

B-3-1.4.1 HTF-SRC Type for High-Load Drive

1. Features

● High-speed operation and low noise
The SRC recirculation system contributes to more than twice the feed speed (d-n value: 140000 and 160000) and the noise level of less than 8 to 10 dB (half to 1/3 of noise) compared with the HTF type.

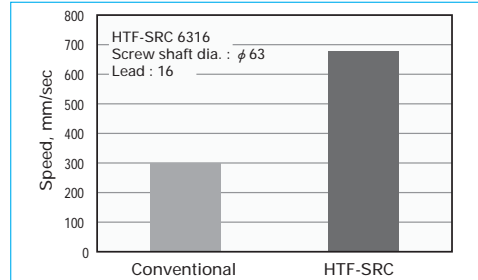


Fig. 1 Feed speed comparison

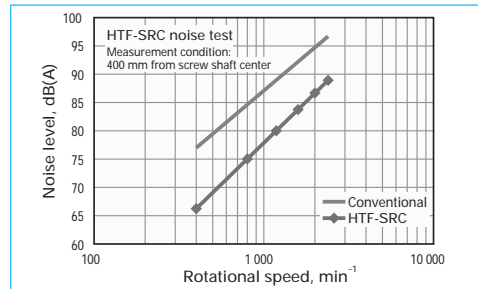


Fig. 2 Noise level comparison

2. Specifications

(1) Recirculation system

The SRC recirculation system picks up balls in the direction they are moving, and contributed high-speed operation with low noise. Structure of recirculation system is as follows.

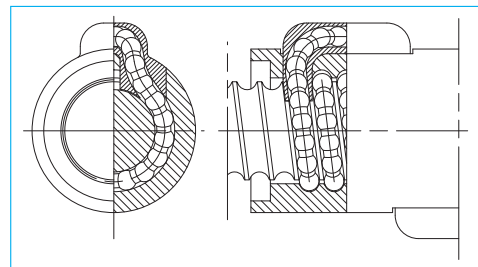


Fig. 3 Structure of SRC recirculation system

(2) Accuracy grade and axial play

The available standard accuracy grade and axial play are as follows. Please consult NSK for other grades.

Table 1 Accuracy grade and axial play

Accuracy grade	Ct7
Axial play	S,0.020 mm or less; N,0.050 mm or less

(3) Allowable d-n value and the criterion of maximum rotational speed

Allowable d-n value and the criterion of maximum rotational speed are shown below. Please consult NSK if the rotational speed exceeds the permissible range below.

Table 2 Allowable d-n value and the criterion of maximum rotational speed

Lead	14, 16 mm	20, 25 mm
Allowable d-n value	160000 or less	140000 or less
Criterion of maximum rotational speed	4225 min ⁻¹	

d-n value : Shaft dia. d[mm] × Rotational speed n[min^{-1}]

Note: Please also review the critical speed. See "Technical Description: Permissible rotational speed" (Page B51) for details.

(4) Ball retaining piece NSK S1™

The NSK S1, resin retainers between the balls, significantly extend ball screw durability to the moment load.

(5) Other

Please consult NSK for special requests, such as the addition of a recirculation circuit to increase the load capacity, or the arrangement of all recirculation circuits on the same phase of ball nut circumference.

3. Design Precautions

The HTF-SRC type is designed to distribute the load uniformly to the load balls for high-load drive mechanism. We recommend installing the ball screws in the way shown below for the full use of this characteristic.

In addition, we will make full analysis when you use the HTF-SRC type under extreme conditions such as application of extremely high load or operating in short stroke. Contact NSK about operating conditions. (Refer to page B31)

When designing the screw shaft end, one end

of the screw shaft must meet either one of the following conditions. If not, we cannot install the ball nut on the screw shaft.


- Cut the ball groove through to the shaft end.
- The diameters of bearing journals and the gear or pulley seat must be less than the root diameter of ball groove "dr" specified on the dimension table.

For general precautions regarding ball screws, refer to "Design Precautions" (Page B84) and "Handling Precautions" (Page B103).

4. Product categories

The HTF-SRC type has a model as follows.

Table 3 HTF-SRC type product categories

Nut models	Shape	Flange shape	Preload system
HTF-SRC		Flanged Circular I	Non-preload Slight axial play

5. Example of model number in dimension tables

A structure of "Model number" and "Reference number for ball screw" are as follows.

