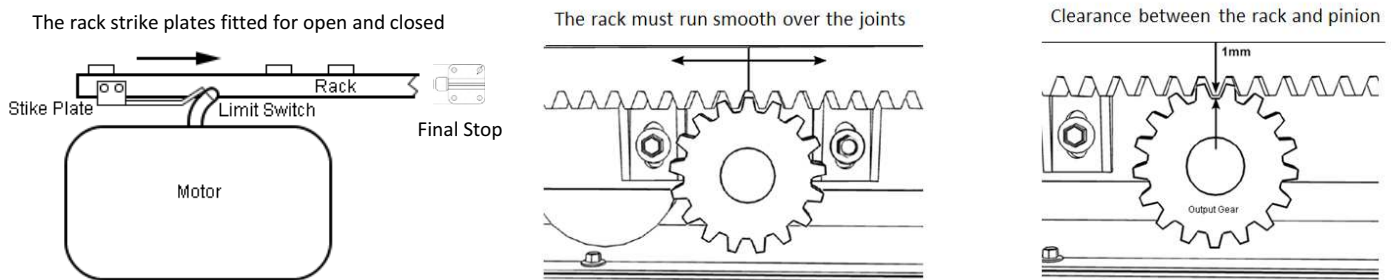


Roger Technology Sliding Brushless BH70 1DC Control Panel Quick Start Guide

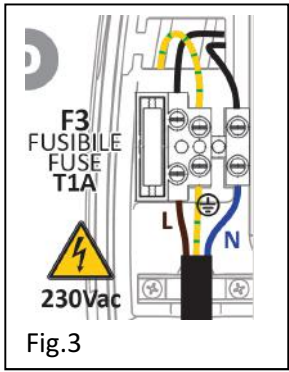
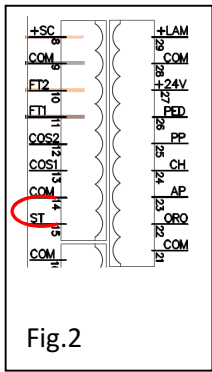
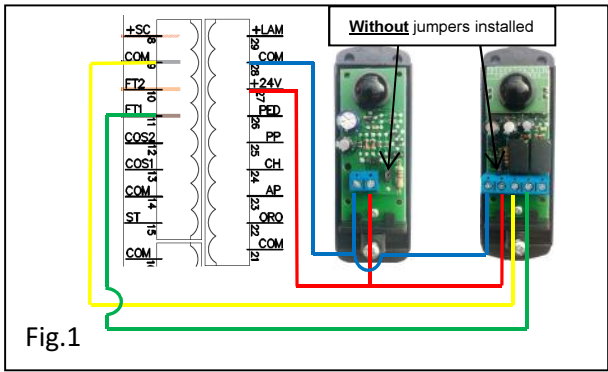
The following instruction is designed to enable the installer to quickly prove the sliding brushless motor and set the work parameters. The final commissioning should only be done in conjunction with the correct full **relevant ROGER SERIES MOTOR instructions manuals**.

STEP 1)

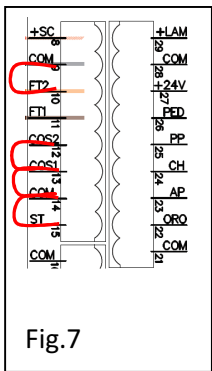
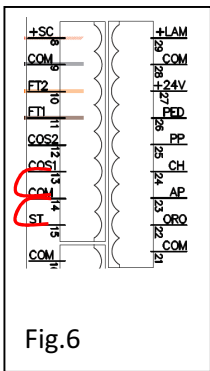
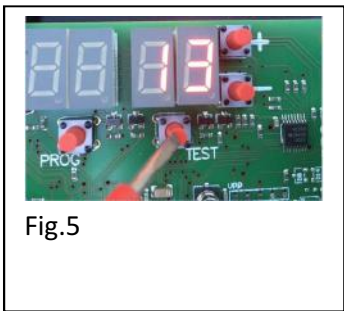
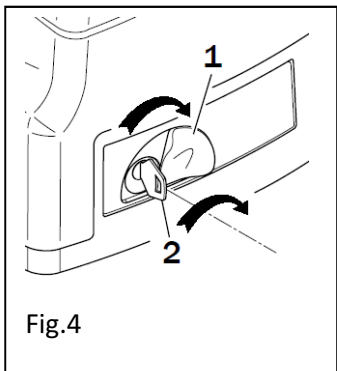
The brushless sliding motor unit must be securely fixed to its concrete base. The gate should be level. The drive rack should be adjusted to give a 1mm clearance throughout the full travel of the gate, be smooth throughout the run with the motor out of drive, and have the **end of run limit plates installed to the rack at both open and closed positions**. The gate should also have a physical final stop (both open and closed) so that in the case of limit switch failure, the gate cannot simply be driven off the end of the rack by the motor.



