



Cubic

Underground automations
for swing gates



Cubic

▶ It keeps the look and the style of your gate unspoilt

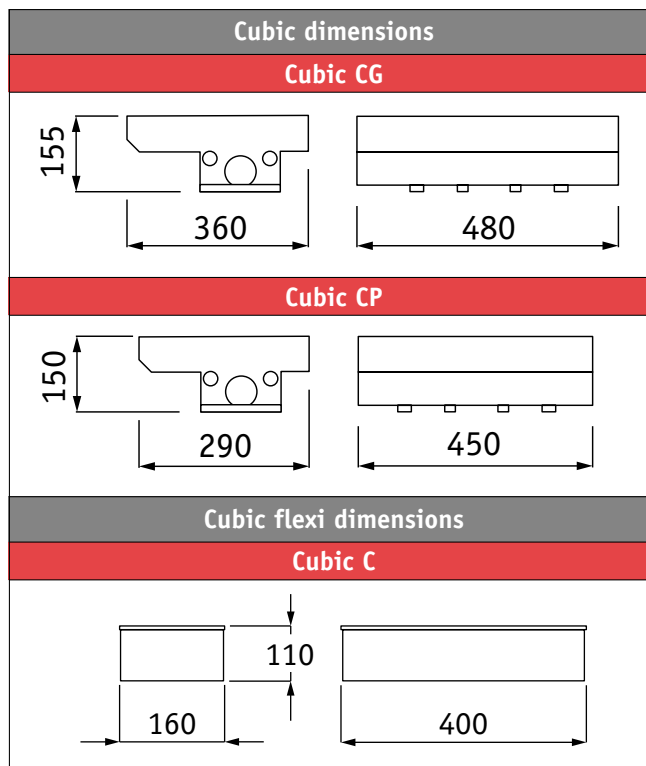
Ideal for prestige gates

Cubic is an underground automation for swing gates. It is not visible and allows to automate your gate without altering its look and style in any way. Cubic is the right choice for prestige gates and doors for buildings and palaces of great architectural and historical value or anywhere it is necessary that style, appearance and elegance are not spoilt.

Concealed, sturdy and versatile

It is a simple and functional system consisting in an underground steel box where the gear motor and the mechanical levers automating the gate wings are housed.

It is an extremely versatile solution because it satisfies other specific requirements on the part of the user. It allows a very wide angular opening, up to 180°, and, combined with DITEC control panels, it allows the motor to easily overcome any eventual friction caused by adverse atmospheric agents such as ice.



Ideal for difficult cases

Sometimes, a stone or granite paving or an unusual gate location have a strong influence even on the installation of an underground automation. "Cubic Flexi" version has been realized to solve even the most difficult cases. Cubic Flexi can be positioned axially or laterally to the gate pillar.

▶ Range of products

Cubic		Cubic Flexi
Cubic 30 (frequent duty)	Cubic 30H (heavy duty)	Cubic FO (frequent duty)
LOCK RELEASES		
NON-REVERSIBLE Lock release on wing Cubic 30 - Cubic 30H		Reversible with mechanical clutch
FOUNDATION CASE AND LEVERS		
For application with wing up to 3.5m		For application with wing up to 2.5m
Cubic CP + Cubic 30 LP (lever group with 110° opening)		Cubic C + Cubic L
For application with wing up to 4m		
Cubic CG + Cubic LG (lever group with 110° opening)		
Cubic CG + Cubic 30 LI (lever group with 180° opening)		



▶ Distinctive features

	Cubic 30	Cubic 30H	Cubic F0
Description: Electromechanical Actuator	irreversible	irreversible	reversible
Maximum capacity	① 600 kg x 2 m - 200 kg x 3.5 m ② 800 kg x 2 m - 300 kg x 4 m	① 600 kg x 2 m - 200 kg x 3.5 m ② 800 kg x 2 m - 300 kg x 4 m	600 kg x 2 m 400 kg x 2.5 m
Type of use / service	frequent	heavy duty	frequent
Intermittency	S2 = 15 min - S3 = 25%	S2 = 30 min - S3 = 50%	S2 = 15 min - S3 = 25%
Power supply	230 V~ / 50 Hz	24 V=	230 V~ / 50 Hz
Insulation class	class 1	class 3	class 1
Input	1.5 A	12 A	1.5 A
Torque	340 Nm	270 Nm	200 Nm
Opening time	20 s/90°	12±25 s/90°	13 s/90°
Max opening	110° - ③ 180°	110° - ③ 180°	180°
Release for manual opening	by key	by key	with lock on door
Operating temperature	-20°C / +55°C	-20°C / +55°C	-20°C / +55°C
Protection degree	IP67	IP67	IP67
Product dimensions	365x150x125	375x150x125	365x150x110
Control panel	E2 - LOGIC A21 - LOGIC A22	LOGIC C22	E2 - LOGIC A21 - LOGIC A22

