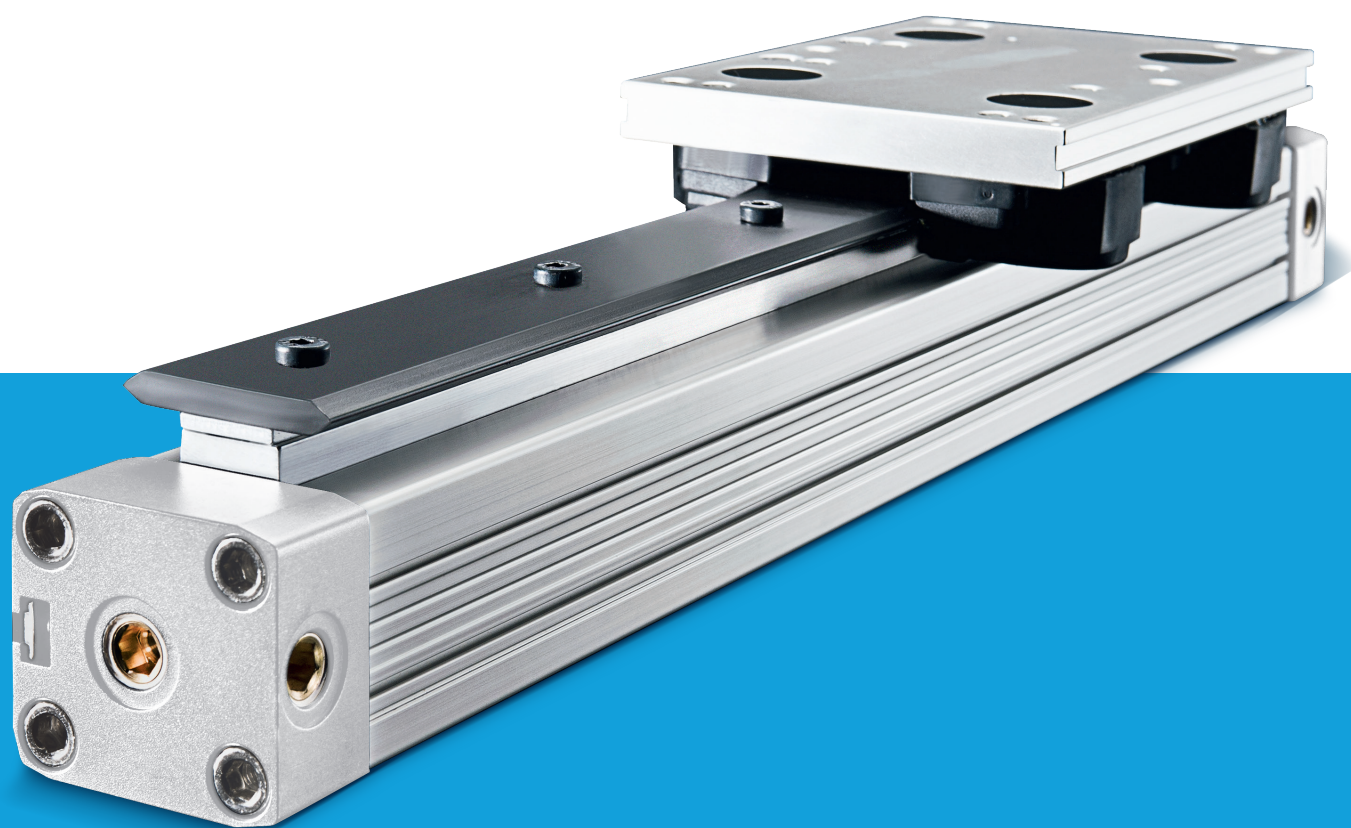


04_05.

SERIE R1F CON GUIDA A RULLI **R1F SERIES WITH ROLLER GUIDE**



Questo sistema lineare estremamente robusto della serie R1F 25-50 è stato sviluppato appositamente per l'uso nella macchina utensile e industrie di robotica. Il movimento forza migliore per questa serie è il nostro collaudato cilindro senza stelo Ø 25-50mm.

This extremely robust linear system typical of the R1F 25-50 series R1F 25-50 has been especially developed for use in the machine tool and robotics industries. The force in this guide refers to our proven rodless cylinder Ø 25-50 mm.

