JW WINCO®
A Ganter Company

Hygienic Design

Standard Parts Especially for the Use in Hygienically Sensitive Areas

Standard Parts. Winco.

EHEDG EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP COMPANY MEMBER

3A

DGUV Test

Knobs, T-Handles

GN 75.6
Mushroom Shaped Knobs
Stainless Steel,
Hygienic Design
Page 8

GN 5064
T-Handles
Stainless Steel,
Hygienic Design
Page 9

Cabinet U-Handles, Tubular Handles

GN 429
Cabinet U-Handles
Stainless Steel,
Hygienic Design
Page 10

GN 3330
Turbular Handles
Stainless Steel,
Hygienic Design
Page 12

GN 3331
Straight Handle Legs
Stainless Steel,
Hygienic Design
Page 13

Adjustable Levers

GN 305
Adjustable Levers
Stainless Steel,
Tapped Type,
Hygienic Design
Page 14

GN 305
Adjustable Levers
Stainless Steel,
with Threaded Stud,
Hygienic Design
Page 15

Star Knobs, Three-Lobed Knobs

GN 5435
Star Knobs
Stainless Steel,
Hygienic Design
Page 16

GN 5445
Three-Lobed Knobs
Stainless Steel,
Hygienic Design
Page 17

Wing Nuts, Wing Screws

GN 8341
Wing Nuts
Stainless Steel,
Hygienic Design
Page 18

GN 8351
Wing Screws
Stainless Steel,
Hygienic Design
Page 19

Indexing Plungers

GN 8170
Indexing Plungers
Stainless Steel,
Knob Side
in Hygienic Design
Page 20

GN 8170
Indexing Plungers
Stainless Steel,
Knob and Pin Side
in Hygienic Design
Page 21

Nuts, Screws

GN 1580
Nuts / Screws
Stainless Steel,
Hygienic Design
Page 22 / 23

GN 1581
Screws
Stainless Steel,
Hygienic Design
Page 24

GN 1582
Screws
Stainless Steel,
Hygienic Design
Page 26

GN 3113
Combination Wrenches
Aluminum,
Hygienic Design
Page 27

GN 3124
Socket
Aluminum,
Hygienic Design
Page 28

Cam Latches, Socket Keys

GN 1150
Cam Latches
Stainless Steel,
Operating Side
in Hygienic Design
Page 29

GN 1150
Cam Latches
Stainless Steel,
Operating and Latch Arm Side
in Hygienic Design
Page 30

GN 1151
Socket Keys
for GN 115 and GN 1150,
Plastic,
Hygienic Design
Page 32

Leveling Feet

GN 19
Leveling Feet
Stainless Steel,
Hygienic Design
Page 33

GN 20
Leveling Feet
Stainless Steel,
without Mounting Holes,
Hygienic Design
Page 36

GN 20
Leveling Feet
Stainless Steel,
with Mounting Holes,
Hygienic Design
Page 38

Leveling Feet

GN 20
Leveling Feet
Stainless Steel, with Extended Adjusting Range, w/o Mounting Holes, Hygienic Design Page 40

GN 20
Leveling Feet
Stainless Steel, with Extended Adjusting Range, with Mounting Holes, Hygienic Design Page 42

Cover Sleeves, Spacers

GN 20.1
Cover Sleeves
Stainless Steel, Hygienic Design Page 44

GN 6226
Spacers
Stainless Steel, Hygienic Design Page 45

Sealing Rings, Wipers

GN 7600
Sealing Rings
Elastomer, Hygienic Design Page 46

GN 7607
Wipers
Elastomer, Hygienic Design Page 48

Magnets

GN 5080
Retaining Magnets
Stainless Steel, Hygienic Design Page 49

GN 5090
Retaining Magnets
Stainless Steel, Hygienic Design Page 50

GN 7080
Holding Disks
Stainless Steel, Hygienic Design Page 51

GN 7090
Holding Disks
Stainless Steel, Hygienic Design Page 52


HD
HYGIENIC
DESIGN

Hygienic Design.

Standard Parts for Extremely Hygienic Requirements.

Advantages

- Greater productivity thanks to reduced cleaning effort
- Conserved resources thanks to lower requirements for fresh water, cleaning agents and energy
- Less wastewater
- Overall cost savings

In the food industry, medical technology and the pharmaceutical industry, an increasing emphasis is placed on product safety, consumer protection and legal aspects.

In response to these requirements, JW Winco has extended its range by the Hygienic Design product family, which meets the strict requirements of the 3-A Sanitary Standards and EHEDG.

Find out more
on our website.

Surfaces

In terms of quality (Ra < 0.8 µm) and geometry, the surfaces of the standard parts are designed so that few dirt particles can adhere, which makes them very easy to clean.

Seals

The primary function of seals is to protect dead spaces, gaps or cracks from the ingress of cleaning liquids or product residues. For this, a defined preload or pressing of the seals and wipers is necessary for a reliable and permanent seal in the installed condition. A sealing concept based on FEM calculations ensures reliable contact pressure after installation. The seals are FDA and EU compliant.

HD

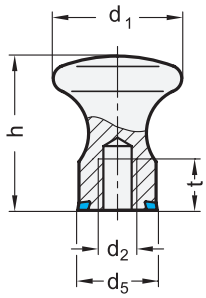
All standard parts of the Hygienic Design product family are labeled with this icon.

Mushroom Shaped Knobs

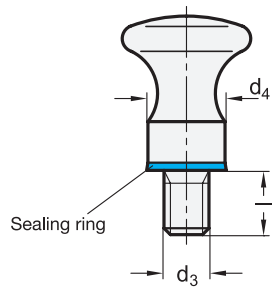
Stainless Steel, with Tapped Hole or Threaded Stud, Hygienic Design

JW WINCO® A Ganter Company

Type **D**



Type **E**



Metric

SS Stainless Steel · HD · FDA

3 Type

D With tapped hole
E With threaded stud

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2 Type D	2 d_3 Type E	d_4	d_5	h	Length l	t min.
20 0.79	M 5	M 5	14 0.55	14.8 0.58	24 0.94	10 0.39	7 0.28
25 0.98	M 6	M 6	16 0.63	16.8 0.66	29 1.14	12 0.47	9 0.35
32 1.26	M 8	M 8	18 0.71	18.8 0.74	37 1.46	14 0.55	12 0.47

Specification

Knob (4 / 5)
Stainless steel AISI 316L
- Matte finish (Ra < 0.8 µm) — **MT**
- Polished finish (Ra < 0.8 µm) — **PL**

Sealing ring
- HNBR — **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM — **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM — **F**
  Operating temperature
  23 °F to 392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85±5 Shore A

RoHS

Mushroom shaped knobs GN 75.6 are intended for use in hygienic areas. The sealed mounting surface enables fastening without dead spaces. The impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.
Mushroom shaped knobs GN 75.6 have a compact and timeless design.

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

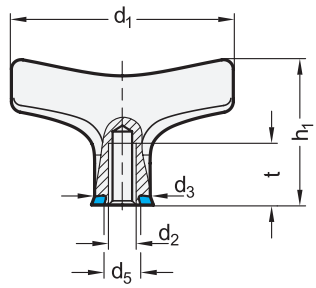
How to order

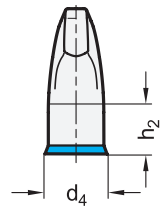
GN 75.6-25-M6-E-MT-H (1 2 3 4 5)

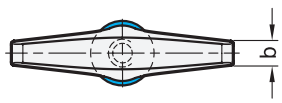
1	Handle diameter d_1
2	Tapped hole d_2 (Threaded stud d_3)
3	Type
4	Finish
5	Sealing ring material

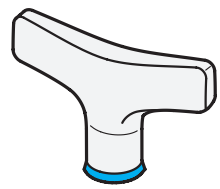
T-Handles

Stainless Steel, with Tapped Hole, Hygienic Design









Metric

SS Stainless Steel · HD · FDA

iF product design award · GERMAN DESIGN AWARD

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	b	d_3	d_4	d_5	h_1	$h_2 \approx$	t min.
63 2.48	M 6	7 0.28	16 0.63	16.8 0.66	12 0.47	41 1.61	12 0.47	12 0.47
80 3.15	M 8	9 0.35	21 0.83	21.8 0.86	17 0.67	52 2.05	15 0.59	16 0.63
100 3.94	M 10	11 0.43	25 0.98	25.8 1.02	21 0.83	65 2.56	19 0.75	20 0.79

Specification

3 4

Handle

Stainless steel precision casting AISI 316

- Matte finish (Ra < 0.8 µm) **MT**
- Polished finish (Ra < 0.8 µm) **PL**

Sealing ring

- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

T-handles GN 5064 comply with the DGUV testing principles and are intended for use in hygienic areas. The versions with PL finish, as well as with sealing ring H and E are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.

T-handles are great for lifting, moving and operating parts or for clamping purposes by means of threads. The ergonomic shape allows for high operating forces.

The T-handles can also be used in particularly aggressive environments thanks to the material used.

see also...	Page
GN 8341 Wing Nuts (Stainless Steel, Hygienic Design)	18

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

1 2 3 4

GN 5064-63-M6-PL-E

1	**Handle diameter d_1**
2	**Thread d_2**
3	**Finish**
4	**Sealing ring material**

Cabinet U-Handles

Round Stainless Steel AISI 316L, with Tapped Holes, Hygienic Design

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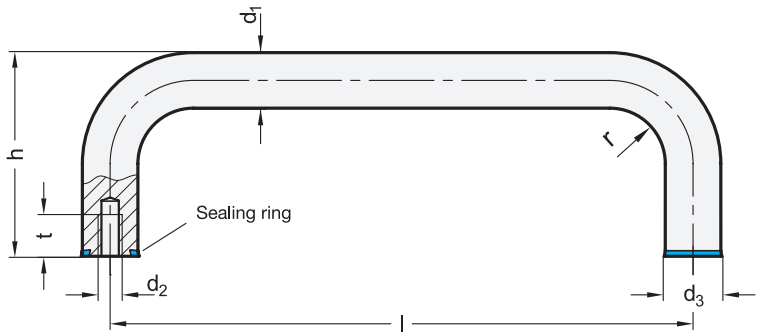
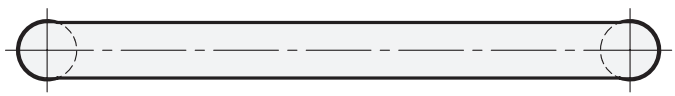


Inch | Metric

SS Stainless Steel | HD | FDA



Inch table

Dimensions in: inches / millimeters

2 d_1	3 Length ±0.02			4 d_2	d_3	h	r	t min.
0.47 12	4.92 125	6.30 160	7.87 200	10 x 24	0.50 12.8	2.01 51	0.55 14	0.47 12
0.63 16	6.30 160	7.87 200	9.84 250	1/4 x 20	0.66 16.8	2.32 59	0.71 18	0.47 12
0.79 20	7.87 200	9.84 250	11.81 300	5/16 x 18	0.82 20.8	3.35 85	0.87 22	0.59 15

Metric table

Dimensions in: millimeters / inches

2 d_1	3 Length l ±0.5			4 d_2	d_3	h	r	t min.
12 0.47	125 4.92	160 6.30	200 7.87	M 5	12.8 0.50	51 2.01	14 0.55	12 0.47
16 0.63	160 6.30	200 7.87	250 9.84	M 6	16.8 0.66	59 2.32	18 0.71	12 0.47
20 0.79	200 7.87	250 9.84	300 11.81	M 8	20.8 0.82	85 3.35	22 0.87	15 0.59

Specification

	1	5	6
Handle			
Stainless steel AISI 316L	**A4**		
• Matte finish (Ra < 0.8 µm)		**MT**	
• Polished finish (Ra < 0.8 µm)		**PL**	
Sealing rings			
• HNBR			**H**
Operating temperature from -13 °F to +302 °F (-25 °C to +150 °C)			
• EPDM			**E**
Operating temperature from -40 °F to +248 °F (-40 °C to +120 °C)			
• FKM			**F**
Operating temperature from 23 °F to 392 °F (-5 °C to +200 °C)			
• FDA compliant material			
• Blue			
• Hardness 85±5 Shore A			

RoHS

Accessory	Page
GN 7600 Sealing Rings	46

Cabinet U-handles GN 429 are intended for use in hygienic areas. The versions with PL finish are certified according to the guidelines of the EHEDG. In addition, the metric versions with PL finish are certified according to the guidelines of DGUV Test.
The sealed mounting surfaces enable fastening without dead spaces. The high quality finish prevents adherence of dirt and facilitates cleaning.

Technical Information	Page
Load Capacity Information	Handbook 2068
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

1 2 3 4 5 6
GN 429-A4-12-160-1/4x20-MT-H

1	**Material**
2	**Handle diameter d_1**
3	**Length l**
4	**Thread d_2**
5	**Finish**
6	**Sealing ring material**

Tubular Handles

Stainless Steel, with Movable Straight Handle Legs, Hygienic Design

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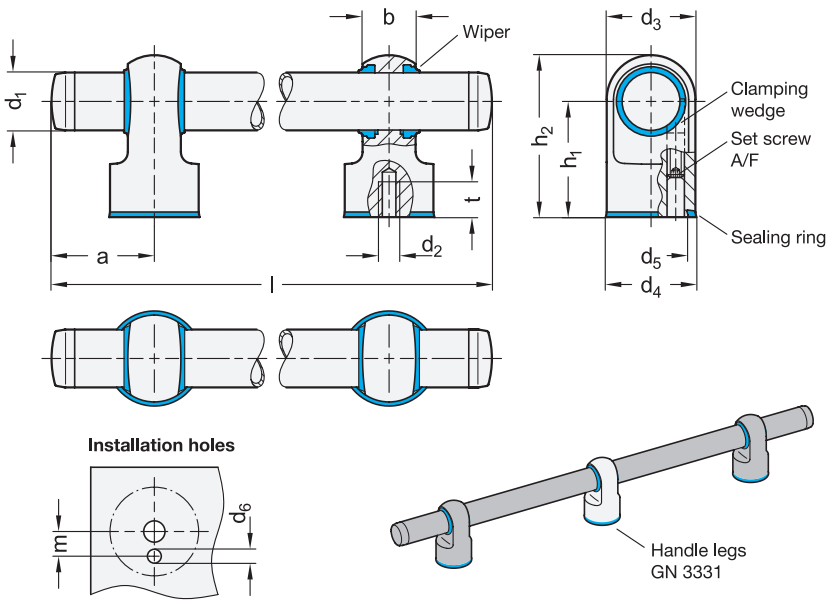

Metric

SS Stainless Steel · HD · FDA

Metric table

Dimensions in: millimeters / inches

2 d_1	3 Length l				a min.	b	d_2	d_3	d_4	d_5	d_6	h_1	h_2	m	A/F	t min.
30 1.18	300 11.81	400 15.75	500 19.69	600 23.62	70 2.76	27.5 1.08	M 10	46 1.81	46.6 1.83	42 1.65	8 0.31	60 2.36	84 3.31	13.5 0.53	5	20 0.79
40 1.57	400 15.75	600 23.62	800 31.50	1000 39.37	70 2.76	30 1.18	M 12	56 2.20	56.8 2.24	50 1.97	8 0.31	70 2.76	99 3.90	18.5 0.73	5	25 0.98

Specification

1 4 5

Handle tube
Stainless steel AISI 304 **NI**
Ground, matte finish (Ra < 0.8 µm) **MT**

Handle legs
Stainless steel AISI 304
Matte finish (Ra < 0.8 µm)

Sealing ring / Wiper
TPU **T**
- Blue
- Operating temperature -4 °F to +230 °F (-20 °C to +110 °C)
- Hardness 95 ±5 Shore A
- FDA compliant material

Clamping wedge
Brass

Set screw
Stainless steel

RoHS

Tubular handles GN 3330 comply with the DGUV testing principles and are designed for use in hygienic areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the non-concave geometry prevent adherence of dirt and facilitate cleaning.
The movable handle legs are loosely enclosed for fastening to the handle tube using the integrated clamping wedge during installation. The position of the handle legs can be adjusted as required, but must not be less than the minimum distance a, as the tubes may be undersized in the edge area.
For large lengths or loads, additional movable handle legs can be added. These are available under standard part number GN 3331.

