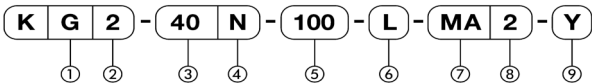


K Series

Air cylinder/Standard type
 Ø40, Ø50, Ø63, Ø80, Ø100

Ordering Instructions



① Magnet
 G : Cylinder with switch available (With built-in magnet)

② Action
 2 : Double acting, single rod

③ Bore (mm)
 40 : Ø40
 50 : Ø50
 63 : Ø63
 80 : Ø80
 100 : Ø100

④ Cushion
 No symbol : Both-side air cushion (Standard)
 R : Rod side air cushion
 H : Head side air cushion
 N : No cushion
 F : Cushion on the other side (R)

⑤ Stroke (mm)
 Refer to Standard Stroke Table

⑥ Mounting
 N : Standard type
 L : Axial foot
 A : Rod side flange
 B : Head side flange
 C : Eye
 W : Clevis
 T : Center trunnion

Model No. of Mounting Bracket

Bore (mm)	Ø40	Ø50	Ø63	Ø80	Ø100
Axial foot mount bracket	K40-L	K50-L	K63-L	K80-L	K100-L
Flange mount bracket	K40-A	K50-A	K63-A	K80-A	K100-A
Eye mount bracket	K40-C	K50-C	K63-C	K80-C	K100-C
Clevis mount bracket	K40-W	K50-W	K63-W	K80-W	K100-W
Trunnion mount bracket	K40-T	K50-T	K63-T	K80-T	K100-T

Model No. of Sensor Switch Mounting Bracket

Bore (mm)	M type sensor switch	
	Reed	Proximity
Ø40	K40-MJ	K40-MTJ
Ø50		
Ø63		
Ø80	K80-MJ	K80-MTJ
Ø100		

⑦ Sensor switch type

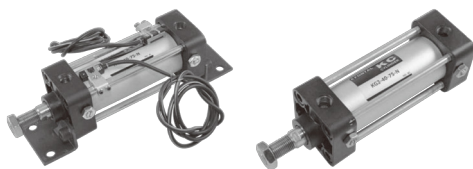
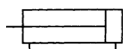
No symbol	No switch	
MA	MA-1 (AC110V, DC24V)	M type reed switch
MB	MD-1 (DC24V)	
MC	MD-3 (DC5, 6V)	
MD	MR (AC, DC5~110V)	
ME	MA-2L (AC110V)	
MF	MA-2H (AC220V)	M type proximity switch
MG	MT-3 (DC5~30V)	
MH	MT-3U (DC5~30V)	
MJ	MT-2 (DC24V)	
MK	MT-2U (DC24V)	

⑧ Number of switches
 No symbol : No switch
 2 : With 2 units
 1 : With 1 unit

⑨ Accessories
 No symbol : Rod end nut
 Y : With rod end clevis
 I : With rod end eye
 (note) Y : Provided with pin

Model No. of Packing

Bore (mm)	Packing
Ø40	K40-PS
Ø50	K50-PS
Ø63	K63-PS
Ø80	K80-PS
Ø100	K100-PS

**JIS Label**

Double acting

Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit:

$$\text{Pressure } Y (\text{MPa}) = X (\text{kgf/cm}^2) \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y (\text{N}) = X (\text{kgf}) \times 9.80665$$

Specifications

Action	Unit	Double-acting
Fluid		Non-lubricated air/Lubricated air
Pressure range	MPa (kgf/cm ²)	0.05~1 (0.51~10.2)
Temperature range	°C	5~60
Piston speed range	mm/s	50~500
Cushion		Standard
Piston stroke allowance	mm	~250 ^{+1.0} ₀ 251~1000 ^{+1.4} ₀
Mounting		Standard type, Axial foot, Rod side flange, Head side flange, Eye, Clevis, Center trunnion

(Note) When piston is within the buffer stroke range, the minimum pneumatic pressure is 0.1MPa{1.0kgf/cm²}.
If it falls outside of the range, the minimum pneumatic pressure is 0.05MPa{0.51kgf/cm²}.

