NSGF series Standardized Precision Ball Screws compliant to ISO/DIN Standards

This series is the Standard stock Ball Screws compliant to ISO/DIN Standards on Ball Nut outer diameter. Precision Ball Screws which are accuracy C3, C5 and have machined shaft end at fixed side in advance are available. Short delivery is available by machining supported end in accordance with customer's request.

●Combination of Shaft nominal dia. & Lead

Unit:mm

Shaft dia. \ Lead	1	2	4	5
4	6			
6	7	8		
8	9	10		11
10		12	13	
12		14	15	16

Note 1) The number in a table : showing a page in this catalogue.

●Accuracy Grade & Axial play

Accuracy grade of NSGF series (Standardized Precision Ball Screws compliant to ISO/DIN Standards) are based on C3 and C5(JIS B 1192-3). According to accuracy grade, Axial play 0(Preload : C3) and 0.005mm or less (C5) are in stock.

●Material & Surface hardness

NSGF series (Standardized Precision Ball Screws compliant to ISO/DIN Standards) consists of Shaft and Nut materials SCM415 (Carburizing and quenching) and Surface hardness is HRC58~62.

●Lubrication

NSGF series (Standardized Precision Ball Screws compliant to ISO/DIN Standards) without end-journal machining will be applied with anti-rust oil for rust prevention.
Anti-rust oil does not have lubricating function so that please apply Grease or lubrication oil when using the Ball Screws.
If there is no specific instruction, KSS would recommend our original Grease (MSG No.2) as standard lubricant. Please feel free to contact us.

●Customized products

It will be a customized product other than the above. Please ask KSS.

●Model number notation

Please use model number below when additional end-journal machining is requested.

NSGF 04 01 — 46 R 85 C3 B 1 X
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

①Ball Screws Series No.
②Screw Shaft nominal diameter(mm)
③Lead(mm)
④Screw thread length(mm)
(Specify in 1mm unit after end-journal machining)
⑤Thread direction(R=Right-hand)
⑥Screw Shaft total length(mm)
(Specify in 1mm unit)
⑦Accuracy grade(C3 or C5)
⑧Shaft supported end profile
Refer to Fig. A-1 below : A-type,B-type,C-type,
D-type(other)
⑨Anti-rust oil or Lubricant
0 : KSS grease (MSG No.2)
1 : Anti-rust oil(Non Ruster PZ2)
2 : Multemp PS2 grease
3 : Other
⑩Nut M-thread direction (Refer to Fig. A-2 below)

Fig. A-1 : Shaft supported end profile

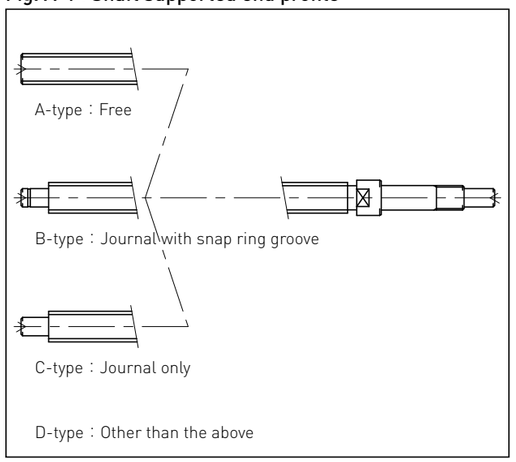
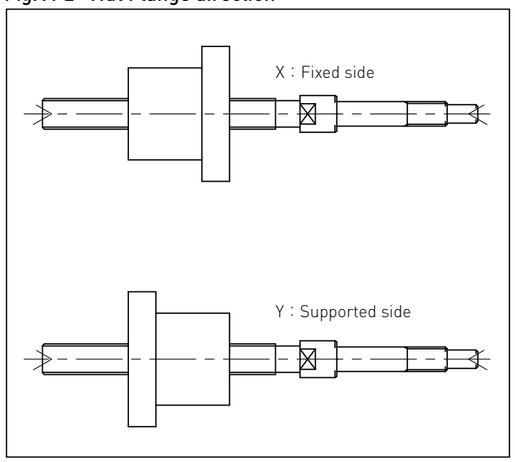


