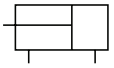
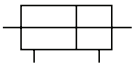
KP140HS series

KP140HS-SD80-S40

KP140HS-LA50-S30N

Features

- Compact hydraulic cylinder with steel tube.
- Double acting hydraulic cylinder for 140kgf/cm² with bore sizes from Ø20 to Ø125.
- Appropriate for pressing, clamping and short-stroke operations.
- Cylinder designed with a shorter length than a conventional cylinder.

Symbol
 Double Acting / Single Rod
 Double Acting / Double Rod

How to Order

KP140HS ① ② ③ ④ ⑤ - S ⑥ ⑦ ⑧

① Series

Series	Type	Tube material	Operating pressure
KP140HS	Single rod	Steel	140 kgf/㎠
KP140HS W	Double rod		
KP140HS.HL	Auto switch attached type (Single rod)	SUS	
KP140HS HL W	Auto switch attached type (Double rod)		

③ Seal material

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

④ Mounting style

SD	Standard
LA	Axial angle of foot

⑤ Bore size

32	Ø30
40	Ø40
50	Ø50
63	Ø63
80	Ø80
100	Ø100
125	Ø125

⑥ Cylinder stroke

Bore size	Standard stroke	Max. stroke
Ø32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	50
Ø40		100
Ø50		
Ø63		
Ø80		
Ø100	-	
Ø125		

※ Check buckling, as it varies depending on mounting style.
※ Contact us for longer stroke.
※ We have inventory only for standard administration. (Female thread standard type, small quantity)
※ Intermediate stroke production (55, 60, 65 ...) is made with 5, 10, 20mm space.

⑦ Rod end attachment

Nil	Rod end female thread
N	Rod end male thread

⑧ Auto switch

Reed A/S	Model	Solid state A/S	Model
Z72	D-Z72K	Y59A	D-Y59AK
Z73	D-Z73K	Y7PK	D-Y7PK
Z76	D-Z76K	Y59B	D-Y59BK
Z80	D-Z80K		
Z82	D-Z82K		

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

⑨ Number of auto switch

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

※ Only for auto switch attached type.

Specifications

Model	KP140HS
Bore size	Ø32, Ø40, Ø50, Ø63, Ø80, Ø100, Ø125
Max. operating pressure	140kgf/㎠ (14.3MPa)
Proof pressure	210kgf/㎠ (21.4MPa)
Min. operating pressure	3kgf/㎠ (0.31MPa)
Operating piston speed	8~100mm/sec
Ambient & fluid temperature	-10 ~ 70℃
Working oil	Petroleum-based fluid
Tolerance of thread	KS class 2
Tolerance of stroke	0~+0.8mm

※ Contact us for delivery of auto switch attached type.

Mass

KP140HS

Unit : kg

Bore size	Standard Type (SD)				Foot Type(LA)				Additional mass of male thread
	Double acting single rod		Double acting double rod		Double acting single rod		Double acting double rod		
	Basic mass	Additional mass per each 1mm of stroke	Basic mass	Additional mass per each 1mm of stroke	Basic mass	Additional mass per each 1mm of stroke	Basic mass	Additional mass per each 1mm of stroke	
Ø32	1.4	0.025	1.6	0.024	1.4	0.027	1.9	0.028	0.057
Ø40	1.8	0.030	2.1	0.032	1.8	0.034	2.4	0.036	0.114
Ø50	2.5	0.037	2.7	0.036	2.6	0.044	3.3	0.048	0.201
Ø63	3.8	0.047	4.1	0.041	4.1	0.062	5.0	0.068	0.435
Ø80	6.6	0.067	7.6	0.083	-	-	-	-	0.798
Ø100	12.5	0.102	14.9	0.121	-	-	-	-	-
Ø125	21.5	0.152	29	0.222	-	-	-	-	-

