

CHINA
Jingpeng Machinery
Ball Screw
YOSO

HIGH QUALITY PRODUCTS FROM GERMANY

JINGPENG MACHINERY & EQUIPMENT(SHANGHAI) CO.,LTD

Ordersystem-Carry ballscrews

KGT 16x5 FG RH 1 S 350 G7 A E M

Example for complete Carry ballscrew

Type of thread drive

KGT = Carry ballscrew

Nominal size (d₀ x p) [mm]

Nut type:

▪ Shape

ZY = cylindrical nut typeSCI...

FG = nut with mounting thread typeBSH...

FB = flange nut type FK...

FA = flange nut type FA...

MS = special design according to drawing

Right-hand / left-hand thread

RH = right-hand thread (standard)

LH = left-hand thread (availability see dimensional charts)

Number of ball circulations (i)

1 = 1 ball circulation

2 = 2 ball circulations

3 = 3 ball circulations

4 = 4 ball circulations

Wipers (SA)

S = with wipers (technopolymer or brush)

N = without wipers

Ballscrew overall length [mm]

Lead accuracy (class)

G9 = ≤0.1 mm/300 mm (standard)

G7 = ≤0.052 mm/300 mm (on request)

G5 = ≤0.023 mm/300 mm (on request)

G3 = ≤0.008 mm/300 mm (on request)

Backlash (T_{max})

A = standard backlash (see dimensional charts)

R = reduced backlash upon specification

Screw end machining

O = no end machining (cut by grinding, hardened ends)

E = end machining according to drawing

Assembly

G = screw and nut separate

M = screw and nut assembled according to drawing/specified orientation

Example for screw only

Example for nut only

for nut only

for nut only

for nut only

for nut only

for screw only

for screw only

for screw only

for screw only

KGT 16x5 RH 350 G7 O G

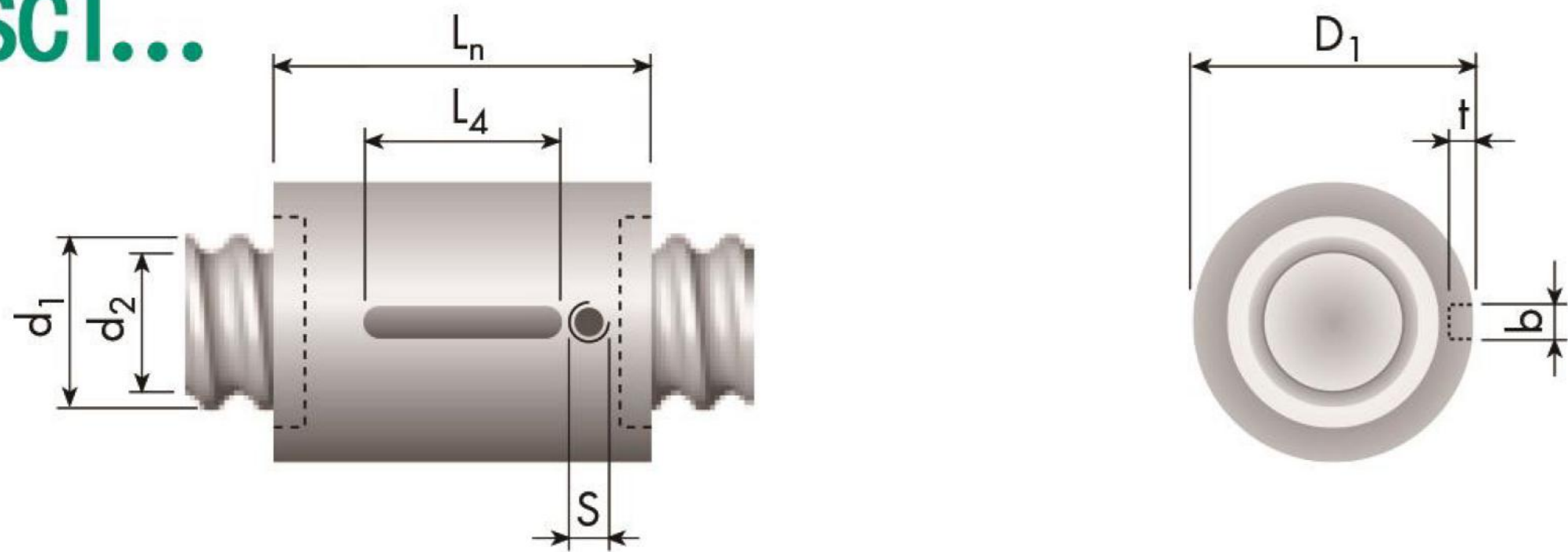
KGT 16x5 FGR RH 1 S A G

Carry ballscrews

Ø4/5/6

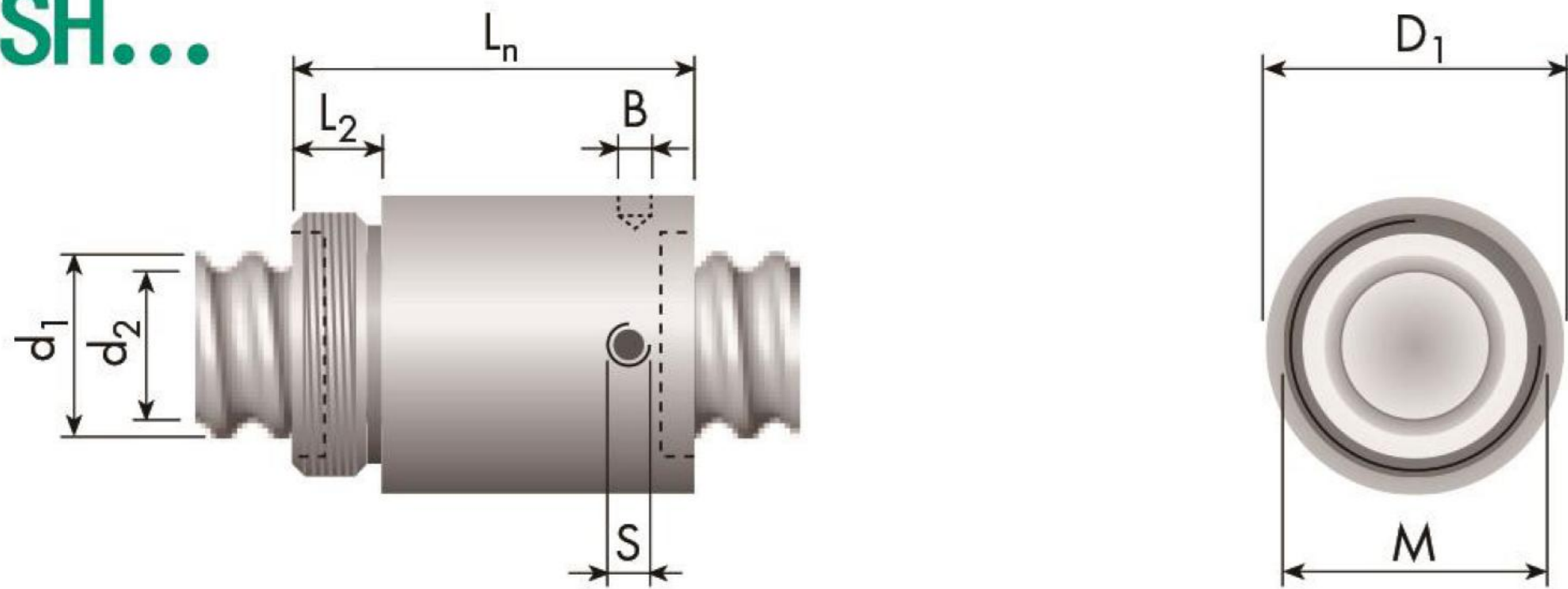
Cylindrical nut

SCI...



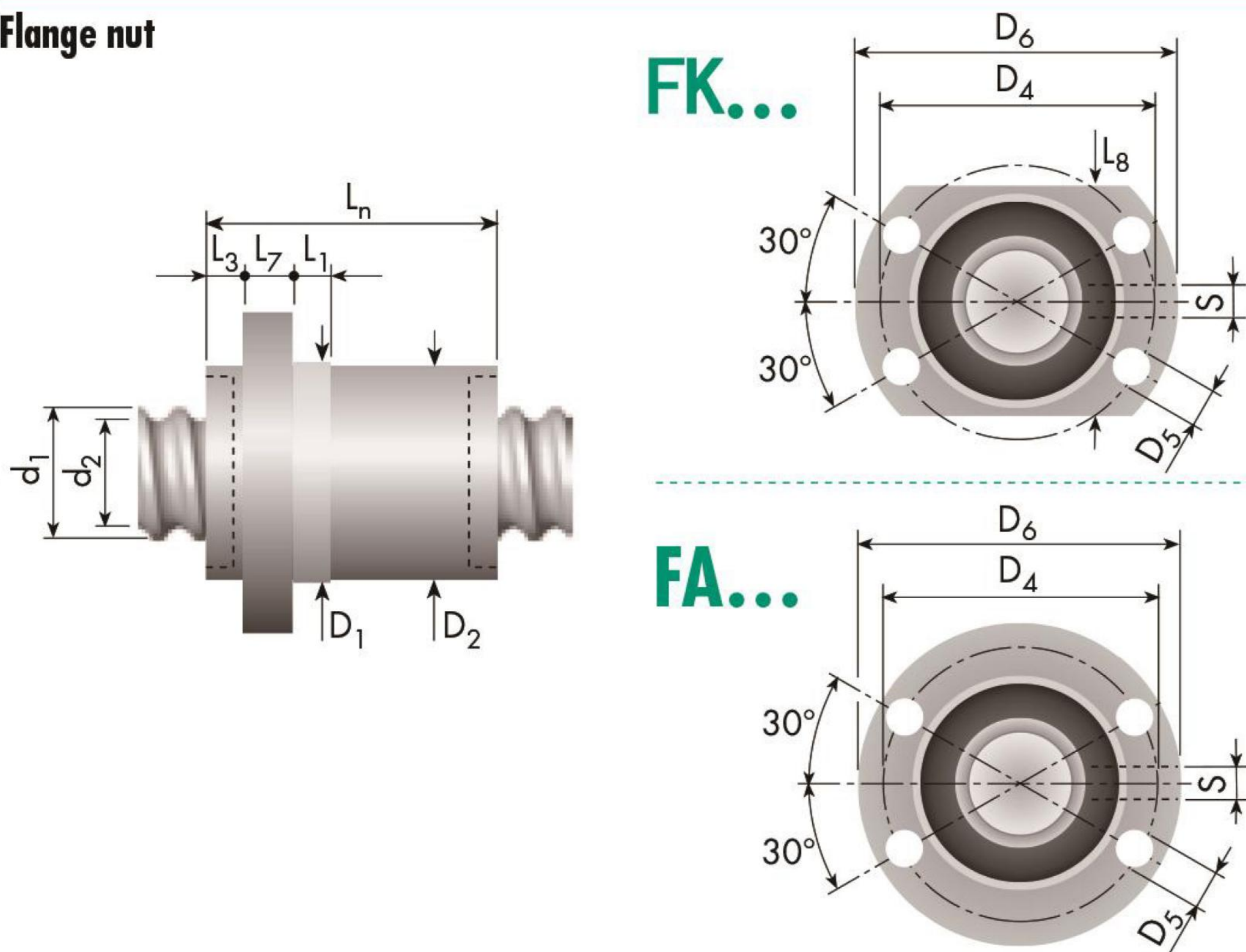
Nut with mounting thread

BSH...



Flange nut

FK...



FA...

Ball return systems



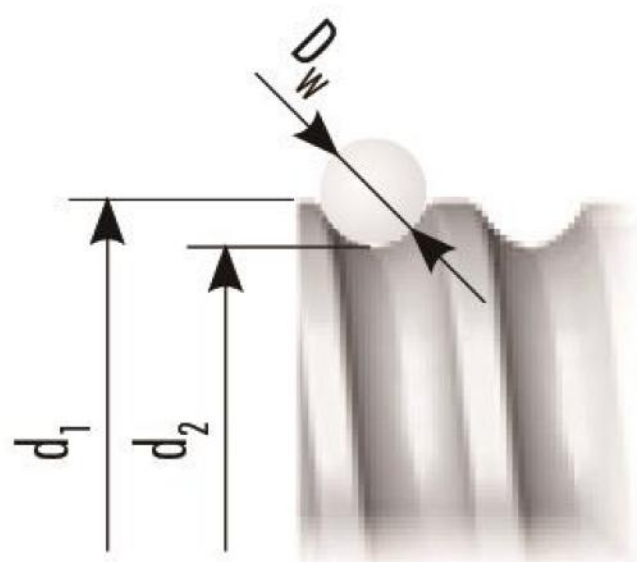
Legend

- d_0 = nominal screw diameter [mm]
- d_1 = outer screw diameter [mm]
- d_2 = core diameter [mm]
- p = pitch [mm]

Nominal size $d_0 \times p$ [mm]	Ball return Type	Relative cost	Right-/left-hand thread	Dimensions [mm]			
				Screw d_1	d_2	Nut D_1	D_2
4 × 1	...I	€€€	RH / —	4.0	3.2	8 _{g6}	—
5 × 2	...I	€€€	RH / —	5.0	4.0	10 _{g6}	—
6 × 1	...I	€€€	RH / —	6.0	5.0	12 _{g6}	—
5 × 2	...I	€€	RH / —	5.0	4.0	10 _{0/-0.1}	—
5 × 3	...I	€€	RH / —	5.0	4.2	10 _{0/-0.1}	—
5 × 3	...I	€€	RH / —	5.0	4.2	10 _{0/-0.1}	—
6 × 2	...R	€€	RH / LH	5.7	4.6	16 _{0/-0.1}	—
6 × 2	...F	€	RH / —	5.7	4.6	19 _{0/-0.1}	—
6 × 6	...F	€	RH / —	5.9	4.6	19 _{0/-0.1}	—
4 × 1	...I	€€€	RH / —	4.0	3.2	8 _{g6}	7.9
6 × 1	...I	€€€	RH / —	6.0	5.0	12 _{g6}	11.8
6 × 2	...F	€€	RH / —	5.7	4.6	18 _{-0.01/-0.05}	17.5
6 × 6	...F	€€	RH / —	5.9	4.6	18 _{-0.01/-0.05}	17.5

Carry ballscrews Ø4/5/6

																			Load rates [N]		Nominal size d ₀ × p [mm]
D ₄ TK	D ₅ H13	D ₆ h13	M	L _n	L ₁	L ₂	L ₃	L ₄	L ₇	L ₈ h13	i	D _w	B +0.5/0	b P9	t	S	SA	T _{max}	C _{dyn}	C _{stat}	
—	—	—	—	10	—	—	—	—	—	—	3 × 1	0.80	—	ø2 +0.1/0	1.0	—	—	0.03	430	580	4 × 1
—	—	—	—	14	—	—	—	8	—	—	3 × 1	0.80	—	2	1.0	—	—	0.03	500	800	5 × 2
—	—	—	—	14	—	—	—	8	—	—	3 × 1	0.80	—	2	1.2	—	—	0.03	600	1 000	6 × 1
—	—	—	M8 × 0.75	18	—	6	—	—	—	—	3 × 1	0.80	2.5	—	—	—	—	0.03	500	800	5 × 2
—	—	—	M8 × 0.75	19	—	6	—	—	—	—	2 × 1	0.80	2.5	—	—	—	—	0.03	340	490	5 × 3
—	—	—	M8 × 0.75	23	—	6	—	—	—	—	3 × 1	0.80	2.5	—	—	—	—	0.03	480	770	5 × 3
—	—	—	M12 × 1	22	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	—	—	0.06	1 700	2 300	6 × 2
—	—	—	M16 × 1	19	—	8	—	—	—	—	1 × 3.7	1.59	2.5	—	—	ø 2	K	0.05	1 900	2 800	6 × 2
—	—	—	M16 × 1	19	—	8	—	—	—	—	2 × 1.6	1.50	2.5	—	—	ø 2	K	0.05	1 700	2 600	6 × 6
12	2.7	17	—	14	2	—	—	—	3	11	3 × 1	0.80	—	—	—	—	—	0.03	430	580	4 × 1
18	3.4	24	—	18	4	—	—	—	4	16	3 × 1	0.80	—	—	—	ø 2	K	0.03	600	1 000	6 × 1
26	3.4	34	—	19	4	—	4	—	4	—	1 × 3.7	1.59	—	—	—	ø 2	K	0.05	1 900	2 800	6 × 2
26	3.4	34	—	19	4	—	4	—	4	—	2 × 1.6	1.50	—	—	—	ø 2	K	0.05	1 700	2 600	6 × 6



i = number of ball circulations [—]
D_w = ball diameter [mm]
B = pin wrench hole* [mm]
S = lubrication hole* [mm]
SA = wipers (details > page 9)
K = technopolymer wipers
B = brush wipers
F = felt rings (on request)

