFF: system locked ON: released by Combilok
D - D	Interlock by door (partly) open contact	OFF: system locked ON: system released by door
SHELTER SWI.	Inflatable shelter switch	ON: shelter on (winter) OFF: shelter off (summer)
DECK UP BUTTON	Pushbutton deck up	OFF: button not pushed ON: button pushed
LIP OUT BUTTON	Pushbutton extend lip	OFF: button not pushed ON: button pushed
LIP IN BUTTON	Pushbutton retract lip	OFF: button not pushed ON: button pushed
AUTO-RETURN	Pushbutton Auto-Return	OFF: button not pushed ON: button pushed
S1 LEVELLER	Maintenance pushbutton S1 on PCB	OFF: button not pushed ON: button pushed
S2 SHELTER	Maintenance pushbutton S2 on PCB	OFF: button not pushed ON: button pushed
S3 OPE DOOR	Maintenance pushbutton S3 on PCB	OFF: button not pushed ON: button pushed
S4 CLO DOOR	Maintenance pushbutton S4 on PCB	OFF: button not pushed ON: button pushed
FREE INP 1	Free input terminal 31	ON: contact input closed OFF: contact input open
FREE INP 2	Free input terminal 32	ON: contact input closed OFF: contact input open
AWG (digital encoder)	Actual value of door position measurement	XXXX
VOLTAGE	System VOLTAGE in V	24,4

SMC ONLY

SMC ONLY

SMC ONLY

12.4 Operation mode Maintenance

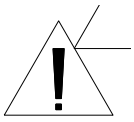


Warning:
In maintenance mode all pushbuttons function as Hold-To-Run.
The door limit switches are still enabled. The maximum runtime function is disabled.
Leveller and door functions are not interlocked!

Display	Description
MAINTENANCE S1 LEVELLER	The lip will be retracted when S1 is pushed. The deck will raise when the lip is completely retracted
MAINTENANCE S2 SHELTER	The shelter will inflate when S2 is pushed
MAINTENANCE S3 DOOR OPEN	The door will open when S3 is pushed The door will stop as soon as the limit switch is reached
MAINTENANCE S4 DOOR CLOSE	The door will close when S4 is pushed The door will stop as soon as the limit switch is reached
MAINTENANCE DOOR OPEN	The door will open when the door OPEN button on the front panel is pushed
MAINTENANCE DOOR CLOSE	The door will close when the door CLOSE button on the front panel is pushed
MAINTENANCE STOP	No function
MAINTENANCE AMPS Y3 XXXX	Shows amperage through coil Y3 (stop valve)
MAINTENANCE AMPS Y1 XXXX	To see the amperage through coil Y1, push the leveller LIP OUT button (extendable lip only)
MAINTENANCE AMPS Y2 XXXX	To see the amperage through coil Y2, push the leveller LIP IN button (extendable lip only)

12.5 Operation mode Adjustment

Adjustment of the digital limit switches.



Warning:
In the ADJUSTMENT mode of operation, the drive does not switch off when the end position is reached.
The door can be damaged if driven beyond the end position

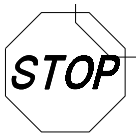
Adjustment of the OPEN position
- Push P-button until ADJUSTMENT appears on the display
- Move the door to the required open position by pushing the + button
- The open position can be saved by pushing and holding the P button and then the + button.

Information:
The door should open when pushing the + button.
If not, the field rotation in the mains connection should be changed.
(swap two phase wires on the U,V,W connection on the terminal door)

Adjustment of the CLOSED position
- Push P-button until ADJUSTMENT appears on the display
- Move the door to the required open position by pushing the - button
- The open position can be saved by pushing and holding the P button and then the - button.

Information:
The end positions can be fine adjusted in the operation mode INPUT (FINE OPEN, FINE CLOSE)

13. Error messages and rectification



Danger!
The mains power is connected to the printed circuit board (PCB). To replace the PCB the mains power to the control box must be disconnected. Switching off the main switch is not sufficient.
The main switch must be switched off and padlocked when doing maintenance on leveller, door and shelter.

As a general rule faults are indicated on the frontpanel with a red fault LED. The Plug In display inside the control box will show the fault in text.

Fault / error message	Cause	Rectification
System does not respond	No mains power	Check mains power to control box
Door is closing when button OPEN is pushed.	Motor in standard left position: Field rotation is wrong	Swap two phase wires of the door motor
Door is opening when button CLOSE Is pushed	Motor is inverted or mounted on the right (UK)	Change RE to LI in operation mode INPUT/FIELD ROT.
Leveller is not raising when the UP button is operated, although motor is running	Field rotation is wrong	Swap two phase wires of the hydraulic leveller motor
AUTOMATIC STOP	The door stop (0) button is pushed	Release stop button.
AUTOMATIC STOP INPUT	The stop chain is broken on terminal 41-42 (emergency stop) or on terminal 43-44 (stop input door)	Check the wiring and switches to terminal 41-44. Also check the connections terminal D1 – D4 and E1 – E8, see chapter 8
ERROR END POSITION Digital encoder (AWG)	The door has travelled beyond one of the end positions The end positions have not been programmed yet	Check the programming of the end positions and reset them if necessary See chapter 11 Navigator ADJUSTMENT
ERROR END POSITION Mechanical limit switch (MES)	The door has travelled beyond one of the end positions The limit switches have not been adjusted yet.	Check limit switches and adjust if required
ERROR RUN TIME	The programmed run time for the door has been exceeded	Check the door rail for obstructions Re-program door run time
ERROR RUN TIME HY	The programmed run time for the hydraulic leveller is exceeded or one of the valves Y1 or Y2 are still operated	Check the LIP IN switch (extendable lip only) Check front panel function
ERROR SAFETY EDGE PROTECTION (SEP)	The safety edge is operated or is faulty	Check safety edge and spiral cable. Remove obstacle.
	The safety edge does not have the correct value when the door is OPEN	Check safety edge, spiral cable and rubber profile.
ERROR PRESSURE SENSING TESTING	The PS switch is not activated at the CLOSE end position	Check the PS switch, spiral cable and profile. Check the position for the CLOSE end position
ERROR ROT. FIELD	Incorrect phase order on mains connection	Swap to phase wires on the mains connection
ERROR RS 485-AWG	Communication fault between the digital encoder and the control board	Check cable and plug connections
ERROR FRONT PANEL FAULT (Folien Fehler)	One of the front panel pushbuttons is pushed or sticking during start up	Turn the main switch off and remove the flatcable plug from the connector on the control board. Turn the main on. Replace the front panel when the fault situation is resolved.
ERROR LIP IN	LIP IN switch defect	Check/replace switch
ERROR LIP 450 mm	LIP 450 mm switch defect	Check/replace switch

14. LED diagnosis

LED nr	Color	Description		Fault diagnosis
1	Red	LED stop valve output 3	LED on LED off	Stop valve disconnected Stop valve operated
2	Yellow	LED switch input 6	LED on LED off	Contact closed Contact opened
3	Yellow	LED switch input 7	LED on LED off	Contact closed Contact opened
4	Yellow	LED truck sensor input 8	LED on LED off	Contact closed Contact opened
5	Yellow	LED interlock C-D input 21	LED on LED off	Leveller released Leveller locked
6	Yellow	LED interlock D-D input 23	LED on LED off	Leveller released Leveller locked
7	Yellow	LED selector switch Shelter input 25	LED on LED off	Contact closed Contact opened
8	Yellow	LED switch CLOSED Input 13	LED on LED off	Photo sensor not activated Photo sensor activated
9	Yellow	LED safety edge Input 15/17	LED on LED off	Sensor not activated Sensor activated
10	Yellow	LED stop input Input 42/44	LED on LED off	Contact closed Contact opened
11	Red	LED fuse F1	LED on LED off	Fuse defect Fuse OK
12	Red	LED fuse F2	LED on LED off	Fuse defect Fuse OK
13	Green	LED 24VDC	LED on LED off	Voltage 24VDC OK No control voltage

15. External door control connections

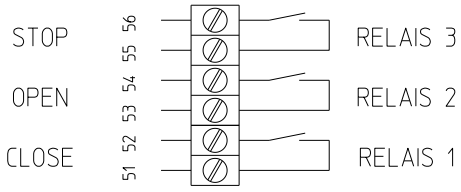
15.1 Set door type 2 (mechanical limit switches door)

The **free limit switches of the door control** system are used.
The free inputs and relays are automatically adjusted when door type 2 is selected

Relas 1: MOD6
Relay 2: MOD7
Relay 3: MOD8
Free input 1: MOD2
Free input 2: MOD4

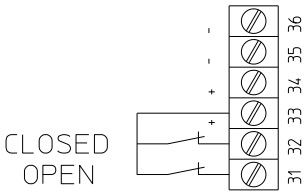
Connection of door push buttons

The push buttons are connected to relais 1,2,3



Connection of door limit switches

The position of both leveller and door must monitored for safe operation.
The limit switches of the door are used for this purpose.
It is advised to use an standby (park) switch on the swing lip leveller to detect the parked position. A jumper should be installed in terminal 5 and 7 when the standby switch is not used.
The extendable lip leveller has standard standby (park) detection (lip in switch).



15.2 Set door type 3 (LIP IN/standby (park) switch and D-D)

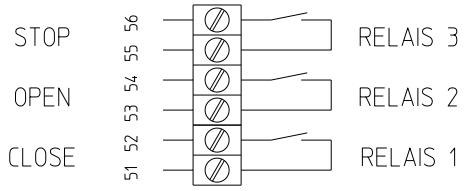
Information:
*Door type3 is also selected when **no door** (or manual door) is used*

The lip in switch (extendable lip) or standby (park) switch (swing lip) is used to the detect the parked position. The **D-D** contact is used as interlock between **D**oor and **D**ock leveller.
The free relays are automatically adjusted when door type 3 is selected

Relais 1: MOD6
Relais 2: MOD7
Relais 3: MOD8

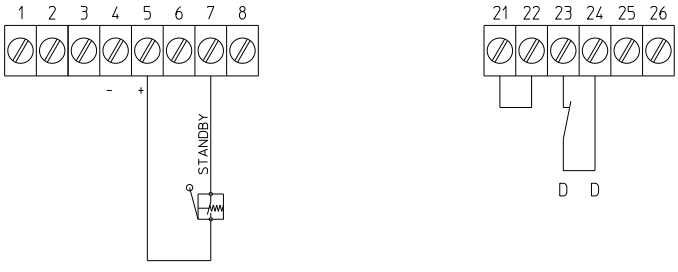
Connection of door push buttons

The push buttons are connected to relay 1,2,3



Connection of LIP IN / standby (park) switch and D-D

The position of both leveller and door must monitored for safe operation.
Door operation is enabled when the LIP IN switch (extendable lip) or the standby (park) switch (swing lip) is operated.
The extendable lip leveller has standard standby (park) detection (lip in switch) that is already functional.
It is required to install a standby (park) switch or sensor (PNP) on the swing lip leveller to detect the parked position.
The D-D contact must be connected to a switch or sensor (PNP), eg in the door rails, that is detecting a door (partly) open position to enable leveller operation.

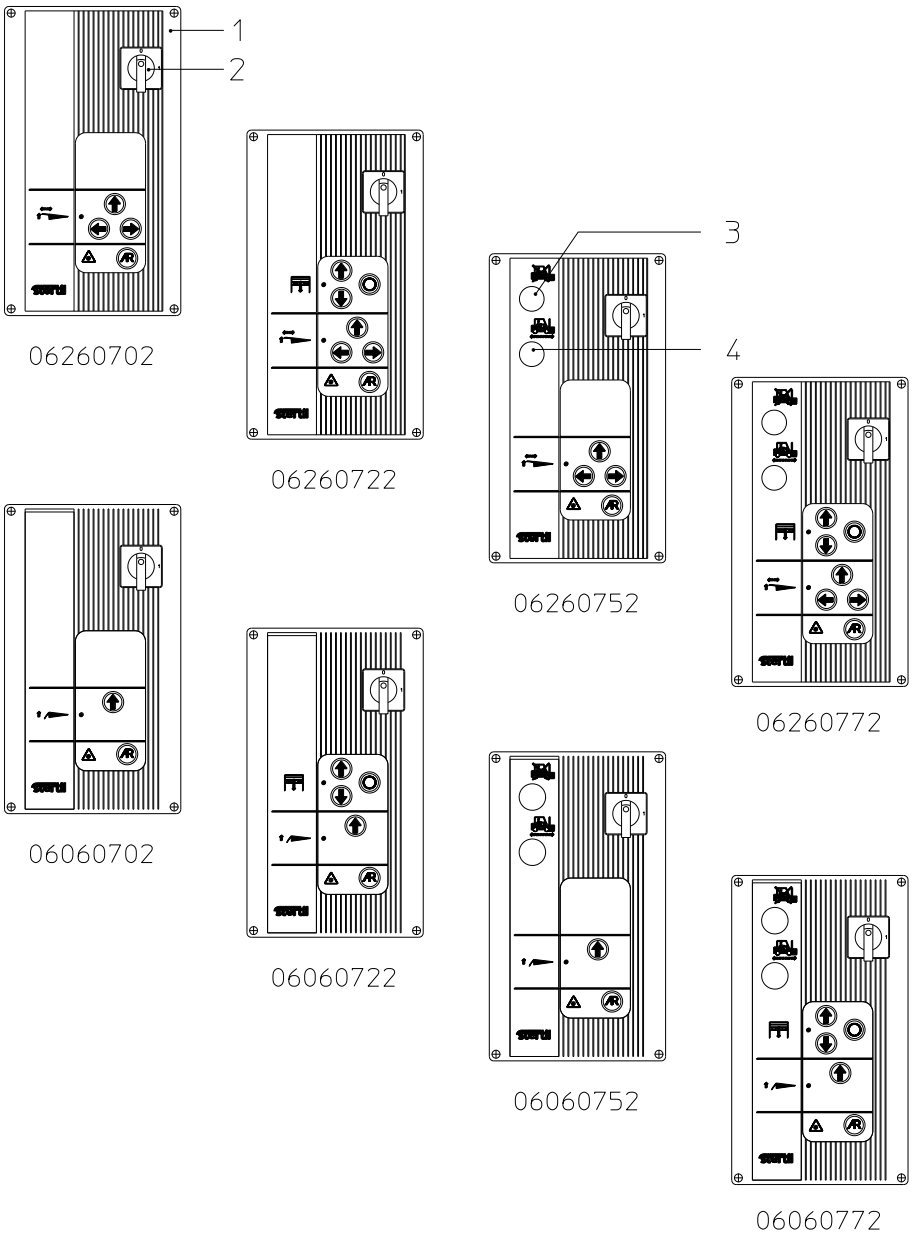


16. Technical data

Mains supply	3x 230/400V+N+PE +/- 10% 50/60 Hz N only required for the outside traffic lights 230V (Japan ,USA 3x 208/460V 50/60Hz)
Mains fuses	10A K- characteristic
Control voltage	24 VDC/ 60VA
Fuse control voltage (secondary)	Polyfuse 2,5A
Maximal loads 230/400VAC Door motor Leveller motor Shelter fan motor	 2,2 kW / 3,2A 2,2 kW / 3,2 A 2.2 kW / 3,2A
Maximum load 24 VDC control voltage Valves	Leveller stop valve 1A / 100% Leveller lip in & out, BDC 1A / 2,2%
Fuse outside traffic lights 230V connection 24V connection	 max. 115 W F1 0,5A (size 20x5) (230VAC) max. 12 W F2 0,5A (size 20x5) (24VDC)
Maximum load relay outputs	Prevent the contacts from burning when inductive loads are used (snubber diode, varistor, RC snubber) min. 10mA./ max 4A 230VAC Contacts that have been switching power, can not switch control voltage afterwards.
Mounting	Vertical on the wall , min. height 100 cm
Housing dimensions (hxbxd)	350x200x148 mm
Ambient temperature	-10°C ….+55°C
Storage temperature	-20°C ….+85°C
Isolation class	IP54 / IP65
Weight	5,5 kg

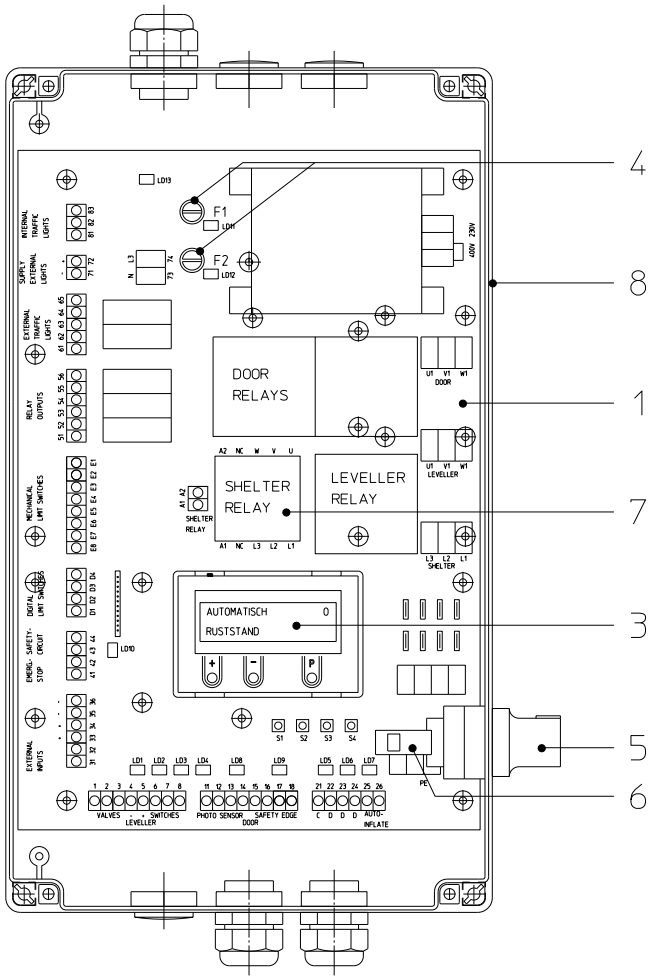
17. Parts list

17.1 Cover control box

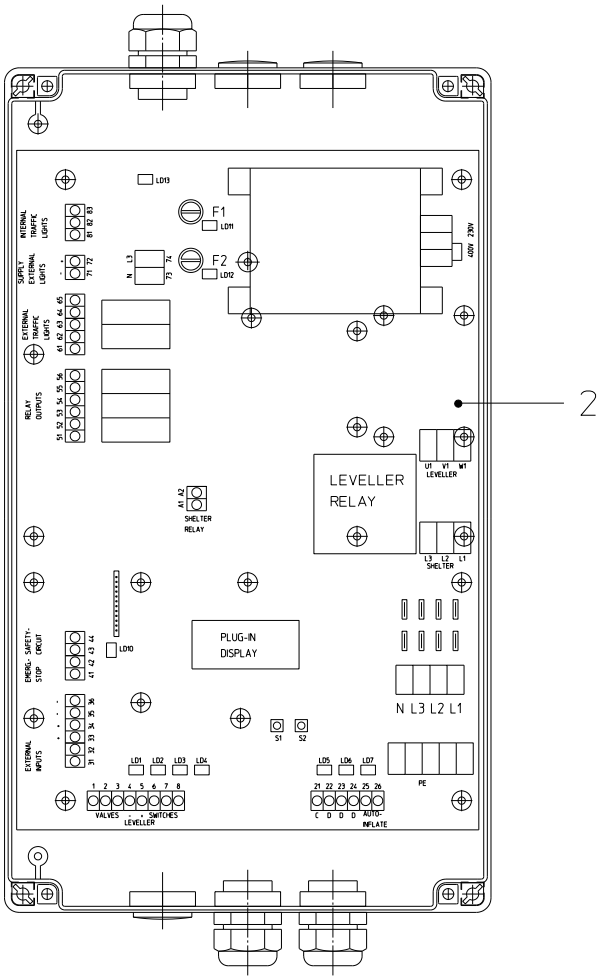


Item	Description	Partnumber
1	Extendable lip	06260702
	Extendable lip & door	06260722
	Extendable lip & inside traffic lights	06260752
	Extendable lip & door & inside traffic lights	06260762
	Swing lip	06060702
	Swing lip & door	06060722
	Swing lip & inside traffic lights	06060752
	Swing lip & door & inside traffic lights	06060762
2	Main switch	69120038
3	LED element red	69141129
4	LED element green	69141130

17.2 Printed Circuit board and controls



SMC



SSC

Item	Description	Partnumber
1	PCB leveller & door 230/400V 50/60Hz	69900290
	PCB leveller & door 208/460V 50/60Hz	69900291
2	PCB leveller 230/400V 50/60Hz	69900280
	PCB leveller 208/460V 50/60Hz	69900281
3	Plug In display	69620001
4	Fuse 500 mAT 5x20	
5	Switch summer /winter	69141122
6	Switch element NO	69141014
7	Shelter fan motor relay	
8	Control box bottom housing (empty)	06000701

18. EU Declaration of conformity

Manufacturer:
Stertil Kootstertille
Westkern 3
9288 CA Kootstertille
Netherlands

Hereby we declare that, by virtue of their conceptual development and design, as well as their manufacture as we have brought them onto the market, the products cited below:

Stertil Multi Control leveller/door control system

Conform to the relevant basic health and safety regulations of the following EU guidelines and standards.