KP140HS HL

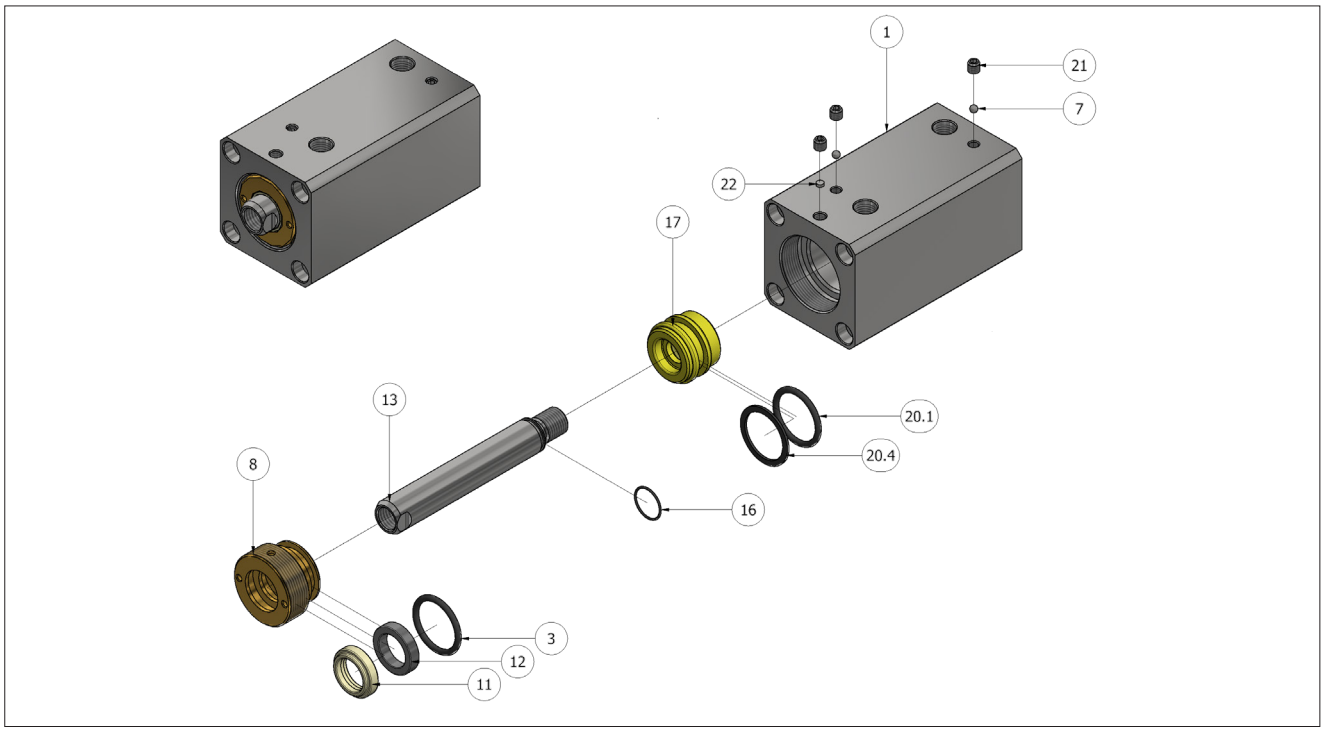
Unit : kg

Bore size	Standard Type (SD)				Foot Type(LA)		Additional mass of male thread
	Double acting single rod		Double acting double rod		Double acting single rod		
	Basic mass	Additional mass per each 1mm of stroke	Basic mass	Additional mass per each 1mm of stroke	Basic mass	Additional mass per each 1mm of stroke	
Ø32	1.2	0.022	1.3	0.024	1.2	0.022	0.057
Ø40	1.6	0.028	1.7	0.031	1.6	0.028	0.114
Ø50	2.2	0.036	2.4	0.041	2.3	0.036	0.201
Ø63	3.3	0.049	3.7	0.057	3.6	0.049	0.435
Ø80	6.2	0.071	7.2	0.084	-	-	0.0798

Calculation:

Ex) KP140HS-SD40-S50
Basic mass: 1.8
Additional mass: 0.030
Cylinder stroke: 50mm
1.8+(0.030 X 50) = 3.3kg

Structure



Part List

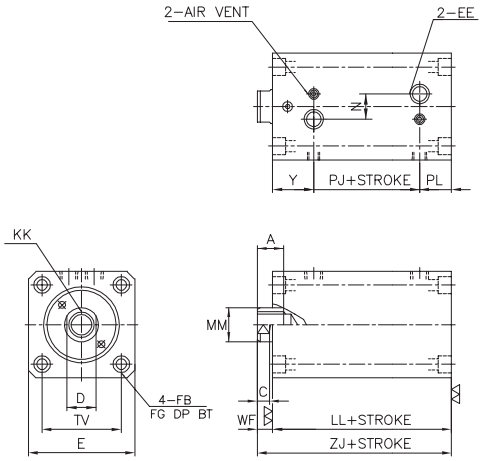
Part no.	Parts	Material	Quantity	Part no.	Parts	Material	Quantity
1	TUBE	SM45C	1	17	PISTON	GC250	1
7	STEEL BALL	SUJ2	2	21	SET SCREW	SCM435	3
8	ROD COVER	GC250	1	22	SHIM	C3604	1
13	ROD	SM45C	1				

