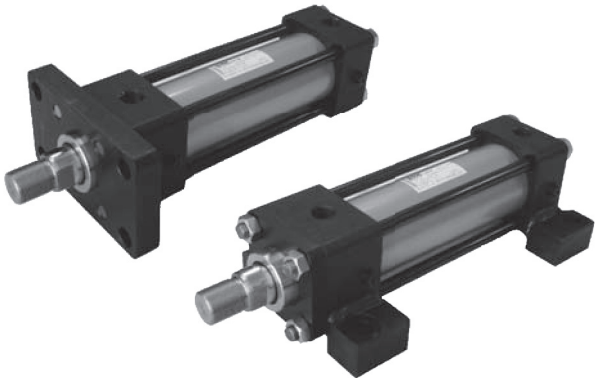
21 MPa hydraulic cylinders

- 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: ϕ40 to ϕ160
- 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)		ϕ40 to ϕ63 : 8 to 400mm/s ϕ80 to ϕ125 : 8 to 300mm/s ϕ140 to ϕ250 : 8 to 200mm/s
Working temperature range (ambient/fluid temperature)		−10 to +80℃ (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: $^{+0.8}_{0}$ 101 to 250mm: $^{+1.0}_{0}$ 251 to 630mm: $^{+1.25}_{0}$ 631 to 1000mm: $^{+1.4}_{0}$ 1001 to 1600mm: $^{+1.6}_{0}$ 1601 to 2000mm: $^{+1.8}_{0}$
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 (℃)
		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	φ40	φ50	φ63	φ80	φ100	φ125	φ140	φ160
General purpose type	Double acting single rod	Standard type 210H-5	●	●	●	●	●	●	●	●

Standard Stroke Range

Unit : mm

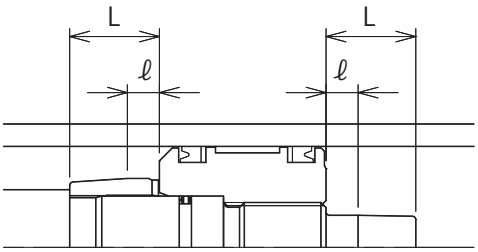
Bore	Stroke
φ40	to 1600
φ50 to φ160	to 2000

- 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
φ40	26	10
φ50	28	10
φ63	28	10
φ80	30	12
φ100	30	12
φ125	33	15
φ140	33	15
φ160	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
φ40	4.13	0.0105	0.80	0.59	1.00	0.56	0.77	0.32	0.74	1.0	1.2	0.03
φ50	7.04	0.0157	1.24	1.04	1.78	0.93	1.28	0.34	1.04	1.4	2.2	0.05
φ63	10.46	0.0240	2.51	1.91	3.15	1.45	2.18	0.70	1.71	2.2	3.7	0.11
φ80	17.35	0.0363	3.99	3.16	5.35	4.17	5.04	1.34	2.99	4.2	7.7	0.24
φ100	26.04	0.0539	5.40	6.12	9.97	7.95	9.51	3.76	6.79	8.0	14.6	0.52
φ125	47.40	0.0838	9.84	12.99	19.59	15.46	18.57	5.42	13.25	20.8	31.7	1.10
φ140	67.60	0.1087	7.85	11.30	21.95	21.30	25.02	8.03	18.75	24.4	38.4	1.44
φ160	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 φ63, cylinder stroke 500 mm, LA style, without rod end attachment

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

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

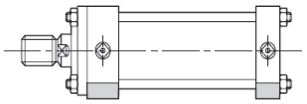
① Type — 210H-5: Double acting single rod standard type

② Seal material

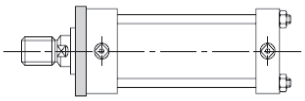
1	Nitrile rubber	3	Fluorocarbon
2	Urethane rubber	6	HNBR

③ Mounting style

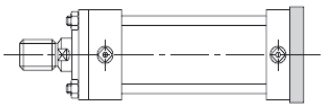
LA (side lugs)



FA (rod flange)

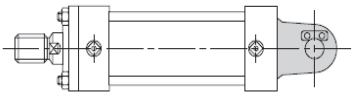


FB (cap flange)

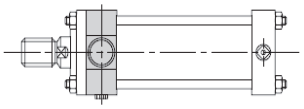


CA (cap eye)

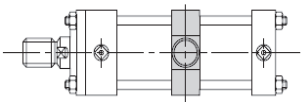
CB (cap clevis)



TA (rod trunnion)



TC (intermediate trunnion)



④ Cylinder bore (mm) — φ40・φ50・φ63・φ80・φ100・φ125・φ140・φ160

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 (φ40 to φ160).
・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 ・Needs not to be entered, if unnecessary.

⑬ Boots — J: Nylon tarpaulin; JN: Chloroprene; JK: Conex ・Needs not to be entered, if unnecessary.

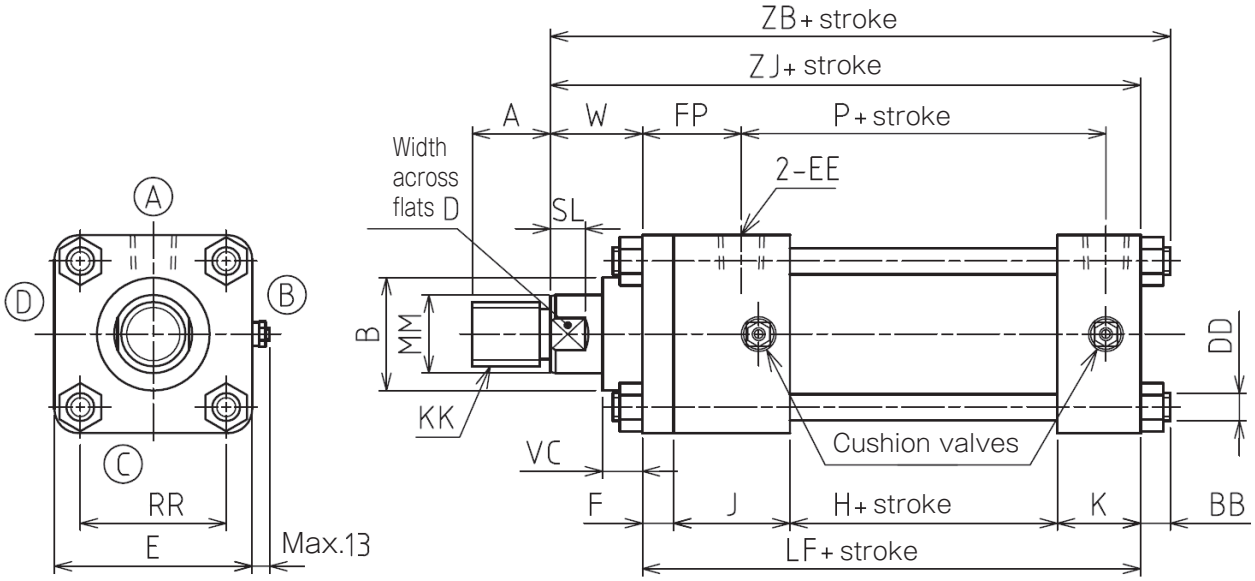
★ Standard position
・We provide standard support for a cushion on the rod side/cap side/both sides and no cushions on either side.
・Fill in the codes shown in the external dimensions figure for the positions of the air vent, port and cushion valve.
You cannot specify the same surface for the port, cushion 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."

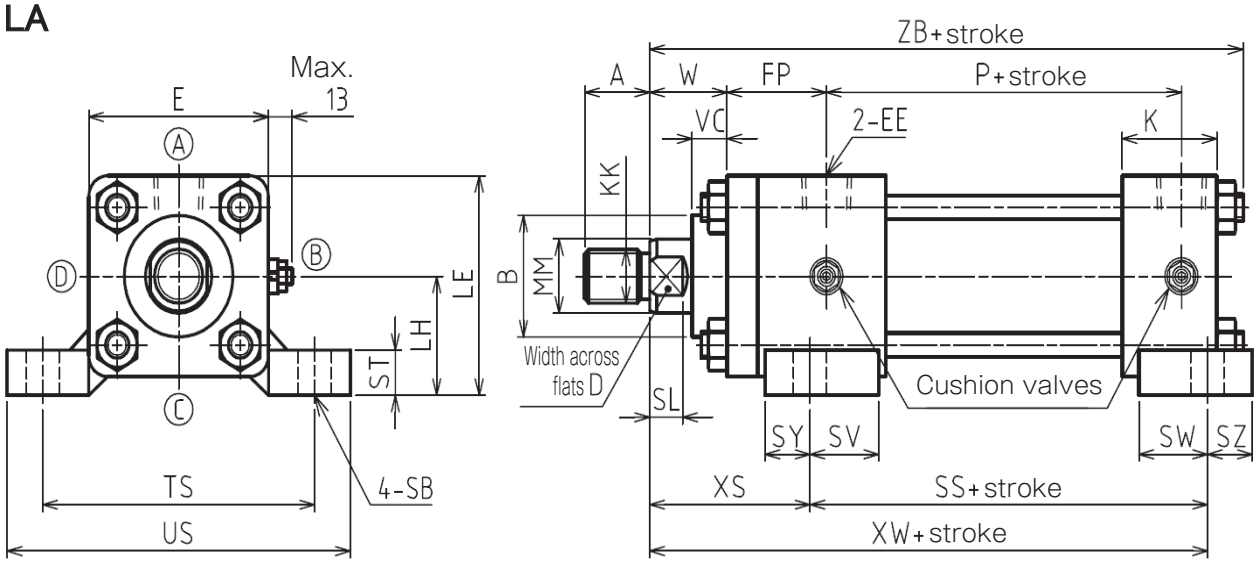
Dimension Table

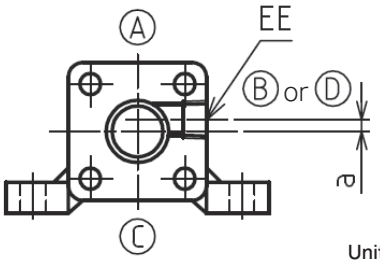
Unit : mm

Symbol / Bore	A	B	BB	D	DD	E	EE	F	FP	H	J	K
φ40	25	φ40	11	19	M10x1.25	□65	Rc3/8	11	38	48	50	36
φ50	30	φ46	13	24	M12x1.25	□80	Rc1/2	13	42	48	56	45
φ63	35	φ55	14	30	M14x1.5	□94	Rc1/2	15	47	52	59	45
φ80	45	φ65	16	41	M16x1.5	□114	Rc3/4	18	57	54	67	48
φ100	55	φ80	18	50	M18x1.5	□135	Rc3/4	20	58	60	66	46
φ125	75	φ95	21	65	M22x1.5	□165	Rc1	24	73	64	82	58
φ140	80	φ105	25	75	M27x2	□192	Rc1	32	81	72	82	58
φ160	90	φ120	27	85	M30x2	□218	Rc1	37	86	80	87	63

Symbol / Bore	KK	LF	MM	P	RR	SL	VC	W	ZB	ZJ
φ40	M20x1.5	145	φ22	94	□45	11	16	-	-	-
φ50	M24x1.5	162	φ28	102	□56	14	16	-	-	-
φ63	M30x1.5	171	φ36	106	□68	16	15	-	-	-
φ80	M39x1.5	187	φ45	110	□84	20	18	-	-	-
φ100	M48x1.5	192	φ56	116	□102	23	17	-	-	-
φ125	M64x2	228	φ70	130	□125	27	19	-	-	-
φ140	M72x2	244	φ80	138	□144	31	15	-	-	-
φ160	M80x2	267	φ90	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.

