CLAMPING AND BRAKING ELEMENTS FOR LINEAR GUIDES AND RODS

PNEUMATIC AND MANUAL UNITS

2022/2023

VR 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 meets the markets 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 and 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

Following 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 (M or D 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

Genere prodotto:
Product designation
SISTEMI DI BLOCCAGGIO E FRENATURA

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

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

Norme armonizzate di riferimento:
Reference harmonized standard
- 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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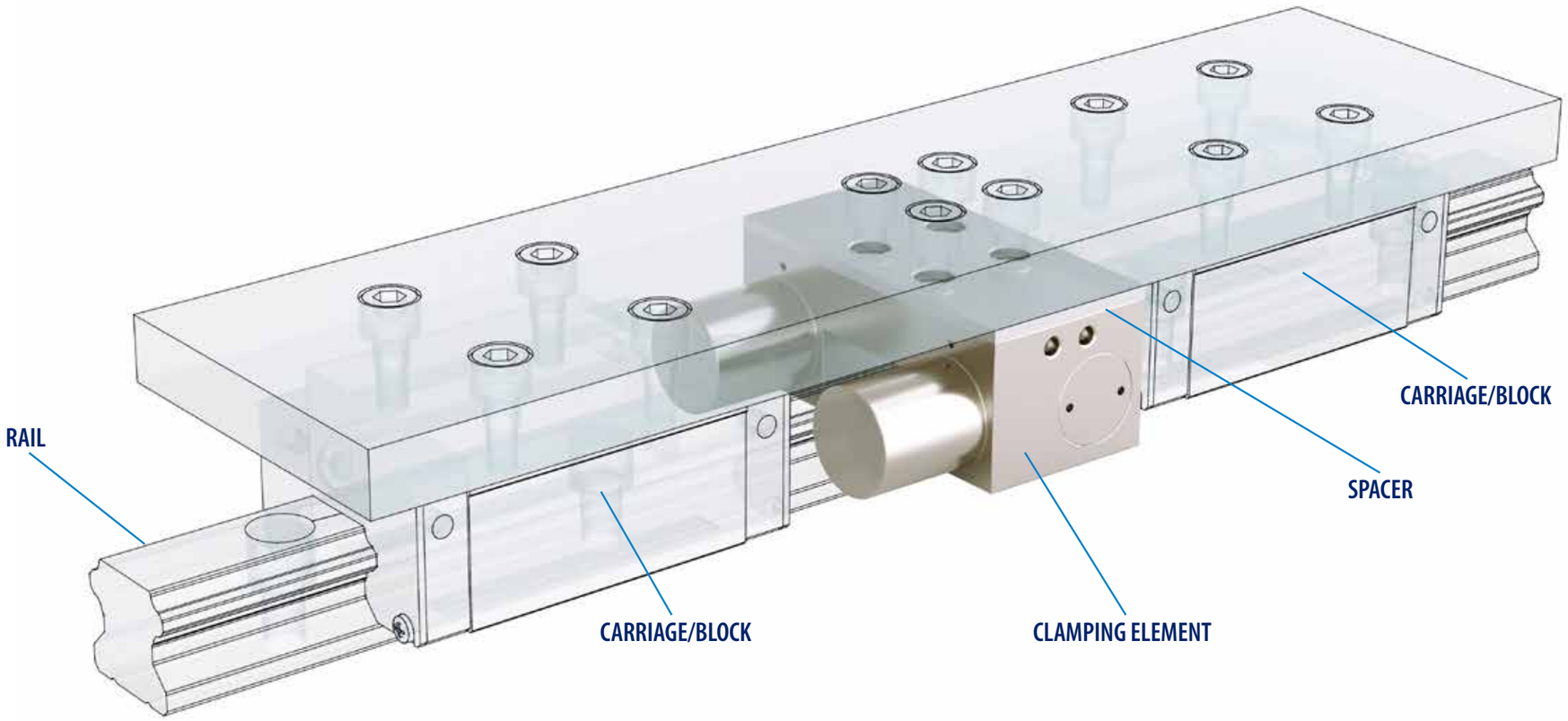
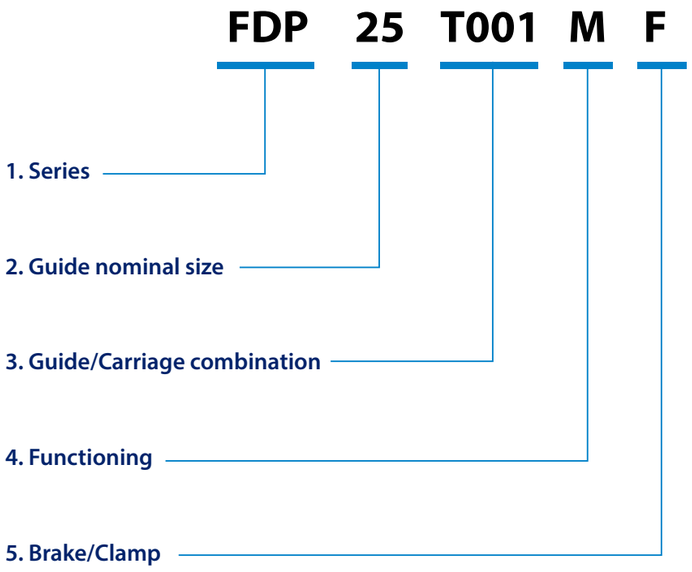
TÜV®

