TBI MOTION BALL SCREW

2-1 Nominal Model Code of Ball Screw

SFU R 025 05 T4 D G C5 - 600 - P1 - B2 + N3 N3

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬

① Nominal Model

S	S : Single nut
	D : Double nut
	O : OFF set double nut
F	F : With flange
	C : Without flange
U	NI : NI type nut
	NU : NU type nut
	H : H type nut
	NH : NH nut (A solution for slide table)
	Y : Y type nut
	V : V type nut
	U : DIN nut
	M : M type nut
	K : K type nut

② Threading Direction

R : Right
L : Left

③ Nominal Diameter

Unit : mm

④ Lead

Unit : mm

⑤ Number of Turns (Turn·Row)

Turn : T : 1
A : 1.5 (or 1.7/1.8)
B : 2.5/2.8
C : 3.5
D : 4.8
ex : (2.5 × 2 = B2)

⑥ Flange Type

N : Not cutting
S : Single cutting
D : Double cutting

⑦ Product Code

G : Ground
F : Rolled

⑧ Accuracy Grade

C0, C1, C2, C3, C5, C7, C10

⑨ Overall Length of Shaft

Unit : mm

⑩ Axial Clearance and Preload Value

P0, P1, P2, P3, P4

⑪ Number of Nut

(Leave blank if only one nut is required)
Ex : Install two nuts on a shaft B2

⑫ Nut Surface Treatment

S : Standard
B1 : Black Oxidation
N1 : Hard Chrome Plating
P : Phosphating
N3 : Nickel Plating
N4 : Raydent
N5 : Chrome Plating

⑬ Shaft Surface Treatment

S : Standard
B1 : Black Oxidation
N1 : Hard Chrome Plating
P : Phosphating
N3 : Nickel Plating
N4 : Raydent
N5 : Chrome Plating

※ No symbol required when plating is not needed.
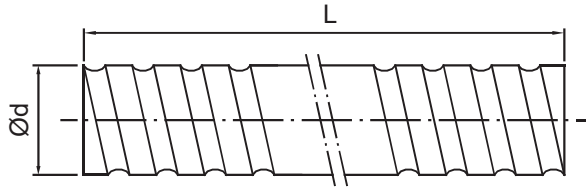※ An inspection report is provided for ground ball screws with an accuracy higher than C5.

Fig 2.1.1 Screw Shaft Nominial Diameter

Table 2.1.1 Ground Ball Screw Specifications Ø4~32

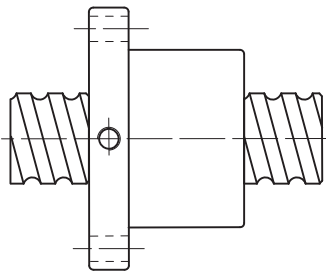| Model No.			Accuracy Grade	Threading Direction	Number of Grooves	Standard Code of Shaft	Type of Nut
Ød	I	Da		R : Right L : Left			
4	1	0.8	C7, C5, C3	R	1	SCR00401	K
6	1	0.8	C7, C5, C3	R	1	SCR00601	K
8	1	0.8	C7, C5, C3	R/L	1	SCR00801	K
	2	1.2	C7, C5, C3	R/L	1	SCR00802	K
	2.5	1.2	C7, C5, C3	R	1	SCR0082.5	K, BSH
10	2	1.2	C7, C5, C3	R/L	1	SCR01002	K, BSH
	4	2	C7, C5, C3	R	1	SCR01004	K, BSH
12	2	1.2	C7, C5, C3	R/L	1	SCR01202	K
	4	2.5	C7, C5, C3	R	1	SCR01204	U, BSH
	5	2.5	C7, C5, C3	R	1	SCR01205-A	V, U, BSH, H
	10	2.5	C7, C5, C3	R	2	SCR01210-B	V
14	2	1.2	C7, C5, C3	R/L	1	SCR01402	K
	4	2.5	C7, C5, C3	R	1	SCR01404	BSH
16	2	1.2	C7, C5, C3	R/L	1	SCR01602	K
	4	2.381	C7, C5, C3	R	1	SCR01604(N)	V, I, U, BSH
	5	3.175	C7, C5, C3	R/L	1	SCR01605	V, NI, NU, BSH
	10	3.175	C7, C5, C3	R/L	2	SCR01610	V, NI, NU, BSH
	16	2.778	C7, C5, C3	R	2	SCR01616	Y
	32	2.778	C7, C5, C3	R	2	SCR01632	Y
20	4	2.381	C7, C5, C3	R	1	SCR02004(N)	V, I, U
	5	3.175	C7, C5, C3	R/L	1	SCR02005	V, NI, NU, BSH, H
	10	3.969	C7, C5, C3	R	1	SCR02010	V
	20	3.175	C7, C5, C3	R	2	SCR02020	V, Y, H
	40	3.175	C7, C5, C3	R	2	SCR02040	Y
25	4	2.381	C7, C5, C3	R	1	SCR02504(N)	I, U
	5	3.175	C7, C5, C3	R/L	1	SCR02505	V, NI, NU, BSH, H
	6	3.969	C7, C5, C3	R	1	SCR02506	V, U
	8	4.762	C7, C5, C3	R	1	SCR02508	V, U
	10	4.762	C7, C5, C3	R	1	SCR02510-A	NI, NU, BSH
	10	6.35	C7, C5, C3	R	1	SCR02510-B	V
	25	3.969	C7, C5, C3	R	2	SCR02525	Y
	50	3.969	C7, C5, C3	R	2	SCR02550	Y
32	4	2.381	C7, C5, C3	R	1	SCR03204(N)	V, I, U
	5	3.175	C7, C5, C3	R/L	1	SCR03205	V, NI, NU, M, H
	6	3.969	C7, C5, C3	R	1	SCR03206	V, U
	8	4.762	C7, C5, C3	R	1	SCR03208	V, U
	10	6.35	C7, C5, C3	R/L	1	SCR03210	V, NI, NU
	20	6.35	C7, C5, C3	R	1	SCR03220	V
	32	4.762	C7, C5, C3	R	2	SCR03232	Y
	64	4.762	C7, C5, C3	R	2	SCR03264	Y

