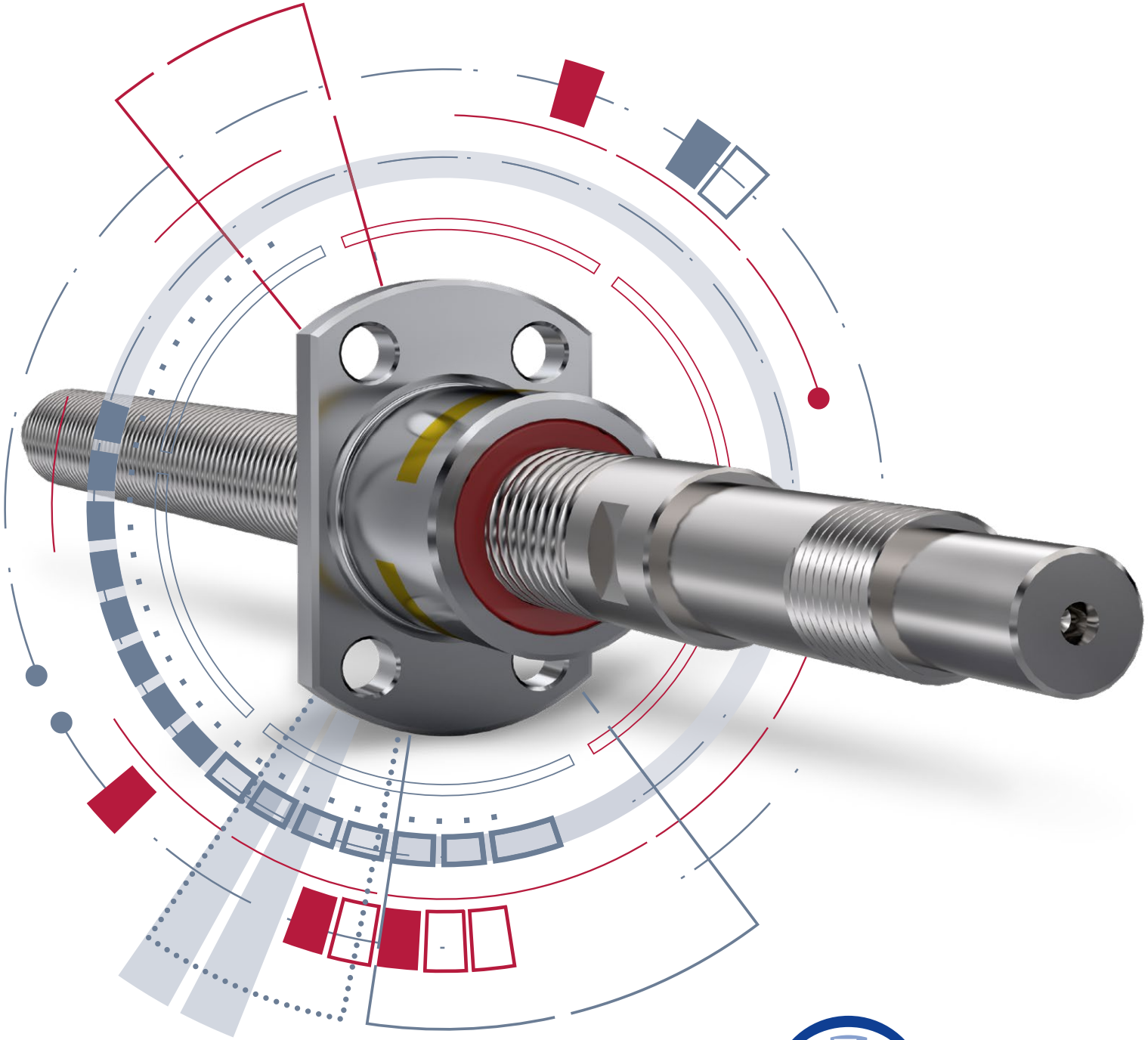
Product Catalogue

Precision ballscrews



HIPP Moving Precision

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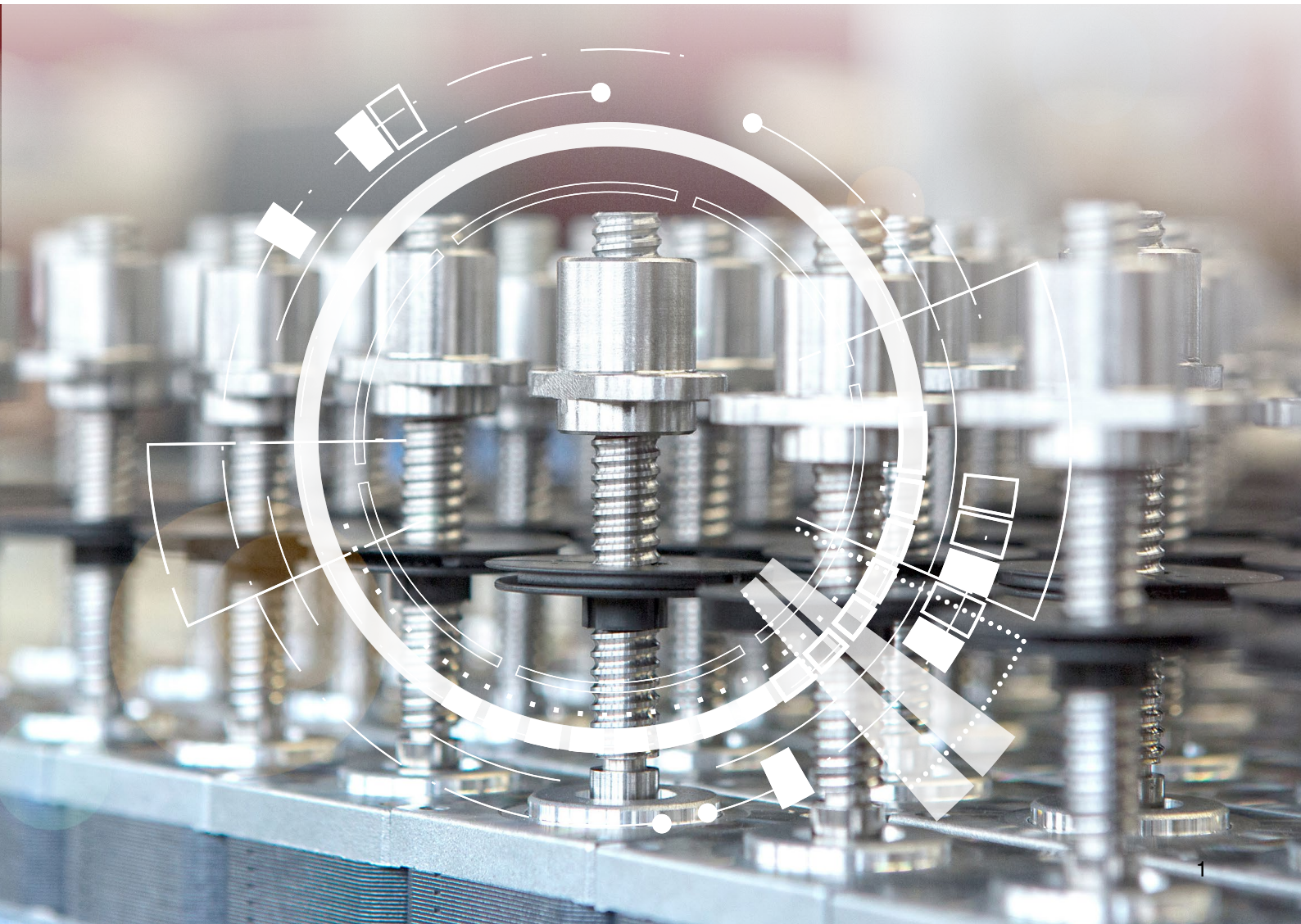
Product range

Precision ballscrews



Hipp – Your partner in the field of Precision screw drives

Precision is our passion

Developing and producing linear drive systems for the highest demands – that is our passion. With ballscrews and leadscrews in miniature design, we give linear motions the highest precision. Decades of experience, well-founded know-how in development and production as well as innovative approaches to solutions characterise us as a company and make us a globally sought-after partner in the field of drive technology. We are one of the world's leading manufacturers of miniature ballscrews and yet always remain connected to our roots: as a family-owned company based in southern Germany, we focus on quality made in Germany.

HIPP

Moving
Precision

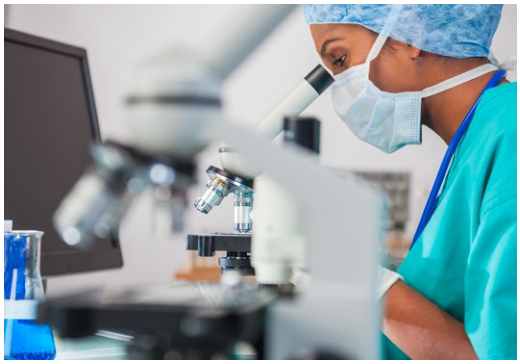
In order to always offer our customers the best solution, we invest in research & development: from new manufacturing processes to the further training of our employees, we actively drive progress. In this way, we are able to offer process-reliable components for your systems in the highest quality as well as at attractive conditions. State-of-the-art testing procedures ensure that our products meet the highest standards.

Our drive solutions for your industry.

From production robots to surgical microscopes: ballscrews from Hipp guarantee precise and fast linear motions. With well-founded know-how in development and production and the enthusiasm for new things, we create special solutions for many industries. State-of-the-art machines and comprehensive test procedures ensure the highest precision. Standardised procedures also enable quickly available results with low development and cost expenditure – of course in first-class Hipp-quality.

Medical technology

Nowhere is precision more valuable than in medical technology. When people's health or even their lives depend on exact results, inaccuracies are out of place. For this reason, preloaded ballscrews from Hipp are used to control precision positioning tables for example in microscopy and imaging processes.

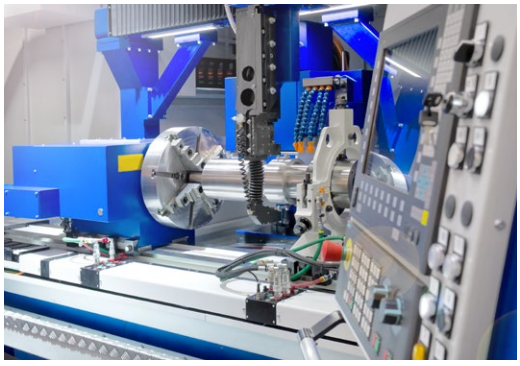


Measurement technology

The question of whether work has been done precisely can only be answered with sophisticated measuring technology. In order to be able to evaluate tolerances in the 1000th of a millimetre range, the measuring technology has to work a little more precisely than that of production. Precision ballscrews from Hipp control the measuring instruments – reliable and very precisely.

Mechanical engineering

Mechanical engineering is characterised by two central challenges: automation at ever higher speeds and ever lower tolerances. Ballscrews from Hipp provide reliable basic work in both disciplines. Thanks to the highest precision, they are the key element for precisely positioning workpieces and tools in the production process.



Automation & robotics

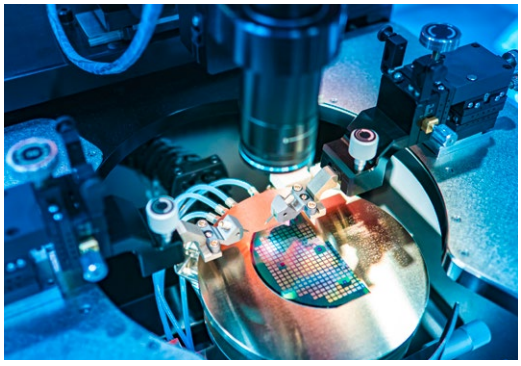
More and more, work is being taken over by automated systems and robots, controlled by artificial intelligence. The work processes of these systems are carried out by mechanical components. They have to implement the commands of the command centre with the highest precision and speed. Hipp screw drives in the highest precision make it possible.

Solar industry

Photovoltaic and solar modules on roofs and in open space systems make an important contribution to meeting the demand for energy. The automated production of modules with thin-film technology requires the most precise movements of the systems. Hipp's precision-ground ballscrews offer the highest precision and enable fast work under clean room conditions.

Semiconductor and electronics industry

Electronic and semiconductor technology-based devices surround us at every turn in our everyday lives. With highly specialised equipment and systems, the most important parts of these devices are manufactured under clean room conditions. Fast and most precise movements of the machining processes are guaranteed by the world-renowned ground miniature ballscrews from Hipp.



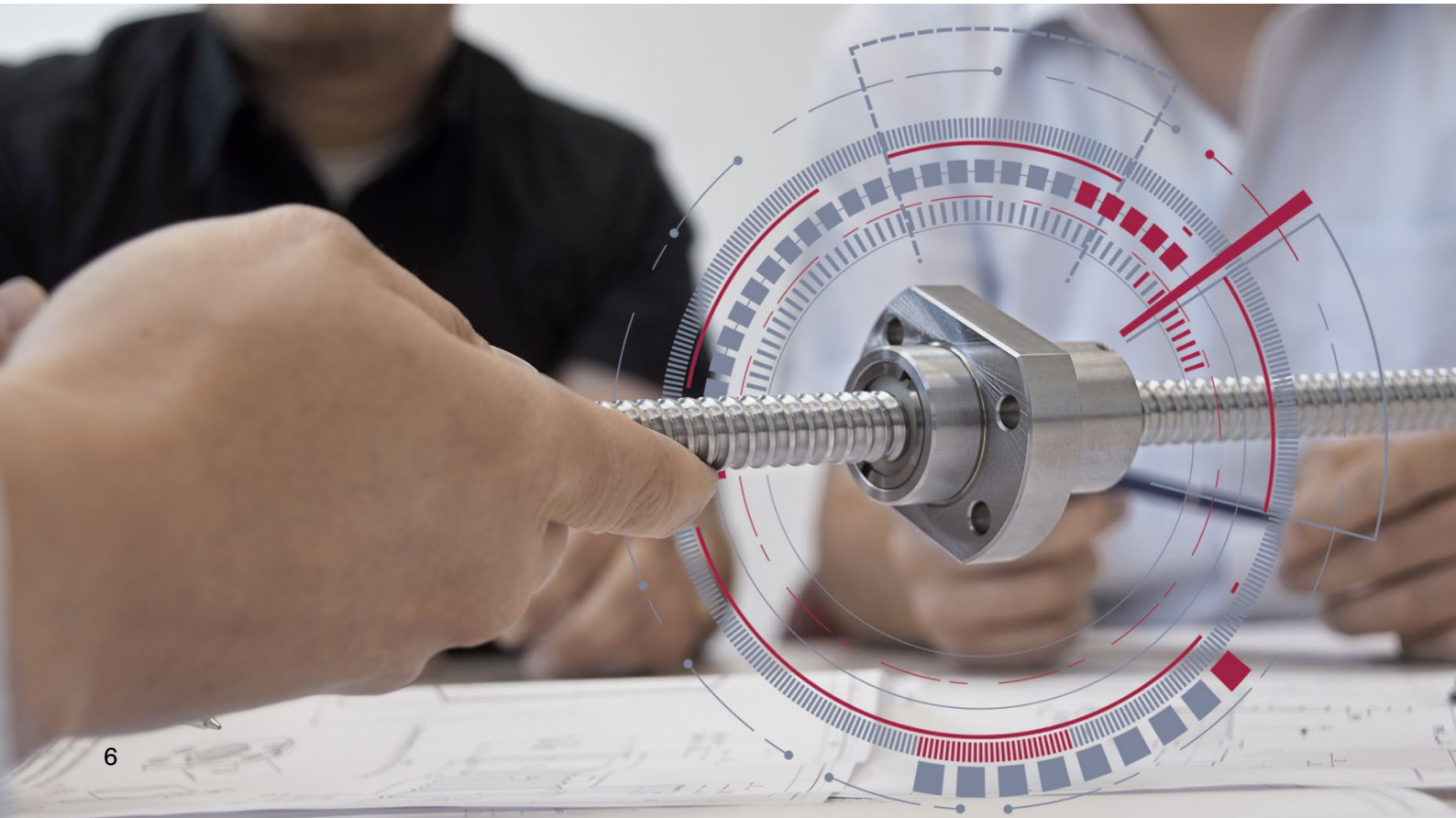
Individual solutions from batch size 1.

Manufacturing according to drawing & new product development

We specialise in threads for the highest requirements in all variations and manufacture precision screw drives, miniature ballscrews as well as components according to customer-specific requirements – from batch size 1 to large-scale production. Whether you need a modified standard product or an individual production entirely according to your wishes, together we will find the solution that will take you further. We take over the development for you or manufacture according to your drawings.

When it comes to drive technology, we are always there for you.

**Does your system require an innovative solution that does not yet exist?
Our experienced employees design and produce screw drives and components according to your very specific requirements, even for difficult tasks.**



Your benefits

Five decades of experience:

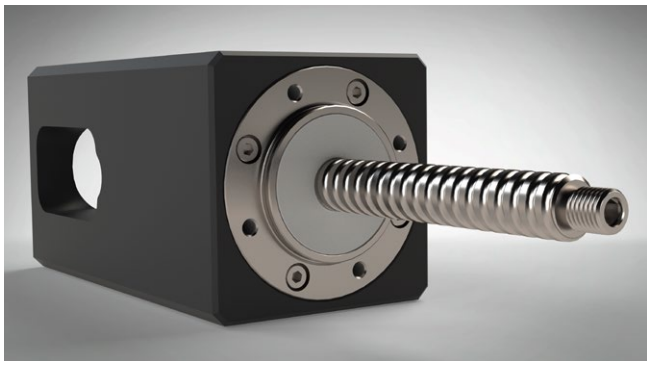
We have been continuously developing our products for over 50 years. By using the most modern manufacturing processes, we produce the best screw drives for you.

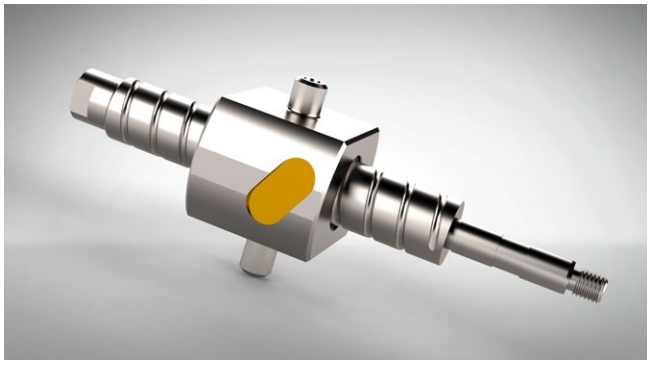
Global customers:

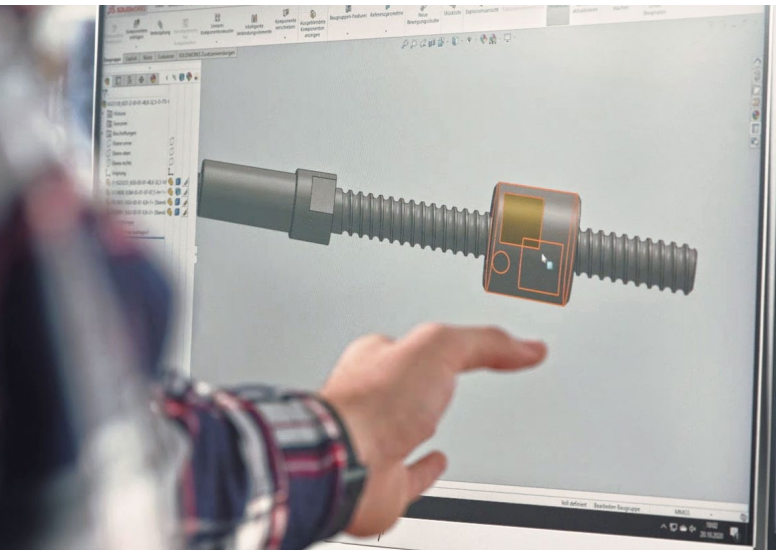
Well-known manufacturers at home and abroad in numerous industries successfully use products from Hipp in machines and systems.

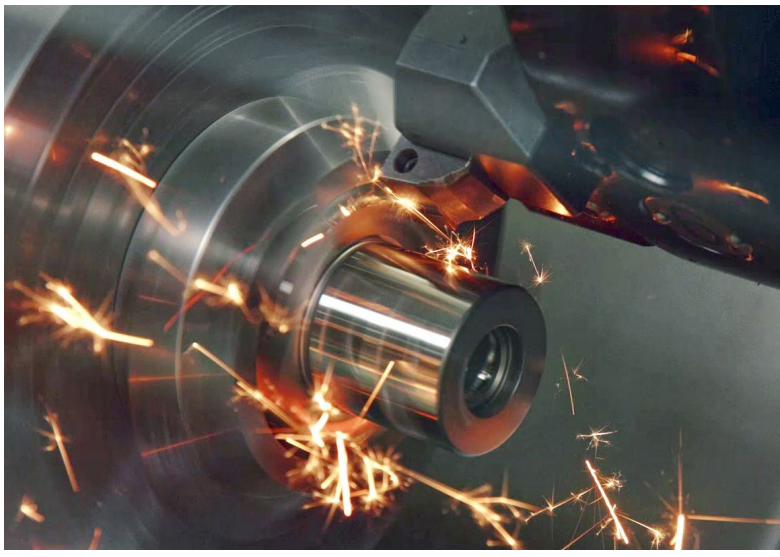
Cooperation:

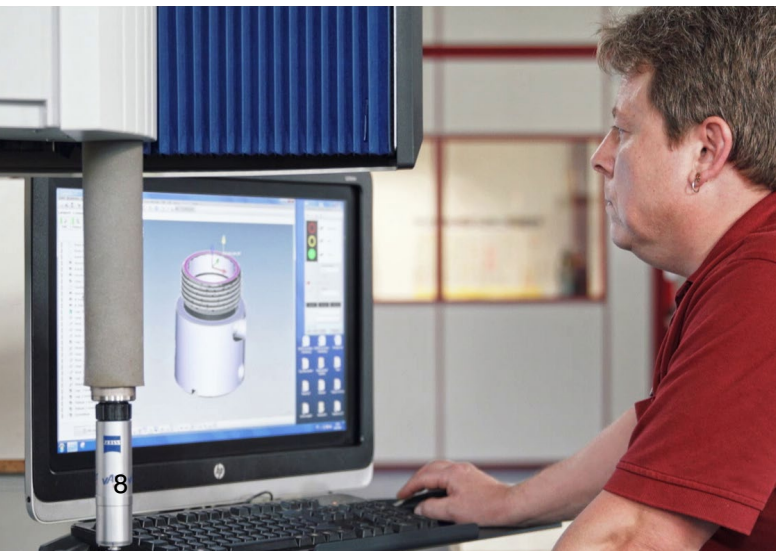
The close cooperation with our engineers and designers leads to solutions that are convincing.









