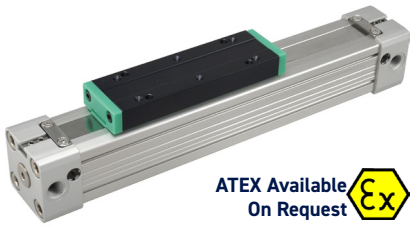
PLF SERIES (Standard)

SAMEDAY BUILD
PREMIUM AVAILABLE



ATEX Available On Request

LOW CARRIAGE STANDARD RODLESS PNEUMATIC CYLINDER

As Origa OSP-P Style (63Ø Piston has a sleight height difference)

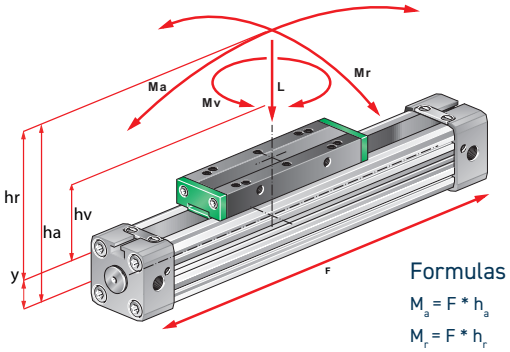
Design	Rodless cylinder, double acting, direct force transmission
Strokes	
ø 25-63 mm	100–5700mm, in increments of 1mm (longer strokes on request)
ø 16 mm	100–4400mm, in increments of 1mm
Air connection	(M5, G 1/8“, G 1/4“, g3/8“)
Mounting	free
Forces + moments	see Forces and moments
Support Forces	see Deflection Diagram
Temperatures	(–10°C bis +80°C) other temperatures on request
Materials	
Barrel	High-strength anodized aluminum
End caps	High-strength anodized aluminum
Piston axle	High-strength anodized aluminum
Seals	Oilproof synthetic material (V < 1m/s (NBR)(V > = 1m/s (VITON)
Sealing bands	Stainless steel
Piston caps	Wear proof synthetic material
Sliding parts	Wear proof synthetic material
Pressure range	0.5–8.0 bar
Medium	compressed air, filtered max. 50µm

- 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 connections 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 *)
- Use in EX area possible - ATEX

*) Special Version On request

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

Forces and Moments



Formulas

$M_a = F * h_a$

$M_r = F * h_r$

$M_v = F * h_v$

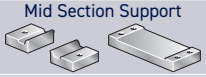
Cylinder		Effect Force (N)	Cushioning	Max. allowed load (N)	Max. allowed bending moments (Nm)		Max. allowed torque (Nm)
		at 6 Bar	(mm)	PLF	PLF		PLF
Ø	Y	F	S	L	Ma axial	Mr radial	Mv central
16	9	110	15	120	4	0.3	0.5
25	14	250	21	300	15	1	3.0
32	18	420	26	450	30	2	4.5
40	22	640	32	750	60	4	8.0
50	28	1000	32	1200	115	7	15.0
63		1550	40	1650	200	8	24.0

