

Heavy duty pneumatic cylinders using rods having large diameters of 50 to 250 mm

- Larger rod dia. and rod end thread than 10A-2 Series.



Cylinder Specifications

Series Variation		10A-3	
Cylinder bore mm		φ50·φ63·φ80·φ100·φ125·φ160·φ180·φ200·φ250	
Working fluid		Air	
Lubrication		Unnecessary	
Working pressure range		0.1 to 1 MPa	
Proof test pressure		1.5 MPa	
Working speed range		50 to 700 mm/s	
Working temperature range		-10 to +70℃ (No freezing)	
Structure of cushioning		With cushions on both ends	
Cushion stroke		φ50·φ63 : 14 mm (rod side) 13 mm (cap side) φ80 : 15 mm (rod side/cap side) φ100·φ125 : 17 mm (rod side) 15 mm (cap side) φ160 to φ200: 20 mm (rod side/cap side) φ250 : 22 mm (rod side/cap side)	
Tolerance for thread		JIS6g/6H	
Tolerance of stroke		0 to 250 mm ^{+1.0} ₀ 251 to 1000 ^{+1.5} ₀ 1001 to 2000 ^{+2.0} ₀	
Mounting style		SD · LB · FA · FB · CA CB · CC · CD · TA · TC	
Accessories	Boots	Standard: Nylon tarpaulin Semi-standard: Chloroprene, Conex	
	Rod end attachments	Rod eye (T-end), rod clevis (Y-end) with pin	
	Others	CB/CD bracket, TA/TC bracket	

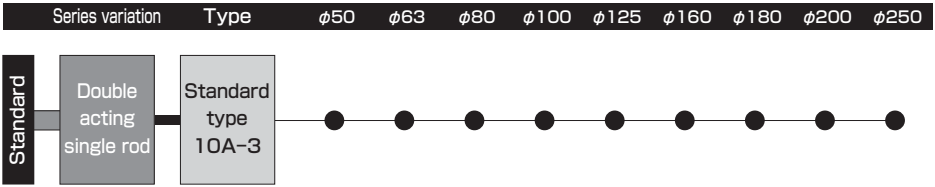
•Conex is the registered trademark of Teijin Limited.

Standard Stroke Range

Bore	φ 50 · φ 63	φ 80 · φ 100	φ 125 to φ 250
Stroke limit	1400	1800	2000

- The above strokes indicate the maximum available strokes for the standard type.
- For the rod buckling, check with the buckling chart in the selection materials.
- Contact us or longer strokes.

Product Lineup

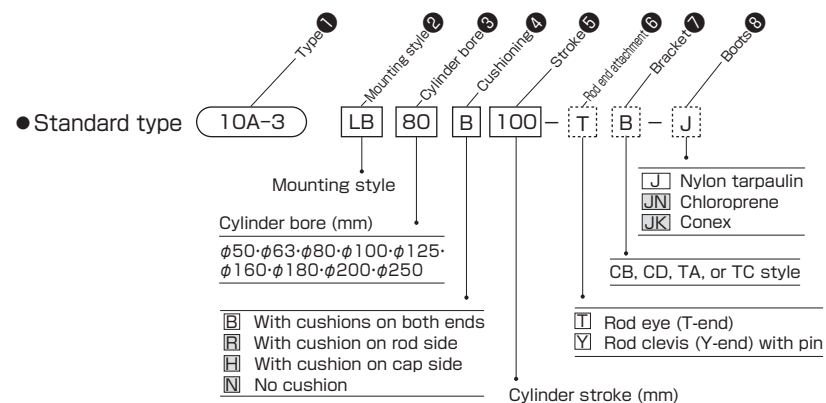


Weight Table

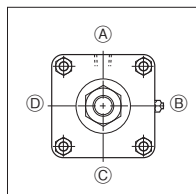
Bore mm	Basic weight (SD style)	Additional weight per mm of stroke	Mounting accessory weight										Bracket weight		Rod end attachment weight	
			LB	FA	FB	CA	CC	CB	CD	TA	TC	CB	TA/TC	Rod eye (T-end)	Rod clevis (Y-end) with pin	
φ50	2.80	0.00779	0.36	0.40	0.50	0.26	—	0.30	—	0.19	0.55	0.66	1.06	0.21	0.41	
φ63	4.20	0.00945	0.46	0.55	0.65	0.42	—	0.39	—	0.19	0.70	0.66	1.06	0.21	0.41	
φ80	8.14	0.0135	0.86	1.36	1.59	1.08	—	0.80	—	0.19	1.16	1.97	1.47	0.62	1.06	
φ100	12.29	0.0178	1.12	1.60	2.20	1.39	—	1.05	—	0.19	1.53	1.97	1.47	0.62	1.06	
φ125	17.29	0.0340	2.00	2.39	2.58	0.57	2.59	0.76	2.86	0.19	2.20	2.60	3.05	1.24	1.47	
φ160	32.25	0.0421	3.22	4.96	5.48	1.35	6.18	1.82	6.73	0.57	4.95	7.80	8.15	2.40	3.32	
φ180	41.59	0.0549	5.69	6.70	7.22	1.25	9.04	1.72	9.73	0.57	6.00	7.80	8.15	2.40	3.32	
φ200	47.79	0.0591	6.12	7.78	8.30	1.25	10.18	1.72	10.86	0.57	6.30	7.80	8.15	2.40	3.32	
φ250	92.87	0.0755	8.38	14.36	15.70	3.23	20.10	4.22	21.30	1.12	10.50	16.65	15.50	4.62	5.83	
Calculation formula	Cylinder weight (kg)=basic weight+(additional weight per mm of stroke×cylinder stroke (mm)) +mounting accessory weight															
Calculation example	10A-3, bore φ100, cylinder stroke 100 mm, LB 12.29+(0.0178×100)+1.12=15.19kg															

● How to order

The item enclosed by broken line needs not to be entered, if unnecessary.  Semi-standard specification



★ Standard specifications



- With cushions on both ends
- Port position (A), cushion valve position (B)

★ Change of port and cushion valve positions

The standard port position is ①, and the standard cushion valve position is ②.
When modifying the positions, enter the symbol shown in the dimensional drawing.

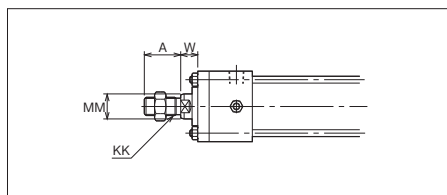
Example) 10A-3 SD63 B200- B C -B-J

Port position (A, B, C, D)	Cushion valve position (A, B, C, D, O)
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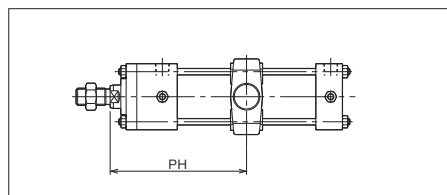
- For the TA style, the standard port position and cushion valve position are ① and ③ on the rod side and ① and ② on the cap side.
- In case that the cushion is not equipped, the cushion valve position is "0".

★ Semi-standard range

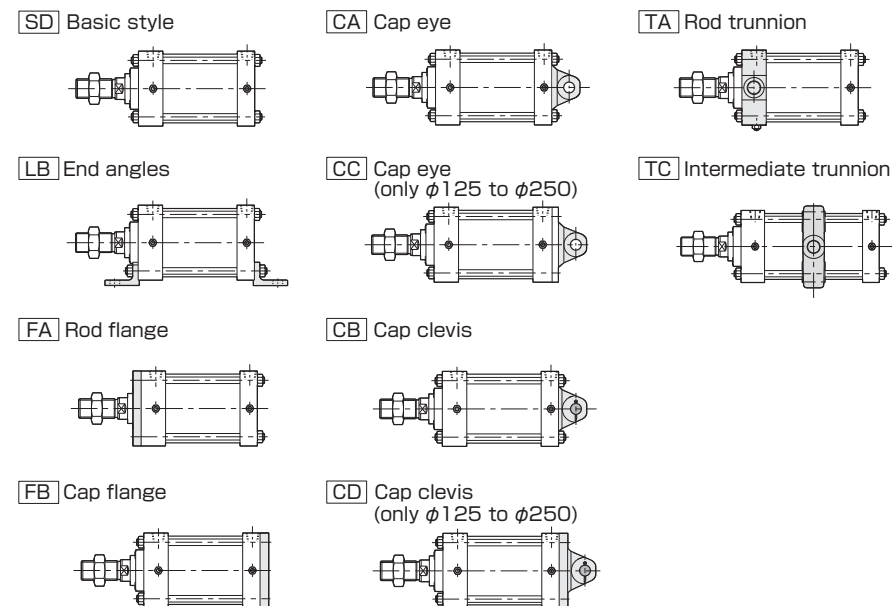
- With boots
- Change of piston rod end (W, WF, A, KK)



- Change of TC accessory position (dimensional symbol: PH)



Mounting Style

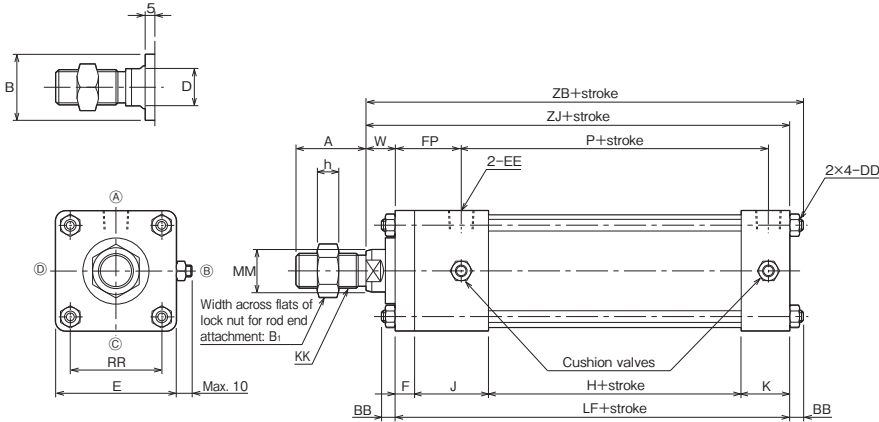


10A-3/TA3 Bore is available. CAD/DATA is available.

