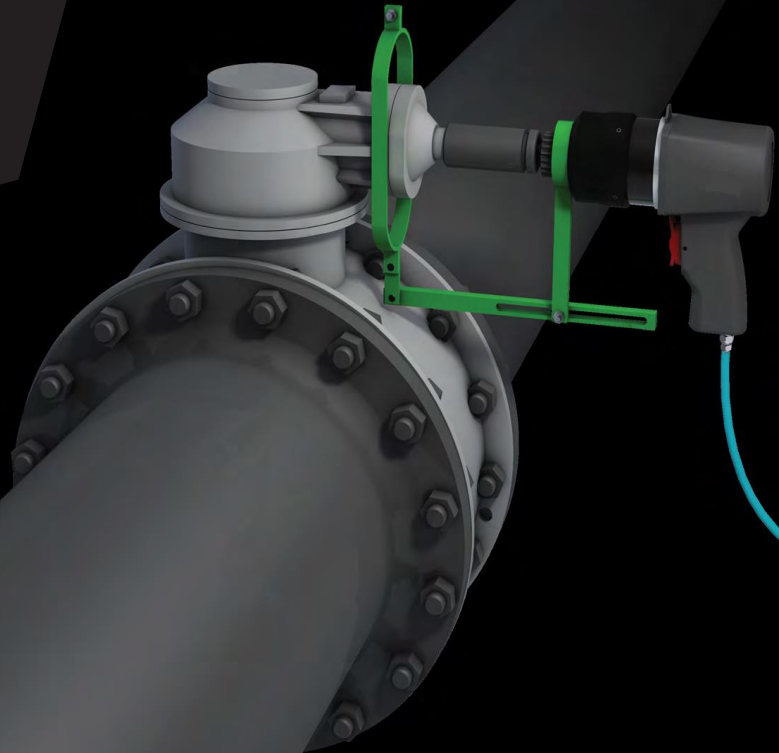




BLACKIRON
ITALY



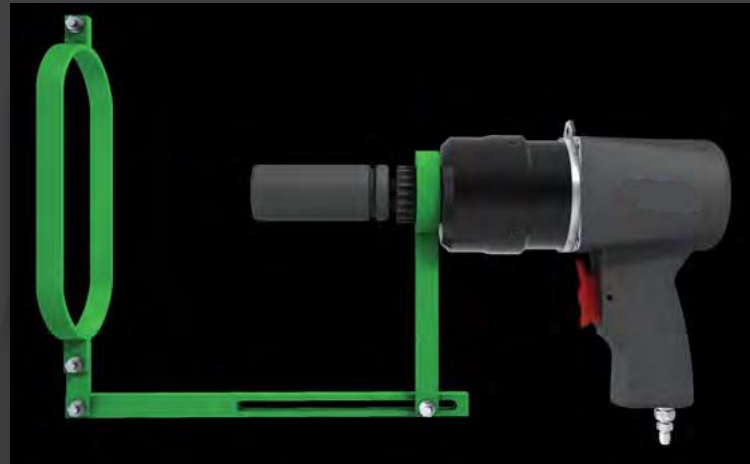
PORTABLE ACTUATORS

PORTABLE VALVE ACTUATION

Portable Actuators offer more benefits than standard actuators. BLACKIRON portable actuators, in particular increases the flexibility for the operator: the same tool can be used on several valves in the same day. Portable actuators are cheaper than standard actuators and much faster than manual activation by hand wheels.

With our portable actuators it's possible to activate any valve even if it requires many turns to be fully open. Valve opening and close operations become easy and safe, without any needing of expensive gears. Pre-install the reaction devices, carry the light-weight tool to the field and open your valves quickly, safely and with minimal operator's effort! Our range of products varies from type of application, covering a torque range of 60-485Nm. On request our Pneumatic multipliers can be

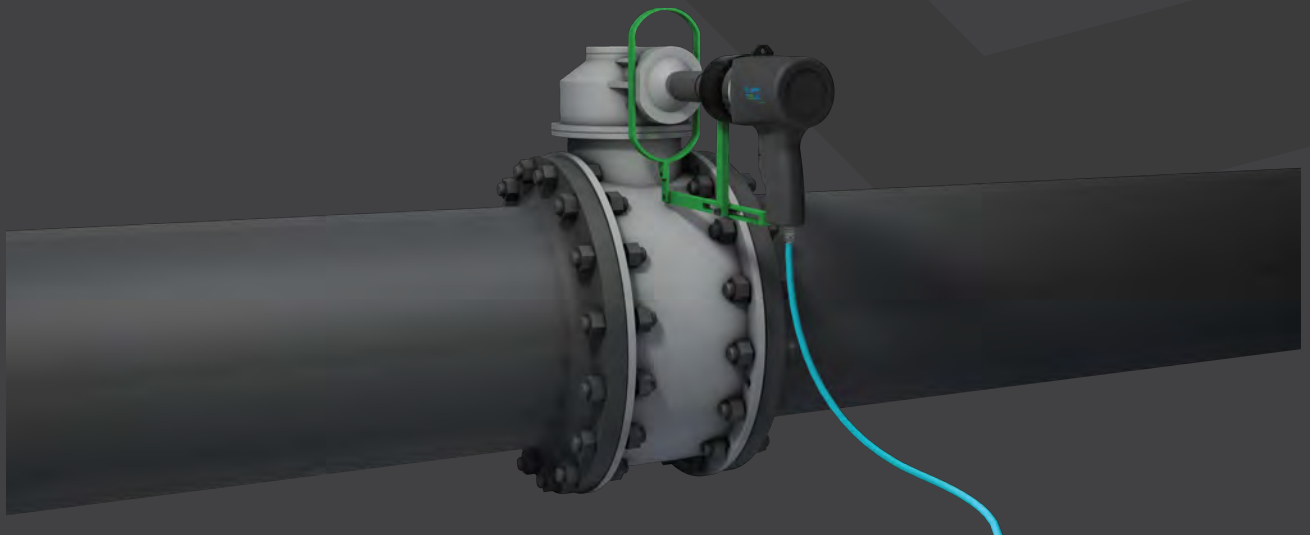
Certified ATEX: II 2 G D c IIB T6. Special Portable Actuators can be designed to achieve higher torque or speed. The CLS-SP and CLS-20232 models offer a PPA able to work optimally between temperatures ranging from 0 to + 50 ° C with the only difference on reaction modality:



