

SUPPORT UNITS

SUPPORT UNITS FOR SMALL-SIZED FACTORY AUTOMATION EQUIPMENT/BUK, BUM



Wide variations

Choose between rectangle type and circle flange type according to the structure of the mounting portion. The unit can be used for ball screws of $\varnothing 6, \varnothing 8, \varnothing 10, \varnothing 12, \varnothing 15, \varnothing 16, \varnothing 20, \varnothing 25, \varnothing 28$ and $\varnothing 32$ in screw shaft diameters.

Compact and easy mounting

Compact and space-saving design. Preloaded duplex angular ball bearings are incorporated in the support unit, allowing direct mounting.

Lock nut with screw

Lock nut exclusively designed for these units ensures precise mounting with locking set screw.

High accuracy

DF type, P5-grade prelubricated duplex angular ball bearing with contact angle of 30° assures stable performance and high accuracy.

Dustproofing

Seals are provided on both ends of bearing for dustproofing.

Short delivery time and reasonable price

Always stocked for short delivery time to be used in combination with KUROODA's stocked ball screws.

NOTATION OF MODEL NUMBER

Direct Mount(Rectangle)Support Unit

BUK-10A

Combination code
 A:Set of fixed and supported end units
 F:Fixed end unit
 S:Supported end unit
 No mark:Fixed end unit & supported end bearing only

Bearing journal diameter(mm)

Model

Circle Flange Support Unit

BUM-10

Combination code
 S:Supported end unit
 No mark:Fixed end unit & supported end bearing only

Bearing journal diameter(mm)

Model

MODEL NUMBER

Direct Mount(Rectangle)Support Unit			Circle Flange Support Unit		
Set	Fixed end unit	Supported end unit	Fixed end unit	supported end bearing	Supported end unit
BUK-6	BUK-6	-	BUM-6	606ZZ	-
BUK-8A	BUK-8F	BUK-6S	BUM-8	606ZZ	BUM-6S
BUK-10A	BUK-10F	BUK-8S	BUM-10	608ZZ	BUM-8S
BUK-12A	BUK-12F	BUK-10S	BUM-12	6000ZZ	BUM-10S
BUK-15A	BUK-15F	BUK-15S	BUM-15	6002ZZ	BUM-15S
BUK-20A	BUK-20F	BUK-20S	BUM-20	6204ZZ	BUM-20S
BUK-25A	BUK-25F	BUK-25S	BUM-25	6205ZZ	-

Support side bearing is attached to fixed side unit of circle flange support unit.

Combination With Ball Screws

Model No.	Diameter of fixed end bearing (mm)	Diameter of supported end bearing (mm)	Applicable ball screw					
			GE Series	GG Series	GP/DP Series	HG Series	GY Series	GW Series
BUK-6 BUM-6	6	6			DP0601*2		GY08□	GW0802
BUK-8A BUM-8	8	6	08□ GE10□*1 12□	08□ GG10□*1 12□	GP/DP 08□ 10□	HG1230	GY 10□ 12□	GW 1010 1210
BUK-10A BUM-10	10	8	1010 GE12□*1 15□	1010 GG12□*1 15□	GP/DP12□	HG 1230 15□	GY 12□ 15□	CW 1210 15□
BUK-12A BUM-12	12	10	GE15□ GE16□	GG15□ GG16□	GP15□	HG 15□ 1632	GY15□	GW15□
BUK-15A BUM-15	15	15	GE20□	GG20□	GP20□	HG20□	GY20□	GW20□
BUK-20A BUM-20	20	20	GE25□	GG25□		HG25□	GY 25□ 28□	GW25□
BUK-25A BUM-25	25	25	GE32□	GG32□		HG3264	GY32□	

(Note)•In case of combination of BUK/BUM-8 marked with *1 and GE10□, and combination of BUK/BUM-10 and GE12□ or GG12□, innermost oil seal of support unit has larger play than usual due to outside diameter of body with shaft end unworked.

•Special collar is prepared for rolled ball screw GY and GW series in order to make proper attachment of support unit possible.

•Only fixed side unit of BUK/BUM-6 can be used for *2.

Bearing Data

Fixed End Bearing (Duplex angular contact bearing)

Model No. of support unit	Model No. of bearing	Axial force			Maximum starting torque (N•cm)	Nominal lock nut	Tightening torque (N•cm)
		Basic dynamic load rating(N)	Preloaded (N)	Rigidity (N/μm)			
BUK-6,BUM-6	70M6DF/GMP5	2670	30	38	0.5	M6X0.75	245
BUK-8F,BUM-8	70M8DF/GMP5	4400	49	52	0.8	M8X1	490
BUK-10F,BUM-10	7000ADFP5	6170	120	95	2.0	M10X1	930
BUK-12F,BUM-12	7001ADFP5	6770	140	100	2.2	M12X1	1370
BUK-15F,BUM-15	7002ADFP5	7740	170	120	2.3	M15X1	2350
BUK-20F,BUM-20	7204ADFP5	18200	350	193	5.5	M20X1	4700
BUK-25F,BUM-25	7205ADFP5	20600	500	230	7.5	M25X1.5	8430

(Note)•Preload shows mean value.

•Rigidity shown above is measured under following load:Axial load of 29N, 49N, 200N, 300N, 400N, 500N and 600N to each of BUK/BUM-6 to BUK/BUM-25.

Supported End Bearing(Deep Groove Radial Bearing)

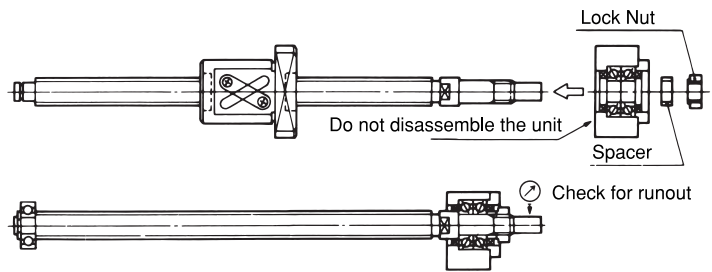
Model No. of support unit	Model No. of bearing	Basic dynamic load rating(N)
BUK-6, BUM-6	606ZZ	1720
BUK-6, BUM-8, BUM-6S	606ZZ	1720
BUK-8S, BUM-10, BUM-8S	608ZZ	2620
BUK-10S, BUM-12, BUM-10S	6000ZZ	3600
BUK-15S, BUM-15, BUM-15S	6002ZZ	4400
BUK-20S, BUM-20, BUM-20S	6204ZZ	10100
BUK-25S, BUM-25	6205ZZ	11000

SUPPORT UNITS

MOUNTING PROCEDURE FOR DIRECT MOUNT SUPPORT UNIT

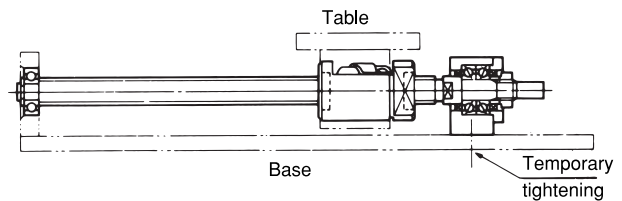
Assembling the support unit

- 1) Fit the support unit to the ball screw.
 - Do not disassemble the unit.
 - Take care to prevent the oil seal lip from peeling off when inserting.
 - When tightening the lock nut, check for runout of the mounting portion for a coupling etc.
- 2) Fit the supported end bearing and fix it with a snap ring.



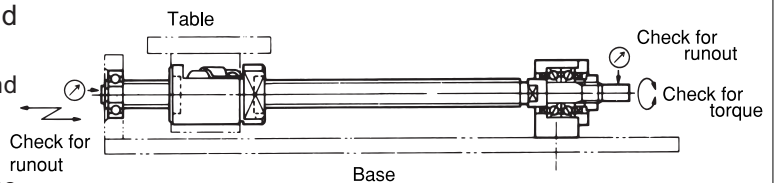
How to align the support unit

- 1) Place the nut into nut housing and temporarily tighten the cap screws on the nut flange.
- 2) Place the support unit to couple the ball screw, then temporarily tighten the fixing screws moving the nut closely to the support unit to get the alignment accurately. Make the following adjustments for more precise alignment on datum line and mounting type.
 - ① For Rectangle Support Unit(BUK)
Adjust the position of the rectangle support unit with the proper shim to meet the nut alignment.
 - ① For Circle Flange Support Unit(BUM)
Adjust the circle flange support unit having some gap between the bracket of support unit and the support unit.
 - ② Alignment with shim
Adjust the nut housing position with the proper shim to meet the support unit alignment.
 - ③ Alignment with gap
Adjust the nut position having some gap between nut housing and nut outside diameter.
- 3) Firmly tighten the all adjust screws and check the runout of the plane outside diameter like as coupling portion.



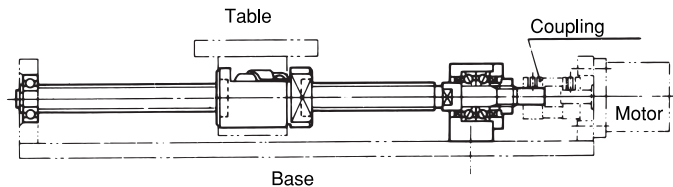
Mounting the supported end bearing and checking the alignment and runout

- 1) Move the table toward the supported side and center the ball screw. Tighten the supported side bearing housing to the base temporarily.
- 2) While reciprocating the table, make adjustment so that it may move thoroughly smooth.
- 3) Firmly tighten and fix the bearing housing while checking the alignment and runout of each part.



Coupling the ball screw to the motor

- 1) Adjust the motor bracket for accurate alignment with the ball screw.
- 2) Connect the ball screw to the motor with a coupling.
- 3) After completion of assembling, thoroughly taking shakedown the unit.

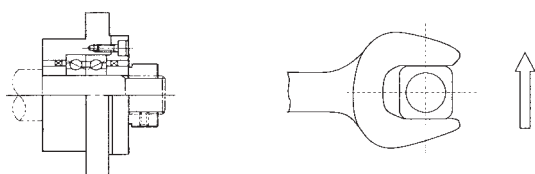


MOUNTING PROCEDURE FOR CIRCLE FLANGE SUPPORT UNIT

Fitting the support unit to the ball screw

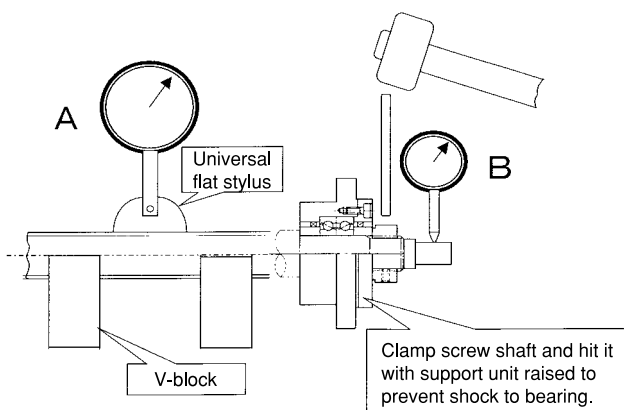
When fixing the bearing lock nut with a spanner etc., the lock nut may sometimes shift in the direction of arrow due to the gap between the external thread and internal thread; this causes mis-alignment and bending of the screw shaft.

