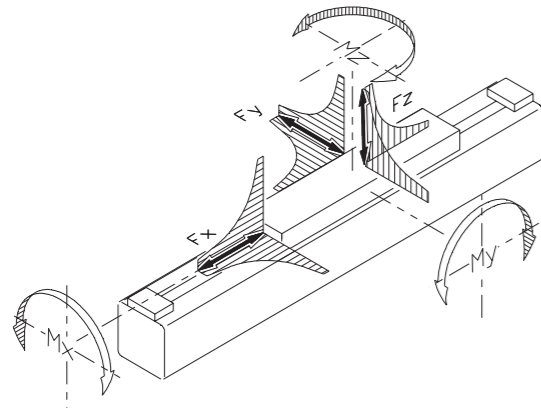


负荷

All information on forces and torques relate to a speed of $v < 0.35$ m/s. Adhering to these values results in optimized service life, noise emissions and operational behavior. Higher speeds reduce the permissible forces.

所有力及力矩信息与速度 $v < 0.35$ m/s 相关，只要严格遵循这些规定值，即可延长气缸的使用寿命、降低噪音、提高运行工况。速度越高，允许的力越低。



Attention 注意: $\Sigma F = F_{zul} = \sqrt{F_x^2 + F_y^2 + F_z^2}$

ZS Standard cylinder

ZS 标准气缸

Piston Ø 活塞 Ø	$v_{max} \leq 0.35$ m/s 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	80	300	80	40	20	1	3	3
25	270	110	480	155	90	40	2	13	13
32	440	165	650	280	155	70	3.5	25	25
40	680	225	800	500	290	125	5.5	40	40
50	1060	325	1060	790	420	195	10	65	65
63	1680	435	1680	1500	850	370	16	100	100

ZK Standard cylinder short

ZK 标准短缸

Piston Ø 活塞 Ø	$v_{max} \leq 0.35$ m/s 最高速度不高于0.35m/s			F_{zul} bei v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	40	140	40	25	10	0.4	1.7	1.7
25	270	55	230	90	50	25	0.7	2.7	2.7
32	440	70	320	200	110	45	1.0	5.0	5.0
40	680	100	400	420	240	110	2.0	8.5	8.5
50	1060	140	480	750	440	190	3.5	13.0	13.0
63	1680	180	590	1500	850	380	5.0	18.0	18.0

负荷

ZS+ Standard cylinder with broad yoke head

ZS+ 标准气缸带宽活塞杆头

Piston Ø 活塞 Ø	$v_{max} \leq 0.35$ m/s 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
25	270	350	480	200	120	50	5	16	16
40	680	750	800	700	400	175	20	55	55

At the moment we only offer the diameters 25 and 40, futher diameters are planned.

目前我们能提供的气缸直径是25和40，未来将供应更多直径气缸。

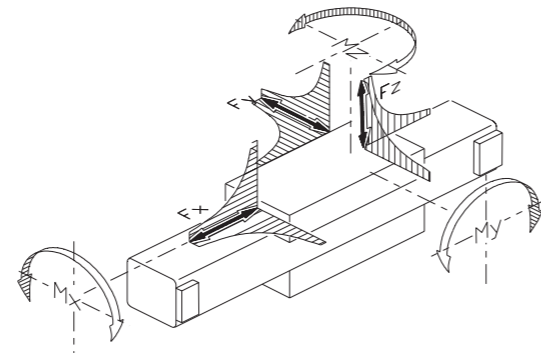
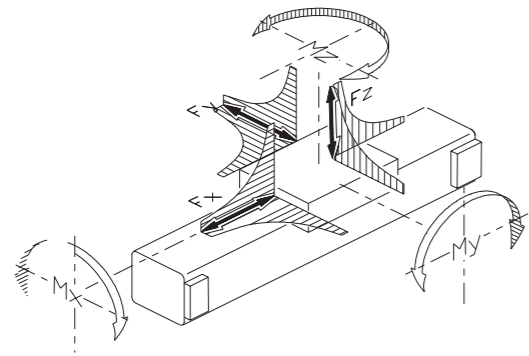
ZK+ Standard cylinder short with broad yoke head

ZK+ 标准短缸带宽活塞杆头

Piston Ø 活塞 Ø	$v_{max} \leq 0.35$ m/s 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
25	270	170	230	95	55	28	2,5	3,3	3,3
40	680	750	800	445	260	125	8	12	12

At the moment we only offer the diameters 25 and 40, futher diameters are planned.

