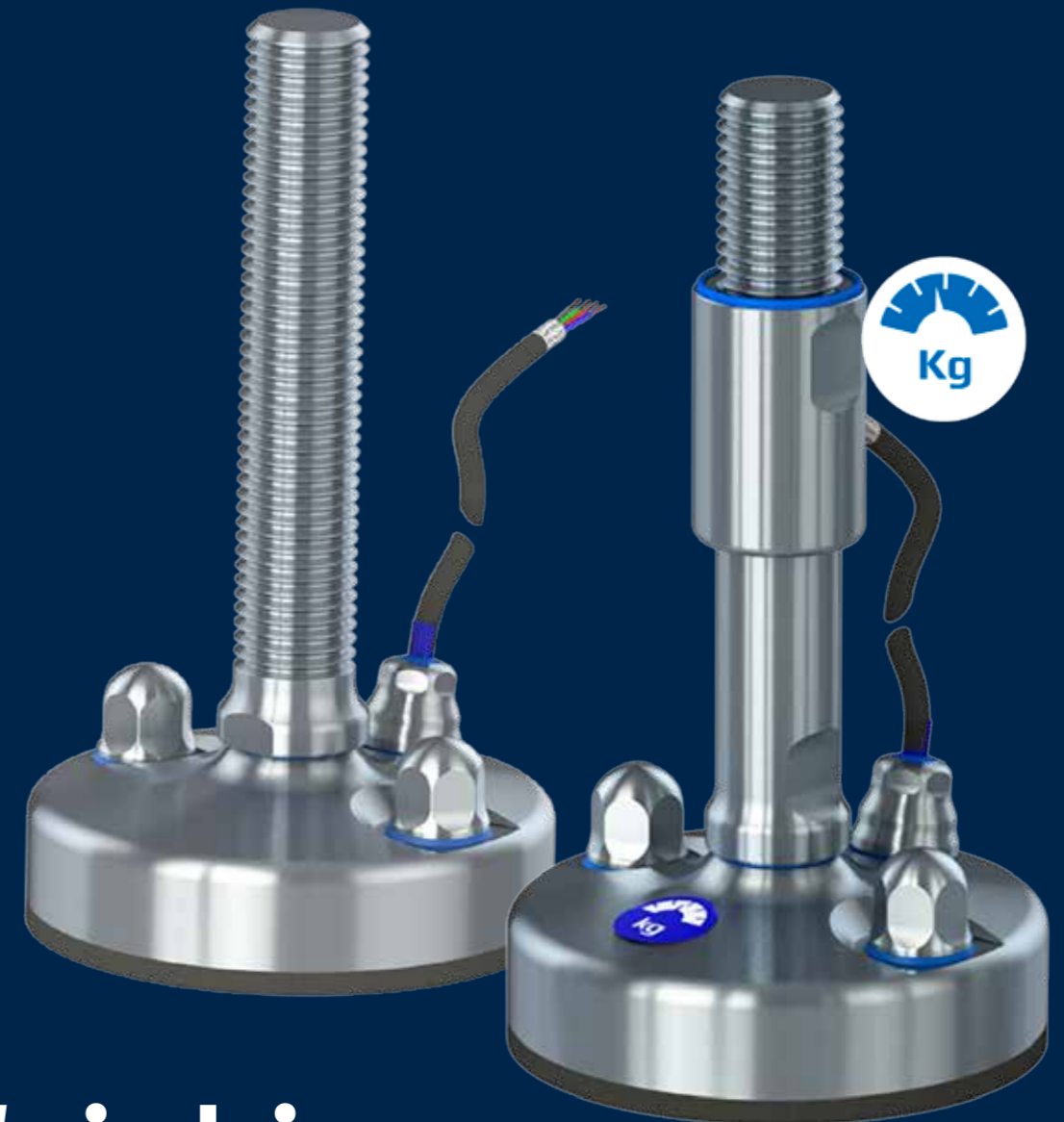




Thanks for your interest
See more at www.ngi-global.com

All NGI hygienic components are
design and patent protected



Weighing levelling feet

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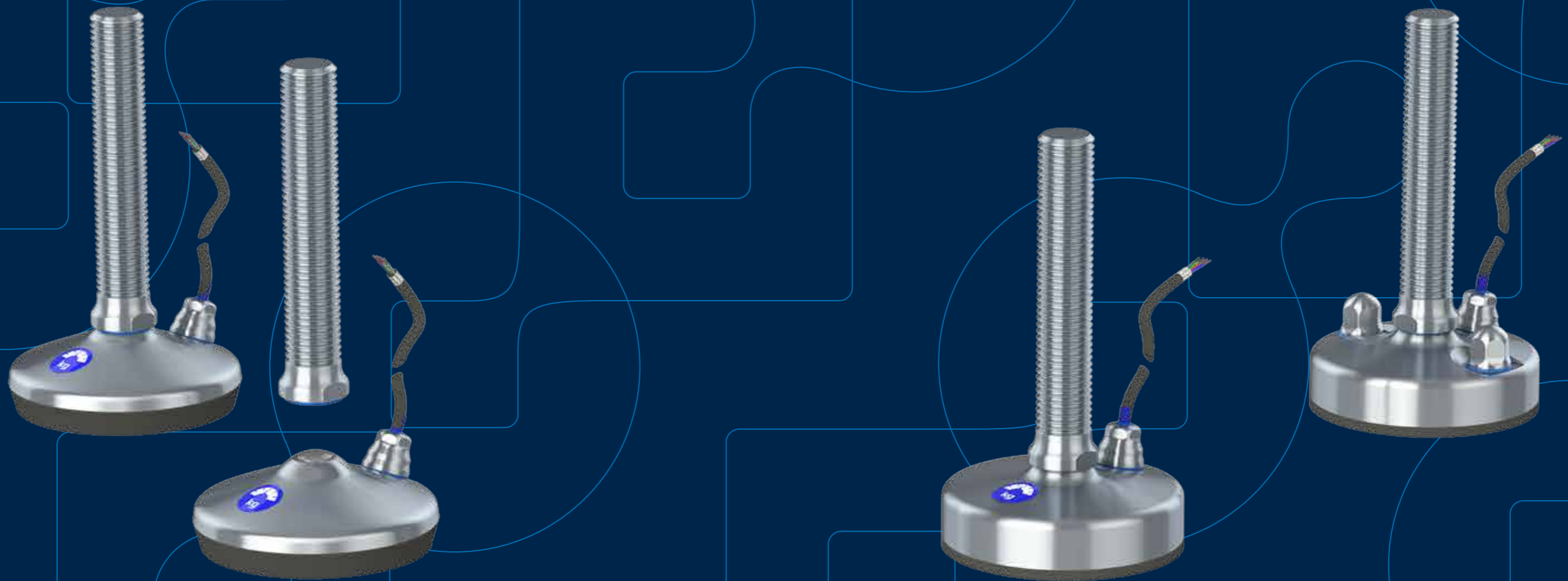
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ngi-global.com



The only weighing levelling feet in the world
with built-in standard weighing cell
secured, guided and protected inside the feet

The design and patent-protected NGI weighing levelling
feet is the optimal choice for supporting and
easy weighing of machinery, equipment, tanks and
vessels



Weighing Levelling feet







Innovative and reliable

We provide the optimal
solution for your application

The only hygienic weighing levelling feet in the world with build in standard weighing cell secured, guided and protected inside the feet.

The design and patent protected NGI Weighing levelling feet is the optimal choice for supporting and easy weighing of machinery, equipment, tanks and vessels in environments with strict hygienic requirements

NGI weighing levelling feet are optimized for the PR 6251 PanCake load cell family to guarantee best weighing performance and a very compact construction, unmatched reliability, robustness and stability, which enable trouble-free operation without adjustment, year after year. Other brands of load cells are also optional.

-  Enhanced food safety
-  A complete hygienic design minimizing risks of cross-contamination
-  Plug&Play installation
-  Minimize water usage and use of cleaning detergents



Go to ngi-global.com/products/levelling-feet/weighing-levelling-feet/ to read more and see our product range.

Weighing Configurator online

Make sure you choose the right weighing levelling foot

We highly recommend that you contact our specialists to make sure you choose the right weighing levelling feet for your project! At our website we have a configurator where you can fill in the requirements for your project. Afterwards the form will be sent to our weighing levelling feet specialist.

Find our configurator by scanning the below QR code and fill out the necessary information.

Based on your input, our weighing specialist will contact you regarding a non-binding solution for your weighing project.



[Find weighing configurator here](#)



Customer information

Customer Name *

City *

Country *

Email *

Machine ref. name *

Machine Information

Load Cell *

Weight equally distributed on all feet? *

Weight incl. products *

Total no. of levelling feet on machine *

Feet Information

Max. height *

Min. height *

Mounting Holes

Yes No

Spindle version

Hygienic Fully-threaded

Version separated or integrated?

Separated spindle from weighing footplate (recommended for accuracy) Integrated spindle with weighing footplate

Weighing Levelling feet

The design and patent protected NGI Weighing levelling feet is the optimal choice for supporting and easy weighing of machinery, equipment, tanks and vessels. The 3-A, USDA and EHEDG certified levelling feet reduce the water consumption and cleaning resources in addition to minimizing the risk of contamination in the production.

Choosing NGI's certified levelling feet will hygienically enhance your machinery and your customer's Return-On-Investment (ROI). NGI weighing levelling feet are optimized for the PR 6251 PanCake load cell family to guarantee best weighing performance and a very compact construction, unmatched reliability, robustness and stability, which enable trouble-free operation without adjustment, year after year.

Product Group Features

- Plug n' play height-adjustable compact design
- One-point impact between load cell and spindle ensures direct and friction free transfer of force
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401
- All movable parts are 100% hygienically sealed even if the load on the foot is removed
- All sealing are blue and therefore detectable by scanning systems



XHW

Special Features

- Height variation 115 mm – 218 mm
- Weight load up to 5 ton
- Spindle sizes M16, M20, M24, M30 & M36
- Footplate sizes Ø 80, Ø105, Ø125 & Ø150 mm
- Admits up to 5° slope on floors and equipment
- Vulcanized FDA-approved, anti-vibration, anti-slip rubber
- Thread covered with hygienic sleeve functioning as counter nut



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XHGTW

Special Features

- Height variation 115 mm – 217 mm
- Weight load up to 5 ton
- Spindle sizes M16, M20, M24, M30, M36
- Footplate sizes Ø105, Ø125 & Ø150 mm
- Admits up to 10° slope on floors and equipment
- Separated spindle from weighing footplate makes maintenance easier
- Spindle indirectly connected to the load cell through the footplate.



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XHGW + XHJW

Special Features

- Height variation 115 mm – 217 mm
- Weight load up to 5 ton
- Spindle sizes M16, M20, M24, M30 & M36
- Footplate sizes Ø105, Ø125 & Ø150 mm
- Admits up to 10° slope on floors and equipment
- Thread covered with hygienic sleeve functioning as counter nut



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HXW

Special Features

- Maximum weight load 5 ton
- Spindle sizes M20, M24, M30 & M36
- Footplate sizes Ø80, Ø105, Ø125 & Ø150 mm
- Hygienic-oriented design due to self-draining surfaces
- Admits up to 5° slope on floors and equipment
- Vulcanized FDA-approved, anti-vibration, anti-slip rubber blocks out bacteria underneath the footplate and protects the load cell

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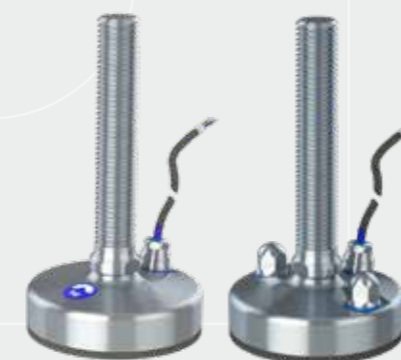
XHTW

Special Features

- Height variation 115 mm – 218 mm
- Weight load up to 5 ton
- Spindle sizes M16, M20, M24, M30 & M36
- Footplate sizes Ø105, Ø125 & Ø150 mm
- Admits up to 5° slope on floors and equipment
- Vulcanized FDA-approved, anti-vibration, anti-slip rubber
- Thread covered with hygienic sleeve functioning as counter nut
- Separated spindle from weighing footplate makes maintenance easier
- Spindle indirectly connected to the load cell through the footplate



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HXGW + HXJW

Special Features

- Footplate diameter Ø105 & Ø150 mm
- Hygienic-oriented design due to self-draining surfaces
- Admits up to 5° slope on floor and equipment
- Top cover with blue sealing detectable by scanning systems
- Ensures hygienic covering of the exposed top
- Available in standardized and customized dimensions
- Optional fixing to the floor

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Weighing Levelling feet

The design and patent protected NGI Weighing levelling feet is the optimal choice for supporting and easy weighing of machinery, equipment, tanks and vessels. The 3-A, USDA and EHEDG certified levelling feet reduce the water consumption and cleaning resources in addition to minimizing the risk of contamination in the production.