STEP 2) Mount the photocells 500mm high on the posts in front of the gate. Make sure they are looking at each other and level. Connect the photocells as per Fig.1 A second set may be added behind the gate and connected into FT2. If required. Add the link between the terminals 14&15, Fig.2. Connect the mains power supply, Fig3.



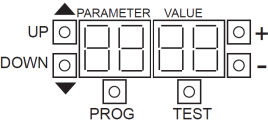
STEP 3) Make sure the gate is not on the open or closed limits, the manual release is closed and the key in the locked position. Fig.4. Turn the power on. Press the TEST button once. The numbers **13** should appear on the display. The system is looking for **COS1** at terminal **13**, (safety edge circuit 1) either install the required safety circuit explained later in the manual, or link terminal 13 to the nearest COM terminal, if this circuit is not required, Fig6. Repeat this procedure or connect the necessary required safety circuits until the display reads **00** when you press the TEST button. The connector block may look like Fig7, where no additional safety circuits have been connected.



Roger Technology Sliding Brushless BH70 1DC Control Panel Quick Start Guide

Step 4) Select the position of the motor left or right.

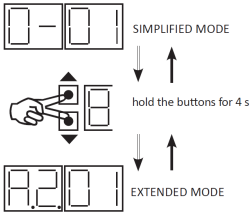
STANDARD PARAMETER AND VALUE	FUNCTION	VALUE ON DISPLAY	DESCRIPTION
	Position of the motor with respect to the gap	00	motor on the LEFT with respect to the gap looking from inside
		01	motor on the RIGHT with respect to the gap looking from inside



Using the UP and DOWN buttons to view the parameter to be changed, then with the + and - buttons change its value (the number on the right starts flashing).

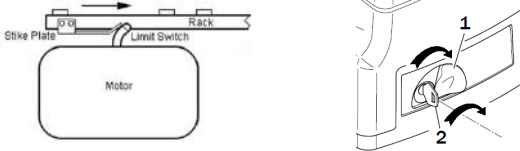
To save the value set on the display, wait a few seconds, the new value is saved automatically.

(Please note, the above change can only be done in simplified mode. If the system is in extended mode, you must change back to simplified mode first.)



Step 5) Stroke programming sequence.

The gate needs to be fully closed and the end of run limit strike plate on the rack pushed fully to the close point. Close and lock the release door with the key fully.



To enter programming mode press and hold **PROG** for 4 sec.: the display will show AP P-
Open the release door with the key, after a few seconds the message **PH AS** appears on the display and the timing of the motor starts. (The motor makes a noise, but at this stage there is no movement)
The message **PH AS** starts to flash on the display. Close and lock the release door with the key fully. The gate should start to move and the stroke programming begins.
(The display may show blinking message **FO to** indicating that you should quickly release the space covered by the photocells.)

After a few seconds the message **Au to** appears on the screen. The gate should be opening. After reaching the end of the opening and after a short pause, the message **Au to** should be flashing on the display. The closing starts and then finishes when the gate reaches the closing limit switch. (The slowing speed period is set automatically)

If the program is successful, the display goes back to showing the control and safety status.
Otherwise, **APPE** appears (acquisition error) or **APPL** (path length error) and the program will have to be repeated.

(Restoring factory parameters if necessary.)
Turn off the control unit, simultaneously press and hold the UP and DOWN buttons then turn on again and keep up pressing the buttons: after 4 seconds the display will show the writing **rE S-** flashing.
(You will need to re-select the position of the motor left or right if the factory reset is carried out at position 0- and repeat the stroke programming sequence)

Roger Technology Sliding Brushless BH70 1DC Control Panel Quick Start Guide

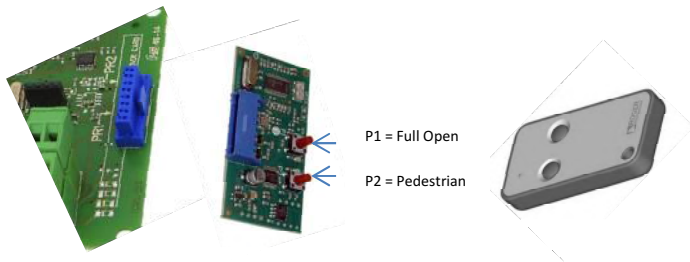
Step 6) Insert the radio card into the slot on the main PCB.

