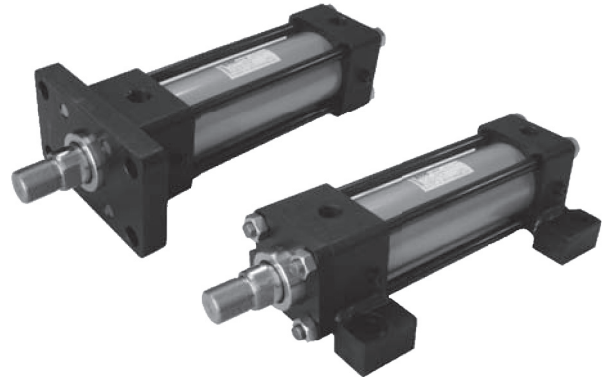


21 MPa hydraulic cylinders

- Now more compact
 - Total cylinder length: Shortened by up to 39mm
 - Total cylinder weight: Reduced by up to 30kg (compared to the 210H-3)
- Bore size: $\phi 40$ to $\phi 160$
- Improved cushion performance
 - Increased absorption energy
 - Reduced shocks when stopping
 - Cushion adjustment possible in all sizes
- Improved check valve performance
 - Achieves fast and smooth startup



Standard Specifications

Type	Standard type
Nominal pressure	21MPa
Maximum allowable pressure	Cap side: 24.5 Mpa Rod side: 26.5 MPa
Proof test pressure	31.5MPa
Minimum operating pressure	Rod side: 0.45 MPa or less Cap side: 0.3 MPa or less
Working speed range (excluding cushion)	$\phi 40$ to $\phi 63$: 8 to 400mm/s $\phi 80$ to $\phi 125$: 8 to 300mm/s $\phi 140$ to $\phi 250$: 8 to 200mm/s
Working temperature range (ambient/fluid temperature)	-10 to +80°C (No freezing)
Structure of cushioning	Metal fitting system
Adaptable fluid	Petroleum-based fluid (When using another fluid, refer to the table of fluid adaptability.)
Tolerance for thread	JIS 6g/6H
Tolerance of stroke	0 to 100mm: $\begin{smallmatrix} +0.8 \\ 0 \end{smallmatrix}$ 101 to 250mm: $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$ 251 to 630mm: $\begin{smallmatrix} +1.25 \\ 0 \end{smallmatrix}$ 631 to 1000mm: $\begin{smallmatrix} +1.4 \\ 0 \end{smallmatrix}$ 1001 to 1600mm: $\begin{smallmatrix} +1.6 \\ 0 \end{smallmatrix}$ 1601 to 2000mm: $\begin{smallmatrix} +1.8 \\ 0 \end{smallmatrix}$
Mounting style	LA, FA, FB, CA, CB, 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 Lock nut

Terminologies

Nominal pressure

Pressure given to a cylinder for convenience of naming. It is not always the same as the working pressure (rated pressure) that guarantees performance under the specified conditions.

Maximum allowable pressure

The maximum allowable pressure generated in a cylinder (surge pressure, etc.).

Proof test pressure

Test pressure against which a cylinder can withstand without unreliable performance at the return to nominal pressure.

Minimum operating pressure

The minimum pressure that a cylinder placed horizontally without a load can work.

Notes

- The hydraulic pressure generated in a cylinder due to the inertia of load must be lower than the maximum allowable pressure.
- In case that the lock nut is attached to the piston rod end thread part, increase the thread length (dimension A).
- Conex, material of the boots, is the registered trademark of Teijin Limited.

Adaptability of Fluid to Seal Material

Seal material		Adaptable fluid					Adaptable cutting oil		Seal operating temperature range (°C)
		Petroleum based fluid	Water-glycol fluid	Phosphate ester fluid	Water in oil fluid	Oil in water fluid	Nonaqueous	Aqueous	
1	Nitrile rubber	○	○	×	○	○	×	△	-10 to 80
2	Urethane rubber	○	×	×	△	△	×	×	-10 to 80
3	Fluorocarbon	○	×	○	○	○	○	×	0 to 100
6	HNBR	○	○	×	○	○	△	○	-10 to 120

Notes) 1. ○: Applicable, ×: Inapplicable. Consult us before using the △-marked items.

Protect with a boot or similar in environments in which the cutting oil disperses frequently.

Product Lineup

Unit : mm

Series Variation		Type	φ 40	φ 50	φ 63	φ 80	φ 100	φ 125	φ 140	φ 160
General purpose type	Double acting	Standard type 210H-5	●	●	●	●	●	●	●	●
	single rod									

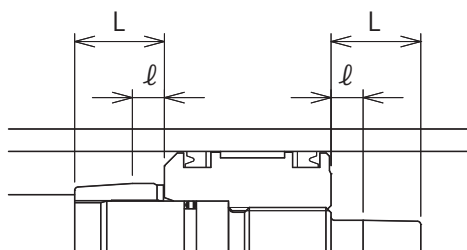
Standard Stroke Range Unit : mm

Bore	Stroke
φ 40	to 1600
φ 50 to φ 160	to 2000

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

Cushion Stroke Length Unit : mm

Bore	Cushion ring length L	Cushion ring parallel part length ℓ
φ 40	26	10
φ 50	28	10
φ 63	28	10
φ 80	30	12
φ 100	30	12
φ 125	33	15
φ 140	33	15
φ 160	33	15



- The cushion stroke lengths in case of cylinders used up to the stroke end.
- In the case that a cylinder is not used up to the stroke end, and it is stopped 5 mm or more before the stroke end, the cushioning effect will be weakened. In such a case, consult us.

Weight Table

Unit : kg

Bore mm	Basic weight	Additional weight per mm of stroke	Mounting accessory weight							Rod end attachment weight		
			LA	FA	FB	CA	CB	TA	TC	Rod eye (T-end)	Rod clevis (Y-end) w/ pin	Lock nut
φ 40	4.13	0.0105	0.80	0.59	1.00	0.56	0.77	0.32	0.74	1.0	1.2	0.03
φ 50	7.04	0.0157	1.24	1.04	1.78	0.93	1.28	0.34	1.04	1.4	2.2	0.05
φ 63	10.46	0.0240	2.51	1.91	3.15	1.45	2.18	0.70	1.71	2.2	3.7	0.11
φ 80	17.35	0.0363	3.99	3.16	5.35	4.17	5.04	1.34	2.99	4.2	7.7	0.24
φ 100	26.04	0.0539	5.40	6.12	9.97	7.95	9.51	3.76	6.79	8.0	14.6	0.52
φ 125	47.40	0.0838	9.84	12.99	19.59	15.46	18.57	5.42	13.25	20.8	31.7	1.10
φ 140	67.60	0.1087	7.85	11.30	21.95	21.30	25.02	8.03	18.75	24.4	38.4	1.44
φ 160	95.44	0.1410	11.29	15.42	31.28	31.43	37.60	18.86	24.28	38.9	57.0	1.93

Calculation formula

Cylinder weight = basic weight

+ (cylinder stroke (mm) × additional weight per mm of stroke)

+ mounting accessory weight

+ rod end attachment weight

Calculation example: 210H-5, rod B, bore φ 63, cylinder stroke 500 mm, LA style, without rod end attachment

Cylinder weight = 10.5 + (500 × 0.024) + 1.42 + 0 = 23.92 kg

How to order

	① Type	② Seal material	③ Mounting style	④ Cylinder bore	⑤ Rod type	⑥ Cushioning	⑦ Stroke	⑧ Air vent position	⑨ Port position	⑩ Cushion valve position		⑪ Rod end attachment	⑫ Lock nut	⑬ Boots
Standard type	210H-5	2	LA	50	B	B	100	A	B	D	-	T	L	J

① Type 210H-5: Double acting single rod standard type

② Seal material

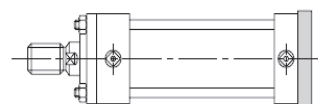
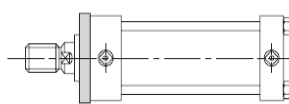
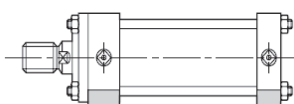
1	Nitrile rubber	3	Fluorocarbon
2	Urethane rubber	6	HNBR

③ Mounting style

LA (side lugs)

FA (rod flange)

FB (cap flange)

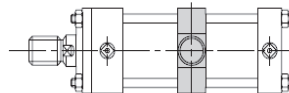
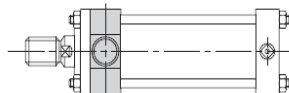
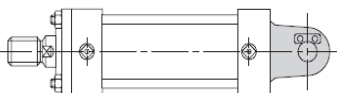
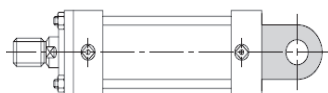


CA (cap eye)

CB (cap clevis)

TA (rod trunnion)

TC (intermediate trunnion)



④ Cylinder bore (mm) $\phi 40 \cdot \phi 50 \cdot \phi 63 \cdot \phi 80 \cdot \phi 100 \cdot \phi 125 \cdot \phi 140 \cdot \phi 160$

⑤ Rod type

B	Rod B
---	-------

⑥ Cushioning

B	With cushions on both ends	H	With cushion on the cap side
R	With cushion on the rod side	N	No cushion

⑦ Cylinder stroke (mm)

⑧ Air vent position (A,B,C,D,N)

⑨ Port position (A,B,C,D)

⑩ Cushion valve position (A,B,C,D,0)

- Specify the codes (A, B, C or D) listed in the dimensions table for ⑧, ⑨ and ⑩.
- If there is no air vent ⑧, this will be N ($\phi 40$ to $\phi 160$).
- If there is no cushion ⑩, this will be 0.
- You cannot specify the same surface for the port, cushion valve and air vent. All three will be on different surfaces.

⑪ Rod end attachment

T	Rod eye (T-end)	Y	Rod clevis (Y-end)
---	-----------------	---	--------------------

 • Needs not to be entered, if unnecessary.

⑫ Lock nut

L	With lock nut
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 • Needs not to be entered, if unnecessary.

⑬ Boots

J	Nylon tarpaulin	JN	Chloroprene	JK	Conex
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 • Needs not to be entered, if unnecessary.

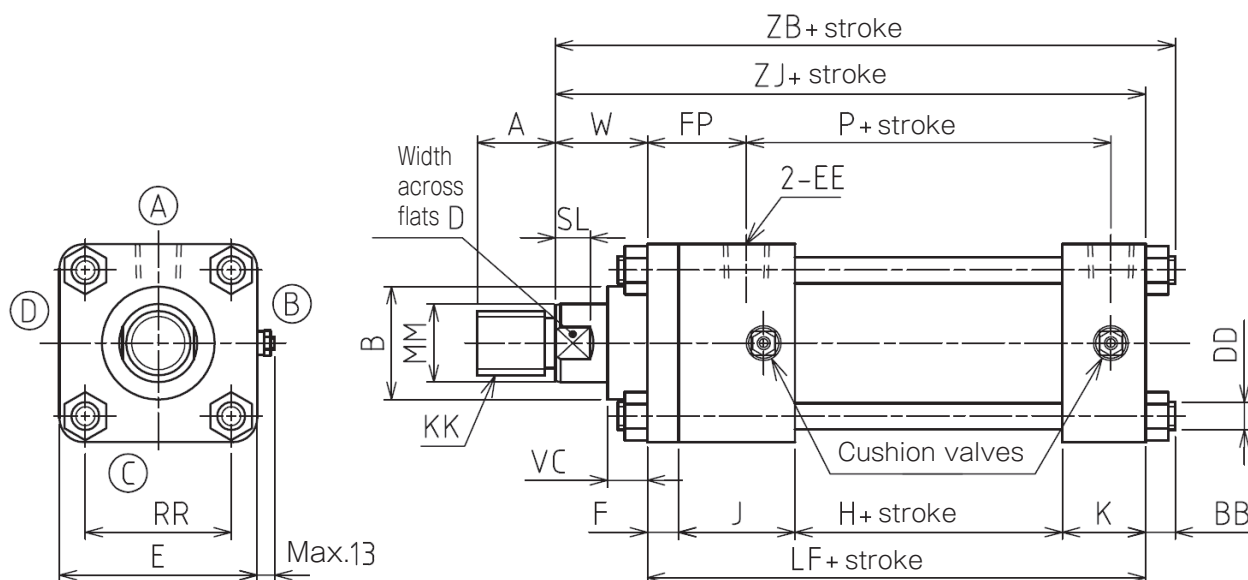
- ★ Standard position
- We provide standard support for a cushion on the rod side/cap side/both sides and no cushions on either side.
 - Fill in the codes shown in the external dimensions figure for the positions of the air vent, port and cushion valve. You cannot specify the same surface for the port, cushion valve and air vent. The cushion valve position code will be "0" when the cushion is not equipped. The air vent position code will be "N" when there is no air vent.
 - Indicate separately if you will change the position of the port, cushion valve or air vent between the rod/cap.

- ★ Standard range
- Change in piston rod end
 - Change in TC accessory position (dimensional symbol: PH)
 - With boots
 - Plated cylinder tube (hard chrome plating thickness: 0.02 mm)

- ★ Air vent specification
- You will need to specify the position of the air vent in ⑧ when replacing the 210H-3 with the 210H-5.

• **There is no SD (basic style) for the 210H-5.**

These are the reference dimensions of the places not listed in other mounting types.
We offer the 210C-2 for the SD type.



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to “Thread length of rod end with lock nut.”

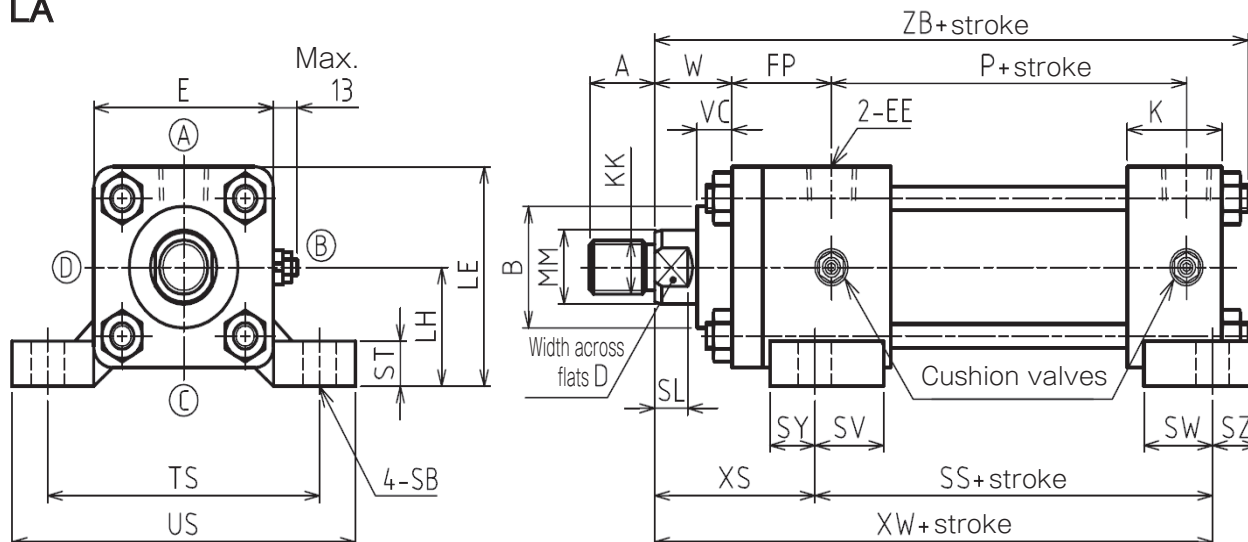
Dimension Table

Unit : mm

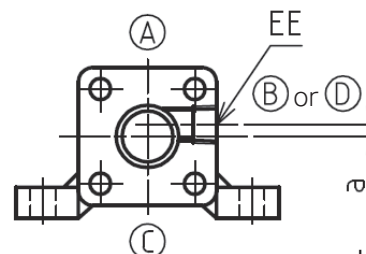
Symbol Bore	A	B	BB	D	DD	E	EE	F	FP	H	J	K
φ 40	25	φ 40	11	19	M10x1.25	□65	Rc3/8	11	38	48	50	36
φ 50	30	φ 46	13	24	M12x1.25	□80	Rc1/2	13	42	48	56	45
φ 63	35	φ 55	14	30	M14x1.5	□94	Rc1/2	15	47	52	59	45
φ 80	45	φ 65	16	41	M16x1.5	□114	Rc3/4	18	57	54	67	48
φ 100	55	φ 80	18	50	M18x1.5	□135	Rc3/4	20	58	60	66	46
φ 125	75	φ 95	21	65	M22x1.5	□165	Rc1	24	73	64	82	58
φ 140	80	φ 105	25	75	M27x2	□192	Rc1	32	81	72	82	58
φ 160	90	φ 120	27	85	M30x2	□218	Rc1	37	86	80	87	63

Symbol Bore	KK	LF	MM	P	RR	SL	VC	W	ZB	ZJ
φ 40	M20x1.5	145	φ 22	94	□45	11	16	-	-	-
φ 50	M24x1.5	162	φ 28	102	□56	14	16	-	-	-
φ 63	M30x1.5	171	φ 36	106	□68	16	15	-	-	-
φ 80	M39x1.5	187	φ 45	110	□84	20	18	-	-	-
φ 100	M48x1.5	192	φ 56	116	□102	23	17	-	-	-
φ 125	M64x2	228	φ 70	130	□125	27	19	-	-	-
φ 140	M72x2	244	φ 80	138	□144	31	15	-	-	-
φ 160	M80x2	267	φ 90	156	□164	33	15	-	-	-

LA



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."
- If the port takes the B or D surfaces, this will be offset on the side of the A surface.



