About Us

BITEBI is one of the leading cylinders manufactures and suppliers in China. Welcome to buy our high-quality with high competitive price products from cylinders, pneumatic cylinders OEM service and ODM from your factory or company.

Our production capacity, comprehensive services as well as abundant experience enable us to be your best choice. We look forward to your reply and to establish mutually beneficial trading relations with you.

Working Process

● Mold Design and Manufacturing

Able to design and produce Die Casting Mold.
Software: Pro

● Die Casting

Fully equipped with high pressure cold chamber die casting machines
All the die casting machines are with automatic feed, spraying, fetch robot arms.

● CNC Machining

We tailor our machining approach for either low-volume or higher-volume production runs. Secondary machining such as tapping, milling, boring, surfacing, drilling, and threading are performed to your specifications.

● Assembling End Product

Able to assemble various cylinders.
Able to assembly big bore cylinder up to 320mm.
Own testing equipment for cylinders.

WUXI BITEBI MACHINERY TECHNOLOGY CO.,LTD

Add: No.12,Jinshan Road, Qianqiao Xinan Industrial Park,Huishan District, wuxi, China.
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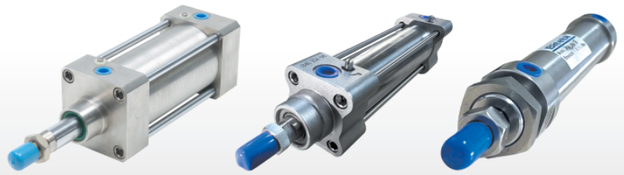
web:www.btbjx.com, www.btbpneumatic.com,
search us on MADE IN CHINA" Wuxi Bitebi Machunery Technology Co.,Ltd."

BITEBI®

Stainless Steel Cylinder



无锡比特比机械科技有限公司
WUXI BITEBI MACHINERY TECHNOLOGY CO.,LTD

Product——Index

BITEBI®

ACTUATORS

About Us

BITEBI®

ABOUT US

COMPANY BITEBI MACHINERY TECHNOLOGY

Wuxi Bitebi Machinery Technology Co., Ltd., as a high-tech enterprise, produces products with stable quality and good performance.
We have got certification of ISO9001, ISO14001, ISO45001, we focus on the product quality, employee safety, working environment, Good performance products have satisfy customers, safe working environment have satisfy employees, we protect the environment, and take the initiative to take social responsibility.

Research and development

Die-casting

Polish

Automatic processing

BITEBI®

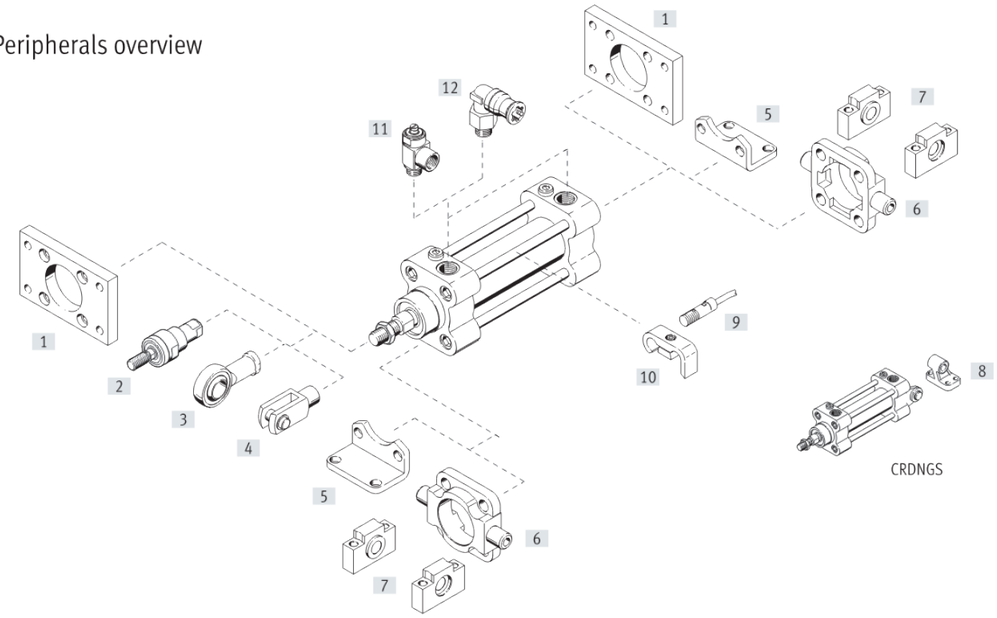
Impregnation

Inspection

Cylinder Assembly

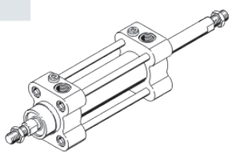
Kit Packing

Peripherals overview



Variant

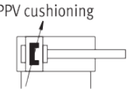
CRDNG-S2



Mounting attachments and accessories		Description	CRDNG	CRDNGS	a Page/Internet
[1]	Flange mounting CRFNG	For bearing or end caps	h	–	51
[2]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	h	h	56
[3]	Rod eye CRSGS	With spherical bearing	h	h	56
[4]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	h	h	56
[5]	Foot mounting CRHNC	For bearing and end caps	h	–	49
[6]	Trunnion fange CRZNG	For bearing and end caps in combination with trunnion supports CRLNZG	h	–	52
[7]	Trunnion support CRLNZG	For supporting trunnion fange CRZNG	h	–	52
[8]	Clevis foot CRLNG	For variant with swivel fange	–	h	53
[9]	Proximity switch CRSMEO-4	With light emitting diode for switching status indication	h	h	56
[10]	Mounting kit CRSMB	For proximity switches CRSMEO-4	h	h	57
[11]	One-way fow control valve CRGRLA	For regulating speed	h	h	57
[12]	Push-in fttings CRQS	For connecting tubing with standard O.D.	h	h	qs

Data sheet

PPV cushioning



Diameter
32 ... 125 mm

Stroke length
10 ... 2000 mm

Spare parts service

Variant
S2

S6

The variant S6 is not suitable for direct contact with food products because of the seals and the grease used.

Conforms to standard
- ISO 15552
- ISO 6431
- VDMA 24562

General technical data Piston ø		32	40	50	63	80	100	125
Pneumatic connection		G1/8	G1/4	G1/4	G3/8	G3/8	G1/2	G1/2
Piston rod thread		M10x1.25	M12x1.25	M16x1.5	M16x1.5	M20x1.5	M20x1.5	M27x2
Design		Piston						
		Piston rod						
		Cylinder barrel						
Cushioning		Pneumatic cushioning, adjustable at both ends						
Cushioning length	[mm]	20	20	23	23	30	30	40
Position sensing		Via proximity switch						
Type of mounting		With accessories						
		With female thread						
Mounting position		Any						

Operating and environmental conditions Variant		CRDNG/CRDNGS	S6
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]	
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)	
Operating pressure	[MPa]	0.06 ... 1	
	[bar]	0.6 ... 10	
	[psi]	8.7 ... 145	
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +120
Food-safe[2]		→ Supplementary material information	
Corrosion resistance class CRC[3]		4	

1) Note operating range of proximity switches
2) Additional information www.festo.com/sp → Certificates.
3) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

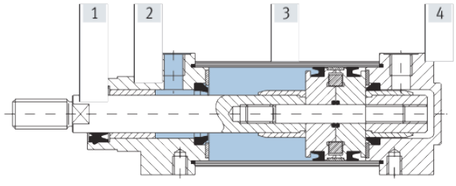
Forces [N] Piston ø	32	40	50	63	80	100	125
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	482	753	1178	1870	3015	4712	7360
Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting	415	633	990	1682	2720	4418	6880

Data sheet

Weight [g] Piston Ø	32	40	50	63	80	100	125
CRDNG							
Basic weight with 0 mm stroke	1045	1360	2160	3455	5935	8070	
Additional weight per 10 mm stroke	20	30	60	60	100	110	
CRDNGS							
Basic weight with 0 mm stroke	1070	1460	2330				
Additional weight per 10 mm stroke	20	30	60				

Materials

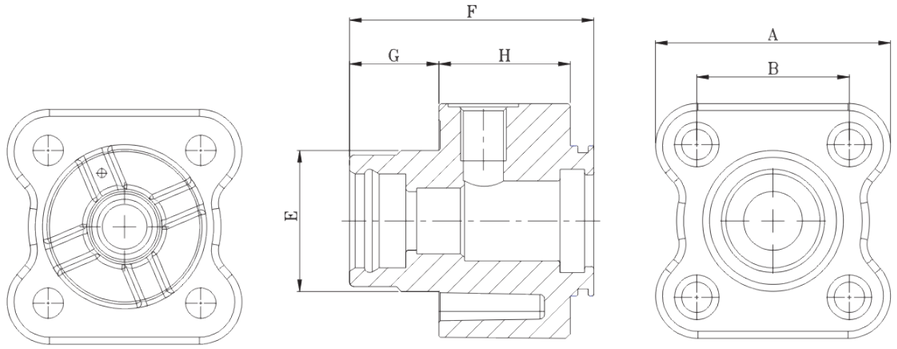
Sectional view CRDNG



Standards-based cylinders	Basic version	S6
[1] Piston rod	High-alloy stainless steel	
[2] Bearing cap	Stainless steel casting	
[3] Cylinder barrel	High-alloy stainless steel	
[4] End cap	Stainless steel casting	
– Tie rod	High-alloy stainless steel	
– Seals	NBR, TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM

*we supply Aluminum piston，material ADC-12

Standards–based cylinders CRDNG to ISO15552 BITEBI®
stainless steel

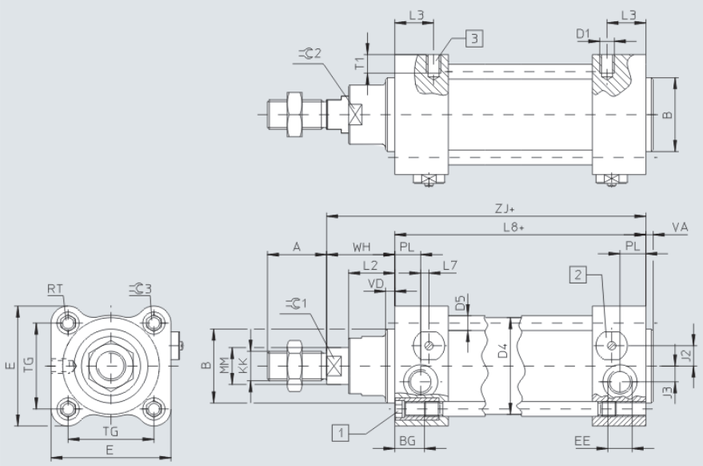


CRDNG Φ32– Φ200端盖/Head						
规格/Spc. \ 代号/Code	A	B	E	F	G	H
Φ32	50	32.5	Φ30	51	18	28
Φ40	55	38	Φ35	59	21.5	31
Φ50	65	46.5	Φ40	67.5	28	33
Φ63	75	56.5	Φ45	70.5	28.5	35
Φ80	95	72	Φ45	83.2	34.7	38
Φ100	110	89	Φ55	87.2	38.2	39
Φ125	140	110	Φ60	106.5	46	48
Φ160	180	140	Φ65	121.5	57.5	52
Φ200	218	175	Φ75	130	66	52

Data sheet

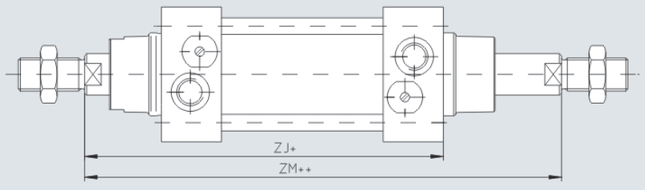
Dimensions CRDNG Download CAD data ➔ www.festo.com

Basic version



[1] Socket head screw with female thread
[2] Covering for adjustable end-position cushioning
[3] Threaded hole for direct mounting
+ = plus stroke length

S2 – Through piston rod



+ = plus stroke length
++ = plus 2x stroke length

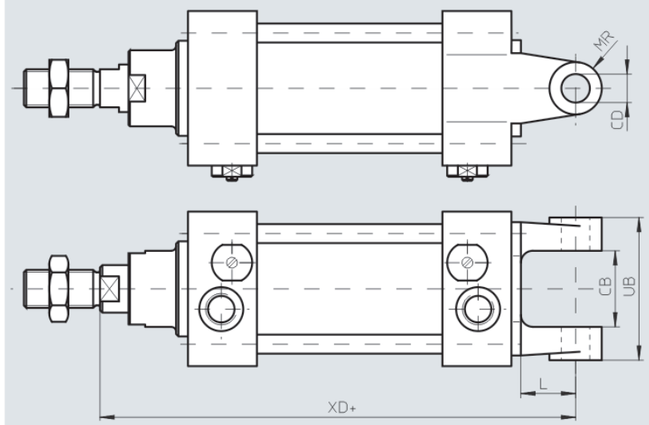
Ø [mm]	A	B Ø e11	BG	D1	D4 Ø	D5 Ø	E	EE	J2	J3	KK	L2	L3
32	22	30	16	M6	33.6	6	50	G1/8	7	5.7	M10x1.25	16	13
40	24	35	16	M6	41.6	6	55	G1/4	10	6.5	M12x1.25	18	16.5
50	32	40	16	M8	52.4	8	65	G1/4	11.5	8.6	M16x1.5	25	21
63	32	45	16	M10	65.4	8	75	G3/8	14.5	12	M16x1.5	25	22
80	40	45	23	M10	82.8	10	100	G3/8	15	13	M20x1.5	31	22.5
100	40	55	23	M12	102.8	10	120	G1/2	23	14	M20x1.5	36	22.5
125	54	60	23	M12	128.6	12	145	G1/2	28.5	8	M27x2	46	23.5

Ø [mm]	L7	L8	MM Ø	PL	RT	T1	TG	VA	VD	WH	ZJ	ZM	⌯1	⌯2	⌯3
32	5.3	94 +0.4	12	13	M6	9	32.5	4	6	26	120	148	10	26	6
40	2.5	105 +0.4/–0.6	16	14	M6	9	38	4	6	30	135	167	13	30	6
50	4.5	106 +0.4/–0.6	20	14	M8	10	46.5	4	6	37	143	183	17	34	8
63	5	121 +0.4/–0.6	20	18	M8	12	56.5	4	6	37	158	199	17	36	8
80	6	128 +0.4/–0.6	25	17	M10	15	72	4	7	46	174	222	22	41	10
100	9	138 +0.4/–0.6	25	18	M10	18	89	4	7	51	189	240	22	41	10
125	4.5	160 +0.4/–0.6	32	27	M12	18	110	6	6	66	226	292	27	50	12

Standards–based cylinders CRDNG to ISO15552 BITEBI®
stainless steel

Data sheet

Dimensions Download CAD data ➔ www.festo.com

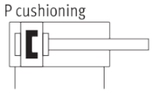


+ = plus stroke length

Ø [mm]	CB H14	CD Ø H9	L	MR	UB	XD
32	26	10	18	9	45	142
40	28	12	21	10	52	160
50	32	12	23	11	60	170
63	40	16	28	13	70	190
80	50	16	32	13	90	210
100	60	20	37	17	110	230
125	70	25	44	23	130	276

Data sheet

P cushioning



Diameter
12 ... 25 mm

Stroke length
1 ... 500 mm
Longer strokes on request

Spare parts service

General technical data					
Piston Ø		12	16	20	25
Pneumatic connection		M5	M5	G1/8	G1/8
Piston rod thread		M6	M6	M8	M10x1.25
Design		Piston			
		Piston rod			
		Cylinder barrel			
Cushioning	P	Elastic cushioning rings/pads at both ends			
	PPV	–		Cushioning, adjustable at both ends	
	PPS	–	Cushioning, self-adjusting at both ends		
Cushioning length	PPV [mm]	–		15	17
	PPS [mm]	–	12	15	17
Position sensing		Via proximity switch			
Type of mounting		With accessories			
		With male thread			
Mounting position		Any			

Operating conditions		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure[1]	[MPa]	0.1 ... 1
	[bar]	1 ... 10
	[psi]	14.5 ... 145
Food-safe[2]		→ Supplementary material information

1) An increase in the minimum operating pressure is possible with variants
2) Additional information www.festo.com/sp → Certificates.