Standard Stroke

(Unit: mm)

Bore	Standard Stroke	Max. Stroke
Ø40	50, 75, 100, 150, 200, 250, 300, 350, 400, 450, 500	600
Ø50		800
Ø63		
Ø80		
Ø100		1000

Cushion Stroke

(Unit: mm)

Bore	Cushion Stroke
Ø40	16
Ø50	
Ø63	
Ø80	20
Ø100	

Theoretical Output

(Unit: kgf)

Bore	Mounting	Operating pressure (kgf/cm ²)									
		1	2	3	4	5	6	7	8	9	10
Ø40	Out stroke	12	25	37	50	62	75	87	100	113	125
	In stroke	10	21	31	42	52	63	73	84	95	105
Ø50	Out stroke	19	39	58	78	98	117	137	157	176	196
	In stroke	16	32	49	65	82	98	115	131	148	164
Ø63	Out stroke	31	62	93	124	155	187	218	249	280	311
	In stroke	28	56	84	112	140	168	196	224	252	280
Ø80	Out stroke	50	100	150	201	251	301	351	402	452	502
	In stroke	45	90	136	181	226	272	317	362	408	432
Ø100	Out stroke	78	157	235	314	392	471	549	628	706	785
	In stroke	71	142	214	285	357	428	500	571	643	714

(Note) Effective output = Theoretical output x 0.85

Accessories

	Name	Standard type	Axial foot	Rod side flange	Head side flange	Eye	Clevis	Center trunnion
Standard	Rod end nut	○	○	○	○	○	○	○
	Clevis fixed shaft type	—	—	—	—	—	○	—
Optional	With rod end clevis	○	○	○	○	○	○	○
	With rod end eye	○	○	○	○	○	○	○

Cylinder Mass

(Unit : g)

Bore (mm)	Standard Mass (0 Stroke)						Additional weight
	Standard type	Axial foot	Mounting plate	Eye	Clevis	Center trunnion	Additional 1mm on stroke
∅40	0.66	0.84	0.82	0.92	0.91	1.27	0.0035
∅50	0.94	1.16	1.20	1.29	1.36	1.74	0.0046
∅63	1.24	1.54	1.57	1.89	1.95	2.10	0.0051
∅80	2.34	2.85	2.96	3.75	3.88	4.57	0.0082
∅100	3.09	3.72	3.94	5.14	5.32	6.27	0.0104

Calculation formula :

(Ex) KG2-50-100-L

Standard weight ----- 1.16kg

Additional weight----- 0.0046/stroke

Stroke ----- 100/stroke

$$1.16 + 0.0046 \times 100 = 1.62\text{kg}$$

Model With Switch

M Type Reed Switch

Lead With Wire



Model No.	Rated voltage (V)	Rated current (mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5, 6	Max.50 (Inductive load) Max.300 (Resistive load)	○	IC circuit
MR	AC 5~110 DC	Max.50 (Inductive load) Max.300 (Resistive load)	No indicator	Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

M Type Proximity Switch

Lead With Wire



Model No.	Rated voltage (V)	Rated current range (mA)	Pilot lamp (Lights up at CN)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

(Note) The MA-2L is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2L.

The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Minimum Stroke with M Type Switch

(Unit: mm)

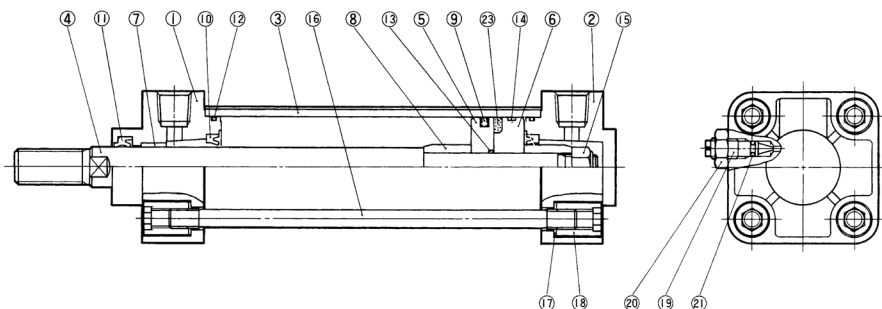
Bore	Number of switches			
	Aside from center trunnion			Center trunnion
	With 2 units (on the same surface)	With 2 units (on different surfaces)	With 1 unit	With 2 units (on the same surface)
Ø40	10	10	5	75
Ø50				85
Ø63				
Ø80				
Ø100				100



When changing the mounting method, please use a hex wrench.

