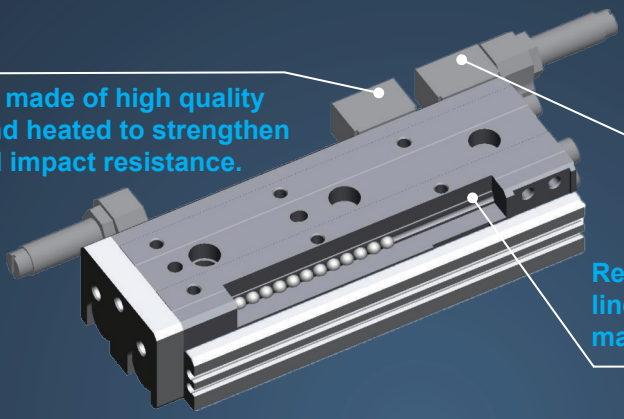
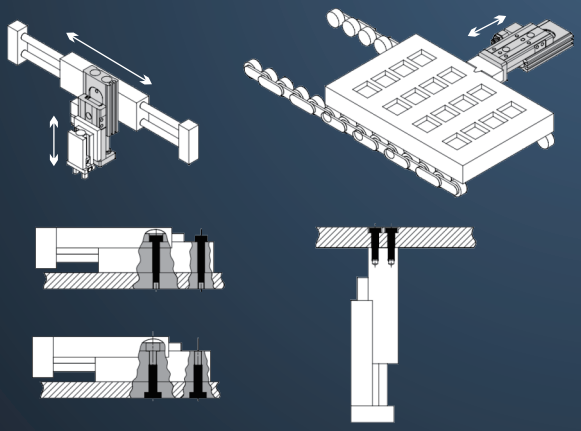
Air Slide Table (Standard Type)
AXQ Series(ϕ 6- ϕ 25)

Advantages

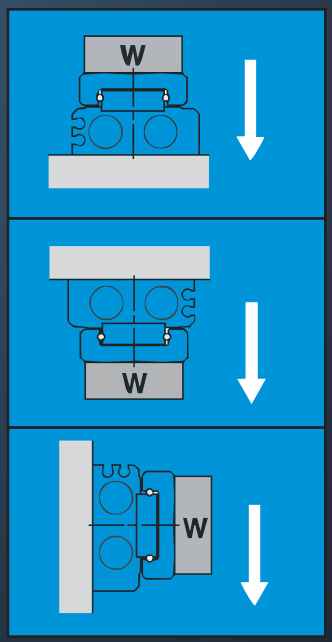
*High precision,compact design.
*30μmDepth of parallelism; 50μmPrependicularity;
*Recirculating linear guide.
*Double cylinders design for double power output.
*Stroke is adjustable.
*Auto switch is available.



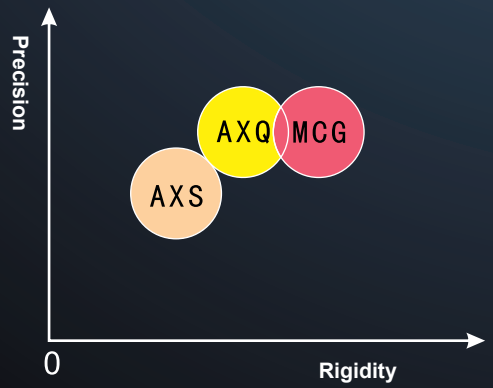
Improved mounting repeatability of the workpiece and body.



Loading W(N):



Slection reference table:



Compare with similar products of other companies

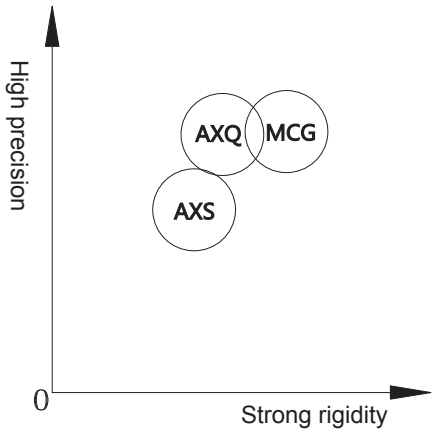
1. Compare with S company from Japan: Maxair AXS adopts wide type linear guide which has great precision and capacity.
2.Compare with C company from Japan: Maxair AXS has lower deflection than similar product of C.

Air Slide Table (Dual Rod Type)
AXQ Series(ϕ 6- ϕ 25)

Specifications

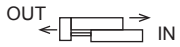
	AXQ6	AXQ8	AXQ12	AXQ16	AXQ20	AXQ25
Bore Size(mm)	Φ6×2相 = Φ8	Φ8×2 相 = Φ11	Φ12×2 相 = Φ17	Φ16×2 相 = Φ22	Φ20×2 相 = Φ28	Φ25×2 相 = Φ35
Fluid	Air					
Action	Double acting					
Max. operating pressure	0.7MPa					
Min. operating pressure	0.15MPa					
Ambient and fluid temperature	-10~+60℃ (No freezing)					
Piston speed	50~500mm/s					
Cushion	bumper/Hydraulic buffer					
Stroke length tolerance	$^{+1}_{0}$					
Lubrication	Non-lube (1) ISOVG32					
Connection diameter	M5×0.8				Rc1/8	
Auto switch	M9B					

election reference table



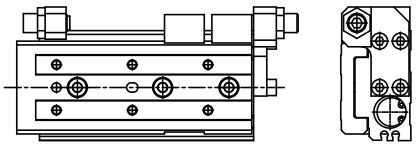
Theoretical Output

The dual rod ensures an output twice that of current cylinders.

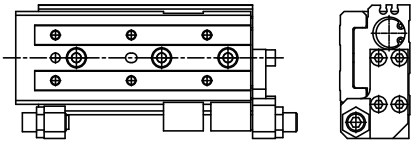


Bore size （mm）	Operating direction	Piston area （mm^2）	Operating pressure （MPa）					
			0.2	0.3	0.4	0.5	0.6	0.7
Φ6×2	OUT	57	11	17	23	29	34	40
	IN	42	8	13	17	21	25	29
Φ8×2	OUT	101	20	30	40	51	61	71
	IN	75	15	23	30	38	45	53
Φ12×2	OUT	226	45	68	90	113	136	158
	IN	170	34	51	68	85	102	119
Φ16×2	OUT	402	80	121	161	201	241	281
	IN	302	60	91	121	151	181	211
Φ20×2	OUT	628	126	188	251	314	377	440
	IN	471	94	141	188	236	283	330
Φ25×2	OUT	982	196	295	393	491	589	687
	IN	756	151	227	302	378	454	529

How to Order



Standard type



Symmetric type

AXQ 12 L — 50 AS — M9B □

Bore size

Nil-Standard type
L-Symmetric type

Stroke

Adjuster option

Nil	Nil	
AS	Rubber stopper	Extension end
AT		Retraction end
A		both sides
BS	Shock absorber	Extension end
BT		Retraction end
B		both sides

Note) Note suitabl for AXQ6.

Number of auto switches

Nil	2Pcs.
S	1pcs.
n	n

Auto switch

Nil	Without auto switch
M9B(L)	two-wire
M9N(L)	three-wire

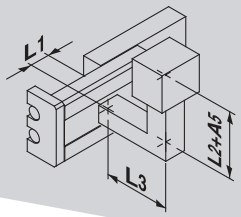
Note)wire length symbols:
1m……Nil(Example)M9B
3m…… L (Example)M9BL

Stroke/Auto switch option

Bore size/mm	Standard stroke/mm	Auto switch(with contact)
6	10,20,30,40,50	SW-M9B(L) SW-M9N(L)
8	10,20,30,40,50,75	
12	10,20,30,40,50,75,100	
16	10,20,30,40,50,75,100,125	
20,25	10,20,30,40,50,75,100,125,150	

How to order
1)For cylinders
AXQ12-50AS-M9B
Bore size 12mm;Stroke 50mm;with extension end adjuster;M9B auto switches with double 3 meters wires.
2)For auto switch
SW-M9B 1m
SW-M9BL 3m