T_{max} = max. standard backlash [mm]
3) = only on request
* position not defined
Special designs available on request



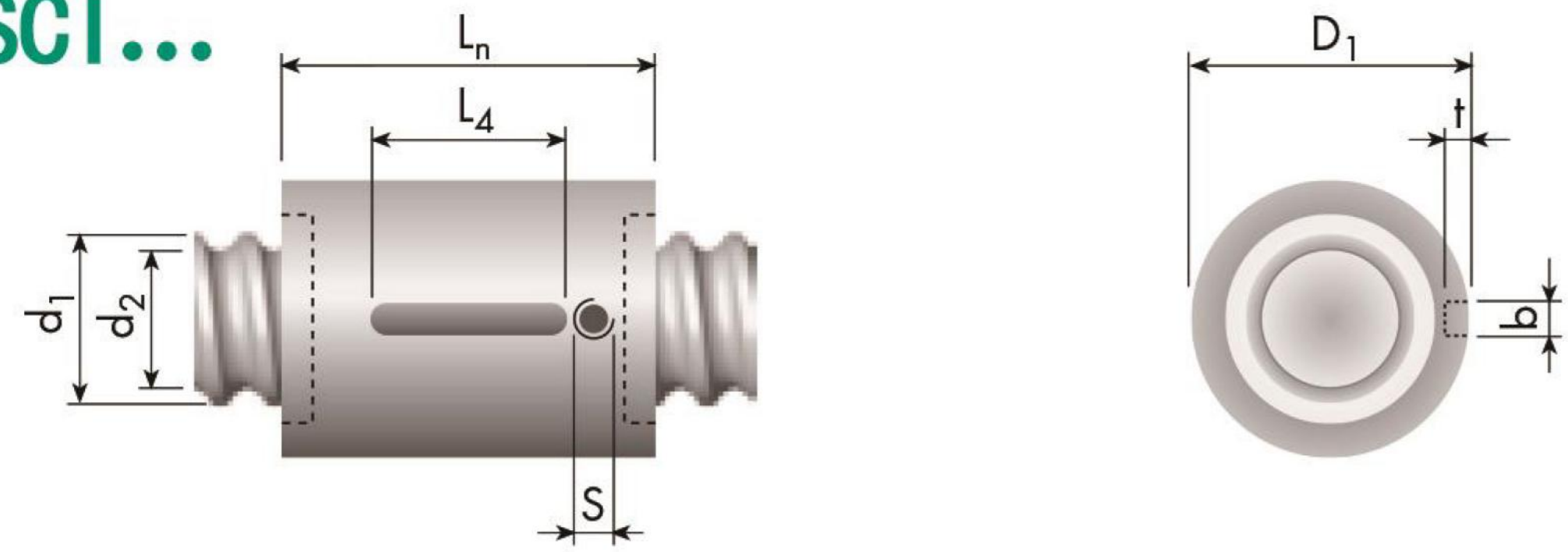
When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!
Calculation > page 12

Carry ballscrews

Ø8

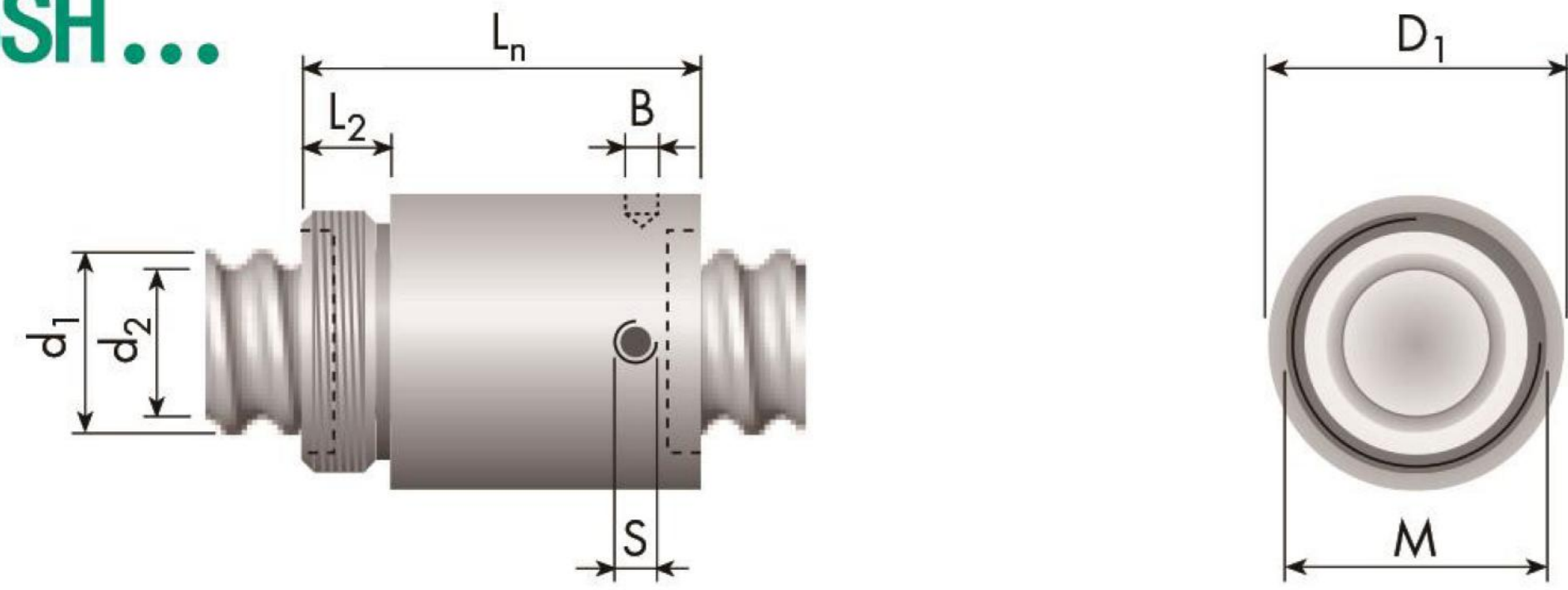
Cylindrical nut

SCI...



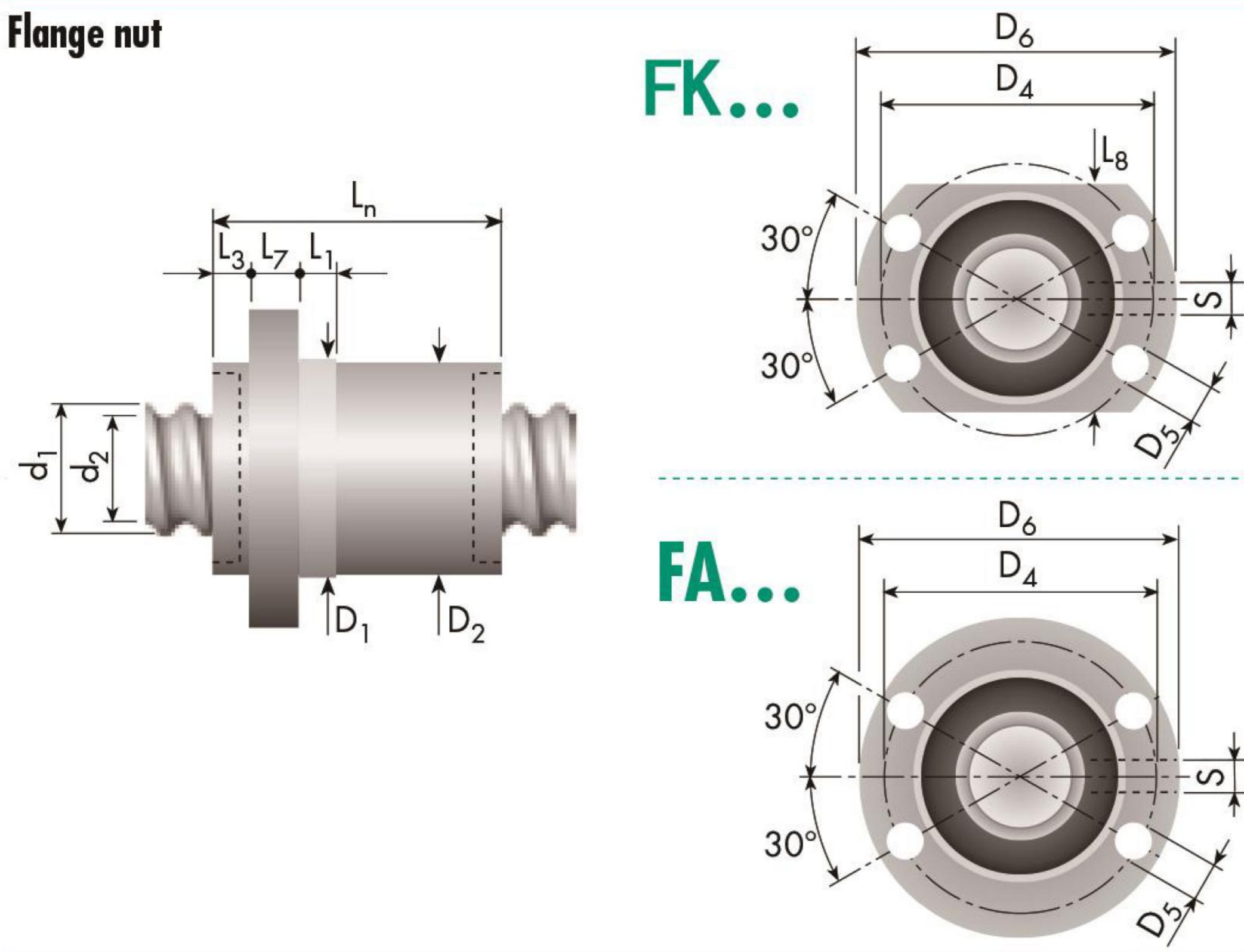
Nut with mounting thread

BSH...



Flange nut

FK...



FA...

Ball return systems



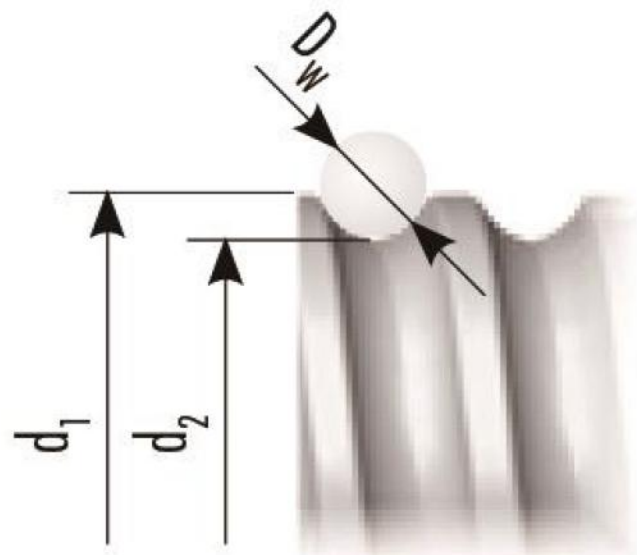
Legend

- d₀ = nominal screw diameter [mm]
- d₁ = outer screw diameter [mm]
- d₂ = core diameter [mm]
- p = pitch [mm]

Nominal size d ₀ × p [mm]	Ball return Type	Relative cost	Right-/left-hand thread	Dimensions [mm]			
				Screw d ₁	d ₂	Nut D ₁	D ₂
8 × 1	...I	€€€	RH / —	8.0	7.0	14 _{g6}	—
8 × 1.5	...I	€€€	RH / —	8.0	6.7	14 _{g6}	—
8 × 2	...I	€€€	RH / —	8.0	6.5	16 _{g6}	—
8 × 2	...R	€€€	RH / —	8.0	6.5	18 _{g6}	—
8 × 2.5	...I	€€€	RH / —	8.0	6.6	16 _{g6}	—
8 × 2.5	...I	€€€	RH / —	8.0	6.6	16 _{g6}	—
8 × 2.5	...R	€€€	RH / —	8.0	6.6	18 _{g6}	—
8 × 3	...I	€€€	RH / —	8.0	6.7	14 _{g6}	—
8 × 3 ³⁾	...I	€€€	RH / —	8.0	6.7	14 _{g6}	—
8 × 5	...R	€€€	RH / —	8.0	6.7	18 _{g6}	—
8 × 12	...E	€€€	RH / —	8.0	6.7	18 _{g6}	—
8 × 1	...I	€€	RH / —	8.0	7.0	16 _{0/-0.1}	—
8 × 1.5	...I	€€	RH / —	8.0	6.7	16 _{0/-0.1}	—
8 × 2	...I	€€	RH / —	8.0	6.5	16 _{0/-0.1}	—
8 × 2	...R	€€	RH / —	8.0	6.5	18 _{0/-0.1}	—
8 × 2	...R	€€	RH / —	8.0	6.5	18 _{0/-0.1}	—
8 × 2.5	...I	€€	RH / —	8.0	6.6	16 _{0/-0.1}	—
8 × 2.5	...R	€€	RH / —	8.0	6.6	17.5 _{0/-0.1}	—
8 × 2.5	...R	€€	RH / —	8.0	6.6	17.5 _{0/-0.1}	—
8 × 3	...I	€€	RH / —	8.0	6.7	16 _{0/-0.1}	—
8 × 3	...F	€	RH / —	8.0	6.7	23 _{0/-0.1}	—
8 × 5	...R	€€	RH / —	8.0	6.7	18 _{0/-0.1}	—
8 × 8	...R	€€	RH / —	8.0	6.6	18 _{0/-0.1}	—
8 × 8	...F	€	RH / —	8.0	6.6	23 _{0/-0.1}	—
8 × 1	...I	€€€	RH / —	8.0	7.0	14 _{g6}	13.5
8 × 2	...I	€€€	RH / —	8.0	6.5	16 _{g6}	15.5
8 × 2	...R	€€€	RH / —	8.0	6.5	18 _{g6}	17.5
8 × 8 ³⁾	...R	€€€	RH / —	8.0	6.6	18 _{g6}	17.5
8 × 12	...E	€€	RH / —	8.0	6.7	18 _{g6}	17.8
8 × 3	...F	€€	RH / —	8.0	6.7	20 _{-0.01/-0.05}	19.5
8 × 8	...F	€€	RH / —	8.0	6.6	20 _{-0.01/-0.05}	19.5

