



# CLAMPING AND BRAKING ELEMENTS FOR LINEAR GUIDES AND RODS

PNEUMATIC AND MANUAL UNITS

2019/2020



 **ERRE DI**



# ERRE DI

ERRE.DI. Automation has been manufacturing and supplying quality automation components and systems for over 20 years.

Within its own facilities, ERRE.DI. is able to design, produce and test an extensive range of clamping and braking elements for linear guides and rods.

Through its new automation line, ERRE.DI. can easily meet the market's requirements for quality and safety, responding to every technical and design problem thanks to the expertise of its engineering department.

In addition to the standard production, ERRE.DI. provides tailor-made solutions to best meet the customers' needs.

High technology production, reliability of components, technical support make ERRE.DI. the ideal partner for every industrial sector, including aerospace, robotics, machine tool, automotive, industrial automation, packaging and material handling.

# CLAMPING AND BRAKING ELEMENTS FOR LINEAR GUIDES AND RODS

## Pneumatic and Manual Units

Having gone through an adequate period of design, analysis, development and testing, ERRE.DI. is able to offer clamping and braking elements for linear guides and rods with the following characteristics:

- High clamping force with minimum space required
- Easy installation
- Both elements working in single or double effect need the same installation space
- The "Normally Closed" devices can be used as safety elements (clamping without air pressure)
- High switching speed Open/Closed
- Italian technology

All the clamping and braking elements undergo galvanic treatments to protect against corrosion: hard anodizing for Aluminum elements and electrolytic nickel plating bath for Steel elements.

The clamping elements - FRC, FRCDP, FRCDPH, FRCMC, FRCC and FRCBS line (SEM Operating Type) satisfy all the essential requirements of safety of the Directive 2006/42/EC.

Harmonised standard applied: EN ISO 13849.

### FIELDS OF APPLICATION:

- Woodworking machine
- Metal working machine
- Glass working machine
- Packaging machinery
- Automation and Robotics
- Handling systems

**Declaration of Compliance**

**TUV16DM268881**



Nome e indirizzo del costruttore:  
Name and address of the manufacturer  
Erre.Di. S.r.l.  
Via dei Lavoratori, 15-17  
20092 Cinisello Balsamo - MI  
Italy

Genero prodotto:  
Product designation  
**SISTEMI DI BLOCCAGGIO E FRENATURA**

Serie/Type:  
Series/Type  
"FRC" / "FRCC" / "FRCBS" / "FRCBC" / "FRCDP" / "FRCDPH" / "FRCMC"

Riferimento legislativo soddisfatto:  
Legislative Reference Compliance  
2006/42/CE

Norme armonizzate di riferimento:  
Reference harmonized standards  
• UNI EN ISO 12100:2010;  
• UNI EN ISO 13849-1:2015;  
• UNI EN ISO 4414:2012

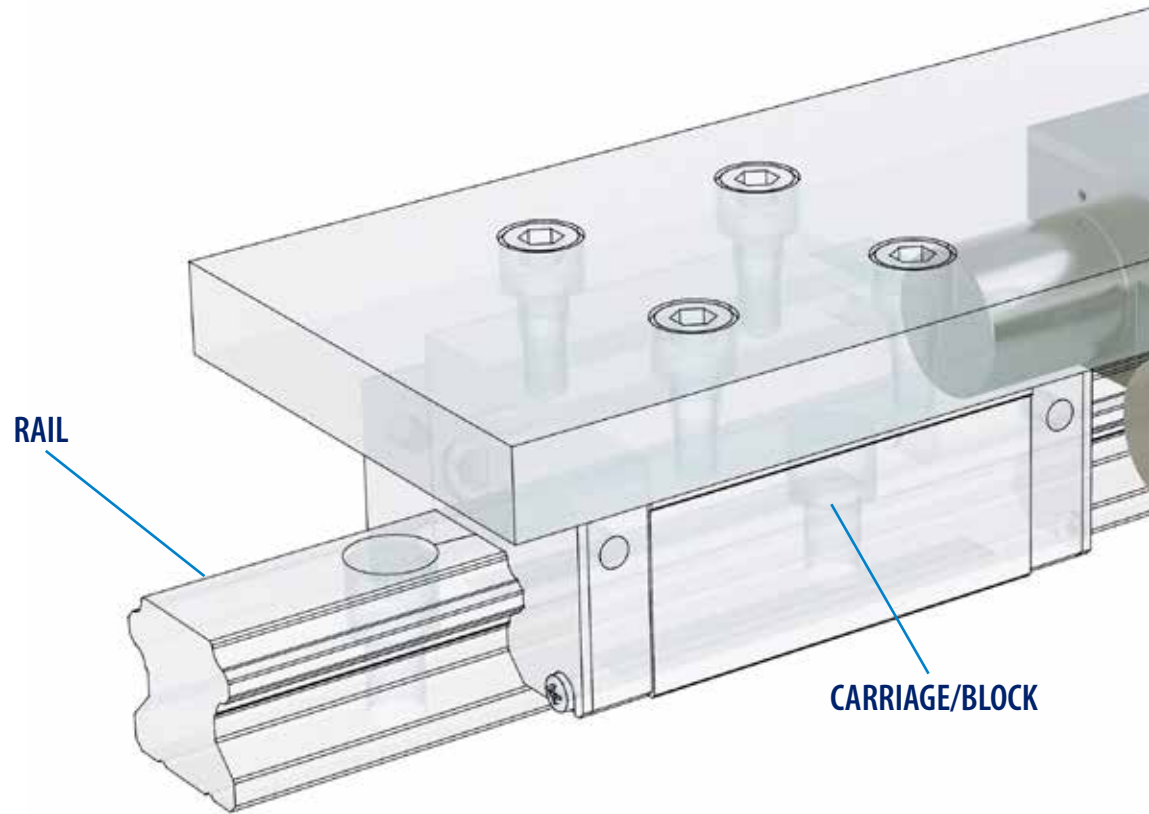
Luogo: Sesto San Giovanni  
Place

Data: 27 Maggio 2016  
Date

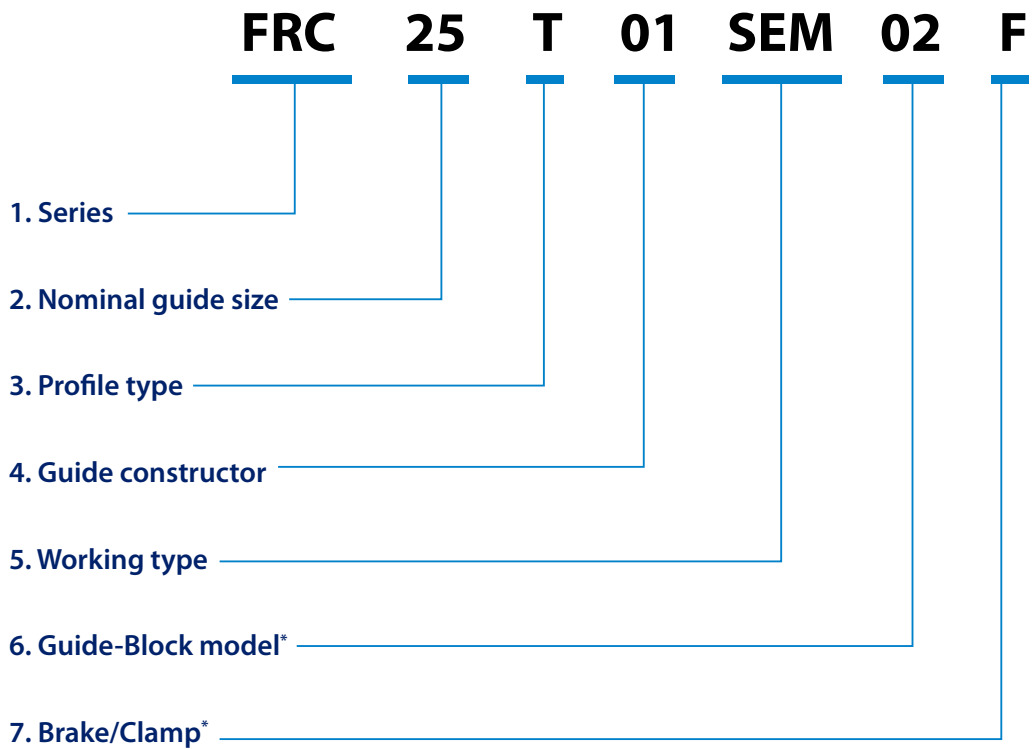
Ispettore verificatore Tested by  
  
Firma e nome / signature & name  
27-05-16  
Data/Date

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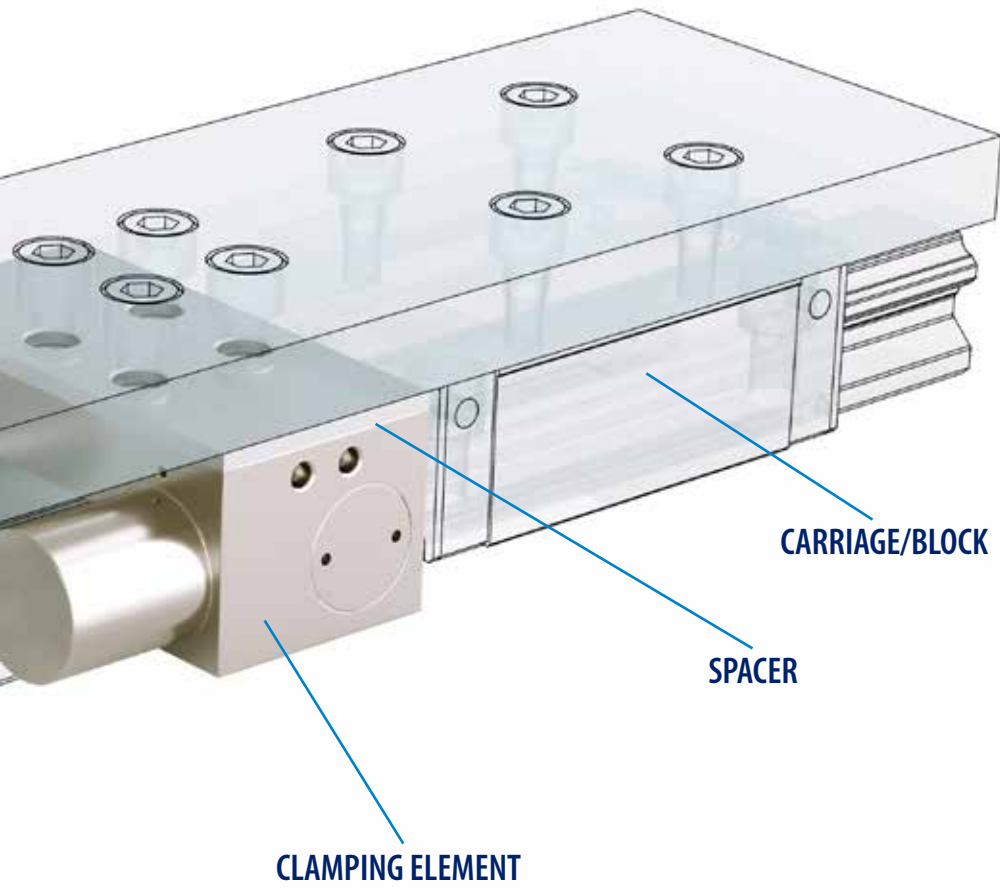




