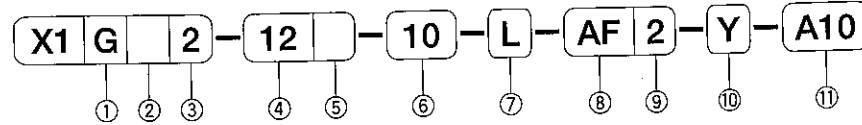


COMPACT AIR CYLINDER/STANDARD TYPE

X1 series

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100, φ 125, φ 140, φ 160

ORDERING INSTRUCTIONS



① Magnet

C	No magnet	
G	Built-in magnet	Cylinder with switch available

(Note) Single-acting (Spring extend) : C type alone
φ 125 to φ 160 : G type alone

② Piston rod end spec.

No symbol	Female threaded (Standard)
M	Male threaded

③ Action

2	Double-acting, single rod
1	Single-acting (Spring return)
0	Single-acting (Spring extend)

④ Bore (mm)

12	φ 12	40	φ 40	125	φ 125
16	φ 16	50	φ 50	140	φ 140
20	φ 20	63	φ 63	160	φ 160
25	φ 25	80	φ 80		
32	φ 32	100	φ 100		

(Note) Single-acting is φ 12 to φ 50 alone

⑤ Cushion

No symbol	Damper cushion (Standard)
N	Not provided

(Note) φ 12 and φ 16 : N (Not provided) alone

⑥ Stroke (mm)

Refer to Standard Strokes (Page 12).

⑦ Mounting

N	Basic type
E	Basic type (With double-sided tap)
M	Side lug
L	Axial foot
A	Rod side flange
B	Head side flange
C	Eye
W	Clevis (With pin)

(Note) φ 12 to φ 25 and φ 125 to φ 160 is N (Basic type) alone

⑧ Type of switch

No symbol	No switch		
KA	ZE101A	DC5~28V	
KB	ZE101B	AC85~115V	
KC	ZE102A	DC10~28V	
KD	ZE102B	AC85~115V	
KE	ZE201A	DC5~28V	
KF	ZE201B	AC85~115V	
KG	ZE202A	DC10~28V	
KH	ZE202B	AC5~115V	
AF	AX101	Reed switch	
AG	AX105		DC5~30V
AH	AX111		AC5~120V
AJ	AX115		
AE	AX125		DC5~50V AC5~120V
AK	AX11A		AC5~120V
AL	AX11B		DC5~30V
AP	AZ101		
AR	AZ105		DC5~30V
AS	AZ111		AC5~120V
AT	AZ115		
AN	AZ125		
AU	AZ11A	AC5~120V	
AW	AZ11B	DC5~30V	

No symbol	No switch		
KJ	ZE135A	DC10~28V	
KK	ZE135B		
KL	ZE155A	DC4.5~28V	
KM	ZE155B		
KN	ZE235A	DC10~28V	
KP	ZE235B		
KR	ZE255A	DC4.5~28V	
KS	ZE255B		
BE	AX201	Solid-state switch	
BF	AX205		
BH	AX221		
BJ	AX225		
OE	AX211		DC5~30V
CF	AX215		
BM	AZ201		
BN	AZ205		
CM	AZ211		
CN	AZ215		

(Note) φ 12 to φ 100 : Symbol KA to KS (ZE type switch) alone

⑨ Number of switch

No symbol	No switch
2	With 2 units
1	With 1 unit

⑩ Bracket at rod end

No symbol	No bracket
Y	With rod end clevis
I	With rod end eye

(Note) When a rod end bracket is specified, the rod end is male-threaded.

⑪ Special shape of rod end

No symbol	Standard
-----------	----------

(Note) Refer to Pages 37 and 38.

Model No. of Mounting Bracket

Bore (mm)	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Side lug mount bracket	X132-M	X140-M	X150-M	X163-M	X180-M	X1100-M
Axial foot mount bracket	X132-L	X140-L	X150-L	X163-L	X180-L	X1100-L
Flange mount bracket	X132-A	X140-A	X150-A	X163-A	X180-A	X1100-A
Eye mount bracket	X132-C	X140-C	X150-C	X163-C	X180-C	X1100-C
Clevis mount bracket	X132-W	X140-W	X150-W	X163-W	X180-W	X1100-W

Model No. of Packing Kit

Bore (mm)	Packing kit
φ 12	X112-PS
φ 16	X116-PS
φ 20	X120-PS
φ 25	X125-PS
φ 32	X132-PS
φ 40	X140-PS
φ 50	X150-PS
φ 63	X163-PS
φ 80	X180-PS
φ 100	X1100-PS
φ 125	X1125-PS
φ 140	X1140-PS
φ 160	X1160-PS

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

SPECIFICATIONS

Action	Unit	Double-acting	Single-acting
Fluid		Non-lubricated air	
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 160 : 0.05~1	φ 12, φ 16 : 0.2~1 φ 20, φ 25 : 0.18~1 φ 32~φ 50 : 0.12~1
Proof pressure	MPa	1.5	
Temperature range	°C	With switch : 0~60 (No dew condensation shall occur.) Without switch : -10~70 (No dew condensation shall occur.)	
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 160 : 30~300	φ 12~φ 40 : 100~500 φ 50 : 100~300
Cushion		φ 12, φ 16 : Not provided φ 20~φ 160 : Damper cushion	φ 12, φ 16 : Not provided φ 20~φ 50 : Damper cushion
Piston stroke allowance	mm	φ 20~φ 100 : ^{+1.0} / ₀ φ 125~φ 160 : ^{+1.4} / ₀	
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange, Head side flange, Eye, Clevis	

(Note) •Single-acting, spring return type cylinder incorporates a damper on the head side alone.
•Single-acting, spring extend type cylinder incorporates a damper (For bore φ 20 to φ 32).
•Bracket can be fitted to each cylinder of bore φ 32 to φ 100.
•No bracket can be mounted on basic type cylinder, as it is not tapped.
•When ordering only a cylinder equipped with a bracket, choose one with double-side tap.

STANDARD STROKE

Action	Bore (mm)	Standard stroke (mm)																											
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100	125	150	175	200	250	300				
Double-acting	φ 12	○	○	○	○	○	○																						
	φ 16	○	○	○	○	○	○																						
	φ 20	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 25	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 32	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 40	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 50	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 63	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 80	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 100	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○								
	φ 125	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
φ 140	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
φ 160	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Single-acting, spring return	φ 12	○	○	○	○																								
	φ 16	○	○	○	○																								
	φ 20	○	○	○	○	○	○																						
	φ 25	○	○	○	○	○	○	○	○																				
	φ 32	○	○	○	○	○	○	○	○	○																			
	φ 40	○	○	○	○	○	○	○	○	○	○																		
Single-acting, spring extend	φ 50	○	○	○	○	○	○	○	○	○	○	○																	
	φ 12	○	○																										
	φ 16	○	○																										
	φ 20	○	○																										
	φ 25	○	○																										
	φ 32	○	○																										

(Note) •Intermediate stroke (Custom-made)
Intermediate stroke is basically prepared by cutting the tube.
However, intermediate stroke for standard type (less than 5 mm strokes for bore φ 20 to φ 40 and less than 10 mm strokes for bore φ 50 to φ 160) is prepared by collaring.
Intermediate stroke for cylinder with switch is prepared by cutting the tube.
•When preparing intermediate stroke by cutting the tube, the additional stroke remains as intermediate stroke.
•When preparing intermediate stroke by collaring, the longer stroke becomes the standard stroke.
•Avoid using the cylinder in such a manner that it receives unbalanced load. Especially when using an oscillating type bracket, be sure to consult KURODA beforehand.

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CYLINDER FORCE (THEORETICAL OUTPUT)

(Unit : N)

Bore (mm)	Rod outside dia. (mm)	Direction of rod	Operating pressure (MPa)									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
φ 12	φ 6	Out stroke	11.3	22.6	33.9	45.2	56.5	67.9	79.2	90.5	102	113
		In stroke	8.5	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
φ 16	φ 8	Out stroke	20.1	40.2	60.3	80.4	101	121	141	161	181	201
		In stroke	15.1	30.2	45.2	60.3	75.4	90.5	106	121	136	151
φ 20	φ 10	Out stroke	31.4	62.8	94.2	126	157	188	220	251	283	314
		In stroke	23.6	47.1	70.7	94.2	118	141	165	188	212	236
φ 25	φ 12	Out stroke	49.1	98.2	147	196	245	295	344	393	442	491
		In stroke	37.8	75.6	113	151	189	227	264	302	340	378
φ 32	φ 16	Out stroke	80.4	161	241	322	402	483	563	643	724	804
		In stroke	60.3	121	181	241	302	362	422	483	543	603
φ 40	φ 16	Out stroke	126	251	377	503	628	754	880	1005	1131	1257
		In stroke	106	211	317	422	528	633	739	844	950	1055
φ 50	φ 20	Out stroke	196	393	589	785	982	1178	1374	1571	1767	1963
		In stroke	165	330	495	660	825	990	1155	1319	1484	1649
φ 63	φ 20	Out stroke	312	623	935	1247	1559	1870	2182	2494	2806	3117
		In stroke	280	561	841	1121	1402	1682	1962	2242	2523	2803
φ 80	φ 25	Out stroke	503	1005	1508	2011	2513	3016	3519	4021	4524	5027
		In stroke	454	907	1361	1814	2268	2721	3175	3629	4082	4536
φ 100	φ 30	Out stroke	785	1571	2356	3142	3927	4712	5498	6283	7069	7854
		In stroke	715	1429	2144	2859	3574	4288	5003	5718	6432	7147
φ 125	φ 32	Out stroke	1227	2454	3682	4909	6136	7363	8590	9817	11045	12272
		In stroke	1147	2294	3440	4587	5734	6881	8027	9174	10321	11468
φ 140	φ 35	Out stroke	1539	3079	4618	6158	7697	9236	10776	12315	13854	15394
		In stroke	1443	2886	4330	5773	7216	8659	10102	11545	12989	14432
φ 160	φ 40	Out stroke	2011	4021	6032	8042	10053	12064	14074	16085	18096	20106
		In stroke	1885	3770	5655	7540	9425	11310	13195	15080	16965	18850

(Note) Output force of double-acting cylinder (Effective output)=Cylinder force (Theoretical output)×0.85
Output force of single-acting cylinder (Effective output)=Cylinder force (Theoretical output)×0.85—Spring tensile strength

SPRING TENSILE STRENGTH

(Unit : N)

Bore (mm)	Load	Stroke (mm)													
		Single-acting, spring return										Single-acting, spring extend			
		5	10	15	20	25	30	35	40	45	50	5	10	20	
φ 12	At stroke 0	8.1	6.5	10.2	6.4	—	—	—	—	—	—	2.9	2.9	—	
	At max. stroke	9.8		11.4		—	—	—	—	—	—	9.8	9.8	—	
φ 16	At stroke 0	11.1	9	10.3	9.3	—	—	—	—	—	—	6.2	5.2	—	
	At max. stroke	13.1		13.2		—	—	—	—	—	—	13	13.2	—	
φ 20	At stroke 0	18.3	15.6	17.9	16.8	15.7	14.5	—	—	—	—	5.9	6.9	—	
	At max. stroke	21.2		21.4		—	—	—	—	—	—	26.5	27.5	—	
φ 25	At stroke 0	24	19.9	24.9	22.9	20	18.9	—	—	—	—	5.9	6.9	—	
	At max. stroke	28.4		30.7		—	—	—	—	—	—	26.5	27.5	—	
φ 32	At stroke 0	33.7	28.5	34.7	33	31.3	29.3	—	—	—	—	22.6	22.6	—	
	At max. stroke	39.4		39.2		—	—	—	—	—	—	42.2	41.2	—	
φ 40	At stroke 0	44.1	24.7	44.7	45.6	43.5	41.4	39.3	37.2	35.1	33	22.6	22.6	—	
	At max. stroke	47.5		54.5								42.2		41.2	—
φ 50	At stroke 0	—	48	41.9	35.8	50.5	48.5	46.5	44.5	42.5	40.4	—	23.5	23.5	
	At max. stroke	—		60				60.6				—	84.2	84.2	—

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CYLINDER MASS

Double-acting (No magnet)

(Unit : g)

Bore (mm)	Basic mass (Basic type)	Additional mass per stroke of 1 mm	Mounting bracket mass				
			Axial foot	Side lug	Flange	Eye	Clevis
φ 12	22	1.3	—	—	—	—	—
φ 16	30	1.7	—	—	—	—	—
φ 20	58	2.5	—	—	—	—	—
φ 25	78	3.2	—	—	—	—	—
φ 32	100	4.1	96	84	210	145	165
φ 40	176	4.9	110	100	275	205	220
φ 50	276	7.4	160	150	415	275	380
φ 63	437	8.6	260	240	560	375	505
φ 80	875	13.8	520	500	1515	890	1100
φ 100	1554	18.9	590	580	1950	1090	1360
φ 125	5485	24.9	—	—	—	—	—
φ 140	6835	29.1	—	—	—	—	—
φ 160	9327	36.8	—	—	—	—	—

Double-acting (Built-in magnet)

(Unit : g)

Bore (mm)	Basic mass (Basic type)	Additional mass per stroke of 1 mm	Mounting bracket mass				
			Axial foot	Side lug	Flange	Eye	Clevis
φ 12	28.6	1.3	—	—	—	—	—
φ 16	40	1.7	—	—	—	—	—
φ 20	86	2.5	—	—	—	—	—
φ 25	116	3.2	—	—	—	—	—
φ 32	151	4.1	96	84	210	145	165
φ 40	248	4.9	110	100	275	205	220
φ 50	385	7.4	160	150	415	275	380
φ 63	593	8.6	260	240	560	375	505
φ 80	1122	13.8	520	500	1515	890	1100
φ 100	1845	18.9	590	580	1950	1090	1360
φ 125	5485	24.9	—	—	—	—	—
φ 140	6835	29.1	—	—	—	—	—
φ 160	9327	36.8	—	—	—	—	—

Single-acting, spring return (No magnet)

(Unit : g)

Bore (mm)	Basic mass (Basic type)										Mounting bracket mass				
	Stroke (mm)										Axial foot	Side lug	Flange	Eye	Clevis
	5	10	15	20	25	30	35	40	45	50					
φ 12	28.5	35	49	55.5	—	—	—	—	—	—	—	—	—	—	
φ 16	39	47.5	66	74.5	—	—	—	—	—	—	—	—	—	—	
φ 20	73	85	112	125	137	149	—	—	—	—	—	—	—	—	
φ 25	101	117	156	172	186	204	—	—	—	—	—	—	—	—	
φ 32	135	156	214	234	255	275	—	—	—	—	96	84	210	145	165
φ 40	221	245	343	367	391	415	440	464	483	512	110	100	275	205	220
φ 50	—	369	512	549	585	622	658	695	731	768	160	150	415	275	380

Single-acting, spring return (Built-in magnet)

(Unit : g)

Bore (mm)	Basic mass (Basic type)										Mounting bracket mass				
	Stroke (mm)										Axial foot	Side lug	Flange	Eye	Clevis
	5	10	15	20	25	30	35	40	45	50					
φ 12	35.1	41.6	55.6	62.1	—	—	—	—	—	—	—	—	—	—	—
φ 16	49	57.5	76	84.5	—	—	—	—	—	—	—	—	—	—	—
φ 20	101	113	141	153	165	177	—	—	—	—	—	—	—	—	—
φ 25	139	155	194	218	226	242	—	—	—	—	—	—	—	—	—
φ 32	186	207	265	285	306	326	—	—	—	—	96	84	210	145	165
φ 40	293	317	415	439	463	487	512	536	560	584	110	100	275	205	220
φ 50	—	479	621	658	694	731	768	804	841	877	160	150	415	275	380

Single-acting, spring extend (No magnet)

(Unit : g)

Bore (mm)	Basic mass (Basic type)			Mounting bracket mass				
	5	10	20	Axial foot	Side lug	Flange	Eye	Clevis
φ 12	29	35.5	—	—	—	—	—	—
φ 16	39	47.5	—	—	—	—	—	—
φ 20	77	88	—	—	—	—	—	—
φ 25	107	121	—	—	—	—	—	—
φ 32	139	154	—	96	84	210	145	165
φ 40	225	243	—	110	100	275	205	220
φ 50	—	386	443	160	150	415	275	380

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

MODEL WITH SWITCH/For detailed specifications, handling precautions and mounting method of switches, refer to Page 86.

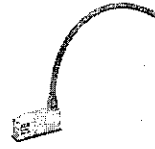
•ZE Type Switch



•AX Type Switch



•AZ Type Switch



LIST OF SWITCHES

Type	Symbol of switch	Load voltage range	Load current range	Protective circuit	Pilot lamp	Connection	Cord length	Applicable load		
Reed switch	KA ZE101A	DC5~28V	DC: 40mA	Not provided	Not provided	0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Axial	1m	Miniature relay PLC		
	KB ZE101B	AC85~115V	AC: 20mA	Not provided	LED (Lights up at ON.)		3m			
	KC ZE102A	DC10~28V	DC: 5~40mA				1m			
	KD ZE102B	AC85~115V	AC: 5~20mA				3m			
	KE ZE201A	DC5~28V	DC: 40mA			0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Perpendicular to axis	Not provided		1m	
	KF ZE201B	AC85~115V	AC: 20mA	3m						
	KG ZE202A	DC10~28V	DC: 5~40mA	1m						
	KH ZE202B	AC85~115V	AC: 5~20mA	3m						
	AF AX101	DC5~30V AC5~120V	DC: 5~40mA AC: 5~20mA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m			
	AG AX105						5m			
	AH AX111						1.5m			
	AJ AX115						5m			
AE AX125	DC5~30V AC5~120V	5~20mA	Provided	LED (Red LED lights up at ON.)	4-pin connector Cord direction : Axial	5m				
AK AX11A	AC5~120V					0.5m				
AL AX11B	DC5~30V	5~40mA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Perpendicular to axis	1.5m				
AP AZ101	DC5~30V AC5~120V	DC: 5~40mA AC: 5~20mA				5m				
AR AZ105						1.5m				
AS AZ111						5m				
AT AZ115			5m							
AN AZ125	AC5~120V	5~20mA	Provided	LED (Red LED lights up at ON.)	4-pin connector Cord direction : Perpendicular to axis	0.5m				
AU AZ11A						0.5m				
AW AZ11B	DC5~50V	5~40mA	Provided	LED (Lights up at ON.)	0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Axial	1m				
KJ ZE135A	DC10~28V	4~20mA				3m				
KK ZE135B						0.15 mm ² 3-core, OD φ 2.6 mm Cord direction : Axial	1m			
KL ZE155A							DC4.5~28V	50mA	3m	
KM ZE155B					0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Perpendicular to axis				1m	
KN ZE235A	DC10~28V	4~20mA							3m	
KP ZE235B						0.15 mm ² 3-core, OD φ 2.6 mm Cord direction : Perpendicular to axis			1m	
KR ZE255A							DC4.5~28V	50mA	3m	
KS ZE255B					0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial				1.5m	
BE AX201	DC5~30V	5~40mA							Provided	LED (Red LED lights up at ON.)
BF AX205						0.3 mm ² 3-core, OD φ 4 mm Cord direction : Axial				
BH AX221							200mA	5m		
BJ AX225			0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m						
CE AX211	5m									
CF AX215		LED (Dual light : Red/green)								
BM AZ201				DC5~30V	5~40mA	Provided	LED (Red LED lights up at ON.)	1.5m		
BN AZ205			0.3 mm ² 2-core, OD φ 4 mm Cord direction : Perpendicular to axis					5m		
CM AZ211	1.5m									
CN AZ215		LED (Dual light : Red/green)						5m		

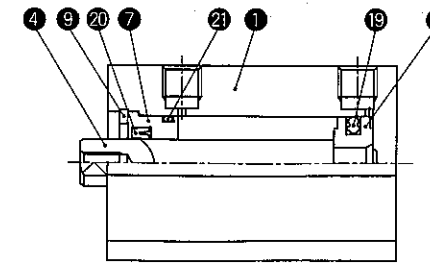
(Note) •When using inductive load (relay etc.) in a switch without a protective circuit, be sure to fit a protective circuit (SK-100) to the load.
•AX, AZ type switch : Mountable cylinder bore φ 125 to φ 160
•Every DC type switch can be used for a cylinder intended for AC200V by using a voltage-converting adaptor.

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CONSTRUCTIONS

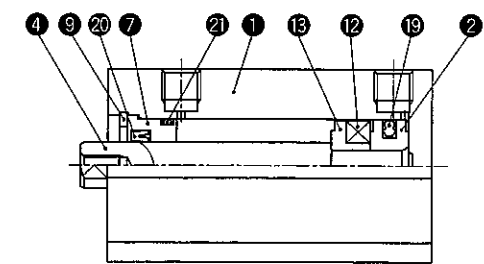
Double-acting (No magnet)/C

•Bore φ 12, φ 16

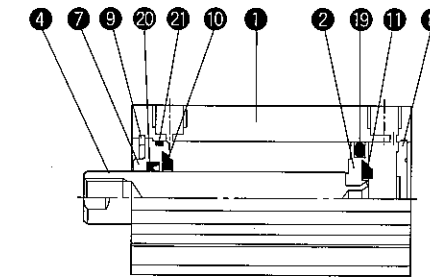


Double-acting (Built-in magnet)/G

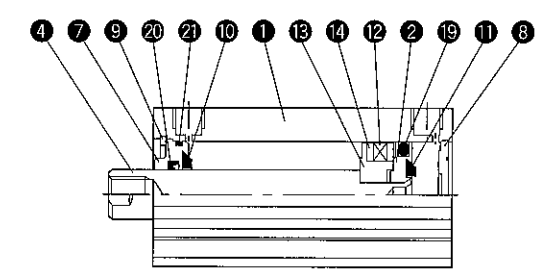
•Bore φ 12, φ 16



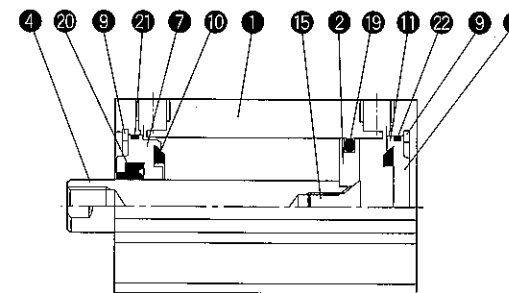
•Bore φ 20, φ 25, φ 32



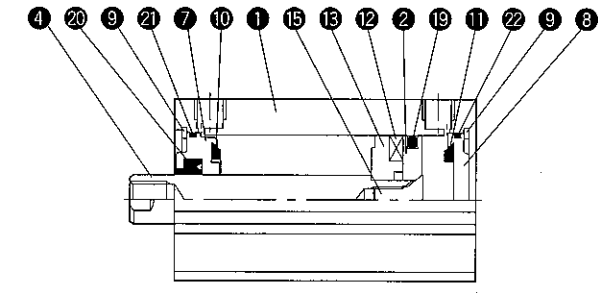
•Bore φ 20, φ 25, φ 32



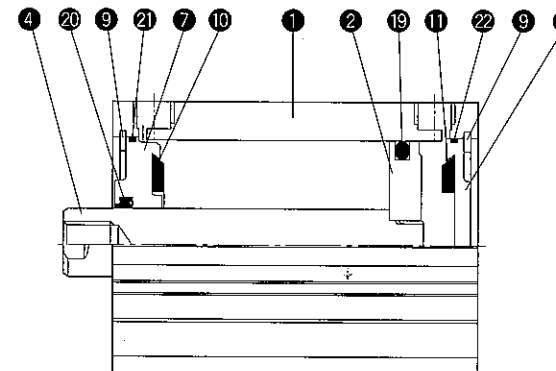
•Bore φ 40, φ 50, φ 63



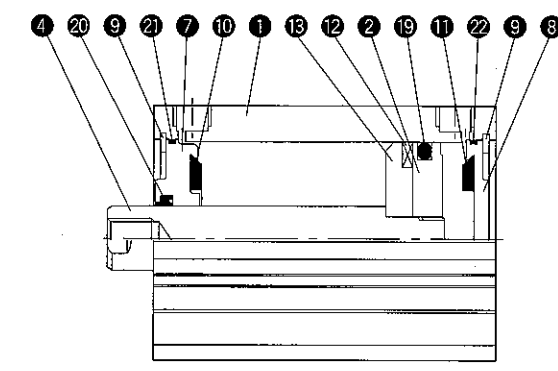
•Bore φ 40, φ 50, φ 63



•Bore φ 80, φ 100



•Bore φ 80, φ 100

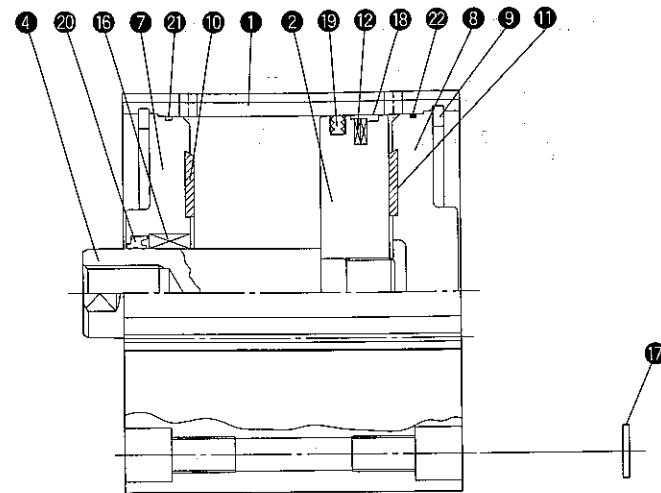


COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CONSTRUCTIONS

Double-acting (Built-in magnet)/G

• Bore ϕ 125, ϕ 140, ϕ 160



(Note) ϕ 125 to ϕ 160 : Built-in magnet type (G type) alone

PARTS LIST

No.	Description	Material
1	Cylinder body	Aluminium alloy
2	Piston	Aluminium alloy (Abrasion-resistant surface)
4	Piston rod	ϕ 12~ ϕ 25 : Stainless steel (Hard chromium plating) ϕ 32~ ϕ 160 : Carbon steel for machine structure (Hard chromium plating)
7	Rod cover	ϕ 12~ ϕ 100 : Aluminium alloy (Abrasion-resistant surface) ϕ 125~ ϕ 160 : Cast iron
8	Head cover	ϕ 12~ ϕ 100 : Aluminium alloy ϕ 125~ ϕ 160 : Cast iron
9	Snap ring	Carbon steel
10	Cushion pad R	Urethane rubber
11	Cushion pad H	Urethane rubber
12	Magnet	—
13	Spacer	Aluminium alloy
14	Yoke	Cold rolled steel
15	Piston set screw	Chromium molybdenum steel
16	Bushing	Aluminium alloy (Abrasion-resistant surface)
17	Flat washer	Cold rolled steel plate
18	Wear ring	Synthetic resins

PACKING LIST

No.	Description	Material	Q'ty	Model No.						
				ϕ 12	ϕ 16	ϕ 20	ϕ 25	ϕ 32	ϕ 40	ϕ 50
19	Piston packing	Nitril rubber	1	PSP-12	PSP-16	PWP-20N	PWP-25N	PWP-32N	PWP-40N	PWP-50N
20	Rod packing	Nitril rubber	1	MYN-6	MYN-18	MYN-10	MYN-12	MYN-16	DRP-16	DRP-20
21	O-ring for rod cover	Nitril rubber	1	S-10	S-14	S-18	S-22	ϕ 29 \times ϕ 1.5	ϕ 39.5 \times ϕ 1.5	ϕ 49.5 \times ϕ 1.5
22	O-ring for head cover	Nitril rubber	1	—	—	—	—	—	ϕ 39.5 \times ϕ 1.5	ϕ 49.5 \times ϕ 1.5

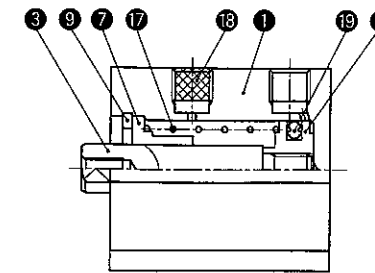
No.	Description	Material	Q'ty	Model No.					
				ϕ 63	ϕ 80	ϕ 100	ϕ 125	ϕ 140	ϕ 160
19	Piston packing	Nitril rubber	1	PWP-63N	PWP-80N	PWP-100N	PWP-125N	PWP-140N	PWP-160N
20	Rod packing	Nitril rubber	1	DRP-20	DRP-25	DRP-30	DRP-35	DRP-35	DRP-40
21	O-ring for rod cover	Nitril rubber	1	ϕ 61.5 \times ϕ 1.5	ϕ 77.3 \times ϕ 1.5	ϕ 98.5 \times ϕ 2	S-120	S-135	S-155
22	O-ring for head cover	Nitril rubber	1	ϕ 61.5 \times ϕ 1.5	ϕ 77.3 \times ϕ 1.5	ϕ 98.5 \times ϕ 2	S-120	S-135	S-155

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CONSTRUCTIONS

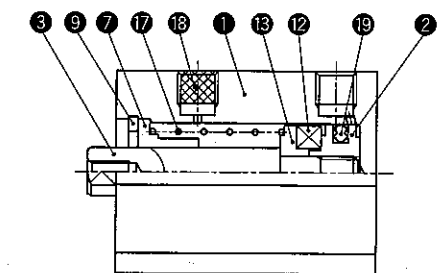
Single-acting, spring return (No magnet)/C

• Bore ϕ 12, ϕ 16

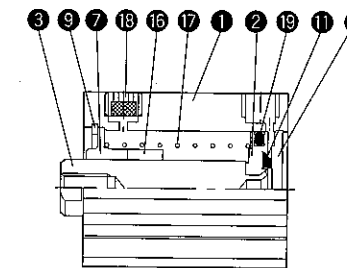


Single-acting, spring return (Built-in magnet)/G

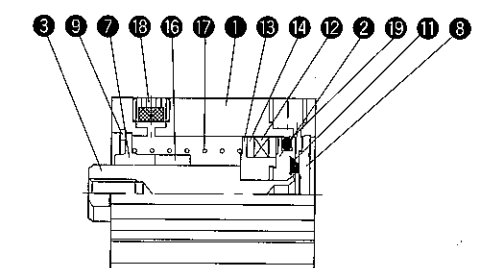
• Bore ϕ 12, ϕ 16



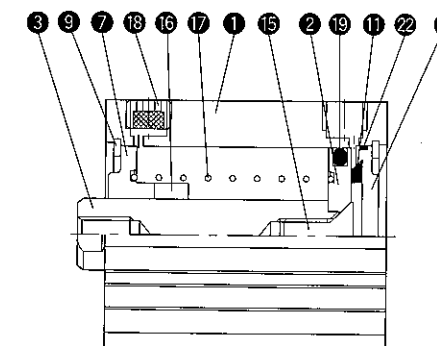
• Bore ϕ 20, ϕ 25, ϕ 32



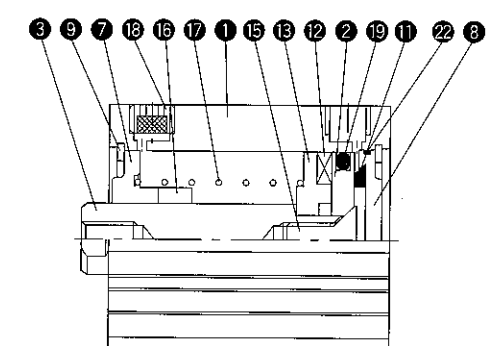
• Bore ϕ 20, ϕ 25, ϕ 32



• Bore ϕ 40, ϕ 50



• Bore ϕ 40, ϕ 50



COMPACT AIR CYLINDER/STANDARD TYPE X1 series

PARTS LIST (Single-acting, spring return)

No.	Description	Material
1	Cylinder body	Aluminium alloy
2	Piston	Aluminium alloy (Abrasion-resistant surface)
3	Piston rod	$\phi 12 \sim \phi 25$: Stainless steel (Hard chromium plating) $\phi 32 \sim \phi 50$: Carbon steel for machine structure (Hard chromium plating)
7	Rod cover	Aluminium alloy (Abrasion-resistant surface)
8	Head cover	Aluminium alloy
9	Snap ring	Carbon steel
11	Cushion pad H	Urethane rubber
12	Magnet	—
13	Spacer	Aluminium alloy
14	Yoke	Cold rolled steel
15	Piston set screw	Chromium molybdenum steel
16	Coller	Aluminium alloy
17	Spring	Piano wire
18	Filter plug	$\phi 20 \sim \phi 40$: Synthetic resins $\phi 50$: Sintered alloy

PACKING LIST (Single-acting, spring return)

No.	Description	Material	Q'ty	Model No.						
				$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$
19	Piston packing	Nitril rubber	1	PSP-12	PSP-16	PWP-20N	PWP-25N	PWP-32N	PWP-40N	PWP-50N
22	O-ring for head cover	Nitril rubber	1	—	—	—	—	—	$\phi 39.5 \times \phi 1.5$	$\phi 49.5 \times \phi 1.5$

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

CONSTRUCTIONS

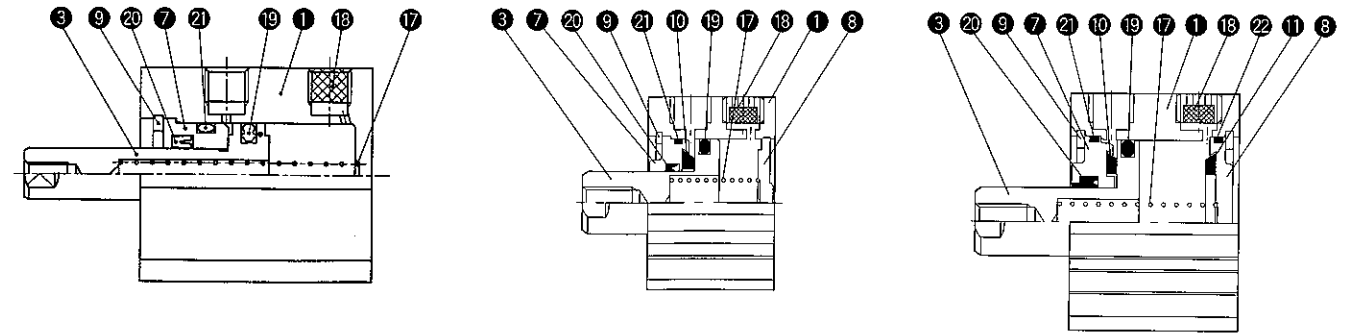
Single-acting, spring extend (No magnet)/C

