

Bukwang Plastic Die Standard Components



Contents

COREUNIT

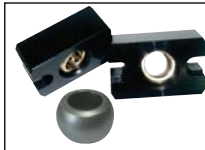
■Catalog No.

■Page



Tools

19p



BGA

20p



BGB

21p



BASN

22p



BASS

23p



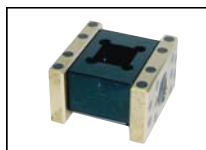
BASL

24p



BNP

25p



BNPS

26p



BNPL

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BOQJF

28P



BCSUF

30P



BPHF

32P



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BDSET

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BDNP

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BBSN

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BBSL

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BBNP

40p



BBNL

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BDGA

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BDGB

43p



BDHB

44p



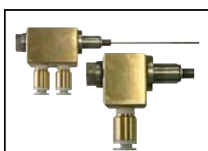
BKN / TDP

45p



BNDW/BNDS/BADW/BADS

48p



WTDW/WTDS

49p

Core Unit Set for high temperature mold
(Guide Plate SKD61 / HRC58)



Contents



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SPRING

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GAS SPRING

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MOLD GUIDE
COMPONENT

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78-79P



BOST

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BOSG

84-87p



BEGB / BEGBK

88-89p



BOVM / BSO EG

90-91p



BEGBL / BEGBLH

92-93p



BGED / BGBTD

94-95p



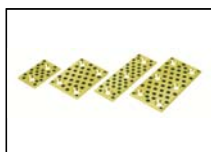
DIN9834 / VDI-KL

96-97p



BWP/BWPC/BWPT/BW PTC

98-99p



BUW P/BUW PC

100-101p



BLT

102-103p



BOLP

104-106p



BOX / BOXT

106-107p



BESW / BESWT

108-109p



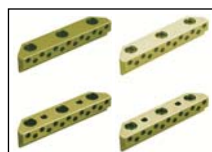
BWX

110-111p



BOML / BPLB

112-113p



BGLS/BGLS N/BGLW/BGLWN

114-115p



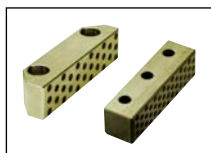
BGLX/BGBF/BGBST/BGBWT

116-119p



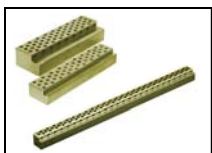
BBGLWN / BMVT-1,2

120-121p



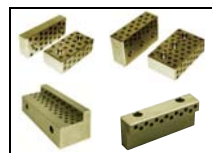
BGBT / BSGBD

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BOVL / BGLX

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BGLF2,3/BVSOL/BGLDW

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MOLD GUIDE COMPONENT

■Catalog No.



MSBB/SMSB/TSPH/TSOH



TSPV/TSON/TSPR/TSOR



AGPHL/AGPH-XL



BPPY/BPPL/BPPLL



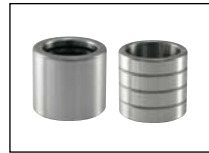
BPPM/BPPX



BPPP/BGEE



BGAE/BGCE



TSD/TSBA



TSB/TSBL



TSSF/TSHF



DU bush



BOB



BGBS



BGBF



BOST



BOSG



BEGB/BEGBK



BOVM



BSOE G/BEGBL/BEGBLH



BGBD/BGBTD



DIN9834



VDI-KL(DIN9832)



BMBS



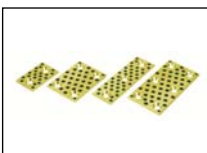
Ball Cages



BWP/BWPC



BWPT/BWPTC



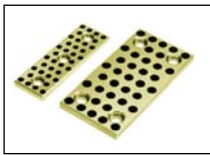
BUWP/BUWPC



BLT



BLT



BOLP



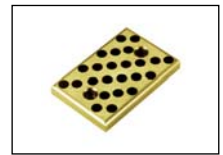
BOX



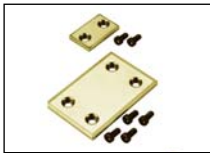
BOXT



BESW



BESWT



BWX



BWX



BOML



BPLB



BGLS



BGLSN



BGLW



BGLWN



BGLXS



BGBFT / BGBWT



BBLWN



BMVT-1/BMVT-2



BGBT



BSGBD



BOVL



BGLX



BGLF2



BGLF3



BVSOL



BGLDW

**SLIDER
CORE**



ALPA



ALPB



ALZZ(SET)



ALZZ(SET)

Catalog No.



ALZA



ALZB



ALSL



ALSR



ALSS



ALZL-60



ALZR-32



ALZR-50



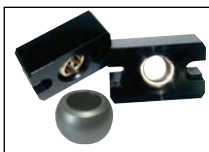
ALZL-32



ALZL-50



■ Catalog No.



BGA/DSKD61



BGB



BASN



BASS



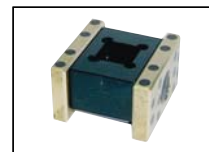
BASL



BASM



BNP



BNPS



BNPL



BNPM



BMM



BSCK



BDSET



BBSET



BDSN



BDSN



BDSS



BDNP



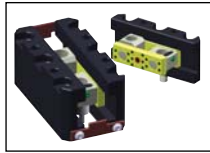
BDNS



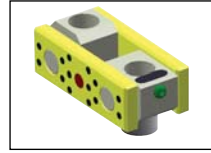
BBSN



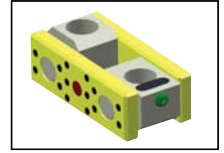
BBSS



BBSL



BBNL



BBNP



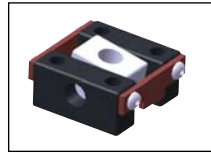
BBS



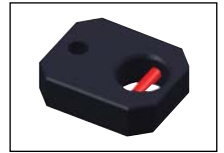
BCGA



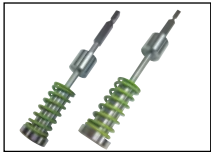
BDGB



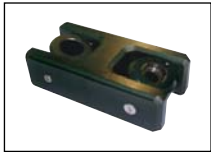
BDHB



BDCP



SKCS8



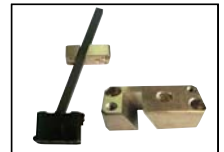
UB



UBB



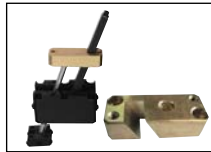
UBK



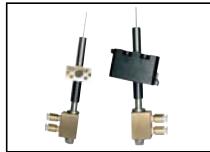
BGS



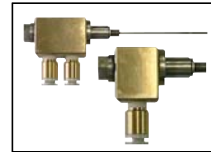
BDGS



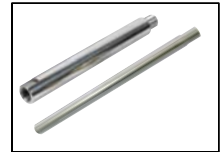
BEGS



BNDW/BNDS/BADW/BADS



WTDW/WTDS



BGPM/BGPA



BKN



TDP



BMAP



BMAT



BGAP



BGAT



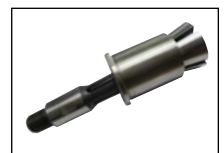
BMD



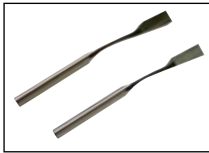
BEE



BED



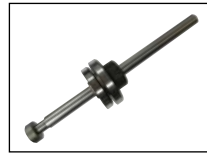
TSL



BPP



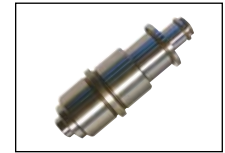
EEP



2stage Ejector



BCT2



BCT1



EZIL

DATEMARK
AIR VALVE

|| Catalog No.



PlateSideExchange Type



PL Exchange Type



3stage Ball Plunger Type



3stage Bolt Type



Coding Plug(Single)



Coding Plug(Double)



Air Valve



Air Valve AJV



Air Valve ZZ491



Air Valve VVD



Air Valve WA



Air Valve WA



Air Valve PPV

PLASTIC DIE
STANDARD
COMPONENTS

|| Catalog No.



MMLKC



MMLK



MMPLK



DTP08



PPLS



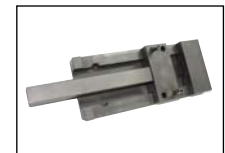
PPLSZ



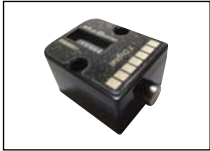
ZZ171/1



ZZ170/1



ZZ174



BVP



BPLH



B73



BPS



PPSR



SSLK-25A



SSLK-8A



ZZ5130



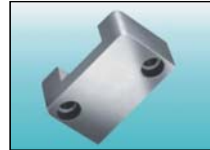
ZZ5140



ZZ5140



ZZ07



ZZ17



ZZ094



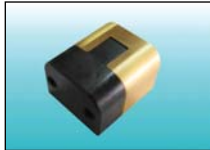
SSLPM



GGL



SSL



TTL



DLM



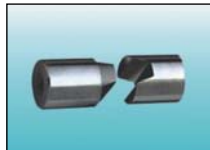
TTSSB



PL/PPLM



PPLF



ZZ06



ZZ08



TTBSF



TTBS



BTPV



HTPV-B(two way)



■ Catalog No.



GAS SPRING



GSBK

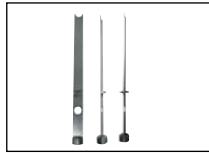


WATER COOLING UNIT SET

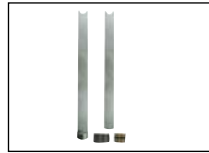
■Catalog No.



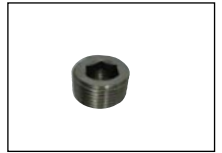
STAINLESS BAFFLE BOARD S WITH PARTITION



STAINLESS BAFFLE BOARD S WITH PARTITION



STAINLESS BAFFLE BOARD S WITH PARTITION



STAINLESS CREW PLUGS



WATER ZERO L



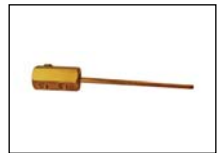
JS-204



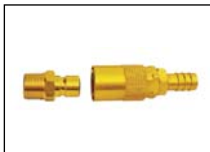
JP-250



JW-220



water Cooling unit DC



JP-252



SVK-106



ATN



STN, SCREW AN



WV700



T2000



BB



BBS



Elbow type Plug



NIPPLE(Z905)



SCREW



Z962



RPL06



CN



BKPM



BKPH2



BJPL1



BF120



BJTW1



BM-BNSC



BWC PN



BWC PK



WJ18



SKL16



ET1816



S-80PC



S-AKC



S-POC



S-FL



CT1, OM1



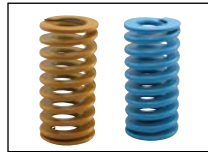
SP



BIIM



|| Catalog No.



SF / SL



SM / SH



SB / SR



|| Catalog No.



DSR



DSS



TSR



DSP



DSH



SEB



CSS



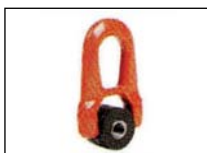
Mega DSS



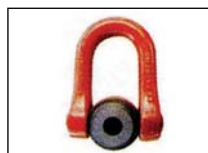
SS DSR



SS DSS



FE DSR



FE DSS



FE SEB



SS,FE DSR



SS,FE DSS

TECHNOLOGY
DATA

■Catalog No.



Torque Wrench

Core Unit for high Temperature



BASN

BDNP

BNPS

BNP

Guide Plate SKD61 / HRC58

Order

Code	Standard	Angle	D(SKD61)
예) BASN - 16	-	5°	- D
BASN - 16	-	5°	- D
BNP - 16	-	-	- D

Order Production



Bukwang Technology Co., Ltd.

COREUNIT

STANDARD COMPONENTS FOR PRESS DIE FOR MOLD DIE



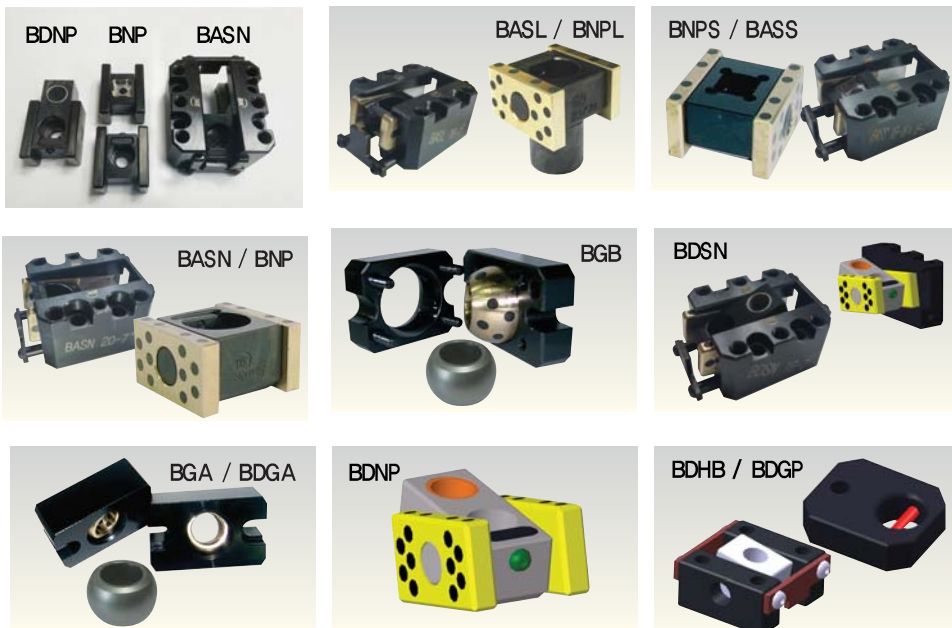
I Core Unit Set Feature

- BASN (Fixed Type), BASS (Square Type)
 - Up-and-down motion, To-and-fro motion.
- BASM / BASL (Controllable Type)
 - Up-and-down / To-and-fro motion screw can be controlled.
- BNP / BNPM / BNPA / BNPL
 - Can be assembled on mold.

II Guide Block

- BGA (Patented)
 - Motion between 0° and 20° to any direction.
 - Good with the case of long shaft.
- BGB (Patented, Fixed Type)
 - Motion between 0° and 20° to any direction.

Core Unit Set for high temperature mold
(Guide SKD61 / HRC58)





Features

1. Excellent applicability for various mould design

- Simplify the mould design process by using BK Standard Core Unit Set
- Diversify mould design range by applying BK Standard Core Unit Set

2. Mould Manufacturing Cost Down

- Save space in the mould by slim and thin Universal Core Set
- No need to purchase extra component besides Universal Core Set

3. Injection Cost Down

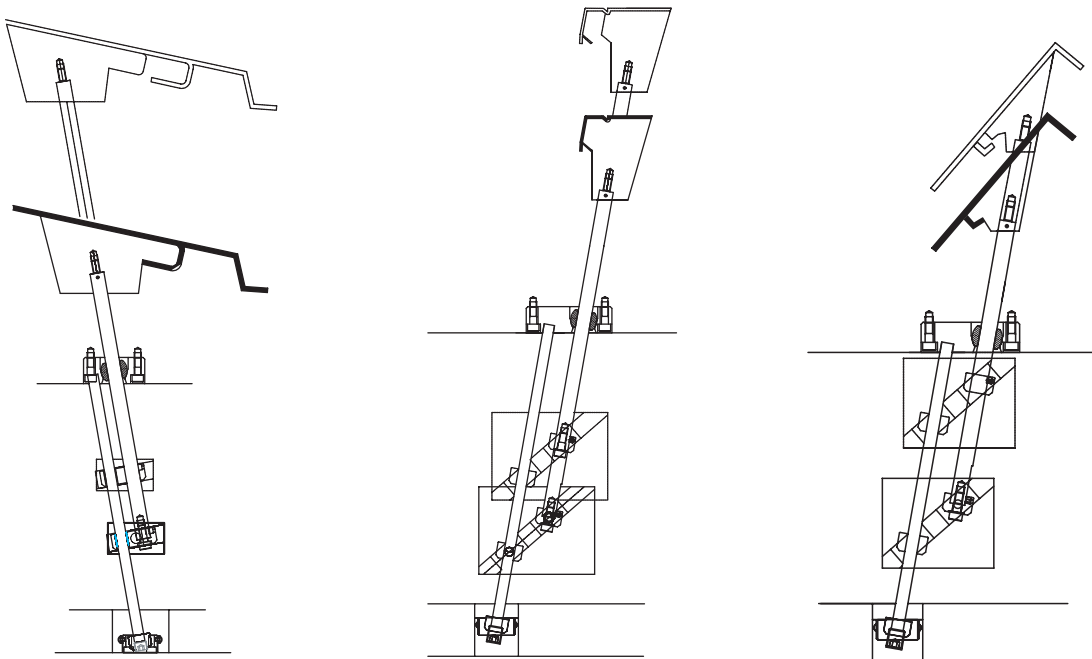
- Shortened stroke and injection time by speed-up movement(Maximum Angle: 35°)
- Improvement in injection product quality by reducing interval time

BDSET

- Integral type of core shaft block and guide shaft block
- Maximum Working Angle: 15°
- Easy to assemble the guide shaft block and adjust shaft length by setscrew
- No need to use extra angle block by precise angle process inside the housing

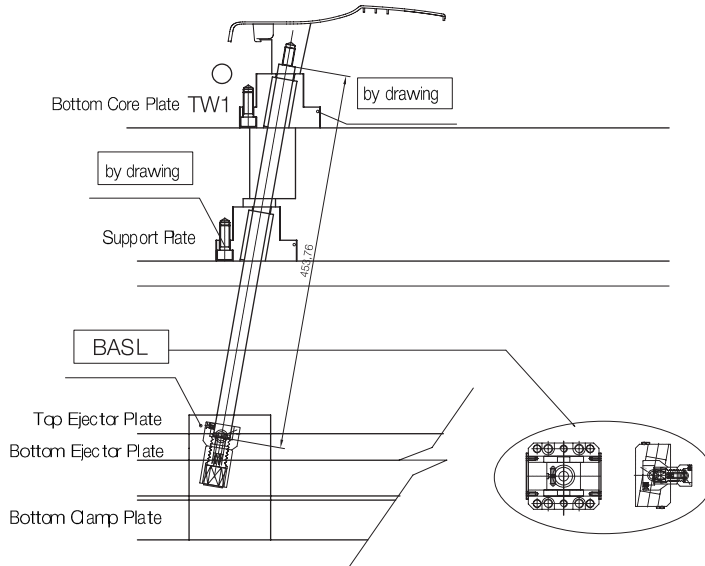
BBSET

- Separate type of core shaft block and guide shaft block
- Maximum Working Angle: 35°
- Easy to assemble the guide shaft block and adjust shaft length by setscrew
- No need to use extra angle block by precise angle process inside the housing
- Convenient to replace parts or add extra block for shafts

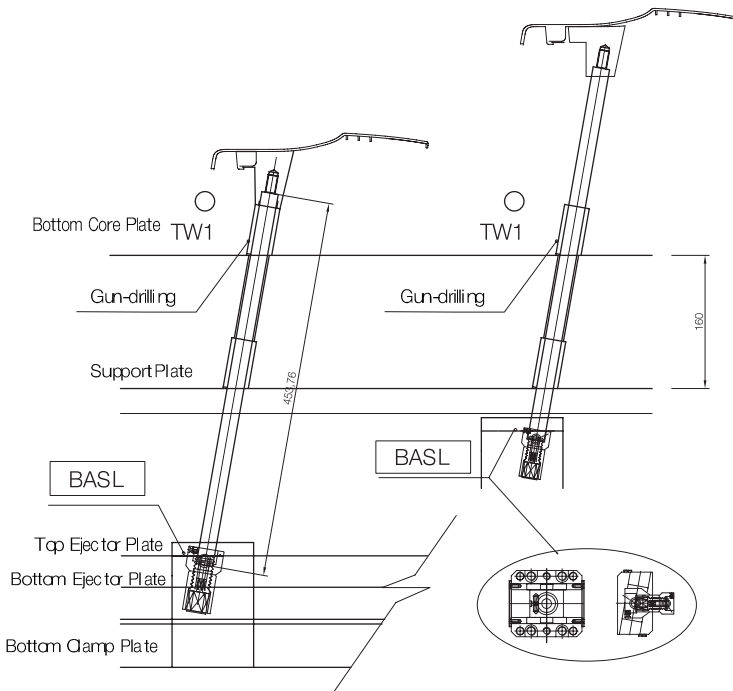


■ Before

Core can be worn away and broke in case of that general guide block does not fit on drilled hole.



Angular pin must move in own limited sphere,
so it raises wear of guide and slide plate or stick them on tool

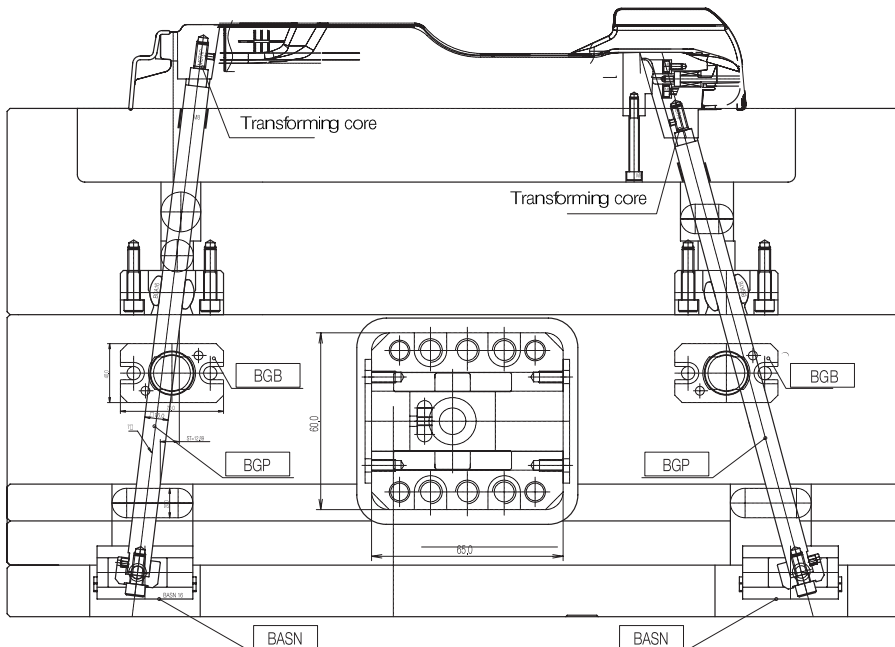
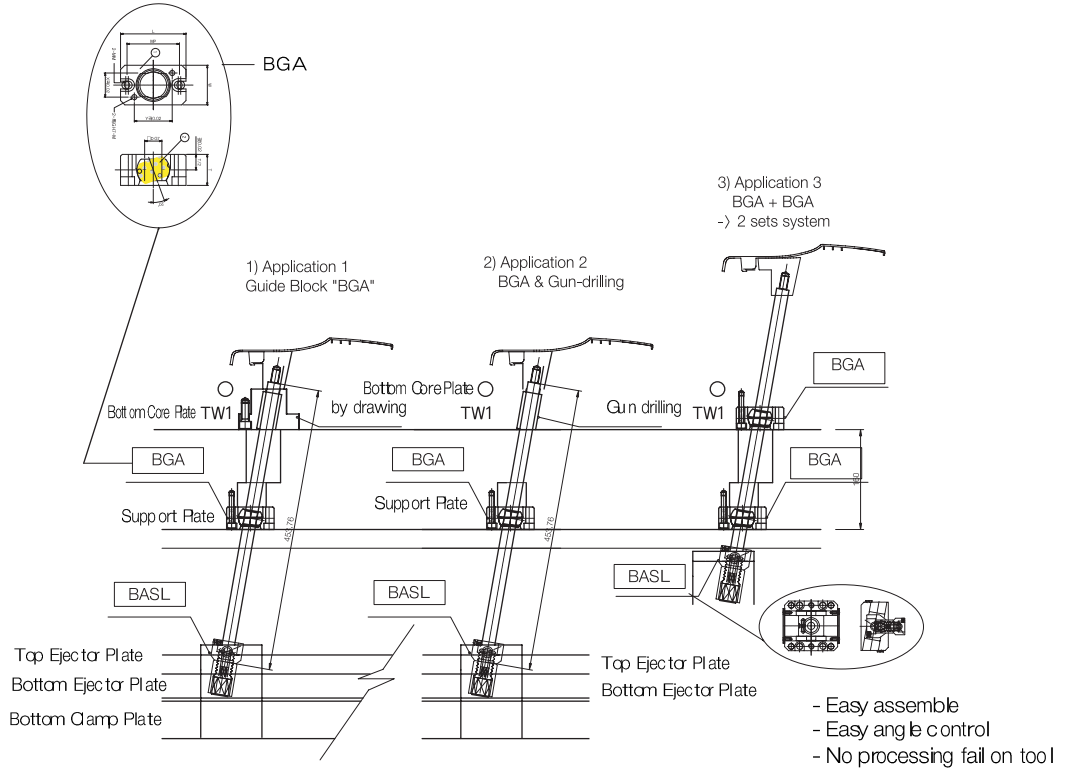


■ Angular pin Maximum allowable compressive force

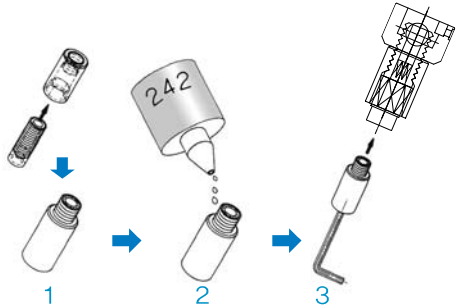
Angular pin (mm)	Maximum allowable compressive force (KN)
ø 12	35,9
ø 16	56,2
ø 20	71,5
ø 25	80,4
ø 30	98,0
ø 35	149,0
ø 40	173,5

■ After

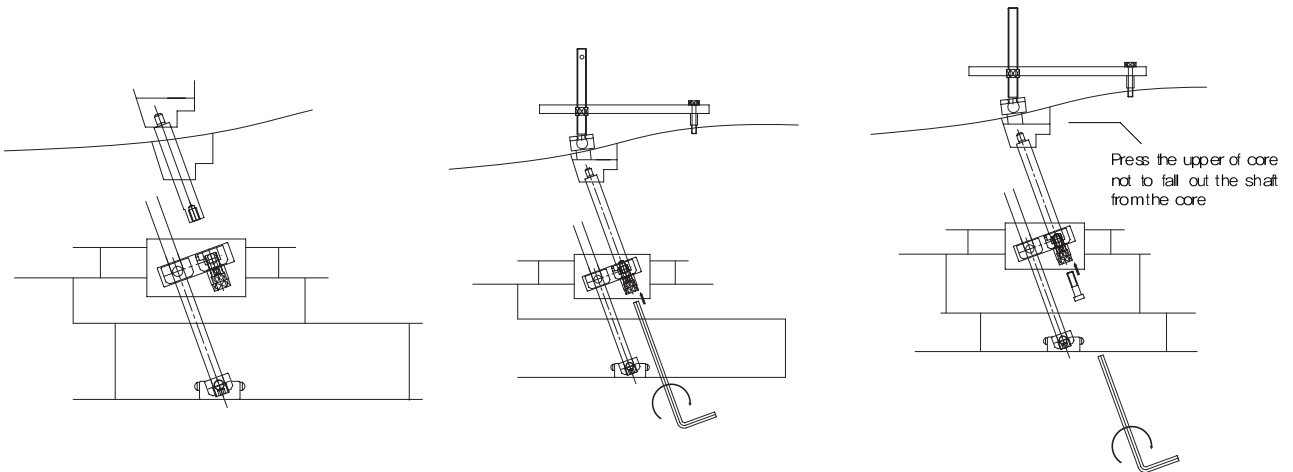
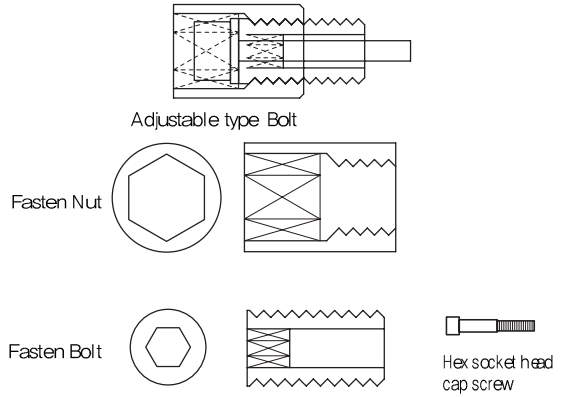
Core Unit and Guide Block can unify both the angle of bottom core plate and support plate. Therefore It gets rid of the risk of wear, bending and stick.



Example



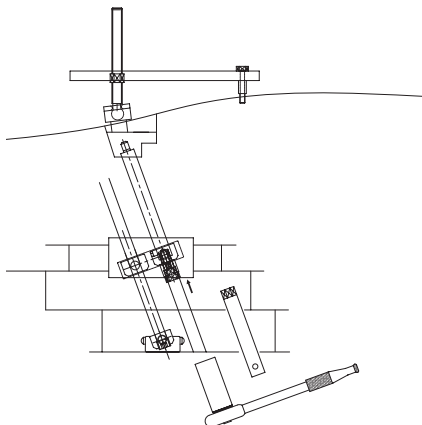
1. Fasten a bolt and a nut to the end of the nut
2. Apply a few drops of Loctite 242 to the thread of bolt
3. Insert Control bolt set into the inclined pin holder with a ball wrench



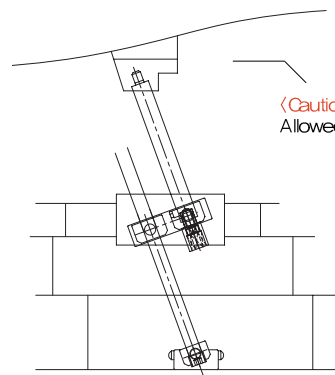
1 Mount Core Unit in the mold

2 Turn bolt with a ball wrench to fix to the end of Core shaft

3 Fasten Core shaft with a hex socket head cap screw



4 Tighten nut with a socket or BCL
(Nut and socket, Bolt and ball wrench)



<Caution>
Allowed torque is limited.

5 Finished

Tools



Socket wrench and sockets



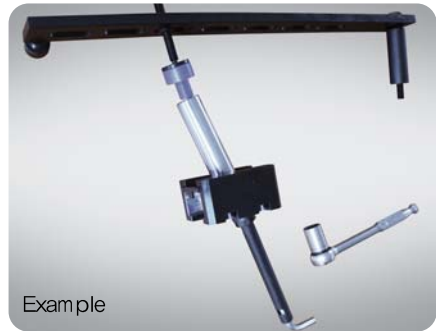
Ball Wrench



BCL

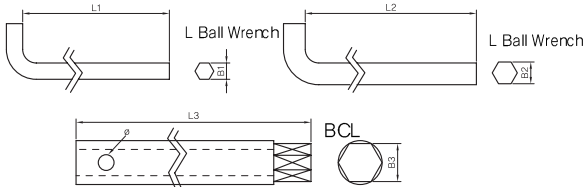


Tools for mounting



Example

▼ **Tools for assembly**

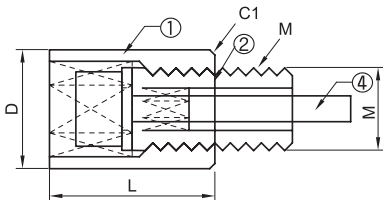


Type	B1×L1	B2×L2	B3×L3	BOLT	
12	4×140	5×160	10×130	M5	
16	6×180	8×180	14×150	M8	
20	8×200	10×230	16×170	M10	
25	10×230	12×250	20×190	M12	
30	10×230	12×250	22×210	M12	
35	14×240	16×280	28×210	M16	
40	14×240	16×280	28×210	M16	
Type	L Ball Wrench	L Ball Wrench	BCL	Hex socket head cap screw	

Order **Item**

BCL-25

▼ **Adjustable bolt set**

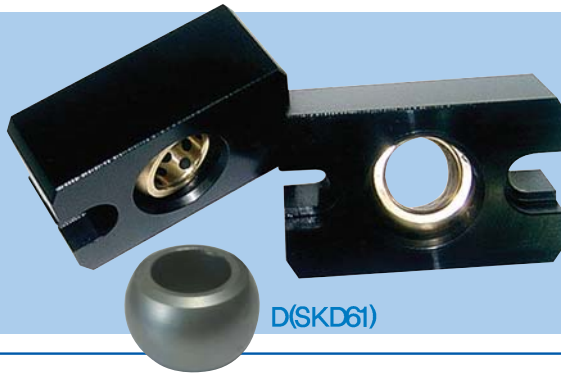


- 1 No adjust the shaft of length
- 2 Allow for thermal expansion
- 3 Use a long handled wrench
- 4 Uses only 242 of Loctite
- 5 No weld between nut and bbt

Type	D	L	M(P)	Assembling tderance	BOLT
12	16	20	M10(P1.25)	45° 90°	M5
16	20	22	M14(P1.5)	0.156 0.312	M8
20	24	25	M16(P1.5)	0.156 0.312	M10
25	29	28	M20(P1.5)	0.187 0.375	M12
30	34	30	M22(P1.5)	0.187 0.375	M12
35	40	30	M28(P1.5)	0.187 0.375	M16
40	40	30	M28(P1.5)	0.187 0.375	M16

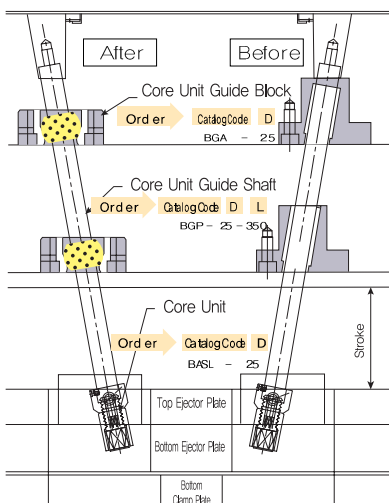
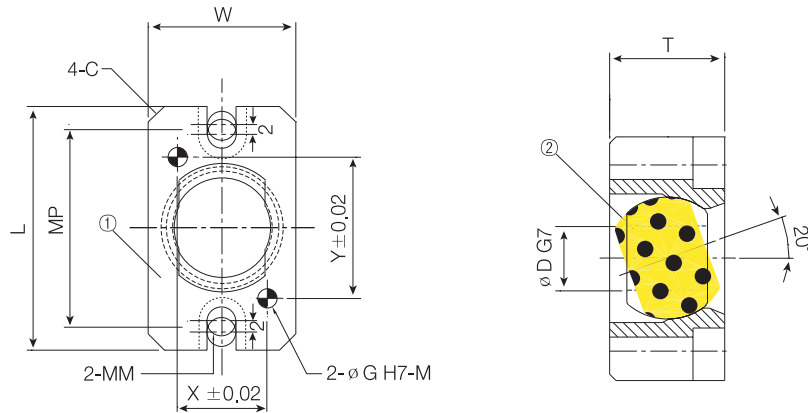
NO	Item	Q' ty	Material
①	Fixed type Nut	1	SCM4
②	Adjustable type Bolt	1	SCM4
③	Fixed type Bolt	1	SCM4

BGA



D(SKD61)

No.	Description	Q'ty	Material
1	Guide Block	2	SCM-4
2	Guide Holder	1	#500SP(CAC304+Gr)
2	Guide Holder	1	SKD61 HRC 58



Order → Catalog Code D SKD61
 BGA - 25
 BGA - 25 - D

Catalog No	D	L	W	T	MM	MP	stroke	G	M	X	Y	R/C
BGA	6,8	48	30	19	M5	38	2	6	M8	18	24	5
	10	50	32	22		40	2			20	26	5
	12	58	34	24	M6	46	2		20	28	6	
	16	70	40	30		56	2		24	36	8	
	20	76	46	36	M8	62	2	28	44	10		
	25	86	52	40		70	2	34	50	12		
	30	92	58	46	M10	76	2	8	M10	38	58	12
	35	108	72	52		88	2			48	64	15
	40	114	78	58	M12	94	2		54	70	15	

Before

Each guide bushings in the guide blocks are supporting the each point.