◇Model number

HTF-SRC 63 20 - 7.5

Nut model : HTF-SRC	Effective turns of balls
Screw shaft diameter (mm)	Lead (mm)

◇Reference number for ball screw

W 63 04 - ** RC SP - C7 S 20

Product code	Lead (mm)
Screw shaft diameter (mm)	Axial play code: S, N
Effective threaded length (in the unit of 100 mm)	Accuracy grade: C7 (Ct7)
NSK design serial number	Ball retaining pieces NSK S1 specification
SRC recirculation system	

6. Handling Precautions

Maximum operating temperature: 70°C
(at outside diameter of ball nut)

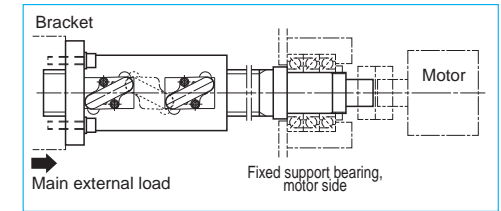
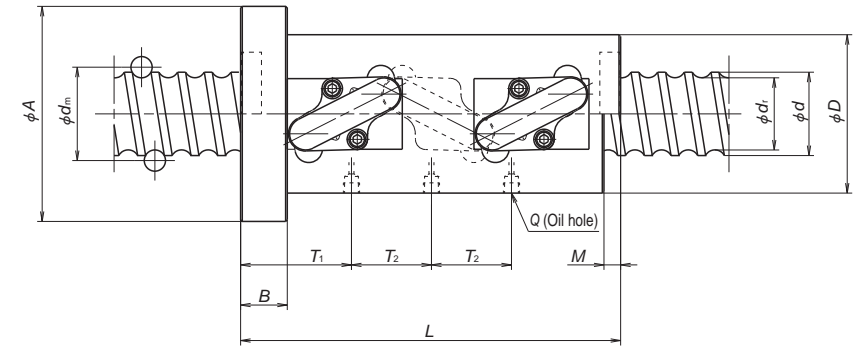
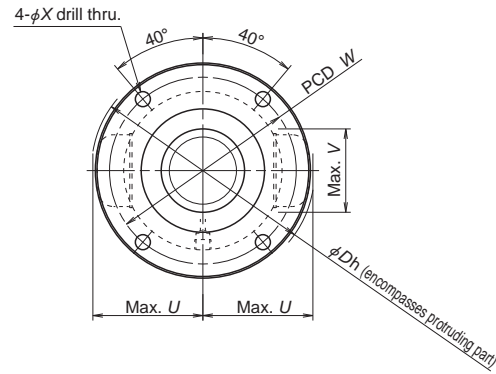


Fig. 4 Recommended installing direction of high-load drive ball screw

Please consult NSK in the case of a short stroke operation less than or equal to four times the length of the ball screw lead.



Model No.	Shaft dia. <i>d</i>	Lead <i>l</i>	Ball dia. <i>D_w</i>	Ball circle dia. <i>d_m</i>	Root dia. <i>d_r</i>	Effective turns of balls × Circuits	Basic load rating (kN)		Allowable axial load (kN)
							Dynamic <i>C_a</i>	Static <i>C_{0a}</i>	
HTF-SRC5014-7.5	50	14	9.525	51.4	41.6	2.5×3	211	623	73.1
HTF-SRC5016-7.5		16	12.7	52	39		306	818	91.1
HTF-SRC6316-7.5	63	16	12.7	65	52	2.5×3	343	1050	119.7
HTF-SRC6316-10.5		16	12.7	65	52	3.5×3	450	1450	167.6
HTF-SRC6320-7.5		20	15.875	65.5	49	2.5×3	457	1280	147.1
HTF-SRC6325-10.5		25	15.875	65.5	49	3.5×3	600	1770	170.0
HTF-SRC8016-10.5	80	16	12.7	82	69	3.5×3	501	1870	221.3
HTF-SRC8020-10.5		20	15.875	82.5	66	3.5×3	671	2300	267.4
HTF-SRC8025-7.5		25	19.05	83	63	2.5×3	632	1960	221.1
HTF-SRC10020-10.5	100	20	15.875	102.5	86	3.5×3	749	2910	345.9
HTF-SRC10025-10.5		25	19.05	103	83		964	3430	408.4
HTF-SRC12020-7.5	120	20	15.875	122.5	106	2.5×3	621	2550	304.6
HTF-SRC12025-10.5		25	19.05	123	103	3.5×3	1040	4200	498.0

- Remarks
1. The right hand screw is the standard. For specifications on left hand screws, contact NSK.
 2. The ball nut length with no seals is shorter by M than that length of a ball nut with seals.
 3. Please consult NSK if load exceeds the allowable axial load.
 4. The allowable axial load is determined in accordance with the mounting conditions of ball screws recommended by NSK (Refer to page B124). If your mounting conditions differ from those provided, please consult NSK.

