

# CD/CG 系列液压缸 Series hydraulic cylinder

## CD250/CG250 系列重型冶金设备用液压缸 series Hydraulic cylinder for heavy metallurgical equipment

### 产品概要 Description

重型冶金设备CD250/CG250型液压缸是参照德国力士乐公司CD250/CG250高压系列液压缸设计和生产。其外部连接尺寸与力士乐液压缸一致。产品技术性能指标达到进口同类产品水平。功能齐全。用途广泛。适用于冶金、矿山、交通、锻压、铸造、钻探等行业。

The CD250/CG250 hydraulic cylinder for heavy metallurgical equipment are manufacture according to Rexroth's CD250/CG250 high pressure hydraulic cylinder. It has the same connecting parts as Rexroth's. The cylinder's quality reach the same level of import kind, function complete, widely used can be used in metallurgical, mining, transportation, forging and stamping, casting, drilling.

### 产品特点 Features

本系列产品分差动液压缸和等速液压缸两类。缸径 $\phi 40\sim\phi 320\text{mm}$ 。14种缸径。两种速比。五种安装型式。产品还配置缓冲节流阀和单向放气阀。

活塞杆经镀铬处理。具有防压、防锈、防腐、耐磨等特性。活塞杆接头有球铰接头GA、GAK、GAS和衬套接头SA。供用户选用。

液压缸油口螺纹有ISO公制螺纹和英制BSP管螺纹两种。

Two types in this series: differential hydraulic cylinder and uniform speed hydraulic cylinder, dia  $\phi 40\sim\phi 320\text{mm}$  14 kinds of dia, 2 kinds of speed ratio, 5 kinds of install pinion product assemble with beffer check valve and one way exhaust valve.

With chromeplating the piston rod features dust proof, corrosion proof, rust proof and wear resistant, piston rod have globe hige GA, GAK, GAS and bush SA connecting for select.

There are ISO and BSP standard for connecting screw.

### 基本性能 basic performance

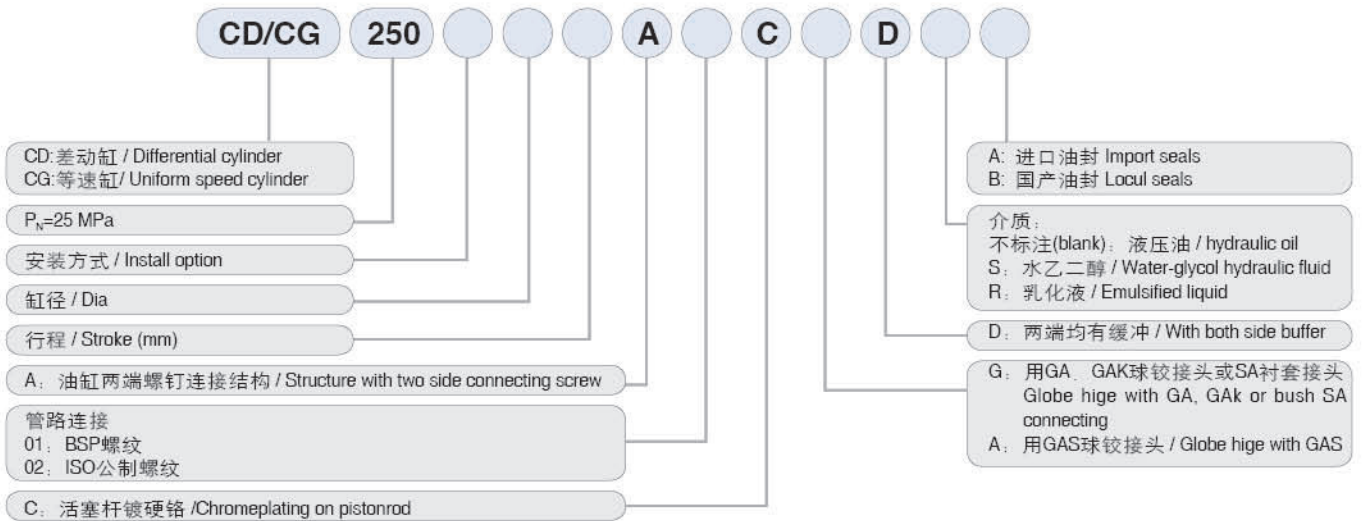
项目 item	参数及性能 specification and features
公称压力 / Pressure	PN $\leq 25\text{MPa}$
适用介质 / Medium	液压油、乳化液、水乙二醇 / hydraulic oil, emulsified liquid, water-glycol hydraulic fluid
适用温度 / Temperature	-20°C ~ +100°C (最高/Max: 200°C)
密封件 / seal components	采用国内和国外两种密封件。用户可根据实际需要自行确定 both local seals and import seals are offer depending on request

### 订货须知 Note for Order

- 1.请对照“供货范围”写出完整的型号。
- 2.活塞杆接头可参考下列表选定。
- 3.用户如有特殊要求。请订货时注明。

1. Please refer to supply range, advise the full type code.
2. Please select the right piston connecting as follow list.
3. Any special request pleas contact us.

型号注释 Note for type



缸径

缸径 dia (mm)	杆径 rod dia (mm)	速比 speed ratio θ	标注 mark
40	20	1.3	40/20
	28	2	40/28
50	28	1.4	50/28
	36	2	50/36
63	36	1.4	63/36
	45	2	63/45
80	45	1.4	80/45
	56	2	80/56
100	56	1.4	100/56
	70	2	100/70
125	70	1.4	125/70
	90	2	125/90
140	90	1.6	140/90
	100	2	140/100
160	100	1.6	160/100
	110	2	160/110
180	110	1.6	180/110
	125	2	180/125
200	125	1.6	200/125
	140	2	200/140
220	140	1.6	220/140
	160	2	220/160
250	160	1.6	250/160
	180	2	250/180
280	180	1.6	280/180
	200	2	280/200
320	200	1.6	320/200
	200	2	320/220

安装方式 / Install opinion

类型 Type	CD 差动液压缸 differential hydraulic cylinder	CG 等速液压缸 uniform speed hydraulic cylinder
A 缸底滑动轴承 Rear slide bearing A		
B 缸底关节轴承 Rear spherical plain bearing		
C 缸头法兰 Top flange		
D 缸底法兰 Rear flange		
E 中间铰轴安装 Middle hinge		
F 底座安装 Foot fixed		

**CD/CG** 系列 液压缸  
 Series Hydraulic cylinder  
 CD250/CG250

活塞端推力与活塞杆拉力 Pisto Rod's Pull/Push Force

缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)									
		5		10		15		20		25	
		推力与拉力(KN) (许用行程 mm) Pull/push force (Possible stroke)									
		推力 Push force	拉力 Pull force	推力 Push force	拉力 Pull force	推力 Push force	拉力 Pull force	推力 Push force	拉力 Pull force	推力 Push force	拉力 Pull force
40	20	6.28	4.71	12.56	9.42	18.84	14.13	25.12	18.84	31.40	23.55
	28		3.20		6.40		9.60		12.80		16.00
50	28	9.82	6.74	19.64	13.48	29.46	20.22	39.28	26.96	49.10	33.70
	36		4.73		9.46		14.19		18.92		23.65
63	36	15.58	10.50	31.17	21.00	46.75	31.50	62.34	42.00	77.90	52.50
	45		7.63		15.26		22.89		30.52		38.15
80	45	25.13	17.18	50.27	34.36	75.40	51.54	100.54	68.72	125.65	85.90
	56		12.82		25.64		38.46		51.28		64.10
100	56	39.27	26.95	78.54	53.90	117.81	80.85	157.08	107.80	196.35	134.75
	70		20.03		40.06		60.09		80.12		100.15
125	70	61.35	42.10	122.70	84.20	184.05	126.30	245.40	168.40	306.75	210.50
	90		29.55		59.10		88.65		118.20		147.75
140	90	76.95	45.15	153.90	90.30	230.85	135.45	307.80	180.60	384.75	225.75
	100		37.70		75.40		113.10		150.80		188.40
160	100	100.50	61.25	201.00	122.50	301.50	183.75	402.00	245.00	502.50	306.25
	110		53.00		106.00		159.00		212.00		265.00
180	110	127.23	79.7	254.47	159.40	381.70	239.10	508.94	318.86	636.17	398.57
	125		65.87		131.75		197.60		263.50		329.37
200	125	157.05	95.70	314.10	191.40	471.15	287.10	628.20	382.80	785.25	478.50
	140		80.10		160.20		240.30		320.40		400.50
220	140	190	113	380.10	262.20	570.20	339.00	760.26	452.38	950.33	565.47
	160		89.53		179.00		268.60		358.14		477.60
250	160	245.4	144.9	490.87	289.80	736.30	434.70	981.70	579.60	1227.20	724.550
	180		118.2		236.40		354.60		472.80		591.00
280	180	307.8	180.6	615.75	361.30	923.63	431.90	1231.50	722.56	1539.40	903.20
	200		150.8		301.60		452.40		603.20		754.00
320	200	402.1	246	804.20	490.00	1206.40	735.10	1608.50	980.20	2010.60	1225.20
	220		212		424.00		636.20		848.20		1060.30