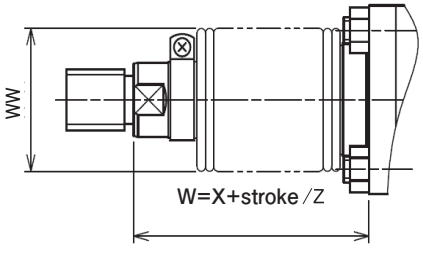
Dimension Table

Unit : mm

Symbol / Bore	a	A	B	D	E	EE	FP	K	KK	LE	LH	MM	P
φ40	5	25	φ40	19	□65	Rc3/8	38	36	M20x1.5	74.5	42 ±0.15	φ22	94
φ50	6	30	φ46	24	□80	Rc1/2	42	45	M24x1.5	95	55 ±0.15	φ28	102
φ63	6	35	φ55	30	□94	Rc1/2	47	45	M30x1.5	110	63 ±0.15	φ36	106
φ80	10	45	φ65	41	□114	Rc3/4	57	48	M39x1.5	132	75 ±0.25	φ45	110
φ100	10	55	φ80	50	□135	Rc3/4	58	46	M48x1.5	152.5	85 ±0.25	φ56	116
φ125	10	75	φ95	65	□165	Rc1	73	58	M64x2	187.5	105 ±0.25	φ70	130
φ140	0	80	φ105	75	□192	Rc1	81	58	M72x2	208	112 ±0.25	φ80	138
φ160	0	90	φ120	85	□218	Rc1	86	63	M80x2	234	125 ±0.25	φ90	156

Symbol / Bore	SB	SL	SS	ST	SV	SW	SY	SZ	TS	US	VC	W	XS	XW	ZB
φ40	φ11	11	111	19	38	25	12	11	98	122	16	36	59	170	192
φ50	φ14	14	120	24	36	30	14	15	118	145	16	36	63	183	211
φ63	φ18	16	132	35	41	39	18	18	140	175	15	38	71	203	223
φ80	φ22	20	152	41	49	49	18	18	175	210	18	44	80	232	247
φ100	φ26	23	162	40	43	59	23	23	215	260	17	46	89	251	256
φ125	φ33	27	182	47	54	64	28	28	270	330	19	54	106	288	303
φ140	φ33	31	187	45	54	61	28	28	280	335	15	54	114	301	323
φ160	φ36	33	212	50	56	76	31	31	315	375	15	59	127	339	353

With Boots



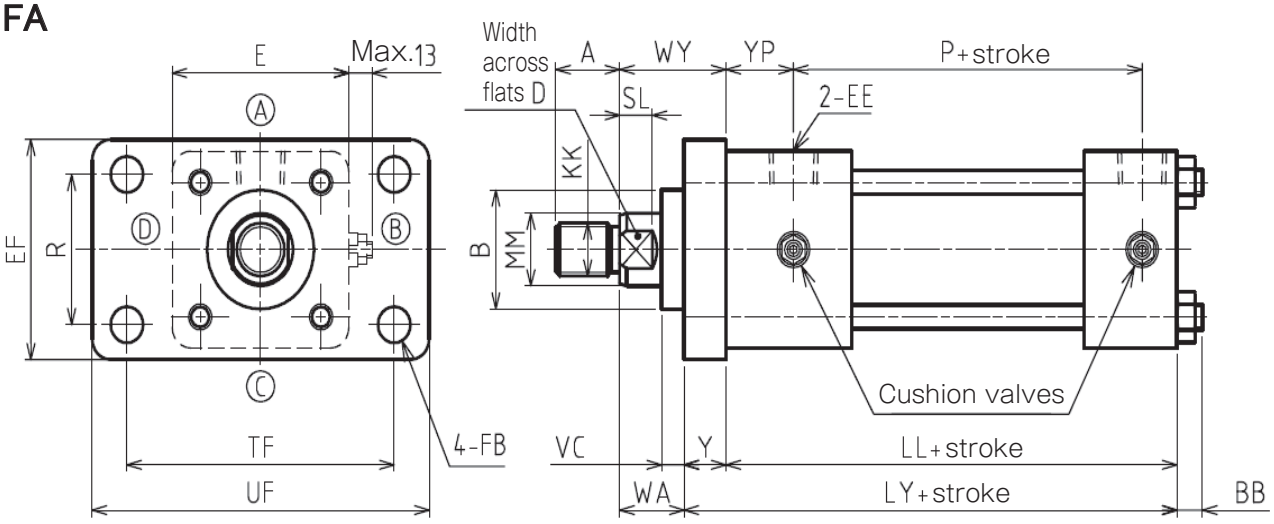
Symbol:Material	Heat proof
J: Nylon tarpaulin	80℃
JN: Chloroprene	130℃
JK: Conex	200℃

- 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.

Unit : mm

Symbol / Bore	WW	X	Z	
			J,JN	JK
φ40	φ50	53	3.5	2.5
φ50	φ63	56	3.5	2.5
φ63	φ71	64	4	3
φ80	φ80	64	4	3
φ100	φ100	66	4	3
φ125	φ125	78	5	3.5
φ140	φ125	74	5	3.5
φ160	φ140	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."

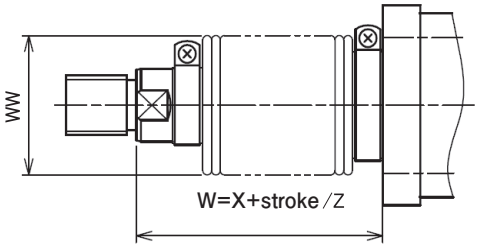
Dimension Table

Unit : mm

Symbol / Bore	A	B	BB	D	E	EE	EF	FB	KK	LL	LY	MM	P
φ40	25	φ40	11	19	□65	Rc3/8	73	φ11	M20x1.5	134	150	φ22	94
φ50	30	φ46	13	24	□80	Rc1/2	88	φ14	M24x1.5	149	169	φ28	102
φ63	35	φ55	14	30	□94	Rc1/2	106	φ18	M30x1.5	156	180	φ36	106
φ80	45	φ65	16	41	□114	Rc3/4	130	φ22	M39x1.5	169	196	φ45	110
φ100	55	φ80	18	50	□135	Rc3/4	165	φ26	M48x1.5	172	203	φ56	116
φ125	75	φ95	21	65	□165	Rc1	205	φ33	M64x2	204	243	φ70	130
φ140	80	φ105	25	75	□192	Rc1	218	φ33	M72x2	212	253	φ80	138
φ160	90	φ120	27	85	□218	Rc1	243	φ36	M80x2	230	276	φ90	156

Symbol / Bore	R	SL	TF	UF	VC	WA	WY	Y	YP
φ40	50	11	98	122	11	28	44	16	27
φ50	60	14	118	145	9	25	45	20	29
φ63	73	16	140	175	6	29	53	24	32
φ80	90	20	175	210	9	35	62	27	39
φ100	115	23	215	260	6	35	66	31	38
φ125	145	27	270	330	4	41	80	39	49
φ140	160	31	280	335	6	45	86	41	49
φ160	180	33	315	375	6	50	96	46	49

With Boots



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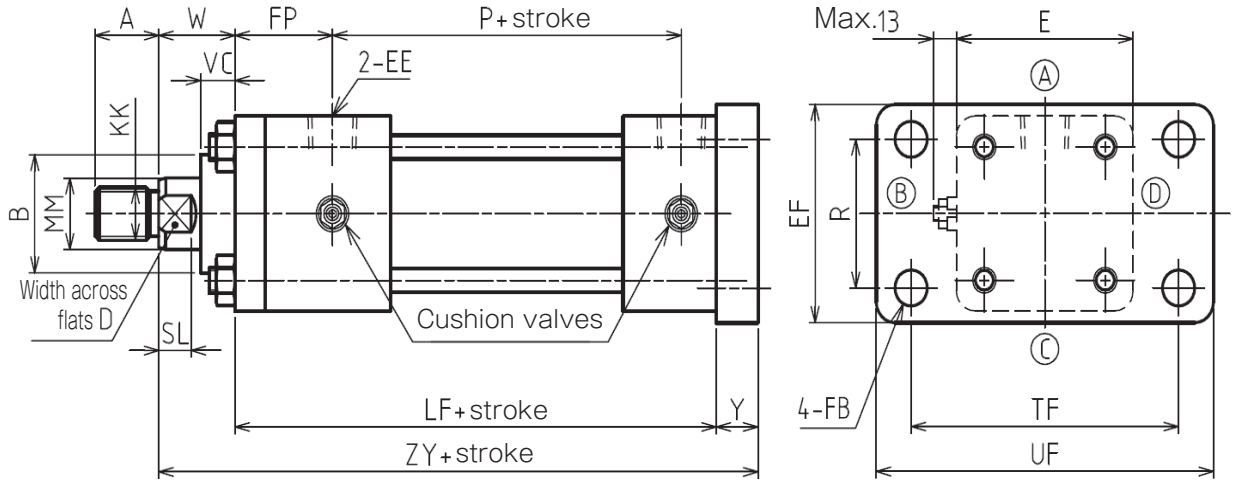
Unit : mm

Symbol / Bore	WW	X	Z	
			J,JN	JK
φ40	φ50	45	3.5	2.5
φ50	φ63	45	3.5	2.5
φ63	φ71	55	4	3
φ80	φ80	55	4	3
φ100	φ100	55	4	3
φ125	φ125	65	5	3.5
φ140	φ125	65	5	3.5
φ160	φ140	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.”

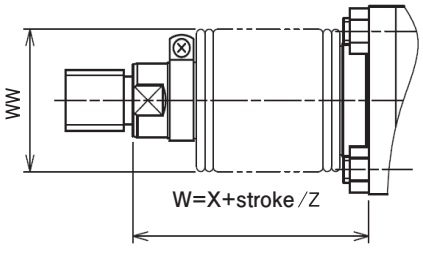
Dimension Table

Unit : mm

Bore \ Symbol	A	B	D	E	EE	EF	FB	FP	KK	LF	MM	P	R
φ40	25	φ40	19	□65	Rc3/8	73	φ11	38	M20x1.5	145	φ22	94	50
φ50	30	φ46	24	□80	Rc1/2	88	φ14	42	M24x1.5	162	φ28	102	60
φ63	35	φ55	30	□94	Rc1/2	106	φ18	47	M30x1.5	171	φ36	106	73
φ80	45	φ65	41	□114	Rc3/4	130	φ22	57	M39x1.5	187	φ45	110	90
φ100	55	φ80	50	□135	Rc3/4	165	φ26	58	M48x1.5	192	φ56	116	115
φ125	75	φ95	65	□165	Rc1	205	φ33	73	M64x2	228	φ70	130	145
φ140	80	φ105	75	□192	Rc1	218	φ33	81	M72x2	244	φ80	138	160
φ160	90	φ120	85	□218	Rc1	243	φ36	86	M80x2	267	φ90	156	180

Bore \ Symbol	SL	TF	UF	VC	W	Y	ZY
φ40	11	98	122	16	40	16	201
φ50	14	118	145	16	40	20	222
φ63	16	140	175	15	51	24	246
φ80	20	175	210	18	63	27	277
φ100	23	215	260	17	78	31	301
φ125	27	270	330	19	82	39	349
φ140	31	280	335	15	81	41	366
φ160	33	315	375	15	92	46	405