Push the P1 button once on the radio card, followed by the button on your remote fob that you want to open the gate fully with. Push the P2 button once on the radio card, followed by the button on your remote fob that you want to open the gate partially. (PEDESTRIAN)

(Deleting all codes.)

Press the receiver buttons P1 and P2 simultaneously for 4 seconds: 5 fast blinks of the two LEDs indicates total erasure of stored codes.

NOTE: it's recommended to delete all codes at the first installation before starting storing codes.



Step 7) Test the system

You can now test run the system with the fob.

If necessary reduce the impact force level with the menu **b**- using the simplified parameters or 30 and 31 in the extended parameters. These settings are explained in the manufacturers B70/1DC manual.

Step 8) add in the necessary safety photocells, safety edges and other devices applicable to your installation as explained in the manufacturers B70/1DC manual.

Installer:

(Name, address, telephone)

UNAC GUIDE No. 1
FOR THE MOTORISATION OF SLIDING GATES
IN ACCORDANCE WITH MACHINERY DIRECTIVE 98/37/EEC AND THE APPLICABLE PARTS OF
STANDARDS EN 13241-1, EN 12453, EN 12445

With this publication UNAC sets out to inform and assist installers in applying the specifications of the directives and of European standards concerning the safe use of motorised gates/doors.

It should be noted that those who sell and *motorise* an existing manual door/gate become the manufacturer of the motorised door/gate *machine* and must prepare and keep the technical file, as laid down by Annex V of the Machinery Directive (98/37/EEC). The technical file must contain the following documents:

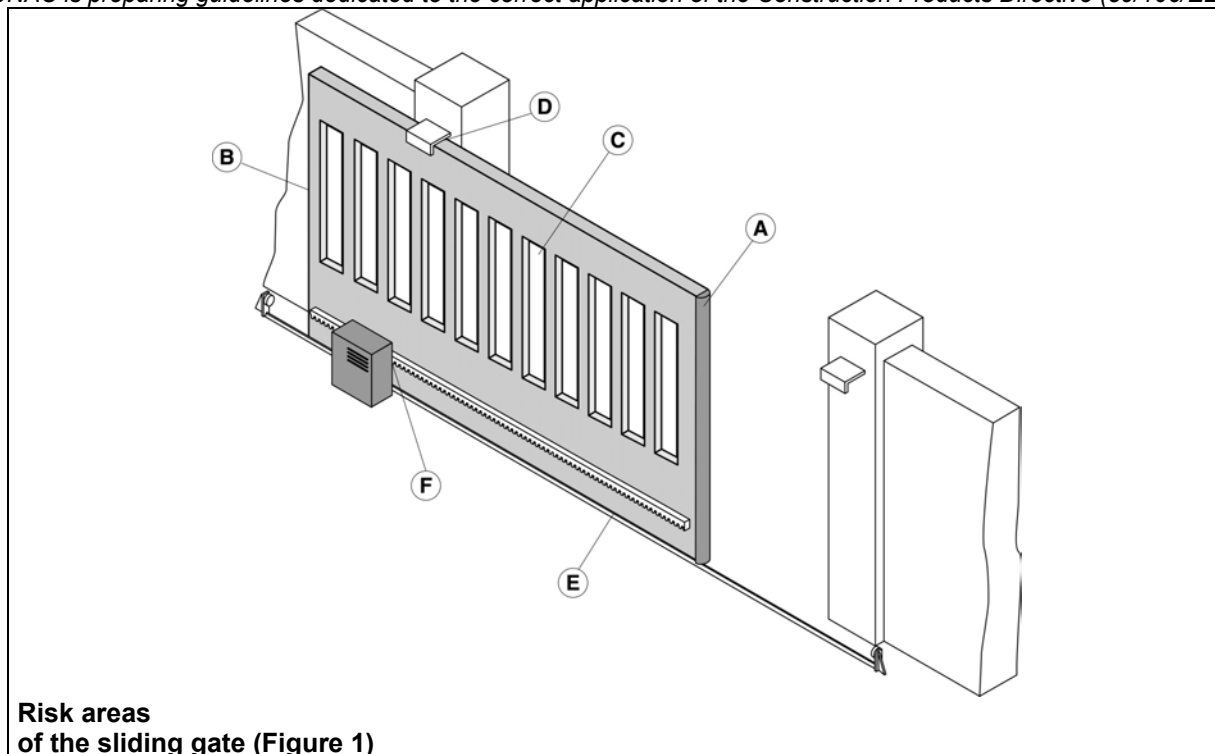
- ☐ Assembly drawing of the motorised door/gate (usually included in the installation manual).
- ☐ Electrical connections and control circuit diagrams (usually included in the installation manual).
- ☐ Risk analysis including (as indicated on the following pages):
the list of the essential requirements as indicated in Annex I of the Machinery Directive;
the list of the risks presented by the door/gate and the description of the solutions adopted.
- ☐ They must also keep the manuals for installation and maintenance of the door/gate and of the components.
- ☐ Prepare the operating instructions and general warnings for safety (if necessary integrating those in the manual for installation of the door/gate) and give the user a copy.
- ☐ Compile the proof book and give the user a copy (see facsimile in Annex 1).
- ☐ Draft the EC declaration of conformity (see facsimile in Annex 2) and give the user a copy.
- ☐ Fill in the label or plate with CE marking and attach it to the motorised door/gate.

