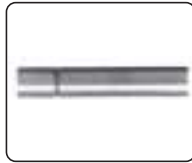


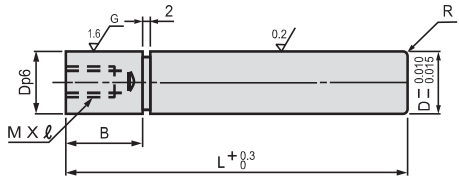
**Section F**  
**COMPONENTS FOR**  
**PRESS DIES**



# Stripper Guide Pins




**ASGPP**



**Straight Type**

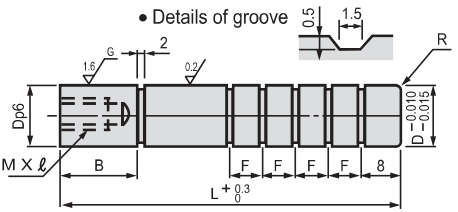
**M** Case Hardening Steel  
**S** 56 to 60 HRC

---



**ASGPPG**  
(Oil groove type)

• Details of groove



D	Number of grooves (n)							
	40	50	70	80	90	100	120	150
8	2	3	4	5	6	—	—	—
10	2	3	4	5	6	—	—	—
13	2	3	4	5	6	7	8	—
16	2	3	4	5	6	7	8	—
20	2	3	4	5	6	7	8	—
25	2	3	4	5	6	7	8	—


✳ L 40~119.5  
L120~L(C)max.    → F = 8  
→ F = 10

**M** Case Hardening Steel  
**S** 56 to 60 HRC

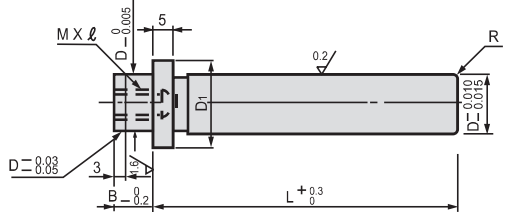
Dp6	M X ℓ Pitch	R	B	Catalog No.		L
				Type	D	
8	+0.024 +0.015	M5 X 12 P0.8	1.0	ASGPP ASGPPG	8	40 50 60
						70 80
10	+0.029 +0.018	M6 X 15 P1.0	1.5	ASGPP ASGPPG	10	40 50 60 70 80 90 100
						40 50 60 70
13	+0.029 +0.018	M6 X 15 P1.0	1.5	ASGPP ASGPPG	13	80 90 100
						110 120
16	+0.035 +0.022	M8 X 20 P1.25	2.0	ASGPP ASGPPG	16	50 60 70 80
						90 100 110 120 130 140
20	+0.035 +0.022	M8 X 20 P1.25	2.0	ASGPP ASGPPG	20	60 70 80 90 100
						110 120 130 140
25	+0.035 +0.022	M8 X 20 P1.25	2.0	ASGPP ASGPPG	25	70 80 90 100
						110 120 130 140



ORDERING CODE	CATALOG NO.	D	L
	ASGPP	25	100




**ASGPC**



**Removable Type**

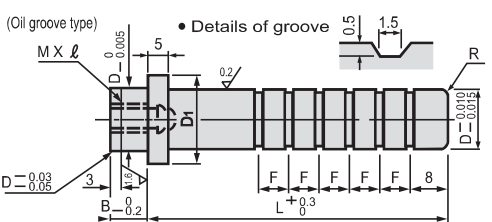
**M** Case hardening steel  
**S** 56 to 60 HRC

---



**ASGPCG**  
(Oil groove type)

• Details of groove



D	Number of grooves (n)				
	30	40	60	70	80
8	2	3	4	5	—
10	2	3	4	5	6
13	2	3	4	5	6
16	2	3	4	5	6
20	2	3	4	5	6
25	2	3	4	5	6

✳ L 40~119.5  
L120~L(C)max.    → F = 8  
→ F = 10

**M** Case hardening steel  
**S** 56 to 60 HRC

M X ℓ Pitch	D1	R	B	Catalog No.		L
				Type	D	
M5 X 12 P0.8	13	1.0	8	ASGPC ASGPCG	8	30 40 50
						60 70
M6 X 15 P1.0	20	1.5	10	ASGPC ASGPCG	10	30 40 50 60
						70 80
M6 X 15 P1.0	23	1.5	10	ASGPC ASGPCG	13	40 50 60
						70 80
M8 X 20 P1.25	27	2.0	13	ASGPC ASGPCG	16	40 50 60
						70 80 90 100
M8 X 20 P1.25	32	2.0	16	ASGPC ASGPCG	20	50 60 70 80
						90 100 110 120
M8 X 20 P1.25	32	2.0	16	ASGPC ASGPCG	25	60 70 80 90 100
						110 120

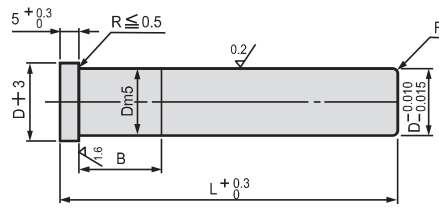


ORDERING CODE	CATALOG NO.	D	L
	ASGPC	25	100

# Stripper Guide Pins (Head Type)



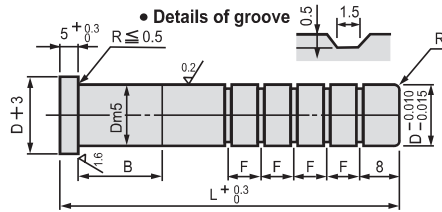
**ASGPPH**



**M** Case Hardening Steel  
**S** 56 to 60 HRC



**ASGPGH**  
 (Oil groove type)



D	Number of grooves (n)							
	40~50	50~70	70~80	80~90	90~100	100~110	110~120	120~
8	2	3	4	5	6	—	—	—
10	2	3	4	5	6	—	—	—
13	2	3	4	5	6	7	8	—
16	2	3	4	5	6	7	8	—
20	2	3	4	5	6	7	8	—
25	2	3	4	5	6	7	8	—

⊗ L 40~119.5 → F = 8  
 L 120~L(C)max. → F = 10

**M** Case Hardening Steel  
**S** 56 to 60 HRC


Dm5	R	B	Catalog No.		L
			Type	D	
8	1.0	10	ASGPPH ASGPGH	8	40 50 60 70 80
10		13		10	40 50 60 70 80 90 100
13	1.5	16		13	40 50 60 70 80 90 100 110 120
16		20		16	50 60 70 80 90 100 110 120 130 140
20	2.0	25		20	60 70 80 90 100 110 120 130 140
25		28		25	70 80 90 100 110 120 130 140



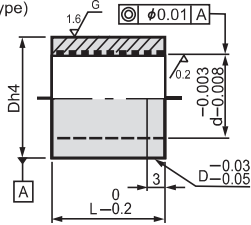
ORDERING  
CODE

CATALOG NO.	D	L
ASGPPH	25	100


# Stripper Guide Bushings (Oil- Free Type)



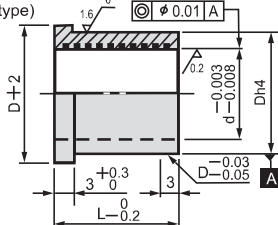
**ASGBPO**  
(Loctite adhesive type)



Ⓜ FG260 + Graphite



**ASGBHO**  
(Loctite adhesive type)



Ⓜ FG260 + Graphite


Dh4	Catalog No.		L
	Type	d	
13	ASGBPO	8	10 13 16 20
16		10	10 13 16 20 22 25
20		13	13 16 20 22 25 30
24		16	13 16 20 22 25 30 35
28		20	16 20 22 25 30 35
34		25	20 22 25 30 35

Dh4	Catalog No.		L
	Type	d	
13	ASGBHO	8	10 13 16 20
16		10	10 13 16 20 22 25
20		13	13 16 20 22 25 30
24		16	13 16 20 22 25 30 35
28		20	16 20 22 25 30 35
34		25	20 22 25 30 35

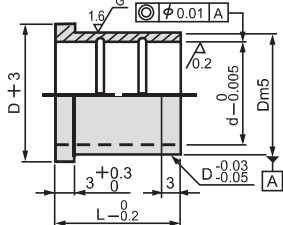
☎ **ORDERING CODE**    **CATALOG NO.**    d    L  
 ASGBPO    25    35

☎ **ORDERING CODE**    **CATALOG NO.**    d    L  
 ASGBHO    25    35

# Stripper Guide Bushings (Oil Type)



**ASGBHP**  
(Press fit type)




Ⓜ Case hardening steel  
 Ⓢ 56 to 60 HRC

Dm5	Catalog No.		L
	Type	d	
12	ASGBHP	8	10 13 16 20
14		10	10 13 16 20 22 25
18		13	13 16 20 22 25 30 35
22		16	13 16 20 22 25 30 35
25		20	16 20 22 25 30 35
32		25	20 22 25 30 35

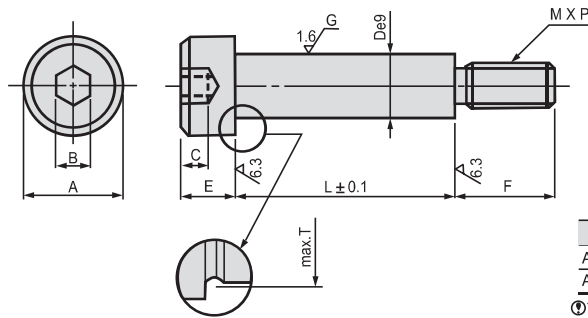
☎ **ORDERING CODE**    **CATALOG NO.**    d    L  
 ASGBHP    25    35



# Stripper Bolts (Male Screw Type)



**ASB**  
**ASSB** (Stainless steel)



Type	M	H	Strength rank
ASB	SCM435	33-38HRC	10.9
ASSB	SUS304	—	A2-70

Ⓜ The tensile strength of ASSB is 700N/mm<sup>2</sup>.

De9		A	B	C	E	F	M X P	T
4	-0.020 -0.050	6.5	2.5	1.6	3	5	2.5 X 0.45	4.5
4.5		7				6		5
5		8			3.5	5.5		
5.5		9	3	2.2	4	7	4 X 0.7	6
6				2				6.5
6.5	-0.025 -0.061	10	4	2.5	5	9	5 X 0.8	7
8		13	5	3	6	9	6 X 1.0	8.7
10	-0.032 -0.075	16	6	4	8	12	8 X 1.25	10.8
12		17						12.8
13		18	8	5	10	16	10 X 1.5	14
16	-0.040 -0.092	24	10	7	14	18	12 X 1.75	17
20		27	14	9	18	24	16 X 2.0	21

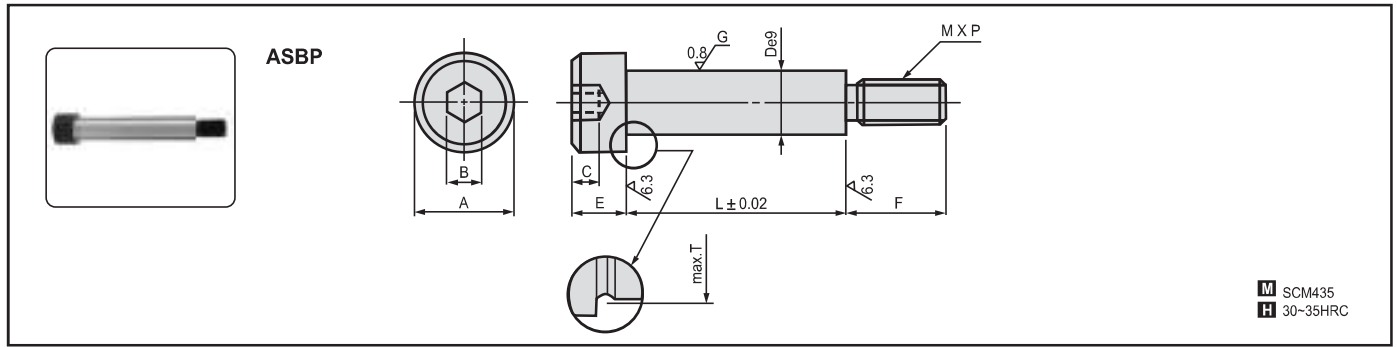
Catalog No.		L (Only the sizes with a * mark is available for ASSB.)		
Type	D			
ASB	4	10	15 20 25 30 35 40 45	
	4.5	*10	*15 *20 *25 *30 *35 *40 45 50	
	5	10	15 20 25 30 35 40 45 50	
	5.5	*10	*15 *20 *25 *30 *35 *40 45 50 55	
	6	10	15 20 25 30 35 40 45 50 55 60 65 70	
	6.5	*10	*15 *20 *25 *30 *35 *40 *45 *50 55 60 65 70 75 80	
	ASSB (Stainless Steel)	8	*10	*15 *20 *25 *30 *35 *40 *45 *50 *55 *60 *65 *70 *75 *80 85 90 95 100 110 120
		10	*10	*15 *20 *25 *30 *35 *40 *45 *50 *55 *60 *65 *70 *75 *80 *85 *90 95 100 110 120
		12	10	15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
		13	10	15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 130
16			15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 130 140 150	
20			40 50 60 70 80 90 100 110 120 130 140 150	