Packing List

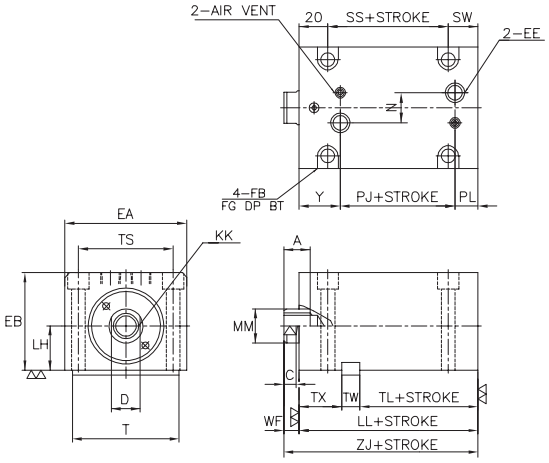
Part no.	3	11	12	16	20.1	20.4
Parts	O-RING FOR TUBE	DUST SEAL	ROD PACKING	O-RING FOR ROD	PISTON PACKING	B.U.R
Material	NBR	NBR	NBR	NBR	NBR	PTFE
Quantity / Bore size	1	1	1	1	1	1
32	1B-P26	LBH-18	USH-18	1B-S16	1B-P26	FOR P26
40	1B-G35	LBH-22	USH-22	1B-S20	1B-P34	FOR P34
50	1B-G45	LBH-28	USH-28	1B-S25	1B-P44	FOR P44
63	1B-G58	LBH-35	USH-35	1B-S32	1B-P53	FOR P53
80	1B-G75	LBH-45	USH-45	1B-S42	1B-P70	FOR P70
100	1B-G95	LBH-55	USH-55	1B-G40	1B-P90	FOR P90
125	1B-G120	LBH-70	USH-70	1B-G60	1B-P115	FOR P115

Dimensions-Single Rod Female Thread Standard Type, Axial Angle of Foot (SD, LA)

SD type
Bore size Ø32, Ø40, Ø50, Ø63, Ø80



LA type
Bore size Ø32, Ø40, Ø50, Ø63



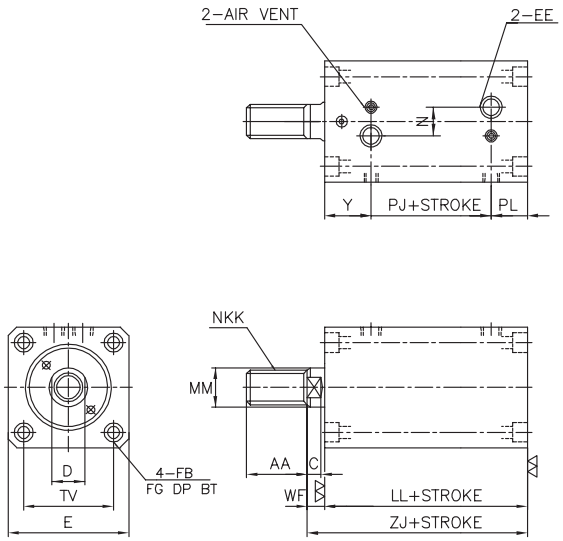
Unit : mm

Bore size	A	BT		C	D	E	EA	EB	EE	FB		FG		KK	LH	LL
		SD type	LA type							SD type	LA type	SD type	LA type			
Ø32	15	6.5	8.6	7	16	□62	70	56	Rc(PT)1/4	Ø6.8	Ø9	Ø11	Ø14	M12×1.75	$25^{\pm0.06}$	54
Ø40	20	8.6	10.8	7	19	□70	80	64	Rc(PT)1/4	Ø9	Ø11	Ø14	Ø17.5	M16×2	$29^{\pm0.06}$	55
Ø50	24	10.8	13	8	25	□80	94	74	Rc(PT)1/4	Ø11	Ø14	Ø17.5	Ø20	M20×2.5	$34^{\pm0.06}$	60
Ø63	33	13	15.5	10	31	□94	114	89	Rc(PT)1/4	Ø14	Ø16	Ø20	Ø23	M27×3	$42^{\pm0.06}$	67
Ø80	33	15.2	18	14	41	□114	142	110	Rc(PT)3/8	Ø16	Ø18	Ø23	Ø26	M30×3.5	$52^{\pm0.06}$	78
Ø100	45	21.5	-	20	50	□145	-	-	Rc(PT)3/8	Ø22	-	Ø32	-	M39×4.0	-	95
Ø125	50	25.5	-	25	65	□185	-	-	Rc(PT)1/2	Ø26	-	Ø39	-	M42×4.5	-	105

