

Magnetic Grippers SGM

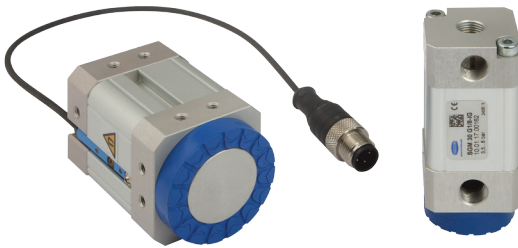
Suction area (Ø) from 30 mm to 70 mm



Suitability for Industry Specific Applications

Applications

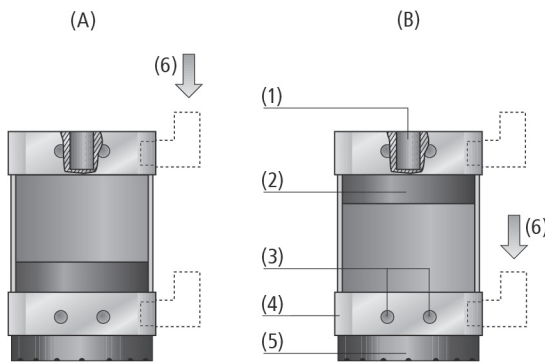
- Magnetic gripper for handling of perforated metal sheets, complex laser-cut workpieces and metal sheets with holes and apertures
- Handling of ferromagnetic workpieces



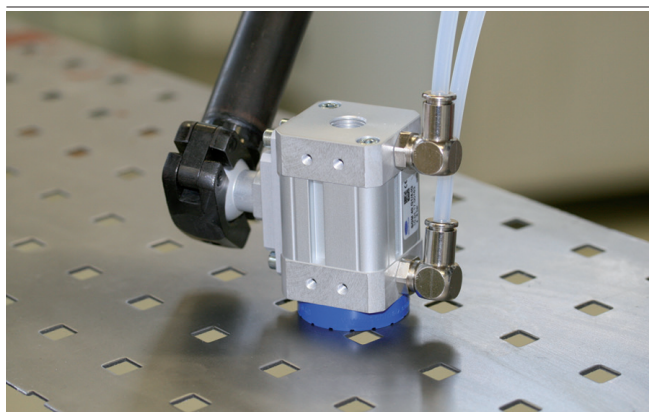
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Design

- Robust aluminum housing (4) with permanent magnet (2)
- Clip-on, easy to replace friction ring (5)
- Bistable design: the magnet settings "grip" (A) and "deposit" (B) are maintained in event of power failure at the compressed air connection (6)
- Standard connection threads (1) in top cover; mounting threads (3) for holder systems HTS on three sides
- The holder system HTS offers several options for mounting a gripper onto the gripping apparatus; HTS...D version for interlocking and mounting two grippers
- SGM-S with piston control for sensor recognition of piston position of the magnetic gripper, can not be retrofitted



System Design Magnetic Grippers SGM



Magnetic grippers SGM being used for handling perforated metal sheets

Our Highlights...

- Safe gripping by a permanent magnet
- Compact and lightweight design
- Easily replaceable friction ring
- Optional side connection for tooling
- Option to interlock two magnetic grippers (HTS...D)

Your Benefits...

- No electric power required
- Minimal space requirements, low total weight
- High shear forces can be achieved
- Flexible mounting options
- Optimal for elongated workpieces

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Magnetic Grippers SGM

Suction area (Ø) from 30 mm to 70 mm



Designation Code Magnetic Grippers SGM

| | | | | | | | | |
|------------|---|----------|---|-----------|---|----------------|---|------------|
| SGM | - | S | - | 30 | - | G1/8-IG | - | PNP |
| 1 | | 2 | | 3 | | 4 | | 5 |

1 – Abbreviated designation

| Code | Version |
|------|---------|
| SGM | SGM |

2 – Product addition

| Code | Type |
|------|---------------------|
| S | With piston control |
| HD | Heavy Duty |

3 – Diameter

| Code | Diameter in mm |
|---------|----------------|
| 30...70 | ø 30 to 70 |

4 – Connection

| Code | Connection |
|---------|---------------------------|
| G1/8-IG | G1/8-IG (IG = female (F)) |
| G1/4-IG | G1/4-IG |

