Pneumatic clamps have a variety of uses in machine and device construction. They are used for clamping, holding and positioning workpieces. The different pneumatic clamps can be categorized into the following types, based on their kinematic properties and design: Pneumatically operated toggle clamps, power clamps and swing clamps.

Toggle Clamps

Pneumatically operated toggle clamps correspond to manually operated toggle clamps in terms of design and dimensions. They function according to the knee lever principle but they are operated pneumatically rather than purely by hand.

Due to the knee lever principle, the clamp remains closed even after a loss of compressed air.

Toggle clamps with a permanent magnet integrated into the piston (coding M) enable detection of the end position by means of sensors.

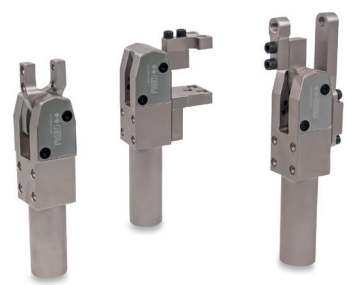
Power Clamps

Power clamps achieve high clamping forces even with small clamp sizes, which results in lower air consumption and weight reduction.

The kinematic properties of the power clamps are designed so that the clamping force achieved in the clamped position is retained even after a loss of compressed air.

All power clamps come pre-equipped for end position detection via sensor.

On request, all power clamps and their accessories can be ordered with an anti-stick coating for protection against welding spray and corrosion.



