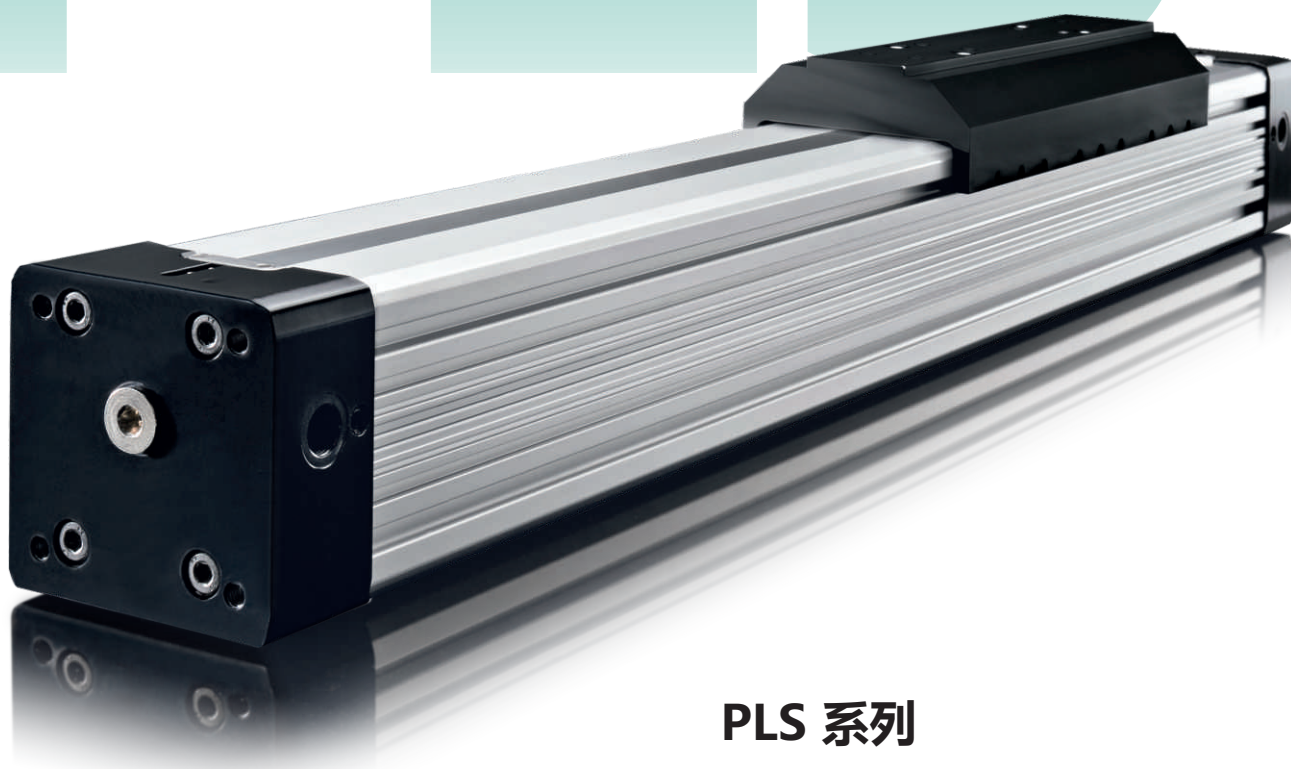


PLS-SERIE

PLS 系列

PLS



PLS 系列

PLS - SERIES

THE GLIDE

PLS(32, 40, 50, 63)系列无杆气缸是为重型负载的自动化应用设计的。特殊线性导向系统与PLF系列无杆气缸相结合，发挥出极其优越的性能。

This particular robust linear guiding system for the types PLS32 - PLS63 was specially constructed for heavy applications and automation systems. The standard well proven rodless cylinder PL..is used as the motive force in the bore sizes from $\varnothing 32-63$ mm.

