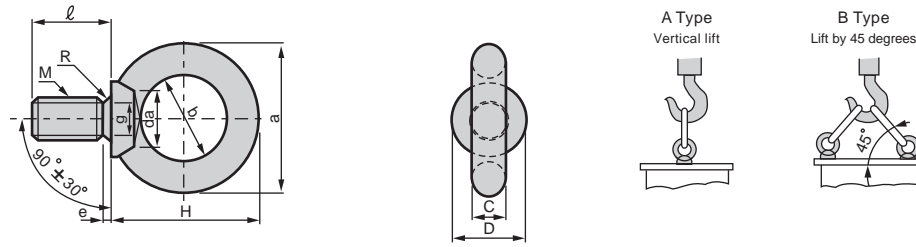


Lifting Eye Bolts

ALEB



MS

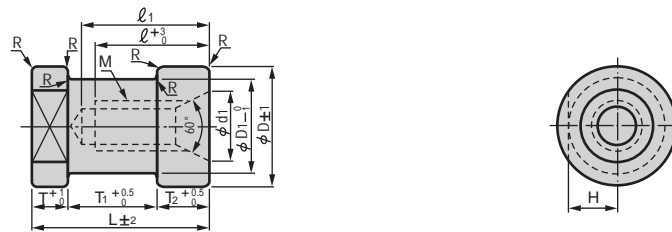
MXP	a	b	C	D	H	l	e	g	R	da	Maximum allowable load N (kgf)		Catalog No.	
											A : Vertical 1pc.	B : 45° 2pcs	Type	M
6 X1.0	24.9	14.5	5.2	12.8	28.45	15	3	4.7	1.0	7.9	392 { 40 }	392 { 40 }	ALEB	6
8 X1.25	32.6	20	6.3	16	33.3	15	3	6	1.0	9.2	785 { 80 }	785 { 80 }		8
10 X1.5	41	25	8	20	41.5	18	4	7.7	1.2	11.2	1471 { 150 }	1471 { 150 }		10
12 X1.75	50	30	10	25	51	22	5	9.4	1.4	14.2	2157 { 220 }	2157 { 220 }		12
16 X2.0	60	35	10.5	30	60	27	5	13	1.6	18.2	4413 { 450 }	4413 { 450 }		16
20 X2.5	72	40	16	35	71	30	6	16.4	2	22.4	6178 { 630 }	6178 { 630 }		20
24 X3.0	90	50	20	45	90	38	8	19.6	2.5	26.4	9316 { 950 }	9316 { 950 }		24
30 X3.5	110	60	25	60	110	45	8	25	3	33.4	14710 { 1500 }	14710 { 1500 }		30
36 X4.0	133	70	31.5	70	131.5	55	10	30.3	3	39.4	22555 { 2300 }	22555 { 2300 }		36
42 X4.5	151	80	35.5	80	150.5	65	12	35.6	3.5	45.6	33342 { 3400 }	33342 { 3400 }		42
48 X6.0	170	90	40	90	170	70	12	41	4	52.6	44130 { 4500 }	44130 { 4500 }	48	

• kgf = N X 0.101972

ORDERING CODE	CATALOG NO.	M
	ALEB	16

Cast-in Lifting Bushes

ACLB



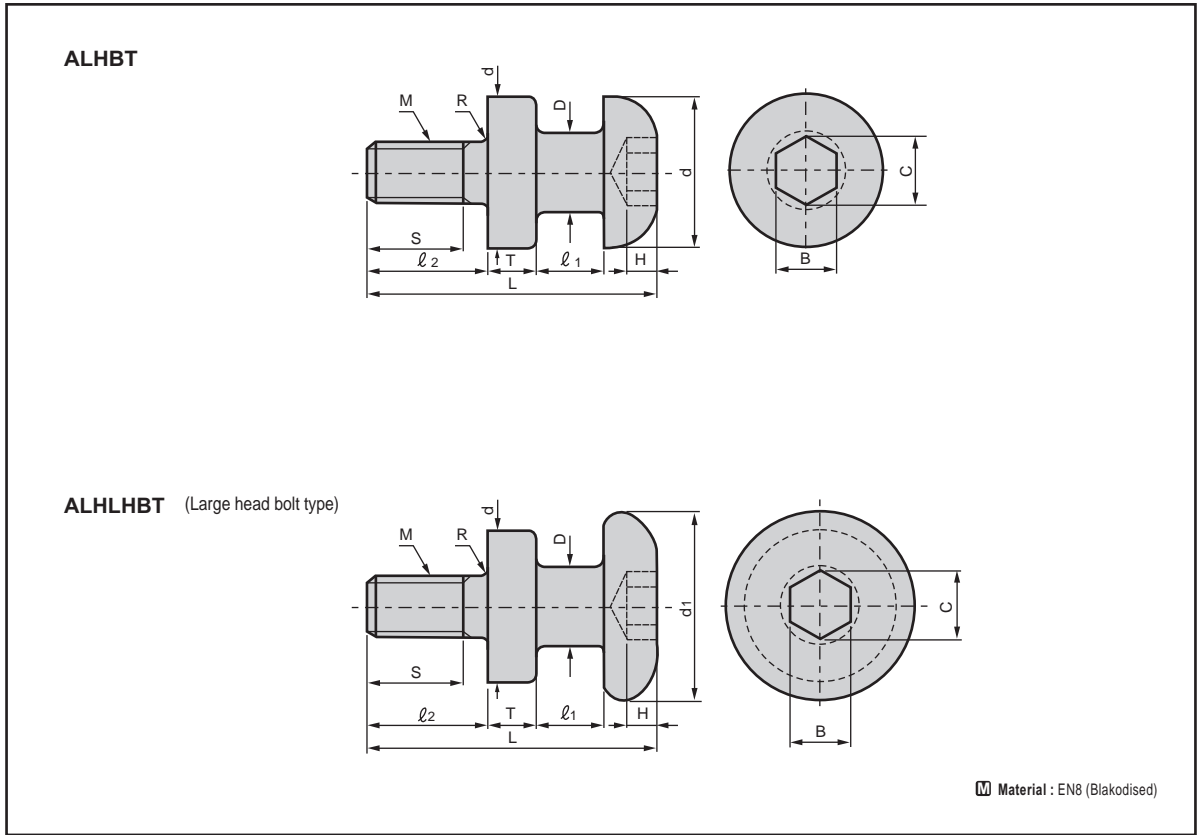
EN8

Maximum allowable load N (kgf)		MXP	D	D1	d1	l	l1	L	T	T1	T2	H	R	Catalog No.		
Hook	Eye bolt													Type	M	
2 pcs.	Vertical lift/1pc.	Lift by 45 degrees/2pcs.														
3730 { 380 }	2160 { 220 }	2160 { 220 }	12 X1.75	38	28	18	30	40	55	10	30	15	14	2	ACLB	12
6620 { 875 }	4410 { 450 }	4410 { 450 }	16 X2.0	46	36	22	35	45	55	10	30	15	18	2		16
3830 { 900 }	5880 { 600 }	5880 { 600 }	20 X2.5	48	38	28	45	55	70	15	35	20	19	2		20
13340 { 1360 }	9810 { 1000 }	9810 { 1000 }	24 X3.0	55	45	36	55	65	85	20	45	20	22.5	2		24
19810 { 2020 }	16670 { 1700 }	16670 { 1700 }	30 X3.5	65	52	42	65	75	95	25	50	20	26	3		30
58450 { 5960 }	22560 { 2300 }	22560 { 2300 }	36 X4.0	85	70	48	75	90	110	30	55	25	35	3		36