N.B. *The technical file must be held and made available to the competent national authorities for at least ten years from the date of construction of the motorised door/gate.*

Note also that, as from May 2005, the manufacturer of a new door/gate (both manual and motorised) must observe the procedure for the CE marking pursuant to the Construction Products Directive (89/106/EEC), as indicated in annex ZA of the standard EN 13241-1. This procedure involves the manufacturer:

- ☐ setting up and maintaining internal production control;
- ☐ having a notified body carry out the initial type tests referring to the applicable characteristics indicated in Annex ZA of standard EN 13241-1.

N.B. *UNAC is preparing guidelines dedicated to the correct application of the Construction Products Directive (89/106/EEC).*

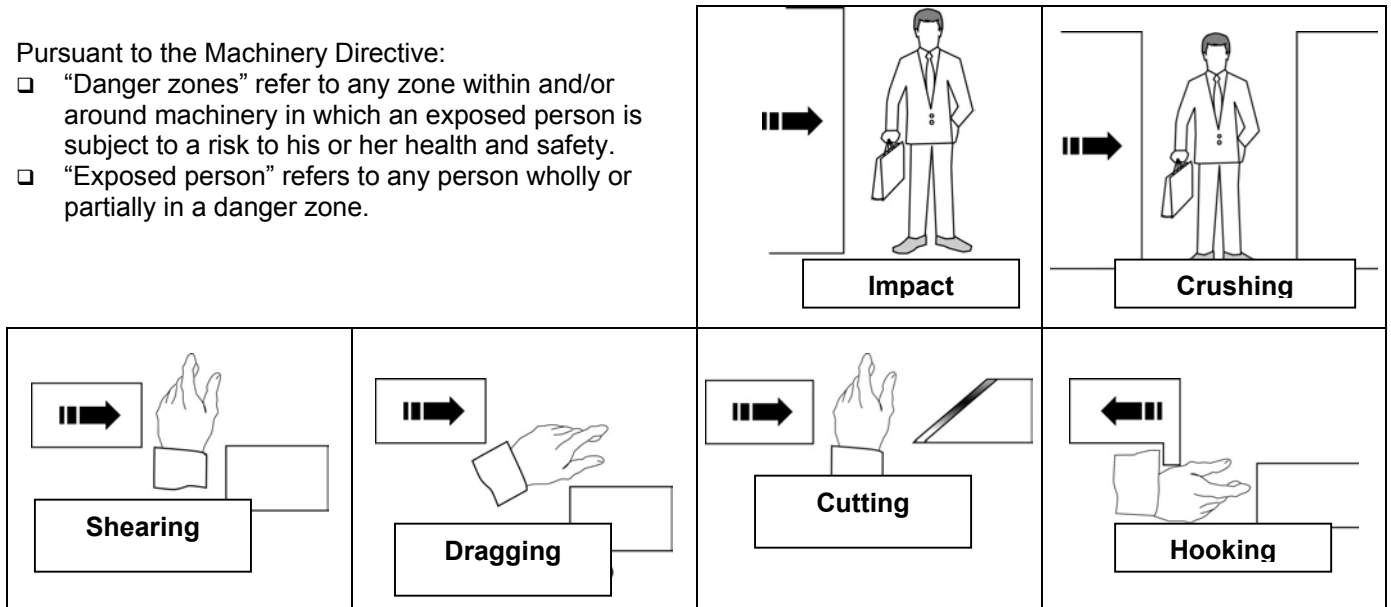


The information given was drafted and checked with the utmost care, nevertheless UNAC declines all responsibility for any errors, omissions or inaccuracies due to technical or graphical requirements. UNAC points out that this guide does not replace the content of standards which the manufacturer of the motorised door/gate must observe.

KEY TO THE MECHANICAL RISKS CAUSED BY MOVEMENT OF THE GATE

Pursuant to the Machinery Directive:

