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Motion Control & Systems



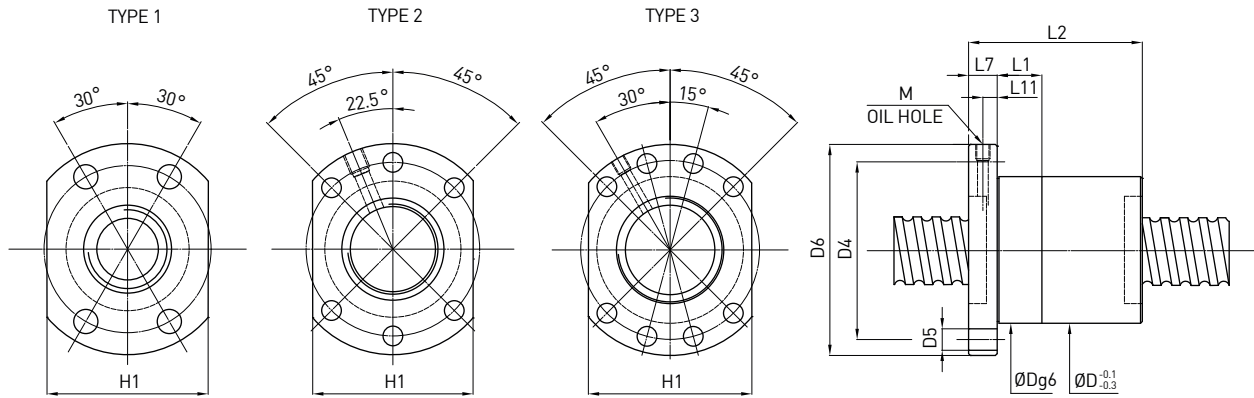
Ballscrews

& Accessories

3.1 Dimensions for DIN Rolled Ballscrews

F S I TYPE

(DIN 69051 part 5 form B)



