



FEINMETALL

Contact Technologies

PNEUMATIC PRODUCTS

Essential accessories
for module testing.

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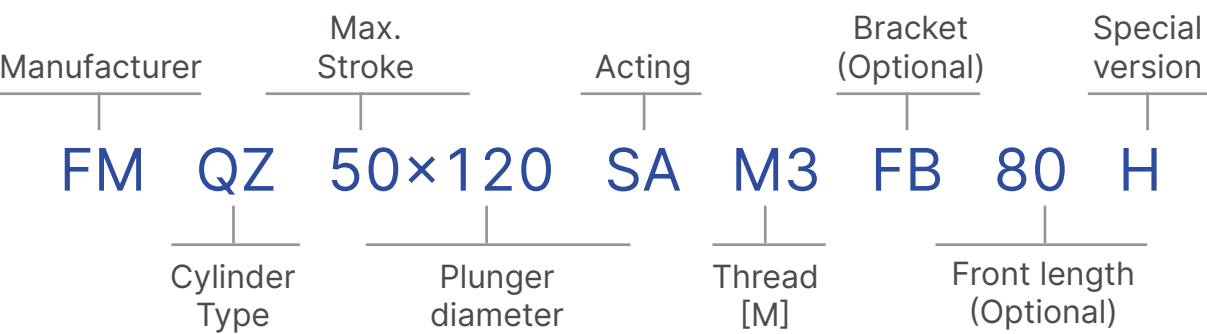
QUAD CYLINDERS

Functional principle

Quad cylinders are components that use compressed air as a medium to perform a movement, which is why they are also referred to as compressed air cylinders. Pneumatic drives are a particularly cost-effective solution for a wide range of applications - even in the most difficult environmental conditions - and are characterized by their particularly simple commissioning. They are robust and, due to the compressibility of air, flexible, which makes them resistant to high external forces.

Example number code

In order to show how our material description is built, the current valid number code system is explained below:



Number code system

- Manufacturer
- FM = FEINMETALL
- Cylinder Type
- QZ = Quad cylinder
- Max.Stroke [mm]
- 50 = 5.0
- Plunger diameter [mm]
- 120 = 12.0
- Acting
- SA = Single acting
- Thread [M]
- Thread M3
- Bracket Optional
- FB = Fixing Bracket
- Front length [mm]
- 80 = 8.0
- Special version
- H = Heel



General specifications

Design	Compact cylinder, single-acting, spring on rod side
Plunger diameter	12.00 [mm]
Actuating	Pneumatic
Control medium	Filtered, oiled, or un-oiled compressed air
Resetting	Mechanical spring
Connection	Fitting for synthetic pipe PA/PU with an inner diameter of 2mm
Temperature (Environ)	-20°...+60° [°C]
Temperature (Medium)	-20°...+60° [°C]
End position damping	None
Mounting type	Via mounting holes (see drawing)
Installation position	Any
Magnetic scanning	None

Materials

Housing and rod cover	technical thermoplastic
Plunger head	Ms 58
Plunger	Stainless steel
Spring	Spring steel
Seals	Perbunan (NBR)

Pneumatic specifications

Pressure range [bar]	2 bis 8
Contact pressure [N]	39 at 6 bar
Return spring force [N] (friction not taken into account)	F1= 12 F2= 24

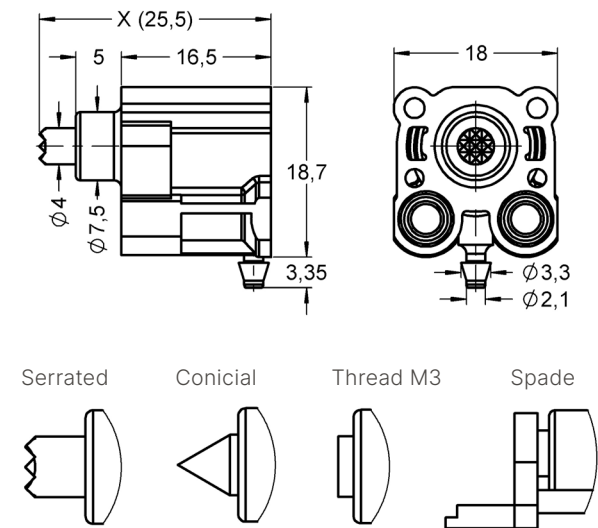
NEW

FMQZ

Quad cylinders | Single acting
Working travel 4.0mm & 5.0mm

Series drawing

All measurements are in mm.



