



## Intelligent Hydraulic Cylinders



V400CL

**Integrated Hydraulic Cylinder 400 Bar,  
Heavy Duty Series**

综合液压油缸，400巴，重型系列

V450CL.0802.00.GB+CN

[www.vegacylinder.com](http://www.vegacylinder.com)

# Order compilation symbols - 订购代码符号

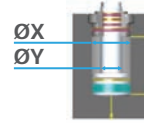
V400CL

Cylinder model V400CL  
油缸型号 V400CL

**CL**

Cylinder BORE (ØX)  
油缸内径  
- P. L4

<b>016</b>	<b>025</b>	<b>032</b>	<b>040</b>
<b>050</b>	<b>063</b>	<b>080</b>	<b>100</b>



ØX = Bore 缸径  
ØY = Rod 活塞杆

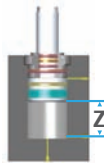
Clamping STYLE  
固定类型  
- P. L5-6

<b>X</b>	<b>Y</b>
Threaded cartridge 螺纹式轴套	Flanged Cartridge 法兰式轴套

Rod End Style  
轴牙类型  
- P. L7

<b>G</b>	Female metric thread - 公制内螺纹
<b>I</b>	Female UNF thread - UNF内螺纹

Stroke (Z)  
冲程  
- P. L4



z ØX	010,0	020,0	025,0	030,0	040,0	050,0	060,0	080,0	100,0	120,0	150,0
16											
25											
32											
40											
50											
63											
80											
100											

**CL 025 X G 050,0**

+ **Accessories**  
附件



Male Thread - 外螺纹	<b>MTA</b>
Floating Joint - 浮动连接	<b>MFA</b>
Floating Joint with Female - 外螺纹的浮动连接	<b>DFA</b>

Rod Accessories  
活塞杆附件  
- P. L7



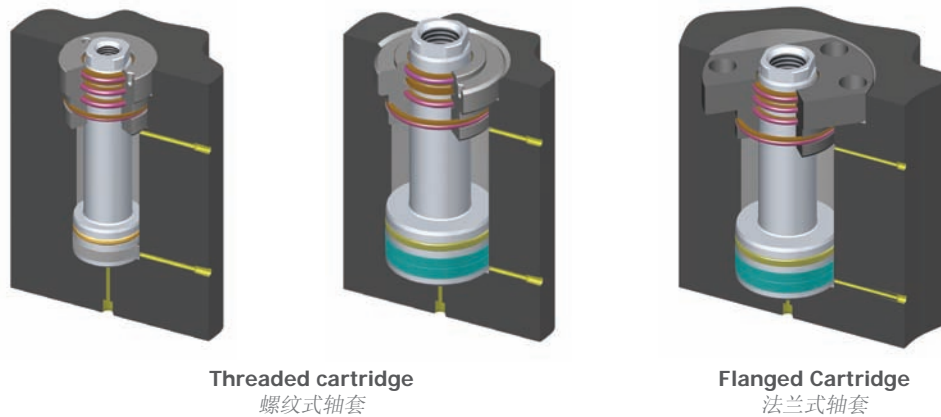
**Pay attention to the BEST PRICE cylinders!** By selecting all the "BEST PRICE" options - bore, stroke, mounting, rod and oil ports - you save up to 30% on cylinder price and you will have stock cylinders in Italy, China and other locations. Best price and service with same quality!

**注意性价比最好的油缸!** 如油缸的缸筒、冲程、座架、活塞杆和输油口都选择最具性价比的，您将节省高达油缸价格30%的费用；您还可从意大利、中国及其它各地购买到库存的油缸。提供最优价格和服务的同时，保证同样的品质！

## Product presentation and general features - 产品介绍和总体特征

The V400CL cylinders are the extreme solution of compactness: we provide rod, piston, cartridge and seals; you get the "chamber" in the mold. The components are those used for the V450CM, which prove extremely sturdy and always available. Available bores: from 16 mm. to 100 mm. Strokes from 10 to 120 depending on the bore (look at page L4). These cylinders are ideal for any use where compact dimensions are required and recommended in case of heavy duties applications as die casting moulds.