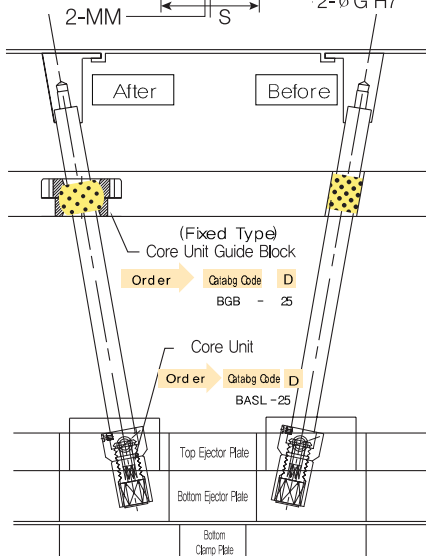
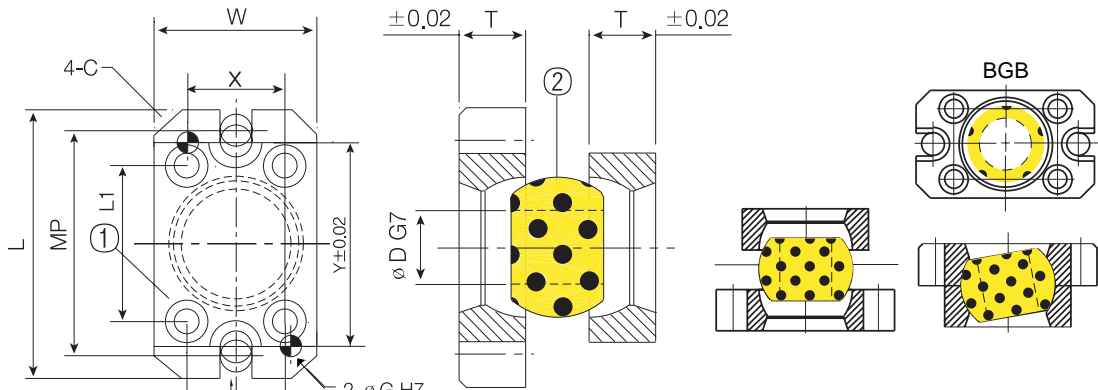
After

BGA guide blocks are adjust by themselves the small difference caused by the processing and design failure, therefore it gets rid of the risk of scratch.

BGB



No.	Description	Q'ty	Material
1	Guide Block	2	SCM-4
2	Guide Holder	1	#500SP(CAC304+Gr)
2	Guide Holder	1	SKD61 HRC 58



Catalog No.	D	L	W	T	MM	MP	stroke	X	Y	S	L1	C	G
BGB	6,8	48	30	9,5	M5	38	2	14	36	18	24	5	4
	10	50	32	11	M5	40	2	16	38	20	26	5	
	12	58	34	12	M6	46	2	18	44	20	28	5	
	16	70	40	15	M8	56	2	22	52	24	36	6	
	6	20	76	46	18	M8	62	2	26	62	28	44	6
		25	86	52	20	M10	70	2	30	70	34	50	8
	8	30	92	58	23	M10	76	2	36	76	38	58	8
		35	108	72	26	M12	88	2	46	88	48	64	10
		40	114	78	29	M12	94	2	52	94	54	70	10

Before

Each guide bushings in the guide blocks are supporting the each point.

After

BGA guide blocks are adjust by themselves the small difference caused by the processing and design failure, therefore It gets rid of the risk of scratch.

Order Catalog Code D SKD61
 BGB - 25
 BGB - 25 - D



BASN

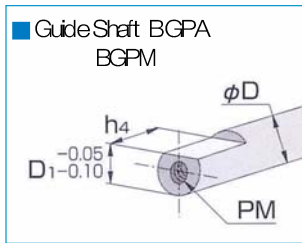
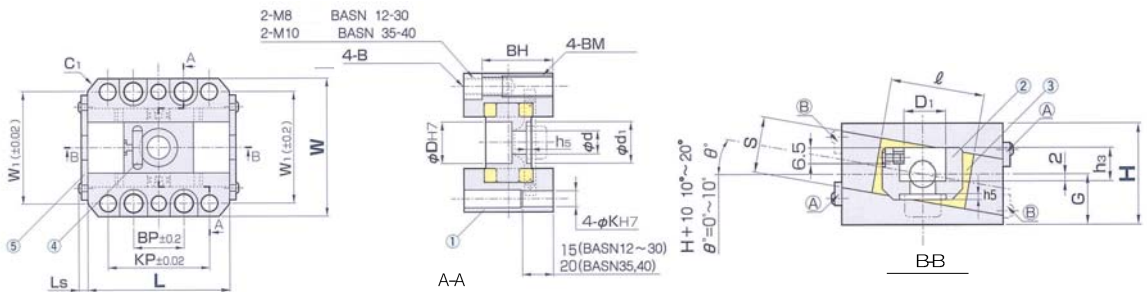
■ Non-lubricant Slide Core Unit - Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.
- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.



Provides extension of slide part by 5mm

No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Guide Plate	2	#500SP(CAC304+Gr)
3	Guide Plate	2	SKD61 HRC 58
4	Key	1	S45C
5	Stopper Plate	2	SS41



Order → Catalog Code D θ SKD 61

BASN- 25 - 0°
BASN- 25 - 0° - D

Catalog No.	∅ D	h5	C1	C2	Ls	Ⓐ	Ⓑ	Over10° (θ)
BASN	12	-	5	-	4.65	0° ~ 10°	0°	Quotation by drawing
	16	3	6	-	4.65	0° ~ 10°	-	
	20	5.5	6	5	4.65	0° ~ 10°	-	
	25	5.5	6	5	4.65	0° ~ 10°	-	H+10
	30	3.5	6	5	4.65	0° ~ 10°	-	
	35	4	6	5	5.20	0° ~ 10°	-	
	40	4	6	5	5.20	0° ~ 10°	-	

※Over 10.1° (θ) Quotation by drawing

∅ D	W	L	H	W1	BP	KP	G	h3	ℓ	S	B	BH	BM	∅ K	D1	∅ d	∅ d1		
8	42	46	30	34	16	32	15	10	30	16	M4	24.5	M6	4	7	5.5	-		
10	42	46	30	34	16	32	15	10	30	16	M4	24.5	M6	4	9	5.5	-		
12	56	55	35	45	21	42	17.5	10	35	20	M6	28.5	M8	6	11	5.5	-		
16	60	65	36	48	25	46	18	11	40	20	M6	29.5	M8	6	15	9	16		
20	68	70	43	55	25	50	21.5	13	40	24	M8	34.5	M10	8	18	11	20		
25	75	80	45	62	35	60	22.5	15	45	26	M8	36.5	M10	8	22	11	20		
30	81	95	54	68	50	75	27	17	55	30	M8	45.5	M10	8	27.5	11	20		
35	98	110	60	81	50	85	30	20	70	34	M10	49.5	M12	10	32.5	13	26		
40	105	120	64	88	60	95	32	22	80	38	M10	53.5	M12	10	37.5	13	26		



BASS

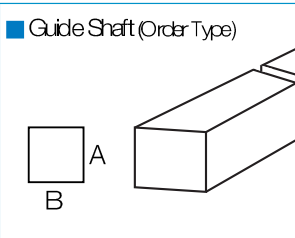
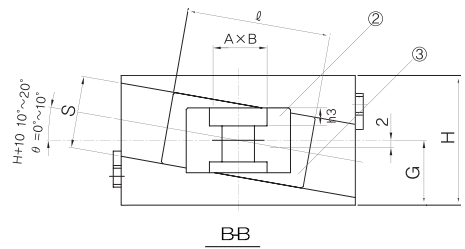
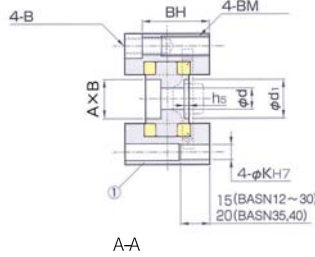
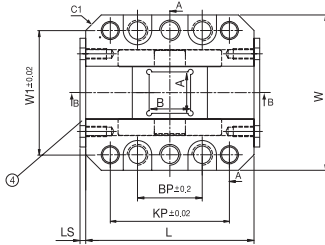


Provides extension of slide part by 5mm

■ Non-lubricant Slide Core Unit - Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut,
- This slide unit adjusts by itself center, therefore it prevent wear and stick of the guide and the slide plate.

No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Guide Plate	2	#500SP(CAC304+Gr)
3	Guide Plate	2	SKD61 HRC 58
4	Stopper Plate	2	SS41



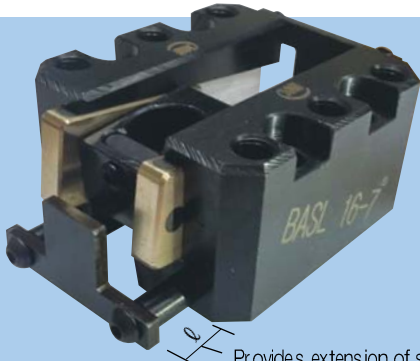
Catalog No.	∅ D	h5	C1	C2	Ls	Ⓐ	Ⓑ	Over 10° (θ)
BASS	12	-	5	-	4.65	0° ~ 10°	0°	Quotation by drawing
	16	3	6	-	4.65	0° ~ 10°	-	
	20	5.5	6	5	4.65	0° ~ 10°	-	H+10
	25	5.5	6	5	4.65	0° ~ 10°	-	
	30	3.5	6	5	4.65	0° ~ 10°	-	
	35	4	6	5	5.20	0° ~ 10°	-	
	40	4	6	5	5.20	0° ~ 10°	-	

Order → Catalog Code □A×B ^{+0.05}/_{+0.1} θ SKD 61
 BASS25 - 25×15 - 3°
 BASS25 - 20×25 - 0°
 BASS25 - 20×25 - D

※Over 10.1° (θ) Quotation by drawing

∅ D	□D	W	L	H	W1	BP	KP	G	h3	ℓ	S	B	BH	BM	∅ K	D1	∅ d	∅ d1		
8	8×8	42	46	30	34	16	32	15	4	30	16	M4	24.5	M6	4	7	5.5	-		
10	10×10	42	46	30	34	16	32	15	4	30	16	M4	24.5	M6	4	9	5.5	-		
12	12×12	56	55	35	45	21	42	17.5	4	35	20	M6	28.5	M8	6	11	5.5	-		
16	16×16	60	65	36	48	25	46	18	5	40	20	M6	29.5	M8	6	15	9	16		
20	20×20	68	70	43	55	25	50	21.5	5	40	24	M8	34.5	M10	8	18	11	20		
25	25×25	75	80	45	62	35	60	22.5	6	45	26	M8	36.5	M10	8	22	11	20		
30	30×30	81	95	54	68	50	75	27	6	55	30	M8	45.5	M10	8	27.5	11	20		
35	35×35	98	110	60	81	50	85	30	8	70	34	M10	49.5	M12	10	32.5	13	26		
40	40×40	105	120	64	88	60	95	32	8	80	38	M10	53.5	M12	10	37.5	13	26		

BASL



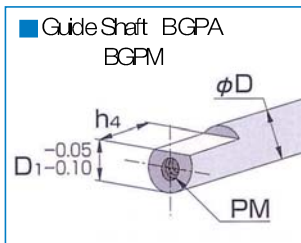
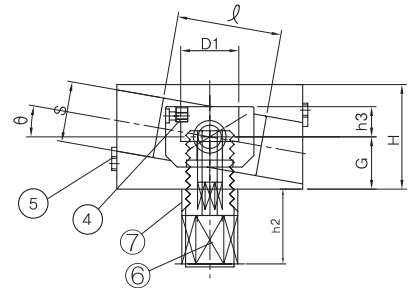
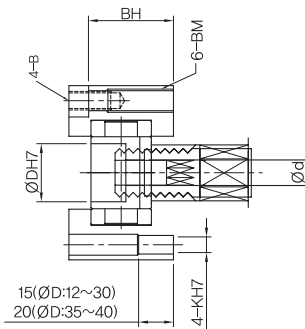
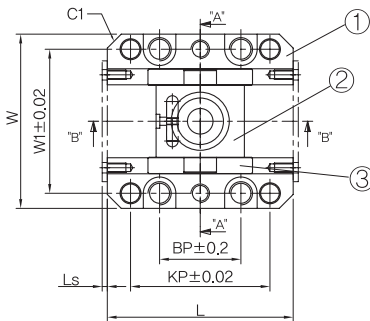
Provides extension of slide part by 5mm

■ Non-lubricant Slide Core Unit - Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.
- This slide unit adjusts by itself center, therefore it prevent wear and stick of the guide and the slide plate.

* Assembling Manual - page 18~19

No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Guide Plate	2	#500SP(CAC304+Gr)
3	Guide Plate	2	SKD61 HRC 58
4	Key	1	S45C
5	Stopper Plate	2	SS41
6	Control Bolt	1	SCM400
7	Fasten Nut	1	SCM400



Catalog No.	φ D	C1	Ls	Ⓐ	Ⓑ	Over 10° (θ)
BASL	12	5	4.65	0° ~ 10°	0°	Quotation by drawing
	16	6	4.65	0° ~ 10°	-	
	20	6	4.65	0° ~ 10°	-	
	25	6	4.65	0° ~ 10°	-	H+10
	30	6	4.65	0° ~ 10°	-	
	35	6	5.20	0° ~ 10°	-	
	40	6	5.20	0° ~ 10°	-	

Example	
φ D	φ d
16	6.5

Order → Catalog Code **D θ** SKD 61

BASL-25 - 0°
BASL-25 - 0° - D

Assembling Tool BCL-25

※ Over 10.1° (θ) Quotation by drawing

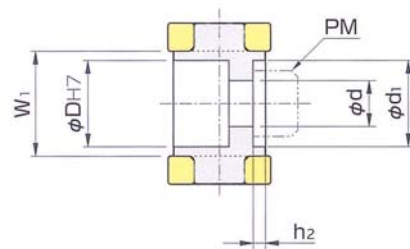
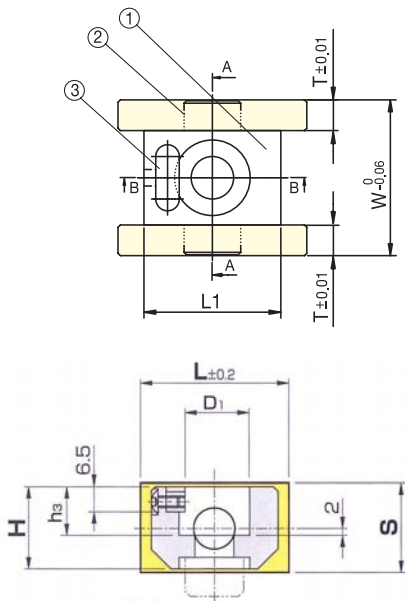
φ D	W	L	H	W1	BP	KP	G	h2	h3	ℓ	S	B	BH	BM	φ K	D1	φ d	PM
12	56	55	35	45	21	42	17.5	20	11.5	35	20	M6	28.5	M8	6	11	5.2	M5
16	60	65	36	48	25	46	18	22	12.5	40	20	M6	29.5	M8	6	15	8.2	M8
20	68	70	43	55	25	50	21.5	25	14.5	40	24	M8	34.5	M10	8	18	10.5	M10
25	75	80	45	62	35	60	22.5	28	16.5	45	26	M8	36.5	M10	8	22	12.5	M12
30	81	95	54	68	50	75	27	30	18.5	55	30	M8	45.5	M10	8	27.5	12.5	M12
35	98	110	60	81	50	85	30	30	21.5	70	34	M10	49.5	M12	10	32.5	16.5	M16
40	105	120	64	88	60	95	32	30	23.5	80	38	M10	53.5	M12	10	37.5	16.5	M16



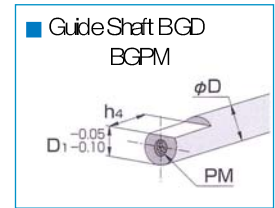
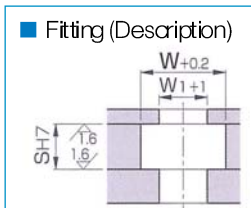
BNP



No.	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Plate	2	#500SP(CAC304+Gr)
2	Guide Plate	2	SKD61 HRC 58
3	Key	1	S45C

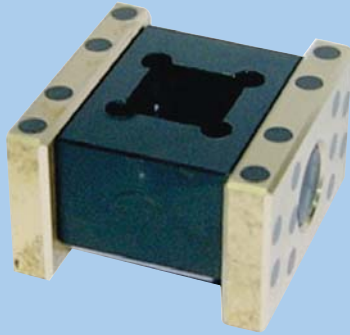


Order → Catalog Code **D SKD 61**
 BNP - 25
 BNP - 25 - D

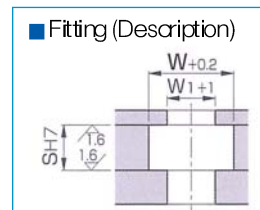
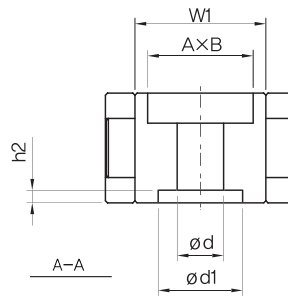
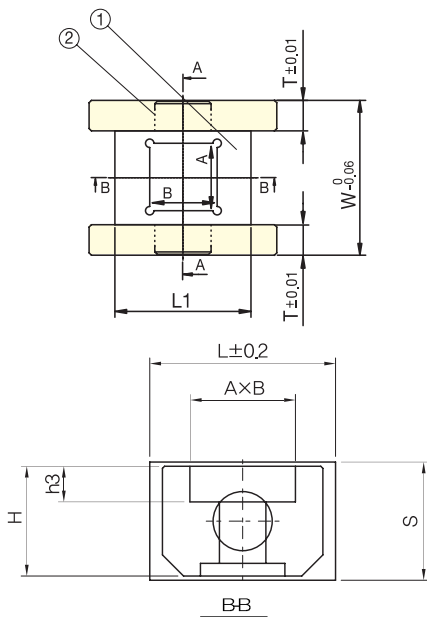


φD	W	W1	T	L	L1	S	H	h2	h3	D1	φd	φd1	
8	23	14	4.5	30	20	16	-0.01	16	-	10	7	5.5	-
10	23	14	4.5	30	20	16		16	-	10	9	5.5	-
12	30	17	6.5	35	25	20		16	-	10	11	5.5	-
16	33	20	6.5	40	29	20	-0.03	18	3	11	15	9	16
20	38	25	6.5	40	34	24		22	5.5	13	18	11	20
25	45	31	7	45	38	26		26	5.5	15	22	11	20
30	51	36	7.5	55	43	30		30	3.5	17	27.5	11	20
35	60	42	9	70	48	34	-0.03	36	4	20	32.5	13	26
40	67	47	10	80	53	38		40	4	22	37.5	13	26

BNPS



No.	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Plate	2	#500SP(CAC304+Gr)
2	Guide Plate	2	SKD61 HRC 58



Order → Catalog Code □ A × B $\begin{matrix} +0.05 \\ +0.1 \end{matrix}$ SKD 61

BNPS25 - 25 × 12
 BNPS25 - 20 × 22
 BNPS25 - 25 × 12 - D
 BNPS25 - 20 × 22 - D

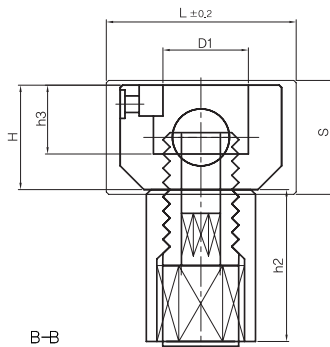
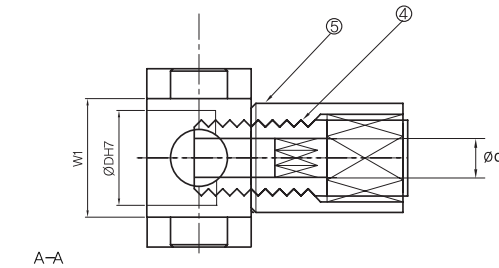
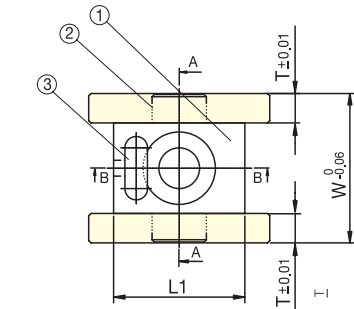
□	A × B	W	W1	T	L	L1	S	H	h2	h3	ø d	ø d1	
8	8 × 8	23	14	4.5	30	20	16	16	-	4	5.5	-	
10	10 × 10	23	14	4.5	30	20	16	16	-	4	5.5	-	
12	12 × 12	30	17	6.5	35	25	20	16	-	4	5.5	-	
16	16 × 16	33	20	6.5	40	29	20	-0.01	18	3	5	9	16
20	20 × 20	38	25	6.5	40	34	24		22	5.5	5	11	20
25	25 × 25	45	31	7	45	38	26	-0.03	26	5.5	6	11	20
30	30 × 30	51	36	7.5	55	43	30		30	3.5	6	11	20
35	35 × 35	60	42	9	70	48	34	36	4	8	13	26	
40	40 × 40	67	47	10	80	53	38	40	4	8	13	26	

BNPL



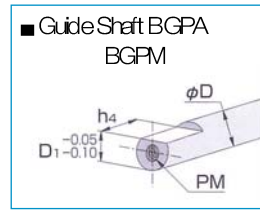
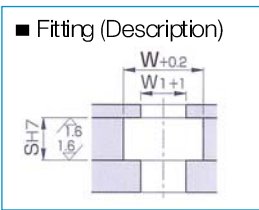
* Assembling Manual - page 18~19

No.	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Plate	2	#500SP(CAC304+Gr)
2	Guide Plate	2	SKD61 HRC 58
3	Key	1	S45C
4	Control Bolt	1	SCM400
5	Fasten Nut	1	SCM400



Order **Catalog Code** **D** **SKD 61**

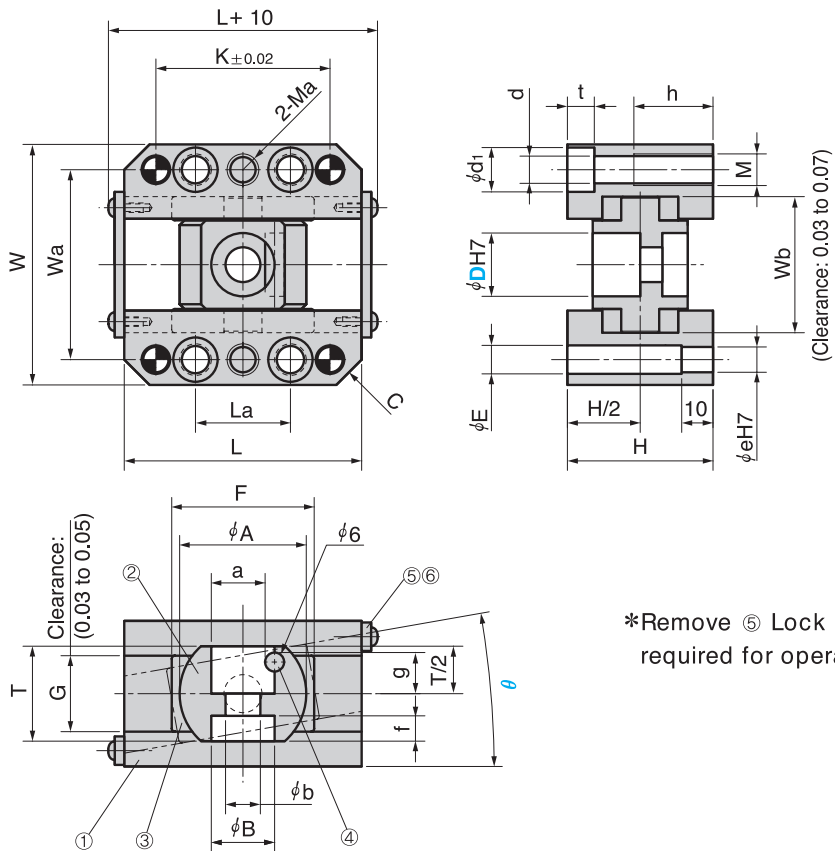
BNPL - 25
BNPL - 25 - D
Assembling Tod BCL-25



Example	
ø D	ø d
16	6.5

ø D	W	W1	T	L	L1	S	H	h2	h3	D1	ø d	PM	
12	30	17	6.5	35	25	20	-0.01	16	20	11.5	11	5.2	M5
16	33	20	6.5	40	29	20		18	22	12.5	15	8.2	M8
20	38	25	6.5	40	34	24		22	25	14.5	18	10.5	M10
25	45	31	7	45	38	26	-0.03	26	28	16.5	22	12.5	M12
30	51	36	7.5	55	43	30		30	30	18.5	27.5	12.5	M12
35	60	42	9	70	48	34		36	30	21.5	32.5	16.5	M16
40	67	47	10	80	53	38		40	30	23.5	37.5	16.5	M16

BOCUF



*Remove ⑤ Lock Plate as required for operation.

Table of Components

No.	Description	Qty	Material and Remark
①	Guide Rail	2	S45C (I C45 A 1045)
②	Inclined Pin Holder	1	S45C (I C45 A 1045)
③	Slide Plate	2	Bronze with Graphite(CAC304+GR)
④	Loosening Lock	1	SK5M
⑤	Lock Plate	2	SS400 (A A36-89b, 283-88)
⑥	Round Head Screw	4	SCM435 (I 34CrMo4 A 4137)



D	W	Wa	L	La	K	Ma	C	H	e	E	d	d ¹	t	h	M	Wb
8	41	33	44	12	25	M4	3	24	4	5	3.4	6	3.4	10	M4	24
10	47	38	50	16	30	M5	3	28	5	5.5	4.5	8	5	15	M5	28
12	53	42	60	20	40	M8	4	36	6	7	6.6	11	4.8	20	M8	31
16	64	50	70	25	50	M8	6	40	6	6.6	6.6	11	6.5	20	M8	36
20	76	60	75	30	55	M10	8	46	8	9	8.6	14	8.5	25	M10	43
25	81	65	85	40	65	M10	8	48	8	9	8.6	14	8.5	25	M10	48
30	88	72	100	50	80	M10	8	54	8	9	8.6	14	8.5	25	M10	55
35	100	80	115	50	85	M12	8	60	10	11	11	18	6.5	30	M12	64
40	108	88	125	50	85	M12	8	65	10	11	11	18	7	30	M12	72

D	A	a	B	b	g	F	f	G	T
8	20	7.5	10	5	6.5	25	5	13	16
10	20	8.5	12	6	6.5	32	4	17	16
12	25	10	13	7	8.5	40	5	20	20
16	30	13	16	9	10	45	6	24	24
20	40	17	20	11	13	45	8	24	30
25	45	22	25	14	14	50	9.5	26	35
30	50	27	25	14	15	60	9	30	38
35	55	31	25	14	15	70	10	34	40
40	60	36	32	18	16	80	11.5	38	43

Catalog No.	D	θ Increments of 1°
	8	
	10	
	12	
	16	
BOCUF	20	0° ~ 10°
	25	
	30	
	35	
	40	



Order

Catalog No.	D	-	θ
BOCUF	25	-	2



Option

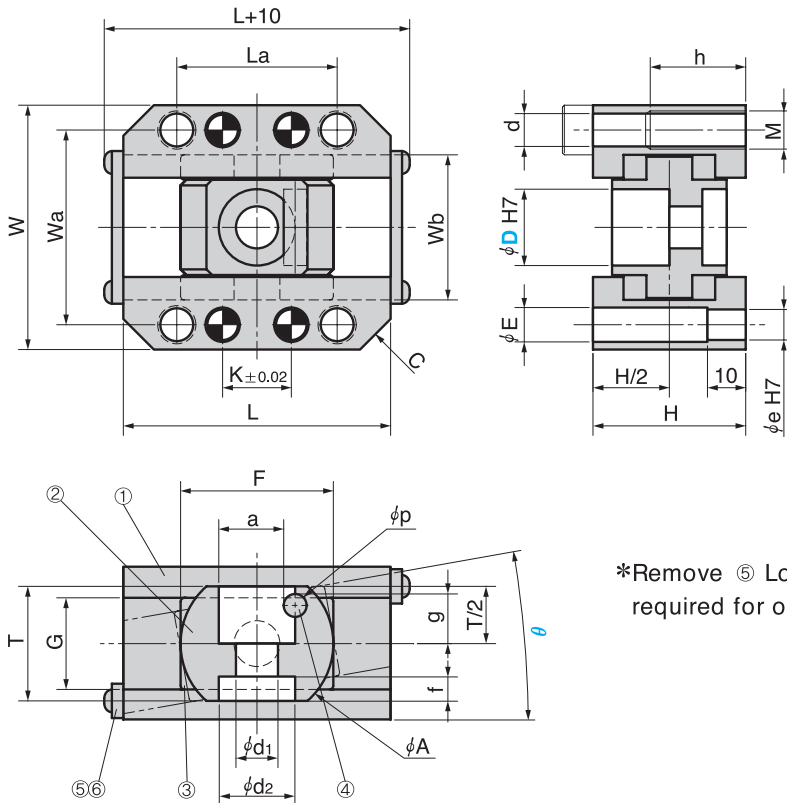
Option Code	Specification
G	Play of 0.1 to 0.2 is provided in the width direction (Wb).



Play of 0.1 to 0.2 is provided when the tolerance between dowel holes is ± 0 .

For details, refer to page. 74.

BCSUF



*Remove ⑤ Lock Plate as required for operation.

Table of Components

No.	Description	Qty	Material and Remark
①	Guide Rail	2	S45C (I C45 A 1045)
②	Inclined Pin Holder	1	S45C (I C45 A 1045)
③	Slide Plate	2	Bronze with Graphite(CAC304+GR)
④	Loosening Lock	1	SK5M
⑤	Lock Plate	2	SS400 (A A36-89b, A283-88)
⑥	Round Head Screw	4	SCM435 (I 34CrMo4 A 4140)



D	W	Wa	L	K	La	Wb	C	d	M	h	e	E	H
10	45	36	50	16	30	26	3	3.5	M 5	14	5	6	28
12	51	40	60	20	40	29	4	6.6	M 8	20	6	6.6	35
16	54	44	65	18	38	33	8	6.6	M 8	20	6	6.6	35
20	64	51	70	18	42	38	8	8.6	M10	25	8	9	40
25	70	58	80	20	45	45	10	8.6	M10	25	8	9	44
30	78	64	100	40	70	51	8	8.6	M10	25	8	9	54
35	92	75	115	50	85	58	8	10.6	M12	30	10	11	60
40	100	82	125	50	85	66	8	10.6	M12	30	10	11	65

■ H Dimension ($11^\circ \leq \theta \leq 20^\circ$)

D	T	G	F	A	p	a	g	d ₁	d ₂	f	D	11° ~ 15°	16° ~ 20°
10	16	17	28	20	3	8.5	6.5	6	10	3	10	○	○
12	20	20	36	25	4	10	8	7	12	5	12	○	○
16	24	20	40	30	6	13	10	9	16	6	16	41	48
20	30	24	40	40	6	17	13	11	20	7	20	47	55
25	35	26	45	45	6	22	14	14	25	9.5	25	52	61
30	38	30	55	50	6	27	15	14	25	9	30	62	72
35	40	34	70	55	8	31	15	14	25	10	35	70	82
40	43	38	70	60	8	36	16	18	32	11.5	40	78	90

Catalog No.	D	θ Increments of 1°	
BCSUF	10	0° ~ 5°	
	12		
	16		
	20	0° ~ 20°	
	25		
	30		
	35		
	40		



Order

Catalog No.	D	-	θ
BCSUF	30	-	12



Option

Option Code	Specification
G	Play of 0.1 to 0.2 is provided in the width direction (Wb).



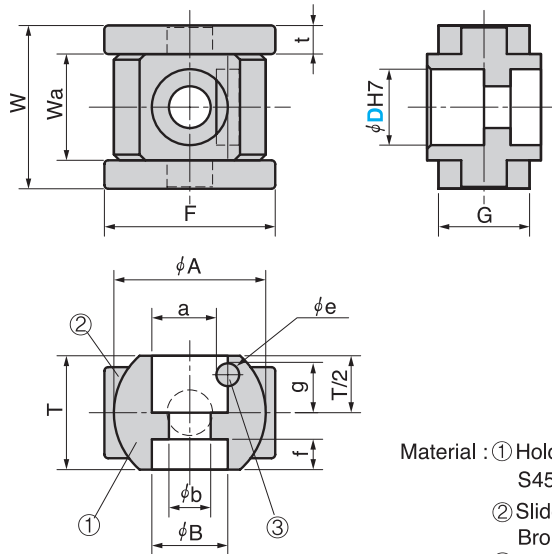
Play of 0.1 to 0.2 is provided when the tolerance between dowel holes is ± 0 .

For details, refer to page. 74.

Order **BCSUF 30-12-G**



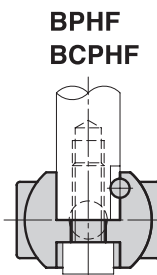
BPHF



Material : ① Holder
S45C (C45 A 1045)
② Slide Plate
Bronze with Graphite
③ Loosening Lock
SK5M

D	W	Wa	F	t	G	A	a	T	g	f	B	b	e
8	24	12	25	6	13	20	7.5	16	6.5	5	10	5	3
10	28	14	32	7	17	20	8.5	16	6.5	4	12	6	3
12	31	17	40	7	20	25	10	20	8.5	5	13	7	4
16	36	21	45	7.5	24	30	13	24	10	6	16	9	6
20	43	28	45	7.5	24	40	17	30	13	8	20	11	6
25	48	33	50	7.5	26	45	22	35	14	9.5	25	14	6
30	55	38	60	8.5	30	50	27	38	15	9	25	14	6
35	64	44	70	10	34	55	31	40	15	10	25	14	8
40	72	50	80	11	38	60	36	43	16	11.5	32	18	8

Catalog No.	D
	8
	10
	12
BPHF	20
	25
	30
	35
	40



Inclined Pin Mounting Bolt

D	BPHF	BCPHF
8	M 4×10	-
10	M 5×12	M 5×12
12	M 6×14	M 6×14
16	M 8×20	M 8×20
20	M10×25	M10×25
25	M12×30	M12×30
30	M12×30	M12×30
35	M12×30	M12×30
40	M16×35	M16×35



Order

Catalog No.

BPHF

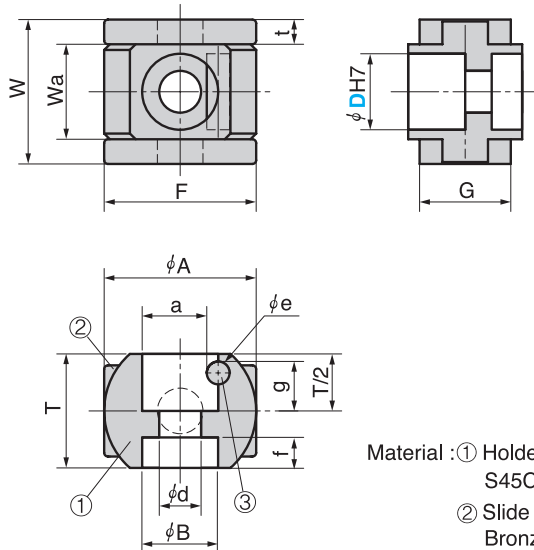
D

20

⚠ Standard parts of BPHF $\phi 8$ to $\phi 12$ and $\phi 35$ or larger will be abolished at the end of March 2008. Please use BCPHF.



BCPHF



Material : ① Holder
S45C (I C45 A 1045)
② Slide Plate
Bronze with Graphite
③ Loosening Lock
SK5M

D	W	Wa	F	t	G	A	a	T	g	e	d	B	f
10	26	14	28	6	17	20	8.5	16	6.5	3	6	10	3
12	29	17	36	6	20	25	10	20	8	4	7	12	5
16	33	20	40	6.5	20	30	13	24	10	6	9	16	6
20	38	25	40	6.5	24	40	17	30	13	6	11	20	7
25	45	30	45	7.5	26	45	22	35	14	6	14	25	9.5
30	51	36	55	7.5	30	50	27	38	15	6	14	25	9
35	58	42	70	8	34	55	31	40	15	8	14	25	10
40	66	48	70	9	38	60	36	43	16	8	18	32	11.5

Catalog No.	D	
BCPHF	10	
	12	
	16	
	20	
	25	
	30	
	35	
	40	



Order

Catalog No.

