

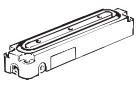
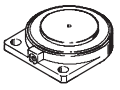
Clamping modules EV



Clamping modules EV

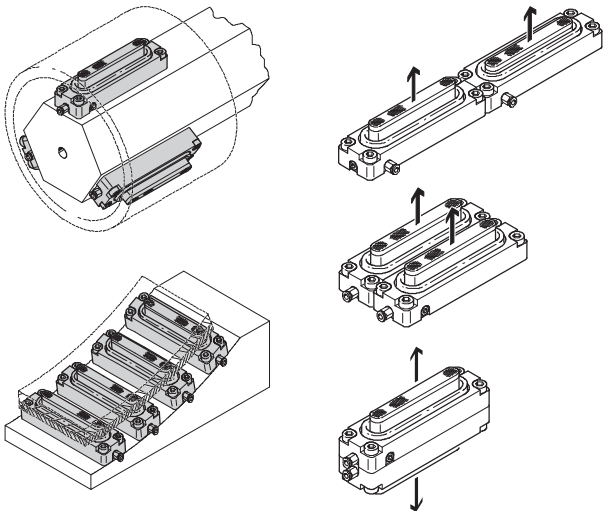
Product range overview

FESTO

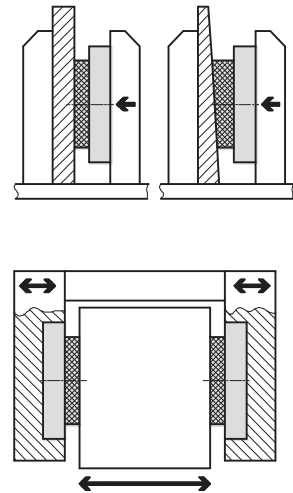
| Function | Version | Type | Clamping area [mm] | Stroke [mm] |
|---------------|---|------|--------------------|-------------|
| Single-acting | Clamping module, block shaped | | | |
| |  | EV | 10x30 | 3 |
| | | | 15x40 | 4 |
| | | | 15x63 | 4 |
| | | | 20x75 | 5 |
| | | | 20x120 | 5 |
| | | | 20x180 | 5 |
| | Clamping module, round | | | |
| |  | EV | ∅ 12 | 3 |
| | | | ∅ 16 | 4 |
| | | | ∅ 20 | 4 |
| | | | ∅ 25 | 4 |
| | | | ∅ 32 | 5 |
| | | | ∅ 40 | 5 |
| ∅ 50 | | | 5 | |
| ∅ 63 | | | 5 | |