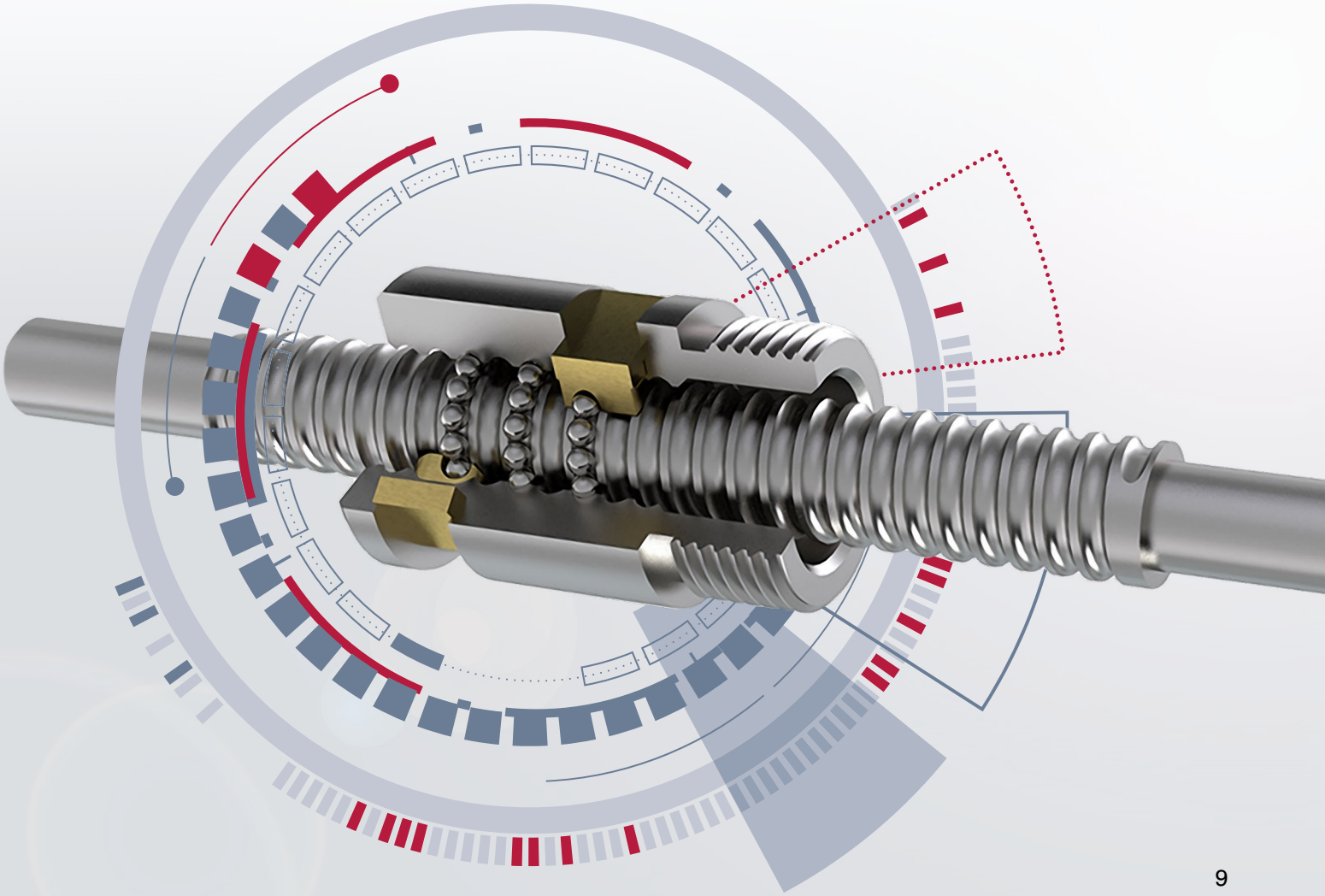



kardex remstar
Shuttle XP 500
kardex remstar

Ballscrew technology

Ballscrews for the highest demands

Mechanical engineering in its many variations, measurement technology and medical technology demand linear drives of the highest accuracy. Precision-ground ballscrews from Hipp are made for these requirements. Whether in production robots or in surgical microscopes, precise and fast linear movements can be realised with our ballscrews. Our developers will also work out an appropriate solution for your special requirements.



General information

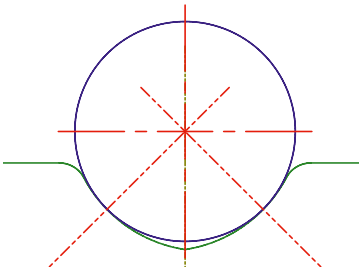
Ballscrews convert rotary motion to linear motion. Balls are the anti-friction element between the ballscrew spindle and nut. Ballscrew dynamics and positioning accuracy primarily depend on the accuracy of production and the technical implementation of the stipulated tolerances.

Advantages of ballscrews over leadscrews:

- Considerably longer lifetime
- Very high traverse speeds
- Low heat generation
- No stick-slip effect
- Very high positioning accuracy
- Very high efficiency
- Less input power required
- No axial play with appropriate pre-loading

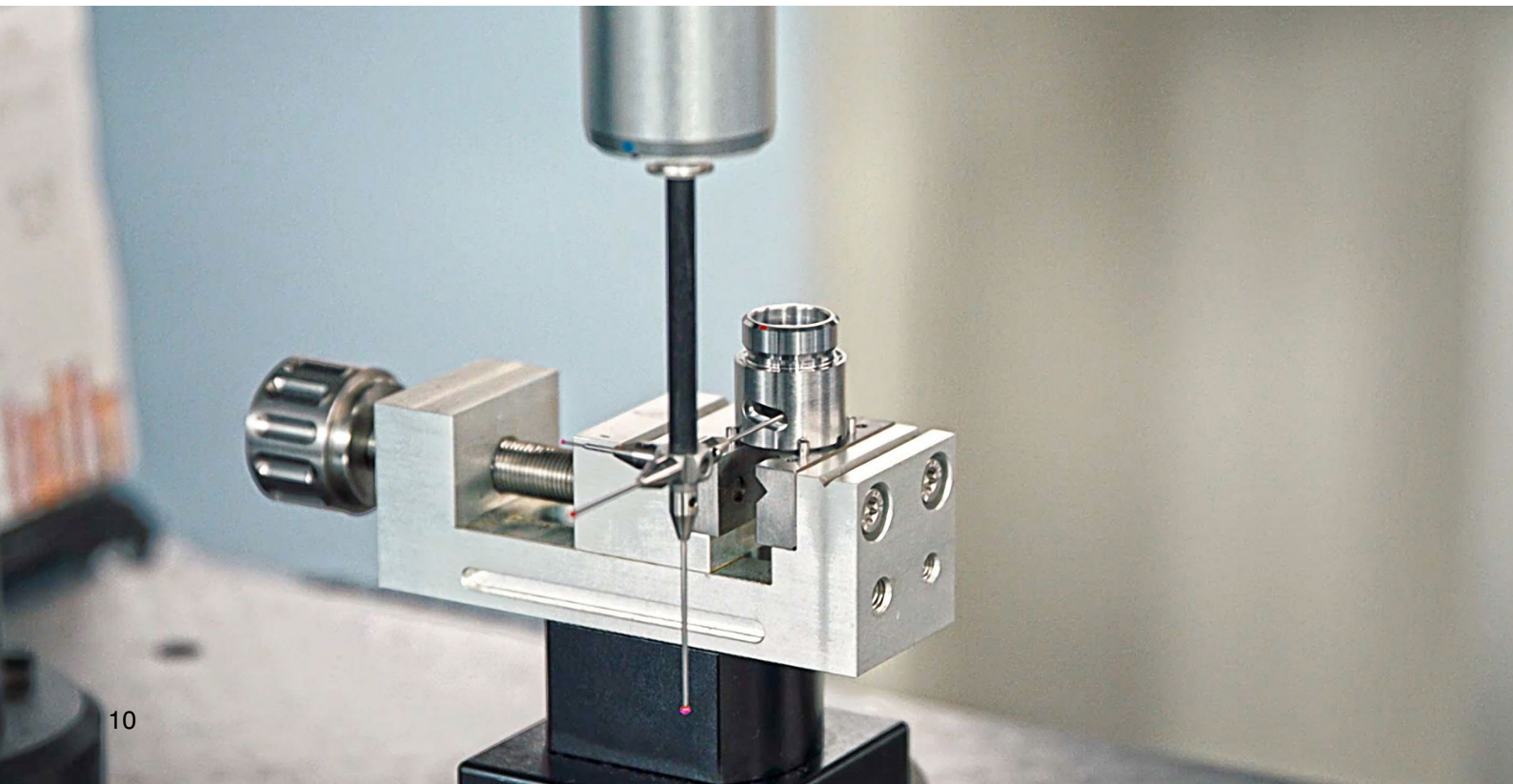
Thread profile

Our ballscrews have “Gothic arch” track profiles, which, with optimal relationship of ball diameter to track radius, generate a contact angle between spindle and nut of around 45°. This gives our ballscrews excellent running characteristics at maximum axial loads. The ball track profiles for all miniature ballscrews are ground after heat treatment using the most advanced machines.



Nut systems

- Low-play single nut
- Anti-backlash pre-loaded single nut
- Anti-backlash pre-loaded double nut
- Spring pre-loaded double nut in the housing



Pre-loading

The pre-loading force is the axial force within a nut system to increase positioning accuracy. As they are extremely precisely formed, our ballscrews can be pre-loaded as standard using the fourpoint system. Thus we attain optimum rating values.

Materials

We use the following materials as standard:

Ballscrew spindle: Cf53 – ball track hardened to 60 +/-2 HRC.
Ballscrew nut: 100Cr6 – hardened to 60 +/-2 HRC.
Balls: 100Cr6 – hardened to 60 +/-2 HRC.

Stainless variants on request:
Ballscrew spindle: 1.4112 – ball track hardened to 56 +/-2 HRC.
Ballscrew nut: 1.4034 – hardened to 56 +/-2 HRC.
Balls: 1.4034 – hardened to 56 +/-2 HRC.
In the stainless steel version, Cstat & Cdyn are reduced by about 20 percent.

Tolerance classes

Karl Hipp GmbH ballscrews are manufactured to tolerance classes 1 to 10 according to DIN ISO 3408. Tolerance classes and tolerances for useful travel l_u correspond to ISO/DIS 286/1.

Tolerance class	**IT1**	**IT3**	**IT5**	**IT7**
Measuring length [mm]	**Tolerances [µm]**			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
80 – 1000	11	21	40	90
1001 – 1250	13	24	46	105
1251 – 1600	15	29	54	125
1601 – 2000	18	35	65	150
2001 – 2500	22	41	77	175
2501 – 3150	26	50	93	210

Tolerances corresponding to DIN ISO 3408-3

Quality

Karl Hipp GmbH has been DIN ISO 9001-certified since 1997. All ballscrews are checked using state-of-the-art measuring and testing machines and are coded accordingly.

On request, we can supply test reports regarding:

- Lead accuracy
- Torque
- Shape and positional tolerances
- Dimensional tolerances

Efficiency

We differentiate between theoretical and practical efficiency. Practical efficiency and the coefficient of friction depend on the following factors:

- Load
- Speed
- Lubrication

The following formulas are used to calculate a ballscrew's efficiency:

Efficiency η or η'

The lead angle is calculated as follows:

$$\tan \alpha = \frac{P}{d_o \cdot \pi}$$

α = lead angle [°]
P = lead [mm]
$\mathbf{d_o}$ = ball reference circle [mm]

If a torque is converted to a longitudinal force, then:

$$\eta = \frac{\tan \alpha}{\tan (\alpha+\rho)}$$

ρ = angle of friction [°]
~ 0.2° to 0.35°

When a longitudinal force is converted to torque, then:

$$\eta' = \frac{\tan (\alpha-\rho)}{\tan \alpha}$$

Practical efficiency is calculated as follows:

$\eta_p = \eta \cdot 0.9$ 0.9 is the average value for load, speed and lubrication.

Rigidity

The rigidity of a ballscrew influences its geometric and positional accuracy. In our miniature ballscrews, we use a zero-play single nut with 4-point pre-loading to obtain very good rigidity values.

Static rating

The static rating is an axial load acting concentrically, corresponding to a total permanent deformation of the ball or ball track of 0.0001 x the ball diameter at the most stressed contact area of the ball or ball track. In the stainless steel version, the static rating is reduced by approx. 20 percent.

Dynamic rating

The dynamic rating is the concentric axial load under which a ballscrew can attain a nominal life of 10 million circuits. In the stainless steel version, the dynamic rating is reduced by approx. 20 percent.

Radial loads

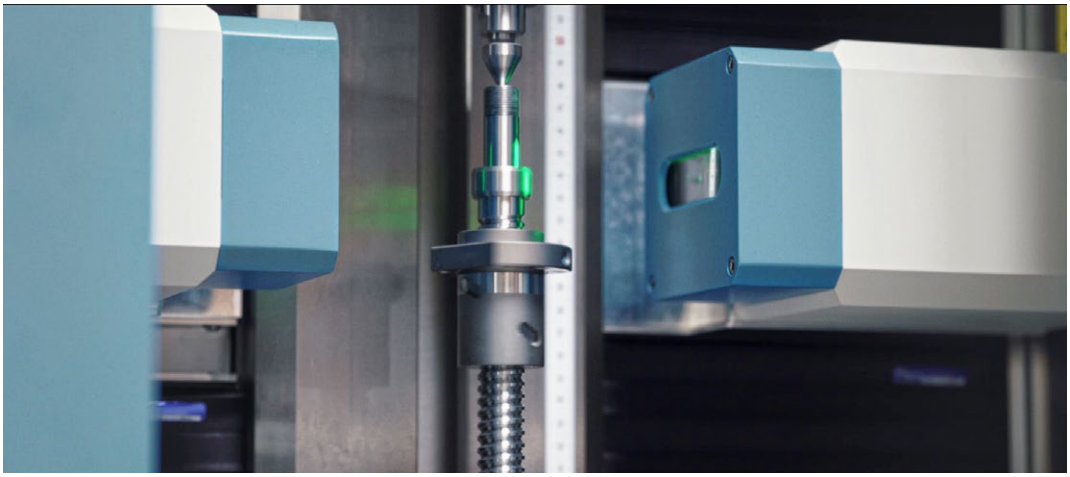
Radial loads may occur due to assembly tolerances, but they should be kept to below 5 % of the smallest axial load.

Speeds

When designing a ballscrew, attention should be paid to the critical bending speed – at this point, resonances occur at the spindle – and the maximum speed, both of which are determined to a large extent by the nut design and by the type of ball return system used.

Guidelines for maximum speeds [1/min]

Lead [mm]	Diameter [mm]									
	4	6	8	10	12	16	20	25	32	40
0.5	4000									
1	4500	4500	3200		1800					
2		4500	4200	4000	3400	3000				
2.5			4200		3400	3000				
3					3400					
4			4200		3600	4000				
5			4000		3600	4200	4000	3800	3500	2700
10					3600	4200	4000	3800	3500	3000



Lifetime

The lifetime (nominal life) is expressed by the number of circuits that 90 % of a sufficiently large number of ballscrews achieve or exceed before the first signs of material fatigue occur. This figure is expressed in circuits or hours.

$$L = \left(\frac{C}{F_m}\right)^3 \cdot 10^6$$

L = lifetime (circuits)
C = dynamic rating
F_m = average axial load (N)

The average axial load is calculated as follows:

$$F_m = \frac{(F_1^3 \cdot L_1 + F_2^3 \cdot L_2 + F_3^3 \cdot L_3 + \ldots)^{1/3}}{(L_1 + L_2 + L_2 + \ldots)^{1/3}}$$

F = axial load (N)
L = payload travel (mm)

Lubrication

Basically, the same lubricants can be used for lubricating ballscrews as are used for ball bearings. As a rule, a single lifelong lubrication is not sufficient for the ballscrew, as, despite the use of appropriate wipers, the ballscrew spindle continually removes grease. An appropriate maintenance interval should be observed, if possible. Several factors determine the selection of a lubricant. The most important ones are spindle speed, operating temperature, and ballscrew load.

Assembly specifications

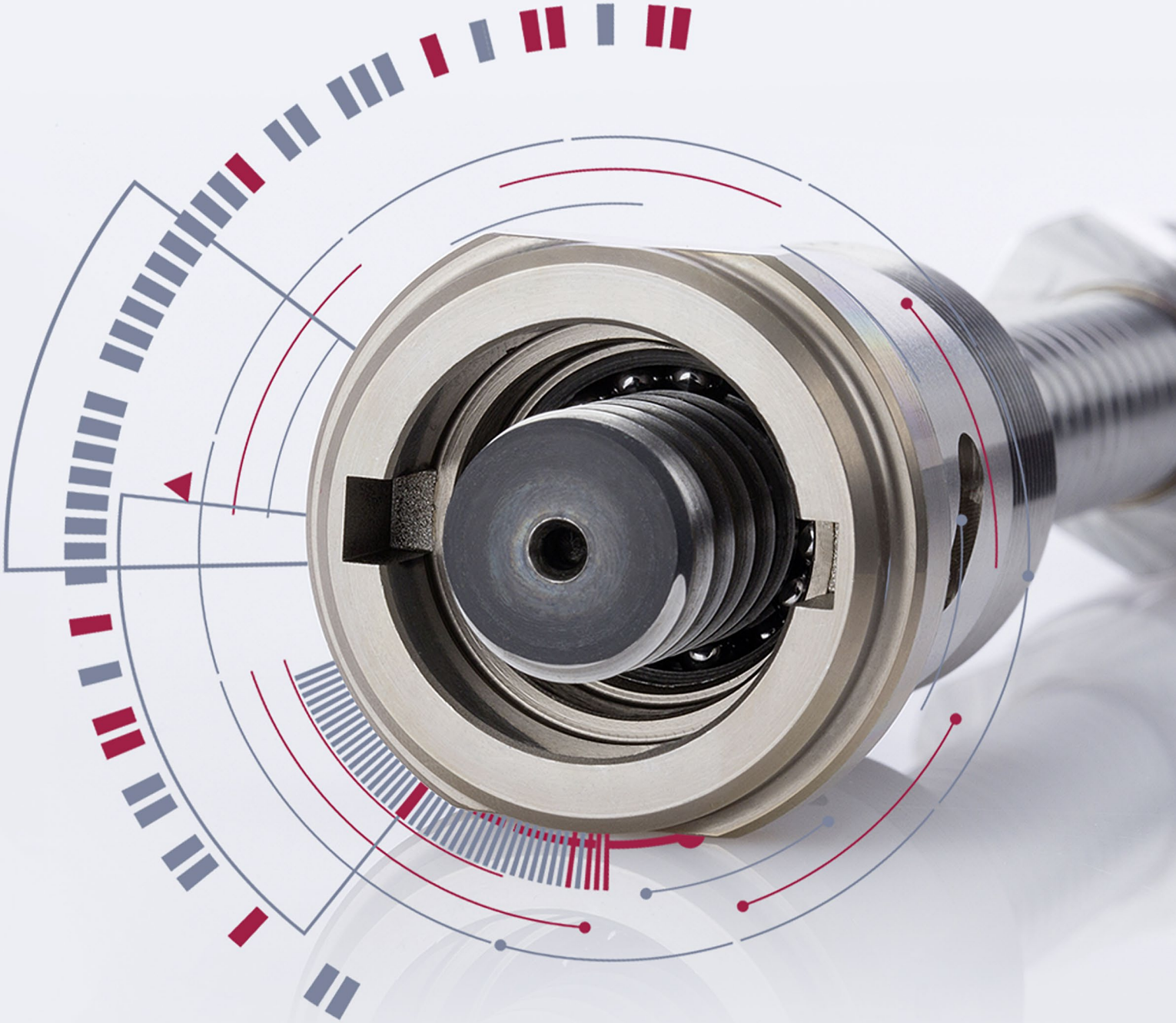
Radial or eccentric forces should not act on the nut system during assembly. Parallel and right-angle deviations must not exceed 0.02 mm.

Wiper

Various types of wipers, made of felt or plastic, for example, are available for protecting ballscrews from dirt and contamination.

Operating temperature

The permissible operating temperature of ballscrews is in the range of -20 °C to +80 °C.