5 – Switching function sensor

| Code | Type |
|------|-------------------|
| NPN | Switches to minus |
| PNP | Switches to plus |

Magnet gripper SGM is delivered assembled. It is available in three versions:

- Gripper of type SGM - available in various diameters
- Gripper of type SGM-HD - stainless-steel grip surface for robust applications - available in various diameters
- Gripper of type SGM-S - with a piston control by a sensor

Available spare parts: friction ring, proximity switch

Available accessories: holder hystem



Ordering Data Magnetic Grippers SGM

| Type* | Part no. |
|----------------------|----------------|
| SGM 30 G1/8-IG | 10.01.17.00162 |
| SGM 40 G1/4-IG | 10.01.17.00163 |
| SGM 50 G1/4-IG | 10.01.17.00164 |
| SGM 70 G1/4-IG | 10.01.17.00165 |
| SGM-S 30 G1/8-IG NPN | 10.01.17.00216 |
| SGM-S 40 G1/4-IG NPN | 10.01.17.00217 |
| SGM-S 50 G1/4-IG NPN | 10.01.17.00218 |
| SGM-S 70 G1/4-IG NPN | 10.01.17.00219 |
| SGM-S 30 G1/8-IG PNP | 10.01.17.00200 |
| SGM-S 40 G1/4-IG PNP | 10.01.17.00201 |
| SGM-S 50 G1/4-IG PNP | 10.01.17.00202 |
| SGM-S 70 G1/4-IG PNP | 10.01.17.00203 |
| SGM-HD 30 G1/8-IG | 10.01.17.00184 |
| SGM-HD 40 G1/4-IG | 10.01.17.00185 |
| SGM-HD 50 G1/4-IG | 10.01.17.00273 |
| SGM-HD 70 G1/4-IG | 10.01.17.00272 |

*Suitable screw in push fittings can be found under "Screw in push fittings" in section "Filters and Connections"

Magnetic Grippers SGM

Suction area (Ø) from 30 mm to 70 mm



Ordering Data Spare Parts Magnetic Grippers SGM

| Type | Friction ring | Proximity switch NPN | Proximity switch PNP |
|----------------------|----------------|----------------------|----------------------|
| SGM 30 G1/8-IG | 10.01.17.00136 | - | - |
| SGM 40 G1/4-IG | 10.01.17.00137 | - | - |
| SGM 50 G1/4-IG | 10.01.17.00138 | - | - |
| SGM 70 G1/4-IG | 10.01.17.00139 | - | - |
| SGM-S 30 G1/8-IG NPN | 10.01.17.00136 | 10.01.17.00215 | - |
| SGM-S 40 G1/4-IG NPN | 10.01.17.00137 | 10.01.17.00215 | - |
| SGM-S 50 G1/4-IG NPN | 10.01.17.00138 | 10.01.17.00215 | - |
| SGM-S 70 G1/4-IG NPN | 10.01.17.00139 | 10.01.17.00215 | - |
| SGM-S 30 G1/8-IG PNP | 10.01.17.00136 | - | 10.01.17.00199 |
| SGM-S 40 G1/4-IG PNP | 10.01.17.00137 | - | 10.01.17.00199 |
| SGM-S 50 G1/4-IG PNP | 10.01.17.00138 | - | 10.01.17.00199 |
| SGM-S 70 G1/4-IG PNP | 10.01.17.00139 | - | 10.01.17.00199 |
| SGM-HD 30 G1/8-IG | 10.01.17.00136 | - | - |
| SGM-HD 40 G1/4-IG | 10.01.17.00137 | - | - |
| SGM-HD 50 G1/4-IG | 10.01.17.00138 | - | - |
| SGM-HD 70 G1/4-IG | 10.01.17.00139 | - | - |



Ordering Data Accessories Magnetic Grippers SGM

| Type* | Holder system HTS-A2 | Holder system HTS-A3 |
|--------|----------------------|----------------------|
| SGM 30 | 10.01.17.00169 | 10.01.17.00170 |
| SGM 40 | 10.01.17.00169 | 10.01.17.00170 |
| SGM 50 | 10.01.17.00172 | 10.01.17.00173 |
| SGM 70 | 10.01.17.00172 | 10.01.17.00173 |

