



KALOS XL

IT OPERATORE IRREVERSIBILE
PER CANCELLI SCORREVOLI

EN IRREVERSIBLE OPERATOR
FOR SLIDING GATES

FR OPERATEUR IRREVERSIBLE
POUR PORTAILS COULISSANTES

ES OPERADOR IRREVERSIBLE
PARA VERJAS CORREDERAS

NL AANDRIJVING VOOR
SCHUIFFPOORTEN

DE SELBSTHEMMENDER
TORANTRIEB FÜR SCHIEBETOREN

TUR KAYAR KAPILARI İÇİN GERİ
DÖNDÜRÜLEMİYEN OPERATÖR



REMOTE
CONTROL
gate
company

IT Operatore EN Gearmotor FR Operator ES Operador NL Aandrijving DE Torantrieb TUR Operatör	Alimentazione Power Supply Alimentation Alimentacion Voeding Stromspannung Güç beslemesi	Centralina Control unit Centrale de commande Cuadro de mando Besturingseenheid Steuereinheit Kumanda merkezi	Peso max cancello Max gate weight Poids maxi portail Peso máx verja Max gewicht poort Max Torgewicht Kapının azami ağırlığı	Spinta max Max Thrust Poussée maxi Max Empuje Max duwkracht Max Schubkraft Azami itme kuvveti	Codice Code Code Codigo Code Code Kod
KALOS XL 1500	230V 50/60Hz	BIOS1	1500 kg / 3307 lbs	152 Kg / 335 lbs	12007859
KALOS XL 1200	230V 50/60Hz	BIOS1	1200 Kg / 2645 lbs	81 Kg / 179 lbs	12007881
KALOS XL 800	230V 50/60Hz	BIOS1	800 Kg / 1765 lbs	71 Kg / 157 lbs	12007882
KALOS XL 1000 120V	120V 50/60Hz	BIOS1 120	1000 Kg / 2205 lbs	76 Kg / 168 lbs	12007884
KALOS XL 1000 24V	24Vdc	BIOS1 24V	1000 Kg / 2205 lbs	76 Kg / 168 lbs	12007886
KALOS XL 600 24V FAST	24Vdc	BIOS1 24V	600 Kg / 1323 lbs	76 Kg / 168 lbs	12007877
KALOS XL 1500 24V POWER	24Vdc	BIOS1 24 POWER	1500 kg / 3307 lbs	91 Kg / 200 lbs	12007839
KALOS XL 1000 24V POWERSPEED	24Vdc	BIOS1 24 POWER	1000 Kg / 2205 lbs	76 Kg / 168 lbs	12007852



IMPORTANT SAFETY INSTRUCTIONS FOR THE INSTALLATION

- ATTENTION - FOR THE SAFETY OF THE PEOPLE IT IS IMPORTANT TO FOLLOW ALL THE INSTRUCTIONS.

- 1° - This handbook is exclusively addressed to the specialized personnel who knows the constructive criteria and the protection devices against the accidents for motorized gates, doors and main doors (follow the standards and the laws in force).
- 2° - The installer will have to issue to the final user a handbook in accordance with the EN 12635.
- 3° - Before proceeding with the installation, the installer must forecast the risks analysis of the final automatized closing and the safety of the identified dangerous points (following the standards EN 12453/ EN 12445).
- 4° - The wiring harness of the different electric components external to the operator (for example photoelectric cells, flashlights etc.) must be carried out according to the EN 60204-1 and the modifications to it done in the point 5.2.2 of the EN 12453.
- 5° - The possible assembly of a keyboard for the manual control of the movement must be done by positioning the keyboard so that the person operating it does not find himself in a dangerous position; moreover, the risk of accidental activation of the buttons must be reduced.
- 6° - Keep the automatism controls (push-button panel, remote control etc.) out of the children way. The controls must be placed at a minimum height of 1,5mt from the ground and outside the range of the mobile parts.
- 7° - Before carrying out any installation, regulation or maintenance operation of the system, take off the voltage by operating on the special magnetothermic switch connected upstream it.

THE ALLMATIC COMPANY DOES NOT ACCEPT ANY RESPONSIBILITY for possible damages caused by the non observance during the installation of the safety standards and of the laws in force at present.

