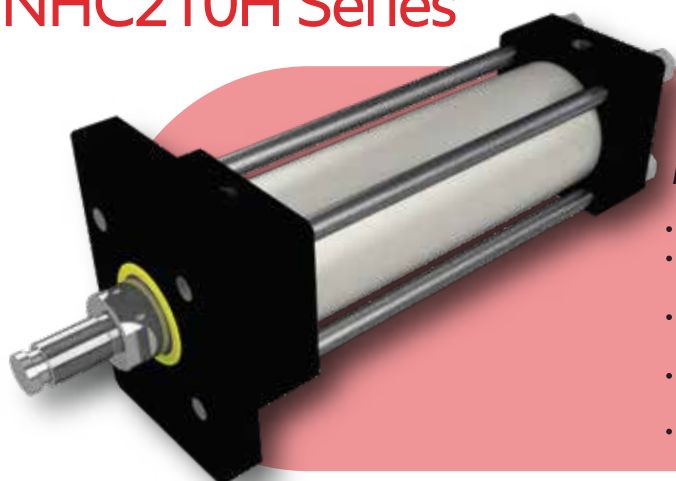
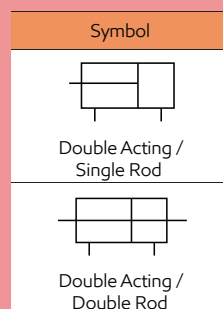


NHC210H Series



Features

- High-pressure tie rod type cylinder.
- Double acting hydraulic cylinder for 2100kgf/cm² with bore from Ø40 to Ø160.
- High performance cushion to reduce shock when stopping
- Various mounting styles (SD, LA, FA, FB, CA, CB, TC, TA)
- Custom made solution.



How to Order

NHC210H - FA 80 B- N 100 A B -

①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬

① Series

NHC210H	Single rod	210kgf/cm ²
NHC210H W	Double rod	
NHC210HL	Auto switch (Single rod)	
NHC210HL W	Auto switch (Double rod)	

② Seal material

Nil	Nitrile Urethane(Standard)
1	Nitrile rubber
2	Fluoric rubber

③ Mounting style

SD	Standard	CA	Single clevis
LA	Axial angle of foot	CB	Double clevis
FA	Rod side flange	TC	Center trunnion
FB	Head side flange	TA	Rod side trunnion

④ Bore size

40	Ø40
50	Ø50
63	Ø63
80	Ø80
100	Ø100
125	Ø125
140	Ø140
150	Ø150
160	Ø160

⑤ Cushion

N	Without cushion
B	With cushions on both ends
R	With cushion on the rod side
H	With cushion on the head side

⑥ Cylinder stroke

Bore size	Stroke
Ø40, Ø50	1200
Ø63, Ø80	1600
Ø100~Ø160	2000

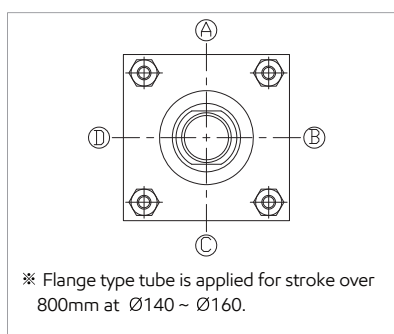
- * Check buckling, as it varies depending on the mounting style.
- * Contact us for longer stroke.
- * Mounting style for stroke over 801mm at tube size Ø140~Ø160 is flange mounting.

⑦ Port position

A	Standard
B,C,D	Refer to figure below

⑧ Cushion valve position

B	Standard
A,C,D	Refer to figure below



⑨ Bellows

	Material	Max. ambient temperature
Nil	Without bellows	
J	Nylon Tarpaulin	60 °C
K	Neoprene Cloth	110 °C

⑩ Rod end attachment

Nil	Rod end nut (Standard)
I	Single knuckle joint
Y	Double knuckle joint

⑪ Auto switch

Reed A/S	Model	Solid state A/S	Model
A54	D-A54K	F59	D-F59K
A56	D-A56K	F5P	D-F5PK
A64	D-A64K	J59	D-J59K
A90(V)	D-A90(V)K	J51	D-J51K
A93(V)	D-A93(V)K	F9N	D-F9N(V)K
A96(V)	D-A96(V)K	F9P	D-F9P(V)K
		F9B	D-F9B(V)K

- * Only for auto switch attached type.
- * For more information, refer to Auto Switch Catalogue.

⑫ Number of auto switches

Nil	2pcs
1	1pc
N	Npcs (N:3,4,5...)

- * Only for auto switch attached type.

⑬ Special order

Nil	Standard
M	Custom-made dimensions and specifications

Specifications

Type	Standard	Auto switch attached
	KP210H	KP210HL
Bore size	Ø40, Ø50, Ø63, Ø80, Ø100, Ø125, Ø140, Ø160	
Operating pressure	214.3kgf/cm ² (21.0MPa)	
Max. operating pressure	Head side 250kgf/cm ² (24.5MPa) Rod side 270kgf/cm ² (26.5MPa)	
Proof pressure	321.4kgf/cm ² (31.5MPa)	
Min. operating pressure	Head side ≤4.59kgf/cm ² (0.45MPa), Rod side ≤3.06kgf/cm ² (0.3MPa)	
Operating piston speed	8~300mm/sec	
Ambient & fluid temperature	-10 ~ 80 °C	-10 ~ 70 °C
Cushion	Metal fitting type	
Working oil	Petroleum-based fluid	
Tolerance of thread	KS class 2	
Tolerance of stroke	0~100mm $\begin{matrix} +0.8 \\ 0 \end{matrix}$, 101~250mm $\begin{matrix} +1.0 \\ 0 \end{matrix}$, 251~630mm $\begin{matrix} +1.25 \\ 0 \end{matrix}$ 631~1000mm $\begin{matrix} +1.4 \\ 0 \end{matrix}$, 1001~1600mm $\begin{matrix} +1.6 \\ 0 \end{matrix}$, 1601~2000mm $\begin{matrix} +1.8 \\ 0 \end{matrix}$	
Tube material	Carbon steel for machine structural use	Stainless steel
Mounting style	SD, LA, FA, FB, CA, CB, TA, TC	

Cushion Length

Unit:mm

Bore size	Ø40 ~ Ø63	Ø80 ~ Ø100
Cushion length	22	25
Bore size	Ø125 ~ Ø150	Ø160
Cushion length	30	35

- * Operating pressure: Max. allowable setting pressure for a relief valve while cylinder is operating.
- * Max. operating pressure: Maximum allowable pressure generated in a cylinder (surge pressure, etc.).
- * Proof pressure: Test pressure for a cylinder can withstand without unreliable performance when returning to operating pressure.
- * Min. operating pressure: Minimum pressure for cylinder installed horizontally and operating without load.
- * A longer thread length (A) is required when lock nut is applied on the end of the piston rod.

