

## 丝杆驱动 Lead Screw Drivers



## 产品特性 Product features

- 丝杆传动组件是将旋转运动转换成直线运动的机器元件。CSB-LMS®丝杆传动组件采用CSB-EPB®材料制成的自润滑的塑料螺母，因此无需外部润滑就可实现长期运转。
- 高效耐用快速螺纹
- 标准梯形自锁螺纹
- 免维护，干运行
- 耐腐蚀、耐脏污、低噪音
- Screw drives are machine elements that convert rotary motion into linear motion. CSB-LMS® screw drives are always based on CSB-EPB® self-lubricating plastic nuts, thus enabling long-lasting operation without external lubrication.
- Efficient and durable CSB-LMS® high helix threads
- Self-locking trapezoidal standard threads
- Maintenance-free, dry operation
- Corrosion resistant, Resistant to dirt and Low-noise

## 丝杆与螺母设计 Lead screws and nuts design

CSB-LMS® 标准梯形丝杆是根据 DIN 103 标准制造，高螺旋线丝杆采用了特殊螺纹角度设计在低转速下可获得高移动速度。CSB-LMS® 丝杆由不锈钢制成，并通过冷轧工艺形成。它们配有高耐磨材料CSB-EPB13螺母设计。对于较高的负载或特殊应用，CSB-EPB5A可用于螺母。

CSB-LMS® lead screw drives are manufactured in accordance with DIN 103. CSB-LMS® high-helix lead screws have high moving speeds been obtained at low rotational speeds. CSB-LMS® high-helix lead screws has made this possible by using a high-helix pitch. CSB-LMS® lead screws are made of stainless steel and are formed by the cold-rolling process. They are coupled with high wear-resistant material CSB-EPB13 nuts designs. For higher loads or special applications, CSB-EPB5A may be used for the nuts.

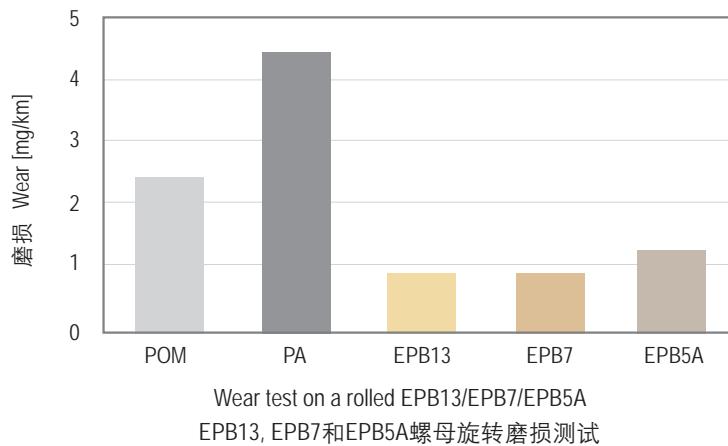
丝杆材料Screw material: 不锈钢Stainless steel

螺母材料Nut material: CSB-EPB13

CSB-EPB5A

CSB-EPB7

材料 Material	耐温 Temperature
CSB-EPB13	-50/+90 °C
CSB-EPB5A	-100/+250 °C
CSB-EPB7	-40/+90 °C



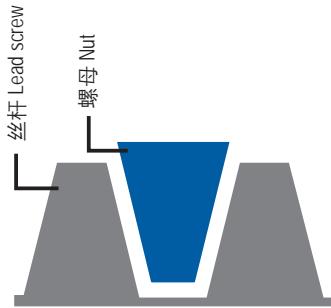
请注意：除了在达到最大额定载荷时会发生变化外，在运行中的热膨胀也会引起变化。我们建议通过具体实验来测试丝杆螺母在低温或高温应用中的可行性。

Please note that the temperature also has an effect on the clearance of the nut, as well as the maximum load capacity. When the application is exposed to particularly low or high temperatures, we recommend testing the suitability of the lead screw nuts in this specific case by a practical test.

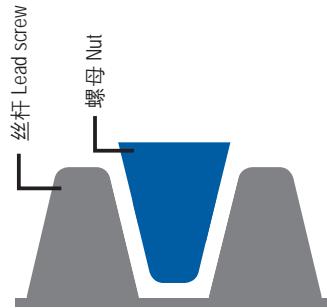
## 高效螺纹设计 Higher efficiency thread design

CSB-LMS® 高螺旋线丝杆和螺母采用了较平坦的螺纹角度，驱动力有效地转换为平移运动，与标准梯形螺纹角度相比具有较低的功率损耗。由于圆齿几何形状，在无润滑运动过程中噪音和振动均减轻。

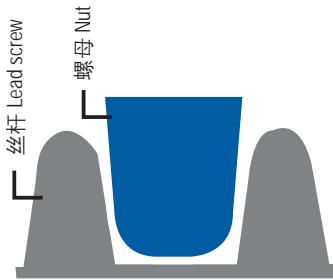
Due to a flatter thread angle in CSB-LMS® high-helix lead screws and nuts, the drive force is efficiently converted into a translational motion. Compared with standard trapezoidal thread angle, this means a lower power loss. Due to the radius tooth design, The thread moving without lubrication, low noise and vibration dampening.



标准梯形齿形  
Standard trapezoidal tooth



TLS特殊圆角齿形  
TLS special tooth with rounded corners



HLS高螺旋线圆齿  
TLS high-helix and rounded tooth

## 多种螺母结构设计 Multiple structure nuts design



## 径向载荷和扭矩 Radial loads and torque

在螺母上承受的径向载荷或扭矩导致单个接触表面过载，从而严重影响导螺杆组件的使用寿命。因此，正确安装螺丝并符合所有相关形式和位置公差是很重要的。

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 lead screw assembly. Therefore it is important to properly mount the screw and to comply with all relevant form and positional tolerances.

## 所需驱动扭矩 Required drive torque

丝杆螺母所需的驱动扭矩取决于轴向载荷，丝杆螺距，丝杆螺纹表面与螺母之间的摩擦系数。在高速时，必须考虑加速扭矩，这可能导致安装精度引起的扭矩增加。污垢，灰尘和表面不良可导致驱动扭矩增加的导螺杆可以增加驱动扭矩。然而，润滑可以暂时减少所需的驱动力。

The required drive torque of the threaded nut is obtained from the axial load, the lead screw pitch, the coefficient of surface friction of lead screw unit and the lead screw bearing. At high speeds, the acceleration torque must be taken into account, which may cause increased start torque depending on the installation. Dirt, dust and the condition of the lead screw can increase the drive torque. However, lubrication can temporarily reduce the required drive forces.

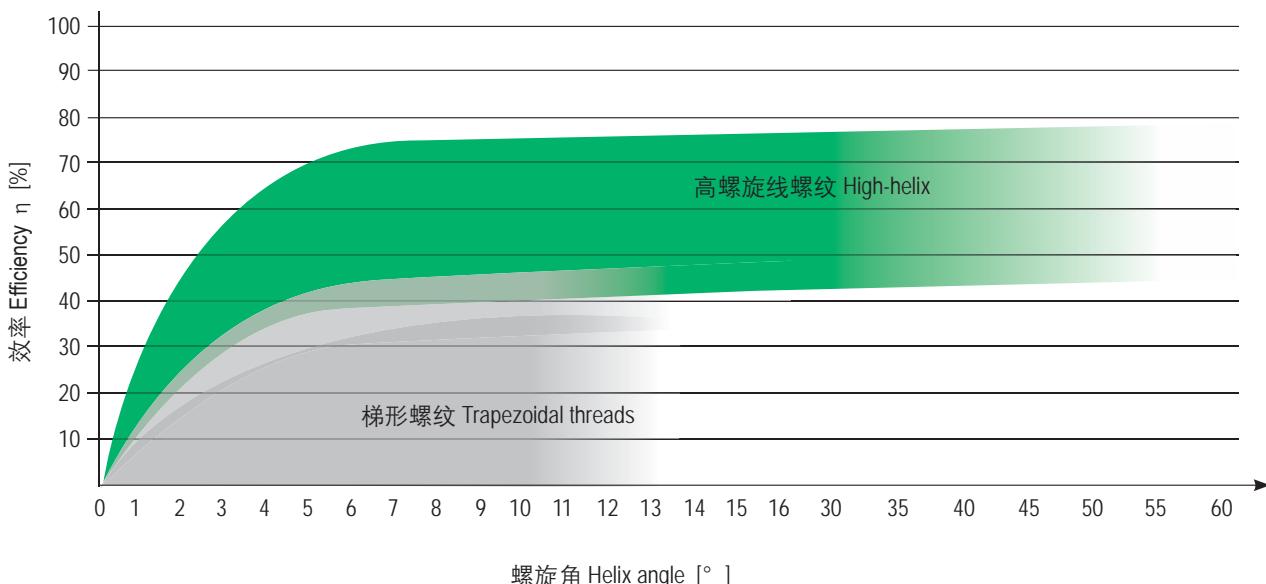
## 效率 Levels of efficiency

效率是输出功率与输入功率的比值。CSB-LMS® 导向螺母具有低摩擦系数，因此有很高的效率。

在干运行条件下，单头梯形导向螺母效率在 20% 到 48% 之间。快速螺纹的导向螺母效率在 50% 到 80% 之间。虽然 CSB-LMS® 导向螺母是专为完全干运行开发的，但添加润滑油能增加效率。

Efficiency is the ratio between the output and input power rating. CSB-LMS® lead screw nuts are characterised by low friction values, resulting in high efficiencies.

Single start trapezoidal lead screw nuts achieve efficiencies between 20 and 48% under dry running conditions. High helix lead screw nuts achieve efficiencies between 50 and 80% under dry running conditions. Even though CSB-LMS® lead screw nuts were developed for completely dry running conditions, lubrication can help to additionally increase efficiency.



