

# 2-Jaw Angle Grippers

## Highlights



### Drive

#### double acting pneumatic cylinder

- maximum power in both opening and closing
- NC models additionally equipped with spring as mechanical safety locking device (in case of pressure loss)



### Power transfer

#### Wedge hook mechanism with mechanical restricted guides

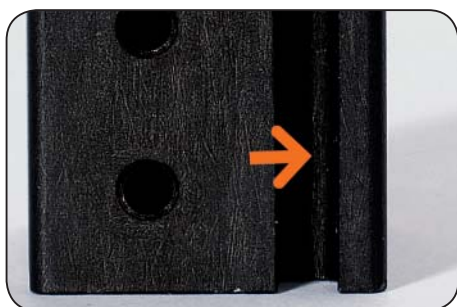
- high gripping force as a result of optimal direction change of driving force into gripping force
- central gripping realized by synchronized compulsory guides
- functional parts made of grinded and hardened steel ensure precision and a long durability



### Gripping jaw positioning

#### precise positioning of individual gripping jaws

- quick and therefore economical jaw changing due to simple handling
- anti-twist protection by double fixing of the gripping jaws



### Position sensing

#### direct piston position sensing via magnetic field sensors

- high process reliability as a result of controlled gripping jaw movement
- integrated position sensing for compact design and minimized interfering contour

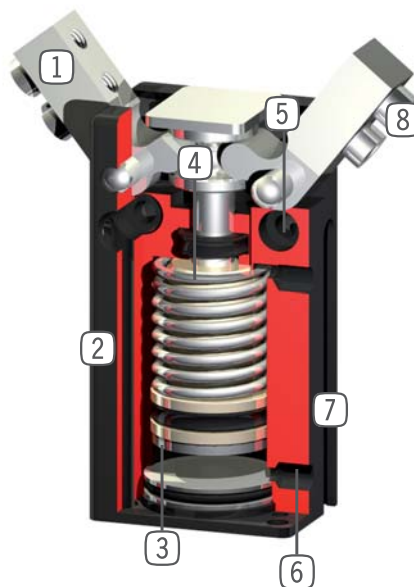


## Terms

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:	dispersion at end stop positions during 50/100 consecutive cycles
Cycle:	one complete movement of the piston forward and back
Maintenance:	<p>maintenance free to 10 mil. cycles</p> <p>(please see the owner's manual for details, download from <a href="http://www.sommer-automatic.com">www.sommer-automatic.com</a>)</p> <ul style="list-style-type: none"> <li>- long maintenance intervals keep costs down</li> <li>- long durability</li> </ul>

## Functional diagram

- |   |   |
|---|---|
| <p><b>1 Gripper jaw</b></p> <ul style="list-style-type: none"> <li>- individual gripper finger mounting</li> </ul>          | <p><b>5 Mounting and positioning</b></p> <ul style="list-style-type: none"> <li>- mounting possible at several sides for individual positioning of the gripper</li> </ul> |
| <p><b>2 Robust, lightweight housing</b></p> <ul style="list-style-type: none"> <li>- hard coated aluminium alloy</li> </ul> | <p><b>6 Energy supply</b></p> <ul style="list-style-type: none"> <li>- at several sides possible</li> </ul>   |



- |  |   |
|--|---|
| <p><b>3 Position sensing</b></p> <ul style="list-style-type: none"> <li>- permanent magnet for direct position sensing of piston movement (starting from size 803)</li> </ul>          | <p><b>7 integrated slot</b></p> <ul style="list-style-type: none"> <li>- mounting and positioning of magnetic field sensors (starting from size 803)</li> </ul> |
| <p><b>4 Integrated gripping force safety device</b></p> <ul style="list-style-type: none"> <li>- spring integrated into cylinder as energy storage (starting from size 803)</li> </ul> | <p><b>8 Removable centering sleeve</b></p> <ul style="list-style-type: none"> <li>- quick and economical positioning of the gripper fingers</li> </ul>          |

# 2-Jaw Angle Grippers



Picture shows MGW801N

Included with purchase



Centring sleeve  
Order no.: **BDST80100**

Recommended accessories



Pneumatic fittings  
Order no.: **GVM3**



Pneumatic fittings  
Order no.: **WVM3**



Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

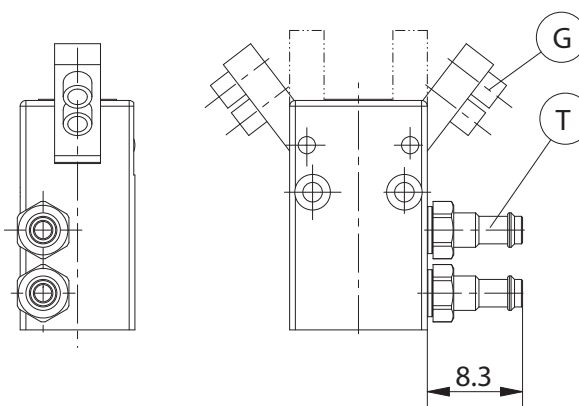
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	0,2
My [Nm]:	0,2
Fa [N]:	37

