



**renova**  
WE NEVER LOSE CONTROL

**simplex**  
CALIPER BRAKES



# simplex

Pneumatic, manual and hydraulic brakes

Simplex, Renova's caliper brakes, are the combination of a disc brake with one or more calipers. They are the best solution to effectively decelerating moving parts for small and medium powers.

The peculiarity of this system is its modularity and flexibility, as it is possible to install one or more calipers with the possibility to activate and deactivate each one according to the required torque.

Simplex caliper brakes are suitable for the most various applications thanks to a wide range of models, including manual, pneumatic or hydraulic brakes, and are also available in the fail-safe version (with spring applied) to guarantee the operators' safety during maintenance and/or in emergency situations.

Send us your application requirements and we will work with you to find the model that suits your needs.

# PNEUMATIC (P) CALIPER BRAKES

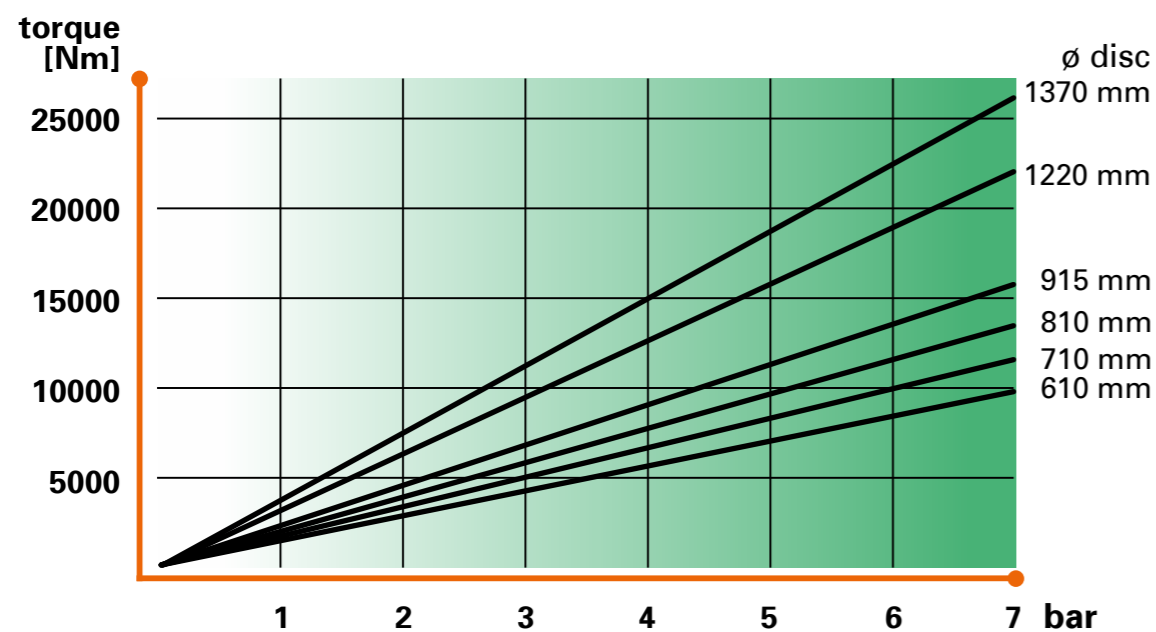
The pneumatic caliper brakes consist of a structure which, through a lever geometry, amplifies the thrust force of the diaphragm pneumatic piston. The two jaws consequently close, clamping onto the disc and generating a braking torque.

They are therefore activated from air pressure, which can vary between 0 and 6 bar modifying the braking force.

Once the power required is reached it will remain constant, regardless the brake pads wear.

They are designed with different mounting systems and different control units to suit any application needs.

Very important is the selection of the most suitable type for both the mounting geometry and the braking power requirements.



