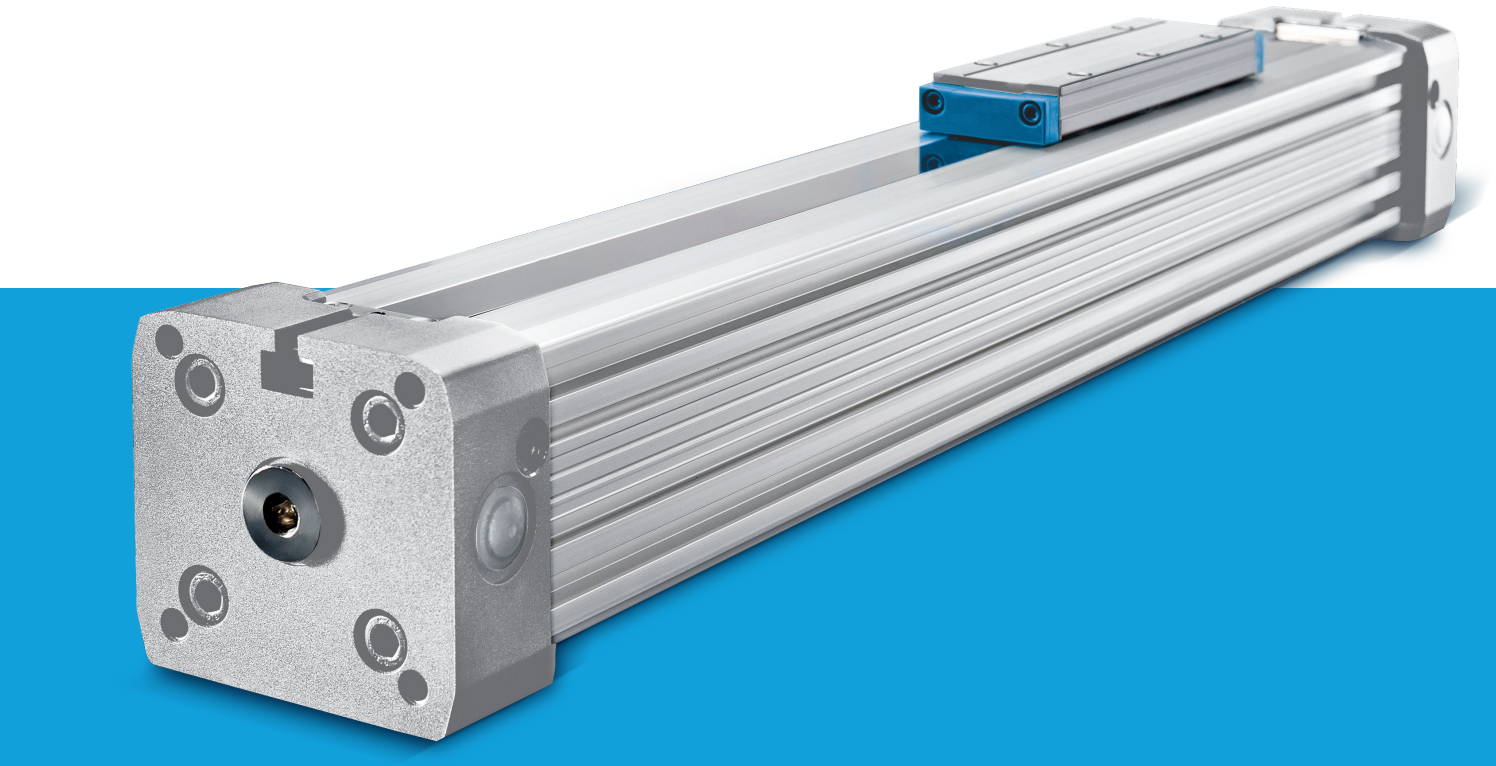
04_02.

SERIE R1B CARRELLO STANDARD
R1B-SERIES STANDARD CARRIER



Il corpo del cilindro è scanalato per tutta la sua lunghezza. La forza si trasmette attraverso il carrello di carico, che è fissato all'asse del pistone. La scanalatura dell'asse del pistone collega la sua parte interna con quella esterna.

Pertanto la trasmissione di potenza avviene in questo modo:
Aria compressa > Pistone > Asse del pistone (parte interna) > Asse del pistone (parte esterna) > Carrello di carico > Carico.
La tenuta del cilindro è garantita da una fascia interna in acciaio smerigliato. Tale fascia è mantenuta in posizione grazie alle strisce magnetiche posizionate su entrambi i lati del corpo del cilindro. È presente, inoltre, una fascia esterna in acciaio il cui scopo è proteggere l'interno del cilindro dalla polvere.

Durante il movimento del pistone, entrambe le fasce d'acciaio vengono sollevate e guidate attraverso l'asse del pistone in un canale separato. Davanti e dietro l'asse del pistone, entrambe le fasce coprono nuovamente la scanalatura in modo permanente.