ORDERING  
CODE

CATALOG NO.	D	L
ASB	20	100

# Precision Stripper Bolts

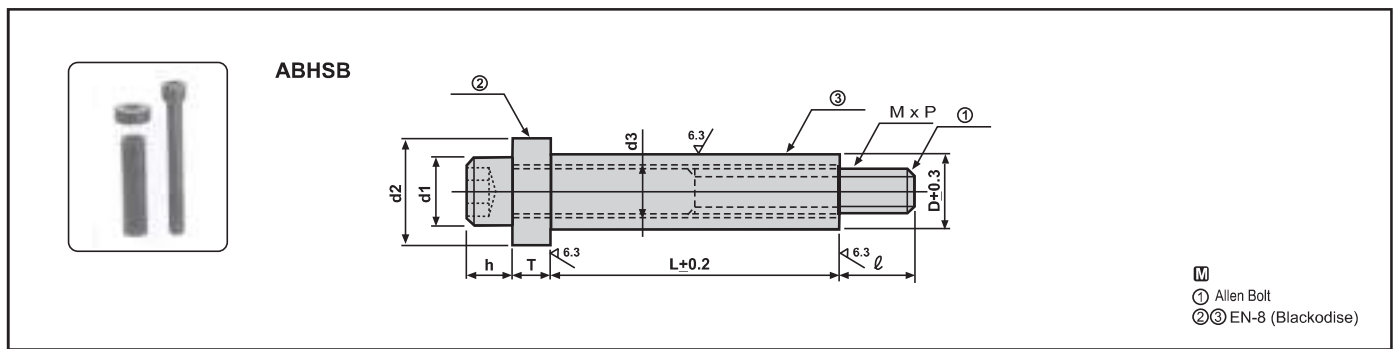


De9		A	B	C	E	F	M x P	T	Catalog No.		
									Type	D	L
6.5	-0.025	10	4	2.5	5	9	M 5 X 0.8	7	ASBP	6.5	10 ~ 70
8	-0.061	13	5	3	6	9	M 6 X 1.0	8.7		8	10 ~ 90
10		16	6	4	8	12	M 8 X 1.25	10.8		10	10 ~ 120
13	-0.032	18	8	5	10	16	M10 X 1.5	14		13	15 ~ 130
16	-0.075	24	10	7	14	18	M12 X 1.75	17		16	15 ~ 150
20	-0.040	27	14	9	18	24	M16 X 2.0	21		20	20 ~ 150
25	-0.092	33	17	11	19	30	M20 X 2.5	26		25	30 ~ 160



ORDERING CODE	CATALOG NO.	D	L
	ASBP	25	125

# Blank Holder Stopper Bolts



D	d1	d2	d3	h	T	M x P	l	Catalog No.		L
								Type	No.	
25.4	24	36	17.4	16	13	16X2.0	27	ABHSB	25	100 110 120
										130 140 150 160
31.8	30	45	21.8	20	16	20X2.5	34	ABHSB	32	170 180 190 200 210 220
										230 240 250 260
										280 300
										100
										110 120 130
										140 150 160
										170 180 190 200 210 220
										230 240 250 260
										280 300

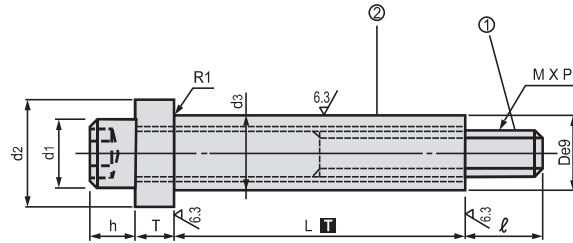


ORDERING CODE	CATALOG NO.	D	L
	ABHSB	32	190

# Spool Retainers



ASR



	$L \pm 0.03$
$L \leq 100$	$L \pm 0.03$
$L \geq 100$	$L \pm 0.05$

① M SCM435  
Strength rank 12.9

② M S45C  
H 38~43HRC  
S Fe304

De9		d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	M X P	h	T	ℓ
10	-0.025 -0.061	10	15	6.3	6 X 1.0	6	5	10
13	-0.032 -0.075	13	18	8.4	8 X 1.25	8	5	15
16		16	24	10.6	10 X 1.5	10	8	22
20	-0.040 -0.092	18	28	12.6	12 X 1.75	12	10	20
25		24	36	16.8	16 X 2.0	16	13	27
32	-0.050 -0.112	30	45	20.8	20 X 2.5	20	16	34

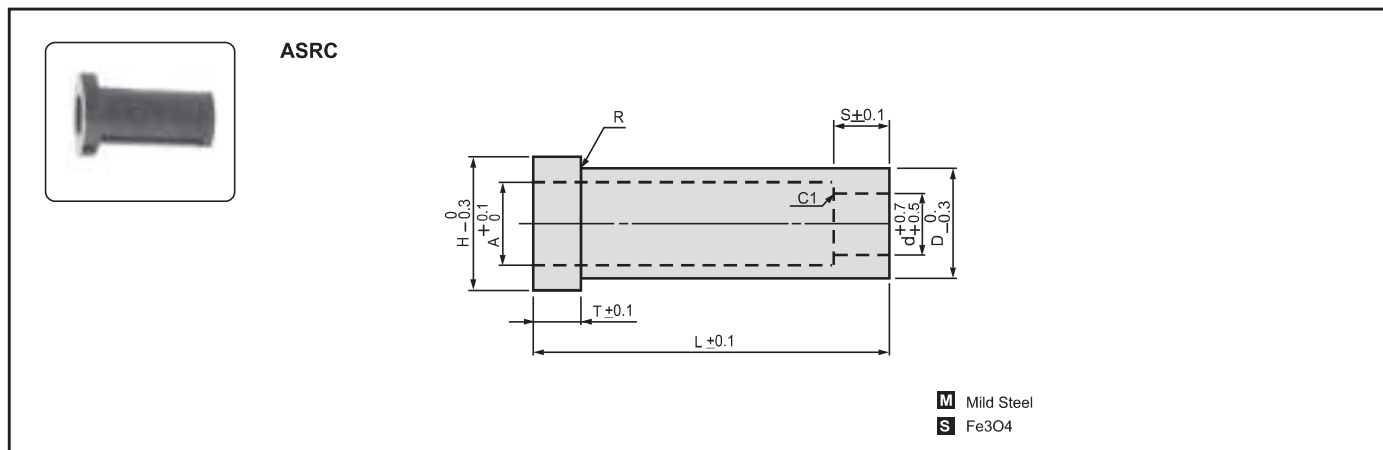
Catalog No.		L	
Type	D	L	
ASR	10	10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100	
	13	15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120	
	16	20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130 140 150 160 170 180	
	20	30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130 130 140 150 160 170 180	
	25	40 45 50 55 60 65 70 75 80 85 90 100 110 120 130 140 150 160 170 180 200	
	32	60 70 80 90 100 110 120 130 140 150 160 170 180 200	



ORDERING  
CODE

CATALOG NO.	D	L
ASR	25	150

# Collars For Spool Retainer




Adoptable ASR standard		H	T	A	D	R	Catalog No.		L 10 mm increments	S 5 mm increments
Type	D						Type	d		
ASR	10	36	5	16	28	1.0	ASRC	10	50 ~ 100	10 ~ 25
	13	40	5	19	30			13		
	16	46	8	25	36			16		
	20	55	10	29	44			20		
	25	60	13	37	50			25		
	32	70	16	46	60			1.5		



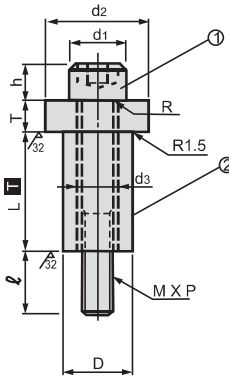
ORDERING CODE	CATALOG NO.	D	L
ASRC	32	100	




# Spool Retainers (Thick Type / Counterbore Type)

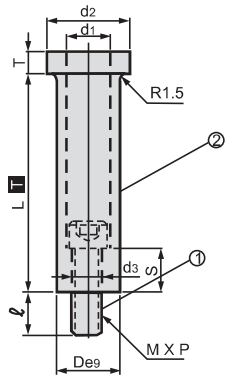


**ASRH**





**ASRZ**



L T	
L ≤ 100	L ± 0.03
L ≥ 110	L ± 0.05

M SCM435  
 Strength rank 12.9 (M10 - 20)  
 10.9 (M24)

M S45C  
H 25 ~ 30 HRC  
S Blacking (Fe<sub>3</sub>O<sub>4</sub>)

## Thick type (ASRH)

De9	d1	d2	d3	M x P	R	h	T	ℓ	Catlog No.		L			
									Type	D				
18 -0.032 -0.075	16	27	10.7	10x1.5	1.0	10	8	22	ASRH	18	60 70 80 90 100 110 120 130 140 150			
											22	60 70 80 90 100 110 120 130 140 150		
												30	60 70 80 90 100 110 120 130 140 150 160 170 180	
													36	80 90 100 110 120 130 140 150 160 170 180
														44

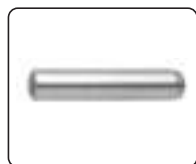
## Counterbore type (ASRZ)

De9	d1	d2	d3	M x P	Supplied Bolt	T	S	ℓ	Catlog No.		L			
									Type	D				
20 -0.040 -0.092	18	33	11	10x1.5	M10-45	6	25	20	ASRZ	20	40 50 60 70 80 90			
											24	50 60 70 80 90 100		
												28	50 60 70 80 90 100 110	
													35	60 70 80 90 100 110 120 130
														44

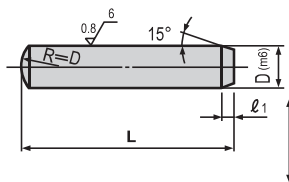


ORDERING CODE	CATALOG NO.	D	L
ASRH	44	100	

# Dowel Pins



**AHDP**  
(Straight type)



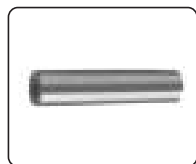
**M** Case Hardened Steel  
**M** 52 - 60 Rc

$l_1$	Catalog No.		L
	Type	D	
1.5	AHDP	4	8 10 15 20 25 30 35 40 45 50
		5	8 10 15 20 25 30 35 40 45 50
2.0		6	8 10 15 20 25 30 35 40 45 50 55 60
2.5		8	10 15 20 25 30 35 40 45 50 55 60 65 70 80
3.0		10	15 20 25 30 35 40 45 50 55 60 65 70 80
3.5		12	20 25 30 35 40 45 50 55 60 70 80
		13	30 40 50 60 70 80

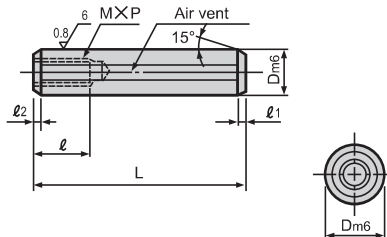


**ORDERING CODE**

CATALOG NO.	L
AHDP12	50



**AITHDP**  
(with internal threads)



**M** Case Hardened Steel  
**M** 52 - 60 Rc

$l_1$	$l_2$	$\frac{M \times P}{P}$	$l$	$D_{m6}$	Catalog No.		L
					Type	D	
1.5	0.3	$\frac{M3 \times 0.5}{0.7}$	6	+0.012 +0.004	AITHDP	5	15 20 25 30
						6	20 30 15 25 35 40 50
2.0	0.5	$\frac{M5 \times 0.8}{1.0}$	8	+0.015 +0.006		8	20 25 30 35 40 45 50 60 70 80
						10	20 25 30 35 40 45 50 60 70 80
2.5	1.0	$\frac{M8 \times 1.25}{1.5}$	15	+0.018 +0.007		12	20 30 40 50 60 70 80
						13	40 50 60 70 80
3.0	1.5	$\frac{M10 \times 1.5}{1.5}$	18	+0.021 +0.008		16	40 50 60 70 80
					20	50 60 70 80	