- ❑ “Danger zones” refer to any zone within and/or around machinery in which an exposed person is subject to a risk to his or her health and safety.
- ❑ “Exposed person” refers to any person wholly or partially in a danger zone.



MINIMUM LEVEL OF PROTECTION OF THE MAIN EDGE

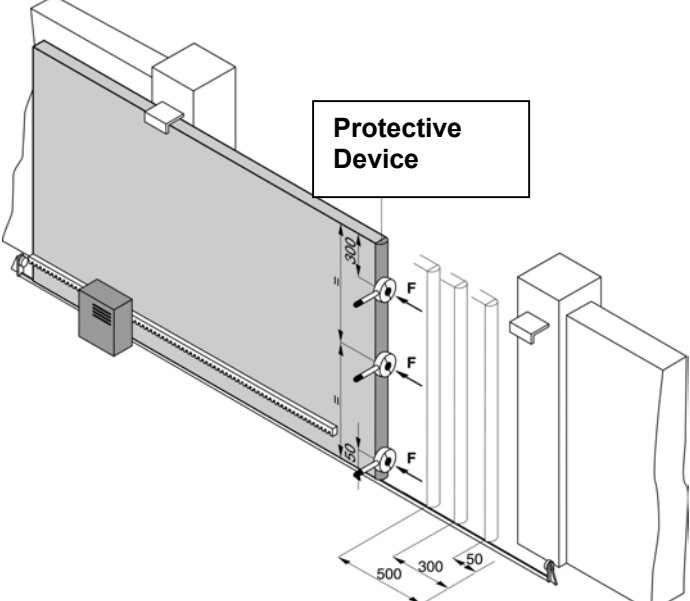
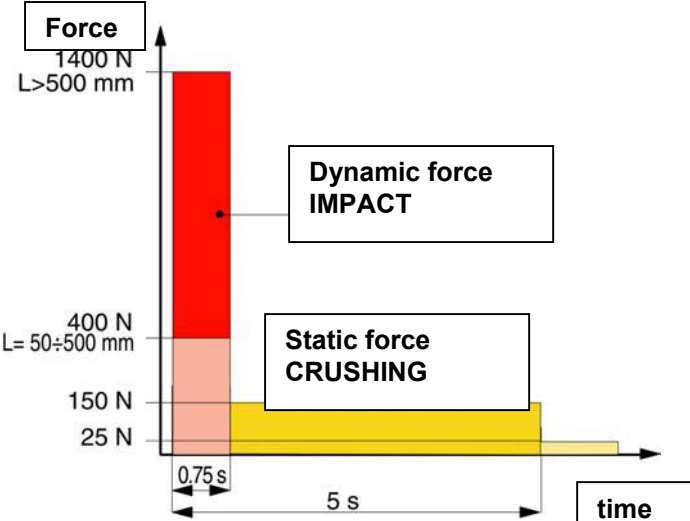
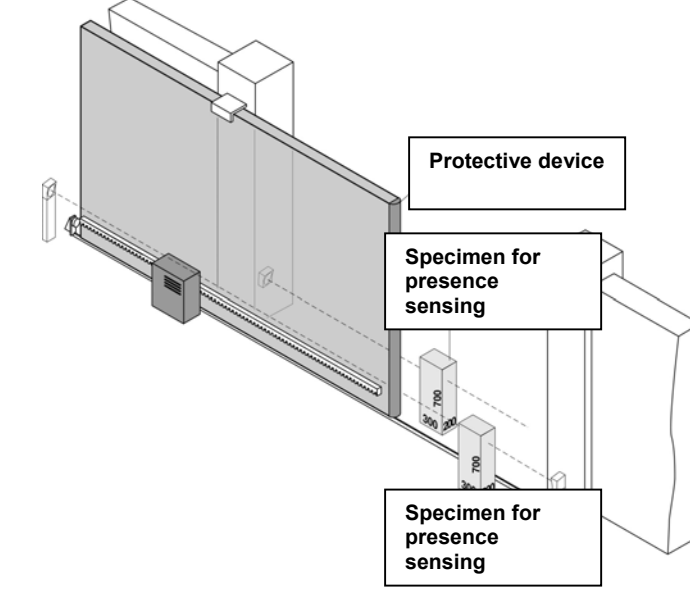
Type of actuation controls	Type of use		
	Informed users (private area)	Informed users (public area)	Uninformed users
Hold-to-run control	Pushbutton control	Pushbutton control with key	Hold-to-run control not possible
Impulse control with door visible	Limitation of forces, or presence sensing devices	Limitation of forces, or presence sensing devices	Limitation of forces and photocells, or presence sensing devices
Impulse control with door not visible	Limitation of forces, or presence sensing devices	Limitation of forces and photocells, or presence sensing devices	Limitation of forces and photocells, or presence sensing devices
Automatic control (e.g. timed closure control)	Limitation of forces and photocells, or presence sensing devices	Limitation of forces and photocells, or presence sensing devices	Limitation of forces and photocells, or presence sensing devices

