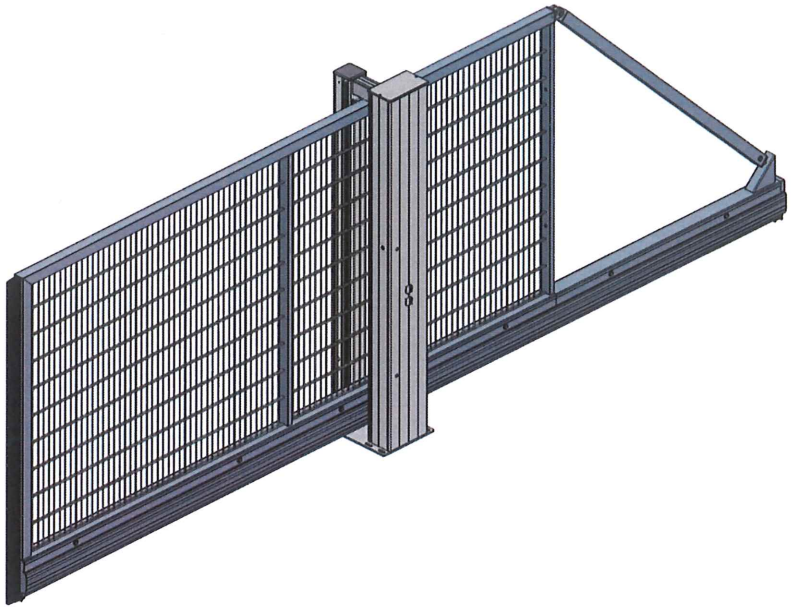
HERAS®

U.K. FENCING SYSTEMS

INSTRUCTION MANUAL

Cantilever Safe Glide



Gate Identification Number SS216692

Date of Issue 20.7.15

Issue	Date	Description	Author	Approved
A	*02-02-15*	*First Issue*	*P. Griffin*	*P Griffin*

Contents

33. Maintenance Schedule

1. Introduction

The gate supplied is part of the Heras UK plug and play range of products. It is designed to be installed within 1 day and all safety devices are factory fitted and working. The gate is supplied built up and ready to be bolted down on prepared foundations. All that is needed is to connect the power supply and the gate is ready for use.

If any extra equipment is required for the individual site, such as remote open and close, or automobile protection, this can be obtained from Heras UK and must be installed by qualified personnel.

In order for this equipment to conform to current legislation a maintenance plan must be established prior to use. It is recommended that the product be serviced at least annually by fully qualified personnel. As Heras UK are the manufacturer of the gate this is best undertaken by Heras UK authorised service engineers based at Eisotech.

2. Contacting Us

Any queries regarding the operation or maintenance of this equipment should be referred to:

Heras U.K. Fencing Systems
Herons Way
Balby
Doncaster, DN4 8WA

U.K. FENCING SYSTEMS

Tel: 01302 364 551
Fax: 01302 322 401

Web Site: www.heras.co.uk
Email: info@heras.co.uk

Eisotech are the approved service provider for Heras equipment.

Contact details are shown below.

Eisotech Services
33 Stakehill Industrial Estate
Middleton
Manchester M24 2RW

EISOTECH

Tel: 0870 706 0606
Fax: 0870 700 0154

All warranty enquiries should be made directly with Heras U.K. Fencing Systems.

⚠ These instructions should be read fully prior to using the system!

CE Declaration of Conformity

Equipment:	**Heras Series 3000 Cantilever Sliding Gate**
Manufacturer:	**CRH Fencing & Security Group (UK) Limited**
Address:	**Herons Way, Balby, Doncaster DN4 8WA**

We hereby declare that the equipment described here above complies with the essential requirements of the following directives:

89/336/EMC	Electromagnetic Compatibility
55014-1	Electromagnetic Compatibility Household Appliances Standards
55012-2	Electromagnetic Immunity
EN 60335-1	Household and similar electrical appliances-Safety: General requirements
73/23/EWG	EC – Low Voltage Directive
BS EN 12453	Industrial, commercial and garage doors and gates – Safety in use of power operated doors - Requirements
BS EN 12445	Industrial, commercial and garage doors and gates – Safety in use of power operated doors - Tests
BS EN 12978	Industrial, commercial and garage doors and gates – Safety devices for power operated doors and gates. Requirements and test methods
98/37/EWG	EC-Machine guideline

For and behalf of the manufacturer:

Name: **Paul Griffin**

Position: **Manufacturing manager**

Signature: P Griffin

Important Note: Modifications to the equipment will render this document null and void
Heras U.K. Fencing Systems is a Business Division of CRH Fencing & Security Group Limited.

LPCB LOSS PREVENTION CERTIFICATION BOARD
UKAS QUALITY MANAGEMENT 007

Cert number 890

HERAS®
U.K. FENCING SYSTEMS

CE Declaration of Incorporation

Equipment: Series 3000 Cantilever Sliding Gate

Installer: DARFEN DURAFENCING
Address: BILPORT LANE WEDNESBURY
WEST MIDLANDS WS10 0NT

We hereby declare that the equipment described here above complies with the essential requirements of the following directives:

89/336/EMC	Electromagnetic Compatibility
BS EN 55014-1	Electromagnetic Compatibility Household Appliances Standards
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98/37/EWG	EC-Machine guideline

For and behalf of the manufacturer:

Name: Paul Griffin

Position: Manufacturing Manager

Signature: P Griffin

Where additional devices are installed by 3rd parties other than the manufacturer the gate must not be put into service until the equipment/components into which it is incorporated and form part of the completed gate system have been identified and declared to be in conformance with the requirements of the Directives and Standards listed in this document.

This document is to be completed by the installer where the gate has not been installed directly by the manufacturer Heras U.K. Fencing Systems. The installer and/or maintenance provider must ensure that any changes to the system are approved. Installation of non-approved spares will render this document null and void.

This document should be submitted together with the Manufacturer's Declaration of Conformity.

5. Twelve-Month Warranty

Important Note: If your equipment was not purchased directly from Heras UK, then all warranty issues will need to be addressed to the supplier of the equipment.

Return to Factory Warranty

All equipment supplied by Heras UK includes a return to factory 12 month warranty. This warranty ***does not*** include engineer call out.

6. Disclaimer

Whilst every effort has been made to ensure that the information contained in this manual is correct at the time of issue, no responsibility is accepted for any loss or damage arising from incorrect information.

This manual forms no part whatsoever of any contract or agreement between Heras UK and others. In no circumstances will Heras UK be responsible or liable for any costs, damage or injury whatsoever arising from the use of this Manual.

Should the gate be tampered with and/or any non-approved equipment is fitted to the barrier such as signs, weights, lights and other auxiliary items then the warranty will be considered void.

7. Copyright

8. Transport and Installation

Installation, setting and maintenance must only be undertaken by skilled persons.

You will receive per gate ordered

1. 1 No. Cantilever sliding gate assembly.
2. 1 No. Front catcher plate.
3. 1 No. Top catcher plate.
4. 1 No. Rear catcher plate.
5. 1 No. Receiving portal.
6. 4 No. 20mm groung anchors
7. 12 No. 16mm ground anchors
8. 2 No. Stump posts.
9. 1 No. proximity magnets and screws.
10. 12 No. M8 x 80mm cup square bolts complete with washers and shear nuts.
11. 1 No. O & M manual.

You will need to supply

1. 1 No. Rotary drill with power supply complete with Suitable drill bits
2. 1 No. 36mm combination spanner.
3. 2 No. 24 mm combination spanners.
4. 1 No. 13mm combination spanner.
5. 1 No. Nylon faced hand hammer.
6. 1 No. Hand hammer.
7. 1 No. 1m Spirit level.
8. 1 No. Steel ruler.

The Heras cantilever sliding gate will arrive fully assembled and ready to bolt down on to the previously prepared foundations. The gate will be transported using a flatbed vehicle incorporating a hydraulic lifting crane. The manufacturer will ensure that only Hi-ab certified drivers will be used. The lifting equipment will be inspected at least once per year and any ancillary lifting attachments such as strops or chains at least twice per year to comply with LOLER regulations.

A method statement and copies of any certificates are available upon request.

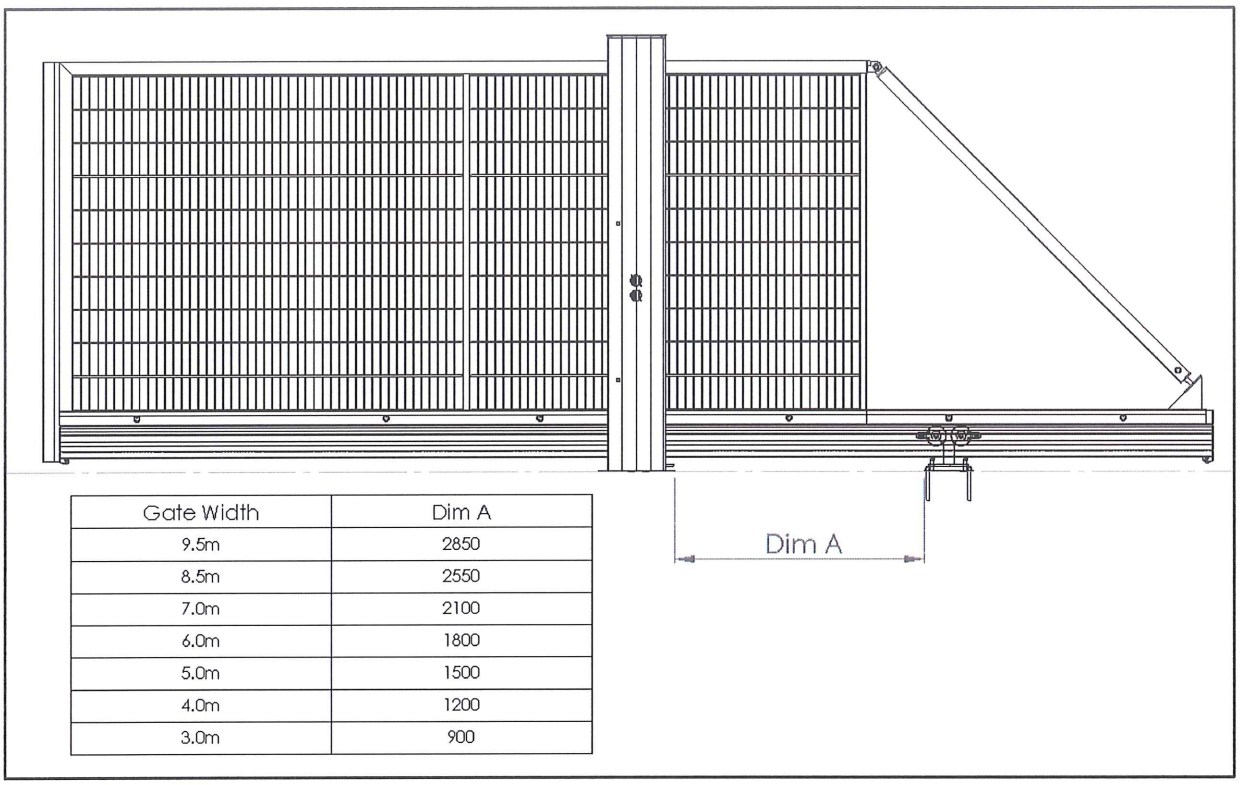
The method of installation is laid out below:-

1. The lorry will use the Hydraulic crane to lower the sling gate assembly into position ensuring that the power supply cable is fed through the bottom of the side of the portal that contains the drive unit.