Illustrations are not binding. Subject to design, dimensional, and material changes.

Important note

This cylinder series is not capable of absorbing external masses.

AVAILABLE VARIANTS

The listed variants differ only in the plunger type and stroke length. All other dimensions and specifications remain the same.

Mechanical specifications	
Plunger Typ style	M3 Internal thread
Tip-style diameter [mm]	Ø 4.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	25.5
Order code	Product name
1142401	FMQZ-40x120-SA-M3
1142225	FMQZ-50x120-SA-M3



Mechanical specifications	
Plunger Typ style	Serrated
Tip-style diameter [mm]	Ø 4.0
Stroke [mm]	4.0
Total Length [mm]	21.5; 25.5
Order code	Product name
1170955	FMQZ-40x120-SA-06S
1170958	FMQZ-40x120-SA-06L



Mechanical specifications	
Plunger Typ style	Conical
Tip-style diameter [mm]	Ø 4.0
Stroke [mm]	4.0
Total Length [mm]	21.5; 25.5
Order code	Product name
1170959	FMQZ-40x120-SA-18S
1142402	FMQZ-40x120-SA-18L



AVAILABLE VARIANTS

The listed variants differ only in the plunger type and stroke length. All other dimensions and specifications remain the same.

Mechanical specifications	
Plunger Typ style	Semicircle
Tip-style diameter [mm]	Ø 4.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	21.5; 25.5
Order code	Product name
1142398	FMQZ-40x120-SA-71S
1142400	FMQZ-40x120-SA-71L
1170970	FMQZ-50x120-SA-71S
1142391	FMQZ-50x120-SA-71L



Mechanical specifications	
Plunger Typ style	Fixing Bracket
Dimensions [mm] FB Length x Width	8.0x10.8 with R11
Stroke [mm]	4.0; 5.0
Total Length [mm]	30.5
Order code	Product name
1163678	FMQZ-40x120-SA-M3-86
1170960	FMQZ-50x120-SA-M3-86



Mechanical specifications	
Plunger Typ style	Fixing Bracket
Dimensions [mm] FB Length x Width	3.5x6.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	26.0
Order code	Product name
1170966	FMQZ-40x120-SA-M3-FB35
1170972	FMQZ-50x120-SA-M3-FB35



AVAILABLE VARIANTS

The listed variants differ only in the plunger type and stroke length. All other dimensions and specifications remain the same.

Mechanical specifications	
Plunger Typ style	Fixing Bracket
Dimensions [mm] FB Length x Width	6.0x6.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	28.5
Order code	Product name
1170967	FMQZ-40x120-SA-M3-FB60
1142397	FMQZ-50x120-SA-M3-FB60



Mechanical specifications	
Plunger Typ style	Fixing Bracket stepped
Dimensions [mm] FB Length x Width	6.0x6.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	28.5
Order code	Product name
1170968	FMQZ-40x120-SA-M3-FB60H
1170957	FMQZ-50x120-SA-M3-FB60H



Mechanical specifications	
Plunger Typ style	Fixing Bracket
Dimensions [mm] FB Length x Width	8.0x6.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	30.5
Order code	Product name
1160344	FMQZ-40x120-SA-M3-FB80
1170961	FMQZ-50x120-SA-M3-FB80



AVAILABLE VARIANTS

The listed variants differ only in the plunger type and stroke length. All other dimensions and specifications remain the same.