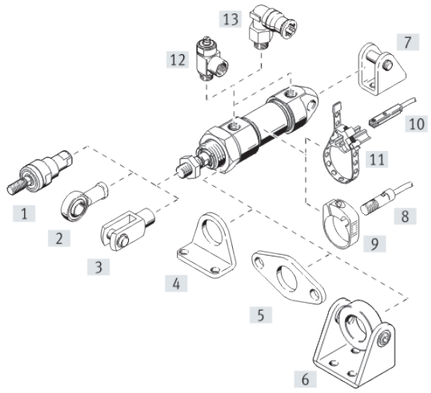
Environmental conditions					
Standards-based cylinders		Basic type/A3	A1	TT	S6
Ambient temperature[1]	[°C]	–20 ... +80	0 ... +80	–40 ... +80	0 ... +120
Corrosion resistance class CRC[2]		3			

1) Note operating range of proximity switches
2) Corrosion resistance class CRC to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

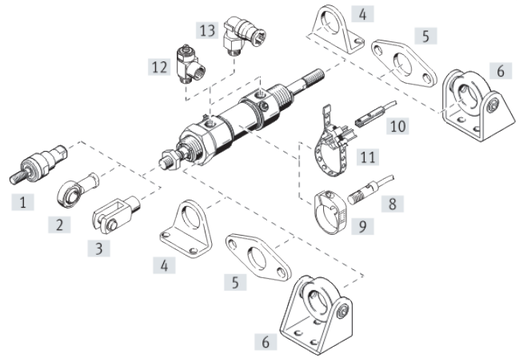
Standards–based cylinders CRDSNU to ISO6432 BITEBI®
stainless steel

Peripherals overview

CRDSNU-...



CRDSNU-...-S2



Mounting attachments and accessories			CRDSNU-				CRDSNU-B	→ Page/ Internet
		Description	Basic version	MQ	MG	S2	MG	
[1]	Self-aligning rod coupler CRFK	To compensate for radial and angular deviations	■	■	■	■	■	56
[2]	Rod eye CRSGS	With spherical bearing	■	■	■	■	■	56
[3]	Rod clevis CRSG	Permits a swivelling movement of the cylinder in one plane	■	■	■	■	■	56
[4]	Foot mounting CRHBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	48
[5]	Flange mounting CRFBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	50
[6]	Swivel mounting CRSBN	• For bearing caps • With CRDSNU-S2 for bearing and end caps	■	■	–	■	–	48
[7]	Clevis foot CRLBN	For end caps	■	–	■	–	■	53
[8]	Proximity switch CRSMEO-4	• Round design • For position sensing	■	■	■	■	■	56
[9]	Mounting kit CRSMBR	For proximity switches CRSMEO-4	■	■	■	■	■	57
[10]	Proximity switch CRSMT-8M	• Design for T-slot • For position sensing	■	■	■	■	■	56
[11]	Mounting kit SMBR	For proximity switches CRSMT-8	■	■	■	■	■	57
[12]	One-way flow control valve CRGRLA	For regulating speed	■	■	■	■	■	57
[13]	Push-in fitting CRQS	For connecting tubing with standard O.D.	■	■	■	■	■	qs

Data sheet

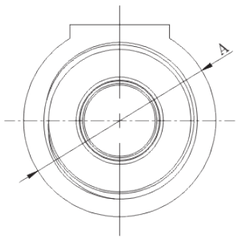
ATEX[1]	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb
ATEX category for dust	II 2D
Type of ignition protection for dust	Ex h IIIC T120°C Db
Explosion-proof ambient temperature	–20°C <= Ta <= +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)

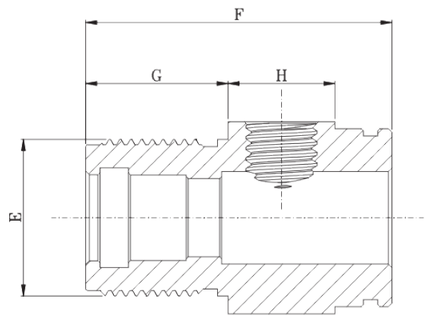
1) Note the ATEX certification of the accessories.

Forces [N] and impact energy [J]				
Piston Ø	12	16	20	25
Theoretical force at 0.6 MPa (6 bar, 87 psi), advancing	68	121	188	295
Theoretical force at 0.6 MPa (6 bar, 87 psi), retracting	51	104	158	247
Impact energy in the end positions for P cushioning[1]	0.07	0.15	0.20	0.30

1) The values are reduced by approx. 50% at an ambient temperature of 80°C

Weight [g]				
Piston Ø	12	16	20	25
Basic weight with 0 mm stroke	101	130	310	410
Additional weight per 10 mm stroke	4	5	7	11
Moving mass with 0 mm stroke	19	21	42	73
Add. moving mass per 10 mm stroke	2	2	4	6

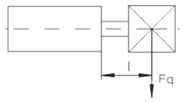




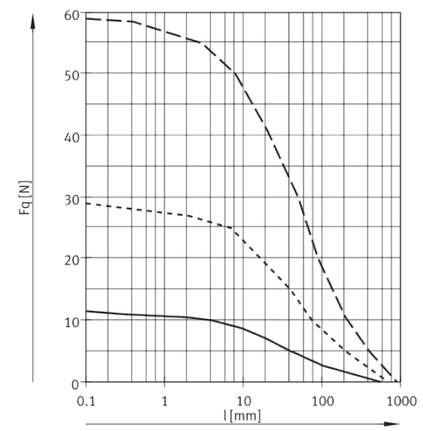
CRDSNU Φ20－Φ40端盖/Head					
规格/Spc. \ 代号/Code	A	E	F	G	H
Φ20	Φ27.3	M22X1.5	45	20	16
Φ25	Φ27.3	M22X1.5	47.75	22	16
Φ32	Φ38	M30X1.5	51.75	26	18
Φ40	Φ46	M38X1.5	63.8	30	24

Data sheet

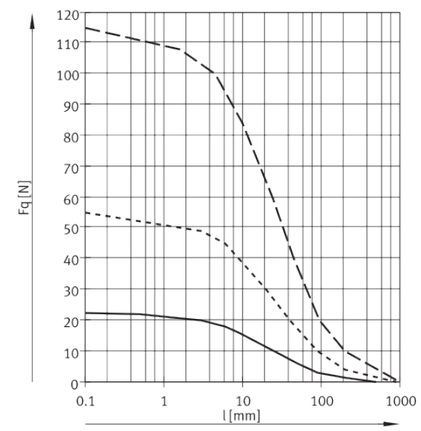
Max. transverse force Fq as a function of projection l



Basic version



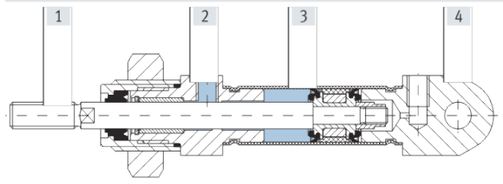
S2 – Through piston rod



DSNU-12/16
DSNU-20
DSNU-25

Materials

Sectional view



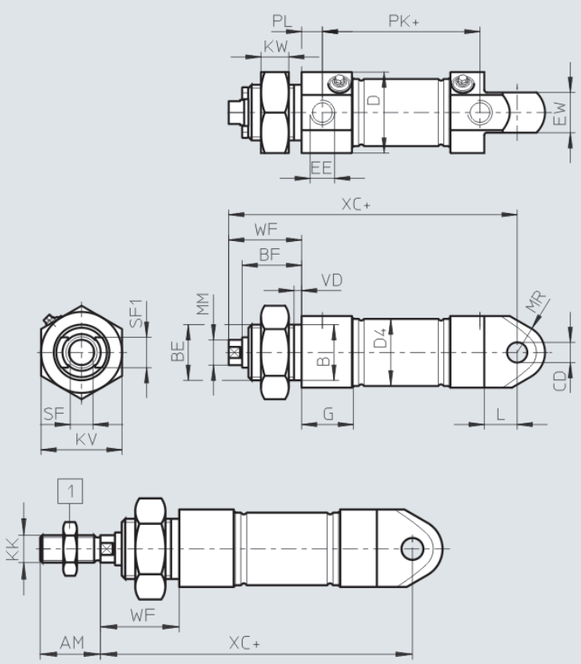
Standards-based cylinders		Basic version	A1	A3	TT	S6
[1]	Piston rod	High-alloy stainless steel				
[2]	Bearing cap	High-alloy stainless steel				
[3]	Cylinder barrel	High-alloy stainless steel				
[4]	End cap	High-alloy stainless steel				
–	Seals	TPE-U (PUR) media seal (modified for resistance to hydrolysis and cleaning)	FPM	UHMW-PE	TPE-U (PUR) (suitable for low temperatures)	FPM
	Note on materials	RoHS-compliant				
		–		Contains paint-wetting impairment substances		–
	PWIS conformity	VDMA24364-B2-L				
Maritime classification[1]		See certificate				

1) Additional information www.festo.com/sp → Certificates

Data sheet

Dimensions Download CAD data ➔ www.festo.com

Basic version



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

+ = plus stroke length

ø [mm]	AM	B ø h9	BE	BF	CD ø H8	D ø	D4 ø
12	16	16	M16x1.5	18	6	20	13.3
16	16	16	M16x1.5	18	6	20	17.3
20	20	22	M22x1.5	20.7	8	30	21.3
25	22	22	M22x1.5	23.5	8	32	26.5

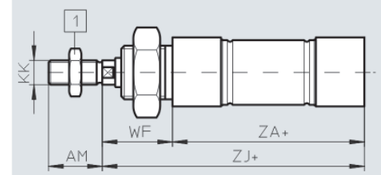
ø [mm]	EE	EW	G	KK	KV	KW	L	MM ø
12	M5	12	9.5	M6	24	8	10	6
16	M5	12	9.7	M6	24	8	10	6
20	G1/8	16	20.5	M8	32	11	13	8
25	G1/8	16	20.5	M10x1.25	32	11	13	10

ø [mm]	MR	PL	SF	SF1	VD	WF	XC ±1
12	8	6	5	9	3.5	22	75
16	8	6	5	9	3.5	22	82
20	11	8.2	7	12	3.5	24	95
25	11	8.2	9	12	3.5	28	104

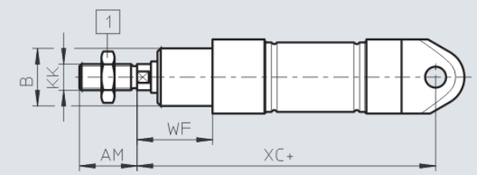
Data sheet

Dimensions Download CAD data ➔ www.festo.com

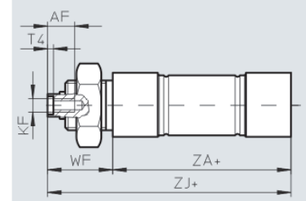
MQ – Short end cap without swivel mounting



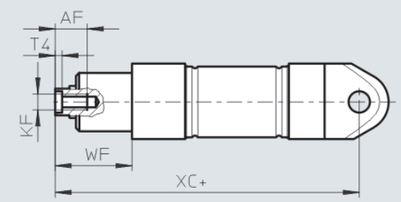
MG – Bearing cap without mounting thread



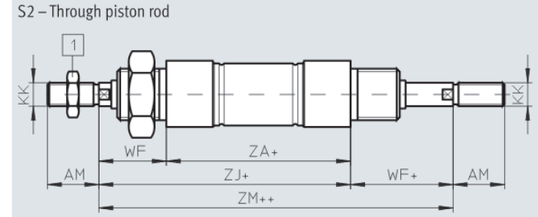
MQ-K3 – Short end cap without swivel mounting, with female piston rod thread



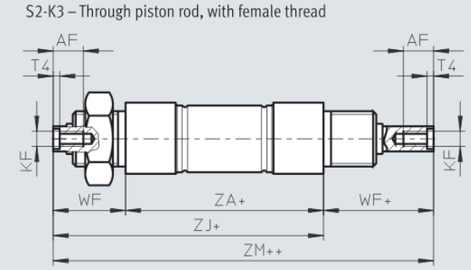
MG-K3 – Bearing cap without mounting thread, with female piston rod thread



S2 – Through piston rod



S2-K3 – Through piston rod, with female thread



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

+ = plus stroke length

++ = plus 2x stroke length

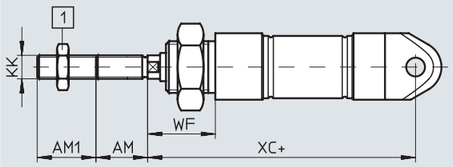
ø [mm]	AF	AM	B ø h9	KF	KK
12	–	16	16	–	M6
16	–	16	16	–	M6
20	12	20	22	M4	M8
25	12	22	22	M6	M10x1.25

ø [mm]	T4	WF	XC ±1	ZA	ZJ	ZM
12	–	22	75	50	72	95
16	–	22	82	56	78	101
20	2	24	95	68	92	117
25	2.6	28	104	69.5	97.5	126

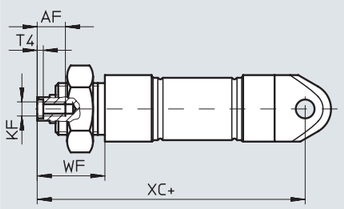
Data sheet

Dimensions Download CAD data ➔ www.festo.com

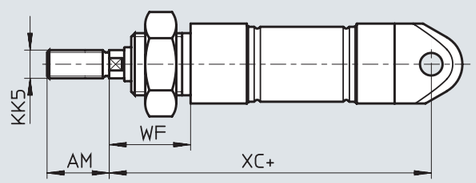
K2 – Extended male piston rod thread



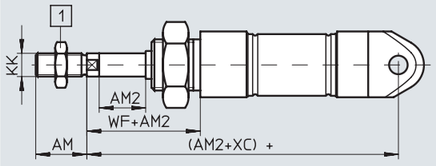
K3 – Female piston rod thread



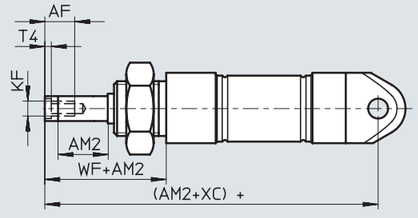
K5 – Custom piston rod thread



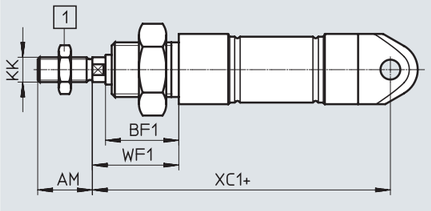
K8 – Extended piston rod



K3-K8 – Extended piston rod, with female thread



TT – Low temperature / A2 – Hard wiper



Note

[1] Piston rod nut is not included in the scope of delivery for diameter 8 ... 20.