Mounting Style

Bore size	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø140	Ø150	Ø160
Mounting	NHC210H LA(Hdy.)40	NHC210H LA(Hdy.)50	NHC210H LA(Hdy.)63	NHC210H LA(Hdy.)80	NHC210H LA(Hdy.)100	NHC210H LA(Hdy.)125	NHC210H LA(Hdy.)140	NHC210H LA(Hdy.)150	NHC210H LA(Hdy.)160
Axial angle of foot	NHC210H LA(Hdy.)40	NHC210H LA(Hdy.)50	NHC210H LA(Hdy.)63	NHC210H LA(Hdy.)80	NHC210H LA(Hdy.)100	NHC210H LA(Hdy.)125	NHC210H LA(Hdy.)140	NHC210H LA(Hdy.)150	NHC210H LA(Hdy.)160
Flange	NHC210H FA/FB(Hdy.)40	NHC210H FA/FB(Hdy.)50	NHC210H FA/FB(Hdy.)63	NHC210H FA/FB(Hdy.)80	NHC210H FA/FB(Hdy.)100	NHC210H FA/FB(Hdy.)125	NHC210H FA/FB(Hdy.)140	NHC210H FA/FB(Hdy.)150	NHC210H FA/FB(Hdy.)160
Single clevis	NHC210H CA(Hdy.)40	NHC210H CA(Hdy.)50	NHC210H CA(Hdy.)63	NHC210H CA(Hdy.)80	NHC210H CA(Hdy.)100	NHC210H CA(Hdy.)125	NHC210H CA(Hdy.)140	NHC210H CA(Hdy.)150	NHC210H CA(Hdy.)160
Double clevis	NHC210H CB(Hdy.)40	NHC210H CB(Hdy.)50	NHC210H CB(Hdy.)63	NHC210H CB(Hdy.)80	NHC210H CB(Hdy.)100	NHC210H CB(Hdy.)125	NHC210H CB(Hdy.)140	NHC210H CB(Hdy.)150	NHC210H CB(Hdy.)160
Trunnion	NHC210H TA/TC(Hdy.)40	NHC210H TA/TC(Hdy.)50	NHC210H TA/TC(Hdy.)63	NHC210H TA/TC(Hdy.)80	NHC210H TA/TC(Hdy.)100	NHC210H TA/TC(Hdy.)125	NHC210H TA/TC(Hdy.)140	NHC210H TA/TC(Hdy.)150	NHC210H TA/TC(Hdy.)160
Pin of double clevis	NHC210H CB PIN(Hdy.)40	NHC210H CB PIN(Hdy.)50	NHC210H CB PIN(Hdy.)63	NHC210H CB PIN(Hdy.)80	NHC210H CB PIN(Hdy.)100	NHC210H CB PIN(Hdy.)125	NHC210H CB PIN(Hdy.)140	NHC210H CB PIN(Hdy.)150	NHC210H CB PIN(Hdy.)160

Accessory

Bore size	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø140	Ø150	Ø160
Single knuckle joint	NHC210H I(Hdy.)40	NHC210H I(Hdy.)50	NHC210H I(Hdy.)63	NHC210H I(Hdy.)80	NHC210H I(Hdy.)100	NHC210H I(Hdy.)125	NHC210H I(Hdy.)140	NHC210H I(Hdy.)150	NHC210H I(Hdy.)160
Double knuckle joint	NHC210H Y(Hdy.)40	NHC210H Y(Hdy.)50	NHC210H Y(Hdy.)63	NHC210H Y(Hdy.)80	NHC210H Y(Hdy.)100	NHC210H Y(Hdy.)125	NHC210H Y(Hdy.)140	NHC210H Y(Hdy.)150	NHC210H Y(Hdy.)160
Pin of double knuckle joint	NHC210H Y PIN(Hdy.)40	NHC210H Y PIN(Hdy.)50	NHC210H Y PIN(Hdy.)63	NHC210H Y PIN(Hdy.)80	NHC210H Y PIN(Hdy.)100	NHC210H Y PIN(Hdy.)125	NHC210H Y PIN(Hdy.)140	NHC210H Y PIN(Hdy.)150	NHC210H Y PIN(Hdy.)160
Rod end nut	NHC210H RN(Hdy.)40	NHC210H RN(Hdy.)50	NHC210H RN(Hdy.)63	NHC210H RN(Hdy.)80	NHC210H RN(Hdy.)100	NHC210H RN(Hdy.)125	NHC210H RN(Hdy.)140	NHC210H RN(Hdy.)150	NHC210H RN(Hdy.)160

Mass

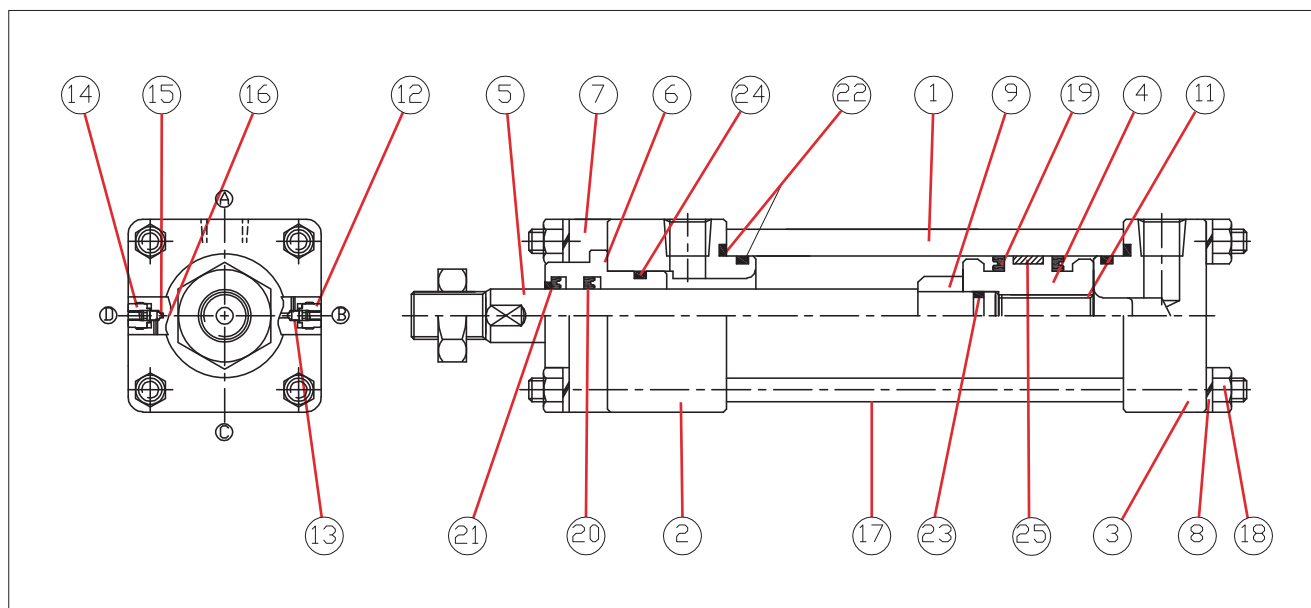
Unit : kg

Bore size	Basis mass (SD)	Mounting mass							Accessory			Additional mass per each 1mm of stroke
		LA	FA	FB	CA	CB	TA	TC	Single knuckle Joint	Double knuckle Joint	Rod end nut	
Ø40	4.44	0.964	0.7	1.0	0.7	0.7	0.4	0.969	1.0	1.2	0.03	0.0122
Ø50	8.06	1.11	1.2	1.9	1.3	1.3	0.4	1.49	1.4	2.2	0.05	0.0202
Ø63	13.2	1.27	1.9	3.7	2.0	2.0	0.6	2.03	2.2	3.7	0.11	0.0293
Ø80	23.6	1.91	2.0	4.7	3.4	3.4	1.0	2.91	4.2	7.7	0.24	0.0451
Ø100	39.6	5.11	4.4	9.7	6.4	6.4	2.1	7.61	8.0	14.6	0.52	0.0738
Ø125	68.5	8.5	10.0	18.6	13.2	13.2	4.0	13.0	31.1	20.5	1.10	0.121
Ø140	92.4	5.2	8.6	21.8	16.5	16.5	5.2	15.1	36.7	24.4	1.44	0.164
Ø160	126	4.7	13.7	30.0	25.6	25.6	7.1	23.7	58.8	41.1	1.93	0.192

Calculation:

Ex.) NHC210H-LA100B-N500 A B
Basis mass: 39.6
Additional mass: 0.0738
Stroke: 500mm / LA type: 5.11
39.6+(0.0738 X 500) + 5.11 = 81.61kg