EG Construction Products Directive 89/106/EG
DIN EN 13241-1
DIN EN 12453
DIN EN 12445
DIN EN 12978

EG Electromagnetic Compatibility Directive 89/336/EG
EN 55014-14
EN 61000-3-2
EN61000-3-3
EN 61000-6-2
EN 61000-6-3

EG Machinery Directive 98/37/EG
EN 60204-1
EN ISO 12100-1

EG Low Voltage Directive 73/23/EG
EN 60335-1
EN 60335-2-103

BGR 232-Richtlinie für kraftbetätigte Fenster, Türen und Tore (German directive for power-driven windows, doors and Gates)

Manufacturer ’s signature:

Ulbe Bijlsma
Managing Director Stertil BV

Kootstertille Netherlands
Date: 24-10-2008

19. Attachments

Overview of 208/460V models (Japan and USA)	Part number
Swing lip	06061700
Swing lip & inside traffic lights	06061750
Swing lip & inside traffic lights & shelter relay & summer / winter switch	06061760
Swing lip & shelter relay & summer / winter switch	06061710
Extendable lip	06261700
Extendable lip & inside traffic lights	06261750
Extendable lip & inside traffic lights & shelter relay & summer / winter switch	06261760
Extendable lip & shelter relay & & summer / winter switch	06261710
Swing lip & **door relays**	06061720
Swing lip & **door relays** & inside traffic lights	06061770
Swing lip & **door relays** & inside traffic lights & shelter relay	06061780
Swing lip & **door relays** & shelter relay	06061730
Swing lip & **door relays** & inside traffic lights & shelter relay & summer / winter switch	06061790
Swing lip & **door relays** & shelter relay & summer / winter switch	06061740
Extendable lip & **door relays**	06261720
Extendable lip & **door relays** & inside traffic lights	06261770
Extendable lip & **door relays** & inside traffic lights & shelter relay	06261780
Extendable lip & **door relays** & shelter relay	06261730
Extendable lip & **door relays** & inside traffic lights & shelter relay & summer / winter switch	06261790
Extendable lip & **door relays** & shelter relay & summer / winter switch	06261740
Swing lip & **door control**	06071720
Swing lip & **door control** & inside traffic lights	06071770
Swing lip & **door control** & inside traffic lights & shelter relay	06071780
Swing lip & **door control** & shelter relay	06071730
Swing lip & **door control** & inside traffic lights & shelter relay & summer / winter switch	06071790
Swing lip & **door control** & shelter relay & summer / winter switch	06071740
Extendable lip & **door control**	06271720
Extendable lip & **door control** & inside traffic lights	06271770
Extendable lip & **door control** & inside traffic lights & shelter relay	06271780
Extendable lip & **door control** & shelter relay	06271730
Extendable lip & **door control** & inside traffic lights & shelter relay & summer / winter switch	06271790
Extendable lip & **door control** & shelter relay & summer / winter switch	06271740

PERSONNEL DOORS OPERATION AND MAINTENANCE MANUAL

INDEX

Section 1 – Maintenance of Door & Hardware

To ensure reliable and safe operation, regular inspection and maintenance of the Door and Hardware are essential.

The manufacturer's warranty is valid for 1 year if the following maintenance regime is followed and accurately recorded, and the correct installation has been carried out.

Identified below are the guidelines for the care and maintenance of each of the door components which must all be checked to ensure the correct maintenance of the door assembly as a whole**.**

Doors

The door alignment should be checked to ensure that the door and frame remain true and have not settled or moved.

Door Openings should be free from obstructions to ensure that the operation of the door is not compromised.

Doors should be free from scratches or dents and should open freely.

Personnel Access Doors

These are generally fitted with a selection of locks along with either pull handles or lever handles and are generally used as the principle entrance doors to the building. Usage can vary depending on the number of people accessing the building.

Plant Room / Store Doors

These are generally fitted with deadlocks and cylinders with either pull handles or a cylinder pull and are usually kept locked. These doors are generally designated as having low usage.

Fire Escape Doors

These are fitted with panic escape hardware and closers or a stay and can be located on the outside of the building as the last point of escape, or on the inside of the building on corridors / stairwells etc. These doors are generally designed to be closed and are used infrequently.

Note: Some external fire escape doors are fitted with outside access devices providing keyed access. These are designed to allow limited infrequent access and any hardware should be used as such.

The frequency of maintenance is related to the amount of use:

Door Usage per Day	Inspection / Maintenance Period
Up to 15 cycles	Every 6 months – Low use
15-30 cycles	Every 4 months – Medium use
30-40 cycles	Every 2 months – High Use
40-50 cycles	Every 4 weeks – High Use
Over 50 cycles	Every 2 weeks – Very High use

Hinges

Lubrication is required as required by the usage guidelines stated previously. Hinges should get a few drops of penetrating oil at the top so it runs down into the wearing surface between the pin and the housing.

The application of lubricant prevents freezing in cold weather. A good time to schedule additional lubrication is just before cold weather starts.

During lubrication all hinge screws should be checked for tightness and that they are holding. If the door appears to have dropped this may be due to the hinge screws not being tight.

If the squeaking of hinges occurs frequently then pin misalignment should be investigated

Any dark marks or stains around the hinge knuckle could indicate wear and potential impending failure.

Overhead Closers

This information must be carefully observed and adhered to. Non-compliance will declare the Manufacturer free from any liability. The door closer must only be used in accordance with the instructions provided and its intended use of closing side hung doors.

Testing the closers

Open the door fully and release. The door should close fully into the frame and overcome the latch.

Open the door and rest the latch bolt against the strike plate. On release the door closer should have enough power to latch the door closed.

Any failure of the door closer to meet the above should be investigated. Possible causes are that the spring power needs to be increased or that there is some miss-alignment between the door and the frame.

Installation and adjustment

This must be done by specialists only. Where necessary a door stop or buffer must be fitted to limit the maximum opening angle of the door especially with the use of a slide arm closer. If necessary check details with the manufacturer and ask for advice.

Incorrect use may cause injury

Obstruction of moving door leaf (dragging on the carpet)

Weather strips or rubber seals or badly fitted ironmongery

Incorrectly fitted or adjusted (doors slamming)

Danger of finger traps between frame and door

Incorrectly sized door closer

Closer is for alternative use and not side hung doors

Maintenance by Specialist

Check that the door closer closes the door properly and that all fixing screws are tight.

Periodically apply light oil to the arm knuckle joints and door hinges.

Check adjustments of valves and they are correctly set.

Entrance door closers should be checked more frequently.

Electro Magnetic Devices

Any electric hold open device or electric lock should be checked for operation weekly along with any associated alarms.

Locks and Latches

Factors affecting the operation of a lock / latch (assuming correct fitting) is often due to movement of the door / frame caused by weather conditions. Wear on hinges can also be a factor.

The result is most commonly discovered by the inability of the latch / deadbolts to locate into the keep located in the frame. All holes inside the keeps should be checked and kept free from dirt or debris. Also they should be deep enough to suit the latch / deadbolt.

Lubricant can be applied occasionally to the face and side of the latch bolts but should not be applied to the locking mechanism as this will attract dirt.

Cylinders

Powdered graphite is the traditional material for lubricating pin tumbler locks. You can even use powdered graphite that comes in a little tube with a thin nozzle specially designed for squirting the graphite powder into the keyway. Also you can use powdered graphite in an aerosol spray, again a product intended specifically for lubricating locks

Handles

Lever handles - back plates and rose fixings should be checked for tightness and re adjusted if loose. Spindle and handle grub screw fixings should also be checked. Incorrect handle operation can lead to problems with the operation of the lock / latch.

Pull handles – Ensure that bolt through / face fixings are tight and adjust if loose. Loose pull handles can eventually lead to damage to the face of the door.

Emergency and Panic Escape Hardware

Moving parts should be inspected for signs of wear and replaced as required. Lubrication should be used where indicated; screws and all fixings should be tested to ensure they are secure.

Security devices should be tested for correct function, particularly that they do not impede the correct operation of the door. Floor sockets, whether easy clean or dust-excluding, should be checked and cleaned out.

Bolts, rods and other protrusions should be checked to ensure they are straight and undamaged. Bolts for locks and latches should be checked to ensure they are fitting centrally into their respective keeps.

Parts liable to corrosive influence should be washed, lubricated and protected. Moving parts that pass through braces or brackets should be examined for wear that might cause intermittent jamming or rusting.

Door Seals

Smoke, fire seals and weatherseals should be examined to ensure they are unbroken and secure in the door and that the gap in the door has not moved out of tolerance or the door moved out of square so as to prevent an effective seal.

Worn or damaged seals must be replaced with the appropriate product.

Cleaning of Hardware

Electro Plated surfaces should be wiped clean with soapy water and a soft cloth and wiped dry

Nickel & Chrome surfaces should be dusted regularly and washed periodically with weak detergent solution.

Stainless Steel surfaces should be dusted regularly occasionally washed with warm soapy water and dried with a soft clean cloth. Avoid acid or chloride based cleaning products and abrasives.

Nylon surfaces do not attract dust as Nylon is a non-porous material. Appearance can be maintained by wiping with a damp cloth which will restore its appearance.

Section 2 – Maintenance of Paint Finishes

Polyester Powder Coating Guarantees

Standard PPC finish is guaranteed for a period of **1 year** subject to the cleaning and maintenance regime described below.

Marine Grade PPC finish is guaranteed for a period of **10 years** subject to the cleaning and maintenance regime described below.

The guarantees only relate to the colourfastness and condition of the coating itself.

All steel used in the manufacture of the Doorsets is fully galvanised which in itself offers very good protection against the weather.

All Polyester Powder coating paints used are applied to provide a microscopically smooth finish, made up of different resins which do different jobs for different environments and are applied with a suitable thickness to act as a barrier to protect the substrate.

For Marine environments prior to application of the paint finish any galvanised steel is coated using a Zero Zinc Antigassing primer which is based on a very high performance epoxy resin and has excellent resistance to chemicals and humidity. In connection with the galvanised steel this offers a high level of protection before the Powder coating is applied.
Following application of the high performance primer a standard powder coat paint finish is applied.

Maintenance of Paint finish

Powder coatings can be treated like most other paints and will benefit from regular washing. The aesthetic life will be prolonged by being polished and waxed with good quality car shampoos and waxes.

Washing:

The frequency of washing depends on the environment in which the doors are situated.
For coatings in low risk exposure areas all paintwork should be washed down every 3 months.
In areas of high risk / marine environments all paintwork should be cleaned every month.

A mild detergent, or ideally car shampoo, applied by a cloth, sponge or bristle brush should be used (not an abrasive). The paint film should be cleaned from settled contaminants adhering to it. If the contaminant cannot be removed the following products have been tested for use:

- ✓ Ajax Cream
- ✓ Flash (in water)
- ✓ Ajax Liquid (in water)
- ✓ Cutting compound ('T Cut')

Prolonged contact with chemically active sediment (bird droppings) can drastically reduce the life of the paint.

If solvents are needed to remove marks a soft cloth dampened with white spirit may be used.

Solvents containing esters, ketones of chlorinated solvents must not be used without consultation as these can be too aggressive and can melt the coated surface.

Scratches

Light scratches can be removed with the use of a cutting compound i.e. 'T Cut'.
Scratches that expose the galvanised metal underneath will need to be touched up with paint immediately to prevent oxidisation from occurring behind the paint leading to further breakdown of any adjoining areas.

Paint Protection

The paint will benefit from the application of wax. This will help maintain its shine, and for outside, the wax will seal any porosity in the paint and prevent any oxidation.
This can be applied during washing as most car shampoos have wax included. However, a dedicated application of wax will be much longer lasting.

Note:
For any guarantees or warranties to be valid, the cleaning / maintenance regime must be documented and recorded, confirming the frequency of maintenance along with all methods and products used. This must be submitted for any claim to be considered.

Section 3 – Disposal

95% of your steel door is manufactured from steel which is easily recyclable.

Mineral wool insulation within the doors can either, be bagged and sent to a mineral wool manufacturer, or can be sent to landfill.

Door hardware can be re-used where possible depending on the previous usage and condition. Again most hardware is made from metals that can be re-cycled.

Weather / fire seals cannot be re-cycled and should be sent to landfill.

Thermadoor 640C

User Manual

Foreword

This user manual is for the Stertil Stokvis Thermadoor 640C:

This user manual is intended for authorised and technically competent people (see "Glossary of terms")

This user manual forms part of the technical construction file as intended in the Machine Directive.

Attention is given in this user manual to the safety, operation, cleaning, maintenance and disposal of overhead doors.

You will find in this user manual a number of notes that are shown as follows:

Tip: Suggestions / recommendations of how to carry out certain tasks in an easier manner

Danger: You can injure yourself or others or damage the product

Note: Draws your attention to possible problems

Caution: The product can be damaged

Table of Contents

EC Declaration of Conformity

(in accordance with Annex IIA of the Machine Directive)

Supplier: Stertil UK Ltd
Unit A, Brackmills Industrial Estate
Caswell Road
Northampton
NN4 7PW
Tel: 0870 770 0471

declares that the product:

Stertil Stokvis Thermadoor 640C

where this certificate relates to, is in accordance with the conditions of the Machinery Directions:

(DIRECTIONS 98/37/EG (98/79/EG)
(Replaces DIRECTIONS 89/392/EEG)

and is in accordance with the below mentioned other EEC-directions
LOW VOLTAGE DERECTIVE 73/23/EEG (93/68/EEG)
EMC DIRECTIVE 89/336/EEG (92/31/EEG, 93/68/EEG)

And SP Swedish National Testing and Research Institute has as Notified Body (no. 0402), performed Initial Type – Testing of the products mentioned above, and the report may be used as Support for an EC Declaration of Conformity according to the requirements in the harmonized standard EN 13 241- 1:2003

Initial Type – Testing Report for EC Declaration of Conformity for Industrial Door: 0402 – CPD – 40 70 02

And by the TÜV Nord "Baumuster" tested in accordance with the below mentioned standards:

EN 12604 : 2000 Doors – Mechanical aspects (Requirements)
EN 12605 : 2000 Doors – Mechanical aspects (Test methods)
EN 12453 : 2000 Safety in use of power operated doors (Requirements)
EN 12445 : 2000 Safety in use of power operated doors (Test methods)

TÜV Registered-no. PP – 022 / 2003

Glossary of terms

Authorised person:
An authorised person is someone who has carefully read this manual and is at least 16 years old. Moreover, this person must have sufficient skills to be able to operate an overhead door.

Technically competent person:
A technically competent person is someone who has sufficient technical knowledge to carry out activities on an overhead door. This person is aware of the dangers that can occur.

Door leaf:
A door leaf is the total of horizontally connected panels used to shut off and give access to an area. These panels are made of 2 steel sheets separated by insulation material.

Overhead door:
An overhead door consists of a door leaf that closes off an opening in a building. This door leaf consists of horizontally connected panels.
An overhead door is opened vertically.

Spring bumper:
A spring bumper is a block of rubber that is mounted at the end of the horizontal rails. This spring bumper restrains the overhead door when it is opened to the maximum.

Insulated Doors (Steel - insulated)
These doors are made of sandwich panels. This means that the panels are constructed of two steel sheets. These sheets are separated by insulating (polyurethane) foam. The total thickness of the panels is 40mm. The steel sheets are 0.5 mm thick.

Insulated Doors (Steel - insulated - with a Plastisol finish)
These doors are made of sandwich panels. This means that the panels are constructed of two steel sheets. These sheets are separated by insulating (polyurethane) foam. The total thickness of the panels is 40 mm. The steel sheets are 0.5 mm thick. Furthermore, these panels have an extra Plastisol (a type of plastic) layer that protects the panel.

1. Introduction

1.1 Intended use

The overhead door is intended to close an opening in a building that is intended to provide access to people or vehicles. It is not allowed to use the overhead door for other purposes. Before carrying out work on the overhead door, read this user manual thoroughly. The supplier is not responsible for any damage resulting from incorrect use of the door.

1.2 Unintended use

The following should be strongly advised against:

- Hoisting and/or lifting objects, animals and/or people using the door mechanism
- Clamping or pressing using the door mechanism
- Changing the door or parts of it
- Increasing or reducing the speed of movement of electrically operated doors

1.3 Operating conditions

The door should not be used in temperatures lower than -30°C and higher than +60°C.
The door can be safely operated up to a wind speed of 32 m/s (10 Beaufort).
The door has a water tightness rating of IP65 (this means that the door is splash proof).

Tip: Lightly grease the rubbers with vaseline to prevent the door freezing to the frame in freezing conditions

Tip: Grease the nylon ball bearing roller, hinges and springs to reduce the noise of the door

Danger: Corrosive and aggressive environments: acid and/or caustic conditions can have a major influence on safe operation. This should be taken into account very seriously.