目前我们能提供的气缸直径是25和40，未来将供应更多直径气缸。



ZF/ZFU Guiding cylinder with external carriage

ZF/ZFU 导流缸，带外部导轮架

Piston Ø 活塞 Ø	$v_{max} \leq 0.35 \text{ m/s}$ 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	370	370	100	58	26	3.5	6	6
25	270	800	800	280	160	65	10	20	20
32	440	1200	1200	510	300	140	25	45	45
40	680	1600	1600	1000	550	250	40	75	75
50	1060	2100	2100	1500	850	380	80	150	150
63	1680	2800	2800	2500	1400	610	110	250	250

ZFK Guiding cylinder short with external carriage

ZFK 导流短缸，带外部导轮架

Piston Ø 活塞 Ø	$v_{max} \leq 0.35 \text{ m/s}$ 最高速度不高于0.35m/s			F_{zul} bei v			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	150	150	50	30	12	1.8	1.8	1.8
25	270	250	250	100	60	30	4	4	4
32	440	450	450	250	135	65	10	10	10
40	680	600	600	480	280	140	16	16	16
50	1060	900	900	800	480	220	30	30	30
63	1680	1100	1100	1500	950	400	45	45	45

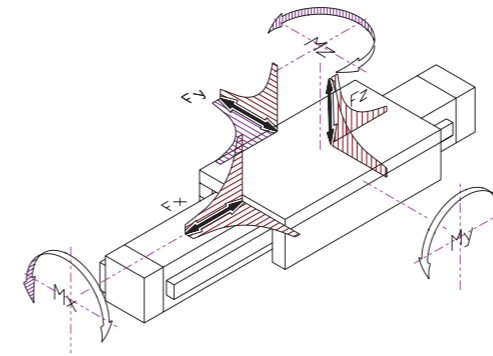
ZFF Guiding cylinder with 2 external carriages

ZFF 导流缸，带两个外部导轮架

Data for Mz when guide carriages have been connected

导轮架连接后的Mz数据

Piston Ø 活塞 Ø	$v_{max} \leq 0.35 \text{ m/s}$ 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
18	140	550	550	150	80	31	5.2	9	9
25	270	1200	1200	420	210	80	15	30	30
32	440	1800	1800	750	400	170	37	67	67
40	680	2400	2400	1500	750	300	60	110	110
50	1060	3200	3200	2200	1150	460	120	220	220
63	1680	4200	4200	3700	1900	740	170	370	370



ZSS Guiding cylinder with external ball bearing guide

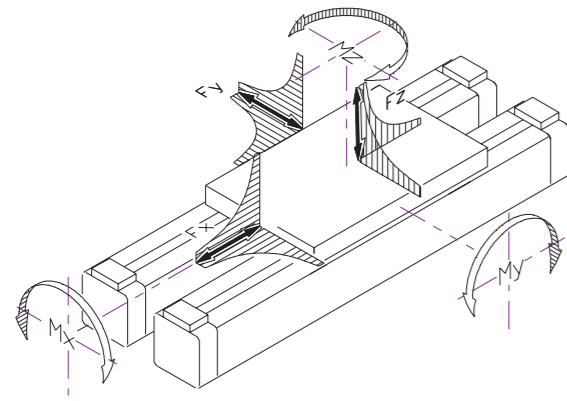
ZSS 导流气缸，带外滚珠轴承导轨

Piston Ø 活塞 Ø	Load rating per carriage 各导轮架的额定负荷			Rail 导轨		Torques 力矩		
	Type 型号	C_{dyn} N	C_0 N	Type 型号		Mx (Nm)	My (Nm)	Mz (Nm)
18	MR15MN	3810	5590	MR15M		87	22	
25	EGH15CA	8350	16300	L1S15		170	154	130
32	EGH20CA	11700	23500	L1S20		320	266	222
40	EGH25CA	18800	36500	L1S25		572	516	434
50								
63	EGH30CA	28800	55000	L1S30		1040	870	730

ZKS Guiding cylinder short with external ball bearing guide

ZKS 导流短缸，带外滚珠轴承导轨

Piston Ø 活塞 Ø	Load rating per carriage 各导轮架的额定负荷			Rail 导轨		Torques 力矩		
	Type 型号	C_{dyn} N	C_0 N	Type 型号		Mx (Nm)	My (Nm)	Mz (Nm)
18	MR15MN	3810	5590	MR15M		43	11	11
25	EGH15CA	8350	16300	L1S15		85	77	65
32	EGH20CA	11700	23500	L1S20		160	133	111
40	EGH25CA	18800	36500	L1S25		286	258	217
50								
63	EGH30CA	28800	55000	L1S30		520	435	365