Mechanical specifications	
Plunger Typ style	Fixing Bracket stepped
Dimensions [mm] FB Length x Width	8.0x6.0
Stroke [mm]	4.0; 5.0
Total Length [mm]	30.5
Order code	Product name
1170969	FMQZ-40x120-SA-M3-FB80H
1170962	FMQZ-50x120-SA-M3-FB80H



Mechanical specifications	
Plunger Typ style	Fixing Bracket
Dimensions [mm] FB Length x Width	10.0x6.0
Stroke [mm]	4.0
Total Length [mm]	32.5
Order code	Product name
1170971	FMQZ-40x120-SA-M3-FB100



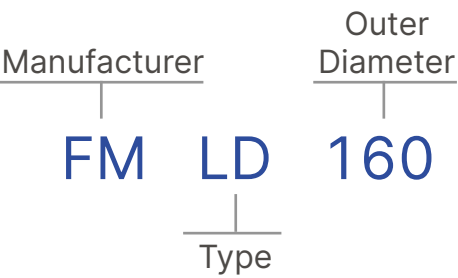
LOCKING DEVICE

Functional principle

A locking device is a device that mechanically fixes a moving part in its position, often in protective devices on machines, to prevent dangerous functions. It is usually based on an electromagnetic actuator in which a locking bolt - a type of latch - is controlled by applying or disconnecting the supply voltage, usually with spring return. There are de-energized unlocked and de-energized locked types.

Example number code

In order to show how our material description is built, the current valid number code system is explained below:



Number code system

- Manufacturer - FM = FEINMETALL
- Type - LD = Locking Device
- Outer diameter - 160 = 16mm



General specifications	
Design	Cylinder with integrated locking lever
Plunger diameter [mm]	12.00
Actuating	Pneumatic
Control medium	Filtered, oiled, or un-oiled compressed air
Resetting	Mechanical spring
Temperature (Environ)	-20°...+60° [°C]
Temperature (Medium)	-20°...+60° [°C]
End position damping	None
Mounting type	Pressed on the outer diameter
Installation position	Any
Magnetic scanning	None

Materials	
Cylinder body and cover	POM
Plunger	POM
locking lever	High-strength hardened steel, POM-GF, brass
Spring	Spring steel
Seals	Perbunan (NBR)

Pneumatic specifications	
Stroke	5.50 [mm]
Pressure range	3 bis 8 bar

Order code	Product name	Outer diameter [mm]	Stroke [mm]	Total Lenth [mm]
1142775	FMLD-160/3	Ø15.8	5.5	59.3

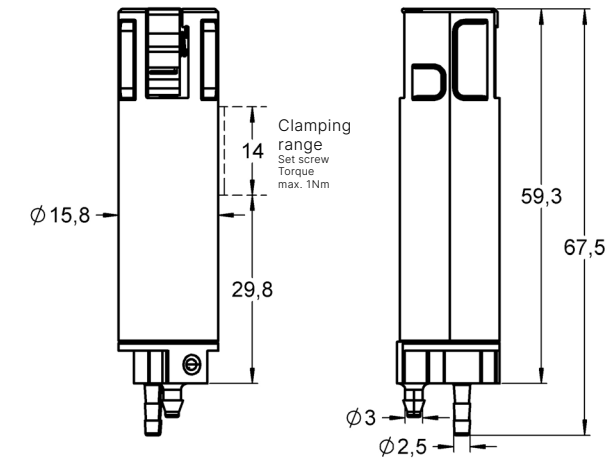
NEW

FMLD-160

Locking device Ø16mm

Series drawing

All measurements are in mm.



Illustrations are not binding. Subject to design, dimensional, and material changes.

Application
The Locking Device is used in adaptation testing technology for wire harnesses. It is used to hold a wide variety of plugs and couplings in position during testing.

