

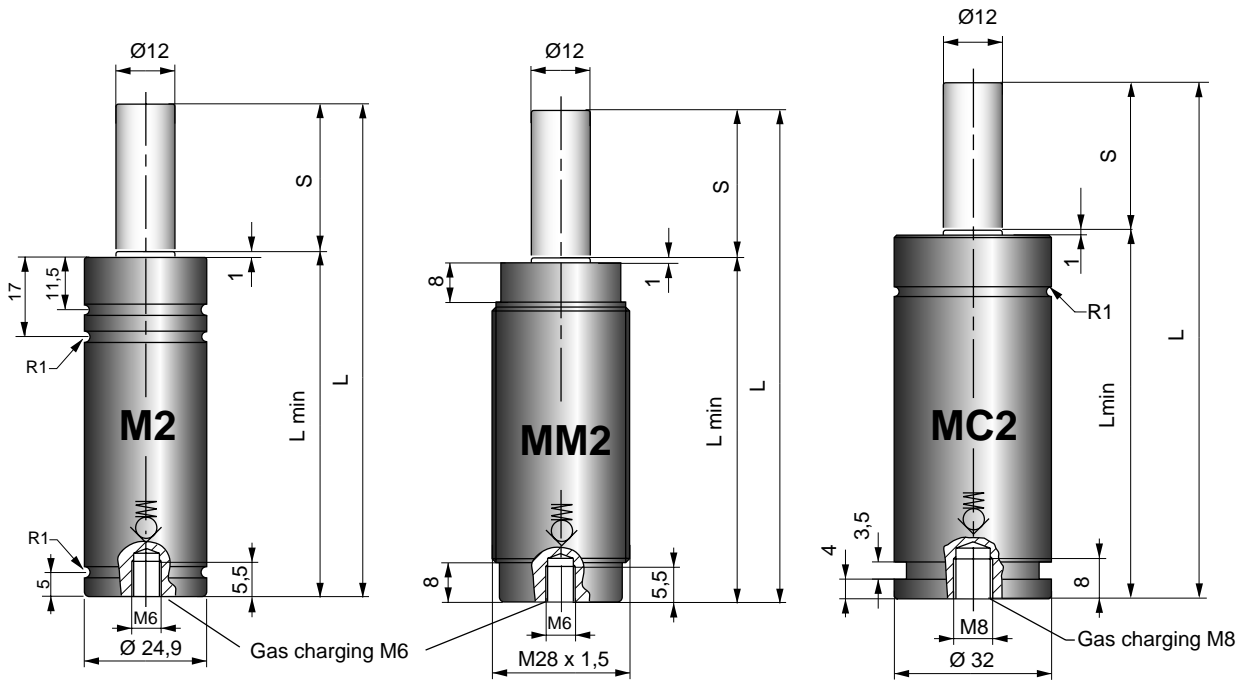
# **KALLER<sup>®</sup>**

## **GAS SPRINGS**



**M2, MM2, MC2**

## Dimensions



Model	Charging pressure (bar)	Colour	Force in N at +20°C	
			Initial	End force*
M2/MM2/MC2 50	45	Green	500	770
M2/MM2/MC2 100	90	Blue	1000	1530
M2/MM2/MC2 150	135	Red	1500	2300
M2/MM2/MC2 200	180	Yellow	2000	3060
M2/MM2/MC2 XXX*	25-180	Black	280-2000	----

\* = at full stroke

- The Mini Gas Springs are available in four preset models, with initial forces from 500 to 2000 N. Each spring is color-coded for easy identification of force rating.
- We also offer a model with adjustable force (black) that can be customized to meet individual force requirements. The adjustable model may be set to desired pressure at the factory or by customers with charging equipment.