KEEP THESE INSTRUCTIONS WITH CARE

- 1° - Install a thermal magnetic switch (omnipolar, with a minimum contact opening of 3 mm) before the control board, in case this is not provided with it. The switch shall be guaranteed by a mark of compliance with international standards. Such a device must be protected against accidental closing (e.g. installing it inside the control panel key locked container).
- 2° - As far as the cable section and the cable kind are concerned, ALLMATIC suggests to use an H05RN-F cable, with a minimum section of 1,5mm², and to follow, in any case, the IEC 364 standard and Installation regulations in force in your Country.
- 3° - Positioning of an eventual pair of photocells: The beam of the photocells must be at an height not above the 70 cm from the ground, and, should not be more than 20 cm away from the axis of operation of the gate (Sliding track for sliding gate or door, and the hinges for the swing gate). In accordance with the point 7.2.1 of EN 12445 their correct functioning must be checked once the whole installation has been completed.
- 4° - In order to comply with the limits defined by the EN 12453 norm, if the peak force is higher than the limit of 400N set by the norm, it is necessary to use an active obstacle detection system on the whole height of the gate (up to a maximum of 2,5m) - The photocells in this case must be apply externally between the columns and internally for all the race of the mobil part every 60÷70cm for all the height of the column of the gate up to a maximum of 2,5m (EN 12445 point 7.3.2.1). example: column height 2,2m => 6 copies of photocells - 3 internal and 3 external (better if complete of synchronism feature).

N.B.: The system must be grounded

Data described by this manual are only Indicative and ALLMATIC reserves to modify them at any time. Install the system complying with current standards and regulations.

CHECKING BEFORE THE INSTALLATION

!! THE GATE SHALL MOVE FRICTIONLESS !!

Note: Gate features must be uniformed with the standards and laws in force. The door/gate can be automated only if it is in a good condition and its conditions comply with the EN 12604 norm.

- The door/gate leaf does not have to have a pedestrian opening. In the opposite case it is necessary to take the appropriate steps, in accordance with EN 12453 norm (for instance; by preventing the operation of the motor when the pedestrian opening is opened, by installing a safety microswitch connected with the control panel).
- Besides the electrical or mechanical limit switches available on the operators, there must be, on both ends of the installation, a fixed mechanical stopper which stop the gate in the unlikely event of ill functioning of limit switches on the operators. For this reason the fixed mechanical stopper must be of an adequate size to withstand the static and kinetic forces generated by the gate.

The guide must be provided with two mechanical stops at its ends.

- Gate columns shall have anti-derailment guides on their top, to avoid the unintentional gate release.

Parts to install meeting the EN 12453 standard

COMMAND TYPE	USE OF THE CLOSING		
	Skilled persons (out of public area*)	Skilled persons (public area)	Unrestricted use
with manned operation	A	B	non possible
with visible impulses (e.g. sensor)	C or E	C or E	C and D, or E
with not visible impulses (e.g. remote control device)	C or E	C and D, or E	C and D, or E
automatic	C and D, or E	C and D, or E	C and D, or E

* a typical example are those shutters which do not have access to any public way
 A: Command button with manned operation (that is, operating as long as activated).
 B: Key selector with manned operation.
 C: Adjustable power of the motor.
 D: Safety strips and/or other safety devices to keep thrust force within the limits of EN12453 regulation - Appendix A.
 E: Photocells.



ELECTRICAL CONNECTIONS

To correctly connect the gearmotor to the control unit, follow the table below:

DESCRIPTION	COLOUR
PHASE 1	Black
PHASE 2	Brown
COMMON	Grey or light blue
GROUND	Yellow / Green

GROUND CONNECTION

The system must be grounded.

Use the predisposed clamp, connected to the yellow / green cable, to connect the gearmotor to the ground system.

MAINTENANCE

To be carried out exclusively by skilled persons after the power supply to the motor has been interrupted.

Periodically, when the gate is standstill, clean and keep the guide free from stones and dirt.