Codes for clamping and braking elements are composed as follows:

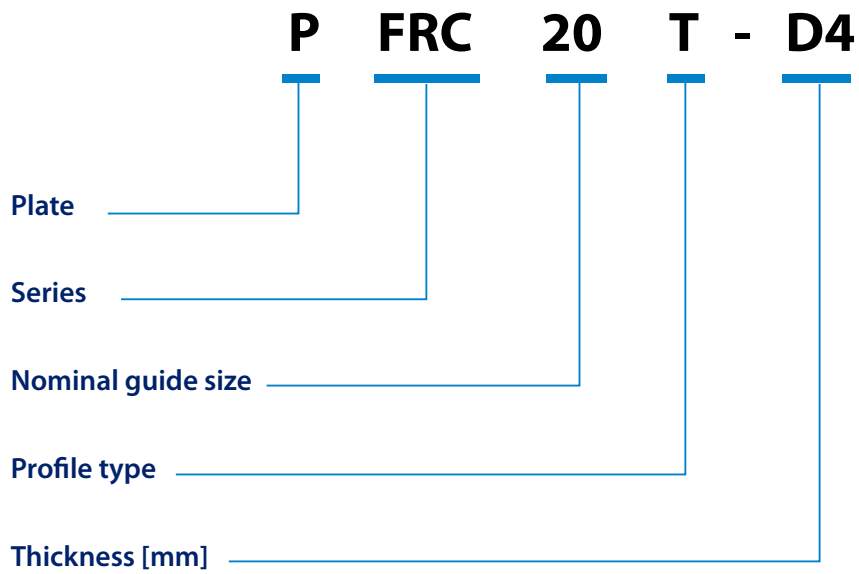


\*If the code doesn't include the last two values, the element is considered as a standard clamping element (01B)



Clamping and braking elements can optionally be supplied with a “spacer” plate made in Steel, used to align the height of the element with the height of the sliding guides.

Codes for the spacer are composed as follows:



1.

The codes for the product Series are:

|           |             |
|-----------|-------------|
| FRC       | FRCMAN-M LT |
| FRCDP     | FRCC        |
| FRCDPH    | FRCCMAN LT  |
| FRCDPM    | FRCBS       |
| FRCMC     | FRCMV       |
| FRCMAN LT | FRC_SP      |

2.

Nominal guide size indicates the size of the guide rail on which the element is mounted. It is also the size of the element.

3.

The Profile type parameter refers to the linear guide profile. It also represents the profile of the body of the element in the clamping area.

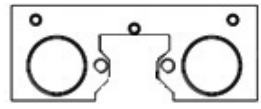
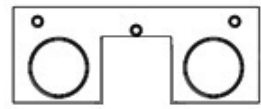
| Type | Profile   |
|------|---|
| S    |  |
| T    |  |

Table A

4.

The codes for the parameter Guide constructor are:

|          |                  |                 |                |
|----------|------------------|-----------------|----------------|
| 01 THK   | 09 DRYLIN        | 17 STAF         | 25 NORELEM     |
| 02 HIWIN | 10 ROLLON        | 18 SKF          | 26 FRANKE      |
| 03 INA   | 11 NB            | 19 NITEK        | 27 WON         |
| 04 IKO   | 12 REXROTH-BOSCH | 20 ROSA SISTEMI | 28 IRSO        |
| 05 NSK   | 13 SCHNEEBERGER  | 21 SNR          | 29 THREE-R     |
| 06 ABBA  | 14 CPC           | 22 ALULIN       | 30 HEPKO       |
| 07 PMI   | 15 TBI           | 23 THOMSON      | 31 LEANTECHNIK |
| 08 SBC   | 16 CSK           | 24 MISUMI       |                |

5.

The code for the pneumatic Working type parameter is composed as follows:

|            |  |
|------------|--|
| <b>SE</b>  | Single action configuration "Normally Open" – Air to close               |
| <b>SEM</b> | Single action configuration "Normally Closed" – Air to open              |
| <b>DE</b>  | Double action configuration "Normally Open" – Air to close and to open   |
| <b>DEM</b> | Double action configuration "Normally Closed" – Air to open and to close |

6.

Since every guide manufacturer supplies a wide range of guide models, the parameter "Guide-Block model" identifies in an univocal way the couple "guide model-block model".

7.

The final letter of the code identifies the element as "brake" or as "clamp".

|          |                  |
|----------|------------------|
| <b>B</b> | Clamping element |
| <b>F</b> | Braking element  |

8.

For Special devices, built in order to meet customers' need, the code is followed by the letters "SP".

9.








The element can be integrated with a proximity sensor in order to check the opening status. The sensor is a cylindrical inductive type, PNP or NPN. It is equipped with a connector and a cable. Operating Temp:  $-25^{\circ}\text{C} \div +75^{\circ}\text{C}$






SERIES

CHARACTERISTICS

ELEMENTS FOR LINEAR GUIDES

|   |                    |   |
|---|--------------------|---|
|    | <b>FRC</b>         | Basic clamping element<br>Excellent force/dimension ratio                       |
|    | <b>FRCDP</b>       | Dual piston system<br>High clamping force<br>Small dimensions                   |
|    | <b>FRCDPH</b>      | Powered dual piston system<br>Extremely high clamping force<br>Small dimensions |
|    | <b>FRCDPM</b>      | Clamping and braking element<br>High clamping force                             |
|    | <b>FRCMC</b>       | Single piston element<br>Compact and inexpensive<br>Suitable for small spaces   |
|  | <b>FRCMAN LT</b>   | Manual element<br>Practical and reliable<br>New ergonomic design                |
|  | <b>FRCMAN-M LT</b> | Manual element for miniature guides<br>New ergonomic design                     |

ELEMENTS FOR ROUND GUIDES AND RODS

|   |                   |   |
|---|-------------------|---|
|  | <b>FRCC</b>       | The same high performance of FRC line for round guides                            |
|  | <b>FRCCMAN LT</b> | Manual element for round guides<br>Practical and reliable<br>New ergonomic design |
|  | <b>FRCBS</b>      | Dual piston system<br>High clamping force   |

SPECIAL ELEMENTS

|   |               |   |
|---|---------------|---|
|  | <b>FRCMV</b>  | Clamping system with only one contact element<br>Small dimensions<br>Multiple ways to use         |
|  | <b>FRC_SP</b> | Easy to assemble thanks to the decomposable system<br>Independent piston system<br>Shaped profile |



| HOW IT WORKS   | AVAILABLE ALSO NORMALLY CLOSED | AVAILABLE AS A BRAKE | AVAILABLE WITH SENSOR | PAG. |
|----------------|--------------------------------|----------------------|-----------------------|------|
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 10   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 12   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 14   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 16   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 18   |
| MANUAL UNIT    | NO                             | NO                   | NO                    | 20   |
| MANUAL UNIT    | NO                             | NO                   | NO                    | 22   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 24   |
| MANUAL UNIT    | NO                             | NO                   | NO                    | 26   |
| PNEUMATIC UNIT | YES                            | YES                  | YES                   | 28   |
| PNEUMATIC UNIT | YES                            | NO                   | YES                   | 30   |
| PNEUMATIC UNIT | YES                            | YES                  | NO                    | 32   |

# FRC Pneumatic Clamping Element

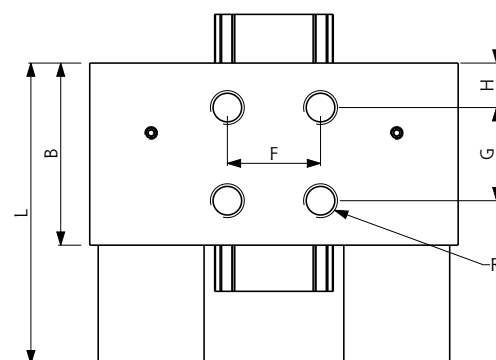
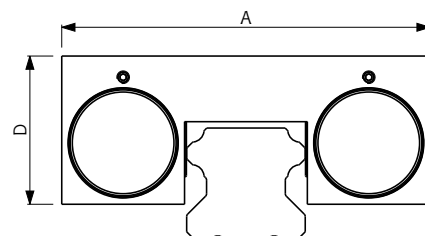
The tightening is done using an amplification system with inclined plane.  
Made in construction steel, for high axial and horizontal stiffness.