Product data sheets

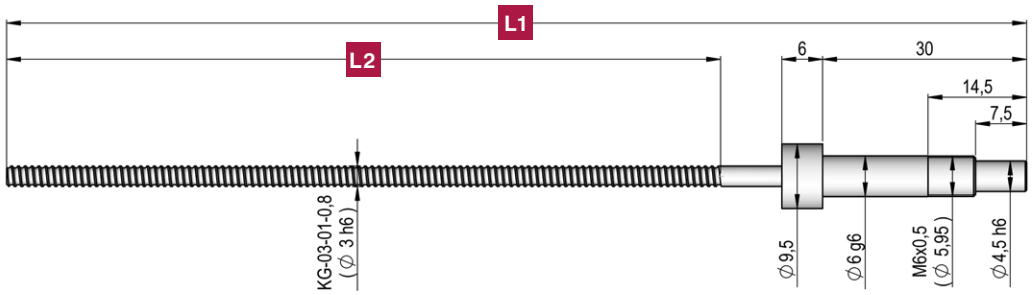
Precision-ground ballscrews

Our standard ballscrews at a glance:

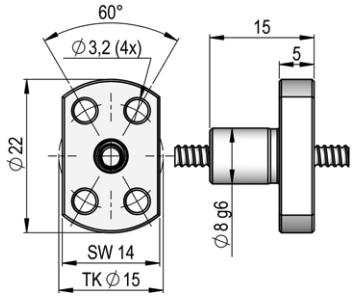
Ø 3.0
/ 1.0

Precision-ground ballscrews

Nominal diameter 3.0 mm | Lead 1.0 mm
Max. speed 4200 rpm | Ball diameter 0.80 mm

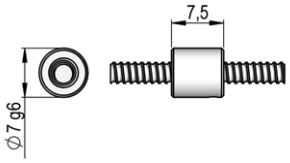


F1 Flange nut



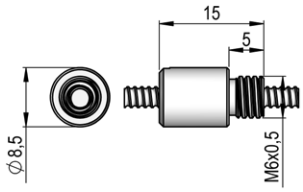
Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

Z1 Cylindrical nut



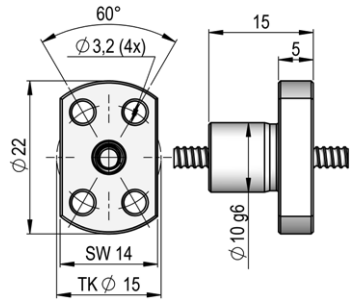
Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

E1 Anchor nut



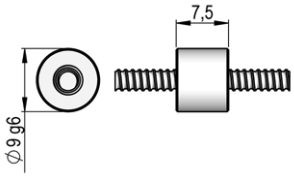
Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

F2 Flange nut



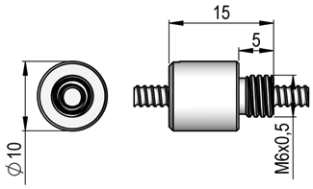
Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

Z2 Cylindrical nut



Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

E2 Anchor nut



Circuits	2	C_{dyn} [N]	230
Wiper	No	C_{stat} [N]	260

Part number/ordering information:

KGT - F1 - 03 - 01 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 100*

Thread length [mm]
≤ 70*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52

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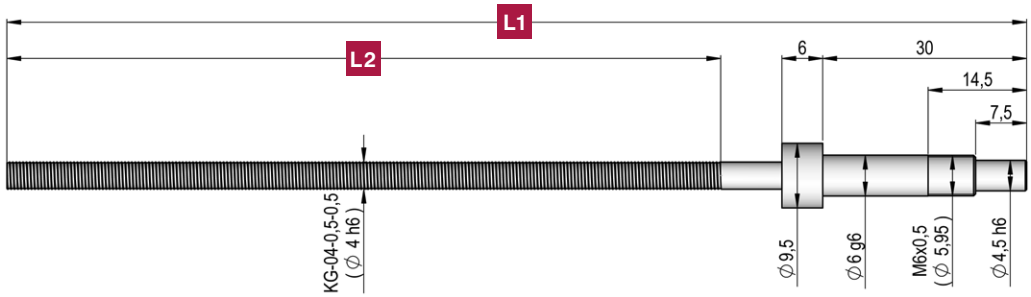
Tolerances corresponding to ISO/DIS 286 Part 1

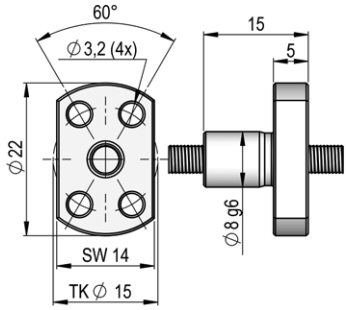
Precision-ground ballscrews

Nominal diameter 4.0 mm | Lead 0.5 mm
Max. speed 4000 rpm | Ball diameter 0.50 mm

Ø 4.0
/ 0.5

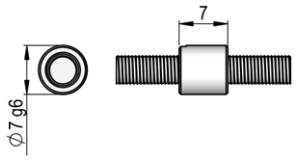


F1 Flange nut



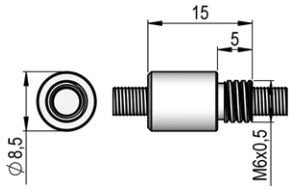
Circuits	2	C_{dyn} [N]	125
Wiper	No	C_{stat} [N]	140

Z1 Cylindrical nut



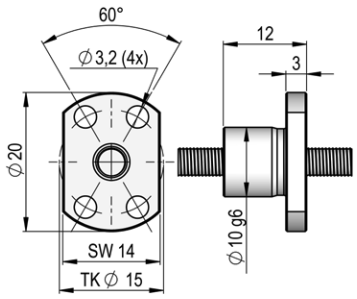
Circuits	2	C_{dyn} [N]	125
Wiper	No	C_{stat} [N]	140

E1 Anchor nut



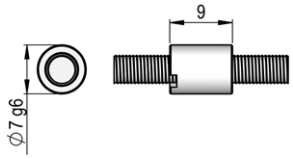
Circuits	2	C_{dyn} [N]	125
Wiper	No	C_{stat} [N]	140

F2 Flange nut



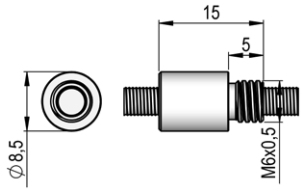
Circuits	2	C_{dyn} [N]	125
Wiper	No	C_{stat} [N]	140

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	150
Wiper	No	C_{stat} [N]	170

E2 Anchor nut



Circuits	3	C_{dyn} [N]	150
Wiper	No	C_{stat} [N]	170

Part number/ordering information:

KGT - F1 - 04 - 0.5 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 125*

Thread length [mm]
≤ 80*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52

Tolerances corresponding to ISO/DIS 286 Part 1

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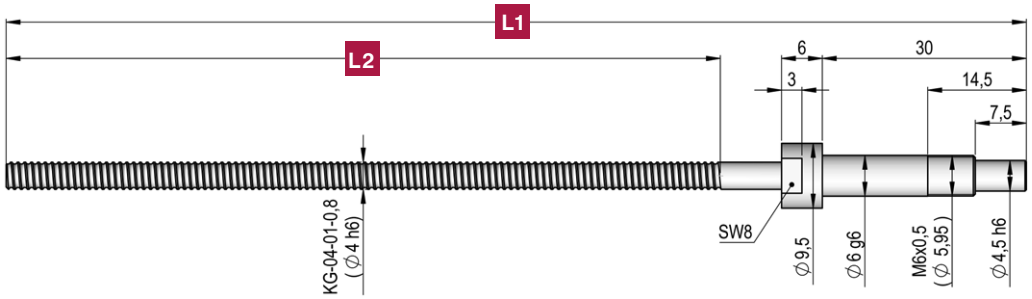
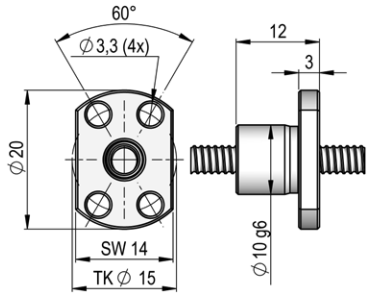
Ø 4.0
/ 1.0

Precision-ground ballscrews

Nominal diameter 4.0 mm | Lead 1.0 mm
Max. speed 4500 rpm | Ball diameter 0.80 mm

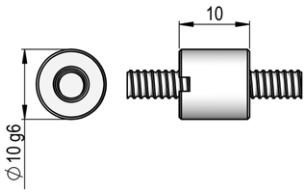


F1 Flange nut



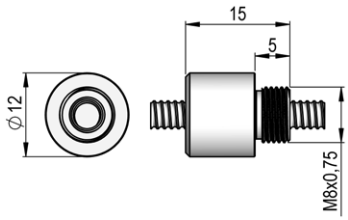
Circuits	2	C_{dyn} [N]	320
Wiper	No	C_{stat} [N]	400

Z1 Cylindrical nut



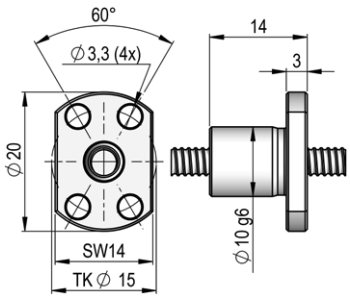
Circuits	2	C_{dyn} [N]	320
Wiper	No	C_{stat} [N]	400

E1 Anchor nut



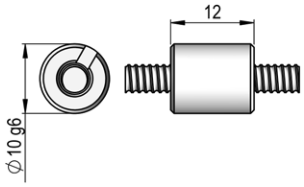
Circuits	2	C_{dyn} [N]	320
Wiper	No	C_{stat} [N]	400

F2 Flange nut



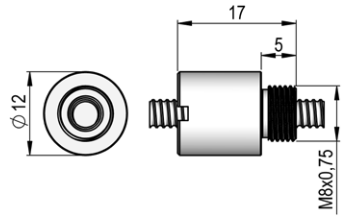
Circuits	3	C_{dyn} [N]	480
Wiper	No	C_{stat} [N]	560

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	480
Wiper	No	C_{stat} [N]	560

E2 Anchor nut



Circuits	3	C_{dyn} [N]	480
Wiper	No	C_{stat} [N]	560

Part number/ordering information:

KGT - F1 - 04 - 01 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 200*

Thread length [mm]
≤ 150*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52

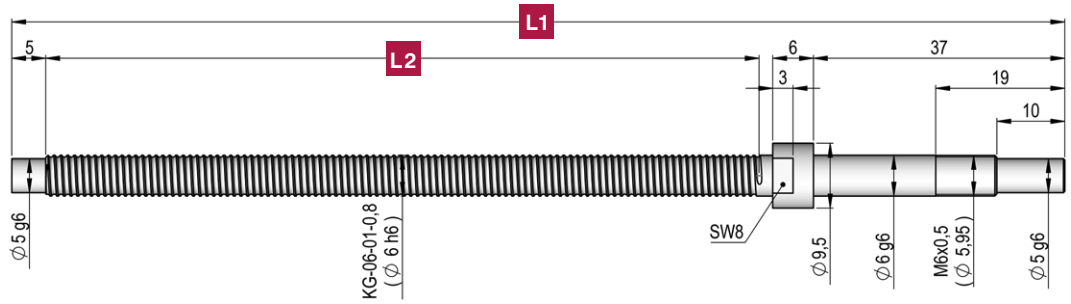
Tolerances corresponding to ISO/DIS 286 Part 1

HIPP Moving Precision

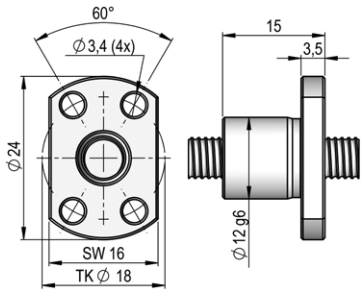
Precision-ground ballscrews

Nominal diameter 6.0 mm | Lead 1.0 mm
Max. speed 4500 rpm | Ball diameter 0.80 mm

Ø 6.0
/ 1.0

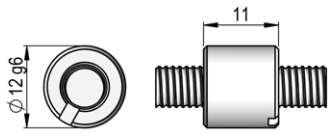


F1 Flange nut



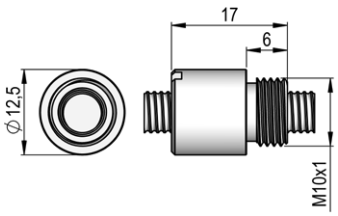
Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	850

Z1 Cylindrical nut



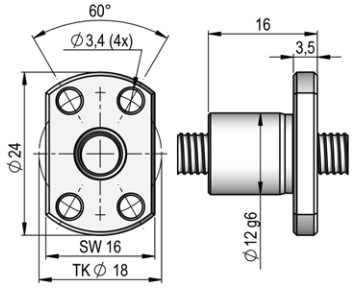
Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	850

E1 Anchor nut



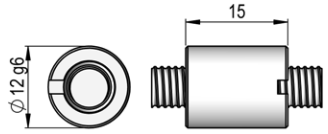
Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	850

F2 Flange nut



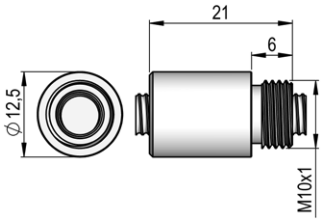
Circuits	4	C_{dyn} [N]	940
Wiper	No	C_{stat} [N]	1130

Z2 Cylindrical nut



Circuits	4	C_{dyn} [N]	940
Wiper	No	C_{stat} [N]	1130

E2 Anchor nut



Circuits	4	C_{dyn} [N]	940
Wiper	No	C_{stat} [N]	1130

Part number/ordering information:

KGT - F1 - 06 - 01 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 400*

Thread length [mm]
≤ 300*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80

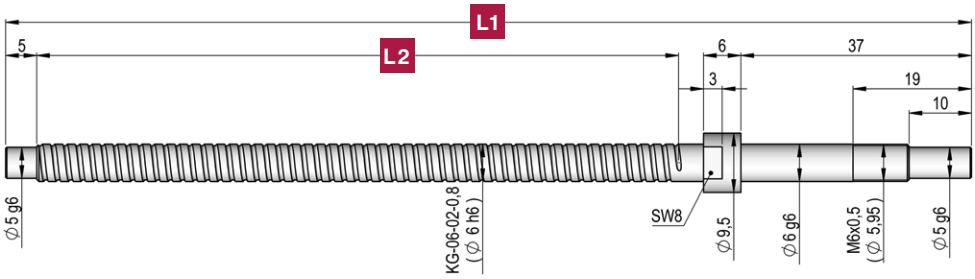
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

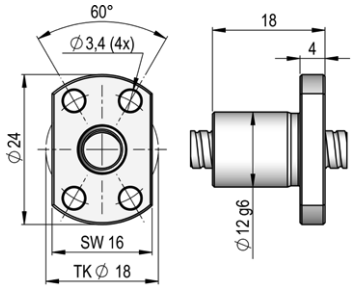
Ø 6.0
/ 2.0

Precision-ground ballscrews

Nominal diameter 6.0 mm | Lead 2.0 mm
Max. speed 4500 rpm | Ball diameter 0.80 mm

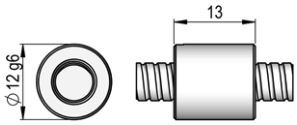


F1 Flange nut



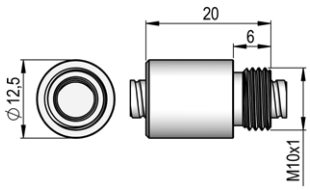
Circuits	2	C_{dyn} [N]	510
Wiper	No	C_{stat} [N]	560

Z1 Cylindrical nut



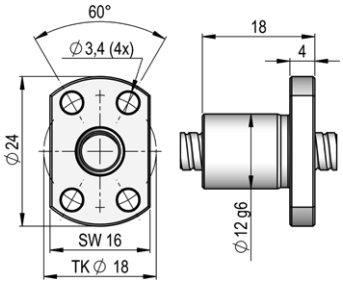
Circuits	2	C_{dyn} [N]	510
Wiper	No	C_{stat} [N]	560

E1 Anchor nut



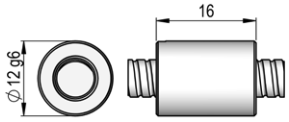
Circuits	2	C_{dyn} [N]	510
Wiper	No	C_{stat} [N]	560

F2 Flange nut



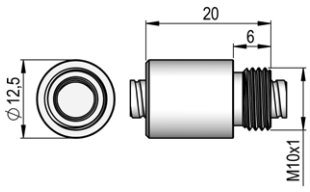
Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	840

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	840

E2 Anchor nut



Circuits	3	C_{dyn} [N]	730
Wiper	No	C_{stat} [N]	840

Part number/ordering information:

KGT - F1 - 06 - 02 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 400*

Thread length [mm]
≤ 300*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80

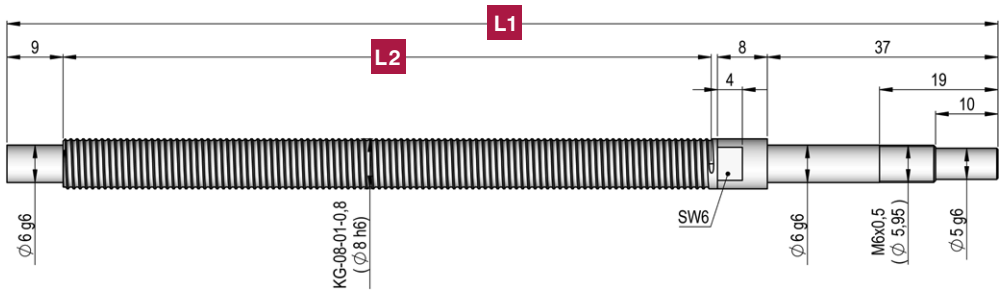
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

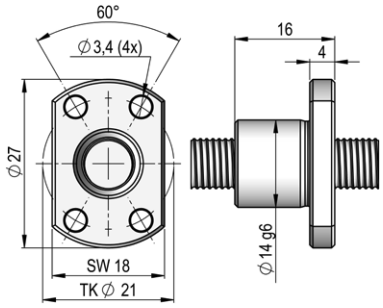
Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 1.0 mm
Max. speed 3200 rpm | Ball diameter 0.80 mm

Ø 8.0
/ 1.0

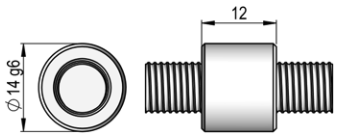


F1 Flange nut



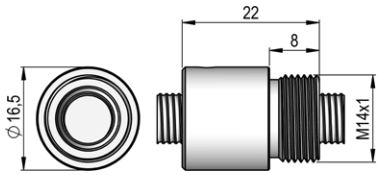
Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

Z1 Cylindrical nut



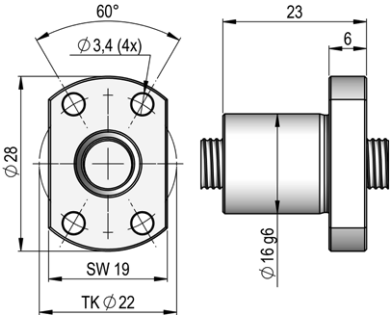
Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

E1 Anchor nut



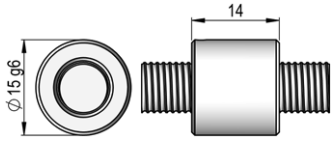
Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

F2 Flange nut



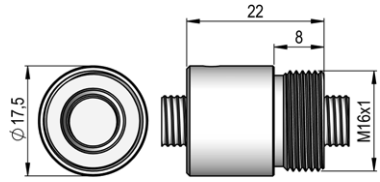
Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

E2 Anchor nut



Circuits	3	C_{dyn} [N]	850
Wiper	No	C_{stat} [N]	1150

Part number/ordering information:

KGT - F1 - 08 - 01 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

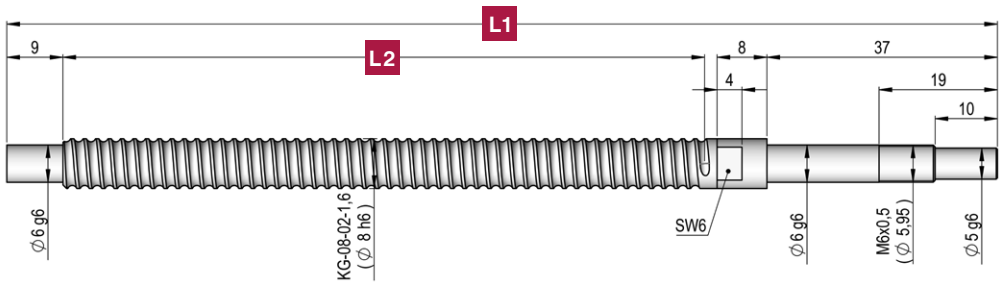
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

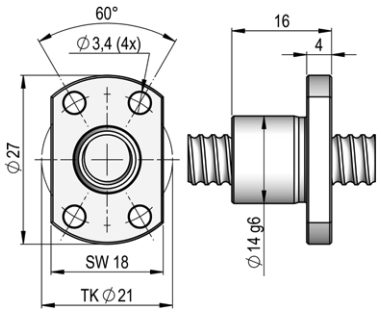
Ø 8.0
/ 2.0

Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 2.0 mm
Max. speed 4500 rpm | Ball diameter 1.60 mm

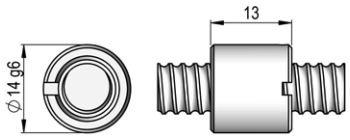


F1 Flange nut



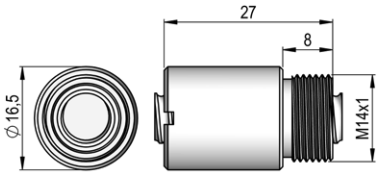
Circuits	2	C_{dyn} [N]	1450
Wiper	No	C_{stat} [N]	1550

Z1 Cylindrical nut



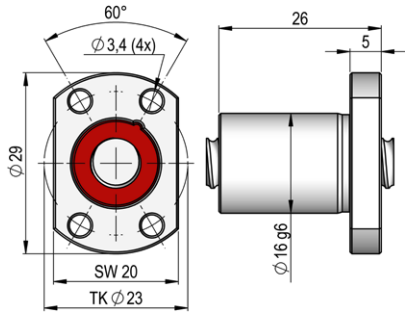
Circuits	2	C_{dyn} [N]	1450
Wiper	No	C_{stat} [N]	1550

E1 Anchor nut



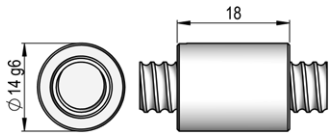
Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

F2 Flange nut



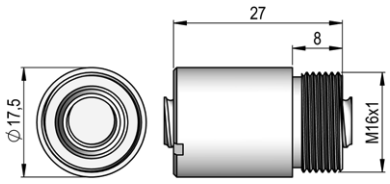
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2320

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

Part number/ordering information:

KGT - F1 - 08 - 02 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

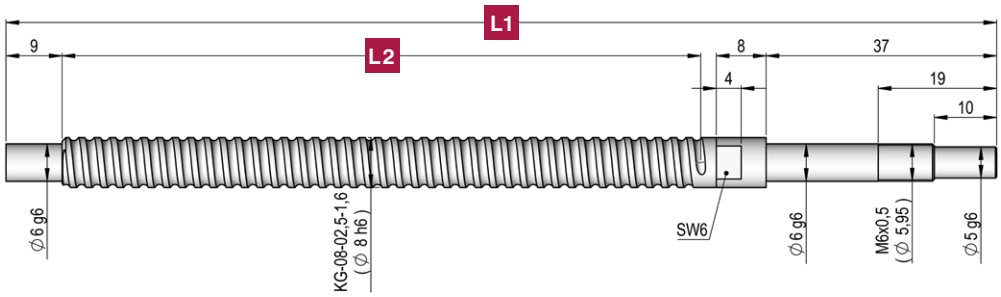
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

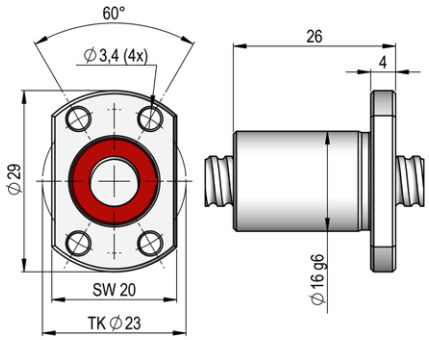
Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 2.5 mm
Max. speed 4500 rpm | Ball diameter 1.60 mm