Order example

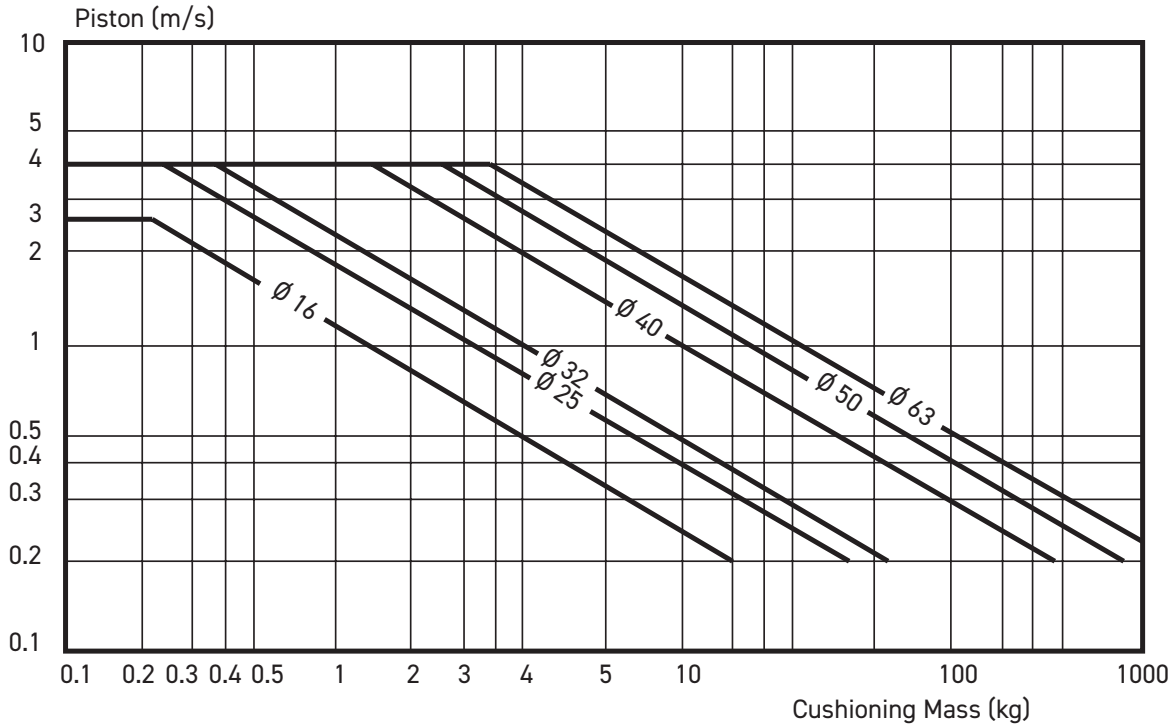
PLF — 25 — 0100 — SSG — SSS — VS — PS+ — 3636

- **MODEL**: Standard Low Carriage Type
- **BORE Ø**: 16, 25, 32, 40, 50, 63
- **STROKE**: 10-5800mm
- **GREASE TYPE**: Blank: Standard Grease; **SSG**: Slow Speed Grease
- **SCREW TYPE**: Blank: Standard Screws; **SSS**: Stainless Steel Screws
- **SEAL TYPE**: Blank: Nitrile Seals; **VS**: Viton Seals
- **PISTON OPTIONS**: Blank: Standard One Piston; **PS+**: Additional Piston
- **3636 ENDCAPS**: Blank: Standard; **3636**: 3636 Endcaps (Only available on Ø32)