Choosing NGI's certified levelling feet will hygienically enhance your machinery and your customer's Return-On-Investment (ROI). NGI weighing levelling feet are optimized for the PR 6251 PanCake load cell family to guarantee best weighing performance and a very compact construction, unmatched reliability, robustness and stability, which enable trouble-free operation without adjustment, year after year.

Product Group Features

- Plug n' play height-adjustable compact design
- One-point impact between load cell and spindle ensures direct and friction free transfer of force
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401
- All movable parts are 100% hygienically sealed even if the load on the foot is removed
- All sealing are blue and therefore detectable by scanning systems

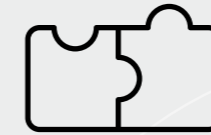


HXTW

Special Features

- Maximum weight load 5 ton
- Spindle sizes M16, M20, M24, M30 & M36
- Footplate sizes Ø80, Ø105, Ø125 & Ø150mm
- Hygienic-oriented design due to self-draining surfaces
- The footplate and spindle are two separate parts
- Admits up to 10° slope on floors and equipment
- Vulcanized FDA-approved, anti-vibration, anti-slip rubber blocks out bacteria underneath the footplate and protects the load cell

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INSTALLATION MANUAL

This installation manual describes how to install the levelling foot onto the machine or equipment for which it is intended to support.

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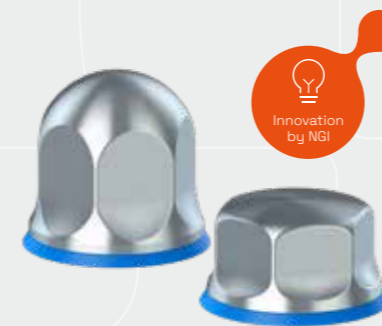


HXGTW

Special Features

- Maximum weight load 5 ton
- Spindle sizes M16, M20, M24, M30 & M36
- Footplate sizes Ø105 & Ø150 mm
- Hygienic-oriented design due to self-draining surfaces
- The footplate and spindle are two separate parts
- Admits up to 10° slope on floors and equipment

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CERTIFIED HYGIENIC NUTS

- Certified in accordance with EHEDG hygienic standard TYPE EL - CLASS I AUX
- Minimizes cleaning time and water consumption
- Surfaces with a maximal roughness of 0,8 µm RA
- Available in sizes M4-M24
- Are delivered with all certified hygienic machine feet with floor fixing

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CLEANING & MAINTENANCE

This cleaning and maintenance manual describes how to clean and maintain the levelling foot once installed.

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CERTIFIED HYGIENIC BOLTS

- Certified in accordance with EHEDG hygienic standard TYPE EL - CLASS I AUX
- Minimizes cleaning time and water consumption
- Surfaces with a maximal roughness of 0,8 µm RA
- Available in sizes M5-M24

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Certified hygienic Weighing levelling feet - XHW

-  Certified hygienic
-  Minimized cleaning time
-  Minimized water usage

The design and patent protected XHW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels in environments with strict hygienic requirements. The load cell is secured, guided and protected inside the foot.

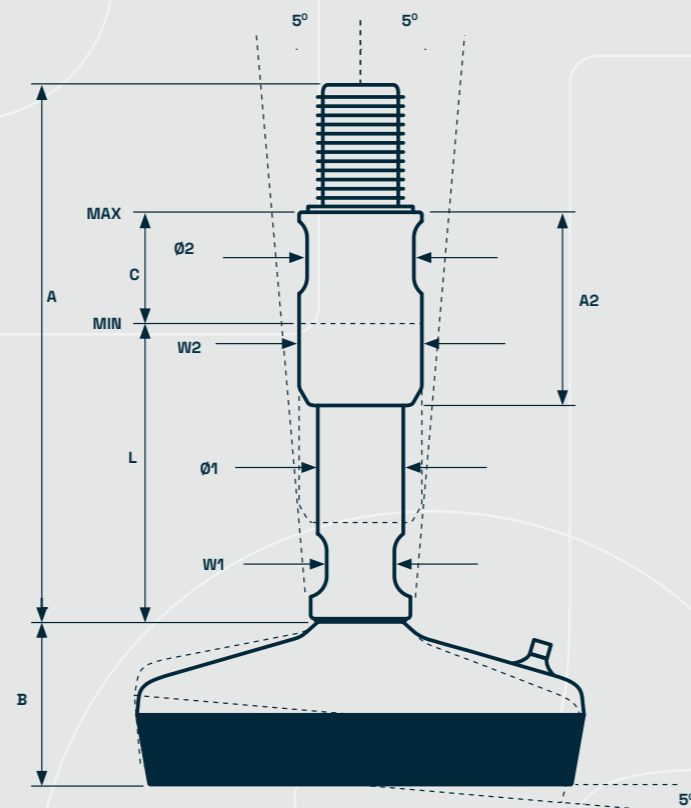
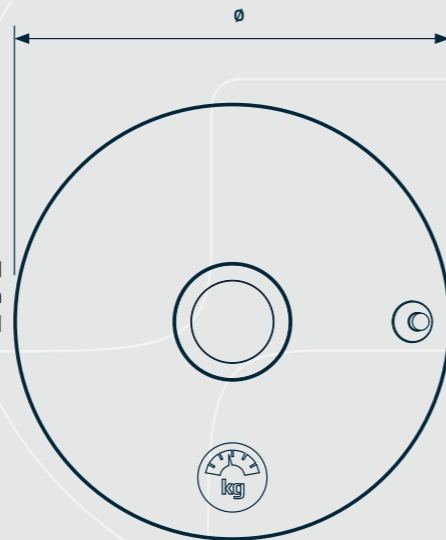
- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The XHW levelling foot is hygienically sealed to the floor by vulcanized FDA-approved, anti-vibration, anti-slip rubber, which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30kg to 5000 kg
- Designed according to the 3-A and EHEDG hygienic standards
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401

Available upon request:

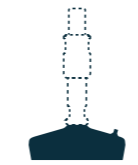
- Datasheet
- Installation instructions
- Cleaning & maintenance instructions



Certified hygienic Weighing levelling feet - XHW



FOOT PLATE



SPINDLE



SLEEVE



PRODUCT CODE FOOT - SPINDLE - SLEEVE - LOAD CELL

EXAMPLE XHW105 - XHM1224150 - RHOX2450 - PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
80	80	39	30/50/100/200/300	XHW080
105	105	40	30/50/100/200/300	XHW105
125	125	45	500/1000/2000/3000/5000	XHW125
150	150	46	500/1000/2000/3000/5000	XHW150

THREAD [metric]	HEIGHT A [mm]	HEIGHT L [mm]	W1 [mm]	DIAMETER Ø1 [mm]	NOM LOAD [N]	ITEM CODE
M20	150	76	17	20	48.200	XHM1220150
M20	210	106	17	20	48.200	XHM1220210
M24	150	76	19	24	69.200	XHM1224150
M24	210	106	19	24	69.200	XHM1224210
M30	150	76	24	30	110.200	XHM1230150
M30	210	106	24	30	110.200	XHM1230210
M36	150	76	30	32	160.200	XHM1236150
M36	210	106	30	32	160.200	XHM1236210

THREAD [metric]	W2 [mm]	DIAMETER Ø2 [mm]	HEIGHT A2 [mm]	ADJUSTMENT C [mm]	ITEM CODE
M20	27	29,7	50	36	RHOX2050
M20	27	29,7	80	66	RHOX2080
M24	30	34,5	50	36	RHOX2450
M24	30	34,5	80	66	RHOX2480
M30	36	39,5	50	33	RHOX3050
M30	36	39,5	80	63	RHOX3080
M36	46	49,5	50	33	RHOX3650
M36	46	49,5	80	63	RHOX3680

LOAD CELL MIN. THREAD [OUTPUT] 2mV/V 4-20mA

30 KG	50 KG	100 KG	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA

- Total height = A + B
- Minimum usable height = B + L
- Maximum usable height = B + L + C
- Maximum nominal load = Lowest value for load cell or spindle
- Tolerance of total height = +/-1,5 mm



Certified hygienic Weighing levelling feet - XHGW

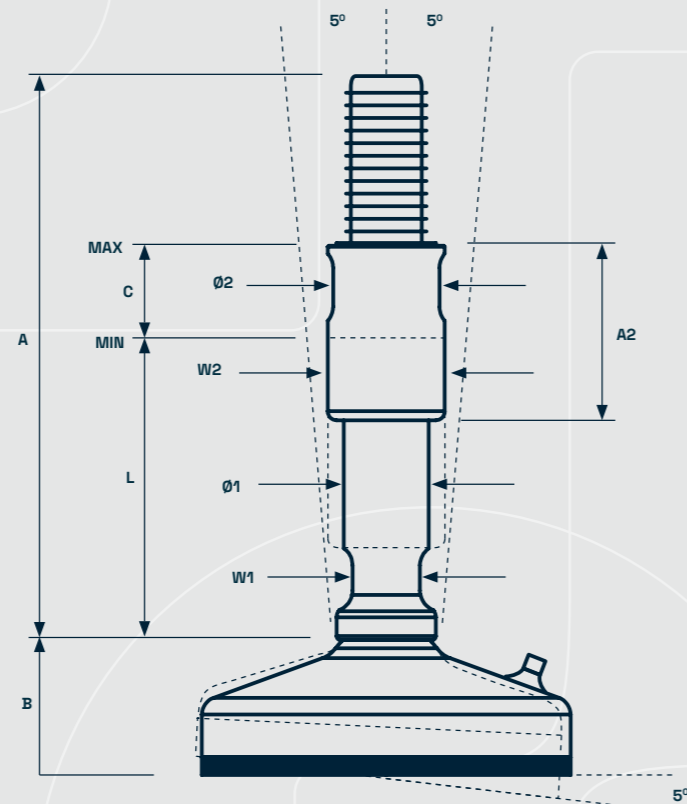
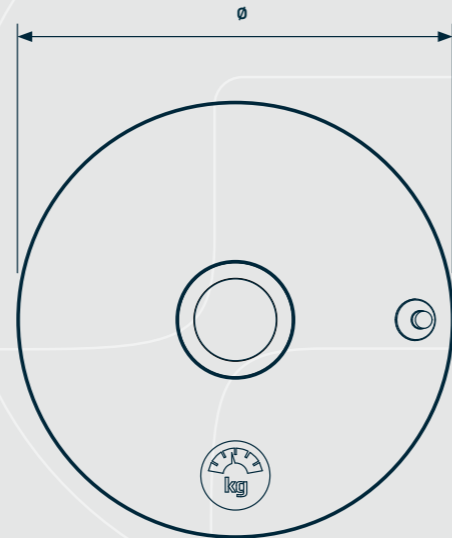
-  Certified hygienic
-  Minimized cleaning time
-  Minimized water usage

The design and patent protected XHGW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels in environments with strict hygienic requirements. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria
- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Designed according to the 3-A and EHEDG hygienic standards
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401

Available upon request:

- Datasheet
- Installation instructions
- Cleaning & maintenance instructions



Certified hygienic Weighing levelling feet - XHGW



PRODUCT CODE	FOOT	SPINDLE	SLEEVE	LOAD CELL
EXAMPLE	XHGW105	XHJGM1220150	RHOX2050	PR6211/32D1



TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	30/50/100/200/300	XHGW105
150	149	45	500/1000/2000/3000/5000	XHGW150

THREAD [metric]	HEIGHT A [mm]	HEIGHT L [mm]	W1 [mm]	DIAMETER Ø1 [mm]	NOM LOAD [N]	ITEM CODE
M20	150	76	17	20	48.200	XHM1220150
M20	210	106	17	20	48.200	XHM1220210
M24	150	76	19	24	69.200	XHM1224150
M24	210	106	19	24	69.200	XHM1224210
M30	150	76	24	30	110.200	XHM1230150
M30	210	106	24	30	110.200	XHM1230210
M36	150	76	30	32	160.200	XHM1236150
M36	210	106	30	32	160.200	XHM1236210

THREAD [metric]	W2 [mm]	DIAMETER Ø2 [mm]	HEIGHT A2 [mm]	ADJUSTMENT C [mm]	ITEM CODE
M20	27	29,7	50	36	RHOX2050
M20	27	29,7	80	66	RHOX2080
M24	30	34,5	50	36	RHOX2450
M24	30	34,5	80	66	RHOX2480
M30	36	39,5	50	33	RHOX3050
M30	36	39,5	80	63	RHOX3080
M36	46	49,5	50	33	RHOX3650
M36	46	49,5	80	63	RHOX3680

LOAD CELL
MIN. THREAD
[OUTPUT]
2mV/V
4-20mA

	30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L	
					PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA	



Total height = A + B
 Minimum usable height = B + L
 Maximum usable height = B + L + C
 Maximum nominal load = Lowest value for load cell or spindle
 Tolerance of total height = +/-1,5 mm

Certified hygienic Weighing levelling feet - XHJW

- Certified hygienic
- Minimized cleaning time
- Minimized water usage

The design and patent protected XHJW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels in environments with strict hygienic requirements. The load cell is secured, guided and protected inside the foot.