**ORDERING CODE**

CATALOG NO.	D	L
AITHDP	6	25

# Retainer Pin Sets

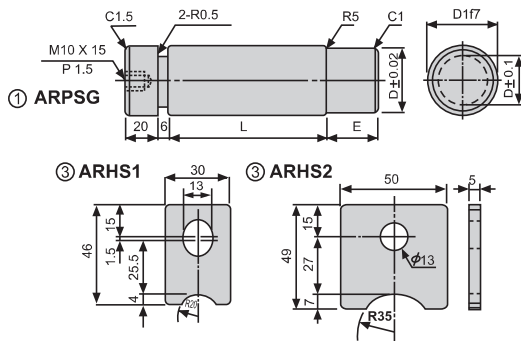


No.	Catalog No.	Part List	M	H	S
①	ARPSG	Retainer Pin (Single Groove)	EN8		
②	ARPDG	Retainer Pin (Double Groove)	EN8	20~25	Black Oxide
③	ARHS	Round Hole Stopper	MS	HRC	Fe3O4
④	ASHS	Oblong Hole Stopper	MS		
⑤	ACST-N	Spring Lock Stopper	S45C		

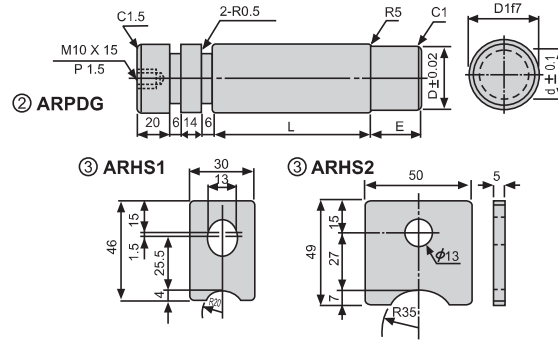
## Single Groove Type

## Double Groove Type

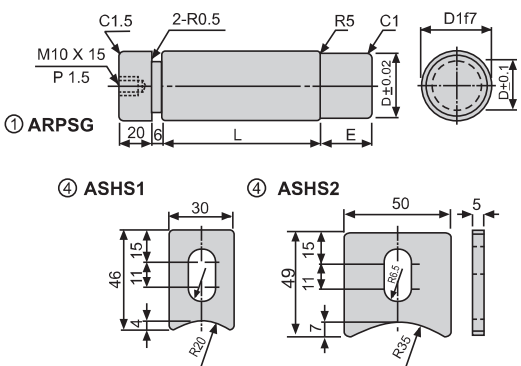
### ARPSG-RHS (①ARPSG + ③ARHS Set)



### ARPDG-RHS (②ARPDG+ ③ARHS Set)

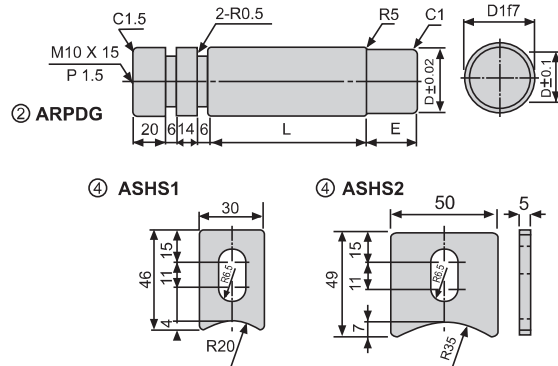


### ARPSG-SHS (①ARPSG + ④ASHS Set)

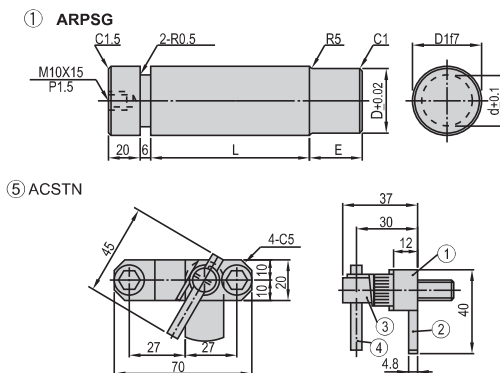


## SLOTTED HOLE STOPPER TYPE

### ARPDG-SHS (②ARPDG + ④ASHS Set)

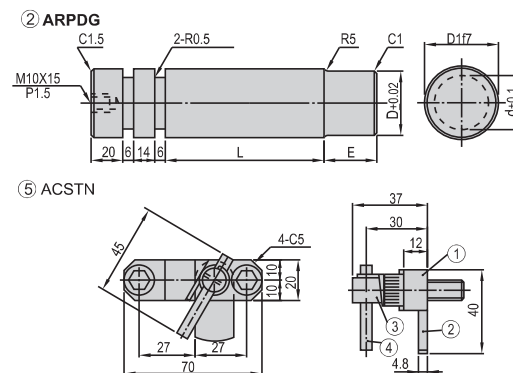


### ARPSG-ACSTN(①ARPSG+ ⑤ACSTN Sets)



## SPRING LOCK STOPPER TYPE

### ARPDG-ACSTN(②ARPDG + ⑤ACSTN Sets)



# Retainer Pin Sets


D	D 1f7	d	E	S	①	②	Allowance load N {kgf} (Safety coefficient 1)	Static load N {kgf} (Safety coefficient 3)	Repeated load N {kgf} (Safety coefficient 5)	Alternate load N {kgf} (Safety coefficient 8)	Impact load N {kgf} (Safety coefficient 12)	Catalog No.	
												Type	D-L
20	22	14	25	27			37167 { 3790 }	12356 { 1260 }	7453 { 760 }	4609 { 470 }	3138 { 320 }	Single groove type	20-40 60 80
												(Pin only) ARPSG (Set)	30-60 80 100
30	32	22	30	31			125427 { 12790 }	41776 { 4260 }	25105 { 2560 }	15691 { 1600 }	10493 { 1070 }	ARPSG-RHS	40-60 80 100 120
												ARPSG-SHS ARPSG-ACSTN	
40	42	30	30	35			253600 { 25860 }	84533 { 8620 }	50700 { 5170 }	31675 { 3230 }	21182 { 2160 }	Double groove type	50-80 100 120
												(Pin only) ARPDG (Set)	60-100 120 140
50	52	40	35	40			495334 { 50510 }	165144 { 16840 }	99047 { 10100 }	61880 { 6310 }	41286 { 4210 }	ARPDG-RHS	70-120 140 160
												ARPDG-SHS ARPDG-ACSTN	
60	62	50	40	45			727751 { 74210 }	242617 { 24740 }	145531 { 14840 }	91006 { 9280 }	60703 { 6190 }		
70	72	60	40	50			990570 { 101010 }	330190 { 33670 }	198094 { 20200 }	123858 { 12630 }	82572 { 8420 }		

• kgf = N × 0.101972

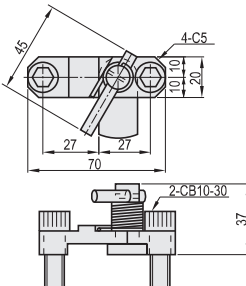


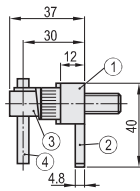
ORDERING  
CODE

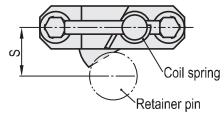
CATALOG NO.	L
ARPDG 30	60
ARPSG-RHS 50	100



⑤ Spring lock stopper type-Details  
ACSTN







(Fig. above shows - a case when installed on to the retainer pin)

- Because the retainer pin is locked by the force of the spring, it can be securely locked in place simply by operating the lever with one hand.
- Stoppers can be mounted in any position.

① SUS304  
 ②③④ S45C  
 ⑤ CB10-30

### Stoppers For Retainer Pin

D (Applicable retainer pins)	Catalog No.	
20-30-40	Round hole	1
50-60-70	Type	2
20-30-40	Oblong lock	1
50-60-70	Type	2
All Size	Spring lock type	ACSTN



ORDERING  
CODE

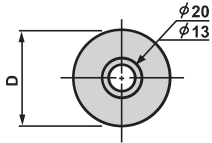
CATALOG NO.
ARHS - 2
ASHS - 1
ACST-N

# Round & Square Distance Plates

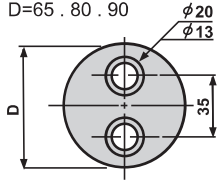


**ROUND DISTANCE PLATE**

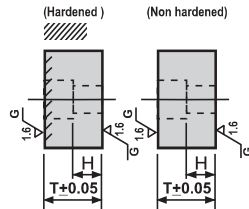
-One hole type -  
D=45 . 55 . 65 . 90



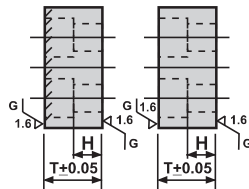
-Two hole type -  
D=65 . 80 . 90



**ARDPM ARDPY**



**ARDPE ARDPYE**

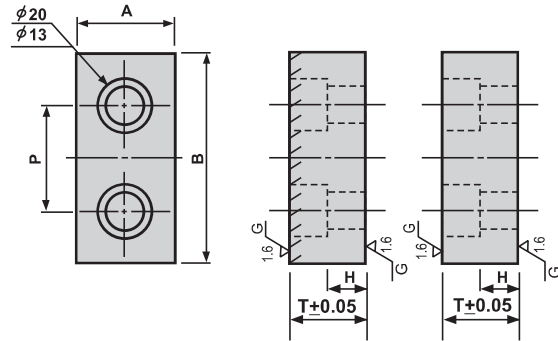


**M** Material : Case Hardening Steel  
**H** Hardness : 55 - 60 HRC



**SQUARE DISTANCE PLATE**

**ASDPK ASDPB**



**M** Material : Case Hardening Steel  
**H** Hardness : 55 - 60 HRC

BOLT HOLE	H	Catlog No.		T
		Type	D	
One hole	6	ARDPM (Hardened)	45	20
	15			30
	6			40
	15	ARDPY (Non Hardened)	55	20
One hole	15	ARDPM (Hardened)	65	30
	15	ARDPY (Non Hardened)	90	30
Two hole	15	ARDPE (Hardened)	65	30
				40
				50
	15	ARDPYE (Non Hardened)	80	30
				40
	15	ARDPYE (Non Hardened)	90	50
				30
				40

H	P	Catlog No.		B	T
		Type	A		
6	30	ASDPK (Hardened)	38	60	20
15					30
6					40
15	55			80	20
6	30			60	30
15	55			50	40
6	55	ASDPK (Hardened)	50	80	20
15					30
6					40
15	55			60	30
6	55			80	40
15	70			60	20
6	70	ASDPB (Non Hardened)	60	80	30
15					40
6					20
15	70			100	30
6	70			100	40
15	85			80	20
6	85	ASDPB (Non Hardened)	80	120	30
15					40
6					20



ORDERING CODE	CATLOG NO.	D	T
ARDPM	45	20	

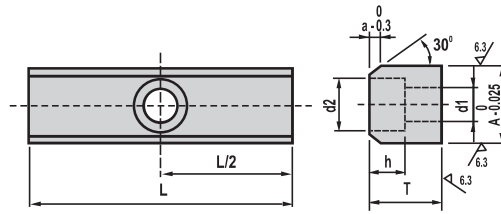


ORDERING CODE	CATLOG NO.	B	T
ASDPK50	60	30	

# Locating Keys



ALK



Mat : EN8 (Blakodised)

A	T	d1	d2	h	a	Catlog No.		L
						Type	A	
20	20	9	14	10	3	ALK	20	60
								80
25	25	11	18	12	4		25	60
								80
							100	
28	25	11	18	12	4		28	60
								80
32	25	11	18	12	5		32	60
								80
								100