Unit: mm

Nut length. <i>L</i>	Ball nut dimensions											Max. feeding speed (mm/sec)	
	Nut dia. <i>D</i>	Flange dia. <i>A</i>	Flange width <i>B</i>	Seal width <i>M</i>	Bolt hole PCD <i>W</i>	Bolt hole size <i>X</i>	Protruding tube dimensions			Oil hole <i>Q</i>	Oil hole position		
	<i>D</i>	<i>A</i>	<i>B</i>	<i>M</i>	<i>W</i>	<i>X</i>	<i>U</i>	<i>V</i>	<i>Dh</i>	<i>Q</i>	<i>T₁</i>		<i>T₂</i>
202	80	114	28	10	97	9	54.5	46	111	M6×1	69	42	750
228	95	129	28	10	112	9	66	50	134	Rc1/8	74.5	48	860
228	105	139	28	10	122	9	72.5	50	148	Rc1/8	74.5	48	680
276	105	139	28	10	122	9	72.5	50	148		74.5	64	680
279	117	157	32	12	137	11	80	62	163		90	60	740
405	117	157	32	12	137	11	81.5	61	167		101.75	100	930
278	120	154	32	10	137	9	80	60	165	Rc1/8	78.5	64	540
339	130	170	32	12	150	11	88	64	180		90	80	590
347	145	185	40	17	165	11	99.5	73	202		111.75	75	730
339	145	185	32	12	165	11	97	78	199	Rc1/8	90	80	470
422	159	199	40	17	179	11	108	79	220		111.75	100	590
287	173	213	40	12	193	11	109.5	88	229	Rc1/8	98	60	390
421	173	213	40	17	193	11	116	92	238		111.25	100	490

B-3-1.4.2 HTF-SRD Type for High-Load Drive

This product is patented by NSK.

1. Features

- High-speed operation and low noise
Used with end deflectors, HTF-SRD type ball screws achieve the maximum feed speed of 1600 mm/s. The ball nut body surface is completely round, thus enabling well balanced ball nut rotation.
- Double start thread structure which has more recirculation circuits, and large diameter balls contribute to have high load carrying capacity.
- Low noise and compact design
End deflector system using a ball scooping mechanism in the direction of screw spiral offers smoother ball recirculation system, thus contributing to less than half the noise level compared with existing ball screws equipped with a return tube.
- Compact, high-performance seal is available.
Nut outside diameter is compact compare with the return tube recirculation system.
- Also, compact, thin plastic seal is available. Nut outside diameter is compact compare with the return tube recirculation system.

2. Specifications

(1) Recirculation system

End-deflector recirculation system has features of high-speed operation with low-noise, and compact nut. The structure of recirculation parts are as follows.

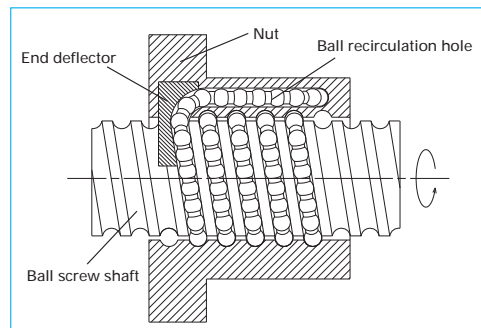


Fig. 1 Structure of End-deflector recirculation system

(2) Accuracy grade and axial play

The available standard accuracy grade and axial play are as follows. Please consult NSK for other grades.

Table 1 Accuracy grade and axial play

Accuracy grade	Ct7
Axial play	S, 0.020 mm or less; N, 0.050 mm or less

(3) Allowable d·n value and the criterion of maximum rotational speed

Allowable d·n value and the criterion of maximum rotational speed are shown below. Please consult NSK if the rotational speed exceeds the permissible range below.

Table 2 Allowable d·n value and the criterion of maximum rotational speed

Allowable d·n value	120000 or less
Criterion of maximum rotational speed	2400 min ⁻¹

d·n value : Shaft dia. d[mm] × Rotational speed n[min⁻¹]

Note: Please also review the critical speed. See "Technical Description: Permissible rotational speed" (Page B51) for details.

(4) Ball retaining piece NSK S1™

The NSK S1, resin retainers between the balls, significantly extend ball screw durability to the moment load.

3. Design Precautions

The HTF-SRD type is designed to distribute the load uniformly to the load balls for high-load drive mechanism. We recommend installing the ball screws in the way shown below for the full use of this characteristic.

In addition, we will make full analysis when you use the HTF-SRD type under extreme conditions such as application of extremely high load or operating in short stroke. Contact NSK about operating conditions. (Refer to page B31)

When designing the screw shaft end, one end

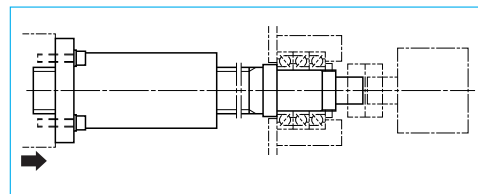


Fig. 2 Recommended installing direction of high-load drive ball screw

of the screw shaft must meet either one of the following conditions. If not, we cannot install the ball nut on the screw shaft.

- Cut the ball groove through to the shaft end.
- The diameters of bearing journals and the gear or pulley seat must be less than the root diameter of ball groove "dr" specified on the dimension table.


For general precautions regarding ball screws, refer to "Design Precautions" (Page B84) and

"Handling Precautions" (Page B103).

