

Gantry modules pneumatic PMP

PMP & PMP-c

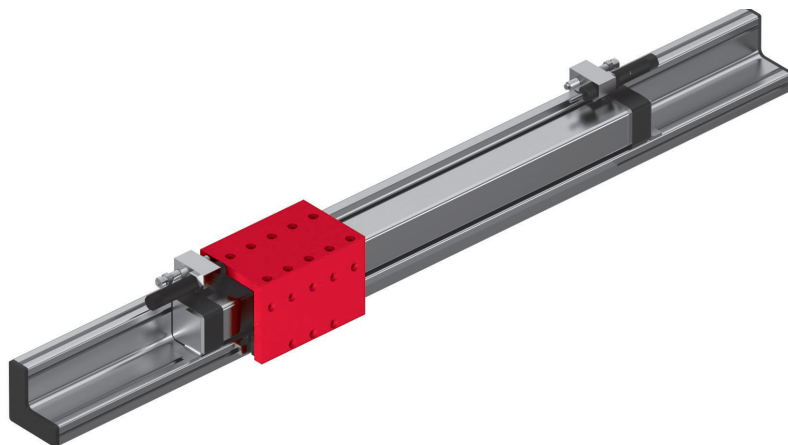
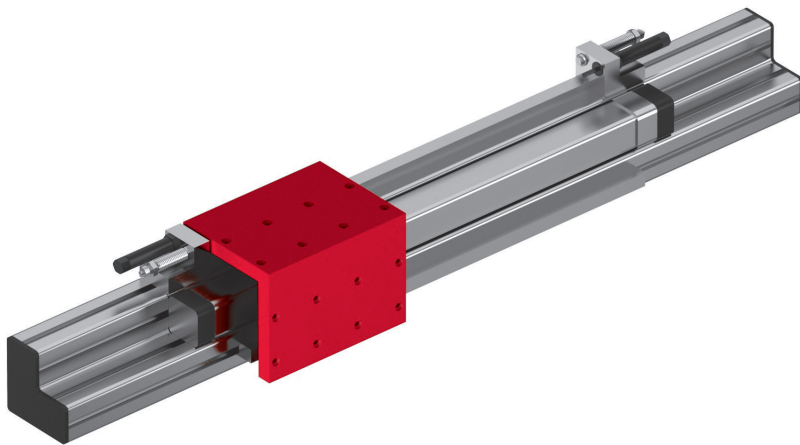
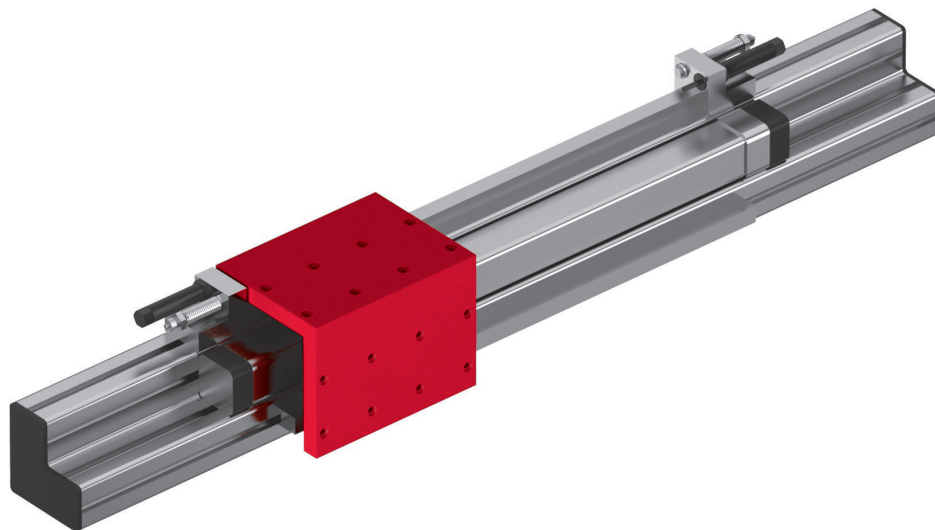


Table of contents: PMP & PMP-c

| Gantry modules pneumatic PMP & PMP-c | | Page |
|--------------------------------------|--|------|
| PMP | | 117 |
| PMP-c | | 125 |
| Accessories PMP & PMP-c | | 132 |

Gantry modules pneumatic PMP

PMP

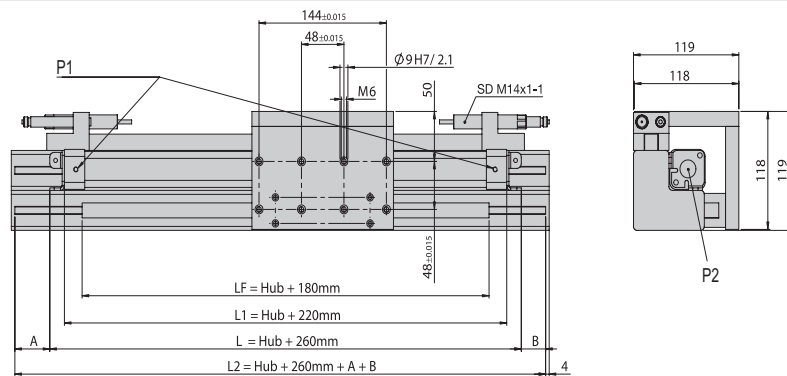


- Millimetre-accurate strokes
- Rigid construction
- Self-supporting profile
- Intermediate stop for any number of positions

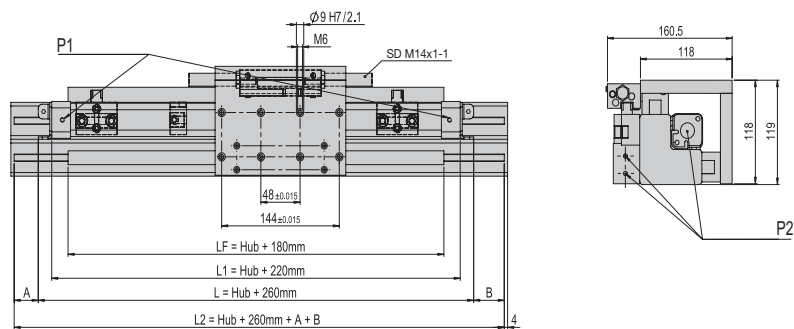
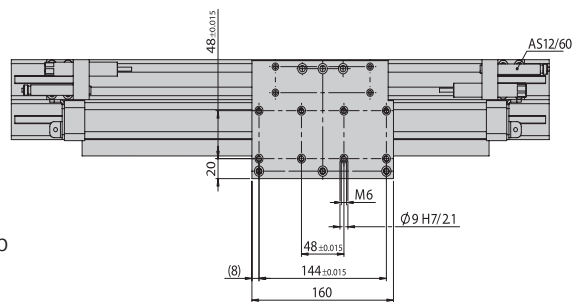
Dimensions and dimension drawings

PMP

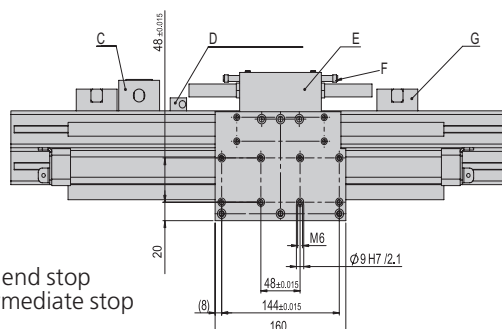
| Type | PMP 01 | PMP 02 |
|------|-----------------------|--------------------------|
| A | Mounting protrusion 1 | Mounting protrusion 1 |
| B | Mounting protrusion 2 | Mounting protrusion 2 |
| C | | |
| D | | Proximity switch bracket |
| E | | |
| F | | |
| G | | End stop |
| P1 | G1/8 " | G1/8 " |
| P2 | M5 | M5 |

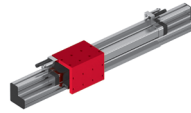


PMP 01
Fix end stop



PMP 02
Adjustable end stop
plus 1 intermediate stop





| PMP | |
|-----------------------|--------------|
| Attachment grid | 48 x 48 mm |
| Attachment thread | M6 |
| Operating pressure | 6 +/-2 bar |
| Air connection P | M5 / G 1/8 " |
| Cylinder Ø | 25 mm |
| Operating temperature | 0 - 50 °C |
| Storage temperature | 0 - 50 °C |
| Humidity | < 90 % |

| Type | PMP 01 | PMP 02 |
|-------------------------------|-----------------|-----------------|
| Order number | 11000105 | 11000106 |
| Max. stroke | 3000 mm | 3000 mm |
| Net weight | 6 kg | 9.1 kg |
| Moving weight | 1.87 kg | 2.33 kg |
| Weight/100 mm stroke | 1.11 kg | 1.11 kg |
| Module weight, 0 mm stroke | 6 kg | 6 kg |
| Max. payload | *15 kg | *15 kg |
| Air consumption/100 mm stroke | 0.25 NL | 0.25 NL |
| Piston force | 250 N | 250 N |
| Repeat accuracy | +/- 0.1 mm | +/- 0.1 mm |
| Max. profile length | 6000 mm | 6000 mm |
| Mounting position | ↔ | ↔ |

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.

