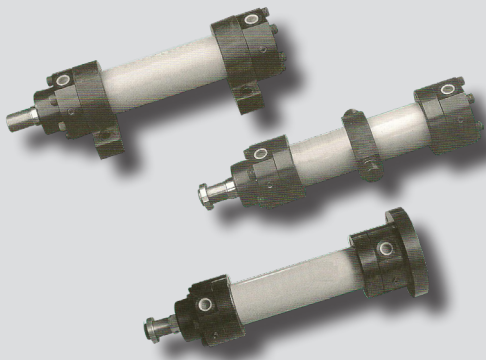
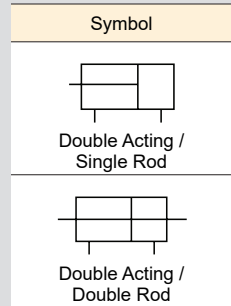


KPC210HR series



Features

- High-pressure heavy machinery (Mill type)
- Double acting hydraulic cylinder for 210kgf/cm² with bore sizes from Ø40 to Ø250.
- It can apply to heavy machinery and steel mills.
- Heavy-duty type resistant to surge pressure, vibration and impact.
- Various mounting styles. (LA, FA, FB, CA, TC)



How to Order

KPC210HR - LA 40 B - B 300 A B F

①
 ②
 ③
 ④
 ⑤
 ⑥
 ⑦
 ⑧
 ⑨
 ⑩
 ⑪

① Series

KPC210HR	Single rod	210kgf/cm ²
KPC210HW	Double rod	

② Seal material

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

③ Mounting style

LA	Axial angle of foot
FA	Rod side flange
FB	Head side flange
CA	Single clevis
TC	Center trunnion

④ Bore size

40	Ø40
50	Ø50
63	Ø63
80	Ø80
100	Ø100
125	Ø125
140	Ø140
160	Ø160
180	Ø180
200	Ø200
250	Ø250

⑤ Cushion

N	Without cushion
B	Cushions on both ends
R	Rod side cushion
H	Head side cushion

⑥ Cylinder stroke

Bore size	Max. stroke
Ø40, Ø50	1200
Ø63, Ø80	1600
Ø100~Ø250	2000

※ Check buckling, it varies depending on mounting style.
 ※ Contact us for longer stroke.

⑦ Port position

Nil	A (Standard)
B,C,D,E,F	Refer to the figure below

⑧ Cushion valve position

Nil	B (Standard)
A,C,D,E,F	Refer to the figure below

⑨ Check valve position

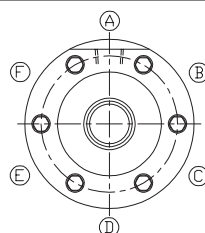
Nil	F (Standard)
A,B,C,D,E	Refer to the figure below

⑩ Bellows

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

⑪ Accessory

Nil	None
I	Single knuckle joint



The standard port position is A, check valve position is F and the standard cushion valve position is B. When modifying the positions, enter the symbol shown in their dimensional drawings.



Specifications

Model	KPC210HR		
Bore size	Ø40, Ø50, Ø63, Ø80, Ø100, Ø125, Ø140, Ø160, Ø180, Ø200, Ø250		
Operating pressure	210kgf/cm ² (21.4MPa)		
Proof pressure	315kgf/cm ² (32.1MPa)		
Min. operating pressure	12~18kgf/cm ² (1.22~1.84MPa)		
Operating piston speed	10~300mm/sec		
Ambient & fluid temperature	-10~80℃ (Use Viton seal when temperature is over 100℃)		
Working oil	Petroleum-based fluid		
Tolerance of thread	KS class 2		
Tolerance of stroke	≤100mm $\begin{matrix} +0.8 \\ 0 \end{matrix}$,	≤101~250mm $\begin{matrix} +1.0 \\ 0 \end{matrix}$,	≤251~650mm $\begin{matrix} +1.25 \\ 0 \end{matrix}$
	≤651~1000mm $\begin{matrix} +1.4 \\ 0 \end{matrix}$,	≤1001~1500mm $\begin{matrix} +1.6 \\ 0 \end{matrix}$,	≤1501~2000mm $\begin{matrix} +1.8 \\ 0 \end{matrix}$
Accessory	Bellows	J : Nylon Tarpaulin, K : Neoprene Cloth	
	Rod end attachment	Single knuckle joint (I-type)	

* Operating pressure: Max. allowable setting pressure for a relief valve while cylinder is operating.

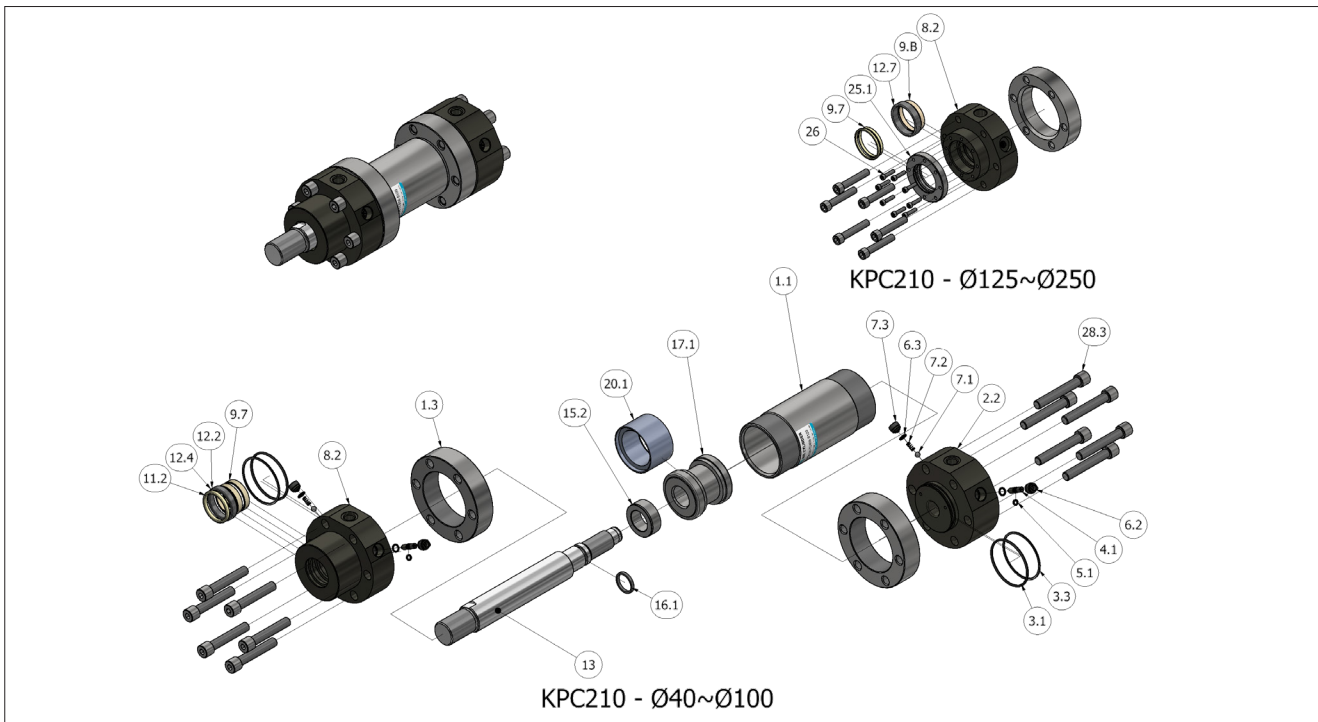
* The minimum working pressure does not apply to the cushion area.