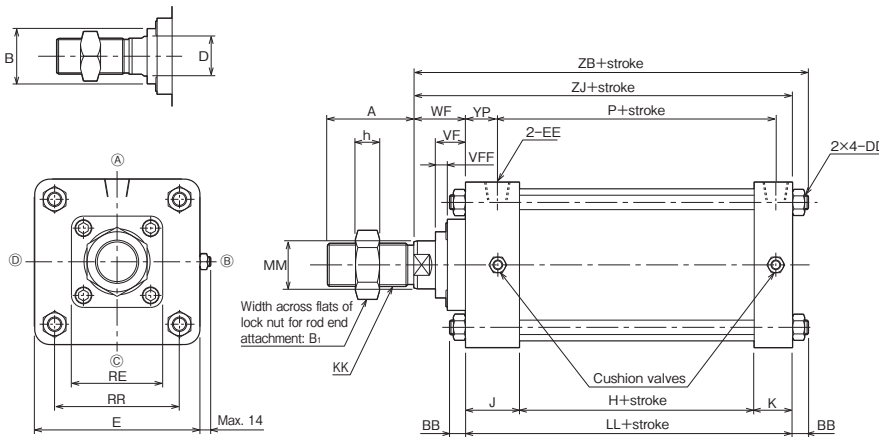
SD

10A-3 SD Bore B Stroke

• $\phi 50$ to $\phi 80$



• $\phi 100$ to $\phi 250$



Dimensional Table

Symbol	A	B	B ₁	BB	D	DD	E	EE	F	FP	H	h	J
Bore													
$\phi 50$	36(32)	$\phi 34$	24	7	19	M6×1	□62	Rc ¹ / ₄	10	34	30	11	38
$\phi 63$	36(32)	$\phi 34$	24	9	19	M8×1.25	□76	Rc ³ / ₈	10	34	33	11	38
$\phi 80$	44(40)	$\phi 39$	30	10	22	*M10×1.25	□94	Rc ³ / ₈	16	43	31	13	45
$\phi 100$	54(49)	$\phi 46$	36	10	27	*M10×1.25	□114	Rc ¹ / ₂	—	—	31	16	45
$\phi 125$	72(67)	$\phi 55$	50	13	36	*M12×1.5	□138	Rc ¹ / ₂	—	—	37	20	45
$\phi 160$	84(79)	$\phi 65$	60	16	46	*M16×1.5	□178	Rc ³ / ₄	—	—	43	22	50
$\phi 180$	84(79)	$\phi 65$	60	16	46	*M16×1.5	□200	Rc ³ / ₄	—	—	43	22	50
$\phi 200$	84(79)	$\phi 65$	60	16	46	*M16×1.5	□216	Rc ³ / ₄	—	—	43	22	50
$\phi 250$	112(107)	$\phi 85$	80	19	55	*M20×1.5	□270	Rc 1	—	—	55	30	57

Symbol	K	KK	LF	LL	MM	P	RE	RR	VF	VFF	W	WF	YP	ZB	ZJ
Bore															
$\phi 50$	25	M18×1.5	103	—	$\phi 22$	58	—	□47	—	—	15	—	—	125	118
$\phi 63$	25	M18×1.5	106	—	$\phi 22$	61	—	□56	—	—	15	—	—	130	121
$\phi 80$	32	M22×1.5	124	—	$\phi 25$	67	—	□70	—	—	19	—	—	153	143
$\phi 100$	32	M27×2	—	108	$\phi 32$	67	□65	□84	21	10	—	37	27	155	145
$\phi 125$	32	M36×2	—	114	$\phi 40$	73	□76	□104	25	10	—	43	27	170	157
$\phi 160$	38	M42×2	—	131	$\phi 50$	85	□94	□134	30	11	—	52	29	199	183
$\phi 180$	38	M42×2	—	131	$\phi 50$	85	□94	□156	30	11	—	52	29	199	183
$\phi 200$	38	M42×2	—	131	$\phi 50$	85	□94	□163	30	11	—	52	29	199	183
$\phi 250$	50	M56×2	—	162	$\phi 63$	109	□125	□202	33	10	—	60	30	241	222

* The parenthesized values of dimension A indicate the screw length.

Comparison of Screw Pitches of New and Old Tie Rods

Symbol	Dimension DD	
	Old	New
$\phi 80$	M10×1.5	M10×1.25
$\phi 100$	M10×1.5	M10×1.25
$\phi 125$	M12×1.75	M12×1.5
$\phi 160$	M16×2	M16×1.5
$\phi 180$	M16×2	M16×1.5
$\phi 200$	M16×2	M16×1.5
$\phi 250$	M20×2.5	M20×1.5

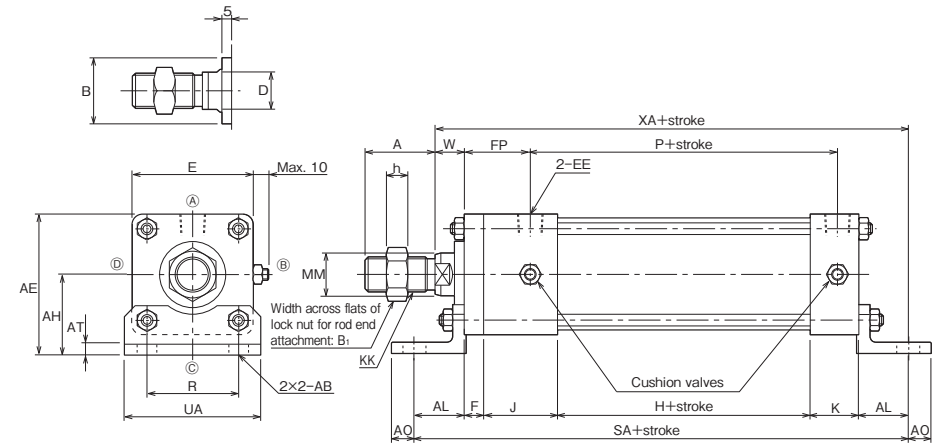
Note) A part of the screw pitches (dimension DD) of the tie rods have been changed from those shown in the 1996 catalog. The changed values are marked with *. If an SD style (basic style) cylinder is purchased and a tie rod is installed with the tie rod screw supplied with the cylinder or only a tie rod is purchased, the tie rod is not applicable to the old screw pitch. Before placing an order, sufficiently check the pitch. Implemented from shipment on Dec. 1, 1995 (From serial No.512)

10A-3/TA3 Bore is available.

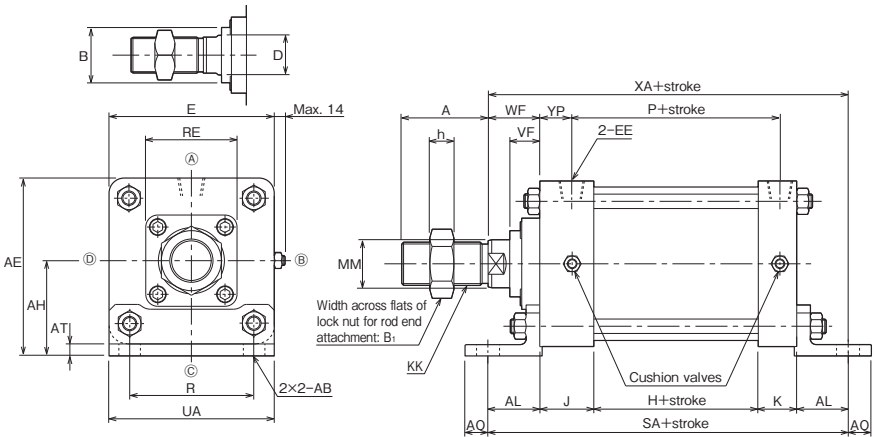
LB

10A-3 LB Bore B Stroke

• $\phi 50$ to $\phi 80$



• $\phi 100$ to $\phi 250$



Dimensional Table

Symbol Bore	A	AB	AE	AH	AL	AO	AT	B	B ₁	D	E	EE	F	FP	H
$\phi 50$	36(32)	$\phi 12$	72	41	26	12	6	$\phi 34$	24	19	$\square 62$	Rc ¹ / ₄	10	34	30
$\phi 63$	36(32)	$\phi 12$	86	48	28	12	6	$\phi 34$	24	19	$\square 76$	Rc ³ / ₈	10	34	33
$\phi 80$	44(40)	$\phi 14$	106	59	34	14	8	$\phi 39$	30	22	$\square 94$	Rc ³ / ₈	16	43	31
$\phi 100$	54(49)	$\phi 14$	123	66	34	14	8	$\phi 46$	36	27	$\square 114$	Rc ¹ / ₂	—	—	31
$\phi 125$	72(67)	$\phi 18$	148	79	43	18	10	$\phi 55$	50	36	$\square 138$	Rc ¹ / ₂	—	—	37
$\phi 160$	84(79)	$\phi 22$	187	98	50	22	10	$\phi 65$	60	46	$\square 178$	Rc ³ / ₄	—	—	43
$\phi 180$	84(79)	$\phi 22$	215	115	55	22	15	$\phi 65$	60	46	$\square 200$	Rc ³ / ₄	—	—	43
$\phi 200$	84(79)	$\phi 22$	226	118	55	22	15	$\phi 65$	60	46	$\square 216$	Rc ³ / ₄	—	—	43
$\phi 250$	112(107)	$\phi 26$	276	141	60	24	15	$\phi 85$	80	55	$\square 270$	Rc 1	—	—	55