BCPHF

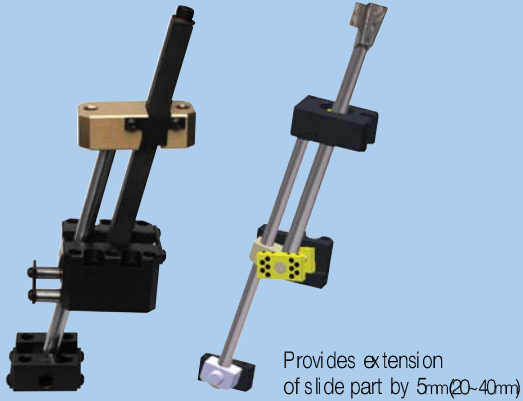
D

30

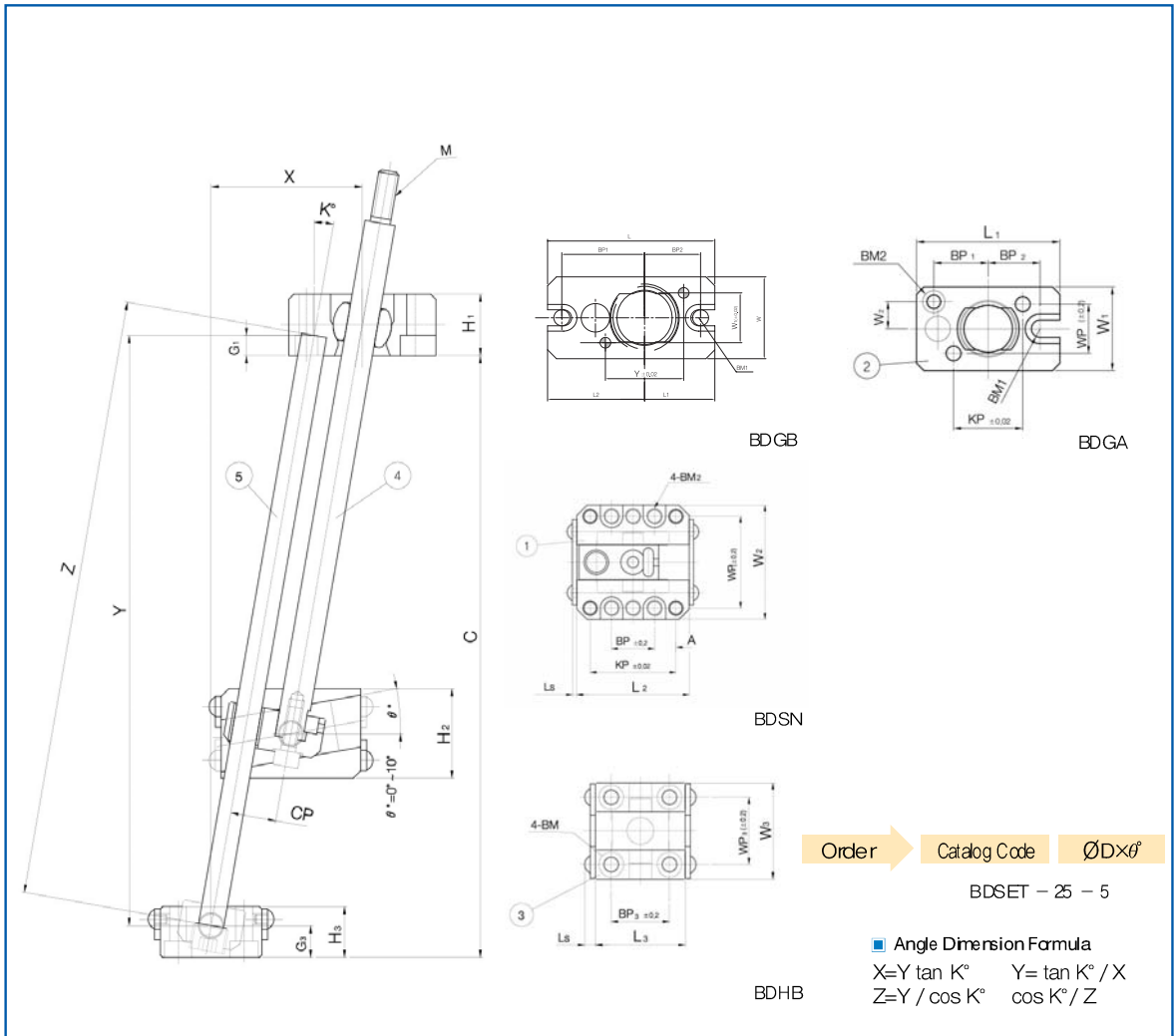
BDSET

■ Non-lubricant Universal Slide Core Unit – Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut,
- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.



No.	Description	Q'ty	Material
1	Core Unit Set	1	SCM440
2	Guide Block Set	1	SCM440
3	Guider Rod Set	1	SCM440
4	Core Shaft	1	SUJ-2
5	Guide Shaft	1	SUJ-2

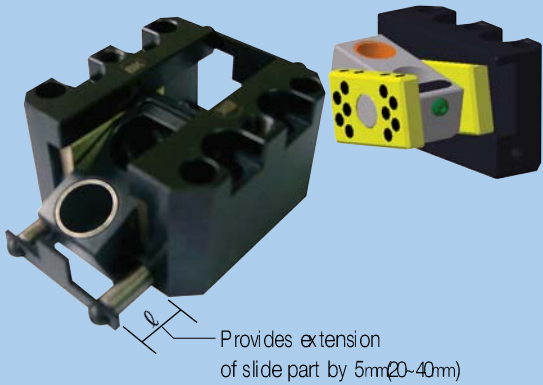




BDSN

■ Non-lubricant Universal Slide Core Unit – Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.
- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.



Provides extension of slide part by 5mm(20-40mm)

No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Bushing	1	DU
4	Guide Plate	2	#500SP(CAC304+Gr)
4	Guide Plate	2	SKD61 HRC 58
5	Key	1	S45C
6	Stopper Plate	2	SS41

Order

Catalog Code $\varnothing D \times \ell$ SKD 61

BDSN-25 - 5
BDSN-25 - 5 - D

Shape for $\varnothing D$ dimension 6 to 10.
*Take off ⑥ Stopper Plate when assemble on injection tool.

$\varnothing D$	h5	C1	Ls	Ⓐ	Ⓑ	Over10° (θ)
6	4.5	3	4.8	0° ~ 10°	0°	H+10
8	5.5	3	4.8	0° ~ 10°	-	
10	5.5	4	4.8	0° ~ 10°	-	Quotation by drawing
12	-	5	4.65	0° ~ 10°	-	
16	3	6	4.65	0° ~ 10°	-	
20	5.5	6	4.65	0° ~ 10°	-	
25	5.5	6	4.65	0° ~ 10°	-	
30	3.5	6	4.65	0° ~ 10°	-	
35	4	6	5.20	0° ~ 10°	-	
40	4	6	5.20	0° ~ 10°	-	

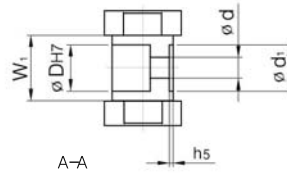
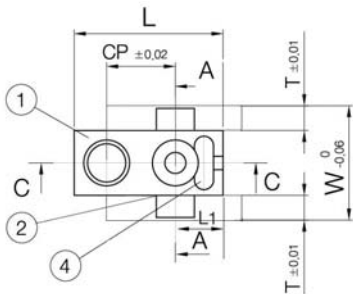
$\varnothing D$	D1	D2	W	L	H	W1	BP	KP	CP	h2	ℓ	S	B	BH	BM	$\varnothing K$	d1	$\varnothing d$
6	6	5	38	46	30	30	16	32	15	3.5	30	16	M4	24.5	M6	4	-	4.5
8	6	7	38	46	30	30	16	32	15	3.5	30	16	M4	24.5	M6	4	-	4.5
10	8	8	40	46	30	32	16	32	20	5	30	16	M4	24.5	M6	4	-	5.5
12	10	11	56	55	35	45	21	42	20	10	35	20	M6	28.5	M8	6	-	5.5
16	12	15	60	65	36	48	25	46	25	11	40	20	M6	29.5	M8	6	16	9
20	16	18	68	70	43	55	25	50	30	13	40	24	M8	34.5	M10	8	20	11
25	20	22	75	80	45	62	35	60	35	15	45	26	M8	36.5	M10	8	20	11
30	25	27.5	81	95	54	68	50	75	40	17	55	30	M8	45.5	M10	8	20	11
35	30	32.5	98	110	60	81	50	85	45	20	70	34	M10	49.5	M12	10	26	13
40	35	37.5	105	120	64	88	60	95	50	22	80	38	M10	53.5	M12	10	26	13



BDNP

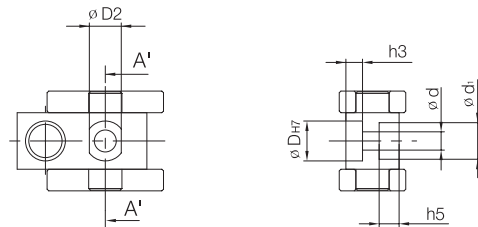
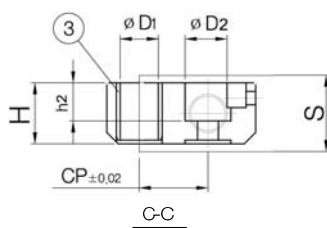


No	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Plate	2	#500SP(CAC304+Gr)
2	Guide Plate	2	SKD61 HRC 58
3	Bushing	1	DU
4	Key	1	S45C



Order → Catalog Code **øD** SKD 61

BDNP- 25
BDNP- 25 - D

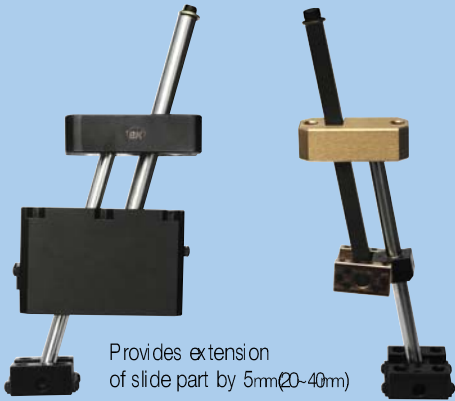


Shape for øD dimension 6 to 10.

ø D	ø D1	D2	W	W1	T	L	L1	CP	S	H	h2	h5	ø d	ø d1	
6	6	5	19	10	4.5	33	10	15	16	-0.01	16	3.5	-	4.5	-
8	6	6.5	19	10	4.5	33	10	15	16		16	3.5	-	4.5	-
10	8	8	21	12	4.5	39	10	20	16		16	5	-	5.5	-
12	10	11	30	17	6.5	43	12.5	20	20		16	10	-	-	-
16	12	15	33	20	6.5	51	14.5	25	20	-0.03	18	11	3	9	16
20	16	18	38	25	6.5	61	17	30	24		22	13	5.5	11	20
25	20	22	45	31	7	70	19	35	26		26	15	5.5	11	20
30	25	27.5	51	36	7.5	80	21.5	40	30		30	17	3.5	11	20
35	30	32.5	60	42	9	92	24	45	34	36	20	4	13	26	
40	35	37.5	67	47	10	100	26.5	50	38	40	22	4	13	26	



BBSET

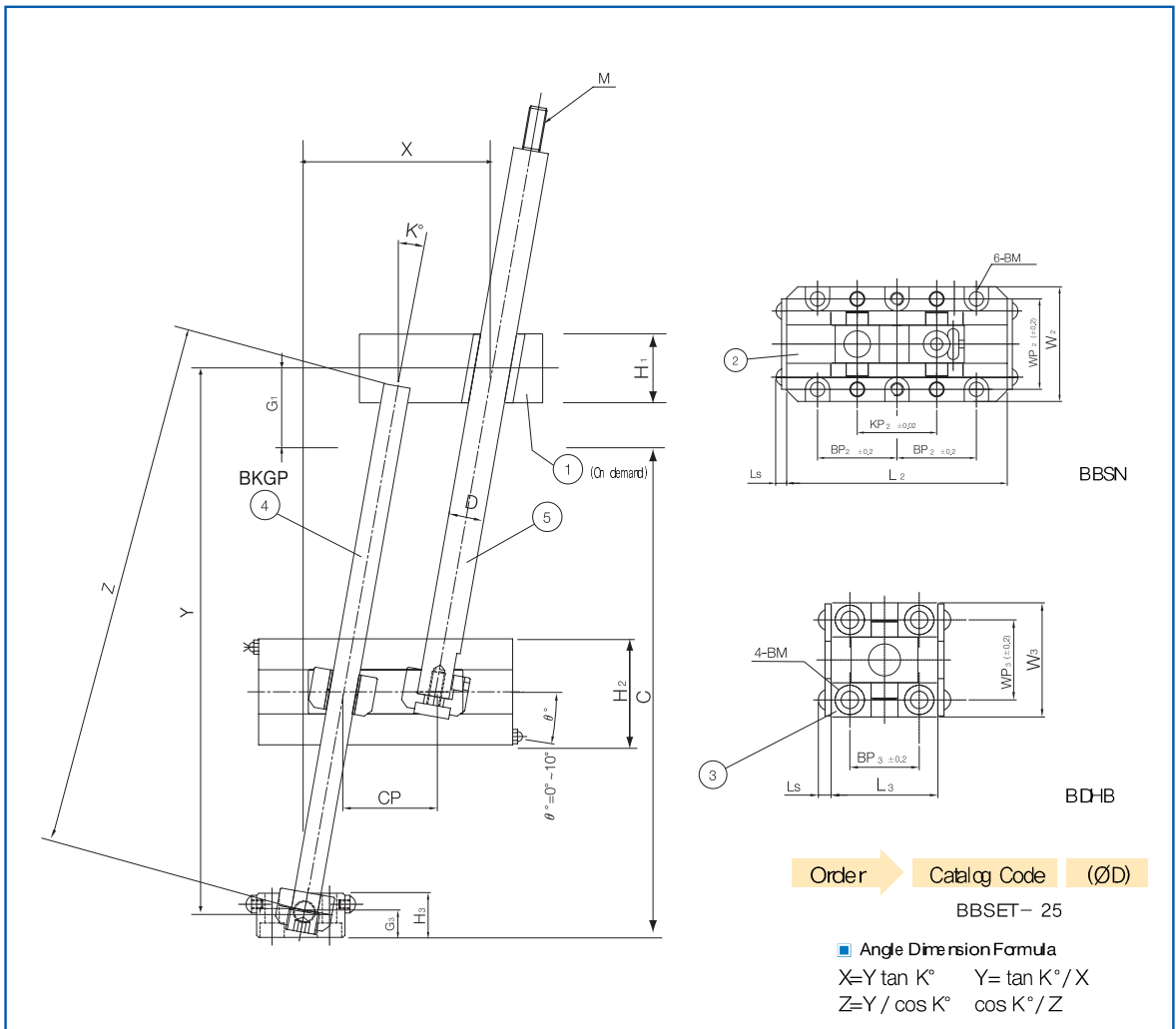


Provides extension of slide part by 5mm(20-40mm)

■ Non-lubricant Universal Slide Core Unit – Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.
- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.
- It's changeable with BDSET core unit set.

No.	Description	Q'ty	Material
1	Guide Rod Set	1	SCM440
2	Core unit Set (Controllable type)	1	SCM440
3	Guide Block Set	1	SCM440
4	Core Shaft	1	SUJ-2
5	Guide Shaft	1	SUJ-2



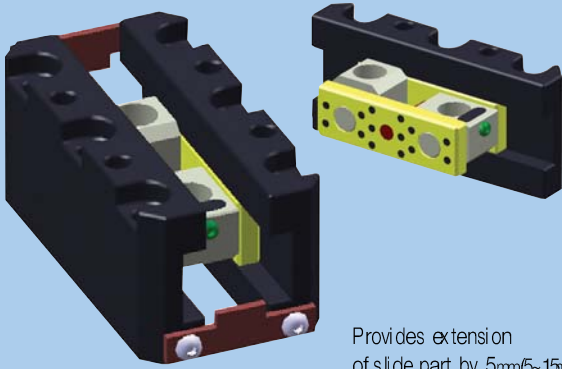


BBSN

■ Universal Core Unit – Core Unit Set (Controllable Type)

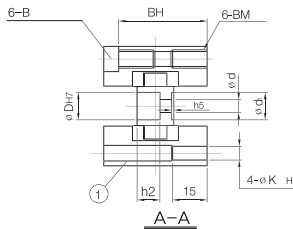
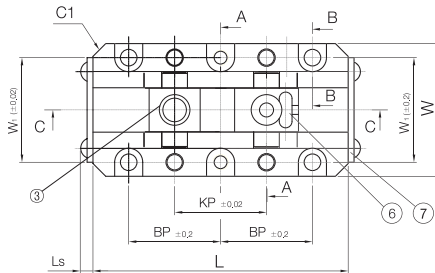
- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.

- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.



Provides extension of slide part by 5mm(5~15mm)

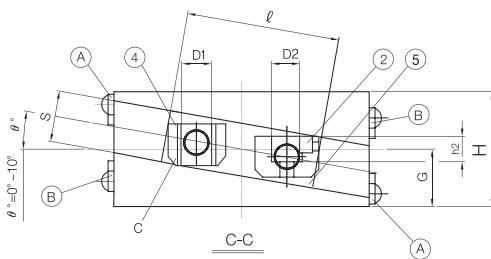
No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Bushing	1	DU
4	Guide Plate	2	#500SP(CAC304+Gr)
4	Guide Plate	2	SKD61 HRC 58
5	Key	1	S45C
6	Stopper Plate	2	SS41



Order

Catalog Code (ØD)×θ° SKD 61

BBSN - 25 - 5
BBSN - 25 - 5 - D



Sha pe for ø D dimension 6 to 10.

* Take off ⑥ Stopper Plate when assemble on injection tool.

ø D	C1	Ls	Ⓐ	Ⓑ	Over10° (θ)
6	3	4.8	0° ~10°	0°	H+10
8	3	4.8	0° ~10°	-	Quotation by drawing
10	4	4.8	0° ~10°	-	
12	5	4.8	0° ~10°	-	
16	6	4.8	0° ~10°	-	
20	6	4.8	0° ~10°	-	
25	6	4.8	0° ~10°	-	

※Over10.1° (θ) Quotation by drawing

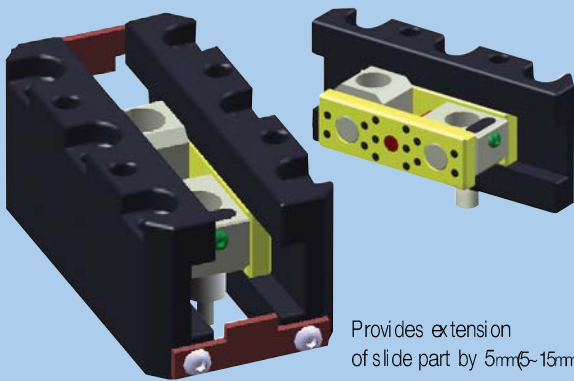
ø D	D1	D2	W	L	H	W1	BP	KP	G	h2	h5	ℓ	S	B	BM	BH	ø K	ø d	ø d1
6	6	5	36	72	34	27	26	26	17	3.5	-	47	14	M4	M5	28.5	4	4	-
8	6	6.5	38	77	34	28	28	28	17	3.5	-	47	14	M4	M5	28.5	4	4.5	-
10	8	8	42	88	38	32	32	32	19	5	-	53	16	M4	M5	32.5	4	5.5	-
12	10	11	52	100	45	41	41	36	22.5	10	-	60	20	M6	M8	38.5	6	5.5	-
16	12	15	56	115	48	46	45	42	24	11	3	70	20	M6	M8	41.5	6	9	16
20	16	18	64	130	56	52	51	46	28	13	5.5	80	24	M6	M8	49.5	8	11	20
25	20	22	71	148	62	59	58	54	31	15	5.5	93	26	M6	M8	55.5	8	11	20



BBSL

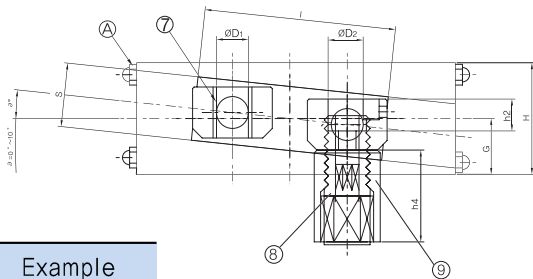
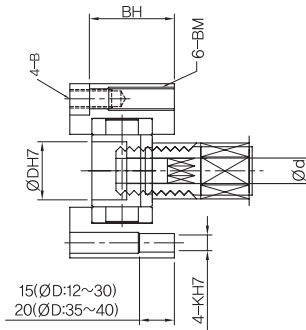
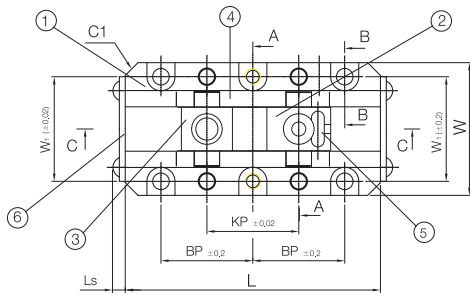
■ Non-lubricant Universal Slide Core Unit – Advantage

- This slide unit leads the angular pin to slide in smooth way when core moves inclined injection including any undercut.
- This slide unit adjusts by itself center, therefore it prevents wear and stick of the guide and the slide plate.



Provides extension of slide part by 5mm(5~15mm)

No.	Description	Q'ty	Material
1	Slide Block	2	SCM440
2	Core Shaft Block	1	SCM440
3	Guide Bushing	1	SCM440
4	Guide Plate	2	#500SP(CAC304+Gr)
4	Guide Plate	2	SKD61 HRC 58
5	Key	1	S45C
6	Stopper Plate	2	SS41
7	Fixing Pin	1	DU
8	Adjustable type Bolt	1	SCM440
9	Fixed type Nut	1	SCM440



Order → Catalog Code (ØD) × θ° SKD 61
 BBSL 25 - 5°
 BBSL 25 - 5° - D
 Assembling Tool BCL - 25°

* Take off ⑥ Stopper Plate when assemble on injection tool.

Example	
Ø D	Ø d
16	6.5

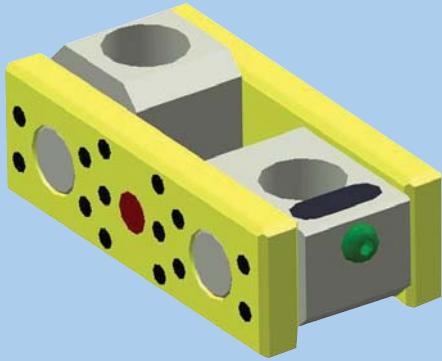
* Assembling Manual - page 18~19

Ø D	C1	Ls	Ⓐ	Ⓑ	Over10° (θ)
12	5	4.8	0° ~ 10°	0°	H+10
16	6	4.8	0° ~ 10°	-	Quotation by drawing
20	6	4.8	0° ~ 10°	-	
25	6	4.8	0° ~ 10°	-	

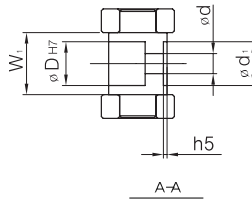
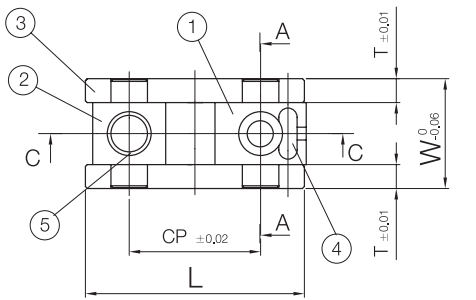
Ø D	D1	D2	W	L	H	W1	BP	KP	G	h2	h4	S	B	BH	Ø K	Ø d
12	10	11	52	100	45	41	41	36	22.5	11.51	20	20	M6	38.5	6	5.2
16	12	15	56	115	48	46	45	42	24	2.5	22	20	M6	41.5	6	8.2
20	16	18	64	130	56	52	51	46	28	14.5	25	24	M6	49.5	8	10.5
25	20	22	71	148	62	59	58	54	31	16.5	28	26	M6	55.5	8	12.5



BBNP

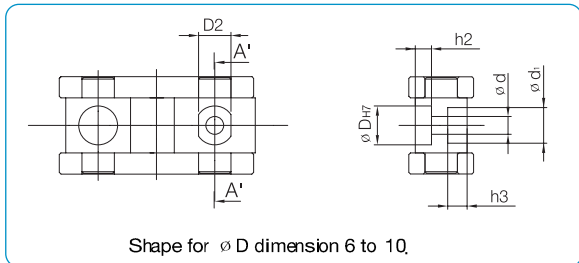
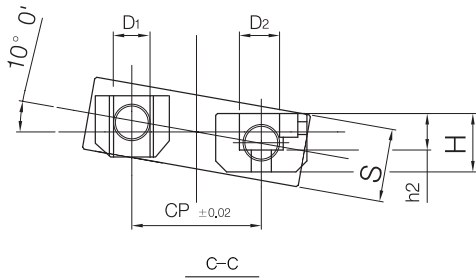


No.	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Block	1	SCM440
3	Guide Plate	2	#500SP(CAC304+Gr)
3	Guide Plate	2	SKD61 HRC 58
4	Key	1	S45C
5	Bushing	1	DU



Order → Catalog Code (ØD) SKD 61

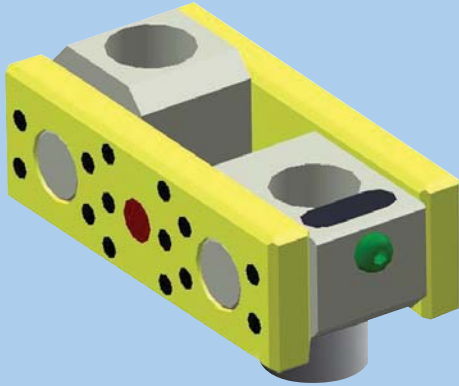
BBNP – 25
BBNP – 25 – D



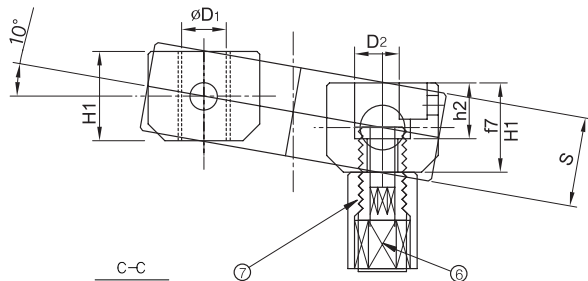
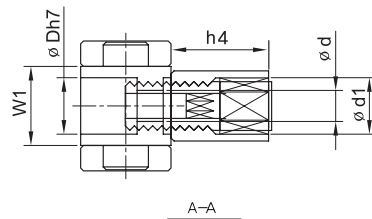
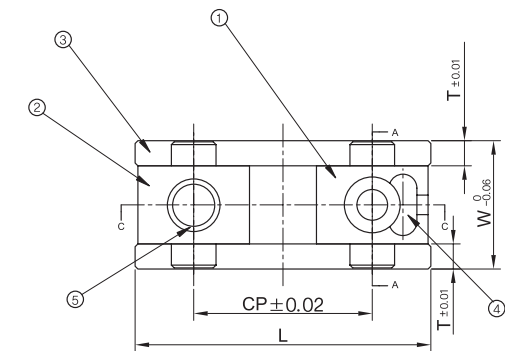
ø D	ø D1	D2	W	W1	T	L	CP	H	S	h2	h5	ø d	ø d1	
6	6	5	19	10	4.5	47	26	16	14	-0.01	3.5	-	4.5	-
8	6	6.5	19	10	4.5	47	28	16	14		3.5	-	4.5	-
10	8	8	21	12	4.5	53	32	16	16		5	-	5.5	-
12	10	11	30	17	6.5	60	36	16	20	-0.03	10	-	5.5	-
16	12	15	33	20	6.5	70	42	18	20		11	3	9	16
20	16	18	38	25	6.5	80	46	22	24		13	5.5	11	20
25	20	22	45	31	7	93	54	26	26	15	5.5	11	20	



BBNL



No.	Description	Q'ty	Material
1	Core Shaft Block	1	SCM440
2	Guide Block	1	SCM440
3	Guide Plate	2	#500SP(CAC304+Gr)
3	Guide Plate	2	SKD61 HRC 58
4	Key	1	S45C
5	Bushing	1	DU
6	Adjustable type Bolt	1	SCM440
7	Fixed type Nut	1	SCM440



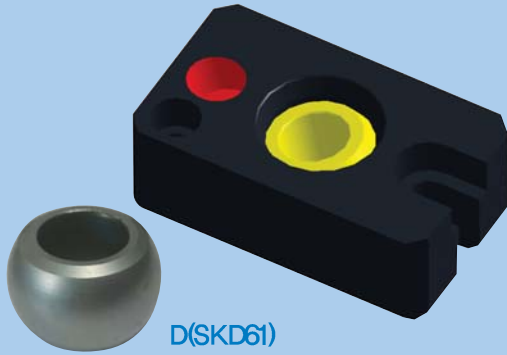
Order → Catalog Code (ØD) SKD 61
 BBNL 25
 BBNL 25 - D
 Assembling Tool BCL - 25

Example	
Ø D	Ø d
16	6.5

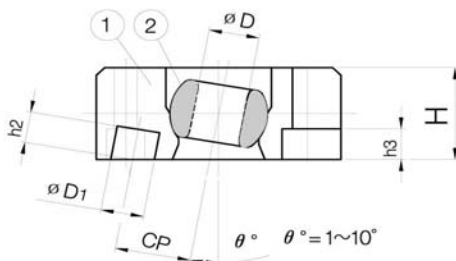
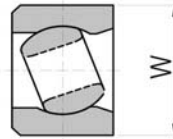
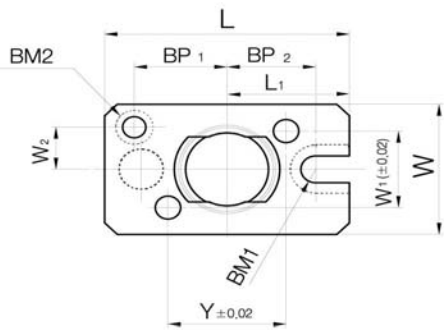
Ø D	D1	D2	W	W1	T	L	CP	H	S		h2	h4	Ø d
12	10	11	30	17	6.5	60	36	16	20		11.5	20	5.2
16	12	15	33	20	6.5	70	42	18	20	-0.01	12.5	22	8.2
20	16	18	38	25	6.5	80	46	22	24	-0.03	14.5	25	10.5
25	20	22	45	31	7	93	54	26	26		16.5	28	12.5



BDGA



No.	Description	Q'ty	Material
1	Guide Block	1	SCM-4
2	Guide Holder	1	#500SP(CAC304+Gr)
2	Guide Holder	1	SKD61 HRC 58



※ Please use after layout application confirmed.

Order → Catalog Code ϕD θ° SKD61

BDGA - 16 - 8°
BDGA - 16 - 8° - D

※ θ is designed as injection tool condition.

ϕD	$\phi D1$	W	L	L1	H	h2	CP	W1	W2	BP1	BP2	Y	BM1	BM2	h3
6	6	30	48	24	19	4	15	18	9	17	18	24	M5	M5	8
8	6	30	48	24	19	4	15	18	9	17	18	24	M5	M5	8
10	8	32	50	25	22	6	20	20	10	18	19	26	M5	M5	8
12	10	34	58	29	24	8	20	20	11	21	22	28	M6	M5	8
16	12	40	70	35	30	10	25	24	13	26	27	36	M8	M6	10
20	16	46	82	38	36	10	30	28	16	29	30	44	M8	M6	10
25	20	52	94	43	40	10	35	34	17	33	34	50	M10	M6	12
30	25	58	106	46	46	10	40	38	19	38	38	58	M10	M6	12

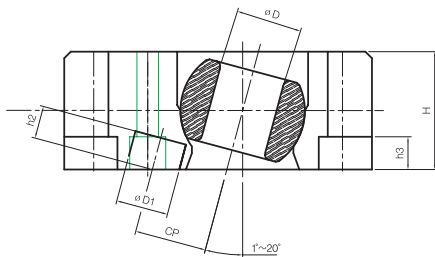
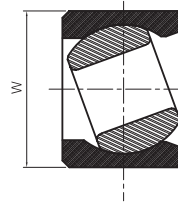
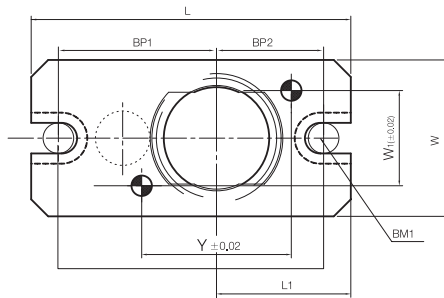


BDGB



Patent No. 10-0592347

No.	Description	Q'ty	Material
1	Guide Block	1	SCM-4
2	Guide Holder	1	#500SP(CAC304+Gr)
2	Guide Holder	1	SKD61 HRC 58



Order → Catalog Code ØD Ø SKD61

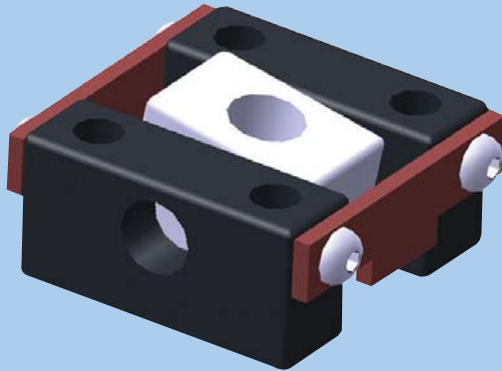
BDGB - 16 - 8°
BDGB - 16 - 8° - D

※ Ø is designed as injection tool condition.

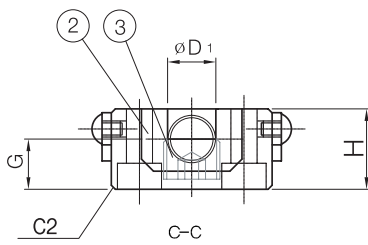
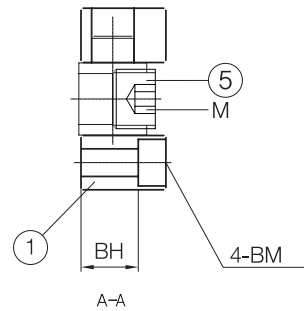
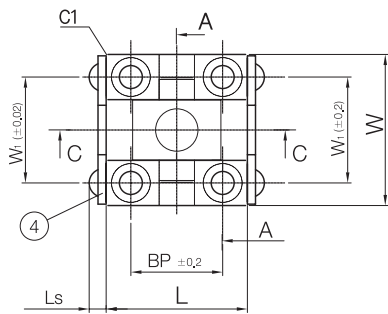
Ø D	Ø D1	h2	h3	L	L1	CP	W	H	W1	Y	BP1	BP2	BM1	
6	6	4	8	70	24	15	30	19	18	24	40	18	M5	
8	6	4	8	70	24	15	30	19	18	24	40	18	M5	
10	8	6	8	71	25	20	32	22	20	26	40	19	M5	
12	10	8	8	84	29	20	34	24	24	28	48	22	M6	
16	12	10	10	98	35	25	40	30	24	36	55	27	M8	
20	16	10	10	108	38	30	46	36	28	44	62	30	M8	
25	20	10	12	123	43	35	52	40	34	50	71	34	M10	
30	25	10	12	133	46	40	58	46	38	58	79	38	M10	



BDHB



No.	Description	Q'ty	Material
1	Guide Block	2	SCM440
2	Core Shaft Fixing Block	1	SCM440
3	Stopper Bolt	1	S45C
4	Stopper Plate	2	SS41
5	Guide Shaft Stopper Bolt	1	Hex socket head cap screw

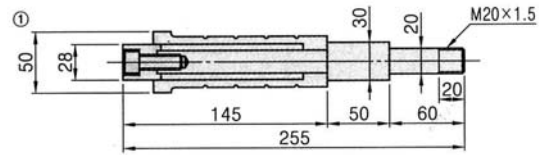


Order → Catalog Code D-D1
 BDHB 12 - 10
 BDHB 8 - 6

$\phi D, D_1$	W	L	H	W1	BP	G	Ls	BH	BM	C1	M
6.8 - 6	31.8	30	19	22	20	11.5	4.8	11.5	M4	0.5	M8-1,25
10 - 8	31.8	30	19	22	20	11.5	4.8	11.5	M4	0.5	M10-1.5
12 - 10	39.8	38	19	27	24	11.5	4.8	12.5	M6	0.5	M12-1.5
16 - 12	42.8	40	20	30	26	12.5	4.8	13.5	M6	0.5	M14-1.5
20 - 16	55.8	54	24	38	36	15.5	4.8	15.5	M8	1	M18-1.5
25 - 20	68.8	63	29	47	40	18.5	4.8	18	M10	1	M22-1.5
30 - 25	78.8	68	34	55	44	21.5	4.8	21	M12	1	M27-1.5



BKN



- ① Main
 - M** Material S45C
 - H** Hardness 38~42HRC
- ② Holder Cap
 - M4· M5· M6· M8· M10

Order Method → Product Code - B - A

EX) BKN(①)Main+②Holder Cap 5EA
BKN-M(②)

■ USING

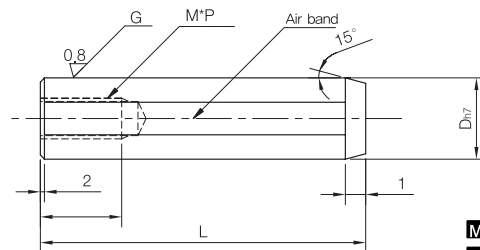
1. Insert a bolt to a holder cap
2. Equip a holder cap on the main body tip.
3. Equip the bolt tip tuning a shaft to an order pin
4. Slide a hammer, and pull out an order pin.