V400CL油缸设计极端紧凑：我们提供活塞轴、活塞、插装阀和密封；您在模具中获得“缸体”。该元件为用于V450CM的元件，坚固耐用，长期备货。现有缸径：从16毫米到100毫米。根据缸径的不同，冲程从10到120不等（见第L4页）。如对装配紧凑尺寸有需要，本油缸的使用最为理想，并推荐在模铸等大负荷操作下使用。

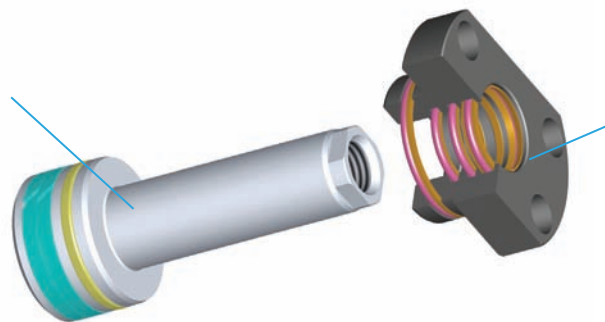


Threaded cartridge  
螺纹式轴套

Flanged Cartridge  
法兰式轴套

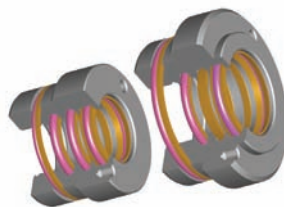
Special steel all-in-one rod piston with 58 HRC surface hardening and 112 kg. x cm<sup>2</sup> break resistance. PTFE+ Bronze seals with FKM O-ring. Guide rings are in polyester or phenolic resin for a high resistance and a long life.

表面硬度为58、能承受112千克/平方厘米断裂阻力的特种钢一体活塞轴活塞。有FKM O形环的聚四氟乙烯+铜密封。导环为聚酯或酚醛树脂材料，适用于高阻力，使用寿命长。



Cast iron seals-cartridge for the rod, with PTFE+ Bronze seals with FKM O-ring. Polyester or Phenolic Resin guide rings, for a high resistance and a long life. This solution with separate seals lodging from the body simplifies the seals replacement.

活塞轴有聚四氟乙烯+铜密封及FKM O形环的铸铁密封滤筒。导环为聚酯或酚醛树脂材料，适用于高阻力，使用寿命长。该方案的密封与缸体分离，使更换密封更简单。

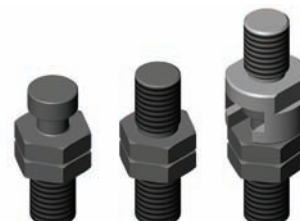


Rod cartridge alternative (see page L5-7)  
活塞轴套备选方案（见第L5-7页）

## Cylinder ACCESSORIES - 油缸附件

Rod end accessories: male thread with locknut, floating joint with locknut and floating joint with female of the floating joint, for increasing the connection options between rod and slide.

活塞轴端附件：有防松螺母的外螺纹；有防松螺母的浮动连接和有浮动连接的阴模的浮动连接能增加活塞轴和滑片之间的连接。



# TECHNICAL AND WORKING CHARACTERISTICS Chart

## 运行特性图表

ØX	Maximum Working PRESSURE in Bar-PSI	Maximum Nominal delivery (pushing) L/min	Max mass applicable in kg. at max speed	Max piston speed m/s	Maximum working temperature °C - °F
	最大工作压力 (单位: 巴-磅/平方英寸)	最大额定输送量 (推动) 升/分钟	在最高速度时的负重 (单位: 千克)	最大活塞速度 米/秒	最高工作温度 °C - °F
16	360 - 5220	1	2	0,1	160°C - +320°F
25	360 - 5220	3	4		
32	360 - 5220	5	10		
40	360 - 5220	7	17		
50	360 - 5220	12	25		
63	360 - 5220	18	30		
80	240 - 3480	30	40		
100	240 - 3480	45	45		

### Choice of **BORE size and STROKE** - 缸径和冲程的选择

Table THRUST and TRACTION FORCE in Kg.