With Boots



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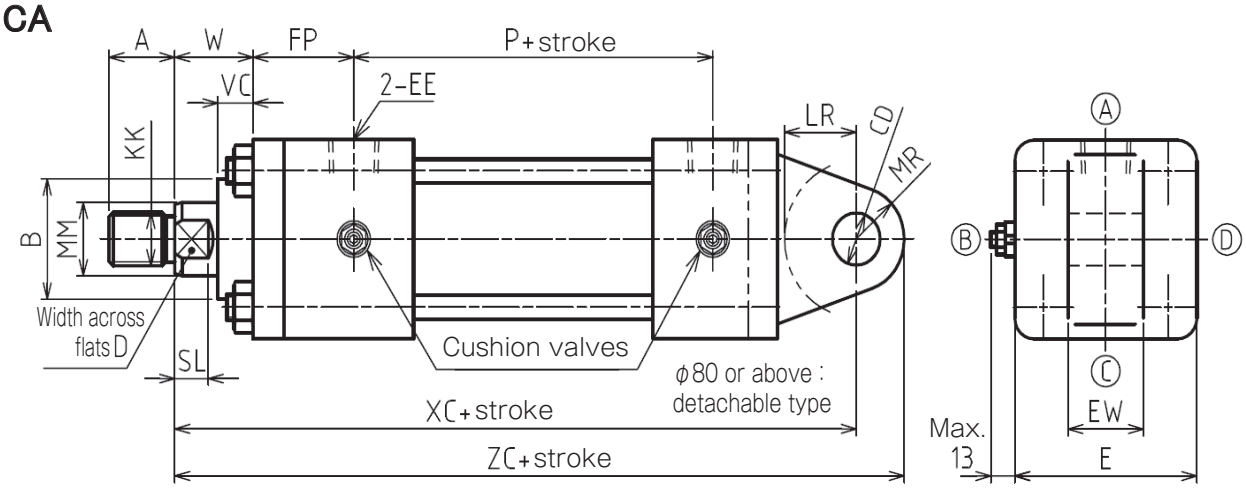
Unit : mm

Bore \ Symbol	WW	X	Z	
			J,JN	JK
φ40	φ50	57	3.5	2.5
φ50	φ63	60	3.5	2.5
φ63	φ71	77	4	3
φ80	φ80	83	4	3
φ100	φ100	98	4	3
φ125	φ125	106	5	3.5
φ140	φ125	101	5	3.5
φ160	φ140	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."

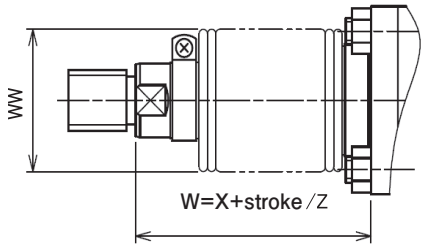
Dimension Table

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



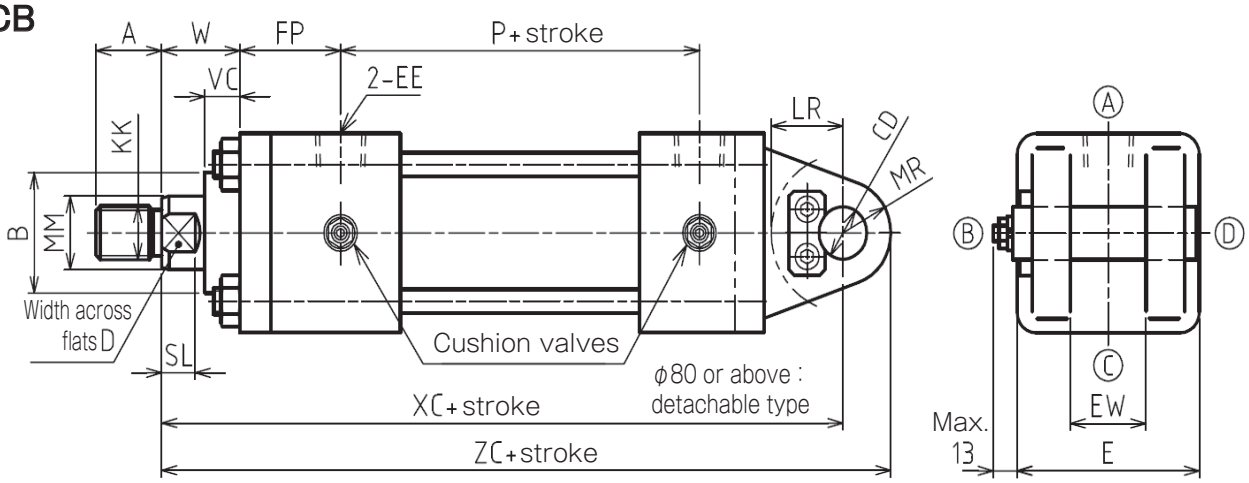
Symbol:Material	Heat proof
J: Nylon tarpaulin	80℃
JN: Chloroprene	130℃
JK: Conex	200℃

- 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
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.

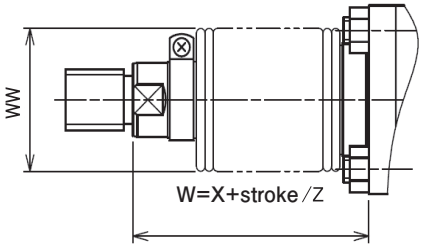
Dimension Table

Unit : mm

Symbol / Bore	A	B	CD	D	E	EE	EW	FP	KK	LR
φ40	25	φ40	φ20 H9 f8	19	□65	Rc3/8	32 +0.4 +0.1	38	M20x1.5	R25
φ50	30	φ46	φ25 H9 f8	24	□80	Rc1/2	36 +0.4 +0.1	42	M24x1.5	R32
φ63	35	φ55	φ31.5 H9 f8	30	□94	Rc1/2	40 +0.4 +0.1	47	M30x1.5	R40
φ80	45	φ65	φ40 H9 f8	41	□114	Rc3/4	50 +0.4 +0.1	57	M39x1.5	R50
φ100	55	φ80	φ50 H9 f8	50	□135	Rc3/4	63 +0.4 +0.1	58	M48x1.5	R63
φ125	75	φ95	φ63 H9 f8	65	□165	Rc1	80 +0.6 +0.1	73	M64x2	R79
φ140	80	φ105	φ71 H9 f8	75	□192	Rc1	80 +0.6 +0.1	81	M72x2	R89
φ160	90	φ120	φ80 H9 f8	85	□218	Rc1	100 +0.6 +0.1	86	M80x2	R100

Symbol / Bore	MM	MR	P	SL	VC	W	XC	ZC
φ40	φ22	R25	94	11	16	45	221	246
φ50	φ28	R30	102	14	16	47	247	277
φ63	φ36	R35	106	16	15	59	277	312
φ80	φ45	R40	110	20	18	58	323	363
φ100	φ56	R50	116	23	17	61	350	400
φ125	φ70	R63	130	27	19	67	417	480
φ140	φ80	R71	138	31	15	57	440	511
φ160	φ90	R80	156	33	15	66	484	564

With Boots



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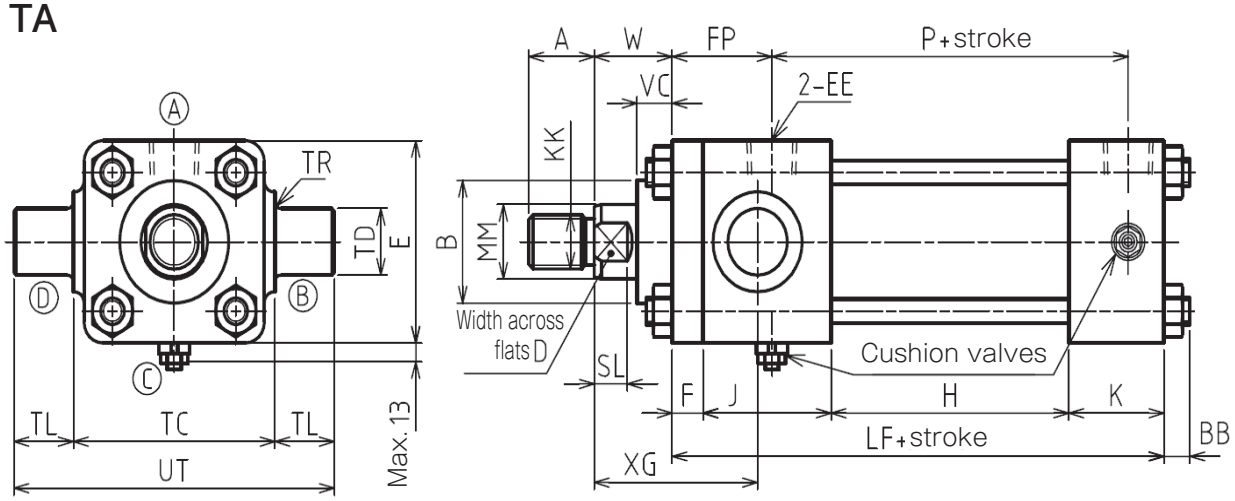
JN: Chloroprene	130℃
JK: Conex	200℃

- 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
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

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."

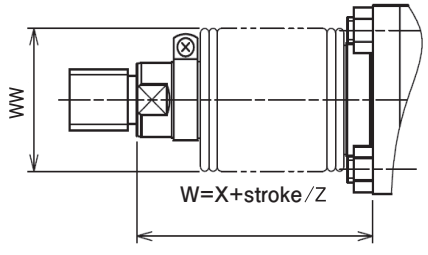
Dimension Table

Unit : mm

Symbol / Bore	A	B	BB	D	E	EE	F	FP	H	J	K	KK	LF
φ40	25	φ40	11	19	□65	Rc3/8	11	38	48	50	36	M20x1.5	145
φ50	30	φ46	13	24	□80	Rc1/2	13	42	48	56	45	M24x1.5	162
φ63	35	φ55	14	30	□94	Rc1/2	15	47	52	59	45	M30x1.5	171
φ80	45	φ65	16	41	□114	Rc3/4	18	57	54	67	48	M39x1.5	187
φ100	55	φ80	18	50	□135	Rc3/4	20	64	60	72	46	M48x1.5	198
φ125	75	φ95	21	65	□165	Rc1	24	73	64	82	58	M64x2	228
φ140	80	φ105	25	75	□192	Rc1	32	86	72	87	58	M72x2	249
φ160	90	φ120	27	85	□218	Rc1	37	111	80	112	63	M80x2	292

Symbol / Bore	MM	P	SL	TC	TD	TL	TR	UT	VC	W	XG
φ40	φ22	94	11	73 $^{0}_{-0.3}$	φ25 e9	25	R2.5	123	16	32	66
φ50	φ28	102	14	88 $^{0}_{-0.35}$	φ25 e9	25	R2.5	138	16	36	71
φ63	φ36	106	16	106 $^{0}_{-0.35}$	φ31.5 e9	31.5	R2.5	169	15	38	81
φ80	φ45	110	20	128 $^{0}_{-0.4}$	φ40 e9	40	R3	208	18	44	92
φ100	φ56	116	23	170 $^{0}_{-0.4}$	φ50 e9	50	R3	270	17	47	99
φ125	φ70	130	27	205 $^{0}_{-0.46}$	φ63 e9	63	R4	331	19	54	116
φ140	φ80	138	31	225 $^{0}_{-0.46}$	φ71 e9	71	R4	367	15	57	131
φ160	φ90	156	33	255 $^{0}_{-0.52}$	φ80 e9	80	R4	415	15	59	146