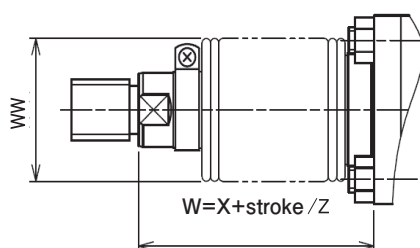
Dimension Table

Unit : mm

Symbol Bore	a	A	B	D	E	EE	FP	K	KK	LE	LH	MM	P
φ 40	5	25	φ 40	19	□65	Rc3/8	38	36	M20x1.5	74.5	42 ±0.15	φ 22	94
φ 50	6	30	φ 46	24	□80	Rc1/2	42	45	M24x1.5	95	55 ±0.15	φ 28	102
φ 63	6	35	φ 55	30	□94	Rc1/2	47	45	M30x1.5	110	63 ±0.15	φ 36	106
φ 80	10	45	φ 65	41	□114	Rc3/4	57	48	M39x1.5	132	75 ±0.25	φ 45	110
φ 100	10	55	φ 80	50	□135	Rc3/4	58	46	M48x1.5	152.5	85 ±0.25	φ 56	116
φ 125	10	75	φ 95	65	□165	Rc1	73	58	M64x2	187.5	105 ±0.25	φ 70	130
φ 140	0	80	φ 105	75	□192	Rc1	81	58	M72x2	208	112 ±0.25	φ 80	138
φ 160	0	90	φ 120	85	□218	Rc1	86	63	M80x2	234	125 ±0.25	φ 90	156

Symbol Bore	SB	SL	SS	ST	SV	SW	SY	SZ	TS	US	VC	W	XS	XW	ZB
φ 40	φ 11	11	111	19	38	25	12	11	98	122	16	36	59	170	192
φ 50	φ 14	14	120	24	36	30	14	15	118	145	16	36	63	183	211
φ 63	φ 18	16	132	35	41	39	18	18	140	175	15	38	71	203	223
φ 80	φ 22	20	152	41	49	49	18	18	175	210	18	44	80	232	247
φ 100	φ 26	23	162	40	43	59	23	23	215	260	17	46	89	251	256
φ 125	φ 33	27	182	47	54	64	28	28	270	330	19	54	106	288	303
φ 140	φ 33	31	187	45	54	61	28	28	280	335	15	54	114	301	323
φ 160	φ 36	33	212	50	56	76	31	31	315	375	15	59	127	339	353

With Boots



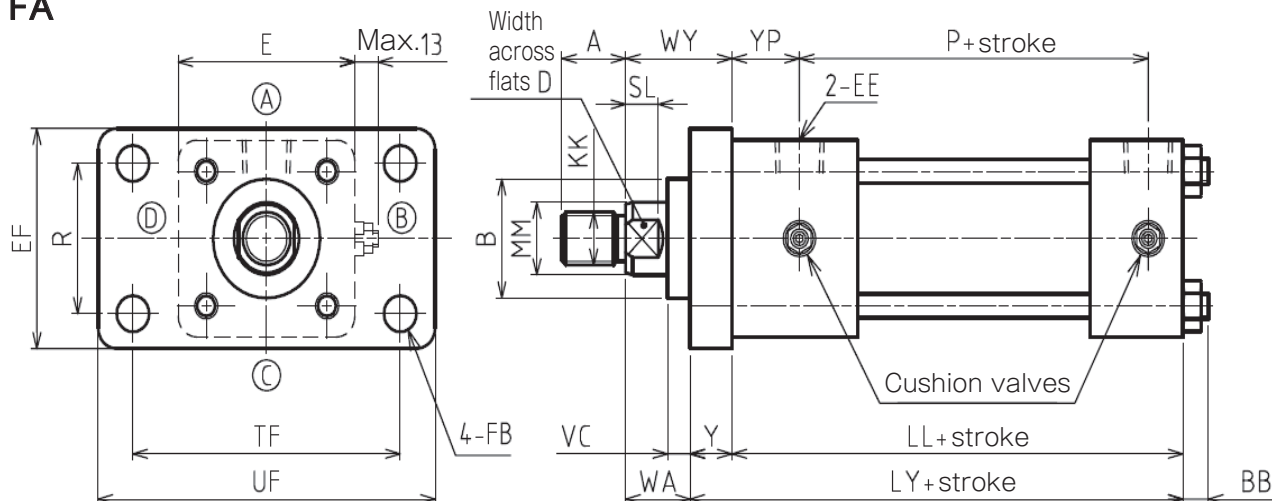
Symbol:Material	Heat proof
J: Nylon tarpaulin	80°C
JN: Chloroprene	130°C
JK: Conex	200°C

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Unit : mm

Symbol Bore	WW	X	Z	
			J,JN	JK
φ 40	φ 50	53	3.5	2.5
φ 50	φ 63	56	3.5	2.5
φ 63	φ 71	64	4	3
φ 80	φ 80	64	4	3
φ 100	φ 100	66	4	3
φ 125	φ 125	78	5	3.5
φ 140	φ 125	74	5	3.5
φ 160	φ 140	74	5	4

FA



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."

Dimension Table

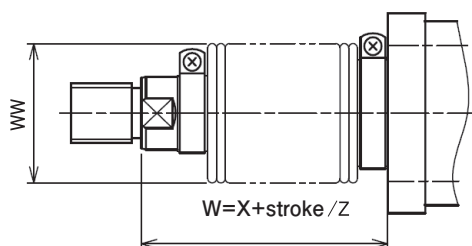
Unit : mm

Symbol Bore	A	B	BB	D	E	EE	EF	FB	KK	LL	LY	MM	P
φ 40	25	φ 40	11	19	□65	Rc3/8	73	φ 11	M20x1.5	134	150	φ 22	94
φ 50	30	φ 46	13	24	□80	Rc1/2	88	φ 14	M24x1.5	149	169	φ 28	102
φ 63	35	φ 55	14	30	□94	Rc1/2	106	φ 18	M30x1.5	156	180	φ 36	106
φ 80	45	φ 65	16	41	□114	Rc3/4	130	φ 22	M39x1.5	169	196	φ 45	110
φ 100	55	φ 80	18	50	□135	Rc3/4	165	φ 26	M48x1.5	172	203	φ 56	116
φ 125	75	φ 95	21	65	□165	Rc1	205	φ 33	M64x2	204	243	φ 70	130
φ 140	80	φ 105	25	75	□192	Rc1	218	φ 33	M72x2	212	253	φ 80	138
φ 160	90	φ 120	27	85	□218	Rc1	243	φ 36	M80x2	230	276	φ 90	156

Symbol Bore	R	SL	TF	UF	VC	WA	WY	Y	YP
φ 40	50	11	98	122	11	28	44	16	27
φ 50	60	14	118	145	9	25	45	20	29
φ 63	73	16	140	175	6	29	53	24	32
φ 80	90	20	175	210	9	35	62	27	39
φ 100	115	23	215	260	6	35	66	31	38
φ 125	145	27	270	330	4	41	80	39	49
φ 140	160	31	280	335	6	45	86	41	49
φ 160	180	33	315	375	6	50	96	46	49

Unit : mm

With Boots

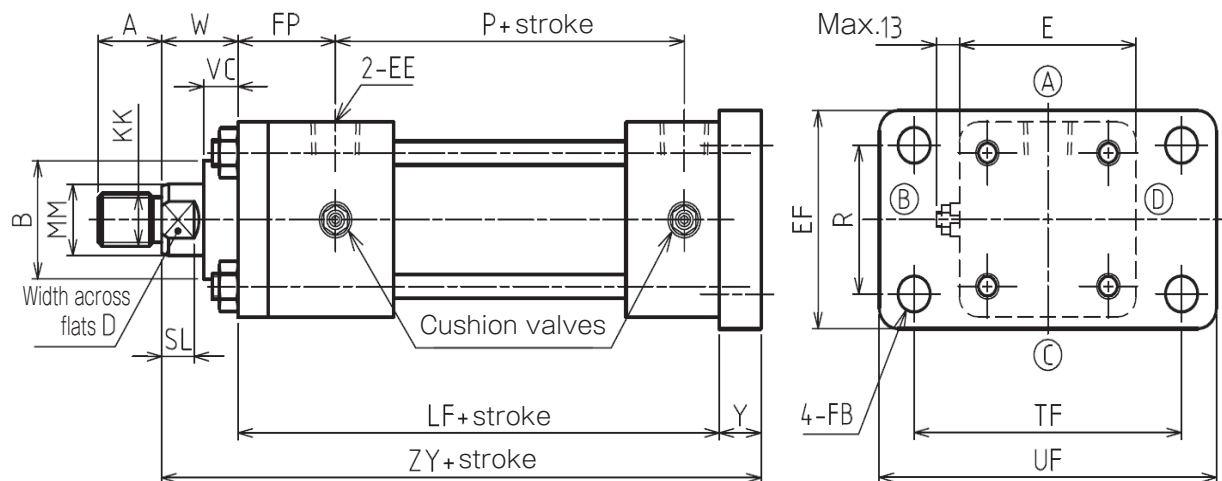


Symbol:Material	Heat proof
J: Nylon tarpaulin	80°C
JN: Chloroprene	130°C
JK: Conex	200°C

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Symbol Bore	WW	X	Z	
			J,JN	JK
φ 40	φ 50	45	3.5	2.5
φ 50	φ 63	45	3.5	2.5
φ 63	φ 71	55	4	3
φ 80	φ 80	55	4	3
φ 100	φ 100	55	4	3
φ 125	φ 125	65	5	3.5
φ 140	φ 125	65	5	3.5
φ 160	φ 140	65	5	4

FB



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."

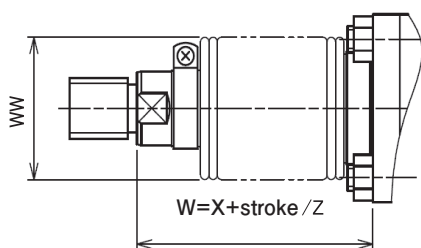
Dimension Table

Unit : mm

Symbol Bore	A	B	D	E	EE	EF	FB	FP	KK	LF	MM	P	R
φ 40	25	φ 40	19	□65	Rc3/8	73	φ 11	38	M20x1.5	145	φ 22	94	50
φ 50	30	φ 46	24	□80	Rc1/2	88	φ 14	42	M24x1.5	162	φ 28	102	60
φ 63	35	φ 55	30	□94	Rc1/2	106	φ 18	47	M30x1.5	171	φ 36	106	73
φ 80	45	φ 65	41	□114	Rc3/4	130	φ 22	57	M39x1.5	187	φ 45	110	90
φ 100	55	φ 80	50	□135	Rc3/4	165	φ 26	58	M48x1.5	192	φ 56	116	115
φ 125	75	φ 95	65	□165	Rc1	205	φ 33	73	M64x2	228	φ 70	130	145
φ 140	80	φ 105	75	□192	Rc1	218	φ 33	81	M72x2	244	φ 80	138	160
φ 160	90	φ 120	85	□218	Rc1	243	φ 36	86	M80x2	267	φ 90	156	180

Symbol Bore	SL	TF	UF	VC	W	Y	ZY
φ 40	11	98	122	16	40	16	201
φ 50	14	118	145	16	40	20	222
φ 63	16	140	175	15	51	24	246
φ 80	20	175	210	18	63	27	277
φ 100	23	215	260	17	78	31	301
φ 125	27	270	330	19	82	39	349
φ 140	31	280	335	15	81	41	366
φ 160	33	315	375	15	92	46	405

With Boots



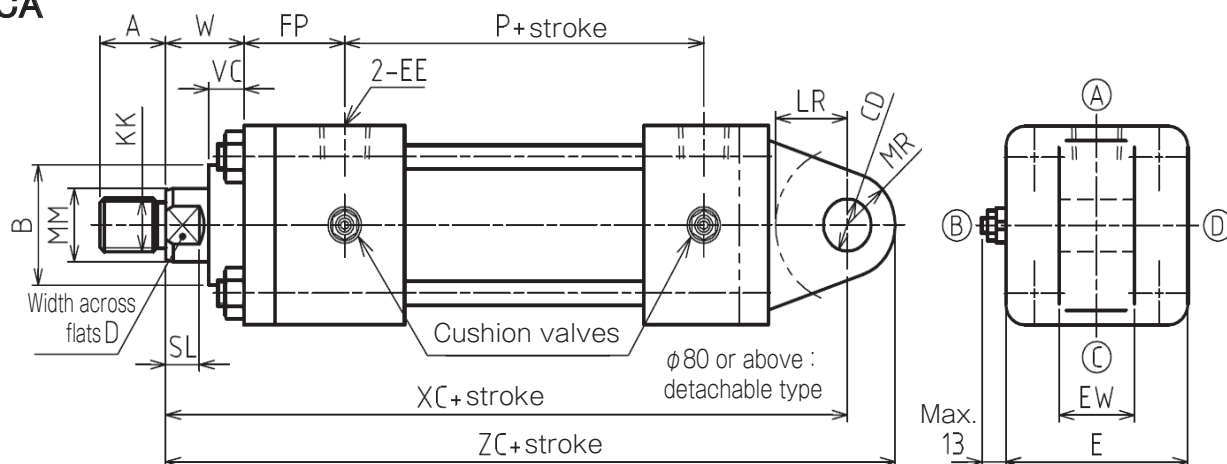
Symbol:Material	Heat proof
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JN: Chloroprene	130℃
JK: Conex	200℃

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Unit : mm

Symbol Bore	WW	X	Z	
			J, JN	JK
φ 40	φ 50	57	3.5	2.5
φ 50	φ 63	60	3.5	2.5
φ 63	φ 71	77	4	3
φ 80	φ 80	83	4	3
φ 100	φ 100	98	4	3
φ 125	φ 125	106	5	3.5
φ 140	φ 125	101	5	3.5
φ 160	φ 140	107	5	4

CA



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."