Note: Also included in the PMP 02 scope of delivery:

- 1 x stop slide PMP
- 2 x end stops PMP
- 1 x intermediate stop PMP

*Observe operation time diagram
**0 mm stroke

Included in the delivery

(Catalogue HT accessories)

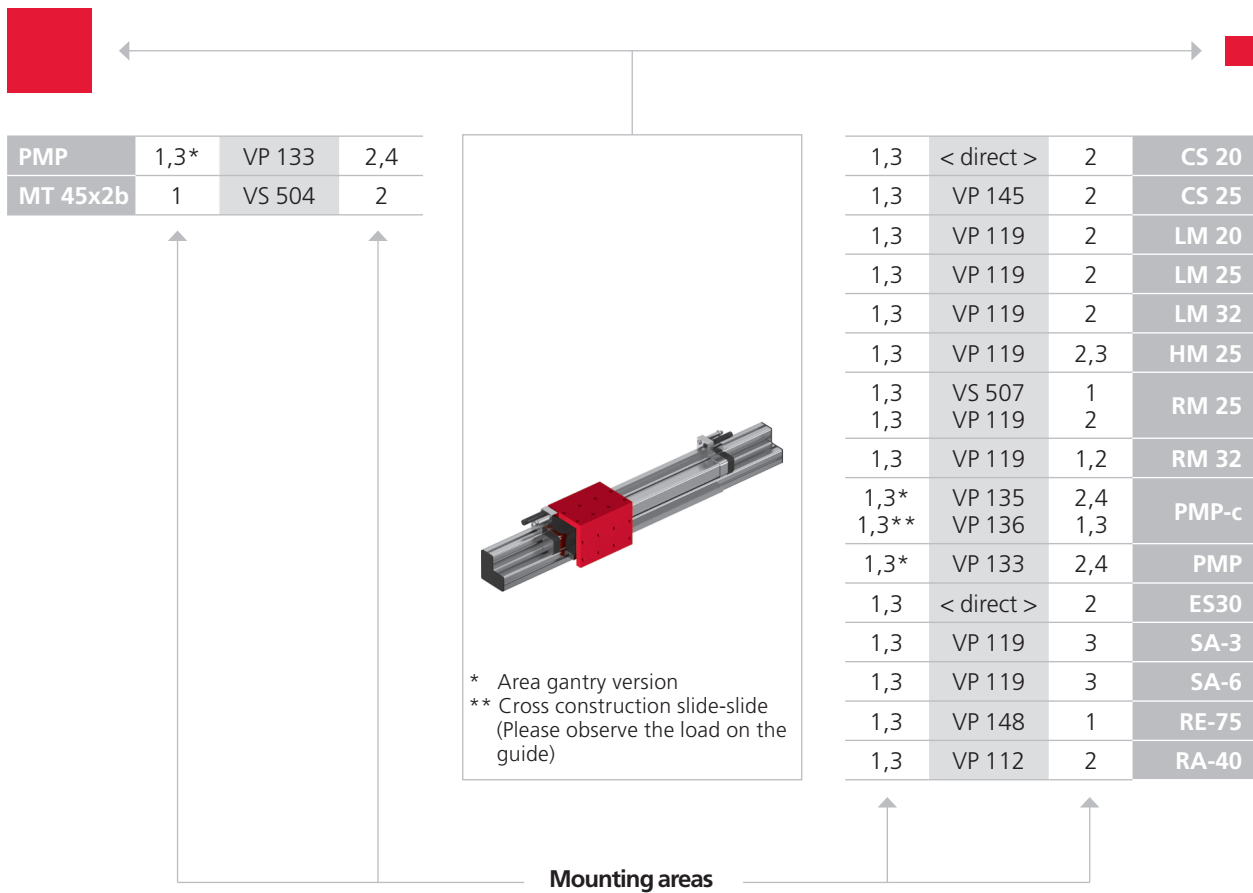
- 2x Shock absorber SD M14x1 -1
- 2x Stop screw AS 12/60

Accessories

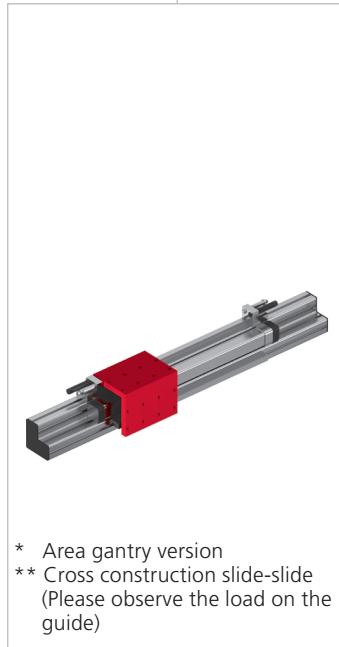
- Stop slide PMP [p. 153]
- Safety brake PMP [p. 153]
- Intermediate stop PMP [p. 154]
- Fine adjustment PMP [p. 154]
- End stop PMP [p. 154]
- Proximity switch bracket PMP [p. 154]
- Cover cap 40 x 40 [p. 155]
- Cover cap 40 x 80 [p. 155]
- Angle profile PMP [p. 155]
- Lubricator adapter PMP [p. 155]

(Catalogue HT accessories)

- T-nut M8
- INI d6.5x44-Sn1.5-PNP-NO-M8x1



| | | | |
|----------|------|--------|-----|
| PMP | 1,3* | VP 133 | 2,4 |
| MT 45x2b | 1 | VS 504 | 2 |



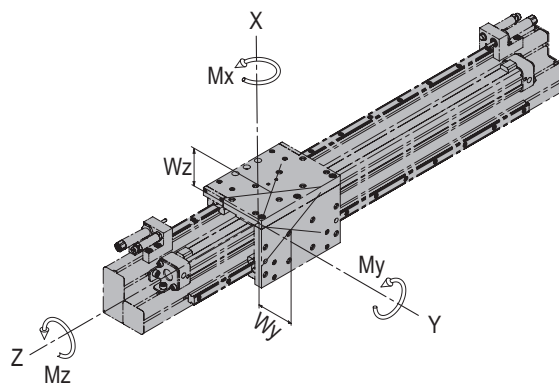
| | | | |
|-------|------------|-----|-------|
| 1,3 | < direct > | 2 | CS 20 |
| 1,3 | VP 145 | 2 | CS 25 |
| 1,3 | VP 119 | 2 | LM 20 |
| 1,3 | VP 119 | 2 | LM 25 |
| 1,3 | VP 119 | 2 | LM 32 |
| 1,3 | VP 119 | 2,3 | HM 25 |
| 1,3 | VS 507 | 1 | RM 25 |
| 1,3 | VP 119 | 2 | RM 25 |
| 1,3 | VP 119 | 1,2 | RM 32 |
| 1,3* | VP 135 | 2,4 | PMP-c |
| 1,3** | VP 136 | 1,3 | PMP-c |
| 1,3* | VP 133 | 2,4 | PMP |
| 1,3 | < direct > | 2 | ES30 |
| 1,3 | VP 119 | 3 | SA-3 |
| 1,3 | VP 119 | 3 | SA-6 |
| 1,3 | VP 148 | 1 | RE-75 |
| 1,3 | VP 112 | 2 | RA-40 |