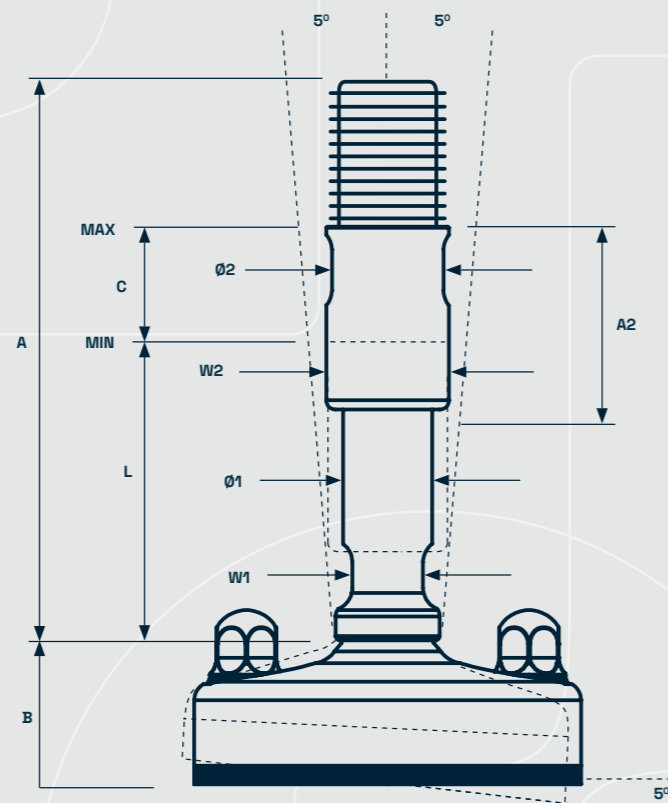
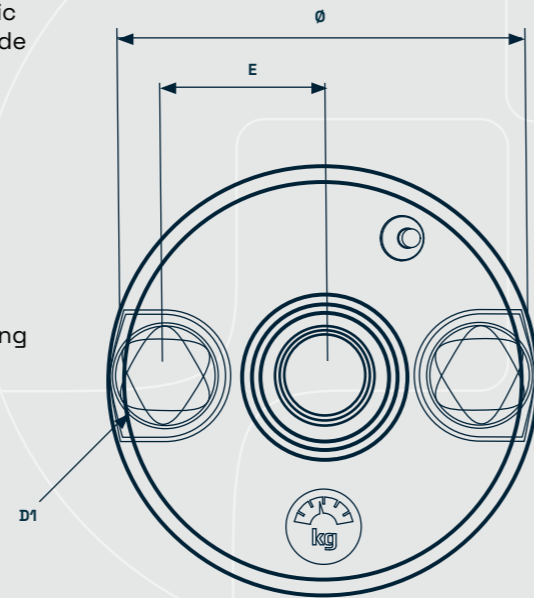
- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The XHJW is designed to be fastened to the floor by the two fixing holes in the footplate.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Designed according to the 3-A and EHEDG hygienic standards
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401

Available upon request:

- Datasheet
- Installation instructions
- Cleaning & maintenance instructions



Certified hygienic Weighing levelling feet - XHJW



PRODUCT CODE: FOOT - SPINDLE - SLEEVE - LOAD CELL
EXAMPLE: XHJW105 - XHJGM1220150 - RHOX2050 - PR6211/32D1



FOOT PLATE



TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	HOLE POSITION E [mm]	HOLE DIAMETER D1 [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	37,75	13	30/50/100/200/300	XHJW105
150	149	45	58	13	500/1000/2000/3000/5000	XHJW150

SPINDLE



THREAD [metric]	HEIGHT A [mm]	HEIGHT L [mm]	W1 [mm]	DIAMETER Ø1 [mm]	NOM LOAD [N]	ITEM CODE
M20	150	76	17	20	48.200	XHM1220150
M20	210	106	17	20	48.200	XHM1220210
M24	150	76	19	24	69.200	XHM1224150
M24	210	106	19	24	69.200	XHM1224210
M30	150	76	24	30	110.200	XHM1230150
M30	210	106	24	30	110.200	XHM1230210
M36	150	76	30	32	160.200	XHM1236150
M36	210	106	30	32	160.200	XHM1236210

SLEEVE



THREAD [metric]	W2 [mm]	DIAMETER Ø2 [mm]	HEIGHT A2 [mm]	ADJUSTMENT C [mm]	ITEM CODE
M20	27	29,7	50	36	RHOX2050
M20	27	29,7	80	66	RHOX2080
M24	30	34,5	50	36	RHOX2450
M24	30	34,5	80	66	RHOX2480
M30	36	39,5	50	33	RHOX3050
M30	36	39,5	80	63	RHOX3080
M36	46	49,5	50	33	RHOX3650
M36	46	49,5	80	63	RHOX3680

LOAD CELL
MIN. THREAD [OUTPUT]
2mV/V
4-20mA

	30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1										
PR6211/51D1										
PR6211/12D1										
PR6211/13D1										
PR6211/32D1										
PR6251/52L										
PR6251/13L										
PR6251/23L										
PR6251/33L										
PR6251/53L										
PR6251/52LA										
PR6251/13LA										
PR6251/23LA										
PR6251/33LA										
PR6251/53LA										



Total height = A + B
Minimum usable height = B + L
Maximum usable height = B + L + C
Maximum nominal load = Lowest value for load cell or spindle
Tolerance of total height = +/-1,5 mm

Certified hygienic Weighing levelling feet - XHTW

- Certified hygienic
- Minimized cleaning time
- Minimized water usage

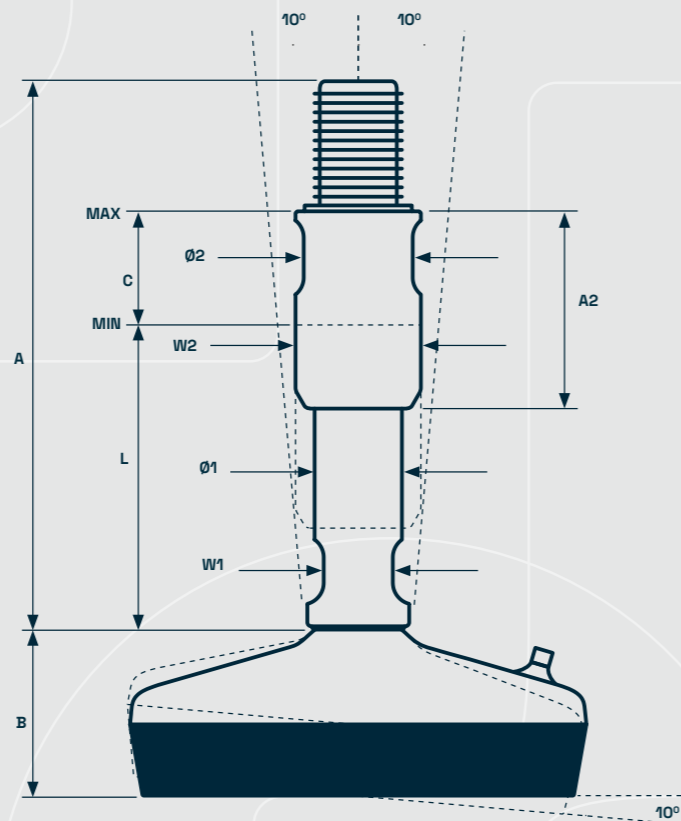
The design and patent protected XHTW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels in environments with strict hygienic requirements. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The XHTW consists of a separated footplate and spindle connected by the diametrically centered elevation on the weighing footplate. Additionally, the levelling foot is hygienically sealed to the floor by vulcanized FDA-approved, anti-vibration, anti-slip rubber, which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5000 kg
- Designed according to the 3-A and EHEDG hygienic standards
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401

- Available upon request:**
- Datasheet
 - Installation instructions
 - Cleaning & maintenance instructions



Certified hygienic Weighing levelling feet - XHTW



FOOT PLATE



SPINDLE



SLEEVE



PRODUCT CODE	FOOT	SPINDLE	SLEEVE	LOAD CELL
EXAMPLE	XHTW105	XHT24150	RHOX2450	PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
80	80	39	30/50/100/200/300	XHW080
105	105	40	30/50/100/200/300	XHW105
125	125	45	500/1000/2000/3000/5000	XHW250
150	150	46	500/1000/2000/3000/5000	XHW250

THREAD [metric]	HEIGHT A [mm]	HEIGHT L [mm]	W1 [mm]	DIAMETER Ø1 [mm]	NOM LOAD [N]	ITEM CODE
M16	150	76	13	16	30.800	XHT16150
M16	210	106	13	16	24.900	XHT16210
M20	150	76	17	20	48.200	XHT20150
M20	210	106	17	20	48.200	XHT20210
M24	150	76	19	24	69.200	XHT24150
M24	210	106	19	24	69.200	XHT24210
M30	150	76	24	30	110.200	XHT30150
M30	210	106	24	30	110.200	XHT30210
M36	150	76	30	32	160.200	XHT36150
M36	210	106	30	32	160.200	XHT36210

THREAD [metric]	W2 [mm]	DIAMETER Ø2 [mm]	HEIGHT A2 [mm]	ADJUSTMENT C [mm]	ITEM CODE
M16	22	24,8	50	36	RHOX1650
M16	22	24,8	80	66	RHOX1680
M20	27	29,7	50	36	RHOX2050
M20	27	29,7	80	66	RHOX2080
M24	30	34,5	50	36	RHOX2450
M24	30	34,5	80	66	RHOX2480
M30	36	39,5	50	33	RHOX3050
M30	36	39,5	80	63	RHOX3080
M36	46	49,5	50	33	RHOX3650
M36	46	49,5	80	63	RHOX3680

LOAD CELL MIN. THREAD [OUTPUT]	30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
2mV/V	PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
4-20mA	-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA



Total height = A + B
 Minimum usable height = B + L
 Maximum usable height = B + L + C
 Maximum nominal load = Lowest value for load cell or spindle
 Tolerance of total height = +/-1,5 mm

Certified hygienic Weighing levelling feet - XHGTW

-  Certified hygienic
-  Minimized cleaning time
-  Minimized water usage

The design and patent protected XHGTW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels in environments with strict hygienic requirements. The load cell is secured, guided and protected inside the foot.