(Note) Single-acting, rod retract : No magnet (C) alone

• Bore $\phi 12, \phi 16$

• Bore $\phi 20, \phi 25, \phi 32$

• Bore $\phi 40, \phi 50$



PARTS LIST (Single-acting, spring extend)

No.	Description	Material
1	Cylinder body	Aluminium alloy
3	Piston, piston rod	Stainless steel
7	Rod cover	Aluminium alloy (Abrasion-resistant surface)
8	Head cover	Aluminium alloy
9	Snap ring	Carbon steel
10	Cushion pad R	Urethane rubber
11	Cushion pad H	Urethane rubber
17	Spring	Piano wire
18	Filter plug	$\phi 20 \sim \phi 40$: Synthetic resins $\phi 50$: Sintered alloy

PACKING LIST (Single-acting, spring extend)

No.	Description	Material	Q'ty	Model No.						
				$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$
19	Piston packing	Nitril rubber	1	PSP-12	PSP-16	PWP-20N	PWP-25N	PWP-32N	PWP-40N	PWP-50N
20	Rod packing	Nitril rubber	1	MYN-6	MYN-8	MYN-10	MYN-12	MYN-16	DRP-16	DRP-20
21	O-ring for rod cover	Nitril rubber	1	S-10	S-14	S-18	S-22	$\phi 29 \times \phi 1.5$	$\phi 39.5 \times \phi 1.5$	$\phi 49.5 \times \phi 1.5$
22	O-ring for head cover	Nitril rubber	1	—	—	—	—	—	$\phi 39.5 \times \phi 1.5$	$\phi 49.5 \times \phi 1.5$

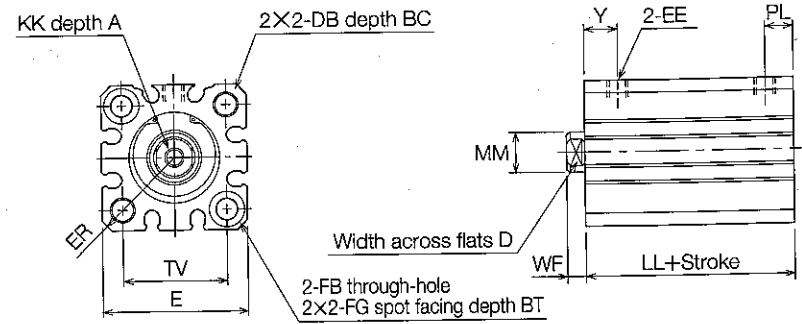
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

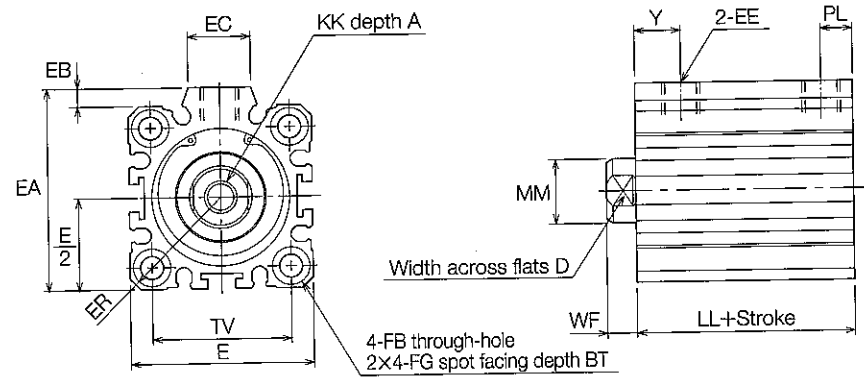
Double-acting Basic type/N

(Unit : mm)

• Bore $\phi 12 \sim \phi 25$



• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE	ER	FB
$\phi 12$	5	8	3.5	5	M4×0.7	□25	—	—	—	M5×0.8	R16	$\phi 3.4$
$\phi 16$	5	8	3.5	6	M4×0.7	□29	—	—	—	M5×0.8	R19	$\phi 3.4$
$\phi 20$	6	10	5.4	8	M6×1	□36	—	—	—	M5×0.8	R23.5	$\phi 5.5$
$\phi 25$	10	10	5.4	10	M6×1	□40	—	—	—	M5×0.8	R26	$\phi 5.5$
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc $\frac{1}{8}$	R30	$\phi 5.5$
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc $\frac{1}{8}$	R34.5	$\phi 5.5$
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc $\frac{1}{4}$	R42.5	$\phi 6.6$
$\phi 63$	15	—	10.5	17	—	□77	84	7	19	Rc $\frac{1}{4}$	R51	$\phi 9$
$\phi 80$	21	—	13.5	22	—	□98	140	6	25	Rc $\frac{3}{8}$	R65	$\phi 11$
$\phi 100$	27	—	13.5	27	—	□117	123.5	6.5	25	Rc $\frac{3}{8}$	R78	$\phi 11$

Bore	FG	KK	LL	MM	PL		TV	WF	Y	
					5st	More than 10st			5st	More than 10st
$\phi 12$	$\phi 6.5$	M2.6×0.45	17	$\phi 6$	5	5	□15.5	3.5	8.5	10
$\phi 16$	$\phi 6.5$	M3×0.5	17	$\phi 8$	5	5	□20	3.5	8.5	10
$\phi 20$	$\phi 9$	M4×0.7	21.5	$\phi 10$	6	7	□25.5	4.5	9	10
$\phi 25$	$\phi 9$	M5×0.8	22.5	$\phi 12$	6	7	□28	5	9	10
$\phi 32$	$\phi 9$	M6×1	23	$\phi 16$	6	8	□34	7	10	11
$\phi 40$	$\phi 9$	M6×1	29.5	$\phi 16$	10	11.5	□40	7	10	11.5
$\phi 50$	$\phi 11$	M8×1.25	30.5	$\phi 20$	—	12	□50	8	—	12
$\phi 63$	$\phi 14$	M10×1.5	36	$\phi 20$	—	14.5	□60	8	—	14.5
$\phi 80$	$\phi 17.5$	M16×2	43.5	$\phi 25$	—	16.5	□77	10	—	16.5
$\phi 100$	$\phi 17.5$	M20×2.5	53	$\phi 30$	—	21	□94	12	—	21

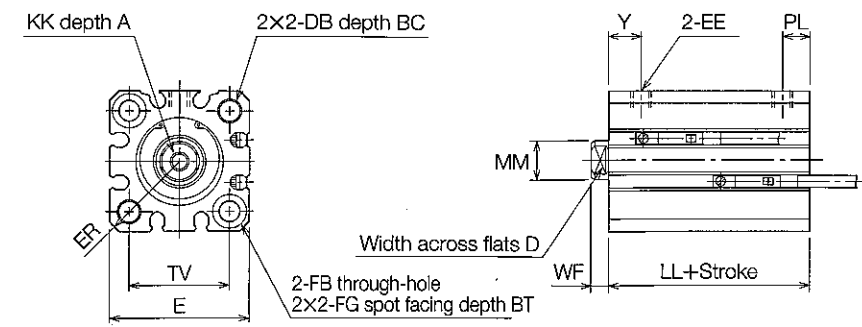
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

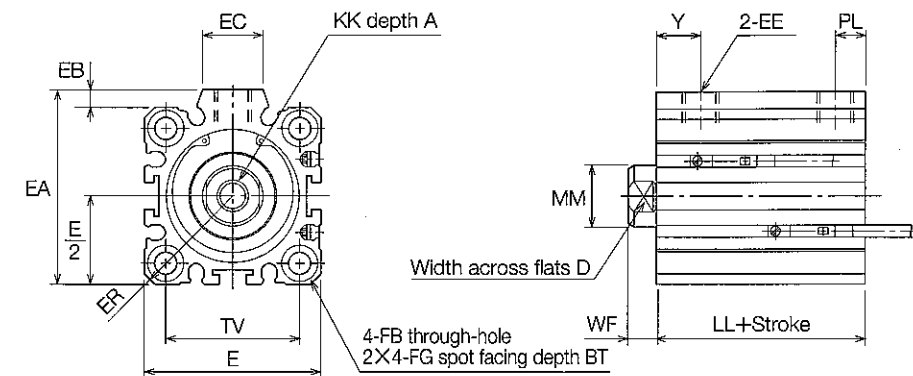
Double-acting with switch Basic type/N

(Unit : mm)

• Bore $\phi 12 \sim \phi 25$



• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE
$\phi 12$	5	8	3.5	5	M4×0.7	□25	—	—	—	M5×0.8
$\phi 16$	5	8	3.5	6	M4×0.7	□29	—	—	—	M5×0.8
$\phi 20$	6	10	5.4	8	M6×1	□36	—	—	—	M5×0.8
$\phi 25$	10	10	5.4	10	M6×1	□40	—	—	—	M5×0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc $\frac{1}{8}$
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc $\frac{1}{8}$
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc $\frac{1}{4}$
$\phi 63$	15	—	10.5	17	—	□77	84	7	19	Rc $\frac{1}{4}$
$\phi 80$	21	—	13.5	22	—	□98	140	6	25	Rc $\frac{3}{8}$
$\phi 100$	27	—	13.5	27	—	□117	123.5	6.5	25	Rc $\frac{3}{8}$

Bore	ER	FB	FG	KK	LL	MM	PL	TV	WF	Y
$\phi 16$	R19	$\phi 3.4$	$\phi 6.5$	M3×0.5	22	$\phi 8$	5	□20	3.5	9.5
$\phi 20$	R23.5	$\phi 5.5$	$\phi 9$	M4×0.7	31.5	$\phi 10$	7	□25.5	4.5	10
$\phi 25$	R26	$\phi 5.5$	$\phi 9$	M5×0.8	32.5	$\phi 12$	7	□28	5	10
$\phi 32$	R30	$\phi 5.5$	$\phi 9$	M6×1	33	$\phi 16$	8	□34	7	11
$\phi 40$	R34.5	$\phi 5.5$	$\phi 9$	M6×1	39.5	$\phi 16$	11.5	□40	7	11.5
$\phi 50$	R42.5	$\phi 6.6$	$\phi 11$	M8×1.25	40.5	$\phi 20$	12	□50	8	12
$\phi 63$	R51	$\phi 9.1$	$\phi 14$	M10×1.5	46	$\phi 20$	14.5	□60	8	14.5
$\phi 80$	R65	$\phi 11$	$\phi 17.5$	M16×2	53.5	$\phi 25$	16.5	□77	10	16.5
$\phi 100$	R78	$\phi 11$	$\phi 17.5$	M20×2.5	63	$\phi 30$	21	□94	12	21

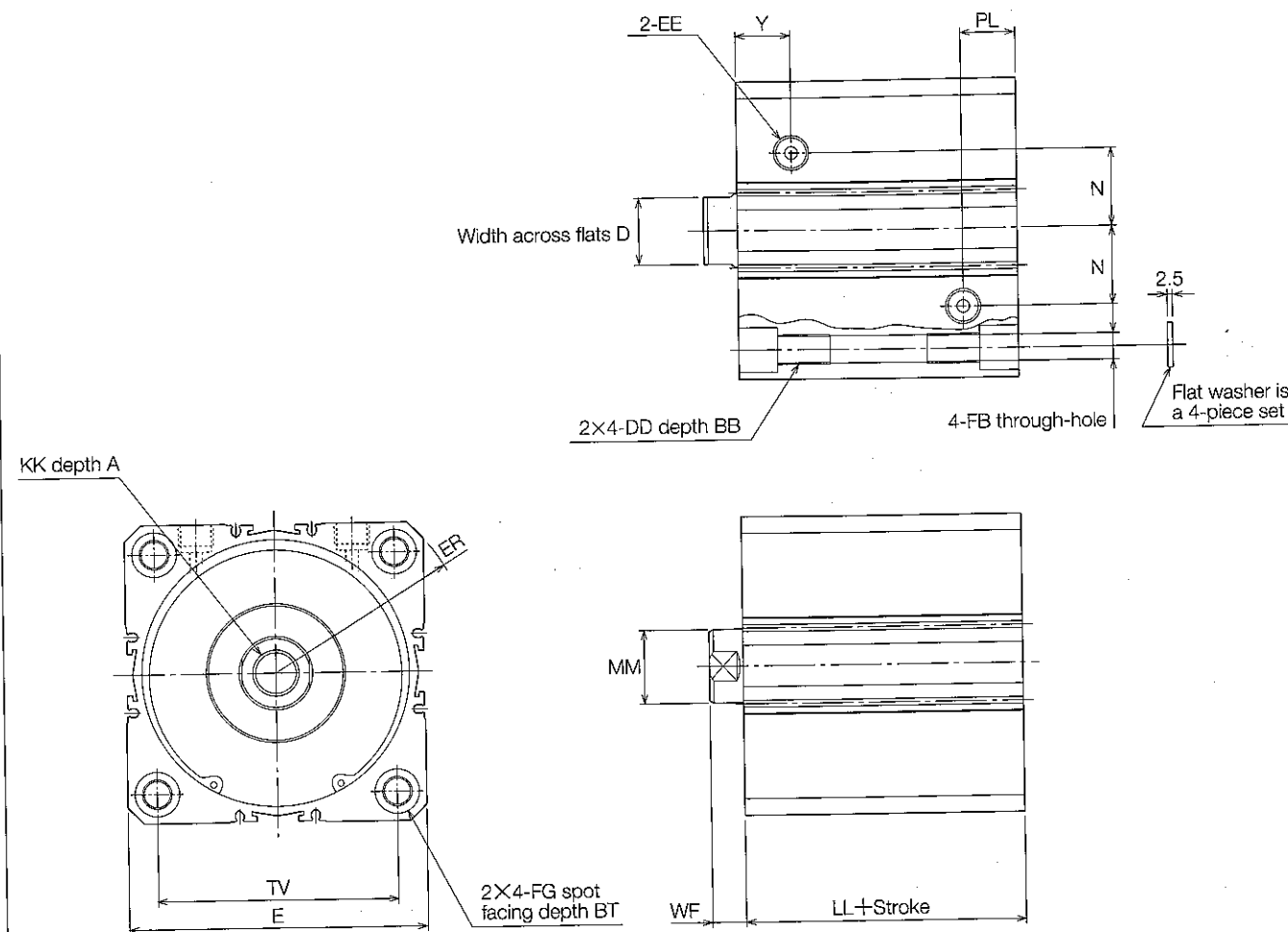
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Basic type/N

(Unit : mm)

• Bore $\phi 125 \sim \phi 160$



(Note) • $\phi 125$ to $\phi 160$: Built-in magnet type (G type) alone

• Size of a cylinder with switch is the same as that of a cylinder without switch (except size of switch).

Bore	A	BB	BT	D	DD	E	EE	ER	FB
$\phi 125$	30	25	18.4	32	M14×2	□142	Rc%	R 95	$\phi 12.5$
$\phi 140$	30	25	18.4	32	M14×2	□158	Rc%	R105	$\phi 12.5$
$\phi 160$	33	28	21.2	36	M16×2	□178	Rc%	R119	$\phi 14.5$

Bore	FG	KK	LL	MM	N	PL	TV	WF	Y
$\phi 125$	$\phi 21.2$	M22×2.5	83	$\phi 35$	37	26	□114	16	26
$\phi 140$	$\phi 21.2$	M22×2.5	83	$\phi 35$	40	26	□128	16	26
$\phi 160$	$\phi 24.2$	M24×3	91	$\phi 40$	45	28.5	□144	17	28.5

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Male threaded rod end type

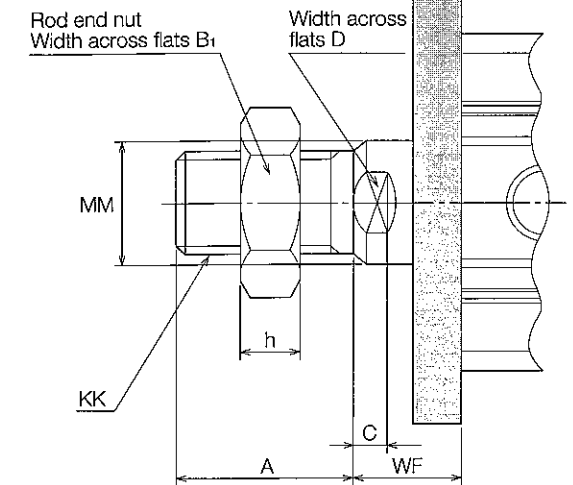
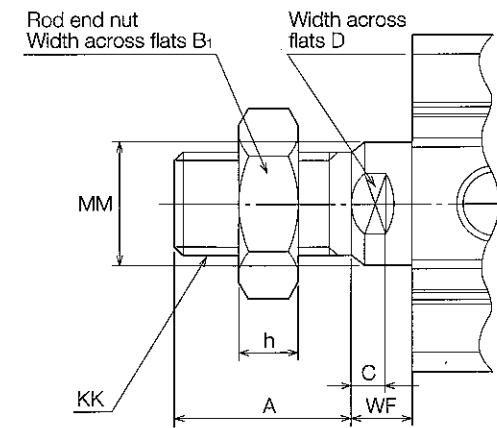
(Unit : mm)

• Type other than A type (Rod side flange)

Bore $\phi 12 \sim \phi 160$

• A type (Rod side flange)

Bore $\phi 32 \sim \phi 100$



(Note) Size WF of A type is longer than that of other types.

Bore	Rod end type of nut parts	A	B1	C	D	h	KK	MM	WF	
									Type other than A type	A type
$\phi 12$	X112-RN	10.5	7	3.5	5	2.4	M4×0.7	6	3.5	—
$\phi 16$		12	7	3	6	2.4	M4×0.7	8	3.5	—
$\phi 20$	X120-RN	14	10	4	8	5	M6×1	10	4.5	—
$\phi 25$	X125-RN	17.5	13	4.5	10	6	M8×1.25	12	5	—
$\phi 32$	X132-RN	23.5	17	4.5	14	8	M10×1.25	16	5	13
$\phi 40$	X140-RN	23.5	22	4.5	14	8	M14×1.5	16	5	15
$\phi 50$	X150-RN	28.5	24	4	17	11	M18×1.5	20	5	15
$\phi 63$		28.5	24	4	17	11	M18×1.5	20	5	15
$\phi 80$	X180-RN	35.5	30	7	22	13	M22×1.5	25	8	24
$\phi 100$	X1100-RN	35.5	41	7	27	16	M26×1.5	30	8	24
$\phi 125$	X1125-RN	45	46	10	32	18	M30×1.5	35	13	—
$\phi 140$		45	46	10	32	18	M30×1.5	35	13	—
$\phi 160$	X1160-RN	50	55	10	36	21	M36×1.5	40	14	—

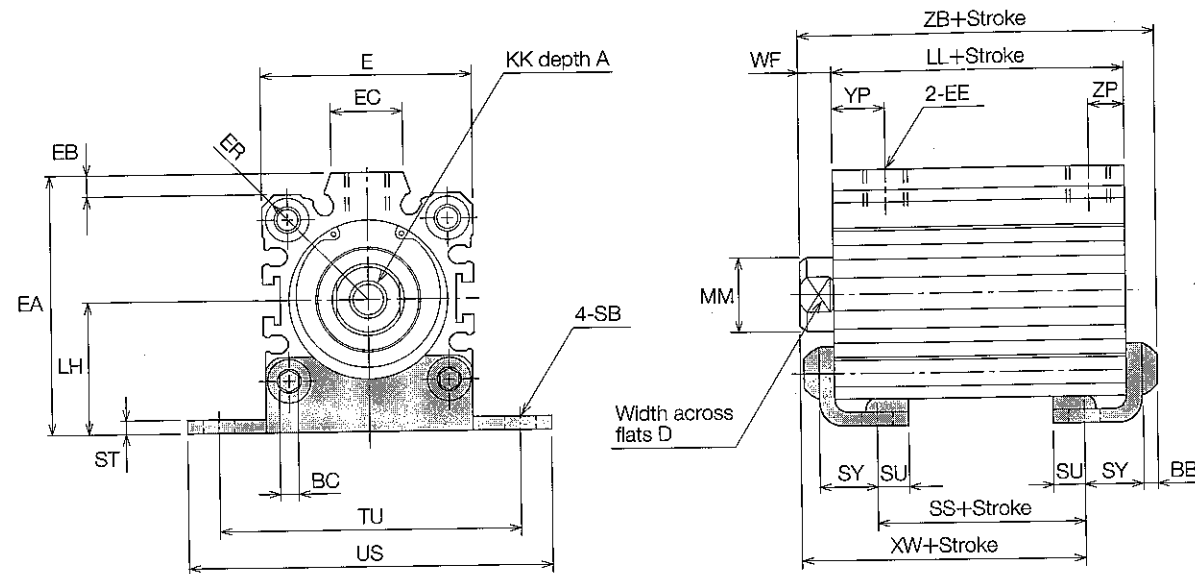
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Side lug mounting/M

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) X1C2-32-5 and X1C2-80-10 cannot be manufactured.
(Bracket will interfere unless stroke for $\phi 32$ is more than 10 mm and stroke for $\phi 80$ is more than 14 mm.)

Bore	A	BB	BC	D	E	EA	EB	EC	EE	ER	KK	LH	LL
$\phi 32$	11	4	4	14	45	55.5	4.5	15	Rc $\frac{1}{2}$	R30	M6×1	28.5	23
$\phi 40$	11	4	4	14	52	63.5	5	17.5	Rc $\frac{1}{2}$	R34.5	M6×1	32.5	29.5
$\phi 50$	13	5	5	17	64	77	7	19	Rc $\frac{1}{4}$	R42.5	M8×1.25	38	30.5
$\phi 63$	15	6	6	17	77	90	7	19	Rc $\frac{1}{4}$	R51	M10×1.5	44.5	36
$\phi 80$	21	7	8	22	98	113.5	6	25	Rc $\frac{3}{8}$	R65	M16×2	58.5	43.5
$\phi 100$	27	7	8	27	117	132	6.5	25	Rc $\frac{1}{2}$	R78	M20×2.5	67	53

Bore	MM	SB	SS	ST	SU	SY	TU	US	WF	XW	YP		ZB	ZP	
											5st	More than 10st		5st	More than 10st
$\phi 32$	$\phi 16$	$\phi 6.6$	4.4	3.2	6.5	12.5	65	78	7	20.7	—	11	37.2	—	8
$\phi 40$	$\phi 16$	$\phi 6.6$	10.9	3.2	6.5	12.5	73	87	7	27.2	10	11.5	43.7	10	11.5
$\phi 50$	$\phi 20$	$\phi 9$	8.9	3.2	8	14	87	103	8	27.7	—	12	46.7	—	12
$\phi 63$	$\phi 20$	$\phi 11$	11.4	3.2	9.5	15.5	109	127	8	31.7	—	14.5	53.2	—	14.5
$\phi 80$	$\phi 25$	$\phi 14$	10.5	4.5	11	21	123	145	10	37	—	16.5	65	—	16.5
$\phi 100$	$\phi 30$	$\phi 14$	20	4.5	11	21	137	159	12	48.5	—	21	76.5	—	21

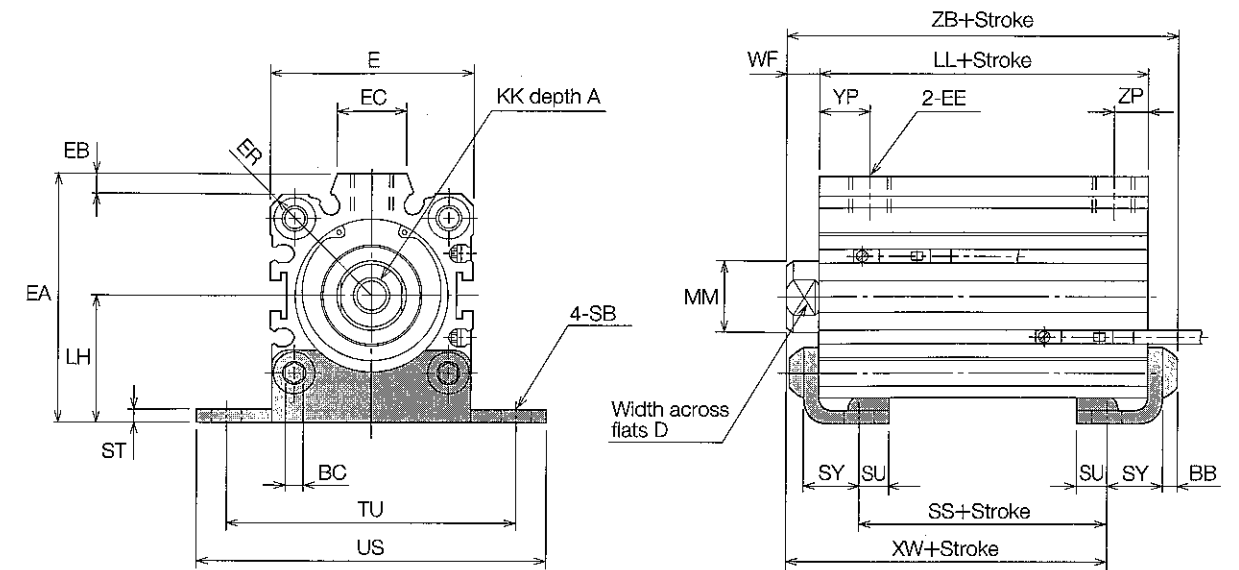
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting with switch Side lug mounting/M

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) X1G2-32-5 and X1G2-80-10 cannot be manufactured.
(Bracket will interfere unless stroke for $\phi 32$ is more than 10 mm and stroke for $\phi 80$ is more than 14 mm.)

Bore	A	BB	BC	D	E	EA	EB	EC	EE	ER	KK	LH
$\phi 32$	11	4	4	14	45	55.5	4.5	15	Rc $\frac{1}{2}$	R30	M6×1	28.5
$\phi 40$	11	4	4	14	52	63.5	5	17.5	Rc $\frac{1}{2}$	R34.5	M6×1	32.5
$\phi 50$	13	5	5	17	64	77	7	19	Rc $\frac{1}{4}$	R42.5	M8×1.25	38
$\phi 63$	15	6	6	17	77	90	7	19	Rc $\frac{1}{4}$	R51	M10×1.5	44.5
$\phi 80$	21	7	8	22	98	113.5	6	25	Rc $\frac{3}{8}$	R65	M16×2	58.5
$\phi 100$	27	7	8	27	117	132	6.5	25	Rc $\frac{1}{2}$	R78	M20×2.5	67

Bore	LL	MM	SB	SS	ST	SU	SY	TU	US	WF	XW	YP	ZB	ZP
$\phi 40$	39.5	$\phi 16$	$\phi 6.6$	20.9	3.2	6.5	12.5	73	87	7	37.2	11.5	53.7	11.5
$\phi 50$	40.5	$\phi 20$	$\phi 9$	18.9	3.2	8	14	87	103	8	37.7	12	56.7	12
$\phi 63$	46	$\phi 20$	$\phi 11$	21.4	3.2	9.5	15.5	109	127	8	41.7	14.5	63.2	14.5
$\phi 80$	53.5	$\phi 25$	$\phi 14$	20.5	4.5	11	21	123	145	10	47	16.5	75	16.5
$\phi 100$	63	$\phi 30$	$\phi 14$	30	4.5	11	21	137	159	12	58.5	21	86.5	21

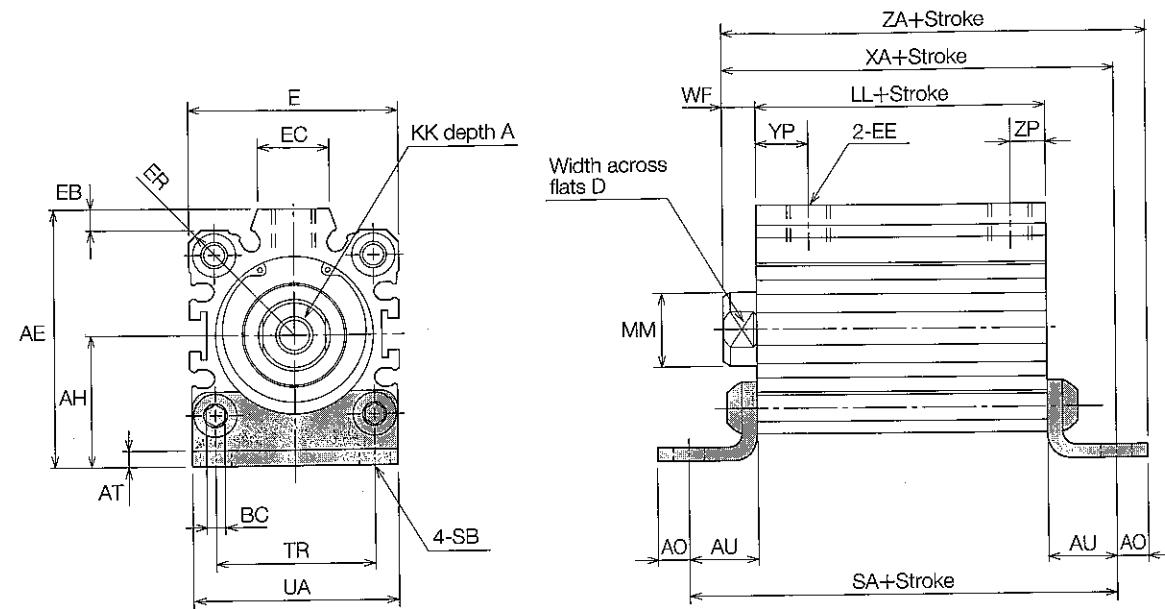
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Doubl-acting Axial foot mounting/L

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	AE	AH	AO	AT	AU	BC	D	E	EB	EC	EE	ER
$\phi 32$	13	55.5	28.5	7	3.2	15	4	14	45	4.5	15	Rc $\frac{1}{8}$	R30
$\phi 40$	13	63.5	32.5	7	3.2	15	4	14	52	5	17.5	Rc $\frac{1}{8}$	R34.5
$\phi 50$	15	77	38	9	3.2	18	5	17	64	7	19	Rc $\frac{1}{4}$	R42.5
$\phi 63$	15	90	44.5	11	3.2	20	6	17	77	7	19	Rc $\frac{1}{4}$	R51
$\phi 80$	21	113.5	58.5	14	4.5	25	8	22	98	6	25	Rc $\frac{3}{8}$	R65
$\phi 100$	27	132	67	14	4.5	25	8	27	117	6.5	25	Rc $\frac{3}{8}$	R78

Bore	KK	LL	MM	SA	SB	TR	UA	WF	XA	YP		ZA	ZP	
										5st	More than 10st		5st	More than 10st
$\phi 32$	M6X1	23	$\phi 16$	53	$\phi 6.6$	34	45	7	45	10	11	52	6	8
$\phi 40$	M6X1	29.5	$\phi 16$	59.5	$\phi 6.6$	40	53	7	51.5	10	11.5	58.5	10	11.5
$\phi 50$	M8X1.25	30.5	$\phi 20$	66.5	$\phi 9$	50	64	8	56.5	—	12	65.5	—	12
$\phi 63$	M10X1.5	36	$\phi 20$	76	$\phi 11$	60	77	8	64	—	14.5	75	—	14.5
$\phi 80$	M16X2	43.5	$\phi 25$	93.5	$\phi 14$	77	100	10	78.5	—	16.5	92.5	—	16.5
$\phi 100$	M20X2.5	53	$\phi 30$	103	$\phi 14$	94	117	12	90	—	21	104	—	21

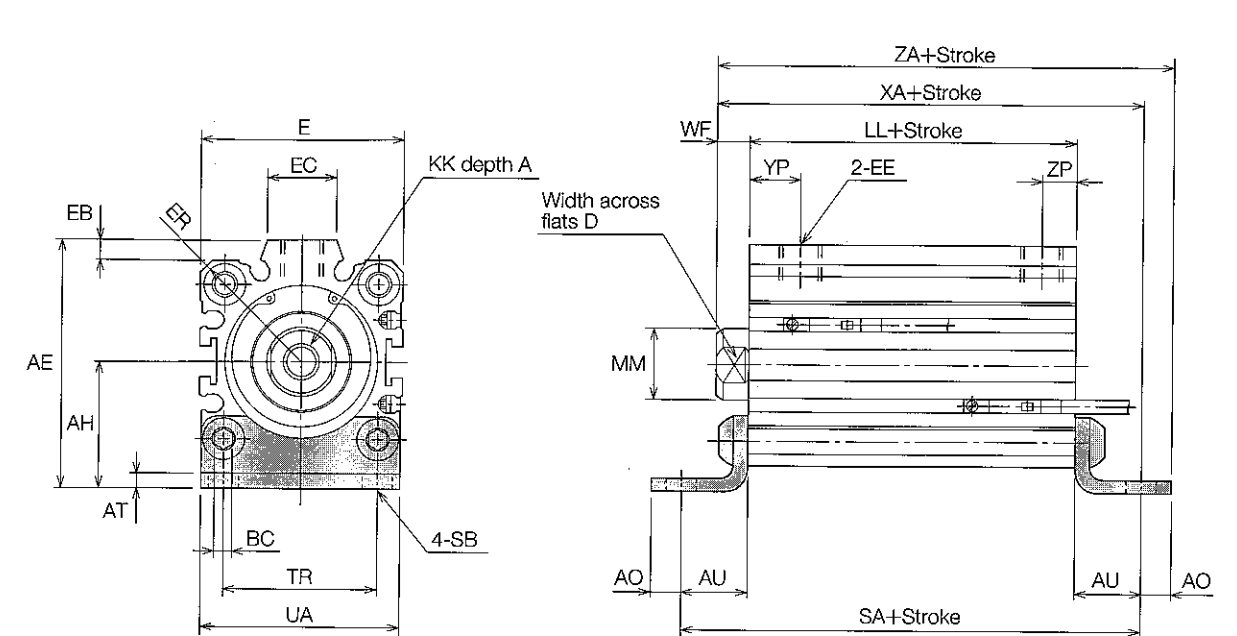
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Doubl-acting with switch Axial foot mounting/L