Ø 8.0
/ 2.5

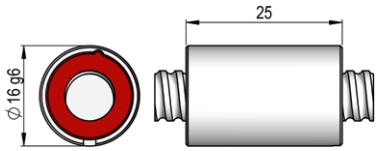


F1 Flange nut



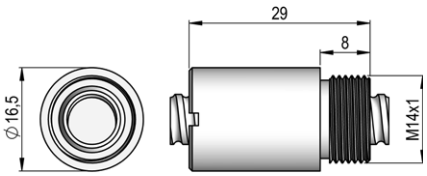
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2320

Z1 Cylindrical nut



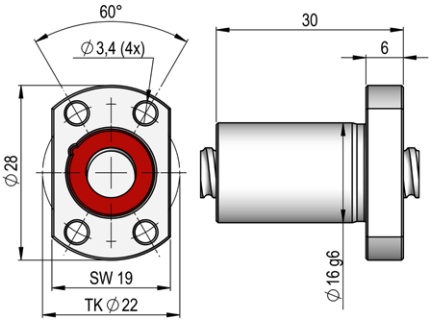
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2320

E1 Anchor nut



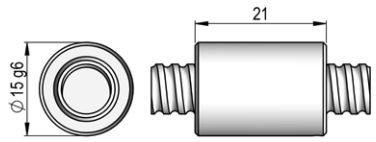
Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

F2 Flange nut



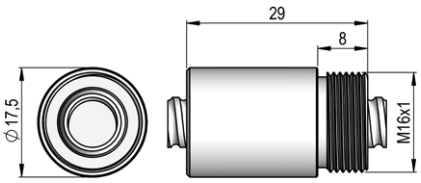
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2320

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2320

Part number/ordering information:

KGT - F1 - 08 - 02.5 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

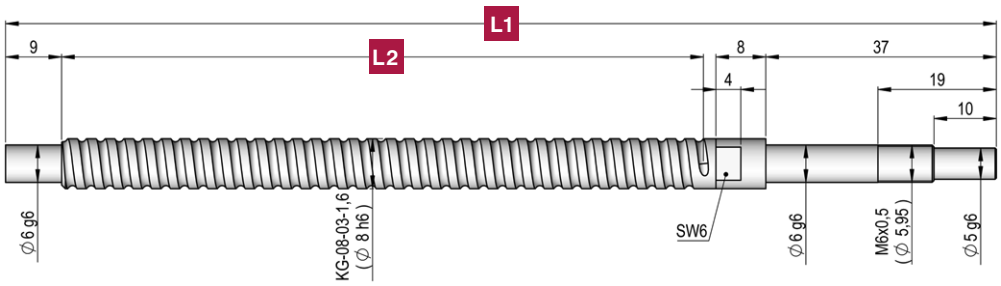
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

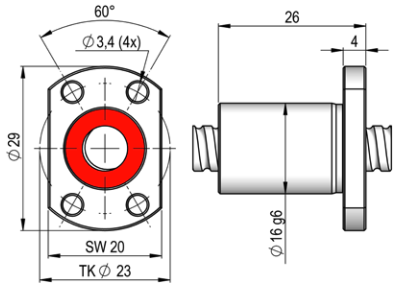
Ø 8.0
/ 3.0

Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 3.0 mm
Max. speed 4500 rpm | Ball diameter 1.60 mm

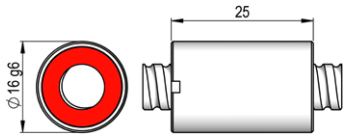


F1 Flange nut



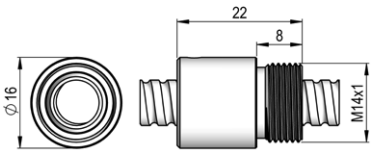
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2330

Z1 Cylindrical nut



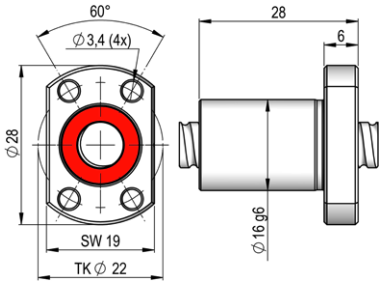
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2330

E1 Anchor nut



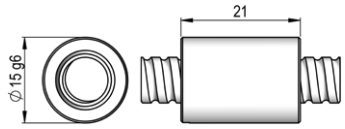
Circuits	2	C_{dyn} [N]	1470
Wiper	No	C_{stat} [N]	1550

F2 Flange nut



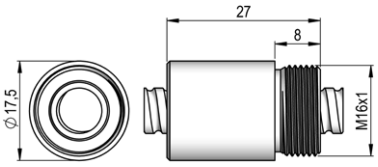
Circuits	3	C_{dyn} [N]	2050
Wiper	Yes	C_{stat} [N]	2330

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2330

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2050
Wiper	No	C_{stat} [N]	2330

Part number/ordering information:

KGT - F1 - 08 - 03 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

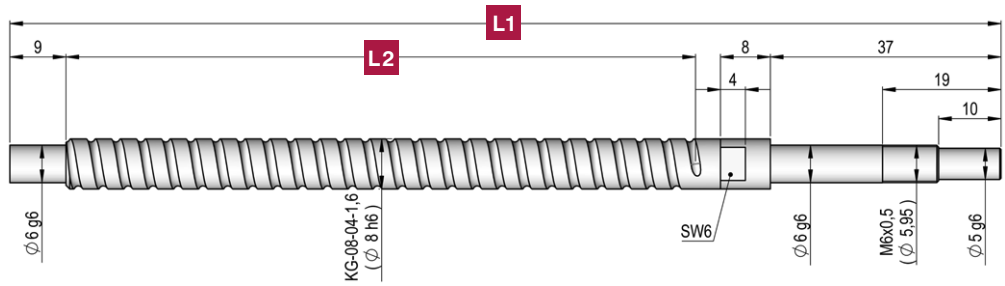
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

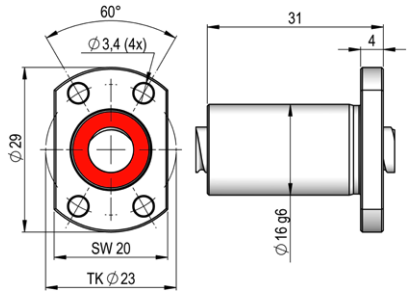
Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 4.0 mm
Max. speed 4500 rpm | Ball diameter 1.60 mm

Ø 8.0
/ 4.0

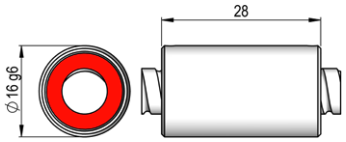


F1 Flange nut



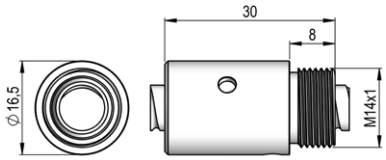
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2300

Z1 Cylindrical nut



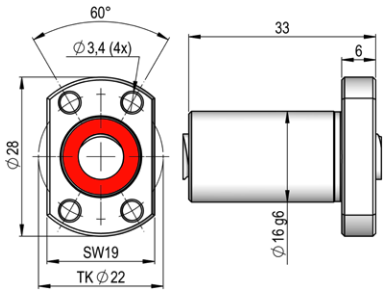
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2300

E1 Anchor nut



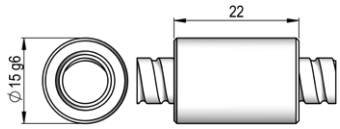
Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2300

F2 Flange nut



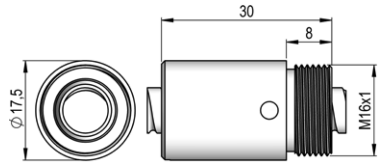
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2300

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2300

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2300

Part number/ordering information:

KGT - F1 - 08 - 04 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]		Tolerances [µm]			
– 315		6	12	23	52
316 – 400		7	13	25	57
401 – 500		8	15	27	63
501 – 630		9	16	30	70
631 – 800		10	18	35	80
801 – 1000		11	21	40	90

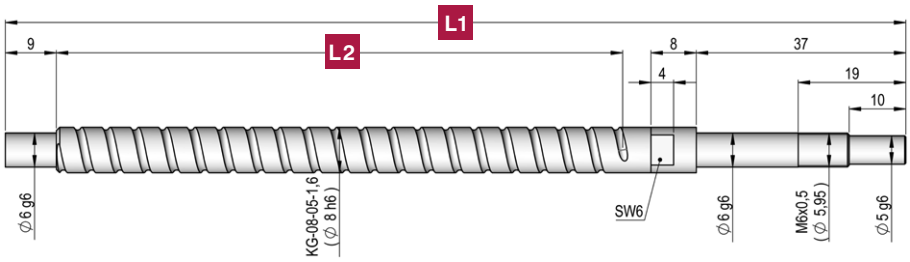
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

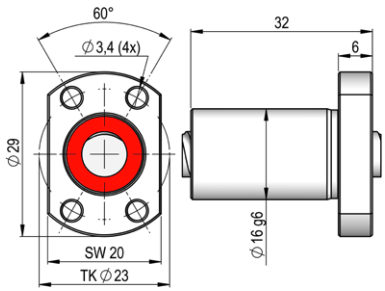
Ø 8.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 8.0 mm | Lead 5.0 mm
Max. speed 4000 rpm | Ball diameter 1.60 mm

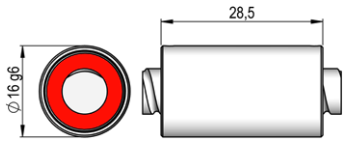


F1 Flange nut



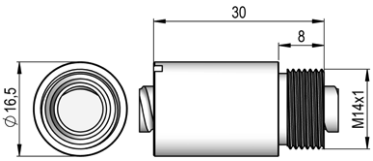
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2230

Z1 Cylindrical nut



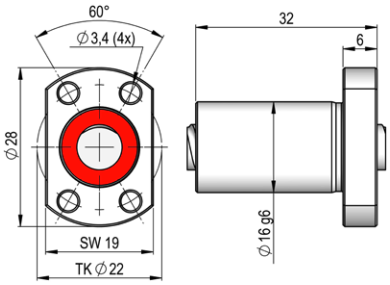
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2230

E1 Anchor nut



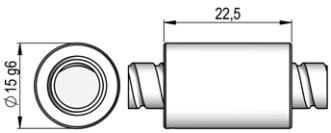
Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2230

F2 Flange nut



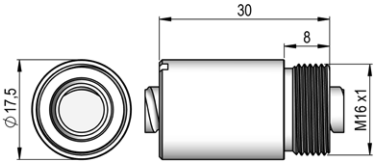
Circuits	3	C_{dyn} [N]	2000
Wiper	Yes	C_{stat} [N]	2230

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2230

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2000
Wiper	No	C_{stat} [N]	2230

Part number/ordering information:

KGT - F1 - 08 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 650*

Thread length [mm]
≤ 500*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

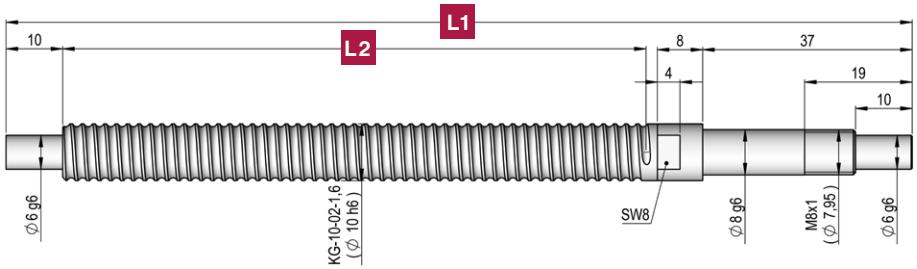
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

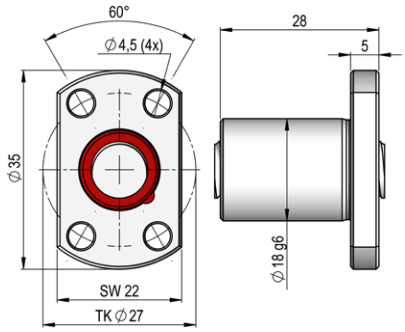
Precision-ground ballscrews

Nominal diameter 10.0 mm | Lead 2.0 mm
Max. speed 4000 rpm | Ball diameter 1.60 mm

Ø 10.0
/ 2.0

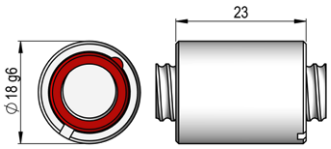


F1 Flange nut



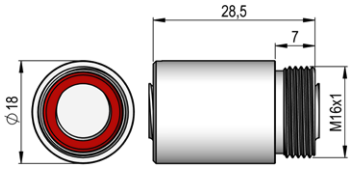
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

Z1 Cylindrical nut



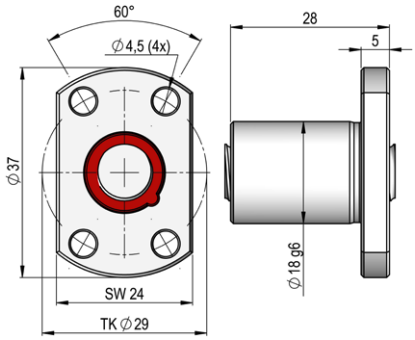
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

E1 Anchor nut



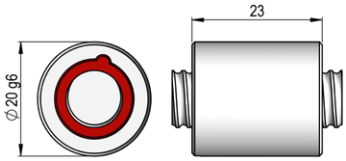
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

F2 Flange nut



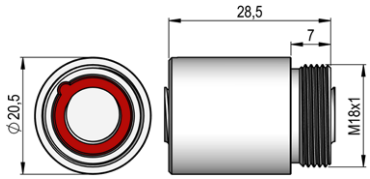
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2950

Part number/ordering information:

KGT - F1 - 10 - 02 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 850*

Thread length [mm]
≤ 600*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

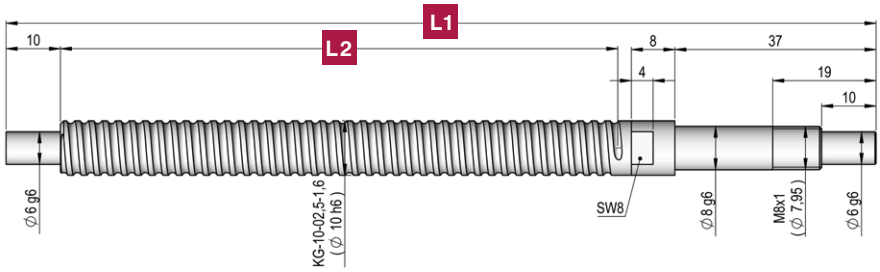
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

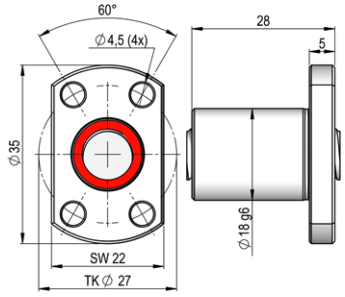
Ø 10.0
/ 2.5

Precision-ground ballscrews

Nominal diameter 10.0 mm | Lead 2.5 mm
Max. speed 4000 rpm | Ball diameter 1.60 mm

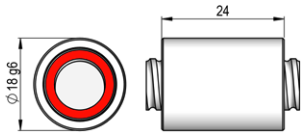


F1 Flange nut



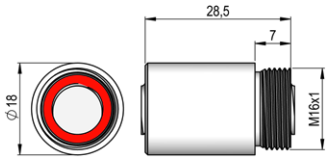
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

Z1 Cylindrical nut



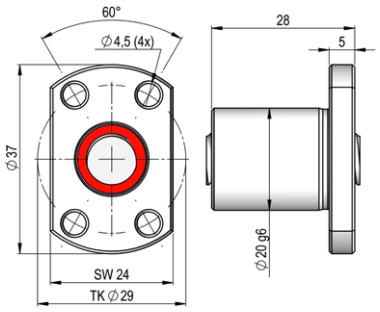
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

E1 Anchor nut



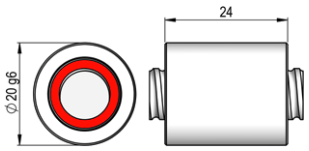
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

F2 Flange nut



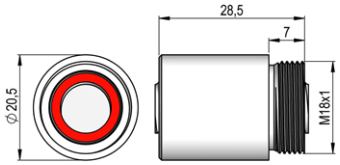
Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	3000

Part number/ordering information:

KGT - F1 - 10 - 02.5 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 850*

Thread length [mm]
≤ 600*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

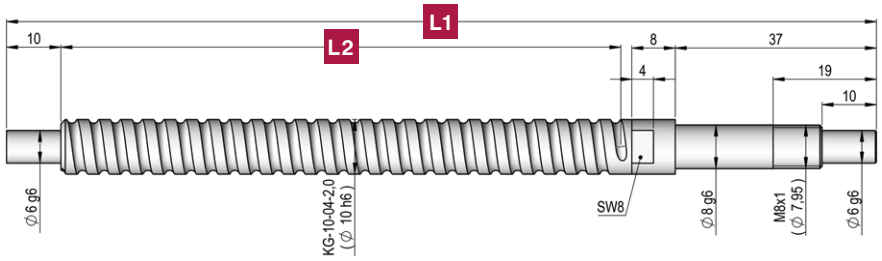
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

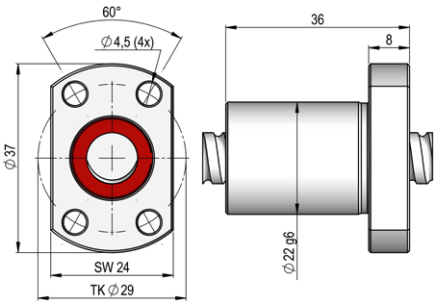
Precision-ground ballscrews

Nominal diameter 10.0 mm | Lead 4.0 mm
Max. speed 4500 rpm | Ball diameter 2.00 mm

Ø 10.0
/ 4.0

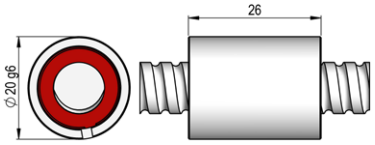


F1 Flange nut



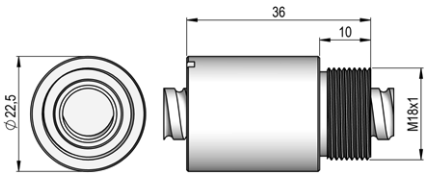
Circuits	3	C_{dyn} [N]	2800
Wiper	Yes	C_{stat} [N]	3200

Z1 Cylindrical nut



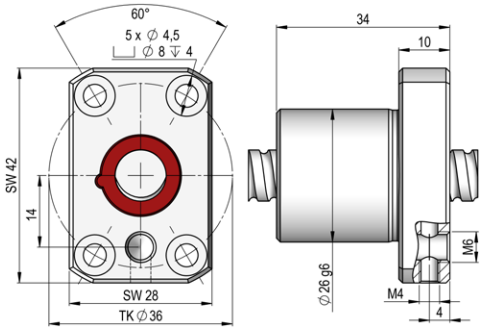
Circuits	3	C_{dyn} [N]	2800
Wiper	Yes	C_{stat} [N]	3200

E1 Anchor nut



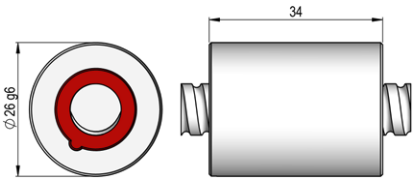
Circuits	3	C_{dyn} [N]	2800
Wiper	No	C_{stat} [N]	3200

F2 Flange nut



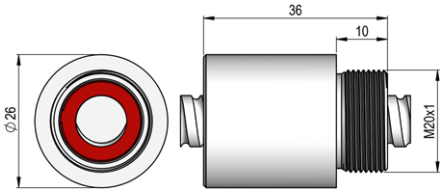
Circuits	3	C_{dyn} [N]	2800
Wiper	Yes	C_{stat} [N]	3200

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2800
Wiper	Yes	C_{stat} [N]	3200

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2800
Wiper	Yes	C_{stat} [N]	3200

Part number/ordering information:

KGT - F1 - 10 - 04 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 850*

Thread length [mm]
≤ 600*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

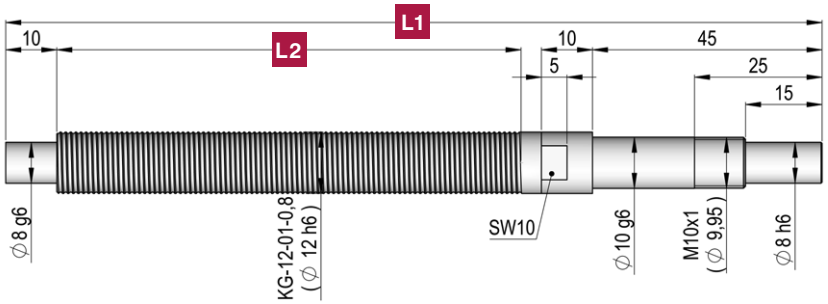
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

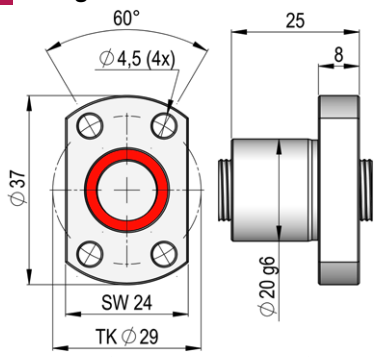
Ø 12.0
/ 1.0

Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 1.0 mm
Max. speed 1800 rpm | Ball diameter 0.80 mm

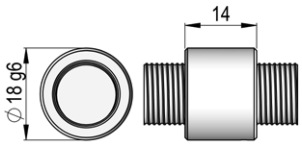


F1 Flange nut



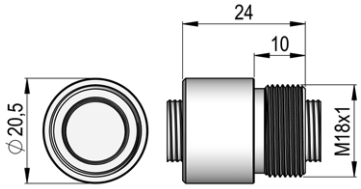
Circuits	3	C_{dyn} [N]	1050
Wiper	Yes	C_{stat} [N]	1800