ANALYSIS OF THE RISKS AND CHOICE OF SOLUTIONS

IN ACCORDANCE WITH THE MACHINERY DIRECTIVE 98/37/EEC AND THE STANDARDS EN 13241-1, EN 12453, EN 12445

The risks listed below follow the sequence of the installation process. These risks are those which are commonly present in motorised doors/gates systems. According to the various situations, consideration therefore has to be made of any possible additional risks and exclude those which are not applicable. The solutions to be adopted are those indicated by the standards mentioned above; in the case of risks not dealt with, the safety integration principles indicated by the Machinery Directive (Annex 1 – 1.1.2) have to be applied.

MD ANN. 1	Type of risks	Evaluation criteria and solutions to be adopted (Tick the box corresponding to the solution adopted)
1.3.1 1.3.2	<i>Mechanical, structural and wear risks.</i> [1] Loss of stability and break-up.	<input type="checkbox"/> Check the solidity of the structure installed (jambs, hinges and leaves) in relation to the forces generated by the motor. Attach the motor stably using adequate materials. If available, check the content of the EC declaration of conformity of the manual gate. <input type="checkbox"/> If necessary, carry out the structural calculation and attach it to the Technical File. <input type="checkbox"/> Check that the travel of the leaves is limited (during opening and closure) by mechanical stops of adequate strength. Check that the leaves cannot, under any circumstance, exit their slide guides and fall.
1.5.15	[2] Tripping.	<input type="checkbox"/> Check that any thresholds higher than 5 mm are visible, indicated or shaped.

MD Ann. 1	Type of risks	Evaluation criteria and solutions to be adopted (Tick the box corresponding to the solution adopted)
1.3.7 1.3.8 1.4	<p><i>Mechanical risks caused by the movement of the gate (see references in Figure 1).</i></p> <p><input type="checkbox"/> CAUTION – If the door/gate is used solely with hold-to-run controls (and meets the requirements of the standard EN 12453), the danger points listed below do not have to be protected.</p> <p><input type="checkbox"/> CAUTION – If protective devices are installed (in accordance with the standard EN 12978) which prevent in all cases contact between the moving leaf and persons (for example photoelectric barriers, presence sensing devices), it is not necessary to measure the operating forces.</p>	
	<p>[3] Impact and crushing on the main closing edge (Figure 1, risk A).</p> <p><input type="checkbox"/> Measure the closure forces (by means of the special instrument required by the standard EN 12445) as illustrated.</p> <p>Check that the values measured by the instrument are below those indicated in the graph.</p> <p>Carry out the measurements in the following points: L = 50, 300 and 500 mm; H = 50 mm, at mid-height of the leaf and at the height of the leaf minus 300 mm (max 2500).</p> <p><i>N.B. The measurement should be repeated three times in each point and the average value considered.</i></p>	
	<p>The graph indicates the maximum values of the dynamic, static and residual operating forces in relation to the various positions of the leaf.</p> <p><i>N. B. With reference to the measurement points with L = 50, 300 and 500 mm, the maximum dynamic force value permitted is 400 N.</i></p> <p><input type="checkbox"/> If the values of the forces are higher, install a protective device in accordance with the standard EN 12978 (for example a sensitive edge) and repeat the measurement.</p> <p><i>N. B. The dynamic force can be reduced, for example, by reducing the speed of the leaf or using a sensitive edge with high elastic deformation.</i></p>	
	<p>[4] Impact on the main closing edge (Figure 1, risk A).</p> <p><input type="checkbox"/> To reduce the risk of impact between the sliding leaf and persons (or vehicles), a pair of photocells must be installed (preferably on the outside) as illustrated (recommended height 500 mm).</p> <p><input type="checkbox"/> In the cases where the thickness of the leaf is greater than 150 mm, or when the impact risk is high (such as for example the presence of unattended children), a second pair of photocells should be installed (on the inside), as illustrated (recommended height 500 mm).</p> <p><i>N.B. The test specimen for presence sensing is a parallelepiped (700 x 300 x 200 mm) having 3 faces with a light and reflective surface and 3 faces with a dark and opaque surface.</i></p>	