以下是高螺旋线丝杆设计和安全操作的相关计算。

The following are the relevant calculations which underlie high-helix screw design and safe operation.

## 许可转速计算 Critical rotational speed $n_{per}$

允许的转速与丝杆本身效率有很大关系。

Permissible rotational speeds depends on the frequency of the screw.

$$n_{per} = K_D \cdot 10^6 \cdot \frac{d_2}{l_a^2} \cdot S_n [\text{min}^{-1}]$$

$n_{per}$  = 许可旋转速度  
permissible rotational speed [ $\text{min}^{-1}$ ]

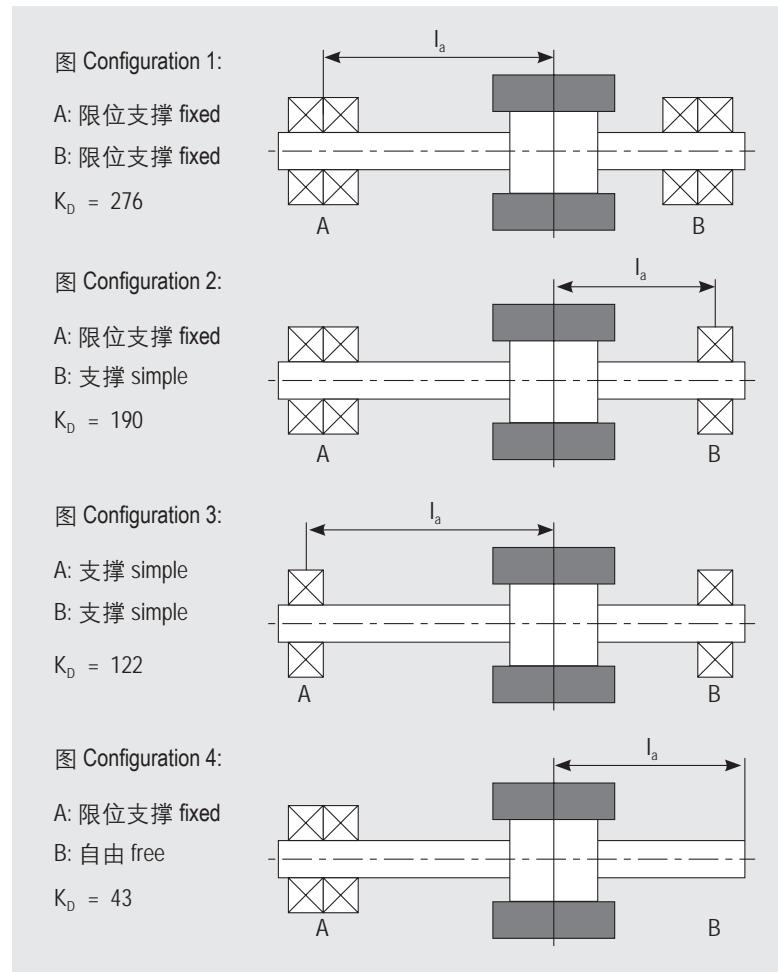
$K_D$  = 轴承的特征参数  
characteristic constant as a function of bearing configuration

$d_2$  = 底径 core diameter [mm]

$l_a$  = 轴承间距 bearing distances [mm]

计算中包含最大许可的  $l_a$   
(always include maximum allowable  $l_a$  in calculation)

$S_n$  = 安全系数 safety factor  
一般 usually  $S_n = 0.5 \dots 0.8 [-]$



## 最大许可载荷与速度关系 Maximum authorized load depending on speed

$$F_{per} = C_o \cdot f_L \quad [\text{N}]$$

$C_o$  = 静载荷 static load rate [N]

$f_L$  = 载荷因数 load factor [-] for EPB13 螺母 nuts

转速 circumferential speed $V_c$ [m/min]	载荷因子 load factor $f_L$ [-]
5	0.95
10	0.75
20	0.45
30	0.37
40	0.12
50	0.08

## 丝杆驱动 Lead Screw Drivers

### 驱动力矩 Driving torque M

依赖于动力传输系统类型 Depends upon the type of power transmission

例 Case 1 : 扭矩 torque → 直线运动 linear movement

$$M_a = \frac{F_a \cdot P}{2000 \cdot \pi \cdot \eta} \quad [\text{Nm}]$$

$M_a$  = 输入扭矩 input torque [Nm]

$\eta$  = 效率 efficiency [%]

例 Case 2 : 轴向力 axial force → 扭矩 torque

$$M_a = \frac{F_a \cdot P \cdot \eta'}{2000 \cdot \pi} \quad [\text{Nm}]$$

$F_a$  = 轴向力 axial force [N]

$P$  = 螺距 pitch [mm]

$M_a$  = 输出扭矩 output torque [Nm]

$\eta'$  = 纠正效率 corrected efficiency [%]

### 输入功率 Input performance P

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

$P$  = 输入功率 input performance [kW]

$n$  = 旋转速度 rotational speed [ $\text{min}^{-1}$ ]

选择驱动时推荐保留20%安全余量 A safety margin of 20% is recommended when selecting drives.

### 潮湿环境 Wet environments

CSB-EPB13材料制成的梯形螺母非常适合潮湿的环境应用。这些材料的特性之一就是吸水率低。

Trapezoidal lead screw nuts from CSB-EPB13 must be used for applications in humid environments, especially for wet applications. These material are characterised by very low moisture absorption.

### 脏污 Dirt

通过用免维护的CSB-EPB®材料来制造导向螺母，CSB-LMS®丝杠驱动就能实现完全干运行。

通过避免使用润滑油，可显著减少软质颗粒如灰尘和纤维的附着。相比传统的需要润滑的材料，免润滑的导向螺母显著提高了在脏污环境中的使用寿命。但是，在污染很严重并且有硬质颗粒如金属碎片或花岗岩粉尘的环境中，导向螺母需要使用防护罩。

Dirt with the use of the maintenance-free CSB-EPB® materials for lead screw nut production, CSB-LMS® lead screw drives feature completely dry-running operation. Due to the deliberate avoidance of lubricants, the adhesion of soft particles such as dust and fibres is reduced. When compared to conventional, lubricated materials, it is common to see significant improvements in the service life in contaminated environments. However, in environments with significant contamination and hard particles, such as metal chips or granite dust, the lead screw should be covered.

### 噪音 Noise

滑动丝杠驱动经常会伴随有噪音，特别是长丝杆和长行程会导致运动系统的自激振动。CSB-LMS®导向螺母由经过摩擦优化的CSB-EPB®材料制成，具有良好的滑动特性，导向螺母比传统塑料或金属材料如青铜或黄铜噪音更低。

Noise can generally occur with the use of lead screw drives. In particular, long lead screws and long travel distances can cause self-induced vibrations in the systems. Due to their good sliding characteristics, lead screw nuts from the tribologically optimised CSB-EPB® materials tend to develop less noise than conventional plastics or metallic materials, such as bronze or brass.

### 法兰型导向螺母 Lead screw nuts with flange

装配法兰型导向螺母的最大拧紧力矩为 2.5Nm。我们建议通过第三方介质（如放脱落螺丝胶）来固定安装螺钉。更高拧紧力矩时应使用防松垫圈。

The maximum tightening torque for the assembly of flanged lead screw nuts is 2.5 Nm. We recommend that assembly screws are secured with a semi permanent thread locking glue. Metallic ferrules should be used for even higher tightening torques.



### 圆柱型导向螺母 Cylindrical lead screw nuts

圆柱型导向螺母的外径面设计有螺纹。我们建议通过第三方介质（如放脱落螺丝胶）来固定安装。

The outer diameter of cylindrical lead screw nuts is designed for screw connection. We recommend that assembly screws are secured with a semi permanent thread locking glue.



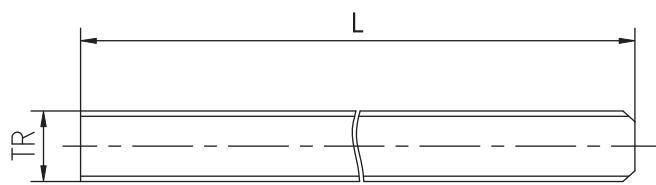
## 梯形螺纹丝杆 Lead screws with trapezoidal thread



### 产品特性 Product features

- 左旋和右旋螺纹可选
- 可选材料: C45钢和不锈钢
- 可以根据客户图纸加工
- Thread: right- or left-hand
- Available materials: C45 steel /304 stainless steel
- Length and machining according to customer drawing

### 标准规格 Standard specifications



产品编码 Part No.:

TLS-**8** × **1.5**R-N**1**-E**S**-0**000**

长度 Length  
不锈钢 Stainless steel  
螺纹数 Thread numble  
R-右旋 Right L-左旋 Left  
螺纹 Thread