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 3331 Straight Handle Legs	13
GN 1580 Hex Head Screws	23
GN 1581 Hex Head Screws	24

How to order

1 2 3 4 5
GN 3330-NI-40-1000-MT-T

1	**Material**
2	**Handle diameter d_1**
3	**Length l**
4	**Finish**
5	**Sealing ring material**

Straight Handle Legs

Stainless Steel, for Tubular Handles GN 3330, Hygienic Design

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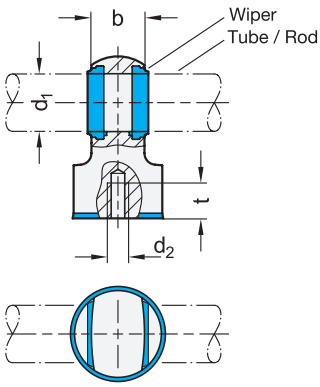
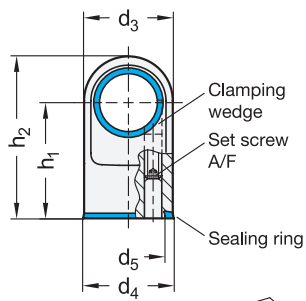
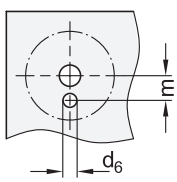




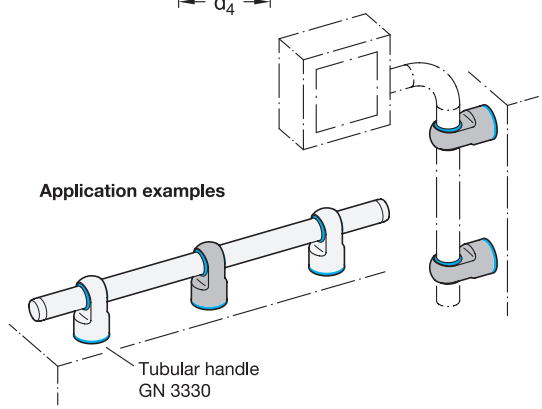
Metric

SS Stainless Steel | HD | FDA

Installation holes



Application examples



Metric table

Dimensions in: millimeters / inches

2 d_1 For rod / tube	3 h_1	b	d_2	d_3	d_4	d_5	d_6	h_2	m	A/F	t min.
30 $^{+0.1}_{-0.25}$ 1.181 $^{+0.004}_{-0.01}$	60 2.36	27.5 1.08	M 10	46 1.81	46.6 1.83	42 1.65	8 0.31	84 3.31	13.5 0.53	5	20 0.79
40 $^{+0.15}_{-0.3}$ 1.575 $^{+0.006}_{-0.012}$	70 2.76	30 1.18	M 12	56 2.20	56.8 2.24	50 1.97	8 0.31	99 3.90	18.5 0.73	5	25 0.98

Specification

	1	4	5
Handle leg			
Stainless steel AISI 304	NI		
Matte finish (Ra < 0.8 µm)		MT	
Sealing ring / Wiper			
TPU			T
• Blue			
• Operating temperature -4 °F to +230 °F (-20 °C to +110 °C)			
• Hardness 95 ±5 Shore A			
• FDA compliant material			
Clamping wedge			
Brass			
Set screw			
Stainless steel			

RoHS

Accessory	Page
GN 1580 Hex Head Screws	23
GN 1581 Hex Head Screws	24

Handle legs GN 3331 comply with the DGUV testing principles and are intended for use in hygienic areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the non-concave geometry prevent adherence of dirt and facilitate cleaning.
The straight handle legs are designed for use with tubular handles GN 3330 to reduce large distances between mounting points or excessive loads on the handle legs. Regardless of the handle application, supports can be used to fix rods and tubes with the corresponding diameter d_1. The tube or rod is fastened during installation using the integrated clamping wedge.

see also...	Page
GN 3330 Tubular Handles (Stainless Steel, Hygienic Design)	12

Technical Information	
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

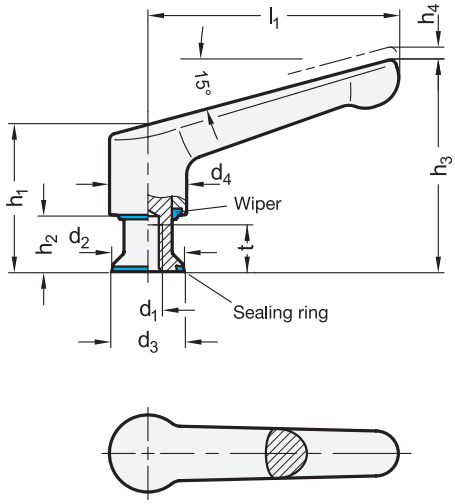
How to order

1 2 3 4 5
GN 3331-NI-40-70-MT-T

1	**Material**
2	**Diameter d_1**
3	**Height h_1**
4	**Finish**
5	**Sealing ring material**

Adjustable Levers

Stainless Steel, DGUV Certified, Tapped Type, Hygienic Design



Metric

SS Stainless Steel · HD · FDA

Metric table

Dimensions in: millimeters / inches

1 l_1	2 d_1	d_2	d_3	d_4	h_1	h_2	h_3	h_4 Stroke	t min.
63 2.48	M 6	14 0.55	14.8 0.58	19 0.75	43.8 1.72	16.3 0.64	60.1 2.37	2.5 0.10	10 0.39
63 2.48	M 8	18 0.71	18.8 0.74	19 0.75	45.8 1.80	18.3 0.72	62.1 2.44	2.5 0.10	12 0.47
78 3.07	M 8	18 0.71	18.8 0.74	24 0.94	49.3 1.94	16.5 0.65	69.3 2.73	3 0.12	12 0.47
78 3.07	M 10	22 0.87	22.8 0.90	24 0.94	51.3 2.02	18.5 0.73	71.3 2.81	3 0.12	15 0.59

Specification

3	4

Lever body
Stainless steel
precision casting AISI 316
Polished finish (Ra < 0.8 µm) — PL

Tapped insert
Stainless steel AISI 304

Sealing ring / Wiper
- HNBR — H
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM — E
  Operating temperature
  -40 °F to +248 °F (-40 °C to + 120 °C)
- FDA compliant material
- Blue
- Hardness 85±5 Shore A

RoHS

Accessory	Page
GN 7600 Sealing Rings	46

Adjustable levers GN 305 with solid stainless steel lever body are certified according to DGUV testing principles, making them suitable for use in in hygienic areas.
The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the impervious exterior surfaces prevent adherence of dirt and facilitates cleaning.
Adjustable levers are ideal whenever parts have to be clamped in a confined space or in a particular lever position.
The threaded insert is moveably attached to the handle with serrations. When pulling up on the handle the serration frees itself and can be re-located into any required position. Engagement is achieved by releasing the lever.

see also...	Page
GN 5435 Star Knobs (Stainless Steel, Hygienic Design)	16
GN 5445 Three-Lobed Knobs (Stainless Steel, Hygienic Design)	17

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Security Information

The information in the operating instructions must be observed during installation, initial operation, and use. These are enclosed with the product or are provided digitally on the product page.

How to order

1 2 3 4
GN 305-63-M8-PL-H

1	**Lever length l_1**
2	**Thread d_1**
3	**Finish**
4	**Sealing ring material**

Adjustable Levers

Stainless Steel, DGUV Certified, Threaded Stud Type, Hygienic Design

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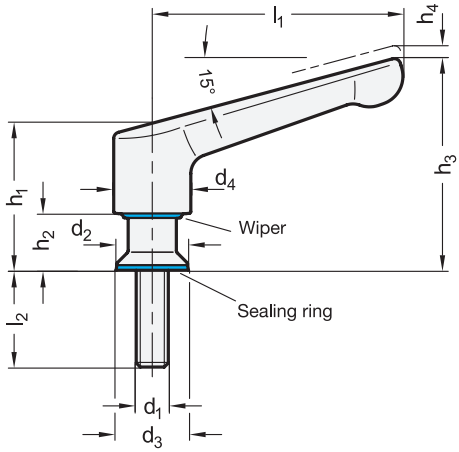


Metric

SS Stainless Steel | HD | FDA

Metric table

Dimensions in: millimeters / inches

1 l_1	2 d_1	3 l_2					d_2	d_3	d_4	h_1	h_2	h_3	h_4 Stroke
63 2.48	M 6	12 0.47	16 0.63	20 0.79	25 0.98	32 1.26	14 0.55	14.8 0.58	19 0.75	43.8 1.72	16.3 0.64	60.1 2.37	2.5 0.10
63 2.48	M 8	12 0.47	16 0.63	20 0.79	25 0.98	32 1.26	18 0.71	18.8 0.74	19 0.75	45.8 1.80	18.3 0.72	62.1 2.44	2.5 0.10
78 3.07	M 8	12 0.47	16 0.63	20 0.79	25 0.98	32 1.26	18 0.71	18.8 0.74	24 0.94	49.3 1.94	16.5 0.65	69.3 2.73	3 0.12
78 3.07	M 10	16 0.63	20 0.79	25 0.98	32 1.26	-	22 0.87	22.8 0.90	24 0.94	51.3 2.02	18.5 0.73	71.3 2.81	3 0.12

Specification

4 5

Lever body
Stainless steel
precision casting AISI 316
Polished finish (Ra < 0.8 µm) **PL**

Threaded stud
Stainless steel AISI 304

Sealing ring / Wiper
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to + 120 °C)
- FDA compliant material
- Blue
- Hardness 85±5 Shore A

RoHS

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

Adjustable levers GN 305 with solid stainless steel lever body are certified according to DGUV testing principles, making them suitable for use in in hygienic areas.
The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the impervious exterior surfaces prevent adherence of dirt and facilitates cleaning.
Adjustable levers are ideal whenever parts have to be clamped in a confined space or in a particular lever position.
The threaded insert is moveably attached to the handle with serrations. When pulling up on the handle the serration frees itself and can be re-located into any required position. Engagement is achieved by releasing the lever.

see also...	Page
GN 5435 Star Knobs (Hygienic Design)	16
GN 5445 Three-Lobed Knobs (Hygienic Design)	17

Security Information

The information in the operating instructions must be observed during installation, initial operation, and use. These are enclosed with the product or are provided digitally on the product page.

How to order

1 2 3 4 5
GN 305-78-M10-20-PL-E

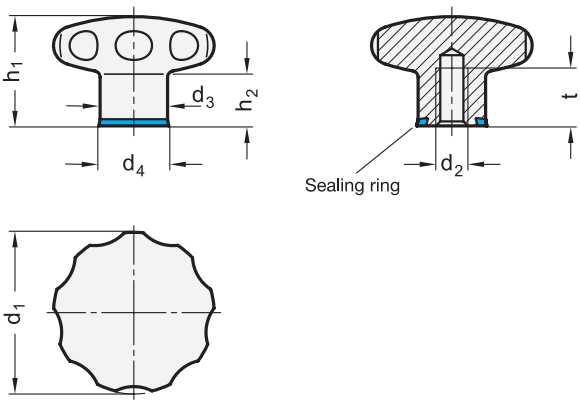
1	**Lever length l_1**
2	**Thread d_1**
3	**Thread length l_2**
4	**Finish**
5	**Sealing ring material**

Star Knobs

Stainless Steel, with Tapped Blind Bore, Hygienic Design

JW WINCO® A Ganter Company

Metric



SS Stainless Steel · HD · FDA

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h_1	h_2	t min.
40 1.57	M 6	18 0.71	18.8 0.74	30.5 1.20	15 0.59	12 0.47
40 1.57	M 8	18 0.71	18.8 0.74	30.5 1.20	15 0.59	15 0.59
50 1.97	M 8	21 0.83	21.8 0.86	34 1.34	17 0.67	15 0.59
50 1.97	M 10	21 0.83	21.8 0.86	34 1.34	17 0.67	18 0.71

Specification

3	4
Star knob	
Stainless steel AISI 316L	
• Matte finish (Ra < 0.8 µm)	**MT**
• Polished finish (Ra < 0.8 µm)	**PL**
Sealing ring	
• HNBR	**H**
Operating temperature	
-13 °F to +302 °F (-25 °C to +150 °C)	
• EPDM	**E**
Operating temperature	
-40 °F to +248 °F (-40 °C to +120 °C)	
• FKM	**F**
Operating temperature	
23 °F to 392 °F (-5 °C to +200 °C)	
• FDA compliant material	
• Blue	
• Hardness 85±5 Shore A	

RoHS

Star knobs GN 5435 are intended for use in hygienic areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish and the large corner radii prevent adherence of dirt and facilitate cleaning.

see also...	Page
GN 5445 Three-Lobed Knobs (Stainless Steel, Hygienic Design)	17

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

How to order

GN 5435-40-M8-PL-H (1-2-3-4)

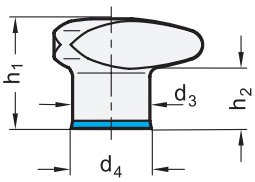
1	**Handle diameter d_1**
2	**Thread d_2**
3	**Finish**
4	**Sealing ring material**

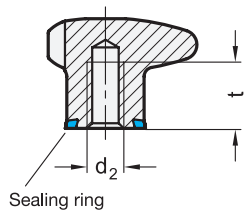
Three-Lobed Knobs

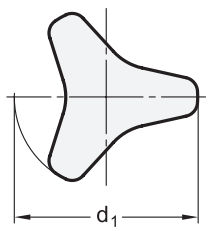
Stainless Steel, with Tapped Blind Bore, Hygienic Design

JW WINCO® A Ganter Company

Metric







SS Stainless Steel · HD · FDA

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h_1	h_2	t min.
40 1.57	M 6	18 0.71	18.8 0.74	26 1.02	15 0.59	12 0.47
40 1.57	M 8	18 0.71	18.8 0.74	26 1.02	15 0.59	15 0.59
50 1.97	M 8	21 0.83	21.8 0.86	30 1.18	17 0.67	15 0.59
50 1.97	M 10	21 0.83	21.8 0.86	30 1.18	17 0.67	18 0.71

Specification

	3	4
Three-lobed knob		
Stainless steel AISI 316L		
• Matte finish (Ra < 0.8 µm)	**MT**	
• Polished finish (Ra < 0.8 µm)	**PL**	
Sealing ring		
• HNBR Operating temperature -13 °F to +302 °F (-25 °C to +150 °C)		**H**
• EPDM Operating temperature -40 °F to +248 °F (-40 °C to +120 °C)		**E**
• FKM Operating temperature 23 °F to 392 °F (-5 °C to +200 °C)		**F**
• FDA compliant material		
• Blue		
• Hardness 85±5 Shore A		

RoHS

Three-lobed knobs GN 5445 are intended for use in hygienic areas. The sealed mounting surface enables fastening without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

see also...	Page
GN 5435 Star Knobs (Stainless Steel, Hygienic Design)	16

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

How to order

GN 5445-40-M8-PL-H (1 2 3 4)

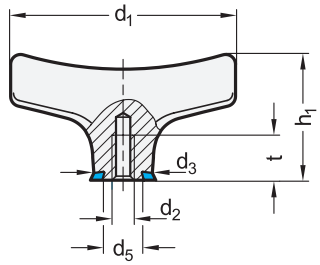
1	**Handle diameter d_1**
2	**Thread d_2**
3	**Finish**
4	**Sealing ring material**

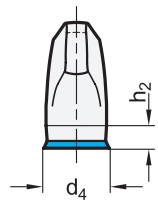
Wing Nuts

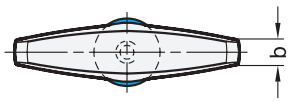
Stainless Steel, with Tapped Blind Bore, Hygienic Design

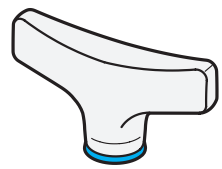
JW WINCO® A Ganter Company

Metric









Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	b	d_3	d_4	d_5	h_1	$h_2 \approx$	t min.
40 1.57	M 4	4 0.16	11 0.43	11.8 0.46	7 0.28	22 0.87	4 0.16	8 0.31
50 1.97	M 5	5 0.20	13 0.51	13.8 0.54	9 0.35	28 1.10	5 0.20	10 0.39
63 2.48	M 6	7 0.28	16 0.63	16.8 0.66	12 0.47	35 1.38	6 0.24	12 0.47

Specification

Wing nut

Stainless steel precision casting AISI 316

- Matte finish (Ra < 0.8 µm) **MT**
- Polished finish (Ra < 0.8 µm) **PL**

Sealing ring

- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Wing nuts GN 8341 comply with the DGUV testing principles and are intended for use in hygienic areas. The versions with PL finish, as well as with sealing ring H and E are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.

Wing nuts clamp and fasten parts easily without tools. The ergonomic shape allows for high tightening forces.

The wing nuts can also be used in particularly aggressive environments thanks to the material used.

see also...	Page
GN 5064 T-Handles (Stainless Steel, Hygienic Design)	9
GN 8351 Wing Screws (Stainless Steel, Hygienic Design)	19

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

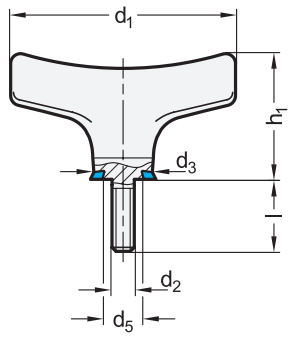
Accessory

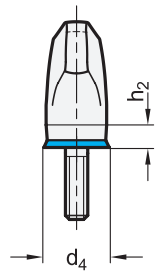
GN 7600 Sealing Rings	46

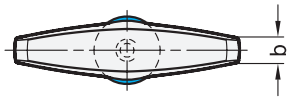
How to order

GN 8341-50-M5-MT-E

1	**Handle diameter d_1**
2	**Thread d_2**
3	**Finish**
4	**Sealing ring material**







Metric

SS Stainless Steel | HD | FDA

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	3 Length l			b	d_3	d_4	d_5	h_1	h_2 ≈
40 1.57	M 4	8 0.31	12 0.47	16 0.63	4 0.16	11 0.43	11.8 0.46	7 0.28	22 0.87	4 0.16
50 1.97	M 5	12 0.47	16 0.63	20 0.79	5 0.20	13 0.51	13.8 0.54	9 0.35	28 1.10	5 0.20
63 2.48	M 6	16 0.63	20 0.79	25 0.98	7 0.28	16 0.63	16.8 0.66	12 0.47	35 1.38	6 0.24

Specification

4 5

Wing screw
Stainless steel precision casting AISI 316
- Matte finish (Ra < 0.8 µm) **MT**
- Polished finish (Ra < 0.8 µm) **PL**

Sealing ring
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Wing screws GN 8351 comply with the DGUV testing principles and are intended for use in hygienic areas. The versions with PL finish, as well as with sealing ring H and E are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents the accumulation of dirt and facilitates cleaning.
Wing screws clamp and fasten parts easily without tools. The ergonomic shape allows for high tightening forces.
The wing screws can also be used in particularly aggressive environments thanks to the material used.