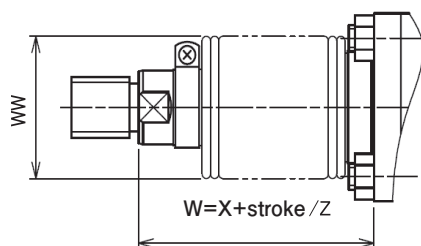
Dimension Table

Unit : mm

Symbol Bore	A	B	CD	D	E	EE	EW	FP	KK	LR	MM	MR
φ40	25	φ40	φ20 H9	19	□65	Rc3/8	32 ^{-0.1/-0.4}	38	M20x1.5	R25	φ22	R25
φ50	30	φ46	φ25 H9	24	□80	Rc1/2	36 ^{-0.1/-0.4}	42	M24x1.5	R32	φ28	R30
φ63	35	φ55	φ31.5 H9	30	□94	Rc1/2	40 ^{-0.1/-0.4}	47	M30x1.5	R40	φ36	R35
φ80	45	φ65	φ40 H9	41	□114	Rc3/4	50 ^{-0.1/-0.4}	57	M39x1.5	R50	φ45	R40
φ100	55	φ80	φ50 H9	50	□135	Rc3/4	63 ^{-0.1/-0.4}	58	M48x1.5	R63	φ56	R50
φ125	75	φ95	φ63 H9	65	□165	Rc1	80 ^{-0.1/-0.6}	73	M64x2	R79	φ70	R63
φ140	80	φ105	φ71 H9	75	□192	Rc1	80 ^{-0.1/-0.6}	81	M72x2	R89	φ80	R71
φ160	90	φ120	φ80 H9	85	□218	Rc1	100 ^{-0.1/-0.6}	86	M80x2	R100	φ90	R80

Symbol Bore	P	SL	VC	W	XC	ZC
φ40	94	11	16	45	221	246
φ50	102	14	16	47	247	277
φ63	106	16	15	59	277	312
φ80	110	20	18	58	323	363
φ100	116	23	17	61	350	400
φ125	130	27	19	67	417	480
φ140	138	31	15	57	440	511
φ160	156	33	15	66	484	564

With Boots



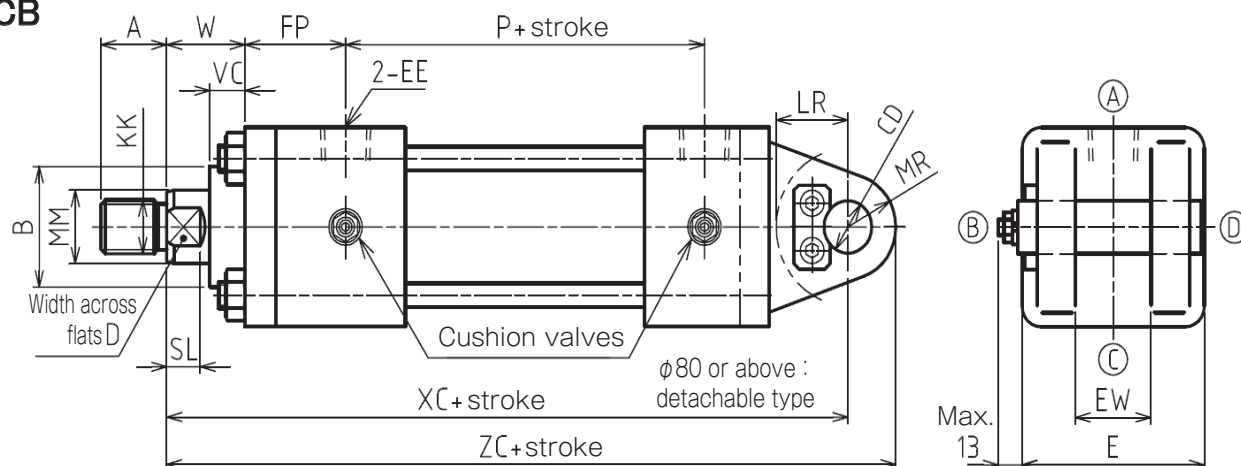
Symbol:Material	Heat proof
J: Nylon tarpaulin	80°C
JN: Chloroprene	130°C
JK: Conex	200°C

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Unit : mm

Symbol Bore	WW	X	Z	
			J,JN	JK
φ40	φ50	62	3.5	2.5
φ50	φ63	67	3.5	2.5
φ63	φ71	85	4	3
φ80	φ80	78	4	3
φ100	φ100	81	4	3
φ125	φ125	91	5	3.5
φ140	φ125	77	5	3.5
φ160	φ140	81	5	4

CB



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."
- The keeper plate position is different depending on the bore.

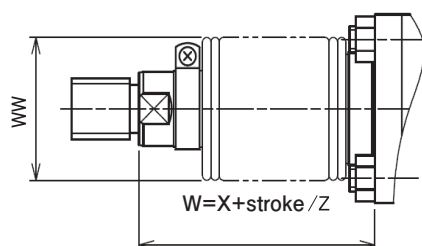
Dimension Table

Unit : mm

Symbol Bore	A	B	CD	D	E	EE	EW	FP	KK	LR
φ 40	25	φ 40	φ 20 ^{H9/f8}	19	□65	Rc3/8	32 ^{+0.4/+0.1}	38	M20x1.5	R25
φ 50	30	φ 46	φ 25 ^{H9/f8}	24	□80	Rc1/2	36 ^{+0.4/+0.1}	42	M24x1.5	R32
φ 63	35	φ 55	φ 31.5 ^{H9/f8}	30	□94	Rc1/2	40 ^{+0.4/+0.1}	47	M30x1.5	R40
φ 80	45	φ 65	φ 40 ^{H9/f8}	41	□114	Rc3/4	50 ^{+0.4/+0.1}	57	M39x1.5	R50
φ 100	55	φ 80	φ 50 ^{H9/f8}	50	□135	Rc3/4	63 ^{+0.4/+0.1}	58	M48x1.5	R63
φ 125	75	φ 95	φ 63 ^{H9/f8}	65	□165	Rc1	80 ^{+0.6/+0.1}	73	M64x2	R79
φ 140	80	φ 105	φ 71 ^{H9/f8}	75	□192	Rc1	80 ^{+0.6/+0.1}	81	M72x2	R89
φ 160	90	φ 120	φ 80 ^{H9/f8}	85	□218	Rc1	100 ^{+0.6/+0.1}	86	M80x2	R100

Symbol Bore	MM	MR	P	SL	VC	W	XC	ZC
φ 40	φ 22	R25	94	11	16	45	221	246
φ 50	φ 28	R30	102	14	16	47	247	277
φ 63	φ 36	R35	106	16	15	59	277	312
φ 80	φ 45	R40	110	20	18	58	323	363
φ 100	φ 56	R50	116	23	17	61	350	400
φ 125	φ 70	R63	130	27	19	67	417	480
φ 140	φ 80	R71	138	31	15	57	440	511
φ 160	φ 90	R80	156	33	15	66	484	564

With Boots



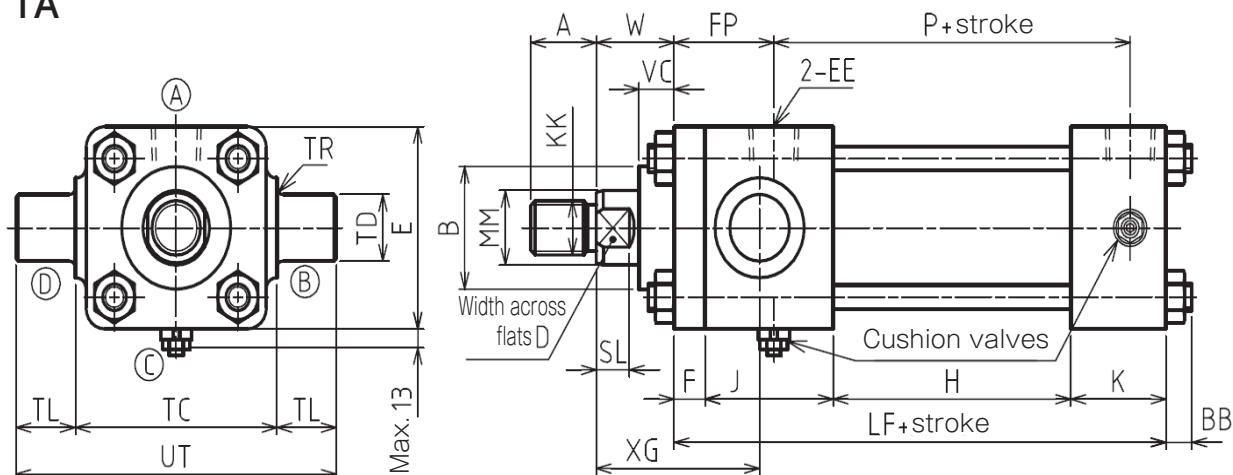
Symbol:Material	Heat proof
J: Nylon tarpaulin	80°C
JN: Chloroprene	130°C
JK: Conex	200°C

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Unit : mm

Symbol Bore	WW	X	Z	
			J,JN	JK
φ 40	φ 50	62	3.5	2.5
φ 50	φ 63	67	3.5	2.5
φ 63	φ 71	85	4	3
φ 80	φ 80	78	4	3
φ 100	φ 100	81	4	3
φ 125	φ 125	91	5	3.5
φ 140	φ 125	77	5	3.5
φ 160	φ 140	81	5	4

TA



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."

Dimension Table

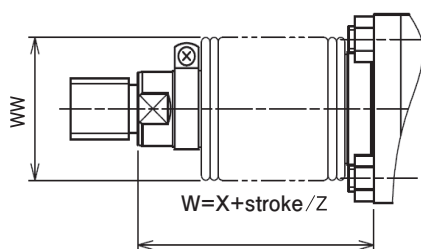
Unit : mm

Symbol Bore	A	B	BB	D	E	EE	F	FP	H	J	K	KK	LF
φ 40	25	φ 40	11	19	□ 65	Rc3/8	11	38	48	50	36	M20x1.5	145
φ 50	30	φ 46	13	24	□ 80	Rc1/2	13	42	48	56	45	M24x1.5	162
φ 63	35	φ 55	14	30	□ 94	Rc1/2	15	47	52	59	45	M30x1.5	171
φ 80	45	φ 65	16	41	□ 114	Rc3/4	18	57	54	67	48	M39x1.5	187
φ 100	55	φ 80	18	50	□ 135	Rc3/4	20	64	60	72	46	M48x1.5	198
φ 125	75	φ 95	21	65	□ 165	Rc1	24	73	64	82	58	M64x2	228
φ 140	80	φ 105	25	75	□ 192	Rc1	32	86	72	87	58	M72x2	249
φ 160	90	φ 120	27	85	□ 218	Rc1	37	111	80	112	63	M80x2	292

Symbol Bore	MM	P	SL	TC	TD	TL	TR	UT	VC	W	XG
φ 40	φ 22	94	11	73 ⁰ _{-0.3}	φ 25 e9	25	R2.5	123	16	32	66
φ 50	φ 28	102	14	88 ⁰ _{-0.35}	φ 25 e9	25	R2.5	138	16	36	71
φ 63	φ 36	106	16	106 ⁰ _{-0.35}	φ 31.5 e9	31.5	R2.5	169	15	38	81
φ 80	φ 45	110	20	128 ⁰ _{-0.4}	φ 40 e9	40	R3	208	18	44	92
φ 100	φ 56	116	23	170 ⁰ _{-0.4}	φ 50 e9	50	R3	270	17	47	99
φ 125	φ 70	130	27	205 ⁰ _{-0.46}	φ 63 e9	63	R4	331	19	54	116
φ 140	φ 80	138	31	225 ⁰ _{-0.46}	φ 71 e9	71	R4	367	15	57	131
φ 160	φ 90	156	33	255 ⁰ _{-0.52}	φ 80 e9	80	R4	415	15	59	146

Unit : mm

With Boots

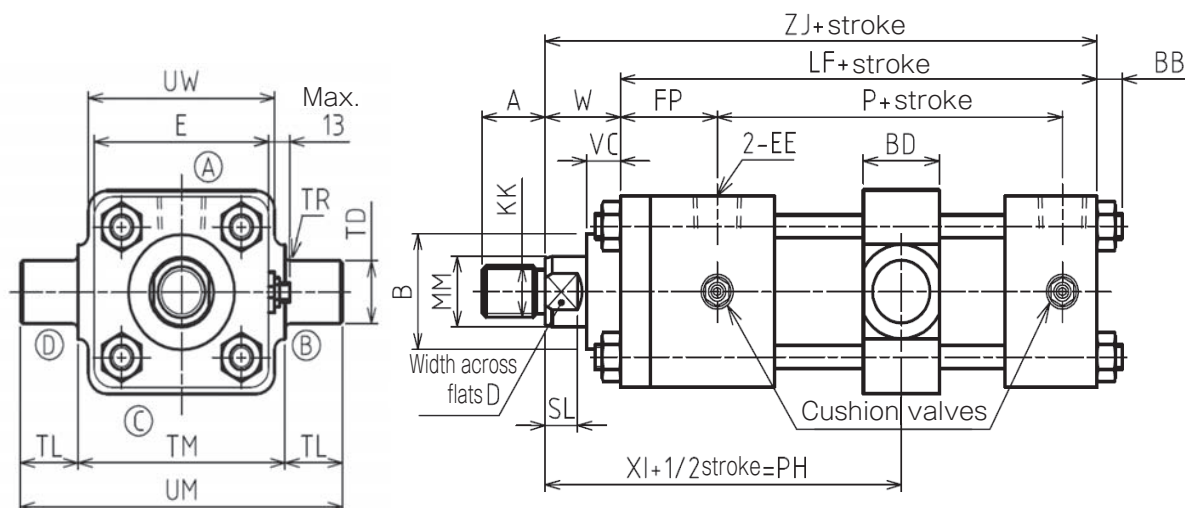


Symbol:Material	Heat proof
J: Nylon tarpaulin	80℃
JN: Chloroprene	130℃
JK: Conex	200℃

- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Symbol Bore	WW	X	Z	
			J,JN	JK
φ 40	φ 50	49	3.5	2.5
φ 50	φ 63	56	3.5	2.5
φ 63	φ 71	64	4	3
φ 80	φ 80	64	4	3
φ 100	φ 100	67	4	3
φ 125	φ 125	78	5	3.5
φ 140	φ 125	77	5	3.5
φ 160	φ 140	74	5	4

TC



- The cushion valve position is different depending on the bore.
- For the thread length (dimension A) when the lock nut is used, refer to "Thread length of rod end with lock nut."

Dimension Table

Unit : mm

Symbol Bore	A	B	BB	BD	D	E	EE	FP	KK	LF	MM	P	Min.PH	SL
φ 40	25	φ 40	11	33	19	□65	Rc3/8	38	M20x1.5	145	φ 22	94	107.5	11
φ 50	30	φ 46	13	33	24	□80	Rc1/2	42	M24x1.5	162	φ 28	102	118.5	14
φ 63	35	φ 55	14	43	30	□94	Rc1/2	47	M30x1.5	171	φ 36	106	131.5	16
φ 80	45	φ 65	16	53	41	□114	Rc3/4	57	M39x1.5	187	φ 45	110	152.5	20
φ 100	55	φ 80	18	63	50	□135	Rc3/4	58	M48x1.5	192	φ 56	116	164.5	23
φ 125	75	φ 95	21	78	65	□165	Rc1	73	M64x2	228	φ 70	130	205	27
φ 140	80	φ 105	25	88	75	□192	Rc1	81	M72x2	244	φ 80	138	218	31
φ 160	90	φ 120	27	98	85	□218	Rc1	86	M80x2	267	φ 90	156	233	33

Symbol Bore	TD	TL	TM	TR	UM	UW	VC	W	XI	ZJ
φ 40	φ 25 e9	25	73 ⁰ _{-0.3}	R2.5	123	□65	16	30	122	175
φ 50	φ 25 e9	25	88 ⁰ _{-0.35}	R2.5	138	□80	16	33	131	195
φ 63	φ 31.5 e9	31.5	106 ⁰ _{-0.35}	R2.5	169	□94	15	36	148	207
φ 80	φ 40 e9	40	128 ⁰ _{-0.4}	R3	208	□114	18	41	169	228
φ 100	φ 50 e9	50	170 ⁰ _{-0.4}	R3	270	□146	17	47	181	239
φ 125	φ 63 e9	63	205 ⁰ _{-0.46}	R4	331	□185	19	60	208	288
φ 140	φ 71 e9	71	225 ⁰ _{-0.46}	R4	367	□210	15	60	218	304
φ 160	φ 80 e9	80	255 ⁰ _{-0.52}	R4	415	□230	15	60	242	327

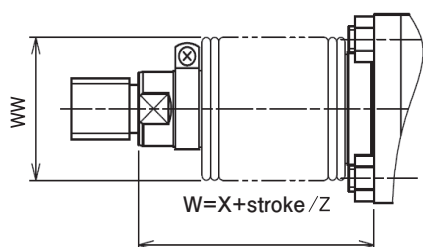
Possible Minimum
Stroke of TC Style

Unit : mm

Symbol Bore	Special XI	Standard XI
φ 63	-	15
φ 80	-	31
φ 100	4	39
φ 125	15	34
φ 140	17	32
φ 160	19	54

Contact us about the special XI.