Cushion Length

Unit : mm

Bore size	Ø40 ~ Ø63	Ø80~Ø160	Ø180~Ø200	Ø250
Cushion length	20	25	30	35

Structure



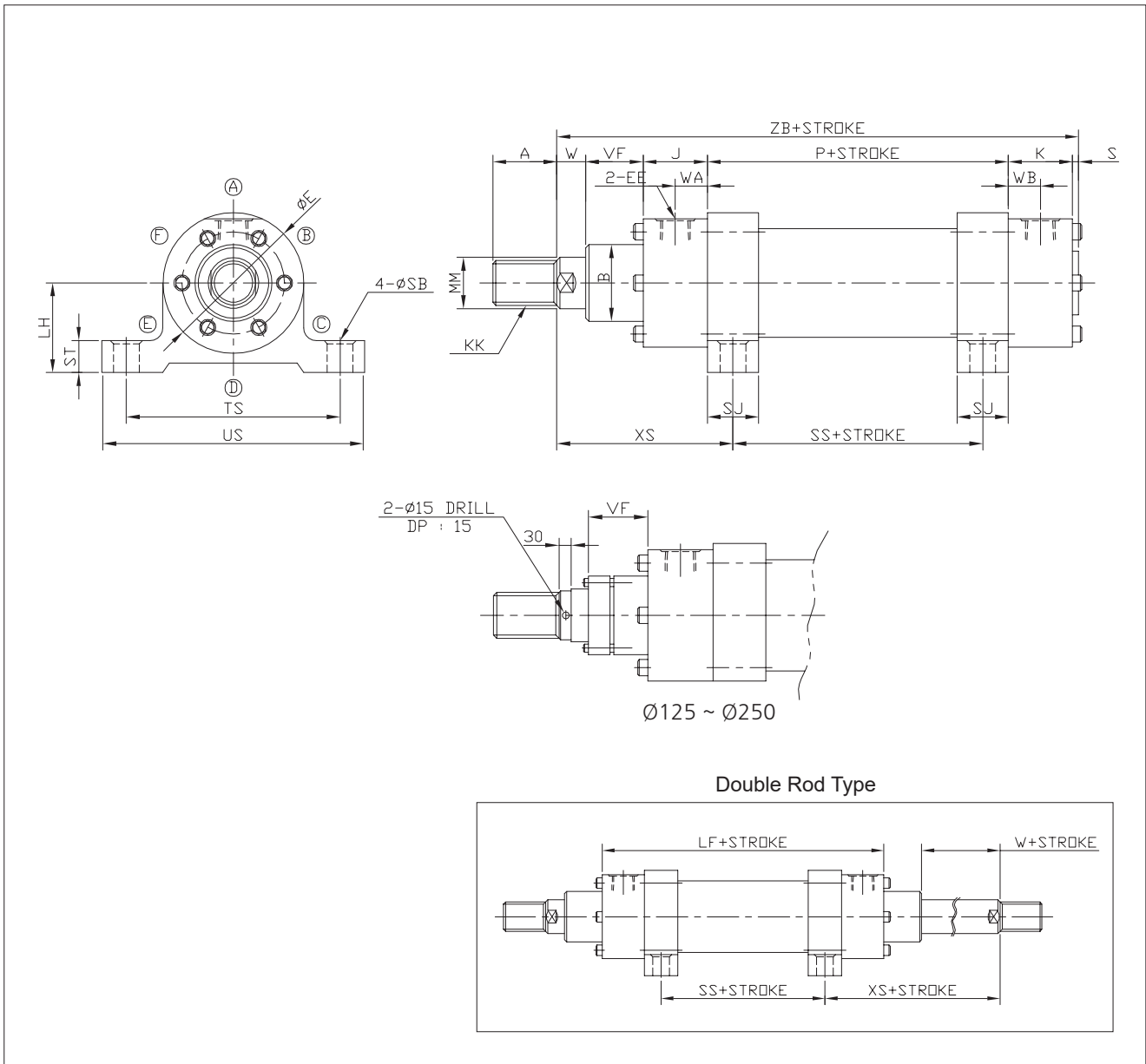
Part List

Part no.	Parts	Material	Quantity	Part no.	Parts	Material	Quantity	Part no.	Parts	Material	Quantity
1.1	Tube	STKM13C	1	7.3	Check Body	SUM24L	2	13	Piston Rod	SM45C	1
1.3	Tube Flange	SS400	1	8.2	Rod Cover (Ø40-Ø100)	SM45C	1	15.2	Cushion Ring	SM45C	1
2.2	Head Cover	SM45C	1		Rod Cover (Ø125-Ø100)	SM45C	1	17.1	Piston	SM45C	1
4.1	Cushion Needle	SM45C	2	9.7	Wearing (Ø40~Ø100)	Phenol	2	25.1	Retainer	SM45C	1
6.2	Cushion Body	SUM24L	2		Wearing (Ø125~Ø250)	Phenol	1	28.3	Socket Bolt	SCM435	1
7.1	Steel Ball	SUJ2	2	9.8	Wearing (Ø125-Ø250)	Phenol	1	26	Socket Bolt	SCM435	1
7.2	Spring For Check	SUP	2								