see also...	Page
GN 8341 Wing Nuts (Stainless Steel, Hygienic Design)	18

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

How to order

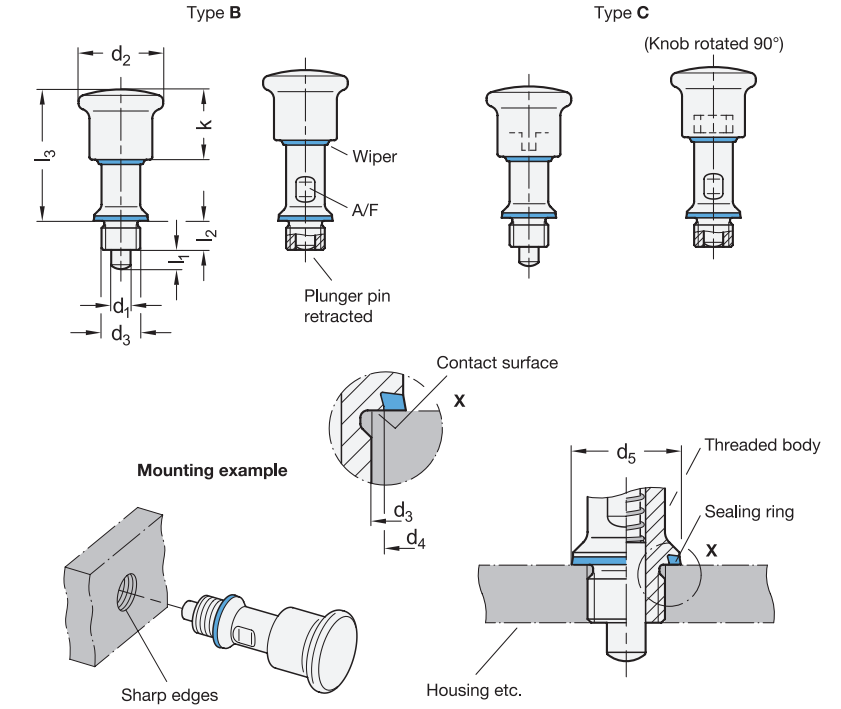
1 2 3 4 5
GN 8351-50-M5-16-MT-E

1	**Handle diameter d_1**
2	**Thread d_2**
3	**Length l**
4	**Finish**
5	**Sealing ring material**

Indexing Plungers

Stainless Steel, DGUV Certified, Lock-Out and Non Lock-Out, Hygienic Design

JW WINCO® A Ganter Company



Metric

SS Stainless Steel | HD | FDA

2 Type

B Non lock-out
C Lock-out

3 Identification

FH Without sealing lock nut, knob side Hygienic Design

Metric table

Dimensions in: millimeters / inches

d_1 Pin f8 Bore H8	d_2	d_3	d_4	d_5	l_1	l_2	l_3	k	A/F	Spring load ≈ Initial	Spring load ≈ End
6 0.236	35 1.38	M 12 x 1.5	18 0.71	22.8 0.90	6 0.24	12 0.47	50.8 2.00	30 1.18	14 0.55	20 N 4.50 lbf	36 N 8.09 lbf
8 0.315	35 1.38	M 16 x 1.5	18 0.71	22.8 0.90	8 0.31	12 0.47	55.3 2.18	30 1.18	14 0.55	22 N 4.95 lbf	32 N 7.19 lbf

Specification

Threaded body / Knob / Plunger pin
Stainless steel AISI 316
Plunger pin surface hardened

Spring
Stainless steel AISI 316Ti

Seals
- Blue
- FDA compliant material
- Operating temperature -13 °F to +230 °F (-25 °C to +110 °C)
- Sealing ring HNBR, hardness 85 ±5 Shore A **H**
- Wiper TPU, hardness 95 ±5 Shore A

All moving parts
Lubricated, grease FDA compliant (NSF H1)

RoHS

Technical Information	Page
ISO Fundamental Tolerances	Handbook 2129
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Indexing plungers GN 8170 are certified according to the DGUV Test and meet hygienic requirements on the knob side. Wipers between the knob and the threaded body as well as the sealing ring between the threaded body and the housing keep the mechanics on the knob side sealed. The high surface quality (Ra < 0.8 µm) and the free of dead-space mounting prevent dirt from adhering and facilitate cleaning.

Indexing plungers with lock-out (type C) are used for applications where the plunger pin needs to stay in its retracted position. To achieve this, the knob is rotated by 90 degrees after being retracted. A notch keeps the plunger in the retracted position.

Mounting holes and through-holes in the housing must be drilled at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function after being mounted.

see also...	Page
GN 8170 Indexing Plungers (Full Hygiene)	21

Accessory

GN 7600 Sealing Rings	46

How to order

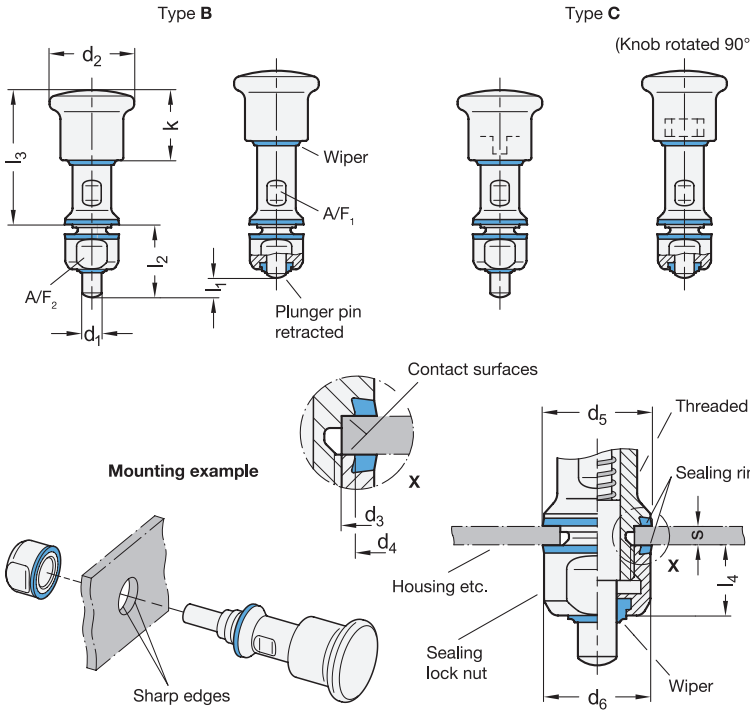
1 2 3 4
GN 8170-8-C-FH-H

1	**Pin diameter d_1**
2	**Type**
3	**Identification**
4	**Sealing ring material**

Indexing Plungers

Stainless Steel, DGUV Certified, Lock-Out and Non Lock-Out, Hygienic Design

JW WINCO® A Ganter Company



Metric

SS Stainless Steel · HD · FDA

2 Type

B Non lock-out
C Lock-out

3 Identification

VH With sealing lock nut, knob and pin side in Hygienic Design

Metric table

1

Dimensions in: millimeters / inches

d_1 Pin f8 Bore H8	d_2	d_3 –0.1	d_4	d_5	d_6	l_1	l_2	l_3	l_4	k	s Clamping distance min.	s Clamping distance max.	A/F_1	A/F_2	Spring load ≈ Initial	Spring load ≈ End
6 0.236	35 1.38	16 0.63	18 0.71	22.8 0.90	22 0.87	6 0.24	27.5 1.08	51.5 2.03	14.5 0.57	30 1.18	1.5 0.06	4 0.16	14 0.55	18 0.71	20 N 4.50 lbf	36 N 8.09 lbf
8 0.315	35 1.38	16 0.63	18 0.71	22.8 0.90	22 0.87	8 0.31	29.5 1.16	56.5 2.22	14.5 0.57	30 1.18	1.5 0.06	4 0.16	14 0.55	18 0.71	22 N 4.95 lbf	32 N 7.19 lbf

Specification

4

Threaded body / Knob / Plunger pin
Stainless steel AISI 316
Plunger pin surface hardened

Spring
Stainless steel AISI 316Ti

Seals
- Blue, FDA compliant material
- Operating temperature
  -13 °F to +230 °F (-25 °C to +110 °C)
- Sealing rings
  HNBR, hardness 85 ±5 shore A **H**
- Wiper
  TPU, hardness 95 ±5 shore A

All moving parts
Lubricated, grease FDA-compliant (NSF H1)

RoHS

Technical Information	Page
ISO Fundamental Tolerances	Handbook 2129
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Indexing plungers GN 8170 are certified according to DGUV Test and, with their additional sealing lock nut, meet hygienic requirements on the knob and pin side. Wipers between knob and threaded body and between threaded body and pin as well as sealing rings on the threaded body and sealing lock nut keep the mechanics sealed. The high surface quality (Ra < 0.8 µm) and the free of dead-space mounting prevent dirt from adhering and facilitate cleaning.

Indexing plungers with lock-out (type C) are used for applications where the plunger pin needs to stay in its retracted position. To achieve this, the knob is rotated by 90 degrees after being retracted. A notch keeps the plunger in the retracted position.

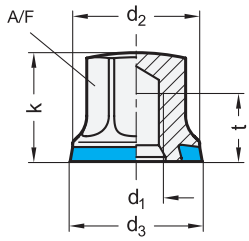
Through-holes in the housing must be drilled at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function after being mounted.

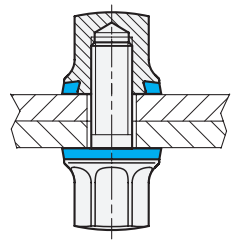
Accessory	Page
GN 7600 Sealing Rings	46

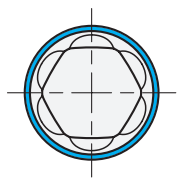
How to order

1 2 3 4
GN 8170-6-B-VH-H

1	**Pin diameter d_1**
2	**Type**
3	**Identification**
4	**Sealing ring material**







Inch | Metric

SS Stainless Steel | HD | FDA

Inch table

Dimensions in: inches / millimeters

d_1	d_2	d_3	k	t min.	A/F
10 x 24	0.47 12	0.50 12.8	0.39 10	0.1875 4.7625	0.3125 7.938
1/4 x 20	0.63 16	0.66 16.8	0.47 12	0.2500 6.35	0.4375 11.113
5/16 x 18	0.71 18	0.74 18.8	0.55 14	0.3125 7.9375	0.5000 12.7
3/8 x 16	0.79 20	0.82 20.8	0.63 16	0.3750 9.525	0.5625 14.288
1/2 x 13	0.98 25	1.02 25.8	0.83 21	0.5000 12.7	0.7500 19.05

Metric table

Dimensions in: millimeters / inches

d_1	d_2	d_3	k	t min.	A/F
M 4	11 0.43	11.8 0.46	9.5 0.37	6 0.2362	7 0.2756
M 5	12 0.47	12.8 0.50	10 0.39	6 0.2362	8 0.3150
M 6	14 0.55	14.8 0.58	12 0.47	7.5 0.2953	10 0.3937
M 8	18 0.71	18.8 0.74	14.5 0.57	9.5 0.3740	13 0.5118
M 10	21 0.83	21.8 0.86	18 0.71	12 0.4724	16 0.6299
M 12	25 0.98	25.8 1.02	21 0.83	14.5 0.5709	18 0.7087
M 16	32 1.26	32.8 1.29	26 1.02	17 0.6693	24 0.9449
M 20	40 1.57	40.8 1.61	32 1.26	22 0.8661	30 1.1811

Specification

	2	3
Nut		
Stainless steel AISI 316L		
• Matte finish (Ra < 0.8 µm)	**MT**	
• Polished finish (Ra < 0.8 µm) (Only available in metric version)	**PL**	
Sealing ring		
• HNBR Operating temperature -13 °F to +302 °F (-25 °C to +150 °C)		**H**
• EPDM Operating temperature -40 °F to +248 °F (-40 °C to +120 °C)		**E**
• FKM Operating temperature +23 °F to +392 °F (-5 °C to +200 °C)		**F**
• FDA compliant material		
• Blue		
• Hardness 85±5 Shore A		

RoHS

The nuts GN 1580 are intended for use in hygiene areas. The metric versions with seal ring, H and E, are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables components to be mounted without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

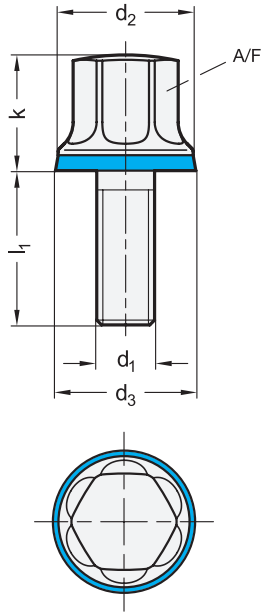
GN 3113 Combination Wrenches	27
GN 3124 Sockets	28
GN 7600 Sealing Rings	46

How to order

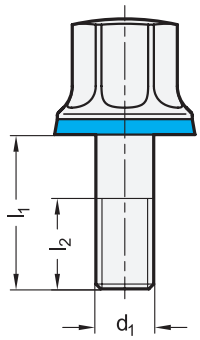
GN 1580-10x24-MT-H (1 – 2 – 3)

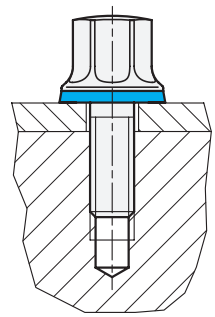
1	**Thread d_1**
2	**Finish**
3	**Sealing ring material**

Without shaft



With shaft





Metric

SS Stainless Steel | HD | FDA

Metric table

Dimensions in: millimeters / inches

d_1	l_1							d_2	d_3	k	l_2	A/F
	Without shaft				With shaft							
M 4	8 0.31	10 0.39	12 0.47	-	16 0.63	-	-	11 0.43	11.8 0.46	9.5 0.37	14 0.55	7 0.28
M 5	10 0.39	12 0.47	16 0.63	-	20 0.79	-	-	12 0.47	12.8 0.50	10 0.39	16 0.63	8 0.31
M 6	12 0.47	16 0.63	20 0.79	25 0.98	30 1.18	-	-	14 0.55	14.8 0.58	12 0.47	18 0.71	10 0.39
M 8	16 0.63	20 0.79	25 0.98	30 1.18	40 1.57	-	-	18 0.71	18.8 0.74	14.5 0.57	22 0.87	13 0.51
M 10	20 0.79	25 0.98	30 1.18	-	40 1.57	50 1.97	-	21 0.83	21.8 0.86	18 0.71	26 1.02	16 0.63
M 12	25 0.98	30 1.18	-	-	40 1.57	50 1.97	60 2.36	25 0.98	25.8 1.02	21 0.83	30 1.18	18 0.71
M 16	30 1.18	40 1.57	-	-	50 1.97	60 2.36	70 2.76	32 1.26	32.8 1.29	26 1.02	38 1.50	24 0.94
M 20	40 1.57	-	-	-	60 2.36	-	-	40 1.57	40.8 1.61	32 1.26	46 1.81	30 1.18

Specification

Screw
Stainless steel AISI 316L
- Matte finish (Ra < 0.8 µm) **MT**
- Polished finish (Ra < 0.8 µm) **PL**

Sealing ring
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85±5 Shore A

RoHS

Hex head screws GN 1580 are intended for use in hygiene areas. The versions with seal ring, H and E, are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables components to be mounted without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 3113 Combination Wrenches	27
GN 3124 Sockets	28
GN 7600 Sealing Rings	46

How to order

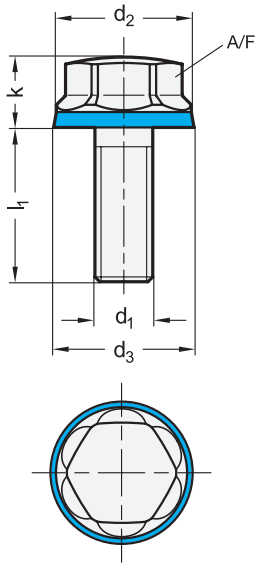
GN 1580-M10-50-PL-H

1	Thread d_1
2	Length l_1
3	Finish
4	Sealing ring material

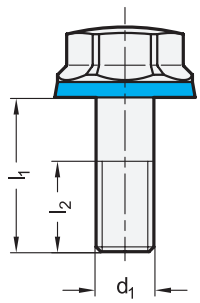
Hex Head Screws

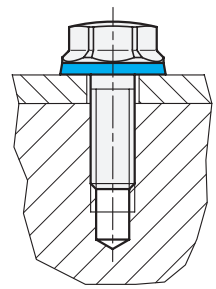
Stainless Steel, Low-Profile Head, Hygienic Design

Without shaft



With shaft





Inch | Metric

SS Stainless Steel | HD | FDA

Specification

	3	4
Screw		
Stainless steel AISI 316L		
• Matte finish (Ra < 0.8 µm)	**MT**	
• Polished finish (Ra < 0.8 µm) (Only available in metric version)	**PL**	
Sealing ring		
• HNBR Operating temperature -13 °F to +302 °F (-25 °C to +150 °C)		**H**
• EPDM Operating temperature -40 °F to +248 °F (-40 °C to +120 °C)		**E**
• FKM Operating temperature +23 °F to +392 °F (-5 °C to +200 °C)		**F**
• FDA compliant material		
• Blue		
• Hardness 85±5 Shore A		

RoHS

The hex head screws GN 1581 with low-profile head are intended for use in hygiene areas. The metric versions with seal ring, H and E, are additionally certified according to the guidelines of the EHEDG. The sealed mounting surface enables components to be mounted without dead spaces. The high quality finish as well as the large corner radii and closed surfaces prevent adherence of dirt and facilitate cleaning.

see also...	Page
GN 1580 Nuts (Hygienic Design)	22
GN 20 Leveling Feet (with Mounting Holes, Hygienic Design)	37

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 3113 Combination Wrenches	27
GN 3124 Sockets	28
GN 7600 Sealing Rings	46

How to order (Inch)

GN 1581 - 1/2 x 13 - 1.25 - MT - H
(1 2 3 4)

1	Thread d_1
2	Length l_1
3	Finish
4	Sealing ring material

How to order (Metric)

GN 1581 - M10 - 50 - PL - H
(1 2 3 4)

1	Thread d_1
2	Length l_1
3	Finish
4	Sealing ring material

Inch table

[1] [2]

Dimensions in: inches / millimeters

d_1	l_1 Without shaft			With shaft	d_2	d_3	k	l_2	A/F
10 x 24	0.50 12.7	0.75 19.05	-	1.00 25.4	0.43 10.9	0.46 11.7	0.28 7.1	0.75 19.1	0.3125 7.9375
1/4 x 20	0.50 12.7	0.75 19.05	1.00 25.4	-	0.55 14	0.58 14.7	0.30 7.6	-	0.4375 11.1125
5/16 x 18	0.75 19.05	1.00 25.4	-	1.25 31.75	0.63 16	0.66 16.8	0.33 8.4	1.00 25.4	0.5000 12.7
3/8 x 16	0.75 19.05	1.00 25.4	-	1.25 31.75	0.71 18	0.74 18.8	0.37 9.4	1.00 25.4	0.5625 14.2875
1/2 x 13	1.00 25.4	1.25 31.75	-	-	0.98 24.9	1.02 25.9	0.42 10.7	1.25 31.8	0.7500 19.05

