

Ball Screws for ISO (DIN) Standard

NSG / NSR Series

Vol.31.1



Ball Screws with Nut outer diameter conforming to ISO standard
(ISO 3408-2 series1 / DIN 69051-5).

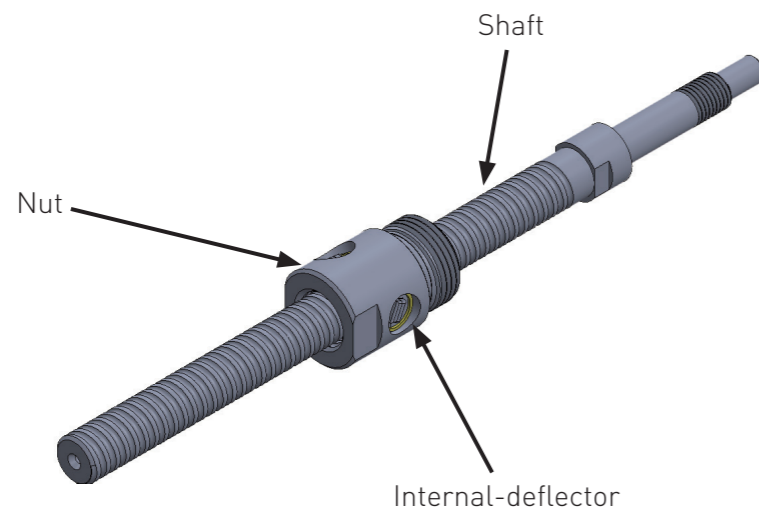


● Features

- Reinforced recirculating device and optimized Ball track of circulation improve reliability of rotational performance and durability.
- Designed with respect for SDGs.
M-thread Nuts are standardized and adhesive-free to reduce disposal loss.
- ISO standard Ball Screws are available in a series of Ground Ball Screw(Precision Class) and Rolled Ball Screw Products. These products offer a choice of accuracy and cost, and are designed for ease of use.

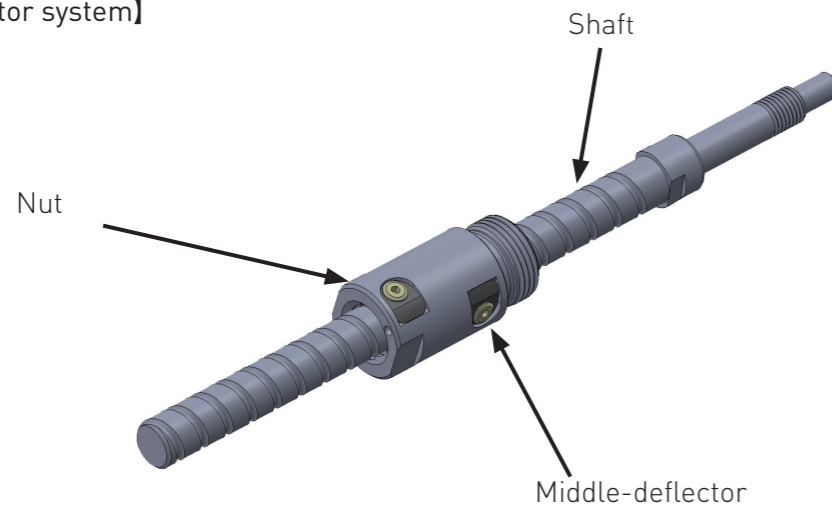
● Construction of Ball Screw

【Internal-deflector system】



Adopted to screw lead 1mm and 2mm

【Middle-deflector system】



Adopted to screw lead 4mm and 5mm

● Model number notation

NSG F 04 01 Z — 063 R 095 C3 — 0

① ② ③ ④ ⑤ — ⑥ ⑦ ⑧ ⑨ — ⑩

- ① Ball Screws Series No.
NSG : Precision Ball Screw
NSR : Rolled Ball Screw
- ② Nut type
None:Single Nut with M-thread
F:Single Nut with Flange
- ③ Screw Shaft nominal diameter(mm)
- ④ Lead(mm)
- ⑤ Customized product identification
Z:Customized products
- ⑥ Screw thread length(mm)
- ⑦ Thread direction(R=Right-hand)
- ⑧ Screw Shaft total length(mm)
- ⑨ Accuracy grade(C3, C5, Ct7, Ct10)
- ⑩ Axial play(μm)

● Accuracy Grade & Axial play

Accuracy grade of NSG Precision Ball Screw type is 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 available.
Accuracy grade of NSR Rolled Ball Screw type is based on Ct7 (Axial play 20 μm or less) and Ct10 (Axial play 50 μm or less).