SYSTEM LAYOUT

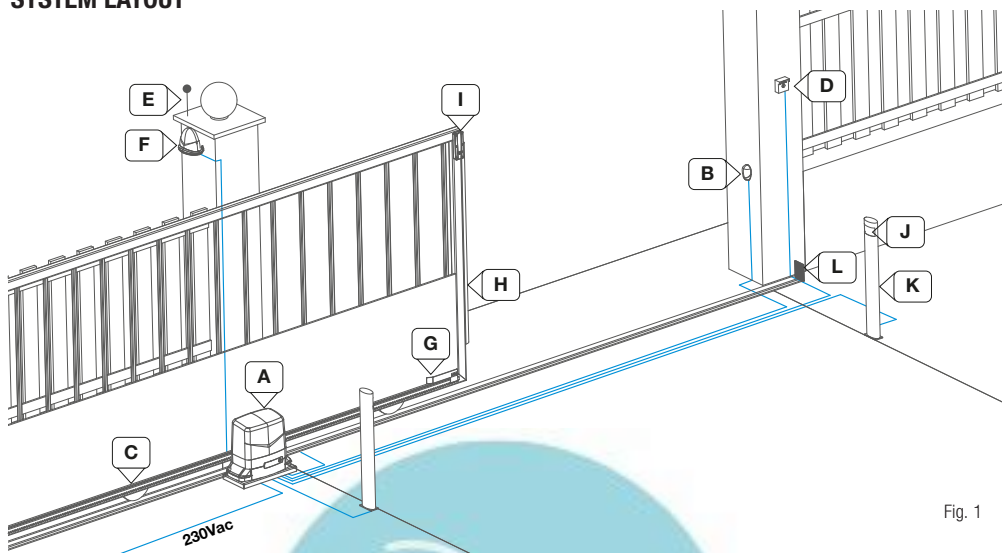


Fig. 1

A - KALOS XL operator
B - Photocells (external)
C - Rack M4
D - Key selector
E - Tuned antenna
F - Flashing lamp

G - Limit switch cams
H - Safety edge fixed to column
I - Safety edge with wireless system
J - Photocells (internal)
K - Galvanized column for photocells
L - Mechanical stops

VERSIONS AND TECHNICAL FEATURES

Irreversible operating devices for sliding gates. The irreversibility of this operating device allows you to avoid using any electric lock for an effective closing of the gate. The motor is protected by an heat probe, that temporary interrupts the operating cycle in case of prolonged use.

TECHNICAL FEATURES		KALOS XL 800	KALOS XL 1200	KALOS XL 1500	KALOS XL 120V	KALOS XL 24V	KALOS XL 24V FAST	KALOS XL 24V POWER	KALOS XL 24 POWERSPEED
Code (mechanic limit switch)		12007882	12007881	12007859	12007884	12007886	12007877	12007839	12007852
Code (magnetic limit switch)		12007872	12007871	-	12007863	12007894	12007841	-	-
Max. leaf weight	Kg	800	1200	1500	1000	1000	600	1500	1000
Operating speed	m/min	10	10	10	11	10	18	10 ... 12	20
Thrust force to constant turns	N	700	800	900	750	750	750	900	750
Rack		M4	M4	M4	M4	M4	M4	M4	M4
Power supply		230V~ 50/60Hz	230V~ 50/60Hz	230V~ 50/60Hz	120V~ 50/60Hz	24Vdc	24Vdc	24Vdc	24Vdc
Nominal power	W	250	350	500	300	75	70	120	90
Current absorbed	A	1,3	2	3	3	3	4,5	8	5
Capacitor	μF	10	12,5	16	50	-	-	-	-
Daily operations suggested	n°	200	200	200	200	400	400	400	300
Guaranteed consecutive cycles T=20°C	n°	10 / 4,5m	10 / 4,5m	20 / 4,5m	15 / 4,5m	50 / 4,5m	50 / 4,5m	50 / 4,5m	40 / 4,5m
Service	%	30	30	30	30	100	80	100	50
Noise	db	<70	<70	<70	<70	<70	<70	<70	<70
Working temperature	°C	-10...+55							
Protection	IP	44							

BASE PLATE INSTALLATION

Respecting the overall size, fix to ground the base plate (Fig. 2-3) through 4 sturdy screw-anchors or drown it into the concrete (Fig. 3). Plan for one or more sheathing for the passage of the power lines.

Note: It is necessary to know the rack dimensions to can calculate exactly the counter-plate positioning (Fig. 4).

