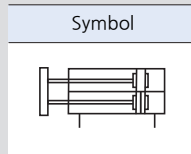
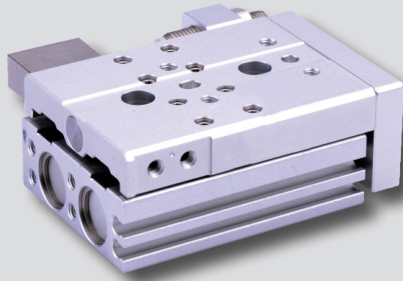


# KTXQ series



### Features

- High precision and high rigidity are realized by anti-rust and dust-proof by linear ball bearing method
- Adjusters (option) can be attached on both sides
- Workpieces can be attached in two directions
- Auto switch can be attached to slot
- The output is doubled with the dual load method
- The cylinder can be mounted from three directions

## How to order

KTXQ 20 - 30 S AS  

①            ②            ③            ④            ⑤            ⑥

### ① Series

KTXQ	Compact table cylinder(Linear ball bearing)
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### ② Bore size

6	6mm	16	16mm
8	8mm	20	20mm
12	12mm	25	25mm

### ③ Stroke

Bore size	Standard stroke	Max. stroke
6	10 20 30 40 50	50
8	10 20 30 40 50 75	75
12	10 20 30 40 50 75 100	100
16	10 20 30 40 50 75 100 125	125
20	10 20 30 40 50 75 100 125 150	150
25	10 20 30 40 50 75 100 125 150	150

### ④ Magnet

S	Built-in magnet
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### ⑥ Thread type

Nil	Rc(PT) (Standard)
G	Built-in magnet
T	NPT

### ⑤ Adjustment unit

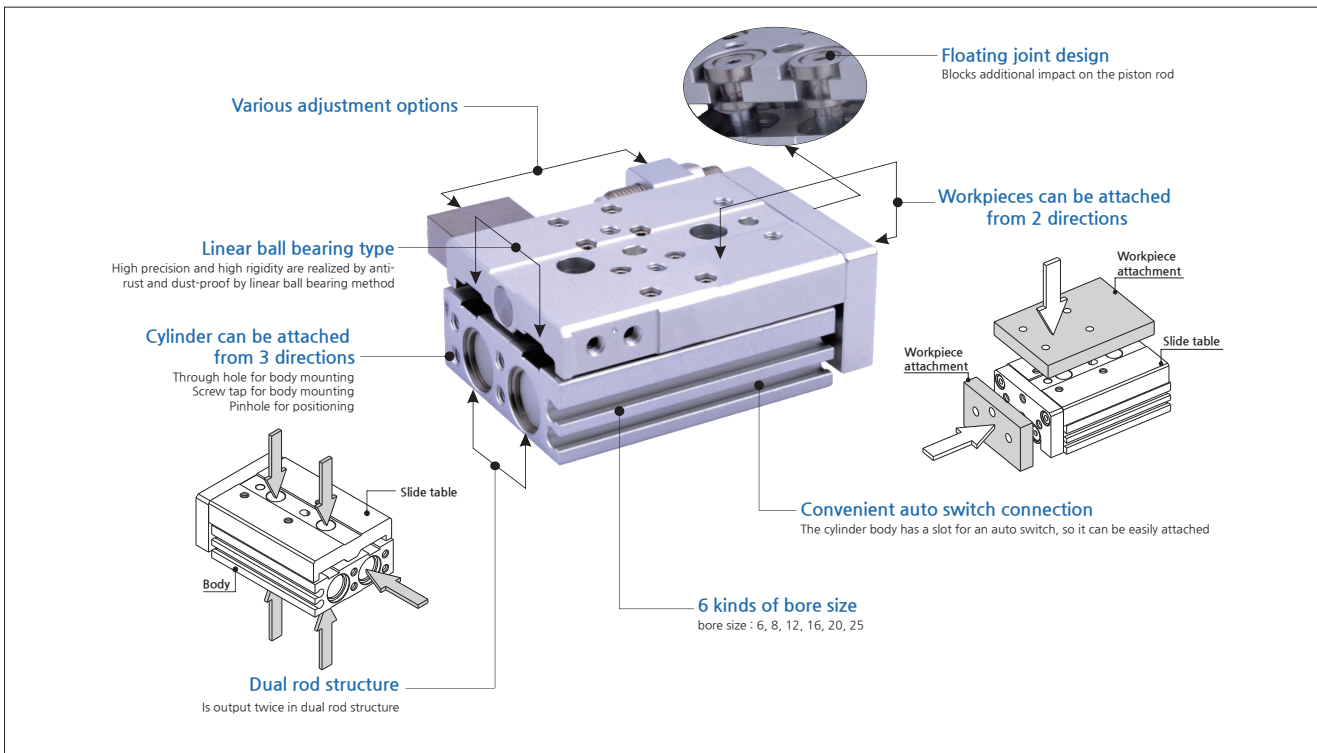
Nil	
None	
A	B
Adjustable rubber stopper (Both ends)	Shock absorber (Both ends)
AS	BS
Adjustable rubber stopper (Extension)	Shock absorber (Extension)
AF	BF
Adjustable rubber stopper (Retraction)	Shock absorber (Retraction)

※ 60 shock absorbers (B, BS, BF) can not be applied.

### Specifications

Bore size(mm)	6	8	12	16	20	25
Number of guide rails	Single guide rail			Double guide rail		
Acting type	Double acting					
Fluid	Air					
Operating pressure	0.15~0.7MPa					
Proof pressure	1.2MPa					
Ambient & fluid temperature	-20 ~ +70°C					
Operating piston speed	50~500mm/s					
Tolerance of stroke	100 Below $+1.0_0$			101 Above $+1.5_0$		
Cushion	Bumper (Both sides), Shock absorber					
Auto switch applied model	D-A93K, D-F9NK, D-F9PK, D-F9BK					
Port size	M5x0.8				Rc(PT)1/8	

### Structure

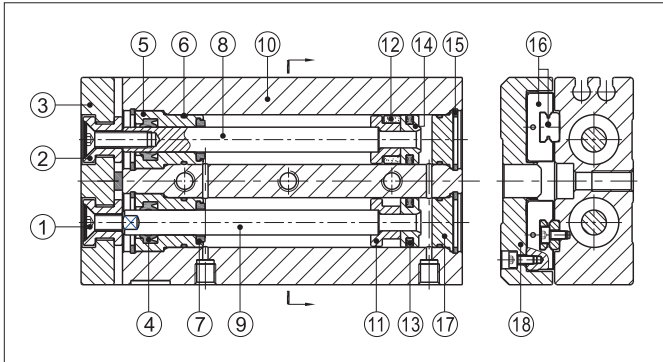


### Theoretical thrust table

Unit:mm

Bore size(mm)	Rod size(mm)	Acting type	Pressure area (mm <sup>2</sup> )	Operating pressure(MPa)					
				0.2	0.3	0.4	0.5	0.6	0.7
6	3	Extension	42	8	13	17	21	25	29
		Retraction	57	11	17	23	29	34	40
8	4	Extension	75	15	23	30	38	45	53
		Retraction	101	20	30	40	51	61	71
12	6	Extension	170	34	51	68	85	102	119
		Retraction	226	45	68	90	113	136	158
16	8	Extension	302	60	91	121	151	181	211
		Retraction	402	80	121	161	201	241	281
20	10	Extension	471	94	141	188	236	283	330
		Retraction	628	126	188	251	314	377	440
25	12	Extension	756	151	227	302	378	454	529
		Retraction	982	186	295	393	491	589	687

Structure

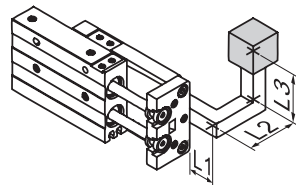


No.	Parts	Material	No.	Parts	Material
1	Screw	Carbon steel	11	Magnet holder	Brass
2	Floating joint	Carbon steel	12	Magnet	Sintered metal
3	Fixing plate	Aluminum alloy	13	Piston seal	NBR
4	Rod seal	NBR	14	Piston	Brass
5	Front cover	Aluminum alloy	15	C Clip	Spring steel
6	O-ring	NBR	16	Linear guide combination	Combination
7	Bumper	TPU			
8	Piston rod A	Stainless steel	17	Back cover	Brass
9	Piston rod B	Carbon steel	18	Slide table	Aluminum alloy
10	Body	Aluminum alloy			