## Accessory

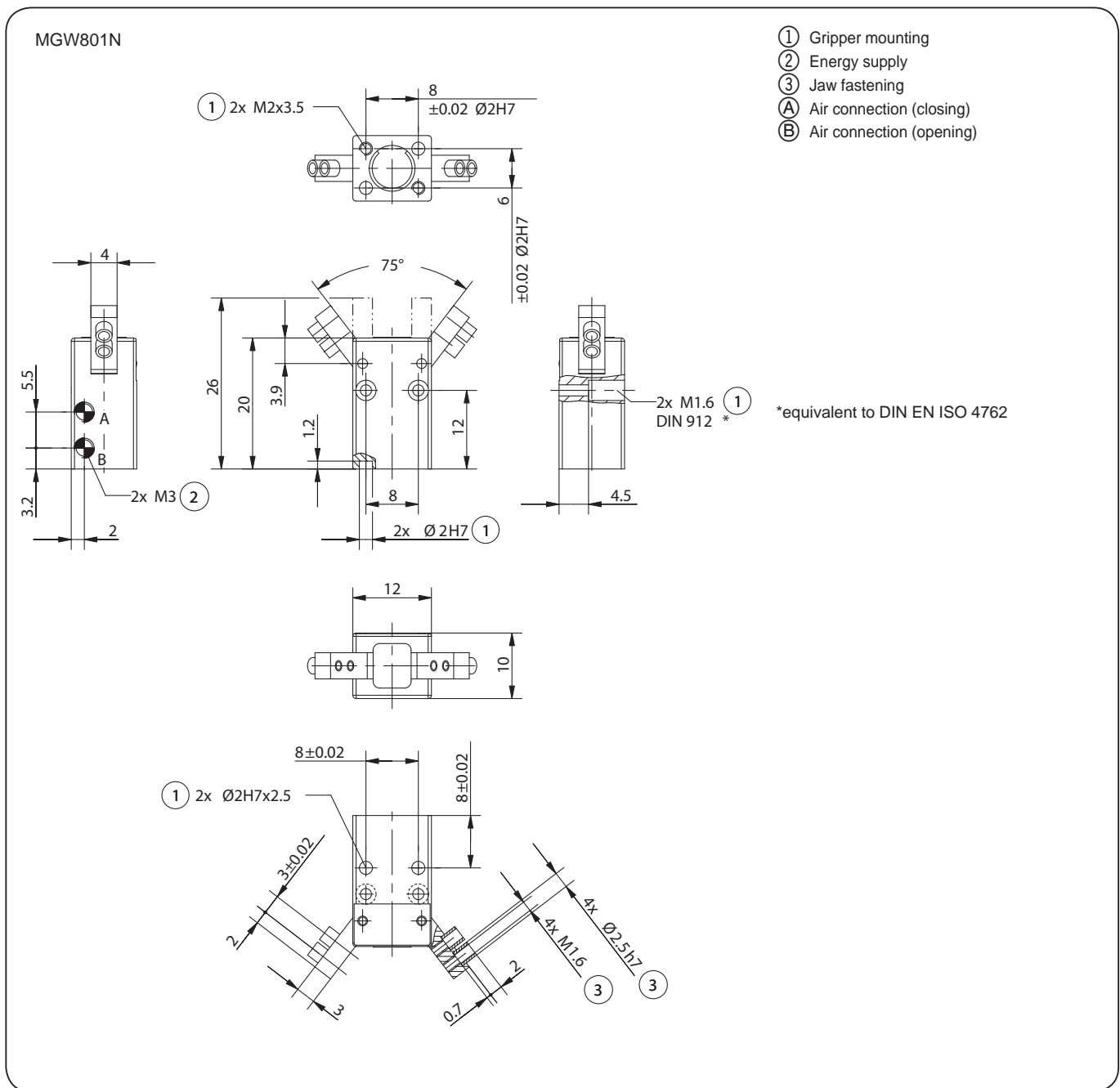


Subject to change without prior notice

<b>Order no.:</b>	<b>MGW801N</b>
Stroke per jaw [°]:	37,5
Gripping moment in opening [Nm]:	0,03
Gripping moment in closing [Nm]:	0,02
Gripping moment secured by spring min. [Nm]:	-
Closing time / opening time [s]:	0,01 / 0,01
Repeatability +/- [mm]:	0,02
Operating pressure min. [bar]:	3
Operating pressure max. [bar]:	8
Operating temperature [°C]*:	5-80
Air volume per cycle [cm³]:	0,14
Weight [g]:	10

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice

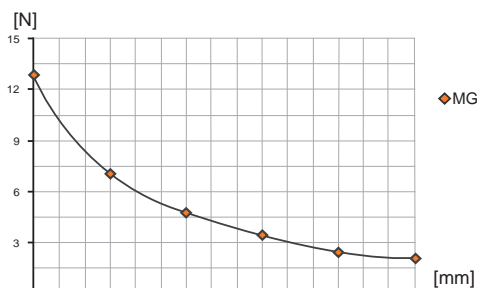
# 2-Jaw Angle Grippers



Picture shows MGW802N

## Gripping force diagram

Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	0,3
My [Nm]:	0,3
Fa [N]:	60