1.4 Operating principle

To move and at the same time counter-balance the weight of the door, a torsion-spring counter-balance system is fitted. There are various types of drive for the overhead doors. These are:

- Manual operation
- Manually operated using a chain hoist
- Electric drive

1.4.1 Manual operation

An overhead door can be operated using a handgrip or a rope. If the door is moved upwards using a handgrip or a rope, the tension in the hoisting cables is reduced. The overhead shaft, which is fitted with a torsion spring, rolls up and the door moves upwards

(at the extreme limit the door hits the spring bumpers). If the door is moved downwards using a handgrip or a rope the door is closed.

1.4.2 Manually operated using a chain hoist

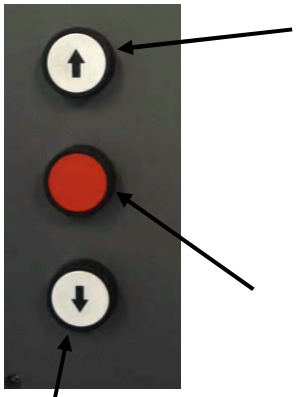
An overhead door can be operated using a chain hoist. By pulling the chain, that is connected through an assembly of gears to the shaft, the door moves upwards or downwards. If the chain is no longer pulled, the door will stop moving. This applies to both the upward and downward movement. The chain has to be held in the hand when opening or closing the door, if you do not hold the chain the cables can detach from the cable drums.

1.4.3 Electric drive

An operating unit is used to start an electric motor. The motor drives the overhead shaft. This rolls up or unrolls the hoisting cables, which raises or lowers the door leaf.

1.4.4 Operating unit

The operating unit (a box with push buttons) is only used if the door is electrically operated.
Electrically operated doors are supplied as standard with the operating unit shown below. The customer can also order another type of operating unit



Meaning of the buttons

Up: This button should be pressed once to open the door
The door then moves automatically upwards until it is completely open.
If the door is fitted with a dead man's switch, the button should be kept pressed in to open the door.
The door stops moving when the button is released.

Stop: The door stops immediately if this button is pressed. This applies if the door is moving either upwards or downwards. If a dead man's switch is fitted, this button is not used.

Down: This button should be pressed once to close the door. The door then moves automatically downwards until it is completely closed. If the door is fitted with a dead man's switch, the button should be kept pressed in to close the door. The door stops moving if the button is released.

Danger: The operating unit may only be opened by a technically competent person.

2. Safety

2.1 Safety risks

Danger: There is a risk of crushing and pinching when the door is moving.

Danger: There is electrical power to the operating unit, which means that there is a danger of electrocution. Therefore only technically competent people are allowed to work on the electrical installation.

Danger: Switch off the mains power when work is carried out on the door control system.

Danger: The door may only be operated by authorised persons.
This is because of the parts (torsion-spring counter-balance system) that are subjected to high forces.

Danger: The door may only be operated if there is no one present in the danger zone (approximately 1 meter from the door).

Danger: If the door operates in a different way to that described in this user manual, do not use the door and contact the supplier as quickly as possible.

Danger: If the operation of the door is disrupted by defective parts, poorly readable (or missing) pictograms or a bad state of repair, contact the supplier as quickly as possible.

Danger: Ensure that during operation the door does not become trapped between the guide rollers and the rail. Always use the handgrip/ foot pedal, rope or the chain.

Danger: Installation, disposal, maintenance and repairs may only be carried out by technically competent persons.

Danger: Corrosive and aggressive environments: acid and/or caustic conditions can have a major influence on safe operation. This should be seriously taken into account.

Caution: The door should be fully open if a vehicle is to pass through it.

2.2 Safety provisions

Every manually operated overhead door that is installed must be fitted with a certified *spring break safety device*. This spring break safety device ensures that the door is stopped from moving if the torsion spring breaks. For electrically operated overhead doors the spring break safety device is integrated in the motor. If a motor is fitted with a manual release, an extra spring break safety device must be fitted.

Every overhead door is fitted with two steel cables that are wound onto drums. These cables must be wound around the drums at least twice for safety reasons (safety windings). This protects the cable attachment point to the drum from wear.

Every electrically operated door must also be fitted with a *slack cable safety device*. This ensures that if the cables go slack, for whatever reason, the motor is switched off. This prevents uncontrolled movement of the door.

Every electrically operated door must also be fitted with a *safety edge*. This safety edge consists of a contact strip on the bottom of the door that sends a signal to the control unit when pressed. The control unit sends a signal to the motor that causes it to immediately switch off. The door can be moved again by using the operating buttons (up and down buttons). A door fitted with a safety edge must have an emergency stop fitted to the control unit. If the overhead door is operated by a dead man's switch, a safety edge is unnecessary and therefore not compulsory.

If a pass door is fitted in an electrically operated door, a *contact switch* must be fitted to this pass door. This switch ensures that the door cannot be electrically opened if the pass door is open.

On the request of the customer, the following safety provisions can be fitted to a door:

- Cable break safety device
- Safety glass
- Laminated glass
- Pass-through safety device
- Sliding bolt microswitch
- Motor (including emergency stop switch)

Cable break safety device
The *cable break safety device* is fitted to a door to ensure that if the cable breaks, the door does not drop. If a cable breaks, then a mechanism ensures that the tilting mechanism clamps to the rails. This prevents the door falling more than 300 mm.

Safety glass
An overhead door that is fitted with safety glass instead of another type of glass prevents injury if the glass breaks. The glass breaks into small pieces so that injuries from falling splinters are minimal.

Laminated glass
An overhead door that is fitted with laminated glass instead of another type of glass prevents injury if the glass breaks. The broken glass remains attached to the plastic laminate.

Pass-through safety device
An overhead door that is electrically operated can be fitted with a pass-through safety device. This pass-through safety device consists of a box that emits an infra red beam. If the door is moving and this beam is interrupted, the door immediately stops moving. If the beam is interrupted, the door cannot be set in motion.

Sliding bolt (fitted with a contact switch)
If an overhead door is electrically operated and is fitted with a sliding bolt, a contact switch is fitted to the bolt. This switch ensures that the door cannot be electrically opened if the door is bolted.

Motor
An overhead door that is electrically operated also has the motor itself as a safety device. If a spring breaks, the motor ensures that the door does not make any uncontrolled movement. When operating with an emergency stop function, the door is stopped because the motor is switched off. In this case the motor serves as a safety device.

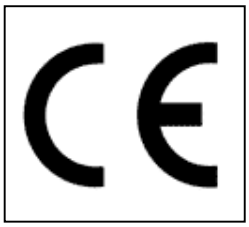
2.3 Safety measures

Bear in mind the following safety measures:

- ✓ Before carrying out work on the overhead door, read this user manual thoroughly. The supplier is not responsible for any damage resulting from incorrect use of the door.
- ✓ It is forbidden to remove guards, safety devices, pictograms and marks or to amend the construction.
- ✓ Repairs and maintenance may only be carried out by technically competent people, because the counter-balance system with the springs is subject to high forces.
- ✓ The owner of the door remains responsible for its use, also when the door is used by a third party, unless agreed otherwise.
- ✓ The door should be made inoperable if it becomes damaged and/or defective. The door may only be brought into use again once the damage and/or defect have/has been corrected.
- ✓ The door may only be operated by an authorised person.

3. Explanation of symbols

The following symbols/pictograms are displayed on the door:

Symbol/pictogram	Position	Description
 Danger of crushing	On the inside of the bottom panel	When shutting the door, people can be crushed between the door and the floor
 Danger of pinching	On the overhead door and the rails on both sides at eye height.	Danger of pinching by the movement of the guide rollers in the rails.
 CE marking	On the type plate.	Declaration of conformity. This indicates that the door satisfies the requirements specified by the machine directive.

4. Life and faults

The parts of the overhead door are designed for 15,000 up and down movements. The life of the door, if used normally is ± 10 years.

Faults:

Fault	Possible cause	Measure to take
The door drops or rises slightly after the door is stopped.	Spring tension is incorrect	Consult the supplier
The safety edge starts operating in warm weather.	The pressure is raised in the bottom rubber	Consult the supplier
The door makes a lot of noise when moving up and down.	The guide rollers are running dry	Grease the guide rollers. (see 5.1)
The door does not react when the buttons are pressed.	Sliding bolt engaged. Problem in the electrical supply	Release bolt. Switch off all equipment that uses electricity and consult the supplier
The door stops moving immediately after it has been started	Fault in the safety edge or the slack cable safety device	Consult the supplier
The door hangs at an angle	The adjustable clutch or the cable drum has rotated	Consult the supplier

5. Inspection, maintenance and disposal

5.1 General

An overhead door should be maintained and checked regularly to ensure its safe operation and use. A record of the maintenance for each item should be held on site. This is described in the EN-norms and under the Provision and Use of Work Equipment Regulations 1998.

GENERAL:

1 Torsion springs, brackets and other components that are attached to the springs and cables, are under extreme tension. If not handled properly, injuries or damage can occur!
So, these components must only be worked on by qualified overhead door Technicians!

2 Broken or worn components should only be replaced by qualified overhead door Technicians.

3 When checking the door, always switch off the electricity supply. Ensure that it is cannot be switched on without your knowledge.

REGULAR MAINTENANCE:

After installation:

1.	Grease running part of the tracks	Technician
2.	Grease the bearings of the rollers	Technician
3.	Grease the shafts of the rollers	Technician
4.	Grease the bearings of the shaft	Technician
5.	Grease the hinge pins	Technician
6.	Grease the lock	Technician
7.	Protect the panels with car wax	USER
8.	Grease the rubbers lightly with Vaseline	USER

Every 3 months:

1.	Complete visual inspection	Technician
2.	Check balancing system and adjust if needed	Technician
3.	Check side seals for damage or wear	Technician
4.	Check top seal for damage or wear	Technician
5.	Check bottom seal for damage or wear	Technician
6.	Grease all the points mentioned above	Technician
7.	Clean the panels	USER
8.	Clean the windows (only wash with water, do not use a cloth)	USER
9.	Remove dirt and rubbish from in, on or around the door	USER

Every 6 months:

1.	Check or test the attachment of the springs to the fittings	Technician
2.	Check the balance of the door and adjust if needed	Technician
3.	Check the cables for damage or play	Technician
4.	Check the cable connection points on drums and bottom bracket	Technician
5.	Check the roller for wear and clearance	Technician
6.	Check the hinges for breaks or wear	Technician
7.	Check the panels for damage, wear or rust	Technician
8.	Check the spring break device following instructions in manual	Technician
9.	Check the manual operation of the door	Technician
10.	Check cable pulleys for wear	Technician
11.	Check panel sealing for wear	Technician
12.	Check functioning of the cable break device	Technician

13. Check position of cable break device hinge pin	Technician
14. Check bolt and screw connections of spring break device	Technician
15. Check connections of the pawl wheel	Technician
16. Check side seals for damage or wear	Technician
17. Check bottom seal for damage or wear	Technician
18. Check top seal for damage or wear	Technician
19. Check functioning of cable tension set	Technician
20. Grease the springs	Technician
21. Grease bearings of rollers	Technician
22. Grease running parts of the tracks	Technician
23. Grease the shaft bearings	Technician

Every 12 months:

1. Grease all the points mentioned above	Technician
2. Check or test the attachment of the springs to the fittings	Technician
3. Check the balance of the door and adjust if needed	Technician
4. Check the cables for damage or wear	Technician
5. Check the cable connection points on drums and bottom bracket	Technician
6. Check the roller for wear and clearance	Technician
7. Check the hinges for breaks or wear	Technician
8. Check the panels for damage, wear or rust	Technician
9. Check the spring break device following instructions in manual	Technician
10. Check the manual operation of the door	Technician
11. Check side seals for damage or wear	Technician
12. Check top seal for damage or wear	Technician
13. Check bottom seal for damage or wear	Technician
14. Check the shaft for wear or damage	Technician
15. Check the bottom bracket for wear or damage	Technician
16. Check the connection of the drum to the shaft (keys!)	Technician
17. Check and re-tighten the bolt of the coupling	Technician
18. Check the connections of the track system	Technician
19. Check the attachment of the door to the lintel and ceiling	Technician
20. Grease the springs	Technician
21. Check bolt and screw connections of spring break device	Technician
22. Check connections of the pawl wheel	Technician
23. Check the functioning of the cable tension set	Technician
24. Grease springs	Technician
25. Grease bearings of rollers	Technician
26. Grease running parts of the tracks	Technician
27. Grease the bearings of the shafts	Technician
28. Grease the hinge pins	Technician
29. Grease the lock	Technician
30. Grease the shafts of the rollers A0	Technician

After spring break:

- ✓ Replace springs and spring break device
- ✓ Check the shaft for damage and replace if necessary

NB! Do not touch any connection or part of the door after a spring break. Wait until qualified technicians arrive at the scene!

After cable break:

- ✓ Replace cable together with the connections
- ✓ Replace cable break device
- ✓ Check tracks and service or replace

NB! Do not touch any connection or part of the door after a cable break. Wait until qualified technicians arrive at the scene!

For greasing use : PTFE or SAE20

For cleaning use : Soft soap with water. Do not use aggressive soap or a cloth.

 **Note:**

- ✓ The rubbers of the door may only be greased with vaseline if it is certain that the electrical power to the door has been switched off and has been secured against being switched on.

- ✓ The guide rollers may only be greased with ball bearing grease if it is certain that the electrical power to the door has been switched off and has been secured against being switched on.

5.2 Spare parts

Parts can be ordered from the supplier who supplied the overhead door. It is of great importance that only original replacement parts are used and that they are fitted by technically competent people.

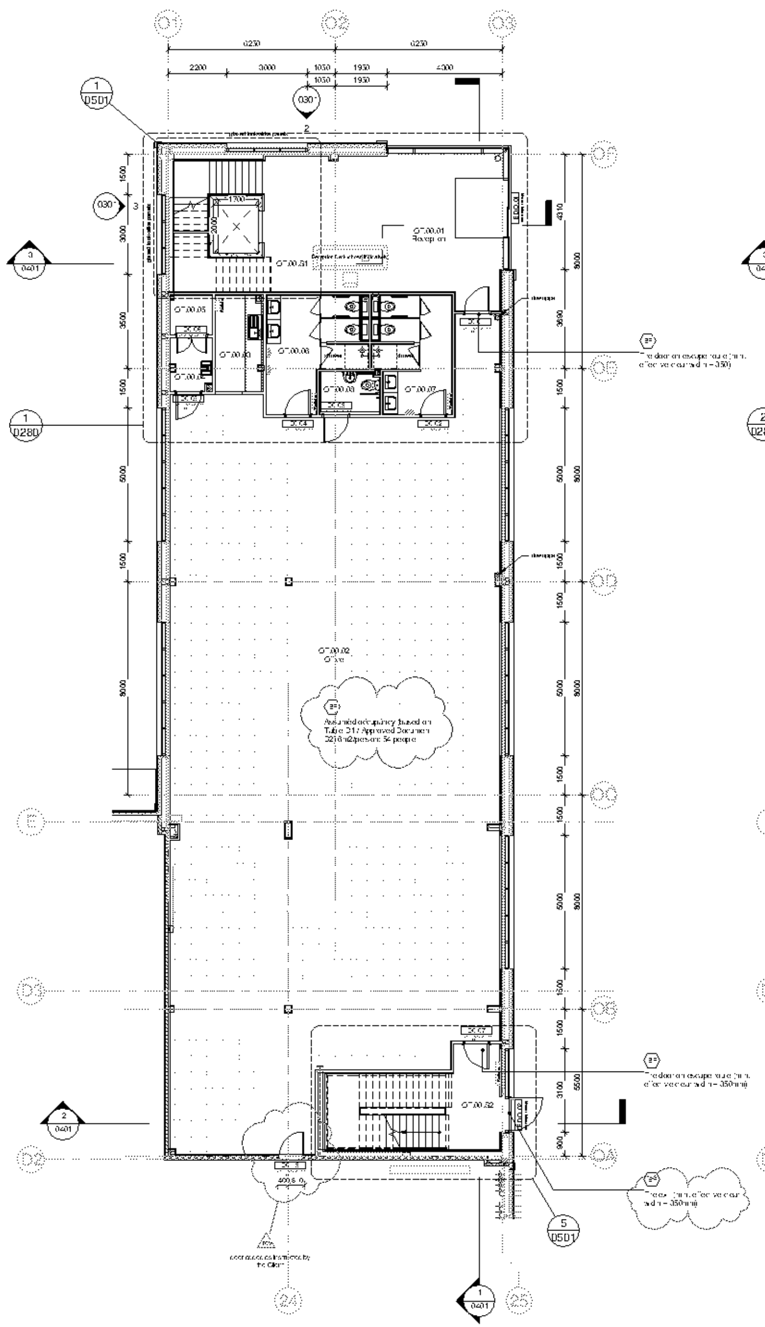
5.3 Disposal

When the door is at the end of its working life and it is decided that it should be replaced or removed, this should be carried out by a technically competent person.

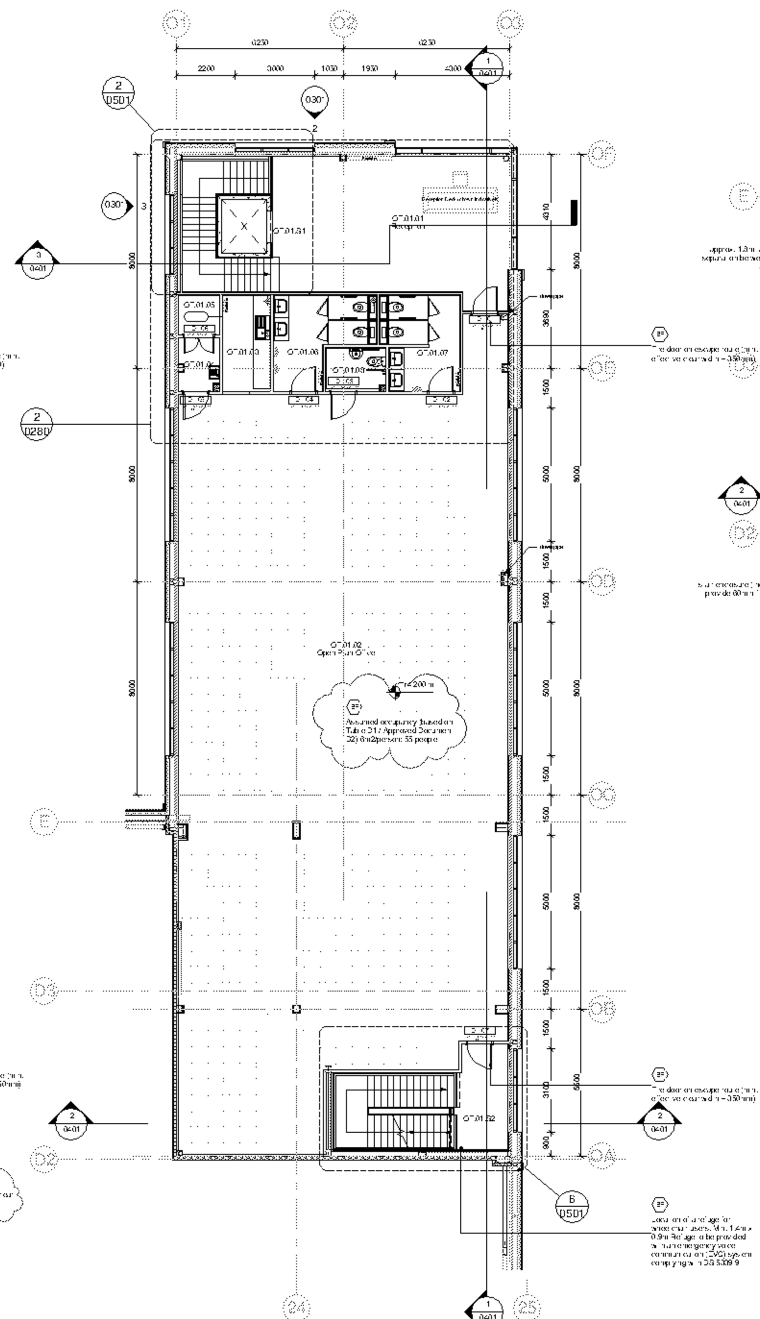
Metal and plastic should be sent separately to a waste processing company.