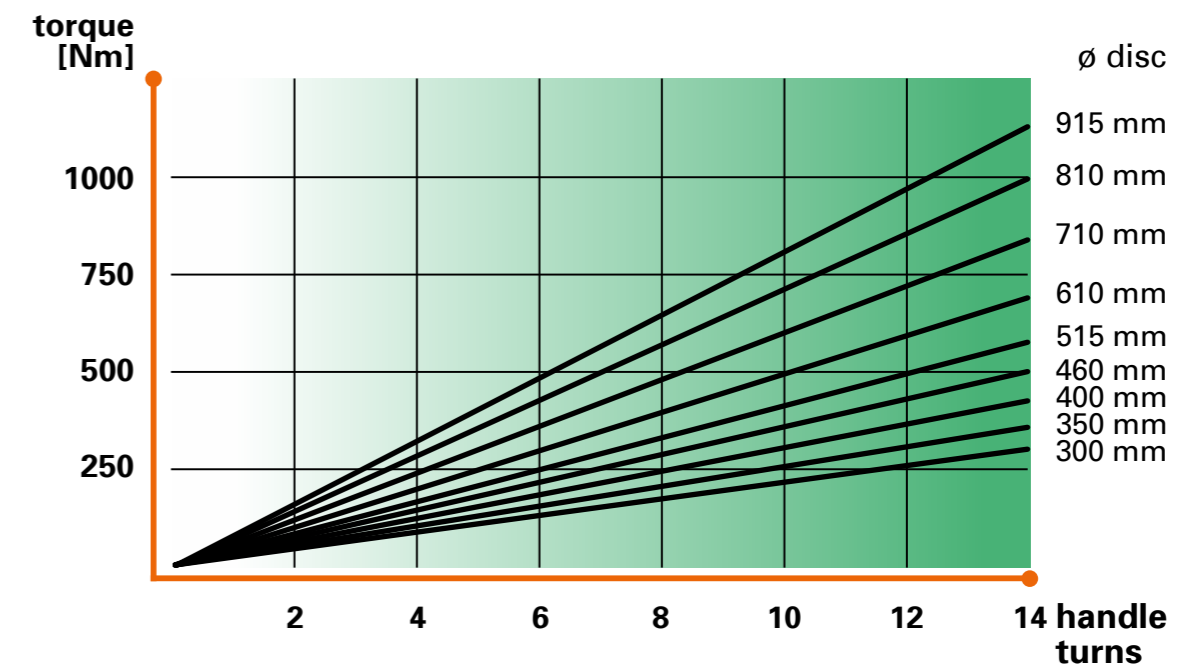
# MANUAL (M) CALIPER BRAKES

Simplex manual caliper brakes are manually activated thanks to the operator intervention and they are used in all industrial applications where the pneumatic or hydraulic supply may be absent. This type of brakes is normally selected to allow static, maneuvering or tensioning braking.

The structure is the same as that of the pneumatic brakes but the operating unit is replaced by a handwheel.

For the less powerful models the handle works on the elastic deformation of the arms, while for the more powerful models it acts on the deformation of a helical spring inserted in the unit.

In the performance table, the air pressure is replaced by the number of turns of the handle.