Like poor alignment, bend of the screw shaft results in lowered feed accuracy and shortened service life, and furthermore, it causes abnormal sound, vibration and other accidents such as break of the screw shaft.



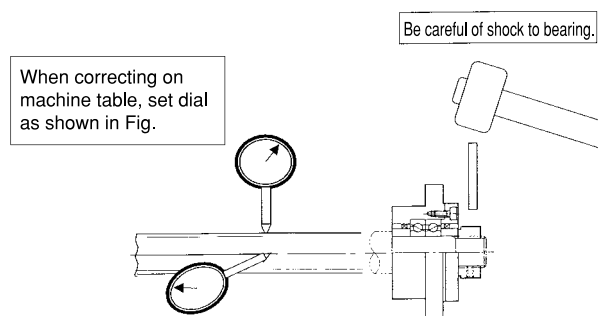
Cautions for fitting the bearing lock nut

- ① Tighten the bearing lock nut lightly.
Tighten at 1/3 of the recommended tightening torque (Refer to the table).
- ② Support the screw shaft with V-block, and apply a dial gauge to A or B shown in the figure, and find a position at which the deflection of the pointer is maximized.
- ③ Lightly hit the lock nut at the above-mentioned backlash alignment position with a hammer as shown in the figure to reduce the deflection of the pointer.
- ④ To tighten to the required torque, repeat the above-mentioned Step ③ while dividing the recommended tightening torque given in the table into 2 to 3.



Fitting the bearing lock nut after fixing the support unit to the machine table.

- ① Set a dial gage vertically and horizontally to the outside of the screw shaft.
- ② Tighten the bearing lock nut lightly.
Tighten at 1/3 of the recommended tightening torque (Refer to the table).
- ③ Lightly hit the bearing lock nut with a hammer as shown in the figure to reduce the deflection of the pointer.
When the pointer of the dial gage dose not deflect even if the lock nut is lightly hit, loosen the lock nut and repeat the procedure to prevent shock to the bearing.
- ④ To tighten to the required torque, repeat the above-mentioned Step ③ while dividing the recommended tightening torque given in the table into 2 to 3.



Recommended tightening torque

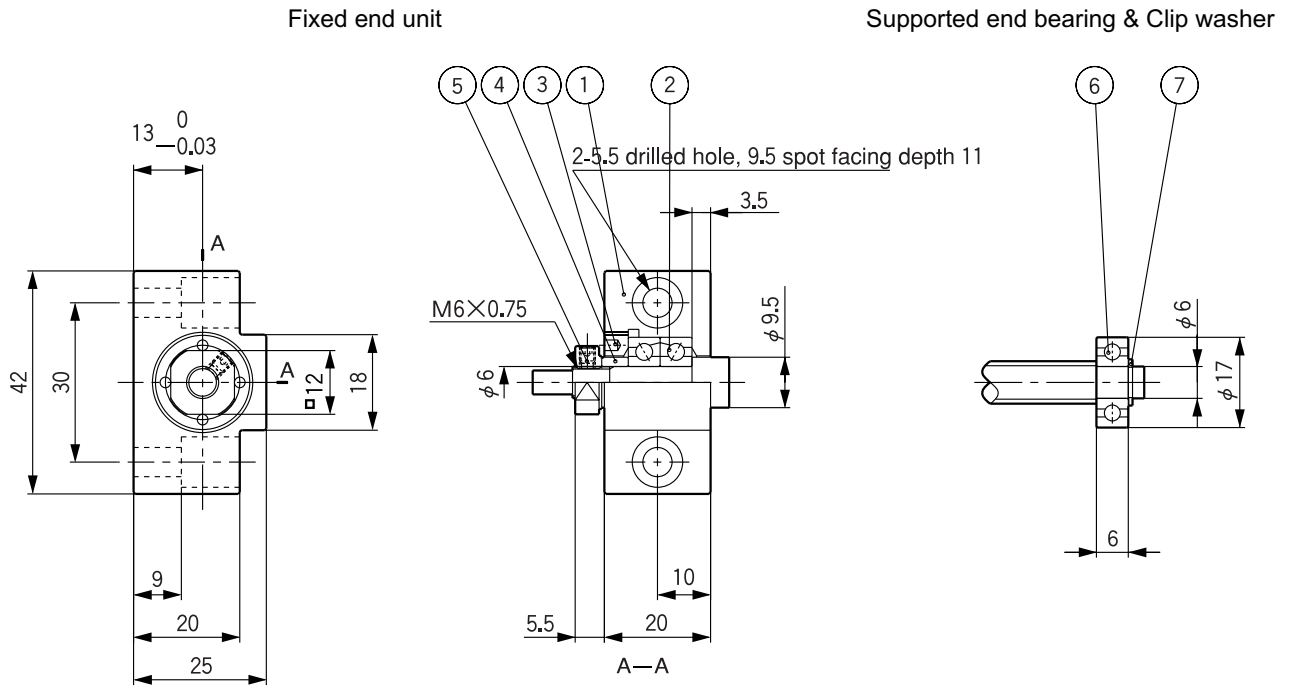
Screw size	Tightening torque (N·cm)
M6X0.75	245
M8X1.0	490
M10X1.0	930
M12X1.0	1370
M15X1.0	2350
M20X1.0	4700
M25X1.5	8430

SUPPORT UNITS

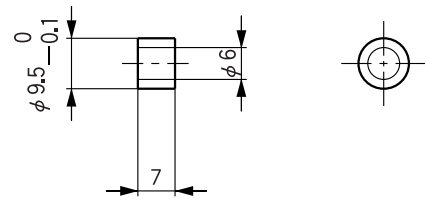
Direct Mount(Rectangle)Support Unit/BUK-6

(Unit:mm)

Mass
BUK-6:0.10kg



Collar for rolled ball screw



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	70M6DF/GMP5
3	Cover flange	Steel	1	
4	Spacer	Steel	1	Nominal 6
5	Lock nut	Steel	1	M6X0.75
6	Radial bearing		1	606ZZ
7	Clip washer		1	Nominal 6

(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Direct Mount(Rectangle)Support Unit/BUK-8A(Set)

(Unit:mm)

Mass

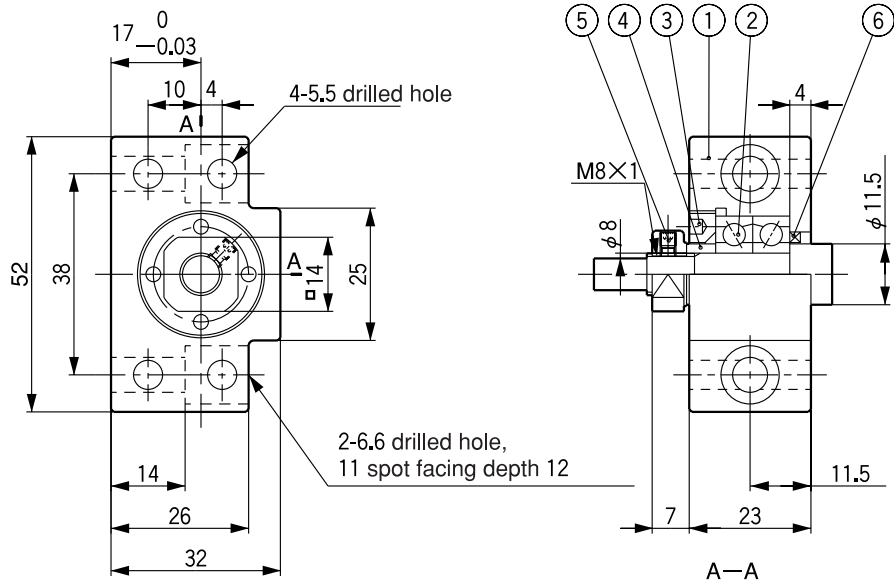
BUK-8A:0.40kg

BUK-8F:0.23kg

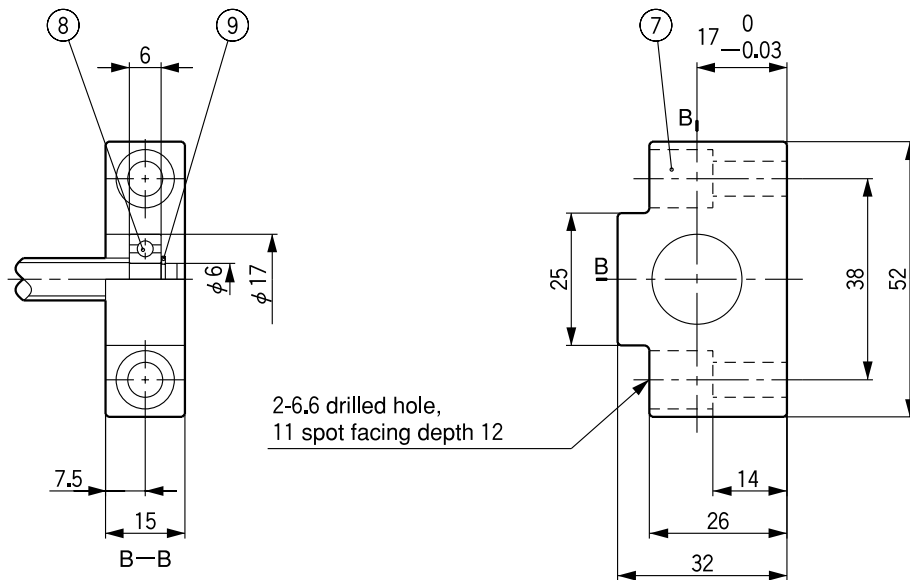
BUK-6S:0.17kg

BUK-8 :0.29kg

Fixed end unit:BUK-8F



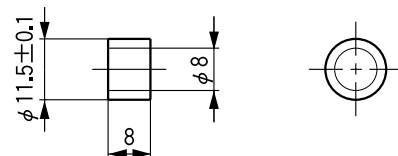
Supported end unit:BUK-6S



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	70M8DF/GMP5
3	Cover flange	Steel	1	
4	Spacer	Steel	1	Nominal 8
5	Lock nut	Steel	1	M8X1
6	Oilseal		1	
7	Bearing housing	Steel	1	
8	Radial bearing		1	606ZZ
9	Clip washer		1	Nominal 6

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.

