

# ASTER

AUTOMATION FOR SWING GATES



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# 1. GENERAL SAFETY PRECAUTIONS

This manual contains important information for the safety of consumers. An improper installation can result in serious injury to objects and people. Carefully read and follow all safety precautions identified with this warning symbol. Save this manual for future consultation.



**Always cut the power when installing. Make sure the earth connection is properly connected.**

Use and installation of the product must comply with Machinery Directive 2006/42/CE. Verify that the system is EN 124445 and EN 12453 standard compliant. Installation must be carried out by expert qualified personnel who knows the potential hazards associated and in full compliance with current regulations. Use of the product must be restricted to its intended use. Any other use is to be considered dangerous and therefore forbidden.



**Do not allow children to play with the fixed command devices, or in the gate's area of operation. Keep any remote control devices (i.e. transmitters) away from the children as well.**

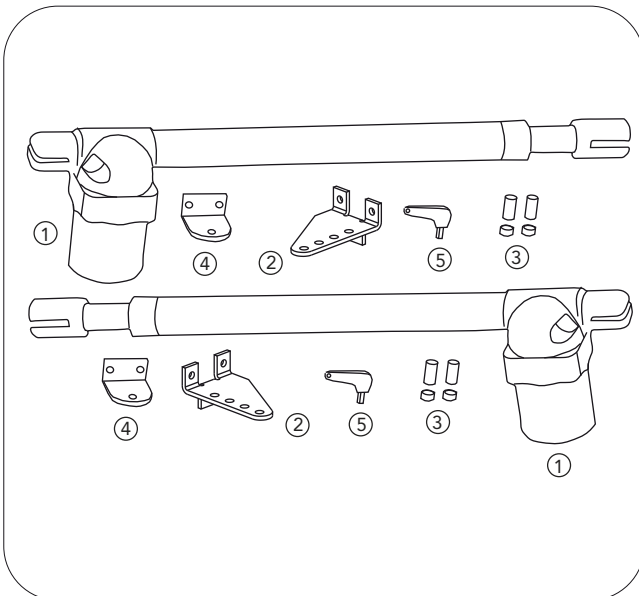
Keep the gate and the gate opener regularly maintained. Use only Proteco's original spares. Users are strictly forbidden to carry out any changes on the gate operator. Proteco Cancelli Automatici Srl is not liable for any damage resulting from improper, wrongful or unreasonable use.

## 2. INTENDED USE AND APPLICATION

The ASTER operator is designed to automate swing gates. The use of this product for purposes other than those described above and installation executed in a manner other than as instructed in this technical manual are prohibited. All ASTER systems are irreversible, therefore no electric-lock is needed. In case of power cut the gate operator can be easily released by manual operation.

### 2.1 KIT CONTENTS

Double-leaf composition



- 01 n°2 Motors
- 02 n°2 Pillar brackets T1
- 03 n°2 Fixing pack PR1-G1
- 04 n°2 Gate brackets S3
- 05 n°2 Release key

