

3-Jaw Concentric Grippers

Highlights



Drive

Double acting pneumatic rotor cylinder

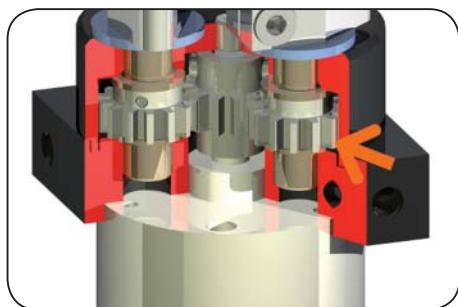
- high power in both opening and closing
- high gripping moment up to 9 Nm



Drive shaft

Rear shaft projection for mounting accessories

- infinitely adjustable stroke and monitoring of gripping jaws' position via optional accessory



Power transfer

Planetary transmission

- optimum transmission of drive force in gripping force
- self-centering
- synchronized
- high repeatability



Gripping via circular movement

- ideal for parts with different diameters
- gripping diameter up to 76 mm
- large stroke with small design



Terms

Gripping force:	arithmetic sum of the individual forces occurring at the jaws
Closing/opening time:	required time for the gripper jaws to cover the maximum stroke distance
Repeatability:	at end stops after 50/100 consecutive cycles
Cycle:	one complete movement of the piston forward and back
Maintenance:	recommended at 10 mil. cycles (please see the owner's manual for conditions, download from www.sommer-automatic.com) long maintenance intervals keep costs down long lifespan

Design

- ① Gripping movement on rotation**
- for various workpiece diameters

② Robust, light housing
- hard coated anodized aluminium alloy

⑤ Mounting and positioning
- mounting possible from several sides for versatile positioning

⑥ Drive
- double-acting pneumatic rotor cylinder
-
- ③ Planetary transmission**
- synchronized jaw movement

④ Standard pins serve as gripper jaw

⑦ Energy supply
- possible radial and axial

⑧ Shaft projection
- for accessory assembly e.g. inquiry sensors

3-Jaw Concentric Grippers



Picture shows GD1-B

Included with purchase

Forces and Moments

Max. allowable forces and moments on jaws.