推力和牵引力表格 (单位: 千克)

ØX	ØY	80 bar-1160 PSI		140 bar-2030 PSI		200 bar-2900 PSI		250 bar-3626 PSI		300 bar-4350 PSI	
		Thrust	Traction	Thrust	Traction	Thrust	Traction	Thrust	Traction	Thrust	Traction
		推力	牵引力	推力	牵引力	推力	牵引力	推力	牵引力	推力	牵引力
016	10	161	98	281	171	402	245	502	306	603	367
025	18	393	189	687	331	981	473	1227	591	1472	709
032	22	643	339	1125	593	1608	848	2010	1060	2412	1272
040	22	1005	701	1758	1226	2512	1752	3140	2190	3768	2628
050	28	1570	1078	2748	1886	3925	2694	4906	3368	5888	4041
063	28	2493	2000	4362	3500	6231	5000	7789	6251	9347	7501
080	36	4019	3205	7034	5609	10048	8013	12560	10017	-	-
100	45	6280	5008	10990	8765	15700	12521	19625	15651	-	-

Example of order code:  
订购代码实例:

CL 025 050,0

STANDARD STROKES Table in mm.

标准冲程表格 (单位: 毫米)

Z ØX	010,0	020,0	025,0	030,0	040,0	050,0	060,0	080,0	100,0	120,0	150,0
16	Standard					Standard					
25		Standard				Standard					
32			Standard			Standard					
40				Standard		Standard					
50					Standard	Standard					
63							Standard				
80								Standard			
100									Standard		

STANDARD STROKES  
标准冲程

SPECIAL STROKES  
特殊冲程

ØX = Bore 缸径

ØY = Rod 活塞杆

Z = Stroke 冲程

Note: The above table shows the maximum strokes for each version. Definitely the effective cylinder stroke will be the one determined by the customer depending on the housing manufactured inside the mould. The effective stroke, indeed, can be shorter than the maximum (but never less than the quote "Q" at pages L5 and L6) In these cases the rod projection - quote "WH" at page L7 - will be increased with the difference between the maximum stroke here above and the effective stroke manufactured.

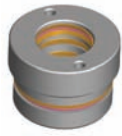
注释: 上述表格显示了各版本的最大冲程。当然, 油缸有效冲程为客户根据模具内生产的外壳所决定。事实上, 有效冲程可比最大冲程短 (但决不会小于第L5和第L6页所引用的Q)。在这种情况下, 活塞轴的投影—第L7页的“WH”—将随上述最大冲程与所生产的有效冲程之间的差异而增加。

# Choice of **CLAMPING style** - 固定类型的选择

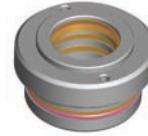
Example of order code:  
订购代码实例:



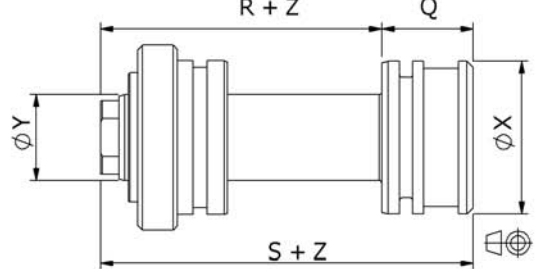
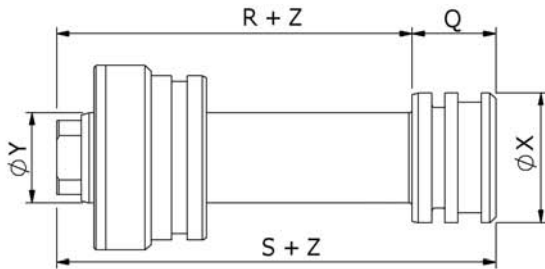
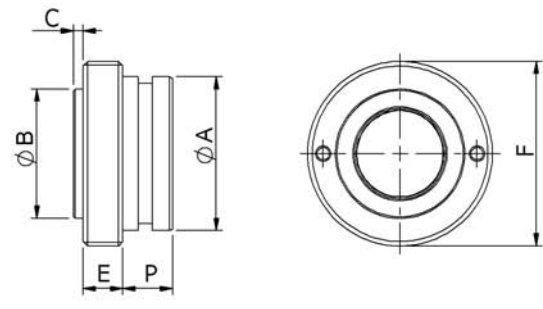
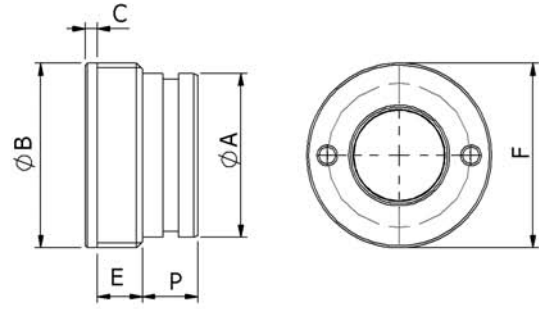
## **X** THREADED CARTRIDGE 螺纹式轴套