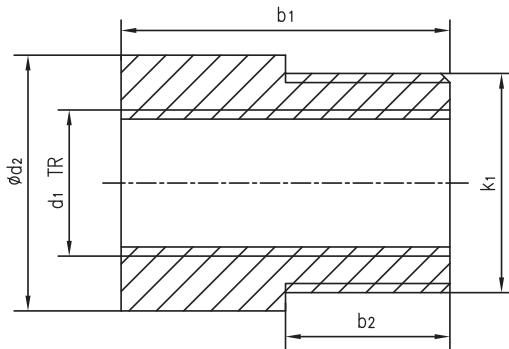
产品编码 Part No.	直径 Outer diameter [mm]	齿根直径 Core diameter [mm]	导程 Lead S[mm]	螺距 Pitch P[mm]	螺纹角 Pitch angle $\alpha$ [°]	头数 Numble of threads N [pcs]	重量 Weight [kg/m]
TLS-8 × 1.5R-N1-ES-0000	8	6.2	1.5	1.5	3.42	1	0.40
TLS-10 × 2R-N1-ES-0000	10	7.5	2	2	3.64	1	0.62
TLS-10 × 3R-N1-ES-0000	10	6.5	3	3	5.45	1	0.89
TLS-10 × 4R-N2-ES-0000	10	7.5	4	2	7.26	2	0.62
TLS-12 × 3R-N1-ES-0000	12	8.5	3	3	4.55	1	0.89
TLS-12 × 6R-N2-ES-0000	12	8.5	6	3	9.04	2	0.89
TLS-14 × 3R-N1-ES-0000	14	10.5	3	3	3.9	1	1.22
TLS-14 × 4R-N1-ES-0000	14	9.5	4	4	5.2	1	1.22
TLS-16 × 2R-N1-ES-0000	16	12.8	2	2	2.28	1	1.59
TLS-16 × 4R-N1-ES-0000	16	11.5	4	4	4.55	1	1.59
TLS-16 × 8R-N2-ES-0000	16	11.5	8	4	9.04	2	1.59
TLS-18 × 4R-N1-ES-0000	18	13.5	4	4	4.05	1	2.01
TLS-18 × 8R-N2-ES-0000	18	13.5	8	4	8.05	2	2.01
TLS-20 × 4R-N1-ES-0000	20	15.5	4	4	3.64	1	2.48
TLS-24 × 5R-N1-ES-0000	24	18.5	5	5	3.79	1	3.57
TLS-26 × 5R-N1-ES-0000	26	20.5	5	5	3.5	1	4.19
TLS-28 × 5R-N1-ES-0000	28	22.5	5	5	3.25	1	4.86
TLS-30 × 6R-N1-ES-0000	30	23	6	6	3.64	1	5.58



### 产品特性 Product features

- 自润滑、低磨损
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNR-1812TR8 × 1.5R-N1

螺纹数 Thread numble  
R-右旋 Right L-左旋 Left  
内螺纹 Inner Thread  $d_1 \times s$   
长度 Length  
外径 Outer diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]	$k_1 \times p$ [mm]	$b_2$ [mm]
SNR-1812TR8 × 1.5R-N1	18	12	TR8 × 1.5	1	M16 × 1.5	6
SNR-2220TR10 × 2R-N1	22	20	TR10 × 2	1	M20 × 1.5	10
SNR-2220TR10 × 3R-N1	22	20	TR10 × 3	1	M20 × 1.5	10
SNR-2220TR10 × 4R-N2	22	20	TR10 × 4	2	M20 × 1.5	10
SNR-2624TR12 × 3R-N1	26	24	TR12 × 3	1	M24 × 2	12
SNR-2624TR12 × 6R-N2	26	24	TR12 × 6	2	M24 × 2	12
SNR-3028TR14 × 3R-N1	30	28	TR14 × 3	1	M27 × 2	14
SNR-3028TR14 × 4R-N1	30	28	TR14 × 4	1	M27 × 2	14
SNR-3632TR16 × 2R-N1	36	32	TR16 × 2	1	M33 × 2	16
SNR-3632TR16 × 4R-N1	36	32	TR16 × 4	1	M33 × 2	16
SNR-3632TR16 × 8R-N2	36	32	TR16 × 8	2	M33 × 2	16
SNR-4036TR18 × 4R-N1	40	36	TR18 × 4	1	M36 × 3	18
SNR-4036TR18 × 8R-N2	40	36	TR18 × 8	2	M36 × 3	18
SNR-4540TR20 × 4R-N1	45	40	TR20 × 4	1	M42 × 3	20
SNR-5048TR24 × 5R-N1	50	48	TR24 × 5	1	M48 × 3	24
SNR-5052TR26 × 5R-N1	50	52	TR26 × 5	1	M48 × 3	26
SNR-6056TR28 × 5R-N1	60	56	TR28 × 5	1	M56 × 4	28
SNR-6060TR30 × 6R-N1	60	60	TR30 × 6	1	M56 × 4	30

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency η	摩擦系数 Coefficient of friction μ	重量 Weight [g]
SNR-1812TR8 × 1.5R-N1	137	547	19-27	0.1-0.25	3.7
SNR-2220TR10 × 2R-N1	283	1131	20-39	0.1-0.25	9.0
SNR-2220TR10 × 3R-N1	267	1068	27-48	0.1-0.25	9.0
SNR-2220TR10 × 4R-N2	282	1127	33-55	0.1-0.25	9.0
SNR-2624TR12 × 3R-N1	396	1583	24-44	0.1-0.25	14.9
SNR-2624TR12 × 6R-N2	396	1583	37-60	0.1-0.25	14.9
SNR-3028TR14 × 3R-N1	550	2199	24-40	0.1-0.25	23.1
SNR-3028TR14 × 4R-N1	528	2111	26-47	0.1-0.25	23.1
SNR-3632TR16 × 2R-N1	754	3016	14-28	0.1-0.25	38.9
SNR-3632TR16 × 4R-N1	704	2815	24-44	0.1-0.25	38.9
SNR-3632TR16 × 8R-N2	704	2815	37-60	0.1-0.25	38.9
SNR-4036TR18 × 4R-N1	905	3619	22-41	0.1-0.25	53.8
SNR-4036TR18 × 8R-N2	905	3619	35-58	0.1-0.25	53.8
SNR-4540TR20 × 4R-N1	1131	4524	20-39	0.1-0.25	76.1
SNR-5048TR24 × 5R-N1	1621	6484	21-40	0.1-0.25	108.1
SNR-5052TR26 × 5R-N1	1920	7678	19-38	0.1-0.25	111.0
SNR-6056TR28 × 5R-N1	2243	8972	18-36	0.1-0.25	184.5
SNR-6060TR30 × 6R-N1	2545	10179	20-39	0.1-0.25	189.6

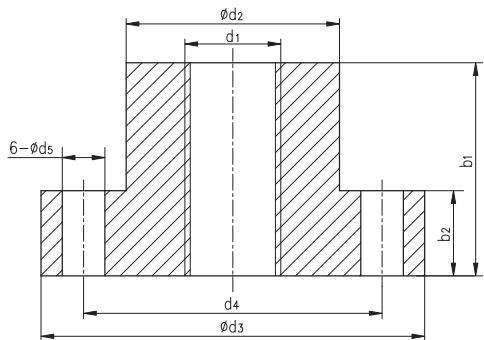
## 圆柱法兰螺母 Lead screw nuts, round flange



### 产品特性 Product features

- 自润滑、低磨损
- 螺丝固定，易安装
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- Easy installation with bolts
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNRF-2020TR8 × 1.5R-N1

螺纹数 Thread numble  
 R-右旋 Right L-左旋 Left  
 内螺纹 Inner thread d<sub>1</sub> × s  
 长度 Length  
 外径 Outer diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_3$ [mm]	$b_2$ [mm]	$d_4$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNRF-2020TR8 × 1.5R-N1	20	20	36	8	28	4	TR8 × 1.5	1
SNRF-2525TR10 × 2R-N1	25	25	42	10	34	5	TR10 × 2	1
SNRF-2525TR10 × 3R-N1	25	25	42	10	34	5	TR10 × 3	1
SNRF-2525TR10 × 4R-N2	25	25	42	10	34	5	TR10 × 4	2
SNRF-2835TR12 × 3R-N1	28	35	48	12	38	6	TR12 × 3	1
SNRF-2835TR12 × 6R-N2	28	35	48	12	38	6	TR12 × 6	2
SNRF-2835TR14 × 3R-N1	28	35	48	12	38	6	TR14 × 3	1
SNRF-2835TR14 × 4R-N1	28	35	48	12	38	6	TR14 × 4	1
SNRF-2835TR16 × 2R-N1	28	35	48	12	38	6	TR16 × 2	1
SNRF-2835TR16 × 4R-N1	28	35	48	12	38	6	TR16 × 4	1
SNRF-2835TR16 × 8R-N2	28	35	48	12	38	6	TR16 × 8	2
SNRF-2835TR18 × 4R-N1	28	35	48	12	38	6	TR18 × 4	1
SNRF-2835TR18 × 8R-N2	28	35	48	12	38	6	TR18 × 8	2
SNRF-3244TR20 × 4R-N1	32	44	55	12	45	7	TR20 × 4	1
SNRF-3244TR24 × 5R-N1	32	44	55	12	45	7	TR24 × 5	1
SNRF-3846TR26 × 5R-N1	38	46	62	14	50	7	TR26 × 5	1
SNRF-3846TR28 × 5R-N1	38	46	62	14	50	7	TR28 × 5	1
SNRF-3846TR30 × 6R-N1	38	46	62	14	50	7	TR30 × 6	1

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency $\eta$	摩擦系数 Coefficient of friction $\mu$	重量 Weight [g]
SNRF-2020TR8 × 1.5R-N1	228	911	19-27	0.1-0.25	16.3
SNRF-2525TR10 × 2R-N1	353	1414	20-39	0.1-0.25	28.7
SNRF-2525TR10 × 3R-N1	334	1335	27-48	0.1-0.25	28.7
SNRF-2525TR10 × 4R-N2	353	1412	33-55	0.1-0.25	28.7
SNRF-2835TR12 × 3R-N1	577	2309	24-44	0.1-0.25	47.6
SNRF-2835TR12 × 6R-N2	577	2309	37-60	0.1-0.25	47.6
SNRF-2835TR14 × 3R-N1	687	2749	24-40	0.1-0.25	45.4
SNRF-2835TR14 × 4R-N1	660	2639	26-47	0.1-0.25	45.4
SNRF-2835TR16 × 2R-N1	825	3299	14-28	0.1-0.25	43.0
SNRF-2835TR16 × 4R-N1	770	3079	24-44	0.1-0.25	43.0
SNRF-2835TR16 × 8R-N2	770	3079	37-60	0.1-0.25	43.0
SNRF-2835TR18 × 4R-N1	880	3519	22-41	0.1-0.25	40.2
SNRF-2835TR18 × 8R-N2	880	3519	35-58	0.1-0.25	40.2
SNRF-3244TR20 × 4R-N1	1244	4976	20-39	0.1-0.25	60.2
SNRF-3244TR24 × 5R-N1	1486	5944	21-40	0.1-0.25	51.2
SNRF-3846TR26 × 5R-N1	1698	6320	19-38	0.1-0.25	80.7
SNRF-3846TR28 × 5R-N1	1843	4560	18-36	0.1-0.25	74.8
SNRF-3846TR30 × 6R-N1	1951	3576	20-39	0.1-0.25	68.6

