## Speedy high-helix leadscrews (SGS)







# Design features

Eichenberger high-helix leadscrews are called Speedy for good reason: never before have such high moving speeds been obtained at such low rotational speeds. The Eichenberger Speedy has made this possible by using a helix pitch unheard of before.

High-helix leadscrews are made of corrosion-protected steel and are formed by the cold-rolling process. They are coupled with high wear-resistant technopolymer flange nuts in non-preloaded or preloaded designs.

For higher loads or special applications, alternative technopolymer materials or bronze may be used to make the nuts.

### Materials

- standard: corrosion-protected steel • 1.4021 (X20Cr13) • on request: other materials such as
- · corrosion and acid resistant steel 1.4404 (X2CrNiMo17-12-2) aluminium
- on request:
- · coating to reduce sliding friction

- non-preloaded:
   POM-C black
- bronze 2.1052 (CuSn12)
- preloaded:
- preloaded:
   axial-preloaded (if  $p_0 < d_0$ ): POM-C black
   torsion-preloaded (if  $p_0 \ge d_0$ ): EX100 white
- bronze on request
   on request: other materials such as
   iglidur® J \*
- \* iglidur" is a registered trademark of igus" GmbH

## Speedy high-helix leadscrews – design features

### Nut types (shapes)

For all Speedy high-helix leadscrews one standard flange nut design has been defined (flange nut type A following DIN 69051), which is deliverable in the following types:



Flange nut, non-preloaded

- Type SFM: POM-C black
   Type SBM: bronze



Flange nut axial-preloaded

- (if p<sub>0</sub> < d<sub>0</sub>)
   Type SFV: POM-C black
- nut body made of bronze



Flange nut torsion-preloaded

- (if  $p_0 \ge d_0$ )
   Type SFT: EX100 white
- · nut body made of bronze

- POM-C / EX100 -40 to +60 °C • iglidur® J -50 to +90 °C
- -40 to +200 °C bronze

### Lead accuracy

- standard:
- G9  $\triangleq$   $\leq\!0.1$  mm/300 mm (in accordance with DIN 69051)
- on request:
- other lead accuracies

### Efficiency

The efficiency  $\eta$  depends on the helix angle and reaches values from  ${\sim}0.5$  to 0.75





## Production / Handling / Lubrication

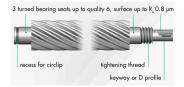
### Production lengths

In general, Eichenberger screws are produced as bars with a length of 3 m. Depending on the diameter and the material availability, lengths up to 6 m are also possible on request.

Any kind of end machining

By default leadscrews are cut to the desired length without special machining.

Upon request, a so-called standard screw end journal with three turned bearing seats is available. Dimensions are as per customer specifications. Note also the links to the CAD data at www.gewinde.ch



Our speciality is any application-specific end machining: Tell us your requirements, and we'll provide YOUR tailor-made screw!

In each instance, a detailed drawing would be necessary.

Speedy, Easy and Rondo leadscrews are precision parts and must be protected from shock, dirt or moisture when transported or stored. Please do not unpack until ready for use

Please check for cleanness when mounting a leadscrew. Dirt or foreign matter on the thread may cause increased wear and premature failure.

Please consult lubrication recommendation before mounting or operating leadscrews.

### Radial loads and torque

Radial loads or torque brought to bear upon the nut result in overload of individual contact surfaces, thus seriously affecting the service life of the leadscrew assembly. Therefore it is important to properly mount the screw and to comply with all relevant form and positional tolerances.

### Lubrication

⚠ In some cases, a single lubrication with grease or oil is sufficient. However, any lubrication cycle depends on the

commended all-purpose lubricant:

Klüber Microlube GBU Y 131

- ... possible on request:
- possible on request.
   generally to reduce sliding friction
   if lubrication is not possible (e.g. in the food industry)
- > also see Materials, page 40

### **Application examples** for Eichenberger leadscrews

Eichenberger Speedy, Easy and Rondo leadscrews are suitable for numerous applications: On the one hand, for shorter lifts, they are a great substitute for belt drive systems because of their lower engineering effort. On the other hand, they are also an excellent substitute for hydraulic and pneumatic lift cylinders because they can be freely accelerated and positioned, and work independently of secondary energy sources. Thanks to high efficiency and excellent value for money, they are an ideal alternative to trapezoidal screws or ballscrews in particular areas of use.