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	AE	AH	AO	AT	AU	BC	D	E	EB	EC	EE
$\phi 32$	11	55.5	28.5	7	3.2	15	4	14	45	4.5	15	Rc $\frac{1}{8}$
$\phi 40$	11	63.5	32.5	7	3.2	15	4	14	52	5	17.5	Rc $\frac{1}{8}$
$\phi 50$	13	77	38	9	3.2	18	5	17	64	7	19	Rc $\frac{1}{4}$
$\phi 63$	15	90	44.5	11	3.2	20	6	17	77	7	19	Rc $\frac{1}{4}$
$\phi 80$	21	113.5	58.5	14	4.5	25	8	22	98	6	25	Rc $\frac{3}{8}$
$\phi 100$	27	132	67	14	4.5	25	8	27	117	6.5	25	Rc $\frac{3}{8}$

Bore	ER	KK	LL	MM	SA	SB	TR	UA	WF	XA	YP	ZA	ZP
$\phi 40$	R34.5	M6X1	39.5	$\phi 16$	69.5	$\phi 6.6$	40	53	7	61.5	11.5	68.5	11.5
$\phi 50$	R42.5	M8X1.25	40.5	$\phi 20$	76.5	$\phi 9$	50	64	8	66.5	12	75.5	12
$\phi 63$	R51	M10X1.5	46	$\phi 20$	86	$\phi 11$	60	77	8	74	14.5	85	14.5
$\phi 80$	R65	M16X2	53.5	$\phi 25$	103.5	$\phi 14$	77	100	10	88.5	16.5	102.5	16.5
$\phi 100$	R78	M20X2.5	63	$\phi 30$	113	$\phi 14$	94	117	12	100	21	114	21

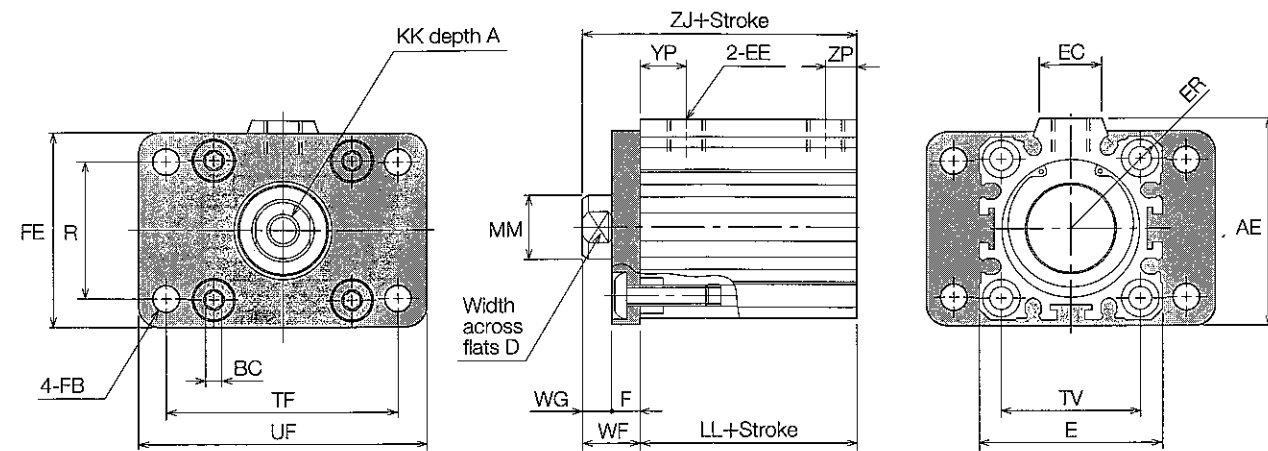
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Rod side flange mounting/A

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) As the head side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6 \times 1
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6 \times 1
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8 \times 1.25
$\phi 63$	15	87.5	6	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	10	$\phi 9$	84	M10 \times 1.5
$\phi 80$	21	107.5	8	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	16	$\phi 12$	105	M16 \times 2
$\phi 100$	27	125.5	8	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	16	$\phi 12$	121	M20 \times 2.5

Bore	LL	MM	R	TV	TF	UF	WF	WG	YP		ZJ	ZP	
									5st	More than 10st		5st	More than 10st
$\phi 32$	23	$\phi 16$	33	$\square 34$	58	72	15	7	10	11	38	6	8
$\phi 40$	29.5	$\phi 16$	36	$\square 40$	70	84	17	7	10	11.5	46.5	10	11.5
$\phi 50$	30.5	$\phi 20$	47	$\square 50$	86	104	18	8	—	12	48.5	—	12
$\phi 63$	36	$\phi 20$	56	$\square 60$	98	116	18	8	—	14.5	54	—	14.5
$\phi 80$	43.5	$\phi 25$	70	$\square 77$	126	150	26	10	—	16.5	69.5	—	16.5
$\phi 100$	53	$\phi 30$	84	$\square 94$	143	165	28	12	—	21	81	—	21

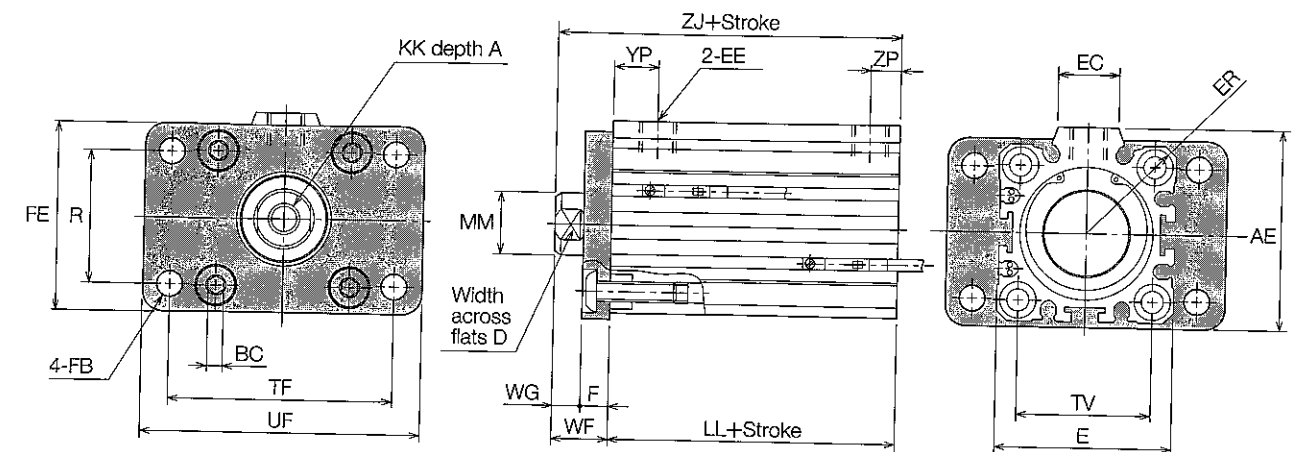
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting with switch Rod side flange mounting/A

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) As the head side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FF
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70
$\phi 63$	15	87.5	6	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	10	$\phi 9$	84
$\phi 80$	21	107.5	8	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	16	$\phi 12$	105
$\phi 100$	27	125.5	8	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	16	$\phi 12$	121

Bore	KK	LL	MM	R	TV	TF	UF	WF	WG	YP	ZJ	ZP
$\phi 40$	M6 \times 1	39.5	$\phi 16$	36	$\square 40$	70	84	17	7	11.5	56.5	11.5
$\phi 50$	M8 \times 1.25	40.5	$\phi 20$	47	$\square 50$	86	104	18	8	12	58.5	12
$\phi 63$	M10 \times 1.5	46	$\phi 20$	56	$\square 60$	98	116	18	8	14.5	64	14.5
$\phi 80$	M16 \times 2	53.5	$\phi 25$	70	$\square 77$	126	150	26	10	16.5	79.5	16.5
$\phi 100$	M20 \times 2.5	63	$\phi 30$	84	$\square 94$	143	165	28	12	21	91	21

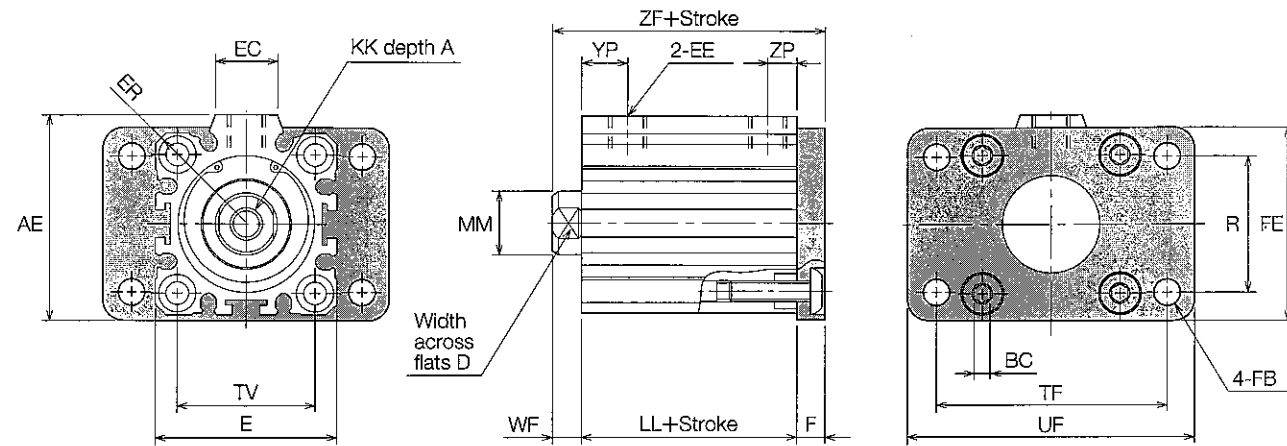
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Head side flange mounting/B

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) As the rod side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	□45	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6×1
$\phi 40$	11	59	4	14	□52	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6×1
$\phi 50$	13	74	5	17	□64	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8×1.25
$\phi 63$	15	87.5	6	17	□77	19	Rc $\frac{1}{4}$	R51	10	$\phi 9$	84	M10×1.5
$\phi 80$	21	107.5	8	22	□98	25	Rc $\frac{3}{8}$	R65	16	$\phi 12$	105	M16×2
$\phi 100$	27	125.5	8	27	□117	25	Rc $\frac{3}{8}$	R78	16	$\phi 12$	121	M20×2.5

Bore	LL	MM	R	TV	TF	UF	WF	YP		ZF	ZP	
								5st	More than 10st		5st	More than 10st
$\phi 32$	23	$\phi 16$	33	□34	58	72	7	10	11	38	6	8
$\phi 40$	29.5	$\phi 16$	36	□40	70	84	7	10	11.5	46.5	10	11.5
$\phi 50$	30.5	$\phi 20$	47	□50	86	104	8	—	12	48.5	—	12
$\phi 63$	36	$\phi 20$	56	□60	98	116	8	—	14.5	54	—	14.5
$\phi 80$	43.5	$\phi 25$	70	□77	126	150	10	—	16.5	69.5	—	16.5
$\phi 100$	53	$\phi 30$	84	□94	143	165	12	—	21	81	—	21

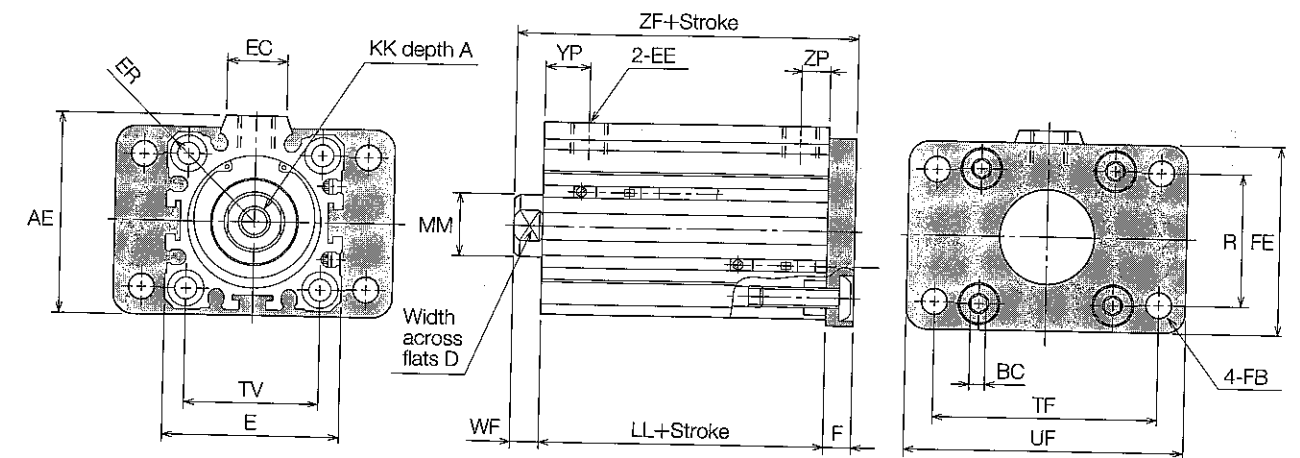
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting with switch Head side flange mounting/B

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) As the rod side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FF
$\phi 32$	11	51	4	14	□45	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48
$\phi 40$	11	59	4	14	□52	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56
$\phi 50$	13	74	5	17	□64	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70
$\phi 63$	15	87.5	6	17	□77	19	Rc $\frac{1}{4}$	R51	10	$\phi 9$	84
$\phi 80$	21	107.5	8	22	□98	25	Rc $\frac{3}{8}$	R65	16	$\phi 12$	105
$\phi 100$	27	125.5	8	27	□117	25	Rc $\frac{3}{8}$	R78	16	$\phi 12$	121

Bore	KK	LL	MM	R	TV	TF	UF	WF	YP	ZJ	ZP
$\phi 40$	M6×1	39.5	$\phi 16$	36	□40	70	84	7	11.5	56.5	11.5
$\phi 50$	M8×1.25	40.5	$\phi 20$	47	□50	86	104	8	12	58.5	12
$\phi 63$	M10×1.5	46	$\phi 20$	56	□60	98	116	8	14.5	64	14.5
$\phi 80$	M16×2	53.5	$\phi 25$	70	□77	126	150	10	16.5	79.5	16.5
$\phi 100$	M20×2.5	63	$\phi 30$	84	□94	143	165	12	21	91	21

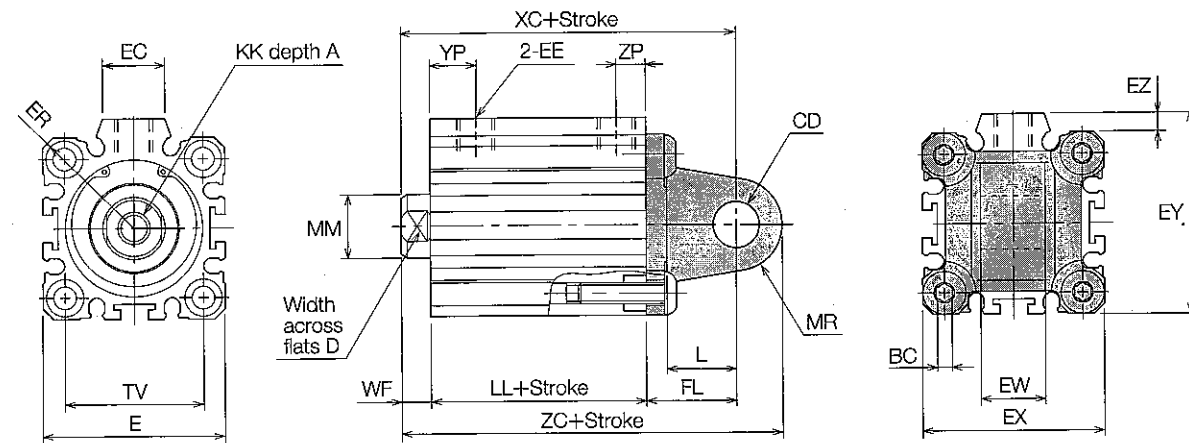
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Eye mounting/C

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL
$\phi 32$	11	4	$\phi 12H9$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	16 $^{0}_{-0.070}$	24
$\phi 40$	11	4	$\phi 14H9$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	20 $^{0}_{-0.084}$	24
$\phi 50$	13	5	$\phi 14H9$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	20 $^{0}_{-0.084}$	24
$\phi 63$	15	6	$\phi 14H9$	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	$\square 77$	84	7	20 $^{0}_{-0.084}$	24
$\phi 80$	21	8	$\phi 20H9$	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	$\square 100$	105	5	32 $^{0}_{-0.100}$	32
$\phi 100$	27	8	$\phi 20H9$	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	$\square 117$	123.5	6.5	32 $^{0}_{-0.100}$	32

Bore	KK	L	LL	MM	MR	TV	WF	XC	YP		ZC	ZP	
									5st	More than 10st		5st	More than 10st
$\phi 32$	M6x1	16.5	23	$\phi 16$	R12	$\square 34$	7	54	10	11	66	6	8
$\phi 40$	M6x1	16	29.5	$\phi 16$	R14	$\square 40$	7	60.5	10	11.5	74.5	10	11.5
$\phi 50$	M8x1.25	16	30.5	$\phi 20$	R14	$\square 50$	8	62.5	—	12	76.5	—	12
$\phi 63$	M10x1.5	16	36	$\phi 20$	R14	$\square 60$	8	68	—	14.5	82	—	14.5
$\phi 80$	M16x2	21	43.5	$\phi 25$	R19	$\square 77$	10	85.5	—	16.5	104.5	—	16.5
$\phi 100$	M20x2.5	21	53	$\phi 30$	R19	$\square 94$	12	97	—	21	116	—	21

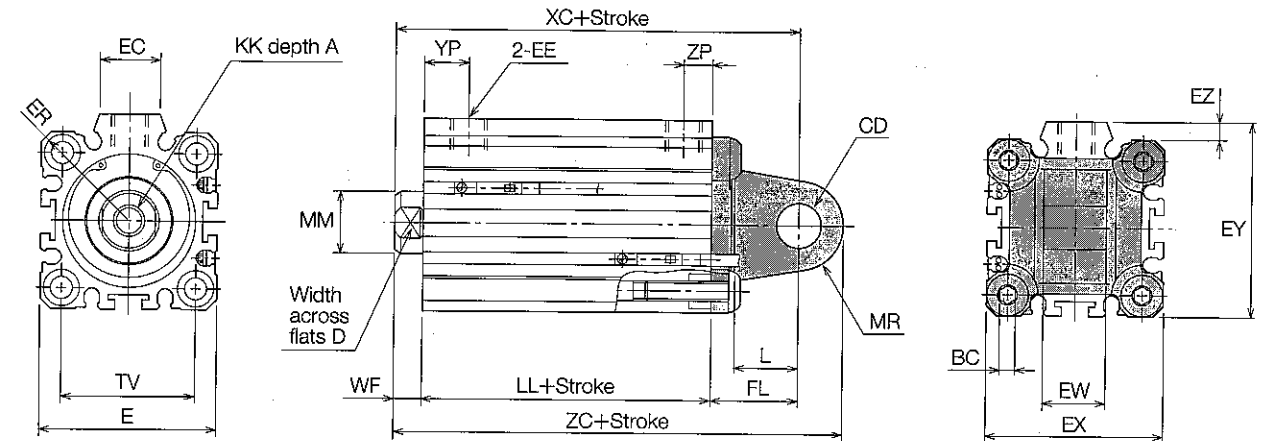
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting with switch Eye mounting/C

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW
$\phi 32$	11	4	$\phi 12H9$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	16 $^{0}_{-0.070}$
$\phi 40$	11	4	$\phi 14H9$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	20 $^{0}_{-0.084}$
$\phi 50$	13	5	$\phi 14H9$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	20 $^{0}_{-0.084}$
$\phi 63$	15	6	$\phi 14H9$	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	$\square 77$	84	7	20 $^{0}_{-0.084}$
$\phi 80$	21	8	$\phi 20H9$	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	$\square 100$	105	5	32 $^{0}_{-0.100}$
$\phi 100$	27	8	$\phi 20H9$	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	$\square 117$	123.5	6.5	32 $^{0}_{-0.100}$

Bore	FL	KK	L	LL	MM	MR	TV	WF	XC	YP	ZC	ZP
$\phi 40$	24	M6x1	16	39.5	$\phi 16$	R14	$\square 40$	7	70.5	11.5	84.5	11.5
$\phi 50$	24	M8x1.25	16	40.5	$\phi 20$	R14	$\square 50$	8	72.5	12	86.5	12
$\phi 63$	24	M10x1.5	16	46	$\phi 20$	R14	$\square 60$	8	78	14.5	92	14.5
$\phi 80$	32	M16x2	21	53.5	$\phi 25$	R19	$\square 77$	10	95.5	16.5	114.5	16.5
$\phi 100$	32	M20x2.5	21	63	$\phi 30$	R19	$\square 94$	12	107	21	126	21

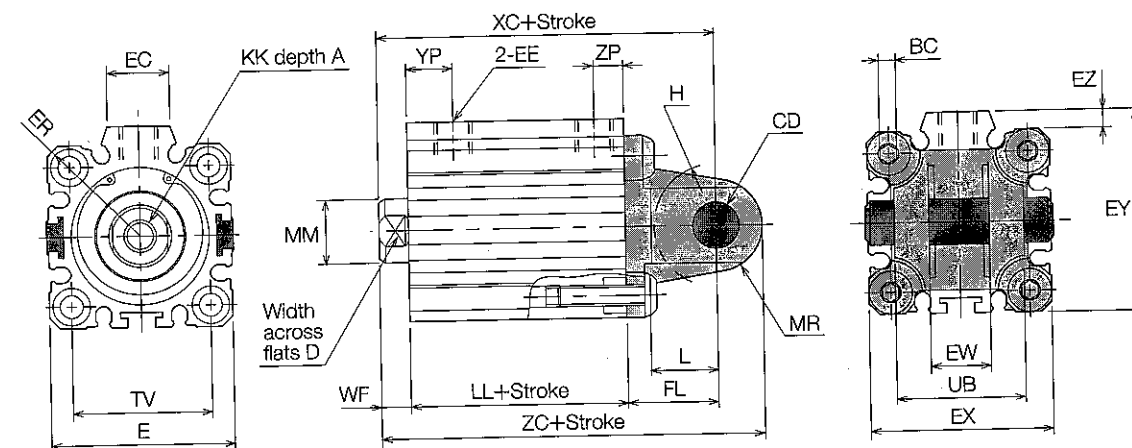
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting Clevis mounting/W

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	H
$\phi 32$	11	4	$\phi 12H9/f8$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	16 ^{+0.7} / _{+0.5}	24	R16.5
$\phi 40$	11	4	$\phi 14H9/f8$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	20 ^{+0.7} / _{+0.5}	24	R18
$\phi 50$	13	5	$\phi 14H9/f8$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	20 ^{+0.7} / _{+0.5}	24	R21
$\phi 63$	15	6	$\phi 14H9/f8$	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	$\square 77$	84	7	20 ^{+0.7} / _{+0.5}	24	R22
$\phi 80$	21	8	$\phi 20H9/f8$	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	$\square 100$	105	5	32 ^{+0.7} / _{+0.5}	32	R30
$\phi 100$	27	8	$\phi 20H9/f8$	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	$\square 117$	123.5	6.5	32 ^{+0.7} / _{+0.5}	32	R30

Bore	KK	L	LL	MM	MR	TV	UB	WF	XC	YP		ZC	ZP	
										5st	More than 10st		5st	More than 10st
$\phi 32$	M6×1	16.5	23	$\phi 16$	R12	$\square 34$	31	7	54	10	11	66	6	8
$\phi 40$	M6×1	16	29.5	$\phi 16$	R14	$\square 40$	38	7	60.5	10	11.5	74.5	10	11.5
$\phi 50$	M8×1.25	16	30.5	$\phi 20$	R14	$\square 50$	49	8	62.5	—	12	76.5	—	12
$\phi 63$	M10×1.5	16	36	$\phi 20$	R14	$\square 60$	52	8	68	—	14.5	82	—	14.5
$\phi 80$	M16×2	21	43.5	$\phi 25$	R19	$\square 77$	64	10	85.5	—	16.5	104.5	—	16.5
$\phi 100$	M20×2.5	21	53	$\phi 30$	R19	$\square 94$	64	12	97	—	21	116	—	21

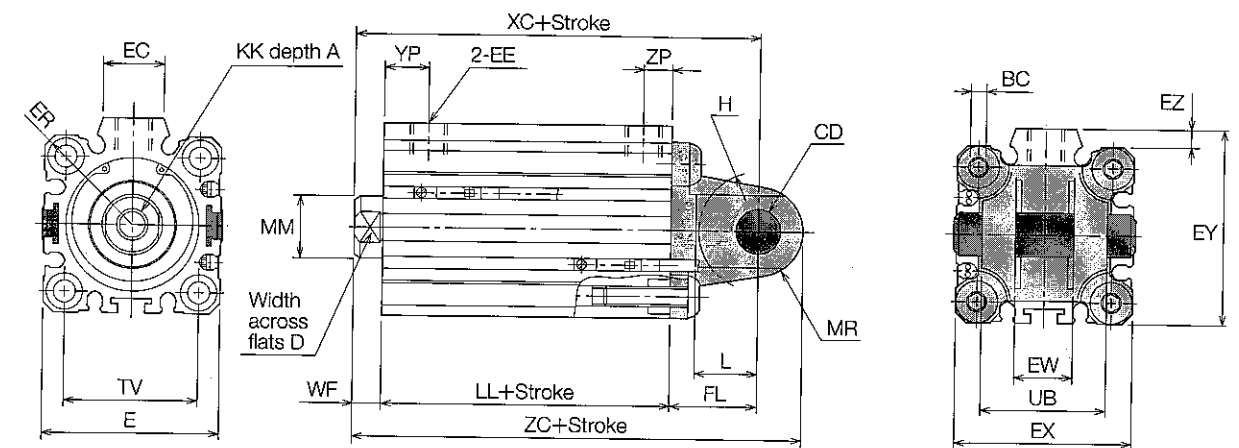
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting with switch Clevis mounting/W

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL
$\phi 32$	11	4	$\phi 12H9/f8$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	16 ^{+0.7} / _{+0.5}	24
$\phi 40$	11	4	$\phi 14H9/f8$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	20 ^{+0.7} / _{+0.5}	24
$\phi 50$	13	5	$\phi 14H9/f8$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	20 ^{+0.7} / _{+0.5}	24
$\phi 63$	15	6	$\phi 14H9/f8$	17	$\square 77$	19	Rc $\frac{1}{4}$	R51	$\square 77$	84	7	20 ^{+0.7} / _{+0.5}	24
$\phi 80$	21	8	$\phi 20H9/f8$	22	$\square 98$	25	Rc $\frac{3}{8}$	R65	$\square 100$	105	5	32 ^{+0.7} / _{+0.5}	32
$\phi 100$	27	8	$\phi 20H9/f8$	27	$\square 117$	25	Rc $\frac{3}{8}$	R78	$\square 117$	123.5	6.5	32 ^{+0.7} / _{+0.5}	32

Bore	H	KK	L	LL	MM	MR	TV	UB	WF	XC	YP	ZC	ZP
$\phi 40$	R18	M6×1	16	39.5	$\phi 16$	R14	$\square 40$	38	7	70.5	11.5	84.5	11.5
$\phi 50$	R21	M8×1.25	16	40.5	$\phi 20$	R14	$\square 50$	49	8	72.5	12	86.5	12
$\phi 63$	R22	M10×1.5	16	46	$\phi 20$	R14	$\square 60$	52	8	78	14.5	92	14.5
$\phi 80$	R30	M16×2	21	53.5	$\phi 25$	R19	$\square 77$	64	10	95.5	16.5	114.5	16.5
$\phi 100$	R30	M20×2.5	21	63	$\phi 30$	R19	$\square 94$	64	12	107	21	126	21

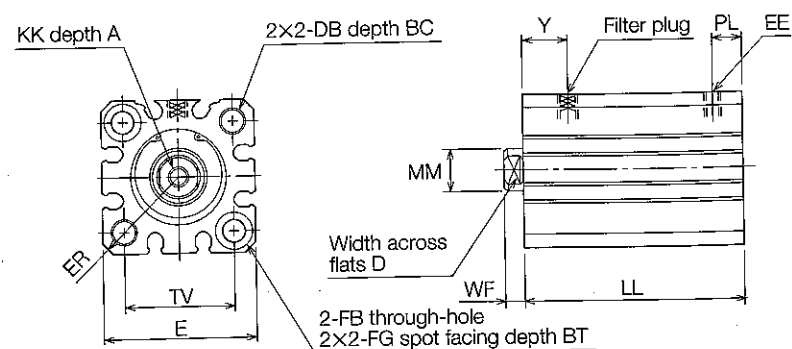
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

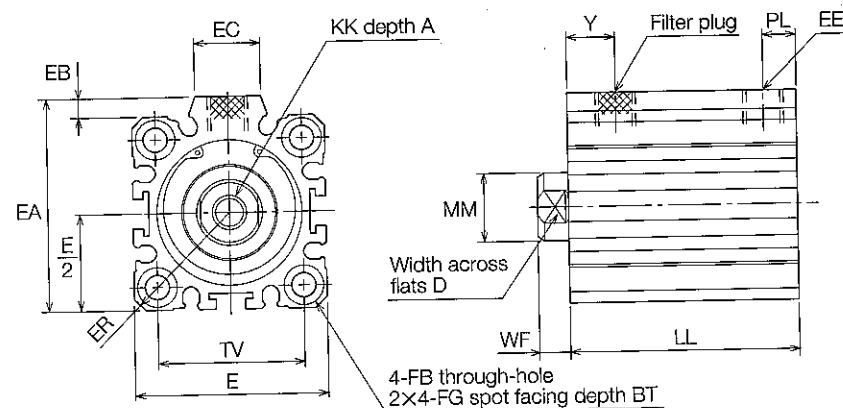
Single-acting, spring return Basic type/N

(Unit : mm)

•Bore $\phi 12 \sim \phi 25$



•Bore $\phi 32 \sim \phi 50$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE	ER	FB	FG	KK
$\phi 12$	5	8	3.5	5	M4×0.7	□25	—	—	—	M5×0.8	R16	$\phi 3.4$	$\phi 6.5$	M2.6×0.45
$\phi 16$	5	8	3.5	6	M4×0.7	□29	—	—	—	M5×0.8	R19	$\phi 3.4$	$\phi 6.5$	M3×0.5
$\phi 20$	6	10	5.4	8	M6×1	□36	—	—	—	M5×0.8	R23.5	$\phi 5.5$	$\phi 9$	M4×0.7
$\phi 25$	10	10	5.4	10	M6×1	□40	—	—	—	M5×0.8	R26	$\phi 5.5$	$\phi 9$	M5×0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc1/8	R30	$\phi 5.5$	$\phi 9$	M6×1
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc1/8	R34.5	$\phi 5.5$	$\phi 9$	M6×1
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc1/4	R42.5	$\phi 6.6$	$\phi 11$	M8×1.25

Bore	LL										MM	PL		TV	WF	Y	
	5st	10st	15st	20st	25st	30st	35st	40st	45st	50st		5st	More than 10st			5st	More than 10st
$\phi 12$	22	27	37	42	—	—	—	—	—	—	$\phi 6$	5	5	□15.5	3.5	8.5	9.5
$\phi 16$	22	27	37	42	—	—	—	—	—	—	$\phi 8$	5	5	□20	3.5	8.5	9.5
$\phi 20$	26.5	31.5	41.5	46.5	51.5	56.5	—	—	—	—	$\phi 10$	6	7	□25.5	4.5	9	10
$\phi 25$	27.5	32.5	42.5	47.5	52.5	57.5	—	—	—	—	$\phi 12$	6	7	□28	5	9	10
$\phi 32$	28	33	48	53	58	63	—	—	—	—	$\phi 16$	6	8	□34	7	10	11
$\phi 40$	34.5	39.5	54.5	59.5	64.5	69.5	74.5	79.5	84.5	89.5	$\phi 16$	10	11.5	□40	7	10	11.5
$\phi 50$	—	40.5	55.5	60.5	65.5	70.5	75.5	80.5	85.5	90.5	$\phi 20$	—	12	□50	8	—	12

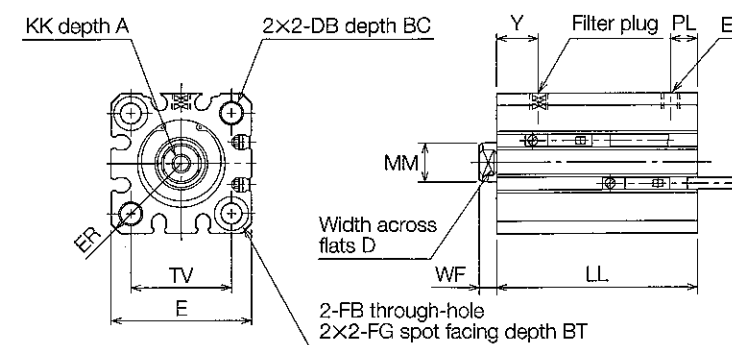
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

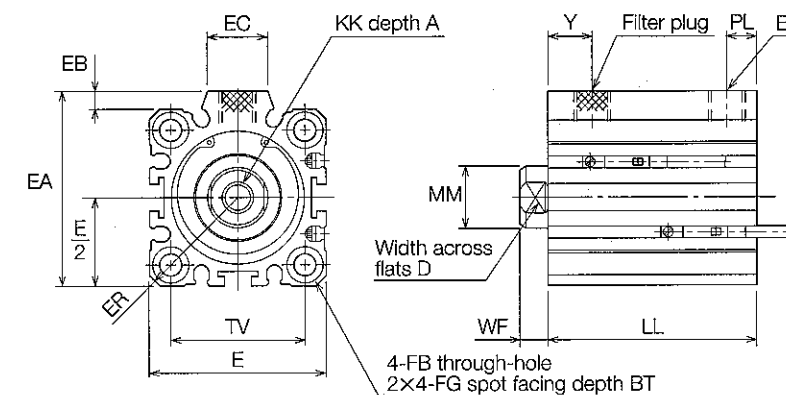
Single-acting, spring return with switch Basic type/N

(Unit : mm)

•Bore $\phi 12 \sim \phi 25$



•Bore $\phi 32 \sim \phi 50$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE	ER	FB	FG	KK
$\phi 12$	5	8	3.5	5	M4×0.7	□25	—	—	—	M5×0.8	R16	$\phi 3.4$	$\phi 6.5$	M2.6×0.45
$\phi 16$	5	8	3.5	6	M4×0.7	□29	—	—	—	M5×0.8	R19	$\phi 3.4$	$\phi 6.5$	M3×0.5
$\phi 20$	6	10	5.4	8	M6×1	□36	—	—	—	M5×0.8	R23.5	$\phi 5.5$	$\phi 9$	M4×0.7
$\phi 25$	10	10	5.4	10	M6×1	□40	—	—	—	M5×0.8	R26	$\phi 5.5$	$\phi 9$	M5×0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc1/8	R30	$\phi 5.5$	$\phi 9$	M6×1
$\phi 40$	11	—	5.4	14	—	□50	57	5	17.5	Rc1/8	R34.5	$\phi 5.5$	$\phi 9$	M6×1
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc1/4	R42.5	$\phi 6.6$	$\phi 11$	M8×1.25

Bore	LL										MM	PL	TV	WF	Y
	5st	10st	15st	20st	25st	30st	35st	40st	45st	50st					
$\phi 12$	27	32	42	47	—	—	—	—	—	—	$\phi 6$	5	□15.5	3.5	9.5
$\phi 16$	27	32	42	47	—	—	—	—	—	—	$\phi 8$	5	□20	3.5	9.5
$\phi 20$	36.5	41.5	51.5	56.5	61.5	66.5	—	—	—	—	$\phi 10$	7	□25.5	4.5	10
$\phi 25$	37.5	42.5	52.5	57.5	62.5	67.5	—	—	—	—	$\phi 12$	7	□28	5	10
$\phi 32$	38	43	58	63	68	73	—	—	—	—	$\phi 16$	8	□34	7	11
$\phi 40$	44.5	49.5	64.5	69.5	74.5	79.5	84.5	89.5	94.5	99.5	$\phi 16$	11.5	□40	7	11.5
$\phi 50$	—	50.5	65.5	70.5	75.5	80.5	85.5	90.5	95.5	100.5	$\phi 20$	12	□50	8	12

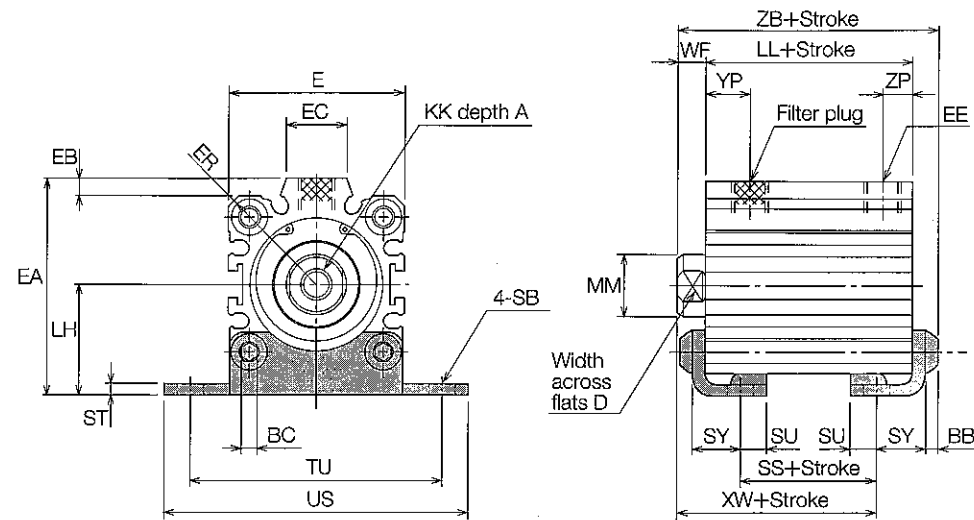
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Side lug mounting/M

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) X1C1-32-5-L cannot be manufactured. (Bracket will interfere unless stroke for more than 10 mm.)