ORDERING CODE	CATALOG NO.
	ACLB 20



Lifting Hooks (Bolt Type)



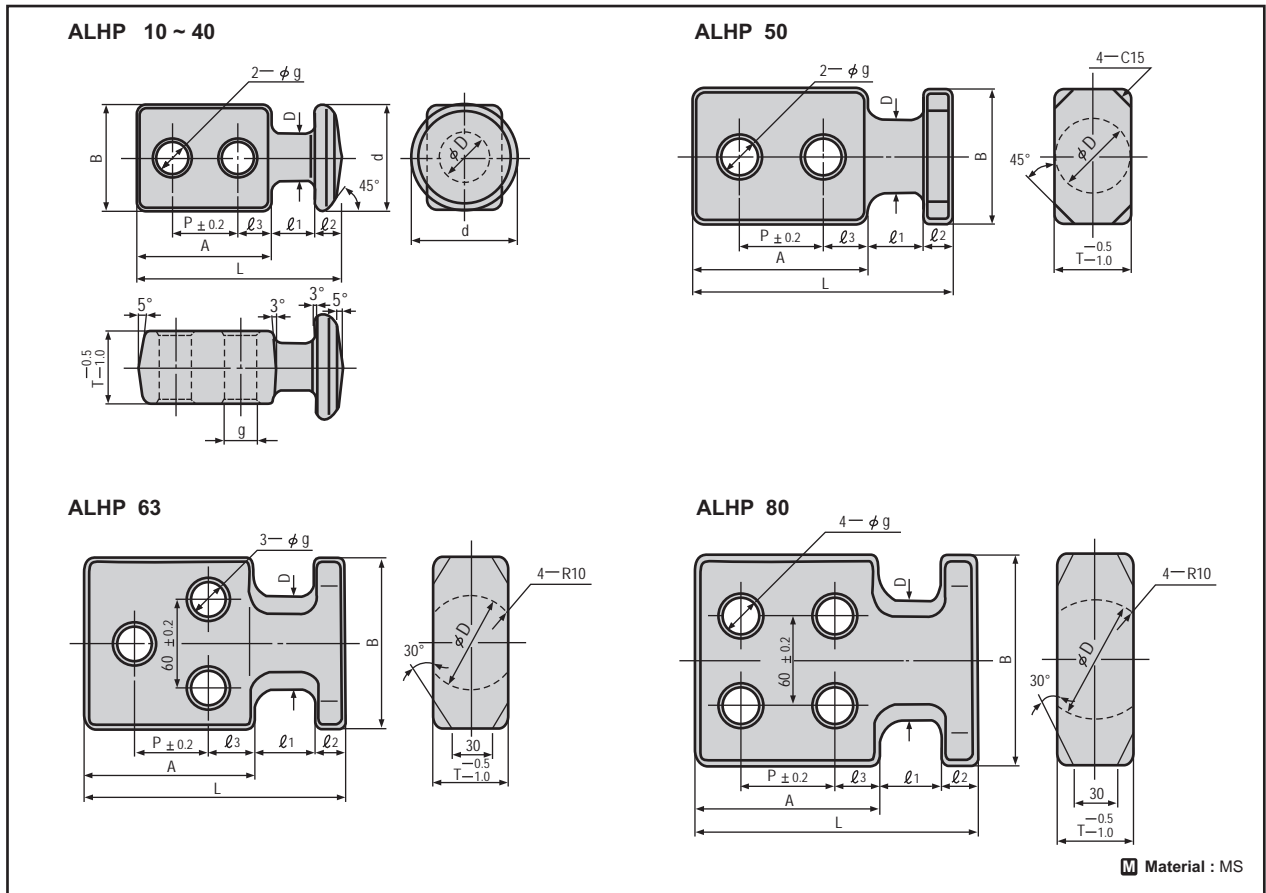
M X P	D	d	d1	l_1		l_2	S	T	L		R	H	B	C	N 1pc. (kg/1pc.) Steel safety coefficient 10	Catalog No.	
				ALHBT	ALHLHBT				ALHBT	ALHLHBT						Type	M
10 X 1.5	13	32	42	10	18	20	16	8	46	54	1.5	5	8	9.2	2452 {250}	ALHBT ALHLHBT	10
12 X 1.75	16	36	48	13	20	24	20	10	57	64	1.5	6	10	11.7	3530 {360}		12
16 X 2.0	20	40	52	18	25	30	25	13	75	82	2	9	14	16.3	6669 {680}		16
20 X 2.5	25	48	62	20	28	37	32	16	90	98	2	12	17	19.8	10395 {1060}		20
24 X 3.0	32	58	76	25	33	47	40	20	111	119	2.5	13	19	22.1	15004 {1530}		24
30 X 3.5	36	68	88	30	40	56	48	22	131	141	3	16	22	25.6	23830 {2430}		30
36 X 4.0	40	78	100	30	40	68	58	25	148	158	3	18	27	31.4	34814 {3550}		36

