



HEINRICH KIPP WERK



NOVOnox hygienic

EDITION 2018



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NOVOnox hygienic

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Reg. Nr. 002081 QM



BUSINESS HOURS

MONDAY-THURSDAY 07.00 - 17.30

FRIDAY 07.00 - 15.30

NovoNox

Inox Components

NovoNox is now NOVOnox hygienic

Initially, the idea was to offer significant additional benefits to KIPP customers from the foodstuff, chemical, pharmaceutical, medical technology and machine construction branches. They knew KIPP as a reliable supplier of high quality operating parts, but must obtain hygienic stainless steel parts from somewhere else.

However, the INOX experts NovoNox with their Hygienic DESIGN und Hygienic USIT® product ranges experienced serious challenges within this growth orientated market. The existing structure was not equipped to meet the ever increasing demand.



NOVOnox hygienic

The solution:

Consolidating the strengths under one roof through a takeover of the NovoNox brand and integrating the products and the business processes into HEINRICH KIPP WERK.

The result:

A clearly coordinated complete program of standard operating parts and hygienic stainless steel parts combined with maximum service and guaranteed availability - for all customers.

As a new product line, the high quality hygienic stainless steel products **NOVOnox hygienic** form a completely new field of competence within the KIPP OPERATING PARTS | STANDARD ELEMENTS catalogue programs. The consistency of the expanded range offers compelling advantages for KIPP and NovoNox customers.

The slogan "Clean & Lean" says it all. "Clean" the hygienic products, "Lean" the trimmed down purchasing process including better availability and customer orientated service with shorter response times.

A win-win situation for KIPP and NovoNox customers

KIPP customers can now profit from excellent know-how in the hygienic sector and a new quality in special solution development competence directly from the manufacturer.

With KIPP, NovoNox customers profit from the sales network and infrastructure of an active partner as well as the roughly 36,000 comprehensive product range. A central logistics system with up to the minute storage technology and powerful IT solutions means that KIPP can guarantee rapid delivery and worldwide availability. This all leads to a clear plus point for reliability and service. For NovoNox customers the extensive distribution network within Germany and the rest of Europe will be new.

A well structured worldwide network of international subsidiaries and sales partners guarantees optimum consultation and competent service. Customer support plays a very important role at KIPP. The experienced team of experts at HEINRICH KIPP WERK supply individual advice and always have the correct answer to realise customer-specific projects. The award of VERY GOOD from "TÜV Service Tested" proves this excellent customer orientation.

With the integration of NOVOnox hygienic, KIPP has positioned itself as a cross-sector single-source supplier with a broadly diversified market presence. KIPP expands its sector competence and generates new knowledge through new demands.

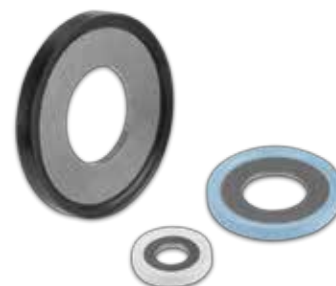
PRODUCTS



Clamping levers



Seals



Nuts



Screws



Knobs



Grips



Pull handles



Quarter-turn locks



Levelling feet



Tools



HD

Hygienic DESIGN - the new standard

Operating parts and machine elements that fulfil
the requirements of Hygienic DESIGN.

Radii, transitions, bevels, and surfaces are designed to impair wetting
and can be easily cleaned or remain permanently unsoiled.

Nothing adheres!

Average surface finish
 $Ra < 0.8 \mu m$



HU°

Hygienic USIT® - the new phenomenon in the process industries

Hygienic USIT® is the new revolutionary sealing and
fastening technology in one package. High-gloss polished surfaces,
radii, bevels and form transitions are cavity-free.

Hygienic USIT® – a trademark of Freudenberg Sealing Technologies.
NOVOnox developed the hygienic screw system for this special washer
and matched them perfectly to each other.
The cavity-free fastening point is made feasible.

High-gloss polished!

Material:
1.4404 grade A4-70
with $Ra < 0.8 \mu m$



100 % seal!

Hygienic USIT® seal
and shim washer from
Freudenberg Sealing Technologies.



System unit!

Collar for Hygienic USIT®
seal and shim washer

Material:
1.4404 grade A4-70
with $Ra < 0.8 \mu m$





Hygienic USIT® - give germs no chance

The current status. Cavities. Not fully sealed.

Fastening points in process technology plant construction must be absolutely sealed and easy to clean. Cavities where product remains or cleaning fluids can accumulate unnoticed are to be prevented. These create breeding grounds for germs and bacteria. A contamination is often just a question of time.

The solution:

Hygienic USIT® from Freudenberg Sealing Technologies solves the problem. The new type of washer with the specially matched screw system from NOVOnox hygienic. Dirty liquids bead off. Nothing can adhere. Nothing can germinate. Hygienic USIT® is the new revolutionary sealing and fastening technology in one package. Screw heads, nuts, washers and screw shafts are perfectly matched to each other and form a system unit. High-gloss polished surfaces, radii, bevels and form transitions are cavity-free and enable easy cleaning.

Sealed over and over again.

The sealing ring made of a metallic flat seal and a vulcanised sealing bead is the heart of Hygienic USIT®. The trapezoidal contour of the sealing bead and the highly polished face of the screw head positively seal the fastening point. The sealing properties remain constant even by repeated loosening and tightening of the screw. The reason: The metallic washer mechanically limits the screw travel when the screw is turned. Excessive pressure on the seal is prevented. The polished surface and the centring effect of the screw shaft ensure that the position and deformation of the seal is almost 100% reproducible.





Hygienic USIT® – High-gloss polished surface

The Hygienic USIT® fasteners have a completely rounded body form and have been designed for use with the USIT® sealing ring. The runoff of liquids and product residues is guaranteed independent of the installed position. The surfaces are repeatedly finely polished. When USIT® seal rings are used, the fastening point is hermetically sealed without any cavities. The fastening point is hygienically safe

Conclusion:

With the washer from Freudenberg Sealing Technologies and the special screw system from NOVONox hygienic, a sealing and fastening component that is 100 % hygienic and cavity-free has been created for the first time.



Hygienic Tools – smooth stays smooth

Protective inserts protect sensitive surfaces.

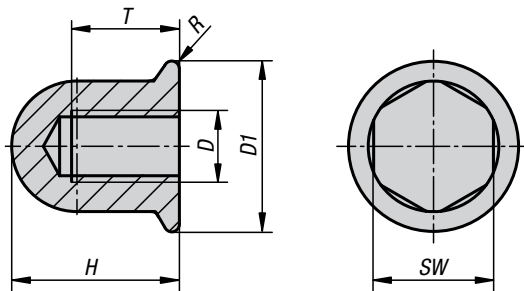
Protective inserts have been developed so that the sensitive surfaces of the screws and nuts of the Hygienic USIT® screw and sealing system remain completely undamaged. These high-strength plastic or aluminium protective inserts prevent scratches on the screws and nuts. Moreover, they also protect from possible contact corrosion between the tool and the

stainless steel fastener. The protective inserts are inserted into tools which have been specially modified to accept them. The inserts clip in place so that they cannot be easily pulled out or lost. The inserts are available for screws sized M3, M4, M5, M6, M8, M10, M12 and M16.



Cap nuts with collar

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:
Stainless steel 1.4404.

Version:
High-gloss polished.

Sample order:
K1328.05

Note:
Cap nut with collar for Hygienic USIT® sealing and shim washer.

Only the combination of a Hygienic USIT® sealing and shim washer and the specially designed cap nuts assures a cavity-free seal.

This is essential especially in product contact areas or within aseptic insulators.

The surface of the nuts and the contact face of the sealing and shim washer are high-gloss polished. Thanks to the extremely high quality surface finish of less than Ra 0.8 µm, almost no dirt particles adhere to the surface. Easy cleaning is assured by the high-gloss polished surface.

No countersink or recess on the screw head, no embossing or toothing beneath the flange.

On request:
Tool from SW 8 mm - SW 24 mm.

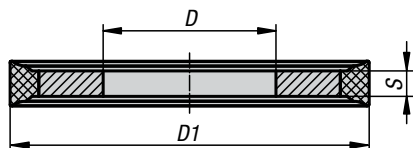
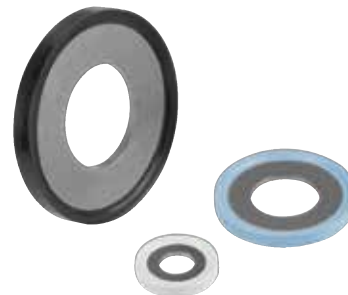
Accessories:
Hygienic USIT® sealing and shim washer K1326.

