



Intelligent Hydraulic Cylinders



Hydraulic cylinder 450 bar with cutting device.
450 Bar 带开凿装置方型油缸

V450CT

V450CT.0802.00.GB+CN

www.vegacylinder.com

Product Introduction and General Features 产品介绍和一般特征

The BLANK ING SYSTEM to apply on V450CM range is a solution studied for the world of Cutting device and drawing for the moving of radial punches; it guarantees suitable forces and strokes as well as reliability and economy of a checked and standard solution.

The cutting group, formed by the cylinder holder base and by the knife holder mobile plate, has been created in order to make this kind of application versatile, cheap and reliable as well as to be fast and easy to install.

The cylinder, central part of this system, is a V450CM with the steel body and integrated micro switches. It is affixed on the cutting group through four axial screws. The centring is made on the base in order to guarantee the axial sliding of the mobile plate during the working.

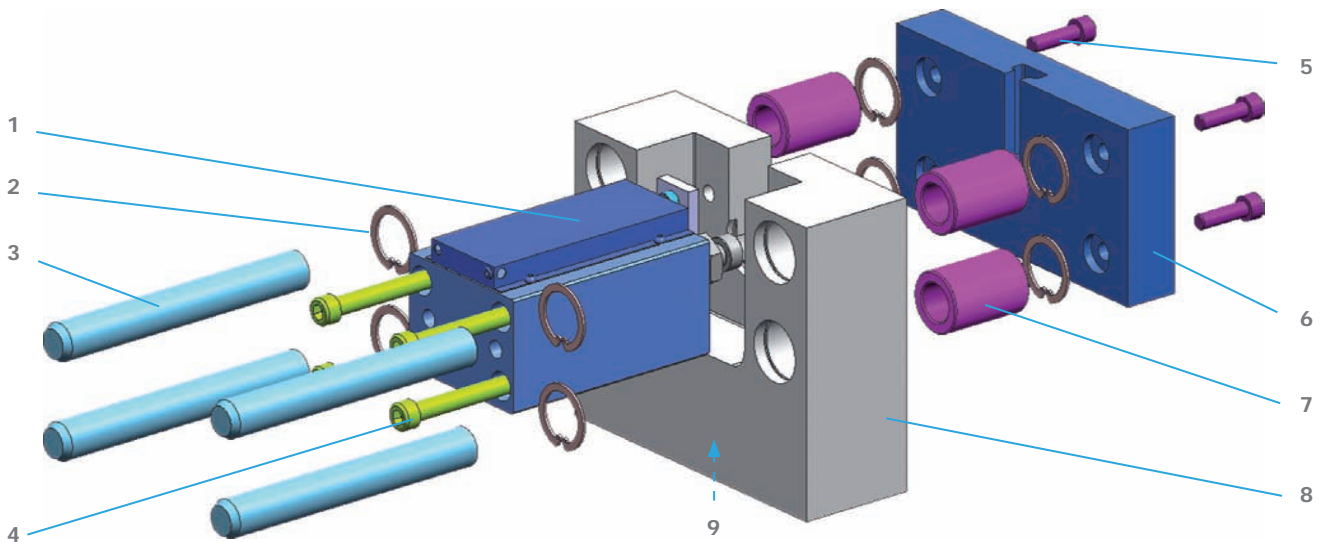
The choice to connect the cylinder to the plate through the connecting floating joint guarantees the system various advantages: 1) By means of the nut and the lock nut with which the head is provided, it is possible to carry out a precise regulation of the "stop point" of the mobile plate; 2) The obtained connection is a floating one therefore it is able to compensate eventual non-alignment of the sliding and avoid seizing-up of the columns and anomalous wear of the cylinder seals; 3) It permits the fast disassembling of the cylinder without modifying any kind of regulations.