Varastoitavat tuotteet lihavoitu. R=oikeäkätinen ja L=vasenkätinen

Model	Size		Ball Dia.	Circuits	Dynamic Load 1x10 ⁶ revs C (kgf)	Static Load Co (kgf)	Nut			Flange							
	Nominal Dia.	Lead					L1	L2	D	D4	D5	D6	H1	L7	TYPE	L11	M-Oil Hole
6-1T3	6	1	0.800	3	110	220	-	15	12	18	3.4	24	16	6	1	-	-
6-1.25T3	6	1.25	0.800	3	100	210	-	15	12	18	3.4	24	16	6	1	-	-
8-1T3	8	1	0.800	3	120	270	-	16	16	22	3.4	28	19	6	1	-	-
8-2T3	8	2	1.500	3	260	440	-	26	16	22	3.4	28	19	6	1	-	-
8-2.5T3	8	2.5	1.500	3	260	440	-	28	16	22	3.4	28	19	6	1	-	-
10-2T3	10	2	1.500	3	300	590	-	28	19	28	4.5	36	23	5	1	-	-
10-2.5T3	10	2.5	2.000	3	430	790	-	32	19	28	4.5	36	23	5	1	-	-
12-2T3	12	2	1.500	3	340	780	-	28	24	32	4.5	37	24	5	1	-	-
12-2.5T3	12	2.5	2.000	3	480	990	-	32	24	32	4.5	40	25	5	1	-	-
L ja R 16-5T3	16	5	3.175	3	1000	2000	10	40	28	38	5.5	48	40	10	2	5	M6x1P
L ja R 20-5T3	20	5	3.175	3	1160	2660	10	44	36	47	6.6	58	44	10	2	5	M6x1P
20-5T4	20	5	3.175	4	1490	3550	10	52	36	47	6.6	58	44	10	2	5	M6x1P
25-5T3	20	5	3.175	3	1320	3490	10	44	40	51	6.6	62	48	10	2	5	M6x1P
25-5T4	25	5	3.175	4	1690	4660	12	52	40	51	6.6	62	48	10	2	5	M6x1P
25-10T3	25	10	4.763	3	2160	4860	16	65	40	51	6.6	62	48	12	2	5	M6x1P
L ja R 32-5T3	32	5	3.175	3	1500	4460	10	46	50	65	9	80	62	10	2	6	M6x1P
L ja R 32-5T4	32	5	3.175	4	1920	6210	10	53	50	65	9	80	62	10	2	6	M6x1P
L ja R 32-5T6	32	5	3.175	6	2730	9320	10	66	50	65	9	80	62	10	2	6	M6x1P
L ja R 32-10T3	32	10	6.350	3	3650	8660	16	74	50	65	9	80	62	16	2	6	M6x1P
L ja R 32-10T4	32	10	6.350	4	4680	11550	16	85	50	65	9	80	62	16	2	6	M6x1P
40-5T4	40	5	3.175	4	2110	7770	10	53	63	78	9	93	70	10	3	7	M8x1P
40-5T6	40	5	3.175	6	2990	11650	10	66	63	78	9	93	70	10	3	7	M8x1P
40-10T3	40	10	6.350	3	4030	10680	16	74	63	78	9	93	70	16	3	7	M8x1P
L ja R 40-10T4	40	10	6.350	4	5170	14240	16	87	63	78	9	93	70	16	3	7	M8x1P
40-12T3	40	12	7.144	3	4670	11830	16	79	63	78	9	93	70	16	3	7	M8x1P
50-5T4	50	5	3.175	4	2330	9990	10	57	75	93	11	110	85	10	3	8	M8x1P
50-5T6	50	5	3.175	6	3310	14980	10	70	75	93	11	110	85	10	3	8	M8x1P
50-10T3	50	10	6.350	3	4590	14000	16	78	75	93	11	110	85	16	3	8	M8x1P
L ja R 50-10T4	50	10	6.350	4	5880	18660	16	89	75	93	11	110	85	16	3	8	M8x1P
L ja R 50-10T6	50	10	6.350	6	8330	28000	16	112	75	93	11	110	85	16	3	8	M8x1P
50-12T4	50	12	7.938	4	7990	23610	16	103	75	90	11	110	85	16	3	8	M8x1P
63-10T4	63	10	6.350	4	6560	23990	16	91	90	108	11	125	95	18	3	9	M8x1P
63-10T6	63	10	6.350	6	9300	35980	16	114	90	108	11	125	95	18	3	9	M8x1P
63-20T4	63	20	9.525	4	11400	35870	25	150	95	115	13.5	135	100	20	3	10	M8x1P
80-10T4	80	10	6.350	4	7450	31960	12	91	105	125	13.5	145	110	20	3	10	M8x1P
80-10T6	80	10	6.350	6	10560	47940	12	114	105	125	13.5	145	110	20	3	10	M8x1P
80-20T4	80	20	9.525	4	12730	45890	25	160	125	145	13.5	165	130	25	3	12.5	M8x1P
80-20T6	80	20	9.525	6	18040	68840	25	224	125	145	13.5	165	130	25	3	12.5	M8x1P

* The calculation for dynamic load and static load is based on DIN69051.

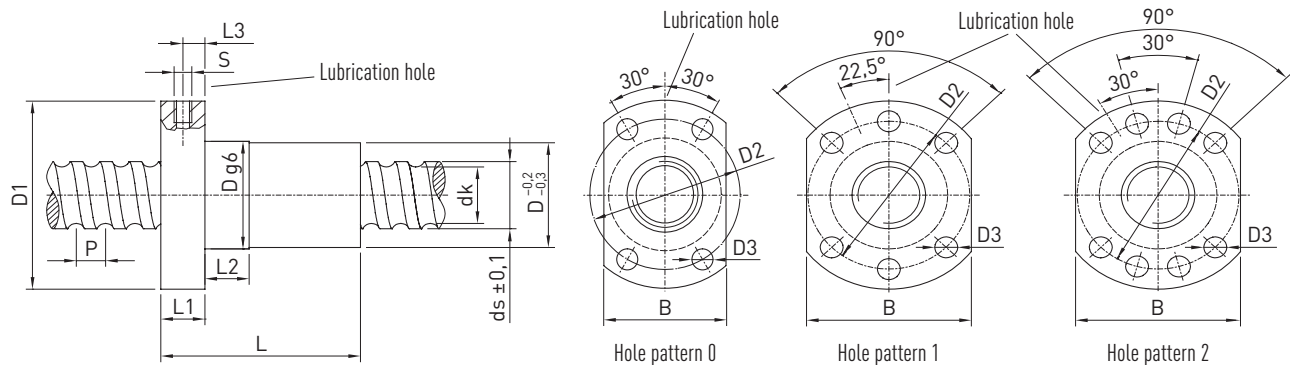
Ballscrews

Rolled ballscrews

Nut designation	Description
FSIDIN	Flange single nut with internal single recirculation
FSCDIN	Flange single nut with cassette recirculation
RSI	Cylindrical single nut with internal single return
RSIT	Cylindrical single nut with screw-in thread and internal single return