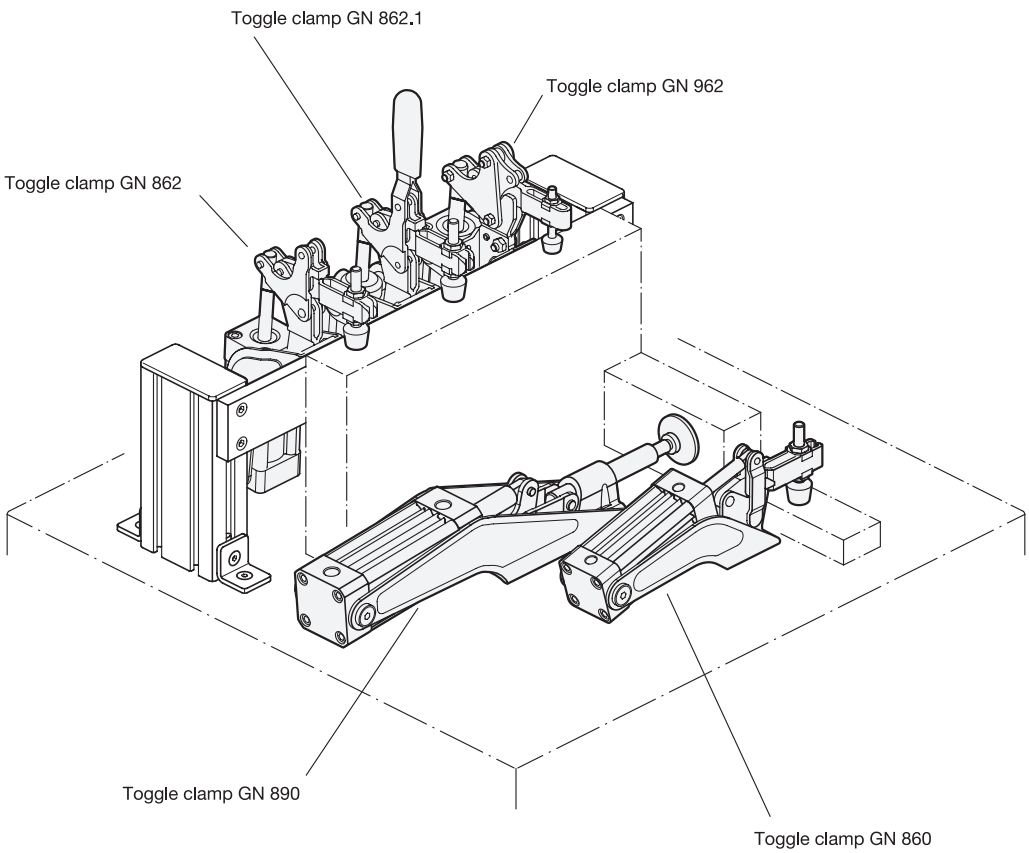
Swing Clamps

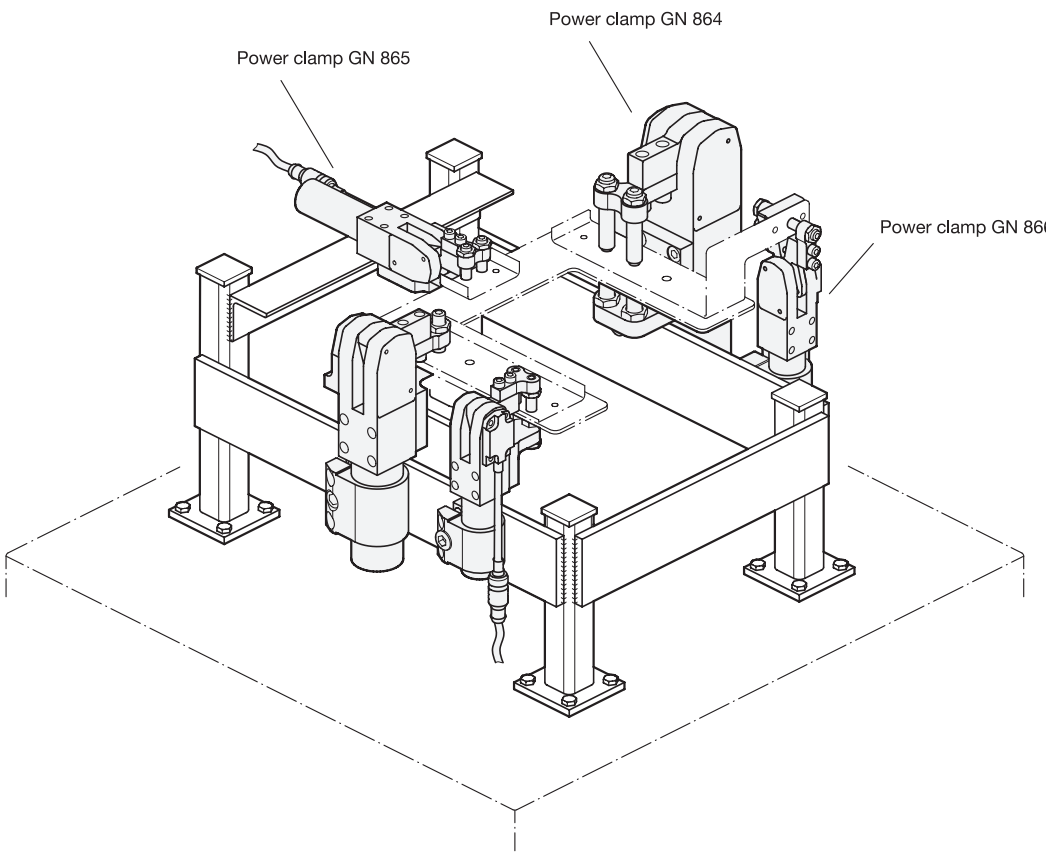
Swing clamps differ from other clamps in terms of their kinematic action. The clamping movements consist of an initial 90° pivot and linear motion downward, followed by the linear clamping motion for clamping of the workpiece.

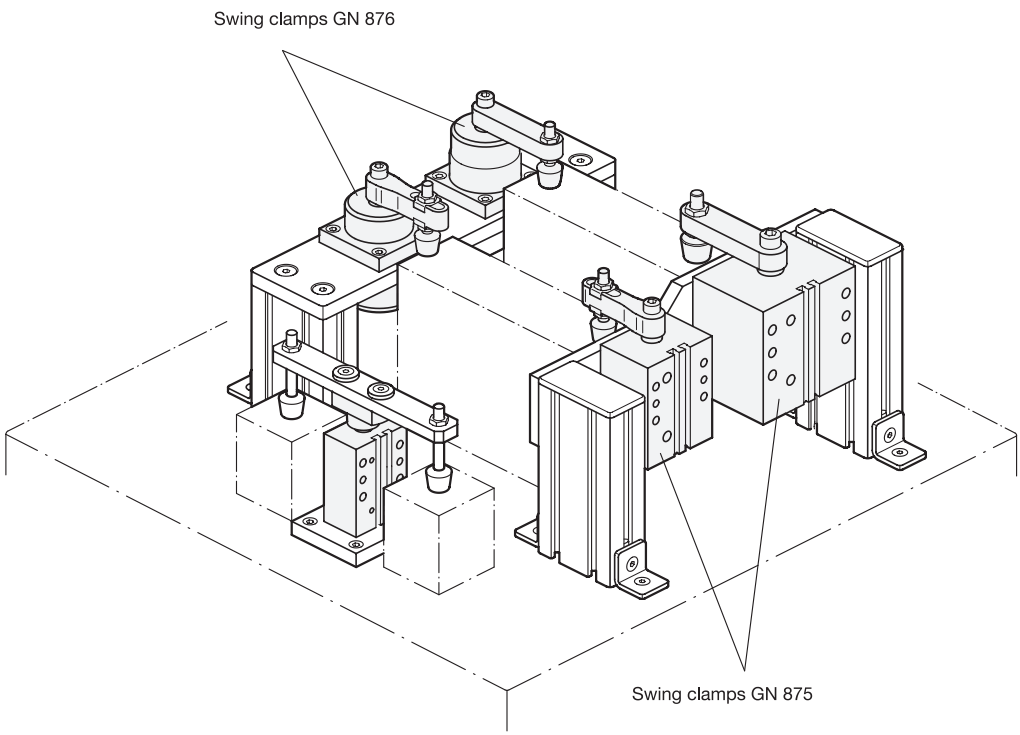
Swing clamps are generally used when the clamping point must be freely accessible from above for insertion and removal of the workpiece.