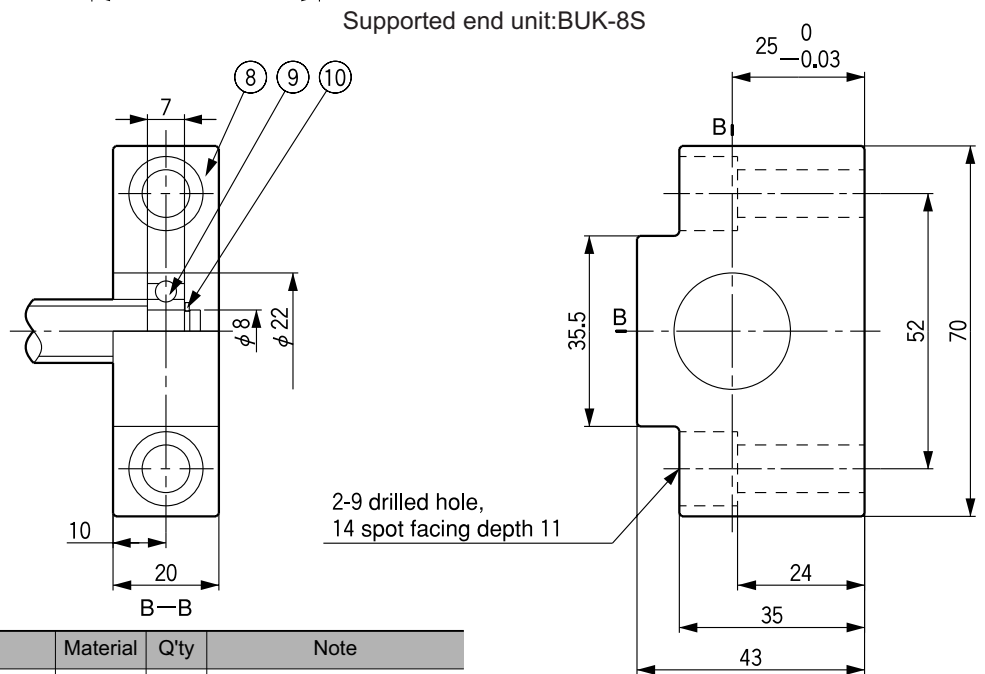
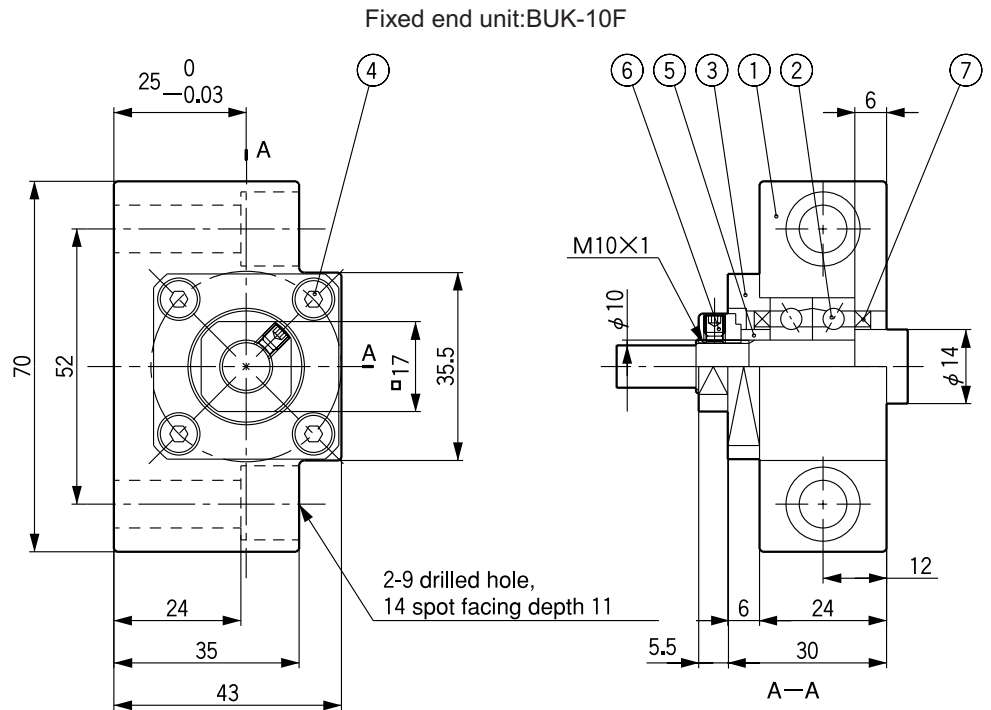
•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

SUPPORT UNITS

Direct Mount(Rectangle)Support Unit/BUK-10A(Set)

(Unit:mm)

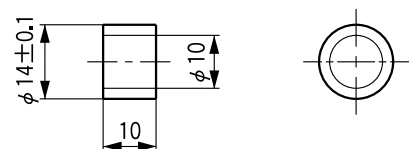
Mass
 BUK-10A:0.86kg
 BUK-10F:0.49kg
 BUK-8S : 0.37kg
 BUK-10 : 0.55kg



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7000ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M4X5
5	Spacer	Steel	1	Nominal 10
6	Lock nut	Steel	1	M10X1
7	Oilseal		2	
8	Bearing housing	Steel	1	
9	Radial bearing		1	608ZZ
10	Clip washer		1	Nominal 8

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.

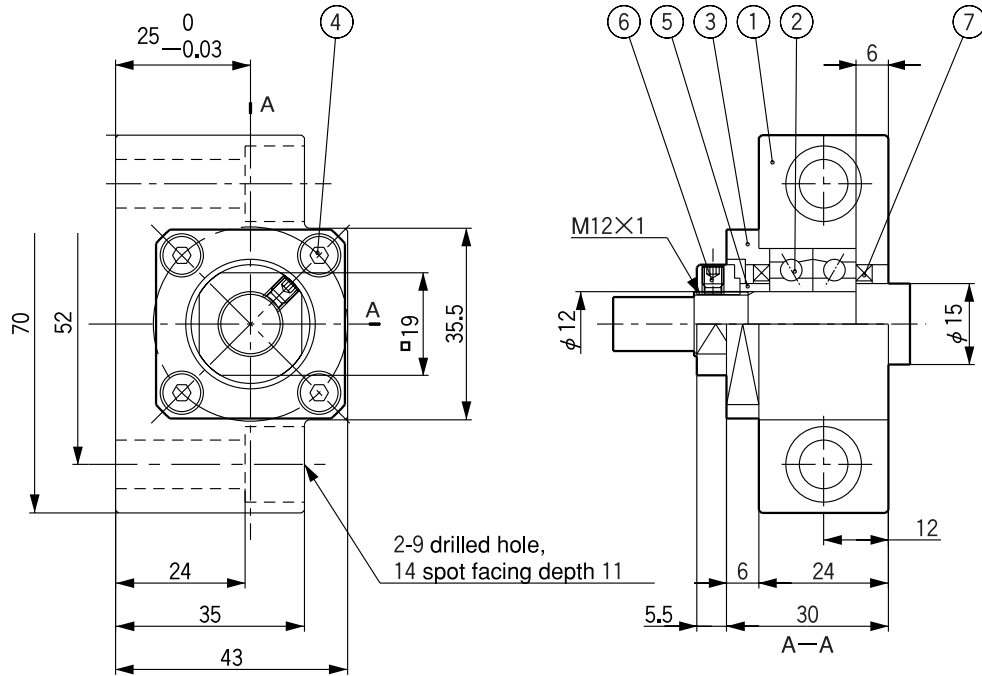
•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Direct Mount(Rectangle)Support Unit/BUK-12A(Set)

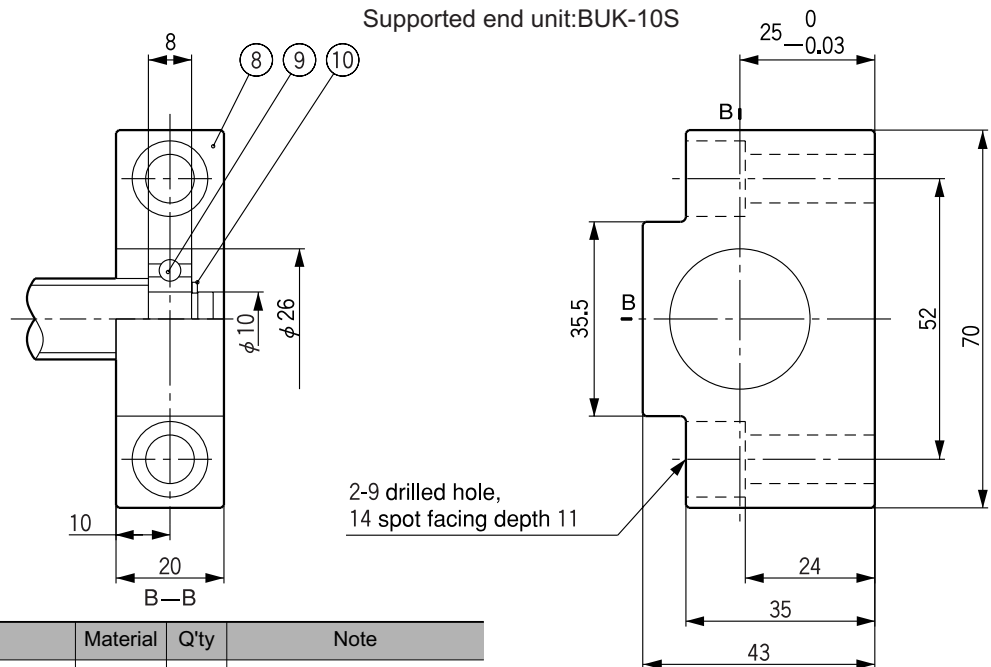
(Unit:mm)

Mass
 BUK-12A:0.86kg
 BUK-12F:0.50kg
 BUK-10S:0.36kg
 BUK-12 :0.55kg

Fixed end unit:BUK-12F



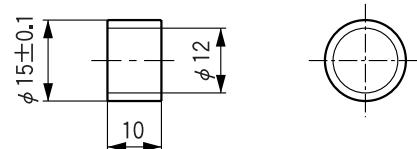
Supported end unit:BUK-10S



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7001ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M4X5
5	Spacer	Steel	1	Nominal 12
6	Lock nut	Steel	1	M12X1
7	Oilseal		2	
8	Bearing housing	Steel	1	
9	Radial bearing		1	6000ZZ
10	Clip washer		1	Nominal 10

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

SUPPORT UNITS

Direct Mount(Rectangle)Support Unit/BUK-25A(Set)

(Unit:mm)