Metric table

[1] [2]

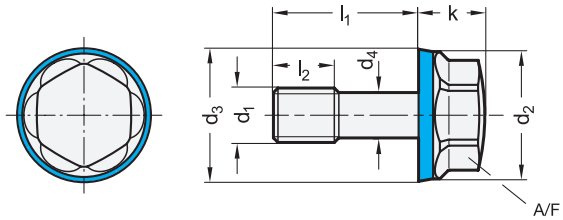
Dimensions in: millimeters / inches

d_1	l_1 Without shaft				With shaft					d_2	d_3	k	l_2	A/F
M 4	8 0.31	10 0.39	12 0.47	-	16 0.63	20 0.79	25 0.98	30 1.18	-	10 0.39	10.8 0.43	6.5 0.26	14 0.55	7 0.2756
M 5	10 0.39	12 0.47	16 0.63	-	20 0.79	25 0.98	30 1.18	35 1.38	40 1.57	11 0.43	11.8 0.46	7 0.28	16 0.63	8 0.3150
M 6	12 0.47	16 0.63	20 0.79	25 0.98	30 1.18	35 1.38	40 1.57	50 1.97	-	13 0.51	13.8 0.54	7.5 0.30	18 0.71	10 0.3937
M 8	16 0.63	20 0.79	25 0.98	30 1.18	40 1.57	50 1.97	60 2.36	-	-	16 0.63	16.8 0.66	8.5 0.33	22 0.87	13 0.5118
M 10	20 0.79	25 0.98	30 1.18	-	40 1.57	50 1.97	60 2.36	-	-	19 0.75	19.8 0.78	9.5 0.37	26 1.02	16 0.6299
M 12	25 0.98	30 1.18	-	-	40 1.57	50 1.97	60 2.36	-	-	22 0.87	22.8 0.90	11 0.43	30 1.18	18 0.7087
M 16	30 1.18	40 1.57	-	-	50 1.97	60 2.36	70 2.76	-	-	28 1.10	28.8 1.13	13 0.51	38 1.50	22 0.8661
M 20	40 1.57	-	-	-	60 2.36	-	-	-	-	34 1.34	34.8 1.37	15 0.59	46 1.81	27 1.0630

Hex Head Screws

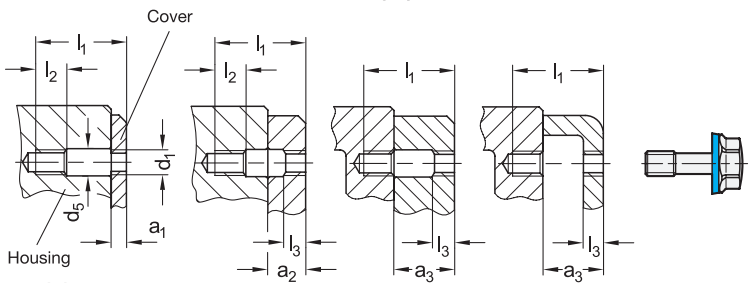
Stainless Steel, with Recessed Stud for Loss Protection, Hygienic Design

JW WINCO® A Ganter Company



Metric

Assembly options



SS Stainless Steel · HD · FDA

5 Identification no.

1 Without additional lock washer

Metric table

1 2

Dimensions in: millimeters / inches

d_1	l_1	a_1	a_2	a_3	d_2	d_3	d_4	d_5	k	l_2	l_3	A/F
M 5	20 0.79	2.5...6 0.10...0.24	6...10.5 0.24...0.41	10.5...14 0.41...0.55	11 0.43	11.8 0.46	4 0.16	5.5 0.22	7 0.28	6 0.24	2.5 0.10	8 0.31
M 5	25 0.98	6...11 0.24...0.43	11...14 0.43...0.55	14...19 0.55...0.75	11 0.43	11.8 0.46	4 0.16	5.5 0.22	7 0.28	6 0.24	2.5 0.10	8 0.31
M 6	25 0.98	3...7 0.12...0.28	7...13 0.28...0.51	13...17 0.51...0.67	13 0.51	13.8 0.54	4.8 0.19	6.5 0.26	7.5 0.30	8 0.31	3 0.12	10 0.39
M 6	30 1.18	7...12 0.28...0.47	12...17 0.47...0.67	17...22 0.67...0.87	13 0.51	13.8 0.54	4.8 0.19	6.5 0.26	7.5 0.30	8 0.31	3 0.12	10 0.39
M 8	30 1.18	4...8 0.16...0.31	8...16 0.31...0.63	16...20 0.63...0.79	16 0.63	16.8 0.66	6.5 0.26	8.5 0.33	8.5 0.33	10 0.39	4 0.16	13 0.51
M 8	40 1.57	8...18 0.31...0.71	18...25 0.71...0.98	25...30 0.98...1.18	16 0.63	16.8 0.66	6.5 0.26	8.5 0.33	8.5 0.33	10 0.39	4 0.16	13 0.51
M 10	40 1.57	5...14 0.20...0.55	14...19 0.55...0.75	19...28 0.75...1.10	19 0.75	19.8 0.78	8.2 0.32	10.5 0.41	9.5 0.37	12 0.47	5 0.20	16 0.63
M 10	50 1.97	14...24 0.55...0.95	24...28 0.95...1.10	28...38 1.10...1.50	19 0.75	19.8 0.78	8.2 0.32	10.5 0.41	9.5 0.37	12 0.47	5 0.20	16 0.63

Specification

3 4

Screw

Stainless steel AISI 316L

- Matte finish (Ra < 0.8 µm) **MT**
- Polished finish (Ra < 0.8 µm) **PL**

Sealing ring

- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue, hardness 85 ±5 Shore A

RoHS

Accessory	Page
GN 3113 Combination Wrenches	27
GN 3124 Sockets	28
GN 7600 Sealing Rings	46

Hex head screws GN 1582 with the low-profile head are certified according to EHEDG guidelines and are ideal for use in hygienic areas. They are used, for example, to fasten machine covers. The shank d_4 provides simple loss prevention. Thus the „captivity of the mounting element“ according to the Machinery Directive 2006 / 42 / EG is given.

Instead of a through-hole, this requires a second thread d_1, potentially with a corresponding clearance bore d_5. Depending on the design and required clamping length a_1 ... a_3 of the component being attached, there are a number of assembly options as shown above. Alternatively, securing can also be achieved by an additional lock washer mounted on the thin shank d_4.

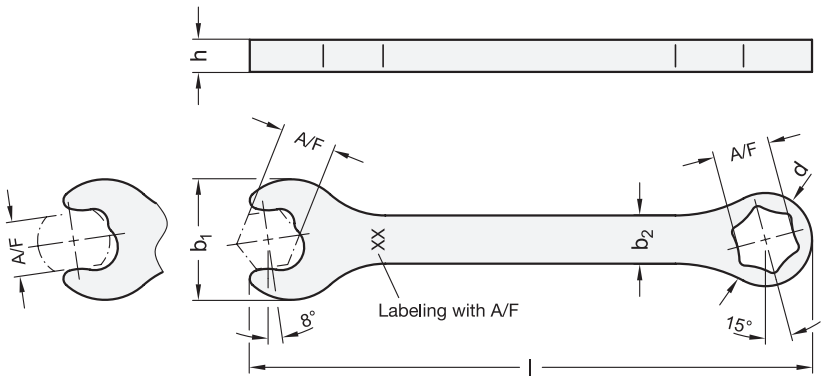
Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

1 2 3 4 5

GN 1582-M5-20-PL-H-1

1	**Thread d_1**
2	**Length l_1**
3	**Finish**
4	**Sealing ring material**
5	**Identification no.**



Metric

HD

1 Coding

RM Open-ended combination wrench

3 Type

SF Hex, flat

Metric table

2

Dimensions in: millimeters / inches

A/F	b_1 ≈	b_2 ≈	d ≈	h	Length l ≈
7 0.28	15 0.59	6 0.24	12 0.47	5 0.20	100 3.94
8 0.31	17 0.67	7 0.28	13 0.51	5 0.20	105 4.13
10 0.39	21 0.83	9 0.35	16 0.63	5 0.20	125 4.92
11 0.43	23 0.91	9.5 0.37	18 0.71	5 0.20	135 5.31
13 0.51	27 1.06	11 0.43	21 0.83	5 0.20	150 5.91
14 0.55	30 1.18	12 0.47	23 0.91	5 0.20	155 6.10
15 0.59	32 1.26	16 0.63	24 0.94	6 0.24	160 6.30
16 0.63	33 1.30	14 0.55	26 1.02	6 0.24	165 6.50
17 0.67	36 1.42	15 0.59	28 1.10	6 0.24	170 6.69
18 0.71	38 1.50	15 0.59	29 1.14	6 0.24	175 6.89
19 0.75	40 1.57	17 0.67	31 1.22	6 0.24	180 7.09
22 0.87	46 1.81	19 0.75	36 1.42	8 0.31	185 7.28
24 0.94	50 1.97	21 0.83	39 1.54	8 0.31	200 7.87
27 1.06	56 2.20	23 0.91	44 1.73	8 0.31	220 8.66
30 1.18	63 2.48	26 1.02	48 1.89	10 0.39	240 9.45

Specification	4	5
Aluminum	**AL**	
Matte finish		**M**
• Tumbled for A/F 7 ... A/F 19		
• Chamfered for A/F 22 ... A/F 30		

RoHS

Combination wrenches GN 3113 are used to assemble and adjust Hygienic Design standard parts with two or six wrench flats.
In conjunction with the aluminum material used, the rounded geometry of the wrench surfaces transfers the torque to the screw head to the screw head without causing damage.
The combination wrenches are designed for manual operation with moderate torques.

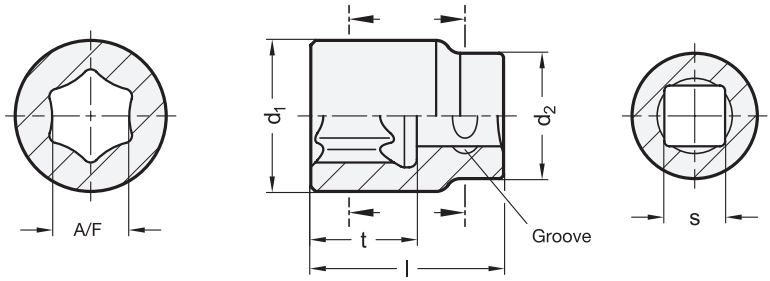
see also...	Page
GN 1580 Hex Head Screws (Stainless Steel, Hygienic Design)	23
GN 1581 Hex Head Screws (Stainless Steel, Low-Profile Head, Hygienic Design)	24
GN 1582 Hex Head Screws (Stainless Steel, with Thin Shaft, Hygienic Design)	26
GN 1150 Cam Latches (Stainless Steel, Operating and Latch Arm Side in Hygienic Design)	30
GN 19 Leveling Feet (Stainless Steel, Foot Plate Sheet Metal, Hygienic Design)	33

How to order

1 2 3 4 5

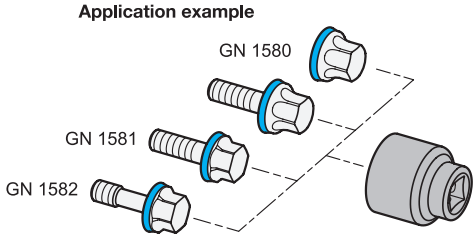
GN 3113-RM-16-SF-ALM

1	Coding
2	A/F
3	Type
4	Material
5	Finish



Metric

Application example



3 Coding

K Short version

Metric table

Dimensions in: millimeters / inches

1 A/F For hex size	2 s Nominal size of square driver		d_1	d_2	Length l	t	Max. torque in Nm	For screws / nuts / latches			
	as per DIN 3120	corresponds to inch						GN 1580	GN 1581	GN 1582	GN 1150
7	6.3 0.25	¼"	18 0.71	13 0.51	19.5 0.77	10.5 0.41	1.3	M 4	M 4	-	-
8	6.3 0.25	¼"	19 0.75	13 0.51	20 0.79	11 0.43	2.5	M 5	M 5	M 5	-
10	6.3 0.25	¼"	22 0.87	13 0.51	21.5 0.85	12.5 0.49	4.4	M 6	M 6	M 6	-
11	6.3 0.25	¼"	23 0.91	13 0.51	22.5 0.89	13.5 0.53	2.5	-	-	-	d_1 = 22
13	6.3 0.25	¼"	25 0.98	13 0.51	25 0.98	16 0.63	11	M 8	M 8	M 8	d_1 = 30
16	12.5 0.49	½"	29 1.14	29 1.14	36 1.42	20 0.79	21	M 10	M 10	M 10	-
18	12.5 0.49	½"	31 1.22	30 1.18	37.5 1.48	21.5 0.85	38	M 12	M 12	-	-
22	12.5 0.49	½"	38 1.50	30 1.18	41 1.61	25 0.98	100	-	M 16	-	-
24	12.5 0.49	½"	40 1.57	30 1.18	43 1.69	27 1.06	94	M 16	-	-	-
27	12.5 0.49	½"	44 1.73	30 1.18	47 1.85	31 1.22	100	-	M 20	-	-
30	12.5 0.49	½"	47 1.85	30 1.18	48.5 1.91	32.5 1.28	100	M 20	-	-	-

Specification

4	
Aluminum	**AL**

RoHS

Sockets GN 3124 are used to install the Hygienic Design standard parts listed in the table. In conjunction with the aluminum material used, the rounded hex geometry of the wrench flats transfers the torque to the screw head without causing damage.

If the specified torques are complied with, the socket wrench inserts achieve a long service life. They are driven using commercially available ratchets or reversible ratchets with square drive.

see also...	Page
GN 1580 Nuts (Hygienic Design)	22
GN 1580 Hex Head Screws (Hygienic Design)	23
GN 1581 Hex Head Screws (Low-Profile Head, Hygienic Design)	24
GN 1582 Hex Head Screws (with Recessed Stud for Loss Protection, Hygienic Design)	26
GN 1150 Cam Latches (Hygienic Design, Full Hygiene)	30

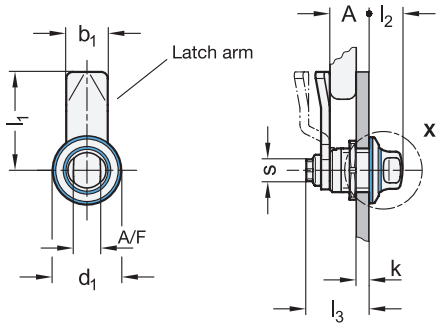
How to order

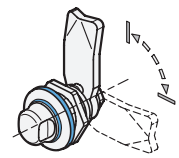
1 2 3 4
GN 3124-18-12.5-K-AL

1	**Width across flats A/F**
2	**Square s**
3	**Coding**
4	**Material**

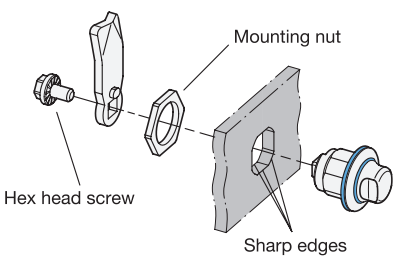
Cam Latches

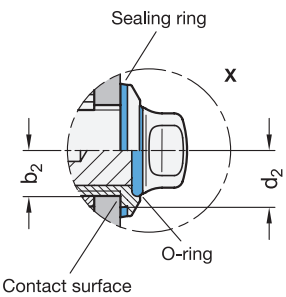
Stainless Steel AISI 316L, Operating Side in Hygienic Design





Mounting example





Metric

SS Stainless Steel | HD | FDA

2 Type

SW With two spanner flats

4 Coding

FH Operating side in Hygienic Design

Metric table

Dimensions in: millimeters / inches

1 d_1	3 Latch arm distance **A**										b_1	b_2	d_2	k min.	k max.	l_1 $^{+1}_{-1}$	l_2	l_3 ≈	s	A/F
22 0.87	7.5 0.30	13.5 0.53	19.5 0.77	-	-	-	-	-	-		12 0.47	7 0.28	9 0.35	1.5 0.06	5 0.20	24 0.94	12.6 0.50	21 0.83	8 0.31	9 0.35
30 1.18	6 0.24	10 0.39	14 0.55	18 0.71	20 0.79	22 0.87	24 0.94	26 1.02	28 1.10		19 0.75	10 0.39	13 0.51	1.5 0.06	6 0.24	45 1.77	15.3 0.60	29 1.14	10 0.39	13 0.51

Specification

5

Cam latch housing
Stainless steel AISI 316L

Latch arm
Stainless steel
- AISI 304 for d_1 = 22
- AISI 316L for d_1 = 30

Sealing ring / O-ring **E**
EPDM
- Blue, FDA compliant material
- Operating temperature -40 °F to 248 °F (-40 °C to 120 °C)
- Hardness 85 ±5 Shore A (Sealing ring)
- Hardness 70 ±5 Shore A (O-ring)

Other parts
Stainless steel AISI 316L

All moving parts
Lubricated with a special, FDA compliant grease

Protection class IP 66

RoHS

Accessory	Page
GN 1151 Socket Keys	32
GN 7600 Sealing Rings	46

Cam latches GN 1150 are intended for use in hygienic areas and meet hygiene requirements on the operating side. The locking mechanism is protected by two seals. At the same time, the high surface quality (Ra < 0.8 µm) and dead-space-free mounting prevent dirt from adhering and facilitate cleaning.

The latches create a secure closure by rotating a maximum of 90°, which positions the latch arm in the locked position behind the frame. Slanted surfaces on the latch arm ensure smooth positioning. Latch arms are available with different bend angles to cover a latch arm distance A from 6 to 28 mm.