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.
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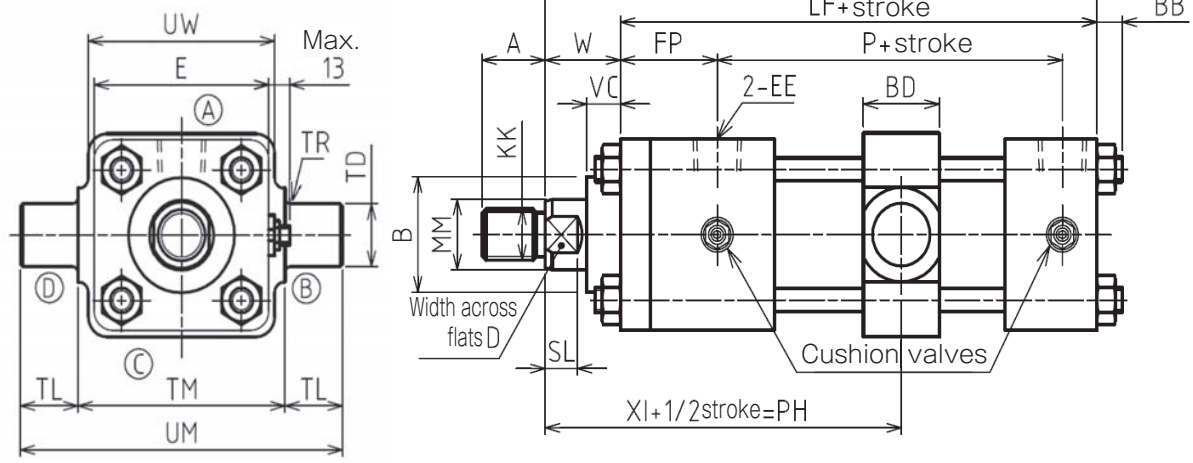
Unit : mm

Symbol / Bore	WW	X	Z	
			J,JN	JK
φ40	φ50	49	3.5	2.5
φ50	φ63	56	3.5	2.5
φ63	φ71	64	4	3
φ80	φ80	64	4	3
φ100	φ100	67	4	3
φ125	φ125	78	5	3.5
φ140	φ125	77	5	3.5
φ160	φ140	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
φ40	25	φ40	11	33	19	□65	Rc3/8	38	M20x1.5	145	φ22	94	107.5	11
φ50	30	φ46	13	33	24	□80	Rc1/2	42	M24x1.5	162	φ28	102	118.5	14
φ63	35	φ55	14	43	30	□94	Rc1/2	47	M30x1.5	171	φ36	106	131.5	16
φ80	45	φ65	16	53	41	□114	Rc3/4	57	M39x1.5	187	φ45	110	152.5	20
φ100	55	φ80	18	63	50	□135	Rc3/4	58	M48x1.5	192	φ56	116	164.5	23
φ125	75	φ95	21	78	65	□165	Rc1	73	M64x2	228	φ70	130	205	27
φ140	80	φ105	25	88	75	□192	Rc1	81	M72x2	244	φ80	138	218	31
φ160	90	φ120	27	98	85	□218	Rc1	86	M80x2	267	φ90	156	233	33

Symbol / Bore	TD	TL	TM	TR	UM	UW	VC	W	XI	ZJ
φ40	φ25 e9	25	73 $^{0}_{-0.3}$	R2.5	123	□65	16	30	122	175
φ50	φ25 e9	25	88 $^{0}_{-0.35}$	R2.5	138	□80	16	33	131	195
φ63	φ31.5 e9	31.5	106 $^{0}_{-0.35}$	R2.5	169	□94	15	36	148	207
φ80	φ40 e9	40	128 $^{0}_{-0.4}$	R3	208	□114	18	41	169	228
φ100	φ50 e9	50	170 $^{0}_{-0.4}$	R3	270	□146	17	47	181	239
φ125	φ63 e9	63	205 $^{0}_{-0.46}$	R4	331	□185	19	60	208	288
φ140	φ71 e9	71	225 $^{0}_{-0.46}$	R4	367	□210	15	60	218	304
φ160	φ80 e9	80	255 $^{0}_{-0.52}$	R4	415	□230	15	60	242	327

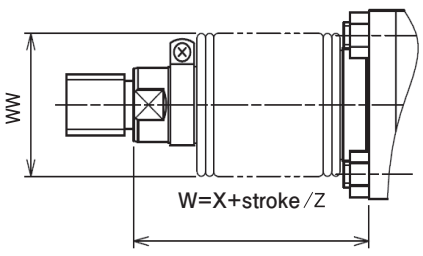
Possible Minimum Stroke of TC Style

Unit : mm

Symbol / Bore	Special XI	Standard XI
φ63	-	15
φ80	-	31
φ100	4	39
φ125	15	34
φ140	17	32
φ160	19	54

Contact us about the special XI.

With Boots

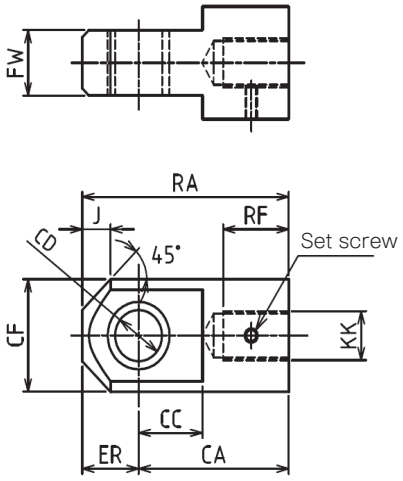


Symbol:Material	Heat proof
J: Nylon tarpaulin	80℃
JN: Chloroprene	130℃
JK: Conex	200℃

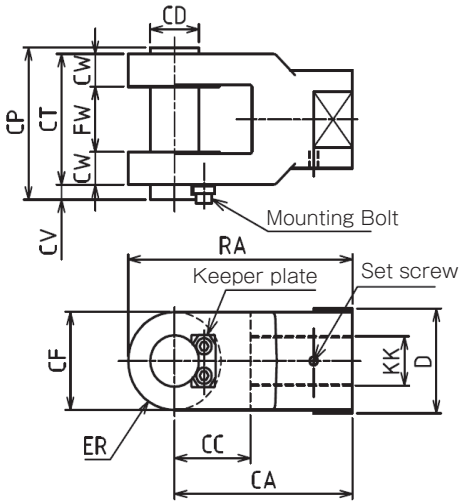
- Remember that the heat proof field in the table above shows the allowable temperatures for the boots, not for the cylinder.
- The boots have been mounted at our factory prior to delivery.
- Conex is the registered trademark of Teijin Limited.

Symbol / Bore	WW	X	Z	
			J,JN	JK
φ40	φ50	47	3.5	2.5
φ50	φ63	53	3.5	2.5
φ63	φ71	62	4	3
φ80	φ80	61	4	3
φ100	φ100	67	4	3
φ125	φ125	84	5	3.5
φ140	φ125	80	5	3.5
φ160	φ140	75	5	4

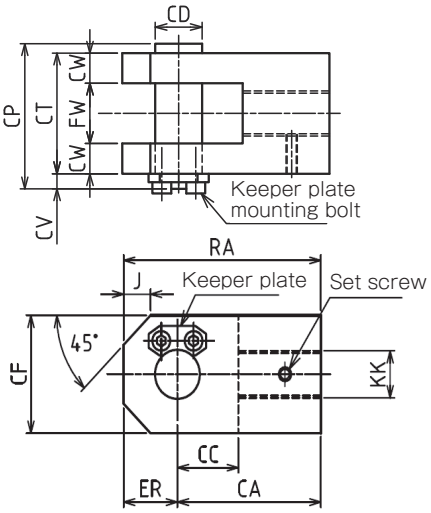
Rod eye (T-end)



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

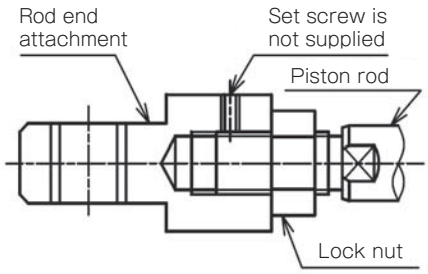
Symbol / Bore	Part number	CA	CC	CD	CF	ER	FW	J	KK	RA	RF
φ40	RTH-20-1-H	70	28	φ20 H10	φ49	25	31.5 -0.1 -0.4	10	M20x1.5	95	32
φ50	RTH-24-2-H	85	35	φ25 H10	φ55	30	35.5 -0.1 -0.4	12	M24x1.5	115	35
φ63	RTH-30-1-H	115	43	φ31.5 H10	φ62	35	40 -0.1 -0.4	15	M30x1.5	150	47
φ80	RTH-39-1-H	145	55	φ40 H10	φ79	40	50 -0.1 -0.4	20	M39x1.5	185	62
φ100	RTH-48-1-H	180	65	φ50 H10	φ100	50	63 -0.1 -0.4	30	M48x1.5	230	77
φ125	RTH-64-2-H	225	85	φ63 H10	φ130	65	80 -0.1 -0.6	40	M64x2	290	82
φ140	RTH-72-2-H	240	90	φ71 H10	φ140	70	80 -0.1 -0.6	45	M72x2	310	97
φ160	RTH-80-2-H	280	100	φ80 H10	φ160	80	100 -0.1 -0.6	50	M80x2	360	112

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

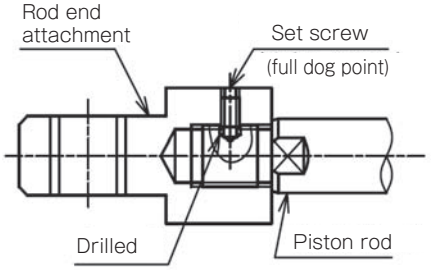
Symbol / Bore	Part number	CA	CC	CD	CF	CP	CT	CW	CV	D	ER	FW	J	KK	RA	RF
φ40	RYH-20-1-H	70	32	φ20 H10 f8	40	76.5	63.5	16	8	41	R20	31.5 +0.4 +0.1	-	M20x1.5	90	-
φ50	RYH-24-2-H	85	45	φ25 H10 f8	50	84.5	71.5	18	8	-	25	35.5 +0.4 +0.1	12	M24x1.5	110	35
φ63	RYH-30-H	115	50	φ31.5 H10 f8	60	93	80	20	8	60	R30	40 +0.4 +0.1	-	M30x1.5	145	-
φ80	RYH-39-1-H	145	60	φ40 H10 f8	80	117	100	25	12	80	R40	50 +0.4 +0.1	-	M39x1.5	185	-
φ100	RYH-48-1-H	180	70	φ50 H10 f8	100	143	126	31.5	12	-	50	63 +0.4 +0.1	30	M48x1.5	230	77
φ125	RYH-64-2-H	225	90	φ63 H10 f8	120	183	160	40	18	-	65	80 +0.6 +0.1	30	M64x2	290	82
φ140	RYH-72-2-H	240	100	φ71 H10 f8	140	183	160	40	18	-	70	80 +0.6 +0.1	40	M72x2	310	97
φ160	RYH-80-2-H	280	110	φ80 H10 f8	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)

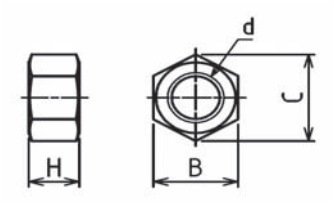
① When the lock nut and rod end attachment are additionally ordered
The rod end attachment and lock nut are temporarily assembled to the piston rod for delivery. Since the lock nut is not tightened, tighten it after adjusting the position of the rod end attachment.
No set screw is supplied.



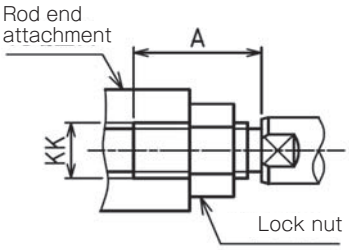
② When only the rod end attachment is additionally ordered (without lock nut)
The rod end attachment is tightened to the piston rod, a drill hole is made on the piston rod and it is secured with the set screw for delivery.
If the drill hole is unnecessary, give us such instructions.



