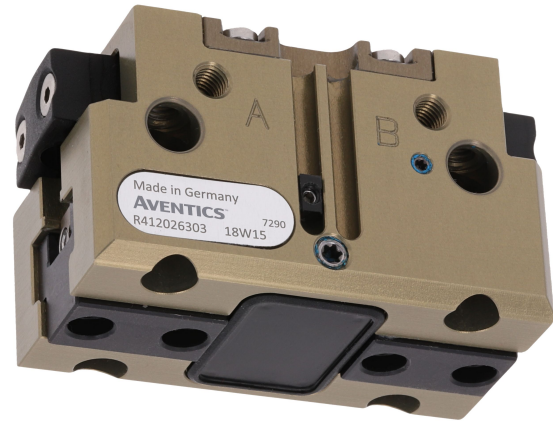


- 2-finger, parallel gripper
- with magnetic piston
- Stroke/finger 2,5 4 6 8 10 13 16 mm
- Recommended workpiece mass 0,62 0,7 1,25 2,1 3,3 5,4 8,2 kg
- Double-acting

AVENTICS Series UPG Grippers

The AVENTICS Series UPG is a 2-finger parallel gripper characterized by its high gripping forces, precision, and exact movement of the clamping jaws. They can be selected based on the application requirements and flexibly equipped with object-specific gripper fingers.



Technical data

Industry

Industrial

Note

Archive product: Do not use in new constructions!

Number of fingers

2

Type

Parallel

Grippers type

2-finger, parallel gripper

Grippers function

Double-acting

Type

UPG-P-64

Min. working pressure

2.5 bar

Max. working pressure

8 bar

Min. ambient temperature

5 °C

Max. ambient temperature

90 °C

Magnetic piston

with magnetic piston

Max. particle size

5 µm

Pressure for determining forces

6 bar

Medium

Compressed air

Min. oil content of compressed air

0 mg/m³

Max. oil content of compressed air

5 mg/m³

Effective gripping force of I.D gripper per finger, min.

135 N

Grippers, Series UPG, Double-acting

R412026303

Series UPG

2024-10-01

| | |
|--|--------------------|
| Effective gripping force of O.D gripper per finger, min. | 125 N |
| Effective total gripping force I.D. gripper, min. | 270 N |
| Effective total gripping force O.D. gripper, min. | 250 N |
| Max. permissible finger length | 80 mm |
| Max. permissible finger mass | 0.35 kg |
| Closing time at 6 bar | 0.03 s |
| Opening time at 6 bar | 0.03 s |
| Air consumption per double-stroke at 1 bar | 10 cm ³ |
| Recommended workpiece mass | 1.25 kg |
| Stroke per finger | 6 mm |

Material

| | |
|-------------------------|--------------------------------|
| Housing material | Aluminum |
| Surface housing | anodized |
| Seal material | Acrylonitrile butadiene rubber |
| Material function parts | Steel, chrome-plated |
| Weight | 0.28 kg |
| Part No. | R412026303 |