Packing List

Part no.	3.1	3.3	5.1	6.3	11.2	12.2	12.4	12.7	16.1	20.1
Parts	O-Ring For Tube	B.U.R For Tube O-ring	O-Ring For NEEDIE	O-Ring For C.B	Dust Seal	Rod Packing	B.U.R For Packing	V-Packing	O-Ring For Rod	Piston Packing
Material	NBR	PTFE	NBR	NBR	Urethane	Urethane	PTFE	NBR	NBR	NBR
Quantity	2	2	2	2	2	1	1	1	1	1
Bore size										
Ø40	1B-G35	G35	1B-P5	1B-P10	LBI 20	ISI 20	For ISI 20		1B-P12	KDSB 40x30x16.4
Ø50	1B-G45	For G45	"	"	LBI 28	ISI 28	For ISI 28		1B-P20	KDSB 50x34x18.4
Ø63	1B-G58	For G58	"	"	LBI 35	ISI 35	For ISI 35		1B-P25	KDSB 63x47x18.4
Ø80	1B-G75	For G75	1B-P6	1B-P11	LBI 45	ISI 45	For ISI 45		1B-P35	KDSB 80x60x22.4
Ø100	1B-G95	For G95	"	"	LBI 55	ISI 55	For ISI 55		1B-P45	KDSB 100x75x22.4
Ø125	1B-G120	For G120	1B-P9	1B-P15	LBI 70	ISI 70		ES-70x85x22.5	1B-P55	KDSB 125x100x25.4
Ø140	1B-G135	For G135	"	"	LBI 90	ISI 90		ES-90x105x22.5	1B-P65	KDSB 140x115x25.4
Ø150	1B-G145	For G145	"	"	LBI 90	ISI 90		ES-90x105x22.5	1B-P65	KDSB 150x125x25.4
Ø160	1B-G150	For G150	"	"	LBI 100	ISI 100		ES-100x120x40	1B-P70	KDSB 160x135x25.4
Ø180	1B-G170	For G170	"	"	LBI 110	ISI 110		ES-110x130x40	1B-P75	KDSB 180x155x25.4
Ø200	1B-G190	For G190	"	"	LBI 125	ISI 125		ES-125x150x46	1B-P95	KDSB 200x175x25.4
Ø250	1B-G240	For G240	"	"	LBI 160	ISI 160		ES-160x190x60	1B-P115	KDSB 250x225x25.4

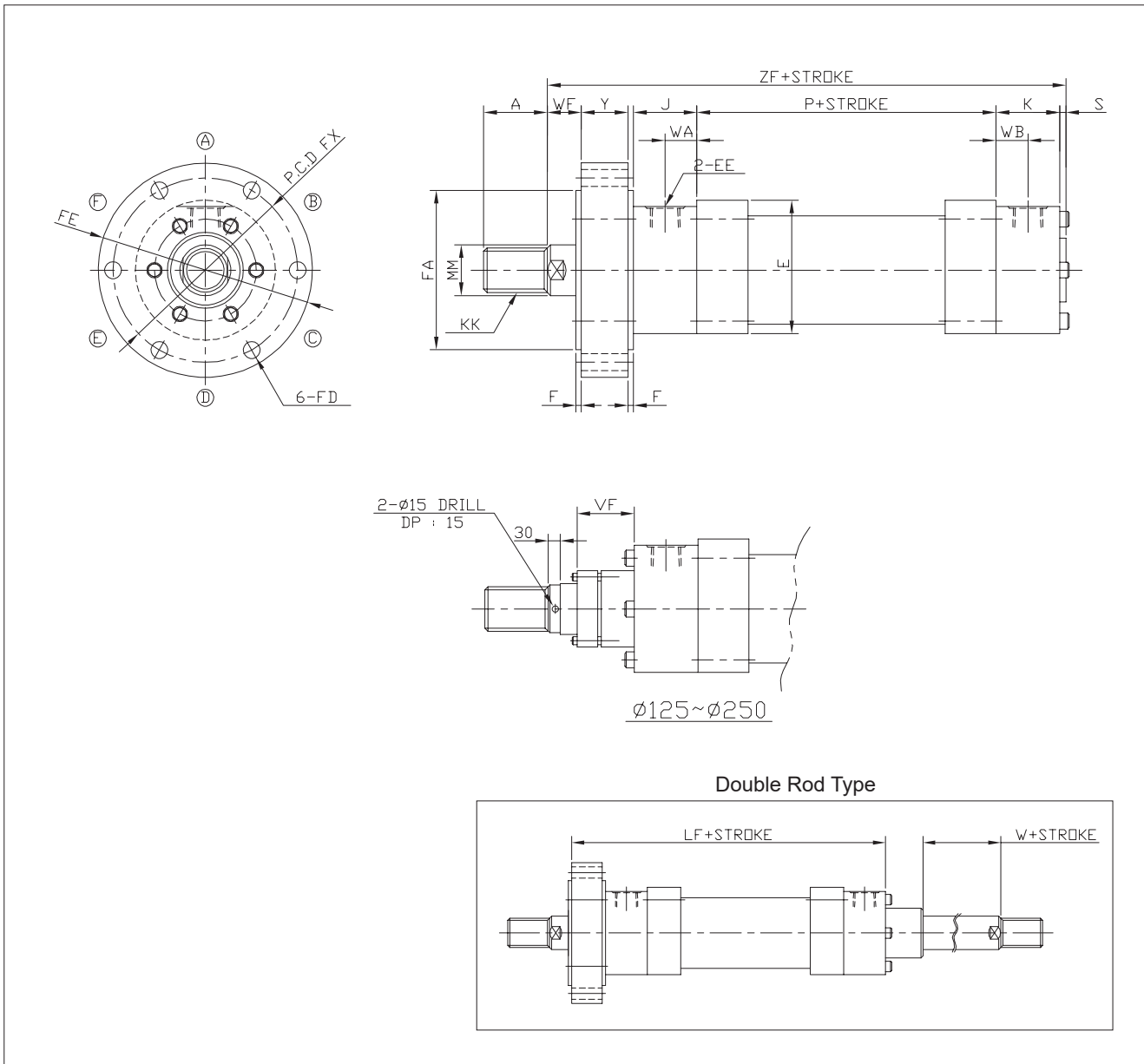
Dimensions-Axial Angle of Foot (LA)