BENEFICI | BENEFITS

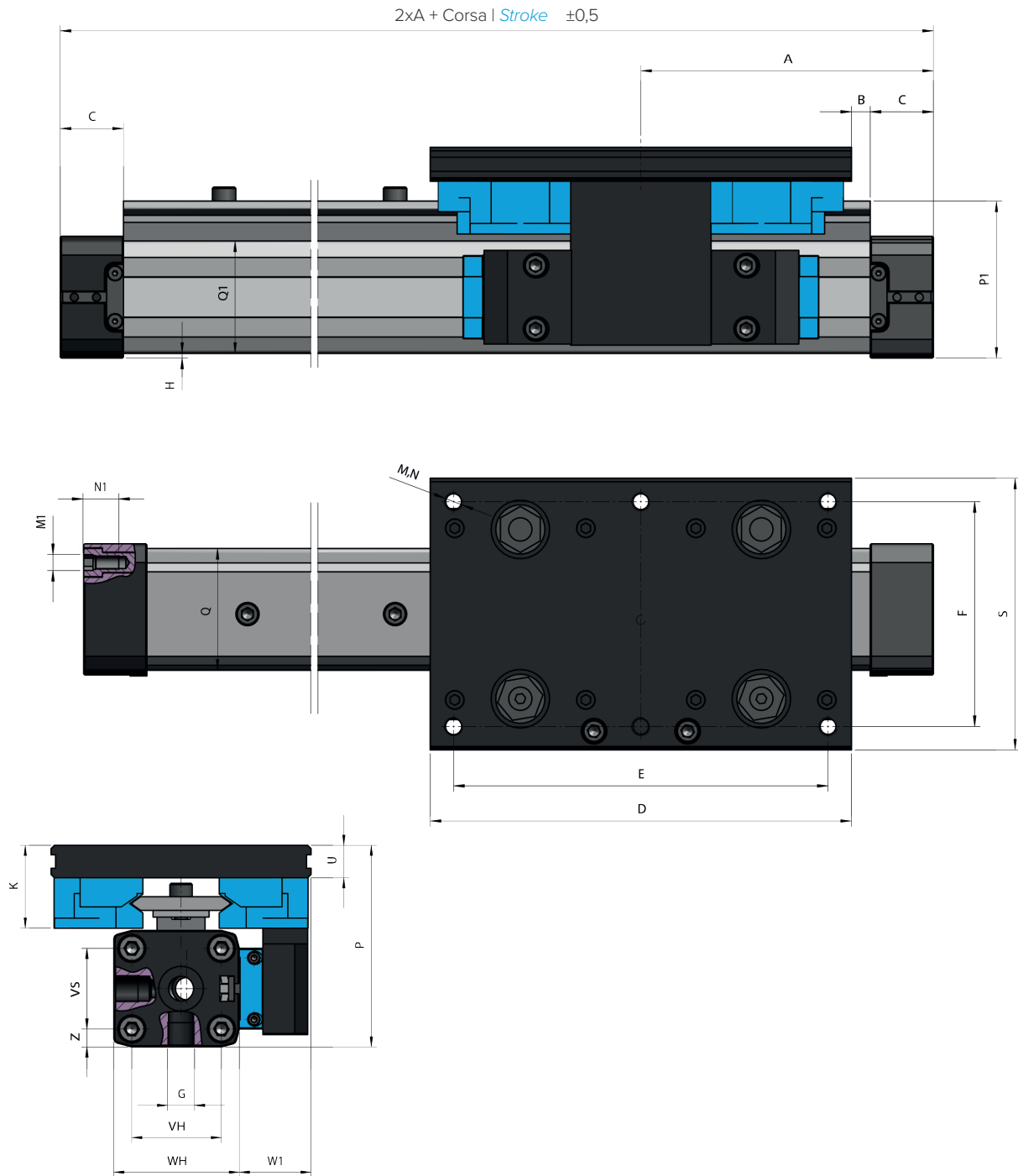
- Scivolo distanziatore in acciaio solido con superfici di scorrimento a V resistenti all'usura
- Piastra di trasporto in alluminio, cuscinetti a doppia fila che garantiscono un utilizzo senza problemi
- Le guarnizioni del cappuccio montate impediscono l'ingresso di sporczia e garantiscono una costante lubrificazione
- Funzionamento silenzioso