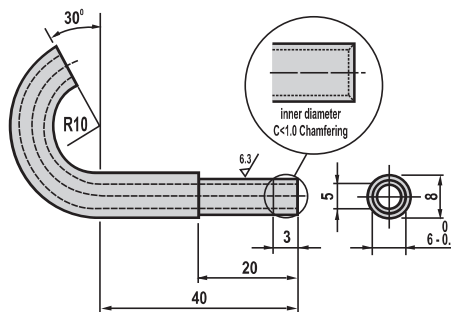


ORDERING CODE	CATALOG NO.	L
ALK 25	80	

# Air Vents



AAV - 5



⚠ Please use epoxy resin adhesive for mounting

**M** Brass

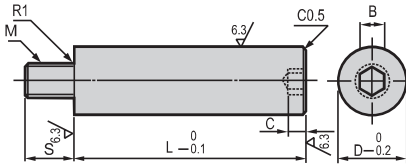


ORDERING CODE	CATALOG NO.
AAV 5	

# Cushion Pins



**ACPR**  
(Hex wrench tightening type with male threads)



**M** Material : Case Hardening Steel  
**H** Hardness : 55 - 60 HRC

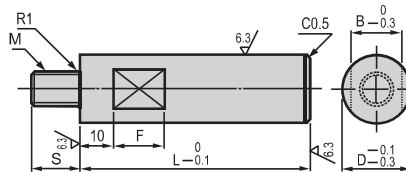
M×P	S	B	C	Catalog No.		L 5 mm increments
				Type	D	
10×1.5	15	8	5	ACPR	16	50 ~ 100
						105 ~ 150
						155 ~ 200
12×1.75	18	10	6		20	50 ~ 100
						105 ~ 150
						155 ~ 200
16×2.0	24	14	9		25	50 ~ 100
						105 ~ 150
						205 ~ 250
20×2.5	30	17	12		32	50 ~ 100
						105 ~ 150
						205 ~ 250



ORDERING CODE	CATALOG NO.	L
ACPR25		200



**ACPM**  
(Spanner tightening type with male threads)



**M** Material : Case Hardening Steel  
**H** Hardness : 55 - 60 HRC

M×P	S	B	F	Catalog No.		L 5 mm increments
				Type	D	
8×1.25	12	13	16	ACPM	16	50 ~ 100
						105 ~ 150
						155 ~ 200
10×1.5	15	16			20	50 ~ 100
						105 ~ 150
						155 ~ 200
12×1.75	18	18			25	50 ~ 100
						105 ~ 150
						155 ~ 200
16×2.0	24	21			32	100 ~ 150
						155 ~ 200
						205 ~ 250

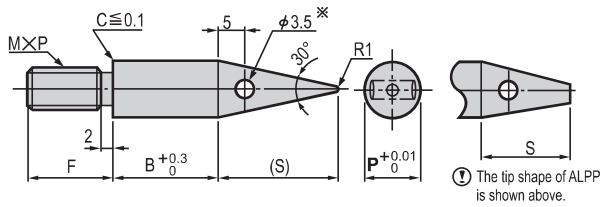


ORDERING CODE	CATALOG NO.	L
ACPM20		200

# Locating Pilot Pin



**ALPP** (Standard)  
**ALPPH** (Configurable P-B)



① ALPPH is (S) ≐ 1.6XP.    ※ALPP6 → φ2, ALPP8·ALPPH8 → φ2.5

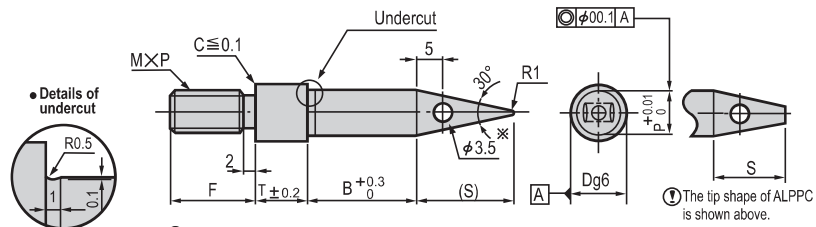
M H13  
H 37 ~ 43HRC

M × P	F	S	Catalog No.		B
			Type	P	
5 × 0.8	12	10	ALPP (Standard)	6	5 10
6 × 1.0				8	
8 × 1.25				9	
10 × 1.5	15	15		10	10 15
12 × 1.75				12	
16 × 2.0				14	
		17	15	15 20	
		20	16	20 25	
			20	25 30	

M × P	F	Catalog No.		P		B
		Type	No.	0.01 mm increments	1 mm increments	
5 × 0.8	12	ALPPH (Configurable P-B)	8	6.00 ~ 8.00	5 ~ 50	
6 × 1.0			10	8.00 ~ 10.00		
8 × 1.25			12	10.00 ~ 12.00		
10 × 1.5	15		14	12.00 ~ 14.00		
12 × 1.75			16	14.00 ~ 16.00		
16 × 2.0			20	16.00 ~ 20.00		



**ALPPC** (Standard)  
**ALPPCH** (Configurable P-B-T)



M H13  
H 37 ~ 43HRC

M × P	F	P	B	T	S	Catalog No.	
						Type	D
6 × 1.0	12	6	5	3	10	ALPPC (Standard)	8
8 × 1.25							10
12 × 1.75	15	10	10	10	15		13
					17		16
					20		20
16 × 2.0	25	25	25				

M × P	F	Catalog No.		B	T	
		Type	D			
6 × 1.0	12	ALPPCH (Configurable P-B-T)	8	6.00 ~ 8.00	5 ~ 60	3 ~ 15
8 × 1.25			10	8.00 ~ 10.00		
12 × 1.75	15		13	10.00 ~ 12.00		
			16	12.00 ~ 14.00		
			20	14.00 ~ 16.00		
16 × 2.0	25		25	16.00 ~ 20.00		



ORDERING CODE

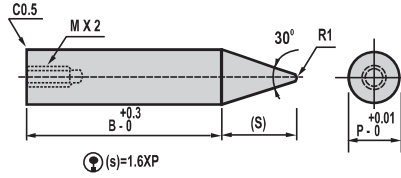
CATALOG NO.	D	P	B	T
ALPP	10		B9	
ALPPH	12	P10	B10	
ALPPC	13			
ALPPCH	16	P13	B50	T10



# Locating Pilot Pin



ALPPS (Standard)  
ALPPSH (Configurable P-B)



M Case Hardened Steel  
H 58 - 60

M x P	Catlog No.		B	
	Type	P		
4 x 0.7	ALPPS (Standard)	6	10	15
		8		
5 x 0.8		10	15	20
		12		
6 x 1.0		13	20	30
		15		
	16	30	40	
8 x 1.25	20	40	50	

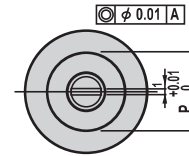
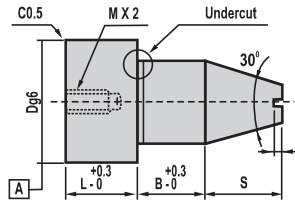
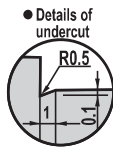
M x P	Catlog No.		P	B
	Type	No.		
4 x 0.7	ALPPSH (Configurable P-B)	6	6.00 ~ 7.00	10.00 ~ 80.00
		8	7.00 ~ 8.00	
5 x 0.8		10	8.01 ~ 10.00	
		12	10.00 ~ 12.00	
6 x 1.0		13	12.01 ~ 13.00	
		15	13.01 ~ 15.00	
	16	15.01 ~ 16.00		
8 x 1.25	20	16.00 ~ 20.00		



ORDERING CODE	CATALOG NO.	P	B
ALPPSH 16	15.05	10.2	



ALPPHD (Standard)  
ALPPHDB (Configurable)



M Case Hardened Steel  
H 58 - 60

Dg6	M	P	L	S	B	Catlog No.		
						Type	D	
8	-0.005	5	6	15	6	ALPPHD (Standard)	8	
10	-0.014	6	8		8		10	
13	-0.006	8	10	20	12		13	
16	-0.017	10	12		17		16	
20	-0.007	12	16	24	20		15	20
	-0.020							

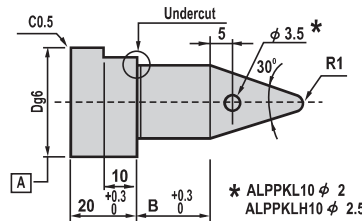
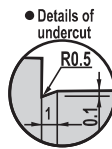
Dg6	M	L	S	Catlog No.		P	B
				Type	D		
8	-0.005	5	15	6	ALPPHDB (Configurable P-B)	6.00 ~ 7.00	3.0 ~ 20.00
10	-0.014	6	8	8		7.00 ~ 9.00	3.0 ~ 30.00
13	-0.006	8	20	12		9.00 ~ 12.00	3.0 ~ 50.00
16	-0.017	10	24	17		12.00 ~ 15.00	
20	-0.007	12	24	20		15.00 ~ 18.00	
	-0.020						



ORDERING CODE	CATALOG NO.	P	B
ALPPHD 16	12	10	



ALPPKL (Standard)  
ALPPKLH (Configurable P-B)



M Case Hardened Steel  
H 58 - 60

Dg6	P	P	Catlog No.		
			Type	D	
10	-0.005 -0.014	6	ALPPKL (Standard)	10	
				13	-0.006
16	-0.017	10			
				20	-0.007
25	-0.020	16			

Dg6	Catlog No.		P	B
	Type	D		
10	-0.005 -0.014	ALPPKLH (Configurable P-B)	6.00 ~ 7.00	3.0 ~ 30.00
			7.00 ~ 9.00	
13	-0.006		9.00 ~ 12.00	3.0 ~ 50.00
			12.00 ~ 15.00	
20	-0.007		15.00 ~ 20.00	
25	-0.020			



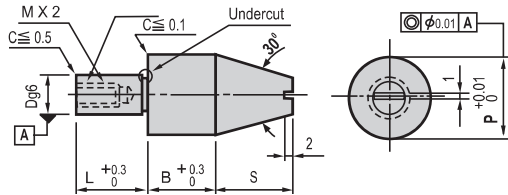
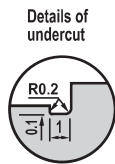
ORDERING CODE	CATALOG NO.	P	B
ALPPKLH	8.05	20	

# Locating Pilot Pins



**ALPPTH**  
(Configurable P · B)

<b>Material</b>	D2
<b>Hardness</b>	60-63 HRC



Dg6	M	L	S	Catlog No.		P 0.01 mm increments	B 0.01 mm increments
				Type	D		
5	-0.004 -0.012	3	12	(Configurable P · B) <b>ALPPTH</b>	5	8.00 ~ 8.99	1.0 ~ 12.0
						9.00 ~ 10.00	
						9.00 ~ 10.99	
6					6	11.00 ~ 12.00	1.0 ~ 15.0
						12.00 ~ 12.99	
8	-0.005 -0.014	4	15		8	13.00 ~ 16.00	1.0 ~ 15.0
						14.00 ~ 14.99	
						15.00 ~ 20.00	1.0 ~ 20.0
10	-0.006 -0.017	5	20		10	16.00 ~ 16.99	1.0 ~ 20.0
						17.00 ~ 20.00	
13	-0.006 -0.017	6	20		13	17.00 ~ 20.00	1.0 ~ 20.0
						18.00 ~ 20.00	
16		8	24	25	16	18.00 ~ 20.00	1.0 ~ 20.0

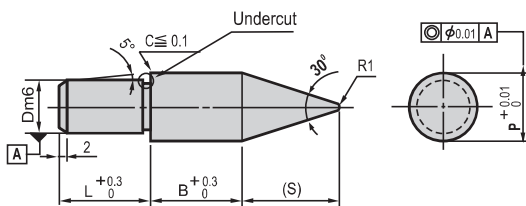
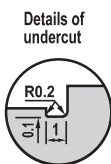


<b>ORDERING CODE</b>	CATALOG NO.	P	B
	ALPPTH10	P14.0	B10



**ALPSTH**  
(Configurable P · B)

<b>Material</b>	D2
<b>Hardness</b>	60-63 HRC



⚠ (S) is a  $\approx 1.6 \times P$ .