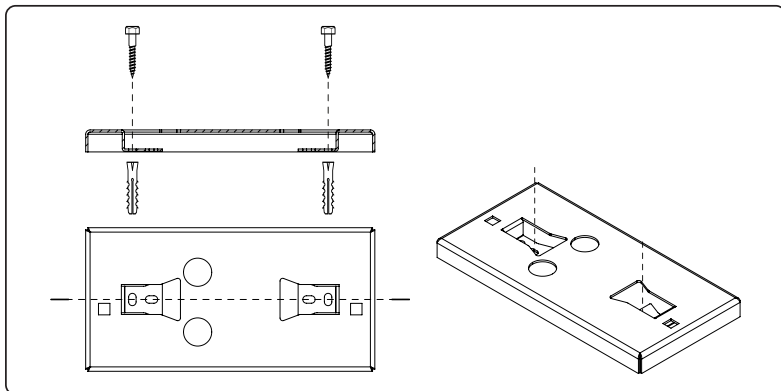


Fig. 2

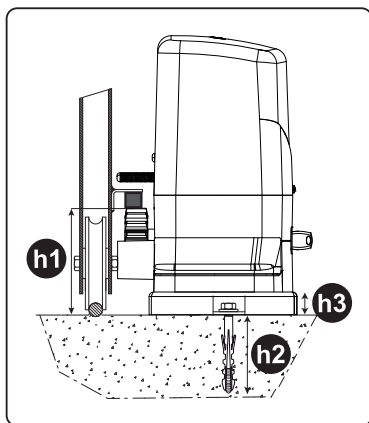


Fig. 3

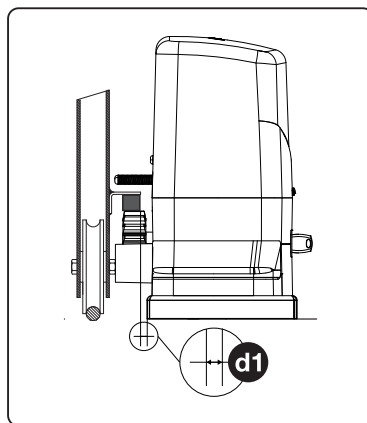


Fig. 4

h1	$110 \text{ mm} \leq h1 \leq 135 \text{ mm}$
h2	$> 80 \text{ mm}$
h3	25 mm
d1	$0 \div 10 \text{ mm}$

MOTOR FITTING

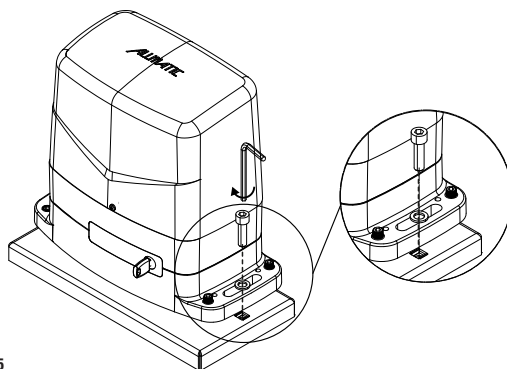


Fig. 5

To fix the motor to the counterplate, insert and screw the two Allen screws into the appropriate housing (Fig. 5). Position the motor in parallel with the gate and with the gear under the rack as shown in Fig. 8.

N.B. It is important to energetically tighten the two screws, making sure that the gearmotor is firmly on the ground during the entire stroke of the gate.

GRANTS FIXING FOR THE ADJUSTMENT OF THE PLANARITY OF THE GEARMOTOR

If the adjustment permitted by the rack is not sufficient, it is possible to compensate the height of the gearmotor by acting on the four adjustment screws, as shown in Fig. 6.

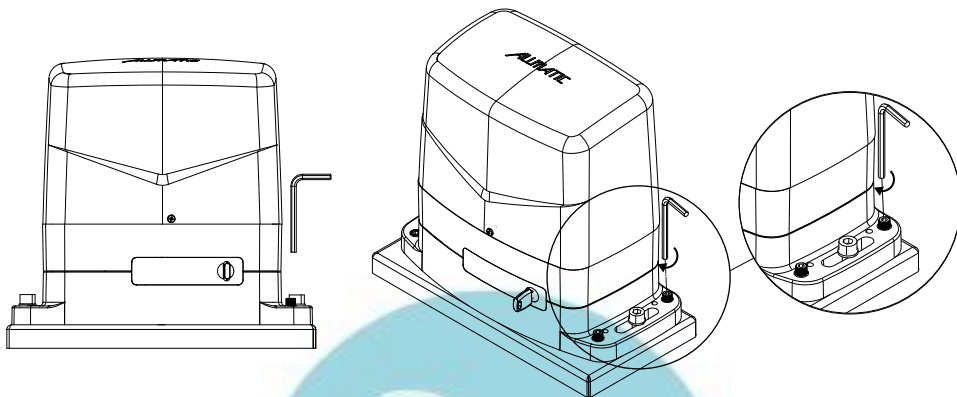


Fig. 6

RACK FITTING

The rack must be fixed at a certain height with respect to the motor fixing plate (Fig. 3). This height can be changed thanks to the slots on the rack. The height adjustment is made so that the gate doesn't rest on the motor gear drive (Fig. 7) during movement. To fix the rack on the gate, make holes of $\varnothing 5$ mm and thread them using a male of the M6 type. The drive gear must be approximately 1 mm to 2 mm away from the rack (Fig. 7).