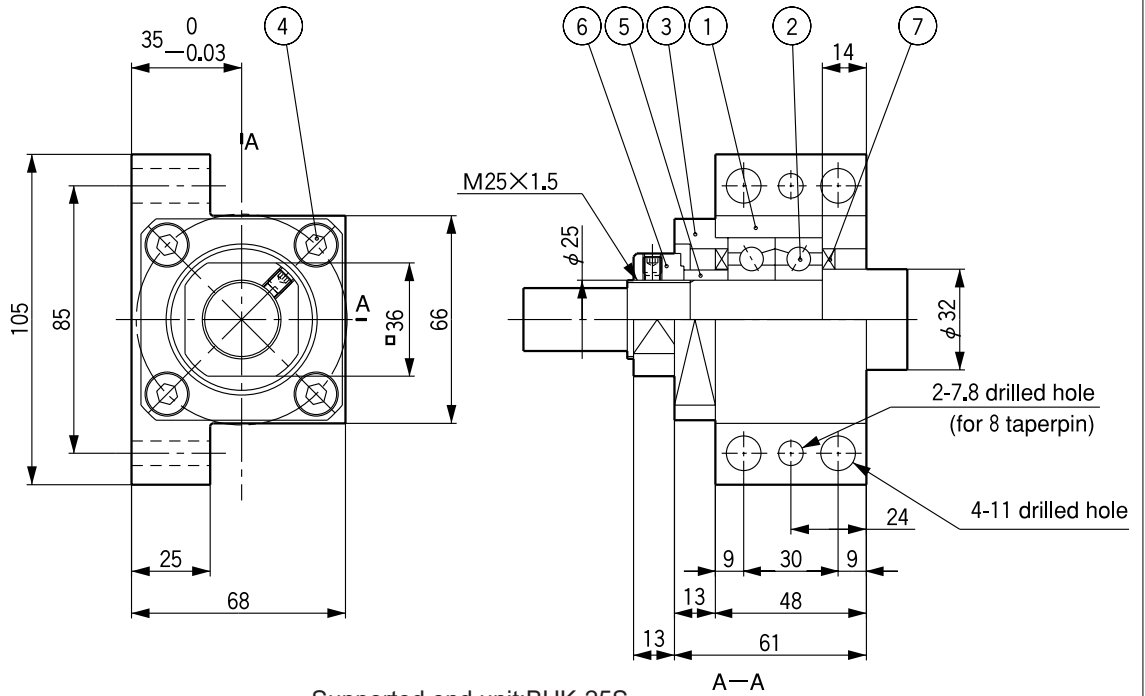
Mass

BUK-25A:2.91kg

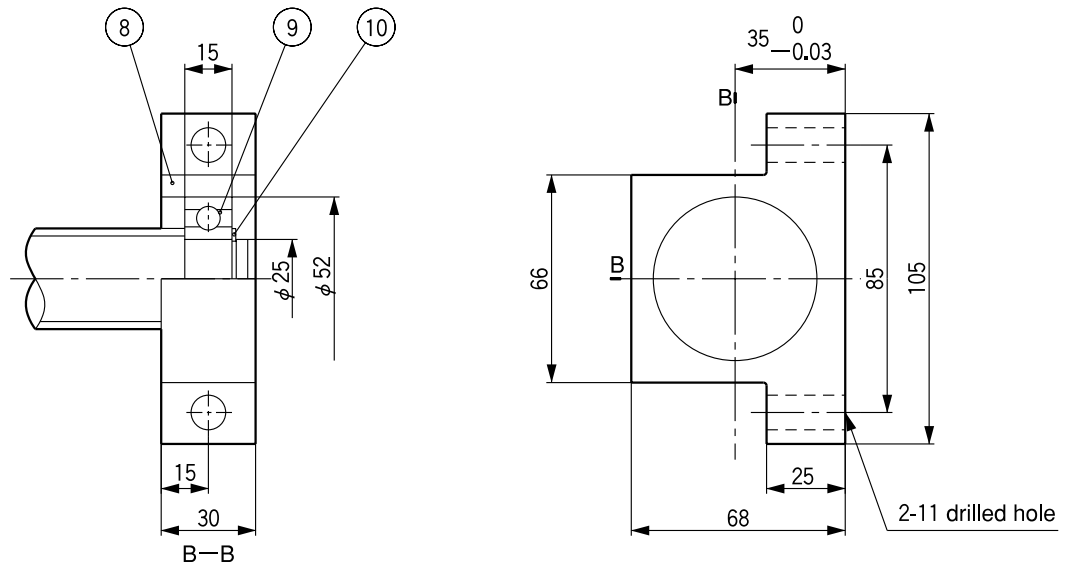
BUK-25F:1.93kg

BUK-25S:0.98kg

Fixed end unit:BUK-25F



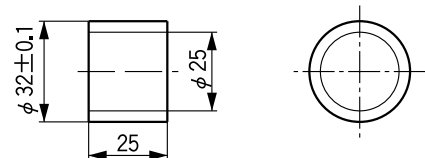
Supported end unit:BUK-25S



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7205ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M8X20
5	Spacer	Steel	1	Nominal 25
6	Lock nut	Steel	1	M25X1.5
7	Oilseal		2	
8	Bearing housing	Steel	1	
9	Radial bearing		1	6205ZZ
10	Clip washer		1	Nominal 25

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.

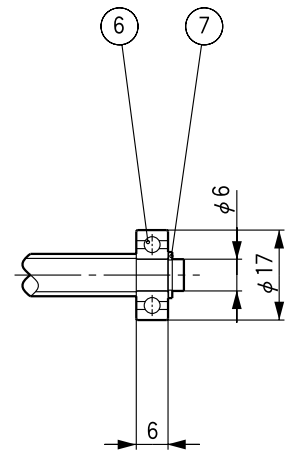
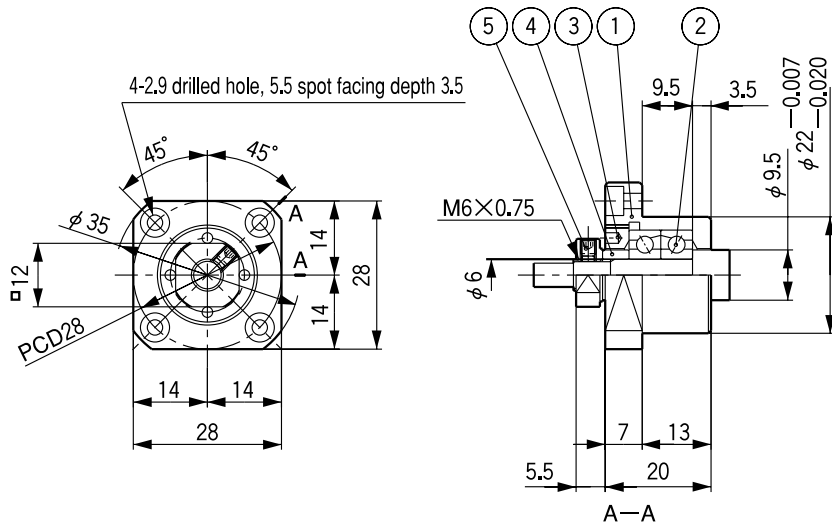
•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Circle Flange Support Unit/BUM-6

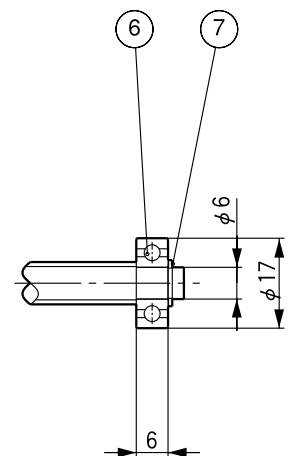
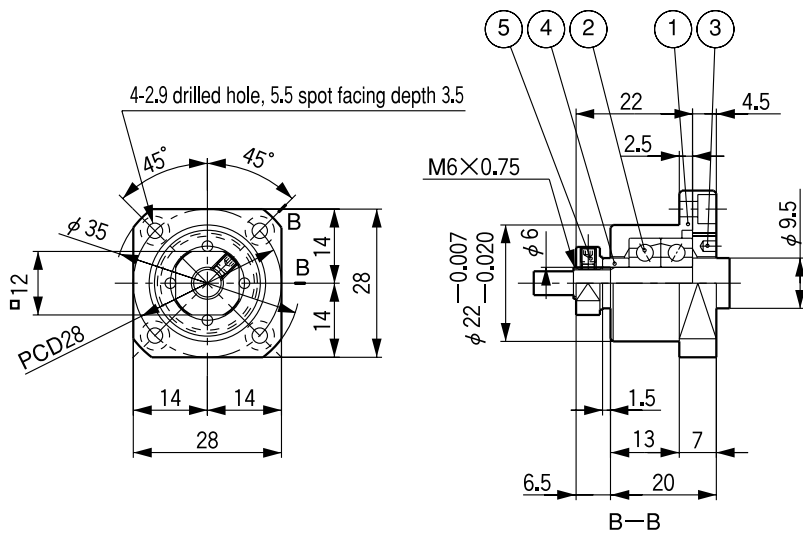
(Unit:mm)

Mass
BUM-6:0.10kg

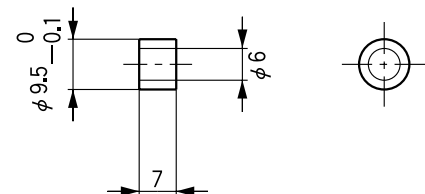
Example 1 Fixed end unit Supported end bearing & Clip washer



Example 2



Collar for rolled ball screw



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	70M6DF/GMP5
3	Cover flange	Steel	1	
4	Spacer	Steel	1	Nominal 6
5	Lock nut	Steel	1	M6X0.75
6	Radial bearing		1	606ZZ
7	Clip washer		1	Nominal 6

(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

SUPPORT UNITS

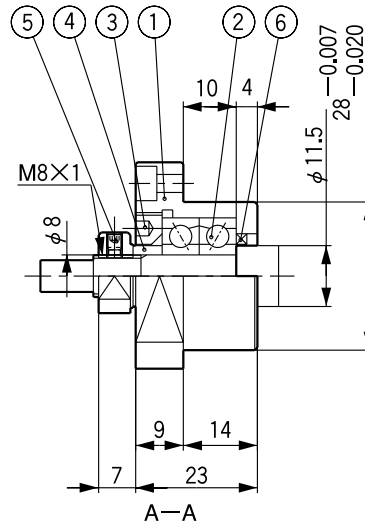
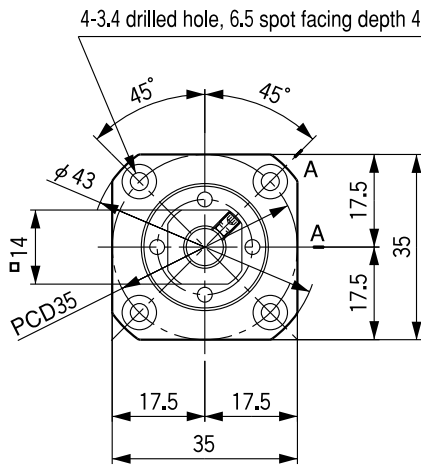
Circle Flange Support Unit/BUM-8

(Unit:mm)

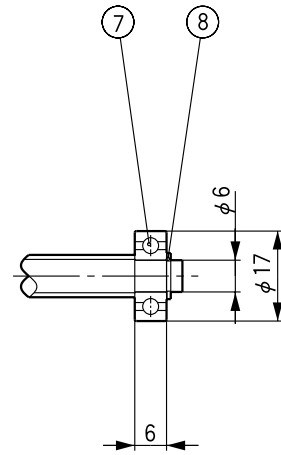
Mass

BUM-8:0.20kg

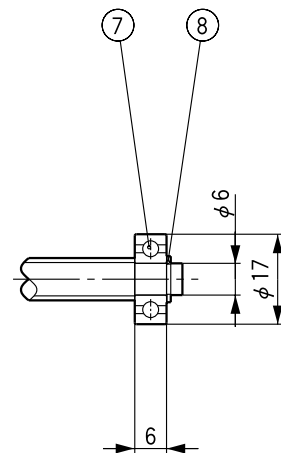
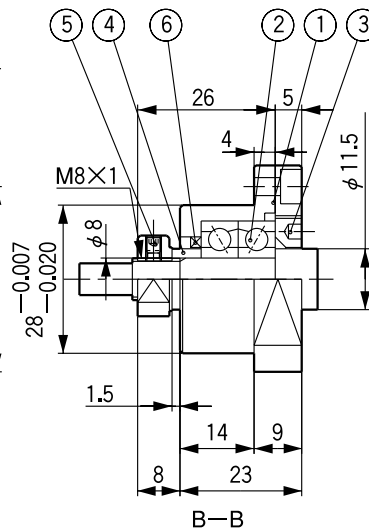
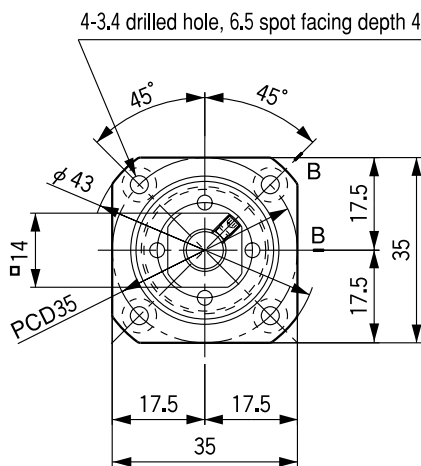
Example 1 Fixed end unit



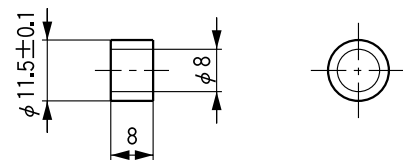
Supported end bearing & Clip washer



Example 2



Collar for rolled ball screw



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	70M8DF/GMP5
3	Cover flange	Steel	1	
4	Spacer	Steel	1	Nominal 8
5	Lock nut	Steel	1	M8X1
6	Oilseal		1	
7	Radial bearing		1	606ZZ
8	Clip washer		1	Nominal 6

(Note)•As ①, ② and ③ are united, do not disassemble the unit.