Bore	A	BT	BC	D	E	EA	EB	EC	EE	ER	KK	LH	LL		MM
													5~10st*	15~30st**	
$\phi 32$	11	4	4	14	45	55.5	4.5	15	Rc $\frac{1}{8}$	R30	M6X1	28.5	23	33	$\phi 16$
$\phi 40$	11	4	4	14	52	63.5	5	17.5	Rc $\frac{1}{8}$	R34.5	M6X1	32.5	29.5	39.5	$\phi 16$
$\phi 50$	13	5	5	17	64	77	7	19	Rc $\frac{1}{4}$	R42.5	M8X1.25	38	30.5	40.5	$\phi 20$

Bore	SB	SS		ST	SU	SY	TU	US	WF	XW		YP		ZB		ZP	
		5~10st*	15~30st**							5st	More than 10st	5~10st*	15~30st**	5st	More than 10st		
$\phi 32$	$\phi 6.6$	—	14.4	3.2	6.5	12.5	65	78	7	20.7	30.7	—	11	37.2	47.2	—	8
$\phi 40$	$\phi 6.6$	10.9	20.9	3.2	6.5	12.5	73	87	7	27.2	37.2	10	11.5	43.7	53.7	10	11.5
$\phi 50$	$\phi 9$	8.9	18.9	3.2	8	14	87	103	8	27.7	37.7	—	12	46.7	56.7	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

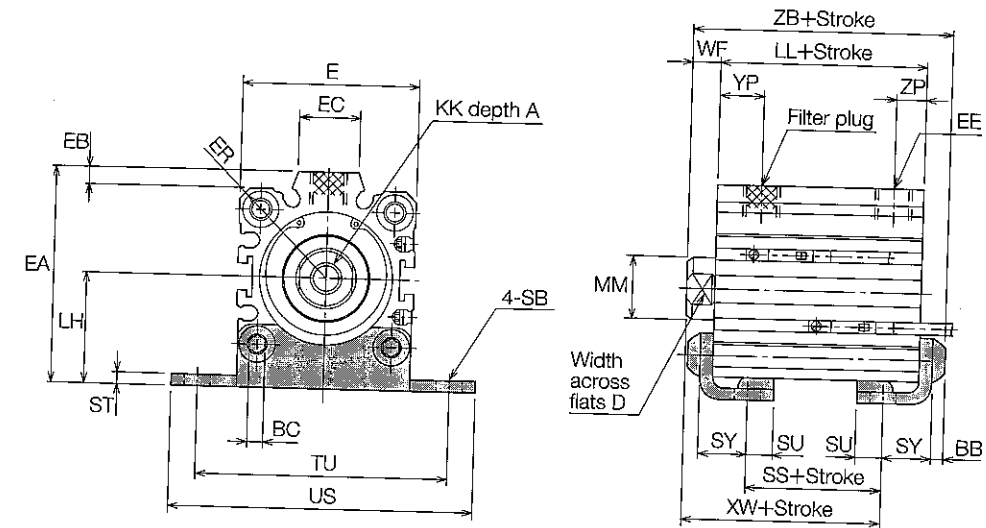
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Side lug mounting/M

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) X1G1-32-5-L cannot be manufactured. (Bracket will interfere unless stroke for more than 10 mm.)

Bore	A	BT	BC	D	E	EA	EB	EC	EE	ER	KK	LH	LL		MM
													5~10st*	15~30st**	
$\phi 32$	11	4	4	14	45	55.5	4.5	15	Rc $\frac{1}{8}$	R30	M6X1	28.5	33	43	$\phi 16$
$\phi 40$	11	4	4	14	52	63.5	5	17.5	Rc $\frac{1}{8}$	R34.5	M6X1	32.5	39.5	49.5	$\phi 16$
$\phi 50$	13	5	5	17	64	77	7	19	Rc $\frac{1}{4}$	R42.5	M8X1.25	38	40.5	50.5	$\phi 20$

Bore	MM	SB	SS		ST	SU	SY	TU	US	WF	XW		YP	ZB		ZP
			5~10st*	15~30st**							5~10st*	15~30st**				
$\phi 32$	$\phi 16$	$\phi 6.6$	14.4	24.4	3.2	6.5	12.5	65	78	7	30.7	40.7	11	47.2	57.2	8
$\phi 40$	$\phi 16$	$\phi 6.6$	20.9	30.9	3.2	6.5	12.5	73	87	7	37.2	47.2	11.5	53.7	63.7	11.5
$\phi 50$	$\phi 20$	$\phi 9$	18.9	28.9	3.2	8	14	87	103	8	37.7	47.7	12	56.7	66.7	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

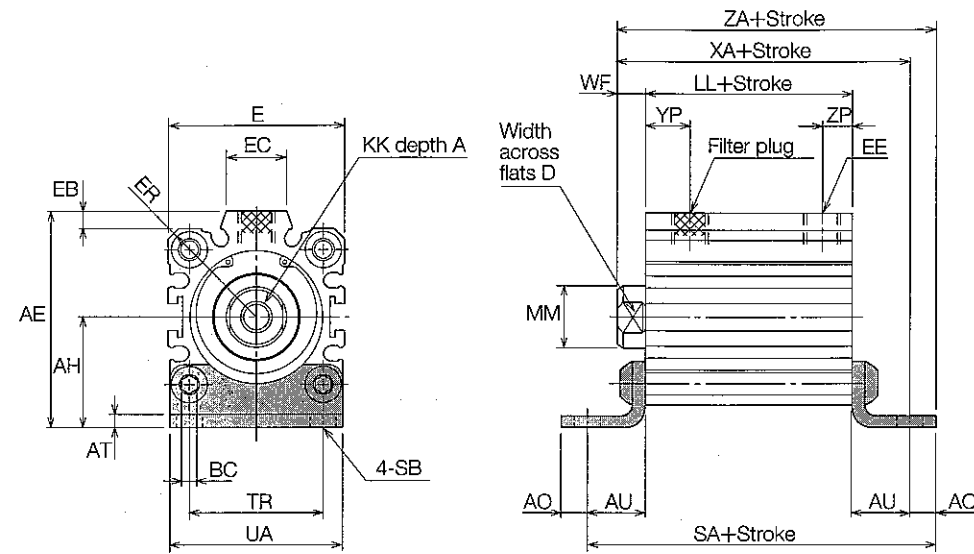
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Axial foot mounting/L

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	AE	AH	AO	AT	AU	BC	D	E	EB	EC	EE	ER	KK	LL	
															5~10st*	15~30st**
$\phi 32$	11	55.5	28.5	7	3.2	15	4	14	45	4.5	15	Rc1/8	R30	M6x1	23	33
$\phi 40$	11	63.5	32.5	7	3.2	15	4	14	52	5	17.5	Rc1/8	R34.5	M6x1	29.5	39.5
$\phi 50$	13	77	38	9	3.2	18	5	17	64	7	19	Rc1/4	R42.5	M8x1.25	30.5	40.5

Bore	MM	SA		SB	TR	UA	WF	XA		YP		ZA		ZP	
		5~10st*	15~30st**					5~10st*	15~30st**	5st	More than 10st	5~10st*	15~30st**	5st	More than 10st
$\phi 32$	$\phi 16$	53	63	$\phi 6.6$	34	45	7	45	55	10	11	52	62	6	8
$\phi 40$	$\phi 16$	59.5	69.5	$\phi 6.6$	40	53	7	51.5	51.5	10	11.5	58.5	68.5	10	11.5
$\phi 50$	$\phi 20$	66.5	76.5	$\phi 9$	50	64	8	56.5	66.5	—	12	65.5	75.5	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

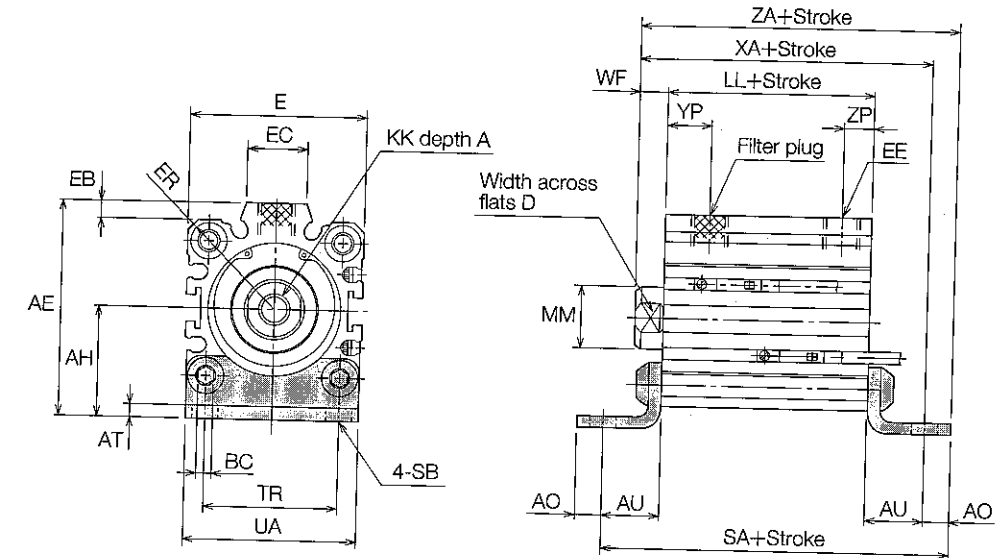
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Axial foot mounting/L

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	AE	AH	AO	AT	AU	BC	D	E	EB	EC	EE	ER	KK
$\phi 40$	11	63.5	32.5	7	3.2	15	4	14	52	5	17.5	Rc1/8	R34.5	M6x1
$\phi 50$	13	77	38	9	3.2	18	5	17	64	7	19	Rc1/4	R42.5	M8x1.25

Bore	LL		MM	SA		SB	TR	UA	WF	XA		YP	ZA		ZP
	5~10st*	15~30st**		5~10st*	15~30st**					5~10st*	15~30st**		5~10st*	15~30st**	
$\phi 32$	33	43	$\phi 16$	63	73	$\phi 6.6$	34	45	7	55	65	11	62	72	8
$\phi 40$	39.5	49.5	$\phi 16$	69.5	79.5	$\phi 6.6$	40	53	7	61.5	71.5	11.5	68.5	78.5	11.5
$\phi 50$	40.5	50.5	$\phi 20$	76.5	86.5	$\phi 9$	50	64	8	66.5	76.5	12	75.5	85.5	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

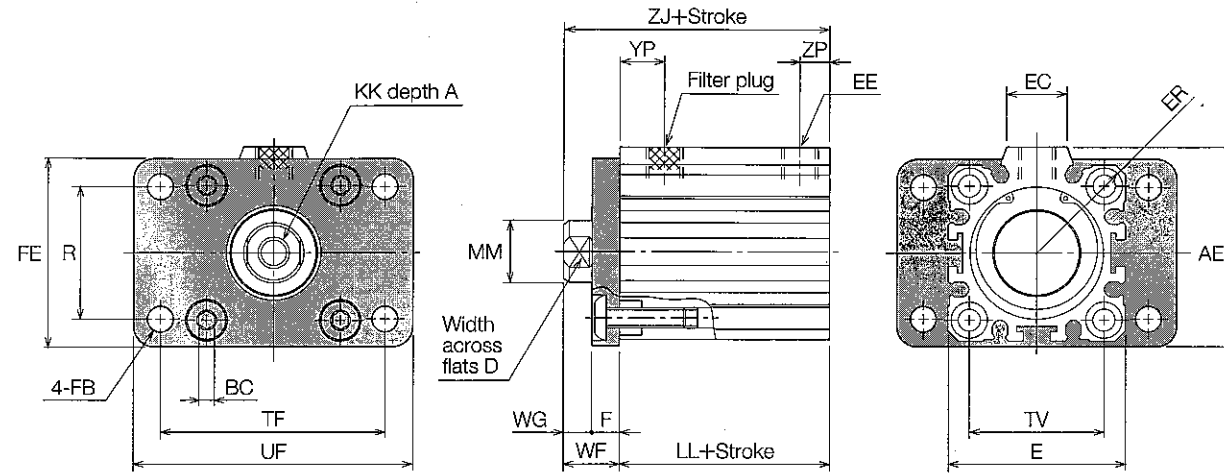
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Rod side flange mounting/A

(Unit : mm)

•Bore $\phi 32 \sim \phi 50$



(Note) As the head side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6×1
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6×1
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8×1.25

Bore	LL		MM	R	TV	TF	UF	WF	WG	YP		ZJ		ZP	
	5~10st*	15~30st**								5st	More than 10st	5~10st*	15~30st**	5st	More than 10st
$\phi 32$	23	33	$\phi 16$	33	$\square 34$	58	72	15	7	10	11	38	48	6	8
$\phi 40$	29.5	39.5	$\phi 16$	36	$\square 40$	70	84	17	7	10	11.5	46.5	56.5	10	11.5
$\phi 50$	30.5	40.5	$\phi 20$	47	$\square 50$	86	104	18	8	—	12	48.5	58.5	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

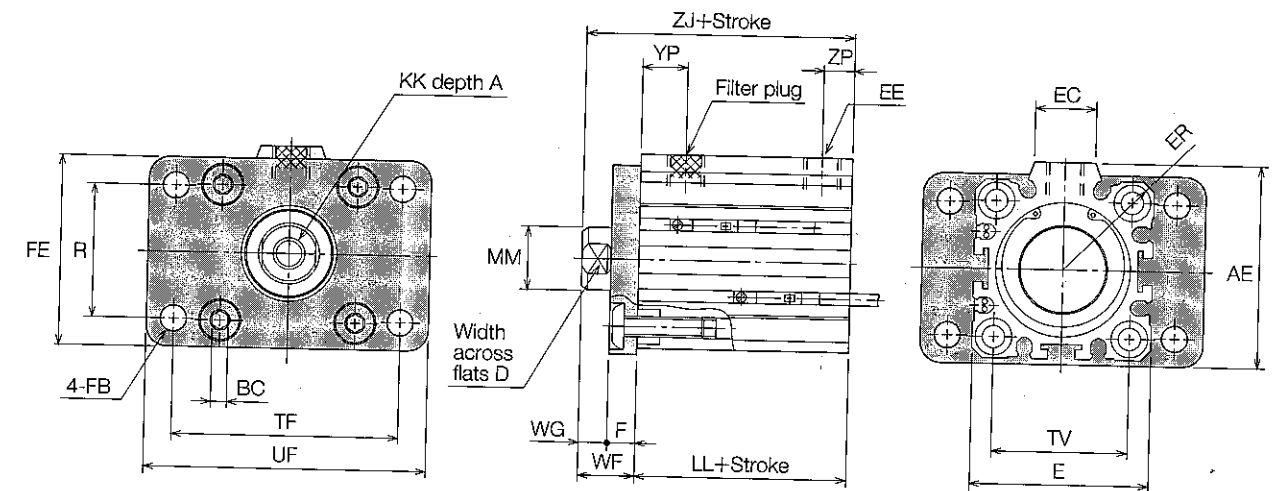
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Rod side flange mounting/A

(Unit : mm)

•Bore $\phi 32 \sim \phi 50$



(Note) As the head side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6×1
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6×1
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8×1.25

Bore	LL		MM	R	TV	TF	UF	WF	WG	YP	ZJ		ZP
	5~10st*	15~30st**									5~10st*	15~30st**	
$\phi 32$	33	43	$\phi 16$	33	$\square 34$	58	72	15	7	11	48	58	8
$\phi 40$	39.5	49.5	$\phi 16$	36	$\square 40$	70	84	17	7	11.5	56.5	66.5	11.5
$\phi 50$	40.5	50.5	$\phi 20$	47	$\square 50$	86	104	18	8	12	58.5	68.5	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

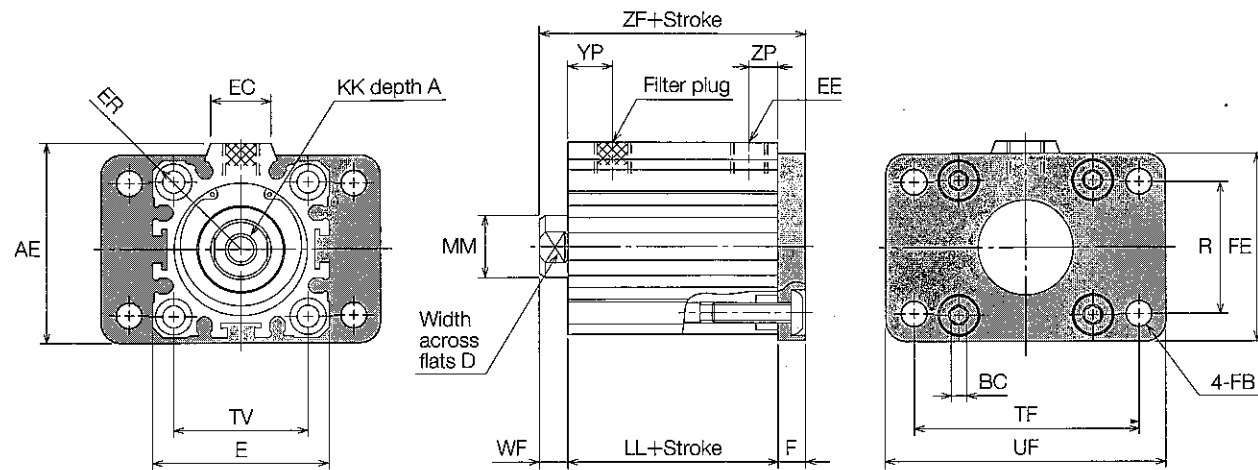
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Head side flange mounting/B

(Unit : mm)

• Bore $\phi 32 \sim \phi 100$



(Note) As the rod side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6x1
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6x1
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8x1.25

Bore	LL		MM	R	TV	TF	UF	WF	YP		ZF		ZP	
	5~10st*	15~30st**							5st	More than 10st	5~10st*	15~30st**	5st	More than 10st
$\phi 32$	23	33	$\phi 16$	33	$\square 34$	58	72	7	10	11	38	48	6	8
$\phi 40$	29.5	39.5	$\phi 16$	36	$\square 40$	70	84	7	10	11.5	46.5	56.5	10	11.5
$\phi 50$	30.5	40.5	$\phi 20$	47	$\square 50$	86	104	8	—	12	48.5	58.5	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

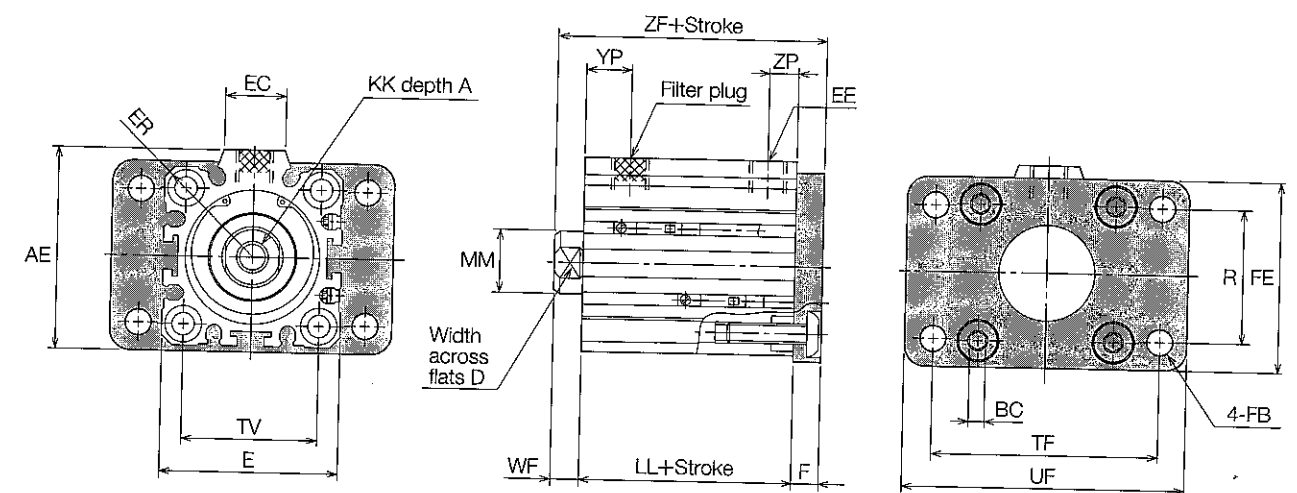
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Head side flange mounting/B

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) As the rod side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6x1
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6x1
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8x1.25

Bore	LL		MM	R	TV	TF	UF	WF	YP	ZF		ZP
	5~10st*	15~30st**								5~10st*	15~30st**	
$\phi 32$	33	43	$\phi 16$	33	$\square 34$	58	72	7	11	48	58	8
$\phi 40$	39.5	49.5	$\phi 16$	36	$\square 40$	70	84	7	11.5	56.5	66.5	11.5
$\phi 50$	40.5	50.5	$\phi 20$	47	$\square 50$	86	104	8	12	58.5	68.5	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

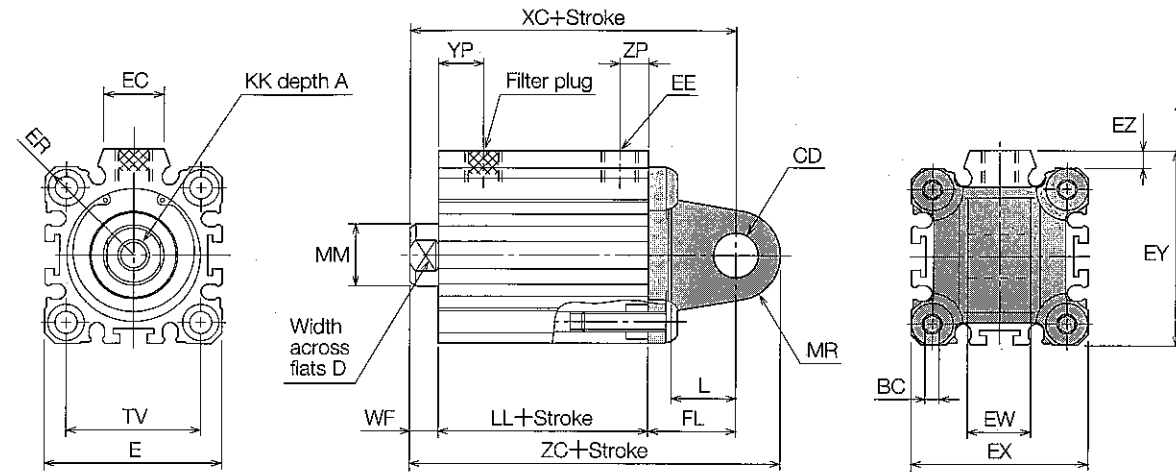
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Eye mounting/C

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	KK
$\phi 32$	11	4	$\phi 12H9$	14	$\square 45$	15	Rc $\frac{1}{4}$	R30	$\square 45$	49.5	4.5	$16_{-0.070}^0$	24	M6×1
$\phi 40$	11	4	$\phi 14H9$	14	$\square 52$	17.5	Rc $\frac{1}{4}$	R34.5	$\square 53$	57.5	4.5	$20_{-0.084}^0$	24	M6×1
$\phi 50$	13	5	$\phi 14H9$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	$20_{-0.084}^0$	24	M8×1.25

Bore	L	LL		MM	MR	TV	WF	XC		YP		ZC		ZP	
		5~10st*	15~30st**					5~10st*	15~30st**	5st	More than 10st	5~10st*	15~30st**	5st	More than 10st
$\phi 32$	16.5	23	33	$\phi 16$	R12	$\square 34$	7	54	64	10	11	66	76	6	8
$\phi 40$	16	29.5	39.5	$\phi 16$	R14	$\square 40$	7	60.5	70.5	10	11.5	74.5	84.5	10	11.5
$\phi 50$	16	30.5	40.5	$\phi 20$	R14	$\square 50$	8	62.5	72.5	—	12	76.5	86.5	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

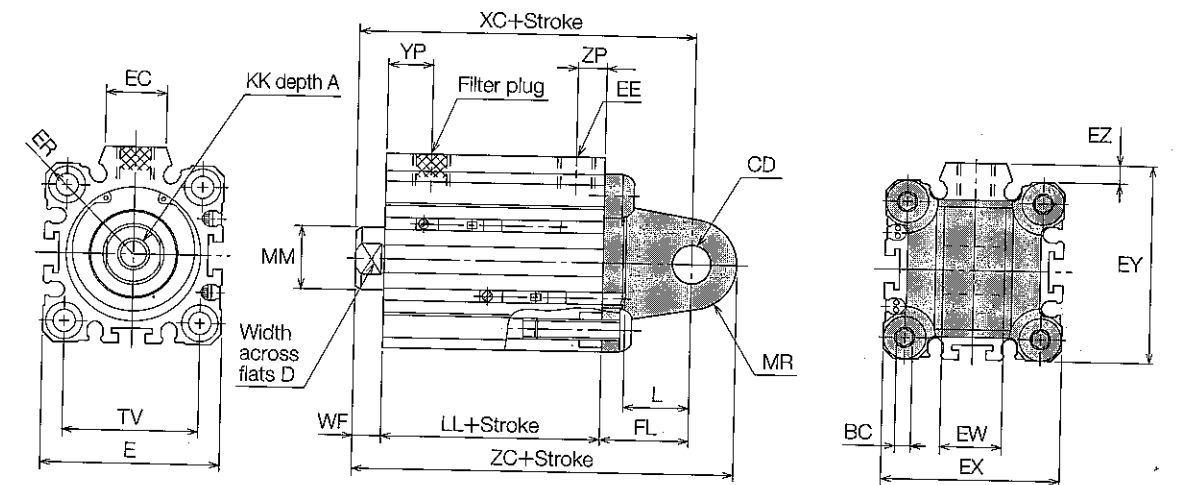
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Eye mounting/C

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	KK
$\phi 32$	11	4	$\phi 12H9$	14	$\square 45$	15	Rc $\frac{1}{4}$	R30	$\square 45$	49.5	4.5	$16_{-0.070}^0$	24	M6×1
$\phi 40$	11	4	$\phi 14H9$	14	$\square 52$	17.5	Rc $\frac{1}{4}$	R34.5	$\square 53$	57.5	4.5	$20_{-0.084}^0$	24	M6×1
$\phi 50$	13	5	$\phi 14H9$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	$20_{-0.084}^0$	24	M8×1.25

Bore	L	LL		MM	MR	TV	WF	XC		YP	ZC		ZP
		5~10st*	15~30st**					5~10st*	15~30st**				
$\phi 32$	16.5	33	43	$\phi 16$	R12	$\square 34$	7	64	74	11	76	86	8
$\phi 40$	16	39.5	49.5	$\phi 16$	R14	$\square 40$	7	70.5	80.5	11.5	84.5	94.5	11.5
$\phi 50$	16	40.5	50.5	$\phi 20$	R14	$\square 50$	8	72.5	82.5	12	86.5	96.5	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

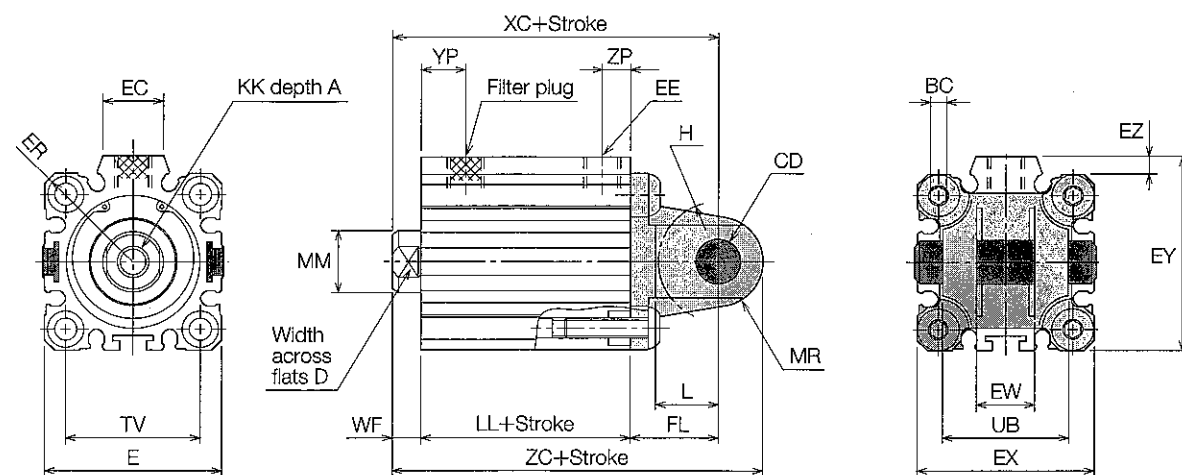
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return Clevis mounting/W

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	H	KK
$\phi 32$	11	4	$\phi 12H9/f8$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	$16^{+0.7}_{+0.5}$	24	R16.5	M6 \times 1
$\phi 40$	11	4	$\phi 14H9/f8$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	$20^{+0.7}_{+0.5}$	24	R18	M6 \times 1
$\phi 50$	13	5	$\phi 14H9/f8$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	$20^{+0.7}_{+0.5}$	24	R21	M8 \times 1.25