Bore (mm)	Hexagon socket round nut	Hexagon socket screw
Ø40, Ø50, Ø63	M8×1.25 Width across flats: 8mm	M8×1.25 Width across flats: 6mm
Ø80, Ø100	M10×1.5 Width across flats: 10mm	M10×1.5 Width across flats: 8mm

Construction



Parts List

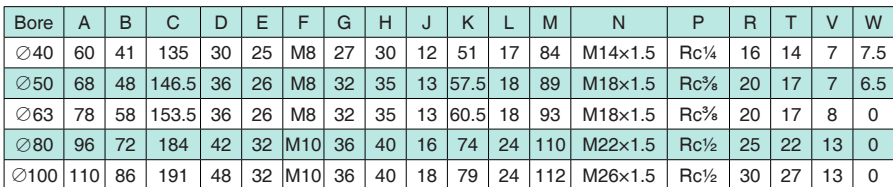
No.	Description	No.	Description
1	Front cover	13	Sleeve gasket
2	End cover	14	Wear ring
3	Outer tube	15	U-shaped nut
4	Piston rod	16	Iron rod
5	Piston A	17	Washer
6	Piston B	18	Tie rod nut
7	Bearing	19	Cushion needle
8	Cushion sleeve	20	Cushion locking nut
9	Piston packing	21	Cushion needle packing
10	Cushion packing	22	Rod end nut
11	Rod packing	23	Magnet
12	O-ring for cover		

Packing List

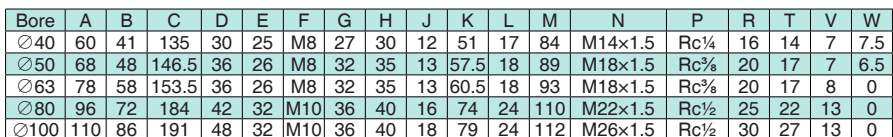
Bore (mm)	9. Piston packing		10. Cushion packing		11. Rod packing		12. O-ring for cover		13. Sleeve gasket		21. Cushion needle packing	
	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount	Model No.	Amount
Ø40	PSD-40	1	CP-18	2	PDU-16	1	KG40	2	IN-11.2	1	P3	2
Ø50	PSD-50	1	CP-24	2	PDU-20	1	KG50	2	P12	1	P3	2
Ø63	PSD-63	1	CP-24	2	PDU-20	1	KG63	2	P12	1	P3	2
Ø80	PSD-80	1	CP-30	2	PDU-25	1	KG80	2	P16	1	P3	2
Ø100	PSD-100	1	CP-35	2	PDU-30	1	KG100	2	P20	1	P3	2

(Note) Seal repair and assembly kits are also available for purchase.

(Unit: mm)



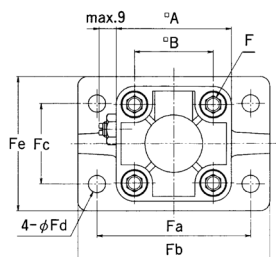
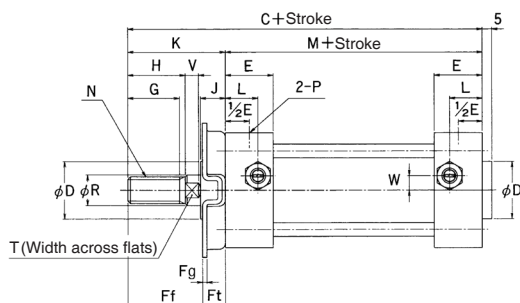
(Unit: mm)



Bore	Lc	Ld	Le	Lf	Lg	Li	Lk	Ls	Lt	Lu
Ø40	42	9	40	27	138	162	12	24	3.2	60
Ø50	50	9	45	27.5	144	169	12.5	30	3.2	68
Ø63	59	11.5	50	36.5	166	193	13.5	24	3.2	78
Ø80	76	13.5	65	47	204	238	17	27	4	100
Ø100	92	13.5	75	50	212	246	17	29	4	116

Rod side flange mounting/A

(Unit: mm)