Model Selection

Model Selection Step	Formula/Data	Selection Example
1 Operating Conditions	·Model to be used ·Type of cushion ·Workpiece mounting position ·Mounting orientation ·Average operating speed Va(mm/s) ·Load mass W(N): Fig.(1) ·Overhang Ln(mm):Fig.(2)	 Cylinder:FAXQ16-50 Cushion: Rubber stopper Workpiece table mounting Mounting:Horizontal wall mounting Average operating speed: Va=300[mm/s] Loa mass:W=10[N] L1=10mm L2=30mm L3=30mm
2 Kinetic Energy ·Find the kinetic energy E(J) of the load. ·Find the allowable kineticenergy Ea(J). ·Confirm that the kinetic energy of the load does not exceed the allowable kinetic energy.	$E=\frac{1}{2}\cdot\frac{W}{9.8}\left(\frac{V}{1000}\right)^2$ Collision speed **V=1.4 · Va** * Correction factor(Reference values) **Ea= K · E max** Workpiece mounting coefficient K:Fig.(3) Max. allowable kinetic energy Emax:Table(1) Kinetic energy(E)≤Allowable kinetic energy(Ea)	$E=\frac{1}{2}\bullet\frac{10}{9.8}\left(\frac{420}{1000}\right)^2=0.09$ **V=1.4 x 300=420** **Ea=1 x 0.11=0.11** **Can be used based on E=0.09≤Ea=0.11**
3 Load Factor		
3-1 Load Factor of Load Mass Find the allowable load mass Wa(N) Find the load factor of the load weight α_1	**Wa=K · β · Wmax** Workpiece mounting coefficient **K**:Fig.(3) Allowable load weight coefficient β Graph(1) Max. allowable load weight **Wmax**:Table(2) α_1**=W / Wa**	**Wa=1 x 1 x 40=40** **K=1** **β=1** **Wmax=40** α_1**=10 / 40=0.25**
3-2 Load factor of the Static Moment Find the static moment M(N.m). Find the allowable static moment Ma(N.m) Find the load factor α_2 of the static moment.	**M=W(Ln+An) / 1000** Correction value of moment center position distance **An**:Table(3) **Ma=K · γ · Mmax** Workpiece mounting coefficient **K**:Fig.(3) Allowable moment coefficient γ: Graph(2) Max. allowable moment **Mmax**:Table(4) α_2**=M / Ma**	**Yawing** **Examine My** **My=10(10+30) / 1000** **=0.4** **A_3=30** **May=1 x 1 x 18=18** **Mymax=18** **K=1** **γ =1** α_2**=0.4 / 18 =0.022** **Rolling** **Examine Mr** **Mr=10(30+10.5) / 1000** **=0.405** **A_6=10.5** **Mar=36** **Mrmax=36** **K=1** **γ =1** α'_2**= 0.405 / 36 =0.011**
3-3 Load Factor of Dynamic Moment Find the dynamic moment M(N.m) Find the allowable dynamic moment M(N.m) Find the load factor α_3 of the dynamic moment.	$Me=1/3\cdot We\ \frac{(Ln+An)}{1000}$ Collision equivalent to impact $We=\delta\cdot W\cdot V$ δ : Bumper coefficient Rubber stopper without adjuster = 4 / 100 Shock absorber = 1 / 100 Metal stopper = 16 / 100 Correction value of moment center position distance An:Table(3) Mea=K · γ · Mmax Workpiece mounting coefficient **K**:Fig.(3) Allowable moment coefficient γ: Graph(2) Max. allowable moment **Mmax**:Table(4) α_3=Me / Mea	**Pitching** **Examine Mep** **Mep=1 / 3 x 168 x $\frac{(30+10.5)}{1000}$ = 2.27** **We=4 / 100 x 10 x 420 =168** **A_2 =10.5** **Meap =1 x 0.7 x 18=12.6** **K=1** **γ =0.7** **Mpmax =18** α_3**=2.27 / 12.6 =0.18** **Yawing** **Examine Mey** **Mey=1 / 3 x 168 x $\frac{(30+24.5)}{1000}$ =3.05** **We=168** **A4 =24.5** **Meay =12.6 (Same value as Meap)** α'_3**=3.05 / 12.6 =0.28**
3-4 Sum of the Load Factors Use is possible if the sum of the load factors does not exceed 1.	$\Sigma\alpha_n=\alpha_1+\alpha_2+\cdots\cdots+\alpha_n\leq 1$	$\Sigma\alpha_n=\alpha_1+\alpha_2+\alpha'_2+\alpha_3+\alpha'_3$ **=0.25+0.022+0.011+0.18+0.28=0.743≤1** And it is possible to use.

AXQ Series

Fig.(1)Load Mass:W(kg)

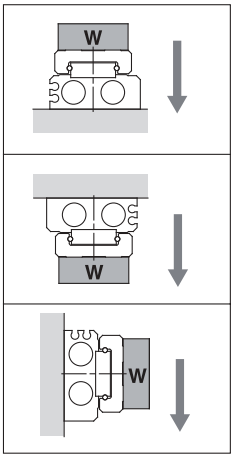
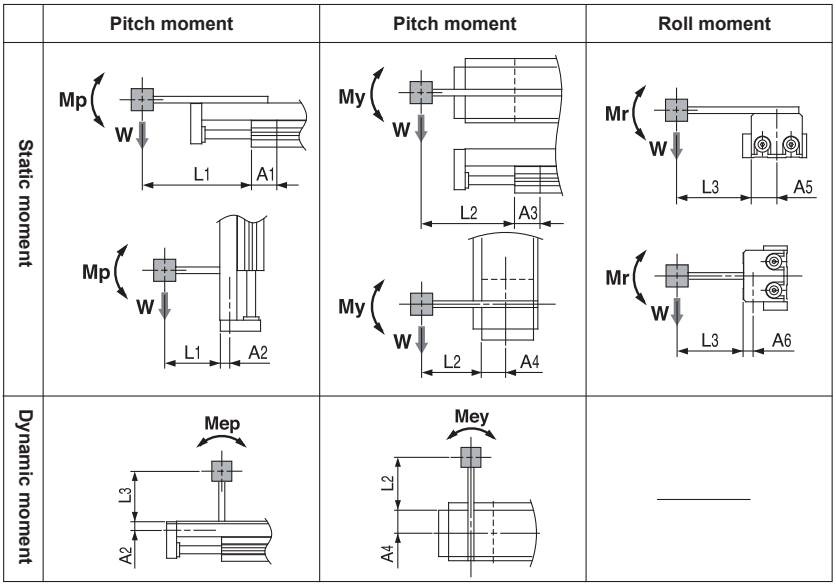
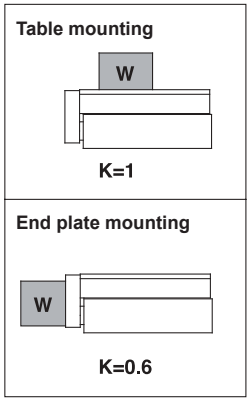


Fig.(2) Overhang:Ln(mm),Correction Value of Moment Center Position Distance:An(mm)



Note)Static moment:Moment generated by gravityDynamic moment:Moment generated by impact when colliding with stopper.

Fig.(3) Workpiece Mounting Coefficient:K



Table(1) Allowable Kinetic Energy:Emax(J)

Model	Allowable kinetic energy			
	Without adjuster	Adjuster option		
		Rubber stopper	Shock absorber	Metal stopper
AXQ6	0.018	0.018	—	0.009
AXQ8	0.027	0.027	0.054	0.013
AXQ12	0.055	0.055	0.11	0.027
AXQ16	0.11	0.11	0.22	0.055
AXQ20	0.16	0.16	0.32	0.080
AXQ25	0.24	0.24	0.48	0.12

Table(2)Max. Allowable Load Mass:Wmax(kg)

Model	Max. allowable load mass
AXQ6	6
AXQ8	10
AXQ12	20
AXQ16	40
AXQ20	60
AXQ25	90

Table(3)Correction Value of Moment Center Position Distance:An(mm)

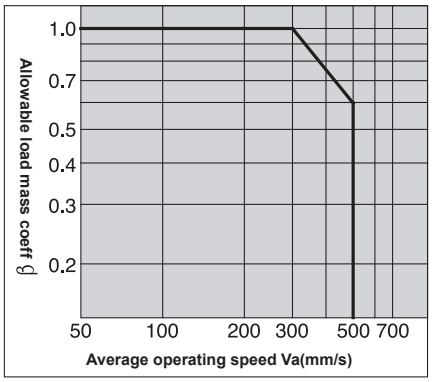
	Correction value of moment center position distance(Refer to Figure (2).)												
	A1, A3 Stroke (mm)									A2	A4	A5	A6
	10	20	30	40	50	75	100	125	150				
AXQ6	14.5	14.5	14.5	18.5	18.5	—	—	—	—	6	13.5	13.5	6
AXQ8	16.5	16.5	18.5	20.5	28	28.5	—	—	—	7	16	16	7
AXQ12	21	21	21	25	25	34	34	—	—	9	19.5	19.5	9
AXQ16	27	27	27	27	30	33	42.5	42.5	—	10.5	24.5	24.5	10.5
AXQ20	29.5	29.5	29.5	29.5	33.5	37.5	53.5	55	56.5	14	30	30	14
AXQ25	35.5	35.5	35.5	35.5	43	43	50	64	64	16.5	37	37	16.5

Note)For A2,A4,A5 and A6,there is no difference in the corrected values due to the stroke.

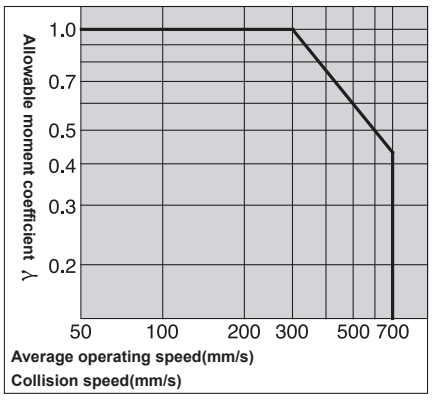
Table(4)Maximum Allowable Moment:Mmax(N·m)

Model	Pitch1/Yaw moment 2 : Mpmax / Mymax									Roll moment 3 : Mrmax								
	Stroke (mm)									Stroke (mm)								
	10	20	30	40	50	75	100	125	150	10	20	30	40	50	75	100	125	150
AXQ6	1.4	1.4	1.4	2.8	2.8	—	—	—	—	3.5	3.5	3.5	5.1	5.1	—	—	—	—
AXQ8	2.0	2.0	2.8	3.7	7.9	7.9	—	—	—	5.1	5.1	6.0	6.9	7.4	7.4	—	—	—
AXQ12	4.7	4.7	4.7	7.2	7.2	15	15	—	—	11	11	11	13	13	14	14	—	—
AXQ16	13	13	13	13	18	23	42	42	—	31	31	31	31	36	41	41	41	—
AXQ20	19	19	19	19	27	36	84	84	84	47	47	47	47	57	66	75	75	75
AXQ25	32	32	32	32	52	52	78	140	140	81	81	81	81	110	110	130	130	130