优选行程系列 Best stroke list

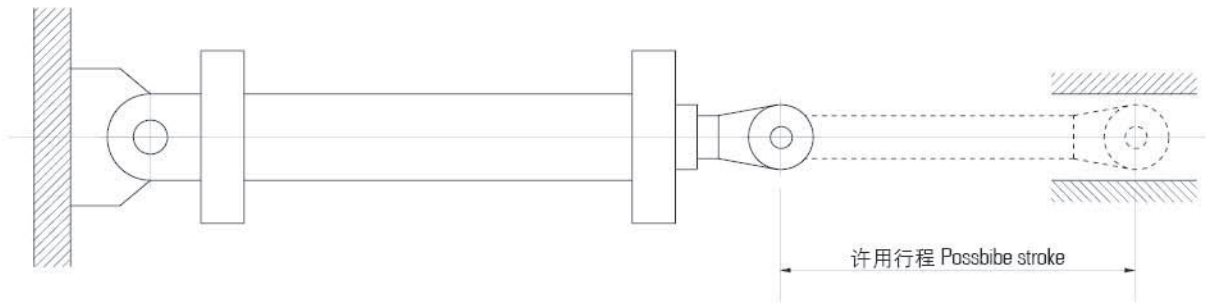
40	50	63	80	90	100	110	125	140	160
180	200	220	250	280	320	360	400	450	500
550	630	700	800	900	1000	1100	1250	1400	1600
1800	2000	2200	2500	2800	3200	3600	4000	4500	5000
5500	6300	7000	8000	9000	10000				

注：本系列采用ISO4359液压传动一缸一活塞行程的基本系列。请优先选用。  
 Note: this series is base on ISO4359, It is the best choice

A型: 缸底滑动轴承 / Type A : Rear Slide Bearing  
 B型: 缸底关节轴承 / Type B : Rear Spherical Plain Bearing

**许用行程 Possible stroke**

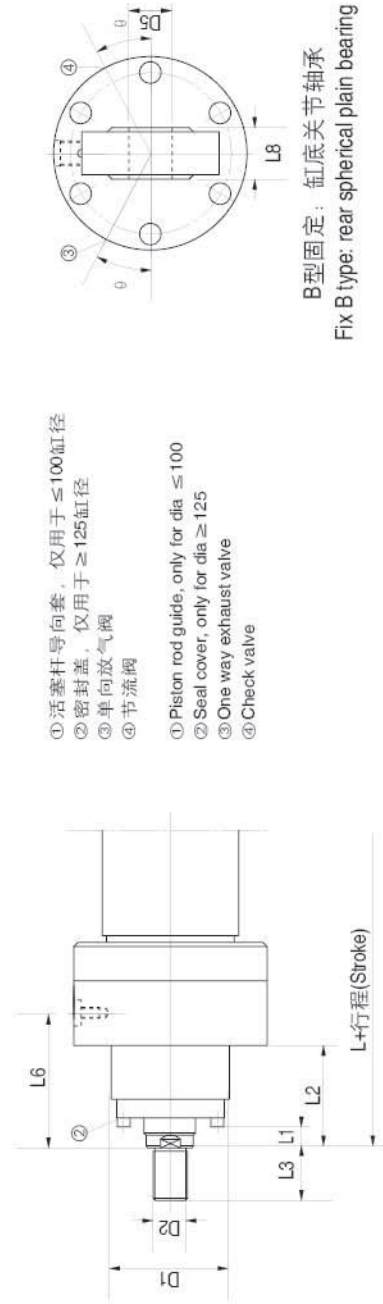
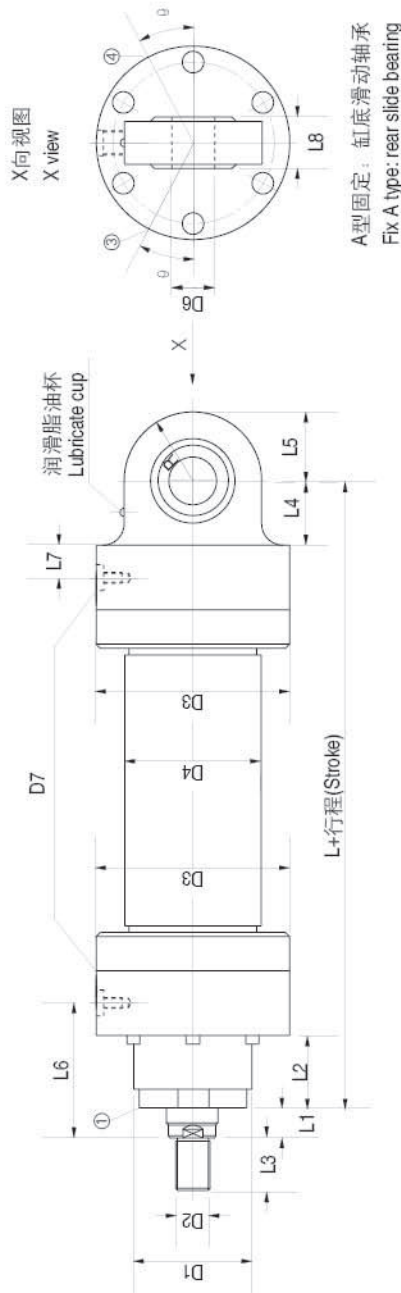
根据欧拉公式。杆在铰接结构。刚性导向载荷下。安全系数为3.5。活塞杆在弯曲应力（压缩载荷）下的许用行程。  
 As per euler formula. hinge connect, safely factor 3.5, piston rod on the stress bend, possible stroke.



缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)				
		5	10	15	20	25
		许用行程 Possible stroke				
40	20	280	155	95	65	40
	28	690	445	335	270	225
50	28	510	315	225	160	140
	36	950	625	480	395	335
63	36	700	440	325	256	210
	45	1195	790	610	505	435
80	45	880	560	420	335	280
	56	1480	985	765	635	545
100	56	1105	710	535	430	360
	70	1865	1245	970	810	695
125	70	1400	905	685	555	465
	90	2500	1680	1320	1105	960
140	90	2170	1440	1115	925	795
	100	2755	1855	1455	1215	1055
160	100	2330	1540	1190	985	840
	110	2895	1940	1520	1265	1095
180	110	2480	1635	1260	1035	885
	125	3325	2230	1745	1455	1260
200	125	2920	1935	1500	1240	1065
	140	3775	2540	1995	1670	1445
220	140	3325	2205	1705	1410	1205
	160	4500	3030	2380	1995	1730
250	160	3880	2590	2015	1675	1445
	180	5055	3415	2690	2260	1965
280	180	4380	2925	2275	1890	1630
	200	5550	3750	2950	2475	2150
320	200	4680	3105	2410	1995	1710
	220	5810	3905	3060	2560	2215