Key

- ① with Cubic CP foundation casing
- ② with Cubic CG foundation casing
- ③ with Cubic CG foundation casing and Cubic 30LI lever mechanisms

▶ Cubic Structural features

Cubic gear motors, housed in sturdy die-castings and with permanent-lubrication gears, are available in two possible versions:

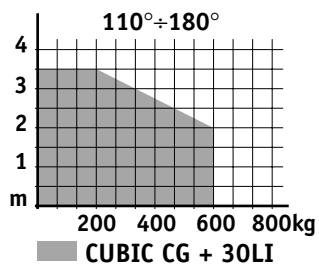
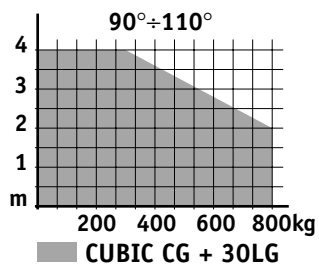
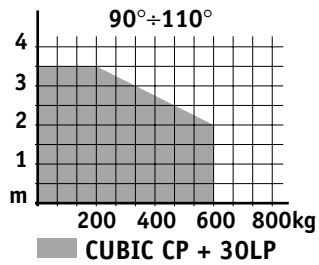
- ▶ Cubic 30/30H with provision for wing lock release.

Gear motors are housed in a sturdy, galvanized-steel foundation case, which is positioned in line with the wing hinges, the wing abutting on a disjointed pin. For the 110° version the motion of rotation results from a lever system allowing a kinematic slowdown of the motion on starting and on stopping, and an acceleration during stroke.

For the 180° version, motion transmission results from a toothed-wheel gearing-down. A gear motor with Cubic CG foundation cases can automate heavier swing gates, ensuring a 30% power increase of the gear motor and double mechanical strength of the levers, which proves to be useful also against breaking attempts.



