

NSRF series Standardized Rolled Ball Screws compliant to ISO/DIN Standards

This series is the Rolled Ball Screws compliant to ISO/DIN Standards on Ball Nut outer diameter. Rolled Ball Screws with accuracy Ct7 are available in stock. It is suitable for compact and low cost design. Rolled Ball Screws with end-journal machining are available for short delivery.

●Combination of Shaft nominal dia. & Lead

Unit:mm

Lead Shaft dia.	1	2	4	5
4	20			
6	21	22		
8	23	24		25
10		26	27	
12		28	29	30

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

●Model number notation

NSRF **06** **01** **—** **200** **R** **200** **C7**
① ② ③ ④ ⑤ ⑥ ⑦

- ①Rolled Ball Screws Series No.
NSRF : Rolled Ball Screws(ISO/DIN compliance)
- ②Screw Shaft nominal diameter(mm)
- ③Lead(mm)
- ④Screw thread length(mm)
- ⑤Thread direction (R=Right-hand)
- ⑥Screw Shaft total length(mm)
- ⑦Accuracy grade(C7)

●Accuracy Grade & Axial play

Accuracy grade of NSRF series (Standardized Rolled Ball Screws compliant to ISO/DIN Standards) is based on Ct7(JIS B 1192-3). Axial play 0.020mm or less (Ct7)is in stock.

●Material & Surface hardness

Materials and Surface hardness of NSRF series (Standardized Rolled Ball Screws compliant to ISO/DIN Standards) are as follows.

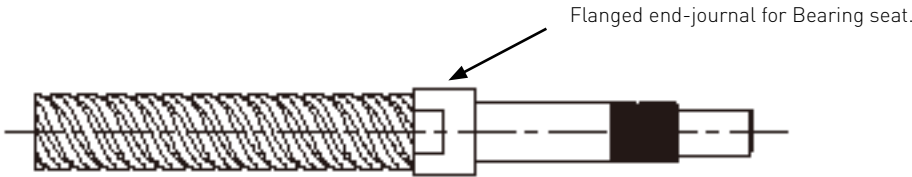
Components	Material	Heat treatment	Surface hardness
Shaft	SCM415 S55C	Carburizing Induction Hardening	HRC58~62 HRC58~62
Nut	SCM415	Carburizing and Quenching	

●Lubrication

NSRF series (Standardized Rolled Ball Screws compliant to ISO/DIN Standard) without end-journal machining are applied with anti-rust oil for rust prevention. Anti-rust oil does not have lubricating function so that please apply the 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.

●Others

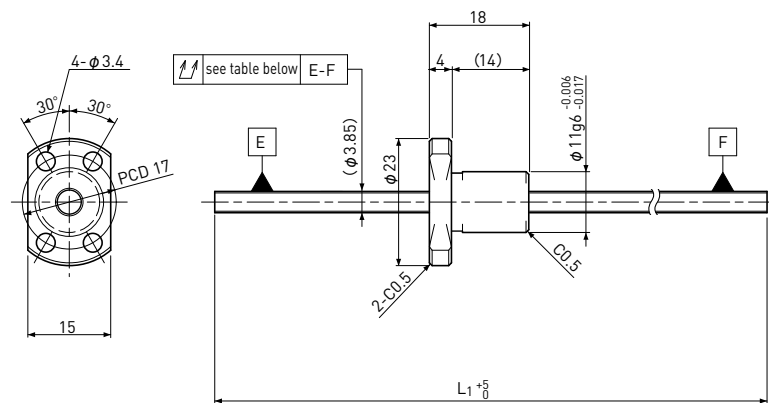
End-journal configuration of NSRF series (Standardized Rolled Ball Screws compliant to ISO/DIN Standards) is not standardized. When you request additional machining, please send us a drawing with end-journal profile. Rolled Ball Screws with Integrated end-journal, which is bigger Bearing face than supported seat, are available as shown below. Please ask KSS.