Examples of applications and installations

Clamping module, block shaped

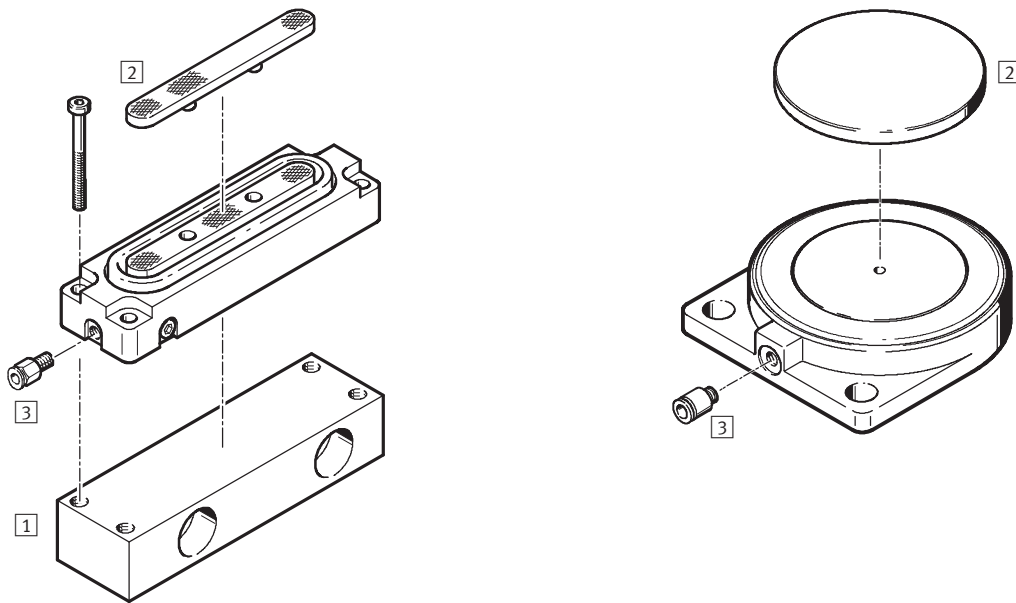


Clamping module, round



Clamping modules EV

Peripherals overview and type code



| Mounting attachments and accessories | | | | | |
|--------------------------------------|--------------------------|---|------------------------|-----------------|------------|
| | Brief description | Clamping module, block shaped | Clamping module, round | → Page/Internet | |
| 1 | Foot mounting HBEV | For horizontal clamping direction | ■ | - | 8 |
| 2 | Pressure plate EV-...-DP | Protects the diaphragm against external damage | ■ | ■ | 8 |
| 3 | Push-in fitting QS | For connecting compressed air tubing with standard O.D. | ■ | ■ | quick star |

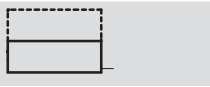
| | | | | | |
|---------------------------|-----------------|---|-------|---|---|
| | EV | - | 20/75 | - | 5 |
| Type | | | | | |
| Single-acting | | | | | |
| EV | Clamping module | | | | |
| Clamping area [mm] | | | | | |
| Stroke [mm] | | | | | |




Clamping modules EV

Technical data

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Function



-  - Diameter
Clamping module, block shaped:
approx. \varnothing 20 ... 68 mm
Clamping module, round:
 \varnothing 12 ... 63 mm
-  - Stroke length
3 ... 5 mm
-  - www.festo.com



| General technical data – Clamping module, block shaped | | | | | | |
|--|--|-------|-------|-------|--------|--------|
| Clamping area | 10x30 | 15x40 | 15x63 | 20x75 | 20x120 | 20x180 |
| Equivalent piston \varnothing | 20 | 28 | 35 | 44 | 55 | 68 |
| Pneumatic connection | M3 | M5 | | | | |
| Operating medium | Compressed air, filtered, lubricated or unlubricated | | | | | |
| Constructional design | Diaphragm | | | | | |
| Cushioning | No | | | | | |
| Position sensing | No | | | | | |
| Type of mounting | Via through holes With accessories | | | | | |
| Mounting position | Any | | | | | |

| General technical data – Clamping module, round | | | | | | | | |
|---|--|----|----|----|----|----|----|----|
| Clamping area \varnothing | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Pneumatic connection | M3 | | | | | | | |
| Operating medium | Compressed air, filtered, lubricated or unlubricated | | | | | | | |
| Constructional design | Diaphragm | | | | | | | |
| Cushioning | No | | | | | | | |
| Position sensing | No | | | | | | | |
| Type of mounting | Via through holes | | | | | | | |
| Mounting position | Any | | | | | | | |

| Operating conditions – Clamping module, block shaped | | | | | | |
|--|-------------|-------|---------|-------|--------|--------|
| Clamping area | 10x30 | 15x40 | 15x63 | 20x75 | 20x120 | 20x180 |
| Operating pressure [bar] | ≤ 6 | | 2 ... 6 | | | |
| Ambient temperature [°C] | -20 ... +40 | | | | | |

| Operating conditions – Clamping module, round | | | | | | | | |
|---|-------------|----|----|----|----|----|----|----|
| Clamping area \varnothing | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Operating pressure [bar] | ≤ 6 | | | | | | | |
| Ambient temperature [°C] | -10 ... +40 | | | | | | | |


Clamping modules EV

Technical data

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| Forces [N] – Clamping module, block shaped | | | | | | |
|--|-------|-------|-------|-------|--------|--------|
| Clamping area | 10x30 | 15x40 | 15x63 | 20x75 | 20x120 | 20x180 |
| Clamping force at 6 bar, stroke 1 mm | 95 | 195 | 350 | 660 | 1 100 | 1 690 |
| Clamping force at 6 bar, maximum stroke | 80 | 165 | 290 | 600 | 1 000 | 1 480 |

| Forces [N] – Clamping module, round | | | | | | | | |
|---|----|-----|-----|-----|-----|-----|-------|-------|
| Clamping area \varnothing | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Clamping force at 6 bar, stroke 1 mm | 55 | 102 | 162 | 226 | 376 | 680 | 1 090 | 1 660 |
| Clamping force at 6 bar, maximum stroke | 56 | 125 | 187 | 271 | 456 | 675 | 1 075 | 1 640 |

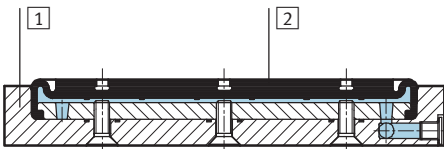
-  - Note
Clamping module must be operated against a stop.