KIPP Cap nuts with collar for Hygienic USIT® sealing and shim washer Freudenberg Process Seals

Order No.	D	D1	H	R	SW	T
K1328.03	M3	10,8	10	0,45	7	7
K1328.04	M4	10,8	10	0,45	7	7
K1328.05	M5	11,8	12	0,45	8	8
K1328.06	M6	14,2	14	0,45	10	9
K1328.08	M8	18	18	0,45	13	12
K1328.10	M10	22,3	22	0,45	16	15
K1328.12	M12	26,6	27	0,45	18	19
K1328.16	M16	35	30	0,45	24	22

Hygienic USIT® sealing and shim washer

Freudenberg Process Seals



Material:

Stainless steel 1.4404.

Rubber beading:

70 EPDM 291 black

70 EPDM 253815 white

75 Fluoroprene XP 45 blue

Sample order:

K1326.051

Note:

Flat metallic seal with elastomer beading for cavity-free, static sealing of screw connections. The Hygienic USIT® sealing and shim washer forms a cavity-free seal on product contact surfaces or within aseptic isolators only when used in conjunction with the specially designed screw or nut (see Art. No. K1327 and K1328). The sealing and shim washer reliably eliminates cavities on screw connections. Residual material or cleaning agents cannot precipitate unnoticed and so contamination through microbes and bacteria is negated.

Application:

Even if the rubber beading cannot be overstressed by the integrated stainless steel washer when the fastening is tightened, every material reaches the end of its life-cycle sometime. Fragments could get into the foodstuff. The different sealing materials and their colours are not just for fulfilling the respective user applications, but also to ensure product specific ease of detectability.

70 EPDM 291 - black

Used mainly in the processing and beverage industries and in dairies.

70 EPDM 253815 - white

Predominantly used in medical technology and pharmaceutical industries

75 FLUOROPRENE® XP 45 - blue

For special requirements such as very fatty, aggressive mediums and very high temperatures that could occur during e.g. cleaning the plant.

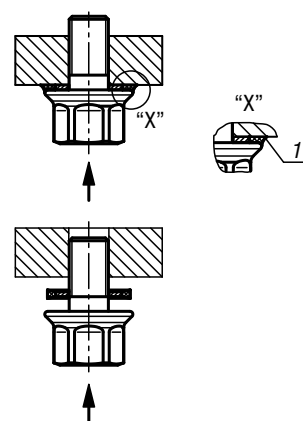
Naturally, all sealing materials are also suitable for individual packaging tasks.

Accessories:

The Hygienic USIT® sealing and shim washers can be used with all other products of the **Hygienic USIT®** range.

Drawing reference:

1) Cavity free sealing

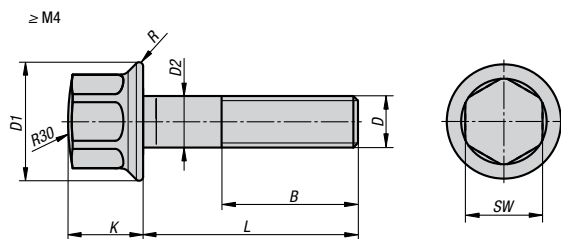
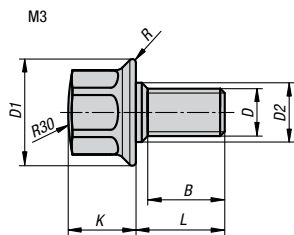


KIPP Hygienic USIT® sealing and shim washer Freudenberg Process Seals

Order No. 70 EPDM 291 black	Order No. 70 EPDM 253815 white	Order No. Fluoroprene XP 45 blue	D	D1	S	Suitable for hexagon screws	Suitable cap nuts
K1326.031	K1326.032	K1326.034	4,2	9,7	1	M3 / M4	M3 / M4
K1326.051	K1326.052	K1326.054	5,2	10,7	1	M5	M5
K1326.061	K1326.062	K1326.064	6,2	13,1	1	M6	M6
K1326.081	K1326.082	K1326.084	8,2	16,9	1	M8	M8
K1326.101	K1326.102	K1326.104	10,2	21,2	1,5	M10	M10
K1326.121	K1326.122	K1326.124	12,2	25,5	1,5	M12	M12
K1326.161	K1326.162	K1326.164	16,2	33,9	1,5	M16	M16

Hexagon head bolts with collar

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:
Stainless steel 1.4404.

Version:
High-gloss polished.

Sample order:
K1327.05X15

Note:
Hexagon head screw with collar for Hygienic USIT® sealing and shim washer.



Only the combination of a Hygienic USIT® washer together with the specially designed hexagon head screw assures a cavity-free seal. This is essential especially in product contact areas or within aseptic insulators.

The screws are explicitly high-gloss polished on the screw head and the seating face of the sealing and shim washer. Thanks to the extremely high quality surface finish of less than Ra 0.8 µm, almost no dirt particles adhere to the screw. Easy cleaning is assured by the high-gloss polished surface.

No countersink or recess on the screw head, no embossing or toothing beneath the flange.

On request:
Tool from SW 8 mm - SW 24 mm.

Accessories:
Hygienic USIT® sealing and shim washer K1326.
Hexagon cap nut with collar K1328.

KIPP Hexagon head bolts with collar for Hygienic USIT® sealing and shim washer Freudenberg

Order No.	D	D1	D2	B	K	L	R	SW
K1327.03X6	M3	10,8	4	4,6	5,7	6	0,45	7
K1327.03X9	M3	10,8	4	7,6	5,7	9	0,45	7
K1327.03X12	M3	10,8	4	10,6	5,7	12	0,45	7
K1327.03X15	M3	10,8	4	13,6	5,7	15	0,45	7
K1327.04X8	M4	10,8	4	6	6,3	8	0,45	7
K1327.04X12	M4	10,8	4	10	6,3	12	0,45	7
K1327.04X16	M4	10,8	4	14	6,3	16	0,45	7
K1327.04X20	M4	10,8	4	18	6,3	20	0,45	7
K1327.04X25	M4	10,8	4	23	6,3	25	0,45	7
K1327.05X10	M5	11,8	5	8	7,3	10	0,5	8
K1327.05X15	M5	11,8	5	8	7,3	15	0,5	8
K1327.05X20	M5	11,8	5	8	7,3	20	0,5	8
K1327.05X25	M5	11,8	5	8	7,3	25	0,5	8
K1327.05X30	M5	11,8	5	8	7,3	30	0,5	8
K1327.05X35	M5	11,8	5	8	7,3	35	0,5	8
K1327.05X40	M5	11,8	5	8	7,3	40	0,5	8
K1327.06X12	M6	14,2	6	9	9	12	0,55	10
K1327.06X15	M6	14,2	6	9	9	15	0,55	10
K1327.06X20	M6	14,2	6	9	9	20	0,55	10
K1327.06X25	M6	14,2	6	9	9	25	0,55	10
K1327.06X30	M6	14,2	6	9	9	30	0,55	10
K1327.06X35	M6	14,2	6	9	9	35	0,55	10
K1327.06X40	M6	14,2	6	9	9	40	0,55	10
K1327.06X45	M6	14,2	6	9	9	45	0,55	10
K1327.06X50	M6	14,2	6	9	9	50	0,55	10

Hexagon head bolts with collar

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Order No.	D	D1	D2	B	K	L	R	SW
K1327.08X15	M8	18	8	12	11	15	0,6	13
K1327.08X20	M8	18	8	12	11	20	0,6	13
K1327.08X25	M8	18	8	12	11	25	0,6	13
K1327.08X30	M8	18	8	12	11	30	0,6	13
K1327.08X35	M8	18	8	12	11	35	0,6	13
K1327.08X40	M8	18	8	12	11	40	0,6	13
K1327.08X45	M8	18	8	12	11	45	0,6	13
K1327.08X50	M8	18	8	12	11	50	0,6	13
K1327.08X55	M8	18	8	12	11	55	0,6	13
K1327.08X60	M8	18	8	12	11	60	0,6	13
K1327.08X65	M8	18	8	12	11	65	0,6	13
K1327.08X70	M8	18	8	12	11	70	0,6	13
K1327.10X20	M10	22,3	10	15	13,5	20	0,75	16
K1327.10X25	M10	22,3	10	15	13,5	25	0,75	16
K1327.10X30	M10	22,3	10	15	13,5	30	0,75	16
K1327.10X35	M10	22,3	10	15	13,5	35	0,75	16
K1327.10X40	M10	22,3	10	15	13,5	40	0,75	16
K1327.10X45	M10	22,3	10	15	13,5	45	0,75	16
K1327.10X50	M10	22,3	10	15	13,5	50	0,75	16
K1327.10X55	M10	22,3	10	15	13,5	55	0,75	16
K1327.10X60	M10	22,3	10	15	13,5	60	0,75	16
K1327.10X65	M10	22,3	10	15	13,5	65	0,75	16
K1327.10X70	M10	22,3	10	15	13,5	70	0,75	16
K1327.10X75	M10	22,3	10	15	13,5	75	0,75	16
K1327.10X80	M10	22,3	10	15	13,5	80	0,75	16
K1327.12X25	M12	26,6	12	18	19,5	25	0,9	18
K1327.12X30	M12	26,6	12	18	19,5	30	0,9	18
K1327.12X35	M12	26,6	12	18	19,5	35	0,9	18
K1327.12X40	M12	26,6	12	18	19,5	40	0,9	18
K1327.12X45	M12	26,6	12	18	19,5	45	0,9	18
K1327.12X50	M12	26,6	12	18	19,5	50	0,9	18
K1327.12X55	M12	26,6	12	18	19,5	55	0,9	18
K1327.12X60	M12	26,6	12	18	19,5	60	0,9	18
K1327.12X65	M12	26,6	12	18	19,5	65	0,9	18
K1327.12X70	M12	26,6	12	18	19,5	70	0,9	18
K1327.12X75	M12	26,6	12	18	19,5	75	0,9	18
K1327.12X80	M12	26,6	12	18	19,5	80	0,9	18
K1327.16X30	M16	35	16	22	25	30	1,2	24
K1327.16X35	M16	35	16	22	25	35	1,2	24
K1327.16X40	M16	35	16	22	25	40	1,2	24
K1327.16X45	M16	35	16	22	25	45	1,2	24
K1327.16X50	M16	35	16	22	25	50	1,2	24
K1327.16X55	M16	35	16	22	25	55	1,2	24
K1327.16X60	M16	35	16	22	25	60	1,2	24
K1327.16X65	M16	35	16	22	25	65	1,2	24
K1327.16X70	M16	35	16	22	25	70	1,2	24
K1327.16X75	M16	35	16	22	25	75	1,2	24
K1327.16X80	M16	35	16	22	25	80	1,2	24