Standard products in stock NSRF series

NSRF0401 | Shaft dia. $\phi 4$ Lead1mm

Ct7



Unit:mm

Ball Screw Specifications	
BCD	$\phi 4.15$
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

Unit:mm

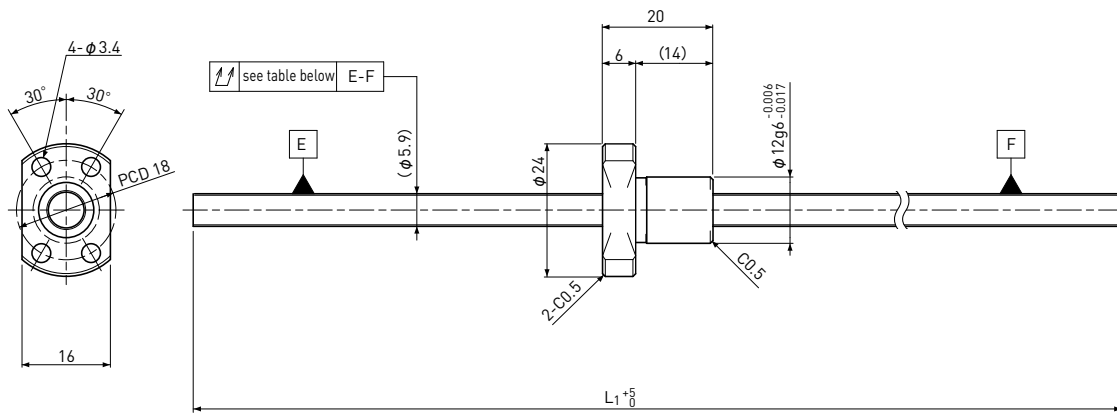
Ball Screw Model	Travel	Grade	Shaft length		Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L ₁	L ₂	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0401-100R100C7	75	Ct7	100	—	±0.030	—	0.080	~0.020	—	450	600

Note)Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF0601 | Shaft dia. $\phi 6$ Lead1mm

Ct7



Unit:mm

Ball Screw Specifications		
BCD	$\phi 6.20$	
Thread direction	Right	
Material	Shaft	S55C
	Nut	SCM415H
Surface hardness	HRC58~62 (Thread area)	
Anti-rust treatment	Anti-rust oil	

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0601-200R200C7	175	Ct7	200	—	±0.040	—	0.080	~0.020	—	560	950

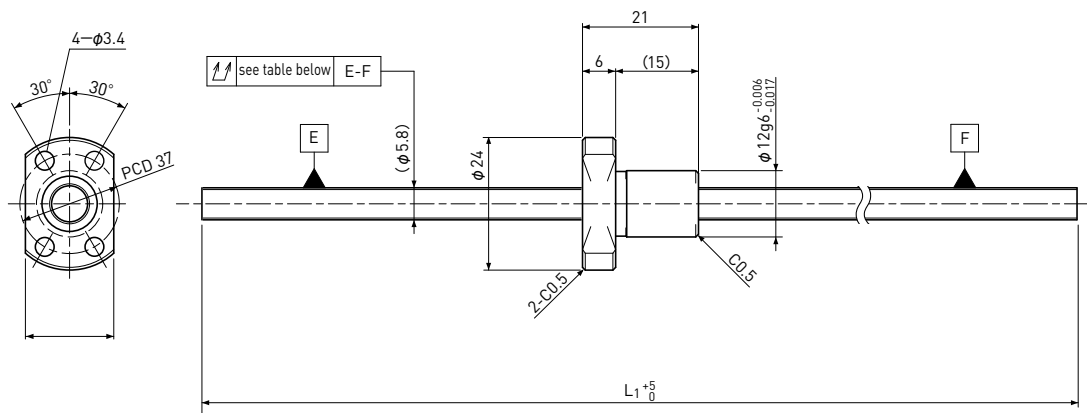
Note)Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF0602