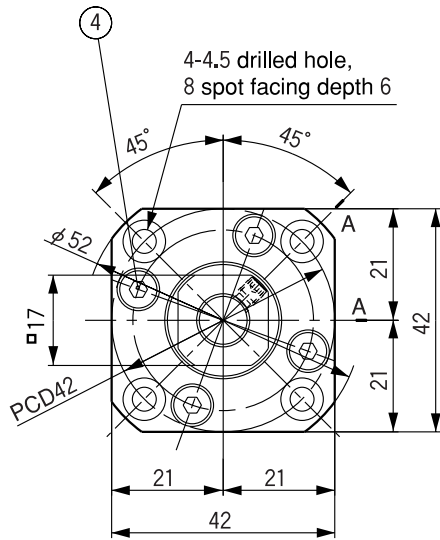
•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Circle Flange Support Unit/BUM-10

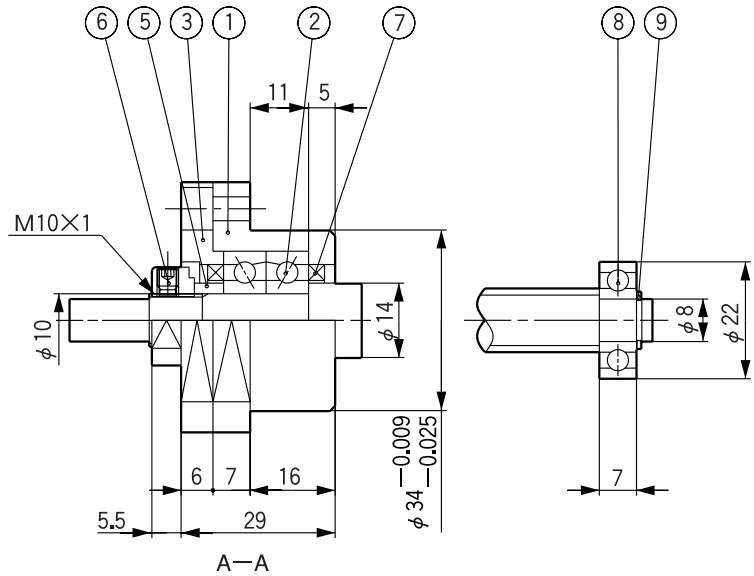
(Unit:mm)

Mass
BUM-10:0.30kg

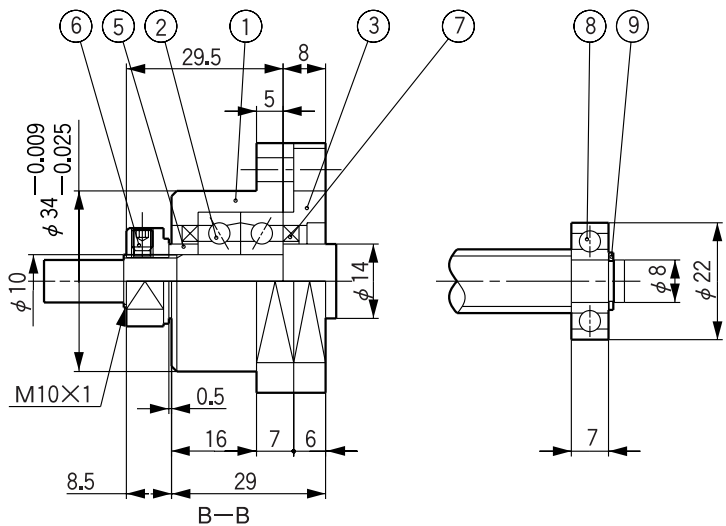
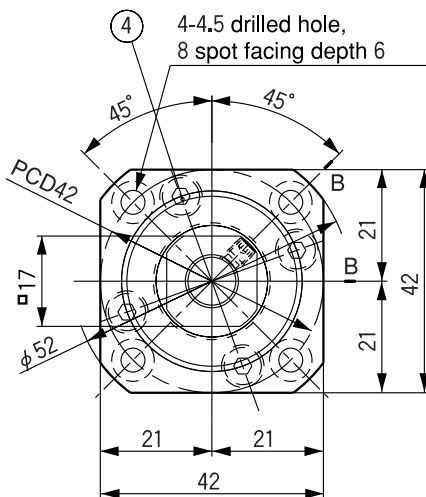
Example 1 Fixed end unit



Supported end bearing & Clip washer



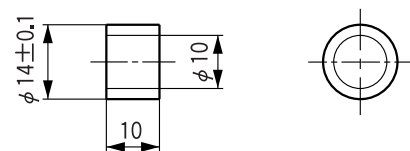
Example 2



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7000ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M4X5
5	Spacer	Steel	1	Nominal 10
6	Lock nut	Steel	1	M10X1
7	Oilseal		2	
8	Radial bearing		1	608ZZ
9	Clip washer		1	Nominal 8

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.
•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

BALL SCREWS' ACCESSORIES

SUPPORT UNITS

Circle Flange Support Unit/BUM-12

(Unit:mm)

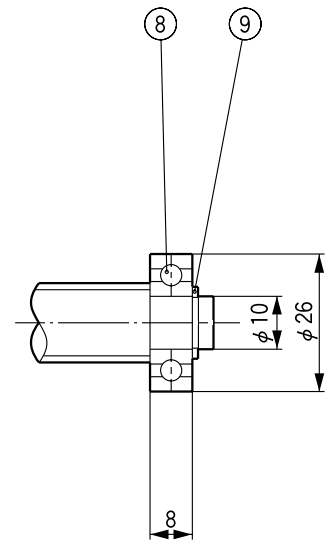
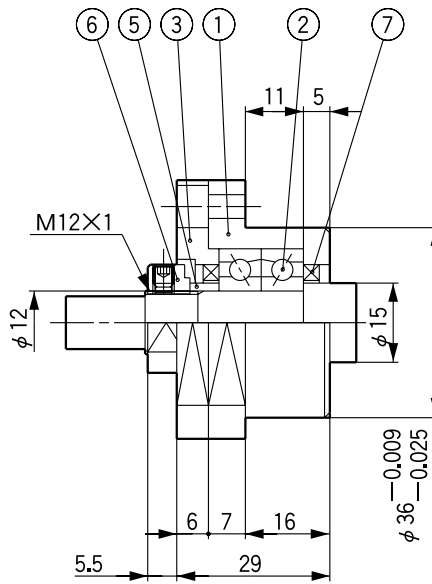
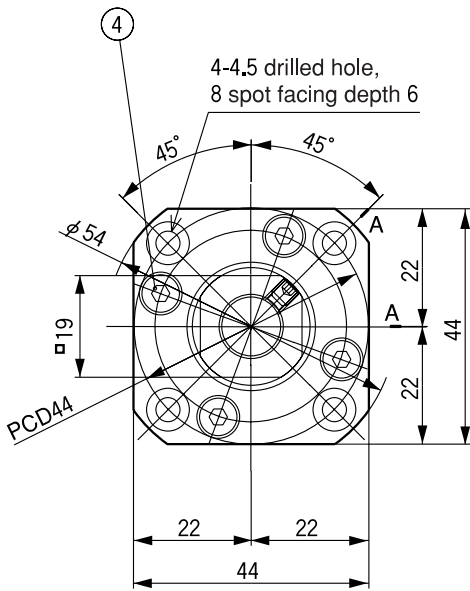
Mass

BUM-12:0.33kg

Example 1

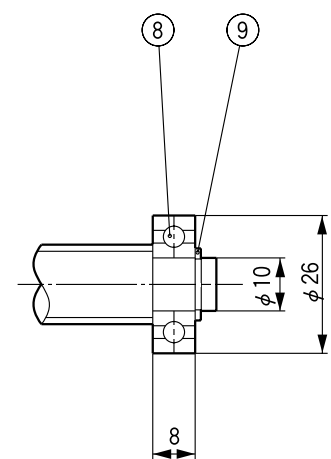
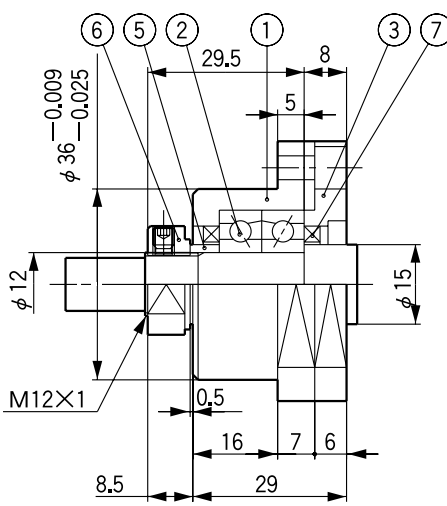
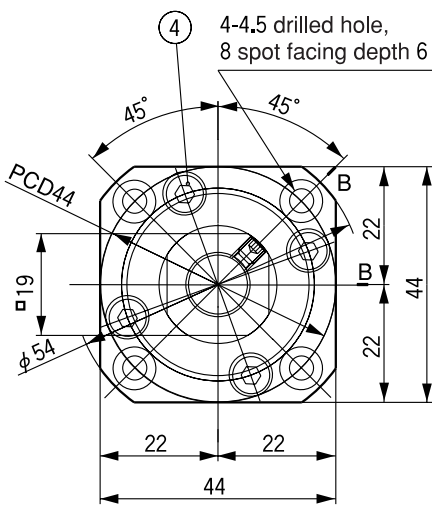
Fixed end unit