应用在V450CM上的切断系统是针对切削装置和径向冲床移动一个解决方案：它能够确保压力和行程的恰当，是一种优选的和标准的具有可靠性和经济性的解决方案。

由油缸支持底座和刀具移动盘形成的切削组的出现是为了使得该类型应用的灵活、可靠，以及安装的快速和简便。

该系统的中心部件油缸型号为V450CM，其主体为钢，并集成微型开关。通过4个轴向螺钉与切削组连接。基准心位于该底座上是为了确保在操作过程中移动盘的轴向滑动。

选择将油缸通过浮动连接与盘连接确保系统具有如下各种优势：1) 通过螺母和提供有头的锁定螺母，使得对移动盘的“停止点”执行精确定位成为可能；2) 获得的连接是一种浮动连接，因此能够补偿最后的非连接性滑动，避免定位柱的失灵和油缸密封的非正常磨损；3) 可以允许油缸的快速分拆，而不必修改任何一种校准。



The base (8) and the mobile plate (6) are made in steel kind 1.1730. After the manufacture they are subjected to a superficial protection treatment which is suitable to their heavy use in the foundry. The lower part of the base (9) is workable in order to carry out the clamping of the cutting group following the specific needs of the rest of the equipment.

The motion and its alignment with the passing of time are guaranteed by the presence of ball recycle bushes supplied SKF (7) which roll on tempered and hardened columns (3). These ones are normalized columns made in steel UNI16NICR4, 60-62HRC.

Treatments: cementation, quenching, grinding and lapping.

The columns are affixed on the plate through four screws (5). The clamping allows the disassembling of the only mobile plate and avoids the movement of the rest of the system: this peculiarity allows for considerable time-saving whenever any kind of maintenance to the cutting elements of the mould is necessary.

Other elements of this system are: the cylinder equipped with the stroke-end micro switches (1) with the fixing screws (4). All the bushes are blocked on their seats with suitable seegers (2).

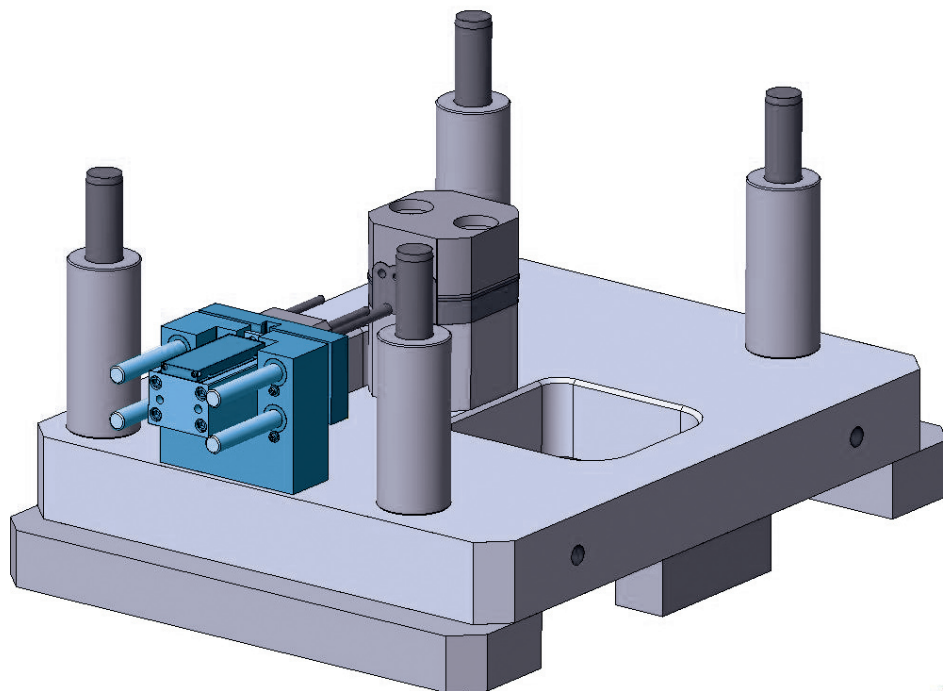
基座(8)和移动盘(6)由1.1730号钢制成。制造完后做表面保护处理，以适宜铸造的需要。基座(9)的下面部分是可利用的，以便执行切削组的夹紧，如果随后设备的其他部分有特定需要。

随着时间的推移，移动及其队列通过由球型循环衬套支撑的SKF(7)的存在而保证，SKF在可调节的和加固的圆柱(3)上滚动。这些圆柱遵照一定规格由UNI16NICR4和60-62HRC钢制造。处理方式：粘固、淬火、研磨和搭叠。

圆柱通过4个螺钉(5)与盘连接。夹具的使用使得这一唯一的移动盘可分拆，避免系统其他部分的移动：这个特性可以大大节省时间，任何时候在对模具切削元件采取必要的维护时。