Shaft dia. $\phi 6$ Lead 2mm

Ct7



Unit:mm

Ball Screw Specifications		
BCD	$\phi 6.20$	
Thread direction	Right	
Material	Shaft	S55C
	Nut	SCM415H
Surface hardness	HRC58~62 (Thread area)	
Anti-rust treatment	Anti-rust oil	

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0602-200R200C7	175	Ct7	200	—	±0.040	—	0.080	~0.020	—	770	1150

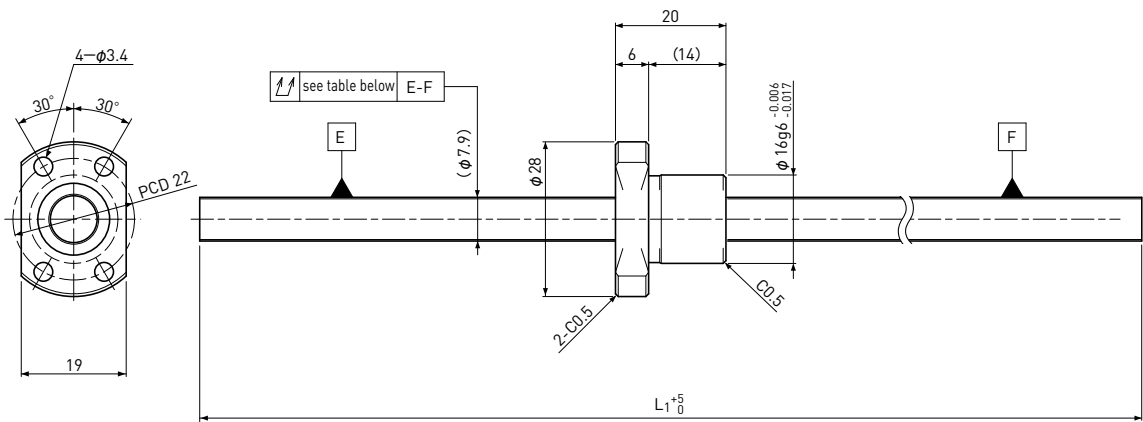
Note) Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF0801

Shaft dia. $\phi 8$ Lead 1mm

Ct7



Unit:mm

Ball Screw Specifications		
BCD	$\phi 8.20$	
Thread direction	Right	
Material	Shaft	S55C
	Nut	SCM415H
Surface hardness	HRC58~62 (Thread area)	
Anti-rust treatment	Anti-rust oil	

Unit:mm

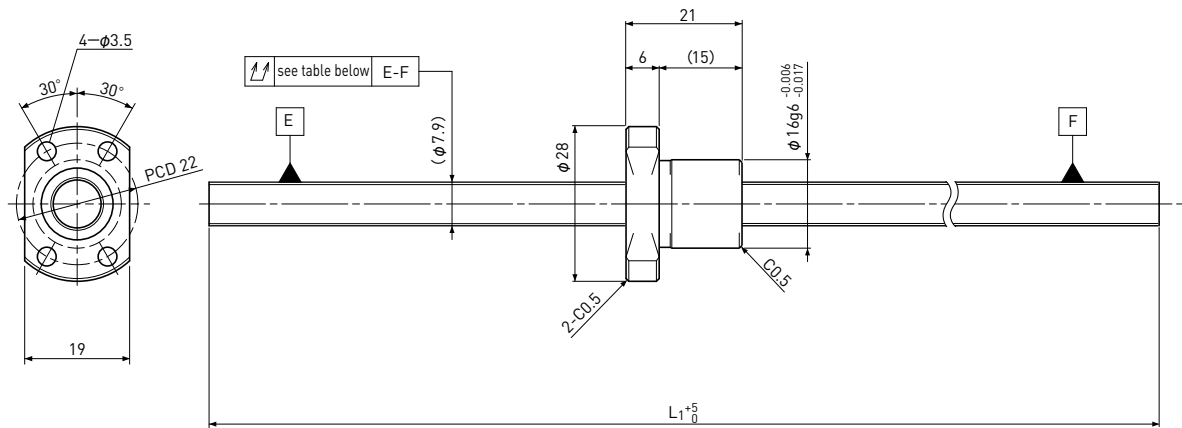
Ball Screw Model	Travel	Grade	Shaft length		Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L ₁	L ₂	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0801-230R230C7	205	Ct7	230	—	±0.052	—	0.080	~0.020	—	650	1300

