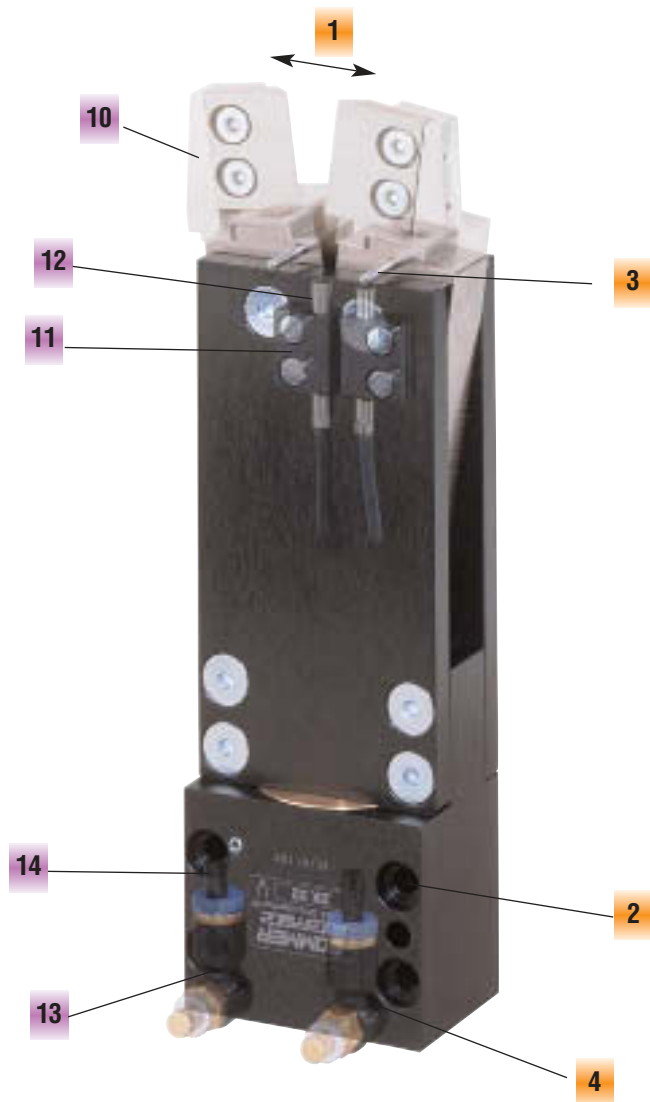


Toggle tongs



Features

- 1 Stroke
- 2 Hole for socket head screw
- 3 Trip dog
- 4 Air connection at the front and bottom

Accessories

- 10 Universal jaws
- 11 Sensor mount
- 12 Proximity switch
- 13 One-way valve
- 14 PU-hose

This small power pack

bites and cuts its way through its entire life. It has its justified part of the market. The toggle tongs achieves its great force due to the leverage of the toggle lever: up to 10 Nm. This force can, for example, be used to hold, squeeze and cut thick wires, cables small chains, etc. with the interchangeable jaws. When the gripper is in the fully closed position, the toggle remains straight, so ensuring mechanical self-locking. The gripped part will therefore be held securely even if the pressure drops.

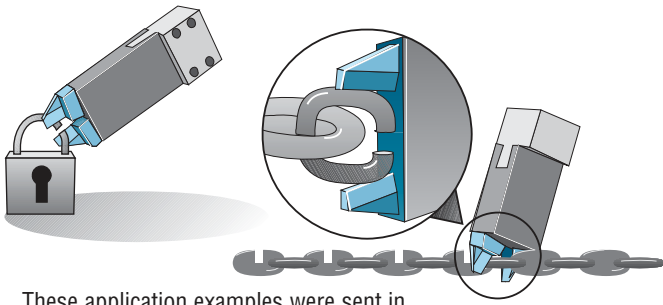
Two pins mounted on the jaws can be used to indicate the open and closed positions. The M3 threaded holes under the pins are provided for

attaching "KB4" sensor mounts for "NJ4-E2" proximity switches (more details in the accessories section)

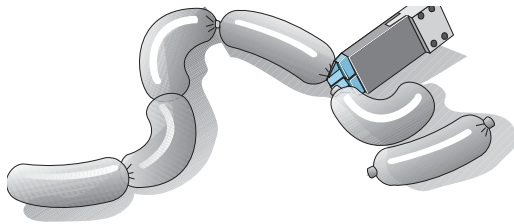
The housing and cylinder are made of hard-anodized aluminum, the jaws of case-hardened steel. This ensures long service life and an easy, continuous operation of the gripper. Numerous pins and attachment holes facilitate installation. The air connections for the double-acting cylinder are located on the bottom (factory-plugged) and on the front. The toggle tongs can be used for a variety of applications (particularly in the plastics industry).