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

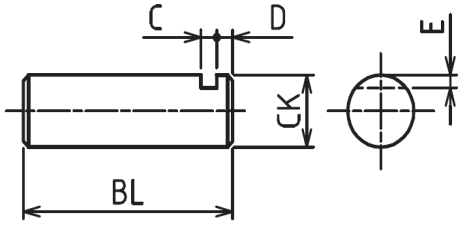
Symbol / Bore	Part number	B	C	d	H
φ40	LNH-20F-H	27	31.2	M20x1.5	12
φ50	LNH-24F-H	32	37	M24x1.5	14
φ63	LNH-30F-H	41	47.3	M30x1.5	17
φ80	LNH-39F-H	55	63.5	M39x1.5	20
φ100	LNH-48F-H	70	80.8	M48x1.5	26
φ125	LNH-64F-H	90	104	M64x2	35
φ140	LNH-72F-H	100	115	M72x2	38
φ160	LNH-80F-H	110	127	M80x2	43

Dimension Table/ Example of long thread

Unit : mm

Symbol / Bore	A	KK
φ40	45	M20x1.5
φ50	50	M24x1.5
φ63	60	M30x1.5
φ80	80	M39x1.5
φ100	95	M48x1.5
φ125	125	M64x2
φ140	140	M72x2
φ160	155	M80x2

Parallel pin



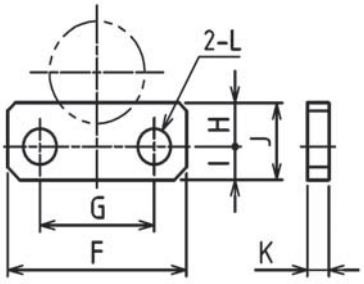
Dimension Table/Parallel pin

Unit : mm

Symbol / Bore	BL	C	CK	D	E
φ40	76.5	5	φ20	3	3
φ50	84.5	5	φ25	3	3.5
φ63	93	5	φ31.5	3	4
φ80	117	7	φ40	5	5
φ100	143	7	φ50	5	5
φ125	183	10	φ63	8	8
φ140	183	10	φ71	8	8
φ160 CB	230	13	φ80	11	10
φ160 Y	210	13	φ80	11	10

- The tolerance of CK is f8.
- The parallel pins for CB type and Y-end are the same for sizes other than φ160.

Keeper plate



Dimension Table/Keeper plate

Unit : mm

Symbol / Bore	F	G	H	I	J	K	L	Bolt
φ40	32	18	7.5	7.5	15	4.5	φ7	M6
φ50	32	18	7.5	7.5	15	4.5	φ7	M6
φ63	32	18	7.5	7.5	15	4.5	φ7	M6
φ80	50	30	10	10	20	6	φ10	M8
φ100	65	40	12	10	22	6	φ12	M10
φ125	75	48	17	13	30	9	φ14	M12
φ140	75	48	17	13	30	9	φ14	M12
φ160	100	68	24	16	40	12	φ18	M16

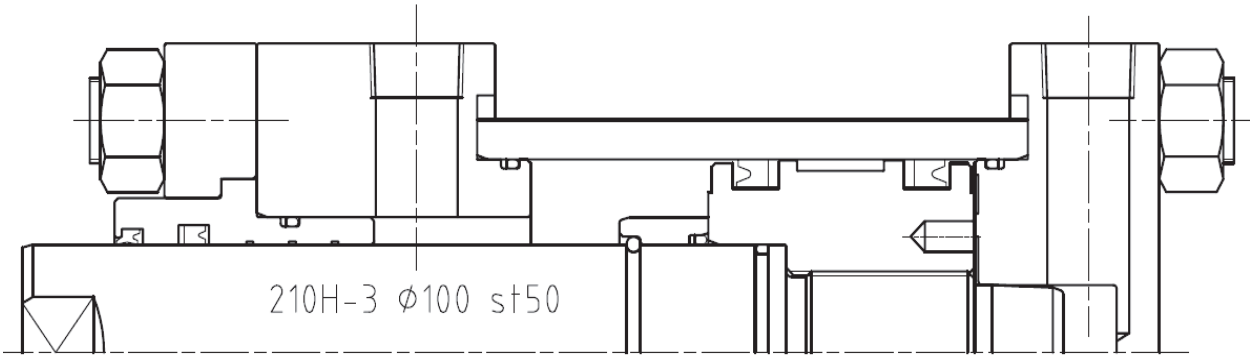
210H-3/210H-5 Model Change

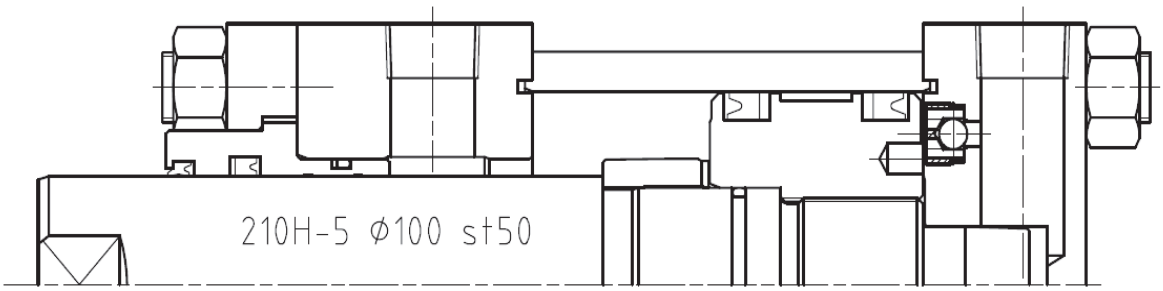
Unit : mm

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	φ40	φ50	φ63	φ80	φ100	φ125	φ140	φ160
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.

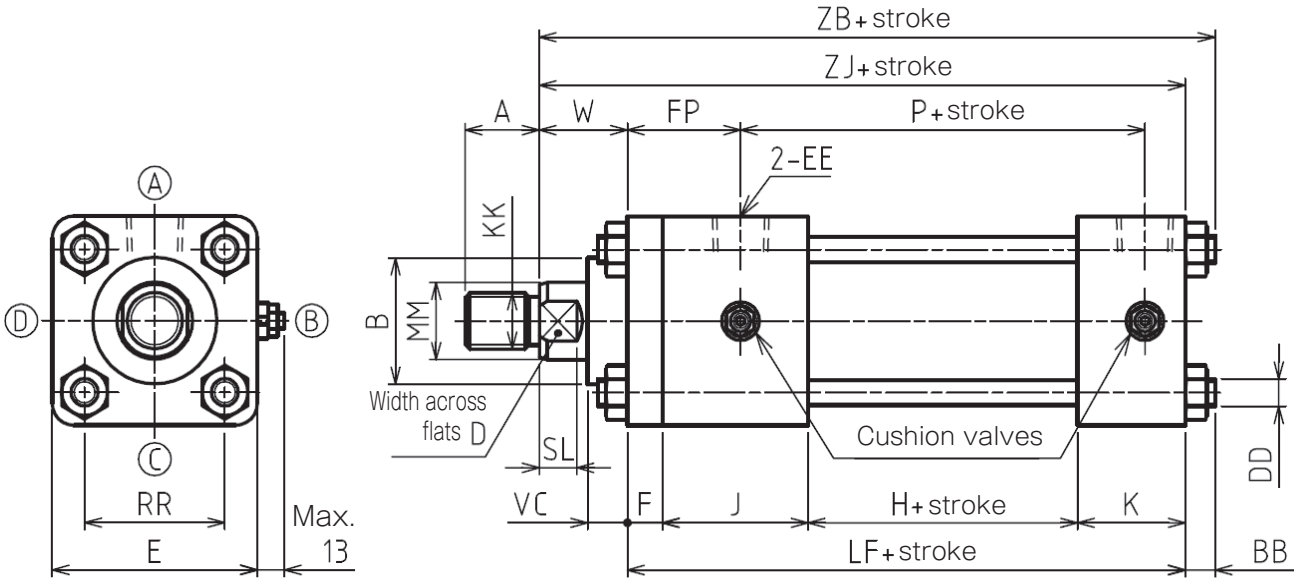
1. The rod diameters of the bore size φ40, φ63 and φ100 have become φ22, φ36 and φ70 from φ22.4, φ35.5 and φ71. The rod packing and dust wipers that accompany this are also different.
   - We will still continue to provide support for the old series maintenance seal sets after June 2016.

2. Now even more lightweight and compact
   - The tie rod is now thinner (Ex. M22×1.5→M18x1.5 for bore size φ100)
   - 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 φ100)

3. Improved cushion performance
   - There is now a shape which relives 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.

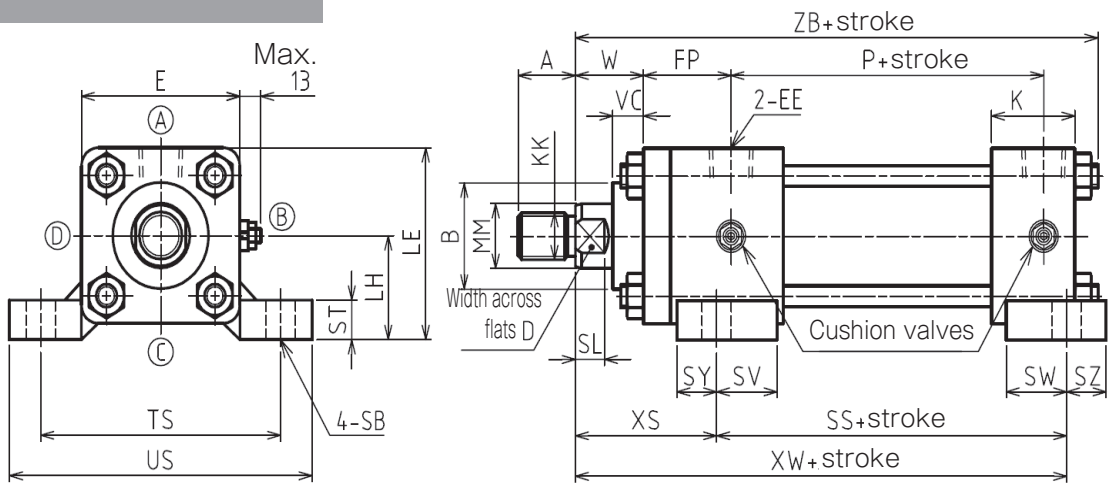
Symbol / Bore	A	B	BB		D	DD		E		EE	F		FP	
			H3	H5		H3	H5	H3	H5		H3	H5	H3	H5
φ40	25	φ40	13	11	19	M12x1.5	M10x1.25	70	65	Rc3/8	13	11	43	38
φ50	30	φ46	14	13	24	M14x1.5	M12x1.25	85	80	Rc1/2	15	13	48	42
φ63	35	φ55	16	14	30	M16x1.5	M14x1.5	100	94	Rc1/2	18	15	56	47
φ80	45	φ65	18	16	41	M18x1.5	M16x1.5	125	114	Rc3/4	24	18	69	57
φ100	55	φ80	21	18	50	M22x1.5	M18x1.5	160	135	Rc3/4	26	20	71	58
φ125	75	φ95	25	21	65	M27x1.5	M22x1.5	190	165	Rc1	33	24	83	73
φ140	80	φ105	27	25	75	M30x1.5	M27x2	215	192	Rc1	36	32	86	81
φ160	90	φ120	29	27	85	M33x1.5	M30x2	240	218	Rc1	41	37	94	86

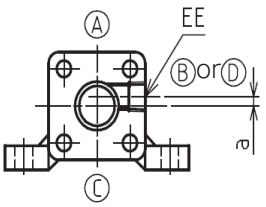
Symbol / Bore	H		J		K		KK	LF		MM		P	
	H3	H5	H3	H5	H3	H5		H3	H5	H3	H5	H3	H5
φ40	64	48	47	50	32	36	M20x1.5	156	145	φ22.4	φ22	98	94
φ50	68	48	52	56	37	45	M24x1.5	172	162	φ28	φ28	106	102
φ63	75	52	57	59	37	45	M30x1.5	187	171	φ35.5	φ36	113	106
φ80	85	54	67	67	42	48	M39x1.5	218	187	φ45	φ45	129	110
φ100	95	60	67	66	42	46	M48x1.5	230	192	φ56	φ56	139	116
φ125	105	64	77	82	52	58	M64x2	267	228	φ71	φ70	159	130
φ140	110	72	77	82	52	58	M72x2	275	244	φ80	φ80	164	138
φ160	132	80	80	87	51	63	M80x2	304	267	φ90	φ90	186	156

Symbol / Bore	RR		SL		VC	
	H3	H5	H3	H5	H3	H5
φ40	□50	□45	11	11	11	16
φ50	□62	□56	12	14	14	16
φ63	□74	□68	16	16	15	15
φ80	□92	□84	20	20	9	18
φ100	□120	□102	20	23	14	17
φ125	□145	□125	26	27	13	19
φ140	□165	□144	30	31	14	15
φ160	□185	□164	33	33	14	15

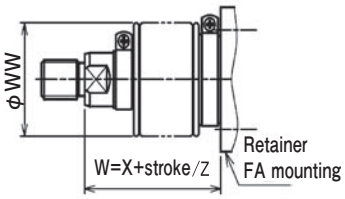
210H-3/210H-5 Comparison Table LA (side lugs)

Unit : mm





With Boots



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 positons 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.