ZP Parallel cylinder

ZP 平行缸

Piston Ø 活塞 Ø	$v_{max} \leq 0.35 \text{ m/s}$ 最高速度不高于0.35m/s			$F_{allowed}$ at v 不同速度下允许的F			Torques 力矩		
	Fx (N) Action force at 6 bar 6巴条件下的作用力	Fy (N)	Fz (N)	$F_{allowed}$ at 0.75 m/s 0.75 m/s下允许的F	$F_{allowed}$ at 1 m/s 1 m/s下允许的F	$F_{allowed}$ at 1.5 m/s 1.5 m/s下允许的F	Mx (Nm) Fy/Fz	My (Nm) Fx/Fz	Mz (Nm) Fx/Fy
25	540	240	900	300	175	75	16	27	27
32	880	360	1220	540	300	130	29	52	52
40	1360	540	1750	1090	620	280	55	88	88
50	2120	750	2500	1760	1000	450	90	155	155
63	3360	1000	3300	2900	1660	720	148	260	260

Note

If greater masses are to be moved, we recommend supporting them at the center of gravity with an additional hydraulic shock absorber.

Information on load values for special cylinders are available on request.

备注

如需要移动更多质量, 建议重力中心处用液压减震装置支撑。

我们可根据用户的需要提供更多特殊气缸负荷数据信息。

Notes

- The provided data is for product description purposes only and is not to be construed as guaranteed properties in the legal sense.
- Any claims for damages against us, no matter on what legal basis, are null and void, unless we are responsible for willful intent or gross negligence.
- Technical modifications, omissions and errors reserved.

Safety regulations

Lanamatic cylinders are manufactured in accordance with state-of-the-art standards and are safe to operate.

Dangers can arise if:

- The cylinder is used, mounted or serviced by unqualified personnel or used, mounted or maintained improperly.
- The cylinder is used contrary to its designated use.
- The accident prevent regulations, the VDE guidelines, and the safety and mounting instructions are not observed.

In addition, note that:

- Procedures that impair the functioning and safe operation of Lanamatic cylinders must be avoided.
- The Lanamatic cylinder may be used according to its specification only, any other use being deemed as contrary to its designated use.
- The manufacturer shall not be liable for damage resulting from such use.
- During mounting, reconstruction and maintenance work, the energy supplies must be removed.
- During maintenance, mounting and reconstruction, it is recommended to remove the Lanamatic cylinder from the work area and to perform the work outside of the danger zone.
- During mounting, connection, setup, commissioning and testing, you have to make sure that accidental actuation of the cylinder by the installer or any other person is not possible/reliably avoided.
- Drilling of additional holes, threads or mounting of not official Lanamatic accessories should only be done after consultation with Lanamatic AG.
- If the cylinder is to be operated in an environment containing abrasive dust or aggressive vapors, prior approval must be obtained from the Lanamatic AG.
- Otherwise the current safety and accident prevention regulations valid in the place of use shall apply.

备注

- 所给数据仅供产品说明使用, 不构成法律意义上的特性保证。
- 除本公司因蓄意或重大过失负责外, 针对本公司提出的任何索赔, 无论是以何种法律为依据, 均是无效的。
- 本公司保留技术修改、删减和错误的权利。

安全规范

Lanamatic气缸根据最高标准制造, 操作安全。

在以下情况下, 可能发生危险:

- 气缸由没有资质的人员使用、安装或维护; 或气缸的使用、安装或维护方法不当。
- 气缸未用于规定用途。
- 未遵守事故预防规定、德国电气工程师协会 (VDE) 指导方针以及安全和安装说明。

此外, 请注意:

- 不得实施有损Lanamatic气缸功能和运行安全的程序
- 必需根据相关规范使用Lanamatic气缸; 其它任何使用都将视为未按规定用途使用。
- 生产商不对因上述使用行为产生的损失负责。
- 安装、改造和维护作业过程中, 必须断电。
- 维护、安装和改造过程中, 建议将Lanamatic气缸从作业区域拆除, 并在危险区域外实施相关作业。
- 安装、连接、设置、调试和测试过程中, 必须防止安装人员或任何其它人员意外启动气缸。
- 与Lanamatic AG协商后, 方能钻孔、车螺纹或安装非原装配件。
- 如果气缸需要在含有磨屑或侵蚀蒸汽的环境中运行, 则必须提前获得Lanamatic AG的批准。
- 使用地的现行安全和事故预防规程将适用。