*Complete with mounting screws

| Type* | Holder system HTS-A2 D | Holder system HTS-A3 D |
|--------|------------------------|------------------------|
| SGM 30 | 10.01.17.00175 | 10.01.17.00176 |
| SGM 40 | 10.01.17.00175 | 10.01.17.00176 |
| SGM 50 | 10.01.17.00178 | 10.01.17.00179 |
| SGM 70 | 10.01.17.00178 | 10.01.17.00179 |

*Complete with mounting screws



Technical Data Magnetic Grippers SGM

| Type | Holding force max. friction ring [N]* | Remaining force [N] | Pressure range (operating pressure) [bar] | Installation position | Control valve | Operating temperature [°C] | Weight [g] |
|----------------------|---------------------------------------|---------------------|---|-----------------------|---------------|----------------------------|------------|
| SGM 30 G1/8-IG | 35 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 130 |
| SGM 40 G1/4-IG | 100 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 240 |
| SGM 50 G1/4-IG | 180 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 440 |
| SGM 70 G1/4-IG | 290 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 715 |
| SGM-S 30 G1/8-IG NPN | 35 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 145 |
| SGM-S 40 G1/4-IG NPN | 100 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 255 |
| SGM-S 50 G1/4-IG NPN | 180 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 445 |
| SGM-S 70 G1/4-IG NPN | 290 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 730 |
| SGM-S 30 G1/8-IG PNP | 35 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 145 |
| SGM-S 40 G1/4-IG PNP | 100 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 255 |

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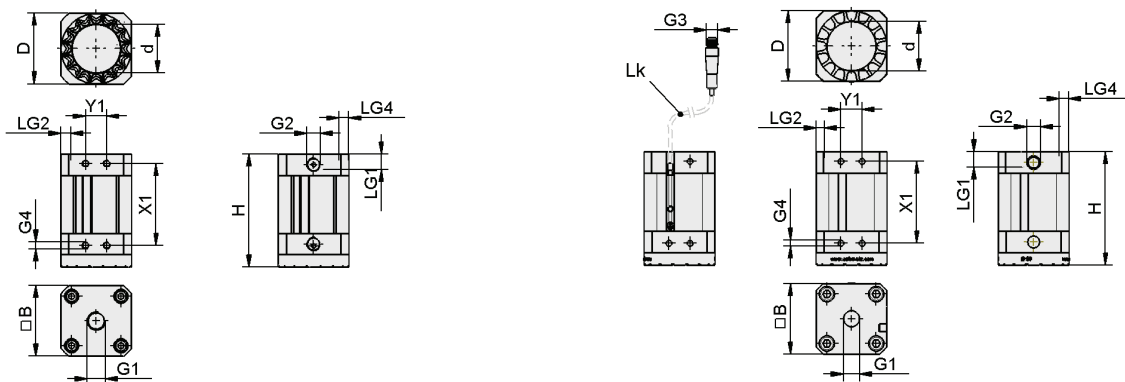
Technical Data Magnetic Grippers SGM

| Type | Holding force max. friction ring [N]* | Remaining force [N] | Pressure range (operating pressure) [bar] | Installation position | Control valve | Operating temperature [°C] | Weight [g] |
|----------------------|---------------------------------------|---------------------|---|-----------------------|---------------|----------------------------|------------|
| SGM-S 50 G1/4-IG PNP | 180 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 445 |
| SGM-S 70 G1/4-IG PNP | 290 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 730 |
| SGM-HD 30 G1/8-IG | 35 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 191 |
| SGM-HD 40 G1/4-IG | 100 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 342 |
| SGM-HD 50 G1/4-IG | 180 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 594 |
| SGM-HD 70 G1/4-IG | 290 | 0.3 | 3.5 ... 6.0 | Any | Bistable | 5 ... 70 | 975 |

*The value given is a static value with no safety factor; based on a plate with a thickness of 2 mm. For system configurations with magnetic grippers SGM, a safety factor of S = 3 must be applied.