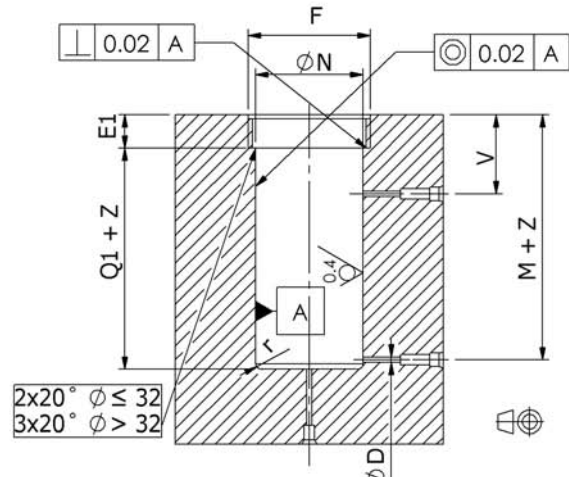
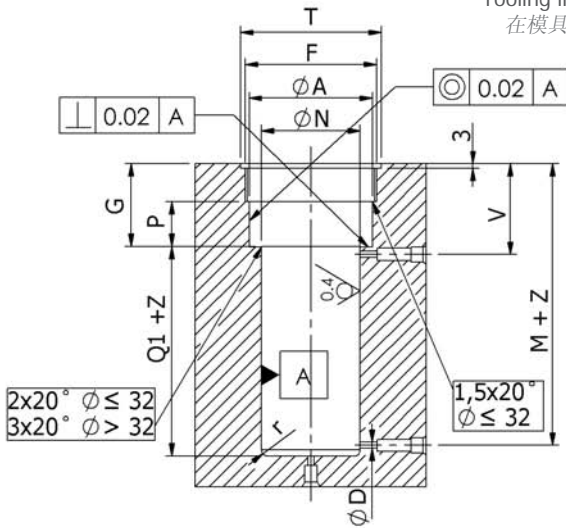
Version for bores 16 ÷ 40 mm  
缸径为16÷40毫米的版本



Version for bores 50 ÷ 100 mm  
缸径为50÷100毫米的版本



Tooling in the mold for installation  
在模具内的工具，安装时需要



NOTE: Out-of-roundness Max. 0,03 mm. 注释：不圆度，最大为0.03毫米。

Smoothen sharp edges - 光滑边缘

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	ØY	ØA h8/H8	ØB h9/H10	C	D	E	E1	F 6g/6H	G <sup>+0,05 0</sup>	M+	N <sup>+0,02 0</sup>	P	Q	Q1+ <sup>+0,05 0</sup>	r	R+	S+ <sup>+0,15 0</sup>	T	V
16	10	24	30	3	1,5	10	-	M30x2	24,5	41,5	16	11,5	19,4	19,5	1,5	30,6	50	30	26,5
25	18	34	38	3	2	11	-	M38x2	26,5	44	25	12,5	20,4	20,5	1,5	34,6	55	38	28,5
32	22	40	45	3	2	11	-	M45x2	27,5	45,5	32	13,5	20,4	20,5	2	36,6	57	45	29,5
40	22	40	45	3	2	11	-	M45x2	31,5	50,5	40	17,5	22,4	22,5	2	40,6	63	45	31,5
50	28	50	42	3,1	2,5	12,9	16	M60x2	-	58	50	16,2	29,7	46	2	41,3	71	-	32
63	28	63	50	3,1	3	14,9	18	M75x2,5	-	59,5	63	14,2	31,2	45,5	2	42,8	74	-	32
80	36	80	60	3,1	3,5	20,9	24	M95x2,5	-	70	80	16,2	34,7	51	2,5	51,3	86	-	39
100	45	100	72	3,1	4	22,9	26	M115x2,5	-	77	100	19,2	36,7	56	2,5	57,3	94	-	45