该系统的其他组件为：油缸装配有的行程端微型开关(1)，带紧固螺钉(4)。所有的衬套用适当的赛格环(2)封闭在各自的位置上。

Application sample on a cutting mold for die casting 用于拉模铸造的一个切削铸型的应用案例



FUNCTIONAL DATA Chart - 功能数据图表

	Max. working PRESSURE in Bar-PSI	Max. oil FLOW Lit\min 升/ 分钟	Max. piston speed m\s 最高活塞速度 米/秒	Max. mass weight at the max speed in kg. 在最高速度时的负重 (单 位: 千克)	Max. working temperature 最大工作温度
ØX	最大工作压力 (单位: 巴-磅/平方英寸)	最大油流量 升/ 分钟	最高活塞速度 米/秒	在最高速度时的负重 (单 位: 千克)	最大工作温度
32	450 - 6525	6	0,1	10	125° C - 266° F
40	450 - 6525	10		17	
50	450 - 6525	14		25	

➔ Cylinder and cutting device order compilation symbols 油缸与开凿装置订购代码符号

Table THRUST and TRACTION FORCE in Kg. - 推力和牵引力表格 (单位: 千克)

ØX	80 bar - 1160 PSI		100 bar - 1450 PSI		125 bar - 1812 PSI		160 bar - 2320 PSI		200 bar - 2900 PSI		250 bar - 3625 PSI	
	Pushing 推力	Traction 牵引力	Pushing 推力	Traction 牵引力	Pushing 推力	Traction 牵引力	Pushing 推力	Traction 牵引力	Pushing 推力	Traction 牵引力	Pushing 推力	Traction 牵引力
32	643	339	804	424	1005	530	1286	678	1608	848	2010	1060
40	1005	701	1256	1002	1570	1095	2010	1402	2512	1752	3140	2190
50	1570	1078	1963	1583	2453	1684	3140	2155	3925	2694	4906	3368

STROKE Chart in mm.
冲程图表 (单位: 毫米)

ØX	050,0	080,0
32		
40		
50		

Cylinder Codes
油缸代码

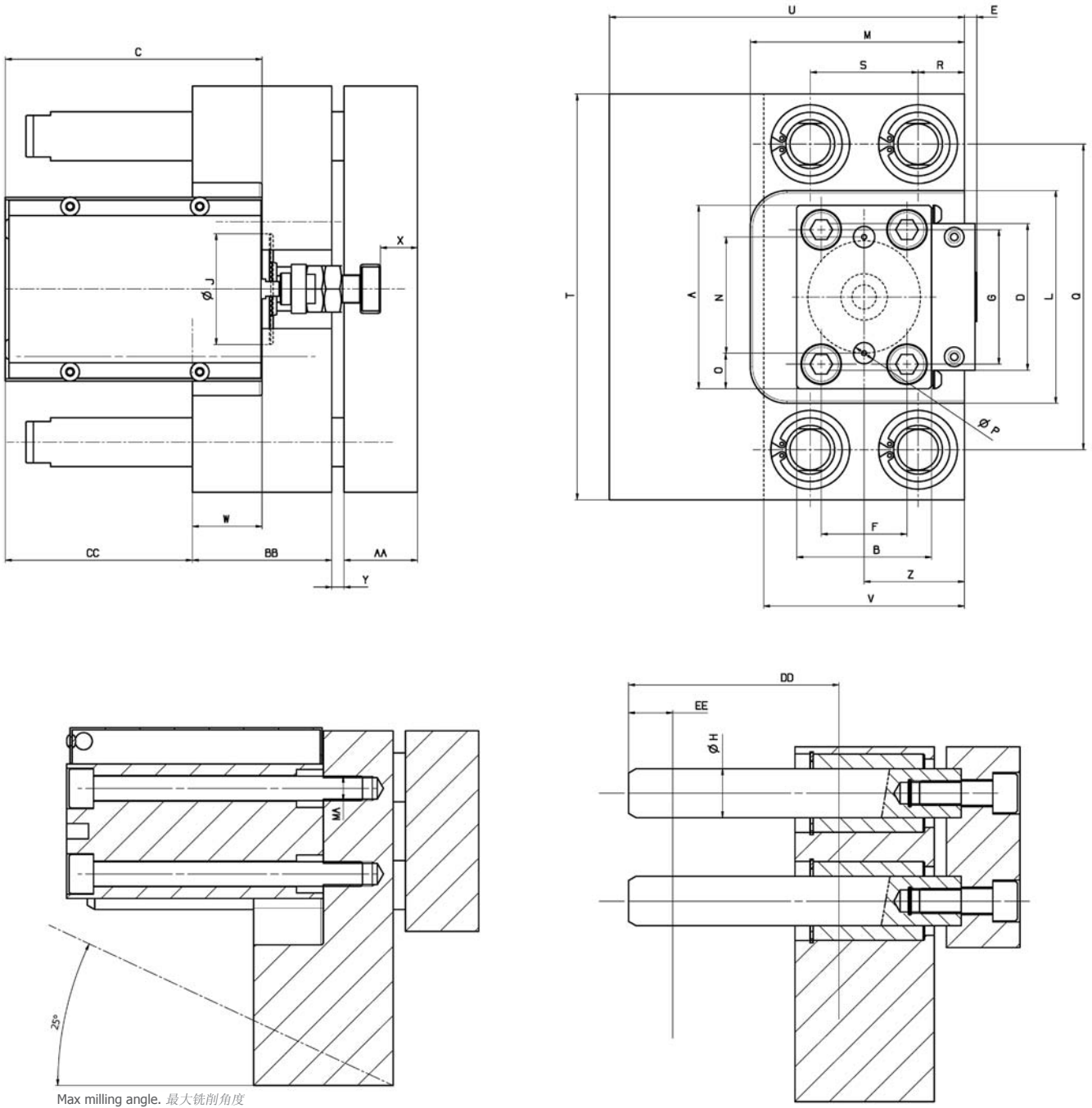
CM	032	C G R G M	050,0
CM	040	C G R G M	050,0
CM	040	C G R G M	080,0
CM	050	C G R G M	050,0
CM	050	C G R G M	080,0