Carry ballscrews Ø8

																			Load rates [N]		Nominal size d ₀ × p [mm]
D ₄ TK	D ₅ H13	D ₆ h13	M	L _n	L ₁	L ₂	L ₃	L ₄	L ₇	L ₈ h13	i	D _w	B +0.5/0	b P9	t	S	SA	T _{max}	C _{dyn}	C _{stat}	
—	—	—	—	14	—	—	—	8	—	—	3 × 1	0.80	—	2	1.2	—	—	0.03	700	1 200	8 × 1
—	—	—	—	14	—	—	—	8	—	—	3 × 1	1.20	—	2	1.2	—	—	0.04	800	1 300	8 × 1.5
—	—	—	—	20	—	—	—	8	—	—	3 × 1	1.59	—	2	1.2	—	—	0.05	1 400	2 000	8 × 2
—	—	—	—	14	—	—	—	8	—	—	1 × 3.5	1.59	—	2	1.2	—	—	0.06	2 000	3 200	8 × 2
—	—	—	—	22	—	—	—	10	—	—	3 × 1	1.59	—	3	2.0	—	—	0.05	1 400	2 100	8 × 2.5
—	—	—	—	22	—	—	—	10	—	—	3 × 1	1.59	—	3	2.0	ø 2	K	0.05	1 400	2 100	8 × 2.5
—	—	—	—	16	—	—	—	10	—	—	1 × 3.5	1.59	—	3	2.0	—	—	0.06	2 000	3 200	8 × 2.5
—	—	—	—	12	—	—	—	8	—	—	2 × 1	1.50	—	2	1.2	—	—	0.05	950	1 500	8 × 3
—	—	—	—	17	—	—	—	8	—	—	3 × 1	1.50	—	2	1.2	—	—	0.05	1 400	2 100	8 × 3 ³⁾
—	—	—	—	19	—	—	—	10	—	—	2 × 2.5	1.50	—	3	2.0	—	—	0.06	1 960	3 470	8 × 5
—	—	—	—	28	—	—	—	8	—	—	2 × 1.5	1.50	—	2	1.2	ø 2	K	0.05	1 400	2 300	8 × 12
—	—	—	M14 × 1	22	—	8	—	—	—	—	3 × 1	0.80	2.5	—	—	—	—	0.03	700	1 200	8 × 1
—	—	—	M14 × 1	22	—	8	—	—	—	—	3 × 1	1.20	2.5	—	—	—	—	0.04	800	1 300	8 × 1.5
—	—	—	M14 × 1	28	—	8	—	—	—	—	3 × 1	1.59	2.5	—	—	—	—	0.05	1 400	2 000	8 × 2
—	—	—	M14 × 1	24	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	—	—	0.06	2 000	3 200	8 × 2
—	—	—	M14 × 1	24	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	ø 2	K	0.06	2 000	3 200	8 × 2
—	—	—	M14 × 1	24	—	8	—	—	—	—	3 × 1	1.59	2.5	—	—	—	—	0.05	1 400	2 100	8 × 2.5
—	—	—	M15 × 1	24	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	—	—	0.06	2 000	3 200	8 × 2.5
—	—	—	M15 × 1	26	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	ø 2	K	0.06	2 000	3 200	8 × 2.5
—	—	—	M14 × 1	25	—	8	—	—	—	—	3 × 1	1.50	2.5	—	—	—	—	0.05	1 400	2 100	8 × 3
—	—	—	M20 × 1	23	—	10	—	—	—	—	1 × 3.7	1.50	2.5	—	—	ø 2	K	0.05	1 900	3 300	8 × 3
—	—	—	M14 × 1	25	—	8	—	—	—	—	2 × 1.5	1.50	2.5	—	—	—	—	0.06	1 960	3 470	8 × 5
—	—	—	M14 × 1	25	—	8	—	—	—	—	2 × 1.5	1.50	2.5	—	—	—	—	0.06	1 500	2 500	8 × 8
—	—	—	M20 × 1	23	—	10	—	—	—	—	2 × 1.7	1.50	2.5	—	—	ø 2	K	0.05	2 000	3 700	8 × 8
21	3.4	27	—	18	4	—	—	—	4	18	3 × 1	0.80	—	—	—	ø 2	K	0.03	700	1 200	8 × 1
22	3.4	28	—	30	4	—	—	—	6	19	3 × 1	1.59	—	—	—	ø 4	K	0.05	1 400	2 000	8 × 2
22	3.4	28	—	25	4	—	—	—	6	19	1 × 3.5	1.59	—	—	—	ø 4	K	0.06	2 000	3 200	8 × 2
22	3.4	28	—	30	4	—	—	—	6	19	2 × 1.5	1.50	—	—	—	—	—	0.06	1 500	2 500	8 × 8 ³⁾
25	3.4	30	—	28	4	—	6	—	4	20	2 × 1.5	1.50	—	—	—	ø 2	K	0.05	1 400	2 300	8 × 12
28	3.4	36	—	23	4	—	5	—	4	—	1 × 3.7	1.50	—	—	—	ø 2	K	0.05	1 900	3 300	8 × 3
28	3.4	36	—	23	4	—	5	—	4	—	2 × 1.7	1.50	—	—	—	ø 2	K	0.05	2 000	3 700	8 × 8



i = number of ball circulations [—]

D_w = ball diameter [mm]

B = pin wrench hole* [mm]

S = lubrication hole* [mm]

SA = wipers (details > page 9)

K = technopolymer wipers

B = brush wipers

F = felt rings (on request)

T_{max} = max. standard backlash [mm]

³⁾ = only on request

* position not defined

Special designs available on request

When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!

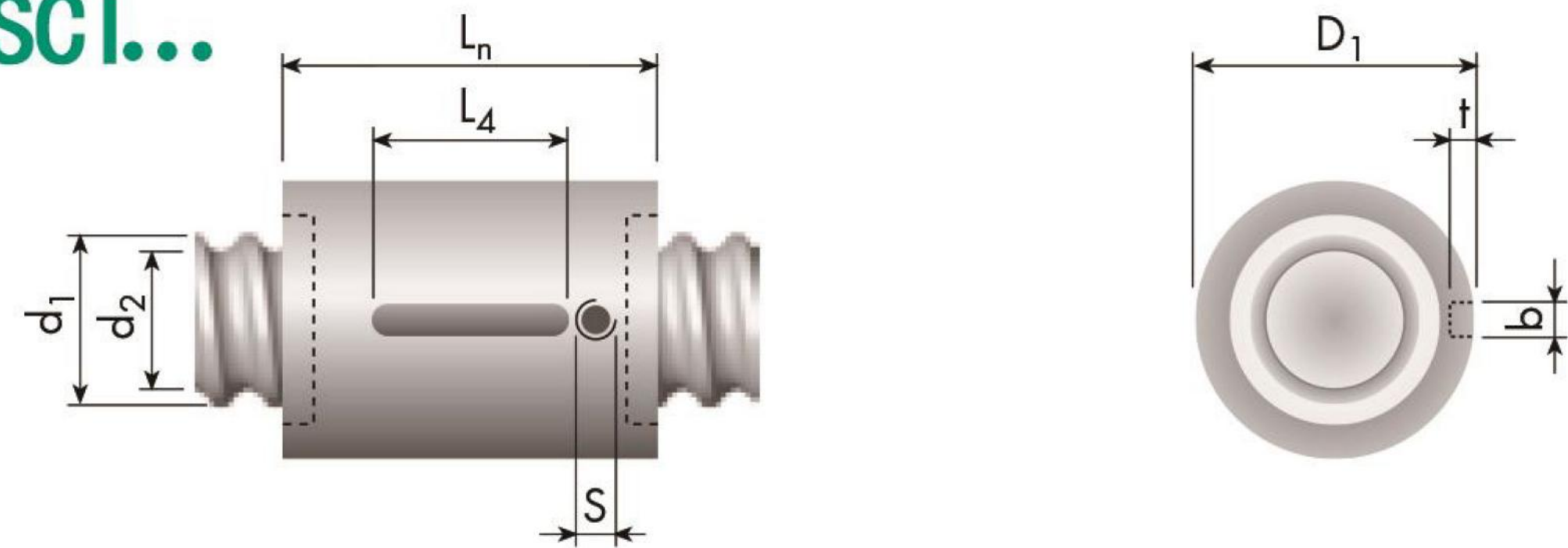
Calculation > page 12

Carry ballscrews

Ø10

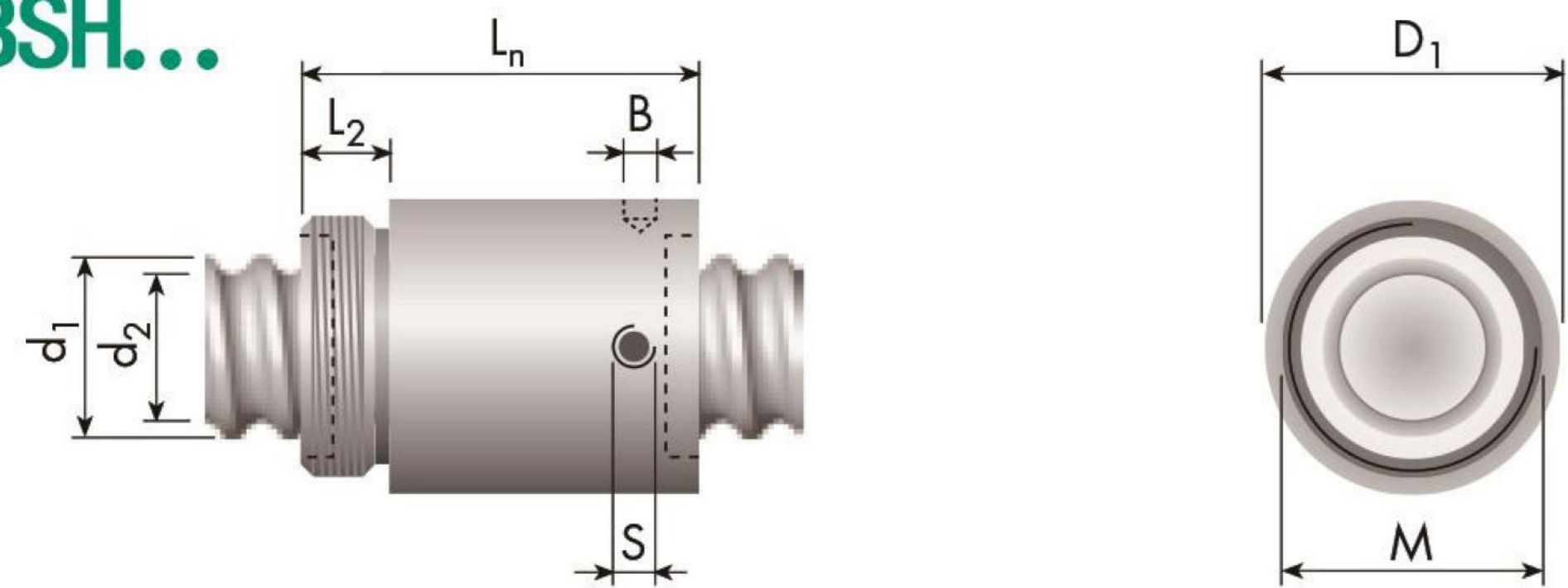
Cylindrical nut

SCI...



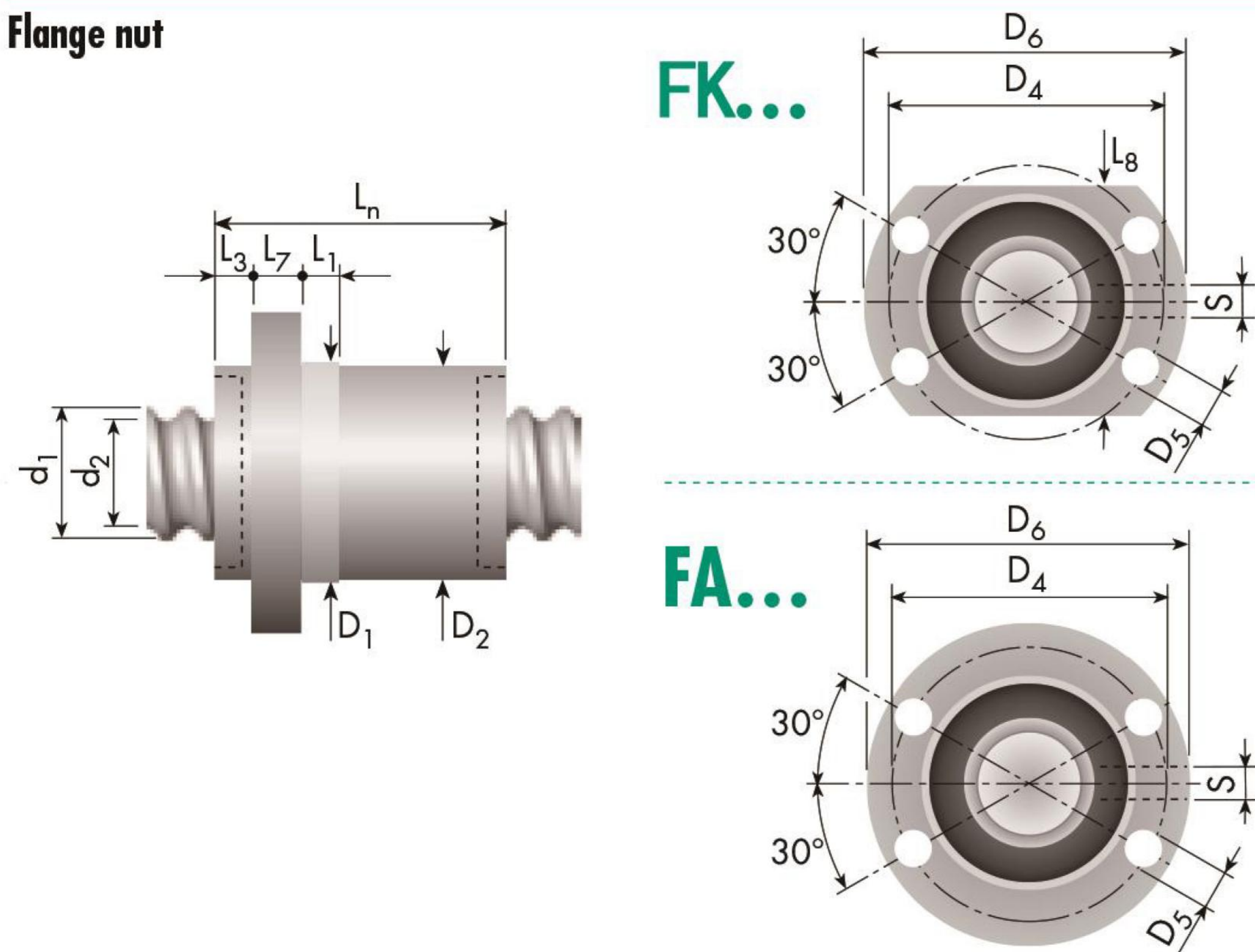
Nut with mounting thread

BSH...