● Material & Surface hardness

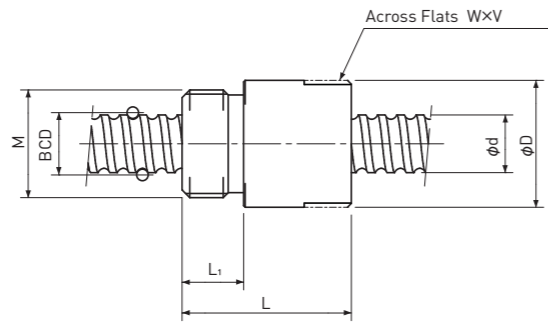
NSG series consists of Shaft and Nut materials SCM415(Carburizing and quenching) and Surface hardness is HRC58~62.
NSR series consists of Shaft materials S55C (Induction hardening)and SCM415(carburizing and quenching)depending on the size.
Nut is made of materials SCM415(carburizing and quenching).
The surface hardness of NSR Shaft is HRC58~62.

● Lubrication

If there is no specific instruction, KSS would recommend our original Grease (MSG No.2) as standard lubricant.

Single Nut with M-thread

Backlash type/Preload type



Unit : mm

Model number	Shaft nominal dia. d	Lead	BCD	Basic Load Rating N		Nut dimension						Model number
				Dynamic Ca	Static Coa	D	L	L ₁	Across Flats width W	Across Flats length V	M	
NSG0401	4	1	4.15	450 / 450	600 / 600	11	19	5	10	3	M9x0.75	NSG0401
NSG0601	6	1	6.20	560 / 560	950 / 950	12	20	6	10	3	M10x1.0	NSG0601
NSG0602	6	2	6.20	770 / 770	1150 / 1150	12	21	6	10	3	M10x1.0	NSG0602
NSG0801	8	1	8.20	650 / 650	1300 / 1300	16	22	8	14	5	M14x1.0	NSG0801
NSG0802	8	2	8.30	1300 / 1300	2300 / 2300	16	23	8	14	5	M14x1.0	NSG0802
NSG0805	8	5	8.30	1850 / 1150	3000 / 1500	16	30.5	8	14	5	M14x1.0	NSG0805
NSG1002	10	2	10.30	2050 / 2050	3650 / 3650	19	27	8	17	5	M16x1.0	NSG1002
NSG1004	10	4	10.30	3000 / 1800	5200 / 2600	19	28	8	17	5	M16x1.0	NSG1004
NSG1202	12	2	12.30	2250 / 2250	4550 / 4550	24	28	8	22	5	M20x1.0	NSG1202
NSG1204	12	4	12.30	4100 / 2500	7400 / 3700	24	29	8	22	5	M20x1.0	NSG1204

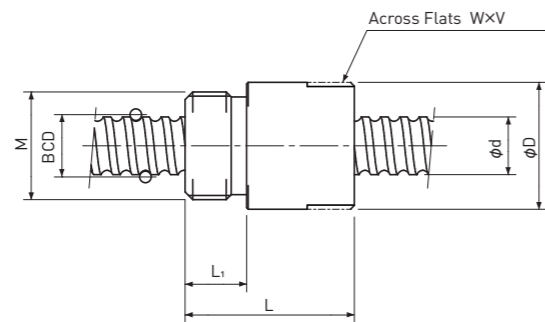
Note 1) NSG0401 is not specified in DIN standard, therefore conforms to the ISO standard.

Note 2) Flange type Nut is available as an option.

Basic Load Rating N	
Dynamic Ca	Static Coa
1000 / 640	3300 / 1650
Preload type	
Backlash type	

Single Nut with M-thread

Backlash type



Unit :mm

Model number	Shaft nominal dia. d	Lead	BCD	Basic Load Rating N		Nut dimension						Model number
				Dynamic Ca	Static Coa	D	L	L ₁	Across Flats width W	Across Flats length V	M	
NSR0401	4	1	4.15	450 / -	600 / -	11	19	5	10	3	M9x0.75	NSR0401
NSR0601	6	1	6.20	510 / -	830 / -	12	20	6	10	3	M10x1.0	NSR0601
NSR0602	6	2	6.20	770 / -	1150 / -	12	21	6	10	3	M10x1.0	NSR0602
NSR0801	8	1	8.20	600 / -	1170 / -	16	22	8	14	5	M14x1.0	NSR0801
NSR0802	8	2	8.30	1250 / -	2200 / -	16	23	8	14	5	M14x1.0	NSR0802
NSR0805	8	5	8.30	1850 / -	3000 / -	16	30.5	8	14	5	M14x1.0	NSR0805
NSR1002	10	2	10.30	1950 / -	3400 / -	19	27	8	17	5	M16x1.0	NSR1002
NSR1004	10	4	10.30	3000 / -	5200 / -	19	28	8	17	5	M16x1.0	NSR1004
NSR1202	12	2	12.30	2200 / -	4300 / -	24	28	8	22	5	M20x1.0	NSR1202
NSR1204	12	4	12.30	4100 / -	7400 / -	24	29	8	22	5	M20x1.0	NSR1204

Note 1) NSR0401 is not specified in DIN standard, therefore conforms to the ISO standard.

Note 2) Flange type Nut is available as an option.

Basic Load Rating N	
Dynamic Ca	Static Coa
1000 / 640	3300 / 1650
Preload type	
Backlash type	