Graph(1)Allowable Load Mass Coefficient: β

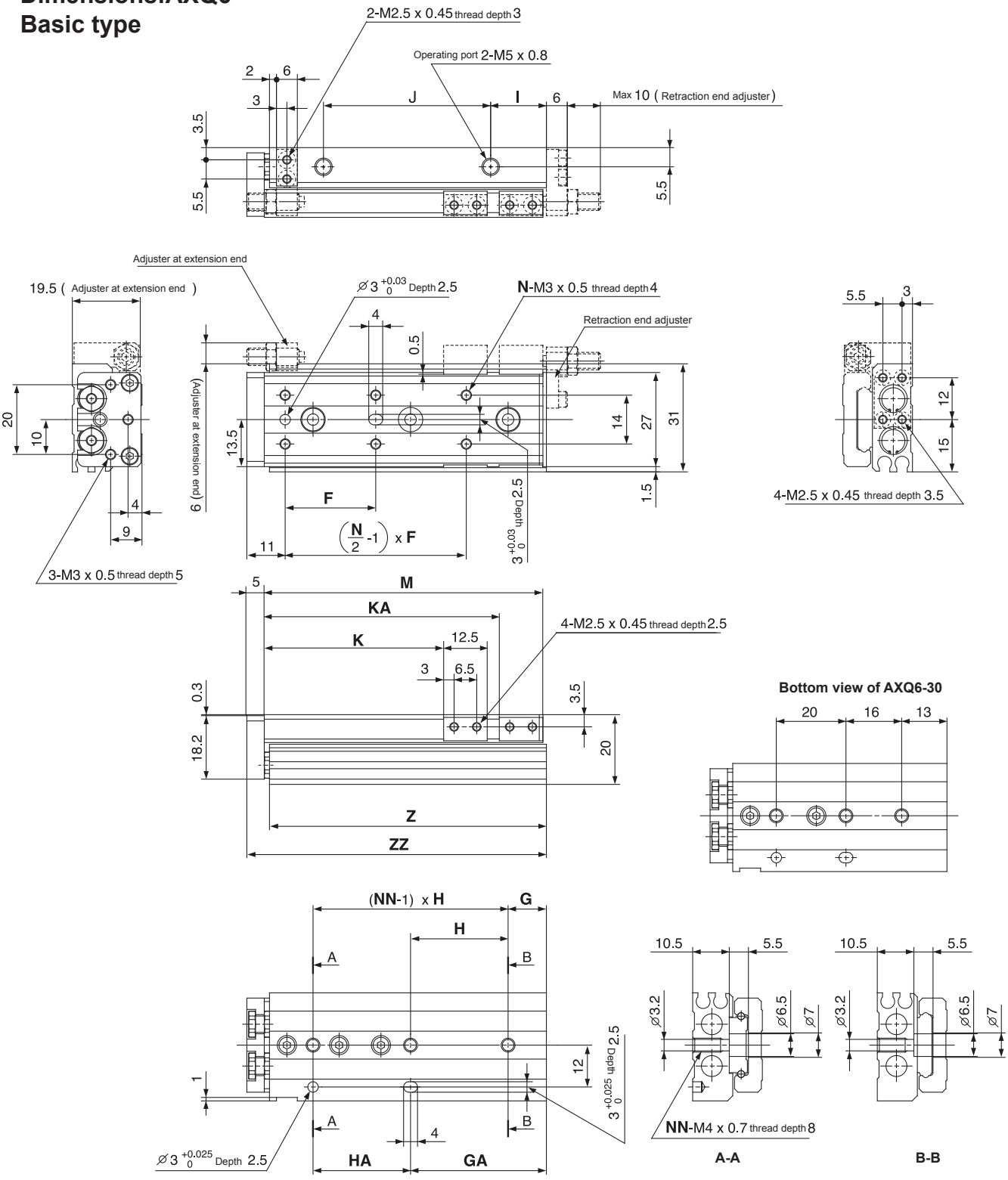


Graph(2)Allowable Moment Coefficient: γ



Note)Use the average operating speed when calculating static moment.
Use the collision speed when calculating dynamic moment.

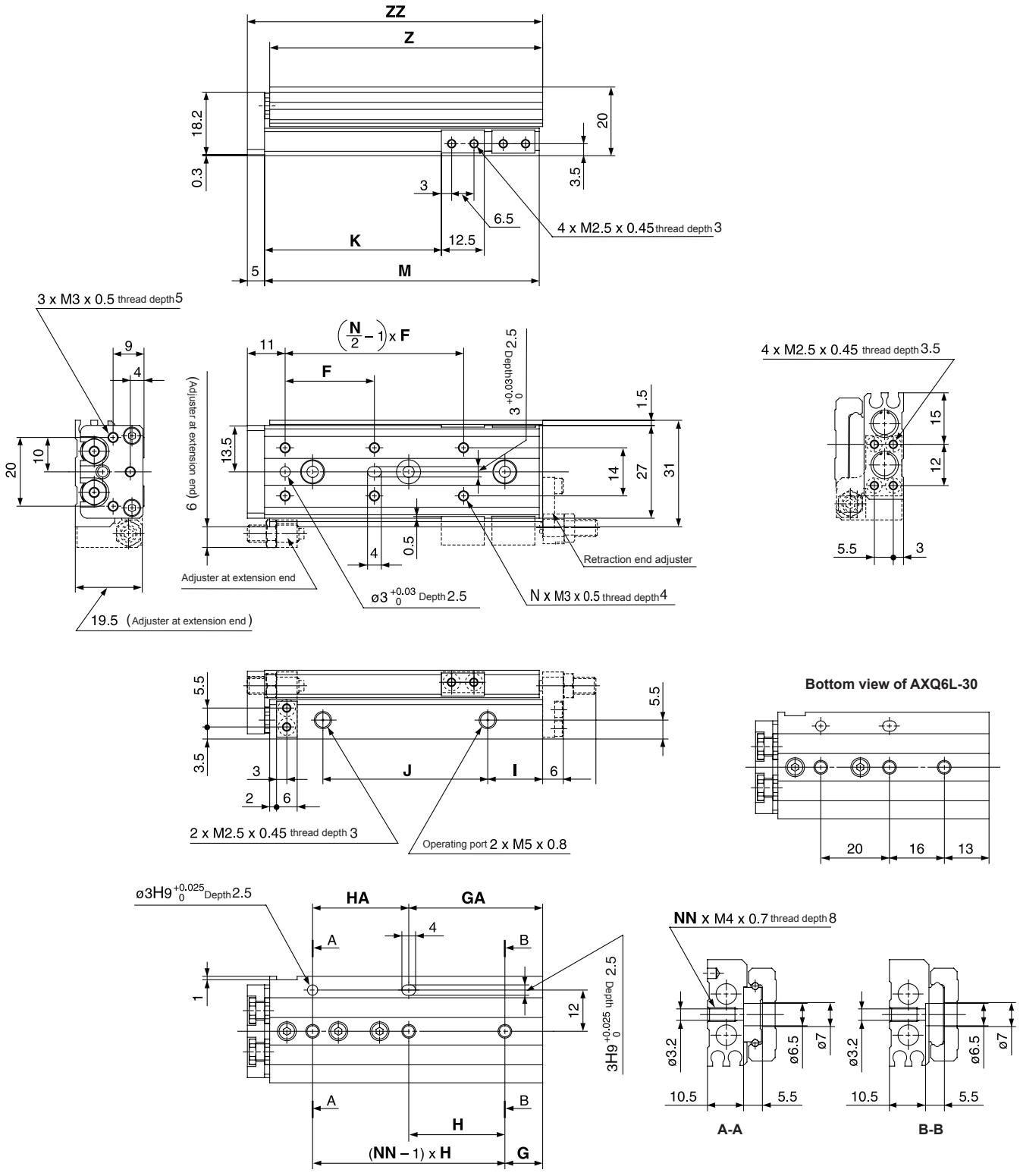
AXQ series
Dimensions:AXQ6
Basic type



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	M	Z	ZZ
AXQ6-10	22	4	6	23	2	13	16	9	17	21.5	—	42	41.5	48
AXQ6-20	25	4	13	26	2	13	26	9	27	31.5	—	52	51.5	58
AXQ6-30	21	6	—	—	3	29	20	9	37	41.5	—	62	61.5	68
AXQ6-40	26	6	11	28	3	39	28	16	48	51.5	67.5	80	79.5	86
AXQ6-50	27	6	21	28	3	49	28	9	65	61.5	77.5	90	89.5	96