Unit : mm

Bore size	A	B	E	EE	J	K	KK	LF	LH	MM	P	S	SB	ST	SS	SJ	TS	US	VF	W	WA	WB	XS	ZB
Ø40	30	Ø55	Ø90	PF 1/2	40	45	M18x1.5	160	45±0.2	Ø20	80	7	Ø11	26	55	30	110±0.2	135	37	17	18	25	106.5	226
Ø50	35	Ø68	Ø110	PF 1/2	40	47.5	M24x1.5	162	55±0.2	Ø28	82	6.5	Ø11	31	57	34	130±0.2	155	37	21	18	27	110.5	234
Ø63	45	Ø75	Ø122	PF 3/4	45	45	M30x1.5	190	65±0.2	Ø35	100	5	Ø14	37	70	38	150±0.2	180	42	25	22.5	22.5	127	262
Ø80	55	Ø95	Ø145	PF 3/4	45	55	M39x1.5	195	75±0.2	Ø45	105	5	Ø18	42	55	54	176±0.2	216	49.5	15.5	22.5	27.5	135	275
Ø100	75	Ø115	Ø174	PF 1	55	55	M48x1.5	235	90±0.2	Ø55	125	5	Ø22	52	75	64	210±0.2	255	52	33	27.5	27.5	165	325
Ø125	95	Ø135	Ø230	PF 1 1/4	65	60	M64x2	280	115±0.2	Ø70	150	5	Ø25	60	90	58	275±0.2	320	55	42	30	30	192	377
Ø140	110	Ø155	Ø250	PF 1 1/4	70	70	M80x2	310	125±0.2	Ø90	170	5	Ø28	65	105	64	305±0.2	360	58	47	30	30	207.5	420
Ø150	110	Ø170	Ø278	PF 1 1/4	75	75	M80x2	330	145±0.2	Ø90	180	5	Ø28	65	110	68	335±0.2	390	60	50	35	35	220	445
Ø160	120	Ø180	Ø288	PF 1 1/2	75	75	M90x2	345	145±0.2	Ø100	195	10	Ø31	70	120	74	345±0.2	410	68	52	35	35	232.5	475
Ø180	140	Ø200	Ø312	PF 1 1/2	80	80	M100x2	375	160±0.2	Ø110	215	10	Ø37	80	135	78	380±0.2	455	78	52	35	40	250	515
Ø200	150	Ø215	Ø348	PF 1 1/2	80	80	M110x2	396	180±0.2	Ø125	236	5	Ø37	85	145	90	415±0.2	490	83	52	35	40	260.5	536
Ø250	160	Ø280	Ø432	PF 1 1/2	105	105	M120x2	484	220±0.2	Ø160	274	10	Ø52	110	174	100	530±0.2	635	124	41	40	40	320	659

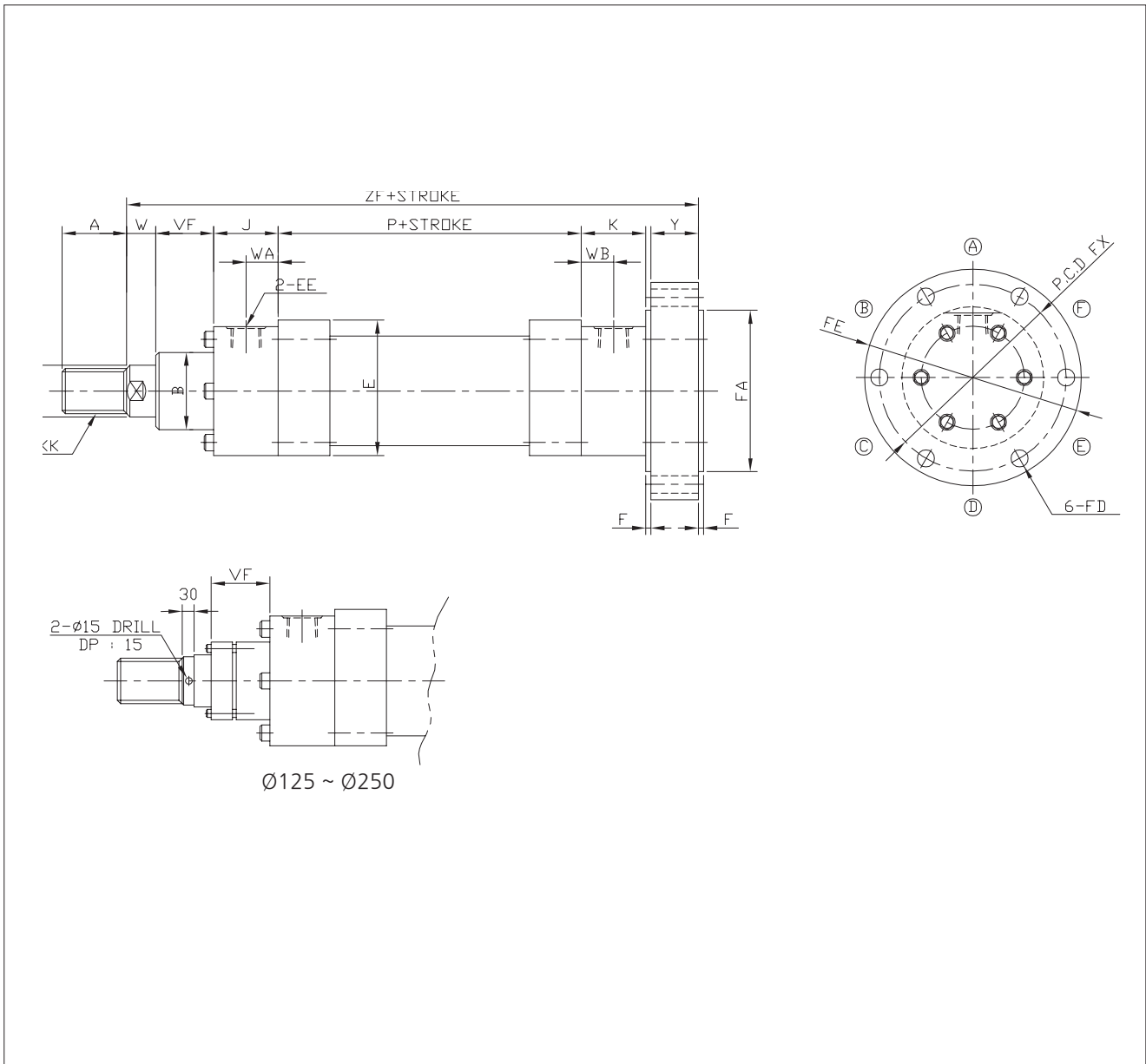
Dimensions-Rod Side Flange (FA)