- *Solid Steel Spacer Slide with Hard wearing Vee running surfaces*
- *Aluminium carriage plate, double-row bearings for long and trouble free life*
- *Fitted cap seals prevent dirt ingress and ensure constant positive lubrication*
- *Silent working times*

CARATTERISTICHE TECNICHE | TECHNICAL DATA

Design	Cilindro senza stelo, doppio effetto, trasmissione diretta	Design	<i>Rodless cylinder, double acting, direct force transmission</i>
Corse		Strokes	
ø 25-50 mm	100-5700 mm, con incrementi di 1mm (corse più lunghe disponibili su richiesta)	ø 25-50 mm	<i>100-5700mm, possible increments of 1mm (longer strokes on request)</i>
Attacco	(M5, G1/8", G1/4", G3/8")	Air inlet	<i>(M5, G1/8", G1/4", G3/8")</i>
Montaggio	Libero	Mounting	<i>Free</i>
Forze e Momenti	Vedi Forze e Momenti	Forces + moments	<i>See Forces and moments</i>
Forze Sopportate	Vedi Diagramma di Deformazione	Support Forces	<i>See Deflection Diagram</i>
Temperature	(da -10°C a +80°C) altre temperature su richiesta	Temperatures	<i>(-10°C to +80°C) other temperatures on request</i>
Materiali		Materials	
Cilindro	Alluminio anodizzato ad alta resistenza	<i>Barre</i>	<i>High-strength anodized aluminum</i>
Tappi Terminali	Alluminio anodizzato ad alta resistenza	<i>End caps</i>	<i>High-strength anodized aluminum</i>
Asse del pistone	Alluminio anodizzato ad alta resistenza	<i>Piston axle</i>	<i>High-strength anodized aluminum</i>
Guarnizioni	Materiale sintetico resistente ai lubrificanti (V < 1m/s (NBR) (V > = 1m/s (Viton)	<i>Seals</i>	<i>Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (Viton)</i>
Nastro di tenuta	Acciaio inossidabile	<i>Sealing bands</i>	<i>Stainless steel</i>
Tappi dei pistoni	Materiale sintetico resistente all'usura	<i>Piston caps</i>	<i>Wear proof synthetic material</i>
Parti scorrevoli	Materiale sintetico resistente all'usura	<i>Sliding parts</i>	<i>Wear proof synthetic material</i>
Campo di pressione	0,5-8,0 bar	Pressure range	<i>0,5-8,0 bar</i>
Fluido	Aria compressa, filtrata max. 50µm	Medium	<i>Compressed air, filtered max. 50µm</i>

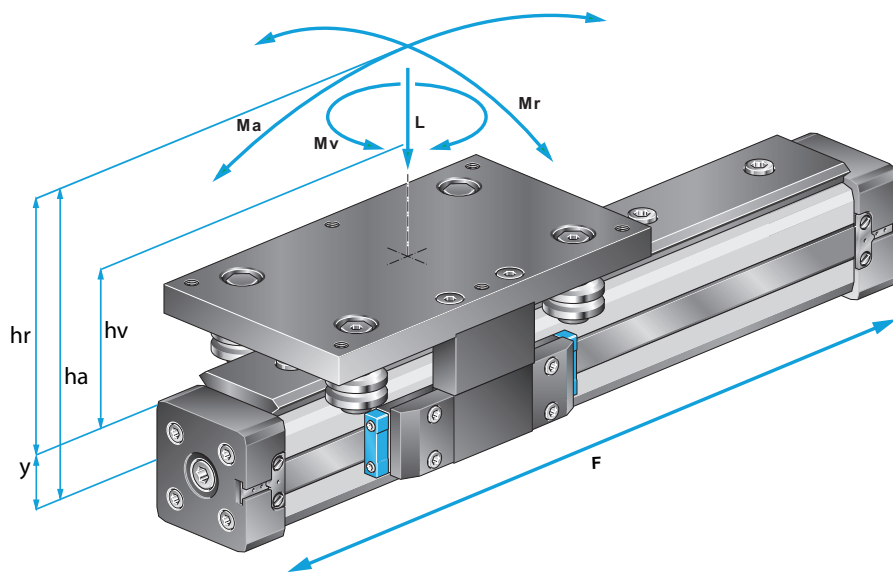
DIMENSIONI | DIMENSIONS



System	A	B	C	D	E	F	G	H	K	M	N	M1	N1
R1F025/... S2	100	9,5	23	135	120	65	1/8	2,0	29,5	M6	11	M5	10
R1F032/... S4	125	8,0	27	180	160	96	1/4	2,0	37	M8	14,5	M6	14
R1F040/... S6	150	0	30	240	216	115	1/4	6,75	39	M8	16,5	M6	17
R1F050/... S6	175	22	33	240	216	115	1/4	1,0	39	M8	16,5	M6	18