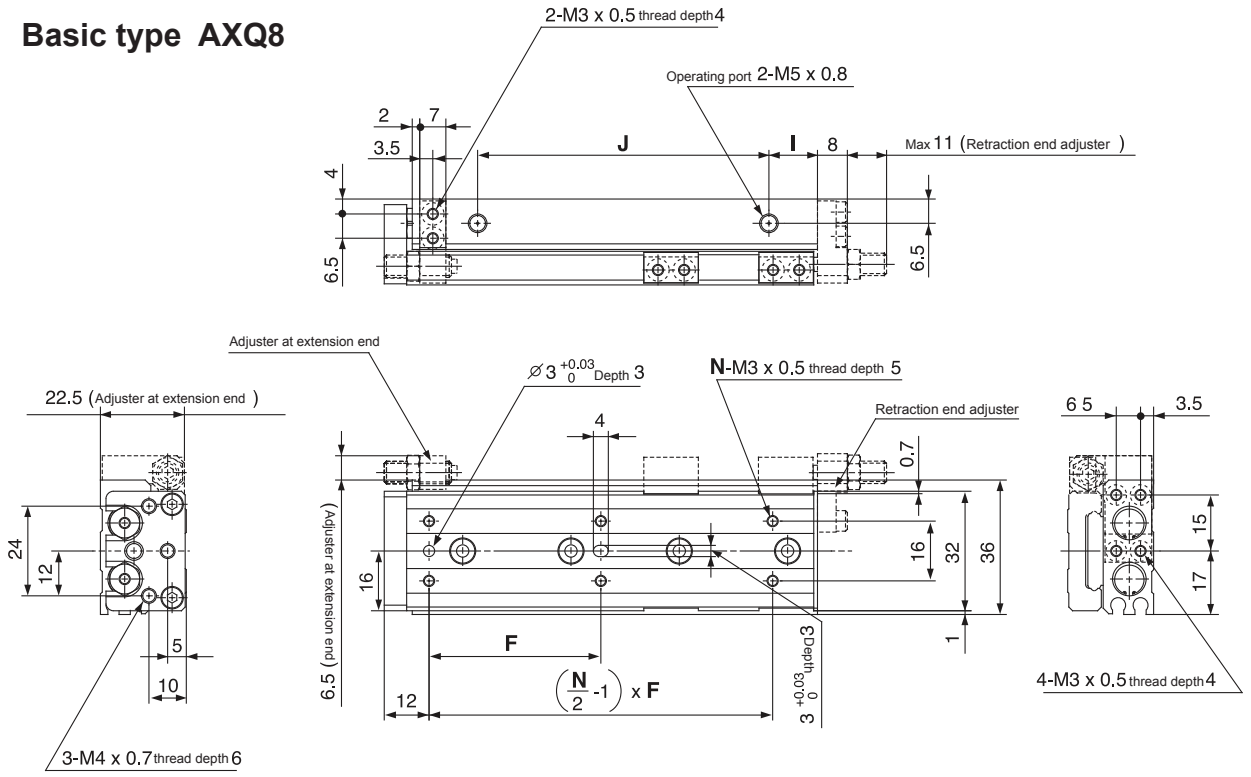
Symmetric Type AXQ6L

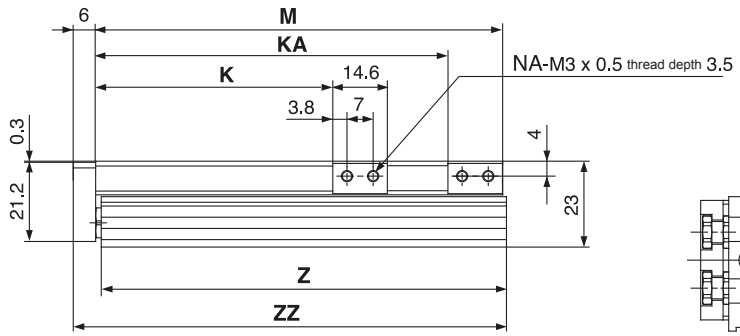


(mm)

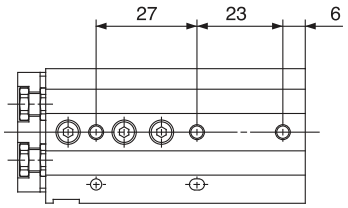
Model	F	N	G	H	NN	GA	HA	I	J	K	M	Z	ZZ
AXQ6L-10	22	4	6	23	2	13	16	9	17	21.5	42	41.5	48
AXQ6L-20	25	4	13	26	2	13	26	9	27	31.5	52	51.5	58
AXQ6L-30	21	6	—	—	3	29	20	9	37	41.5	62	61.5	68
AXQ6L-40	26	6	11	28	3	39	28	16	48	51.5	80	79.5	86
AXQ6L-50	27	6	21	28	3	49	28	9	65	61.5	90	89.5	96

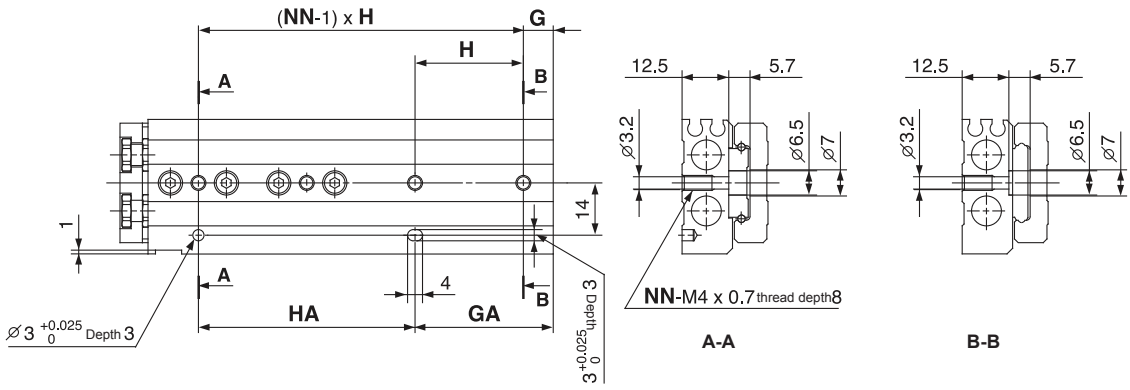
Basic type AXQ8





Bottom view of AXQ8-30

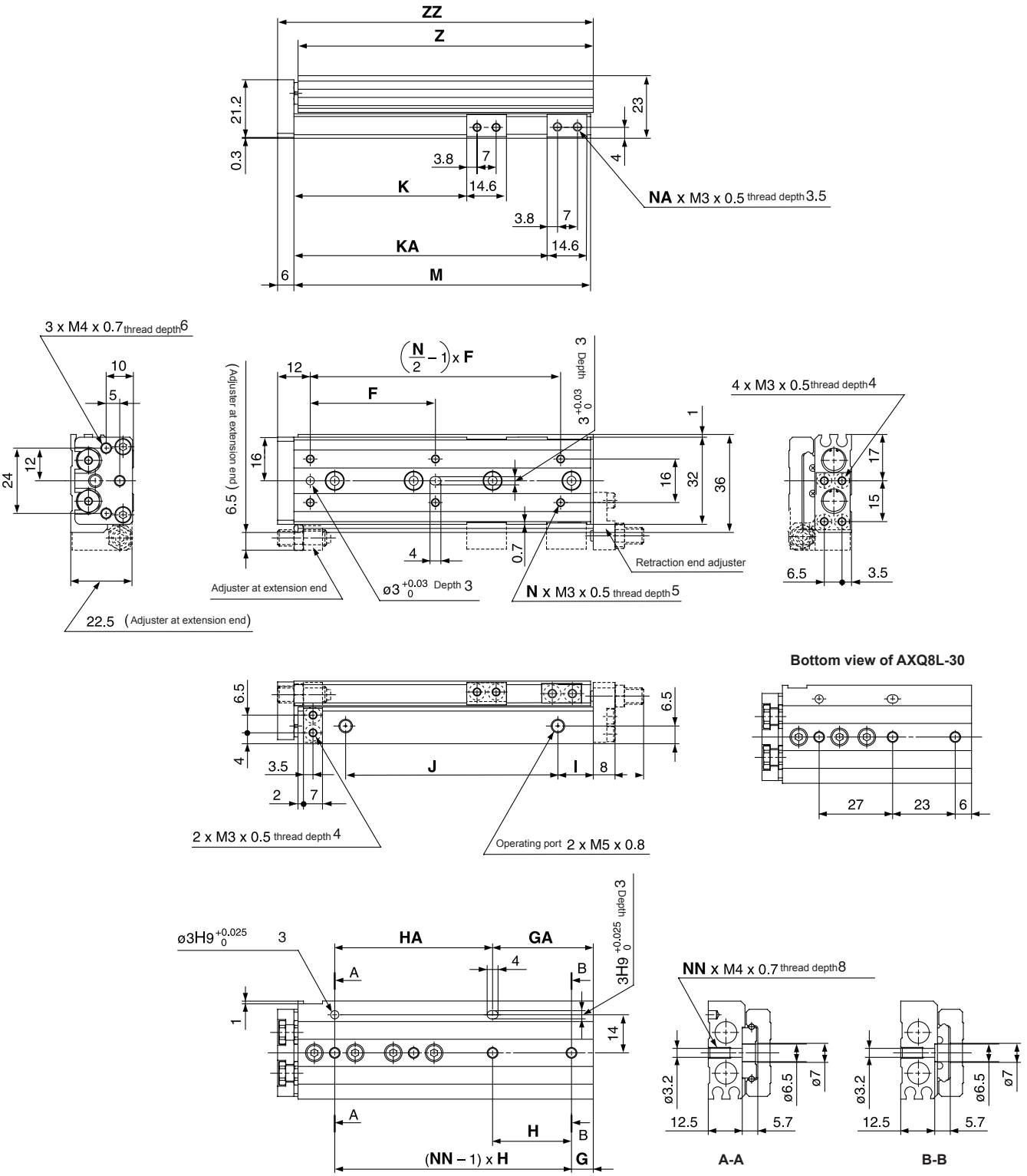




(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ8-10	25	4	7	25	2	13	19	11	17	23.5	—	4	46	45.5	53
AXQ8-20	25	4	14	28	2	14	28	10	28	33.5	—	4	56	55.5	63
AXQ8-30	26	6	—	—	3	29	27	12	40	43.5	—	4	70	69.5	77
AXQ8-40	32	6	8	31	3	39	31	14	52	53.5	69.4	4	84	83.5	91
AXQ8-50	46	6	8	29	4	37	58	13	78	63.5	94.4	8	109	108.5	116
AXQ8-75	50	6	31	30	4	61	60	12	105	88.5	120.4	8	135	134.5	142

