世邦机械 SHIBANG MACHINERY

Product catalog / 产品目录

	Series 系列	Equivalent to... series 相当于…系列	Specifications 规格	Pressure 压力
SB01	Heavy duty hydraulic cylinder 重载液压缸	CD/CG 250 CDH1 350 CDH2	Piston diameter 活塞直径 ϕ40~500mm Travel 行程≤16m	25~35MPa
SB02	Heavy duty hydraulic cylinder(servo.with sensor) 重载液压缸(伺服、带传感器)	CD/CG 250 CDH1 350 CDH2	Piston diameter 活塞直径 ϕ40~500mm Travel 行程≤16m	25~35MPa
SB03	Tie-rod hydraulic cylinder(servo.with sensor) 拉杆液压缸（伺服、带传感器）	SB 70/140 L1 W 70/140 L1	Piston diameter 活塞直径 ϕ32~250mm Travel 行程≤5m	7,14,21 MPa
SB04	Project hydraulic cylinder(servo.with sensor) 工程液压缸（伺服、带传感器）	SHSG / HSG	Piston diameter 活塞直径 ϕ25~200mm Travel 行程≤16m	16~24MPa
SB05	Vehicles hydraulic cylinder(servo.with sensor) 车载液压缸（伺服、带传感器）	SBDG / DG	Piston diameter 活塞直径 ϕ25~200mm Travel 行程≤16m	16~24MPa
SB06	Press plunger hydraulic cylinder(servo.with sensor) 压机用液压缸（伺服、带传感器）	SBYZG	Piston diameter 活塞直径 ϕ100~1200mm Travel 行程≤16m	16~24MPa
SB07	Multi-stage hydraulic cylinder(servo.with sensor) 多级液压缸（伺服、带传感器）	SBDH	Piston diameter 活塞直径 ϕ50~500mm Travel 行程≤16m	16~24MPa
SB08	Swviel gear cylinder(servo.with sensor) 摆动液压缸（伺服、带传感器）	SB08	Piston diameter 活塞直径 ϕ40~400mm Swing angle 摆动角度 行程≤360°	14~16MPa

SB01系列(series)

Heavy duty hydraulic cylinder / 重载液压缸

This series of single-piston double-acting differential cylinders includes 36 kinds of specifications, each of which is specified by a combination of one of 18 bores and one of 2 ratios. Moreover, it is possible to have 384 kinds of specifications, considering the fact that the cylinder head flange, intermediate shaft pin and base mounting (3 factors) can also be those of a double-rod double-acting steady cylinder and in combination with whether there is cushion. Its mounting type and size are in accordance with German steel mills and ISO3320 standards. Especially suitable for adverse environment and where heavy load working status is required, this series is widely used in industrial sectors such as iron and steel, casting, forging and machinery manufacturing etc.

Model designation
型号含义

□□□D/d × S□10□□□□□※

Kinds: 种类:
CD – differential cylinder CD – 差动缸
CG – steady cylinder CG – 等速缸

Pressure: 压力:
250 – 25MPa 250 – 25MPa
350 – 35Mpa 350 – 35Mpa

Mounting type:
A – Tail single earring with bush
B – Tail single earring with knuckle bearing
C – Front flange D – Rear flange
E – Intermediate shaft pin F – Base
安装型式
A – 尾部单耳环带衬套 B – 尾部单耳环带关节轴承
C – 前法兰 D – 后法兰 E – 中间轴销 F – 底座

Cylinder head and bottom connecting method:
A、Both ends are connected by thread
B、Head is connected by thread, and bottom by welding(D≤100)
缸头、缸底连接方法：
A、两端均以螺纹连接
B、缸头螺纹连接、缸底焊接(D≤100)

10–10 series，10–19 series with same size
Thread 01 – British 02 – Metric
10 – 10系列，10 – 19系列尺寸相同
接口01 – 英制螺纹 02 – 公制螺纹

Travel 行程

Piston rod material
C – 45# steel, plated with hard chrome
H – 50# steel, plated with hard chrome
L – 1cr1 7Ni2, plated with hard chrome
活塞杆材质
C – 45钢表面镀硬铬
H – 50钢表面镀硬铬
L – 1cr1 7Ni2表面镀硬铬

Piston rod thread
G – for earrings GA, GAK and SA
A – for GAS earrings
活塞杆螺纹
G – 用于耳环GA、GAK及SA的螺纹
A – 用于GAS耳环的螺纹

Cushionr U –without cushion D–with cushionr
缓冲U – 无缓冲 D – 带缓冲

Oil medium 油介质
M – Mineral oil, NBR seals M – 矿物油，丁晴橡胶密封
V – Phosphate viton seals V – 磷酸酯氟橡胶密封

Seal T – Slide ring combination seal
Structure A – V–ring set
密封T – 滑动环组合密封
结构A – V型密封圈组

Remarks 进一步说明

世邦机械 SHIBANG MACHINERY

Heavy duty hydraulic cylinder / 重载液压缸

本系列液压缸是由18种缸径，分别按二种速比组成36种规格的单活塞双作用差动油缸。另外缸头法兰、中间轴销和底座安装三种还可做成双活塞杆双作用等速油缸，再加上有无缓冲与上述36种规格组成384个品种。其安装型式和尺寸符合德国钢厂和ISO3320标准，特别适合于环境恶劣、重载的工作状态。