### Included with purchase



Centring sleeve  
Order no.: **BDST80200**

### Recommended accessories



Pneumatic fittings  
Order no.: **GVM3**



Pneumatic fittings  
Order no.: **WVM3**

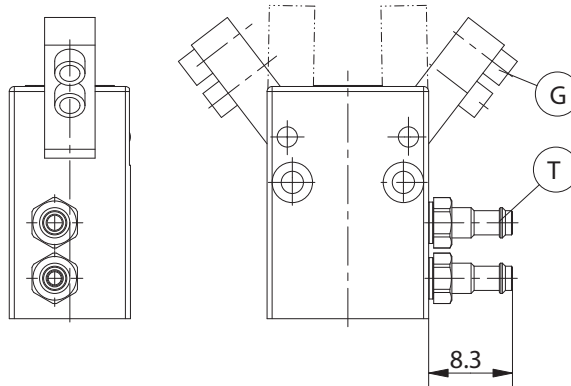


Quick Exhaust Valve  
Order no.: **DEV04**



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

## Accessory

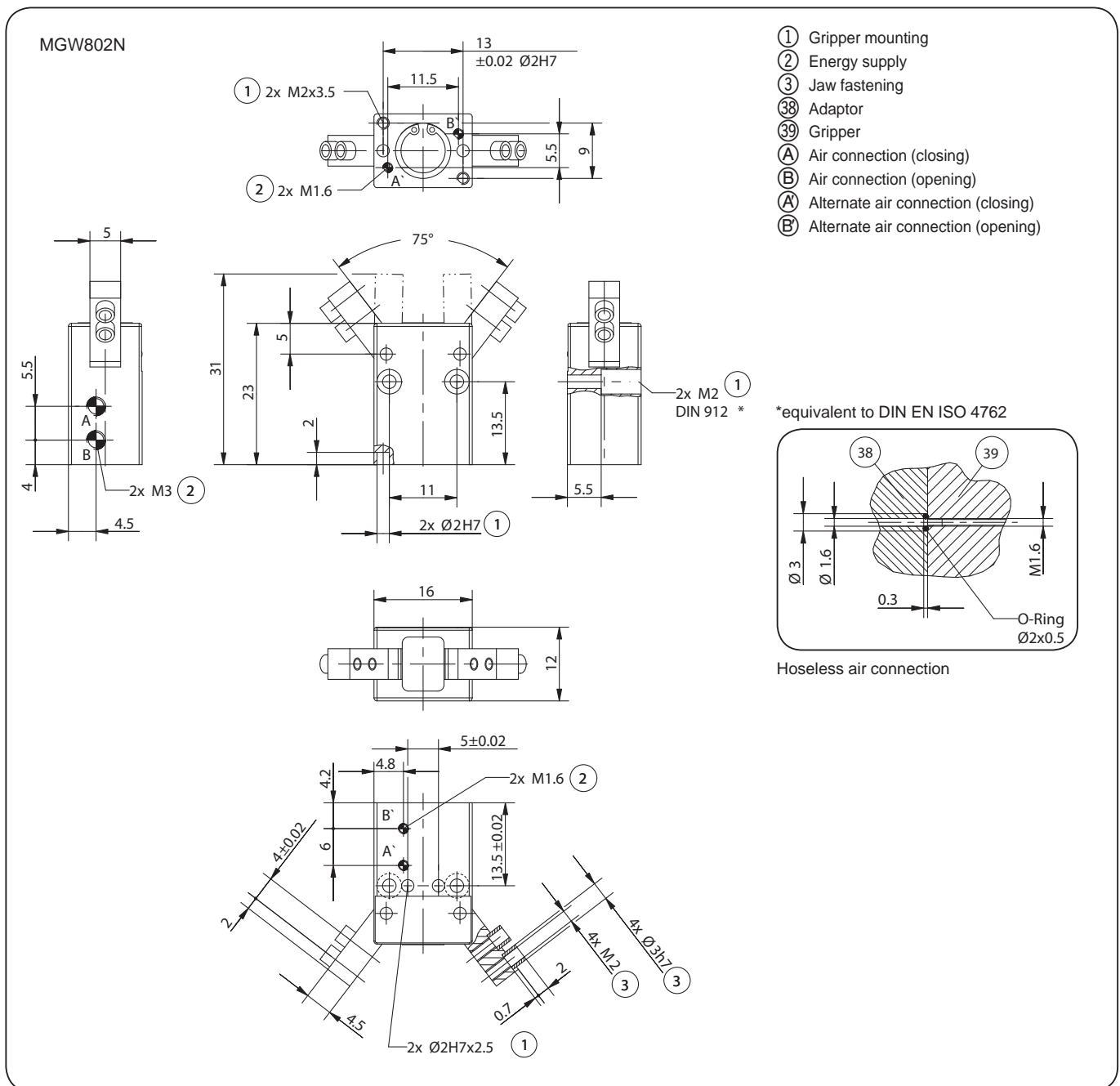


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<b>Order no.:</b>	<b>MGW802N</b>
Stroke per jaw [°]:	37,5
Gripping moment in opening [Nm]:	0,05
Gripping moment in closing [Nm]:	0,04
Gripping moment secured by spring min. [Nm]:	-
Closing time / opening time [s]:	0,01 / 0,01
Repeatability +/- [mm]:	0,02
Operating pressure min. [bar]:	3
Operating pressure max. [bar]:	8
Operating temperature [°C]*:	5-80
Air volume per cycle [cm³]:	0,22
Weight [g]:	15

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice

# 2-Jaw Angle Grippers



Picture shows MGW803N

Included with purchase



Centring sleeve  
Order no.: **BDST80320**

Recommended accessories



Pneumatic fittings  
Order no.: **WVM3**



Pneumatic fittings  
Order no.: **GVM3**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



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



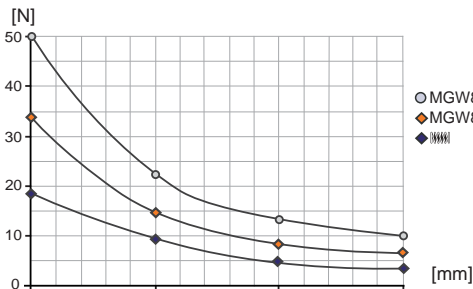
Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

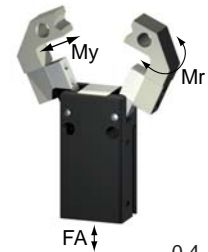
Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

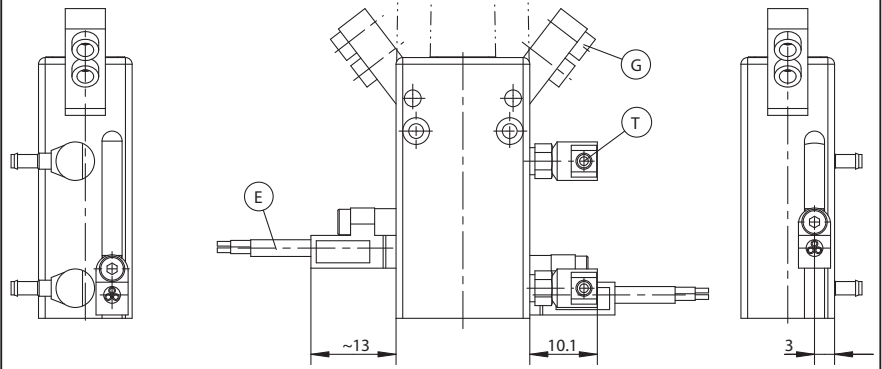
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	0.4
My [Nm]:	0.4
Fa [N]:	90

## Accessory

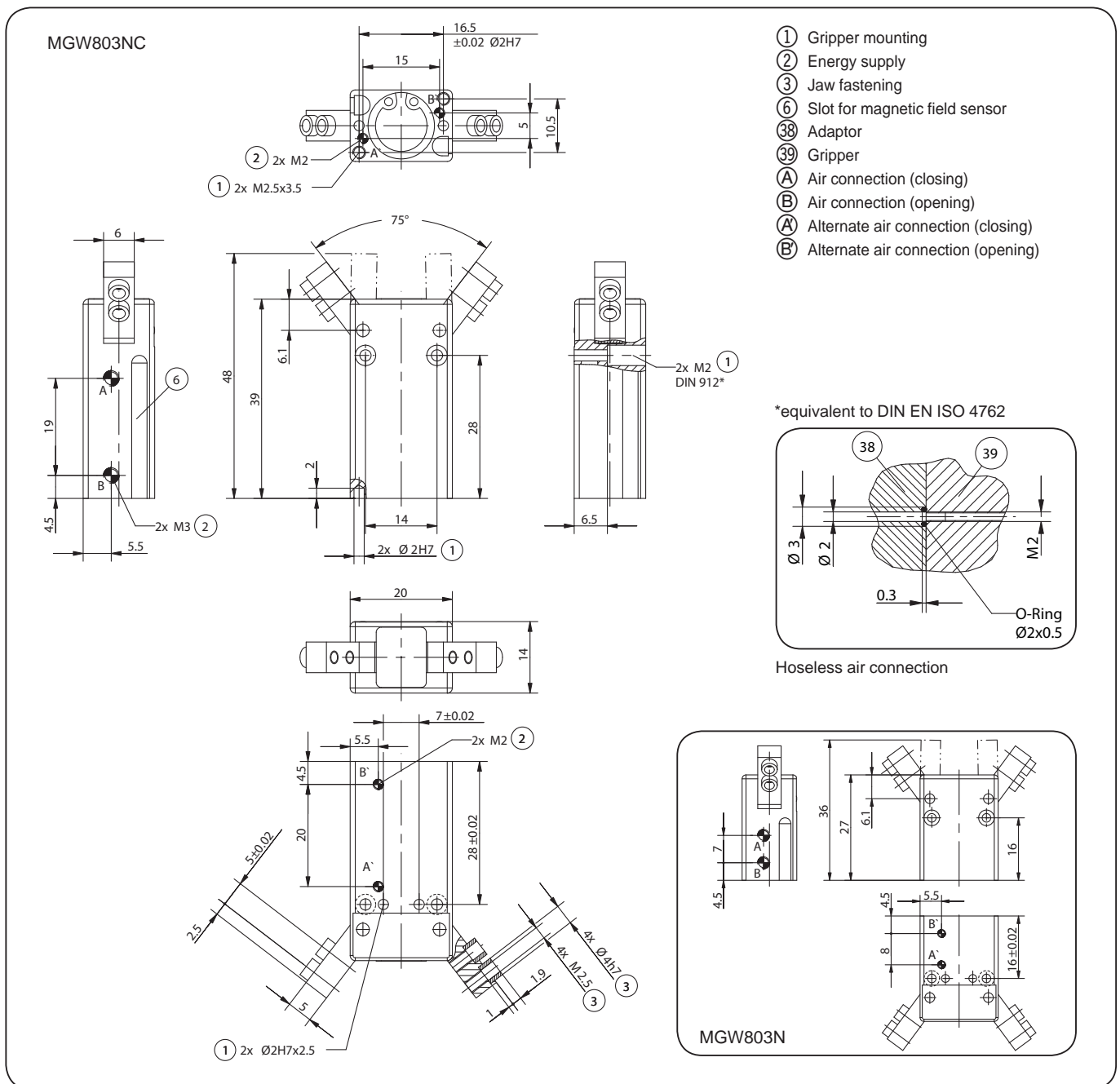


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Order no.:	MGW803N	MGW803NC
Stroke per jaw [°]:	37.5	37.5
Gripping moment in opening [Nm]:	0.23	-
Gripping moment in closing [Nm]:	0.2	0.3
Gripping moment secured by spring min. [Nm]:	-	0.1
Closing time / opening time [s]:	0.01 / 0.01	0.01 / 0.02
Repeatability +/- [mm]:	0.02	0.02
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	0.64	1
Weight [g]:	25	40