Catalog No.	Catalog No.	d
BKN (①+②)	BKN-M (②)	4,2
		5,2
		6,3
		8,5
		10,5



TDP

(TAP detail type)

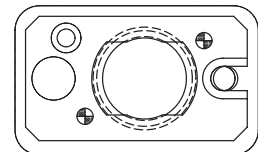
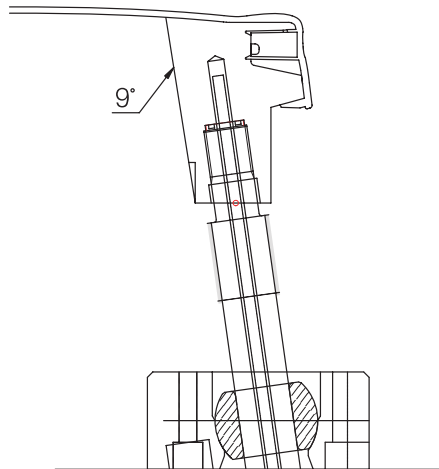


- M** Material SUJ2
- H** Hardness HRC58-

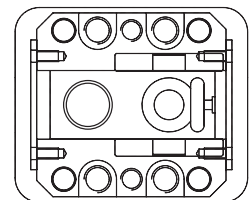
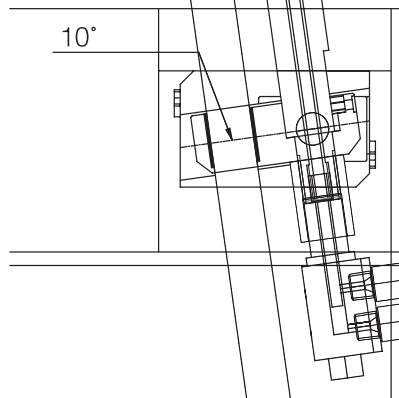
✖ when L=10 in D5, D6, There is the case that a hall penetrates.

l ₁	l ₂	M×P	l	D	Catalog No.		L
					Type	D	
1.5	1.0	3×0.5	6	+0,010	TDP	5	10 15 20 25 30
		4×0.7	*8			6	10 15 20 25 30 35 40 50
2.0	1.0	5×0.8	*8	+0,005		8	15 20 25 30 35 40 50 60 70 80
		6×1.0	10			10	15 20 25 30 35 40 50 60 70 80
2.5	1.0	8×1.25	15	+0,005		12	20 30 40 50 60 70 80
						13	40 50 60 70 80
3.0	1.0	8×1.25	15	+0,005		16	40 50 60 70 80

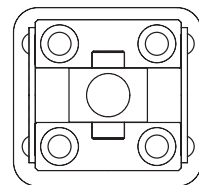
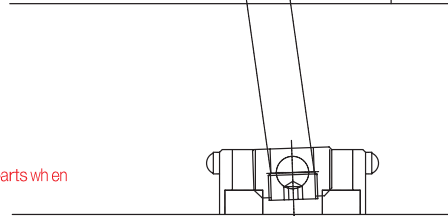
※ **WARNING** – Don't too much press power when you assemble this merchandise



BDGA20



BDDW 20



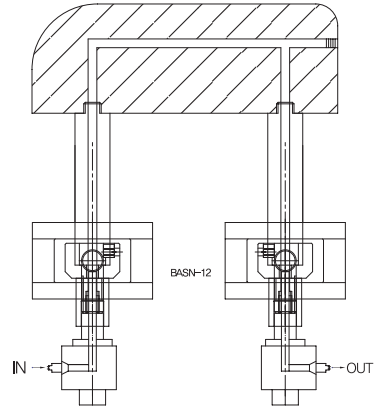
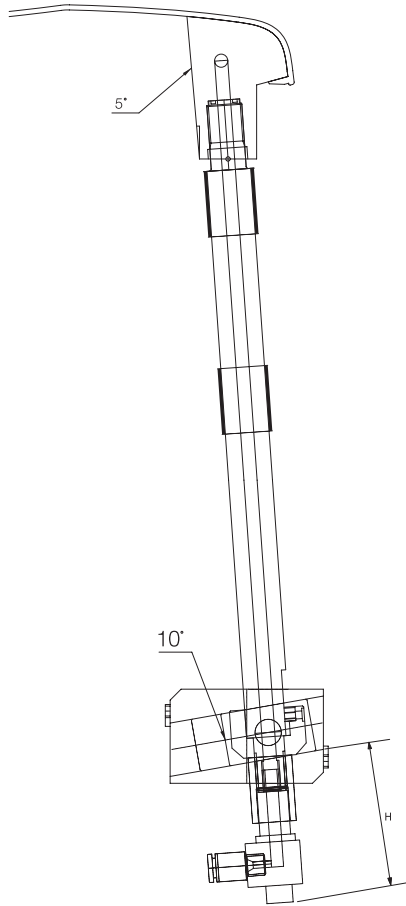
BDHB20-16

FASTENING TORQUE(Nm)

Screw Shank(mm)	MAX Torque(Nm)
M6	7.5
M8	8.9
M12	26.6

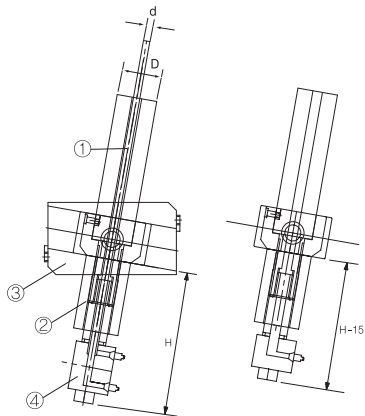
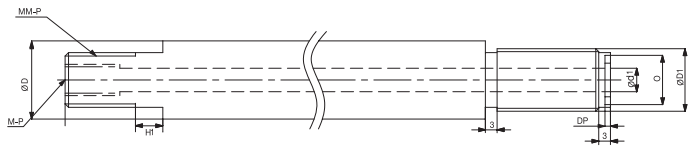
Warning - Don't press too much pressure on screw parts when fastening WTDW/WTD to avoid any breakdown.
(M-P) Screw pitch position might be changed.

Example



WATER COOLING UNIT
In WTDS-12 Out WTDS-12

WTS



※ **WARNING** – Don't too much press power when you assemble this merchandise

M	D	d	Ød1	d2	M-P	MM-P	H
M6	12	2	4	10	6-0,75	10-1,25	73
M8	16	4	6	12	8-1,0	14-1,5	80
	20	4	6	14	8-1,0	14-1,5	82
M12	25	6	9	18	12-1,25	18-1,5	83
	30	6	9	18	12-1,25	18-1,5	83
	35	6	9	18	12-1,25	22-1,5	85
	40	6	9	18	12-1,25	22-1,5	85



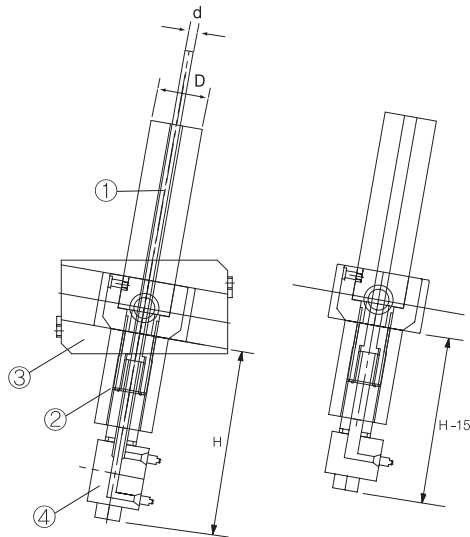
BNDW / BNDS BADW / BADS



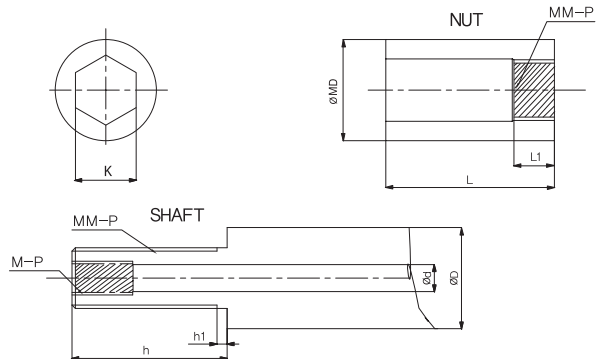
WATER COOLING UNIT SET (Feature)

- Water Cooling Unit. Can be applied with a Diameter of Core Shaft 12-40.
- This Unit allows easy installation with Core Unit.

No.	Description	Q'ty	Material
1	Core Shaft	1	SUJ2
2	Core Shaft Fixed Nut	1	S45C
3	Core Unit	1	SUS
4	Water Cooling Unit	1	SUS, CAC304



c) BASN, BNP



Warning- Don't press too much pressure on screw parts when assembling WTDW/WTD to avoid any breakdown.
(M-P) Screw pitch position might be changed.

Order

BADW - D- ϕ
BADS - D- ϕ
BNDW - D
BNDS - D
NUT - D

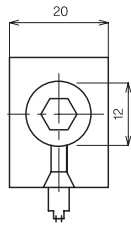
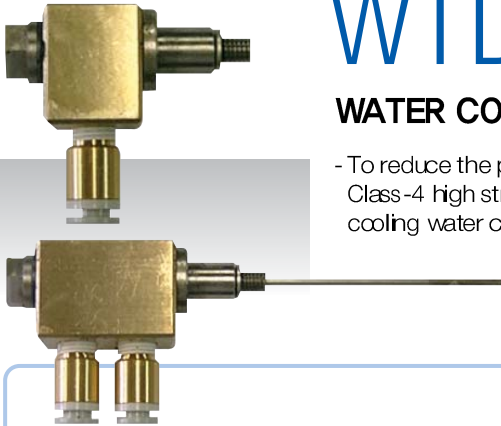
Screw Shank(mm)	MAX Torque(Nm)
M6	7,5
M8	8,9
M12	26,6

N U T / S H A F T	ϕ D	ϕ d	ϕ MD	M-P	MM-P	h	h1	L	L1	ϕ K	H	SHAFT
	12	4	18	6-0,75	10-1,25	18	5	20	10	10	78	Indicate what length you required
	16	6	22	8-1,0	14-1,5	22	5	25	12	14	82	
	20	6	25		14-1,5	25	5	25	12	14	82	
	25	9	28	12-1,25	18-1,5	30	8	30	16	19	85	
	30	9	34		22-1,5	30	8	30	16	19	83	
	35	9	34		22-1,5	34	10	30	16	22	85	
40	9	34	22-1,5		35	12	30	18	22	84		

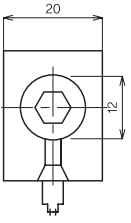
WTDW / WTDS

WATER COOLING UNIT SET (Feature)

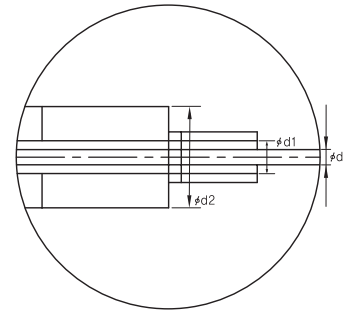
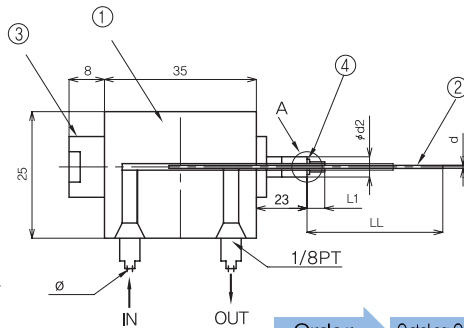
- To reduce the problems caused by heat and dirt, it is made of Stainless Steel and Class-4 high strength brass. Due to the new IN-OUT Water Distributor design, the cooling water can be more efficiently supplied.



WATER COOLING IN&OUT



WATER COOLING IN&OUT



magnification

Order → Catalog Code **M LL**
WTDW - M8 - 1000

Order → Catalog Code **M**
WTDS - M8

Warning- Don't press too much pressure on screw parts when assembling WTDW/WTDS to avoid any breakdown.
(M-P) Screw pitch position might be changed.

M	D	ϕd	$\phi d1$	$\phi d2$	M-P	L1
M6	12	2	3	10	(6-0.75)	10
M8	16	4	5	14	(8-1.0)	10
	20	4	5	14		10
M12	25	6	8	18	(12-1.25)	12
	30	6	8	18		12
	35	6	8	18		12
	40	6	8	18		12

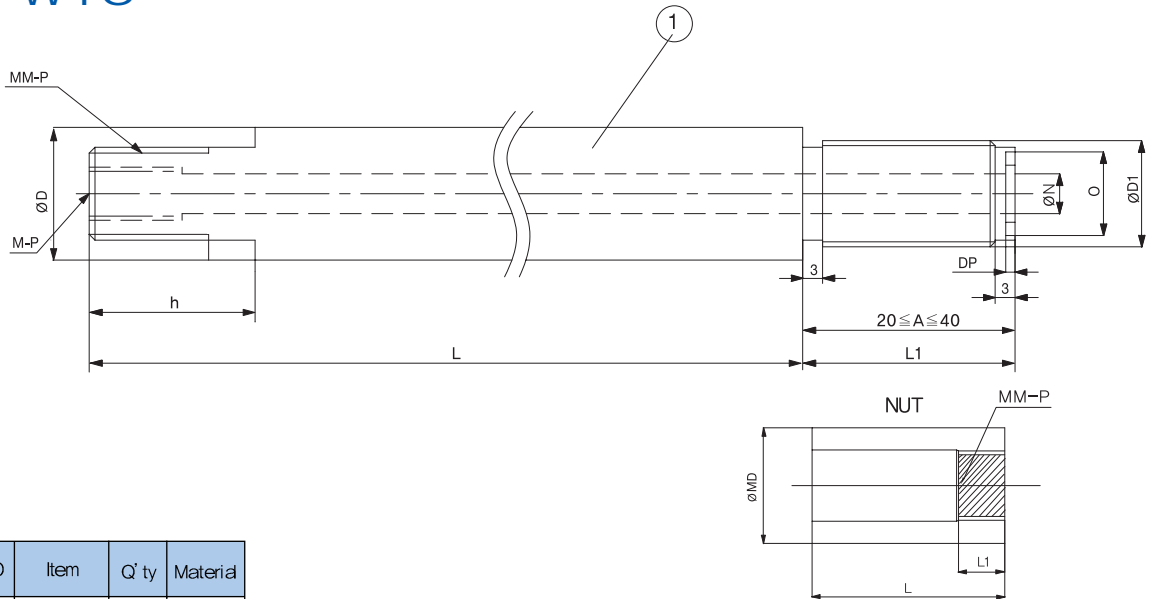
FASTENING TORQUE (Nm)

Screw Shank(mm)	MAX Torque(Nm)
M6	7.5
M8	8.9
M12	26.6

No.	Description	Q'ty	Material
1	Water cooling unit	1	CAC 304
2	PIPE	1	SUS
3	Core shaft fixed nut	1	SUS
4	Core shaft	1	SUS



WTS



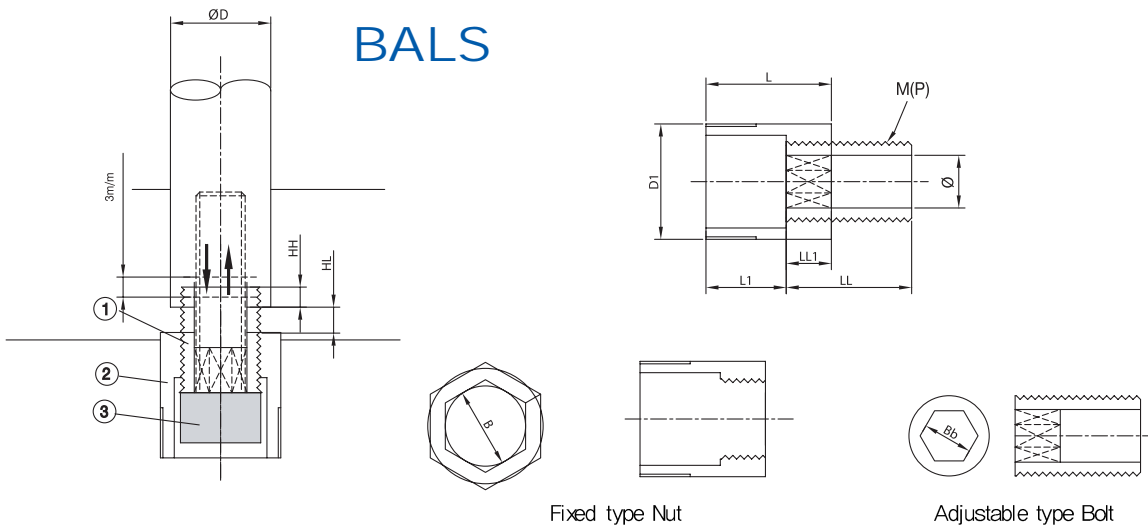
NO	Item	Q' ty	Material
1	Fixed type Bolt	1	SUJ2

Catalog No.	Ø D	Ø N	M-P	MM-P	L	L1	h	h1	Ø MD	D1 (P)	DP	O(I.D)
WTS	12	4	6-0.75	10-1.25	20	10	18	5	15	M12 (1.25)	1.1 ±0.05	O-ring φ 8 OD φ 6 I.D φ 1
	16	6	8-1.0	14-1.5	25	12	22	5	19	M16 (1.5)		O-ring φ 11.5 O.D φ 8.5 I.D φ 1.5
	20	6	8-1.0	14-1.5	25	12	25	5	22	M18 (1.5)	1.1 ±0.05	S-9
	25	9	12-1.25	18-1.5	30	16	30	8	28	M22 (1.5)		O-ring φ 15 OD φ 12 I.D φ 1.5
	30	9	12-1.25	22-1.5	30	16	30	8	34	M26 (1.5)	1.8 ±0.05	S-12.5
	35	9	12-1.25	22-1.5	30	16	34	10	34	M32 (1.5)		
	40	9	12-1.25	22-1.5	30	18	35	12	34	M36 (1.5)		

TORQUE (Nm)

Screw Shank(mm)	MAX Torque(Nm)
M6	7.5
M8	8.9
M12	26.6

Warning- Don't press too much pressure on screw parts when assembling WTDW/WTD to avoid any breakdown.
(M-P) Screw pitch position might be changed.



Fixed type Nut

Adjustable type Bolt

NO	Item	Q'ty	Material
1	Fixed type Bolt	1	SCM440
2	Fixed type Nut	1	SCM440
3	Fasten Bolt	1	SCM440

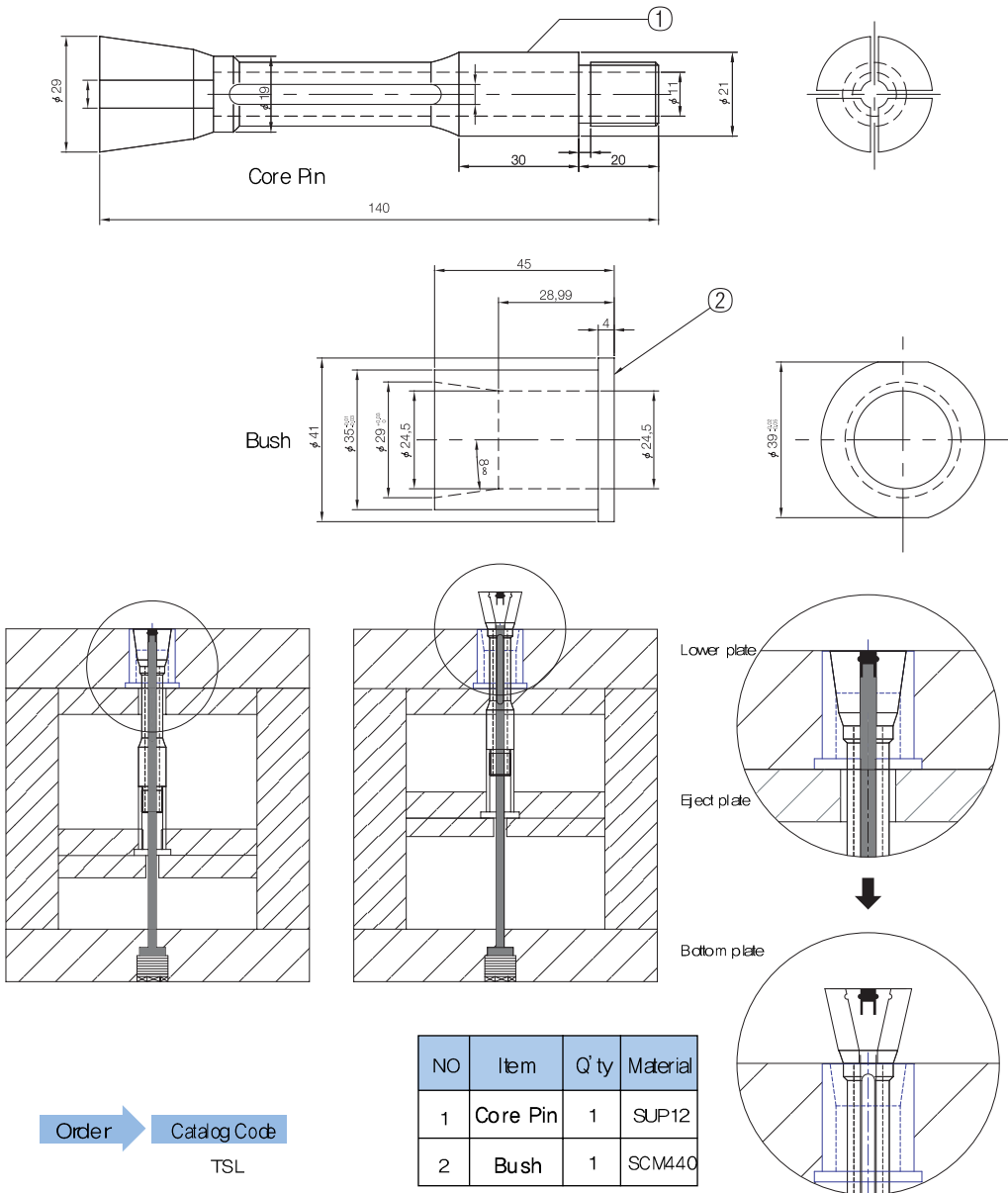
ØD	ø	D1	L	L1	LL	LL1	M(P)	HL	HH	⬡ B	⬡ Bb	Fasten Bolt
12	5.2	16	20	12	20	6	M10 P1.25	8	3	⬡ 10	⬡ 5	M5
16	8.2	20	22	14	22	7	M14 P1.5	9	3	⬡ 14	⬡ 8	M8
20	10.5	24	25	16	25	9	M16 P1.5	11	3	⬡ 16	⬡ 10	M10
25	12.5	29	28	18	27	11	M20 P1.5	12	3	⬡ 20	⬡ 12	M12
30	12.5	34	30	20	30	12	M22 P1.5	14	3	⬡ 22	⬡ 12	M12
35	16.5	40	30	20	32	12	M28 P1.5	16	3	⬡ 28	⬡ 16	M16
40	16.5	40	30	20	34	12	M28 P1.5	18	3	⬡ 28	⬡ 16	M16

Order → Item - D
BALS - 20

TSL



The Collapsible Core applies molding plastic parts requiring undercuts.

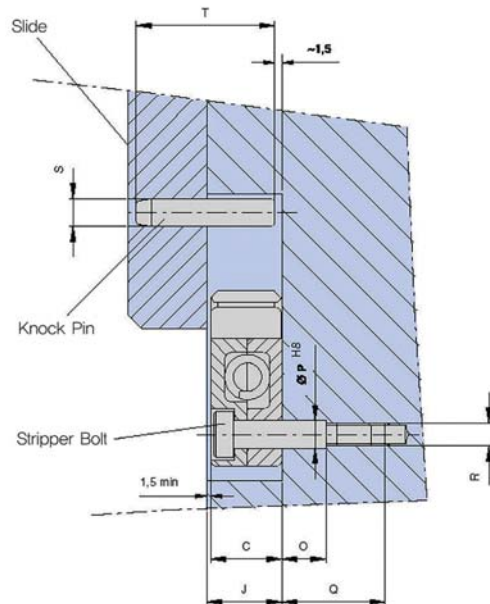
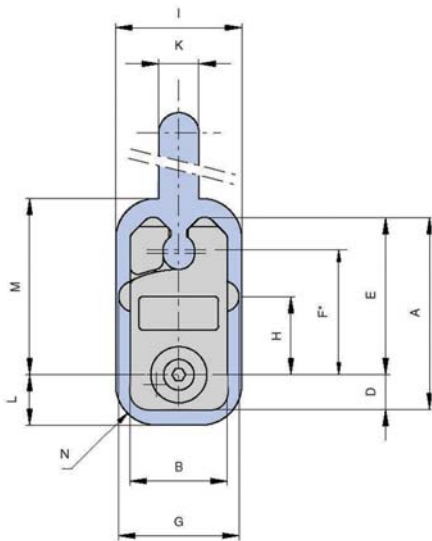


BPS



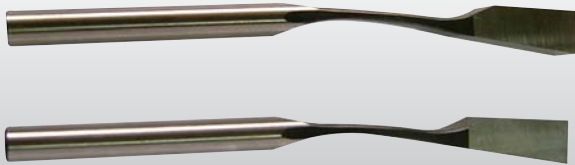
Patent Qualified No. 20-0441694

Order Catalog Code **S**
BPS-8



Code	Description											Retainer Pocket in Mold									
Description	A	B	C	D	E	F*	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	kg
BPS 6	38	19	16	7	31,5	24,89	24,0	15,5	25,5	17,5	8	10,0	34,5	8	8,5	6	20	M5	6	32	10
BPS 8	54	32	20	11	43,0	34,93	36,5	22,5	38,0	21,5	10	14,5	46,0	10	10,5	8	25	M6	8	40	20
BPS 10	86	45	30	19	67,0	53,98	49,5	40,0	51,0	31,5	12	22,5	70,0	12	17,0	10	35	M8	10	60	40

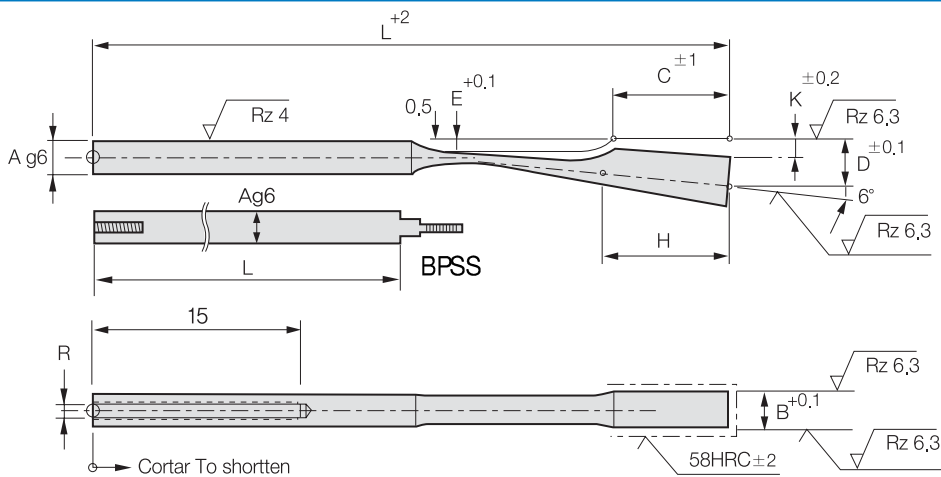
BPP



Patent Applied No. 02-22007-0004232

Assembling Manual

- 1) The supporting area of spring core must be the same length as dimension "H" on the spring core.
- 2) The adjustment area must be at least 1/3 of the dimension "C".
- 3) The stroke of the spring core must be the same or smaller than the dimension "C".
- 4) The plate that houses the shaft of the core must be min. 15mm in all cases.
- 5) The draft angle must be min. 5°.
- 6) The core length must be 0.02 ÷ 0.05 larger than its own hole.
- 7) General tolerance of adjustment H7/g6.
- 8) After the core are adjusted, remove 0.1 for to ensure smooth ejection.

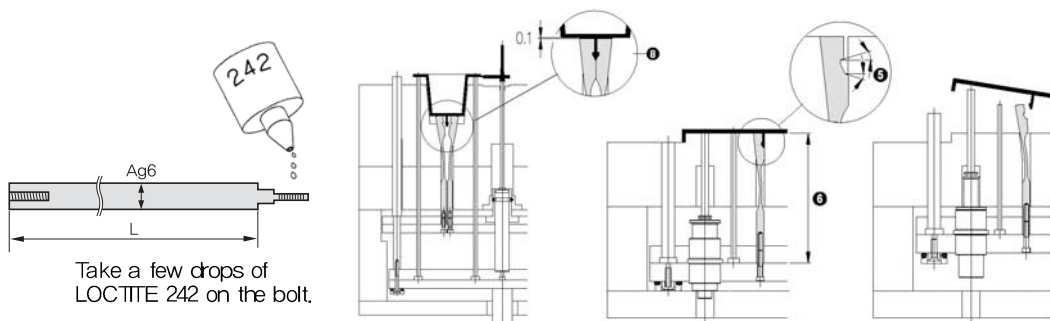


Description	A	B	C	D	E	H	K	L	R
BPP.0606	6	6,2	22	9	3,5	25	3,5	125	M4
BPP.0608	6	8,2	22	9	3,5	25	3,5	125	M4
BPP.0808	8	8,2	25	11,5	4,5	30	4,5	140	M5
BPP.0810	8	10,2	25	11,5	4,5	30	4,5	140	M5
BPP.0812	8	12,2	25	11,5	4,5	30	4,5	140	M5
BPP.1014	10	14,2	30	15	5,5	38	5,5	175	M6
BPP.1016	10	16,2	30	15	5,5	38	5,5	175	M6
BPP.1018	10	18,2	30	15	5,5	38	5,5	175	M6

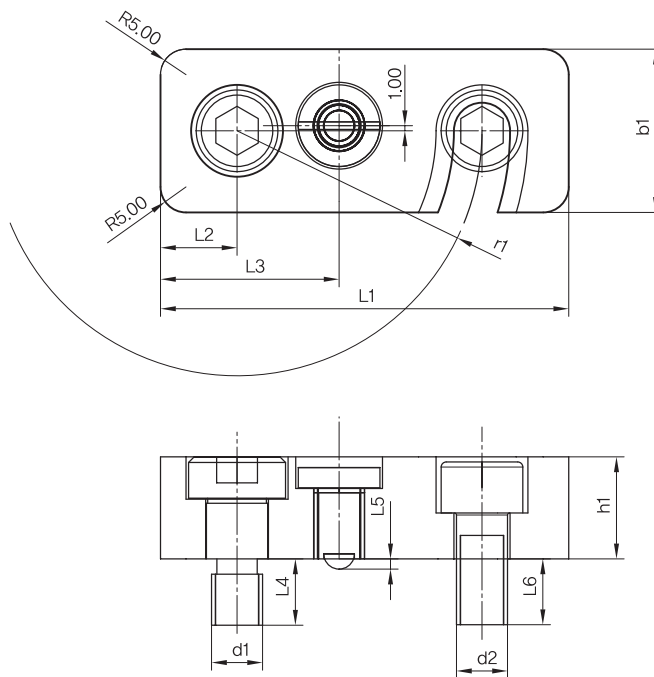
※ Manufactured from spring steel this unit allows the release of small undercuts. It is activated by the ejector plates as a standard ejector.

Order → Catalog Code (ØD)

BPP - 0608
BPSS-L200



B73



Order

Catalog Code

Size

12×20×50

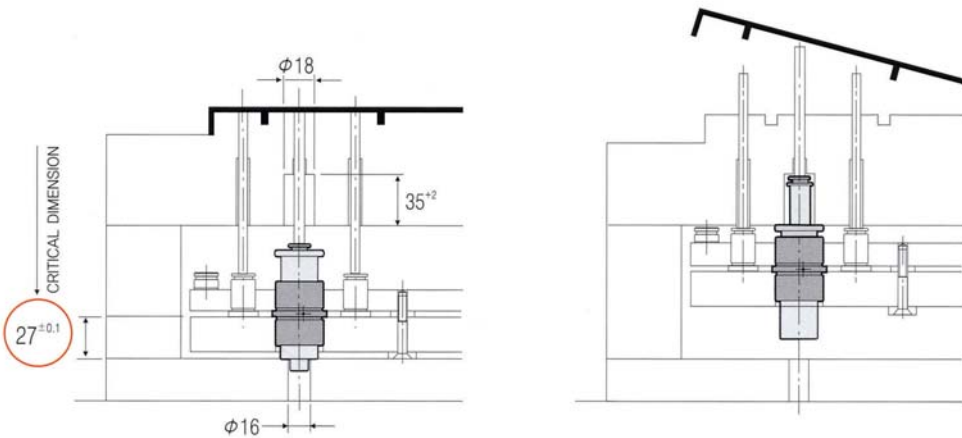
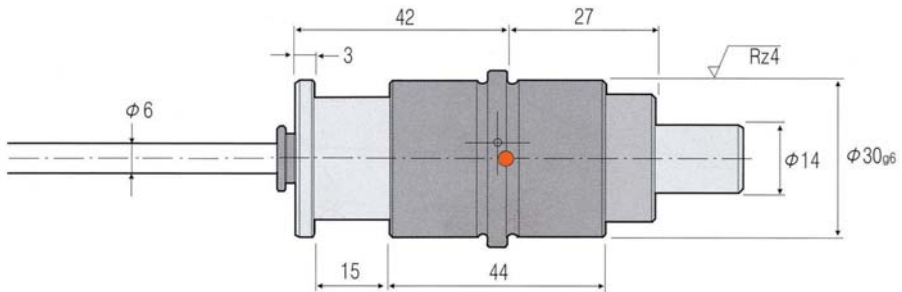
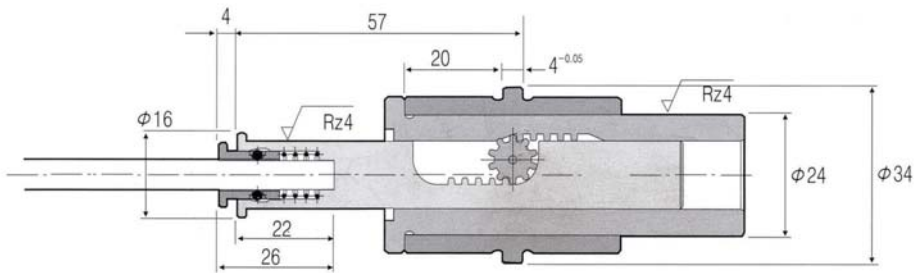
Type	h1 (mm)	b1 (mm)	L1 (mm)	L6 (mm)	L5 (mm)	L4 (mm)	L3 (mm)	L2 (mm)	r1 (mm)	d2 (mm)	d1 (mm)
B 73/12×20×50	12	20	50	8	0.9	9	24	10	30	M6	M6
B 73/16×25×63	16	25	63	11	1.5	11	30	13	38	M8	M8
B 73/20×32×80	20	32	80	13	2	13	35	15	48	M10	M10



BCT1

Order Catalog Code Q'ty

BCT1 - 1

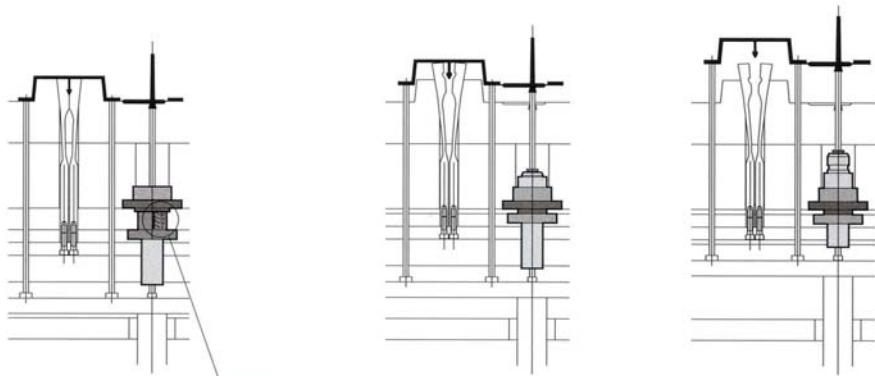
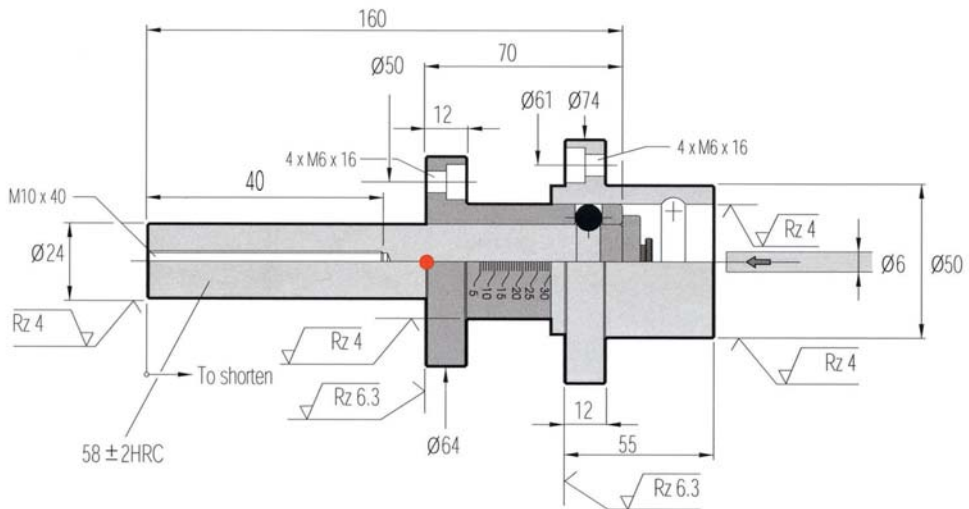


BCT2

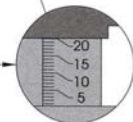


Order Catalog Code Q'ty

BCT2 - 2



If 20 is selected...