**CD/CG** 系列 液压缸  
 Series Hydraulic cylinder  
 CD250/CG250-A/B

外形尺寸 Outlook & Dimension



A, B型规格尺寸 / Dimension of type A & B

活塞直径 piston dia (mm)	活塞杆直径 piston rod dia (mm)	缓冲长度 buffer length (mm)	D1	活塞杆螺纹D2 piston rod thread		D3	D4	D5	D6	油口 oil port D7		R	L	L1	L2	L3		L4	L5	L6	L7	L8	θ
				A*	G*					01	02					A	G						
40	20	20	055e8	M18 × 2	M16 × 1.5	085	050	025	025H11	R1/2"	M22 × 1.5	R27.5	252	17	54	30	16	32.5	27.5	76	20.5	23-0.4	30°
	28																						
50	28	20	068e8	M24 × 2	M22 × 1.5	0105	060	030	030H11	R1/2"	M22 × 1.5	R32.5	265	21	58	35	22	37.5	32.5	80	20.5	28-0.4	30°
	36																						
63	36	25	075e8	M30 × 2	M28 × 1.5	0120	078	035	035H11	R3/4"	M27 × 2	R40	302	25	67	45	28	45	40	89.5	22.5	30-0.4	30°
	45																						
80	45	30	095e8	M39 × 3	M35 × 1.5	0135	0100	040	040H11	R3/4"	M27 × 2	R50	330	15.5	65	55	35	52.5	50	86	32.5	35-0.4	30°
	56																						
100	56	35	0115e8	M50 × 3	M45 × 1.5	0165	0125	050	050H11	R1"	M33 × 2	R62.5	385	33	85	75	45	60	62.5	112.5	32.5	40-0.4	30°
	70																						
125	70	50	0135e8	M64 × 3	M58 × 1.5	0200	0150	060	060H11	R1 1/4"	M42 × 2	R65	447	32	97	95	58	70	70	132	35	50-0.4	30°
	90																						
140	90	50	0155e8	M80 × 3	M65 × 1.5	0220	0170	070	070H11	R1 1/4"	M48 × 2	R77	490	37	105	110	65	75	82	145	40	55-0.4	30°
	100																						
160	100	55	0180e8	M90 × 3	M80 × 2	0265	0194	080	080H11	R1 1/2"	M48 × 2	R88	550	40	120	120	80	85	95	160	40	60-0.4	30°
	110																						
180	110	65	0200e8	M100 × 3	M100 × 2	0290	0220	090	090H11	R1 1/2"	M48 × 2	R103	610	40	130	140	100	90	113	175	55	65-0.4	30°
	125																						
200	125	70	0215e8	M110 × 4	M110 × 2	0310	0244	0100	0100H11	R1 1/2"	M48 × 2	R115	645	40	135	150	110	115	125	180	60	70-0.4	30°
	140																						
220	140	80	0245e8	M120 × 4	M120 × 3	0355	0267	0110	0110H11	R1 1/2"	M48 × 2	R132.5	750	25	155	160	120	125	142.5	225	70	80-0.4	30°
	160																						
250	160	90	0280e8	M120 × 4	M120 × 3	0395	0305	0110	0110H11	R1 1/2"	M48 × 2	R150	789	25	165	160	120	140	160	235	70	80-0.4	30°
	180																						
280	180	90	0305e8	M150 × 4	M130 × 3	0430	0330	0120	0120H11	R1 1/2"	M48 × 2	R170	884	35	170	190	130	150	180	270	99	90-0.4	30°
	200																						
320	200	100	0340e8	M160 × 4	--	0490	0381	0140	0140H11	R1 1/2"	M48 × 2	R190	980	40	195	200	--	175	200	295	100	1100-0.4	45°
	220																						

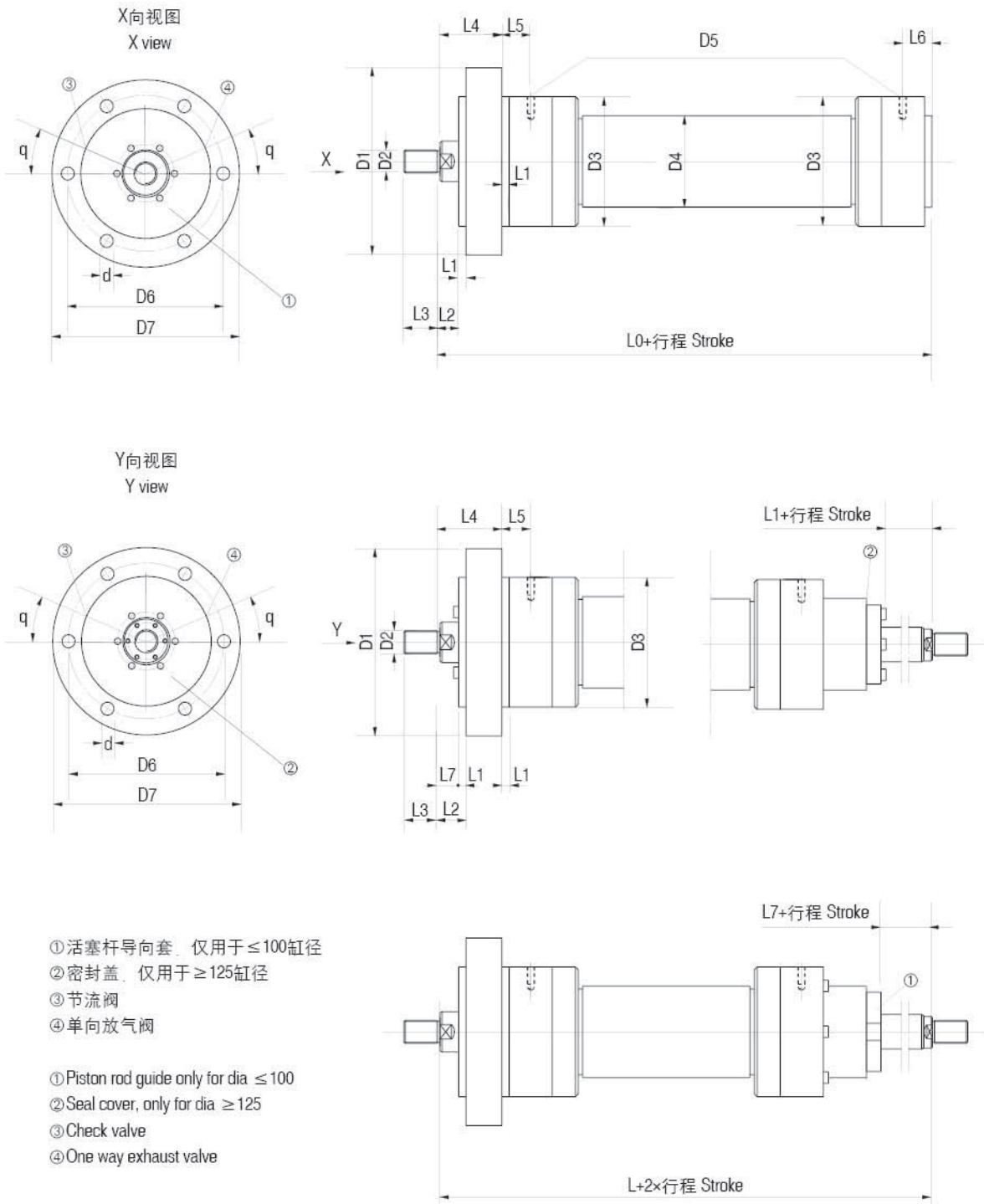
\*G=采用球铰接头GA, GAK, 衬套接头SA的螺纹 / G=globe hinge with GA, GAK, or bush SA connecting.  
\*A=采用球铰接头GAS的螺纹 / A=globe hinge with GAS.