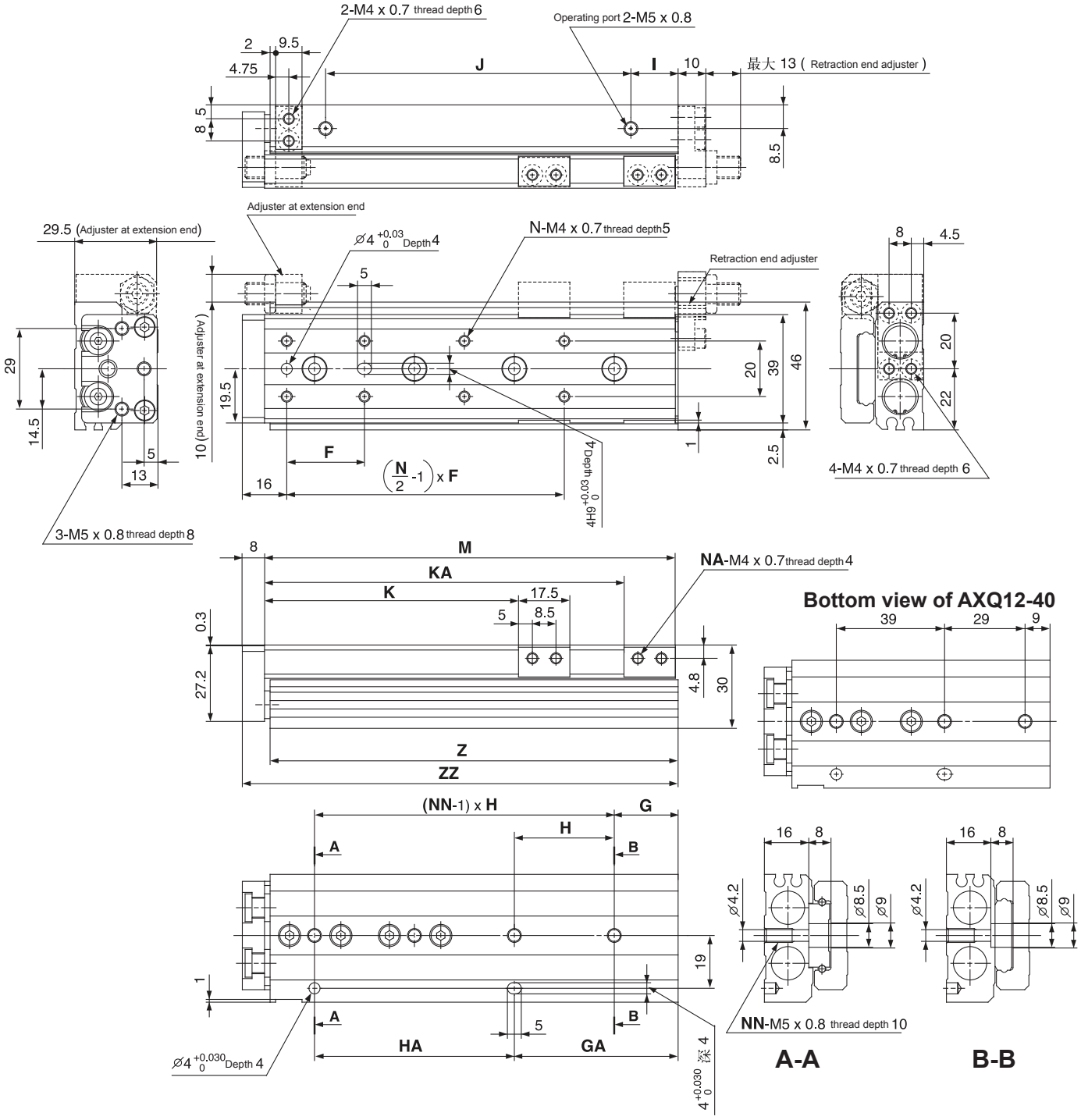
Symmetric Type AXQ8L



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ8L-10	25	4	7	25	2	13	19	11	17	23.5	—	4	46	45.5	53
AXQ8L-20	25	4	14	28	2	14	28	10	28	33.5	—	4	56	55.5	63
AXQ8L-30	26	6	—	—	3	29	27	12	40	43.5	—	4	70	69.5	77
AXQ8L-40	32	6	8	31	3	39	31	14	52	53.5	69.4	4	84	83.5	91
AXQ8L-50	46	6	8	29	4	37	58	13	78	63.5	94.4	8	109	108.5	116
AXQ8L-75	50	6	31	30	4	61	60	12	105	88.5	120.4	8	135	134.5	142

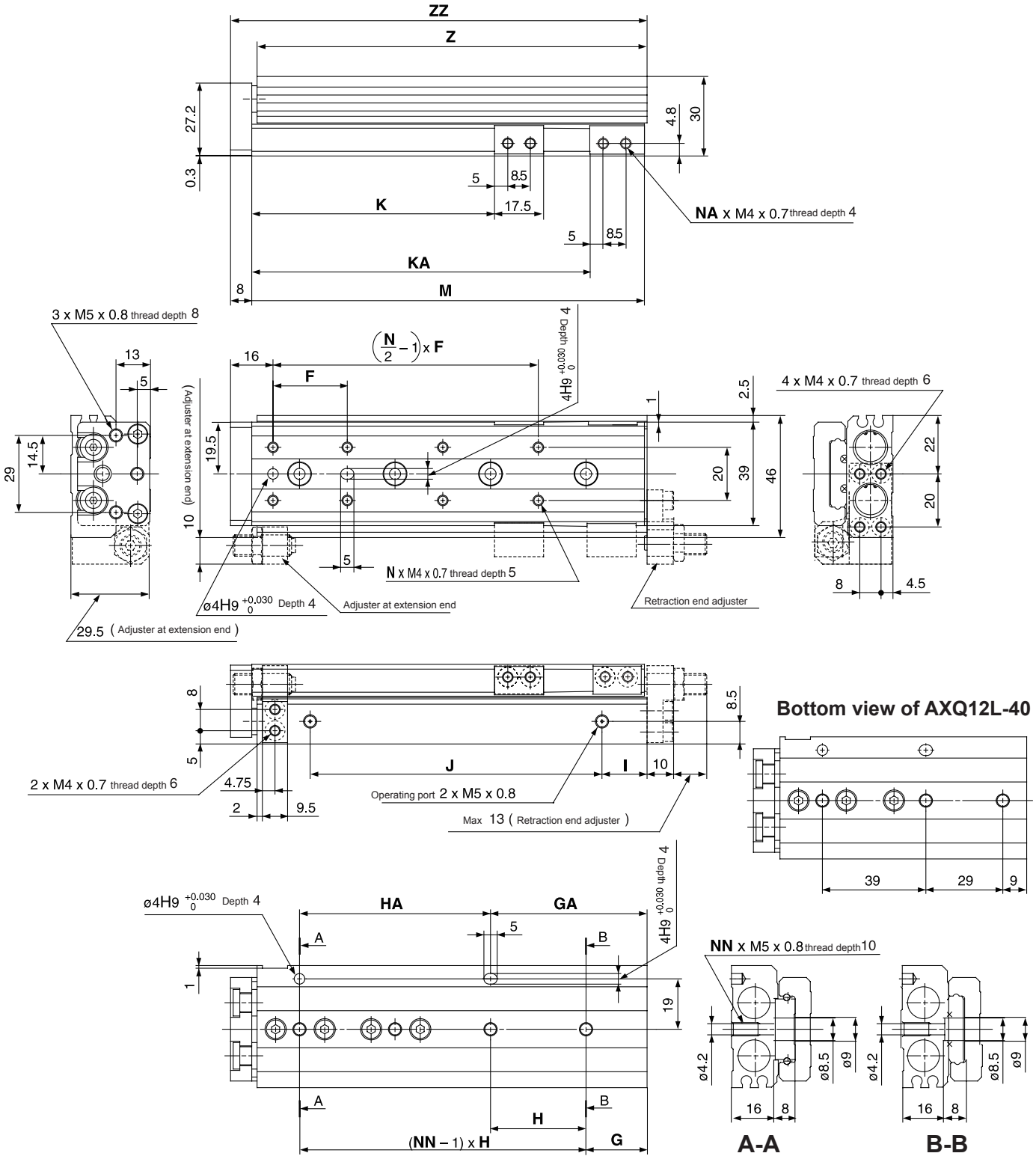
Basic type AXQ12



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ12- 10	28	4	18	32	2	18	32	12	34	27	49	4	67	66	76
AXQ12- 20	28	4	18	32	2	18	32	12	34	37	—	4	67	66	76
AXQ12- 30	38	4	20	40	2	20	40	14	42	47	—	4	77	76	86
AXQ12- 40	34	6	—	—	3	38	39	15	58	57	76	4	94	93	103
AXQ12- 50	34	6	9	39	3	48	39	13	70	67	86	4	104	103	113
AXQ12- 75	36	8	23	36	4	59	72	17	110	92	130	8	148	147	157
AXQ12-100	36	10	12	36	5	84	72	17	135	117	155	8	173	172	182