优势 / BENEFITS

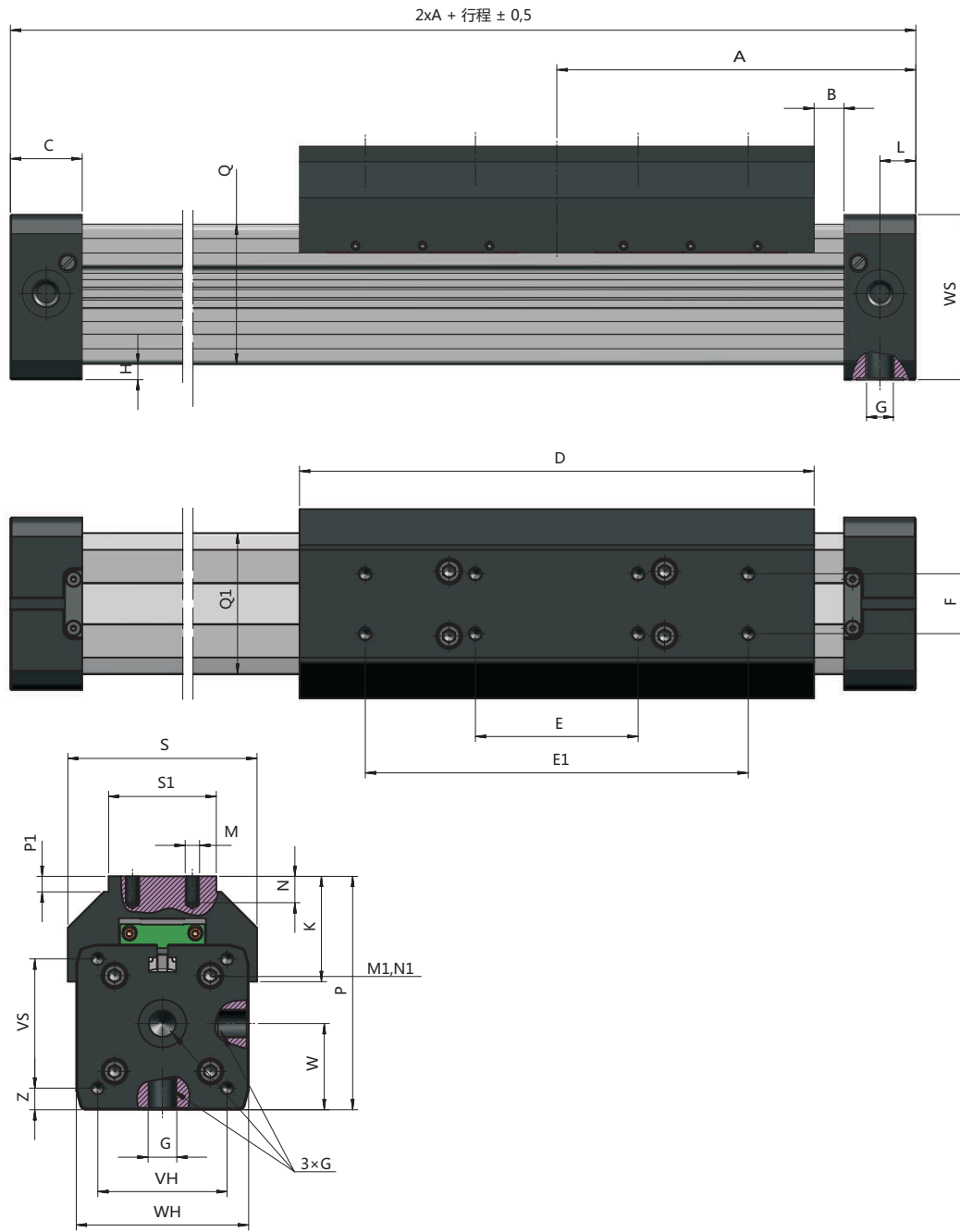
- 耐磨性高
- 噪音低
- 耐灰尘，耐潮湿
- 可调公差
- 可承受全方位的负载
- 重量轻
- 耐腐蚀
- 抗震动与耐冲击性能更强
- 滑块元件可更换
- 导轨模块可随时扩展

- High resistance to wear
- Quiet running
- High resistance to dirt & moisture
- Tolerances adjustable
- Ability to take high loads & moments in all directions
- Weight
- High resistance to corrosion
- Ability to take shock loadings and vibrations against blows and vibrations
- Interchangeable gliding elements
- The guide modul can be expanded at any time.