With Boots

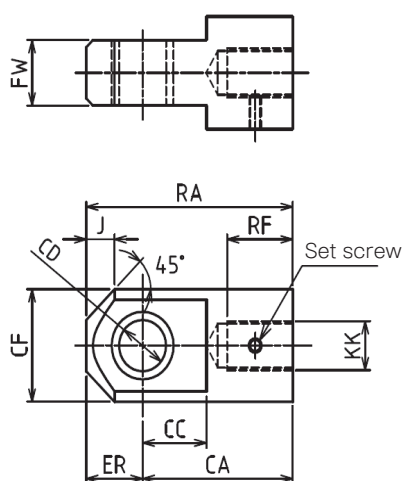


Symbol:Material	Heat proof
J: Nylon tarpaulin	80℃
JN: Chloroprene	130℃
JK: Conex	200℃

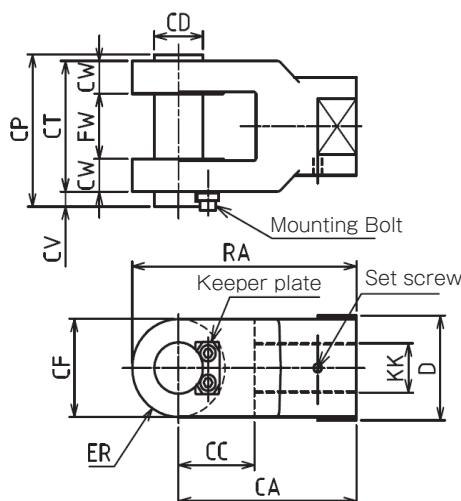
- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Symbol Bore	WW	X	Z	
			J,JN	JK
φ 40	φ 50	47	3.5	2.5
φ 50	φ 63	53	3.5	2.5
φ 63	φ 71	62	4	3
φ 80	φ 80	61	4	3
φ 100	φ 100	67	4	3
φ 125	φ 125	84	5	3.5
φ 140	φ 125	80	5	3.5
φ 160	φ 140	75	5	4

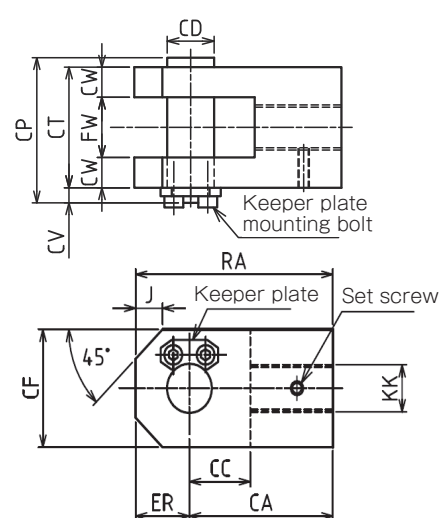
Rod eye (T-end)



Rod clevis (Y-end) with pin



The exterior (casting/cutting) and keeper plate position is different depending on the size.



Dimension Table/Rod eye (T-end)

Unit : mm

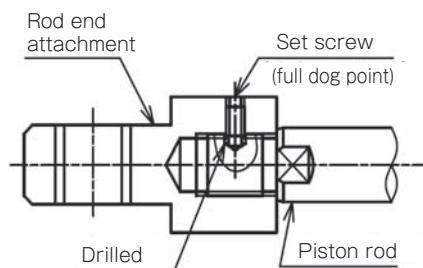
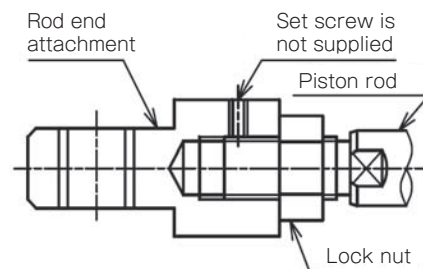
Symbol Bore	Part number	CA	CC	CD	CF	ER	FW	J	KK	RA	RF
φ 40	RTH-20-1-H	70	28	φ 20 H10	φ 49	25	31.5 -0.1 -0.4	10	M20x1.5	95	32
φ 50	RTH-24-2-H	85	35	φ 25 H10	φ 55	30	35.5 -0.1 -0.4	12	M24x1.5	115	35
φ 63	RTH-30-1-H	115	43	φ 31.5 H10	φ 62	35	40 -0.1 -0.4	15	M30x1.5	150	47
φ 80	RTH-39-1-H	145	55	φ 40 H10	φ 79	40	50 -0.1 -0.4	20	M39x1.5	185	62
φ 100	RTH-48-1-H	180	65	φ 50 H10	φ 100	50	63 -0.1 -0.4	30	M48x1.5	230	77
φ 125	RTH-64-2-H	225	85	φ 63 H10	φ 130	65	80 -0.1 -0.6	40	M64x2	290	82
φ 140	RTH-72-2-H	240	90	φ 71 H10	φ 140	70	80 -0.1 -0.6	45	M72x2	310	97
φ 160	RTH-80-2-H	280	100	φ 80 H10	φ 160	80	100 -0.1 -0.6	50	M80x2	360	112

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

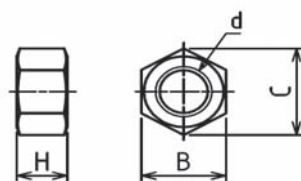
Symbol Bore	Part number	CA	CC	CD	CF	CP	CT	CW	CV	D	ER	FW	J	KK	RA	RF
φ 40	RYH-20-1-H	70	32	φ 20 ^{H10} _{fs}	40	76.5	63.5	16	8	41	R20	31.5 +0.4 +0.1	-	M20x1.5	90	-
φ 50	RYH-24-2-H	85	45	φ 25 ^{H10} _{fs}	50	84.5	71.5	18	8	-	25	35.5 +0.4 +0.1	12	M24x1.5	110	35
φ 63	RYH-30-H	115	50	φ 31.5 ^{H10} _{fs}	60	93	80	20	8	60	R30	40 +0.4 +0.1	-	M30x1.5	145	-
φ 80	RYH-39-1-H	145	60	φ 40 ^{H10} _{fs}	80	117	100	25	12	80	R40	50 +0.4 +0.1	-	M39x1.5	185	-
φ 100	RYH-48-1-H	180	70	φ 50 ^{H10} _{fs}	100	143	126	31.5	12	-	50	63 +0.4 +0.1	30	M48x1.5	230	77
φ 125	RYH-64-2-H	225	90	φ 63 ^{H10} _{fs}	120	183	160	40	18	-	65	80 +0.6 +0.1	30	M64x2	290	82
φ 140	RYH-72-2-H	240	100	φ 71 ^{H10} _{fs}	140	183	160	40	18	-	70	80 +0.6 +0.1	40	M72x2	310	97
φ 160	RYH-80-2-H	280	110	φ 80 ^{H10} _{fs}	160	210	180	40	24	-	80	100 +0.6 +0.1	40	M80x2	360	112

Delivery of rod end attachment (T-end or Y-end)

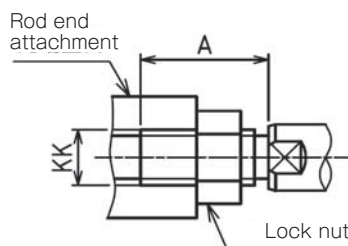
- ① When the lock nut and rod end attachment are additionally ordered
The rod end attachment and lock nut are temporarily assembled to the piston rod for delivery. Since the lock nut is not tightened, tighten it after adjusting the position of the rod end attachment.
No set screw is supplied.
- ② When only the rod end attachment is additionally ordered (without lock nut)
The rod end attachment is tightened to the piston rod, a drill hole is made on the piston rod and it is secured with the set screw for delivery.
If the drill hole is unnecessary, give us such instructions.



Lock nut



Thread length of rod end lock nut



The standard fitting length of the rod end attachment and piston rod is about 80% of the thread diameter.

Therefore, when you order a cylinder with a lock nut, make sure that the length of fit is sufficient.

Dimension Table/Lock nut

Unit : mm

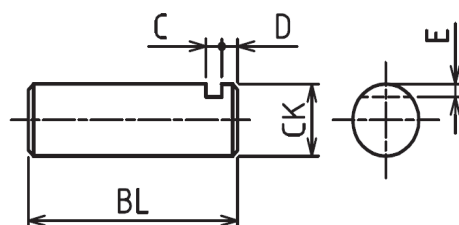
Symbol Bore	Part number	B	C	d	H
φ 40	LNH-20F-H	27	31.2	M20x1.5	12
φ 50	LNH-24F-H	32	37	M24x1.5	14
φ 63	LNH-30F-H	41	47.3	M30x1.5	17
φ 80	LNH-39F-H	55	63.5	M39x1.5	20
φ 100	LNH-48F-H	70	80.8	M48x1.5	26
φ 125	LNH-64F-H	90	104	M64x2	35
φ 140	LNH-72F-H	100	115	M72x2	38
φ 160	LNH-80F-H	110	127	M80x2	43

Dimension Table/
Example of long thread

Unit : mm

Symbol Bore	A	KK
φ 40	45	M20x1.5
φ 50	50	M24x1.5
φ 63	60	M30x1.5
φ 80	80	M39x1.5
φ 100	95	M48x1.5
φ 125	125	M64x2
φ 140	140	M72x2
φ 160	155	M80x2

Parallel pin



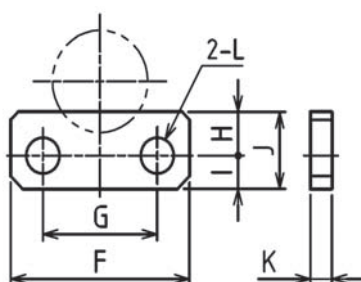
Dimension Table/Parallel pin

Unit : mm

Symbol Bore	BL	C	CK	D	E
φ 40	76.5	5	φ 20	3	3
φ 50	84.5	5	φ 25	3	3.5
φ 63	93	5	φ 31.5	3	4
φ 80	117	7	φ 40	5	5
φ 100	143	7	φ 50	5	5
φ 125	183	10	φ 63	8	8
φ 140	183	10	φ 71	8	8
φ 160 CB	230	13	φ 80	11	10
φ 160 Y	210	13	φ 80	11	10

- The tolerance of CK is f8.
- The parallel pins for CB type and Y-end are the same for sizes other than φ 160.

Keeper plate



Dimension Table/Keeper plate

Unit : mm

Symbol Bore	F	G	H	I	J	K	L	Bolt
φ 40	32	18	7.5	7.5	15	4.5	φ 7	M6
φ 50	32	18	7.5	7.5	15	4.5	φ 7	M6
φ 63	32	18	7.5	7.5	15	4.5	φ 7	M6
φ 80	50	30	10	10	20	6	φ 10	M8
φ 100	65	40	12	10	22	6	φ 12	M10
φ 125	75	48	17	13	30	9	φ 14	M12
φ 140	75	48	17	13	30	9	φ 14	M12
φ 160	100	68	24	16	40	12	φ 18	M16

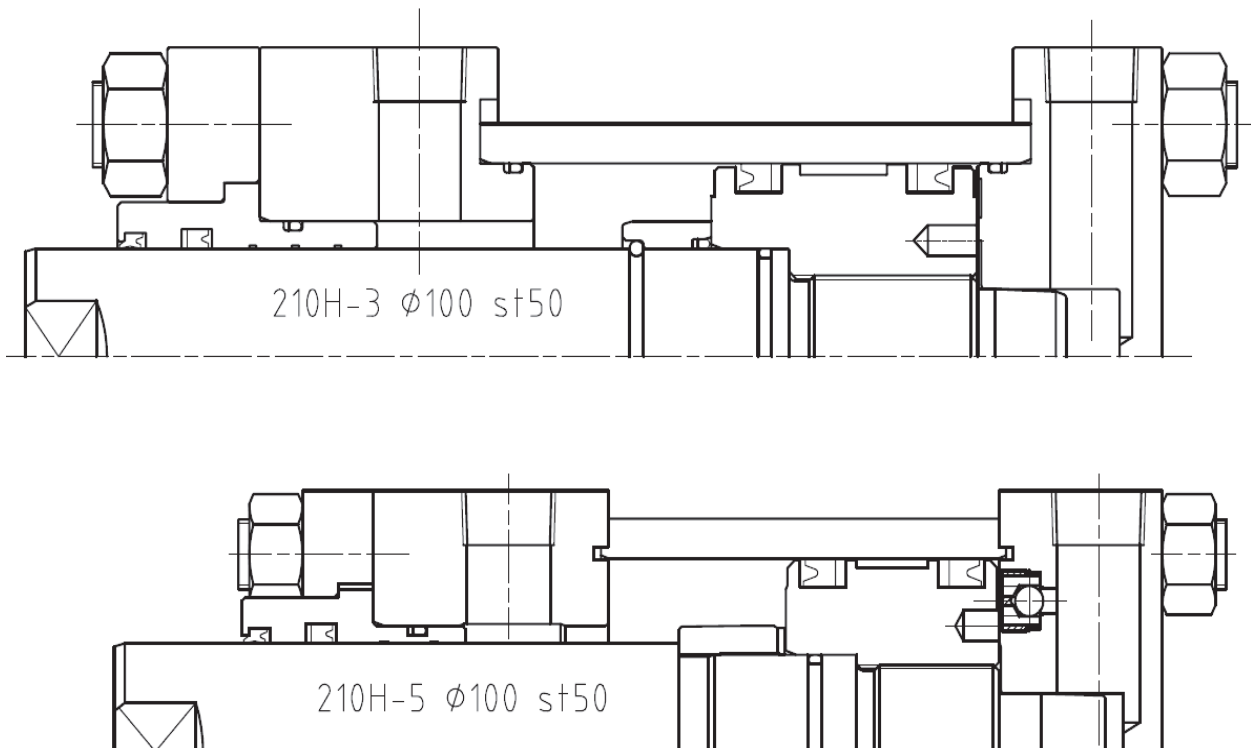
210H-3/210H-5 Model Change

Unit : mm

Now more compact.

We will end our standard support for the 210H-3 in June 2016.
The successor series will be the 210H-5.

Bore	φ 40	φ 50	φ 63	φ 80	φ 100	φ 125	φ 140	φ 160
Shorter total length	11	10	16	31	38	39	31	37
Cover corner reduction	5	5	6	11	25	25	23	22



The main differences between the 210H-3 and 210H-5 are as follows.