Technical information

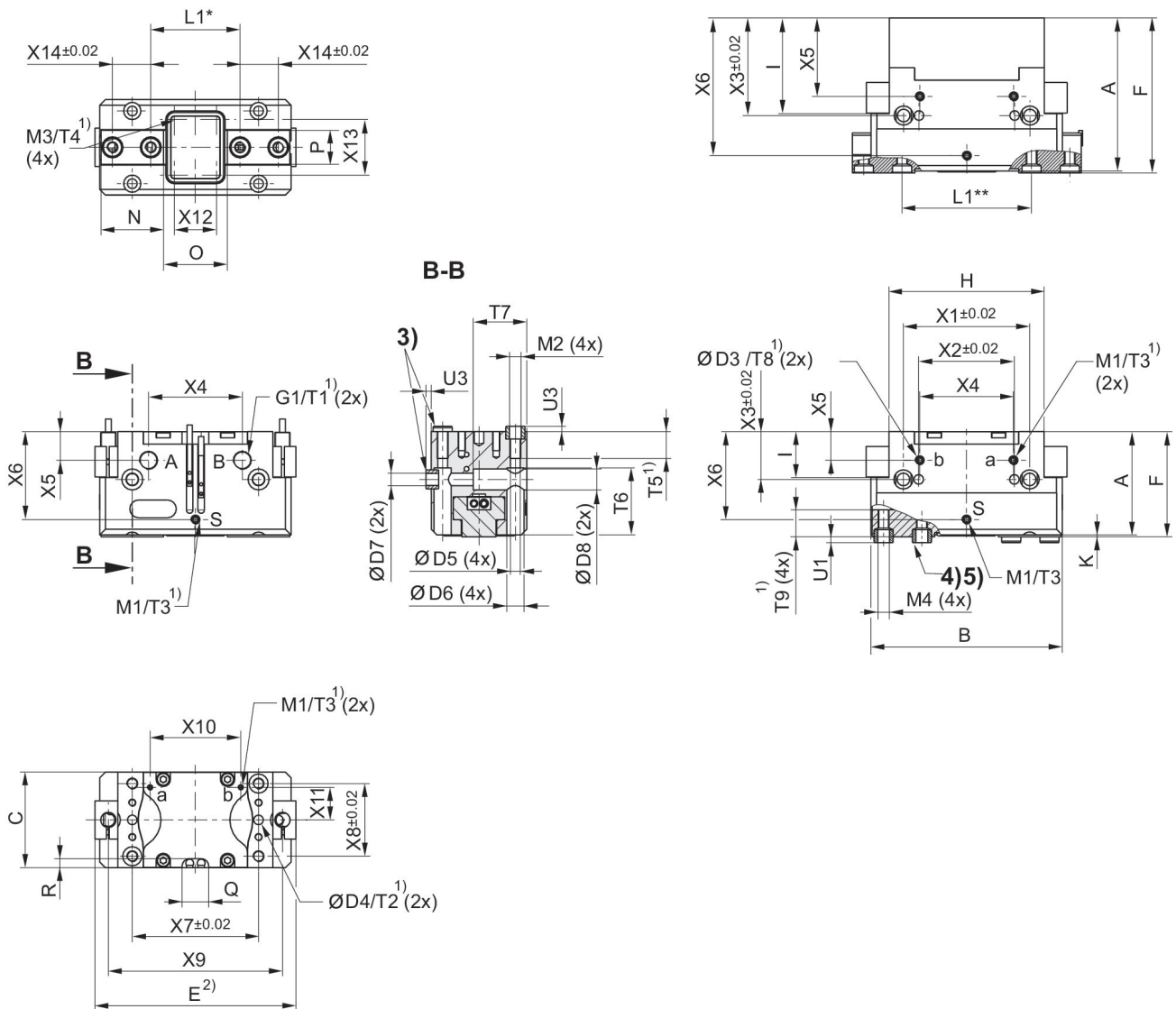
Grip tolerance determined by measuring the dispersion of the end positions for 100 successive strokes.

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

The oil content of compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

Dimensions



* Gripper closed

** Gripper open

1) min.

2) max.

3) Sleeve ØD2 h6 ØD2 in housing for bottom gripper connection (2x)

4) Sleeve ØD1 h6 ØD1 H7 in base jaw for bottom finger connection (4x)

5) Sleeve ØD1 h6 ØD1 in base jaw for bottom finger connection (4x)

| Part No. | A | B | C | D1 H7 | D2 H7 | D3 H7 | D4 H7 | D5 | D6 |
|------------|----|-----|----|-------|-------|-------|-------|-----|------|
| R412026301 | 24 | 45 | 24 | 4 | 5 | - | - | 2.5 | 4.8 |
| R412026302 | 30 | 57 | 30 | 5 | 6 | - | - | 3,3 | 5,8 |
| R412026303 | 38 | 64 | 36 | 6 | 8 | 4 | 4 | 4,2 | 7,25 |
| R412026304 | 48 | 80 | 42 | 8 | 8 | - | 4 | 4,2 | 7,25 |
| R412026305 | 54 | 100 | 50 | 10 | 10 | 5 | 5 | 5,1 | 9 |
| R412026306 | 62 | 125 | 60 | 10 | 12 | 6 | 6 | 6,8 | 10,5 |
| R412026307 | 76 | 160 | 72 | 14 | 12 | 6 | 6 | 6,8 | 10,5 |

Grippers, Series UPG, Double-acting

R412026303

Series UPG

2024-10-01

| Part No. | D7 | D8 | E | F | G1 | H | I | K | L1* |
|------------|-----|------|-------|------|------|-----|----|-----|------|
| R412026301 | 2.6 | 4.8 | - | 24.7 | M3 | 38 | 9 | 0.7 | 26.5 |
| R412026302 | 3,3 | 5,8 | - | 31 | M5 | 42 | 13 | 1 | 33,5 |
| R412026303 | 4,2 | 7,25 | 70 | 39 | M5 | 52 | 15 | 1 | 40,5 |
| R412026304 | 5,1 | 9 | 87 | 49 | M5 | 63 | 20 | 1 | 53 |
| R412026305 | 6,6 | 11 | 105 | 55 | G1/8 | 81 | 24 | 1 | 67 |
| R412026306 | 9 | 14 | 130 | 63 | G1/8 | 100 | 26 | 1 | 87 |
| R412026307 | 9 | 14 | 162,5 | 77 | G1/8 | 125 | 32 | 1 | 109 |

