

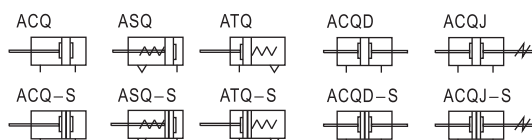
Compact cylinder

ACQ Series

AIRTAC



Symbol



Product feature

1. JIS standard is implemented.
2. C clip is adopted to connect the cylinder body and back cover or front cover, and riveted structure is adopted to connect piston and piston rod to make it compact and reliable.
3. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Installing accessories with various specifications are optional.

Ordering code

Model can to be changed Ordering code. Example:

Production type: ACQJ

Magnet: With magnet

Bore size: 50mm

Stroke: 80mm

Adjustable stroke: 50mm

Rod type: Male thread

Mounting type: LB

Thread type: NPT

Model: ACQJ S-50 × 80-50-B-LB-T

Ordering code: ACQJ S 50 0080 050 B LB T

Model	Magnet	Bore size	Stroke	Adjustable stroke	Rod type	Mounting type	Thread type
	Blank: Without magnet S: With magnet	12: Φ12mm 16: Φ16mm 20: Φ20mm 25: Φ25mm 32: Φ32mm 40: Φ40mm 50: Φ50mm 63: Φ63mm 80: Φ80mm A0: Φ100mm	In 4 digits	In 3 digits	Blank: Female thread B: Male thread N: No thread	Blank: No accessories FA: FA type FB: FB type CB: CB type LB: LB type	P: PT T: NPT G: G

Specification

Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double acting									
	Single acting-Push type, Single acting-Pull type									
Fluid	Air(to be filtered by 40 μ m filter element)									
Operating pressure	0.1~1.0MPa(15~145psi)(1.0~10.0bar)									
	0.2~1.0MPa(28~145psi)(2.0~10.0bar)									
Proof pressure	1.5MPa(215psi)(15bar)									
Temperature °C	-20~80									
Speed range mm/s	Double acting: 30~500									
	Single acting: 50~500									
Stroke tolerance	0~150 ^{+1.0} ₀									
	>150 ^{+1.4} ₀									
Cushion type	Bumper									
Port size ①	M5 × 0.8				1/8"		1/4"		3/8"	

① PT thread, NPT thread and G thread are available. Add) Refer to P403~426 for detail of sensor switch.

Stroke

Bore size (mm)		Standard stroke (mm)										Max. std stroke	Max. stroke			
													Without magnet	With magnet		
12	Double acting	5	10	15	20	25	30	35	40	45	50	50	80	70		
	Single acting	5	10	15	20								20	-	-	
16	Double acting	5	10	15	20	25	30	35	40	45	50	55	60	70		
	Single acting	5	10	15	20								20	-	-	
20	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30								30	-
32	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									
40	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									
50	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									
63	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									
80	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									
100	Double acting	5	10	15	20	25	30	35	40	45	50	60	70	80	90	100
	Single acting	5	10	15	20	25	30									

Note) 1. Please contact the company for other special strokes.

2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Explain of model

① Please refer to page 281 for accessory parts.

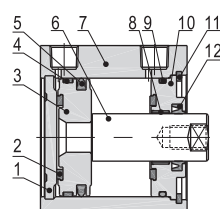
② Standard thread is blank here.



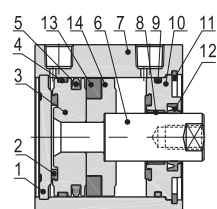
ACQ Series



ACQ



ACQS

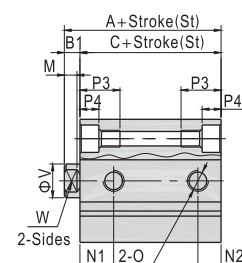
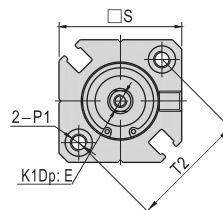
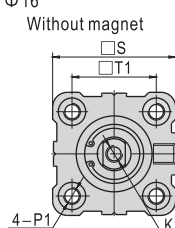