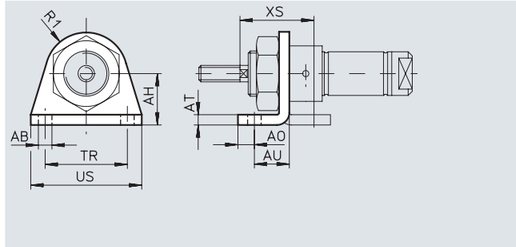
\+ = plus stroke length

Data sheet

Foot mounting CRHBN

Scope of delivery:
CRHBN-... x1: 1 foot
CRHBN-... x2: 2 feet, 1 nut

Material:
High-alloy steel

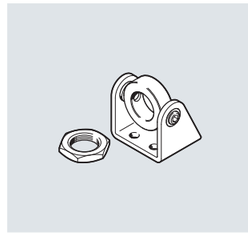


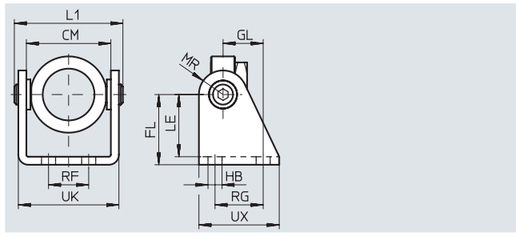
Dimensions and ordering data														
For Ø [mm]	AB Ø	AH	AO	AT	AU	R1	TR	US	XS	CRC[1]	Weight [g]	Part no.	Type
12	5.5	20	6	4	14	13	32	42	32	4	43	**161866**	**CRHBN-12/16x1**
16	5.5	20	6	4	14	13	32	42	32	4	107	**162999**	**CRHBN-12/16x2**
20	6.6	25	8	5	17	20	40	54	36	4	94	**161867**	**CRHBN-20/25x1**
25	6.6	25	8	5	17	20	40	54	40	4	236	**162998**	**CRHBN-20/25x2**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (➔ also FN 940082), using appropriate media.

Swivel mounting CRSBN

Material:
High-alloy steel





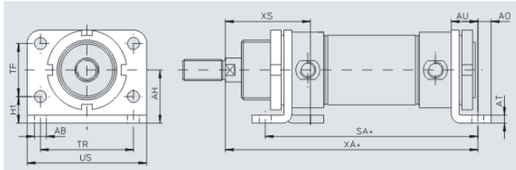
Dimensions and ordering data															
For Ø [mm]	CM	FL	GL	HB Ø	L1	LE	MR	RF	RG	UK	UX	CRC[1]	Weight [g]	Part no.	Type
20	38.1	35	20	7	55	31	12	20	24	50.1	40	4	230	**552904**	**CRSBN-2 0/25**
25															

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (➔ also FN 940082), using appropriate media.

Data sheet

Foot mounting CRH

Material:
High-alloy steel



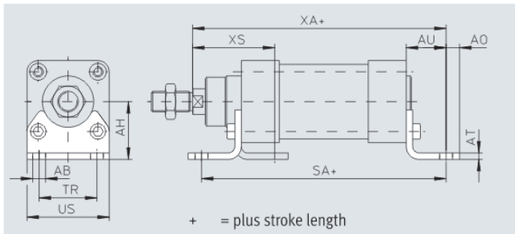
+ = plus stroke length

Dimensions and ordering data																
For ø [mm]	AB ø	AH	AO	AT	AU	H1	SA	TF	TR	US	XA	XS	CRC[1]	Weight [g]	Part no.	Type
32	7	28	7	4	14	14	124	28	52	66	148	48	4	237	**162951**	**CRH-32**
40	9	33	10	5	20	18	153	30	60	80	178	60	4	341	**162952**	**CRH-40**
50	9	40	10	6	20	20	160	40	70	90	190	64	4	559	**162953**	**CRH-50**
63	9	45	10	6	20	20	164	50	76	96	195	64	4	680	**162954**	**CRH-63**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Foot mounting CRHNC

Material:
High-alloy steel



+ = plus stroke length

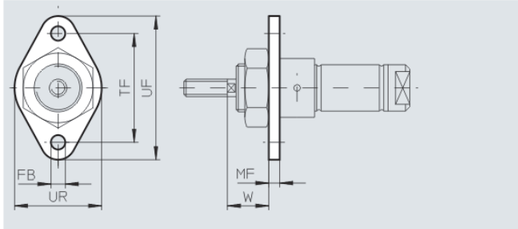
Dimensions and ordering data															
For ø [mm]	AB ø	AH	AO	AT	AU	SA	TR	US	XA	XS	CRC[1]	Weight [g]	Part no.	Type
32	7	32	6.5	4	24	142	32	45	144.7	45.7	4	139	**176937**	**CRHNC-32**
40	10	36	9	4	28	160.8	36	54	163.6	53.8	4	188	**176938**	**CRHNC-40**
50	10	45	9.5	5	31	167.9	45	64	175	63.1	4	341	**176939**	**CRHNC-50**
63	10	50	12.5	5	32	184.9	50	75	191.5	64.6	4	424	**176940**	**CRHNC-63**
80	12	63	15	6	41	209.9	63	93	215.5	81.6	4	810	**176941**	**CRHNC-80**
100	14.5	71	17.5	6	41	220.1	75	110	229.6	85.5	4	990	**176942**	**CRHNC-100**
125	16.5	90	22	8	45	250	90	131	270	102	4	1920	**176943**	**CRHNC-125**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Flange mounting CRFBN

Material:
High-alloy steel

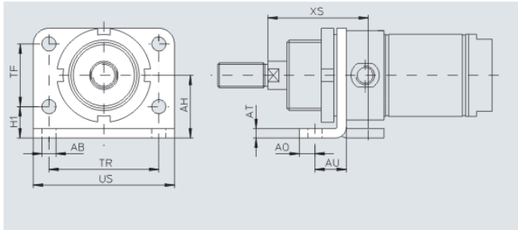


Dimensions and ordering data										
For ø [mm]	FB ø	MF	TF	UF	UR	W	CRC[1]	Weight [g]	Part no.	Type
12, 16	5.5	4	40	53	30	18	4	26	**161864**	**CRFBN-12/16**
20	6.6	5	50	66	40	19	4	52	**161865**	**CRFBN-20/25**
25	6.6	5	50	66	40	23	4	52	**161865**	**CRFBN-20/25**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Flange mounting CRFV

Material:
High-alloy steel



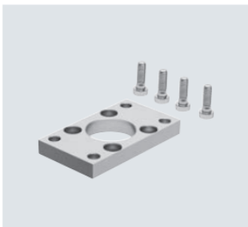
Dimensions and ordering data														
For ø [mm]	AB ø	AH	AO	AT	AU	H1	TF	TR	US	XS	CRC[1]	Weight [g]	Part no.	Type
32	7	28	7	4	14	14	28	52	66	48	4	102	**161858**	**CRFV-32**
40	9	33	10	5	20	18	30	60	80	60	4	190	**161859**	**CRFV-40**
50	9	40	10	6	20	20	40	70	90	64	4	290	**161860**	**CRFV-50**
63	9	45	10	6	20	20	50	76	96	64	4	365	**161861**	**CRFV-63**

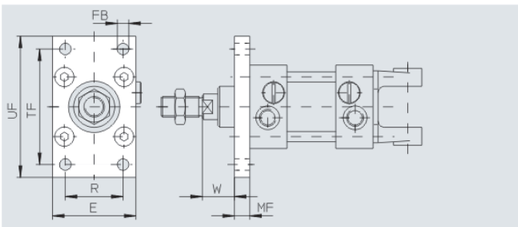
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Flange mounting CRFNG

Material:
High-alloy steel





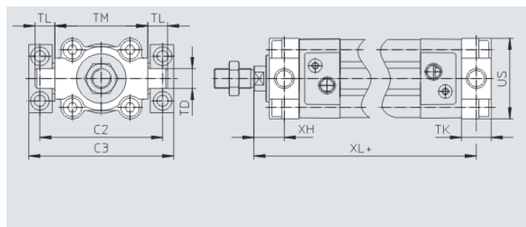
Dimensions and ordering data											
For Ø [mm]	E	FB Ø	MF	R	TF	UF	W	CRC[1]	Weight [g]	Part no.	Type
32	45	7	10	32	64	80	16	4	220	**161846**	**CRFNG-32**
40	54	9	10	36	72	90	20	4	291	**161847**	**CRFNG-40**
50	65	9	12	45	90	110	25	4	526	**161848**	**CRFNG-50**
63	75	9	12	50	100	120	25	4	680	**161849**	**CRFNG-63**
80	93	12	16	63	126	150	30	4	1508	**161850**	**CRFNG-80**
100	110	14	16	75	150	175	35	4	2054	**161851**	**CRFNG-100**
125	132	16	20	90	180	210	45	4	3787	**185363**	**CRFNG-125**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Trunnion flange CRZNG

Material:
High-alloy steel



Dimensions and ordering data													
For Ø [mm]	C2	C3	TD Ø e9	TK	TL	TM	UW	XH	XL	CRC[1]	Weight [g]	Part no.	Type
32	71	86	12	16	12	50	50	18	128	4	150	**161852**	**CRZNG-32**
40	87	105	16	20	16	63	55	20	145	4	285	**161853**	**CRZNG-40**
50	99	117	16	24	16	75	65	25	155	4	473	**161854**	**CRZNG-50**
63	116	136	20	24	20	90	75	25	170	4	687	**161855**	**CRZNG-63**
80	136	156	20	28	20	110	100	32	188	4	1296	**161856**	**CRZNG-80**
100	164	189	25	38	25	132	120	32	208	4	2254	**161857**	**CRZNG-100**
125	192	217	25	50	25	160	150	40	250	4	3484	**185362**	**CRZNG-125**

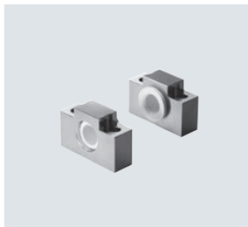
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

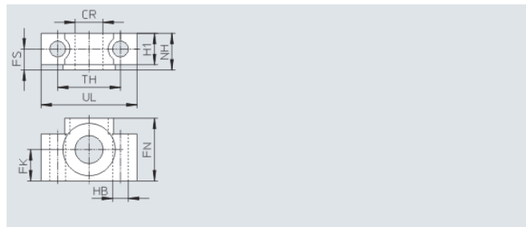
Note

Screws with a special length are required to mount diameter 125 mm.
→ Page 57

Trunnion supports CRLNZG

Material:
High-alloy steel





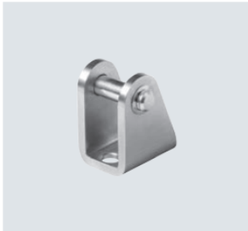
Dimensions and ordering data													
For Ø [mm]	CR Ø D11	FK Ø ±0.1	FN	FS	H1	HB Ø H13	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part no.	Type
32	12	15	30	10.5	15	6.6	18	32	46	4	205	**161874**	**CRLNZG-32**
40, 50	16	18	36	12	18	9	21	36	55	4	323	**161875**	**CRLNZG-40/50**
63, 80	20	20	40	13	20	11	23	42	65	4	435	**161876**	**CRLNZG-63/80**
100/125	25	25	50	16	24.5	14	28.5	50	75	4	739	**161877**	**CRLNZG-100/125**

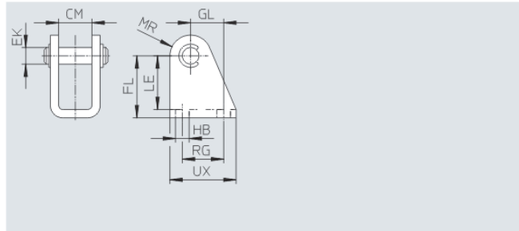
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Clevis foot CRLBN

Material:
High-alloy steel





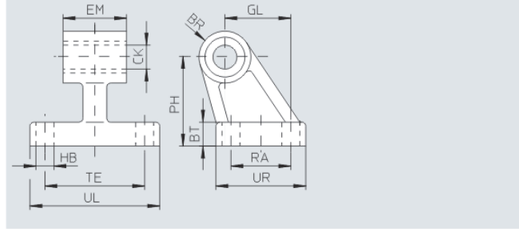
Dimensions and ordering data

For ø [mm]	CM	EK ø	FL	GL	HB	LE	MR	RG	UX	CRC[1]	Weight [g]	Part no.	Type
12, 16	12.1	6	27 +0.3/–0.2	13	5.5	24	7	15	25	4	39	**161862**	**CRLBN-12/16**
20, 25	16.1	8	30 +0.4/–0.2	16	6.6	26	10	20	32	4	82	**161863**	**CRLBN-20/25**
32	16.1	10	35 +0.4/–0.2	18.5	6.6	31	11	24	35	4	106	**195866**	**CRLBN-32**
40	18.1	12	40 +0.4/–0.2	24.5	9	35	13	30	45	4	185	**195867**	**CRLBN-40**
50, 63	21.1	16	45 +0.5/–0.2	28	9	39	14	34	50	4	293	**195868**	**CRLBN-50/63**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Clevis foot CRLNG