n°1 Installation manual

## 2.2 TECHNICAL FEATURES

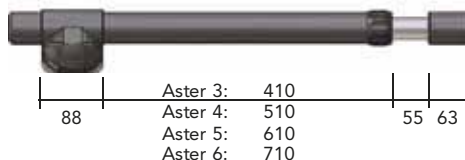
	Aster 3			Aster 4			Aster 5			Aster 6
Motor power supply	V	24Vdc	230V~50Hz 115V~60Hz	24Vdc	230V~50Hz 115V~60Hz	24Vdc	230V~50Hz 115V~60Hz	230V~50Hz		
Max draw.	A	0,5-0,75A	1,2-1,7A 2,0-2,3A	0,5-0,75A	1,2-2A 2,0-2,3A	0,5-0,75A	1,2-1,7A 2,0-2,3A	1,2-1,7A		
Power	W	50W	280W 300W	50W	280W 300W	50W	280W 300W	280W		
Capacitor	µF	--	8µF 30µF	--	8µF 30µF	--	8µF 30µF	8µF		
Thermal protection	C°	--	150°C 150°C	--	150°C 150°C	--	150°C 150°C	150°C		
Adjustable thrust	N	2500N	2800N 3000N	2500N	2800N 3000N	2500N	2800N 3000N	2800N		
Protection rating	IP	44	44 44	44	44 44	44	44 44	44		
Revolutions	rpm	1600 rpm	1400 rpm 1700 rpm	1600 rpm	1400 rpm 1700 rpm	1600 rpm	1400 rpm 1700 rpm	1400 rpm		
Opening angle	deg	110°deg	110°deg 110°deg	110°deg	110°deg 110°deg	110°deg	110°deg 110°deg	110°deg		
Opening time (90°)	s	15"	17" 14"	20"	22" 18"	25"	27" 22"	32"		
Leaf weight	Kg	275Kg	350Kg 300Kg	250Kg	350Kg 250Kg	150Kg	250Kg 200Kg	250Kg		
Leaf length	m	2,00m	2,00m 2,00m	2,50m	2,75m 2,75m	3,00m	3,5m 3,5m	4m		
Duty cycle	%	80%	40% 40%	80%	40% 40%	80%	40% 40%	40%		

## 2.3 OPERATOR DIMENSIONS

Aster 3: Closed = 665 / Open = 980  
Aster 4: Closed = 765 / Open = 1180



Aster 5: Closed = 865 / Open = 1380  
Aster 6: Closed = 965 / Open = 1580



## 3. INSTALLATION

### 3.1 Preliminary checks

Before installing make sure:

- Weight, dimensions and gate construction are proper for the operator you intend to buy
- Proper mechanical stops are already in place
- The gate swings freely
- The opening of the automated gate is not an entrapment hazard as regards any surrounding fixed parts and there is sufficient space for manual release
- Any lawn watering devices will not wet the gearmotor from the bottom up
- The earth cable is properly connected
- Do not install onto gates on either an upward or downward slope (i.e. that are not on flat, level ground)

### 3.2 TOOLS AND MATERIALS (NOT INCLUDED)

#### PILLARS AND WALLS



brick



concrete



inox/alu. tubular



stainless steel



3+3  
Ø 18mm



3+3  
Ø 15mm



3+3



3+3

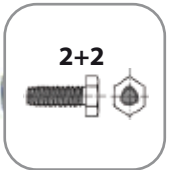
#### LEAF



stainless steel/alu



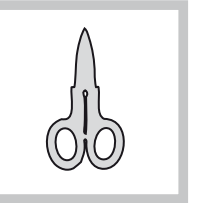
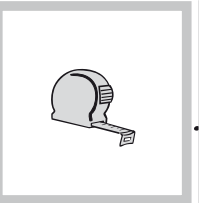
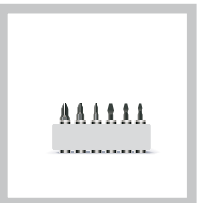
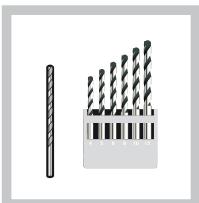
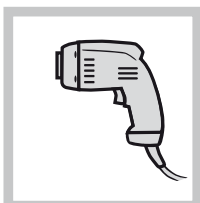
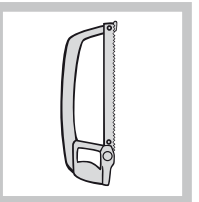
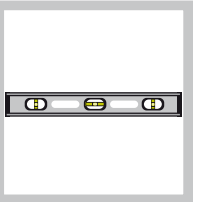
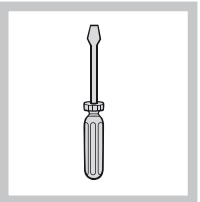
wood



