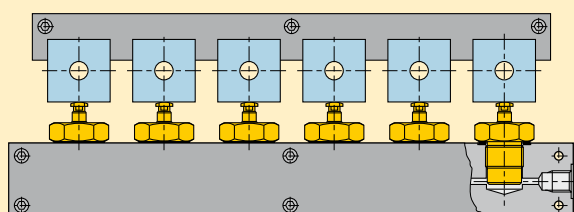


# Manifold cylinders *Application & selection*

Shown: CSM-10132, CSM-572, CSM-18252



These compact, fixture-integrated cylinders are designed for workpiece positioning, holding and ejecting applications where space is at a premium. No exposed tubing.



Six CSM series manifold cylinders are used to clamp piston blocks for machining. The hydraulic flow to the cylinders is side-ported in order to minimize the required manifold thickness.

Threaded cylinders are used here to position engine manifolds for drilling, tapping and mill finish.

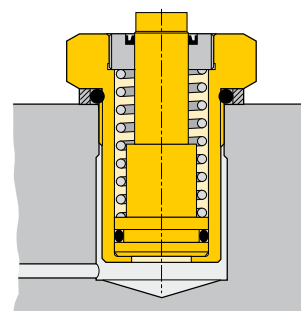


## Compact, fixture-integrated positioning and holding

- Design eliminates the need for fittings and tubing, minimizing space requirements and facilitating easy removal of chips and dirt
- Minimal cylinder height enables extremely compact fixture designs
- High-strength bodies and internal plunger wipers allow maintenance-free, high cycle performance
- Center-tapped plungers will hold workpiece contact buttons.

## Manifold mount

Manifold cylinders are designed to be screwed directly into a manifold or fixture. Enerpac's manifold cylinders include a steel washer and O-ring providing an effective seal between the cylinder and manifold.



## Product selection

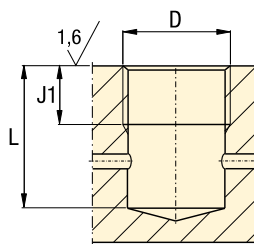
| Cylinder capacity at 350 bar | Stroke | Model number     | Effective area  | Oil capacity    |
|------------------------------|--------|------------------|-----------------|-----------------|
| kN                           | mm     |                  | cm <sup>2</sup> | cm <sup>3</sup> |
| 1,7                          | 7      | <b>CSM-272</b>   | 0,5             | 0,4             |
| 1,7                          | 13     | <b>CSM-2132</b>  | 0,5             | 0,7             |
| 5,3                          | 7      | <b>CSM-572</b>   | 1,6             | 1,1             |
| 5,3                          | 13     | <b>CSM-5132</b>  | 1,6             | 2,0             |
| 11,3                         | 7      | <b>CSM-1072</b>  | 3,3             | 2,3             |
| 11,3                         | 13     | <b>CSM-10132</b> | 3,3             | 4,3             |
| 11,3                         | 19     | <b>CSM-10192</b> | 3,3             | 6,3             |
| 17,2                         | 13     | <b>CSM-18132</b> | 5,1             | 6,6             |
| 17,2                         | 25     | <b>CSM-18252</b> | 5,1             | 12,7            |
| 26,9                         | 15     | <b>CSM-27152</b> | 7,9             | 11,8            |
| 26,9                         | 25     | <b>CSM-27252</b> | 7,9             | 19,7            |

Note: - Seal material: Buna-N, Polyurethane.

**Installation dimensions** in mm [ ]

| Model number     | D<br>Thread | D2<br>min.<br>ø | L<br>min. |
|------------------|-------------|-----------------|-----------|
| <b>CSM-272</b>   | M12 x 1,5   | 11              | 22        |
| <b>CSM-2132</b>  | M12 x 1,5   | 11              | 33        |
| <b>CSM-572</b>   | M20 x 1,5   | 13              | 28        |
| <b>CSM-5132</b>  | M20 x 1,5   | 13              | 37        |
| <b>CSM-1072</b>  | M28 x 1,5   | 16              | 28        |
| <b>CSM-10132</b> | M28 x 1,5   | 16              | 35        |
| <b>CSM-10192</b> | M28 x 1,5   | 16              | 44        |
| <b>CSM-18132</b> | M36 x 1,5   | 19              | 39        |
| <b>CSM-18252</b> | M36 x 1,5   | 19              | 58        |
| <b>CSM-27152</b> | M42 x 1,5   | 19              | 40        |
| <b>CSM-27252</b> | M42 x 1,5   | 19              | 58        |

Note: - O-rings included.