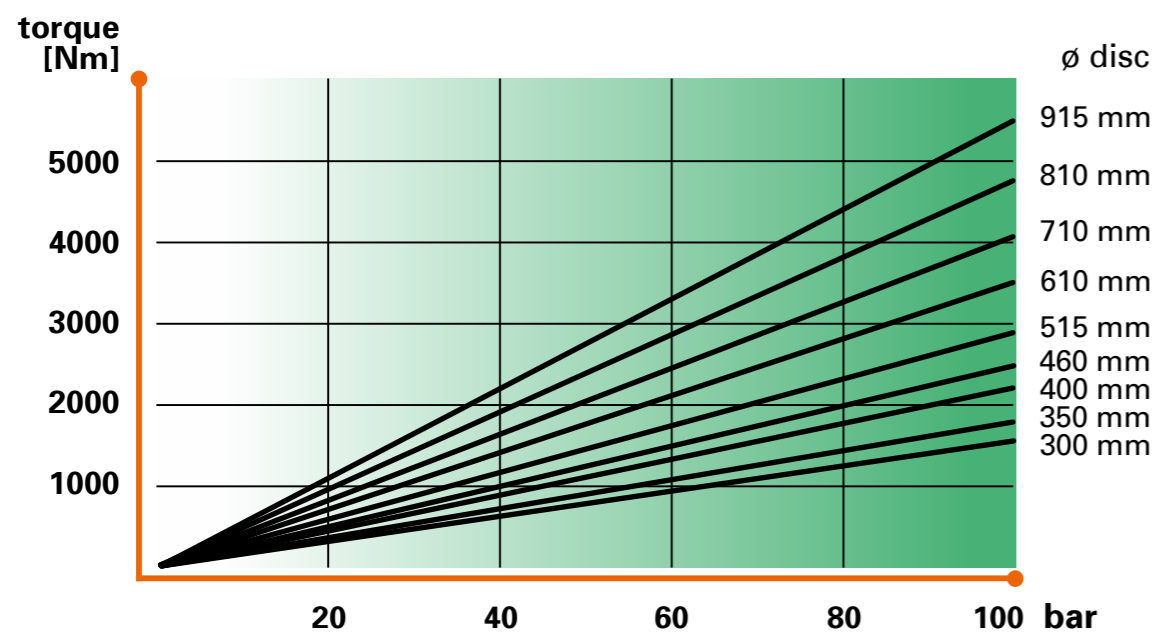
# HYDRAULIC (Y) CALIPER BRAKES

A wide range of hydraulic caliper brakes is available, designed for industrial applications where there is a hydraulic supply with high pressures, up to 120 bar.

Hydraulic calipers are more compact than pneumatic ones. They have a fast response and, given the direct relationship between torque and fluid pressure, they are easy to adjust.