Supported end bearing & Clip washer



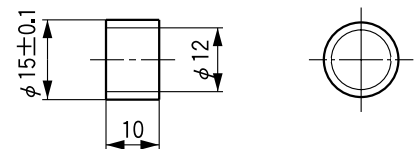
A-A

Example 2



B-B

Collar for rolled ball screw



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7001ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M4X5
5	Spacer	Steel	1	Nominal 12
6	Lock nut	Steel	1	M12X1
7	Oilseal		2	
8	Radial bearing		1	6000ZZ
9	Clip washer		1	Nominal 10

(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Circle Flange Support Unit/BUM-15

(Unit:mm)

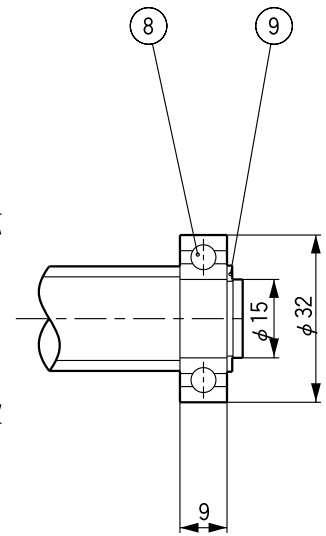
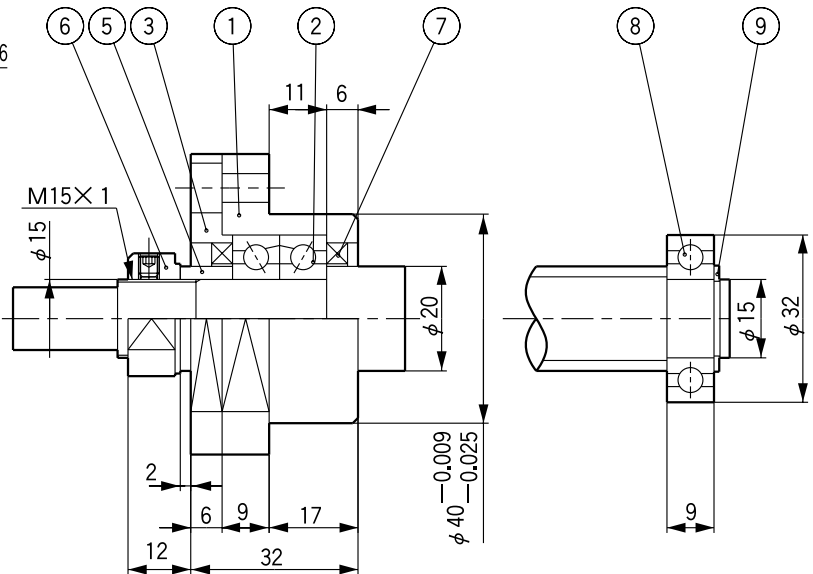
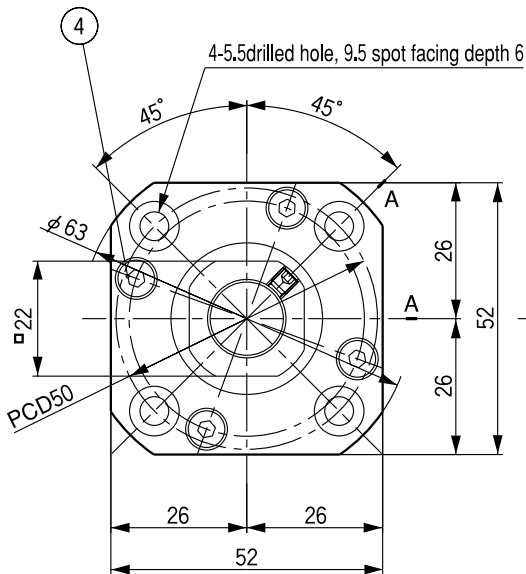
Mass

BUM-15:0.46kg

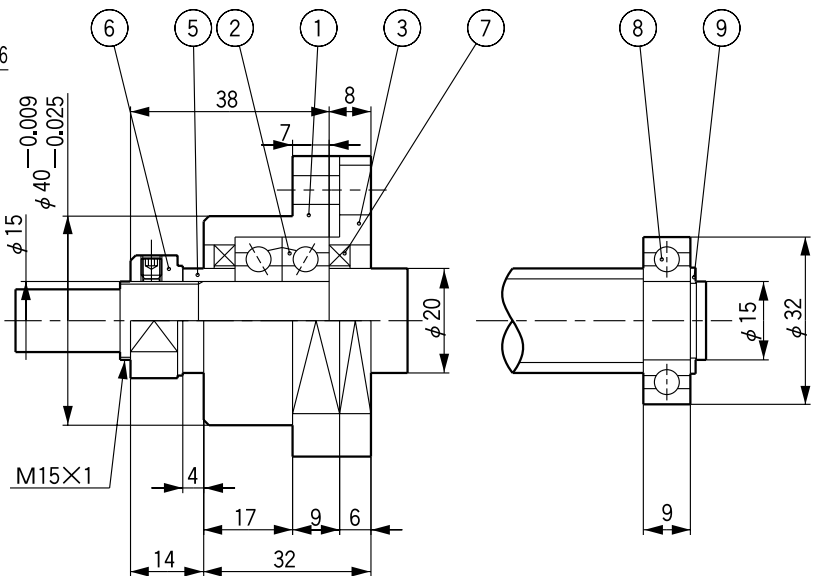
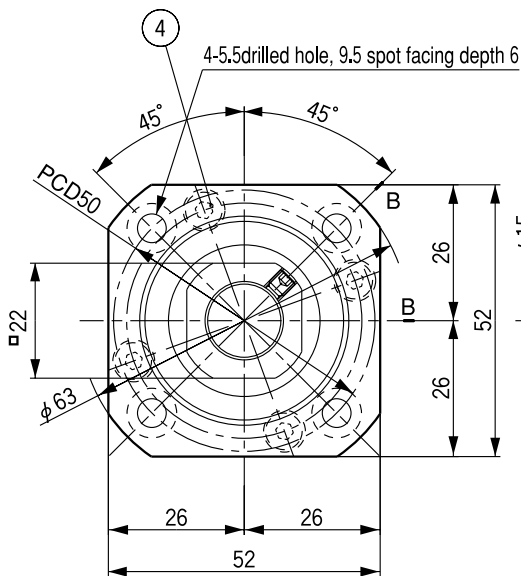
Example 1

Fixed end unit

Supported end bearing & Clip washer



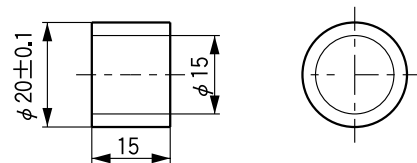
Example 2



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7002ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M4X5
5	Spacer	Steel	1	Nominal 15
6	Lock nut	Steel	1	M15X1
7	Oilseal		2	
8	Radial bearing		1	6002ZZ
9	Clip washer		1	Nominal 15

Collar for rolled ball screw



(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

BALL SCREWS' ACCESSORIES

SUPPORT UNITS

Circle Flange Support Unit/BUM-20

(Unit:mm)

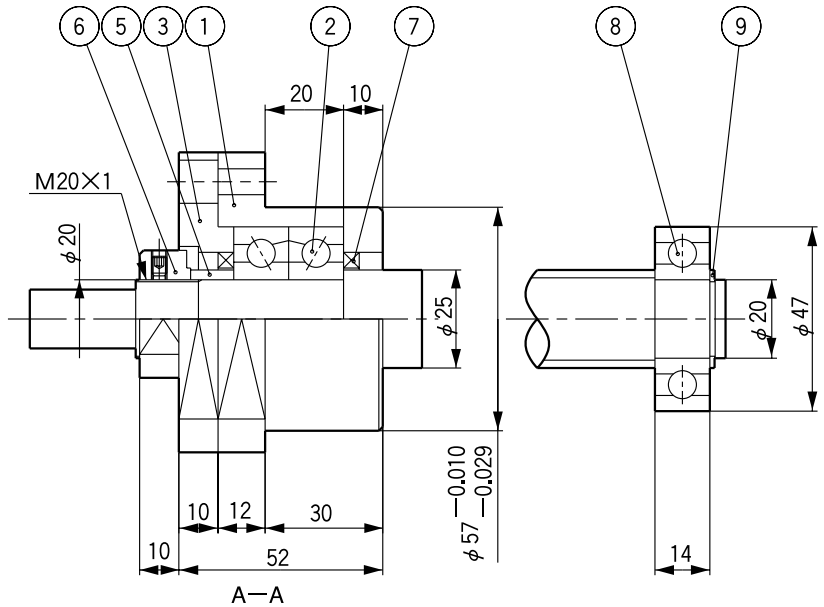
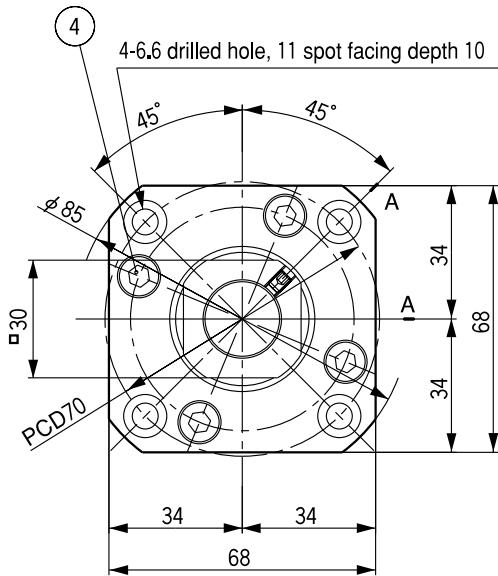
Mass

BUM-20:1.32kg

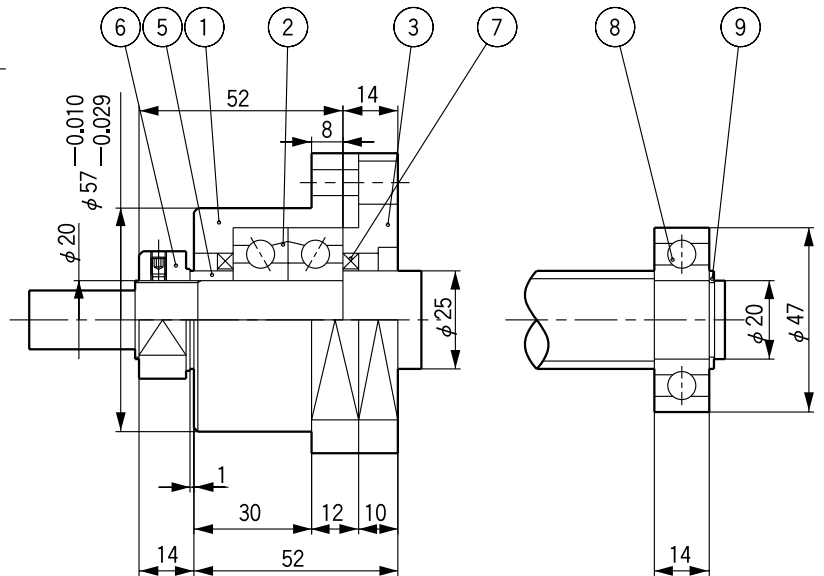
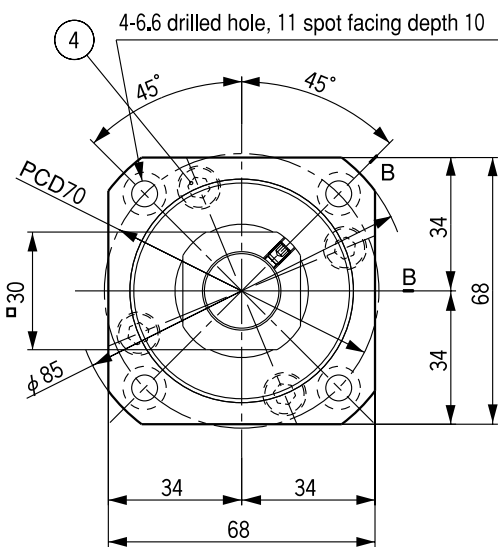
Example 1