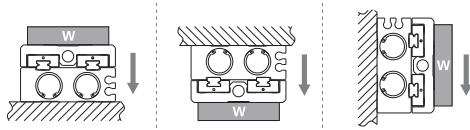
How to select a model

A. Check usage conditions

1. Model used (Inner diameter, Stroke)
2. Cushion type (Bumper, Shock absorber)
3. Workpiece mounting position
4. Attachment posture
5. Average speed  $V_a$ (mm/s)
6. Load mass  $W$ (N) [Pic 1](#)
7. Overhang amount  $L1, L2, L3$ (mm)



[Pic 1](#) Load mass



B. Kinetic energy

1. Calculate the kinetic energy of the load  $E$ (J)  

$$E = \frac{1}{2} \times \frac{W}{g} \times \left( \frac{1.4 \times V_a}{1000} \right)^2$$

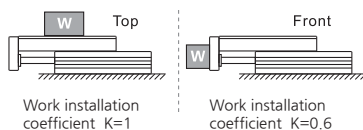
$$E_a = K \times E_{max}$$
2. Allowable kinetic energy calculation  $E_a$ (J)  
 $K$ : Work installation coefficient [Pic 2](#)  
 $E_{max}$ : Max. allowable kinetic energy [Tab 1](#)
3. Check that the kinetic energy of the load does not exceed the allowable kinetic energy.  $E \leq E_a$

C. Load factor

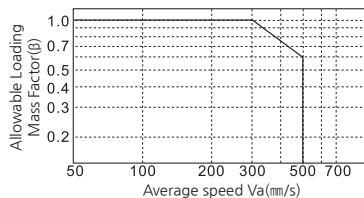
1. Calculation of permissible load mass  $W_a$ (N)  

$$W_a = K \times \beta \times W_{max}$$
 $K$ : Work installation coefficient [Pic 2](#)  
 $W_{max}$ : Max. permissible load mass [Tab 1](#)  
 $\beta$ : Allowable loading mass factor [Pic 3](#)
2. Make sure the mass does not exceed the allowable load :  $W \leq W_a$

[Pic 2](#) Work installation coefficient K



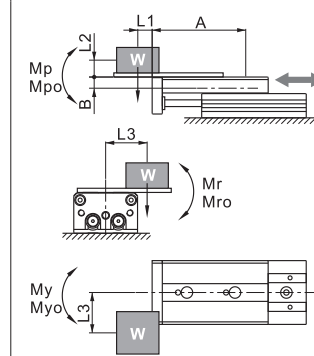
[Pic 3](#) Allowable Loading Mass Factor  $\beta$



D. Moment

Horizontal attachment

1. Moment Calculation:  $M_p, M_{po}, M_y, M_{yo}, M_r, M_{ro}$ (Nm)



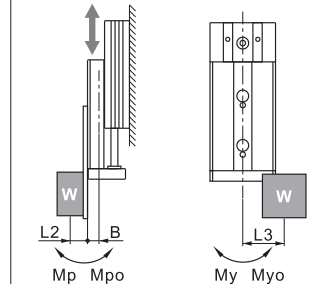
Dynamic moment: $M_p = W \times (L1 + A) / 1000$
Static moment: $M_{po} = \frac{W \times (L1 + A)}{1000} + \frac{W \times a \times (L2 + B)}{1000 \times g}$
Dynamic moment: $M_r = W \times L3 / 1000$
Static moment: $M_{ro} = (W \times a \times L3) / 1000g$
Dynamic moment: $M_y = 0$
Static moment: $M_{yo} = (W \times a \times L3) / 1000g$

2. Check

Dynamic moment:	$\frac{M_p}{M_{p_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_r}{M_{r_{max}}} \leq 1$
Static moment:	$\frac{M_{po}}{M_{po_{max}}} + \frac{M_{yo}}{M_{yo_{max}}} + \frac{M_{ro}}{M_{ro_{max}}} \leq 1$

Vertical attachment

1. Moment Calculation:  $M_p, M_{po}, M_y, M_{yo}$ (Nm)



Dynamic moment: $M_p = W \times (L2 + B) / 1000$
Static moment: $M_{po} = \frac{W \times (L2 + B)}{1000} + \frac{W \times a \times (L2 + B)}{1000 \times g}$
Dynamic moment: $M_y = W \times L3 / 1000$
Static moment: $M_{yo} = \frac{W \times a \times L3}{1000g} + \frac{W \times L3}{1000}$

2. Check

Dynamic moment:	$\frac{M_p}{M_{p_{max}}} + \frac{M_y}{M_{y_{max}}} \leq 1$
Static moment:	$\frac{M_{po}}{M_{po_{max}}} + \frac{M_{yo}}{M_{yo_{max}}} \leq 1$

Compact table cylinder  
(Linear ball bearing)

**Tab 1** Max. allowable kinetic energy (E<sub>max</sub>)  
Max. permissible load mass (W<sub>max</sub>)

Model	Max. allowable kinetic energy E <sub>max</sub> (J)			Max. permissible load mass W <sub>max</sub> (N)
	Standard	Rubber stopper	Shock absorber	
KTXQ6	0.01	0.01	-	4
KTXQ8	0.024	0.024	0.048	8
KTXQ12	0.05	0.05	0.1	15
KTXQ16	0.1	0.1	0.2	30
KTXQ20	0.13	0.13	0.26	40
KTXQ25	0.22	0.22	0.44	70

**Symbol mark**

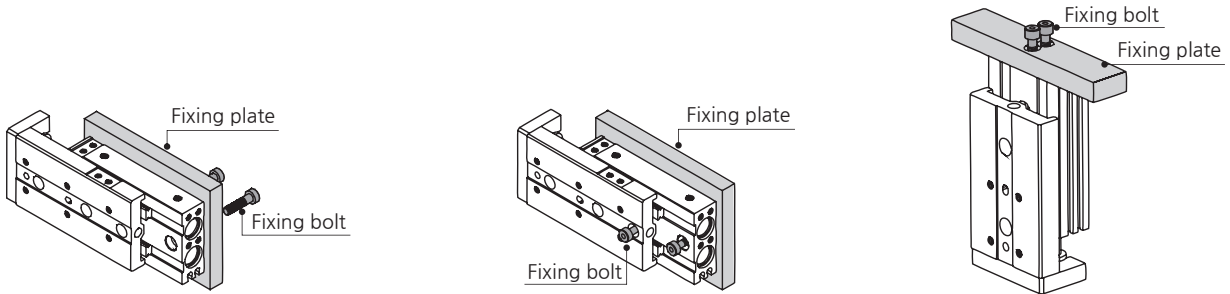
Symbol	Item	Unit
A, B	Moment center position distance correction value	mm
a	Inertial acceleration	-
E	Kinetic energy	J
E <sub>a</sub>	Allowable kinetic energy	J
E <sub>max</sub>	Max. allowable kinetic energy	J
g	Gravitational acceleration g=9.81	m/s <sup>2</sup>
K	Work installation coefficient	-
L1, L2, L3	Overhang amount	mm
M <sub>p</sub> , M <sub>y</sub> , M <sub>r</sub>	Dynamic moment (Pitch,Yaw,Roll)	Nm
M <sub>p<sub>max</sub></sub> , M <sub>y<sub>max</sub></sub> , M <sub>r<sub>max</sub></sub>	Max. permissible dynamic moment (Pitch,Yaw,Roll)	Nm
M <sub>po</sub> , M <sub>yo</sub> , M <sub>ro</sub>	Static moment (Pitch,Yaw,Roll)	Nm
M <sub>po<sub>max</sub></sub> , M <sub>yo<sub>max</sub></sub> , M <sub>ro<sub>max</sub></sub>	Max. permissible static moment (Pitch,Yaw,Roll)	Nm
V <sub>a</sub>	Average speed	mm/s
W	Load mass	N
W <sub>max</sub>	Max. permissible load mass	N
β	Allowable loading mass factor	-