**Installation dimensions**

Force: 1,7 - 26,9 kN

Stroke: 7 - 25 mm

Pressure: 40 - 350 bar

**E** Cilindros para colector**F** Vérins pour bloc foré**D** Einbauszylinder**Accessory chart**

| Plunger<br>Thread<br>K | Contact<br>Bolt<br>86 ▶ |
|------------------------|-------------------------|
| M4 x 0,7               | BS-42                   |
| M6 x 1                 | BS-62                   |
| M8 x 1,25              | BS-82                   |

**Options**

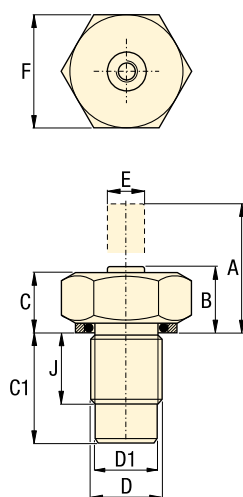
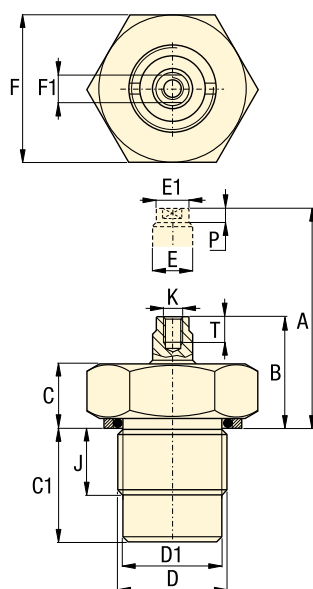
Contact bolts

86 ▶

**Important**

Tighten manifold cylinders according to specifications in the instruction sheet.

Return springs in single-acting cylinders should not be used to pull back heavy attachments.

**CSM-272, 2132****other models****Product dimensions** in mm [ ]

| Model number     | A<br>Ext.<br>height | B<br>Retr.<br>height | C    | C1   | D         | D1   | E    | E1 | F  | F1   | J    | K         | P   | T  | kg  |
|------------------|---------------------|----------------------|------|------|-----------|------|------|----|----|------|------|-----------|-----|----|-----|
| <b>CSM-272</b>   | 20,5                | 13,5                 | 13,3 | 21,7 | M12 x 1,5 | 10,1 | 4,8  | -  | 19 | -    | 11,4 | -         | -   | -  | 0,1 |
| <b>CSM-2132</b>  | 24,4                | 11,4                 | 11,2 | 32,2 | M12 x 1,5 | 10,1 | 4,8  | -  | 19 | -    | 11,4 | -         | -   | -  | 0,1 |
| <b>CSM-572</b>   | 23,5                | 16,5                 | 12,5 | 27,5 | M20 x 1,5 | 17,5 | 7,9  | 7  | 27 | 5,9  | 12,5 | M4 x 0,7  | 4,0 | 7  | 0,2 |
| <b>CSM-5132</b>  | 29,5                | 16,5                 | 12,5 | 36,0 | M20 x 1,5 | 17,5 | 7,9  | 7  | 27 | 5,9  | 12,5 | M4 x 0,7  | 4,0 | 7  | 0,3 |
| <b>CSM-1072</b>  | 27,3                | 20,3                 | 14,8 | 27,1 | M28 x 1,5 | 25,6 | 11,9 | 11 | 36 | 9,0  | 14,1 | M6 x 1    | 5,5 | 8  | 0,5 |
| <b>CSM-10132</b> | 33,3                | 20,3                 | 14,8 | 33,1 | M28 x 1,5 | 25,6 | 11,9 | 11 | 36 | 9,0  | 14,1 | M6 x 1    | 5,5 | 8  | 0,6 |
| <b>CSM-10192</b> | 39,3                | 20,3                 | 14,8 | 48,6 | M28 x 1,5 | 25,6 | 11,9 | 11 | 36 | 9,0  | 14,1 | M6 x 1    | 5,5 | 8  | 0,7 |
| <b>CSM-18132</b> | 36,2                | 23,2                 | 16,8 | 36,6 | M36 x 1,5 | 34,2 | 15,9 | 15 | 46 | 12,0 | 18,1 | M8 x 1,25 | 6,5 | 12 | 0,5 |
| <b>CSM-18252</b> | 48,2                | 23,2                 | 16,8 | 56,1 | M36 x 1,5 | 34,2 | 15,9 | 15 | 46 | 12,0 | 18,1 | M8 x 1,25 | 6,5 | 12 | 0,6 |
| <b>CSM-27152</b> | 42,2                | 27,2                 | 20,8 | 37,5 | M42 x 1,5 | 39,7 | 17,9 | 17 | 55 | 15,0 | 16,9 | M8 x 1,25 | 6,5 | 12 | 0,7 |
| <b>CSM-27252</b> | 52,8                | 27,8                 | 21,3 | 56,0 | M42 x 1,5 | 39,7 | 17,9 | 17 | 55 | 15,0 | 16,9 | M8 x 1,25 | 6,5 | 12 | 0,9 |