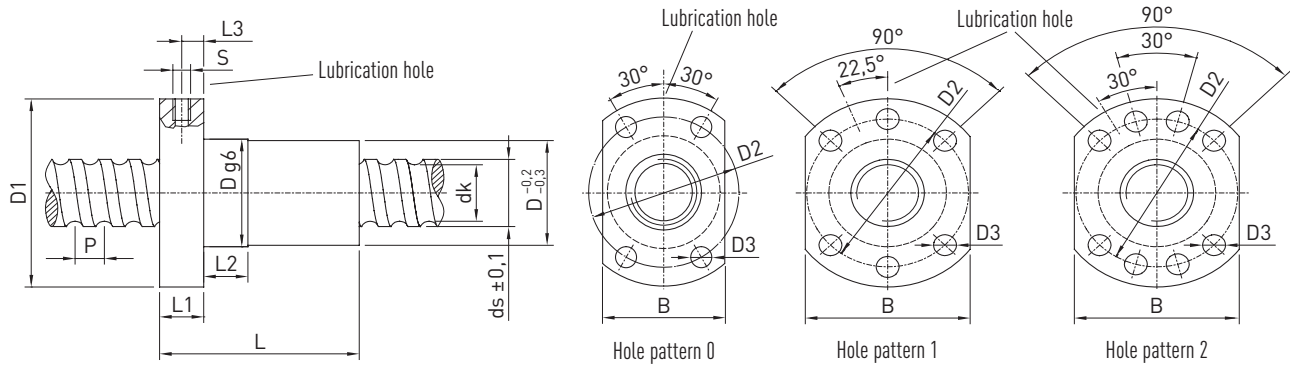
4.4 Nuts for rolled ballscrews

4.4.1 Flange single nut FSCDIN/FSIDIN



Varustoitavat tuotteet **lihavoitu**. R=oikeakätinen ja L=vasenkätinen

Article number	ds	P	D	D1	D2	D3	Hole pattern	L	L1	L2	L3	S	B	dk	C _{dyn} [N]	C ₀ [N]	Max. axial play [mm]	Mass [kg/piece]
R12-05K4-FSCDIN	11.7	5	24	40	32	4.5	0	33	8	8	4	M3	26	9.9	5,500	12,000	0.02	0.11
R12-10K3-FSCDIN	11.8	10	24	40	32	4.5	0	43	8	8	4	M3	26	9.6	5,100	10,100	0.02	0.13
R15-05K4-FSCDIN	13.9	5	28	48	38	5.5	1	38	10	10	5	M6	40	11.8	12,600	21,000	0.04	0.18
R16-05T3-FSIDIN	15.5	5	28	48	38	5.5	1	40	10	10	5	M6	40	12.9	6,500	11,700	0.04	0.18
R16-10K3-FSCDIN	14.7	10	28	48	38	5.5	1	45	10	10	5	M6	40	12.5	9,100	19,300	0.04	0.20
R16-16K3-FSCDIN	15.0	16	28	48	38	5.5	1	61	12	20	6	M6	40	13.0	7,900	17,000	0.04	0.26
R16-20K2-FSCDIN	14.0	20	28	48	38	5.5	1	56	10	10	5	M6	40	11.8	5,200	10,400	0.04	0.25
R20-05K4-FSCDIN	19.6	5	36	58	47	6.6	1	40	10	10	5	M6	44	16.9	13,400	32,740	0.04	0.28
R20-10K3-FSCDIN	19.3	10	36	58	47	6.6	1	48	10	10	5	M6	44	16.6	10,000	23,500	0.04	0.32
R20-20K2-FSCDIN	19.7	20	36	58	47	6.6	1	57	10	10	5	M6	44	17.1	6,800	15,300	0.04	0.37
R20-20K4-DFSCDIN	19.7	20	36	58	47	6.6	1	57	10	10	5	M6	44	17.1	12,300	30,500	0.04	0.36
R25-05K4-FSCDIN	24.9	5	40	62	51	6.6	1	43	10	12	5	M6	48	22.3	14,900	41,500	0.04	0.22
R25-10K4-FSCDIN	24.5	10	40	62	51	6.6	1	61	10	16	5	M6	48	21.8	16,100	44,900	0.04	0.43
R25-25K2-FSCDIN	24.7	25	40	62	51	6.6	1	70	10	16	5	M6	48	22.1	7,400	19,100	0.04	0.48
R25-25K4-DFSCDIN	24.7	25	40	62	51	6.6	1	70	10	16	5	M6	48	22.1	13,500	38,200	0.04	0.46
R32-05K6-FSCDIN	31.7	5	50	80	65	9	1	48	12	10	6	M6	62	29.1	23,900	81,900	0.04	0.59
R32-10K5-FSCDIN	31.8	10	50	80	65	9	1	77	12	16	6	M6	62	28.6	31,500	80,100	0.04	0.82
R32-20K3-FSCDIN	31.8	20	50	80	65	9	1	88	12	16	6	M6	62	28.6	17,000	48,500	0.04	0.91
R32-32K2-FSCDIN	31.9	32	50	80	65	9	1	88	12	20	6	M6	62	28.7	11,600	31,800	0.04	0.90
R32-32K4-DFSCDIN	31.9	32	50	80	65	9	1	88	12	20	6	M6	62	28.7	20,600	62,200	0.04	0.87