The entire tube is slotted throughout its full length. The force is transmitted through the load carrier, which is attached to the piston axle. The design of the piston axle is that way that the inner part of the piston axle is connected through the slot with the outer part of it.

Therefore the force transmission runs as follows:
Air pressure > Piston area > piston axle (inner part) > piston axle (outer part) > load carrier > load.
The sealing of the cylinder slot is garanteed by a most precisely grinded inner steel band. The inner band is kept in position due to magnet stripes which are placed on both sides of the slot. In addition there is an outer steel band covering the slot in order to keep dust out of inner space of the cylinder.

During piston movement as well as during stillstand of it both steelbands are lifted right after the piston seal and led through the piston axle by means of a separate own guiding chanel. Before and behind the piston axle both bands are covering the slot permanently again.

BENEFICI | *BENEFITS*

- Forze uguali su entrambe le direzioni
- Trasmissione diretta di potenza, protetta contro la torsione
- Pistone con o senza magneti
- Risparmi di spazio del 50%
- Corse fino a 5700mm
- Tappi terminali con 3 prese d'aria e ammortizzo regolabile
- Accelerazione rapida ed elevata velocità del pistone
- Molto flessibile e di facile utilizzo
- Alimentazione ad aria non filtrata o filtrata e lubrificata **)
- Sistema di ammortizzo in 3 stadi per la protezione del sistema di ammortizzazione e di carico *)

*) Versione speciale su richiesta
**) Attenzione: prima di effettuare il passaggio dall'alimentazione ad aria filtrata a quella non filtrata, il cilindro deve essere smontato, pulito e nuovamente lubrificato prima di essere rimontato

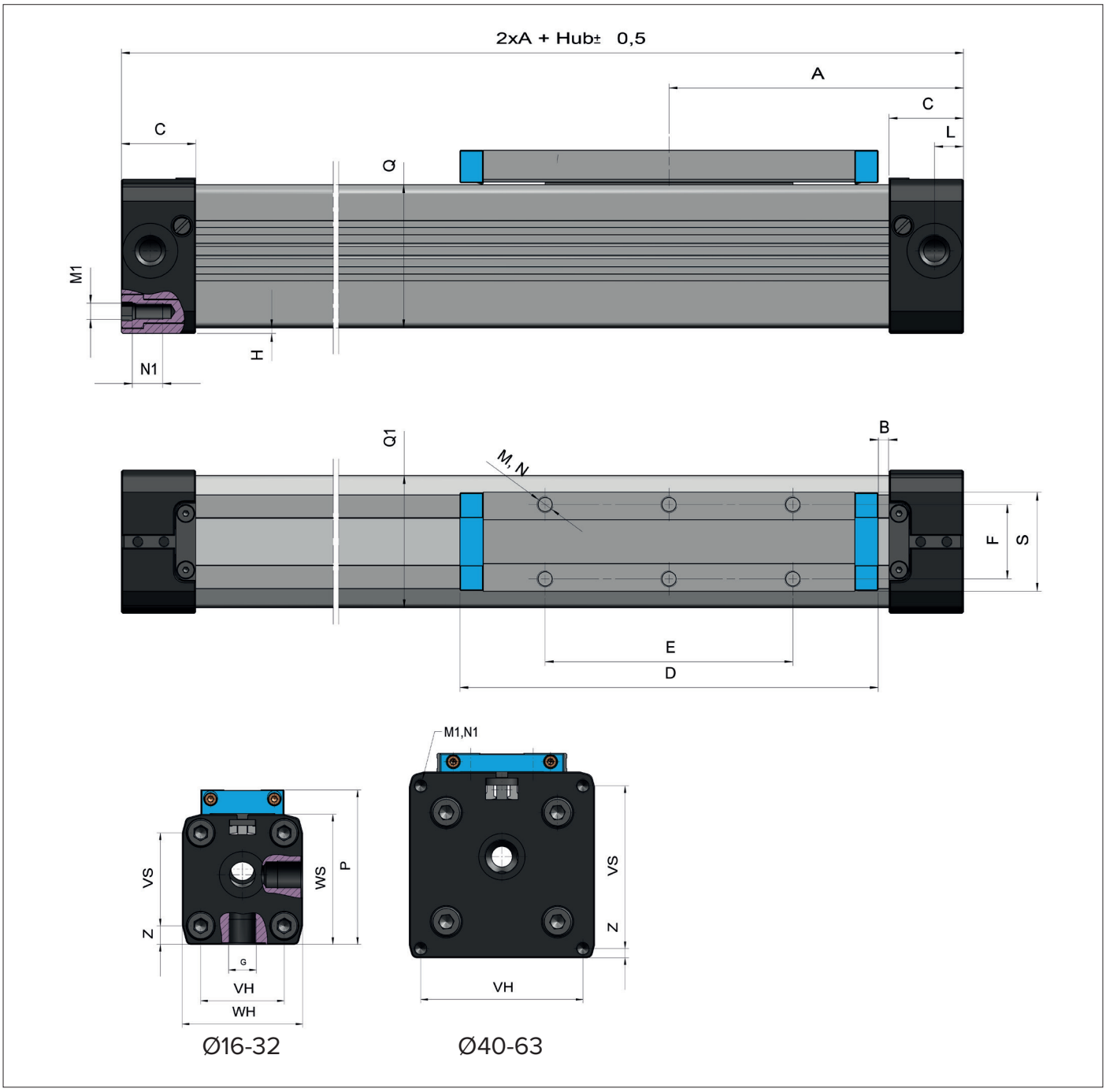
- *Equal forces on both ends of the piston*
- *Force connection direct, torque safe*
- *Piston with or without magnets*
- *50% space-savings*
- *Long strokes up to > 5700mm*
- *End caps with 3 air inlets and adjustable cushioning*
- *Fast acceleration and high piston velocity*
- *Very flexible in the user`s design*
- *Non lubricated or lubricated air supply **)*
- *3 stage cushioning characteristics for protection of the cushioning- and loadsystem *)*