FRC##\$ SE  
FRC##\$ DE

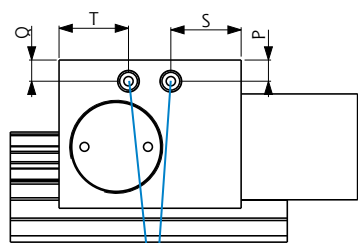


## Guide size **15 ÷ 65**  
\$ Guide type **T / S (see table A)**  
Working type **Norm. Open**  
Body **Steel**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ Limited length
- ◆ High clamping forces
- ◆ Precise positioning
- ◆ High rigidity



| Type | Guide | SEM  | Clamping Force [N] |      |      | A [mm] | B [mm] |
|------|-------|------|--------------------|------|------|--------|--------|
|      |       |      | SE                 | DE   | DEM  |        |        |
| FRC  | S 15  | 400  | 650                | 650  | 1050 | 57     | 43     |
| FRC  | T 15  | 400  | 650                | 650  | 1050 | 60     | 43     |
| FRC  | S 20  | 600  | 1000               | 1000 | 1600 | 68     | 39     |
| FRC  | T 20  | 600  | 1000               | 1000 | 1600 | 70     | 39     |
| FRC  | S 25  | 750  | 1200               | 1200 | 1950 | 75     | 39     |
| FRC  | T 25  | 750  | 1200               | 1200 | 1950 | 77     | 39     |
| FRC  | S 30  | 1050 | 1750               | 1750 | 2800 | 87     | 43     |
| FRC  | T 30  | 1050 | 1750               | 1750 | 2800 | 87     | 43     |
| FRC  | S 35  | 1250 | 2000               | 2000 | 3250 | 106    | 46     |
| FRC  | T 35  | 1250 | 2000               | 2000 | 3250 | 106    | 46     |
| FRC  | S 45  | 1500 | 2300               | 2300 | 3800 | 116    | 50     |
| FRC  | T 45  | 1500 | 2300               | 2300 | 3800 | 120    | 50     |
| FRC  | S 55  | 2000 | 3000               | 3000 | 5000 | 128    | 49     |
| FRC  | T 55  | 2000 | 3000               | 3000 | 5000 | 136    | 49     |
| FRC  | T 65  | 2000 | 3000               | 3000 | 5000 | 146    | 49     |



**M5  
AIR CONNECTION**  
we recommend  
the use of compressed  
air hose  $\varnothing 6 \times 4$

FRC##\$ SEM  
FRC##\$ DEM



## Guide size **15 ÷ 65**  
\$ Guide type **T / S (see table A)**  
Working type **Norm. Closed**  
Body **Steel**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ Locking element without the use of energy
- ◆ Includes springs for closing, while the pressure is for opening

| D [mm] | F [mm] | G [mm] | H [mm] | L [mm] | P [mm] | Q [mm] | R      | S [mm] | T [mm] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 21     | 15     | 15     | 12.5   | 62     | 5      | 15     | M4x5   | 37     | 6      |
| 21.5   | 15     | 15     | 12.5   | 62     | 5.5    | 15.5   | M4x5   | 37     | 6      |
| 27     | 20     | 20     | 14     | 61     | 5      | 7      | M5x5   | 16.9   | 5.5    |
| 25.5   | 20     | 20     | 14     | 61     | 5      | 5      | M5x5   | 18.5   | 5      |
| 32.5   | 20     | 20     | 14     | 63.5   | 6.6    | 9.5    | M6x8   | 19.5   | 5.5    |
| 28     | 20     | 20     | 14     | 63.5   | 5      | 6      | M6x8   | 19     | 5.5    |
| 38.5   | 22     | 22     | 10.5   | 71     | 8.5    | 8.5    | M8x8   | 16.5   | 16.5   |
| 35     | 22     | 22     | 10.5   | 71     | 5      | 5      | M8x8   | 16.5   | 16.5   |
| 42.5   | 24     | 24     | 7.5    | 78     | 5.5    | 11     | M8x15  | 23     | 7      |
| 42.5   | 24     | 24     | 7.5    | 78     | 12     | 11     | M8x15  | 23     | 7      |
| 52     | 26     | 26     | 12     | 82     | 15     | 8      | M10x19 | 20.5   | 21     |
| 52     | 26     | 26     | 12     | 82     | 15     | 8      | M10x19 | 20     | 20     |
| 59     | 30     | 30     | 9.5    | 82     | 17     | 10     | M10x19 | 18.5   | 18.5   |
| 54     | 30     | 30     | 9.5    | 82     | 13     | 8      | M10x19 | 18.5   | 18.5   |
| 67     | 50     | 30     | 9.5    | 82     | 26     | 21     | M10x20 | 18.5   | 18.5   |

# FRCDP Double Piston Element

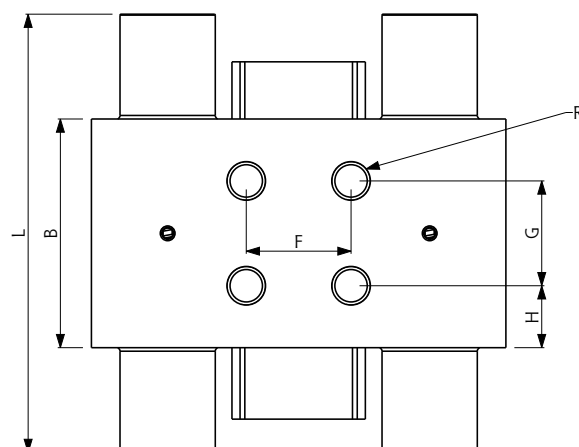
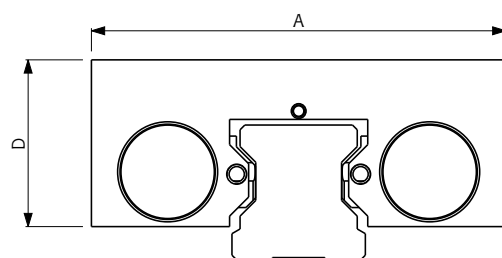
New line created to obtain a high clamping force in small spaces.  
Dual Locking Action made by a pair of pistons for each tightening part.

FRCDP##\$ SE  
FRCDP##\$ DE

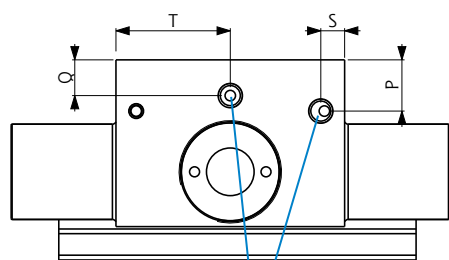


## Guide size **20 ÷ 45**  
\$ Guide type **T / S (see table A)**  
Working type **Norm. Open**  
Body **Steel**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ **Dual piston system: high clamping force**
- ◆ **Small size**
- ◆ **Short reaction time**



| Type  | Guide | Clamping Force [N] |      |      |      | A [mm] | B [mm] | D [mm] |
|-------|-------|--------------------|------|------|------|--------|--------|--------|
|       |       | SEM                | SE   | DE   | DEM  |        |        |        |
| FRCDP | S 20  | 800                | 1300 | 1300 | 2100 | 70     | 51     | 27     |
| FRCDP | T 20  | 800                | 1300 | 1300 | 2100 | 73     | 51     | 25.5   |
| FRCDP | S 25  | 1200               | 2000 | 2000 | 3200 | 74     | 51     | 32.5   |
| FRCDP | T 25  | 1200               | 2000 | 2000 | 3200 | 78     | 51     | 30.5   |
| FRCDP | S 30  | 1200               | 2000 | 2000 | 3200 | 87     | 48     | 35     |
| FRCDP | T 30  | 1200               | 2000 | 2000 | 3200 | 89     | 48     | 33     |
| FRCDP | S 35  | 1500               | 2200 | 2200 | 3700 | 94     | 49     | 44     |
| FRCDP | T 35  | 1500               | 2200 | 2200 | 3700 | 100    | 49     | 36.5   |
| FRCDP | S 45  | 2000               | 3000 | 3000 | 5000 | 107.8  | 56     | 52     |
| FRCDP | T 45  | 2000               | 3000 | 3000 | 5000 | 120    | 56     | 43.5   |



**M5  
AIR CONNECTION**  
we recommend  
the use of compressed  
air hose  $\varnothing 6 \times 4$

**FRCDP##\$ SEM**  
**FRCDP##\$ DEM**



## Guide size **20 ÷ 45**  
\$ Guide type **T / S (see table A)**  
Working type **Norm. Closed**  
Body **Steel**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ Locking element without the use of energy
- ◆ High clamping force thanks to a double piston system
- ◆ Small size
- ◆ Short reaction times

| F<br>[mm] | G<br>[mm] | H<br>[mm] | L<br>[mm] | P<br>[mm] | Q<br>[mm] | R      | S<br>[mm] | T<br>[mm] |
|-----------|-----------|-----------|-----------|-----------|-----------|--------|-----------|-----------|
| 20        | 27        | 12        | 89        | 7.5       | 5         | M5x6   | 15        | 10        |
| 20        | 27        | 12        | 89        | 5.5       | 5         | M5x6   | 15        | 10        |
| 20        | 20        | 15.5      | 95        | 5.25      | 8.25      | M6x7   | 25.5      | 5.5       |
| 20        | 20        | 15.5      | 95        | 5         | 6.5       | M6x7   | 30.5      | 5.5       |
| 22        | 22        | 13        | 92        | 7.5       | 11        | M8x10  | 24        | 5         |
| 22        | 22        | 13        | 92        | 6         | 9.5       | M8x10  | 19.5      | 6         |
| 24        | 24        | 12.5      | 98        | 13        | 10        | M8x15  | 14        | 19.5      |
| 24        | 24        | 12.5      | 98        | 7.5       | 5.25      | M8x15  | 30.5      | 4.5       |
| 26        | 26        | 15        | 114       | 16.55     | 12.55     | M10x17 | 28        | 4.5       |
| 26        | 26        | 15        | 114       | 13        | 9.5       | M10x17 | 22        | 5         |

# FRCDPH Powered Double Piston Element

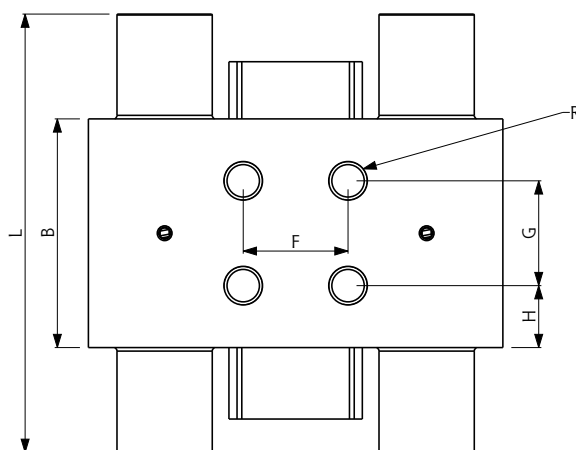
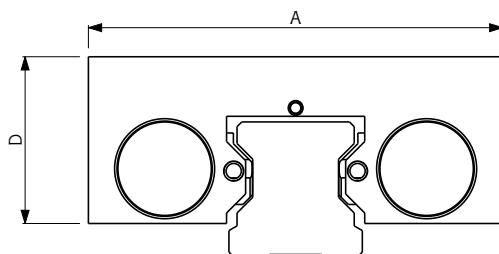
New line created to obtain a high clamping force in small spaces.  
 Powered Dual Locking Action: with a pair of pistons for each tightening part.  
 The clamping force of this element is double that of FRC line.