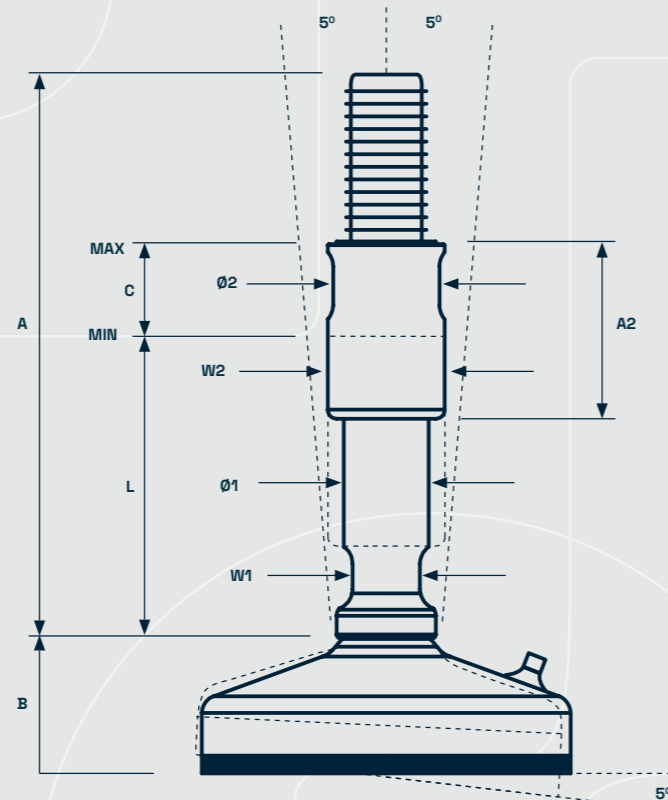
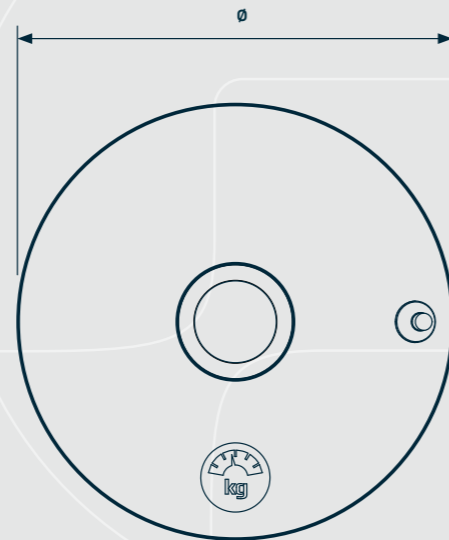
- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The XHGTW consists of a separated footplate and spindle connected by the diametrically centered elevation on the weighing footplate.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Designed according to the 3-A and EHEDG hygienic standards
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401

Available upon request:

- Datasheet
- Installation instructions
- Cleaning & maintenance instructions



Certified hygienic Weighing levelling feet - XHGTW



FOOT PLATE



SPINDLE



SLEEVE



PRODUCT CODE	FOOT	SPINDLE	SLEEVE	LOAD CELL
EXAMPLE	XHGTW105	XHT20150	RHOX2050	PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	30/50/100/200/300	XHGTW105
150	149	45	500/1000/2000/3000/5000	XHGTW150

THREAD [metric]	HEIGHT A [mm]	HEIGHT L [mm]	W1 [mm]	DIAMETER Ø1 [mm]	NOM LOAD [N]	ITEM CODE
M16	150	76	13	16	30.800	XHT16150
M16	210	106	13	16	24.900	XHT16210
M20	150	76	17	20	48.200	XHT20150
M20	210	106	17	20	48.200	XHT20210
M24	150	76	19	24	69.200	XHT24150
M24	210	106	19	24	69.200	XHT24210
M30	150	76	24	30	110.200	XHT30150
M30	210	106	24	30	110.200	XHT30210
M36	150	76	30	32	160.200	XHT36150
M36	210	106	30	32	160.200	XHT36210

THREAD [metric]	W2 [mm]	DIAMETER Ø2 [mm]	HEIGHT A2 [mm]	ADJUSTMENT C [mm]	ITEM CODE
M16	22	24,8	50	36	RHOX1650
M16	22	24,8	80	66	RHOX1680
M20	27	29,7	50	36	RHOX2050
M20	27	29,7	80	66	RHOX2080
M24	30	34,5	50	36	RHOX2450
M24	30	34,5	80	66	RHOX2480
M30	36	39,5	50	33	RHOX3050
M30	36	39,5	80	63	RHOX3080
M36	46	49,5	50	33	RHOX3650
M36	46	49,5	80	63	RHOX3680

LOAD CELL
MIN. THREAD
[OUTPUT]
2mV/V
4-20mA

	30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L	
					PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA	



Total height = A + B
Minimum usable height = B + L
Maximum usable height = B + L + C
Maximum nominal load = Lowest value for load cell or spindle
Tolerance of total height = +/-1,5 mm

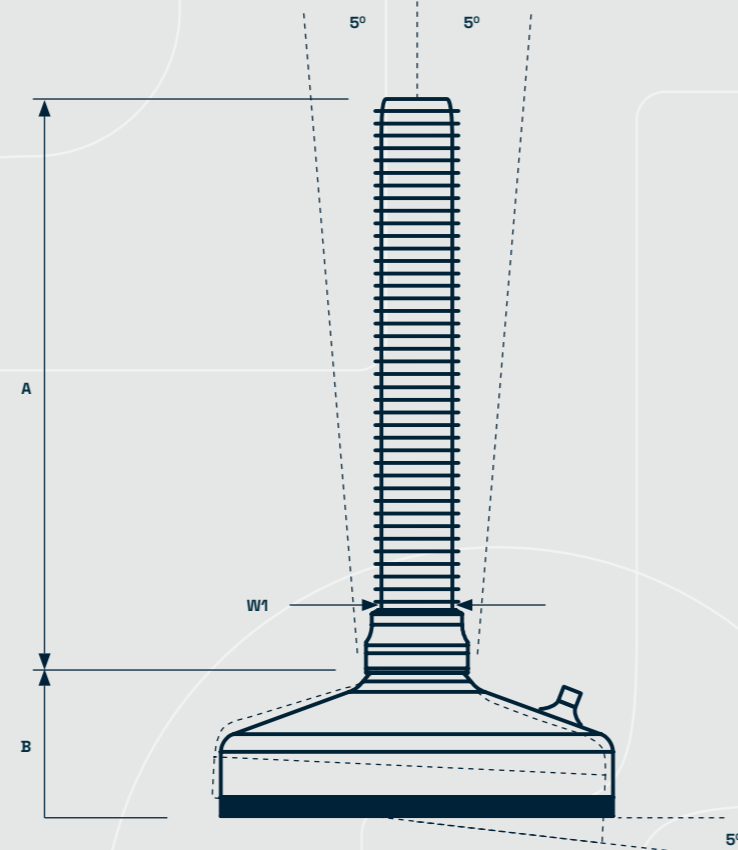
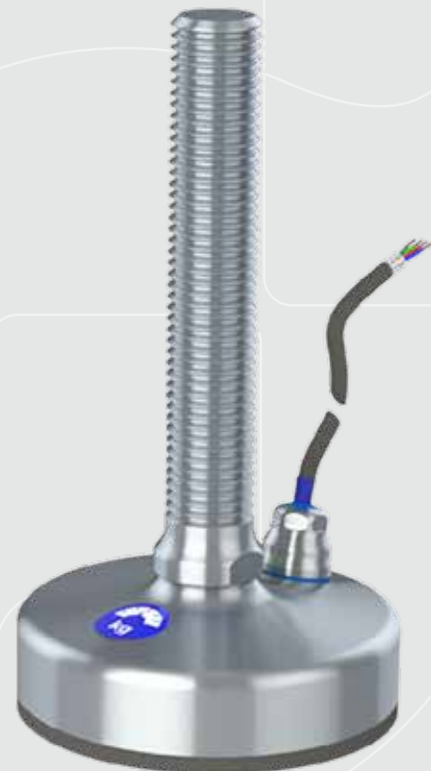
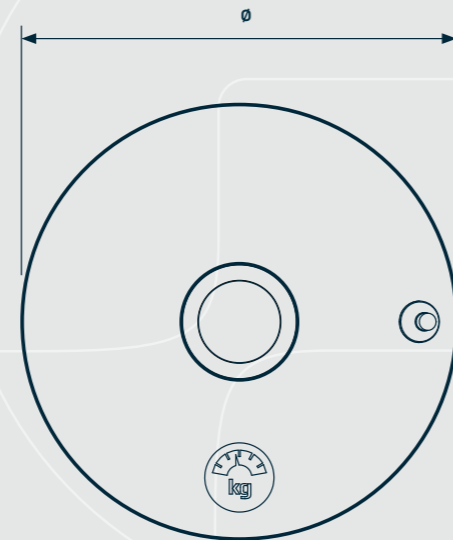
Fully-threaded weighing levelling feet - HXGW

The design and patent protected HXGW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The HXGW levelling foot is hygienically sealed to the floor by rubber sealing which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401



Fully-threaded weighing levelling feet - HXGW



FOOT PLATE

PRODUCT CODE FOOT - SPINDLE - LOAD CELL

EXAMPLE HXGW105 - HXJGM1224150 - PR6211/32D1



SPINDLE

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	30/50/100/200/300	HXGW105
150	149	45	500/1000/2000/3000/5000	HXGW150

TYPE ▶	70	100	150	180	230	310	W1 [mm]
THREAD	[N]	[N]	[N]	[N]	[N]	[N]	
M20	49.000	49.000	49.000	48.000	30.000	15.000	20
M24	70.000	70.000	70.000	70.000	65.000	35.000	20
M30	112.500	112.500	112.500	112.500	112.500	95.000	20
M36	162.000	162.000	162.000	162.000	162.000	162.000	36
M42	220.000	220.000	220.000	220.000	220.000	220.000	36
HEIGHT A [mm] ▶	70	100	150	180	230	310	

LOAD CELL MIN. THREAD [OUTPUT] 2mV/V 4-20mA

30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA



Maximum nominal load Tolerance of total height = Lowest value for load cell or spindle = +/-1,5 mm

Fully-threaded weighing levelling feet - HXJW

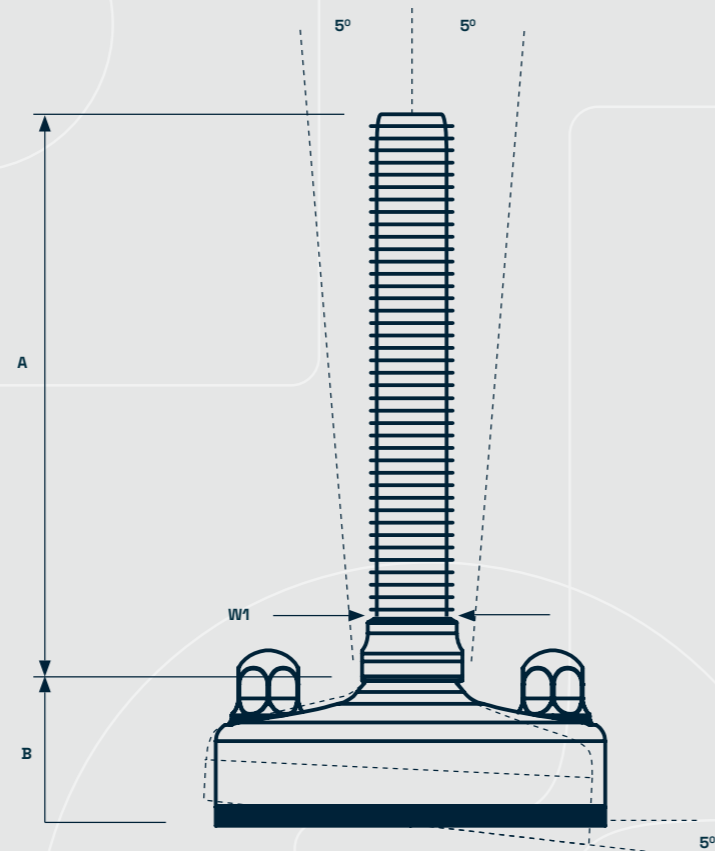
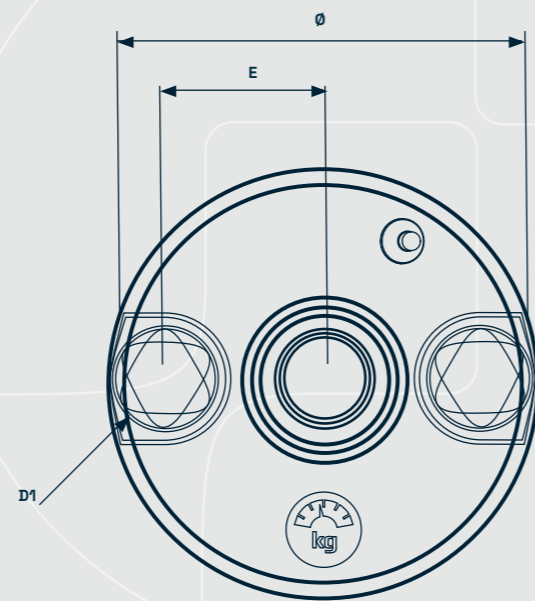
The design and patent protected HXJW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The HXJW is designed to be fastened to the floor by the two fixing holes in the footplate.