The motor can contains oil. This falls under Small-scale Chemical Waste.

 **Note:** Consult the supplier in every case



1 Office Level 00
1 : 100



2 Office Level 01
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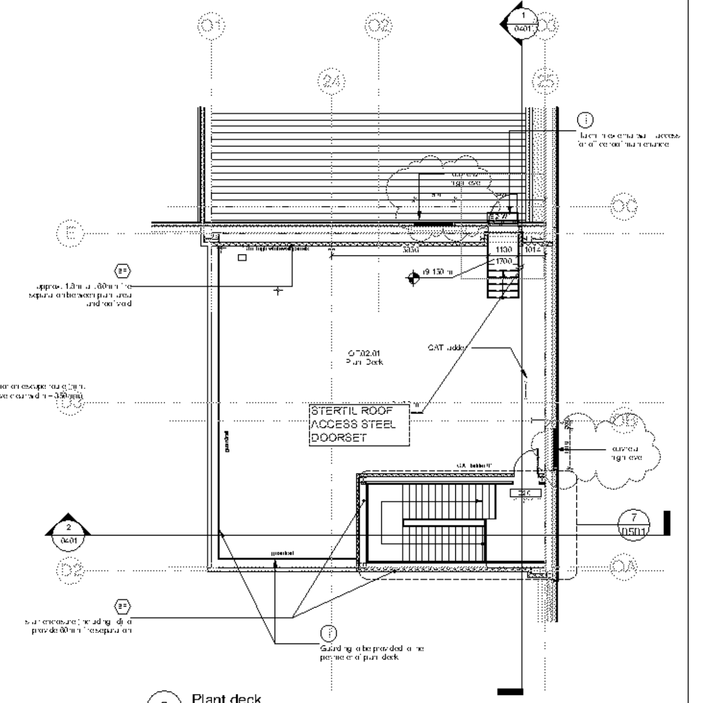

3 Plant deck
1 : 100

Room Schedule - OFfice		
Number	Name	Area
OF.00.01	Reception	37.4 m²
OF.00.02	Office	325.2 m²
OF.00.03	Kitchen	6.3 m²
OF.00.04	Cleaner's Store	3.0 m²
OF.00.05	Riser	2.3 m²
OF.00.06	Female WC	13.7 m²
OF.00.07	Male WC	12.4 m²
OF.00.08	AWC	3.5 m²
OF.00.S1	Stair 01	22.6 m²
OF.00.S2	Stair 02	21.2 m²
OF.01.01	Reception	42.7 m²
OF.01.02	Open Plan Office	331.3 m²
OF.01.03	Kitchen	6.1 m²
OF.01.04	Cleaners Store	2.9 m²
OF.01.05	Riser	2.3 m²
OF.01.06	Female WC	10.4 m²
OF.01.07	Male WC	10.0 m²
OF.01.08	AWC	3.6 m²
OF.01.S1	Stair 01	18.0 m²
OF.01.S2	Stair 02	20.8 m²
OF.02.01	Plant Deck	126.0 m²

Rev. Date/Checked

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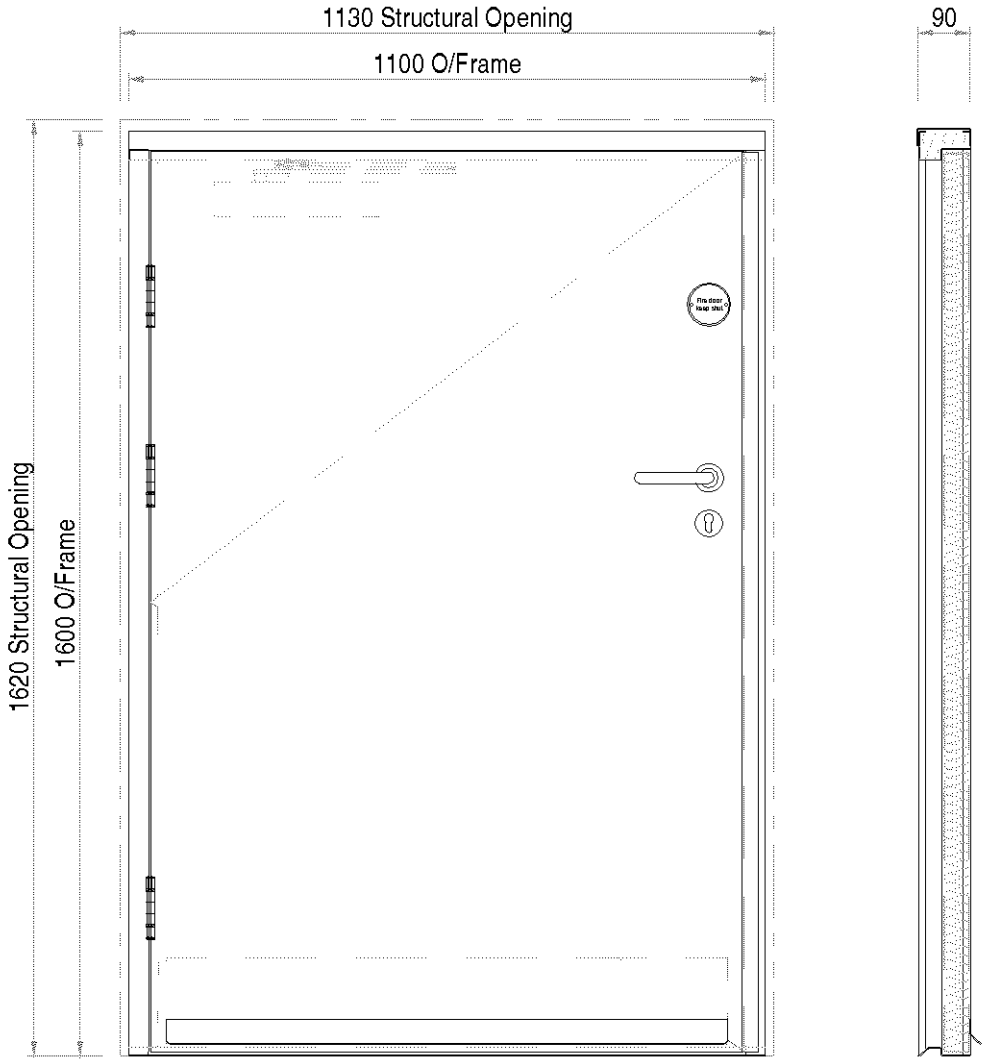
pHp architects

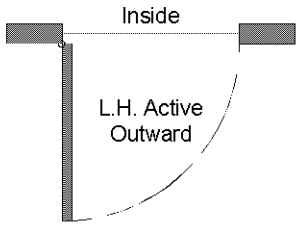
3899-09
EMG Plot 9
East Midlands Gateway

SEGRO

GA Plans - Office

Status Preliminary
Drawn RZ Checked RM
Apr 2021 23.07.2021
Project Number:
EMGP9 - pHp - OF - XX - DR - A - 0201 P05
Scale@ A1 1 : 100



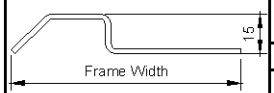


1no. Metador Defender Fireshield single-leaf steel hinged doorsets:

* To suit a structural opening of 1130 x 1620mm WxH
* Overall frame size of 1100 x 1600mm WxH
* Telescopic side frame system
* Adjustable head extension (20mm projection left and right)
* Insulated frame
* Heavy duty door leaf with astragal - 1.5mm thick galvanised steel skin c/w Rockwool core
* Heavy duty 2mm galvanised steel 90mm single rebate frame
* Weatherseals
* Stainless steel hinges c/w hinge bolts
* Outward opening chamfered low profile stainless steel threshold - DDA compliant
* Built to E60 specification
* Leaf Raindrip Bar
* Mortice sashlock
* Lever handles - SS
* Double 30/30 thumbturn euro cylinder c/w 3 keys
* Escutcheon - 47mm self adhesive - SS
* Surface mounted closer Geze TS4000 (1-6) Universal SE Closer c/w adj backcheck
* Sign - Fire Door Keep Shut - 76mm dia SS mounted to leading edge at 1500mm FFL to both sides
* Kickplate 150mm high SSS internally
* Finished in polyester powder coat to RAL 7016
* Outward opening
* Left hand hinged viewed from the 'pull to open' side
* Fixing Kit - Steel

THRESHOLD DETAIL

CHAMFERED



MASTIC SEALING TO BE UNDERTAKEN BY OTHER CONTRACTOR

REFER TO STERTIL QUOTATION / SPECIFICATION SHEET FOR COMPLETE DETAILS

REV	DATE	COMMENT	APPROVED
A	19/08/21	FIRST ISSUE	

stertil®

PROJECT

DRAWING TITLE: Plot 9, EMG - Plant Room

MODEL TYPE: STRATA

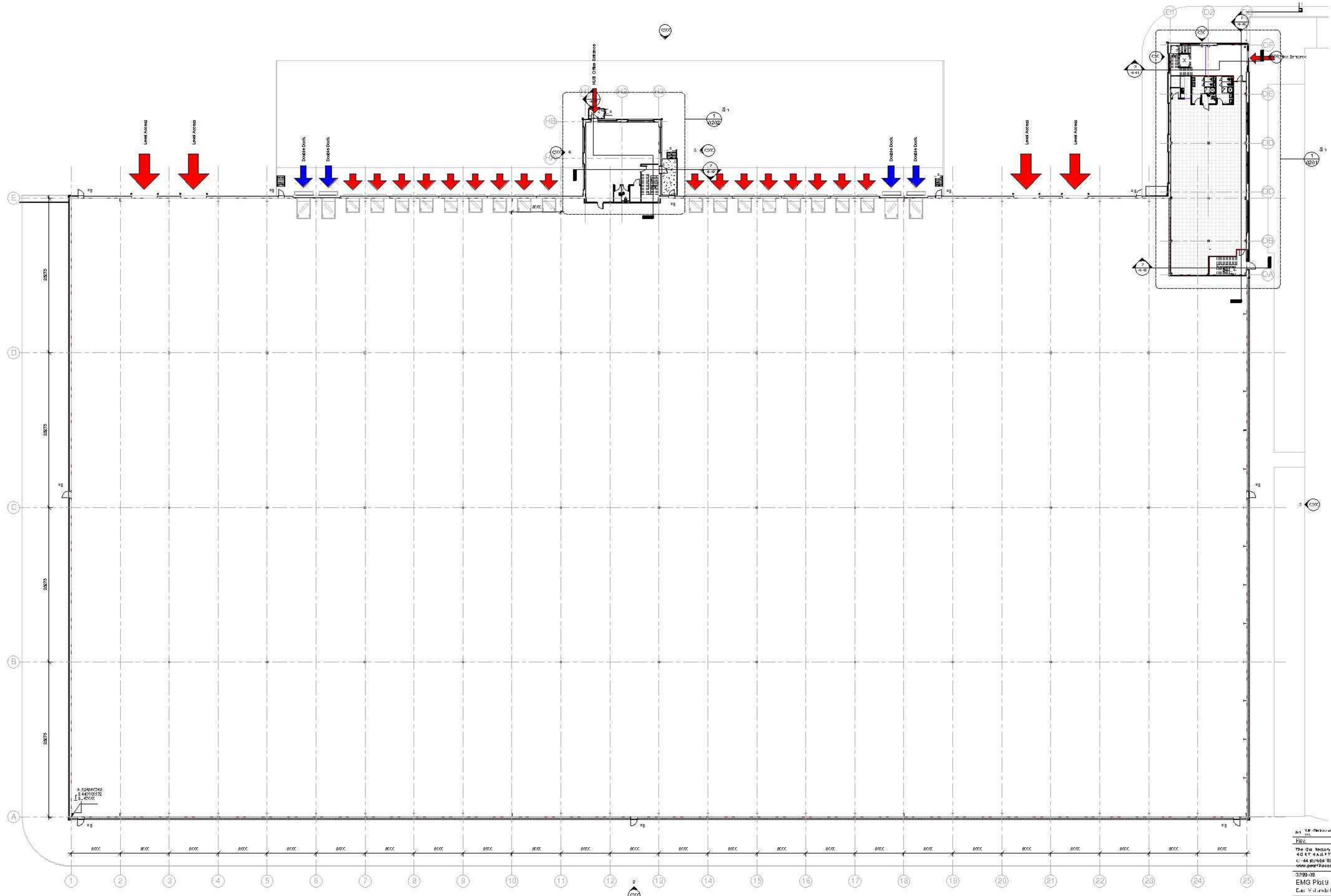
DRAWING No: 62371-1-A

REVISION: A

BY / DATE / REF: LT 19/08/2021

SCALE: NTS

STERTIL UK Ltd, UNIT A - BRACKMILLS BUSINESS PARK - CASWELL ROAD - NORTHAMPTON - NN4 7PW - TEL 0870 7700471



Rev. Date/Checked

The Old Rectory Rectory Lane
NORTHAMPTON
www.peterhaddon.com

pHp architects

3399-09
EMG Plot 9
East Midlands Gateway

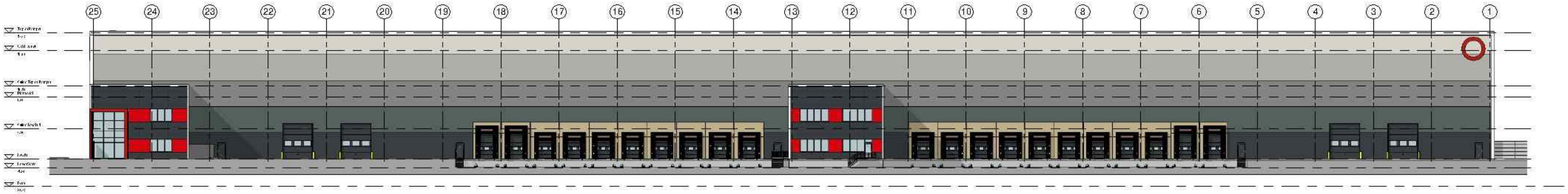
SEGRO

GA Plan - Level 00

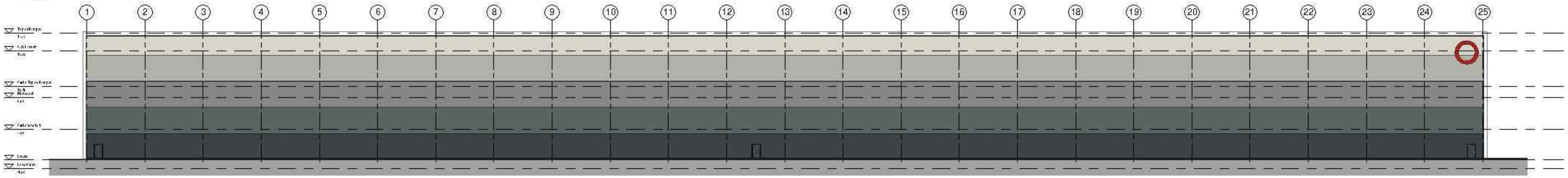
Status			Preliminary
Drawn	TZ	Checked	TW
	Apr 2021		30.04.2021

Project Number
EMGP9 - php - XX - 00 - DR - A - 0200 P01

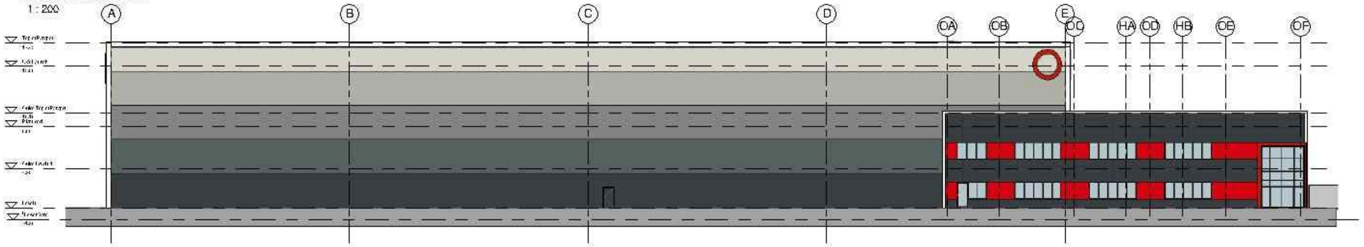
Scale@ A0 1 : 200



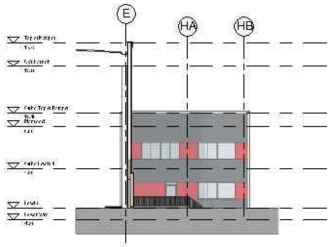
North Elevation
1 : 200



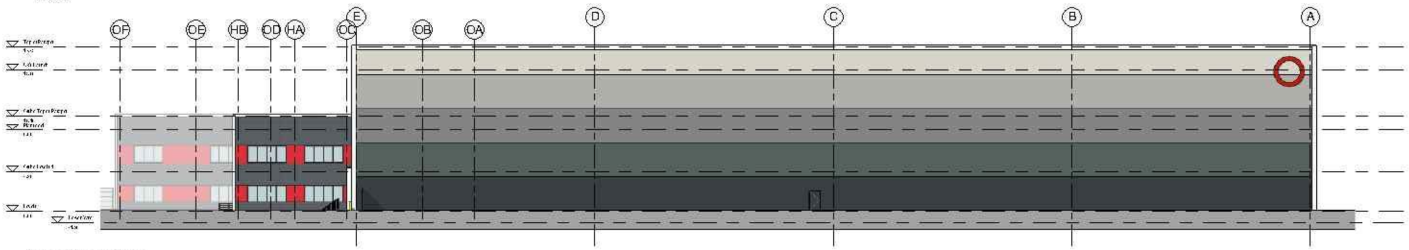
South Elevation
1 : 200



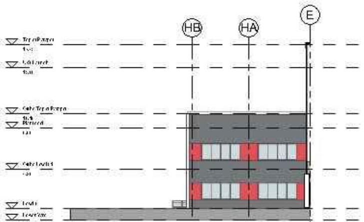
East Elevation
1 : 200



East Hub Office Elevation
1 : 200



West Elevation
1 : 200



West Hub Office Elevation
1 : 200

Schedule of Materials

Office Elevations - to comprise the elevated mix of;
- Horizontally laid micro rib cladding (or similar approved):
  HPS 200 Ultra: Red: RAL 3000
- Horizontally laid micro rib cladding (or similar approved):
  HPS 200 Ultra: Anthracite: RAL 7016

PPC frame glazed entrance doors and windows with grey tinted
- External colour: Anthracite: RAL 7016

Lookalike glazing panels where required, indicated darker grey (anthracite film or spandrel panels)

Main Warehouse;
Gradated horizontally fitted trapezoidal profiled built up metal cladding system external finish and colour HPS 200 ultra:
Colour Bands (top to bottom);
- Hamlet RAL 9002
- Goosewing Grey RAL 7038
- Pure Grey: RAL 000 55 00
- Merlin Grey: RAL 180 40 05
- Anthracite: RAL 7016
- 500mm wide x 100mm deep Aluminium feature flashings / framing to wall cladding. White RAL 9003

Precast concrete panel walling to loading dock surround

- Insulated composite panel Dock and Level Access doors Anthracite Grey RAL 7016
- Steel faced fire escape / personnel doors, Anthracite Grey RAL 7016
- Occupiers signage, design and size to be confirmed. Subject to separate Signage Application.
- 2m diameter Segro Landlord signage ('O' logo) Colour: RAL 3020 (Red)

Rev.		Date	Checked

The Old Rectory Rectory Lane Wootton
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SEGRO

3399-09
EMG Plot 9
East Midlands Gateway

Building Elevations

Status			Preliminary
Drawn	TZ	Checked	TM
	Apr 2021		30.04.2021

Project Number
EMGP9 - php - XX - XX - DR - A - 0300 P01

Scale @ A0 As indicated

Installatie instructies shelters WS, WL, WF
Installationsanleitung Torabdichtungen WS, WL, WF
Installation instructions dockshelters WS, WL, WF
Instruction d'installation sas d'étanchéité WS, WL, WF

STERTIL B.V.
WESTKERN 3
9288 CA KOOTSTERTILLE NL.