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice



# 2-Jaw Angle Grippers



Picture shows MGW804N

Included with purchase



Centring sleeve  
Order no.: **BDST40400**

Recommended accessories



Pneumatic fittings  
Order no.: **WVM3**



Pneumatic fittings  
Order no.: **GVM3**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



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



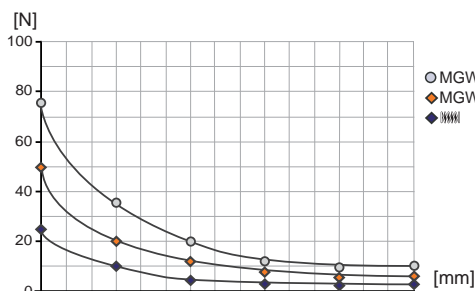
Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

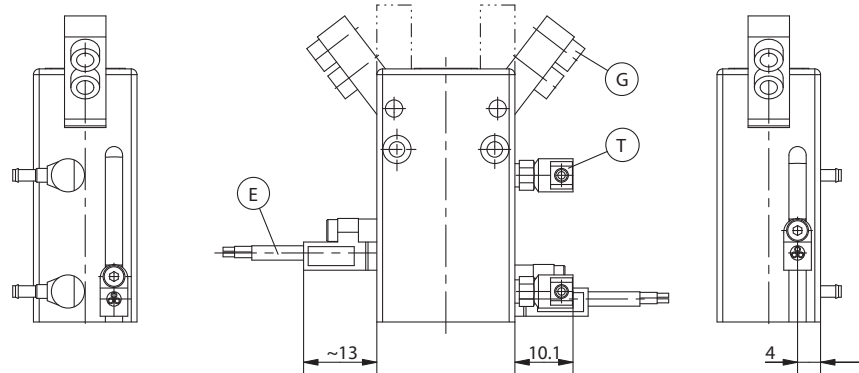
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	0,5
My [Nm]:	0,5
Fa [N]:	150

## Accessory

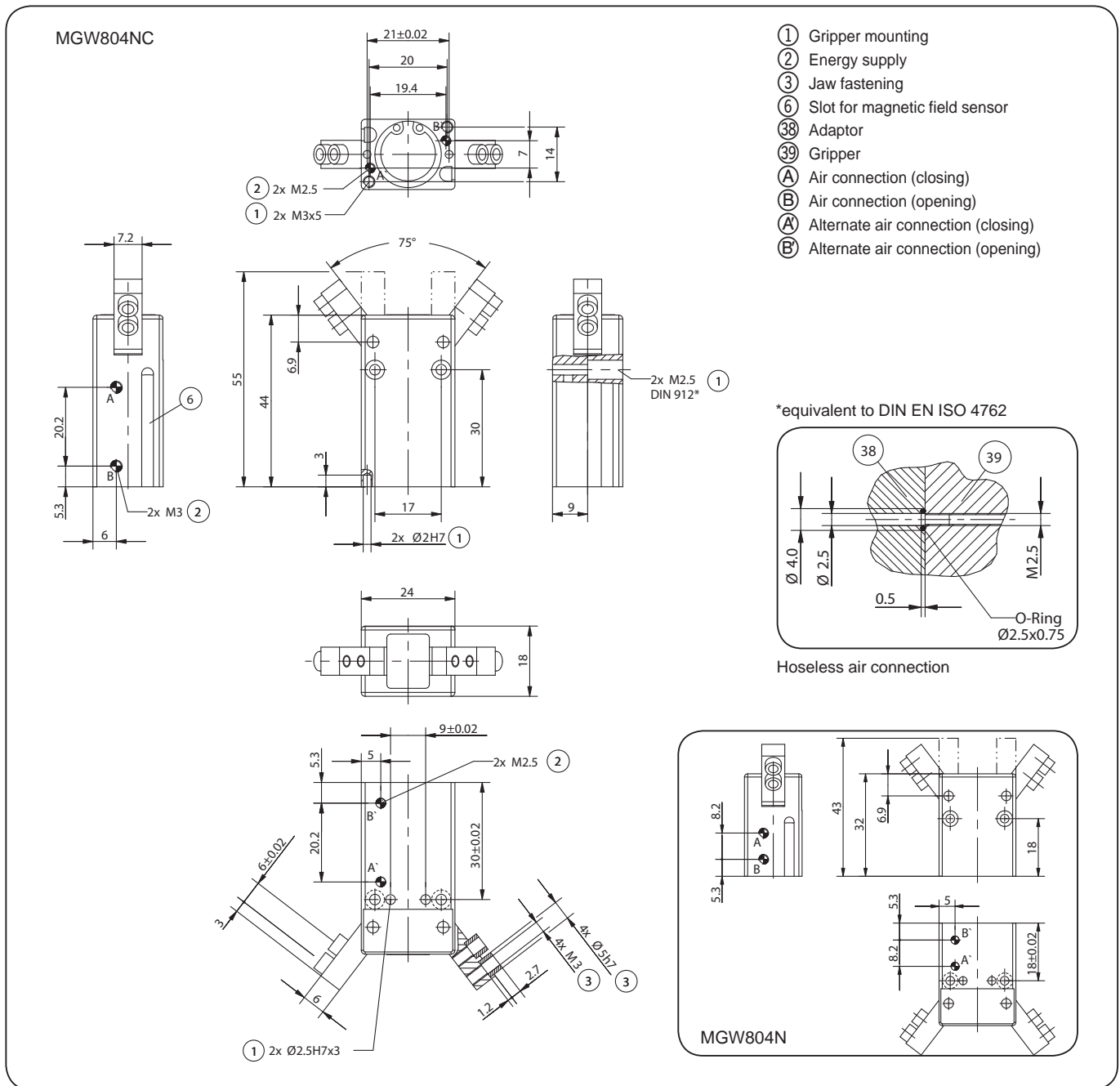


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Order no.:	MGW804N	MGW804NC
Stroke per jaw [°]:	37,5	37,5
Gripping moment in opening [Nm]:	0,41	-
Gripping moment in closing [Nm]:	0,35	0,5
Gripping moment secured by spring min. [Nm]:	-	0,15
Closing time / opening time [s]:	0,02 / 0,02	0,02 / 0,03
Repeatability +/- [mm]:	0,02	0,03
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	1,4	2
Weight [g]:	50	80