2. Visually line up the gate to the proposed position of the receiving post.

3. Drill 1 hole that bolts down the main portal. Ensure that the hole is free from debris to the required depth. Insert a 16mm ground anchor and secure the portal.

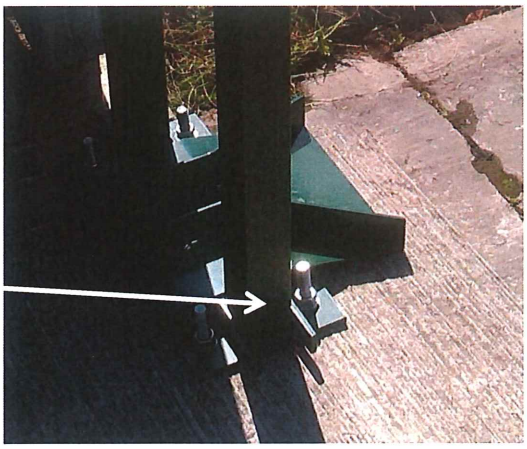
4. Measure the gap between the end of the portal base plate and front of the rear roller set using the table below. Repeat the drilling and cleaning process for 1 hole in the rear roller assembly. Insert a 16mm ground anchor and secure the rear support rollers.



Gate Width	Dim A
9.5m	2850
8.5m	2550
7.0m	2100
6.0m	1800
5.0m	1500
4.0m	1200
3.0m	900

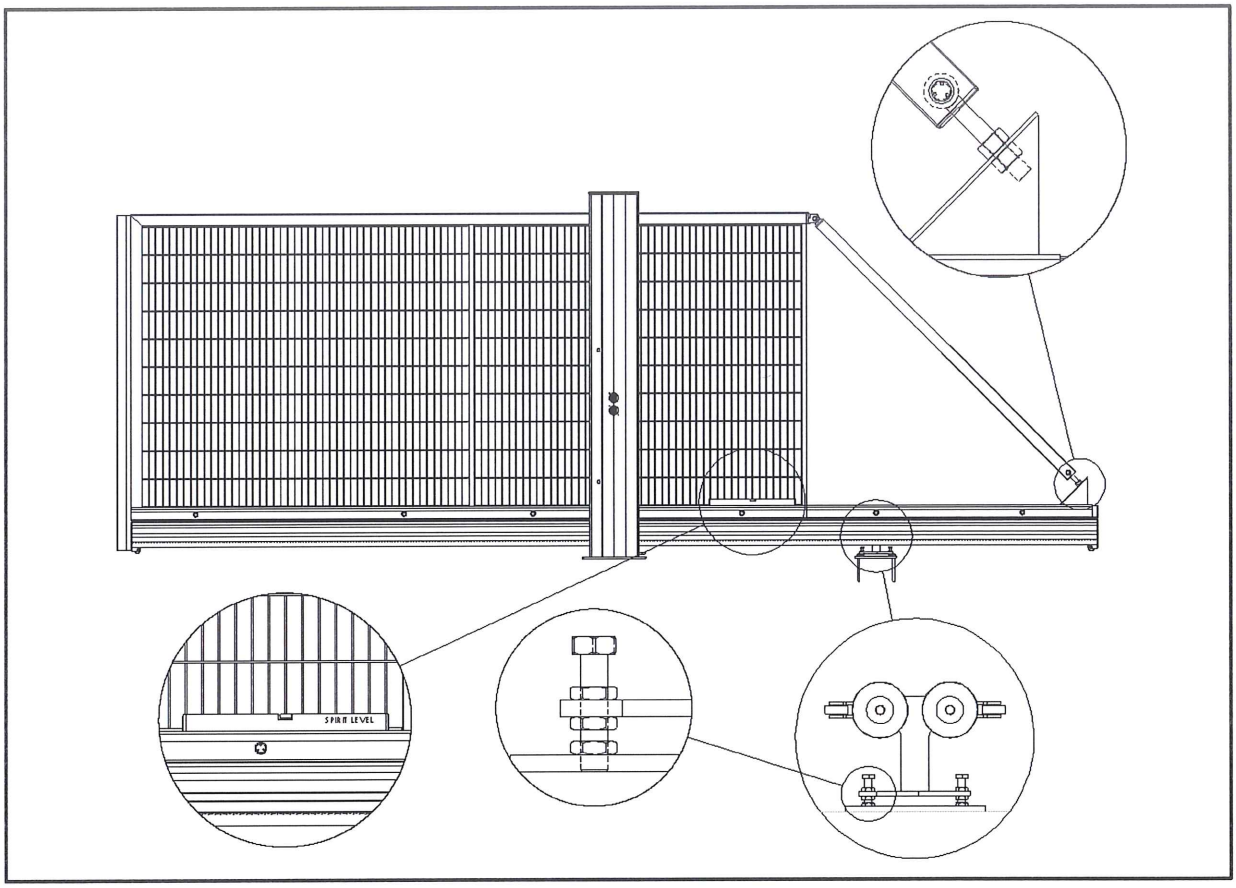
5. The sliding gate can now be unsecured and slid to the closed position. The receiving portal can be placed into position and secured using 4 No 16mm ground anchor bolts. Ensure that the photo cells within the shutting post is pointing towards the Drive portal

4 x 16mm ground anchors

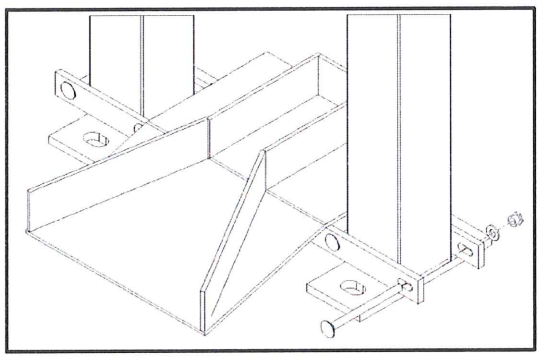


6. Now drill the remaining 6 holes and fit the remaining 16mm ground anchors that secure the drive portal and rear roller set.

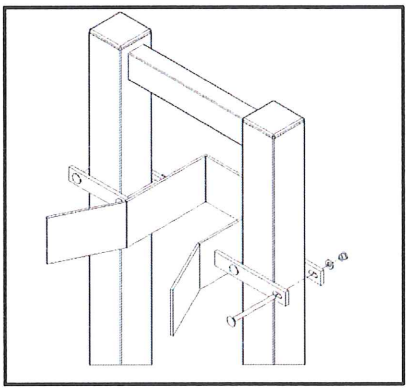
7. Ensure that the gate is level using a spirit level in conjunction with the screw mountings on the roller sets. If the gate is dipping at the end then this can be lifted using the 36mm combination spanner on the lower turnbuckle assembly.



8. Position the top and Front catcher plates using the M8 x 80mm cup square bolt sets.



Front catcher plate

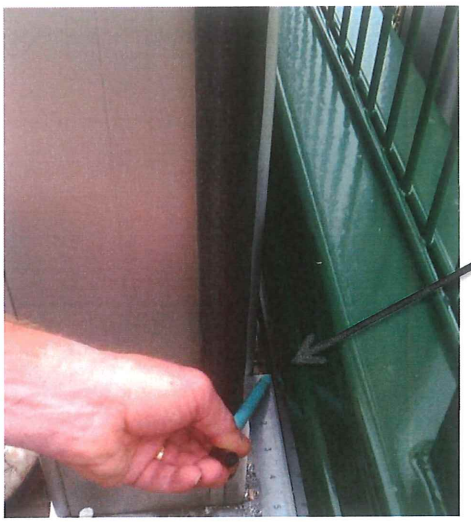


Top catcher plate

9. Now position the rear catcher plate and bolt down the 2 stump posts with the remaining 4 No. 16mm ground anchor bolts.

10. Secure the rear catcher plate using the remaining M8 x 80mm cup square bolts.

11. Position the gate in the closed position and using straight edge mark out the edge of the closing magnet. Slide the gate slightly open and secure the magnetic proximity switch with the self-drilling screws supplied.

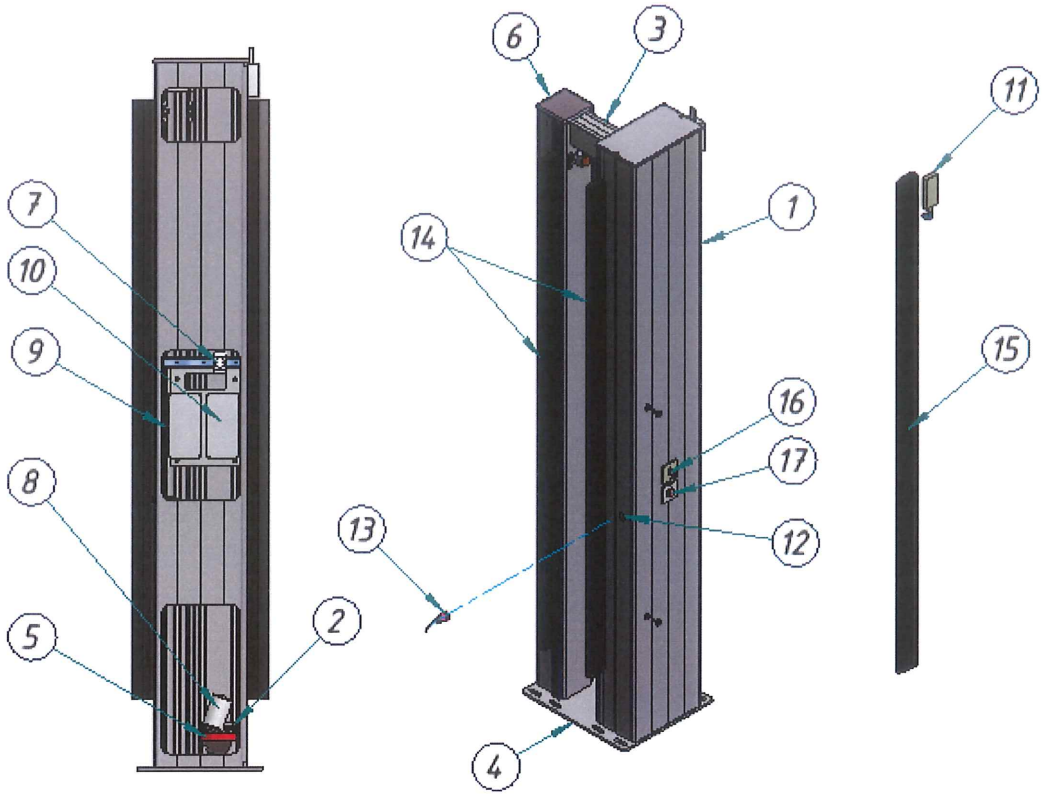


Mark edge of portal on beam

Align edge of proximity magnet to line on beam.