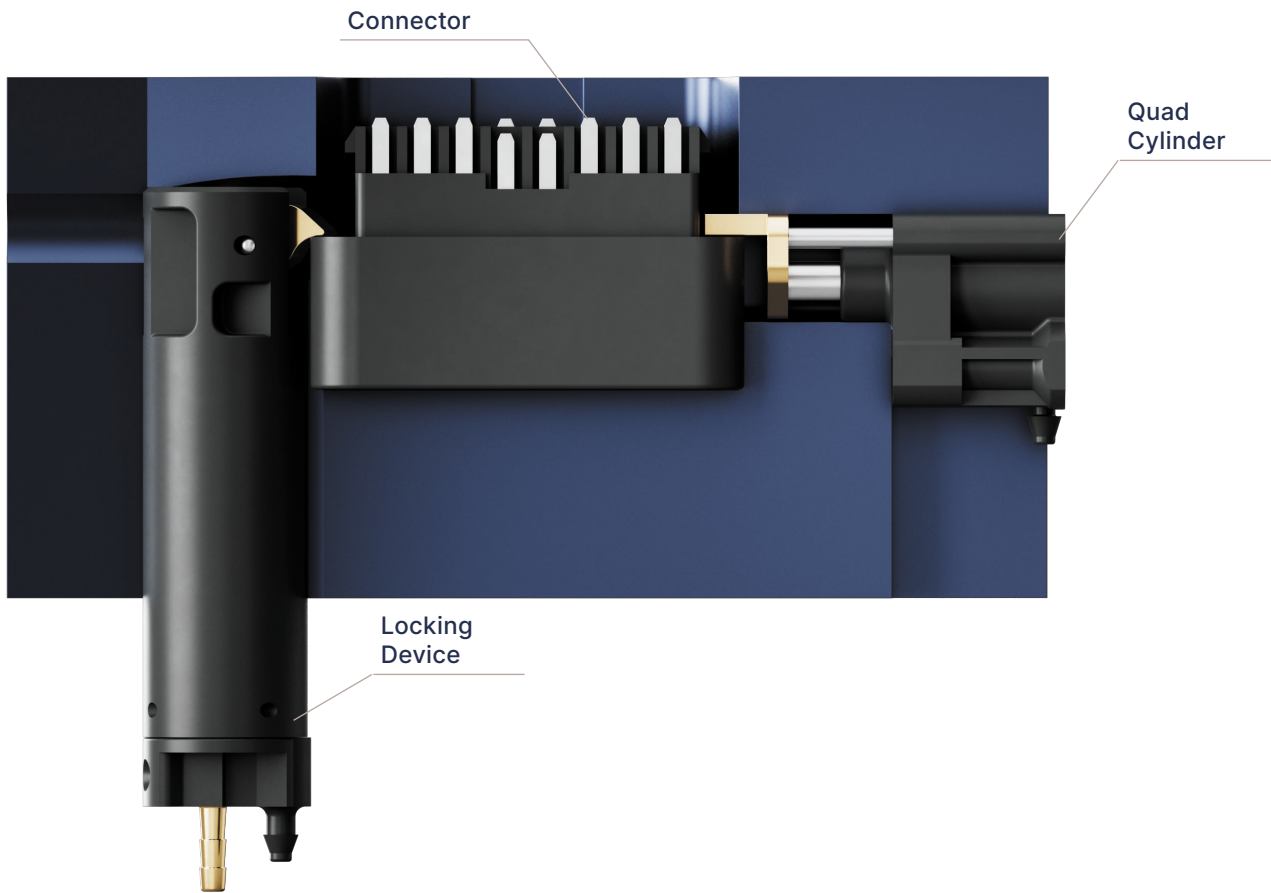
Special feature
The plunger actuates the lever via the off-center plunger rod, which locks or unlocks a component. The size is determined by the installation space (diameter 16). No part may protrude beyond the diameter 16 over the entire length of the cylinder body, as the locking device is inserted into a bore.

APPLICATION PRINCIPLE

Functional principle

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A locking device is a device that mechanically fixes a moving part in its position, often in protective devices on machines, to prevent dangerous functions. It is usually based on an electromagnetic actuator in which a locking bolt - a type of latch - is controlled by applying or disconnecting the supply voltage, usually with spring return. There are de-energized unlocked and de-energized locked types.



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