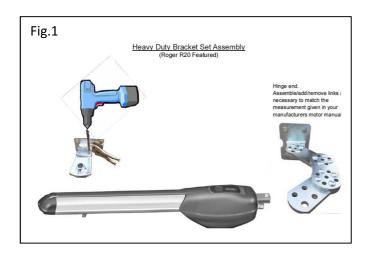
The following instruction is designed to enable the installer to quickly prove the ROGER brushless swing gate motors and set the control panel work parameters prior to the final installation. The final commissioning should only be done in conjunction with the correct full **relevant ROGER SERIES MOTOR instructions manuals and all the necessary safeties.**

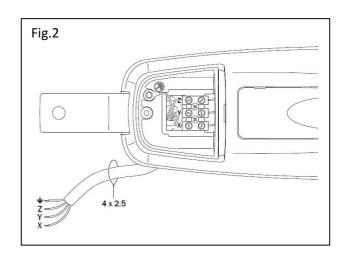
STEP 1)

Check the gates to receive the automation are level, free to swing throughout the full arc open/closed and all hinges well lubricated. Assemble the std or (heavy duty Fig1) brackets for above ground installations, securely and adhere to the measurement tables for your motor type. In particular measurements A&B from the separate motor installation manual.

STEP 2)

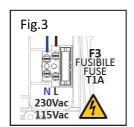
Connect the motor cables XYZ and earth to the XYZ points inside the control panel for each motor respecting that brushless motors need a minimum of 2.5mm cross section cable size. If the cables to be connected to the motor are extended over 10 metres in total length, a 4.0mm cross section cable must be used. In the case on just 1 motor, connect to

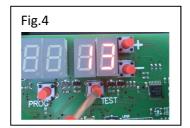


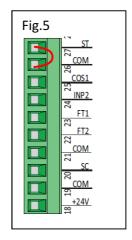


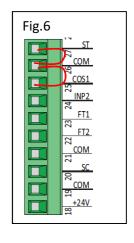
Step 3)

Connect the power supply to the control panel. Press the test button once. The display should read a number on the display. Example, (27). The system is looking for the safety device input terminal number 27 from the connection block in Fig.5. Either connect the necessary safety device or link out the terminal number to the nearest COM terminal on the same block if the safety input displayed is not necessary. Repeat the proceedure and connect the displayed number to COM or connect the safety device if necessary, until the display reads 00 when the TEST button is pressed. Fig.6 is an example of how the terminal block may look with some devices linked out.









ROGER BRUSHLESS B70/2DCHP Control panel when using FES180/PHOTO180 photocells

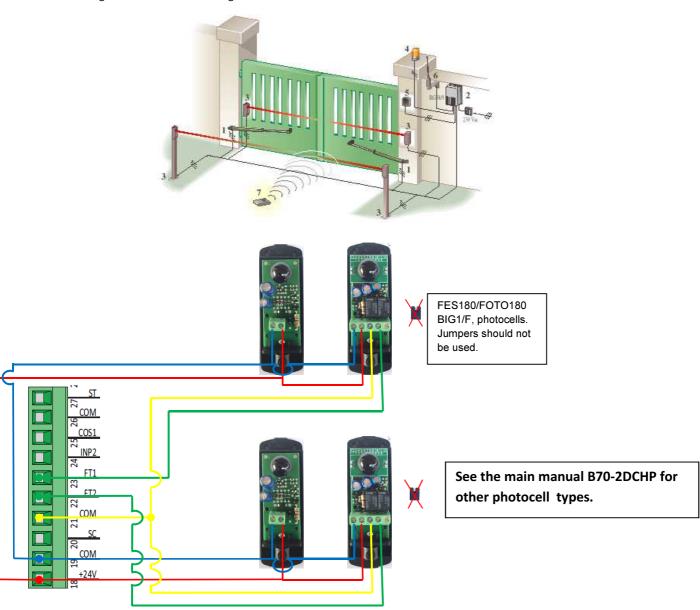
The photocells are in pairs, one transmitter and one receiver. They should be mounted 500-600 mm from the ground and face each other level. Each photocell regardless of type has a 24VAC supply.

The receiving photocell does the switching on and off to the control panel. If the transmitting beam can reach the receiving photocell, there will be a completed circuit to the main panel and the gate/s will function. If the beam is broken, during operation of closing, the gates will stop and reopen.