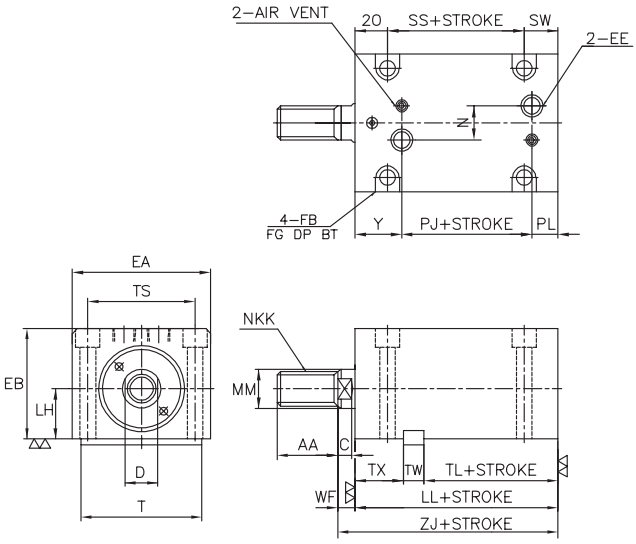
Bore size	MM	N	PJ	PL	SS	SW	T	TL	TS	TV	TW	TX	WF	Y	ZJ
Ø32	Ø18	20	14	12	24	10	70	14	56	□47	12	28	10	28	64
Ø40	Ø22	20	16	12	23	12	70	15	62	□52	12	28	10	27	65
Ø50	Ø28	20	19	13	27	13	80	17	74	□58	14	29	11	28	71
Ø63	Ø35	20	21	13	32	15	100	20	90	□69	16	31	13	33	80
Ø80	Ø45	30	25	18	40	18	100	26	116	□86	16	36	17	35	95
Ø100	Ø55	36	39	21	-	-	-	-	-	□105	-	-	26	35	121
Ø125	Ø70	56	44	26	-	-	-	-	-	□140	-	-	31	35	136

Dimensions-Single Rod Male Thread Standard Type, Axial Angle of Foot (SD, LA)