NO.	Item	Material
1	Back cover	No(Φ 12, 16)\Aluminum alloy(Others)
2	Bumper	TPU(Φ 12~25)NBR(Others)
3	Piston	Brass(Φ 12, 16)\Aluminum alloy(Others)
4	Wear ring	No(Φ 12~32)\Wear resistant material(Others)
5	Piston seal	NBR
6	Piston rod	Carbon steel with 20 μ m chrome plated
7	Body	Aluminum alloy
8	Bushing	No(Φ 12~32)\Wear resistant material(Others)
9	O-ring	NBR
10	Front cover	Aluminum alloy
11	C clip	Spring steel
12	Front cover packing	NBR
13	Magnet	Φ 12~25 Sintered metal(Neodymium-iron-boron)
		Others Plastic
14	Magnet holder	Brass(Φ 12, 16)\Aluminum alloy(Others)

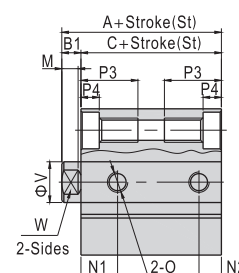
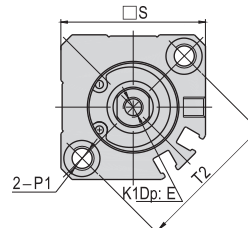
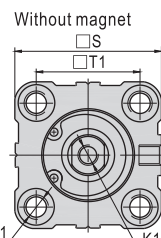
■ Dimensions

ACQ

Φ12、Φ16

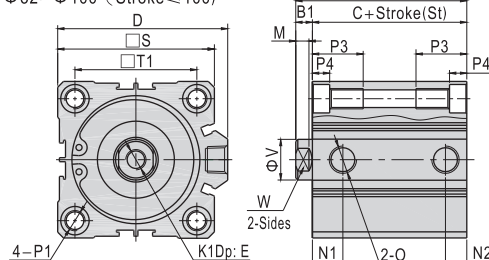


Φ20、Φ25



Model	Without magnet										With magnet				B1	D	E	M	K1
Item	A			C			N1	N2	A	C	N1	N2							
Bore size	St≤50	St=55	St≥60	St≤50	St=55	St≥60													
12	20.5	-	-	17	-	-	7.5	5	31.5	28	9	7	3.5	-	6	3.5	M3×0.5		
16	22	22	-	18.5	18.5	-	8	5.5	34	30.5	9.5	5.5	3.5	-	8	3	M4×0.7		
20	24	-	34	19.5	-	29.5	9	5.5	36	31.5	9.5	5.5	4.5	-	7	4	M5×0.8		
25	27.5	-	37.5	22.5	-	32.5	11	5.5	37.5	32.5	11	5.5	5	-	12	4.5	M6×1.0		
Bore size\Item O		P1						P3						P4	S	T1	T2	V	W
12	M5×0.8	2-Sides: Φ6.5 Thread:M4×0.7 Thru.hole: Φ3.4										11	3.5	25	15.5	22	6	5	
16	M5×0.8	2-Sides: Φ6.5 Thread:M4×0.7 Thru.hole: Φ3.4										11	3.5	29	20	28	8	6	
20	M5×0.8	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2										17	7	36	25.5	36	10	8	
25	M5×0.8	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2										17	7	40	28	40	12	10	

Φ32~Φ100 (Stroke≤100)