+

RM	032	CT	050,0
RM	040	CT	050,0
RM	040	CT	080,0
RM	050	CT	050,0
RM	050	CT	080,0

Cutting Device Codes
开凿装置代码

➔ Overall dimensions - 总尺寸



Max milling angle. 最大铣削角度

NOTE: For dimensions where no tolerance is indicated, refer to DIN norm 7168-m
 注释：至于没有显示公差尺寸，参照德国标准 7168-M

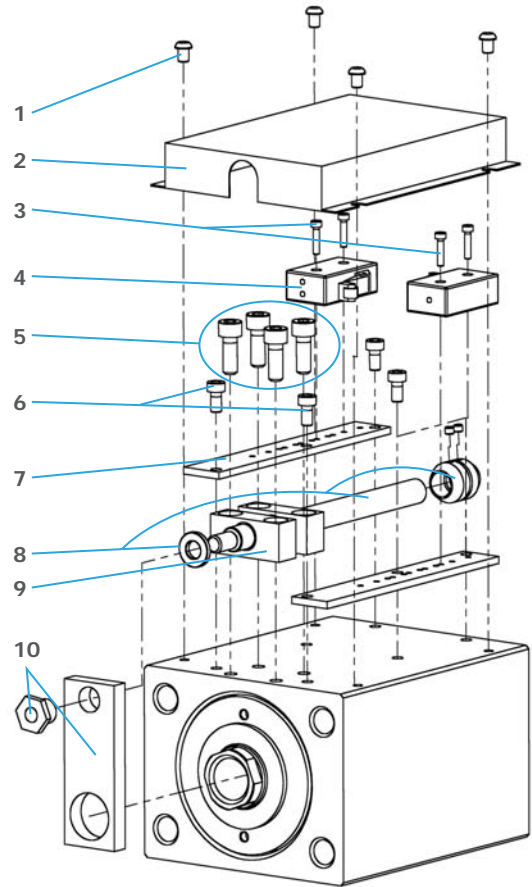
ØX	Z	A	B	C	D	E	F	G	ØH g6	J h9	L	M	N	O	ØP	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	MA
32	050	75	55	105	60	1,3	35	55	20	45	87	87,5	47,5	14,5	1/8 BSP	125	19	44	166	145	82	28,5	15,1	5	41	30	57	76,5	136	68	M10
40	050	85	63	113	60	5,3	40	63	20	45	87	87,5	56,5	13	1/8 BSP	126	19	44	166	145	82	28,5	15,1	7	41	30	57	84,5	160	90	M10
	143			114,5																											
50	050	100	75	123	60	-	45	76	25	42	103		64	17	1/4 BSP	161	25,5	65	222	192	116	45	17,8	7	58	36	78	78	185	94	M12
	153			108																											