Diagrams of use

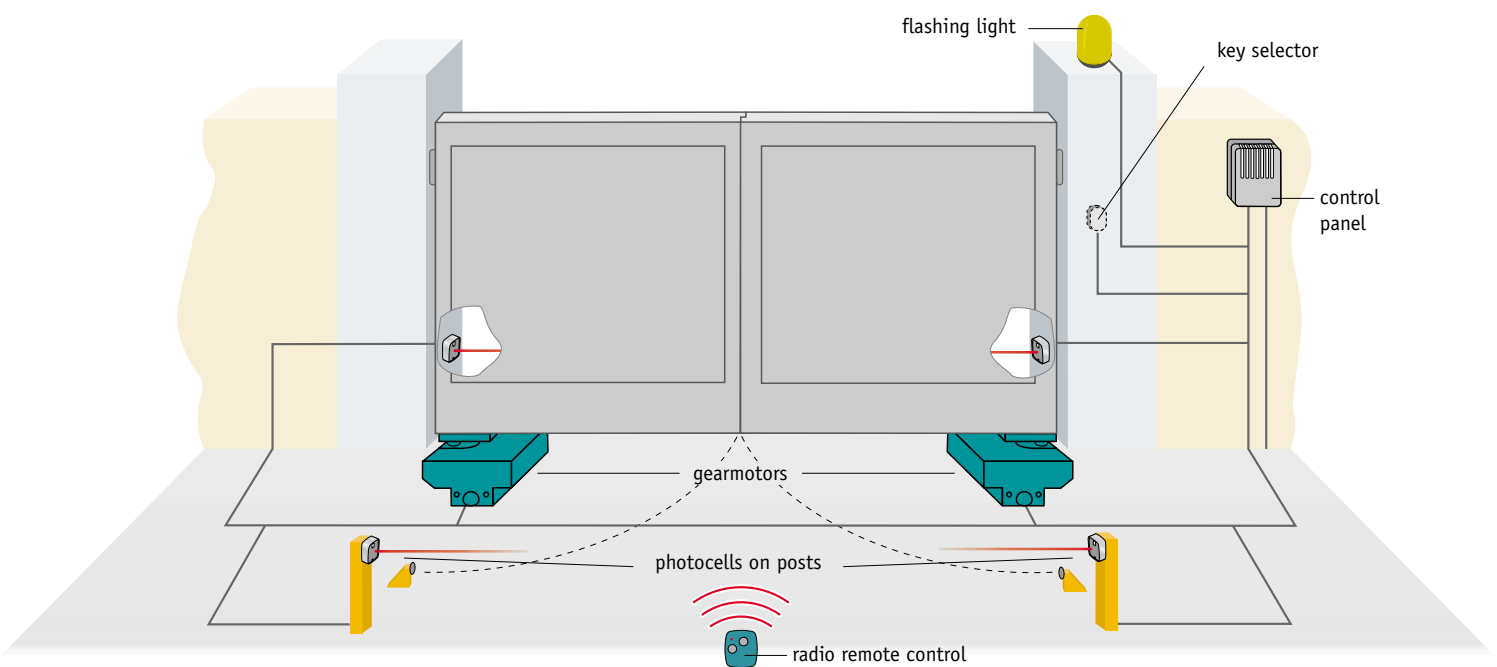


Distinctive features

- ▶ CE marked
- ▶ IP67 watertight gearmotors and galvanized-steel foundation case
- ▶ Standard lock release with double accessibility (from inside/outside)
- ▶ Operation possible even at low temperatures
- ▶ Standard 110° opening angle with kinematic slowing down
- ▶ Motor self-protected by internal thermal probe
- ▶ Full range of control and safety accessories
- ▶ Version with batteries in case of power failure (Cubic 30H)

Specific accessories

- ▶ internal mechanical stop



Cubic Flexi

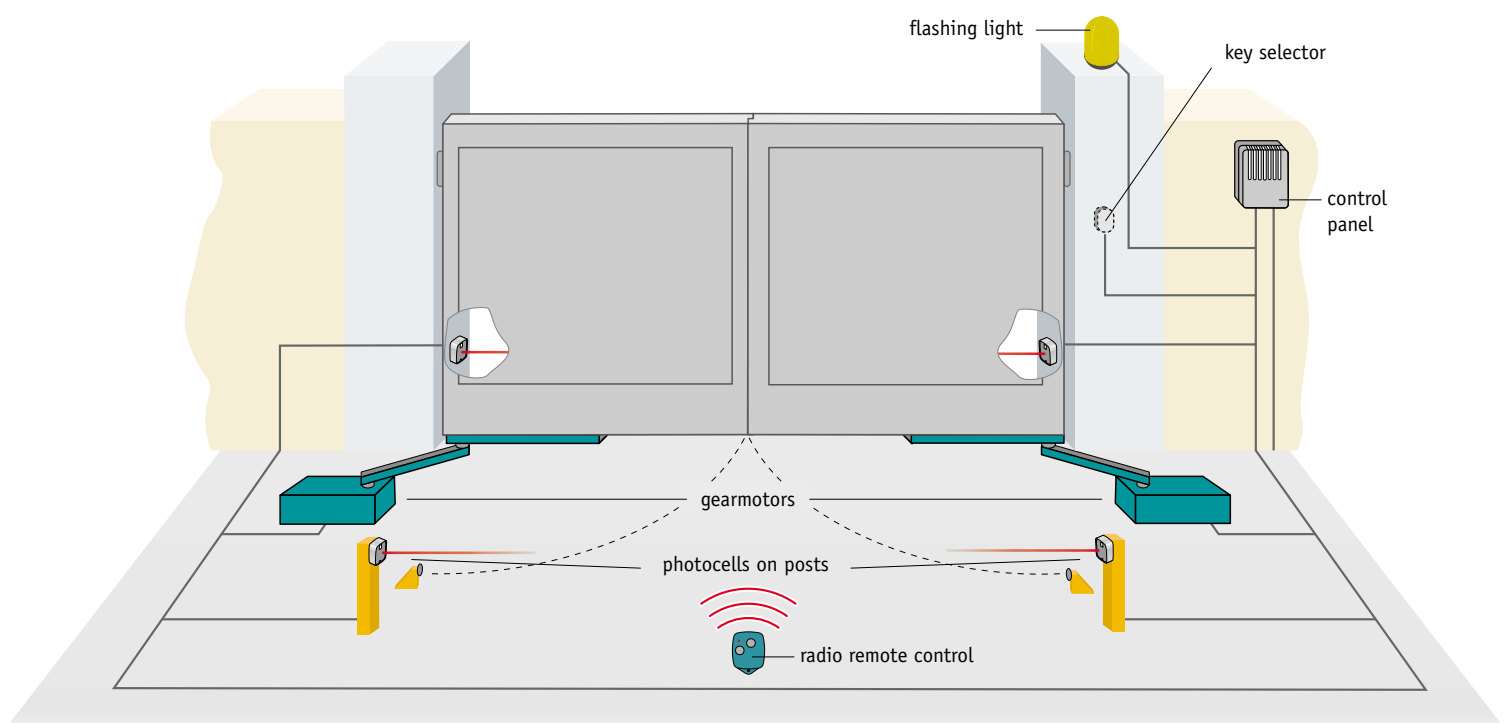
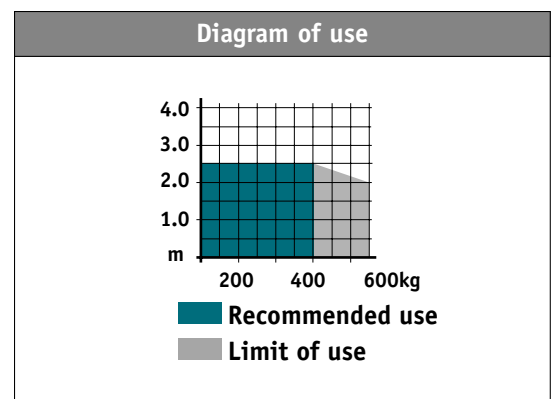
► Structural features