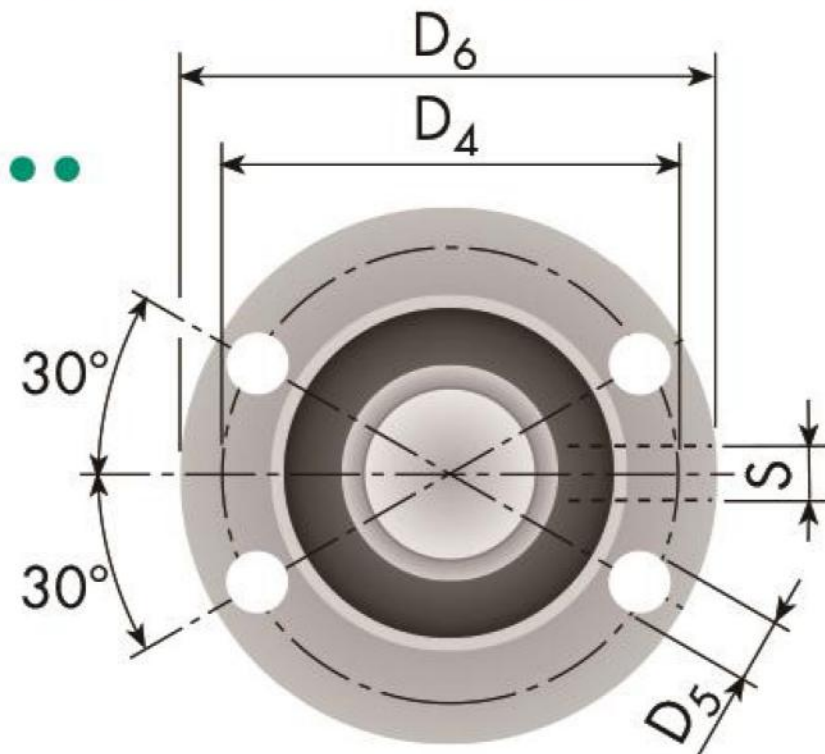


Flange nut

FK...



FA...



Ball return systems



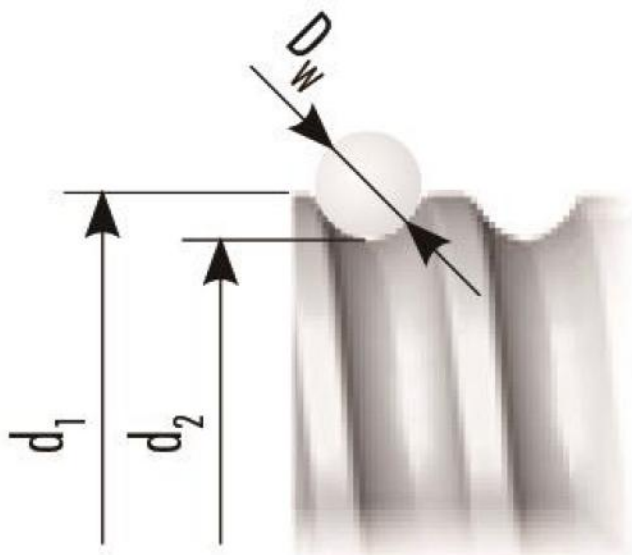
Legend

- d_0 = nominal screw diameter [mm]
- d_1 = outer screw diameter [mm]
- d_2 = core diameter [mm]
- p = pitch [mm]

Nominal size $d_0 \times p$ [mm]	Ball return Type	Relative cost	Right-/left-hand thread	Dimensions [mm]			
				Screw d_1	d_2	Nut D_1	D_2
10×2	...I	€€€	RH / LH	9.7	8.2	18 _{g6}	—
10×2 ³⁾	...I	€€€	RH / LH	9.7	8.2	18 _{g6}	—
10×3	...R	€€€	RH / LH	9.9	7.8	22 _{g6}	—
10×3	...R	€€€	RH / LH	9.9	7.8	22 _{g6}	—
10×4	...I	€€€	RH / —	10.0	7.5	18 _{g6}	—
10×4	...I	€€€	RH / —	10.0	7.5	18 _{g6}	—
10×10	...R	€€€	RH / —	9.8	7.9	23 _{g6}	—
10×2	...I	€€	RH / LH	9.7	8.2	18 _{0/-0.1}	—
10×2 ³⁾	...I	€€	RH / LH	9.7	8.2	18 _{0/-0.1}	—
10×2	...R	€€	RH / LH	9.7	8.2	19.5 _{0/-0.1}	—
10×2	...R	€€	RH / —	9.7	8.2	19.5 _{0/-0.1}	—
10×3	...I	€€	RH / —	9.9	7.8	20 _{0/-0.1}	—
10×3	...I	€€	RH / —	9.9	7.8	20 _{0/-0.1}	—
10×3	...R	€€	RH / LH	9.9	7.8	21 _{0/-0.1}	—
10×3	...R	€€	RH / LH	9.9	7.8	21 _{0/-0.1}	—
10×3	...F	€	RH / —	9.9	7.8	27 _{0/-0.1}	—
10×4	...I	€€	RH / —	10.0	7.5	20 _{0/-0.1}	—
10×4	...I	€€	RH / —	10.0	7.5	20 _{0/-0.1}	—
10×10	...R	€€	RH / —	9.8	7.9	23 _{0/-0.1}	—
10×10	...R	€€	RH / —	9.8	7.9	23 _{0/-0.1}	—
10×10	...F	€	RH / —	9.9	7.9	27 _{0/-0.1}	—
10×4	...I	€€€	RH / —	10.0	7.5	18 _{g6}	17.8
10×4	...I	€€€	RH / —	10.0	7.5	18 _{g6}	17.8
10×10	...R	€€€	RH / —	9.8	7.9	23 _{g6}	22.5
10×3	...F	€€	RH / —	9.9	7.8	24 _{-0.01/-0.06}	23.5
10×10	...F	€€	RH / —	9.8	7.9	24 _{-0.01/-0.06}	23.5

Carry ballscrews Ø 10

																			Load rates [N]		Nominal size
D ₄ TK	D ₅ H13	D ₆ h13	M	L _n	L ₁	L ₂	L ₃	L ₄	L ₇	L ₈ h13	i	D _w	B +0.5/0	b P9	t	S	SA	T _{max}	C _{dyn}	C _{stat}	d ₀ × p [mm]
—	—	—	—	14	—	—	—	10	—	—	2 × 1	1.59	—	3	1.2	—	—	0.06	1 250	2 100	10 × 2
—	—	—	—	20	—	—	—	10	—	—	3 × 1	1.59	—	3	1.2	—	—	0.06	1 750	3 200	10 × 2 ³⁾
—	—	—	—	24	—	—	—	10	—	—	1 × 3.5	2.00	—	3	2.0	—	—	0.06	2 800	5 000	10 × 3
—	—	—	—	24	—	—	—	10	—	—	1 × 3.5	2.00	—	3	2.0	ø 3.5	K	0.06	2 800	5 000	10 × 3
—	—	—	—	35	—	—	—	10	—	—	4 × 1	2.50	—	3	1.2	—	—	0.07	4 100	6 700	10 × 4
—	—	—	—	35	—	—	—	10	—	—	4 × 1	2.50	—	3	1.2	ø 2	K	0.07	4 100	6 700	10 × 4
—	—	—	—	26	—	—	—	10	—	—	2 × 1.5	2.00	—	3	2.0	—	—	0.06	2 500	4 500	10 × 10
—	—	—	M16 × 1	22	—	8	—	—	—	—	2 × 1	1.59	2.5	—	—	—	—	0.06	1 250	2 100	10 × 2
—	—	—	M16 × 1	28	—	8	—	—	—	—	3 × 1	1.59	2.5	—	—	—	—	0.06	1 750	3 200	10 × 2 ³⁾
—	—	—	M17 × 1	22	—	7	—	—	—	—	1 × 3.5	1.59	2.5	—	—	—	—	0.06	2 300	4 000	10 × 2
—	—	—	M17 × 1	22	—	7	—	—	—	—	1 × 3.5	1.59	2.5	—	—	ø 2	K	0.06	2 300	4 000	10 × 2
—	—	—	M18 × 1	29	—	8	—	—	—	—	3 × 1	2.00	2.5	—	—	—	—	0.06	2 400	4 200	10 × 3
—	—	—	M18 × 1	29	—	8	—	—	—	—	3 × 1	2.00	2.5	—	—	ø 2	K	0.06	2 400	4 200	10 × 3
—	—	—	M18 × 1	29	—	9	—	—	—	—	1 × 3.5	2.00	3.0	—	—	—	—	0.06	2 800	5 000	10 × 3
—	—	—	M18 × 1	29	—	9	—	—	—	—	1 × 3.5	2.00	3.0	—	—	ø 2	K	0.06	2 800	5 000	10 × 3
—	—	—	M24 × 1.5	27	—	10	—	—	—	—	1 × 3.7	2.00	3.0	—	—	ø 2	K	0.06	3 500	6 300	10 × 3
—	—	—	M18 × 1	40	—	8	—	—	—	—	4 × 1	2.50	2.5	—	—	—	—	0.07	4 100	6 700	10 × 4
—	—	—	M18 × 1	40	—	8	—	—	—	—	4 × 1	2.50	2.5	—	—	ø 2	K	0.07	4 100	6 700	10 × 4
—	—	—	M18 × 1	35	—	9	—	—	—	—	2 × 1.5	2.00	3.0	—	—	—	—	0.06	2 500	4 500	10 × 10
—	—	—	M18 × 1	35	—	9	—	—	—	—	2 × 1.5	2.00	3.0	—	—	ø 4	K	0.06	2 500	4 500	10 × 10
—	—	—	M24 × 1.5	27	—	10	—	—	—	—	2 × 1.7	2.00	3.0	—	—	ø 2	K	0.06	3 200	5 900	10 × 10
28	4.5	36	—	38	6	—	—	—	6	23	4 × 1	2.50	—	—	—	—	—	0.07	4 100	6 700	10 × 4
28	4.5	36	—	38	6	—	—	—	6	23	4 × 1	2.50	—	—	—	ø 2	K	0.07	4 100	6 700	10 × 4
29	4.5	37	—	40	6	—	—	—	8	24	2 × 1.5	2.00	—	—	—	M5	K	0.06	2 500	4 500	10 × 10
32	4.5	40	—	27	5	—	4	—	7	—	1 × 3.7	2.00	—	—	—	ø 3	K	0.06	3 500	6 300	10 × 3
32	4.5	40	—	27	5	—	4	—	7	—	2 × 1.7	2.00	—	—	—	ø 4	K	0.06	3 200	5 900	10 × 10



- i = number of ball circulations [—]

D_w = ball diameter [mm]

B = pin wrench hole* [mm]

S = lubrication hole* [mm]
- SA = wipers (details > page 9)

K = technopolymer wipers

B = brush wipers

F = felt rings (on request)
- T_{max} = max. standard backlash [mm]

³⁾ = only on request

* position not defined

Special designs available on request

When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!

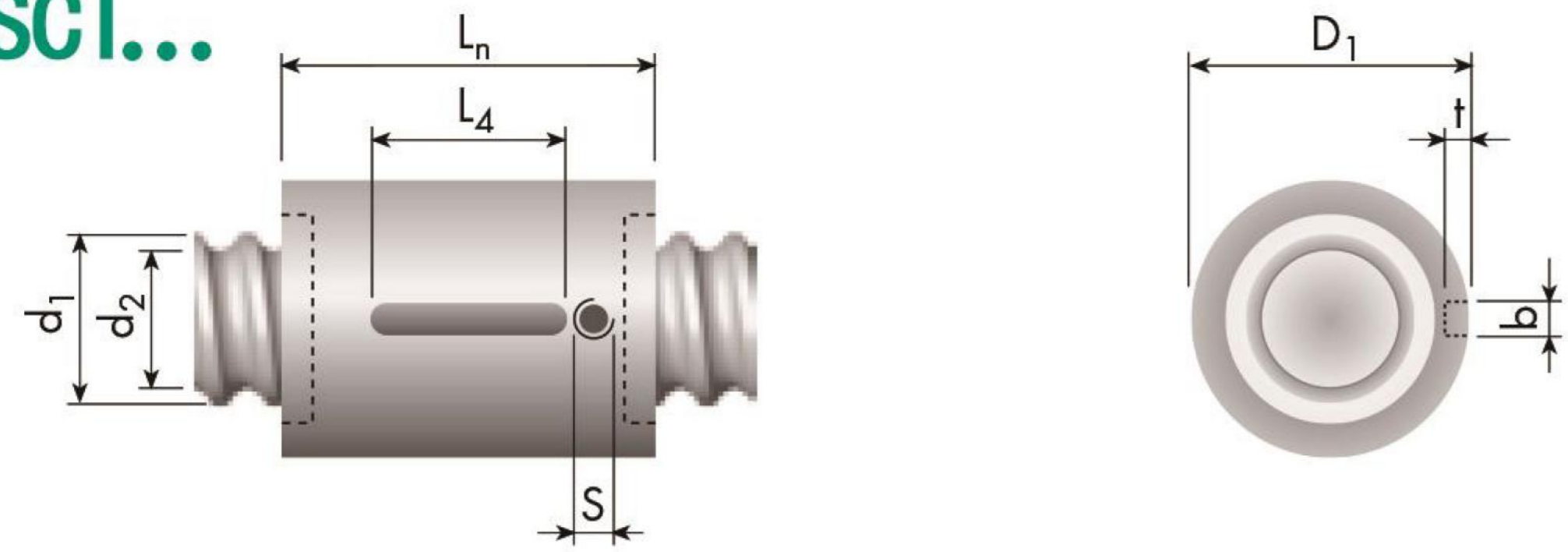
Calculation > page 12

Carry ballscrews

Ø12

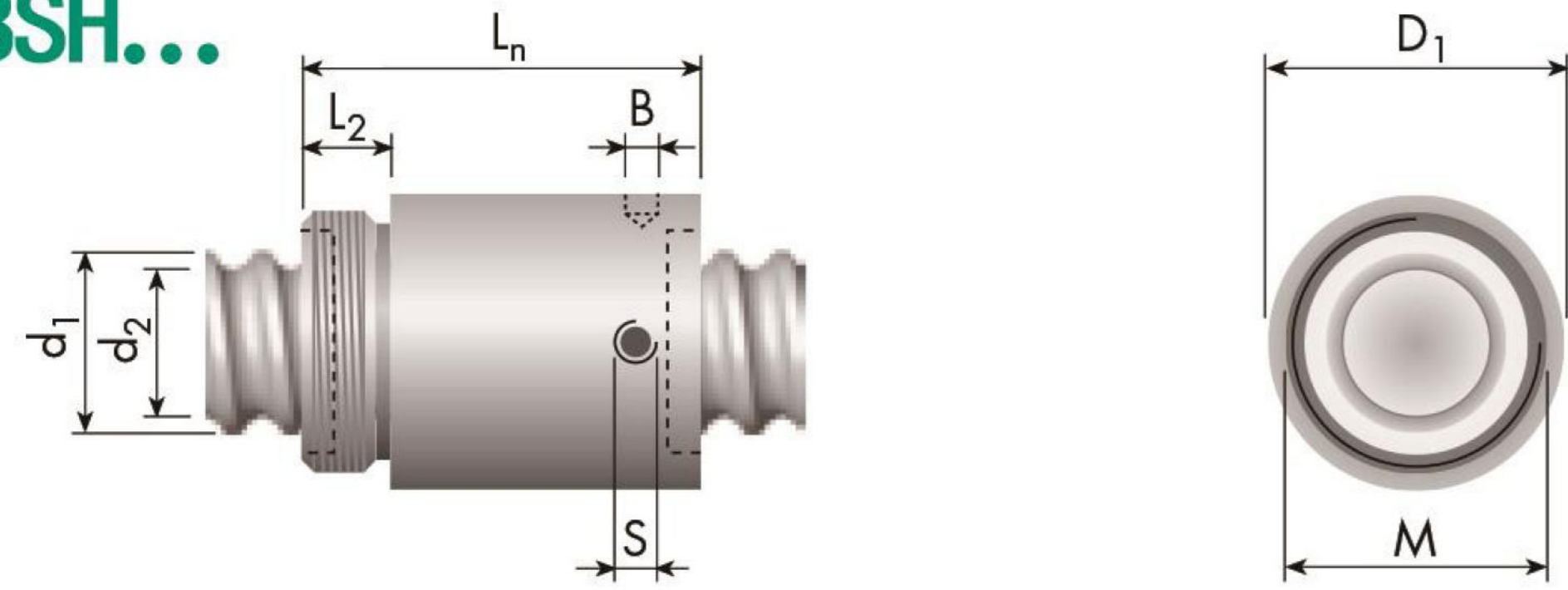
Cylindrical nut

SCI...