Fig. A-2 : Nut Flange direction

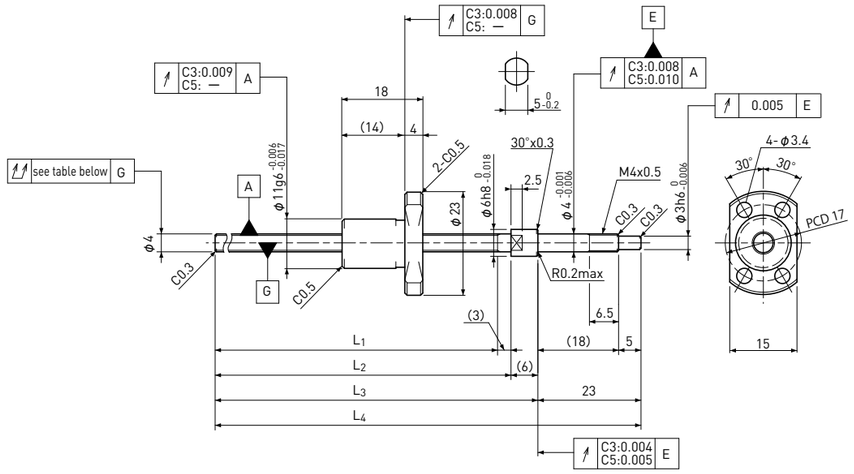


●Note

1)The detail of end-journal dimension for each size is shown from next page.
2)KSS does not make additional Nut machining.
3)The specification is subject to change without notice.
4)If the other configuration except (A,B,C)is requested, please contact KSS.

Standard products in stock NSGF series

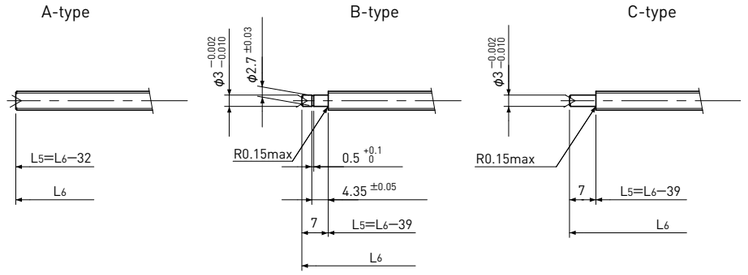
NSGF0401 | Shaft dia.φ4 Lead1mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ4.15
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-4CS/4GS
	Fixed-side	MSU-4C/4G

D-type : Other than the above.

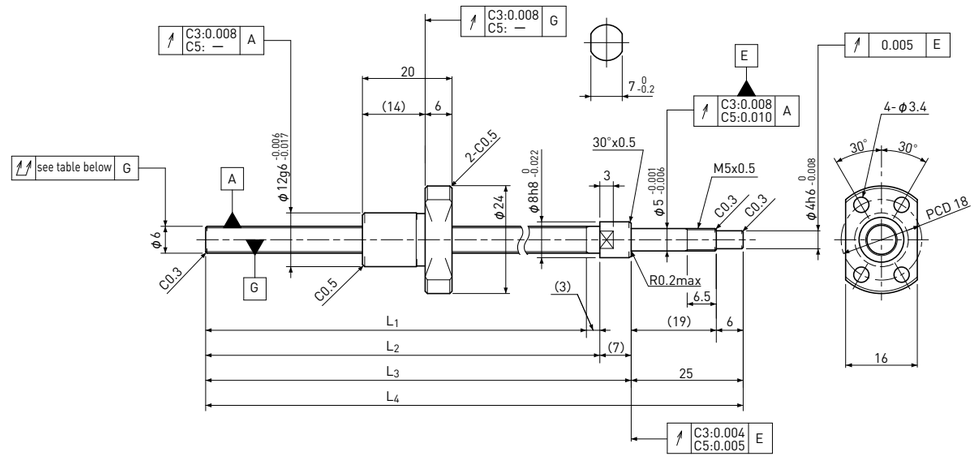
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0401- 63R 95C3	40	C3	63	66	72	95	±0.008	0.008	0.025	0	～0.002	450	600
NSGF0401-103R135C3	80	C3	103	106	112	135	±0.010	0.008	0.035				
NSGF0401- 63R 95C5	40	C5	63	66	72	95	±0.018	0.018	0.035	～0.005	—	450	600
NSGF0401-103R135C5	80	C5	103	106	112	135	±0.020	0.018	0.050				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

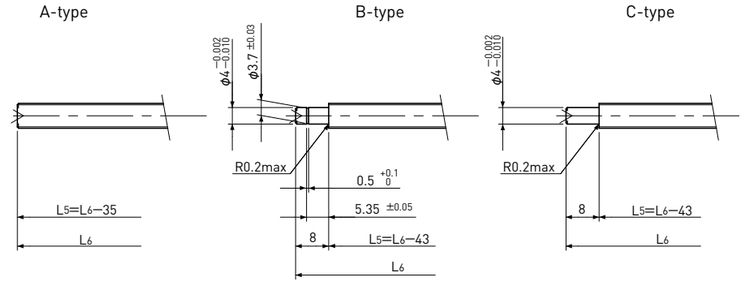
NSGF0601 | Shaft dia.φ6 Lead1mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ6.20
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-5CS/5GS
	Fixed-side	MSU-5C/5G

D-type : Other than the above.