System	P	P1	Q X Q1	S	U	VH	VS	WH	W1	Z
R1F025/... S2	73,5	50,5	36 x 36	80	11	27	27	40	22	6,5
R1F032/... S4	90,0	64,5	52 x 48	116	14,5	40	36	56	32	8,0
R1F040/... S6	108,5	84,0	58,5 x 59	135	16,5	54	54	69	34,5	9,0
R1F050/... S6	122,0	97,5	77 x 78	135	16,5	70	70	80	31	5,0

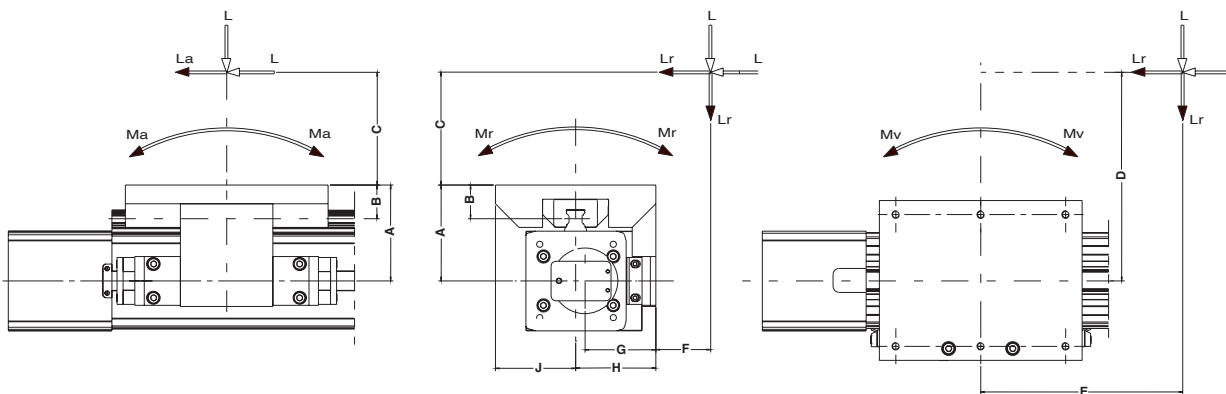
FORZE E MOMENTI | FORCES AND MOMENTS



FORMULE
FORMULAS

$$M_a = F * h_a$$

$$M_r = F * h_r$$

$$M_v = F * h_v$$


Caratteristiche	25	32	40	50	PLR - Movements	25	32	40	50
Forza (6bar) (N)	250	420	640	1000	Effect force (6 bar) (N)	250	420	640	1000
A (mm)	53,0	64,0	72,5	88,5	A (mm)	53,0	64,0	72,5	88,5
B (mm)	20,5	26,0	28	28	B (mm)	20,5	26,0	28	28
C/D/E/F (mm)	Dimensioni secondo progettazione				C/D/E/F (mm)	Dimensions according design			
G (mm)	38,0	55,5	54,5	58,5	G (mm)	38,0	55,5	54,5	58,5
H (mm)	40,0	58,0	67,5	67,5	H (mm)	40,0	58,0	67,5	67,5
J (mm)	40,0	58,0	67,5	67,5	J (mm)	40,0	58,0	67,5	67,5
Forza massima L (N)	1400	3100	3100	3100	Load forces max L (N)	1400	3100	3100	3100
Forze del momento La, Lr, Lv (N)	1400	3100	3100	3100	Moment forces max La, Lr, Lv (N)	1400	3100	3100	3100
Momenti assiali massimi Ma (Nm)	50	165	250	250	Axial moments max Ma (Nm)	50	165	250	250
Momenti radiali massimi Mr (Nm)	14	65	90	90	Radial moments max Mr (Nm)	14	65	90	90
Torsione massima Mv (Nm)	50	165	250	250	Torsion moments max Mv (Nm)	50	165	250	250