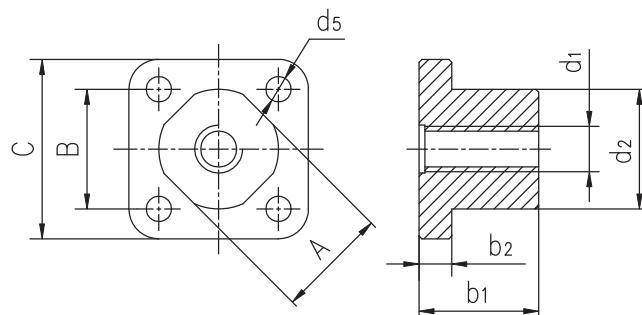
## 方法兰螺母 Lead screw nuts, square flange



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 螺丝固定易安装
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Easy installation with bolts
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNSF-202030TR8 × 1.5R-N1

螺纹数 Thread numble  
 R-右旋Right L-左旋Left  
 内螺纹 Inner thread  $d_1 \times s$   
 法兰边长 Flange width  
 长度 Length  
 外径 Outer diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	A [mm]	B [mm]	C [mm]	$b_2$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNSF-202030TR8 × 1.5R-N1	20	20	19	20	30	5.5	4.2	TR8 × 1.5	1
SNSF-202030TR10 × 2R-N1	20	20	19	20	30	5.5	4.2	TR10 × 2	1
SNSF-202030TR10 × 3R-N1	20	20	19	20	30	5.5	4.2	TR10 × 3	1
SNSF-202030TR10 × 4R-N2	20	20	19	20	30	5.5	4.2	TR10 × 4	2
SNSF-242534TR12 × 3R-N1	24	25	22.6	24	34	6	5	TR12 × 3	1
SNSF-242534TR12 × 6R-N2	24	25	22.6	24	34	6	5	TR12 × 6	2
SNSF-242534TR14 × 3R-N1	24	25	22.6	24	34	6	5	TR14 × 3	1
SNSF-242534TR14 × 4R-N1	24	25	22.6	24	34	6	5	TR14 × 4	1
SNSF-282538TR16 × 2R-N1	28	25	25.5	27	38	6.5	6	TR16 × 2	1
SNSF-282538TR16 × 4R-N1	28	25	25.5	27	38	6.5	6	TR16 × 4	1
SNSF-282538TR16 × 8R-N2	28	25	25.5	27	38	6.5	6	TR16 × 8	2
SNSF-282538TR18 × 4R-N1	28	25	25.5	27	38	6.5	6	TR18 × 4	1
SNSF-282538TR18 × 8R-N2	28	25	25.5	27	38	6.5	6	TR18 × 8	2

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency η	摩擦系数 Coefficient of friction μ	重量 Weight [g]
SNSF-202030TR8 × 1.5R-N1	228	911	19-27	0.1-0.25	12.66
SNSF-202030TR10 × 2R-N1	283	1131	20-39	0.1-0.25	11.82
SNSF-202030TR10 × 3R-N1	267	1068	27-48	0.1-0.25	11.82
SNSF-202030TR10 × 4R-N2	282	1127	33-55	0.1-0.25	11.82
SNSF-242534TR12 × 3R-N1	412	1649	24-44	0.1-0.25	18.93
SNSF-242534TR12 × 6R-N2	412	1649	37-60	0.1-0.25	18.93
SNSF-242534TR14 × 3R-N1	491	1963	24-40	0.1-0.25	17.41
SNSF-242534TR14 × 4R-N1	471	1885	26-47	0.1-0.25	17.41
SNSF-282538TR16 × 2R-N1	589	2356	14-28	0.1-0.25	22.85
SNSF-282538TR16 × 4R-N1	550	2199	24-44	0.1-0.25	22.85
SNSF-282538TR16 × 8R-N2	550	2199	37-60	0.1-0.25	22.85
SNSF-282538TR18 × 4R-N1	628	2513	22-41	0.1-0.25	21.48
SNSF-282538TR18 × 8R-N2	628	2513	35-58	0.1-0.25	21.48

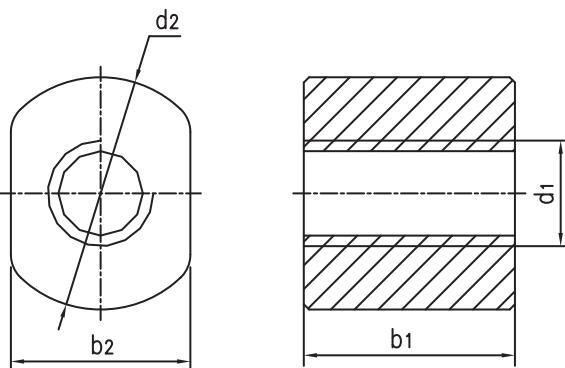
## 扁螺母 Lead screw nuts with spanner flat



### 产品特性 Product features

- 自润滑、低磨损
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 节约空间，安装简易
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Save space and easy installation
- Available materials: EPB13, EPB7 and EPB5A

## 标准规格 Standard specifications



产品编码 Part No.:

SNF-192020TR8 × 1.5R-N1

螺纹数 Thread numble  
 R 右旋 Right L 左旋 Left  
 内螺纹 Inner thread d<sub>1</sub> × s  
 法兰边长 Flange width  
 长度 Length  
 外径 Outer diameter

产品编码 Part No.	$d_2$ [mm]	$b_2$ [mm]	$b_1$ [mm]	$d_1 \times s$ [mm]	头数 Numebr of threads N [pcs]
SNF-192020TR8 × 1.5R-N1	20	19	20	TR8 × 1.5	1
SNF-192020TR10 × 2R-N1	20	19	20	TR10 × 2	1
SNF-192020TR10 × 3R-N1	20	19	20	TR10 × 3	1
SNF-192020TR10 × 4R-N2	20	19	20	TR10 × 4	2
SNF-222425TR12 × 3R-N1	24	22.6	25	TR12 × 3	1
SNF-222425TR12 × 6R-N2	24	22.6	25	TR12 × 6	2
SNF-222425TR14 × 3R-N1	24	22.6	25	TR14 × 3	1
SNF-222425TR14 × 4R-N1	24	22.6	25	TR14 × 4	1
SNF-252825TR16 × 2R-N1	28	25.5	25	TR16 × 2	1
SNF-252825TR16 × 4R-N1	28	25.5	25	TR16 × 4	1
SNF-252825TR16 × 8R-N2	28	25.5	25	TR16 × 8	2
SNF-252825TR18 × 4R-N1	28	25.5	25	TR18 × 4	1
SNF-252825TR18 × 8R-N2	28	25.5	25	TR18 × 8	2

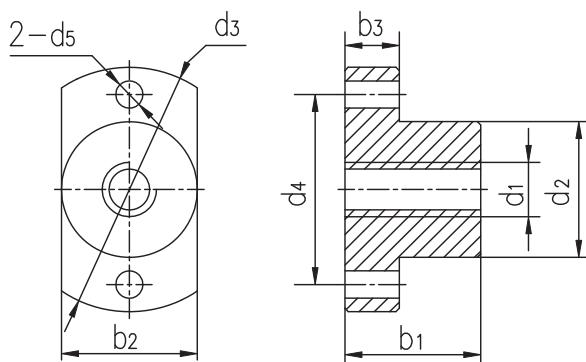
产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency η	摩擦系数 Coefficient of friction μ	重量 Weight [g]
SNF-192020TR8 × 1.5R-N1	228	500	19-27	0.1-0.25	7.86
SNF-192020TR10 × 2R-N1	283	1131	20-39	0.1-0.25	7.02
SNF-192020TR10 × 3R-N1	267	1068	27-48	0.1-0.25	7.02
SNF-192020TR10 × 4R-N2	282	1127	33-55	0.1-0.25	7.02
SNF-222425TR12 × 3R-N1	412	1649	24-44	0.1-0.25	12.64
SNF-222425TR12 × 6R-N2	412	1649	37-60	0.1-0.25	12.64
SNF-222425TR14 × 3R-N1	491	1963	24-40	0.1-0.25	11.12
SNF-222425TR14 × 4R-N1	471	1885	26-47	0.1-0.25	11.12
SNF-252825TR16 × 2R-N1	589	2356	14-28	0.1-0.25	15.45
SNF-252825TR16 × 4R-N1	550	2199	24-44	0.1-0.25	15.45
SNF-252825TR16 × 8R-N2	550	2199	37-60	0.1-0.25	15.45
SNF-252825TR18 × 4R-N1	628	2362	22-41	0.1-0.25	13.46
SNF-252825TR18 × 8R-N2	628	2362	35-58	0.1-0.25	13.46

## 扁法兰螺母 Lead screw nuts with flat flange



### 产品特性 Product features

- 自润滑、低磨损
- 节约空间，螺丝固定易装配
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- Save space and Easy installation with bolts
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A



产品编码 Part No.:

SNFF-2020TR8 × 1.5R-N1

螺纹数 Thread nubmle  
R-右旋Right L-左旋Left  
内螺纹 Inner thread  $d_1 \times s$   
长度 Length  
外径 Outer diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_3$ [mm]	$b_3$ [mm]	$b_2$ [mm]	$d_4$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNFF-2020TR8 × 1.5R-N1	20	20	36	8	20	28	4	TR8 × 1.5	1
SNFF-2525TR10 × 2R-N1	25	25	42	10	25	34	5	TR10 × 2	1
SNFF-2525TR10 × 3R-N1	25	25	42	10	25	34	5	TR10 × 3	1
SNFF-2525TR10 × 4R-N2	25	25	42	10	25	34	5	TR10 × 4	2
SNFF-2835TR12 × 3R-N1	28	35	48	12	28	38	6	TR12 × 3	1
SNFF-2835TR12 × 6R-N2	28	35	48	12	28	38	6	TR12 × 6	2
SNFF-2835TR14 × 3R-N1	28	35	48	12	28	38	6	TR14 × 3	1
SNFF-2835TR14 × 4R-N1	28	35	48	12	28	38	6	TR14 × 4	1
SNFF-2835TR16 × 2R-N1	28	35	48	12	28	38	6	TR16 × 2	1
SNFF-2835TR16 × 4R-N1	28	35	48	12	28	38	6	TR16 × 4	1
SNFF-2835TR16 × 8R-N2	28	35	48	12	28	38	6	TR16 × 8	2
SNFF-2835TR18 × 4R-N1	28	35	48	12	28	38	6	TR18 × 4	1
SNFF-2835TR18 × 8R-N2	28	35	48	12	28	38	6	TR18 × 8	2

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency $\eta$	摩擦系数 Coefficient of friction $\mu$	重量Weight [g]
SNFF-2020TR8 × 1.5R-N1	228	911	19-27	0.1-0.25	12.7
SNFF-2525TR10 × 2R-N1	353	1414	20-39	0.1-0.25	23.7
SNFF-2525TR10 × 3R-N1	334	1335	27-48	0.1-0.25	23.7
SNFF-2525TR10 × 4R-N2	353	1412	33-55	0.1-0.25	23.7
SNFF-2835TR12 × 3R-N1	577	2309	24-44	0.1-0.25	39.2
SNFF-2835TR12 × 6R-N2	577	2309	37-60	0.1-0.25	39.2
SNFF-2835TR14 × 3R-N1	660	2639	24-40	0.1-0.25	37.1
SNFF-2835TR14 × 4R-N1	660	2639	26-47	0.1-0.25	37.1
SNFF-2835TR16 × 2R-N1	825	3299	14-28	0.1-0.25	34.6
SNFF-2835TR16 × 4R-N1	770	3079	24-44	0.1-0.25	34.6
SNFF-2835TR16 × 8R-N2	770	3079	37-60	0.1-0.25	34.6
SNFF-2835TR18 × 4R-N1	880	3519	22-41	0.1-0.25	31.9
SNFF-2835TR18 × 8R-N2	880	3519	35-58	0.1-0.25	31.9

## 高螺旋线丝杆 Lead screws with high helix



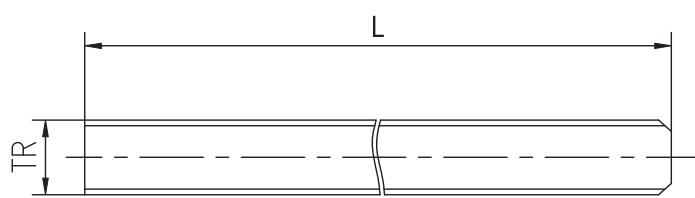
### 产品特性 Product features

- 左旋和右旋螺纹可选
- 可选材料: 304不锈钢
- 可以根据客户图纸加工
- Thread: right- or left-hand
- Available materials: 304 stainless steel
- Length and machining according to customer drawing

HLS

CSB-LMS®

### 标准规格 Standard specifications



产品编码 Part No.:

HLS-6.35 × 12.7R-N6-ES-0000

长度 Length

不锈钢 Stainless steel

螺纹数 Thread numble

R-右旋 Right L-左旋 Left

螺纹 Thread

产品编码 Part No.	直径 Outer diameter [mm]	齿根直径 Core diameter [mm]	导程 Lead S [mm]	螺距 Pitch P [mm]	Pitch angle $\alpha$ [°]	头数 Numble of threads N [pcs]	重量 Weight [kg/m]
HLS-6.35 × 12.7R-N6-ES-0000	6.35	4.35	12.7	2.12	32.48	6	0.25
HLS-6.35 × 25.4R-N8-ES-0000	6.35	4.15	25.4	3.175	51.85	8	0.25
HLS-8 × 10R-N4-ES-0000	8	5.63	10	2.5	21.70	4	0.40
HLS-8 × 15R-N10-ES-0000	8	5.63	15	1.5	30.83	10	0.40
HLS-10 × 12R-N4-ES-0000	10	6.95	12	3	21.54	4	0.62
HLS-10 × 25R-N10-ES-0000	10	7.10	25	2.5	38.51	10	0.62
HLS-12 × 25R-N10-ES-0000	12	8.95	25	3.175	33.55	10	0.89
HLS-14 × 30R-N6-ES-0000	14	9.60	30	5	34.30	6	1.22
HLS-18 × 24R-N8-ES-0000	18	14.40	24	3	22.99	8	2.01
HLS-18 × 40R-N8-ES-0000	18	13.60	40	5	35.55	8	2.01
HLS-20 × 20R-N5-ES-0000	20	15.60	20	4	17.66	5	2.48

www.csb-ep.com  
sales@csb-ep.com

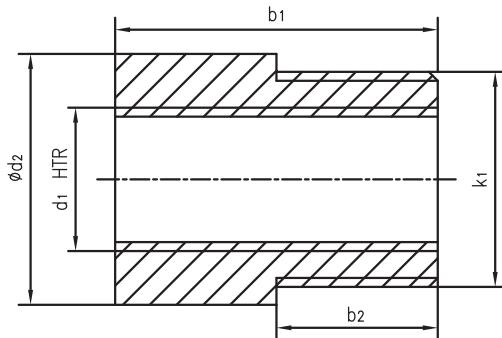
Tel: 0086 573 84186133/84185527  
Fax: 0086 573 84185517



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNR-1413HTR6.35 × 12.7R-N6

螺纹数 Thread nubmle  
 R-右旋Right L-左旋Left  
 螺纹 Thread  
 长度 Length  
 直径 Diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]	$k_1 \times p$ [mm]	$b_2$ [mm]
SNR-1413HTR6.35 × 12.7R-N6	14	13	HTR6.35 × 12.7	6	M12 × 1.5	6
SNR-1413HTR6.35 × 25.4R-N8	14	13	HTR6.35 × 25.4	8	M12 × 1.5	6
SNR-1812HTR8 × 10R-N4	18	12	HTR8 × 10	4	M16 × 1.5	6
SNR-1812HTR8 × 15R-N10	18	12	HTR8 × 15	10	M16 × 1.5	6
SNR-2220HTR10 × 12R-N4	22	20	HTR10 × 12	4	M20 × 1.5	10
SNR-2220HTR10 × 25R-N10	22	20	HTR10 × 25	10	M20 × 1.5	10
SNR-2624HTR12 × 25R-N10	26	24	HTR12 × 25	10	M24 × 2	12
SNR-3027HTR14 × 30R-N6	30	27	HTR14 × 30	6	M27 × 2	14
SNR-4036HTR18 × 24R-N8	40	36	HTR18 × 24	8	M36 × 3	18
SNR-4036HTR18 × 40R-N8	40	36	HTR18 × 40	8	M36 × 3	18
SNR-4540HTR20 × 20R-N5	45	40	HTR20 × 20	5	M42 × 3	20

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency η	摩擦系数 Coefficient of friction μ	重量 Weight [g]
SNR-1413HTR6.35 × 12.7R-N6	67	152	60-81	0.1-0.25	2.40
SNR-1413HTR6.35 × 25.4R-N8	74	152	57-81	0.1-0.25	2.40
SNR-1812HTR8 × 10R-N4	127	275	55-77	0.1-0.25	3.65
SNR-1812HTR8 × 15R-N10	110	275	60-81	0.1-0.25	3.65
SNR-2220HTR10 × 12R-N4	195	487	55-76	0.1-0.25	6.74
SNR-2220HTR10 × 25R-N10	249	623	61-82	0.1-0.25	8.70
SNR-2624HTR12 × 25R-N10	302	754	61-81	0.1-0.25	14.94
SNR-3027HTR14 × 30R-N6	440	1101	61-81	0.1-0.25	21.50
SNR-4036HTR18 × 24R-N8	844	2110	55-77	0.1-0.25	52.00
SNR-4036HTR18 × 40R-N8	786	1966	61-81	0.1-0.25	52.00
SNR-4540HTR20 × 20R-N5	984	2460	52-74	0.1-0.25	73.50

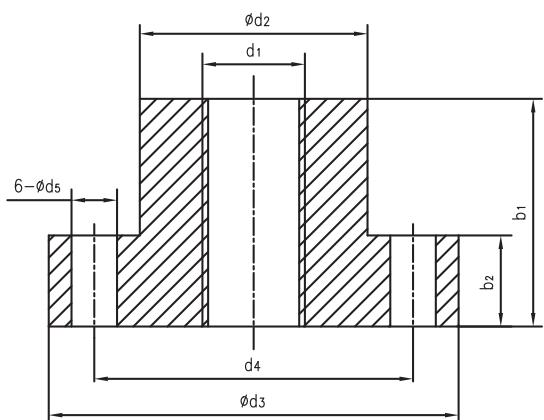
## 高螺旋线圆柱法兰螺母 High helix nuts, round flange



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 螺丝固定易安装
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Easy installation with bolts
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNRF-1315HTR6.35 × 12.7R-N6