# CD/CG 系列 液压缸 Series Hydraulic cylinder

CD250/CG250-C

C型: 缸头法兰 / Type C : Top flange

## 外形尺寸 Outlook & Dimension



C型规格尺寸 / Dimension of type C

活塞直径 piston dia (mm)	活塞杆直径 piston rod dia (mm)	缓冲长度 buffer length (mm)	D1	活塞杆螺纹D2 piston rod thread		D3	D4	油口 oil port D5		D6	D7	d	L0	L	L1	L2	L3		L4	L5	L6	L7	θ
				A*	G*			01	02								A*	G*					
40	20	20	Ø90e8	M18 × 2	M16 × 1.5	Ø85	Ø50	R1/2"	M22 × 1.5	Ø108 ± 0.2	Ø130	9.5	226	268	5	19	30	16	49	27	27	17	30°
	28																						
50	28	20	Ø110e8	M24 × 2	M22 × 1.5	Ø105	Ø60	R1/2"	M22 × 1.5	Ø130 ± 0.2	Ø160	11.5	234	278	5	23	35	22	53	27	27	21	30°
	36																						
63	36	25	Ø130e8	M30 × 2	M28 × 1.5	Ø120	Ø78	R3/4"	M27 × 2	Ø155 ± 0.2	Ø185	14	262	324	5	27	45	28	62	27.5	27.5	25	30°
	45																						
80	45	30	Ø145e8	M39 × 3	M35 × 1.5	Ø135	Ø100	R3/4"	M27 × 2	Ø170 ± 0.2	Ø200	14	275	325	5	25	55	35	60	26	30	15.5	30°
	56																						
100	56	35	Ø175e8	M50 × 3	M45 × 1.5	Ø165	Ø125	R1"	M33 × 2	Ø205 ± 0.2	Ø245	18	325	405	5	35	75	45	80	32.5	32.5	33	30°
	70																						
125	70	50	Ø210e8	M64 × 3	M58 × 1.5	Ø200	Ø150	R1 1/4"	M42 × 2	Ø245 ± 0.2	Ø295	22	377	474	5	37	95	58	87	45	35	32	30°
	90																						
140	90	50	Ø230e8	M80 × 3	M65 × 1.5	Ø220	Ø170	R1 1/4"	M48 × 2	Ø265 ± 0.2	Ø315	22	420	520	10	45	110	65	95	50	45	37	30°
	100																						
160	100	55	Ø275e8	M90 × 3	M80 × 2	Ø265	Ø194	R1 1/2"	M48 × 2	Ø325 ± 0.2	Ø385	28	475	585	10	50	120	80	110	50	50	40	30°
	110																						
180	110	65	Ø300e8	M100 × 3	M100 × 2	Ø290	Ø220	R1 1/2"	M48 × 2	Ø360 ± 0.2	Ø420	30	515	635	10	50	140	100	120	55	55	40	30°
	125																						
200	125	70	Ø320e8	M110 × 4	M110 × 2	Ø310	Ø244	R1 1/2"	M48 × 2	Ø375 ± 0.2	Ø445	33	535	665	10	50	150	110	125	55	45	40	30°
	140																						
220	140	80	Ø370e8	M120 × 4	M120 × 3	Ø355	Ø267	R1 1/2"	M48 × 2	Ø430 ± 0.2	Ø490	33	635	780	10	60	160	120	145	80	80	25	30°
	160																						
250	160	90	Ø415e8	M120 × 4	M120 × 3	Ø395	Ø305	R1 1/2"	M48 × 2	Ø485 ± 0.2	Ø555	39	659	814	10	70	160	120	155	80	80	25	30°
	180																						
280	180	90	Ø450e8	M150 × 4	M130 × 3	Ø430	Ø330	R1 1/2"	M48 × 2	Ø520 ± 0.2	Ø590	39	744	905	10	65	190	130	160	110	109	35	30°
	200																						
320	200	100	Ø510e8	M160 × 4	--	Ø490	Ø381	R1 1/2"	M48 × 2	Ø600 ± 0.2	Ø680	45	815	1000	10	65	200	--	185	110	110	40	45°
	220																						

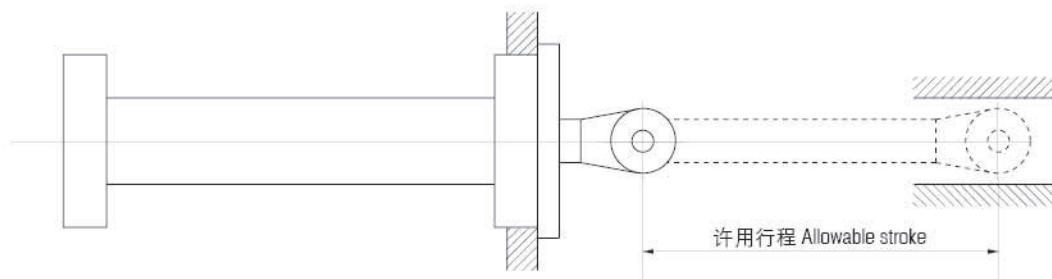
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\*A=采用球铰接头GAS的螺纹 / A=globe hinge with GAS.



# CD/CG 系列 液压缸 Series Hydraulic cylinder CD250/CG250-C

## 许用行程 Possible stroke

根据欧拉公式，杆在铰接结构，刚性导向载荷下，安全系数为3.5，活塞杆在弯曲应力（压缩载荷）下的许用行程。  
As per euler formula, hinge connect, safely factor 3.5, piston rod on the stress bend, possible stroke.

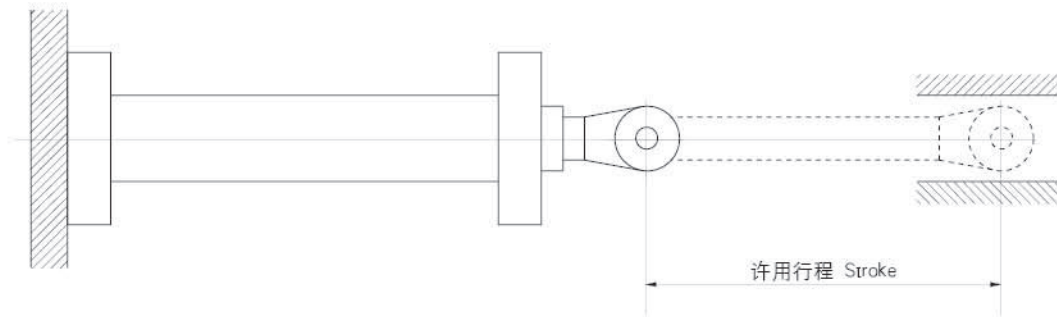


缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)				
		5	10	15	20	25
许用行程 Possible stroke						
40	20	1115	760	605	510	445
	28	2285	1590	1280	1095	965
50	28	1795	1235	990	840	740
	36	3040	2115	1705	1465	1295
63	36	2370	1635	1315	1120	990
	45	3780	2635	2125	1825	1615
80	45	2935	2035	1635	1395	1235
	56	4625	3230	2610	2240	1990
100	56	3630	2515	2020	1725	1520
	70	5780	4030	3255	2795	2480
125	70	4555	3155	2535	2165	1915
	90	7670	5360	4335	3725	3310
140	90	6795	4735	3820	3275	2905
	100	8450	5900	4775	4100	3640
160	100	7325	5100	4110	3525	3120
	110	8925	6230	5035	4320	3835
180	110	7850	5455	4390	3760	3330
	125	10235	7140	5770	4950	4390
200	125	9145	6360	5130	4395	3890
	140	11565	8075	6525	5605	4975
220	140	10435	7255	5850	5010	4440
	160	13750	9600	7765	6670	5920
250	160	12040	8390	6775	5810	5155
	180	15365	10730	8685	7465	6630
280	180	13610	9485	7660	6570	5825
	200	16915	11825	9565	8220	7305
320	200	14615	10160	8185	7010	6205
	220	17810	12420	10030	8605	7635