Material:
High-alloy steel



Dimensions and ordering data

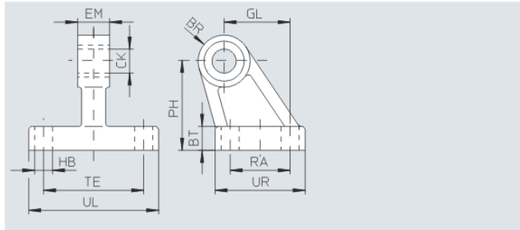
For ø [mm]	BR	BT	CK ø D11	EB ø H13	EM –0.4	GL	HB ø H13	OF	PH	RA	TE	UL	UR	CRC[1]	Weight [g]	Part no.	Type
32	10	8	10	–	25.8	21	6.6	–	32	18	38	51	31	4	133	**161840**	**CRLNG-32**
40	11	10	12	–	27.8	24	6.6	–	36	22	41	54	35	4	161	**161841**	**CRLNG-40**
50	12	12	12	–	31.8	33	9	–	45	30	50	65	45	4	281	**161842**	**CRLNG-50**
63	15	12	16	15	39.8	37	9	10.8	50	35	52	67	50	4	370	**161843**	**CRLNG-63**
80	15	14	16	18	49.8	47	11	12.7	63	40	66	86	60	4	562	**161844**	**CRLNG-80**
100	19	15	20	18	59.8	55	11	13.7	71	50	76	96	70	4	915	**161845**	**CRLNG-100**
125	22	20	25	20	69.8	70	14	18.6	90	60	94	124	90	4	2539	**176951**	**CRLNG-125**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Data sheet

Clevis foot CRLMC

Material:
High-alloy steel



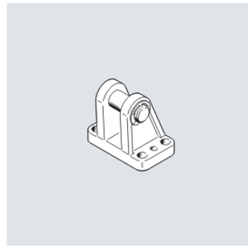
Dimensions and ordering data

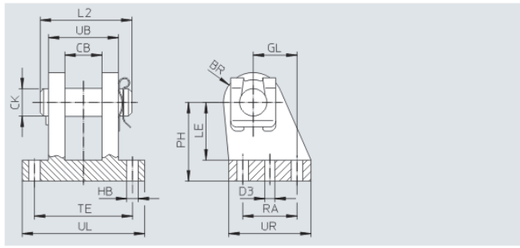
For ø [mm]	BR	BT	CK ø D11	EB ø H13	EM –0.4	GL	HB ø H13	OF	PH	RA	TE	UL	UR	CRC[1]	Weight [g]	Part no.	Type
32	10	8	10	–	10	21	6.6	–	32	18	38	51	31	4	112	**197320**	**CRLMC-32**
40	11	10	12	–	12	24	6.6	–	36	22	41	54	35	4	144	**197321**	**CRLMC-40**
50	12	12	12	–	16	33	9	–	45	30	50	65	45	4	254	**197322**	**CRLMC-50**
63	15	12	16	15	16	37	9	10.8	50	35	52	67	50	4	306	**197323**	**CRLMC-63**
80	15	14	16	18	20	47	11	12.7	63	40	66	86	60	4	482	**197324**	**CRLMC-80**
100	19	15	20	18	20	55	11	13.7	71	50	76	96	70	4	722	**197325**	**CRLMC-100**

1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

Clevis foot LBG-...-R3
The pivot pin is secured against rotation with a spring pin.

Material: High-alloy stainless steel
RoHS-compliant





Dimensions and ordering data

For ø [mm]	CL	CM	EK ø	FL	GL	HB ø	L2	LE	MR
80	50	25.1	20	63	30	11	60	49	18
100	50	25.1	20	71	41	11	60	56	22

For ø [mm]	RF	RG	S1 ø	UK	UX	CRC[1]	Weight [g]	Part no.	Type
80	70	36	7.8	89	55	3	1050	**2078797**	**LBG-80-R3**
100	70	46	9.8	89	65	3	1375	**2078799**	**LBG-100-R3**

1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

DNG –BXG Series



Product feature

1. ISO15552 (original ISO6431) standard cylinder.
2. The piston seal is composed of two Y-shape seals of single direction structure, which has compensation function, long service life and low start-up pressure.
3. DNG series cylinders are made of stainless steel material 3O4 & 316.
4. The buffer adjustment of cylinder is smooth and steady.
5. Cylinders and accessories for installation with several specifications are optional.
6. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150℃.

Symbol

DNG DNG-S DNGD DNGDS DNGJ DNGJS

Specification

Bore size(mm)	32	40	50	63	80	100	125	160	200	250	320
Acting type	Double acting										
Fluid	Air(to be filtered by 40μm filter element)										
Operating pressure	0.15~1.0MPa(22~145psi)(1.5~10.0bar)										
Proof pressure	1.5MPa(215psi)(15bar)										
Temperature	−40～200℃										
Speed range	30~800 mm/s										
Stroke tolerance	$0\sim1000^{+1.0}_{0}$ $1001\sim2000^{+1.8}_{0}$										
Cushion type	Variable cushion										
Cushion stroke	20		25		30		32		40		50
Port size [Note1]	G1/8	G1/4		G3/8		G1/2			G3/4		G1

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size(mm)	Standard stroke	Max.std stroke	Max. stroke
32	25 50 75 100 125 150 175 200 250 300 350 400 450 500	1000	1500
40	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800	1200	1500
50	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	1500
63	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
80	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
100	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
125	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
160	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
250	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
320	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

[Note] Consult us for non-standard stroke.

DNG –BXG Series

Ordering code

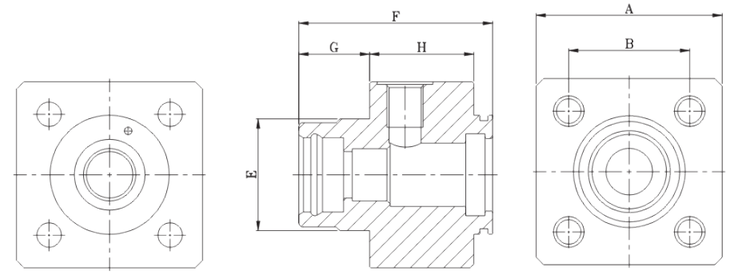
DNG - 32 R × 50 -S - FA - H - □
DNGD - 32 R × 50 -S - FA - H - □
DNGJ - 32 R × 50 - 20 - S - FA - H - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Model
DNG: Double acting type
DNGD: Double rod type
DNGJ: Adjustable stroke type

② Bore size
32 40 50 63 80
100 125 160
200 250 320

③ Rod material
Blank: EU
R: DPR

DNG–BXG Φ32–Φ200端盖/Head						
规格/Spc. \ 代号/Code	A	B	E	F	G	H
Φ32	50	32.5	Φ30	51	18	28
Φ40	55	38	Φ35	59	21.5	31
Φ50	65	46.5	Φ40	67.5	28	33
Φ63	75	56.5	Φ45	70.5	28.5	35
Φ80	95	72	Φ45	83.2	34.7	38
Φ100	110	89	Φ55	87.2	38.2	39
Φ125	140	110	Φ60	106.5	46	48
Φ160	180	140	Φ65	120	41	50
Φ200	220	175	Φ75	131	50	50

⑦ Mounting style	
Mounting style	Adaptable series
Blank: No acccessories	DNG DNGD DNGJ
LB: LB type	
FA: FA type	
FTC: FTC type	
TC: TC type	
FB: FB type	DNG
CA: CA type	
CB: CB type	
CR: CR type	

⑥ Magnet
Blank: Without magnet
S: With magnet

⑧ Seals material
Blank: NBR
H: Viton
T: TPU

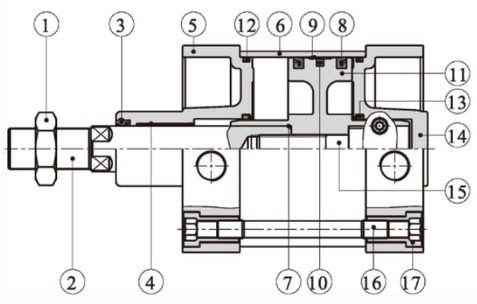
⑨ Thread type
Blank: G thread
PT: PT thread

④ Stroke
Refer to stroke table for details

⑤ Adjustable stroke	
Series	Adjustable stroke
DNGJ series	10: 10mm
	20: 20mm
	30: 30mm
	40: 40mm
	50: 50mm
	75: 75mm
	100: 100mm
Others series	No this code

[Note1] CR is used with CB, FTC. TC are used with TCM1,TCM2.

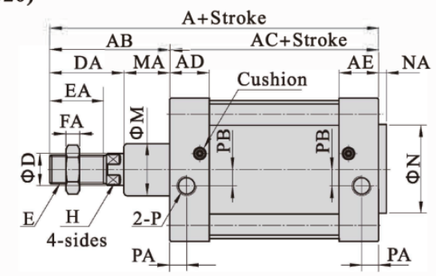
Inner structure and material of major parts

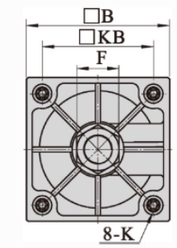


NO.	Item	Material
1	Rod nut	Stainless steel 304/316
2	Piston rod	Stainless steel 304/316
3	Front cover packing	NBR(SGC250)\TPU(Other)
4	Bushing	Wear resistant material
5	Front cover	Stainless Steel 304/316
6	pipe	Stainless Steel 304/316
7	O-ring	NBR
8	Piston Seal	NBR
9	Wear ring	Wear resistant material
10	Magnet	Rubber
11	Piston	Aluminum alloy
12	O-ring	NBR
13	Buffer gasket	NBR(SGC250)\TPU(Other)
14	Back cover	Stainless Steel 304/316
15	Screw	Stainless Steel 304/316
16	Tie-rod	Stainless steel 304/316
17	Tie-rod nut	Stainless steel 304/316

Dimensions

DNG Series(Φ32~Φ320)

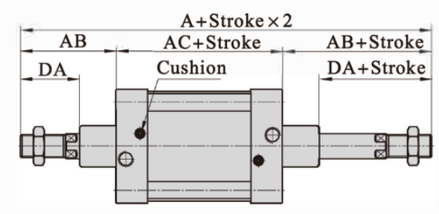




Bore size\Item	A	AB	AC	AD	AE	B	D	DA	E	EA	F	FA	H	K	KB	M	MA	N	NA	P	PA	PB
32	142	48	94	27	27	47	12	29	M10×1.25	22	17	6	10	M6	32.5	30	19	30	3	G1/8	12	5.5
40	159	54	105	31	31	53	16	33	M12×1.25	24	17	7	13	M6	38	35	21	35	3.5	G1/4	15	6
50	175	69	106	31	31	65	20	42	M16×1.5	32	23	8	17	M8	46.5	40	27	40	3.5	G1/4	15.5	7.5
63	190	69	121	33	33	75	20	42	M16×1.5	32	23	8	17	M8	56.5	45	27	45	4	G3/8	16.5	7.5
80	214	86	128	36	36	95	25	53	M20×1.5	40	26	10	22	M10	72	45	33	45	4	G3/8	19	8.5
100	229	91	138	37	37	115	25	55	M20×1.5	40	26	10	22	M10	89	55	36	55	4	G1/2	18	9.5
125	279	119	160	45	45	140	32	79	M27×2.0	54	41	13.5	27	M12	110	60	40	60	4	G1/2	23	10
160	332	152	180	50	50	180	40	94	M36×2.0	72	55	18	36	M16	140	65	55	65	4	G3/4	25	15
200	347	167	180	50	50	220	40	100	M36×2.0	72	55	18	36	M16	175	75	67	75	5	G3/4	25	15
250	389	189	200	60	60	270	50	114	M42×2.0	84	64	20	46	M20	220	90	75	90	8	G1	30	20
320	436	216	220	65	65	350	63	126	M48×2.0	96	72	20	55	M24	270	110	90	110	10	G1	30	30

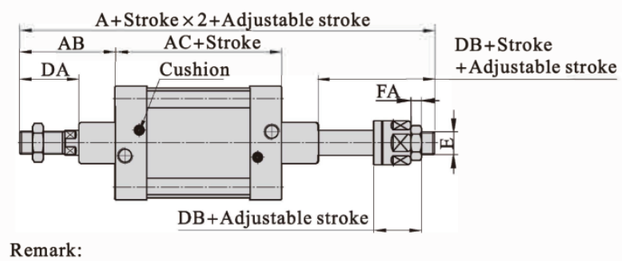
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

DNGD Series(Φ32~Φ320)



Bore size\Item Model	A DNGD	A DNGJ	AB	AC	DA
32	190	188	48	94	29
40	213	208	54	105	33
50	244	231	69	106	42
63	259	246	69	121	42
80	300	282.5	86	128	53
100	320	300.5	91	138	55
125	398	366.5	119	160	74
160	484	458	152	180	94
200	514	482	167	180	100
250	578	547	189	200	114
320	652		216	220	126

DNGJ Series(Φ32~Φ320)



Bore size\Item	DB	E	FA
32	27	M10X1.25	6
40	28	M12X1.25	7
50	29	M16X1.5	8
63	29	M16X1.5	8
80	35.5	M20X1.5	10
100	35.5	M20X1.5	10
125	42.5	M27X2.0	13. 5
160	68	M36X2.0	18
200	68	M36X2.0	18
250	80	M42X2.0	21
320	80	M42X2.0	21

Remark:
1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
2. The unmarked dimension is the same as DNG standard type.