Unit : mm

Bore size	A	E	EE	F	FA	FD	FE	FX	J	K	KK	LF	MM	P	S	VF	W	WA	WB	WF	Y	ZF
Ø40	30	Ø90	PF 1/2	5	Ø90 ^{eb}	Ø9	Ø130	Ø108	40	45	M18x1.5	195	Ø20	80	7	37	17	18	25	19	30	226
Ø50	35	Ø110	PF 1/2	5	Ø110 ^{eb}	Ø11	Ø160	Ø130	40	47.5	M24x1.5	197	Ø28	82	6.5	37	21	18	27	23	30	234
Ø63	45	Ø122	PF 3/4	5	Ø130 ^{eb}	Ø14	Ø185	Ø155	45	45	M30x1.5	230	Ø35	100	5	42	25	22.5	22.5	27	35	262
Ø80	55	Ø145	PF 3/4	5	Ø145 ^{eb}	Ø14	Ø200	Ø170	45	55	M39x1.5	235	Ø45	105	5	49.5	15.5	22.5	27.5	25	35	275
Ø100	75	Ø174	PF 1	5	Ø175 ^{eb}	Ø18	Ø245	Ø205	55	55	M48x1.5	285	Ø55	125	5	52	33	27.5	27.5	35	45	325
Ø125	95	Ø230	PF 1 1/4	5(10)	Ø230 ^{eb}	Ø22	Ø305	Ø265	65	60	M64x2	340	Ø70	150	5	55	42	30	30	37	50	377
Ø140	110	Ø250	PF 1 1/4	10	Ø250 ^{eb}	Ø22	Ø325	Ø285	70	70	M80x2	370	Ø90	170	5	58	47	30	30	45	50	420
Ø150	110	Ø278	PF 1 1/4	10	Ø278 ^{eb}	Ø26	Ø370	Ø320	75	75	M80x2	395	Ø90	180	5	60	50	35	35	45	55	445
Ø160	120	Ø288	PF 1 1/2	10	Ø290 ^{eb}	Ø28	Ø390	Ø335	75	75	M90x2	415	Ø100	195	10	68	52	35	35	50	60	475
Ø180	140	Ø312	PF 1 1/2	10	Ø315 ^{eb}	Ø30	Ø420	Ø360	80	80	M100x2	455	Ø110	215	10	78	52	35	40	50	70	515
Ø200	150	Ø348	PF 1 1/2	10	Ø350 ^{eb}	Ø33	Ø460	Ø400	80	80	M110x2	481	Ø125	236	5	83	52	35	40	50	75	536
Ø250	160	Ø432	PF 1 1/2	10	Ø435 ^{eb}	Ø40	Ø575	Ø500	105	105	M120x2	579	Ø160	274	10	124	41	40	40	70	85	659

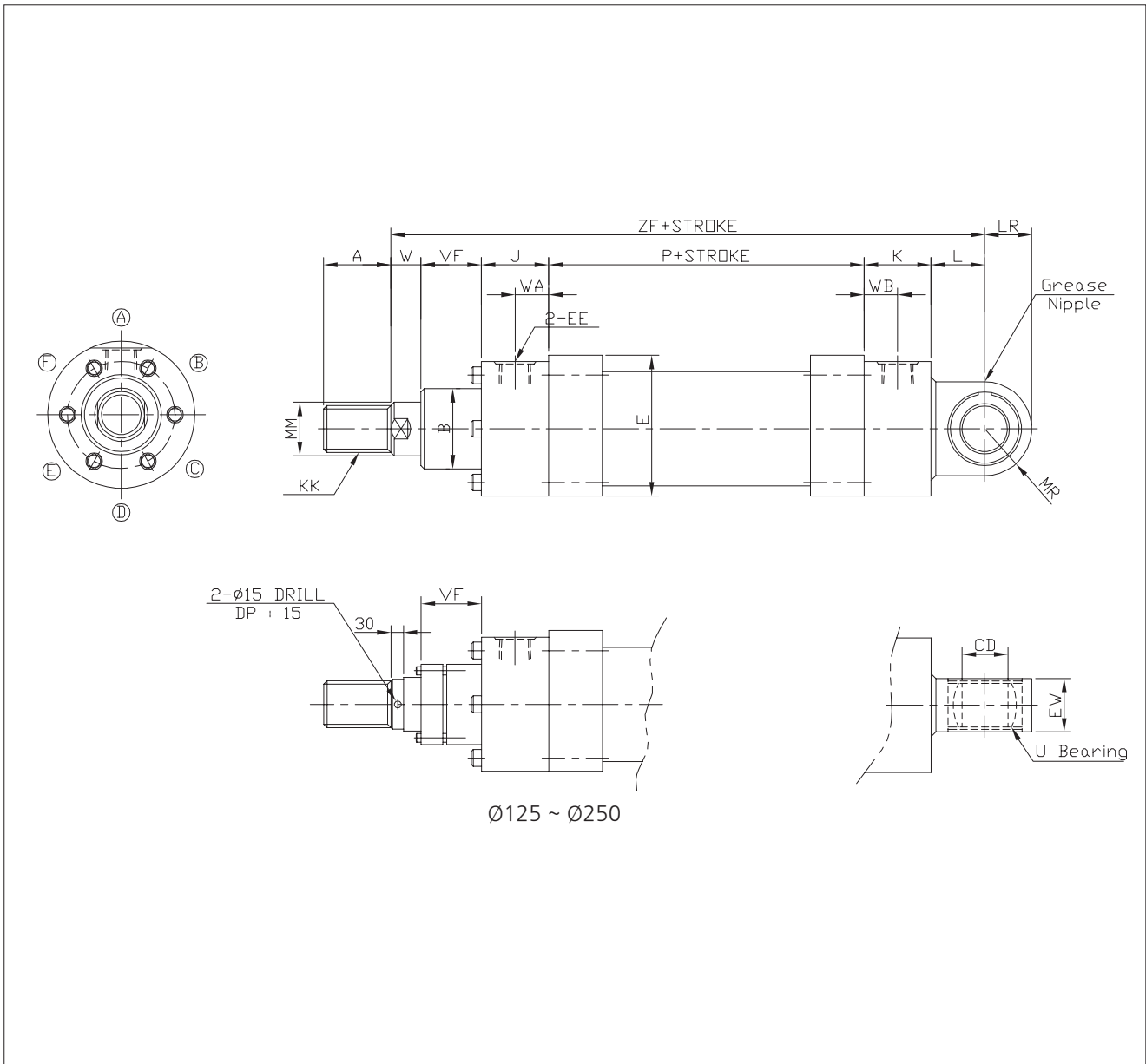
Dimensions-Head Side Flange (FB)