Mounting areas

| CS, ES | LM | HM | SA | UG, GM, SG, DG, PG, GE, SGE |
|------------|----------|----------|--------|-----------------------------|
| | | | | |
| PMP, PMP-c | PEZ, PDZ | PEL, PDL | RM, RE | CR, RM 32, RE, SREH, RA |
| | | | | |

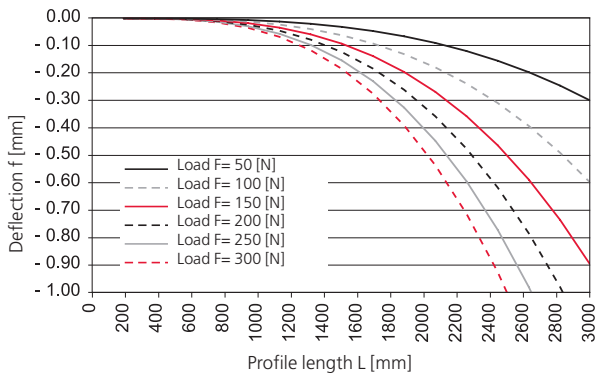
Note that there might be different mounting positions from one module to another one.
 The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

| Type | PMP 01 | PMP 02 |
|---------------------------|---------|---------|
| Max. static torque M_x | 380 Nm | 380 Nm |
| Max. static torque M_y | 380 Nm | 380 Nm |
| Max. static torque M_z | 650 Nm | 650 Nm |
| Max. dynamic torque M_x | 26.5 Nm | 26.5 Nm |
| Max. dynamic torque M_y | 26.5 Nm | 26.5 Nm |
| Max. dynamic torque M_z | 40 Nm | 40 Nm |
| Effective distance W_y | 40 mm | 40 mm |
| Effective distance W_z | 40 mm | 40 mm |

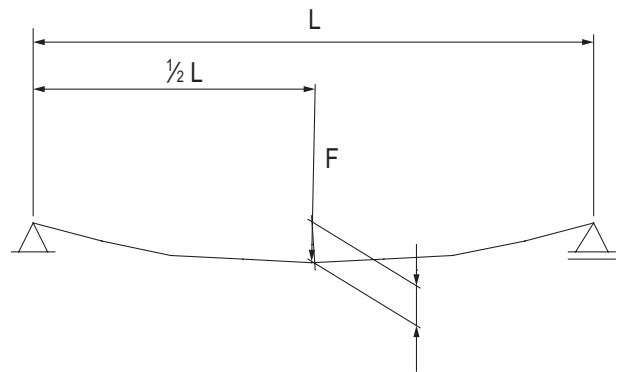


PMP diagrams

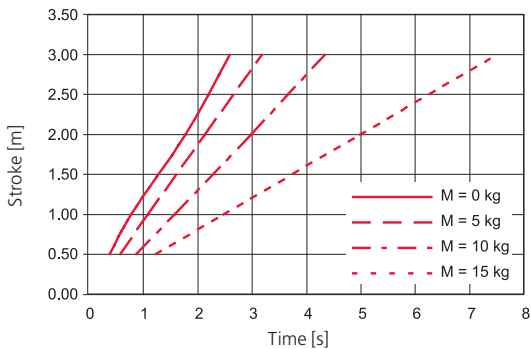
Angle profile deflection, load case static

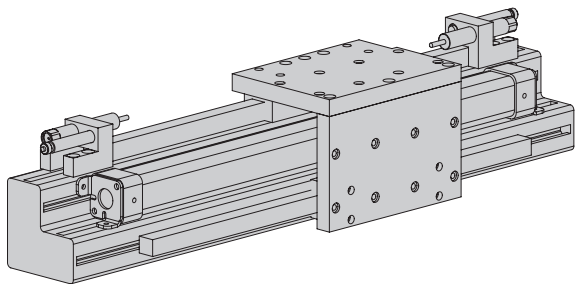


Angle profile deflection, load case static



Angle profile deflection, load case static



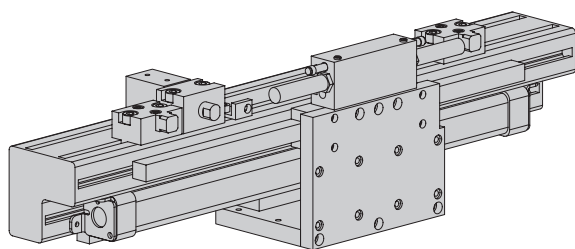
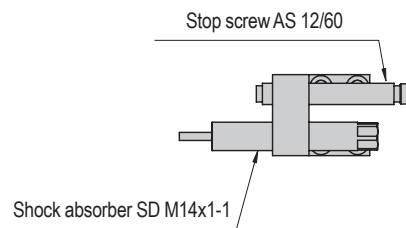
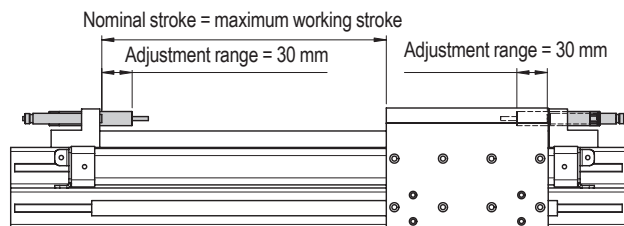


PMP 01

Version with pneumatic cylinder and two fixed limit stops.

Determination of the stroke for PMP 01

The maximum work area is determined with the nominal stroke data. We recommend a stroke reserve for the determination of the nominal stroke. The adjustment range of the stop screws is up to 30 mm per stop side.



PMP 02

Version with pneumatic cylinder and adjustable intermediate and end stops.

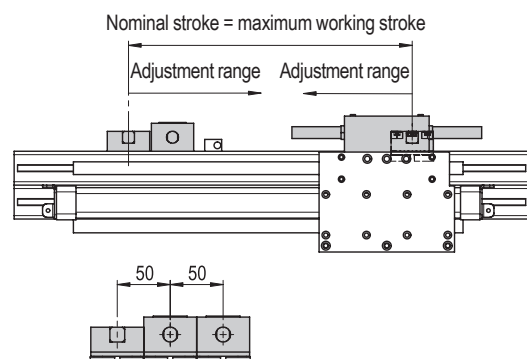
Determination of the stroke for PMP 02

With the information of nominal stroke, you determine the maximum field of action. We recommend adding some extra stroke depending on the application.

Due to the slideable end stops the work area can be limited. Please note that a minimal grid of 50 mm is given when using more than one intermediate stop.

Please contact out technicians for tasks that require a smaller grid.

If pneumatic cylinders are measured by the means of magnetic switches a minimum gap of 60 mm is necessary.



| | | | | | |
|------------|-------------|----------|--------|-------|-------|
| Order form | PMP-Version | xxxxxxxx | xxxx | xxxx | xxxx |
| | | | stroke | Maß A | Maß B |

Ordering example 1

| | | | | |
|--------|----------|---------|--------|--------|
| PMP 01 | 11000105 | 1500 mm | 500 mm | 800 mm |
|--------|----------|---------|--------|--------|