Typical areas of application:

- Drives for doors, gates and windows
- Air-conditioning technology (valve/slide drives) Construction industry (e.g. automatic shading systems)
- Handling systems
- Graphics equipment and devices
- Medical technology
- Textile machines
- Food and packaging industry
   Electric cylinders (actuators)
- Electronics industry







## **Design fundamentals**

The following are the relevant calculations which underlie screw design and safe operation of a Speedy, Easy or Rondo leadscrew.

Calculations at dynamic load:

Critical rotational speed n

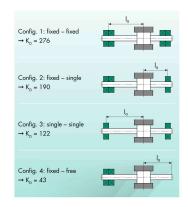
Permissible rotational speeds must differ substantially from the screw's own frequency.

$$n_{per} = K_{_D} \cdot 10^6 \cdot \frac{d_{_2}}{|_{_{_0}}^2} \cdot S_{_n} \text{ [min}^{\cdot 1}]$$

$$\begin{split} &\mathbf{n}_{\mathrm{per}} = \text{ permissible rotational speed [min^{-1}]} \\ &\mathbf{K}_{\mathrm{b}} = \text{ characteristic constant [--]} \\ &\text{as a function of bearing configuration > see aside} \end{split}$$

d<sub>2</sub> = core screw diameter [mm] I<sub>a</sub> = bearing distances [mm] > see aside

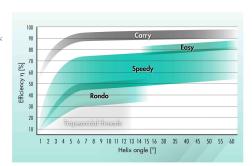
(always include maximum allowable  $I_a$  in calculation!)  $S_n = \text{safety factor } [-], \text{ usually } S_n = 0.5...0.8$ 



Efficiency  $\eta_{_{p}}$  (practical) The efficiency  $\eta$  depends on the helix angle and reaches the following values:

■ **Speedy** ~0.5...0.75

• Easy > 0.8 • Rondo ~ 0.3 ... 0.5



### Driving torque M depends upon the type of power transmission

Case 1: torque → linear movement

$$M_{o} = \frac{F_{o} \cdot p}{2000 \cdot \pi \cdot \eta} [Nm]$$

Case 2: axial force → torque

$$M_{_{0}} = \frac{F_{_{0}} \cdot p \cdot \eta'}{2000 \cdot \pi} \ [Nm]$$

M<sub>a</sub> = input torque [Nm], case 1

M<sub>0</sub> = output torque [Nm], case 2
F<sub>0</sub> = axial force [N]
p = pitch [mm]
η = efficiency [%]

η' = corrected efficiency [%]

Input performance P

$$P = \frac{M_o \cdot n}{9550} \text{ [kW]}$$

P = input performance [kW]

n = rotational speed [min-1]

A safety margin of 20% is recommended when selecting drives.

## **Basic calculations**

Maximum authorized load depending on speed

$$\mathbf{F}_{\text{per.}} = \mathbf{C}_0 \cdot \mathbf{f}_{\text{L}} [\mathbf{N}]$$

 $C_0$  = static load rate [N]  $f_L$  = load factor [-] for POM-C nuts

Circumferential speed v <sub>c</sub> [m/min]	Load factor f <sub>L</sub> [-]
5	0.95
10	0.75
20	0.45
30	0.37
40	0.12
50	0.08

### Example

• Parameters: Speedy 10/50 with non-preloaded POM-C nut,  $d_0$  = 10 mm, p = 50 mm and  $C_0$  = 1250 N; required moving speed  $v_s = 200$  mm/sec.