Unit : mm

Bore size	A	B	E	EE	F	FA	FD	FE	FX	J	K	KK	MM	P	VF	W	WA	WB	Y	ZF
Ø40	30	Ø55	Ø90	PF 1/2	5	Ø90 ^{e8}	Ø9	Ø130	Ø108	40	45	M18x1.5	Ø20	80	37	17	18	25	30	254
Ø50	35	Ø68	Ø110	PF 1/2	5	Ø110 ^{e8}	Ø11	Ø160	Ø130	40	47.5	M24x1.5	Ø28	82	37	21	18	27	30	262.5
Ø63	45	Ø75	Ø122	PF 3/4	5	Ø130 ^{e8}	Ø14	Ø185	Ø155	45	45	M30x1.5	Ø35	100	42	25	22.5	22.5	35	297
Ø80	55	Ø95	Ø145	PF 3/4	5	Ø145 ^{e8}	Ø14	Ø200	Ø170	45	55	M39x1.5	Ø45	105	49.5	15.5	22.5	27.5	35	310
Ø100	75	Ø115	Ø174	PF 1	5	Ø175 ^{e8}	Ø18	Ø245	Ø205	55	55	M48x1.5	Ø55	125	52	33	27.5	27.5	45	370
Ø125	95	Ø135	Ø230	PF 1 1/4	5(10)	Ø230 ^{e8}	Ø22	Ø305	Ø265	65	60	M64x2	Ø70	150	55	42	30	30	50	432
Ø140	110	Ø155	Ø250	PF 1 1/4	10	Ø250 ^{e8}	Ø22	Ø325	Ø285	70	70	M80x2	Ø90	170	58	47	30	30	50	475
Ø150	110	Ø170	Ø278	PF 1 1/4	10	Ø278 ^{e8}	Ø26	Ø370	Ø320	75	75	M80x2	Ø90	180	60	50	35	35	55	505
Ø160	120	Ø180	Ø288	PF 1 1/2	10	Ø290 ^{e8}	Ø28	Ø390	Ø335	75	75	M90x2	Ø100	195	68	52	35	35	60	535
Ø180	140	Ø200	Ø312	PF 1 1/2	10	Ø315 ^{e8}	Ø30	Ø420	Ø360	80	80	M100x2	Ø110	215	78	52	35	40	70	585
Ø200	150	Ø215	Ø348	PF 1 1/2	10	Ø350 ^{e8}	Ø33	Ø460	Ø400	80	80	M110x2	Ø125	236	83	52	35	40	75	616
Ø250	160	Ø280	Ø432	PF 1 1/2	10	Ø435 ^{e8}	Ø40	Ø575	Ø500	105	105	M120x2	Ø160	274	124	41	40	40	85	744

Dimensions-Single Clevis (CA)