The mounting holes in the housing must be at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function properly. Latches GN 1150 are supplied with loosely enclosed latch arm.

Technical Information	Page
Technical and Assembly Instructions	31
IP Protection Classes	Handbook 2130
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

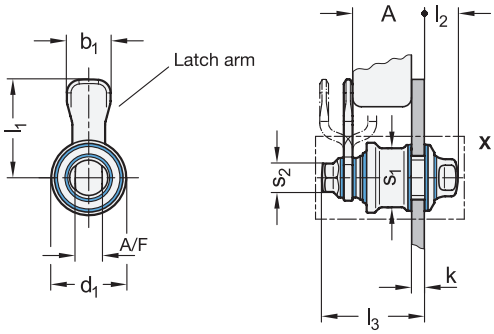
How to order

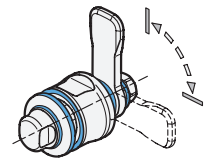
GN 1150-22-SW-7.5-FH-E

1	**Diameter d_1**
2	**Type**
3	**Latch arm distance A**
4	**Coding**
5	**Material (Sealing ring / O-ring)**

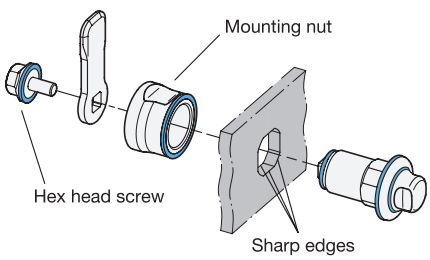
Cam Latches

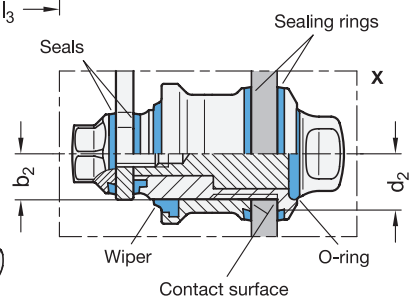
Stainless Steel AISI 316L, Operating and Latch Arm Side in Hygienic Design





Mounting example





Metric

SS Stainless Steel | HD | FDA

2 Type

SW With two spanner flats

4 Coding

VH Operating and latch arm side in Hygienic Design

Metric table

Dimensions in: millimeters / inches

1 d_1	3 Latch arm distance **A**			b_1	b_2	d_2	k min.	k max.	l_1 +1 −1	l_2	l_3 ≈	s_1	s_2	A/F
22 0.87	24 0.94	30 1.18	36 1.42	14 0.55	7 0.28	9 0.35	1.5 0.06	5 0.20	30 1.18	12.6 0.50	39.5 1.56	19 0.75	11 0.43	9 0.35
30 1.18	22 0.87	33 1.30	44 1.73	20 0.79	10 0.39	13 0.51	1.5 0.06	6 0.24	45 1.77	15.3 0.60	47 1.85	27 1.06	13 0.51	13 0.51

Specification

5

Cam latch housing
Stainless steel AISI 316L

Latch arm
Stainless steel AISI 316

Seals
Blue, FDA compliant
Operating temperature
-40 °F to 230 °F (-40 °C to 110 °C)
- Sealing rings / O-ring
  EPDM **E**
  - Hardness 85 ±5 Shore A (Sealing rings)
  - Hardness 70 ±5 Shore A (O-ring)
- Other seals / wipers
  TPU, hardness 95 ±5 Shore A

Other parts
Stainless steel AISI 316L

All moving parts
Lubricated with a special, FDA compliant grease

Protection class IP 66

RoHS

Accessory	Page
GN 3124 Sockets	27
GN 1151 Socket Keys	32
GN 7600 Sealing Rings	46
GN 7607 Wipers	48

Cam latches GN 1150 are designed for use in hygiene areas and meet strict hygiene requirements on the operating and latch arm side due to the special mounting nuts as well as the optimized latch arm and hex head screw. The locking mechanism is protected by multiple seals. At the same time, the high surface quality (Ra < 0.8 µm) and dead-space-free mounting prevent dirt from adhering and facilitate cleaning.
The latches create a secure closure by rotating a maximum of 90°, which positions the latch arm in the locked position behind the frame. Slanted surfaces on the latch arm ensure smooth positioning. Latch arms are available with different bend angles to cover a latch arm distance A from 22 to 44 mm.
The mounting holes in the housing must be at a right angle, free of burrs and without a chamfer. This ensures that the sealing rings will function properly.

see also...	Page
GN 1150 Cam Latches (Stainless Steel, Operating Side in Hygienic Design)	29

Technical Information	
IP Protection Classes	Handbook 2130
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

1 2 3 4 5
GN 1150-30-SW-22-VH-E

1	**Diameter d_1**
2	**Type**
3	**Latch arm distance A**
4	**Coding**
5	**Material (Sealing ring / O-ring)**

Technical and Assembly Instructions

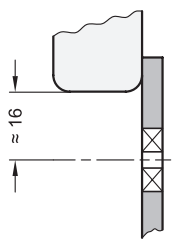
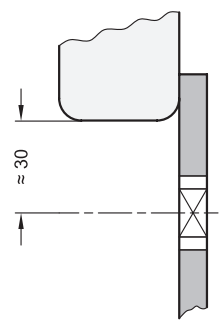
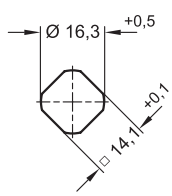
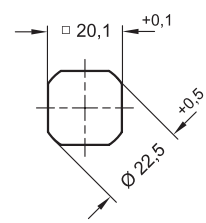
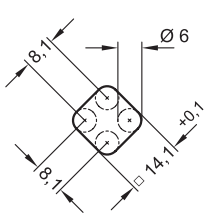
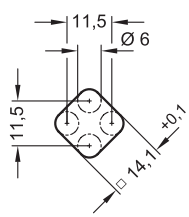
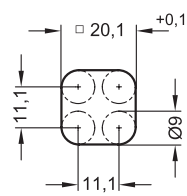
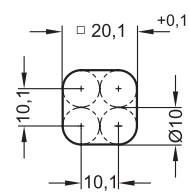
For installation, set a bore diameter in the door, cover or hatch as shown in the outline drawing opposite.

The lock housing is inserted into the installation bore from the front and secured from the back with the mounting nut. Then the latch bar is secured with the hexagon head screw.

In series production, the required installation bore in the door leaf is usually created by punching or laser cutting.

The installation bore diameter can also be created by drilling or milling as shown in the outline drawings.

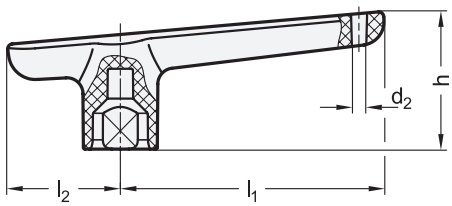
The sheet metal punch GN 123 is also available for small series production and sheet steel with a thickness < 2 mm.

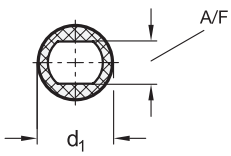
Construction note for d_1 = 22	Construction note for d_1 = 30
Bore distance	
	
Installation bore for punching or lasering	
	
Installation bore for drilling or milling	
 	 

Socket Keys

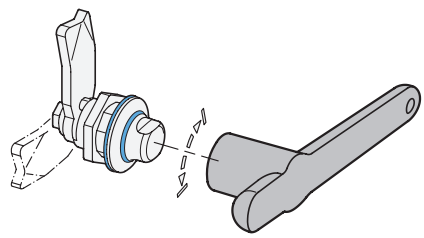
Plastic, for Cam Latches GN 115 and GN 1150, Hygienic Design

Metric





Application example



2	Type
SW9	With two wrench flats A/F9
SW13	With two wrench flats A/F13

Metric table

1

Dimensions in: millimeters / inches

l_1	d_1	d_2	h	l_2	A/F	For cam latches
82 3.23	23 0.91	5 0.20	42.7 1.68	35 1.38	9	GN 1150
82 3.23	23 0.91	5 0.20	42.7 1.68	35 1.38	13	GN 1150 | GN 115-AZ13

Specification

3	4
Plastic, Polyamide (PA)	**PA**
• Glass fiber reinforced	
• Blue	**BL**

RoHS

Socket keys GN 1151 can be used to operate latches in hygienic areas. The material used protects the drive surface from damage.
The bore d_2 serves for storing the socket key near the place of use, for example, or can be used to attach a key ring or retaining cable to prevent loss.

see also...	Page
GN 1150 Cam Latches (Stainless Steel, Operating Side in Hygienic Design)	29
GN 1150 Cam Latches (Stainless Steel, Operating and Latch Arm Side in Hygienic Design)	30

Technical Information

Plastic Characteristics — Handbook 2135

Accessory

GN 111.8 Retaining Cables (Stainless Steel AISI 316) — jwwinco.com

How to order

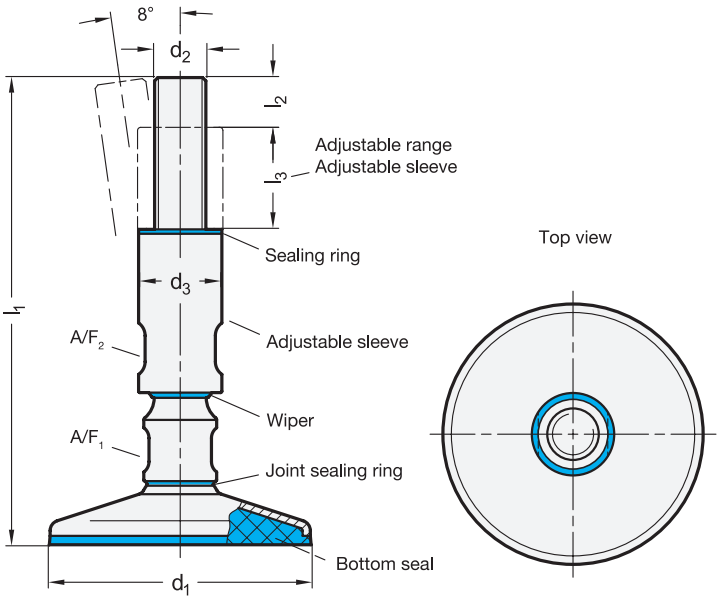
1 2 3 4

GN 1151-82-SW9-PA-BL

1	Length l_1
2	Type
3	Material
4	Color

Leveling Feet

Stainless Steel, Hygienic Design



Inch | Metric

SS Stainless Steel | HD | FDA

4 Type

A Without mounting holes

Specification

Base plate
Stainless steel sheet metal AISI 316L

Threaded stud / Adjustable sleeve
Stainless steel AISI 304
Turned

Seals
Blue, FDA compliant material
- Sealing ring
  HNBR, hardness 70 ±5 Shore A
- Wiper
  TPU, hardness 95 ±5 Shore A
- Joint sealing ring
  HNBR, hardness 85 ±5 Shore A

Bottom seal
Silicone
- Blue
- Hardness 85 ±5 Shore A
- Vulcanised

Operating temperature
-4 °F to 212 °F (-20 °C to +100 °C)

RoHS

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Leveling feet GN 19 are intended for use in hygienic areas. The metric versions comply with the 3-A sanitary standard 88-01 and the DGUV testing principles.
The elastomer pad seals the space below the foot plate against dirt. This is achieved by the weight of the machine on the plate. The sealing ring above the adjustment sleeve enables fastening without dead space. Due to the wiper and the joint sealing ring, the moving components are sealed against the environment.
The high quality finish prevents adherence of dirt and facilitates cleaning.
The values listed in the table for static load capacity refer to a purely vertical load in relation to the leveling foot. Under normal operating conditions bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

see also...	Page
GN 20 Leveling Feet (Stainless Steel, without Mounting Holes, Hygienic Design)	36
GN 20 Leveling Feet (Stainless Steel, with Mounting Holes, Hygienic Design)	38

Accessory

GN 20.1 Protective End Caps	44
GN 7600 Sealing Rings	46
GN 7607 Wipers	48

How to order (Inch)

GN 19-100-5/8x11-175-A

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

How to order (Metric)

GN 19-100-M16-175-A

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

Inch table

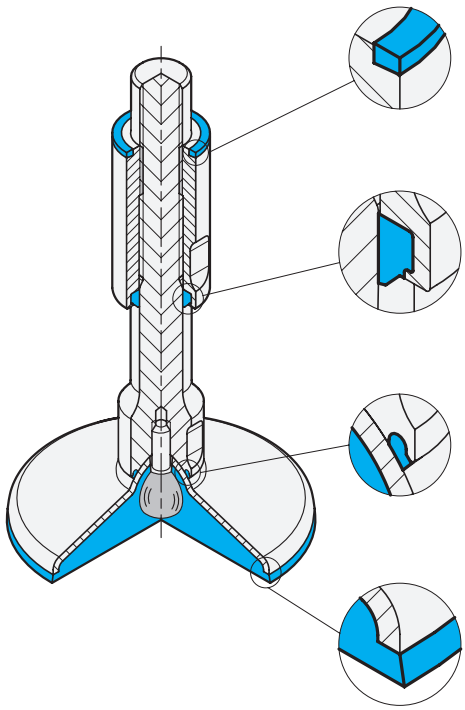
Dimensions in: inches / millimeters

d_1	d_2	l_1		d_3	l_2	l_3	A/F_1	A/F_2	Static load (see information)
2.36 60	1/2 x 13	6.89 175	8.86 225	1.10 28	0.55 14	1.38 35	0.6875 17.4625	0.8750 22.225	2023 lbf 9 kN
2.36 60	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.8750 22.225	2023 lbf 9 kN
3.15 80	1/2 x 13	6.89 175	8.86 225	0.98 25	0.55 14	1.38 35	0.6875 17.4625	0.8750 22.225	3372 lbf 15 kN
3.15 80	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.8750 22.225	3372 lbf 15 kN
3.15 80	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.0625 26.9875	3372 lbf 15 kN
3.15 80	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.3750 34.925	3372 lbf 15 kN
3.94 100	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.8750 22.225	4946 lbf 22 kN
3.94 100	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.0625 26.9875	4946 lbf 22 kN
3.94 100	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.3750 34.925	4946 lbf 22 kN
4.72 120	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.8750 22.225	6744 lbf 30 kN
4.72 120	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.0625 26.9875	6744 lbf 30 kN
4.72 120	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.3750 34.925	6744 lbf 30 kN

Metric table

Dimensions in: millimeters / inches

d_1	d_2	l_1		d_3	l_2	l_3	A/F_1	A/F_2	Static load (see information)
60 2.36	M 12	175 6.89	225 8.86	25 0.98	14 0.55	35 1.38	17 0.6693	19 0.7480	9 kN 2023 lbf
60 2.36	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.8661	9 kN 2023 lbf
80 3.15	M 12	175 6.89	225 8.86	25 0.98	14 0.55	35 1.38	17 0.6693	19 0.7480	15 kN 3372 lbf
80 3.15	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.8661	15 kN 3372 lbf
80 3.15	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.0630	15 kN 3372 lbf
80 3.15	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.1811	15 kN 3372 lbf
100 3.94	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.8661	22 kN 4946 lbf
100 3.94	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.0630	22 kN 4946 lbf
100 3.94	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.1811	22 kN 4946 lbf
120 4.72	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.8661	30 kN 6744 lbf
120 4.72	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.0630	30 kN 6744 lbf
120 4.72	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.1811	30 kN 6744 lbf



Sealing ring
flat sealing (static),
seals the adjustable sleeve
against the mounting surface

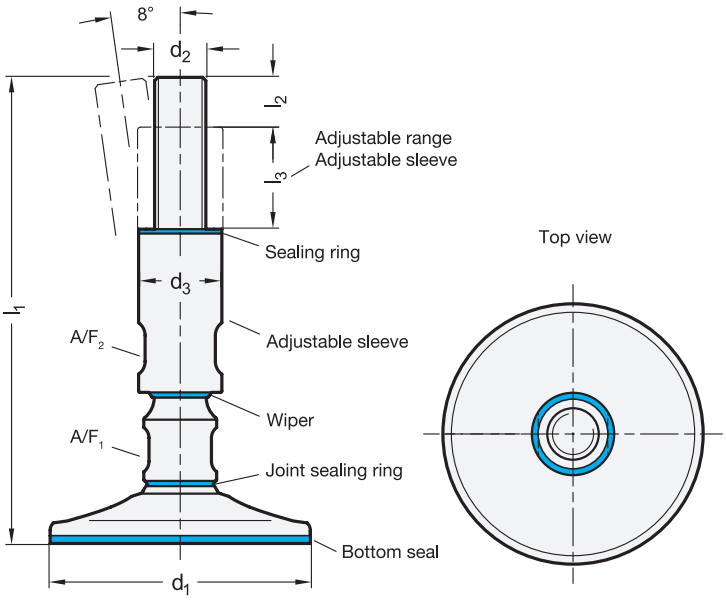
Wiper
rotatable and moveable in axial direction,
seals the adjustable sleeve
against the spindle shaft

Joint sealing ring
moveable
in two planes,
seals between
ball and spindle

Bottom seal
flat sealing (static),
seals the foot plate
against the support surface

Leveling Feet

Stainless Steel, without Mounting Holes, Hygienic Design



Inch | Metric

SS Stainless Steel | HD | FDA

4 Type

A Without mounting holes

Specification

Spindle / Screw-in sleeve / Base plate
Stainless steel AISI 304
Turned

Seals
- FDA compliant material
- Blue
- Sealing ring
  NBR, hardness 70 ±5 Shore A
- Wiper
  TPU, hardness 95 ±5 Shore A
- Joint sealing ring
  HNBR, hardness 85 ±5 Shore A
- Bottom seal
  Silicone, hardness 85 ±5 Shore A

RoHS

Accessory	Page
GN 20.1 Protective End Caps	44
GN 7600 Sealing Rings	46
GN 7607 Wipers	48