Model	Without magnet							With magnet				B1	D	E	M	K1	O		
Item	A		C		N1	N2	A	C	N1	N2									
Bore size	St≤50	St≥60	St≤50	St≥60															
32	St=5 St>5	30	40	23	33	7.5 10.5	6.5 7.5	40	33	10.5	7.5	7	49.5	13	6	M8 × 1.25	1/8"		
40		36.5	46.5	29.5	39.5	11	8	46.5	39.5	11	8	7	57	13	6	M8 × 1.25	1/8"		
50	St=5	38.5	48.5	30.5	40.5	9	9	48.5	40.5	10.5	10.5	8	71	15	6.5	M10 × 1.5	1/4"		
	St>5					10.5	10.5												
63	St=5	44	54	36	46	14	9.5	54	46	15	10.5	8	84	15	6.5	M10 × 1.5	1/4"		
	St>5					15	10.5												
80		53.5	63.5	43.5	53.5	16	14	63.5	53.5	16	14	10	104	20	8.5	M16 × 2.0	3/8"		
100		65	75	53	63	20	17.5	75	63	20	17.5	12	123.5	26	9.5	M20 × 2.5	3/8"		
Bore size\Item		P1											P3	P4	S	T1	T2	V	W
32		2-Sides: Φ9 Thread:M6 × 1.0 Thru.hole: Φ 5.2										17	7	45	34	-	16	14	
40		2-Sides: Φ9 Thread:M6 × 1.0 Thru.hole: Φ 5.2										17	7	53	40	-	16	14	
50		2-Sides: Φ 11 Thread:M8 × 1.25 Thru.hole: Φ 6.8										22	8	64	50	-	20	17	
63		2-Sides: Φ 14 Thread:M10 × 1.5 Thru.hole: Φ 8.5										28.5	10.5	77	60	-	20	17	
80		2-Sides: Φ 17.5 Thread:M12 × 1.75 Thru.hole: Φ 10.3										35.5	13.5	98	77	-	25	22	
100		2-Sides: Φ 17.5 Thread:M12 × 1.75 Thru.hole: Φ 10.3										35.5	13.5	117	94	-	32	27	