**) Special Version On request*
***) Attention: Before changing operation from lubricated to nonlubricated air the cylinder has to be disassembled, cleaned, newly greased and reassembled*

CARATTERISTICHE TECNICHE | *TECHNICAL DATA*

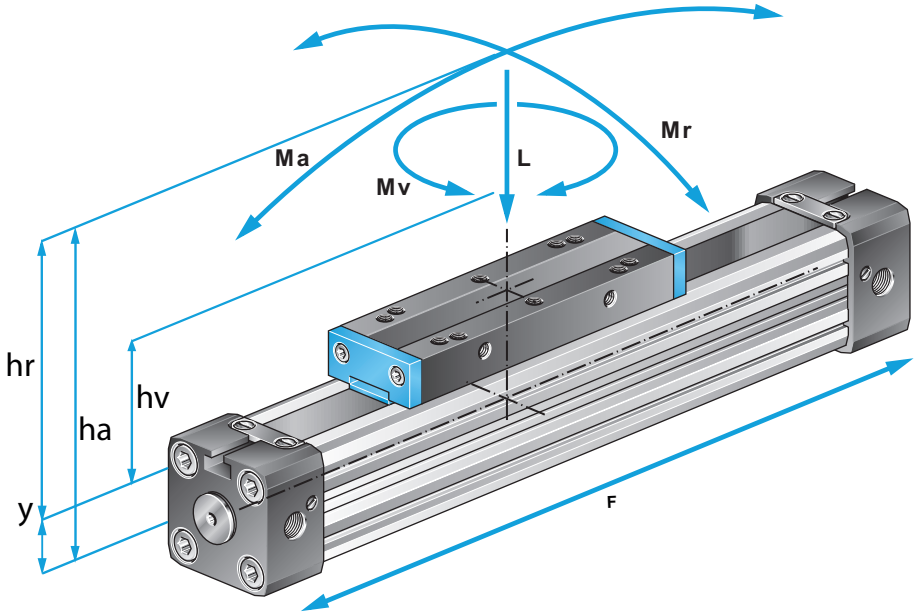
Design	Cilindro senza stelo, doppio effetto, trasmissione diretta	***Design***	*Rodless cylinder, double acting, direct force transmission*
Corse		***Strokes***	
Ø 16mm	100-4400mm con incrementi di 1mm	*ø 16 mm*	*100-4400mm, in increments of 1mm*
Ø 25-63mm	100-5700mm, con incrementi di 1mm (corse più lunghe disponibili su richiesta)	*ø 25-63 mm*	*100-5700mm, in increments of 1mm (longer strokes on request)*
Attacco	(M5, G1/8", G1/4", G3/8")	***Air inlet***	*(M5, G1/8", G1/4", G3/8")*
Montaggio	Libero	***Mounting***	*Free*
Forze e Momenti	Vedi Forze e Momenti	***Forces + moments***	*See Forces and moments*
Forze Sopportate	Vedi Diagramma di Deformazione	***Support Forces***	*See Deflection Diagram*
Temperature	(da -10°C a +80°C) altre temperature su richiesta	***Temperatures***	*(-10°C to +80°C) other temperatures on request*
Materiali		***Materials***	
Cilindro	Alluminio anodizzato ad alta resistenza	*Barrel*	*High-strength anodized aluminum*
Tappi Terminali	Alluminio anodizzato ad alta resistenza	*End caps*	*High-strength anodized aluminum*
Asse del pistone	Alluminio anodizzato ad alta resistenza	*Piston axle*	*High-strength anodized aluminum*
Guarnizioni	Materiale sintetico resistente ai lubrificanti (V < 1m/s (NBR) (V > = 1m/s (Viton)	*Seals*	*Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (Viton)*
Nastro di tenuta	Acciaio inossidabile	*Sealing bands*	*Stainless steel*
Tappi dei pistoni	Materiale sintetico resistente all'usura	*Piston caps*	*Wear proof synthetic material*
Parti scorrevoli	Materiale sintetico resistente all'usura	*Sliding parts*	*Wear proof synthetic material*
Campo di pressione	0,5-8,0 bar	***Pressure range***	*0,5-8,0 bar*
Fluido	Aria compressa, filtrata max. 50µm	***Medium***	*Compressed air, filtered max. 50µm*