Symbol Bore	h	J	K	KK	MM	P	R	RE	SA	UA	VF	W	WF	XA	YP
$\phi 50$	11	38	25	M18×1.5	$\phi 22$	58	47	—	155	70	—	15	—	144	—
$\phi 63$	11	38	25	M18×1.5	$\phi 22$	61	56	—	162	80	—	15	—	149	—
$\phi 80$	13	45	32	M22×1.5	$\phi 25$	67	70	—	192	97	—	19	—	177	—
$\phi 100$	16	45	32	M27×2	$\phi 32$	67	84	$\square 65$	176	114	21	—	37	179	27
$\phi 125$	20	45	32	M36×2	$\phi 40$	73	104	$\square 76$	200	138	25	—	43	200	27
$\phi 160$	22	50	38	M42×2	$\phi 50$	85	134	$\square 94$	231	178	30	—	52	233	29
$\phi 180$	22	50	38	M42×2	$\phi 50$	85	156	$\square 94$	241	200	30	—	52	238	29
$\phi 200$	22	50	38	M42×2	$\phi 50$	85	163	$\square 94$	241	216	30	—	52	238	29
$\phi 250$	30	57	50	M56×2	$\phi 63$	109	202	$\square 125$	282	270	33	—	60	282	30

* The parenthesized values of dimension A indicate the screw length.

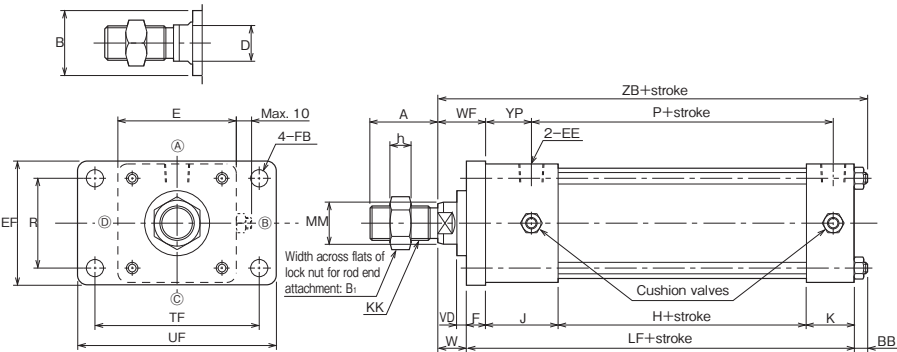
10A-3/TA3 Bore is available. CAD/DATA



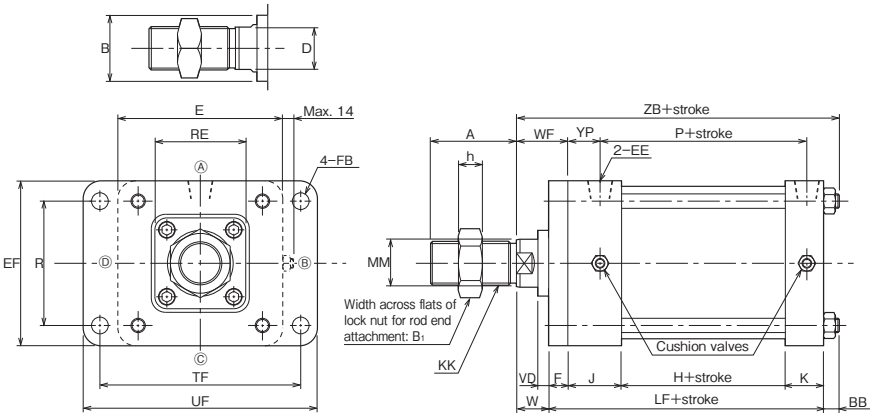
FA

10A-3 FA Bore B Stroke

• $\phi 50$ to $\phi 80$



• $\phi 100$ to $\phi 250$



Dimensional Table

Symbol Bore	A	B	B ₁	BB	D	E	EE	EF	F	FB	H	h	J
$\phi 50$	36(32)	$\phi 34$	24	7	19	$\square 62$	Rc ¹ / ₄	65	10	$\phi 9$	30	11	38
$\phi 63$	36(32)	$\phi 34$	24	9	19	$\square 76$	Rc ³ / ₈	76	10	$\phi 9$	33	11	38
$\phi 80$	44(40)	$\phi 39$	30	10	22	$\square 94$	Rc ³ / ₈	95	16	$\phi 12$	31	13	45
$\phi 100$	54(49)	$\phi 46$	36	10	27	$\square 114$	Rc ¹ / ₂	115	16	$\phi 12$	31	16	45
$\phi 125$	72(67)	$\phi 55$	50	13	36	$\square 138$	Rc ¹ / ₂	138	16	$\phi 14$	37	20	45
$\phi 160$	84(79)	$\phi 65$	60	16	46	$\square 178$	Rc ³ / ₄	178	20	$\phi 18$	43	22	50
$\phi 180$	84(79)	$\phi 65$	60	16	46	$\square 200$	Rc ³ / ₄	200	20	$\phi 18$	43	22	50
$\phi 200$	84(79)	$\phi 65$	60	16	46	$\square 216$	Rc ³ / ₄	216	20	$\phi 18$	43	22	50
$\phi 250$	112(107)	$\phi 85$	80	19	55	$\square 270$	Rc 1	270	25	$\phi 22$	55	30	57

Symbol Bore	K	KK	LF	MM	P	R	RE	TF	UF	VD	W	WF	YP	ZB
$\phi 50$	25	M18×1.5	103	$\phi 22$	58	47	—	86	104	5	15	25	24	125
$\phi 63$	25	M18×1.5	106	$\phi 22$	61	56	—	98	116	5	15	25	24	130
$\phi 80$	32	M22×1.5	124	$\phi 25$	67	70	—	119	143	5	19	35	27	153
$\phi 100$	32	M27×2	124	$\phi 32$	67	84	$\square 65$	138	162	5	21	37	27	155
$\phi 125$	32	M36×2	130	$\phi 40$	73	104	$\square 76$	168	196	9	27	43	27	170
$\phi 160$	38	M42×2	151	$\phi 50$	85	134	$\square 94$	212	248	10	32	52	29	199
$\phi 180$	38	M42×2	151	$\phi 50$	85	156	$\square 94$	234	270	10	32	52	29	199
$\phi 200$	38	M42×2	151	$\phi 50$	85	163	$\square 94$	250	286	10	32	52	29	199
$\phi 250$	50	M56×2	187	$\phi 63$	109	201	$\square 125$	312	356	8	35	60	30	241

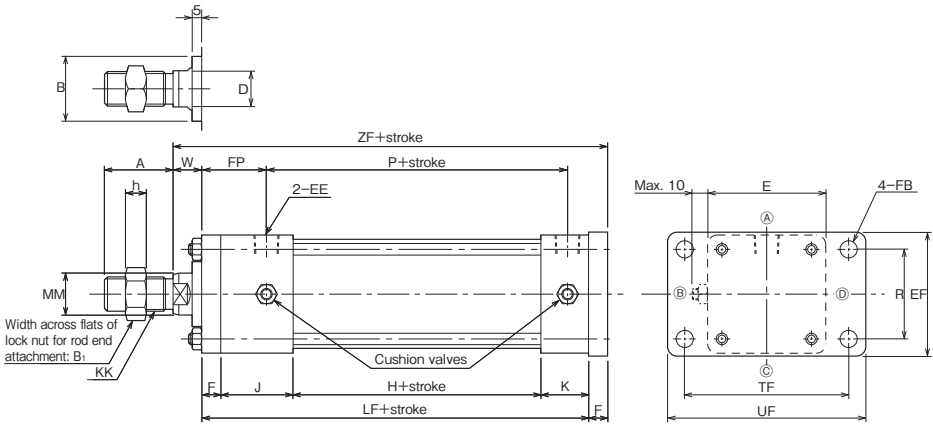
* The parenthesized values of dimension A indicate the screw length.

CAD/DATA
10A-3/TA3  is available. 