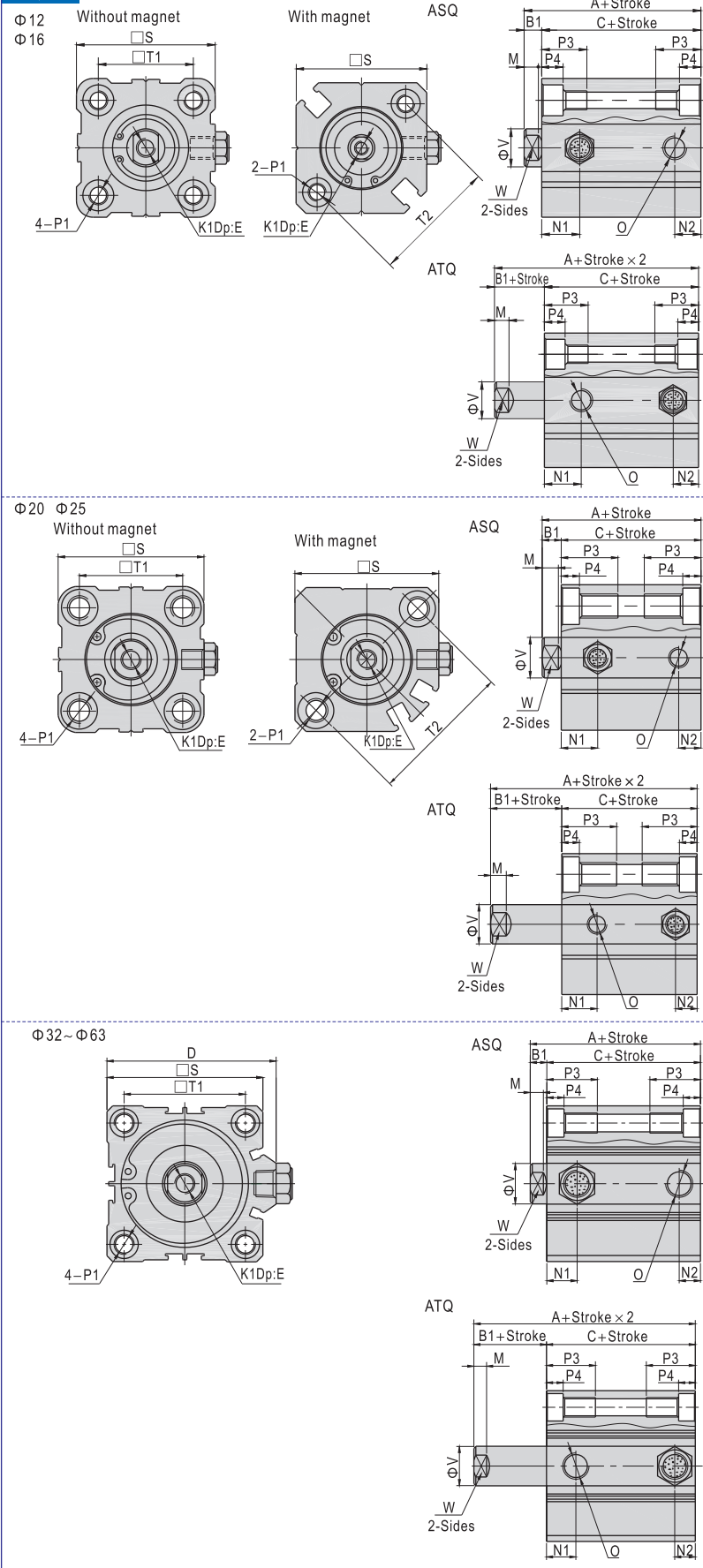


ACQ

Compact cylinder
ACQ Series



ASQ, ATQ



Model	Without magnet											
Bore size\Item	A			C			N1	N2	B1	D	E	
Stroke	5,10	15,20	25,30	5,10	15,20	25,30						
12	25.5	30.5	-	22	27	-	7.5	5	3.5	-	6	
16	27	32	-	23.5	28.5	-	8	5.5	3.5	-	8	
20	29	34	39	24.5	29.5	34.5	9	5.5	4.5	-	7	
25	32.5	37.5	42.5	27.5	32.5	37.5	11	5.5	5	-	12	
32	35	40	45	28	33	38	10.5	7.5	7	49.5	13	
40	41.5	46.5	51.5	34.5	39.5	44.5	11	8	7	57	13	
50	48.5	53.5	58.5	40.5	45.5	50.5	10.5	10.5	8	71	15	
63	54	59	64	46	51	56	15	10.5	8	84	15	

Model	With magnet										
Bore size\Item	A			C			N1	N2	K1		
Stroke	5,10	15,20	25,30	5,10	15,20	25,30					
12	36.5	41.5	-	33	38	-	9	7	M3×0.5		
16	39	44	-	35.5	40.5	-	9.5	5.5	M4×0.7		
20	41	46	51	36.5	41.5	46.5	9.5	5.5	M5×0.8		
25	42.5	47.5	52.5	37.5	42.5	47.5	11	5.5	M6×1.0		
32	45	50	55	38	43	48	10.5	7.5	M8×1.25		
40	51.5	56.5	61.5	44.5	49.5	54.5	11	8	M8×1.25		
50	58.5	63.5	68.5	50.5	55.5	60.5	10.5	10.5	M10×1.5		
63	64	69	74	56	61	66	15	10.5	M10×1.5		

Bore size\Item	O	P1
12	M5×0.8	2-Sides: Φ6.5 Thread:M4×0.7 Thru.hole: Φ3.4
16	M5×0.8	2-Sides: Φ6.5 Thread:M4×0.7 Thru.hole: Φ3.4
20	M5×0.8	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2
25	M5×0.8	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2
32	1/8"	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2
40	1/8"	2-Sides: Φ9.0 Thread:M6×1.0 Thru.hole: Φ5.2
50	1/4"	2-Sides: Φ11 Thread:M8×1.25 Thru.hole: Φ6.8
63	1/4"	2-Sides: Φ14 Thread:M10×1.5 Thru.hole: Φ8.5

