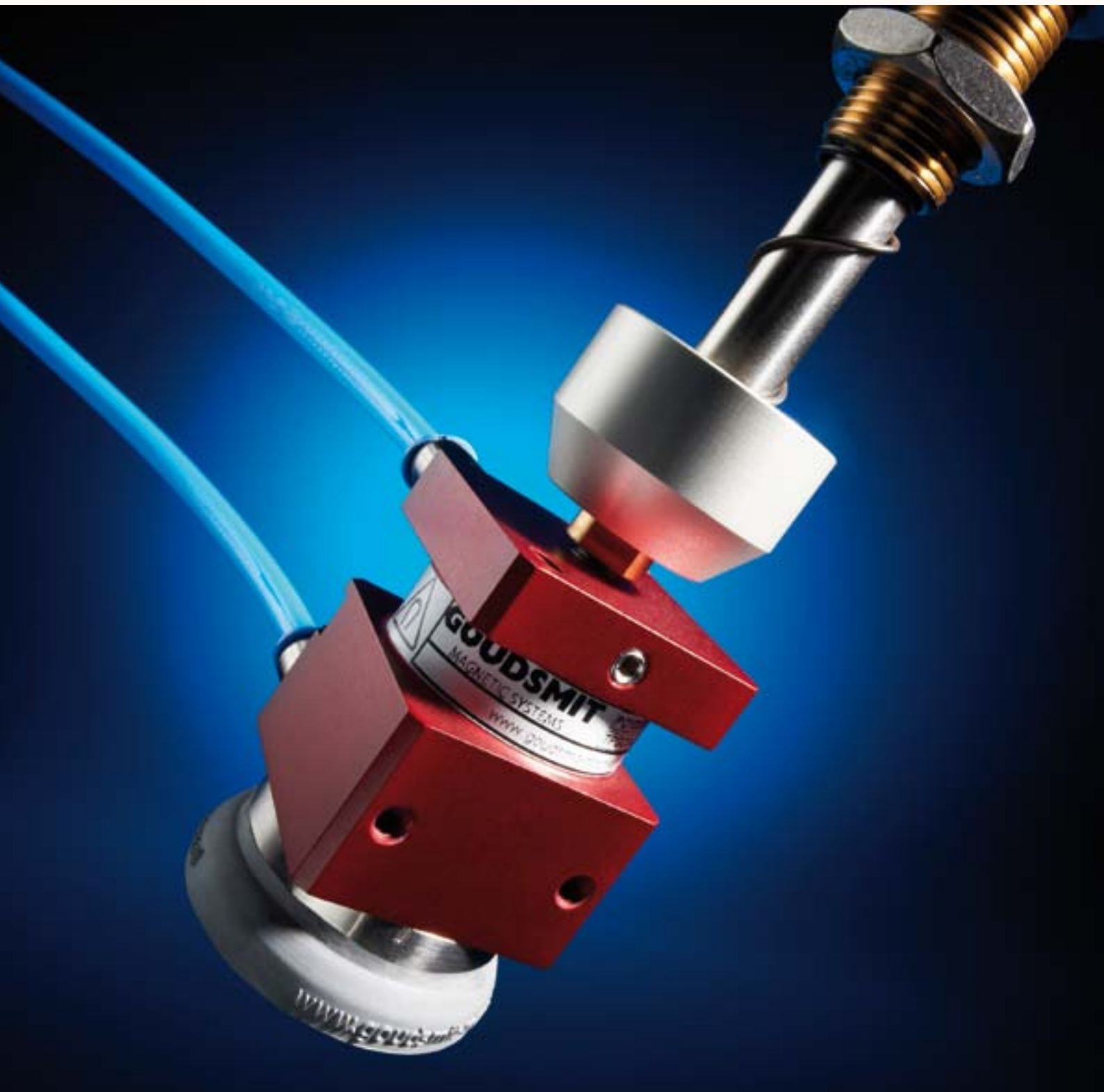


Magnet grippers



Goudsmit Magnet grippers



Magnet gripper with flexolink spring plunger for angle compensation of appr. 5°.



The **magnet gripper** handles a car door

The indicated lifting force is intended for ideal circumstances. The maximum allowable lifting force depends on the risk assessment, but must contain a safety factor of at least 2.

Magnet grippers lift both steel plates and perforated products. Also, aluminium and stainless steel plates and products up to approx. 4 mm are no problem. This makes these magnetic grippers universally applicable in automated processes in laser cutting machines, robotized press brakes and press-transfer systems in the automotive and sheet metal industry. Grippers are a proven technology in which the magnets can be switched on and off using compressed air.

If the magnet is set at high, there is no magnetic field that flows outside and the gripper is off. If the magnet is set at low, the magnetic field will be moved outside the housing and the magnet is on. Grippers are widely used for handling sheet metal up to about 4 mm and smaller steel objects. For heavier steel parts we recommend the Magswitch heavy lifter.