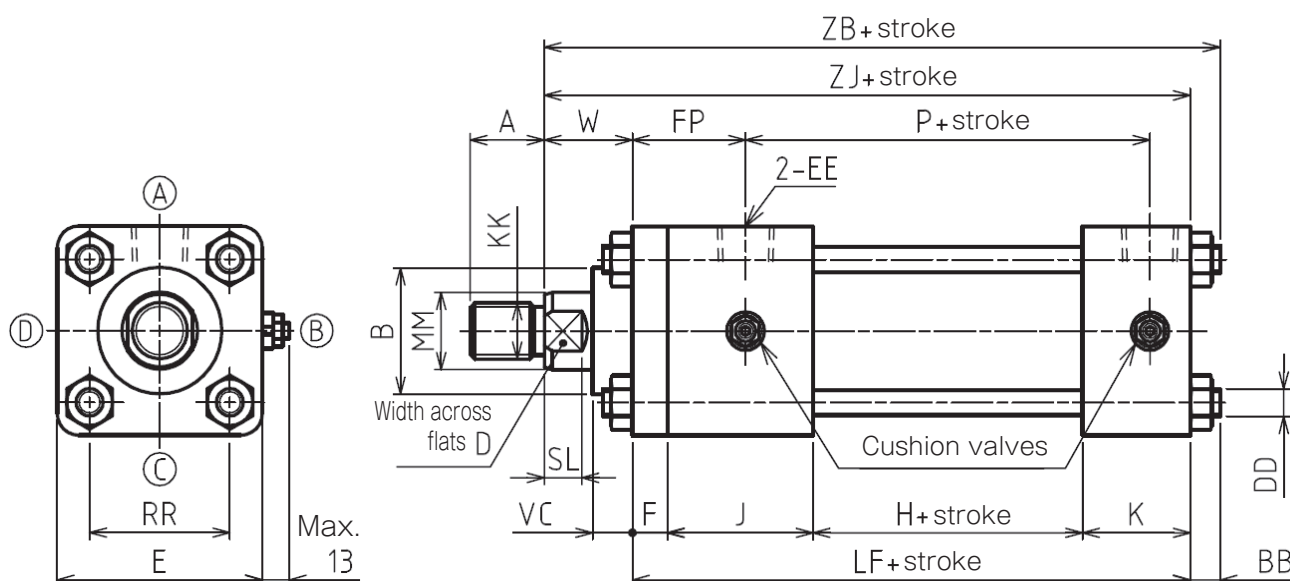
There is basically no compatibility between the parts of the 210H-3 and the 210H-5.

- The rod diameters of the bore size φ 40, φ 63 and φ 100 have become φ 22, φ 36 and φ 70 from φ 22.4, φ 35.5 and φ 71.
The rod packing and dust wipers that accompany this are also different.
 - We will still continue to provide support for the old series maintenance seal sets after June 2016.
- Now even more lightweight and compact
 - The tie rod is now thinner (Ex. M22×1.5→M18×1.5 for bore size φ 100)
 - The tie rod mounting pitch is now more compact (Closer to the tube)
 - The cover corners are now smaller (Ex. □160→□135 for bore size φ 100)
- Improved cushion performance
 - There is now a shape which relieves shocks when the cushioning is impacted.
 - The operability of the cushion valve has been improved.
 - There is now a check valve with sufficient room for a smooth startup.
 - There is now room to attach a cushion valve path with a change to the cover seal structure.

This means it has become possible to adjust the cushions in all sizes

210H-3/210H-5 Comparison Table Basic dimensions

Unit : mm



- There is no SD type for the 210H-5.

If you need compatibility with the SD type of the 210H-3, we will support as custom made from June 2016. Contact us for details.

The basic dimensions of the cylinder that forms the base are as below.
There is no mounting compatibility as the SD type.

H3 indicates
210H-3.
H5 indicates
210H-5.

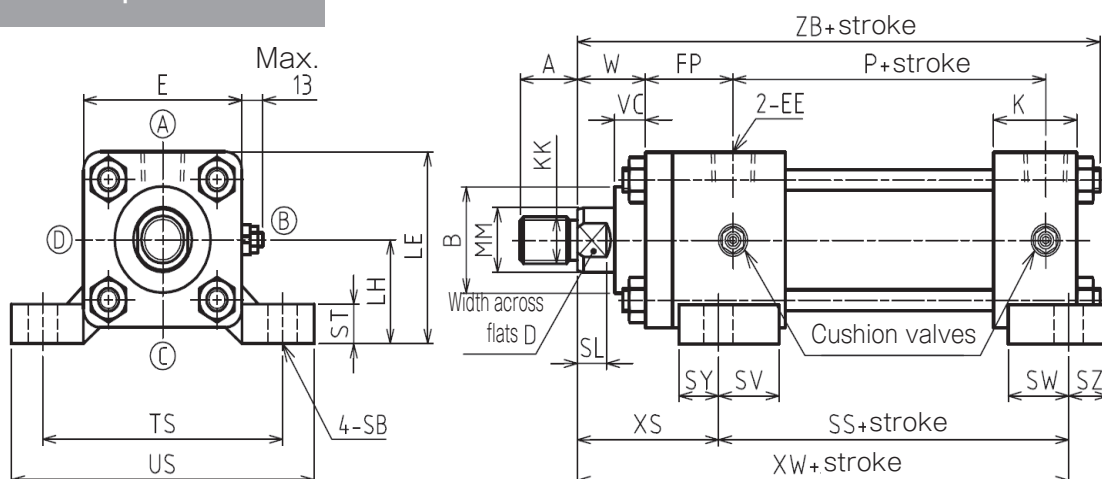
Symbol Bore	A	B	BB		D	DD		E		EE	F		FP	
			H3	H5		H3	H5	H3	H5		H3	H5	H3	H5
φ 40	25	φ 40	13	11	19	M12x1.5	M10x1.25	70	65	Rc3/8	13	11	43	38
φ 50	30	φ 46	14	13	24	M14x1.5	M12x1.25	85	80	Rc1/2	15	13	48	42
φ 63	35	φ 55	16	14	30	M16x1.5	M14x1.5	100	94	Rc1/2	18	15	56	47
φ 80	45	φ 65	18	16	41	M18x1.5	M16x1.5	125	114	Rc3/4	24	18	69	57
φ 100	55	φ 80	21	18	50	M22x1.5	M18x1.5	160	135	Rc3/4	26	20	71	58
φ 125	75	φ 95	25	21	65	M27x1.5	M22x1.5	190	165	Rc1	33	24	83	73
φ 140	80	φ 105	27	25	75	M30x1.5	M27x2	215	192	Rc1	36	32	86	81
φ 160	90	φ 120	29	27	85	M33x1.5	M30x2	240	218	Rc1	41	37	94	86

Symbol Bore	H		J		K		KK	LF		MM		P	
	H3	H5	H3	H5	H3	H5		H3	H5	H3	H5	H3	H5
φ 40	64	48	47	50	32	36	M20x1.5	156	145	φ 22.4	φ 22	98	94
φ 50	68	48	52	56	37	45	M24x1.5	172	162	φ 28	φ 28	106	102
φ 63	75	52	57	59	37	45	M30x1.5	187	171	φ 35.5	φ 36	113	106
φ 80	85	54	67	67	42	48	M39x1.5	218	187	φ 45	φ 45	129	110
φ 100	95	60	67	66	42	46	M48x1.5	230	192	φ 56	φ 56	139	116
φ 125	105	64	77	82	52	58	M64x2	267	228	φ 71	φ 70	159	130
φ 140	110	72	77	82	52	58	M72x2	275	244	φ 80	φ 80	164	138
φ 160	132	80	80	87	51	63	M80x2	304	267	φ 90	φ 90	186	156

Symbol Bore	RR		SL		VC	
	H3	H5	H3	H5	H3	H5
φ 40	□50	□45	11	11	11	16
φ 50	□62	□56	12	14	14	16
φ 63	□74	□68	16	16	15	15
φ 80	□92	□84	20	20	9	18
φ 100	□120	□102	20	23	14	17
φ 125	□145	□125	26	27	13	19
φ 140	□165	□144	30	31	14	15
φ 160	□185	□164	33	33	14	15

210H-3/210H-5 Comparison Table LA (side lugs)

Unit : mm

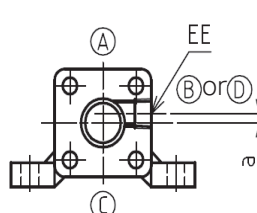


The basic mounting dimensions for the LA type of the 210H-3 and the LA type of the 210H-5 are the same.

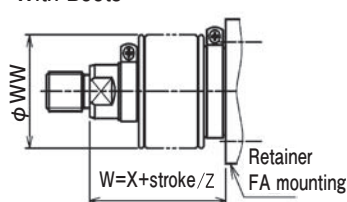
- The mounting hole sizes (SB) and mounting hole pitches (TS/SS) are shared with the 210H-3.
- The cylinder center height (LH) and the distance between the mounting holes and piston rod (XS) are also shared.

The dimensions other than this have almost been completely changed.

- The port surface height (LE) and pitch between ports (P) differ. Note this when piping.
- There are products with a thicker foot (ST). Select an appropriate length product for the mounting bolts.
- The positions before and after the end of the foot are different. Match to the actual article if attaching a stopper.
- The W dimension in regards to the same XS dimension differ between H3/H5. Note this when specifying the W dimension.



With Boots



H3 indicates
210H-3.

H5 indicates
210H-5.

Symbol Bore	a		A	B	D	E		EE	FP		K		KK
	H3	H5				H3	H5		H3	H5	H3	H5	
φ40	0	5	25	φ40	19	□70	□65	Rc3/8	43	38	32	36	M20x1.5
φ50	0	6	30	φ46	24	□85	□80	Rc1/2	48	42	37	45	M24x1.5
φ63	0	6	35	φ55	30	□100	□94	Rc1/2	56	47	37	45	M30x1.5
φ80	0	10	45	φ65	41	□125	□114	Rc3/4	69	57	42	48	M39x1.5
φ100	0	10	55	φ80	50	□160	□135	Rc3/4	71	58	42	46	M48x1.5
φ125	0	10	75	φ95	65	□190	□165	Rc1	83	73	52	58	M64x2
φ140	0	0	80	φ105	75	□215	□192	Rc1	86	81	52	58	M72x2
φ160	0	0	90	φ120	85	□240	□218	Rc1	94	86	51	63	M80x2

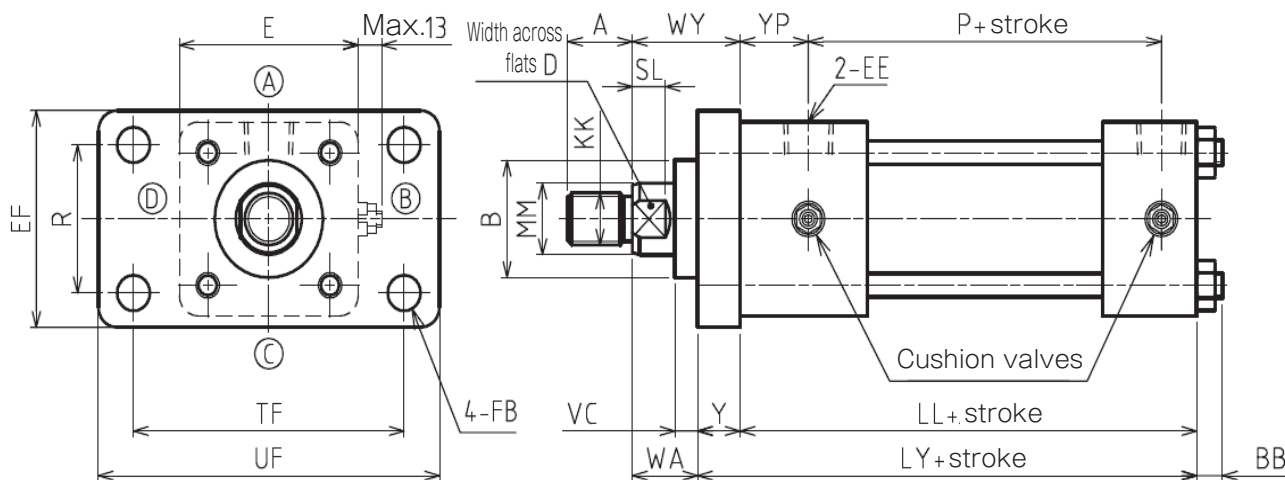
Symbol Bore	LE		LH	MM		P		SB	SL		SS	ST		SV		SW	
	H3	H5		H3	H5	H3	H5		H3	H5		H3	H5	H3	H5	H3	H5
φ40	77	74.5	42 ±0.15	φ22.4	φ22	98	94	φ11	11	11	111	15	19	31	38	16	25
φ50	97.5	95	55 ±0.15	φ28	φ28	106	102	φ14	12	14	120	20	24	34	36	18	30
φ63	113	110	63 ±0.15	φ35.5	φ36	113	106	φ18	16	16	132	25	35	39	41	18	39
φ80	137.5	132	75 ±0.25	φ45	φ45	129	110	φ22	20	20	152	30	41	46	49	21	49
φ100	165	152.5	85 ±0.25	φ56	φ56	139	116	φ26	20	23	162	35	40	44	43	23	59
φ125	200	187.5	105 ±0.25	φ71	φ70	159	130	φ33	26	27	182	45	47	49	54	28	64
φ140	219.5	208	112 ±0.25	φ80	φ80	164	138	φ33	30	31	187	45	45	49	54	28	61
φ160	245	234	125 ±0.25	φ90	φ90	186	156	φ36	33	33	212	50	50	49	56	31	76

Symbol Bore	SY		SZ		TS	US	VC		W		WW	X		XS	XW	Z(J,N)	Z(JK)	ZB	
	H3	H5	H3	H5			H3	H5	H3	H5		H3	H5					H3	H5
φ40	16	12	16	11	98	122	11	16	30	36	φ50	47	53	59	170	3.5	2.5	199	192
φ50	18	14	19	15	118	145	14	16	30	36	φ63	50	56	63	183	3.5	2.5	216	211
φ63	18	18	19	18	140	175	15	15	35	38	φ71	61	64	71	203	4	3	238	223
φ80	21	18	21	18	175	210	9	18	35	44	φ80	55	64	80	232	4	3	271	247
φ100	23	23	24	23	215	260	14	17	40	46	φ100	60	66	89	251	4	3	291	256
φ125	28	28	29	28	270	330	13	19	45	54	φ125	69	78	106	288	5	3.5	337	303
φ140	28	28	29	28	280	335	14	15	50	54	φ125	70	74	114	301	5	3.5	352	323
φ160	31	31	31	31	315	375	14	15	55	59	φ140	70	74	127	339	5	4	388	353

210H-3/210H-5 Comparison Table

FA (rod flange)

Unit : mm



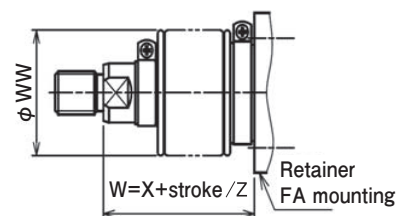
With Boots

The basic mounting dimensions for the FA type of the 210H-3 and the FA type of the 210H-5 are the same.

- The mounting hole sizes (FB) and mounting hole pitches (R/TF) are shared with the 210H-3.
- The flange width (UF), height (EF) and the distance between the mounting surface and piston rod (WA) are also shared.

The dimensions other than this have almost been completely changed.

- The port position (YP,E) and pitch between ports (P) differ. Note this when piping.
- There are products with a thicker flange (Y). Note that WY dimension is also changed.



H3 indicates
210H-3.
H5 indicates
210H-5.