• kgf = N X 0.101972

ORDERING
CODE

CATALOG NO.
ALHBT 20

Lifting Hooks - Plate Type



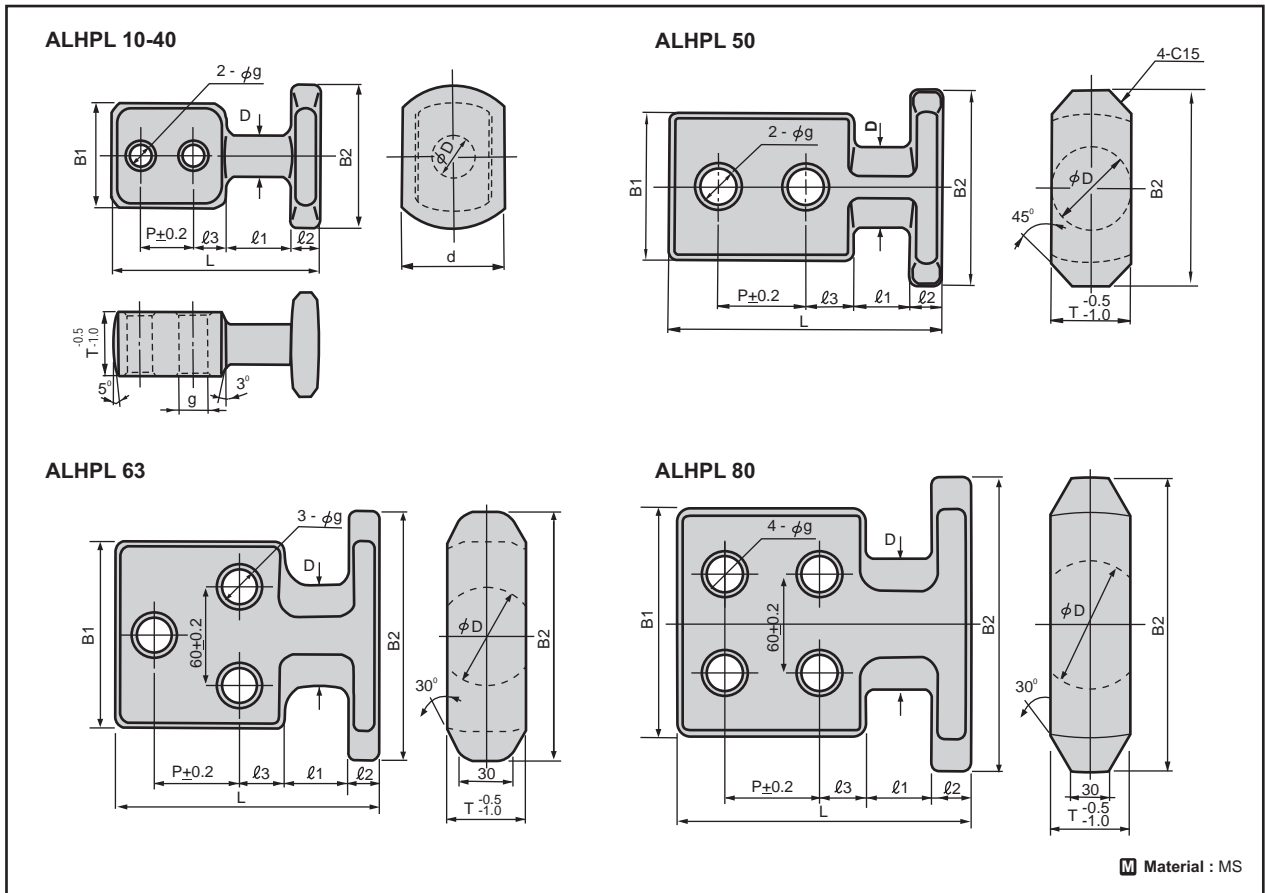
d	B	T	L	A	l ₁	l ₂	l ₃	P	g	N/1pc. (kgf/1pc.) (Steel safety coefficient 10)	Catalog No.	
											Type	D
28	28	18	50	32	10	8	8	16	7	1569 { 160 }	ALHP	10
32	32	20	56	38	10	8	10	18	9	3530 { 360 }		12
36	36	24	67	46	13	8	12	22	11	4511 { 460 }		16
40	40	26	88	60	18	10	15	30	14	5492 { 560 }		20
48	48	35	92	60	20	12	15	30	14	6570 { 670 }		25
55	55	40	118	80	25	13	20	40	18	12160 { 1240 }		32
70	70	50	138	93	30	15	24	45	22	19123 { 1950 }		40
—	90	50	170	115	35	20	30	55	26	27459 { 2800 }		50
—	115	50	175	115	40	20	30	55	26	39227 { 4000 }		63
—	140	50	185	120	40	25	30	60	26	50995 { 5200 }		80

•(KGF) = NX 0.101972

ORDERING
CODE

CATALOG NO.
ALHP 50

Lifting Hooks - Large Head Plate Type



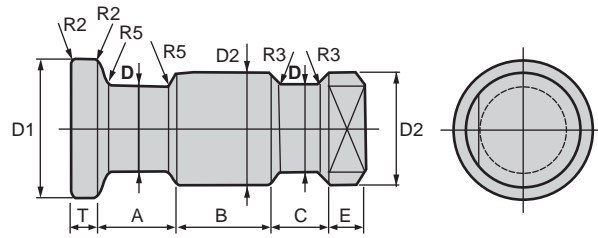
d	B1	B2	T	L	l1	l2	l3	P	g	N/1 pc. (kg/1pc) (Steel safety coefficient 10)	Catalog No.	
											Type	D
28	28	38	18	60	20	8	8	16	7	1569(0160)	ALHPL	10
32	32	44	20	66	20	8	10	18	9	3530(0360)		12
36	36	50	24	78	20	12	12	22	11	4511(0460)		16
40	40	56	26	97	25	12	15	30	14	5492(0560)		20
48	48	68	35	98	25	13	15	30	14	6570(0670)		25
55	55	77	40	125	30	15	20	40	18	12160(1240)		32
70	70	100	50	143	35	15	24	45	22	19123(1950)		40
-	90	120	50	170	35	20	30	55	26	27459(2800)		50
-	115	155	50	175	40	20	30	55	26	39227(4000)		63
-	140	180	50	185	40	25	30	60	26	50995(5200)		80

ORDERING
CODE

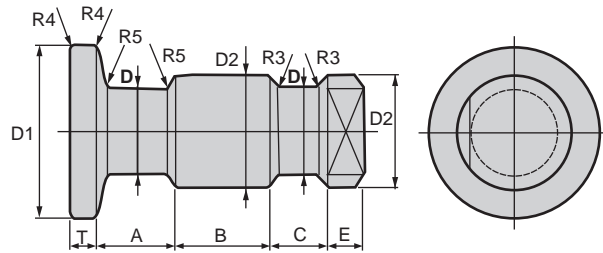
CATALOG NO.
ALHPL 50

Lifting Hooks - Cast-in Type

ALHCT



ALHCTLH (Large head bolt type)



MS

D	D1		D2	T	A	B	C	E	N/1 pc. (kgf/1pc)	Catalog No.	
	ALHCT	ALHCTLH								Type	D
25	46	60	36	12	25	30	15	16.6	7940(810) 13140(1340) 16570(1690) 20500(2090) 32070(3270) 62860(6410)	ALHCT ALHCTLH	25
32	55	70	42	12.4	30	40	20	16.8			32
36	60	80	46	17.6	35	45	25	17			36
40	70	90	55	18.1	35	60	30	17.4			40
50	90	120	76	23.9	35	70	40	18.1			50
70	120	140	100	30.2	40	80	40	19.4			70