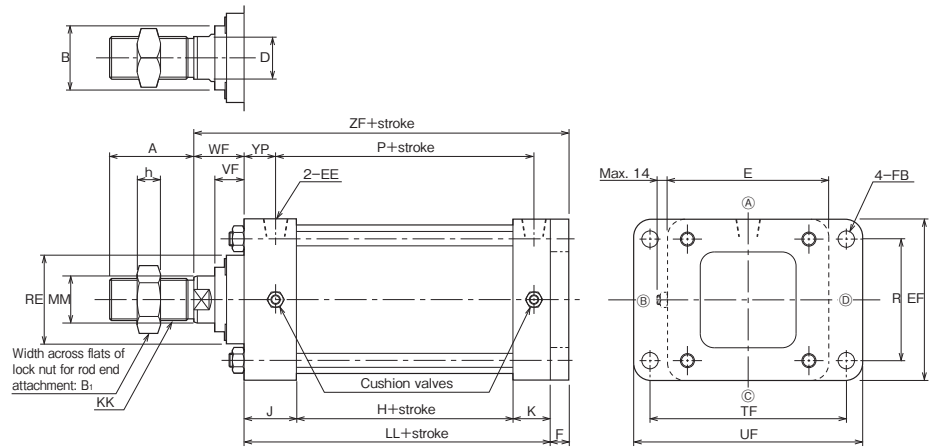
FB

10A-3 FB  

● $\phi 50$ to $\phi 80$



● $\phi 100$ to $\phi 250$



Dimensional Table

Symbol Bore	A	B	B ₁	D	E	EE	EF	F	FB	FP	H	h	J
$\phi 50$	36(32)	$\phi 34$	24	19	$\square 62$	Rc ¹ / ₄	65	10	$\phi 9$	34	30	11	38
$\phi 63$	36(32)	$\phi 34$	24	19	$\square 76$	Rc ³ / ₈	76	10	$\phi 9$	34	33	11	38
$\phi 80$	44(40)	$\phi 39$	30	22	$\square 94$	Rc ³ / ₈	95	16	$\phi 12$	43	31	13	45
$\phi 100$	54(49)	$\phi 46$	36	27	$\square 114$	Rc ¹ / ₂	115	16	$\phi 12$	—	31	16	45
$\phi 125$	72(67)	$\phi 55$	50	36	$\square 138$	Rc ¹ / ₂	138	16	$\phi 14$	—	37	20	45
$\phi 160$	84(79)	$\phi 65$	60	46	$\square 178$	Rc ³ / ₄	178	20	$\phi 18$	—	43	22	50
$\phi 180$	84(79)	$\phi 65$	60	46	$\square 200$	Rc ³ / ₄	200	20	$\phi 18$	—	43	22	50
$\phi 200$	84(79)	$\phi 65$	60	46	$\square 216$	Rc ³ / ₄	216	20	$\phi 18$	—	43	22	50
$\phi 250$	112(107)	$\phi 85$	80	55	$\square 270$	Rc 1	270	25	$\phi 22$	—	55	30	57

Symbol Bore	K	KK	LF	LL	MM	P	R	RE	TF	UF	VF	W	WF	YP	ZF
$\phi 50$	25	M18×1.5	103	—	$\phi 22$	58	47	—	86	104	—	15	—	—	128
$\phi 63$	25	M18×1.5	106	—	$\phi 22$	61	56	—	98	116	—	15	—	—	131
$\phi 80$	32	M22×1.5	124	—	$\phi 25$	67	70	—	119	143	—	19	—	—	159
$\phi 100$	32	M27×2	—	108	$\phi 32$	67	84	$\square 65$	138	162	21	—	37	27	161
$\phi 125$	32	M36×2	—	114	$\phi 40$	73	104	$\square 76$	168	196	25	—	43	27	173
$\phi 160$	38	M42×2	—	131	$\phi 50$	85	134	$\square 94$	212	248	30	—	52	29	203
$\phi 180$	38	M42×2	—	131	$\phi 50$	85	156	$\square 94$	234	270	30	—	52	29	203
$\phi 200$	38	M42×2	—	131	$\phi 50$	85	163	$\square 94$	250	286	30	—	52	29	203
$\phi 250$	50	M56×2	—	162	$\phi 63$	109	201	$\square 125$	312	356	33	—	60	30	247

* The parenthesized values of dimension A indicate the screw length.

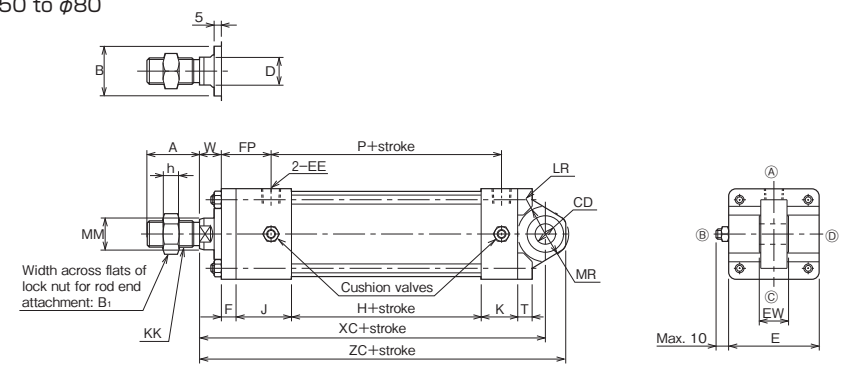
10A-3/TA3 Bore is available. CAD/DATA



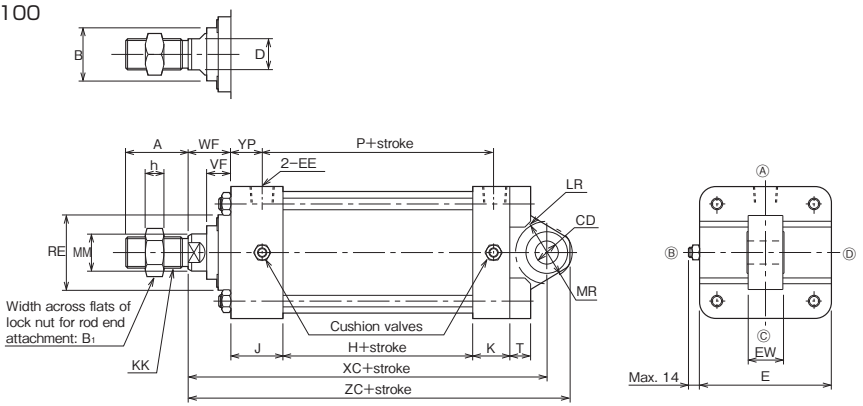
CA

10A-3 CA Bore B Stroke

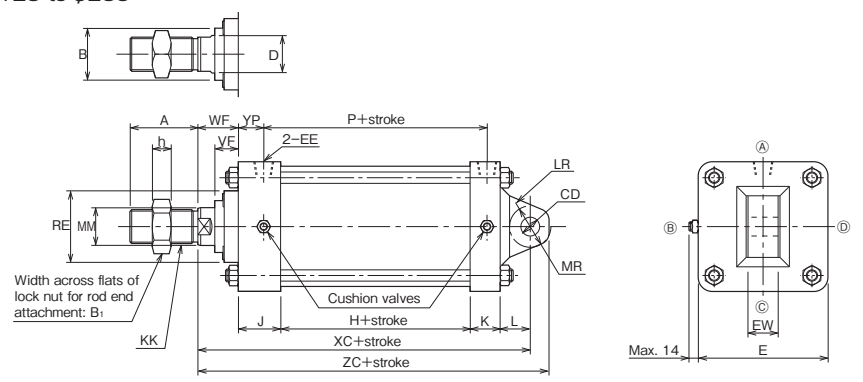
•φ50 to φ80



•φ100



•φ125 to φ250



Dimensional Table

Symbol	A	B	B ₁	CD	D	E	EE	EW	F	FP	H	h	J	K	KK
Bore															
φ50	36(32)	φ34	24	φ14H9	19	□62	Rc ¹ / ₄	20 ⁰ _{-0.084}	10	34	30	11	38	25	M18×1.5
φ63	36(32)	φ34	24	φ14H9	19	□76	Rc ³ / ₈	20 ⁰ _{-0.084}	10	34	33	11	38	25	M18×1.5
φ80	44(40)	φ39	30	φ20H9	22	□94	Rc ³ / ₈	32 ⁰ _{-0.100}	16	43	31	13	45	32	M22×1.5
φ100	54(49)	φ46	36	φ20H9	27	□114	Rc ¹ / ₂	32 ⁰ _{-0.100}	—	—	31	16	45	32	M27×2
φ125	72(67)	φ55	50	φ20H9	36	□138	Rc ¹ / ₂	32 ⁰ _{-0.100}	—	—	37	20	45	32	M36×2
φ160	84(79)	φ65	60	φ28H9	46	□178	Rc ³ / ₄	40 ⁰ _{-0.100}	—	—	43	22	50	38	M42×2
φ180	84(79)	φ65	60	φ28H9	46	□200	Rc ³ / ₄	40 ⁰ _{-0.100}	—	—	43	22	50	38	M42×2
φ200	84(79)	φ65	60	φ28H9	46	□216	Rc ³ / ₄	40 ⁰ _{-0.100}	—	—	43	22	50	38	M42×2
φ250	112(107)	φ85	80	φ36H9	55	□270	Rc 1	50 ⁰ _{-0.100}	—	—	55	30	57	50	M56×2

Symbol	L		LR		MM	MR	P	RE	T	VF	W	WF	XC		YP	ZC	
Bore	CA style	CC style	CA style	CC style									CA style	CC style		CA style	CC style
φ50	—	—	R19	—	φ22	R17	58	—	10	—	15	—	137	—	—	151	—
φ63	—	—	R19	—	φ22	R17	61	—	13	—	15	—	140	—	—	154	—
φ80	—	—	R26	—	φ25	R22	67	—	18	—	19	—	175	—	—	195	—
φ100	—	—	R27	—	φ32	R22	67	□65	18	21	—	37	177	—	27	197	—
φ125	32	36	R22	R26	φ40	R22	73	□76	14	25	—	43	189	207	27	209	227
φ160	38	44	R30	R32	φ50	R30	85	□94	20	30	—	52	221	247	29	249	275
φ180	38	44	R30	R32	φ50	R30	85	□94	25	30	—	52	221	252	29	249	280
φ200	38	44	R30	R32	φ50	R30	85	□94	25	30	—	52	221	252	29	249	280
φ250	54	58	R42	R46	φ63	R44	109	□125	30	33	—	60	276	310	30	312	346

* The parenthesized values of dimension A indicate the screw length.