The HXJW levelling foot is hygienically sealed to the floor by rubber sealing which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401



Fully-threaded weighing levelling feet - HXJW



FOOT PLATE



SPINDLE



PRODUCT CODE	FOOT	-	SPINDLE	-	LOAD CELL
EXAMPLE	XHJW105	-	XHJGM1220150	-	RHOX2050 - PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	HOLE POSITION E [mm]	HOLE DIAMETER D1 [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	37,75	13	30/50/100/200/300	HXJW105
150	149	45	58	13	500/1000/2000/3000/5000	HXJW150

TYPE ▶	70	100	150	180	230	310	W1 [mm]
THREAD	[N]	[N]	[N]	[N]	[N]	[N]	[mm]
M20	49.000	49.000	49.000	48.000	30.000	15.000	20
M24	70.000	70.000	70.000	70.000	65.000	35.000	20
M30	112.500	112.500	112.500	112.500	112.500	95.000	20
M36	162.000	162.000	162.000	162.000	162.000	162.000	36
M42	220.000	220.000	220.000	220.000	220.000	220.000	36
HEIGHT A [mm] ▶	70	100	150	180	230	310	

LOAD CELL
MIN. THREAD [OUTPUT]
2mV/V
4-20mA

30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA



Maximum nominal load
Tolerance of total height

= Lowest value for load cell or spindle
= +/-1,5 mm

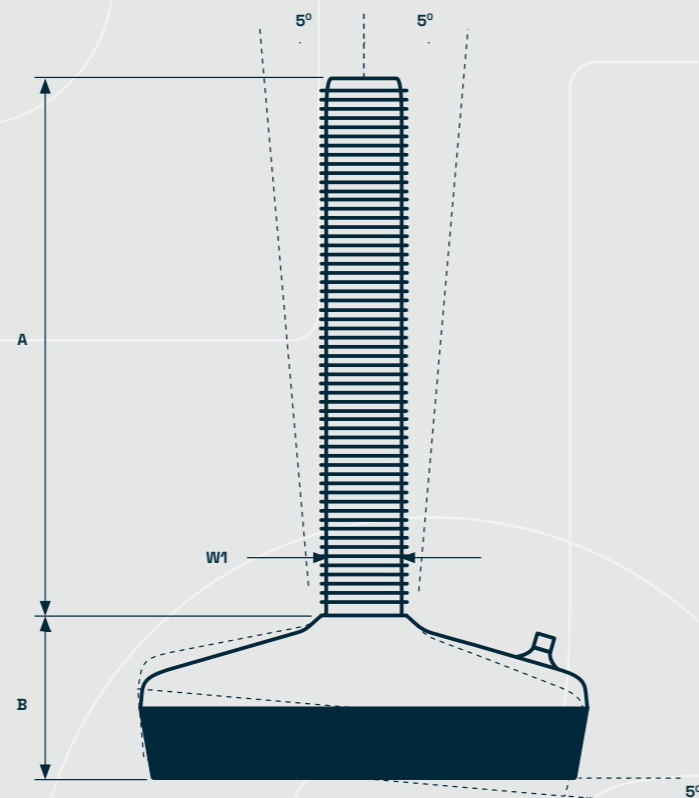
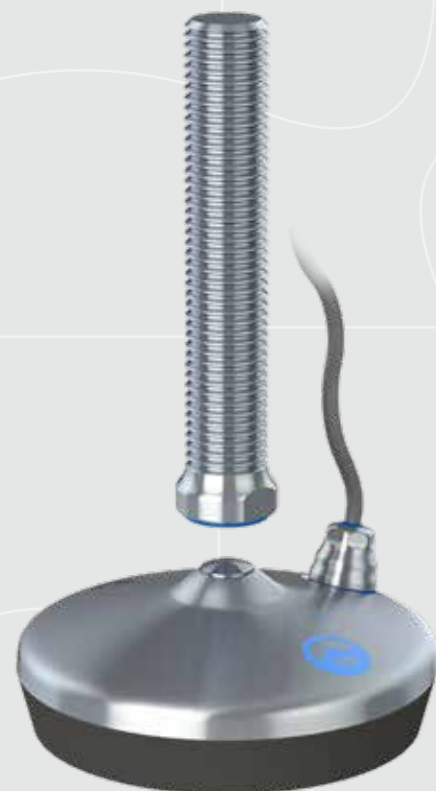
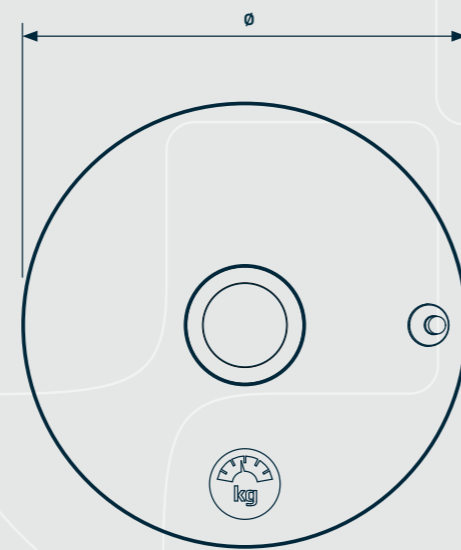
Fully-threaded weighing levelling feet - HXTW

The design and patent protected HXTW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The HXTW consists of a separated footplate and spindle connected by the diametrically centered elevation on the weighing footplate. Additionally, the levelling foot is hygienically sealed to the floor by vulcanized FDA-approved, anti-vibration, anti-slip rubber, which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5000 kg
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401



Fully-threaded weighing levelling feet - HXTW



FOOT PLATE



SPINDLE



PRODUCT CODE	FOOT	SPINDLE	LOAD CELL
EXAMPLE	HXTW105	- HXL24150	- PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
80	80	39	30/50/100/200/300	HXTW080
105	105	40	30/50/100/200/300	HXTW105
125	125	45	500/1000/2000/3000/5000	HXTW250
150	150	46	500/1000/2000/3000/5000	HXTW250

TYPE	70	100	150	180	230	310	W1 [mm]
THREAD	[N]	[N]	[N]	[N]	[N]	[N]	
M16	30.000	30.000	30.000	22.000	13.000	7.000	20
M20	49.000	49.000	49.000	48.000	30.000	15.000	20
M24	70.000	70.000	70.000	70.000	65.000	35.000	20
M30	112.500	112.500	112.500	112.500	112.500	95.000	20
M36	162.000	162.000	162.000	162.000	162.000	162.000	36
M42	220.000	220.000	220.000	220.000	220.000	220.000	36
HEIGHT A [mm]	70	100	150	180	230	310	

LOAD CELL
MIN. THREAD [OUTPUT]
2mV/V
4-20mA

30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA



Maximum nominal load = Lowest value for load cell or spindle
Tolerance of total height = +/-1,5 mm

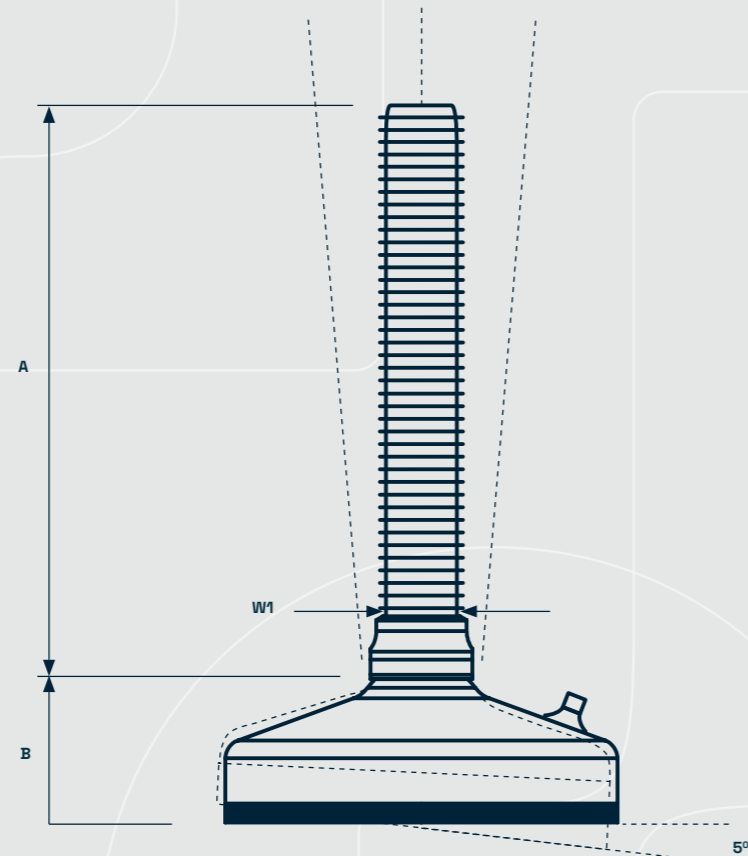
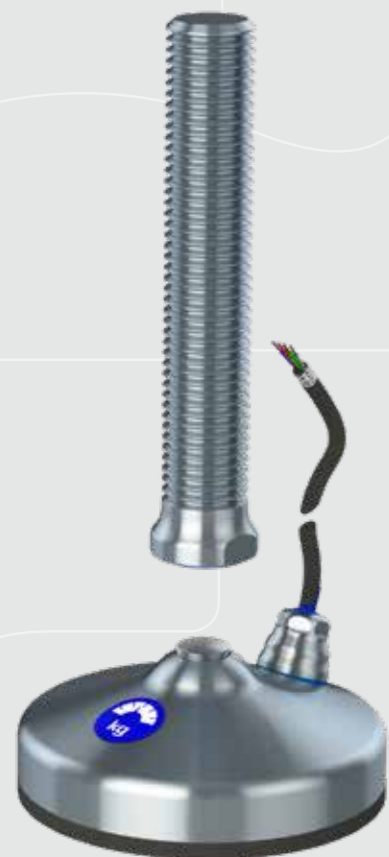
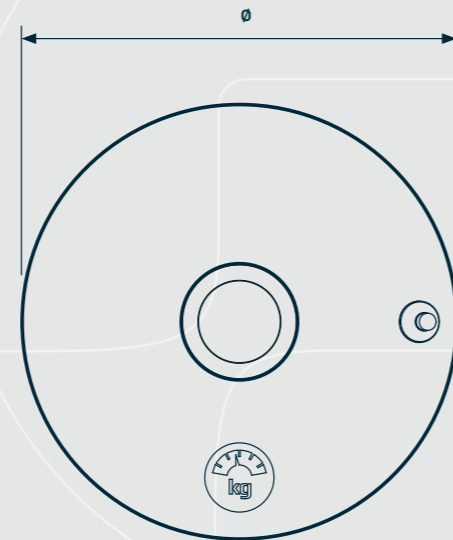
Fully-threaded weighing levelling feet - HXGTW

The design and patent protected HXGTW weighing levelling foot is the optimal choice for supporting and weighing machinery, equipment, tanks and vessels. The load cell is secured, guided and protected inside the foot.

- Secured: Load cell is secured against hazardous mechanical external impacts
- Guided: Can obtain strong forces in all directions without affecting the load cell
- Protected: Against external influences like corrosion, temperatures and bacteria

The HXGTW consists of a separated footplate and spindle connected by the diametrically centered elevation on the weighing footplate. The HXGTW levelling foot is hygienically sealed to the floor by rubber sealing which blocks out bacteria underneath the footplate and protects the load cell.

- Maintenance free and height-adjustable compact design
- Simple and fast installation - no mounting kit needed
- The different load cells cover a span of 30 kg to 5.000 kg
- Stainless steel AISI 304/A2, 1.4301. Optional AISI 316/A4, 1.4401



Fully-threaded weighing levelling feet - HXGTW



FOOT PLATE



SPINDLE



PRODUCT CODE: FOOT - SPINDLE - LOAD CELL
 EXAMPLE: HXGTW105 - HXT24150 - PR6211/32D1

TYPE	DIAMETER Ø [mm]	HEIGHT B [mm]	LOAD CELL NOM LOAD [KG]	ITEM CODE
105	104	39	30/50/100/200/300	HXGTW105
150	149	45	500/1000/2000/3000/5000	HXGTW150

TYPE ▶	70	100	150	180	230	310	W1 [mm]
THREAD	[N]	[N]	[N]	[N]	[N]	[N]	
M16	30.000	30.000	30.000	22.000	13.000	7.000	20
M20	49.000	49.000	49.000	48.000	30.000	15.000	20
M24	70.000	70.000	70.000	70.000	65.000	35.000	20
M30	112.500	112.500	112.500	112.500	112.500	95.000	20
M36	162.000	162.000	162.000	162.000	162.000	162.000	36
M42	220.000	220.000	220.000	220.000	220.000	220.000	36
HEIGHT A [mm] ▶	70	100	150	180	230	310	