ØX = Bore 缸径 ØY = Rod 活塞杆 Z = Stroke 冲程

End Stroke Mechanical Micro Switches - 冲程尾端机械微动开关

Components and assembly - 元件和部件

1. Cover fixing screws (4). For some bores the clamping is lateral
盖子定位螺钉(4)。某些缸径的油缸，固定在侧面
2. Switch protection cover
开关保护罩
3. Switch fixing screws (nr. 4)
开关定位螺钉(约4个)。
4. Mechanical micro switches
机械微动电门
5. Guide support fixing screws (nr. 4)
导轨支持定位螺钉(约4个)。
6. Bracket fixing screws
支架定位螺钉
7. Switch regulation and set bracket (nr. 2)
开关调节和机组支架(约2个)
8. Switch control shaft
开关控制轴
9. Control shaft guide supports (nr. 2)
控制轴导轨支持(约2个)。
10. Control shaft joining bracket
控制轴连接支架



Switches Technical Features - 开关技术性能

Max. switching voltage – 最高开关电压	6A - 250V AC
Min-Max Working temperature – 最低-最高工作温度	-40 +125°C / -85 +266°F
Contact distance mm. – 接触距离(毫米)	0,4
Mechanical life time – 机械使用寿命	2 × 10 ⁶
Max. cable temp. – 电缆最高温度	150 °C - 320° F
Cable mm. (diameter - length) – 电缆(毫米)(直径-长度)	Ø4×3000

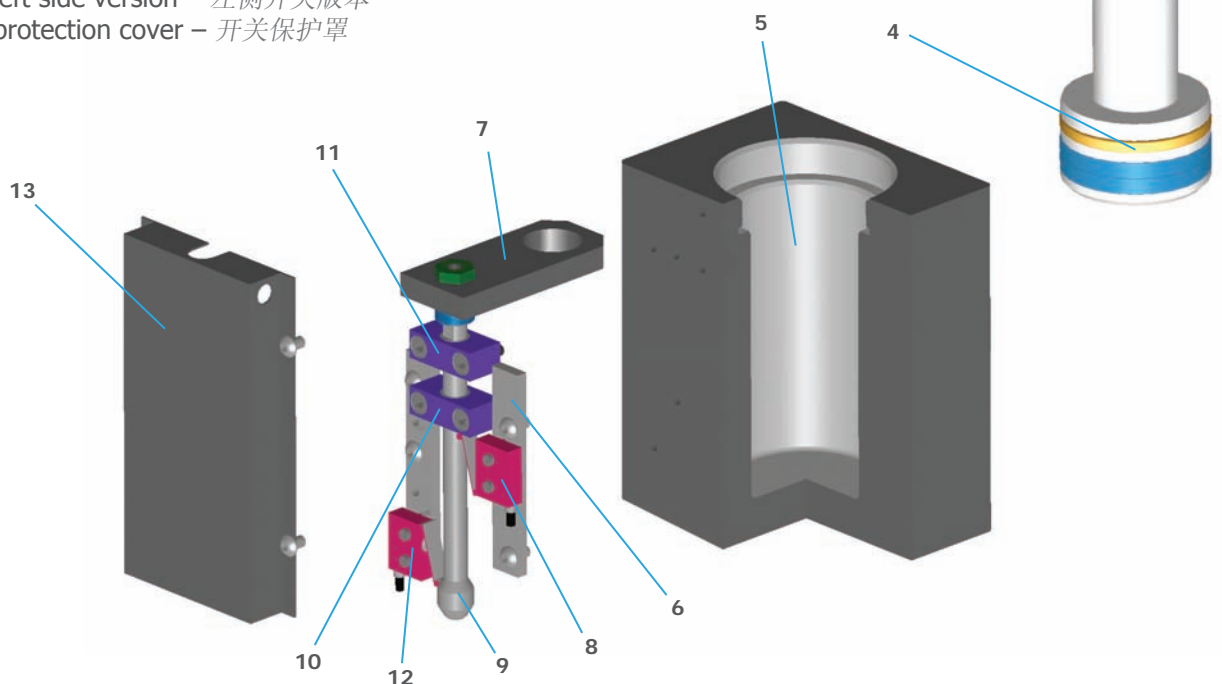
Switches Positioning-Field Chart - 开关安装位置图表