Z1 Cylindrical nut



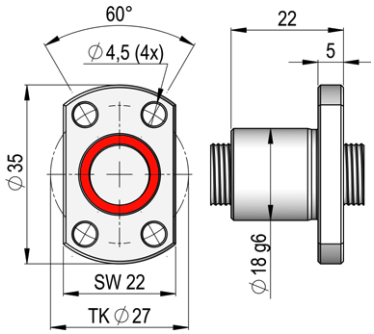
Circuits	3	C_{dyn} [N]	1050
Wiper	No	C_{stat} [N]	1800

E1 Anchor nut



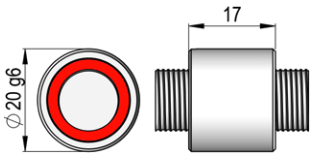
Circuits	3	C_{dyn} [N]	1050
Wiper	No	C_{stat} [N]	1800

F2 Flange nut



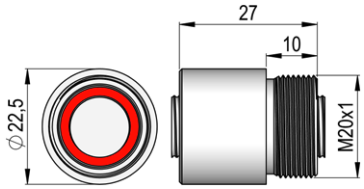
Circuits	3	C_{dyn} [N]	1050
Wiper	Yes	C_{stat} [N]	1800

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	1050
Wiper	Yes	C_{stat} [N]	1800

E2 Anchor nut



Circuits	3	C_{dyn} [N]	1050
Wiper	Yes	C_{stat} [N]	1800

Part number/ordering information:

KGT - F1 - 12 - 01 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 600*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

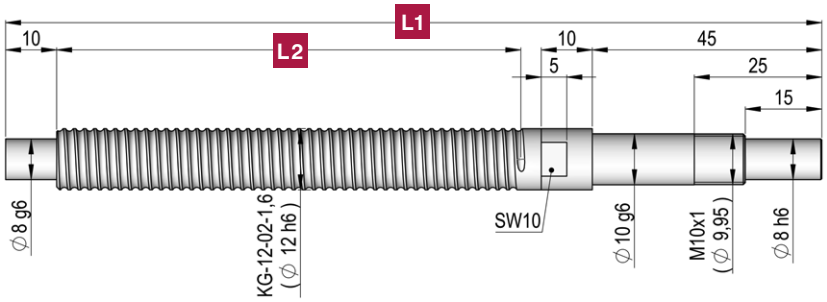
Tolerances corresponding to ISO/DIS 286 Part 1

HIPP Moving Precision

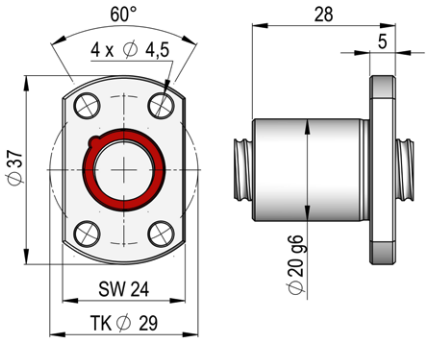
Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 2.0 mm
Max. speed 3600 rpm | Ball diameter 1.60 mm

Ø 12.0
/ 2.0

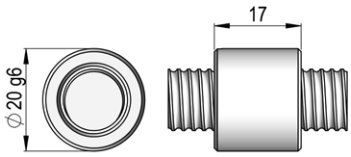


F1 Flange nut



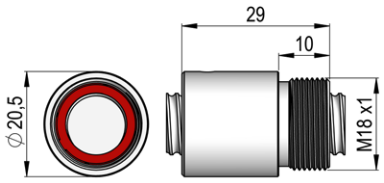
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z1 Cylindrical nut



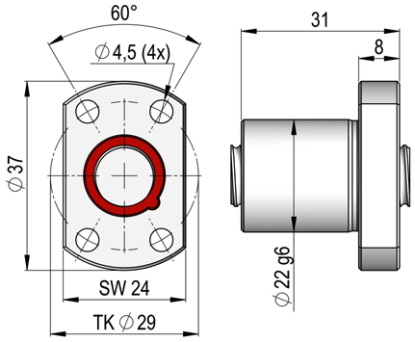
Circuits	3	C_{dyn} [N]	2670
Wiper	No	C_{stat} [N]	3650

E1 Anchor nut



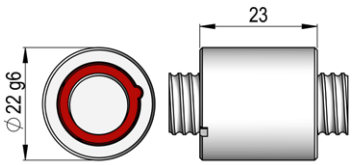
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

F2 Flange nut



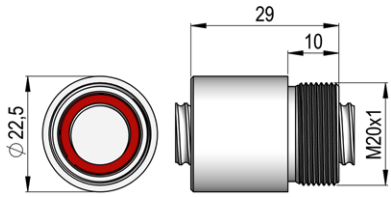
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Part number/ordering information:

KGT - F1 - 12 - 02 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 700*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

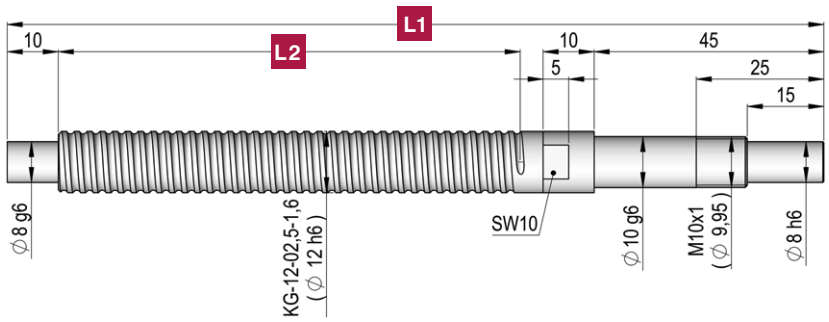
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

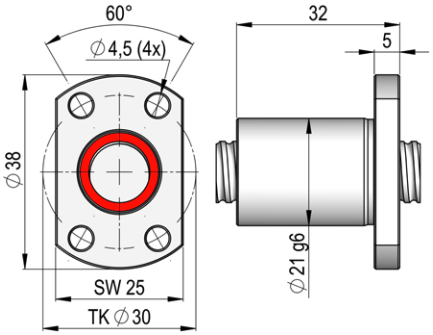
Ø 12.0
/ 2.5

Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 2.5 mm
Max. speed 3800 rpm | Ball diameter 1.60 mm

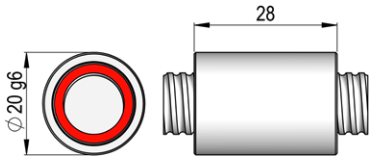


F1 Flange nut



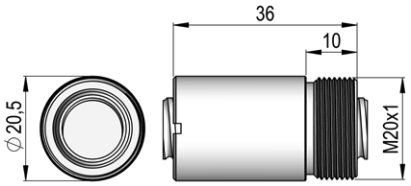
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z1 Cylindrical nut



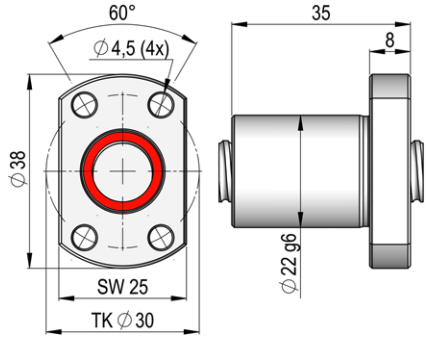
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

E1 Anchor nut



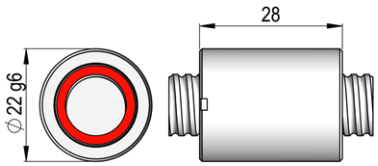
Circuits	3	C_{dyn} [N]	2670
Wiper	No	C_{stat} [N]	3650

F2 Flange nut



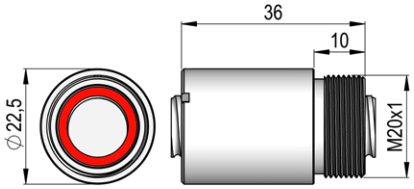
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Part number/ordering information:

KGT - F1 - 12 - 02.5 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 700*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

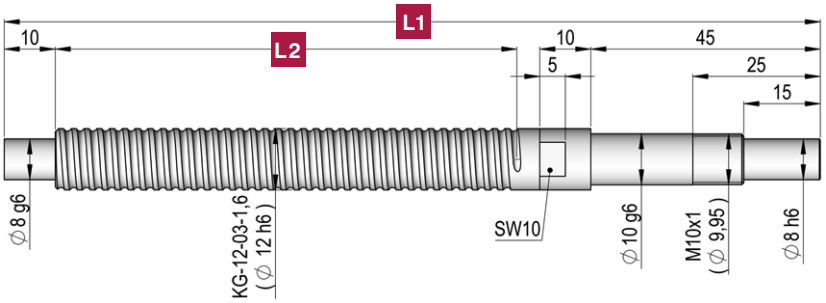
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

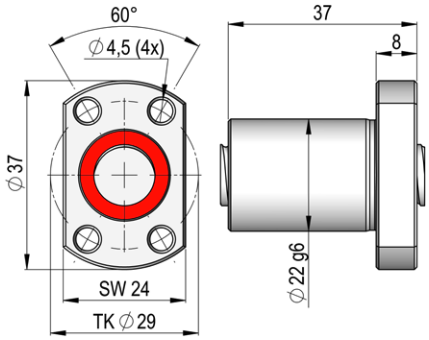
Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 3.0 mm
Max. speed 4000 rpm | Ball diameter 1.60 mm

Ø 12.0
/ 3.0

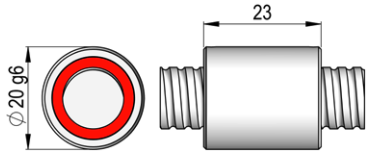


F1 Flange nut



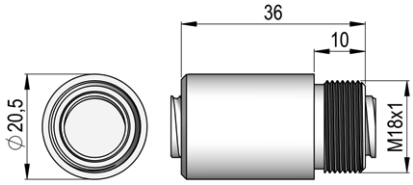
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z1 Cylindrical nut



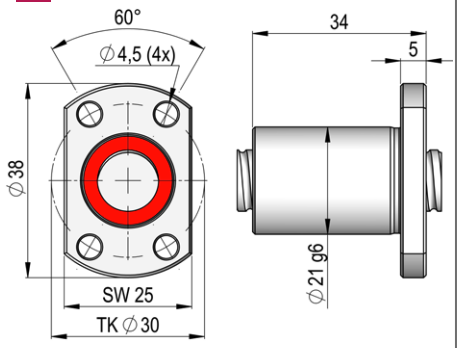
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

E1 Anchor nut



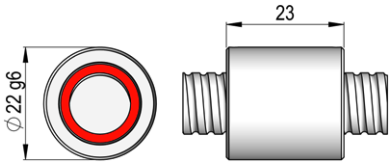
Circuits	3	C_{dyn} [N]	2670
Wiper	No	C_{stat} [N]	3650

F2 Flange nut



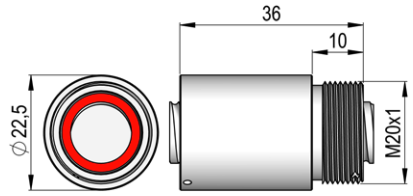
Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

E2 Anchor nut



Circuits	3	C_{dyn} [N]	2670
Wiper	Yes	C_{stat} [N]	3650

Part number/ordering information:

KGT - F1 - 12 - 03 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 700*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

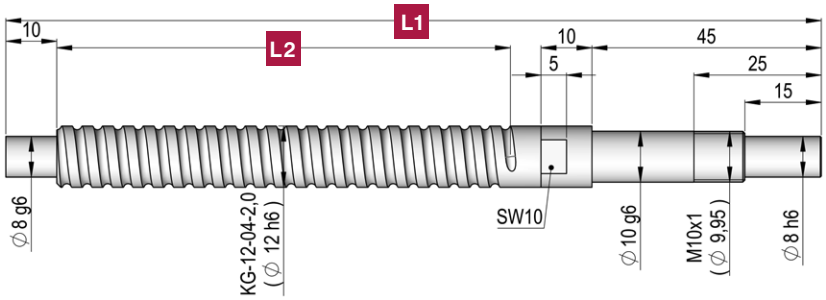
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

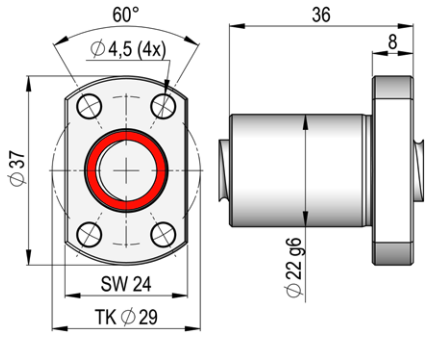
Ø 12.0
/ 4.0

Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 4.0 mm
Max. speed 4300 rpm | Ball diameter 2.00 mm

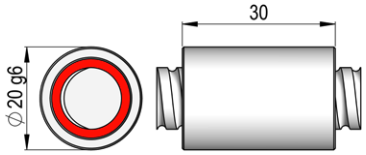


F1 Flange nut



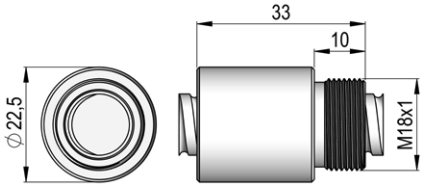
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3800

Z1 Cylindrical nut



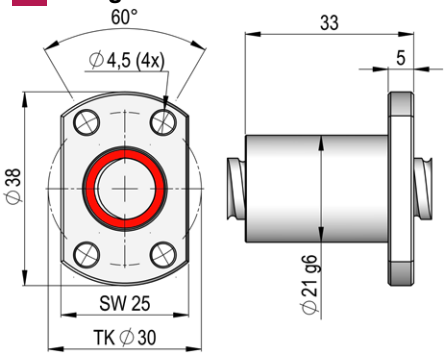
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3800

E1 Anchor nut



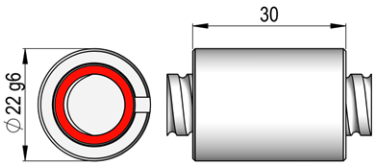
Circuits	3	C_{dyn} [N]	3100
Wiper	No	C_{stat} [N]	3800

F2 Flange nut



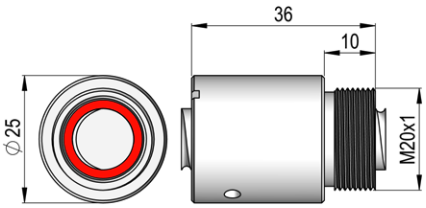
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3800

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3800

E2 Anchor nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3800

Part number/ordering information:

KGT - F1 - 12 - 04 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

Axial play [mm]
O = 0.0
S = 0.01 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

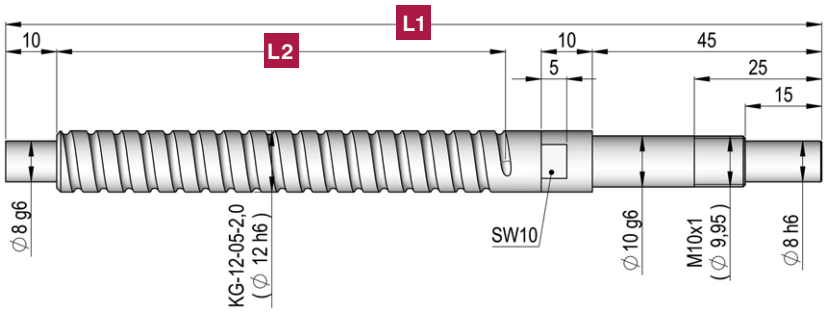
Tolerances corresponding to ISO/DIS 286 Part 1

HIPP Moving Precision

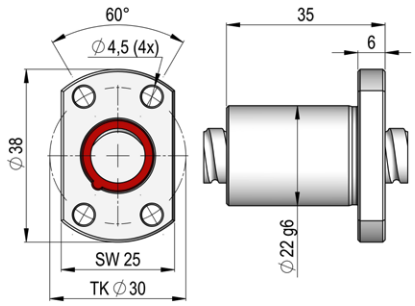
Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 5.0 mm
Max. speed 4300 rpm | Ball diameter 2.00 mm

Ø 12.0
/ 5.0

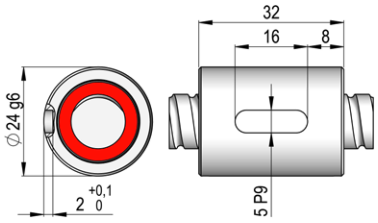


F1 Flange nut



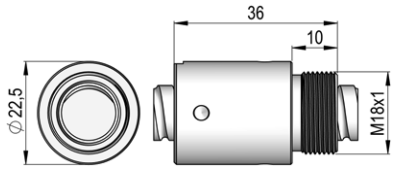
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3900

Z1 Cylindrical nut



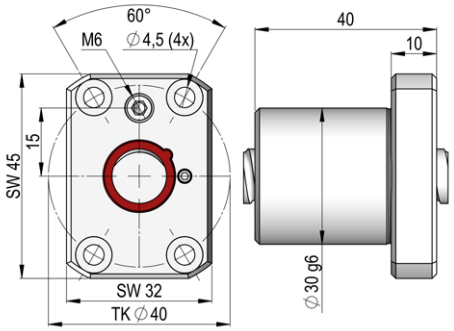
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3900

E1 Anchor nut



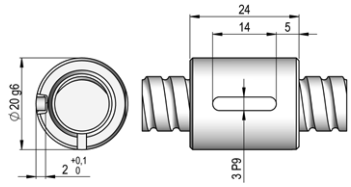
Circuits	3	C_{dyn} [N]	3100
Wiper	No	C_{stat} [N]	3900

F2 Flange nut



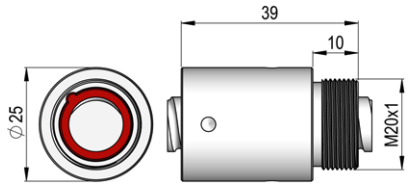
Circuits	2	C_{dyn} [N]	2400
Wiper	Yes	C_{stat} [N]	2800

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	3100
Wiper	No	C_{stat} [N]	3900

E2 Anchor nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	3900

Part number/ordering information:

KGT - F1 - 12 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

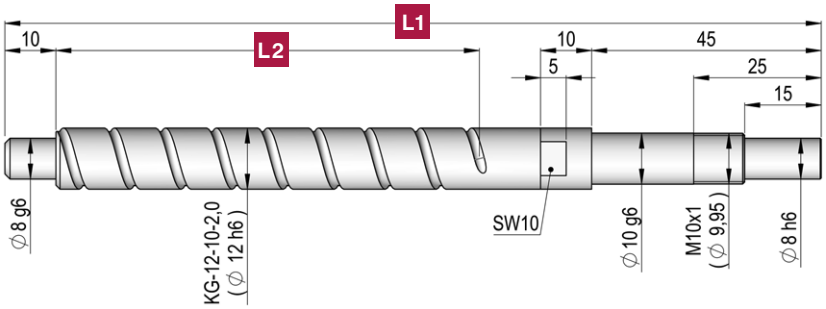
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

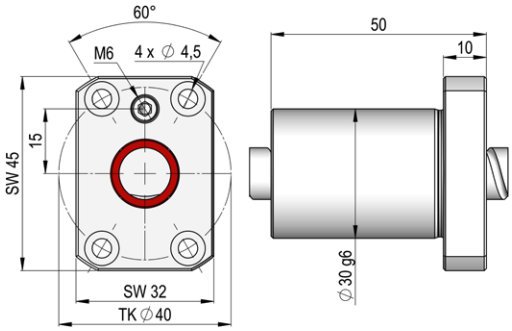
Ø 12.0
/ 10.0

Precision-ground ballscrews

Nominal diameter 12.0 mm | Lead 10.0 mm
Max. speed 4300 rpm | Ball diameter 2.00 mm

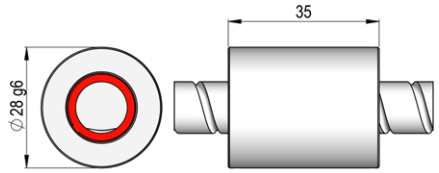


F1 Flange nut



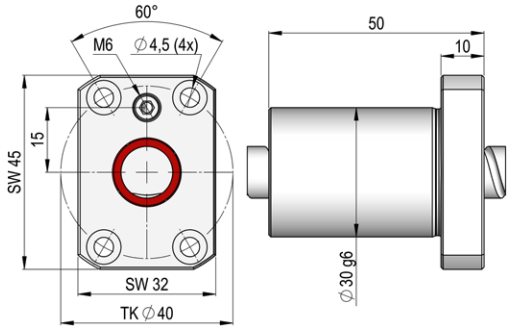
Circuits	2	C_{dyn} [N]	2300
Wiper	Yes	C_{stat} [N]	2900

Z1 Cylindrical nut



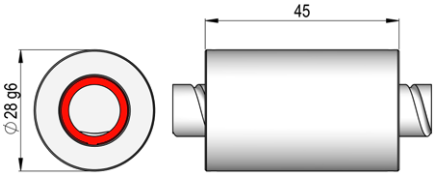
Circuits	2	C_{dyn} [N]	2300
Wiper	Yes	C_{stat} [N]	2900

F2 Flange nut



Circuits	3	C_{dyn} [N]	3300
Wiper	Yes	C_{stat} [N]	4300

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	3300
Wiper	Yes	C_{stat} [N]	4300

Part number/ordering information:

KGT - F1 - 12 - 10 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

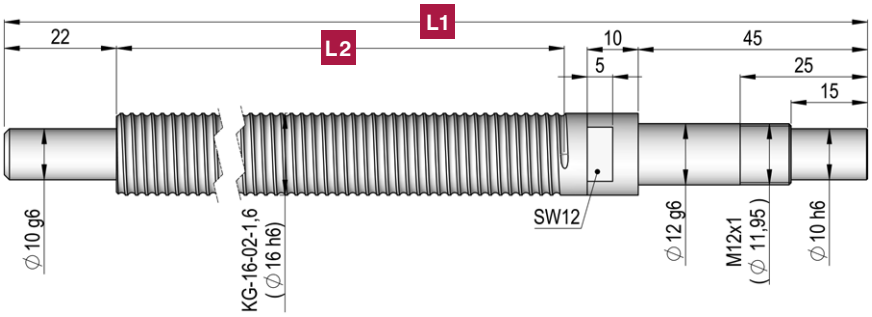
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