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice

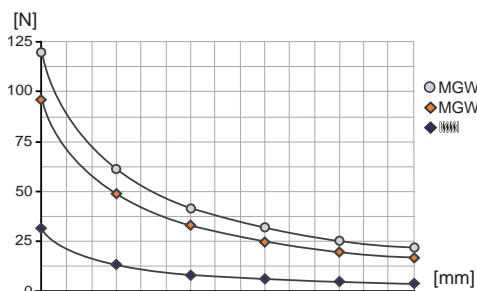
# 2-Jaw Angle Grippers



Picture shows MGW806N

## Gripping force diagram

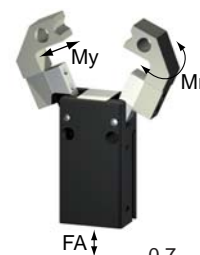
Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	0,7
My [Nm]:	0,7
Fa [N]:	260

### Included with purchase



Centring sleeve  
Order no.: **BDST40600**

### Recommended accessories



Pneumatic fittings  
Order no.: **WVM3**



Pneumatic fittings  
Order no.: **GVM3**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



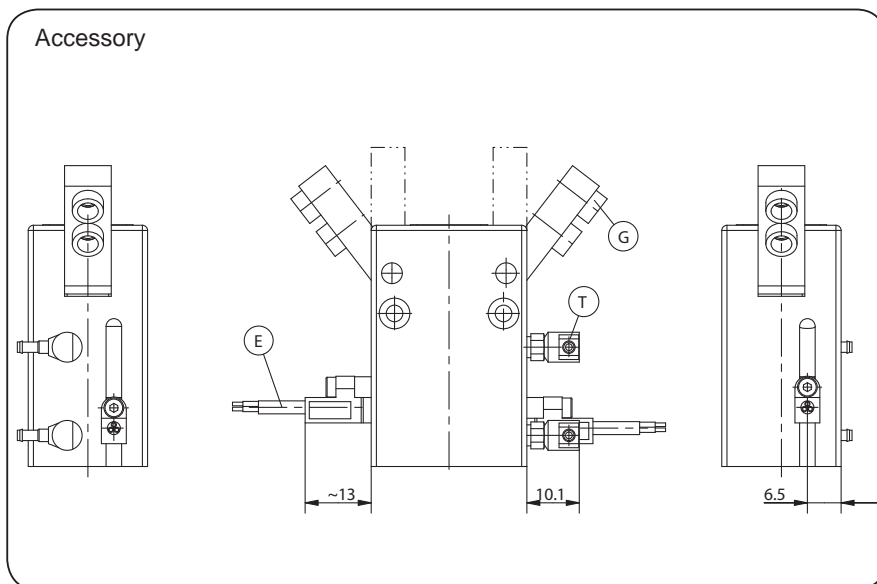
Plug 3- pole  
Order no.: **S12-G-3**



Quick Exhaust Valve  
Order no.: **DEV04**



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

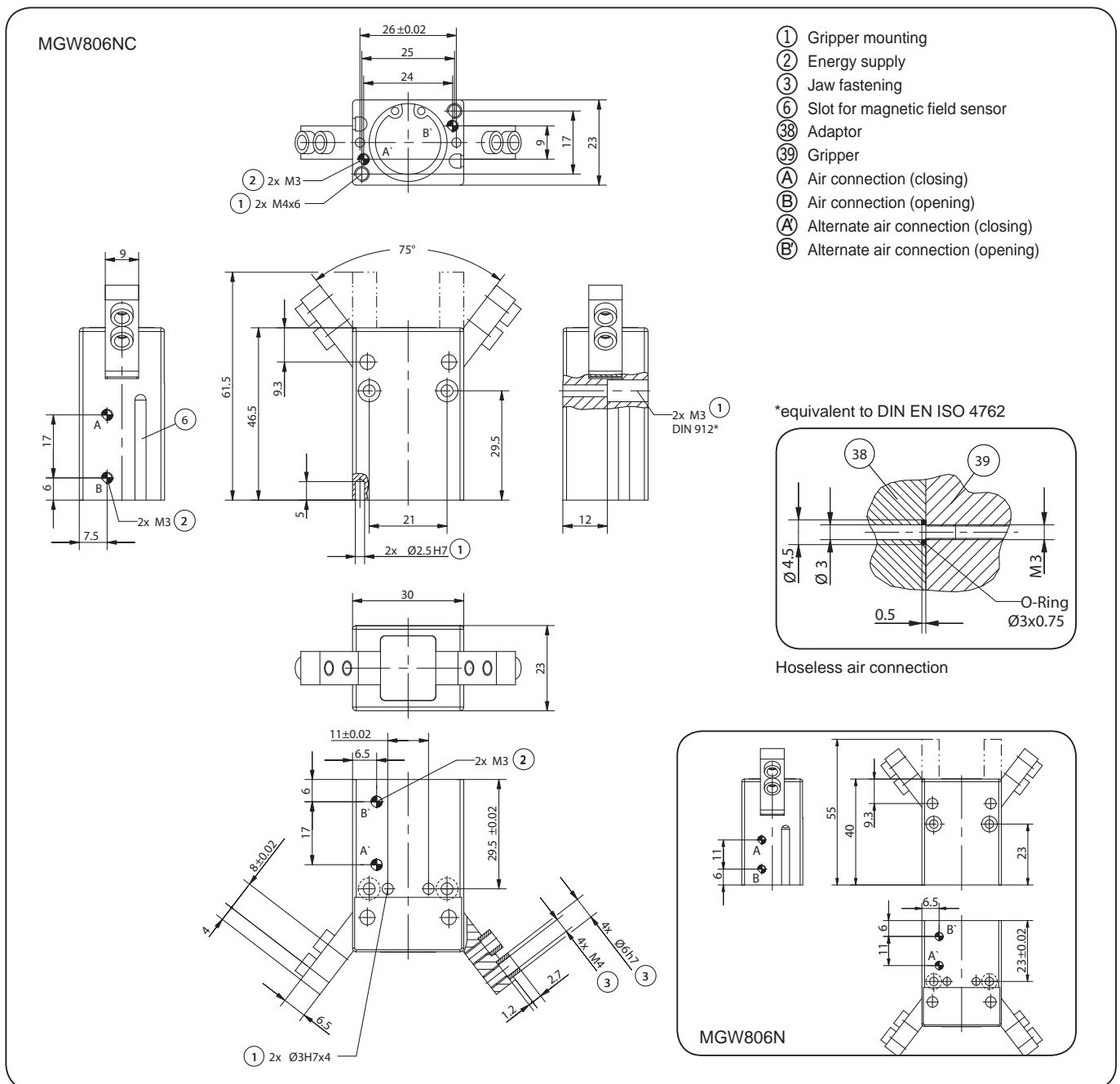


Subject to change without prior notice

Order no.:	MGW806N	MGW806NC
Stroke per jaw [°]:	37,5	37,5
Gripping moment in opening [Nm]:	1,02	-
Gripping moment in closing [Nm]:	0,85	1,1
Gripping moment secured by spring min. [Nm]:	-	0,25
Closing time / opening time [s]:	0,02 / 0,02	0,02 / 0,04
Repeatability +/- [mm]:	0,02	0,02
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	2,4	3,4
Weight [g]:	100	120