ØX	Z		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80		
032	050	Front Position - 前端位置	■	■	■															
		Rear Position - 后方位置								■	■	■	■							
040	050	Front Position - 前端位置	■	■	■															
		Rear Position - 后方位置								■	■	■	■							
	080	Front Position - 前端位置	■	■	■															
		Rear Position - 后方位置															■	■	■	■
050	050	Front Position - 前端位置	■	■	■															
		Rear Position - 后方位置								■	■	■	■							
	080	Front Position - 前端位置	■	■	■															
		Rear Position - 后方位置															■	■	■	■

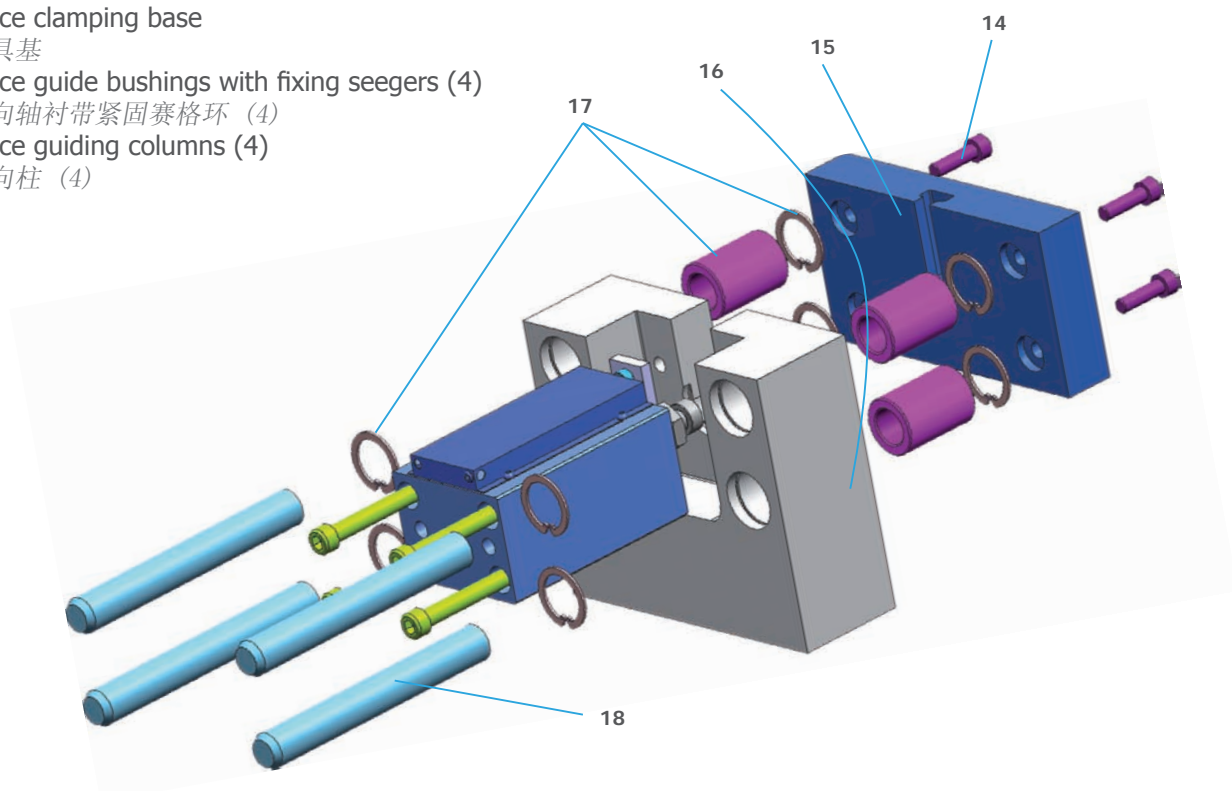
ØX = Bore 缸径 ØY = Rod 活塞杆 Z = Stroke 冲程

Spare Parts - 备件

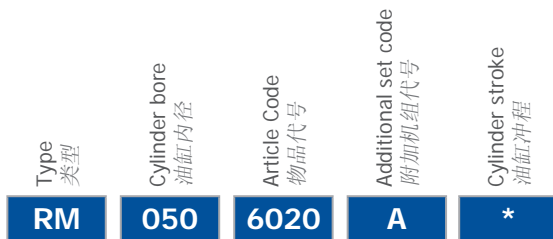
1. Rod cartridge – 活塞轴套
2. Rod seals kit – 活塞杆密封圈套件
3. Rod piston – 连杆活塞
4. Piston seals kit – 活塞密封圈套件
5. Body – 缸体
6. Switch fixing brackets – 开关固定支架
7. Control shaft joining racket – 控制轴连接支架
8. Switch right side version – 右侧开关版本
9. Switch control shaft – 开关控制轴
10. Supports for switch shaft guides – 开关轴导轨支持
11. Guide segments for switch shaft – 开关轴扇形导板
12. Switch left side version – 左侧开关版本
13. Switch protection cover – 开关保护罩



14. Cutting device guiding columns fixing screw (4)
切削装置定向柱紧固螺钉 (4)
15. Cutting device cores plate
切削装置芯盘
16. Cutting device clamping base
切削装置夹具基
17. Cutting device guide bushings with fixing seegers (4)
切削装置定向轴衬带紧固赛格环 (4)
18. Cutting device guiding columns (4)
切削装置定向柱 (4)



Example of order code:
订购代码实例:



RM	...	6010	A	Rod seals kit – 活塞杆密封圈套件	2
RM	...	6020	A	Piston seal kit – 活塞杆密封圈套件	4
RM	...	0310		Rod cartridge without seals – 无密封的活塞轴套	1