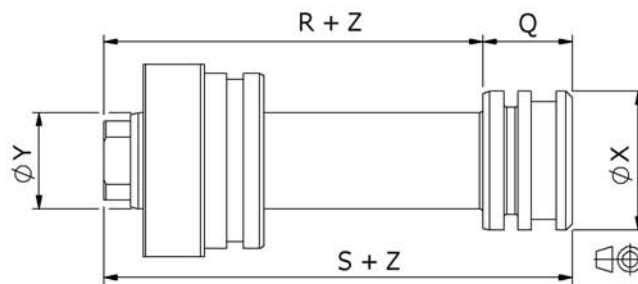
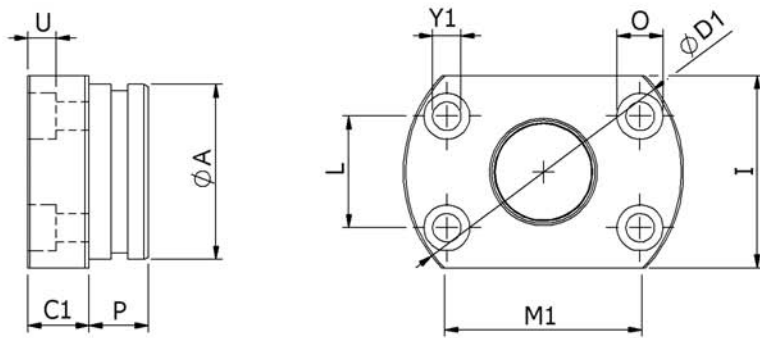
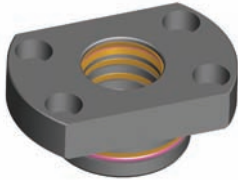
ØX = Bore 缸径    ØY = Rod 活塞杆    Z = Stroke 冲程 (P.L4)    eg. ØX = 25 ,    ØY = 18 ,    Z = 50mm :    R + Z = 34,6 + 50 = 84,6 mm

## Choice of **CLAMPING style** - 固定类型的选择

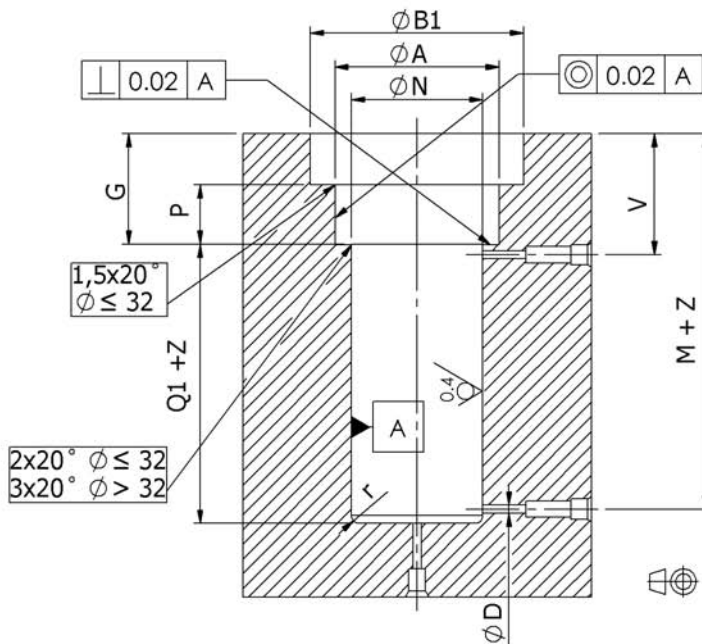
Example of order code:  
订购代码实例:



**Y** FLANGED CARTRIDGE  
兰式轴套



Tooling in the mold for installation  
在模具内的工具，安装时需要



Smoothen sharp edges - 光滑边缘

NOTE: Out-of-roundness Max. 0,03 mm. 注释: 不圆度, 最大为0.03毫米.