Leveling feet GN 20 without mounting holes are intended for use in hygienic areas. The metric versions comply with the 3-A sanitary standard 88-01 and the DGUV testing principles, making them suitable for use in in hygienic areas.
The bottom seal protects the area beneath the base from dirt. For this, the foot must be pressed down by the weight of the machine. The sealing ring above the adjustment sleeve enables mounting without dead space. Due to the wiper or the joint sealing ring, the movable components are sealed against the environment.
The high surface quality prevents dirt from adhering and facilitates cleaning.
The values for static load capacity listed in the table refer to a purely vertical load to the leveling foot. Under normal operating conditions, bending loads or angular loads are not uncommon and result in a reduction of the load capacity, which must be taken into consideration.

see also...	Page
GN 19 Leveling Feet (without Mounting Holes, Hygienic Design)	33
GN 20 Leveling Feet (Stainless Steel, with Mouning Holes, Hygienic Design)	38
GN 20 Leveling Feet (with Extended Adjusting Range, w/o Mounting Holes, Hygienic Design)	40

Technical Information	
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order (Inch)

GN 20- 100 -5/8x11- 175 -A
(1 2 3 4)

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

How to order (Metric)

GN 20- 100 -M16- 175 -A
(1 2 3 4)

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

Inch table

Dimensions in: inches / millimeters

d_1	d_2	l_1		d_3	l_2	l_3	A/F_1	A/F_2	Static load (See information)
2.36 60	1/2 x 13	6.89 175	8.86 225	1.10 28	0.55 14	1.38 35	0.6875 17.4625	0.88 22.2	3597 lbf 16 kN
2.36 60	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.88 22.2	6744 lbf 30 kN
3.15 80	1/2 x 13	6.89 175	8.86 225	1.10 28	0.55 14	1.38 35	0.6875 17.4625	0.88 22.2	3597 lbf 16 kN
3.15 80	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.88 22.2	6744 lbf 30 kN
3.15 80	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.06 27	10566 lbf 47 kN
3.15 80	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.38 34.9	15062 lbf 67 kN
3.94 100	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.88 22.2	6744 lbf 30 kN
3.94 100	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.06 27	10566 lbf 47 kN
3.94 100	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.38 34.9	15062 lbf 67 kN
4.72 120	5/8 x 11	6.89 175	8.86 225	1.10 28	0.75 19	1.38 35	0.6875 17.4625	0.88 22.2	6744 lbf 30 kN
4.72 120	3/4 x 10	7.28 185	9.25 235	1.26 32	0.94 24	1.38 35	0.8750 22.225	1.06 27	10566 lbf 47 kN
4.72 120	1 x 8	7.28 185	9.25 235	1.57 40	1.14 29	1.38 35	1.0000 25.4	1.38 34.9	15062 lbf 67 kN

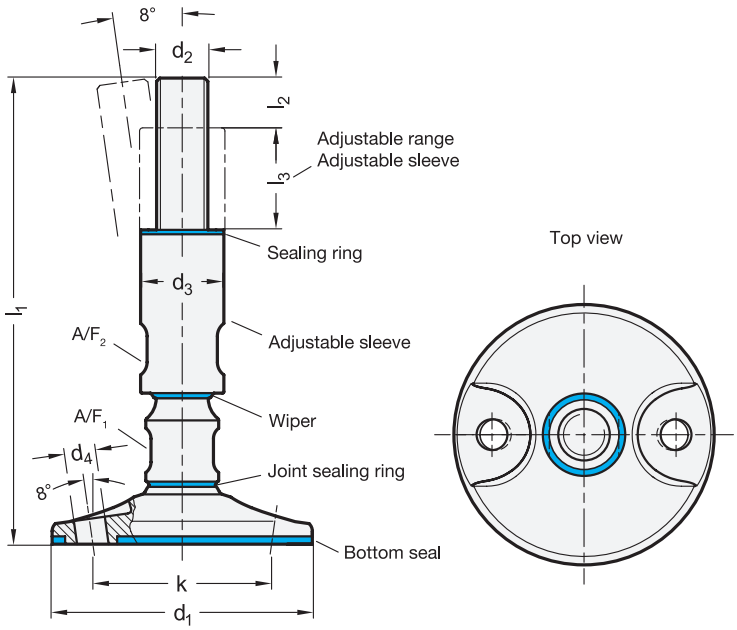
Metric table

Dimensions in: millimeters / inches

d_1	d_2	l_1		d_3	l_2	l_3	A/F_1	A/F_2	Static load (See information)
60 2.36	M 12	175 6.89	225 8.86	25 0.98	14 0.55	35 1.38	17 0.6693	19 0.75	16 kN 3597 lbf
60 2.36	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.87	30 kN 6744 lbf
80 3.15	M 12	175 6.89	225 8.86	25 0.98	14 0.55	35 1.38	17 0.6693	19 0.75	16 kN 3597 lbf
80 3.15	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.87	30 kN 6744 lbf
80 3.15	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.06	47 kN 10566 lbf
80 3.15	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.18	67 kN 15062 lbf
100 3.94	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.87	30 kN 6744 lbf
100 3.94	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.06	47 kN 10566 lbf
100 3.94	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.18	67 kN 15062 lbf
120 4.72	M 16	175 6.89	225 8.86	28 1.10	19 0.75	35 1.38	18 0.7087	22 0.87	30 kN 6744 lbf
120 4.72	M 20	185 7.28	235 9.25	32 1.26	24 0.94	35 1.38	24 0.9449	27 1.06	47 kN 10566 lbf
120 4.72	M 24	185 7.28	235 9.25	36 1.42	29 1.14	35 1.38	24 0.9449	30 1.18	67 kN 15062 lbf

Leveling Feet

Stainless Steel, with Mounting Holes, Hygienic Design



Inch | Metric

SS Stainless Steel

4 Type

B With mounting holes

Specification

Spindle / Screw-in sleeve / Base plate
Stainless steel AISI 304
Turned

Seals
- FDA compliant material
- Blue
- Sealing ring
  NBR, hardness 70 ±5 Shore A
- Wiper
  TPU, hardness 95 ±5 Shore A
- Joint sealing ring
  HNBR, hardness 85 ±5 Shore A
- Bottom seal
  Silicone, hardness 85 ±5 Shore A

RoHS

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 1580 Hex Head Screws	23
GN 1581 Hex Head Screws	24
GN 20.1 Protective End Caps	44
GN 7600 Sealing Rings	46
GN 7607 Wipers	48

Leveling feet GN 20 with mounting holes are intended for use in hygienic areas. The metric versions comply the guidelines of the EHEDG, with the 3-A sanitary standard 88-01 and the DGUV testing principles, making them suitable for use in in hygienic areas.
The bottom seal protects the area beneath the base from dirt. For this, the foot must be screwed dowon using the mounting holes and compressed accordingly. Hygienic fasteners such as GN 1580 screws and nuts, and the correct position of the mounting bores in the mating surface are essential for a properly sealed foot to surface installation. The sealing ring above the adjustment sleeve enables mounting without dead space. Due to the wiper or the joint sealing ring, the movable components are sealed against the environment.
The high surface quality prevents dirt from adhering and facilitates cleaning.
The values for static load capacity listed in the table refer to a purely vertical load to the leveling foot. Under normal operating conditions, bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

see also...	Page
GN 19 Leveling Feet	33
GN 20 Leveling Feet (Stainless Steel, without Mouning Holes, Hygienic Design)	36
GN 20 Leveling Feet (with Extended Adjusting Range, with Mounting Holes, Hygienic Design)	42

How to order (Inch)

1 2 3 4
GN 20-120-5/8x11-175-B

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

How to order (Metric)

1 2 3 4
GN 20-120-M16-175-B

1	Foot diameter d_1
2	Thread d_2
3	Length l_1
4	Type

Inch table

Dimensions in: inches / millimeters

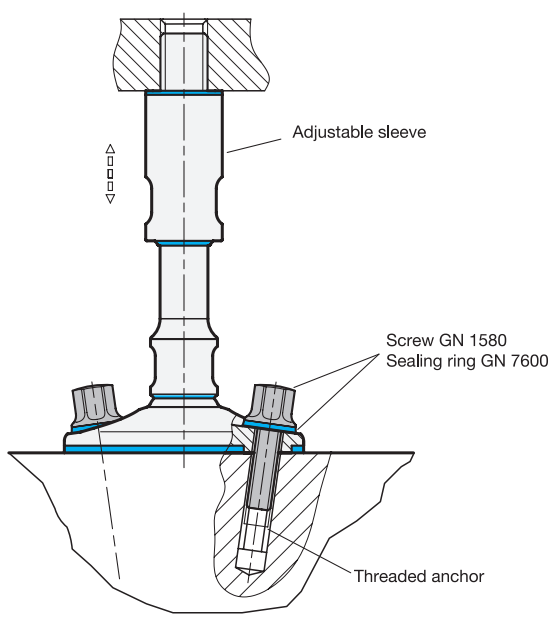
d_1	d_2	l_1		d_3	d_4	k	l_2	l_3	A/F_1	A/F_2	Static load (See information)
3.15 80	1/2 x 13	6.89 175	8.86 225	1.10 28	0.37 9.5	2.19 55.5	0.55 14	1.38 35	0.6875 17.5	0.8750 22.2	3597 lbf 16 kN
3.15 80	5/8 x 11	6.89 175	8.86 225	1.10 28	0.37 9.5	2.19 55.5	0.75 19	1.38 35	0.6875 17.5	0.8750 22.2	6744 lbf 30 kN
3.15 80	3/4 x 10	7.28 185	9.25 235	1.26 32	0.37 9.5	2.19 55.5	0.94 24	1.38 35	0.8750 22.2	1.0625 27	10566 lbf 47 kN
3.15 80	1 x 8	7.28 185	9.25 235	1.57 40	0.37 9.5	2.19 55.5	1.14 29	1.38 35	1.0000 25.4	1.3750 34.9	15062 lbf 67 kN
3.94 100	5/8 x 11	6.89 175	8.86 225	1.10 28	0.47 12	2.72 69	0.75 19	1.38 35	0.6875 17.5	0.8750 22.2	6744 lbf 30 kN
3.94 100	3/4 x 10	7.28 185	9.25 235	1.26 32	0.47 12	2.72 69	0.94 24	1.38 35	0.8750 22.2	1.0625 27	10566 lbf 47 kN
3.94 100	1 x 8	7.28 185	9.25 235	1.57 40	0.47 12	2.72 69	1.14 29	1.38 35	1.0000 25.4	1.3750 34.9	15062 lbf 67 kN
4.72 120	5/8 x 11	6.89 175	8.86 225	1.10 28	0.47 12	3.50 89	0.75 19	1.38 35	0.6875 17.5	0.8750 22.2	6744 lbf 30 kN
4.72 120	3/4 x 10	7.28 185	9.25 235	1.26 32	0.47 12	3.50 89	0.94 24	1.38 35	0.8750 22.2	1.0625 27	10566 lbf 47 kN
4.72 120	1 x 8	7.28 185	9.25 235	1.57 40	0.47 12	3.50 89	1.14 29	1.38 35	1.0000 25.4	1.3750 34.9	15062 lbf 67 kN

Metric table

Dimensions in: millimeters / inches

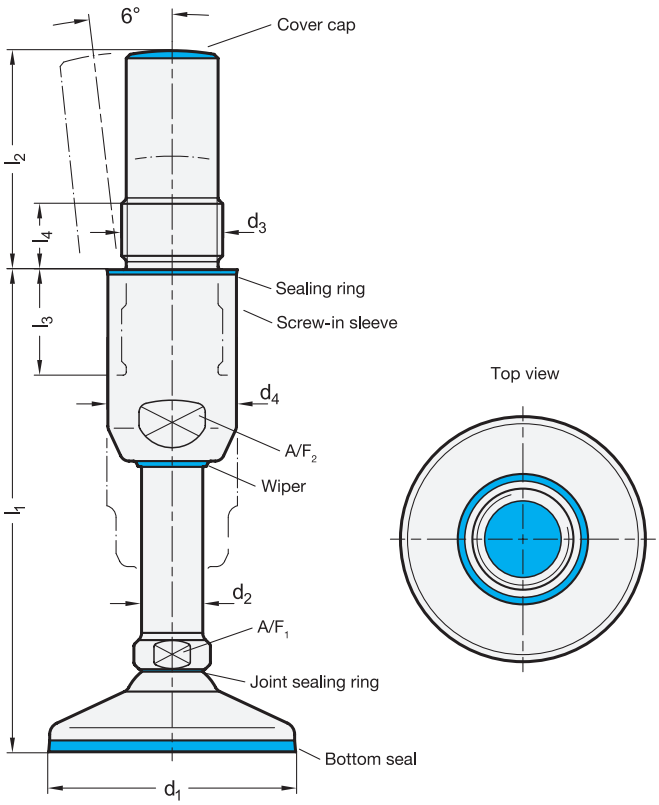
d_1	d_2	l_1		d_3	d_4	k	l_2	l_3	A/F_1	A/F_2	Static load (See information)
80 3.15	M 12	175 6.89	225 8.86	25 0.98	9.5 0.37	55.5 2.19	14 0.55	35 1.38	17 0.6693	19 0.7480	16 kN 3597 lbf
80 3.15	M 16	175 6.89	225 8.86	28 1.10	9.5 0.37	55.5 2.19	19 0.75	35 1.38	18 0.7087	22 0.8661	30 kN 6744 lbf
80 3.15	M 20	185 7.28	235 9.25	32 1.26	9.5 0.37	55.5 2.19	24 0.94	35 1.38	24 0.9449	27 1.0630	47 kN 10566 lbf
80 3.15	M 24	185 7.28	235 9.25	36 1.42	9.5 0.37	55.5 2.19	29 1.14	35 1.38	24 0.9449	30 1.1811	67 kN 15062 lbf
100 3.94	M 16	175 6.89	225 8.86	28 1.10	12 0.47	69 2.72	19 0.75	35 1.38	18 0.7087	22 0.8661	30 kN 6744 lbf
100 3.94	M 20	185 7.28	235 9.25	32 1.26	12 0.47	69 2.72	24 0.94	35 1.38	24 0.9449	27 1.0630	47 kN 10566 lbf
100 3.94	M 24	185 7.28	235 9.25	36 1.42	12 0.47	69 2.72	29 1.14	35 1.38	24 0.9449	30 1.1811	67 kN 15062 lbf
120 4.72	M 16	175 6.89	225 8.86	28 1.10	12 0.47	89 3.50	19 0.75	35 1.38	18 0.7087	22 0.8661	30 kN 6744 lbf
120 4.72	M 20	185 7.28	235 9.25	32 1.26	12 0.47	89 3.50	24 0.94	35 1.38	24 0.9449	27 1.0630	47 kN 10566 lbf
120 4.72	M 24	185 7.28	235 9.25	36 1.42	12 0.47	89 3.50	29 1.14	35 1.38	24 0.9449	30 1.1811	67 kN 15062 lbf

Mounting Example



Leveling Feet

Stainless Steel, with Extended Adjusting Range, without Mounting Holes, Hygienic Design



Metric

SS Stainless Steel | HD | FDA

4 Type

AV Extended adjusting range, without mounting holes

Specification

Spindle / Screw-in sleeve / Base plate
Stainless steel AISI 304
Turned

Seals
- FDA compliant material
- Blue
- Sealing ring
  NBR, hardness 70 ±5 Shore A
- Wiper
  TPU, hardness 95 ±5 Shore A
- Joint sealing ring
  HNBR, hardness 85 ±5 Shore A
- Bottom seal
  Silicone, hardness 85 ±5 Shore A

Cover cap
TPU, hardness 95 ±5 Shore A
- FDA compliant material
- Blue

RoHS

Accessory	Page
GN 7600 Sealing Rings	46
GN 7607 Wipers	48

Leveling feet GN 20 with extended adjusting range are suitable for use in hygiene areas.
The bottom seal protects the area beneath the foot plate from dirt. For this, the foot must be pressed down by the weight of the machine. The sealing ring above the adjustment sleeve enables fastening without dead space. Due to the wiper or the joint sealing ring, the moving components are sealed against the environment.
The high quality finish prevents adherence of dirt and facilitates cleaning.
The values listed in the table for static load capacity refer to a purely vertical load in relation to the leveling foot. Under normal operating conditions bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

see also...	Page
GN 19 Leveling Feet (without Mounting Holes, Hygienic Design)	33
GN 20 Leveling Feet (Stainless Steel, with Mouning Holes, Hygienic Design)	36
GN 20 Leveling Feet (with Extended Adjusting Range, with Mounting Holes, Hygienic Design)	42

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

GN 20-100-D20-133-AV (1 2 3 4)

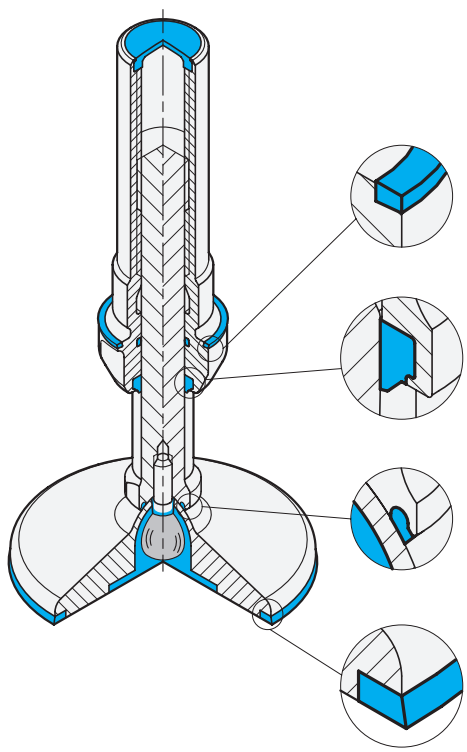
1	**Foot diameter d_1**
2	**Diameter d_2**
3	**Length l_1**
4	**Type**