List for ordering code of accessories

Accessories / Bore size	Mounting accessories							
	LB	FA/FB	CA	CB	CR	TC	FTC	TCM1
32	F-DNG32LB	F-DNG32FA	F-DNG32CA	F-DNG32CB	F-DNG32CR	F-DNG32TC	F-DNG32FTC	F-DNG32TCM1
40	F-DNG40LB	F-DNG40FA	F-DNG40CA	F-DNG40CB	F-DNG40CR	F-DNG40TC	F-DNG40FTC	F-DNG40TCM1
50	F-DNG50LB	F-DNG50FA	F-DNG50CA	F-DNG50CB	F-DNG50CR	F-DNG50TC	F-DNG50FTC	F-DNG40TCM1
63	F-DNG63LB	F-DNG63FA	F-DNG63CA	F-DNG63CB	F-DNG63CR	F-DNG63TC	F-DNG63FTC	F-DNG63TCM1
80	F-DNG80LB	F-DNG80FA	F-DNG80CA	F-DNG80CB	F-DNG80CR	F-DNG80TC	F-DNG80FTC	F-DNG63TCM1
100	F-DNG100LB	F-DNG100FA	F-DNG100CA	F-DNG100CB	F-DNG100CR	F-DNG100TC	F-DNG100FTC	F-DNG125TCM1
125	F-DNG125LB	F-DNG125FA	F-DNG125CA	F-DNG125CB	F-DNG125CR	F-DNG125TC	F-DNG125FTC	F-DNG125TCM1
160	F-DNG160LB	F-DNG160FA	-	F-DNG160CB	-	F-DNG160TC	F-DNG160FTC	F-DNG160TCM1
200	F-DNG200LB	F-DNG200FA	-	F-DNG200CB	-	F-DNG200TC	F-DNG200FTC	F-DNG200TCM1
250	F-DNG250LB	F-DNG250FA	-	F-DNG250CB	-	-	-	-
320	F-DNG320LB	F-DNG320FA	-	F-DNG320CB	-	-	-	-

Accessories / Bore size	Knuckle				Sensor switch	
	I: I Knuckle	Y: Y Knuckle	F: F Knuckle	U: U Knuckle	CS1-G	DS1-G
32	F-M10X125I	F-M10X125Y	F-M10X125F	F-M10X125U		
40	F-M12X125I	F-M12X125Y	F-M12X125F	F-M12X125U		
50	F-M16X150I	F-M16X150Y	F-M16X150F	F-M16X150U		
63	F-M16X150I	F-M16X150Y	F-M16X150F	F-M16X150U		
80	F-M20X150I	F-M20X150Y	F-M20X150F	F-M20X150U		
100	F-M20X150I	F-M20X150Y	F-M20X150F	F-M20X150U	CS1-G	DS1-G
125	F-M27X200I	F-M27X200Y	F-M27X200F	F-M27X200U		
160	F-M36X200I	F-M36X200Y	F-M36X200F	F-M36X200U		
200	F-M36X200I	F-M36X200Y	F-M36X200F	F-M36X200U		
250	F-M42X200I	F-M42X200Y	F-M42X200F	F-M42X200U		
320	F-M42X200I	F-M42X200Y	F-M42X200F	F-M42X200U		

Accessory selection

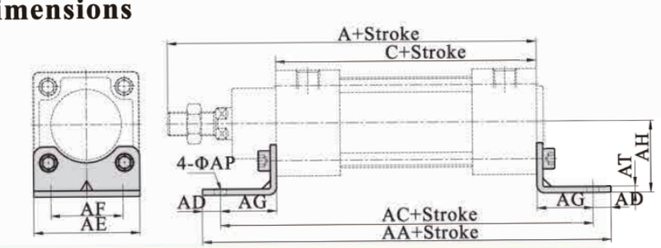
Accessories / Cylinder model		Mounting accessories									Knuckle				Sensor switch	
		LB	FA	FB	CA	CB	CR	TC	FTC	TCM1	I	Y	U	F	CMSE	DMSE
DNG	Standard	●	●	●	●	●	●	●	●	●	●	●	●	●	×	×
	With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DNGD DNGJ	Standard	●	●	×	×	×	×	●	●	●	●	●	●	●	×	×
	With magnet	●	●	×	×	×	×	●	●	●	●	●	●	●	●	●

Material of accessories

Accessories / Bore size	Mounting accessories								Knuckle			
	LB	FA	FB	CA	CB	CR	FTC	TCM1	I	Y	F	U
32~100	○	●	●	●	●	●	■	■	□	□	□	□
125~320	□	□	□	□	□	□	□	□	□	□	□	□
Material: stainless steel 304/316												

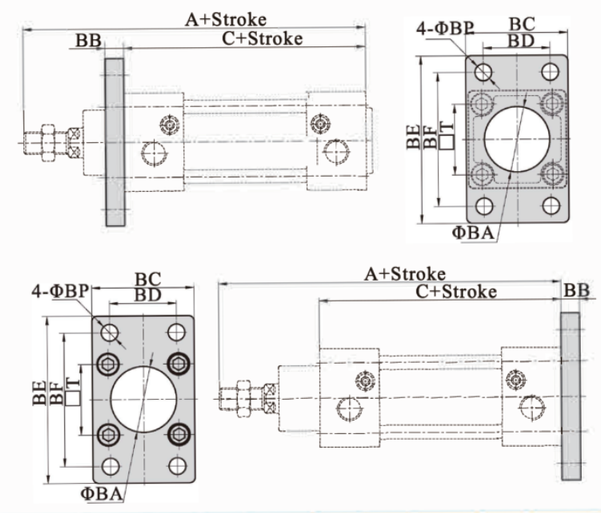
Accessories Dimensions

LB type



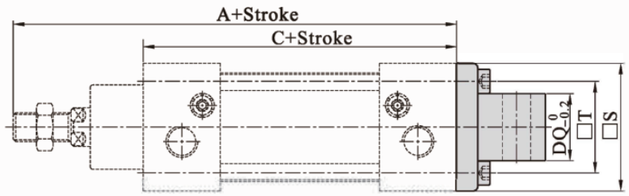
Bore size\Item	A	C	AA	AC	AD	AE	AF	AG	AH	AP	AT
32	142	94	158	142	8	47	32	24	32	7	3
40	159	105	179	161	9	53	36	28	36	9	3
50	175	106	190	170	10	65	45	32	45	9	3
63	190	121	209	185	12	75	50	32	50	9	3
80	214	128	248	210	19	95	63	41	63	12.5	4
100	229	138	258	220	19	115	75	41	71	14.5	4
125	279	160	290	250	20	140	90	45	90	16.5	8
160	332	180	340	300	20	180	115	60	115	18.5	8
200	347	180	380	320	30	220	135	70	135	24	9
250	389	200	410	350	30	275	165	75	165	28	19
320	436	220	470	390	40	350	200	85	185	35	23

FA\FB type

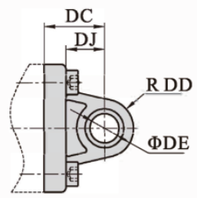


Bore size\Item	A	C	BA	BB	BC	BD	BE	BF	BP	T
32	142	94	30.5	10	47	32	80	64	7	32.5
40	159	105	35.5	10	53	36	90	72	9	38
50	175	106	40.5	12	65	45	108	90	9	46.5
63	190	121	45.5	12	75	50	118	100	9	56.5
80	214	128	45.5	16	95	63	150	126	12.5	72
100	229	138	55.5	16	115	75	176	150	14.5	89
125	279	160	60.5	20	139	90	218	180	16.5	110
160	332	180	65.5	20	180	115	280	230	18.5	140
200	347	180	75.5	25	220	135	320	270	24	175
250	389	200	90.5	25	270	165	390	330	26	220
320	436	220	110	30	349	200	470	400	33	270

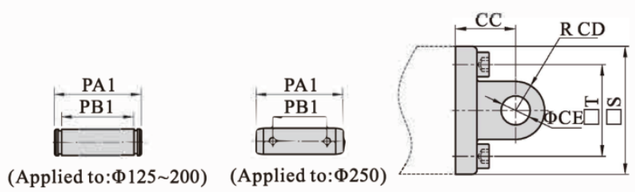
CA type

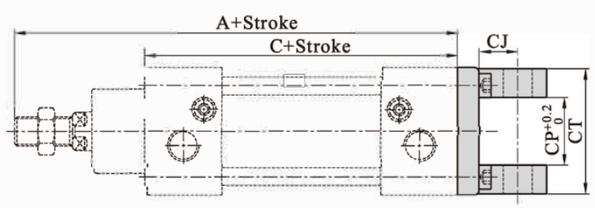


Bore size\Item	A	C	S	T	DC	DD	DE	DJ	DQ
32	142	94	46.5	32.5	22	10.5	10	13	25.8
40	159	105	54	38	25	12	12	16	27.8
50	175	106	64	46.5	27	12	12	17	31.7
63	190	121	75	56.5	32	15	16	22	39.7
80	214	128	93	72	36	15.5	16	22	49.7
100	229	138	110	89	41	20	20	27	59.7
125	279	160	134	110	50	24	25	33	69.7
160	332	180	180	140	55	30	30	35.5	89.7
200	347	180	220	175	60	30	30	37	89.7
250	389	200	270	220	70	35	40	46	110
320	436	220	350	270	80	45	45	52	120



CB type

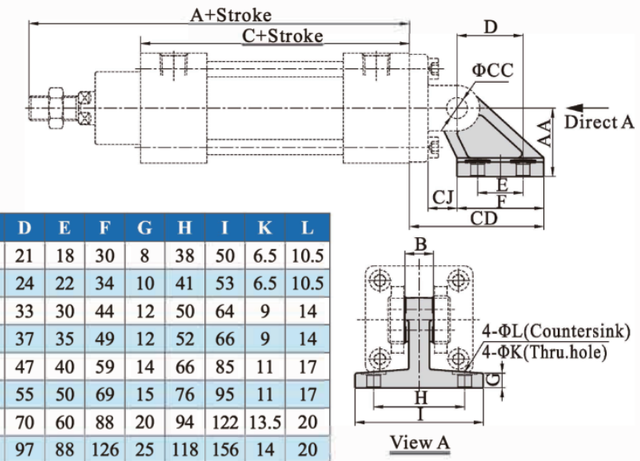




Bore size\Item	A	C	CC	CD	CE	CJ	CP	CT	PA1	PB1	S	T
32	142	94	22	10.5	10	13	26	45	51	45.5	46.5	32.5
40	159	105	25	12	12	16	28	52	59	52.5	54	38
50	175	106	27	12	12	17	32	60	67	60.5	64	46.5
63	190	121	32	15	16	22	40	70	77	70.5	75	56.5
80	214	128	36	15.5	16	22	50	90	97	90.5	93	72
100	229	138	41	20	20	27	60	110	119	110.5	110	89
125	279	160	50	24	25	33	70	130	139	130.5	134	110
160	332	180	55	30	30	35.5	90	170	181	170.5	180	140
200	347	180	60	30	30	36	90	170	181	170.5	220	175
250	389	200	70	35	40	46	110	200	230	208	270	220
320	436	220	80	45	45	52	120	220	240	222	350	270

Stainless steel ISO15552 Cylinder BITEBI®
DNG -BXG Series

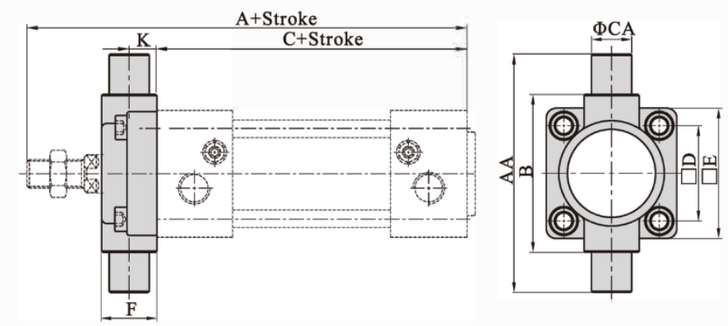
CR type



Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	142	32	26	94	10	49	10	21	18	30	8	38	50	6.5	10.5
40	159	36	28	105	12	55	12	24	22	34	10	41	53	6.5	10.5
50	175	45	32	106	12	67	13	33	30	44	12	50	64	9	14
63	190	50	40	121	16	76	17	37	35	49	12	52	66	9	14
80	214	63	50	128	16	92.5	19.5	47	40	59	14	66	85	11	17
100	229	71	60	138	20	105.5	22.5	55	50	69	15	76	95	11	17
125	279	90	70	160	25	134	29	70	60	88	20	94	122	13.5	20
160	332	115	90	180	30	171	25	97	88	126	25	118	156	14	20
200	347	135	90	180	30	185	31	105	90	130	30	122	162	18	26

[Note] CR can't be used alone, it must be used with CB.

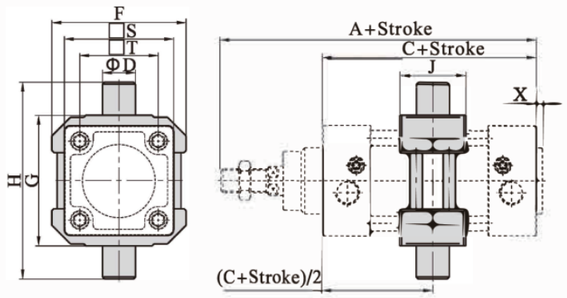
FTC type



Bore size\Item	A	C	AA	B	CA	D	E	F	K
32	142	94	74	50	12	32.5	46	19	10
40	159	105	95	63	16	38	52	21	10
50	175	106	107	75	16	46.5	64	26	12
63	190	121	130	90	20	56.5	74	28	12
80	214	128	150	110	20	72	94	31	16
100	229	138	182	132	25	89	114	35	16
125	279	160	210	160	25	110	139	43	20
160	332	180	264	200	32	140	179	56	20
200	347	180	314	250	32	175	218	64	20

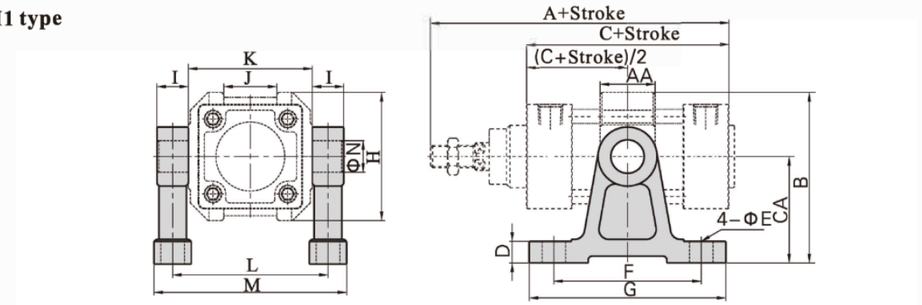
DNG –BXG Series

TC type



Bore size\Item	A	C	D	F	G	H	J	S	X	T
32	142	94	12	52	50	74	22	47	3	32.5
40	159	105	16	63	63	95	28	53	3.5	38
50	175	106	16	75	75	107	28	65	3.5	46.5
63	190	121	20	90	90	130	30	75	4	56.5
80	214	128	20	110	110	150	32	95	4	72
100	229	138	25	132	132	182	38	115	4	89
125	279	160	25	160	160	210	40	140	4	110
160	332	180	32	210	200	264	50	180	4	140
200	347	180	32	255	250	314	50	220	5	175
250										
320										

TCM1 type



Bore size\Item	A	AA	B	C	CA	D	E	F	G	H	I	J	K	L	M	N
32	142	22	66	94	40	11	9	60	80	52	12	20	50	62	77	12
40	159	28	86.5	105	54	11	12	75	100	65	16	27	63	79	98	16
50	175	28	91.5	106	54	11	12	75	100	75	16	31	75	91	110	16
63	190	30	115	121	70	11	12	85	110	90	20	42	90	110	133	20
80	214	32	126	128	70	11	12	85	110	112	20	54	110	130	153	20
100	229	38	157.5	138	90	19	18	115	155	135	25	68	132	157	185	25
125	279	40	175	160	90	19	18	115	155	170	25	80	160	185	213	25
160	332	50	215	180	110	24	22	140	190	210	32	100	200	232	267	32
200	347	50	262.5	180	135	27	22	150	200	255	32	125	250	282	317	32
250																
320																

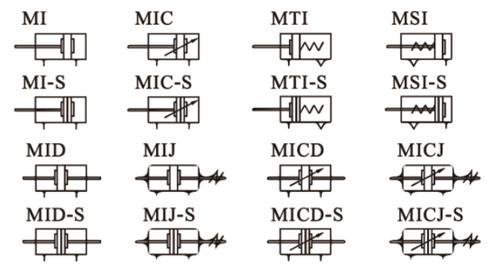
[Note] The installation position of the accessories can not be adjusted arbitrarily.