**D型: 缸底法兰 / Type D : Rear flange**

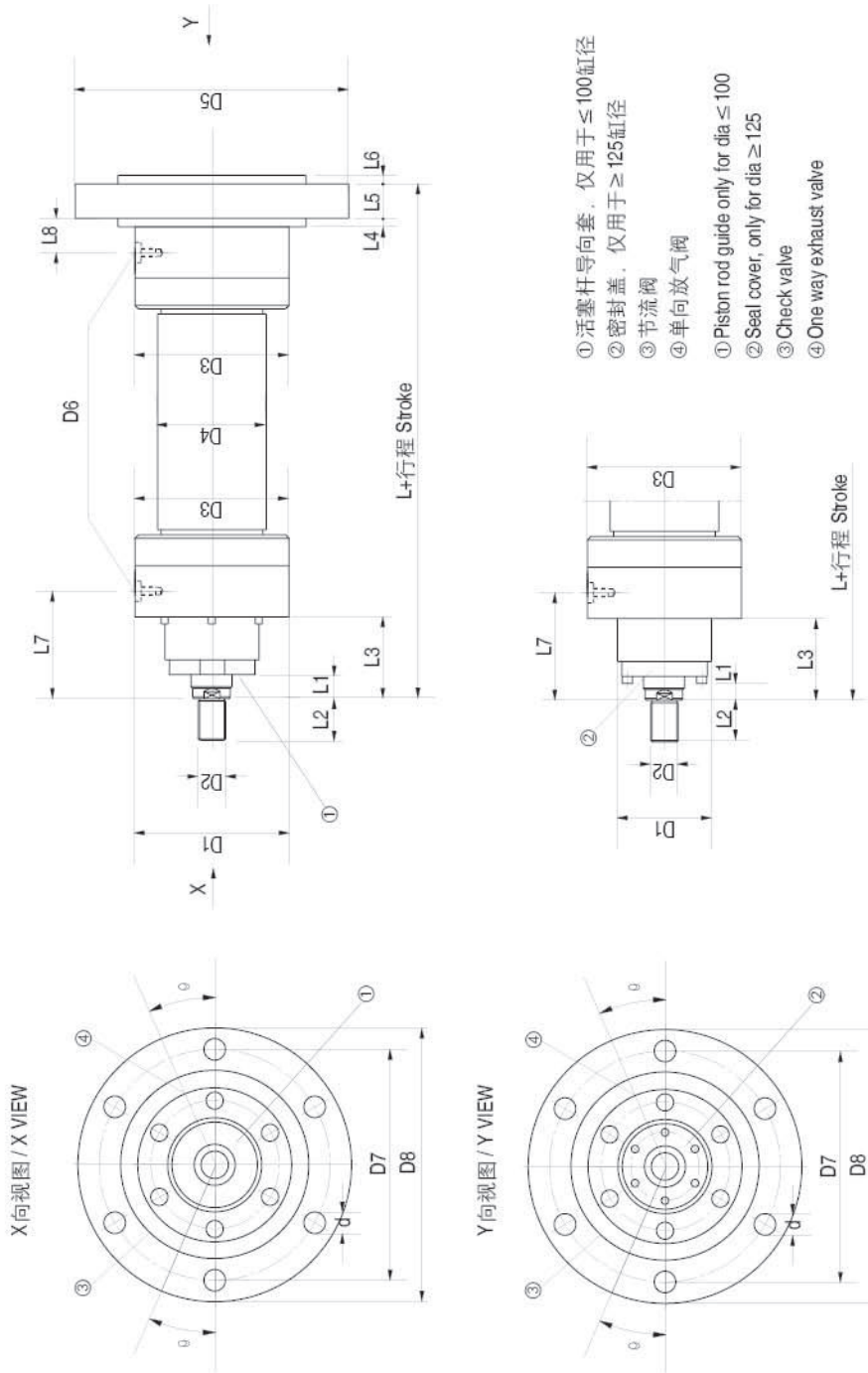
**许用行程 Possible stroke**

根据欧拉公式。杆在铰接结构。刚性导向载荷下。安全系数为3.5。活塞杆在弯曲应力（压缩载荷）下的许用行程。  
 As per euler formula. hinge connect, safely factor 3.5, piston rod on the stress bend, possible stroke.



缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)				
		5	10	15	20	25
许用行程 Possible stroke						
40	20	455	275	200	150	120
	28	1040	690	535	445	380
50	28	790	510	390	315	265
	36	1415	950	750	625	545
63	36	1070	700	540	440	375
	45	1770	1200	945	795	690
80	45	1355	905	705	585	505
	56	2200	1505	1195	1010	885
100	56	1670	1100	860	715	610
	70	2740	1870	1480	1250	1095
125	70	2105	1405	1095	910	785
	90	3660	2505	1995	1690	1480
140	90	3210	2175	1720	1445	1260
	100	4035	2760	2195	1860	1630
160	100	3450	2335	1845	1550	1350
	110	4250	2900	2305	1950	1705
180	110	3695	2495	1965	1645	1430
	125	4885	3335	2650	2245	1965
200	125	4330	2965	2320	1950	1700
	140	5540	3790	3015	2555	2240
220	140	4930	3340	2635	2215	1930
	160	6590	4515	3595	3045	2670
250	160	5725	3900	3090	2610	2280
	180	7380	5070	4050	3440	3020
280	180	6465	4405	3490	2945	2575
	200	8115	5570	4445	3770	3310
320	200	6935	4705	3720	3130	2730
	220	8530	5835	4640	3930	3445