Ordering example 2

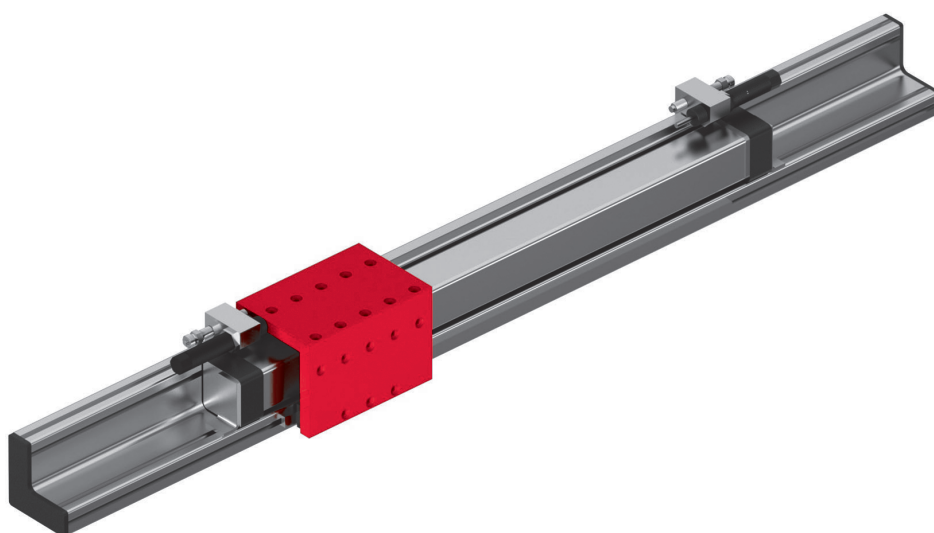
| | | | | |
|--------|----------|---------|--------|--------|
| PMP 02 | 11000106 | 3000 mm | 100 mm | 100 mm |
|--------|----------|---------|--------|--------|

Ordering process

- Select the desired PMP version, the stroke length, dimension A and dimension B.
- Enter the corresponding red order number in the order form in the place of the cross.
- Enter the corresponding lengths in mm for the stroke as well as dimensions A and B (also in mm) in the order form in the place of the cross.

Gantry modules pneumatic PMP

PMP-C

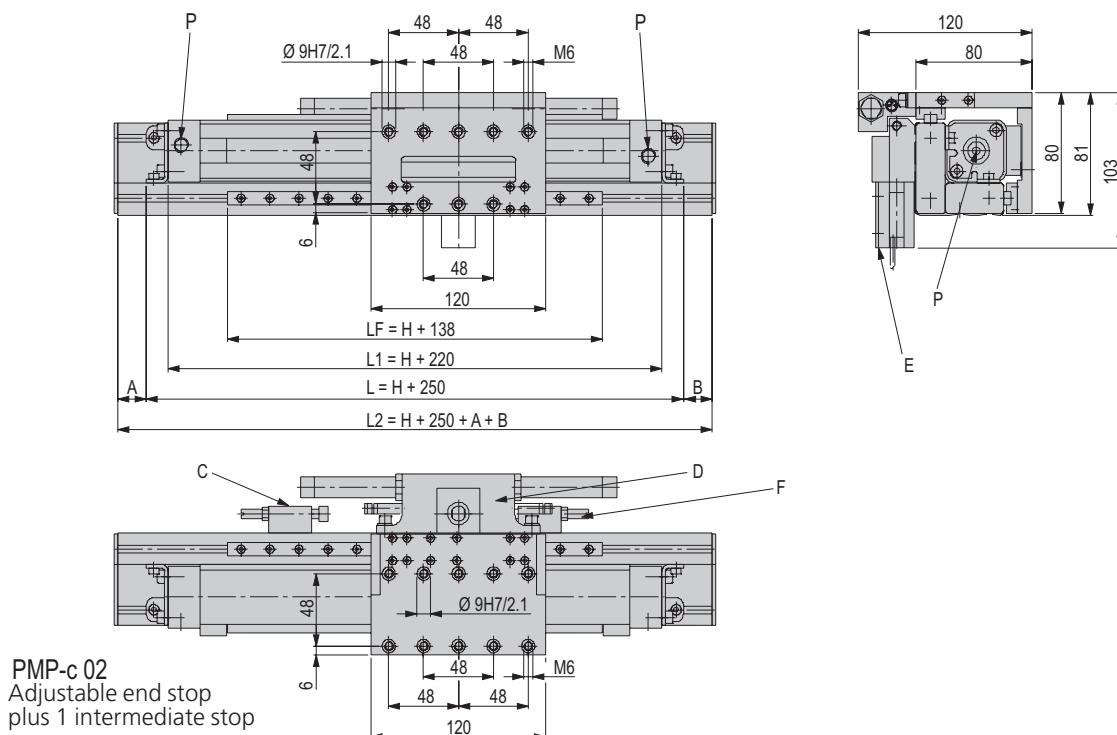
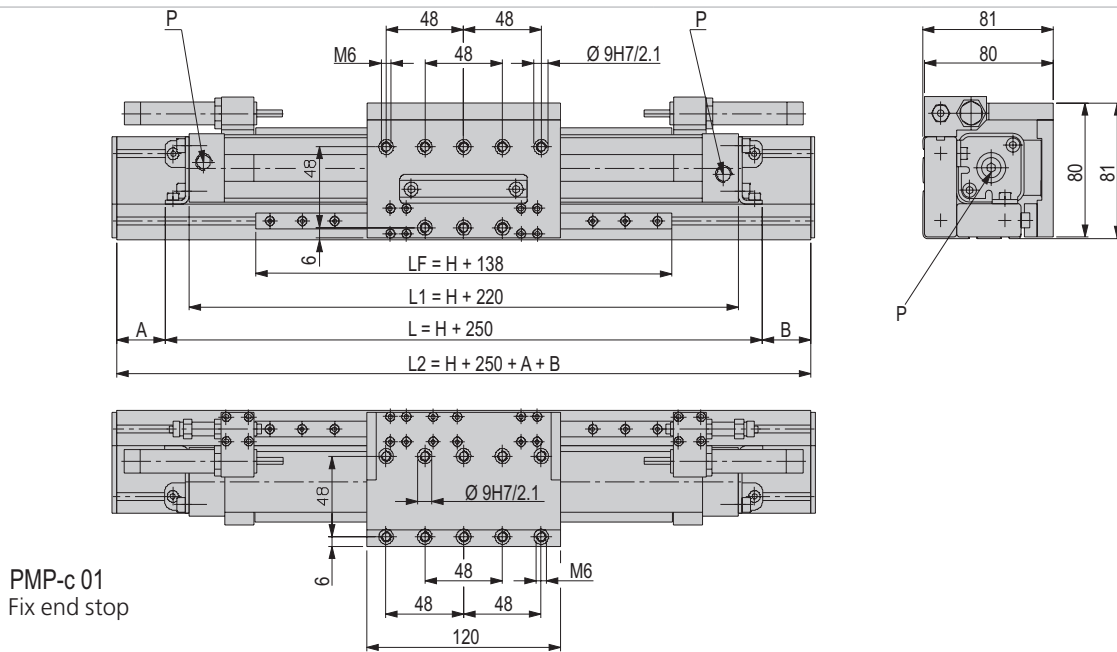


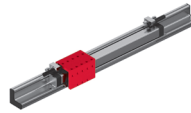
- Millimetre-accurate strokes
- Rigid construction
- Self-supporting profile
- Intermediate stop for any number of positions

Dimensions and dimension drawings

PMP-c

| Type | PMP-c 01 | PMP-c 02 |
|------|-----------------------|---------------------------------------|
| A | Mounting protrusion 1 | Mounting protrusion 1 |
| B | Mounting protrusion 2 | Mounting protrusion 2 |
| C | | End stop |
| D | | Stop slide |
| E | | Intermediate stop |
| F | | Proximity switch $\varnothing 6.5$ mm |
| P | G1/8 " | G1/8 " |





| PMP-c | |
|-----------------------|------------|
| Attachment grid | 48 x 48 mm |
| Attachment thread | M6 |
| Operating pressure | 6 +/-2 bar |
| Air connection P | G 1/8 " |
| Cylinder Ø | 25 mm |
| Operating temperature | 0 - 50 °C |
| Storage temperature | 0 - 50 °C |
| Humidity | < 90 % |

| Type | PMP-c 01 | PMP-c 02 |
|-------------------------------|-----------------|-----------------|
| Order number | 11015620 | 11015621 |
| Max. stroke | 2000 mm | 2000 mm |
| Net weight | 2.2 kg | 2.6 kg |
| Moving weight | 0.55 kg | 0.89 kg |
| Weight/100 mm stroke | 0.54 kg | 0.54 kg |
| Module weight, 0 mm stroke | 2.22 kg | 2.64 kg |
| Max. payload | *5 kg | *5 kg |
| Air consumption/100 mm stroke | 0.25 NL | 0.25 NL |
| Piston force | 250 N | 250 N |
| Repeat accuracy | +/- 0.1 mm | +/- 0.1 mm |
| Max. profile length | 3000 mm | 3000 mm |
| Mounting position | ↔ | ↔ |

The technical data refer to a nominal pressure of 6 bar under Afag standard test conditions.