Clamping lever with internal thread and collar

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:

Metal parts stainless steel 1.4404.
Surface high-gloss polished.
Shaft seal 70 EPDM 291.

Sample order:

K1316.308

Note:

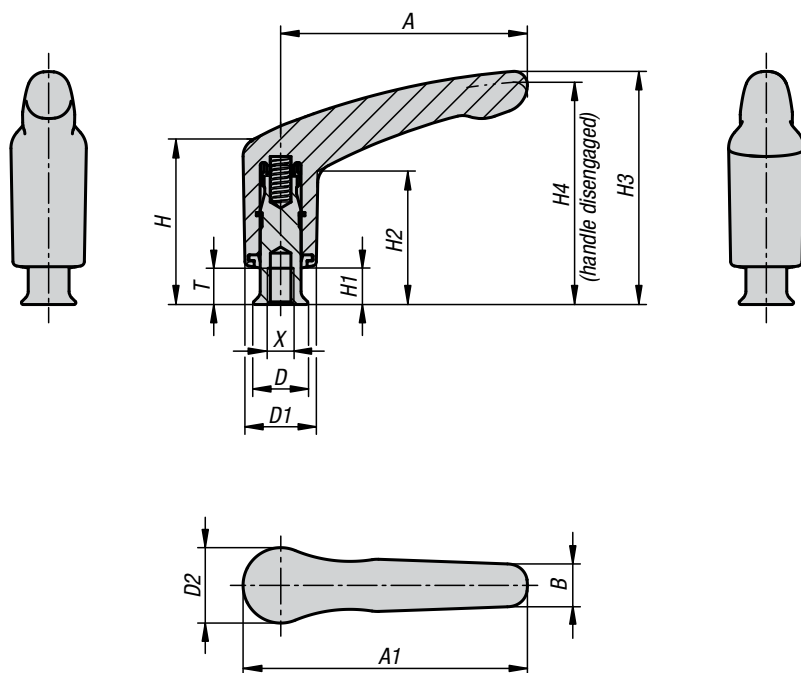
Clamping lever designed for the hygienic sector.
The completely closed grip part and the shaft seal prevent contamination of the lever internal workings. Additionally, the screw insert has a conical collar so that the fastening point can be hygienically sealed with the Hygienic USIT® sealing and shim washer. Due to the extremely high surface finish quality of much less than Ra 0.8 µm, hardly any dirt particles adhere to the surface. The highly polished surfaces enable easy cleaning.
At rest, the lever is freely rotatable. Unintended opening of the lever is excluded. The toothing is protected against high wear for mounting on vibrating elements.

On request:

Other thread depths and inch threads.

Accessories:

Hygienic USIT® sealing and shim washer K1326.



KIPP Clamping lever with internal thread and collar, for Hygienic USIT® sealing and shim washer

Order No.	Size	X	T	D	D1	D2	H	H1	H2	H3	H4	A	A1	B	No. of teeth
K1316.308	3	M8	12	18	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20
K1316.310	3	M10	15	22,3	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20
K1316.312	3	M12	12	18	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20

Clamping lever with male thread and collar

for Hygienic USIT® Freudenberg Process Seals sealing and shim washer



Material:

Metal parts stainless steel 1.4404.
Surface high-gloss polished.
Shaft seal 70 EPDM 291.

Sample order:

K1317.308X16

Note:

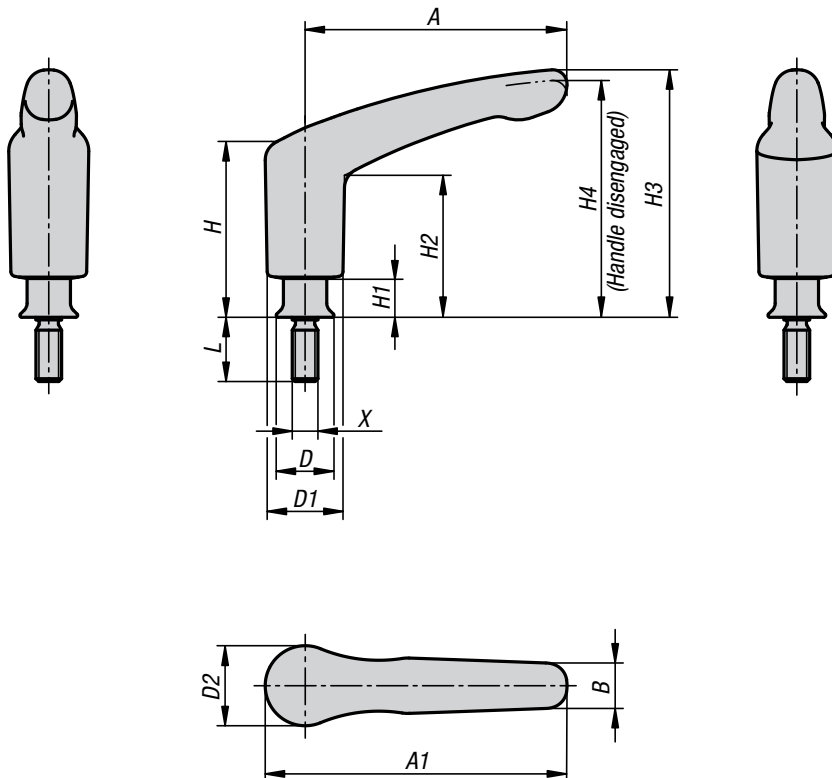
Clamping lever designed for the hygienic sector. The completely closed grip part and the shaft seal prevent contamination of the lever internal workings. Additionally, the screw insert has a conical collar so that the fastening point can be hygienically sealed with the Hygienic USIT® sealing and shim washer. Due to the extremely high surface finish quality of much less than Ra 0.8 µm, hardly any dirt particles adhere to the surface. The highly polished surfaces enable easy cleaning. At rest, the lever is freely rotatable. Unintended opening of the lever is excluded. The toothing is protected against high wear for mounting on vibrating elements.

On request:

Other screw lengths and inch threads.

Accessories:

Hygienic USIT® sealing and shim washer K1326.



KIPP Clamping lever with external thread and collar for Hygienic USIT® sealing and shim washer

Order No.	Size	X	D	D1	D2	H	H1	H2	H3	H4	A	A1	B	No. of teeth	L
K1317.308X	3	M8	18	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20	16/20/25/30/35/40/50/60
K1317.310X	3	M10	22,3	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20	20/25/30/35/40/50/60
K1317.312X	3	M12	26,6	23,6	24,9	54,7	12,1	44	77	73,5	81,5	94	14,2	20	25/30/35/40/50/60

Wing nut

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1312.2004

Note:

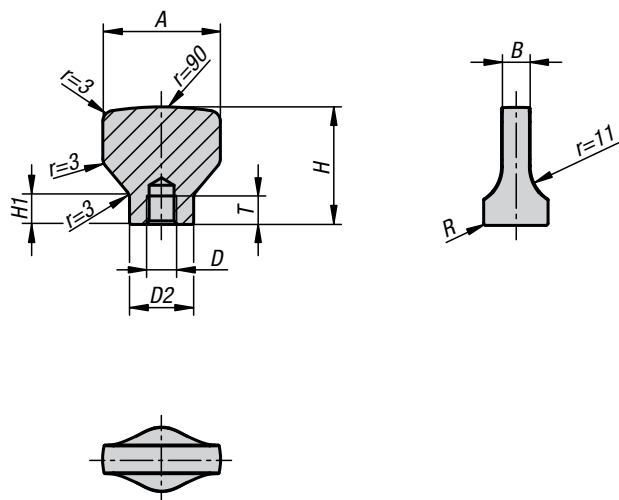
The wing nut makes simple screw connections superbly feasible. They can be easily opened or re-tightened without tools.
The complete surface is polished to a high gloss with a surface finish of much less than Ra 0.8 µm. The contour is produced with generous radii and transitions. It doesn't matter in which position the wing grip is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured. The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the wing nut is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths.