Bore size\Item	P3	P4	M	S	T1	T2	V	W
12	11	3.5	3.5	25	15.5	22	6	5
16	11	3.5	3	29	20	28	8	6
20	17	7	4	36	25.5	36	10	8
25	17	7	4.5	40	28	40	12	10
32	17	7	6	45	34	-	16	14
40	17	7	6	53	40	-	16	14
50	22	8	6.5	64	50	-	20	17
63	28.5	10.5	6.5	77	60	-	20	17

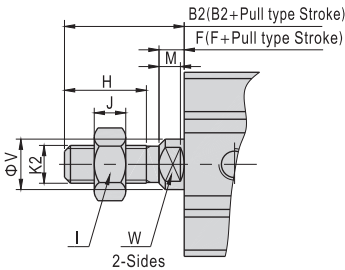


Compact cylinder
ACQ Series



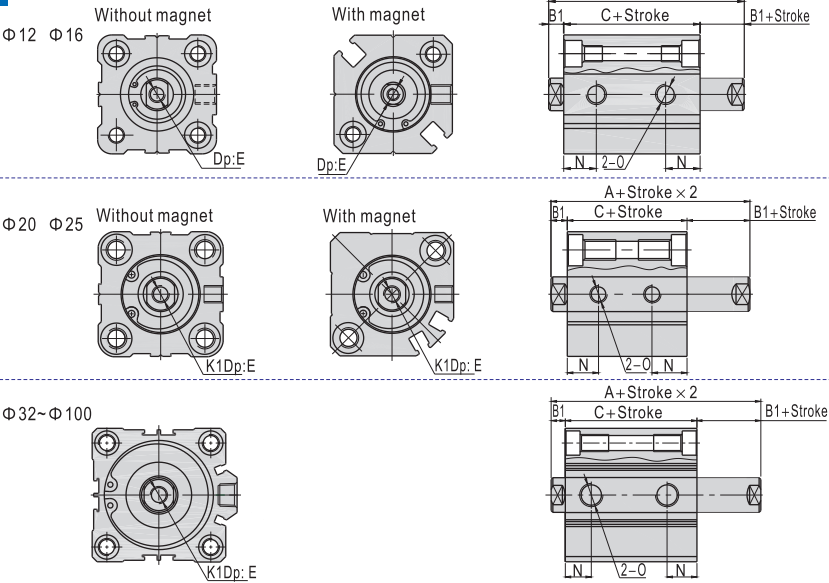
Male thread

(Bore size: $\Phi 12 \sim \Phi 100$, Stroke ≤ 100)



Bore size\Item	B2	F	H	I	J	K2	M	V	W
12	14	3.5	9	8	4	M5 $\times$ 0.8	3.5	6	5
16	15.5	3.5	10	10	5	M6 $\times$ 1.0	3	8	6
20	18.5	4.5	12	12	6	M8 $\times$ 1.25	4	10	8
25	22.5	5	15	17	6	M10 $\times$ 1.25	4.5	12	10
32	28.5	5	20.5	19	8	M14 $\times$ 1.5	4	16	14
40	28.5	5	20.5	19	8	M14 $\times$ 1.5	4	16	14
50	33.5	5	26	27	11	M18 $\times$ 1.5	4	20	17
63	33.5	5	26	27	11	M18 $\times$ 1.5	4	20	17
80	43.5	8	32.5	32	13	M22 $\times$ 1.5	6	25	22
100	43.5	8	32.5	36	13	M26 $\times$ 1.5	5.5	32	27