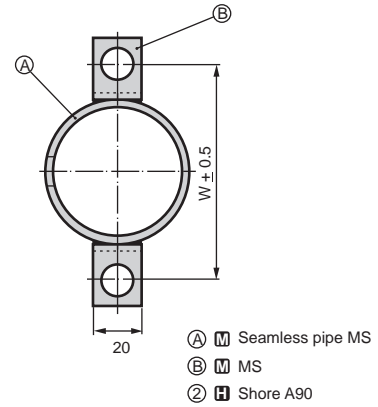
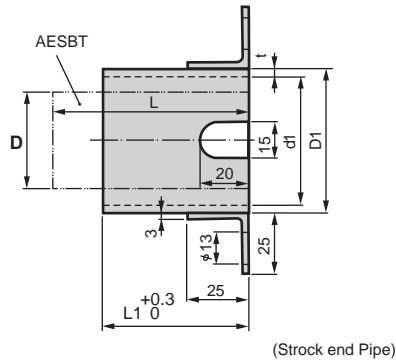
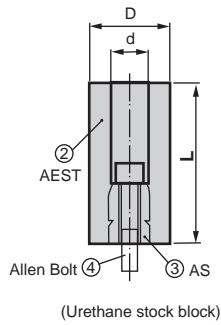
•(KGF) = NX 0.101972

ORDERING CODE CATLOG NO.
ALHCT 50

Urethane Stock Block Sets

APHBT

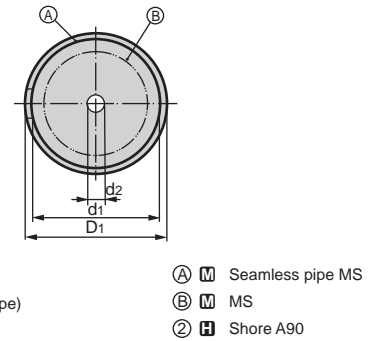
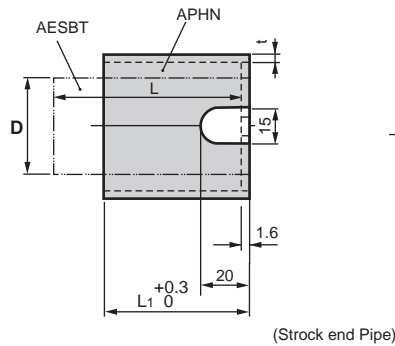
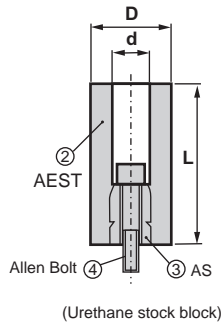
(AESBT + APH SET)



Urethane Stock Blocks ② ③ ④ AESBT			Stock end pipe ① ② APH					Sleeve ③ AS	Allen Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	t	W			Type	D			
40	80	-	60.5	60	52.9	3.8	91	-		APHBT	40	80	60	R (Red) Y (Yellow)
50	110	14	89.1	85	80.7	4.2	119	AS-14	M8-45 (Qty : 1)		50	110	85	
70	140		90	101.6	93.2		132				70	140	90 100 110	
		100	90		100 110									
90	140	22	139.8	100	130.8	4.5	170	AS-22	M12-55 (Qty : 1)		90	140	90 100 110	
			110	90	100 110									
100	140	22	165.2	100	155.2	5.0	195	AS-22	M12-55 (Qty : 1)		100	140	90 100 110	
			110	90	100 110									

A PHBTN

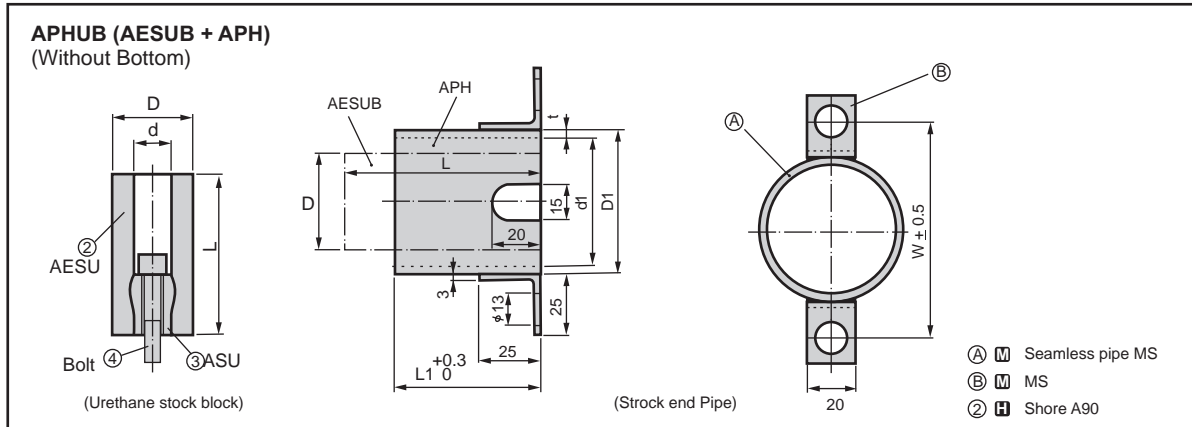
(AESBT + APHN SET)



Urethane Stock Blocks ② ③ ④ AESBT			Stock end pipe ① ② APHN					Sleeve ③ AS	Allen Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	d2	t			Type	D			
40	80	-	60.5	60	52.9		3.8			APHBTN	40	80	60	R (Red) Y (Yellow)
50	110	14	89.1	85	80.7	9	4.2	AS-14	M8-45 (Qty : 1)		50	110	85	
70	140		101.6	93.2	132						70	140		
90		139.8	110	130.8		4.5	AS-22	M12-55 (Qty : 1)	90		140	110		
100	152.5	142.5	5.0	100	140				110					