Accessories:

Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

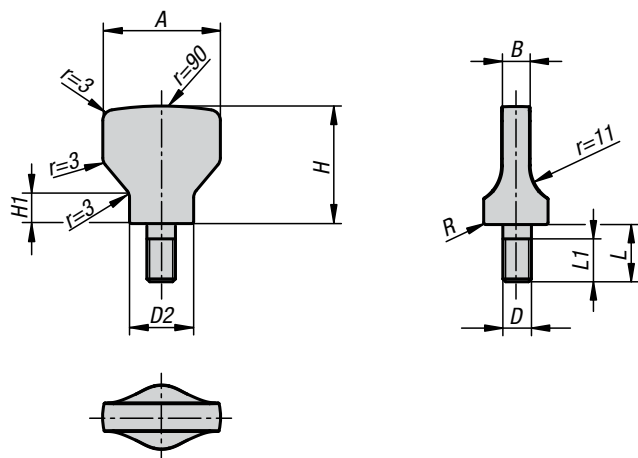


KIPP Wing nut for Hygienic USIT® sealing and shim washer

Order No.	D	D2	A	H	H1	B	T	R
K1312.2004	M4	10,8	20	19	5,3	4	6	0,45
K1312.2105	M5	11,8	21	21	6	5	6	0,5
K1312.2506	M6	14,2	25	25	7	6	7	0,55
K1312.3308	M8	18	33	33	8,4	8	9	0,6
K1312.4010	M10	22,3	40	40	10	10	11	0,75

Wing screw

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1313.2004X8

Note:

The wing screw makes simple screw connections superbly feasible. They can be easily opened or re-tightened without tools.

The complete surface is polished to a high gloss with a surface finish of much less than $Ra\ 0.8\ \mu m$. The contour is produced with generous radii and transitions. It doesn't matter in which position the wing grip is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured. The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the wing screw is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths.

Accessories:

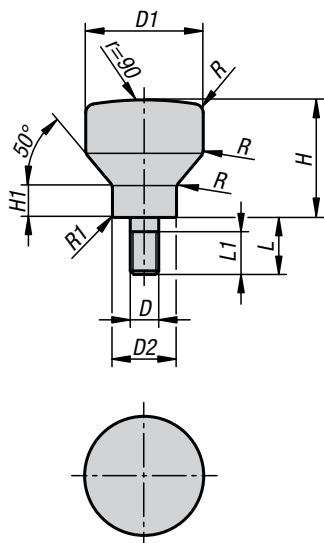
Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

KIPP Wing screw for Hygienic USIT® sealing and shim washer

Order No.	D	D2	A	H	H1	B	R	L	L1
K1313.2004X8	M4	10,8	20	19	5,3	4	0,45	8	7
K1313.2105X10	M5	11,8	21	21	6	5	0,5	10	9
K1313.2506X12	M6	14,2	25	25	7	6	0,55	12	11
K1313.3308X16	M8	18	33	33	8,4	8	0,6	16	15
K1313.4010X20	M10	22,3	40	40	10	10	0,75	20	19

Mushroom knobs male thread with low head

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1311.2004X8

Note:

The low head makes the mushroom knob ideal for manual lateral movements.

The complete surface is polished to a high gloss with a surface finish of much less than Ra 0.8 µm. The contour is produced with generous radii and transitions. It doesn't matter in which position the mushroom knob is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the mushroom knob is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths, form variations.

Accessories:

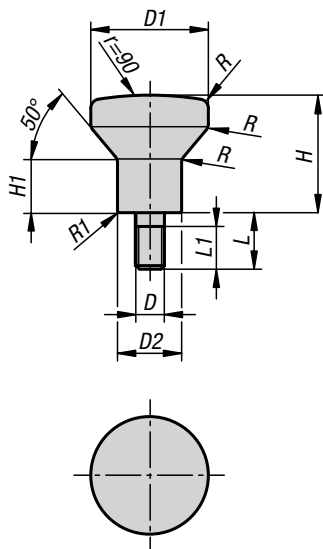
Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

KIPP Mushroom knobs male thread, with low head, for Hygienic USIT® sealing and shim washer

Order No.	D	D1	D2	H	H1	L	L1	R	R1
K1311.2004X8	M4	20	10,8	19	3,5	8	7	3	0,45
K1311.2105X10	M5	21	11,8	21	5,5	10	9	3	0,5
K1311.2506X12	M6	25	14,2	25	7	12	11	3	0,55
K1311.3308X16	M8	33	18	33	9	16	15	4	0,6
K1311.4010X20	M10	40	22,3	40	11,5	20	19	4	0,75

Mushroom knobs male thread with high head

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1309.2004X8

Note:

The high head makes the mushroom knob ideal for manual pull and push movements.

The complete surface is polished to a high gloss with a surface finish of much less than Ra 0.8 µm. The contour is produced with generous radii and transitions. It doesn't matter in which position the mushroom knob is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the mushroom knob is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths, form variations.

Accessories:

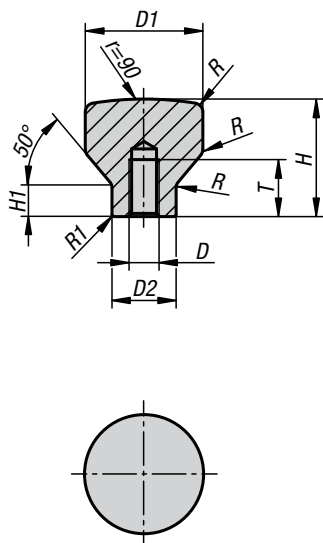
Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

KIPP Mushroom knobs male thread, with high head, for Hygienic USIT® sealing and shim washer

Order No.	D	D1	D2	H	H1	L	L1	R	R1
K1309.2004X8	M4	20	10,8	19	8	8	7	3	0,45
K1309.2105X10	M5	21	11,8	21	10	10	9	3	0,5
K1309.2506X12	M6	25	14,2	25	12	12	11	3	0,55
K1309.3308X16	M8	33	18	33	15	16	15	4	0,6
K1309.4010X20	M10	40	22,3	40	19	20	19	4	0,75

Mushroom knobs female thread with low head

for Hygienic USIT® Freudenberg Process Seals sealing and shim washer



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1310.2004

Note:

The low head makes the mushroom knob ideal for manual lateral movements.

The complete surface is polished to a high gloss with a surface finish of much less than Ra 0.8 µm. The contour is produced with generous radii and transitions. It doesn't matter in which position the mushroom knob is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the mushroom knob is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths, form variations.

Accessories:

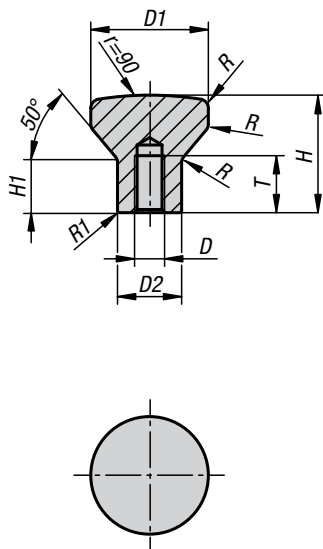
Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

KIPP Mushroom knobs female thread, with low head, for Hygienic USIT® sealing and shim washer

Order No.	D	D1	D2	H	H1	T	R	R1
K1310.2004	M4	20	10,8	19	3,5	10	3	0,45
K1310.2105	M5	21	11,8	21	5,5	12	3	0,5
K1310.2506	M6	25	14,2	25	7	12	3	0,55
K1310.3308	M8	33	18	33	9	16	4	0,6
K1310.4010	M10	40	22,3	40	11,5	20	4	0,75

Mushroom knobs female thread with high head

for Hygienic USIT® Freudenberg Process Seals sealing and shim washer



Material:

Steel parts stainless steel 1.4404.
Surface high-gloss polished.

Sample order:

K1308.2004

Note:

The high head makes the mushroom knob ideal for manual pull and push movements.

The complete surface is polished to a high gloss with a surface finish of much less than Ra 0.8 µm. The contour is produced with generous radii and transitions. It doesn't matter in which position the mushroom knob is mounted, dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

The Hygienic USIT® sealing and shim washers from Freudenberg Process are used to seal the screw-on point. The shaft of the mushroom knob is specially designed to suit this seal. An almost cavity-free seal of the screw-on point is created which satisfies hygienic regulations.