Note: Also included in the PMP-c 02 scope of delivery:

- 1 x stop slide PMP-c
- 2 x end stops PMP-c
- 1 x intermediate stop PMP-c

*Observe operation time diagram

**0 mm stroke

Included in the delivery

(Catalogue HT accessories)

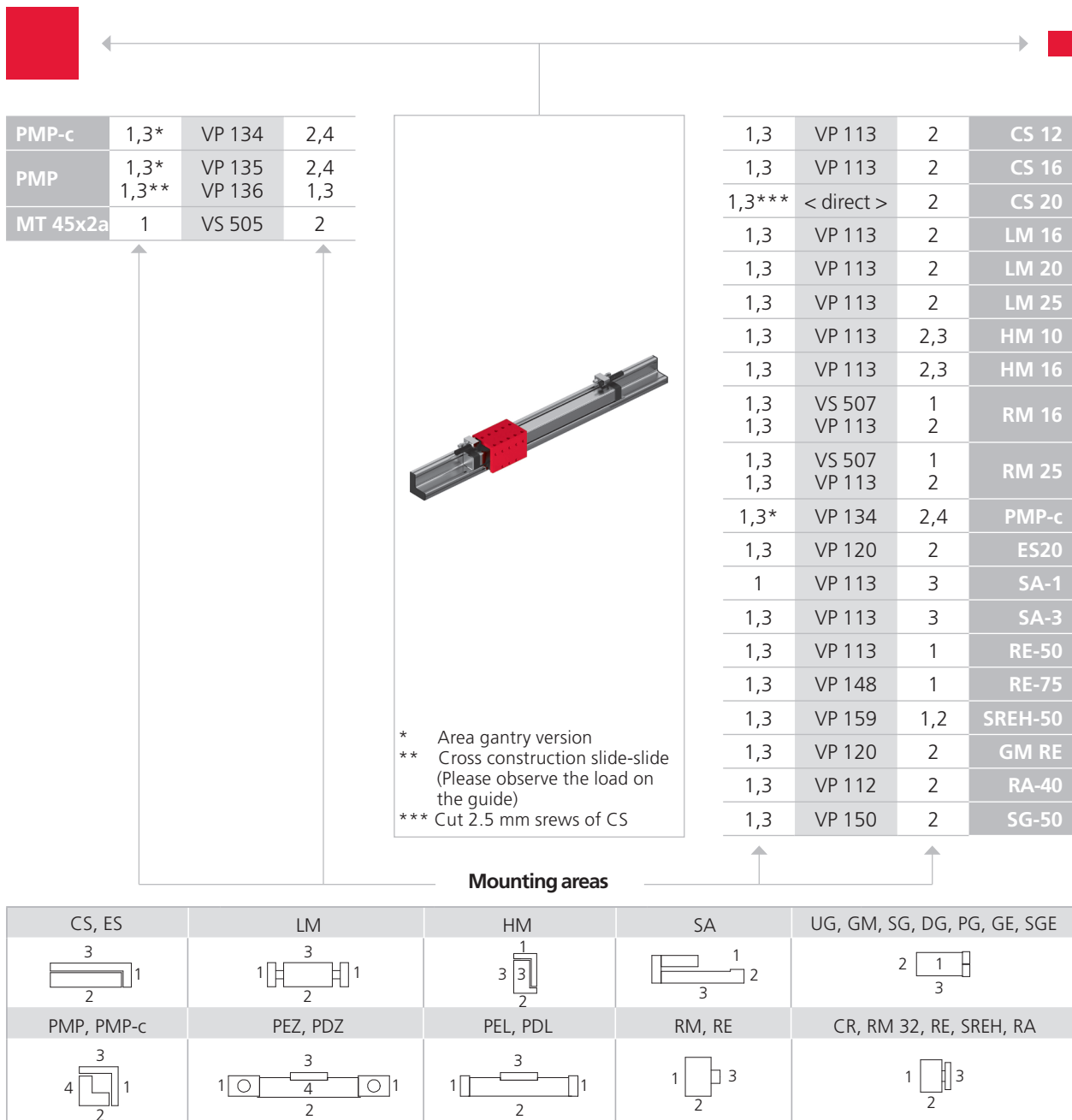
- 2x Stop screw AS 08/40
- 2x Shock absorber SD M14x1 -1

Accessories

- Stop slide PMP-c [p. 156]
- Safety brake PMP-c [p. 157]
- Intermediate stop PMP-c [p. 156]
- Fine adjustment PMP-c [p. 156]
- End stop PMP-c [p. 158]
- Drag-chain PMP-c [p. 157]
- Cover cap 40 x 20 [p. 157]
- Cover cap 60 x 20 [p. 157]
- Angle profile PMP-c [p. 158]

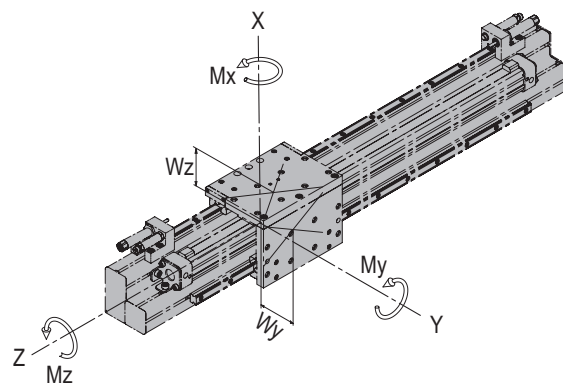
(Catalogue HT accessories)

- INI d6.5x44-Sn1.5-PNP-NO-M8x1
- T-nut M4



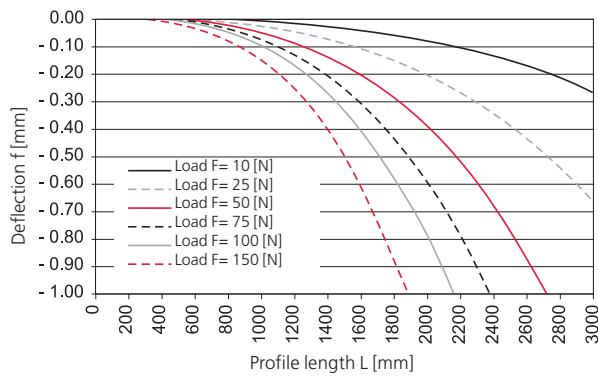
Note that there might be different mounting positions from one module to another one.
 The required connection elements and the range of support columns are depicted in the catalogue HT accessories.

| Type | PMP-c 01 | PMP-c 02 |
|------------------------|----------|----------|
| Max. static torque Mx | 158 Nm | 158 Nm |
| Max. static torque My | 158 Nm | 158 Nm |
| Max. static torque Mz | 199 Nm | 199 Nm |
| Max. dynamic torque Mx | 5.2 Nm | 5.2 Nm |
| Max. dynamic torque My | 5.2 Nm | 5.2 Nm |
| Max. dynamic torque Mz | 6.5 Nm | 6.5 Nm |
| Effective distance Wy | 26 mm | 26 mm |
| Effective distance Wz | 26 mm | 26 mm |