4. Product categories

The HTF-SRD type has a model as follows.

Table 3 HTF-SRD type product categories

Nut models	Shape	Flange shape	Preload system
HTF-SRD		Semicircular III	Non-preload Slight axial play

5. Example of model number in dimension tables

A structure of "Model number" and "Reference number for ball screw" are as follows.

◇Model number

HTF-SRD 50 40 - 6E

Nut model : HTF-SRD Effective turns of balls
Screw shaft diameter (mm) Lead (mm)

◇Reference number for ball screw

W 50 18 - ** SS SP X - C7 N 40

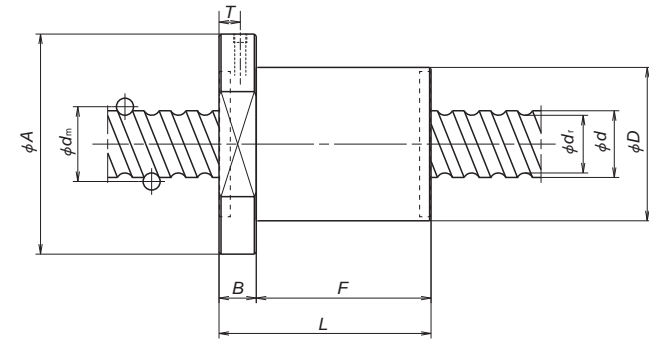
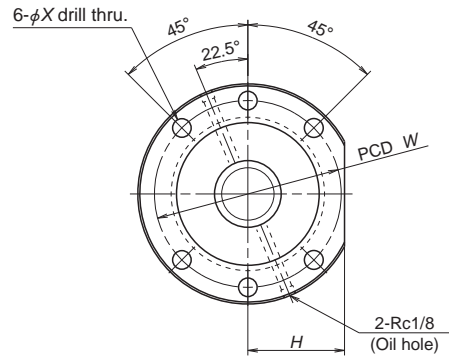
Product code Lead (mm)
Screw shaft diameter (mm) Axial play code: S, N
Effective threaded length (in the unit of 100 mm) Accuracy grade: C7 (Ct7)
NSK design serial number Ball screw specification/appearance
End-deflector recirculation system Ball retaining pieces NSK S1 specification

6. Handling Precautions

Maximum operating temperature: 70°C (at outside diameter of ball nut)

Please consult NSK in the case of a short stroke

operation less than or equal to four times the length of the ball screw lead.



Model No.	Shaft dia. <i>d</i>	Lead <i>l</i>	Ball dia. <i>D_w</i>	Ball circle dia. <i>d_m</i>	Root dia. <i>d_r</i>	Effective turns of balls	Basic load rating (kN)		Allowable axial load (kN)
							Dynamic <i>C_a</i>	Static <i>C_{0a}</i>	
HTF-SRD5040-6E	50	40	12.7	52	39	6	195	491	67.6
HTF-SRD5040-8E						8	255	679	92
HTF-SRD6332-4E	63	32	15.875	65.5	49	4	233	590	72.6
HTF-SRD6340-6E		40				6	291	768	106.3
HTF-SRD6340-8E						8	381	1060	144.7
HTF-SRD8050-6E	80	50	19.05	83	63	6	401	1180	163.7
HTF-SRD8050-8E						8	526	1630	224.1

Remarks
 1. The right hand screw is the standard. For specifications on left hand screws, contact NSK.
 2. Please consult NSK if load exceeds the allowable axial load.
 3. The allowable axial load is determined in accordance with the mounting conditions of ball screws recommended by NSK (Refer to page B127). If your mounting conditions differ from those provided, please consult NSK.

Unit: mm

Nut entire length <i>L</i>	Nut dia. <i>D</i>	Ball nut dimensions							Max. feeding speed (mm/sec)
		Flange dia. <i>A</i>	Notch size <i>H</i>	Flange width <i>B</i>	Nut length <i>F</i>	Bolt hole PCD <i>W</i>	Bolt hole size <i>X</i>	Oil hole position <i>T</i>	
159	115	165	72.5	28	131	140	14	16	1600
199					171				
176	140	190	85	32	144	165	14	18	1000
163		200	90		131	170	18		18
203					171				
194	175	250	110	40	154	210	22	18	1250
244					204				

B-3-1.4.3 HTF Type for high load drive

This product is patented by NSK.

1. Features

- **High load carrying capacity**
Has an ideal design to bear heavy load. It significantly enhances load rating as well as maximum permissible load.

- **Abundant diameter / lead combinations**
Twenty five types of shaft diameter/lead combinations are available. Please consult NSK when you require other combination.

- **Respond to various shaft end configuration**
Additional ball screw shaft machining is not required. HTF type responds to various shaft ends that convey high torque.

HTF type can be used with: involute spline (JIS B 1603), straight sided spline (JIS B 1601), Key seat, etc.

2. Specifications

(1) Recirculation system

Structure of recirculation system is shown in Fig. 1.