DIMENSIONI | *DIMENSIONS*



Ø	A	B	C	D	E	F	G	H	L	M	M1	N	N1	P	QxQ1	S	VS	VH	WS	WH	Z
16	65	15,5	15	69	36	16,5	M5	1,0	5,5	M4	M3	7	7,0	36,5	24,5x25	22,0	18	18	27	27	4,5
25	100	21,0	23	111	65	25,0	G1/8	2,0	8,5	M5	M5	10	12	52,5	36x36	33,0	27	27	40	40	6,5
32	125	22,0	27	152	90	27,0	G1/4	2,0	10,5	M6	M6	7	14	66,5	52x51	36,0	40	36	56	52	8,0
40	150	44,0	30	152	90	27,0	G1/4	6,75	15,0	M6	M6	10	17	80,0	58,5x59	36,4	54	54	69	72	9,0
50	175	42,0	33,0	200	110	27,0	G1/4	0,5	11,7	M6	M6	6	18	88,0	77x78	56,0	70	70	80	80	4,0
63	215	47,5	50	235	155	36,0	G3/8	1,5	25,0	M8	M8	15	18	123,0	102x102	50,0	78	78	106	106	14,5

FORZE E MOMENTI | *FORCES AND MOMENTS*



FORMULE *FORMULAS*

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

Cilindro		Forza (N)	Ammortizzo	Massimo carico consentito (N)	Flessione massima consentita (Nm)		Torsione massima consentita (Nm)
		A 6 bar	(mm)	R1B	R1B		R1B
Ø	Y	F	S	L	Ma assiale	Mr radiale	Mv torcente
16	9	110	15	120	4	0,3	0,5
25	14	250	21	300	15	1	3,0
32	18	420	26	450	30	2	4,5
40	22	640	32	750	60	4	8,0
50	28	1000	32	1200	115	7	15,0
63	36	1550	40	1650	200	8	24,0

Cylinder		*Effect Force (N)*	*Cushioning*	*Max. allowed load (N)*	*Max. allowed bending moments (Nm)*		*Max. allowed torque (Nm)*
		At 6 bar	*(mm)*	*R1B*	*R1B*		*R1B*
Ø	*Y*	*F*	*S*	*L*	*Ma axial*	*Mr radial*	*Mv central*
16	*9*	*110*	*15*	*120*	*4*	*0,3*	*0,5*
25	*14*	*250*	*21*	*300*	*15*	*1*	*3,0*
32	*18*	*420*	*26*	*450*	*30*	*2*	*4,5*
40	*22*	*640*	*32*	*750*	*60*	*4*	*8,0*
50	*28*	*1000*	*32*	*1200*	*115*	*7*	*15,0*
63	*36*	*1550*	*40*	*1650*	*200*	*8*	*24,0*

Le cifre indicate si riferiscono a valori massimi basati urti leggeri e velocità di v ≤ 0,2 m/sec [serie R1A] – v ≤ 0,45 m/sec [serie R1B]. Pressione massima consentita: 6 bar.

Si consiglia di evitare qualsiasi superamento, anche minimo e per brevi istanti, dei valori indicati.

Attenzione: Le forze risultanti potrebbero superare i valori indicati. In caso di dubbio o situazioni difficilmente definibili, i valori massimi devono essere ridotti del 10-20%.

Non esitate a contattare il nostro Servizio Commerciale

The figures above are max. values based on light shock free duty and speed of v ≤ 0,2m/sec [R1A-series] – v ≤ 0,45m/sec [R1B-series]. Max. pressure 6 bar.
An exceeding of the values in dynamic operations, even for short moments, has to be avoided.