LOAD CELL MIN. THREAD [OUTPUT]
 2mV/V
 4-20mA

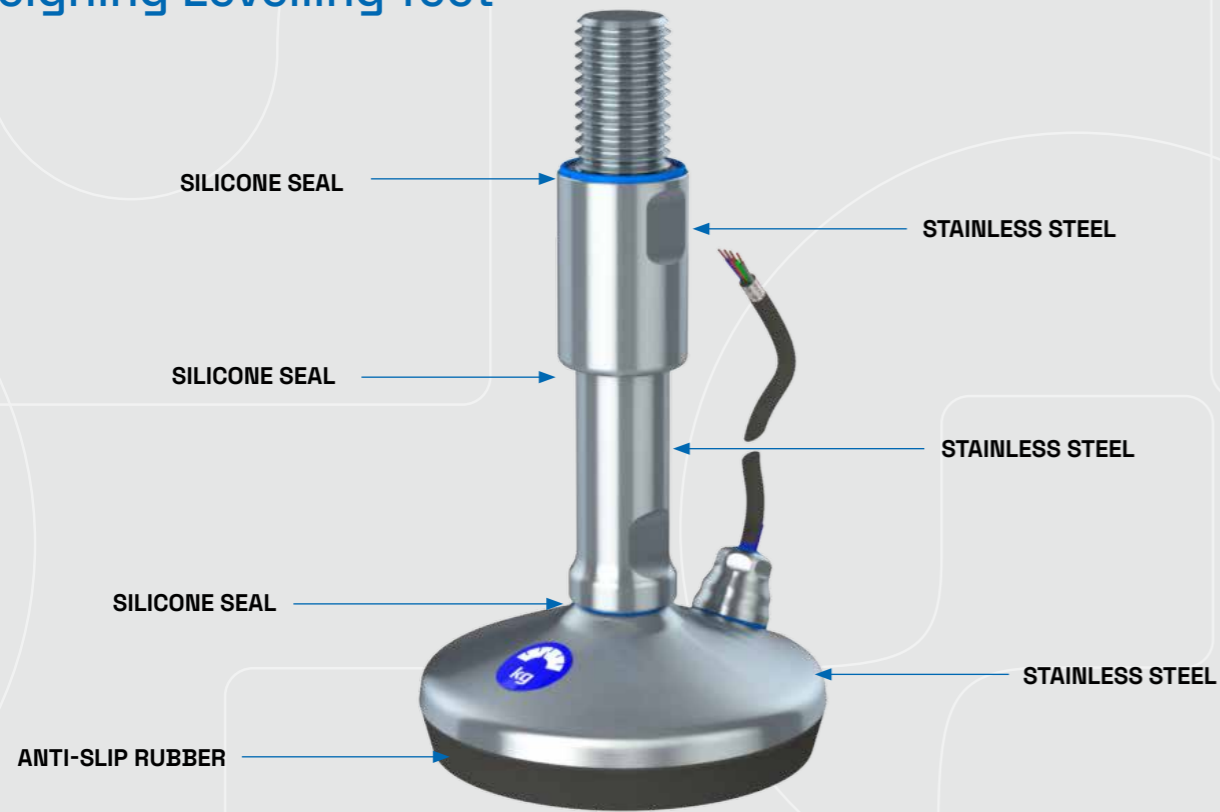
30 KG	50 KG	100 KG M16	200 KG	300 KG	500 KG M24	1.000 KG M24	2.000 KG M30	3.000 KG M30	5.000 KG M30
PR6211/31D1	PR6211/51D1	PR6211/12D1	PR6211/13D1	PR6211/32D1	PR6251/52L	PR6251/13L	PR6251/23L	PR6251/33L	PR6251/53L
-	-	-	-	-	PR6251/52LA	PR6251/13LA	PR6251/23LA	PR6251/33LA	PR6251/53LA



Maximum nominal load Tolerance of total height = Lowest value for load cell or spindle = +/-1,5 mm

Cleaning & Maintenance

Weighing Levelling feet



CLEANING

1. Rinse with water (maximum temperature ~40°C on proteins).
2. Distribute and cover all surfaces with foaming alkaline detergent for minimum 10 minutes. All standard products within the industry can be used. Follow supplier recommendations for temperature (maximum 100°C) and concentration depending on foaming detergent.
3. Rinse with hot water (maximum 100°C) with low-medium pressure (approximately 8-12 bar) until it is visibly clean. Cleaning of the levelling foot including sealings and dome-headed nuts can normally be done with a spraying nozzle pointing in a downwards direction approximately 45°. For heavy duty cleaning a more direct-oriented nozzle can be necessary. Be careful not to damage the sealings if high pressure cleaning is used. Keep nozzle at minimum 200-300 mm distance.
4. Mechanical cleaning may be necessary if the levelling foot is severely soiled. Cleaning must be executed with a soft brush or soft plastic scraper together with a more direct pointing nozzle spray. Steel scraper, steel brush or other sharp metallic tools are strictly prohibited, since the sealings can be severely damaged and the steel surfaces will be scratched.

MAINTENANCE

1. If the sealings on the sleeve are damaged they must be replaced. Always use genuine spare parts from NGI.
2. If the sealing between the foot and the spindle is damaged, replace the whole levelling foot and install a new one. An assembled levelling foot cannot be separated.
3. Load on the levelling foot must be obtained in order for the footplate to be hygienically sealed to the floor.
4. For a levelling foot for floor fixing always make sure that the floor fixing nut or bolt is tightened as specified in the installation manual. Tighten if necessary. If replacement of nuts or washers is always use genuine spare parts from NGI.
5. If any readjustments are necessary the levelling foot and the nearest surroundings must be cleaned carefully to prevent any soil from entering the sleeve.



The design and patent protected NGI Weighing levelling feet is the optimal choice for supporting and easy weighing of machinery equipment, tanks and vessels in environments with strict hygienic requirements. Here are shown a reference case, where Bocard in France has used NGI weighing levelling feet for one of their production sites. Read the case at our website.



Installation

Weighing Levelling feet

It is important to follow these instructions in order to ensure the certified hygienic design and functionality.

This documentation is enclosed with the levelling feet and should always be handed over to the end-user.

0A. Prior to installation of the levelling foot ensure that the floor does not exceed maximum slope.

0B. When installing, make sure that the footplate does not span over cracks, grout lines or other floor imperfections. If unavoidable, seal the cavity with bonding material under and around the edge of the footplate.

1A. Lift or jack up the machinery or equipment to install the levelling foot.

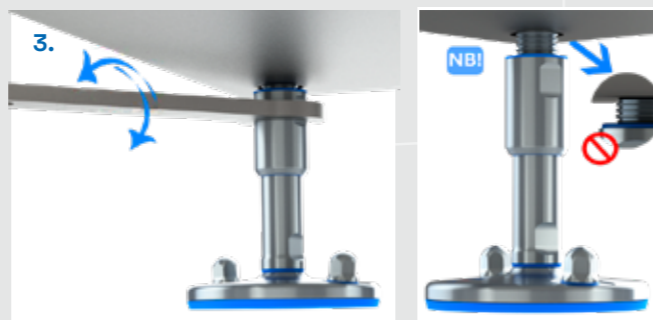
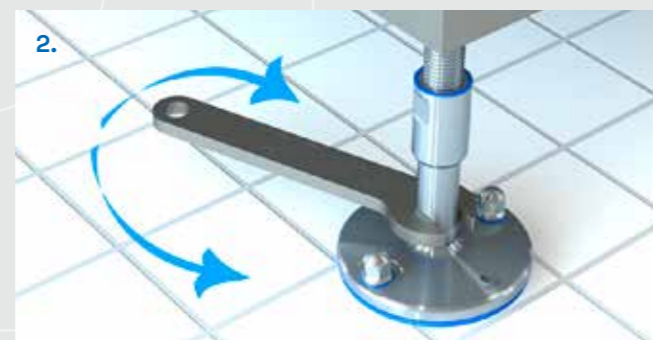
1B. Make sure that the sealing is correctly fixed on top of the sleeve. Grease the exposed thread with FoodLube Universal Grease and make sure to remove any excess grease after installation.

2. Install the levelling foot and use a wrench to adjust the vertical position and make sure that the engagement is no less than the diameter of the thread.

Repeat step 0A-2 for all feet supporting the machinery.

Lower the machinery so that the feet rest on the floor. Perform final height and levelling adjustments if needed and ensure that the load is uniformly distributed on all feet.

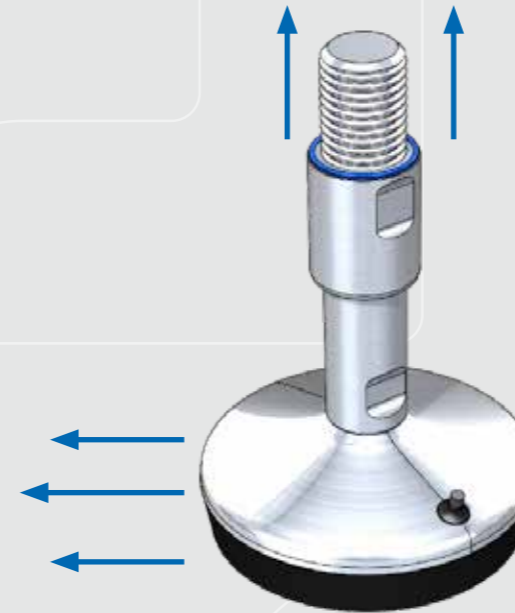
3. Use a wrench to rotate and tighten the sleeve against the machinery or equipment. Make sure that the sleeve is tightened to counter-lock the levelling foot and cover the thread.



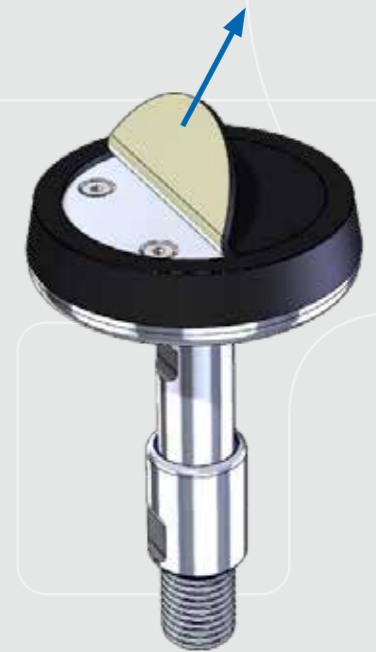
If the levelling foot is not fully inserted into the machinery or equipment the thread will become partly exposed. In this case, it is not correctly installed and will neither meet 3A, USDA & EHEDG hygienic demands nor load specifications.

Service & access to the load cell

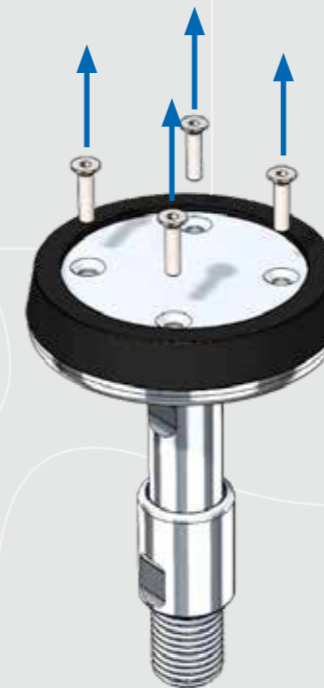
Weighing Levelling feet



1. Lift the machine
When the machine is lifted, unscrew the levelling foot.



The center rubber is easy to remove by pulling it off the bottom plate.



3. Unscrew weighing fasteners
The fasteners are secured with Loctite so they may be a little difficult to unscrew.



4. Pull out load cell
It is now possible to pull out the load cell, but if it is stuck just screw 2 fasteners a bit in the load cell and use them as handles to pull it out.



NB: When assembling
When assembling the weighing levelling foot again. Tighten the screws until the load cell presses against the pressure tap and then release them a bit. It is important to use Loctite secure the screws.

FAQ

Weighing Levelling feet

WHY USE LOAD CELLS:

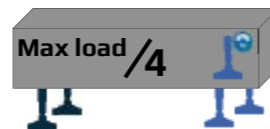
- A pressure sensor will not measure the weight of the tank correctly, if a tank is pressurized.
- A level sensor will not measure the weight of the tank correctly if there is foam in the tank.
- In order to measure the total weight of part of the machine or entire machinery
- In order to supplement and verify, a level sensor, a pressure sensor or a flow sensor.
- Because it is easy and seldom require changes in the existing design.
- Because it is the most hygienic solution that also ensures optimum measurements.



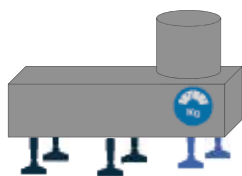
Machinery on 3 feet can measure total load with 1 foot if the load is evenly distributed on all the feet.



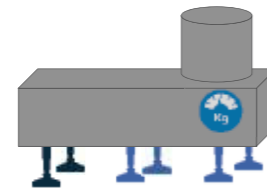
Machinery on 4 feet can measure total load with 2 feet if the load is evenly distributed on all the feet.



