

Trapezoidal Screw



We have rolling trapezoidal screw series as well. There are YTr-R(L) type and SYTr-R(L) type which are used as trapezoidal screw shafts, and YNF-R(L) type and YNS-R(L) type which are used as nuts. Furthermore the basic size of trapezoidal screws follows JIS B0216.

YTr-R(L)

Standard trapezoidal screw

SYTr-R

Stainless trapezoidal screw

YNF-R(L)

Nut with flange

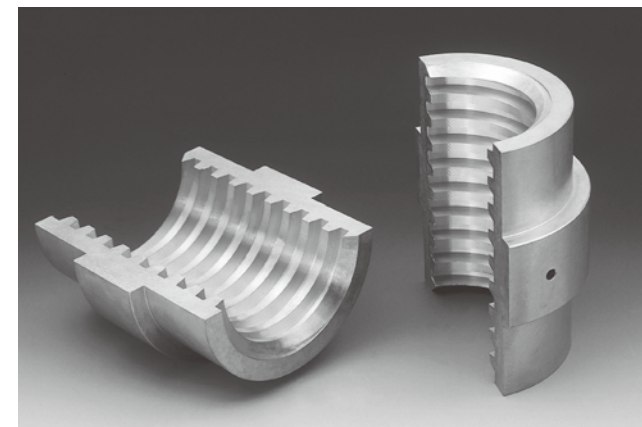
YNS-R(L)

Straight nut

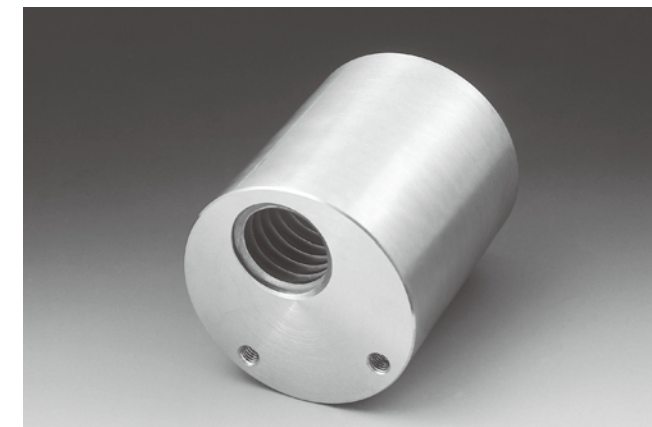


The example of machining of trapezoidal screw nut

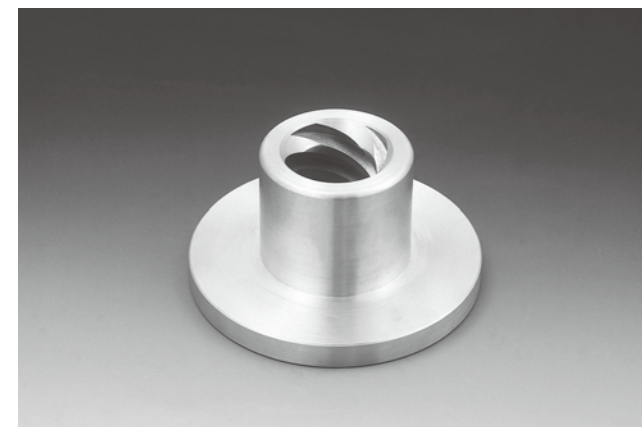
- We adopt BC6 material of the nut, because it's superior for abrasion resistant and low coefficient of friction, and it satisfies the feed function. We can make other materials and then please ask to us.
- We also take an order of special machining in accordance with standard nut. One of the examples is published. We can make according to customer's order in addition of the example and then please ask to us.
- About screw, we can make left and right screw, double thread screw, quadruple thread, etc. according to the order, and then please ask to us.