Metric table

Dimensions in: millimeters / inches

d_1	d_2	l_1			d_3	d_4	l_2	l_3 Adjustable range	l_4	A/F_1	A/F_2	Static load (See information)
60 2.36	D 20	133 5.24	173 6.81	213 8.39	M 33 x 2	42 1.65	111.5 4.39	70 2.76	21.5 0.85	22 0.8661	36 1.42	30 kN 6744 lbf
80 3.15	D 20	133 5.24	173 6.81	213 8.39	M 33 x 2	42 1.65	111.5 4.39	70 2.76	21.5 0.85	22 0.8661	36 1.42	47 kN 10566 lbf
80 3.15	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf
100 3.94	D 20	133 5.24	173 6.81	213 8.39	M 33 x 2	42 1.65	111.5 4.39	70 2.76	21.5 0.85	22 0.8661	36 1.42	47 kN 10566 lbf
100 3.94	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf
120 4.72	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf

Sealing Concept



Sealing ring
flat sealing (static)
seals the adjustable sleeve
against the installation surface

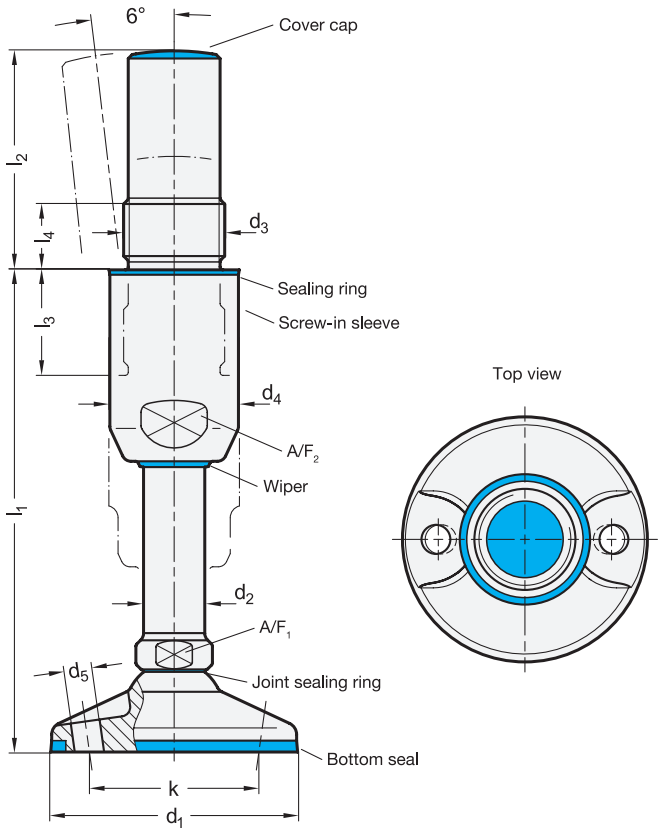
Wiper
rotatable and moveable
in axial direction,
seals the adjustable sleeve
against the spindle shaft

Joint sealing ring
Moveable
in two planes,
seals between ball
and spindle

Bottom seal
flat sealing (static),
seals the base plate
against the installation surface

Leveling Feet

Stainless Steel, with Extended Adjusting Range, with Mounting Holes, Hygienic Design



Metric

SS Stainless Steel | HD | FDA

4 Type

BV Extended adjusting range, with mounting holes

Specification

Spindle / Screw-in sleeve / Base plate
Stainless steel AISI 304
Turned

Seals
- FDA compliant material
- Blue
- Sealing ring
  NBR, hardness 70 ±5 Shore A
- Wiper
  TPU, hardness 95 ±5 Shore A
- Joint sealing ring
  HNBR, hardness 85 ±5 Shore A
- Bottom seal
  Silicone, hardness 85 ±5 Shore A

Cover cap
TPU, hardness 95 ±5 Shore A
- FDA compliant material
- Blue

RoHS

Accessory	Page
GN 7600 Sealing Rings	46
GN 7607 Wipers	48
GN 1580 Hex Head Screws	23
GN 1581 Hex Head Screws	24

Leveling feet GN 20 with extended adjusting range and mounting holes are suitable for use in hygiene areas.
The bottom seal protects the area beneath the foot plate from dirt. For this, the foot must be pressed down by the weight of the machine. The sealing ring above the adjustment sleeve enables fastening without dead space. Due to the wiper or the joint sealing ring, the moving components are sealed against the environment.
The high quality finish prevents adherence of dirt and facilitates cleaning.
The values listed in the table for static load capacity refer to a purely vertical load in relation to the leveling foot. Under normal operating conditions bending loads or angular loads are not uncommon and result in a reduction of load capacity, which must be taken into consideration.

see also...	Page
GN 19 Leveling Feet (without Mounting Holes, Hygienic Design)	33
GN 20 Leveling Feet (Stainless Steel, with Mouning Holes, Hygienic Design)	38
GN 20 Leveling Feet (with Extended Adjusting Range, without Mounting Holes, Hygienic Design)	40

Technical Information

Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

GN 20-80-D28-220-BV

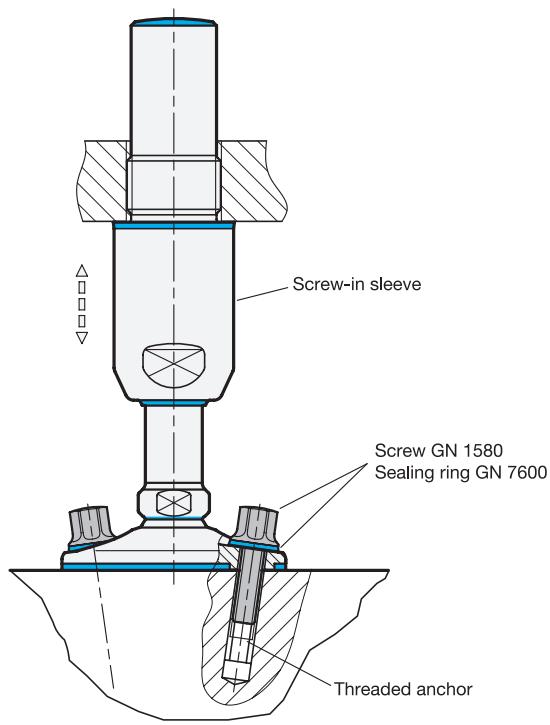
1	**Foot diameter d_1**
2	**Diameter d_2**
3	**Length l_1**
4	**Type**

Metric table

Dimensions in: millimeters / inches

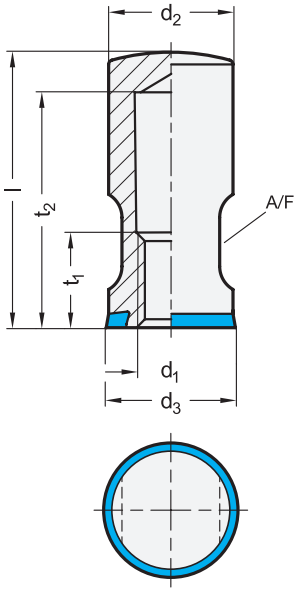
d_1	d_2	l_1			d_3	d_4	k	l_2	l_3 Adjustable range	l_4	A/F_1	A/F_2	Static load (See information)
80 3.15	D 20	133 5.24	173 6.81	213 8.39	M 33 x 2	42 1.65	55.5 2.19	111.5 4.39	70 2.76	21.5 0.85	22 0.8661	36 1.42	47 kN 10566 lbf
80 3.15	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	55.5 2.19	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf
100 3.94	D 20	133 5.24	173 6.81	213 8.39	M 33 x 2	42 1.65	69 2.72	111.5 4.39	70 2.76	21.5 0.85	22 0.8661	36 1.42	47 kN 10566 lbf
100 3.94	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	69 2.72	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf
120 4.72	D 28	170 6.69	220 8.66	270 10.63	M 44 x 2	56 2.20	89 3.50	149 5.87	100 3.94	21.5 0.85	30 1.1811	46 1.81	67 kN 15062 lbf

Mounting Example

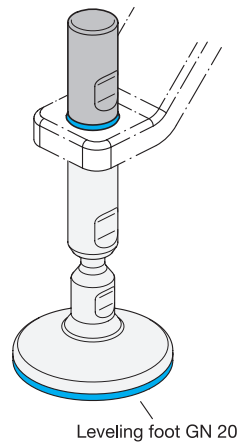


Protective End Caps

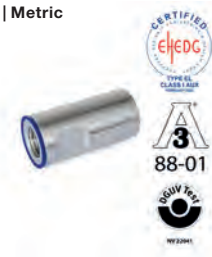
Stainless Steel, Hygienic Design



Application example



Inch | Metric



SS Stainless Steel | HD | FDA

Inch table

Dimensions in: inches / millimeters

d_1	Length l	d_2	d_3	A/F	t_1	t_2
1/2 x 13	2.20 56	1.10 28	1.02 25.8	0.8750 22.225	0.61 15.5	1.97 50
5/8 x 11	2.44 62	1.10 28	1.13 28.8	0.8750 22.225	0.81 20.5	2.17 55
3/4 x 10	2.68 68	1.26 32	1.29 32.8	1.0625 26.9875	1.00 25.5	2.36 60
1 x 8	2.91 74	1.57 40	1.45 36.8	1.3750 34.925	1.20 30.5	2.56 65

Metric table

Dimensions in: millimeters / inches

d_1	Length l	d_2	d_3	A/F	t_1	t_2
M 12	56 2.20	25 0.98	25.8 1.02	19 0.7480	15.5 0.61	50 1.97
M 16	62 2.44	28 1.10	28.8 1.13	22 0.8661	20.5 0.81	55 2.17
M 20	68 2.68	32 1.26	32.8 1.29	27 1.0630	25.5 1.00	60 2.36
M 24	74 2.91	36 1.42	36.8 1.45	30 1.1811	30.5 1.20	65 2.56

Specification

End cap
Stainless steel AISI 304

Sealing ring
- HNBR — H
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM — E
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Accessory	Page
GN 7600 Sealing Rings	46

Protective end caps GN 20.1 are intended for use in hygienic areas. The metric versions comply with the guidelines of the EHEDG, the 3-A sanitary standard 88-01 and the DGUV testing principles, making them extremely suitable for use in hygienic areas.
They protect threaded studs and at the same time they replace lock nuts. The sealed mounting surface enables fastening without dead spaces. The high surface quality prevents adherence of dirt and facilitates cleaning.

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order (Inch)

GN 20.1-1/2x13-56-H

1	Thread d_1
2	Length l
3	Sealing ring material

How to order (Metric)

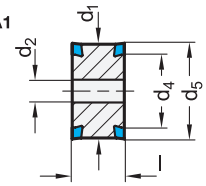
GN 20.1-M12-56-H

1	Thread d_1
2	Length l
3	Sealing ring material

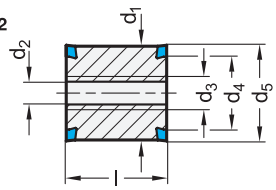
Spacers

Stainless Steel AISI 316L, EHEDG and DGUV Certified, Hygienic Design

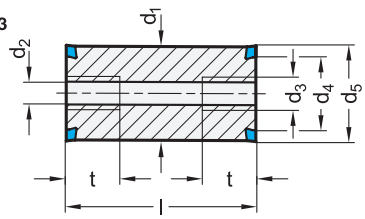
Type **A1**



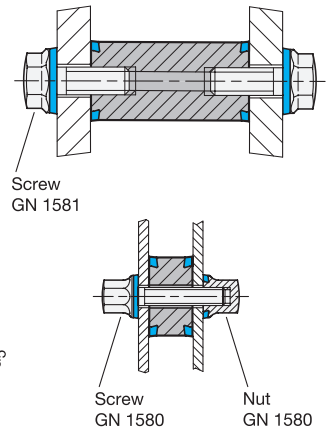
Type **A2**



Type **A3**



Application examples



Metric

SS Stainless Steel · HD · FDA

3 Type

A1 Through hole
A2 Through hole with continuous thread
A3 Through hole with thread on both sides

Metric table

Dimensions in: millimeters / inches

1 d_1	2 Length l ±0.1 Type A1			Type A2	2 Length l ±0.2 Type A3		d_2 Through hole for screw	d_3 Thread	d_4	d_5	t min.
22 0.87	10 0.394	12 0.472	16 0.630	20 0.787	30 1.181	50 1.969	M 5	M 6	18 0.71	22.8 0.90	12 0.47
28 1.10	12 0.472	16 0.630	20 0.787	30 1.181	50 1.969	75 2.953	M 6	M 8	24 0.94	28.8 1.13	16 0.63
34 1.34	12 0.472	16 0.630	20 0.787	30 1.181	50 1.969	100 3.937	M 8	M 10	30 1.18	34.8 1.37	20 0.79

Specification

4 5

Spacers
Stainless steel AISI 316L
Matte finish (Ra < 0.8 µm) **MT**

Sealing ring
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Technical Information	Page
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 7600 Sealing Rings	46

Spacers GN 6226 are intended for use in hygienic areas. The versions with sealing ring H und E comply additionally according to the guidelines of the EHEDG and DGUV Test guidelines. The sealed mounting surfaces enable fastening without dead spaces. The high quality finish prevents adherence of dirt and facilitates cleaning.
Spacers are used to fasten parts at an offset parallel to their plane of installation. This avoids doubling up on surfaces and leaves space for cleaning. The internal thread can alternatively be used as a through hole by a screw with a smaller thread.

see also...	Page
GN 1580 Hex Head Screws (Hygienic Design)	23
GN 1580 Nuts (Hygienic Design)	22
GN 1581 Hex Head Screws (Low-Profile Head, Hygienic Design)	24
GN 1582 Hex Head Screws (with Recessed Stud for Loss Protection, Hygienic Design)	26

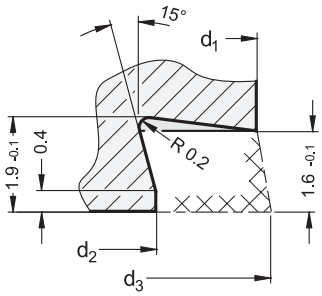
How to order

1 2 3 4 5
GN 6226-28-75-A3-MT-H

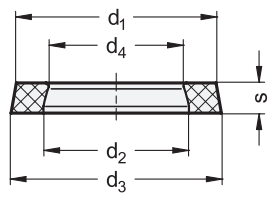
1	**Outer diameter d_1**
2	**Length l**
3	**Type**
4	**Finish**
5	**Sealing ring material**

Metric

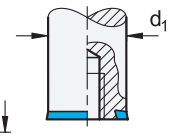
Installation space



Sealing ring



Application example



HD FDA

Specification

	4	5
Hydrogenated acrylonitrile butadiene rubber	**HNBR**	
• Blue		
• Operating temperature from -13 °F to +302 °F (-25 °C to +150 °C)		
• FDA compliant material		
• Hardness 85 ±5 Shore A		**85**
Ethylene propylene diene rubber	**EPDM**	
• Blue		
• Operating temperature from -40 °F to +248 °F (-40 °C to +120 °C)		
• FDA compliant material		
• Hardness 85 ±5 Shore A		**85**
Fluorine rubber	**FKM**	
• Blue		
• Operating temperature from +23 °F to +392 °F (-5 °C bis +200 °C)		
• FDA compliant material		
• Hardness 85 ±5 Shore A		**85**

RoHS

Components with cylindrical mounting surfaces, which are installed in hygienic areas, can be sealed and mounted without dead spaces using sealing rings GN 7600. Standard parts that are supplied with sealing rings GN 7600 are listed in the table and can be supplied individually in case service is required.
When delivered, or when not assembled, the sealing rings have the “actual dimensions” stated in the table. To ensure a firm seating and a reliable sealing, an installation space as shown in the sketch must be provided on the component. This ensures that when the sealing ring is mounted, it will be subject to the necessary pressure without excess load. All surfaces that are in contact with the sealing ring should have a minimum surface quality of Ra 0.8 µm.