Dm6	L	Catlog No.		P 0.01 mm increments	B 0.1 mm increments
		Type	D		
4	+0.012	(Configurable P · B) <b>ALPSTH</b>	4	4.00 ~ 8.00	1.0 ~ 12.00
5			5.00 ~ 10.00	1.0 ~ 12.00	
6	+0.004		15	6.00 ~ 12.00	1.0 ~ 15.00
				8.00 ~ 14.00	1.0 ~ 15.00
8	+0.015		20	10.00 ~ 16.00	1.0 ~ 20.00
10	+0.006			13.00 ~ 18.00	1.0 ~ 20.00
13	+0.018		24	16.00 ~ 20.00	1.0 ~ 20.00
16	+0.007				

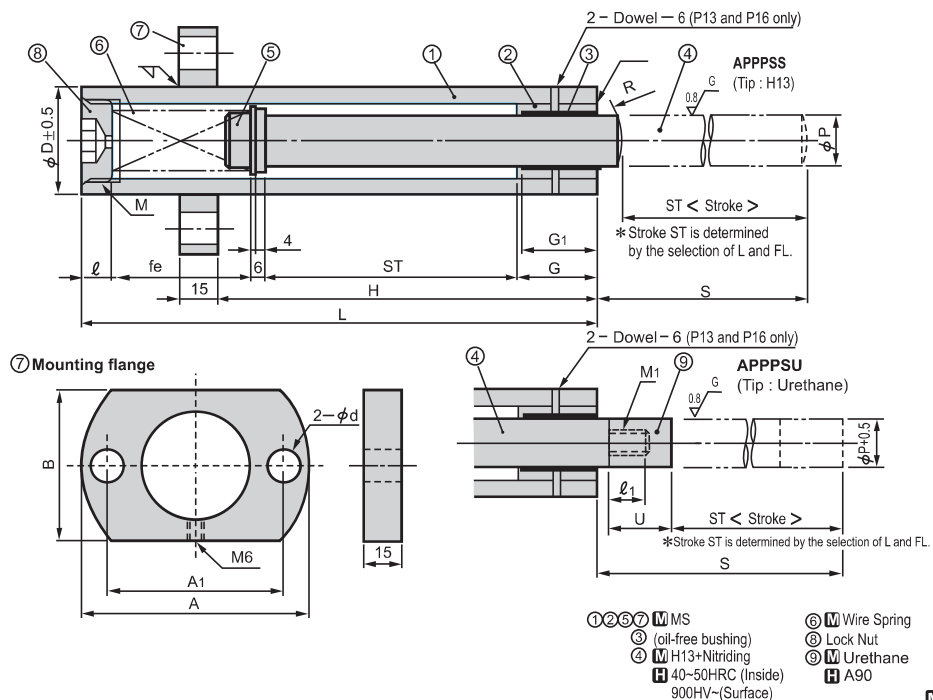


<b>ORDERING CODE</b>	CATALOG NO.	P	B
	ALPSTH10	P10	B6

# Pre-holding Push Pin Sets - Normal Type



**APPPSS** (Tip : Steel)  
**APPPSU** (Tip : Urethane)



① Case				④ Push pin				⑦ Mounting flange				Catalog No.		S	L 10mm increments	H 1mm increments	Spring free length FL		
D	G	G <sub>1</sub>	ℓ	M	R	U	M <sub>1</sub>	ℓ <sub>1</sub>	A	A <sub>1</sub>	B	d	Type					P	
27.2	22	20	10	22	20	15	M6	9	70	52	40	11	APPPSS (Tip : Steel)	13	100	150 ~ 250	0 ≧ H ≧ L - 20	90	
															150			125	
															200			150	
34.0	27	25	10	26	25	20	M8	12	80	60	50	11		APPPSS (Tip : Steel)	16	100	150 ~ 350	0 ≧ H ≧ L - 20	90
																150			125
																200			150
																250			175
																300			200
42.7	32	30	12	33	30	25	M10	15	90	70	60	13			APPPSU (Tip : Urethane)	20	100	180 ~ 500	0 ≧ H ≧ L - 20
													150				150		
													200				175		
													250				200		
													300	250					
													350	300					
													400	350					
450	400																		
500	425																		
																	450		
																		500	

① Be sure to make selections so that the urethane tip of APPPSU would not enter inside the bushing. S - ST > U



ORDERING  
CODE

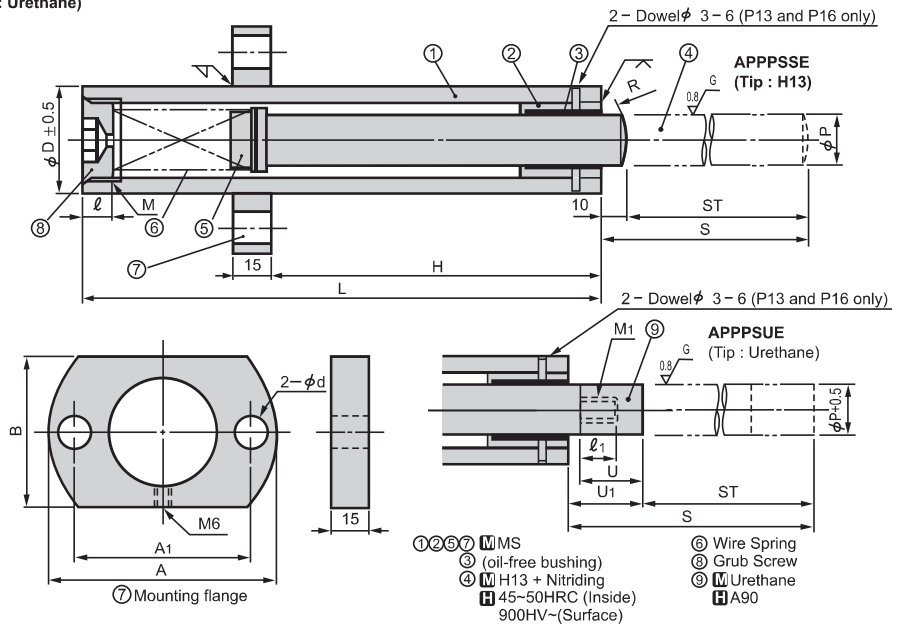
CATALOG NO.	S	L	H	FL
APPPSS 20	100	180	150	200



# Pre-holding Push Pin Sets - Economy Type



**APPPSSE** (Tip : Steel)  
**APPPSUE** (Tip : Urethane)




① Case		④ Push Pin					⑦ Mounting flange				Free length FL	Spring constant N/mm (kgf/mm)	Initial load N (kgf)	Max. load	S		L	Catalog No.		ST	H 1mm increments		
D	$\ell$	M	R	U	U <sub>1</sub>	M <sub>1</sub>	$\ell_1$	A	A <sub>1</sub>	B					d	APPPSSE		APPPSUE	Type			P	
27.2	10	22	20	15	20	M6	9	70	52	40	11	90	0.63 {0.064}	7.8 {0.8}	39.2 {4.0}	60	70	115	APPPSSE (Tip : Steel)	13	50	0 ~ 95	
												175	0.32 {0.033}	7.8 {0.8}		110	120				190	100	0 ~ 170
												270	0.21 {0.021}	7.8 {0.8}		160	170				270	150	0 ~ 250
34.0	10	26	25	20	25	M8	12	80	60	50	11	90	0.80 {0.082}	9.8 {1.0}	49.2 {5.0}	60	75	120	APPPSSE (Tip : Steel)	16	50	0 ~ 100	
												175	0.39 {0.040}	9.8 {1.0}		110	125				195	100	0 ~ 175
												270	0.26 {0.027}	9.8 {1.0}		160	175				275	150	0 ~ 255
												350	0.20 {0.020}	8.8 {0.9}		210	225				350	200	0 ~ 330
42.7	12	33	30	25	30	M10	15	90	70	60	13	90	0.95 {0.097}	9.8 {1.0}	58.8 {6.0}	60	80	130	APPPSUE (Tip : Urethane)	20	50	0 ~ 110	
												175	0.48 {0.049}	9.8 {1.0}		110	130				205	100	0 ~ 185
												260	0.32 {0.033}	9.8 {1.0}		160	180				280	150	0 ~ 260
												350	0.23 {0.024}	9.8 {1.0}		210	230				360	200	0 ~ 340
												425	0.20 {0.020}	8.8 {0.9}		260	280				430	250	0 ~ 410



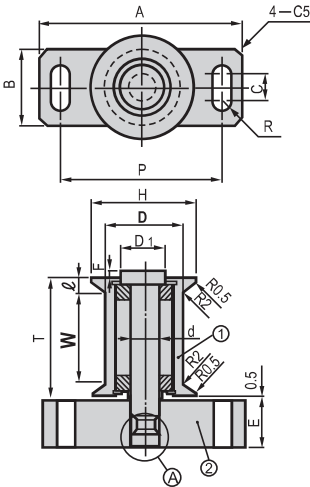
ORDERING CODE


CATALOG NO.	ST	H
APPPSSE 20	150	200

# Stock Guide Sets - Bearing Type

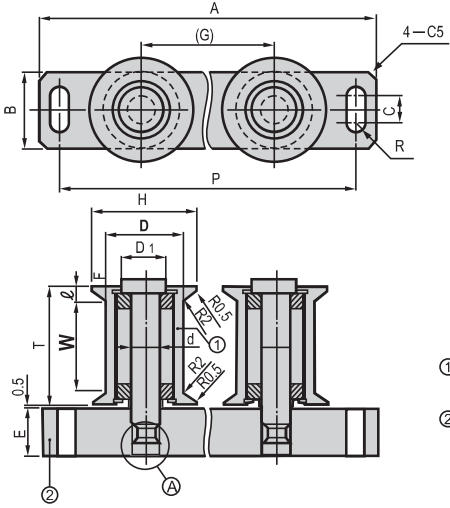


**ASGSRB** (Roller bearing type)  
**ASGSBB** (Ball bearing type)  
**Single guide**





**ASGSRBW** (Roller bearing type)  
**ASGSBBW** (Ball bearing type)  
**Double guide**



① Mat : Case Hardening Steel  
 Hardness : 55HRC ~ (Case hardening)  
 ② M MS  
**A** Grub screw  
 Single Guide : 1 pc.  
 Double Guides : 2 pcs.

**Set**

W	H	ℓ	d	A	B	C	P	R	E	F	(G)	D1	Catalog No.		W
													Type	D	
48	40	5	10	95 (395)	30	10	73(373)	5.5	20	1.5	(300)	14	(roller bearing) <b>ASGSRB</b>	30	38
54	75	8	25	145 (445)	55	20	115(415)	6.5	35	5.5		32	<b>ASGSRBW</b>	55	70
86															
48	40	5	9	95(395)	30	10	73(373)	5.5	20	1.5	(300)	12	(ball bearing) <b>ASGSBB</b>	30	38
54	75	8	20	145(445)	55	20	115(415)	6.5	35	5.5		32	<b>ASGSBBW</b>	55	70
86															

Numbers in parentheses are dimensions of the double guides (ASGSRBW and ASGSBBW)

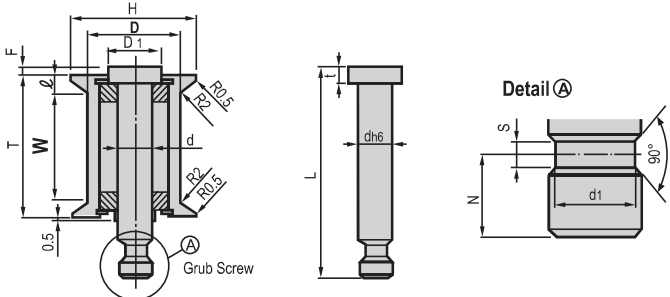


**ORDERING CODE**

**CATALOG NO.** W

ASGSRB30 38

**ASGSRBT** (Roller bearing type)  
**ASGSBBT** (Ball bearing type)  
**Guide roller unit**



**Unit**

W	H	ℓ	d	F	D1	L	t	d1	S	N	Catalog No.		W
											Type	D	
48	40	5	10	1.5	14	67	5.5	8	2.5	7	(roller bearing) <b>ASGSRBT</b>	30	38
54	75	8	25	5.5	32	92	9.5	22	5	17		55	70
86						124							
48	40	5	9	1.5	12	67	5.5	7	2.5	7	(ball bearing) <b>ASGSBBT</b>	30	38
54	75	8	20	5.5	32	92	9.5	17	5	17		55	70
86						124							