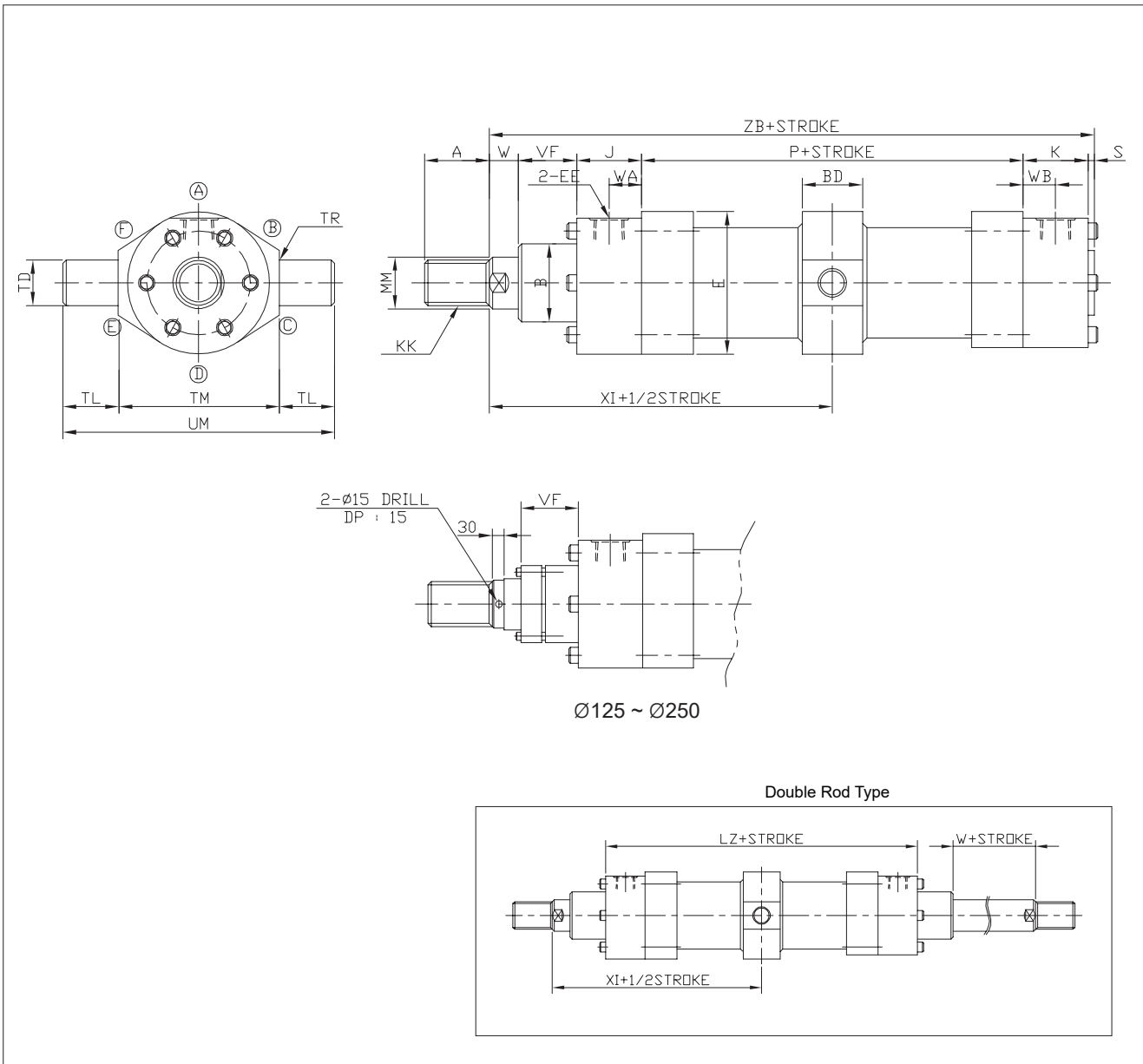


Ø125 ~ Ø250

Unit : mm

Bore size	A	B	CD	E	EE	EW	J	K	KK	L	LR	MR	MM	P	U	VF	W	WA	WB	ZF
Ø40	30	Ø55	Ø25	Ø90	PF 1/2	23 ⁰ _{-0.3}	40	45	M18x1.5	33	-	R27.5	Ø20	80	GE25ES	37	17	18	25	252
Ø50	35	Ø68	Ø30	Ø110	PF 1/2	28 ⁰ _{-0.3}	40	47.5	M24x1.5	37.5	-	R32.5	Ø28	82	GE30ES	37	21	18	27	265
Ø63	45	Ø75	Ø35	Ø122	PF 3/4	30 ⁰ _{-0.3}	45	45	M30x1.5	45	-	R40	Ø35	100	GE35ES	42	25	22.5	22.5	302
Ø80	55	Ø95	Ø40	Ø145	PF 3/4	35 ⁰ _{-0.3}	45	55	M39x1.5	60	-	R50	Ø45	105	GE40ES	49.5	15.5	22.5	27.5	330
Ø100	75	Ø115	Ø50	Ø174	PF 1	40 ⁰ _{-0.3}	55	55	M48x1.5	65	-	R62.5	Ø55	125	GE50ES	52	33	27.5	27.5	385
Ø125	95	Ø135	Ø60	Ø230	PF 1 1/4	50 ⁰ _{-0.3}	65	60	M64x2	75	70	R65	Ø70	150	GE60ES	55	42	30	30	447
Ø140	110	Ø155	Ø70	Ø250	PF 1 1/4	55 ⁰ _{-0.3}	70	70	M80x2	75	82	R77	Ø90	170	GE70ES	58	47	30	30	490
Ø150	110	Ø170	Ø70	Ø278	PF 1 1/4	60 ⁰ _{-0.3}	75	75	M80x2	80	82	R77	Ø90	180	GE70ES	60	50	35	35	520
Ø160	120	Ø180	Ø80	Ø288	PF 1 1/2	60 ⁰ _{-0.3}	75	75	M90x2	85	95	R90	Ø100	195	GE80ES	68	52	35	35	550
Ø180	140	Ø200	Ø90	Ø312	PF 1 1/2	65 ⁰ _{-0.3}	80	80	M100x2	105	113	R105	Ø110	215	GE90ES	78	52	35	40	610
Ø200	150	Ø215	Ø100	Ø348	PF 1 1/2	70 ⁰ _{-0.3}	80	80	M110x2	114	125	R115	Ø125	236	GE100ES	83	52	35	40	645
Ø250	160	Ø280	Ø110	Ø432	PF 1 1/2	80 ⁰ _{-0.3}	105	105	M120x2	140	160	R150	Ø160	274	GE110ES	124	41	40	40	789

Dimensions-Center Trunnion (TC)