| Weights [g] – Clamping module, block shaped | | | | | | |
|---|-------|-------|-------|-------|--------|--------|
| Clamping area | 10x30 | 15x40 | 15x63 | 20x75 | 20x120 | 20x180 |
| Product weight | 20 | 45 | 65 | 130 | 190 | 270 |

| Weights [g] – Clamping module, round | | | | | | | | |
|--------------------------------------|----|----|----|----|----|----|----|-----|
| Clamping area \varnothing | 12 | 16 | 20 | 25 | 32 | 40 | 50 | 63 |
| Product weight | 11 | 15 | 19 | 24 | 34 | 52 | 68 | 100 |

Materials

Sectional view



| Clamping module | |
|-----------------|--|
| 1 | Housing Die-cast aluminium |
| 2 | Diaphragm Polyurethane |
| - | Note on material Versions free of copper, PTFE and silicone → Ordering data Conforms to RoHS |

Clamping modules EV

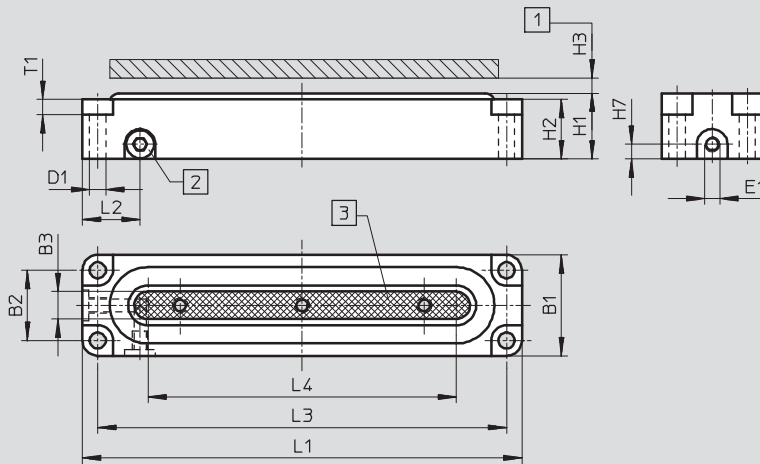
Technical data

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Dimensions

Download CAD data → www.festo.com

Clamping module, block shaped



- 1 Maximum permissible stroke against stop
- 2 Choice of positions for air connection, achieved by re-positioning blanking plug
- 3 Clamping area

| Clamp- ing area [mm] | B1 | B2 | B3 | D1 ∅ | E1 | H1 | H2 | H3 | H7 | L1 | L2 | L3 | L4 | T1 |
|----------------------------|----|------|-----|---------|----|-----------------------|------|----|-----|-----|------|-----|-----|-----|
| 10x30 | 17 | 9 | 3 | 3.3 | M3 | 14.5 ^{+0.3} | 12.5 | 3 | 3 | 45 | 13.5 | 37 | 16 | 4.6 |
| 15x40 | 23 | 15.5 | 4.9 | 4.3 | M5 | 18 ^{±0.54} | 16 | 4 | 4.8 | 55 | 13 | 47 | 25 | 3 |
| 15x63 | | | | | | | | | | 80 | 13 | 72 | 50 | 3 |
| 20x75 | 33 | 23 | 9.5 | 5.3 | M5 | 21.5 ^{±0.57} | 19.5 | 5 | 4.8 | 98 | 18.9 | 88 | 55 | 5.2 |
| 20x120 | | | | | | | | | | 144 | 18.9 | 134 | 103 | 5.2 |
| 20x180 | | | | | | | | | | 204 | 18.9 | 194 | 161 | 5.2 |

Clamping modules EV

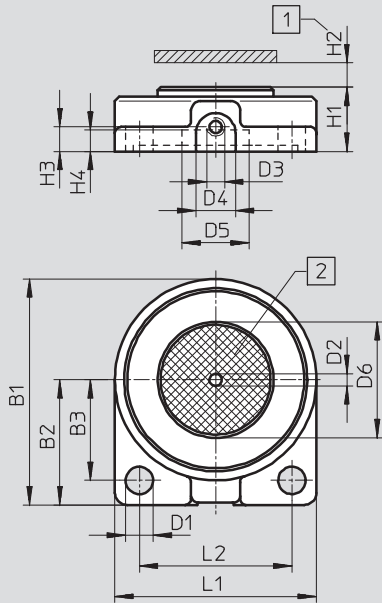
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