**ORDERING CODE**

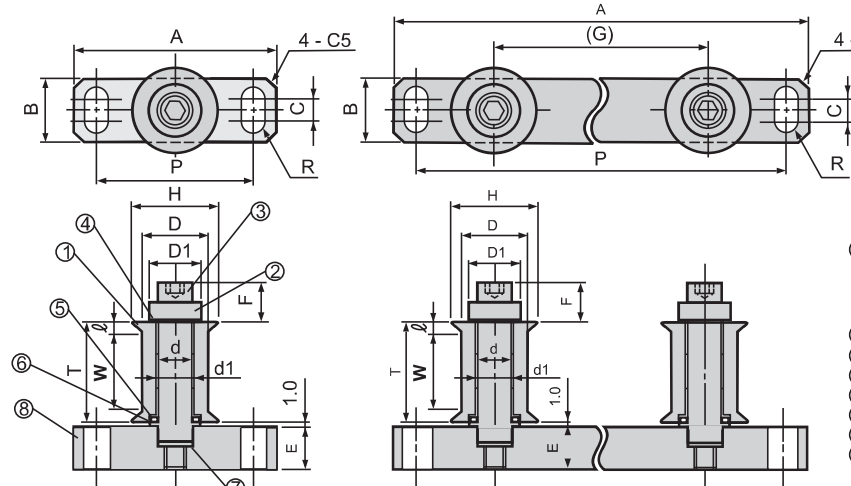
**CATALOG NO.** W

ASGSRBT30 38


# Stock Guide Sets - Oil-Free Bushing Type

**Single Guide AEGDR**





**Double Guide AEGDRW**




① Roller  
M 20 MnCr5  
M 55HRC ~

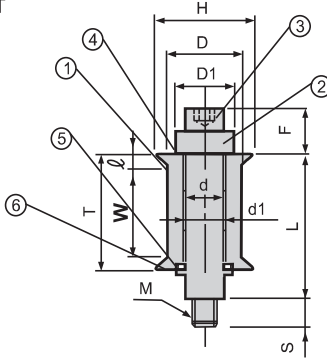
② ASR ( Spool retainer)  
 ③ Hexagon socket head cap screw  
 ④ Oil - free bushing  
 ⑤ Snap ring ( C type)  
 ⑥ Spacer  
 ⑦ Spring washer  
 ⑧ Mounting Plate  
M (M.S.)

■ Set Parts

T	H	ℓ	d	d1	A	B	C	P	R	E	F	(G)	D1	Catalog No.			
														Type	D	W	
48	40	5	16	18	95(395)	30	10	73(373)	5.5	20	19	(300)	24	AEGDR AEGDRW	30	38	
54	75	8	25	28	145(445)	55	20	115(415)	6.5	35	30.5				36	55	38
86																	70

**Guide Roller Unit AEGDRT**





① Roller  
M 20 MnCr5  
M 55HRC ~

② ASR ( Spool retainer)  
 ③ Hexagon socket head cap screw  
 ④ Oil - free bushing  
 ⑤ Snap ring ( C type)  
 ⑥ Spacer


■ Individual parts

T	H	L	ℓ	d	F	S	D1	d1	M	Catalog No.		
										Type	D	W
48	40	52	5	16	19	15	24	18	10	AEGDRT	30	38
54	75	61	8	25	30.5	26	36	28	16		55	38
86		93				24					70	

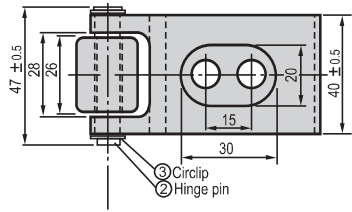


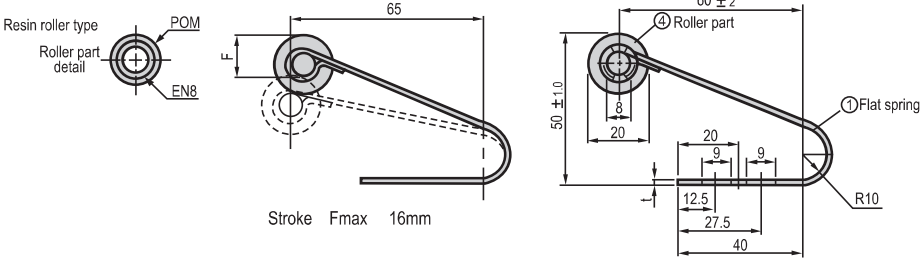
ORDERING CODE    CATALOG NO.    W  
 AEGDRT 55    38

# Stock Feeder Lifter Units



**ASFLUM  
ASFLUH**  
Resin roller type





Stroke Fmax 16mm

① Mat : Spring steel  
 ② EN8  
 ③ Circlip  $\phi 8$   
 ④ Resin roller type  
 Outside **M** POM (Polyacetal resin)  
 Inside **M** EN8  
**A** M8-20 (Allen Bolt) Q'ty:2

t	N/mm{kgf/mm}	Type	Catalog No.
1.4	5.88 {0.60}	Resin roller	ASFLUM
1.6	8.43 {0.86}		ASFLUH


{kgf} = N × 0.101972



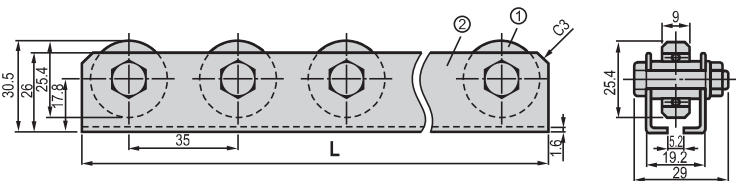
ORDERING  
CODE

CATALOG NO.  
ASFLUH

# Roller Carriers



**ARC**



① The dimension (L) is a reference value.  
 ② Load resistance of a roller: 20kg/piece

① **M** Ball Bearing  
 ② **M** MS

L	Catalog No.	A Number of rollers
(105)	<b>ARC</b>	3
(140)		4
(175)		5
(210)		6
(245)		7
(280)		8
(315)		9
(350)		10
(385)		11
(420)		12
(455)		13
(490)		14
(525)		15

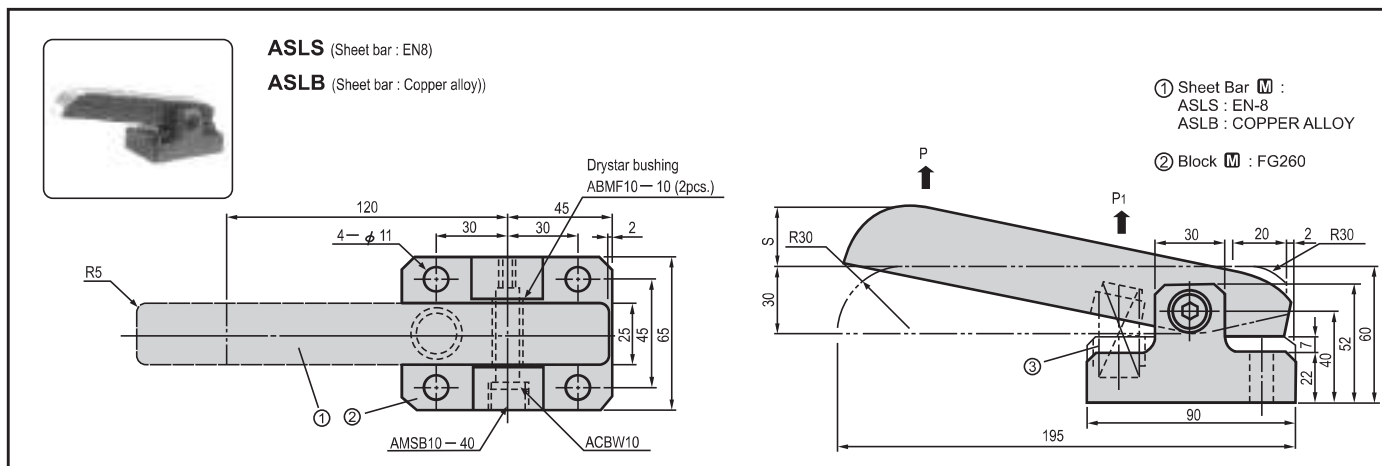
L	Catalog No.	A Number of rollers
(560)	<b>ARC</b>	16
(595)		17
(630)		18
(665)		19
(700)		20
(735)		21
(770)		22
(805)		23
(840)		24
(875)		25
(910)		26
(945)		27
(980)		28



ORDERING  
CODE

CATALOG NO.  
ARC

# Sheet Lifters



Lifting load P N(kgf)		Spring load P1 N(kgf)		Coil spring (Color) ③	Stroke S	Catalog No.	
min.	max.	min.	max.			Type	No.
18.3{1.9}	24.5{2.5}	73{ 7.5}	98{10.0}	ASWU17 50 (Light blue)	20	ASLS ASLB	20U
29.3{3.0}	39.2{4.0}	117{12.0}	157{16.0}	ASWR17 50 (Ivory)			20R
54.9{5.6}	73.5{7.5}	220{22.5}	294{30.0}	ASWS17 50 (Orange)			20S
16.9{1.7}	24.5{2.5}	67{ 6.9}	98{10.0}	ASWU17 50 (Light blue)			25U
27.0{2.8}	39.2{4.0}	108{11.0}	157{16.0}	ASWR17 50 (Ivory)	25	ASLS ASLB	25R
51.0{5.2}	73.5{7.5}	202{20.6}	294{30.0}	ASWS17 50 (Orange)			25S

① Do not use full stroke. It is recommended to shorten the stroke setting by about 1mm.

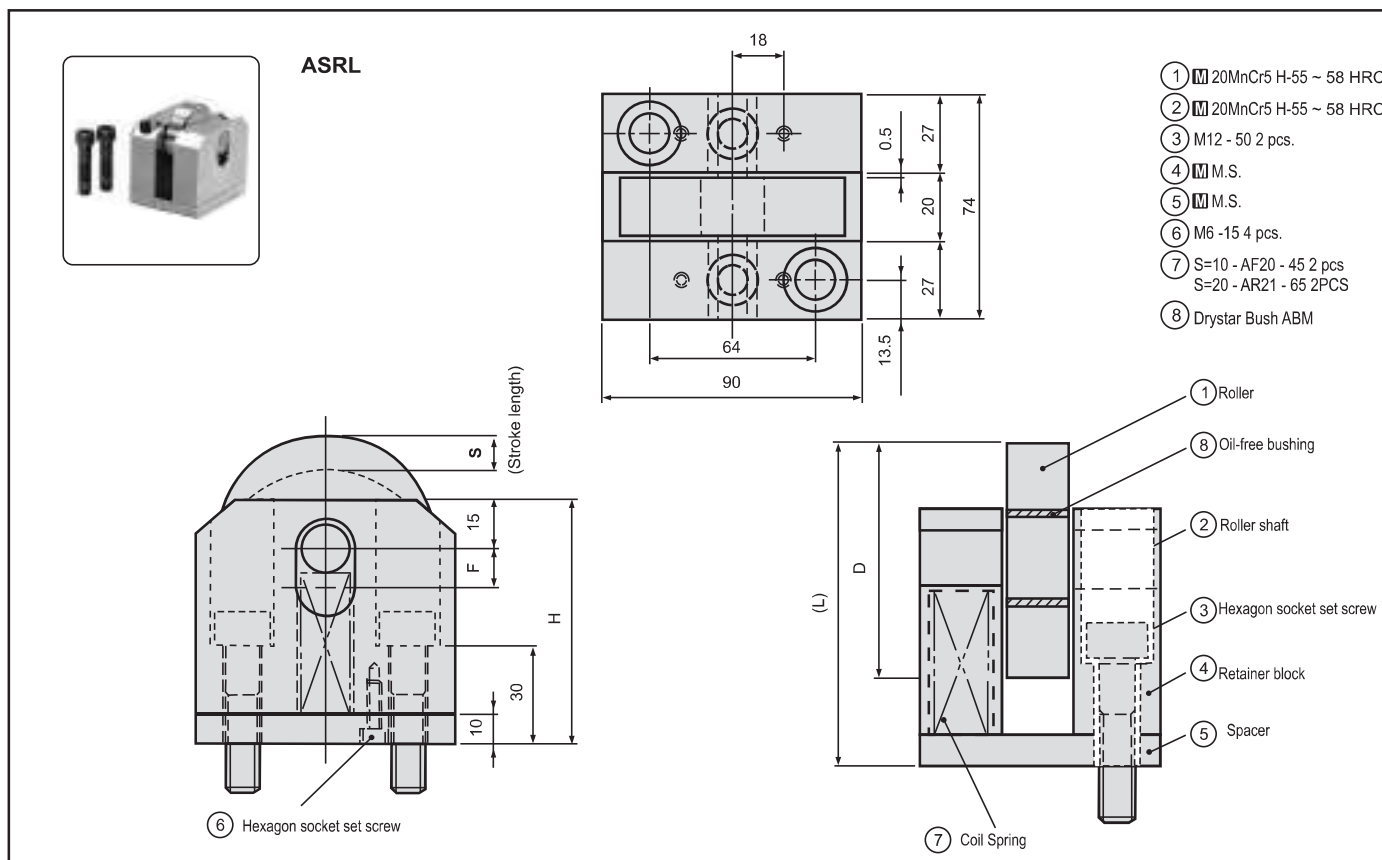
$$\{kgf\} = N \times 0.101972$$



ORDERING CODE

CATALOG NO.  
ASLB 25S

# Material Lifters / Material Feed Lifter Units



D	H	F	(L)	N(kgf) min.	N(kgf) max.	Catalog No.	
						Type	S
60	75	12	90	165 {16.8}	439 {44.8}	ASRL	10
80	95	22	120	108 {11.0}	469 {47.8}		20