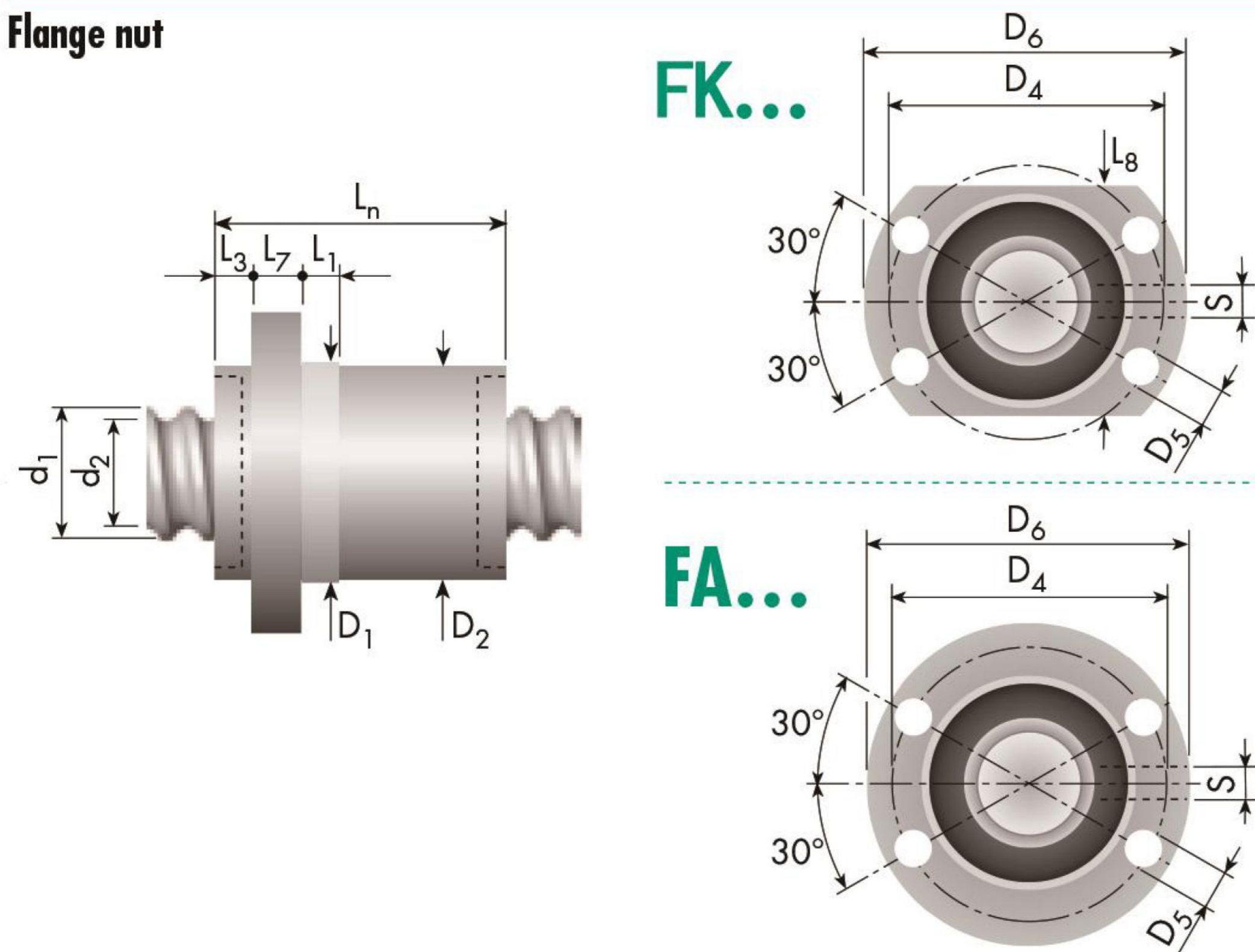
Nut with mounting thread

BSH...



Flange nut

FK...



FA...

Ball return systems



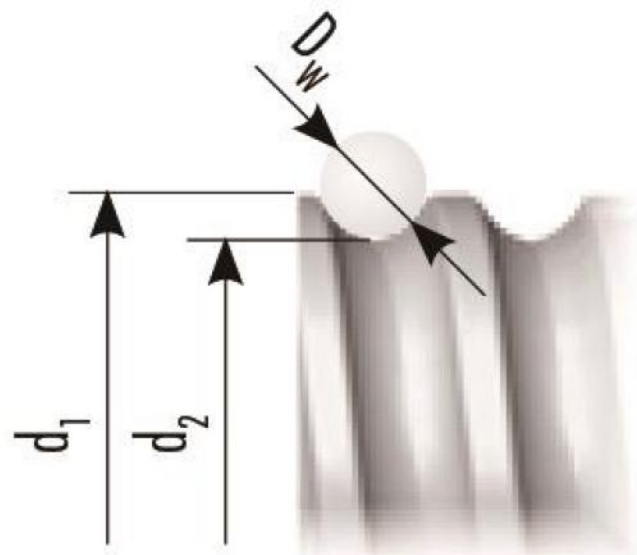
Legend

- d₀ = nominal screw diameter [mm]
- d₁ = outer screw diameter [mm]
- d₂ = core diameter [mm]
- p = pitch [mm]

Nominal size d ₀ × p [mm]	Ball return Type	Relative cost	Right-/left-hand thread	Dimensions [mm]			
				Screw d ₁	d ₂	Nut D ₁	D ₂
12 × 2	...I	€€€	RH / —	12.0	10.6	20 _{g6}	—
12 × 2 ³⁾	...I	€€€	RH / LH	12.0	10.6	20 _{g6}	—
12 × 4	...R	€€€	RH / —	12.0	9.8	26 _{g6}	—
12 × 4	...R	€€€	RH / —	12.0	9.8	26 _{g6}	—
12 × 2	...I	€€	RH / —	12.0	10.6	20 _{0/-0.1}	—
12 × 2 ³⁾	...I	€€	RH / LH	12.0	10.6	20 _{0/-0.1}	—
12 × 4	...I	€€	RH / —	12.0	9.8	24 _{0/-0.1}	—
12 × 4	...I	€€	RH / —	12.0	9.8	24 _{0/-0.1}	—
12 × 4	...R	€€	RH / —	12.0	9.8	26 _{0/-0.1}	—
12 × 4	...R	€€	RH / —	12.0	9.8	26 _{0/-0.1}	—
12 × 5	...I	€€	RH / —	12.0	9.5	23 _{0/-0.1}	—
12 × 5	...I	€€	RH / —	12.0	9.5	23 _{0/-0.1}	—
12 × 5	...R	€€	RH / LH	12.0	9.5	26 _{0/-0.1}	—
12 × 5	...R	€€	RH / —	12.0	9.5	26 _{0/-0.1}	—
12 × 5	...F	€	RH / —	12.0	9.5	32 _{0/-0.1}	—
12 × 10	...R	€€	RH / —	11.9	9.7	26 _{0/-0.1}	—
12 × 10	...F	€	RH / —	11.9	9.7	32 _{0/-0.1}	—
12 × 12	...F	€	RH / —	12.0	9.7	32 _{0/-0.1}	—
12 × 2	...R	€€€	RH / —	12.0	10.6	22 _{g6}	21.5
12 × 3	...R	€€€	RH / —	12.3	10.2	24 _{g6}	23.5
12 × 4	...R	€€€	RH / —	12.0	9.8	26 _{g6}	25.5
12 × 5	...I	€€€	RH / —	12.0	9.5	24 _{g6}	23.5
12 × 5	...R	€€€	RH / —	12.0	9.5	26 _{g6}	25.5
12 × 5	...F	€€	RH / —	12.0	9.5	26 _{-0.01/-0.06}	25.5
12 × 10	...F	€€	RH / —	11.9	9.7	26 _{-0.01/-0.06}	25.5
12 × 12	...F	€€	RH / —	12.0	9.7	26 _{-0.01/-0.06}	25.5

Carry ballscrews Ø12

																			Load rates [N]		Nominal size
D ₄ TK	D ₅ H13	D ₆ h13	M	L _n	L ₁	L ₂	L ₃	L ₄	L ₇	L ₈ h13	i	D _w	B +0.5/0	b P9	t	S	SA	T _{max}	C _{dyn}	C _{stat}	d ₀ × p [mm]
—	—	—	—	15	—	—	—	10	—	—	2 × 1	1.59	—	3	1.2	—	—	0.06	1 380	2 500	12 × 2
—	—	—	—	20	—	—	—	10	—	—	3 × 1	1.59	—	3	1.2	—	—	0.06	2 000	4 000	12 × 2 ³⁾
—	—	—	—	24	—	—	—	10	—	—	1 × 3.5	2.50	—	3	1.8	—	—	0.07	5 500	11 000	12 × 4
—	—	—	—	32	—	—	—	10	—	—	1 × 3.5	2.50	—	3	1.8	ø 4	K	0.07	5 500	11 000	12 × 4
—	—	—	M18 × 1	23	—	8	—	—	—	—	2 × 1	1.59	2.5	—	—	—	—	0.06	1 380	2 500	12 × 2
—	—	—	M18 × 1	28	—	8	—	—	—	—	3 × 1	1.59	2.5	—	—	—	—	0.06	2 000	4 000	12 × 2 ³⁾
—	—	—	M20 × 1	39	—	10	—	—	—	—	3 × 1	2.50	2.5	—	—	—	—	0.07	4 000	6 800	12 × 4
—	—	—	M20 × 1	39	—	10	—	—	—	—	3 × 1	2.50	2.5	—	—	ø 4	K	0.07	4 000	6 800	12 × 4
—	—	—	M20 × 1	32	—	8	—	—	—	—	1 × 3.5	2.50	2.5	—	—	—	—	0.07	5 500	11 000	12 × 4
—	—	—	M20 × 1	34	—	10	—	—	—	—	1 × 3.5	2.50	2.5	—	—	ø 4	K	0.07	5 500	11 000	12 × 4
—	—	—	M20 × 1	42	—	10	—	—	—	—	3 × 1	2.78	3.0	—	—	—	—	0.07	5 000	8 600	12 × 5
—	—	—	M20 × 1	42	—	10	—	—	—	—	3 × 1	2.78	3.0	—	—	ø 4	K	0.07	5 000	8 600	12 × 5
—	—	—	M20 × 1	37	—	8	—	—	—	—	1 × 3.5	2.78	3.0	—	—	—	—	0.07	6 600	12 000	12 × 5
—	—	—	M20 × 1	37	—	8	—	—	—	—	1 × 3.5	2.78	3.0	—	—	ø 4	K	0.07	6 600	12 000	12 × 5
—	—	—	M28 × 1.5	30	—	12	—	—	—	—	1 × 3.7	2.78	3.5	—	—	ø 4	K	0.06	5 900	10 600	12 × 5
—	—	—	M20 × 1	37	—	8	—	—	—	—	2 × 1.5	2.50	3.0	—	—	—	—	0.07	4 400	7 700	12 × 10
—	—	—	M28 × 1.5	38	—	12	—	—	—	—	2 × 2.4	2.50	3.5	—	—	ø 4	K	0.06	6 400	12 600	12 × 10
—	—	—	M28 × 1.5	30	—	12	—	—	—	—	2 × 1.6	2.50	3.5	—	—	ø 4	K	0.06	4 600	8 500	12 × 12
29	4.5	37	—	30	5	—	—	—	8	24	1 × 3.5	1.59	—	—	—	ø 4	K	0.06	2 500	5 100	12 × 2
32	4.5	40	—	36	5	—	—	—	8	26	2 × 2.5	2.00	—	—	—	—	—	0.06	5 000	11 000	12 × 3
32	4.5	39.5	—	36	5	—	—	—	8	28	1 × 3.5	2.50	—	—	—	M5	K	0.07	5 500	11 000	12 × 4
32	4.5	40	—	40	6	—	—	—	8	26	3 × 1	2.78	—	—	—	ø 4	K	0.07	5 000	8 600	12 × 5
32	4.5	39.5	—	40	5	—	—	—	7	28	1 × 3.5	2.78	—	—	—	M5	K	0.07	6 600	12 000	12 × 5
34	4.5	42	—	30	6	—	6	—	8	—	1 × 3.7	2.78	—	—	—	ø 4	K	0.06	5 900	10 600	12 × 5
34	4.5	42	—	38	6	—	6	—	8	—	2 × 2.4	2.50	—	—	—	ø 4	K	0.06	6 400	12 600	12 × 10
34	4.5	42	—	30	6	—	6	—	8	—	2 × 1.6	2.50	—	—	—	ø 4	K	0.06	4 600	8 500	12 × 12



- i = number of ball circulations [—]

D_w = ball diameter [mm]

B = pin wrench hole* [mm]

S = lubrication hole* [mm]
- SA = wipers (details > page 9)

K = technopolymer wipers

B = brush wipers

F = felt rings (on request)
- T_{max} = max. standard backlash [mm]

³⁾ = only on request

* position not defined

Special designs available on request

When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!