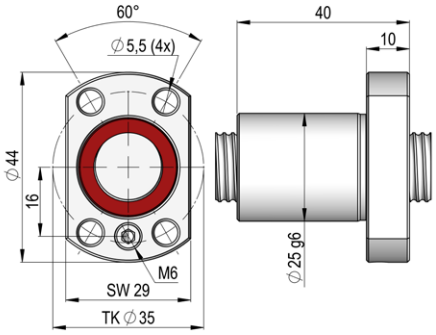
Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 2.0 mm
Max. speed 3000 rpm | Ball diameter 1.60 mm

Ø 16.0
/ 2.0

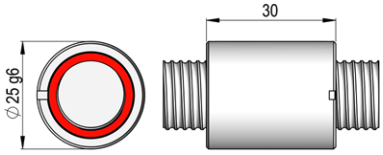


F1 Flange nut



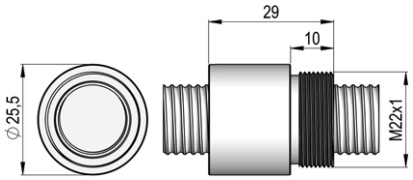
Circuits	4	C_{dyn} [N]	4000
Wiper	Yes	C_{stat} [N]	6500

Z1 Cylindrical nut



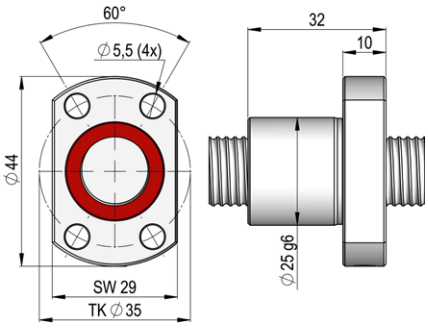
Circuits	4	C_{dyn} [N]	4000
Wiper	Yes	C_{stat} [N]	6500

E1 Anchor nut



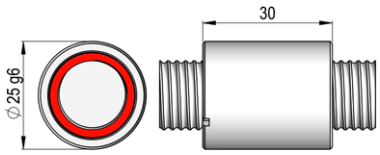
Circuits	3	C_{dyn} [N]	3100
Wiper	No	C_{stat} [N]	4900

F2 Flange nut



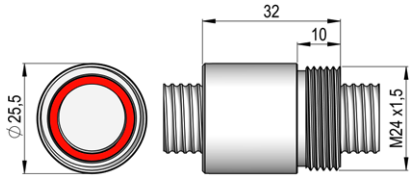
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

E2 Anchor nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

Part number/ordering information:

KGT - F1 - 16 - 02 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

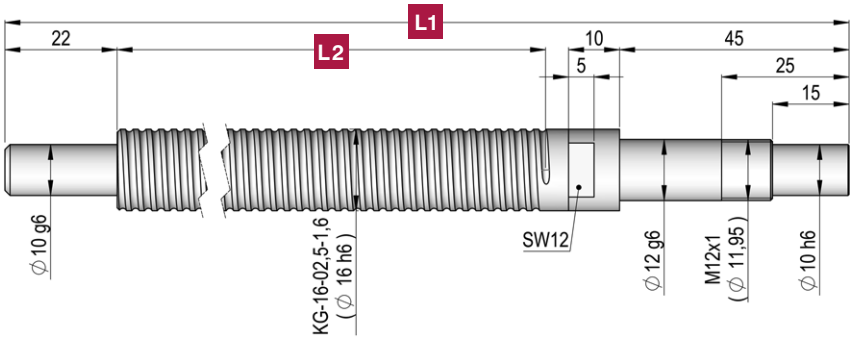
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

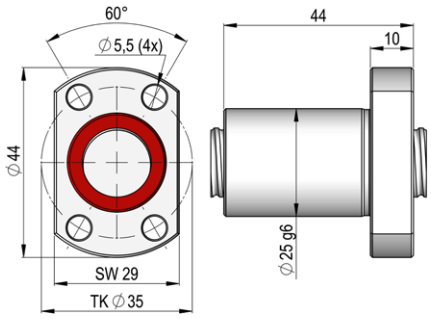
Ø 16.0
/ 2.5

Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 2.5 mm
Max. speed 3500 rpm | Ball diameter 1.60 mm

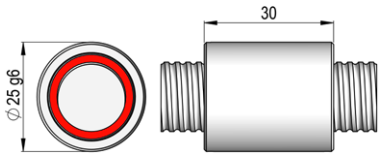


F1 Flange nut



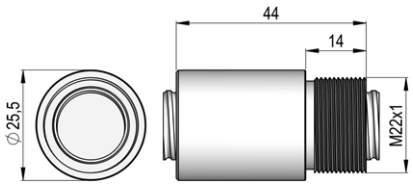
Circuits	4	C_{dyn} [N]	3800
Wiper	Yes	C_{stat} [N]	6600

Z1 Cylindrical nut



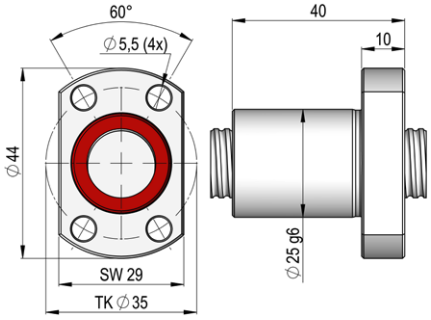
Circuits	4	C_{dyn} [N]	3800
Wiper	Yes	C_{stat} [N]	6600

E1 Anchor nut



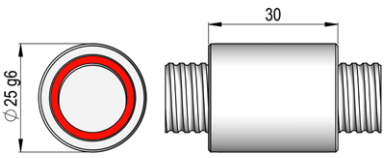
Circuits	3	C_{dyn} [N]	3100
Wiper	No	C_{stat} [N]	4900

F2 Flange nut



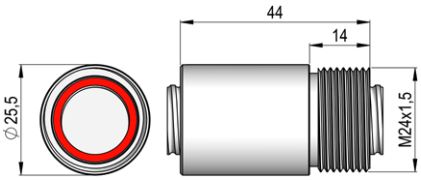
Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

E2 Anchor nut



Circuits	3	C_{dyn} [N]	3100
Wiper	Yes	C_{stat} [N]	4900

Part number/ordering information:

KGT - F1 - 16 - 02.5 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.01 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

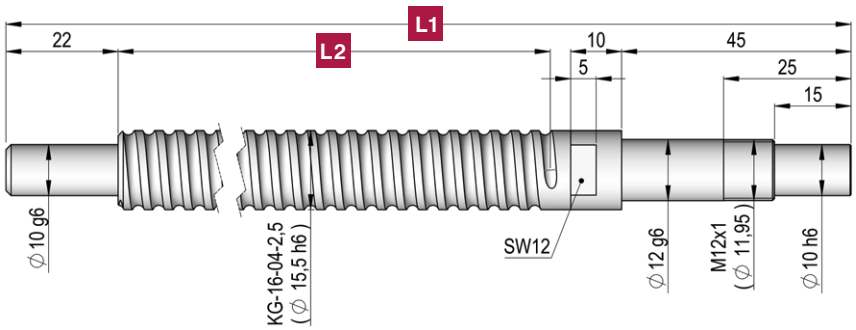
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

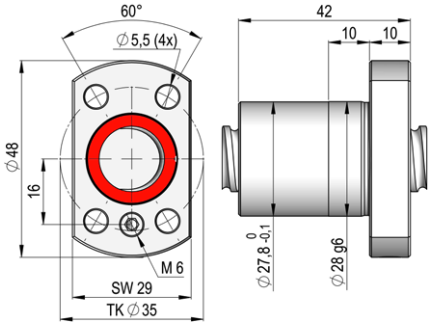
Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 4.0 mm
Max. speed 4000 rpm | Ball diameter 2.50 mm

Ø 16.0
/ 4.0

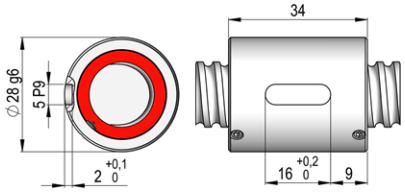


F1 Flange nut



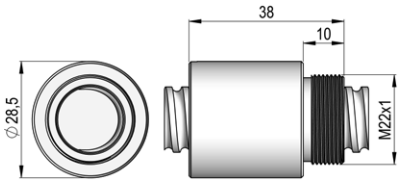
Circuits	4	C_{dyn} [N]	8700
Wiper	Yes	C_{stat} [N]	13100

Z1 Cylindrical nut



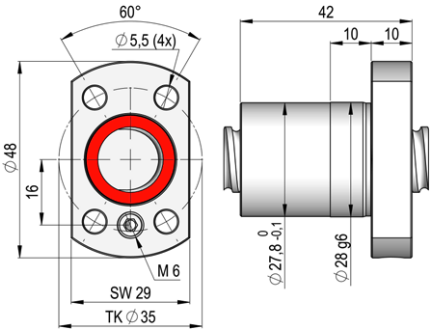
Circuits	4	C_{dyn} [N]	8700
Wiper	Yes	C_{stat} [N]	13100

E1 Anchor nut



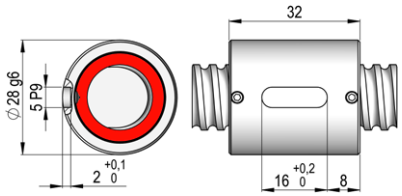
Circuits	3	C_{dyn} [N]	6800
Wiper	No	C_{stat} [N]	9800

F2 Flange nut



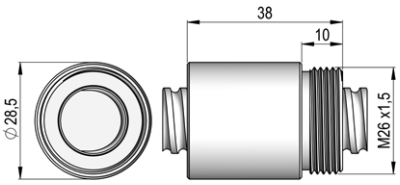
Circuits	3	C_{dyn} [N]	6800
Wiper	Yes	C_{stat} [N]	9800

Z2 Cylindrical nut



Circuits	3	C_{dyn} [N]	6800
Wiper	Yes	C_{stat} [N]	9800

E2 Anchor nut



Circuits	3	C_{dyn} [N]	6800
Wiper	No	C_{stat} [N]	9800

Part number/ordering information:

KGT - F1 - 16 - 04 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

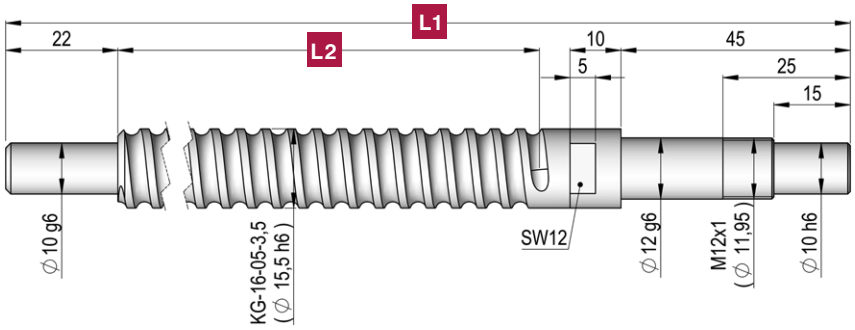
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

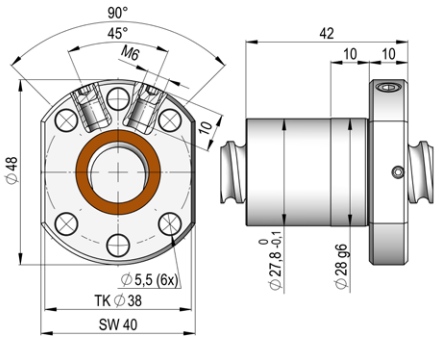
Ø 16.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 5.0 mm
Max. speed 4200 rpm | Ball diameter 3.50 mm

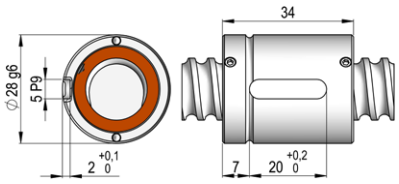


F1 Flange nut



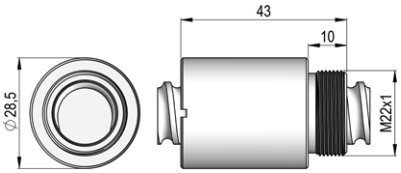
Circuits	3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [kN]	13.2

Z1 Cylindrical nut



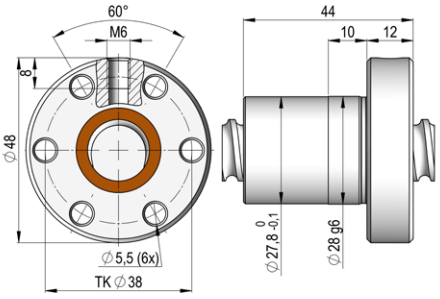
Circuits	3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [kN]	13.2

E1 Anchor nut



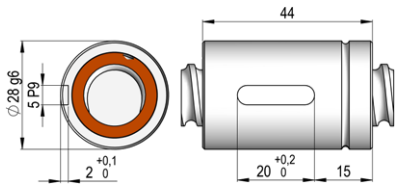
Circuits	3	C_{dyn} [kN]	10.1
Wiper	No	C_{stat} [kN]	13.2

F2 Flange nut



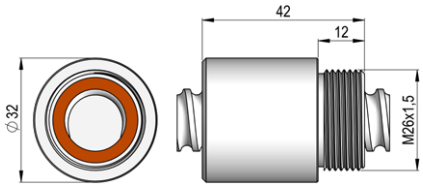
Circuits	3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [kN]	13.2

Z2 Cylindrical nut



Circuits	4	C_{dyn} [kN]	12.9
Wiper	Yes	C_{stat} [kN]	17.6

E2 Anchor nut



Circuits	3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [kN]	13.2

Part number/ordering information:

KGT - F1 - 16 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

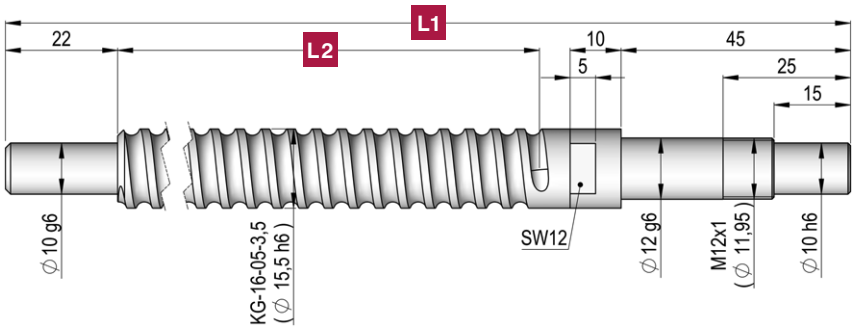
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

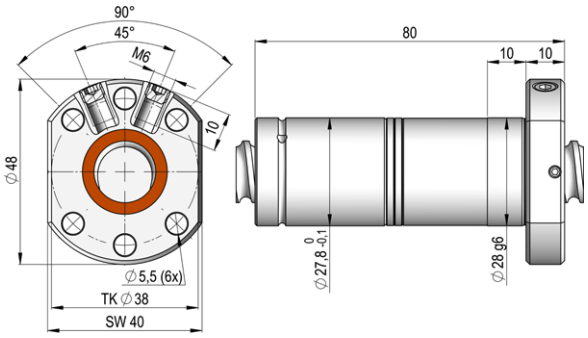
Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 5.0 mm
Max. speed 4200 rpm | Ball diameter 3.50 mm | Pre-loaded double nut

Ø 16.0
/ 5.0

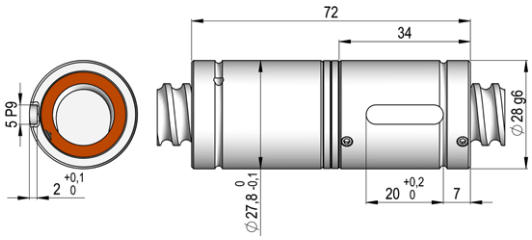


F3 Flange nut



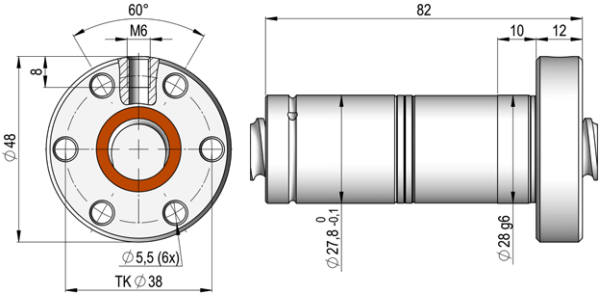
Circuits	2x3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [N]	13.2

Z3 Cylindrical nut



Circuits	2x3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [N]	13.2

F4 Flange nut



Circuits	2x3	C_{dyn} [kN]	10.1
Wiper	Yes	C_{stat} [N]	13.2

Part number/ordering information:

KGT - F1 - 16 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

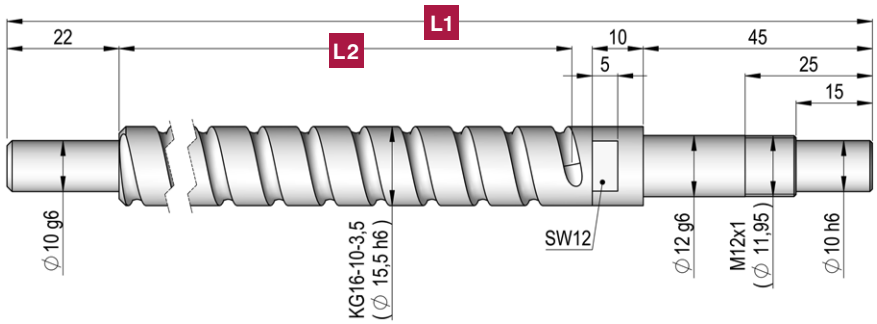
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

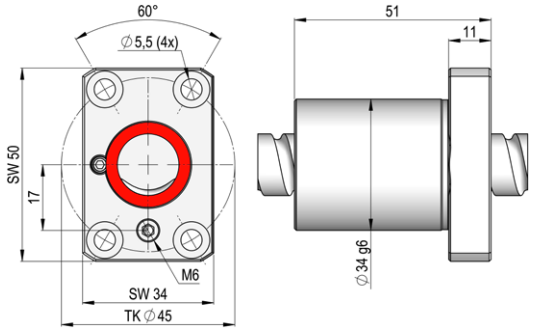
Ø 16.0
/ 10.0

Precision-ground ballscrews

Nominal diameter 16.0 mm | Lead 10.0 mm
Max. speed 4200 rpm | Ball diameter 3.50 mm

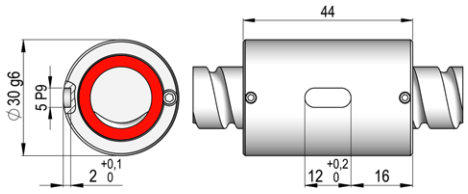


F1 Flange nut



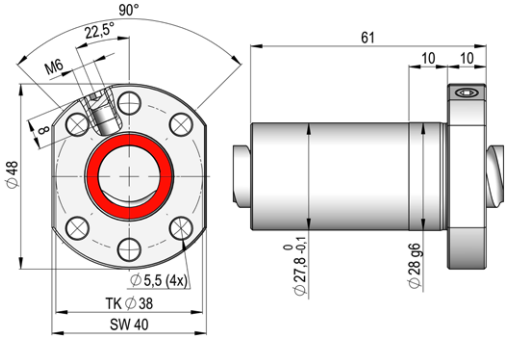
Circuits	2	C_{dyn} [kN]	7.6
Wiper	Yes	C_{stat} [kN]	10.0

Z1 Cylindrical nut



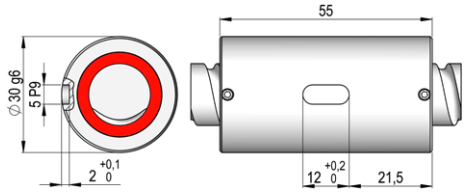
Circuits	2	C_{dyn} [kN]	7.6
Wiper	Yes	C_{stat} [kN]	10.0

F2 Flange nut



Circuits	3	C_{dyn} [kN]	10.9
Wiper	Yes	C_{stat} [kN]	15.0

Z2 Cylindrical nut



Circuits	3	C_{dyn} [kN]	10.9
Wiper	Yes	C_{stat} [kN]	15.0

Part number/ordering information:

KGT - F1 - 16 - 10 - L1 - L2 - O - IT1

- **Nut design**
- **Overall length** [mm]: max. 1000*
- **Thread length** [mm]: ≤ 900*
- **Axial play** [mm]: O = 0.0; S = 0.02 max.