Structure



Part List

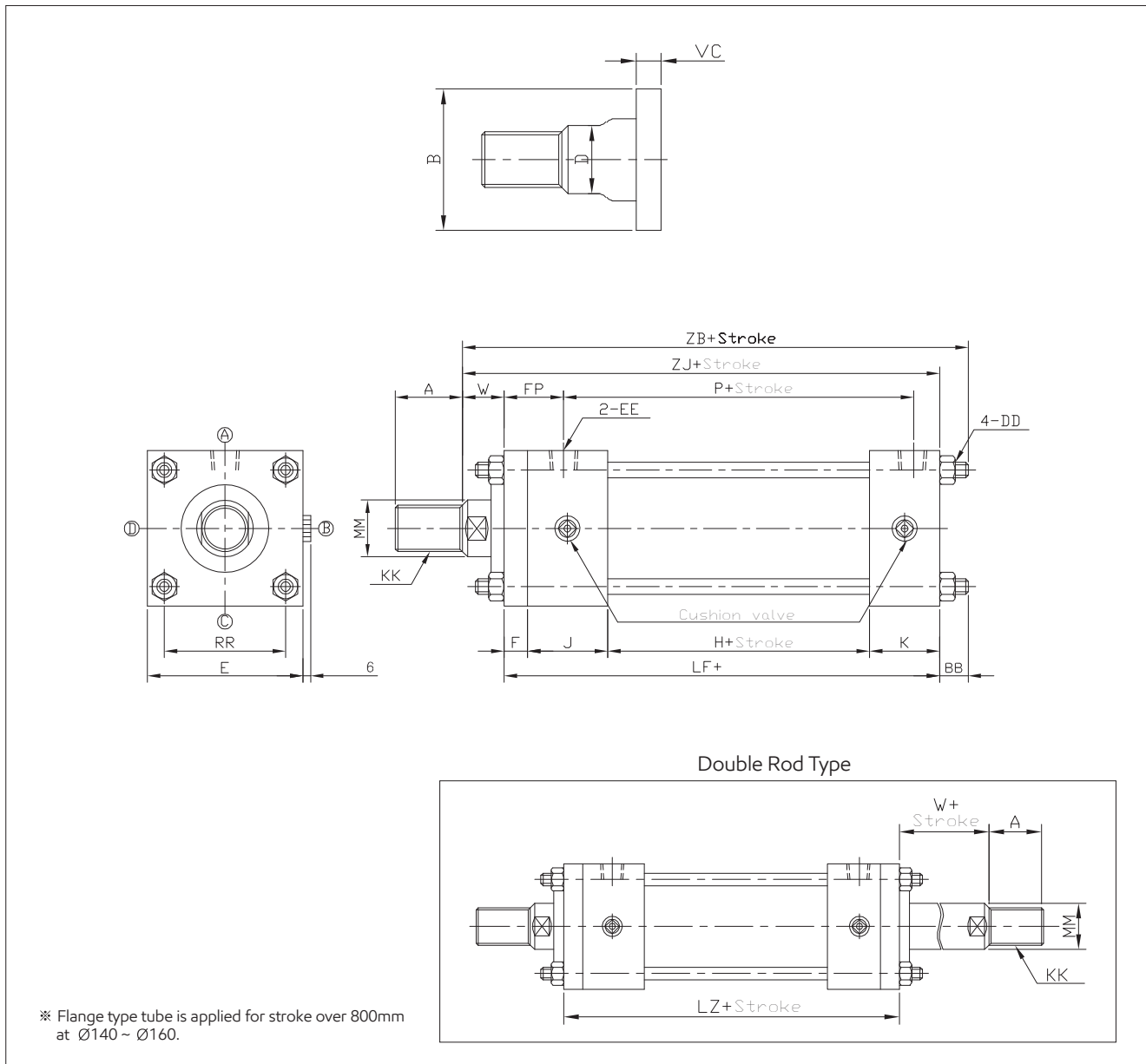
Part no.	Parts	Material	Quantity
1	Cylinder Tube	STKM13C	1
2	Rod Cover	SS400	1
3	Head Cover	SS400	1
4	Piston	S45C	1
5	Piston Rod	S45C	1
6	Bush	SM45C	1
7	Retainer (Bush Cover)	SS400	1
8	Spring Washer	SS400	8
9	Cushion Ring	S45C	1

Part no.	Parts	Material	Quantity
11	Set Screw	SCM435	1
12	Cushion Body	SUM24L	2
13	Cushion Needle	SUM24L	2
14	Check Body	SUM24L	2
15	Coil Spring	SUP	2
16	Steel Ball	SUJ2	2
17	Tie Rod	SM45C	4
18	Hex Nut (2 Kinds)	SM45C	8

Packing List

Part no.	19	20		21	22		23	24
Part	Piston Packing	Rod Packing	B.U.R	Dust Seal	T/O-Ring	B.U.R	Rod O-Ring	Bush O-Ring
Quantity	2	1	1	1	2	2	1	1
Material	Urethane	Urethane	PTFE	Urethane	NBR	PTFE	NBR	NBR
Bore size	Type	Type	Type	Type	Type	Type	Type	Type
Ø40	40x30x16	22x30x5	22x30x2	22x30x4.5x6	G40	-	P-14	G30
Ø50	50x34x18.4	28x35.5x5	28x35.5x3	28x36x4.5/6	G45	For G45	P-18	For P-18
Ø63	63x47x18.4	35x45x6	35x45x3	35x43x5/6.5	G58	For G58	P-22	For P-22
Ø80	80x60x22.4	45x55x6	45x55x3	45x53x5x6.5	G75	For G75	G25	G55
Ø100	100x75x22.4	55x65x6	55x65x3	55x63x5x6.5	G95	For G95	G40	G65
Ø125	125x100x25.4	70x80x6	70x80x3	70x80x6/8	G120	For G120	G50	G85
Ø140	140x115x25.4x9.5	80x90x6	80x90x3	80x90x6/8	G135	For G135	G60	G95
Ø160	160x135x25.4	90x105x9	90x105x3	90x100x6/8	G150	For G150	G65	G115

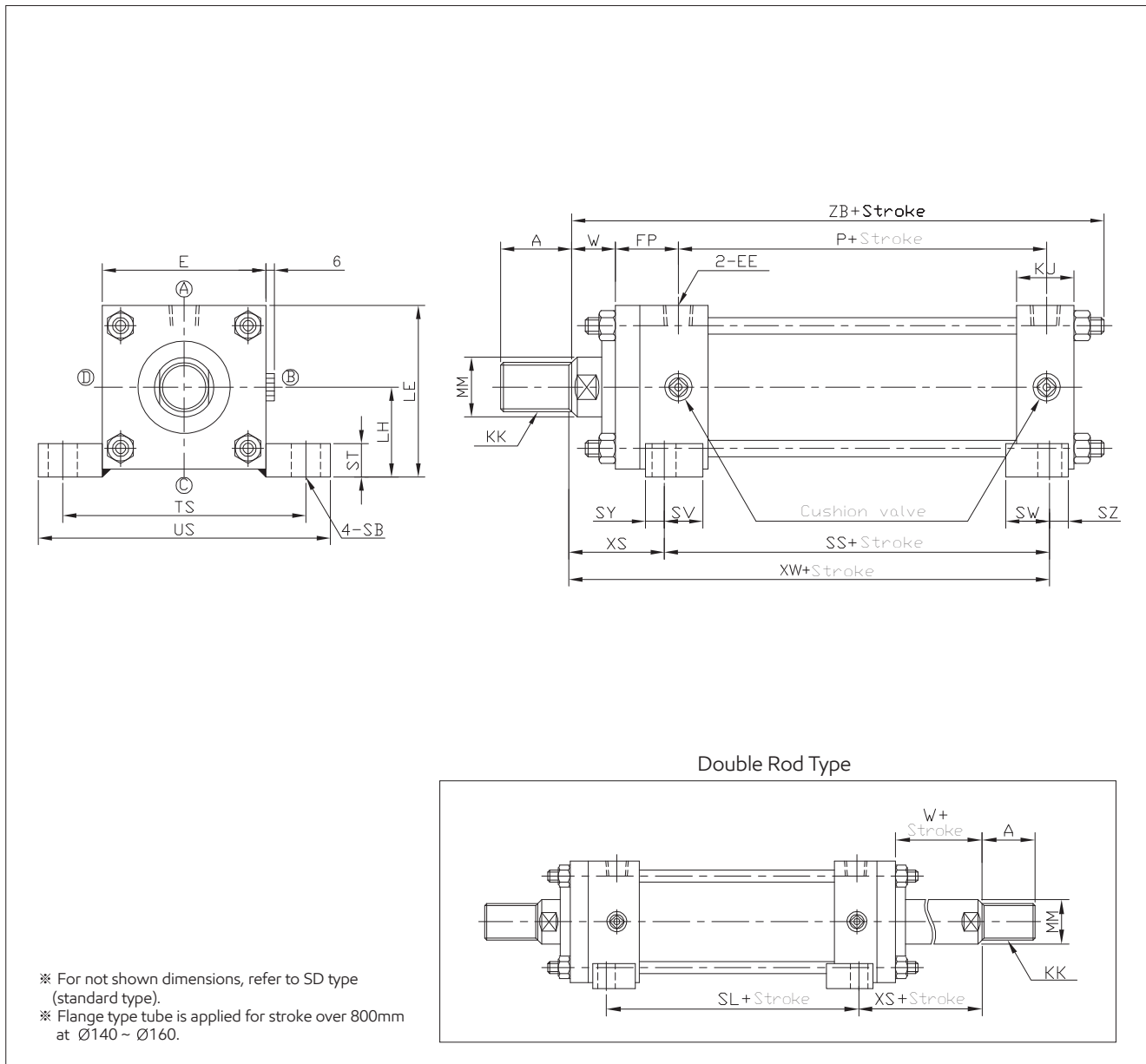
Dimensions-Standard (SD)