S Stroke	M2		MM2		MC2	
	L	Lmin	L	Lmin	L	Lmin
10	62	52	62	52	70	60
12,7	67,4	54,7	67,4	54,7	75,4	62,7
15	72	57	72	57	--	--
16	74	58	74	58	82	66
25	92	67	92	67	100	75
38,1	118,2	80,1	118,2	80,1	126,2	88,1
50	142	92	142	92	150	100
63,5	172	108,5	169	105,5	177	113,5
80	205	125	202	122	210	130
100	245	145	242	142	250	150
125	295	170	292	167	300	175

**Note!** For model M2, for stroke 10 to 50 mm, L and L min are 3 mm shorter compared to older version of Mini Spring (called M). To obtain the correct length when replacing the old type using Drop in or Foot mount FCR, use a 3 mm distance (Order No. 4016109).

## Basic Information

Pressure medium ..... Nitrogen  
 Max. charging pressure ..... 180 bar  
 Min. charging pressure ..... 25 bar  
 Operating temperature ..... 0 - +80°C  
 Force increase by temperature ..... ±0,3%/°C  
 Recommended max strokes/min ..... 80-100 (at 20° C)  
 Max piston rod velocity ..... 0,8 m/s

Surface Tube ..... Black oxide  
 Surface Rod ..... Chromium plated

## Initial force

Calculation of filling pressure for M2/MC2/MM2, to achieve desired initial force:

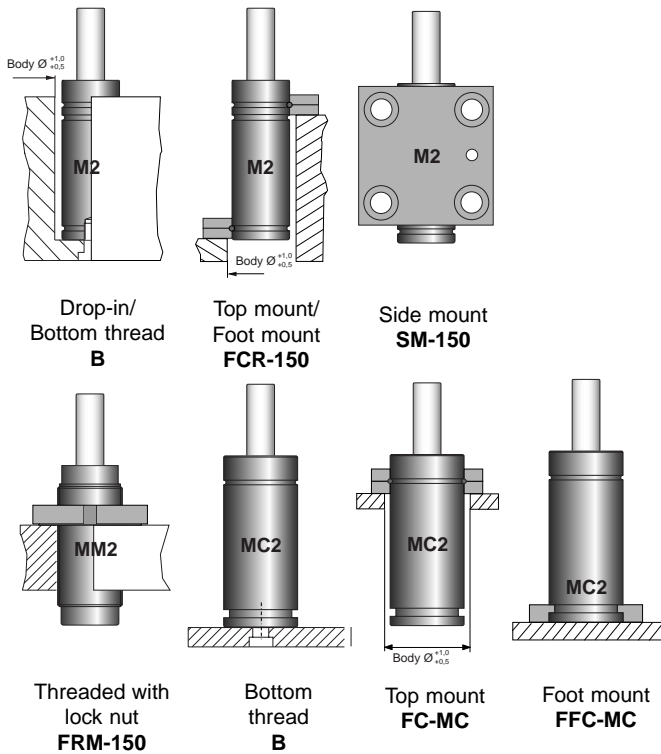
X = Desired initial force in N

$$\text{Filling pressure} = 180 \cdot \frac{X}{2000}$$

*Example:* A M2 spring to have a desired initial force of 750 N

$$\text{Filling pressure} = 180 \cdot \frac{750}{2000} \approx 68 \text{ bar}$$

## Mounting possibilities



## How to order

Example:

**M2 50-63,5**

Model

M2, MM2 or MC2

Stroke Length (mm)