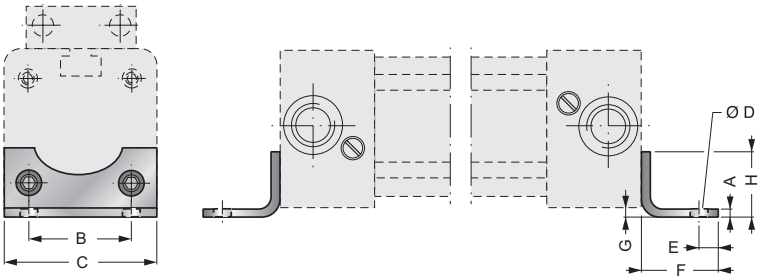
***Attention:** Resulting forces could lead to extreme exceedings of the values. In case of undefinable situations the above max. values have to be reduced by 10-20%.*

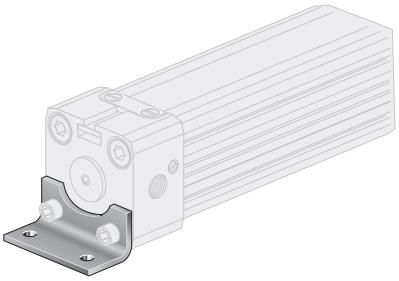
Please do not hesitate to contact our Sales Representative for further information

ACCESSORI | *MOUNTINGS*

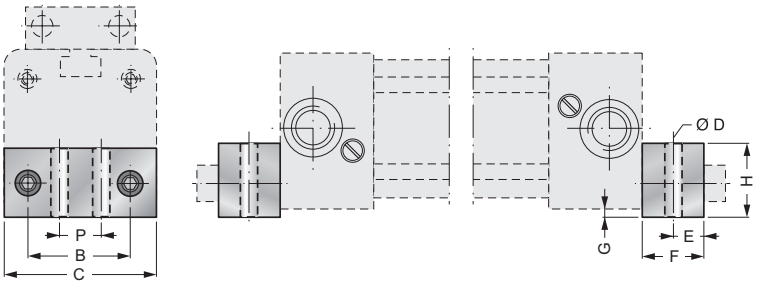
PIEDINO | *END COVER BRACKET (FOOT)*

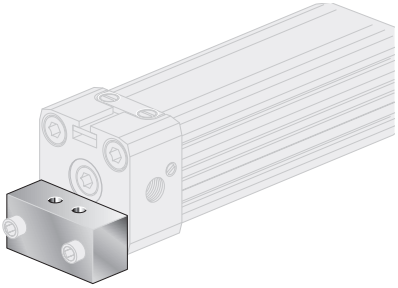
RPA16S - RPA25S*





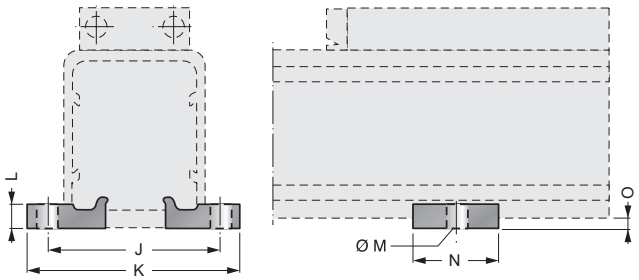
RPA32A - RPA63A*

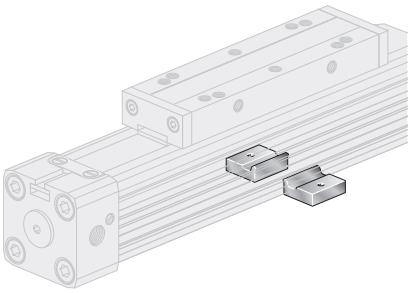




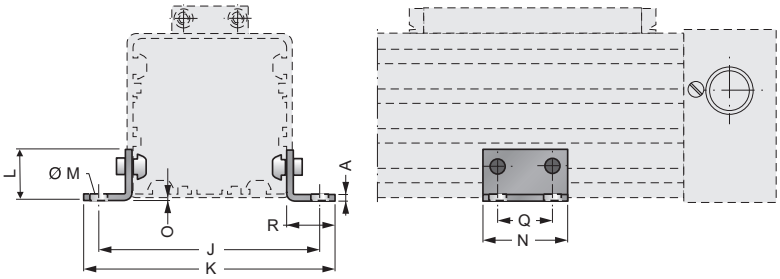
SUPPORTO CENTRALE | *MID SECTION SUPPORT*