12. The gate can now be powered and configured.

Overview of Drive portal



1. Aluminium post
2. Height adjustment
3. Cross bar
4. Base plate
5. Emergency release
6. Lockable cover
7. Isolating switch
8. Internally-mounted drive unit
9. Additional control unit box with integrated terminal connectors
10. Control unit with wireless receiver
11. Wireless transmission system for the main closing edge
12. Photocell (receiver)
13. Photocell (transmitter)
14. Safety edges – secondary closing edges
15. Safety edges – main closing edge
16. Key switch (on both posts)
17. Emergency stop button

Power Supply:

1. Connect the power supply (230 V) to the pre-assembled isolator switch.

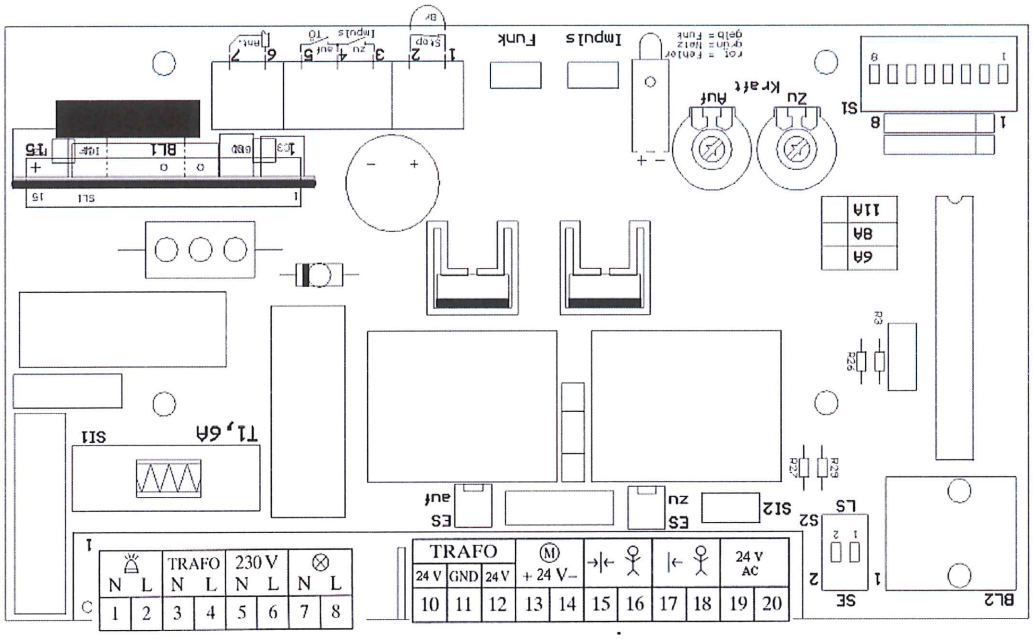
2. Connect the 2-core power cable for the photocell transmitter to the slam post (24 V AC).

   All the rest of the safety equipment is pre-wired within the portal. These include:-

   - Mains power isolator switch
   - The wireless transmission system for the main closing edge
   - Two photocell receivers
   - Two key switches
   - One emergency stop
   - Safety edges (secondary closing edge)
   - Safety edge on the main closing edge

   If any auxiliary equipment is fitted the signal wires should not be longer than 30m.

9. Connection plan 47-21-(8 u. 11 A)



10. Auxiliary Connector Block

Netz 230 V			Warning-light 230 V		3-Min.-Light 230 V		Impuls-Partial openingg			Not Stop		Main-Closing edge/ Light-barrier		Second. - closing-edge./ Light-barrier		24 V AC max. 0,5 A	
L	N	PE	L	N	L	N	Potentialfrei										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

For easy wiring a special connector block has been installed inside the control box:

1. mains L
2. mains N
3. mains PE
4. warning light 230 V AC
5. warning light 230 V AC
6. 3-minutes-light 230 V
7. 3-minutes-light 230 V
8. push button-impulse/closed
9. push button - shared
10. push button partial opening

8, 9, 10; function depending on position of dip-switch 7:
ON - impulse, OFF – push button

11. stop
12. stop
13. main closing edge
14. main closing edge
15. secondary closing edge
16. secondary closing edge

11, 12 not used inputs
13, 14 have to be bridged
15, 16 connection acc to no. 24

17. 24 V AC max. 0.5 A
18. 24 V AC max. 0.5 A

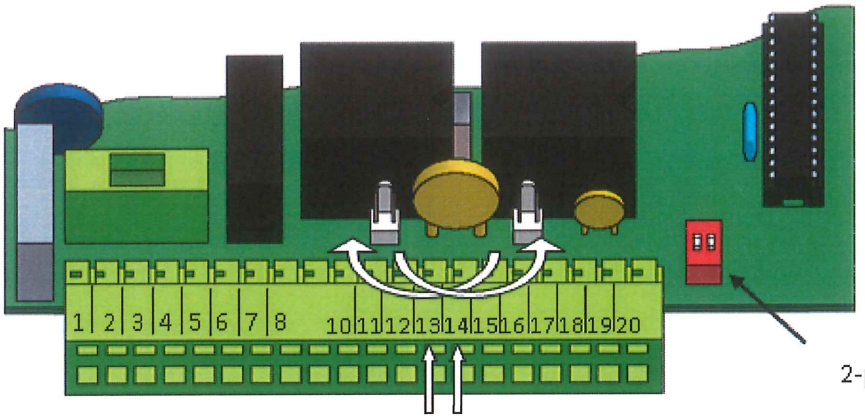
11. Light Emitting Diodes (LEDs)

LED glows green:	Normal mains supply
LED glows yellow:	Radio–reception/training/deletion
LED glows red:	Display malfunction/self-test

12. Setting into Operation/Adjustment of Control Board

After you have connected the power supply the first time you switch on the gate the control board starts a self-diagnosis, indicated by a red flashing light. After 3 seconds the green main LED glows. When the gate has finished its self-diagnostic test ensure that the gate leaf is in the middle of the travel and then operate the gate. The initial action should be the gate leaf opening. If the gate leaf travels towards the shut position the gate direction should be changed.

To change the opening direction all that is required is to change the limit switches on the control unit DCM 47-21 AND the connections on the side of the terminal strip (clamp 13 and 14) located in the control unit.



Now let the operator run four times in each direction until it reaches the limit positions OPEN and CLOSED. The gate should not be stopped during these "learning runs"!

Attention! No safety devices are active during these four learning runs!

During these runs in memorising mode, the power consumption value of the gate has been automatically determined. Before memorising the corresponding power consumption value, the determined value has been slightly increased to compensate eventual tolerances. Should this "reserve" be insufficient, you can again increase the value for each direction manually by readjusting the potentiometers "power open" and "power closed". In any case, make sure that the power the gate could exert on an obstacle does not exceed 150 Newton (15kg)!

13. Programming the Handset

The two encoding switches on the control board are NOT connected with the programming the handset.

The handset's code will be transmitted from the handset to the radio receiver and the receiver then memorises the handset's code.

1. For this, open the handset and set your personal code using the encoding switches. At least 4 switches should be set to ON.

2. On the control board press the "Funk" button briefly. The yellow "Funk" LED starts to flash. There is now 15 seconds during which to program a button on the handset.

Press the desired button on the handset until the yellow "Funk" LED shines continuously. This indicates that programming process is finished.

During this process, the radio receiver will only transfer a signal to operate the gate if the handset button is accidentally pressed twice. So it is possible to program the handset without moving the gate.

The memorising process is now completed. Your operator is now ready for use and works with the basic functions.

14. Pulsed operation

Apart from handsets, the drive can also be operated using sensing devices, key switches, buttons or coded switches. The potential-free connection is found on terminal 8 and 9 (pulse).

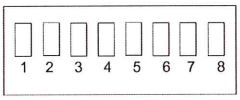
Your operator is now ready for use and works with the basic functions.

This control board is equipped with several additional functions, which can be activated as described below.

15. Table of Encoding Switches

There are two encoding switches on the control board:

1. program selection
2. safety devices



Program selection

S1.1 / S1.2	soft stop distance	1 OFF	2 OFF	standard
		1 ON	2 OFF	short
		1 OFF	2 ON	long
		1 ON	2 ON	opening short closing off
S1.3	automatic closing	ON	= active	
		OFF	= not active	
S1.4	partial opening	ON	= partial opening position memorised	
		OFF	= no partial opening position	
S1.5	warning light	ON	= 5 seconds pre-warning period	
		OFF	= warning light only active when motor is running	
S1.6	running speed	OFF	= standard	
		ON	= half speed (open and closing dir.)	

S1.7 / S1.8	impulse – partial opening	**S1.7** = OFF	**S1.8** = OFF
	direct opening/closing **without** panic mode	**S1.7.** = ON	**S1.8.** = OFF
	direct opening/closing **with** panic - mode	**S1.7** = OFF	**S1.8** = ON
	"dead man" mode	**S1.7** = ON	**S1.8** = ON

Note:

Ref. 3: When automatic closing is active, the prior warning period is 5 seconds. If prior warning is not active (S1.5 = off), pre-warning is effected by flashing light.

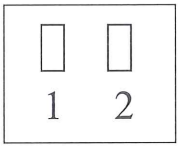
Ref. 5: A self-flashing warning light is necessary.

Ref. 8: In "deadman" mode automatic closing is disabled.