Bore	L	LL		MM	MR	TV	UB	WF	XC		YP		ZC		ZP	
		5~10st*	15~30st**						5~10st*	15~30st**	5st	More than 10st	5~10st*	15~30st**	5st	More than 10st
$\phi 32$	16.5	23	33	$\phi 16$	R12	$\square 34$	31	7	54	64	10	11	66	76	6	8
$\phi 40$	16	29.5	39.5	$\phi 16$	R14	$\square 40$	38	7	60.5	70.5	10	11.5	74.5	84.5	8	11.5
$\phi 50$	16	30.5	40.5	$\phi 20$	R14	$\square 50$	49	8	62.5	72.5	—	12	76.5	86.5	—	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

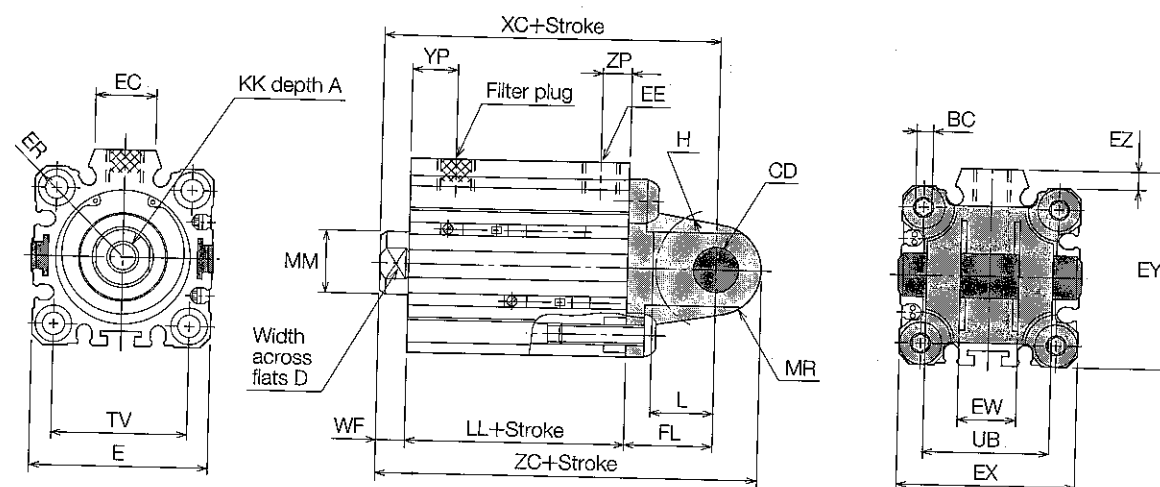
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring return with switch Clevis mounting/W

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	H	KK
$\phi 32$	11	4	$\phi 12H9/f8$	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	$\square 45$	49.5	4.5	$16^{+0.7}_{+0.5}$	24	R16.5	M6 \times 1
$\phi 40$	11	4	$\phi 14H9/f8$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	$20^{+0.7}_{+0.5}$	24	R18	M6 \times 1
$\phi 50$	13	5	$\phi 14H9/f8$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	$20^{+0.7}_{+0.5}$	24	R21	M8 \times 1.25

Bore	L	LL		MM	MR	TV	UB	WF	XC		YP	ZC		ZP
		5~10st*	15~30st**						5~10st*	15~30st**				
$\phi 32$	16.5	33	43	$\phi 16$	R12	$\square 34$	31	7	64	74	11	76	86	8
$\phi 40$	16	39.5	49.5	$\phi 16$	R14	$\square 40$	38	7	70.5	80.5	11.5	84.5	94.5	11.5
$\phi 50$	16	40.5	50.5	$\phi 20$	R14	$\square 50$	49	8	72.5	82.5	12	86.5	96.5	12

(Note) * $\phi 50$: 10~20st
 ** $\phi 40$: 15~50st
 $\phi 50$: 25~50st

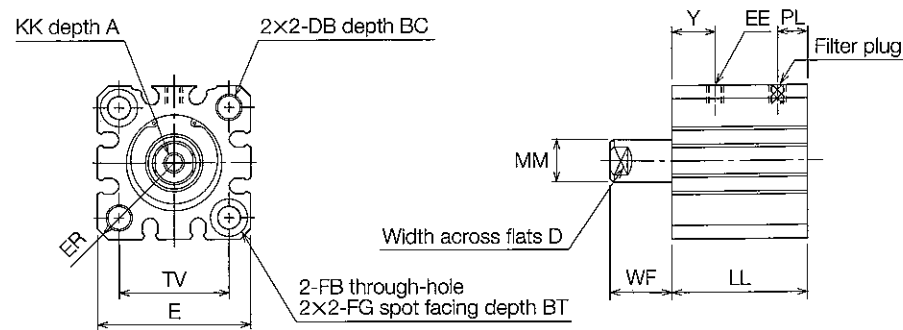
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

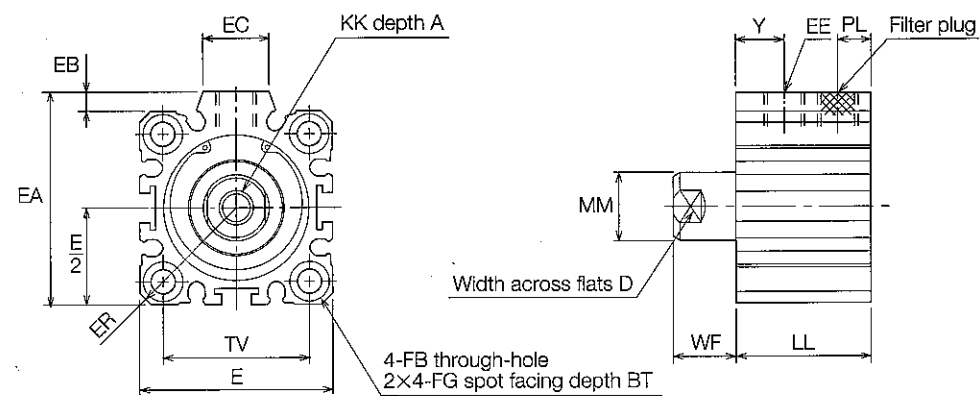
Single-acting, spring extend Basic type/N

(Unit : mm)

• Bore $\phi 12 \sim \phi 25$



• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	BD	D	DB	E	EA	EB	EC	EE	ER	FB	FG	KK
$\phi 12$	5	8	3.5	5	M4x0.7	□25	—	—	—	M5x0.8	R16	$\phi 3.4$	$\phi 6.5$	M2.6x0.45
$\phi 16$	5	8	3.5	6	M4x0.7	□29	—	—	—	M5x0.8	R19	$\phi 3.4$	$\phi 6.5$	M3x0.5
$\phi 20$	6	10	5.4	8	M6x1	□36	—	—	—	M5x0.8	R23.5	$\phi 5.5$	$\phi 9$	M4x0.7
$\phi 25$	10	10	5.4	10	M6x1	□40	—	—	—	M5x0.8	R26	$\phi 5.5$	$\phi 9$	M5x0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc1/8	R30	$\phi 5.5$	$\phi 9$	M6x1
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc1/8	R34.5	$\phi 5.5$	$\phi 9$	M6x1
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc1/4	R42.5	$\phi 6.5$	$\phi 11$	M8x1.25

Bore	LL			MM	PL		TV	WF			Y	
	5st	10st	20st		5st	More than 10st		5st	10st	20st	5st	More than 10st
$\phi 12$	22	27	—	$\phi 6$	5	5	□15.5	8.5	13.5	—	8.5	9.5
$\phi 16$	22	27	—	$\phi 8$	5	5	□20	8.5	13.5	—	8.5	9.5
$\phi 20$	26.5	31.5	—	$\phi 10$	6	7	□25.5	9.5	14.5	—	9	10
$\phi 25$	27.5	32.5	—	$\phi 12$	6	7	□28	10	15	—	9	10
$\phi 32$	28	33	—	$\phi 16$	6	8	□34	12	17	—	10	11
$\phi 40$	34.5	39.5	—	$\phi 16$	10	11.5	□40	12	17	—	10	11.5
$\phi 50$	—	40.5	50.5	$\phi 20$	—	12	□50	—	18	28	—	12

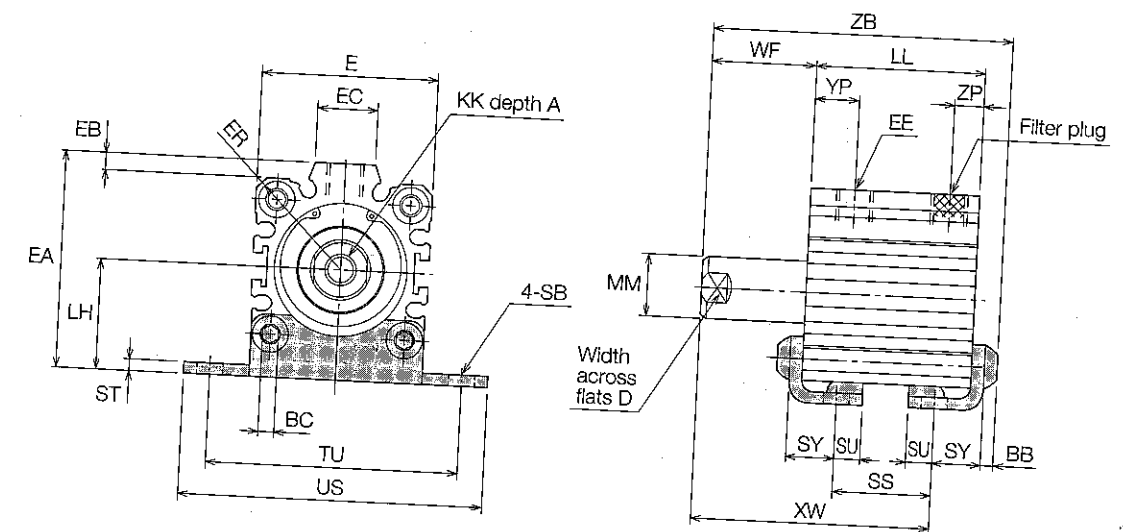
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Side lug mounting/M

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) X1C0-32-5 cannot be manufactured. (Bracket will interfere unless stroke for more than 10 mm.)

Bore	A	BB	BC	D	E	EA	EB	EC	EE	ER	KK	LH	LL			MM	SB
													5st	10st	20st		
$\phi 32$	11	4	4	14	45	55.5	4.5	15	Rc1/8	R30	M6x1	28.5	—	33	—	$\phi 16$	$\phi 6.6$
$\phi 40$	11	4	4	14	52	63.5	5	17.5	Rc1/8	R34.5	M6x1	32.5	34.5	39.5	—	$\phi 16$	$\phi 6.6$
$\phi 50$	13	5	5	17	64	77	7	19	Rc1/4	R42.5	M8x1.25	38	—	40.5	50.5	$\phi 20$	$\phi 9$

Bore	SS			ST	SU	SY	TU	US	WF			XW			YP		ZB		ZP		
	5st	10st	20st						5st	10st	20st	5st	10st	20st	5st	More than 10st	5st	10st	20st	5st	More than 10st
$\phi 32$	—	14.4	—	3.2	6.5	12.5	65	78	—	17	—	—	40.7	—	—	11	—	57.2	—	—	
$\phi 40$	15.9	20.9	—	3.2	6.5	12.5	73	87	12	17	—	—	37.2	47.2	—	10	11.5	53.7	63.7	—	8
$\phi 50$	—	18.9	28.9	3.2	8	14	87	103	—	18	28	—	47.7	67.7	—	12	—	66.7	86.7	—	12

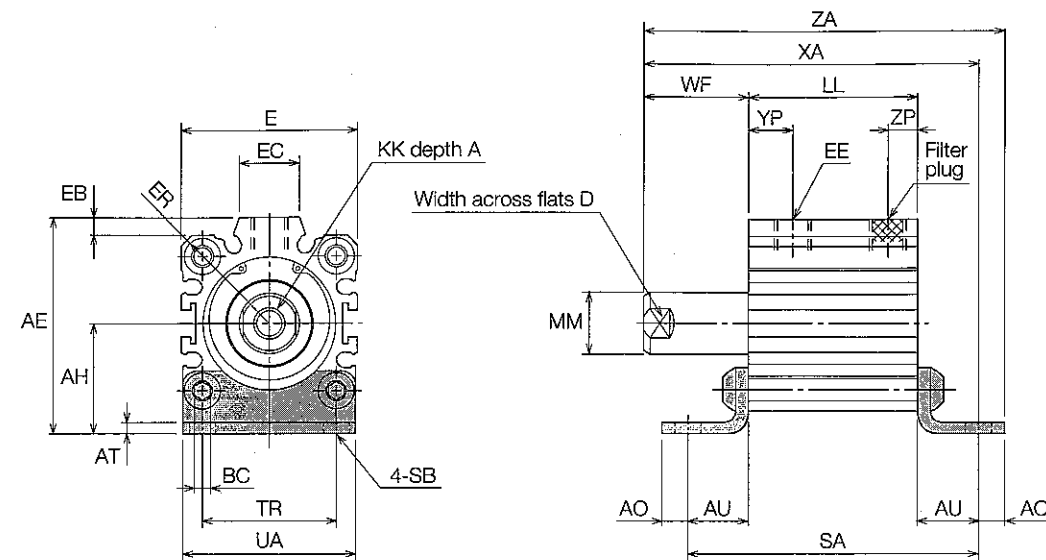
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Axial foot mounting/L

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	AE	AH	AO	AT	AU	BC	D	E	EB	EC	EE	ER	KK	LL		
															5st	10st	20st
$\phi 32$	11	55.5	28.5	7	3.2	15	4	14	45	4.5	15	Rc $\frac{1}{8}$	R30	M6x1	28	33	—
$\phi 40$	11	63.5	32.5	7	3.2	15	4	14	52	5	17.5	Rc $\frac{1}{8}$	R34.5	M6x1	34.5	39.5	—
$\phi 50$	13	77	38	9	3.2	18	5	17	64	7	19	Rc $\frac{1}{4}$	R42.5	M8x1.25	—	40.5	50.5

Bore	MM	SA			SB	TR	UA	WF			XA			YP			ZA			ZP	
		5st	10st	20st				5st	10st	20st	5st	10st	20st	5st	More than 10st	5st	10st	20st	5st	More than 10st	
$\phi 32$	$\phi 16$	58	63	—	$\phi 6.6$	34	45	12	17	—	55	65	—	10	11	62	72	—	6	8	
$\phi 40$	$\phi 16$	64.5	69.5	—	$\phi 6.6$	40	53	12	17	—	61.5	71.5	—	10	11.5	68.5	78.5	—	10	11.5	
$\phi 50$	$\phi 20$	—	76.5	86.5	$\phi 9$	50	64	—	18	28	—	76.5	96.5	—	12	—	85.5	105.5	—	12	

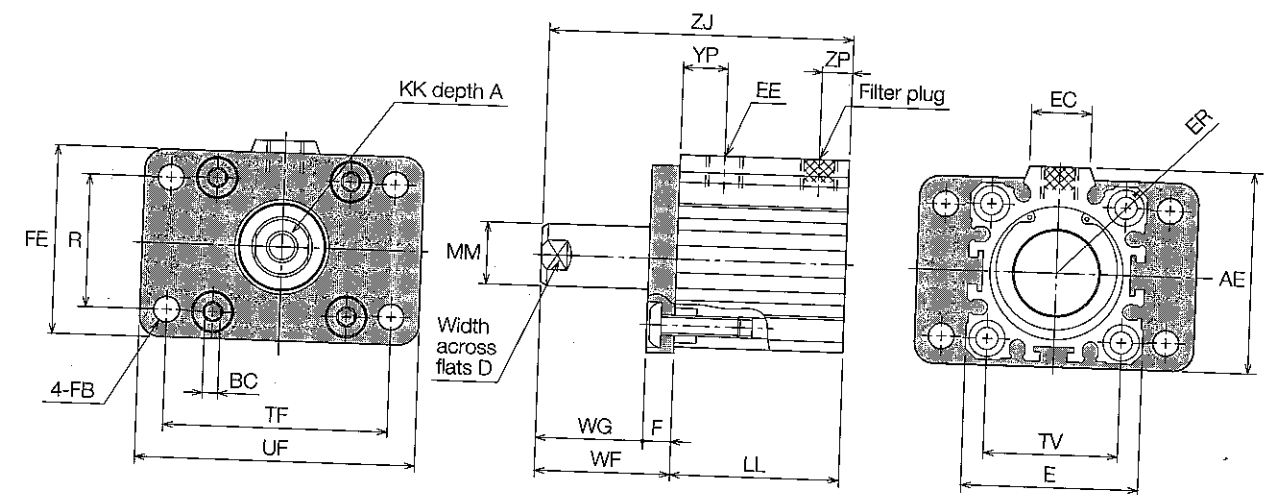
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Rod side flange mounting/A

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) As the head side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK	LL		
													5st	10st	20st
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6x1	28	33	—
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6x1	34.5	39.5	—
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8x1.25	—	40.5	50.5

Bore	MM	R	TV	TF	UF	WF			WG			YP		ZJ			ZP	
						5st	10st	20st	5st	10st	20st	5st	More than 10st	5st	10st	20st	5st	More than 10st
$\phi 32$	$\phi 16$	33	$\square 34$	58	72	20	25	—	12	17	—	10	11	48	58	—	6	8
$\phi 40$	$\phi 16$	36	$\square 40$	70	84	22	27	—	12	17	—	10	11.5	56.5	66.5	—	10	11.5
$\phi 50$	$\phi 20$	47	$\square 50$	86	104	—	28	38	—	18	28	—	12	—	68.5	88.5	—	12

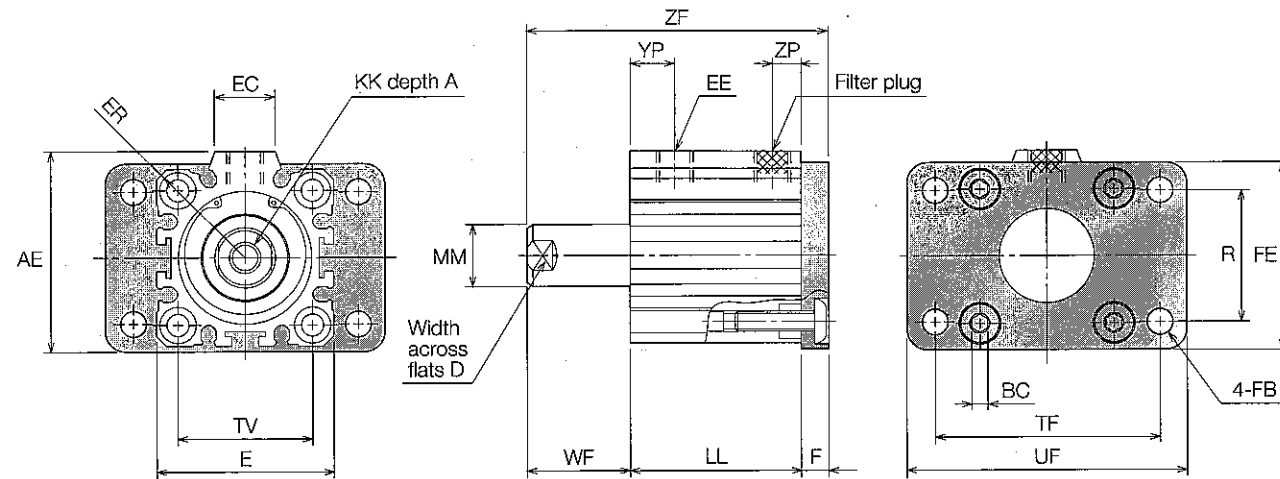
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Head side flange mounting/B

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



(Note) As the rod side is not tapped, flange fittings cannot be mounted.

Bore	A	AE	BC	D	E	EC	EE	ER	F	FB	FE	KK	LL		
													5st	10st	20st
$\phi 32$	11	51	4	14	$\square 45$	15	Rc $\frac{1}{8}$	R30	8	$\phi 7$	48	M6 \times 1	28	33	—
$\phi 40$	11	59	4	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	10	$\phi 7$	56	M6 \times 1	34.5	39.5	—
$\phi 50$	13	74	5	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	10	$\phi 9$	70	M8 \times 1.25	—	40.5	50.5

Bore	MM	R	TV	TF	UF	WF			YP		ZF			ZP	
						5st	10st	20st	5st	More than 10st	5st	10st	20st	5st	More than 10st
$\phi 32$	$\phi 16$	33	$\square 34$	58	72	12	17	—	10	11	48	58	—	6	8
$\phi 40$	$\phi 16$	36	$\square 40$	70	84	12	17	—	10	11.5	56.5	66.5	—	10	11.5
$\phi 50$	$\phi 20$	47	$\square 50$	86	104	—	18	28	—	12	—	68.5	88.5	—	12

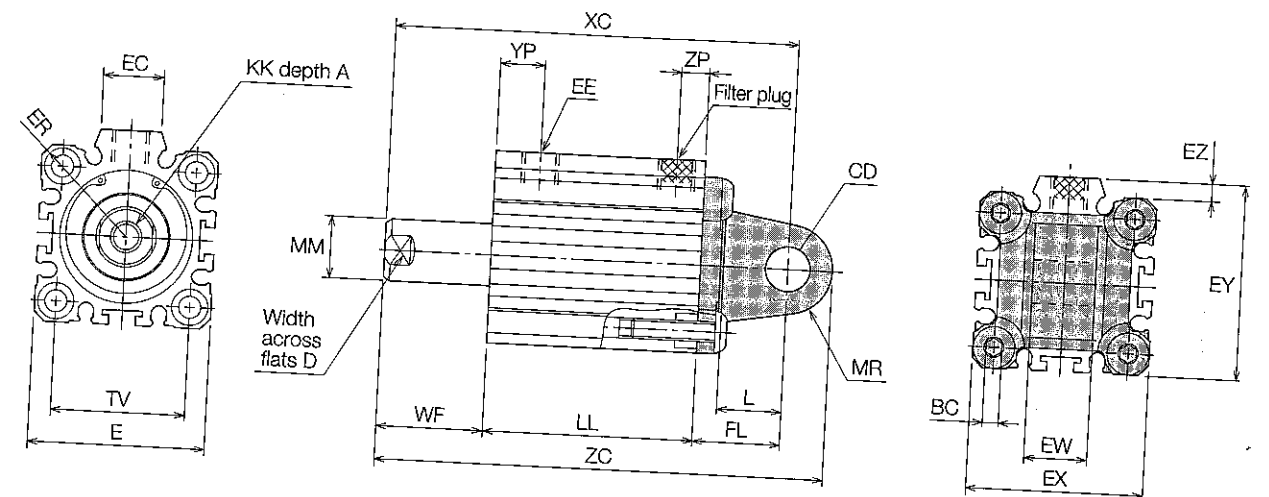
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Eye mounting/C

(Unit : mm)

• Bore $\phi 32 \sim \phi 50$



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	KK
$\phi 40$	11	4	$\phi 14H9$	14	$\square 52$	17.5	Rc $\frac{1}{8}$	R34.5	$\square 53$	57.5	4.5	20 ⁰ _{-0.084}	24	M6 \times 1
$\phi 50$	13	5	$\phi 14H9$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	20 ⁰ _{-0.084}	24	M8 \times 1.25

Bore	L	LL			MM	MR	TV	WF			XC			YP		ZC			ZP	
		5st	10st	20st				5st	10st	20st	5st	10st	20st	5st	More than 10st	5st	10st	20st	5st	More than 10st
$\phi 32$	16.5	28	33	—	$\phi 16$	R12	$\square 34$	12	17	—	64	74	—	10	11	76	86	—	6	8
$\phi 40$	16	34.5	39.5	—	$\phi 16$	R14	$\square 40$	12	17	—	70.5	80.5	—	10	11.5	84.5	94.5	—	10	11.5
$\phi 50$	16	—	40.5	50.5	$\phi 20$	R14	$\square 50$	—	18	28	—	82.5	102.5	—	12	—	96.5	116.5	—	12

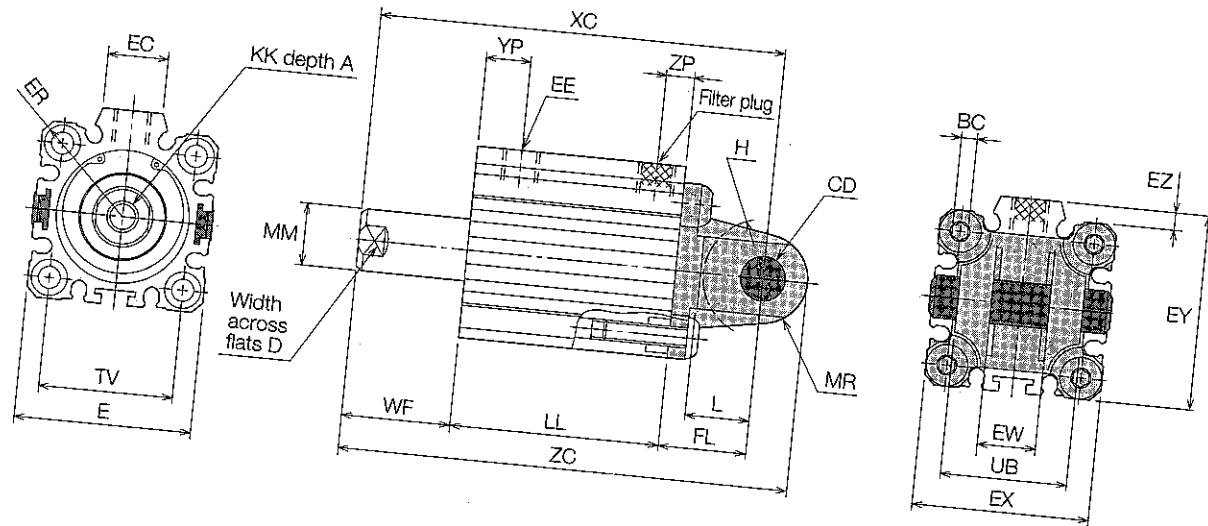
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Single-acting, spring extend Clevis mounting/W

• Bore $\phi 32 \sim \phi 50$

(Unit: mm)



Bore	A	BC	CD	D	E	EC	EE	ER	EX	EY	EZ	EW	FL	H	KK	L
$\phi 32$	11	4	$\phi 12H9/f8$	14	$\square 45$	15	Rc $\frac{1}{4}$	R30	$\square 45$	49.5	4.5	$16^{+0.7}_{+0.5}$	24	R16.5	M6x1	16.5
$\phi 40$	11	4	$\phi 14H9/f8$	14	$\square 52$	17.5	Rc $\frac{1}{4}$	R34.5	$\square 53$	57.5	4.5	$20^{+0.7}_{+0.5}$	24	R18	M6x1	16
$\phi 50$	13	5	$\phi 14H9/f8$	17	$\square 64$	19	Rc $\frac{1}{4}$	R42.5	$\square 64$	71	7	$20^{+0.7}_{+0.5}$	24	R21	M8x1.25	16

Bore	LL			MM	MR	TV	UB	WF			XC			YP			ZC			ZP	
	5st	10st	20st					5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	10st	20st	5st	More than 10st
$\phi 32$	28	33	—	$\phi 16$	R12	$\square 34$	31	12	17	—	64	74	—	10	11	76	86	—	6	8	
$\phi 40$	34.5	39.5	—	$\phi 16$	R14	$\square 40$	38	12	17	—	70.5	80.5	—	10	11.5	84.5	94.5	—	8	11.5	
$\phi 50$	—	40.5	50.5	$\phi 20$	R14	$\square 50$	49	—	18	28	—	82.5	102.5	—	12	—	96.5	116.5	—	12	

KURODA

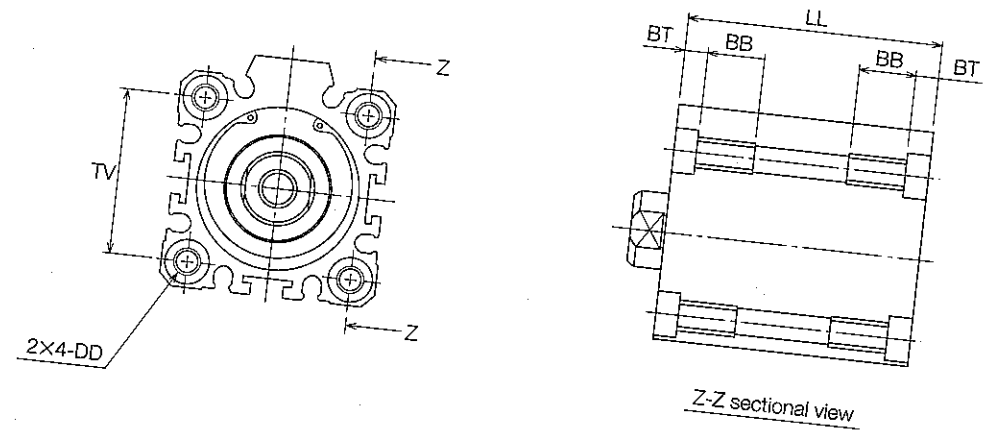
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

DIMENSIONS

Double-acting, Single-acting With double-sided tap/E

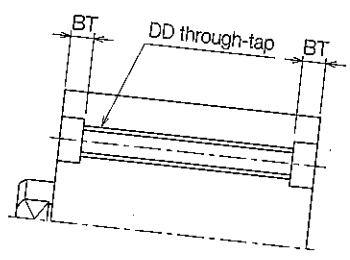
• Bore $\phi 32 \sim \phi 100$

(Unit: mm)



(Note) When size LL is smaller than values mentioned in the following table, a through-tap is used.

Bore	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
LL	38	39.5	45.5	61	73.5	73



(Note) • For other size than shown in this Fig., refer to basic type.
• Single-acting type of up to $\phi 50$ is available.

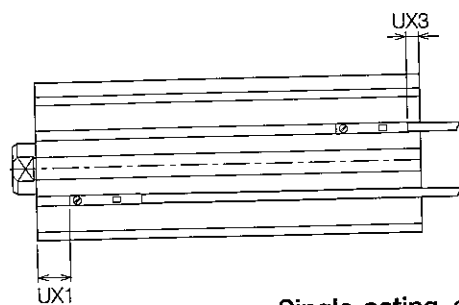
Bore	BB	BT	DD	TV
$\phi 32$	12	5.4	M 6x1	$\square 34$
$\phi 40$	12	5.4	M 6x1	$\square 40$
$\phi 50$	14	8	M 8x1.25	$\square 50$
$\phi 63$	18	10.5	M10x1.5	$\square 60$
$\phi 80$	22	13.5	M12x1.75	$\square 77$
$\phi 100$	22	13.5	M12x1.75	$\square 94$

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

SWITCH SETTING POSITION

(Unit : mm)

Bore $\phi 12 \sim \phi 100$



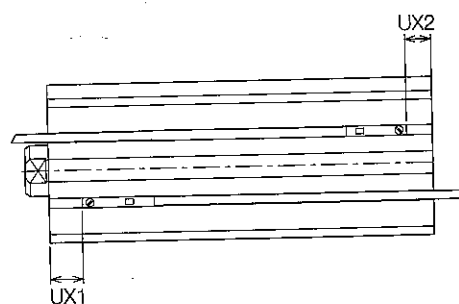
WITH ZE TYPE REED SWITCH

• Double-acting, single rod

Bore	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
UX1	2.5	2.5	6.7	6.3	7.8	12.3	12	14.5	17.5	20.5
UX2	0	0	4.8	6.2	5.2	7.2	8.5	11.5	16	22.5
UX3	-3	-3	2.8	4.2	3.2	5.2	6.5	9.5	14	20.5

• Single-acting, spring return

Bore	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$
Stroke	5~10	15~20	5~10	15~30	5~10	15~30	5~10
UX1	7	12	7	12	6.7	11.7	6.3
UX2	4	4	4	4	4.8	4.8	6.2
UX3	-7	-7	-7	-7	2.8	2.8	4.2



WITH ZE TYPE SOLID-STATE SWITCH

• Double-acting, single rod

Bore	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
UX1	7	7	10.7	10.3	11.8	16.3	16	18.5	21.5	24.5
UX2	4	4	8.8	10.2	9.2	11.2	12.5	15.5	20	26.5
UX3	-7	-7	-1.2	0.2	-0.8	1.2	2.5	5.5	10	16.5

• Single-acting, spring return

Bore	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$
Stroke	5~10	15~20	5~10	15~30	5~10	15~30	5~10
UX1	7	12	7	12	10.7	15.7	10.3
UX2	4	4	4	4	8.8	8.8	10.2
UX3	-7	-7	-7	-7	-1.2	-1.2	0.2

HYSTERESIS AND RESPONSE RANGE OF SWITCH

(Unit : mm)

Bore	ZE type reed switch		ZE type solid-state switch	
	Response range	Hysteresis	Response range	Hysteresis
$\phi 12$	4.5~8.5	Below 1	2~4	Below 1
$\phi 16$	5.5~9.5	Below 2	2~5	
$\phi 20$	8~12.5	Below 1.5	2~6	
$\phi 25$	9~13		2.5~6	
$\phi 32$	7.5~12		2~6	
$\phi 40$	9~13		2.5~5.5	
$\phi 50$	10~14	3~7	Below 1.5	
$\phi 63$	11~15.5	3~7		
$\phi 80$	11~15.5	Below 2		3.5~8
$\phi 100$	12~16.5	4~8.5		4~8.5

MINIMUM STROKE OF CYLINDER WITH SWITCH

(Unit : mm)

Bore	With 2 units (on the same surface)	With 1 unit
	With 2 units (on different surface)	
$\phi 12 \sim \phi 100$	10	10

(Note) Two switches can be mounted at stroke of 5mm. However, there is the possibility that an overlap occur.