**Tab 2** Max. allowable moment (Nm)  
Moment center position distance correction value (mm)

Bore size	Stroke	Static moment			Dynamic moment			Correction value	
		M <sub>po<sub>max</sub></sub>	M <sub>yo<sub>max</sub></sub>	M <sub>ro<sub>max</sub></sub>	M <sub>p<sub>max</sub></sub>	M <sub>y<sub>max</sub></sub>	M <sub>r<sub>max</sub></sub>	A	B
6	10	3.3	3.8	2.6	0.7	0.7	0.6	30	7
	20	3.3	3.8	2.6	0.7	0.8	0.6	40	
	30	3.3	3.8	2.6	0.7	0.8	0.6	50	
	40	7.2	7.9	3.6	1.3	1.3	0.6	60	
	50	12.4	12.7	4.7	1.8	1.8	0.6	70	
8	10	10.1	9.1	8.8	2.5	2.5	2.0	30	7
	20	10.1	9.1	8.8	2.6	2.6	2.0	40	
	30	10.1	9.1	8.8	2.8	2.8	2.0	50	
	40	12.4	10.8	10.1	3.4	3.4	2.3	60	
	50	23.6	24.8	13.9	4.4	4.4	2.1	70	
12	10	8.5	8.5	13.6	2.5	2.5	4	32	11
	20	8.5	8.5	13.6	2.5	2.5	4	44	
	30	8.5	8.5	13.6	2.5	2.5	4	54	
	40	8.5	8.5	13.6	2.5	2.5	4	62	
	50	8.5	8.5	13.6	2.5	2.5	4	72	
16	75	52.3	52.3	85.6	18.9	18.9	13	115	12
	100	53.9	53.9	86.9	19.5	19.5	13	142	
	10	33.6	33.6	35.2	8.4	8.4	8.8	49	
	20	33.6	33.6	35.2	8.4	8.4	8.8	49	
	30	33.6	33.6	35.2	8.4	8.4	8.8	59	
20	40	33.6	33.6	35.2	8.4	8.4	8.8	69	14
	50	33.6	33.6	35.2	8.4	8.4	8.8	79	
	75	70.2	70.2	62.5	28.1	28.1	25	120	
	100	76.6	76.6	62.5	38.3	38.3	25	150	
	125	78	78	62.5	39	39	25	175	
25	10	34.8	34.8	36.8	8.7	8.7	9.2	53	17
	20	34.8	34.8	36.8	8.7	8.7	9.2	53	
	30	34.8	34.8	36.8	8.7	8.7	9.2	63	
	40	34.8	34.8	36.8	8.7	8.7	9.2	73	
	50	34.8	34.8	36.8	8.7	8.7	9.2	83	
25	75	70.2	70.2	74.5	28.1	28.1	29.7	123	17
	100	76.6	76.6	74.5	38.3	38.3	29.7	157	
	125	78	78	74.5	39	39	29.7	178	
	150	98.4	98.4	74.5	49.2	49.2	29.7	210	
	10	56.7	56.7	51	16.2	16.2	17	60	
25	20	56.7	56.7	51	16.2	16.2	17	60	17
	30	56.7	56.7	51	16.2	16.2	17	70	
	40	56.7	56.7	51	16.2	16.2	17	80	
	50	56.7	56.7	51	16.2	16.2	17	90	
	75	122.5	122.5	138.5	49	49	55.4	130	
25	100	173.8	173.8	138.5	79	79	55.4	168	17
	125	217	217	138.5	108.6	108.6	55.4	205	
	150	221.8	221.8	138.5	110.9	110.9	55.4	230	

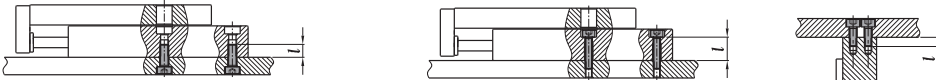
**Installation and precautions**

Vertical installation (Body thread tap)    Vertical installation (Body through hole)    Axial installation (Body thread tap)



When attaching the cylinder, use screws of an appropriate length and tighten with less than the maximum torque.  
If it is not tightened sufficiently, it may fall or be out of position, and if it is tightened excessively, problems such as malfunction may occur.

Vertical installation (Body thread tap)    Vertical installation (Body through hole)    Axial installation (Body thread tap)

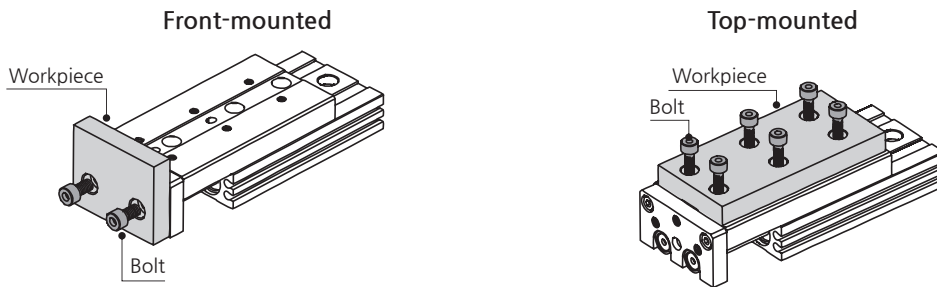


Model	Used bolt	Max. tightening torque (N·m)	Max. threading depth (mm)
KTXQ6	M4x0.7	2.1	8
KTXQ8	M4x0.7	2.1	8
KTXQ12	M5x0.8	4.4	10
KTXQ16	M6x1.0	4.4	10
KTXQ20	M6x1.0	7.4	12
KTXQ25	M8x1.25	18.0	16

Model	Used bolt	Max. tightening torque (N·m)	Max. threading depth (mm)
KTXQ6	M3x0.5	1.2	8.0
KTXQ8	M3x0.5	1.2	9.6
KTXQ12	M4x0.7	2.8	13.4
KTXQ16	M5x0.8	5.7	16.7
KTXQ20	M5x0.8	5.7	22.0
KTXQ25	M6x1.0	10.0	27.0

Model	Used bolt	Max. tightening torque (N·m)	Max. threading depth (mm)
KTXQ6	M2.5x0.45	0.5	3.5
KTXQ8	M3x0.5	0.9	4.0
KTXQ12	M4x0.7	2.1	6.0
KTXQ16	M5x0.8	4.4	7.0
KTXQ20	M5x0.8	4.4	8.0
KTXQ25	M6x1.0	7.4	10.0

Workpieces can be installed on both sides of the compact slide.



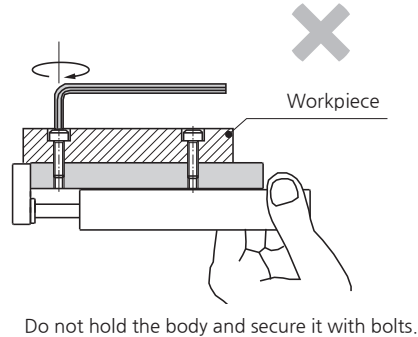
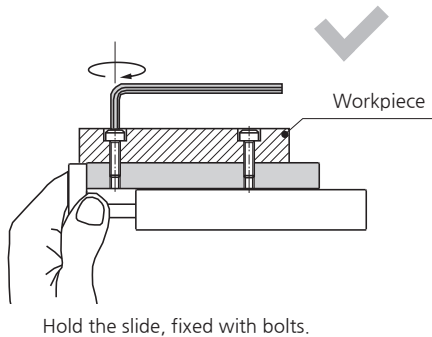
When mounting a workpiece, install bolts appropriately with a tightening torque within the limit range.  
To prevent the bolt from touching the guide block, use a bolt that is at least 0.5 mm shorter than the maximum thread depth.  
If the bolt is too long, it may hit the guide block and cause breakage.

Model	Used bolt	Max. tightening torque (N·m)	Max. threading depth (mm)
KTXQ6	M3x0.4	0.9	5
KTXQ8	M4x0.7	2.1	6
KTXQ12	M5x0.8	4.4	8
KTXQ16	M6x1.0	7.4	10
KTXQ20	M6x1.0	7.4	13
KTXQ25	M8x1.25	18.0	15

Model	Used bolt	Max. tightening torque (N·m)	Max. threading depth (mm)
KTXQ6	M3x0.5	0.9	4.7
KTXQ8	M3x0.5	0.9	4.7
KTXQ12	M4x0.7	2.1	5.0
KTXQ16	M5x0.8	4.4	5.0
KTXQ20	M5x0.8	4.4	8.0
KTXQ25	M6x1.0	7.4	9.0

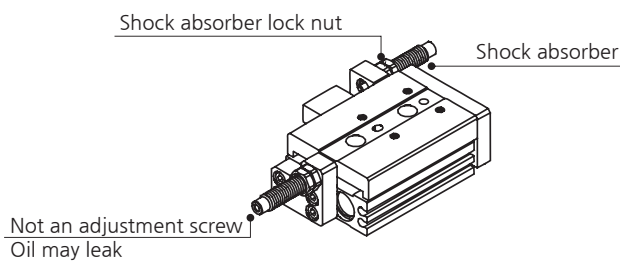
Compact table cylinder  
(Linear ball bearing)

The table is supported by the linear guide, so be careful not to apply a strong impact or large force to the guide part.  
Hold the slide when bolting the workpiece. If you hold the body when tightening the bolt, excessive force may damage the guide part.