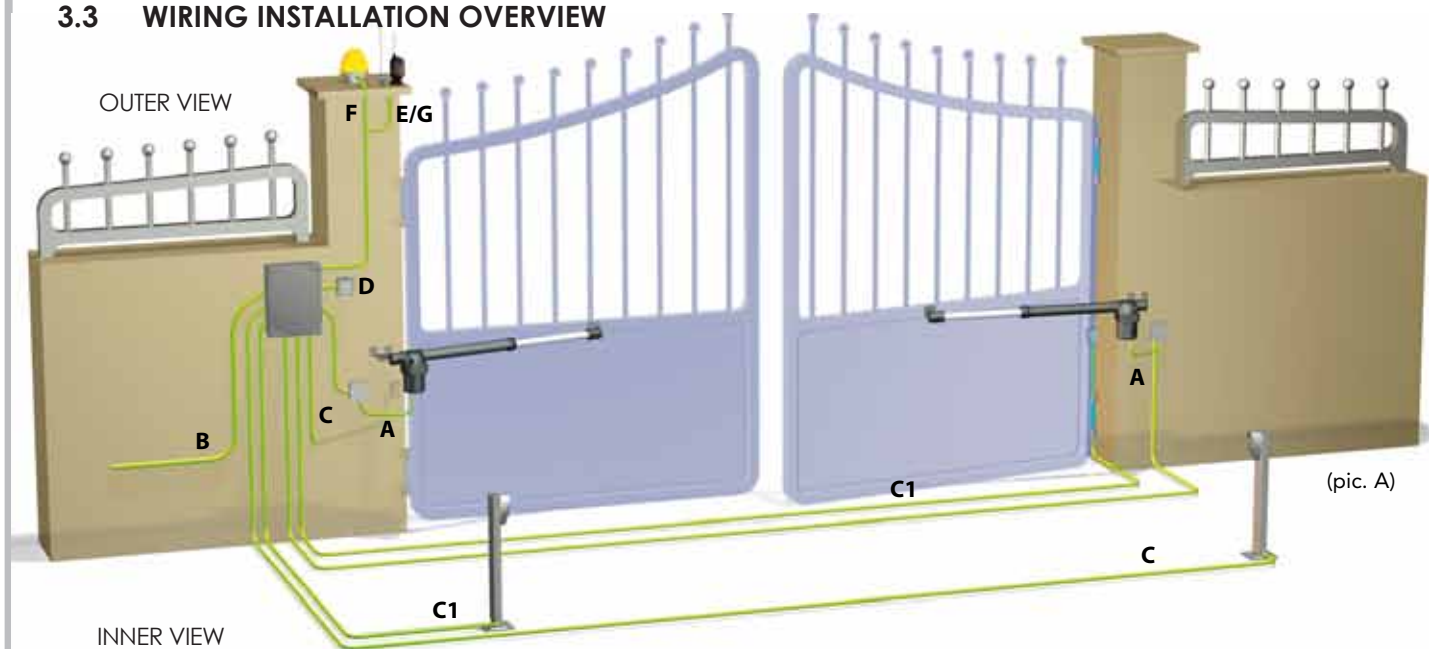
2+2



2+2



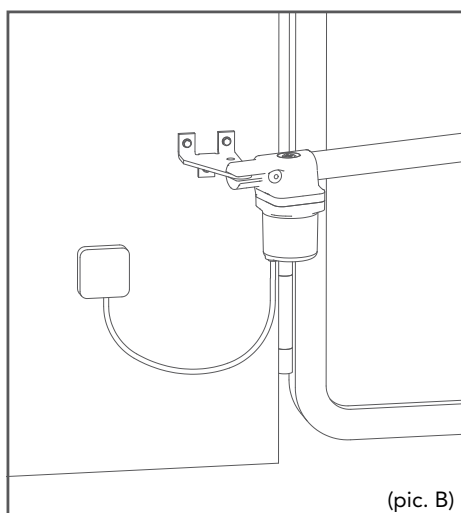
### 3.3 WIRING INSTALLATION OVERVIEW



230V		
<b>A</b>	Ram	3 x 1,5 + T
<b>B</b>	Control panel	2 x 1,5 + T
<b>C</b>	Photocells	rx 4 x 0,50 mm <sup>2</sup>
<b>C'</b>	Photocells	tx 2 x 0,50 mm <sup>2</sup>
<b>D</b>	Key-switch	2 x 0,50 mm <sup>2</sup>
<b>E</b>	Aerial	RG58
<b>F</b>	Flashing light	2 x 0,50 mm <sup>2</sup>
<b>G</b>	Radio receiver	2 x 0,50 mm <sup>2</sup>