C

Ball Screw

2-1 Nominal Model Code of Ball Screw

Table 2.1.2　Standard Specifications Ø40~80　　　　　　　　　　　　　　　　　　Unit : mm

Ød	I	Da	Accuracy Grade	Threading Direction R : Right L : Left	Number of Grooves	Standard Code of Shaft	Type of Nut
40	5	3.175	C7, C5, C3	R / L	1	SCR04005	V, NI, NU, H
	6	3.969	C7, C5, C3	R	1	SCR04006	V, NU
	8	4.762	C7, C5, C3	R	1	SCR04008	V, NU
	10	6.35	C7, C5, C3	R / L	1	SCR04010	V, NI, NU
	20	6.35	C7, C5, C3	R	2	SCR04020	V
	40	6.35	C7, C5, C3	R	2	SCR04040	Y
	80	6.35	C7, C5, C3	R	2	SCR04080	Y
50	5	3.175	C7, C5, C3	R	1	SCR05005	V, H
	10	6.35	C7, C5, C3	R / L	1	SCR05010	V, NI, NU
	20	9.525	C7, C5, C3	R	1	SCR05020	V
	50	7.938	C7, C5, C3	R	2	SCR05050	Y
	100	7.938	C7, C5, C3	R	2	SCR050100	Y
63	10	6.35	C7, C5, C3	R	1	SCR06310	V, NI, NU
	20	9.525	C7, C5, C3	R	1	SCR06320	V, NU
80	10	6.35	C7, C5, C3	R	1	SCR08010	V, NI, NU
	20	9.525	C7, C5, C3	R	1	SCR08020	V, NU