| Part No. | L1** | M1 | M2 | M3 | M4 | N | O | P | Q |
|------------|------|----|----|------|------|------|------|------|-----|
| R412026301 | 21.5 | M2 | M3 | M2 | M2.5 | 14.8 | 14.9 | 6.8 | 9.5 |
| R412026302 | 25,5 | M5 | M4 | M2,5 | M3 | 18,6 | 19 | 10 | 9.5 |
| R412026303 | 28,5 | M5 | M5 | M2,5 | M4 | 21 | 20,3 | 12 | 11 |
| R412026304 | 37 | M5 | M5 | M2,5 | M5 | 26 | 26,8 | 14,4 | 12 |
| R412026305 | 47 | M5 | M6 | M3 | M6 | 32,7 | 33,3 | 17,8 | 14 |
| R412026306 | 61 | M5 | M8 | M3 | M6 | 39 | 45,5 | 19,7 | 14 |
| R412026307 | 77 | M5 | M8 | M3 | M10 | 50 | 57,9 | 26 | 16 |

| Part No. | R | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 |
|------------|-----|-----|----|----|-----|----|------|----|----|
| R412026301 | 3.5 | 4 | - | 4 | 3.5 | 8 | 16 | 14 | - |
| R412026302 | 3,8 | 4,5 | - | 6 | 3,5 | 11 | 19 | 18 | - |
| R412026303 | 4,3 | 6 | 6 | 6 | 3,5 | 12 | 24,1 | 25 | 5 |
| R412026304 | 4,2 | 6 | 8 | 4 | 3,5 | 15 | 33 | 24 | - |
| R412026305 | 4,8 | 7 | 6 | 6 | 5,5 | 14 | 35 | 28 | 5 |
| R412026306 | 4,3 | 7 | 10 | 6 | 5,5 | 20 | 39,5 | 38 | 6 |
| R412026307 | 5,3 | 7 | 12 | 6 | 5,5 | 20 | 55,5 | 41 | 7 |

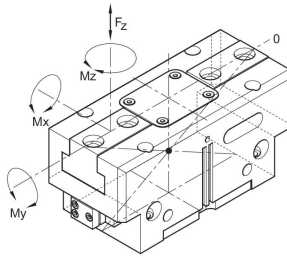
| Part No. | T9 | U1 | U3 | X1 | X2 | X3 | X4 | X5 | X6 |
|------------|------|-----|-----|-----|----|------|----|----|------|
| R412026301 | 6.1 | 2.2 | 2 | 32 | - | 11 | 22 | 8 | 18.6 |
| R412026302 | 8,5 | 2,2 | 2,5 | 35 | - | 14,5 | 24 | 10 | 25,5 |
| R412026303 | 10 | 2,6 | 2,5 | 42 | 20 | 17,5 | 31 | 10 | 33 |
| R412026304 | 10 | 2,6 | 2,5 | 52 | - | 20 | 40 | 12 | 39,5 |
| R412026305 | 14,2 | 3,1 | 3 | 66 | 50 | 25 | 49 | 15 | 46 |
| R412026306 | 13 | 3,1 | 3 | 82 | 60 | 30 | 63 | 15 | 53 |
| R412026307 | 17 | 4 | 3 | 100 | 76 | 28 | 74 | 18 | 61 |

| Part No. | X7 | X8 | X9 | X10 | X11 | X12 | X13 | X14 |
|------------|-----|----|-------|------|------|------|------|-----|
| R412026301 | 32 | 18 | - | 20 | 6.8 | 8 | 14 | 8 |
| R412026302 | 35 | 22 | - | 22,6 | 8,7 | 11 | 18 | 12 |
| R412026303 | 42 | 27 | 58,6 | 27 | 10 | 13 | 20,5 | 13 |
| R412026304 | 52 | 32 | 73 | 37 | 12 | 17 | 14,4 | 16 |
| R412026305 | 66 | 38 | 91 | 47,4 | 17 | 22 | 17,8 | 20 |
| R412026306 | 82 | 45 | 116 | 61 | 20 | 35,5 | 19,7 | 24 |
| R412026307 | 100 | 56 | 148,5 | 75 | 24,5 | 43 | 31 | 32 |