Force: 50 = Green

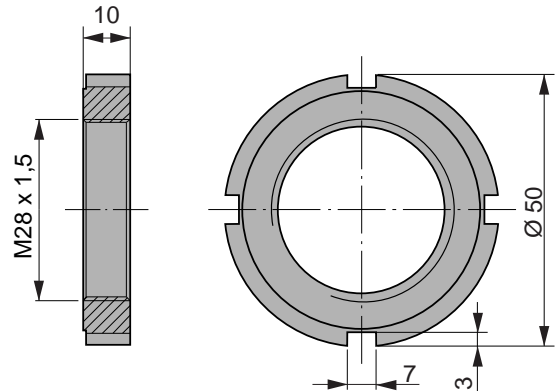
100 = Blue

150 = Red

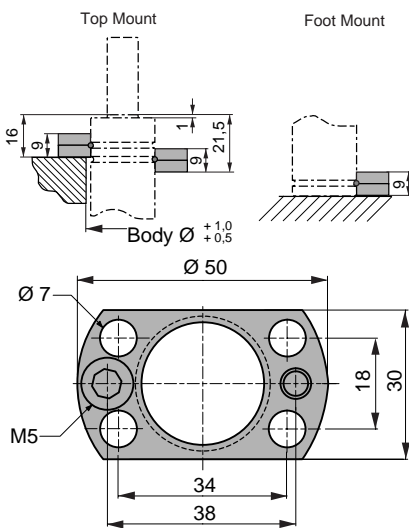
200 = Yellow

XXX = Black, state desired force in daN

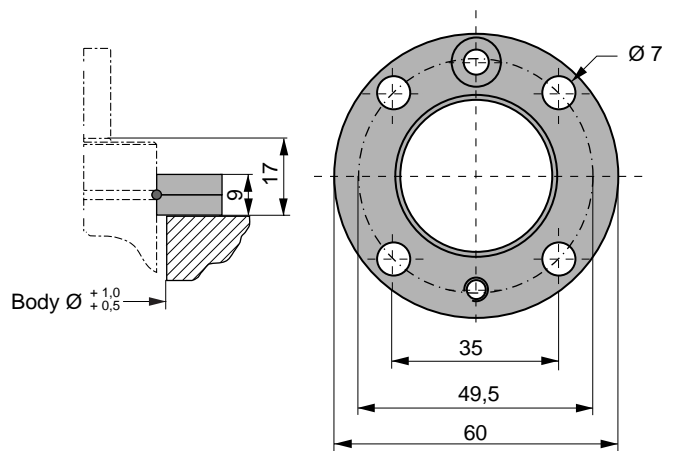
## Dimension FRM-150



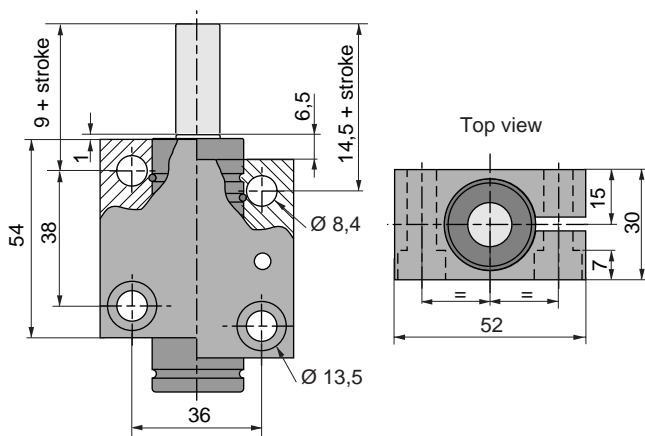
## Dimension FCR-150



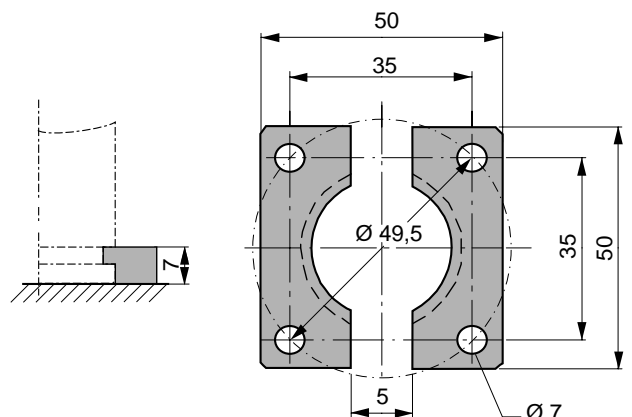
## Dimension FC-MC



## Dimension SM-150



## Dimension FFC-MC



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## World Leader

### In Gas Springs for Metal Forming



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