Table 2.1.3　H-type Specifications Ø16~50　　　　　　　　　　　　　　　　　　Unit : mm
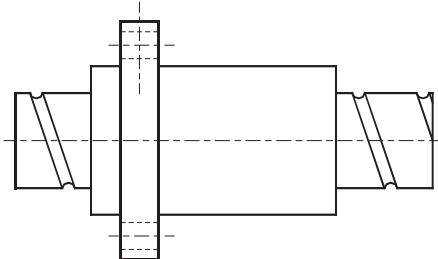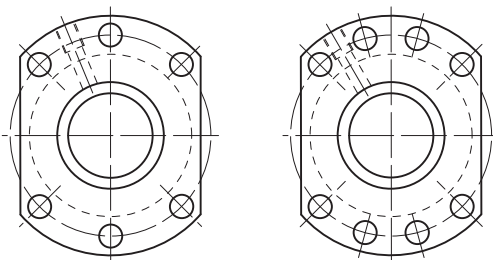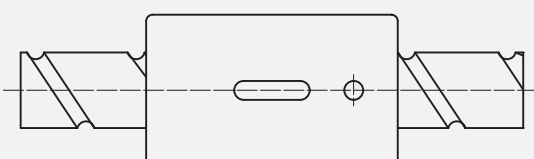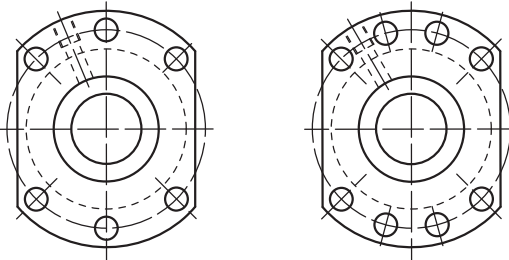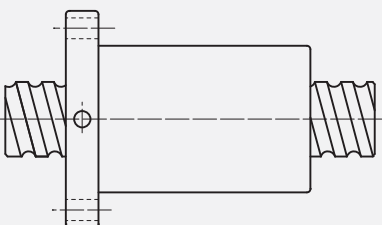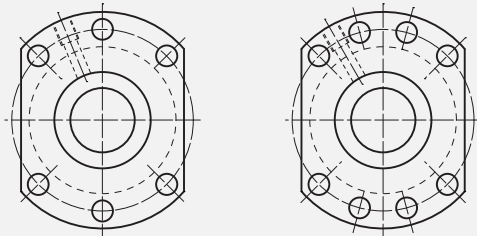
Ød	I	Da	Accuracy Grade	Threading Direction R : Right L : Left	Number of Grooves	Type-H Code of Shaft	Type of Nut
12	10	2.5	C7, C5, C3	R	1	SSR01210	H
16	5	2.778	C7, C5, C3	R	1	SSR01605	H
	10	2.778	C7, C5, C3	R	1	SSR01610	H
	16	2.778	C7, C5, C3	R	1	SSR01616	H
	20	2.778	C7, C5, C3	R	1	SSR01620	H
20	10	3.175	C7, C5, C3	R	1	SSR02010	H
25	10	3.175	C7, C5, C3	R	1	SSR02510	H
	25	3.175	C7, C5, C3	R	1	SSR02525	H
32	10	3.969	C7, C5, C3	R	1	SSR03210	H
	20	3.969	C7, C5, C3	R	1	SSR03220	H
	32	6.35	C7, C5, C3	R	1	SSR03232	H
40	10	6.35	C7, C5, C3	R	1	SSR04010	H
	20	6.35	C7, C5, C3	R	1	SSR04020	H
	40	6.35	C7, C5, C3	R	1	SSR04040	H
50	10	6.35	C7, C5, C3	R	1	SSR05010	H
	20	6.35	C7, C5, C3	R	1	SSR05020	H
	50	6.35	C7, C5, C3	R	1	SSR05050	H

※The information is for specifications, if customized products are needed please contact *TBI MOTION*.