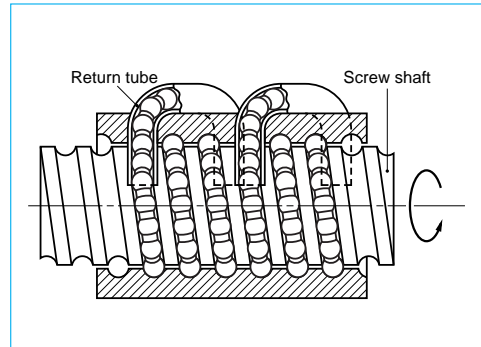


Fig. 1 Structure of return tube recirculation system

(2) Accuracy grade and axial play

The allowable standard accuracy grade and axial play are as follows. Please consult NSK for other grades.

Table 1 Accuracy grade and axial play

Accuracy grade	Ct7
Axial play	S, 0.020 mm or under; N, 0.050 mm or under

(3) Allowable d·n value and the criterion of maximum rotational speed

Allowable d·n value and the criterion of maximum rotational speed are shown below. Please consult NSK if the rotational speed exceeds the permissible range below. For higher-speed operation, HTF-SRC type is recommended.

Table 2 Allowable d·n value and the criterion of maximum rotational speed

Lead		- 20 mm	25 mm	30 - 32 mm
Allowable	Standard specification	70000 or less	70000 or less	50000 or less
d·n value	High-speed specification	100000 or less	-	-
Criterion of maximum rotational speed		3125 min ⁻¹		

d·n value: Shaft dia. d [mm]×Rotational speed n [min⁻¹]

Note: Please also review the critical speed. See "Technical Description: Permissible rotational speed" (Page B51) for details.

(4) Ball retaining piece NSK S1™

The NSK S1, resin retainers between the balls, significantly extend ball screw durability to the moment load.

(5) Other

Please consult NSK for special requests, such as the addition of a recirculation circuit to increase the load capacity, or the arrangement of all recirculation circuits on the same phase of ball nut circumference.

3. Design precautions

For designing shaft end configuration, you should take into account that the HTF type ball screws are dedicated to high load drive.

The HTF type is designed to distribute the load uniformly to the load balls for high load drive mechanism. (This product is patented by NSK.)


We recommend installing the ball screws in the way shown in Fig. 2 for the full use of this characteristic. In addition, we will make full analysis when you use the HTF type under extreme conditions such as application of extremely high load or operating in short stroke. Contact NSK about operating conditions. (Refer to page B31)

For general precautions regarding ball screws, refer to "Design Precautions" (Page B84) and "Handling Precautions" (Page B103).

4. Product categories

The HTF type has a model as follows.

Table 3 HTF type product categories

Nut model	Shape	Flange shape	Preload system
HTF		Flanged Circular I	Non-preloaded Slight axial play

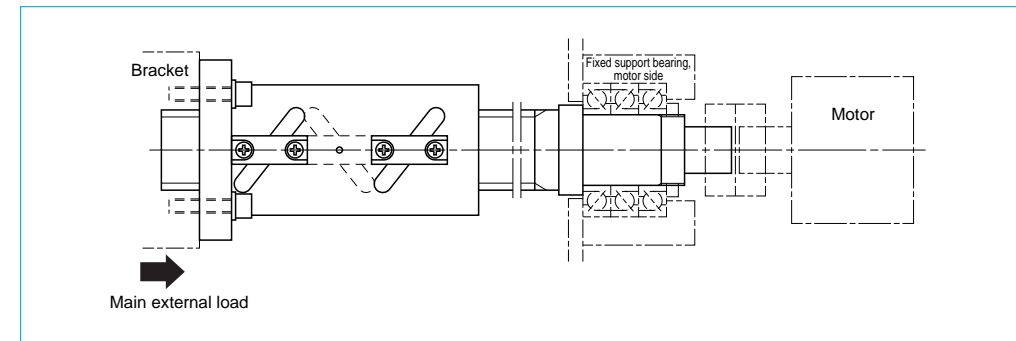
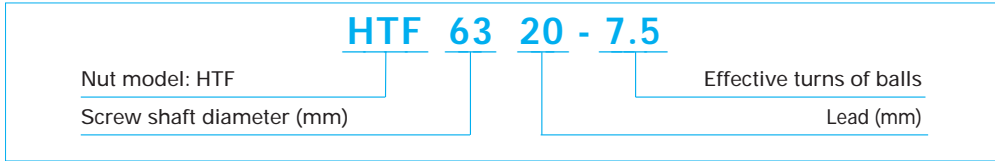