MD Ann. 1	Type of risks considered	Evaluation criteria and solutions to be adopted (Tick the box corresponding to the solution adopted)
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[5] Impact and crushing in the area of opening (Figure 1, risk B).

☐ Observe the safety distances illustrated, in the two different cases.



or:

☐ Measure the forces of opening (by means of the special instrument required by the standard EN 12445) as illustrated.

Check that the values measured by the instrument are less than those indicated in the graph.

Carry out the measurements in the following points:

L = 50, 300 and 500 mm;

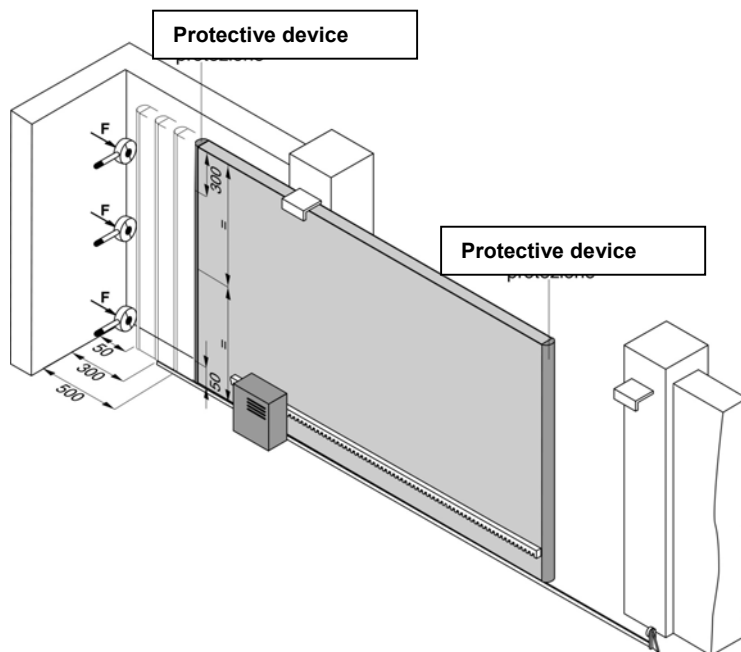
H = 50 mm,

at mid-height of the leaf and

at the height of the leaf minus 300 mm (max 2500).

N.B. The measurement should be repeated three times in each point and the average value considered.

☐ If the values of the forces are higher, install a protective device in accordance with the standard EN 12978 (for example a sensitive edge) and repeat the measurement.