* longer lengths available on request

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

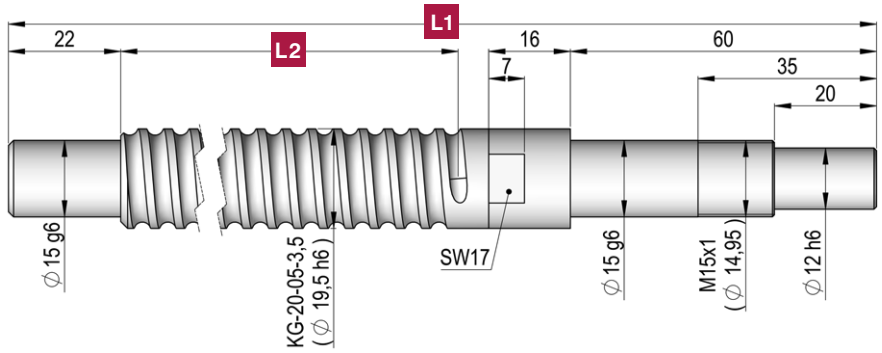
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

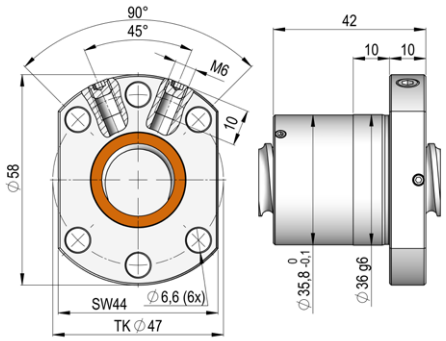
Precision-ground ballscrews

Nominal diameter 20.0 mm | Lead 5.0 mm
Max. speed 4000 rpm | Ball diameter 3.50 mm

Ø 20.0
/ 5.0

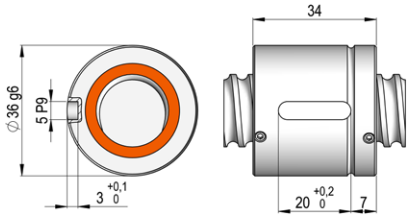


F1 Flange nut



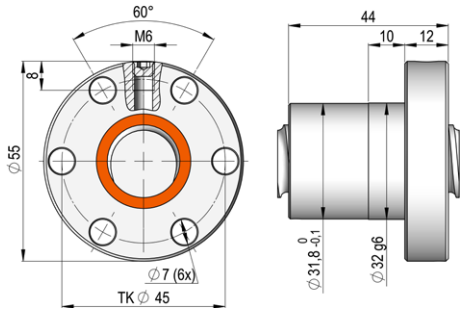
Circuits	3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Z1 Cylindrical nut



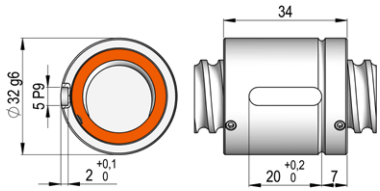
Circuits	3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

F2 Flange nut



Circuits	3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Z2 Cylindrical nut



Circuits	3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Part number/ordering information:

KGT - F1 - 20 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

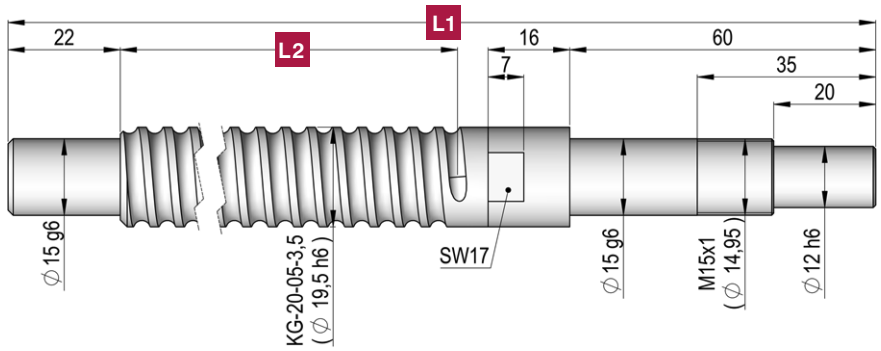
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

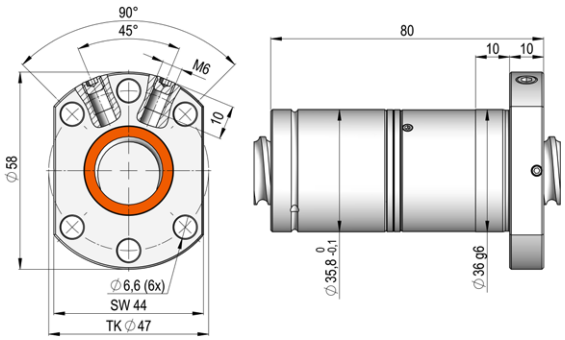
Ø 20.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 20.0 mm | Lead 5.0 mm
Max. speed 4000 rpm | Ball diameter 3.50 mm | Pre-loaded double nut

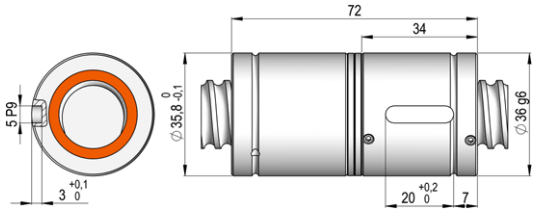


F3 Flange nut



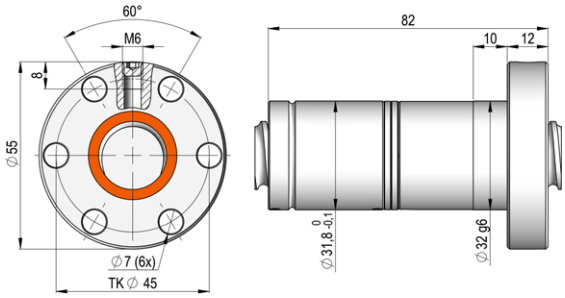
Circuits	2x3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Z3 Cylindrical nut



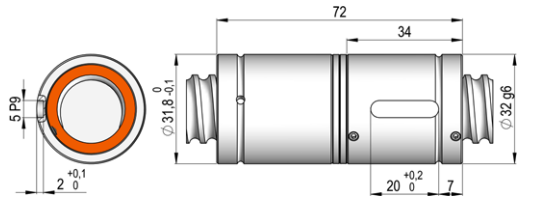
Circuits	2x3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

F4 Flange nut



Circuits	2x3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Z4 Cylindrical nut



Circuits	2x3	C_{dyn} [kN]	11.8
Wiper	Yes	C_{stat} [kN]	17.2

Part number/ordering information:

KGT - F1 - 20 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

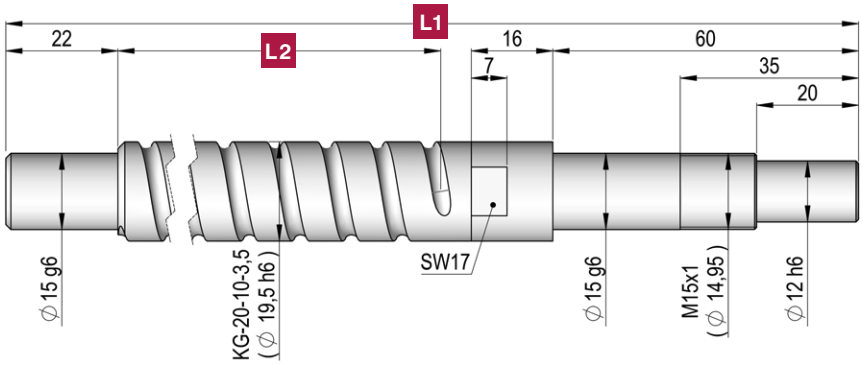
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

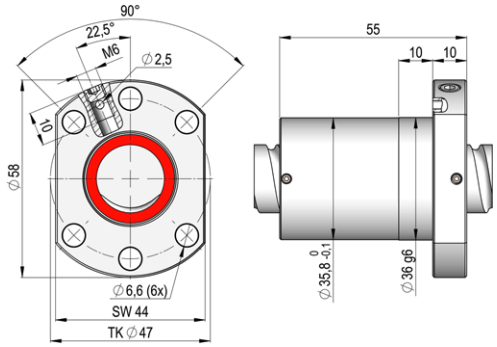
Precision-ground ballscrews

Nominal diameter 20.0 mm | Lead 10.0 mm
Max. speed 4000 rpm | Ball diameter 3.50 mm

Ø 20.0
/ 10.0

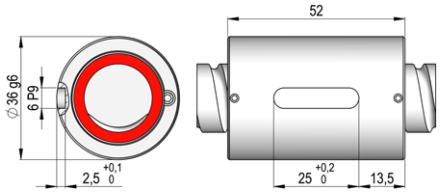


F1 Flange nut



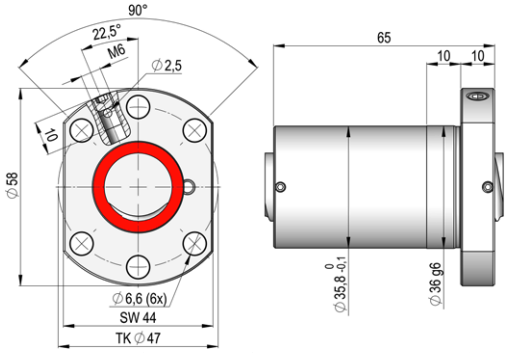
Circuits	2	C_{dyn} [kN]	9.0
Wiper	Yes	C_{stat} [kN]	13.0

Z1 Cylindrical nut



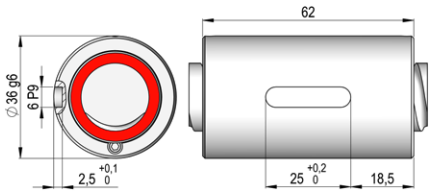
Circuits	2	C_{dyn} [kN]	9.0
Wiper	Yes	C_{stat} [kN]	13.0

F2 Flange nut



Circuits	3	C_{dyn} [kN]	12.6
Wiper	Yes	C_{stat} [kN]	19.0

Z2 Cylindrical nut



Circuits	3	C_{dyn} [kN]	12.6
Wiper	Yes	C_{stat} [kN]	19.0

Part number/ordering information:

KGT - F1 - 20 - 10 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

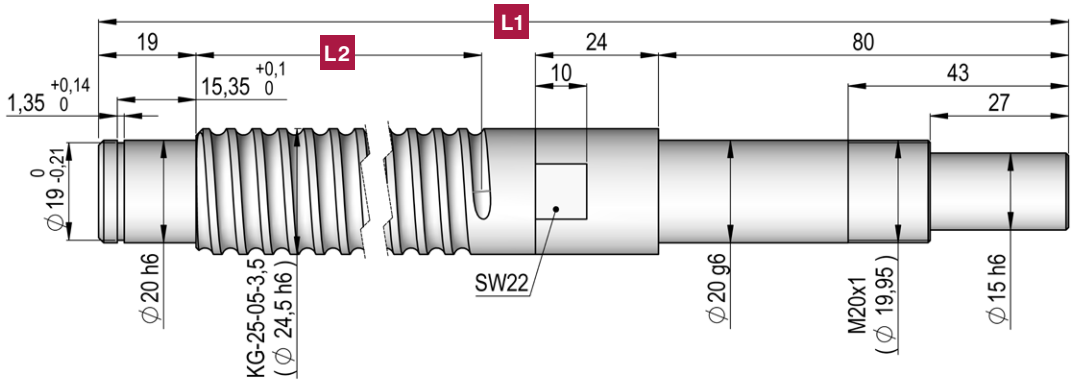
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

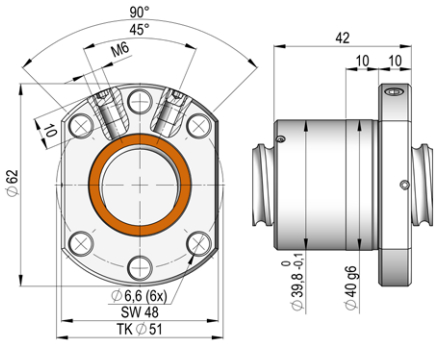
Ø 25.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 25.0 mm | Lead 5.0 mm
Max. speed 3800 rpm | Ball diameter 3.50 mm

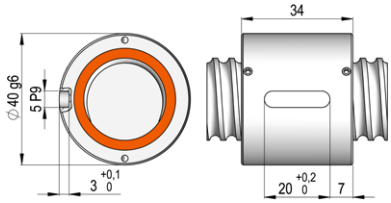


F1 Flange nut



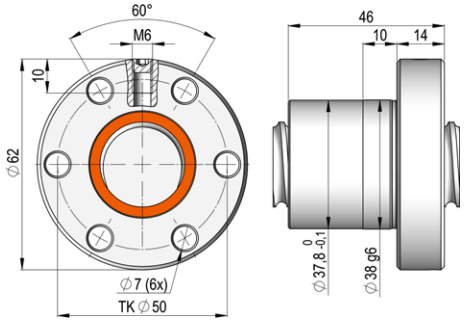
Circuits	3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Z1 Cylindrical nut



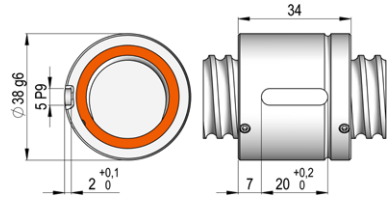
Circuits	3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

F2 Flange nut



Circuits	3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Z2 Cylindrical nut



Circuits	3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Part number/ordering information:

KGT - F1 - 25 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

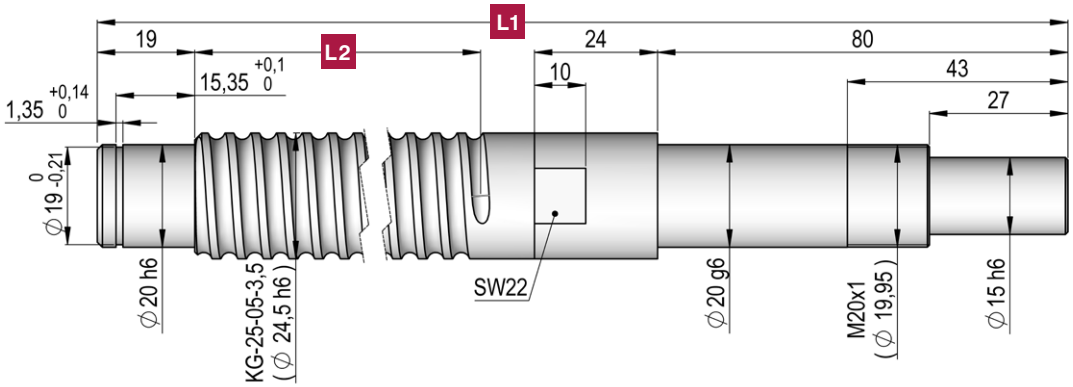
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

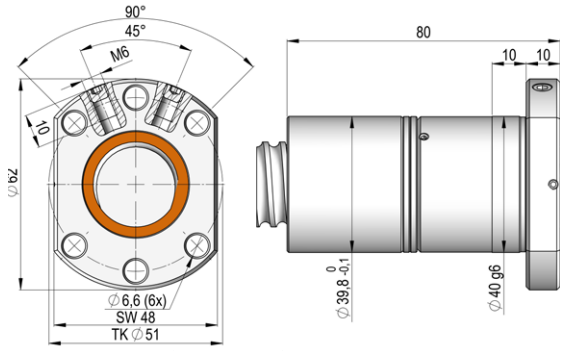
Precision-ground ballscrews

Nominal diameter 25.0 mm | Lead 5.0 mm
Max. speed 3800 rpm | Ball diameter 3.50 mm | Pre-loaded double nut

Ø 25.0
/ 5.0

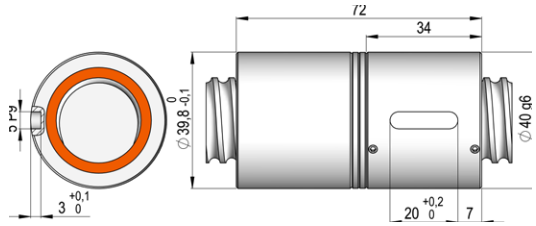


F3 Flange nut



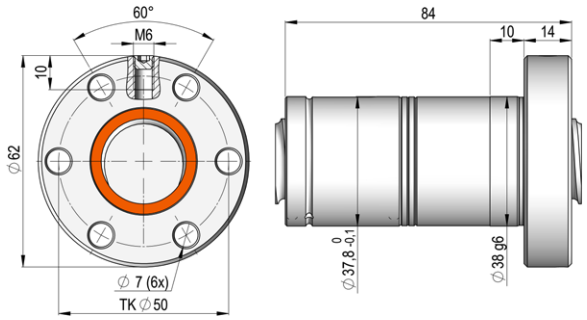
Circuits	2x3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Z3 Cylindrical nut



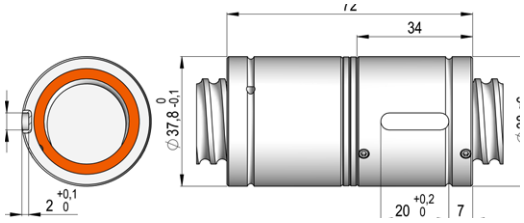
Circuits	2x3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

F4 Flange nut



Circuits	2x3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Z4 Cylindrical nut



Circuits	2x3	C_{dyn} [kN]	13.7
Wiper	Yes	C_{stat} [kN]	22.2

Part number/ordering information:

KGT - F1 - 25 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

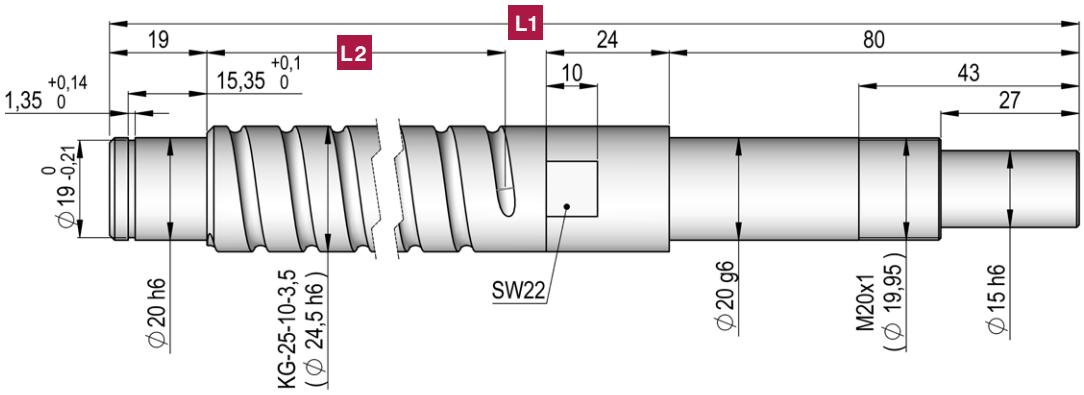
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

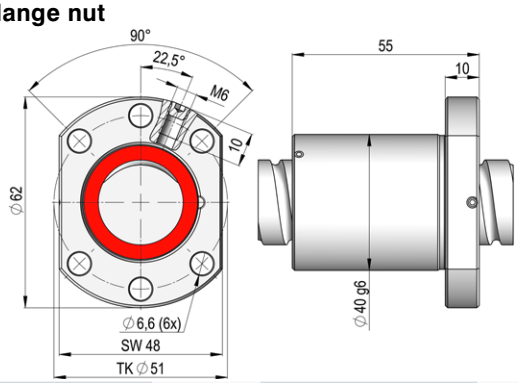
Ø 25.0
/ 10.0

Precision-ground ballscrews

Nominal diameter 25.0 mm | Lead 10.0 mm
Max. speed 3800 rpm | Ball diameter 3.50 mm

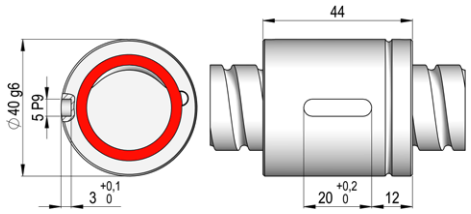


F1 Flange nut



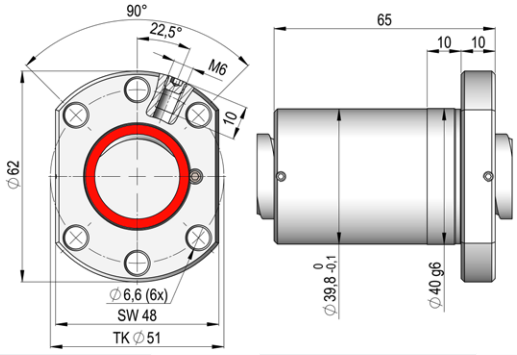
Circuits	2	C_{dyn} [kN]	10.0
Wiper	Yes	C_{stat} [kN]	16.0

Z1 Cylindrical nut



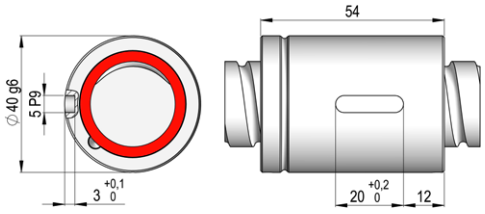
Circuits	2	C_{dyn} [kN]	10.0
Wiper	Yes	C_{stat} [kN]	16.0

F2 Flange nut



Circuits	3	C_{dyn} [kN]	14.0
Wiper	Yes	C_{stat} [kN]	24.0

Z2 Cylindrical nut



Circuits	3	C_{dyn} [kN]	14.0
Wiper	Yes	C_{stat} [kN]	24.0

Part number/ordering information:

KGT - F1 - 25 - 10 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

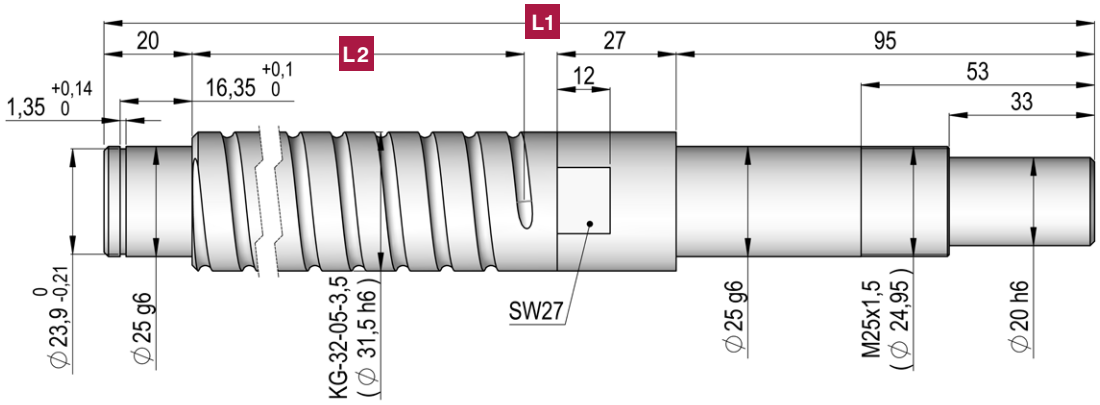
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

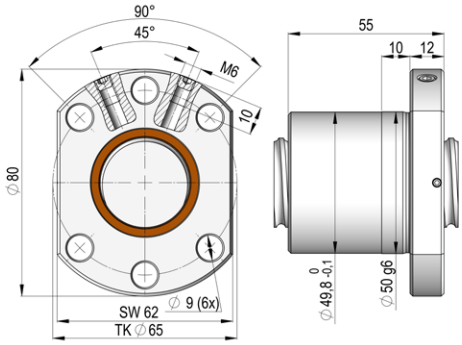
Precision-ground ballscrews

Nominal diameter 32.0 mm | Lead 5.0 mm
Max. speed 3500 rpm | Ball diameter 3.50 mm

Ø 32.0
/ 5.0

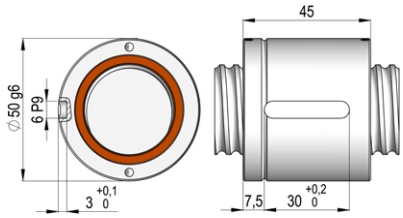


F1 Flange nut



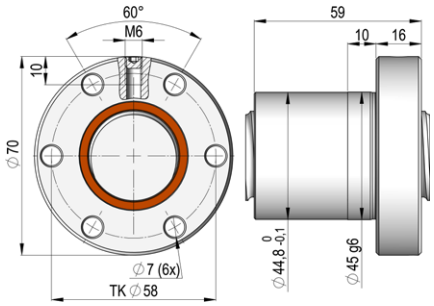
Circuits	5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Z1 Cylindrical nut