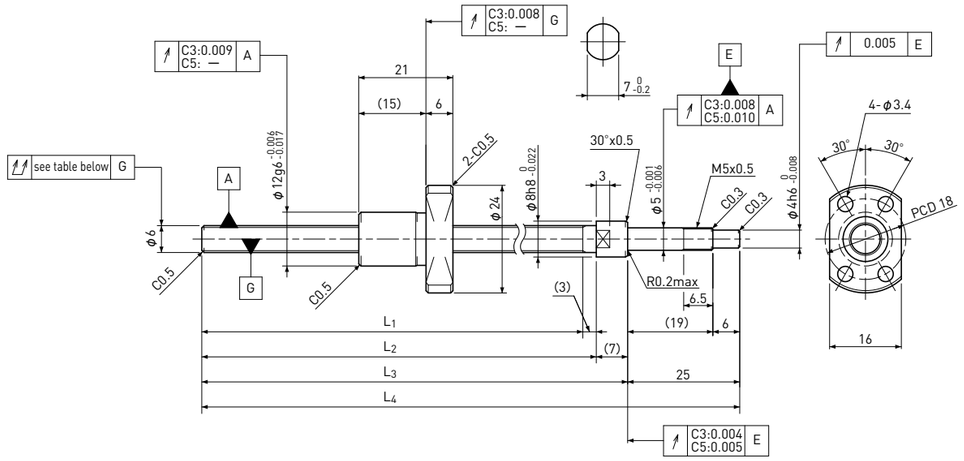
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0601- 85R120C3	60	C3	85	88	95	120	±0.008	0.008	0.025	0	～0.002	560	950
NSGF0601-135R170C3	110	C3	135	138	145	170	±0.010	0.008	0.035				
NSGF0601- 85R120C5	60	C5	85	88	95	120	±0.018	0.018	0.035	～0.005	—	560	950
NSGF0601-135R170C5	110	C5	135	138	145	170	±0.020	0.018	0.050				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

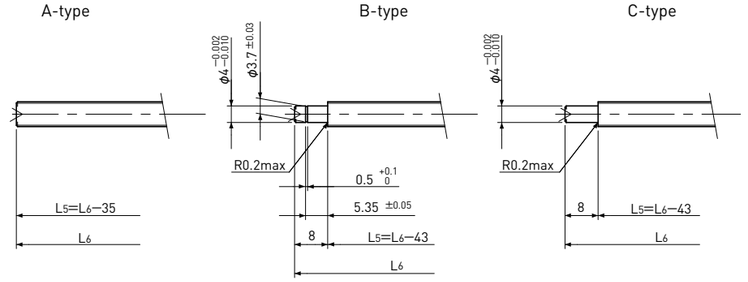
NSGF0602 | Shaft dia.φ6 Lead2mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ6.20
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-5CS/5GS
	Fixed-side	MSU-5C/5G

D-type : Other than the above.

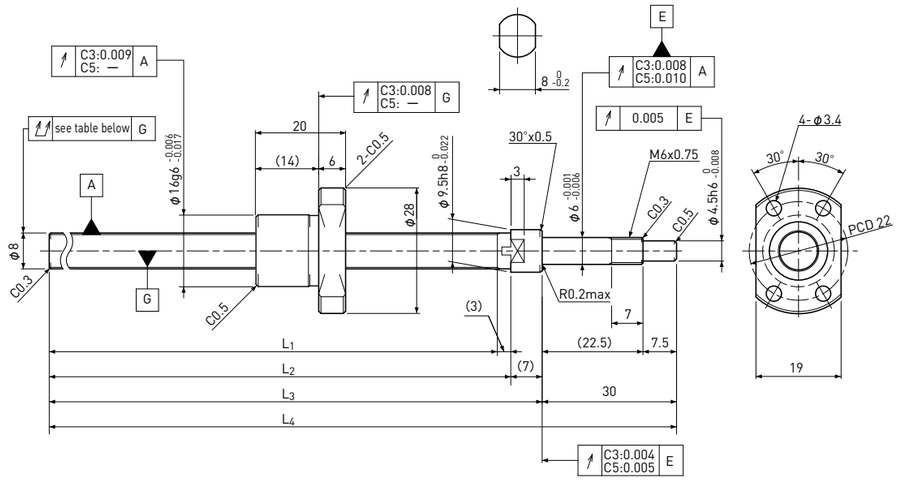
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0602- 85R120C3	60	C3	85	88	95	120	±0.008	0.008	0.025	0	～0.0039	770	1150
NSGF0602-135R170C3	110	C3	135	138	145	170	±0.010	0.008	0.035				
NSGF0602- 85R120C5	60	C5	85	88	95	120	±0.018	0.018	0.035	～0.005	—	770	1150
NSGF0602-135R170C5	110	C5	135	138	145	170	±0.020	0.018	0.050				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