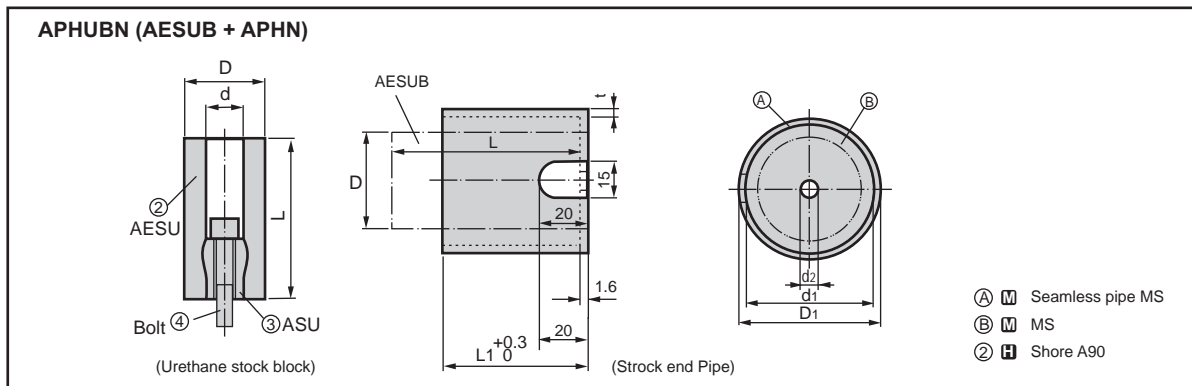
ORDERING CODE	CATALOG NO.	L	L1	R - Y
	APHBT 50	110	85	R
	APHBTN 70	140	110	Y
	APHUB 40	80	60	R
	APHUBN 90	140	110	Y

Urethane Stock Block Sets



Urethane Stock Block ②③④ AESUB			Stroke end pipe ① APH					Sleeve ③ ASU	Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	t	W	Type	D					
40	80	14	60.5	60	52.9	3.8	91	ASU14	M8-45 (Qty : 1)	APHUB	40	80	60	R (Red) Y (Yellow)
90	140	22	139.8	90	130.8	4.5	170	ASU22	M12-55 (Qty : 1)		90	140	90	

ORDERING CODE	CATALOG NO.	L	L1	R - Y
APHUB 40	80	60	Y	



Urethane Stock Block ②③④ AESUB			Stroke end pipe ① APHN					Sleeve ③ ASU	Bolt ④	Catlog No.		L	L1	Color
D	L	d	D1	L1	d1	d2	t	Type	D					
40	80	14	60.5	60	52.9	9	3.8	ASU14	MB-45 (Qty : 1)	APHUBN	40	80	60	R (Red) Y (Yellow)
70	110	22	101.6	85	93.2	13	4.2	ASU22	M12-55		70	110	85	
90	140	22	139.8	110	130.8	13	4.5	ASU22	M12-55 (Qty : 1)		90	140	110	

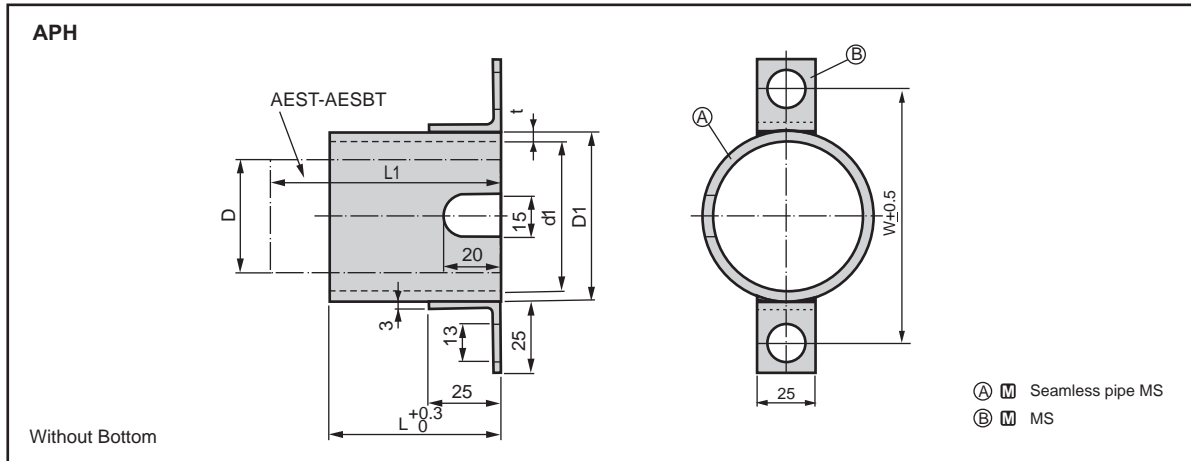
The Combination list of stroke end pipes and urethane stock blocks

Set name ①②③④	Stroke end pipe ①	Urethane Stock Blocks ②③④	Components		
			② Urethane	③ Sleeve	④ Bolt
			APHBT	APH	AESBT
APHBTN	APHN				
APHUB	APH	AESUB	AESU	ASU	
APHUBN	APHN				

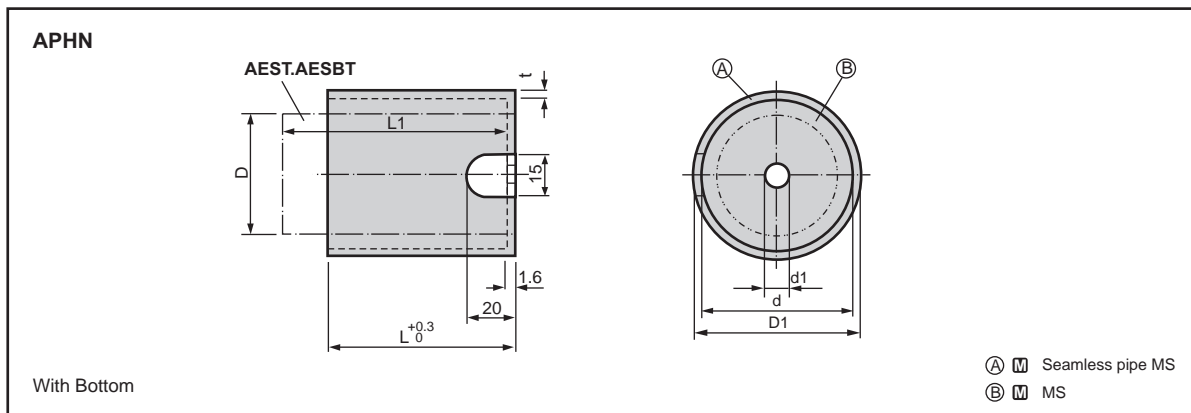
ORDERING CODE	CATALOG NO.	L	L1	R - Y
APHUBN 70	110	85	Y	