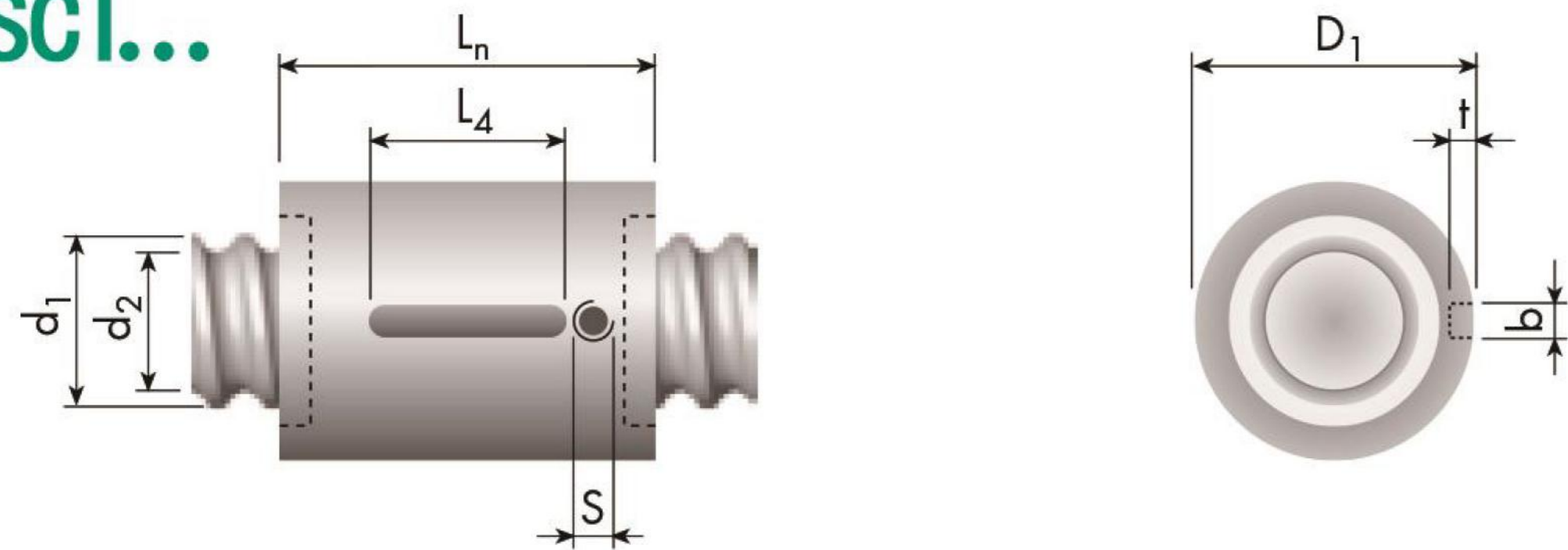
Calculation > page 12

Carry ballscrews

Ø12.7 (1/2")

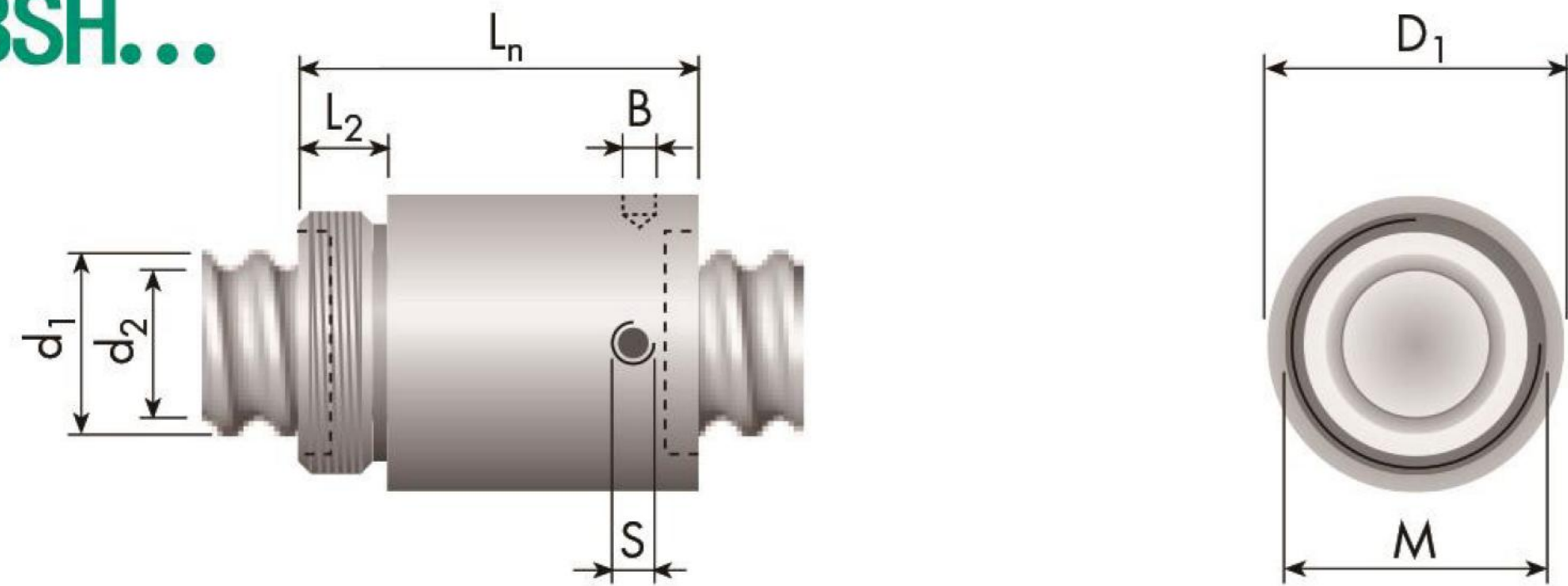
Cylindrical nut

SCI...



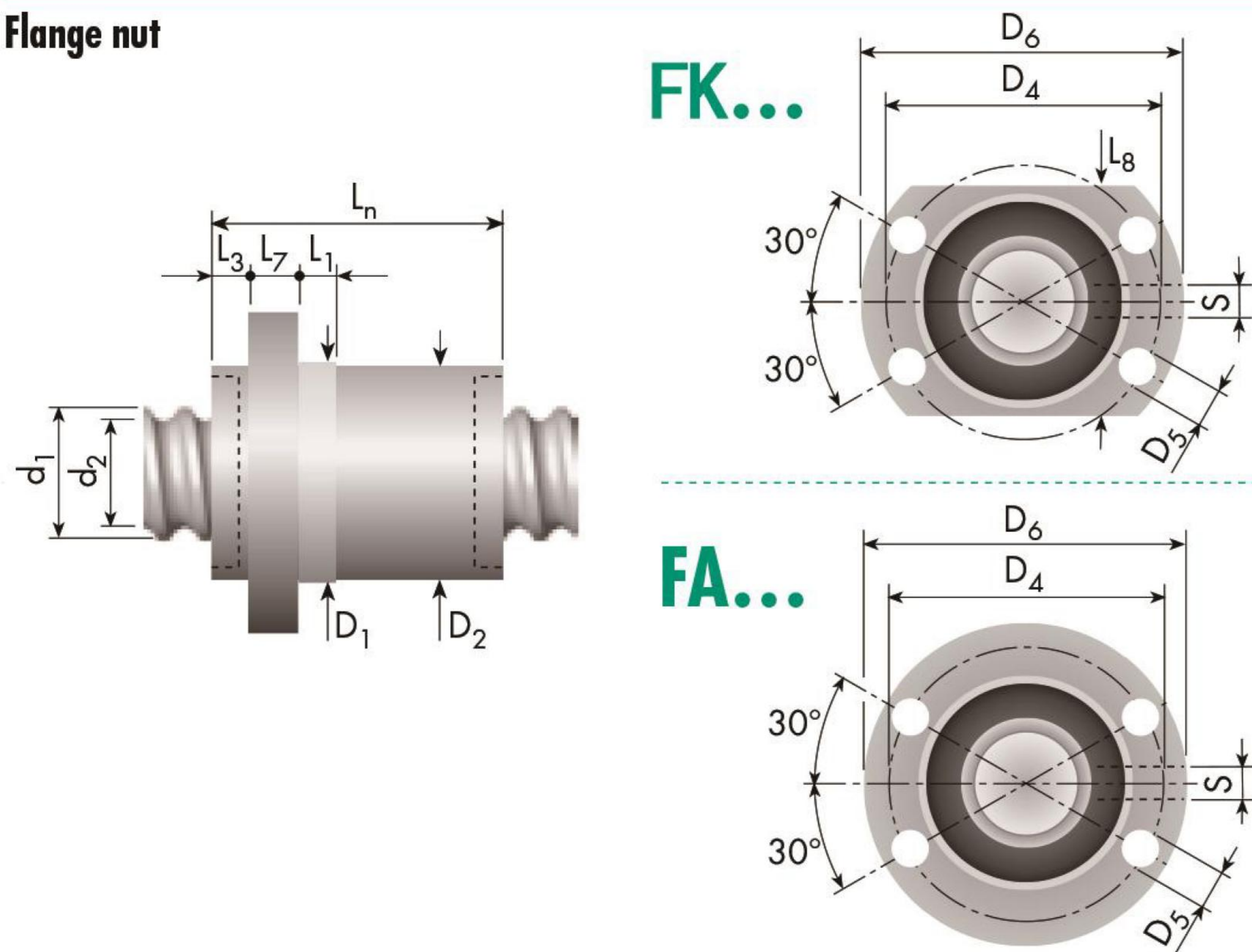
Nut with mounting thread

BSH...

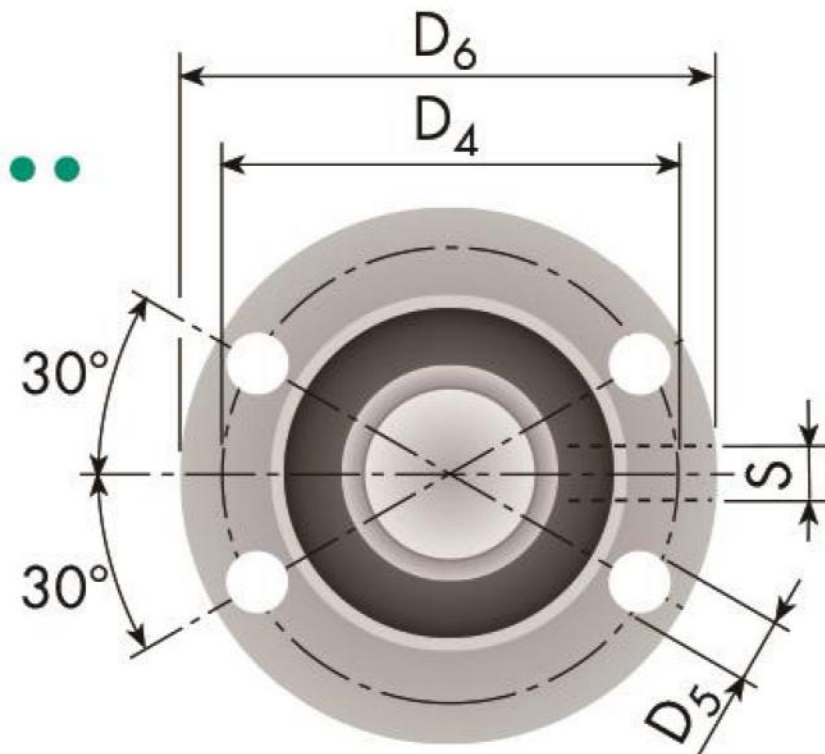


Flange nut

FK...



FA...



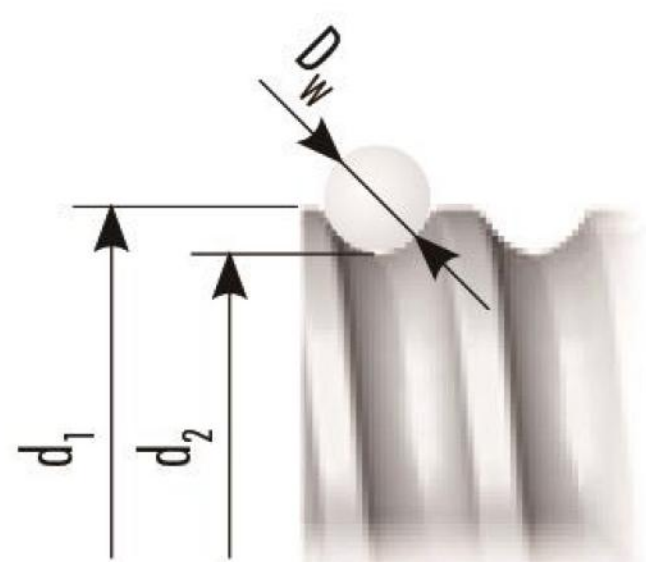
Ball return systems



Legend

- d_0 = nominal screw diameter [mm]
- d_1 = outer screw diameter [mm]
- d_2 = core diameter [mm]
- p = pitch [mm]

10 YOSO Ball Screw

[illegible]

i = number of ball circulations [—]

$$D_w = \text{ball diameter [mm]}$$
$$B = \text{pin wrench hole}^* [\text{mm}]$$
$$S = \text{lubrication hole}^* [\text{mm}]$$

SA = wipers (details > page 9)

K = technopolymer wipers

B = brush wipers

F = felt rings (on request)

$$T_{\max} = \text{max. standard backlash [mm]}$$

3) = only on request

* position not defined

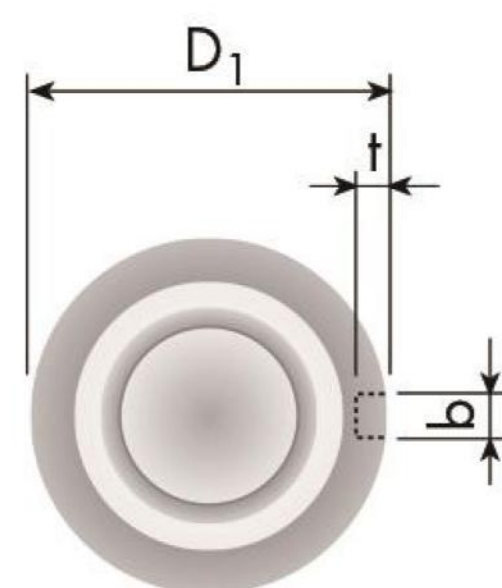
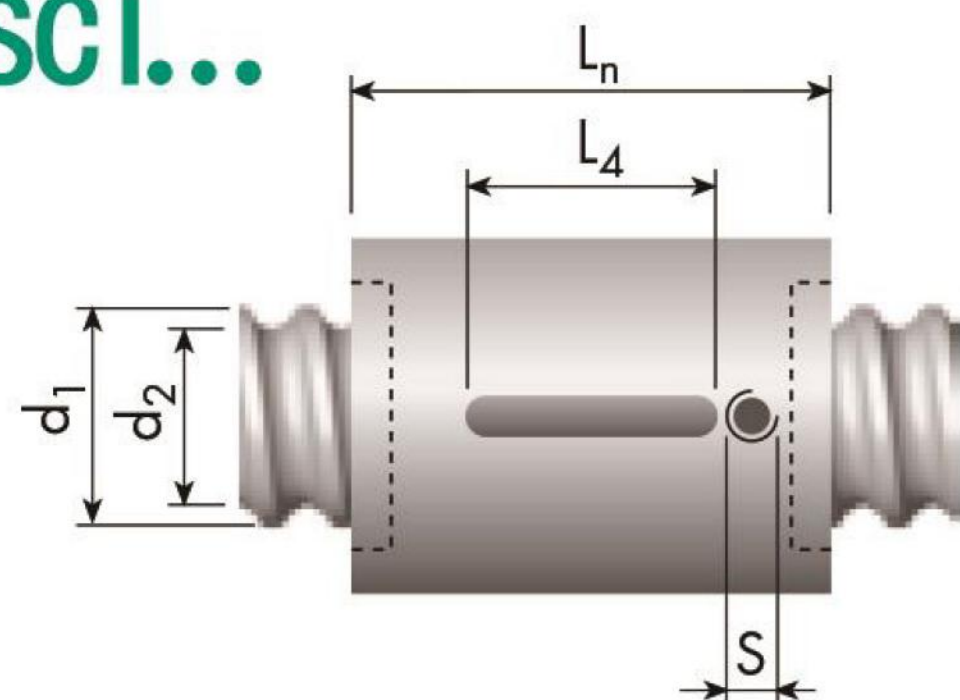
Special designs available on request

 When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!