The maintenance required is very low, thanks to the pad wear compensation system: the stroke of the pistons allows for perfect braking even with worn pads.

For the feeding, it is recommended to use a good quality SAE ISO 46 mineral base oil.



# SPRING APPLIED (N) CALIPER BRAKES

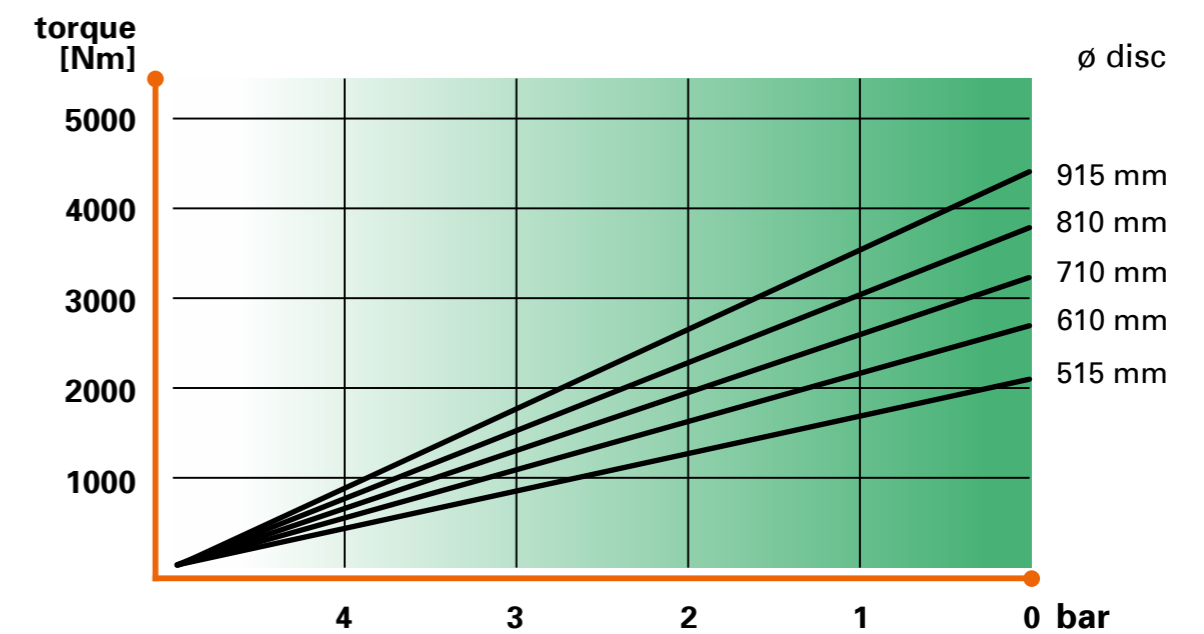
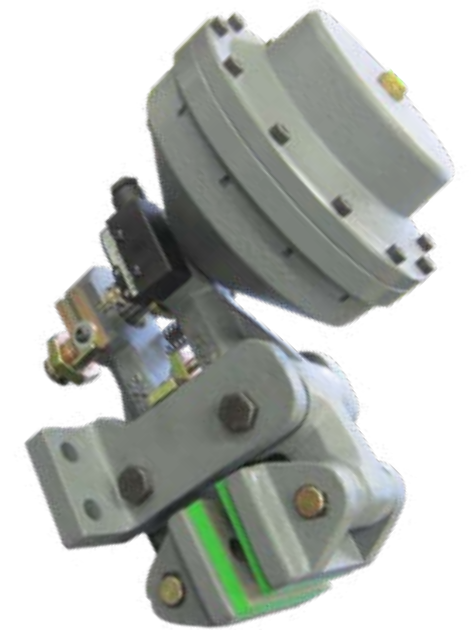
The negative pneumatic caliper brakes exploit, instead, the spring actions to activate braking system in a very short time.