**Shock absorber mounting**

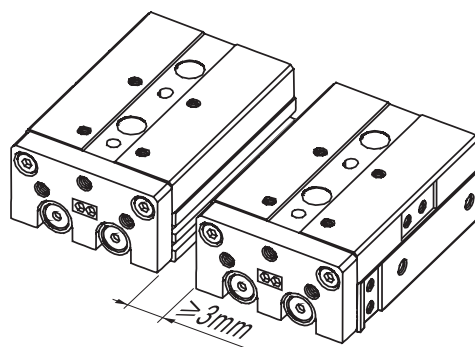
The shock absorber is a consumable item. If the shock absorption capacity decreases, it must be replaced immediately.  
Do not turn or adjust the screws on the bottom of the shock absorber body. The screws are not for adjustment, and loosening the screws may cause oil to leak. Install the shock absorber lock nut tightening torque according to the table below.



Model	Shock absorber	Max. tightening torque (N·m)
KTXQ6	Can't attach	
KTXQ8	ACA0806-1N	1.67
KTXQ12	ACA0806-1N	1.67
KTXQ16	ACA1007-1N	3.14
KTXQ20	ACA1210-1N	3.14
KTXQ25	ACA1412-1N	10.8

**Auto switch mounting**

All KTXQ series have built-in magnets.  
To prevent malfunction, keep a minimum of 3mm gap when using two compact cylinders side by side.



The cylinder must be connected through a meter-out speed controller, and the operating speed of the cylinder must be less than 500mm/s.  
Do not apply a load that exceeds the operating limit. If it is exceeded, it may cause defects due to bending or sagging of the table.

Table displacement amount (Reference value)

Table displacement according to pitching moment load

When a load is applied to the arrow area during full stroke operation of the table cylinder, the table displacement at the arrow area

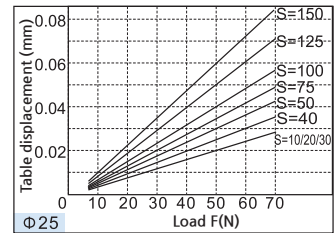
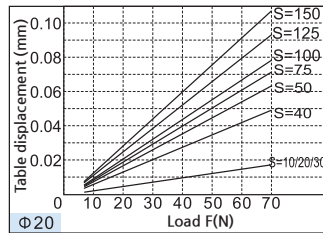
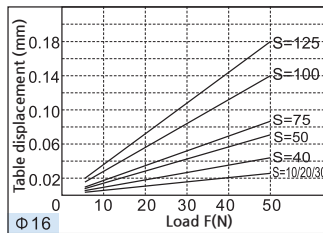
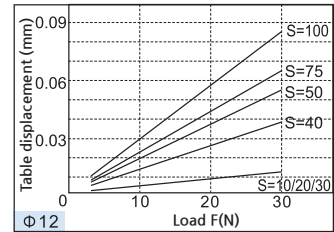
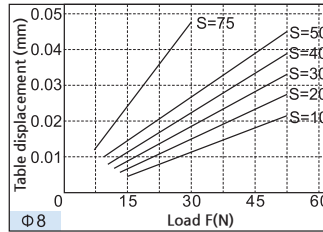
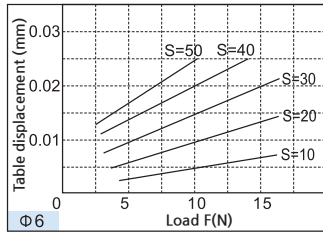


Table displacement according to yawing moment load

When a load is applied to the arrow area during full stroke operation of the table cylinder, the table displacement at the arrow area

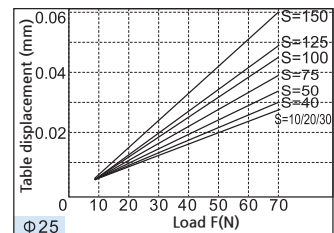
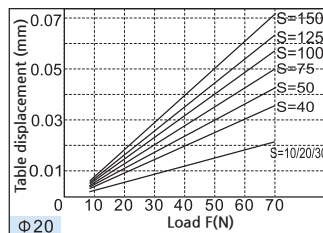
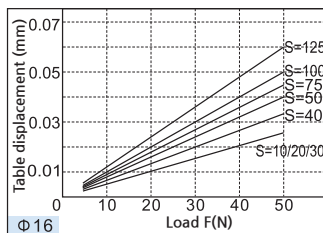
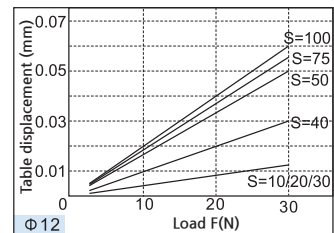
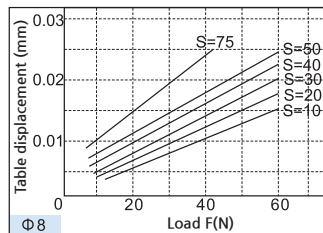
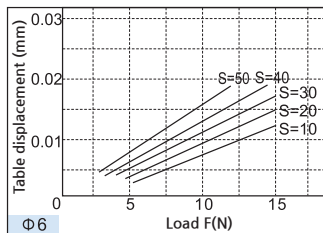
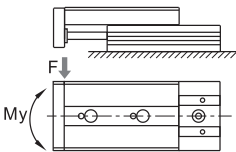
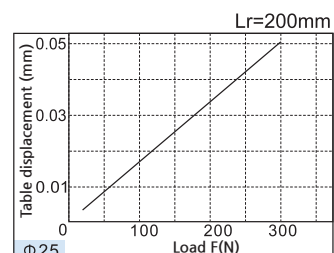
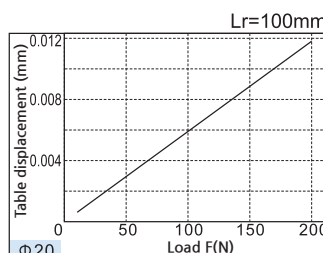
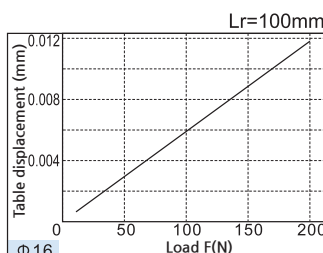
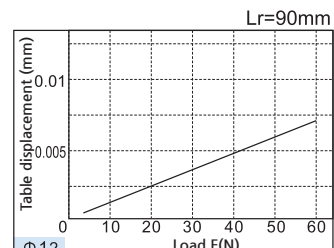
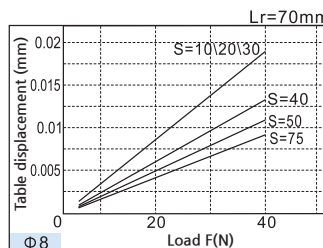
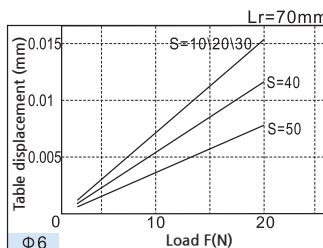
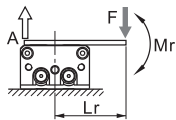


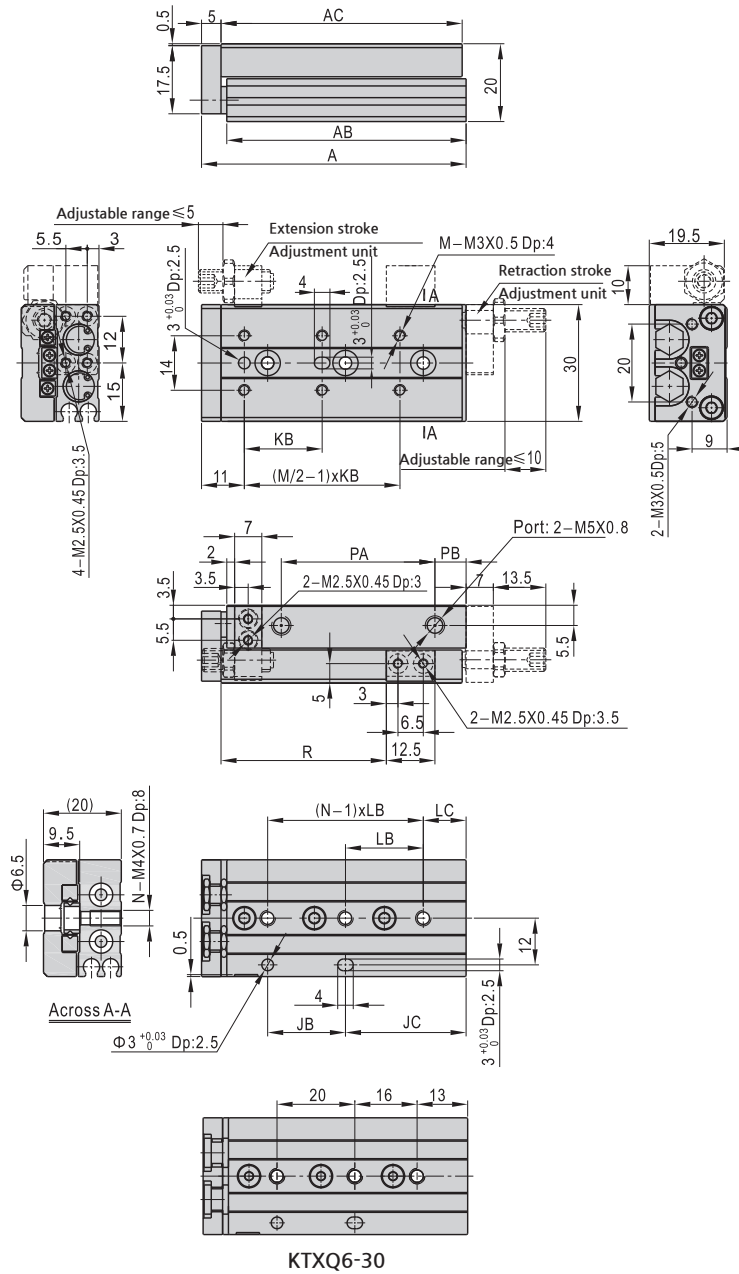
Table displacement according to rolling moment load