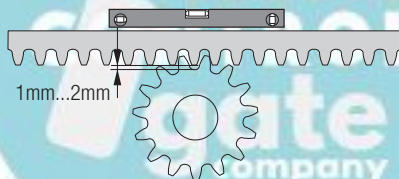


Fig. 7

GEARMOTOR POSITIONING IN RELATION TO THE GATE



Fig. 8

- 1** WARNING! Position the motor with the pinion under the rack as shown in figure 8.
- 2** WARNING ! The distance between the motor and the gate must be constant throughout the stroke.

LIMIT SWITCH FITTING

In order to determine the gate travel length, place two cams (Fig. 9) at the ends of the rack (Fig. 10). Move the cams on the rack teeth to adjust their opening and closing travel. To fix the cams to the rack, tighten the screws issued.

Note: In addition to the electric stop cams mentioned above, you must also install strong mechanical stops preventing the gate from sliding out from the top guides.

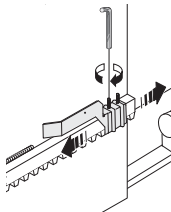
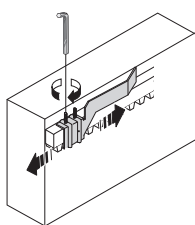


Fig. 9

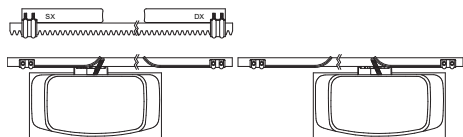


Fig. 10

INSTALLATION AND REGULATION OF MAGNETIC HALL LIMIT SWITCHES. Only for versions with magnetic limit switches

Rack 28 x 20 / 6410001 (nylon with steel core)

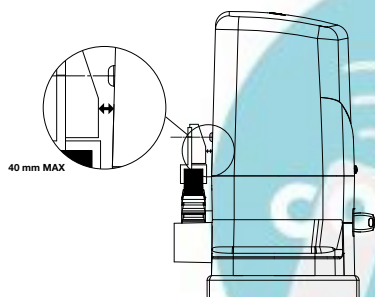


Fig. 11

Rack 30 x 12 / 6410005 (galvanized steel)

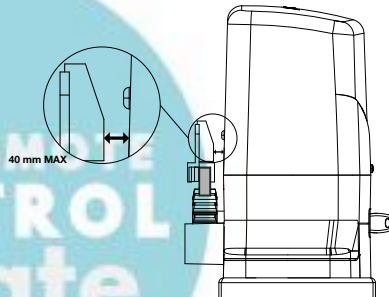
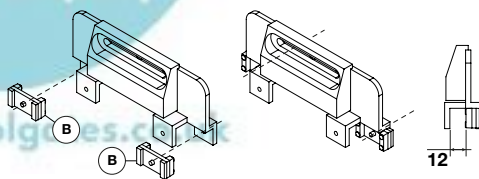
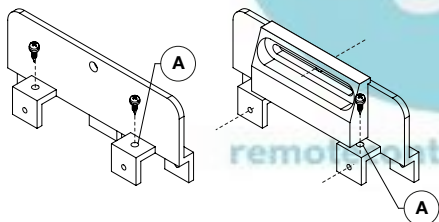


Fig. 12



NOTE: If necessary make 2 additional holes to improve the fixing (A) and copy them on the rack. Pay attention to the screws choice, they mustn't be too long and obstruct the grip.

If you use the steel rack type 30 x 12 (CODE 64100005) use the supplied spacers and position them as shown in the figure to respect the distance indicated.