N.B.: The number of tubes and cables (not included in the kit) depends on the type of the accessories employed

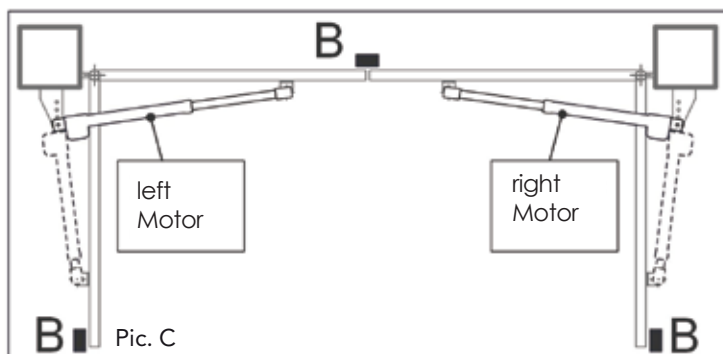
- Cut off the power before starting wiring
- A circuit breaker should be fitted close to the gate (**3 mm** wires) to protect both the gate control panel and the house main fuse box. A **6A** automatic breaker or a **16A** single phase breaker complete with fuses shall be suitable.
- Make sure you have suitable tubing and conduits for the electrical cables: feed the motors, control panel and accessories separately, in order to prevent interferences that may result in bad operation.
- Fit the power cable keeping a curve as shown in picture B, in order to avoid water backflow inside the operator. (pic. B)



(pic. B)

### 3.4 INSTALLING THE OPERATOR

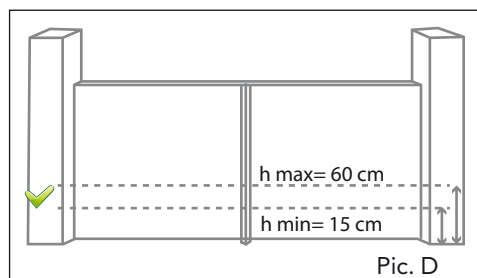
The kit is supplied with a right and a left hand motor and are specific. Ensure you are mounting the correct handed motor to the leaf. See picture C. Make sure there is a mechanical stop (**B**) for opening and closing.



**B** = mechanical ground stops

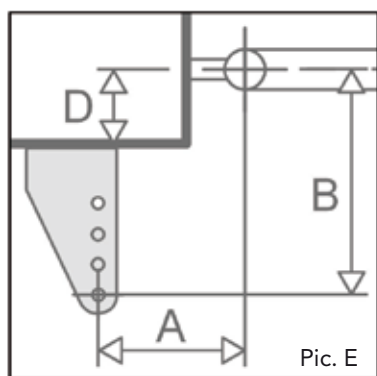
#### 3.4.1. QUOTES FROM GROUND

The operator has to be fitted keeping a height from ground between **40 and 50 cm**. See picture D. If the gate is particularly light, fit the operator as closer as possible to gate centerline.

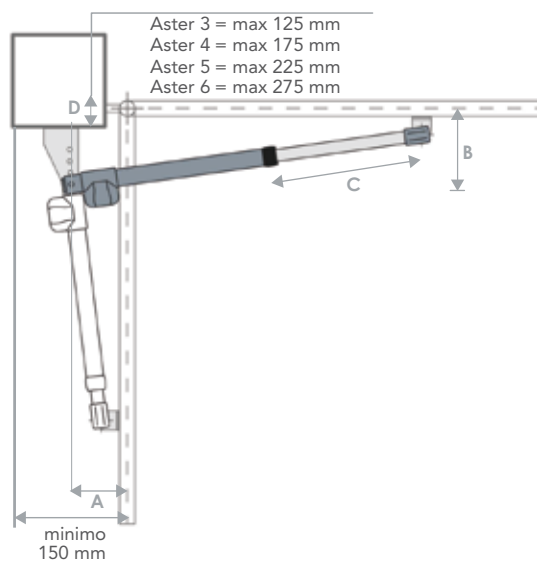


#### 3.4.2. PILLAR BRACKETS – How to determine fixing dimensions

The ideal approach is to fix the brackets complying with the measures A and B as indicated in the below table for an opening **angle of 90°** (picture E).