If you are using two pairs of photocells as pictured, the receivers should be crossed on opposite sides so that you do not have two receivers at the same side. The set on the gate posts (3) are on the outside of the gates.

For this purpose 5 core BT type cable is recommended for use. (CW1128 with conduit) Follow the wiring diagram provided to wire both the receiver and transmitting photocells. At the control box end, wire the colour coded cables up as per the diagram provided showing a typical photocell placement.

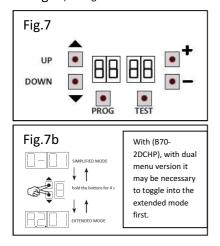
When the photocells are working and correctly aligned, you should hear a clicking sound from the transmitter when the beam is broken intermittently. Once wired, place the covers over the photocells and secure the fixing screw. Fill any cable gaps with silicone to prevent insects from entering the device and interfering with it.





STEP 4)

Using the control panel buttons UP/DOWN, Fig.7 Scroll down to menu 70 Fig.8 and select 1 motor or 2 motors. Change the parameter using the + - buttons. After a few seconds the board will realise the change automatically. From the chart in Fig.9, scroll down to **A1**, select the correct parameter for the motor you have connected using the + - buttons, make sure the panel realises the change. It should do this again automatically after a few seconds of the change. (See Fig7b for B70-2DC with dual menu)



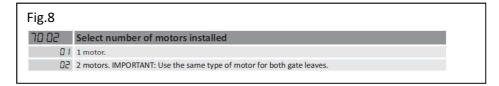
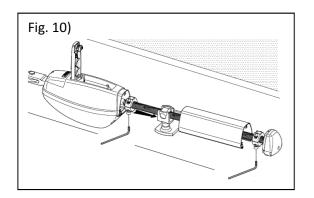
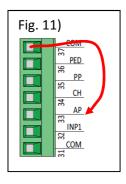


Fig. 9		
A104	Selecting automation system model WARNING! If this parameter is not set correctly, the automation system may not function properly. N.B.: in the event of a reset to restore the default parameters, this parameter must be set again manually.	
01	BM20 series - Irreversible piston for gate leaf lengths up to 3 m.	
02	BR20 series - Irreversible piston for gate leaf lengths from 2,5 to 3,5 m.	
03	BH23 series - Gear motor with irreversible articulated arm for gate leaf lengths up to 2,8 m.	
04	BR21 series - In-ground irreversible gear motor for gate leaf lengths up to 3,5 m.	
05	SMARTY series - Irreversible piston for gate leaf lengths from 5 to 7 m.	

Step 5)

Using a hex key tool, and the unlock lever, set the maximum open and closed stop positions of the motor, to give the correct corresponding gate open and closed positions for each gate as shown in Fig.10. Double check the positions of the collars by swinging the gate open/closed with the motor unlocked.





Step 6)

You should now be ready to carry out the stroke programming sequence. But first you should check that the motors are traveling in the correct direction in relation to the control panel. To do this it will be necessary to give the panel a brief open or close command and compare the command to the movement of the gate direction, but then quickly turn off the power once you realise the movement. Attach a temporary cable to COM as FIG.11 then, briefly touch the other end into the AP terminal. The AP terminal is the open command, so the gates should open. Turn off the power to the panel as soon as you see the movement. If the gates close with the AP input, the gates are going the wrong way. It will be necessary to swap around any two wires to the incorrect motor (ZYX) as detailed in Fig.2.

Step 7) THE <u>STROKE PROGRAMMING SEQUENCE</u> (also detailed in the main B70/2DCHP manual) WARNING! Before proceeding, make sure that:

The doors are in a fully closed position: bring the doors into position by giving a close command, (CH) or with above ground motors by using the manual un-lock) so that they come right against the mechanical stop. Pay attention to the position of the lever arm of the BR21 underground motors: it must be properly hooked onto the door. To facilitate the operation, it is recommended to power off and then restart, so that you can give the close command regardless of the position of the door: the motor stops automatically when it reaches the mechanical closure stop. For the program starting from the fully closed position is important because the control unit performs a mapping of the absorption of current along the entire movement, while opening and then closing. For this reason, if a different path is detected between opening and closing the program fails and returns an error message of AP PL

If the limit switches are present and connected, the motion stops when they are activated, otherwise the motors will stop on the motor adjustable stops or the gate wing stops set.