Symbol Bore	A	B	BB		D	E		EE	EF	FB	KK	LL	
			H3	H5		H3	H5					H3	H5
φ 40	25	φ 40	13	11	19	□70	□65	Rc3/8	73	φ 11	M20x1.5	143	134
φ 50	30	φ 46	14	13	24	□85	□80	Rc1/2	88	φ 14	M24x1.5	157	149
φ 63	35	φ 55	16	14	30	□100	□94	Rc1/2	106	φ 18	M30x1.5	169	156
φ 80	45	φ 65	18	16	41	□125	□114	Rc3/4	130	φ 22	M39x1.5	194	169
φ 100	55	φ 80	21	18	50	□160	□135	Rc3/4	165	φ 26	M48x1.5	204	172
φ 125	75	φ 95	25	21	65	□190	□165	Rc1	205	φ 33	M64x2	234	204
φ 140	80	φ 105	27	25	75	□215	□192	Rc1	218	φ 33	M72x2	239	212
φ 160	90	φ 120	29	27	85	□240	□218	Rc1	243	φ 36	M80x2	263	230

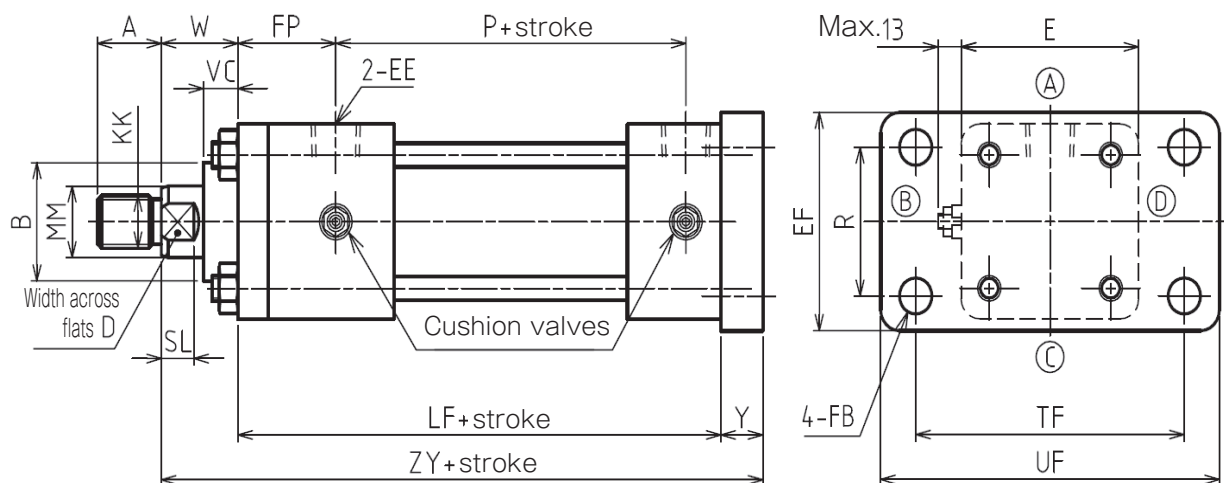
Symbol Bore	LY		MM		P		R	SL		TF	UF	VC		WA	WW
	H3	H5	H3	H5	H3	H5		H3	H5			H3	H5		
φ 40	158	150	φ 22.4	φ 22	98	94	50	11	11	98	122	9	11	28	φ 50
φ 50	177	169	φ 28	φ 28	106	102	60	12	14	118	145	9	9	25	φ 63
φ 63	193	180	φ 35.5	φ 36	113	106	73	16	16	140	175	9	6	29	φ 71
φ 80	218	196	φ 45	φ 45	129	110	90	20	20	175	210	9	9	35	φ 80
φ 100	235	203	φ 56	φ 56	139	116	115	20	23	215	260	9	6	35	φ 100
φ 125	271	243	φ 71	φ 70	159	130	145	26	27	270	330	9	4	41	φ 125
φ 140	280	253	φ 80	φ 80	164	138	160	30	31	280	335	9	6	45	φ 125
φ 160	309	276	φ 90	φ 90	186	156	180	33	33	315	375	9	6	50	φ 140

Symbol Bore	WY		X	Y		YP		Z(J,N)	Z(JK)
	H3	H5		H3	H5	H3	H5		
φ 40	43	44	45	15	16	30	27	3.5	2.5
φ 50	45	45	45	20	20	33	29	3.5	2.5
φ 63	53	53	55	24	24	38	32	4	3
φ 80	59	62	55	24	27	45	39	4	3
φ 100	66	66	55	31	31	45	38	4	3
φ 125	78	80	65	37	39	50	49	5	3.5
φ 140	86	86	65	41	41	50	49	5	3.5
φ 160	96	96	65	46	46	53	49	5	4

210H-3/210H-5 Comparison Table

FB (cap flange)

Unit : mm



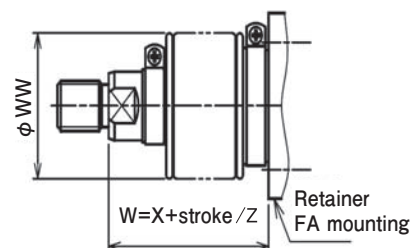
The basic mounting dimensions for the FB type of the 210H-3 and the FB type of the 210H-5 are the same.

- The mounting hole sizes (FB) and mounting hole pitches (R/TF) are shared with the 210H-3.
- The flange width (UF), height (EF) and the distance between the mounting surface and piston rod (ZY) are also shared.

The dimensions other than this have almost been completely changed.

- The port position (E) and pitch between ports (P) differ. Note this when piping.
 - There are products with a thicker flange (Y).
 - The W dimension in regards to the same ZY dimension differ between H3/H5.
- Note this when specifying the W dimension.

With Boots



Symbol Bore	A	B	D	E		EE	EF	FB	FP		KK	LF	
				H3	H5				H3	H5		H3	H5
φ 40	25	φ 40	19	□ 70	□ 65	Rc3/8	73	φ 11	43	38	M20x1.5	156	145
φ 50	30	φ 46	24	□ 85	□ 80	Rc1/2	88	φ 14	48	42	M24x1.5	172	162
φ 63	35	φ 55	30	□ 100	□ 94	Rc1/2	106	φ 18	56	47	M30x1.5	187	171
φ 80	45	φ 65	41	□ 125	□ 114	Rc3/4	130	φ 22	69	57	M39x1.5	218	187
φ 100	55	φ 80	50	□ 160	□ 135	Rc3/4	165	φ 26	71	58	M48x1.5	230	192
φ 125	75	φ 95	65	□ 190	□ 165	Rc1	205	φ 33	83	73	M64x2	267	228
φ 140	80	φ 105	75	□ 215	□ 192	Rc1	218	φ 33	86	81	M72x2	275	244
φ 160	90	φ 120	85	□ 240	□ 218	Rc1	243	φ 36	94	86	M80x2	304	267

H3 indicates
210H-3.
H5 indicates
210H-5.

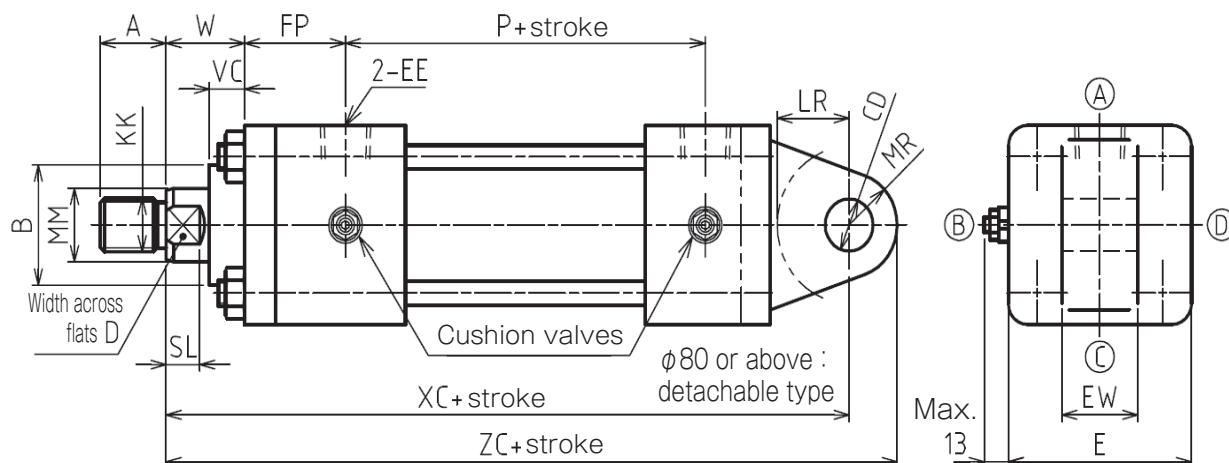
Symbol Bore	MM		P		R	SL		TF	UF	VC		W	
	H3	H5	H3	H5		H3	H5			H3	H5	H3	H5
φ 40	φ 22.4	φ 22	98	94	50	11	11	98	122	11	16	30	40
φ 50	φ 28	φ 28	106	102	60	12	14	118	145	14	16	30	40
φ 63	φ 35.5	φ 36	113	106	73	16	16	140	175	15	15	35	51
φ 80	φ 45	φ 45	129	110	90	20	20	175	210	9	18	35	63
φ 100	φ 56	φ 56	139	116	115	20	23	215	260	14	17	40	78
φ 125	φ 71	φ 70	159	130	145	26	27	270	330	13	19	45	82
φ 140	φ 80	φ 80	164	138	160	30	31	280	335	14	15	50	81
φ 160	φ 90	φ 90	186	156	180	33	33	315	375	14	15	55	92

Symbol Bore	WW	X		Y		Z(J,N)	Z(JK)	ZY
		H3	H5	H3	H5			
φ 40	φ 50	47	57	15	16	3.5	2.5	201
φ 50	φ 63	50	60	20	20	3.5	2.5	222
φ 63	φ 71	61	77	24	24	4	3	246
φ 80	φ 80	55	83	24	27	4	3	277
φ 100	φ 100	60	98	31	31	4	3	301
φ 125	φ 125	69	106	37	39	5	3.5	349
φ 140	φ 125	70	101	41	41	5	3.5	366
φ 160	φ 140	70	107	46	46	5	4	405

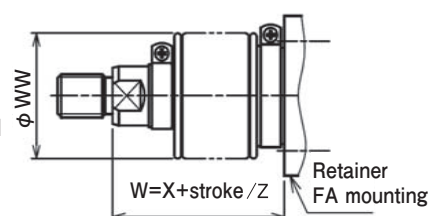
210H-3/210H-5 Comparison Table

CA (cap eye)

Unit : mm



With Boots



The basic mounting dimensions for the CA type of the 210H-3 and the CA type of the 210H-5 are the same.

- The pin hole diameter (CD) and related dimensions (EW, MR and LR) are shared with the 210H-3.
- The distance between the center of the pin hole and the piston rod (XC) is also shared.

The dimensions other than this have almost been completely changed.

- The port positions (FP and E) and the pitches between the ports (P) are different. Note this when piping.
- The W dimension in regards to the same XC dimension differ between H3/H5. Note this when specifying the W dimension.
- Sizes of $\phi 80$ and above have been changed to a detachable mounting accessory type for the 210-5.

H3 indicates
210H-3.

H5 indicates
210H-5.

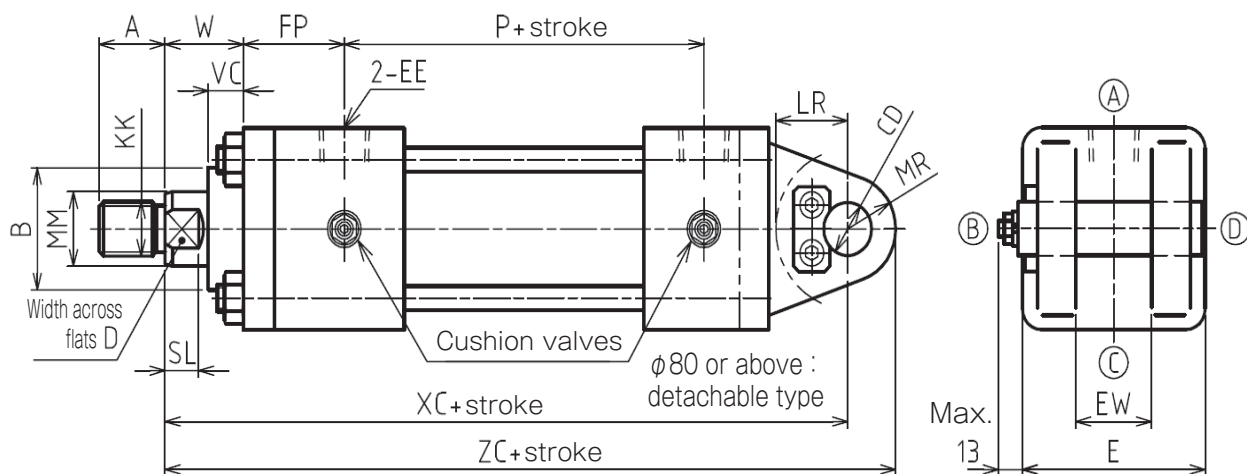
Symbol Bore	A	B	CD	D	E		EE	EW	FP		KK	LR
					H3	H5			H3	H5		
$\phi 40$	25	$\phi 40$	$\phi 20$ H9	19	□70	□65	Rc3/8	32 ^{-0.1 -0.4}	43	38	M20x1.5	R25
$\phi 50$	30	$\phi 46$	$\phi 25$ H9	24	□85	□80	Rc1/2	36 ^{-0.1 -0.4}	48	42	M24x1.5	R32
$\phi 63$	35	$\phi 55$	$\phi 31.5$ H9	30	□100	□94	Rc1/2	40 ^{-0.1 -0.4}	56	47	M30x1.5	R40
$\phi 80$	45	$\phi 65$	$\phi 40$ H9	41	□125	□114	Rc3/4	50 ^{-0.1 -0.4}	69	57	M39x1.5	R50
$\phi 100$	55	$\phi 80$	$\phi 50$ H9	50	□160	□135	Rc3/4	63 ^{-0.1 -0.4}	71	58	M48x1.5	R63
$\phi 125$	75	$\phi 95$	$\phi 63$ H9	65	□190	□165	Rc1	80 ^{-0.1 -0.6}	83	73	M64x2	R79
$\phi 140$	80	$\phi 105$	$\phi 71$ H9	75	□215	□192	Rc1	80 ^{-0.1 -0.6}	86	81	M72x2	R89
$\phi 160$	90	$\phi 120$	$\phi 80$ H9	85	□240	□218	Rc1	100 ^{-0.1 -0.6}	94	86	M80x2	R100

Symbol Bore	MM		MR	P		SL		VC		W		WW	X		XC	Z(J, JN)	Z(JK)	ZC
	H3	H5		H3	H5	H3	H5	H3	H5	H3	H5		H3	H5				
$\phi 40$	$\phi 22.4$	$\phi 22$	R25	98	94	11	11	11	16	30	45	$\phi 50$	47	62	221	3.5	2.5	246
$\phi 50$	$\phi 28$	$\phi 28$	R30	106	102	12	14	14	16	30	47	$\phi 63$	50	67	247	3.5	2.5	277
$\phi 63$	$\phi 35.5$	$\phi 36$	R35	113	106	16	16	15	15	35	59	$\phi 71$	61	85	277	4	3	312
$\phi 80$	$\phi 45$	$\phi 45$	R40	129	110	20	20	9	18	35	58	$\phi 80$	55	78	323	4	3	363
$\phi 100$	$\phi 56$	$\phi 56$	R50	139	116	20	23	14	17	40	61	$\phi 100$	60	81	350	4	3	400
$\phi 125$	$\phi 71$	$\phi 70$	R63	159	130	26	27	13	19	45	67	$\phi 125$	69	91	417	5	3.5	480
$\phi 140$	$\phi 80$	$\phi 80$	R71	164	138	30	31	14	15	50	57	$\phi 125$	70	77	440	5	3.5	511
$\phi 160$	$\phi 90$	$\phi 90$	R80	186	156	33	33	14	15	55	66	$\phi 140$	70	81	484	5	4	564

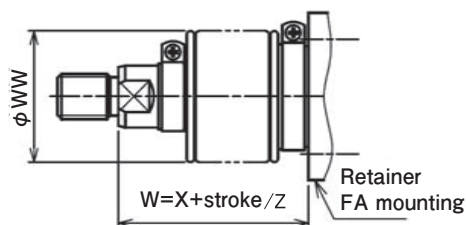
210H-3/210H-5 Comparison Table

CB (cap clevis)

Unit : mm



With Boots



The basic mounting dimensions for the CB type of the 210H-3 and the CB type of the 210H-5 are the same.

- The pin hole diameter / pin diameter (CD) and related dimensions (EW, MR and LR) are shared with the 210H-3.
- The distance between the center of the pin holes and the piston rod (XC) is also shared.

The dimensions other than this have almost been completely changed.

- The port positions (FP and E) and the pitches between the ports (P) are different. Note this when piping.
- The W dimension in regards to the same XC dimension differ between H3/H5. Note this when specifying the W dimension.
- Sizes of φ80 and above have been changed to a detachable mounting accessory type for the 210-5.

H3 indicates

210H-3.