广泛应用于钢铁、铸造、锻造及机械制造等工业部门。

Working conditions:
- Working Pressure Mpa：25、35
- Working temperature ℃：–30～+100
- Working medium：Mineral oil, phosphate oil, and water–glycol
- Medium viscosity cst：2.8–380
- Working speed m /s：0.5(possible to reach 15 years with special seal)

工作条件:
- 工作压力MPa：25、35
- 工作温度℃：–30～+100
- 工作介质：矿物油、磷酸油和水—乙二醇
- 介质粘度cst：2.8–380
- 工作速度m /s：0.5(采用特殊密封可达到15年)

Specifications / technical parameters 规格/技术参数

Piston	Piston rod	Area ratio	Areas			Force at 250 bar 1)			Flow at 0.1 m/s 2)		
			Piston	Rod	Annulus	Push	Regen.	Pull	Out	Regen.	In
活塞	活塞杆	面积比	面积			在250bar时的力1)			在0.1/ m时的流量2)		
			活塞	活塞杆	环形	推力	差动	拉力	驶出	差动	驶入
AL ϕ mm	MM ϕ mm	A_1/A_3	A_1 cm²	A_2 cm²	A_3 cm²	F_1 kN	F_2 kN	F_3 kN	q_{V1} L/min	q_{V2} L/min	q_{V3} L/min
40	22	1.43	12.57	3.80	8.77	31.40	9.50	21.93	7.5	2.3	5.3
	28	1.96		6.16	6.41		15.40	16.03		3.7	3.8
50	28	1.46	19.64	6.16	13.48	49.10	15.40	33.70	11.8	3.7	8.1
	36	2.08		10.18	9.46		25.45	23.65		6.1	5.7
63	36	1.48	31.17	10.18	20.99	77.90	25.45	52.45	18.7	6.1	12.6
	45	2.04		15.90	15.27		39.75	38.15		9.5	9.2
80	45	1.46	50.27	15.90	34.36	125.65	39.75	85.90	30.2	9.5	20.7
	56	1.96		24.63	25.63		61.55	64.10		14.8	15.4
100	56	1.46	78.54	24.63	53.91	196.35	61.55	134.80	47.1	14.8	32.3
	70	1.96		38.48	40.06		96.20	100.15		23.1	24.0
125	70	1.46	122.72	38.48	84.24	306.75	96.20	210.55	73.6	23.1	50.5
	90	2.08		63.62	59.10		159.05	147.70		38.2	35.4
140	90	1.70	153.94	63.62	90.32	384.75	159.05	225.70	92.4	38.2	54.2
	100	2.04		78.54	75.40		196.35	188.40		47.1	45.3
160	100	1.64	201.06	78.54	122.50	502.50	196.35	306.15	120.6	47.1	73.5
	110	1.90		95.03	106.03		237.65	265.08		57.0	63.6
180	110	1.60	254.47	95.03	159.44	636.17	237.65	398.60	152.7	57.0	95.7
	125	1.93		122.72	131.75		306.80	329.37		73.6	79.1
200	125	1.64	314.16	122.72	191.44	785.25	306.80	478.45	188.5	73.6	114.9
	140	1.96		153.94	160.22		384.90	400.55		92.4	96.1
220	140	1.68	380.13	153.94	226.19	950.3	384.8	565.5	228.1	92.4	135.7
	160	2.12		210.06	179.1		502.6	447.7		120.7	107.4
250	160	1.69	490.88	201.06	289.8	1227.2	502.7	724.5	294.5	120.7	173.8
	180	2.08		254.47	236.4		636.2	591.0		152.7	141.8
280	180	1.70	615.75	254.47	361.3	1539.4	636.2	903.2	369.4	152.7	216.7
	200	2.04		314.16	301.6		785.4	753.9		188.5	180.9
320	200	1.64	804.25	314.16	490.1	2010.6	785.4	1225.2	482.5	188.5	294.0
	220	1.90		380.13	424.2		950.3	1060.3		228.1	254.4
360	200	1.45	1017.88	314.16	703.7	2544.7	785.4	1759.3	610.7	188.5	422.2
	220	1.60		380.13	637.7		950.3	1594.4		228.1	382.6
	250	1.93		490.88	527.0		1227.2	1317.5		294.6	316.1
400	220	1.43	1256.64	380.13	876.5	3141.6	950.3	2191.3	754.0	228.1	525.9
	250	1.64		490.88	765.8		1227.2	1914.4		294.6	459.4
	280	1.96		615.75	640.9		1539.4	1602.2		369.5	384.5
450	250	1.45	1590.44	490.88	1099.6	3976.1	1227.2	2748.9	954.2	294.6	659.6
	280	1.63		615.75	974.7		1539.4	2436.7		369.5	584.7
	320	2.02		804.25	786.2		2010.6	1965.5		482.5	471.7
500	280	1.46	1963.5	615.75	1347.7	4908.7	1539.4	3369.4	1178.0	369.5	808.5
	320	1.69		804.25	1159.2		2010.6	2898.1		482.5	695.5
	360	2.08		1017.88	945.6		2544.7	2364.0		610.8	567.2