Technical Information	Page
Plastic Characteristics	Handbook 2135

How to order

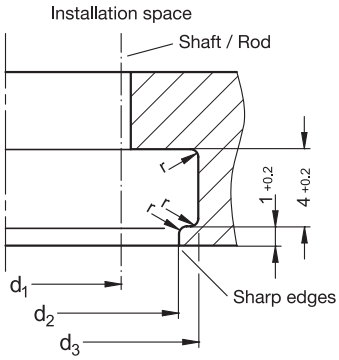
1 2 3 4 5
GN 7600-12-8-2-HNBR-85

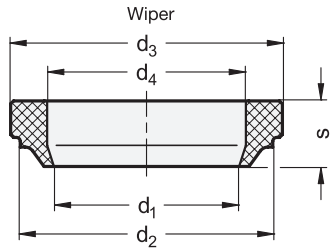
1	Outer diameter d_1
2	Inner diameter d_2
3	Width s
4	Material
5	Hardness

Metric table

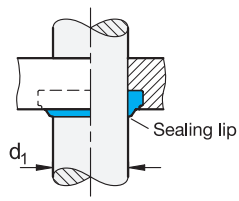
Dimensions in: millimeters / inches

[1] d_1	[2] d_2	d_3	d_1	d_2	d_3	d_4	[3] s	Suitable for
Nominal dimensions - installation space			Actual dimensions - sealing rings unassembled					
10 0.39	6 0.24	10.8 0.43	9.5 0.37	6.1 0.24	10.2 0.40	5.4 0.21	2 0.08	GN 1581
11 0.43	7 0.28	11.8 0.46	10.2 0.40	6.8 0.27	10.9 0.43	6.1 0.24	2 0.08	GN 1580 / GN 1581 / GN 1582 / GN 8341 / GN 8351
12 0.47	8 0.31	12.8 0.50	11.2 0.44	7.8 0.31	11.9 0.47	7.1 0.28	2 0.08	GN 429 / GN 1580
13 0.51	9 0.35	13.8 0.54	12.2 0.48	8.8 0.35	12.9 0.51	8.1 0.32	2 0.08	GN 1581 / GN 1582 / GN 8341 / GN 8351
14 0.55	10 0.39	14.8 0.58	13.2 0.52	9.8 0.39	13.9 0.55	9.1 0.36	2 0.08	GN 75.6 / GN 305 / GN 1580
16 0.63	12 0.47	16.8 0.66	15.1 0.59	11.7 0.46	15.8 0.62	11 0.43	2 0.08	GN 75.6 / GN 429 / GN 1581 / GN 1582 / GN 5064 / GN 8341 / GN 8351
18 0.71	14 0.55	18.8 0.74	17 0.67	13.6 0.54	17.7 0.70	12.9 0.51	2 0.08	GN 75.6 / GN 305 / GN 1580 / GN 5435 / GN 5445
19 0.75	15 0.59	19.8 0.78	17.9 0.70	14.5 0.57	18.6 0.73	13.8 0.54	2 0.08	GN 1581 / GN 1582
20 0.79	16 0.63	20.8 0.82	18.9 0.74	15.5 0.61	19.6 0.77	14.8 0.58	2 0.08	GN 429
21 0.83	17 0.67	21.8 0.86	19.9 0.78	16.4 0.65	20.5 0.81	15.7 0.62	2 0.08	GN 1580 / GN 5064 / GN 5435 / GN 5445
22 0.87	18 0.71	22.8 0.90	20.8 0.82	17.4 0.69	21.4 0.84	16.7 0.66	2 0.08	GN 305 / GN 1150 / GN 1581 / GN 8170 / GN 6226
25 0.98	21 0.83	25.8 1.02	23.6 0.93	20.2 0.80	24.3 0.96	19.5 0.77	2 0.08	GN 19 / GN 20 / GN 20.1 / GN 1580 / GN 5064
28 1.10	24 0.94	28.8 1.13	26.5 1.04	23.1 0.91	27.2 1.07	22.4 0.88	2 0.08	GN 19 / GN 20 / GN 20.1 / GN 1581 / GN 5080 / GN 5090 / GN 6226
30 1.18	26 1.02	30.8 1.21	28.5 1.12	25.1 0.99	29.2 1.15	24.4 0.96	2 0.08	GN 1150
32 1.26	28 1.10	32.8 1.29	30.4 1.20	27 1.06	31.1 1.22	26.3 1.04	2 0.08	GN 19 / GN 20 / GN 20.1 / GN 1580
34 1.34	30 1.18	34.8 1.37	32.3 1.27	28.9 1.14	34 1.34	28.2 1.11	2 0.08	GN 6226
36 1.42	32 1.26	36.8 1.45	34.2 1.35	30.8 1.21	34.8 1.37	30.1 1.19	2 0.08	GN 19 / GN 20 / GN 20.1
40 1.57	36 1.42	40.8 1.61	38.1 1.50	34.7 1.37	38.8 1.53	34 1.34	2 0.08	GN 1580
42 1.65	38 1.50	42.8 1.69	39.9 1.57	36.5 1.44	40.6 1.60	35.8 1.41	2 0.08	GN 5080 / GN 5090





Application example



Metric

Metric table

Dimensions in: millimeters / inches

d_1 h9	d_2 H9	d_3 H9	r max.	d_1	d_2	d_3	d_4	s	Suitable for
Nominal dimensions - installation pace				Actual dimensions - wipers, unassembled					
12 0.472	18 0.709	20 0.787	0.4 0.02	11.2 0.44	18.2 0.72	20.2 0.80	12.6 0.50	6.8 0.27	GN 19 / GN 20
14 0.551	20 0.787	22 0.866	0.4 0.02	13.2 0.52	20.2 0.80	22.2 0.87	14.6 0.57	6.8 0.27	GN 1150
16 0.630	22 0.866	24 0.945	0.4 0.02	15.20.60	22.2 0.87	24.2 0.95	16.6 0.65	6.8 0.27	GN 19 / GN 20 / GN 8170
20 0.787	26 1.024	28 1.102	0.4 0.02	19.3 0.76	26.3 1.04	28.3 1.11	20.7 0.81	6.8 0.27	GN 19 / GN 20 / GN 1150
24 0.945	30 1.181	32 1.260	0.4 0.02	23.3 0.92	30.3 1.19	32.3 1.27	24.7 0.97	6.8 0.27	GN 19 / GN 20

Specification

Thermoplastic polyurethane	**TPU**
• Operating temperature -4 °F to 230 °F (-20 °C to 110 °C)	
• FDA compliant material	
• Blue	
• Hardness 95 ±5 Shore A	**95**

RoHS

When used in hygienic areas, wipers GN 7607 can be used to seal moving components with a cylindrical cross-section against their bearing position. The wipers are designed for moderate speeds, and continuously sustained operation cannot be guaranteed.

With their specially shaped sealing lip, the wipers prevent the formation of dead spaces where dust can accumulate. Commercially available wipers are not suitable for this purpose due to a 45° chamfer on the inner edge of the sealing lip.

The standard parts listed in the table are equipped as standard with wipers GN 7607. For replacement, the respective wipers can be ordered individually.

As delivered, the wipers have the ‚actual dimensions' as stated in the table. To guarantee a secure fit and a reliable seal, the specified installation space must be provided at the bearing position. This ensures that the wiper undergoes the necessary deformation during installation. All surfaces in contact with the wiper should have a minimum surface quality of Ra 0.8 µm. Wear can be reduced with lubrication.

see also...	Page
GN 7600 Sealing Rings	46

Technical Information

ISO Fundamental Tolerances	Handbook 2129
Plastic Characteristics	Handbook 2135

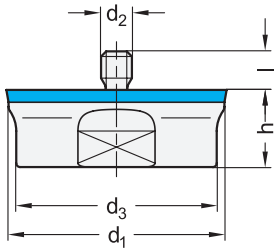
How to order

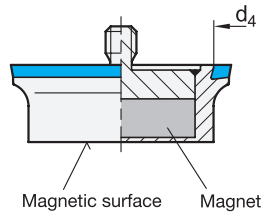
GN 7607-16-TPU-95

1	**Inner diameter d_1**
2	**Material**
3	**Hardness**

Retaining Magnets

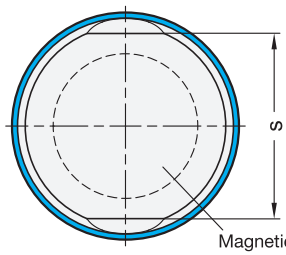
NdFeB, Stainless Steel Housing, with Threaded Stud, Hygienic Design





Metric

View of magnetic surface



SS Stainless Steel | HD | FDA

3 Polarity

N North
S South

4 Type

A Flat magnetic surface

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h	Length l	s	Nominal magnetic forces	
							Combination with holding disk	Combination of magnet polarity N with polarity S
28 1.10	M 4	26 1.02	24 0.94	10 0.39	5 0.20	24 0.94	45 N 10.12 lbf	60 N 13.49 lbf
42 1.65	M 5	40 1.57	38 1.50	11 0.43	5 0.20	38 1.50	80 N 17.98 lbf	105 N 23.60 lbf

Specification

5 6

Magnet material
NdFeB
Neodymium, iron, boron
Operating temperature up to 356 °F (180 °C)

Housing
Stainless steel AISI 316L
Matte finish (Ra < 0.8 µm) **MT**

Sealing ring
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Retaining magnets GN 5080 are designed for use in hygienic areas. The sealed screw-on surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents dirt from accumulating and facilitates cleaning.
Since non-magnetic stainless steels are generally used in hygienic areas, a holding force is only achieved in combination with holding disks GN 7080 or GN 7090. If an increased holding force is required, a second magnet with opposite polarity can be used as a counterpart.
Thanks to the material used and the enclosed design, the retaining magnets can also be used in particularly aggressive environments.

Technical Information	Page
Assembly Instructions	53
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory	Page
GN 1580 Nuts	22
GN 7600 Sealing Rings	46
GN 7080 Holding Disks	51
GN 7090 Holding Disks	52

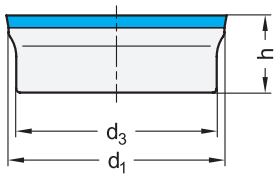
How to order

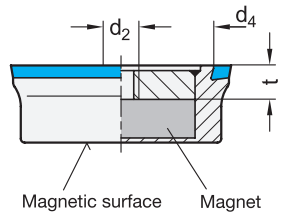
1 2 3 4 5 6
GN 5080-42-M5-S-A-MT-E

1	Diameter d_1
2	Thread d_2
3	Polarity
4	Type
5	Finish
6	Sealing ring material

Retaining Magnets

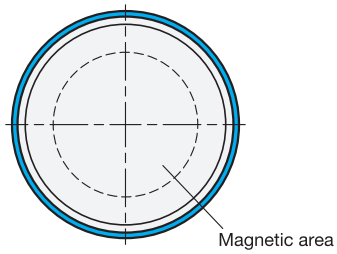
NdFeB, Stainless Steel Housing, with Tapped Hole, Hygienic Design





Metric

View of magnetic surface



Stainless Steel

3 Polarity

N North
S South

4 Type

A Flat magnetic surface

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h	t	Nominal magnetic forces	
						Combination with holding disk	Combination of magnet polarity N with polarity S
28 1.10	M 4	26 1.02	24 0.94	10 0.39	4 0.16	45 N 10.12 lbf	60 N 13.49 lbf
42 1.65	M 5	40 1.57	38 1.50	11 0.43	5 0.20	80 N 17.98 lbf	105 N 23.60 lbf

Specification

Magnet material (5)
NdFeB
Neodymium, iron, boron
Operating temperature up to 356 °F (180 °C)

Housing (5)
Stainless steel AISI 316L
Matte finish (Ra < 0.8 µm) **MT**

Sealing ring (6)
- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Accessory	Page
GN 1581 Hex Head Screws	24
GN 7600 Sealing Rings	46
GN 7080 Holding Disks	51
GN 7090 Holding Disks	52

Retaining magnets GN 5090 are designed for use in hygienic areas. The sealed screw-on surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents dirt from accumulating and facilitates cleaning.
Since non-magnetic stainless steels are generally used in hygienic areas, a holding force is only achieved in combination with holding disks GN 7080 or GN 7090. If an increased holding force is required, a second magnet with opposite polarity can be used as a counterpart.
To prevent the magnetic properties from being impaired, the mounting screw should also be made of non-magnetic stainless steel.
Thanks to the material used and the enclosed design, the retaining magnets can also be used in particularly aggressive environments.

Technical Information	Page
Assembly Instructions	53
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

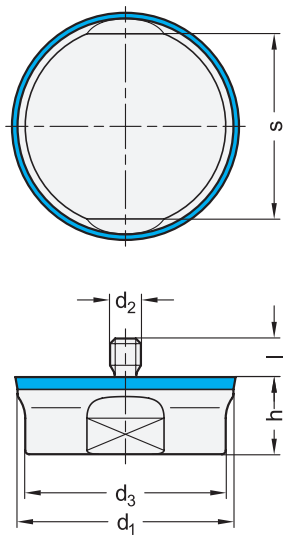
How to order

GN 5090-28-M4-N-A-MT-H (1 2 3 4 5 6)

1	Diameter d_1
2	Thread d_2
3	Polarity
4	Type
5	Finish
6	Sealing ring material

Holding Disks

Stainless Steel, with Threaded Stud, Hygienic Design



Metric

SS Stainless Steel | HD | FDA

3 Type

A Flat locating surface

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h	Length l	s
28 1.10	M 4	26 1.02	24 0.94	10 0.39	5 0.20	24 0.94
42 1.65	M 5	40 1.57	38 1.50	11 0.43	5 0.20	38 1.50

Specification

Disk

Stainless steel AISI 318LN

Matte finish (Ra < 0.8 µm) **MT**

Sealing ring

- HNBR **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Holding disks GN 7080 are used as counterparts for retaining magnets when these are used in combination with non-magnetic materials or when the holding force needs to be increased due to thin material.
They are intended for use in hygiene areas. The sealed screw-on surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish
prevents dirt from accumulating and facilitates cleaning.
The holding disks can also be used in particularly aggressive environments thanks to the material used.

see also...	Page
GN 5080 Retaining Magnets (Hygienic Design)	49
GN 5090 Retaining Magnets (Hygienic Design)	50

Technical Information

Assembly Instructions	53
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

Accessory

GN 1580 Nuts	22
GN 7600 Sealing Rings	46

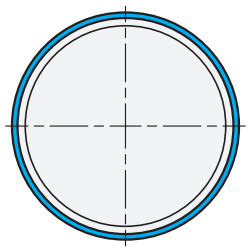
How to order

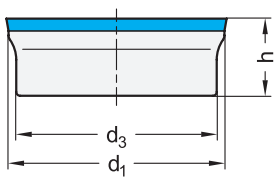
GN 7080-28-M4-A-MT-E

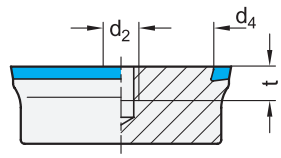
1	**Diameter d_1**
2	**Thread d_2**
3	**Type**
4	**Finish**
5	**Sealing ring material**

Holding Disks

Stainless Steel, with Tapped Hole, Hygienic Design







Metric

SS Stainless Steel | HD | FDA

3 Type

A Flat locating surface

Metric table

Dimensions in: millimeters / inches

1 d_1	2 d_2	d_3	d_4	h	t
28 1.10	M 4	26 1.02	24 0.94	10 0.39	5 0.20
42 1.65	M 5	40 1.57	38 1.50	11 0.43	6 0.24

Specification

Disk

Stainless steel AISI 318LN
Matte finish (Ra < 0.8 µm) — **MT**

Sealing ring

- HNBR — **H**
  Operating temperature
  -13 °F to +302 °F (-25 °C to +150 °C)
- EPDM — **E**
  Operating temperature
  -40 °F to +248 °F (-40 °C to +120 °C)
- FKM — **F**
  Operating temperature
  +23 °F to +392 °F (-5 °C to +200 °C)
- FDA compliant material
- Blue
- Hardness 85 ±5 Shore A

RoHS

Accessory	Page
GN 1580 Hex Head Screws	23
GN 1581 Hex Head Screws	24
GN 7600 Sealing Rings	46

Holding disks GN 7090 are used as counterparts for retaining magnets when these are used in connection with non-magnetic materials or when the holding force needs to be increased due to thin material.
They are intended for use in hygiene areas. The sealed screw-on surface enables mounting without dead spaces; the impervious geometry in combination with the high quality finish prevents dirt from accumulating and facilitates cleaning.
The holding disks can also be used in particularly aggressive environments thanks to the material used.

see also...	Page
GN 5080 Retaining Magnets (With Threaded Stud, Hygienic Design)	49
GN 5090 Retaining Magnets (With Tapped Hole, Hygienic Design)	50

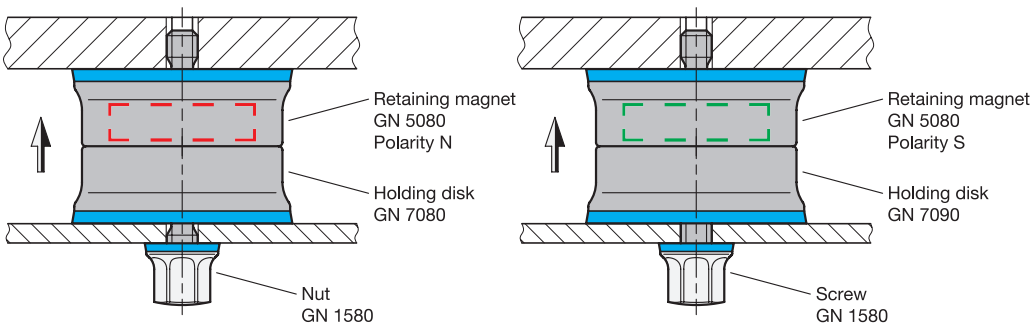
Technical Information	
Assembly Instructions	53
Plastic Characteristics	Handbook 2135
Stainless Steel Characteristics	Handbook 2143

How to order

GN 7090-42-M5-A-MT-E

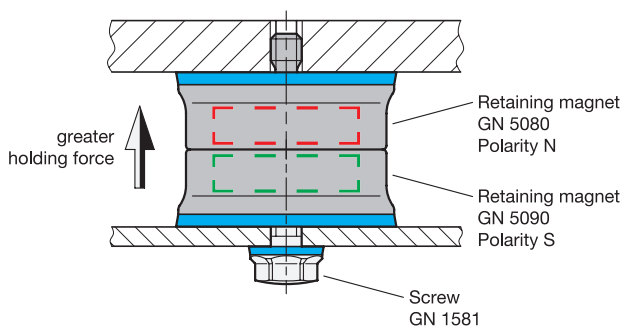
1	Diameter d_1
2	Thread d_2
3	Type
4	Finish
5	Sealing ring material

Retaining magnet with holding disks



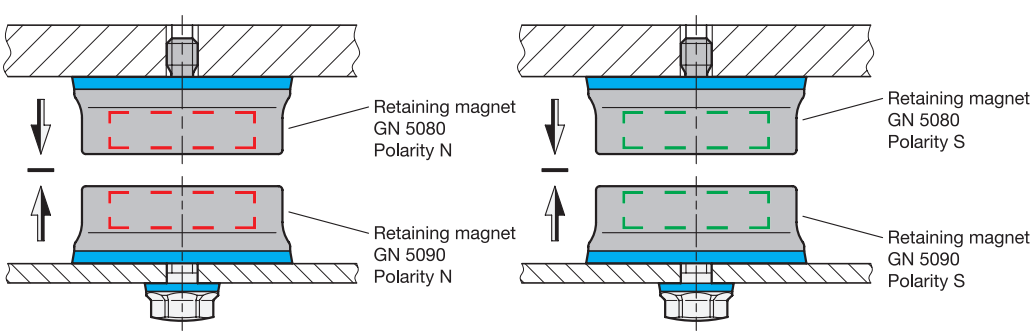
A normal holding force is achieved by combining retaining magnets with holding disks.
Retaining magnets with north or south poles on the holding surface can be used equally.

Two retaining magnets with opposite polarity



If two retaining magnets with opposite polarity are combined, an increased holding force is achieved.

Two retaining magnets with the same polarity



Combining two retaining magnets with the same polarity creates a repelling force.

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