MI–BXG Series

Product feature

1. In accordance with ISO6432 standard(Φ8~Φ25).
2. Front and back cover owns fixed bumper pad which can reduce the impact of direction-change of the cylinder.
3. There are several mode of back cover, which makes the installation of cylinder more convenient.
4. Front and back cover and stainless steel block adopt riveted rolling packed structure to form a reliable connection.
5. Piston rod and cylinder body with the material of stainless steel make the cylinder adapt general working environment with corrosivity.
6. There are cylinders and accessories with several specifications for installation for your choice.

Symbol



Specification

Bore size(mm)		8	10	12	16	20	25	32	40
Acting type		Double acting, Single acting_Push, Single acting_Pull							
		–			Double acting with cushion				
Fluid		Air(to be filtered by 40μm filter element)							
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)(1.5~10.0bar)							
	Single acting	0.2~1.0MPa(28~145psi)(2.0~10.0bar)							
Proof pressure		1.5MPa(215psi)(15bar)							
Temperature ℃		−40～200℃							
Speed range mm/s		Double acting:30~800 Single acting:50~800							
Stroke tolerance		$0\sim150^{+1.0}_{0}$ $>150^{+1.5}_{0}$							
Cushion type		MIC Series: Variable cushion Other series: Bumper							
Port size [Note1]		M5×0.8				G1/8			G1/4

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke	Max. stroke
MI	8	10 15 20 25 30 40 50 60 75 80 100 125 150	150	200
	10	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200	200	200
	12	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250	250	500
MI MIC	16	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	600
	20 25 32 40		500	800
MID MIJ	8 10	10 15 20 25 30 40 50 60 75 80 100	100	–
	12	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200	200	–
MID, MIJ MICD, MICJ	16 20 25	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300	300	–
	32 40	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 350 400 450 500	500	–
MSI MTI	8 10 12	10 15 20 25 30 40 50	–	–
	16	10 15 20 25 30 40 50 60 75 80 100	–	–
	20 25 32 40	10 15 20 25 30 40 50 60 75 80 100 125 150	–	–

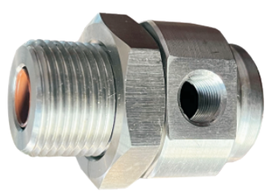
[Note] Consult us for non-standard stroke.

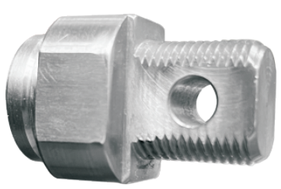
Ordering code

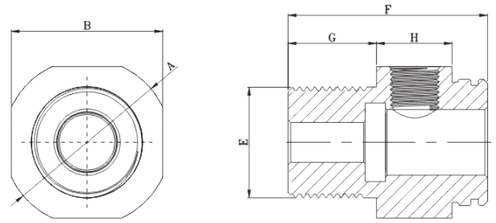
MI-BXG - 32 × 40 -S - CA - FA - □
MID-BXG- 32 × 50 -S - CA - FA - □
MIJ-BXG - 32 × 50 - 20 - S - CA - FA - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model
MI: Mini cylinder(Double acting)
MIC: Mini cylinder (Double acting with cushion)
MSI: Mini cylinder(Single acting_push)
MTI: Mini cylinder(Single acting_pull)
MID: Mini cylinder(Double rod)
MICD: Mini cylinder (Double rod with cushion)
MIJ: Mini cylinder(Adjustable stroke)
MICJ: Mini cylinder(Adjustable stroke with cushion)







MI-BXG Φ10-Φ40端盖/Head						
规格/Spc. \ 代号/Code	A	B	E	F	G	H
Φ10	Φ16.7	15	M12X1.25	29.5	17	6.5
Φ12	Φ19.7	18	M16X1.5	36.5	17	12.5
Φ16	Φ19.7	18	M16X1.5	36.5	17	12.5
Φ20	Φ28	24	M22X1.5	42	20	15
Φ25	Φ33	30	M22X1.5	45.5	22	16.5
Φ32	Φ37.5	34.5	M30X1.5	55	30	17
Φ40	Φ46.5	42.5	M38X1.5	66.5	35	22.5

⑥Back cover		
Back cover	Series	Bore size
CA: Pivot type	MI MSI MTI	Φ8~Φ25
U: Perpendicular 90°		Φ8~Φ40
R: Axial air-in		Φ16~Φ40
CM: Round-end type		Φ16~Φ40
CA: Pivot type	MIC	Φ16~Φ25
U: Perpendicular 90°		Φ16~Φ40
CM: Round-end type		Φ16~Φ40
No this code	Others	

②Bore size	
Bore size	Series
8 10 12 16 20 25 32 40	MI
16 20 25 32 40	MIC
8 10 12 16 20 25 32 40	MSI
	MTI
	MID
16 20 25 32 40	MICD
8 10 12 16 20 25 32 40	MIJ
16 20 25 32 40	MICJ

③Stroke
Refer to stroke table for details

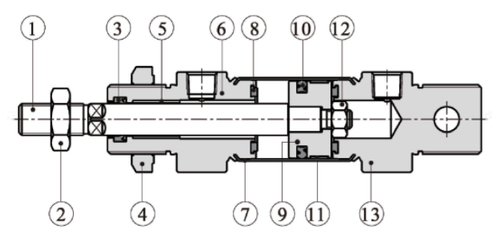
⑤ Magnet
Blank: Without magnet
S: With magnet

⑦Mounting type	
Mounting type	Series
Blank: No accessories	MI MIC MSI MTI
FA: FA type	
SDB: SDB type	
LB: LB type	
TC: TC type	
Blank: No accessories	MID MICD MIJ MICJ
FA: FA type	
LB: LB type	
TC: TC type	

⑧ Thread type
Blank: G thread
PT: PT thread

④ Adjustable stroke	
Series	Adjustable stroke
MIJ series MICJ series	10: 10mm
	20: 20mm
	30: 30mm
	40: 40mm
	50: 50mm
	75: 75 mm
	100: 100mm
Others series	No this code

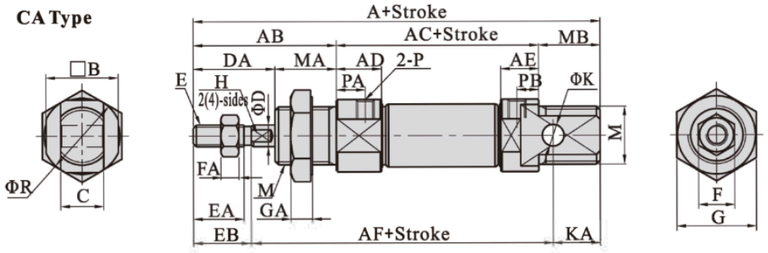
Inner structure and material of major parts

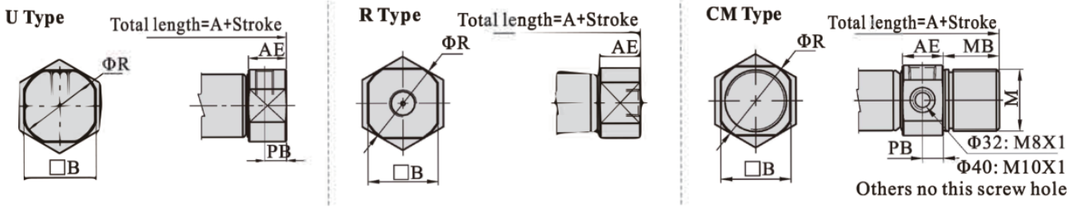


NO.	Item	Material
1	Rod	Stainless Steel 304/316
2	Rod nut	Stainless steel 304/316
3	Front cover packing	NBR
4	Front cover nut	Stainless steel 304/316
5	Bushing	Wear resistant material
6	Front cover	Stainless Steel 304/316
7	Barrel	Stainles Steel
8	Bumper	Rubber
9	Piston	Aluminum alloy
10	Piston seal	NBR
11	Wear ring	Wear resistant material
12	Nut	Stainless steel 304/316
13	Back cover	Stainless steel 304/316

Dimensions

MI



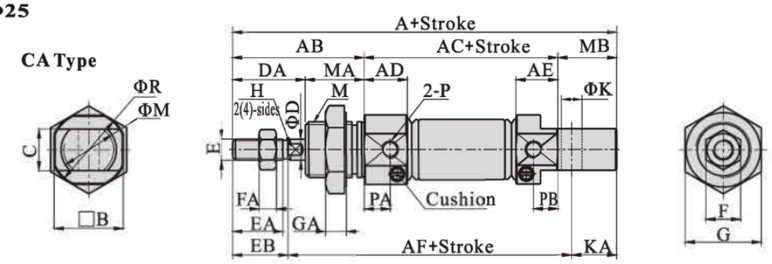


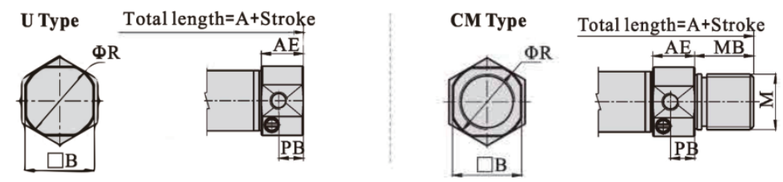
Bore size\Item / Back cover	A				AB	AC	AD	AE		AF	B	C	D	DA	E	EA	EB	F	FA
	CA	U	R	CM				CA	U/R/CM										
8	86	74	-	-	28	46	11.5	9.5	9.5	64	15	8	4	16	M4×0.7	10.5	12	7	3
10	86	74	-	-	28	46	11.5	9.5	9.5	64	15	8	4	16	M4×0.7	10.5	12	7	3
12	105	88	-	-	38	50	12.5	10.5	10.5	75	18	12	6	21	M6×1.0	14.5	16	10	5
16	111	94	94	111	38	56	12.5	10.5	10.5	82	20	12	6	21	M6×1.0	14.5	16	10	5
20	126	106	106	126	44	62	14.5	14.5	14.5	95.5	25	16	8	24	M8×1.25	18	19.5	12	6
25	137	114.5	115	137	50	65	16	16	16	104.5	30	16	10	28	M10×1.25	20	21.5	17	6
32	-	125	126	140	58	-	16.5	-	16.5	-	34.5	-	12	28	M10×1.25	18.5	20	17	6
40	-	158	158	174	69	-	22	-	22	-	42.5	-	16	34	M12×1.25	22.5	24	17	7

Bore size\Item / Back cover	G	GA	H	K	KA	M	MA	MB	P	PA	PB		R
											CA	U/CM	
8	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
10	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
12	22	6	5(2-Sides)	6	14	M16×1.5	17	17	M5×0.8	8	6	6	20
16	22	6	5(2-Sides)	6	13	M16×1.5	17	17	M5×0.8	8	6	6	22
20	29	7	6(2-Sides)	8	11	M22×1.5	20	20	G1/8	7.5	7.5	7.5	29
25	29	7	8(4-Sides)	8	11	M22×1.5	22	22	G1/8	8	8	8	33.5
32	36	7	10(4-Sides)	-	-	M30×1.5	30	14	G1/8	9	-	8/9	37.5
40	46	8	14(4-Sides)	-	-	M38×1.5	35	16	G1/4	12	-	11.5/12	46.5

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MIC Φ16~Φ25



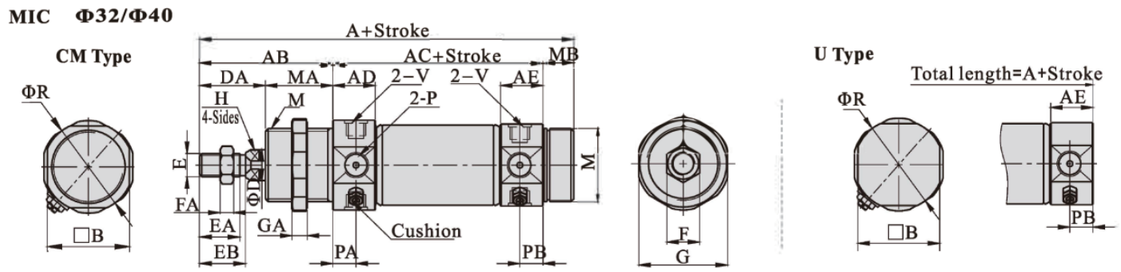


Bore size\Item / Back cover	A		AB	AC	AD	AE		AF	B	C	D	DA	E	EA	EB	F	FA
	CA/CM	U				CA/CM	U										
16	111	94	38	56	12.5	12	12	82	20	12	6	21	M6×1.0	14.5	16	10	5
20	126	106	44	62	14.5	14.5	14.5	95.5	25	16	8	24	M8×1.25	18	19.5	12	6
25	137	113.5	50	65	16	16	14.5	104.5	30	16	10	28	M10×1.25	20	21.5	17	6

Bore size\Item	G	GA	H	K	KA	M	MA	MB	P	PA	PB	R
16	22	6	5(2-Sides)	6	13	M16×1.5	17	17	M5×0.8	7.5	7	22
20	29	7	6(2-Sides)	8	11	M22×1.5	20	20	G1/8	7.5	7.5	29
25	29	7	8(4-Sides)	8	11	M22×1.5	22	22	G1/8	8	8	33.5

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MIC Φ32/Φ40



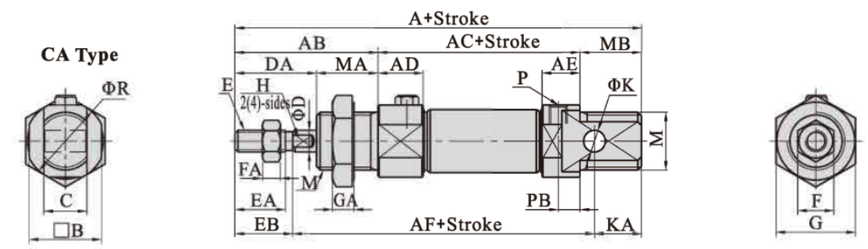
Bore size\Item / Back cover	A		AB	AC	AD	AE		B	D	DA	E	EA	EB	F	FA	G	GA
	U	CM				U	CM										
32	124	140	58	68	16.5	14.5	16.5	34.5	12	28	M10×1.25	18.5	20	17	6	36	7
40	157.5	174	69	89	22	21.5	22	42.5	16	34	M12×1.25	22.5	24	17	7	46	8