Unit : mm

Bore size	A	B	BB	D	DD	E	EE	F	FP	H	J	K	KK	LF	LZ	MM	P	RR	VC	W	ZB	ZJ
Ø40	25	Ø40	17	19	M12×1.5	□70	Rc(PT)3/8	13	43	64	47	32	M20×1.5	156	183	Ø22	98	□50	11	30	203	186
Ø50	30	Ø46	18	25	M14×1.5	□85	Rc(PT)1/2	15	48	68	52	37	M24×1.5	172	202	Ø28	106	□62	14	30	220	202
Ø63	35	Ø55	21	30	M16×1.5	□100	Rc(PT)1/2	18	56	75	57	37	M30×1.5	187	225	Ø35	113	□74	15	35	243	222
Ø80	45	Ø65	23	41	M18×1.5	□125	Rc(PT)3/4	24	69	85	67	42	M39×1.5	218	267	Ø45	129	□92	9	35	276	253
Ø100	55	Ø80	29	50	M22×1.5	□160	Rc(PT)3/4	26	71	95	67	42	M48×1.5	230	281	Ø55	139	□120	14	40	299	270
Ø125	75	Ø95	35	65	M27×1.5	□190	Rc(PT)1	33	83	105	77	52	M64×2	267	325	Ø71	159	□145	13	45	347	312
Ø140	80	Ø105	39	75	M30×1.5	□215	Rc(PT)1	36	86	110	77	52	M72×2	275	336	Ø80	164	□165	14	50	364	325
Ø160	90	Ø120	40	85	M33×1.5	□240	Rc(PT)1	41	94	124	80	59	M80×2	304	366	Ø90	186	□185	14	55	399	359

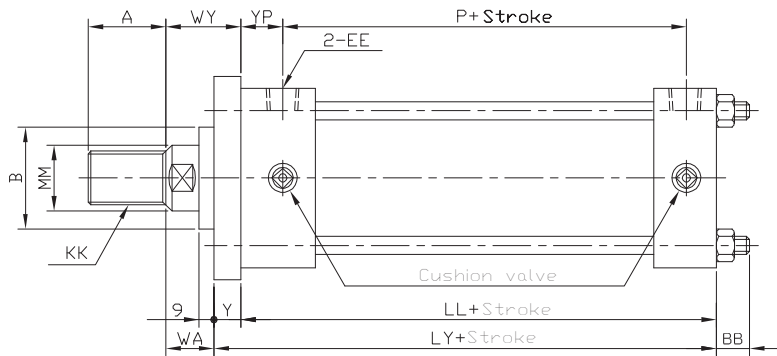
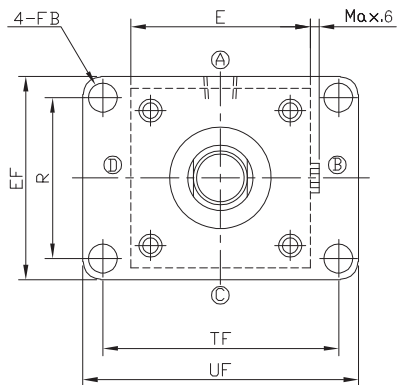
Dimensions-Axial Angle of Foot (LA)



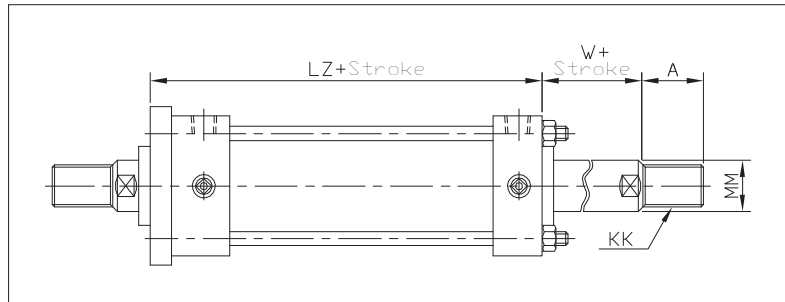
Unit : mm

Bore size	A	E	EE	FP	KK	KJ	LE	LH	MM	P	SB	SL	SS	ST	SV	SW	SY	SZ	TS	US	W	XS	XW	ZB
Ø40	25	□70	Rc(PT)3/8	43	M20×1.5	32	77	42±0.15	Ø22	98	Ø11	125	111	15	31	16	16	16	98	122	30	59	170	203
Ø50	30	□85	Rc(PT)1/2	48	M24×1.5	37	97.5	55±0.15	Ø28	106	Ø14	136	120	20	34	18	18	19	118	145	30	63	183	220
Ø63	35	□100	Rc(PT)1/2	56	M30×1.5	37	113	63±0.15	Ø35	113	Ø18	153	132	25	39	18	18	19	140	175	35	71	203	243
Ø80	45	□125	Rc(PT)3/4	69	M39×1.5	42	137.5	75±0.25	Ø45	129	Ø22	177	152	30	46	21	21	21	175	210	35	80	232	276
Ø100	55	□160	Rc(PT)3/4	71	M48×1.5	42	165	85±0.25	Ø55	139	Ø26	183	162	35	44	23	23	24	215	260	40	89	251	299
Ø125	75	□190	Rc(PT)1	83	M64×2	52	200	105±0.25	Ø71	159	Ø33	203	182	45	49	28	28	29	270	330	45	106	288	347
Ø140	80	□215	Rc(PT)1	86	M72×2	52	219.5	112±0.25	Ø80	164	Ø33	208	187	45	49	28	28	29	280	335	50	114	301	364
Ø160	90	□240	Rc(PT)1	94	M80×2	59	245	125±0.25	Ø90	186	Ø36	222	212	50	49	31	31	31	315	375	55	127	339	399

Dimensions-Rod Side Flange (FA)



Double Rod Type

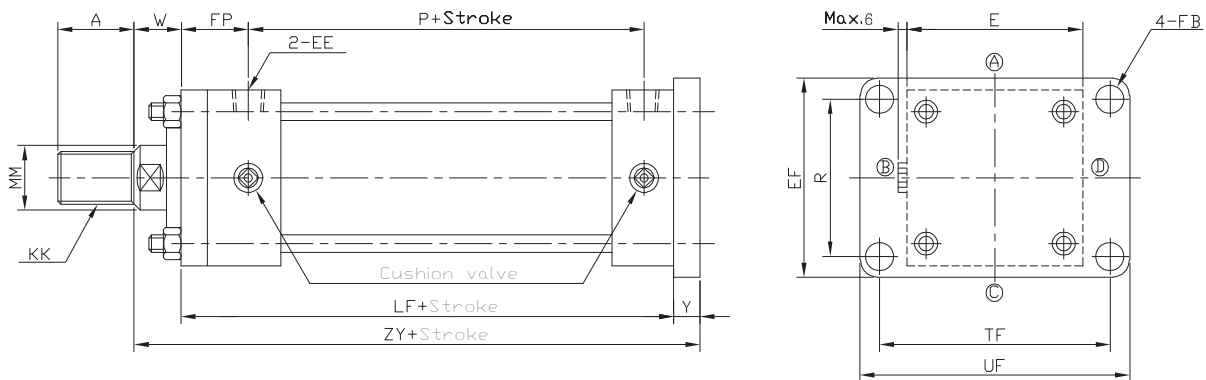


※ For not shown dimensions, refer to SD type (standard type).
※ Flange type tube is applied for stroke over 800mm at Ø140 ~ Ø160.