15.500.005 G

INSTALLATIE-INSTRUCTIES

voor de

STERTIL dockshelters

Typen WS, WL, WF

- Wijzigingen voorbehouden -

INSTALLATIONSANLEITUNG

für die

Torabdichtungen von **STERTIL**

Modellen WS, WL, WF

- Änderungen vorbehalten -

INSTALLATION INSTRUCTIONS

of the

STERTIL dockshelters

models WS, WL, WF

- Modifications reserved -

INSTRUCTION A L'INSTALLATION

du

sas d'étanchéité **STERTIL**

modèle WS, WL, WF

- Sous réserve de modifications -

I N H O U D S O P G A V E

I N H A L T S V E R Z E I C H N I S

C O N T E N T S

T A B L E D E S M A T I E R E S

1. ALGEMEEN

Fabrikant: STERTIL B.V.
Westkern 3
9288 CA Kootstertille NL

Produkt: Dockshelter

Typen: WS, WL, WF

Doeksoort: 544 - Vinyl
554 - Powerflex 1000
574 - PVC 3 mm

1. ALLGEMEIN

Hersteller: STERTIL B.V.
Westkern 3
9288 CA Kootstertille NL

Produkt: Torabdichtung

Typen: WS, WL, WF

Tuch: 544 - Vinyl
554 - Powerflex 1000
574 - PVC 3 mm

1. GENERAL

Manufacturer: STERTIL BV
Westkern 3
9288 CA Kootstertille NL

Product: Dockshelter

Models: WS, WL, WF

Curtain: 544 - Vinyl
554 - Powerflex 1000
574 - PVC 3 mm

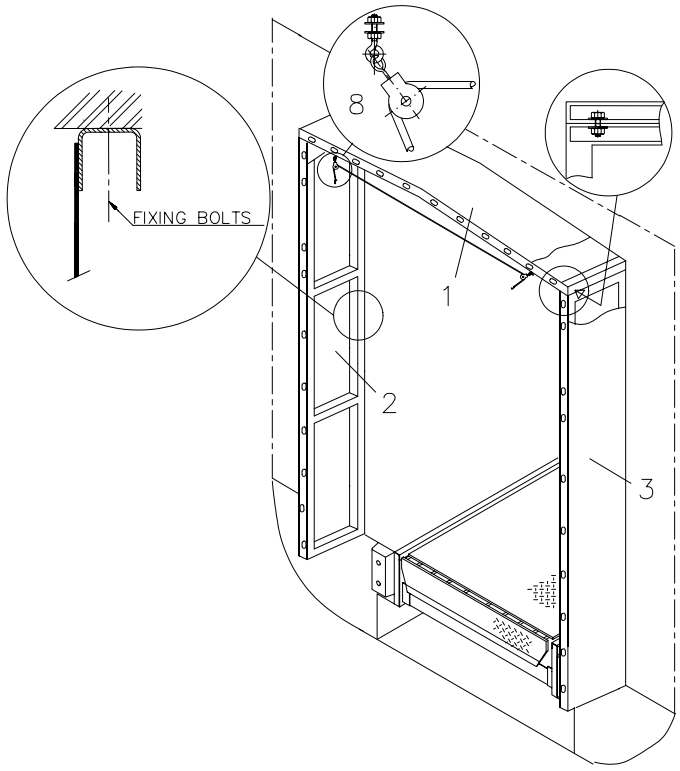
1. GENERALITES

Fabricant: Stertil B.V.
Westkern 3
NL - 9288 CA Kootstertille

Produit: Sas d'étanchéité

Types: WS, WL, WF

Rideau: 544 - Réine
554 - Powerflex 1000
574 - PVC 3 mm



2 INSTALLATIE WS

De WS dockshelter bestaat uit de volgende onderdelen:
1) Bovenframe
2) Zijframe (links)
3) Zijframe (rechts)
4) Zijgordijn (links)
5) Zijgordijn (rechts)
6) Bovengordijn
7) Fjongs (2x)
8) Kabelsamenstelling
9) Aluminium hoeklijnen (3x)
   Bevestigingsmateriaal

- De bouwkundig te verzorgen montageondergrond dient vlak te zijn en bestand tegen druk/eigengewicht van 350 kg.
- Bevestig het linker en rechter zijframe aan de gevel.
- Plaats het bovenframe op de zijframes en bevestig deze onderling en aan de gevel.
- Monteer de kabelsamenstelling aan het bovenframe.
- Ter voorkoming van het wegtrekken van de sheltergordijnen dient er op de aangegeven plaatsen (A) extra popnagels te worden aangebracht (niet voor 3 mm PVC Type 574), voordat de aluminium hoeklijnen en standaard bevestigingsbouten worden aangebracht (zie Fig. D).
- Monteer de zij- en bovengordijnen met behulp van de aluminium hoeklijnen.
- Bevestig de kabelsamenstelling aan de zijgordijnen.
- Monteer de fjongs.
- De opening tussen bovenframe en gevel afkitten.

Algemeen: De gordijnen moeten strakgetrokken worden door de uiteinden van de gordijnen onder trekkracht te monteren.

Voor bevestiging aan gevel zie pagina 6.

Per frame minimaal 3 bevestigingsbouten aanbrengen.

2. INSTALLATION WS

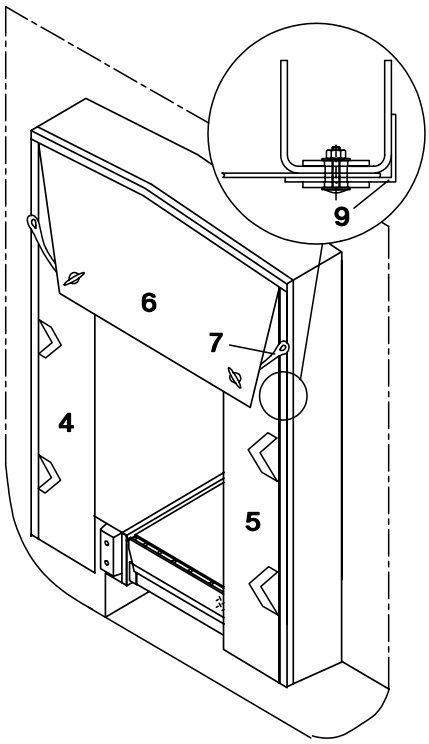
Die WS Torabdichtung muss aus folgenden Teilen bestehen:
1) Obenrahmen
2) Seitenrahmen (Links)
3) Seitenrahmen (Rechts)
4) Seitenvorhang (Links)
5) Seitenvorhang (Rechts)
6) Obenvorhang
7) Fjongs (2x)
8) Kabelzusammenstellung
9) Aluminium Winkelprofile (3x)
   Befestigungsmaterial

- Die Bauseitig zu schaffen Montagefläche muss flach sein und dem Druck/Eigengewicht von 350 kg. wiederstehen können.
- Befestigen Sie die Linker- und Rechter Seitenrahmen an der Mauer.
- Setzen Sie den Oberrahmen auf die Seitenrahmen, und befestigen Sie gegenseitig sowie an der Mauer.
- Montieren Sie die Kabelzusammenstellung an dem Obenrahmen.
- Um zu verhüten dass die Sheltervorhänge aufgezogen werden, sind an den angegeben Stellen (A) zusätzliche Hohlniete anzubringen (nicht für 3 mm PVC Typ 574), bevor die Eckleisten aus Aluminium und die Standardbefestigungsbolzen angebracht werden (Siehe Abb. D).
- Befestigen Sie die Seitenvorhänge und der Obenvorhang mit Hilfe der Aluminium Winkelprofile.
- Befestigen Sie die Kabelzusammenstellung an den Seitenvorhänge.
- Montieren Sie den Fjongs.
- Die Öffnung zwischen dem Oberrahmen und der Front verschließen.

Allgemein: Die Vorhänge müssen Straffgezogen werden durch die Ende der Vorhänge mit Zugkraft zu montieren.

Für die Befestigung an der Mauer siehe Seite 6.

Pro Rahmen mindestens 3 Befestigungsbolzen verwenden.



2 INSTALLATION WS

The WS dockshelter consists of the following parts:

1) Headframe
2) Sideframe (left)
3) Sideframe (right)
4) Sidecurtain (left)
5) Sidecurtain (right)
6) Headcurtain
7) Fjongs (2x)
8) Cable assembly
9) Aluminium angles (3x)
   Fixing material

- The fixing area, which has to be provided by the customer, must be flush and able to support the dockshelterweight/ pressure of approximately 350 kg.
- Mount the left and right sideframe to the fixing area.
- Place the upper frame on the side frames; fasten frames to each other and to the wall.
- Mount the headframe to the fixing area. Fix the cable assembly under the headrame.
- To prevent the shelter curtains from being drawn away extra pop rivets are to be placed at the locations indicated (A) (not for 3 mm PVC Type 574) before the aluminium angle strips and the standard fastening bolts are applied (See Fig. D).
- Mount the sidecurtains and the headcurtain to the frame by using aluminium angles.
- Mount the fjongs.
- The opening between upper frame and wall must be sealed off by means of putty.

General: Curtains should be stretched when mounted by first fastening the ends of the curtains under tension.

For fastening to wall see page 6.

Use at least 3 fastening bolts per frame.

2 L'INSTALLATION WS

Lors de livraison d'un sas complet, les pièces ci-dessous doivent être présentes:

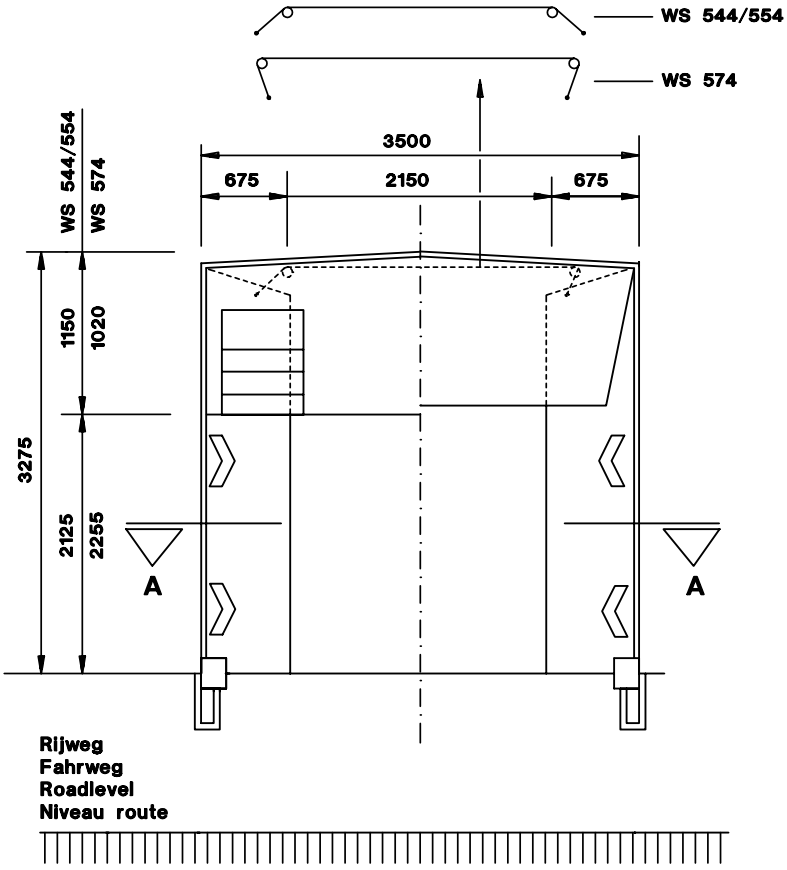
1) Elément supérieur
2) Elément côté gauche
3) Elément côté droite
4) Rideau côté gauche
5) Rideau côté droite
6) Rideau supérieur
7) Fjongs (2x) (courroies de retenue)
8) Assemblage câble
9) Diagonales en aluminium (3x)
   Matériel de fixation

- La zone de fixation prévue par le client doit être lisse et capable de supporter le poids et la pression du sas à rideaux d'approximativement 350 kg.
- Monter les éléments côté gauche et droit sur la zone de fixation.
- Posez le châssis supérieur sur les châssis latéraux et fixez-les uns aux autres et à la façade.
- Monter l'élément supérieur sur la zone de fixation et monter l'assemblage de câble sur l'élément supérieur.
- Pour empêcher l'écartement des rideaux de l'abri il faut appliquer aux endroits indiqués (A) des rivets tubulaires supplémentaires (pas pour PVC 3 mm Type 574) avant l'installation des lignes cornières en aluminium et les boulons de fixation standard (Voir Fig. D).
- Monter les rideaux sur le sas avec les diagonales en aluminium.
- Relier l'assemblage de câble aux rideaux latéraux.
- Monter les fjongs (les courroies de retenue).
- Mastiquer l'ouverture entre le châssis supérieur et la façade.

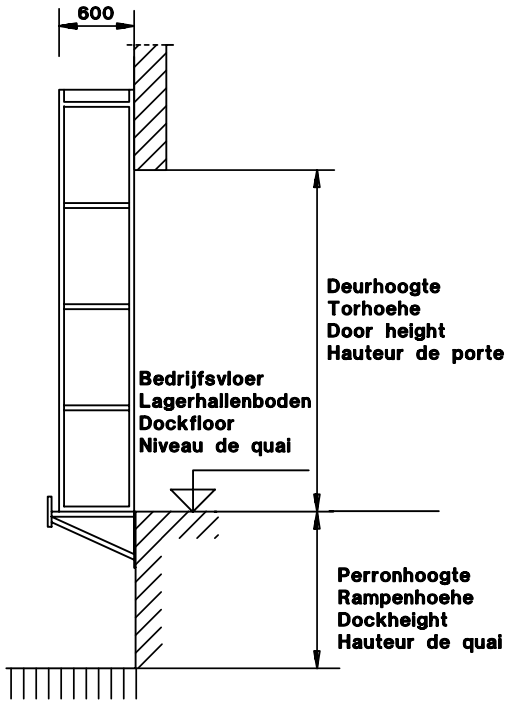
Generalites: Les rideaux doivent être déployés et tendus lors on montage, la fixation devant être commencée par les extrémités.

Pour la fixation à la façade voir page 6.

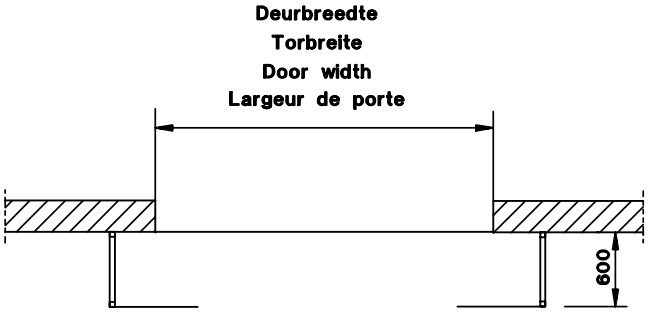
Utilisez au moins 3 boulons de fixation par châssis.