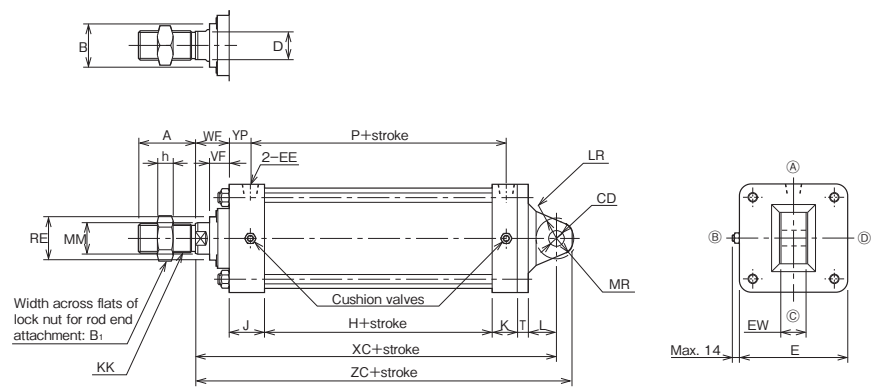
10A-3/TA3 Bore



CC

10A-3 CC Bore B Stroke

•φ125 to φ250

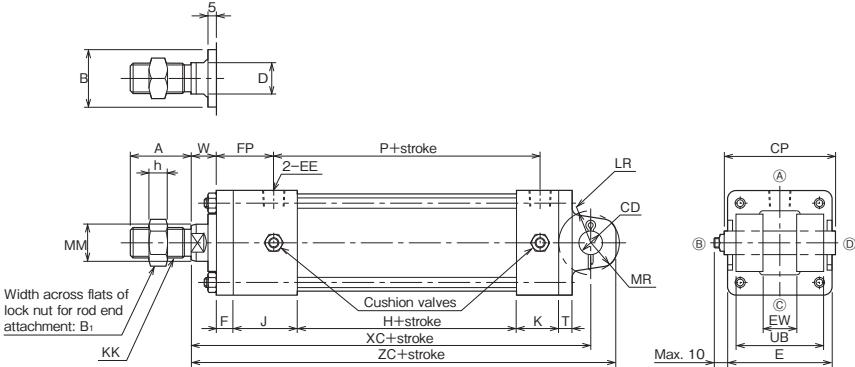


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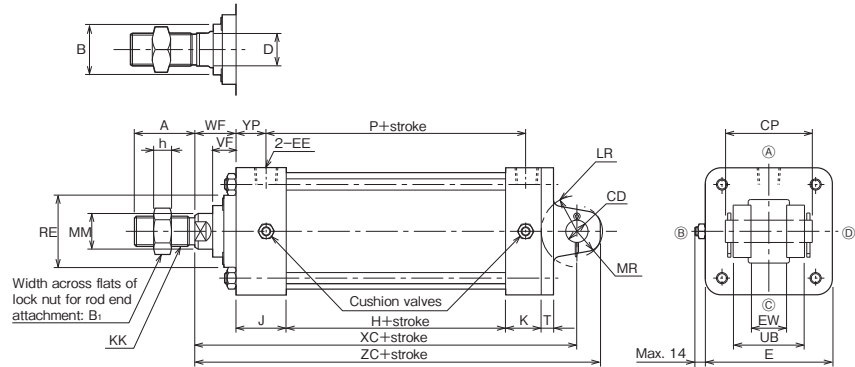
CB

10A-3 CB  

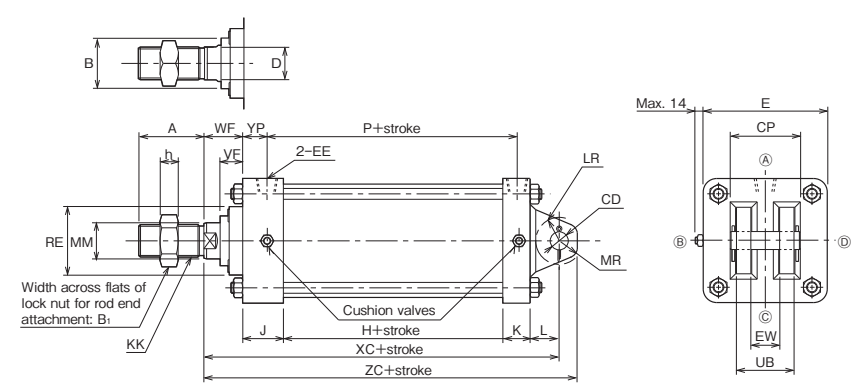
• $\phi 50$ to $\phi 80$



• $\phi 100$



• $\phi 125$ to $\phi 250$



Dimensional Table

Symbol	A	B	B ₁	CD	CP	D	E	EE	EW	F	FP	H	h	J	K	KK
Bore																
$\phi 50$	36(32)	$\phi 34$	24	$\phi 14^{+0.05}_{-0.05}$	66	19	$\square 62$	Rc ¹ / ₄	$20^{+0.7}_{+0.5}$	10	34	30	11	38	25	M18×1.5
$\phi 63$	36(32)	$\phi 34$	24	$\phi 14^{+0.05}_{-0.05}$	66	19	$\square 76$	Rc ³ / ₈	$20^{+0.7}_{+0.5}$	10	34	33	11	38	25	M18×1.5
$\phi 80$	44(40)	$\phi 39$	30	$\phi 20^{+0.05}_{-0.05}$	78	22	$\square 94$	Rc ³ / ₈	$32^{+0.7}_{+0.5}$	16	43	31	13	45	32	M22×1.5
$\phi 100$	54(49)	$\phi 46$	36	$\phi 20^{+0.05}_{-0.05}$	78	27	$\square 114$	Rc ¹ / ₂	$32^{+0.7}_{+0.5}$	—	—	31	16	45	32	M27×2
$\phi 125$	72(67)	$\phi 55$	50	$\phi 20^{+0.05}_{-0.05}$	78	36	$\square 138$	Rc ¹ / ₂	$32^{+0.7}_{+0.5}$	—	—	37	20	45	32	M36×2
$\phi 160$	84(79)	$\phi 65$	60	$\phi 28^{+0.05}_{-0.05}$	97	46	$\square 178$	Rc ³ / ₄	$40^{+0.8}_{+0.5}$	—	—	43	22	50	38	M42×2
$\phi 180$	84(79)	$\phi 65$	60	$\phi 28^{+0.05}_{-0.05}$	97	46	$\square 200$	Rc ³ / ₄	$40^{+0.8}_{+0.5}$	—	—	43	22	50	38	M42×2
$\phi 200$	84(79)	$\phi 65$	60	$\phi 28^{+0.05}_{-0.05}$	97	46	$\square 216$	Rc ³ / ₄	$40^{+0.8}_{+0.5}$	—	—	43	22	50	38	M42×2
$\phi 250$	112(107)	$\phi 85$	80	$\phi 36^{+0.05}_{-0.05}$	117	55	$\square 270$	Rc 1	$50^{+0.8}_{+0.5}$	—	—	55	30	57	50	M56×2

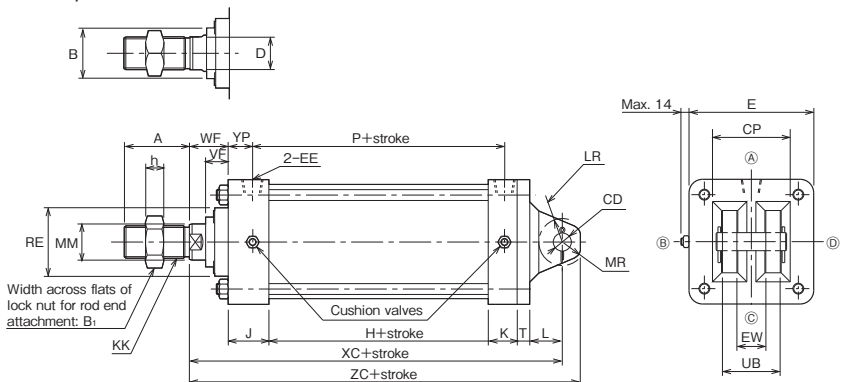
Symbol	L		LR	MM	MR	P	RE	T	UB	VF	W	WF	XC		YP	ZC	
	CB style	CD style											CB style	CD style		CB style	CD style
Bore																	
$\phi 50$	—	—	R19	$\phi 22$	R18	58	—	8	52	—	15	—	137	—	—	152	—
$\phi 63$	—	—	R19	$\phi 22$	R18	61	—	8	52	—	15	—	140	—	—	155	—
$\phi 80$	—	—	R32	$\phi 25$	R23	67	—	11	64	—	19	—	175	—	—	196	—
$\phi 100$	—	—	R32	$\phi 32$	R23	67	$\square 65$	11	64	21	—	37	177	—	27	198	—
$\phi 125$	32	36	R26	$\phi 40$	R22	73	$\square 76$	14	64	25	—	43	189	207	27	209	227
$\phi 160$	38	44	R32	$\phi 50$	R30	85	$\square 94$	20	80	30	—	52	221	247	29	249	275
$\phi 180$	38	44	R32	$\phi 50$	R30	85	$\square 94$	25	80	30	—	52	221	252	29	249	280
$\phi 200$	38	44	R32	$\phi 50$	R30	85	$\square 94$	25	80	30	—	52	221	252	29	249	280
$\phi 250$	54	58	R46	$\phi 63$	R44	109	$\square 125$	30	100	33	—	60	276	310	30	312	346

* The parentized values of dimension A indicate the screw length.