螺纹数 Thread numble  
 R-右旋Right L-左旋Left  
 螺纹 Thread  
 长度 Length  
 直径 Diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_3$ [mm]	$b_2$ [mm]	$d_4$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]
SNRF-1315HTR6.35 × 12.7R-N6	13	15	25	5	19	3.2	HTR6.35 × 12.7	6
SNRF-1315HTR6.35 × 25.4R-N8	13	15	25	5	19	3.2	HTR6.35 × 25.4	8
SNRF-2020HTR8 × 10R-N4	20	20	34	5	28	4	HTR8 × 10	4
SNRF-2020HTR8 × 15R-N10	20	20	34	5	28	4	HTR8 × 15	10
SNRF-2525HTR10 × 12R-N4	25	25	42	10	34	5	HTR10 × 12	4
SNRF-2525HTR10 × 25R-N10	25	25	42	10	34	5	HTR10 × 25	10
SNRF-2835HTR12 × 25R-N10	28	35	48	12	38	6	HTR12 × 25	10
SNRF-2835HTR14 × 30R-N6	28	35	48	12	38	6	HTR14 × 30	6
SNRF-2835HTR18 × 24R-N8	28	35	48	12	38	6	HTR18 × 24	8
SNRF-2835HTR18 × 40R-N8	28	35	48	12	38	6	HTR18 × 40	8
SNRF-3244HTR20 × 20R-N5	32	44	55	12	45	7	HTR20 × 20	5

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency η	摩擦系数 Coefficient of friction μ	重量 Weight [g]
SNRF-1315HTR6.35 × 12.7R-N6	78	125	60-81	0.1-0.25	4.90
SNRF-1315HTR6.35 × 25.4R-N8	86	125	57-81	0.1-0.25	4.90
SNRF-2020HTR8 × 10R-N4	212	458	55-77	0.1-0.25	12.29
SNRF-2020HTR8 × 15R-N10	183	459	60-81	0.1-0.25	12.29
SNRF-2525HTR10 × 12R-N4	325	811	55-76	0.1-0.25	28.70
SNRF-2525HTR10 × 25R-N10	312	780	61-82	0.1-0.25	28.70
SNRF-2835HTR12 × 25R-N10	440	1100	61-81	0.1-0.25	45.40
SNRF-2835HTR14 × 30R-N6	571	1428	61-81	0.1-0.25	45.40
SNRF-2835HTR18 × 24R-N8	710	1776	55-77	0.1-0.25	40.19
SNRF-2835HTR18 × 40R-N8	764	1910	61-81	0.1-0.25	50.90
SNRF-3244HTR20 × 20R-N5	1083	2708	52-74	0.1-0.25	60.20

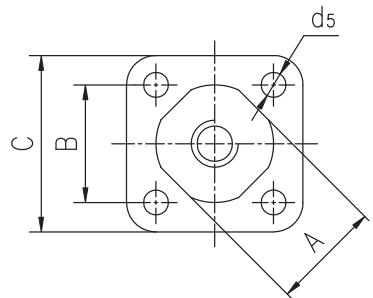
## 高螺旋线方法兰螺母 High helix nuts, square flange



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 螺丝固定易安装
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Easy installation with bolts
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Available materials: EPB13, EPB7 and EPB5A

## 标准规格 Standard specifications



产品编码 Part No.:

SNSF-111212HTR6.35 × 12.7R-N6

螺纹数 Thread numble  
 R-右旋Right L-左旋Left  
 螺纹 Thread  
 长度 Length  
 直径 Diameter  
 宽度 Width

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	A [mm]	B [mm]	C [mm]	$b_2$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNSF-111212HTR6.35 × 12.7R-N6	12	12	11	12	18	4	3.2	HTR6.35 × 12.7	6
SNSF-111212HTR6.35 × 25.4R-N8	12	12	11	12	18	4	3.2	HTR6.35 × 25.4	8
SNSF-192020HTR8 × 10R-N4	20	20	19	20	30	5.5	4.2	HTR8 × 10	4
SNSF-192020HTR8 × 15R-N10	20	20	19	20	30	5.5	4.2	HTR8 × 15	10
SNSF-192020HTR10 × 12R-N4	20	20	19	20	30	5.5	4.2	HTR10 × 12	4
SNSF-192020HTR10 × 25R-N10	20	20	19	20	30	5.5	4.2	HTR10 × 25	10
SNSF-222425HTR12 × 25R-N10	24	25	22.6	24	34	6	5	HTR12 × 25	10
SNSF-222425HTR14 × 30R-N6	24	25	22.6	24	34	6	5	HTR14 × 30	6
SNSF-252825HTR18 × 24R-N8	28	25	25.5	27	38	6.5	6	HTR18 × 24	8
SNSF-252825HTR18 × 40R-N8	28	25	25.5	27	38	6.5	6	HTR18 × 40	8

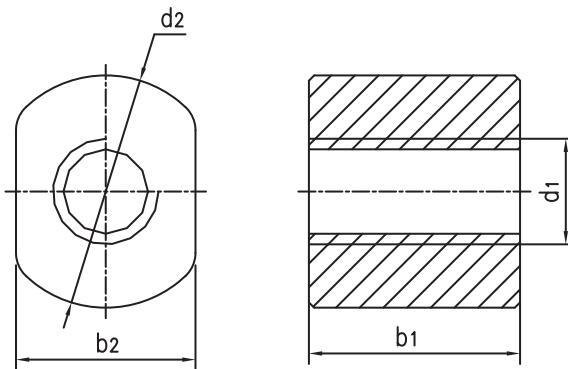
产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency $\eta$	摩擦系数 Coefficient of friction $\mu$	重量 Weight [g]
SNSF-111212HTR6.35 × 12.7R-N6	78	125	60-81	0.1-0.25	2.71
SNSF-111212HTR6.35 × 25.4R-N8	86	125	57-81	0.1-0.25	2.71
SNSF-192020HTR8 × 10R-N4	203	507	55-77	0.1-0.25	12.66
SNSF-192020HTR8 × 15R-N10	254	634	60-81	0.1-0.25	12.66
SNSF-192020HTR10 × 12R-N4	338	846	55-76	0.1-0.25	11.82
SNSF-192020HTR10 × 25R-N10	312	779	61-82	0.1-0.25	11.82
SNSF-222425HTR12 × 25R-N10	433	1083	61-81	0.1-0.25	18.93
SNSF-222425HTR14 × 30R-N6	571	1427	61-81	0.1-0.25	17.41
SNSF-252825HTR18 × 24R-N8	802	2004	55-77	0.1-0.25	21.48
SNSF-252825HTR18 × 40R-N8	764	1911	61-81	0.1-0.25	21.48



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 节约安装空间，易装配
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Save space and easy installation
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNF-111212HTR6.35 × 12.7R-N6

螺纹数 Thread numble  
 R-右旋Right L-左旋Left  
 螺纹 Thread  
 长度 Length  
 直径 Diameter  
 宽度 Width

产品编码 Part No.	$d_2$ [mm]	$b_2$ [mm]	$b_1$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNF-111212HTR6.35 × 12.7R-N6	12	11	12	HTR6.35 × 12.7	6
SNF-111212HTR6.35 × 25.4R-N8	12	11	12	HTR6.35 × 25.4	8
SNF-192020HTR8 × 10R-N4	20	19	20	HTR8 × 10	4
SNF-192020HTR8 × 15R-N10	20	19	20	HTR8 × 15	10
SNF-192020HTR10 × 12R-N4	20	19	20	HTR10 × 12	4
SNF-192020HTR10 × 25R-N10	20	19	20	HTR10 × 25	10
SNF-222425HTR12 × 25R-N10	24	22.6	25	HTR12 × 25	10
SNF-222425HTR14 × 30R-N6	24	22.6	25	HTR14 × 30	6
SNF-252825HTR18 × 24R-N8	28	22.6	25	HTR18 × 24	8
SNF-252825HTR18 × 40R-N8	28	22.6	25	HTR18 × 40	8

产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency $\eta$	摩擦系数 Coefficient of friction $\mu$	重量 Weight [g]
SNF-111212HTR6.35 × 12.7R-N6	62	152	60-81	0.1-0.25	1.46
SNF-111212HTR6.35 × 25.4R-N8	69	152	57-81	0.1-0.25	1.46
SNF-192020HTR8 × 10R-N4	203	507	55-77	0.1-0.25	7.86
SNF-192020HTR8 × 15R-N10	203	507	60-81	0.1-0.25	7.86
SNF-192020HTR10 × 12R-N4	271	677	55-76	0.1-0.25	7.02
SNF-192020HTR10 × 25R-N10	249	623	61-82	0.1-0.25	7.02
SNF-222425HTR12 × 25R-N10	433	1083	61-81	0.1-0.25	7.02
SNF-222425HTR14 × 30R-N6	408	1019	61-81	0.1-0.25	11.12
SNF-252825HTR18 × 24R-N8	573	1431	55-77	0.1-0.25	13.46
SNF-252825HTR18 × 40R-N8	546	1365	61-81	0.1-0.25	13.46

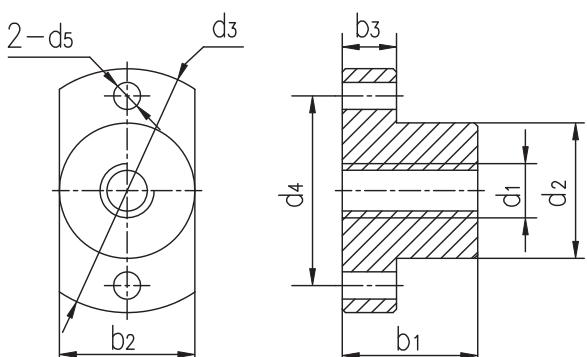
## 高螺旋线扁法兰螺母 High helix nuts with flat flange