Note) Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF0802 | Shaft dia. $\phi 8$ Lead2mm

Ct7



Unit:mm

Ball Screw Specifications		
BCD		$\phi 8.30$
Thread direction		Right
Material	Shaft	S55C
	Nut	SCM415H
Surface hardness		HRC58~62 (Thread area)
Anti-rust treatment		Anti-rust oil

Unit:mm

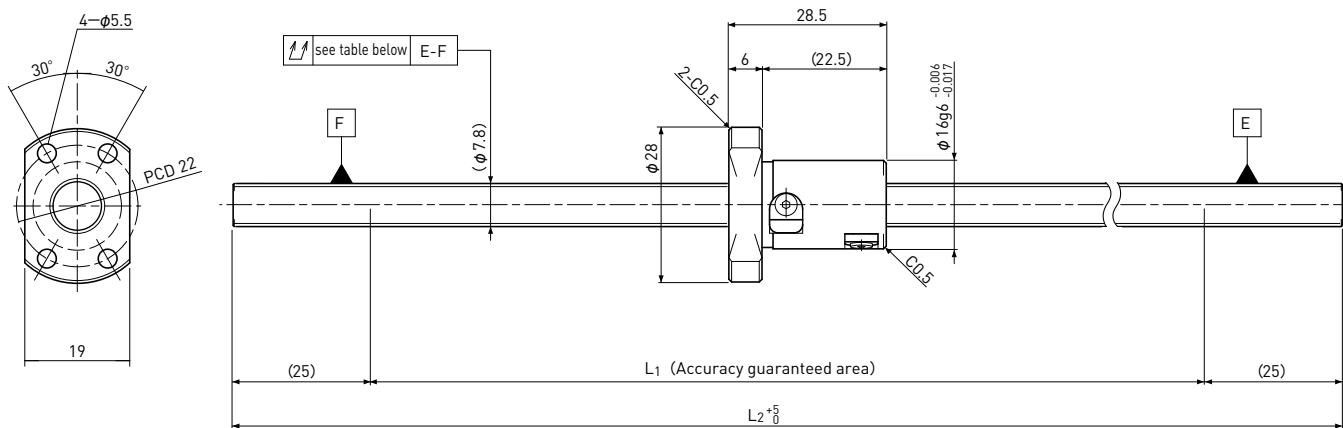
Ball Screw Model	Travel	Grade	Shaft length		Lead accuracy		Total Run-out	Axial play	Preload Torque Nm	Basic Load Rating N	
			L ₁	L ₂	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0802-230R230C7	205	Ct7	230	—	±0.052	—	0.080	~0.020	—	1300	2300

Note)Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF0805 | Shaft dia. $\phi 8$ Lead5mm

Ct7



Unit:mm

Ball Screw Specifications	
BCD	$\phi 8.30$
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