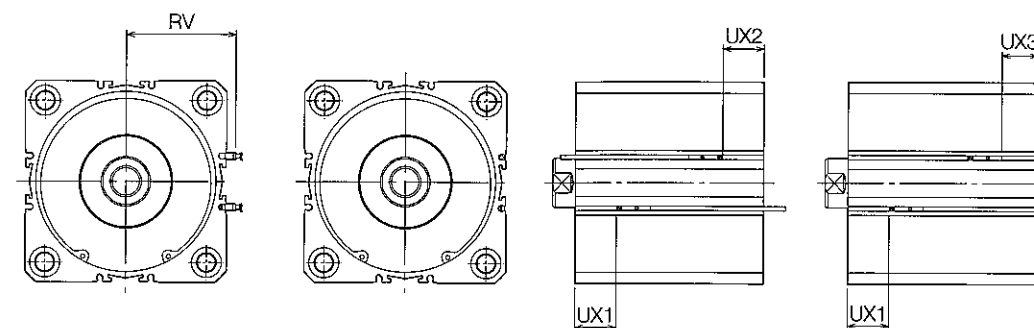
COMPACT AIR CYLINDER/STANDARD TYPE X1 series

SWITCH SETTING POSITION

(Unit : mm)

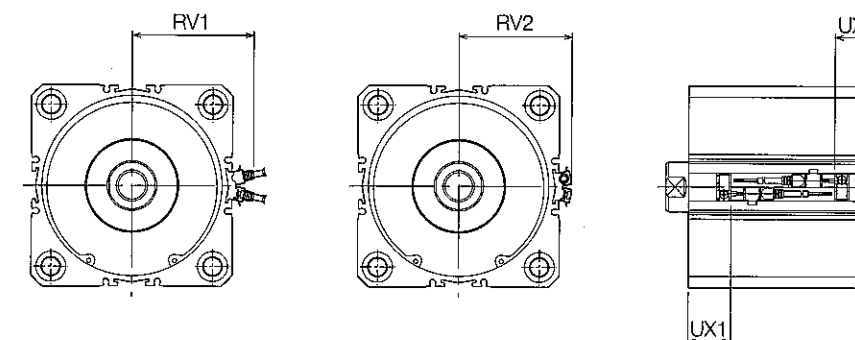
Bore $\phi 125 \sim \phi 160$

WITH ZE TYPE SWITCH



Bore	Optimum set position (Reed switch)			Optimum set position (Solid-state switch)			RV
	UX1	UX2	UX3	UX1	UX2	UX3	
$\phi 125$	38	33	23	34	29	27	77.5
$\phi 140$	38	33	23	34	29	27	85.5
$\phi 160$	44	35	25	40	31	29	95.5

WITH AX, AZ TYPE SWITCH



Bore	Optimum set position		RV1	RV2
	UX1	UX2		
$\phi 125$	35	30	86.5	80
$\phi 140$	35	30	95	88.5
$\phi 160$	41	32	104.5	98

Both reed switch and solid-state switch optimum set position of reed switch is the same as that of solid-state switch.

HYSTERESIS AND RESPONSE RANGE OF SWITCH

(Unit : mm)

Bore	ZE type reed switch		ZE type solid-state switch		AX, AZ type reed switch		AX, AZ type solid-state switch	
	Response range	Hysteresis	Response range	Hysteresis	Response range	Hysteresis	Response range	Hysteresis
$\phi 125$	10~17	Below 2	4~9	Below 1.5	8~5	Below 1.5	5~11	Below 1
$\phi 140$								
$\phi 160$								

MINIMUM STROKE OF CYLINDER WITH SWITCH

(Unit : mm)

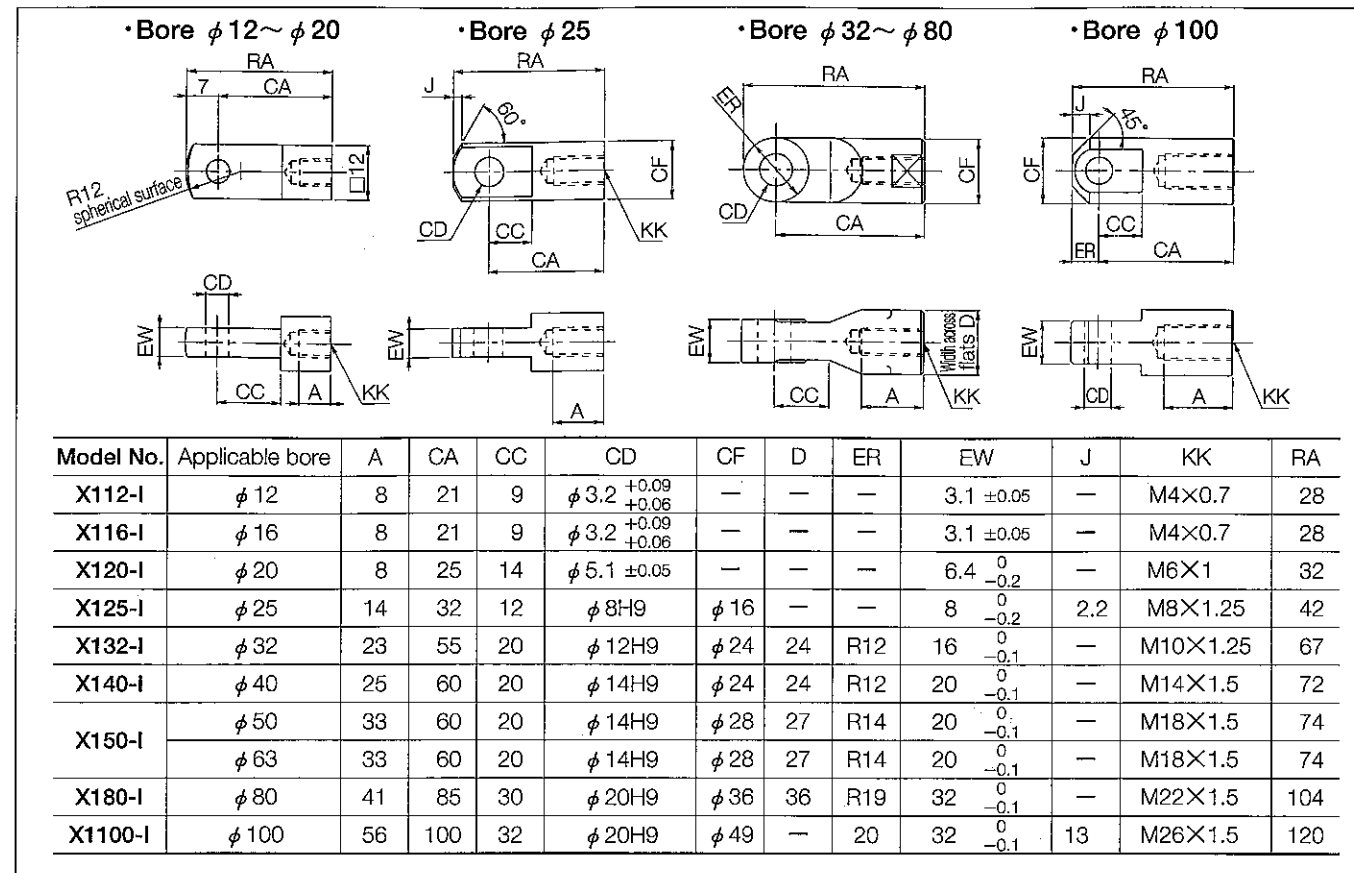
Bore	ZE type		AX, AZ type	
	With 2 units (on different surface)	With 1 unit	With 2 units (on the same surface)	With 1 unit
$\phi 125$	10	10	10	10
$\phi 140$				
$\phi 160$				

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

SWITCH SETTING POSITION

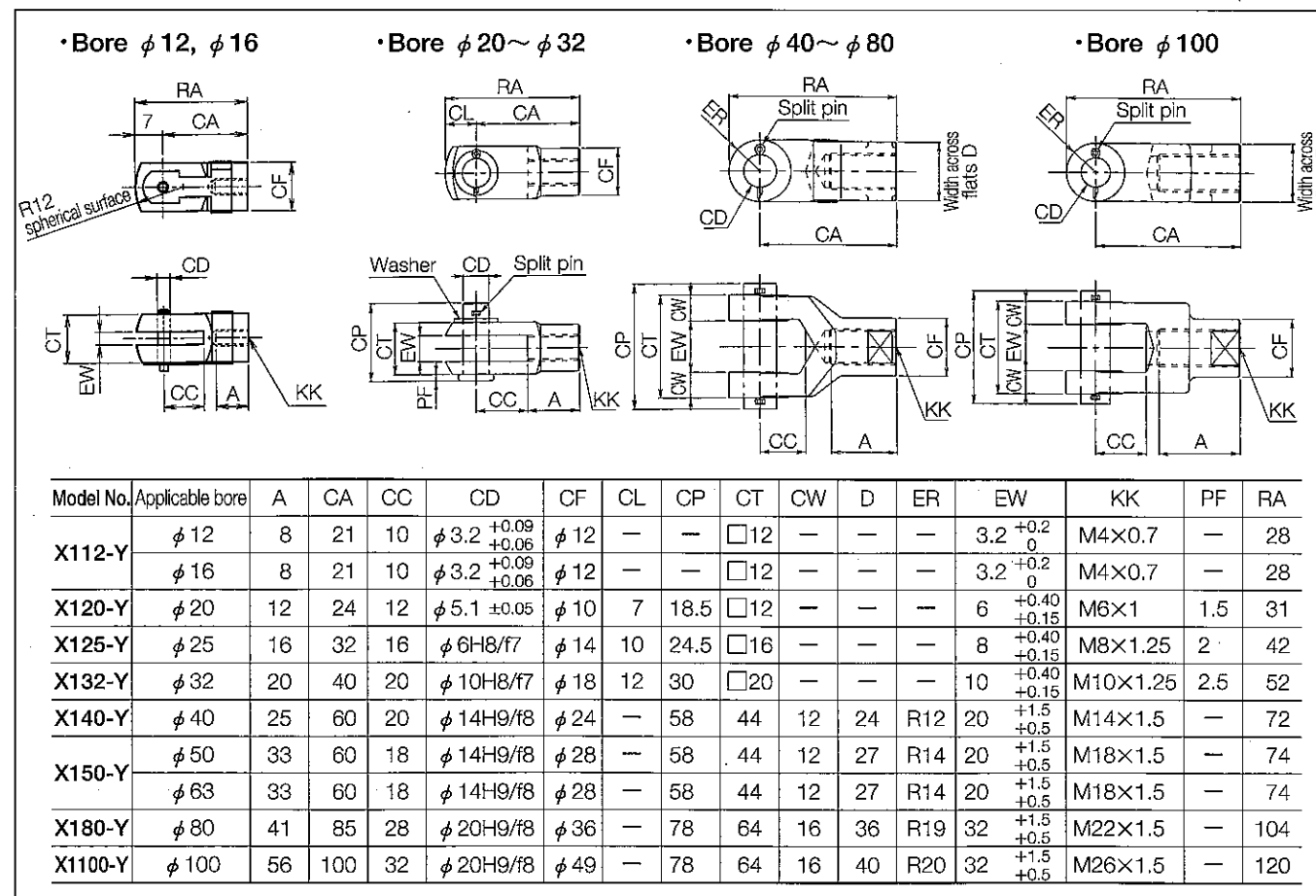
Rod end eye

(Unit : mm)



Rod end clevis

(Unit : mm)

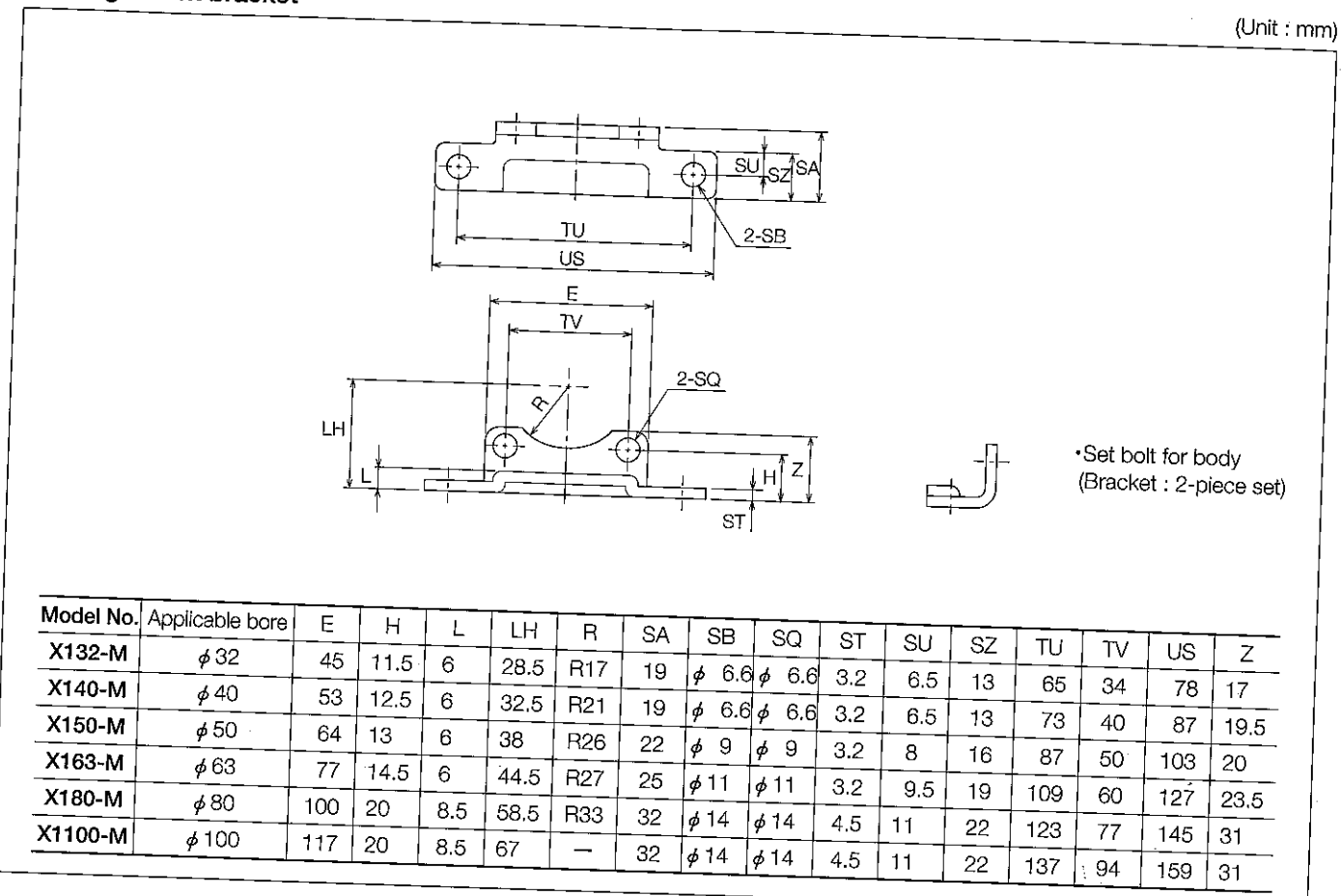


COMPACT AIR CYLINDER/STANDARD TYPE X1 series

ACCESSORIES

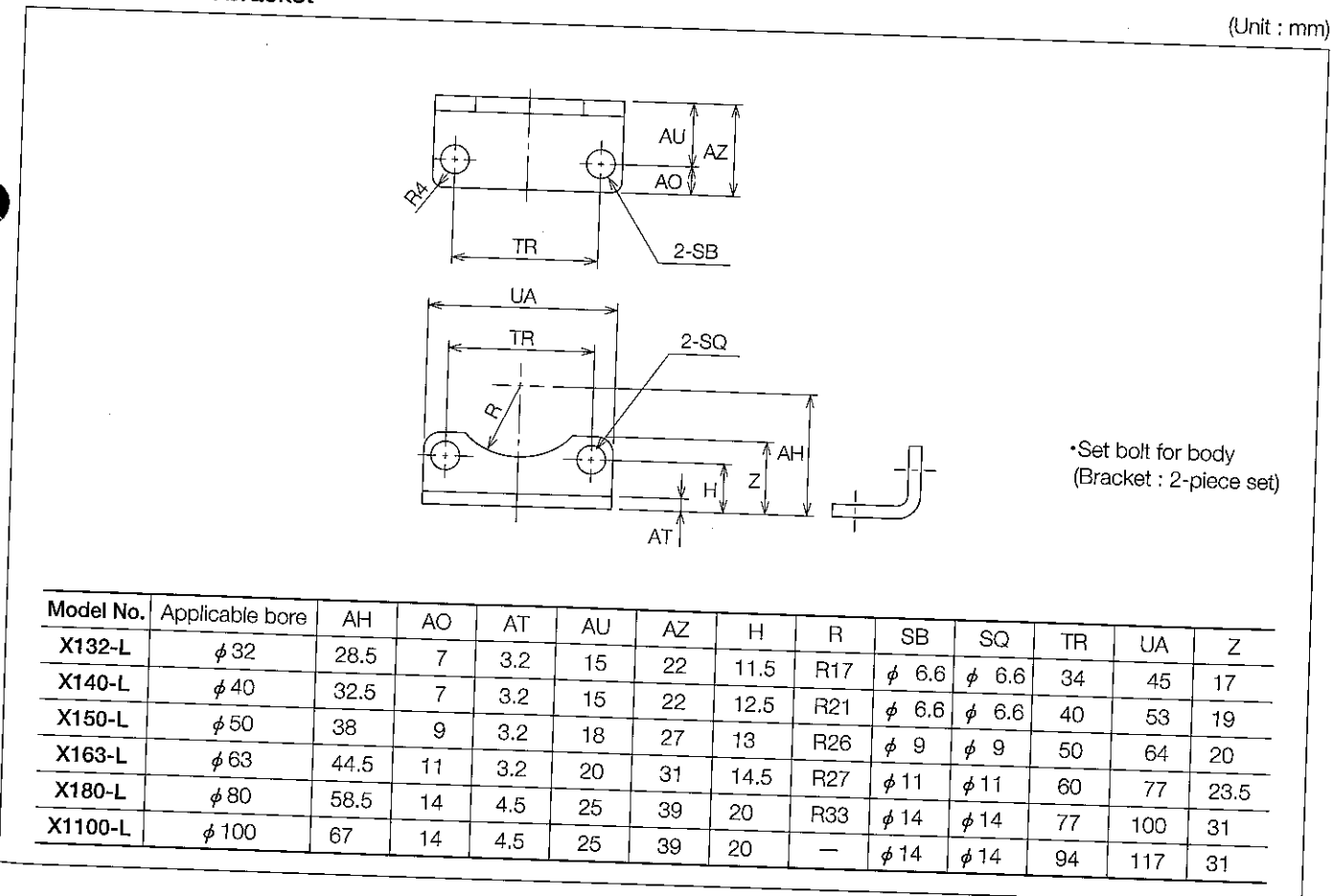
Side lug mount bracket

(Unit : mm)



Axial foot mount bracket

(Unit : mm)

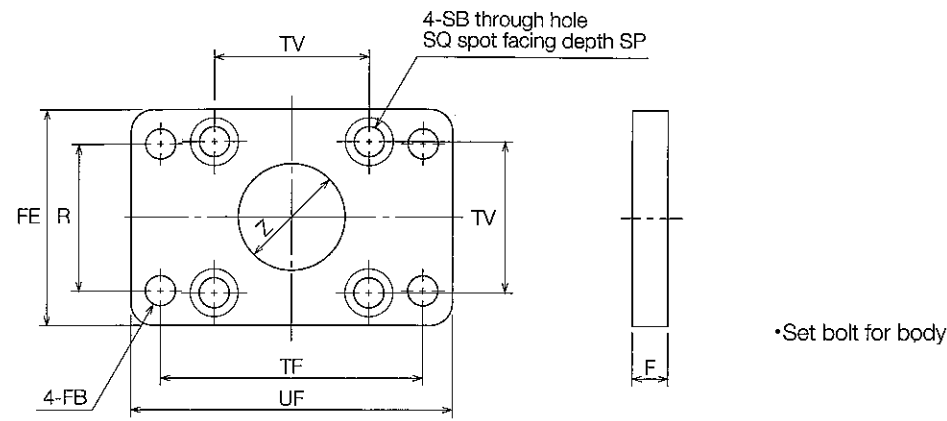


COMPACT AIR CYLINDER/STANDARD TYPE X1 series

ACCESSORIES

Flange mount bracket

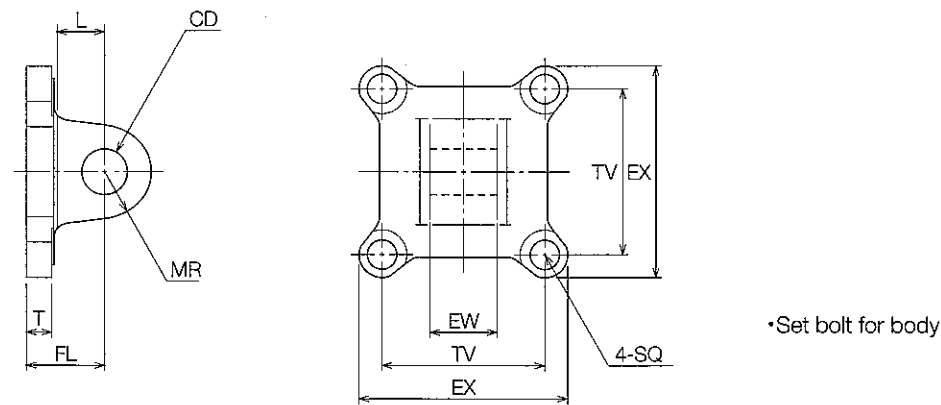
(Unit : mm)



Model No.	Applicable bore	F	FB	FE	R	SB	SP	SQ	TF	TV	UF	Z
X132-A	φ 32	8	φ 7	48	33	φ 6.6	4.5	11	58	34	72	φ 24
X140-A	φ 40	10	φ 7	56	36	φ 6.6	4.5	11	70	40	84	φ 30
X150-A	φ 50	10	φ 9	70	47	φ 9	5.5	15	86	50	104	φ 37
X163-A	φ 63	10	φ 9	84	56	φ 11	6.5	19	98	60	116	φ 41
X180-A	φ 80	16	φ 12	105	70	φ 14	7.5	22	126	77	150	φ 51
X1100-A	φ 100	16	φ 12	121	84	φ 14	7.5	22	143	94	165	φ 56

Eye mount bracket

(Unit : mm)



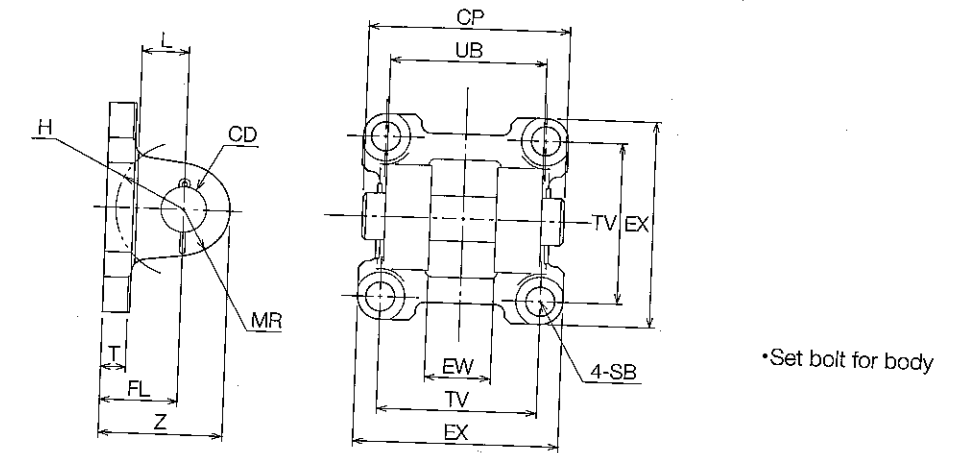
Model No.	Applicable bore	CD	EW	EX	FL	L	MR	SQ	T	TV
X132-C	φ 32	φ 12H9/ f8 ^{+0.043} / ₀	16 ⁰ / _{-0.084}	45	24	16.5	R12	φ 6.6	6	34
X140-C	φ 40	φ 14H9/ f8 ^{+0.043} / ₀	20 ⁰ / _{-0.084}	53	24	16	R14	φ 6.6	6.5	40
X150-C	φ 50	φ 14H9/ f8 ^{+0.043} / ₀	20 ⁰ / _{-0.084}	64	24	16	R14	φ 9	6.5	50
X163-C	φ 63	φ 14H9/ f8 ^{+0.043} / ₀	20 ⁰ / _{-0.084}	77	24	16	R14	φ 11	6.5	60
X180-C	φ 80	φ 20H9/ f8 ^{+0.052} / ₀	32 ⁰ / _{-0.100}	100	32	21	R19	φ 14	9.5	77
X1100-C	φ 100	φ 20H9/ f8 ^{+0.052} / ₀	32 ⁰ / _{-0.100}	117	32	21	R19	φ 14	9.5	94

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

ACCESSORIES

Clevis mount bracket

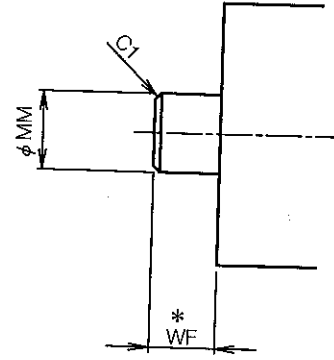
(Unit : mm)



Model No.	Applicable bore	CD	CP	EW	EX	FL	H	L	MR	SB	T	TV	UB	Z
X132-W	φ 32	φ 12H9/ f8	46	16 ^{+0.7} / _{+0.5}	45	24	R17	16.5	R12	φ 6.6	6	34	31	36
X140-W	φ 40	φ 14H9/ f8	52	20 ^{+0.7} / _{+0.5}	53	24	R18	15	R14	φ 6.6	7.5	40	38	38
X150-W	φ 50	φ 14H9/ f8	63	20 ^{+0.7} / _{+0.5}	64	24	R21	15	R14	φ 9	7.5	50	49	38
X163-W	φ 63	φ 14H9/ f8	66	20 ^{+0.7} / _{+0.5}	77	24	R22	15	R14	φ 11	7.5	60	52	38
X180-W	φ 80	φ 20H9/ f8	78	32 ^{+0.7} / _{+0.5}	100	32	R30	20	R19	φ 14	10.5	77	64	51
X1100-W	φ 100	φ 20H9/ f8	78	32 ^{+0.7} / _{+0.5}	117	32	R30	20	R19	φ 14	10.5	94	64	51

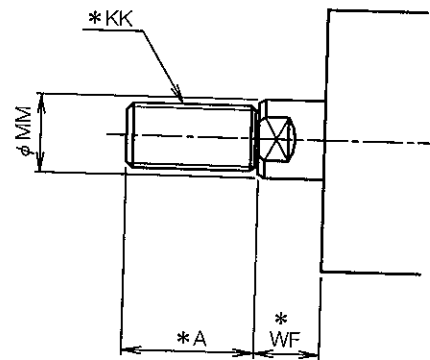
SPECIAL ROD END SHAPES (Custom-made)

Designation Mark
A10



Bore	MM	WF	Bore	MM	WF
φ 12	6	8	φ 63	20	10
φ 16	8	8	φ 80	25	14
φ 20	10	8	φ 100	30	14
φ 25	12	10	φ 125	35	14
φ 32	16	10	φ 140	35	14
φ 40	16	10	φ 160	40	16
φ 50	20	10			

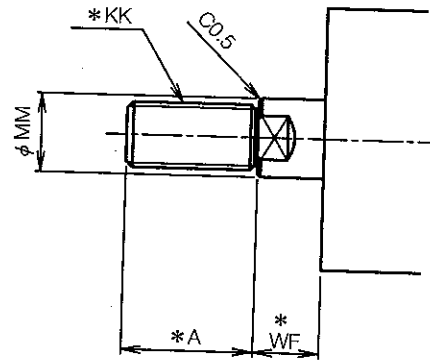
Designation Mark
A15



Bore	A	KK	MM	WF	Bore	A	KK	MM	WF
φ 12	10	M5×0.8	6	8	φ 63	36	M18×1.5	20	10
φ 16	12	M6×1	8	8	φ 80	44	M22×1.5	25	14
φ 20	16	M8×1.25	10	8	φ 100	52	M26×1.5	30	14
φ 25	20	M10×1.25	12	10	φ 125	60	M30×1.5	35	14
φ 32	28	M14×1.5	16	10	φ 140	60	M30×1.5	35	14
φ 40	28	M14×1.5	16	10	φ 160	72	M36×1.5	40	16
φ 50	36	M18×1.5	20	10					

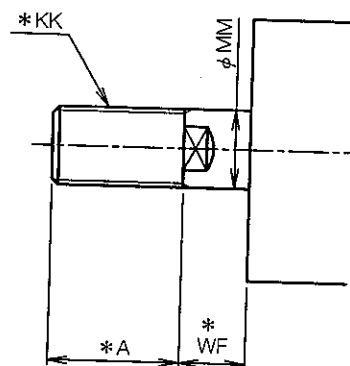
(Note) When ordering other size than standard for asterisked items, consult KURODA beforehand.

Designation Mark
A14



Bore	A	KK	MM	WF	Bore	A	KK	MM	WF
φ 12	10	M5×0.8	6	8	φ 63	36	M18×1.5	20	10
φ 16	12	M6×1	8	8	φ 80	44	M22×1.5	25	14
φ 20	16	M8×1.25	10	8	φ 100	52	M26×1.5	30	14
φ 25	20	M10×1.25	12	10	φ 125	60	M30×1.5	35	14
φ 32	28	M14×1.5	16	10	φ 140	60	M30×1.5	35	14
φ 40	28	M14×1.5	16	10	φ 160	72	M36×1.5	40	16
φ 50	36	M18×1.5	20	10					

Designation Mark
A16

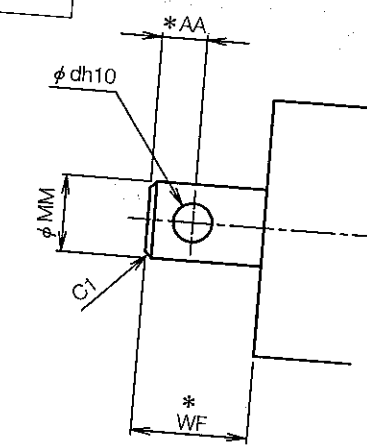


Bore	A	KK	MM	WF	Bore	A	KK	MM	WF
φ 12	10	M6×1	6	8	φ 32	28	M16×1.5	16	10
φ 16	12	M8×1.25	8	8	φ 40	28	M16×1.5	16	10
φ 20	16	M10×1.25	10	8	φ 50	36	M20×1.5	20	10
φ 25	20	M12×1.25	12	10	φ 63	36	M20×1.5	20	10

COMPACT AIR CYLINDER/STANDARD TYPE X1 series

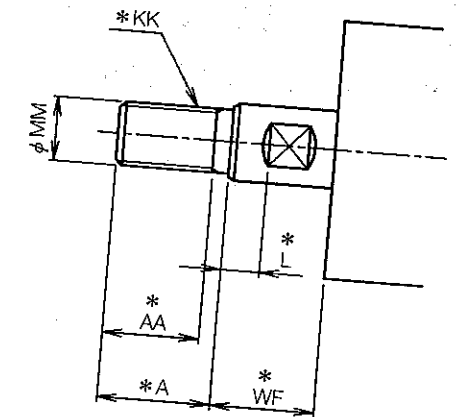
SPECIAL ROD END SHAPES (Custom-made)

Designation Mark
A20



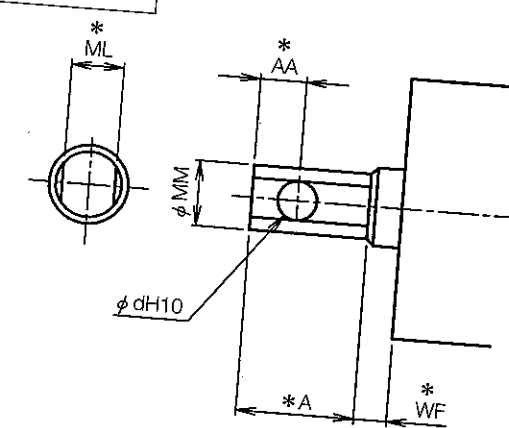
Bore	AA	d	MM	WF	Bore	AA	d	MM	WF
φ 12	3.5	3	6	9	φ 63	12	10	20	30
φ 16	5	4	8	12	φ 80	14	12	25	36
φ 20	6	5	10	15	φ 100	18	14	30	45
φ 25	7	6	12	18	φ 125	20	16	35	50
φ 32	8	8	16	24	φ 140	20	16	35	50
φ 40	8	8	16	24	φ 160	24	18	40	55
φ 50	12	10	20	30					

Designation Mark
A28



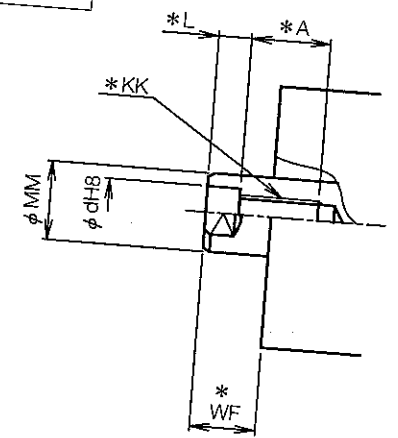
Bore	A	AA	KK	L	MM	WF	Bore	A	AA	KK	L	MM	WF
φ 12	10.5	9	M5×0.8	6	6	14	φ 63	28.5	25.5	M18×1.5	10	20	20
φ 16	12	10	M6×1	6	8	14	φ 80	35.5	32.5	M22×1.5	10	25	24
φ 20	14	12	M8×1.25	6	10	14	φ 100	35.5	32.5	M26×1.5	10	30	24
φ 25	17.5	15	M10×1.25	6	12	16	φ 125	45	42	M30×1.5	10	35	24
φ 32	23.5	20.5	M14×1.5	8	16	18	φ 140	45	42	M30×1.5	10	35	24
φ 40	23.5	20.5	M14×1.5	8	16	18	φ 160	50	47	M36×1.5	10	40	26
φ 50	28.5	25.5	M18×1.5	10	20	20							

Designation Mark
A30



Bore	A	AA	d	ML	MM	WF	Bore	A	AA	d	ML	MM	WF
φ 12	9	3.5	3	3.5	6	5	φ 63	30	12	10	12	20	5
φ 16	12	5	4	4	8	5	φ 80	36	14	12	14	25	5
φ 20	15	6	5	6	10	5	φ 100	45	18	14	18	30	5
φ 25	18	7	6	8	12	5	φ 125	50	20	16	22	35	5
φ 32	24	8	8	10	16	5	φ 140	50	20	16	22	35	5
φ 40	24	8	8	10	16	5	φ 160	55	24	18	28	40	5
φ 50	30	12	10	12	20	5							

Designation Mark
A37



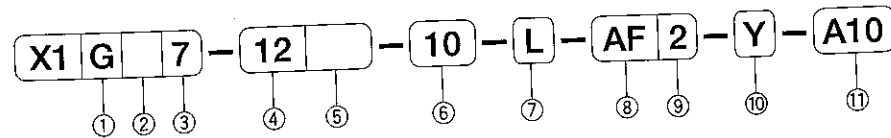
Bore	A	d	KK	L	MM	WF	Bore	A	d	KK	L	MM	WF
φ 20	7	6	M5×0.8	5	10	8	φ 63	15	12	M10×1.5	10	20	10
φ 25	12	8	M6×1	5	12	10	φ 80	21	18	M16×2	10	25	14
φ 32	13	10	M8×1.25	7	16	10	φ 100	27	20	M20×2.5	10	30	14
φ 40	13	10	M8×1.25	7	16	10	φ 125	30	26	M22×2.5	10	35	14
φ 50	15	12	M10×1.5	10	20	10	φ 140	30	26	M22×2.5	10	35	14
							φ 160	33	28	M24×3	10	40	16

COMPACT AIR CYLINDER/DOUBLE ROD TYPE

X1○7 series

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63,
φ 80, φ 100, φ 125, φ 140, φ 160

ORDERING INSTRUCTIONS



① Magnet

C	No magnet	
G	Built-in magnet	Cylinder with switch available

(Note) φ 125 to φ 160 : G type alone

② Piston rod end spec.