H5 indicates

210H-5.

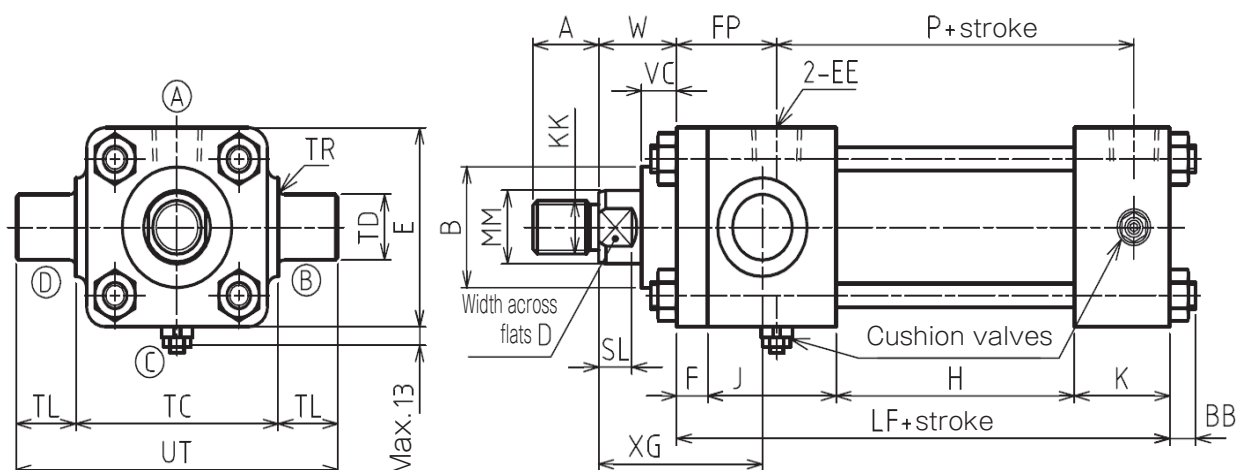
Symbol Bore	A	B	CD	D	E		EE	EW	FP		KK	LR
					H3	H5			H3	H5		
φ 40	25	φ 40	φ 20 ^{H9/f8}	19	□70	□65	Rc3/8	32 ^{+0.4/+0.1}	43	38	M20x1.5	R25
φ 50	30	φ 46	φ 25 ^{H9/f8}	24	□85	□80	Rc1/2	36 ^{+0.4/+0.1}	48	42	M24x1.5	R32
φ 63	35	φ 55	φ 31.5 ^{H9/f8}	30	□100	□94	Rc1/2	40 ^{+0.4/+0.1}	56	47	M30x1.5	R40
φ 80	45	φ 65	φ 40 ^{H9/f8}	41	□125	□114	Rc3/4	50 ^{+0.4/+0.1}	69	57	M39x1.5	R50
φ 100	55	φ 80	φ 50 ^{H9/f8}	50	□160	□135	Rc3/4	63 ^{+0.4/+0.1}	71	58	M48x1.5	R63
φ 125	75	φ 95	φ 63 ^{H9/f8}	65	□190	□165	Rc1	80 ^{+0.6/+0.1}	83	73	M64x2	R79
φ 140	80	φ 105	φ 71 ^{H9/f8}	75	□215	□192	Rc1	80 ^{+0.6/+0.1}	86	81	M72x2	R89
φ 160	90	φ 120	φ 80 ^{H9/f8}	85	□240	□218	Rc1	100 ^{+0.6/+0.1}	94	86	M80x2	R100

Symbol Bore	MM		MR	P		SL		VC		W		WW	X		XC	Z(J,JN)	Z(JK)	ZC
	H3	H5		H3	H5	H3	H5	H3	H5	H3	H5		H3	H5				
φ 40	φ 22.4	φ 22	R25	98	94	11	11	11	16	30	45	φ 50	47	62	221	3.5	2.5	246
φ 50	φ 28	φ 28	R30	106	102	12	14	14	16	30	47	φ 63	50	67	247	3.5	2.5	277
φ 63	φ 35.5	φ 36	R35	113	106	16	16	15	15	35	59	φ 71	61	85	277	4	3	312
φ 80	φ 45	φ 45	R40	129	110	20	20	9	18	35	58	φ 80	55	78	323	4	3	363
φ 100	φ 56	φ 56	R50	139	116	20	23	14	17	40	61	φ 100	60	81	350	4	3	400
φ 125	φ 71	φ 70	R63	159	130	26	27	13	19	45	67	φ 125	69	91	417	5	3.5	480
φ 140	φ 80	φ 80	R71	164	138	30	31	14	15	50	57	φ 125	70	77	440	5	3.5	511
φ 160	φ 90	φ 90	R80	186	156	33	33	14	15	55	66	φ 140	70	81	484	5	4	564

210H-3/210H-5 Comparison Table

TA (rod trunnion)

Unit : mm



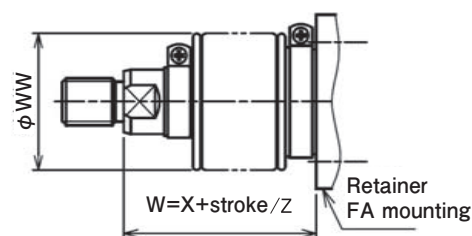
The basic mounting dimensions for the TA type of the 210H-3 and the TA type of the 210H-5 are the same.

- The pin diameter (TD) and related dimensions (TC, TL and UT) are shared with the 210H-3.
- The distance between the center of the pin and the piston rod (XG) is also shared.

The dimensions other than this have almost been completely changed.

- The port positions (FP and E) and the pitches between the ports (P) are different. Note this when piping.
- The W dimension in regards to the same XG dimension differ between H3/H5. Note this when specifying the W dimension.

With Boots



H3 indicates
210H-3.
H5 indicates
210H-5.

Symbol Bore	A	B	BB	D	E		EE	F		FP		H		J	
					H3	H5		H3	H5	H3	H5	H3	H5	H3	H5
φ 40	25	φ 40	11	19	□ 70	□ 65	Rc3/8	13	11	43	38	64	48	47	50
φ 50	30	φ 46	13	24	□ 85	□ 80	Rc1/2	15	13	48	42	68	48	52	56
φ 63	35	φ 55	14	30	□ 100	□ 94	Rc1/2	18	15	56	47	75	52	57	59
φ 80	45	φ 65	16	41	□ 125	□ 114	Rc3/4	24	18	69	57	85	54	67	67
φ 100	55	φ 80	18	50	□ 160	□ 135	Rc3/4	26	20	71	64	95	60	67	72
φ 125	75	φ 95	21	65	□ 190	□ 165	Rc1	33	24	83	73	105	64	77	82
φ 140	80	φ 105	25	75	□ 215	□ 192	Rc1	36	32	86	86	110	72	90	87
φ 160	90	φ 120	27	85	□ 240	□ 218	Rc1	41	37	94	111	132	80	100	112

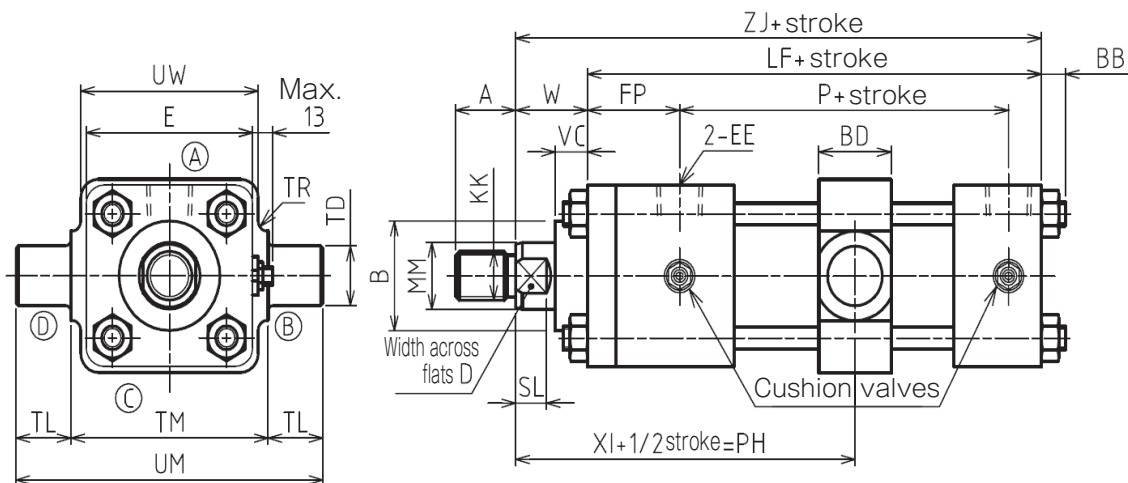
Symbol Bore	K		KK	LF		MM		P		SL		TC	
	H3	H5		H3	H5	H3	H5	H3	H5	H3	H5		
φ 40	32	36	M20x1.5	156	145	φ 22.4	φ 22	98	94	11	11	73	0/-0.3
φ 50	37	45	M24x1.5	172	162	φ 28	φ 28	106	102	12	14	88	0/-0.35
φ 63	37	45	M30x1.5	187	171	φ 35.5	φ 36	113	106	16	16	106	0/-0.35
φ 80	42	48	M39x1.5	218	187	φ 45	φ 45	129	110	20	20	128	0/-0.4
φ 100	42	46	M48x1.5	230	198	φ 56	φ 56	139	116	20	23	170	0/-0.4
φ 125	52	58	M64x2	267	228	φ 71	φ 70	159	130	26	27	205	0/-0.46
φ 140	52	58	M72x2	288	249	φ 80	φ 80	164	138	30	31	225	0/-0.46
φ 160	51	63	M80x2	324	292	φ 90	φ 90	186	156	33	33	255	0/-0.52

Symbol Bore	TD	TL	TR	UT	VC		W		WW	X		XG	Z(J,JN)	Z(JK)
					H3	H5	H3	H5		H3	H5			
φ 40	φ 25 e9	25	R3	123	11	16	30	32	φ 50	47	49	66	3.5	2.5
φ 50	φ 25 e9	25	R3	138	14	16	30	36	φ 63	50	56	71	3.5	2.5
φ 63	φ 31.5 e9	31.5	R3	169	15	15	35	38	φ 71	61	64	81	4	3
φ 80	φ 40 e9	40	R3	208	9	18	35	44	φ 80	55	64	92	4	3
φ 100	φ 50 e9	50	R3	270	14	17	40	47	φ 100	60	67	99	4	3
φ 125	φ 63 e9	63	R4	331	13	19	45	54	φ 125	69	78	116	5	3.5
φ 140	φ 71 e9	71	R4	367	14	15	50	57	φ 125	70	77	131	5	3.5
φ 160	φ 80 e9	80	R4	415	14	15	55	59	φ 140	70	74	146	5	4

210H-3/210H-5 Comparison Table

TC (intermediate trunnion)

Unit : mm



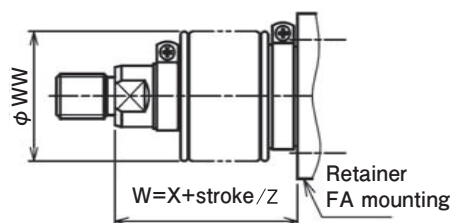
The basic mounting dimensions for the TC type of the 210H-3 and the TC type of the 210H-5 are the same.

- The pin diameter (TD) and related dimensions (TM, TL and UM) are shared with the 210H-3.
- The distance between the pin and the piston rod (XI) is also shared.

The dimensions other than this have almost been completely changed.

- The port positions (FP and E) and the pitches between the ports (P) are different. Note this when piping.
- The W dimension in regards to the same XG dimension differ between H3/H5. Note this when specifying the W dimension.
- We are not able to provide products with less than the minimum stroke ZZ for the 210H-5.

With Boots



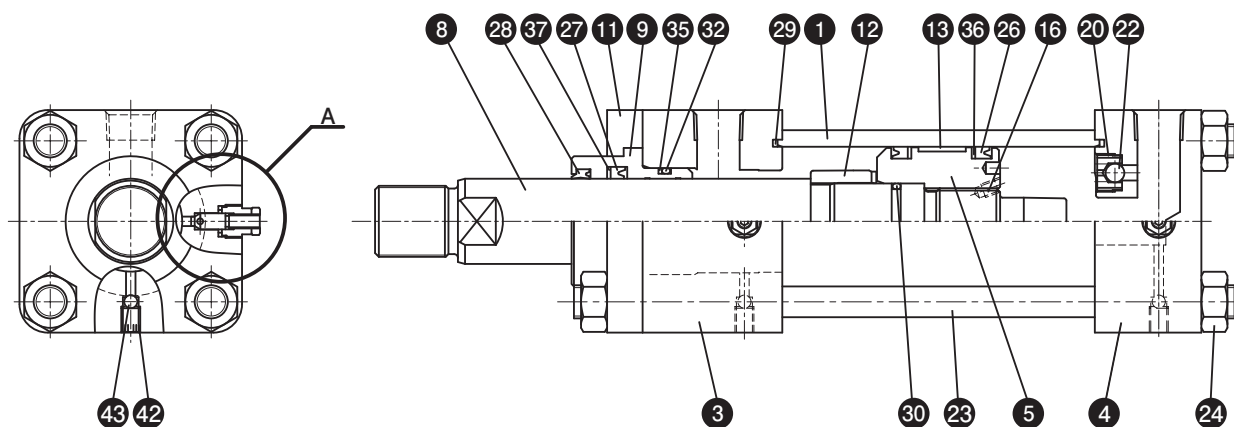
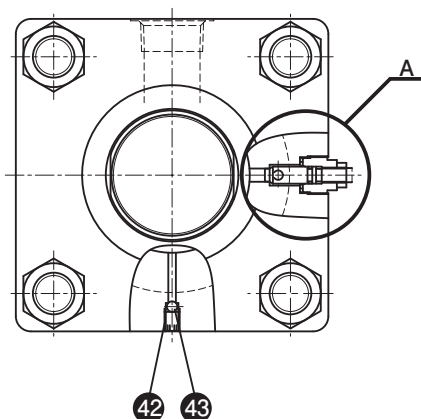
H3 indicates
210H-3.
H5 indicates
210H-5.