Mr [Nm]:	0,1
Mx [Nm]:	0,1
My [Nm]:	0,1
Fa [N]:	10

Recommended accessories



Pneumatic fittings
Order no.: **WVM5**



Pneumatic fittings
Order no.: **GVM5**



Rotation limiter
Order no.: **DB1-B**



Proximity switch
Order no.: **NJ3-E2-02**

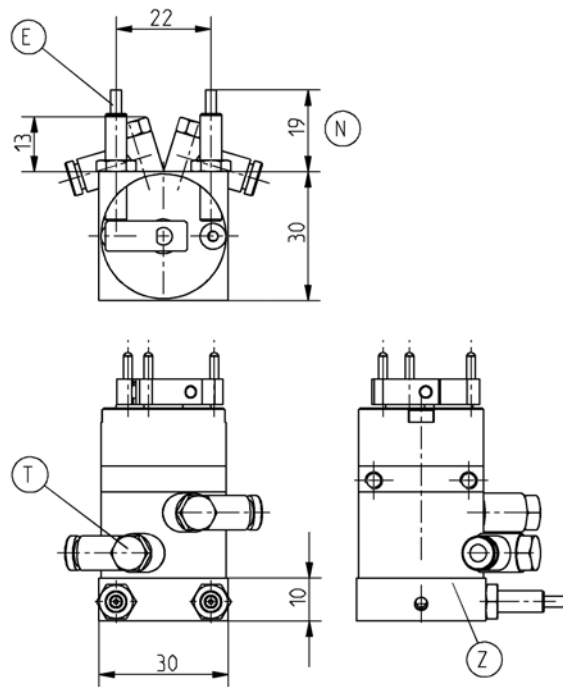


Plug 3- pole
Order no.: **S12-G-3**



Pressure safety valve
Order no.: **DSV1/8**

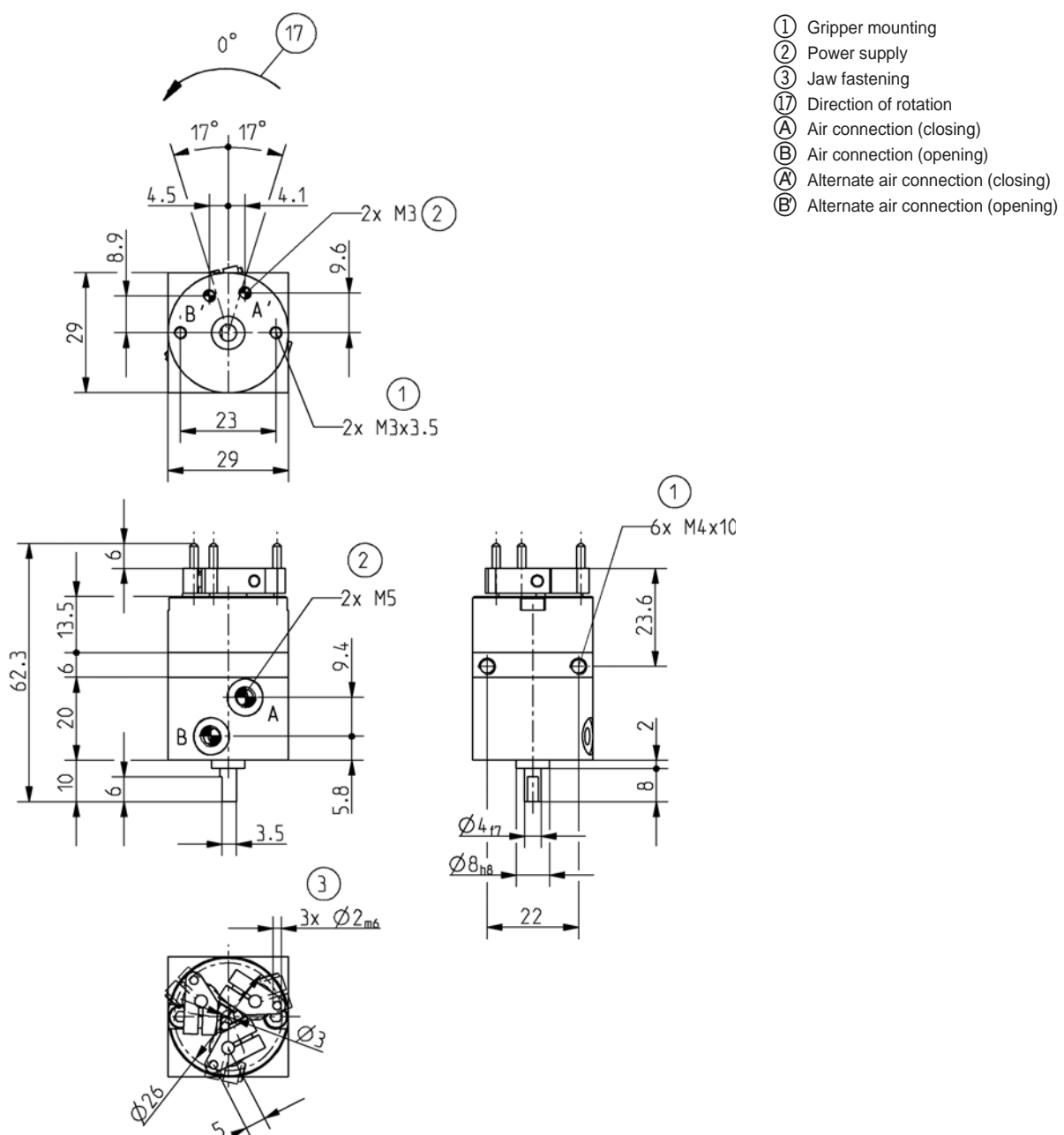
Accessory



Subject to change without prior notice

Order no.:	GD1-B
Stroke per jaw [°]:	130
Grip diameter in closing min. [mm]:	3
Grip diameter in closing max [mm]:	22
Grip diameter in opening min. [mm]:	7
Grip diameter in opening max. [mm]:	26
Gripping moment in closing and opening [Nm]:	0,12
Closing time/opening time [s]:	0,02
Repeatability +/- [mm]:	0,1
Min. operating pressure [bar]:	3
Max. operating pressure [bar]:	8
Min./max. operating temperature [°C]:	5-60 °C
Air volume per cycle [cm³]:	2,8
Weight [kg]:	0,083

All data measured at 6 bar



Subject to change without prior notice

3-Jaw Concentric Grippers



Picture shows GD10

Included with purchase

Forces and Moments

Max. allowable forces and moments on jaws.