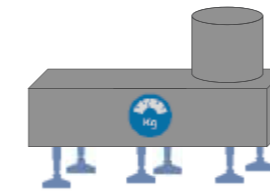
To find the maximum load on the foot take the total weight of the machinery filled with product and divide it by the number of feet if the load is evenly distributed on all the feet.



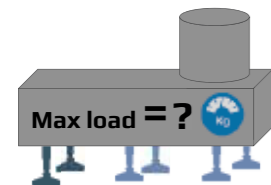
When load is not measured on all feet that supports the machinery use the ones with maximum load.



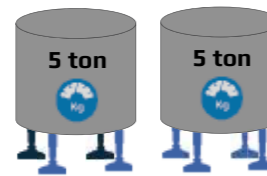
Total load of machinery with more than 4 feet can be measured if the feet that represent most of the load is chosen.



Optimal weighing is ensured by measuring the load on all feet regardless of how many that supports the machinery.



If the load is NOT evenly distributed on all the feet, calibrate the weight with known weight of material in your PLC.



Machinery and product = max 5 ton.
 $5000/4 = 1250 \text{ kg} \Rightarrow 2000 \text{ kg load cell}$



For loads less than 300 kg NGI recommend the feet XHSW, XHTSW, HXW and HXTW size 80 and 105 to obtain maximum accuracy.



For loads less than 300 kg NGI recommend the feet XHSW, XHTSW, HXW and HXTW size 80 and 105 to obtain maximum accuracy.



If there is seismic activity use NGI Seismic levelling feet after advice from NGI.



All load cells may be connected in one box



Matching sizes and designs are available with or without build-in weighing cell

Selecting the right load cell

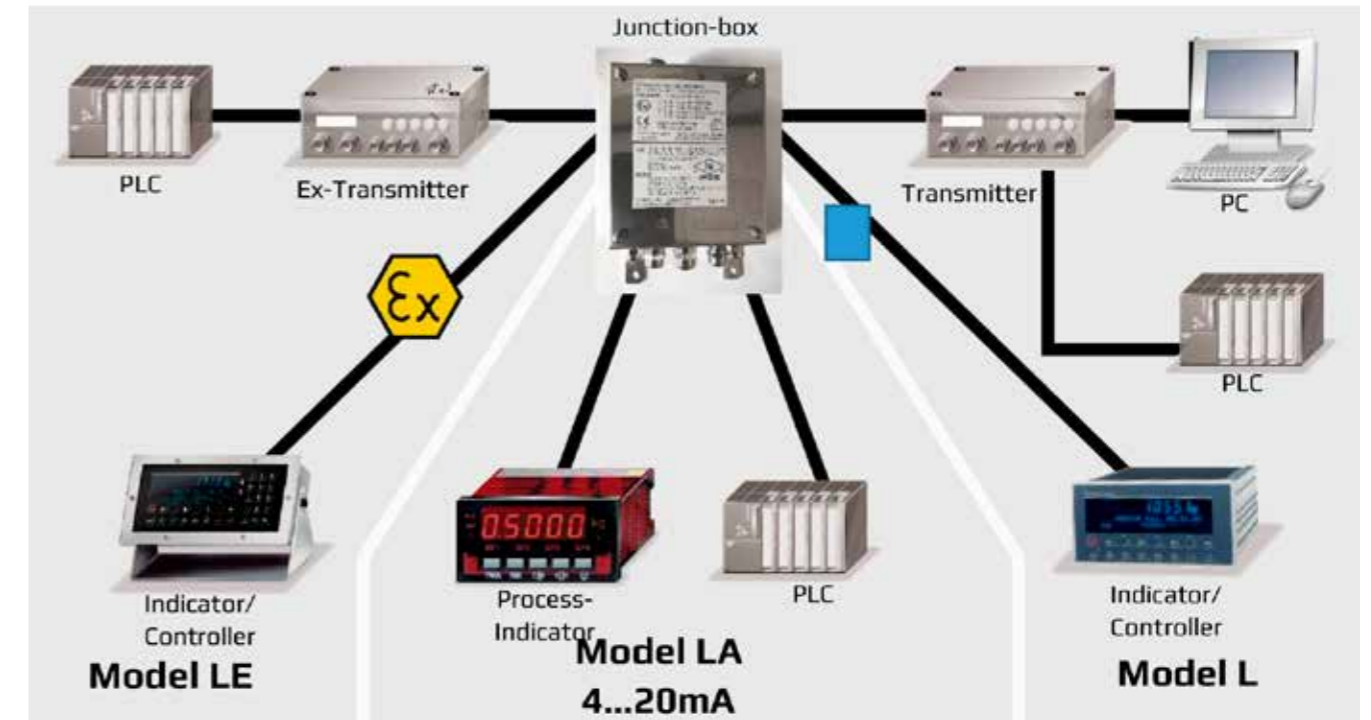
Weighing Levelling feet

LET MINEBEA CONFIGURE YOUR SYSTEM TO YOUR SPECIFIC NEEDS

The model LA provides 4...20 mA output for direct connection to process instrumentation or PLCs/DCS.
 The model L and LE featuring mV/V output are connected via our vast range of transmitters and indicators



Usually only one PanCakes required (three legs). If two PanCakes are used (4 legs) you still require only one input channel in your PLC or Process Indicator by simply switching the two outputs in parallel.



COMMON LEVEL CONTROL SYSTEMS IN COMPARISON

The performance of conventional level control instrumentation is rarely better than a glimpse into the tank or a blow with the hammer. Ultrasonic, Radar and many other systems suffer from a wide range of application related problems: rotating mixer blades, varying shape of material cones and vessels are the stumbling stones of one-dimensional height measurement instead of real content determination.

Specific material properties like particle size, foam, reflection properties, vapor and dust or material sticking to the walls and the equipment add to the complications. In comparison, only PanCake level-by-weight technology provides reliable results.

MEASUREMENT METHOD*	SOLIDS			LIQUIDS		
	FREE FLOWING GRANULAR	FINE POWDERS / DUST	COARSE / LUMPY	VOLATILE	FOAMING	VISCOUS / ADHESIVE
RADIOMETRY	●	●	●	●	●	●
RADAR	●	●	●	●	●	●
ULTRASONIC	●	●	●	●	●	●
HYDROSTATIC	●	●	●	●	●	●
DISPLACEMENT	●	●	●	●	●	●
PANCAKE*	●	●	●	●	●	●

● = Optimal / ● = under certain conditions / ● = not suitable

* Application notes and further information available upon request.

FAQ

Weighing Levelling feet

WHY USE LOAD CELLS?

This product is an Adjustable Hygienic Mounting kits with a built in load cell. It is the only weighing levelling feet in the world with built-in load cell for measuring of fluid level and weighing of products where the load cell is secured, guided and protected inside the foot. It has self-draining surfaces, sealed movable parts and the certified hygienic type has no exposed thread which secures absolute minimum cleaning and maximum product safety.



NGI's weighing levelling feet is a mounting kit adjustable in height and hygienic in design. That's the difference. All other features are the same as other mounting kits that also ads benefit to the weighing cell or sensor.

IS THE CELL PROTECTION AGAINST HOT WATER DURING WASHING?

The load cell is IP68, IEC 529, equivalent to NEMA 6 and can be submerged in water to a depth of 1.5 m for 10,000 hours. It is a hermetically sealed, welded stainless steel 1.4542 (DIN 17440) construction, filled with polyurethane and inert gas.

The foot covers the censor and protects it against fast heat changes and mechanical impacts. The sealing between spindle and foot is IP Code IP69K: DIN (Deutsches Institut für Normung) 40050-9: Straßenfahrzeuge; IP-Schutzarten; Schutz gegen Fremdkörper, Wasser und Berühren; Elektrische Ausrüstung [Road vehicles; degrees of protection (IP-code); protection against foreign objects, water and impact; electrical equipment]. May 1993. (an English translation of the German original is available from DIN).

WHAT IS THE VALUE FOR OVERLOADING OF SENSORS?

It is important first of all to select a load cell suitable for the loads. Use transport security lock if overload is a problem during transport. If the load cell has been exposed to a higher load than "Max. usable load" it is recommended to re-calibrate the equipment.

LOAD CELL		FOOT SIZE Ø80 AND Ø105 MM	FOOT SIZE Ø125 MM AND UP	FOOT SIZE Ø125 AND UP
SENSOR		PR 6211 D1	PR 625 LI LE	PR 625 LA LAC
WEIGHING RANGE		30 - 300 KG	500 KG - 16 TONS	500 KG - 16 TONS
MAX. USABLE LOAD	Upper limit for measurements	150%	150%	120%
MAX. LOAD WITHOUT DAMAGE	Highest limit without irreversible effects	500 kg	300%	300%

* Source: Sartorius Data sheet.

WHAT IF THE LOAD ON THE MACHINE FEET IS NOT EQUALLY DISTRIBUTED?

It is important that the load on the feet reflects the actual weight of the machine that stands on them, to get the most accurate measurement make sure that the load is uniformly distributed on all feet by adjusting the spindle (see installation). You can also measure the output between the green and gray wire to make sure they reflex the weight on top of them.

WHAT IF THE WEIGHT OF THE MACHINE IS NOT EQUALLY DISTRIBUTED?

Weighing feet on all feet will ensure that everything is measured but if only some feet are with weighing you can use software in the Transmitter, PLC, PC, Indicator, Controller, etc. to handle the load so that it gives the total weight anyway.

WHAT IF THERE IS HORIZONTAL LOAD INVOLVED?

The patented NGI design absorbs horizontal forces (No torque, side shear and temperature changes affect the measurement).

ELECTRIC PROTECTION AGAINST DAMAGE DUE TO OVERLOADING, ELECTRICAL SPIKES ETC.?

Earth connection is not a problem since the cell is protected inside the feet, nevertheless avoid sending current through the foot. Electrical interference may occur from other components, due to loose connections, varying voltage, potential differences, poor shielding, cheap electrical components and so on.

FAQ

Weighing Levelling feet

WHAT IS THE ACCEPTABLE ANGLE FOR LATERAL LOAD ON FOOT?

This is never a problem as it can be calibrated in the equipment the load cell is connected to, but follow recommended angles in the Catalog. When a force is transferred on to a surface at an angle it forms a force diagram, this may in theory lead to wrong measurements, but in praxis a 5-degree angle result in 0.38% less registered force (that still can be calibrated away).

WHAT IS LIFETIME OF THE FOOT?

NGI's machine feet lifetime is minimum 20 years. Global Weighing in Denmark has never changed a load cell due to service life. Load cells do not break they get substituted when the wire is cut by accident. Broken wires is the most common failure.

WHAT RECLAMATION PROCESS IN COMPANY NGI?

See TERMS OF SALE AND DELIVERY on website.

REFERENCE WHERE THEY ARE USED AND WHERE WE CAN SEE THEM?

This is a new product and we are waiting for permission to use references from customers.

WHAT IS WARRANTY TIME AND WHAT IS COVERED IN WARRANTY?

One year but see TERMS OF SALE AND DELIVERY on website.

ADDITIONAL EQUIPMENT FOR SENSORS OR WHAT ELECTRICAL EQUIPMENT IS REQUESTED?

The load cell sends out 2mV/V or 4-20mA depending on the choice of the cell, this signal can be handled with everything from a simple volt/amp meter or an amplifier to an advanced industrial PC. The solution is up to the designer and the needs of the end-user.

WHAT IS PROCESS FOR CALIBRATION OF SENSORS AFTER THEIR INSTALLATION ON MACHINE?

When we calibrate our test system consisting of 4 load cells connected to a display, we proceed as follows:

1. Install the machine feet so that the pressure is evenly distributed, which means about same torque on the spindle key for lifting. (Can be measured electrically on disconnected output wires)
2. Make sure that the spindle is correctly engaged and that the sleeve or counter nut is tightened.
3. Run Setup on the display as prescribed in the manual provided by the supplier and then you are ready to see the weight. This last point of the process is probably as diverse as the solutions are many.

DO NGI HELP AND TRAIN ENGINEERS AND TECHNICIANS IN USE OF WEIGHING CELLS?

NGI has over 25 years' experience in supporting machines and levelling them. We help our costumer to choose the right size, strength, adjustment and design whether it's a plastic foot or an extra strong seismic foot. We do the same with weighing, but we also know that when it comes to handling electrical signals we are no experts and that is why we teamed up with one of the world's leading companies Minebea. Minebea has local suppliers in all countries around the world and is always glad to help you chose the right equipment to handle the signals from the weighing cells.

WHAT TO DO WHEN THE MACHINE IS VIBRATING?