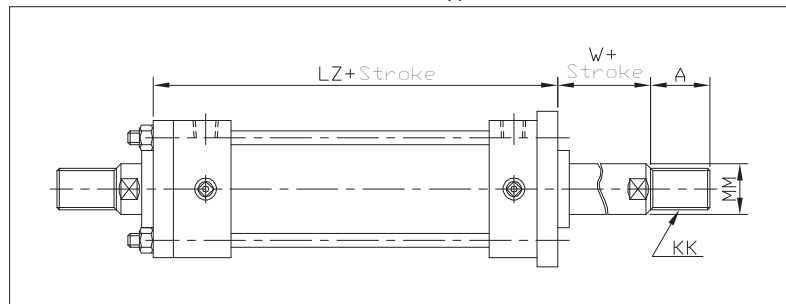
Unit : mm

Bore size	A	B	BB	E	EE	EF	FB	KK	LL	LY	LZ	MM	P	R	TF	UF	W	WA	WY	Y	YP
Ø40	25	Ø40	17	□70	Rc(PT)3/8	73	Ø11	M20×1.5	143	158	185	Ø22	98	50	98	122	30	28	43	15	30
Ø50	30	Ø46	18	□85	Rc(PT)1/2	88	Ø14	M24×1.5	157	177	207	Ø28	106	60	118	145	30	25	45	20	33
Ø63	35	Ø55	21	□100	Rc(PT)1/2	106	Ø18	M30×1.5	169	193	231	Ø35	113	73	140	175	35	29	53	24	38
Ø80	45	Ø65	23	□125	Rc(PT)3/4	130	Ø22	M39×1.5	194	218	267	Ø45	129	90	175	210	35	35	59	24	45
Ø100	55	Ø80	29	□160	Rc(PT)3/4	165	Ø26	M48×1.5	204	235	286	Ø55	139	115	215	260	40	35	66	31	45
Ø125	75	Ø95	35	□190	Rc(PT)1	205	Ø33	M64×2	234	271	329	Ø71	159	145	270	330	45	41	78	37	50
Ø140	80	Ø105	39	□215	Rc(PT)1	218	Ø33	M72×2	239	280	341	Ø80	164	160	280	335	50	45	86	41	50
Ø160	90	Ø120	40	□240	Rc(PT)1	243	Ø36	M80×2	263	309	371	Ø90	186	180	315	375	55	50	96	46	53

Dimensions-Head Side Flange (FB)



Double Rod Type

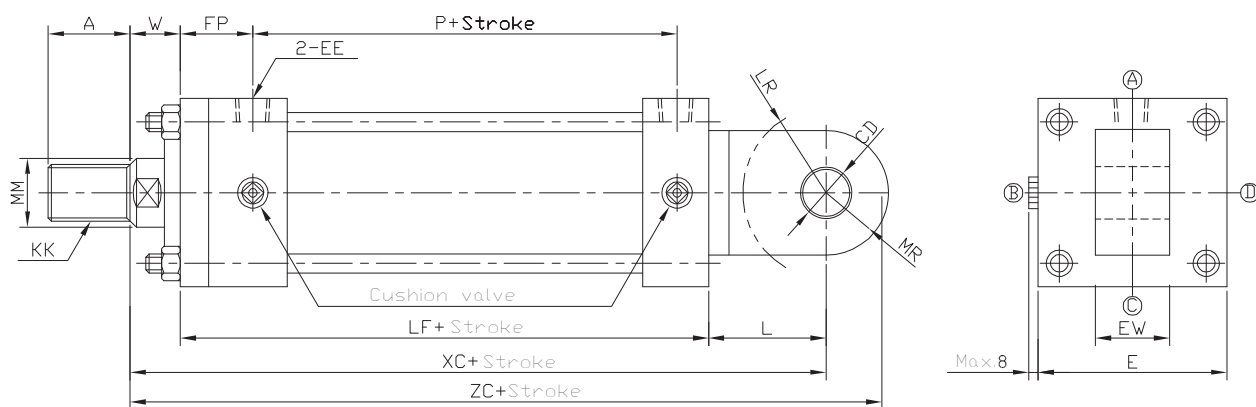


※ For not shown dimensions, refer to SD type (standard type).
※ Flange type tube is applied for stroke over 800mm at Ø140 ~ Ø160.

Unit : mm

Bore size	A	E	EE	EF	FB	FP	KK	LF	LZ	MM	P	R	TF	UF	W	Y	ZY
Ø40	25	□70	Rc(PT)3/8	73	Ø11	43	M20×1.5	156	185	Ø22	98	50	98	122	30	15	201
Ø50	30	□85	Rc(PT)1/2	88	Ø14	48	M24×1.5	172	207	Ø28	106	60	118	145	30	20	222
Ø63	35	□100	Rc(PT)1/2	106	Ø18	56	M30×1.5	187	231	Ø35	113	73	140	175	35	24	246
Ø80	45	□125	Rc(PT)3/4	130	Ø22	69	M39×1.5	218	267	Ø45	129	90	175	210	35	24	277
Ø100	55	□160	Rc(PT)3/4	165	Ø26	71	M48×1.5	230	286	Ø55	139	115	215	260	40	31	301
Ø125	75	□190	Rc(PT)1	205	Ø33	83	M64×2	267	329	Ø71	159	145	270	330	45	37	349
Ø140	80	□215	Rc(PT)1	218	Ø33	86	M72×2	275	341	Ø80	164	160	280	335	50	41	366
Ø160	90	□240	Rc(PT)1	243	Ø36	94	M80×2	304	371	Ø90	186	180	315	375	55	46	405

Dimensions-Single Clevis (CA)

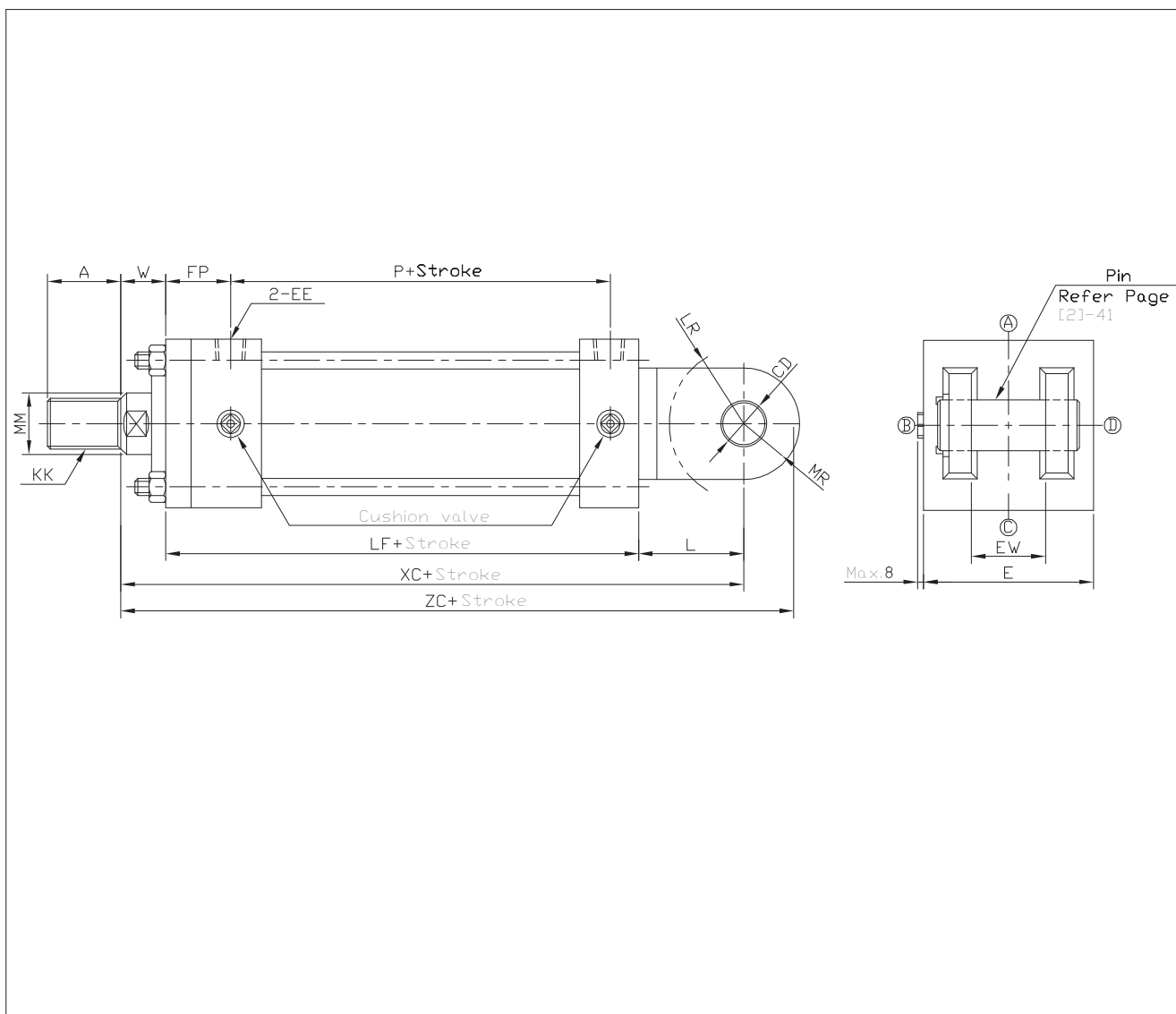


※ For not shown dimensions, refer to SD type (standard type).
 ※ Flange type tube is applied for stroke over 800mm at Ø140 ~ Ø160.