On request:

Inch threads, thread lengths, form variations.

Accessories:

Hygienic USIT® sealing and shim washer K1326 for the screw-on surface.

KIPP Mushroom knobs, female thread with high head, for Hygienic USIT® sealing and shim washer

Order No.	D	D1	D2	H	H1	T	R	R1
K1308.2004	M4	20	10,8	19	8	10	3	0,45
K1308.2105	M5	21	11,8	21	10	12	3	0,5
K1308.2506	M6	25	14,2	25	12	12	3	0,55
K1308.3308	M8	33	18	33	15	16	4	0,6
K1308.4010	M10	40	22,3	40	19	20	4	0,75

Pull handles

for Hygienic USIT® sealing and shim washer Freudenberg Process Seals



Material:
Stainless steel 1.4404.

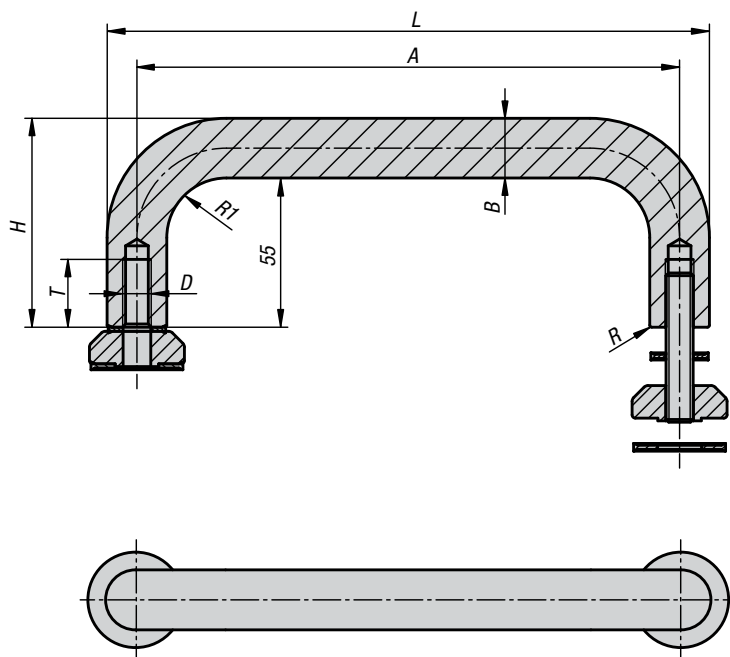
Version:
High-gloss polished.

Sample order:
K1364.30006

Note:
Solid pull handles, polished overall to a high gloss. The resulting surface finish of less than Ra 0.8 µm allows residue from products or cleaners to seldom adhere. This, together with the large radii make the handle extremely easy to clean.
Through the optionally available support disc, the contact surface i.e. the transferable force is considerably increased.
Screwing on directly or using the intermediate support disc is carried out using the Hygienic USIT® sealing washer from Freudenberg Process Seals. The as normal time-consuming welding of the handle, grinding and polishing the weld is not required. All fastening points and the screw-on surface are hygienically handled.

On request:
External threads, inch threads, longer and higher versions.

Accessories:
Hygienic USIT® sealing and shim washer K1326 for the screw-on surface and the support disc.



KIPP Pull handles

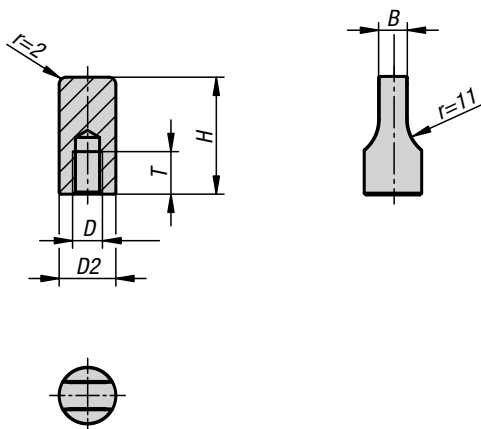
Order No.	A	B	D	H	L	R	R1	T
K1364.12005	120	11,8	M5	66,8	131,8	0,5	13	12,5
K1364.20005	200	11,8	M5	66,8	211,8	0,5	13	12,5
K1364.30005	300	11,8	M5	66,8	311,8	0,5	13	12,5
K1364.12006	120	14,2	M6	69,2	134,2	0,55	16	15
K1364.20006	200	14,2	M6	69,2	214,2	0,55	16	15
K1364.30006	300	14,2	M6	69,2	314,2	0,55	16	15
K1364.12008	120	18	M8	73	138	0,6	19	20
K1364.20008	200	18	M8	73	218	0,6	19	20
K1364.30008	300	18	M8	73	318	0,6	19	20
K1364.12010	120	22,3	M10	77,3	142,3	0,75	23,5	25
K1364.20010	200	22,3	M10	77,3	222,3	0,75	23,5	25
K1364.30010	300	22,3	M10	77,3	322,3	0,75	23,5	25

KIPP Circular plates

Order No.	for screws	D2	D3	D4	D5	H	H1	H2	R2	R3
K1365.05	M5	13,5	18	8	5,2	6	3,5	0,7	1,5	0,6
K1365.06	M6	15,7	22,3	10	6,2	8	4,8	0,7	1,5	0,75
K1365.08	M8	20	26,6	12	8,2	10	6,7	1	2	0,9
K1365.10	M10	24,3	35	16	10,2	12	7	1	2	1,2

Wing nut narrow

in Hygienic DESIGN



Material:

Stainless steel 1.4404.

Version:

Polished.

Sample order:

K1314.04

Note:

The wing nut makes simple screw connections feasible. They can be easily opened or re-tightened without tools.

The complete surface is polished with a surface finish of less than $Ra\ 0.8\ \mu m$. The contour is rounded with smooth transitions. Due to the polished surface dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

On request:

Inch threads, external threads.

KIPP Wing nut narrow in Hygienic DESIGN

Order No.	D	D2	H	B	T
K1314.04	M4	9	20	4,5	6
K1314.05	M5	10	22	4,5	6
K1314.06	M6	12	22	5,5	7
K1314.08	M8	16	25	8	9
K1314.10	M10	20	30	10	11

Wing nut wide

in Hygienic DESIGN



Material:

Stainless steel 1.4404.

Version:

Polished.

Sample order:

K1315.2004

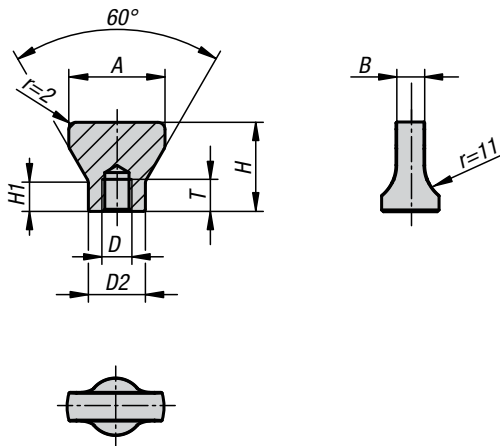
Note:

The wing nut makes simple screw connections feasible. They can be easily opened or re-tightened without tools.

The complete surface is polished with a surface finish of less than $Ra\ 0.8\ \mu m$. The contour is rounded with smooth transitions. Due to the polished surface dirt and residue from products or cleaners seldom adheres. Easy cleaning is ensured.

On request:

Inch threads, external threads.

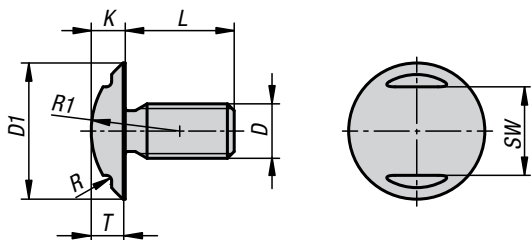


KIPP Wing nut wide in Hygienic DESIGN

Order No.	D	D2	A	B	H	H1	T
K1315.2004	M4	9	20	4,5	20	5	6
K1315.2205	M5	10	22	4,5	22	5,9	6
K1315.2506	M6	12	25	5,5	22	5	7
K1315.2708	M8	16	27	8	25	8,5	9
K1315.3010	M10	20	30	10	30	10	11

Ball head screw

in Hygienic DESIGN


Material:

Stainless steel 1.4404.

Version:

Polished.

Sample order:

K1329.06X20 (include length L)

Note:

Ideal elements for fastening cladding panels, Plexiglas covers etc. The oversized flange and the thread undercut ensure a stress-free, uniform force distribution on the respective surfaces. Projecting edges are kept to a minimum by the head height being kept as low as possible. An open-end spanner is used to screw the fastener in.