Hydraulic In their negative version they work by springs activation.

In safety applications where the braking of moving parts is automatically required in the absence of power supply or in parking brakes, a wide range of pneumatic and hydraulic spring-actuated brakes is available.

It is important to have sufficient pressure of the control fluid to open the brake.

The brake can still be opened mechanically by acting on the lead screw which counteracts the action of the springs.





**SIMPLEX  
MODELS**

45SQE21.0

45SQ 20.7

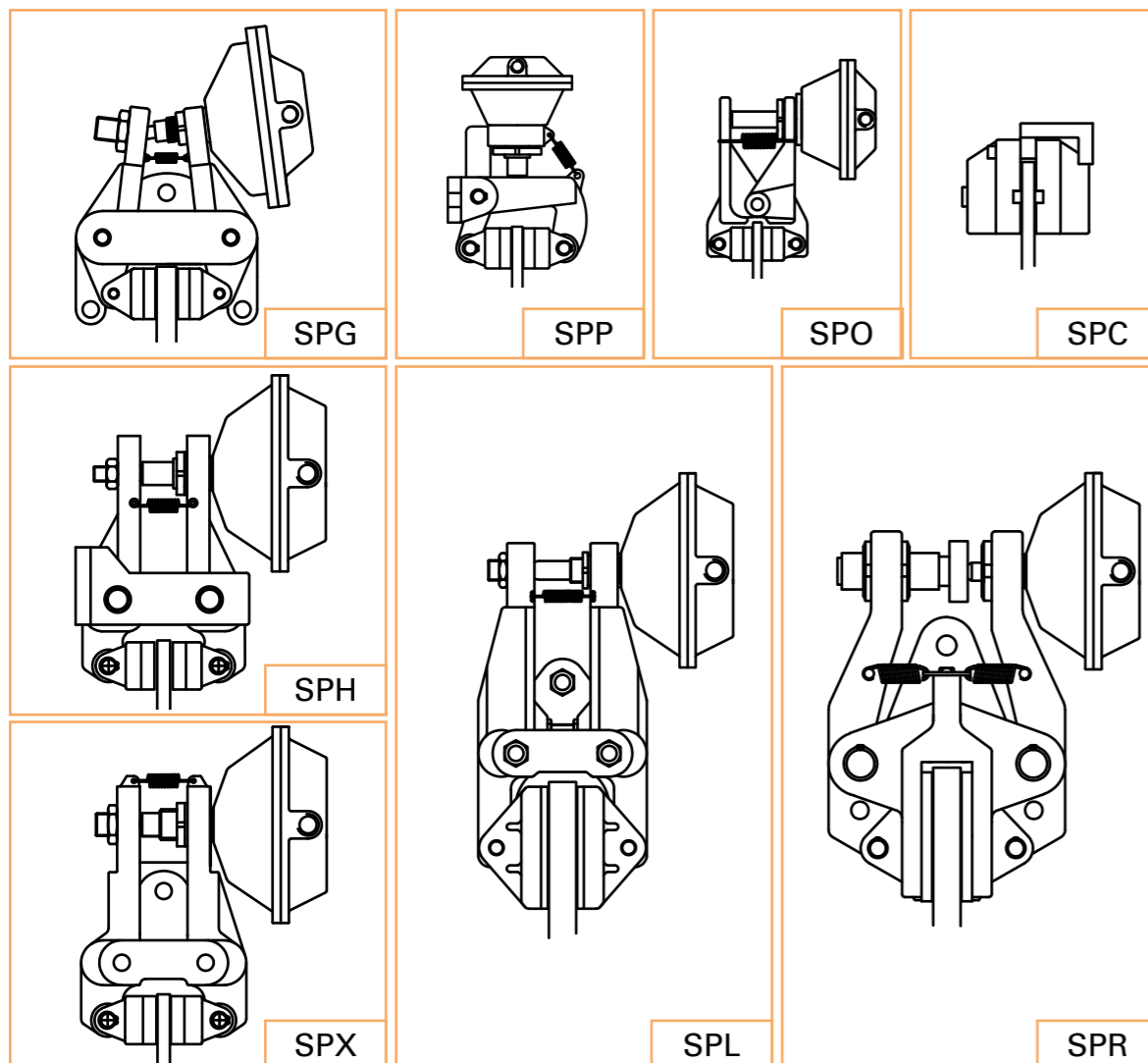
103M

24VDC

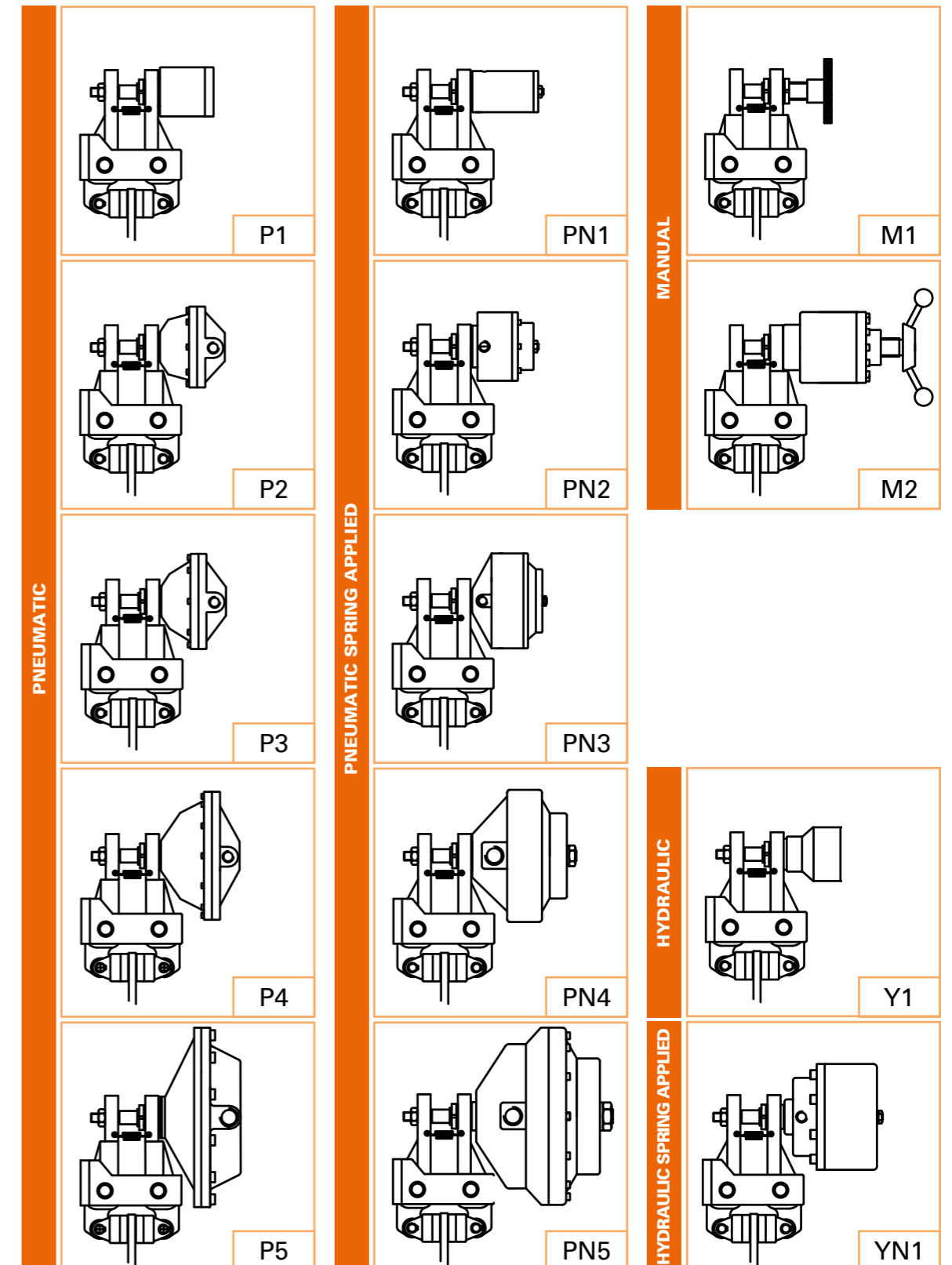
# CUSTOMIZABLE CALIPER BRAKES

Calipers, actuators, discs and optionals: designed and manufactured with the highest quality, each caliper brake can be customized in every part, in order to operate according to the application working conditions.