外形尺寸 Outlook & Dimension



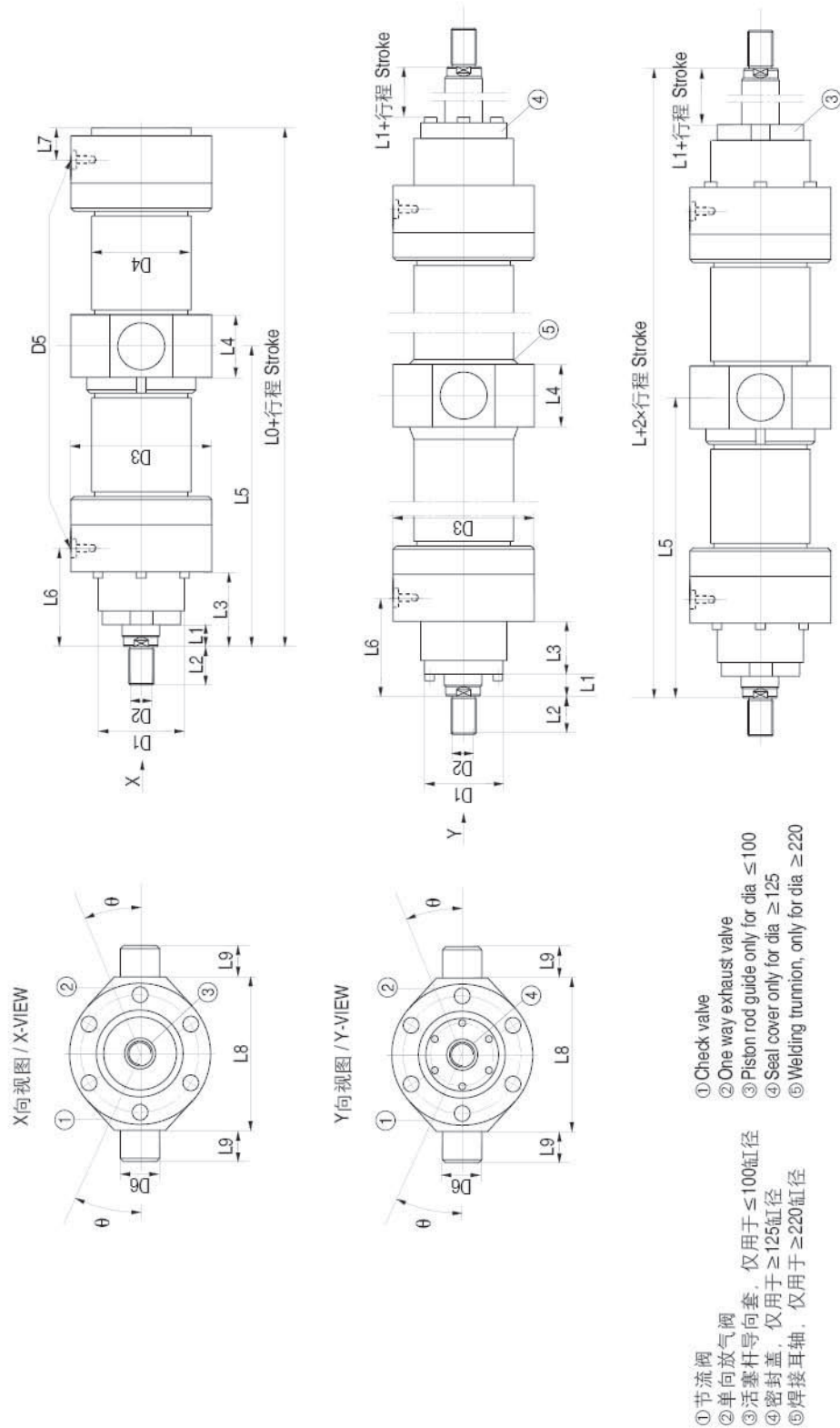
D型规格尺寸 / Dimension of type D

活塞直径 piston dia (mm)	活塞杆直径 piston rod dia (mm)	缓冲长度 buffer length (mm)	D1	活塞杆螺纹D2 piston rod thread		D3	D4	D5	油口 oil port D6		D7	D8	d	L	L1	L2		L3	L4	L5	L6	L7	L8	θ
				A*	G*				01	02						A	G							
40	20	20	055e8	M18 × 2	M16 × 1.5	085	050	090e8	R1/2"	M22 × 1.5	0130	9.5	256	17	30	16	54	5	30	5	76	27	30°	
	28																							
50	28	20	068e8	M24 × 2	M22 × 1.5	0105	060	0110e8	R1/2"	M22 × 1.5	0160	11.5	264	21	35	22	58	5	30	5	80	27	30°	
	36																							
63	36	25	075e8	M30 × 2	M28 × 1.5	0120	078	0130e8	R3/4"	M27 × 2	0185	14	297	25	45	28	67	5	35	5	89.5	27.5	30°	
	45																							
80	45	30	095e8	M39 × 3	M35 × 1.5	0135	0100	0145e8	R3/4"	M27 × 2	0200	14	315	15.5	55	35	65	10	35	5	86	35	30°	
	56																							
100	56	35	0115e8	M50 × 3	M45 × 1.5	0165	0125	0175e8	R1"	M33 × 2	0245	18	375	33	75	45	85	10	45	5	112.5	37.5	30°	
	70																							
125	70	50	0135e8	M64 × 3	M58 × 1.5	0200	0150	0210e8	R1 1/2"	M42 × 2	0295	22	432	32	95	58	97	10	50	5	132	40	30°	
	90																							
140	90	50	0155e8	M80 × 3	M65 × 1.5	0220	0170	0230e8	R1 1/2"	M48 × 2	0315	22	475	37	110	65	105	10	50	10	145	50	30°	
	100																							
160	100	55	0180e8	M90 × 3	M80 × 2	0265	0194	0275e8	R1 1/2"	M48 × 2	0385	28	535	40	120	80	120	10	60	10	160	50	30°	
	110																							
180	110	65	0200e8	M100 × 3	M100 × 2	0290	0220	0300e8	R1 1/2"	M48 × 2	0420	30	585	40	140	100	130	10	70	10	175	55	30°	
	125																							
200	125	70	0215e8	M110 × 4	M110 × 2	0310	0244	0320e8	R1 1/2"	M48 × 2	0445	33	615	40	150	110	135	10	75	10	180	60	30°	
	140																							
220	140	80	0245e8	M120 × 4	M120 × 3	0355	0267	0370e8	R1 1/2"	M48 × 2	0490	33	720	25	160	120	155	10	85	10	225	80	30°	
	160																							
250	160	90	0280e8	M120 × 4	M120 × 3	0395	0305	0415e8	R1 1/2"	M48 × 2	0555	39	744	25	160	120	165	10	85	10	235	80	30°	
	180																							
280	180	90	0305e8	M150 × 4	M130 × 3	0430	0330	0450e8	R1 1/2"	M48 × 2	0590	39	839	35	190	130	170	10	95	10	270	109	30°	
	200																							
320	200	100	0340e8	M160 × 4	--	0490	0381	0510e8	R1 1/2"	M48 × 2	0600 ± 0.2	45	935	40	200	--	195	10	120	10	295	110	45°	
	220																							

\*G=采用球铰接头GA, GAK, 衬套接头SA的螺纹 / G=globe hinge with GA, GAK, or bush SA connecting.  
\*A=采用球铰接头GAS的螺纹 / A=globe hinge with GAS.

E型: 缸底法兰 / Type D : Rear flange

外形尺寸 Outlook & Dimension



E型规格尺寸 / Dimension of type E

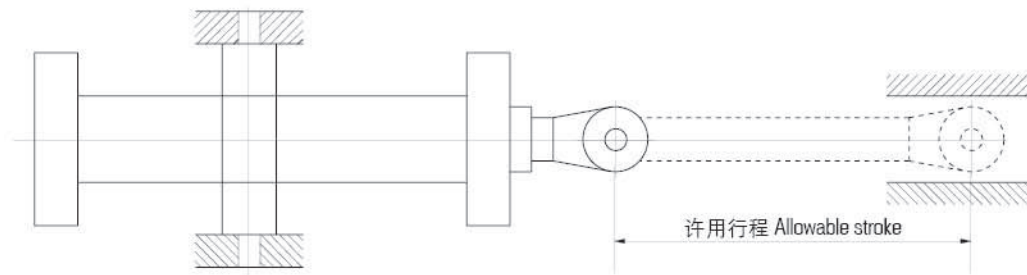
活塞直径 piston dia (mm)	缓冲长度 buffer length (mm)	D1	活塞杆螺纹 piston rod thread		D3	D4	油口 oil port D5		D6	L0	L	L1	L2		L3	L4	L5			L6	L7	L8	L9	θ
			A*	G*			01	02					A	G			中间 mid	最小 min	最大 max					
40	20	055e8	M18 × 2	M16 × 1.5	065	050	R1/2"	M22 × 1.5	030e8	226	288	17	30	16	54	35	136+行程(stroke)/2	141	135+行程(stroke)/2	76	27	95-0.2	20	30°
50	20	068e8	M24 × 2	M22 × 1.5	0105	060	R1/2"	M22 × 1.5	030e8	234	278	21	35	22	58	35	143.5+行程(stroke)/2	148	141+行程(stroke)/2	80	27	115-0.2	20	30°
63	25	075e8	M30 × 2	M28 × 1.5	0120	078	R3/4"	M27 × 2	035e8	262	324	25	45	28	67	40	162+行程(stroke)/2	169	165+行程(stroke)/2	89.5	27.5	130-0.2	20	30°
80	30	095e8	M39 × 3	M35 × 1.5	0135	0100	R3/4"	M27 × 2	040e8	275	325	15.5	55	35	65	45	170+行程(stroke)/2	167	168+行程(stroke)/2	86	30	145-0.2	25	30°
100	35	0115e8	M50 × 3	M45 × 1.5	0165	0125	R1"	M33 × 2	050e8	325	405	33	75	45	85	55	201+行程(stroke)/2	216	201+行程(stroke)/2	112.5	32.5	175-0.2	30	30°
125	50	0135e8	M64 × 3	M58 × 1.5	0200	0150	R1 1/4"	M42 × 2	060e8	377	474	32	95	58	97	65	136+行程(stroke)/2	244	242+行程(stroke)/2	132	35	210-0.5	40	30°
140	50	0155e8	M80 × 3	M65 × 1.5	0220	0170	R1 1/4"	M48 × 2	065e8	420	520	37	110	65	105	70	260+行程(stroke)/2	265	267+行程(stroke)/2	145	45	230-0.5	42.5	30°
160	55	0180e8	M90 × 3	M80 × 2	0265	0194	R1 1/2"	M48 × 2	075e8	475	585	40	120	80	120	80	292.5+行程(stroke)/2	298	312+行程(stroke)/2	160	50	275-0.5	52.5	30°
180	65	0200e8	M100 × 3	M100 × 2	0290	0220	R1 1/2"	M48 × 2	085e8	515	635	40	140	100	130	95	317.5+行程(stroke)/2	330	320+行程(stroke)/2	175	55	300-0.5	55	30°
200	70	0215e8	M110 × 4	M110 × 2	0310	0244	R1 1/2"	M48 × 2	090e8	535	665	40	150	110	135	95	332.5+行程(stroke)/2	335	345+行程(stroke)/2	180	45	320-0.5	55	30°
220	80	0245e8	M120 × 4	M120 × 3	0355	0267	R1 1/2"	M48 × 2	0100e8	635	780	25	160	120	155	110	390+行程(stroke)/2	430	350+行程(stroke)/2	225	80	370-0.5	60	30°
250	90	0280e8	M120 × 4	M120 × 3	0395	0305	R1 1/2"	M48 × 2	0110e8	659	814	25	160	120	165	125	407+行程(stroke)/2	463	350+行程(stroke)/2	235	80	410-0.5	65	30°
280	90	0305e8	M150 × 4	M130 × 3	0430	0330	R1 1/2"	M48 × 2	0130e8	744	905	35	190	130	170	145	452+行程(stroke)/2	520	380+行程(stroke)/2	270	108	450-0.5	70	30°
320	100	0340e8	M160 × 4	--	0490	0381	R1 1/2"	M48 × 2	0160e8	815	1000	40	200	--	195	175	500+行程(stroke)/2	570	430+行程(stroke)/2	295	110	510-0.5	90	45°

\*G=采用球接头GA, GAK, 衬套接头SA的螺纹 / G=globe hige with GA, GAK, or bush SA connecting.  
\*A=采用球接头GAS的螺纹 / A=globe hige with GAS.

# CD/CG 系列 液压缸 Series Hydraulic cylinder CD250/CG250-E

## 许用行程 Possible stroke

根据欧拉公式，杆在铰接结构，刚性导向载荷下，安全系数为3.5，活塞杆在弯曲应力（压缩载荷）下的许用行程。  
As per euler formula, hinge connect, safely factor 3.5, piston rod on the stress bend, possible stroke.