Cubic Flexi has been designed to ensure installation also on pre-existing gates. The very compact foundation case where the gearmotor is housed (Cubic C) allows Cubic Flexi to be placed axially or laterally to the gate pillar.

The system, which allows an opening angle up to 150° can be very effective when there are problems of positioning.

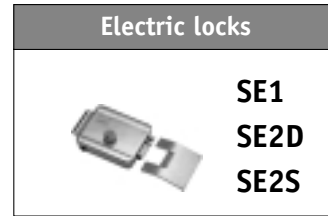
Movement transmission is provided by an external lever arm with a pallet sliding along a track welded to the swing leaf.

In the event of power failure, the gate can be opened manually by lock releasing the electric lock and by pushing the leaf itself manually, thanks to the mechanical friction.

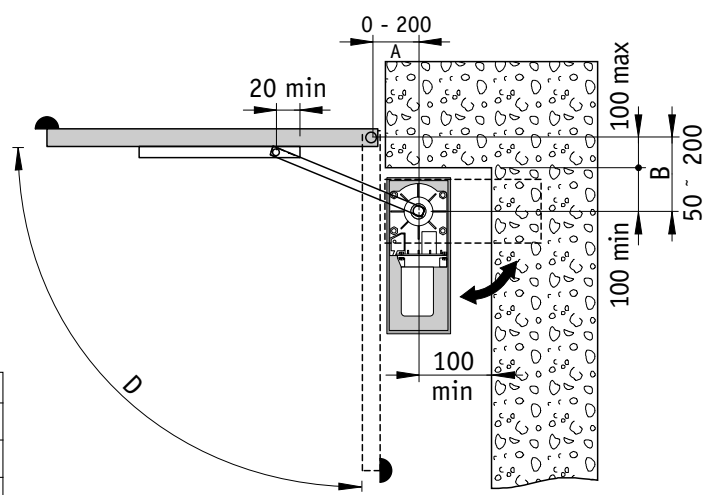


Specific accessories

- 12 V SE1 electric lock, with single cylinder



Example of Cubic Flexi installation



	A	B	D
Recommended measures	100	100	150°
	150	150	120°
Maximum measures	200	200	90°