FRCDPH##\$ SE  
 FRCDPH##\$ DE

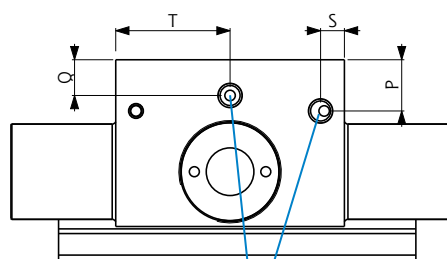


## Guide size **15 ÷ 55**  
 \$ Guide type **T / S (see table A)**  
 Working type **Norm. Open**  
 Body **Steel**  
 Operating Temp. **-20°C ÷ 80°C**  
 Operating Pressure **5,5 ÷ 8 bar**

- ◆ Dual piston system: high clamping force
- ◆ Small size
- ◆ Short reaction time



| Type    | Guide | Clamping Force [N] |      |      |       | A [mm] | B [mm] | D [mm] |
|---------|-------|--------------------|------|------|-------|--------|--------|--------|
|         |       | SEM                | SE   | DE   | DEM   |        |        |        |
| FRCDPH  | S 15  | 800                | 1300 | 1300 | 2100  | 61     | 54.4   | 21.5   |
| FRCDPH  | T 15  | 800                | 1300 | 1300 | 2100  | 61     | 56     | 21.5   |
| FRCDPH  | S 20  | 1200               | 2000 | 2000 | 3200  | 70     | 51     | 27     |
| FRCDPH  | T 20  | 1200               | 2000 | 2000 | 3200  | 73     | 51     | 25.5   |
| FRCDPH  | S 25  | 1500               | 2400 | 2400 | 3900  | 75     | 51     | 32.5   |
| FRCDPH  | T 25  | 1500               | 2400 | 2400 | 3900  | 78     | 51     | 32.5   |
| FRCDPH  | S 30  | 2100               | 3500 | 3500 | 5600  | 90     | 50     | 38     |
| FRCDPH  | T 30  | 2100               | 3500 | 3500 | 5600  | 93     | 50     | 38     |
| FRCDPHL | S 35  | 2100               | 3500 | 3500 | 5600  | 97     | 50     | 40     |
| FRCDPH  | S 35  | 2500               | 4000 | 4000 | 6500  | 101    | 57.6   | 42     |
| FRCDPHH | S 35  | 3000               | 4600 | 4600 | 7600  | 106    | 57.6   | 43.5   |
| FRCDPH  | T 35  | 2500               | 4000 | 4000 | 6500  | 109    | 60.8   | 42.3   |
| FRCDPH  | S 45  | 3000               | 4600 | 4600 | 7600  | 120    | 60.8   | 55     |
| FRCDPH  | T 45  | 3000               | 4600 | 4600 | 7600  | 120    | 60.8   | 49.3   |
| FRCDPH  | S 55  | 4000               | 6000 | 6000 | 10000 | 128    | 60     | 59     |
| FRCDPH  | T 55  | 4000               | 6000 | 6000 | 10000 | 136    | 60     | 54     |



**M5  
AIR CONNECTION**  
we recommend  
the use of compressed  
air hose  $\varnothing$  6x4

**FRCDPH##\$ SEM  
FRCDPH##\$ DEM**



## Guide size **15 ÷ 55**  
\$ Guide type **T / S (see table A)**  
Working type **Norm. Closed**  
Body **Steel**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ Locking element without the use of energy
- ◆ High clamping force thanks to a double piston system
- ◆ Small size
- ◆ Short reaction times

| F<br>[mm] | G<br>[mm] | H<br>[mm] | L<br>[mm] | P<br>[mm] | Q<br>[mm] | R      | S<br>[mm] | T<br>[mm] |
|-----------|-----------|-----------|-----------|-----------|-----------|--------|-----------|-----------|
| 15        | 15        | 19.7      | 92.4      | 5         | 5         | M4x4   | 16.2      | 16.2      |
| 15        | 15        | 19.7      | 94        | 5         | 5.2       | M4x4   | 17        | 17        |
| 20        | 27        | 12        | 95        | 6.5       | 6.5       | M5x6   | 16.1      | 15.8      |
| 20        | 27        | 12        | 95        | 5         | 5         | M5x6   | 16.1      | 15.8      |
| 20        | 20        | 15.5      | 100       | 5         | 7.25      | M6x7   | 25.5      | 5         |
| 20        | 20        | 15.5      | 100       | 5         | 7.25      | M6x7   | 20.5      | 5         |
| 22        | 22        | 14        | 108       | 9         | 5         | M8x10  | 12        | 25        |
| 22        | 22        | 14        | 108       | 9         | 5         | M8x10  | 20.5      | 5         |
| 24        | 24        | 13        | 108       | 11        | 8         | M8x15  | 25        | 12        |
| 24        | 24        | 16.8      | 97.6      | 10.5      | 6.5       | M8x15  | 28.8      | 5         |
| 24        | 24        | 16.8      | 121.6     | 10.5      | 6.5       | M8x15  | 28.8      | 6         |
| 24        | 24        | 18.4      | 124.6     | 7         | 5         | M8x16  | 30.4      | 5         |
| 26        | 26        | 17.4      | 124.8     | 12        | 7         | M10x18 | 30.4      | 5         |
| 26        | 26        | 17.4      | 124.8     | 12.3      | 7         | M10x19 | 30.4      | 5         |
| 30        | 30        | 15        | 126       | 18        | 8         | M10x20 | 30        | 23.5      |
| 30        | 30        | 15        | 126       | 13        | 8         | M10x20 | 23.5      | 23.5      |

# FRCDPM Clamping and Braking Element

Braking element with high clamping force.

Material and shape of contact parts allow high clamping force without damaging the rail.

FRCDPM##S SEM

FRCDPM##S DEM

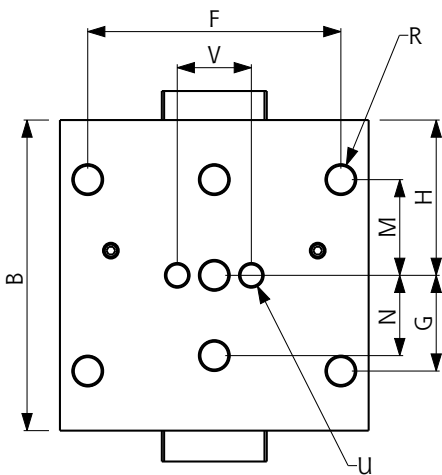
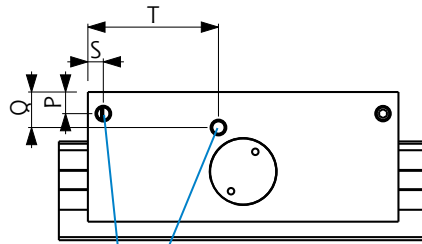
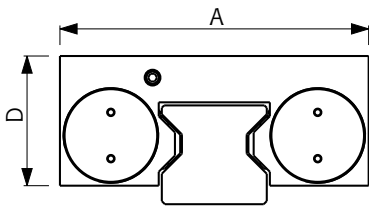


|                    |                     |
|--------------------|---------------------|
| ## Guide size      | 25 ÷ 55             |
| § Guide type       | T / S (see table A) |
| Working type       | Norm. Closed        |
| Body               | Steel               |
| Operating Temp.    | -20°C ÷ 80°C        |
| Operating Pressure | 5,5 ÷ 8 bar         |

- ◆ Locking element without the use of energy
- ◆ High clamping force thanks to a double piston system
- ◆ Short reaction times
- ◆ Compact and rigid body
- ◆ Clamping in case of pressure drop
- ◆ Working in emergency stop

| Type   | Guide | Clamping Force [N] |      | A [mm] | B [mm] | D [mm] | F [mm] | G [mm] |
|--------|-------|--------------------|------|--------|--------|--------|--------|--------|
|        |       | SEM                | DEM  |        |        |        |        |        |
| FRCDPM | S 25  | 1500               | 3900 | 70     | 99     | 32.5   | 57     | 22.5   |
| FRCDPM | S 30  | 2100               | 5600 | 90     | 109    | 38     | 72     | 22     |
| FRCDPM | S 35  | 2600               | 6600 | 100    | 100.6  | 42     | 82     | 31     |
| FRCDPM | T 35  | 2600               | 6600 | 108    | 100.6  | 42     | 82     | 31     |
| FRCDPM | S55   | 7700               | 9200 | 140    | 219    | 59     | 116    | 47.5   |





**M5  
AIR CONNECTION**  
we recommend  
the use of compressed  
air hose  $\varnothing$  6x4

| H [mm] | M [mm] | N [mm] | P [mm] | Q [mm] | R      | S [mm] | T [mm] | U     | V [mm] |
|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|
| 49.5   | 22.5   | 20     | 7.75   | 5.25   | M8x7   | 5      | 56     | M6x7  | 20     |
| 54.5   | 26     | 22     | 9      | 6      | M10x8  | 5      | 47     | M8x8  | 22     |
| 50.3   | 31     | 26     | 7      | 11.5   | M10x10 | 5      | 42.3   | M8x10 | 24     |
| 50.3   | 31     | 26     | 7      | 11.5   | M10x10 | 5      | 42.3   | M8x10 | 24     |
| 109.5  | 47.5   | 35     | 10     | 17     | M14x14 | 92     | 92     | -     | -      |

# FRCMC Single Cylinder Element

Compact and inexpensive locking element.

These characteristics are obtained using a single contact section.

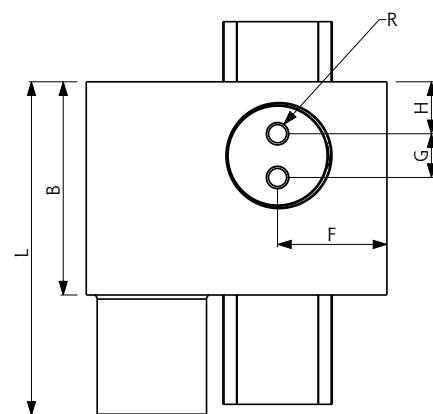
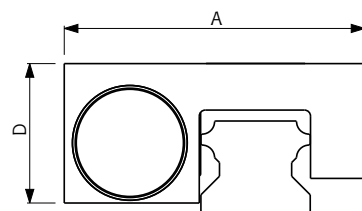
The clamping action is allowed by the floating system of the body that ensures:

- the clamping of the rail on one side by the contact section and on the other by the body itself;
- a symmetrical distribution of clamping force on the linear guide;
- absolutely no friction between the linear guide with the body and with the contact section when the clamping is released.