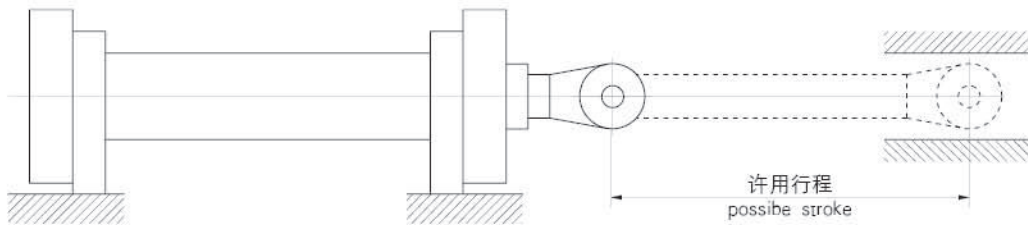


缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)				
		5	10	15	20	25
许用行程 Possible stroke						
40	20	450	280	205	160	135
	28	1000	670	525	440	380
50	28	765	500	385	315	265
	36	1350	915	720	610	530
63	36	1025	680	525	435	375
	45	1690	1150	910	765	670
80	45	1280	855	670	555	480
	56	2080	1420	1130	955	835
100	56	1595	1070	825	695	600
	70	2605	1785	1420	1200	1050
125	70	2005	1345	1055	880	760
	90	3470	2385	1900	1615	1415
140	90	3045	2075	1640	1385	1210
	100	3825	2625	2090	1840	1560
160	100	3275	2225	1760	1485	1295
	110	4030	2760	2195	1860	1630
180	110	3505	2375	1875	1575	1370
	125	4625	3170	2525	2140	1875
200	125	4105	2790	2210	1860	1625
	140	5245	3595	2865	2430	2135
220	140	4675	3176	2515	2120	1850
	160	6240	4280	3415	2900	2550
250	160	5425	3705	2940	2490	2180
	180	6990	4810	3845	3270	2875
280	180	6130	4185	3325	2810	2460
	200	7685	5285	4220	3590	3155
320	200	6565	4465	3530	2980	2600
	220	8070	5530	4400	3730	3270

**F型: 缸底法兰 / Type F : Foot fixed**

**许用行程 Possible stroke**

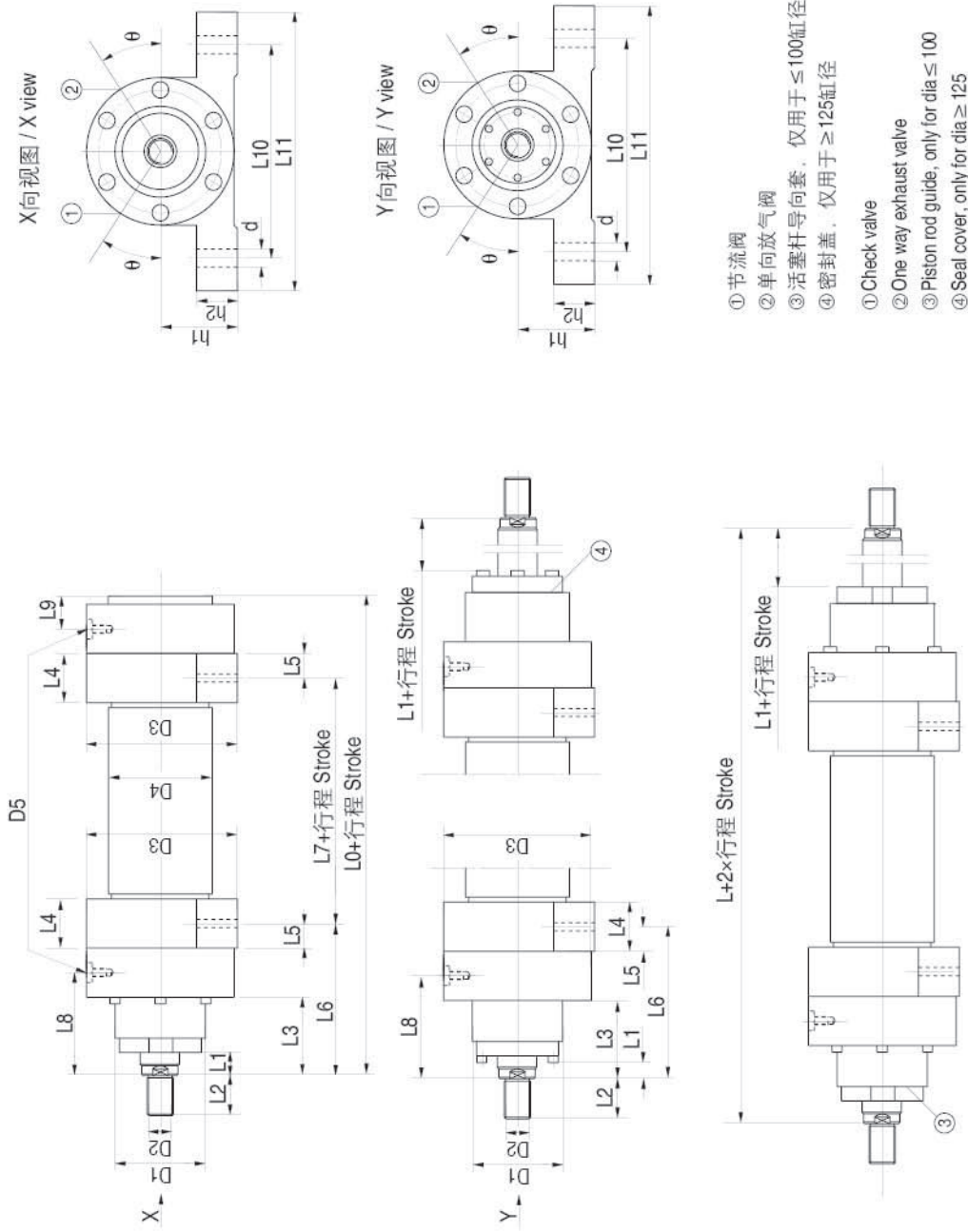
根据欧拉公式。杆在铰接结构。刚性导向载荷下。安全系数为3.5。活塞杆在弯曲应力（压缩载荷）下的许用行程。  
 As per euler formula. hinge connect, safely factor 3.5, piston rod on the stress bend, possible stroke.



缸径 dia	杆径 Rod dia	工作压力 Working pressure (MPa)				
		5	10	15	20	25
许用行程 Possible stroke						
40	20	1115	760	605	510	455
	28	2285	1590	1280	1095	965
50	28	1795	1235	990	840	740
	36	3040	2115	1705	1465	1295
63	36	2370	1635	1315	1120	990
	45	3780	2635	2125	1825	1615
80	45	2935	2035	1635	1395	1235
	56	4625	3230	2610	2240	1990
100	56	3630	2515	2020	1725	1520
	70	5780	4030	3255	2795	2480
125	70	4555	3155	2535	2165	1915
	90	7670	5360	4335	3725	3310
140	90	6795	4735	3820	3275	2905
	100	8450	5900	4775	4100	3640
160	100	7325	5100	4110	3525	3120
	110	8925	6230	5035	4320	3835
180	110	7850	5455	4390	3760	3330
	125	10235	7140	5770	4950	4390
200	125	9145	6360	5130	4395	3890
	140	11565	8075	6525	5605	4975
220	140	10435	7255	5850	5015	4440
	160	13750	9600	7765	6670	5920
250	160	12040	8390	6775	5810	5155
	180	15365	10730	8685	7465	6630
280	180	13610	9485	7660	6570	5825
	200	16915	11825	9565	8220	7305
320	200	14615	10160	8185	7010	6205
	220	17810	12420	10030	8605	7635



外形尺寸 Outlook & Dimension



- ① 节流阀
- ② 单向放气阀
- ③ 活塞杆导向套, 仅用于  $\leq 100$  缸径
- ④ 密封盖, 仅用于  $\geq 125$  缸径
- ① Check valve
- ② One way exhaust valve
- ③ Piston rod guide, only for dia  $\leq 100$
- ④ Seal cover, only for dia  $\geq 125$