When a load is applied to the arrow area during full stroke operation of the table cylinder, the table displacement at the arrow area



Dimensions

KTXQ6



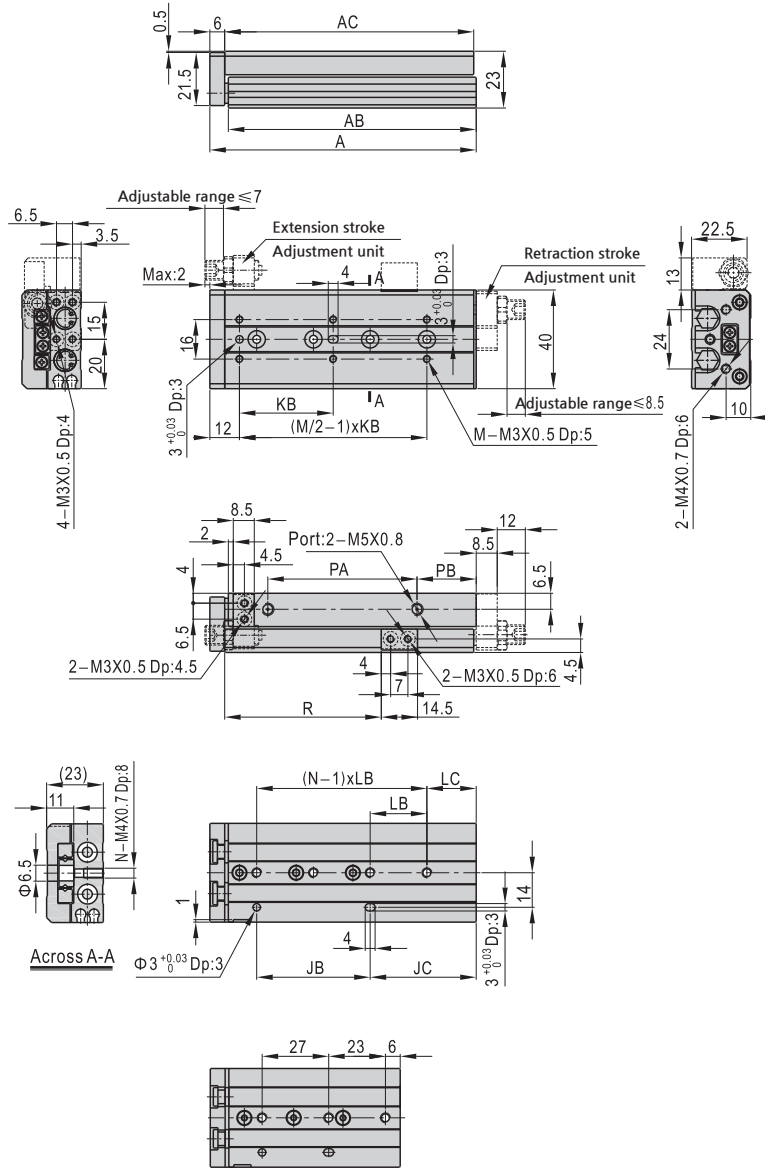
Unit:mm

Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB	R
10	48	41.5	42	16	13	22	23	6	4	2	16	9	21.5
20	58	51.5	52	26	13	25	26	13	4	2	26	9	31.5
30	68	61.5	62	20	29	21	-	-	6	3	36	9	41.5
40	86	79.5	80	28	39	26	28	11	6	3	47	16	51.5
50	96	89.5	90	28	49	27	28	21	6	3	64	9	61.5