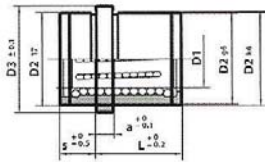


20 millimeters 1st stroke is obtained...

and a free 2nd stroke

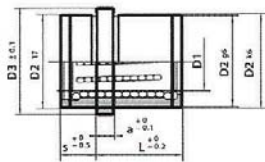


Ejector Ball Cages A Type



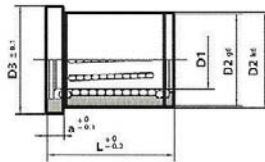
NO	CODE NO	D1	D2	D3	S	L	a
1	EBC_A1226	12	22	26	6	20	6
2	EBC_A1835	18	30	35	11	24	6
3	EBC_A2445	24	38	43	16	29	6
4	EBC_A3055	30	46	52	21	34	6

Ejector Ball Cages B Type



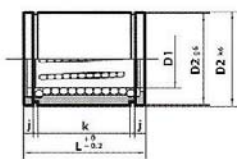
NO	CODE NO	D1	D2	D3	S	L	a
1	EBC_B1222	12	24	28	8	22	5
2	EBC_B1622	16	28	32	8	22	6
3	EBC_B1626	16	28	32	9	26	6
4	EBC_B2026	20	32	36	9	26	6
5	EBC_B2035	20	32	36	9	35	6
6	EBC_B2526	25	40	45	9	26	6
7	EBC_B2535	25	40	45	10	35	6
8	EBC_B2545	25	40	45	10	45	6
9	EBC_B2555	25	40	45	10	55	6
10	EBC_B3245	32	50	56	12	45	8
11	EBC_B3263	32	50	56	12	63	8
12	EBC_B4045	40	60	66	12	45	8
13	EBC_B4063	40	60	66	12	63	8

Ejector Ball Cages C Type



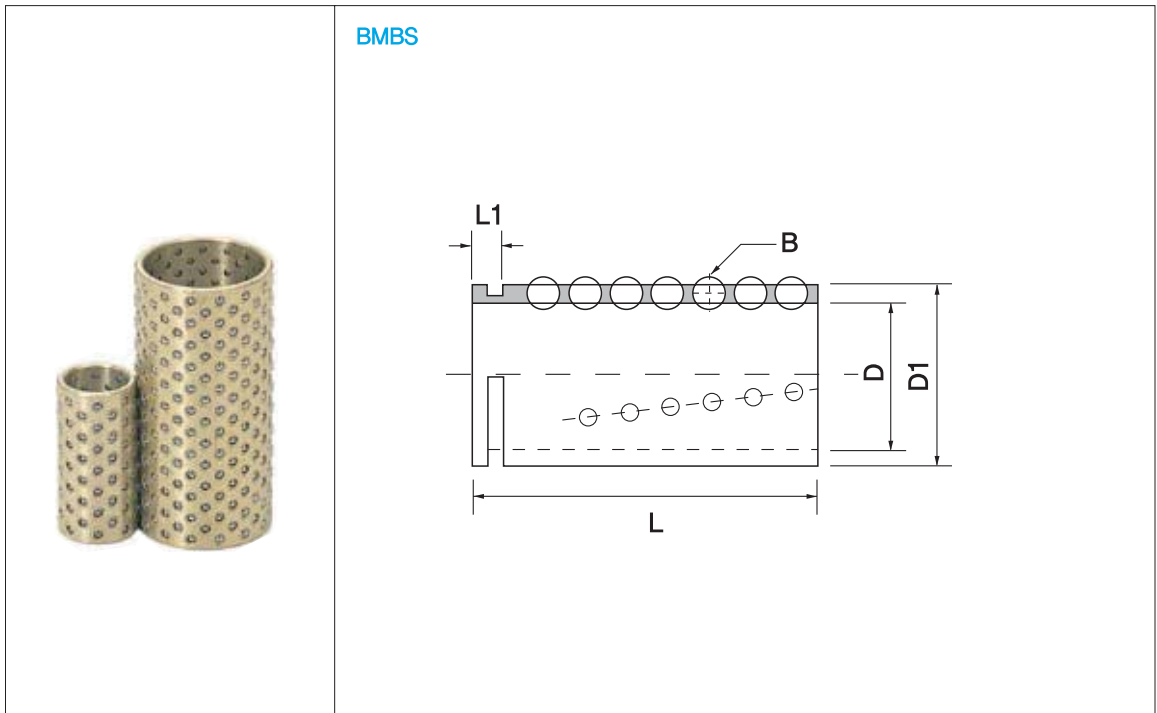
NO	CODE NO	D1	D2	D3	L	a
1	EBC_C2035	20	32	36	35	6
2	EBC_C2535	25	40	45	35	6
3	EBC_C2545	25	40	45	45	6
4	EBC_C2555	25	40	45	55	6
5	EBC_C3245	32	50	56	45	8
6	EBC_C3263	32	50	56	63	8
7	EBC_C4045	40	60	64	45	8
8	EBC_C4063	40	60	64	63	8

Ejector Ball Cages D Type



NO	CODE NO	D1	D2	L	k	j
1	EBC_D1230	12	24	30	20	1.3
2	EBC_D1630	16	28	30	19	1.6
3	EBC_D1635	16	28	35	24	1.6
4	EBC_D2035	20	32	35	24	1.6
5	EBC_D2045	25	32	45	34	1.6
6	EBC_D2535	25	40	35	23	1.8
7	EBC_D2545	25	40	45	33	1.8
8	EBC_D2555	25	40	55	43	1.8
9	EBC_D3245	32	50	45	33	2.1
10	EBC_D3263	32	50	63	51	2.1
11	EBC_D4045	40	60	45	33	2.1
12	EBC_D4063	40	60	63	51	2.1

Order/ex Catalog No.



D	D1	L	L1
12	16	40	2.1
		56	
18	24	45	3
		56	
		71	
30	38	56	4.8
		75	
		95	

- Material · Pipe : Brass
- Ball : 100Cr6(DIN) SUJ2(JIS)
- Ball Hardness : 62~67HRC ·Ball Grade : G10

■ Note

Use under temperature 100°. The balls of BMBS can be thermal expansion.

Order

Catalog No.	-	L
BMBS 20	-	45



Bukwang Technology Co., Ltd.

BUKWANG GAS SPRING

STANDARD COMPONENTS FOR PRESS DIE FOR MOLD DIE



- BK GAS SPRING
- M2B 50-200
- TUB 250
- KB 500
- TUB 500
- KB 750
- TUB 750
- KB 1500
- TUB 1500
- GSBK



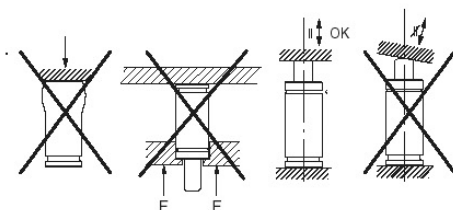
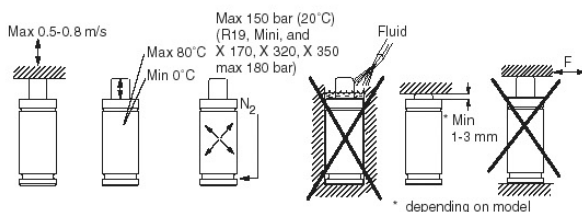
Bukwang Technology Co., Ltd.

USER INFORMATION

Mounting Instructions

To achieve the best possible service-life and safety from the gas spring, the instructions below must be followed. The gas spring is intended for use in tool and machine applications.

- Secure the gas spring to the tool/machine whenever possible, using the threaded hole(s) in the base of the gas spring or a suitable flange.
- The threaded hole in the piston rod top should not be used for mounting purposes. It is only to be used when servicing the gas spring.
- Do not use the gas spring in such a way that the piston rod is released freely from its compressed position, as this could cause internal damage to the gas spring.
- The maximum allowed stroke speed is from 0.5 to 0.8 m/s, depending on model, see catalogue.
- Make sure the gas spring is mounted parallel to the direction of the compression stroke.
- Ensure the contact surface of the piston rod top is perpendicular to the direction of the compression stroke and is sufficiently hardened.
- The gas spring should not be subjected to side loads.
- Protect the piston rod against mechanical damage and contact with fluids.



Stroke length

The nominal stroke (defined as S in the catalogue tables) may be utilised fully in all gas springs.

However the recommendation is not to use the full stroke in normal operation. This is to prevent the spring from being “over-stroked” as a result of changes to the tool or mis-happenings in the tool.

We do not recommend the last 5 mm or 10 % of the nominal stroke be utilised.

Maximum charging pressure

The maximum charging pressure (at 20°) stated for the different gas springs may not be exceeded as it may affect the safety of the product.

Operating temperature

Exceeding the gas spring's recommended max. operating temperature will shorten the service-life of the gas spring.

Recommended maximum strokes/minute

The values given for each gas spring in the catalogue are valid for “normal” applications in press tools. The lower limits given are valid for the longer stroke lengths and the higher values for short stroke springs. These values are based on a fully utilised stroke. If only a portion of the stroke is used the number of strokes per minute could be increased.

For further information contact your local distributor.

Maximum piston rod velocity

The maximum piston rod velocity is not to be exceeded because it may infringe on safety, as well as the performance of the gas spring.

Service interval

If correctly installed and used, the following minimum service-interval of the Gas Springs, except models TB, HT, HG and HF, are recommended.

Stroke lengths up to and including 50 mm after 1 million strokes.

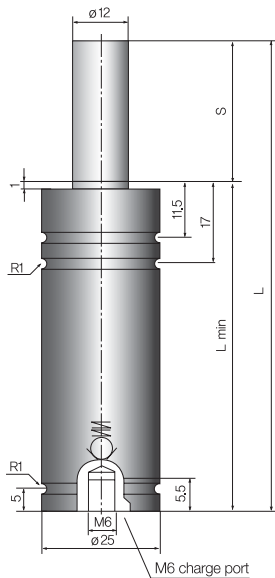
Stroke lengths above 50 mm after 100 000 stroke meters.

The number of stroke meters is calculated as:
Used stroke (in meters) x 2 x number of strokes.

It is our recommendation that the gas spring is replaced after 2 million strokes or after 10 years of service.

M2B 50-200

- M2B is available in four preset models, with initial forces from 50~200kgf.
- Each spring is colour-coded for easy identification of force rating.
- All M2B springs can be repaired and recharged.



Model	Charging pressure (bar)	Color	Force[kgf] (+20°C)
			Initial
M2B50	45	Green	50
M2B 100	90	Blue	100
M2B 150	135	Red	150
M2B 200	180	Yellow	200

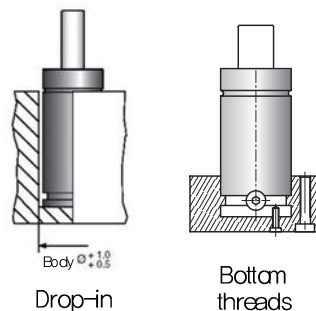
*Adjustable version allowing gas pressure both to be raised and lowered between 50 and 180bar. State desired initial force in daN. If the spring should be delivered uncharged, please state zero force.

Model Code	Stroke S	Force[kgf] (150bar / +20 °C)				L ± 0,25	L min	Gas vol. (l)	Weight (kg)
		M2B 50	M2B100	M2B150	M2B200				
M2B50-010	10	77	153	230	306	62	52	0,005	0,30
M2B50-013	12,7	77	153	230	307	67,4	54,7	0,006	0,31
M2B50-016	16	77	154	231	307	74	58	0,007	0,33
M2B50-025	25	77	154	231	308	92	67	0,010	0,38
M2B50-039	38,1	77	154	232	309	118,2	80,1	0,015	0,43
M2B50-050	50	77	154	232	309	142	92	0,019	0,48
M2B50-064	63,5	76	152	227	302	172	108,2	0,024	0,54
M2B50-080	80	76	152	228	304	205	125	0,029	0,62
M2B50-100	100	76	152	229	305	245	145	0,036	0,71
M2B50-125	125	76	153	229	306	295	170	0,044	0,83

Basic Information

- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 25bar
- Operating temperature : 0~+60°C
- Force increase by temperature : ±0,3% / °C
- Recommended max stroke/min : ~80~100 (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

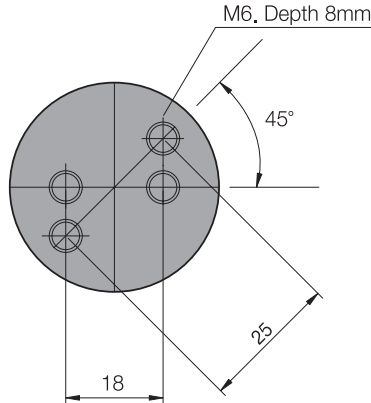
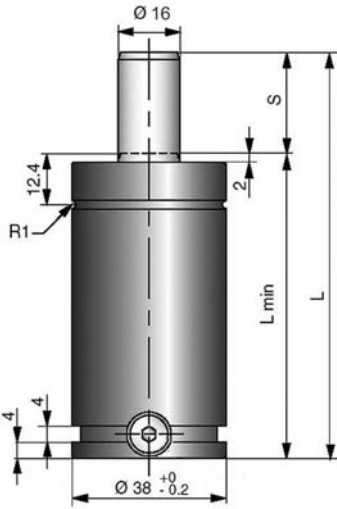
Mounting Possibilities



TUB 250

Standard line of gas springs is the TUB-line. Sizes 250 to 1500 correspond to the ISO 11901 standard.

The total length L is 50mm+(2×stroke).

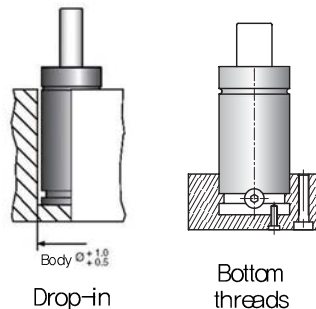


Model Code	Stroke S	Force [kgf] (150bar / +20 °c)		L ±0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
TUB 250-010	10	265	350	70	60	0.011	0.43
TUB 250-013	12.7		350	75.4	62.7	0.013	0.44
TUB 250-016	16		350	82	66	0.016	0.46
TUB 250-025	25		350	100	75	0.023	0.50
TUB 250-038	38.1		350	126.2	88.1	0.032	0.54
TUB 250-050	50		350	150	100	0.041	0.58
TUB 250-064	63.5		350	177	113.5	0.051	0.67
TUB 250-080	80		350	210	130	0.062	0.72
TUB 250-100	100		350	250	150	0.077	0.83
TUB 250-125	125		350	300	175	0.096	0.97

○ Basic Information

- Pressure medium : Nitrogen
 - Max. charging pressure : 125bar
 - Min. charging pressure : 50bar
 - Operating temperature : 0~+60°C
 - Force increase by temperature : ±0.3% / °C
 - Recommended max stroke/min : ~80~100 (at 20°C)
 - Max piston rod velocity : 0.8m/s
 - Tube surface : Black oxide
- ※ Initial force : 300kgf (150bar Charged)

○ Mounting Possibilities

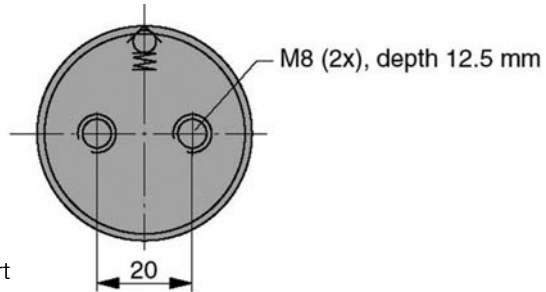
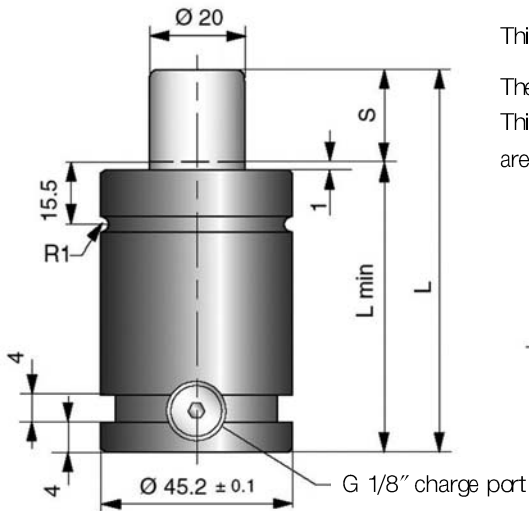


KB 500

This is a short height hoseable spring with an initial force of 470kgf

The KB 500 has a total length of 50mm+(2×stroke).

This spring is 35mm shorter than the TUB 500. Mounting options are the same as for the TUB 500.

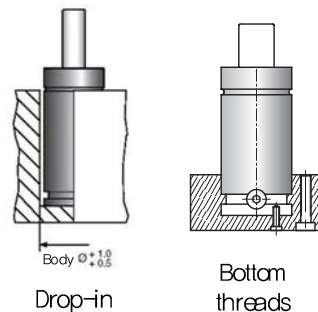


Model Code	Stroke S	Force [kgf] (150bar / +20°C)		L ± 0,25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KB 500-006	6	470	560	62	56	0,02	0,50
KB 500-013	12,7		590	75,4	62,7	0,03	0,54
KB 500-019	19		610	88,1	69,05	0,04	0,59
KB 500-025	25		610	100	75	0,04	0,62
KB 500-038	38,1		620	126,2	88,1	0,06	0,71
KB 500-050	50		630	150	100	0,07	0,78
KB 500-064	63,5		630	177	113,5	0,09	0,88
KB 500-080	80		660	210	130	0,11	0,98
KB 500-100	100		660	250	150	0,12	1,12
KB 500-125	125		660	300	175	0,15	1,28

○ Basic Information

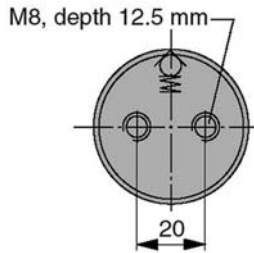
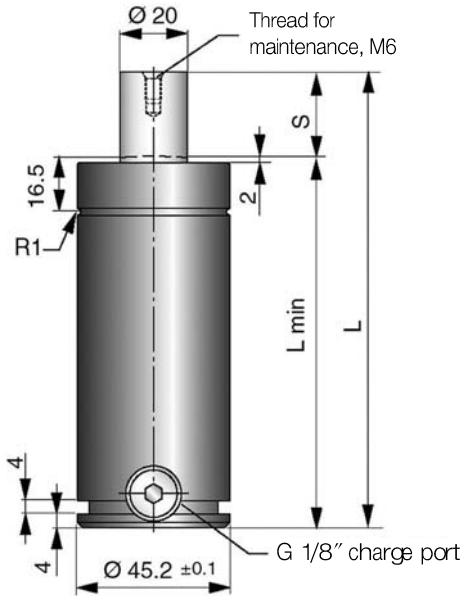
- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : ±0,3% / °C
- Recommended max stroke/min : ~30 (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

○ Mounting Possibilities



TUB 500

Standard line of gas springs is the TUB-line. Sizes 250 to 1500 correspond to the ISO 11901 standard. The TUB 500 has a total length L is 85mm+(2×stroke).

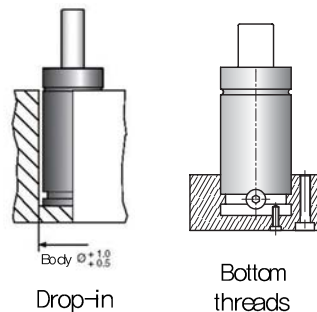


Model Code	Stroke S	Force [kgf] (150bar / +20 °C)		L ±0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
TUB500-010	10	470	600	105	95	0,023	0,96
TUB500-013	12,7		610	110,4	97,7	0,025	1,04
TUB500-025	25		640	135	110	0,038	1,13
TUB500-038	38,1		650	161,2	123,1	0,051	1,22
TUB500-050	50		660	185	135	0,063	1,30
TUB500-064	63,5		660	212	148,5	0,077	1,41
TUB500-080	80		670	245	165	0,093	1,55
TUB500-100	100		670	285	185	0,114	1,72
TUB500-125	125		670	335	210	0,139	1,89
TUB500-160	160		670	405	245	0,175	2,14

○ Basic Information

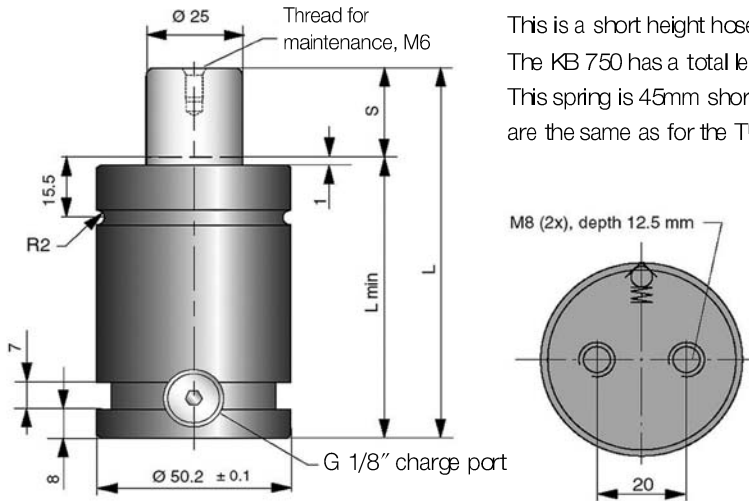
- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : ±0,3% / °C
- Recommended max stroke/min : ~40 ~80 (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

○ Mounting Possibilities



KB 750

This is a short height hoseable spring with an initial force of 740kgf. The KB 750 has a total length of 50mm+(2×stroke). This spring is 45mm shorter than the TUB 750. Mounting options are the same as for the TUB 750.

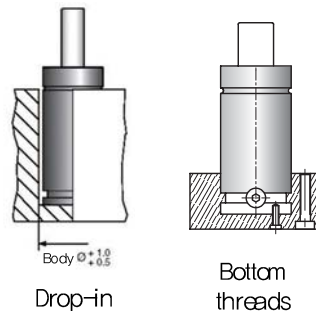


Model Code	Stroke S	Force [kgf] (150bar / +20 °c)		L $\pm 0,25$	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KB 750-006	6	740	1500	62	56	0,01	0,68
KB 750-013	12,7		1300	75,4	62,7	0,02	0,73
KB 750-019	19		1200	88,1	69,05	0,03	0,80
KB 750-025	25		1100	100	75	0,04	0,82
KB 750-038	38,1		1100	126,2	88,1	0,06	0,92
KB 750-050	50		1100	150	100	0,08	1,06
KB 750-064	63,5		1100	177	113,5	0,10	1,12
KB 750-080	80		1100	210	130	0,12	1,26
KB 750-100	100		1100	250	150	0,15	1,39
KB 750-125	125		1100	300	175	0,19	1,57

○ Basic Information

- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : $\pm 0,3\%$ / °c
- Recommended max stroke/min : ~15~30 (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

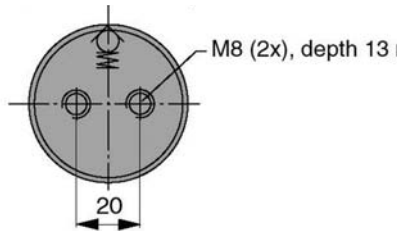
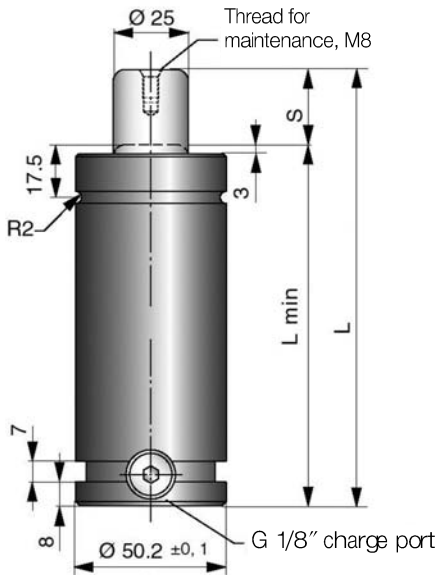
○ Mounting Possibilities



TUB 750

Standard line of gas springs is the TUB-line. Sizes 250 to 1500 correspond to the ISO 11901 standard.

The TUB 750 has a total length L is 95mm+(2× stroke).

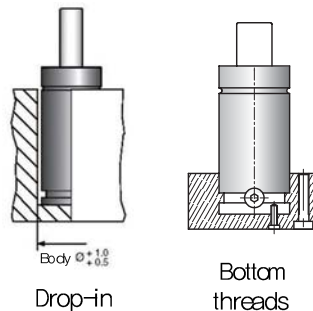


Model Code	Stroke S	Force [kgf] (150bar / +20 °c)		L $\pm 0,25$	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
TUB 750-013	12,7	740	1200	120,4	107,7	0,03	1,30
TUB 750-025	25		1200	145	120	0,04	1,45
TUB 750-038	38,1		1200	171,2	133,1	0,06	1,50
TUB 750-050	50		1200	195	145	0,07	1,70
TUB 750-064	63,5		1200	222	168,5	0,09	1,75
TUB 750-080	80		1200	255	175	0,11	1,95
TUB 750-100	100		1200	295	195	0,14	2,15
TUB 750-125	125		1210	345	220	0,17	2,40
TUB 750-160	160		1210	415	255	0,21	2,70
TUB 750-200	200		1210	495	295	0,26	3,10
TUB 750-250	250		1210	595	345	0,33	3,60
TUB 750-300	300		1210	695	395	0,39	4,10

○ Basic Information

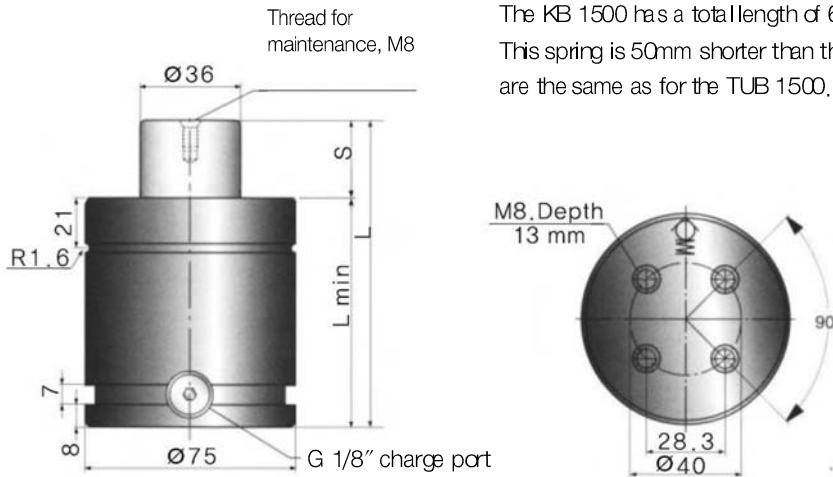
- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : $\pm 0,3\%$ / °c
- Recommended max stroke/min : $\sim 15\sim 40$ (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

○ Mounting Possibilities



KB 1500

This is a short height hoseable spring with an initial force of 1500kgf
 The KB 1500 has a total length of 60mm+(2×stroke).
 This spring is 50mm shorter than the TUB 1500. Mounting options are the same as for the TUB 1500.

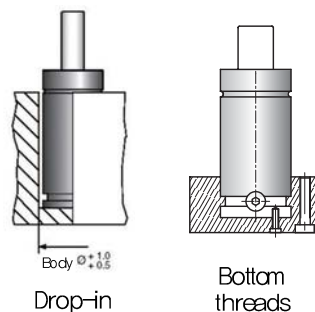


Model Code	Stroke S	Force [kgf] (150bar / +20 °C)		L ±0.25	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
KB 1500-025	25	1500	2400	110	85	0.10	2.05
KB 1500-038	38.1		2300	136.2	98.1	0.14	2.35
KB 1500-050	50		2300	160	110	0.18	2.50
KB 1500-064	63.5		2300	187	123.5	0.22	2.75
KB 1500-080	80		2300	220	140	0.27	3.05
KB 1500-100	100		2300	260	160	0.34	3.40

○ Basic Information

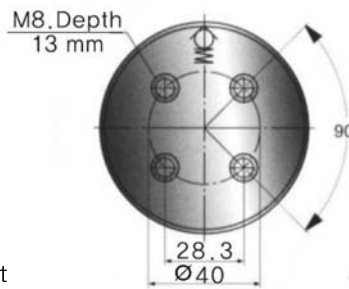
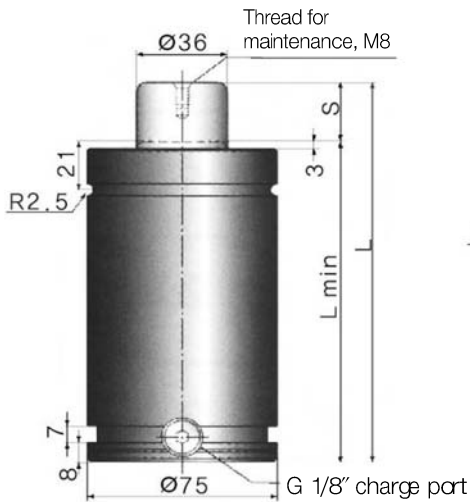
- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : ±0.3% / °C
- Recommended max stroke/min : ~15~30 (at 20°C)
- Max piston rod velocity : 0.8m/s
- Tube surface : Black oxide

○ Mounting Possibilities



TUB 1500

Standard line of gas springs is the TUB-line. Sizes 250 to 1500 correspond to the ISO 11901 standard.
The TUB 1500 has a total length L is 110mm+(2 × stroke).