Symbol Bore	A	B	BB		D	E		EE	FP		KK	LF	
			H3	H5		H3	H5		H3	H5		H3	H5
φ 40	25	φ 40	13	11	19	□70	□65	Rc3/8	43	38	M20x1.5	156	145
φ 50	30	φ 46	14	13	24	□85	□80	Rc1/2	48	42	M24x1.5	172	162
φ 63	35	φ 55	16	14	30	□100	□94	Rc1/2	56	47	M30x1.5	187	171
φ 80	45	φ 65	18	16	41	□125	□114	Rc3/4	69	57	M39x1.5	218	187
φ 100	55	φ 80	21	18	50	□160	□135	Rc3/4	71	58	M48x1.5	230	192
φ 125	75	φ 95	25	21	65	□190	□165	Rc1	83	73	M64x2	267	228
φ 140	80	φ 105	27	25	75	□215	□192	Rc1	86	81	M72x2	275	244
φ 160	90	φ 120	29	27	85	□240	□218	Rc1	94	86	M80x2	304	267

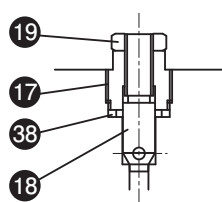
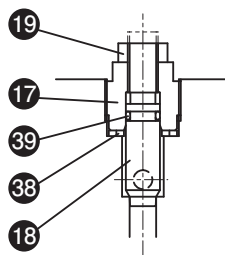
Symbol Bore	MM		P		Min.PH		SL		TD	TL	TM	TR
	H3	H5	H3	H5	H3	H5	H3	H5				
φ 40	φ 22.4	φ 22	98	94	107	107.5	11	11	φ 25 e9	25	73 0/-0.3	R2.5
φ 50	φ 28	φ 28	106	102	114	118.5	12	14	φ 25 e9	25	88 0/-0.35	R2.5
φ 63	φ 35.5	φ 36	113	106	132	131.5	16	16	φ 31.5 e9	31.5	106 0/-0.35	R2.5
φ 80	φ 45	φ 45	129	110	153	152.5	20	20	φ 40 e9	40	128 0/-0.4	R3
φ 100	φ 56	φ 56	139	116	165	164.5	20	23	φ 50 e9	50	170 0/-0.4	R3
φ 125	φ 71	φ 70	159	130	219	205	26	27	φ 63 e9	63	205 0/-0.46	R4
φ 140	φ 80	φ 80	164	138	232	218	30	31	φ 71 e9	71	225 0/-0.46	R4
φ 160	φ 90	φ 90	186	156	253	233	33	33	φ 80 e9	80	255 0/-0.52	R4

Symbol Bore	UM	UW		VC		W		WW	X		XI	Z(J,JN)	Z(JK)	ZJ		ZZ	
		H3	H5	H3	H5	H3	H5		H3	H5				H3	H5	H3	H5
φ 40	123	□70	□65	11	16	30	30	φ 50	47	47	122	3.5	2.5	186	177	-	-
φ 50	138	□85	□80	14	16	30	33	φ 63	50	53	131	3.5	2.5	202	198	-	-
φ 63	169	□100	□94	15	15	35	36	φ 71	61	62	148	4	3	222	209	-	-
φ 80	208	□125	□114	9	18	35	41	φ 80	55	61	169	4	3	253	231	-	-
φ 100	270	□160	□146	14	17	40	47	φ 100	60	67	181	4	3	270	239	-	4
φ 125	331	□195	□185	13	19	45	60	φ 125	69	84	208	5	3.5	312	282	-	15
φ 140	367	□215	□210	14	15	50	60	φ 125	70	80	218	5	3.5	325	301	-	17
φ 160	415	□245	□230	14	15	55	60	φ 140	70	75	242	5	4	359	326	-	19

Double acting single rod/Standard type/210H-5

●Bore $\phi 40$ to $\phi 100$ ●Bore $\phi 125$ to $\phi 160$ 

Enlarged drawing of part A (cushion valve)

●Bore $\phi 40$ to $\phi 100$ ●Bore $\phi 125$ to $\phi 160$ 

Parts List

No.	Name	Material	Qty.
①	Cylinder tube	Carbon steel for machine structural use	1
③	Rod cover	Carbon steel for machine structural use (φ40 to φ80) Rolled steel for general structure (φ100 to φ160)	1
④	Cap cover	Carbon steel for machine structural use (φ40 to φ80) Rolled steel for general structure (φ100 to φ160)	1
⑤	Piston	Spheroidal graphite cast iron	1
⑧	Piston rod	Carbon steel for machine structural use	1
⑨	Bush	Copper alloy	1
⑪	Retainer	Carbon steel for machine structural use (φ40 to φ80) Rolled steel for general structure (φ100 to φ160)	1
⑫	Cushion ring	Spheroidal graphite cast iron	1
⑬	Wear ring	Synthetic resin	1
⑯	Set screw	Chrome molybdenum steel	1
⑰	Cushion plug	Carbon steel for machine structural use	2
⑱	Cushion valve	Chrome molybdenum steel	2
⑲	Cushion lock nut	Carbon steel for machine structural use	2
⑳	Check plug	Carbon steel for machine structural use	1
㉒	Check ball	Chromium bearing steel	1
㉓	Tie rod	Chrome molybdenum steel	4
㉔	Tie rod nut	Carbon steel for machine structural use	8
㉘	Set screw	Chrome molybdenum steel	2
㉙	Steel ball	Chromium bearing steel	2

- The quantities shown in the table above are applicable to the type with both ends cushioned.
- The internal structure of the 210C-2 and 210H-5 is shared.

Seal List

Standard type/Nitrile rubber/210H-5

No.	Part name	Material	Qty.	Part code			
				φ40	φ50	φ63	φ80
26	Piston seal	Nitrile rubber	2	OUHR-40	OUHR-50	OUHR-63	OUHR-80A
27	Rod seal	Nitrile rubber	1	IUH-22A	IUH-28	IUH-36	IUH-45A
28	Dust wiper	Nitrile rubber	1	LBH-22	LBH-28	LBH-36	LBH-45
29	Cover seal	Nitrile rubber	2	TT-40	TT-50	TT-63	TT-80
30	O-ring for piston rod	Nitrile rubber	1	P-16	P-21	G-25	G-35
32	O-ring for bush	Nitrile rubber	1	G-25	G-30	G-40	G-55
35	Backup ring for bush	Fluororesin	1	BUR-G25	BUR-G31	BUR-G40	BUR-G55
36	Backup ring for piston seal	Fluororesin with bronze	2	40x30x1.5	50x40x1.5	63x53x1.5	80x71x2
37	Backup ring for rod seal	Fluororesin	1	22X30X1	28X35.5X1	36X46X1.5	45X56X1.5
38	Valve seal	HNBR with metallic ring	Note2	CX-12H	CX-12H	CX-12H	CX-14H
39	O-ring for cushion valve	HNBR	Note2	—	—	—	—
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS1-040	TH5/PKS1-050	TH5/PKS1-063	TH5/PKS1-080

No.	Part name	Material	Qty.	Part code			
				φ100	φ125	φ140	φ160
26	Piston seal	Nitrile rubber	2	OUHR-100	OUHR-125	OUHR-140	OUHR-160
27	Rod seal	Nitrile rubber	1	IUH-56	IUH-70	IUH-80	IUH-90
28	Dust wiper	Nitrile rubber	1	LBH-56	LBH-70	LBH-80	LBH-90
29	Cover seal	Nitrile rubber	2	TT-100	TT-125	TT-140	TT-160
30	O-ring for piston rod	Nitrile rubber	1	G-45	G-55	G-65	G-75
32	O-ring for bush	Nitrile rubber	1	G-60	G-80	G-90	G-100
35	Backup ring for bush	Fluororesin	1	BUR-G60	BUR-G80	BUR-G90	BUR-G100
36	Backup ring for piston seal	Fluororesin with bronze	2	100x85x3	125x112x3	140x125x3	160x145x3
37	Backup ring for rod seal	Fluororesin	1	56X66X1.5	70X80X1.5	80X90X1.5	90X105X2
38	Valve seal	HNBR with metallic ring	Note2	CX-14H	CR-18H	CR-18H	CR-18H
39	O-ring for cushion valve	HNBR	Note2	—	S-7	S-7	S-7
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS1-100	TH5/PKS1-125	TH5/PKS1-140	TH5/PKS1-160

• The O-ring for piston rod conform to JIS B2401-1B. The O-ring for bush conform to JIS B2401-1A.

* The nominal code of seal is subject to change. * The backup ring (BUR-G31) conform to TAIYO standards.

Note 2: The quantity is 2 for a product with cushioning on both sides and 0 for no cushioning. There are 2 pcs in each seal set.

Standard type/Urethane rubber/210H-5

No.	Part name	Material	Qty.	Part code			
				φ40	φ50	φ63	φ80
26	Piston seal	Urethane rubber	2	OUIS-40	OUIS-50	OUIS-63	OUIS-80A
27	Rod seal	Urethane rubber	1	B3022AP5008	B3028AP5008	B3036BP5008	B3045DP5008
28	Dust wiper	Urethane rubber	1	AY022AP5008	AY028AP5008	AY036AP5008	AY045AP5008
29	Cover seal	Nitrile rubber	2	TT-40	TT-50	TT-63	TT-80
30	O-ring for piston rod	Nitrile rubber	1	P-16	P-21	G-25	G-35
32	O-ring for bush	Nitrile rubber	1	G-25	G-30	G-40	G-55
35	Backup ring for bush	Fluororesin	1	BUR-G25	BUR-G31	BUR-G40	BUR-G55
36	Backup ring for piston seal	Fluororesin with bronze	2	40x30x1.5	50x40x1.5	63x53x1.5	80x71x2
37	Backup ring for rod seal	Fluororesin	1	22X30X1	28X35.5X1	36X46X1.5	45X56X1.5
38	Valve seal	HNBR with metallic ring	Note2	CX-12H	CX-12H	CX-12H	CX-14H
39	O-ring for cushion valve	HNBR	Note2	—	—	—	—
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS2-040	TH5/PKS2-050	TH5/PKS2-063	TH5/PKS2-080

No.	Part name	Material	Qty.	Part code			
				φ100	φ125	φ140	φ160
26	Piston seal	Urethane rubber	2	OUIS-100	OUIS-125	OUIS-140	OUIS-160
27	Rod seal	Urethane rubber	1	B3056AP5008	B3070AP5008	B3080AP5008	B3090BP5008
28	Dust wiper	Urethane rubber	1	AY056AP5008	AY070AP5008	AY080AP5008	AY090AP5008
29	Cover seal	Nitrile rubber	2	TT-100	TT-125	TT-140	TT-160
30	O-ring for piston rod	Nitrile rubber	1	G-45	G-55	G-65	G-75
32	O-ring for bush	Nitrile rubber	1	G-60	G-80	G-90	G-100
35	Backup ring for bush	Fluororesin	1	BUR-G60	BUR-G80	BUR-G90	BUR-G100
36	Backup ring for piston seal	Fluororesin with bronze	2	100x85x3	125x112x3	140x125x3	160x145x3
37	Backup ring for rod seal	Fluororesin	1	56X66X1.5	70X80X1.5	80X90X1.5	90X105X2
38	Valve seal	HNBR with metallic ring	Note2	CX-14H	CR-18H	CR-18H	CR-18H
39	O-ring for cushion valve	HNBR	Note2	—	S-7	S-7	S-7
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS2-100	TH5/PKS2-125	TH5/PKS2-140	TH5/PKS2-160

• The O-ring for piston rod conform to JIS B2401-1B. The O-ring for bush conform to JIS B2401-1A.

* The nominal code of seal is subject to change. * The backup ring (BUR-G31) conform to TAIYO standards.

Note 2: The quantity is 2 for a product with cushioning on both sides and 0 for no cushioning. There are 2 pcs in each seal set.

Seal List

Standard type/Fluorocarbon/210H-5

No.	Part name	Material	Qty.	Part code			
				φ40	φ50	φ63	φ80
26	Piston seal	Fluorocarbon	2	UHP-40	UHP-50	UHP-63	UHP-80
27	Rod seal	Fluorocarbon	1	UHR-22	UHR-28	UHR-36	UHR-45
28	Dust wiper	Fluorocarbon	1	DHS-22	DHS-28	DHS-36	DHS-45
29	Cover seal	Fluorocarbon	2	TT-40	TT-50	TT-63	TT-80
30	O-ring for piston rod	Fluorocarbon	1	P-16	P-21	G-25	G-35
32	O-ring for bush	Fluorocarbon	1	G-25	G-30	G-40	G-55
35	Backup ring for bush	Fluororesin	1	BUR-G25	BUR-G31	BUR-G40	BUR-G55
36	Backup ring for piston seal	Fluororesin with bronze	2	40x30x1.5	50x40x1.5	63x53x1.5	80x71x2
37	Backup ring for rod seal	Fluororesin	1	22X30X1	28X35.5X1	36X46X1.5	45X56X1.5
38	Valve seal	Fluorocarbon with metallic ring	Note2	CX-12F	CX-12F	CX-12F	CX-14F
39	O-ring for cushion valve	Fluorocarbon	Note2	—	—	—	—
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS3-040	TH5/PKS3-050	TH5/PKS3-063	TH5/PKS3-080

No.	Part name	Material	Qty.	Part code			
				φ100	φ125	φ140	φ160
26	Piston seal	Fluorocarbon	2	UHP-100	UHP-125	UHP-140	UHP-160
27	Rod seal	Fluorocarbon	1	UHR-56	UHR-70	UHR-80	UHR-90
28	Dust wiper	Fluorocarbon	1	DHS-56	DHS-70	DHS-80	DHS-90
29	Cover seal	Fluorocarbon	2	TT-100	TT-125	TT-140	TT-160
30	O-ring for piston rod	Fluorocarbon	1	G-45	G-55	G-65	G-75
32	O-ring for bush	Fluorocarbon	1	G-60	G-80	G-90	G-100
35	Backup ring for bush	Fluororesin	1	BUR-G60	BUR-G80	BUR-G90	BUR-G100
36	Backup ring for piston seal	Fluororesin with bronze	2	100x85x3	125x112x3	140x125x3	160x145x3
37	Backup ring for rod seal	Fluororesin	1	56X66X1.5	70X80X1.5	80X90X1.5	90X105X2
38	Valve seal	Fluorocarbon with metallic ring	Note2	CX-14F	CR-18F	CR-18F	CR-18F
39	O-ring for cushion valve	Fluorocarbon	Note2	—	S-7	S-7	S-7
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS3-100	TH5/PKS3-125	TH5/PKS3-140	TH5/PKS3-160

• The spring hardness of the O-ring for the piston rod is 90°. The O-ring for bush conform to JIS B2401-4D.

* The nominal code of seal is subject to change. * The backup ring (BUR-G31) conform to TAIYO standards.

Note 2: The quantity is 2 for a product with cushioning on both sides and 0 for no cushioning. There are 2 pcs in each seal set.

Standard type/HNBR/210H-5

No.	Part name	Material	Qty.	Part code			
				φ40	φ50	φ63	φ80
26	Piston seal	HNBR	2	UHP-40	UHP-50	UHP-63	UHP-80
27	Rod seal	HNBR	1	UHR-22	UHR-28	UHR-36	UHR-45
28	Dust wiper	HNBR	1	DHS-22	DHS-28	DHS-36	DHS-45
29	Cover seal	HNBR	2	TT-40	TT-50	TT-63	TT-80
30	O-ring for piston rod	HNBR	1	P-16	P-21	G-25	G-35
32	O-ring for bush	HNBR	1	G-25	G-30	G-40	G-55
35	Backup ring for bush	HNBR	1	BUR-G25	BUR-G31	BUR-G40	BUR-G55
36	Backup ring for piston seal	Fluororesin with bronze	2	40x30x1.5	50x40x1.5	63x53x1.5	80x71x2
37	Backup ring for rod seal	Fluororesin	1	22X30X1	28X35.5X1	36X46X1.5	45X56X1.5
38	Valve seal	HNBR with metallic ring	Note2	CX-12H	CX-12H	CX-12H	CX-14H
39	O-ring for cushion valve	HNBR	Note2	—	—	—	—
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS6-040	TH5/PKS6-050	TH5/PKS6-063	TH5/PKS6-080

No.	Part name	Material	Qty.	Part code			
				φ100	φ125	φ140	φ160
26	Piston seal	HNBR	2	UHP-100	UHP-125	UHP-140	UHP-160
27	Rod seal	HNBR	1	UHR-56	UHR-70	UHR-80	UHR-90
28	Dust wiper	HNBR	1	DHS-56	DHS-70	DHS-80	DHS-90
29	Cover seal	HNBR	2	TT-100	TT-125	TT-140	TT-160
30	O-ring for piston rod	HNBR	1	G-45	G-55	G-65	G-75
32	O-ring for bush	HNBR	1	G-60	G-80	G-90	G-100
35	Backup ring for bush	HNBR	1	BUR-G60	BUR-G80	BUR-G90	BUR-G100
36	Backup ring for piston seal	Fluororesin with bronze	2	100x85x3	125x112x3	140x125x3	160x145x3
37	Backup ring for rod seal	Fluororesin	1	56X66X1.5	70X80X1.5	80X90X1.5	90X105X2
38	Valve seal	HNBR with metallic ring	Note2	CX-14H	CR-18H	CR-18H	CR-18H
39	O-ring for cushion valve	HNBR	Note2	—	S-7	S-7	S-7
Seal set	Double acting single rod cylinder	—	1 set	TH5/PKS6-100	TH5/PKS6-125	TH5/PKS6-140	TH5/PKS6-160

• The spring hardness of the O-ring is 90°.

* The nominal code of seal is subject to change. * The backup ring (BUR-G31) conform to TAIYO standards.

Note 2: The quantity is 2 for a product with cushioning on both sides and 0 for no cushioning. There are 2 pcs in each seal set.

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