Design Data Magnetic Grippers SGM



SGM, SGM-HD

SGM-S

| Type | B [mm]* | d [mm] | D [mm] | G1 | G2 | G3 | G4 | H [mm] | LG1 [mm] | LG2 [mm] | LG4 [mm] | Lk [mm] | X1 [mm] | Y1 [mm] |
|----------------------|---------|--------|--------|---------|---------|---------|------|--------|----------|----------|----------|---------|---------|---------|
| SGM 30 G1/8-IG | 30.0 | 16.5 | 29.5 | G1/8"-F | G1/8"-F | - | M4-F | 70.2 | 7 | 6 | 5 | - | 46 | 12 |
| SGM 40 G1/4-IG | 40.6 | 26.0 | 40.0 | G1/4"-F | G1/8"-F | - | M4-F | 70.2 | 11 | 6 | 7 | - | 46 | 12 |
| SGM 50 G1/4-IG | 50.6 | 35.0 | 50.0 | G1/4"-F | G1/8"-F | - | M5-F | 80.2 | 11 | 6 | 7 | - | 58 | 15 |
| SGM 70 G1/4-IG | 68.7 | 51.0 | 68.0 | G1/4"-F | G1/8"-F | - | M5-F | 80.2 | 11 | 6 | 8 | - | 58 | 15 |
| SGM-S 30 G1/8-IG NPN | 30.0 | 16.5 | 29.5 | G1/8"-F | G1/8"-F | M12x1-M | M4-F | 70.2 | 7 | 6 | 5 | 300 | 46 | 12 |
| SGM-S 40 G1/4-IG NPN | 40.6 | 26.0 | 40.0 | G1/4"-F | G1/8"-F | M12x1-M | M4-F | 70.2 | 11 | 6 | 7 | 300 | 46 | 12 |
| SGM-S 50 G1/4-IG NPN | 50.6 | 35.0 | 50.0 | G1/4"-F | G1/8"-F | M12x1-M | M5-F | 80.2 | 11 | 6 | 7 | 300 | 58 | 15 |
| SGM-S 70 G1/4-IG NPN | 68.7 | 51.0 | 68.0 | G1/4"-F | G1/8"-F | M12x1-M | M5-F | 80.2 | 11 | 6 | 8 | 300 | 58 | 15 |
| SGM-S 30 G1/8-IG PNP | 30.0 | 16.5 | 29.5 | G1/8"-F | G1/8"-F | M12x1-M | M4-F | 70.2 | 7 | 6 | 5 | 300 | 46 | 12 |
| SGM-S 40 G1/4-IG PNP | 40.6 | 26.0 | 40.0 | G1/4"-F | G1/8"-F | M12x1-M | M4-F | 70.2 | 11 | 6 | 7 | 300 | 46 | 12 |
| SGM-S 50 G1/4-IG PNP | 50.6 | 35.0 | 50.0 | G1/4"-F | G1/8"-F | M12x1-M | M5-F | 80.2 | 11 | 6 | 7 | 300 | 58 | 15 |
| SGM-S 70 G1/4-IG PNP | 68.7 | 51.0 | 68.0 | G1/4"-F | G1/8"-F | M12x1-M | M5-F | 80.2 | 11 | 6 | 8 | 300 | 58 | 15 |
| SGM-HD 30 G1/8-IG | 30.0 | 16.5 | 29.5 | G1/8"-F | G1/8"-F | - | M4-F | 61.4 | 7 | 6 | 5 | - | 46 | 12 |
| SGM-HD 40 G1/4-IG | 40.6 | 26.0 | 40.0 | G1/4"-F | G1/8"-F | - | M4-F | 61.4 | 11 | 6 | 7 | - | 46 | 12 |
| SGM-HD 50 G1/4-IG | 50.6 | 35.0 | 50.0 | G1/4"-F | G1/8"-F | - | M5-F | 71.4 | 11 | 6 | 7 | - | 58 | 15 |
| SGM-HD 70 G1/4-IG | 68.7 | 51.0 | 68.0 | G1/4"-F | G1/8"-F | - | M5-F | 71.4 | 11 | 6 | 8 | - | 58 | 15 |

*Contact surface of the grippers (round) corresponds to dimension B