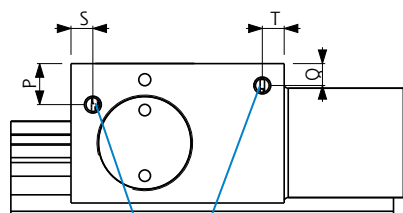
FRCMC##\$ SE  
FRCMC##\$ DE



## Guide size      **15 – 20 – 25**  
 \$ Guide type      **T / S (see table A)**  
 Working type      **Norm. Open**  
 Body                **Steel**  
 Operating Temp.   **-20°C ÷ 80°C**  
 Operating Pressure **5,5 ÷ 8 bar**



| Type  | Guide | Clamping Force [N] |     |     |     | A [mm] | B [mm] | D [mm] |
|-------|-------|--------------------|-----|-----|-----|--------|--------|--------|
|       |       | SEM                | SE  | DE  | DEM |        |        |        |
| FRCMC | T 15  | 200                | 320 | 320 | 520 | 41.5   | 36     | 18     |
| FRCMC | S 20  | 300                | 500 | 500 | 800 | 55     | 39     | 27     |
| FRCMC | T 20  | 300                | 500 | 500 | 800 | 55     | 39     | 25.5   |
| FRCMC | S 25  | 375                | 600 | 600 | 975 | 60.5   | 39     | 30     |
| FRCMC | T 25  | 375                | 600 | 600 | 975 | 60.5   | 39     | 30     |



M3

**AIR CONNECTION**

we recommend  
the use of compressed  
air hose  $\varnothing 6 \times 4$

FRCMC##\$ SEM  
FRCMC##\$ DEM



## Guide size  
\$ Guide type  
Working type  
Body  
Operating Temp.  
Operating Pressure

15 – 20 – 25  
T/S (see table A)  
**Norm. Closed**  
**Steel**  
-20°C ÷ 80°C  
**5,5 ÷ 8 bar**

| F [mm] | G [mm] | H [mm] | L [mm] | P [mm] | Q [mm] | R      | S [mm] | T [mm] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 14.25  | 7      | 8.9    | 55     | 4      | 4      | M4x4.5 | 3      | 4.5    |
| 21     | 8      | 9.5    | 61     | 5      | 4      | M4x5.8 | 4      | 4      |
| 21     | 8      | 9.5    | 61     | 5      | 4      | M4x5.8 | 4      | 4      |
| 22     | 8      | 9.5    | 63.5   | 5      | 7.5    | M4x5.8 | 5      | 5      |
| 22     | 8      | 9.5    | 63.5   | 5      | 7.5    | M4x5.8 | 5      | 5      |

# FRCMAN LT Manual Clamping Element for Linear

Simple and reliable, this clamping element is manually controlled.

By acting on the adjustable locking lever, the contact profiles press with sync on the surfaces of the rail.

The floating profiles of contact ensure a symmetrical distribution of the force on the linear guide.

New ergonomic design.

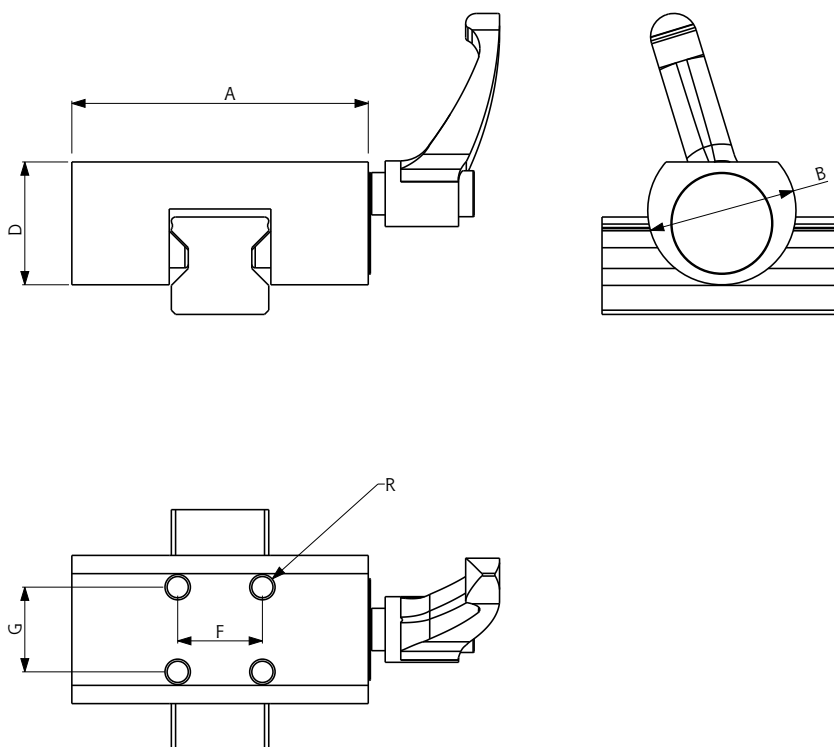
## FRCMAN ##\$ LT



|               |                     |
|---------------|---------------------|
| ## Guide size | 15 ÷ 65             |
| \$ Guide type | T / S (see table A) |
| Working type  | Manual              |
| Body          | Steel               |

- ◆ Simple and inexpensive
- ◆ Floating locking contacts

| Type      | Guide | Clamping Force [N] | A [mm] |
|-----------|-------|--------------------|--------|
| FRCMAN LT | S 15  | 1200               | 47     |
| FRCMAN LT | T 15  | 1200               | 47     |
| FRCMAN LT | S 20  | 1200               | 60     |
| FRCMAN LT | T 20  | 1200               | 60     |
| FRCMAN LT | S 25  | 1200               | 70     |
| FRCMAN LT | T 25  | 1200               | 70     |
| FRCMAN LT | S 30  | 2000               | 90     |
| FRCMAN LT | T 30  | 2000               | 90     |
| FRCMAN LT | S 35  | 2000               | 98     |
| FRCMAN LT | T 35  | 2000               | 98     |
| FRCMAN LT | S 45  | 2000               | 118    |
| FRCMAN LT | T 45  | 2000               | 118    |
| FRCMAN LT | T 55  | 2000               | 138    |
| FRCMAN LT | T 65  | 2000               | 160    |



| B<br>[mm] | D<br>[mm] | F<br>[mm] | G<br>[mm] | R      |
|-----------|-----------|-----------|-----------|--------|
| 25        | 19        | 17        | 17        | M4x5   |
| 25        | 17.5      | 17        | 17        | M4x5   |
| 28        | 23        | 15        | 15        | M5X6   |
| 26        | 20        | 15        | 15        | M5X6   |
| 35        | 29        | 20        | 20        | M6x7   |
| 32        | 24        | 20        | 20        | M6x8   |
| 40        | 32        | 22        | 22        | M6x8   |
| 38        | 29        | 22        | 22        | M6x8   |
| 45        | 37        | 24        | 24        | M8x10  |
| 42        | 32        | 24        | 24        | M8x10  |
| 55        | 48        | 26        | 26        | M10x14 |
| 50        | 42        | 26        | 26        | M10x14 |
| 56        | 47        | 30        | 30        | M14x16 |
| 70        | 58        | 35        | 35        | M16x20 |

# FRCMAN-M LT for Miniature Linear Guides

Manual clamping element for miniature linear guides.

By acting on the locking screw, the contact sections press with sync on the surfaces of the rail.

The floating profiles of contact ensure a symmetrical distribution of the force on the linear guide.

New ergonomic design to save space.

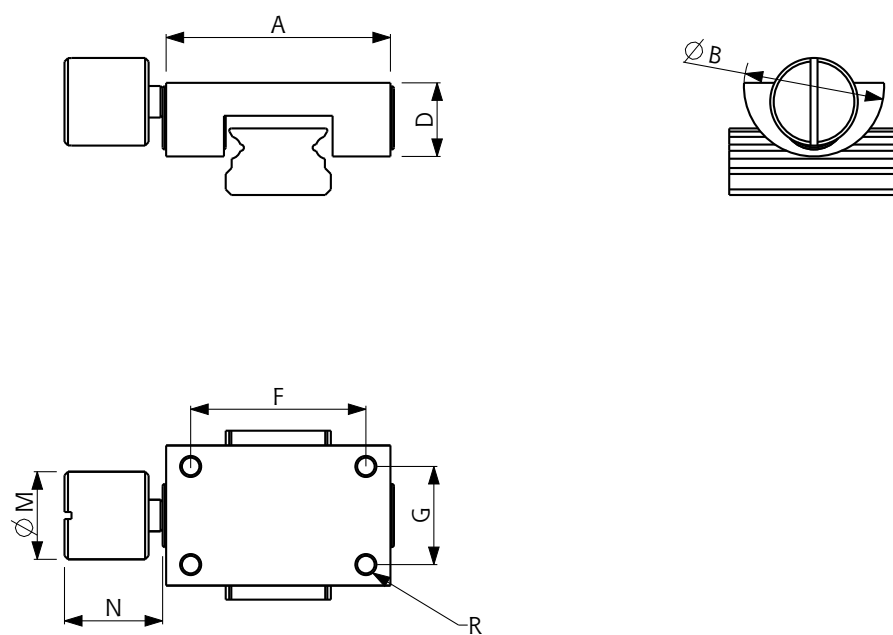
## FRCMAN ## M LT



|               |               |
|---------------|---------------|
| ## Guide size | <b>9 ÷ 15</b> |
| Working type  | <b>Manual</b> |
| Body          | <b>Steel</b>  |

- ◆ **Simple and inexpensive**
- ◆ **Floating locking contacts**

| Type        | Size | Clamping Force [N] | A [mm] | B [mm] |
|-------------|------|--------------------|--------|--------|
| FRCMAN-M LT | 7    | 65                 | 17     | 12     |
| FRCMAN-M LT | 9    | 100                | 20     | 17     |
| FRCMAN-M LT | 12   | 150                | 27     | 19     |
| FRCMAN-M LT | 15   | 180                | 32     | 20     |



| D<br>[mm] | F<br>[mm] | G<br>[mm] | M<br>[mm] | N<br>[mm] | R    |
|-----------|-----------|-----------|-----------|-----------|------|
| 6         | 12        | 8         | 6         | 7,5       | M2X3 |
| 7.3       | 15        | 11        | 8         | 9         | M3x3 |
| 9.5       | 20        | 13        | 10        | 10        | M3x4 |
| 10.5      | 25        | 14        | 12.5      | 14        | M3X5 |

# FRCC Pneumatic Clamping Elements for Round Bars

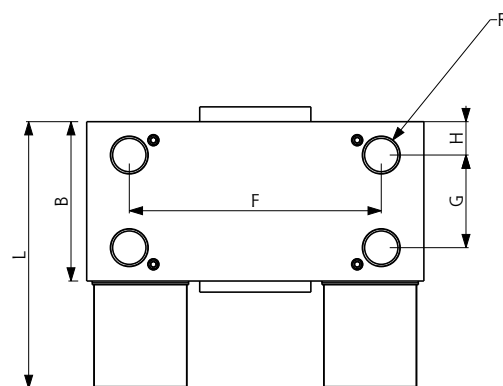
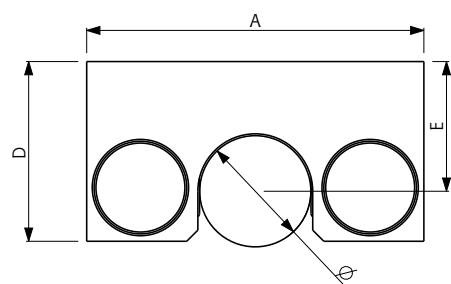
The same high performance of FRC line for round guides  
The tightening is done using an amplification system with inclined plane.