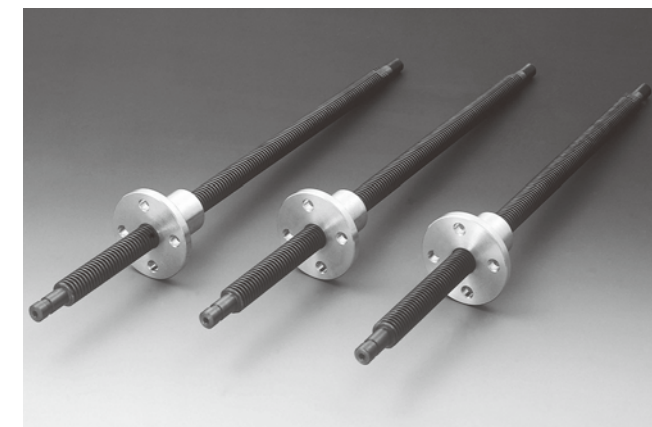
- The half nut for high precision feed screw such as lathe machine (split nut)



- The type that make the part of trapezoidal screw eccentricity and can mount with cylindrical form

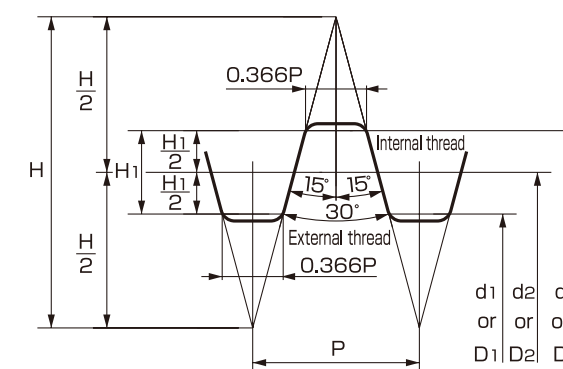


- The nut of quadruple thread which raised the feed speed



- The type which treat the trapezoidal screw anti-corrosion (Parkerizing)

Basic profile of trapezoidal screw

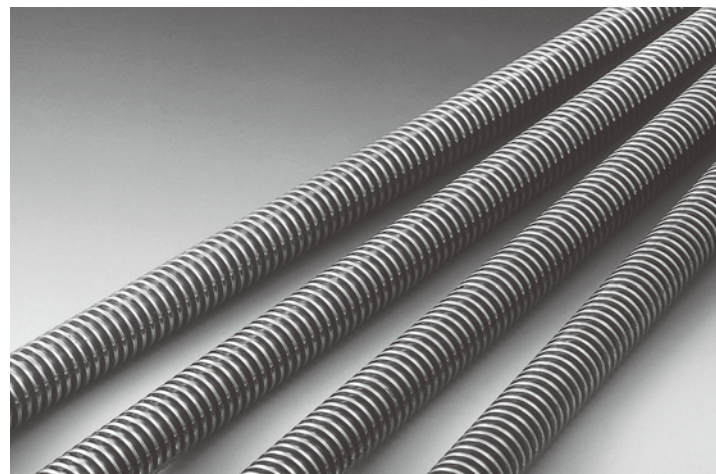


Formula : The formula, which is used for calculation of basic dimension of trapezoidal screw, is based on the equation as below.

$$\begin{aligned} H &= 1.866P & d_2 &= d - 0.5P & D &= d \\ H_1 &= 0.5P & d_2 &= d - P & D_2 &= d_2 \\ & & & & D_1 &= d_1 \end{aligned}$$