Fig. 2 Recommended installing direction of ball screws for high load drive

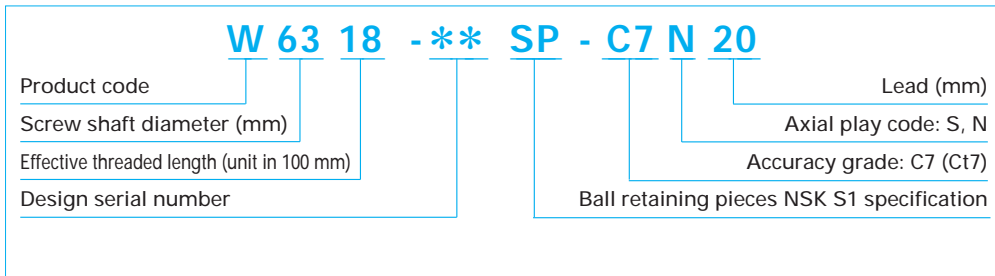
5. Example of model number in dimension table

A structure of "Model number" and "Reference number for ball screw" are as follows.

◇Model number



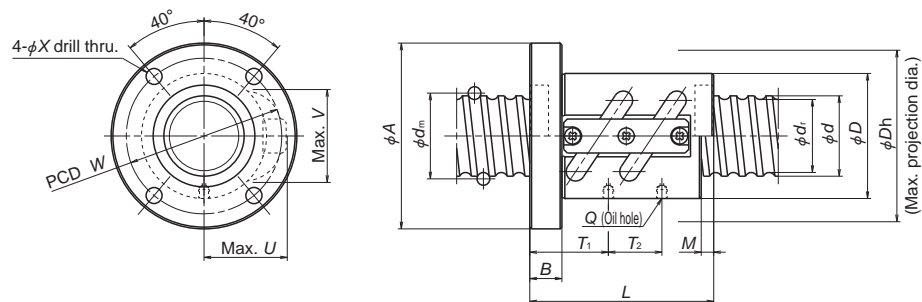
◇Reference number for ball screw



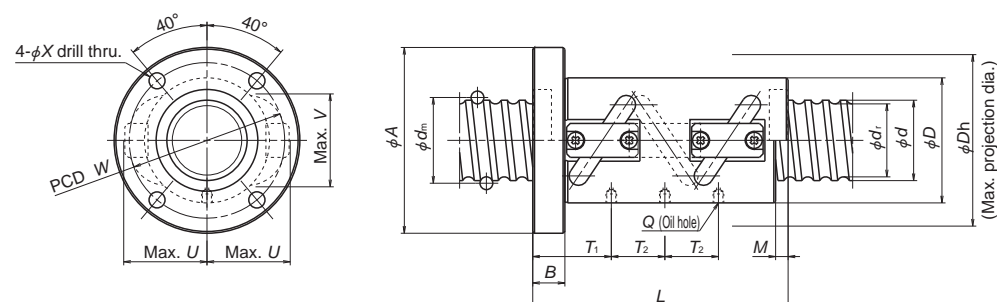
6. Handling precautions

Please consult NSK in the case of a short stroke operation less than or equal to four times the length of the ball screw lead.

Maximum operating temperature: 70°C
(at outside diameter of ball nut)



Nut model I



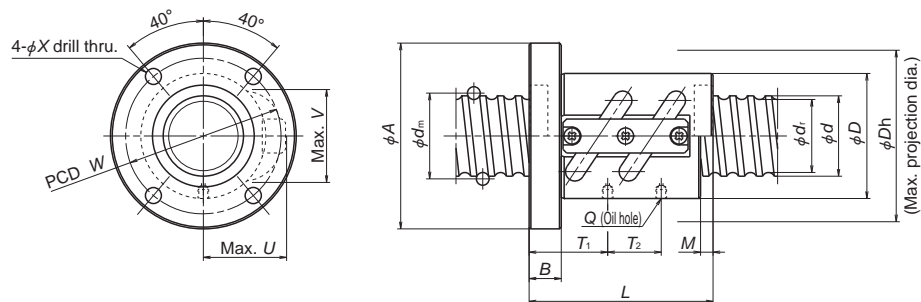
Nut model II

Model No.	Shaft dia. <i>d</i>	Lead <i>I</i>	Ball dia. <i>D_w</i>	Ball circle dia. <i>d_m</i>	Root dia. <i>d_r</i>	Effective turns of balls Turns × Circuits	Nut model	Basic load rating (kN)		Permissible axial load (kN)
								Dynamic <i>C_a</i>	Static <i>C_{0a}</i>	
HTF3210-5	32	10	7.144	33	25.6	2.5×2	I	71	169	20.3
HTF3610-5	36	10	7.144	37	29.6	2.5×2	I	76.9	191	23.4
HTF3612-5		12	7.938	37.25	29			90	228	28.3
HTF4010-7.5	40	10	7.144	41	33.6	2.5×3	II	120	344	39.6
HTF4012-7.5		12	7.938	41.25	33			147	422	48
HTF4510-7.5	45	10	7.144	46	38.6	2.5×3	II	127	386	45.3
HTF4512-7.5		12	7.938	46.25	38			156	473	55
HTF5010-7.5	50	10	7.144	51	43.6	2.5×3	II	133	435	51
HTF5012-7.5		12	7.938	51.25	43			164	525	62
HTF5014-7.5		14	9.525	51.5	41.7			211	623	73.1
HTF5016-7.5		16	12.700	52	39			306	818	91.1
HTF5510-7.5	55	10	7.144	56	48.6	2.5×3	II	139	477	55.7
HTF5512-7.5		12	7.938	56.25	48			171	586	69.1
HTF5514-7.5		14	9.525	56.5	46.7			216	696	81.2
HTF5516-7.5		16	12.700	57	44			319	922	101.9
HTF6312-7.5	63	12	7.938	64.25	56	2.5×3	II	181	668	80.3
HTF6314-7.5		14	9.525	64.5	54.7			233	800	93.5
HTF6316-7.5		16	12.700	65	52			343	1050	119.7
HTF6316-10.5		16	12.700	65	52			450	1450	167.6
HTF6320-7.5		20	15.875	66	49			457	1320	147.3