Aster 3 A=150 B=150  
 Aster 4 A=200 B=200  
 Aster 5 A=250 B=250  
 Aster 6 A=300 B=300



Aster 3 = max 125 mm  
 Aster 4 = max 175 mm  
 Aster 5 = max 225 mm  
 Aster 6 = max 275 mm



If this ideal scenario of A and B is not applicable, then refer to the below table to determine the brackets position (values are expressed in **mm**)

Aster 6	D	275	250	225	200	175	150	125	100	75
	A	275	300	295	290	315	310	335	360	385
	B	325	300	305	310	285	290	265	240	215
	Bracket quota	50	50	80	110	110	140	140	140	140
	Minimum Leaf length	1300	1240	1280	1280	1260	1270	1240	1220	1200

Aster 5	D	225	200	175	150	125	100	75	50	25
	A	225	250	245	240	235	260	285	310	335
	B	275	250	255	260	265	240	215	190	165
	Bracket quota	50	50	80	110	140	140	140	140	140
	Minimum Leaf length	1150	1130	1130	1130	1140	1120	1100	1070	1050

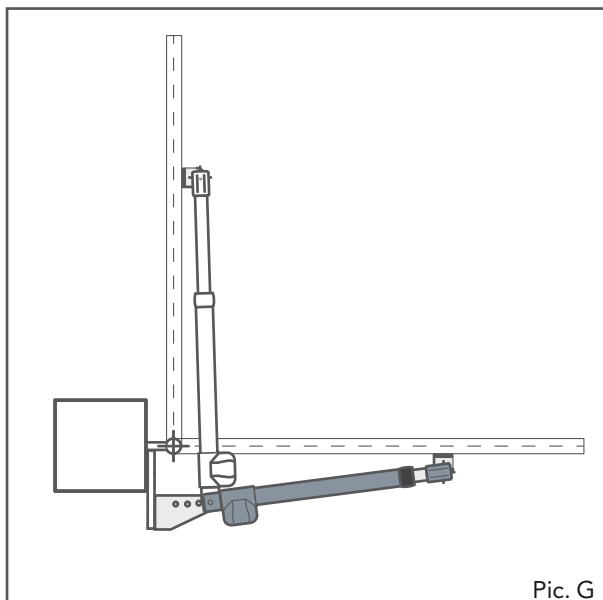
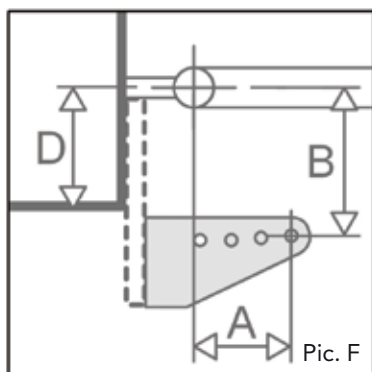
Aster 4	D	200	175	150	125	100	75	50	25	0
	A	140	170	200	195	190	185	210	235	260
	B	250	225	200	205	210	215	190	165	140
	Bracket quota	50	50	50	80	110	140	140	140	140
	Minimum Leaf length	1030	1000	980	990	990	970	970	950	930

Aster 3	D	150	125	100	75	50	25	0
	A	100	125	150	145	140	135	160
	B	200	175	150	155	160	165	140
	Bracket quota	50	50	50	80	110	140	140
	Minimum Leaf length	880	860	840	840	850	850	830

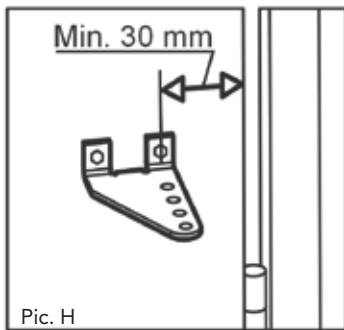
### 3.4.3. OUTWARD OPENING

It's possible to have your gate opening outward (fig. F-G)