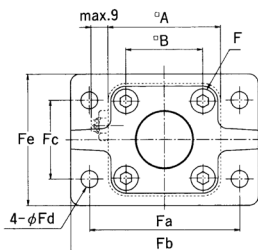
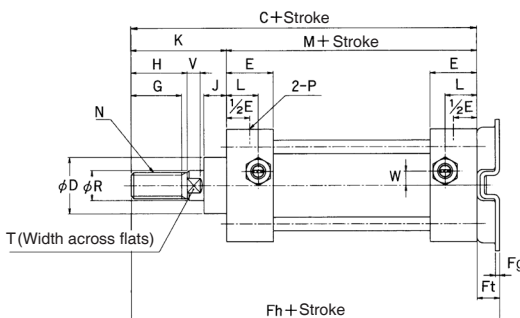


Bore	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	V	W
∅40	60	41	135	30	25	M8	27	30	12	51	17	84	M14x1.5	Rc1/4	16	14	7	7.5
∅50	68	48	146.5	36	26	M8	32	35	13	57.5	18	89	M18x1.5	Rc3/8	20	17	7	6.5
∅63	78	58	153.5	36	26	M8	32	35	13	60.5	18	93	M18x1.5	Rc3/8	20	17	8	0
∅80	96	72	184	42	32	M10	36	40	16	74	24	110	M22x1.5	Rc1/2	25	22	13	0
∅100	110	86	191	48	32	M10	36	40	18	79	24	112	M26x1.5	Rc1/2	30	27	13	0

Bore	Fa	Fb	Fc	Fd	Fe	Ff	Fg	Ft
∅40	80	100	42	9	70	39	2.3	12
∅50	90	110	50	9	80	45	3.2	12.5
∅63	105	130	59	11.5	92	43	3.2	17.5
∅80	130	160	76	13.5	114	53	4	21
∅100	150	180	92	13.5	130	54	4	25

Head side flange mounting/B

(Unit: mm)

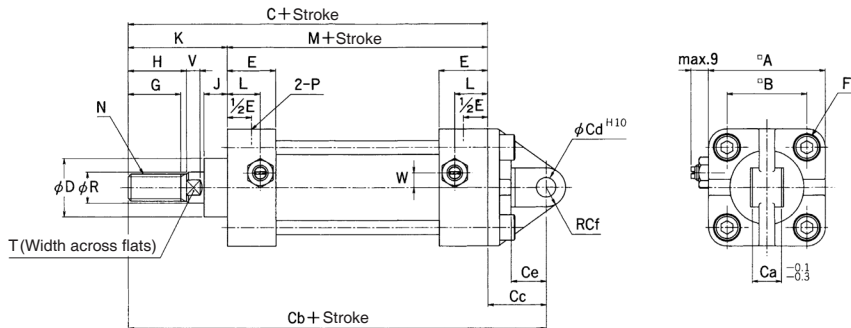


Bore	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	V	W
∅40	60	41	135	30	25	M8	27	30	12	51	17	84	M14x1.5	Rc1/4	16	14	7	7.5
∅50	68	48	146.5	36	26	M8	32	35	13	57.5	18	89	M18x1.5	Rc3/8	20	17	7	6.5
∅63	78	58	153.5	36	26	M8	32	35	13	60.5	18	93	M18x1.5	Rc3/8	20	17	8	0
∅80	96	72	184	42	32	M10	36	40	16	74	24	110	M22x1.5	Rc1/2	25	22	13	0
∅100	110	86	191	48	32	M10	36	40	18	79	24	112	M26x1.5	Rc1/2	30	27	13	0

Bore	Fa	Fb	Fc	Fd	Fe	Fg	Fh	Ft
∅40	80	100	42	9	70	2.3	147	12
∅50	90	110	50	9	80	3.2	159	12.5
∅63	105	130	59	11.5	92	3.2	171	17.5
∅80	130	160	76	13.5	114	4	205	21
∅100	150	180	92	13.5	130	4	216	25

Eye mounting/C

(Unit: mm)