Fixed end unit

Supported end bearing & Clip washer



Example 2

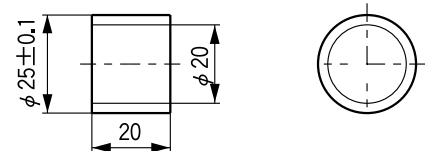


Parts List

B-B

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7204ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M6X10
5	Spacer	Steel	1	Nominal 20
6	Lock nut	Steel	1	M20X1
7	Oilseal		2	
8	Radial bearing		1	6204ZZ
9	Clip washer		1	Nominal 20

Collar for rolled ball screw



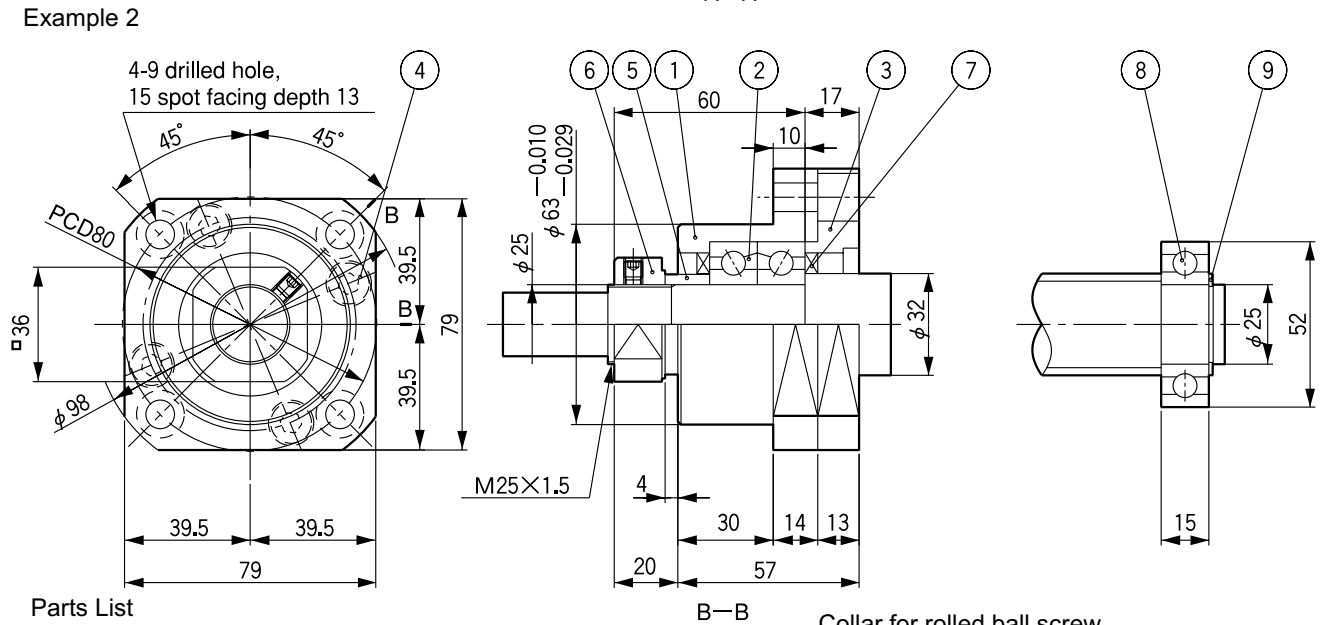
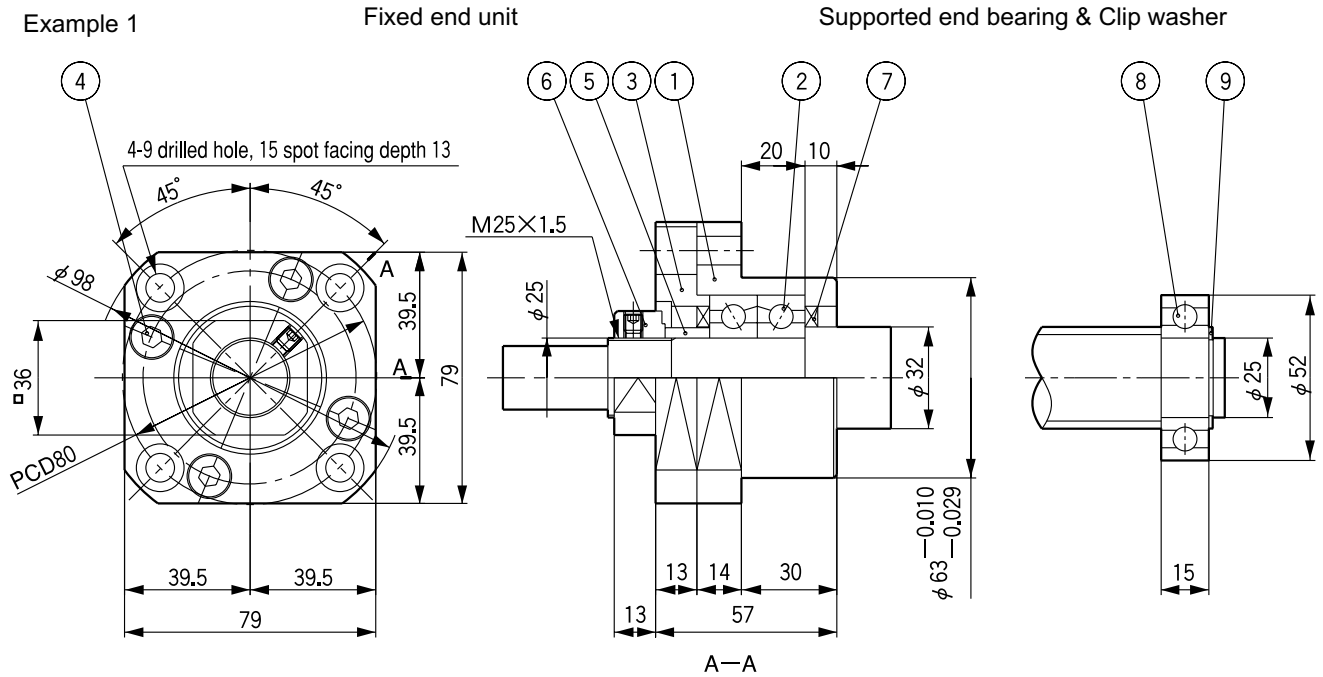
(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

Circle Flange Support Unit/BUM-25

(Unit:mm)

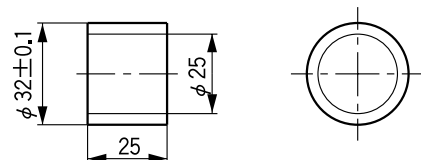
Mass
BUM-25:1.74kg



Parts List

No.	Description	Material	Q'ty	Note
1	Bearing housing	Steel	1	
2	Angular bearing		1 set	7205ADFP5
3	Cover flange	Steel	1	
4	Hexagon socket head cap screw		4	M8X20
5	Spacer	Steel	1	Nominal 25
6	Lock nut	Steel	1	M25X1.5
7	Oilseal		2	
8	Radial bearing		1	6205ZZ
9	Clip washer		1	Nominal 25

Collar for rolled ball screw



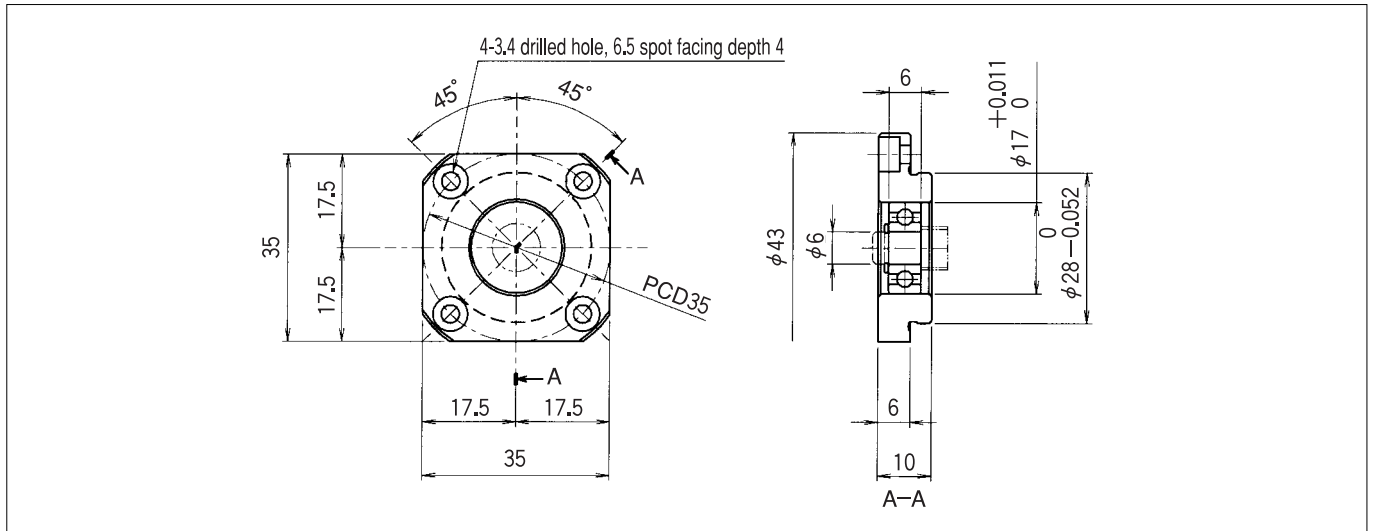
(Note)•As ①, ② and ③ are united, do not disassemble the unit.

•When using with rolled ball screw, optional collar is required. The optional collar is available on request.