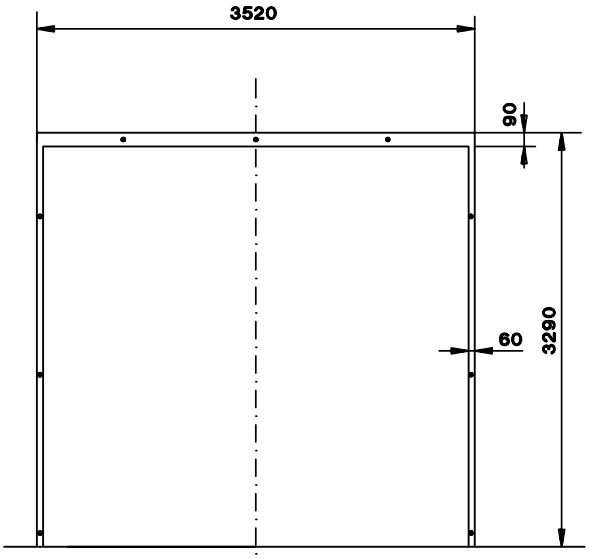
VOORAANZICHT
VORDERANSICHT
FRONT ELEVATION
VUE DE FACE



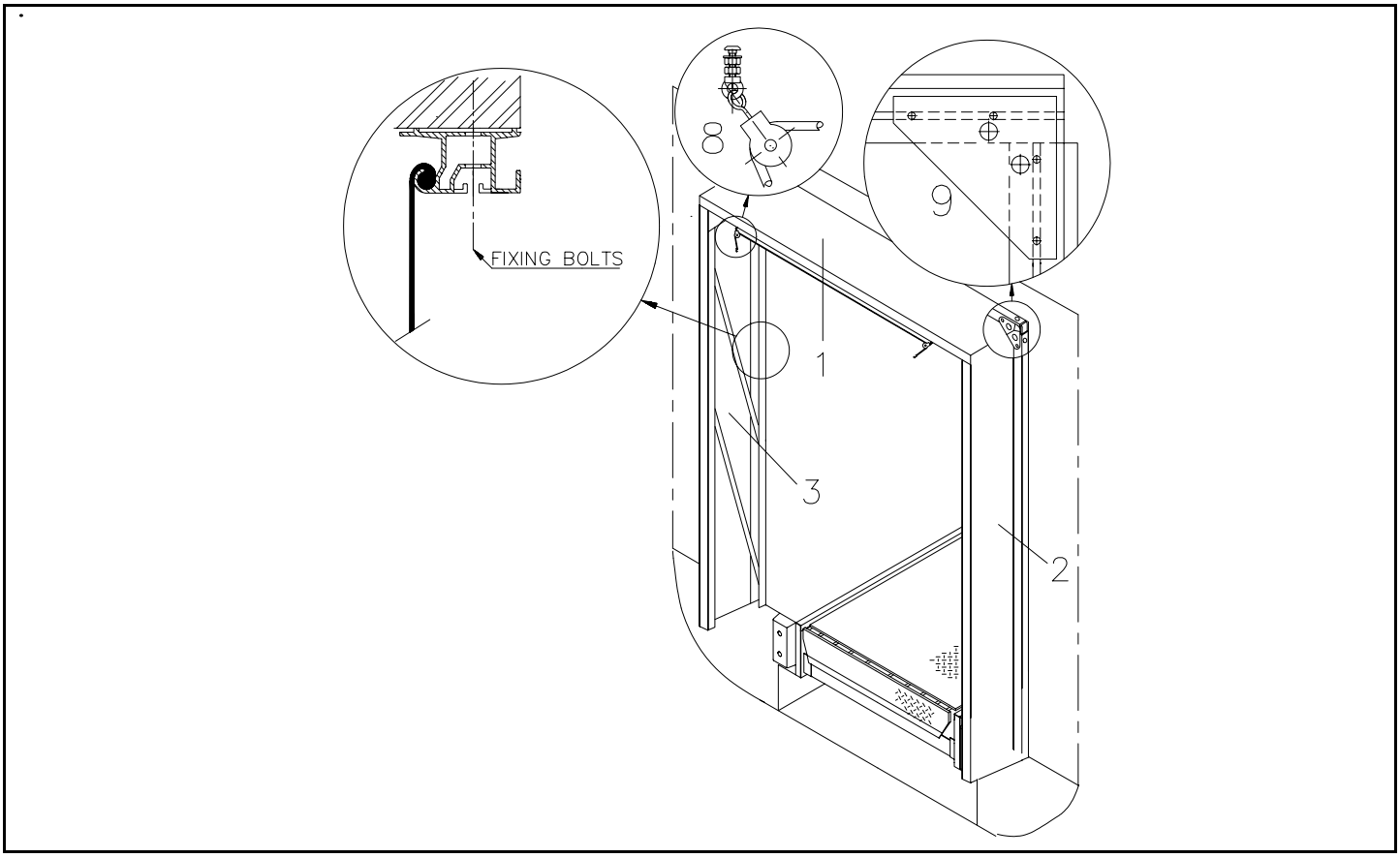
ZIJAANZICHT
SEITENANSICHT
SIDE VIEW
VUE DE COTE



DOORSNEDE
DURCHSCHNITT
SECTION A-A



MONTAGEONDERGROND
MONTAGEFLAECHE
FIXING AREA
ZONE DE FIXATION



3 INSTALLATIE WL

De WL dockshelter bestaat uit de volgende onderdelen:

1) Bovenframe
2) Zijframe (rechts)
3) Zijframe (links)
4) Zijgordijn (links)
5) Zijgordijn (rechts)
6) Bovengordijn
7) Fjongs (2x)
8) Kabelsamenstelling
9) Hoekstuk
10) Bevestigingsmateriaal
11) Afdichtingsdoppen

- De bouwkundig te verzorgen montageondergrond dient vlak te zijn en bestand tegen druk/eigengewicht van 350 kg.
- Monteer de zijgordijnen in de het linker en rechter zijframe en bevestig deze vervolgens aan de gevel.
- Monteer het bovengordijn in het bovenframe en bevestig het op de zijframes met behulp van hoekstukken.
- Bevestig het bovenframe aan de gevel. Monteer de kabelsamenstelling aan het bovenframe.
- Monteer de afdichtingsdoppen in het bovenframe en vervolgens de fjongs.
- De hamerkopbout met flensmoer eerst bevestigen, daarna zeskant moer met oogmoer.
- Oogmoer vertikaal positioneren en daarna borgen met zeskant moer.
- De opening tussen bovenframe en gevel afkitten.

Algemeen: De gordijnen moeten strakgetrokken worden door de uiteinden van de gordijnen onder trekkracht te monteren.

Voor bevestiging aan gevel zie pagina 9.

Per frame minimaal 3 bevestigingsbouten aanbrengen.

3 INSTALLATION WL

Die WL Torabdichtung muss aus folgenden Teilen bestehen:

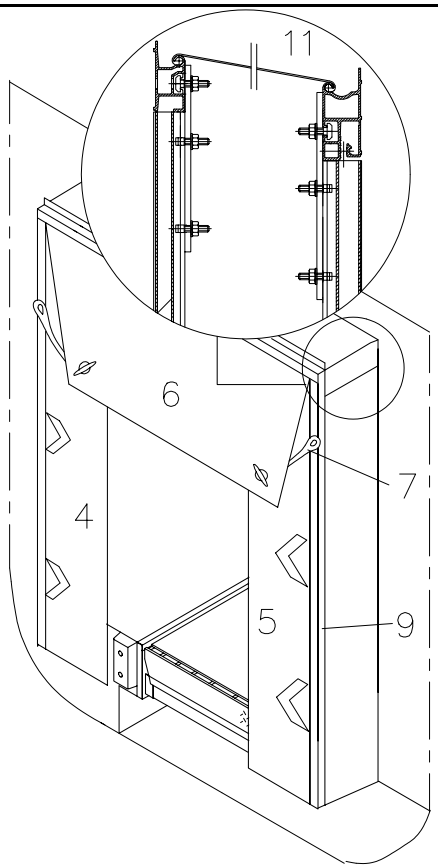
1) Obenrahmen
2) Seitenrahmen (Rechts)
3) Seitenrahmen (Links)
4) Seitenvorhang (Links)
5) Seitenvorhang (Rechts)
6) Obenvorhang
7) Fjongs (2x)
8) Kabelzusammenstellung
9) Eckstück
10) Befestigungsmaterial
11) Verschlusskappen

- Die Bauseitig zu schaffen Montagefläche muss flach sein und dem Druck/Eigengewicht von 350 kg. wiederstehen können.
- Montieren Sie die Seitenvorhänge im linken und rechten Seitenrahmen, und befestigen Sie sie daraufhin an der Front.
- Montieren Sie den Obervorhang im Oberrahmen, und befestigen Sie ihn mit Hilfe von Eckstücken an den Seitenrahmen.
- Befestig der Obenrahmen an der Mauer und montieren Sie die Kabelzusammenstellung an dem Obenrahmen.
- Montieren Sie die Verschlusskappen im Oberrahmen und daraufhin die Fjongs.
- Fixieren Sie zunächst die Hammerschraube mit Bundmutter, danach die Sechskantmutter mit Augenmutter.
- Positionieren Sie die Augenmutter vertikal, und sichern Sie sie daraufhin mit der Sechskantmutter.
- Die Öffnung zwischen dem Oberrahmen und der Front verschließen.

Allgemein: Die Vorhänge müssen Straffgezogen werden durch die Ende der Vorhänge mit Zugkraft zu montieren.

Für die Befestigung an der Mauer siehe Seite 9.

Pro Rahmen mindestens 3 Befestigungsbolzen verwenden.



3 INSTALLATION WL

The WL dockshelter consists of the following parts:

1) Headframe
2) Sideframe (right)
3) Sideframe (left)
4) Sidecurtain (left)
5) Sidecurtain (right)
6) Headcurtain
7) Fjongs (2x)
8) Cable assembly
9) Corner angle
10) Fixing material
11) Seal caps

- The fixing area, which has to be provided by the customer, must be flush and able to support the dockshelterweight/ pressure of approximately 350 kg.
- Fit the side curtains to the left and right side frames and then fasten these to the wall.
- Fit the upper curtain to the upper frame and then fasten this to the side frames by means of angle pieces.
- Mount the headframe to the fixing area. Fix the cable assembly under the headframe.
- Fit the sealing caps in the upper frame and then fit the fjongs
- First fit the hammerhead bolt with the flanged nut, then the hexagon nut with the eye nut.
- Position the eye nut vertically, then secure it with the hexagon nut.
- The opening between upper frame and wall must be sealed off by means of putty.

General: Curtains should be stretched when mounted by first fastening the ends of the curtains under tension.

For fastening to wall see page 9.

Use at least 3 fastening bolts per frame.

2 L'INSTALLATION WL

Lors de livraison d'un sas complet, les pièces ci-dessous doivent être présentes:

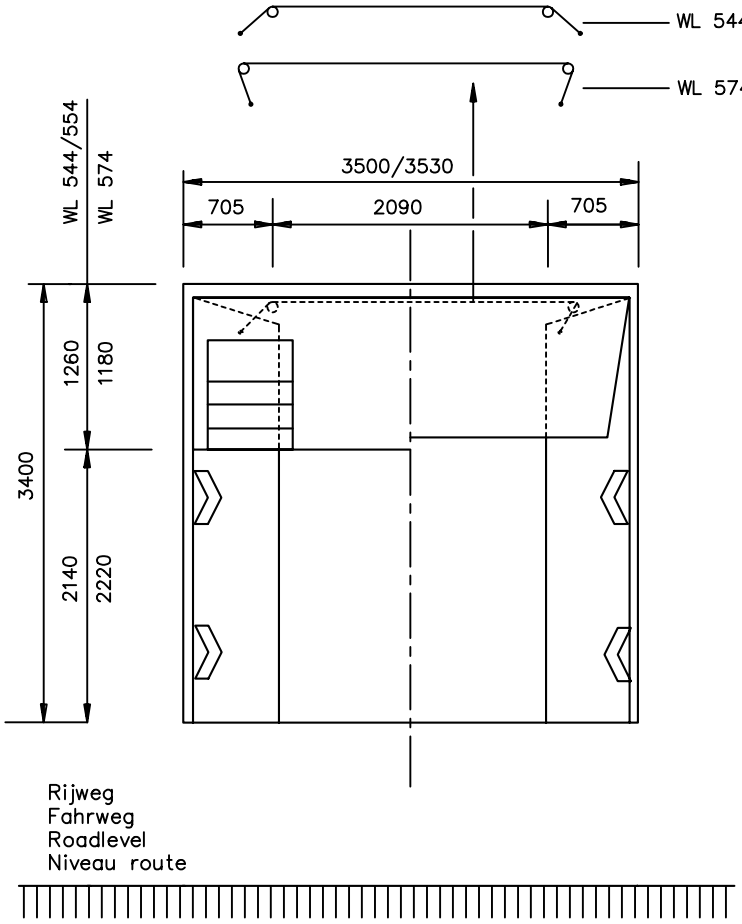
1) Elément supérieur
2) Elément côté droite
3) Elément côté gauche
4) Rideau côté gauche
5) Rideau côté droite
6) Rideau supérieur
7) Fjongs (2x) (courroies de retenue)
8) Assemblage câble
9) Cornières
10) Matériel de fixation
11) Bouchons d'obturation

- La zone de fixation prévue par le client doit être lisse et capable de supporter le poids et la pression du sas à rideaux d'approximativement 350 kg.
- Montez les rideaux latéraux dans les châssis latéraux gauche et droit et fixez-les ensuite sur la façade.
- Montez le rideau supérieur dans le châssis supérieur et fixez-le sur les châssis latéraux à l'aide de cornières.
- Monter l'élément supérieur sur la zone de fixation et monter l'assemblage de câble sur l'élément supérieur.
- Montez les bouchons d'obturation dans le châssis supérieur et ensuite les fjongs.
- Fixez d'abord le boulon à tête en T avec l'écrou bourrelet, fixez ensuite l'écrou à six pans avec l'écrou à anneau.
- Positionnez verticalement l'écrou à anneau, verrouillez-le ensuite à l'aide d'un écrou à six pans.
- Mastiquer l'ouverture entre le châssis supérieur et la façade.

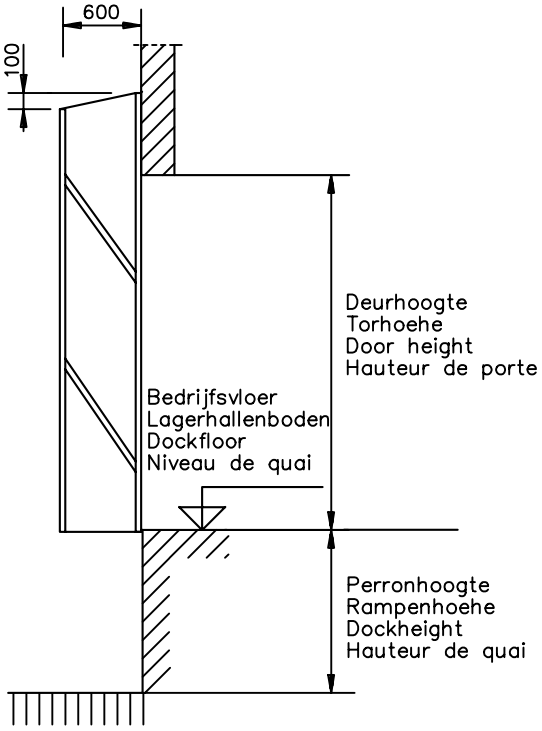
Generalites: Les rideaux doivent être déployés et tendus lors on montage, la fixation devant être commencée par les extrémités.

Pour la fixation à la façade voir page 9.

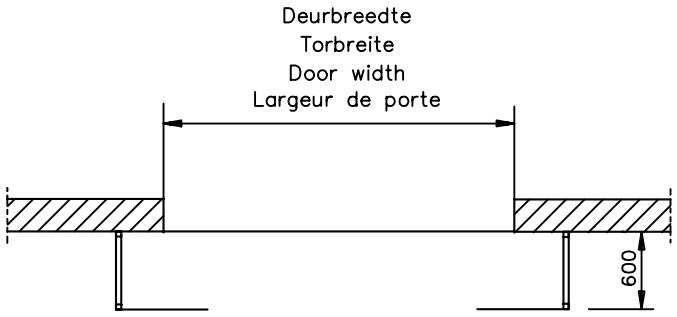
Utilisez au moins 3 boulons de fixation par châssis.



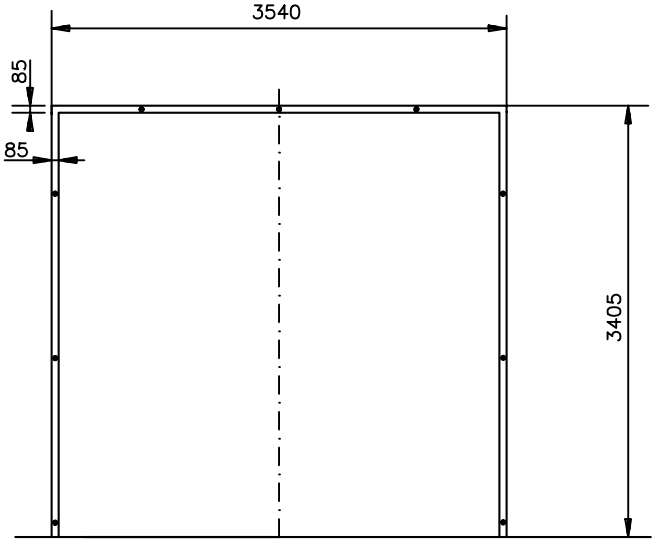
VOORAANZICHT
VORDERANSICHT
FRONT ELEVATION
VUE DE FACE



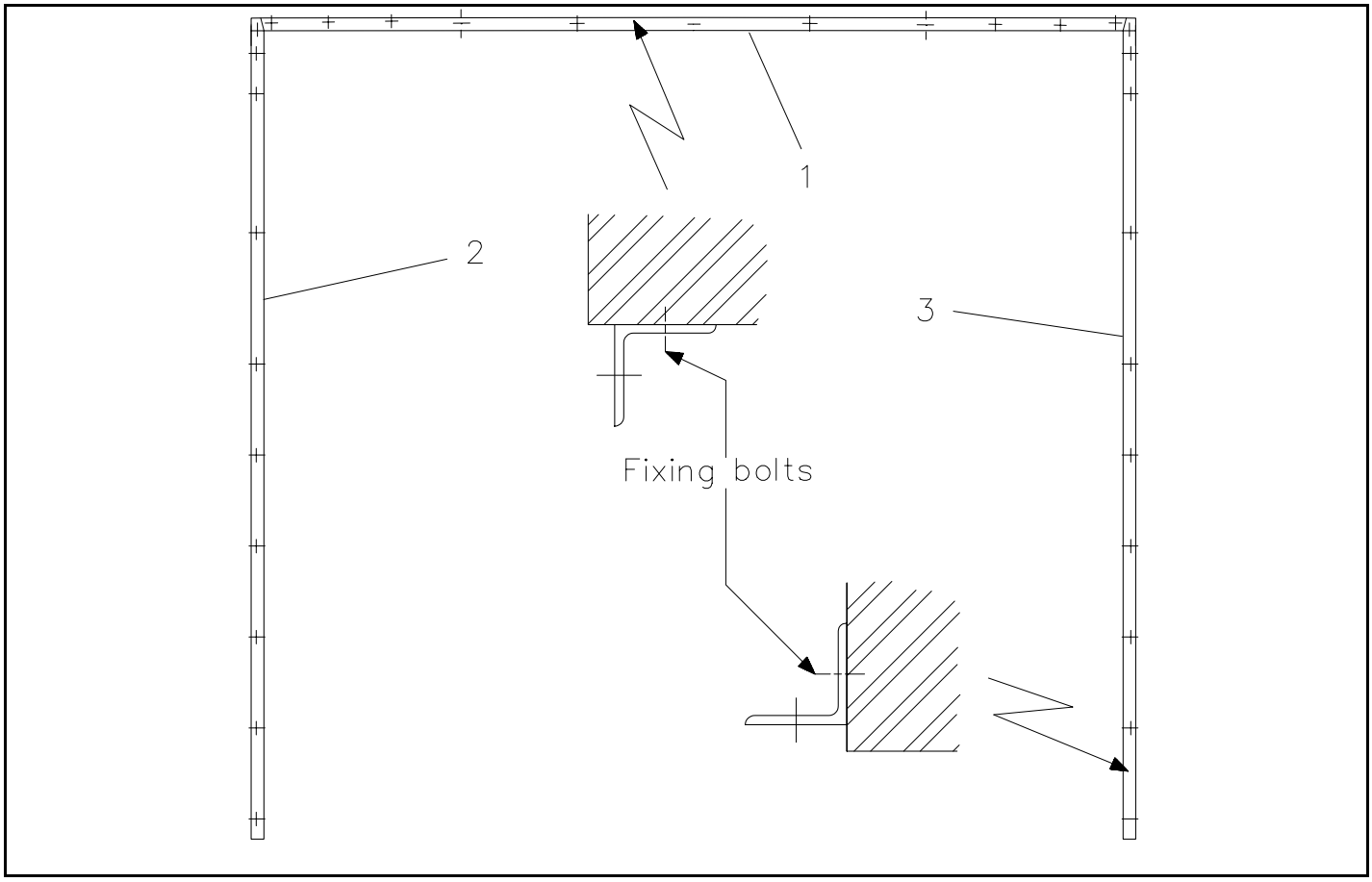
ZIJAANZICHT
SEITENANSICHT
SIDE VIEW
VUE DE COTE



DOORSNEDE
DURCHSCHNITT
SECTION



MONTAGEONDERGROND
MONTAGEFLAECHE
FIXING AREA
ZONE DE FIXATION



4 INSTALLATIE WF

De WF dockshelter bestaat uit de volgende onderdelen:
1) Hoekprofiel (boven)
2) Hoekprofiel (rechts)
3) Hoekprofiel (links)
4) Zijgordijn (links)
5) Zijgordijn (rechts)
6) Bovengordijn
7) Hoekprofiel (achter) (3x)
8) Fjongs (2x)
9) Kabelsamenstelling
   Bevestigingsmateriaal

- De bouwkundig te verzorgen montageondergrond dient vlak te zijn en bestand tegen druk/eigengewicht van 350 kg.
- Bevestig de hoekprofielen in de deuropening aan de gevel.
- Monteer de zijgordijnen en het bovengordijn aan de hoekprofielen (voor) met behulp van de hoekprofielen (achter).
- Ter voorkoming van het wegtrekken van de sheltergordijnen dient er op de aangegeven plaatsen (A) extra popnagels te worden aangebracht (niet voor 3 mm PVC Type 574), voordat de aluminium hoeklijnen en standaard bevestigingsbouten worden aangebracht (zie Fig. D).
- Monteer de kabelsamenstelling boven aan het hoekprofiel (achter) en bevestig de haken aan de zijgordijnen.
- Monteer de fjongs.