The surface of the ball head screw is polished and, with regard to design optimised for the use in hygienic environments. The surface is polished to a surface finish of less than $Ra\ 0.8\ \mu m$. Dirt and residue from products or cleaners seldom adheres and easy cleaning is ensured.

Accessories:

For damage-free tightening and loosening of the screw we recommend the open-end spanners with protective cap, see article No. K1362 ... together with the protective caps K1362 ...

KIPP Ball head screw in Hygienic DESIGN

Order No.	D	D1	K	T	SW	R	R1	L
K1329.03X	M3	8	1,8	1,1	4,4	0,3	5,6	4/5/6/8/10
K1329.04X	M4	11	2,9	1,9	6	0,3	6,7	5/6/8/10/12
K1329.05X	M5	14	4	2,3	8	0,4	8,5	6/8/10/12/16
K1329.06X	M6	17	5	3,5	10	0,6	10	8/10/12/16/20
K1329.08X	M8	20	5	3	13	0,8	13	10/12/16/20/25
K1329.10X	M10	22	6,4	4,4	15	0,9	13,5	12/16/20/25/30/37
K1329.12X	M12	27	7,5	5	19	1	17,5	16/20/25/30/35
K1329.16X	M16	36	9	7	24	1,1	23	20/25/30/35/40

Hexagon bolts with narrow shaft

in Hygienic DESIGN



Material:

Stainless steel 1.4404.

Version:

Polished.

Sample order:

K1330.06X30 (include length L)

Note:

Narrow shaft bolts are preferably secured against unintentional loss with a retaining element. This satisfies the EU standard 2006/42/EG. With the optionally available retaining washer the bolt is permanently combined with the component before screwing in. The washer is screwed over the threaded section and can then move freely on the narrow shaft. The shaft is not damaged by e.g. notching caused by a spring effect. By manual operation it is not possible that the washer screws itself out again. However, by careful manipulation the washer can be removed from the bolt without damaging either.

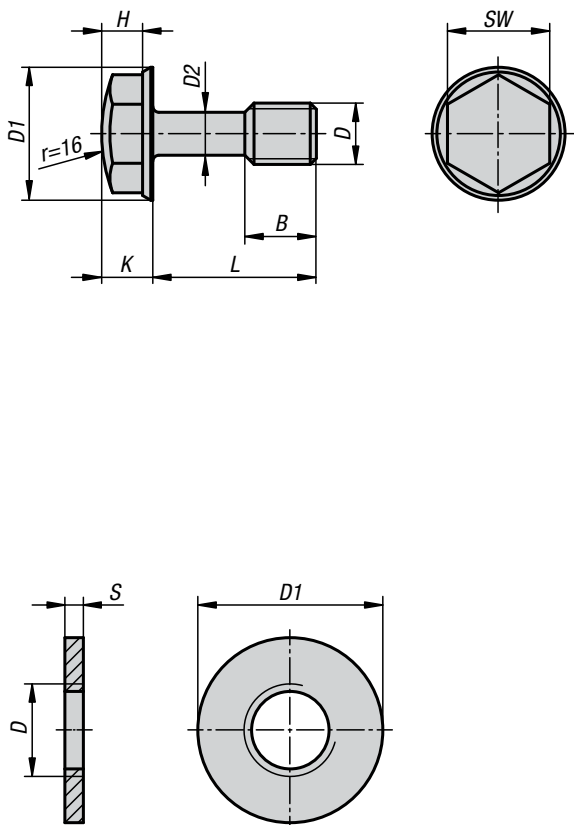
The surface of the hexagon head bolt is polished and, with regard to design optimised for the use in hygienic environments. The bolt head is convex on the top face and the collar has a conical formed top surface. Instead of troublesome embossing or indentations, the bolt head is smooth with a surface finish of less than Ra 0.8 µm. Dirt and residue from products or cleaners seldom adheres and easy cleaning is ensured.

On request:

Inch threads, thread lengths, shaft lengths

Accessories:

Locking washer K1331.



KIPP Hexagon bolts with narrow shaft in Hygienic DESIGN

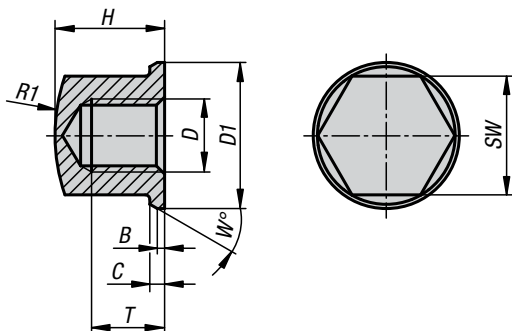
Order No.	D	D1	D2	B	H	K	L	SW
K1330.03X	M3	7	2,1	4,5	3	3,8	6/8/10/12	5,5
K1330.04X	M4	9,2	3,1	5	3	4	6/8/10/12/16/20	7
K1330.05X	M5	10,5	3,7	6	3,7	4,7	10/12/8/16/20/25	8
K1330.06X	M6	13	4,2	7	4	5	8/10/12/16/20/25/30/35/40/45/50/60	10
K1330.08X	M8	16,8	6	9	5,5	6,5	12/14/16/20/25/30/35/40/45/50/55/60/65/70	13
K1330.10X	M10	20,6	7,7	12	7,3	8,3	20/25/30/35/40/45/50/55/60/65/70/75/80	16

KIPP Retaining washers for narrow shank screws

Order No.	D	D1	S
K1331.03	M3	6	1,5
K1331.04	M4	8	1,5
K1331.05	M5	10	1,5
K1331.06	M6	12	1,5
K1331.08	M8	16	2
K1331.10	M10	20	2

Cap nut compact

in Hygienic DESIGN



Material:

Stainless steel 1.4404.

Version:

Polished.

Sample order:

K1332.08

Note:

The surface of the cap nut is polished and, with regard to design optimised for the use in hygienic environments. The top of the nut is spherical and the collar has a conical formed top face. The nut has been designed as a low version so as to keep troublesome corners as few as possible. Due to the extremely high quality surface finish of much less than $Ra\ 0.8\ \mu m$, hardly any dirt particles adhere to the surface.

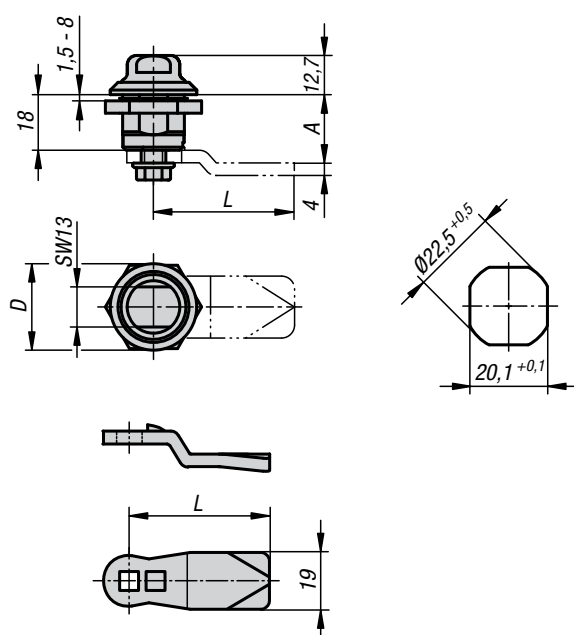
On request:

Inch threads, high versions.

KIPP Cap nut compact in Hygienic DESIGN

Order No.	D	D1	B	C	H	R1	SW	T	W
K1332.03	M3	6,8	0,25	0,5	4,95	8,8	5,5	3	20
K1332.04	M4	9	0,3	0,8	6,5	10	7	4	30
K1332.05	M5	10	0,5	1	7	16	8	4	30
K1332.06	M6	12	0,8	1	9	16	10	6	30
K1332.08	M8	16	0,8	1,6	12	20	13	8	30
K1332.10	M10	20	1	2	14	32	16	10	30
K1332.12	M12	24	1	2,5	16	35	19	11	30

Quarter-turn locks in Hygienic DESIGN


Material:

Housing, actuation and fastening nut, stainless steel 1.4404.
O-rings red silicone, conforming to FDA.
Tongue 1.4301 stainless steel.

Version:

Bright.

Sample order:

Quarter turn lock K1353.18
Tongue K1340.45060

Note:

The quarter turn lock fulfills the hygienic requirements acc. to DIN EN 1672-2 and DIN EN 14159.
Especially suitable for the food and beverage industry.

Please order required tongue version separately. Every tongue can be combined with every housing.