If you change the value of par. 31 and/or 32 in extended mode it is necessary to repeat the programming.

To enter programming press the PROG button for 4 s.: the display will show **AP P-**; at this point, you can programme the stroke by pressing the **PROG button** again, or by pressing **the radio control** button enabled by the step-by-step function.

The display shows the indication **AUTO** and motor 1 starts opening, after the phase shift time.

Programming is performed automatically. Wait for the completion of the cycles avoiding crossing the ray of the photocells or activating other safety devices (safety edges, stop).

The display shows the indication AU TO and motor 1 starts opening, after the phase shift time established in par. 25, motor 2 is also automatically activated; when the wings both reach the fully open position, stopping on the mechanical gate stop (or on the limit switch in the case of a motor with an articulated arm) the writing AU TO flashes on the display for 2 seconds indicating that it is going to close, then the indication AU TO stops flashing and the closing operation starts. If the program is successfully finished, 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 standard factory parameters.

Turn off the control unit, simultaneously press and hold the UP and DOWN buttons then turn on again while keeping the buttons pressed. After 4 seconds the display will show the writing **rE S-** flashing, which indicates that the values have been restored to factory. N.B.: parameter A1 in extended mode is not restored and should be checked again as well as the number of motors connected at 70

20 05	Select number of motors installed
🛛 I 1 motor.	
50	2 motors. IMPORTANT: Use the same type of motor for both gate leaves.
A104	Selecting automation system model WARNING! If this parameter is not set correctly, the automation system may not function properly. N.B.: in the event of a reset to restore the default parameters, this parameter must be set again manually.
01	BM20 series - Irreversible piston for gate leaf lengths up to 3 m.
BR20 series - Irreversible piston for gate leaf lengths from 2,5 to 3,5 m.	
03	BH23 series - Gear motor with irreversible articulated arm for gate leaf lengths up to 2,8 m.
04	BR21 series - In-ground irreversible gear motor for gate leaf lengths up to 3,5 m.
05	SMARTY series - Irreversible piston for gate leaf lengths from 5 to 7 m.

Step 8)

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 9)

Test the system

You can now test run the system with the fob.

If necessary reduce the impact force level with the menus **30 to 33** in the parameters. These settings are explained in the manufacturers B70/2DCHP manual.

Step 10)

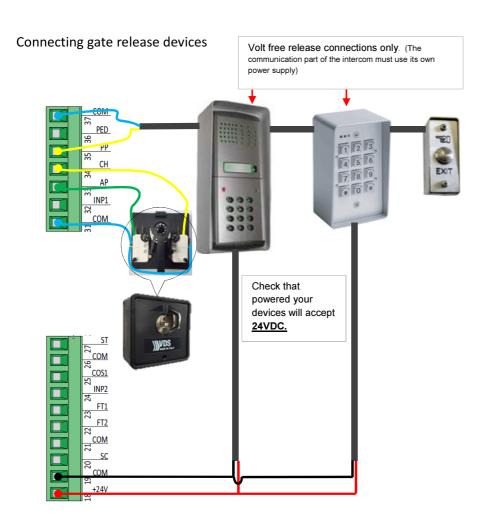
Add in the necessary safety photocells, safety edges and other devices applicable to your installation as explained in the manufacturers B70/1DCHP manual

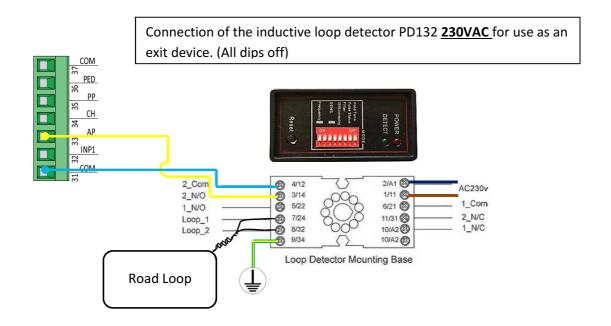
Step 11) Enabling Automatic Closing.

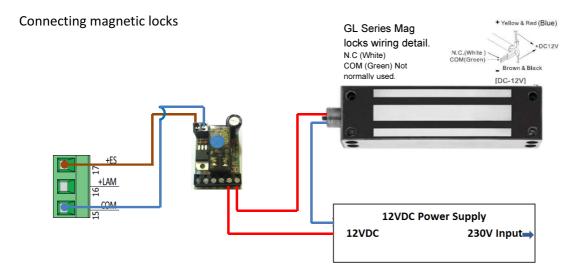
Change the parameter A2 to any number other than 00. Eg. 05 would make the gate auto-close and re-attempt a further 5 times before remaining open.