FRCC##SE  
FRCC##DE



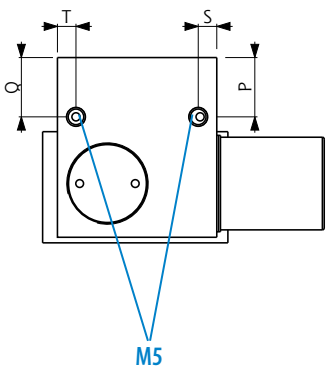
## Guide size  
Working type  
Body  
Operating Temp.  
Operating Pressure

**16 ÷ 60**  
**Norm. Open**  
**Steel**  
**-20°C ÷ 80°C**  
**5,5 ÷ 8 bar**



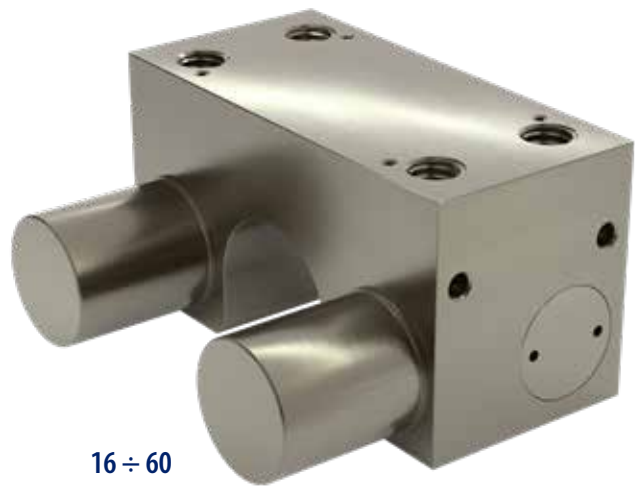
| Type | Ø guide | Clamping Force [N] |      |      |      | A [mm] | B [mm] | D [mm] |
|------|---------|--------------------|------|------|------|--------|--------|--------|
|      |         | SEM                | SE   | DE   | DEM  |        |        |        |
| FRCC | 16      | 400                | 650  | 650  | 1050 | 55     | 35     | 31.5   |
| FRCC | 20      | 600                | 1000 | 1000 | 1600 | 66     | 38     | 36.5   |
| FRCC | 25      | 750                | 1200 | 1200 | 1950 | 77     | 38.5   | 43     |
| FRCC | 30      | 1050               | 1750 | 1750 | 2800 | 91     | 43     | 48.5   |
| FRCC | 40      | 1500               | 2300 | 2300 | 3800 | 115    | 49     | 63     |
| FRCC | 50      | 2000               | 3000 | 3000 | 5000 | 131    | 48     | 70     |
| FRCC | 60      | 2000               | 3000 | 3000 | 5000 | 141    | 48     | 70     |





**M5**  
**AIR CONNECTION**  
 we recommend  
 the use of compressed  
 air hose  $\varnothing$  6x4

FRCC#SEM  
 FRCC#DEM



## Guide size  
 Working type  
 Body  
 Operating Temp.  
 Operating Pressure

**16 ÷ 60**  
**Norm. Closed**  
**Steel**  
**-20°C ÷ 80°C**  
**5,5 ÷ 8 bar**

| E [mm] | F [mm] | G [mm] | H [mm] | L [mm] | P [mm] | Q [mm] | R      | S [mm] | T [mm] |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 22     | 15     | 15     | 10     | 54     | 11.65  | 11.65  | M5x6   | 5      | 5      |
| 25     | 45     | 18     | 13     | 60     | 12.5   | 12.5   | M8x10  | 13.5   | 5      |
| 30     | 60     | 20     | 8      | 63     | 10.5   | 15.5   | M10x12 | 5      | 5      |
| 35     | 68     | 25     | 9      | 72     | 16     | 16     | M10x12 | 5      | 5      |
| 45     | 90     | 26     | 9      | 81     | 20     | 20     | M10x15 | 5      | 17     |
| 50     | 108    | 30     | 9      | 81     | 21.5   | 21.5   | M10x15 | 5      | 5      |
| 50     | 108    | 30     | 9      | 81     | 15     | 15     | M10x15 | 20     | 17     |

# FRCCMAN LT Manual Clamping Element for Round

Simple and reliable, this clamping element is manually controlled.

By acting on the adjustable locking lever, the contact profiles press with sync on the surfaces of the bar.

The floating profiles of contact ensure a symmetrical distribution of the force on the round bar or guide.

New ergonomic design.

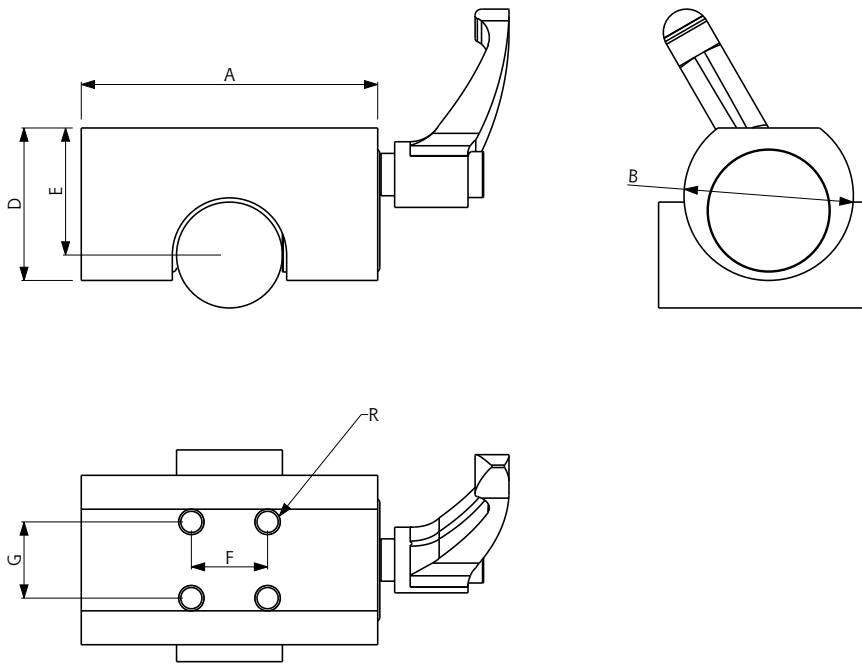
FRCCMAN## LT



## Guide size      **12 ÷ 50**  
 Working type      **Manual**  
 Body                 **Steel**

- ◆ **Simple and inexpensive**
- ◆ **Floating locking contacts**

| Type       | Ø guide | Clamping Force [N] | A [mm] | B [mm] |
|------------|---------|--------------------|--------|--------|
| FRCCMAN LT | 12      | 1200               | 43     | 30     |
| FRCCMAN LT | 16      | 1200               | 47     | 30     |
| FRCCMAN LT | 20      | 1200               | 60     | 32     |
| FRCCMAN LT | 25      | 1200               | 70     | 40     |
| FRCCMAN LT | 30      | 2000               | 90     | 45     |
| FRCCMAN LT | 40      | 2000               | 107    | 58     |
| FRCCMAN LT | 50      | 2000               | 130    | 65     |



| D<br>[mm] | E<br>[mm] | F<br>[mm] | G<br>[mm] | R      |
|-----------|-----------|-----------|-----------|--------|
| 24        | 18        | 17        | 17        | M4x5   |
| 26        | 22        | 17        | 17        | M4x5   |
| 28        | 25        | 15        | 15        | M5X6   |
| 36        | 30        | 18        | 18        | M6x8   |
| 41        | 35        | 20        | 20        | M6x8   |
| 51        | 45        | 25        | 25        | M10x15 |
| 55        | 50        | 30        | 30        | M14x20 |

# FRCBS Braking Element For Rods

The body of the element made in anodized aluminium improve the mechanical properties of this device.

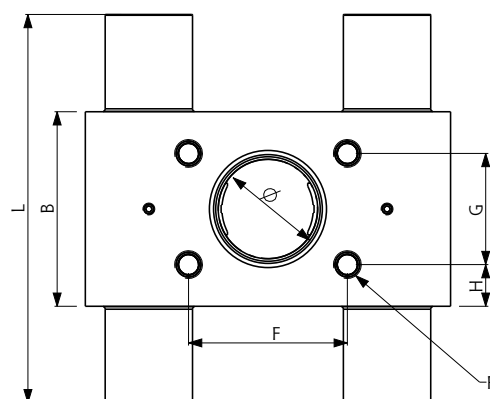
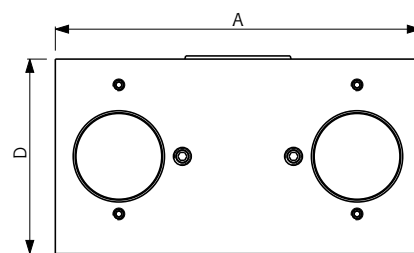
The double piston system produces clamping forces that are 50% higher than the normal mechanism, maintaining a limited size.