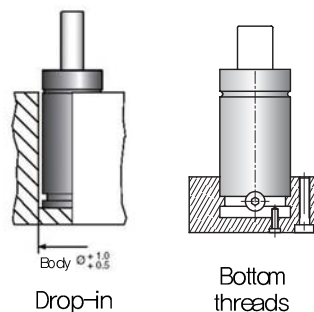


Model Code	Stroke S	Force [kgf] (150bar / +20 °c)		L $\pm 0,25$	L min	Gas vol. (l)	Weight (kg)
		Initial	End force*				
TUB 1500-025	25	1500	2300	160	135	0,01	3,75
TUB 1500-038	38,1		2300	186,2	148,1	0,15	3,95
TUB 1500-050	50		2300	210	160	0,18	4,15
TUB 1500-064	63,5		2300	237	173,5	0,22	4,40
TUB 1500-080	80		2300	270	190	0,28	4,70
TUB 1500-100	100		2300	310	210	0,34	5,10
TUB 1500-125	125		2300	360	235	0,42	5,55
TUB 1500-160	160		2300	430	270	0,53	6,25
TUB 1500-200	200		2300	510	310	0,68	6,90
TUB 1500-250	250		2300	610	360	0,81	7,80
TUB 1500-300	300		2300	710	410	0,96	8,90

○ Basic Information

- Pressure medium : Nitrogen
- Max. charging pressure : 150bar
- Min. charging pressure : 50bar
- Operating temperature : 0~+60°C
- Force increase by temperature : $\pm 0,3\%$ / °c
- Recommended max stroke/min : ~15~40 (at 20°C)
- Max piston rod velocity : 0,8m/s
- Tube surface : Black oxide

○ Mounting Possibilities

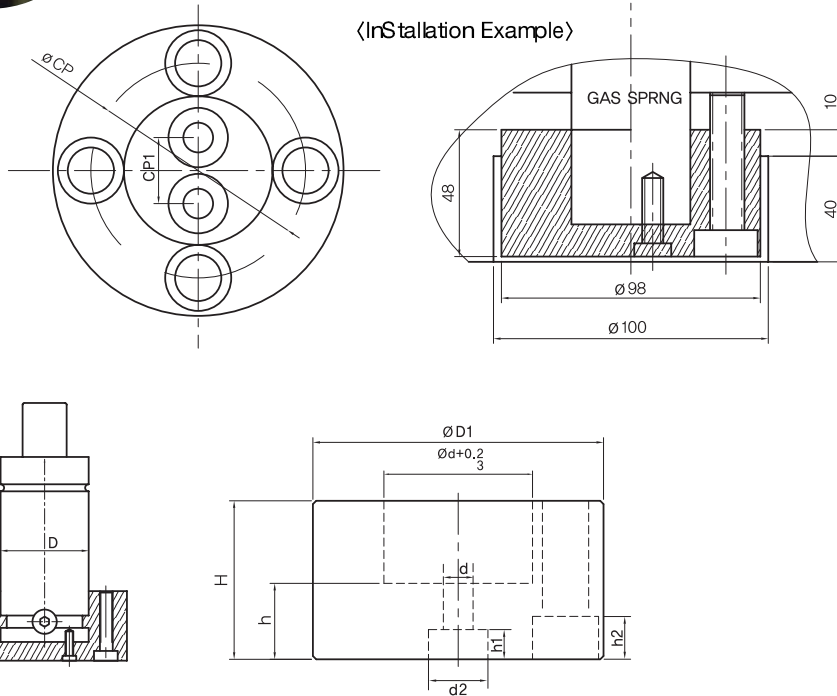


GSBK



No.	Description	Q'ty	Material
1	Gas Spring Holder	1	S45C Black Oxide

Order Catalog Code standards H
 GSBK750-50

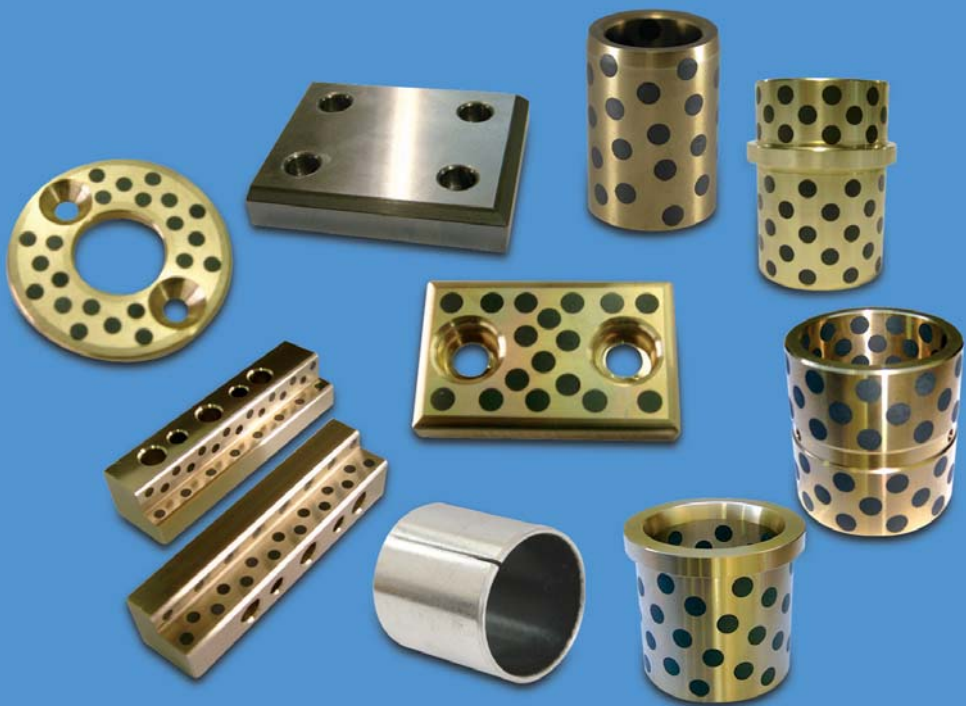


Available Quotation by Drawing

MODEL	H	$\phi D+0.1$	h	$\phi D1$	CP	CP1	$\phi d+0.2/0.3$	$\phi d1$	d2	h1	h2	Hex nut	
TUB250	40	$\phi 38$	15	78	56	(18) 25	$\phi 38$	6.5	12	7	9	M6×15	M8×40
	50												M8×50
TUB500 KB500	50	$\phi 45$	20	88	65	20	$\phi 45.3$	9	14	11	11	M8×20	M10×50
	60												M10×60
TUB750 KB750	50	$\phi 50$	20	98	75	20	$\phi 50.3$	13	14	11	13	M8×20	M12×50
	60												M12×60
	70												M12×70

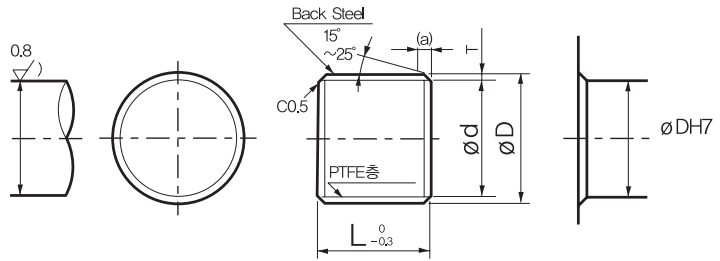
MOLD GUIDE COMPONENT

STANDARD COMPONENTS FOR PRESS DIE FOR MOLD DIE





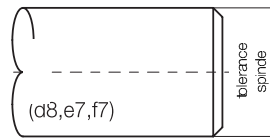
DU bush



Parts No.	Shaft	ϕd	ϕD	$L_{-0.3}^0$	
LFB-0303	3 ^{-0.025} _{-0.034}	3	5	3	
LFB-0304	"	"	"	4	
LFB-0305	"	"	"	5	
LFB-0306	"	"	"	6	
LFB-0404	4 ^{-0.025} _{-0.037}	4	6	4	
LFB-0406	"	"	"	6	
LFB-0408	"	"	"	8	
LFB-0504	5 ^{-0.025} _{-0.037}	5	7	4	
LFB-0505	"	"	"	5	
LFB-0506	"	"	"	6	
LFB-0508	"	"	"	8	
LFB-0605	6 ^{-0.025} _{-0.037}	6	8	5	
LFB-0606	"	"	"	6	
LFB-0607	"	"	"	7	
LFB-0608	"	"	"	8	
LFB-0610	"	"	"	10	
LFB-0705	7 ^{-0.025} _{-0.040}	7	9	5	
LFB-0707	"	"	"	7	
LFB-0710	"	"	"	10	
LFB-0712	"	"	"	12	
LFB-0806	8 ^{-0.025} _{-0.040}	8	10	6	
LFB-0808	"	"	"	8	
LFB-0810	"	"	"	10	
LFB-0812	"	"	"	12	
LFB-0910	9 ^{-0.025} _{-0.040}	9	11	10	
LFB-1006	10 ^{-0.025} _{-0.040}	10	12	6	
LFB-1007	"	"	"	7	
LFB-1008	"	"	"	8	
LFB-1010	"	"	"	10	
LFB-1012	"	"	"	12	
LFB-1015	"	"	"	15	
LFB-1020	"	"	"	20	
LFB-1206	12 ^{-0.025} _{-0.043}	12	14	6	
LFB-1208	"	"	"	8	
LFB-1210	"	"	"	10	
LFB-1212	"	"	"	12	
LFB-1215	"	"	"	15	
LFB-1220	"	"	"	20	
LFB-1315	13 ^{-0.025} _{-0.043}	13	15	15	
LFB-1410	14 ^{-0.025} _{-0.043}	14	16	10	

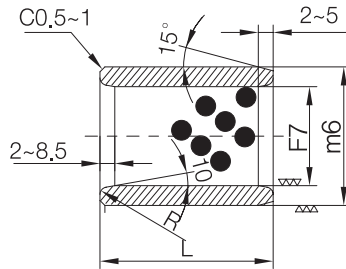
Parts No.	Shaft	ϕd	ϕD	$L_{-0.3}^0$	
LFB-1412	"	"	"	12	
LFB-1415	"	"	"	15	
LFB-1420	"	"	"	20	
LFB-1510	15 ^{-0.025} _{-0.043}	15	17	10	
LFB-1512	"	"	"	12	
LFB-1515	"	"	"	15	
LFB-1520	"	"	"	20	
LFB-1525	"	"	"	25	
LFB-1610	16 ^{-0.025} _{-0.043}	16	18	10	
LFB-1612	"	"	"	12	
LFB-1615	"	"	"	15	
LFB-1620	"	"	"	20	
LFB-1625	"	"	"	25	
LFB-1715	17 ^{-0.025} _{-0.043}	17	19	15	
LFB-1810	18 ^{-0.025} _{-0.043}	18	20	10	
LFB-1812	"	"	"	12	
LFB-1815	"	"	"	15	
LFB-1820	"	"	"	20	
LFB-1825	"	"	"	25	
LFB-1915	19 ^{-0.025} _{-0.046}	19	22	15	
LFB-2010	20 ^{-0.025} _{-0.046}	20	23	10	
LFB-2012	"	"	"	12	
LFB-2015	"	"	"	15	
LFB-2020	"	"	"	20	
LFB-2025	"	"	"	25	
LFB-2030	"	"	"	30	
LFB-2210	22 ^{-0.025} _{-0.046}	22	25	10	
LFB-2212	"	"	"	12	
LFB-2215	"	"	"	15	
LFB-2220	"	"	"	20	
LFB-2225	"	"	"	25	
LFB-2415	24 ^{-0.025} _{-0.046}	24	27	15	
LFB-2420	"	"	"	20	
LFB-2425	"	"	"	25	
LFB-2430	"	"	"	30	
LFB-2510	25 ^{-0.025} _{-0.046}	25	28	10	
LFB-2512	"	"	"	12	
LFB-2515	"	"	"	15	
LFB-2520	"	"	"	20	
LFB-2525	"	"	"	25	

BOB



■ tolerance
 housing : H7
 spindle : d8= high-weight , e7=low-weight, f17=detailed type, b9=under-water type

products code	SIZE	size tolerance				length (L ^{+0.3} / _{+0.3})								
		IN		OUT		8	10	12	15	16	20	25	30	35
		d	F7	D	m6									
	8	8	^{+0.028} / _{+0.028}	12	^{+0.039} / _{+0.039}	081208	081210	181212	081215					
	10	10	"	14	"	101408	101410	101412	101415		101420			
	12	12	^{+0.028} / _{+0.028}	18	"		121810	121812	121815	121816	121820	121825	121830	
	13	13	"	19	^{+0.031} / _{+0.031}				131915		131920			
	14	14	"	20	"				142015		142020			
	15	15	"	21	"				152115	152116	152120	152125	152130	
	16	16	"	22	"					162216	162220	162225	162230	162235
	18	18	"	24	"				182415	182416	182420	182425	182430	
	20	20	^{+0.031} / _{+0.031}	28	"				202815	202816	202820	202825	202830	202835
	20	20	"	30	"					203016	203020	203025	203030	203035
	25	25	"	33	^{+0.035} / _{+0.035}					253316	253320	253325	253330	253335
	25	25	"	35	"					253516	253520	253525	253530	253535
	30	30	"	38	"						303820	303825	303830	303835
	30	30	"	40	"						304020	304025	304030	304035
	31.5	31.5	^{+0.050} / _{+0.028}	40	"								31.54030	
	35	35	"	44	"								354430	354435
	35	35	"	45	"								354530	354535
	40	40	"	50	"								405030	405035
	40	40	"	55	^{+0.030} / _{+0.011}								405530	405535
	45	45	"	55	"								455530	455535
	45	45	"	56	"								455630	455635
	45	45	"	60	"								456030	456035
	50	50	"	60	"								506030	506035
	50	50	"	62	"								506230	506235
	50	50	"	65	"								506530	
	55	55	^{+0.030} / _{+0.030}	70	"									
	60	60	"	74	"								607430	607435
	60	60	"	75	"								607530	607535
	63	63	"	75	"									
	65	65	"	80	"									
	70	70	"	85	^{+0.035} / _{+0.013}									708535
	70	70	"	90	"									
	75	75	"	90	"									
	75	75	"	95	"									
	80	80	"	96	"									
	80	80	"	100	"									
	90	90	^{+0.031} / _{+0.031}	110	"									
	100	100	"	120	"									
	110	110	"	130	^{+0.040} / _{+0.015}									
	120	120	"	140	"									
	125	125	^{+0.035} / _{+0.015}	145	"									
	130	130	"	150	"									
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Material SP : #50SP(CAC304+Graphite)

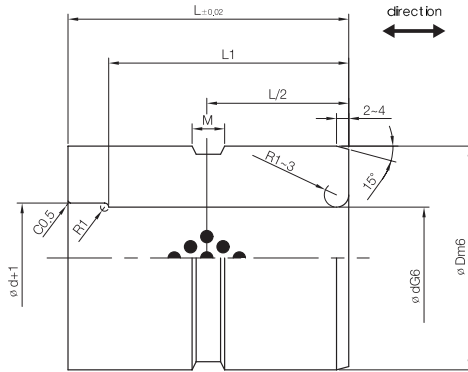
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455640	455650	455660								45	56
456040	456050	456060	456070	456080						45	60
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506240	506250	506260	506270							50	62
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557040	557050	557060	557070							55	70
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607540	607550	607560	607570	607580	6075100					60	75
		637560	637570	637580						63	75
	658050	658060	658070	658080						65	80
708540	708550	708560	708570	708580	7085100					70	85
	709050	709060	709070	709080						70	90
		759060	759070	759080	7590100					75	90
		759560	759570	759580	7595100					75	95
809640	809650	809660	809670	809680	8096100	8096120				80	96
8010040	8010050	8010060	8010070	8010080	80100100	80100120		80100140		80	100
		9011060		9011080	90110100	90110120				90	110
		10012060	10012070	10012080	100120100	100120120		100120140		100	120
				11013080	110130100	110130120				110	130
				12014080	120140100	120140120		120140140		120	140
					125145100	125145120				125	145
					130150100		130150130			130	150
					140160100			140160140		140	160
					150170100				150170150	150	170
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Order/ex Catalog No. — d — D — L
 BOB — 20 — 28 — 40

BGBS



■ Material #500SP (CAC304+Gr)

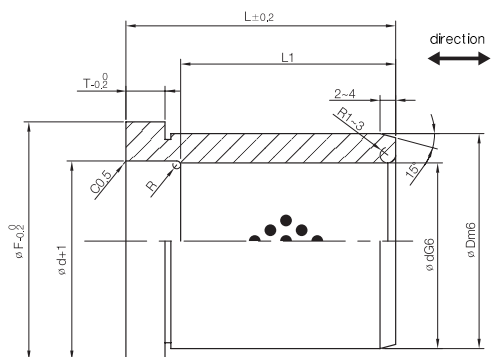


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			+0.007	24	24					
			16	25	+0.017 +0.006		+0.021 +0.008	19	19	6
								24	24	
	29	29								
	34	34								
	39	35								
	19	19				4				
	24	24	6							
	29	29								
	34	34								
	20	30		+0.020 +0.007	+0.025 +0.009	39	39	8		
			49			40				
			24			24	8			
			29			29				
			34			34				
			39			39				
			49			49				
			59			50				
			29			29			8	
34			34			10				
39	39									
49	49									
25	35	+0.020 +0.007	+0.025 +0.009	59	59		10			
				69	60					
				79	60					
				89	89					
				99	99					
				109	100					

products code	dG6	Dm6	L	L1	M				
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				34	34				
				39	39				
				49	49				
				59	59				
				69	69				
				79	70				
				40	55		+0.025 +0.009	+0.030 +0.011	39
	49	49							
	59	59							
	69	69							
	79	79							
	89	80							
	49	49	10						
	59	59				12			
	69	69							
	79	79							
	50	70	+0.030 +0.011	+0.035 +0.013	89		89	12	
					99	90			
					59	59	12		
69					69	14			
79					79				
89					89				
60	80	+0.029 +0.010	+0.035 +0.013	99	99		14		
				109	90				
				69	69	14			
				79	79			16	
				89	89				
				99	99				
80	100	+0.029 +0.010	+0.035 +0.013	109	100	16			
				119	100				
				69	69		16		
				79	79				

☎ Order/ex Catalog No. [] - [d] - [L]
BGBS - 30 - 49

BGBF



Material #500SP (CAC304+Gr)

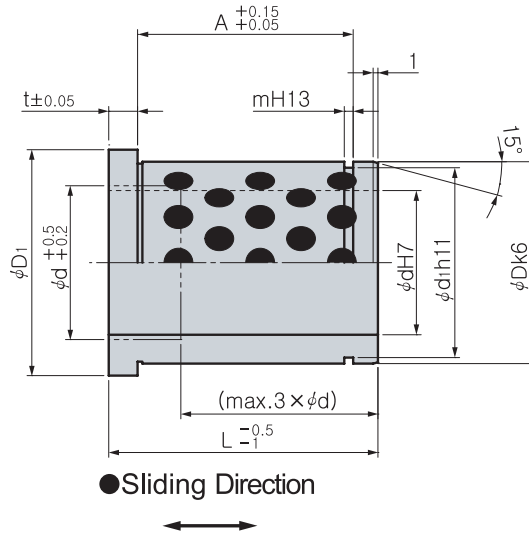
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	16	+0.017 +0.006	25	30	6	19	19
						24	24
						29	29
						34	30
	20	+0.021 +0.008	30	35	8	39	30
						49	30
						24	24
						29	29
	25	+0.020 +0.007	35	40	8	34	34
						39	39
						49	40
						59	40
	30	+0.025 +0.009	42	47	10	29	29
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						49	49
						59	50
						69	50
						29	29
						34	34

products code	dG6	Dm6	F	T	L	L1		
BGBF	35	48	+0.025 +0.009	54	10	39	39	
						49	49	
						59	59	
						69	69	
	40	+0.025 +0.009	55	61	10	79	70	
						89	70	
						99	70	
						39	39	
	50	+0.030 +0.011	70	76	12	49	49	
						59	59	
						69	69	
						79	79	
	60	+0.025 +0.009	80	86	15	89	89	
						99	90	
						109	90	
						119	90	
	80	+0.029 +0.010	100	108	15	99	99	
						109	109	
						119	119	
						129	120	
							149	120

Order/ex Catalog No. — d — L
BGBF — 30 — 49



BOST



Material : Bronze with Graphite
(CAC304+GR)

* When the product is used at high temperature (150°C or more), the embedding specification of solid lubricant is different. Please contact us for details.

t	D k6	D ₁	d H7	d ₁ h11	A	m H13	Catalog No.	d	L		
3	14	-0.032 -0.050	16	+0.015 0	13.4	0 -0.110	BOST	1.1	+0.140 0	6.6	012
										11.6	017
										16.6	09 022
										21.6	027
										30.6	036
										6.6	012
										11.6	017
										16.6	10 022
										21.6	027
										30.6	036



Guide Bushing – For Injection and Die Casting Moulds

t	D k6		D ₁	d H7		d ₁ h11		A	m H13		Calalog No.	d	L					
6	18	+0.012 +0.001	23	12		17	0 -0.110	8.3			BOST	12	017					
								13.3					022					
								18.3					027					
								27.3					036					
									8.3					BOST	14	017		
									13.3							022		
									18.3							027		
									27.3							036		
				14					37.3							BOST	15	046
									47.3									056
									8.3									017
									13.3									022
	20		25			19		18.3			BOST	16	027					
								27.3					036					
								37.3					046					
								47.3					056					
6								8.3		1.3			BOST	18	017			
								13.3							022			
								18.3							027			
								27.3							036			
		22	+0.015 +0.002	27	16		21	0 -0.130	37.3							BOST	20	046
									47.3									056
									8.3									017
									13.3									022
									18.3			BOST			20			027
									27.3									036
									37.3									046
									47.3									056
				18				57.3			BOST		20	066				
								8.3						017				
								13.3						022				
								18.3						027				
	26		31			24.9		27.3						BOST		20	036	
								37.3									046	
								47.3									056	
								57.3									066	
								8.3				BOST			20		017	
								13.3									022	
								18.3									027	
								27.3									036	
				20	+0.021 0			37.3			BOST		20				046	
								47.3									056	
								57.3									066	
								8.3									017	



Order

Catalog No.

BOST

d

09

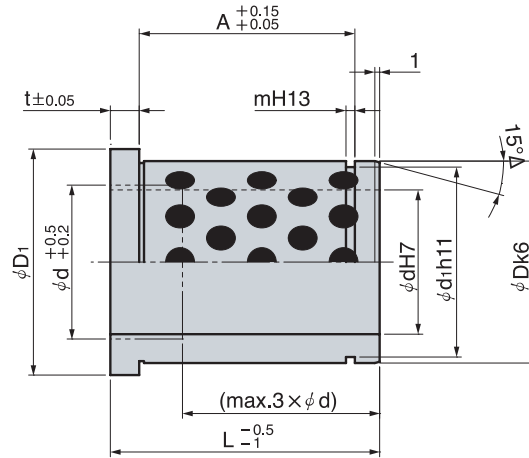
—

L

012



BOST



t	D k6	D ₁	d H7	d ₁ h11	A	m H13	Cagalog No.	d	L	
					7.6				017	
					12.6				022	
					17.6				027	
					26.6				036	
			22		36.6			22	046	
					46.6				056	
					56.6				066	
					66.6				076	
	30	+0.015 +0.002	35		28.6	0 -0.130		1.6	086	
					7.6				017	
					12.6				022	
					17.6				027	
					26.6				036	
6			24	+0.021 0	36.6		+0.140 +0	BOST	24	046
					46.6				056	
					56.6				066	
					66.6				076	
					76.6				086	
					15.85				027	
					24.85				036	
					34.85				046	
					44.85				056	
	42	+0.018 +0.002	47	30	39.5	0 -0.160		1.85	30	066
					54.85				076	
					64.85				086	
					74.85				096	
					84.85				116	
					104.85				116	



Guide Bushing – For Injection and Die Casting Moulds

t	D k6		D ₁	d H7		d ₁ h11		A	m H13		Catalog No.	d	L
								15.85					027
								24.85					036
								34.85					046
								44.85					056
6	42	+0.018 +0.002	47	32		39.5	⁰ -0.160	54.85	1.85			32	066
								64.85					076
								74.85					086
								84.85		+0.140 +0			096
								104.85					116
								40.15					056
								50.15					066
								60.15					076
				40		51	⁰ -0.190	70.15	2.15			40	086
								80.15					096
								100.15					116
					+0.025 0			120.15					136
	54		60					—					156
								40.15			BOST		056
								50.15					066
								60.15					076
10				42		51	⁰ -0.190	70.15	2.15	+0.140 0		42	086
								80.15					096
		+0.021 +0.002						100.15					116
								120.15					136
													156
													076
													086
													096
	66		72	50								50	116
													136
													156
													196
													096
													116
20	80		86	60	+0.030 0							60	136
													156
													196

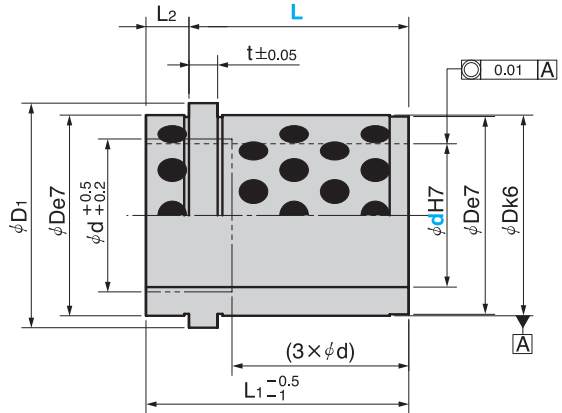


Order

Catalog No.	d	-	L
BOST	24	-	022



BOSG



● Sliding Direction



Material : Bronze with Graphite (CAC304+GR)

L1	L2	t	D	Tolerance		D1	d H7	Catalog No.	d	L
				e7	k6					
15										012
20										017
25							9		9	022
30										027
39										036
15	3	3	14	- 0.032	+ 0.012	16	+ 0.015	BOSG	10	012
20				- 0.050	+ 0.001		0			017
25							10			022
30										027
39										036
26										017
31										022
36										027
45	9	6	20	- 0.040	+ 0.015	25	+ 0.018	BOSG	14	036
55				- 0.061	+ 0.002		0			046
65										056



Guide Bushing – For Injection and Die Casting Moulds

L1	L2	t	D	Tolerance		D1	d H7		Catalog No.	d	L		
				e7	k6								
26											017		
31											022		
36			20			25	15			15	027		
45												036	
55												046	
65												056	
26												+0.018 0	
31											022		
36											027		
45							18			18	036		
55											046		
65											056		
75			26			31					066		
26													017
31													022
36													027
45									20			20	036
55											046		
65	9	6		-0.040	+0.015				BOSG		056		
75				-0.061	+0.002					066			
26													017
31													022
36													027
45											036		
55							22			22	046		
65								+0.021 0			056		
75											066		
85											076		
95			30			35					086		
26													017
31													022
36													027
45													036
55							24			24	046		
65											056		
75											066		
85											076		
95											086		

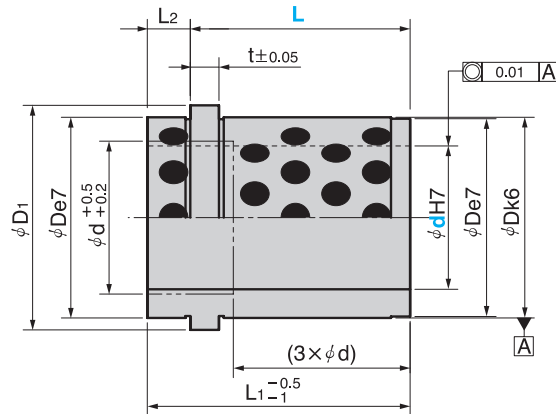


Order

Catalog No. BOSG d 9 - L 017



BOSG



L1	L2	t	D	Tolerance		D1	d H7	Catalog No.	d	L
				e7	k6					
36										027
45										036
55										046
65										056
75							30	$\begin{matrix} +0.021 \\ 0 \end{matrix}$	30	066
85										076
95										086
105										096
125	9	6	42	-0.050	+0.018	47		BOSG		116
36				-0.075	+0.002					
45										036
55										046
65										056
75							32	$\begin{matrix} +0.021 \\ 0 \end{matrix}$	32	066
85										076
95										086
105										096
125										116



Guide Bushing – For Injection and Die Casting Moulds

L1	L2	t	D	Tolerance		D1	d H7	Catalog No.	d	L
				e7	k6					
68										056
78										066
88										076
98							40		40	086
108										096
128										116
148										136
168	12	10	54	-0.060	-0.021	60	+0.021	BOSG		156
68				-0.090	-0.002		+0			
78										066
88										076
98							42		42	086
108										096
128										116
148										136
168										156



Order

Catalog No.	d	-	L
BOSG	32	-	027

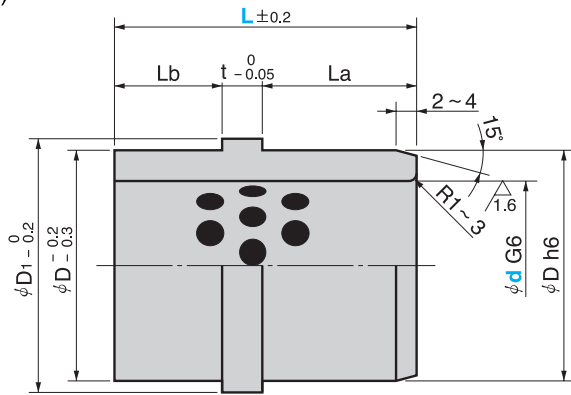
BEGB (Flange Thickness 4mm Type)

BEGBK (Flange Thickness 8mm Type)



BEGB

BEGBK



● Sliding Direction



Material : Bronze with Graphite (CAC304+GR)

d G6	D h6	D1	La	Lb	t	Catalog No.	d	L
16	25	30	12	10	4	BEGB	16	26
			14					28
			19					33
20	30	35	24	15	4	BEGB	20	38
			12					26
			14					28
25	35	40	19	15	4	BEGB	25	33
			24					38
			12					26
30	40	45	14	15	4	BEGB	30	33
			19					38
			24					43
35	46	50	19	15	4	BEGB	35	38
			24					43
			29					48
40	52	57	24	20	4	BEGB	40	53
			29					48
			24					53
50	62	67	24	20	4	BEGB	50	48
			29					53
			24					48



Ejector Guide Bushing – Bronze with Graphite Type

d G6		D h6		D1	La	Lb	t	Catalog No.	d	L
25		35		40	19	6			25	33
					24					38
30	+ 0.020 + 0.007	40		45	29	11				48
					24					
35		42	0 - 0.016	47	29	15			30	52
					50					39
40		50		55	32	20				60
					42					49
45		55		60	24	25		BEGBK	40	78
					29					30
50	+ 0.025 + 0.009	62	0 - 0.019	67	29	30				67
					39					40
60	+ 0.029 + 0.010	74		82	29	30			45	98
					39					40
					29	30			50	87
					39	40			60	87

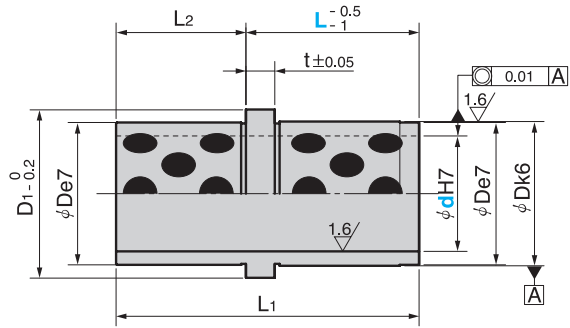


Order

Catalog No.	d	-	L
BEGB	30	-	43
BEGBK	25	-	38



BOVM



● Sliding Direction



Material : Bronze with Graphite
(CAC304+GR)

L1	L2	t	D	Tolerance		D1	d H7		Catalog No.	d	L	
				e7	k6							
15	6	3	14	-0.032	+0.012	16	9	+0.015	BOVM	9	009	
				-0.050	+0.001		10	0		10	017	
								14		14	017	
			20			25		15		+0.018	15	022
								18		0	18	022
			26	-0.040	+0.015	31		20			20	027
				-0.061	+0.002						22	027
		6	30			35		22		+0.021	22	027
								24		0	24	036
			42			47		30			30	036
		27		-0.050	+0.018						32	046
				-0.075	+0.002			32		+0.025	32	046



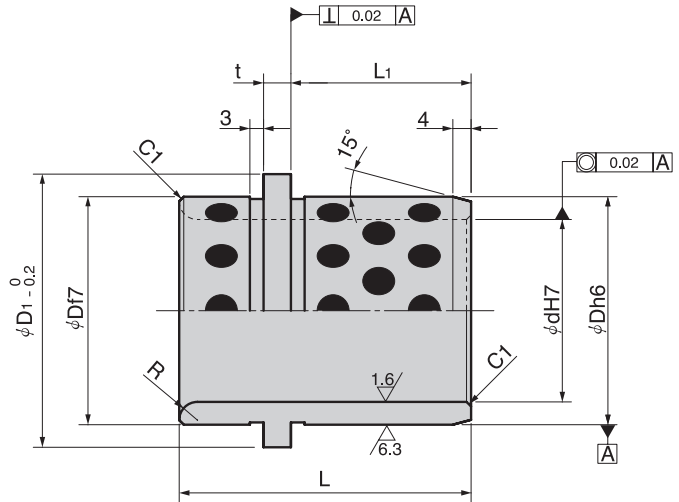
Order

Catalog No.	d	-	L
BOVM	24	-	036



Guide Bushing – For Ejector and Stripper Plates

BSOEG



● Sliding Direction



Material : Bronze with Graphite
(CAC304+GR)

d	L	L1	t	D f7	D h6	D1	d H7	R	Catalog No.	Nominal
25	43	24	7.5	35	35	40	25	3	BSOEG	25
30				42						47
40	60	35.5	6	50	50	59.9	40	4		40.1
	64	39.5								40.2
50	77	44.5	8	63	63	71.9	50	4		50.3
	92	55.5								50.4
60	78	49	7.5	80	80	86	60	3		60
	95	55.5								63.5
63	100	62.5	8	80	80	89.9	63	4		63.6
	108									63.7

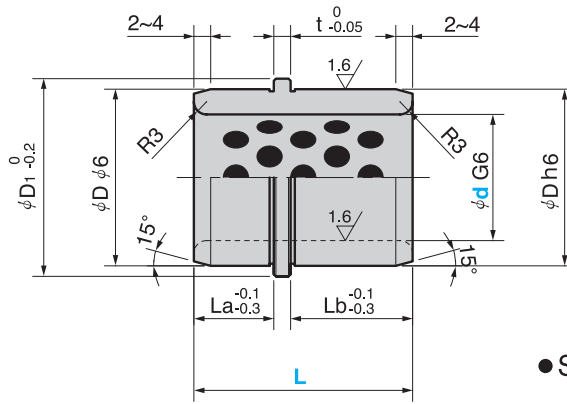


Order

Catalog No. - Nominal

BSOEG - 30

BEGBL
BEGBLH (For Large Die)



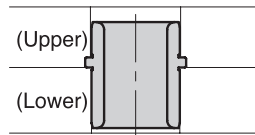
● Sliding Direction
↔

Material : Bronze with Graphite (CAC304+GR)

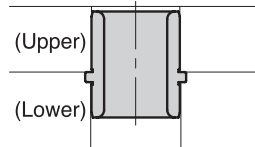
■ Criteria for BEGBL (Relation between dimension L and upper/lower plate thickness)

Ejector plate thickness						Guide Bushing BEGBL		
Lower plate as master		Upper plate as master		Spacer method		d	L	t
Upper	Lower	Upper	Lower	Upper	Lower			
						20		
15	20	20	20	15	20	25	33	4
						30		
						20		
20	20	20	20	20	20	25	37	4
						30		
						25		
20	25	25	30	20	25	30	42	4
						35		
						40	43	8
				25	30	30	52	4
25	30	30	40			35		
						40	53	8
						50		
				30	40	35		4
30	40	40	40			40	68	8
						50		

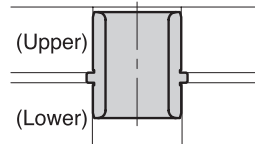
● Lower plate as master



● Upper plate as master



● Spacer method





Ejector Guide Bushing – Long Type

d G6	D	h6	D ₁	La	Lb	t	Catalog No.	d	L
20	30	$\begin{matrix} 0 \\ -0.013 \end{matrix}$	34	10	19			20	33
				14					37
25	35	$\begin{matrix} +0.020 \\ +0.007 \end{matrix}$	40	10	19			25	33
				14					37
				14	24	42			
30	42	$\begin{matrix} 0 \\ -0.016 \end{matrix}$	47	10	19	4		30	33
				14					37
				14	24	42			
				19	29	BEGBL	52		
35	48		53	14	24			35	42
				19	29		52		
				25	39		68		
40	55	$\begin{matrix} +0.025 \\ +0.009 \end{matrix}$	61	11	24			40	43
				16	29		53		
				21	39	8	68		
50	65	$\begin{matrix} 0 \\ -0.019 \end{matrix}$	71	16	29			50	53
				21	39		68		
40	55	$\begin{matrix} +0.025 \\ +0.009 \end{matrix}$	61	16	24			40	48
				21	29		58		
50	65	$\begin{matrix} 0 \\ -0.019 \end{matrix}$	71	21	29	8	BEGBLH	50	58
				31	39				78
60	76	$\begin{matrix} +0.029 \\ +0.010 \end{matrix}$	84	31	39			60	78
				41	49		98		

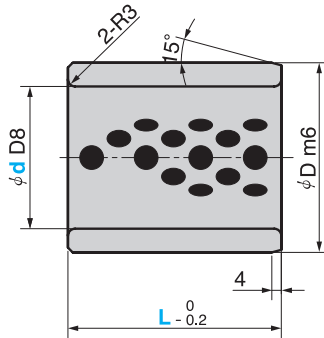


Order

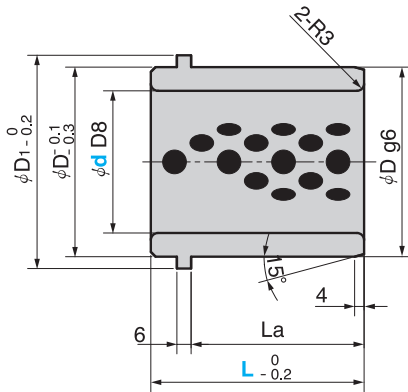
Catalog No.	d	-	L
BEGBL	30	-	37
BEGBLH	50	-	78



BGBD (Straight Type)



BGBTD (Flange Type)



● Sliding Direction



● Recommended tolerance for drilled hole H7

Material : Bronze with Graphite (CAC304+GR)

■ Tolerance of outer diameter φ D

D	BGBD	BGBTD	d D8	D	D1	La	Catalog No.	d	L
	Tolerance m6	Tolerance g6							
80	+ 0.030	- 0.010	60	80	90	53	BGBD	60	70
	+ 0.011	- 0.029				73			90
100	+ 0.035	- 0.012	80	100	110	80	BGBTD	80	100
	+ 0.013	- 0.034				100			120



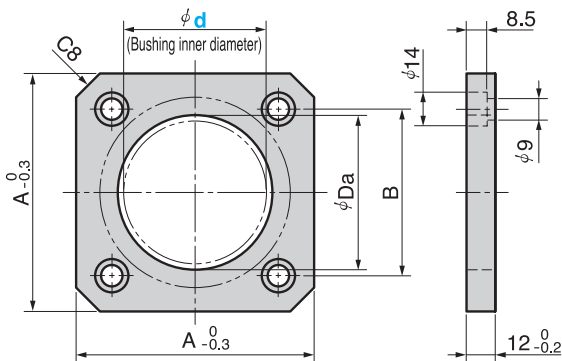
Order

Catalog No. **BGBTD** d **60** - L **90**



■ Guide Bushing Loosening Lock Plate (for Straight Type)

BBSP



A	B	Da	Bushing outer diameter D	Catalog No.	d
90	70	65	80	BBSP	60
110	90	85	100		80



Order

Catalog No.