- 1. I momenti sopra menzionati (Ma max, Mr max, Mv max) sono relativi al centro del binario di guida. La forza di carico (L) è la sintesi di tutte le singole forze relative alla massa. Il centro della massa può essere posizionato all'interno o all'esterno della superficie del carrello.
- 2. Normalmente il carrello subirebbe un carico dinamico, che deve essere individuato attraverso il calcolo della forza del pistone necessaria (F) e della capacità del sistema con guida a sfere. La formula è la seguente:

$$\frac{M_a}{M_{a \max}} + \frac{M_r}{M_{r \max}} + \frac{M_v}{M_{v \max}} + \frac{L}{L_{\max}} \leq 1$$

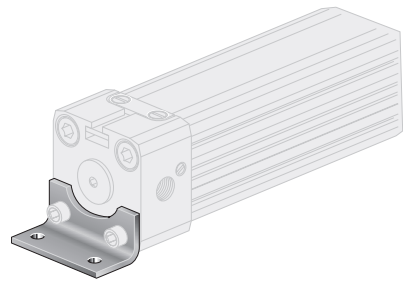
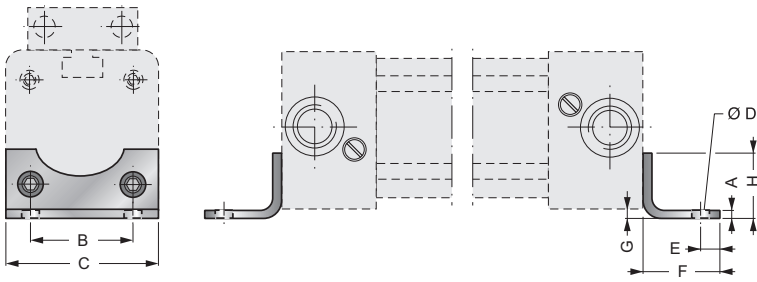
- 1. The above mentioned moments (Ma max, Mr max, Mv max) are related to the guide rail centre. The load force (L) is the summary of all single forces related to the common centre of the mass. The mass center can be placed inside or outside the surface area of the carriage.
- 2. Normally the carriage would experience a dynamic load, which has to be considered with the calculation of needed piston force (F) and capacity of the ballguided system. Use the following calculation formula:

$$\frac{M_a}{M_{a \max}} + \frac{M_r}{M_{r \max}} + \frac{M_v}{M_{v \max}} + \frac{L}{L_{\max}} \leq 1$$

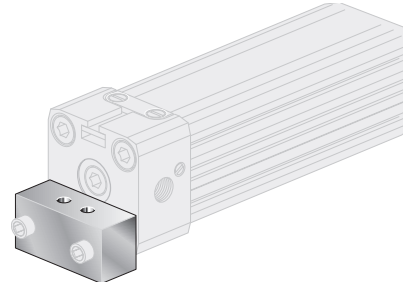
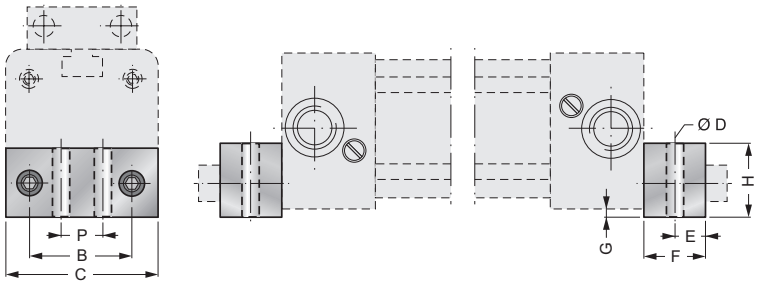
ACCESSORI | MOUNTINGS

PIEDINO | END COVER BRACKET (FOOT)