技术参数 / TECHNICAL DATA

设计	无杆气缸、双动				Design	Rodless cylinder, double acting			
行程					Strokes				
∅ 32-63 mm	100-5700mm, 1mm的增量 (可按要求制作更长的行程)				∅ 32-63 mm	100-5700mm, in increments of 1mm (longer strokes on request)			
供气口	∅32	∅40	∅50	∅63	Air connection	∅32	∅40	∅50	∅63
	G1/4	G1/4	G1/4	G3/8		G1/4	G1/4	G1/4	G3/8
安装位置	自由安装				Mounting	free			
力 + 力矩	见负载，作用力和力矩图表				Forces + moments	see Forces and moments			
支撑力	见中部支撑图表				Support Forces	see Deflection Diagram			
缓冲长度	见缓冲图表				Cushion Length	see Cushion Diagram			
温度	-10°C ~ +80°C (其他温度范围可定制)				Temperatures	-10°C ~ +80°C (other temperatures on request)			
压力范围	0,5-8,0 bar				Pressure range	0,5-8,0 bar			
介质	压缩空气，过滤最大50微米				Medium	compressed air, filtered max. 50µm			
材料					Materials				
缸筒	高强度阳极氧化铝合金				Barrel	High-strength anodized aluminum			
端盖	高强度阳极氧化铝合金				End caps	High-strength anodized aluminum			
活塞轴	高强度阳极氧化铝合金				Piston axle	High-strength anodized aluminum			
密封件	耐油合成材料 (NBR : v < 1m/s , VITON 可选 : v ≥ 1m/s)				Seals	Oilproof synthetic material (NBR: v < 1m/s, VITON: v ≥ 1m/s)			
密封带	不锈钢				Sealing bands	Stainless steel			
活塞	耐磨合成材料				Piston caps	Wear proof synthetic material			
滑动件	耐磨合成材料				Sliding parts	Wear proof synthetic material			

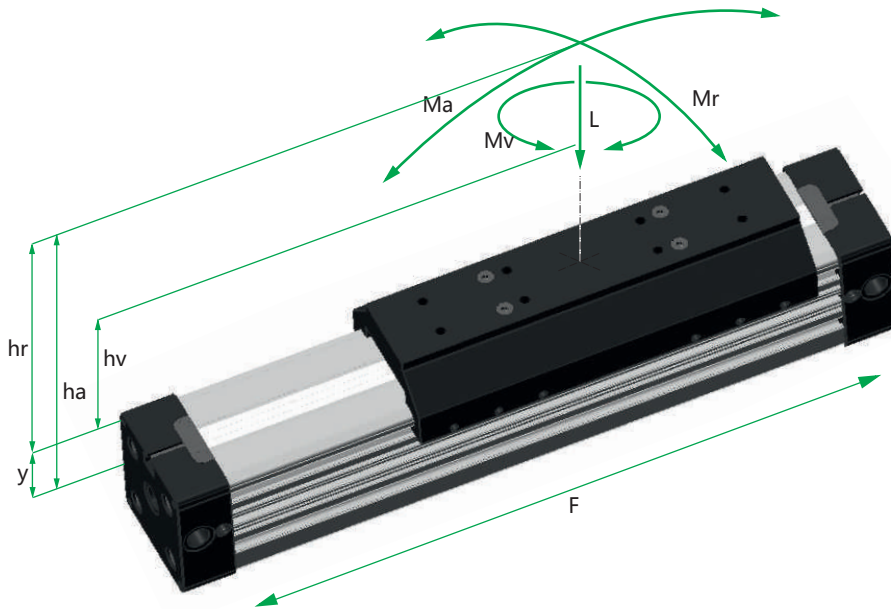
气缸外形尺寸 / CYLINDER DIMENSIONS



型号/System	A	B	C	D	E	E1	F	G	H	K	L	M	N	M1	N1	P	P1
PLS32	125	22	27	152	60	120	25	G1/4'	2,0	42,5	10,5	M5	10	M6	14	81,5	6,5
PLS40	150	12,5	30	215	68	160	25	G1/4'	7,0	44	15	M8	10	M6	17	97,5	6,5
PLS50	175	17,5	33	250	84	190	25	G1/4'	0,5	48,5	11,7	M8	10	M6	18	110	6,5
PLS63	215	6,5	55	320	120	240	25	G3/8'	1,5	56	25	M8	14	M8	18	137	5,0

型号/System	Q x Q1	S	S1	VH	VS	W	WH	WS	Z
PLS32	52 x 51	66	40	36	40	30	52	56	8
PLS40	58,5 x 59	79	45	54	54	36	72	69	9
PLS50	77 x 78	92	50	70	70	43,5	80	80	4
PLS63	102 x 102	116	50	78	78	62,5	106	106	14,5

负载，作用力和力矩 / FORCES AND MOMENTS



公式 /
FORMELN
 $M_a = F \cdot h_a$
 $M_r = F \cdot h_r$
 $M_v = F \cdot h_v$

气缸 Ø	32	40	50	63	Cylinder Ø	32	40	50	63
有效作用力 F (6 bar) (N)	420	640	1000	1550	Efect force F (6 bar) (N)	420	640	1000	1550
最大允许负载 L (N)	495	825	1320	1815	Max. allowed load L (N)	495	825	1320	1815
最大La · Lr · Lv (N)	495	825	1320	1815	Max. La, Lr, Lv (N)	495	825	1320	1815
最大弯矩Ma (Nm)	39	99	170	315	Max. Ma (N)	39	99	170	315
最大弯矩Mr (Nm)	15	35	58	105	Max. Mr (N)	15	35	58	105
最大扭矩Mv (Nm)	39	99	170	317	Max. Mv (N)	39	99	170	317