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice

# 2-Jaw Angle Grippers



Picture shows MGW808N

Included with purchase



Centring sleeve  
Order no.: **BDST40600**

Recommended accessories



Pneumatic fittings  
Order no.: **WVM3**



Pneumatic fittings  
Order no.: **GVM3**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



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



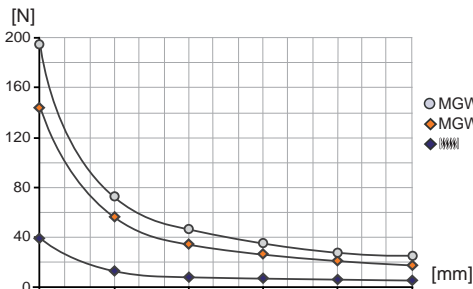
Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

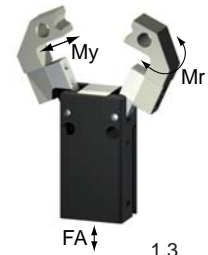
Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

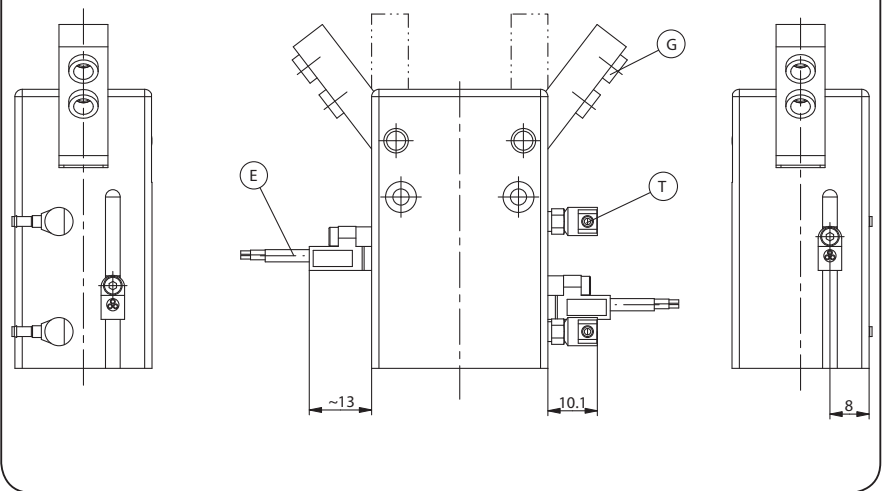
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	1,3
My [Nm]:	1,3
Fa [N]:	430

## Accessory

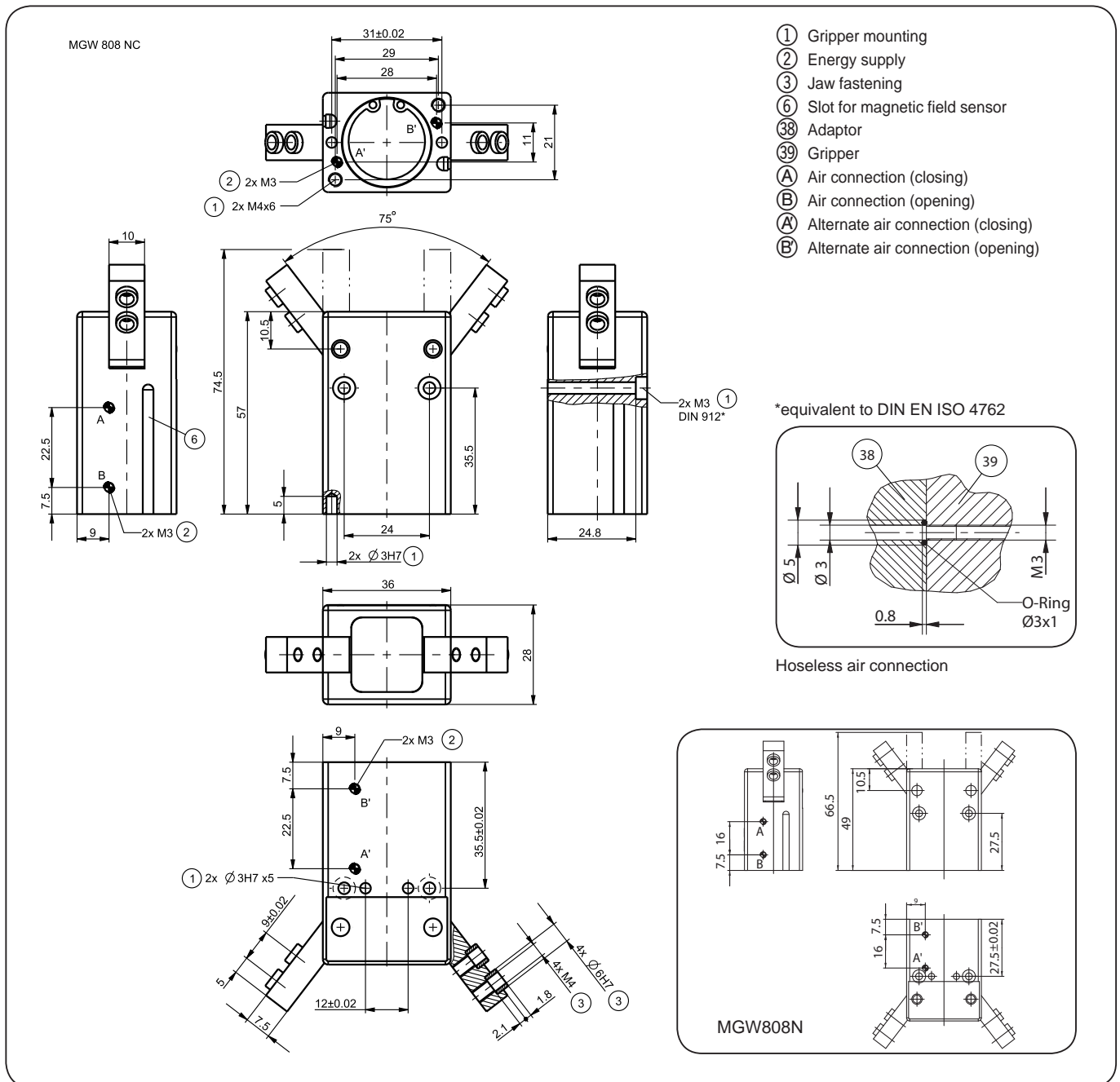


Subject to change without prior notice

Order no.:	MGW808N	MGW808NC
Stroke per jaw [°]:	37,5	37,5
Gripping moment in opening [Nm]:	1,76	-
Gripping moment in closing [Nm]:	1,55	2
Gripping moment secured by spring min. [Nm]:	-	0,45
Closing time / opening time [s]:	0,02 / 0,02	0,02 / 0,04
Repeatability +/- [mm]:	0,02	0,02
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	8,1	10,5
Weight [g]:	180	190