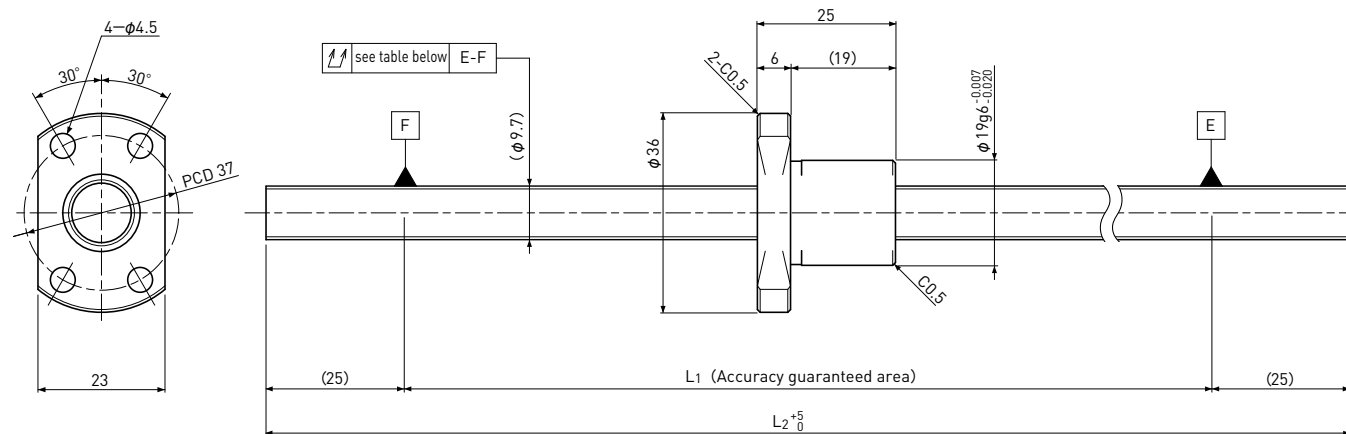
Unit:mm

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF0805-400R400C7	315	Ct7	350	400	±0.060	0.052	0.120	~0.020	—	1850	3000

Note)Please designate end-journal profile with your sketch.

NSRF1002 | Shaft dia. $\phi 10$ Lead 2mm

Ct7



Unit:mm

Ball Screw Specifications	
BCD	φ 10.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

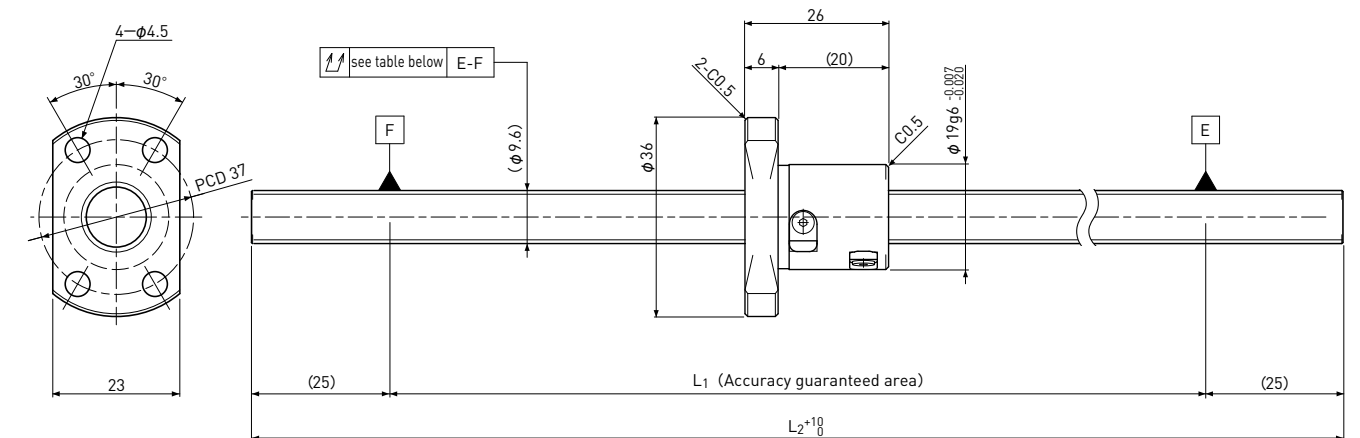
Unit:mm

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic C _a	Static C _{0a}
NSRF1002-400R400C7	320	Ct7	350	400	±0.060	0.052	0.080	~0.020	—	2050	3650

Note) Please designate end-journal profile with your sketch.