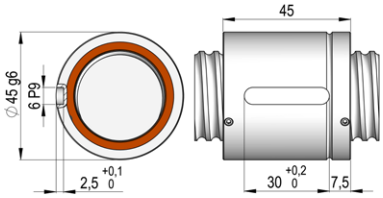
Circuits	5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

F2 Flange nut



Circuits	5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Z2 Cylindrical nut



Circuits	5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Part number/ordering information:

KGT - F1 - 32 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

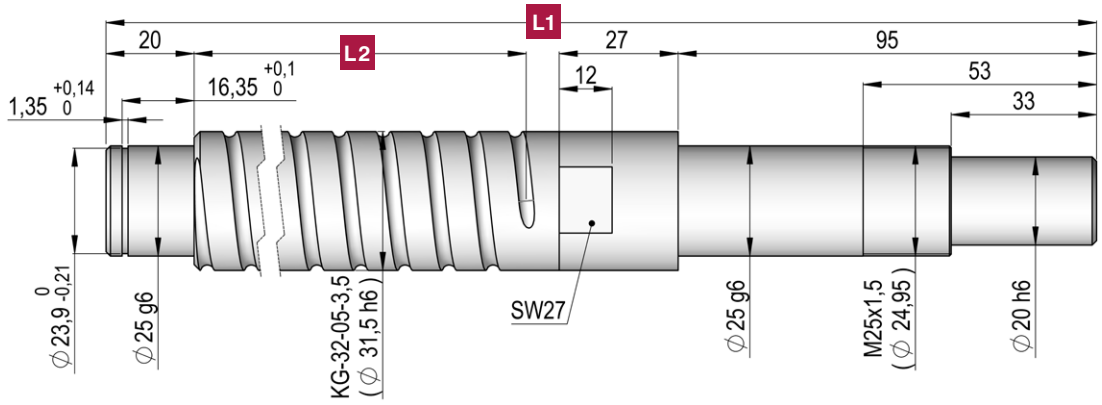
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

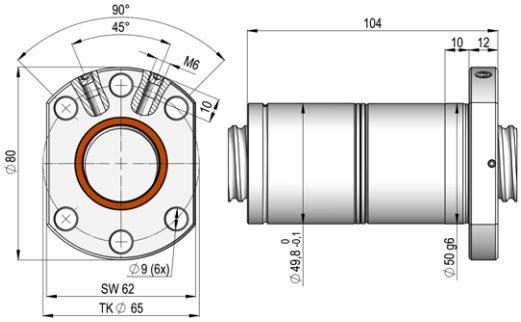
Ø 32.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 32.0 mm | Lead 5.0 mm
Max. speed 3500 rpm | Ball diameter 3.50 mm | Pre-loaded double nut

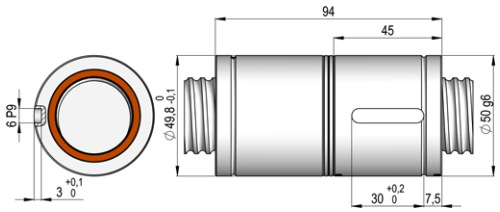


F3 Flange nut



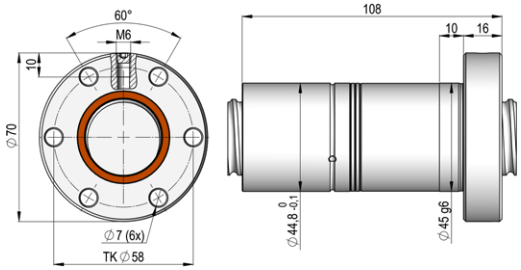
Circuits	2x5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Z3 Cylindrical nut



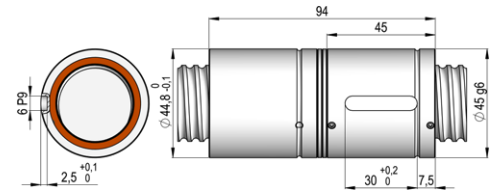
Circuits	2x5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

F4 Flange nut



Circuits	2x5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Z4 Cylindrical nut



Circuits	2x5	C_{dyn} [kN]	24.5
Wiper	Yes	C_{stat} [kN]	48.6

Part number/ordering information:

KGT - **F1** - 32 - 05 - **L1** - **L2** - **O** - **IT1**

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

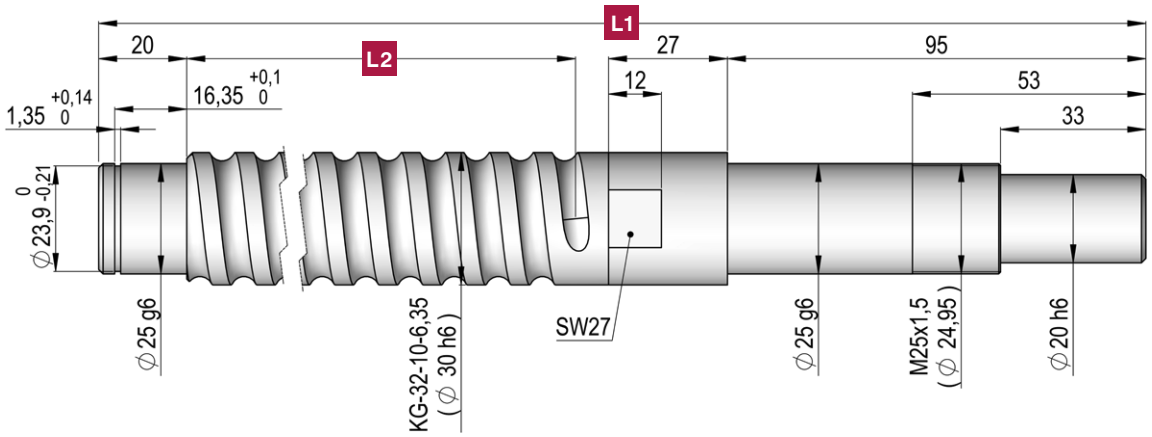
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

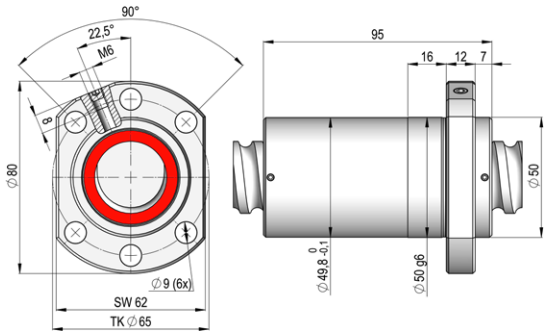
Precision-ground ballscrews

Nominal diameter 32.0 mm | Lead 10.0 mm
Max. speed 3500 rpm | Ball diameter 6.35 mm

Ø 32.0
/ 10.0

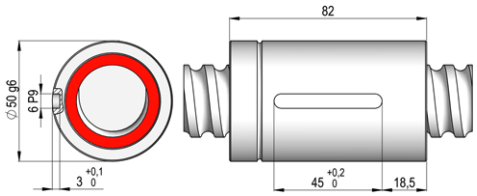


F1 Flange nut



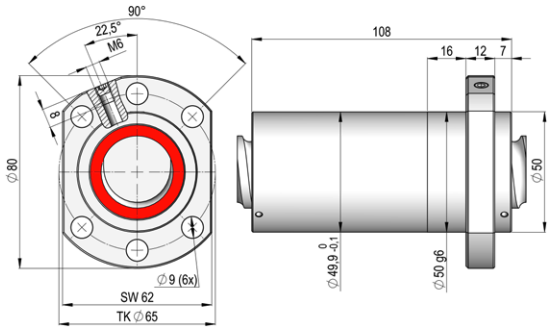
Circuits	4	C_{dyn} [kN]	34.4
Wiper	Yes	C_{stat} [kN]	53.0

Z1 Cylindrical nut



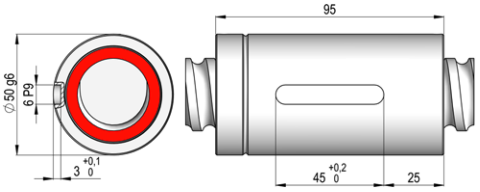
Circuits	4	C_{dyn} [kN]	34.4
Wiper	Yes	C_{stat} [kN]	53.0

F2 Flange nut



Circuits	5	C_{dyn} [kN]	41.5
Wiper	Yes	C_{stat} [kN]	66.0

Z2 Cylindrical nut



Circuits	5	C_{dyn} [kN]	41.5
Wiper	Yes	C_{stat} [kN]	66.0

Part number/ordering information:

KGT - F1 - 32 - 10 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

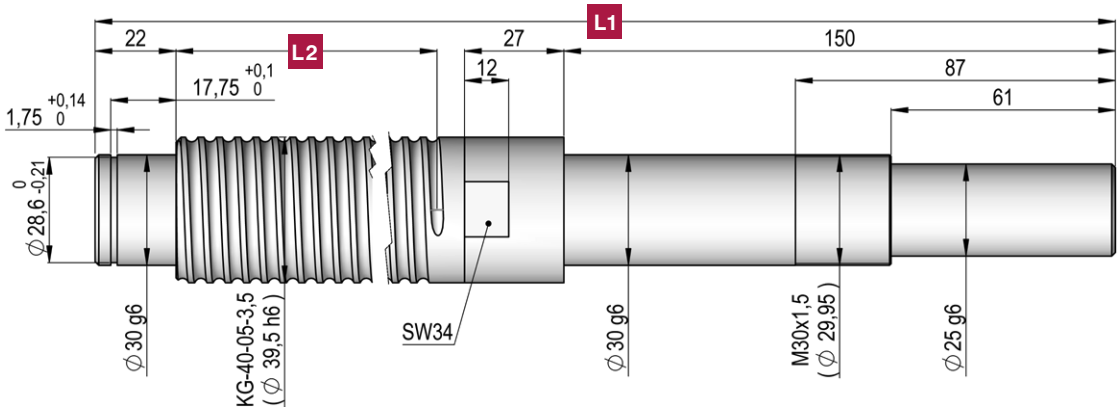
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

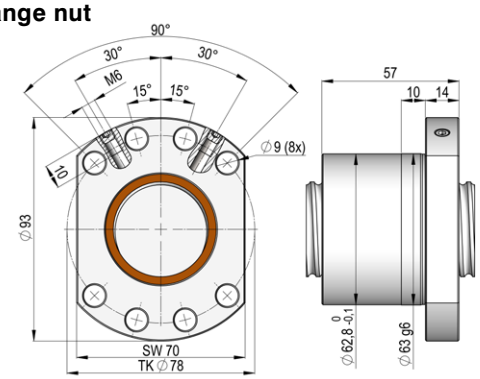
Ø 40.0
/ 5.0

Precision-ground ballscrews

Nominal diameter 40.0 mm | Lead 5.0 mm
Max. speed 2700 rpm | Ball diameter 3.50 mm

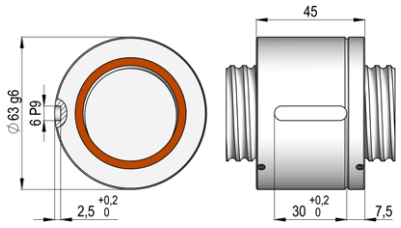


F1 Flange nut



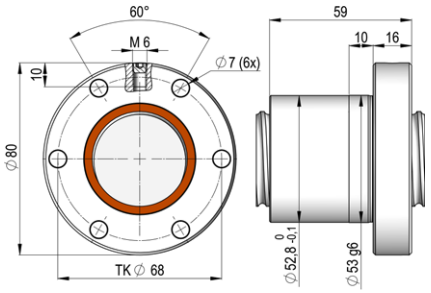
Circuits	5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Z1 Cylindrical nut



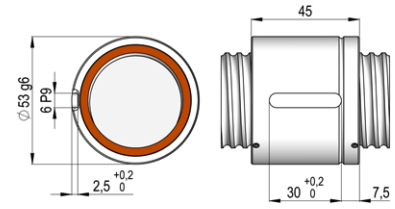
Circuits	5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

F2 Flange nut



Circuits	5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Z2 Cylindrical nut



Circuits	5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Part number/ordering information:

KGT - F1 - 40 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

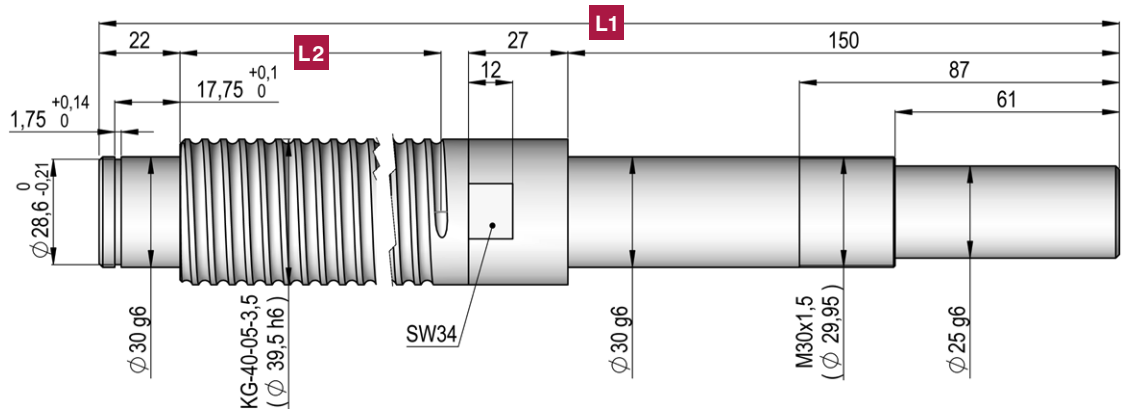
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

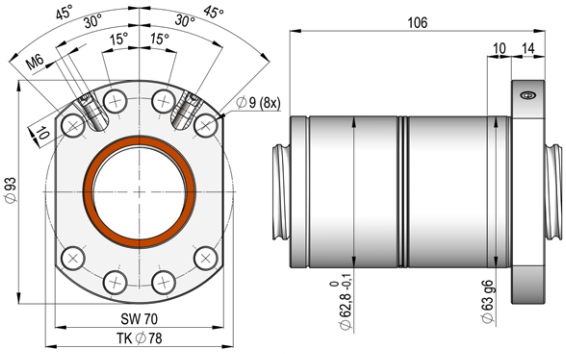
Precision-ground ballscrews

Nominal diameter 40.0 mm | Lead 5.0 mm
Max. speed 2700 rpm | Ball diameter 3.50 mm | Pre-loaded double nut

Ø 40.0
/ 5.0

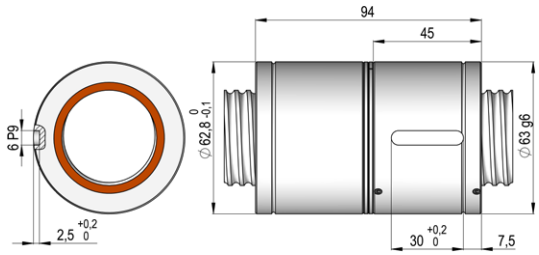


F3 Flange nut



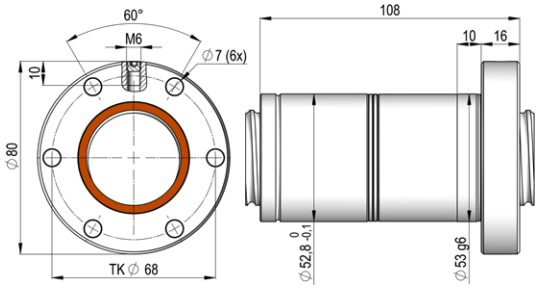
Circuits	2x5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Z3 Cylindrical nut



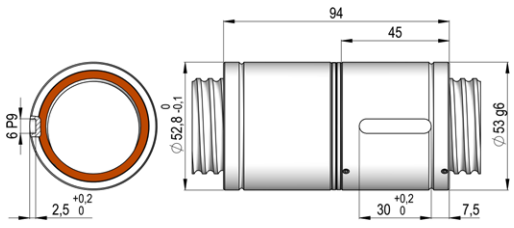
Circuits	2x5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

F4 Flange nut



Circuits	2x5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Z4 Cylindrical nut



Circuits	2x5	C_{dyn} [kN]	27.6
Wiper	Yes	C_{stat} [kN]	62.0

Part number/ordering information:

KGT - F1 - 40 - 05 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 500*

* longer lengths available on request

Axial play [mm]
O = 0.0

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

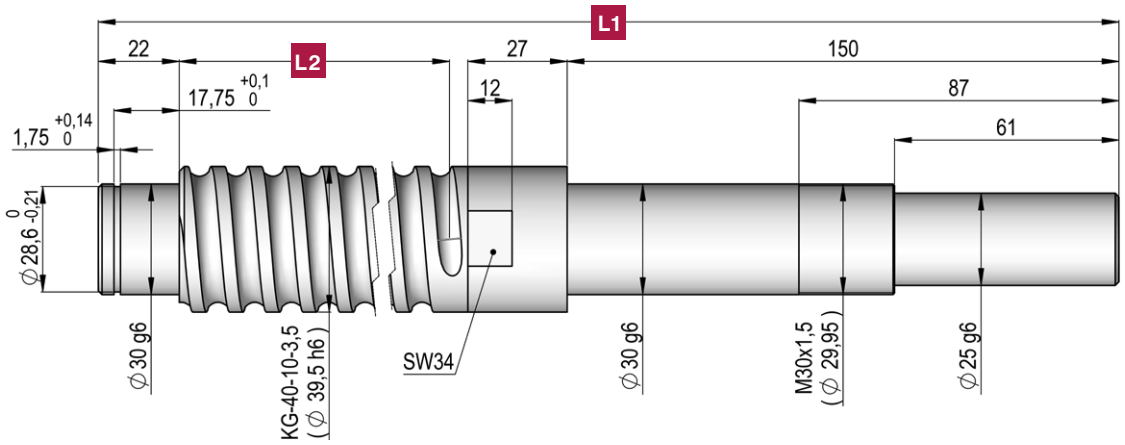
HIPP Moving Precision

Tolerances corresponding to ISO/DIS 286 Part 1

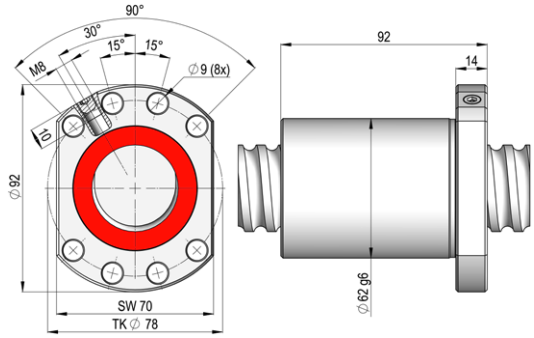
Ø 40.0
/ 10.0

Precision-ground ballscrews

Nominal diameter 40.0 mm | Lead 10.0 mm
Max. speed 3000 rpm | Ball diameter 6.35 mm

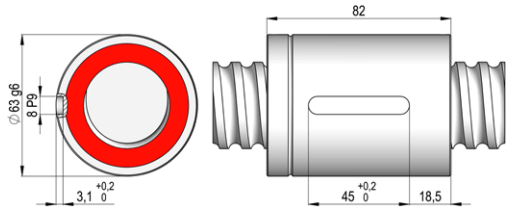


F1 Flange nut



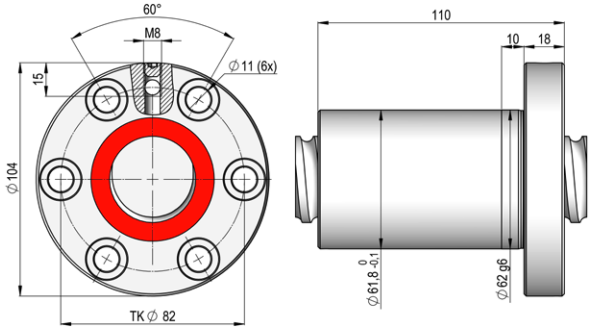
Circuits	4	C_{dyn} [kN]	40.0
Wiper	Yes	C_{stat} [kN]	68.0

Z1 Cylindrical nut



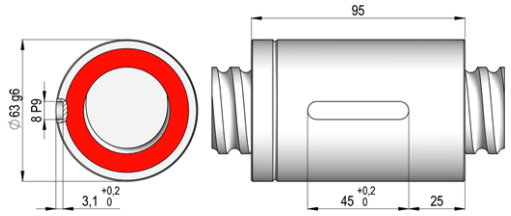
Circuits	4	C_{dyn} [kN]	40.0
Wiper	Yes	C_{stat} [kN]	68.0

F2 Flange nut



Circuits	5	C_{dyn} [kN]	48.0
Wiper	Yes	C_{stat} [kN]	85.0

Z2 Cylindrical nut



Circuits	5	C_{dyn} [kN]	48.0
Wiper	Yes	C_{stat} [kN]	85.0

Part number/ordering information:

KGT - F1 - 40 - 10 - L1 - L2 - O - IT1

Nut design

Overall length [mm]
max. 1000*

Thread length [mm]
≤ 900*

* longer lengths available on request

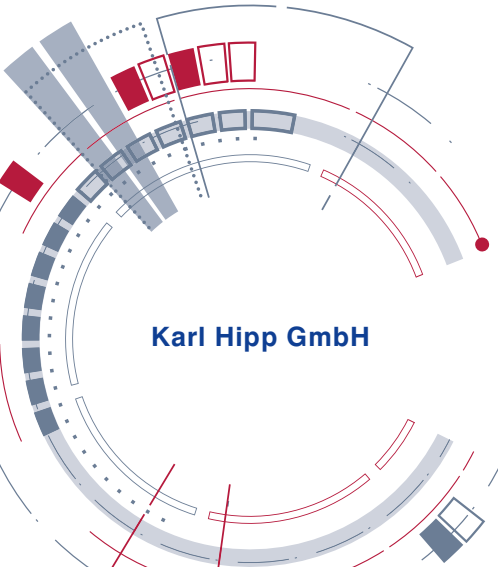
Axial play [mm]
O = 0.0
S = 0.02 max.

Tolerance class IT1 IT3 IT5 IT7

Meas. length [mm]	Tolerances [µm]			
– 315	6	12	23	52
316 – 400	7	13	25	57
401 – 500	8	15	27	63
501 – 630	9	16	30	70
631 – 800	10	18	35	80
801 – 1000	11	21	40	90

Tolerances corresponding to ISO/DIS 286 Part 1

HIPP Moving Precision



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