Operation magnet gripper



Magnet grippers with vacuum suction pad

Magnet grippers can lift steel plates, but also perforated plates. In order to also lift non-magnetic parts, the gripper optionally available with a vacuum suction pad. This doubles the lifting power for steel plates. This causes the robot arm to be able to accelerate much faster, which speeds up the process considerably. Moreover, it is possible to lift non-magnetic plates without change-over costs. The vacuum suction pad prevents the gripper from picking up two thin plates simultaneously (provided the plates do not stuck together too much due to oil residue; then a magnetic plates separator will be required).

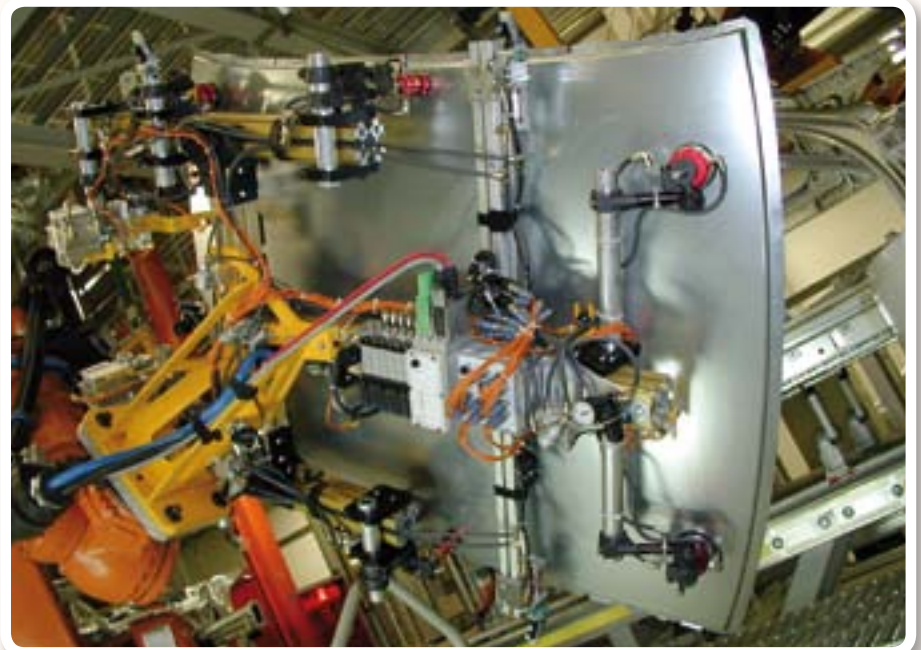
By first switching on the vacuum and then the magnetic force, only one plate is lifted.

Switching diagram, see page 4. Magnet grippers are available from a diameter of 20 mm (lifting force approx. 3 N) up to a diameter of 160 mm (lifting force approx. 800 N). For dimensions we refer you to our website www.goudsmit.eu

Type	Dimension (mm)	Magnetic force (N)	Vacuum force (N)	Tear Off kracht (N)	Advised lifting force (N)	Advised sheet Thickness (mm)
TPGC024078	26 x 63	40	0	40	13	>1
TPGC040078	43 x 63	170	0	170	57	>2
TPGC070078	73 x 71	400	0	400	135	>2
TPGC100078	103 x 71	1300	0	1300	435	>2
TPMV040028	42 x 57	35	70	105	47	>2
TPMV070028	72 x 84	200	260	460	195	>2
TPMV100028	103 x 65	370	540	910	395	>2

Magnet grippers in combination with vacuum technology

Magnet grippers are usually applied as replacement of or in combination with vacuum technology. The reason for this is that magnet grippers also adhere well on non-planar and perforated bases. This is not possible using only a vacuum suction pad. A magnet gripper requires less precision in the placement on the object and gives the user more space in the production process to perform other actions. A great advantage in the use of magnets is that no backup system is required to absorb disturbances. The magnetic force is still present, even when the vacuum or the electricity fails. The magnet gripper can also hold very small particles. This is not possible with only vacuum technology, due to the minimum required diameter of the suction pad. Another important advantage is the longevity of magnetic grippers. Replacement of the gripper is not necessary in highly automated processes. This means lower maintenance costs.



The MagVacu gripper contains double power (magnet and vacuum) and with this double safety, especially suitable for handling of non-ferrous parts of perforated in p.e. the automotive industry.



Available accessories and options



Vacuum suction pad at the bottom of the gripper, for the lifting of non-magnetic parts. Plunger with flexolink for more variation in the engagement moment, so that the gripper can also firmly grasp the object under an angle.

