



AUTOMATIC ENTRANCE SPECIALISTS

Cubic
Underground automatic
systems for swing gates



novotecnica

Automatic gates

CE

Cubic

Valuable gates or those of a special design require "invisible" automatic systems in order to avoid altering their aesthetic appearance. The standard underground Cubic range, designed to be positioned so that it is "aligned with the hinge of the leaf", amply satisfies such requirements because

it is easy to insert beneath existing paving, especially when this is of high value. However, sometimes stone or granite paving may heavily condition the positioning of a "hinge aligned" buried automatic system. The alternative Cubic Flexi range has been created to solve this problem, and is

extremely flexible in its installation, thanks to an external lever arm, which enables it to solve just about any problem caused by existing architectural structures.

Cubic range

Release mechanism on the gate leaf

Cubic 30

Non-reversible geared motor designed for the release mechanism on the gate leaf - Operates with a 230V AC power supply. IP67 protection degree.

Cubic 30H

Version operating with a 24V DC power supply.

Handle-operated return release mech.

Cubic 30D

Non-reversible geared motor designed for the handle-operated remote release system - Operates with a 230V AC power supply. IP67 protection degree.

Cubic 30DH

Version operating with a 24V DC power supply.

Cubic Flexi range

With mechanical clutch

Cubic FO

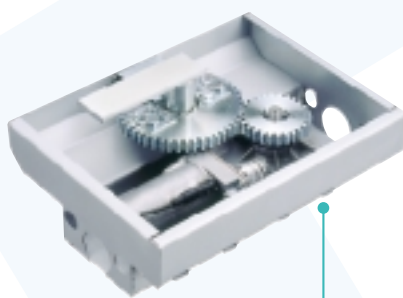
Reversible geared motor with mechanical clutch pre-adjusted at 15 kg - External lever control - Operates with a 230V AC power supply. IP67 protection degree.

The Cubic Flexi system can also use non-reversible geared motors with handle-operated return release mechanisms.

- **Cubic 30D** - Operates with a 230V AC power supply.
- **Cubic 30DH** - Operates with a 24V DC power supply.



Cubic
110° opening



Cubic
180° opening

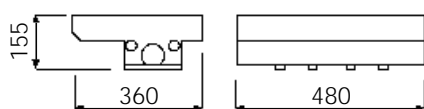


Cubic Flexi

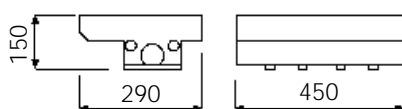
Technical specifications

Models:		Cubic 30-30D	Cubic 30H-30DH	Cubic FO
Voltage of power supply	V	230	24	230
Power	W	160	200	160
Current	A	1,5	12	1,5
Torque	Nm	340	270	340
Manoeuvre time	s	20 (90° open.)	12+25 (90° open.)	16
Jogging		S2-15min, S3-25% (230 V AC)		S2-30min, S3-50% (24 V DC)

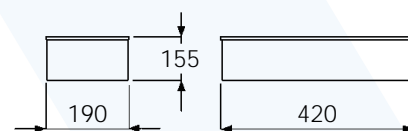
Dimensions (mm)



Cubic CG



Cubic CP



Cubic C

Cubic

Construction features

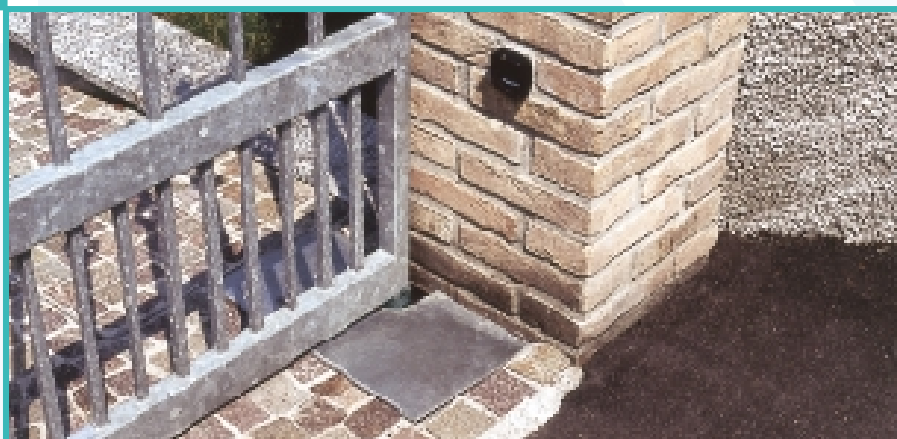
The Cubic geared motors, housed in sturdy pressure die-cast casings, with gears which operate with permanent lubrication, exist in two versions:

- **Cubic 30/30H** designed for release mechanism on the gate leaf.
- **Cubic 30D/30DH** designed for the Deb 04 remote release system.