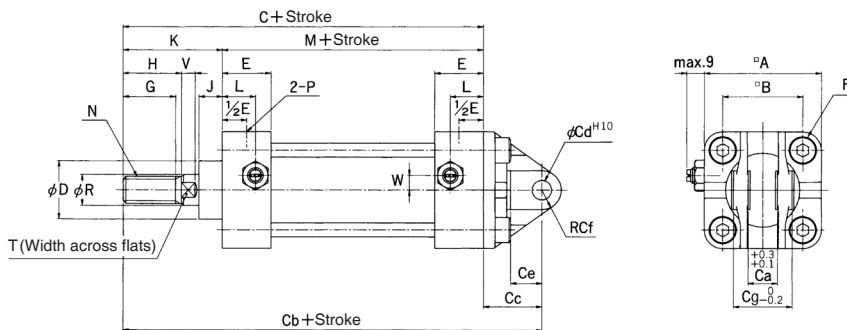


Bore	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	V	W
Ø40	60	41	135	30	25	M8	27	30	12	51	17	84	M14×1.5	Rc¼	16	14	7	7.5
Ø50	68	48	146.5	36	26	M8	32	35	13	57.5	18	89	M18×1.5	Rc⅜	20	17	7	6.5
Ø63	78	58	153.5	36	26	M8	32	35	13	60.5	18	93	M18×1.5	Rc⅜	20	17	8	0
Ø80	96	72	184	42	32	M10	36	40	16	74	24	110	M22×1.5	Rc½	25	22	13	0
Ø100	110	86	191	48	32	M10	36	40	18	79	24	112	M26×1.5	Rc½	30	27	13	0

Bore	Ca	Cc	Cd	Ce	Cf	Cb
Ø40	15	30	10	16	10	165
Ø50	18	35.5	12	19	12	182
Ø63	25	42.5	16	23	16	196
Ø80	31.5	51	20	28	20	235
Ø100	35.5	65	25	36	25	256

Clevis mounting/W

(Unit: mm)

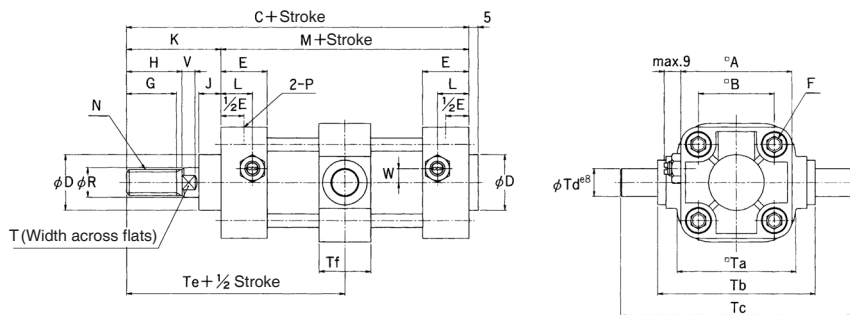


Bore	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	V	W
Ø40	60	41	135	30	25	M8	27	30	12	51	17	84	M14×1.5	Rc¼	16	14	7	7.5
Ø50	68	48	146.5	36	26	M8	32	35	13	57.5	18	89	M18×1.5	Rc⅜	20	17	7	6.5
Ø63	78	58	153.5	36	26	M8	32	35	13	60.5	18	93	M18×1.5	Rc⅜	20	17	8	0
Ø80	96	72	184	42	32	M10	36	40	16	74	24	110	M22×1.5	Rc½	25	22	13	0
Ø100	110	86	191	48	32	M10	36	40	18	79	24	112	M26×1.5	Rc½	30	27	13	0

Bore	Ca	Cc	Cd	Ce	Cf	Cg	Cb
Ø40	15	30	10	16	10	30	165
Ø50	18	35.5	12	19	12	35.5	182
Ø63	25	42.5	16	23	16	50	196
Ø80	31.5	51	20	28	20	63	235
Ø100	35.5	65	25	36	25	71	256

Center trunnion mounting/T

(Unit: mm)

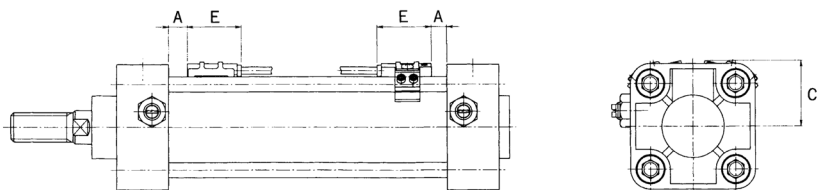


Bore	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	T	V	W
Ø40	60	41	135	30	25	M8	27	30	12	51	17	84	M14×1.5	Rc1/4	16	14	7	7.5
Ø50	68	48	146.5	36	26	M8	32	35	13	57.5	18	89	M18×1.5	Rc3/8	20	17	7	6.5
Ø63	78	58	153.5	36	26	M8	32	35	13	60.5	18	93	M18×1.5	Rc3/8	20	17	8	0
Ø80	96	72	184	42	32	M10	36	40	16	74	24	110	M22×1.5	Rc1/2	25	22	13	0
Ø100	110	86	191	48	32	M10	36	40	18	79	24	112	M26×1.5	Rc1/2	30	27	13	0