TRAPEZOIDAL SCREW

YTr-R(L) Standard trapezoidal screw

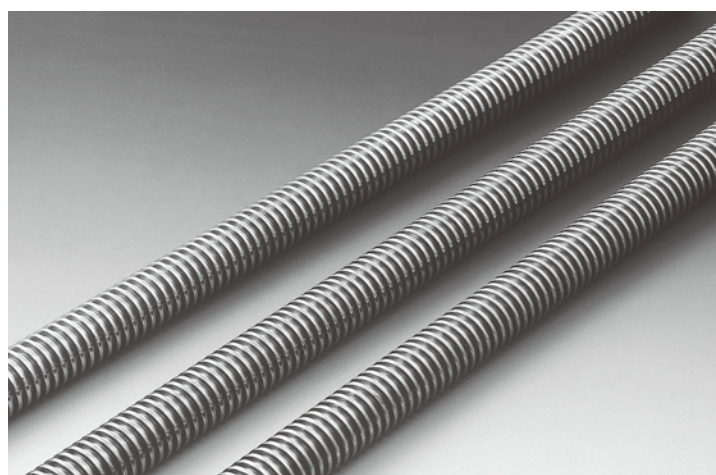


| | YTr-R(L) |
|-------------------------|---------------------------------------|
| Material | Carbon steel for machine parts (S45C) |
| Single pitch error | ±0.02(mm) |
| Accumulated pitch error | ±0.1/300(mm) |
| Tolerance grade | 7e |

- We use carbon steel for machine parts S45C as material and the screw is molded by rolling.
- The right-hand thread is YTr-R type.
- The left-hand thread is YTr-L type.
- We machine the shaft ends

YTr-R(L)-10 · 12 · 14 · 16 · 18 · 20 · 22 · 25 · 28 · 32 · 36 · 40
YTr-R-45 · 50

SYTr-R Stainless trapezoidal screw



| | SYTr-R |
|-------------------------|------------------------------------|
| Material | SUS303(Austenitic stainless steel) |
| Single pitch error | ±0.02(mm) |
| Accumulated pitch error | ±0.1/300(mm) |
| Tolerance grade | 7e |

- We use austenitic stainless steel SUS303 as material and the screw is molded by rolling.
- It is superior in corrosion resistance and abrasion resistance
- Right-hand thread is standard.
- We machine the shaft ends

SYTr-R-10 · 12 · 14 · 16 · 18 · 20 · 22 · 25 · 28 · 32

YNF-R(L) Nut with flange

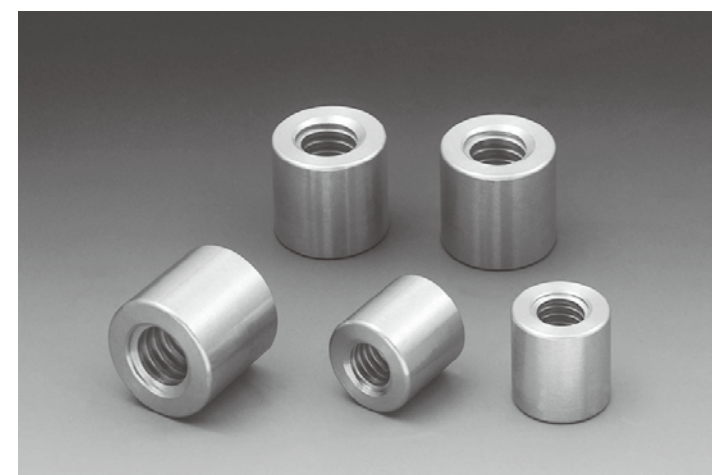


| | YNF-R(L) |
|-----------------|---------------------|
| Material | BC6(Bronze casting) |
| Tolerance grade | 7H |

- We use BC6 as the material of nut in order to satisfy enough the function (abrasion resistance and low coefficient of friction) of sliding conduction.
- The right-hand screw is YNF-R type
- The left-hand screw is YNF-L type

YNF-R(L)-10 · 12 · 14 · 16 · 18 · 20 · 22 · 25 · 28 · 32 · 36 · 40
YNF-R-45 · 50

YNS-R(L) Straight nut



| | YNS-R(L) |
|-----------------|---------------------|
| Material | BC6(Bronze casting) |
| Tolerance grade | 7H |

- We use BC6 as the material of nut in order to satisfy enough the function (abrasion resistance and low coefficient of friction) of sliding conduction.
- The right-hand screw is YNS-R type
- The left-hand screw is YNS-L type

YNS-R(L)-10 · 12 · 14 · 16 · 18 · 20 · 22 · 25 · 28 · 32 · 36 · 40
YNS-R-45 · 50