NSGF0801 | Shaft dia.φ8 Lead1mm | C3&C5

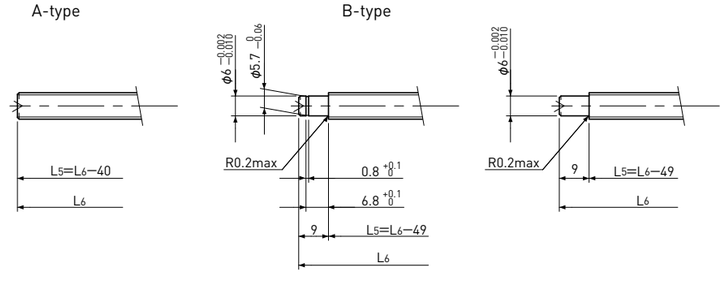


Unit:mm

C-type

Ball Screw Specifications	
BCD	φ8.20
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-6CS/6GS
	Fixed-side	MSU-6C/6G

D-type : Other than the above.

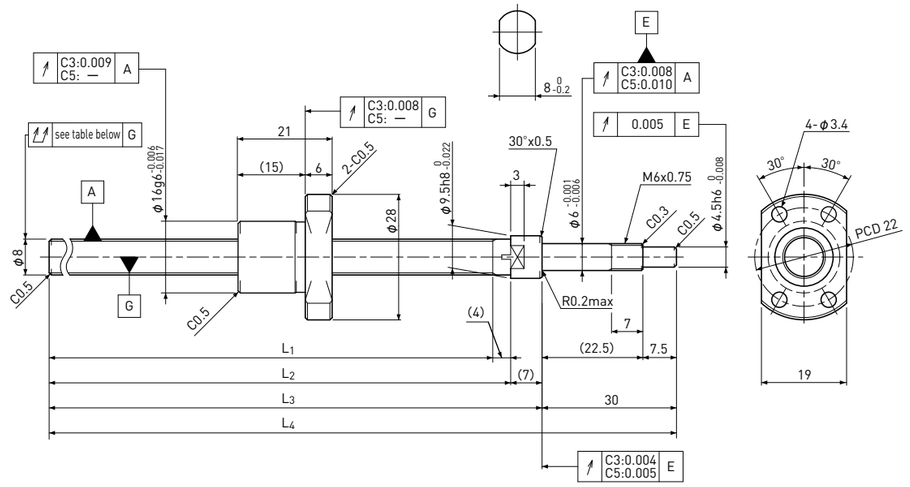
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0801-100R140C3	75	C3	100	103	110	140	±0.008	0.008	0.035	0	～0.0029	650	1300
NSGF0801-160R200C3	135	C3	160	163	170	200	±0.010	0.008	0.035				
NSGF0801-100R140C5	75	C5	100	103	110	140	±0.018	0.018	0.050	～0.005	—	650	1300
NSGF0801-160R200C5	135	C5	160	163	170	200	±0.020	0.018	0.050				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

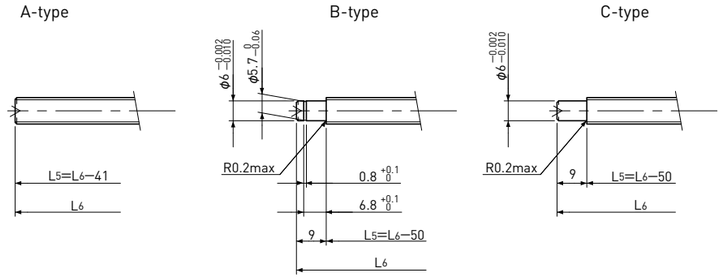
NSGF0802 | Shaft dia.φ8 Lead2mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ8.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-6CS/6GS
	Fixed-side	MSU-6C/6G

D-type : Other than the above.

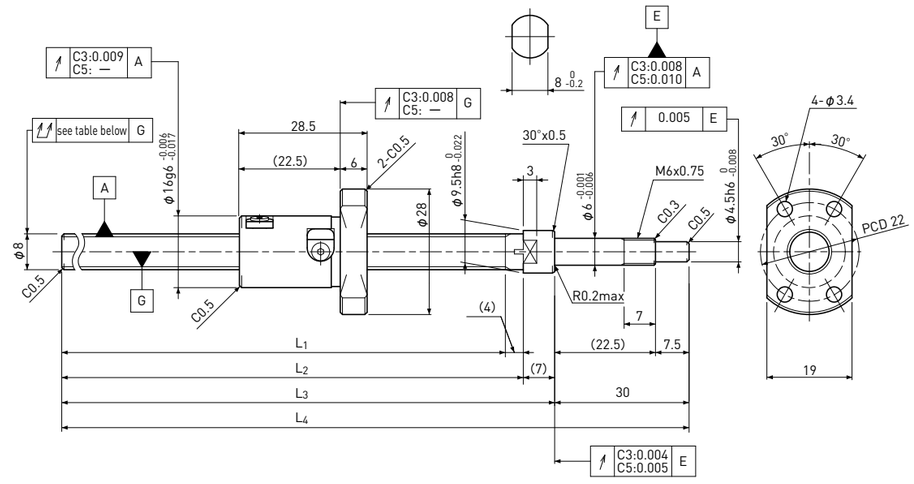
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0802- 99R140C3	75	C3	99	103	110	140	±0.008	0.008	0.035	0	～0.0075	1300	2300
NSGF0802-159R200C3	135	C3	159	163	170	200	±0.010	0.008	0.035				
NSGF0802- 99R140C5	75	C5	99	103	110	140	±0.018	0.018	0.050	～0.005	—	1300	2300
NSGF0802-159R200C5	135	C5	159	163	170	200	±0.020	0.018	0.050				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