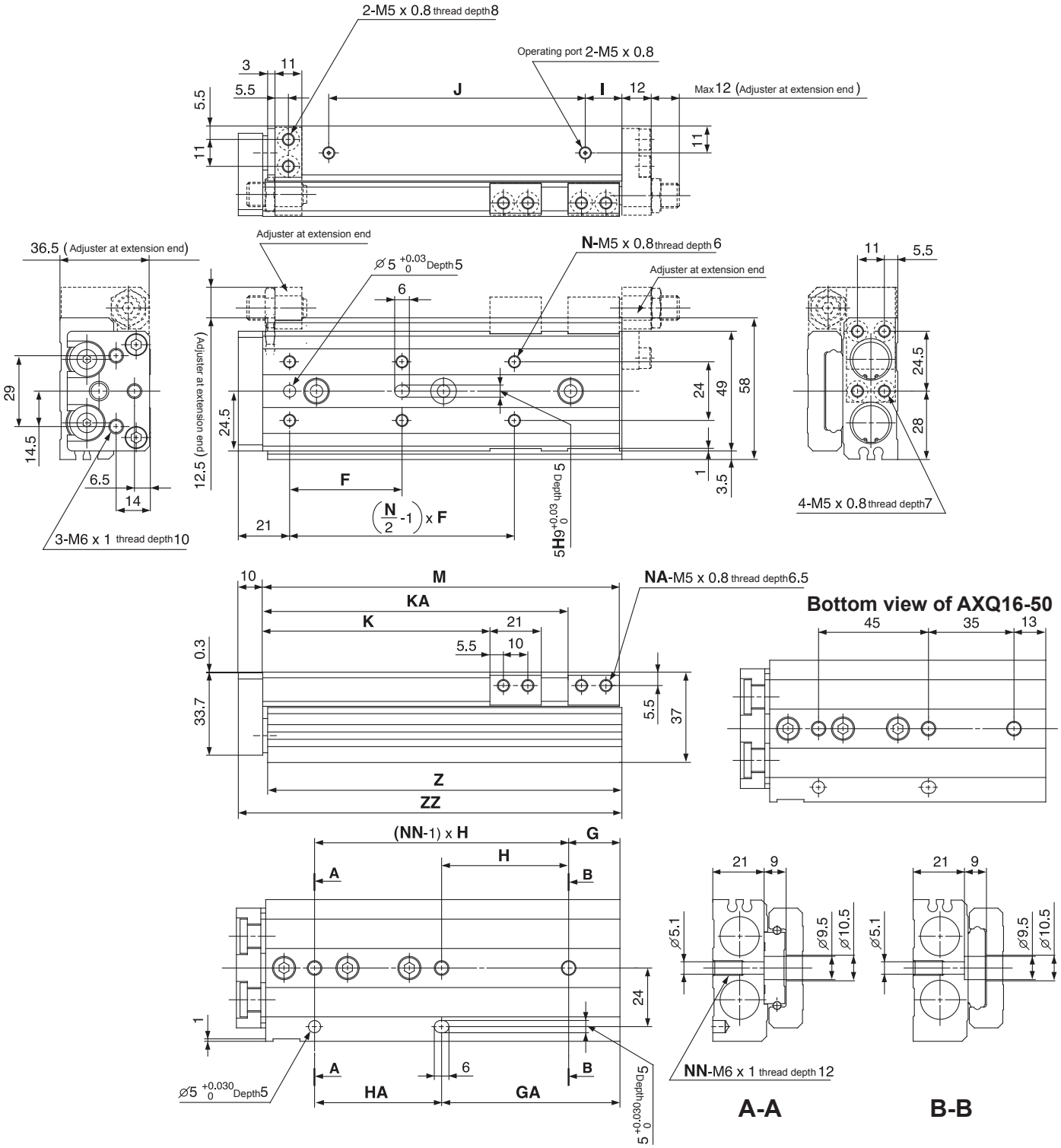
Symmetric Type AXQ12L



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ12L- 10	28	4	18	32	2	18	32	12	34	27	49	4	67	66	76
AXQ12L- 20	28	4	18	32	2	18	32	12	34	37	—	4	67	66	76
AXQ12L- 30	38	4	20	40	2	20	40	14	42	47	—	4	77	76	86
AXQ12L- 40	34	6	—	—	3	38	39	15	58	57	76	4	94	93	103
AXQ12L- 50	34	6	9	39	3	48	39	13	70	67	86	4	104	103	113
AXQ12L- 75	36	8	23	36	4	59	72	17	110	92	130	8	148	147	157
AXQ12L-100	36	10	12	36	5	84	72	17	135	117	155	8	173	172	182

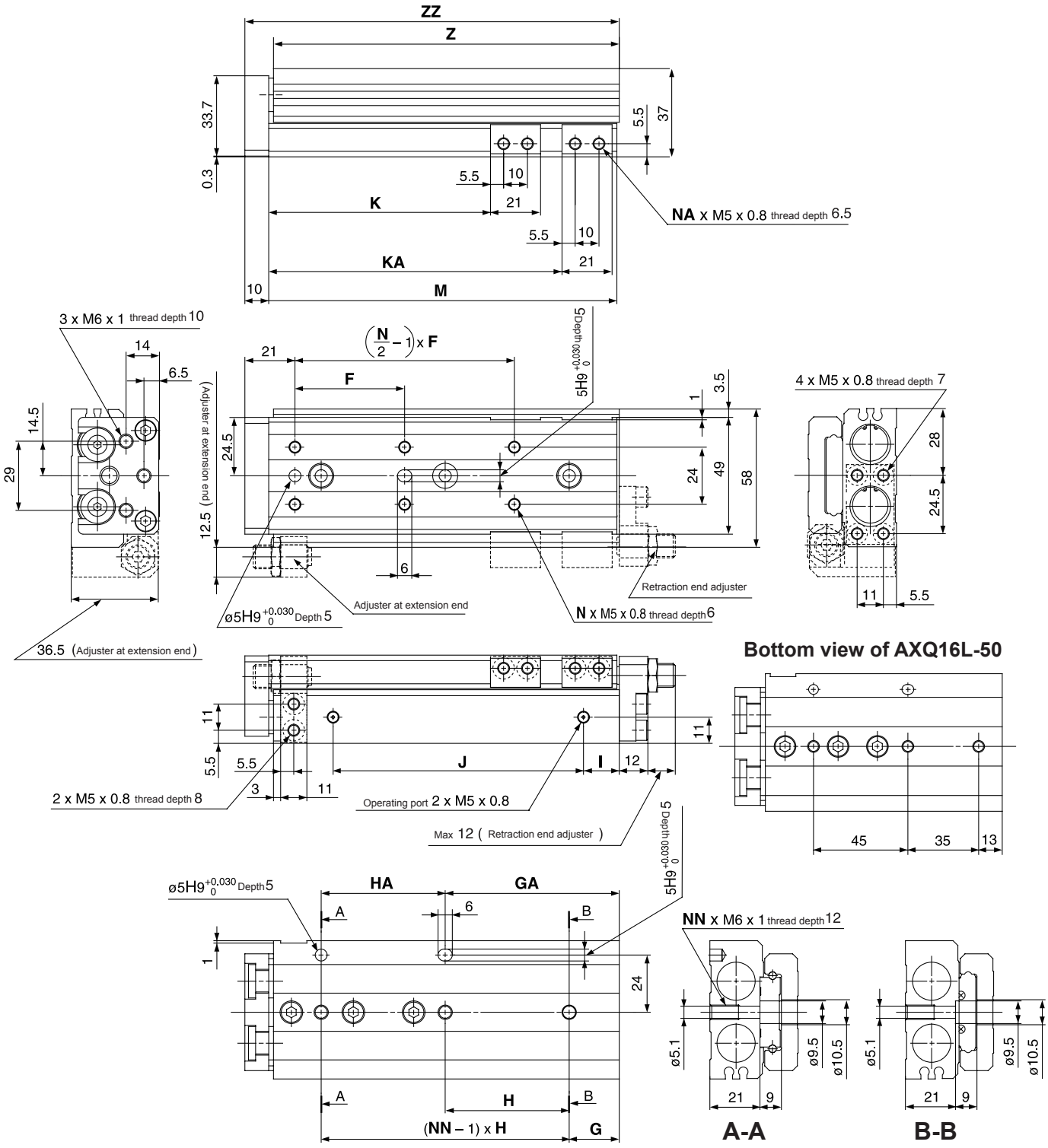
Basic type AXQ16



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ16- 10	38	4	18	39	2	18	39	12	40	28	57	4	78	77	89
AXQ16- 20	38	4	18	39	2	18	39	12	40	38	—	4	78	77	89
AXQ16- 30	48	4	19	48	2	19	48	12	50	48	—	4	88	87	99
AXQ16- 40	58	4	19	58	2	19	58	12	60	58	—	4	98	97	109
AXQ16- 50	40	6	—	—	3	48	45	20	68	68	93	8	114	113	125
AXQ16- 75	46	6	21	52	3	73	52	15	105	93	125	8	146	145	157
AXQ16-100	44	8	36	44	4	80	88	18	145	118	168	8	189	188	200
AXQ16-125	44	10	17	44	5	105	88	23	165	143	193	8	214	213	225