Stroke End Pipes



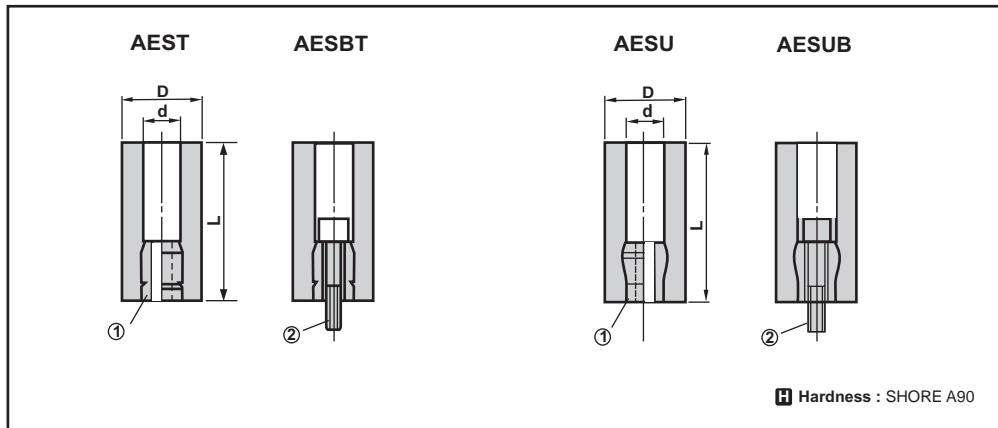
AEST - AESBT		D1	d	t	W	Catlog No.		L	COLOR
D	L1					Type	D		
40	80	60.5	52.9	3.8	91	APH	40	60	R (Red)
50	110	89.1	80.7	4.2	119		50	85	
70	140	101.6	93.2	4.2	132		70	110	
90	140	139.8	130.8	4.5	170		90	110	
100	140	165.2	155.2	5	195		90-100	110	Y (Yellow)
110	140	190.7	180.1	5.3	220		100	110	
							100	90-100	
								110	110



AEST - AESBT		D1	d	d1	t	Catlog No.		L	COLOR
D	L1					Type	D		
40	80	60.5	52.9	9	3.8	APHN	40	60	R (Red)
50	110	89.1	80.7		4.2		50	85	
70	140	101.6	93.2		4.2		70	110	
70	140	101.6	93.2	4.2	7022		110		
90	140	139.8	130.8	13	4.5		90	110	Y (Yellow)
100	140	152.5	142.5		5		100	110	
110	140	190.7	180.1		5.3		110	110	

ORDERING CODE	CATALOG NO.	L	R - Y
	APH 90	110	R

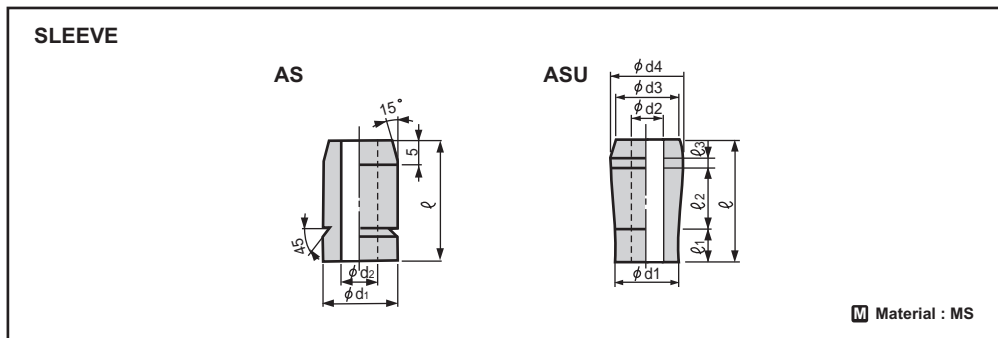
Urethane Stock Blocks



d	①		② Allen Bolt	Catalog No.	
	AEST- AESBT	AESU- AESUB		Type	D-L
14	S14	SU14	M8-45	AEST	* 40-80
				AESBT	50-110
				* AESU	70-140
22	S22	SU22	M12-55	* AESUB	* 7022140
					90-120
					* 90-140
					100-140

AESU and AESUB are available only in the sizes marked with an *.

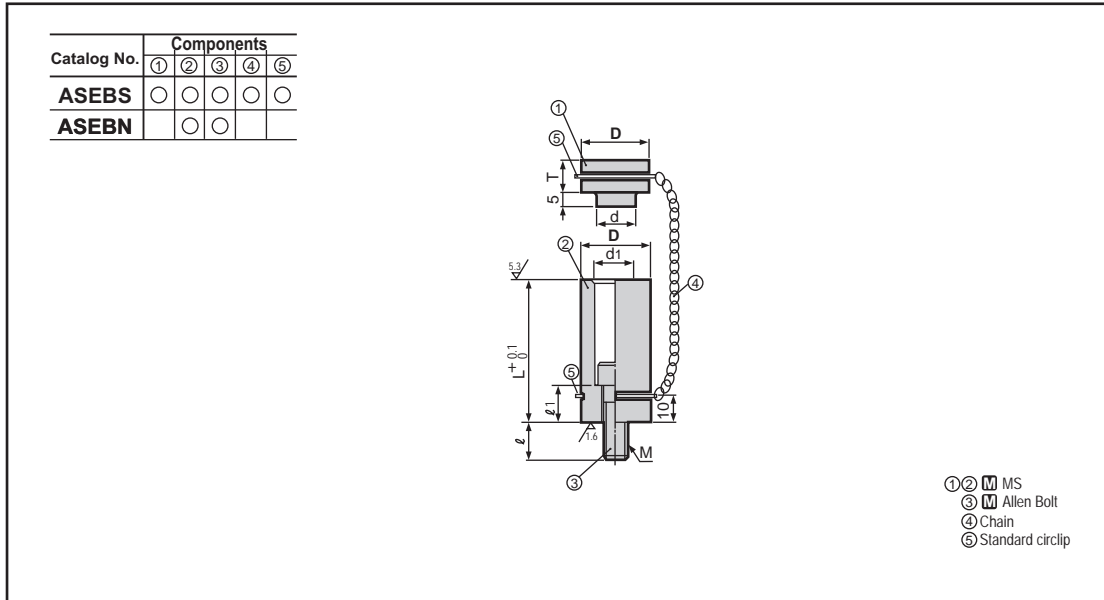
ORDERING CODE	CATALOG NO.	D	L
AEST	50	110	



d1	d2	d3	d4	l	l1	l2	l3	Urethane d	Catalog No.
16	9	-	-	30	-	-	-	14	AS14
24	13	-	-	35	-	-	-	22	AS22
24	13	-	-	100	-	-	-	22 (L170 or more)	AS22-100
14	9	13	19	30	7	10	3	14	ASU14
22	13	20	27					22	ASU22