NSRF1004 | Shaft dia. $\phi 10$ Lead 4mm

Ct7



Unit:mm

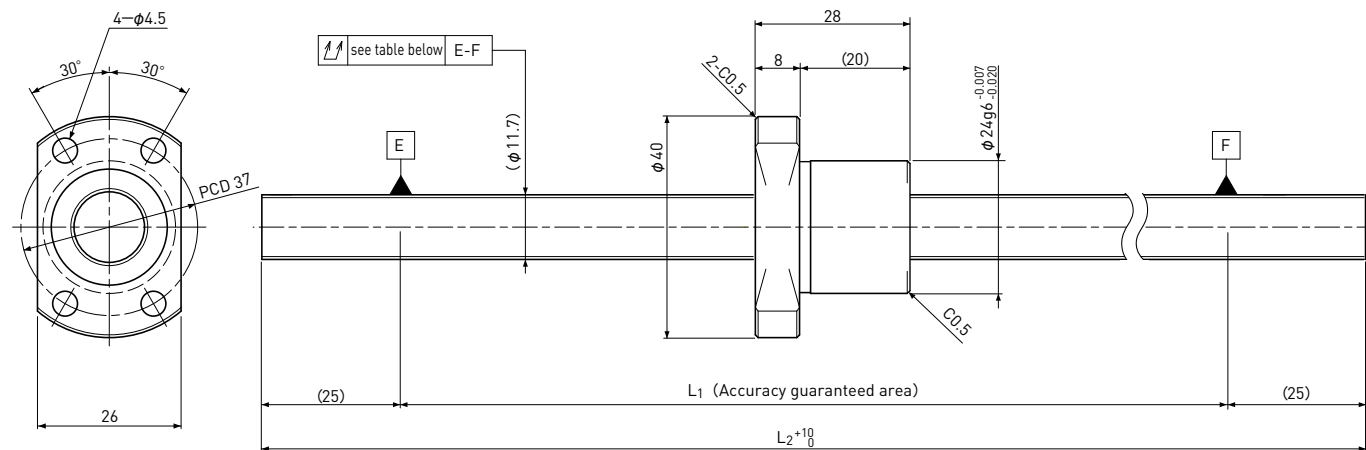
Ball Screw Specifications	
BCD	φ 10.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic C _a	Static C _{0a}
NSRF1004-450R450C7	370	Ct7	400	450	±0.069	0.052	0.120	~0.020	—	3000	5200

Note) Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF1202 | Shaft dia. $\phi 12$ Lead 2mm**Ct7**

Unit:mm

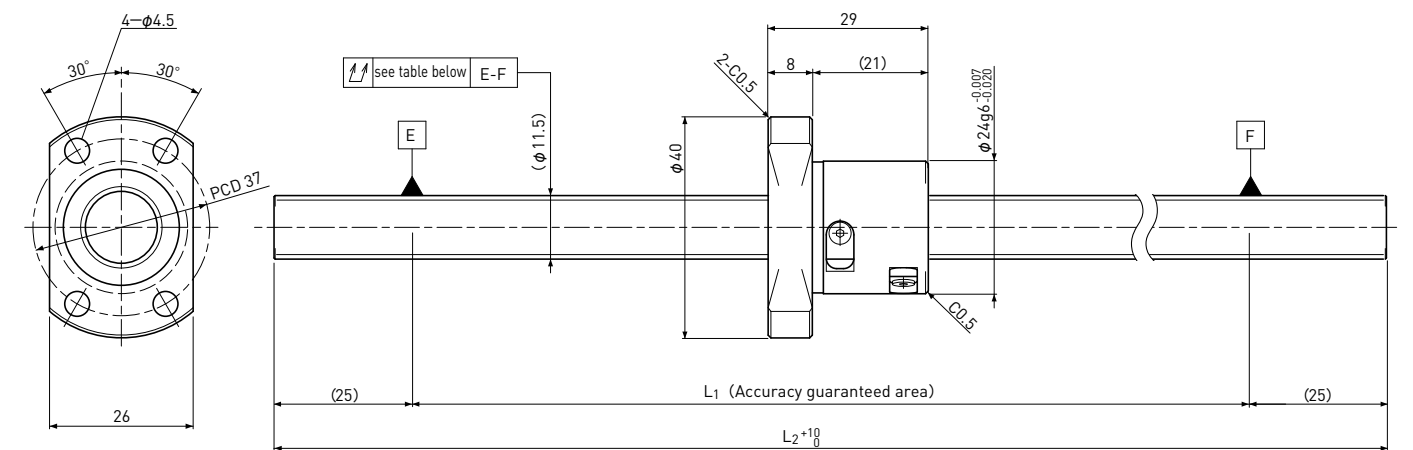
Ball Screw Specifications	
BCD	$\phi 12.30$
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