NOMENCLATURE

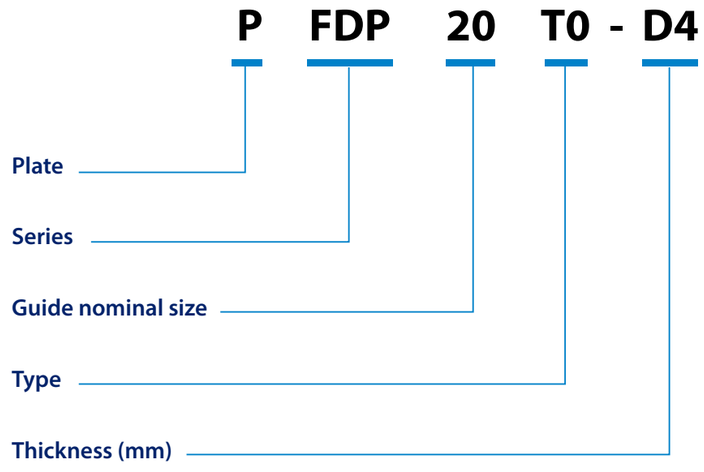


Codes for clamping and braking elements are composed as follows:



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:



NOMENCLATURE

1.

Series codes are the following:

F	**FDI**	**FBS**
FC	**FMC**	**FBC**
FDP	**FMCE**	**FMN-M**
FDPH	**FMN**	
FDPM	**FCMN**	

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 Guide/Carriage combination identifies the clamping element associated with the guide/carriage

4.

The code of the Pneumatic functioning type parameter is the following:

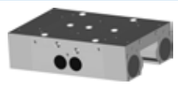
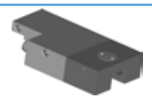
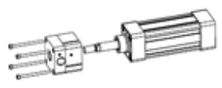
S	Normally open – Air to close
M	Normally closed – Air to open
E	Normally open – Air to close and to open
D	Normally closed – Air to open and to close

5.

The Working type parameter defines the clamping element:

F	Dynamic braking element (otherwise it is clamping).
S	Whit sensor integration of a proximity sensor in order to verify the opening status of the element. The sensor is an inductive sensor in cylindrical stainless steel housing M8 (PNP or NPN). It comes with a connector and a cable. Working temperature: -25°C ÷ +75°C.
P	Element working with pressure less than 6 bar, but more than 4.5 bar
Q	Element working with pressure from 4.5 bar to 4 bar
R	Element working with pressure less than 4 bar