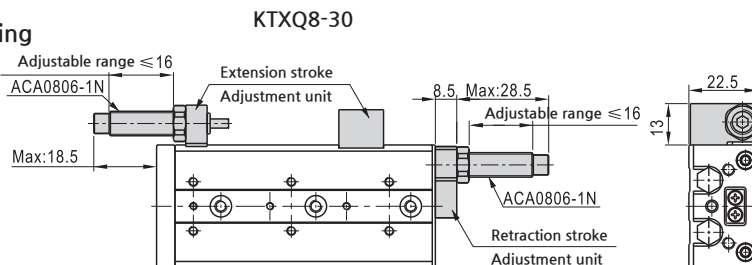


Dimensions

KTXQ8



Shock absorber mounting

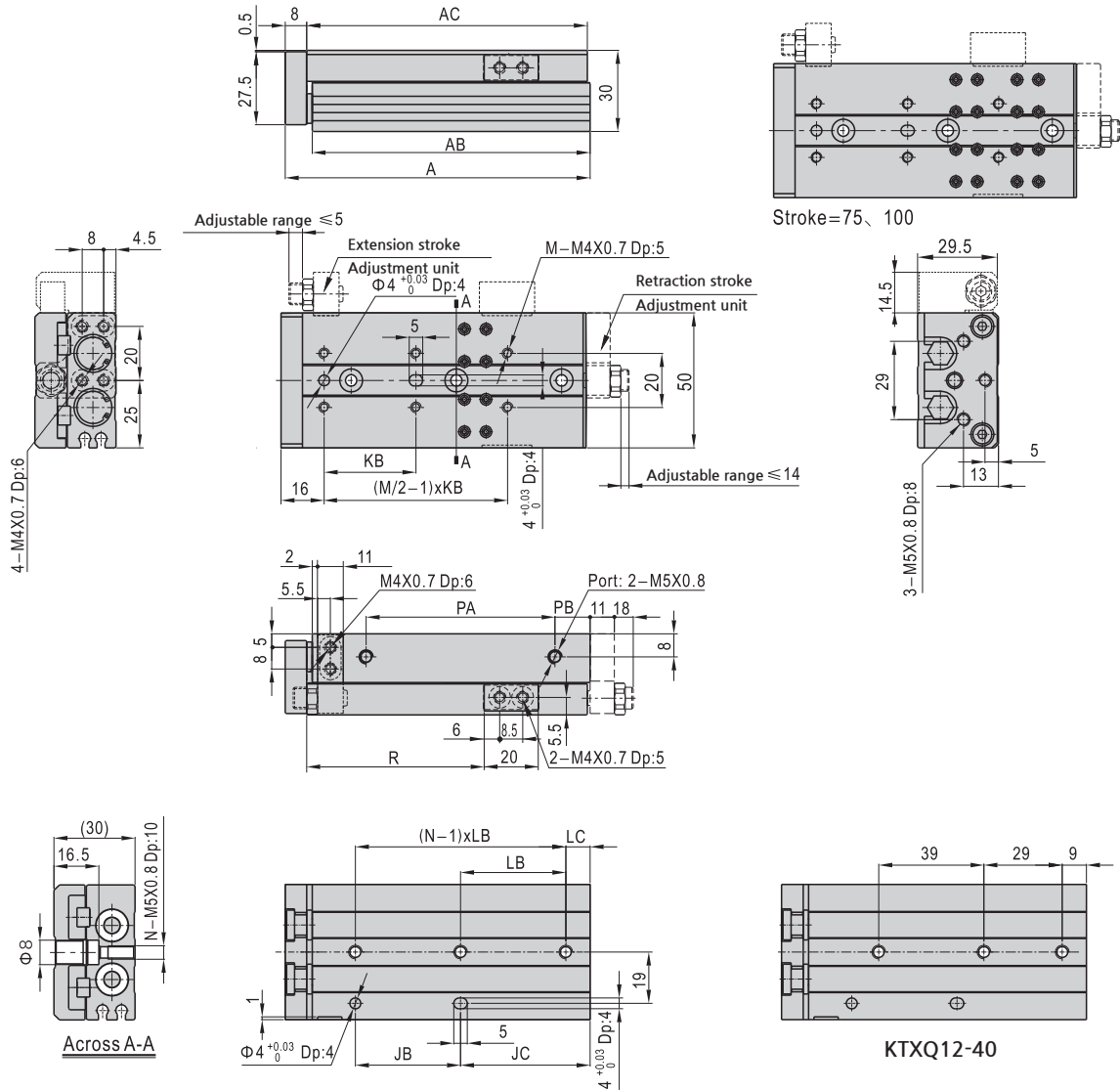


Unit:mm

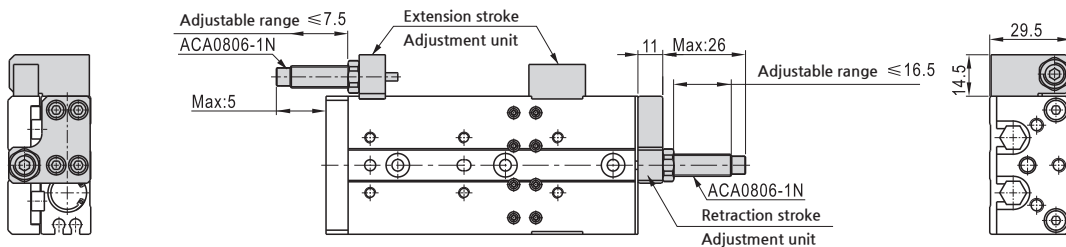
Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB	R
10	53	45.5	46	19	13	25	25	7	4	2	17.5	10.5	23.5
20	63	55.5	56	28	14	25	28	14	4	2	28	10	33.5
30	77	69.5	70	27	29	26	-	-	6	3	42	10	43.5
40	91	83.5	84	31	39	32	31	8	6	3	54	12	53.5
50	116	108.5	109	58	37	46	29	8	6	4	79	12	63.5
75	144	136.5	137	60	63	50	30	33	6	4	109	10	88.5

Dimensions

KTXQ12



Shock absorber mounting

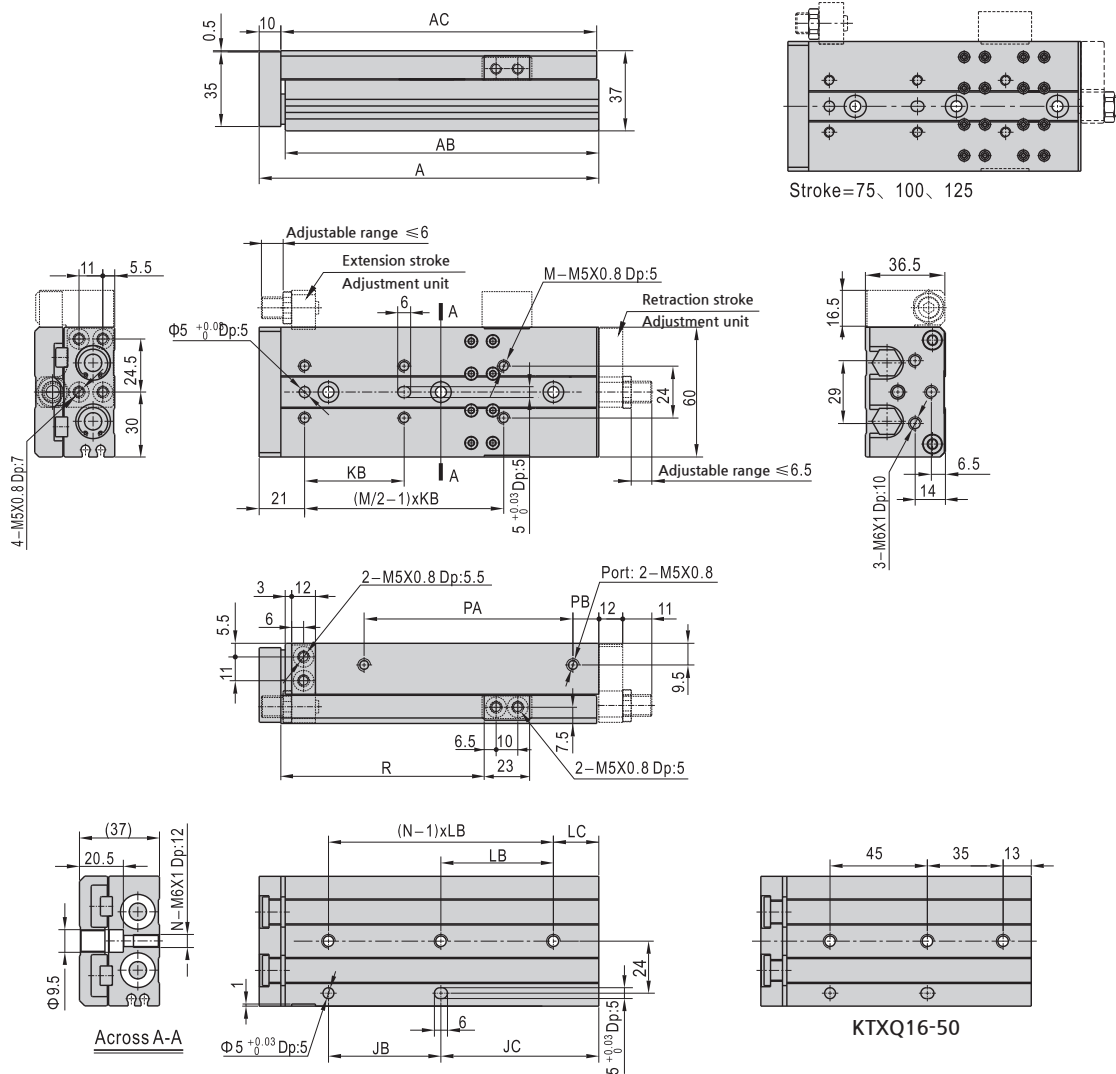


Unit:mm

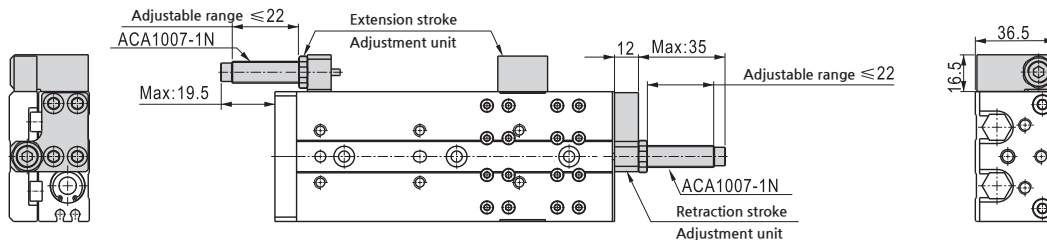
Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB	R
10	76	66	67	32	18	28	32	18	4	2	32.5	13	35
20	76	66	67	32	18	28	32	18	4	2	32.5	13	45
30	86	76	77	40	20	38	40	20	4	2	42.5	13	55
40	103	93	94	39	38	34	-	-	6	3	59.5	13	65
50	113	103	104	39	48	34	39	9	6	3	69.5	13	75
75	157	147	148	72	59	36	36	23	8	4	113.5	13	99
100	182	172	173	72	84	36	36	12	10	5	134.5	17	124