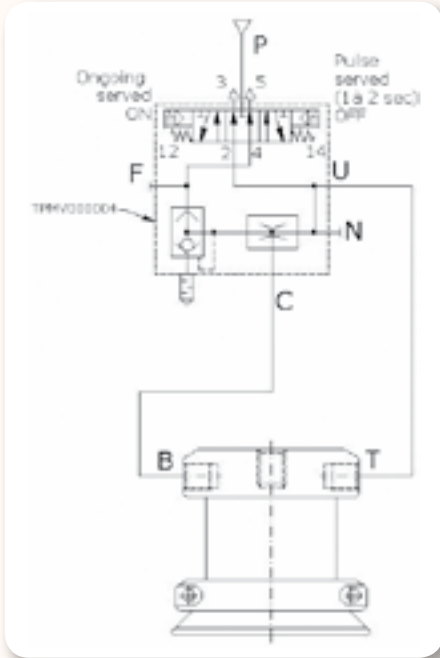


If you want to move the object vertically, we recommend the gripper with an abrasion-resistant NBR pad. This gives more friction and prevents that an imprint is left on the object.

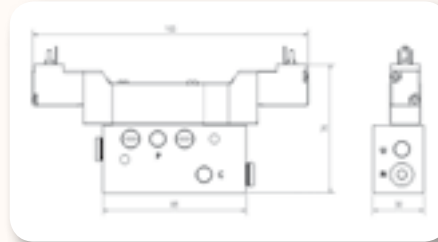


Special version for high temperatures >70°C up to max 180°C.

Standard connection scheme vacuum valve



Goudsmit vacuum vent valve TPMV000004



Technical data

Maximum connection pressure (P): 6 bar
 Optimal connection pressure (P): 5.5 bar
 Realised vacuum pressure (C): -0.7 bar
 (with P 5.5 bar)
 Air consumption (in 'on' position): 11.5 l/min
 Dimensions: Connection P, C and U: G 1/8"
 Electric current: 24V DC
 Temperatures: suited to ambient temperatures of -5 to +50°C

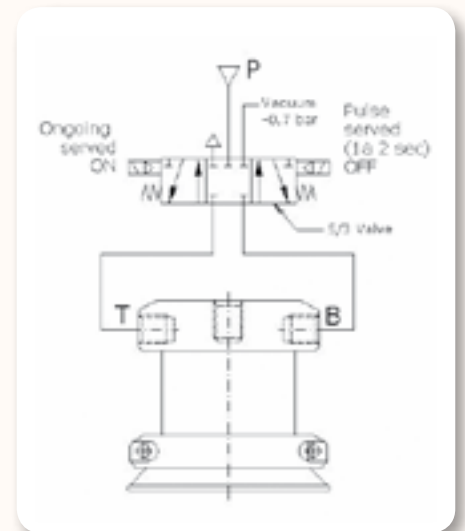
In this situation the vacuum connection is realized by a Goudsmit vacuum blow-off valve (TPMV000004).

Connection pressure : 5.5 bar
 Realised vacuum pressure : -0.7 bar

Connection scheme if you already have vacuum

If you already have a vacuum connection (-0.7 bar), you can select a connection with 5/3-valves.

Connection pressure : 4 bar
 Vacuum connection : 0.7 bar



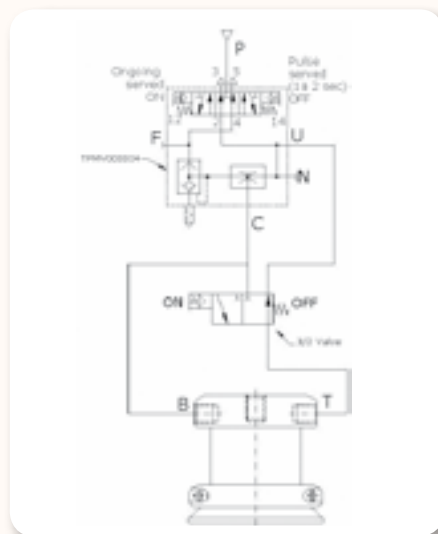
Connecting diagram if you want to first switch on the vacuum and then the magnetic force.

In this case the magnetic force is switched off for a moment ("off"), when the 3/2 valve is engaged ("on") together with the 5/3 valve. As soon as the 3/2 valve is disconnected ("off"), the magnetic force will start. This is useful for lifting thin sheets from the stack one by one. In this case vacuum is also generated by a Goudsmit blow-off valve (TPMV000004).

Connection pressure : 5.5 bar
 Realised vacuum pressure : -0.7 bar



Vacuum and link valve if you have no vacuum pump. Suitable for the connection of two grippers with vacuum suction pad (TPMV000004) Connecting diagram: see above.



Magswitch heavy lifter for lifting heavier parts, thicker than 6 mm.