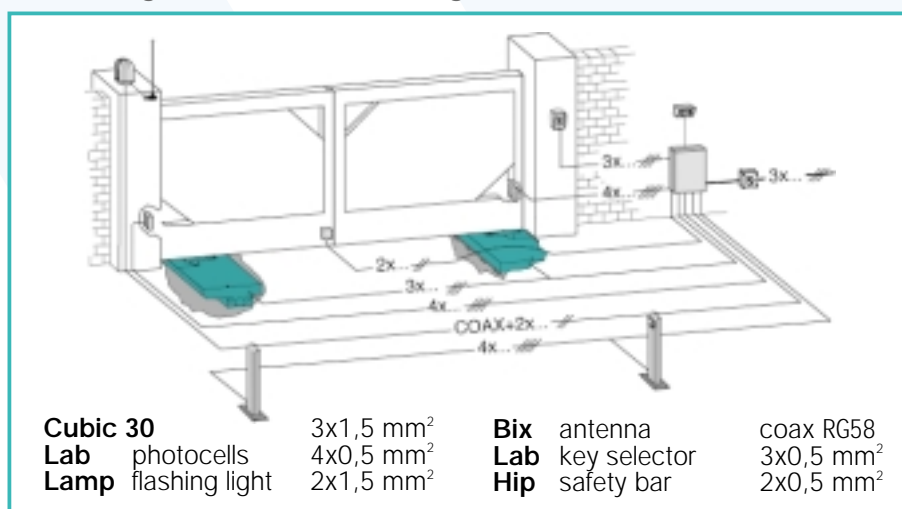
The geared motors are inserted in a sturdy foundation box which is aligned with the hinges of the gate leaf, but which does not however directly rest upon the axis of the geared motor, but on a separate pivot. In the 110° version, the rotation movement takes place through a system of levers which

permit a kinematic slow down of the movement at the start and at the stop and accelerated movement during the stroke. In the 180° version, the return movement occurs instead by means of a crownwheel gear. The use of the geared motor with Cubic CG foundation boxes not only permits the automation of heavier gate leaves, but also guarantees a 30% increase in the force of the geared motor and twice the mechanical resistance of the lever mechanisms, including against attempts of break-in.

- **CE European certification**
- **Fast gate leaf movement during the stroke and slow down at closure.**
- **Easily accessible release system, or battery operation in the case of power failure.**
- **Operation even at very low temperatures.**
- **Maintenance-free IP67 sealed geared motor.**
- **Electronic parts protected against lightning.**
- **Sturdy solutions to move all kinds of gates.**

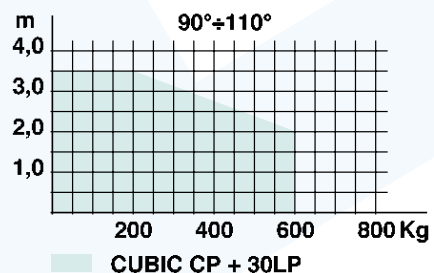
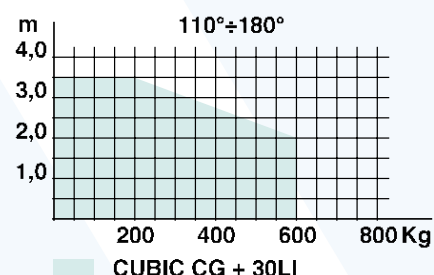
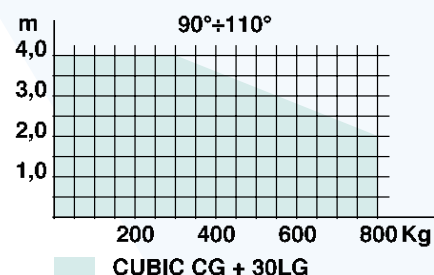


Positioning of the electrical wiring connections Cubic 30 – 230V AC

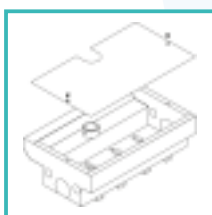


Diagrams of use

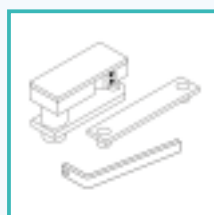
Length x weight of each gate leaf



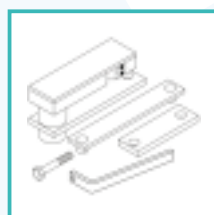
Specific accessories



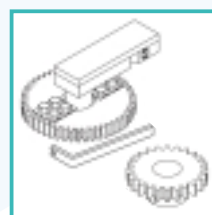
Cubic CP-CG



Cubic 30 LP



Cubic 30 LG



Cubic 30 LI

Cubic CP Small foundation box (for Cubic LP 30 only)

Cubic CG Large foundation box (for Cubic 30 LG and 30 LI only)

Cubic 30 LP-LG Lever system unit with release mechanism on gate leaf – 110° opening

Cubic 30 LI Gear unit, with release mechanism on gate leaf – 180° opening.