BBSP

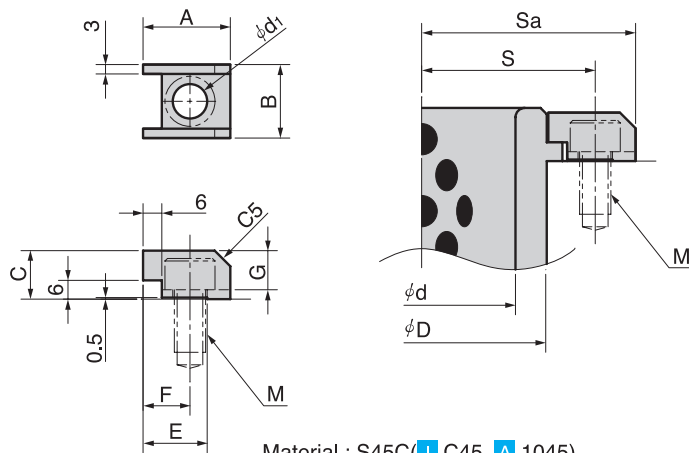
d

60

Material : S45C(1 C45 A 1045)
Surface Treatment : Black oxide

■ Guide Bushing Loosening Lock Plate (for Flange Type)

BNG



Material : S45C(1 C45 A 1045)

Guide Bushing		M	S	Sa
d	D			
60	80	M8	54	65.1
		M10	55.5	68.4
80	100	M8	65	76.1
		M10	66.5	79.4

A	B	d1	C	E	F	G	M	Catalog No.
24.6	18.9	9	13	18	13.5	10	M8	BNG72
27.9	23.5	11	15.5	20.5	15	12.5	M10	BNG73

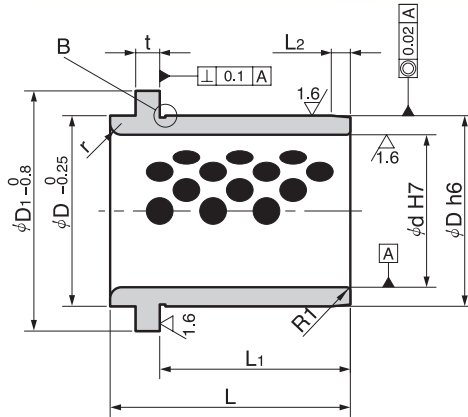


Order

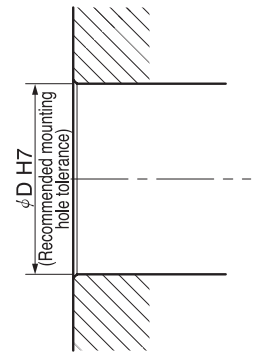
Catalog No.

BNG73

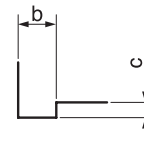
DIN9834



● Sliding Direction

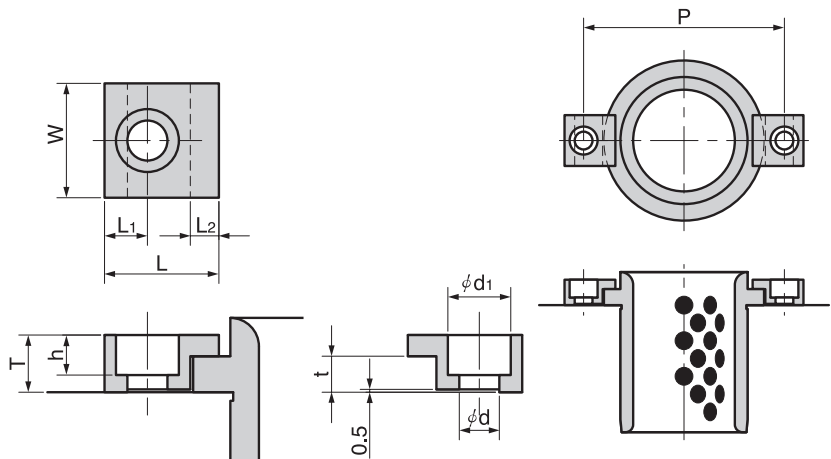


Detail B



Material : Bronze with Graphite (CAC304+GR)

■ Clamp VDI-KL(DIN9832)



Material : ST37K(Equivalent to SS400)



Catalog No.	d	H7	D	h6	L	D ₁	L ₁	L ₂	t	r	b×c
9834-025	25	+0.021 0	32		40	40	30	3			
9834-032	32		40	0 -0.016	50	50	40	4	6.3	3	0.6×0.3
9834-040	40	+0.025 0	50		63	63	50	5			
9834-050	50		63	0 -0.019	71	71	56	6.3		5	
9834-063	63		80		80	90	63	8		6	
9834-080	80	+0.030 0	100	0 -0.022	100	112	80	10		8	
9834-100	100		125	0 -0.025	125	140	106	12.5	10	10	1.0×0.4
9834-125	125	+0.040 0	160		160	180	132	16			
9834-160	160		200	0 -0.029	200	220	170	16		18	



Order

Catalog No.

9834-063

■ Operating conditions

Allowable maximum surface pressure P (daN/cm ²)	Allowable maximum speed V (m/min)	Allowable maximum PV value (daN/cm ² ·m/min)	Operating temperature °C
1000	15	2000	-150~300

● Mating material condition

Hardness : min HRC35

Surface roughness :

Ra 0.8 μm or less

■ Clamp

Catalog No.	W	L	T	L ₁	L ₂	t	d	d ₁	h	Applicable post diameter
VDI-KL- 6	20	20	10	7.5	5	6.3	7	11	7	φ25~ φ50
VDI-KL-10	32	32	16	11	10	10	11.5	17.5	11.5	φ63~ φ160



Order

Catalog No.

VDI-KL-10

■ Clamp mounting hole circle

Bushing Hole Diameter	P
25	58
32	66
40	79
50	89
63	123
80	143
100	168
125	203
160	243



Slide Plate – Bronze Type (Thickness 10mm)

BWP

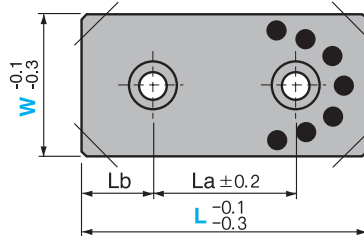
(Bronze Standard Type)

BWPC

(Bronze Standard Type
4-C chamfering Type)

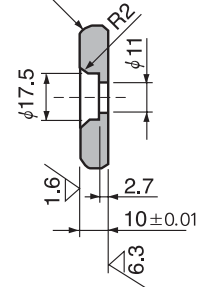


● W = 28 ~ 75

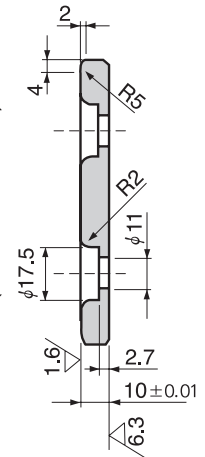
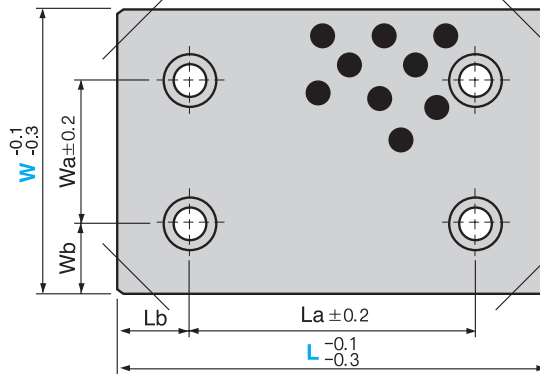


W=28 2-R2

Chamfering for W38 or more is the same as chamfering for W100 or more



● W = 100 or more

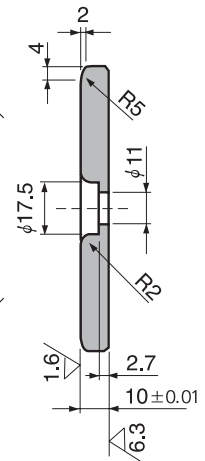
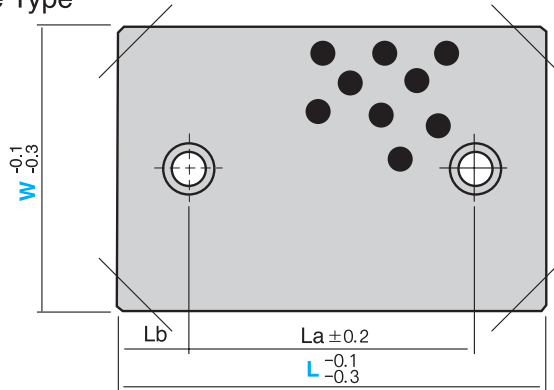


BWPT

(Bronze Standard, 2-Hole Type)

BWPTC

(Bronze Standard, 2-Hole Type
4-C chamfering Type)

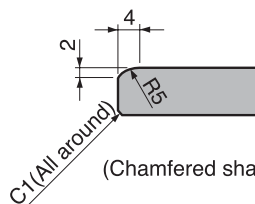


● Sliding Direction

W = 28 and 38



W = 48 or more



(Chamfered shape at both ends)

Material : Bronze with Graphite (CAC304+GR)
Accessory : Mounting bolt



Slide Plate – Bronze Type (Thickness 10mm)

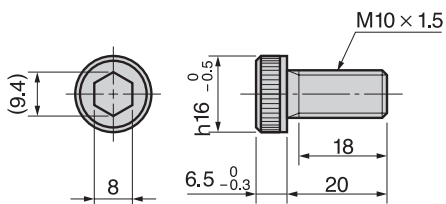
Wa	Wb	La	Lb	Catalog No.	W	L
		45	15			75
		50			28	100
		75	25			125
		100				150
		45	15			75
	□□	50			38	100
		75	25			125
		100				150
		45	15	BWP		75
-	□□	50		BWPC		100
		75			48 (58)	125
		100				150
		150				200
		25				75
		50				100
		75			75	125
		100				150
		150				200
		50	25			100
		75				125
	25	100			100	150
		150				200
50		200		BWP		250
		100		BWPC		150
	37.5	150		BWPT	125	200
		200		BWPTC		250
		100			150	150
100	25	150				200



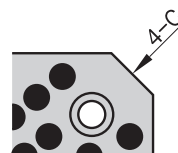
Order

Catalog No.	W	-	L
BWP	75	-	150
BWPC	48	-	100
BWPT	100	-	200

- Special brazier head bolt (LCS standard)
LCS-10-20



- BWPC/BWPTC Details of 4-C chamfering



W	Size of chamfering
28	10
38	13
48	
75	
100	17
125	
150	

■ We are ready to accept requests or orders for special parts.

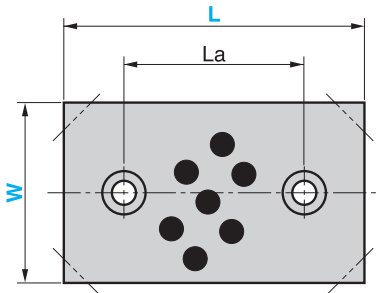


Slide Plate – Bronze Type (Thickness 5mm)

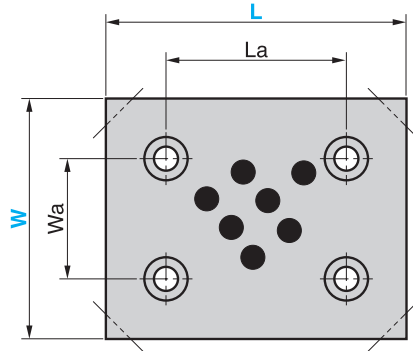
BUWP
BUWPC (4-C chamfering Type)



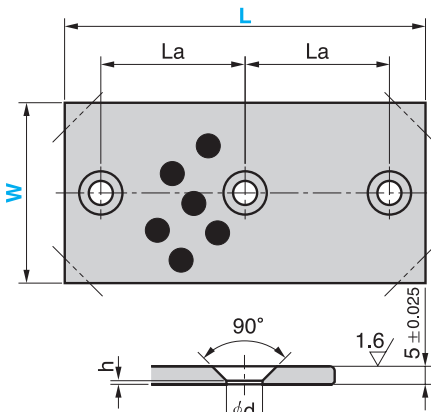
- W= 18 to 38, L= 50 to 100
W= 48, L= 75 to 125



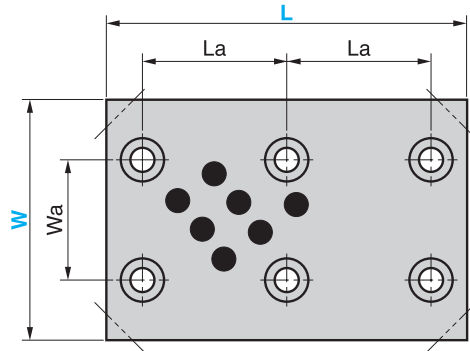
- W= 75, L= 75 to 125
W= 100, L= 100 and 125



- W=18 to 48, L=150

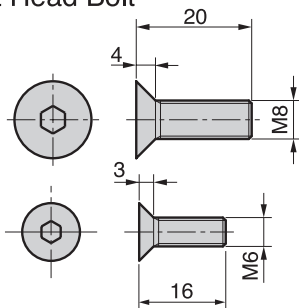


- W= 75 and 100, L= 150

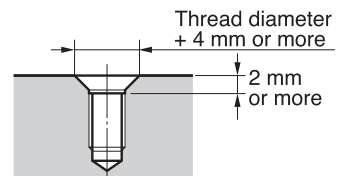


When tapped holes for mounting are drilled on the mating part, chamfer corners as shown below .

• Flat Head Bolt



• Sliding Direction



Material : Bronze with Graphite (CAC304+GR)
Accessory : Flat Head Bolt



Slide Plate – Bronze Type (Thickness 5mm)

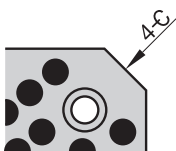
Wa	La	d	h	Mounting Bolt	Catalog No.	W	L
	20						50
-	45	6.5	1.5	M6		18	75
	70						100
	60						150
-	20					28	50
	45						75
	70						100
	60						150
-	20				BUWP BUWPC	38	50
	45						75
	70						100
	60						150
-	45	10	0.8	M8		48	75
	70						100
	95						125
	60						150
45	45					75	75
	70						100
	95						125
	60						150
70	70					100	100
	95						125
	60						150



Order

Catalog No.	W	-	L
BUWP	75	-	150
BUWPC	48	-	100

●BUWPC 4-C chamfering specification



W	Size of chamfering
28	10
38	13
48	
75	17
100	

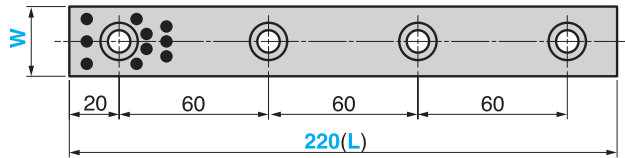
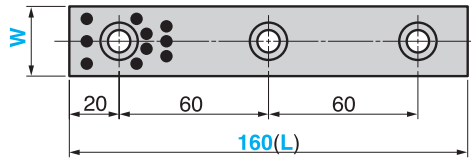
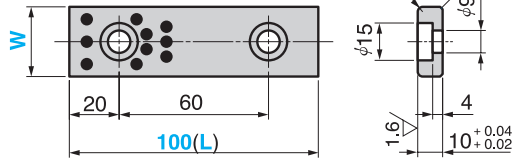
■ We are ready to accept requests or orders for special parts.



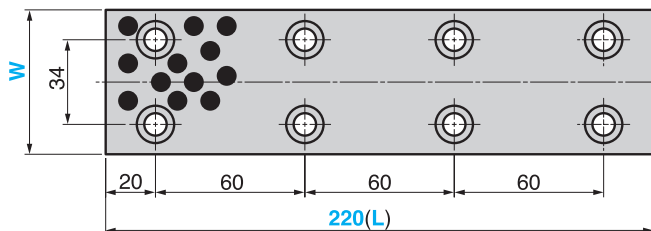
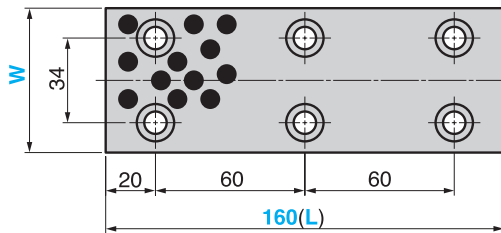
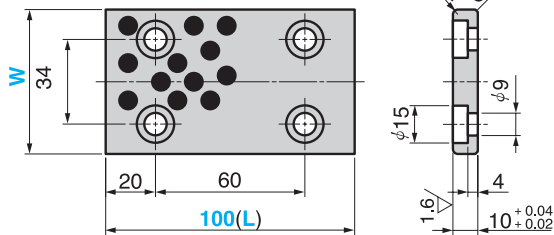
Slide Plate – Bronze High Pressure Type

BLT

● For W = 18, 28, 38, 48



● For W = 58 and 68



● Sliding Direction



Bolt
Special brazier head bolt M8 x 15

Material : Bronze with Graphite
(CAC304+GR)



Slide Plate – Bronze High Pressure Type

Catalog No.	W	(L)
		100
	18	160
		220
		100
	28	160
		220
		100
	38	160
BLT		220
		100
	48	160
		220
		100
	58	160
		220
		100
	68	160
		220



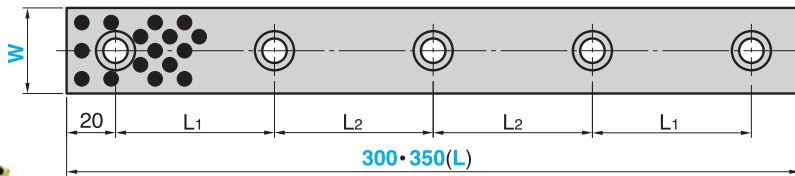
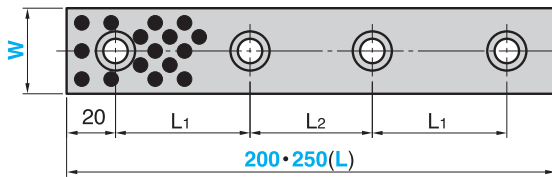
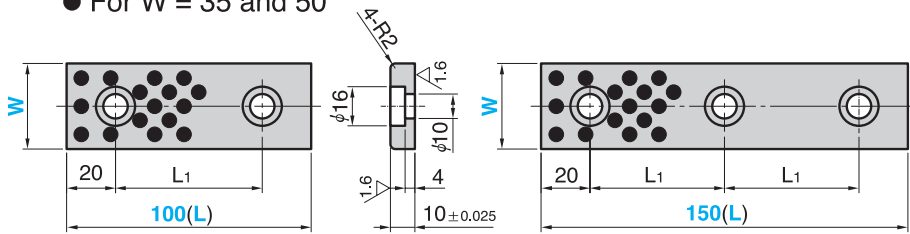
Order

Catalog No.	W	—	(L)
BLT	48	—	160

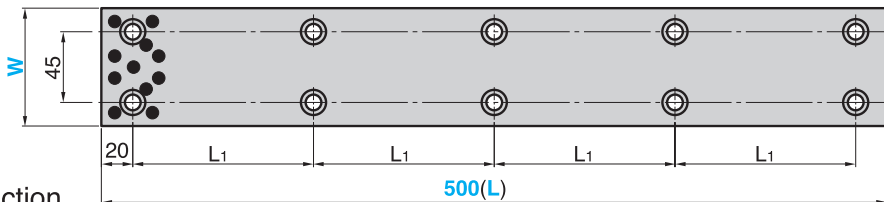
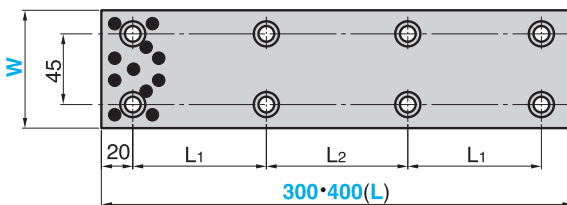
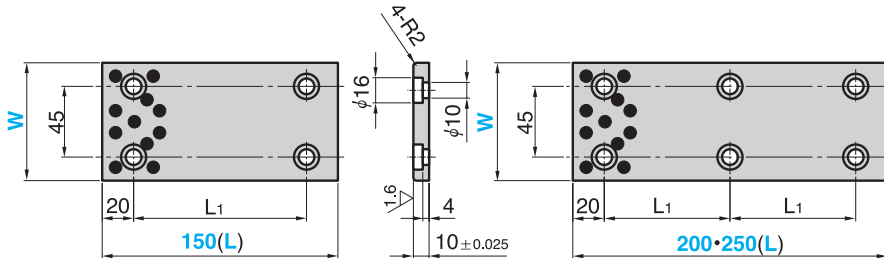
■ We are ready to accept requests or orders for special parts.

BOLP

● For W = 35 and 50



● For W = 75



● Sliding Direction



Bolt
Special brazier head bolt M8 × 15

Material : Bronze with Graphite
(CAC304+GR)



Slide Plate – Bronze Type

Bolt Position		Mounting Bolt	Catalog No.	W	(L)
L1	L2				
60	-	2			100
		3			150
55	50	4		35	200
70	70				250
65	65	5			300
80	75				350
60	-	2			100
		3			150
55	50	4	BOLP	50	200
70	70				250
65	65	5			300
80	75				350
110		4			150
80	-	6			200
105				75	250
85	90	8			300
120	120				400
115	-	10			500



Order

Catalog No.

W

(L)

BOLP

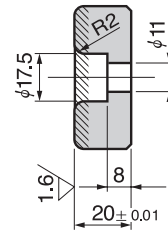
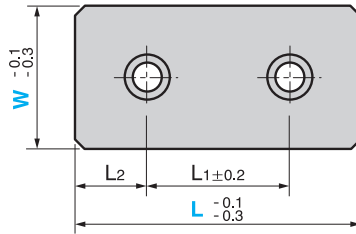
50

-

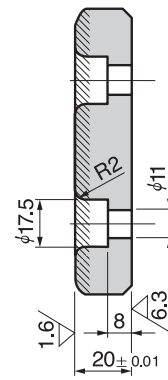
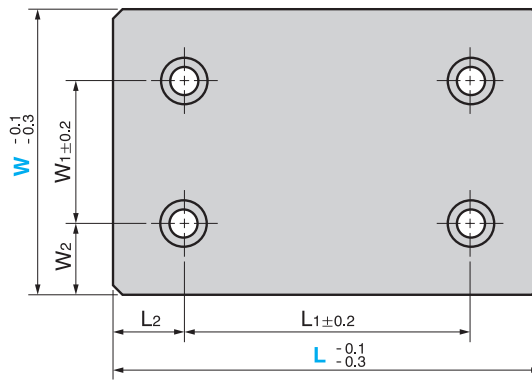
200

■ We are ready to accept requests or orders for special parts.

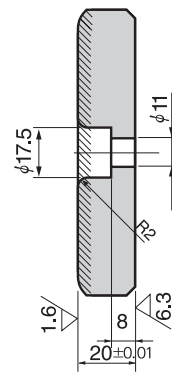
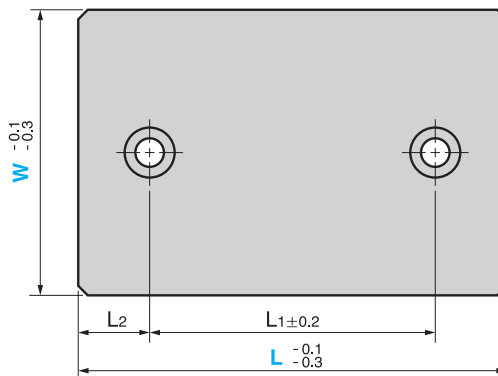
BOX (Sintered and Standard Type) • $W = 28$ to 75



• $W = 100$ or more



BOXT (Sintered 2-Hole Type)



• Sliding Direction



Material : Powder sintered (#200S)
 Hatched Area Sintered
 Thickness 1.2 mm or more
 SS400(base plate)



Wear Plate – Sintered Type

W1	W2	L1	L2	Catalog No.	W	L	
						BOX	BOXT
		45	15			75	
		50	25		28	100	
		100				150	
		45	15				75
		50	25		38	100	
		100				150	
		45	15				75
		50	25		48	100	
		75				125	
—	—	100	50	BOX			150
						200	
		45	15		58	75	
		50		100			
		100		150			
		25	25		75	75	
		50				100	
		75				125	
		100			150		
		150		200			
		50	50		100	100	100
		75				125	125
50	25	100		150		150	
		150		200	200		
		200		250	250		
		75	25	BOX		125	—
		100			BOXT		150
50	37.5	150			125	200	200
		200	50			250	250
							300
		100	25		150	150	150
100	25	150				200	200
		200				250	250

* W1 and W2 are the dimensions only for BESF (W = 100 or more).



Order

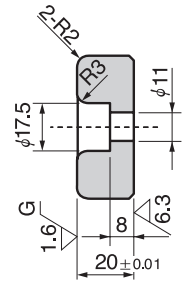
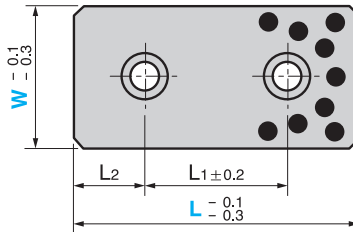
Catalog No.	W	—	L
BOX	48	—	75
BOXT	125	—	150

■ We are ready to accept requests or orders for special parts.

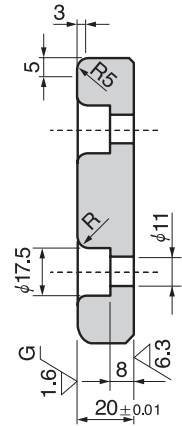
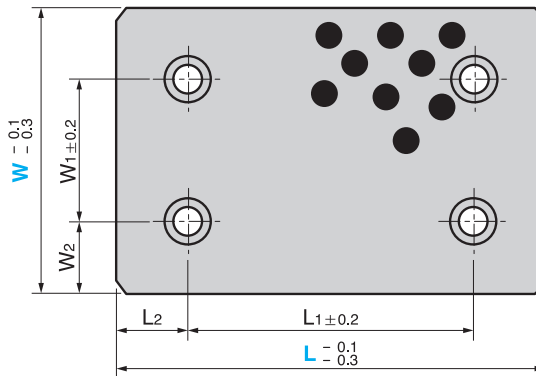
BESW (Bronze Standard Type)



• W = 28 to 75



• W = 100 or more



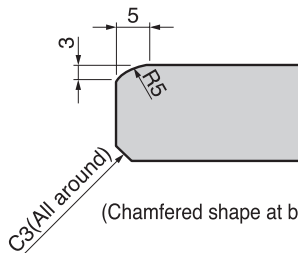
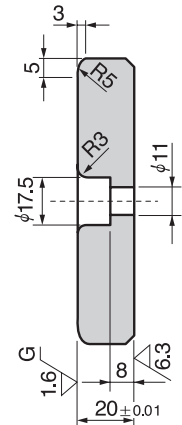
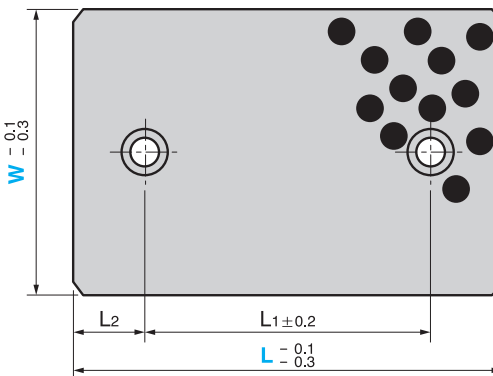
BESWT
(Bronze 2-Hole Type)



• Sliding Direction
W = 28 and 38



W = 48 or more



(Chamfered shape at both ends)

Material : Bronze with Graphite
(CAC304+GR)

W ₁	W ₂	L ₁	L ₂	Catalog No.	W	L	
						BESW	BESWT
		45	15			75	
		50	25		28	100	
		100				150	
		45	15			75	
		50	25		38	100	
		100				150	
		45	15			75	
		50	25		48	100	
		75				125	
-	-	100		BESW			150
		150				200	
		45	15		58	75	
		50				100	
		100				150	
		25				75	
		50			75	100	
		75				125	
		100	25			150	
		150				200	
		50			100	100	100
		75				125	125
	25	100				150	150
		150				200	200
		200				250	250
50		200	50			300	300
		75		BESW	125	125	125
		100				BESWT	150
	37.5	150	25				200
						250	250
		200	50			300	300
			75			350	350
		100			150	150	150
100	25	150	25			200	200
		200				250	250

* W₁ and W₂ are the dimensions only for BESF (W = 100 or more).



Order

Catalog No.	W	-	L
BESW	38	-	100
BESWT	100	-	150

■ We are ready to accept requests or orders for special parts.

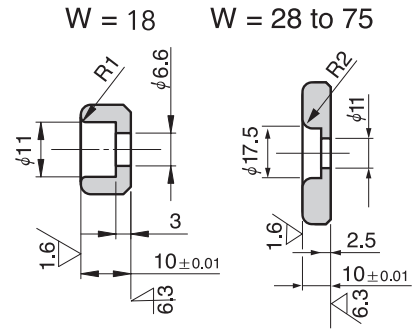
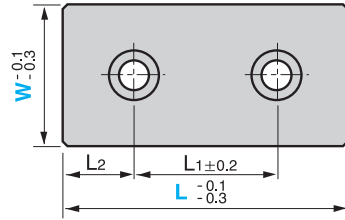


Wear Plate – Sintered Type (Thickness 10mm)

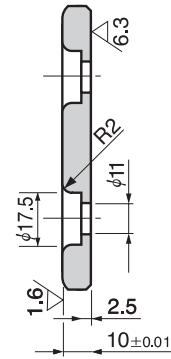
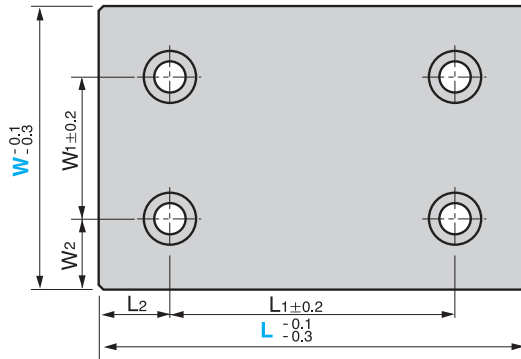
BWX



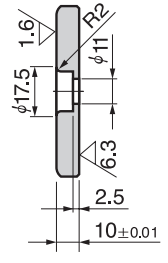
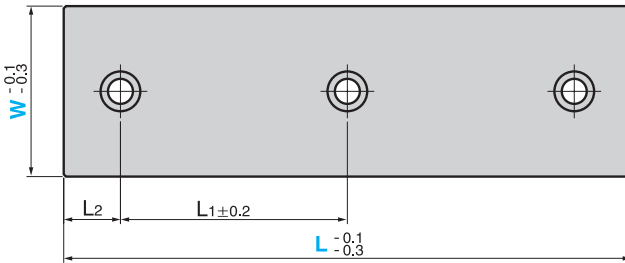
• W = 18 to 75



• W = 100 or more



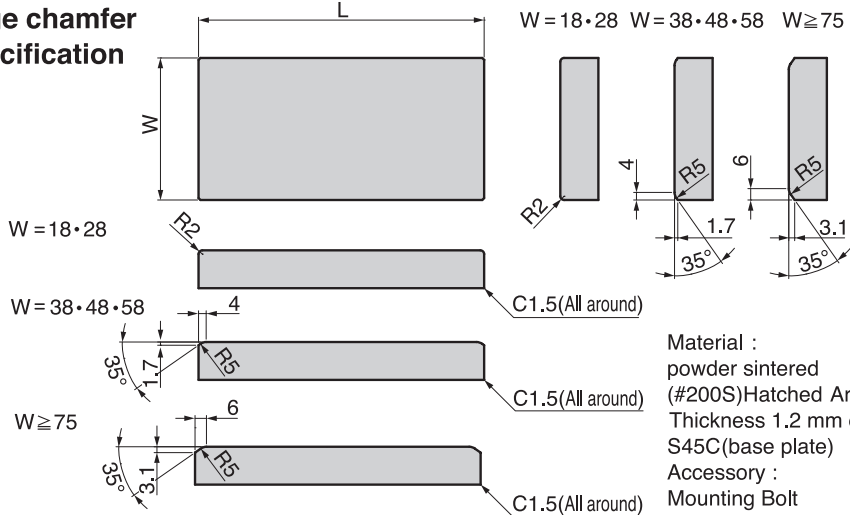
• W = 48, L = 250
W = 75, L = 250 and 300



• Sliding Direction



Edge chamfer specification



Material :
powder sintered
(#200S)Hatched Area Sintered
Thickness 1.2 mm or more
S45C(base plate)
Accessory :
Mounting Bolt



Wear Plate – Sintered Type (Thickness 10mm)

W1	W2	L1	L2	Catalog No.	W	L
		45	15			75
		50			18	100
		75	25			125
		100				150
		45	15			75
		50			28	100
		75	25			125
		100				150
		45	15			75
		50			38	100
		75	25			125
		100				150
		45	15			75
		50			48	100
		75	25			125
		100				150
		45	15			75
		50			58	100
		100		BWX		150
		25				75
		50	25			100
		75			75	125
		100				150
		150				200
		100				250
		100	50			300
		50				100
		75				125
50	25	100	25		100	150
		150				200
		200				250
		200	50			300
75		75				125
		100				150
		150	25		125	200
50	37.5	200				250
		200	50			300
		100				150
100	25	150	25		150	200
		200				250

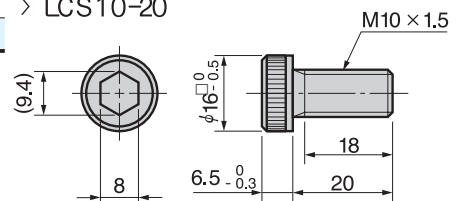
*Bolts are not attached to BWX18.



Order

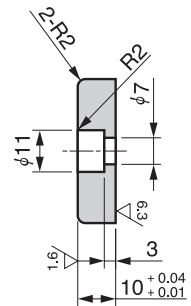
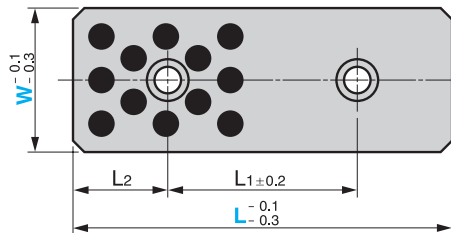
Catalog No.	W	-	L
BWX	48	-	150

- Special brazier head bolt (LCS standard)
- > LCS10-20

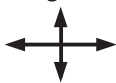


■ We are ready to accept requests or orders for special parts.

BOML



● Sliding Direction



 Bolt
M6×15

Material : Bronze with Graphite
(CAC304+GR)

L1	L2	Catalog No.	W	L
45	15			75
50			18	100
75	25			125
100				150
45	15			75
50			28	100
75	25			125
100		BOML		150
45	15			75
50			38	100
75	25			125
100				150
45	15			75
50			48	100
75	25			125
100				150

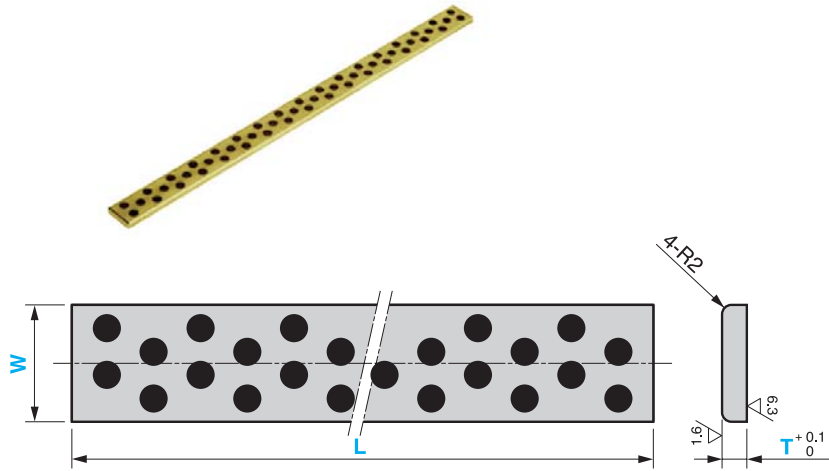


Order

Catalog No. W - L
BOML 28 - 100

■ We are ready to accept requests or orders for special parts.

BPLB



● Sliding Direction



Material : Bronze with Graphite
(CAC304+GR)

(Actual Size) T	Recommended Bolt	Catalog No.	W	L	T (Nominal)
5.3	M6 × 10 Countersunk head screw	BPLB	20	305	5
			25		
			30		
10.3	M8 × 15 Hexagonal socket head round screw		35	605	10
			40		
			50		
15.3	M10 × 20 Hexagon Socket Bolt	60		15	

■ **For Operation**

- Cut or drill the plate as required.
- Please use after machining bolt holes



Order

Catalog No.	W	–	L	–	T
BPLB	25	–	305	–	5



The catalog number was changed for our convenience. The specifications are the same.