Algemeen: De gordijnen moeten strakgetrokken worden door de uiteinden van de gordijnen onder trekkracht te monteren.

Voor bevestiging aan gevel zie pagina 12.

Per frame minimaal 3 bevestigingsbouten aanbrengen.

4 INSTALLATION WF

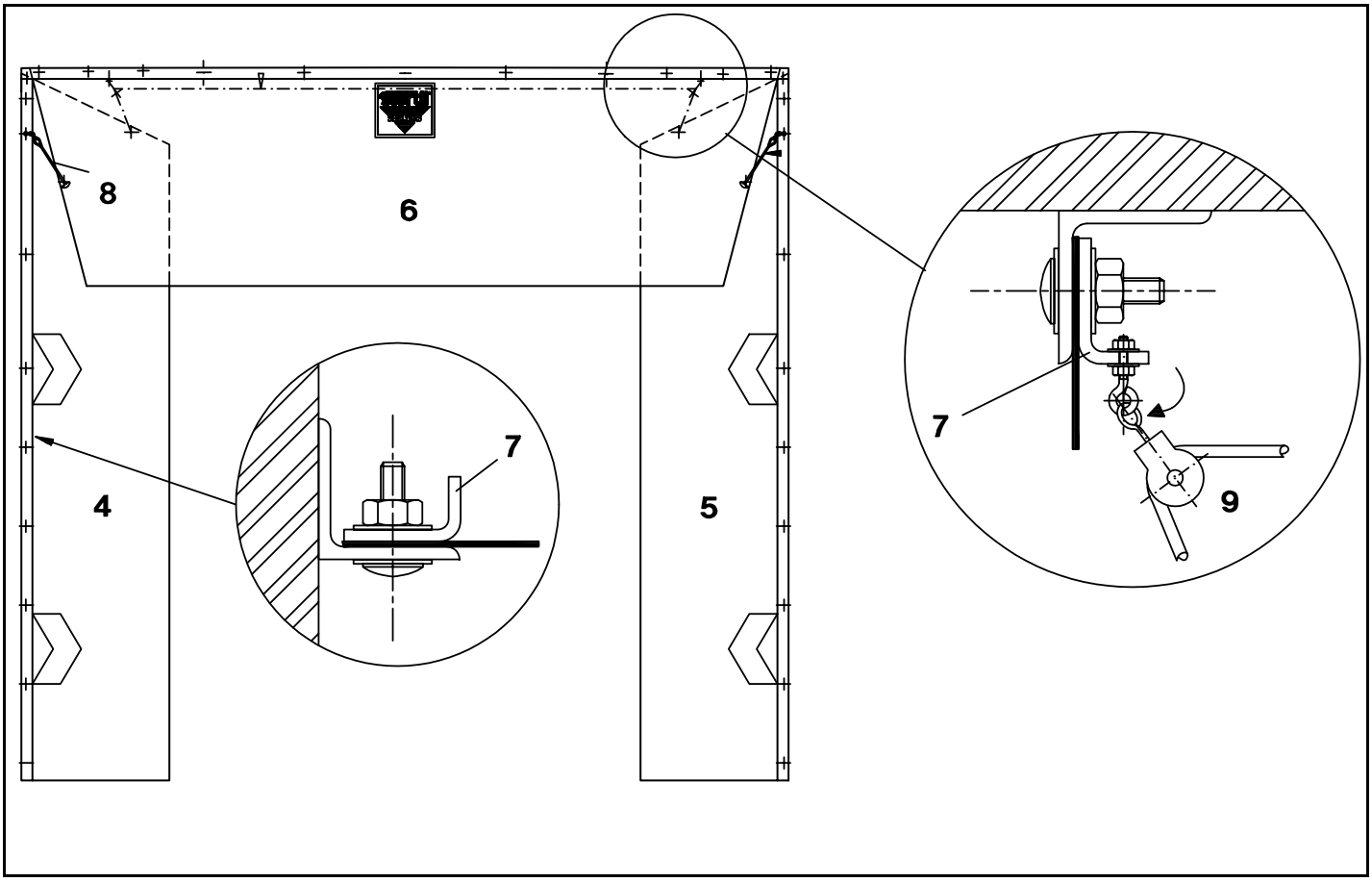
Die WF Torabdichtung muss aus folgenden Teilen bestehen:
1) Obenwinkelprofil
2) Seitenwinkelprofil (Links)
3) Seitenwinkelprofil (Rechts)
4) Seitenvorhang (Links)
5) Seitenvorhang (Rechts)
6) Obenvorhang
7) Winkelprofile (Hinten) (3x)
8) Fjongs (2x)
9) Kabelzusammenstellung
   Befestigungsmaterial

- Die Bauseitig zu schaffen Montagefläche muss flach sein und dem Druck/Eigengewicht von 350 kg. wiederstehen können.
- Befestigen Sie die Linker- und Rechterseiten-winkelprofil und der Obenwinkelprofil an der Mauer.
- Befestigen Sie die Seitenvorhänge und der Obenvorhang mit Hilfe der Hinterwinkelprofile.
- Um zu verhüten dass die Sheltervorhänge aufgezogen werden, sind an den angegeben Stellen (A) zusätzliche Hohlniete anzubringen (nicht für 3 mm PVC Typ 574), bevor die Eckleisten aus Aluminium und die Standardbefestigungsbolzen angebracht werden (Siehe Abb. D).
- Montieren Sie die Kabelzusammenstellung oben an dem Hinterwinkelprofil
- Befestigen Sie die Kabelzusammenstellung an den Seitenvorhänge.
- Montieren Sie den Fjongs.

Allgemein: Die Vorhänge müssen Straffgezogen werden durch die Ende der Vorhänge mit Zugkraft zu montieren.

Für die Befestigung an der Mauer siehe Seite 12.

Pro Rahmen mindestens 3 Befestigungsbolzen verwenden.



4 INSTALLATION WF

The WF dockshelter consists of the following parts:
1) Top front angle profile
2) Side front angle profile (left)
3) Side front angle profile (right)
4) Sidecurtain (left)
5) Sidecurtain (right)
6) Headcurtain
7) Rear angle profiles (3x)
8) Fjongs (2x)
9) Cable assembly
   Fixing material

- The fixing area, which has to be provided by the customer, must be flush and able to support the dockshelterweight/ pressure of approximately 350 kg.
- Mount the left and right side front angle profiles and the top front angle profile to the fixing area.
- Mount the side curtains and the head curtain to the front angles by using the rear angle profiles.
- To prevent the shelter curtains from being drawn away extra pop rivets are to be placed at the locations indicated (A) (not for 3 mm PVC Type 574) before the aluminium angle strips and the standard fastening bolts are applied (See Fig. D).
- Fix the cable assembly under the top rear angle and connect the hooks of the cable assembly with the side curtains.
- Mount the fjongs.

General: Curtains should be stretched when mounted by first fastening the ends of the curtains under tension.

For fastening to wall see page 12.

Use at least 3 fastening bolts per frame.

4 L'INSTALLATION WF

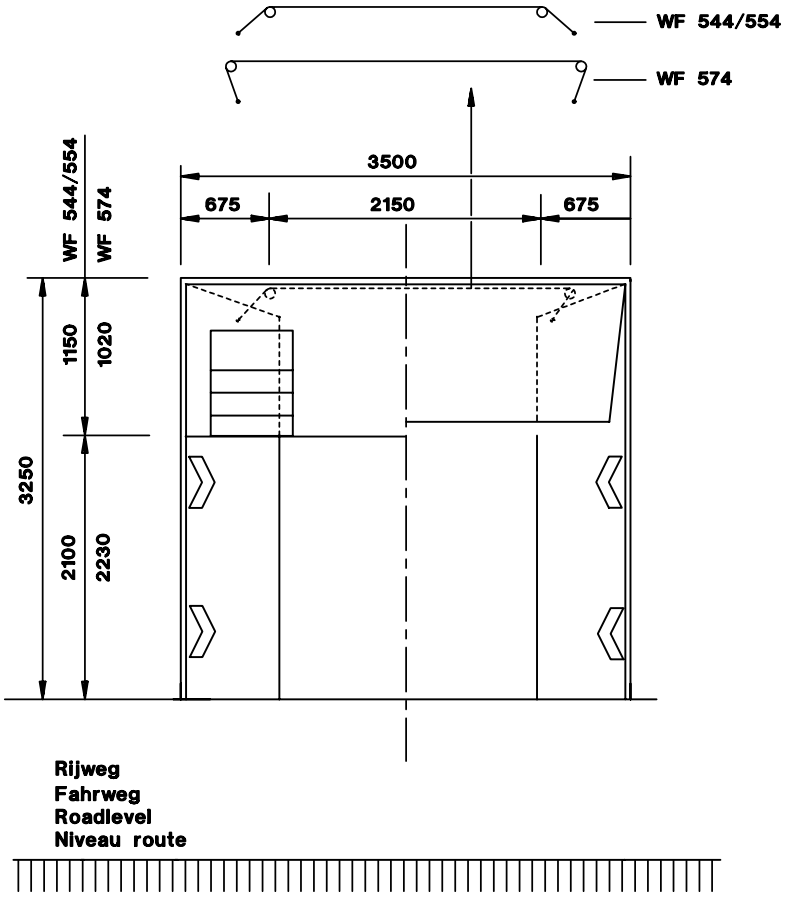
Lors de livraison d'un sas complet, les pièces ci-dessous doivent être présentes:
1) Cornière supérieur devant
2) Cornière côté gauche devant
3) Cornière côté droite devant
4) Rideau côté gauche
5) Rideau côté droite
6) Rideau supérieur
7) Cornières en arrière
8) Fjongs (2x) (courroies de retenue)
9) Assemblage câble
   Matériel de fixation

- La zone de fixation prévue par le client doit être lisse et capable de supporter le poids et la pression du sas à rideaux d'approximativement 350 kg.
- Monter les cornières côté gauche devant, - côte droit devant et - supérieur devant sur la zone de fixation.
- Monter les rideaux sur les cornières devant avec les cornières en arrière.
- Pour empêcher l'écartement des rideaux de l'abri il faut appliquer aux endroits indiqués (A) des rivets tubulaires supplémentaires (pas pour PVC 3 mm Type 574) avant l'installation des lignes cornières en aluminium et les boulons de fixation standard (Voir Fig. D).
- Monter l'assemblage de câble sur le cornière supérieur en arrière.
- Relier l'assemblage de câble aux rideaux latéraux.
- Monter les fjongs (les courroies de retenue).

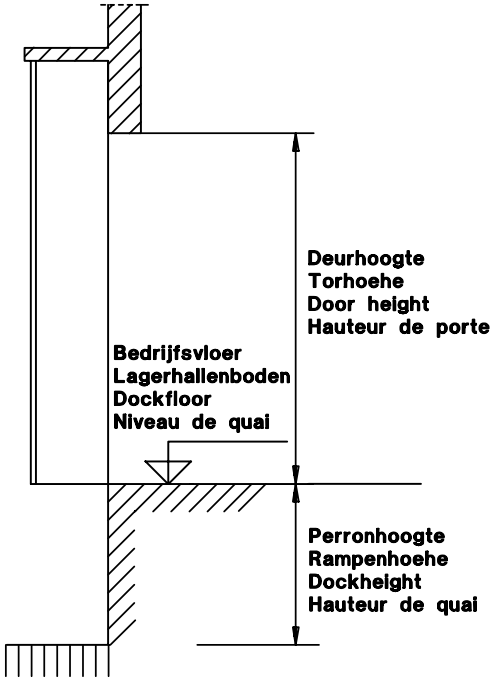
Generalites: Les rideaux doivent être déployés et tendus lors on montage, la fixation devant être commencée par les extrémités.

Pour la fixation à la façade voir page 12.

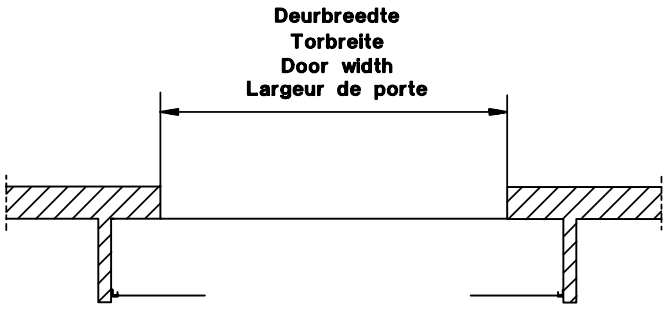
Utilisez au moins 3 boulons de fixation par châssis.



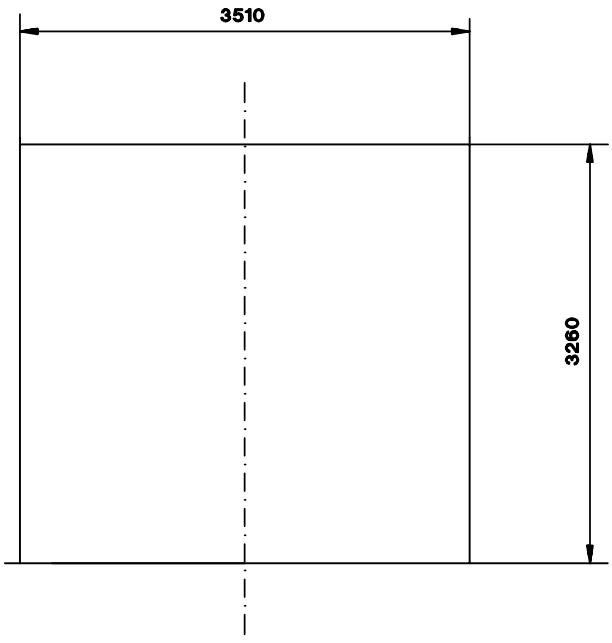
VOORAANZICHT
VORDERANSICHT
FRONT ELEVATION
VUE DE FACE



ZIJAANZICHT
SEITENANSICHT
SIDE VIEW
VUE DE COTE



DOORSNEDE
DURCHSCHNITT
SECTION



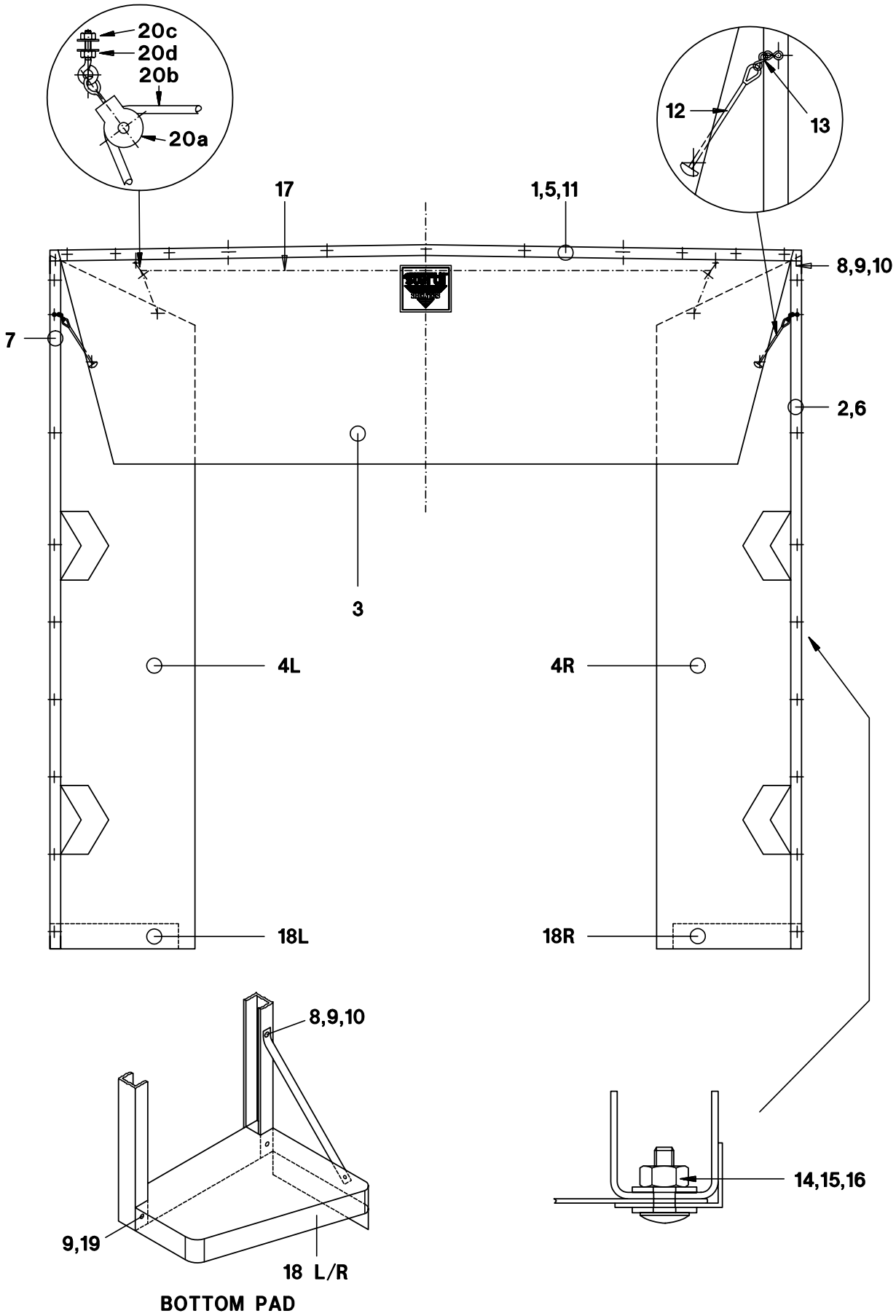
MONTAGEONDERGROND
MONTAGEFLAECHE
FIXING AREA
ZONE DE FIXATION

FIG. A PARTS WS

INDEX	REFERENCE	DESCRIPTION
1	15-525-200*	Head frame assembly
2	15-525-100*	Side frame assembly
3		Head curtain
4		Side curtain (left & right)
5	15-525-021*	Angle (top)
6	15-535-011*	Angle (right)
7	15-535-016*	Angle (left)
8	65-003-363	Bolt M8 x 20 DIN 933
9	65-055-018	Washer M8 DIN 125
10	65-050-132	Nut M8 DIN 934
11	90-899-019	Seal L=3600
12	925-440	Fjong
13	15-425-150	Fjong chain
14	65-725-004	Socket domed head screw M8 x 25
15	65-655-713	Washer 35 x 11.5 x 1.5 aluminium
16	65-750-132	Bolt
17	15-510-018	Cable assembly
18	15-430-210	Bottom pad left (optional)
	15-430-220	Bottom pad right (optional)
19	65-010-069	Hexagon headwood screws
20a	15-425-160	Pulley
20b	925-450	Cord
20c	65-050-132	Nut
20d	65-055-306	Washer

* Alleen voor standaard model. Raadpleeg uw leverancier in geval van een niet-standaard model!
Nur für standard Modell. Befragen Sie ihren Lieferanten im Fall eines Sondermodells!
For standard model only. Contact your supplier in case of a non-standard model!
Seulement pour modèle standard. Contacter votre fournisseur en cas d'un modèle non-standard!