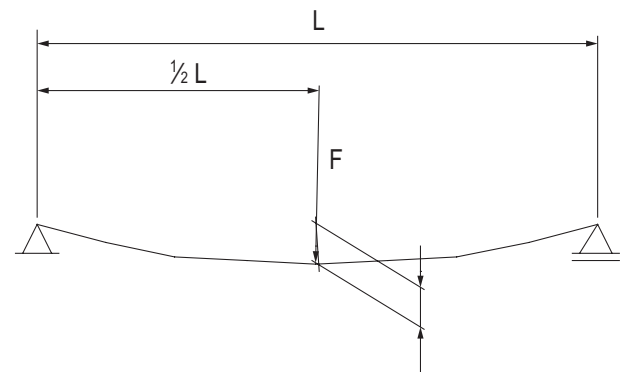


PMP-c diagrams

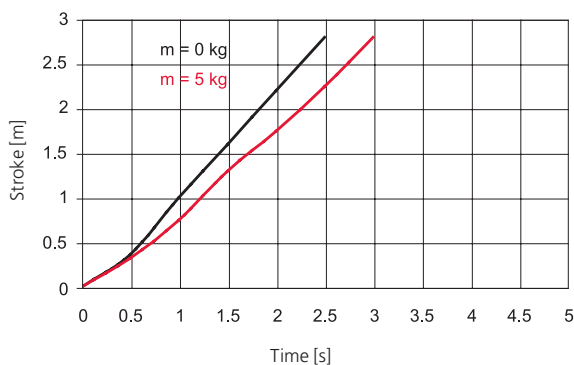
Angle profile deflection, load case static

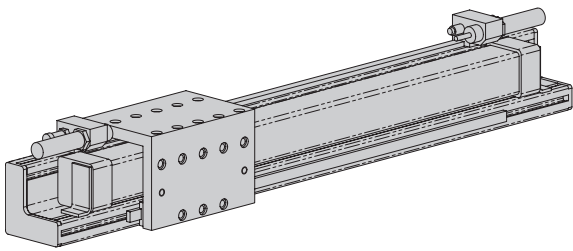


Angle profile deflection, load case static



Angle profile deflection, load case static





PMP-c 01

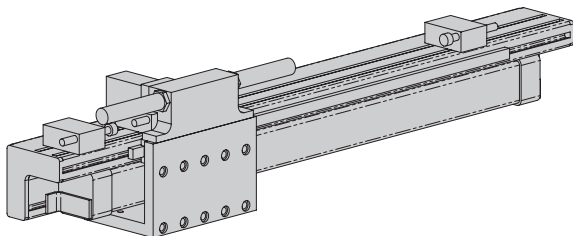
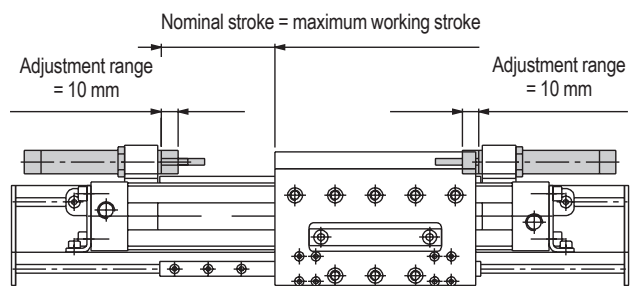
Version with pneumatic cylinder and two fixed limit stops.

Determination of the stroke for PMP-c 01

The maximum work area is determined with the nominal stroke data.

We recommend a stroke reserve for the determination of the nominal stroke.

The adjustment range of the stop screws is up to 10 mm per stop side.



PMP-c 02

Version with pneumatic cylinder and adjustable intermediate and end stops.

Determination of the stroke for PMP-c 02

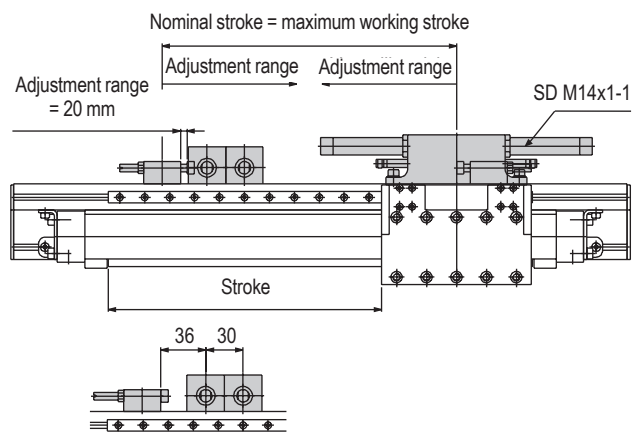
With the information of nominal stroke, you determine the maximum field of action. We recommend adding some extra stroke depending on the application.

Due to the slideable end stops the work area can be limited.

Please note that a minimal grid of 30 mm is given when using more than one intermediate stop.

Please contact out technicians for tasks that require a smaller grid.

If pneumatic cylinders are measured by the means of magnetic switches a minimum gap of 40 mm is necessary.



| | | | | | |
|------------|---------------|----------|--------|-------------|-------------|
| Order form | PMP-c Version | XXXXXXXX | XXXX | XXXX | XXXX |
| | | | Stroke | Dimension A | Dimension B |

Ordering example 1

| | | | | |
|----------|----------|---------|--------|--------|
| PMP-c 01 | 11015620 | 1500 mm | 500 mm | 800 mm |
|----------|----------|---------|--------|--------|

Ordering example 2

| | | | | |
|----------|----------|---------|--------|--------|
| PMP-c 02 | 11015621 | 2000 mm | 100 mm | 100 mm |
|----------|----------|---------|--------|--------|

Ordering process

- Select the desired PMP-c version, the stroke length, dimension A and dimension B.
- Enter the corresponding red order number in the order form in the place of the cross.
- Enter the corresponding lengths in mm for the stroke as well as dimensions A and B (also in mm) in the order form in the place of the cross.

Accessories PMP & PMP-c

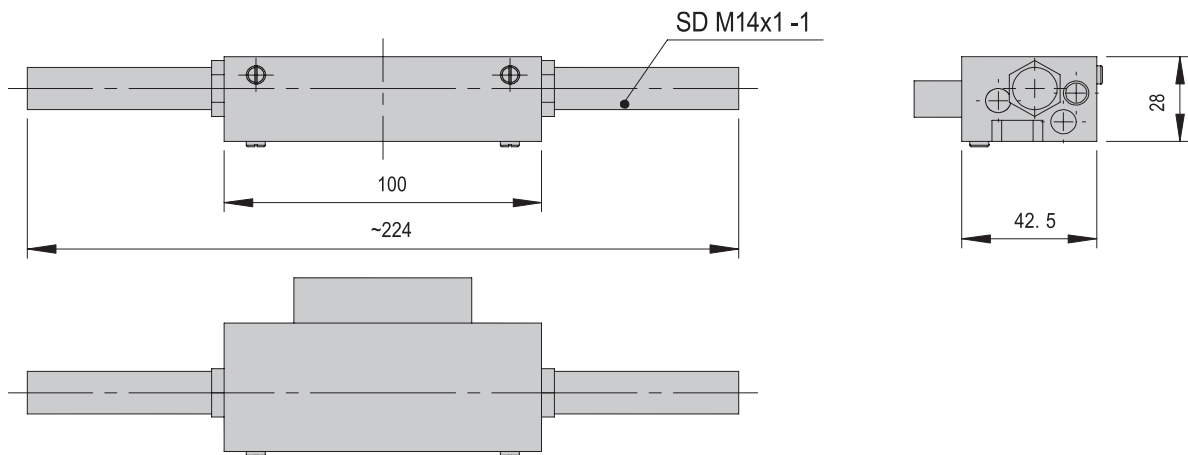
Stop slide PMP

Order number

11000110

Net weight

0.5 kg



Included in the delivery

(Catalogue HT accessories)

- 2x Shock absorber SD M14x1 -1

Accessories

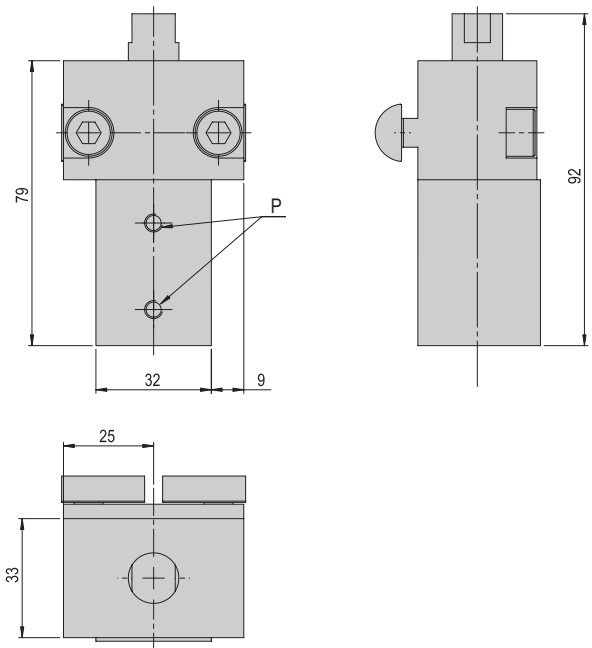
(Catalogue HT accessories)