• We need to find: F\_\_\_

Therefore we calculate n [min-1],

$$n = \frac{v_s \, [mm/sec.] \cdot 60}{p \, [mm]} = \frac{200 \cdot 60}{50} = 240 \, min^{-1}$$

the circumferential speed  ${\rm v}_{_{\rm C}}\,[{\rm m/min}]$ 

$$v_{c} = \frac{d_{0} [mm] \cdot \pi \cdot n [min^{1}]}{1000} = \frac{10 \cdot \pi \cdot 240}{1000} = 7.53 \text{ m/min}$$

and find the load factor f<sub>i</sub> in above table:

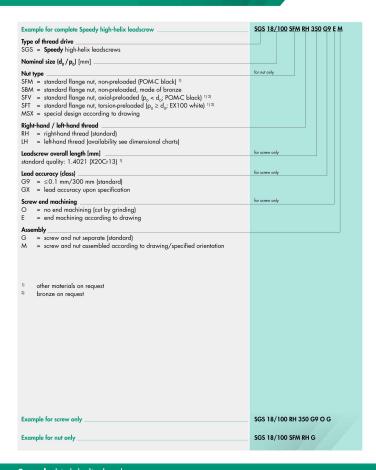
 $f_L \text{ at } v_C \text{ of } 7.53 \text{ m/min} = 0.85 [-]$ 

It follows:

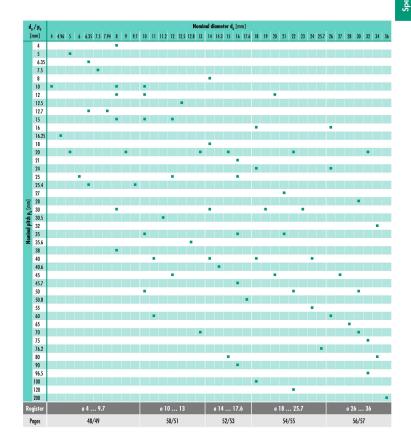
 $F_{per.} = C_{stat} \cdot f_i = 1250 \cdot 0.85 = 1062.5 \text{ N}$ 

So the maximum load for a Speedy 10/50 at  $v_{\rm S}$  = 200 mm/sec.  $(\rightarrow n = 240 \text{ min}^{-1}) \text{ is } 1060 \text{ N}.$ 