Varastoitavat tuotteet lihavoitu. R=oikeakätinen ja L=vasenkätinen

Table 4.4 Nut dimensions – continuation

Article number	ds	P	D	D1	D2	D3	Hole pattern	L	L1	L2	L3	S	B	dk	C _{dyn} [N]	C ₀ [N]	Max. axial play [mm]	Mass [kg/piece]
R40-05K6-FSCDIN	39.4	5	63	93	78	9	2	50	14	10	7	M8 × 1	70	36.8	25,900	100,600	0.04	0.93
R40-10K4-FSCDIN	37.8	10	63	93	78	9	2	70	14	16	7	M8 × 1	70	32.8	45,000	123,000	0.04	1.19
R40-20K3-FSCDIN	37.8	20	63	93	78	9	2	88	14	16	7	M8 × 1	70	32.8	34,850	90,000	0.07	1.43
R40-40K2-FSCDIN	37.9	40	63	93	78	9	2	102	14	16	7	M8 × 1	70	32.9	23,000	58,400	0.07	1.61
R40-40K4-DFSCDIN	37.9	40	63	93	78	9	2	102	14	16	7	M8 × 1	70	32.9	41,500	115,800	0.07	1.59
R50-05K6-FSCDIN	49.4	5	75	110	93	11	2	50	16	10	8	M8 × 1	85	46.8	28,300	127,200	0.07	1.32
R50-10K6-FSCDIN	48.0	10	75	110	93	11	2	90	16	20	8	M8 × 1	85	42.9	74,500	250,000	0.07	2.05
R50-20K5-FSCDIN	47.9	20	75	110	93	11	2	132	18	25	9	M8 × 1	85	42.9	67,200	217,500	0.07	2.89
R50-40K3-FSCDIN	50.0	40	75	110	93	11	2	149	18	45	9	M8 × 1	85	45.0	39,000	123,000	0.07	2.96
R50-40K6-DFSCDIN	50.0	40	75	110	93	11	2	149	18	45	9	M8 × 1	85	45.0	70,300	242,600	0.07	2.93
R63-10T6-FSIDIN	63.1	10	90	125	108	11	2	120	18	16	9	M8 × 1	95	58.0	61,920	214,090	0.07	3.30

All dimensions stated without a unit are in mm

- Nuts with NBR wiper
- For nut housing, see Section 8.4
- No axial play on request (T5)
- FSCDIN/FSIDIN: Nut filled on one turn
- DFSCDIN: Nut filled on two turns
- R12 to R40 also available in T5

Order example:

R	25	10	K3	FSCDIN	650	730	0.052
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