Clamping module, round



- 1 Maximum permissible stroke against stop
- 2 Clamping area

| Clamping area ∅ [mm] | B1 | B2 | B3 | D1 ∅ | D2 ∅ | D3 | D4 ∅ | D5 ∅ | H1 | H2 | H3 | H4 | L1 | L2 |
|----------------------------|----|------|------|---------|---------|----|---------|---------|------|----|----|-----|----|----|
| 12 | 29 | 16.5 | 13 | 3.5 | 2 | M3 | 6.5 | 3 | 10.5 | 3 | 4 | 3.5 | 25 | 18 |
| 16 | 33 | 18.5 | 15 | 3.5 | 2 | M3 | 6.5 | 7 | 10.5 | 4 | 4 | 3.5 | 29 | 22 |
| 20 | 37 | 20.5 | 16.5 | 4.5 | 2 | M3 | 6.5 | 11 | 10.5 | 4 | 4 | 3.5 | 33 | 25 |
| 25 | 42 | 23 | 18.5 | 5.5 | 2 | M3 | 6.5 | 16 | 10.5 | 4 | 4 | 3.5 | 38 | 28 |
| 32 | 49 | 26.5 | 21 | 5.5 | 2 | M3 | 6.5 | 23 | 10.5 | 5 | 4 | 3.5 | 45 | 34 |
| 40 | 57 | 30.5 | 25 | 5.5 | 2 | M3 | 6.5 | 31 | 10.5 | 5 | 4 | 2.5 | 53 | 42 |
| 50 | 67 | 35.5 | 29 | 5.5 | 2 | M3 | 6.5 | 41 | 10.5 | 5 | 4 | 2.5 | 63 | 49 |
| 63 | 80 | 42 | 34 | 5.5 | 2 | M3 | 6.5 | 54 | 10.5 | 5 | 4 | 2.5 | 76 | 60 |

Ordering data – Clamping module, block shaped

| Clamping area [mm] | Stroke [mm] | Part No. | Type |
|-----------------------|----------------|----------|-------------|
| 10x30 | 3 | 151 993 | EV-10/30-3 |
| 15x40 | 4 | 13 289 | EV-15/40-4 |
| 15x63 | 4 | 13 290 | EV-15/63-4 |
| 20x75 | 5 | 13 291 | EV-20/75-5 |
| 20x120 | 5 | 13 292 | EV-20/120-5 |
| 20x180 | 5 | 13 293 | EV-20/180-5 |

Ordering data – Clamping module, round

| Clamping area ∅ [mm] | Stroke [mm] | Part No. | Type |
|-------------------------|----------------|----------|-----------------------|
| 12 | 3 | 150 681 | EV-12-3 |
| 16 | 4 | 150 682 | EV-16-4 |
| 20 | 4 | 150 683 | EV-20-4 |
| 25 | 4 | 150 684 | EV-25-4 |
| 32 | 5 | 150 685 | EV-32-5 |
| 40 | 5 | 184 857 | EV-40-5 ¹⁾ |
| 50 | 5 | 184 858 | EV-50-5 ¹⁾ |
| 63 | 5 | 184 859 | EV-63-5 ¹⁾ |

1) Free of copper, PTFE and silicone

Clamping modules EV

Accessories

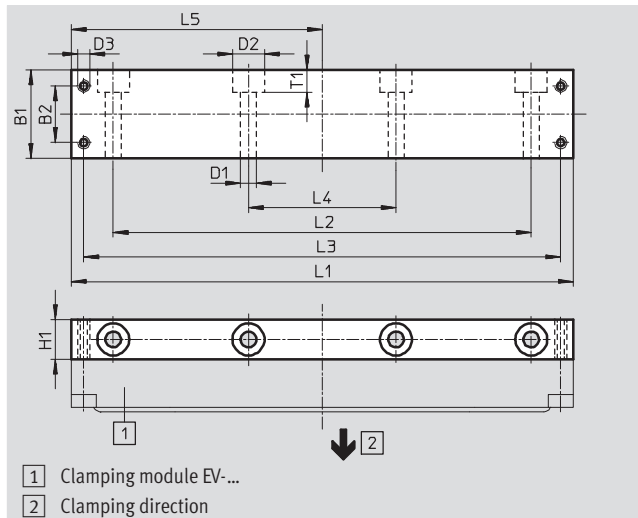
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Foot mounting HBEV

For clamping module, block shaped

Material:

Wrought aluminium alloy



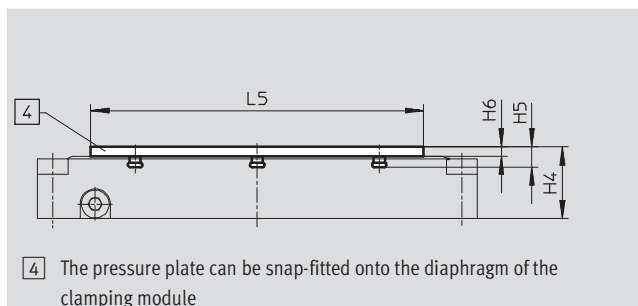
| Dimensions and ordering data | | | | | | | | | | | | | | |
|------------------------------|----|------|---------|---------|----|----|-----|-----|-----|----|------|-----|----------|-------------|
| For clamp- ing area | B1 | B2 | D1 ∅ | D2 ∅ | D3 | H1 | L1 | L2 | L3 | L4 | L5 | T1 | Part No. | Type |
| 10x30 | 20 | 9 | 4.5 | 8 | M3 | 10 | 45 | 23 | 37 | - | 22.5 | 4.6 | 152 512 | HBEV-10/30 |
| 15x40 | 25 | 15.5 | 5.4 | 11 | M4 | 15 | 55 | 29 | 47 | - | 27.5 | 7 | 34 562 | HBEV-15/40 |
| 15x63 | | | | | | | 80 | 50 | 72 | - | 40 | 7 | 34 563 | HBEV-15/63 |
| 20x75 | 36 | 23 | 6.4 | 13 | M5 | 16 | 98 | 64 | 88 | - | 49 | 9 | 34 564 | HBEV-20/75 |
| 20x120 | | | | | | | 144 | 110 | 134 | - | 72 | 9 | 34 565 | HBEV-20/120 |
| 20x180 | | | | | | | 204 | 170 | 194 | 60 | 102 | 9 | 34 566 | HBEV-20/180 |

Pressure plate EV-...-DP

For clamping module, block shaped

Material:

Steel



| Dimensions and ordering data | | | | | | |
|------------------------------|------|-----|-----|-----|-------------------|---------------------|
| For clamp- ing area | H4 | H5 | H6 | L5 | CRC ¹⁾ | Part No. Type |
| 10x30 | 17 | 5 | 2.5 | 19 | 2 | 151 994 EV-10/30-DP |
| 15x40 | 20.5 | 5.6 | 2.5 | 29 | 2 | 13 783 EV-15/40-DP |
| 15x63 | | | | 54 | 2 | 13 784 EV-15/63-DP |
| 20x75 | 24.5 | 6.6 | 3 | 63 | 2 | 13 785 EV-20/75-DP |
| 20x120 | | | | 109 | 2 | 13 786 EV-20/120-DP |
| 20x180 | | | | 169 | 2 | 13 787 EV-20/180-DP |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.

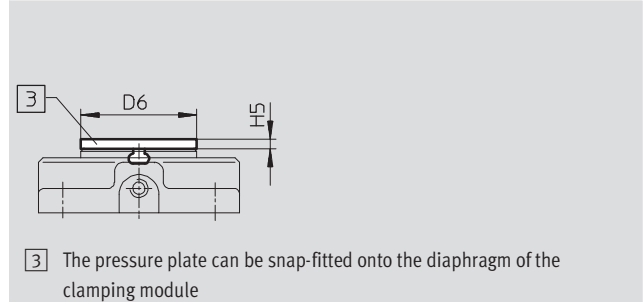
Clamping modules EV

Accessories

FESTO

Pressure plate EV-...-DP
For clamping module, round

Material:
Steel



| Dimensions and ordering data | | | | | |
|------------------------------|----|-----|-------------------|----------|----------|
| For clamping area | D6 | H5 | CRC ¹⁾ | Part No. | Type |
| ∅ | ∅ | | | | |
| 12 | 11 | 1.5 | 2 | 150 690 | EV-12-DP |
| 16 | 15 | 1.5 | 2 | 150 691 | EV-16-DP |
| 20 | 19 | 1.5 | 2 | 150 692 | EV-20-DP |
| 25 | 24 | 1.5 | 2 | 150 693 | EV-25-DP |
| 32 | 31 | 1.5 | 2 | 150 694 | EV-32-DP |
| 40 | 39 | 1.6 | 2 | 184 860 | EV-40-DP |
| 50 | 49 | 1.6 | 2 | 184 861 | EV-50-DP |
| 63 | 62 | 1.6 | 2 | 184 862 | EV-63-DP |

1) Corrosion resistance class 2 according to Festo standard 940 070
Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a surrounding industrial atmosphere or media such as cooling or lubricating agents.