No symbol	Female threaded (Standard)
M	Male threaded

③ Action

7	Double-acting, double rod
---	---------------------------

④ Bore (mm)

12	φ 12	40	φ 40	125	φ 125
16	φ 16	50	φ 50	140	φ 140
20	φ 20	63	φ 63	160	φ 160
25	φ 25	80	φ 80		
32	φ 32	100	φ 100		

⑤ Cushion

No symbol	Damper cushion
N	Not provided

(Note) φ 12 and φ 16 : N (Not provided) alone

⑥ Stroke (mm)

Refer to Standard Strokes (Page 70).

⑦ Mounting

N	Basic type
E	Basic type (With double-sided tap)
M	Side lug
L	Axial foot
A	Rod side flange

(Note) φ 12 to φ 25 and φ 125 to φ 160 is N (Basic type) alone

⑧ Type of switch

No symbol	No switch	
KA	ZE101A	DC5~28V
KB	ZE101B	AC85~115V
KC	ZE102A	DC10~28V
KD	ZE102B	AC85~115V
KE	ZE201A	DC5~28V
KF	ZE201B	AC85~115V
KG	ZE202A	DC10~28V
KH	ZE202B	AC5~115V
AF	AX101	
AG	AX105	DC5~30V
AH	AX111	AC5~120V
AJ	AX115	
AE	AX125	DC5~50V AC5~120V
AK	AX11A	AC5~120V
AL	AX11B	DC5~30V
AP	AZ101	
AR	AZ105	DC5~30V
AS	AZ111	AC5~120V
AT	AZ115	
AN	AZ125	
AU	AZ11A	AC5~120V
AW	AZ11B	DC5~30V

No symbol	No switch	
KJ	ZE135A	DC10~28V
KK	ZE135B	
KL	ZE155A	DC4.5~28V
KM	ZE155B	
KN	ZE235A	DC10~28V
KP	ZE235B	
KR	ZE255A	DC4.5~28V
KS	ZE255B	
BE	AX201	
BF	AX205	
BH	AX221	
BJ	AX225	
CE	AX211	DC5~30V
CF	AX215	
BM	AZ201	
BN	AZ205	
CM	AZ211	
CN	AZ215	

(Note) φ 12 to φ 100 : Symbol KA to KS (ZE type switch) alone

⑨ Number of switch

No symbol	No switch
2	With 2 units
1	With 1 unit

⑩ Bracket at rod end

No symbol	No bracket
YY	With two rod end clevis
ll	With two rod end eye

(Note) When a rod end bracket is specified, the rod end is male-threaded.

⑪ Special shape of rod end

No symbol	Standard
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(Note) Refer to Pages 66 and 67.

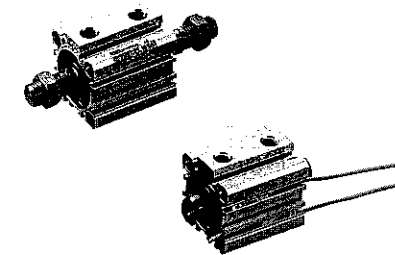
Model No. of Mounting Bracket

Bore (mm)	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Side lug mount bracket	X132-M	X140-M	X150-M	X163-M	X180-M	X1100-M
Foot mount bracket	X132-L	X140-L	X150-L	X163-L	X180-L	X1100-L
Flange mount bracket	X132-A	X140-A	X150-A	X163-A	X180-A	X1100-A

Model No. of Packing Kit

Bore (mm)	Packing kit
φ 12	X112-PSD
φ 16	X116-PSD
φ 20	X120-PSD
φ 25	X125-PSD
φ 32	X132-PSD
φ 40	X140-PSD
φ 50	X150-PSD
φ 63	X163-PSD
φ 80	X180-PSD
φ 100	X1100-PSD
φ 125	X1125-PSD
φ 140	X1140-PSD
φ 160	X1160-PSD

COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series



SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 160 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	φ 12, φ 16 : 0~60 (No dew condensation shall occur.) φ 20~φ 160 : -10~70 (No dew condensation shall occur.)
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 160 : 30~300
Cushion		φ 12, φ 16 : Not provided φ 20~φ 160 : Damper cushion
Piston stroke allowance	mm	φ 12~φ 100 ^{+0.1} ₀ φ 125~φ 160 ^{+1.4} ₀
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange

(Note) •Bracket can be fitted to each cylinder of bore φ 32 to φ 100.
•No bracket can be mounted on basic type cylinder, as it is not tapped.
•When ordering only a cylinder equipped with a bracket, choose one with double-side tap.

STANDARD STROKE

(Unit : mm)

Action	Bore (mm)	Standard stroke (mm)																								
		5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100	125	150	175	200	250	300	
Double-acting	φ 12	○	○	○	○	○																				
	φ 16	○	○	○	○	○																				
	φ 20	○	○	○	○	○	○																			
	φ 25	○	○	○	○	○	○	○																		
	φ 32	○	○	○	○	○	○	○	○																	
	φ 40	○	○	○	○	○	○	○	○	○																
	φ 50		○	○	○	○	○	○	○	○	○															
	φ 63			○	○	○	○	○	○	○	○	○														
	φ 80				○	○	○	○	○	○	○	○	○													
	φ 100					○	○	○	○	○	○	○	○	○												
φ 125						○		○		○		○								○	○	○	○	○	○	
φ 140								○		○		○								○	○	○	○	○	○	
φ 160										○		○								○	○	○	○	○	○	

(Note) •Intermediate stroke (Custom-made)
Intermediate stroke is basically prepared by cutting the tube. However, intermediate stroke for standard type (less than 5 mm strokes for bore φ 20 to φ 40 and less than 10 mm strokes for bore φ 50 to φ 100) is prepared by collaring.
Intermediate stroke for cylinder with switch is prepared by cutting the tube.
•When preparing intermediate stroke by cutting the tube, the additional stroke remains as intermediate stroke.
•When preparing intermediate stroke by collaring, the longer stroke becomes the standard stroke.
•Avoid using the cylinder in such a manner that it receives unbalanced load. Especially when using an oscillating type bracket, be sure to consult KURODA beforehand.

COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

CYLINDER FORCE (THEORETICAL OUTPUT)

(Unit : N)

Bore (mm)	Rod outside dia. (mm)	Operating pressure (MPa)									
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
φ 12	φ 6	8.5	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
φ 16	φ 8	15.1	30.2	45.2	60.3	75.4	90.5	106	121	136	151
φ 20	φ 10	23.6	47.1	70.7	94.2	118	141	165	188	212	236
φ 25	φ 12	37.8	75.6	113	151	189	227	264	302	340	378
φ 32	φ 16	60.3	121	181	241	302	362	422	483	543	603
φ 40	φ 16	106	211	317	422	528	633	739	844	950	1055
φ 50	φ 20	165	330	495	660	825	990	1155	1319	1484	1649
φ 63	φ 20	280	561	841	1121	1402	1682	1962	2242	2523	2803
φ 80	φ 25	454	907	1361	1814	2268	2721	3175	3629	4082	4536
φ 100	φ 30	715	1429	2144	2859	3574	4288	5003	5718	6432	7147
φ 125	φ 32	1147	2294	3440	4587	5734	6881	8027	9174	10321	11468
φ 140	φ 35	1443	2886	4330	5773	7216	8659	10102	11545	12989	14432
φ 160	φ 40	1885	3770	5655	7540	9425	11310	13195	15080	16965	18850

(Note) Output force of double-acting cylinder (Effective output)=Cylinder force (Theoretical output)×0.85

CYLINDER MASS

Double-acting, double rod (No magnet) (Unit : g)

Bore (mm)	Basic mass (Basic type)	Additional mass per stroke of 1 mm	Mounting bracket mass		
			Axial foot	Side lug	Flange
φ 12	30	1.6	—	—	—
φ 16	42	2.1	—	—	—
φ 20	76	3.1	—	—	—
φ 25	104	4.1	—	—	—
φ 32	169	5.7	96	84	210
φ 40	229	6.4	110	100	275
φ 50	362	9.8	160	150	415
φ 63	550	11.1	260	240	560
φ 80	1151	17.6	520	500	1515
φ 100	1973	24.4	590	580	1950
φ 125	5480	32.4	—	—	—
φ 140	6830	36.1	—	—	—
φ 160	9357	46.7	—	—	—

Double-acting, double rod (Built-in magnet) (Unit : g)

Bore (mm)	Basic mass (Basic type)	Additional mass per stroke of 1 mm	Mounting bracket mass		
			Axial foot	Side lug	Flange
φ 12	36.6	1.6	—	—	—
φ 16	52	2.1	—	—	—
φ 20	106	3.1	—	—	—
φ 25	142	4.1	—	—	—
φ 32	220	5.7	96	84	210
φ 40	301	6.4	110	100	275
φ 50	471	9.8	160	150	415
φ 63	706	11.1	260	240	560
φ 80	1398	17.6	520	500	1515
φ 100	2333	24.4	590	580	1950
φ 125	5480	32.4	—	—	—
φ 140	6830	36.1	—	—	—
φ 160	9357	46.7	—	—	—

COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

MODEL WITH SWITCH/For detailed specifications, handling precautions and mounting method of switches, refer to Page 86.

•ZE Type Switch

•AX Type Switch

•AZ Type Switch

LIST OF SWITCHES

Type	Symbol of switch	Load voltage range	Load current range	Protective circuit	Pilot lamp	Connection	Cord length	Applicable load							
Reed switch	[KA] ZE101A	DC5~28V	DC:40mA	Not provided	Not provided	0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Axial	1m	Miniature relay PLC							
	[KB] ZE101B	AC85~115V	AC:20mA				3m								
	[KC] ZE102A	DC10~28V	DC:5~40mA				1m								
	[KD] ZE102B	AC85~115V	AC:5~20mA	Not provided	LED (Lights up at ON.)	0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Axial	3m								
	[KE] ZE201A	DC5~28V	DC:40mA				1m								
	[KF] ZE201B	AC85~115V	AC:20mA	Not provided	LED (Lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	3m								
	[KG] ZE202A	DC10~28V	DC:5~40mA				1m								
	[KH] ZE202B	AC85~115V	AC:5~20mA				3m								
	[AF] AX101	DC5~30V AC5~120V	DC:5~40mA AC:5~20mA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m								
	[AG] AX105						5m								
	[AH] AX111			Provided	Not provided	Not provided	4-pin connector Cord direction : Axial		1.5m						
	[AJ] AX115								5m						
	[AE] AX125	DC5~30V AC5~120V	5~20mA	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	0.5m								
	[AK] AX11A	AC5~120V	5~40mA				0.5m								
	[AL] AX11B	DC5~30V	5~40mA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Perpendicular to axis	1.5m								
[AP] AZ101	DC5~30V AC5~120V	DC:5~40mA AC:5~20mA	Provided				Not provided	4-pin connector Cord direction : Axial	1.5m						
[AR] AZ105									5m						
[AS] AZ111	AC5~120V	DC:5~40mA AC:5~20mA	Not provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Perpendicular to axis	1.5m									
[AT] AZ115						5m									
[AN] AZ125	AC5~120V	5~20mA	Provided	LED (Red LED lights up at ON.)	4-pin connector Cord direction : Perpendicular to axis	0.5m									
[AU] AZ11A						0.5m									
[AW] AZ11B	DC5~50V	5~40mA	Solid-state switch	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	Miniature relay PLC IC circuit								
[KJ] ZE135A	DC10~28V	4~20mA						Provided	LED (Lights up at ON.)	0.15 mm ² 2-core, OD φ 2.6 mm Cord direction : Axial	1m				
[KK] ZE135B											3m				
[KL] ZE155A											1m				
[KM] ZE155B	DC4.5~28V	50mA						DC10~28V	4~20mA	0.15 mm ² 3-core, OD φ 2.6 mm Cord direction : Axial	3m				
[KN] ZE235A	DC10~28V	4~20mA									Provided	LED (Dual light : Red/green)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m	
[KP] ZE235B														5m	
[KR] ZE255A	DC4.5~28V	50mA						Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m				
[KS] ZE255B											5m				
[BE] AX201	DC5~30V	5~40mA						Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m				
[BF] AX205											5m				
[BH] AX221											200mA	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 3-core, OD φ 4 mm Cord direction : Axial	1.5m
[BJ] AX225															5m
[CE] AX211											5~40mA	Provided	LED (Dual light : Red/green)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial	1.5m
[CF] AX215															5m
[BM] AZ201			DC5~30V	5~40mA	Provided	LED (Red LED lights up at ON.)	0.3 mm ² 2-core, OD φ 4 mm Cord direction : Axial				1.5m				
[BN] AZ205											5m				
[CM] AZ211											1.5m				
[CN] AZ215											5m				

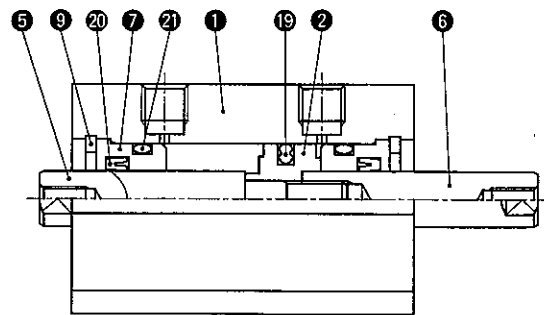
(Note) •When using inductive load (relay etc.) in a switch without a protective circuit, be sure to fit a protective circuit (SK-100) to the load.
•AX, AZ type switch : Mountable cylinder bore φ 125 to φ 160
•Every DC type switch can be used for a cylinder intended for AC200V by using a voltage-converting adaptor.

COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

CONSTRUCTIONS

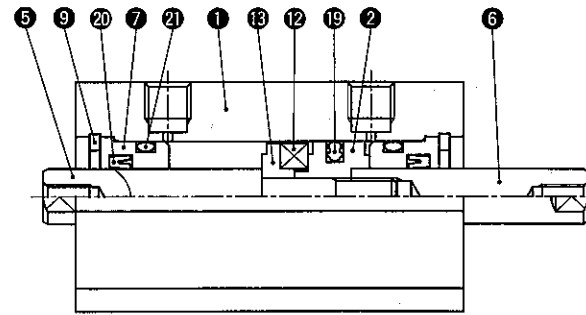
Double-acting, double rod (No magnet)/C

•Bore $\phi 12, \phi 16$

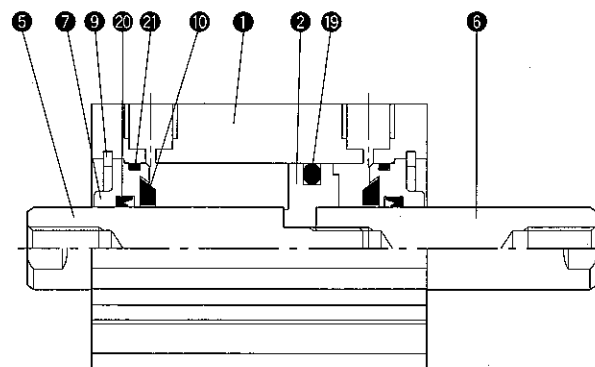


Double-acting double rod (Built-in magnet)/G

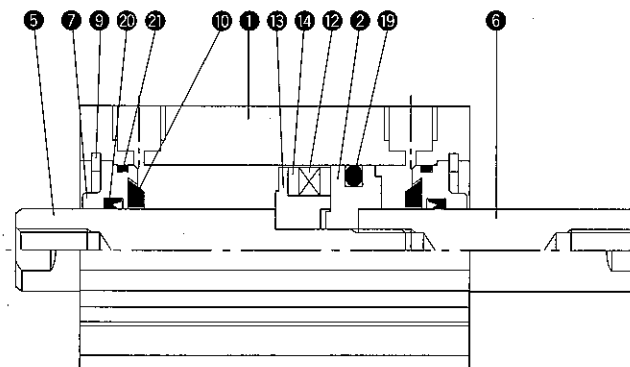
•Bore $\phi 12, \phi 16$



•Bore $\phi 20 \sim \phi 100$

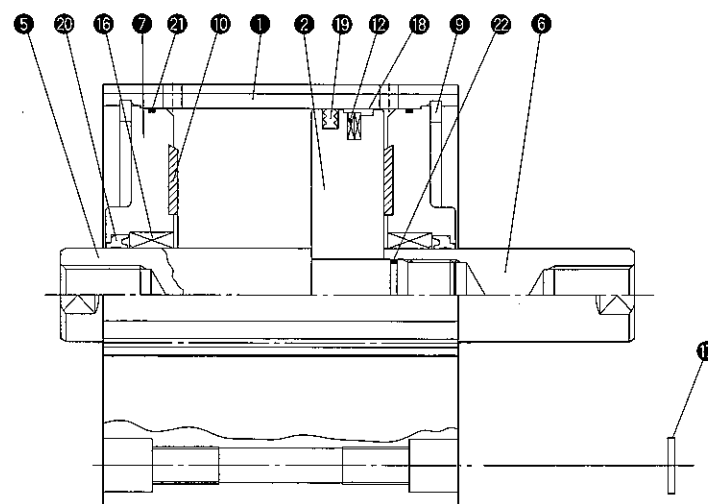


•Bore $\phi 20 \sim \phi 100$



•Bore $\phi 125 \sim \phi 160$

(Note) $\phi 125 \sim \phi 160$: Built-in magnet type (G type) alone



COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

PARTS LIST

No.	Description	Material
1	Cylinder body	Aluminium alloy
2	Piston	Aluminium alloy
5	Piston rod A	$\phi 12 \sim \phi 25$: Stainless steel (Hard chromium plating) $\phi 32 \sim \phi 160$: Carbon steel for machine structure (Hard chromium plating)
6	Piston rod B	$\phi 12 \sim \phi 25$: Stainless steel (Hard chromium plating) $\phi 32 \sim \phi 160$: Carbon steel for machine structure (Hard chromium plating)
7	Rod cover	$\phi 12 \sim \phi 100$: Aluminium alloy (Abrasion-resistant surface) $\phi 125 \sim \phi 160$: Cast iron
9	Snap ring	Carbon steel
10	Cushion pad	Urethane rubber
12	Magnet	—
13	Spacer	Aluminium alloy
14	Yoke	Cold rolled steel ($\phi 32$)
16	Bushing	Aluminium alloy (Abrasion-resistant surface)
17	Flat washer	Cold rolled steel plate
18	Wear ring	Synthetic resins

PACKING LIST

No.	Description	Material	Q'ty	Model No.					
				$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$
19	Piston packing	Nitril rubber	1	PSD-12	PSD-16	PWP-20N	PWP-25N	PWP-32N	PWP-40N
20	Rod packing	Nitril rubber	2	MYN-6	MYN-8	MYN-10	MYN-12	MYN-16	DRP-16
21	O-ring for rod cover	Nitril rubber	2	S-10	S-14	S-18	S-22	$\phi 29 \times \phi 1.5$	$\phi 39.5 \times \phi 1.5$

No.	Description	Material	Q'ty	Model No.			
				$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
19	Piston packing	Nitril rubber	1	PWP-50N	PWP-63N	PWP-80N	PWP-100N
20	Rod packing	Nitril rubber	2	DRP-20	DRP-20	DRP-25	DRP-30
21	O-ring for rod cover	Nitril rubber	2	$\phi 49.5 \times \phi 1.5$	$\phi 61.5 \times \phi 1.5$	$\phi 77.3 \times \phi 1.5$	$\phi 98.5 \times \phi 2$

No.	Description	Material	Q'ty	Model No.		
				$\phi 125$	$\phi 140$	$\phi 160$
19	Piston packing	Nitril rubber	1	PWP-125N	PWP-140N	PWP-160N
20	Rod packing	Nitril rubber	2	DRP-35	DRP-35	DRP-40
21	O-ring for rod cover	Nitril rubber	2	S120	S135	S155
22	O-ring for piston rod	Nitril rubber	1	S24	S24	S26

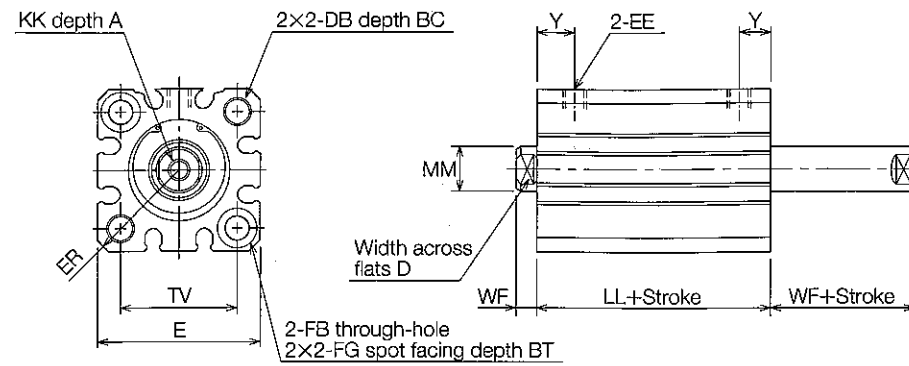
COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

DIMENSIONS

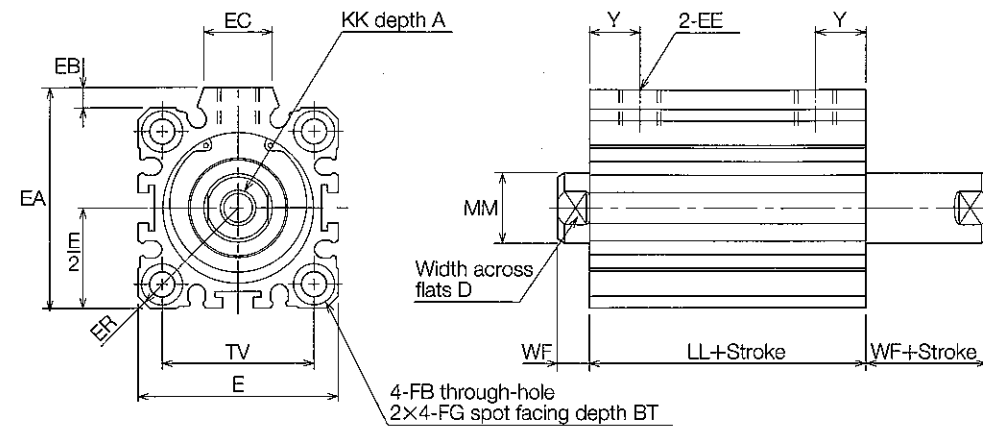
Double-acting Basic type/N

(Unit : mm)

• Bore $\phi 12 \sim \phi 25$



• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE
$\phi 12$	5	8	3.5	5	M4x0.7	□25	—	—	—	M5x0.8
$\phi 16$	5	8	3.5	6	M4x0.7	□29	—	—	—	M5x0.8
$\phi 20$	6	10	5.4	8	M6x1	□36	—	—	—	M5x0.8
$\phi 25$	10	10	5.4	10	M6x1	□40	—	—	—	M5x0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc1/8
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc1/8
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc1/4
$\phi 63$	15	—	10.5	17	—	□77	84	7	19	Rc1/4
$\phi 80$	21	—	13.5	22	—	□98	140	6	25	Rc3/8
$\phi 100$	27	—	13.5	27	—	□117	123.5	6.5	25	Rc3/8

Bore	ER	FB	FG	KK	LL	MM	TV	WF	Y
$\phi 12$	R16	$\phi 3.4$	$\phi 6.5$	M2.6x0.45	23	$\phi 6$	□15.5	3.5	9.5
$\phi 16$	R19	$\phi 3.4$	$\phi 6.5$	M3x0.5	23	$\phi 8$	□20	3.5	9.5
$\phi 20$	R23.5	$\phi 5.5$	$\phi 9$	M4x0.7	26.5	$\phi 10$	□25.5	4.5	10
$\phi 25$	R26	$\phi 5.5$	$\phi 9$	M5x0.8	27.5	$\phi 12$	□28	5	10
$\phi 32$	R30	$\phi 5.5$	$\phi 9$	M6x1	33	$\phi 16$	□34	7	11
$\phi 40$	R34.5	$\phi 5.5$	$\phi 9$	M6x1	34.5	$\phi 16$	□40	7	11.5
$\phi 50$	R42.5	$\phi 6.6$	$\phi 11$	M8x1.25	35.5	$\phi 20$	□50	8	12
$\phi 63$	R51	$\phi 9$	$\phi 14$	M10x1.5	41	$\phi 20$	□60	8	14.5
$\phi 80$	R65	$\phi 11$	$\phi 17.5$	M16x2	53.5	$\phi 25$	□77	10	16.5
$\phi 100$	R78	$\phi 11$	$\phi 17.5$	M20x2.5	63	$\phi 30$	□94	12	21

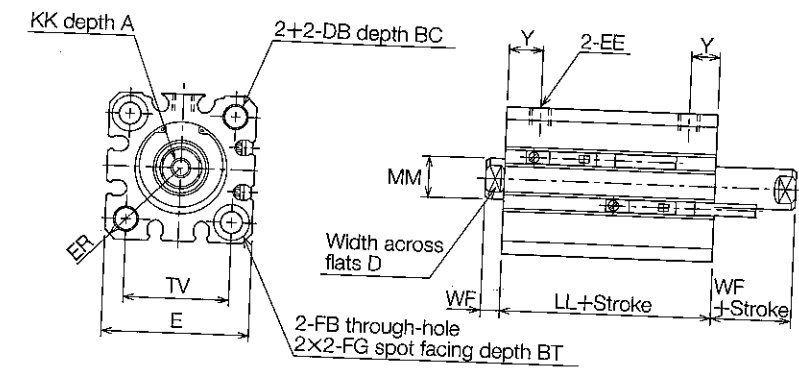
COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

DIMENSIONS

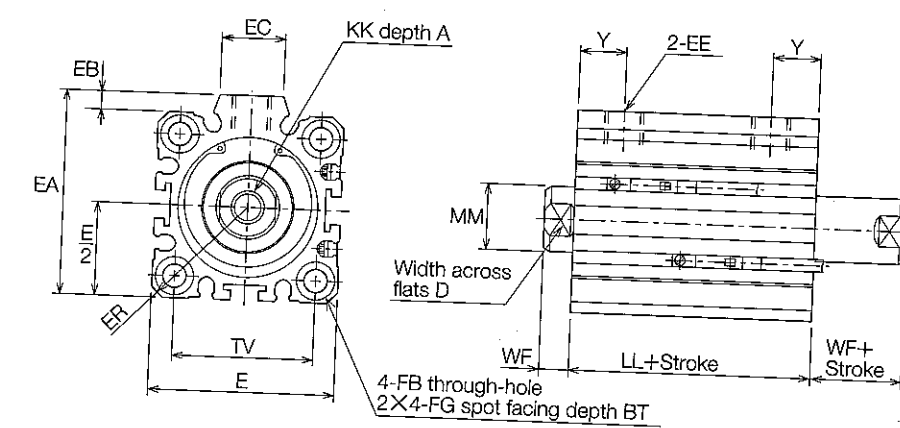
Double-acting, with switch Basic type/N

(Unit : mm)

• Bore $\phi 12 \sim \phi 25$



• Bore $\phi 32 \sim \phi 100$



Bore	A	BC	BT	D	DB	E	EA	EB	EC	EE
$\phi 12$	5	8	3.5	5	M4x0.7	□25	—	—	—	M5x0.8
$\phi 16$	5	8	3.5	6	M4x0.7	□29	—	—	—	M5x0.8
$\phi 20$	6	10	5.4	8	M6x1	□36	—	—	—	M5x0.8
$\phi 25$	10	10	5.4	10	M6x1	□40	—	—	—	M5x0.8
$\phi 32$	11	—	5.4	14	—	□45	49.5	4.5	15	Rc1/8
$\phi 40$	11	—	5.4	14	—	□52	57	5	17.5	Rc1/8
$\phi 50$	13	—	8	17	—	□64	71	7	19	Rc1/4
$\phi 63$	15	—	10.5	17	—	□77	84	7	19	Rc1/4
$\phi 80$	21	—	13.5	22	—	□98	140	6	25	Rc3/8
$\phi 100$	27	—	13.5	27	—	□117	123.5	6.5	25	Rc3/8

Bore	ER	FB	FG	KK	LL	MM	TV	WF	Y
$\phi 12$	R16	$\phi 3.4$	$\phi 6.5$	M2.6x0.45	28	$\phi 6$	□15.5	3.5	9.5
$\phi 16$	R19	$\phi 3.4$	$\phi 6.5$	M3x0.5	28	$\phi 8$	□20	3.5	9.5
$\phi 20$	R23.5	$\phi 5.5$	$\phi 9$	M4x0.7	36.5	$\phi 10$	□25.5	4.5	10
$\phi 25$	R26	$\phi 5.5$	$\phi 9$	M5x0.8	37.5	$\phi 12$	□28	5	10
$\phi 32$	R30	$\phi 5.5$	$\phi 9$	M6x1	43	$\phi 16$	□34	7	11
$\phi 40$	R34.5	$\phi 5.5$	$\phi 9$	M6x1	44.5	$\phi 16$	□40	7	11.5
$\phi 50$	R42.5	$\phi 6.6$	$\phi 11$	M8x1.25	45.5	$\phi 20$	□50	8	12
$\phi 63$	R51	$\phi 9$	$\phi 14$	M10x1.5	51	$\phi 20$	□60	8	14.5
$\phi 80$	R65	$\phi 11$	$\phi 17.5$	M16x2	63.5	$\phi 25$	□77	10	16.5
$\phi 100$	R78	$\phi 11$	$\phi 17.5$	M20x2.5	73	$\phi 30$	□94	12	21

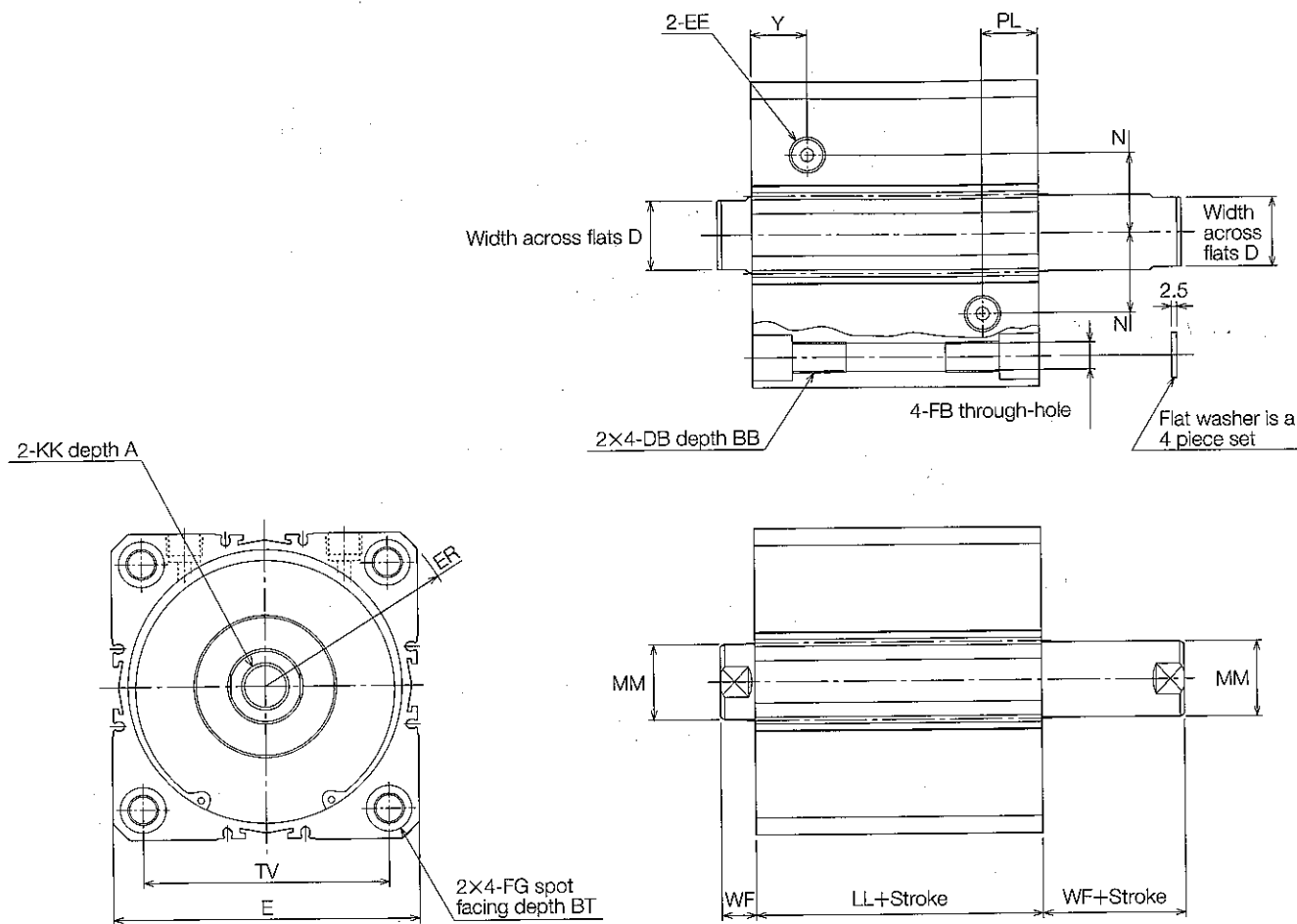
COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

DIMENSIONS

Double-acting Basic type/N

(Unit: mm)

• Bore $\phi 125 \sim \phi 160$



(Note) • $\phi 125$ to $\phi 160$: Built-in magnet type (G type) alone
• Size of a cylinder with switch is the same as that of a cylinder without switch (except size of switch).