CD

10A-3 CD  

• $\phi 125$ to $\phi 250$

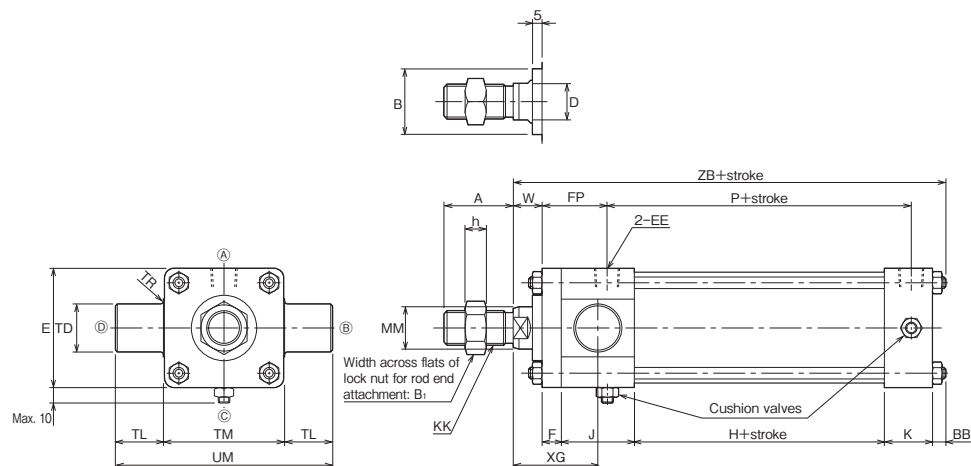




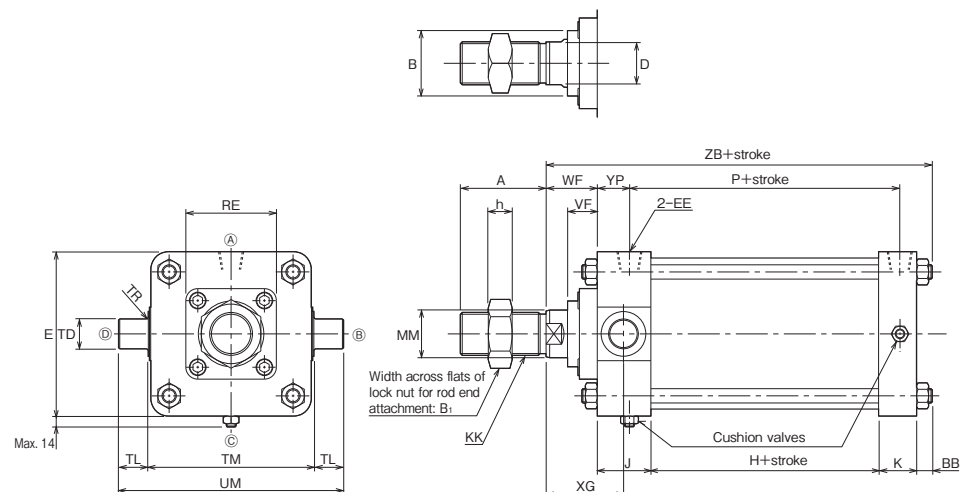
TA

10A-3 TA

- $\phi 50$ to $\phi 80$



- $\phi 100$ to $\phi 250$



Dimensional Table

Symbol Bore	A	B	B ₁	BB	D	E	EE	F	FP	H	h	J	K
φ50	36(32)	φ34	24	7	19	□62	Rc ¹ / ₄	10	34	30	11	38	25
φ63	36(32)	φ34	24	9	19	□76	Rc ³ / ₈	10	34	33	11	38	25
φ80	44(40)	φ39	30	10	22	□94	Rc ³ / ₈	16	43	31	13	45	32
φ100	54(49)	φ46	36	10	27	□114	Rc ¹ / ₂	—	—	31	16	45	32
φ125	72(67)	φ55	50	13	36	□138	Rc ¹ / ₂	—	—	37	20	45	32
φ160	84(79)	φ65	60	16	46	□178	Rc ³ / ₄	—	—	43	22	50	38
φ180	84(79)	φ65	60	16	46	□200	Rc ³ / ₄	—	—	43	22	50	38
φ200	84(79)	φ65	60	16	46	□216	Rc ³ / ₄	—	—	43	22	50	38
φ250	112(107)	φ85	80	19	55	□270	Rc 1	—	—	55	30	57	50

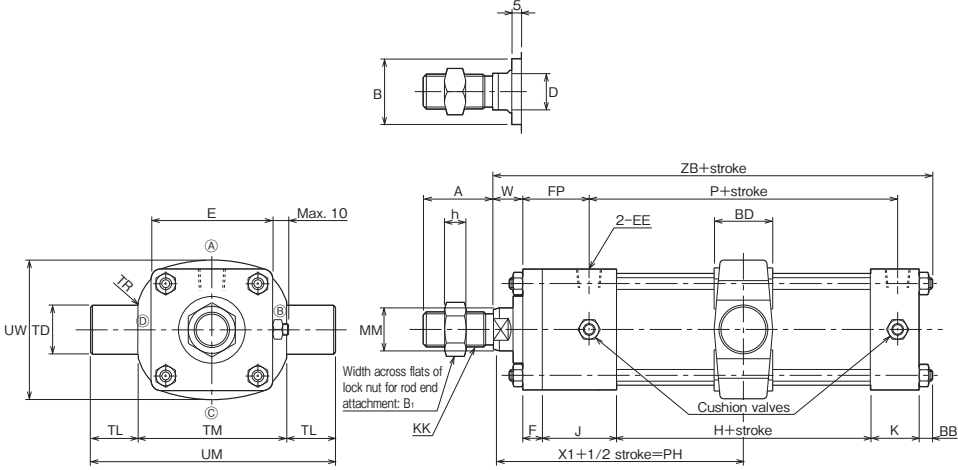
Symbol Bore	KK	MM	P	RE	TD	TL	TM	TR	UM	VF	W	WF	XG	YP	ZB
φ50	M18×1.5	φ22	58	—	φ25e9	25	63	R1.6	113	—	15	—	44	—	125
φ63	M18×1.5	φ22	61	—	φ25e9	25	76	R1.6	126	—	15	—	44	—	130
φ80	M22×1.5	φ25	67	—	φ25e9	25	95	R1.6	145	—	19	—	57	—	153
φ100	M27×2	φ32	67	□65	φ25e9	25	114	R2	164	21	—	37	59	27	155
φ125	M36×2	φ40	73	□76	φ25e9	25	139	R2	189	25	—	43	65	27	170
φ160	M42×2	φ50	85	□94	φ36e9	36	178	R2.5	250	30	—	52	77	29	195
φ180	M42×2	φ50	85	□94	φ36e9	36	200	R2.5	272	30	—	52	77	29	195
φ200	M42×2	φ50	85	□94	φ36e9	36	216	R2.5	288	30	—	52	77	29	195
φ250	M56×2	φ63	109	□125	φ45e9	45	270	R3	360	33	—	60	88	30	240

*The parenthesized values of dimension A indicate the screw length.

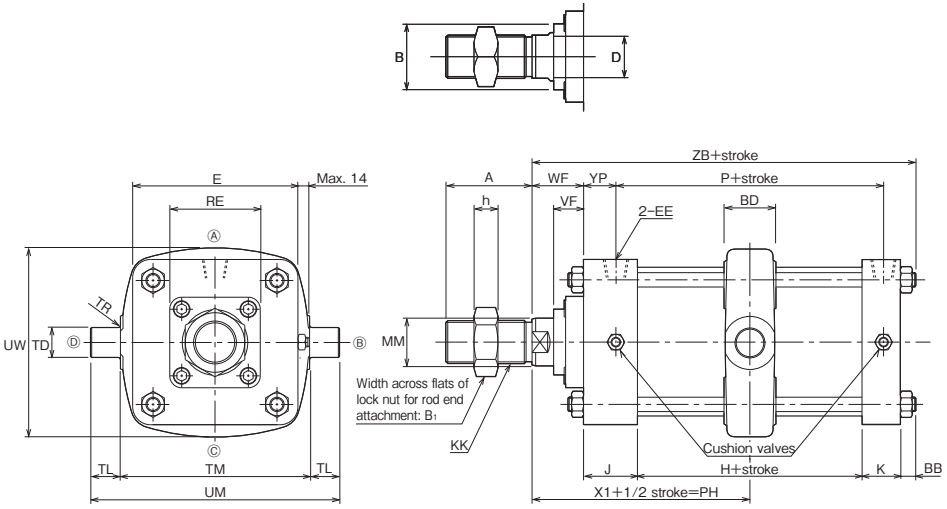
10A-3/TA3 Bore is available. CAD/DATA

TC
10A-3 TC Bore B Stroke

• φ50 to φ80



• φ100 to φ250



Dimensional Table

Symbol Bore	A	B	B ₁	BB	BD	D	E	EE	F	FP	H	h	J	K	KK	MM
φ50	36(32)	φ34	24	7	30	19	□62	Rc ¹ / ₄	10	34	30	11	38	25	M18×1.5	φ22
φ63	36(32)	φ34	24	9	30	19	□76	Rc ³ / ₈	10	34	33	11	38	25	M18×1.5	φ22
φ80	44(40)	φ39	30	10	35	22	□94	Rc ³ / ₈	16	43	31	13	45	32	M22×1.5	φ25
φ100	54(49)	φ46	36	10	40	27	□114	Rc ¹ / ₂	—	—	31	16	45	32	M27×2	φ32
φ125	72(67)	φ55	50	13	43	36	□138	Rc ¹ / ₂	—	—	37	20	45	32	M36×2	φ40
φ160	84(79)	φ65	60	16	53	46	□178	Rc ³ / ₄	—	—	43	22	50	38	M42×2	φ50
φ180	84(79)	φ65	60	16	53	46	□200	Rc ³ / ₄	—	—	43	22	50	38	M42×2	φ50
φ200	84(79)	φ65	60	16	53	46	□216	Rc ³ / ₄	—	—	43	22	50	38	M42×2	φ50
φ250	112(107)	φ85	80	19	58	55	□270	Rc 1	—	—	55	30	57	50	M56×2	φ63