Cubic Flexi

Construction features

The Cubic Flexi solution has been designed for underground installation even on existing gates, as it can be positioned in line with or lateral to the pillar of the gate by means of a geared motor housed in a very compact foundation box (Cubic C).

This system, which permits an opening angle of up to 150°, can be very useful when there are problems in positioning the device.

The movement is transmitted by an external lever arm equipped with a pawl which slides along a track welded to the gate leaf. In the case of power failure, manual opening (Cubic FO) can be

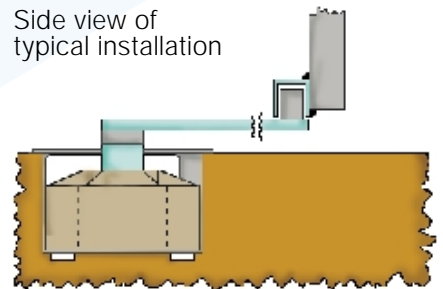
easily carried out by releasing the electrical lock and the manual thrust of the leaf itself thanks to the mechanical clutch.

If the Cubic 30D/30DH motors are used instead, it is necessary to use the Deb 01 return release handle or the automatic manoeuvre (30DH) using the Logic C22 control panel complete with batteries.

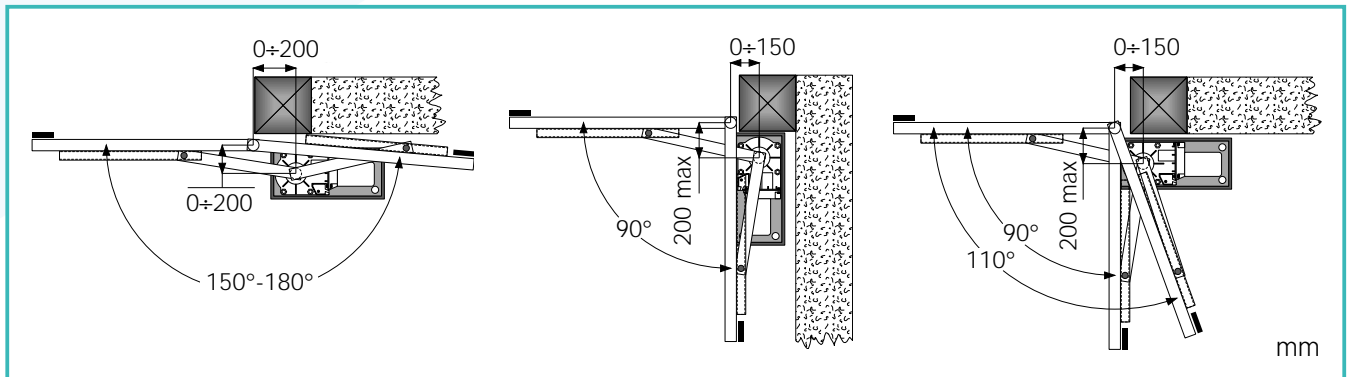
- **CE European certification**
- **Very compact solution suitable for moving all kinds of gates, even those involving complex problems concerning the positioning of the automatic system.**
- **Very useful system, both for traditional and for pedestrian gates.**
- **Easy unlocking systems or solutions with buffer batteries in case of power failure.**
- **Operation even at very low temperatures.**
- **Electronic parts protected against lightning.**



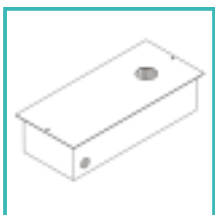
Side view of typical installation



Examples of installation



Specific accessories



Cubic C



Cubic L



Deb 01

Cubic C Compact foundation box with cover
Cubic L External lever arm system
Deb 01 Key handle kit for remote release for Cubic 30D/30DH