Unit : mm

Bore size	A	CD	E	EE	EW	FP	KK	L	LF	LR	MM	MR	P	W	XC	ZC
Ø40	25	Ø20 ^{H9}	□70	Rc(PT)3/8	32 ^{-0.1 -0.4}	43	M20×1.5	35	156	R25	Ø22	R25	98	30	221	246
Ø50	30	Ø25 ^{H9}	□85	Rc(PT)1/2	36 ^{-0.1 -0.4}	48	M24×1.5	45	172	R32	Ø28	R30	106	30	247	277
Ø63	35	Ø31.5 ^{H9}	□100	Rc(PT)1/2	40 ^{-0.1 -0.4}	56	M30×1.5	55	187	R40	Ø35	R35	113	35	277	312
Ø80	45	Ø40 ^{H9}	□125	Rc(PT)3/4	50 ^{-0.1 -0.4}	69	M39×1.5	70	218	R50	Ø45	R40	129	35	323	363
Ø100	55	Ø50 ^{H9}	□160	Rc(PT)3/4	63 ^{-0.1 -0.4}	71	M48×1.5	80	230	R63	Ø55	R50	139	40	350	400
Ø125	75	Ø63 ^{H9}	□190	Rc(PT)1	80 ^{-0.1 -0.6}	83	M64×2	105	267	R79	Ø71	R63	159	45	417	480
Ø140	80	Ø71 ^{H9}	□215	Rc(PT)1	80 ^{-0.1 -0.6}	86	M72×2	115	275	R89	Ø80	R71	164	50	440	511
Ø160	90	Ø80 ^{H9}	□240	Rc(PT)1	100 ^{-0.1 -0.6}	94	M80×2	125	304	R100	Ø90	R80	186	55	484	564

Dimensions-Double Clevis (CB)

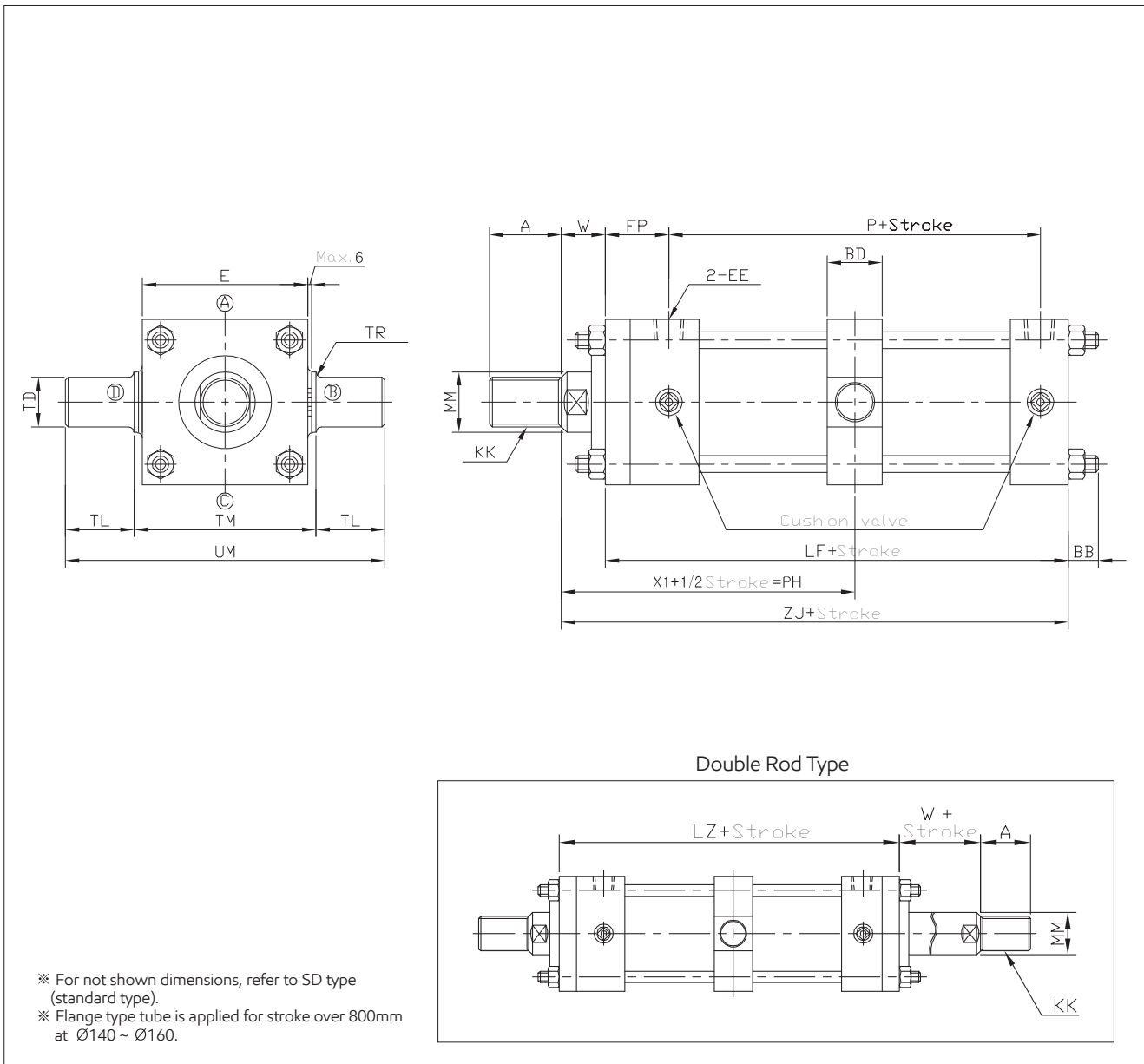


※ For not shown dimensions, refer to SD type(standard type).
※ Flange type tube is applied for stroke over 800mm at Ø140 ~ Ø160.

Unit : mm

Bore size	A	CD	E	EE	EW	FP	KK	L	LF	LR	MM	MR	P	W	XC	ZC
Ø40	25	Ø20 ^{H9}	□70	Rc(PT)3/8	32 ^{+0.4 +0.1}	43	M20×1.5	35	156	R25	Ø22.4	R25	98	30	221	246
Ø50	30	Ø25 ^{H9}	□85	Rc(PT)1/2	36 ^{+0.4 +0.1}	48	M24×1.5	45	172	R32	Ø28	R30	106	30	247	277
Ø63	35	Ø31.5 ^{H9}	□100	Rc(PT)1/2	40 ^{+0.4 +0.1}	56	M30×1.5	55	187	R40	Ø35.5	R35	113	35	277	312
Ø80	45	Ø40 ^{H9}	□125	Rc(PT)3/4	50 ^{+0.4 +0.1}	69	M39×1.5	70	218	R50	Ø45	R40	129	35	323	363
Ø100	55	Ø50 ^{H9}	□160	Rc(PT)3/4	63 ^{+0.4 +0.1}	71	M48×1.5	80	230	R63	Ø56	R50	139	40	350	400
Ø125	75	Ø63 ^{H9}	□190	Rc(PT)1	80 ^{+0.6 +0.1}	83	M64×2	105	267	R79	Ø71	R63	159	45	417	480
Ø140	80	Ø71 ^{H9}	□215	Rc(PT)1	80 ^{+0.6 +0.1}	86	M72×2	115	275	R89	Ø80	R71	164	50	440	511
Ø160	90	Ø80 ^{H9}	□240	Rc(PT)1	100 ^{+0.6 +0.1}	94	M80×2	125	304	R100	Ø90	R80	186	55	484	564