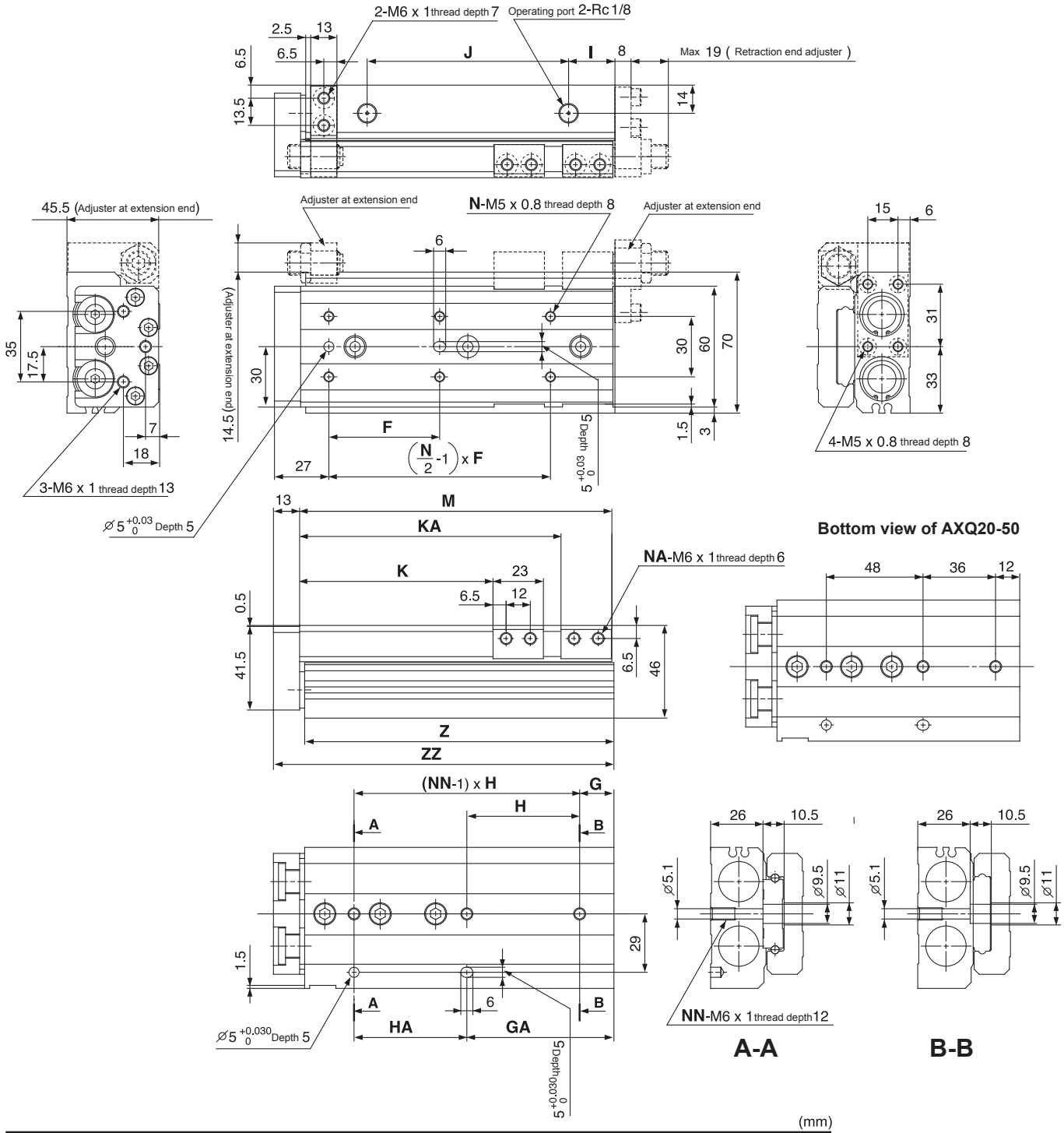
Symmetric Type AXQ16L



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ16L- 10	38	4	18	39	2	18	39	12	40	28	57	4	78	77	89
AXQ16L- 20	38	4	18	39	2	18	39	12	40	38	—	4	78	77	89
AXQ16L- 30	48	4	19	48	2	19	48	12	50	48	—	4	88	87	99
AXQ16L- 40	58	4	19	58	2	19	58	12	60	58	—	4	98	97	109
AXQ16L- 50	40	6	—	—	3	48	45	20	68	68	93	8	114	113	125
AXQ16L- 75	46	6	21	52	3	73	52	15	105	93	125	8	146	145	157
AXQ16L-100	44	8	36	44	4	80	88	18	145	118	168	8	189	188	200
AXQ16L-125	44	10	17	44	5	105	88	23	165	143	193	8	214	213	225

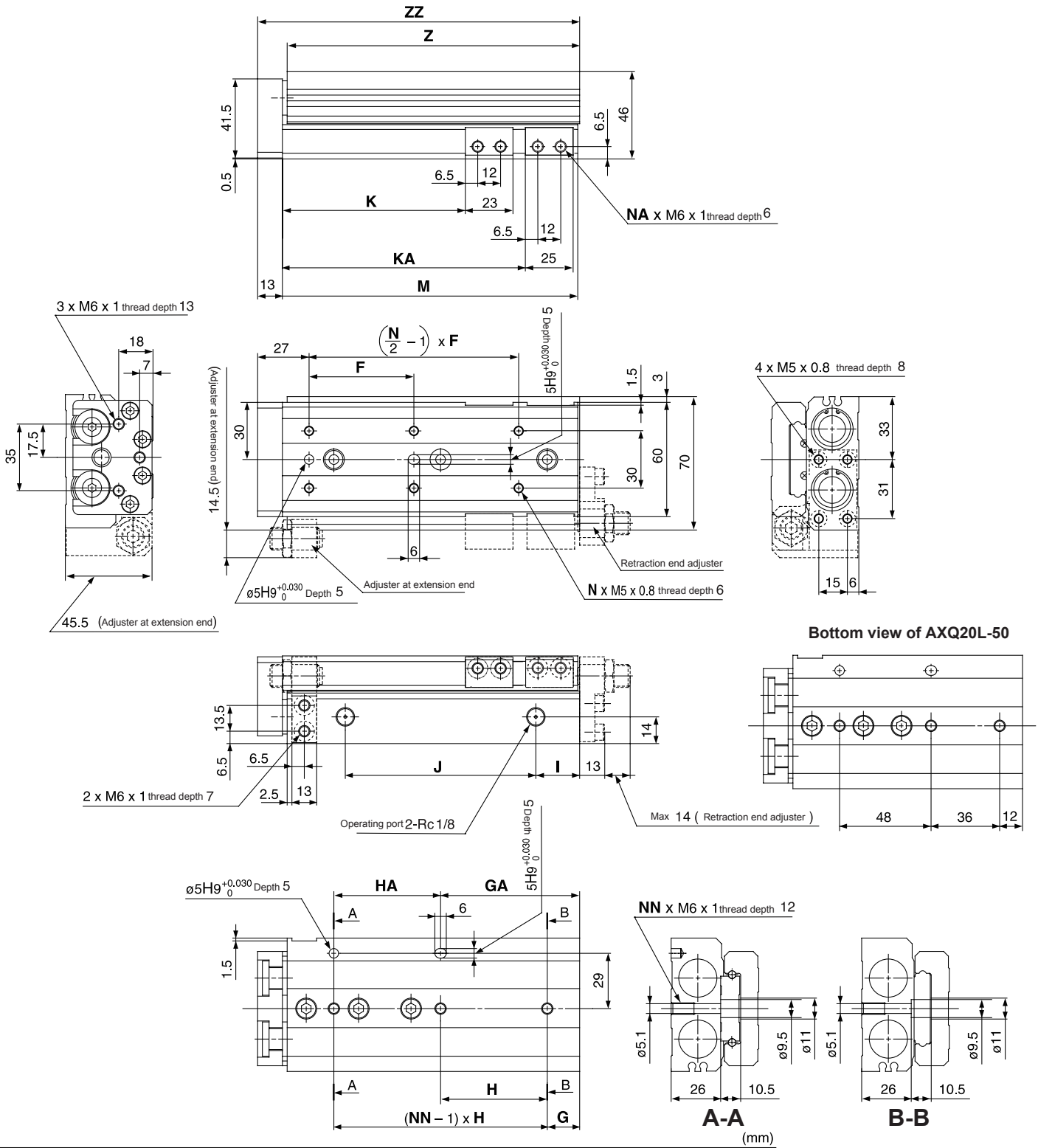
Basic type AXQ20



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ20- 10	45	4	22	46	2	18	50	16	46	32	70	4	94	92.5	108
AXQ20- 20	40	4	22	46	2	18	50	16	46	42	70	4	94	92.5	108
AXQ20- 30	48	4	22	46	2	18	50	16	46	52	—	4	94	92.5	108
AXQ20- 40	58	4	22	56	2	22	56	16	56	62	—	4	104	102.5	118
AXQ20- 50	42	6	—	—	3	48	48	18	72	72	98	4	122	120.5	136
AXQ20- 75	55	6	17	56	3	73	56	23	100	97	131	8	155	153.5	169
AXQ20-100	50	8	18	56	4	74	112	25	155	122	188	8	212	210.5	226
AXQ20-125	55	8	37	59	4	96	118	18	190	147	216	8	240	238.5	254
AXQ20-150	62	8	56	62	4	118	124	21	215	172	244	8	268	266.5	282