FIG. A



BOTTOM PAD

FIG. B PARTS WL

INDEX	REFERENCE	DESCRIPTION
1	15-570-211*	Top frame channel front (Type 574)
	15-571-211*	Top frame channel front (Type 544 and 554)
2	15-570-201*	Top frame channel rear
3	15-570-126*	Side frame channel front (Type 574)
	15-571-126*	Side frame channel front (Type 544 and 554)
4	15-570-101*	Side frame channel rear
5	15-570-225*	Top projection cloth (transparent)
	15-570-725*	Top projection cloth (black)
6R	15-570-125*	Side projection cloth right (tansparent)
	15-570-625*	Side projection cloth right (black)
6L	15-570-175*	Side projection cloth left (transparent)
	15-570-675*	Side projection cloth left (black)
7	15-570-050*	Hinge arm assy
7a	15-570-025	Hinge
8	15-570-040	Bracket
9	15-570-020*	Top curtain
10R	15-570-010*	Side curtain (right)
10L	15-570-015*	Side curtain (left)
11	15-570-045	Cable assy (Type 574)
	15-571-045	Cable assy (Type 544 and 554)
11a	15-570-044	Pulley
11b	925-450	Cord
11c	65-050-132	Nut
12	925-440	Fjong
13	15-425-150	Fjong chain
14	65-045-007	Bolt
15	65-052-915	Nut
16	65-045-010	Plate bolt
17	65-045-011	Plate bolt
18+19	15-570-033	Set covers 2x front + 2x rear (transparent)
	15-570-533	Set covers 2x front + 2x rear (black)
20	5-010-069	Hexagon head wood screw
21	15-570-065	Bottom pad left (optional)
	15-570-060	Bottom pad right (optional)
22	65-045-009	Screw (self drilling/tapping)
23	65-055-708	Washer

* Alleen voor standaard model. Raadpleeg uw leverancier in geval van een niet-standaard model!
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FIG. B

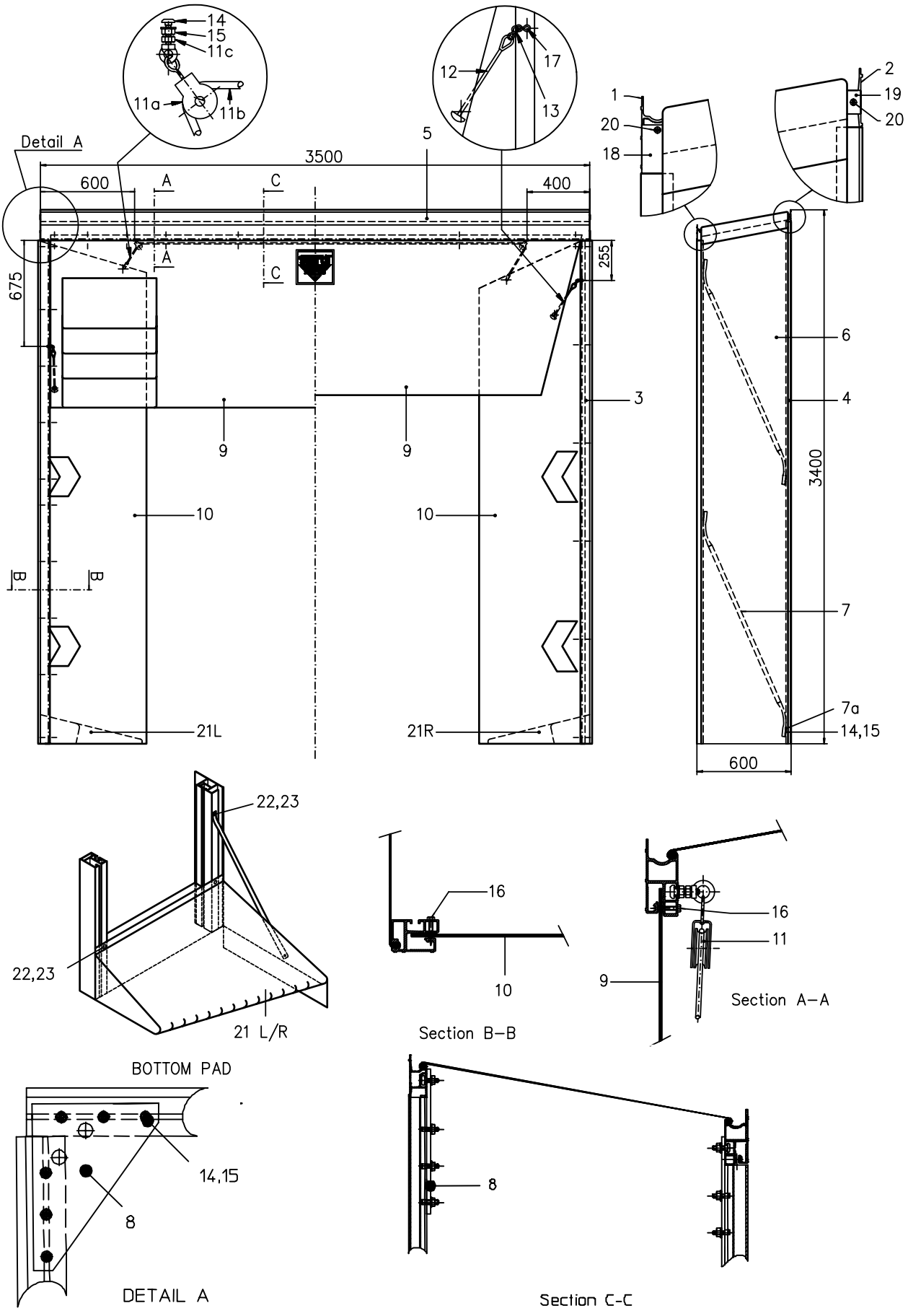
14
15
11c
11a
11b
Detail A
12
17
13
5
3500
600
A
C
400
1
20
18
2
19
20
675
255
6
4
3
9
9
10
10
3400
B
B
7
7a
14,15
21L
21R
600
22,23
22,23
21 L/R
BOTTOM PAD
16
10
Section B–B
16
11
9
Section A–A
14,15
8
DETAIL A
8
Section C-C

FIG. C PARTS WF

INDEX	REFERENCE	DESCRIPTION
1	15-500-210*	Top front angle
2	15-500-110*	Side front angle
3		Top curtain
4		Side curtain (left & right)
5	15-500-021*	Angle (top)
6	15-500-011*	Angle (right)
	15-500-016*	Angle (left)
7	925-440	Fjong
8	15-425-150	Fjong chain
9	65-725-004	Socket domed head screw M8 x 25
10	65-655-713	Washer 35 x 11.5 x 1.5
11	65-750-132	Nut DIN 934
12	15-510-018	Cable assembly
12a	15-425-160	Pulley
12b	925-450	Cord
12c	65-050-132	Nut
12d	65-055-306	Washer

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FIG. C

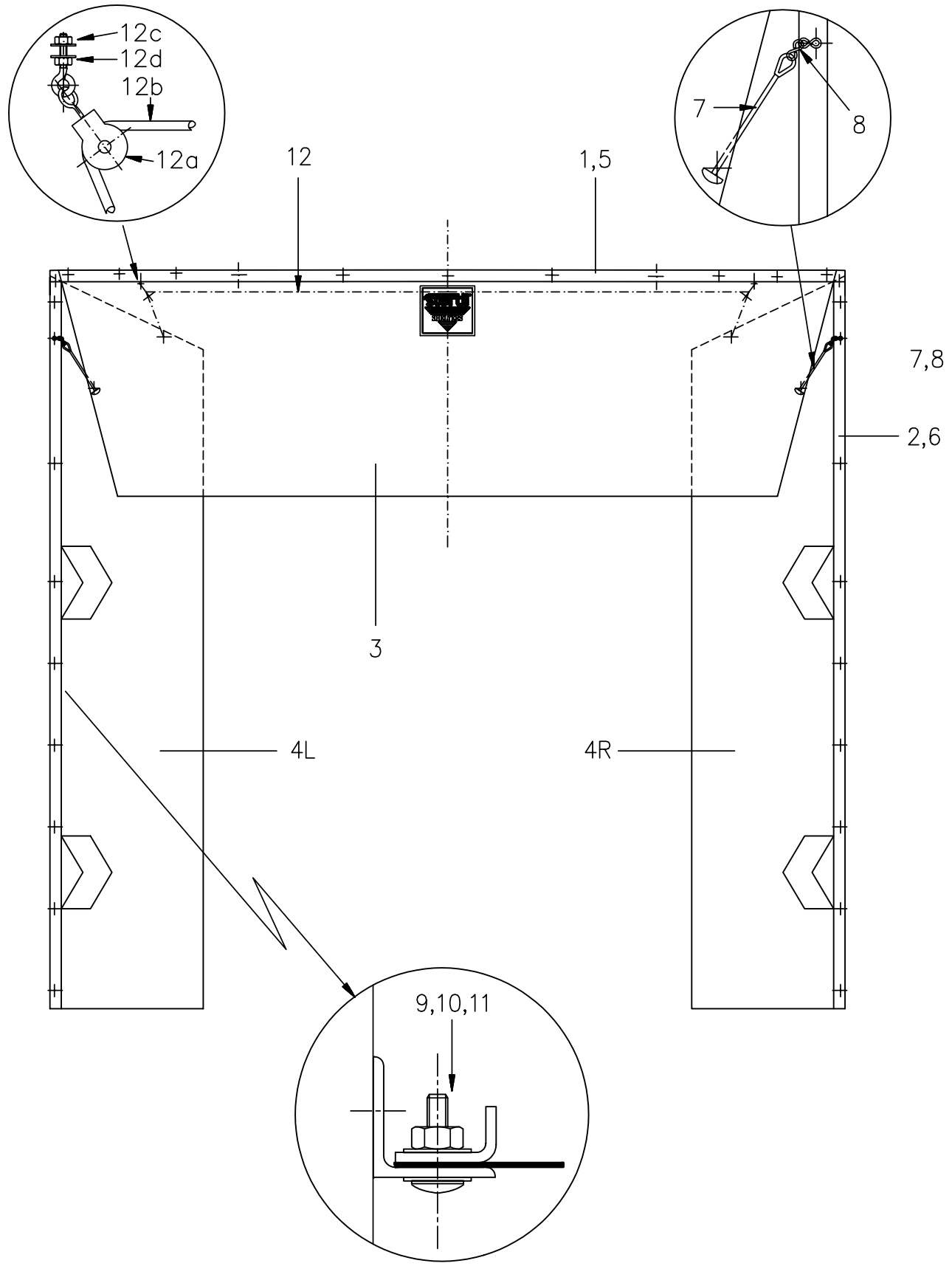
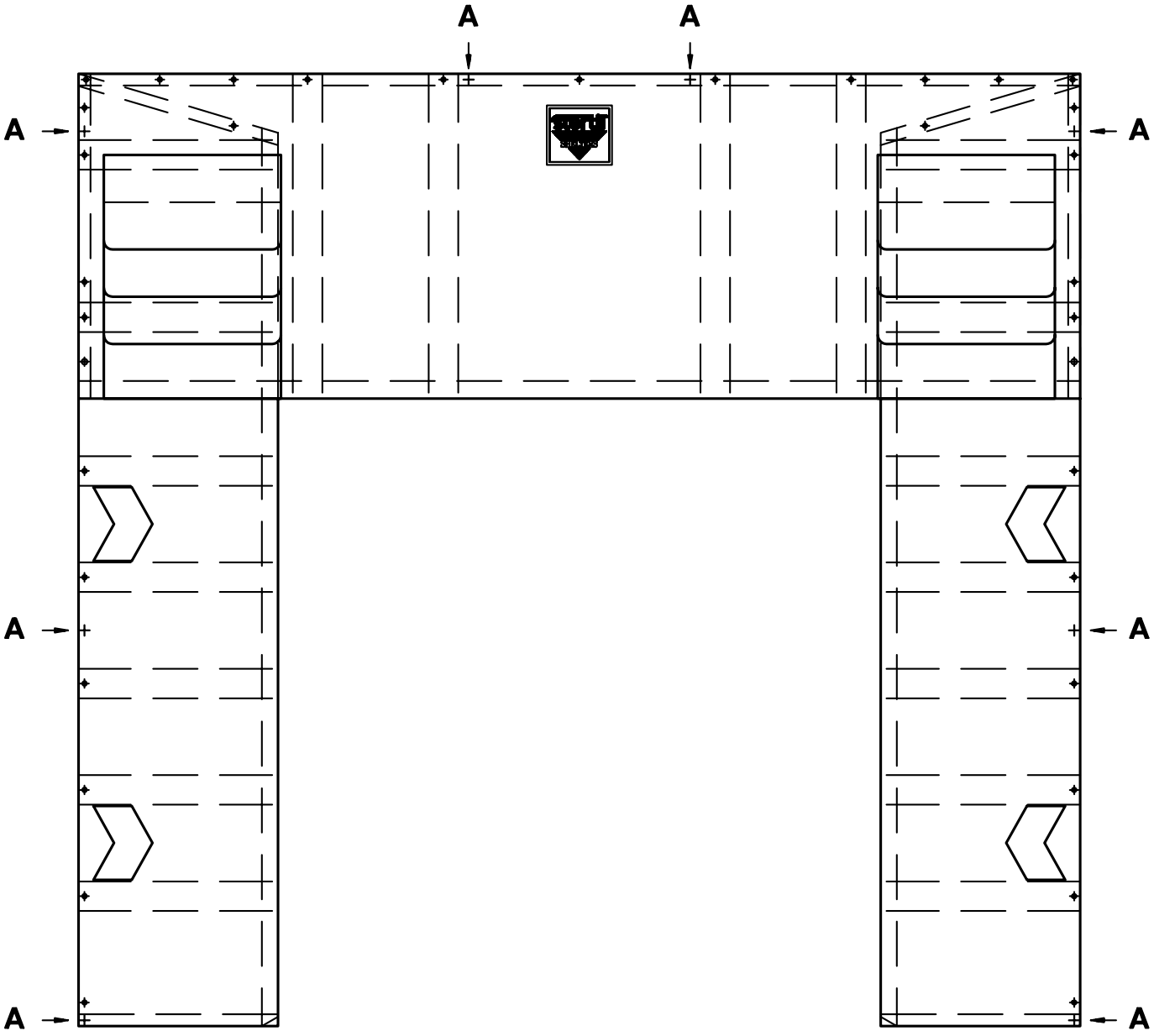


FIG. D INSTRUCTION POP RIVETS (TYPE WS AND WF)



stertil®

DOCKPRODUCTS

Manufactured by:

stertil®

STERTIL B.V.
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Tel. 31(0)512334444. Telefax 31(0)512332099
E-mail: info@stertil.nl Website: www.stertil.nl

CDM Documentation

Site Name:	Winvic Construction Ltd, Plot 9, Segro East Midlands Gateway Logistics Park, Derby. DE74 2DL
Date:	27th July 2022

Index

Section 1

Scope of Works

Supply and installation of

21 x Dock Levellers
21 x Collapsible Dock Shelters
25 x Thermadoors
21 x Dock Bumpers
21 x Traffic Lights
21 x Dock Lights
21 x Wheel Guides
10 x Personnel Doors
03 x Flexi Edge Doors

Section 2

Suppliers Details

Stertil UK Ltd
Unit A,
Brackmills Business Park,
Caswell Road,
Northampton,
NN4 7PW

Telephone: 0870 770 0471
Fax: 01604 765181

Email: info@stertiluk.com

Section 3

Manufacturers Details

Stertil BV
Postbus 23
9288 ZG Kootstertille
Netherlands

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Handelsweg 31
3899 AA Zeewolde
Netherlands

DYNACO Europe NV
Waverstraat 21
B-9310
Moorsel

Dok-Tec
Unit D7d Avondale Works
Woodland Way
Kingswood
Bristol
BS15 1PA

Britannia Metador
Britannia House
John Boyle Road
Middlesborough
TS6 6TY

Section 4

Manufacturers Manuals

See Appendix 1

Section 5

Emergency Procedures

In the event of an emergency whilst operating the equipment the user should adhere to the following procedure.

- Immediately halt operation of the equipment
- Isolate the equipment by switching off the electrical supply at the mains on/off switch located on, or adjacent, to the control panel
- Cordoned off the area and label the equipment as shut down to clearly identify that it should not be used
- Contact Stertil UK Ltd

In house emergency procedures should also be followed and duty managers for operations, health and safety and fire wardens should be advised.

Section 6

Maintenance and Demolition

Removal or decommissioning of the equipment should be referred to the approved installers Stertil UK Ltd.

Section 7

COSHH Recommendations

All substances should be supplied with the relevant COSHH data sheets

Section 8

Technical Specifications

Refer to manuals in Appendix 1

Section 9

Test Certification & Handover Documents

To follow once complete

Or

Refer to appendix 2

Section 10

As Built Drawing Amendments

Standard drawings enclosed in Appendix 1.

Amendments as listed below.