PRODUCTS INDEX

	SERIES	CHARACTERISTICS	FUNCTIONING	NORMALLY CLOSED	BRAKING	SENSOR	PAG.
ELEMENTS FOR LINEAR GUIDES	 **F**	STANDARD CLAMPING ELEMENT GREAT HOLDING FORCE/DIMENSION RATIO	PNEUMATIC	YES	YES	YES	10
	 **FDP**	DOUBLE PISTON SYSTEM. HIGH HOLDING FORCE SMALL DIMENSIONS	PNEUMATIC	YES	YES	YES	12
	 **FDPH**	POWERED DOUBLE PISTON SYSTEM EXTREMELY HIGH HOLDING FORCE SMALL DIMENSIONS	PNEUMATIC	YES	YES	YES	14
	 **FDPM**	CLAMPING AND BRAKING ELEMENT HIGH CLAMPING FORCE SHAPED PROFILE	PNEUMATIC	YES	YES	YES	16
	 **FDI**	CLAMPING AND BRAKING ELEMENT WITH INTEGRATED SPRINGS FURTHER INCREASE OF CLAMPING FORCE COMPARED TO FDPM	PNEUMATIC	YES	YES	YES	18
	 **FMC**	MONOCYLINDER CLAMPING AND BRAKING ELEMEN. HIGH CLAMPING FORCE. SHAPED PROFILE	PNEUMATIC	YES	YES	YES	20
	 **FMCE**	ELECTRIC CLAMPING ELEMENT	ELECTRIC	YES	NO	YES	22
	 **FMN**	MANUAL ELEMENT PRACTICAL AND RELIABLE NEW ERGONOMIC DESIGN	MANUAL	NO	NO	NO	24
	 **FMN-M**	MANUAL ELEMENT FOR MINIATURE GUIDE PRACTICAL AND RELIABLE NEW ERGONOMIC DESIGN	MANUAL	NO	NO	NO	26
ELEMENTS FOR ROUND GUIDES AND RODS	 **FC**	SAME HIGH PERFORMANCES AS F SERIES FOR ROUND GUIDES	PNEUMATIC	YES	YES	YES	28
	 **FCMN**	MANUAL ELEMENT FOR ROUND GUIDES PRACTICAL AND RELIABLE NEW ERGONOMIC DESIGN	MANUAL	NO	NO	NO	30
	 **FBS**	DOUBLE PISTON SYSTEM HIGH HOLDING FORCE FOR ROUND GUIDES	PNEUMATIC	YES	YES	YES	32
	 **FBC**	CYLINDER BLOCKING ELEMENT HIGH HOLDING FORCE FOR LINEAR GUIDES AND RODS OF PNEUMATIC CYLINDERS	PNEUMATIC	YES	YES	YES	34
SPECIAL ELEMENTS	 **FMV**	CLAMPING SYSTEM WITH ONLY ONE CONTACT ELEMENT SMALL DIMENSIONS DIFFERENT MODES OF USE	PNEUMATIC	YES	YES	YES	36
	 **F_SP**	EASY TO ASSEMBLE THANKS TO THE DECOMPOSABLE SYSTEM INDEPENDENT PISTON SYSTEM SHAPED PROFILE	PNEUMATIC	YES	NO	NO	38

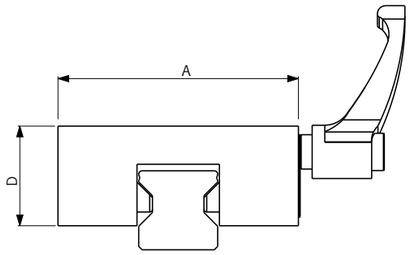
FMN Series - Manual clamping element for linear guides

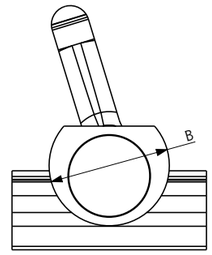
Simple and reliable, this clamping element is manually controlled.
By acting on the adjustable locking lever, the contact profiles press with sync on the surfaces of the rail.
The floating profiles of contact ensure a symmetrical distribution of the force on the linear guide.
New ergonomic design.

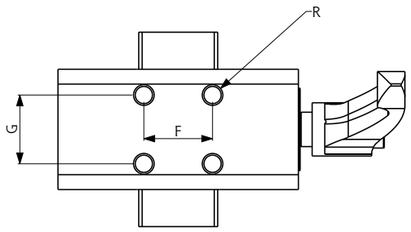
FMN ##---

## Guide size	**15 ÷ 65 mm**
Working type	**Manual**
Body	**Steel**

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







Type	Size	Clamping Force [N]	A [mm]	B [mm]	D [mm]	F [mm]	G [mm]	R
FMN	15 S	1200	47	25	19	17	17	M4x5
FMN	15 T	1200	47	25	17.5	17	17	M4x5
FMN	20 S	1200	60	28	23	15	15	M5X6
FMN	20 T	1200	60	26	20	15	15	M5X6
FMN	25 S	1200	70	35	29	20	20	M6x7
FMN	25 T	1200	70	32	24	20	20	M6x8
FMN	30 S	2000	90	40	32	22	22	M6x8
FMN	30 T	2000	90	38	29	22	22	M6x8
FMN	35 S	2000	98	45	37	24	24	M8x10
FMN	35 T	2000	98	42	32	24	24	M8x10
FMN	45 S	2000	118	55	48	26	26	M10x14
FMN	45 T	2000	118	50	42	26	26	M10x14
FMN	55 S	2000	138	65	57.8	30	30	M14x16
FMN	55 T	2000	138	56	47	30	30	M14x16
FMN	65 T	2000	160	70	58	35	35	M16x20