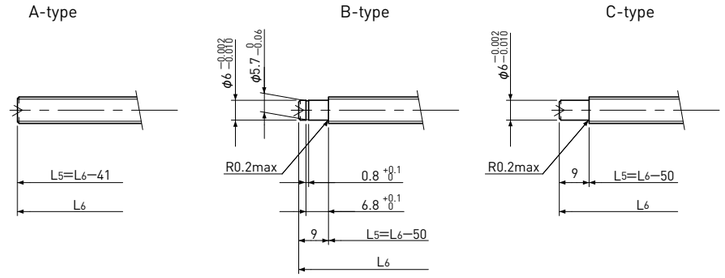
NSGF0805 | Shaft dia.φ8 Lead5mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ8.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-6CS/6GS
	Fixed-side	MSU-6C/6G

D-type : Other than the above.

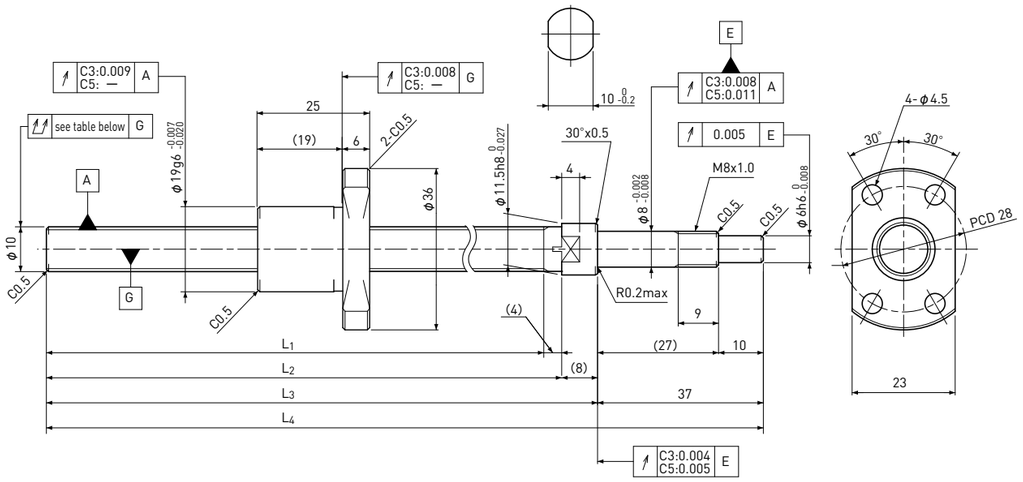
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF0805- 99R140C3	65	C3	99	103	110	140	±0.008	0.008	0.035	0 Spacer Ball (1:1)	～0.0104	1150	1500
NSGF0805-209R250C3	175	C3	209	213	220	250	±0.012	0.008	0.050				
NSGF0805- 99R140C5	65	C5	99	103	110	140	±0.018	0.018	0.050	～0.005	—	1850	3000
NSGF0805-209R250C5	175	C5	209	213	220	250	±0.023	0.018	0.065				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

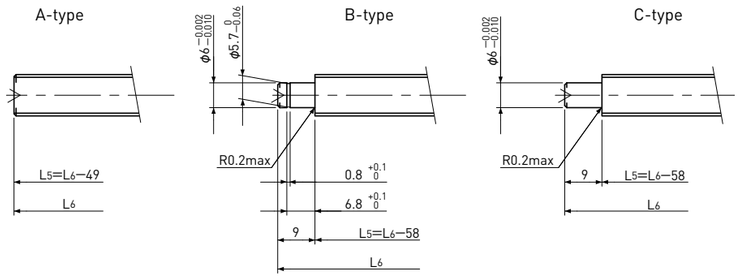
NSGF1002 | Shaft dia.φ10 Lead2mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ10.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-8CS/8GS
	Fixed-side	MSU-8C/8G

D-type : Other than the above.