### 产品特性 Product features

- 自润滑、低磨损
- 高效率传动
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 节约安装空间，易用螺丝固定
- 可选材料：EPB13, EPB7, EPB5A
- Self lubricating and lower wear
- High efficiency drive
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Save space and easy installation with bolts
- Available materials: EPB13, EPB7 and EPB5A

### 标准规格 Standard specifications



产品编码 Part No.:

SNFF-1315HTR6.35 × 12.7R-N6

螺纹数 Thread numble  
R-右旋Right L-左旋Left  
螺纹 Thread  
长度 Length  
直径 Diameter

产品编码 Part No.	$d_2$ [mm]	$b_1$ [mm]	$d_3$ [mm]	$b_3$ [mm]	$b_2$ [mm]	$d_4$ [mm]	$d_5$ [mm]	$d_1 \times s$ [mm]	头数 Numble of threads N [pcs]
SNFF-1315HTR6.35 × 12.7R-N6	13	15	25	5	13	19	3.2	HTR6.35 × 12.7	6
SNFF-1315HTR6.35 × 25.4R-N8	13	15	25	5	13	19	3.2	HTR6.35 × 25.4	8
SNFF-2020HTR8 × 10R-N4	20	20	36	8	20	28	4	HTR8 × 10	4
SNFF-2020HTR8 × 15R-N10	20	20	36	8	20	28	4	HTR8 × 15	10
SNFF-2525HTR10 × 12R-N4	25	25	42	10	25	34	5	HTR10 × 12	4
SNFF-2525HTR10 × 25R-N10	25	25	42	10	25	34	5	HTR10 × 25	10
SNFF-2835HTR12 × 25R-N10	28	35	48	12	28	38	6	HTR12 × 25	10
SNFF-2835HTR14 × 30R-N6	28	35	48	12	28	38	6	HTR14 × 30	6
SNFF-2835HTR18 × 24R-N8	28	35	48	12	28	38	6	HTR18 × 24	8
SNFF-2835HTR18 × 40R-N8	28	35	48	12	28	38	6	HTR18 × 40	8

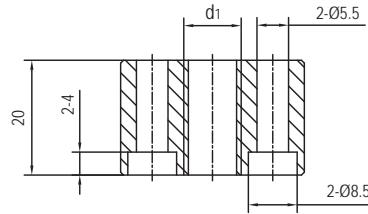
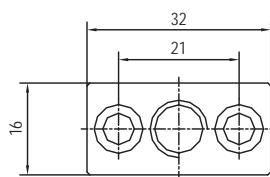
产品编码 Part No.	有效接触面积 Effective supporting surface [mm <sup>2</sup> ]	最大轴向静载荷 Max. stat. axial F [N]	效率 Efficiency $\eta$	摩擦系数 Coefficient of friction $\mu$	重量 Weight [g]
SNFF-1315HTR6.35 × 12.7R-N6	78	125	60-81	0.1-0.25	3.7
SNFF-1315HTR6.35 × 25.4R-N8	114	125	57-81	0.1-0.25	3.7
SNFF-2020HTR8 × 10R-N4	203	507	55-77	0.1-0.25	12.7
SNFF-2020HTR8 × 15R-N10	205	513	60-81	0.1-0.25	12.7
SNFF-2525HTR10 × 12R-N4	343	858	55-76	0.1-0.25	23.7
SNFF-2525HTR10 × 25R-N10	312	779	61-82	0.1-0.25	23.7
SNFF-2835HTR12 × 25R-N10	562	1405	61-81	0.1-0.25	39.2
SNFF-2835HTR14 × 30R-N6	571	1427	61-81	0.1-0.25	37.1
SNFF-2835HTR18 × 24R-N8	821	2053	55-77	0.1-0.25	31.9
SNFF-2835HTR18 × 40R-N8	764	1911	61-81	0.1-0.25	31.9

## 特殊螺母 Special nuts

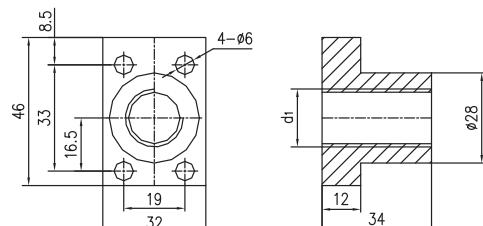


### 产品特性 Product features

- 为LMS直线运动系统而特殊设计的丝杆螺母
- 自润滑、低磨损
- 极低的摩擦系数
- 耐腐蚀，可用于液体介质环境
- 抵抗灰尘和无噪音运行
- 节约安装空间，易装配
- 可选材料：EPB13, EPB7, EPB5A
- Special design nuts for LMS linear motion system
- Self lubricating and lower wear
- Best coefficient of friction
- Chemical resistant
- Dust resistant and quiet running
- Save space and Easy installation
- Available materials: EPB13, EPB7 and EPB5A



产品编码 Part No.	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]	平台页码 LMS Page
LMS01-1210-TR10 × 2R-N1	TR10 × 2	1	P242-243
LMS01-1210-TR10 × 3R-N1	TR10 × 3	1	P242-243
LMS01-1210-HTR10 × 12R-N4	HTR10 × 12	4	P242-243
LMS01-1210-HTR10 × 25R-N10	HTR10 × 25	10	P242-243



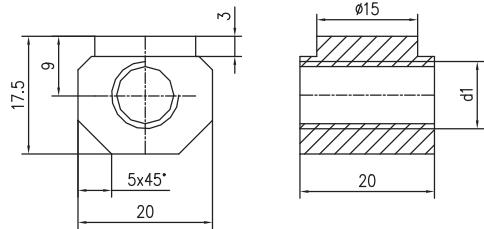
产品编码 Part No.	螺纹 Thread [mm]	头数 Numb of threads N [pcs]	平台页码 LMS Page
LMS01-2018-TR18 × 4R-N1	TR18 × 4	1	P242-243
LMS01-2018-TR18 × 8R-N2	TR18 × 8	2	P242-243

LMS

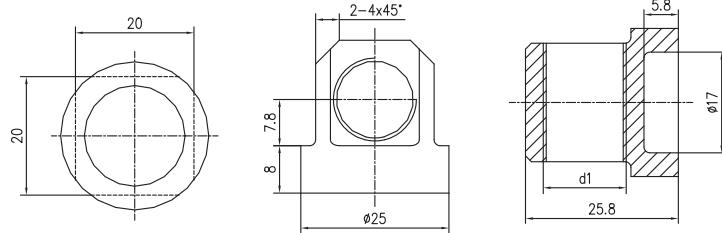
CSB-LMS®

www.csb-ep.com  
sales@csb-ep.comTel: 0086 573 84186133/84185517  
Fax: 0086 573 84185517

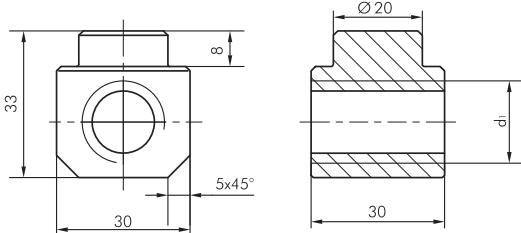
## 丝杆驱动 Lead Screw Drivers



产品编码 Part No.	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]	平台页码 LMS Page
LMS02-1040-TR10 × 2R-N1	TR10 × 2	1	P244-245
LMS02-1040-TR10 × 3R-N1	TR10 × 3	1	P244-245
LMS02-1040-HTR10 × 12R-N4	HTR10 × 12	4	P244-245
LMS02-1040-HTR10 × 25R-N4	HTR10 × 25	10	P244-245



产品编码 Part No.	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]	平台页码 LMS Page
LMS02-1660-TR14 × 3R-N1	TR14 × 3	1	P244-245
LMS02-1660-TR14 × 4R-N1	TR14 × 4	1	P244-245
LMS02-1660-HTR14 × 30R-N6	HTR14 × 30	6	P244-245



产品编码 Part No.	$d_1 \times s$ [mm]	头数 Numb of threads N [pcs]	平台页码 LMS Page
LMS02-2080-TR18 × 4R-N1	TR18 × 4	1	P244-245
LMS02-2080-TR18 × 8R-N2	TR18 × 8	2	P244-245
LMS02-2080-HTR18 × 24R-N8	HTR18 × 24	8	P244-245

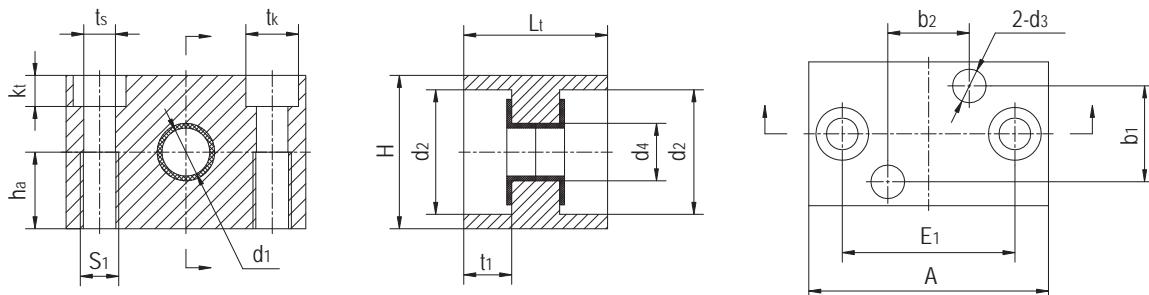
## 丝杆支撑，固定式 Lead screw supports, fixed bearing side



### 产品特性 Product features

- 阳极氧化铝轴承座
- 灵活安装丝杠
- 丝杠直径: 10, 18和24 mm
- 通过内置塑料轴承实现自润滑
- Anodized aluminum bearing blocks
- Flexible mounting of the leadscrew
- Leadscrew diameter: 10, 18 and 24 mm
- Lubricant-free through built-in plastic bearing