ORDERING CODE

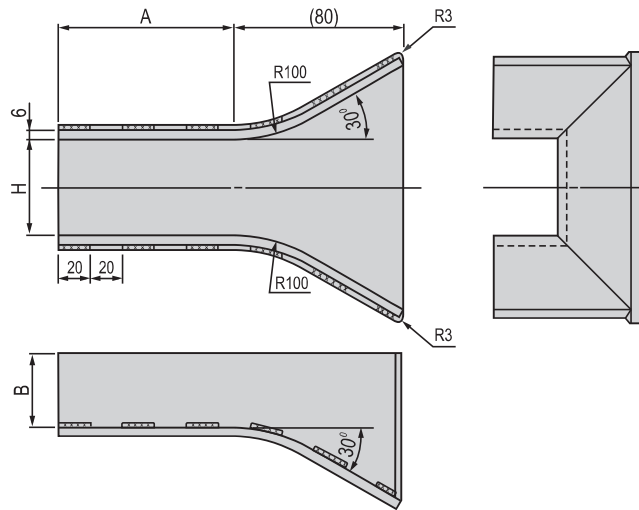
CATALOG NO.  
ASRL 20



# Coiled Material Guides



ACILG



M.S.

Catalog No.		B	H
Type	A		
ACILG	60	40	30
			50
			60
		60	30
			50
			60
	70	40	30
			50
			60
		60	30
			50
			60
	80	40	30
			50
			60
		60	30
			50
			60
	90	40	30
			50
			60
		60	30
			50
			60
100	40	30	
		50	
		60	
	60	30	
		50	
		60	
110	40	30	
		50	
		60	
	60	30	
		50	
		60	



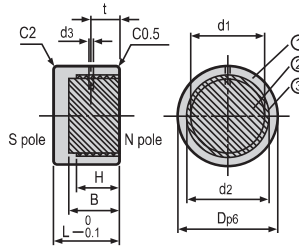
ORDERING CODE

CATALOG NO.	A	B	H
ACILG	100	60	50

# Pot Magnets



**APMAG** (Press fit type)



- ① MS
  - ② Alnico magnet
  - ③ Brass
- Allowable temperature limit 80°C

Dp6	L	* Adsorption N {kgf}	Surface magnetic flux density Gauss [G]	d1	d2	d3	B	H	t	Catalog No.	
										Type	D
20 $\begin{smallmatrix} +0.035 \\ +0.022 \end{smallmatrix}$	16	25.5 {2.6}	1400 ~ 1700	13	16	2	12	8	4.0	APMAG	20
25 $\begin{smallmatrix} +0.035 \\ +0.022 \end{smallmatrix}$	19	47.1 {4.8}	1600 ~ 1900	15.5	18.5		13	10	5.0		25
30 $\begin{smallmatrix} +0.035 \\ +0.022 \end{smallmatrix}$	20	68.6 {7.0}		19.5	23	15	10	5.0	30		
35 $\begin{smallmatrix} +0.042 \\ +0.026 \end{smallmatrix}$	26	98.1 {10.0}	1900 ~ 2100	24.5	28	3	18	13	6.5		35
40 $\begin{smallmatrix} +0.042 \\ +0.026 \end{smallmatrix}$	27	142.2 {14.5}		29.5	33		20	13	6.5		40

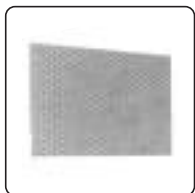
$kgf = N \times 0.101972$

- ⚠ Since magnets are broken easily, do not alter them.
- ⚠ The end face is ground.

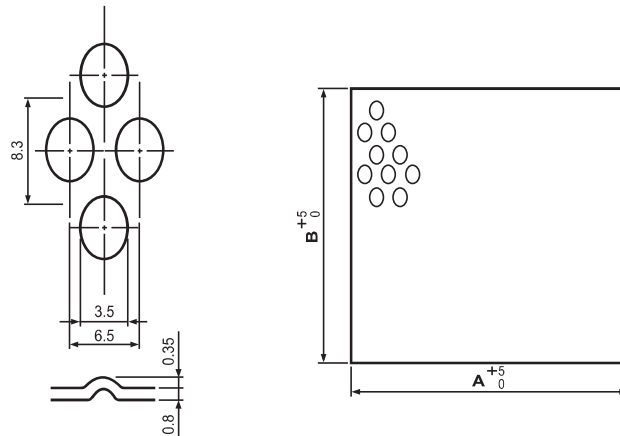


<b>ORDERING CODE</b>	<b>CATALOG NO.</b>
	APMAG 25

# Embossed Shooting Plates



**AESP**



Note : Embossed Surface Shape may differ slightly than shown in the sketch.



**M** Material : SS304 / MS

Catalog No.	A	B
AESP	350	500
	500	1000
		2000

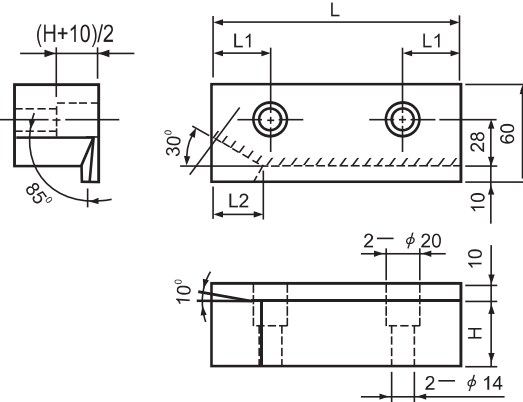


<b>ORDERING CODE</b>	<b>CATALOG NO.</b>	<b>A</b>	<b>B</b>	<b>Material</b>
	AESP	500	1000	SS304

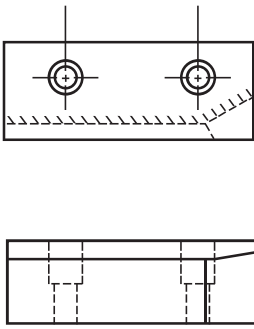
# Material Guides

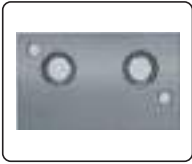
**Left hand**  
AMCG-L (Round hole type)



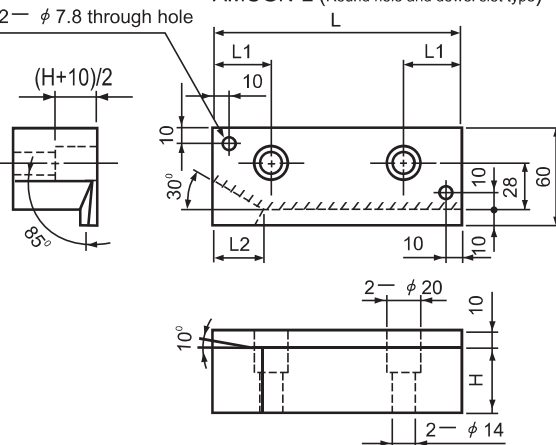
**Right hand**  
AMCG-R (Round hole type)



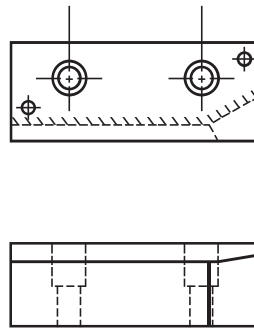
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AMCGN-L (Round hole and dowel slot type)



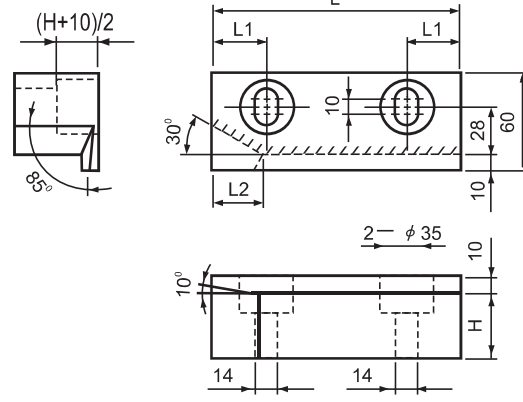
AMCGN-R (Round hole and dowel slot type)



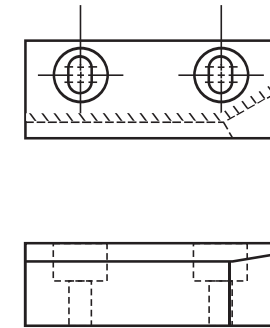
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AMCGE-L (Oblong hole)




AMCGE-R (Oblong hole)

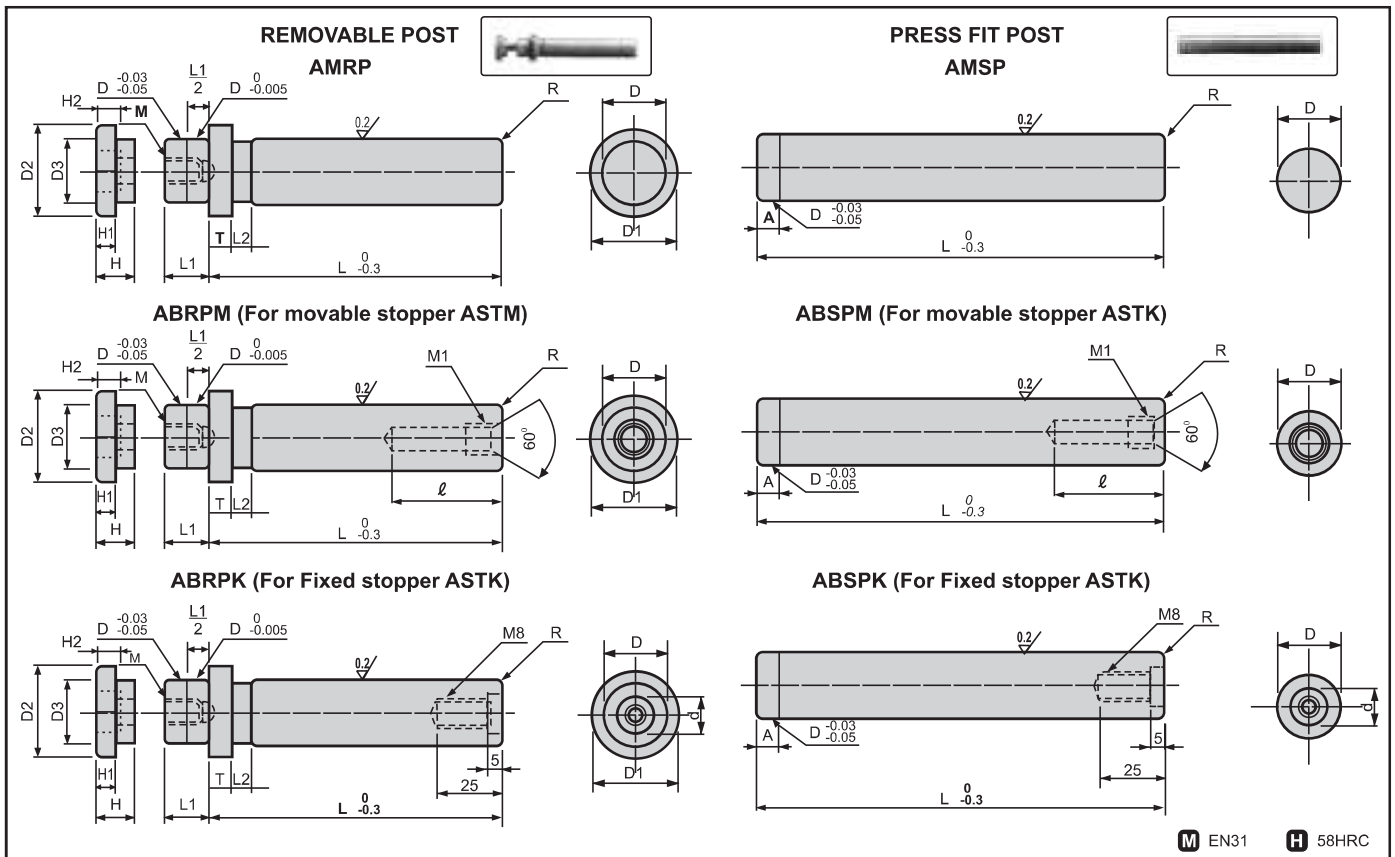


 20MnCr5  
 55 HRC  
 (Part : Case - hardened)