RM	...	0310	A	Rod cartridge with seals – 带密封的活塞轴套	1+2
RM	...	1120	A ...	Piston-rod with Female Metric Thread Rod End – 有公制内螺纹轴端的活塞杆	3
RM	...	1121	A ...	Piston-rod with Female UNF Thread Rod End – 有统一标准细牙内螺纹轴端的活塞杆	3
RM	...	1916R	* ...	Cylinder Body with threaded ports BSP back – 固定缸体, BSP牙输油口 背侧	5
RM	...	1916R	* ...	Cylinder Body with threaded ports NPT back – 固定缸体, NPT牙输油口 背侧	5
RM	...	6311	A ...	Complete switch kit – Kit completo interruttori	6 to/a 13
RM	...	5010	A ...	Switch control shaft – 开关控制轴	9
RM	...	5011	A ...	Control shaft joining bracket – 控制轴连接支架	7
RM	...	5012	A ...	Switch fixing brackets (2) – 开关固定支架 (2)	6
RM	...	5013	A	Complete switch shaft guide supports (2) – 完全开关轴导轨支持 (2个)。	10+11
RM	...	6310	A ...	Switches protection cover – 开关保护罩	13
		MS1		Small type switch with right lever and 2,5 mt. lenght direct cable - 右侧带微动杆及2.5米长直接电缆的小型开关	7
		MS2		Small type switch with left lever and 2,5 mt. length direct cable - 左侧带微动杆及2.5米长直接电缆的小型开关	12
RM	...	7010	A ...	Cutting device guiding column with fixing screw – 切削装置定向柱紧固螺钉	14+18
RM	...	7011	A ...	Cutting device guide bushing with fixing seeger – 切削装置定向轴衬带紧固赛格环	17
RM	...	7012		Cutting device cores plate – 切削装置芯盘	15
RM	...	7013		Cutting device clamping base – 切削装置夹具基	16
MFA10X150		Floating Joint for cylinder bore 32 mm. 浮动连接供给32 毫米缸径的油缸			19
MFA14X200		Floating Joint for cylinder bore 40 mm. 浮动连接供给40 毫米缸径的油缸			19
MFA20X250		Floating Joint for cylinder bore 50 mm. 浮动连接供给50 毫米缸径的油缸			19



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