16. Safety Buttons (dip-buttons) 1+2

S2.1 input LS / SE1 — ON = 8.2 kΩ safety contact edge, OFF = photocell

S2.2 input LS / SE2 — ON = 8.2 kΩ safety contact edge, OFF = photocell



17. Modification of Soft Stop

The distance of soft stop movement can be modified by means of the dip switches 1 and 2:

1 OFF	**2 OFF**	**usual distance**
1 ON	**2 OFF**	**short distance**
1 OFF	**2 ON**	**long distance**
1 ON	**2 ON**	**soft movement only in opening direction**

18. Automatic Closing

Automatic closing can be activated by dip switch 3. During this mode it is only possible to open the gate by push button, key switch etc. – closing will always be done automatically. We recommend the use of an electric photocell when this mode is enabled.

To program the period of time the gate should stay open before the automatic closing starts, proceed as follows:

Let the gate run from limit position CLOSED to limit position OPEN. Wait as long as you want the gate to stay open and then set dip switch 3 to ON. Now the "STAY-OPEN" – time is memorised. Maximum adjustable "STAY-OPEN" – time is 3 minutes. Automatic closing is also active with partial opening mode. When the gate is in limit position OPEN and an impulse is given, the "STAY-OPEN" – time gets reset and the time counter starts anew. If the gate touches an obstacle during the closing process the motor will be stopped by the automatic obstacle detection, the gate reverses and then stops. Afterwards the gate will only move after a new impulse is given by push button, key switch etc... If the gate runs in the closing direction and the operator is switched off by an electric photocell or safety contact edge, the gate reverses and runs back until it reaches the limit position OPEN. After removing the obstacle, the operator tries to close the gate again – but only at half speed. If this second try is also unsuccessful, the automatic closing mode will be switched off until a new impulse is given by push button, key switch etc.

19. Partial Opening

Make sure that dip switch 7 and 8 are set to OFF. Move the gate to limit position CLOSED. Then move the gate by impulse (clamps 8 and 9) or impulse button on the control board or by remote control to the position where it should stop in partial opening mode. Now set dip switch 4 to ON and the partial opening is memorised. Connect corresponding control elements (push button, key switch, encoding switch etc.) potential-free contact to the clamps 9 and 10 (partial opening) on the board.

Alternatively the partial opening mode can be activated by the second button of the handset. For this press the "Funk" button on the control board for about half a second, then press the "Impulse" button for about half a second. The yellow LED flashes at 2 second intervals. Now press the corresponding button of the handset and keep it pressed until the LED shines continuously. The handset button is now memorised.

When an impulse for partial opening is given while the gate is in the CLOSED position, the gate will run to the partial opening position. After the next impulse the gate closes. As long as the gate is outside the position CLOSED, the partial opening mode is not active. If the inputs "impulse" and "partial opening" are activated at the same time, this will cause an emergency stop.

20. Warning Light, Pre-Warning Function

The control board 47-21-11A-W is equipped with a relay for a warning light. You can connect an external warning light directly to the clamps 4 and 5. It must be a 230V AC warning light. For this mode please set dip switch 5 to ON. Directly after giving an impulse 230 V is available. 5 seconds later the gate starts running. The warning light is active until the gate reaches the limit position. If another impulse is given during these 5 seconds, it will stop. A new impulse starts this procedure again.

21. Reduction of Running Speed

If you set dip switch 6 to ON the motor will only run at half speed. In this case the centrifugal mass of the gate is lower. This can help to keep the max. power at the closing edge in accordance with the regulations. After changing the running speed you have to reset the control board to allow for memorising running terms and power consumption values anew.

22. Direct Opening/Closing

By means of the dip switches 7 and 8 you can switch the two inputs IMPULSE/CLOSED and PARTIAL OPENING/OPEN over to the function of direct opening/closing with or without panic mode. Switching over from IMPULSE/ PARTIAL OPENING to DIRECT OPENING/CLOSING has no influence on the function of the radio channels. If one of the inputs OPEN or CLOSED is activated while the motor is running in direct opening/closing mode with panic mode, the motor will make a soft stop. In direct opening/closing mode without panic function the activation of an input (for the actual direction) while the motor is running will not have any effect. In case of activating the input for opposite direction, the actual running direction will be changed. When both inputs are activated at the same time the motor will stop immediately without soft stop.

Impulse - /partial opening
S1.7 = OFF S1.8 = OFF
Direct opening/closing without panic mode
S1.7 = ON S1.8 = OFF
Direct opening/closing with panic mode
S1.7 = OFF S1.8 = ON

23. "Deadman" Function

For activating this mode please set dip switches 7 and 8 to ON. In this mode the motor only runs in the corresponding direction as long as the input is activated.

In "deadman" mode the use of a radio transmitter is not possible.

S2.1	Input LS / SE 1	ON	= 8.2 kΩ safety edge main closing edge
		OFF	= Photocell
S2.2	Input LS / SE 2	ON	= 8.2 kΩ safety edge secondary closing edge
		OFF	= Light

24. Connection of The Photocells

The gate is fitted with a 2 channel photocell system. The recievers are contained within the main portal and the senders are located within the shutting post. The secondary channel can be identified by the brown and black wire being soldered together.

The recievers are prewired at the factory and do not need any further work. The senders which are located within the shutting post must have a 24v supply applied. This is done by running a twin core cable across the gate opening and connecting the senders to the portal.

The cables for the senders can be located at the top of the shutting post ready for connecting to the twin core cable. The black and brown wires from the second channel sender and the brown from the primary channel sender should be wired to one core and then connected to number 17 within the portal (see section 10) The blue from both the senders should be wired to the second core and connected to number 18 (see section 10). Continue the colour coding of Brown and Blue to the portal for later identification. The black wire from the primary channel is redundant and not used.

The recievers contained within the portal have 2 LED indicator lights. These lights are visible when the recievers are not getting a signal from the senders. Test the photocells by placing a hand over the sender on the shutting post and the corresponding LED mlight should illuminate on the portal.

25. Delete all Hand Transmitters

Press the "Funk" button for at least 6 seconds, after which all learnt hand transmitters will be cleared from the memory. During this process the "Funk" LED will flash for the first 3 seconds (as it does when learning in a new hand transmitter), then flash rapidly. Once the LED turns off, all learnt hand transmitters will have been deleted.

Warning! The gate must not be operated during this procedure.

26. Delete the Path of Travel and the Programmed Force

To erase the learnt travel path and programmed force, for instance when moving the drive to a new gate, proceed as follow: Set all dip switches to OFF, then press the following keys in sequence:

Funk button once	Funk - LED flashes
Impulse button twice	Funk - LED flashes 3 times
Funk button once	Funk - LED stays off

The deletion is now complete.

Now the learning cycle can be performed as described in Section 12.

27. Self-Monitoring / Error Messages

The control board performs a self-test every time the mains power supply is switched on, after each motor movement (for 15 seconds), after an emergency stop and every 3 hours when in sleep mode.

The Error LED flashes here and a relay is briefly energised, the control board however, is functioning normally.

If the thyristors or the relay are defective a brief motor movement (<0.5 s) can occur.

If an error occurs during the test, the Error LED will display the following:

1 flash	Watchdog timer error - replace the control board
2 flashes	Current measurement error - replace the control board
3 flashes	Error on safety input 1 or 2 - check the connection of the photocells, safety edges and jumper wires
4 flashes	Thyristors error - replace the control board
5 flashes	Relay error - replace the control board
6 flashes	Error learnt forces - reset the control board and relearn the gate forces
1 flicker	Ram error - replace the control board
2 flickers	Rom error - replace the control board

LED permanently on:	Switch off the power. Check for obstructions to the gate or binding points. Check the connection to the motor and for motor defects.

28. Safety Instructions

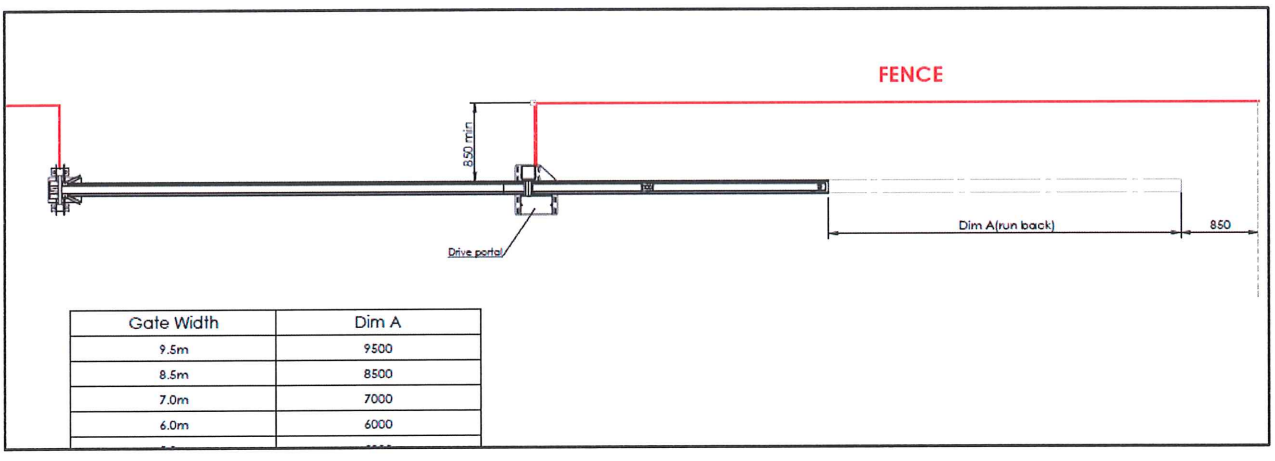
The safety instructions are an essential part of the product. Read through all of the instructions carefully, as they contain important information about the security during the fitting, operating and maintenance of the product. Please keep these instructions in a safe place and make sure that they are available to all users at all time.

Any deviation from the intended use and/or any misapplication of the product is not allowed and will be considered as dangerous and improper use. The product may be used exclusively for the purpose intended by the producer. Any claims against the manufacturer because of damage caused by improper use or fitting of the product are void. Make sure that no persons are in the gate's travel while the gate is in motion.

Before undertaking any electrical work, disconnect the operator from the mains supply (230 V). In the event of a failure of the gate operator, a specialist must be commissioned immediately for the inspection or repair work. In case of any defect do not attempt to repair the product by your own. Fitting, maintenance, repairs of the control board must be performed by a specialist.

We recommend having the gate system inspected and maintained regularly by a qualified person in accordance with the manufacturer´s specifications. All the safety and protective functions, in particular, must be checked regularly. Fitting, maintenance and repair works must be registered in a maintenance log book.

If any fence is erected which runs along the side of the back run should have a minimum gap of 850mm from the moving part of the gate as shown below. This is not necessary if any gaps in the infill of the fence are small enough so as to ensure that no persons can get their arm through. Heras UK recommend that all fences are 850mm away from the moving part of the gate.