ORDERING CODE	CATALOG NO.
	ASU14

Stroke End Blocks



Catalog No.		②		①		
Type	D	L 0.1mm.increments	Color	T 5mm.increments	Color	
ASEBS ①②③④⑤	14	22.0~100.0	R (Red)	10 ~ 50	R (Red)	
	16					
	18					
	20					
	25	22.0~170.0	Y (Yellow)		Y (Yellow)	
	32					
	38		N (Normal)			N (Normal)
	50					
25.0~200.0		10 ~ 50				
60		55 ~ 100				
60		10 ~ 50	55 ~ 100			
ASEBN ②③	14	22.0~100.0	R (Red)	—	—	
	16					
	18					
	20					
	25	22.0~170.0	Y (Yellow)		—	
	32					
	38		N (Normal)			
	50		25.0~200.0			
60						

③ Table of bolt sizes

D	d	d1	MXP	ℓ	ℓ1	L	③
14	7	8	M4 × 0.7	10	10	22.0~ 80.0	M4×20
				35	35	80.1~100.0	M4×45
16	7	8	M4 × 0.7	10	10	22.0~ 80.0	M4×20
				35	35	80.1~100.0	M4×45
18	8.5	9.5	M5 × 0.8	10	10	22.0~ 80.0	M5×20
				35	35	80.1~100.0	M5×45
20	10	11	M6 × P1.0	9	9	22.0~ 80.0	M6×20
				34	34	80.1~100.0	M6×45
				54	54	100.1~120.0	M6×65
				12	8	22.0~ 80.0	M8×20
25	13	14	M8 × P1.25	31	31	80.1~100.0	M8×45
				51	51	100.1~120.0	M8×65
				76	76	120.1~170.0	M8×90
				12	8	22.0~ 80.0	M8×20
32	13	14	M8 × P1.25	31	31	80.1~100.0	M8×45
				51	51	100.1~120.0	M8×65
				76	76	120.1~170.0	M8×90
				16	9	25.0~ 80.0	M10×25
38	16	17	M10 × P1.5	33	33	80.1~100.0	M10×50
				53	53	100.1~120.0	M10×70
				83	83	120.1~200.0	M10×100
				18	7	25.0~ 80.0	M12×25
50	18	20	M12 × P1.75	30	30	80.1~100.0	M12×50
				50	50	100.1~120.0	M12×70
				80	80	120.1~200.0	M12×100
				18	7	25.0~ 80.0	M12×25
50	18	20	M12 × P1.75	30	30	80.1~100.0	M12×50
				50	50	100.1~120.0	M12×70
				80	80	120.1~200.0	M12×100