## Order system - Speedy high-helix leadscrews



### Dimension map - Speedy standard range

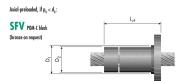


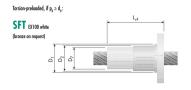




SFM POM-C black SBM bronze







Nominal size	Right-hand/	Dimens Screw	ions [mn	n]		Nut											Load rates for POM-C/EX100	Nominal size	
d <sub>o</sub> / p <sub>o</sub> [mm] (in)	thread	d,	d,	p	g		D <sub>2</sub> ±0.05	D, m	D <sub>s</sub>	D,	D,	L	L	L	L,	L,	C,[N]	d <sub>o</sub> / p <sub>o</sub> [mn	1] (in)
4/10	RH/—	4.0	3.0	10	8	12	11.5	18	3.2	28		20	15	_	3	4	150	4/10	
4.96 / 16.25	RH/—	5.0	4.0	16.25	13	12	11.5	18	3.2	28	_	20	15	_	3	4	220	4.96 / 16.25	
5/5	RH/—	5.4	3.6	5	4	21	20.5	29	4.2	38	18.5	25	18	38	3	5	300	5/5	
5/20	RH/LH	6.0	5.0	20	16	21	20.5	29	4.2	38	18.5	25	18	38	3	5	300	5 / 20	
6/25	RH/—	7.4	6.3	25	20	21	20.5	29	4.2	38	18.5	25	18	38	3	5	400	6/25	
6.35 / 6.35 (%"/%")	RH/—	6.4	4.4	6.35	4	21	20.5	29	4.2	38	18.5	25	18	38	3	5	850	6.35 / 6.35	(¼~/¼~)
6.35 / 12.7 (¼~/½~)	RH/—	6.3	4.6	12.70	6	21	20.5	29	4.2	38	18.5	25	18	38	3	5	800	6.35 / 12.7	(¼~/½~)
6.35 / 25.4 (¼"/1")	RH/—	6.35	4.2	25.40	8	21	20.5	29	4.2	38	18.5	25	18	38	3	5	800	6.35 / 25.4	(%"/1")
6.35 / 25.4 (¼"/1")	RH/—	6.1	4.4	25.40	10	21	20.5	29	4.2	38	18.5	25	18	38	3	5	700	6.35 / 25.4	(%"/1")
7.5 / 7.5	RH/—	7.7	5.9	7.5	6	21	20.5	29	4.2	38	18.5	25	18	38	3	5	450	7.5 / 7.5	
7.94 / 12.7 (% ~ / ½~)	RH/—	7.9	5.8	12.70	6	21	20.5	29	4.2	38	18.5	25	18	38	3	5	1100	7.94 / 12.7	(%e~/½~)
8/4	RH/—	7.9	5.5	4	2	24	23.5	32	4.2	42	-	25	18	38	3	5	950	8/4	
8/10	RH/LH	8.2	5.5	10	4	24	23.5	32	4.2	42	21.5	25	18	38	3	5	800	8/10	
8/12	RH/—	8.0	5.9	12	5	24	23.5	32	4.2	42	21.5	25	18	38	3	5	800	8/12	
8/15	RH/—	8.0	5.9	15	6	24	23.5	32	4.2	42	21.5	25	18	38	3	5	850	8/15	
8/30	RH/LH	8.6	7.5	30	24	21	20.5	29	4.2	38	18.5	25	18	38	3	5	500	8/30	
8/38	RH/—	8.0	5.7	38	8	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 000	8/38	
9 / 20	RH/—	8.9	5.8	20	5	24	23.5	32	4.2	42	21.5	25	18	38	3	5	850	9 / 20	
9.7 / 25.4 (%"/1")	RH/LH	9.7	6.4	25.40	5	24	23.5	32	4.2	42	21.5	25	-	38	3	5	1 200	9.7 / 25.4	(%"/1")













 $\begin{array}{lll} \mathbf{d}_{0} & = & \text{Nominal screw diameter [mm]} \\ \mathbf{d}_{1} & = & \text{outer screw diameter [mm]} \\ \mathbf{d}_{2} & = & \text{core diameter [mm]} \end{array}$ 



 $\begin{array}{lll} \rho_0 & = & \text{nominal pitch [mm]} \\ p & = & \text{effective pitch [mm]} \\ g & = & \text{number of threads [+-]} \end{array}$ 

 $\begin{array}{ll} L_{if} &= \mbox{ length of nut body, non-spellooded, POM-C (type SFM)} \\ L_{ig} &= \mbox{ length of nut body, non-spellooded, bronze (type SBM)} \\ L_{ic} &= \mbox{ length of nut body, prelooded, POM-C/EX100 (types SFV and SFT)} \end{array}$ 

$$\begin{split} &\zeta_{\rm ser}=\ {\rm startic \ kod \ utter \ for \ non-preboted \ end \ preboxed \ nuts \ mode \ of \ POM-C/EX100\ (N);} \\ & \ {\rm for \ higher \ load \ utter} \rightarrow \ {\rm borzen \ nuts} \rightarrow \ {\rm C}_{\rm nuts \ nut} = 1.3 \times \ {\rm C}_{\rm nut \ nut} {\rm curr} \\ & \ {\rm ^{3}} \ = \ {\rm only \ on \ request} \end{split}$$