## CALIPERS

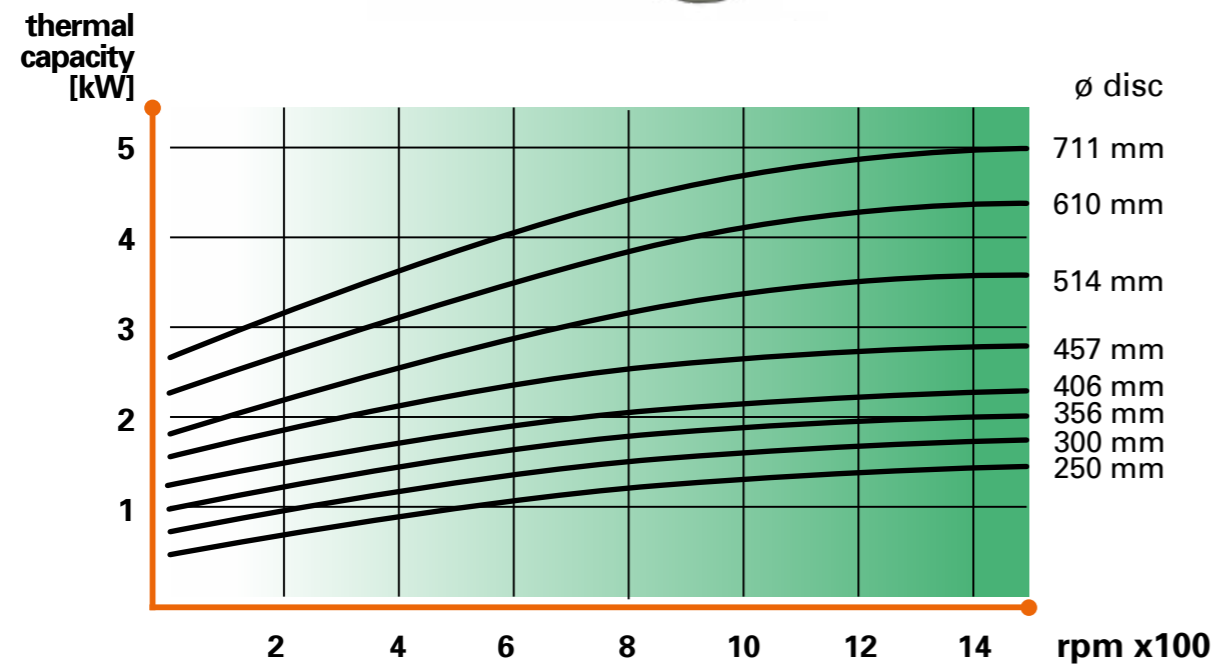


# ACTUATORS



# DISCS

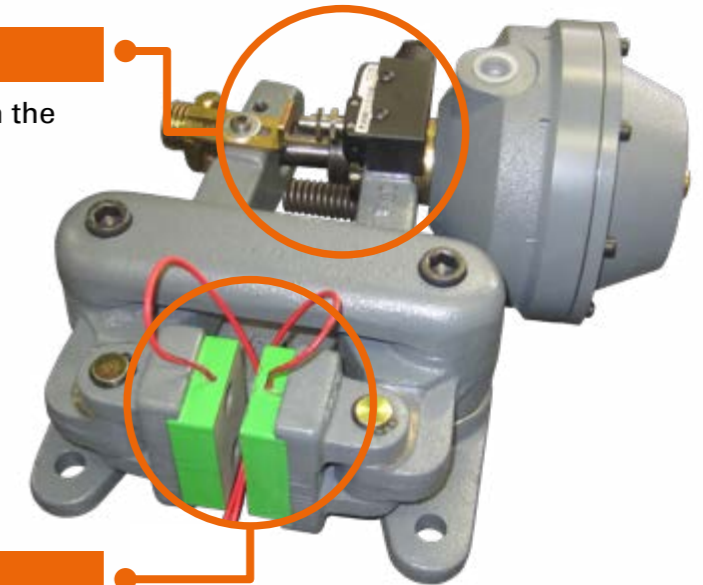
We have a wide selection of spheroidal cast iron discs, the natural complement to the calipers. They are to be selected according to the required braking torque which is proportional to their size and the amount of heat to be dissipated during braking. Discs from 250 mm to 762 mm are available.



# OPTIONALS

## ON/OFF INDICATOR

safety precaution that warns when the brake is open or closed



## WEAR INDICATOR

the wear indicator is a monitoring device that simplifies maintenance procedures by informing via electrical input when the brake pads have reached their wear limit

# SPARE PARTS



We have at stock a wide range of original spare parts at competitive prices. Our pads are also 100% compatible with all caliper brakes available on the market.



**ROHS compliant:** all pads are asbestos, hexavalent chromium, mercury, cadmium, antimony and lead FREE!

Thanks to the new compounds formula, Renova's pads guarantee a longer life and therefore a reduced need for spare parts and reduced dust emissions in the workplace.





**MADE IN ITALY**  
Our products are 100% designed and made in Italy



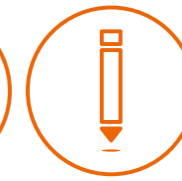
**SUPPORT**  
Our staff is always available to answer your questions, also in the after-sales phase

**INNOVATION**  
We provide solutions that increase productivity and safety levels while reducing maintenance costs and procedures



**CUSTOM PROJECTS**  
Projects large or small, we work with you to provide the solution that fits

**QUALITY**  
All Renova's products are managed by TUV ISO 9001



**SUSTAINABILITY**  
Sustainable products, sustainable company.  
Renova has joined Erion



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