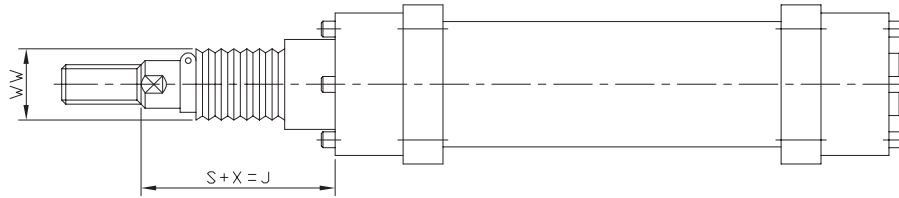


Unit : mm

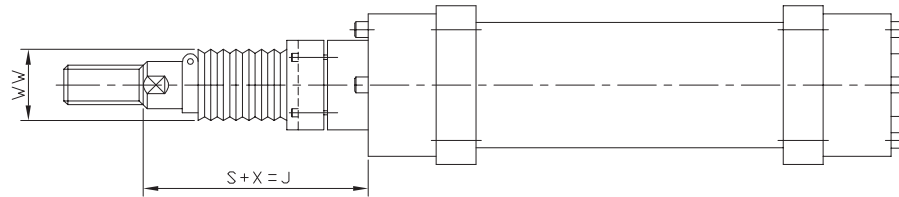
Bore size	A	B	BD	E	EE	J	K	KK	LZ	MM	P	S	TD	TM	TL	TR	UM	VF	XI	W	WA	WB	ZB
Ø40	30	Ø55	38	Ø90	PF 1/2	40	45	M18x1.5	160	Ø20	80	7	Ø30 ^{SB}	95±0.2	20	R2	135	37	136	17	18	25	226
Ø50	35	Ø68	38	Ø110	PF 1/2	40	47.5	M24x1.5	162	Ø28	82	6.5	Ø30 ^{SB}	115±0.2	20	R2	155	37	143.5	21	18	27	234
Ø63	45	Ø75	43	Ø122	PF 3/4	45	45	M30x1.5	190	Ø35	100	5	Ø35 ^{SB}	130±0.2	20	R2	170	42	162	25	22.5	22.5	262
Ø80	55	Ø95	48	Ø145	PF 3/4	45	55	M39x1.5	195	Ø45	105	5	Ø40 ^{SB}	145±0.2	25	R2	195	49.5	170	15.5	22.5	27.5	275
Ø100	75	Ø115	58	Ø174	PF 1	55	55	M48x1.5	235	Ø55	125	5	Ø50 ^{SB}	175±0.2	30	R2.5	235	52	201	33	27.5	27.5	325
Ø125	95	Ø135	68	Ø230	PF 1 1/4	65	60	M64x2	280	Ø70	150	5	Ø60 ^{SB}	210±0.2	40	R2.5	290	55	237	42	30	30	377
Ø140	110	Ø155	73	Ø250	PF 1 1/4	70	70	M80x2	310	Ø90	170	5	Ø65 ^{SB}	230±0.2	42.5	R2.5	315	58	260	47	30	30	420
Ø150	110	Ø170	78	Ø278	PF 1 1/4	75	75	M80x2	330	Ø90	180	5	Ø71 ^{SB}	260±0.2	50	R2.5	360	60	270	50	35	35	445
Ø160	120	Ø180	83	Ø288	PF 1 1/2	75	75	M90x2	345	Ø100	195	10	Ø75 ^{SB}	275±0.2	52.5	R2.5	380	68	292.5	52	35	35	475
Ø180	140	Ø200	96	Ø312	PF 1 1/2	80	80	M100x2	375	Ø110	215	10	Ø85 ^{SB}	300±0.2	55	R2.5	410	78	317.5	52	35	40	515
Ø200	150	Ø215	96	Ø348	PF 1 1/2	80	80	M110x2	396	Ø125	236	5	Ø90 ^{SB}	320±0.2	55	R2.5	430	83	332.5	52	35	40	536
Ø250	160	Ø280	126	Ø432	PF 1 1/2	105	105	M120x2	484	Ø160	274	10	Ø110 ^{SB}	410±0.2	65	R2.5	540	124	407	41	40	40	659

Dimensions-Bellows Attached Type (J, K)

Ø40 ~ Ø100



Ø125 ~ Ø250



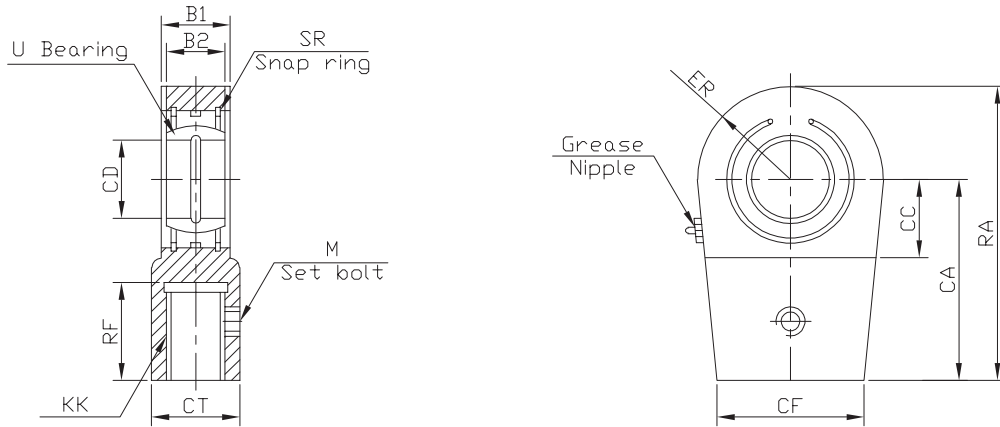
Type	J	K
Material	Nylon Tarpaulin	Neoprene Cloth
Temperature	80°C	130°C

Bore size	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø140	Ø150	Ø160	Ø180	Ø200	Ø250
WW	Ø50	Ø63	Ø71	Ø80	Ø100	Ø125	Ø140	Ø140	Ø160	Ø180	Ø180	Ø200
X	75	75	85	95	95	110	115	115	125	135	140	190
S	1/3.5 × Stroke		1/4 × Stroke			1/5 × Stroke					1/6 × Stroke	

- ※ For not shown dimensions, refer to standard type.
- ※ When calculating with decimals, please round up.
- ※ SUS band is mounted at bellows at delivery.

Dimensions-Accessory

Single Knuckle Joint



Unit : mm

Bore size	B1	B2	CA	CC	CD	CF	CT	ER	KK	M	RF	RA	SR	U
Ø40	23	20	65	25	Ø25	48	28	R28	M18x1.5	M8	32	95	R42	G25ES
Ø50	28	22	75	30	Ø30	54	34	R32	M24x1.5	M8	37	109	R47	G30ES
Ø63	30	25	90	40	Ø35	66	44	R39	M30x1.5	M8	47	132	R55	G35ES
Ø80	35	28	105	45	Ø40	78	55	R47	M39x1.5	M8	57	155	R62	G40ES
Ø100	40	35	135	55	Ø50	90	70	R58	M48x1.5	M10	77	198	R75	G50ES
Ø125	50	44	170	65	Ø60	118	87	R65	M64x2	M10	98	240	R90	G60ES
Ø140	55	49	195	75	Ø70	130	105	R77	M80x2	M12	113	278	R105	G70ES
Ø150	55	49	195	75	Ø70	130	105	R77	M80x2	M12	113	278	R105	G70ES
Ø160	60	55	210	80	Ø80	152	125	R88	M90x2	M16	123	305	R120	G80ES
Ø180	65	60	250	90	Ø90	162	150	R103	M100x2	M16	143	363	R130	G90ES
Ø200	70	70	275	105	Ø100	172	170	R115	M110x2	M20	155	400	R150	G100ES
Ø250	80	70	300	115	Ø110	194	180	R132.5	M120x2	M20	165	442.5	R160	G110ES