Application Ideas

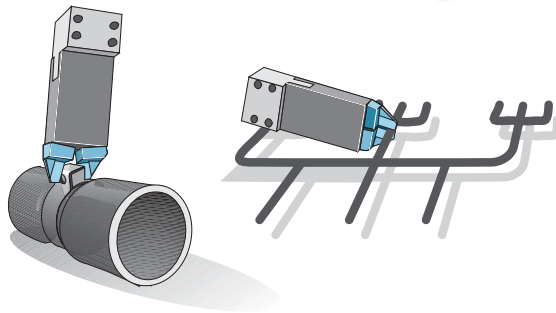
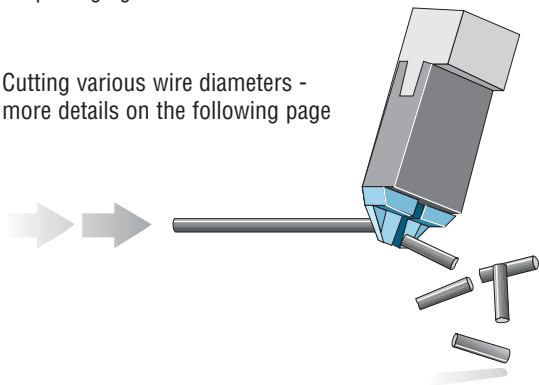


These application examples were sent in by Mr. Ed Pincher of Snipville.

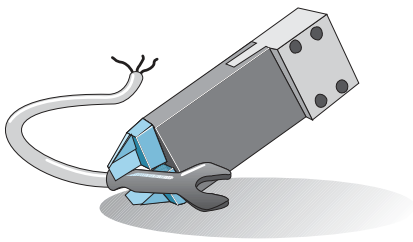


Example sent in by Mr. Hoffmann and Mr. Mandel: The sausage is at stake...
An endless string of sausages is cut into single sausages for packaging.

Cutting various wire diameters - more details on the following page



Tongs used for removing plastic or cast parts and cropping them at the same time.



Tongs used for crimping hose and cable clamps on production lines.

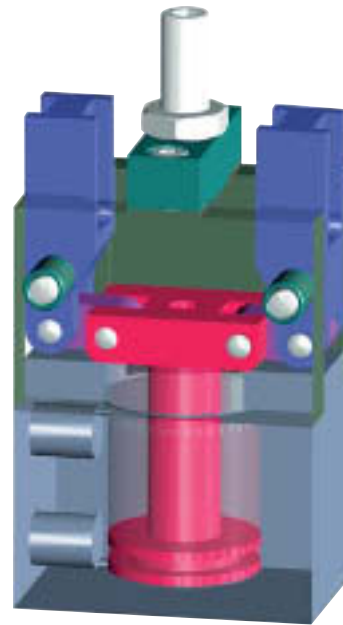


Illustration is similar in type

Operation

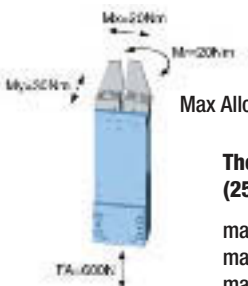
A double-acting pneumatic cylinder drives the internal linkage (red). The jaws move radially from the center and are connected to the internal linkage (toggle lever). The toggle lever is straight when closed and it ensures a great gripping force and mechanical self-locking.