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

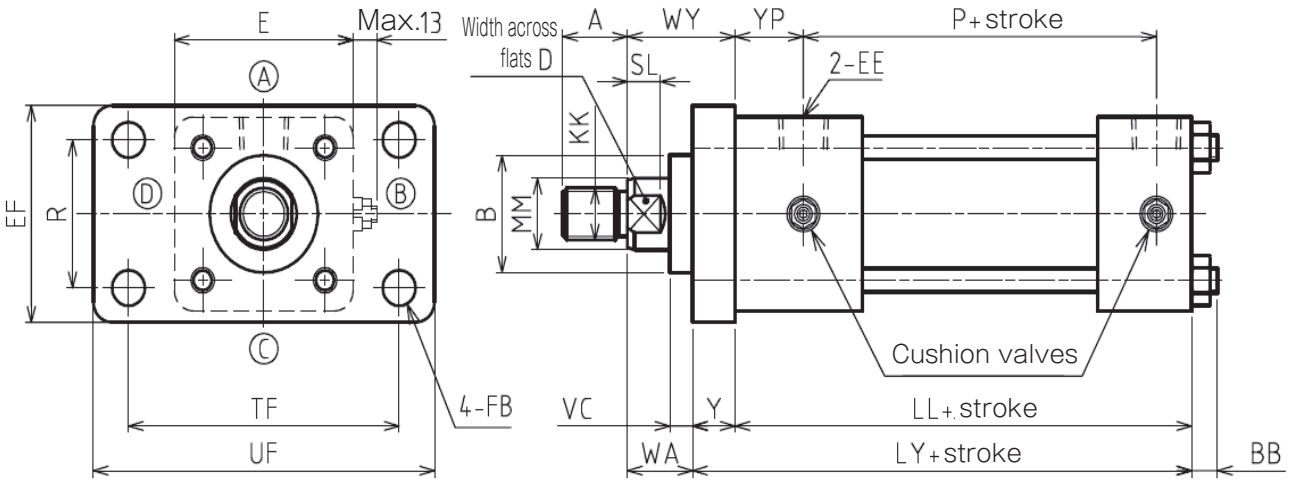
Symbol / Bore	LE		LH	MM		P		SB	SL		SS	ST		SV		SW	
	H3	H5		H3	H5	H3	H5		H3	H5		H3	H5	H3	H5	H3	H5
φ40	77	74.5	42 ±0.15	φ22.4	φ22	98	94	φ11	11	11	111	15	19	31	38	16	25
φ50	97.5	95	55 ±0.15	φ28	φ28	106	102	φ14	12	14	120	20	24	34	36	18	30
φ63	113	110	63 ±0.15	φ35.5	φ36	113	106	φ18	16	16	132	25	35	39	41	18	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,JN)	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

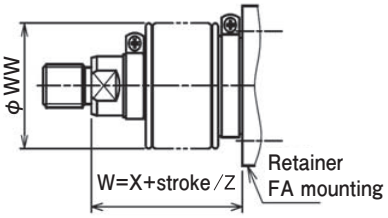
210H-3/210H-5 Comparison Table

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.

Symbol / Bore	A	B	BB		D	E		EE	EF	FB	KK	LL	
			H3	H5		H3	H5					H3	H5
φ40	25	φ40	13	11	19	□70	□65	Rc3/8	73	φ11	M20x1.5	143	134
φ50	30	φ46	14	13	24	□85	□80	Rc1/2	88	φ14	M24x1.5	157	149
φ63	35	φ55	16	14	30	□100	□94	Rc1/2	106	φ18	M30x1.5	169	156
φ80	45	φ65	18	16	41	□125	□114	Rc3/4	130	φ22	M39x1.5	194	169
φ100	55	φ80	21	18	50	□160	□135	Rc3/4	165	φ26	M48x1.5	204	172
φ125	75	φ95	25	21	65	□190	□165	Rc1	205	φ33	M64x2	234	204
φ140	80	φ105	27	25	75	□215	□192	Rc1	218	φ33	M72x2	239	212
φ160	90	φ120	29	27	85	□240	□218	Rc1	243	φ36	M80x2	263	230

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

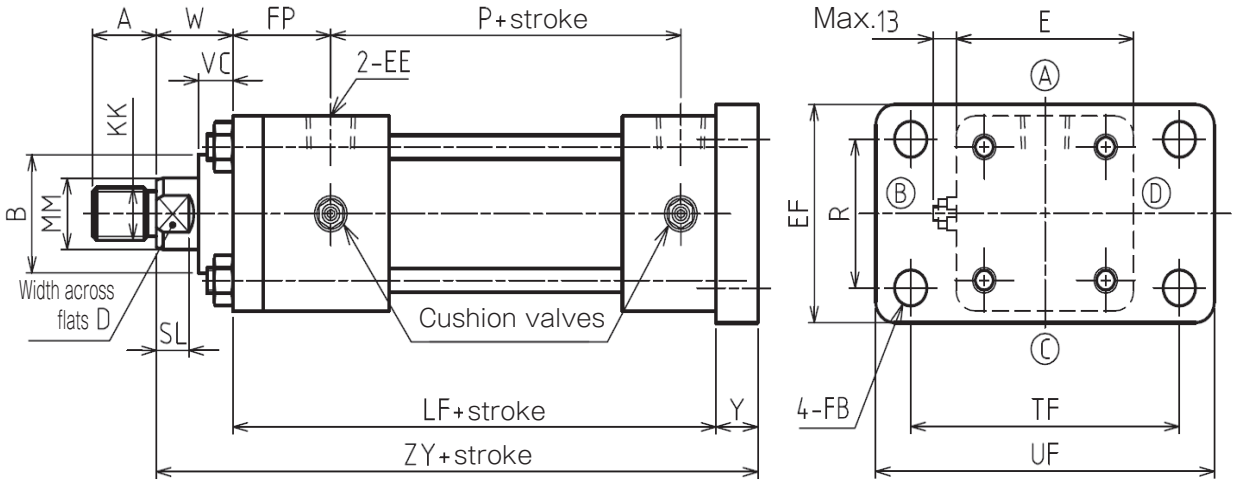
Symbol / Bore	LY		MM		P		R	SL		TF	UF	VC		WA	WW
	H3	H5	H3	H5	H3	H5		H3	H5			H3	H5		
φ40	158	150	φ22.4	φ22	98	94	50	11	11	98	122	9	11	28	φ50
φ50	177	169	φ28	φ28	106	102	60	12	14	118	145	9	9	25	φ63
φ63	193	180	φ35.5	φ36	113	106	73	16	16	140	175	9	6	29	φ71
φ80	218	196	φ45	φ45	129	110	90	20	20	175	210	9	9	35	φ80
φ100	235	203	φ56	φ56	139	116	115	20	23	215	260	9	6	35	φ100
φ125	271	243	φ71	φ70	159	130	145	26	27	270	330	9	4	41	φ125
φ140	280	253	φ80	φ80	164	138	160	30	31	280	335	9	6	45	φ125
φ160	309	276	φ90	φ90	186	156	180	33	33	315	375	9	6	50	φ140

Symbol / Bore	WY		X	Y		YP		Z(J,JN)	Z(JK)
	H3	H5		H3	H5	H3	H5		
φ40	43	44	45	15	16	30	27	3.5	2.5
φ50	45	45	45	20	20	33	29	3.5	2.5
φ63	53	53	55	24	24	38	32	4	3
φ80	59	62	55	24	27	45	39	4	3
φ100	66	66	55	31	31	45	38	4	3
φ125	78	80	65	37	39	50	49	5	3.5
φ140	86	86	65	41	41	50	49	5	3.5
φ160	96	96	65	46	46	53	49	5	4

210H-3/210H-5 Comparison Table

FB (cap flange)

Unit : mm



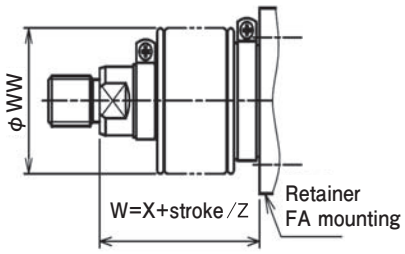
The basic mounting dimensions for the FB type of the 210H-3 and the FB type of the 210H-5 are the same.

- 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



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

Symbol / Bore	A	B	D	E		EE	EF	FB	FP		KK	LF	
				H3	H5				H3	H5		H3	H5
φ40	25	φ40	19	□70	□65	Rc3/8	73	φ11	43	38	M20x1.5	156	145
φ50	30	φ46	24	□85	□80	Rc1/2	88	φ14	48	42	M24x1.5	172	162
φ63	35	φ55	30	□100	□94	Rc1/2	106	φ18	56	47	M30x1.5	187	171
φ80	45	φ65	41	□125	□114	Rc3/4	130	φ22	69	57	M39x1.5	218	187
φ100	55	φ80	50	□160	□135	Rc3/4	165	φ26	71	58	M48x1.5	230	192
φ125	75	φ95	65	□190	□165	Rc1	205	φ33	83	73	M64x2	267	228
φ140	80	φ105	75	□215	□192	Rc1	218	φ33	86	81	M72x2	275	244
φ160	90	φ120	85	□240	□218	Rc1	243	φ36	94	86	M80x2	304	267

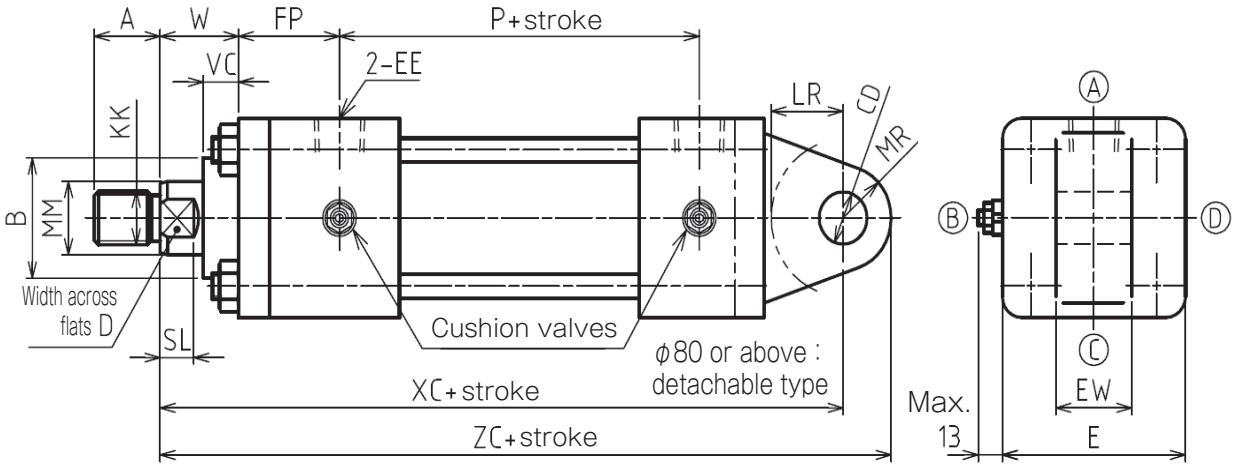
Symbol / Bore	MM		P		R	SL		TF	UF	VC		W	
	H3	H5	H3	H5		H3	H5			H3	H5	H3	H5
φ40	φ22.4	φ22	98	94	50	11	11	98	122	11	16	30	40
φ50	φ28	φ28	106	102	60	12	14	118	145	14	16	30	40
φ63	φ35.5	φ36	113	106	73	16	16	140	175	15	15	35	51
φ80	φ45	φ45	129	110	90	20	20	175	210	9	18	35	63
φ100	φ56	φ56	139	116	115	20	23	215	260	14	17	40	78
φ125	φ71	φ70	159	130	145	26	27	270	330	13	19	45	82
φ140	φ80	φ80	164	138	160	30	31	280	335	14	15	50	81
φ160	φ90	φ90	186	156	180	33	33	315	375	14	15	55	92