PLF SERIES Pricing

Bore Ø / Stroke	Ø16	Ø25	Ø32	Ø40	Ø50	Ø63
100 mm	£190.15	£224.70	£305.59	£398.85	£704.66	£933.83
200 mm	£206.89	£244.84	£330.93	£431.57	£742.86	£985.34
300 mm	£223.64	£264.98	£356.28	£464.28	£781.06	£1,036.85
400 mm	£240.38	£285.13	£381.62	£496.99	£819.26	£1,088.37
500 mm	£257.12	£305.27	£406.97	£529.70	£857.46	£1,139.88
600 mm	£273.86	£325.41	£432.31	£562.41	£895.66	£1,191.40
700 mm	£290.60	£345.55	£457.66	£595.13	£933.86	£1,242.91
800 mm	£307.34	£365.70	£483.00	£627.84	£972.06	£1,294.42
900 mm	£324.08	£385.84	£508.34	£660.55	£1,010.26	£1,345.94
1000 mm	£340.82	£405.98	£533.69	£693.26	£1,048.46	£1,397.45
1100 mm	£357.57	£426.12	£559.03	£725.97	£1,086.66	£1,448.97
1200 mm	£374.31	£446.27	£584.38	£758.68	£1,124.86	£1,500.48
1300 mm	£391.05	£466.41	£609.72	£791.40	£1,163.06	£1,551.99
1400 mm	£407.79	£486.55	£635.07	£824.11	£1,201.26	£1,603.51
1500 mm	£424.53	£506.69	£660.41	£856.82	£1,239.46	£1,655.02
1600 mm	£441.27	£526.84	£685.76	£889.53	£1,277.66	£1,706.54
1700 mm	£458.01	£546.98	£711.10	£922.24	£1,315.86	£1,758.05
1800 mm	£474.75	£567.12	£736.44	£954.96	£1,354.06	£1,809.56
1900 mm	£491.50	£587.27	£761.79	£987.67	£1,392.26	£1,861.08
2000 mm	£508.24	£607.41	£787.13	£1,020.38	£1,430.46	£1,912.59
Additional 100mm	£15.08	£20.22	£25.72	£32.87	£38.53	£52.24
3636 Endcaps (Pair Fitted PL00 / PLF 32)			£151.20			
Additional Piston Assy (PS+)	£134.47	£148.19	£193.20	£223.38	£268.67	£313.95
End Supports (Pair) 	**24-1**	**24-2**	**24-3**	**24-4**	**24-5**	**24-6**
	£34.56	£41.04	£51.84	£51.84	£62.64	£62.64
Mid Section Support 	**25-1**	**25-2**	**25-3**	**25-4**	**25-5**	**25-6**
	£32.62	£36.94	£34.26	£51.84	£51.84	£51.84
Adjustable Clamp Support (Preferred Stock) 	**25-1-3**	**25-2-3**	**25-3-3**			
	£58.61	£68.97	£73.57			
Inversion Bracket	**231-1-F**	**231-2-F**	**231-3-F**	**231-4-F**	**231-5-F**	**231-6-F**
	£35.00	£50.83	£53.65	£75.64	£98.98	£114.58
Slow Speed Grease (SSG)	£7.30	£8.83	£10.08	£11.47	£12.46	£14.09
Stainless Screws (SSS)	£14.24	£16.46	£19.80	£19.80	£20.91	£23.14
Viton Seals (VS)	£59.06	£81.44	£97.82	£107.37	£121.46	£145.69
RCAL-3M Reed Switch	£16.93					
RCAL-EQD	£16.93					
RCI-3M Reed Switch			£18.09			
RCI-EQD			£20.45			
RNA-3M Inductive Switch	£33.16					
RNA-EQD	£22.72					
RPA-3M Inductive Switch	£23.55					
RPA-EQD	£39.42					
RNI-3M Inductive Switch			£31.41			
RNI-EQD			£30.51			
RPI-3M Inductive Switch			£31.41			
RPI-QD			£31.86			
M83RPVC-5M (QR Lead)			£17.63			
Switch Clamp (Use With RCAL / NA / PA)	**HPL**	**HPL**				
	£4.22	£4.22				
Switch Clamp (Use With RCI / RNI / RPI) 25ø Only		**DC1**				
		£4.31				