Parallel gripper		Three-jaw gripper		Angle gripper	Internal-hole gripper	Other grippers			Electric gripper			
SCH20	SCH23	ST36	ST40	ZK22	ZK33	GS65	RG0-30	RG10-60	SPG30-95	GF40	GF41	HM



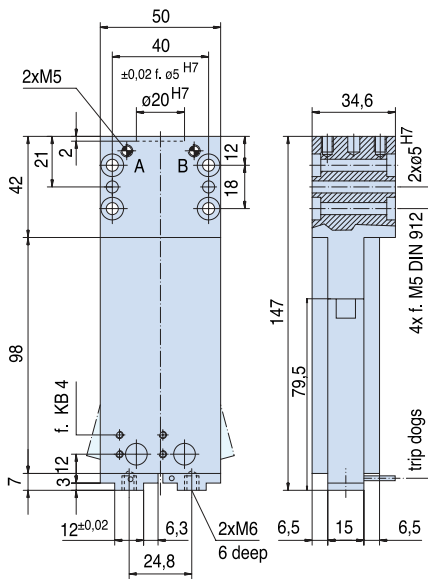
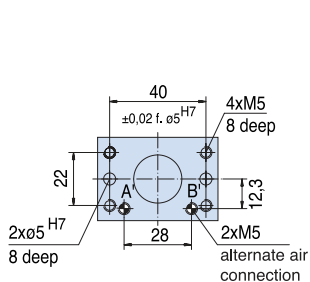
Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder



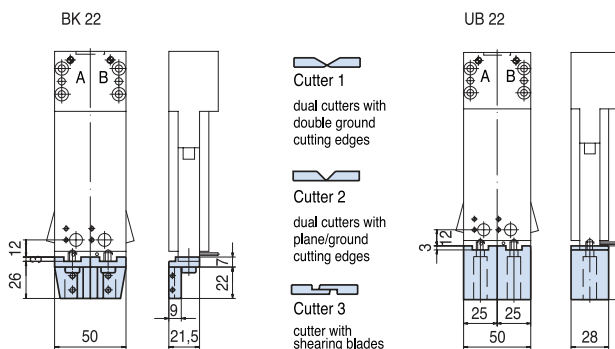
Max Allowable Forces on Jaws

These wire thicknesses can be cut (25 mm from top edge of gripper)

- max. Ø 3,5 mm Copper wire
- max. Ø 3,0 mm Brass wire
- max. Ø 2,0 mm Steel wire (St52)



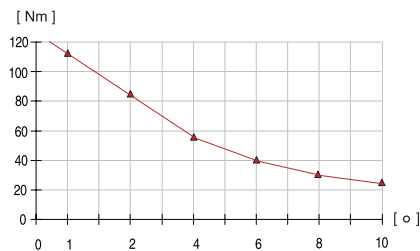
Order no.:	BK22	Knife 1	Knife 2	Knife 3	UB22
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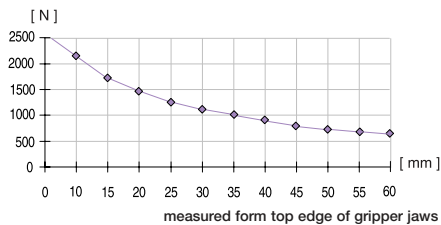
Cutting/Toggle tongs

Advantages, benefits, comparisons and tips! Stacks of information all about this product are on page 171.

Gripping force as a function of opening angle



Gripping force as a function of jaw length



Order no.:	ZK22			
Drive:	pneum.			
Stroke per jaw [°]:	7,5			
Gripping force in closing [N]:	2150			
Gripping torque in closing [Nm]*:	58			
Self-locking via:	mech.			
Closing time/opening time [s]:	0,15			
Repeatability ± [mm]:	0,1			
Min./max. operating pressure [bar]:	3/8			
Air volume per cycle [cm³]:	10			
Min./max. operating temperature [°C]:	5/80			
Temp. resistant version up to 150° C [add to part number]:	T2			
Piston diameter [mm]:	30			
Weight [kg]:	0,62			

All data measured at 6 bar.

All data measured at 10 mm from top edge of gripper jaw.

* measured at 1° opening angle/jaw.

See Page 171 for Accessory list.