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	ØY	ØA h8/H8	ØB1	C1	ØD	ØD1	$G^{+0,05}_0$	I	L	M+	M1	$ØN^{+0,02}_0$	O	$P^{+0,05}_0$	Q	$Q1^{+0,05}_0$	r	R+	$S^{+0,15}_0$	U	V	Y1
16	10	24	46	13	1,5	44	24,5	28	16,5	41,5	28,6	16	9	11,5	19,4	19,5	1,5	30,6	50	5,5	26,5	5,5
25	18	34	56	14	2	54	26,5	38	21,5	44	37,2	25	9	12,5	20,4	20,5	1,5	34,6	55	5,5	28,5	5,5
32	22	40	66	14	2	64	27,5	44	25,5	45,5	44,2	32	10,5	13,5	20,4	20,5	2	36,6	57	6,5	29,5	6,5
40	22	40	66	14	2	64	31,5	44	25,5	50,5	44,2	40	10,5	17,5	22,4	22,5	2	40,6	63	6,5	31,5	6,5
50	28	50	84	16	2,5	82	32,2	54	32	58	55,4	50	13,5	16,2	29,7	29,8	2	41,3	71	8,5	32	8,5
63	28	63	98	18	3	96	32,2	67	39	59,5	67,5	63	13,5	14,2	31,2	31,3	2	42,8	74	8,5	32	8,5
80	36	80	122	24	3,5	120	40,2	84	49	70	84,9	80	16,5	16,2	34,7	34,8	2,5	51,3	86	10,5	39	10,5
100	45	100	148	26	4	146	45,2	104	61	77	105,7	100	18,5	19,2	36,7	36,8	2,5	57,3	94	12,5	45	12,5

ØX = Bore 缸径 ØY = Rod 活塞杆 Z = Stroke 冲程 (P.L4)

eg. ØX = 25, ØY = 18, Z = 50mm : R + Z = 34,6 + 50 = 84,6 mm

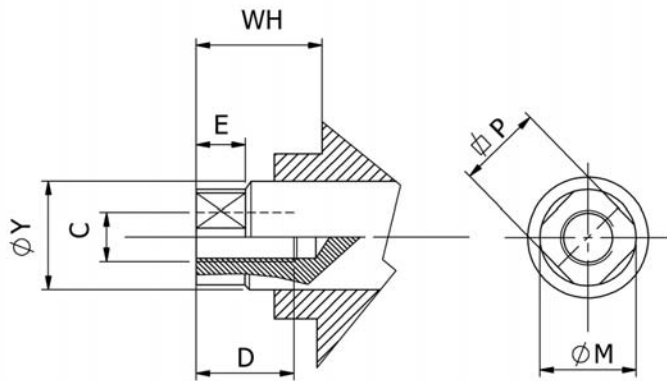
## Choice of **Rod End Style** - 杆端杆端类型的选择

Example of order code:  
订购代码实例:

CL 025 X **Y** 050,0

DESCRIPTION OF ROD END STYLE  
轴端类型的描述

<b>G</b>	METRIC FEMALE THREAD - STANDARD 公制内螺纹-标准
<b>I</b>	UNF-UNEF FEMALE THREAD (U.S.A. STANDARD) UNF - UNEF内螺纹 (美国标准)



ØX	ØY	C		D	E	ØM	φP	WH
		METRIC	UNF-UNEF					
16	10	M6×1	1/4-28	12	4	9,5	8	6
25	18	M10×1,5	3/8-24	20	5	17	15	8
32	22	M12×1,75	1/2-20	20	6	21	18	9
40	22	M14×2	9/16-18	20	6	21	18	9
50	28	M20×2,5	3/4-16	30	6	27	24	9
63	28	M20×2,5	3/4-16	30	7	28	24	10,5
80	36	M27×3	1/12	40	8	35	32	11
100	45	M33×3,5	1-1/4-12	50	9	44	40	12

## ACCESSORIES - 附件

Rod accessories for rod Metric or UNF thread. - 公制螺纹或统一标准细牙螺纹的轴端附件

Example of order code:  
订购代码实例:

**MTA** **10X150**

**MTA**



**Metric Male Thread**  
公制外螺纹

**MFA**

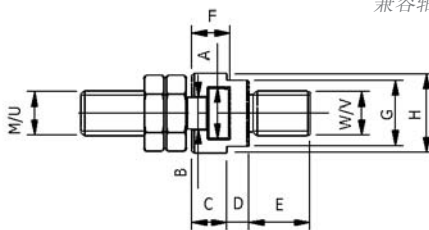
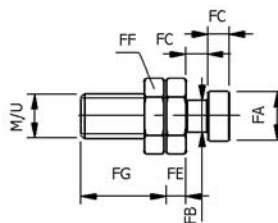
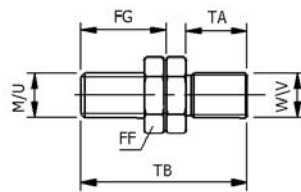


**Floating Joint**  
浮动连接

**DFA**



**Floating Joint With Female**  
有内螺纹的浮动连接



METRIC (G)	UNF-UNEF (I)	ØX	ØY	#1
-	-	16	10	-
<b>10X150</b>	<b>3/8-24</b>	25	18	G I
<b>12X175</b>	<b>1/2-20</b>	32	22	G I
<b>14X200</b>	<b>9/16-18</b>	40	22	G I
<b>20X250</b>	<b>3/4-16</b>	50	28	G I
<b>20X250</b>	<b>3/4-16</b>	63	28	G I
<b>27X300</b>	<b>1-12</b>	80	36	G I
<b>33X350</b>	<b>1-1/4-12</b>	100	45	G I

#1 : Compatible rod end code  
兼容轴端代号

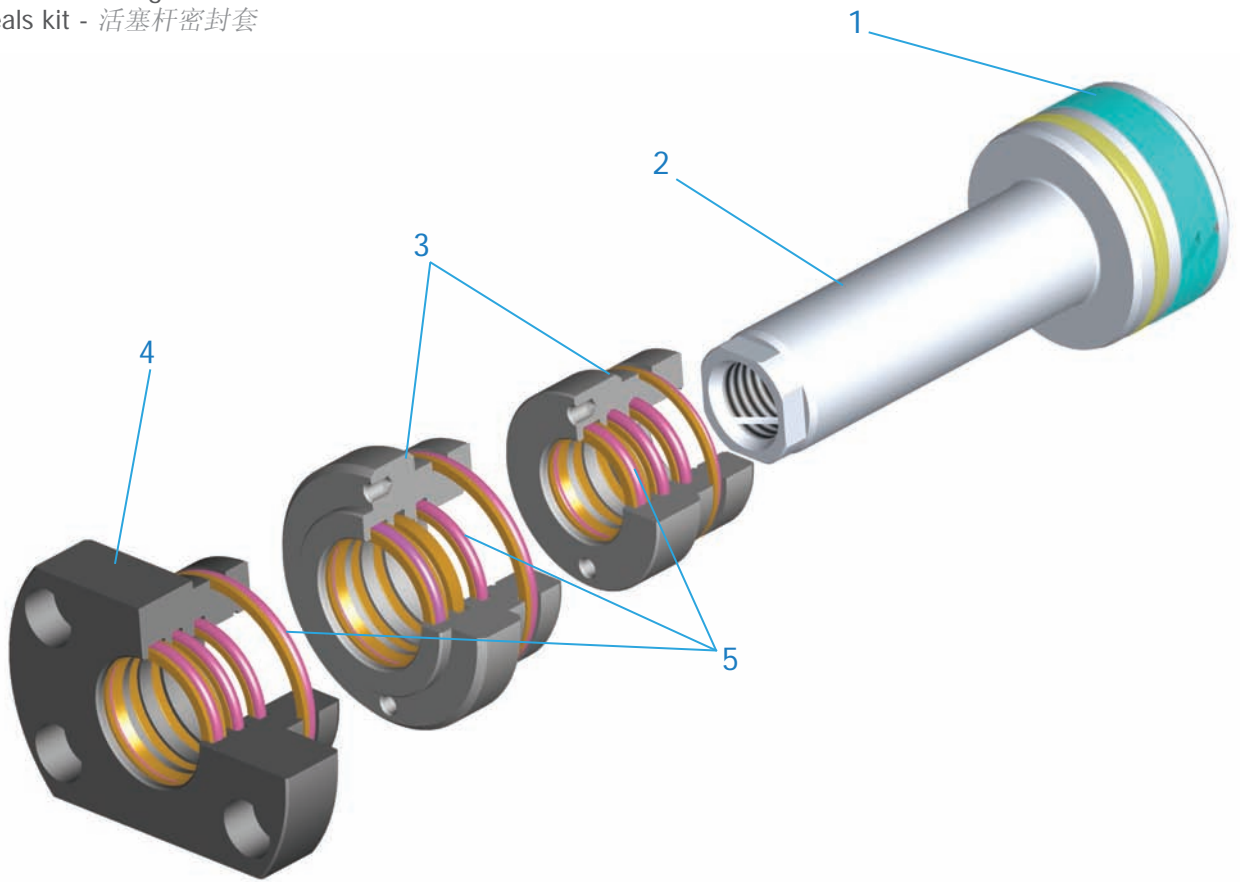
NOTE: For dimensions where no tolerance is indicated, refer to DIN norm 7168-m  
注释: 至于没有显示公差尺寸, 参照德国标准 7168-M