Magnetic limit switches connection

+ 24Vdc	White
- GND	Brown
COM	Yellow
L.S.1	Green
L.S.2	Grey



WARNING! There must be a maximum distance of 40 mm between the magnet attached to the rack and the sensor on the body of the motor. (Fig. 11, Fig. 12)

ATTENTION! If magnetic limit switches are used, configure the parameters on the control unit as indicated below:

Gearmotor		KALOS XL 230V 800KG		KALOS XL 230V 1200KG-1500KG		KALOS XL 24V 1000KG		KALOS XL 24V 600KG FAST	
Gearmotor code		12007882		12007881-12007859		12007886		12007877	
Control Unit		BIOS1 230V		BIOS1 230V		BIOS1 24V		BIOS1 24V	
Amplitude of slowdown	LSI	≥	30	≥	30	≥	30	≥	30
Slowdowns speed	SPL	-	-	-	-	40	40	20	20
Slowing down mode	SSL	=	0	=	0	-	-	-	-

GATE POSITIONING IN RELATION TO SURFACE

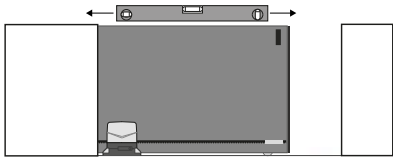


Fig. 13

OK

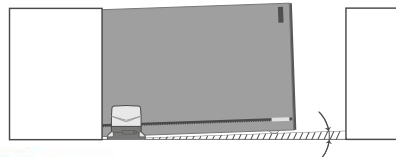


Fig. 13

NO

For special installations request information from Allmatic or use larger geared motors.

RELEASE

To move the gate manually it is necessary to release the gearmotor inserting the key, turning it for 90° and open the lever (Fig. 14).

In order to carry out the manual operation of the gate leaf the followings must be checked:

- That the gate is endowed with appropriate handles;
- That these appropriate handles are placed so to avoid safety risks for the gearmotor;
- That the physical effort necessary to move the gate leaf should not be higher than 225 N, for doors/gates for private dwellings, and, 390N for doors/gates for commercial and industrial sites (values indicated in 5.3.5 of the EN 12453 norm).

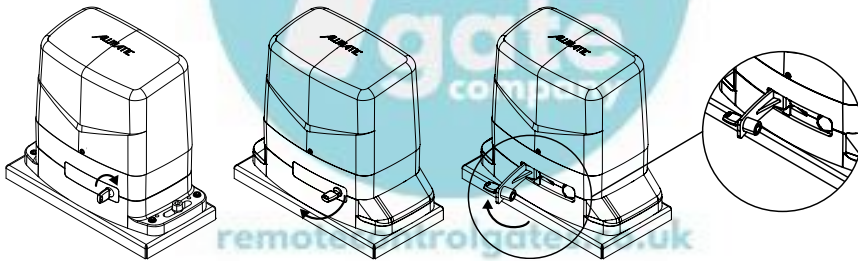


Fig. 14

DISPOSAL OF THE PRODUCT

This product is an integral part of the automation, and therefore, they must be disposed of together. As for the installation operations, at the end of the life of this product, the dismantling operations must be performed by qualified personnel. This product is made from different types of materials: some can be recycled, others must be disposed of. Please inform yourselves on the recycling or disposal systems provided for by the laws in force in your area, for this category of product.

CAUTION! – some parts of the product can contain polluting or dangerous substances which, if dispersed in the environment, may cause serious harm to the environment and human health.



As indicated by the symbol at the side, it is forbidden to throw this product into domestic refuse. Therefore, follow the “separated collection” instructions for disposal, according to the methods provided for by local regulations in force, or redeliver the product to the retailer at the moment of purchase of a new, equivalent product.

CAUTION! – the regulations in force at local level may envisage heavy sanctions in case of abusive disposal of this product.

WARRANTY

In compliance with legislation, the manufacturer's guarantee is valid from the date stamped on the product and is restricted to the repair or free replacement of the parts accepted by the manufacturer as being defective due to poor quality materials or manufacturing defects. The guarantee does not cover damage or defects caused by external agents, faulty maintenance, overloading, natural wear and tear, choice of incorrect product, assembly errors, or any other cause not imputable to the manufacturer. Products that have been misused will not be guaranteed or repaired. Printed specifications are only indicative. The manufacturer does not accept any responsibility for range reductions or malfunctions caused by environmental interference. The manufacturer's responsibility for damage caused to persons resulting from accidents of any nature caused by our defective products, are only those responsibilities that come under Italian law.



ALLMATIC S.r.l
32026 Borgo Valbelluna - Belluno - Italy
Via dell'Artigiano, n°1 - Z.A.
Tel. 0437 751175 - 751163 r.a.
www.allmatic.com - E-mail: info@allmatic.com

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