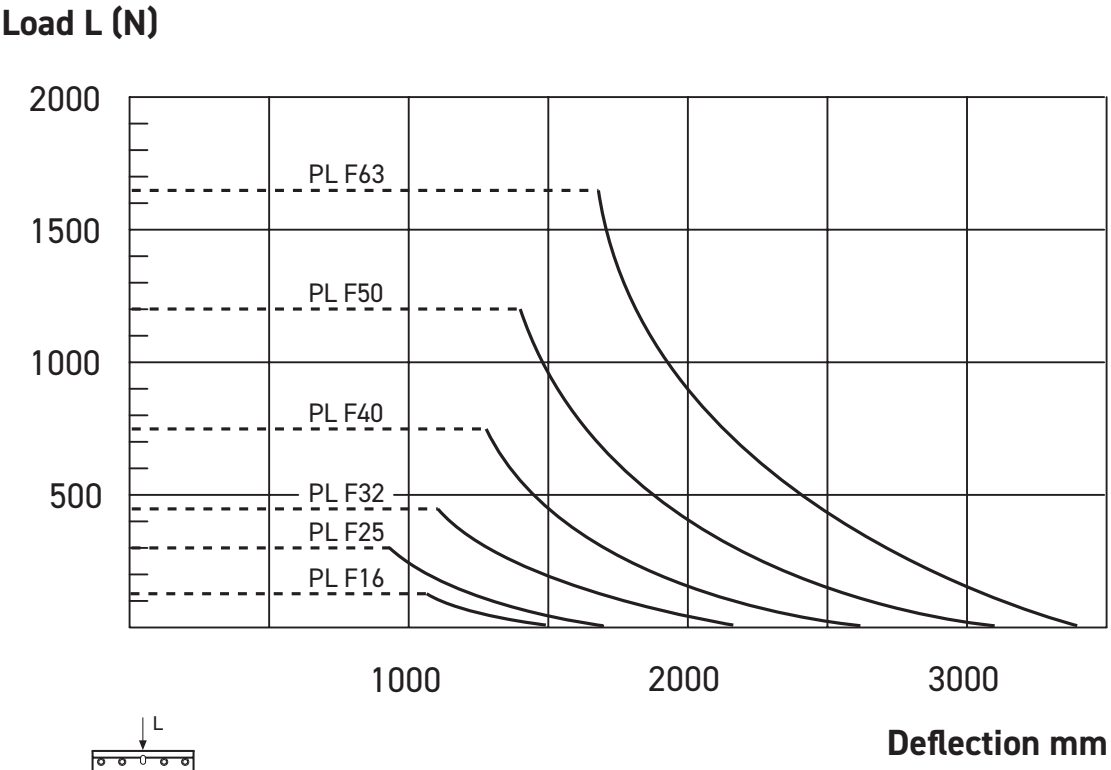
PLF SERIES Cushioning Diagram

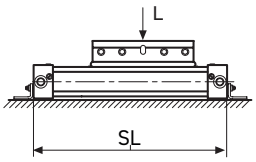


Pay attention to the following points:

- If the limits above are exceeded additional shock absorbers are necessary.
- For piston speeds of more than ⟩ 1m/s viton seals are recommended.
- For piston speeds ⟨ 0,1m/s (NBR), ⟨ 0,2m/s (VITON) slow speed lubrication is necessary
- Maximum life duration will be achieved when piston speeds do not exceed 1m/s.

PLF SERIES Deflection Diagram





max. distance (SL) in mm - free of mounting No. 25

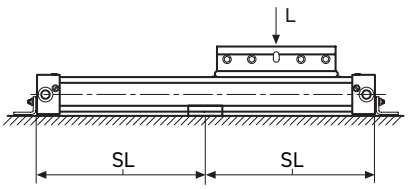
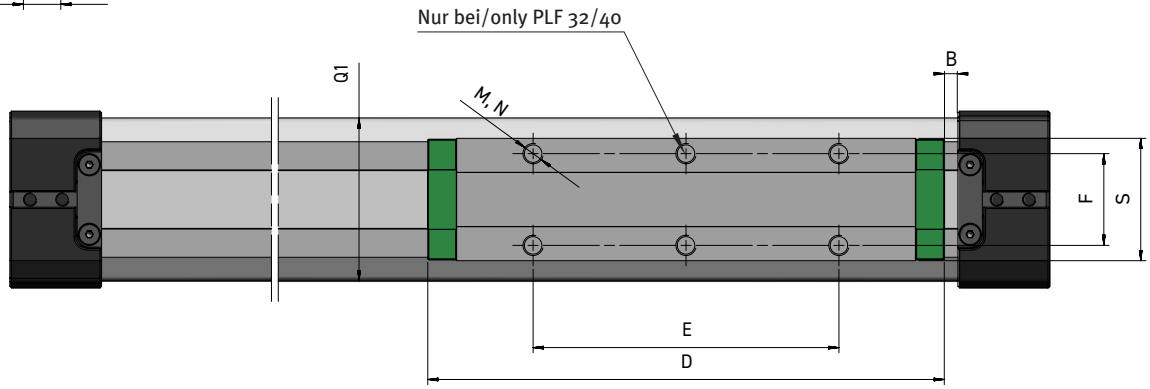
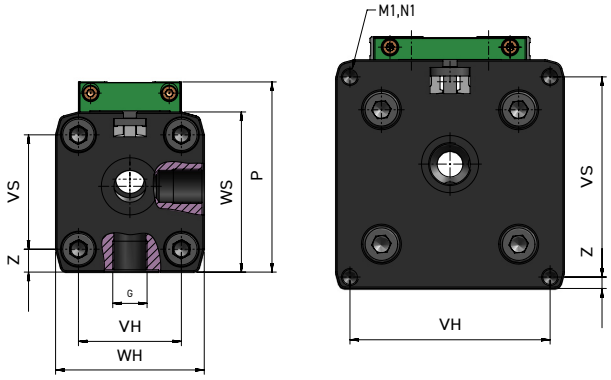


Diagram Information:

- Calculated deflections without support of 0.5 – 1mm allow exceeding of supporting distance.
- Calculated deflections without support of 1mm – max 1.5mm require reduction of the supporting distance.