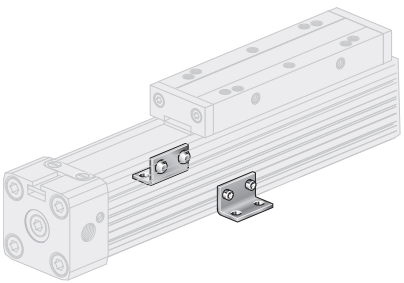
RFC16A - RFC25A*





RFC32A - RFC40A - RFC50A - RFC63A*





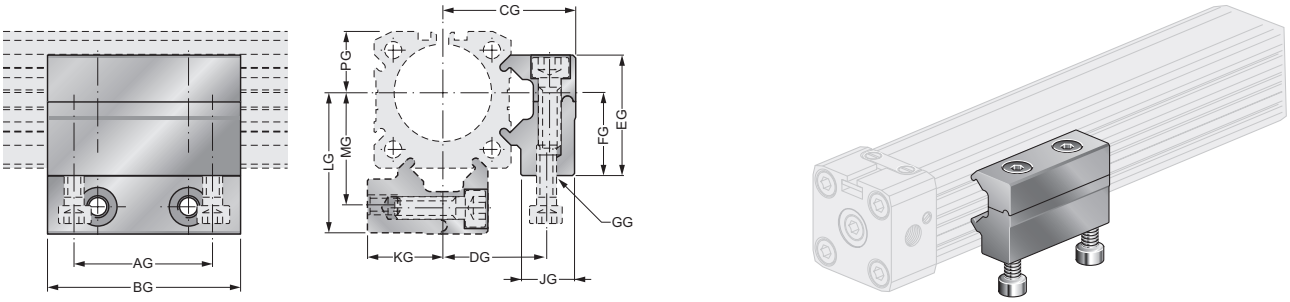
Ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
16	1,5	18	26	3,6	4,0	14	1,5	12,5	41,5	53,5	5	ø5,5	20	3	-	-	-
25	2,5	27	40	5,5	6,0	22	2	18	48,5	60	6	ø5,5	20	4	-	-	-
32	5,0	36	51	6,5	8,0	24	4	20	82	91	30	ø4,5	45	6	20	30	20
40	5,0	54	71	9	11,5	24	2	20	90	99	25	ø4,5	45	8,5	30	30	20
50	5,0	70	80	9	12,5	25	1,0	25	123	148	35	6,5	45	1	45	30	35
63	5,0	78	105	11	15	30	2,0	40	147	172	35	6,5	45	3,5	48	30	35

*)Applicazione	*Application No.*
RPA16S = ø16	RFC16A = ø16
RPA25S = ø25	RFC25A = ø25
RPA32A = ø32	RFC32A = ø32
RPA40A = ø40	RFC40A = ø40
RPA50A = ø50	RFC50A = ø50
RPA63A = ø63	RFC63A = ø63

ACCESSORI | *MOUNTINGS*

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

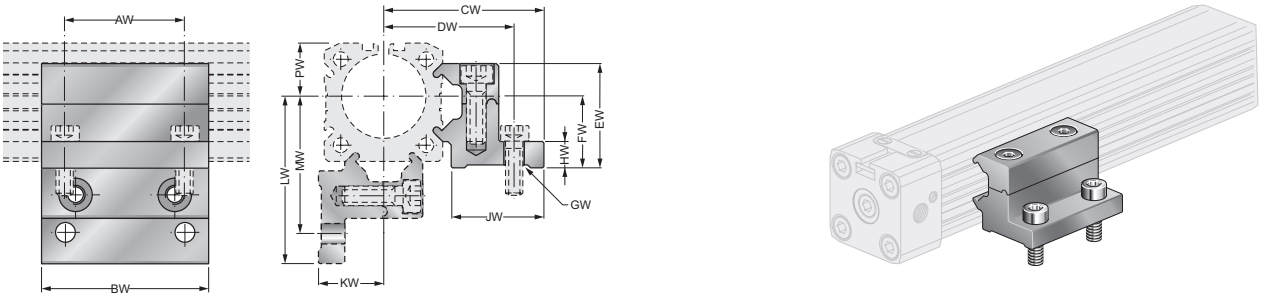
RFG16A - RFG25A



Ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
16	18,0	30,0	27,5	18,4	21,0	15,0	M4	11,5	13,9	29,0	19,7	10,8
25	36,0	50,0	34,5	27,0	31,3	22,0	M5	14,0	20,0	36,5	29,0	16,0

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

RFW16A - RFW25A

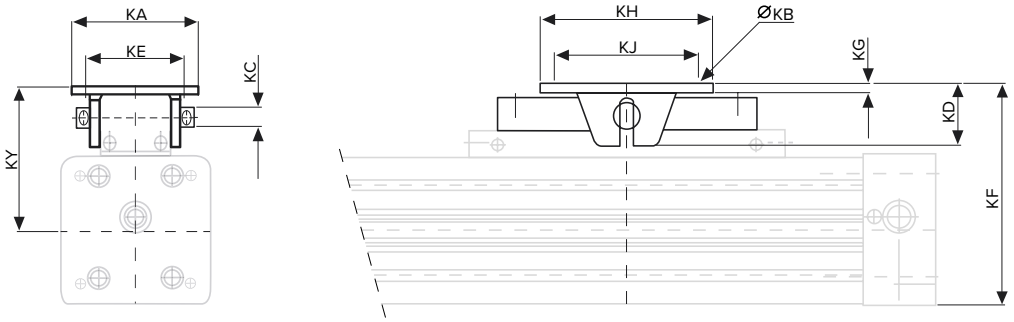


Ø	AW	BW	CW	DW	EW	FW	GW	HW	JW	KW	LW	MW	PW
16	18,0	30,0	37,0	32,5	21,0	15,0	ø4,5	6,0	22,4	13,9	38,0	32,9	10,8
25	36,0	50,0	47,5	40,0	31,3	22,0	ø5,5	10,0	26,0	20,0	49,5	42,0	16,0