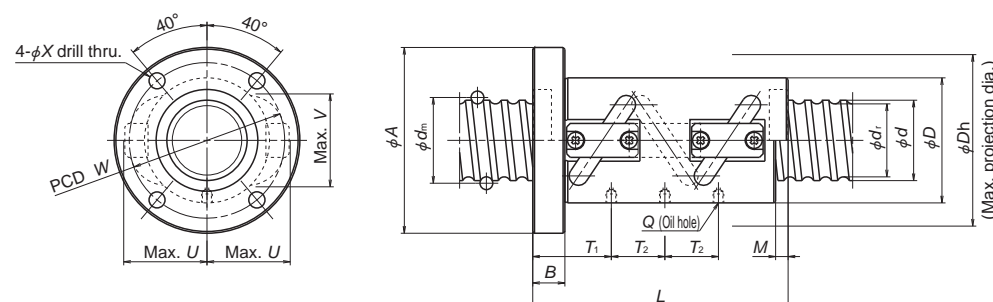
Remarks 1. The right hand screw is the standard. "L" is added to the end of the model code for the left turn screw.
2. If there is no seal, the nut length is shorter by the lengths of "M" than those with a seal.

Ball nut dimensions													Max. feeding speed (mm/sec)
Nut length <i>L</i>	Nut appearance <i>D</i>	Flange appearance <i>A</i>	Flange width <i>B</i>	Seal dimensions <i>M</i>	Bolt hole PCD <i>W</i>	Bolt hole size <i>X</i>	Tube projecting size			Oil hole	Oil hole positions		
							<i>U</i>	<i>V</i>	<i>Dh</i>	<i>Q</i>	<i>T₁</i>	<i>T₂</i>	
103	58	92	18	7	75	9	40.5	42	82	M6×1	36.5	30	520
103	62	96	18	7	79	9	43	45	87	M6×1	36.5	30	460
123	66	100	22	8	83	9	46.5	46	94		44	36	550
143	66	100	18	7	83	9	45	48	91	M6×1	46.5	30	410
171	70	104	22	8	87	9	47.5	50	96		56	36	500
143	70	104	18	7	87	9	47	52	95	M6×1	46.5	30	370
171	72	106	22	8	89	9	49.5	54	100		56	36	440
143	75	109	18	7	92	9	49	57	99	M6×1	46.5	30	330
171	77	111	22	8	94	9	52	59	105	M6×1	56	36	400
200	80	114	28	10	97	9	55.5	61	112	M6×1	66.5	42	460
223	95	129	28	10	112	9	68	66	137	Rc1/8	73	48	530
143	80	114	18	7	97	9	51.5	62	104	M6×1	46.5	30	300
171	82	116	22	8	99	9	54.5	63	110	M6×1	56	36	360
200	85	119	28	10	102	9	57.5	65	116	M6×1	66.5	42	420
223	99	133	28	10	116	9	70	70	141	Rc1/8	73	48	480
171	92	126	22	8	109	9	58.5	70	118	M6×1	56	36	310
200	94	128	28	10	111	9	61.5	72	124	M6×1	66.5	42	370
223	105	139	28	10	122	9	72.5	76	146	Rc1/8	73	48	420
271	105	139	28	10	122	9	72.5	76	146	Rc1/8	73	64	420
273	117	157	32	12	137	11	83.5	81	168	Rc1/8	88	60	520

3. Please consult NSK if load exceeds the allowable axial load.
4. The allowable axial load is determined in accordance with the mounting conditions of ball screws recommended by NSK (Refer to page B132). If your mounting conditions differ from those provided, please consult NSK.