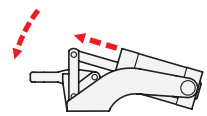
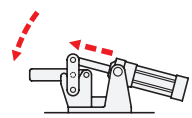
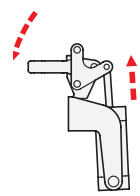
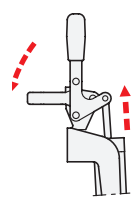
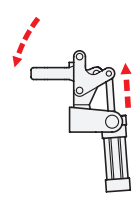
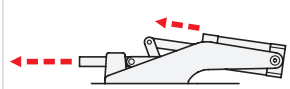
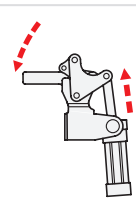
Typically, swing clamps are fitted with rectangular or cylindrical housings.

Swing clamps with rectangular housings (block version) are additionally fitted with a magnet ring piston, making them suitable for end position detection by means of a sensor.

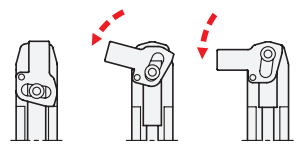
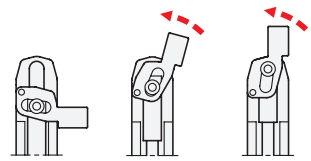
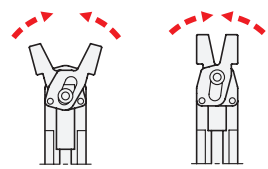

Toggle clamp GN 862.1
Toggle clamp GN 962
Toggle clamp GN 862
Toggle clamp GN 890
Toggle clamp GN 860


Power clamp GN 865
Power clamp GN 864
Power clamp GN 866

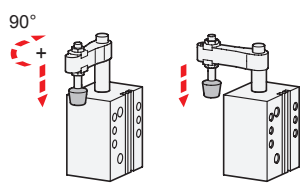
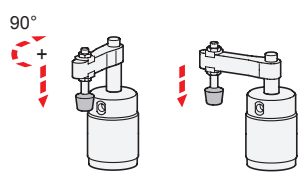

Swing clamps GN 876
Swing clamps GN 875

Toggle Clamps				
Standard	**Properties**	**Kinematics**	**Clamping force F_S in N** at 6 bar	**Holding capacity F_H in N**
GN 860 Page 794	- Knee lever principle - The tensioning mechanism corresponds to the manually operated toggle clamps in terms of design - End position detection		380 - 3200	700 - 4000
GN 861 Page 796	- Knee lever principle - Heavy duty design with high clamping forces - End position detection		2500 - 3600	10000 - 20000
GN 862 Page 798	- Knee lever principle - Mounting via angled base - End position detection		570 - 1800	750 - 2600
GN 862.1 Page 802	- Knee lever principle - Mounting via angled base - Design and dimensions as GN 862, however with additional manual operation - End position detection		1260 - 1800	2200 - 2600
GN 863 Page 804	- Knee lever principle - Mounting via angled base - Heavy duty design with high clamping forces - End position detection		3250 - 5600	10000 - 20000
GN 890 Page 806	- Knee lever principle - The tensioning mechanism corresponds to the manually operated push-pull type toggle clamps in terms of design - for push clamping - End position detection		780 - 5520	1200 - 25000
GN 962 Page 800	- Knee lever principle - Mounting via angled base - Heavy duty design with high clamping forces - „Longlife“ - End position detection		870 - 2280	2200 - 8500

Power Clamps

Standard	Properties	Kinematics	Clamping force F_S in N at 6 bar	Holding capacity F_H in N
GN 864 Page 822	- Dead point mechanism - Clamping arm horizontal, vertical, or centered - High clamping forces - Compact size - Low air consumption - Long service life - End position detection		2220 - 9000	4070 - 13300
GN 865 Page 824			1250 - 4900	2300 - 7200
GN 866 Page 826			630 - 1800	1150 - 2000

Swing Clamps

Standard	Properties	Kinematics	Clamping force F_S in N at 6 bar	Holding capacity F_H in N
GN 875 Page 842	- Pivot and linear motion - In block version, universal mounting capability - Compact dimensions - End position detection		170 - 1100	170 - 1100
GN 876 Page 844	- Pivot and linear motion - With screw-in thread, adjustable - Compact dimensions		170 - 1100	170 - 1100