Accessories:

Lock key K1335.113
Ring spanner K1362.13
Protective insert K1362.1310

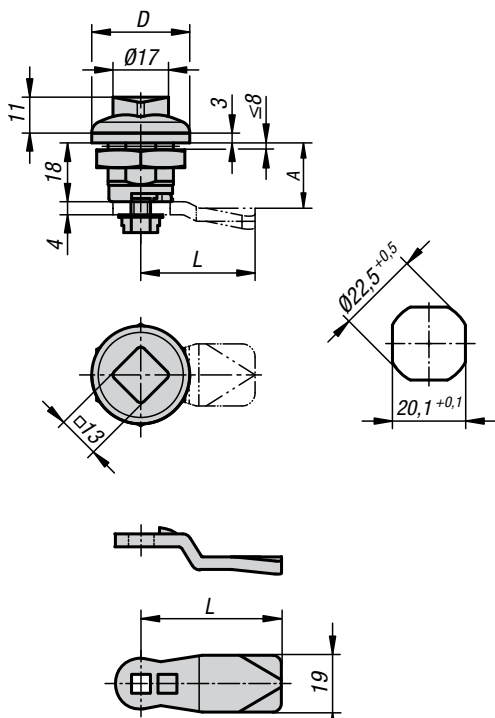
KIPP Quarter-turn lock for sterile areas

Order No.	Actuation	D
K1353.18	key	28

KIPP Tongue for quarter-turn lock

Order No.	A	L
K1340.45060	6	45
K1340.45080	8	45
K1340.45100	10	45
K1340.45140	14	45
K1340.45160	16	45
K1340.45180	18	45
K1340.45200	20	45
K1340.45220	22	45
K1340.45240	24	45
K1340.45260	26	45
K1340.45280	28	45
K1340.45320	32	45
K1340.45500	50	45

Quarter-turn locks in Hygienic DESIGN



Material:

Housing and actuation: 1.4404.
Earthing nut and ratchet screw: 1.4301.
Seal: blue silicon, FDA conform.
Tongue 1.4301 stainless steel.

Version:

Bright.

Sample order:

Quarter turn lock K1354.18
Tongue K1340.45060

Note:

The hygienic stainless steel quarter turn lock prevents bacterial attack and fulfils the strict regulations of testing principles for foodstuff machinery and hygien. The well conceived geometric form, the mirror polished stainless steel surface and the central circumferential seal reliably prevent dirt accumulation. Water, cleaning agents etc. can drain off fully and so prevent contamination.

Especially in processes where the resistance of the seal to cleaning and disinfection agents is very important, optimised control cabinets, terminal boxes and command panels are a must. Specifically designed after the principles of Hygienic DESIGN, the hygienic quarter turn lock HD fulfils the strict regulations of the foodstuff processing industry and passes therefore optimally in their professional hygienic applications.

The special seal is suitable for high pressure washing up to max. 100 bar and fulfils IP65/67. Furthermore, the seal is temperature stable up to 80°C and the blue colour satisfies FDA regulations (reliably prevents a confusion with foodstuffs).

Please order required tongue version separately. Every tongue can be combined with every housing.

Accessories:

Lock key K1335.113
Ring spanner K1362.16
Protective insert K1362.1613

KIPP Quarter-turn lock for sterile areas

Order No.	Actuation	D
K1354.18	key	30

KIPP Tongue for quarter-turn lock

Order No.	A	L
K1340.45060	6	45
K1340.45080	8	45
K1340.45100	10	45
K1340.45140	14	45
K1340.45160	16	45
K1340.45180	18	45
K1340.45200	20	45
K1340.45220	22	45
K1340.45240	24	45
K1340.45260	26	45
K1340.45280	28	45
K1340.45320	32	45
K1340.45500	50	45

NOVOnox hygienic Tools

**Material:**

Tools: tool steel.

Protective insert: PETP.

Protective cap: AlSi1MgMn.

Version:

- Protective caps for open-ended spanners 7 / 8 / 10 / 13 / 16 / 18 and 24 mm
- Protective inserts for ring spanners 7 / 8 / 10 / 13 / 16 / 18 and 24 mm
- Protective inserts for sockets 7 / 8 / 10 / 13 / 16 / 18 and 24 mm
- Spanners and sockets designed for the inserts and caps
- Socket wrench ½" length 275 mm
- Socket wrench ½" length 199 mm
- Extensions ½" lengths 248 mm, 76 mm and 45 mm
- Swivel extension ½" length 46 mm
- Universal joint ½" length 70 mm
- Tommy bar ½" length 298 mm

Sample order:

K1363.1

Note:

Tool set with ½" drive and protective insert specially designed for tightening and loosening screw connections with sensitive surfaces - see article No. K1361 and K1362.

Apart from a complete set of protective caps and inserts, the tool case also contains the matching special tools. To complete the set normal drive and aid tools are also included.

All parts are set into a special moulding and prevented from falling out when the case is opened. The case itself can be fully opened 180° so that all tools and parts are immediately available. It is also immediately obvious if all protective inserts are available in adequate amounts or if they must be specifically re-ordered.

Application:

Fastening of surface sensitive nuts and screws for hygienic areas. Additionally, soiling due to contact corrosion is reliably prevented. Also for other sensitive visible parts on automobiles and motorbikes and in the sanitary branches.

On request:

Other AF sizes, tools and protective inserts for ¼" drive.

Attention:

To prevent contact corrosion the tools should not be used with normal steel fasteners.

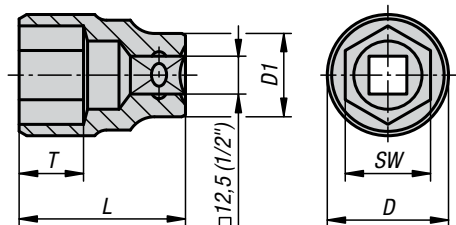
KIPP NOVOnox hygienic Tools

Order No.	Description
K1363.1	Tool set

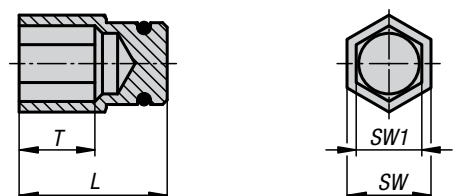
Sockets and plastic inserts



Ⓐ



Ⓑ



Material:
Socket tool steel.
Insert special PETP.

Version:
Socket chromium-plated.

Sample order:
K1361.1112 (Socket SW11)
K1361.0805 (Plastic insert SW8 for M5 hex head screw)

Note:
Socket:
Socket with 1/2" drive, made by Hazat. Specially modified, for holding the plastic inserts. The plastic inserts are securely held by the inner form and length of the socket. Optimal drive torque is transmitted to the screw head. By careful use, metallic contact between the socket and the hex head is prevented. Contact corrosion is eliminated.

Plastic inserts:
Plastic inserts for tightening and loosening screws and nuts, specially designed for Hygienic DESIGN and other stainless steel fasteners. Polished and sensitive surfaces are protected and a later contact corrosion is avoided.
The plastic inserts are made from a specially manufactured PETP and have FDA approval. The inserts are pressed into the special socket manually. The form fit and locking device ensures an optimal hold in the socket. No special tools are required to exchange the worn out inserts.
By a tightening torque of μ 0.12 coefficient of friction (DIN for A4-70 for screws and nuts), the plastic inserts have a life expectancy of up to 1000 alternating cycles.

Drawing reference:
A) Socket
B) Plastic insert

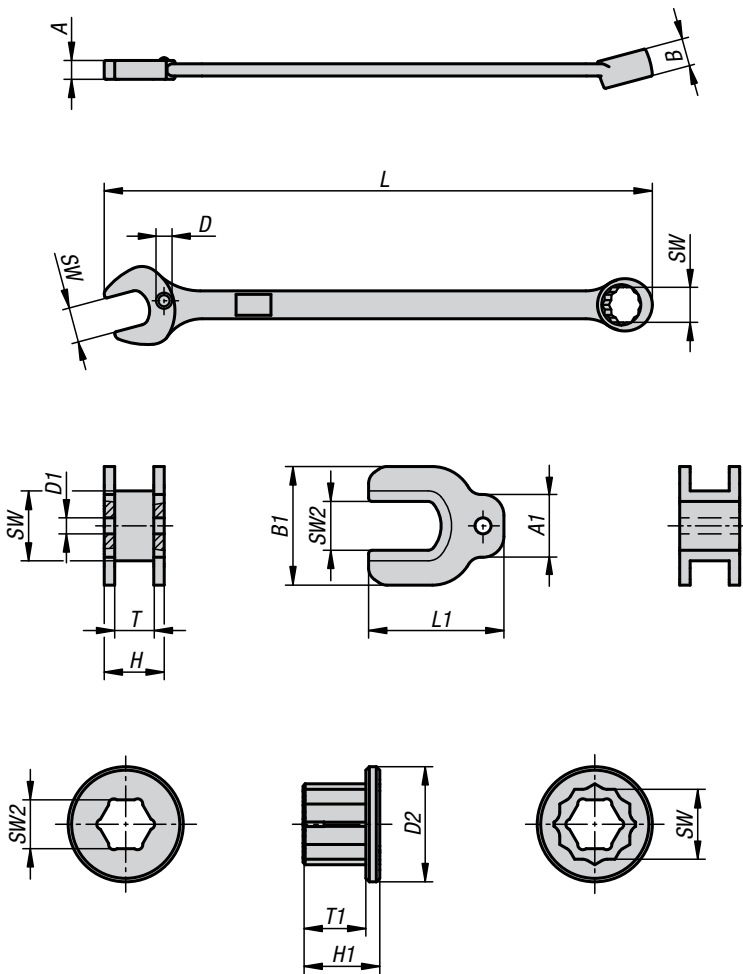
KIPP Sockets

Order No.	D	D1	L	T	SW
K1361.1112	16,6	22	37,3	10,1	11
K1361.1312	19,1	22	37,3	10,6	13
K1361.1612	22,9	23,6	37,1	11,3	16
K1361.1912	26,6	23	37	13,2	19
K1361.2112	29	25	36,8	12,9	21
K1361.2712	35,2	25	44,4	18,1	27