Mr [Nm]:	1
Mx [Nm]:	1
My [Nm]:	0,5
Fa [N]:	30

Recommended accessories



Pneumatic fittings
Order no.: **WVM5**



Rotation limiter
Order no.: **DB10**



Proximity switch
Order no.: **NJ12-E2S**



Stop-stroke adjusting screw
Order no.: **AI-M8X1-38**



Cable straight plug
Order no.: **KAG500**



Cable angled plug
Order no.: **KAW500**

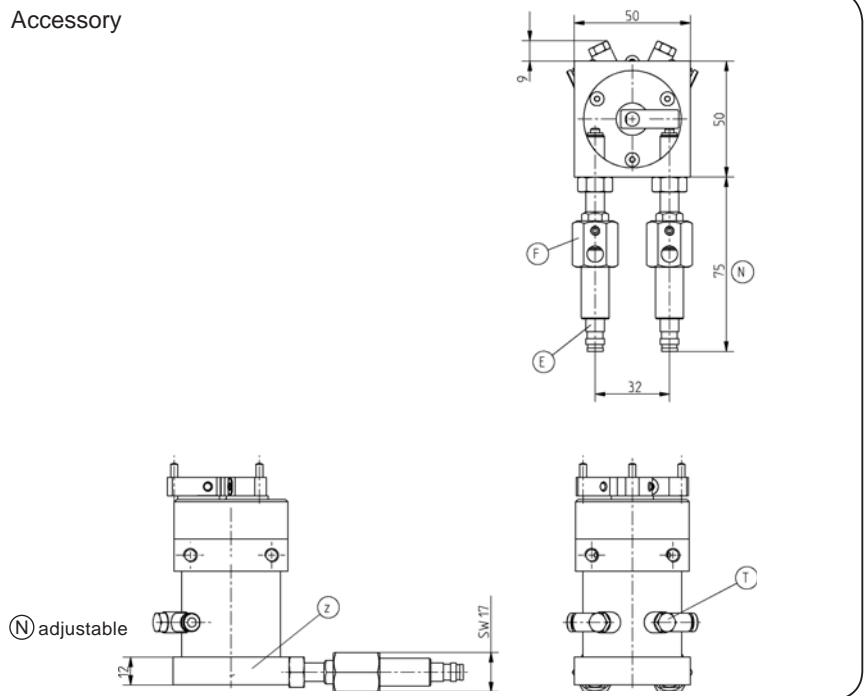


Plug 3-pole
Order no.: **S12-G-3**



Pressure safety valve
Order no.: **DSV1/8**

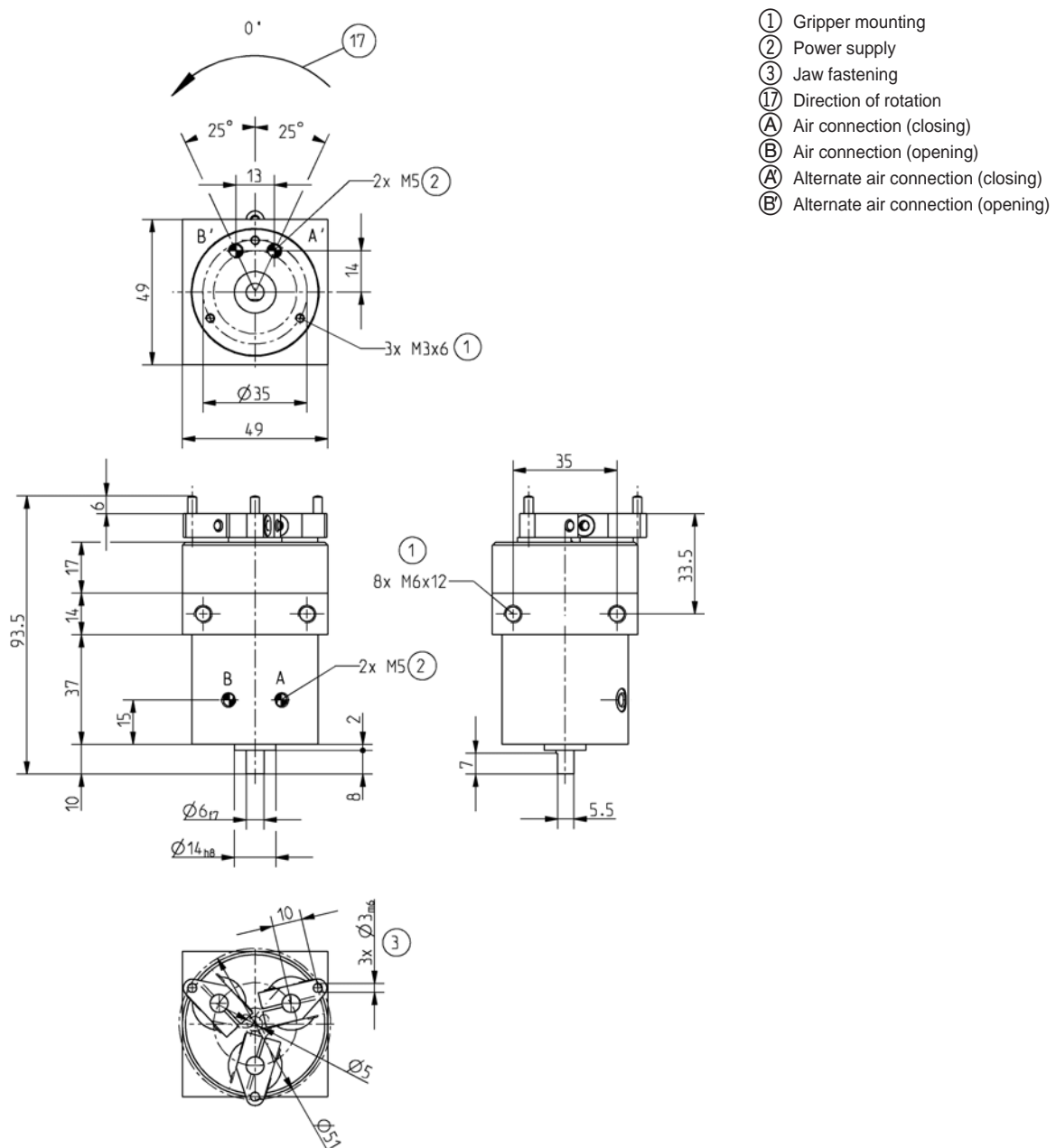
Accessory



Subject to change without prior notice

Order no.:	GD10
Stroke per jaw [°]:	180
Grip diameter in closing min. [mm]:	5
Grip diameter in closing max [mm]:	45
Grip diameter in opening min. [mm]:	11
Grip diameter in opening max. [mm]:	51
Gripping moment in closing and opening [Nm]:	1
Closing time/opening time [s]:	0,07
Repeatability +/- [mm]:	0,1
Min. operating pressure [bar]:	3
Max. operating pressure [bar]:	8
Min./max. operating temperature [°C]:	5-60 °C
Air volume per cycle [cm³]:	20
Weight [kg]:	0,354

All data measured at 6 bar



Subject to change without prior notice

3-Jaw Concentric Grippers



Picture shows GD50

Included with purchase

Forces and Moments

Max. allowable forces and moments on jaws.