2-2 Precision Ground Ball Screw Series

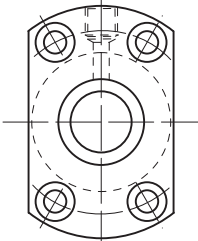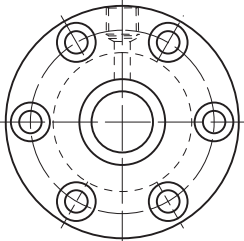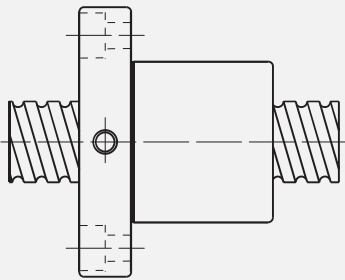### ■ 2-2-1 *TBI MOTION* Nut of Precision Ground Ball Screw Type
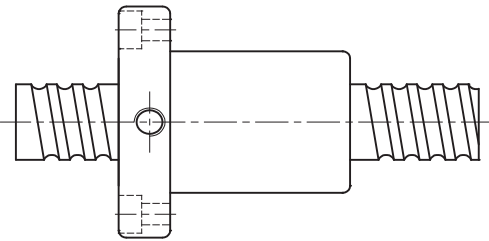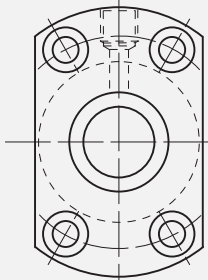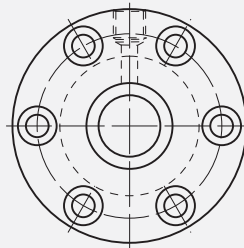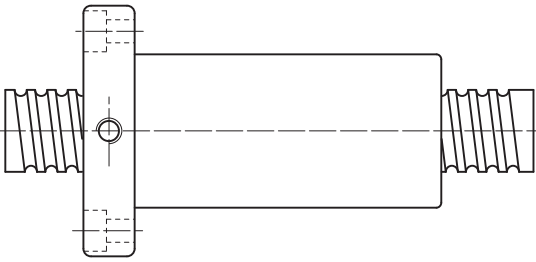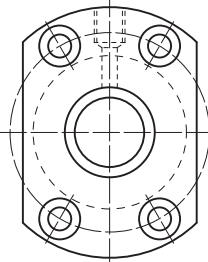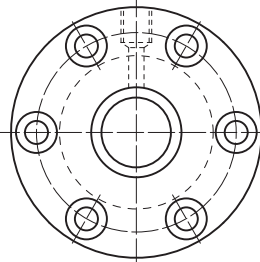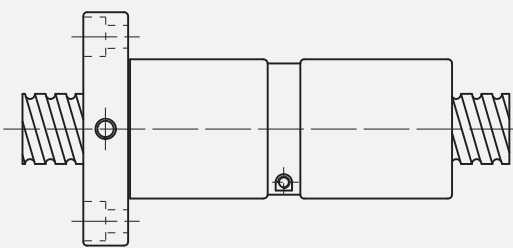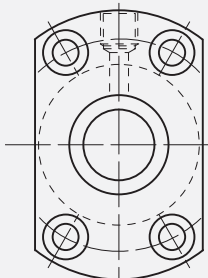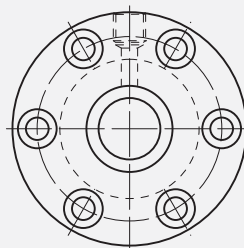
Nut Type	Flange Type
NH/H (A solution for slide table/High Speed/Strong dust-proof type) SFNH/SFH (DIN) C44	d≤32 d≥40
CNH (A solution for slide table) SCNH C45	No-Flange
NU/U (Strong dust-proof type) SFNU/SFU (DIN) C46	d≤32 d≥40
OFU/U (OFF set double nut) OFU/DFU (DIN) C47	

2-2 Precision Ground Ball Screw Series

C

Ball Screw

Nut Type	Flange Type
NI/I (Strong dust-proof type) — SFNI/SFI — C48	
M (Design for Milling) — SFM — C48	
OFI/I (OFF set double nut) — OFI/DFI — C49	
M (Design for Milling) — DFM — C49	

Nut Type	Flange Type
(High Load External Circulation type) SFV C50	
OFV (OFF set double nut) OFV C51	
(High Load External Circulation type) DFV C51	
(High DM-N Rating) SFY C52	