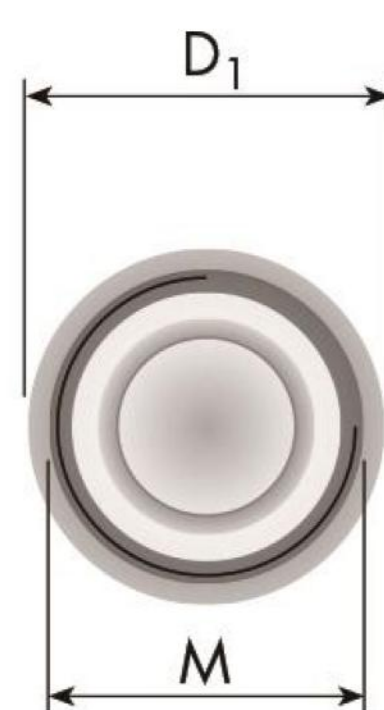
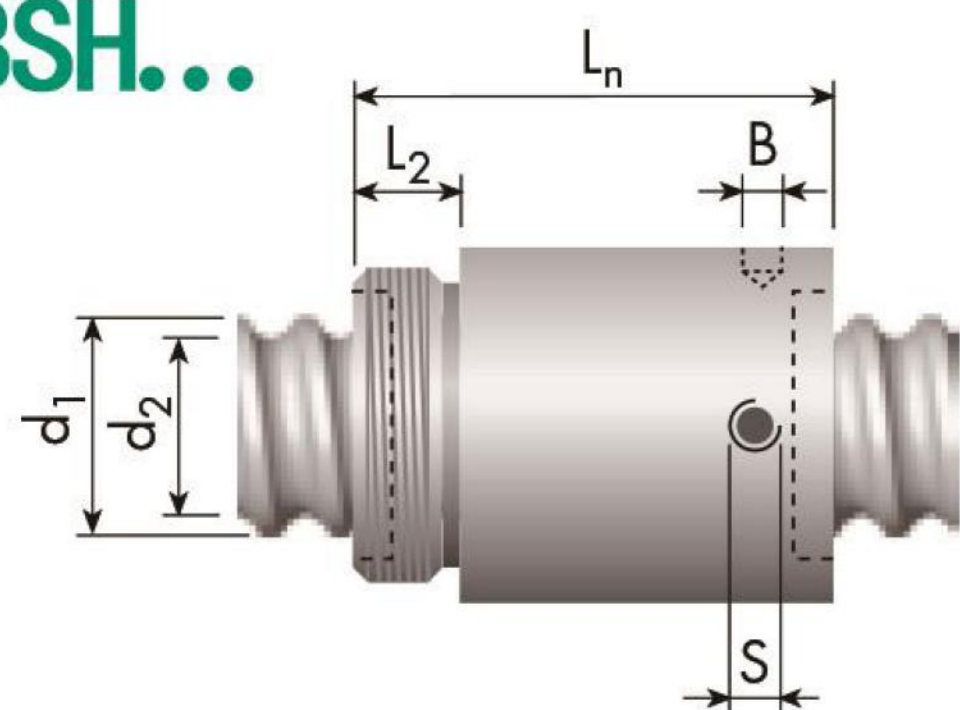
Calculation > page 12

Ø14

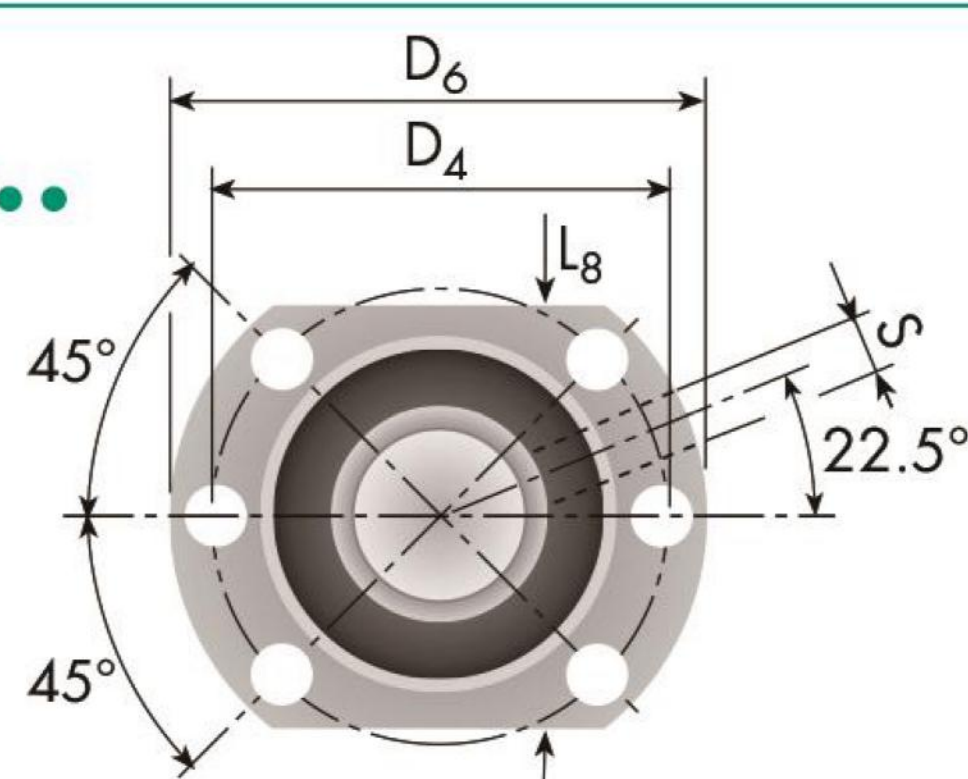
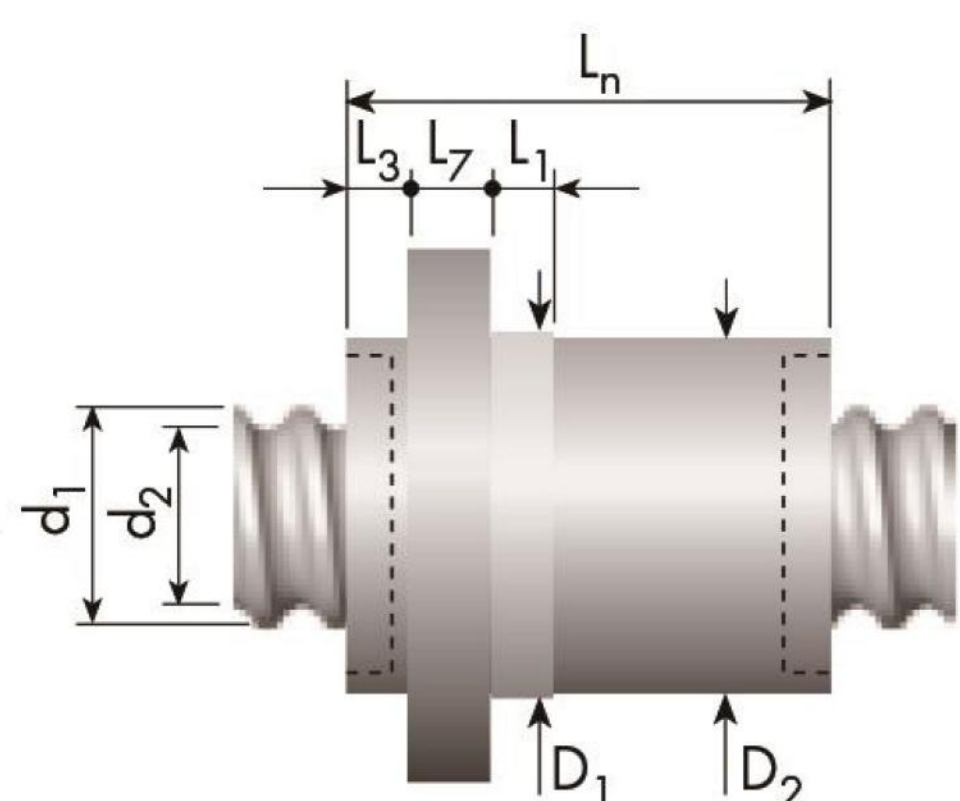
SCI...



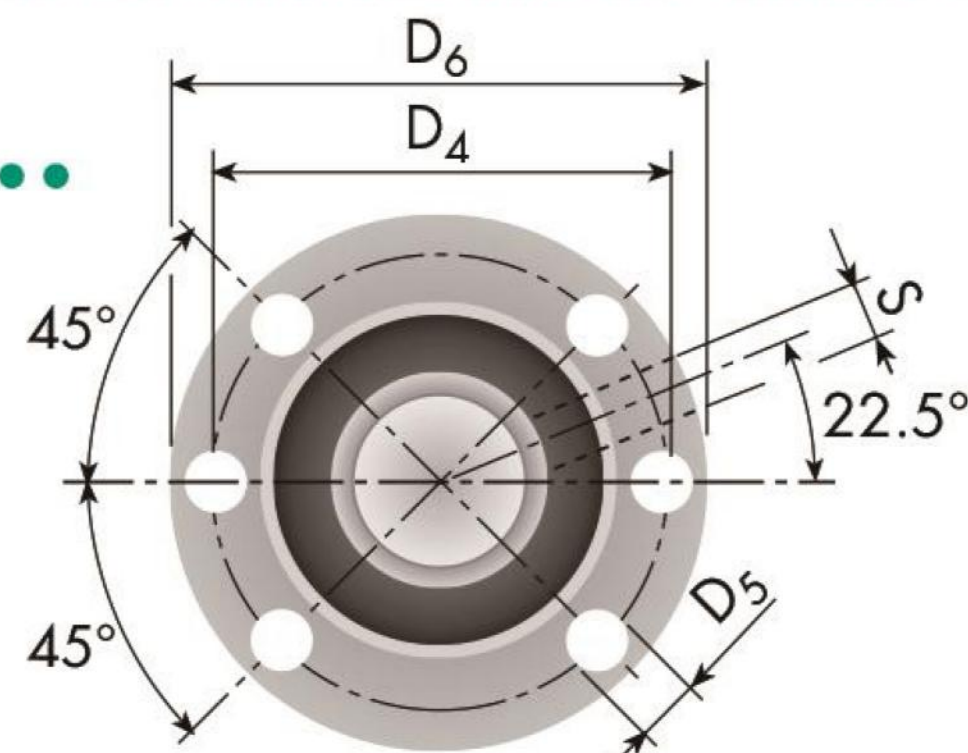
BSH...



FK...

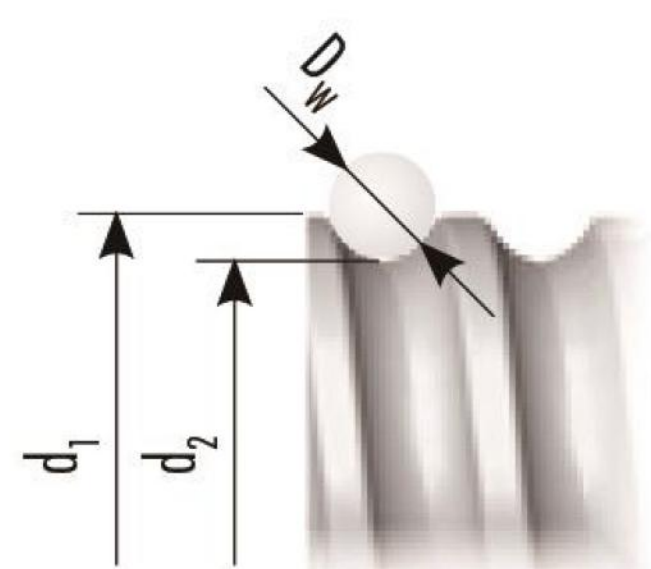


FA...



d_0 = nominal screw diameter [mm]
 d_1 = outer screw diameter [mm]
 d_2 = core diameter [mm]
 p = pitch [mm]

[illegible]

[illegible]

SA = wipers (details > page 9)

K = technopolymer wipers

B = brush wipers

F = felt rings (on request)

3) = only on request

Special designs available on request

 When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!

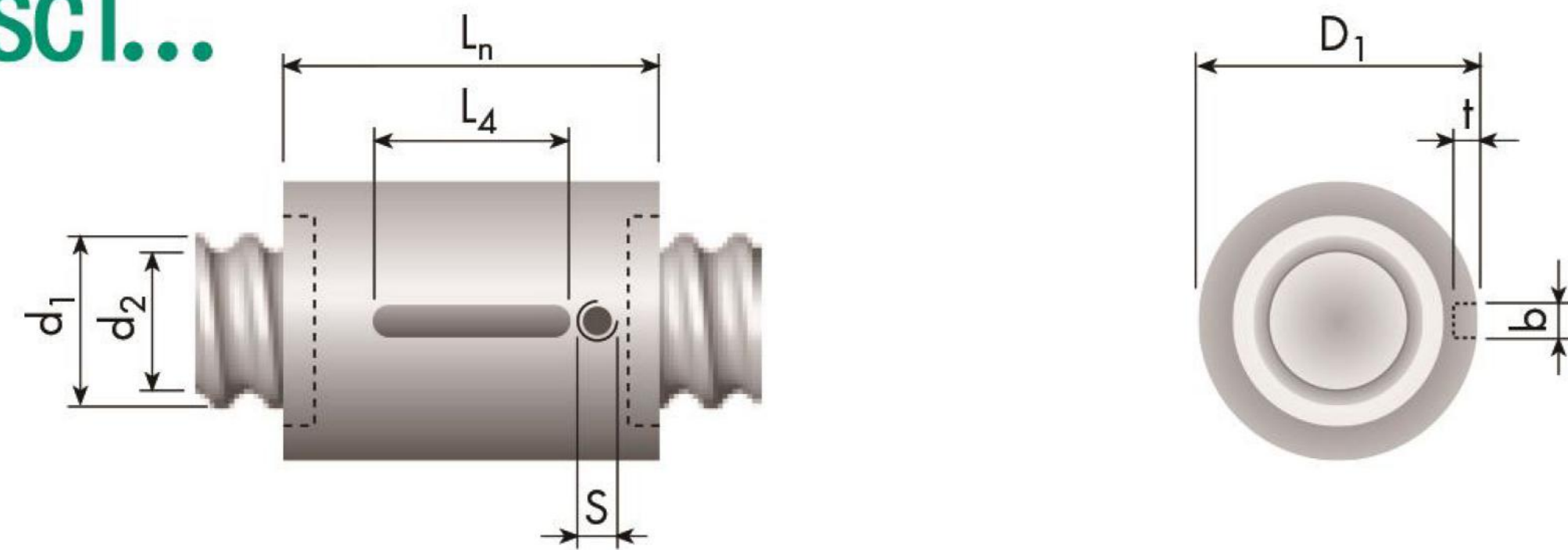
Calculation > page 12

Carry ballscrews

Ø15/16

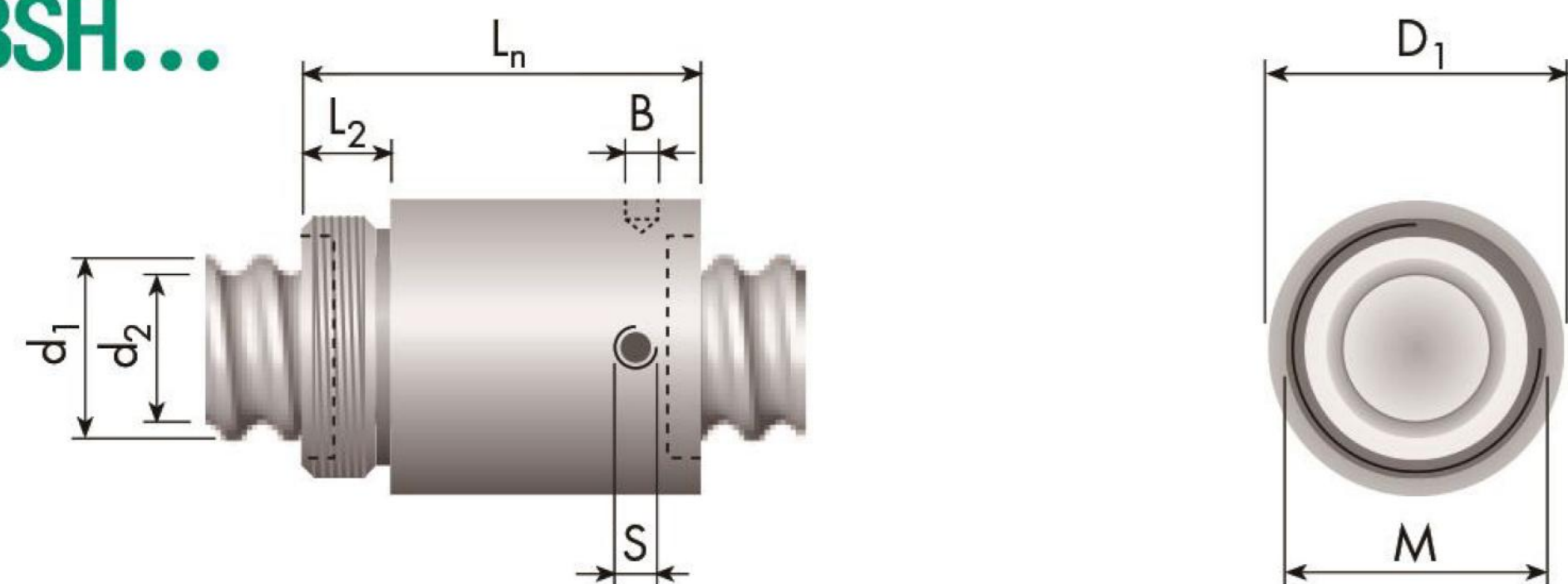
Cylindrical nut

SCI...