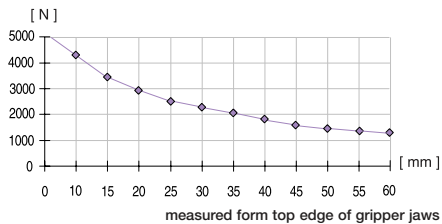
Parallel gripper		Three-jaw gripper		Angle gripper		Internal-hole gripper		Other grippers			Electric gripper	
SCH20	SCH23	ST36	ST40	ZK22	ZK33	GS65	RG0-30	RG10-60	SPG30-95	GF40	GF41	HM



Cutting/Toggle tong

Advantages, benefits, comparisons and tips!
Stacks of information all about this product are on page 171.

Gripping force (in power stroke) as a function of jaw length



These wire thicknesses can be cut
(35 mm from top edge of gripper)

- max. Ø 6,0 mm Copper wire
- max. Ø 5,0 mm Brass wire
- max. Ø 4,0 mm Steel wire (St52)

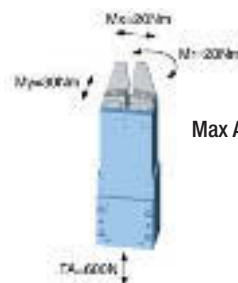
Order no.:	ZK33
Drive:	pneum.
Power stroke per jaw [°]:	9
Power Stroke per jaw [°]:	2
Gripping force in closing [N]:	4200
Gripping torque in closing [Nm]*:	110
Self-locking via:	mech.
Closing time/opening time [s]:	0,2
Repeatability± [mm]:	0,1
Min./max. operating pressure [bar]:	3/8
Air volume per cycle [cm³]:	73
Min./max. operating temperature [°C]:	5/80
Temp. resistant version up to 150° C [add to part number]:	T2
Piston diameter [mm]:	40
Weight [kg]:	1,3

All data measured at 6 bar.
All data measured at 10 mm from top edge of gripper jaw.
* measured at 1° opening angle/jaw.

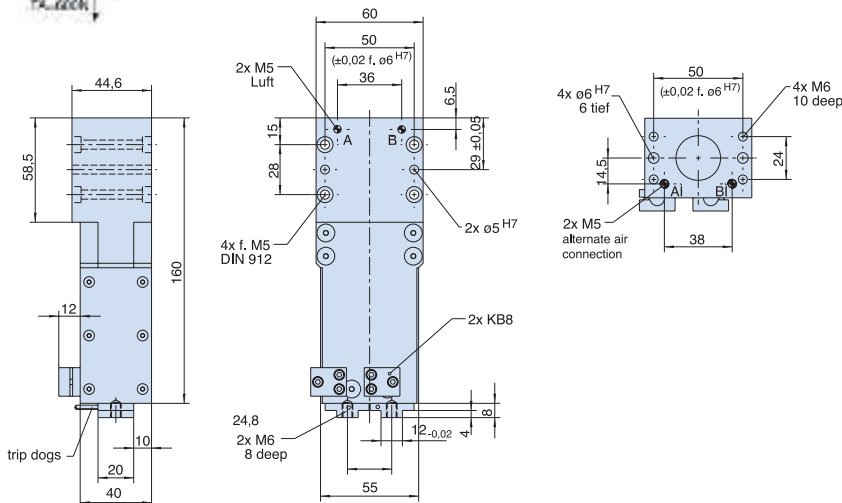
See Page 171 for Accessory list.



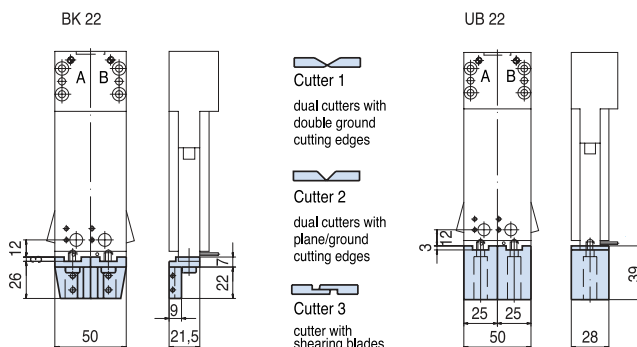
ZK33



Max Allowable Forces on Jaws



Order no.:	BK22	Knife 1	Knife 2	Knife 3	UB22
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Sommer-automatic
Grippers
Separators
Swivel units
Rotating jaws
Axial compensators
Tool changers
Linear cylinders
Shock absorbers
Rotary cylinders
Air vane motors
Vacuum components
Accessories
Quick finder