SD type
Bore size Ø32, Ø40, Ø50, Ø63, Ø80



LA type
Bore size Ø32, Ø40, Ø50, Ø63



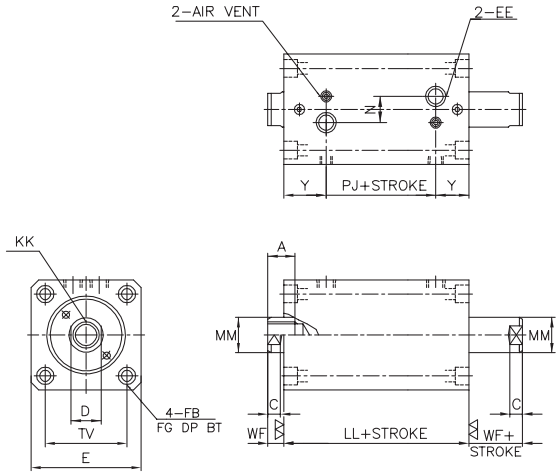
Unit : mm

Bore size	AA	BT		C	D	E	EA	EB	EE	FB		FG		NKK	LH	LL
		SD type	LA type							SD type	LA type	SD type	LA type			
Ø32	20	6.5	8.6	7	16	□62	70	56	Rc(PT)1/4	Ø6.8	Ø9	Ø11	Ø14	M16×1.5	$25^{\pm0.06}$	54
Ø40	20	8.6	10.8	7	20	□70	80	64	Rc(PT)1/4	Ø9	Ø11	Ø14	Ø17.5	M20×1.5	$29^{\pm0.06}$	55
Ø50	35	10.8	13	8	25	□80	94	74	Rc(PT)1/4	Ø11	Ø14	Ø17.5	Ø20	M24×1.5	$34^{\pm0.06}$	60
Ø63	35	13	15.5	9	31	□94	114	89	Rc(PT)1/4	Ø14	Ø16	Ø20	Ø23	M30×1.5	$42^{\pm0.06}$	67
Ø80	60	15.2	18	14	41	□114	142	110	Rc(PT)3/8	Ø16	Ø18	Ø23	Ø26	M39×1.5	$52^{\pm0.06}$	78
Ø100	75	21.5	-	20	50	□145	-	-	Rc(PT)3/8	Ø22	-	Ø32	-	M48×1.5	-	95
Ø125	95	25.5	-	25	65	□185	-	-	Rc(PT)1/2	Ø26	-	Ø39	-	M64×2.0	-	105

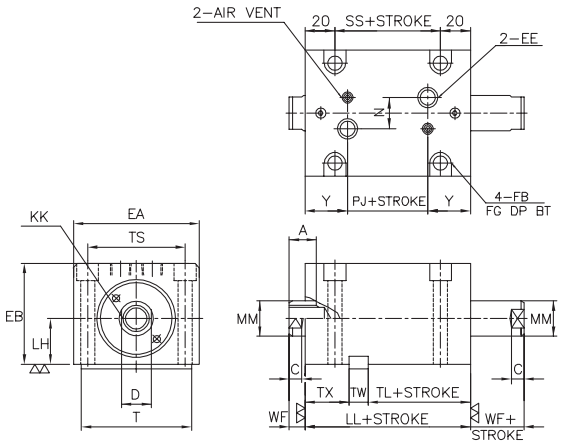
Bore size	MM	N	PJ	PL	SS	SW	T	TL	TS	TV	TW	TX	WF	Y	ZJ
Ø32	Ø18	20	14	12	24	10	70	14	56	□47	12	28	10	28	64
Ø40	Ø22	20	16	12	23	12	70	15	62	□52	12	28	10	27	65
Ø50	Ø28	20	19	13	27	13	80	17	74	□58	14	29	11	28	71
Ø63	Ø35	20	21	13	32	15	100	20	90	□69	16	31	13	33	80
Ø80	Ø45	30	25	18	40	18	100	26	116	□86	16	36	17	35	95
Ø100	Ø55	36	39	21	-	-	-	-	-	□105	-	-	26	35	121
Ø125	Ø70	56	44	26	-	-	-	-	-	□140	-	-	31	35	136

Dimensions-Double Rod Female Thread Standard Type, Axial Angle of Foot (SD, LA)

SD type
Bore size Ø32, Ø40, Ø50, Ø63, Ø80



LA type
Bore size Ø32, Ø40, Ø50, Ø63



Unit : mm

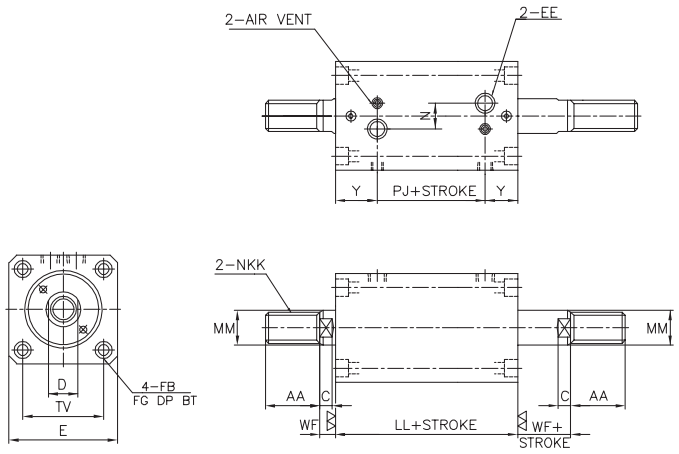
Bore size	A	BT		C	D	E	EA	EB	EE	FB		FG		KK	LH	LL
		SD type	LA type							SD type	LA type	SD type	LA type			
Ø32	15	6.5	8.6	7	16	□62	70	56	Rc(PT)1/4	Ø6.8	Ø9	Ø11	Ø14	M12×1.75	$25^{\pm0.06}$	72
Ø40	20	8.6	10.8	7	19	□70	80	64	Rc(PT)1/4	Ø9	Ø11	Ø14	Ø17.5	M16×2	$29^{\pm0.06}$	72
Ø50	24	10.8	13	8	25	□80	94	74	Rc(PT)1/4	Ø11	Ø14	Ø17.5	Ø20	M20×2.5	$34^{\pm0.06}$	75
Ø63	33	13	15.5	10	31	□94	114	89	Rc(PT)1/4	Ø14	Ø16	Ø20	Ø23	M27×3	$42^{\pm0.06}$	82
Ø80	33	15.2	18	14	41	□114	142	110	Rc(PT)3/8	Ø16	Ø18	Ø23	Ø26	M30×3.5	$52^{\pm0.06}$	95
Ø100	45	21.5	-	20	50	□145	-	-	Rc(PT)3/8	Ø22	-	Ø32	-	M39×4.0	-	112
Ø125	50	25.5	-	25	65	□185	-	-	Rc(PT)1/2	Ø26	-	Ø39	-	M42×4.5	-	117