**Speedy** high-helix leadscrews

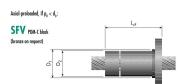
> CAD data > www.gewinde.ch

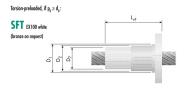




SFM POM-C black SBM bronze







Nominal size	Right-hand/	Dimens	ions [mn	]													Load rates	Nominal size	
	left-hand	Screw				Nut											for POM-C/EX100		
<b>d</b> <sub>o</sub> / <b>p</b> <sub>o</sub> [mm] (in)	thread	d,	d <sub>2</sub>	P	g	<b>D</b> <sub>1</sub> hs	<b>D</b> <sub>2</sub> ±0.05	D <sub>4</sub> TX	D <sub>s</sub>	D <sub>6</sub>	D,	L	L	L <sub>vf</sub>	L,	L,	C <sub>stet</sub> [N]	d <sub>o</sub> / p <sub>o</sub> [mm]	] (in)
10/10	RH/—	10.0	8.2	10	8	24	23.5	32	4.2	42	21.5	25	18	38	3	5	600	10/10	
10/12	RH/LH	10.0	7.1	12	4	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 200	10/12	
10/15	RH/—	10.0	7.4	15	5	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 200	10/15	
10/35	RH/LH	10.1	8.9	35	28	24	23.5	32	4.2	42	21.5	25	18	38	3	5	600	10/35	
10 / 50	RH/LH	10.0	7.4	50	10	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1 250	10 / 50	
11 / 40	RH/—	11.5	10.2	40	32	24	23.5	32	4.2	42	21.5	25	18	38	3	5	700	11/40	
11/60	RH/—	11.7	9.1	60	12	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1 500	11/60	
11.2 / 30.5 (1/16"/11%4")	RH/—	11.2	8.0	30.48	6	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 400	11.2 / 30.5	(1/15"/111/64")
12/15	RH/LH	12.2	9.2	15	5	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 400	12/15	
12/25	RH/LH	11.9	8.0	25	5	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 500	12 / 25	
12 / 45	RH/LH	12.8	11.4	45	36	24	23.5	32	4.2	42	21.5	25	18	38	3	5	800	12/45	
12.5 / 12.5 31	RH/—	12.3	10.4	12.5	10	24	23.5	32	4.2	42	21.5	25	18	38	3	5	750	12.5 / 12.5 3	
12.8 / 35.6 (½~/1%~)	RH/—	12.8	9.6	35.56	7	24	23.5	32	4.2	42	21.5	25	18	38	3	5	1 600	12.8 / 35.6	(½~/1%~)
13 / 20	RH/—	13.3	8.8	20	4	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1 300	13/20	
13 / 70	RH/LH	13.5	10.9	70	14	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1750	13/70	
																		> CAD data >	www.gewinde













 $\begin{array}{lll} \mathbf{d}_{0} & = & \text{Nominal screw diameter [mm]} \\ \mathbf{d}_{1} & = & \text{outer screw diameter [mm]} \\ \mathbf{d}_{2} & = & \text{core diameter [mm]} \end{array}$ 



 $\begin{array}{lll} \rho_0 & = & \text{nominal pitch [mm]} \\ p & = & \text{effective pitch [mm]} \\ g & = & \text{number of threads [+-]} \end{array}$ 

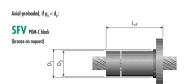
 $\begin{array}{ll} L_{if} &= \mbox{ length of nut body, non-spellooded, POM-C (type SFM)} \\ L_{ig} &= \mbox{ length of nut body, non-spellooded, bronze (type SBM)} \\ L_{ic} &= \mbox{ length of nut body, prelooded, POM-C/EX100 (types SFV and SFT)} \end{array}$ 

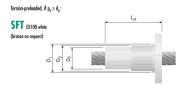
 $C_{\rm int} = {\rm static lood rates for non-probloded and proboded rats mode of POM-C/EXTOD (BI);} \\ for higher lood rates <math>\rightarrow {\rm brozen \ ntS} \rightarrow {\rm C}_{\rm order, correct} \\ = {\rm ody \ or request} \\ > {\rm problem \ or request} \\ > {\rm Special \ designs \ covilable \ on request} \\ > {\rm correct} \\ > {\rm corre$ 