F型规格尺寸 / Dimension of type F

活 塞 直 径 piston dia (mm)	活 塞 杆 直 径 piston rod dia (mm)	活 塞 杆 螺 纹 piston rod thread	油口 oil port D5		D3	D4	D	L0	L	L1	L2		L3	L4	L5	L6	L7	L8	L9	L10	L11	h1	h2	θ	
			A*	G*							01	02													
40	20	M18 × 2	M16 × 1.5	Ø11	Ø85	Ø50	R1/2"	M22 × 1.5	226	268	17	30	16	54	35	12.5	106.5	55	76	27	110 ± 0.2	135	45	26	30°
50	28	M24 × 2	M22 × 1.5	Ø11	Ø60	Ø60	R1/2"	M22 × 1.5	234	278	21	35	22	58	35	12.5	110.5	57	80	27	130 ± 0.2	155	55	31	30°
63	36	M30 × 2	M28 × 1.5	Ø14	Ø78	Ø78	R3/4"	M27 × 2	262	324	25	45	28	67	40	15	127	60	89.5	27.5	150 ± 0.2	180	65	37	30°
80	45	M39 × 3	M35 × 1.5	Ø18	Ø100	Ø100	R3/4"	M27 × 2	275	325	15.5	55	35	65	45	27.5	135	65	86	30	170 ± 0.2	210	70	42	30°
100	56	M50 × 3	M45 × 1.5	Ø22	Ø125	Ø125	R1"	M33 × 2	325	405	33	75	45	85	55	25	165	75	112.5	32.5	205 ± 0.2	250	85	52	30°
125	70	M64 × 3	M58 × 1.5	Ø200	Ø150	Ø150	R1 1/4"	M42 × 2	377	474	32	95	58	97	65	30	192	90	132	35	255 ± 0.2	305	105	60	30°
140	90	M80 × 3	M65 × 1.5	Ø220	Ø170	Ø170	R1 1/4"	M42 × 2	420	520	37	110	65	105	70	32.5	207.5	105	145	45	280 ± 0.2	340	115	65	30°
160	100	M90 × 3	M80 × 2	Ø265	Ø194	Ø194	R1 1/2"	M48 × 2	475	585	40	120	80	120	80	37.5	232.5	120	160	50	330 ± 0.2	400	135	70	30°
180	110	M100 × 3	M100 × 2	Ø290	Ø220	Ø220	R1 1/2"	M48 × 2	515	635	40	140	100	130	95	40	250	135	175	55	360 ± 0.2	440	150	80	30°
200	125	M110 × 4	M110 × 2	Ø310	Ø244	Ø244	R1 1/2"	M48 × 2	535	665	40	150	110	135	95	45	260	145	180	45	385 ± 0.2	465	160	85	30°
220	140	M120 × 4	M120 × 3	Ø355	Ø267	Ø267	R1 1/2"	M48 × 2	635	780	25	160	120	155	110	47	307	166	225	80	445 ± 0.2	530	185	95	30°
250	160	M120 × 4	M120 × 3	Ø395	Ø305	Ø305	R1 1/2"	M48 × 2	659	814	25	160	120	165	125	50	320	174	235	80	500 ± 0.2	600	205	110	30°
280	180	M150 × 4	M130 × 3	Ø430	Ø330	Ø330	R1 1/2"	M48 × 2	744	905	35	190	130	170	145	55	370	185	270	109	530 ± 0.2	630	225	125	30°
320	200	M160 × 4	--	Ø490	Ø381	Ø381	R1 1/2"	M48 × 2	815	1000	40	200	--	195	175	60	400	200	295	110	610 ± 0.2	730	255	140	45°

\*G=采用球接头GA, GAK, 衬套接头SA的螺纹 / G=globe hige with GA, GAK, or bush SA connecting.

\*A=采用球接头GAS的螺纹 / A=globe hige with GAS.

**CD/CG** 系列 液压缸  
Series Hydraulic cylinder  
CD250重量计算

重量计算 Weight calculate

CD差动缸质量计算表 / CD differential hydraulic cylinder's weight calculate

重量计算公式 / Formula:  $M=X+Y \cdot S$

其中: M: 重量 Weight (kg)  
X: 常数 Constant (kg)  
S: 行程 Stroke (mm)  
Y: 系数 Factor (kg/mm)

缸径 dia	杆径 Rod dia	安装方式 Install opinion									
		A		B		C		D		E	
		X, Y									
		X	Y	X	Y	X	Y	X	Y	X	Y
40	20	8.1	0.013	11.52	0.013	11.52	0.013	9.06	0.013	8.23	0.013
	28		0.015		0.015		0.015		0.015		0.015
50	28	11.83	0.015	17.33	0.015	17.33	0.015	14.74	0.015	12.63	0.015
	36		0.019		0.019		0.019		0.019		
63	36	17.8	0.020	25.87	0.020	25.87	0.020	24.14	0.020	18.40	0.020
	45		0.024		0.024		0.024		0.024		
80	45	27.32	0.037	33.57	0.037	33.57	0.037	30.63	0.037	22.73	0.037
	56		0.044		0.044		0.044		0.044		
100	56	51.74	0.050	69.22	0.050	69.22	0.050	55.56	0.050	55.57	0.050
	70		0.060		0.060		0.060		0.060		
125	70	76	0.078	103.95	0.078	103.95	0.078	81	0.078	85	0.078
	90		0.096		0.096		0.096		0.096		
140	90	99	0.105	138.36	0.105	138.36	0.105	105.72	0.105	112.59	0.105
	100		0.122		0.122		0.122		0.122		
160	100	163	0.136	217.47	0.136	217.47	0.136	165	0.136	184	0.136
	110		0.156		0.156		0.156		0.156		
180	110	229	0.17	273	0.170	273	0.170	248	0.170	285	0.170
	125		0.192		0.192		0.192		0.192		
200	125	275	0.221	371.21	0.221	371.21	0.221	282	0.221	302	0.221
	140		0.246		0.246		0.246		0.246		
220	140	420.8	0.280	546.75	0.280	546.75	0.280	44	0.280	510	0.280
	160		0.320		0.320		0.320		0.320		
250	160	571	0.346	719.30	0.346	719.30	0.346	591	0.346	590	0.346
	180		0.387		0.387		0.387		0.387		
280	180	714	0.387	784	0.387	784	0.387	745	0.387	816	0.387
	200		0.434		0.434		0.434		0.434		
320	200	1238.15	0.510	1199.5	0.510	1199.5	0.510	1138	0.510	1171	0.510
	220		0.562		0.562		0.562		0.562		

CG等速缸质量计算表 / CG uniform speed hydraulic cylinder weight calculate

重量计算公式 / Formula:  $M=X+Y \cdot S$

其中: M: 重量 Weight (kg)  
 X: 常数 Constant (kg)  
 S: 行程 Stroke (mm)  
 Y: 系数 Factor (kg/mm)

缸径 dia	杆径 Rod dia	安装方式 Install opinion									
		A, B		C		D		E		F	
		X, Y									
		X	Y	X	Y	X	Y	X	Y	X	Y
40	20	—	—	12.96	0.015	—	—	10.35	0.015	10.35	0.015
	28	—	—		0.019		—		—		0.019
50	28	—	—	18.77	0.019	—	—	16.21	0.019	16.21	0.019
	36	—	—		0.027		—		—		0.027
63	36	—	—	28.46	0.028	—	—	27.59	0.028	27.59	0.028
	45	—	—		0.036		—		—		0.036
80	45	—	—	37.95	0.052	—	—	35.22	0.052	35.22	0.052
	56	—	—		0.065		—		—		0.065
100	56	—	—	77.66	0.069	—	—	63.5	0.069	63.5	0.069
	70	—	—		0.090		—		—		0.090
125	70	—	—	112.9	0.108	—	—	90	0.108	94	0.108
	90	—	—		0.148		—		—		0.148
140	90	—	—	159.1	0.155	—	—	124	0.155	131	0.155
	100	—	—		0.183		—		—		0.183
160	100	—	—	240	0.197	—	—	187	0.197	206	0.197
	110	—	—		0.230		—		—		0.230
180	110	—	—	300	0.244	—	—	275	0.244	312	0.244
	125	—	—		0.288		—		—		0.288
200	125	—	—	415.67	0.317	—	—	322	0.317	342	0.317
	140	—	—		0.366		—		—		0.366
220	140	—	—	611	0.409	—	—	501	0.409	582.9	0.409
	160	—	—		0.489		—		—		0.489
250	160	—	—	794	0.504	—	—	658	0.504	657	0.504
	180	—	—		0.587		—		—		0.587
280	180	—	—	884	0.587	—	—	845	0.587	916	0.587
	200	—	—		0.680		—		—		0.680
320	200	—	—	1419.7	0.757	—	—	1274	0.757	1307	0.757
	220	—	—		0.860		—		—		0.860