Gate Width	Dim A
9.5m	9500
8.5m	8500
7.0m	7000
6.0m	6000

29. EC Directives

The product has been developed and produced in accordance of the following EC Directives:

89/336/EMC	Electromagnetic Compatibility
55014-1	Electromagnetic Compatibility Household Appliances Standards
55012-2	Electromagnetic Immunity
BS EN 60335-1	Household and similar electrical appliances-Safety: General requirements
73/23/EWG	EC – Low Voltage Directive
BS EN 12453	Industrial, commercial and garage doors and gates. – Safety in use of power operated doors – Requirements
BS EN 12445	Industrial, commercial and garage doors and gates. – Safety in use of power operated doors – Tests
BS EN 12978	Industrial, commercial and garage doors and gates. Safety devices for power operated doors and gates. Requirements and test methods
98/37/EWG	EC-Machine guideline

30. Troubleshooting

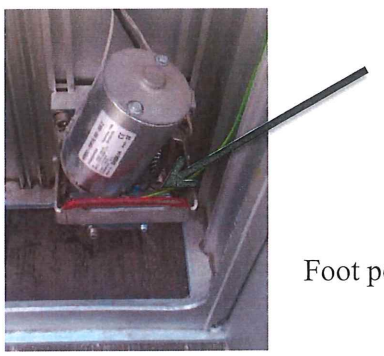
Malfunction	Potential cause	Remedy
The unit does not function.	No voltage is present	Check the power connection, fuse T1 and 6A on the circuit board
Drive will start running but stops after about 30-50 cm	Incorrect information has been learnt, possibly the drive was operated at start up without a gate	Proceed to Section 20 and then relearn the forces by following Section 12.
Photocell terminal acts in the opening direction	Direction of motor rotation is not correct.	Change the direction of rotation of the motor in accordance with section 5 of this manual
Drive performs uncontrolled movements.	The programme selector switch has been confused with the hand transmitter coding switch	set all DIP - switches to "OFF" (see Section 9)
Hand transmitter is not being coded in	Mixed use of individually coded hand transmitters and fixed-code hand transmitters is not possible.	Delete all coded in hand transmitters - Section 19
Drive exceeds the limit switch	Magnet is too far away from the drive. Magnet fallen off. Reed-switch defect.	Move the magnet closer to the drive or the drive closer to the gate. Mount a new magnet. Replace the reed switch.
Automatic opening rather than automatic closure	Direction of motor rotation is not correct	Change the motor's direction of rotation through Section 5
Gate closes by itself	The automatic closure setting has been selected	DIP - Switch 3 should be set to OFF
Gate opens by itself	Automatic closure function has been selected and the direction of motor rotation is not correct	DIP - Switch 3 should be set to OFF and change the direction of rotation (see Section 5)
The gate is running too long in the soft stop	Long soft-start feature set.	See Section 10
Drive can be activated by push button or key switch, but not with the hand-held transmitter	Battery is dead, Hand transmitter is defective, Receiver is defective. Hand transmitter is not coded in; Antenna is connected to the wrong terminal	Replace the battery, test it with another other hand transmitter, then possibly send back the hand-held transmitter or receiver if it is faulty; Code in the hand transmitter; Connect the antenna to the correct terminal (terminal 6)
The hand transmitter range is too short.	Battery in the HS weak; abnormally high interference field; unfavourable antenna installation	Replace battery; Test out the best antenna location; Check another hand transmitter on the receiver. If a longer range is achieved, send the original hand transmitter in to be repaired.

31. Technical data

Power Supply:	$230V_{AC}$ +10% / -15% 2 x $24V_{AC}$ +/-5V with centre tap
Power Consumption:	50Hz Stand by: 2 x 24V, per 25mA, with RF-Module
Output:	Motor $24V_{DC}$ Light output $230V_{AC}$ max. 100W Warning light output $230V_{AC}$ max. 100W Transformer $230V_{AC}$ max. 200W Light + Warning light + transformer together max. 350W $24V_{AC}$ 500mA
Input:	$230\ V_{AC}$ with $_L$ Transformer secondary 2 x $24V_{AC}$ with centre tap Impulse/Closed (pot.- free closing) Partial opening (pot.- free closing) Photocell/SE1 (pot.- free opener/8.2 kΩ) Photocell/SE2 (pot.- free opener/8.2 kΩ) Stop (pot.- free opener) Reference Switch/reed contact open (pot.- free closing) Reference Switch/reed contact closed (pot.- free opener)
Antenna	Ground connection for antenna shielding
Radio:	Multipoint connector with 15 poles for connection with radio module
Service temperature:	Environmental temperature electronic - 20°C up to + 50°C for max. 5,5A current with 80s
Lifetime	Due to higher current the life time of the operator is decreasing or the using of coolers is necessary.

32. Emergency release

If the gate leaf sticks or it becomes necessary to open the gate manually then this is achieved by opening the drive post and pushing the red lever down. This pulls away the drive motor and allows the gate to run freely.



Foot pedal engaged

Foot pedal released

33. Maintenance Schedule

In order for this equipment to meet current legislation the gate and any auxiliary equipment must be serviced using the following criteria and a record kept of any results, or maintenance carried out.

3 monthly

Mechanical Check List.

- Portal post ground bolts (Check for tightness)
- Drive motor assembly fastenings (check for tightness)
- Limit switch fastenings-locknuts (check for tightness)
- Rack (check for wear and damage).
- Drive rack sprocket (check for wear)
- Cantilever rollers (Inspect for damage or wear)
- Check condition shutting post ground bolts (Check for tightness)

Electrical check list.

- Isolate mains power before accessing terminal boxes.
- Clean photoelectric beam lenses
- Check all terminals in control cabinet
- Test photoelectric beam operations
- Run gates and check that operation is correct
- Test all safety edges for correct operation
- Test emergency stops
- Check operation in both automatic and manual modes

Annually:

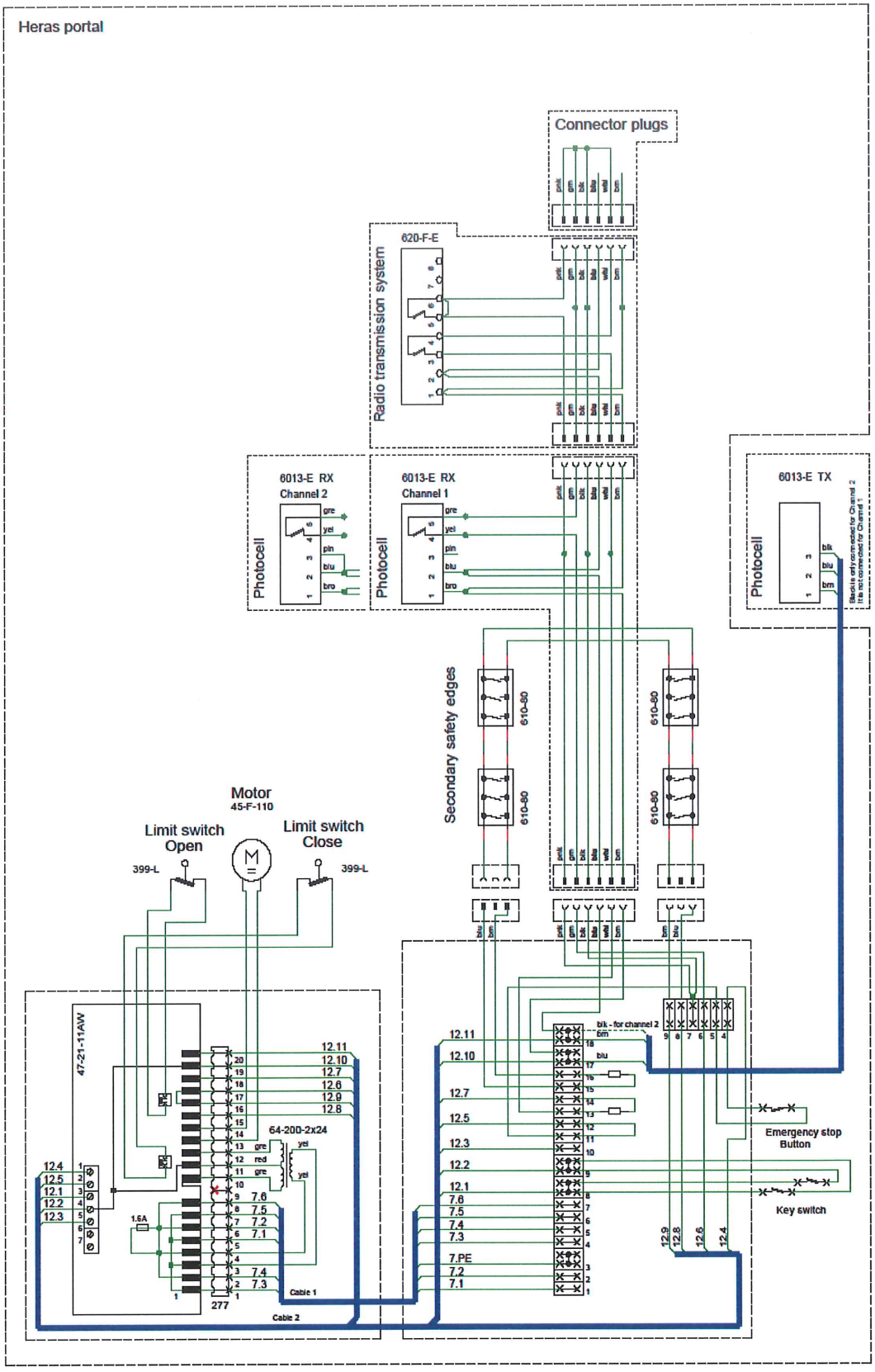
- As Three Monthly and
- Inspect powder coating-touch-up as necessary
- Force Testing to be repeated to BS EN 12453