RPA25S*

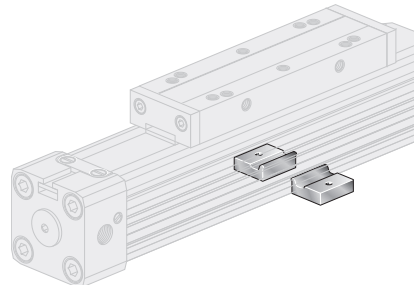
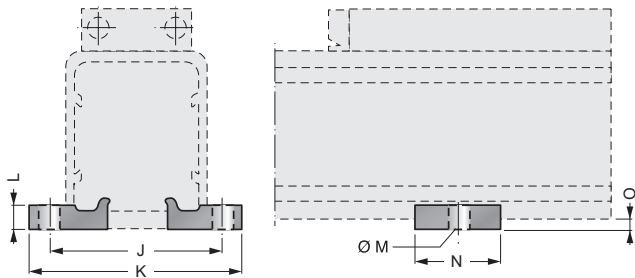


RPA32A - RPA40A - RPA50A*



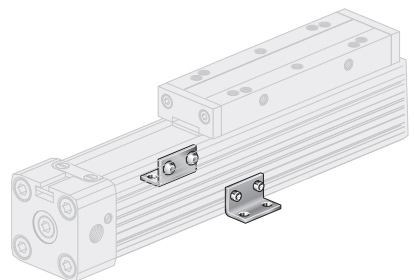
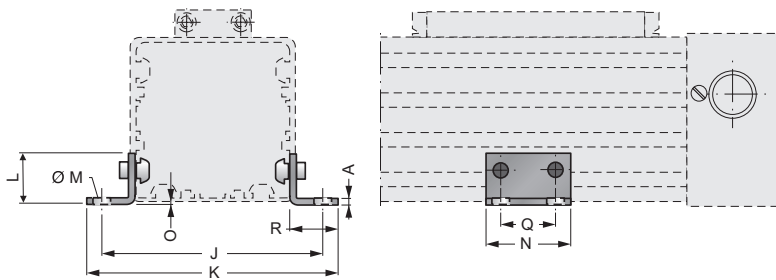
SUPPORTO CENTRALE | MID SECTION SUPPORT

RFC25A*



Ø32 versione disponibile su richiesta | *version available on request*

RFC40A - RFC50A

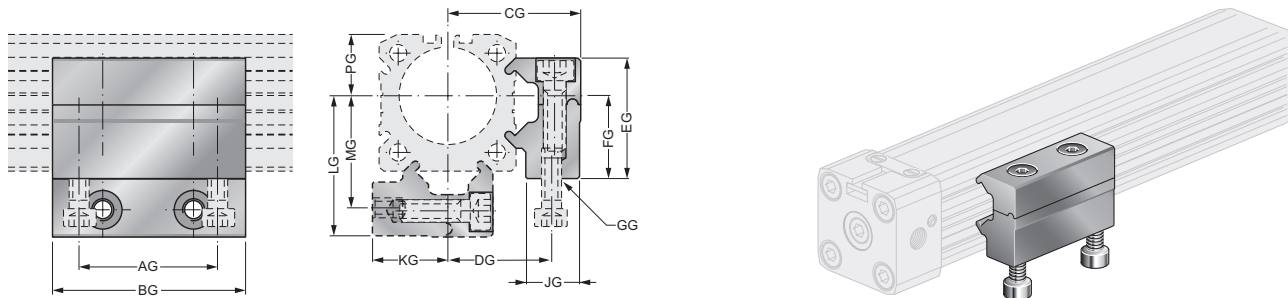


Ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	*)Applicazione Application No.	
25	2,5	27	40	5,5	6,0	22	2	18	48,5	60	6	ø5,5	20	4	-	-	-	RPA25S = ø25	RFC25A = ø25
40	5,0	54	71	9	11,5	24	2	20	90	99	25	ø4,5	45	8,5	30	30	20	RPA40A = ø40	RFC40A = ø40
50	5,0	70	80	9	12,5	25	1,0	25	123	148	35	6,5	45	1	45	30	35	RPA50A = ø50	RFC50A = ø50