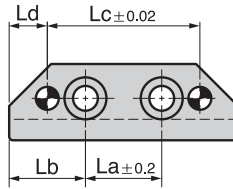
Old catalog No.	New catalog No.
SP	BPLB

■ We are ready to accept requests or orders for special parts.

- BGLS** (Steel without Dowel Hole)
- BGLSN** (Steel with Dowel Hole)
- BGLW** (Copper Alloy without Dowel Hole)
- BGLWN** (Copper Alloy with Dowel Hole)



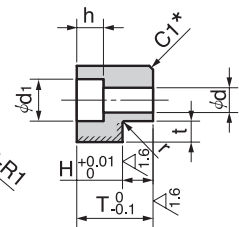
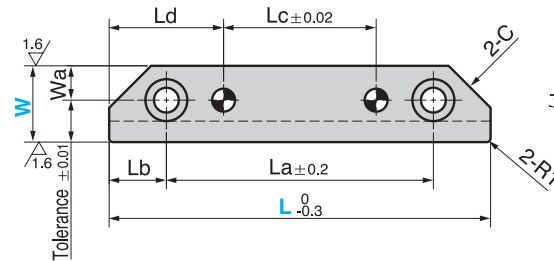
• **L=60**



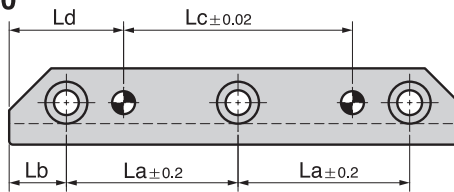
*The copper alloy type is C2.



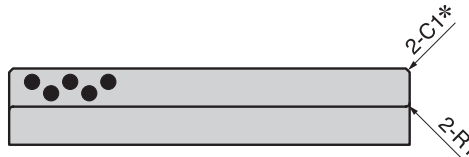
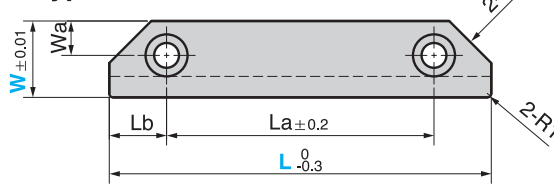
• **L=80~100**



• **L=120**

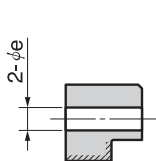


■ **Type without Dowel Hole**

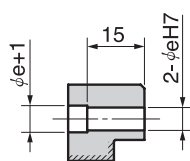


*The copper alloy type is C2.

■ **Type with dowel hole and dowel hole specification**



*BGLSN
BGLWN15



*BGLWN20 or more

Material : SKS3
Hatched Area with Graphite and to be Induction Hardened HRC53~58

BGLW
BGLWN
Copper alloy
Hatched Area with Graphite



Guide Rail – For Slide Core

W	L	Wa	La	Lb	Lc	Ld	C	T	H	t	r	d	d ₁	h
15	60	6	20	20	40	10	9	15	8	4.5	0.5	5.5	9.5	6
	80		55	12.5	35	22.5								
	100		75	55										
20	60	9	20	20	40	10	11	20	8	5.5	0.5	6.5	11	7
	80		50	15	20	30								
	100		70	40										
25	120	9	45		20		13	25	10	7.5	0.8	9	14	9
	80		65	17.5	40	30								
	100		42.5	60										
30	140	11	50	20	60	40	16	30	15	11	0.8	11	18	11
	120		40	40										
	160		60	80										
	180		70		100									

Catalog No.	W	L
		60
	15	80
		100
		60
	20	80
BGLS		100
BGLSN		120
BGLW		80
BGLWN	25	100
		120
		140
		120
	30	140
		160
		180

W	e	H7
15	6	+0.012
20		0
25	8	+0.015
30		0



Order

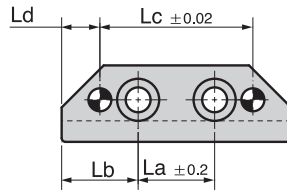
Catalog No.	W	-	L
BGLSN	25	-	120



BGLXS



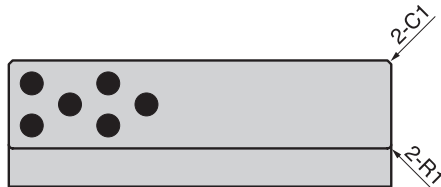
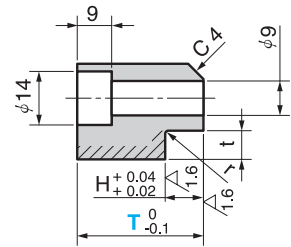
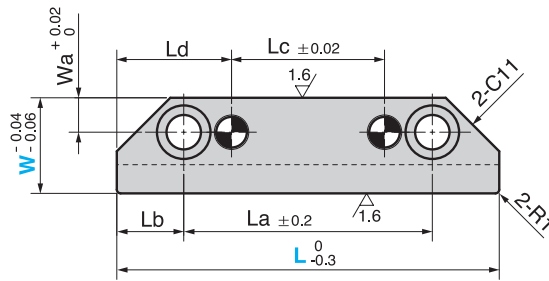
• L=60



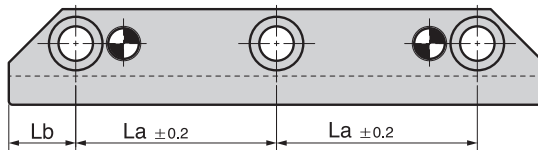
• Dowel hole

W=20 $\phi 6^{+0.012}_0$
 W=25•30 $\phi 8^{+0.015}_0$

• L=80~100



• L=120~200



Material : Bronze with Graphite
 (CAC304+GR)
 Oilless Type Area
 (Hatched Area)



Guide Rail – For Slide Core

W	L	Wa	La	Lb	Lc	Ld	T	H	t	r	
20	60	9	20	20	40	10	23	8	5.5	0.5	
	80		50	20							
	100		70	40							
	120		45	15	60	30					28
	140		55	80							
	160	65	100								
25	80	9	45	17.5	20	80	30	10	7.5	0.8	
	100		65		40						
	120		42.5		60						28
	140		52.5		80						33
	160		62.5		100						43
	180	72.5	120								
	200	82.5	140								
30	100	11	60	20	20	80	40	15	11	0.8	
	120		40		40						
	140		50		60						43
	160		60		80						53
	180		70		100						
	200	80	120								

Catalog No.	W	L	T
	20	60	
		80	
		100	23
		120	28
		140	
	25	160	
		80	
		100	
BGLXS		120	28
		140	33
	30	160	43
		180	
		200	
		100	
		120	
	30	140	43
		160	53
		180	
		200	



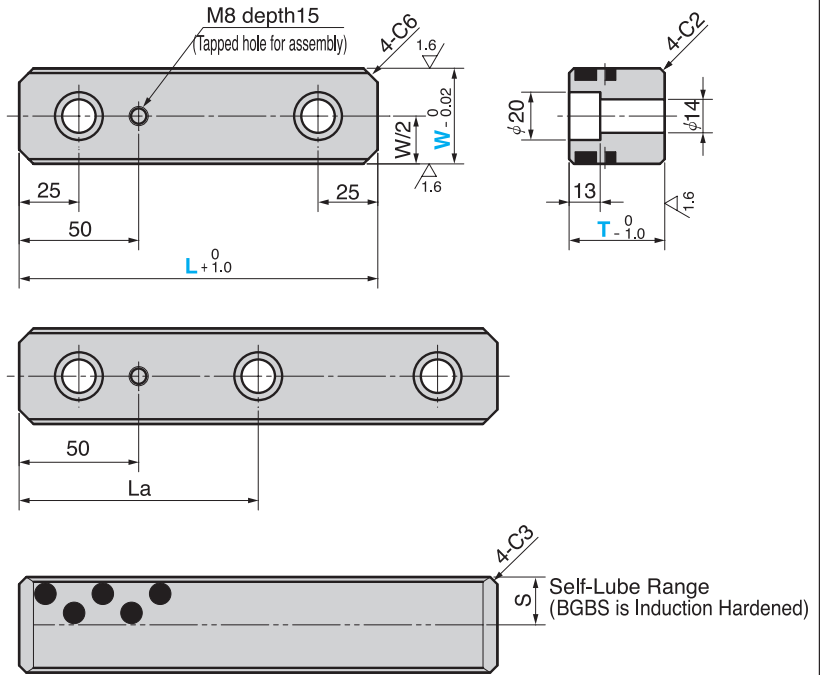
Order

Catalog No. **BGLXS** W **20** - L **100** - T **28**

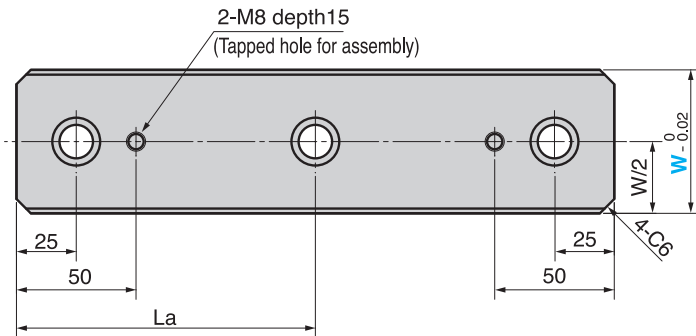


Guide Rail Center Key Type – For Slide Core

- BGBFT** (FC with Graphite Type)
- BGBST** (Steel with Graphite Type)
- BGBWT** (Bronze with Graphite Type)



• **W=60, L ≥ 250 Only**



Material

- BGBFT FC250 (I 185-88E A A48-83)
with Graphite
- BGBST S55C (I C55 A 1055)
with Graphite
HRC 40 to 45 (S Area)
Induction Hardened
- BGBWT Bronze with Graphite

■ We are ready to accept requests or orders for special parts.



Guide Rail Center Kye Type – For Slide Core

La	S	Catalog No.	W	L	T
-				100	
-				150	
100			30	200	30
125				250	
150				300	
175	15	BGBFT		350	
-		BGBST		100	
-				150	
100			40	200	30
125				250	
150				300	
175				350	
-					
-				150	
100	20	BGBFT	40	200	40
125		BGBST		250	
150		BGBWT		300	
175				350	
-					
125	25	BGBWT	60	250	40
150				300	
175				350	
-					



Order

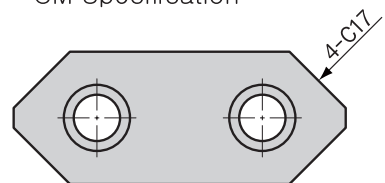
Catalog No.	W	-	L	-	T
BGBFT	30	-	150	-	30



Option

Option Code	Specification
CM	With chamfering (C17) on corners for relief (4 corners). Please instruct CM17 when ordering. This option is available only for W=40, 60 (without BGBS)

•CM Specification

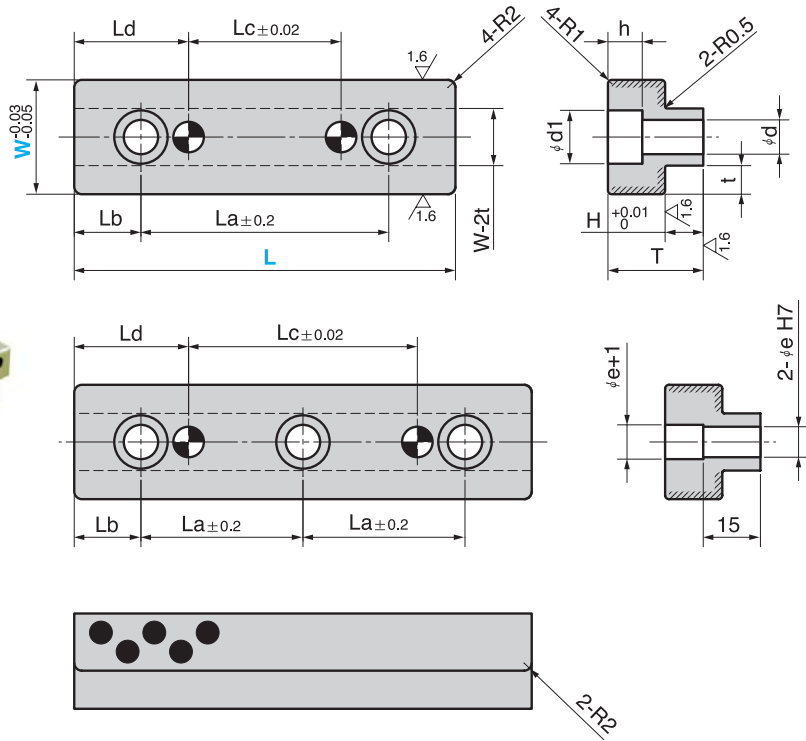


Order **BGBFT 30-150-30-CM17**



Guide Rail Oilless, Copper Alloy, L-shaped Type – For Slide Core

BBGLWN



Material : Bronze with Graphite
(CAC304+GR)

La	Lb	Lc	Ld	T	H	t	d	d ₁	h	Catalog No.	W	L
35		15										60
55	12.5	35	22.5	15	8	4.5	5.5	9.5	6		20	80
75		55										100
50		20										80
70	15	40	30	20	8	5.5	6.5	11	7		25	100
45		60								BBGLWN		120
65		40										100
42.5	17.5	60	30	25	10	7.5	9	14	9		30	120
52.5		80										140
40		40										120
50		60										140
60	20	80	40	30	15	11	11	18	11		40	160
70		100										180



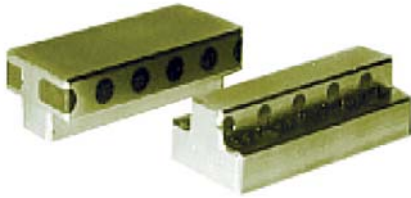
Order

Catalog No. **BBGLWN**
W **30** - L **120**

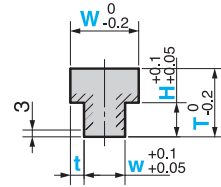
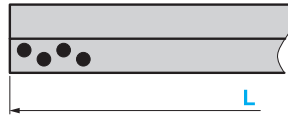
W	e	H7
20·25	6	+0.012 0
30·40	8	+0.015 0



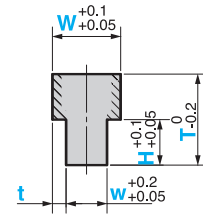
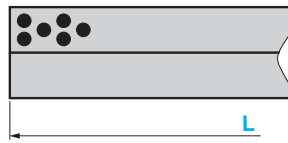
BMVT-1
BMVT-2



BMVT-1



BMVT-2



Material : Bronze with Graphite
(CAC304+GR)
Oilless Type Area
(Hatches Area)

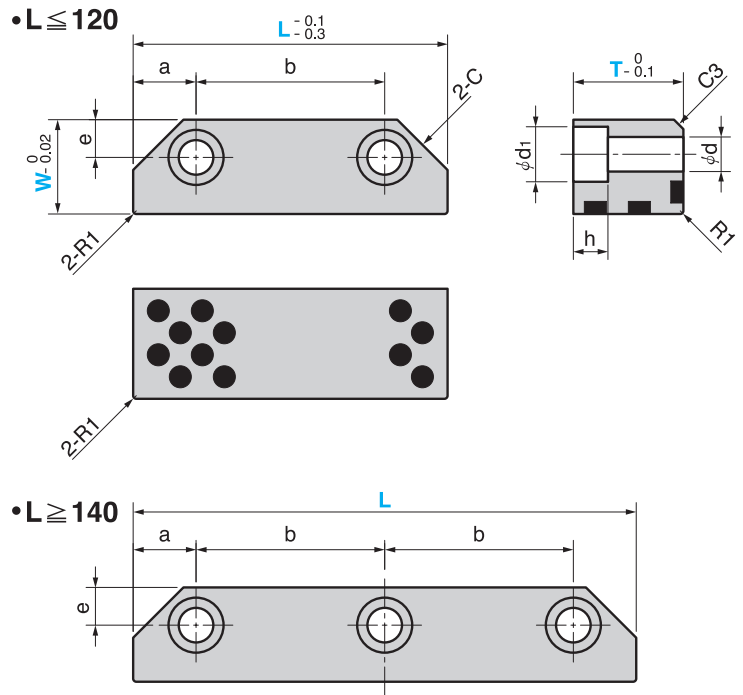
Catalog No.	T(Min) increments of 1mm	H(Min) increments of 1mm	W(Min) increments of 1mm	t(Min) increments of 1mm	w(Min) increments of 1mm	L(Max Length) increments of 1mm
BMVT-1	12	5	18	5	8	350
BMVT-2						



Order

Catalog No.	T	H	W	t	w	L
BMVT- 1	25	15	22	5	12	156
BMVT- 2	30	18	22	6	10	196

BGBT



Material : Bronze with Graphite (CAC304+GR)

a	b	e	d	d ₁	h	C	Catalog No.	W	L	T
	50								80	
	70								100	20
15	90	9	6.5	11	7	11		20	120	25
	55								140	
	65								160	
	45								80	
17.5	65								100	25
	85	10	9	14	9	13	BGBT	25	120	30
20	50								140	
	60								160	
	60								100	
	80								120	30
20	50	12	11	17.5	11	16		30	140	35
	60								160	
	70								180	



Order

Catalog No.

BGBT

W

25

-

L

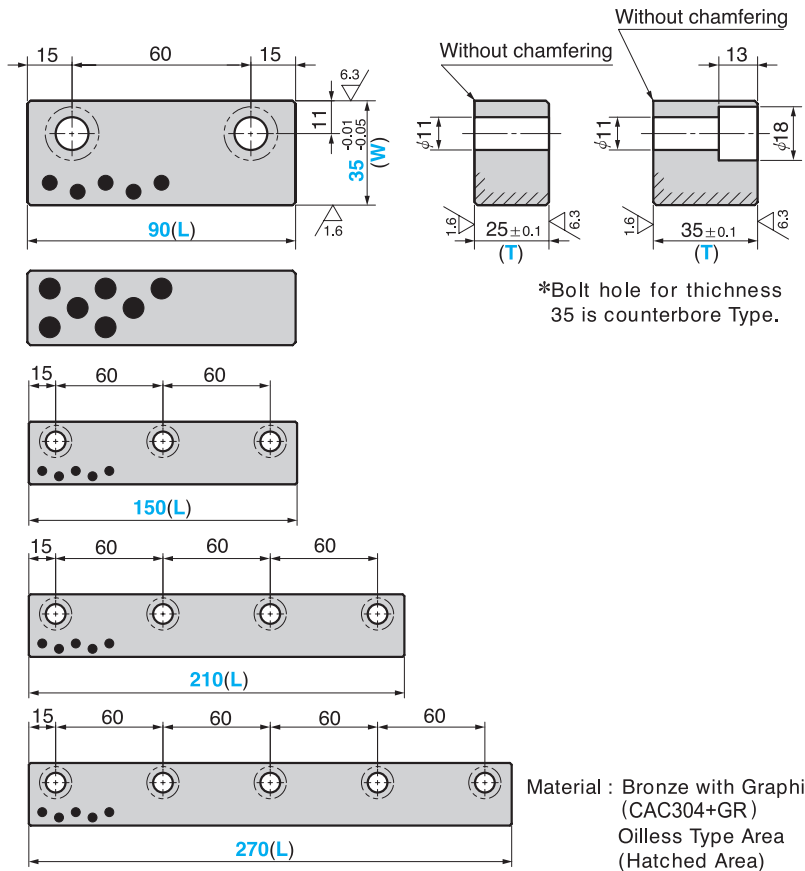
120

-

T

30

BSGBD



Catalog No.	(W)	(L)	(T)
BSGBD	35	90	25
		150	35
		210	
		270	



Option

Option Code	Specification
CM	With chamfering (C10) on corners for relief (2 corners). Please instruct CM10 when ordering.

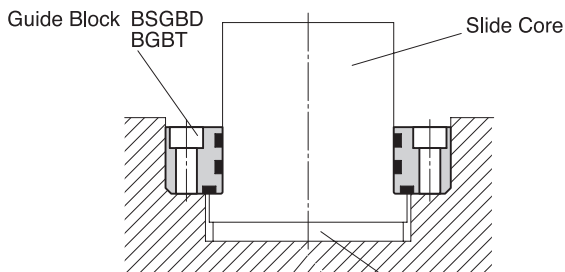


Order

Catalog No.	(W)	(L)	(T)
BSGBD	35	150	25



Example



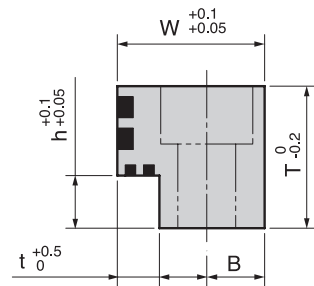
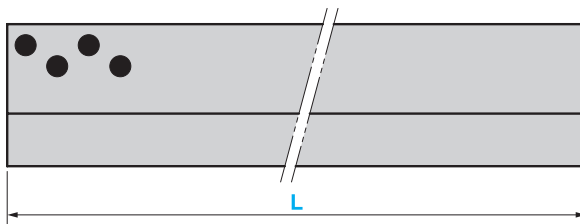
Order **BSGBD35 - 270 - 35 - CM10**

• CM Specification



BK Slide Guide L-shape – Bronze Type

BOVL



Screw holes are not machined

Material : Bronze with Graphite
(CAC304+GR)

Catalog No.	L	W	T	h	t	B
BOVL- 0	205	15	12	5		6
BOVL- 1	205	20	17	7	5	7.5
	320		22			
BOVL- 2	205		27			
	320					
BOVL- 3	205					
	320					
BOVL- 4	205	28	36	10	8	11
	320					
BOVL- 5	205		46			
	320					
BOVL- 6	205	40	66	22		
	320					
BOVL- 7	205		86	26		
	320					



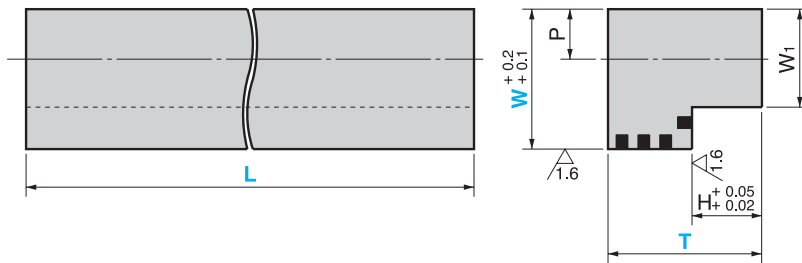
Order

Catalog No. - L
BOVL- 2 - 320



Guide Rail L-shape Blank Type – For Slide Core

BGLX



Material : Bronze with Graphite(CAC304+GR)

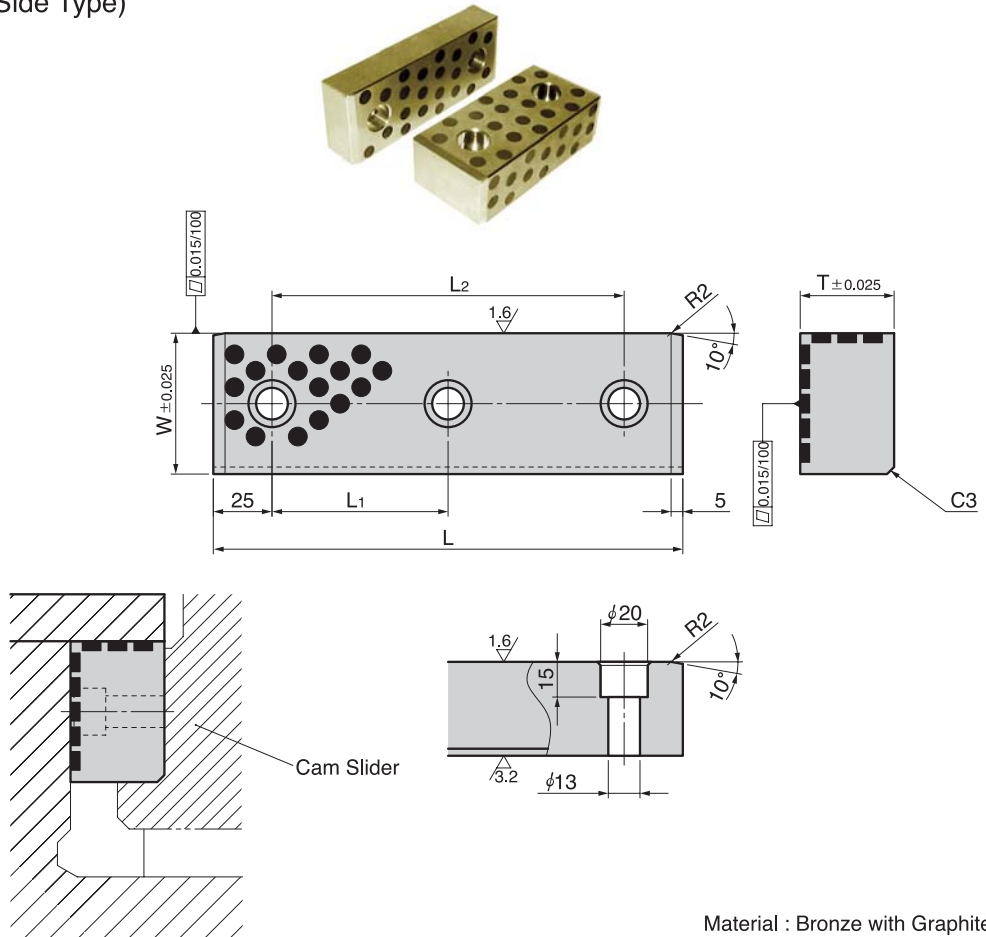
W ₁	H	Recommended Mounting Hole		Catalog No.	W	L	T	
		P	Size					
14.5	5	8		BGLX	20	320	15	
			20					
	25							
	23							
8			M 8				28	
	10						28	
17.5	10	10			25		33	
							43	
							38	
19	15				30		43	
				53				
23		12	M10		35	605	43	
								63
								45
28	20	14	M12		40		55	
								65



Order

Catalog No.	W	-	L	-	T
BGLX	20	-	320	-	25

BGLF2(Side Type)



Material : Bronze with Graphite
(CAC304+GR)

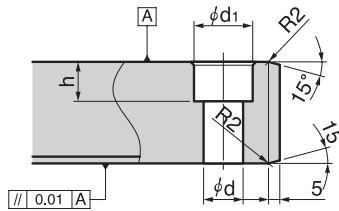
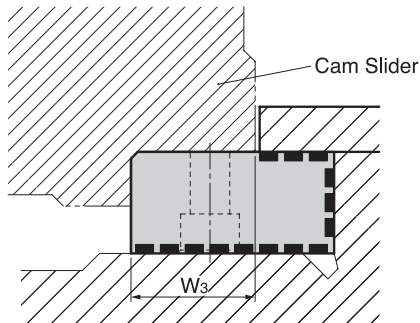
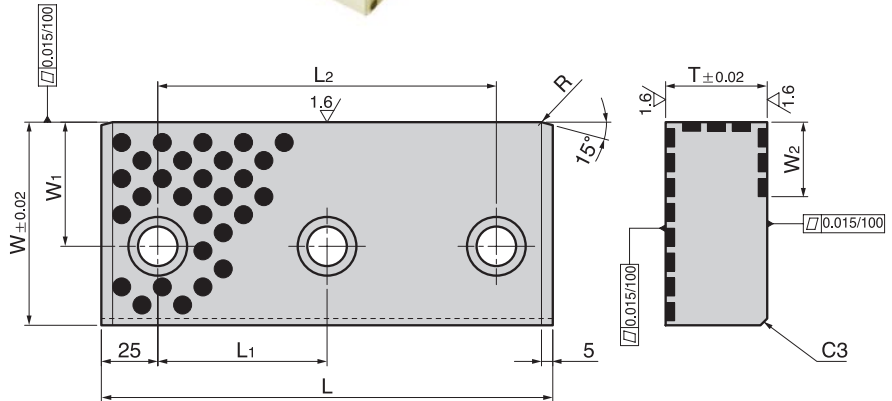
Catalog No.	W	T	L	L ₁	L ₂
BGLF2 6030125	60	30	125	-	75
BGLF2 6030150			150	-	100
BGLF2 6030200			200	75	150
BGLF2 6040125	40	40	125	-	75
BGLF2 6040150			150	-	100
BGLF2 6040200			200	75	150



Order

Catalog No.
BGLF2 6030150

BGLF3 (Lower Type)



Material : Bronze with Graphite
(CAC304+GR)

Catalog No.	W	T	L	W ₁	W ₂	W ₃	L ₁	L ₂	d	d ₁	h
BGLF3 7032125			125				-	75			
BGLF3 7032150	70	32	150	40	25	40	-	100	13	20	14.5
BGLF3 7032200			200				75	150			
BGLF3 9045125			125				-	75			
BGLF3 9045150	90	45	150	55	30	55	50	100	18	26	17.5
BGLF3 9045200			200				100	150			



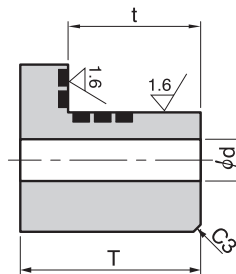
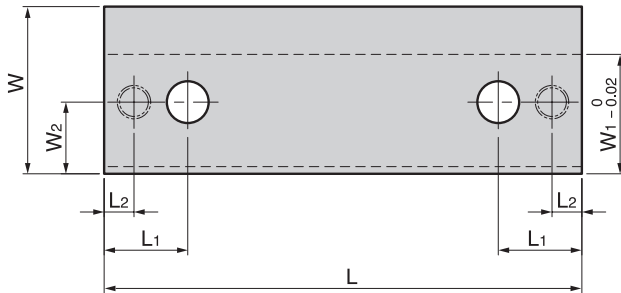
Order

Catalog No.
BGLF3 9045200

BVSOL

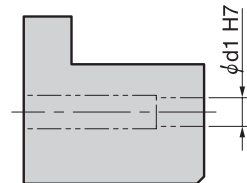
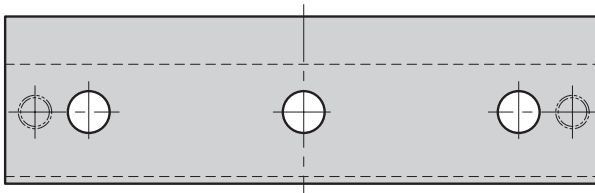


• For $L \leq 200$



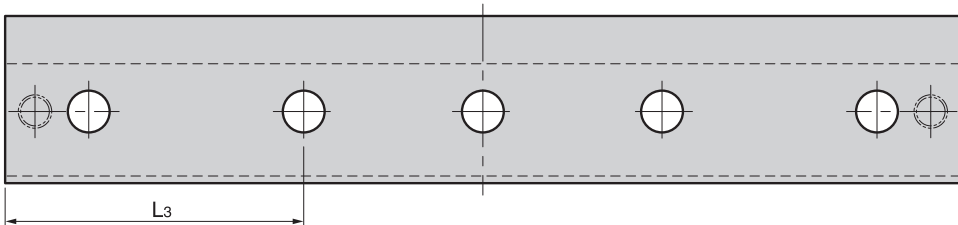
▲ T and t have the adjusting allowance of 0.5 mm.

• For $L \geq 250$



▲ Dowel pin hole (ϕd_1) is not machined.

• For $L \geq 400$



• Sliding Direction



Material : Bronze with Graphite (CAC304+GR)

Catalog No.	W	L	W ₁	W ₂	L ₁	L ₂	L ₃	T	t	d	d ₁
BVSOL-01	25	125	18	9				15.5	8.5	9	6
BVSOL-02		160									
BVSOL-03	32	125						30.5	15.5	11	8
BVSOL-04		160									
BVSOL-05		200									
BVSOL-06	55	100	37	20			-	55.5	39.5	13.5	10
BVSOL-07		160									
BVSOL-11	70	160	50	30	35	12.5		75.5	55.5	17.5	12
BVSOL-12		200									
BVSOL-13		250									
BVSOL-15		400									
BVSOL-16		160									
BVSOL-17	85	200	63	38	42.5	15	-	90.5	65.5	22	16
BVSOL-18		250									
BVSOL-20		400									



Order

Catalog No.

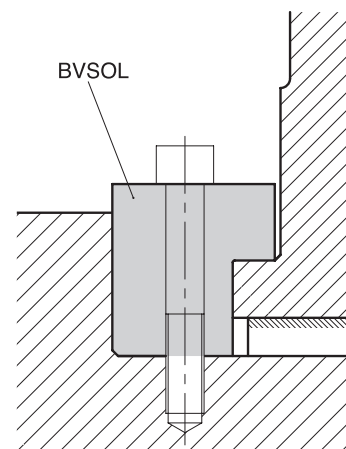
BVSOL-12

■ Recommended Mounting Bolt and Dowel Pin

Catalog No.	W	L	Recommended Mounting Bolt DIN 912	Recommended Dowel Pin DIN7979
BVSOL-01	25	125	M8 × 30	φ6 × 20
BVSOL-02		160		
BVSOL-03	32	125	M10 × 50	φ8 × 40
BVSOL-04		160		
BVSOL-05		200		
BVSOL-06	55	100	M12 × 80	φ10 × 60
BVSOL-07		160		
BVSOL-11	70	160	M16 × 100	φ12 × 70
BVSOL-12		200		
BVSOL-13		250		
BVSOL-15		400		
BVSOL-16		160		
BVSOL-17	85	200	M20 × 120	φ16 × 70
BVSOL-18		250		
BVSOL-20		400		



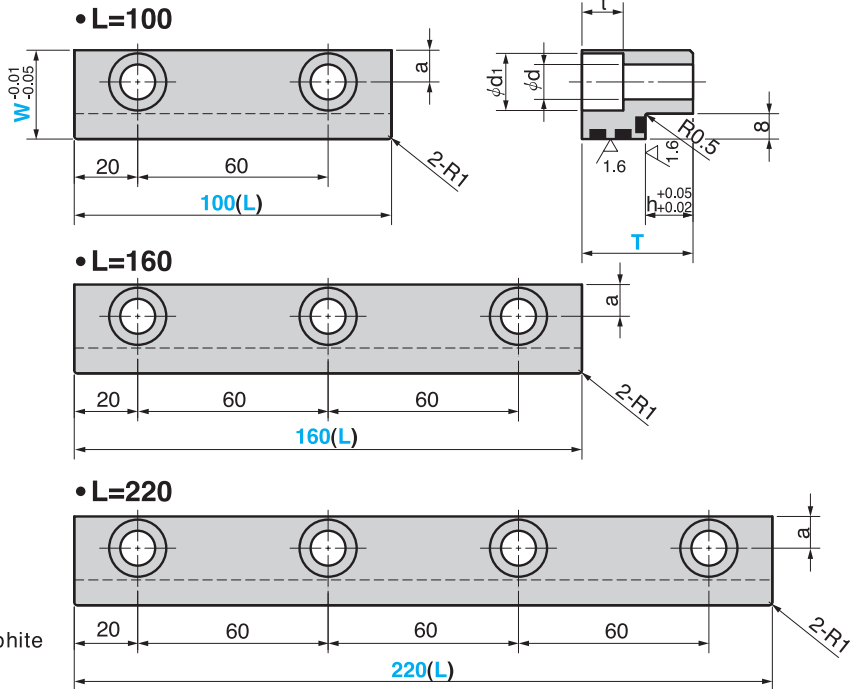
Example





Guide Rail Oilless, Copper Alloy, L-shaped Type – For Slide Core

BGLDW



Material : Bronze with Graphite
(CAC304+GR)

a	d	d ₁	h	t	Catalog No.	W	L	T
7.5	7	11	15	7		23	100	30
							160	
							220	
7.5	7	11	26	7			100	41
							160	
							220	
10	11	18	10	13	BGLDW		100	25
							160	
							220	
10	11	18	15	13		28	100	35
							160	
							220	
10	11	18	26	13			100	56
							160	
							220	



Order

Catalog No. **BGLDW** W **23** - L **160** - T **41**

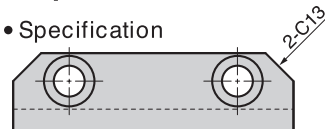
■ We are ready to accept requests or orders for special parts.



Option

Option Code	Specification
CM	With chamfering (C13) on corners for relief (2 corners). Please instruct CM13 when ordering.

• Specification



Order

BGLDW 23-160-41-CM13

M E M O