ORDERING CODE	CATALOG NO.	L	② R-Y-N	T	① R-Y-N
	ASEBS 20	90.0	R	25	Y

Disappearing Gauge

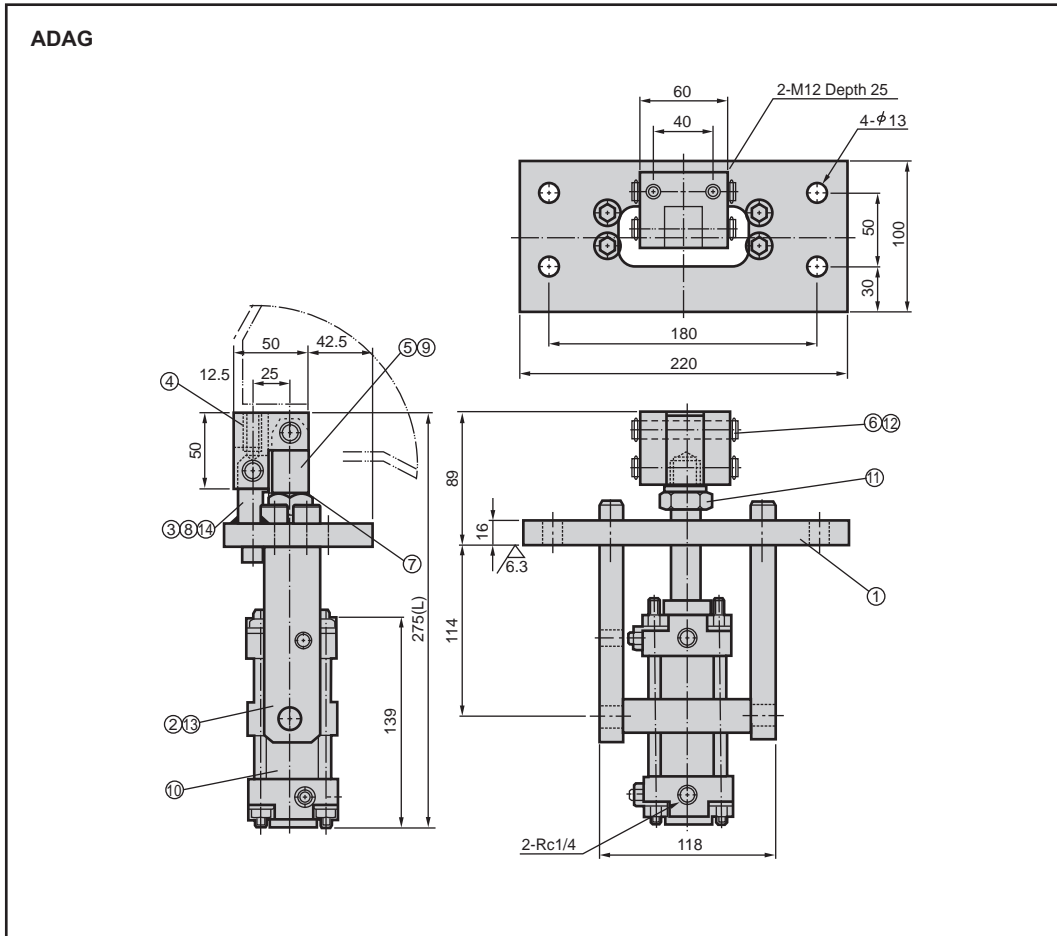


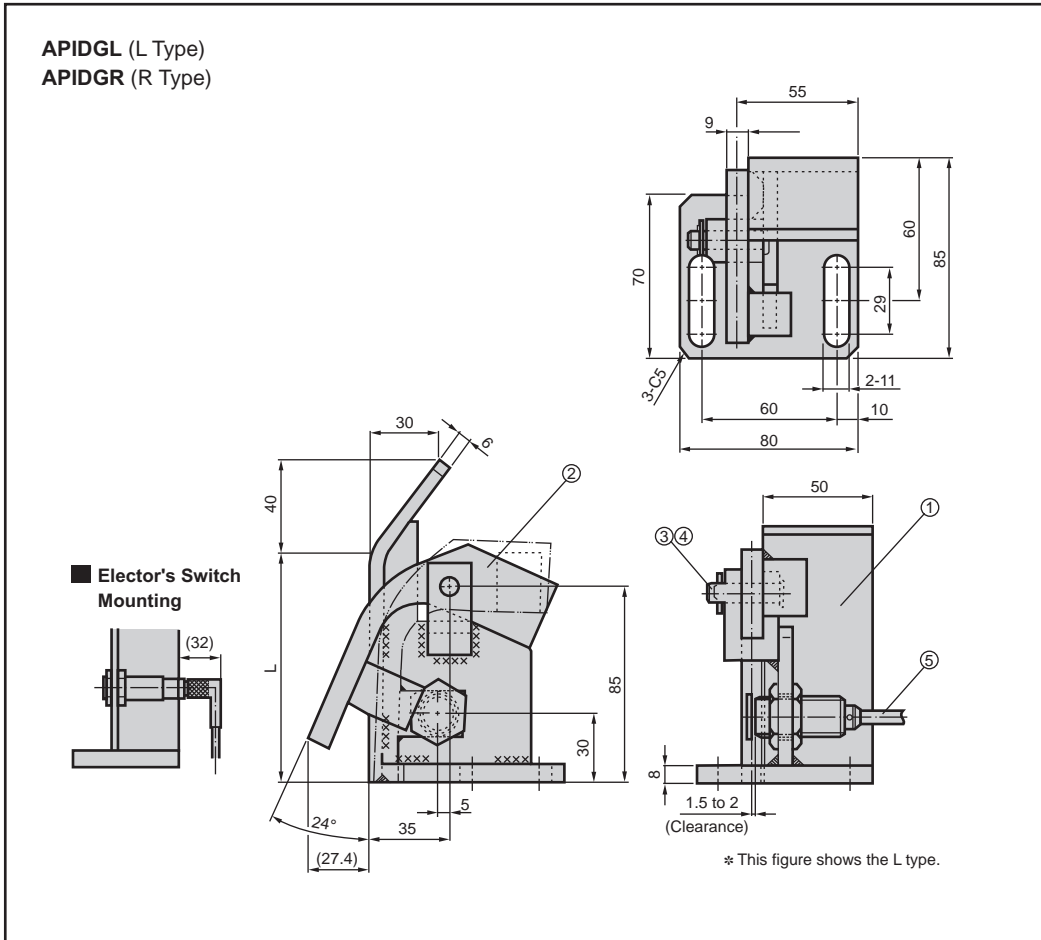
Table of Components

No.	Description	Qty	Material and Remark
①	Base Plate	1	MS
②	Cylinder Support	2	MS
③	Gauge Bracket Support	1	MS
④	Gauge Bracket	1	MS
⑤	Joint	1	MS
⑥	Joint Pin	2	20MnCr5 HRC55 to 60
⑦	Turning Lock Plate	1	MS T = 0.8

No.	Description	Qty	Material and Remark
⑧	Bushing	2	Drystar ABM1215
⑨	Bushing	1	Drystar ABM1220
⑩	Air Cylinder	1	CA1TN40-50 SMC Make
⑪	Hexagon Nut	1	M20 X P 1.5
⑫	Circlip	4	For φ 12
⑬	Allen Bolt	4	M12 X 40
⑭	Allen Bolt	1	M10 X 35

ORDERING CODE	CATALOG NO.	L	CYLINDER TRAVEL
ADAG	275	50	

Panel Input Detector Gauge



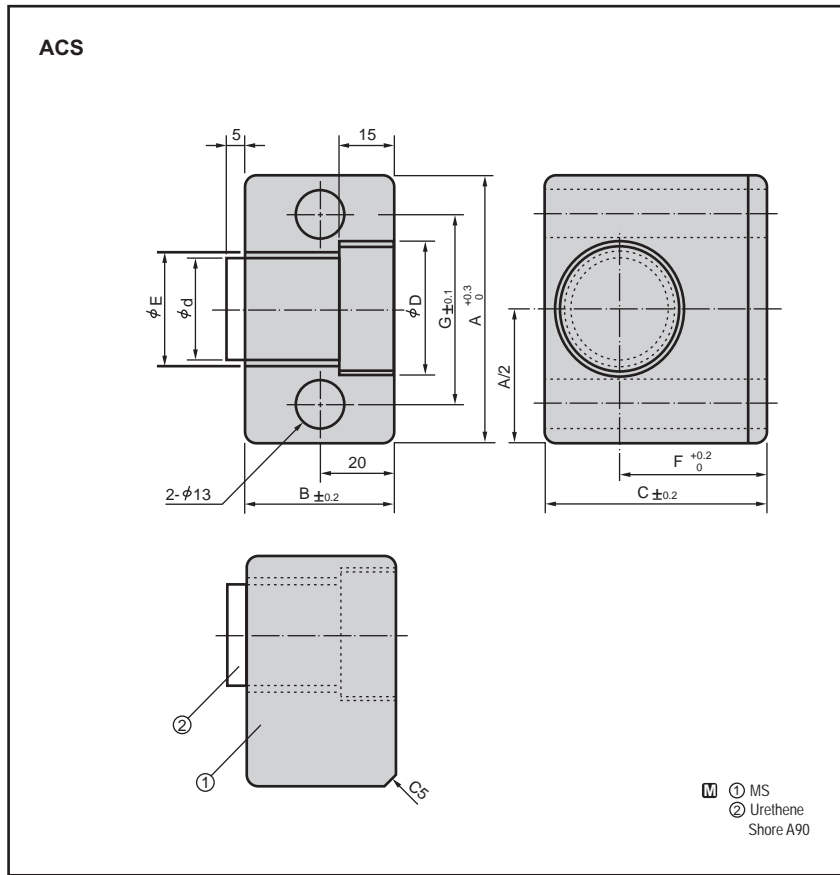
■ Table of Components

No.	Description	Qty	Material and Remark
①	Gauge	1	MS Chrome-plating
②	Loading Detection Lever	1	MS Chrome-plating
③	Clevis Pin	1	En8 HRC40 to 45
④	E Type Retaining Ring	2	MS
⑤	Proximity switch	1	AC or DC

Weight kg	Catalog No.	L	Switch Type
1.5	APIDGL APIDGR	75	Without switch
1.6		100	With switch (AC/DC)
1.8		150	

ORDERING CODE	CATALOG NO.	L	Switch Type
	APIDGL	100	Without Switch

Cam Stopper



A	B	C	D	E	F	G	Load N	d
70	40	60	35	30	40	50	5200	27
80	40	70	45	40	45	60	9800	36

ORDERING CODE	CATALOG NO.	D
	ACS	27