- INI d6.5x35-Sn1.5-PNP-NO-M8x1
- INI d6.5x44-Sn1.5-PNP-NO-M8x1

Accessories PMP & PMP-c

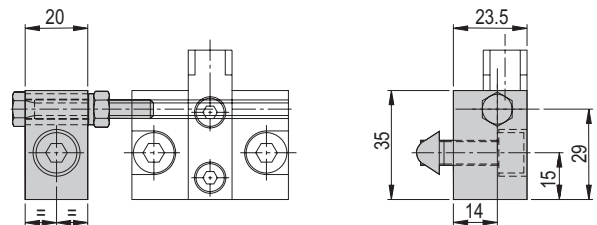
Intermediate stop PMP

| | |
|---------------------|-----------------|
| Order number | 11000111 |
| Net weight | 0.351 kg |
| P | M5 |



Fine adjustment PMP

| | |
|---------------------|-----------------|
| Order number | 11004973 |
| Net weight | 0.302 kg |



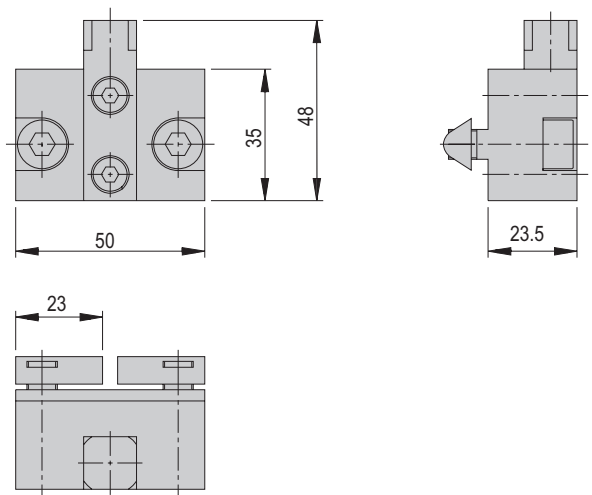
Accessories

(Catalogue HT accessories)

- INI 10.5x5.8x30-Em-PNP-NO-M8x1

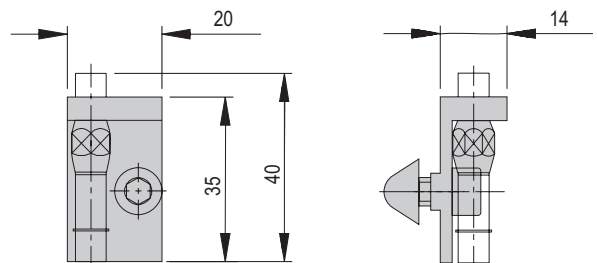
End stop PMP

| | |
|---------------------|-----------------|
| Order number | 11000112 |
| Net weight | 0.203 kg |



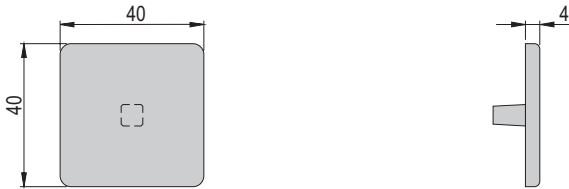
Proximity switch holder PMP

| | |
|---------------------|-----------------|
| Order number | 11004972 |
| Net weight | 0.036 kg |

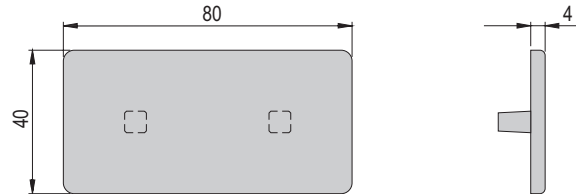


Accessories PMP & PMP-c

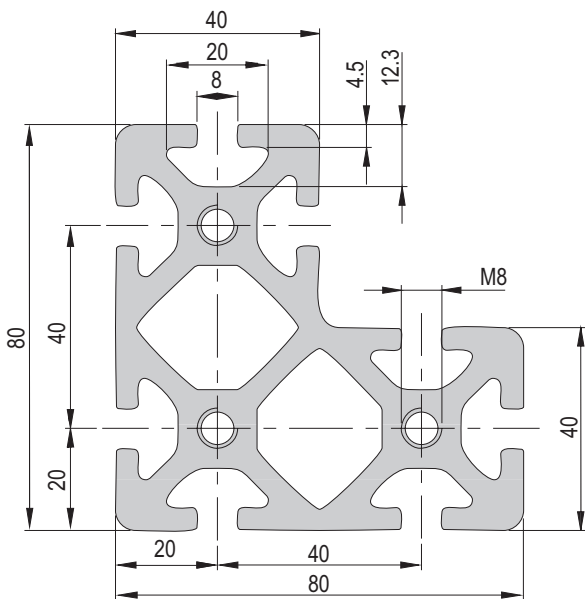
| | |
|--------------------------|-----------------|
| Cover cap 40 x 40 | 40 x 40 |
| Order number | 11002454 |
| Net weight | 0.007 kg |



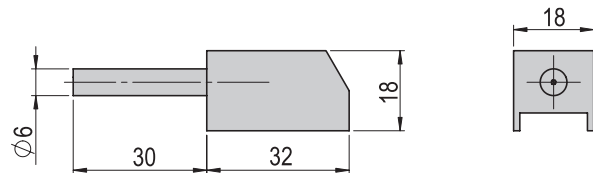
| | |
|--------------------------|-----------------|
| Cover cap 40 x 80 | 40 x 80 |
| Order number | 11002455 |
| Net weight | 0.006 kg |



| | |
|---------------------------|-----------------|
| Angle profile PMP | |
| Order number | 11001162 |
| Net weight | 0.646 kg |
| Weight/100 mm stroke | 6.5 kg |
| Max. profile length | *6000 mm |
| Straightness and twisting | < 0.5/1000 mm |



| | |
|-------------------------------|-----------------|
| Lubricator adapter PMP | |
| Order number | 11016038 |
| Net weight | 0.028 kg |

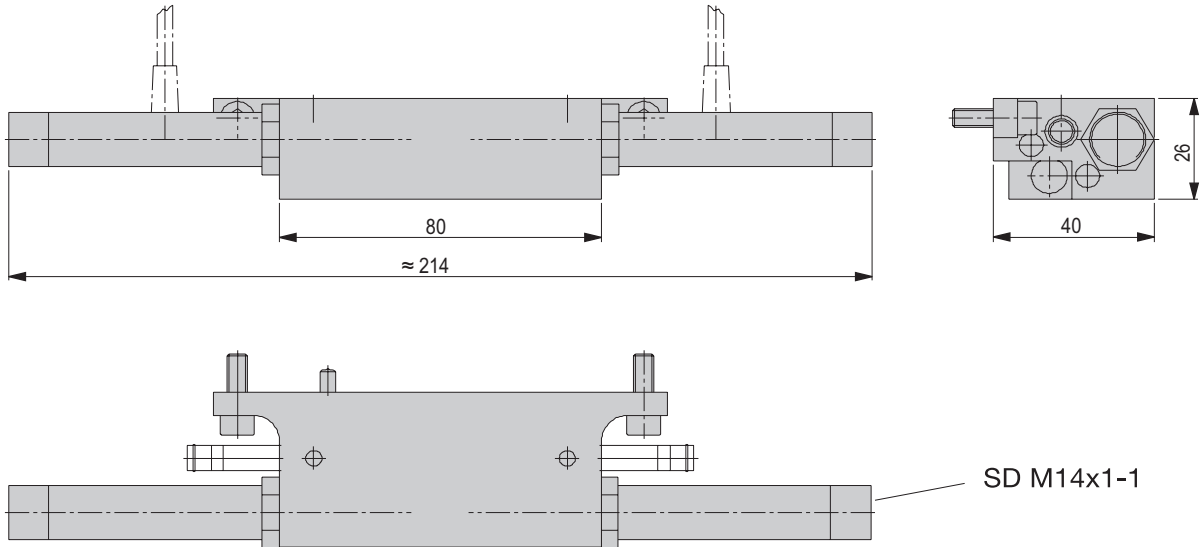


*When ordering, note the desired length after the order number. Example: 11001162/300 mm