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice

# 2-Jaw Angle Grippers



Picture shows MGW810N

Included with purchase



Centring sleeve  
Order no.: **BDST07540**

Recommended accessories



Pneumatic fittings  
Order no.: **WVM5**



Pneumatic fittings  
Order no.: **GVM5**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



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



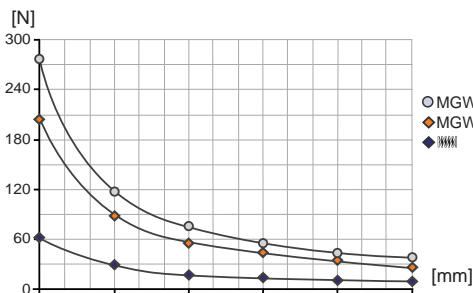
Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

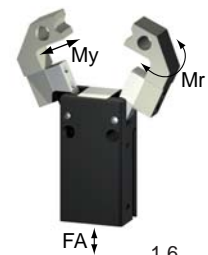
Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

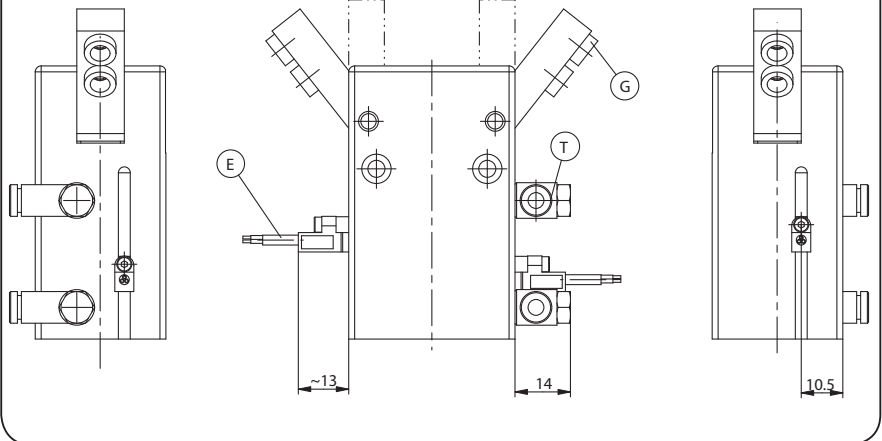
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	1,6
My [Nm]:	1,6
Fa [N]:	500

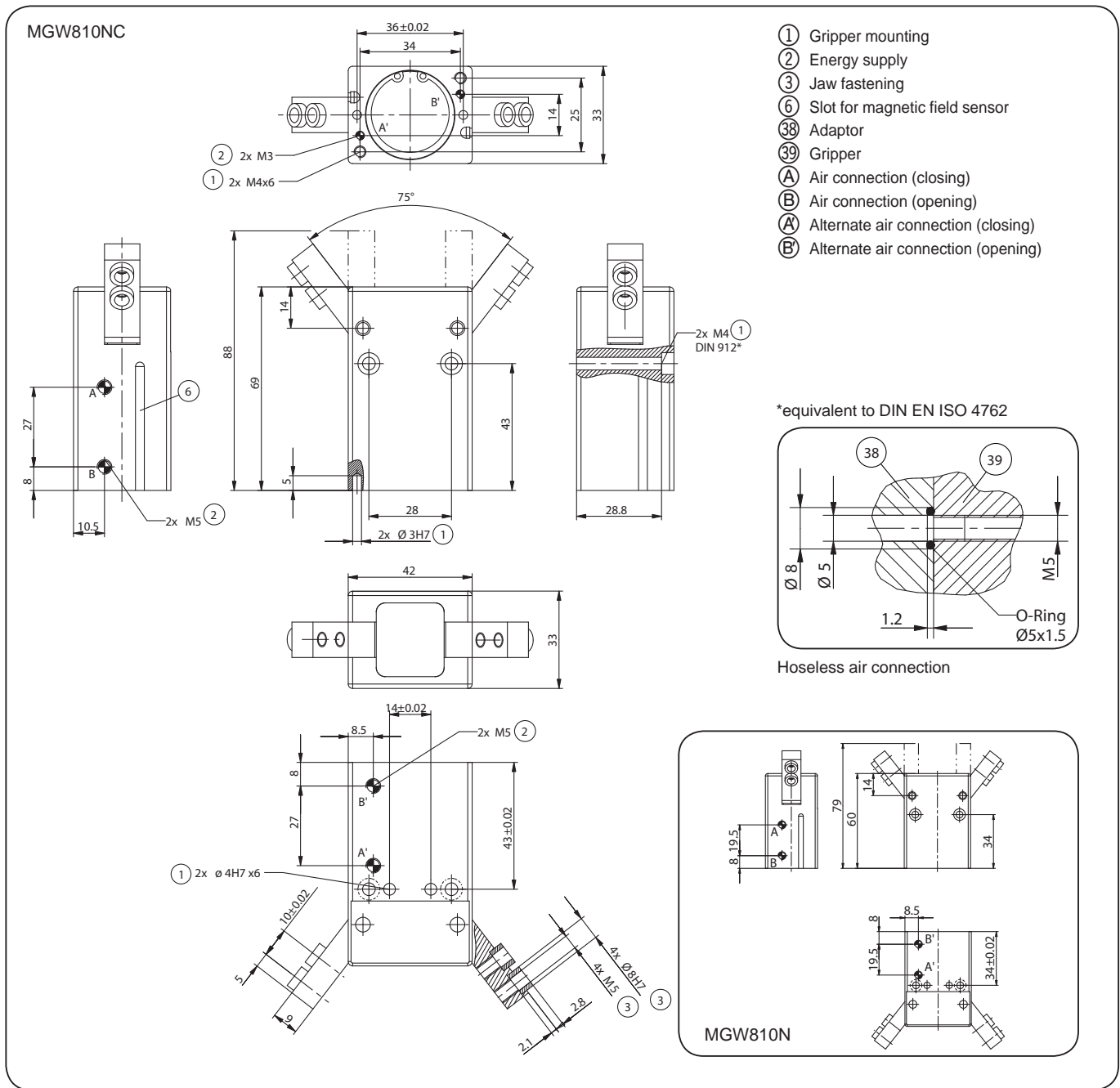
## Accessory



Subject to change without prior notice

Order no.:	MGW810N	MGW810NC
Stroke per jaw [°]:	37,5	37,5
Gripping moment in opening [Nm]:	3,3	-
Gripping moment in closing [Nm]:	2,9	3,8
Gripping moment secured by spring min. [Nm]:	-	0,9
Closing time / opening time [s]:	0,03 / 0,03	0,03 / 0,06
Repeatability +/- [mm]:	0,02	0,02
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	14,1	18,4
Weight [g]:	275	310

All data measured at 6 bar  
 \* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice



# 2-Jaw Angle Grippers



Picture shows MGW812N

Included with purchase



Centring sleeve  
Order no.: **BDST07540**

Recommended accessories



Pneumatic fittings  
Order no.: **WVM5**



Pneumatic fittings  
Order no.: **GVM5**



Magnetic field sensor  
Order no.: **MFS103KHC**



Magnetic field sensor  
Order no.: **MFS204KHC**



Plug 3- pole  
Order no.: **S8-G-3**



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



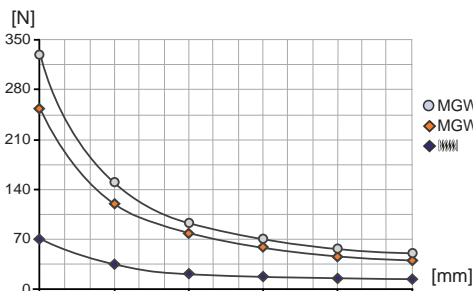
Quick Exhaust Valve  
Order no.: **DEV04**



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

## Gripping force diagram

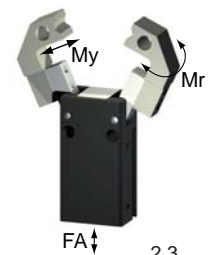
Gripping force as a function of jaw length.