Dimensions

KTXQ16



Shock absorber mounting

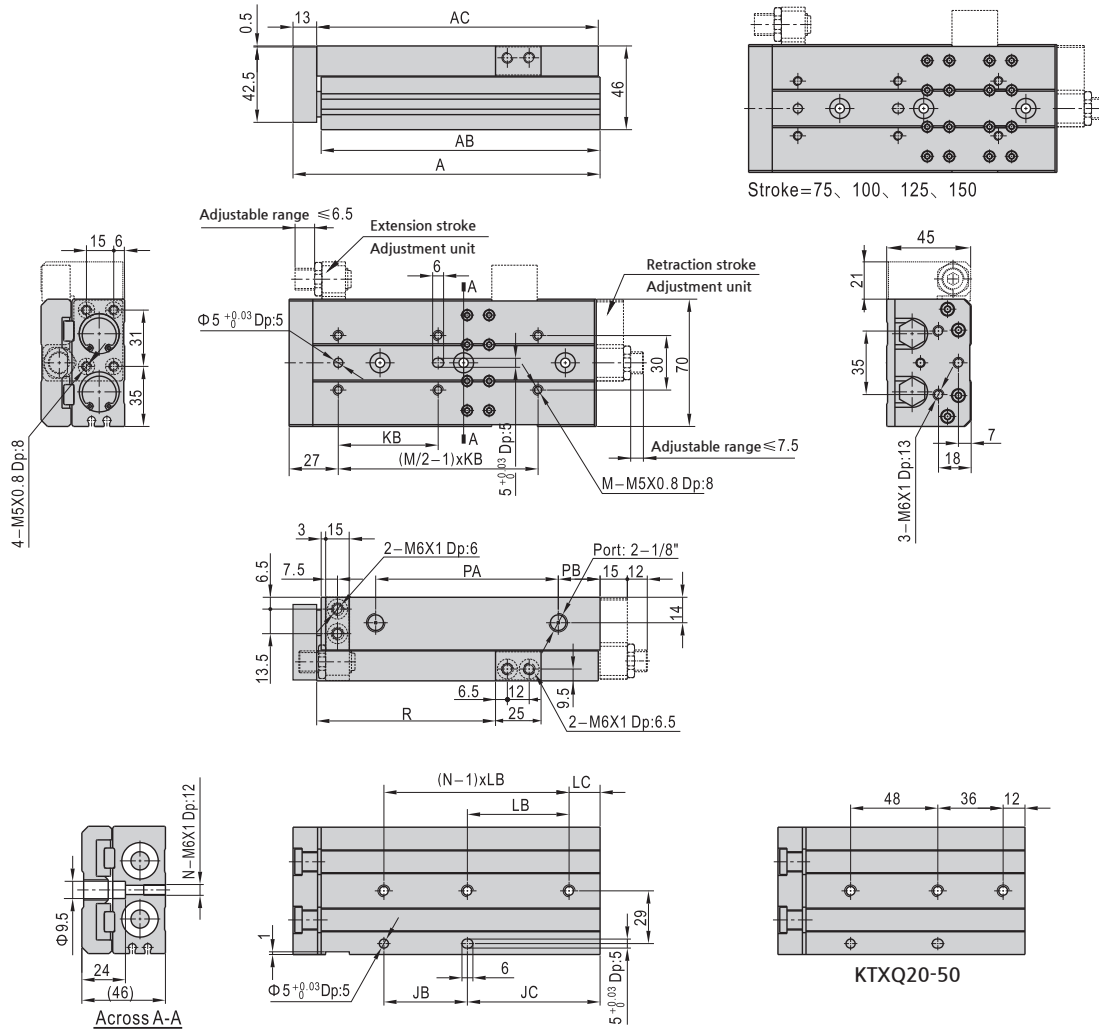


Unit:mm

Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB	R
10	89	77	78	39	18	38	39	18	4	2	40.5	12	28.5
20	89	77	78	39	18	38	39	18	4	2	40.5	12	38.5
30	99	87	88	48	19	48	48	19	4	2	50.5	12	48.5
40	109	97	98	58	19	58	58	19	4	2	60.5	12	58.5
50	125	113	114	45	48	40	-	-	6	3	70.5	18	68.5
75	157	145	146	52	73	46	52	21	6	3	108.5	12	93.5
100	200	188	189	88	80	44	44	36	8	4	151.5	12	118.5
125	225	213	214	88	105	44	44	17	10	5	176.5	12	143.5

Dimensions

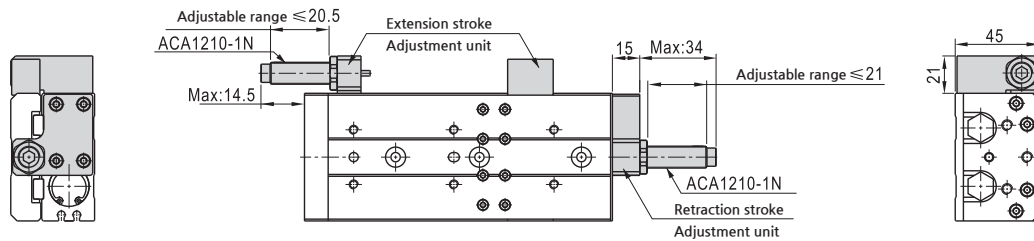
KTXQ20



Stroke=75、100、125、150

KTXQ20-50

Shock absorber mounting

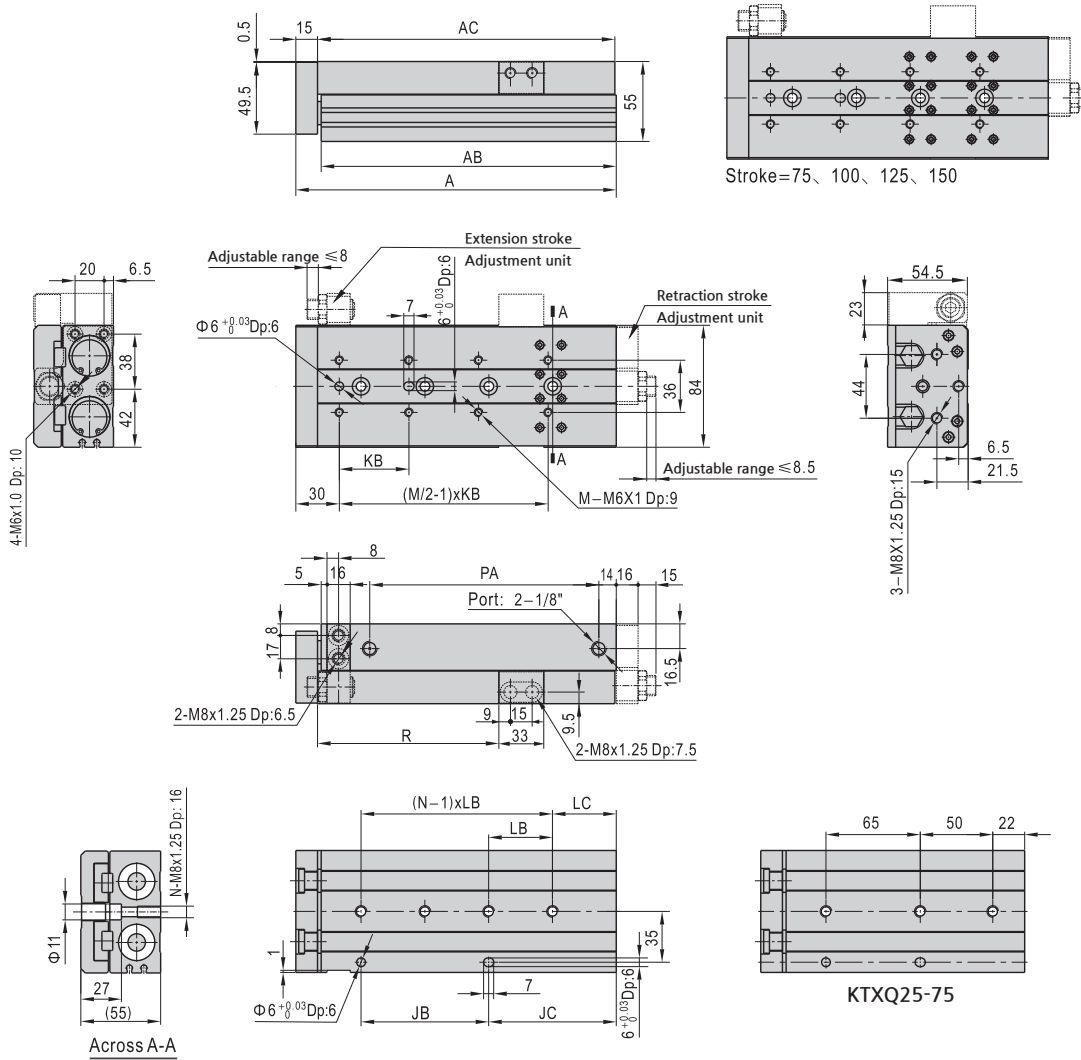


Unit:mm

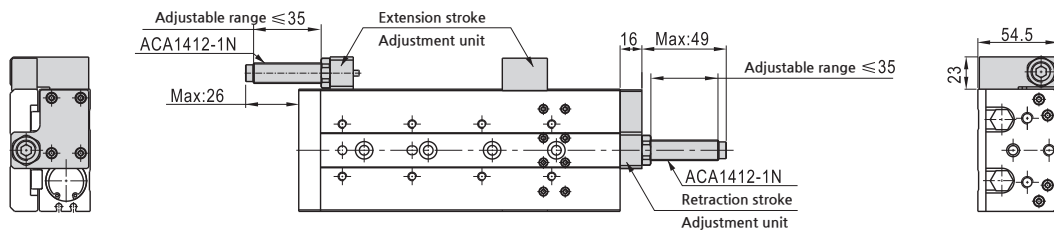
Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB	R
10	108	92.5	94	50	18	45	46	22	4	2	46.5	16	32.5
20	108	92.5	94	50	18	40	46	22	4	2	46.5	16	42.5
30	108	92.5	94	50	18	48	46	22	4	2	46.5	16	52.5
40	118	102.5	104	56	22	58	56	22	4	2	56.5	16	62.5
50	136	120.5	122	48	48	42	-	-	6	3	72.5	18	72.5
75	169	153.5	155	56	73	55	56	17	6	3	98.5	25	97.5
100	226	210.5	212	112	74	50	56	18	8	4	155.5	25	122.5
125	254	238.5	240	118	96	55	59	37	8	4	183.5	25	147.5
150	282	266.5	268	124	118	62	62	56	8	4	211.5	25	172.5