INSTALATION NOTES

MAINTENANCE LOG

Maintenance undertaken	Date	Sign

34. Wiring Diagram



TEST REPORT OF FORCE MEASUREMENT - TEST OF TYPE

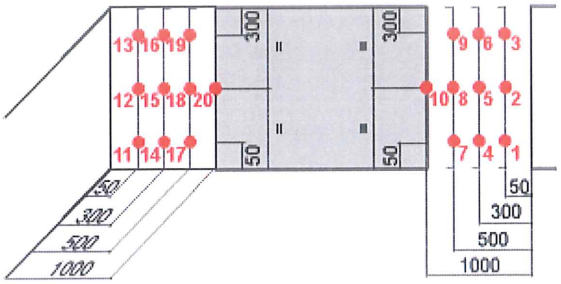
Laboratory:	Geoquip World Wide
Address:	33 Stakehill Industrial Estate, Middleton, Manchester M24 2RW
Measuring instrument:	Speed Force (art. 50V001T)
Builder:	Microtronics srl
Serial Number:	00002925
Calibration date:	06/10/2014
Customer:	Boughton Leigh School
Address:	Wetherell Way, Brownsover,Rugby, Warwickshire,
Technician/Builder:	Darfen Durafencing
Address:	Bilport Lane, WS10 0NT
Door identification:	Main Entry
Location:	Main Entry
Installation date:	11/6/15
Door type:	Sliding gate
Applied norm:	EN 12453
Brand and model:	Heras Easy Glide
Dimension of door:	2000mm x 10500mm
Weight of door:	Unknown
Kind of edge:	ASO
Security device:	Photocells
Motor:	Belfox
Electronic panel:	Belfox
Adjustments:	
Power supply:	230v Single Phase
Temperature:	17
Annotations	
Test Report nr.:	32291
Test date:	11/6/15
Carried out by:	D Wright, J Collins
Approved by:	J Collins

Door type: Sliding gate

Applied norm: EN 12453

Point of measure: see image attached

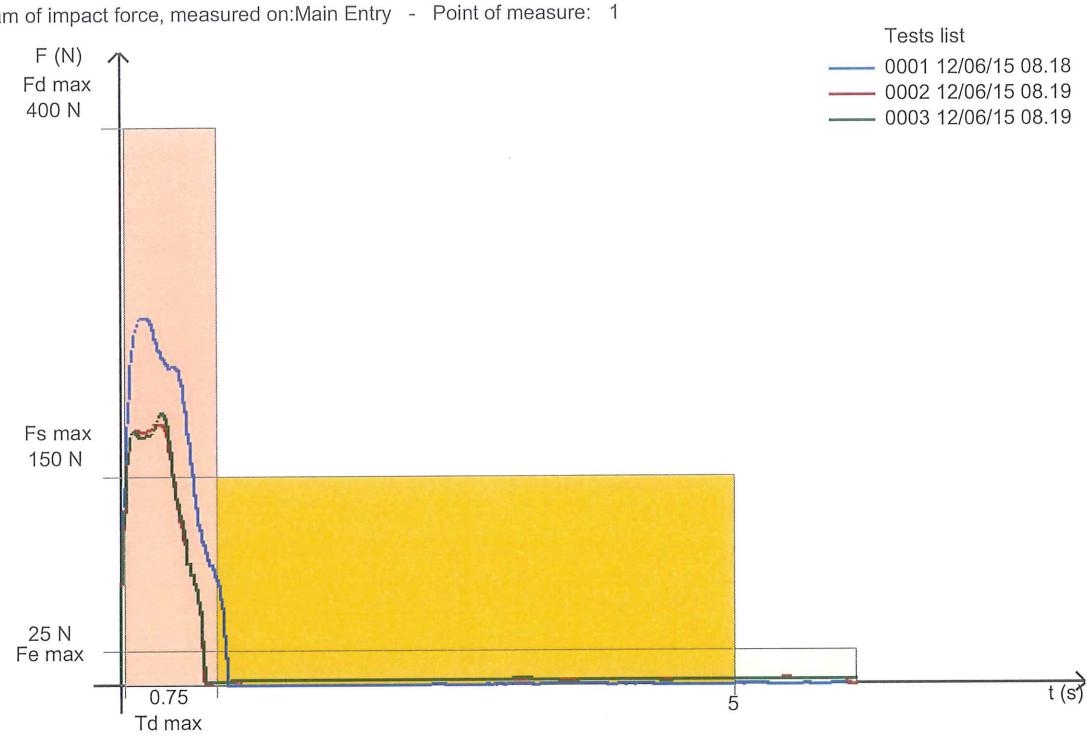
Annotations:



Recapitulation of tests executed:

Point of Measure	*Description of tests*	*Fd [N]* - Measure - Limit	*Td [s]* - Measure - Limit	*Fs [N]* - Measure - Limit	*Fe [N]* - Measure - Limit	*Result*
1	Height: at 50 mm from bottom edge of the door. Gap: 50 mm from main closing edge and the opposing edge.	217 400	0.44 0.75	7 150	3 25	PASS
2	Height at centre of door or 2500 mm from floor, when the height of door is >5000 mm. Gap 50mm from main closing edge and the floor.	265 400	0.41 0.75	5 150	1 25	PASS
3	Height of the door minus 300mm (max 2500 mm). Gap: 50 mm from main closing edge and the opposing edge.	224 400	0.38 0.75	6 150	1 25	PASS
4	Height: at 50 mm from bottom edge of the door. Gap: 300 mm from main closing edge and the opposing edge.	208 400	0.36 0.75	6 150	2 25	PASS
5	Height at centre of door or 2500 mm from floor, when the height of door is >5000 mm. Gap 300mm from main closing edge and the floor.	224 400	0.34 0.75	6 150	2 25	PASS
6	Height of the door minus 300mm (max 2500 mm). Gap: 300 mm from main closing edge and the opposing edge.	246 400	0.40 0.75	5 150	1 25	PASS
7	Height: at 50 mm from bottom edge of the door. Gap: 500 mm from main closing edge and the opposing edge.	180 400	0.23 0.75	6 150	2 25	PASS
8	Height at centre of door or 2500 mm from floor, when the height of door is >5000 mm. Gap 500mm from main closing edge and the floor.	195 400	0.32 0.75	6 150	2 25	PASS
9	Height of the door minus 300mm (max 2500 mm). Gap: 500 mm from main closing edge and the opposing edge.	195 400	0.37 0.75	5 150	1 25	PASS
10	Height: at the center of door, or at 1000 mm above the floor. Gap: 1000 mm from main closing edge and the opposing edge.	729 1400	0.68 0.75	3 150	1 25	PASS

Diagram of impact force, measured on:Main Entry - Point of measure: 1



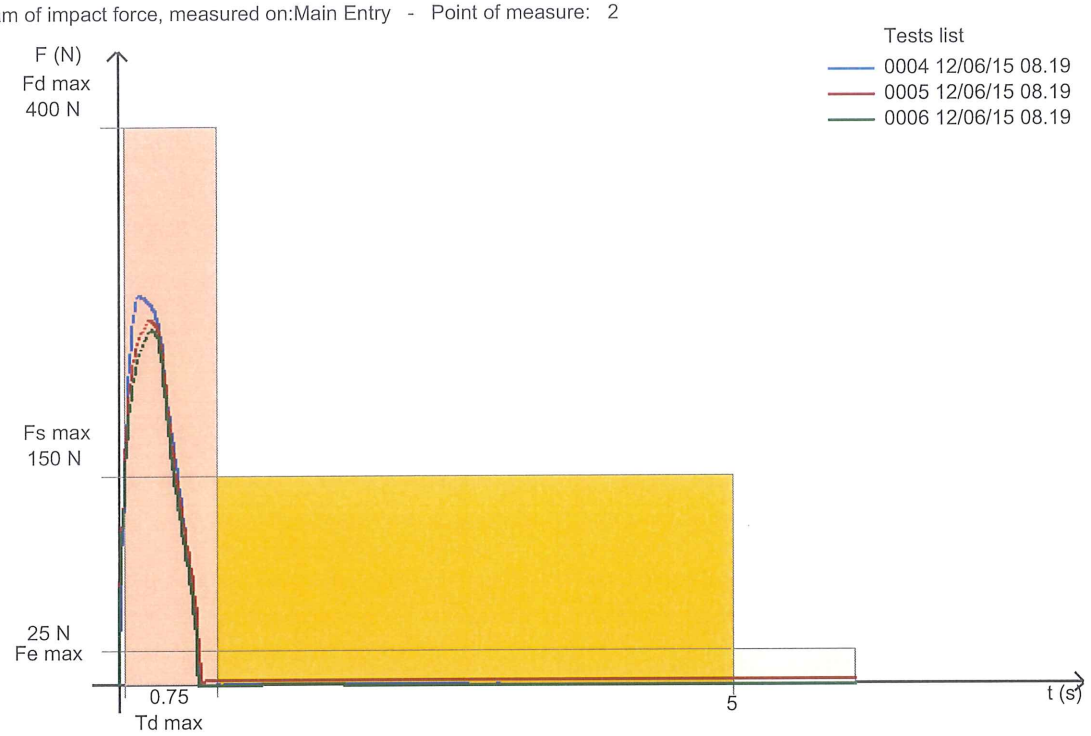
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0001 12/06/15 08.18	265	0.56	6	2
0002 12/06/15 08.19	189	0.38	8	4
0003 12/06/15 08.19	197	0.38	8	4
Average Value	217	0.44	7	3

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 2

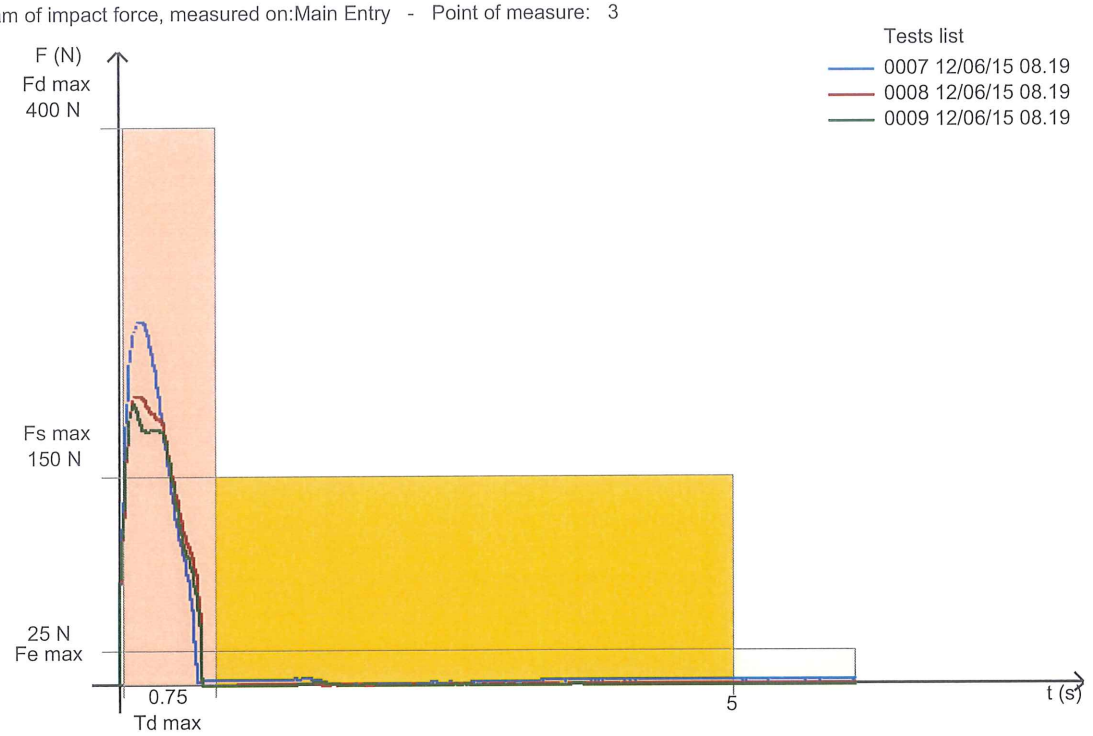


Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]	
0004 12/06/15 08.19	280	0.43	4	0	
0005 12/06/15 08.19	263	0.42	8	5	
0006 12/06/15 08.19	254	0.40	3	0	
Average Value	265	0.41	5	1	Result PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 3