Colored area: increased wear and tear to be expected

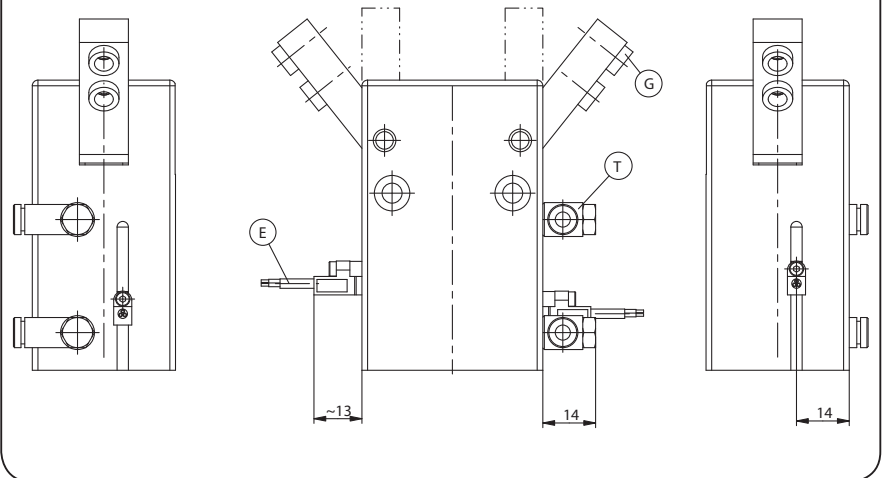
## Forces and moments

Max allowable forces and moments on jaw.



Mr [Nm]:	2,3
My [Nm]:	2,3
Fa [N]:	720

## Accessory

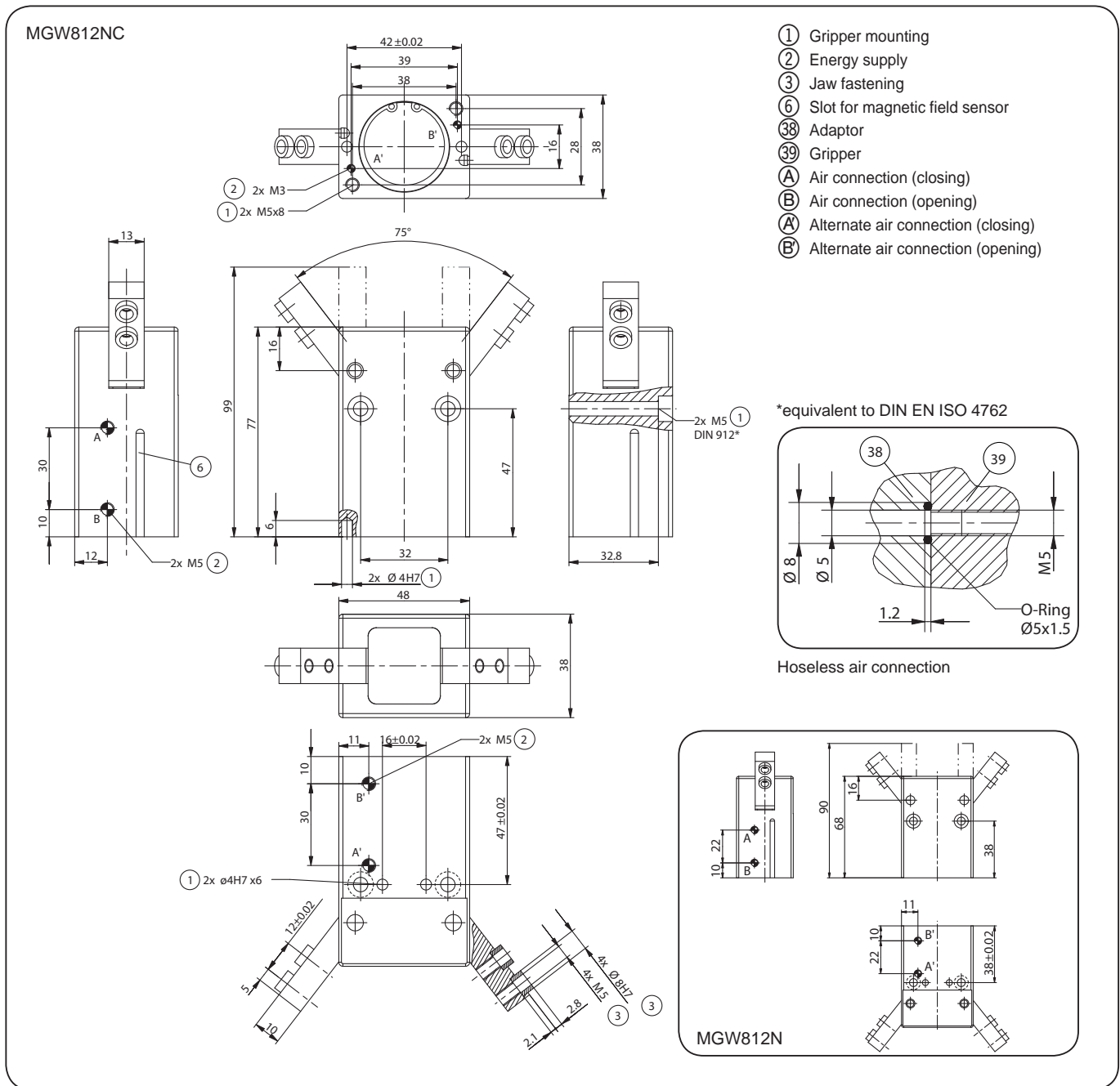


Subject to change without prior notice

Order no.:	MGW812N	MGW812NC
Stroke per jaw [°]:	37,5	37,5
Gripping moment in opening [Nm]:	4,55	-
Gripping moment in closing [Nm]:	4,1	5,2
Gripping moment secured by spring min. [Nm]:	-	1,1
Closing time / opening time [s]:	0,03 / 0,03	0,03 / 0,06
Repeatability +/- [mm]:	0,02	0,02
Operating pressure min. [bar]:	3	4
Operating pressure max. [bar]:	8	8
Operating temperature [°C]*:	5-80	5-80
Air volume per cycle [cm³]:	22,1	27,6
Weight [g]:	400	450

All data measured at 6 bar

\* High-temperature-resistant model (up to 150°C) add T to part number



Subject to change without prior notice