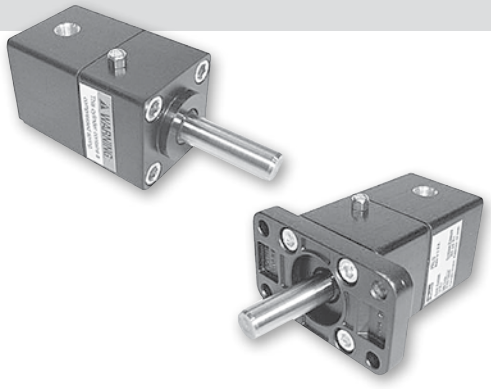
# PRL Series



The PRL Series rod lock is used in applications where the locking of linear travel is required. It is commonly used in workholding applications and for locking tools and fixtures in the event of air pressure or electrical control failure.

## Application

- Clamping: Without an appropriate air signal to the rod lock pressure port, the rod lock clamps to the precision metric rod and prevents rod movement in the axial direction.
- Delatching: When 4 Bar (58 PSIG) of air pressure is applied to the port, the rod lock releases and allows free movement of the rod. This will be required for installation.
- Locking Direction: The rod lock is designed specifically to prevent rod movement in the axial direction only. It is not recommended for locking rotary rod motion.
- Rod Material: The Series PRL rod lock is a precision locking device, therefore strict rod tolerances and rod material specifications are required to ensure safe and proper operation. Minimum requirements for the rod material include a chrome plated surface finish of 10 microinches or less and a surface hardness of 52 Rc. Rod material may be ordered separately in custom lengths. See next page for how to order.
- Environment: The rod lock is recommended for use in dry, clean conditions. Please take precautions to prevent moisture from entering the pressure port or the exhaust port of the locking device.

There should be no relative motion between the rod and the Rod Lock Device when the locking device is activated. The locking device is not intended to brake a movement in repeated sequences.

### Considerations for Rod Sizing

When applying a rod lock device, it is important to consider the loading forces which will be imposed on the rod in the axial direction.

For applications where the rod lock and its associated load impose a compressive force on the rod, please consider the axial compression force and rod length to select the appropriate rod diameter for preventing rod buckling.

In situations where the rod lock and its associated load place the rod in tension, please take care to securely fasten the rod ends to the machine member.

## Operating information

| | |
|---|---|
| Working pressure | Max. 10 bar (145 PSIG) |
| Working temperature | -20° to 80°C (-4°F to 176°F) |
| Locking pressure | 4 bar (58 PSIG) ±10% |
| Filtration requirements | 40 micron, dry filtered air |

## Holding Forces

| Model number | Holding force | |
|---|---|---|
| | Pounds (lbs.) | Newtons (N) |
| **12PRL*** | 123 | 550 |
| **16PRL*** | 193 | 860 |
| **20PRL*** | 481 | 2140 |
| **25PRL*** | 1211 | 5390 |
| **32PRL*** | 1894 | 8425 |

* Character reserved for port style

## Ordering information

**Example: 25PRLU**

| 25 | PRL | U | |
|---|---|---|---|
| **Rod diameter**<br>Specify<br>12, 16, 20, 25 or 32 (mm) | | **Ports**<br>**U** NPTF<br>**R** BSPP | **S** **Specials**<br>Leave blank if no specials |





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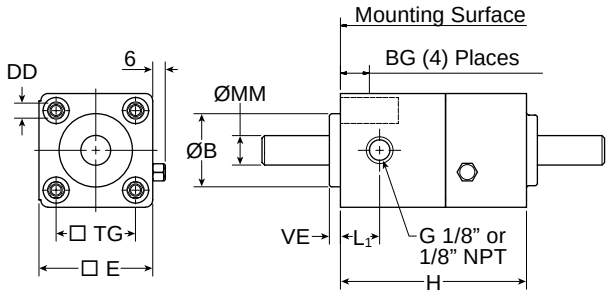
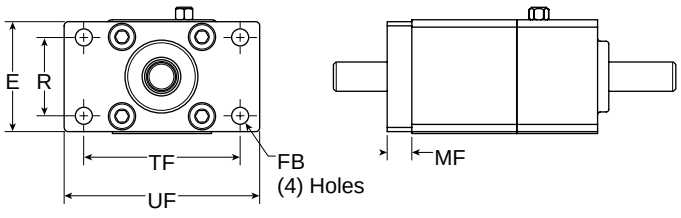
## Basic rod lock




## Rod lock with flange mount






## Table 1 – Mounting dimensions

| Part | Rod dia. MM | B D11 | BG | DD | E | FB | H | L1 | MF | R | TF | TG | UF | VE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **12PRL*** | 12.00 (-.04) | 30 | 16 | M6 | 46.5 | 7 | 76 | 16 | 10 | 32 | 64 | 32.5 | 80 | 4.5 |
| **16PRL*** | 16.00 (-.04) | 35 | 16 | M6 | 51 | 9 | 81.1 | 16 | 10 | 36 | 72 | 38 | 92 | 4.5 |
| **20PRL*** | 20.00 (-.04) | 45 | 16 | M8 | 76 | 9 | 100.8 | 26 | 12 | 50 | 100 | 56.5 | 129 | 5 |
| **25PRL*** | 25.00 (-.04) | 55 | 16 | M10 | 114.5 | 14 | 146 | 50 | 16 | 75 | 150 | 89 | 186 | 4 |
| **32PRL*** | 32.00 (-.04) | 60 | 20 | M12 | 140 | 16 | 165.2 | 60 | 20 | 90 | 180 | 110 | 220 | 6 |

* Character reserved for port style

## Flange mounting kit

Mounting kits are available separately from the rod lock device. Please use the following part numbers to order. Mounting fasteners are included with the kits.

| Model number | Flange mount |
|---|---|
| **12PRL*** | **L075370032** |
| **16PRL*** | **L075370040** |
| **20PRL*** | **L075370063** |
| **25PRL*** | **L075370100** |
| **32PRL*** | **L075370125** |

* Character reserved for port style

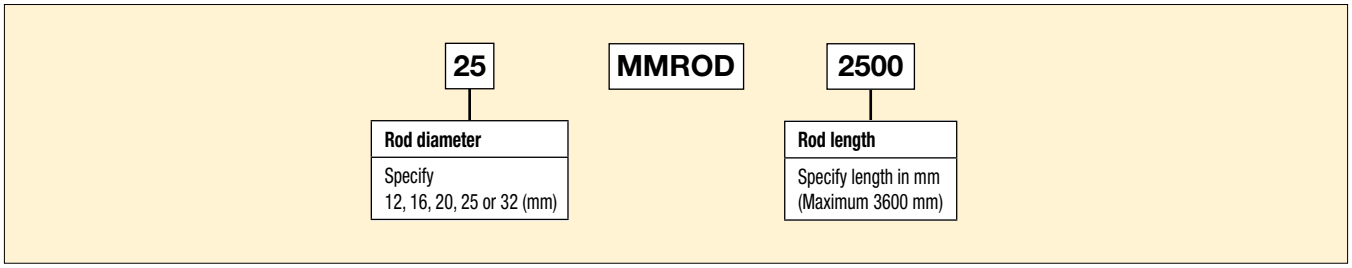
## Metric rod material

Rods will be supplied in the specified length with chamfered ends. Please note, the rod material is case hardened and requires annealing prior to machining. Parker is pleased to quote custom machined rods per customer supplied drawings.

⚠ **Caution:** Using piston rod material which does not meet the tolerance and finished conditions as listed on the previous page may prevent the locking device from properly holding the intended load.

## How to order

**Example: 25MMROD2500**



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