The CLS -SPC serie includes a modular reaction arm which can be clamped to the valve gearbox and an impact socket for stem connection.

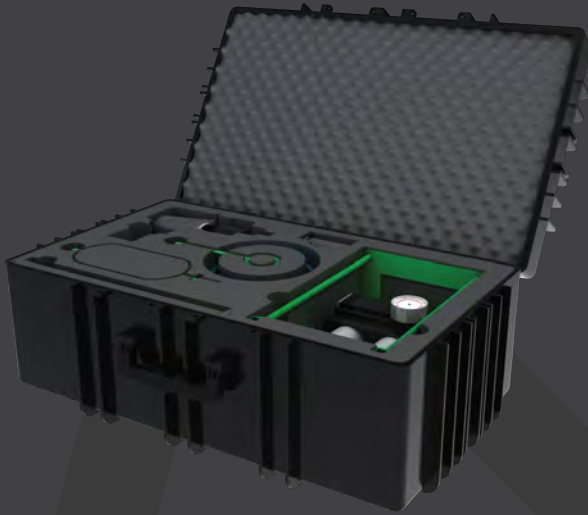
SAVE UP TO 80% OF VALVE ACTIVATION TIME

With our portable actuators you can quickly open and close any type of industrial valves: BALL, BUTTERFLY, GATE. Even valves that require a high number of rotations or need high operating torque are activated in a few minutes.



REACTION DEVICE ENSURES SAFE VALVE OPERATION

All force during operation is diverted through the reaction arm on the mounting bracket. This way, safe valve operation is guaranteed at all times. Portable actuator is easy and convenient. Our light-weight tools are designed to be quickly carried on the production site.



CLS-20232 makes reaction through a flanged mandrel with two telescopic reaction arms.



The CLS-YT model is designed to work in harsh environments with a temperature range from +25 to -50 ° C.

Item	Class	Temp. Range	Square Drive	Torque range	Diameter	Lenght	Speed	Noise Level	Vibrations	Weight (r. arm excl.)
		°C	Inches	Nm	mm	mm	Rpm	Db		Kgs
CLS15-SPC1	Standard	0° to 50°	1/2" or 3/4"	60-220	41	255	60	91**	trascurable	6,0
CLS25-SPC1	Standard	0° to 50°	1/2" or 3/4"	95-280	41	255	38	91**	trascurable	6,5
CLS35-SPC1	Standard	0° to 50°	3/4"	135-390	41	255	34	91**	trascurable	6,5
CLS45-SPC1	Standard	0° to 50°	3/4"	165-485	41	255	27	91**	trascurable	6,5
CLS15-YT-SPC1	Artic	-50° to 25°	3/4"	60-220	41	255	60	91**	trascurable	6,0
CLS25-YT-SPC1	Artic	-50° to 25°	3/4"	95-280	41	255	38	91**	trascurable	6,5
CLS35-YT-SPC1	Artic	-50° to 25°	3/4"	135-390	41	255	34	91**	trascurable	6,5
CLS45-YT-SPC1	Artic	-50° to 25°	3/4"	165-485	41	255	27	91**	trascurable	6,5
CLS15-20232	Spindle	0° to 50°	1/2"	60-220	41	255	60	91**	trascurable	6,0
CLS25-20232	Spindle	0° to 50°	1/2"	95-280	41	255	38	91**	trascurable	6,5
CLS35-20232	Spindle	0° to 50°	3/4"	135-390	41	255	34	91**	trascurable	6,5
CLS45-20232	Spindle	0° to 50°	3/4"	165-485	41	255	27	91**	trascurable	6,5

Torque accuracy depends by air supply stability.

For optimal performance it is recommended an air pressure of 3-7 bar (about 300-700 kPas) and an air flow of 10-15 l/sec.

* Low temp could reduce the Torque output by 10% and accuracy would be at about +/- 5%.

**Acoustic emission can be reduced at < 70 db by using an optional sound absorber.



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