FRCBS##SE  
FRCBS##DE

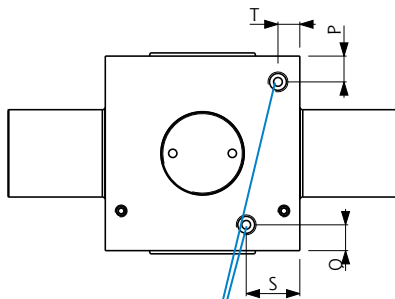


## Rod diameter **16 ÷ 25**  
 Working type **Norm. Open**  
 Body **Anodized aluminum**  
 Operating Temp. **-20°C ÷ 80°C**  
 Operating Pressure **5,5 ÷ 8 bar**

- ◆ Compact in size
- ◆ Functioning in both directions
- ◆ High clamping force thanks to a double piston system



| Type  | Ø guide | Clamping Force [N] |      |      |      | A [mm] | B [mm] |
|-------|---------|--------------------|------|------|------|--------|--------|
|       |         | SEM                | SE   | DE   | DEM  |        |        |
| FRCBS | 16      | 1200               | 1600 | 1600 | 2800 | 83     | 49     |
| FRCBS | 20      | 1200               | 1800 | 1800 | 3000 | 87     | 49     |
| FRCBS | 25      | 1500               | 2000 | 2000 | 3500 | 92     | 49     |


**M5**
**AIR CONNECTION**

we recommend  
the use of compressed  
air hose  $\varnothing 6 \times 4$

**FRCBS##SEM**  
**FRCBS##DEM**


|                    |                          |
|--------------------|--------------------------|
| ## Rod diameter    | <b>16 ÷ 25</b>           |
| Working type       | <b>Norm. Closed</b>      |
| Body               | <b>Anodized aluminum</b> |
| Operating Temp.    | <b>-20°C ÷ 80°C</b>      |
| Operating Pressure | <b>5,5 ÷ 8 bar</b>       |

- ◆ **Compact in size**
- ◆ **Double piston system**
- ◆ **Used to block guided loads in case of pressure drop (emergency situations)**
- ◆ **The clamping force operates in both directions**

| D [mm] | F [mm] | G [mm] | H [mm] | L [mm] | P [mm] | Q [mm] | R    | S [mm] | T [mm] |
|--------|--------|--------|--------|--------|--------|--------|------|--------|--------|
| 49     | 40     | 28     | 10.5   | 98     | 6.5    | 6.5    | M6x6 | 13.5   | 5.5    |
| 49     | 40     | 28     | 10.5   | 98     | 6.5    | 6.5    | M6x6 | 13.5   | 5.5    |
| 49     | 40     | 28     | 10.5   | 98     | 6.5    | 6.5    | M6x6 | 13.5   | 5.5    |

## ERRE.DI. Automation also provides special elements to best meet customers' needs

Thanks to its advanced technical know-how and a continuous process of innovation, ERRE.DI. is able to provide customized automation components to best meet its customers' needs, creating a real partnership during the development of new solutions.

Design, manufacturing and testing are carried out within ERRE.DI. facilities in order to give a quick and effective response to customers' requests. Here below some examples of customized solutions.

# FRCMV Multifunction Element

FRCMV##SE  
FRCMV##DE

FRCMV##SEM  
FRCMV##DEM

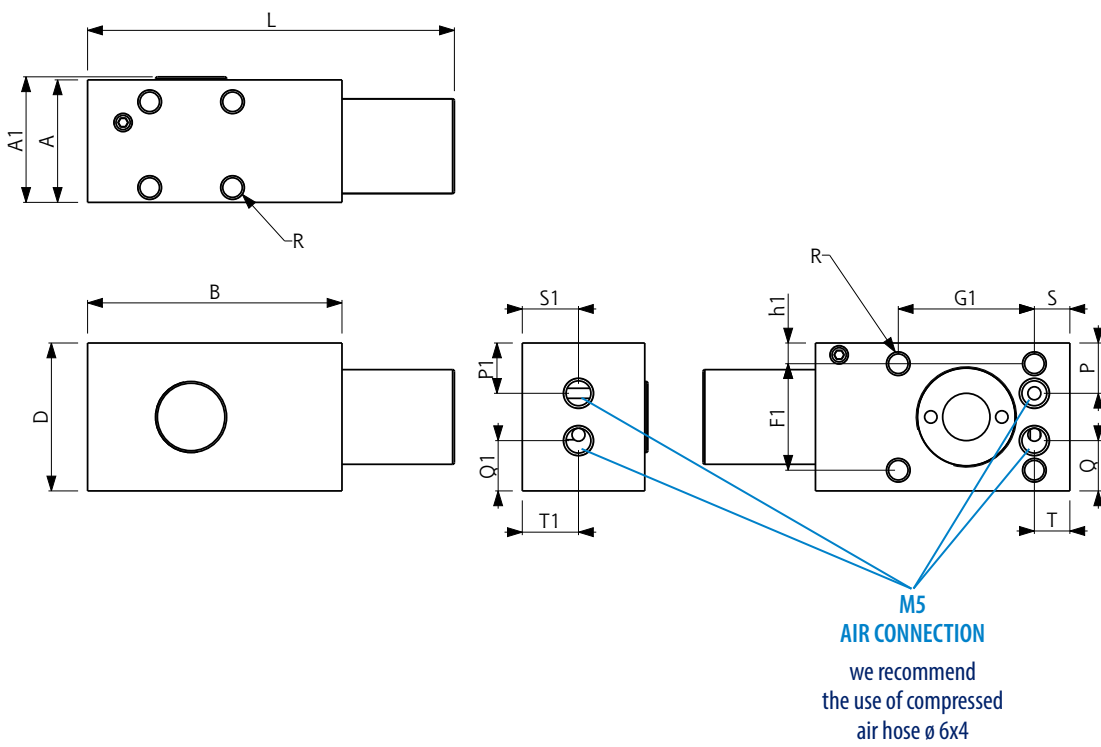


## Size **15**  
Working type **Norm. Open**  
Body **Steel/Aluminum**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

## Size **15**  
Working type **Norm. Closed**  
Body **Steel/Aluminum**  
Operating Temp. **-20°C ÷ 80°C**  
Operating Pressure **5,5 ÷ 8 bar**

- ◆ Small dimensions
- ◆ Multiple ways to use
- ◆ Different fields of application
- ◆ Also available with the contact elements covered with rubber

| Type  | Size | Clamping Force [N] |     |     |     | A [mm] | A1 [mm] | B [mm] | D [mm] | F [mm] | F1 [mm] | G [mm] |
|-------|------|--------------------|-----|-----|-----|--------|---------|--------|--------|--------|---------|--------|
|       |      | SEM                | SE  | DE  | DEM |        |         |        |        |        |         |        |
| FRCMV | 15   | 200                | 320 | 320 | 520 | 20.7   | 21.22   | 43     | 25     | 14.5   | 18      | 14     |



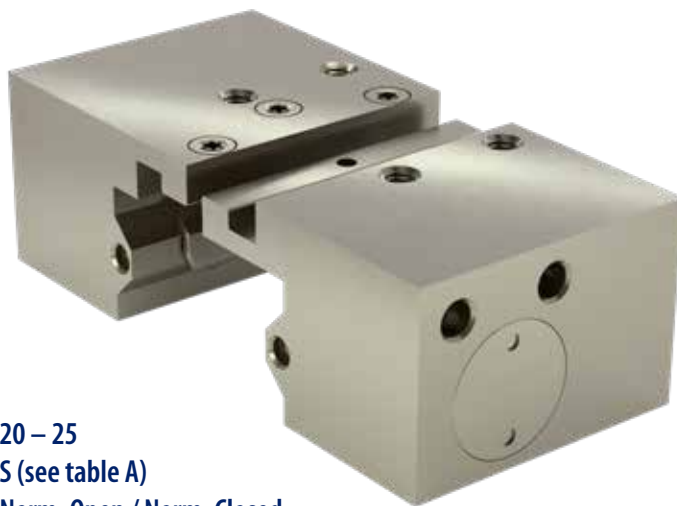
| G1 [mm] | H [mm] | h [mm] | h1 [mm] | L [mm] | P [mm] | Q [mm] | R    | S [mm] | T [mm] | P1 [mm] | Q1 [mm] | S1 [mm] | T1 [mm] |
|---------|--------|--------|---------|--------|--------|--------|------|--------|--------|---------|---------|---------|---------|
| 23      | 10.5   | 2.5    | 3.5     | 62     | 8.5    | 8.5    | M4X4 | 6      | 6      | 8.5     | 8.5     | 9.5     | 9.5     |

# FRC\_SP Decomposable Clamping Element

It's a small element, extremely easy to install and/or replace in the system where is used:

- Fewer parts of the production machine need to be displaced;
- No need to slide the blocking element along the whole length of the guide.