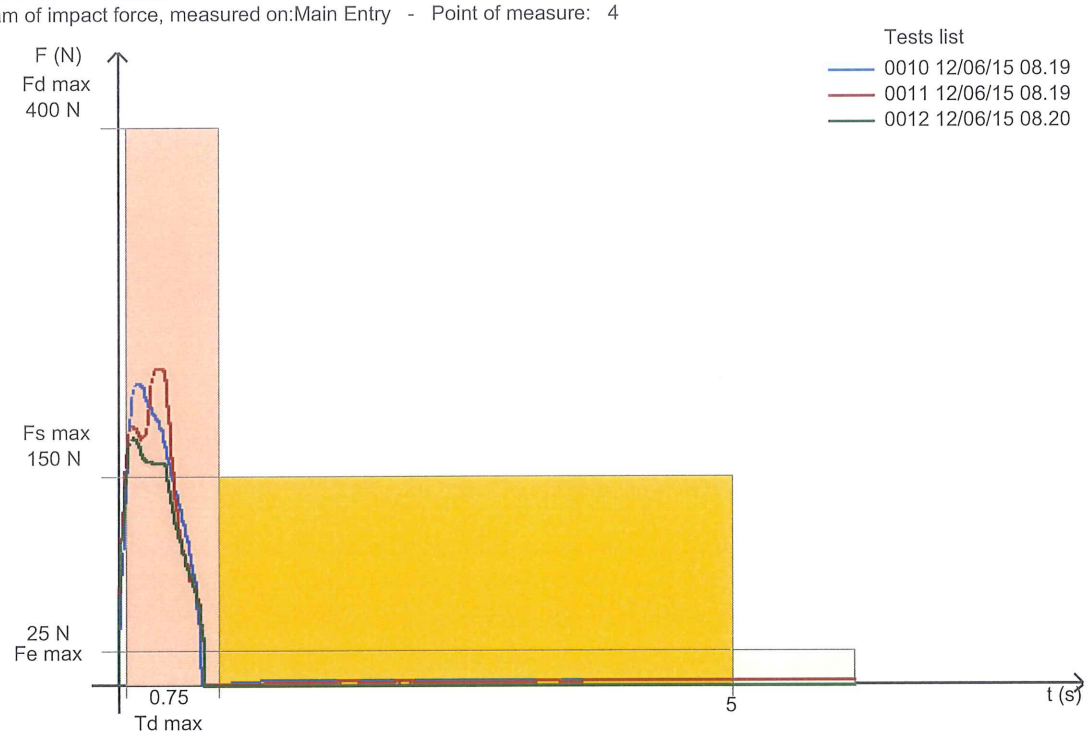
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0007 12/06/15 08.19	262	0.37	7	3
0008 12/06/15 08.19	209	0.38	6	1
0009 12/06/15 08.19	202	0.38	5	0
Average Value	224	0.38	6	1

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 4



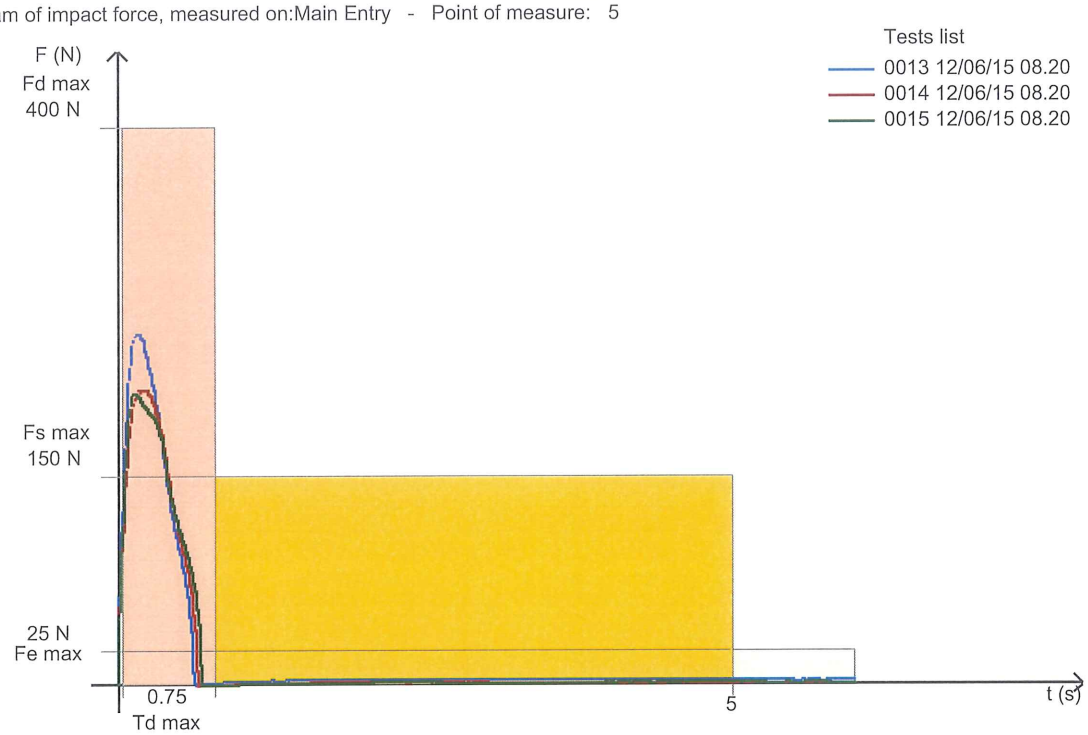
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0010 12/06/15 08.19	218	0.37	8	4
0011 12/06/15 08.19	228	0.39	7	4
0012 12/06/15 08.20	179	0.33	5	0
Average Value	208	0.36	6	2

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 5



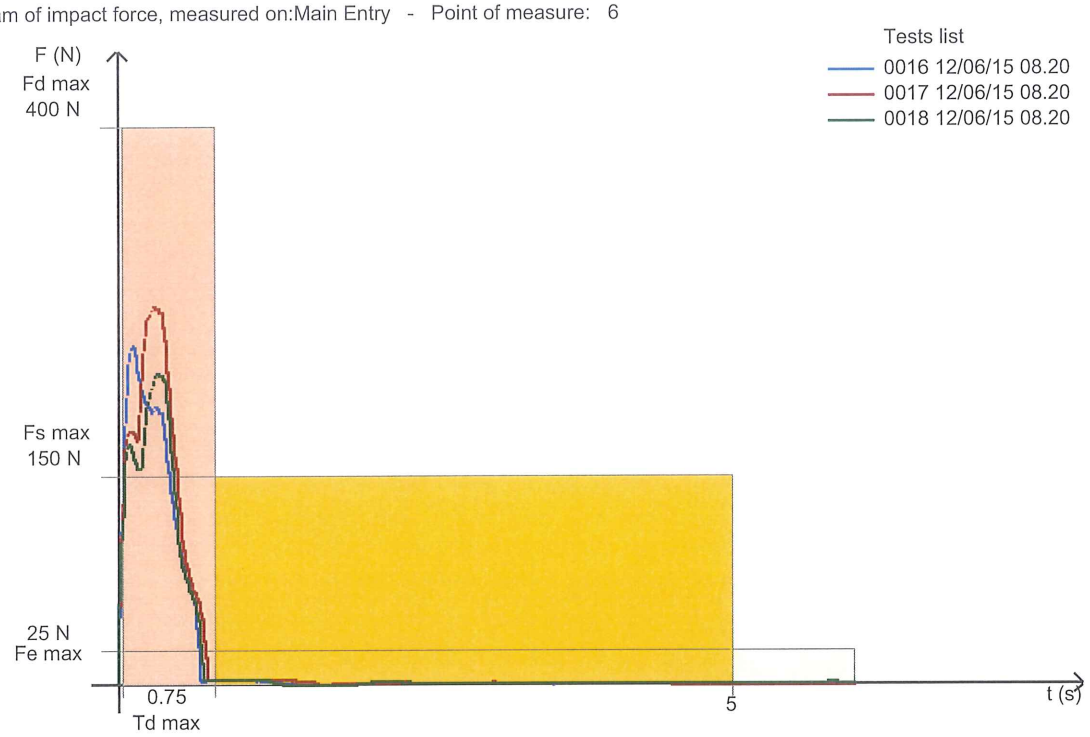
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0013 12/06/15 08.20	252	0.34	7	4
0014 12/06/15 08.20	210	0.34	6	2
0015 12/06/15 08.20	210	0.34	7	2
Average Value	224	0.34	6	2