Mr [Nm]:	5
Mx [Nm]:	5
My [Nm]:	4
Fa [N]:	100

Recommended accessories



Pneumatic fittings
Order no.: **WV1/8X8**



Rotation limiter
Order no.: **DB50**



Proximity switch
Order no.: **NJ12-E2S**



Stop-stroke adjusting screw
Order no.: **AI-M8X1-38**



Cable angled plug
Order no.: **KAW500**



Cable straight plug
Order no.: **KAG500**

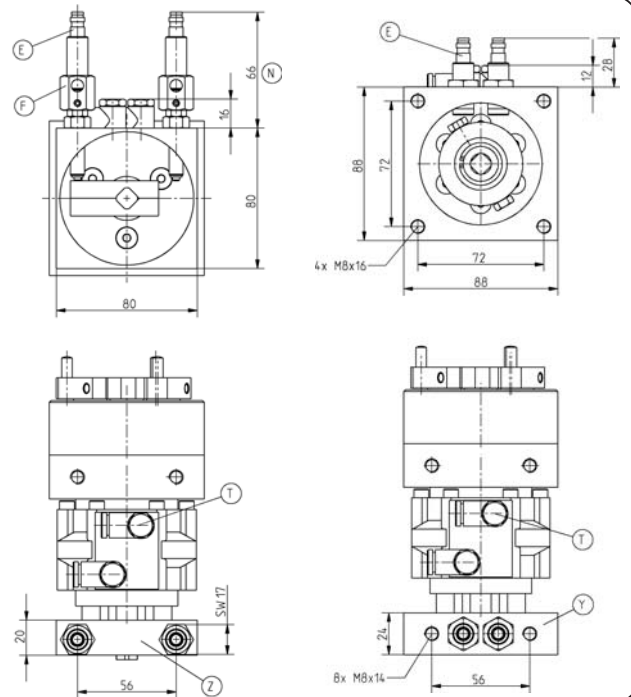


Inquiry for interim position
Order no.: **GF50**



Pressure safety valve
Order no.: **DSV1/8**

Accessory

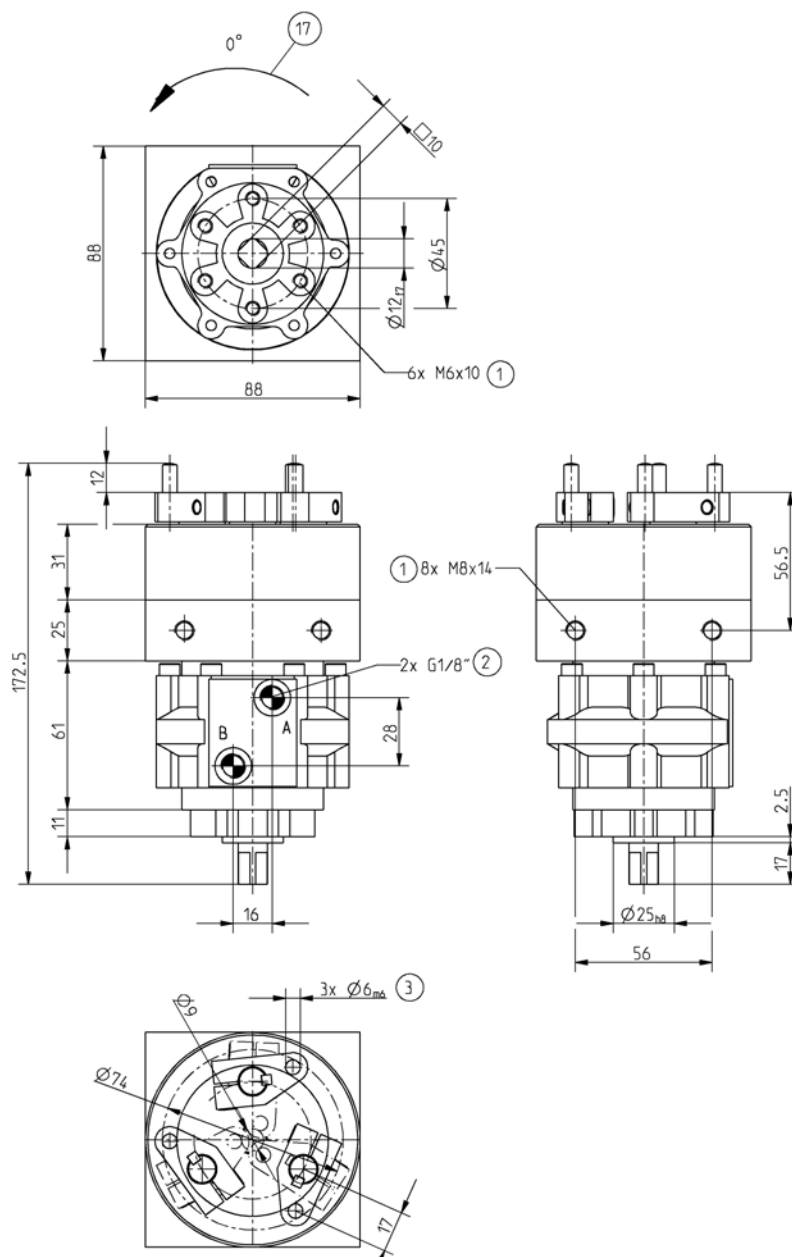


Subject to change without prior notice



Order no.:	GD50
Stroke per jaw [°]:	120
Grip diameter in closing min. [mm]:	9
Grip diameter in closing max [mm]:	62
Grip diameter in opening min. [mm]:	21
Grip diameter in opening max. [mm]:	74
Gripping moment in closing and opening [Nm]:	9
Closing time/opening time [s]:	0,09
Repeatability +/- [mm]:	0,1
Min. operating pressure [bar]:	3
Max. operating pressure [bar]:	8
Min./max. operating temperature [°C]:	5-60 °C
Air volume per cycle [cm³]:	102
Weight [kg]:	2,000

All data measured at 6 bar



- ① Gripper mounting
- ② Power supply
- ③ Jaw fastening
- ⑰ Direction of rotation
- A Air connection (closing)
- B Air connection (opening)
- A Alternate air connection (closing)
- B Alternate air connection (opening)

Subject to change without prior notice