ACCESSORI | MOUNTINGS

SUPPORTO CENTRALE, TIPO G | *MOBILE MID SECTION SUPPORT, G TYPE*

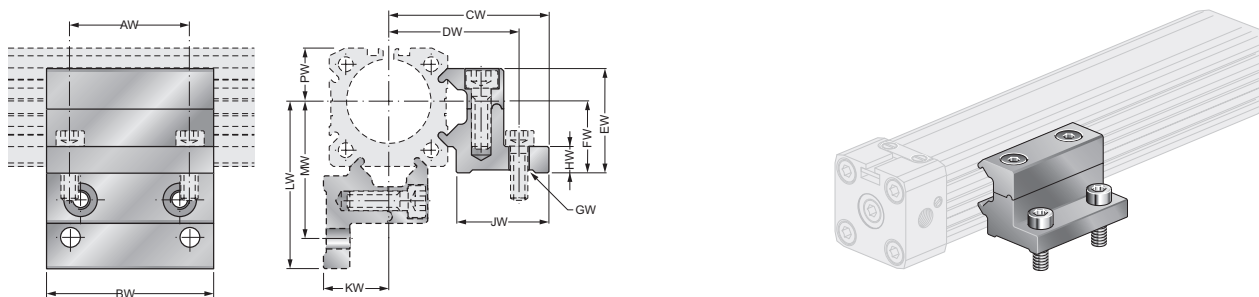
RFG25A - RFG32A



Ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
25	36,0	50,0	34,5	27,0	31,3	22,0	M5	14,0	20,0	36,5	29,0	16,0
32	36,0	50,0	41,8	34,2	39,0	30,0	M6	14,0	27,6	47,0	39,5	21,5

SUPPORTO CENTRALE, TIPO W | *MOBILE MID SECTION SUPPORT, W TYPE Ø16/25*

RFW25A - RFW32A



Ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
25	36,0	50,0	47,5	40,0	31,3	22,0	ø5,5	10,0	26,0	20,0	49,5	42,0	16,0
32	36,0	50,0	56,0	47,5	39,0	30,0	ø6,5	10,0	28,5	27,6	61,0	52,5	21,5

CILINDRO | *CYLINDER*

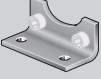
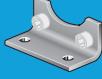


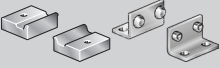
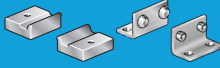
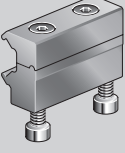
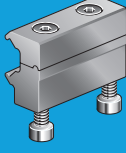
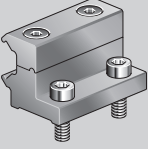
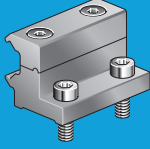
••• Dettagli per la definizione della corsa (0100-5700 mm)

••• Ident-figures for stroke definition (0100-5700 mm)

Ø 25-50MM

Tipo	Ø [mm]	Varianti	Types	Ø [mm]	Variants
R1FØ/•••	25	S2 R1F025 Standard con guida a rulli misura 25 S4 R1F025 - 032 standard con guida a rulli misura 44 S6 R1F040 - 050 standard con guida a rulli misura 60 S7 R1F050 Standard con guida a rulli misura 76	R1FØ/•••	25	S2 Standard R1F025 with roller guide size 25 S4 Standard R1F025 - 032 with roller guide size 44 S6 Standard R1F040 - 050 with roller guide size 60 S7 Standard R1F050 with roller guide size 76
	32			32	
	40			40	
	50			50	

ACCESSORI PER CILINDRI | CYLINDER MOUNTINGS

TIPO	Ø [mm]	DESCRIZIONE	TYPES	Ø [mm]	DESCRIPTION
Accessori di fissaggio			Mounting accessories		
Piedino			Foot		
RPAØS 	25	Set di montaggio RPAØS: 2 staffe 4 viti 10.9 zincate placcate acc. DIN 912	RPAØS 	25	Connection set RPAØS: 2 brackets 4 zinc-plated 10.9 screws acc. DIN 912
RPAØA 	32 40 50	Set di montaggio RPAØA: 2 staffe 4 viti 10.9 zincate placcate acc. DIN 912	RPAØA 	32 40 50	Connection set RPAØA: 2 brackets 4 zinc-plated 10.9 screws acc. DIN 912
Supporto centrale			Mid-section support		
RFCØA 	25 40 50	Set di montaggio RFCØA: Staffe del corpo Alluminio anodizzato	RFCØA 	25 40 50	Connection Set RFCØA: body brackets anodised aluminium
Supporto centrale tipo G			Mobile mid-section support G type		
RFGØA 	25 32	Colore: naturale Materiale: AL	RFGØA 	25 32	Colour: natur Material: AL
Supporto centrale tipo W			Mobile mid-section support W type		
RFWØA 	25 32	Colore: naturale Materiale: AL	RFWØA 	25 32	Colour: natur Material: AL