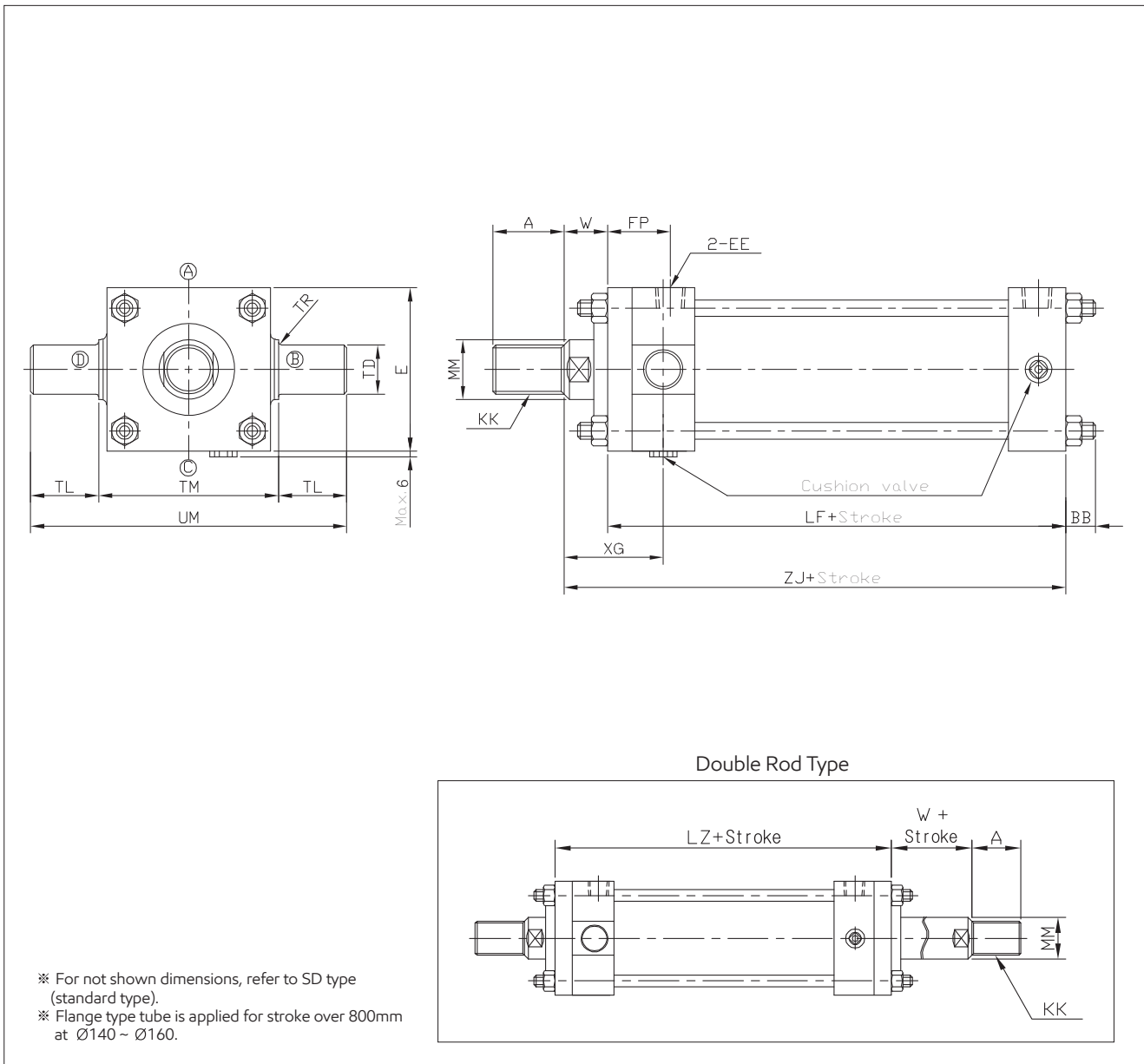
Dimensions-Center Trunnion (TC)



Unit : mm

Bore size	A	BB	BD	E	EE	FP	KK	LF	LZ	MM	P	Min. PH	TL	TM	TD	TR	UM	W	X1	ZJ
Ø40	25	17	33	□70	Rc(PT)3/8	43	M20×1.5	156	183	Ø22	98	107	25	73 ⁰ _{-0.3}	Ø25 ^{e9}	2.5	123	30	122	186
Ø50	30	18	33	□85	Rc(PT)1/2	48	M24×1.5	172	202	Ø28	106	114	25	88 ⁰ _{-0.35}	Ø25 ^{e9}	2.5	138	30	131	202
Ø63	35	21	43	□100	Rc(PT)1/2	56	M30×1.5	187	225	Ø35	113	132	31.5	106 ⁰ _{-0.35}	Ø31.5 ^{e9}	2.5	169	35	148	222
Ø80	45	23	53	□125	Rc(PT)3/4	69	M39×1.5	218	267	Ø45	129	153	40	128 ⁰ _{-0.4}	Ø40 ^{e9}	3	208	35	169	253
Ø100	55	29	63	□160	Rc(PT)3/4	71	M48×1.5	230	281	Ø55	139	165	50	170 ⁰ _{-0.4}	Ø50 ^{e9}	3	270	40	181	270
Ø125	75	35	78	□190	Rc(PT)1	83	M64×2	267	325	Ø71	159	219	63	205 ⁰ _{-0.46}	Ø63 ^{e9}	4	331	45	208	312
Ø140	80	39	88	□215	Rc(PT)1	86	M72×2	275	336	Ø80	164	232	71	225 ⁰ _{-0.46}	Ø71 ^{e9}	4	367	50	218	325
Ø160	90	40	98	□240	Rc(PT)1	94	M80×2	304	366	Ø90	186	253	80	255 ⁰ _{-0.52}	Ø80 ^{e9}	4	415	55	242	359

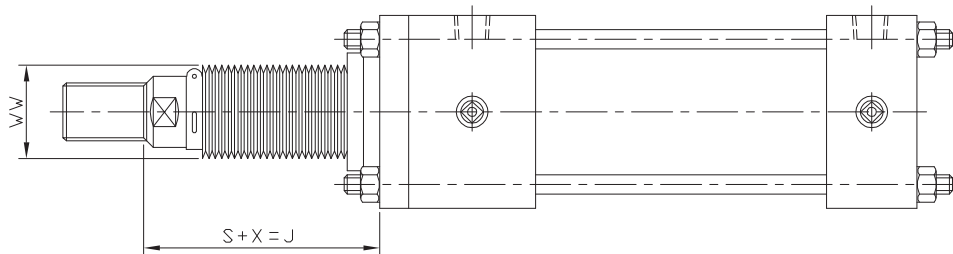
Dimensions-Rod Side Trunnion (TA)



Unit: mm

Bore size	A	BB	E	EE	FP	KK	LF	LZ	MM	TD	TL	TM	TR	UM	W	XG	ZJ
Ø40	25	17	□70	Rc(PT)3/8	43	M20×1.5	156	183	Ø22.4	Ø25 ^{±0.09}	25	73 ^{0 -0.3}	2.5	123	30	66	186
Ø50	30	18	□85	Rc(PT)1/2	48	M24×1.5	172	202	Ø28	Ø25 ^{±0.09}	25	88 ^{0 -0.35}	2.5	138	30	71	202
Ø63	35	21	□100	Rc(PT)1/2	56	M30×1.5	187	225	Ø35.5	Ø31.5 ^{±0.09}	31.5	106 ^{0 -0.35}	2.5	169	35	81	222
Ø80	45	23	□125	Rc(PT)3/4	69	M39×1.5	218	267	Ø45	Ø40 ^{±0.09}	40	128 ^{0 -0.4}	3	208	35	92	253
Ø100	55	29	□160	Rc(PT)3/4	71	M48×1.5	230	281	Ø56	Ø50 ^{±0.09}	50	170 ^{0 -0.4}	3	270	40	99	270
Ø125	75	35	□190	Rc(PT)1	83	M64×2	267	325	Ø71	Ø63 ^{±0.09}	63	205 ^{0 -0.46}	4	331	45	116	312
Ø140	80	39	□215	Rc(PT)1	99	M72×2	288	349	Ø80	Ø71 ^{±0.09}	71	225 ^{0 -0.46}	4	367	50	131	325
Ø160	90	40	□240	Rc(PT)1	114	M80×2	324	386	Ø90	Ø80 ^{±0.09}	80	255 ^{0 -0.52}	4	415	55	146	359