Symbol / Bore	WW	X		Y		Z(J,JN)	Z(JK)	ZY
		H3	H5	H3	H5			
φ40	φ50	47	57	15	16	3.5	2.5	201
φ50	φ63	50	60	20	20	3.5	2.5	222
φ63	φ71	61	77	24	24	4	3	246
φ80	φ80	55	83	24	27	4	3	277
φ100	φ100	60	98	31	31	4	3	301
φ125	φ125	69	106	37	39	5	3.5	349
φ140	φ125	70	101	41	41	5	3.5	366
φ160	φ140	70	107	46	46	5	4	405

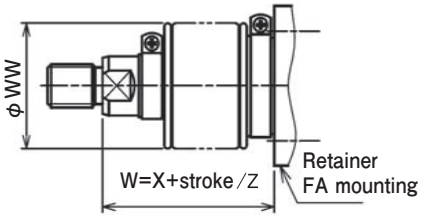
210H-3/210H-5 Comparison Table

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 φ80 and above have been changed to a detachable mounting accessory type for the 210-5.

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

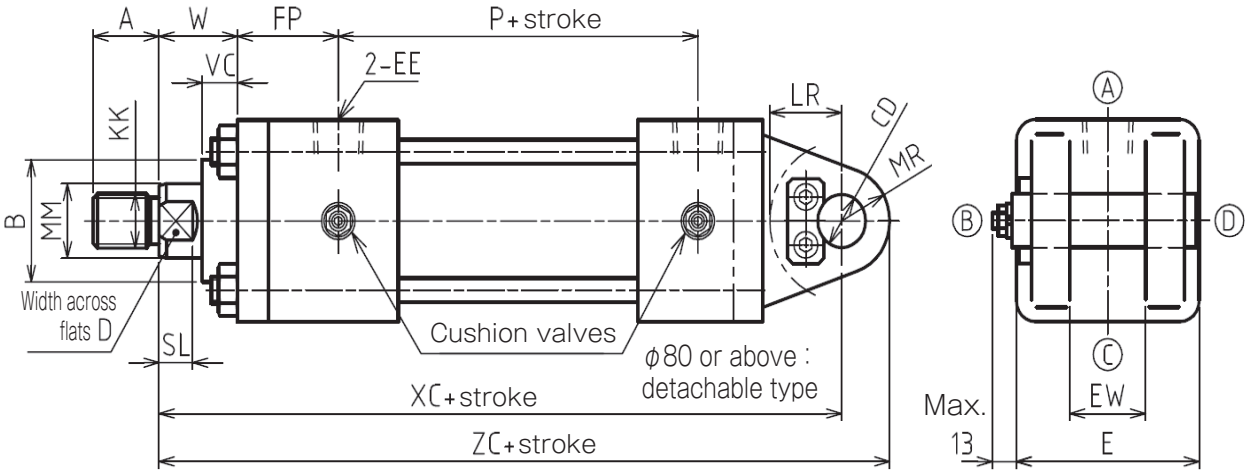
Symbol / Bore	A	B	CD	D	E		EE	EW	FP		KK	LR
					H3	H5			H3	H5		
φ40	25	φ40	φ20 H9	19	□70	□65	Rc3/8	32 -0.1 -0.4	43	38	M20x1.5	R25
φ50	30	φ46	φ25 H9	24	□85	□80	Rc1/2	36 -0.1 -0.4	48	42	M24x1.5	R32
φ63	35	φ55	φ31.5 H9	30	□100	□94	Rc1/2	40 -0.1 -0.4	56	47	M30x1.5	R40
φ80	45	φ65	φ40 H9	41	□125	□114	Rc3/4	50 -0.1 -0.4	69	57	M39x1.5	R50
φ100	55	φ80	φ50 H9	50	□160	□135	Rc3/4	63 -0.1 -0.4	71	58	M48x1.5	R63
φ125	75	φ95	φ63 H9	65	□190	□165	Rc1	80 -0.1 -0.6	83	73	M64x2	R79
φ140	80	φ105	φ71 H9	75	□215	□192	Rc1	80 -0.1 -0.6	86	81	M72x2	R89
φ160	90	φ120	φ80 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				
φ40	φ22.4	φ22	R25	98	94	11	11	11	16	30	45	φ50	47	62	221	3.5	2.5	246
φ50	φ28	φ28	R30	106	102	12	14	14	16	30	47	φ63	50	67	247	3.5	2.5	277
φ63	φ35.5	φ36	R35	113	106	16	16	15	15	35	59	φ71	61	85	277	4	3	312
φ80	φ45	φ45	R40	129	110	20	20	9	18	35	58	φ80	55	78	323	4	3	363
φ100	φ56	φ56	R50	139	116	20	23	14	17	40	61	φ100	60	81	350	4	3	400
φ125	φ71	φ70	R63	159	130	26	27	13	19	45	67	φ125	69	91	417	5	3.5	480
φ140	φ80	φ80	R71	164	138	30	31	14	15	50	57	φ125	70	77	440	5	3.5	511
φ160	φ90	φ90	R80	186	156	33	33	14	15	55	66	φ140	70	81	484	5	4	564

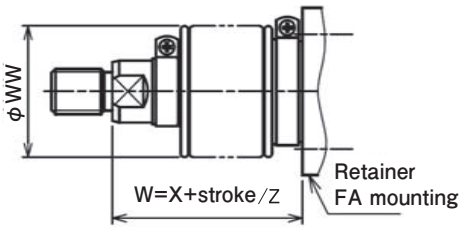
210H-3/210H-5 Comparison Table

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.

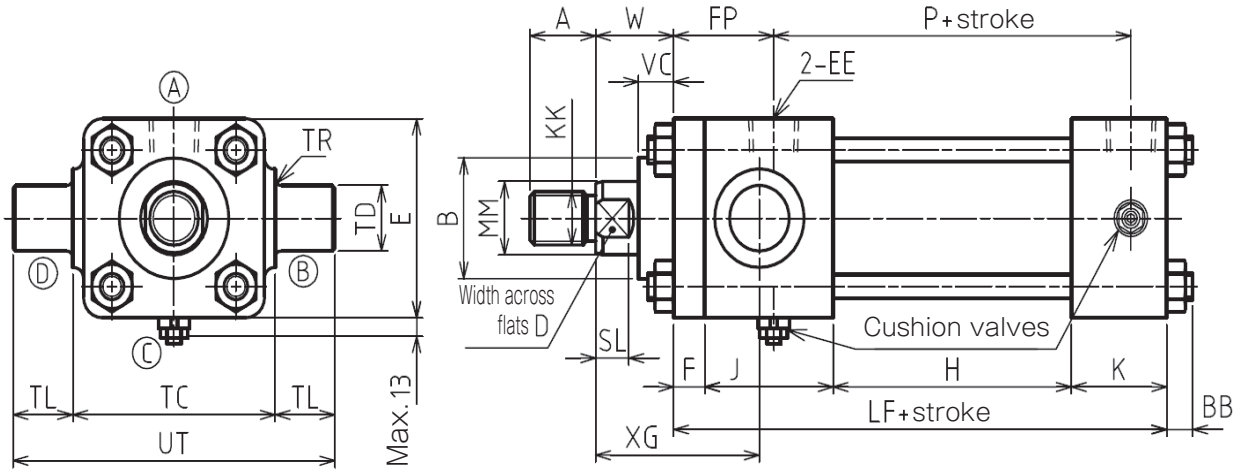
Symbol / Bore	A	B	CD	D	E		EE	EW	FP		KK	LR
					H3	H5			H3	H5		
φ40	25	φ40	φ20 H9 f8	19	□70	□65	Rc3/8	32 +0.4 +0.1	43	38	M20x1.5	R25
φ50	30	φ46	φ25 H9 f8	24	□85	□80	Rc1/2	36 +0.4 +0.1	48	42	M24x1.5	R32
φ63	35	φ55	φ31.5 H9 f8	30	□100	□94	Rc1/2	40 +0.4 +0.1	56	47	M30x1.5	R40
φ80	45	φ65	φ40 H9 f8	41	□125	□114	Rc3/4	50 +0.4 +0.1	69	57	M39x1.5	R50
φ100	55	φ80	φ50 H9 f8	50	□160	□135	Rc3/4	63 +0.4 +0.1	71	58	M48x1.5	R63
φ125	75	φ95	φ63 H9 f8	65	□190	□165	Rc1	80 +0.6 +0.1	83	73	M64x2	R79
φ140	80	φ105	φ71 H9 f8	75	□215	□192	Rc1	80 +0.6 +0.1	86	81	M72x2	R89
φ160	90	φ120	φ80 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				
φ40	φ22.4	φ22	R25	98	94	11	11	11	16	30	45	φ50	47	62	221	3.5	2.5	246
φ50	φ28	φ28	R30	106	102	12	14	14	16	30	47	φ63	50	67	247	3.5	2.5	277
φ63	φ35.5	φ36	R35	113	106	16	16	15	15	35	59	φ71	61	85	277	4	3	312
φ80	φ45	φ45	R40	129	110	20	20	9	18	35	58	φ80	55	78	323	4	3	363
φ100	φ56	φ56	R50	139	116	20	23	14	17	40	61	φ100	60	81	350	4	3	400
φ125	φ71	φ70	R63	159	130	26	27	13	19	45	67	φ125	69	91	417	5	3.5	480
φ140	φ80	φ80	R71	164	138	30	31	14	15	50	57	φ125	70	77	440	5	3.5	511
φ160	φ90	φ90	R80	186	156	33	33	14	15	55	66	φ140	70	81	484	5	4	564

210H-3/210H-5 Comparison Table

TA（rod trunnion）

Unit : mm



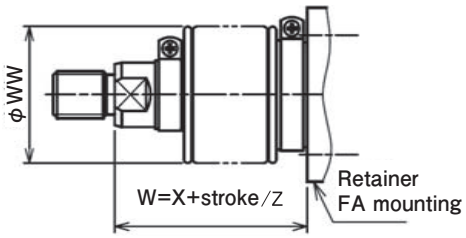
The basic mounting dimensions for the TA type of the 210H-3 and the TA type of the 210H-5 are the same.

- 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.