L1	L2	Catalog No.		L	H 10 mm increments
		Type	Mounting Direction		
25	30	AMCG	R	100	20-70
35		AMCGN	L	150	
	AMCGE				

	ORDERING CODE	CATLOG NO.	L	H
		AMCG-R	100	50

# Guide Post For Die Set



D	D1	T	L1	L2	ℓ	M1 X P	d	A	M	R	D2	D3	H	H1	H2	Allen bolts
20	+0.020	29	5	15	10	38	14	4	M8X18	2.0	28	19.5	14	7	8.5	M 8-25
22	+0.015	31	8	42		30					21.5					
25		36	10	50		35					24.5					
28	+0.025	39	10	20	12	50	20	5	M10X22	3.5	36	27.5	16	8	10.5	M 10-30
32	+0.020	44		23		60					40	31.5				
38	+0.030	53	12	27	15	60	20	6	M12X27	4.0	49	37.5	18	10	12.5	M 12-35
45	+0.025	59		32		70					55	44.5				
50	+0.035	69	15	35	15	70	20	7	M14X31	5.0	62	49.5	20	12	14.5	M 14-40
60	+0.030	79		42		70					72	59.5				

Catlog No. Type	D	L									
		80	90	100	110	120					
AMRP	20										
	22										
	25										
	28										
ABRPM	32										
	38										
ABRPK	45										
	50										
	50										
	60										

Catlog No. Type	D	L									
		100	110	120	130	140	150	160	170	180	
AMSP	20										
	22										
	25										
	28										
ABSPM	32										
	38										
ABSPK	45										
	50										
	50										
	60										



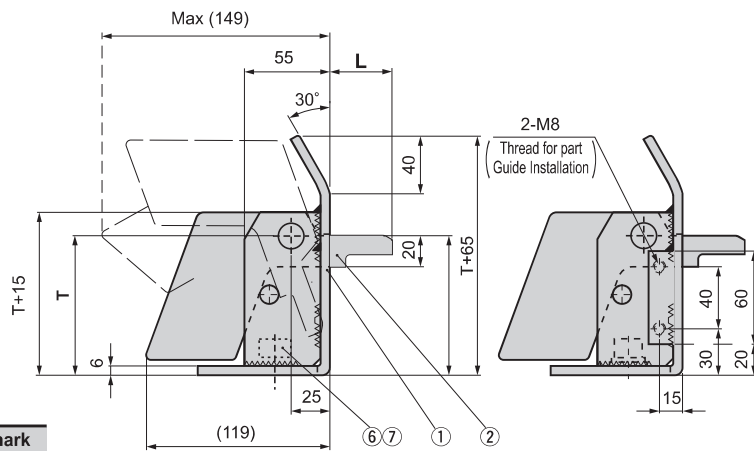
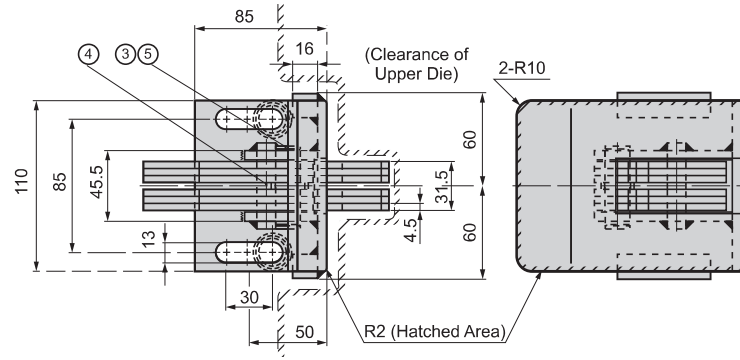
**ORDERING CODE**    **CATALOG NO.**    **L**  
 AMSP 32                      200



# Sheet Support Gauge - Weight Adjusting Type



**AFKGN**



■ **Table of Components**

No.	Description	Qty	Material and Remark
①	Gauge	1	SPC
②	Support Plate	6	SPC
③	Support Point Hinge Pin	1	S45C
④	Collar	5	SGP ( 1 piece is assembled. 4 piece are accompanied )
⑤	C-Type Retaining Ring	2	For ø 16 shaft
⑥	Hexagon Socket Head Bolt	2	M12X30
⑦	Washer	2	For M 12

■ To turn the support plate, load of approx 500 g/plate is required.

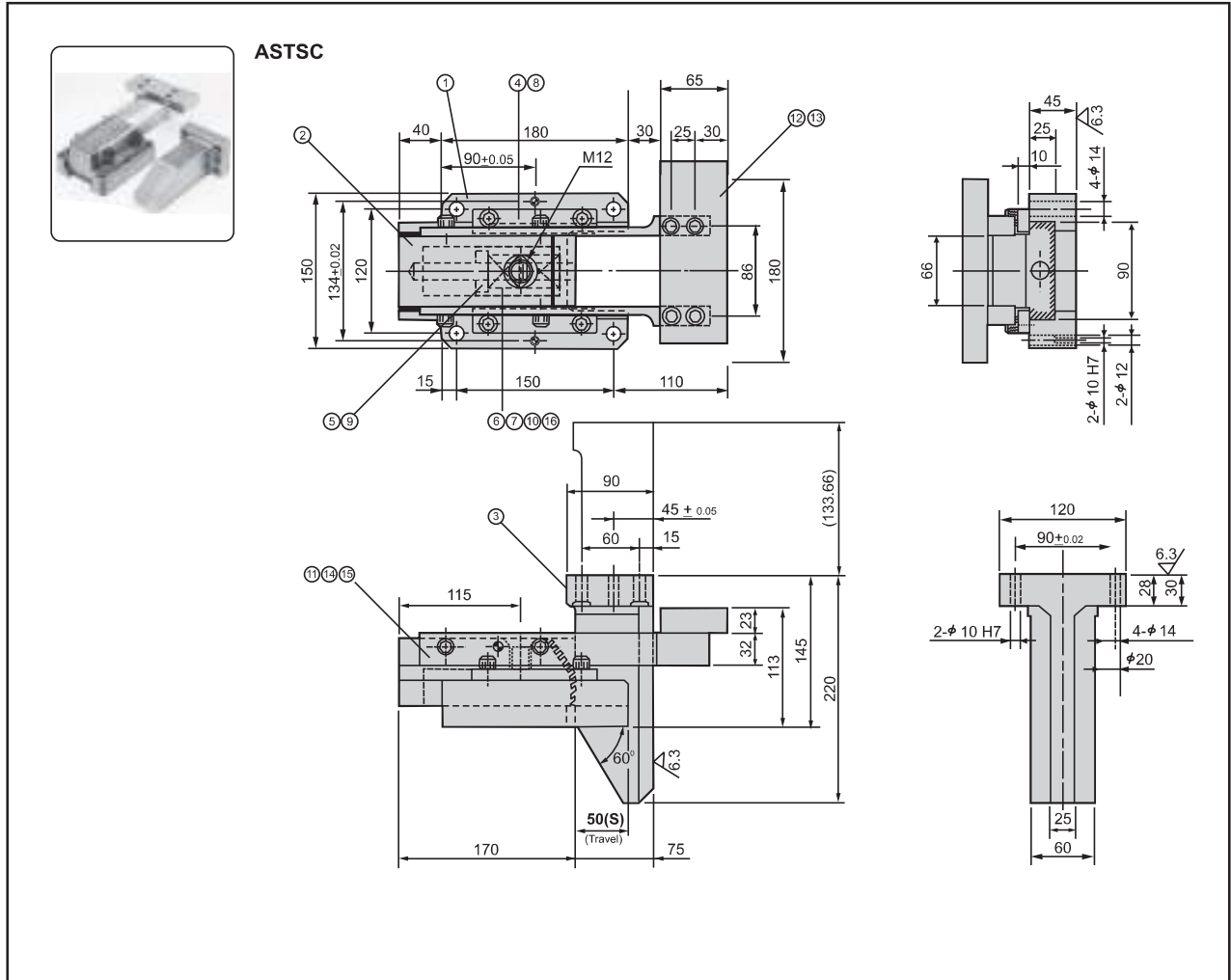
Catalog No.	T	L
<b>AFKGN</b>	90	20
	120	
	150	
	180	



**ORDERING CODE**

CATALOG NO.	T	L
AFKGN	90	20

# Coil Support - Cam Type



■ Table of Components

No.	Description	Qty	Material and Remark
①	Base	1	FG260
②	Slider	1	FG260 Oilless Type
③	Driver	1	FG260
④	Upper Plate	2	M.S.
⑤	Spring Stopper	1	M.S.
⑥	Guide pin	1	M.S.
⑦	Spring	2	AF30-65
⑧	Hexagon Socket Head Bolt	4	M10X25
⑨	Set Screw	1	M6X10
⑩	Dowel Pin with Female Thread	1	φ6X30(m6)
⑪	Arm	2	M.S.
⑫	Plate	1	M.S.
⑬	Hexagon Socket Head Bolt	4	M10X40
⑭	Hexagon Socket Head Bolt	4	M12X35
⑮	Dowel Pin	2	φ10X30
⑯	Washer	1	S45C

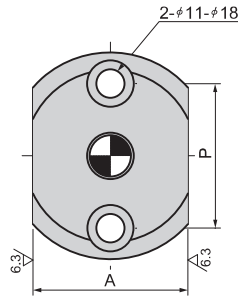
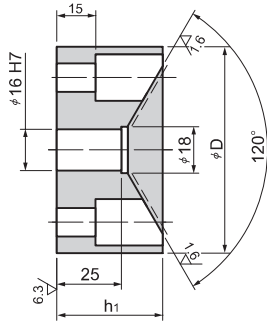
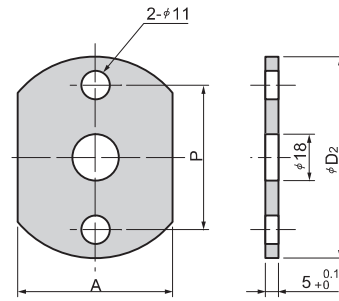
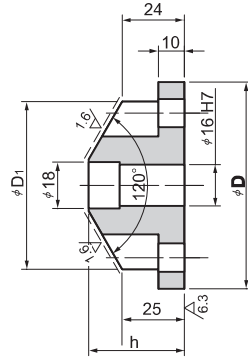
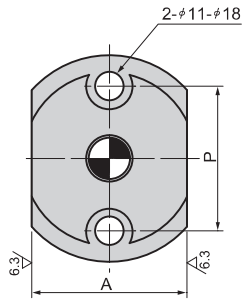


ORDERING  
CODE

CATALOG NO. S  
ASTSC 50

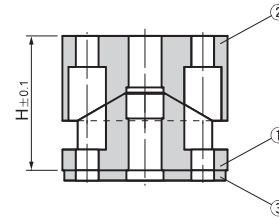
# Locating Corn

ASLTC



■ **Accessory: Shim plate**  
(for adjusting height please use after grinding)

■ **Assembly drawing**



## Table Components

No.	Description	Qty	Material and Remark
①	Locating cone: Male	1	S45C HRC50 or more
②	Locating cone: Female	1	S45C HRC50 or more
③	Shim Plate	1	M.S.

Area to be induction hardened (Hached Area), HRC50 or more

A	P	D1	h	h1	D2	H	Catalog No.	D
60	56	65	37	41	78	65	ASLTC	80
80	76	85	42	51	98	75		100



ORDERING CODE

CATALOG NO.	D
ASLTC	80