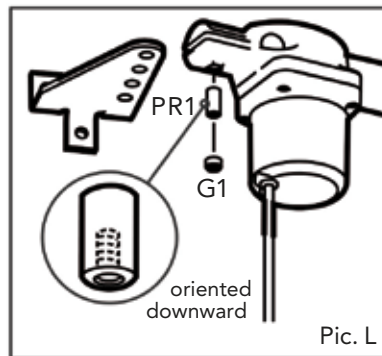
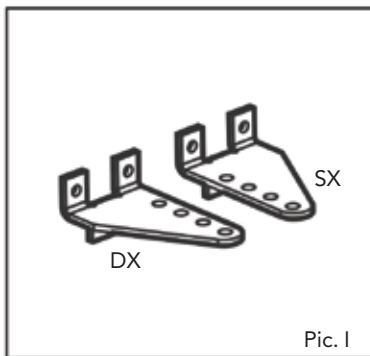


### 3.4.3. PILLAR BRACKET T1

Anchor the pivot bracket T1 onto the pillar by welding or bolting ( $\varnothing$  13 mm bolts) , making sure the quotas shown in the previous table are met. Ensure to keep a minimum distance of **30 mm** from the pillar edge as shown in picture H.



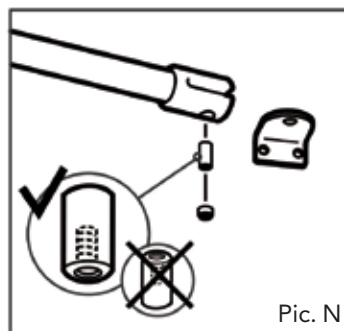
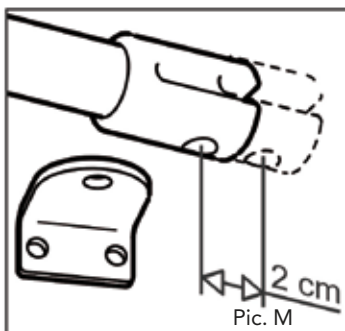
In cases of masonry pillars, use chemical or resin to secure bolts or stone (cement) the bracket into position. Brackets T1 as well are supplied in two versions, left hand and right hand and match the according motor (see picture I). Fix motor into bracket T1 and place the pivot pin PR1 through the holes. Keep the pivot pin PR1 oriented downward. See picture L.



### 3.4.4. GATE BRACKET S3

To determine the position of bracket S3:

- Put the gate in closing position
- Release the operator (see paragraph 5)
- Extend the arm fully
- Turn back the arm 2 cms. This avoids the motor to "leap forward"(pic. M)
- Affix the bracket S3 to the motor slot as illustrated in picture M. Place the pivot pin PR1 into the locating hole.
- Mount the arm of the motor onto the gate. Ensure the arm is perfectly straight.



**NB.**

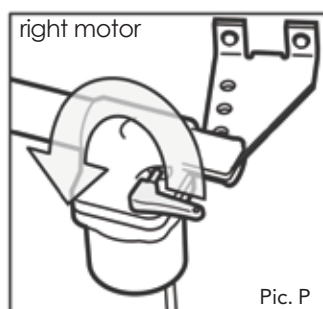
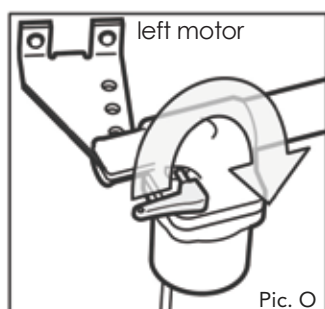
Check the manual opening of the leaf before definitively fixing the bracket to make sure the gate can open fully to your required angle.

## 4. MANUAL RELEASE

Insert the hexagonal release key (included in the fixing pack) and turn 90°. See pictures O/P.

Now proceed to manual opening. To lock back the operator, insert the key and turn 90°.