* Gripper open

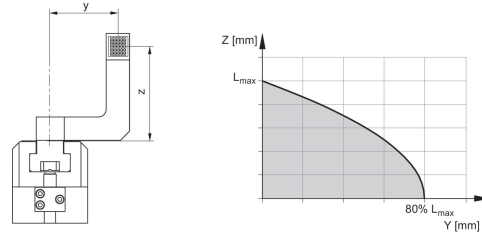
** Gripper closed

Max. permissible forces and torques on gripper



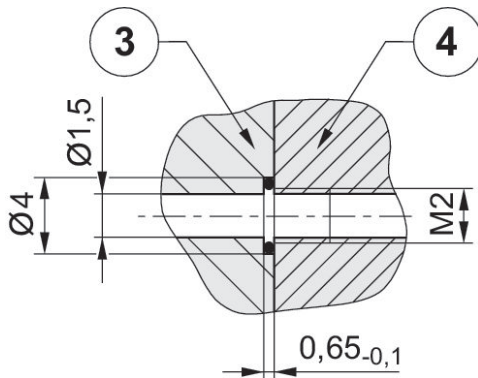
Moments and forces are static values, apply per base jaw, and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself.

Maximum permissible projection Gripping range



Lmax = Max. permissible finger length

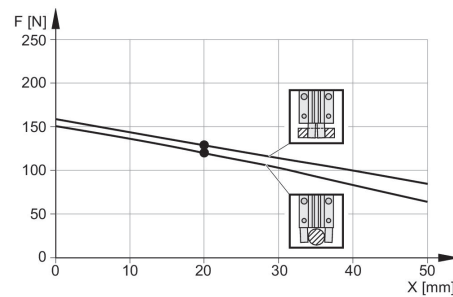
Tubeless direct connection M2



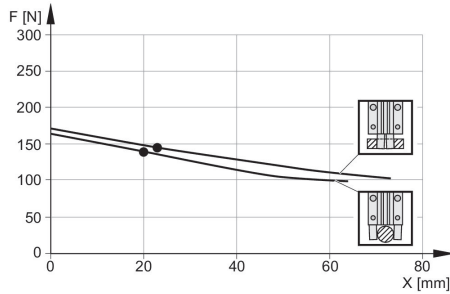
The direct connection is used for supplying compressed air without tubing, which is liable to faults. Instead, the pressure medium is fed through boreholes in the screw-on plate.

- 3) Adapter
- 4) Grippers

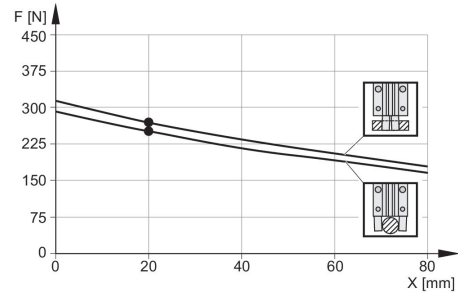
Gripping force/finger UPG-P-40



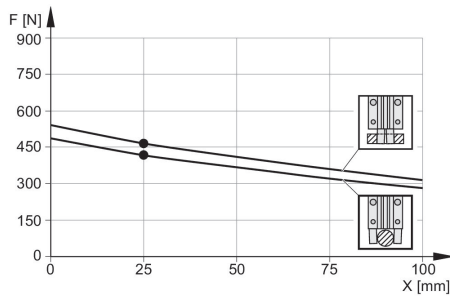
Gripping force/finger
UPG-P-50



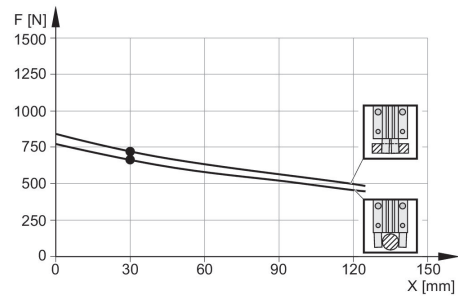
Gripping force/finger
UPG-P-64



Gripping force/finger
UPG-P-80



Gripping force/finger
UPG-P-100



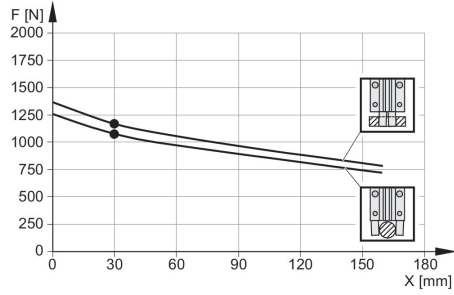
Grippers, Series UPG, Double-acting

R412026303

Series UPG

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Gripping force/finger UPG-P-125



Gripping force/finger UPG-P-160