		METRIC		UNF-UNEF		A	B	C	D	E	F	G	H	FA	FB	FC	FE	FF	FG	TA	TB
		M	W	U	V																
<b>10X150</b>	<b>3/8-24</b>	M10×1,5	M10×1,25	3/8-24	3/8-24	17,5	11	11	8	16	12,5	21	25	16	10	7	6	17	24	14	44
<b>12X175</b>	<b>1/2-20</b>	M12×1,75	M12×1,25	1/2-20	1/2-20	19,5	12	13	9	18	14,5	24	28	18	11	8	7	19	28	16	51
<b>14X200</b>	<b>9/16-18</b>	M14×2	M14×1,5	9/16-18	9/16-18	19,5	12	13	9	22	14,5	24	28	18	11	8	8	22	33	18	59
<b>20X250</b>	<b>3/4-16</b>	M20×2,5	M20×1,5	3/4-16	3/4-16	24	15	16	10	28	17,5	30	36	22	14	10	9	30	39	28	76
<b>27X300</b>	<b>1-12</b>	M27×3	M27×2	1-12	1-12	30	19	20	12	40	23	36	44	28	18	12,5	12	36	52	36	100
<b>33X350</b>	<b>1-1/4-12</b>	M33×3,5	M33×2	1-1/4-12	1-5/16-18	39	23	23	14	50	27,5	46	55	35	22	16	14	46	64	45	123

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

## Spare Parts - 备件

- 1 Piston seals kit - 活塞密封圈套
- 2 Rod piston - 活塞轴活塞
- 3 Rod cartridge - 活塞轴套
- 4 Flanged rod cartridge - 法兰杆套
- 5 Rod seals kit - 活塞杆密封套



V400CL

Example of order code:  
订购代码实例:

Type 类型	Cylinder bore 油缸内径	Article Code 物品代号	Additional set code 附加机组代号	Cylinder stroke 油缸冲程
RM	025	6010	A	*

RM	...	6010	A	Rod seals kit - 活塞杆密封套	5
RM	...	6020	A	Piston seals kit - 活塞密封圈套	1
RM	...	0310		Threaded rod cartridge without seals - 无密封的螺纹活塞轴套	3
RM	...	0310	A	Threaded rod cartridge with seals - 有密封的螺纹活塞轴套	3 + 5
RL	...	0320		Flanged rod cartridge without seals - 无密封的法兰活塞轴套	4
RL	...	0320	A	Flanged rod cartridge with seals - 有密封的法兰活塞轴套	4 + 5
RM	...	1120	A	Piston-rod with Female Metric Thread Rod End 有公制内螺纹活塞轴端的活塞轴	1 + 2
RM	...	1121	A	Piston-rod with Female UNF Thread Rod End 有统一标准细牙内螺纹活塞轴端的活塞杆	1 + 2











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