SFM POM-C black SBM bronze







Nominal size	Right-hand/		ions [mn	ıl		Non										П	Load rates for POM-C/EX100	Nominal size
d <sub>o</sub> / p <sub>o</sub> [mm] (in)	left-hand thread	Screw d <sub>1</sub>	d,	P	g	Nut D, hs	D <sub>2</sub> ±0.05	D <sub>4</sub> TX	D <sub>s</sub>	D,	D,	L,	L <sub>a</sub>	L	L,	L,	tor POM-C/EX100 C <sub>stet</sub> [N]	d <sub>o</sub> / p <sub>o</sub> [mm] (in)
14/8	RH/—	14.0	9.8	8	2	26	25.5	36	5.1	46	-,	42	30	58	3	7	900	14/8
14/18	RH/LH	14.3	11.4	18	6	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1600	14/18
14/30	RH / LH	13.9	10.1	30	6	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1750	14/30
14/40	RH/—	14.0	10.9	40	5	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1800	14/40
4.3 / 40.6 (%ε / 1%)	RH/LH	14.4	11.2	40.64	8	26	25.5	36	5.1	46	23.5	42	30	58	3	7	1800	14.3 / 40.6 (%)
1107 1010 (1117 1117)	MIT / EII	11.1	11.2	10.01		10	15.5	00	3.,		10.5	""	- 50	50	_	, i	1000	11107 1010 (7107
15/20	RH/LH	15.2	12.5	20	8	30	29.5	39	5.1	49	27	42	30	58	3	7	1 600	15/20
15/80	RH/LH	15.2	12.6	80	16	30	29.5	39	5.1	49	27	42	30	58	3	7	2 000	15/80
.,																		
16/21	RH/LH	16.5	13.6	21	7	30	29.5	39	5.1	49	27	42	30	58	3	7	1 800	16/21
16/25	RH/—	16.0	11.5	25	5	30	29.5	39	5.1	49	27	42	30	58	3	7	1 550	16/25
16/35	RH/—	15.9	12.1	35	7	30	29.5	39	5.1	49	27	42	30	58	3	7	2000	16/35
16 / 45.7 11 (%"/1%")	RH/—	16.0	12.8	45.72	9	30	29.5	39	5.1	49	27	42	30	58	3	7	2 000	16 / 45.7 3 (%"/
16/90	RH/LH	17.0	14.3	90	18	30	29.5	39	5.1	49	27	42	30	58	3	7	2250	16/90
7.6 / 50.8 (% 2")	RH/—	17.6	14.4	50.80	10	30	29.5	39	5.1	49	27	42	30	58	3	7	2 200	17.6 / 50.8 (7/10)











 $\begin{array}{lll} \mathbf{d}_{0} & = & \text{Nominal screw diameter [mm]} \\ \mathbf{d}_{1} & = & \text{outer screw diameter [mm]} \\ \mathbf{d}_{2} & = & \text{core diameter [mm]} \end{array}$ 



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 $\begin{array}{ll} L_{if} &= \mbox{ length of nut body, non-spellooded, POM-C (type SFM)} \\ L_{ig} &= \mbox{ length of nut body, non-spellooded, bronze (type SBM)} \\ L_{ic} &= \mbox{ length of nut body, prelooded, POM-C/EX100 (types SFV and SFT)} \end{array}$ 

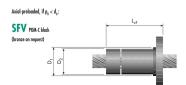
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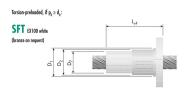