Bore	A	BB	BT	D	DD	E	EE	ER	FB
$\phi 125$	30 (22.5)	25	18.4	32	M14×2	□142	Rc $\frac{3}{8}$	R 95	$\phi 12.5$
$\phi 140$	30 (22.5)	25	18.4	36	M14×2	□158	Rc $\frac{3}{8}$	R105	$\phi 12.5$
$\phi 160$	33 (26.5)	28	21.2	36	M16×2	□178	Rc $\frac{3}{8}$	R119	$\phi 14.5$

Bore	FG	KK	LL	MM	N	PL	TV	WF	Y
$\phi 125$	$\phi 21.2$	M22×2.5	83	$\phi 35$	37	26	□114	16	26
$\phi 140$	$\phi 21.2$	M22×2.5	83	$\phi 35$	40	26	□128	16	26
$\phi 160$	$\phi 24.2$	M24×3	91	$\phi 40$	45	28.5	□144	17	28.5

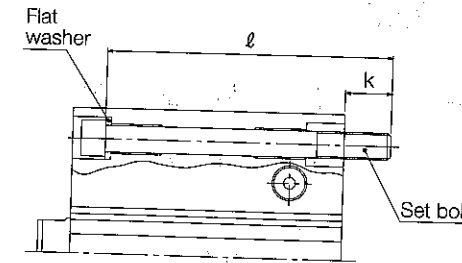
(Note) Bracketed figures : Effective length of single side in case of 10 mm strokes.

COMPACT AIR CYLINDER/DOUBLE ROD TYPE X1○7 series

MALE THREADED ROD END TYPE

Refer to Page 24.

For the double rod type, both ends of piston rod are male-threaded.
(Two rod end nuts are provided.)



Type designation

When ordering, specify the following type designation.

Type of set bolt

① Bolt size

3 : M3 10 : M10
5 : M5 12 : M12
6 : M6 14 : M14
8 : M8

② Quantity

S : 2 pcs
D : 4 pcs

Bolt length : l (mm)

Set bolt : Hexagon socket head cap screw (Black oxidized coating)

LIST OF SET BOLT TYPES/NO MAGNET

Type	Bore (mm)	k (mm)	Stroke (mm)						
			5	10	15	20	25	30	35
C type (No magnet)	$\phi 12$	5.5	CBT3-30S	CBT3-35S	CBT3-40S	CBT3-45S	CBT3-50S	—	—
	$\phi 16$	5.5	CBT3-30S	CBT3-35S	CBT3-40S	CBT3-45S	CBT3-50S	—	—
	$\phi 20$	13.9	CBT5-40S	CBT5-45S	CBT5-50S	CBT5-55S	CBT5-60S	CBT5-65S	—
	$\phi 25$	12.9	CBT5-40S	CBT5-45S	CBT5-50S	CBT5-55S	CBT5-60S	CBT5-65S	—
	$\phi 32$	12.4	CBT5-45D	CBT5-50D	CBT5-55D	CBT5-60D	CBT5-65D	CBT5-70D	CBT5-75D
	$\phi 40$	10.9	CBT5-45D	CBT5-50D	CBT5-55D	CBT5-60D	CBT5-65D	CBT5-70D	CBT5-75D
	$\phi 50$	12.5	—	CBT6-50D	CBT6-55D	CBT6-60D	CBT6-65D	CBT6-70D	CBT6-75D
	$\phi 63$	14.5	—	CBT8-55D	CBT8-60D	CBT8-65D	CBT8-70D	CBT8-75D	CBT8-80D
	$\phi 80$	15	—	CBT10-65D	CBT10-70D	CBT10-75D	CBT10-80D	CBT10-85D	CBT10-90D
	$\phi 100$	15.5	—	CBT10-75D	CBT10-80D	CBT10-85D	CBT10-90D	CBT10-95D	CBT10-100D
G type (Built-in magnet)	$\phi 12$	5.5	CBT3-35S	CBT3-40S	CBT3-45S	CBT3-50S	CBT3-55S	—	—
	$\phi 16$	5.5	CBT3-35S	CBT3-40S	CBT3-45S	CBT3-50S	CBT3-55S	—	—
	$\phi 20$	13.9	CBT5-50S	CBT5-55S	CBT5-60S	CBT5-65S	CBT5-70S	CBT5-75S	—
	$\phi 25$	12.9	CBT5-50S	CBT5-55S	CBT5-60S	CBT5-65S	CBT5-70S	CBT5-75S	—
	$\phi 32$	12.4	CBT5-55D	CBT5-60D	CBT5-65D	CBT5-70D	CBT5-75D	CBT5-80D	CBT5-85D
	$\phi 40$	10.9	CBT5-55D	CBT5-60D	CBT5-65D	CBT5-70D	CBT5-75D	CBT5-80D	CBT5-85D
	$\phi 50$	12.5	—	CBT6-60D	CBT6-65D	CBT6-70D	CBT6-75D	CBT6-80D	CBT6-85D
	$\phi 63$	14.5	—	CBT8-65D	CBT8-70D	CBT8-75D	CBT8-80D	CBT8-85D	CBT8-90D
	$\phi 80$	15	—	CBT10-75D	CBT10-80D	CBT10-85D	CBT10-90D	CBT10-95D	CBT10-100D
	$\phi 100$	15.5	—	CBT10-85D	CBT10-90D	CBT10-95D	CBT10-100D	CBT10-105D	CBT10-110D

Type	Bore (mm)	k (mm)	Stroke (mm)		
			40	45	50
C type (No magnet)	$\phi 32$	12.4	CBT5-80D	CBT5-85D	CBT5-90D
	$\phi 40$	10.9	CBT5-80D	CBT5-85D	CBT5-90D
	$\phi 50$	12.5	CBT6-80D	CBT6-85D	CBT6-90D
	$\phi 63$	14.5	CBT8-85D	CBT8-90D	CBT8-95D
	$\phi 80$	15	CBT10-95D	CBT10-100D	CBT10-105D
G type (Built-in magnet)	$\phi 32$	12.4	CBT5-90D	CBT5-95D	CBT5-100D
	$\phi 40$	10.9	CBT5-90D	CBT5-95D	CBT5-100D
	$\phi 50$	12.5	CBT6-90D	CBT6-95D	CBT6-100D
	$\phi 63$	14.5	CBT8-95D	CBT8-100D	CBT8-105D
	$\phi 80$	15	CBT10-105D	CBT10-110D	CBT10-115D

Bore (mm)	k (mm)	Stroke (mm)						
		10	20	30	40	50	75	100
$\phi 125, \phi 140$	22.9	CBT12-100D	CBT12-110D	CBT12-120D	CBT12-130D	CBT12-140D	CBT12-165D	CBT12-190D
$\phi 160$	27.7	CBT14-110D	CBT14-120D	CBT14-130D	CBT14-140D	CBT14-150D	CBT14-175D	CBT14-200D

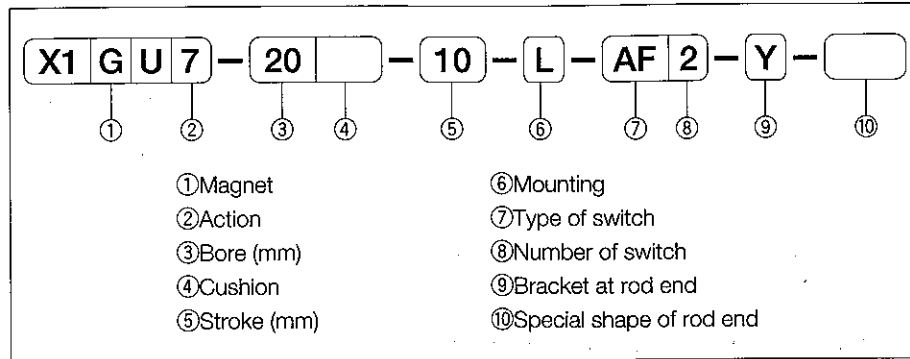
(Note) $\phi 125$ to $\phi 160$: When using a set bolt with a through-hole, be sure to use the supplied flat washer.

COMPACT AIR CYLINDER/NON-ROTATING PISTON ROD TYPE

X1○U series (CUSTOM-MADE)

φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

ORDERING INSTRUCTIONS

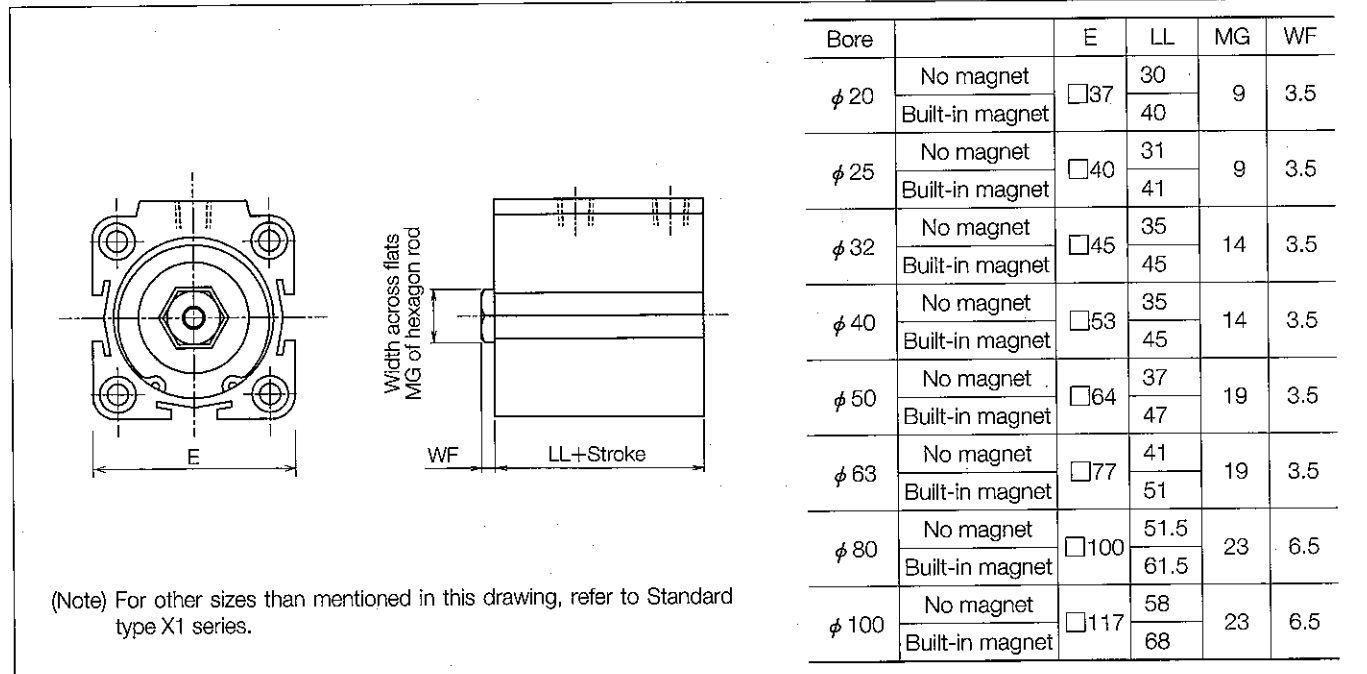


SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 20~φ 50 : 0.1~1 φ 63~φ 100 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	5~60
Piston speed range	mm/s	φ 40 : 100~500 φ 50~φ 100 : 100~300
Cushion		Damper cushion
Piston stroke allowance	mm	+1.0 0
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange

(Note) •SBracket can be fitted to each cylinder of bore φ 32 to φ 100.
•No bracket can be mounted on basic type cylinder, as it is not tapped.
•When ordering only a cylinder equipped with a bracket, choose one with double-side tap.

DIMENSIONS

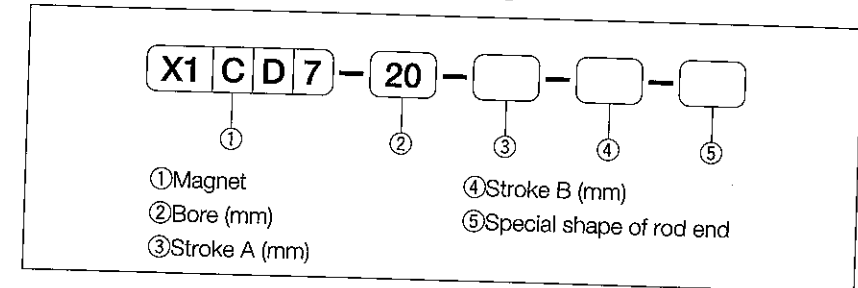


COMPACT AIR CYLINDER/SINGLE ROD TYPE DUAL STROKE CYLINDER

X1○D2 series (CUSTOM-MADE)

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

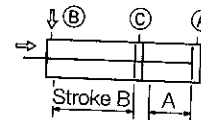
ORDERING INSTRUCTIONS



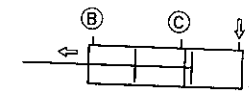
SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 100 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	-10~70
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 100 : 30~300
Cushion		φ 12, φ 16 : No cushion φ 20~φ 100 : Damper cushion
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange, Head side flange, eye, Clevis

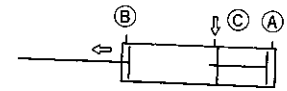
This cylinder consists of two cylinders connected in series and united. The stroke can be controlled in two steps.



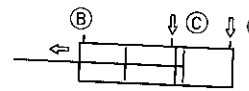
When air pressure is supplied from port B, the piston rod retracts for both strokes A and B.



When air pressure is supplied from port A, the piston rod moves for stroke A alone.

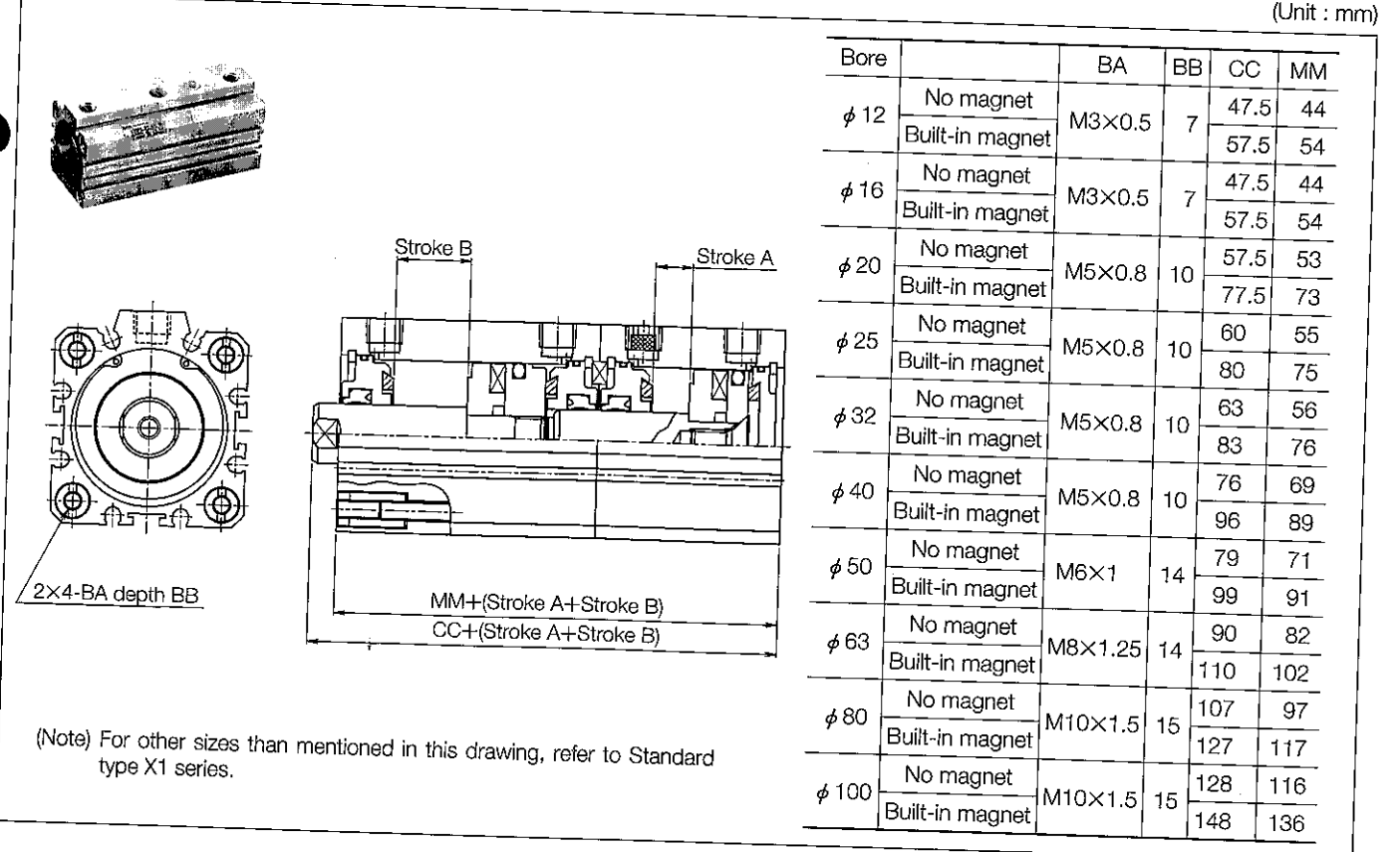


When air pressure is supplied from port C, the piston rod moves furthermore for stroke B-A.



When air pressure is supplied from both ports A and C, the output doubles only for stroke A.

CONSTRUCTIONS AND DIMENSIONS

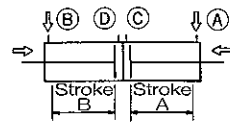


COMPACT AIR CYLINDER/DOUBLE ROD TYPE DUAL STROKE CYLINDER

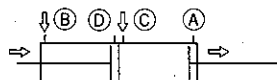
X1○D7 series (CUSTOM-MADE)

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

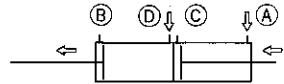
This cylinder consists of two cylinders connected in back to back and united. The stroke can be controlled in three steps.



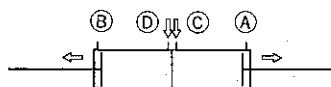
When air pressure is supplied from both ports A and B, the piston rod retracts for both strokes A and B.



When air pressure is supplied from both ports A and C, the piston rod retracts for stroke B and extends for stroke A alone.

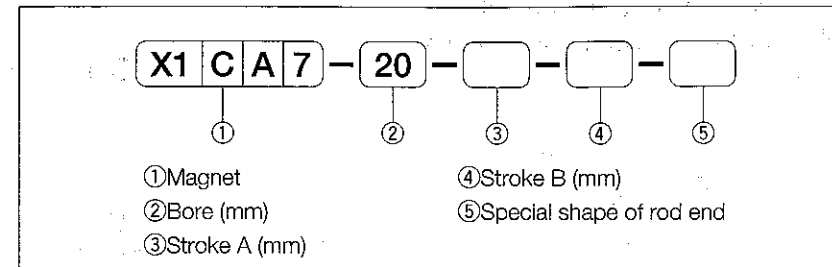


When air pressure is supplied from both ports A and D, the piston rod retracts for stroke A and extends for stroke B alone.



When air pressure is supplied from both ports C and D, the piston rod moves for both strokes A and B.

ORDERING INSTRUCTIONS

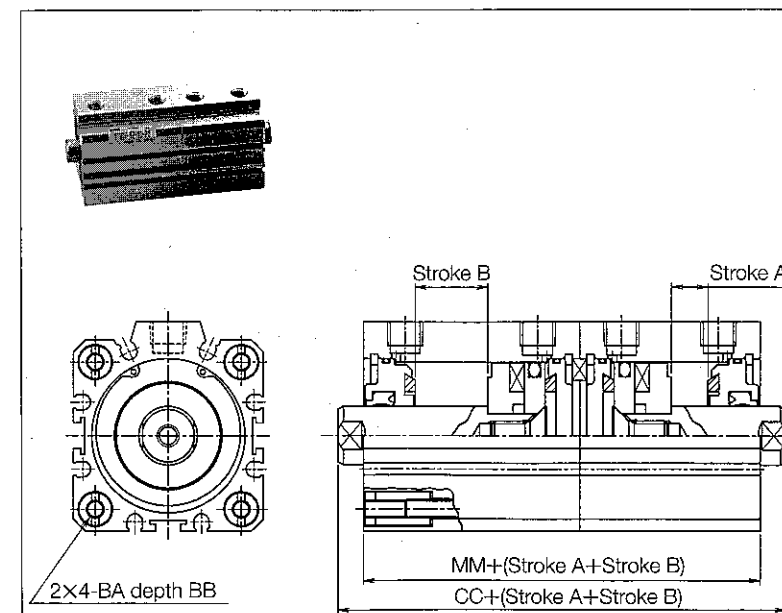


SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 100 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	-10~70
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 100 : 30~300
Cushion		φ 12, φ 16 : No cushion φ 20~φ 100 : Damper cushion
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange

CONSTRUCTIONS AND DIMENSIONS

(Unit : mm)



Bore		BA	BB	CC	MM
φ 12	No magnet	M3×0.5	7	41	34
	Built-in magnet			51	44
φ 16	No magnet	M3×0.5	7	41	34
	Built-in magnet			51	44
φ 20	No magnet	M5×0.8	10	52	43
	Built-in magnet			72	63
φ 25	No magnet	M5×0.8	10	55	45
	Built-in magnet			75	65
φ 32	No magnet	M5×0.8	10	60	46
	Built-in magnet			80	66
φ 40	No magnet	M5×0.8	10	73	59
	Built-in magnet			93	79
φ 50	No magnet	M6×1	14	77	61
	Built-in magnet			97	81
φ 63	No magnet	M8×1.25	14	88	72
	Built-in magnet			108	92
φ 80	No magnet	M10×1.5	15	107	87
	Built-in magnet			127	107
φ 100	No magnet	M10×1.5	15	130	106
	Built-in magnet			150	126

(Note) For other sizes than mentioned in this drawing, refer to Standard type X1 series.

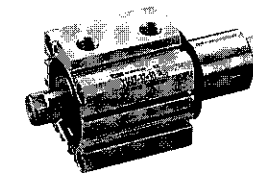
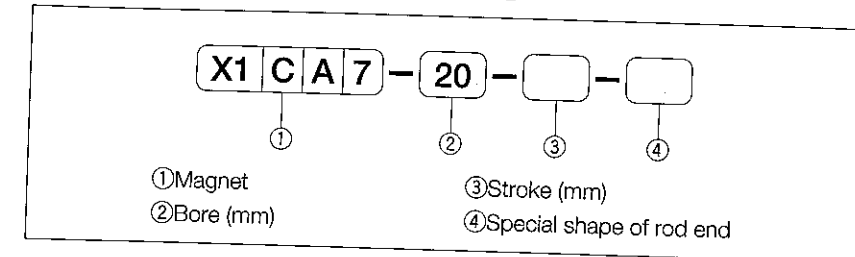
COMPACT AIR CYLINDER/ADJUSTABLE STROKE CYLINDER (Adjustable stroke with rod extended)

X1○A7 series (CUSTOM-MADE)

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

The stroke on the extendable rod side is adjustable within a range of 0 to 10 mm. Stroke adjustment is accomplished with the stopper fitted on the rod end.

ORDERING INSTRUCTIONS

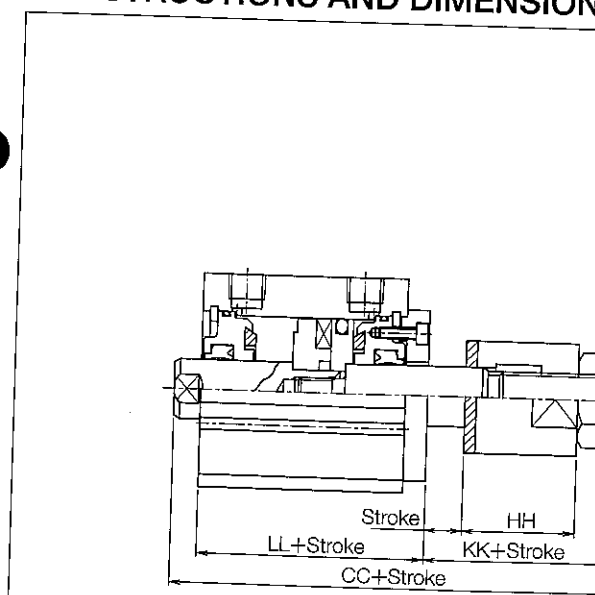


SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 100 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	-10~70
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 100 : 30~300
Cushion		φ 12, φ 16 : No cushion φ 20~φ 100 : Damper cushion
Stroke adjustment		Adjustable with stopper
Adjustable stroke range	mm	0~10
Mounting		Basic type, Basic type (With double-sided tap)

CONSTRUCTIONS AND DIMENSIONS

(Unit : mm)



Bore		CC	HH	KK	LL
φ 12	No magnet	61.5	21	26	32
	Built-in magnet	66.5			37
φ 16	No magnet	61.5	22	27	32
	Built-in magnet	66.5			37
φ 20	No magnet	70	24	31	34.5
	Built-in magnet	80			44.5
φ 25	No magnet	72.5	24	32	35.5
	Built-in magnet	82.5			45.5
φ 32	No magnet	88	30	40	41
	Built-in magnet	98			51
φ 40	No magnet	87.5	30	40	40.5
	Built-in magnet	97.5			50.5
φ 50	No magnet	93.5	31	44	41.5
	Built-in magnet	103.5			51.5
φ 63	No magnet	99	31	44	47
	Built-in magnet	109			57
φ 80	No magnet	128.5	40	55	63.5
	Built-in magnet	138.5			73.5
φ 100	No magnet	143	40	58	73
	Built-in magnet	153			83

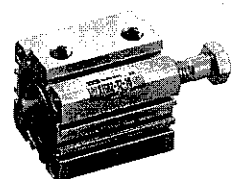
(Note) For other sizes than mentioned in this drawing, refer to Double rod type X1○7 series.

COMPACT AIR CYLINDER/ADJUSTABLE STROKE CYLINDER (Adjustable stroke with rod retracted)

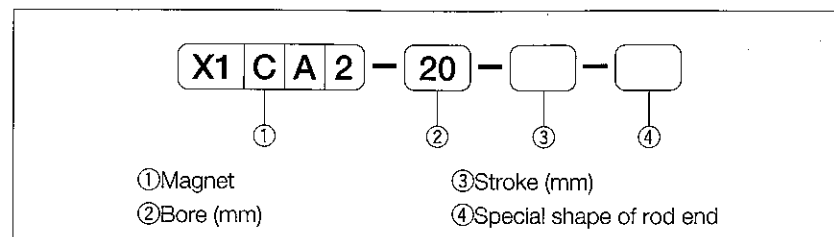
X1○A2 series (CUSTOM-MADE)

φ 10, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

The stroke on the retractable rod side is adjustable within a range of 0 to 10 mm. Stroke adjustment is accomplished with the adjusting bolt fitted on the head side.



ORDERING INSTRUCTIONS

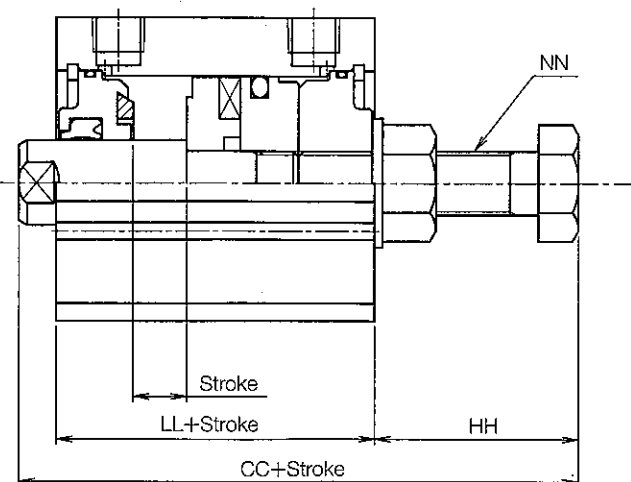


SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~1 φ 40~φ 100 : 0.05~1
Proof pressure	MPa	1.5
Temperature range	°C	-10~70
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 100 : 30~300
Cushion		φ 12, φ 16 : No cushion φ 20~φ 100 : Damper cushion
Stroke adjustment		Adjustable with adjusting bolt
Adjustable stroke range	mm	0~10
Mounting		Basic type, Basic type (With double-sided tap)

CONSTRUCTIONS AND DIMENSIONS

(Unit : mm)



(Note) For other sizes than mentioned in this drawing, refer to Standard type X1 series.

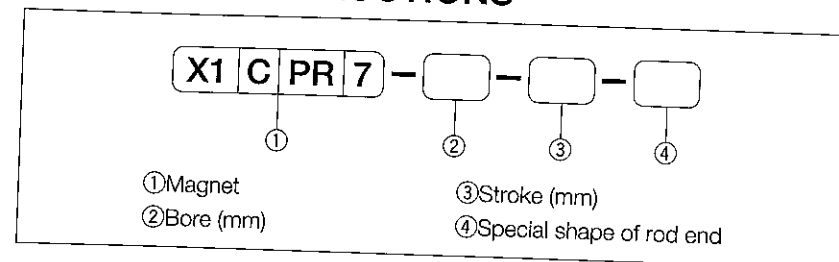
Bore		CC	HH	LL	NN
φ 10	No magnet	47.5	22	22	M5×0.8
	Built-in magnet	52.5		27	
φ 16	No magnet	47.5	22	22	M5×0.8
	Built-in magnet	52.5		27	
φ 20	No magnet	66.5	30.5	31.5	M8×1.25
	Built-in magnet	76.5		41.5	
φ 25	No magnet	68.5	31	32.5	M8×1.25
	Built-in magnet	78.5		42.5	
φ 32	No magnet	69	29	33	M8×1.25
	Built-in magnet	79		43	
φ 40	No magnet	85.5	39	39.5	M12×1.5
	Built-in magnet	95.5		49.5	
φ 50	No magnet	87.5	39	40.5	M12×1.5
	Built-in magnet	97.5		50.5	
φ 63	No magnet	98	44	46	M16×1.5
	Built-in magnet	108		56	
φ 80	No magnet	117.5	54	53.5	M20×1.5
	Built-in magnet	127.5		63.5	
φ 100	No magnet	133	58	63	M24×2
	Built-in magnet	143		73	

COMPACT AIR CYLINDER/WITH HOLLOW ROD

X1○RP series (CUSTOM-MADE)

φ 12, φ 16, φ 20, φ 25, φ 32, φ 40, φ 50, φ 63, φ 80, φ 100

ORDERING INSTRUCTIONS

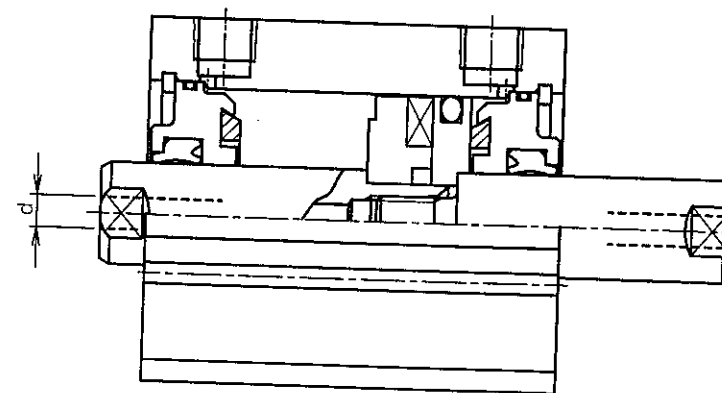


SPECIFICATIONS

Action	Unit	Double-acting
Fluid		Non-lubricated air
Pressure range	MPa	φ 12~φ 32 : 0.1~0.7 φ 40~φ 100 : 0.05~0.7
Proof pressure	MPa	0.15
Temperature range	°C	-10~70
Piston speed range	mm/s	φ 12~φ 40 : 30~500 φ 50~φ 100 : 30~300
Cushion		φ 12, φ 16 : No cushion φ 20~φ 100 : Damper cushion
Mounting		Basic type, Basic type (With double-sided tap), Side lug, Axial foot, Rod side flange

CONSTRUCTIONS AND DIMENSIONS

(Unit : mm)



Bore	Through-hole dia.
φ 12	φ 1.5
φ 16	φ 1.5
φ 20	φ 2
φ 25	φ 2
φ 32	φ 5
φ 40	φ 5
φ 50	φ 6
φ 63	φ 6
φ 80	φ 8
φ 100	φ 8

(Note) For other sizes than mentioned in this drawing, refer to Double rod type X1○7 series.