### 标准规格 Standard specifications



产品编码 Part No.	$d_1$ [mm]	A [mm]	H [mm]	$E_1$ [mm]	$L_1$ [mm]	$k_1$ [mm]	$t_k$ [mm]	$t_s$ [mm]	$S_1$ [mm]	$h_a$ [mm]	$d_2$ [mm]	$d_4$ [mm]	$t_1$ [mm]	$d_3$ [mm]	$b_1$ [mm]	$b_2$ [mm]	最大轴向载荷 Max. axial static load [N]	重量 Weight [g]
LSS-10-FI	10	50	32	36	30	6.5	11	6.6	M8	16	26	12	10	7	20	17	700	88
LSS-18-FI	18	72	46	54	36	8.6	15	9	M10	23	38	20	15	10	21	27	1600	205
LSS-24-FI	24	94	64	70	50	13	20	13.5	M16	32	47	26	17	12	34	34	2500	525

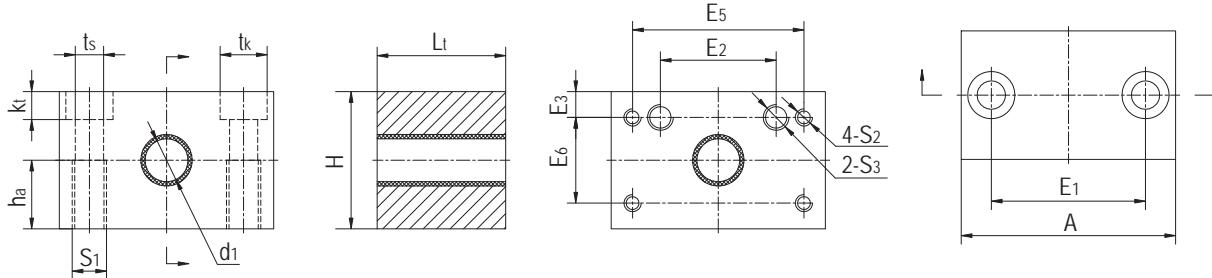
## 丝杆支撑，浮动式 Lead screw supports, floating bearing side



### 产品特性 Product features

- 阳极氧化铝轴承座
- 灵活安装丝杠
- 丝杠直径: 10, 18和24 mm
- 通过内置塑料轴承实现自润滑
- Anodized aluminum bearing blocks
- Flexible mounting of the leadscrew
- Leadscrew diameter: 10, 18 and 24 mm
- Lubricant-free through built-in plastic bearing

## 标准规格 Standard specifications



产品编码 Part No.	$d_1$ [mm]	A [mm]	H [mm]	$E_1$ [mm]	$L_t$ [mm]	$k_t$ [mm]	$t_k$ [mm]	$t_s$ [mm]	$S_1$ [mm]	$h_a$ [mm]	$E_2$ [mm]	$E_5$ [mm]	$E_3$ [mm]	$E_6$ [mm]	$S_2$ [mm]	$S_3$ [mm]	重量 Weight [g]
LSS-10-FL	10	50	32	36	30	6.5	11	6.6	M8	16	27	40	6.5	20	M4	M6	115
LSS-18-FL	18	72	46	54	36	8.6	15	9	M10	23	27	40	13.5	20	M4	M6	295
LSS-24-FL	24	94	64	70	50	13	20	13.5	M16	32	27	40	22.5	20	M4	M6	725

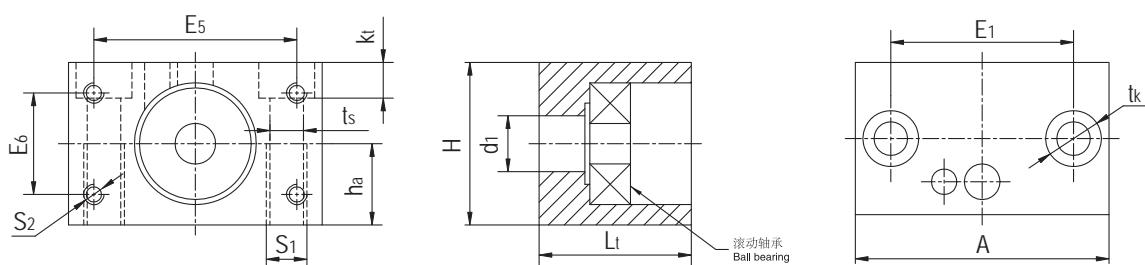
## 丝杆支撑，滚动轴承 Lead screw supports, ball bearing-faster



## 产品特性 Product features

- 自润滑、免维护 Lubricant- and maintenance-free
- 快速连接安装 Quick connection
- 传输高转速 Transmission of high rotation speed
- 低摩擦 Low friction
- 精准无间隙配合 Accurate and clearance-free

## 标准规格 Standard specifications



产品编码 Part No.	$S_1$ [mm]	$S_2$ [mm]	A [mm]	H [mm]	$E_1$ [mm]	$E_5$ [mm]	$E_6$ [mm]	$L_t$ [mm]	$k_t$ [mm]	$t_k$ [mm]	$t_s$ [mm]	$d_1$ [mm]	$h_a$ [mm]	最大轴向载荷 Max. axial static load [N]	重量 Weight [g]
LSS-10-BB	M8	M4	50	32	36	40	20	30	6.5	11	6.6	10	16	350	110
LSS-18-BB	M10	M4	72	46	54	48	36	36	8.6	15	9	18	23	1000	265
LSS-24-BB	M16	M4	94	64	70	48	36	50	13	20	13.5	24	32	1500	350

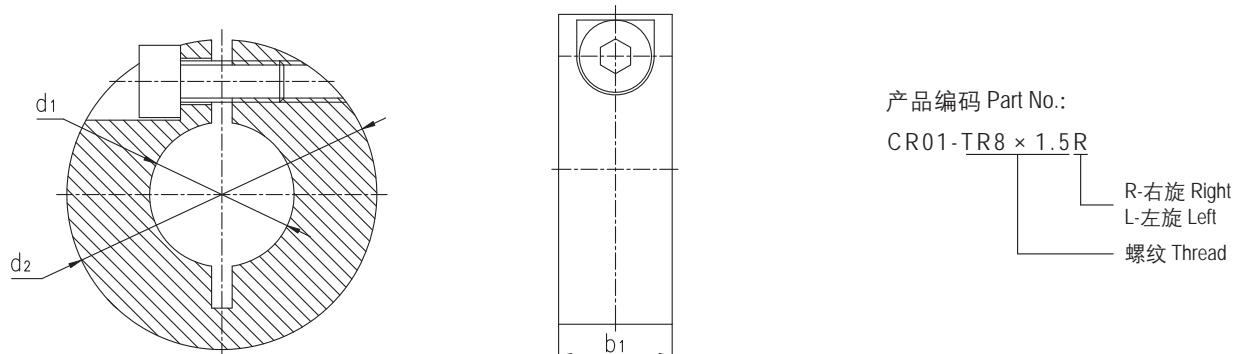
## CR01丝杆夹环，带螺纹 Lead screw clamping rings with thread



### 产品特性 Product features

- 直接与丝杆螺纹配合安装
- 配合梯形丝杆支撑客户解决方案
- 承受较高的轴向力
- 采用表面硬质氧化铝合金制成
- 带锁紧螺丝
- Ready to install in the screw
- Custom solutions for lead screw support
- Can absorb even high axial forces
- Clamping rings made from coated aluminum
- Screw included in delivery

### 标准规格 Standard specifications



产品编码 Part No.	螺纹 Thread $d_1 \times P$	$d_2$ [mm]	$b_1$ [mm]	最大轴向载荷 Max. axial static load [N]
CR01-TR8 x 1.5R	TR08 x 1.5	16	9	1530
CR01-TR10 x 2R	TR10 x 2	24	8	1800
CR01-TR12 x 3R	TR12 x 3	28	8	2096
CR01-TR14 x 4R	TR14 x 4	30	11	3312
CR01-TR16 x 4R	TR16 x 4	34	11	3840
CR01-TR18 x 4R	TR18 x 4	36	13	5216
CR01-TR20 x 4R	TR20 x 4	45	15	6784
CR01-TR24 x 5R	TR24 x 5	45	15	8096

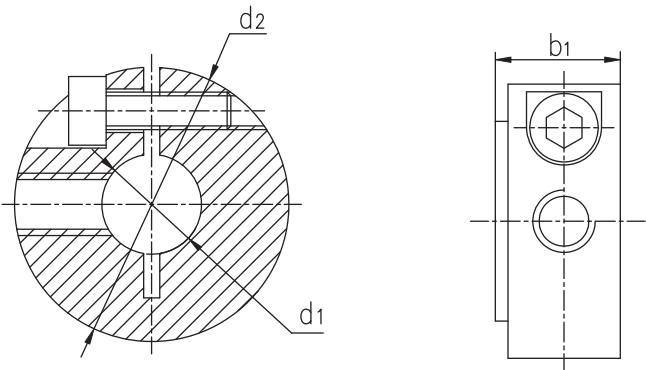
## CR02丝杆夹环，无螺纹 Lead screw clamping rings without thread



## 产品特性 Product features

- 直接与丝杆端安装
- 承受较高的轴向力
- 采用表面硬质氧化铝合金制成
- 带锁紧螺丝
- Ready to install in the end of screw
- Can absorb even high axial forces
- Clamping rings made from coated aluminum
- Screw included in delivery

## 标准规格 Standard specifications



产品编码 Part No.:

CR02-10

内径 Inner diameter

产品编码 Part No.	$d_i$ [mm]	$d_2 h9$ [mm]	$b_1$ [mm]
CR02-10	10	24	8
CR02-12	12	28	11
CR02-14	14	30	11
CR02-16	16	34	11
CR02-18	18	36	13
CR02-24	24	45	15