Bore	Ta	Tb	Tc	Td	Te	Tf
Ø40	64	85	125	15	93	28
Ø50	76	95	135	15	102	28
Ø63	92	110	160	18	107	30
Ø80	112	140	200	25	129	40
Ø100	136	162	222	25	135	45

Sensor switch mounting position / M type sensor switch

(Unit: mm)



Bore	A		C
	Reed	Proximity	
Ø40	5.5	11.5	32
Ø50	7	13	37
Ø63	9	15	42
Ø80	11.5	17.5	51
Ø100	12.5	18.5	59

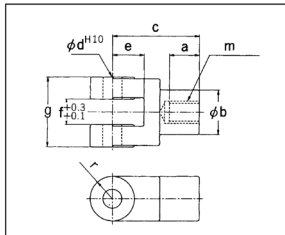
Switch	E
M type reed switch	28
M type proximity switch	26.5(24)

(Note) value within bracket is of the MT-“U type.

Accessories

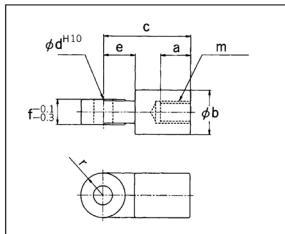
(Unit: mm)

Rod end clevis



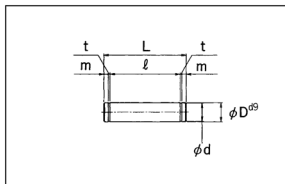
Model. No	Applicable bore	a	b	c	d	e	f	g	m	r
K40-Y	∅40	22	28	55	12	20	16	44	M14×1.5	14
K50-Y	∅50, ∅63	27	30	60	12	20	16	44	M18×1.5	15
K80-Y	∅80	37	40	71	18	26	28	60	M22×1.5	20
K100-Y	∅100	37	44	83	20	28	30	60	M26×1.5	22

Rod end eye



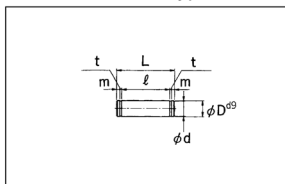
Model. No	Applicable bore	a	b	c	d	e	f	m	r
K40-I	∅40	22	28	55	12	20	16	M14×1.5	14
K50-I	∅50, ∅63	27	30	60	12	20	16	M18×1.5	15
K80-I	∅80	37	40	71	18	26	28	M22×1.5	20
K100-I	∅100	37	44	83	20	28	30	M26×1.5	22

Axis rod end clevis fixed shaft type



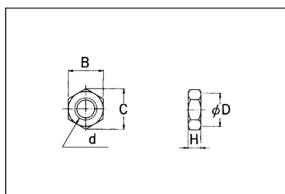
Model. No	Applicable bore	D	L	d	ℓ	m	t	snap ring
K40-YP	∅40, ∅50, ∅63	12	52	11.5	44.2	2.75	1.15	C12
K80-YP	∅80	18	68	17	60.2	2.55	1.35	C18
K100-YP	∅100	20	74	19	66.2	2.55	1.35	C20

Clevis fixed shaft type



Model. No	Applicable bore	D	L	d	ℓ	m	t	snap ring
K40-WP	∅40	10	36.5	9.6	30.2	2	1.15	C10
K50-WP	∅50	12	42	11.5	35.7	2	1.15	C12
K63-WP	∅63	16	56.5	15.2	50.2	2	1.15	C16
K80-WP	∅80	20	70	19	63.2	2	1.35	C20
K100-WP	∅100	25	78	23.9	71.2	2	1.35	C25

Rod end nut



Model. No	Applicable bore	m	H	B	C	D
J40-RN	∅40	M14×1.5	8	22	25.4	21
K50-RN	∅50, ∅63	M18×1.5	11	27	31.2	26
K80-RN	∅80	M22×1.5	13	32	37	31
K100-RN	∅100	M26×1.5	16	41	47.3	39

(Note) Bore 40mm can be shared with J series.