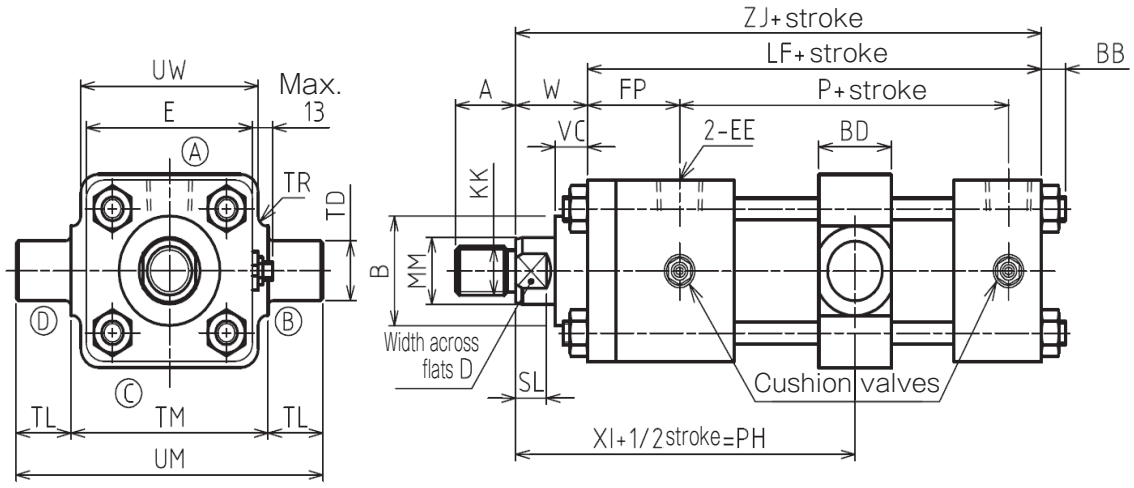
Symbol / Bore	A	B	BB	D	E		EE	F		FP		H		J	
					H3	H5		H3	H5	H3	H5	H3	H5	H3	H5
φ40	25	φ40	11	19	□70	□65	Rc3/8	13	11	43	38	64	48	47	50
φ50	30	φ46	13	24	□85	□80	Rc1/2	15	13	48	42	68	48	52	56
φ63	35	φ55	14	30	□100	□94	Rc1/2	18	15	56	47	75	52	57	59
φ80	45	φ65	16	41	□125	□114	Rc3/4	24	18	69	57	85	54	67	67
φ100	55	φ80	18	50	□160	□135	Rc3/4	26	20	71	64	95	60	67	72
φ125	75	φ95	21	65	□190	□165	Rc1	33	24	83	73	105	64	77	82
φ140	80	φ105	25	75	□215	□192	Rc1	36	32	86	86	110	72	90	87
φ160	90	φ120	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		
φ40	32	36	M20x1.5	156	145	φ22.4	φ22	98	94	11	11	73	0/-0.3
φ50	37	45	M24x1.5	172	162	φ28	φ28	106	102	12	14	88	0/-0.35
φ63	37	45	M30x1.5	187	171	φ35.5	φ36	113	106	16	16	106	0/-0.35
φ80	42	48	M39x1.5	218	187	φ45	φ45	129	110	20	20	128	0/-0.4
φ100	42	46	M48x1.5	230	198	φ56	φ56	139	116	20	23	170	0/-0.4
φ125	52	58	M64x2	267	228	φ71	φ70	159	130	26	27	205	0/-0.46
φ140	52	58	M72x2	288	249	φ80	φ80	164	138	30	31	225	0/-0.46
φ160	51	63	M80x2	324	292	φ90	φ90	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			
φ40	φ25 e9	25	R3	123	11	16	30	32	φ50	47	49	66	3.5	2.5
φ50	φ25 e9	25	R3	138	14	16	30	36	φ63	50	56	71	3.5	2.5
φ63	φ31.5 e9	31.5	R3	169	15	15	35	38	φ71	61	64	81	4	3
φ80	φ40 e9	40	R3	208	9	18	35	44	φ80	55	64	92	4	3
φ100	φ50 e9	50	R3	270	14	17	40	47	φ100	60	67	99	4	3
φ125	φ63 e9	63	R4	331	13	19	45	54	φ125	69	78	116	5	3.5
φ140	φ71 e9	71	R4	367	14	15	50	57	φ125	70	77	131	5	3.5
φ160	φ80 e9	80	R4	415	14	15	55	59	φ140	70	74	146	5	4

210H-3/210H-5 Comparison Table

TC (intermediate trunnion) Unit : mm



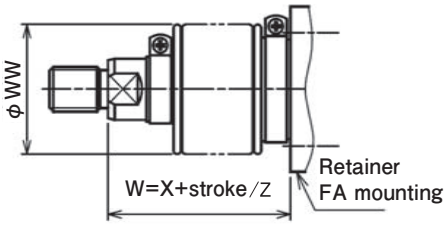
The basic mounting dimensions for the TC type of the 210H-3 and the TC type of the 210H-5 are the same.

- 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.

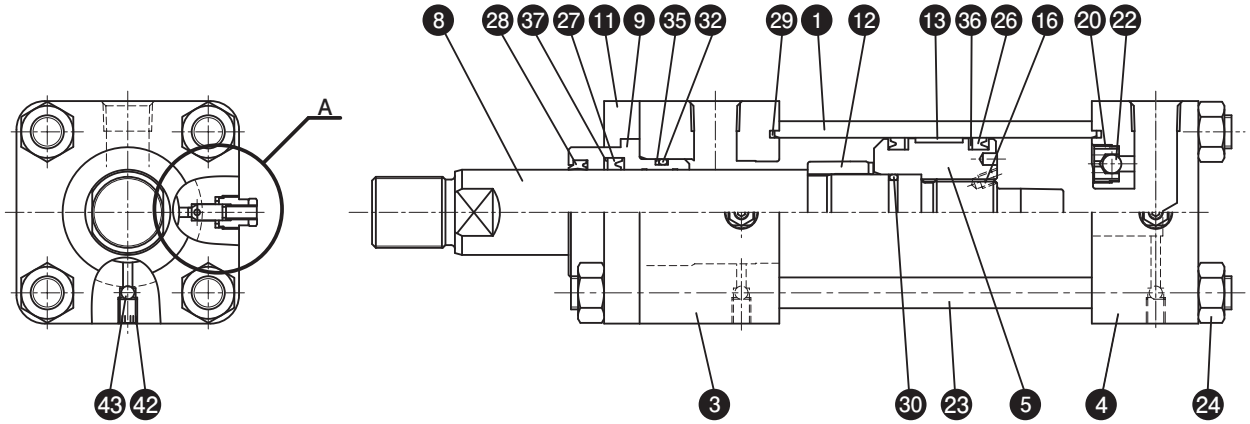
Symbol / Bore	A	B	BB		D	E		EE	FP		KK	LF	
			H3	H5		H3	H5		H3	H5		H3	H5
φ40	25	φ40	13	11	19	□70	□65	Rc3/8	43	38	M20x1.5	156	145
φ50	30	φ46	14	13	24	□85	□80	Rc1/2	48	42	M24x1.5	172	162
φ63	35	φ55	16	14	30	□100	□94	Rc1/2	56	47	M30x1.5	187	171
φ80	45	φ65	18	16	41	□125	□114	Rc3/4	69	57	M39x1.5	218	187
φ100	55	φ80	21	18	50	□160	□135	Rc3/4	71	58	M48x1.5	230	192
φ125	75	φ95	25	21	65	□190	□165	Rc1	83	73	M64x2	267	228
φ140	80	φ105	27	25	75	□215	□192	Rc1	86	81	M72x2	275	244
φ160	90	φ120	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				
φ40	φ22.4	φ22	98	94	107	107.5	11	11	φ25 e9	25	73 0/-0.3	R2.5
φ50	φ28	φ28	106	102	114	118.5	12	14	φ25 e9	25	88 0/-0.35	R2.5
φ63	φ35.5	φ36	113	106	132	131.5	16	16	φ31.5 e9	31.5	106 0/-0.35	R2.5
φ80	φ45	φ45	129	110	153	152.5	20	20	φ40 e9	40	128 0/-0.4	R3
φ100	φ56	φ56	139	116	165	164.5	20	23	φ50 e9	50	170 0/-0.4	R3
φ125	φ71	φ70	159	130	219	205	26	27	φ63 e9	63	205 0/-0.46	R4
φ140	φ80	φ80	164	138	232	218	30	31	φ71 e9	71	225 0/-0.46	R4
φ160	φ90	φ90	186	156	253	233	33	33	φ80 e9	80	255 0/-0.52	R4

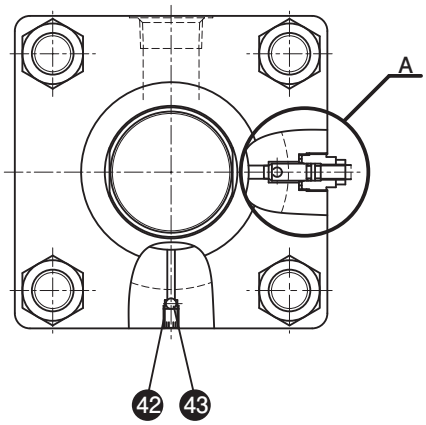
Symbol / Bore	UM	UW		VC		W		WW	X		XI	Z(J,JN)	Z(JK)	ZJ		ZZ	
		H3	H5	H3	H5	H3	H5		H3	H5				H3	H5	H3	H5
φ40	123	□70	□65	11	16	30	30	φ50	47	47	122	3.5	2.5	186	177	-	-
φ50	138	□85	□80	14	16	30	33	φ63	50	53	131	3.5	2.5	202	198	-	-
φ63	169	□100	□94	15	15	35	36	φ71	61	62	148	4	3	222	209	-	-
φ80	208	□125	□114	9	18	35	41	φ80	55	61	169	4	3	253	231	-	-
φ100	270	□160	□146	14	17	40	47	φ100	60	67	181	4	3	270	239	-	4
φ125	331	□195	□185	13	19	45	60	φ125	69	84	208	5	3.5	312	282	-	15
φ140	367	□215	□210	14	15	50	60	φ125	70	80	218	5	3.5	325	301	-	17
φ160	415	□245	□230	14	15	55	60	φ140	70	75	242	5	4	359	326	-	19

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

●Bore φ40 to φ100

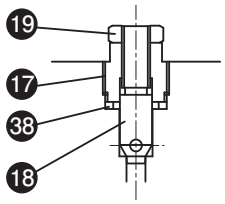


●Bore φ125 to φ160

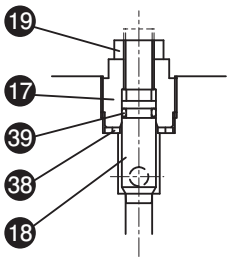


Enlarged drawing of part A (cushion valve)

●Bore φ40 to φ100



●Bore φ125 to φ160



Parts List

No.	Name	Material	Qty.
❶	Cylinder tube	Carbon steel for machine structural use	1
❸	Rod cover	Carbon steel for machine structural use (ϕ40 to ϕ80) Rolled steel for general structure (ϕ100 to ϕ160)	1
❹	Cap cover	Carbon steel for machine structural use (ϕ40 to ϕ80) Rolled steel for general structure (ϕ100 to ϕ160)	1
❺	Piston	Spheroidal graphite cast iron	1
❽	Piston rod	Carbon steel for machine structural use	1
❾	Bush	Copper alloy	1
⓫	Retainer	Carbon steel for machine structural use (ϕ40 to ϕ80) Rolled steel for general structure (ϕ100 to ϕ160)	1
⓬	Cushion ring	Spheroidal graphite cast iron	1
⓭	Wear ring	Synthetic resin	1
⓰	Set screw	Chrome molybdenum steel	1
⓱	Cushion plug	Carbon steel for machine structural use	2
⓲	Cushion valve	Chrome molybdenum steel	2
⓳	Cushion lock nut	Carbon steel for machine structural use	2
⓴	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
㊷	Set screw	Chrome molybdenum steel	2
㊸	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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