PLF SERIES Dimensions





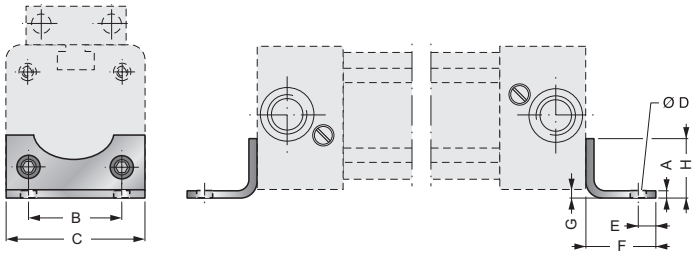
Ø16-32 Ø40-63

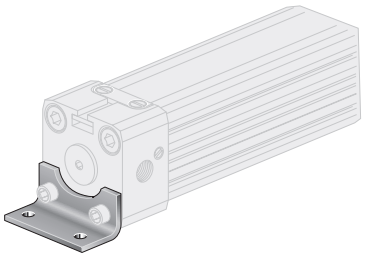
ø	A	B	C	D	E	F	G	H	L	M	M1	N	N1	P	QxQ1	S	VS	VS	WS	WH	Z
16	65	15.5	15	69	36	16.5	M5	1.0	5.5	M4	M3	7	7.0	36.5	24.5x25	22.0	18	18	27	27	4.5
25	100	21.0	23	111	65	25.0	G1/8	2.0	8.5	M5	M5	10	12	52.5	36x36	33.0	27	27	40	40	6.5
32	125	22.0	27	152	90	27.0	G1/4	2.0	10.5	M6	M6	7	14	66.5	52x51	36.0	40	40	56	52	8.0
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

PLF SERIES Mountings

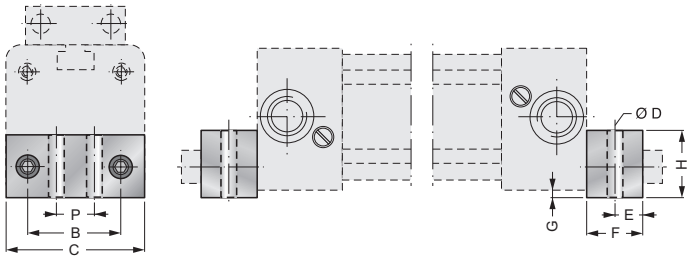
End cover bracket (foot)