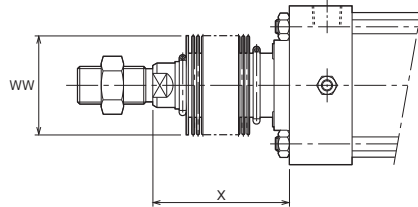
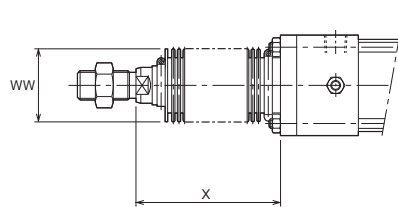
Symbol Bore	P	Min. PH	TC style min. stroke	RE	TD	TL	TM	TR	UM	UW	VF	W	WF	XI	YP	ZB
φ50	58	78	3	—	φ25e9	25	76	R1.6	126	71	—	15	—	78	—	125
φ63	61	78	0	—	φ25e9	25	88	R1.6	138	86	—	15	—	79.5	—	130
φ80	67	98	7	—	φ25e9	25	114	R1.6	164	104	—	19	—	95.5	—	153
φ100	67	102	12	□65	φ25e9	25	132	R2	182	128	21	—	37	97.5	27	155
φ125	73	110	9	□76	φ25e9	25	158	R2	208	158	25	—	43	106.5	27	170
φ160	85	129	13	□94	φ36e9	36	200	R2.5	272	200	30	—	52	123.5	29	199
φ180	85	129	13	□94	φ36e9	36	228	R2.5	300	228	30	—	52	123.5	29	199
φ200	85	129	13	□94	φ36e9	36	246	R2.5	318	246	30	—	52	123.5	29	199
φ250	109	146	6	□125	φ45e9	45	304	R3	394	304	33	—	60	144.5	30	241

* The parenthesized values of dimension A indicate the screw length.

With Boots

● $\phi 50$ to $\phi 80$

● $\phi 100$ to $\phi 250$



CAD/DATA
10A-3/TA3 [Bore] K is available.



	Standard	Semi-standard	
Material	Nylon tarpaulin	Chloroprene	Conex
Heat proof	80℃	100℃	200℃

- (Notes)
- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
 - Conex is the registered trademark of Teijin Limited.
 - If the calculated value has a fractional part, round it up.
 - The boots have been mounted at our factory prior to delivery.
 - Dimension X is the distance from the cover end. When using the FA accessory, check dimension carefully. (On 50 to 80 mm bore cylinders, the distance is measured from the retainer end face.)
 - Note that the seal housings of 32 to 80 mm bore cylinders with boots differ from those of standard type cylinders.

Dimensional Table/With boots (nylon tarpaulin/chloroprene)

Symbol Bore	WW	X (standard strokes)												X (other than standard strokes)
		50	75	100	125	150	200	250	300	350	400	450	500	Nylon tarpaulin/chloroprene
φ50	φ45	72	80	89	97	105	122	139	155	172	189	205	222	1/3 stroke+55
φ63	φ45	72	80	89	97	105	122	139	155	172	189	205	222	
φ80	φ60	78	84	90	97	103	115	128	140	153	165	178	190	
φ100	φ71	86	92	98	105	111	123	136	148	161	173	186	198	1/4 stroke+73
φ125	φ80	88	94	100	107	113	125	138	150	163	175	188	200	1/4 stroke+75
φ160	φ100	98	104	110	117	123	135	148	160	173	185	198	210	1/4 stroke+85
φ180	φ100	98	104	110	117	123	135	148	160	173	185	198	210	
φ200	φ100	98	104	110	117	123	135	148	160	173	185	198	210	
φ250	φ125	103	109	115	122	128	140	153	165	178	190	203	215	1/4 stroke+90

Dimensional Table/With boots (Conex)

Symbol Bore	WW	X (standard strokes)												X (other than standard strokes)
		50	75	100	125	150	200	250	300	350	400	450	500	Conex
φ50	φ61	75	85	95	105	115	135	155	175	195	215	235	255	1/2.5 stroke+55
φ63	φ61	75	85	95	105	115	135	155	175	195	215	235	255	
φ80	φ61	82	90	99	107	115	132	149	165	182	199	215	232	1/3 stroke+65
φ100	φ71	90	98	107	115	123	140	157	173	190	207	223	240	1/3 stroke+73
φ125	φ80	92	100	109	117	125	142	159	175	192	209	225	242	1/3 stroke+75
φ160	φ100	102	110	119	127	135	152	169	185	202	219	235	252	1/3 stroke+85
φ180	φ100	102	110	119	127	135	152	169	185	202	219	235	252	
φ200	φ100	102	110	119	127	135	152	169	185	202	219	235	252	
φ250	φ125	107	115	124	132	140	157	174	190	207	224	240	257	1/3 stroke+90

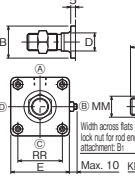
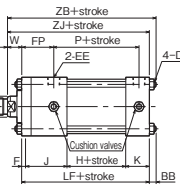
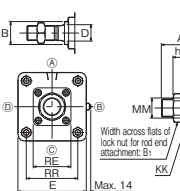
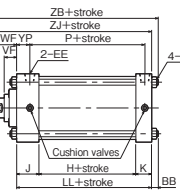
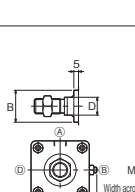
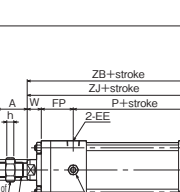
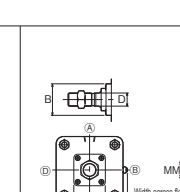
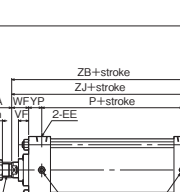
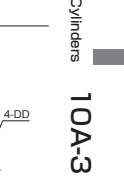
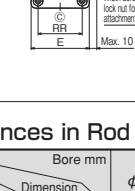
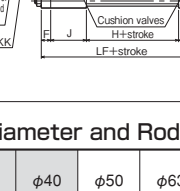
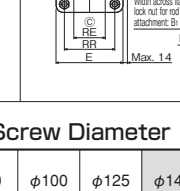
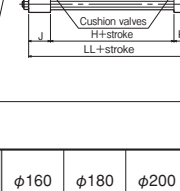
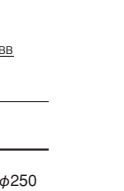
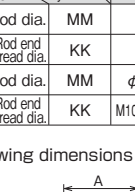
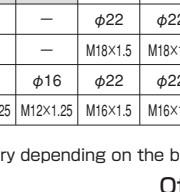
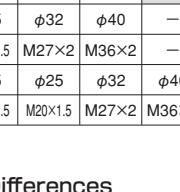
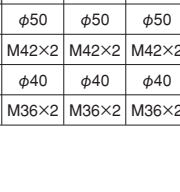
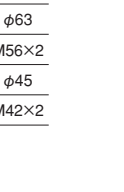
Information

Differences between 10A-3 and 10A-2

- 10A-3 cylinders are more heavy duty type cylinders having thicker piston rods than those of 10A-2.

Appearance

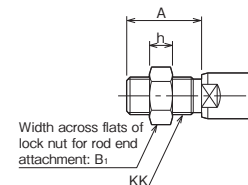
10A-3 Series cylinders marked with  are not available.

Series	Bore mm	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	$\phi 180$	$\phi 200$	$\phi 250$
10A-3													
													
10A-2													
													

Differences in Rod Diameter and Rod End Screw Diameter

Series	Item	Dimension symbol	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	$\phi 180$	$\phi 200$	$\phi 250$
10A-3	Rod dia.	MM	—	—	$\phi 22$	$\phi 22$	$\phi 25$	$\phi 32$	$\phi 40$	—	$\phi 50$	$\phi 50$	$\phi 50$	$\phi 63$
	Rod end thread dia.	KK	—	—	M18×1.5	M18×1.5	M22×1.5	M27×2	M36×2	—	M42×2	M42×2	M42×2	M56×2
10A-2	Rod dia.	MM	$\phi 12$	$\phi 16$	$\phi 22$	$\phi 22$	$\phi 25$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 40$	$\phi 40$	$\phi 40$	$\phi 45$
	Rod end thread dia.	KK	M10×1.25	M12×1.25	M16×1.5	M16×1.5	M20×1.5	M20×1.5	M27×2	M36×2	M36×2	M36×2	M36×2	M42×2

The following dimensions vary depending on the bore.



Other Differences

	Difference
$\phi 50$ to $\phi 80$	Same dimensions as 10A-2 Series
$\phi 100$ to $\phi 250$	• Body overall length (dimensional symbol: LL (only $\phi 100$)) • Rod diameter (dimensional symbol: MM, D, B) • Rod protrusion (dimensional symbol: WF, VF, ZB, ZJ)

- The securing method of 100 mm bore cylinders was changed from the retainer which is secured from tie rod nuts to hex bolts.

The mounting accessories for 10A-3 and 10A-2 are interchangeable.

CAD/DATA
10A-3/TA3  is available. 