Accessories PMP & PMP-c

Fence carriage PMP-c

| | |
|---------------------|-----------------|
| Order number | 11014642 |
| Net weight | 0.376 kg |

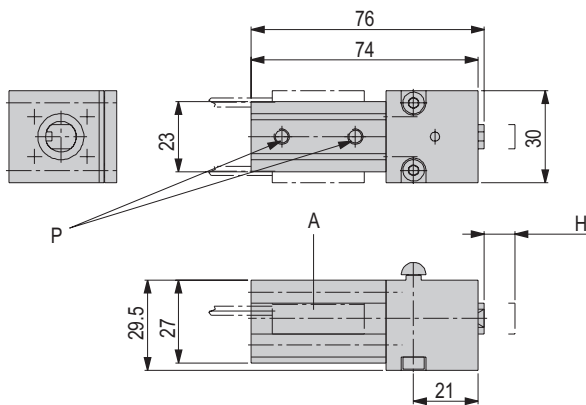


Included in the delivery
(Catalogue HT accessories)
 ■ 2x Shock absorber SD M14x1 -1

Accessories
(Catalogue HT accessories)
 ■ INI d6.5x44-Sn1.5-PNP-NO-M8x1
 ■ INI d6.5x35-Sn1.5-PNP-NO-M8x1

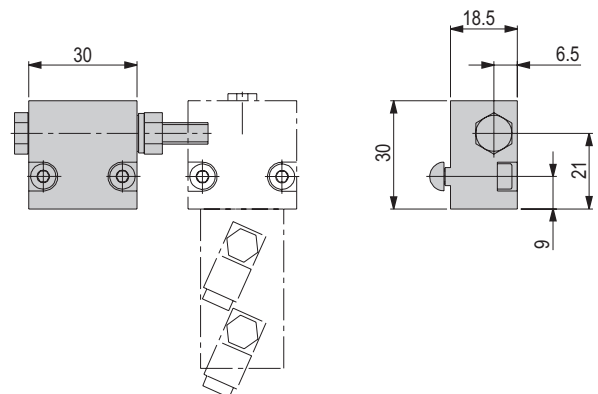
Intermediary stop PMP-c

| | |
|---------------------|---------------------------|
| Order number | 11014641 |
| Net weight | 0.167 kg |
| A | Magnetic proximity switch |
| H | 10 mm |
| P | M5 |



Fine adjustment PMP-c

| | |
|---------------------|-----------------|
| Order number | 11015746 |
| Net weight | 0.237 kg |

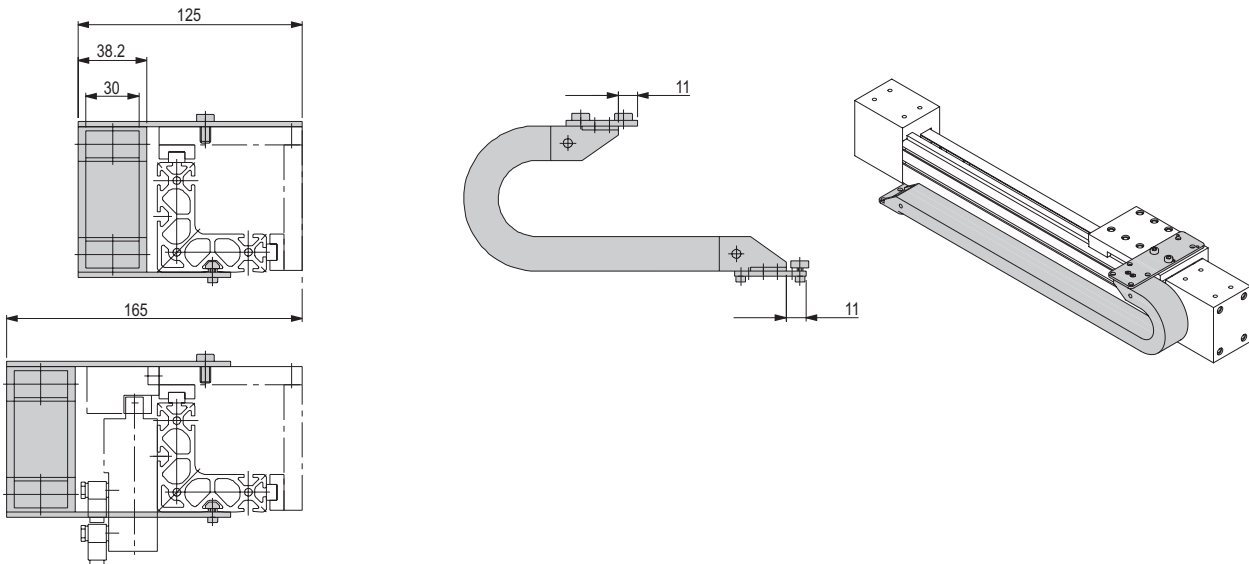


Accessories PMP & PMP-c

Drag-chain PMP-c

Order number **11014738**

Net weight **0.8 kg**

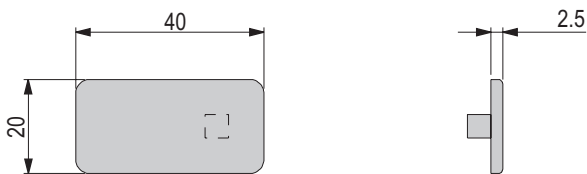


Note: Chain length = axis stroke: 2 + 210 mm

Cover cap 40 x 20 **40x20**

Order number **11014897**

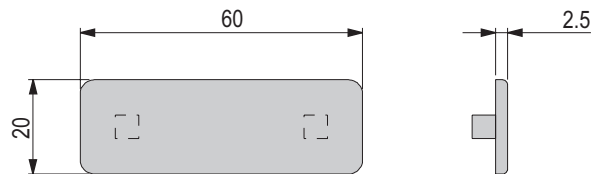
Net weight **0.002 kg**



Cover cap 60 x 20 **60x20**

Order number **11014898**

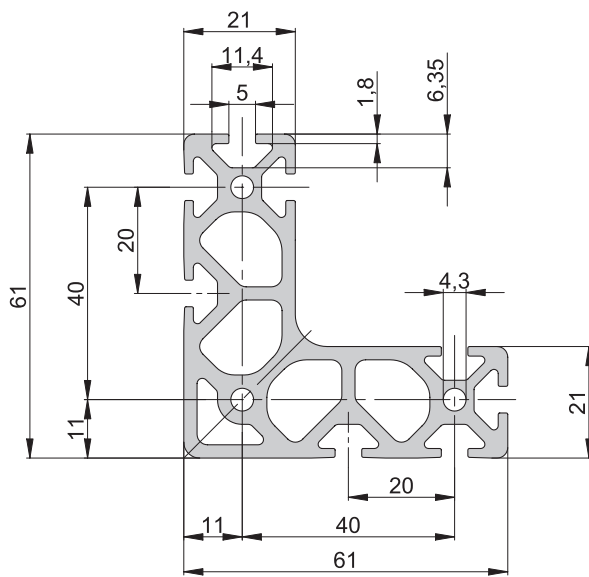
Net weight **0.003 kg**



Accessories PMP & PMP-c

Angle profile PMP-c

| | |
|---------------------------|-----------------|
| Order number | 11015615 |
| Net weight | 0.254 kg |
| Weight/100 mm stroke | 2.544 kg |
| Max. profile length | *3000 mm |
| Straightness and twisting | < 0.5/1000 mm |



*When ordering, note the desired length after the order number. Example: 11015615/300 mm

End stop PMP-c

| | |
|---------------------|-----------------|
| Order number | 11014639 |
| Net weight | 0.082 kg |