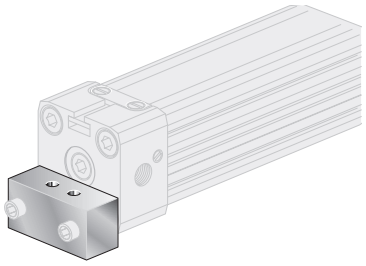
24/1.0 - 2.0*





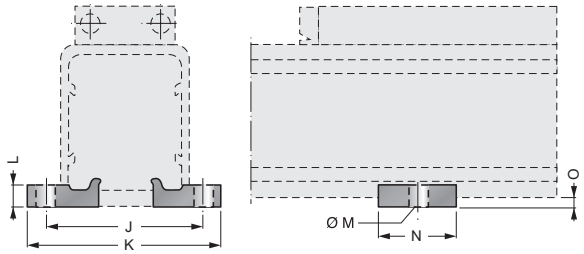
24/3.0 - 6.0*

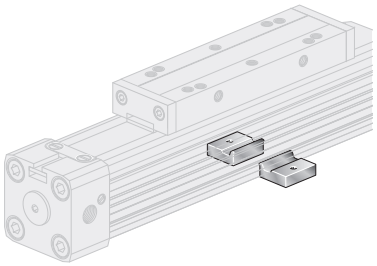




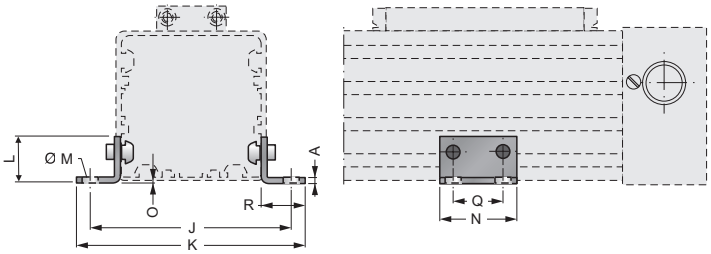
Mid section support

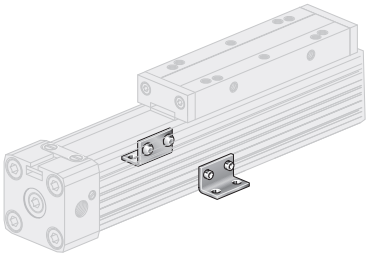
25/1.0 - 2.0*





25/3.0 - 6.0*

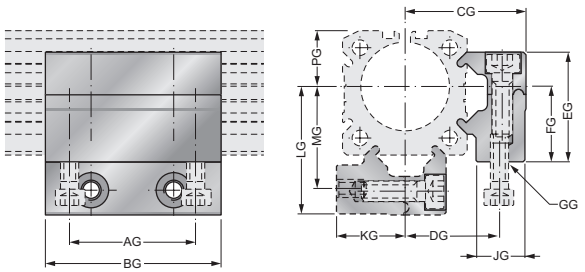


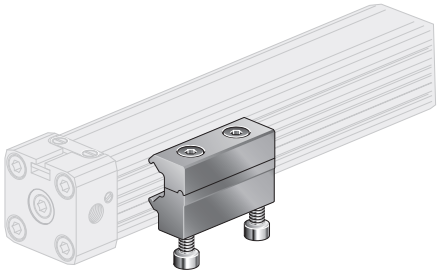


ø	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
16	1.5	18	26	3.6	4.0	14	1.5	12.5	41.5	53.5	5	ø5.5	20	3	-	-	-
25	2.5	27	40	5.5	6.0	22	2	18	48.5	60	6	ø5.5	20	4	-	-	-
32	5.0	36	51	6.5	8.0	24	4	20	82	91	30	ø4.5	45	6	20	30	20
40	5.0	54	71	9	11.5	24	2	20	90	99	25	ø4.5	45	8.5	30	30	20
50	5.0	70	80	9	12.5	25	1.0	25	123	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

Application No.	
24/1.0 = ø16	24/2.0 = ø25
24/3.0 = ø32	24/4.0 = ø40
24/5.0 = ø50	24/6.0 = ø63
25/1.0 = ø16	25/2.0 = ø25
25/3.0 = ø32	25/4.0 = ø40
25/5.0 = ø50	25/6.0 = ø63

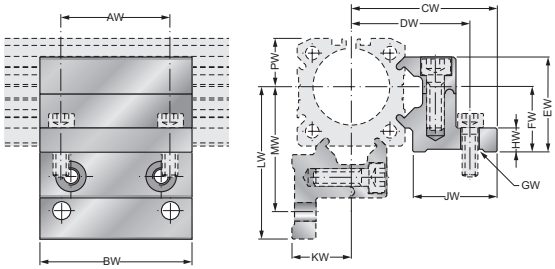
Mobile Mid Section Support, Type G for Cylinder Ø25/32

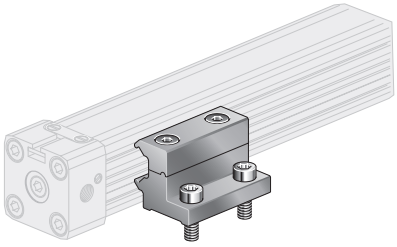




ø	AG	BG	CG	DG	EG	FG	GG	JG	KG	LG	MG	PG
16	18.0	30.0	27.5	18.4	21.0	15.0	M4	11.5	13.9	29.0	19.7	10.8
25	36.0	50.0	34.5	27.0	31.3	22.0	M5	14.0	20.0	36.5	29.0	16.0
32	36.0	50.0	41.8	34.2	39.0	30.0	M6	14.0	27.6	47.0	39.5	21.5

Mobile Mid Section Support, Type W for Cylinder Ø25/32





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
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