Dimensions

KTXQ25



Shock absorber mounting



Unit:mm

Stroke	A	AB	AC	JB	JC	KB	LB	LC	M	N	PA	PB
10	123	105.5	107	55	23	55	55	23	4	2	58	35
20	123	105.5	107	55	23	46	55	23	4	2	58	45
30	123	105.5	107	55	23	55	55	23	4	2	58	55
40	133	115.5	117	65	23	65	65	23	4	2	68	65
50	157	139.5	141	80	32	75	80	32	4	2	92	75
75	182	164.5	166	65	72	60	-	-	6	3	117	100
100	221	203.5	205	88	88	48	44	44	8	4	156	125
125	274	256.5	258	132	97	60	66	31	8	4	209	150
150	299	281.5	283	132	122	65	66	56	8	4	234	175

Accessory

F - KTXQ 10 A

①      ②      ③      ④

① Accessory

F	Accessory
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② Cylinder model

KTXQ	Compact table cylinder(Linear ball bearing)
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③ Bore size

6	6mm	16	16mm
8	8mm	20	20mm
12	12mm	25	25mm

④ Adjustment unit

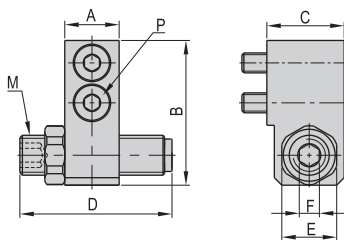
A	Adjustable rubber stopper(Both ends)
AS	Adjustable rubber stopper(Extension)
AF	Adjustable rubber stopper(Retraction)
B	Shock absorber(Both ends)
BS	Shock absorber(Extension)
BF	Shock absorber(Retraction)

Accessories / Bore size		6	8	12	16	20	25
Both ends	A (Adjustable rubber stopper)	F-KTXQ6A	F-KTXQ8A	F-KTXQ12A	F-KTXQ16A	F-KTXQ20A	F-KTXQ25A
	B (Shock absorber)	-	F-KTXQ8B	F-KTXQ12B	F-KTXQ16B	F-KTXQ20B	F-KTXQ25B
Extension	AS (Adjustable rubber stopper)	F-KTXQ6AS	F-KTXQ8AS	F-KTXQ12AS	F-KTXQ16AS	F-KTXQ20AS	F-KTXQ25AS
	BS (Shock absorber)	-	F-KTXQ8BS	F-KTXQ12BS	F-KTXQ16BS	F-KTXQ20BS	F-KTXQ25BS
Retraction	AF (Adjustable rubber stopper)	F-KTXQ6AF	F-KTXQ8AF	F-KTXQ12AF	F-KTXQ16AF	F-KTXQ20AF	F-KTXQ25AF
	BF (Shock absorber)	-	F-KTXQ8BF	F-KTXQ12BF	F-KTXQ16BF	F-KTXQ20BF	F-KTXQ25BF

Dimensions - Accessories

Extension adjustable rubber stopper (AS)

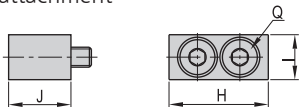
Body attachment



Unit:mm

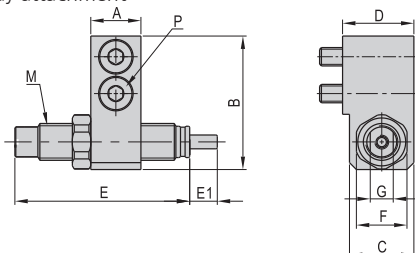
Bore size	Stroke adjustment range	A	B	C	D	E	F	M	P	H	I	J	Q
6	5	7	19	10.5	16.5	8	3	M6x1.0	M2.5 Length:10	12.5	6.5	10.5	M2.5 Length:10
8	5	8.5	21.5	14	21.5	11	4	M8x1.0	M3 Length:14	14.5	8	12	M3 Length:14
12	5	11	29	15.5	31.5	11	4	M8x1.0	M4 Length:16	20	9	13.5	M4 Length:16
16	5	12	36	17.5	24	14	5	M10x1.0	M5 Length:16	23	10.5	17	M5 Length:16
20	5	15	44.5	22	28	17	6	M12x1.0	M6 Length:20	25	12.5	21	M6 Length:20
25	5	16	53.5	24	32	19	6	M14x1.5	M8 Length:20	33	16.5	23	M8 Length:20

Table attachment



Extension shock absorber (BS)

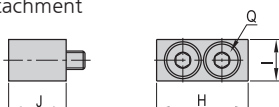
Body attachment



Unit:mm

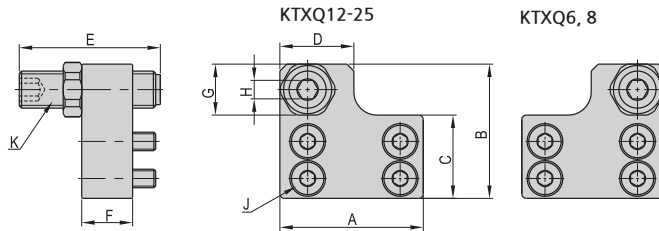
Bore size	A	B	C	D	E	E1	F	G	M	P	H	I	J	Q
8	8.5	21.5	12.5	14	40	6	11	7	M8x1.0	M3 Length:14	14.5	8	12	M3 Length:14
12	11	29	14	15.5	40	6	11	7	M8x1.0	M4 Length:16	20	9	13.5	M4 Length:16
16	12	36	16	17.5	49	7	14	9	M10x1.0	M5 Length:16	23	10.5	17	M5 Length:16
20	15	44.5	20	22	53.5	10	17	11	M12x1.0	M6 Length:20	25	12.5	21	M6 Length:20
25	16	53.5	22	24	68.5	12	19	12	M14x1.5	M8 Length:20	33	16.5	23	M8 Length:20

Table attachment



**Dimensions - Accessories**

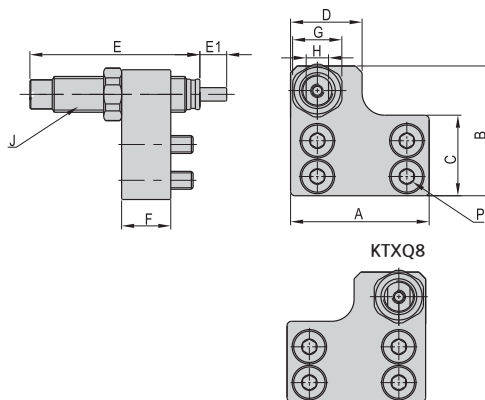
**Retraction adjustable rubber stopper (AF)**



Unit:mm

Bore size	Stroke adjustment range	A	B	C	D	E	F	G	H	J	K
6	5	18	19	11	8	21.5	7	8	3	M2.5 Length:6	M6x1.0
8	5	24	22.5	13	14	21.5	8.5	11	4	M3 Length:8	M8x1.0
12	5	31	29	18	16	21.5	8.5	11	4	M4 Length:12	M8x1.0
16	5	37	37.5	23	18	24	12	14	5	M5 Length:12	M10x1.0
20	5	45.5	47	28.5	23	28	15	17	6	M5 Length:16	M12x1.0
25	5	54	56	34	28	32	16	19	6	M6 Length:18	M14x1.5

**Retraction shock absorber (BF)**



Unit:mm

Bore size	A	B	C	D	E	E1	F	G	H	J	P
8	24	22.5	13	14	40	6	8.5	11	7	M8x1.0	M3 Length:8
12	31	29	18	16	40	6	11	11	7	M8x1.0	M4 Length:12
16	37	37.5	23	18	49	7	12	14	9	M10x1.0	M5 Length:12
20	45.5	47	28.5	23	53.5	10	15	17	11	M12x1.0	M5 Length:16
25	54	56	34	28	68.5	12	16	19	12	M14x1.5	M6 Length:18