ACCESSORI | *MOUNTINGS*

SUPPORTO ARTICOLATO | *ARTICULATED CARRIER*

RMB16A - RMB25A - RMB32A - RMB40A - RMB50A - RMB63A



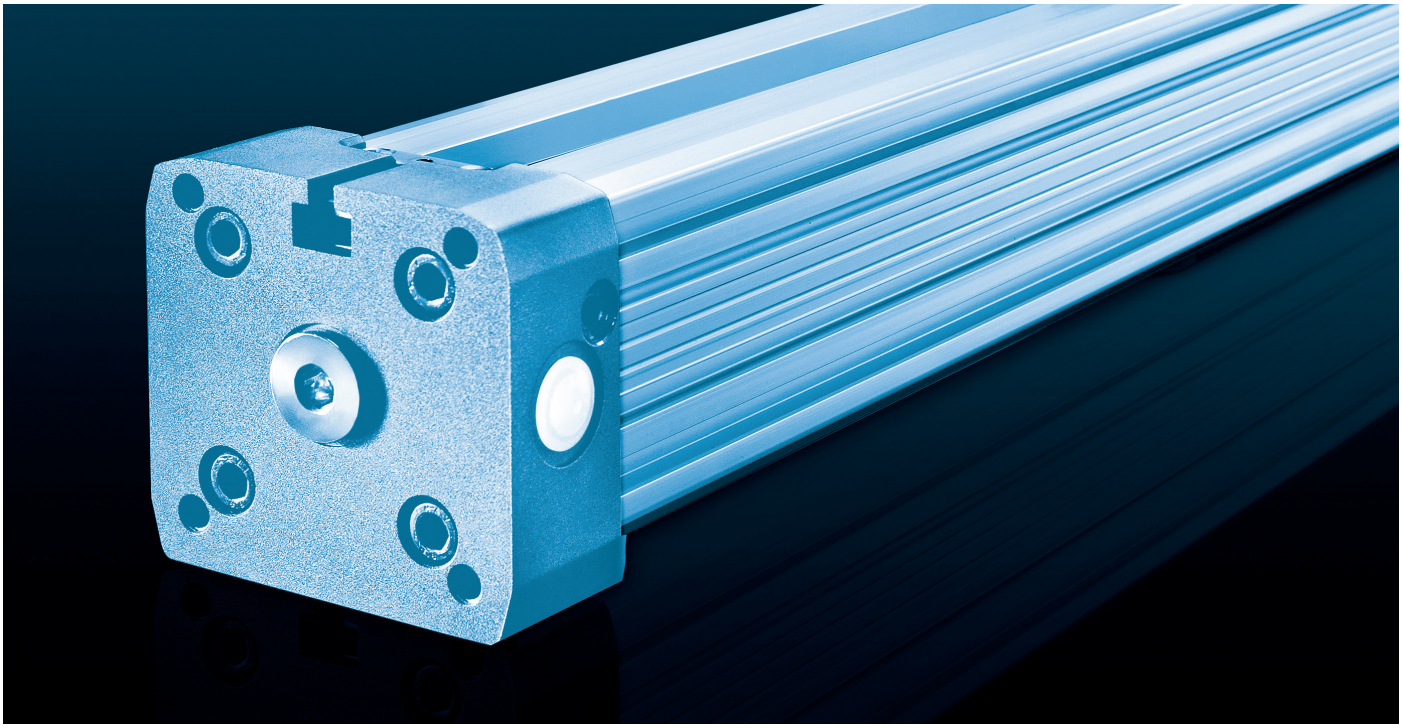
Ø	KA	KB	KD	KE	KF	KG	KH	KJ	KY
16	26	M4	10	10	46,5-47,5	3,0	28	20	33
25	38	M5	19	16	71,5-73,5	3,5	40	30	51,5
32	62	M6	28	25	94,5-96,5	6,0	60	46	66,5
40	62	M6	28	25	108-110	6,0	60	46	73,5
50	90	9	43,7	70	135-150	6,4	120	100	95-110
63	90	9	43,7	70	155-170	6,4	120	100	102-117