SFM POM-C black SBM bronze







Nominal size	Right-hand/	Dimen	sions (mn	1]													Load rates	Nominal size
	left-hand	Screw				Nut											for POM-C/EX100	
<b>d</b> <sub>o</sub> / <b>p</b> <sub>o</sub> [mm] (in)	thread	d,	d,	P	g	<b>D</b> <sub>1</sub> hs	D <sub>2</sub> ±0.05	D <sub>4</sub> TX	D <sub>s</sub>	D <sub>6</sub>	D,	L	L	L <sub>vf</sub>	L,	L,	C <sub>ster</sub> [N]	<b>d</b> <sub>o</sub> / <b>p</b> <sub>o</sub> [mm] (in)
18/16	RH/—	18.0	14.3	16	4	30	29.5	39	5.1	49	-	42	30	58	3	7	1 100	18/16
18 / 24	RH/LH	18.7	15.7	24	8	30	29.5	39	5.1	49	27	42	30	58	3	7	2 000	18 / 24
18/40	RH/LH	17.9	14.1	40	8	30	29.5	39	5.1	49	27	42	30	58	3	7	2250	18/40
18/100	RH/LH	18.8	16.2	100	20	30	29.5	39	5.1	49	27	42	30	58	3	7	2 500	18/100
19/30	RH/—	18.8	14.2	30	6	30	29.5	39	5.1	49	27	42	30	58	3	7	1 800	19/30
20/12	RH/—	20.0	15.8	12	3	36	35.5	47	6.2	59	-	46	32	64	5	8	1 200	20/12
20 / 45	RH/—	20.0	16.1	45	9	36	35.5	47	6.2	59	33	46	32	64	5	8	2 500	20 / 45
21 / 27	RH/—	20.8	17.9	27	9	36	35.5	47	6.2	59	33	46	32	64	5	8	2 200	21 / 27
21 / 35 3)	RH/—	21.5	17.0	35	7	36	35.5	47	6.2	59	33	46	32	64	5	8	2 050	21 / 35 3)
22 / 20	RH/—	22.0	18.3	20	5	36	35.5	47	6.2	59	-	46	32	64	5	8	1 400	22 / 20
22 / 50	RH/—	22.0	18.1	50	10	36	35.5	47	6.2	59	33	46	32	64	5	8	2750	22 / 50
22 / 120	RH/—	22.5	19.8	120	24	36	35.5	47	6.2	59	33	46	32	64	5	8	3 000	22 / 120
23/30	RH/LH	23.0	20.0	30	10	36	35.5	47	6.2	59	33	46	32	64	5	8	2 400	23 / 30
24 / 40 11	RH / —	24.3	19.8	40	8	36	35.5	47	6.2	59	33	46	32	64	5	8	2300	24 / 40 11
24 / 55	RH/—	24.0	20.1	55	11	36	35.5	47	6.2	59	33	46	32	64	5	8	3 000	24 / 55
25.7 / 76.2 (1"/3")	RH/LH	25.7	24.0	76.20	15	42	41.5	53	6.2	64	39	50	35	71	5	8	2800	25.7 / 76.2 (1"/3")













 $\begin{array}{lll} \mathbf{d}_{0} & = & \text{Nominal screw diameter [mm]} \\ \mathbf{d}_{1} & = & \text{outer screw diameter [mm]} \\ \mathbf{d}_{2} & = & \text{core diameter [mm]} \end{array}$ 



 $\begin{array}{lll} \rho_0 & = & \text{nominal pitch [mm]} \\ p & = & \text{effective pitch [mm]} \\ g & = & \text{number of threads [+-]} \end{array}$ 

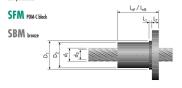
 $\begin{array}{ll} L_{if} &= \mbox{ length of nut body, non-spellooded, POM-C (type SFM)} \\ L_{ig} &= \mbox{ length of nut body, non-spellooded, bronze (type SBM)} \\ L_{ic} &= \mbox{ length of nut body, prelooded, POM-C/EX100 (types SFV and SFT)} \end{array}$ 

C<sub>min</sub> = static lood rates for non-proboded and probaded nuts made of POM-C/EXT00 [NI]; for higher lood rates — bronze nuts — C<sub>minion</sub> = 1.3 × C<sub>minion</sub>/cursu = 0 only on request