Unit:mm

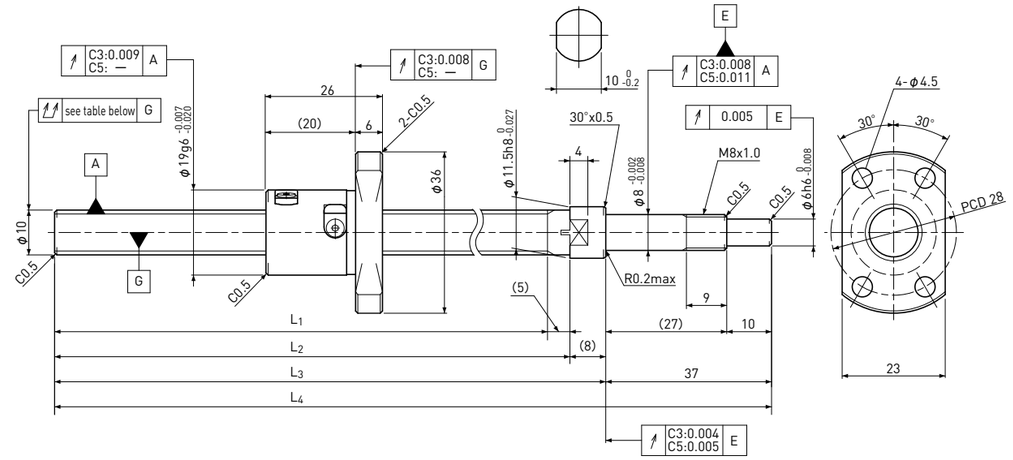
Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF1002-111R160C3	80	C3	111	115	123	160	±0.010	0.008	0.035	0	～0.0131	2050	3650
NSGF1002-211R260C3	180	C3	211	215	223	260	±0.012	0.008	0.040				
NSGF1002-111R160C5	80	C5	111	115	123	160	±0.020	0.018	0.040	～0.005	—	2050	3650
NSGF1002-211R260C5	180	C5	211	215	223	260	±0.023	0.018	0.055				

Note)Please refer to page 5 for order code of end-journal machining.

Ball Screw
Standard products in stock NSGF series

Standard products in stock NSGF series

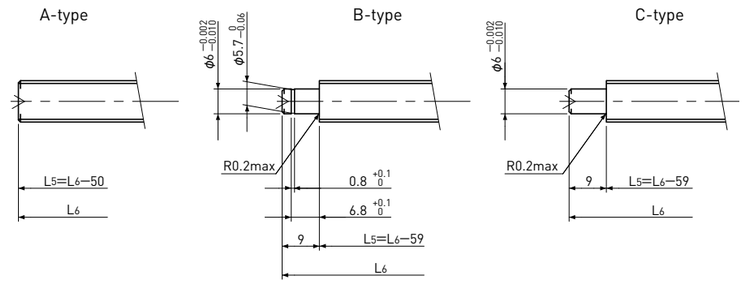
NSGF1004 | Shaft dia.φ10 Lead4mm | C3&C5



Unit:mm

Ball Screw Specifications 諸元	
BCD	φ10.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	MSU-8CS/8GS
	Fixed-side	MSU-8C/8G

D-type : Other than the above.

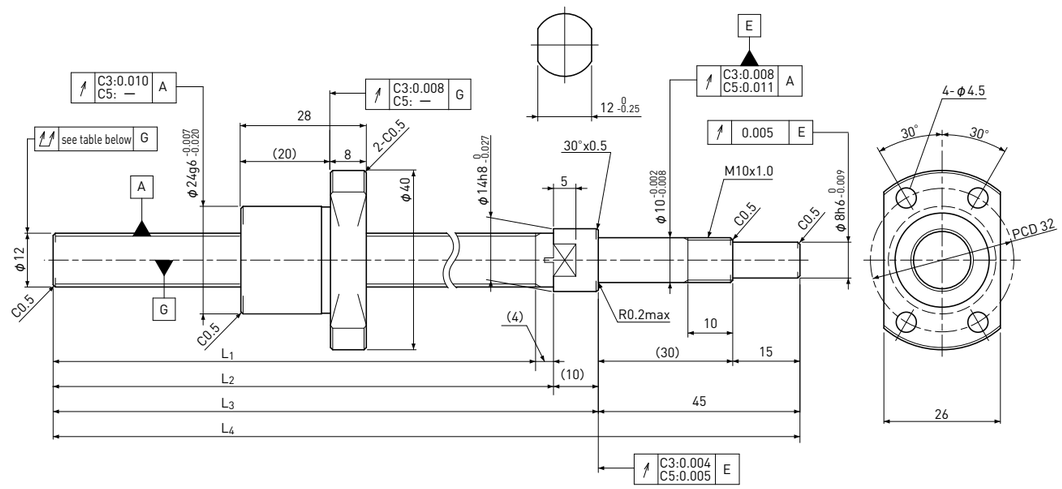
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length L1	L2	L3	L4	Lead accuracy Travel deviation ep	Variation Vu	Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N Dynamic Ca	Static Coa
NSGF1004-110R160C3	80	C3	110	115	123	160	±0.010	0.008	0.035	0 Spacer Ball (1:1)	～0.0163	1800	2600
NSGF1004-260R310C3	230	C3	260	265	273	310	±0.012	0.008	0.040				
NSGF1004-110R160C5	80	C5	110	115	123	160	±0.020	0.018	0.040	～0.005	—	3000	5200
NSGF1004-260R310C5	230	C5	260	265	273	310	±0.023	0.018	0.055				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