CILINDRO | *CYLINDER*

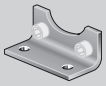
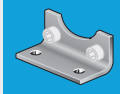
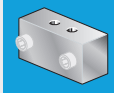
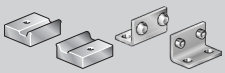
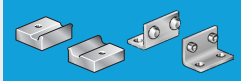
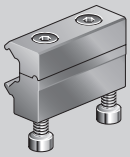
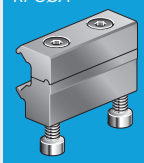
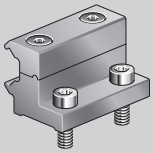
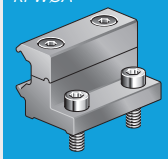
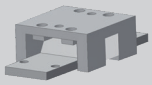
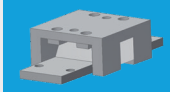
• • • • Dettagli per la definizione della corsa (0100-5700 mm)
• • • • Ident-figures for stroke definition (0100-5700 mm)

Ø 16-63MM

Tipo	Ø [mm]	Varianti		*Types*	*Ø [mm]*	*Variants*	
R1BØ/• • • •	16 25 32 40 50 63	**ST**	Connessioni di carico rigide v=1m/s Guarnizioni in NBR Viti 10.9 zincate 3 prese d'aria	***R1BØ/• • • •***	*16* *25* *32* *40* *50* *63*	***ST***	*Rigid load connection* *v=1 m/s* *NBR-seals* *Zinc-plated 10.9 screws* *3 air inlets*
		TI	Connessioni di carico rigide v=1m/s Guarnizioni in NBR Viti in Acciaio inox 3 prese d'aria			***TI***	*Rigid load connection* *v=1 m/s* *NBR-seals* *Stainless-steel screws* *3 air inlets*
		VT	Connessioni di carico rigide v=1m/s Guarnizioni in Viton Viti 10.9 zincate 3 prese d'aria			***VT***	*Rigid load connection* *v=1 m/s* *NBR-seals* *Stainless-steel screws* *3 air inlets*
		TIVT	Connessioni di carico rigide v=1m/s Guarnizioni in Viton Viti in acciaio Inox 3 prese d'aria			***TIVT***	*Rigid load connection* *v=1 m/s* *Viton-seals* *Stainless-steel screws* *3 air inlets*
		SC	Alimentazione ad aria da un lato			***SC***	*Air supply from one side*
		CF	Connessioni di carico flessibili v=1m/s Guarnizioni in NBR Viti 10.9 zincate 3 prese d'aria			***CF***	*Flexible load connection* *v=1 m/s* *NBR-seals* *Zinc-plated 10.9 screws* *3 air inlets*
		CFVT	pistone lungo consiglia Connessioni di carico flessibili v=1m/s Guarnizioni in Viton Viti 10.9 zincate 3 prese d'aria to per movimento verticale			***CFVT***	*Flexible load connection* *v=1 m/s* *Viton-seals* *Zinc-plated 10.9 screws* *3 air inlets*



ACCESSORI PER CILINDRI | *CYLINDER MOUNTINGS*

TIPO	Ø [mm]	DESCRIZIONE	TYPES	Ø [mm]	DESCRIPTION
Accessori di fissaggio			***Mounting accessories***		
Piedino			***Foot***		
RPAØS 	16 25	Set di montaggio RPAØS: 2 staffe 4 viti 10.9 zincate placcate acc. DIN 912	*RPAØS* 	*16* *25*	*Connection set RPAØS: 2 brackets* *4 zinc-plated 10.9 screws acc. DIN 912*
RPAØA 	32 40 50 63	Set di montaggio RPAØA: 2 staffe 4 viti 10.9 zincate placcate acc. DIN 912	*RPAØA* 	*32* *40* *50* *63*	*Connection set RPAØA: 2 brackets* *4 zinc-plated 10.9 screws acc. DIN 912*
Supporto centrale			***Mid-section support***	*16* *25* *32* *40* *50* *63*	*Connection Set RFCØA:* *body brackets* *anodised aluminium*
RFCØA 	16 25 32 40 50 63	Set di montaggio RFCØA: Staffe del corpo Alluminio anodizzato	*RFCØA* 		
Supporto centrale tipo G			***Mobile mid-section support type G***		
RFGØA 	16 25	Colore: naturale Materiale: AL	*RFGØA* 	*16* *25*	*Colour: natur* *Material: AL*
Supporto centrale tipo W			***Mobile mid-section support type W***		
RFWØA 	16 25	Colore: naturale Materiale: AL	*RFWØA* 	*16* *25*	*Colour: natur* *Material: AL*
Accessori di carico			***Load mounting***		
Supporto articolato			***Articulated carrier***		
RMBØA 	16 25 32 40 50 63	Set di montaggio RMBØA: 1 carrello di carico con boccola 1 linguetta di fissaggio 1 bullone	*RMBØA* 	*16* *25* *32* *40* *50* *63*	*Connection Set RMBØA:* *1 Load carrier with liner* *1 articulated carrier* *1 bolt*