The pause time for auto-closing is pre-set to 30 seconds. Use the parameter 21 to change the time.

A2 00	Automatic closure after photocell is triggered (from gate completely open)		
00	Disabled.		
0 1- 15	From 1 to 15 of gate closure attempts after photocell is triggered. Once the number of attempts set is reached, the gate remains open.		
99	The gate tries to close indefinitely.		
2130	Setting automatic closing time The timer starts from the gate open state and continues for the set time. Once the set time is reached, the gate closes automatically. The timer count restarts if a photocell is triggered.		
00-90	Pause time settable from 00 to 90 s.		
92-99 Pause time settable from 2 to 9 min.			





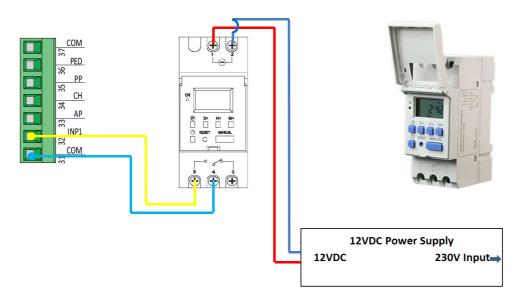


29 01	Electric lock
00	DEACTIVATED
0 1	ENABLED

Activation occurs 0.5 seconds before the start of the movement and lasts 3 seconds.

The controller takes into account when door 1 is approaching the closure stop, and helps the electric lock to hook. WARNING! For proper operation, adjust the mechanical stop inside the BR21 motor carefully (see also Note 13 and 14 relating to the parameters).

Connecting a 12V time clock



80 00	Clock contact configuration (INP1) When the clock function is active, the gate opens and remains open. At the end of the programmed time set with the external device (clock), the gate closes. N.B.: This parameter is not visible if R I D3 and 72D I.		
00	When the clock function is active, the gate opens and remains open. Any command signal received is ignored.		
01	When the clock function is active, the gate opens and remains open. Any command signal received is accepted. When the gate returns to the completely open position, the clock function is reactivated.		



installer:	ln	sta	II	e	r	•
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(Name, address, telephone)

UNAC GUIDE No. 2 FOR THE MOTORISATION OF HINGED 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.

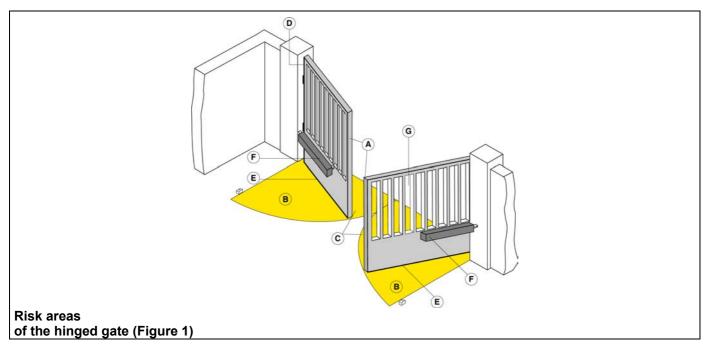
It should be noted that those who sell and *motorise* an existing manual door/gate become the manufacturer of the motorised door/gate *machine* and must prepare and keep the technical file, as laid down by Annex V of the Machinery Directive (98/37/EEC). The technical file must contain the following documents:

- □ 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

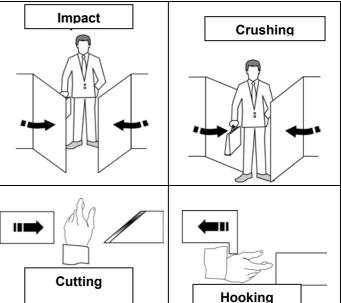
Pursuant to the Machinery Directive:

"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.