C
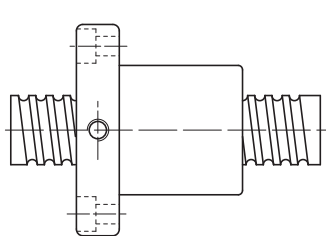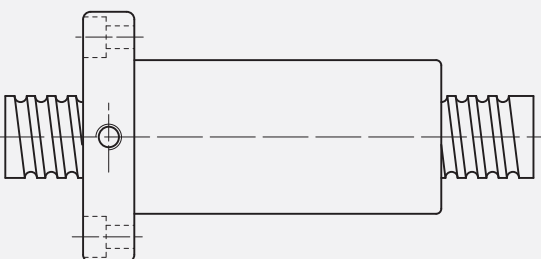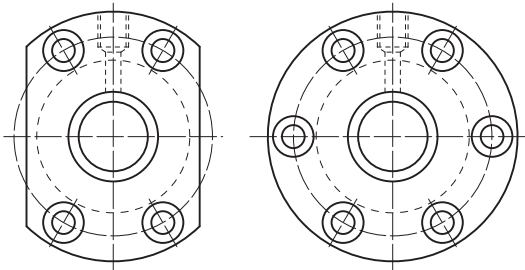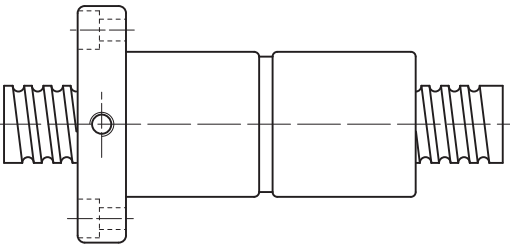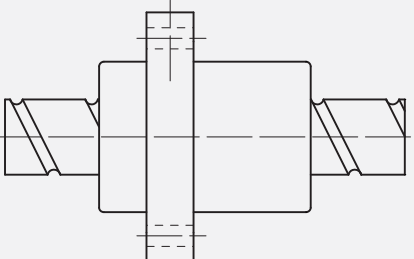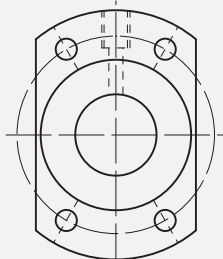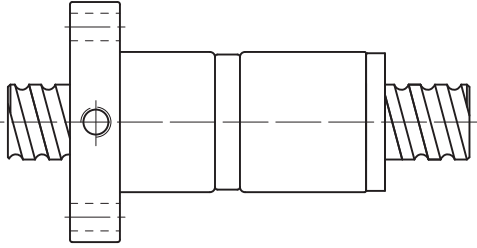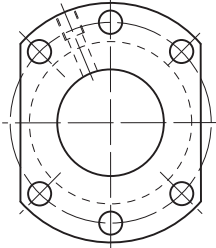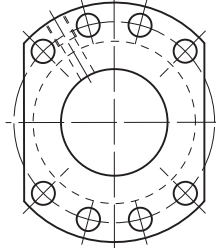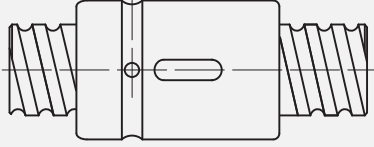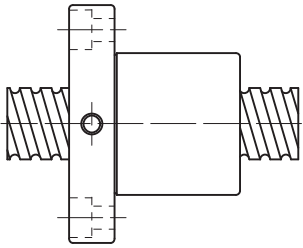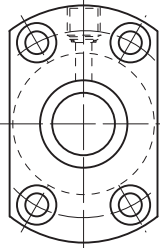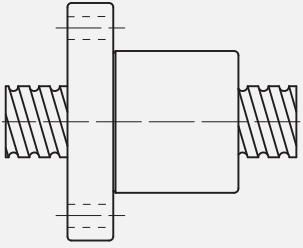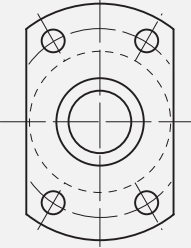
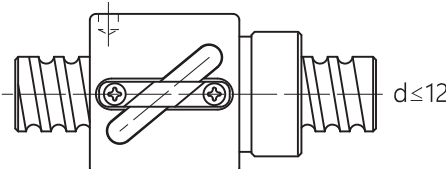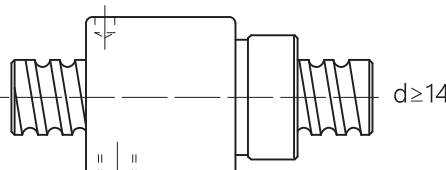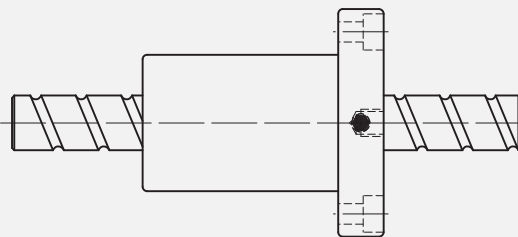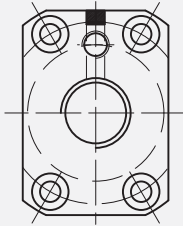**Ball Screw**

2-2 Precision Ground Ball Screw Series

Nut Type	Flange Type
S (High Speed / Low Noise type) — DFS (DIN) C53	Model No.≤3232　　Model No.≥4005
CNI/I (Standard) — SCNI/SCI C54	No-Flange
K (Miniature type) — SFK C55	(SFK 01004) (SFK 02002) (SFK 02502)
SFK C55	

Nut Type		Flange Type
BSH	BSH d≤12 d≥14 C56	No-Flange
XSV (Design for factory automation)	XSV C57~61	

※The information is for specifications, if customized products is are needed please contact **TBI MOTION**.

Table 2.2.1 Preload Chart

Preload	I, U, M-type	H-type	Y-type	V-type	BSH-type	K-type
P0						
P1	√	√	√	√	√	√
P2	√	√	√	√	√	
P3	√	√	√	√	√	
P4				√		