Nut model I



Nut model II

Model No.	Shaft dia. <i>d</i>	Lead <i>l</i>	Ball dia. <i>D_w</i>	Ball circle dia. <i>d_m</i>	Root dia. <i>d_r</i>	Effective turns of balls Turns × Circuits	Nut model	Basic load rating (kN)		Permissible axial load (kN)
								Dynamic <i>C_a</i>	Static <i>C_{0a}</i>	
HTF8014-7.5	80	14	9.525	81.5	71.7	2.5×3	II	261	1020	121.9
HTF8016-7.5		16	12.7	82	69	2.5×3		382	1340	159
HTF8016-10.5		16	12.7	82	69	3.5×3		501	1870	221.3
HTF8020-7.5		20	15.875	83	66	2.5×3		511	1690	192.6
HTF8020-10.5		20	15.875	83	66	3.5×3		670	2300	272.4
HTF8025-7.5		25	19.05	84	64	2.5×3		663	2020	228.3
HTF10016-7.5	100	16	12.7	102	89	2.5×3	II	423	1710	202.3
HTF10020-7.5		20	15.875	103	86	2.5×3		571	2140	248.6
HTF10025-7.5		25	19.05	104	84	2.5×3		734	2550	293.2
HTF10025-10.5		25	19.05	104	84	3.5×3		962	3490	409.1
HTF12016-7.5	120	16	12.7	122	109	2.5×3	II	457	2050	248.9
HTF12020-7.5		20	15.875	123	106	2.5×3		620	2550	304.7
HTF12025-7.5		25	19.05	124	104	2.5×3		792	3080	358.2
HTF12025-10.5		25	19.05	124	104	3.5×3		1040	4200	505.7
HTF14020-7.5	140	20	15.875	143	126	2.5×3	II	663	3000	360.9
HTF14025-7.5		25	19.05	144	124			842	3610	423.1
HTF14030-7.5		30	22.225	144	121			1050	4110	487.1
HTF14032-7.5		32	25.4	144	118			1270	4740	549.3
HTF16025-7.5		25	19.05	164	144			909	4140	495.3
HTF16030-7.5	160	30	22.225	164	141	2.5×3	II	1120	4760	564.3
HTF16032-7.5		32	25.4	164	138	1330		5370	636	
HTF20030-7.5	200	30	22.225	204	181	2.5×3	II	1240	5960	718.8
HTF20032-7.5		32	25.4	204	178			1470	6840	809.4

Remarks 1. The right hand screw is the standard. "L" is added to the end of the model code for the left turn screw.
2. If there is no seal, the nut length is shorter by the lengths of "M" than those with a seal.

Ball nut dimensions													Max. feeding speed (mm/sec)
Nut length <i>L</i>	Nut appearance <i>D</i>	Flange appearance <i>A</i>	Flange width <i>B</i>	Seal dimensions <i>M</i>	Bolt hole PCD <i>W</i>	Bolt hole size <i>X</i>	Tube projecting size			Oil hole	Oil hole positions		
							<i>U</i>	<i>V</i>	<i>Dh</i>	<i>Q</i>	<i>T₁</i>	<i>T₂</i>	
200	116	150	28	10	133	9	72	87	146	M6×1	66.5	42	290
227	120	154	32	10	137	9	80	92	161	Rc1/8	77	48	330
275	120	154	32	10	137	9	80	92	161	Rc1/8	77	64	330
273	130	170	32	12	150	11	89.5	96	181	Rc1/8	88	60	410
333	130	170	32	12	150	11	89.5	96	181	Rc1/8	88	80	410
338	145	185	40	17	165	11	102	100	206	Rc1/8	109.25	75	360
227	145	185	32	10	165		91	109	184		77	48	260
273	145	185	32	12	165	11	97.5	114	196	Rc1/8	88	60	330
338	159	199	40	17	179		108.5	118	219		109.25	75	290
413	159	199	40	17	179		108.5	118	219		109.25	100	290
227	173	213	32	10	193		104	126	210		77	48	220
281	173	213	40	12	193	11	111	131	223	Rc1/8	96	60	270
338	173	213	40	17	193	11	116	135	233	Rc1/8	109.25	75	240
413	173	213	40	17	193	11	116	135	233	Rc1/8	109.25	100	240
281	204	250	40	12	226	14	122.5	148	248		96	60	230
338	204	250	40	17	226	14	127.5	153	258	Rc1/8	109.25	75	200
411	222	282	50	22	252	18	139	160	281	Rc1/8	134.5	90	170
465	222	296	70	22	259	22	148	163	299		166.5	96	190
338	234	280	40	17	256	14	138	173	279		109.25	75	180
411	234	294	50	22	264	18	148	177	299	Rc1/8	134.5	90	150
465	234	308	70	22	271	22	152	181	307		166.5	96	160
411	290	350	50	22	320	18	178	212	359	Rc1/8	134.5	90	120
465	290	364	70	22	327	22	182	215	367	Rc1/8	166.5	96	130

3. Please consult NSK if load exceeds the allowable axial load.
4. The allowable axial load is determined in accordance with the mounting conditions of ball screws recommended by NSK (Refer to page B132). If your mounting conditions differ from those provided, please consult NSK.