Unit : mm

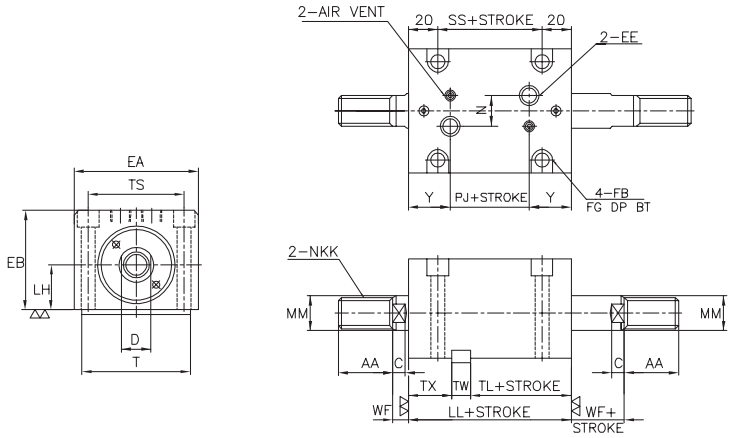
Bore size	MM	N	PJ	SS	T	TL	TS	TV	TW	TX	WF	Y
Ø32	Ø18	20	16	32	70	32	56	□47	12	28	10	28
Ø40	Ø22	20	18	32	70	32	62	□52	12	28	10	27
Ø50	Ø28	20	19	35	80	32	74	□58	14	29	11	28
Ø63	Ø35	20	16	42	100	35	90	□69	16	31	13	33
Ø80	Ø45	30	25	55	100	43	116	□86	16	36	17	35
Ø100	Ø55	36	42	-	-	-	-	□105	-	-	26	35
Ø125	Ø70	56	47	-	-	-	-	□140	-	-	31	35

Dimensions-Double Rod Male Thread Standard Type, Axial Angle of Foot (SD, LA)