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 6



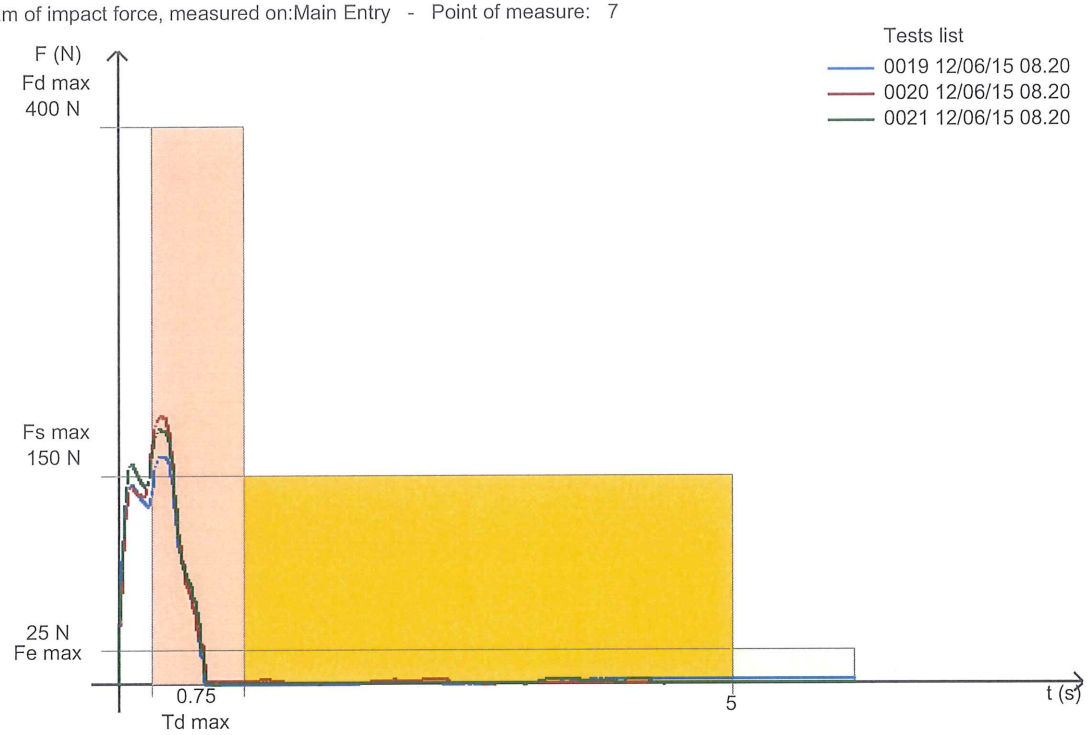
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0016 12/06/15 08.20	245	0.37	6	2
0017 12/06/15 08.20	270	0.42	5	0
0018 12/06/15 08.20	224	0.39	6	2
Average Value	246	0.40	5	1

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 7



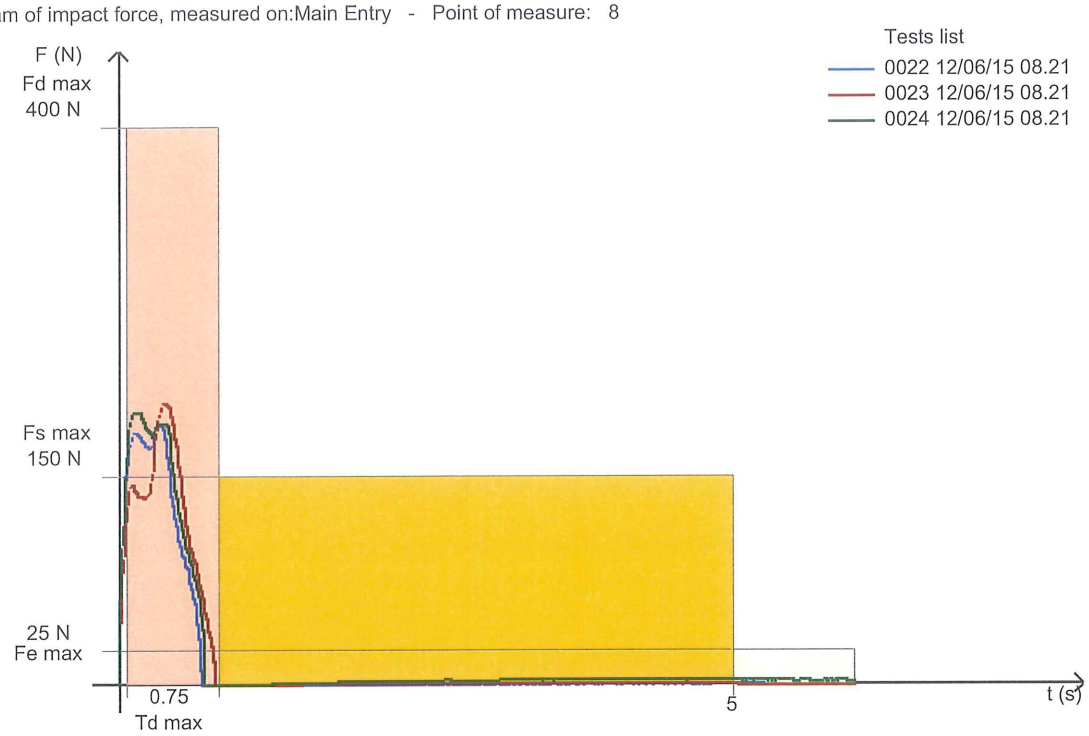
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0019 12/06/15 08.20	164	0.14	6	4
0020 12/06/15 08.20	194	0.20	6	2
0021 12/06/15 08.20	183	0.37	6	2
Average Value	180	0.23	6	2

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 8



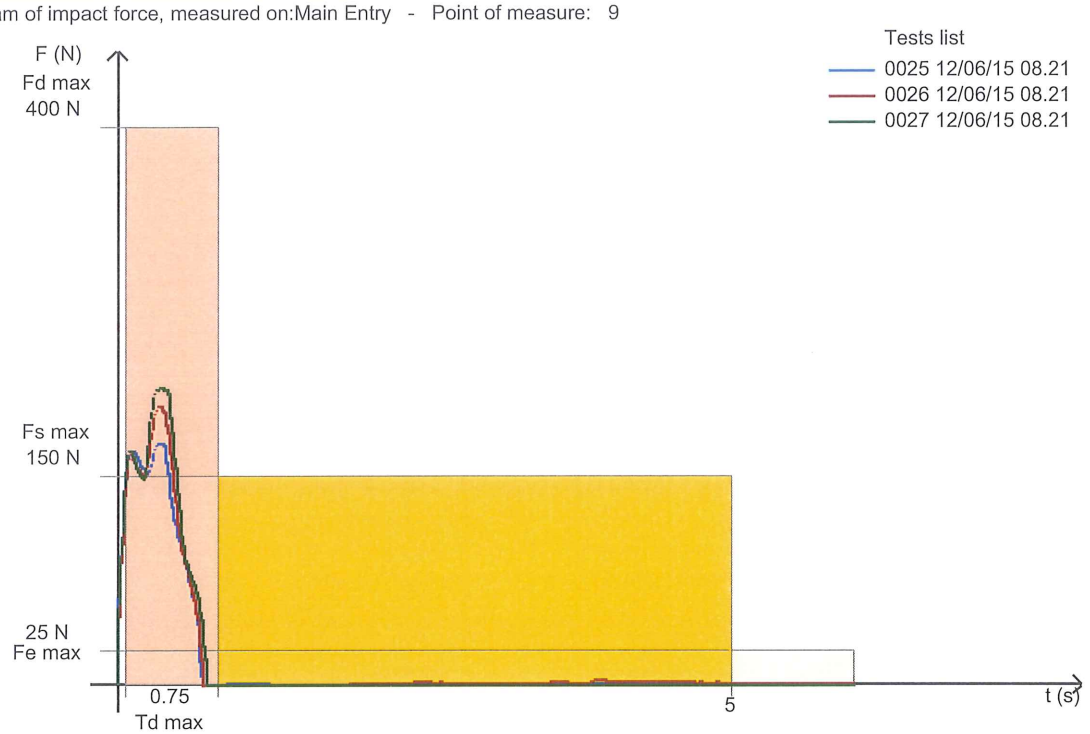
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0022 12/06/15 08.21	187	0.35	5	2
0023 12/06/15 08.21	202	0.22	6	1
0024 12/06/15 08.21	197	0.38	7	3
Average Value	195	0.32	6	2

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 9



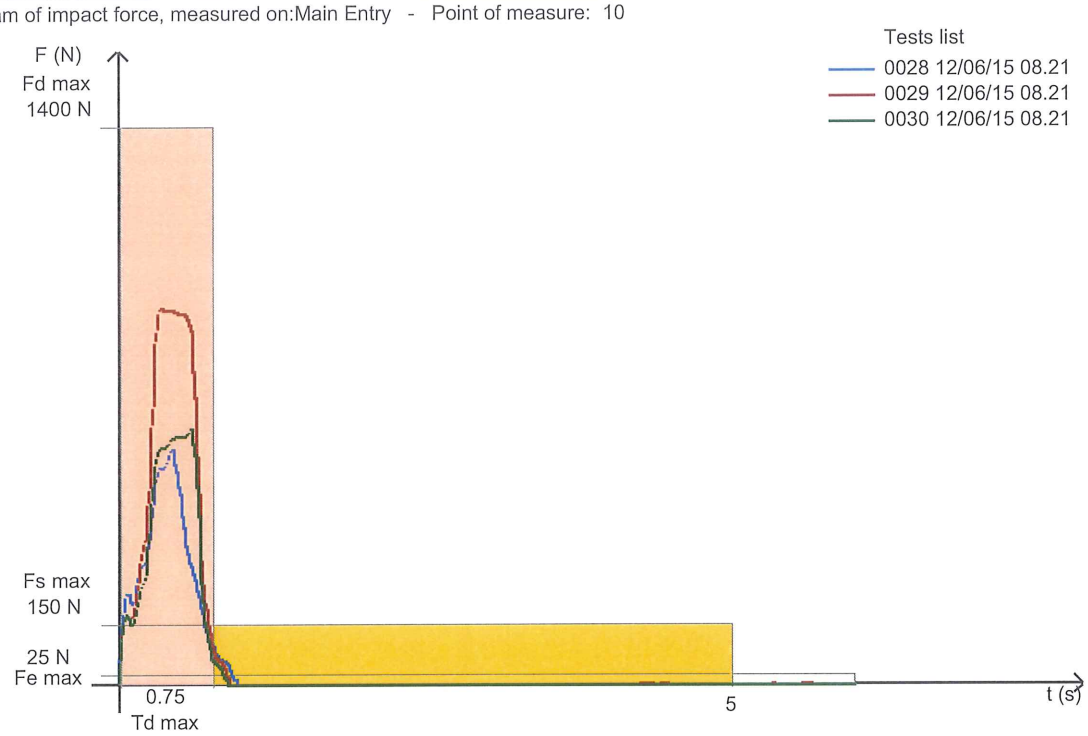
Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]
0025 12/06/15 08.21	174	0.34	6	2
0026 12/06/15 08.21	200	0.38	6	2
0027 12/06/15 08.21	212	0.40	4	0
Average Value	195	0.37	5	1

Result
PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.

Diagram of impact force, measured on:Main Entry - Point of measure: 10



Reference:	Dynamic Force Fd [N]	Dynamic Time Td [s]	Static Force Fs [N]	End Force Fe [N]	
0028 12/06/15 08.21	594	0.67	4	0	
0029 12/06/15 08.21	948	0.69	6	4	
0030 12/06/15 08.21	646	0.67	0	0	
Average Value	729	0.68	3	1	Result PASS

Annotations:

WARNING: if the max value of static force Fs is above 150 N and the result is PASS, check the frequency of the next peak force. If the distance from peak to peak is above 1 s, the result is FAIL.