KIPP Plastic inserts

Order No.	L	T	SW	SW1	Suitable for hexagon screws
K1361.0805	18	6	11	8	M5
K1361.1006	19,5	10	13	10	M6
K1361.1308	21,5	11	16	13	M8
K1361.1610	22	13,5	19	16	M10
K1361.1812	21,5	12	21	18	M12
K1361.2416	26,5	18	27	24	M16

Combination spanner with protective caps



Material:

Combination spanner tool steel.
Protective cap AlSi1MgMn.

Sample order:

K1362.10 combination spanner
K1362.1007 caps for open-end spanner
K1362.11007 caps for ring spanner

Note:

The protective cap was specially developed for tightening and loosening screw connections with sensitive surfaces. With normal tools, the surface of polished screws are so damaged even by the first tightening, that cavities are created making easy and effective cleaning no longer possible.

The protective caps ensure damage free tightening and loosening of fasteners with outer contours. The soft aluminium leaves no scratches or other damage on sensitive surfaces. As the aluminium cap is placed over the hard tool steel, the actual tightening load / tightening torque is taken up by the combination spanner. By proper and professional use the protective caps have a service life of ca. 1000 operating cycles.

Additionally, with the protective caps the risk of contact corrosion is reliably prevented on stainless steel fasteners. The projecting contour largely prevents unintentional contact points between spanner and stainless steel screw. The protective caps are made of the aluminium alloy EN AW 6082 and so comply with EN 602 - aluminium in contact with food. The protective cap is safely held in the spanner by a special moulding or sprung clip element. The cap cannot fall out on its own. Damaged protective caps can be exchanged manually.

On request:

Other sizes.



Combination spanner with protective caps



KIPP Combination spanner

Order No.	SW	A	B	L	D
K1362.10	10	5	8	154,5	5
K1362.11	11	5,5	8,4	168,5	5
K1362.13	13	6,3	10	193	6
K1362.16	16	7	11,4	230,5	6
K1362.19	19	8	13,5	268,5	7
K1362.21	21	8,5	13,7	292	7
K1362.27	27	10,5	16	380	9

KIPP Cap for open-end spanner

Order No.	SW	SW2	A1	B1	L1	D1	T	H
K1362.1007	10	7	9	17	19,4	2,3	5,6	8,6
K1362.1108	11	8	9	18	20,7	2,3	5,7	8,7
K1362.1310	13	10	10	22	23,2	3	6,7	10,7
K1362.1613	16	13	13	27	28,6	3	7,7	11,7
K1362.1916	19	16	13	30	32,5	4	8,6	12,6
K1362.2118	21	18	13	32	35	4	9	13
K1362.2724	27	24	14	40	43,8	4	10,8	15

KIPP Cap for ring spanner

Order No.	SW	SW2	D2	T1	H1
K1362.11007	10	7	16,5	8	11
K1362.11108	11	8	18	9,4	11,4
K1362.11310	13	10	21	11	13
K1362.11613	16	13	25	12,4	14,4
K1362.11916	19	16	30	14,5	16,5
K1362.12118	21	18	32	14,7	16,7
K1362.12724	27	24	41	17	19

Levelling feet Hygienic DESIGN



Material:

Foot plate stainless steel 1.4301.
Threaded spindle stainless steel 1.4301.
Rubber base (NBR) Shore 85 +/-5, FDA tested.
Rubber seal, silicone, FDA tested.

Version:

Foot plate, polished.
Threaded spindle, bright.
Rubber base, black.
Rubber seal, blue.

Sample order:

K1303.108016X140
(include length L)

Note:

Certified according to 3-A Sanitary Standard 88-00.

The high surface quality, the double sealing of the thread and the special seal on the machine foot's spindle joint prevent dirt from sticking and reduce cleaning times to a minimum.

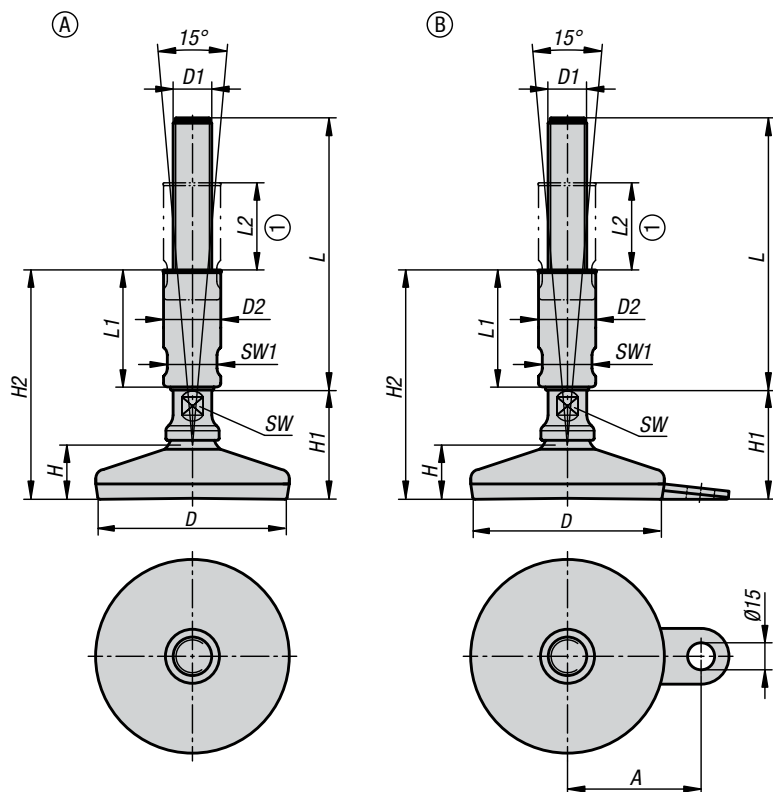
The machine foot is supplied with the 3-A logo.

Application:

The machine foot is particularly suitable for machines, plants and appliances in the foodstuff industry, breweries, dairies, beverage and pharmaceutical industries.

Accessories:

Hygienic USIT® sealing and shim washer K1326.
Hexagon cap nut with collar K1328.



Drawing reference:

1) Adjustment range

KIPP Form A

Order No.	Form	D	D1	D2	H	H1	H2	L1	L2	SW	SW1	L	Load rating max. kN
K1303.108016X	A	80	M16	24	25	53	114/139	60/85	45/70	13	20	140/190	20
K1303.108020X	A	80	M20	30	25	53	114/139	60/85	45/70	17	26	140/190	20
K1303.108024X	A	80	M24	35	25	53	114/139	60/85	45/70	20	30	140/190	20
K1303.110016X	A	100	M16	24	28	56	117/142	60/85	45/70	13	20	140/190	25
K1303.110020X	A	100	M20	30	28	56	117/142	60/85	45/70	17	26	140/190	25
K1303.110024X	A	100	M24	35	28	56	117/142	60/85	45/70	20	30	140/190	25
K1303.112016X	A	120	M16	24	32	60	121/146	60/85	45/70	13	20	140/190	30
K1303.112020X	A	120	M20	30	32	60	121/146	60/85	45/70	17	26	140/190	30
K1303.112024X	A	120	M24	35	32	60	121/146	60/85	45/70	20	30	140/190	30

KIPP Form B with fastening tab

Order No.	Form	A	D	D1	D2	H	H1	H2	L1	L2	SW	SW1	L	Load rating max. kN
K1303.208016X	B	54	80	M16	24	25	53	114/139	60/85	45/70	13	20	140/190	20
K1303.208020X	B	54	80	M20	30	25	53	114/139	60/85	45/70	17	26	140/190	20
K1303.208024X	B	54	80	M24	35	25	53	114/139	60/85	45/70	20	30	140/190	20
K1303.210016X	B	69	100	M16	24	28	56	117/142	60/85	45/70	13	20	140/190	25
K1303.210020X	B	69	100	M20	30	28	56	117/142	60/85	45/70	17	26	140/190	25
K1303.210024X	B	69	100	M24	35	28	56	117/142	60/85	45/70	20	30	140/190	25

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