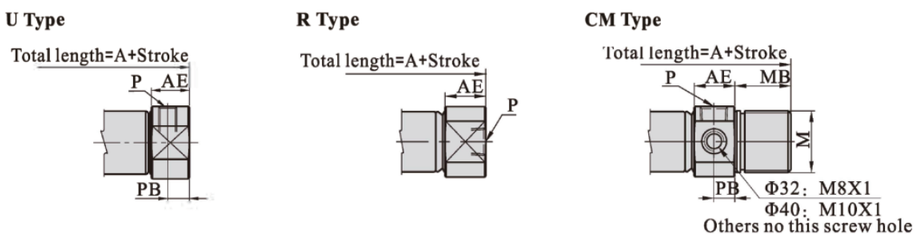
Bore size\Item / Back cover	H	M	MA	MB	P	PA	PB		R	V
							U	CM		
32	10(4-Sides)	M30×1.5	30	14	G1/8	9	7.5	9	37.5	M8X1
40	14(4-Sides)	M38×1.5	35	16	G1/4	12	11.5	12	46.5	M10X1

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MI-BXG Series

MSI





Item / Back cover	A												AB
	CA			U			R			CM			
Bore size\Stroke	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	
8	111	-	-	99	-	-	-	-	-	-	-	-	28
10	111	-	-	99	-	-	-	-	-	-	-	-	28
12	130	-	-	113	-	-	-	-	-	-	-	-	38
16	136	161	-	119	144	-	119	144	-	136	161	-	38
20	151	176	201	131	156	181	131	156	181	151	176	201	44
25	162	187	212	139.5	164.5	189.5	140	165	190	162	187	212	50
32	-	-	-	150	175	200	151	176	201	165	190	215	58
40	-	-	-	183	208	233	183	208	233	199	224	249	69

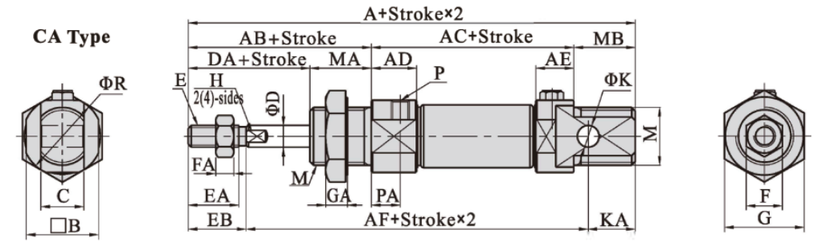
Item / Back cover	AC			AD	AF			AE		B	C	D	DA	E
								CA	U/R/CM					
Bore size\Stroke	0~50	51~100	101~150		0~50	51~100	101~150	-	-					
8	71	-	-	11.5	89	-	-	9.5	9.5	15	8	4	16	M4×0.7
10	71	-	-	11.5	89	-	-	9.5	9.5	15	8	4	16	M4×0.7
12	75	-	-	12.5	100	-	-	10.5	10.5	18	12	6	21	M6×1.0
16	81	106	-	12.5	107	132	-	10.5	10.5	20	12	6	21	M6×1.0
20	87	112	137	14.5	120.5	145.5	170.5	14.5	14.5	25	16	8	24	M8×1.25
25	90	115	140	16	129.5	154.5	179.5	16	16	30	16	10	28	M10×1.25
32	-	-	-	16.5	-	-	-	-	16.5	34.5	-	12	28	M10×1.25
40	-	-	-	22	-	-	-	-	22	42.5	-	16	34	M12×1.25

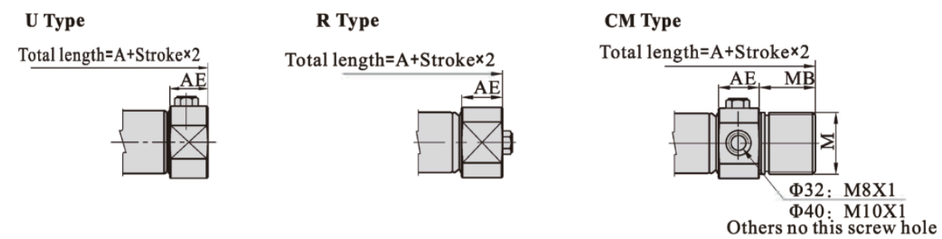
Bore size\Item / Back cover	EA	EB	F	FA	G	GA	H	K	KA	M	MA	MB	P	PA	PB		R
															CA	U/CM	
8	10.5	12	7	3	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
10	10.5	12	7	3	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
12	14.5	16	10	5	22	6	5(2-Sides)	6	14	M16×1.5	17	17	M5×0.8	8	6	6	20
16	14.5	16	10	5	22	6	5(2-Sides)	6	13	M16×1.5	17	17	M5×0.8	8	6	6	22
20	18	19.5	12	6	29	7	6(2-Sides)	8	11	M22×1.5	20	20	G1/8	7.5	7.5	7.5	29
25	20	21.5	17	6	29	7	8(4-Sides)	8	11	M22×1.5	22	22	G1/8	8	8	8	33.5
32	18.5	20	17	6	36	7	10(4-Sides)	-	-	M30×1.5	30	14	G1/8	9	-	8/9	37.5
40	22.5	24	17	7	46	8	14(4-Sides)	-	-	M38×1.5	35	16	G1/4	12	-	11.5/12	46.5

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MI-BXG Series

MTI





Item / Back cover	A												AB
	CA			U			R			CM			
Bore size\Stroke	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	
8	111	-	-	99	-	-	-	-	-	-	-	-	28
10	111	-	-	99	-	-	-	-	-	-	-	-	28
12	130	-	-	113	-	-	-	-	-	-	-	-	38
16	136	161	-	119	144	-	119	144	-	136	161	-	38
20	151	176	201	131	156	181	131	156	181	151	176	201	44
25	162	187	212	139.5	164.5	189.5	140	165	190	162	187	212	50
32	-	-	-	150	175	200	151	176	201	165	190	215	58
40	-	-	-	183	208	233	183	208	233	199	224	249	69

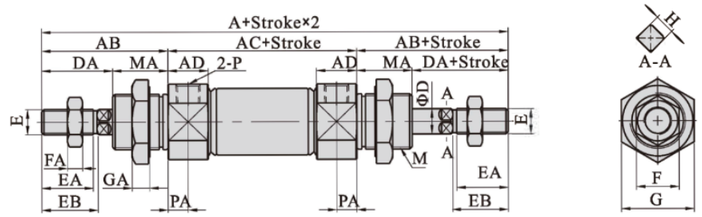
Item / Back cover	AC			AD	AF			AE		B	C	D	DA	E
								CA	U/R/CM					
Bore size\Stroke	0~50	51~100	101~150		0~50	51~100	101~150	-	-					
8	71	-	-	11.5	89	-	-	9.5	9.5	15	8	4	16	M4×0.7
10	71	-	-	11.5	89	-	-	9.5	9.5	15	8	4	16	M4×0.7
12	75	-	-	12.5	100	-	-	10.5	10.5	18	12	6	21	M6×1.0
16	81	106	-	12.5	107	132	-	10.5	10.5	20	12	6	21	M6×1.0
20	87	112	137	14.5	120.5	145.5	170.5	14.5	14.5	25	16	8	24	M8×1.25
25	90	115	140	16	129.5	154.5	179.5	16	16	30	16	10	28	M10×1.25
32	-	-	-	16.5	-	-	-	-	16.5	34.5	-	12	28	M10×1.25
40	-	-	-	22	-	-	-	-	22	42.5	-	16	34	M12×1.25

Bore size\Item / Back cover	EA	EB	F	FA	G	GA	H	K	KA	M	MA	MB	P	PA	PB		R
															CA	U/CM	
8	10.5	12	7	3	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
10	10.5	12	7	3	17	6	-	4	10	M12×1.25	12	12	M5×0.8	7	5	5	17
12	14.5	16	10	5	22	6	5(2-Sides)	6	14	M16×1.5	17	17	M5×0.8	8	6	6	20
16	14.5	16	10	5	22	6	5(2-Sides)	6	13	M16×1.5	17	17	M5×0.8	8	6	6	22
20	18	19.5	12	6	29	7	6(2-Sides)	8	11	M22×1.5	20	20	G1/8	7.5	7.5	7.5	29
25	20	21.5	17	6	29	7	8(4-Sides)	8	11	M22×1.5	22	22	G1/8	8	8	8	33.5
32	18.5	20	17	6	36	7	10(4-Sides)	-	-	M30×1.5	30	14	G1/8	9	-	8/9	37.5
40	22.5	24	17	7	46	8	14(4-Sides)	-	-	M38×1.5	35	16	G1/4	12	-	11.5/12	46.5

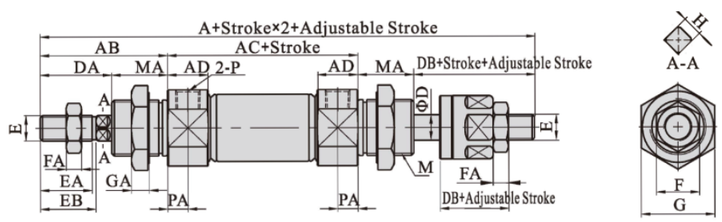
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MI-BXG Series

MID



MIJ



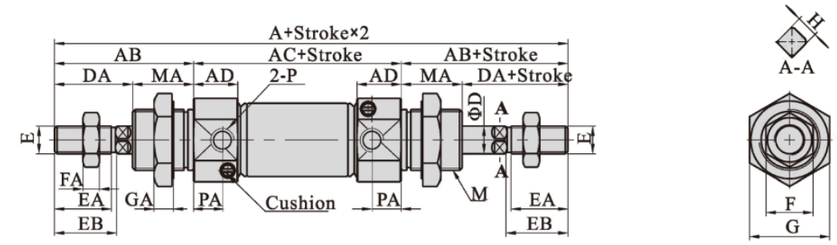
Bore size\Item	A(MID)	A(MIJ)	AB	AC	AD	D	DA	DB	E	EA	EB	F	FA	G	GA
8	104	103	28	48	11.5	4	16	15	M4×0.7	10.5	12	7	3	17	6
10	104	103	28	48	11.5	4	16	15	M4×0.7	10.5	12	7	3	17	6
12	128	128	38	52	12.5	6	21	21	M6×1.0	14.5	16	10	5	22	6
16	134	134	38	58	12.5	6	21	21	M6×1.0	14.5	16	10	5	22	6
20	150	151	44	62	14.5	8	24	25	M8×1.25	18	19.5	12	6	29	7
25	165	164	50	65	16	10	28	27	M10×1.25	20	21.5	17	6	29	7
32	184	183	58	68	16.5	12	28	27	M10×1.25	18.5	20	17	6	36	7
40	227	222	69	89	22	16	34	29	M12×1.25	22.5	24	17	7	46	8

Bore size\Item	H	M	MA	P	PA
8	-	M12×1.25	12	M5×0.8	7
10	-	M12×1.25	12	M5×0.8	7
12	5(2-Sides)	M16×1.5	17	M5×0.8	8
16	5(2-Sides)	M16×1.5	17	M5×0.8	8
20	6(2-Sides)	M22×1.5	20	G1/8	7.5
25	8(4-Sides)	M22×1.5	22	G1/8	8
32	10(4-Sides)	M30×1.5	30	G1/8	9
40	14(4-Sides)	M38×1.5	35	G1/4	12

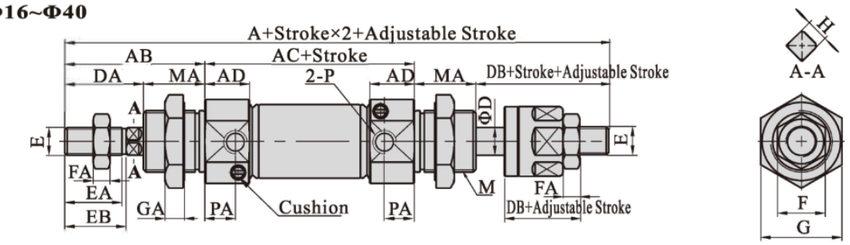
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

MI-BXG Series

MICDΦ16~Φ40



MICJΦ16~Φ40



Bore size\Item	A(MICD)	A(MICJ)	AB	AC	AD	D	DA	DB	E	EA	EB	F	FA	G	GA
16	132.5	132.5	38	56.5	12.5	6	21	21	M6×1.0	14.5	16	10	5	22	6
20	150	151	44	62	14.5	8	24	25	M8×1.25	18	19.5	12	6	29	7
25	165	164	50	65	16	10	28	27	M10×1.25	20	21.5	17	6	29	7
32	184	183	58	68	16.5	12	28	27	M10×1.25	18.5	20	17	6	36	7
40	227	222	69	89	22	16	34	29	M12×1.25	22.5	24	17	7	46	8

Bore size\Item	H	M	MA	P	PA
16	5(2-Sides)	M16×1.5	17	M5×0.8	7.5
20	6(2-Sides)	M22×1.5	20	G1/8	7.5
25	8(4-Sides)	M22×1.5	22	G1/8	8
32	10(4-Sides)	M30×1.5	30	G1/8	9
40	14(4-Sides)	M38×1.5	35	G1/4	12

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

List for ordering code of accessories

Accessories / Bore size	Mounting accessories				Knuckle				Sensor switch	
	LB	FA	SDB	TC	I	Y	F	U	CS1-G	DS1-G
8	F-MI10LB	F-MI8FA	F-MI8SDB	F-MI10TC	F-M4X070I	F-M4X070Y	F-M4X070F	F-M4X070U	CS1-G	DS1-G
10										
12	F-MI12LB	F-MI12FA	F-MI12SDB	F-MI12TC	F-M6X100I	F-M6X100Y	F-M6X100F	F-M6X100U		
16										
20	F-MI20LB	F-MI20FA	F-MI20SDB	F-MI20TC	F-M8X125I	F-M8X125Y	F-M8X125F	F-M8X125U		
25					F-M10X125I	F-M10X125Y	F-M10X125F	F-M10X125U		
32	F-MI32LB	-	F-MI32SDB	F-MI32TC						
40	F-MI40LB	-	F-MI40SDB	F-MI40TC	F-M12X125I	F-M12X125Y	F-M12X125F	F-M12X125U		