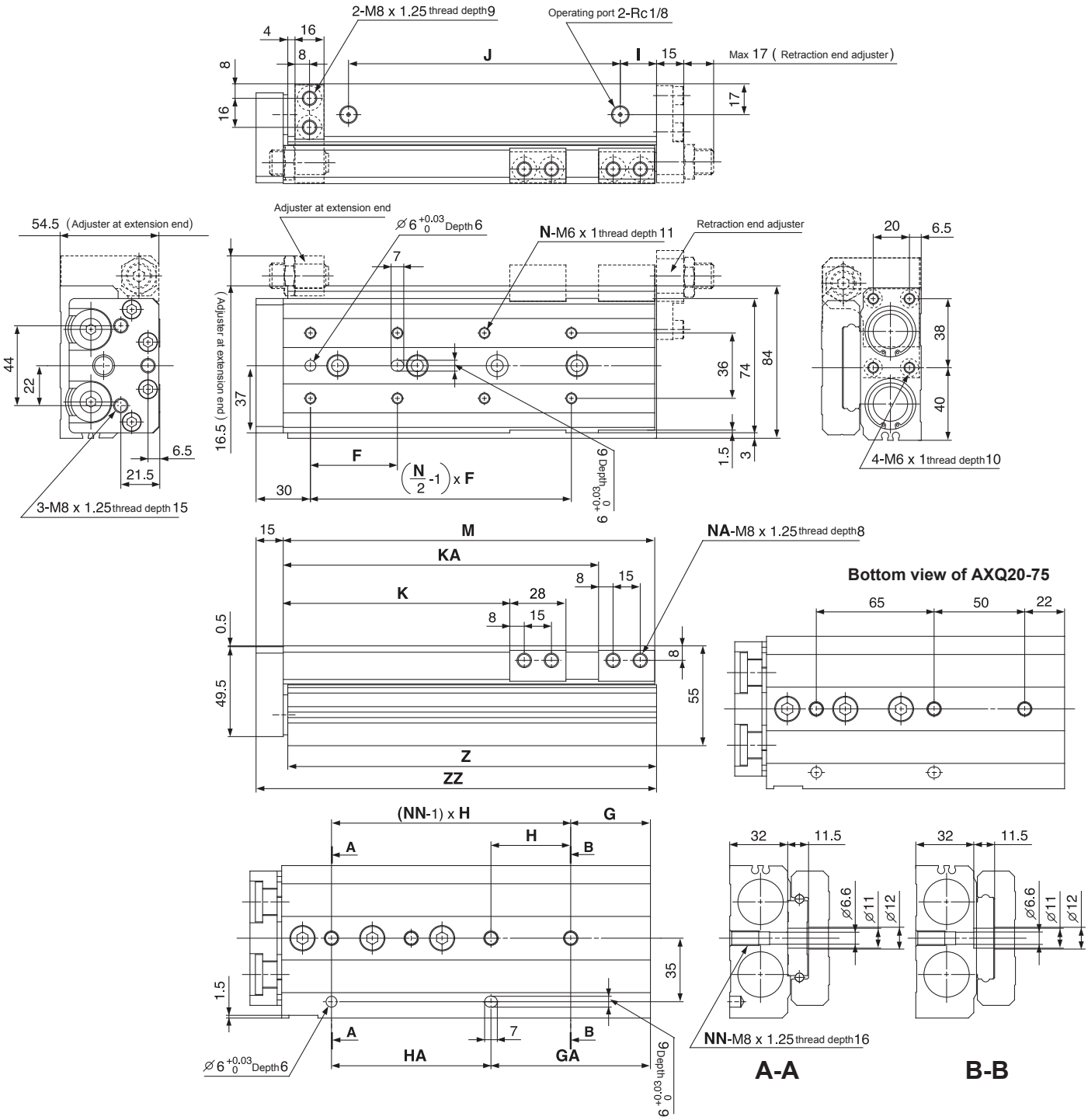
Symmetric Type AXQ20L



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ20L- 10	45	4	22	46	2	18	50	16	46	32	70	4	94	92.5	108
AXQ20L- 20	40	4	22	46	2	18	50	16	46	42	70	4	94	92.5	108
AXQ20L- 30	48	4	22	46	2	18	50	16	46	52	—	4	94	92.5	108
AXQ20L- 40	58	4	22	56	2	22	56	16	56	62	—	4	104	102.5	118
AXQ20L- 50	42	6	—	—	3	48	48	18	72	72	98	4	122	120.5	136
AXQ20L- 75	55	6	17	56	3	73	56	23	100	97	131	8	155	153.5	169
AXQ20L-100	50	8	18	56	4	74	112	25	155	122	188	8	212	210.5	226
AXQ20L-125	55	8	37	59	4	96	118	18	190	147	216	8	240	238.5	254
AXQ20L-150	62	8	56	62	4	118	124	21	215	172	244	8	268	266.5	282

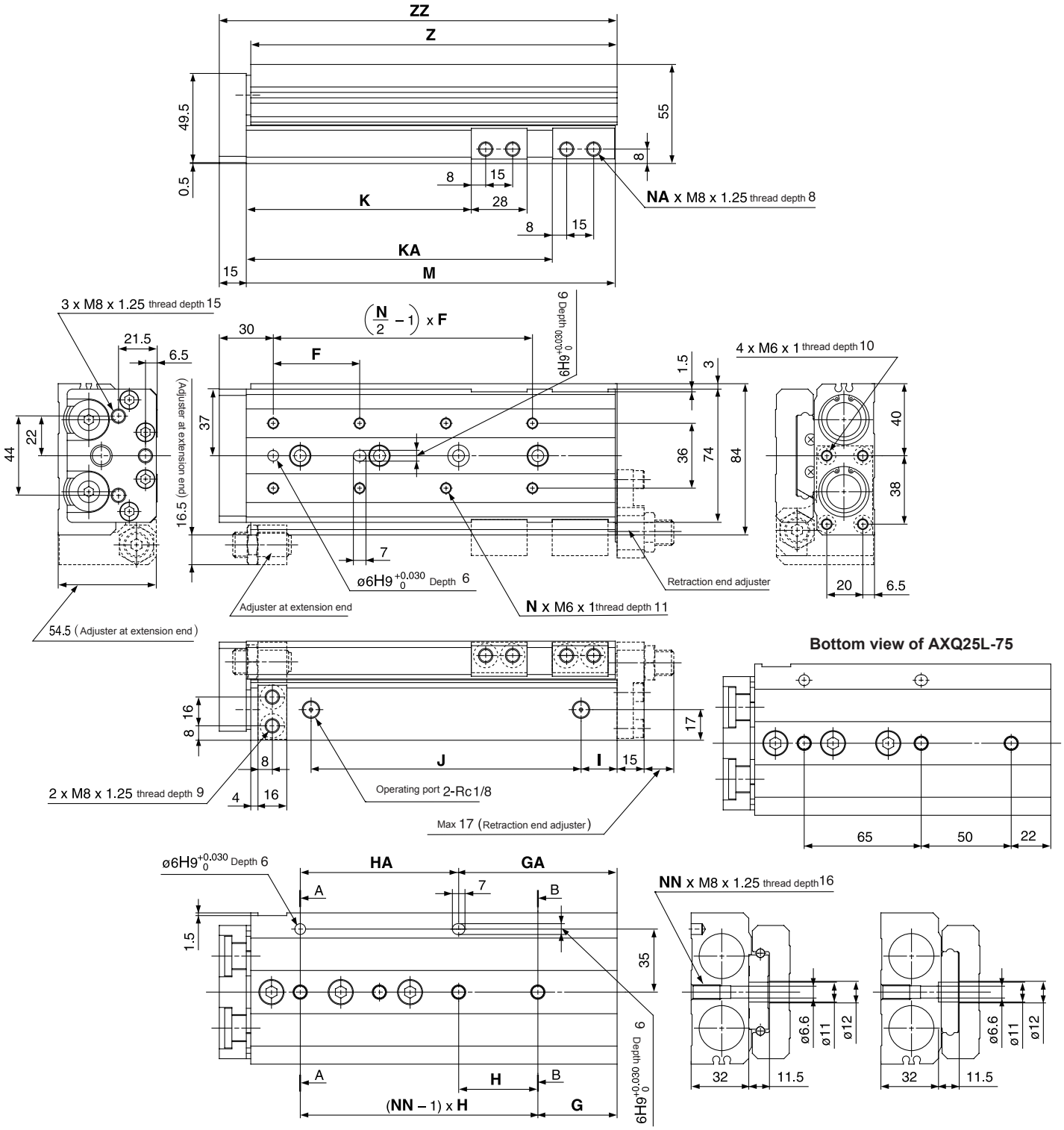
Basic type AXQ25



(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ25- 10	55	4	23	55	2	23	55	16	56	36.5	77.5	4	107	105.5	123
AXQ25- 20	46	4	23	55	2	23	55	16	56	46.5	77.5	4	107	105.5	123
AXQ25- 30	55	4	23	55	2	23	55	16	56	56.5	—	4	107	105.5	123
AXQ25- 40	65	4	23	65	2	23	65	16	66	66.5	—	4	117	115.5	133
AXQ25- 50	75	4	32	80	2	32	80	16	90	76.5	111.5	4	141	139.5	157
AXQ25- 75	60	6	—	—	3	72	65	31	100	101.5	136.5	4	166	164.5	182
AXQ25-100	48	8	44	44	4	88	88	20	150	126.5	175.5	8	205	203.5	221
AXQ25-125	60	8	31	66	4	97	132	18	205	151.5	228.5	8	258	256.5	274
AXQ25-150	65	8	56	66	4	122	132	18	230	176.5	253.5	8	283	281.5	299

Symmetric Type AXQ25L

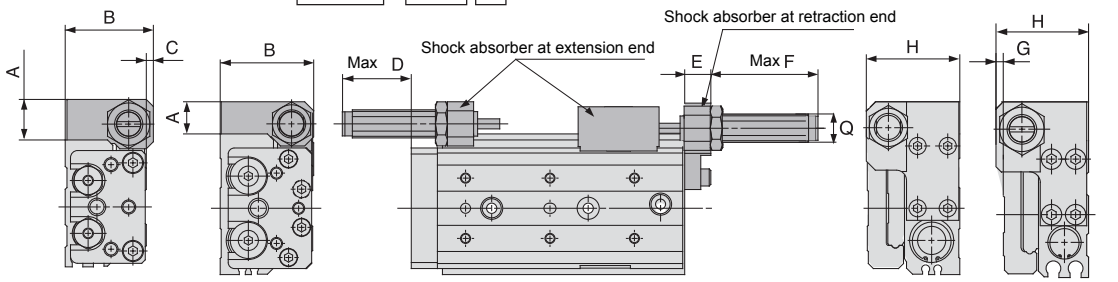


(mm)

Model	F	N	G	H	NN	GA	HA	I	J	K	KA	NA	M	Z	ZZ
AXQ25L- 10	55	4	23	55	2	23	55	16	56	36.5	77.5	4	107	105.5	123
AXQ25L- 20	46	4	23	55	2	23	55	16	56	46.5	77.5	4	107	105.5	123
AXQ25L- 30	55	4	23	55	2	23	55	16	56	56.5	—	4	107	105.5	123
AXQ25L- 40	65	4	23	65	2	23	65	16	66	66.5	—	4	117	115.5	133
AXQ25L- 50	75	4	32	80	2	32	80	16	90	76.5	111.5	4	141	139.5	157
AXQ25L- 75	60	6	—	—	3	72	65	31	100	101.5	136.5	4	166	164.5	182
AXQ25L-100	48	8	44	44	4	88	88	20	150	126.5	175.5	8	205	203.5	221
AXQ25L-125	60	8	31	66	4	97	132	18	205	151.5	228.5	8	258	256.5	274
AXQ25L-150	65	8	56	66	4	122	132	18	230	176.5	253.5	8	283	281.5	299

Shock absorber at extension end

B-With shock absorber AXQ **Bore size** - **Stroke** ☐ BS, BT, B



AXQ 8 and 20 AXQ 12•16•25 AXQ 12•16•25 AXQ 8 and 20

With shock absorber (mm)

Model	Stroke Adjustable Range		A	B	C	D	E	F	G	H	Q
	Extension end	Retraction end									
AXQ8	20	20	11.5	25	2	23	8	32	2	25	M8 x 1.0
AXQ12	18	18	10	29.5	-	18	10	30	-	29.5	M8 x 1.0
AXQ16	22	22	12.5	36.5	-	20	12	34	-	36.5	M10 x 1.0
AXQ20	35	35	16	46.5	0.5	35	13	54	0.5	46.5	M14x1.5
AXQ25	35	35	16.5	54.5	-	29	15	52	-	54.5	M14x1.5