SUPPORT UNITS

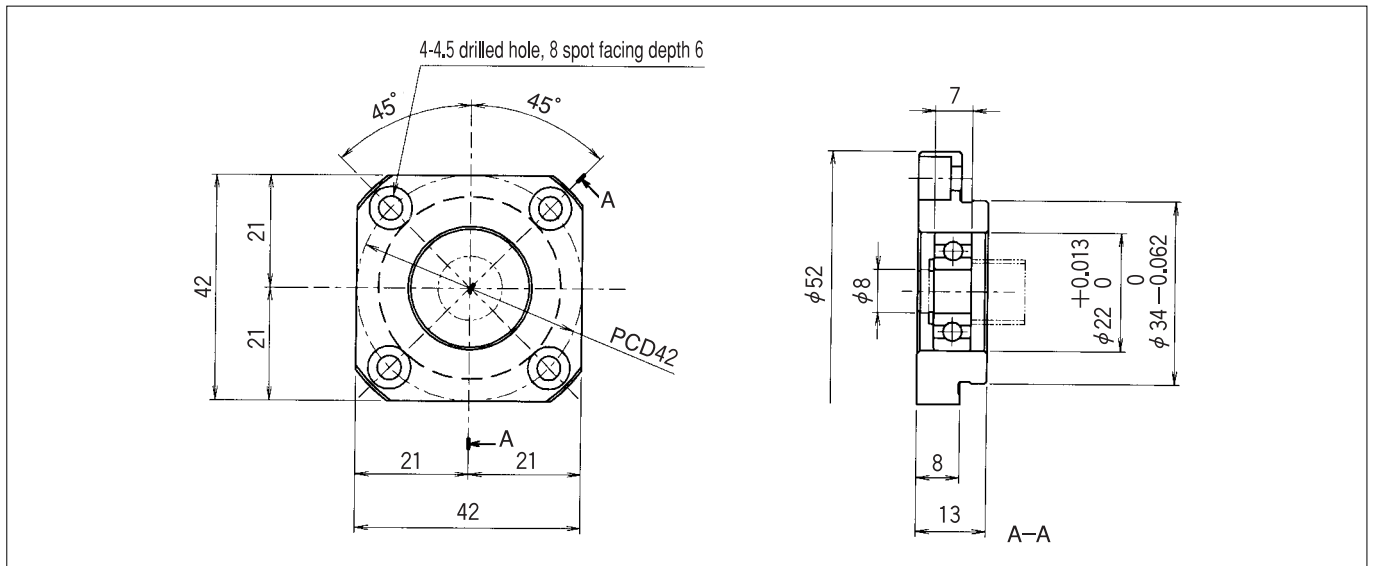
Circle Flange Supported end unit/BUM-6S

(Unit:mm)



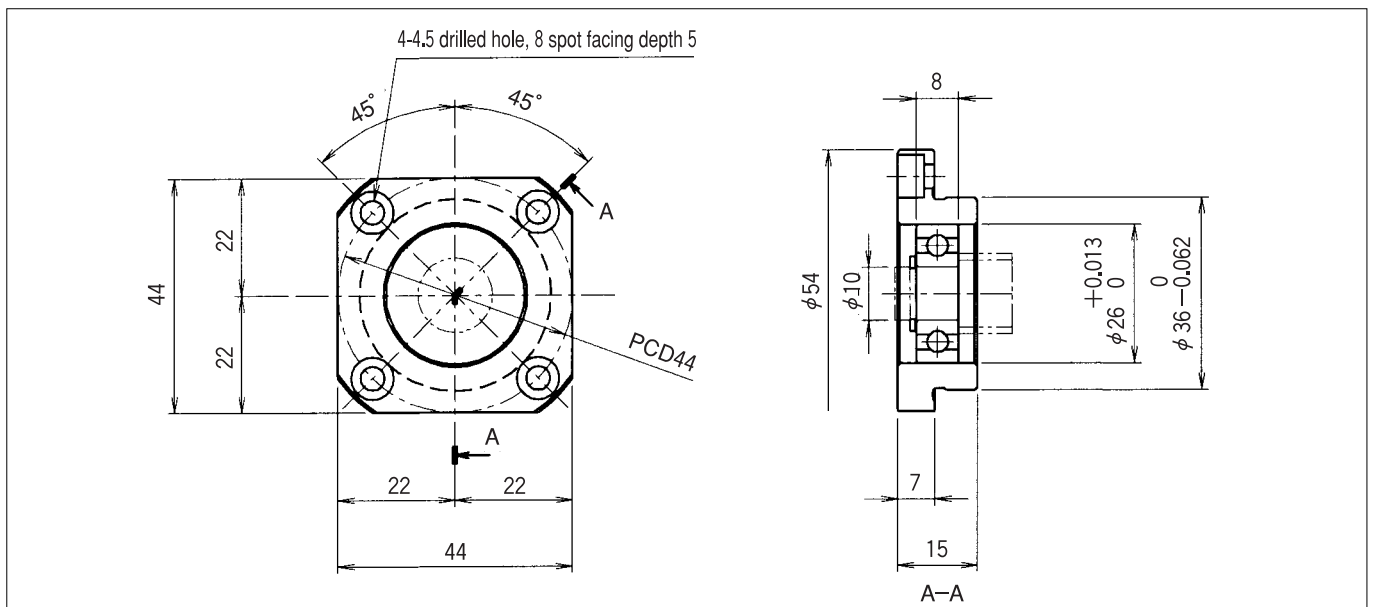
Circle Flange Supported end unit/BUM-8S

(Unit:mm)



Circle Flange Supported end unit/BUM-10S

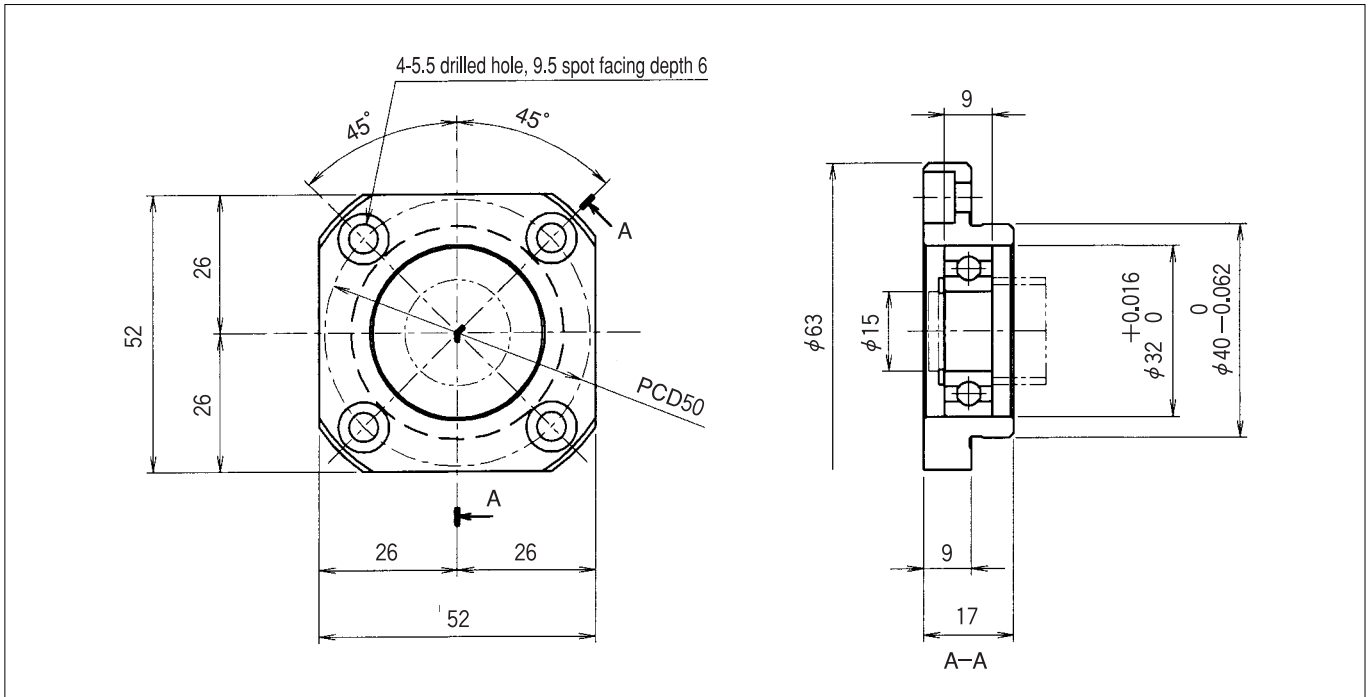
(Unit:mm)



BALL SCREWS/ ACCESSORIES

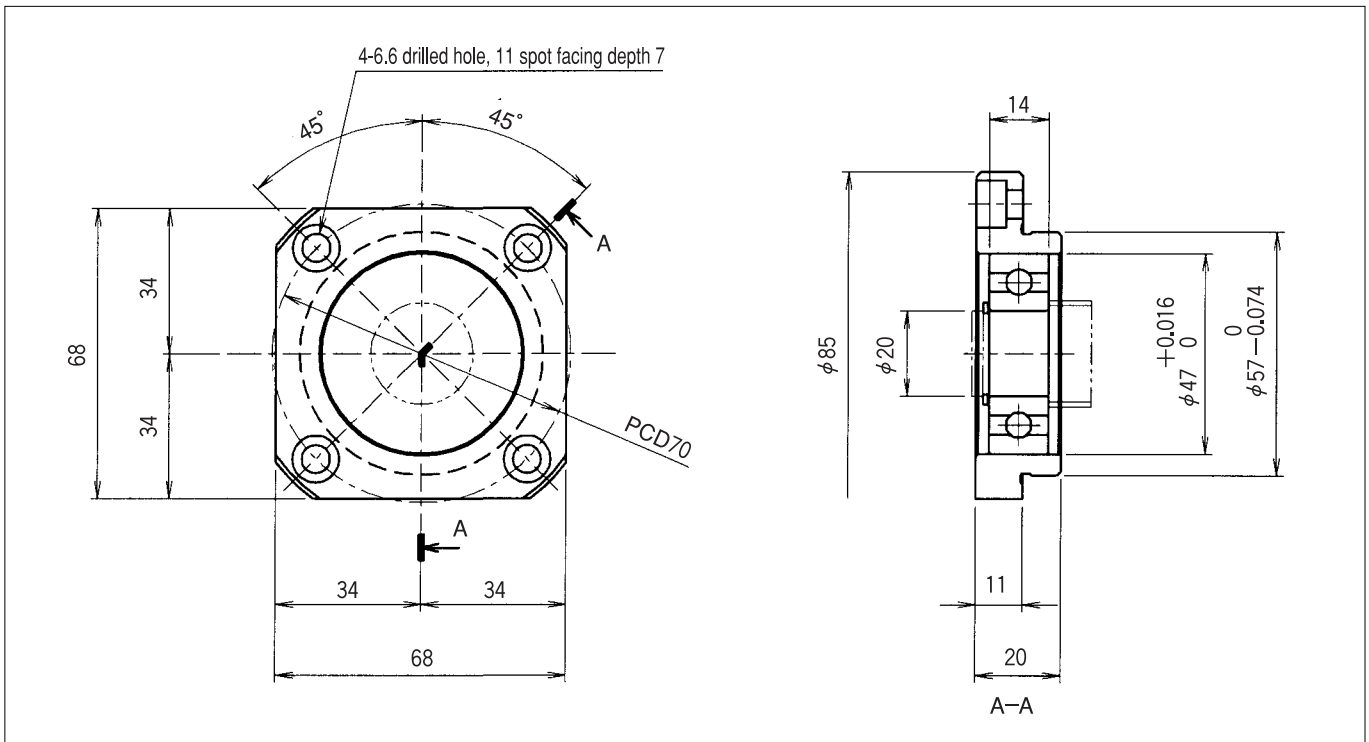
Circle Flange Supported end unit/BUM-15S

(Unit:mm)



Circle Flange Supported end unit/BUM-20S

(Unit:mm)



BALL SCREWS' ACCESSORIES