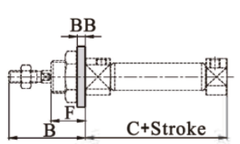
Accessory selection

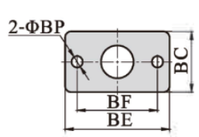
Cylinder model	Accessories	Mounting accessories				Knuckle				Sensor switch	
		LB	FA	SDB	TC	I	Y	U	F	CS1-G	DS1-G
MI MIC	Standard	●	●	●	●	●	●	●	●	×	×
	With magnet	●	●	●	●	●	●	●	●	●	●
MSI MTI	Standard	●	●	●	●	●	●	●	●	×	×
	With magnet	●	●	●	●	●	●	●	●	●	●
MID MICD	Standard	●	●	×	●	●	●	●	●	×	×
	With magnet	●	●	×	●	●	●	●	●	●	●
MIJ MICJ	Standard	●	●	×	●	●	●	●	●	×	×
	With magnet	●	●	×	●	●	●	●	●	●	●

Dimensions

FA type

Φ8~Φ25



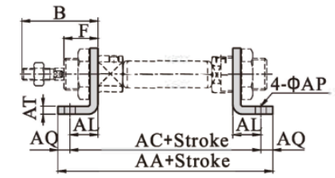


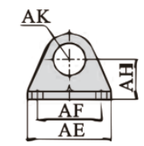
Bore size\Item	B	C	BB	BC	BE	BF	BP	F
8	28	46	2	22	40	30	4.5	12
10	28	46	2	22	40	30	4.5	12
12	38	50	3	26	52	40	5.5	17
16	38	56	3	26	52	40	5.5	17
20	44	62	3.5	38	64	50	7	20
25	50	65	3.5	38	64	50	7	22

Stainless steel ISO6432 Cylinder BITEBI®
MI-BXG Series

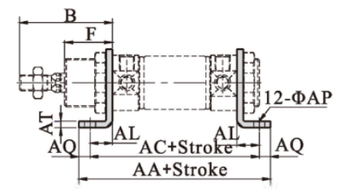
LB type

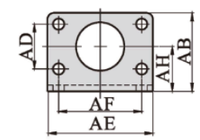
Φ8~Φ25





Φ32~Φ40

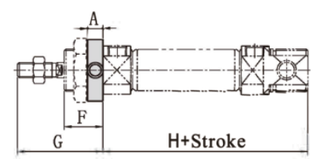


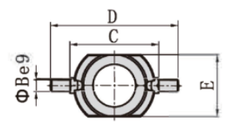


Bore size\Item	AA	AB	AC	AD	AE	AF	AH	AK	AL	AP	AQ	AT	B	F
8	78	-	68	-	35	25	16	10	11	4.5	5	2	28	12
10	78	-	68	-	35	25	16	10	11	4.5	5	2	28	12
12	90	-	78	-	42	32	20	13	14	5.5	6	2.5	38	17
16	96	-	84	-	42	32	20	13	14	5.5	6	2.5	38	17
20	112	-	96	-	54	40	25	20	17	7	8	3	44	20
25	115	-	99	-	54	40	25	20	17	7	8	3	50	22
32	110	49	96	28	66	52	28	-	14	7	7	3.5	58	30
40	149	58	129	30	80	60	33	-	20	9	10	3.5	69	35

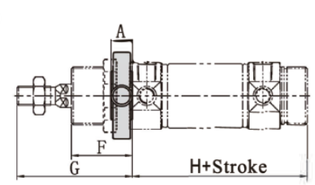
TC type

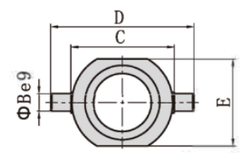
Φ8~Φ25





Φ32~Φ40



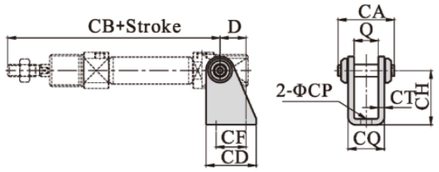


Bore size\Item	A	B	C	D	E	F	G	H
8	6	4	26	38	20	12	28	58
10	6	4	26	38	20	12	28	58
12	8	6	38	58	25	17	38	67
16	8	6	38	58	25	17	38	73
20	8	6	46	66	32	20	44	82
25	8	6	46	66	32	22	50	87
32	11	9	54	74	45	31.5	59.5	80.5
40	12	10	64	84	55	36.5	70.5	103.5

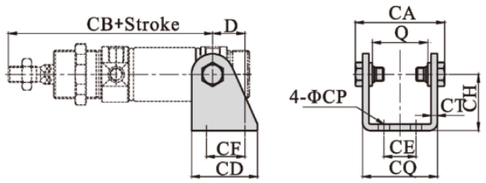
MI-BXG Series

SDB type

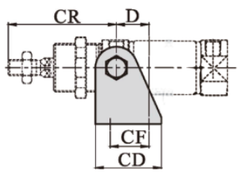
Φ8~Φ25



Φ32~Φ40



Φ32~Φ40



Bore size\Item	D	Q	CA	CB	CD	CE	CF	CH	CP	CQ	CT	CR
8	11	8.1	16.4	76	20	-	12.5	24	4.5	12.1	2	-
10	11	8.1	16.4	76	20	-	12.5	24	4.5	12.1	2	-
12	13	12.1	26	91	25	-	15	27	5.5	16.1	2	-
16	13	12.1	26	98	25	-	15	27	5.5	16.1	2	-
20	16	16.1	35	115	32	-	20	30	7	21.1	2.5	-
25	16	16.1	35	126	32	-	20	30	7	21.1	2.5	-
32	20	34.6	53.6	117	41	20	24	35	7	44.6	3	67
40	27	42.6	65.6	146	52	28	30	40	9	54.6	3	81

[Note] SDB is attached with relevant PIN.

Material: SUS304 / SUS316

Outside Diameter: ϕ11~213mm

Inside Diameter: ϕ10~200mm

ID Tolerance: ISOH9/ISOH10

Roundness: 1/2 tolerance

Surface Roughness: Ra≤0.6

Straightness: 1mm/1000mm

Length: ≤3000mm

Table of dimensions-ID Tolerance

ID mm	OD mm	Thickness (mm)	kg/m	ID Tolerance μm	
				H9	H10
10	11	0.5	0.13	0/+43	0/+70
12	13	0.5	0.16	0/+43	0/+70
16	17.5	0.75	0.31	0/+43	0/+70
20	21.5	0.75	0.39	0/+52	0/+81
25	26.5	0.75	0.48	0/+52	0/+81
30	31.5	0.75	0.58	0/+52	0/+81
32	33.5	0.75	0.61	0/+62	0/+100
40	41.5	0.8	0.76	0/+62	0/+100
32	40.0	4.0	3.16	0/+62	0/+100
40	45.0	2.5	2.65	0/+62	0/+100
50	55	2.5	3.27	0/+62	0/+100
63	70	3.5	4.93	0/+74	0/+120
80	86	3.0	6.20	0/+74	0/+120
100	106	3.0	10.40	0/+87	0/+140
125	133	4.0	12.86	0/+100	0/+160
160	168	5.0	16.20	0/+100	0/+160
200	213	6.5	49.10	0/+115	0/+185

Dimension: ϕ 6~250mm

Tolerance:ISOf7/On request

Roundness:≤1/2 Diameter tolerance

Standard length: < ϕ 30mm, 2~3 mts/On request cut length

≥ ϕ 30mm, 3~6mts/On request cut length

Surface Roughness: Ra≤0.2

Chrome layer thickness: ϕ < 20mm:min.15 μm

ϕ ≥20mm:min.20 μm

Chrome layer Hardness: HV850~HV1050

straightness：0.15/1000mm

Evaluation Corroseston Test: ISO 10289:1999,IDT

Delivery condition: NORMAL,QT, INDUCTION HARDENED

Steel grades correspondents

GB	EN	DIN	B.S.	UNI	JIS	GOST	"AISISAEASTM"
42CrMo	42CrMo4	42CrMo4	708M40	42CrMo4	SCM440(H)	40ChFA	4140
45#	C45E	CK45	080M46	C45	S45C	45	1045
0Cr18Ni9	X5CrNi18-10	X5CrNi18-10	304S17	X5CrNi18-10	SUS304	08Ch18N10	304
2Cr13	X20Cr13	X20Cr13	420S37	X20Cr13	SUS420F	20Ch13	420
1Cr17Ni2	X17CrNi16-2	X17CrNi16-2	431S29	X16CrNi16	SUS431	20Ch17N2	431
1Cr17	X6Cr17	X6Cr17	430S15	X8Cr17	SUS430	-	430

Chemmical composition-in % by weight

Steel grade	C	SI	Mn	P	S	Cr	Mo	Ni
42CrMo	0.38~0.45	0.17~0.37	0.5~0.8	≤0.035	≤0.035	0.9~1.2	0.15~0.25	≤0.03
45#	0.42~0.5	0.17~0.37	0.5~0.8	≤0.035	≤0.035	≤0.25	≤0.1	≤0.25
304/316	≤0.07	≤1	≤2	≤0.045	≤0.03	18-20	—	8-10.5
420	0.16-0.25	≤1	≤1.5	≤0.04	≤0.03	12-14	—	—
431	0.12-0.22	≤1	≤1.5	≤0.04	≤0.03	15-17	—	1.5-2.5
430	≤0.12	≤0.75	≤1	≤0.04	≤0.03	16-18	—	≤0.6

Mechanical properties

Steel grade	Tensile N/mm²	Yield N/mm²	Elogation
42CrMo+QT	≥1080	≥930	min.12%
45#+QT	≥600	≥390	min.16%
45#	≥600	≥355	min.16%
304/316	≥520	≥205	min.40%
420	≥635	≥440	min.20%
431	≥800	≥600	min.10%
430	≥450	≥205	min.22%

Tolerance

Diameter mm	ISO f7 μ m	ISO f8 μ m
ϕ =6	-10/-22	-10/-28
6 < ϕ ≤10	-13/-28	-13/-35
10 < ϕ ≤18	-16/-34	-16/-43
18 < ϕ ≤30	-20/-41	-20/-53
30 < ϕ ≤50	-25/-50	-25/-64
50 < ϕ ≤80	-30/-60	-30/-76
80 < ϕ ≤120	-36/-71	-36/-90
120 < ϕ ≤180	-43/-83	-43/-106
180 < ϕ ≤250	-50/-96	-50/-122

TECHNICAL INDICES OF PISTON ROD(CHROME PLATED BARS)

Chrome Plated Thickness	ϕ <20mm≥15μm, from ϕ >20mm>20μm
Surface Roughness	Ra<0.2
Hardness Chrome Layer	HV850~HV1050
Diameter Tolerance	f7,f8
Straightness	0.1/1000mm
Ovality	<1/2 外径公差diameter tolerance
Evaluation Corroseston Test	ISO 10289:1999,IDT
Condition of delivery:	Normal,Induction Harden,Q+T Solid Solution, Aging
Condition of delivery length:	≤ϕ32, 2~3mts > ϕ35,5~6mts Also we can cut as required or according to drawings

TOLERANCE OF PISTON ROD

Dia	Weight	Tolerance		Dia	Weight	Tolerance	
mm	kg/m	f7(μm)	f8(μm)	mm	kg/m	f7(μm)	f8(μm)
6	0.22	-10~-22	-10~-28	75	34.71	-30~-60	-30~-76
8	0.39	-13~-28	-13~-35	80	39.49	-30~-60	-30~-76
10	0.62	-13~-28	-13~-35	85	44.58	-36~-71	-36~-90
12	0.89	-16~-34	-16~-43	90	49.98	-36~-71	-36~-90
16	1.58	-16~-34	-16~-43	95	55.68	-36~-71	-36~-90
18	2.00	-16~-34	-16~-43	100	61.70	-36~-71	-36~-90
20	2.47	-20~-41	-20~-53	105	68.02	-36~-71	-36~-90
22	2.99	-20~-41	-20~-53	110	74.66	-36~-71	-36~-90
25	3.86	-20~-41	-20~-53	115	81.60	-36~-71	-36~-90
28	4.84	-20~-41	-20~-53	120	88.85	-36~-71	-36~-90
30	5.55	-20~-41	-20~-53	125	96.41	-43~-83	-43~-106
32	6.32	-25~-50	-25~-64	130	104.27	-43~-83	-43~-106
35	7.56	-25~-50	-25~-64	135	112.45	-43~-83	-43~-106
36	8.00	-25~-50	-25~-64	140	120.93	-43~-83	-43~-106
38	8.91	-25~-50	-25~-64	150	138.83	-43~-83	-43~-106
40	9.87	-25~-50	-25~-64	160	157.95	-43~-83	-43~-106
45	12.49	-25~-50	-25~-64	170	178.31	-43~-83	-43~-106
48	14.22	-25~-50	-25~-64	180	199.91	-43~-83	-43~-106
50	15.43	-25~-50	-25~-64	190	222.74	-50~-96	-50~-122
55	18.66	-30~-60	-30~-76	200	246.80	-50~-96	-50~-122
56	19.35	-30~-60	-30~-76	210	272.10	-50~-96	-50~-122
60	22.21	-30~-60	-30~-76	220	298.63	-50~-96	-50~-122
63	24.49	-30~-60	-30~-76	230	326.39	-50~-96	-50~-122
65	26.07	-30~-60	-30~-76	240	355.39	-50~-96	-50~-122
70	30.23	-30~-60	-30~-76	250	385.63	-50~-96	-50~-122

Material: 42CrMo/SUS304/SUS316/SUS430

Specification: ϕ5.28~ϕ28.92 , or custom made

Surface Roughness: Ra<3.2

Tolerance: h9

Straightness: 0.3/1000mm

Roundness: <1/2 diameter tolerance

Delivery Length: 3000mm

Dia (mm)	Tolerance(μm) (h9)	Weight(kg/m)		
		42CrMo	SUS304/SUS316	SUS430
ϕ5.28	0/-30	0.17	0.17	0.17
ϕ7.11	0/-36	0.31	0.31	0.31
ϕ7.28	0/-36	0.33	0.33	0.32
ϕ9.11	0/-36	0.51	0.52	0.51
ϕ10.94	0/-43	0.74	0.75	0.73
ϕ11.11	0/-43	0.76	0.77	0.75
ϕ12.94	0/-43	1.03	1.04	1.02
ϕ14.94	0/-43	1.38	1.39	1.36
ϕ16.92	0/-43	1.77	1.78	1.74
ϕ18.91	0/-52	2.21	2.23	2.18
ϕ20.91	0/-52	2.70	2.72	2.66
ϕ22.91	0/-52	3.24	3.27	3.20
ϕ25.92	0/-52	4.15	4.19	4.09
ϕ28.92	0/-52	5.16	5.21	5.09

STAINLESS STEEL CYLINDER

ISO15552 standard CastedStainless steel Cylinder

ELECTRIC LINEAR ACTUATOR

electric linear actuator 32-160mm

New Product Introduction BITEBI®

PNEUMATIC CYLINDER