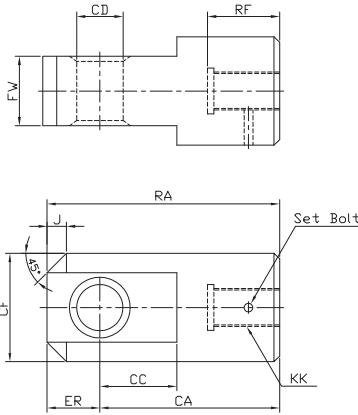
Dimensions- Bellows Attached Type (J, K)



Type	J	K	Bore size	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø140	Ø160	
Material	Nylon Tarpaulin	Neoprene Cloth	WW	Ø50	Ø63	Ø71	Ø80	Ø100	Ø125	Ø125	Ø140	
Temperature	60°C	110°C	X	FA type	45	45	55	55	55	65	65	65
				All types accept FA	47	50	61	55	60	69	70	70
			S	1/3.5 × Stroke			1/4 × Stroke			1/5 × Stroke		

Dimensions-Accessory

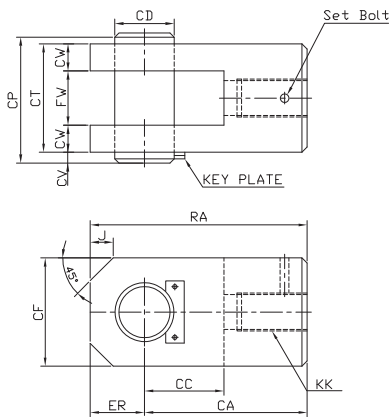
Single Knuckle Joint



Unit : mm

Part no.	CA	CC	CD	CF	CP	CT	CW	CV	ER	FW	KK	RA	RF	J
NHC210H I(Hdy.)40	70	28	Ø20 ^{H10}	Ø49	76.5	63.5	16	8	25	31.5 ^{-0.1 -0.4}	M20×1.5	95	32	10
NHC210H I(Hdy.)50	85	35	Ø25 ^{H10}	Ø55	84.5	71.5	18	8	30	35.5 ^{-0.1 -0.4}	M24×1.5	115	35	12
NHC210H I(Hdy.)63	115	43	Ø31.5 ^{H10}	Ø62	93	80	20	8	35	40 ^{-0.1 -0.4}	M30×1.5	150	47	15
NHC210H I(Hdy.)80	145	55	Ø40 ^{H10}	Ø79	117	100	25	12	40	50 ^{-0.1 -0.4}	M39×1.5	185	62	20
NHC210H I(Hdy.)100	180	65	Ø50 ^{H10}	Ø100	143	126	31.5	12	50	63 ^{-0.1 -0.4}	M48×1.5	230	77	30
NHC210H I(Hdy.)125	225	85	Ø63 ^{H10}	Ø130	183	160	40	18	65	80 ^{-0.1 -0.6}	M64×2	290	82	30
NHC210H I(Hdy.)140	225	85	Ø71 ^{H10}	Ø130	183	160	40	18	65	80 ^{-0.1 -0.6}	M72×2	290	87	30

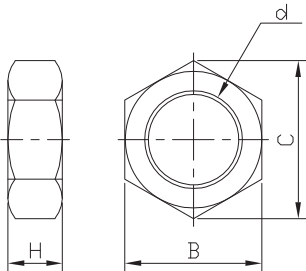
Double Knuckle Joint



Unit : mm

Part no.	CA	CC	CD	CF	CP	CT	CW	CV	ER	FW	KK	RA	RF	J
NHC210H Y(Hdy.)40	70	32	Ø20 ^{H10 F8}	40	76.5	63.5	16	8	20	31.5 ^{+0.4 +0.1}	M20×1.5	90	32	10
NHC210H Y(Hdy.)50	85	45	Ø25 ^{H10 F8}	50	85	71.5	18	8	25	35.5 ^{+0.4 +0.1}	M24×1.5	110	35	12
NHC210H Y(Hdy.)63	115	50	Ø31.5 ^{H10 F8}	60	93	80	20	8	30	40 ^{+0.4 +0.1}	M30×1.5	145	47	15
NHC210H Y(Hdy.)80	145	60	Ø40 ^{H10 F8}	80	117	100	25	12	40	50 ^{+0.4 +0.1}	M39×1.5	185	62	20
NHC210H Y(Hdy.)100	180	70	Ø50 ^{H10 F8}	100	143	126	31.5	12	50	63 ^{+0.4 +0.1}	M48×1.5	230	77	30
NHC210H Y(Hdy.)125	225	90	Ø63 ^{H10 F8}	120	183	160	40	18	65	80 ^{+0.6 +0.1}	M64×2	290	82	30
NHC210H Y(Hdy.)140	225	90	Ø71 ^{H10 F8}	120	183	160	40	18	65	80 ^{+0.6 +0.1}	M72×2	290	87	30

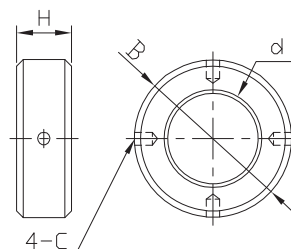
Rod End Nut
Ø40~Ø63



Part no.	d	B	C	H
NHC210H RN(Hdy.)40	M20×P1.5	30	34	12
NHC210H RN(Hdy.)50	M24×P1.5	36	41	14
NHC210H RN(Hdy.)63	M30×P1.5	41	47	17

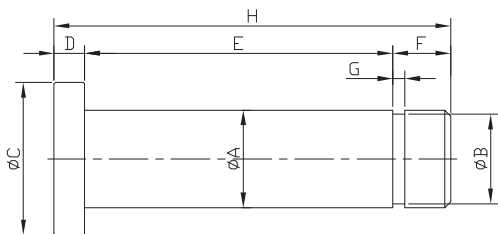
* For rod end nut attached type, longer thread length (dimension A) is required.

Rod End Nut
Ø80~Ø160



Part no.	d	B	C	H
NHC210H RN(Hdy.)80	M39×P1.5	Ø58	Ø8	20
NHC210H RN(Hdy.)100	M48×P1.5	Ø70	Ø8	26
NHC210H RN(Hdy.)125	M64×P2	Ø84	Ø8	35
NHC210H RN(Hdy.)140	M72×P2	Ø108	Ø10	38
NHC210H RN(Hdy.)160	M80×P2	Ø115	Ø10	43

Knuckle Joint / Clevis Pin



Unit : mm

Part no.		A	B	C	D	E	F	G	H
Clevis Pin		Knuckle Joint Pin							
NHC210H CB PIN(Hdy.)40	NHC210H Y PIN(Hdy.)40	20	18.5	30	5	64	10	2	79
NHC210H CB PIN(Hdy.)50	NHC210H Y PIN(Hdy.)50	25	23.9	32	5	72	10	1.5	87
NHC210H CB PIN(Hdy.)63	NHC210H Y PIN(Hdy.)63	31.5	30	40	5	80.5	9.5	2.5	95
NHC210H CB PIN(Hdy.)80	NHC210H Y PIN(Hdy.)80	40	37.5	50	5	100.5	9.5	2.5	115
NHC210H CB PIN(Hdy.)100	NHC210H Y PIN(Hdy.)100	50	46.5	60	5	126.5	9.5	3	141
NHC210H CB PIN(Hdy.)125	NHC210H Y PIN(Hdy.)125	63	58.5	70	10	161	9	3	180
NHC210H CB PIN(Hdy.)140	NHC210H Y PIN(Hdy.)140	71	58.5	70	10	161	9	3	180