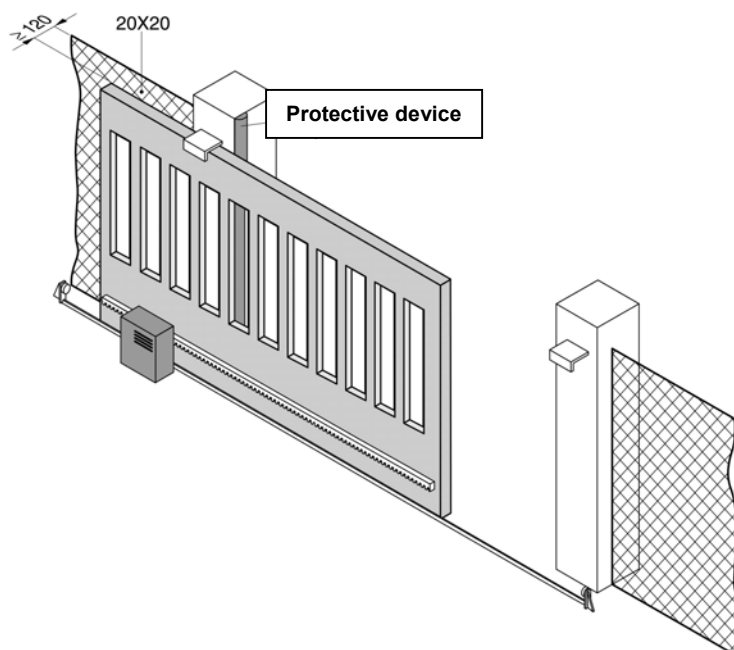
[6] Shearing between the sliding leaf and fixed part during the movement of opening and closure (Figure 1, risk C).


☐ The leaf of the sliding gate and the enclosure must be free from gaps, or the gaps must be covered with a net whose mesh sizes depend on the distance of the leaf from the enclosure.

Dimensions of the meshes of the net	Distance between the leaf and the enclosure
≤ 18.5	120
from > 18.5 to ≤ 29	300
from > 29 to ≤ 44	500
> 44	850

☐ Or a protective device should be installed in accordance with the standard EN 12978 (for example a sensitive edge) as illustrated.

☐ Eliminate or protect any sharp edges, handles, projecting parts etc. (for example by means of covers or strips in rubber).



MD Ann. 1	Type of risks	Evaluation criteria and solutions to be adopted (Tick the box corresponding to the solution adopted)
1.3.7 1.3.8 1.4	<p><i>Mechanical risks due to movement of the leaf.</i></p> <p>[7] Dragging of the hands in point (Figure 1, risk D).</p> <p>[8] Dragging of the feet on the lower edge (Figure 1, risk E).</p> <p>[9] Dragging of the hands on the drive unit (Figure 1, risk F).</p>	<p><input type="checkbox"/> Check that there is a clearance ≤ 8 mm.</p> <p>or:</p> <p><input type="checkbox"/> attach guards that prevent fingers from being inserted (for example a rubber strip).</p> <p><input type="checkbox"/> The clearance between the gate and ground must prevent the risk of dragging of the feet.</p> <p><input type="checkbox"/> Adequately protect the point of dragging between the pinion and the rack during movement of the leaf.</p>
1.5.1 1.5.2 1.5.10 1.5.11	<p><i>Electrical and electromagnetic compatibility risks</i></p> <p>[10] Direct and indirect contacts. Dispersion of electrical energy.</p> <p>[11] Risks relating to electromagnetic compatibility.</p>	<p></p> <p><input type="checkbox"/> Use CE-marked components and materials pursuant to the Low Voltage Directive (73/23/EEC).</p> <p><input type="checkbox"/> Carry out the electrical connections, connection to the mains, earth connections and relevant checks, in accordance with current regulations and as indicated in the installation manual of the drive unit.</p> <p><i>N.B. If the electrical supply line is already set up (via both a socket and a connector block) declarations of conformity to Italian law no. 46/90 are not necessary.</i></p> <p><input type="checkbox"/> Use CE-marked components pursuant to the EMC Directive (89/336/EEC). Carry out the installation as indicated in the manual for installation of the drive unit.</p>
1.2 1.5.3 1.2.3 1.2.4	<p><i>Safety and reliability of drive unit and control and safety devices.</i></p> <p>[12] Safety conditions in the event of malfunctioning and power failure.</p> <p>[13] Energy types other than electrical energy</p> <p>[14] Actuation and disabling of the drive unit.</p> <p>[15] Power supply switch.</p>	<p><input type="checkbox"/> Use drive units which comply with the standard EN 12453 and safety devices which comply with the standard EN 12978.</p> <p><input type="checkbox"/> If hydraulic drive units are used, they must comply with the standard EN 982; or</p> <p><input type="checkbox"/> if pneumatic drive units are used, they must comply with the standard EN 983.</p> <p><input type="checkbox"/> Check that, after a fault or power failure, the drive unit restarts safely without creating hazardous situations.</p> <p><input type="checkbox"/> Install an omnipolar switch for electrical insulation of the door/gate, in accordance with current laws. This switch must be positioned and protected against accidental or unauthorised actuation.</p>