Dragging

Shearing



MINIMUM LEVEL OF PROTECTION OF THE MAIN EDGE

Type of actuation	Type of use			
controls	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 or 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	Mechanical, structural and wear risks. [1] Loss of stability and break-up.	 ☐ 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. ☐ If necessary, carry out the structural calculation and attach it to the Technical File. ☐ 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.	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	Mechanical risks caused by the movement of	the gate (see references in Figure 1).
1.4	☐ CAUTION – If the door/gate is used solely with hold-to-run controls (and meets the requirements o standard EN 12453), the danger points listed below do not have to be protected. ☐ CAUTION – If protective devices are installed (in accordance with the standard EN 12978) which p all cases contact between the moving leaf and persons (for example photoelectric barriers, presence devices), it is not necessary to measure the operating forces.	

[3] Impact and crushing on the main closing edge (Figure 1, risk A).

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

In the case of gates with two leaves, the closure force should be measured one leaf at a time. Check that the values measured by the instrument are below 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).

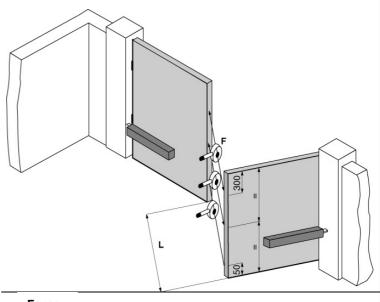
N.B. The measurement should be repeated three times in each point and the average value considered.

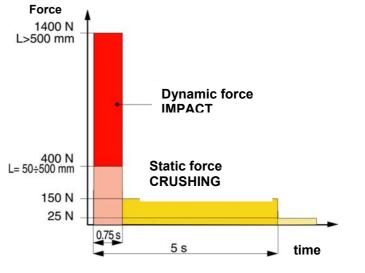
The graph indicates the maximum values of the dynamic, static and residual operating forces in relation to the various positions of the leaf.

N. B. With reference to the measurement points with L = 50, 300 and 500 mm, the maximum dynamic force value permitted is 400 N.

☐ 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.

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.



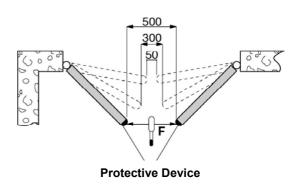




Leaves with overlapping and delayed closure

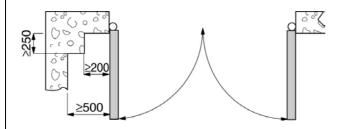
Protective Device

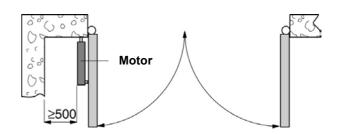
Leaves with simultaneous closure



[4] Impact and crushing in the area of opening (Figure 1, risk B).

Observe the safety distances illustrated (in the most prominent part of the leaf).





or:

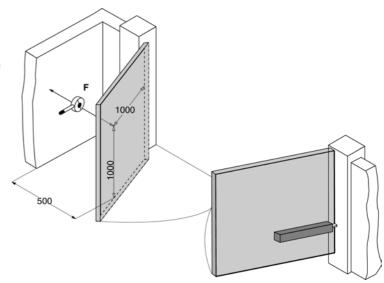
☐ Measure the forces of opening (by means of the special instrument required by the standard EN 12445) as illustrated.

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

Carry out the measurement at a height of 1000 mm (or in the most prominent point of the leaf

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

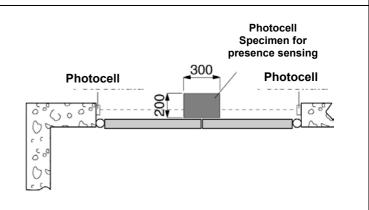
☐ If the values of the forces are higher, install a protective device in accordance with the standard EN 12978 (for example a sensitive edge) and repeat the measurement.



[5] Impact in the area of closure (Figure 1, risk C).

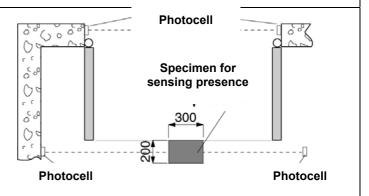
☐ Install a pair of photocells (recommended height 500 mm) so as to sense the presence of the test parallelepiped (height 700 mm) positioned as illustrated.

N.B. The test specimen for presence sensing is a parallelepiped (700 \times 300 \times 200 mm) with 3 faces with a light and reflective surface and 3 faces with a dark and opaque surface.



[6] Impact in the area of opening (Figure 1, risk B) and in the area of closure (Figure 1, risk C)

☐ To reduce further the possibility of impact in the areas of movement of the gate, it is possible to install a pair of photocells (recommended height 500 mm) so as to sense the presence of the test parallelepiped (height 700 mm) positioned as illustrated.