SD type / Bore size Ø32, Ø40, Ø50, Ø63, Ø80



LA type / Bore size Ø32, Ø40, Ø50, Ø63



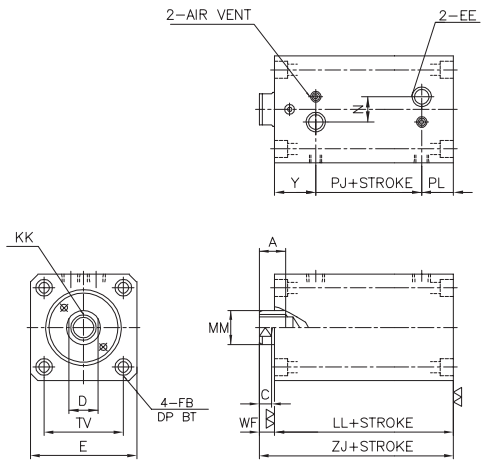
Unit : mm

Bore size	AA	BT		C	D	E	EA	EB	EE	FB		FG		NKK	LH	LL
		SD type	LA type							SD type	LA type	SD type	LA type			
Ø32	20	6.5	8.6	7	16	□62	70	56	Rc(PT)1/4	Ø6.8	Ø9	Ø11	Ø14	M16×1.5	$25^{\pm0.06}$	72
Ø40	20	8.6	10.8	7	20	□70	80	64	Rc(PT)1/4	Ø9	Ø11	Ø14	Ø17.5	M20×1.5	$29^{\pm0.06}$	72
Ø50	35	10.8	13	8	25	□80	94	74	Rc(PT)1/4	Ø11	Ø14	Ø17.5	Ø20	M24×1.5	$34^{\pm0.06}$	75
Ø63	35	13	15.5	9	31	□94	114	89	Rc(PT)1/4	Ø14	Ø16	Ø20	Ø23	M30×1.5	$42^{\pm0.06}$	82
Ø80	60	15.2	18	14	41	□114	142	110	Rc(PT)3/8	Ø16	Ø18	Ø23	Ø26	M39×1.5	$52^{\pm0.06}$	95
Ø100	75	21.5	-	20	50	□145	-	-	Rc(PT)3/8	Ø22	-	Ø32	-	M48×1.5	-	112
Ø125	95	25.5	-	25	65	□185	-	-	Rc(PT)1/2	Ø26	-	Ø39	-	M64×2.0	-	117

Bore size	MM	N	PJ	SS	T	TL	TS	TV	TW	TX	WF	Y
Ø32	Ø18	20	16	32	70	32	56	□47	12	28	10	28
Ø40	Ø22	20	18	32	70	32	62	□52	12	28	10	27
Ø50	Ø28	20	19	35	80	32	74	□58	14	29	11	28
Ø63	Ø35	20	16	42	100	35	90	□69	16	31	13	33
Ø80	Ø45	30	25	55	100	43	116	□86	16	36	17	35
Ø100	Ø55	36	42	-	-	-	-	□105	-	-	26	35
Ø125	Ø70	56	47	-	-	-	-	□140	-	-	31	35

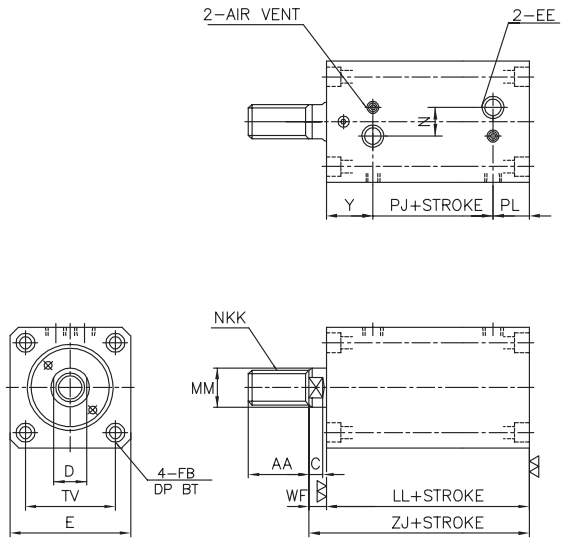
Dimensions-Single Long Stroke Type (SD)

Female Thread /Bore size Ø32, Ø40, Ø50, Ø63, Ø80



Administrative limit
Ø32 = 101 ~ 200㎜
Ø40, Ø50, Ø63, Ø80 = 101 to 250㎜

Male Thread /Bore size Ø32, Ø40, Ø50, Ø63, Ø80



Administrative limit
Ø32 = 101 ~ 200㎜
Ø40, Ø50, Ø63, Ø80 = 101 to 250㎜

Unit : mm

Bore size	Stroke	A	AA	BT	C	D	□E	EE	FB	KK	LL	N	PJ	PL	MM	NKK	□TV	WF	Y	ZJ
Ø32	101~200	15	20	12	7	16	□62	Rc(PT)1/4	M6xP1.0	M12xP1.75	72	20	16	28	Ø18	M16xP1.5	□47	10	28	82
Ø40	101~250	20	20	16	7	20	□70	Rc(PT)1/4	M8xP1.25	M16xP2.0	72	20	18	27	Ø22	M20xP1.5	□52	10	27	82
Ø50	101~250	24	35	20	8	24	□80	Rc(PT)1/4	M10xP1.5	M20xP2.5	75	20	19	28	Ø28	M24xXP1.5	□58	11	28	86
Ø63	101~250	33	35	24	9	30	□94	Rc(PT)1/4	M12xP1.75	M27xP3.0	82	20	16	33	Ø35	M30xP1.5	□69	13	33	95
Ø80	101~250	33	60	28	14	41	□114	Rc(PT)3/8	M14xP2.0	M30xP3.5	95	30	25	35	Ø45	M39xP1.5	□86	17	35	112