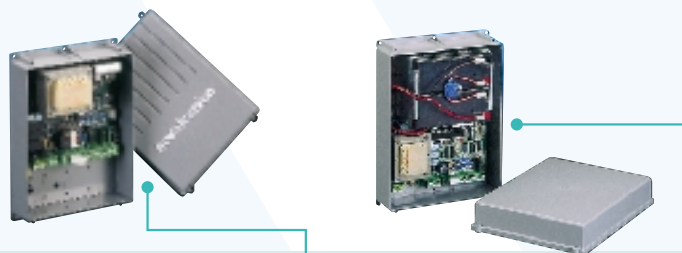
Cubic

Principal features of the system

		230 V AC	24 V DC
• ODS obstacle detection	With adjustable sensitivity which causes the stop of the gate movement if an obstacle is detected.	✓	✓
• MPS Start-up at maximum power	Permits the motor to overcome any initial friction caused by ice, snow, sand, etc. After 1s, the device switches itself to the safety value preset by the installer.	✓	
• RF torque regulator	Ensures the optimal torque value for the leaf in order to guarantee correct functioning.	✓	
• Pre-flashing signal	Provides a 3s advance warning of the movement of the gate	✓	✓
• Ready for radio fitting	Permits to plug-in 1 or 2 channel receiver card, available for various frequencies.	✓	✓
• Immediate radio re-closure	Possible even when the chosen function is positioned on timed "automatic closure".	✓	✓
• Gate open signal light	Signals that the gate has not closed completely.	✓	✓
• Speed regulation	Permits the peripheral speed of the gate to be adapted according to both the requirements of the regulations and the length of the leaf.		✓*
• Slow-down manoeuvre	Enables even heavy doors to come to a soft stop.		✓*
• Partial opening	Permits the user to make use of a handy pedestrian opening.	✓ ^o	✓*

^o Logic A21 - A22

* Logic C22



Functions of the control panels

Models:	D2	Logic A21	Logic A22	Logic C22
• Voltage of power supply to geared motor	230 V AC	230 V AC	230 V AC	24 V DC
• Number of motors	2	1	2	2
• Adjustable speed and slow-down				✓
• Power supply for electrical lock		✓	✓	✓
• 24V DC power supply output to accessories	✓	✓	✓	✓
• Automatic closure		✓	✓	✓
• Step-by-step		✓	✓	✓
• Step-by-step or open-close/auto. clos.	✓			
• Opening and closure		✓	✓	✓
• Partial opening		✓	✓	✓
• Hold to run control		✓	✓	✓
• Flashing light output	✓	✓	✓	✓
• Pre-flashing signal	✓	✓	✓	✓
• Provision for limit switch		✓	✓	
• Gate open signal light	✓	✓	✓	✓
• Safety devices	✓	✓	✓	✓
• Self-test safety provision		✓		
• Batteries for operation in case of power failure				✓

IMPORTANT: If equipped with batteries, the control panels for the 24V DC motors permit numerous manoeuvres in the case of power failure.

Accessories

All automatic systems must be completed with control and safety devices possessing all the functioning and associated compatibility requirements prescribed by the regulations. In addition

to manufacturing devices which are mutually compatible because they are designed "one for the other", and which guarantee the maximum safety of the system, NOVOTECNICA have

also taken aesthetic requirements into consideration. Indeed, thanks to its elegant design, the accessories range fits in well with both modern and period-style surroundings.

- **Hip**
Safety rubber bars designed to guarantee the safe operation of the moving gate leaf.



- **Lab**
Photocells with modulated infrared beam to permit the automatic system to operate at the maximum level of safety.



- **Bix**
Opening and closing the gate becomes even easier with a remote control device. There is no need to move your hands from the steering wheel of your vehicle, and you can control the automatic system of the gate and other devices such as the garden lights and the burglar alarm of the house with one or two flashes. If instead you wish to use other new generation self-learning radio frequency systems, featuring 16 million combinations, the following devices are available:

- Attractively designed miniature remote controls, with single code, and relative receivers, CEPT T/R 01.04 type-approved;
- "Rolling-code" miniature remote controls which make the detection and duplication of the code practically impossible, due to its continual variation.



- **Lab 9**
Magnetic loop detector which authorizes or blocks the functioning of the automatic system when its magnetic field detects the presence of a vehicle.



- **Lab 55**
Key selector switches with an anti-burglary system. Models available for both wall mounting and embedding.



- **Lamp**
Elegantly designed flashing beacons, used to signal the movement of the gate.



- **Lan 4**
Digital non-volatile programmable combination selector, in an anti-vandal stainless steel casing.



Regulations

DITEC automatic systems possess the CE mark and are designed and built in compliance with the safety requirements of the Machines Directive (89/392/EEC), the Electromagnetic Compatibility Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC).

DITEC S.p.A. reserve the right to make modifications aimed at improving the products.

DITEC S.p.A.
Via Mons. Banfi, 3
21042 Caronno P.Ila (VA) Italy
Tel. +39 02 963911 - Fax +39 02 9650314
www.ditec.it
NOVOTECNICA logo is owned by DITEC S.p.A.



ISO 9001
Cert. n° 0957/0

novotecnica