FRC##S01SE\_SP  
FRC##S01SEM\_SP

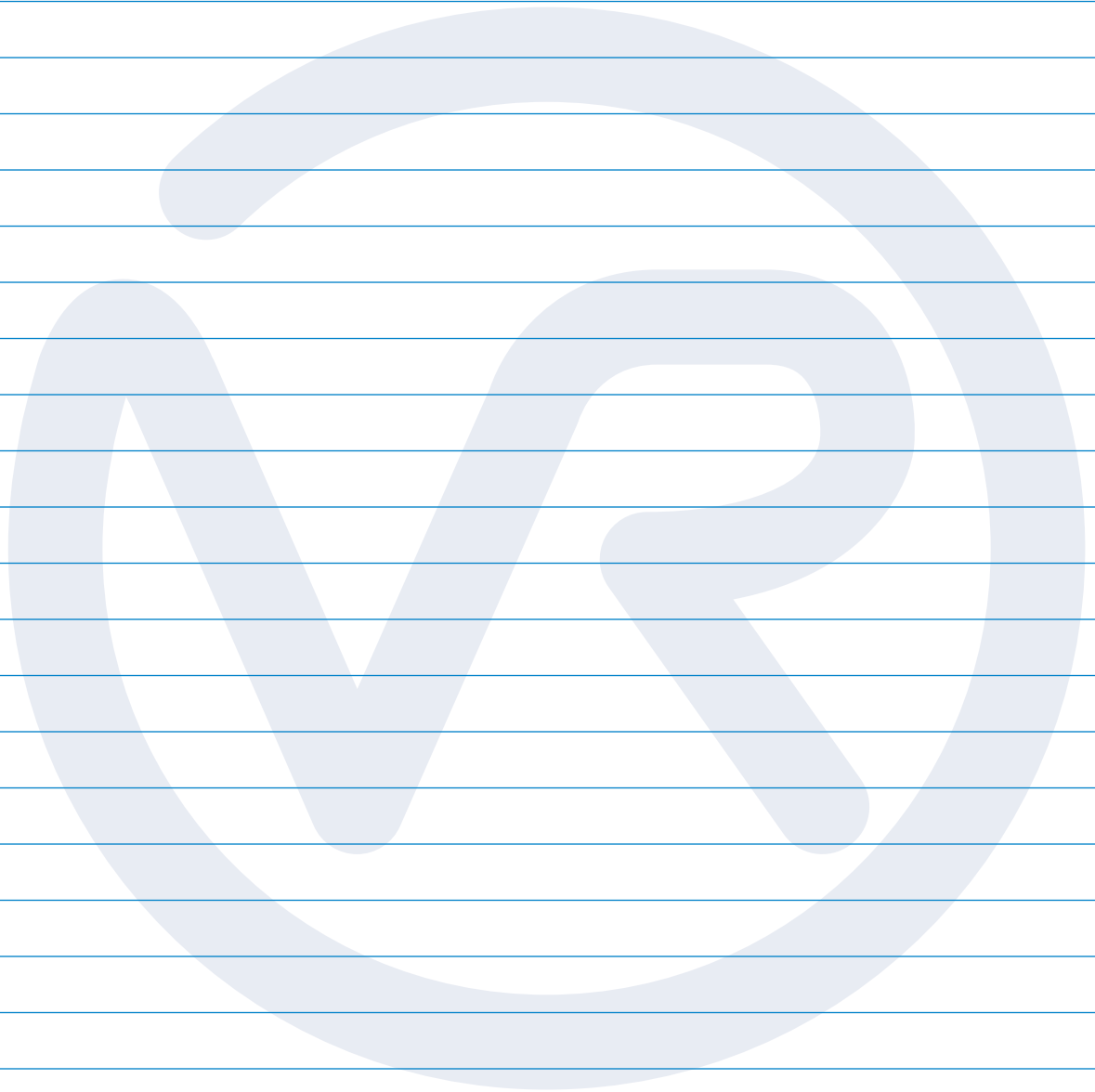


|                    |                           |
|--------------------|---------------------------|
| ## Guide size      | 20 – 25                   |
| \$ Guide type      | S (see table A)           |
| Working type       | Norm. Open / Norm. Closed |
| Body               | Steel                     |
| Operating Temp.    | -20°C ÷ 80°C              |
| Operating Pressure | 5,5 ÷ 8 bar               |

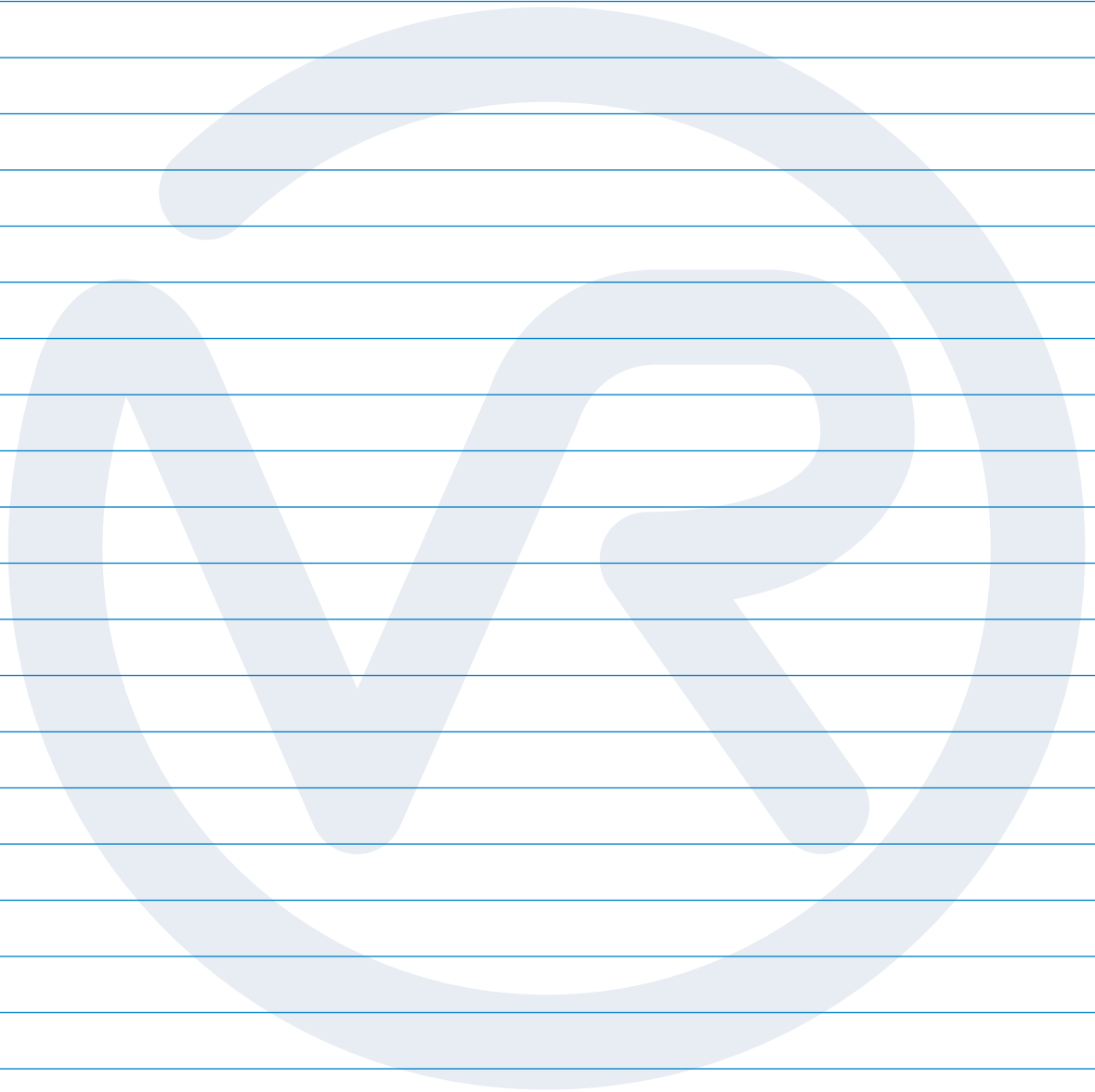
- ◆ Single-piston system
- ◆ Reduced length
- ◆ High clamping forces
- ◆ Precise positioning
- ◆ High rigidity
- ◆ Shaped profile



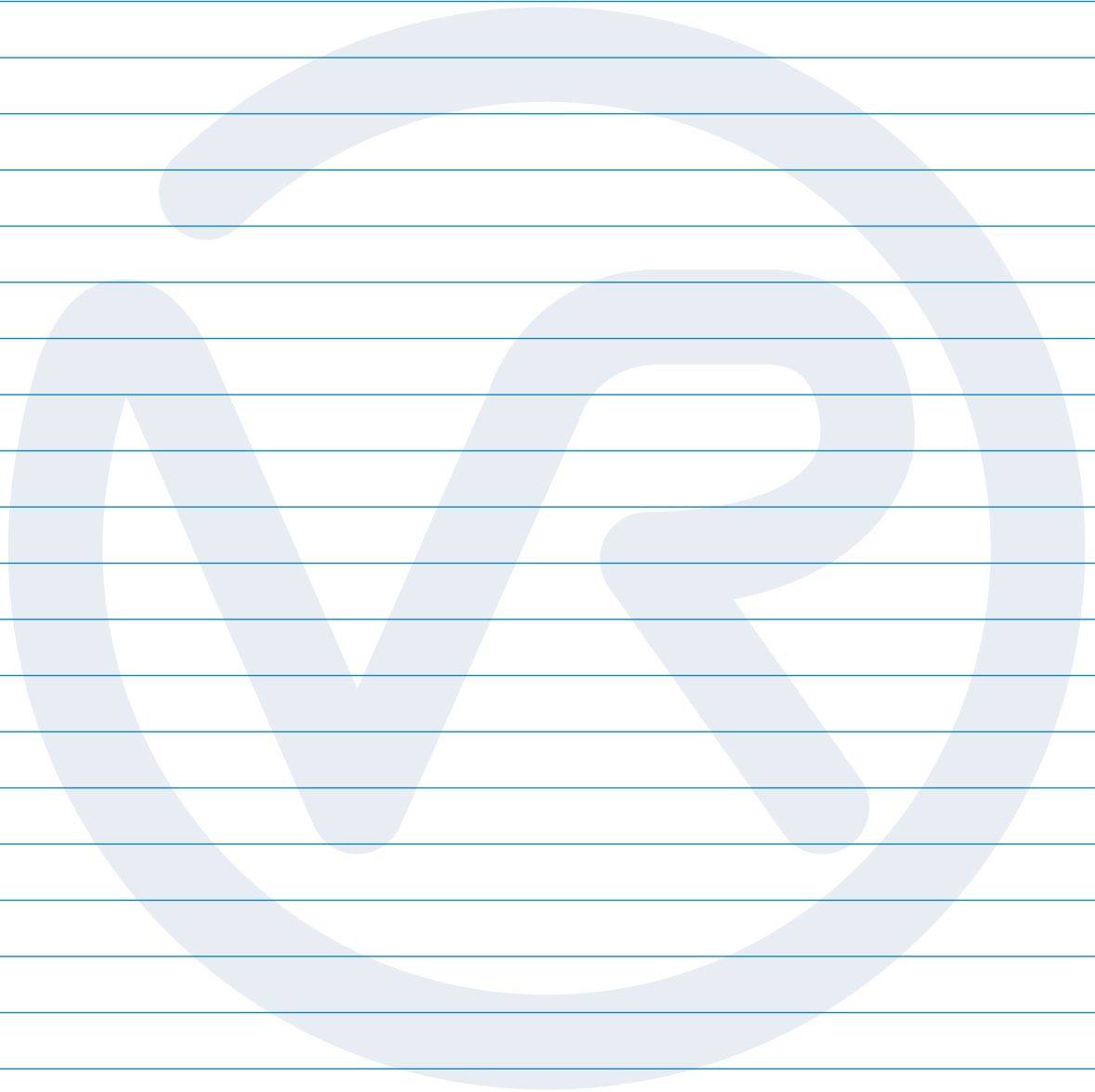
# Note



# Note



# Note





**ERRE.DI. s.r.l.**

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