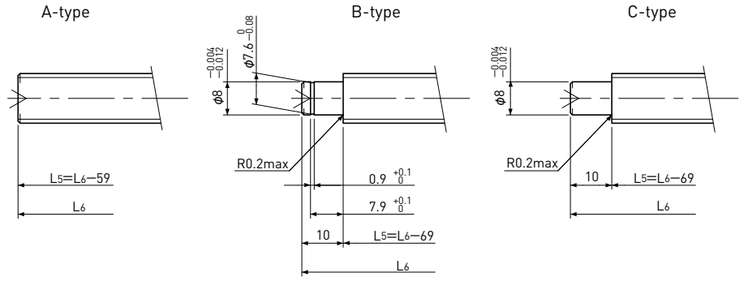
NSGF1202 | Shaft dia.φ12 Lead2mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ12.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	—
	Fixed-side	—

D-type : Other than the above.

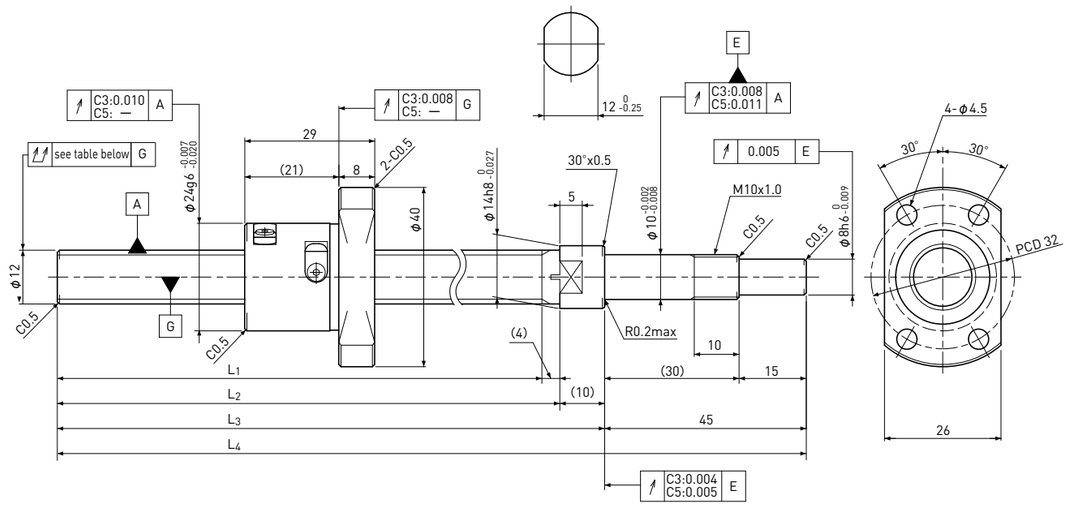
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length				Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L1	L2	L3	L4	Travel deviation ep	Variation Vu				Dynamic Ca	Static Coa
NSGF1202-141R200C3	110	C3	141	145	155	200	±0.010	0.008	0.035	0	～0.0157	2250	4550
NSGF1202-241R300C3	210	C3	241	245	255	300	±0.012	0.008	0.040				
NSGF1202-341R400C3	310	C3	341	345	355	400	±0.013	0.010	0.050				
NSGF1202-141R200C5	110	C5	141	145	155	200	±0.020	0.018	0.040	～0.005	—	2250	4550
NSGF1202-241R300C5	210	C5	241	245	255	300	±0.023	0.018	0.055				
NSGF1202-341R400C5	310	C5	341	345	355	400	±0.025	0.020	0.065				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

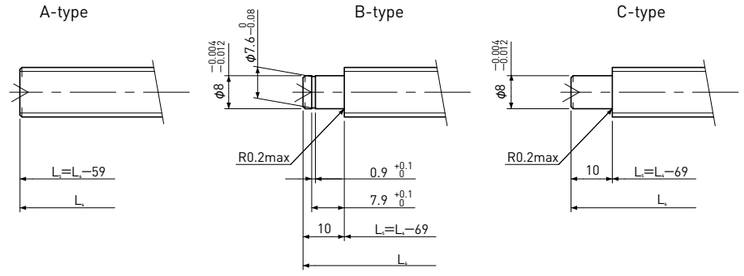
NSGF1204 | Shaft dia.φ12 Lead4mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ12.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L5:Thread length after end-journal machining.
L6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	—
	Fixed-side	—

D-type : Other than the above.