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	Travel deviation e_p	Variation V_{300}				Dynamic C_a	Static C_{oa}
NSRF1202-450R450C7	370	Ct7	400	450	± 0.069	0.052	0.080	~0.020	—	2250	4550

Note) Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF1204 | Shaft dia. $\phi 12$ Lead 4mm**Ct7**

Unit:mm

Ball Screw Specifications	
BCD	$\phi 12.30$
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

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	Travel deviation e_p	Variation V_{300}				Dynamic C_a	Static C_{oa}
NSRF1204-450R450C7	370	Ct7	400	450	± 0.069	0.052	0.080	~0.020	—	4100	7400

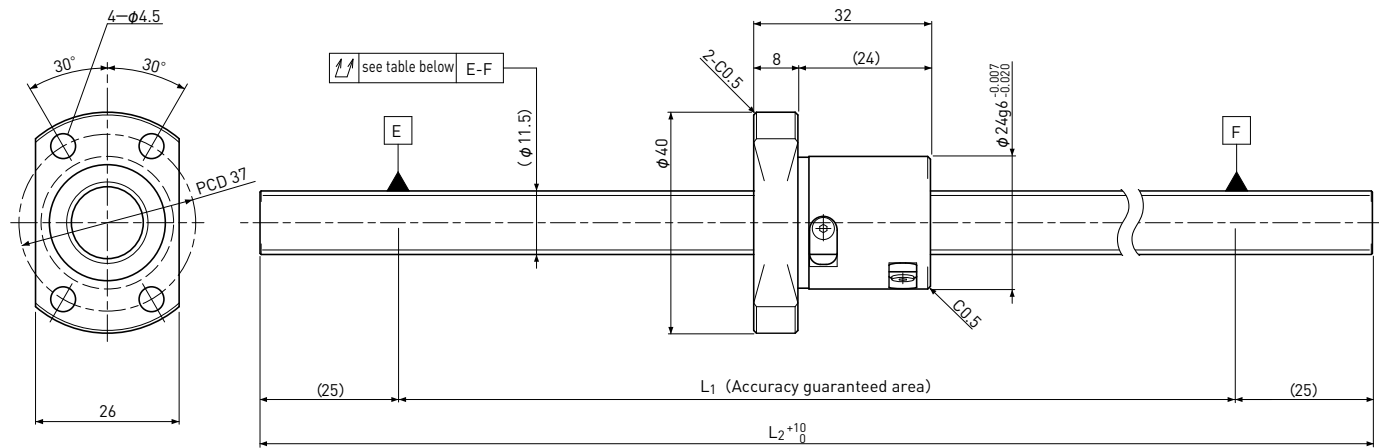
Note) Please designate end-journal profile with your sketch.

Standard products in stock NSRF series

NSRF1205

Shaft dia.φ12 Lead5mm

Ct7



Unit:mm

Ball Screw Specifications	
BCD	φ 12.30
Thread direction	Right
Shaft, Nut material	SCM415H
Surface hardness	HRC58~62 (Thread area)
Anti-rust treatment	Anti-rust oil

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	Travel deviation e _p	Variation V ₃₀₀				Dynamic Ca	Static Coa
NSRF1205-450R450C7	360	Ct7	400	450	±0.069	0.052	0.080	~0.020	—	4100	7400

Note)Please designate end-journal profile with your sketch.