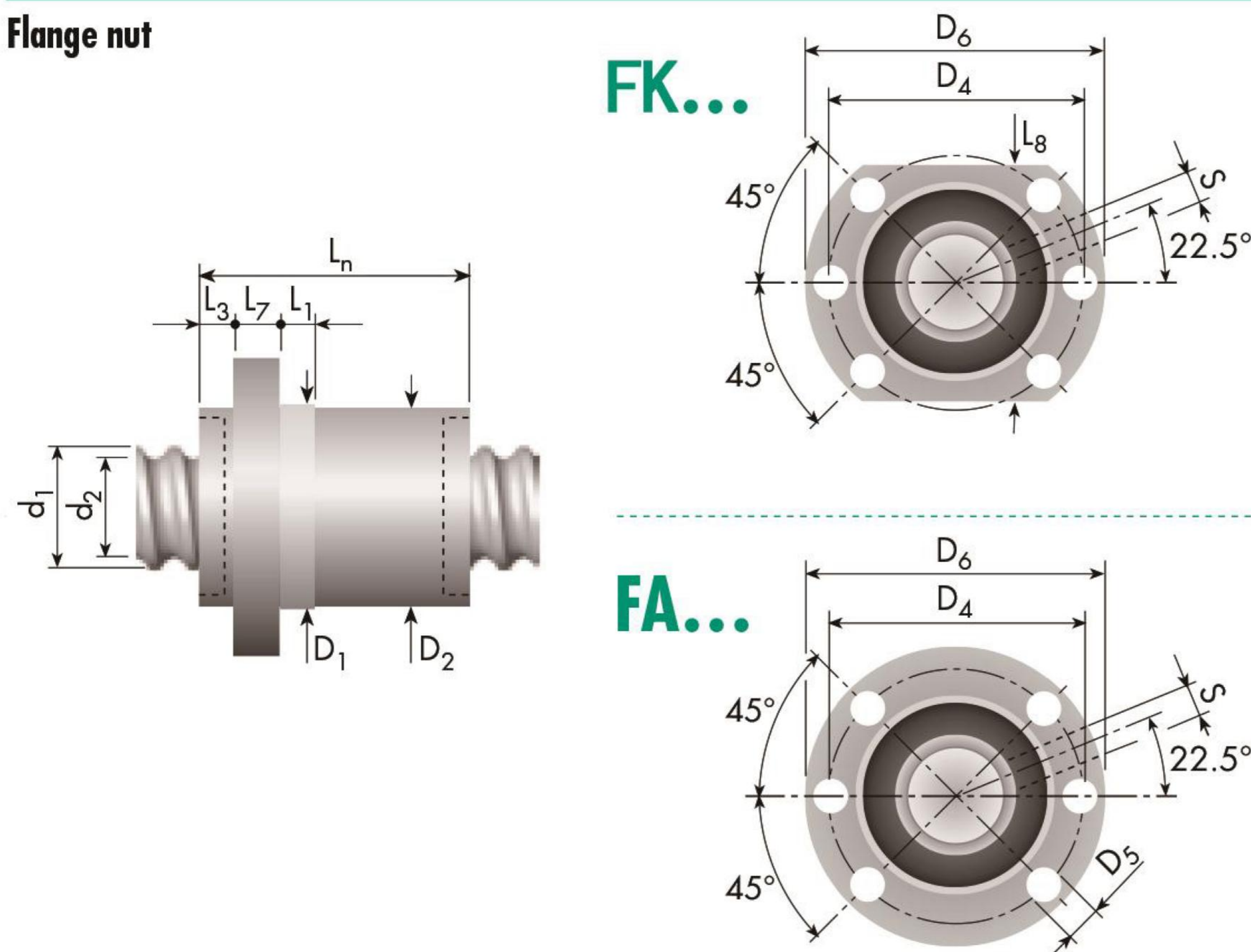
Nut with mounting thread

BSH...

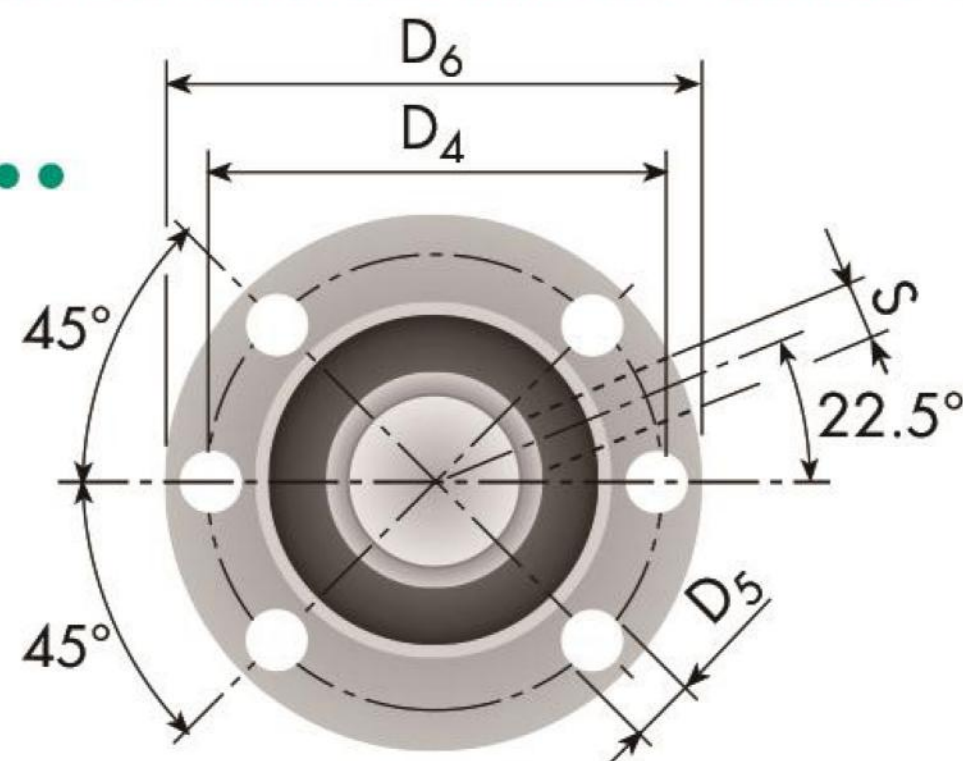


Flange nut

FK...



FA...



Ball return systems



Legend

- d_0 = nominal screw diameter [mm]
- d_1 = outer screw diameter [mm]
- d_2 = core diameter [mm]
- p = pitch [mm]

Nominal size $d_0 \times p$ [mm]	Ball return Type	Relative cost	Right-/left-hand thread	Dimensions [mm]			
				Screw d_1	d_2	Nut D_1	D_2
16×5	...I	€€€	RH / LH	15.7	13.0	30 _{g6}	—
16×10	...R	€€€	RH / —	15.7	13.0	32 _{g6}	—
16×10	...R	€€€	RH / —	15.7	13.0	32 _{g6}	—
16×10	...E	€€€	RH / —	16.0	13.4	28 _{g6}	—
16×16	...E	€€€	RH / —	15.5	13.2	28 _{g6}	—
16×50	...E	€€€	RH / —	16.0	13.2	28 _{g6}	—
15×20	...F	€	RH / —	14.9	12.0	36 _{0/-0.1}	—
16×2	...I	€€	— / LH	16.0	14.5	25 _{0/-0.1}	—
16×2	...R	€€	RH / —	16.0	14.5	30 _{0/-0.1}	—
16×2	...R	€€	RH / —	16.0	14.5	30 _{0/-0.1}	—
16×5	...I	€€	RH / —	15.7	13.0	30.2 _{0/-0.1}	—
16×5	...I	€€	RH / LH ³⁾	15.7	13.0	30.2 _{0/-0.1}	—
16×5	...R	€€	RH / LH	15.7	13.0	32 _{0/-0.1}	—
16×5	...R	€€	RH / LH	15.7	13.0	32 _{0/-0.1}	—
16×10	...R	€€	RH / —	15.7	13.0	32 _{0/-0.1}	—
16×10	...R	€€	RH / —	15.7	13.0	32 _{0/-0.1}	—
16×10	...R	€€	RH / —	15.7	13.0	32 _{0/-0.1}	—
16×10	...R	€€	RH / —	15.7	13.0	32 _{0/-0.1}	—
16×16	...R	€€	RH / —	15.9	13.2	32 _{0/-0.1}	—
16×16	...F	€	RH / —	15.5	13.2	36 _{0/-0.1}	—
16×2	...R	€€€	RH / —	16.0	14.5	30 _{g6}	29.5
16×2	...R	€€€	RH / —	16.0	14.5	30 _{g6}	29.5
16×5	...I	€€€	RH / LH	15.7	13.0	28 _{g6}	27.8
16×10	...R	€€€	RH / —	15.7	13.0	32 _{g6}	31.5
16×10	...E	€€	RH / —	16.0	13.4	28 _{g6}	27.8
16×16	...E	€€	RH / —	15.5	13.2	28 _{g6}	27.8
16×50	...E	€€	RH / —	16.0	13.2	28 _{g6}	27.8
15×20	...F	€€	RH / —	14.9	12.0	32 _{-0.01/-0.07}	31.5
16×16	...F	€€	RH / —	15.5	13.2	32 _{-0.01/-0.07}	31.5

Order system - Carry ballscrews

KGT 16x5 FG RH 1 S 350 G7 A E M

Example for complete Carry ballscrew

Type of thread drive

KGT = Carry ballscrew

Nominal size ($d_o \times p$) [mm]

Nut type:

▪ Shape

ZY = cylindrical nut type SCI...

FG = nut with mounting thread type BSH...

FB = flange nut type FK...

FA = flange nut type FA...

MS = special design according to drawing

for nut only

Right-hand / left-hand thread

RH = right-hand thread (standard)

LH = left-hand thread (availability see dimensional charts)

for nut only

Number of ball circulations (i)

1 = 1 ball circulation

2 = 2 ball circulations

3 = 3 ball circulations

4 = 4 ball circulations

for nut only

Wipers (SA)

S = with wipers (technopolymer or brush)

N = without wipers

for nut only

Ballscrew overall length [mm]

for screw only

Lead accuracy (class)

G9 = ≤ 0.1 mm/300 mm (standard)

G7 = ≤ 0.052 mm/300 mm (on request)

G5 = ≤ 0.023 mm/300 mm (on request)

G3 = ≤ 0.008 mm/300 mm (on request)

for screw only

Backlash (T_{max})

A = standard backlash (see dimensional charts)

R = reduced backlash upon specification

for screw only

Screw end machining

O = no end machining (cut by grinding, hardened ends)

E = end machining according to drawing

for screw only

Assembly

G = screw and nut separate

M = screw and nut assembled according to drawing/specified orientation

Example for screw only

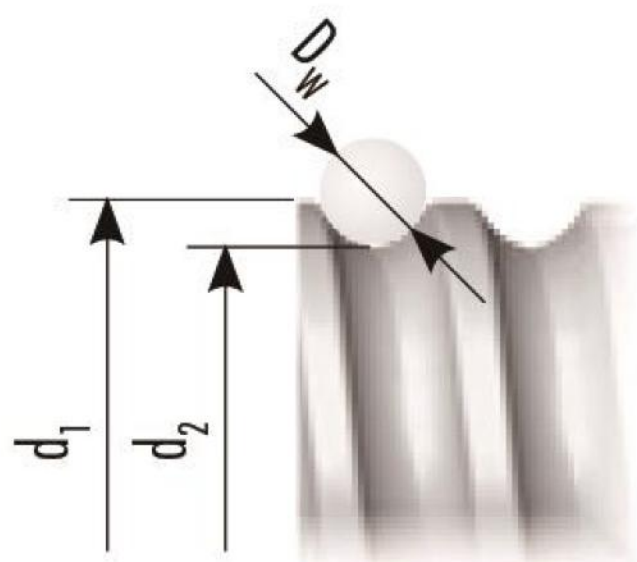
KGT 16x5 RH 350 G7 O G

Example for nut only

KGT 16x5 FGR RH 1 S A G

Carry ballscrews 04/5/6

																			Load rates [N]		Nominal size d ₀ × p [mm]
D ₄ TK	D ₅ H13	D ₆ h13	M	L _n	L ₁	L ₂	L ₃	L ₄	L ₇	L ₈ h13	i	D _w	B +0.5/0	b P9	t	S	SA	T _{max}	C _{dyn}	C _{stat}	
—	—	—	—	10	—	—	—	—	—	—	3 × 1	0.80	—	ø2 +0.1/0	1.0	—	—	0.03	430	580	4 × 1
—	—	—	—	14	—	—	—	8	—	—	3 × 1	0.80	—	2	1.0	—	—	0.03	500	800	5 × 2
—	—	—	—	14	—	—	—	8	—	—	3 × 1	0.80	—	2	1.2	—	—	0.03	600	1 000	6 × 1
—	—	—	M8 × 0.75	18	—	6	—	—	—	—	3 × 1	0.80	2.5	—	—	—	—	0.03	500	800	5 × 2
—	—	—	M8 × 0.75	19	—	6	—	—	—	—	2 × 1	0.80	2.5	—	—	—	—	0.03	340	490	5 × 3
—	—	—	M8 × 0.75	23	—	6	—	—	—	—	3 × 1	0.80	2.5	—	—	—	—	0.03	480	770	5 × 3
—	—	—	M12 × 1	22	—	8	—	—	—	—	1 × 3.5	1.59	2.5	—	—	—	—	0.06	1 700	2 300	6 × 2
—	—	—	M16 × 1	19	—	8	—	—	—	—	1 × 3.7	1.59	2.5	—	—	ø 2	K	0.05	1 900	2 800	6 × 2
—	—	—	M16 × 1	19	—	8	—	—	—	—	2 × 1.6	1.50	2.5	—	—	ø 2	K	0.05	1 700	2 600	6 × 6
12	2.7	17	—	14	2	—	—	—	3	11	3 × 1	0.80	—	—	—	—	—	0.03	430	580	4 × 1
18	3.4	24	—	18	4	—	—	—	4	16	3 × 1	0.80	—	—	—	ø 2	K	0.03	600	1 000	6 × 1
26	3.4	34	—	19	4	—	4	—	4	—	1 × 3.7	1.59	—	—	—	ø 2	K	0.05	1 900	2 800	6 × 2
26	3.4	34	—	19	4	—	4	—	4	—	2 × 1.6	1.50	—	—	—	ø 2	K	0.05	1 700	2 600	6 × 6



i = number of ball circulations [—]
D_w = ball diameter [mm]
B = pin wrench hole* [mm]
S = lubrication hole* [mm]
SA = wipers (details > page 9)
K = technopolymer wipers
B = brush wipers
F = felt rings (on request)

T_{max} = max. standard backlash [mm]
3) = only on request
* position not defined
Special designs available on request



When selecting a ballscrew, always observe the maximum rotational speed dependent on the system-specific rotational speed characteristics!
Calculation > page 12



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