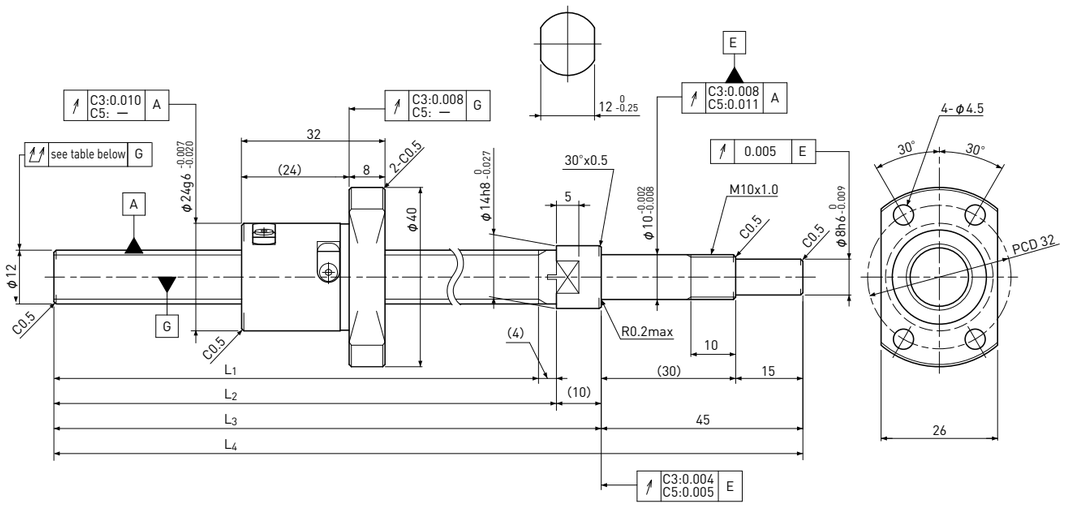
Unit:mm

Ball Screw Model	Travel	Grade	Shaft length				Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L1	L2	L3	L4	Travel deviation ep	Variation Vu				Dynamic Ca	Static Coa
NSGF1204-141R200C3	110	C3	141	145	155	200	±0.010	0.008	0.035	0 Spacer Ball (1:1)	～0.0247	2500	3700
NSGF1204-241R300C3	210	C3	241	245	255	300	±0.012	0.008	0.040				
NSGF1204-341R400C3	310	C3	341	345	355	400	±0.013	0.010	0.050				
NSGF1204-141R200C5	110	C5	141	145	155	200	±0.020	0.018	0.040	～0.005	—	4100	7400
NSGF1204-241R300C5	210	C5	241	245	255	300	±0.023	0.018	0.055				
NSGF1204-341R400C5	310	C5	341	345	355	400	±0.025	0.020	0.065				

Note)Please refer to page 5 for order code of end-journal machining.

Standard products in stock NSGF series

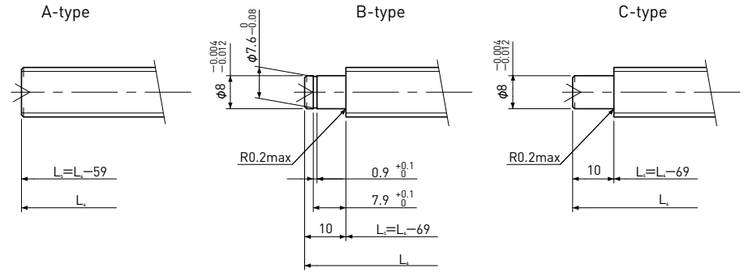
NSGF1205 | Shaft dia.φ12 Lead5mm | C3&C5



Unit:mm

Ball Screw Specifications	
BCD	φ12.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58～62 (Thread area)
Anti-rust treatment	Anti-rust oil

Supported-side end-journal profile



L_5:Thread length after end-journal machining.
L_6:Total length after end-journal machining.

Support-unit Recommendation		
	Supported-side	—
	Fixed-side	—

D-type : Other than the above.

Unit:mm

Ball Screw Model	Travel	Grade	Shaft length				Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L_1	L_2	L_3	L_4	Travel deviation e_p	Variation V_u				Dynamic Ca	Static Coa
NSGF1205-141R200C3	110	C3	141	145	155	200	±0.010	0.008	0.035	0 Spacer Ball (1:1)	～0.0247	2500	3700
NSGF1205-241R300C3	210	C3	241	245	255	300	±0.012	0.008	0.040				
NSGF1205-341R400C3	310	C3	341	345	355	400	±0.013	0.010	0.050				
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NSGF1205-341R400C5	310	C5	341	345	355	400	±0.025	0.020	0.065				

Note)Please refer to page 5 for order code of end-journal machining.