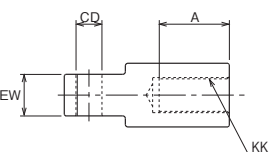
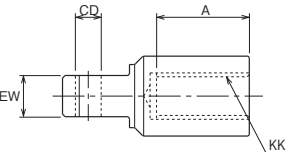
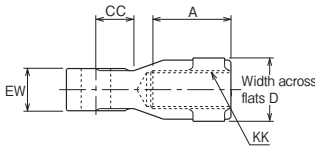
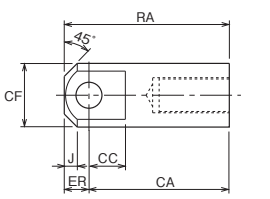
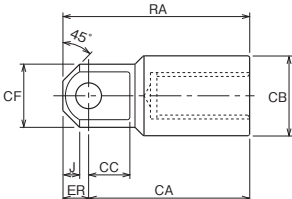
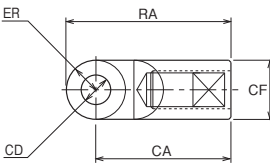
Rod End Attachment

● Rod eye (T-end)

● $\phi 50$ to $\phi 80$

● $\phi 125$

● $\phi 100 \cdot \phi 160$ to $\phi 250$

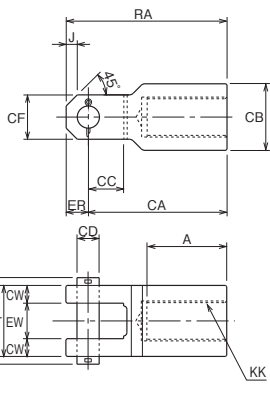
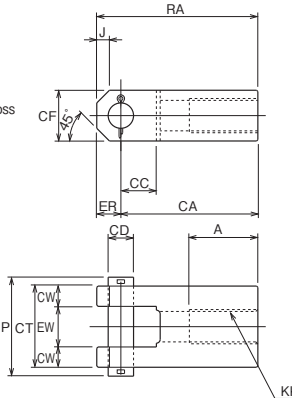
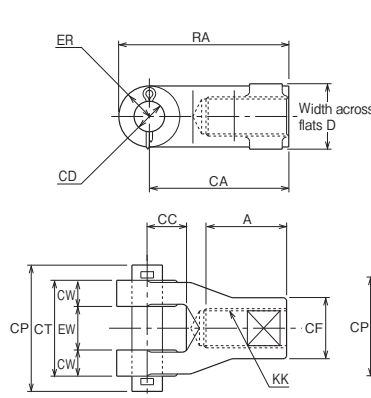


● Rod clevis (Y-end) with pin

● $\phi 50$ to $\phi 80$

● $\phi 100 \cdot \phi 250$

● $\phi 125$ to $\phi 200$



Dimensional Table/Rod eye (T-end)

Symbol Bore	Part number	A	CA	CB	CC	CD	CF	D	ER	EW	J	KK	RA
$\phi 50$	RTA-18-A	37	64	—	18	$\phi 14H9$	$\phi 28$	30	R14	$20_{-0.1}^0$	—	M18×1.5	78
$\phi 63$	RTA-22-A	45	100	—	30	$\phi 20H9$	$\phi 38$	41	R19	$32_{-0.1}^0$	—	M22×1.5	119
$\phi 80$	RTA-27-1-A	54	108	—	28	$\phi 20H9$	$\phi 49$	—	19	$32_{-0.1}^0$	10	M27×2	127
$\phi 125$	RTA-36-1-A	72	125	$\phi 62$	32	$\phi 20H9$	$\phi 49$	—	20	$32_{-0.1}^0$	13	M36×2	145
$\phi 160$	RTA-42-1-A	84	140	—	33	$\phi 28H9$	$\phi 62$	—	28	$40_{-0.1}^0$	18	M42×2	168
$\phi 180$													
$\phi 200$													
$\phi 250$	RTA-56-A	110	188	—	48	$\phi 36H9$	$\phi 79$	—	36	$50_{-0.1}^0$	20	M56×2	224

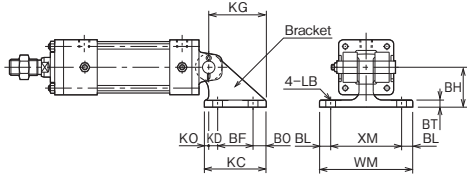
Dimensional Table/Rod clevis (Y-end) with pin

Symbol Bore	Part number	A	CA	CB	CC	CD	CF	CP	CT	CW	D	ER	EW	J	KK	RA
$\phi 50$	RYA-18-A	37	64	—	18	$\phi 14_{-0.016}^{+0.013}$	$\phi 28$	58	44	12	30	R14	$20_{-0.016}^{+0.013}$	—	M18×1.5	78
$\phi 63$	RYA-22-A	45	100	—	28	$\phi 20_{-0.016}^{+0.013}$	$\phi 38$	78	64	16	41	R19	$32_{-0.016}^{+0.013}$	—	M22×1.5	119
$\phi 80$	RYA-27-1-A	54	108	—	28	$\phi 20_{-0.016}^{+0.013}$	40	78	64	16	—	19	$32_{-0.016}^{+0.013}$	10	M27×2	127
$\phi 125$	RYA-36-1-A	72	125	60	32	$\phi 20_{-0.016}^{+0.013}$	40	78	64	16	—	20	$32_{-0.016}^{+0.013}$	10	M36×2	145
$\phi 160$	RYA-42-1-A	84	140	60	33	$\phi 28_{-0.016}^{+0.013}$	54	97	80	20	—	28	$40_{-0.016}^{+0.013}$	16	M42×2	168
$\phi 180$																
$\phi 200$																
$\phi 250$	RYA-56-A	110	188	—	48	$\phi 36_{-0.016}^{+0.013}$	80	117	100	25	—	36	$50_{-0.016}^{+0.013}$	23	M56×2	224

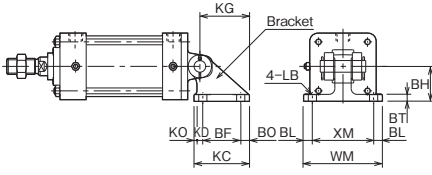
CAD/DATA
10A-3/TA3 □Bore □K is available.

Bracket
●CB/CD bracket

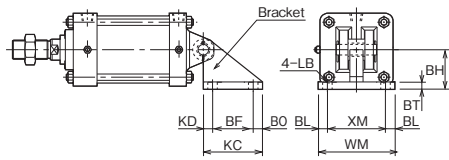
●φ50 to φ80



●φ100

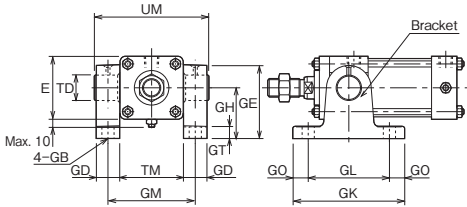


●φ125 to φ250

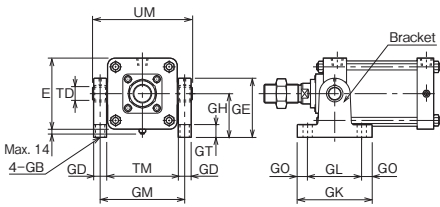


●TA bracket

●φ50 to φ80

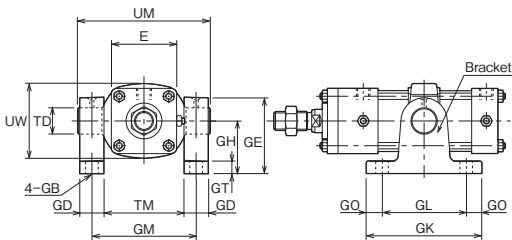


●φ100 to φ250

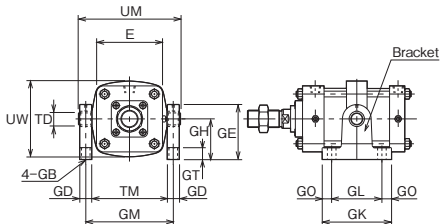


●TC bracket

●φ50 to φ80



●φ100 to φ250



Dimensional Table/CB/CD bracket

Symbol Bore	Part number	BF	BH	BL	BO	BT	KC	KD	KG	KO	LB	WM	XM
φ50	BCA-14-A	40	45	12.5	15	8	70	10	65	5	φ11	105	80
φ63													
φ80	BCA-20-A	65	60	15	16.5	12	98	5	85	10	φ14	135	105
φ100													
φ125	BCA-20-1-A	77	75	17.5	17.5	14	112	17.5	—	—	φ18	145	110
φ160	BCA-28-A	120	115	22.5	22.5	23	165	22.5	—	—	φ22	175	130
φ180													
φ200													
φ250	BCA-36-A	165	140	25	25	28	215	25	—	—	φ26	220	170

Dimensional Table/TA/TC bracket

Symbol Bore	Part number	E	GB	GD	GE	GH	GK	GL	GM		GO	GT	TD	TM		UM		UW
									TA type	TC type				TA type	TC type	TA type	TC type	
φ50	BTA-25-A	□ 62 □ 76	φ12	23	72	50	110	80	86	99	15	12	φ25 ^{H9/g9}	63	76	113	126	71
φ63									99	111				76	88	126	138	86
φ80	BTA-25-1-A	□ 94 □ 114	φ14	23	92	70	120	85	118	137	17.5	14	φ25 ^{H9/g9}	95	114	145	164	104
φ100									137	155				114	132	164	182	128
φ125	BTA-25-2-A	□ 138	φ18	25	115	85	145	105	164	183	20	25	φ25 ^{H9/g9}	139	158	189	208	158
φ160	BTA-36-A	□ 178	φ22	36	170	130	185	140	214	236	22.5	25	φ36 ^{H9/g9}	178	200	250	272	200
φ180		□ 200							236	264				200	228	272	300	228
φ200		□ 216							252	282				216	246	288	318	246
φ250	BTA-45-A	□ 270	φ26	45	210	160	215	165	315	349	25	32	φ45 ^{H9/g9}	270	304	360	394	304