Main functions of the automation system and control panels

	CUBIC 30 - CUBIC F0			CUBIC 30H
	E2	LOGIC A21	LOGIC A22	LOGIC C22
Description: Control panel	for 1 or 2 230 V~ motors with incorporated radio	for 1 230 V~ motor (multifunction)	for 2 230 V~ motors (multifunction)	for 1 or 2 24 V= motors
Mains power supply	230 V~ / 50 Hz	230 V~ / 50 Hz	230 V~ / 50 Hz	230 V~ / 50 Hz
Batteries for operation in case of a power break				
Number of motors	1 or 2	1	2	1 or 2
Motor power supply	230 V~ / 2 x 2.5 A	230 V~ / 5 A	230 V~ / 2 x 2.5 A	24 V= / 2 x 12 A
Accessories power supply	24 V= / 0.5 A	24 V= / 0.3 A	24 V= / 0.3 A	24 V= / 0.3 A
Electric lock	12 V= / 15 W	24 V= / 1.2 A	24 V= / 1.2 A	24 V= / 1.2 A
Flashing light indicates automatic closing for 3 seconds	230 V	230 V and 24 V	230 V and 24 V	24 V
Open automation indicator signals total closing failure	from limit switch and analogue	from limit switch and analogue	from limit switch and analogue	analogue
Courtesy light	 (1 motor only)			
Limit switch prearrangement			(opening only) 	(deceleration) 
Force adjustment	electronic	transformer	transformer	
ODS - Obstacle detecting system causes stop or reversal of operation if an obstacle is found				
Speed adjustment permits adjusting speed to achieve best operation				
Braking / Deceleration for best approach				
Operation time adjustment				
Opening command	(with dip-switch) 			
Partial opening command	(with remote only) 			
Closing command				
Timed automatic closing				
Step-by-step command				
Hold-to-run command				
Stop safety device				
Reverse movement safety device				
Autotest function for SICUR self-controlled safety devices				
NIO - Antifreeze system for maintaining motor efficiency even at low temperatures				
Operating temperature	-20°C / +55°C	-20°C / +55°C	-20°C / +55°C	-20°C / +55°C (+5°C / +40°C batteries)
Protection degree	IP55	IP55	IP55	IP55
Product dimensions	180x250x100 mm	180x250x100 mm	225x320x120 mm	225x320x120 mm

▶ Accessories

DITEC wide range of accessories offers access systems with several operation and control alternatives.



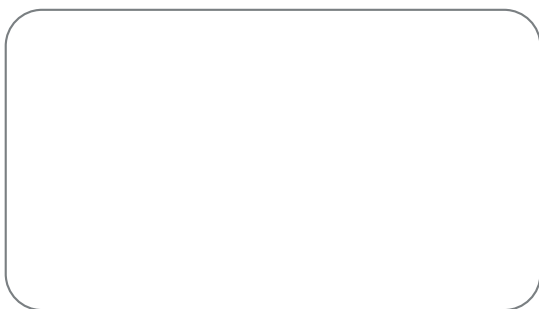
Bix radio remote controls
With individual code, that can not be copied, stored in the EEPROM, 16-million code combinations, rolling code technology. Approved and in compliance with directives.

▶ Regulations

Use only DITEC accessories and safety devices for automation system installation.

DITEC actuators are CE-marked. They are designed and built in compliance with the safety requirements defined in the Machinery Directive (98/37/EC), Electromagnetic Compatibility Directive (89/336/EEC) and Low-Voltage Directive (73/23/EEC). DITEC S.p.A. reserves the right to make any changes whatsoever in order to upgrade its products.

Ditec products are constantly improved. As a consequence, technical data as listed in this leaflet are not to be considered binding. Further information can be found in our technical manuals, available on the website www.ditec.it



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▶ **Bix 5 - radio remote control holder**
Its elegant design makes it the right complement anywhere: on your car dashboard, on your garage or on your house walls. The radio remote control can easily be placed into its holder and be always available there for you to use.



▶ **Xel 2 infrared photocells**
They allow actuators to operate at the highest safety levels. Suitable for post or surface mounting. Modulated infrared beam.



▶ **Xel 5 key selectors**
High security, vandal-proof device. Suitable for post or surface mounting.



▶ **CS0 rubber safety edges**
They guarantee the highest safety conditions during opening and closing operations in any entrance system.



▶ **Lan 4 digital selectors**
Vandal-proof digital keypad with secret code up to 8 figures.



▶ **LAMP flashing light**
Attractive and elegant design. Available also with surface-mounting holder and built-in antenna.



▶ **TEO L wireless digital keypad**
4-channel programmable radio remote control. It provides radio opening of automatic entrances, by means of a code. Suitable for surface mounting.



▶ **LAN 7 proximity access control**
Identification system using transponder technology. Non-contact detection.



ISO 9001
Cert. n° 0957/1