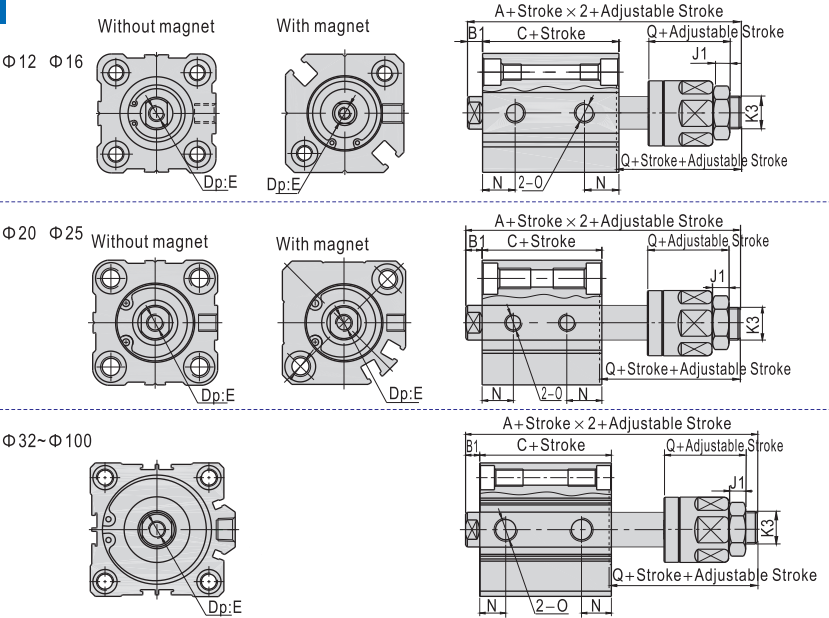
ACQD



Bore size\Item	A		C		B1	E	N
	Without magnet	With magnet	Without magnet	With magnet			
12	32.2	39.4	25.2	32.4	3.5	6	9
16	33	43	26	36	3.5	8	9.5
20	35	47	26	38	4.5	7	9.5
25	39	49	29	39	5	9.5(St=5)/12(St>5)	11
32	44.5	54.5	30.5	40.5	7	9(St≤10)/13(St>10)	10
40	54	64	40	50	7	11(St≤10)/13(St>10)	13
50	56.5	66.5	40.5	50.5	8	12(St≤10)/15(St>10)	13.5
63	58	68	42	52	8	12(St≤10)/15(St>10)	14.5(St=5)/16(St>5)
80	71	81	51	61	10	14(St≤15)/20(St>15)	16
100	84.5	94.5	60.5	70.5	12	20(St≤25)/26(St>25)	21

Remark) The unmarked dimension is the same as ACQ standard type. Please refer to this page for male thread dimensions.

ACQJ



Item	A		C		B1	E	N	Q	J1	K3
	Without magnet	With magnet	Without magnet	With magnet						
12	45.2	52.4	25.2	32.4	3.5	6	9	17	4	M5 $\times$ 0.8
16	50	60	26	36	3.5	8	9.5	21	5	M6 $\times$ 1.0
20	55	67	26	38	4.5	7	9.5	25	6	M8 $\times$ 1.25
25	60.5	70.5	29	39	5	9.5(St=5)/12(St>5)	11	27	6	M10 $\times$ 1.25
32	64.9	74.9	30.5	40.5	7	9(St≤10)/13(St>10)	10	28	7	M12 $\times$ 1.25
40	74.5	84.5	40	50	7	11(St≤10)/13(St>10)	13	28	7	M12 $\times$ 1.25
50	77	87	40.5	50.5	8	12(St≤10)/15(St>10)	13.5	29	8	M16 $\times$ 1.5
63	78.4	88.4	42	52	8	12(St≤10)/15(St>10)	14.5(St=5)/16(St>5)	29	8	M16 $\times$ 1.5
80	95.8	105.8	51	61	10	14(St≤15)/20(St>15)	16	35.5	10	M20 $\times$ 1.5
100	114.3	124.3	60.5	70.5	12	20(St≤25)/26(St>25)	21	42.5	13.5	M27 $\times$ 2.0

Remark) The unmarked dimension is the same as ACQ standard type. Please refer to this page for male thread dimensions.



ACQ