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	Mechanical risks due to movement of the leaf.	, , ,
1.4	[7] Dragging of the hands on the hinges side edge (Figure 1, risk D).	☐ Check that there is a clearance ≥ 25 mm, or:
		attach guards that prevent fingers from being inserted (for example a rubber strip).
	[8] Dragging of the feet on the lower edge (Figure 1, risk E).	☐ The clearance between the gate and ground must prevent the risk of dragging of the feet.
	(Figure 1, fisk L).	N.B. Should, due to the slope of the ground, the clearance vary, guards should be attached (e.g. rubber strips).
	[9] Dragging of the hands on the drive unit (Figure 1, risk F).	☐ If the distances between the drive unit and the leaf vary, check on the presence of a clearance \geq 25 mm, or attach guards (e.g. covers or strips in rubber).
	[10] Dragging, hooking and cutting due to the shaping of the mobile leaf (Figure 1, risk G).	☐ Eliminate or protect any sharp edges, handles, projecting parts etc. (for example by means of covers or strips in rubber).
	Electrical and electromagnetic compatibility risks	
1.5.1 1.5.2	[11] Direct and indirect contacts. Dispersion of electrical energy.	☐ Use CE-marked components and materials pursuant to the Low Voltage Directive (73/23/EEC). ☐ 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.
1.5.10 1.5.11	[12] Risks relating to electromagnetic compatibility.	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. 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
	Safety and reliability of drive unit and control and safety devices.	unit.
1.2	[13] Safety conditions in the event of malfunctioning and power failure.	Use drive units which comply with the standard EN 12453 and safety devices which comply with the standard EN 12978.
	[14] Energy types other than electrical energy	☐ If hydraulic drive units are used, they must comply with the standard EN 982; or
1.5.3		if pneumatic drive units are used, they must comply with the standard EN 983.
	[15] Actuation and disabling of the drive unit.	Check that, after a fault or power failure, the drive unit restarts safely without creating hazardous situations.
1.2.3 1.2.4	[16] Power supply switch.	☐ 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.

MD Ann. 1	Type of risks	Evaluation criteria and solutions to be adopted (Tick the box corresponding to the solution adopted)	
1.2.5	[17] Consistency of controls	☐ Install the controls (e.g. key selector) so that the user is not in a danger zone, and check that the meaning of the controls has been understood by the user (for example the function selector).	
		Use CE-marked radio controls pursuant to the R&TTE directive (1999/5/EEC) and complying with the frequencies admitted by the laws of each individual country.	
1.5.14	[18] Risk of trapping.	☐ Install a device for release of the drive unit that allows manual opening and closure of the leaf with force no higher than 225 N (for doors/gates in residential areas) or 390 N (for doors/gates in industrial or commercial areas). Supply the user with the means and instructions for the release operations. Check that operation of the release device is simple and does not create additional risks.	
1.2.4	[19] Emergency stop.	☐ If appropriate, install an emergency stop control in accordance with the standard EN 418. N.B. Make sure that the emergency stop does not introduce additional risks, aborting operation of the safety devices installed.	
	Integration principles for safety and information.		
1.7.1	[20] Signalling equipment.	A flashing light should be installed, in a visible position, to indicate movement of the leaf.	
		Traffic lights can be installed to control vehicle traffic.	
		Reflectors can also be attached to the leaf.	
1.7.2	[21] Warnings.	Attach all those signs or warnings considered necessary for indicating any unprotected residual risks and to indicate any foreseeable improper use.	
1.7.3	[22] Marking.	Attach the label or plate with the CE marking and containing at least what is shown in the illustration.	
		Automatic Gate	
		Manufacturer (name – address):	
		Type of gate:	
		Year of manufacture:	
1.7.4	[23] Operating instructions.	Consign to the user the operating instructions, safety warnings and EC declaration of conformity (cf. facsimile in Annex 2).	
1.6.1	[23] Maintenance.	A maintenance plan has to be drawn up and implemented. Check on the proper working of the safety devices at least every 6 months.	
		Record the work carried out in the proof book in accordance with the standard EN 12635 (cf. facsimile in Annex 1).	
1.1.2	[24] Unprotected residual risks.	☐ Inform the user in writing (for example in the operating instructions) of any unprotected residual risks and foreseeable improper use.	