The gate can be locked in any position since after the first start command the system will return to its default settings



## 5. MAINTENANCE

Periodic maintenance is needed. We suggest checking the state of lubrication and tightness of the anchoring screws on the operator as well as the good operation of all safety devices.

## 6. WARRANTY

All goods supplied by PROTECO are covered by a limited warranty of 3 years from the production date printed on the product.

In this period, Proteco Srl offers a free guarantee against malfunction due to defects in workmanship and materials. Any form of guarantee provided here is strictly conditional upon compliance with the instructions for use and maintenance.

The limited warranty does not apply when the goods are not PROTECO'S originals and the fault comes from an incorrect installation or is due to force majeure.

The installation and any maintenance works are the responsibility of who installs the system.

Under no circumstances and in no way Proteco Srl will be liable for damages, including any loss of profits, savings, or other incidental or consequential damages, resulting from the use or inability to use the PROTECO products.

Any return coming without previous authorization will be rejected.

Returning shipping costs will be at customer's charge.

All faulty items have to be returned along with the according invoice to:

**PROTECO Srl Via Neive 77, 12050 Castagnito (CN) - Italia**

The limited warranty is not applicable when:

- Goods have been handled or stored in abnormal use and maintenance conditions
- Goods have been repaired, changed and altered by unauthorized personnel
- Goods have been subject to incorrect use, neglect, electrical problems, improper packaging, accidents or natural events
- Goods have been installed in an improper way.
- The label of the product warranty is illegible or missing.
- Bad operation is due to incorrect installation, natural or accidental events (falls, surcharges, oxidation)

## 7. PHASING OUT AND DISPOSAL



**DO NOT DISPOSE OF IN NATURE!**

Some components may contain hazardous waste. They must, thus, be removed and turned in to licensed firms for their disposal. Before acting always check the local laws on the matter.

## 8. DECLARATION OF CONFORMITY

Translation of the original declaration

In accordance with Annex II B of Machinery Directive 2006/42/CE

The legal representatives of



**Proteco S.r.l.** via Neive 77 12050 Castagnito (CN) Italia  
tel (+39) 0173210111 fax (+39) 0173210199  
www.proteco.net info@proteco.net

hereby declare that the products listed below

**Aster 3, Aster 4, Aster 5,  
Aster 3 24, Aster 4 24, Aster 5 24,  
Aster 3 115, Aster 4 115, Aster 5 115**

**electromechanical gear motor for swing gates**

comply the following Essential Requirements of Directive 2006/42/CE Annex I  
(Machinery directive):

1.1.2 1.1.3 1.1.5 1.2.1 1.2.2 1.2.3 1.2.6 1.3.2 1.3.4 1.3.9 1.4.1  
1.4.2.1 1.5.1 1.5.4 1.5.6 1.5.8 1.5.13 1.6.1 1.6.4 1.7.1 1.7.3 1.7.4

are in conformity with the following directives:

**2004/108/CE (electromagnetic compatibility)**

**1999/5/CE (R&TTE)**

**2011/65/CE (directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment)**

The above listed products are delivered, limitedly to the applicable parts, according to the following standards:

- |                       |  |
|-----------------------|--|
| <b>- EN 12453</b>     | Industrial, commercial and garage doors and gates.<br>Safety in use of power operated doors. Requirements                    |
| <b>- EN 12445</b>     | Industrial, commercial and garage doors and gates.<br>Safety in use of power operated doors. Test methods                    |
| <b>- EN60335-1</b>    | Safety of household and similar electrical appliances -<br>Part I: General requirements                                      |
| <b>-EN60335-2-103</b> | Household and similar electrical appliances -<br>Part 2-103: Particular requirements for drives for gates, doors and windows |

They also state that:

- the relevant technical documentation is compiled in accordance with part B of Annex VII of directive 2006/42/CE
- the relevant technical documentation is compiled and preserved by PROTECO SRL which undertakes to transmit it by mail in response to a reasoned request by the national authorities.
- the partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the directive 2006/42/CE

Castagnito, 19.01.2016