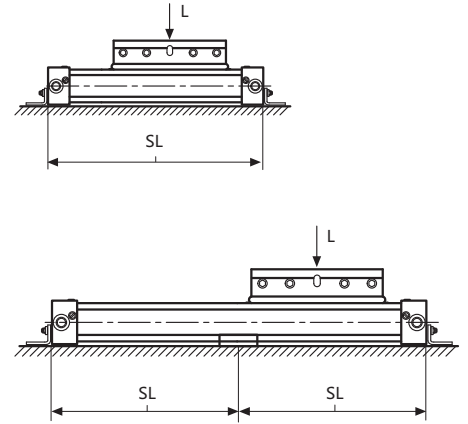
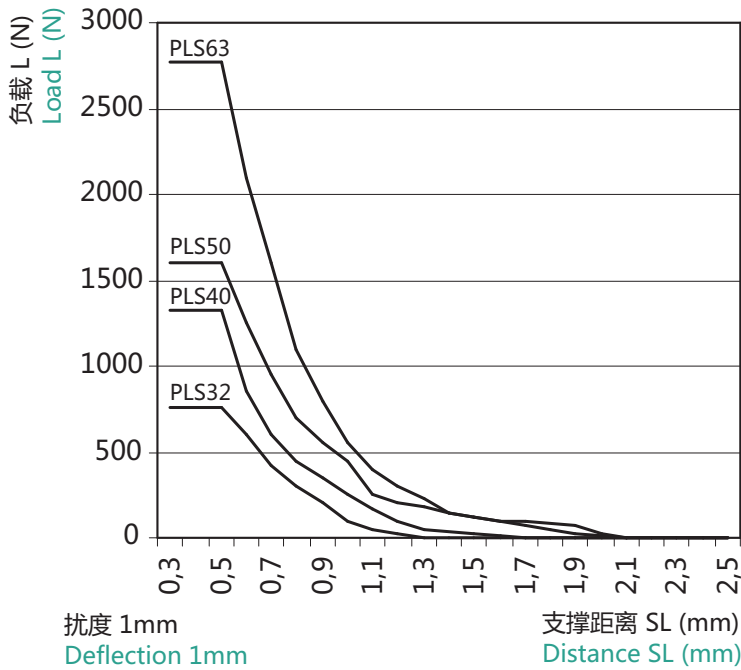
- 上述力矩 (M_a , M_r , M_v) 是与线性滑轨的中心相关, 负载 (L) 位于工件的重心, 并且是与轴向, 径向, 中心三种力相关。工件的中心可以处于滑块范围之外。
- 通常情况下, 滑块总是承受动态负载, 需要考虑计算活塞的作用力 (F) 和气缸直线导向系统的能力。
- 请使用以下计算公式:

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

- The above mentioned moments ($M_a \max$, $M_r \max$, $M_v \max$) 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 centre of the mass can be placed inside or outside the surface area of the carriage.
- 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 formular:

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

扰度图表 / DEFLECTION DIAGRAM



若小于最大支撑距离 SL (mm) , 则无需中部支撑配件 (No. 25)
 Max. distance SL (mm)- free of mounting (No. 25)

中部支撑相关信息：

- 在图表最大负载 (L) 的作用下，支撑之间气缸产生0.5-1mm的扰度是允许的。
- 在图表最大负载 (L) 的作用下，支撑之间气缸产生1-1.5mm的扰度，则必须增加中部支撑配件。

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.

线性装置组合气缸 PLR / LINEAR UNIT PLR

- 行程尺寸 (0100-5700 mm)
- Ident-figures for stroke definition (0100-5700 mm)

型号	订购码	描述	Types	Ident.-N0.	Description
PLS 40/00	94.077.	标准 PLS40 带外部滑动导轨	PLS 40/00	94.077.	Standard PLS40 with external gliding guide
PLS 50/00	95.077.	标准 PLS50 带外部滑动导轨	PLS 50/00	95.077.	Standard PLS50 with external gliding guide
PLS 63/00	96.377.	标准 PLS63 带外部滑动导轨	PLS 63/00	96.377.	Standard PLS63 with external gliding guide