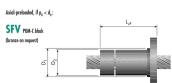
Special designs excitable on request

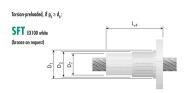












Nominal size	Right-hand/ left-hand	Dimens Screw	ions (mn	d .		Nut											Load rates for POM-C/EX100	Nominal size
d <sub>o</sub> / p <sub>o</sub> [mm] (in)	thread	d <sub>i</sub>	d,	l p l	g	D, 18	D <sub>2</sub> ±0.05	<b>D</b> <sub>4</sub> 1x	D <sub>s</sub>	D,	D,	L	L.	L	L,	L,	C <sub>ite</sub> [N]	d <sub>o</sub> / p <sub>o</sub> [mm] (in)
26 / 16 31	RH/—	26.0	21.8	16	4	42	41.5	53	6.2	64		50	35	71	5	8	1 400	26 / 16 3)
26 / 24	RH/—	26.0	22.3	24	6	42	41.5	53	6.2	64	_	50	35	71	5	8	2000	26 / 24
26 / 60	RH/—	26.0	22.2	60	12	42	41.5	53	6.2	64	39	50	35	71	5	8	3 250	26/60
27 / 45 31	RH/—	27.0	22.5	45	9	42	41.5	53	6.2	64	39	50	35	71	5	8	2 550	27 / 45 3)
28 / 65 11	RH/—	28.0	24.2	65	13	42	41.5	53	6.2	64	39	50	35	71	5	8	3 500	28 / 65 31
30 / 28	RH/—	30.0	26.5	28	7	42	41.5	53	6.2	64	-	50	35	71	5	8	2 000	30 / 28
30 / 50	RH/—	29.8	25.3	50	10	42	41.5	53	6.2	64	39	50	35	71	5	8	2800	30 / 50
30 / 70	RH/—	30.0	26.2	70	14	42	41.5	53	6.2	64	39	50	35	71	5	8	3750	30/70
32 / 20 11	RH/—	32.0	27.8	20	5	50	49.5	65	9.0	80	-	70	50	-	10	12	2 000	32 / 20 3)
32 / 75 3)	RH/—	32.0	28.2	75	15	50	49.5	65	9.0	80	-	70	50	-	10	12	4 000	32 / 75 31
32 / 96.5 (1½"/3¾")	RH/LH	32.2	29.0	96.52	19	50	49.5	65	9.0	80	-	70	50	-	10	12	4600	32 / 96.5 (1¼"/3¾")
34 / 32 31	RH/—	34.0	30.5	32	8	50	49.5	65	9.0	80	_	70	50	_	10	12	2 300	34 / 32 3)
34 / 80	RH/—	34.0	30.2	80	16	50	49.5	65	9.0	80	-	70	50	-	10	12	4 250	34/80
36 / 200	RH/—	36.0	33.4	200	40	50	49.5	65	9.0	80	-	70	50	_	10	12	4500	36 / 200













 $\begin{array}{lll} \mathbf{d}_{0} & = & \text{Nominal screw diameter [mm]} \\ \mathbf{d}_{1} & = & \text{outer screw diameter [mm]} \\ \mathbf{d}_{2} & = & \text{core diameter [mm]} \end{array}$ 





 $\begin{array}{lll} \rho_0 & = & \text{nominal pitch [mm]} \\ p & = & \text{effective pitch [mm]} \\ g & = & \text{number of threads [+-]} \end{array}$ 

 $\begin{array}{ll} L_{if} &= \mbox{ length of nut body, non-spellooded, POM-C (type SFM)} \\ L_{ig} &= \mbox{ length of nut body, non-spellooded, bronze (type SBM)} \\ L_{ic} &= \mbox{ length of nut body, prelooded, POM-C/EX100 (types SFV and SFT)} \end{array}$ 

 $C_{\rm int} = {\rm static lood rates for non-probabled and probabled nots made of POM-C/EX100 [N];} \\ for higher hood rates <math>\rightarrow {\rm boxten \ nots} \rightarrow C_{\rm non-loos} = 1.3 \times C_{\rm normal, (1010)} \\ = {\rm ody \ on request} \\ \\ Special designs evoluble on request} \\$