When a machine is vibrating - the weight on the display will vary. You can easily make the fluctuations disappear by middling input from the load cells with amplifiers or software in the Indicator/ Controller PLC or PC and in some cases you can just use the signal when the machine is standing still.

FAQ

Weighing Levelling feet

WHAT IS THE ACCURACY?

For the exact accuracy see the data sheet for the weighing cells. The most crucial factor for precise weighing is that the forces are transferred properly into the load cells. NGI's design combined with the special measuring element geometry in the load cell ensures that the transmission of forces into the load cell is always at the optimum level. This minimizes the disruptive effect on measurement accuracy whilst a high overload range, high repeatability and good linearity are maintained. That also means that the load cell is as accurate as stated in the data sheet (also below) and as external circumstances permit.

LOAD CELL		FOOT SIZE Ø80 AND Ø105 MM	FOOT SIZE Ø125 MM AND UP	FOOT SIZE Ø125 AND UP
SENSOR		PR 6211 D1	PR 625 LI LE	PR 625 LA LAC
WEIGHING RANGE		30 - 300 KG	500 KG - 16 TONS	500 KG - 16 TONS
ACCURACY CLASS	Deviation relative to temperature variations	0.05 %	0.5 %	0.5 %
RATED OUTPUT	Relative output at nominal load	2.0 mV/V	2.0 mV/V	16 mA
TOLERANCE ON RATED OUTPUT	Permissible deviation from rated output	< 0.25 % Cn	< 4 % Cn	< 4 % Cn
TOLERANCE ON ZERO SIGNAL	Load cell output signal under unloaded condition	< 0... 2 % Cn	< 4 % Cn	4 mA
REPEATABILITY ERROR	Max. change in load cell output for repeated loading	< 0.01 % Cn	< 0.1 % Cn	< 0.1 % Cn
CREEP, DURING 30 MIN	Max. change in load cell output under nominal load	< 0.03 % Cn	< 0.1 % Cn	< 0.1 % Cn
NON-LINEARITY	Max. deviation from best straight line through zero	< 0.05 % Cn	< 0.25 % Cn	< 0.25 % Cn
HYSTERESIS	Max. difference in load cell output when loading from zero to nominal load and unloading back to zero	< 0.05 % Cn	< 0.15 % Cn	< 0.15 % Cn
TEMPERATURE EFFECT (ON ZERO)	Max. change of S min/10 K D T over BT referred to Cn	< 0.042 % Cn/10 K	< 0.15 % Cn/10 K	< 0.15 % Cn/10 K
TEMPERATURE EFFECT (ON OUTPUT)	max. change of C/10 K D T over BT referred to Cn	< 0.03 % Cn/10 K	< 0.1 % Cn/10 K	< 0.1 % Cn/10 K

* Source: Minebea Data sheet.

L vs LA on Pancake® Load Cells

Weighing Levelling feet

DESCRIPTION

The Pancake® loadcell by Minebea Intec offers 2 different versions.

The **L-Version**, outputting a mV-Signal and the **LA-Version**, outputting a mA-Signal.

When more than 1 Weighing feet are used below a tank, or under multiple tanks which are installed in close vicinity, NGI recommends the use of the L-Version in conjunction with a transmitter.

The transmitter converts the signal from mV to mA.

The LA-Version already has a transmitter installed in the loadcell, a transmitter is therefore not necessary. However, the LA-Version costs significantly more and it only recommend when a single tank needs to be fitted with these feet.



Compact Compression Load Cell PR 6211



- Easy to install in limited space
- Full stainless steel construction
- Resistant against vibrations
- Hermetically welded sealed, IP68 (depth of 1.5m for 10,000 hrs.), IP 69K
- Ex-version not available
- Integrated overload protection for up to 300kg capacity
- Easy corner adjustment by matched D1 load cell outputs
- Wide temperature range
- Hermetically sealed, IP68 (depth of 1.5 m for 10,000 hrs.), IP69K
- W&M approval (acc. OIML R 60)

COMPACT COMPRESSION LOAD CELL PR 6211... D1

Compression load cells from 30 kg to 300 kg. Specially designed for tank and hopper weighing as well as basic dosing systems. For use in EX zones 1, 2, 20, 21, 22 and FM DIV 1.

DESCRIPTION

The PR 6211 range of load cells is specially designed for weighing silos, tanks and process vessels. The unique design principle facilitates a particularly compact construction and, as a result, the unit can be used even in restricted space conditions. The NGI installation counterbalance movements arising from mechanical or thermal expansion or contraction of the vessel or its supporting construction. In addition, the small construction has integrated overload protection of 500kg. At the same time, this range distinguishes itself above all for its unmatched reliability, robustness and stability, which enable trouble-free operation without adjustment, year after year. The hermetically sealed enclosure and special TPE cable allow the unit to be used even under extreme operating conditions in harsh production environments. The entire measurement chain can be calibrated without the use of a reference weight. Due to "matched output" technology, a damaged load cell can be exchanged without the need for re-calibration. This saves a tremendous amount of time during commissioning. An explosion-proof (Ex) version of this range of load cells is also available, as an option, for use in intrinsically safe environments.

LOAD CELL CONSTRUCTION

Hermetically sealed, welded stainless steel construction, filled with Polyurethane.

MATERIAL

1.4542 (DIN 17440) acc. to S604, S622 (B.S.)

PROTECTION

IP 68, IEC 529 (equivalent to NEMA 6). The load cell can be submerged in water to a depth of 1.5m for 10,000 hours, IP 69K Rugged, flexible, screened; TPE thermoplastic Elastomere; Sheath: grey; Diameter: 3mm, 4 x 0,13mm²; Length : 3m.

PanCake Level Sensor PR 6251



- Easy mounting
- Stainless steel construction
- Hermetically welded sealed, IP68 (depth of 1.5m for 10,000 hrs.), IP 69K
- Ex-version available (LE)
- Direct 4... 20 mA output (LA)
- Only 25/35 mm installation height

PanCake® Level Sensor PR 6251

The PR 6251 fill-level sensor is specially designed for basic weighing of silos and horizontal tanks. It meets all requirements for years of trouble-free operation without adjustment. For use in EX zones 1, 2, 20, 21, 22 and DIV

DESCRIPTION

The PR 6251 range of load cells is specially designed for weighing silos and horizontal tanks. The unique design principle ensures a very compact construction. As a result, existing applications can also be upgraded very easily. The range distinguishes itself above all for its unmatched reliability, robustness and stability, which enable trouble-free operation without adjustment, year after year.

PRODUCT PROFILE

Special measuring element geometry ensures that the transmission of force into the sensor is always at the optimum level. This minimizes the effect on measurement accuracy whilst a high overload range, high repeatability and good linearity are maintained. There is a particularly wide working temperature range attributable to special resistance strain gauge technology. The hermetically sealed enclosure and special TPE cable allow the unit to be used even under extreme operating conditions in harsh production environments. The entire measurement chain can be calibrated without the use of a reference weight. A version is also available with a direct output of 4-20 mA. This facilitates easy and cost-effective integration into an existing application. An explosion-proof (Ex) version of this range of load cells is also available, as an option, for use in intrinsically safe environments.

LOAD CELL CONSTRUCTION

Hermetically sealed, welded stainless steel construction, filled with Polyurethane.

MATERIAL

500 kg... 10 t 1.4021 (DIN 17440), 420 S 37 (B.S.); 16 t 1.4542 (DIN 17440), S 604/S 622 (B.S.), 17-4 PH (Int.)

PROTECTION

IP68, IEC 529, equivalent to NEMA 6. The load cell can be submerged in water to a depth of 1.5 m for 10,000 hours. Robust, flexible, screened
Sheath: Thermopl. Elastomere
Colour: grey (LE: blue, LA/LAC: green)
Diameter: 5 mm, wires 4 x 0.35 mm²
Length: 5 m

BENDING RADIUS

Fixed installation: ≥ 50mm; Flexible installation: ≥ 150mm

CERTIFICATE OF CONFORMITY

Approval: II 1G EEx ia IIC T6, II 1D IP65 85°C; Approval No.: PTB 02 ATEX 2059, TÜV 03 ATEX 2301x

Certified hygienic nuts - NDXH



Certified hygienic



Minimized cleaning time



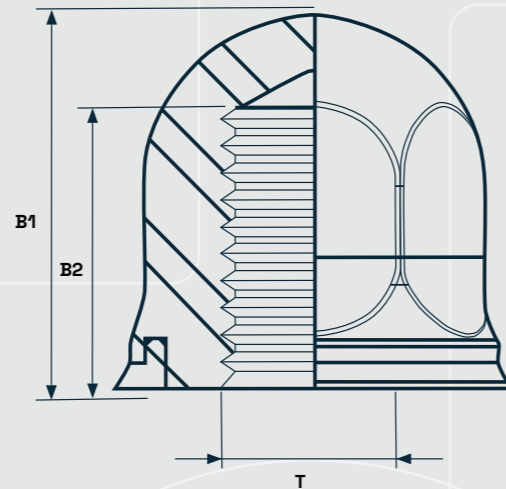
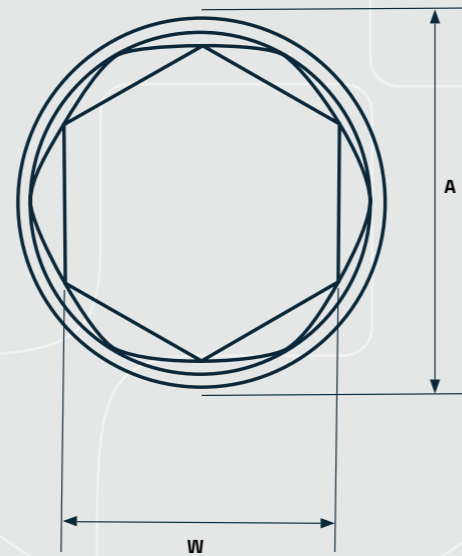
Minimized water usage

Certified hygienic nuts with blue NBR rubber seals is the right choice of nuts to be used on all machinery in all certified hygienic wash-down environments. The NBR rubber seal blocks out water and bacteria and also prevents a non-hygienic metal-to-metal assembly. Round-headed and self-draining surfaces with a maximal roughness of 0.8 µm Ra.

The design of the nuts does not deviate from the sizes of current standard nuts. Therefore, wrench sizes, thread heights etc. all remains the same making it very easy to upgrade and replace standard nuts. NGI's certified hygienic nuts are used for floor-mounting of certified hygienic levelling feet in order to ensure compliance with current legislation towards hygienic design.

The NDXH is used when the length of exposed bolt thread can vary.

- Certified in accordance with 3-A (RPSCQC)
- Certified in accordance with EHEDG hygienic standard TYPE EL - CLASS I AUX
- Minimizes cleaning time and water consumption
- Surfaces with a maximal roughness of 0,8 µm Ra
- Available in sizes M6-M24




Certified hygienic nuts - NDXH



CERTIFIED HYGIENIC NUTS



THREAD T	TIGHTENING TORQUE [Nm]	TOTAL HEIGHT B1 [mm]	THREAD LENGTH B2 [mm]	 W [mm]	OUTER DIAMETER A [mm]	ITEM CODE
M06	8,6	13,6	10	10	12,8	NDXH-M06
M08	21,0	16,6	12	13	17,3	NDXH-M08
M10	38,0	19,9	15	16	21,1	NDXH-M10
M12	68,0	24,5	18	18	25,8	NDXH-M12
M16	122,0	31	23	24	31,9	NDXH-M16
M20	307,0	37	27	30	38,9	NDXH-M20
M24	507,0	46	34	36	46,1	NDXH-M24

Certified hygienic nuts - NLXH



Certified hygienic



Minimized cleaning time



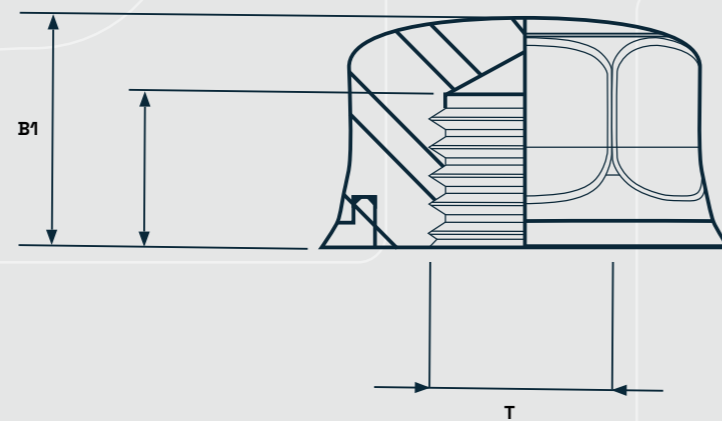
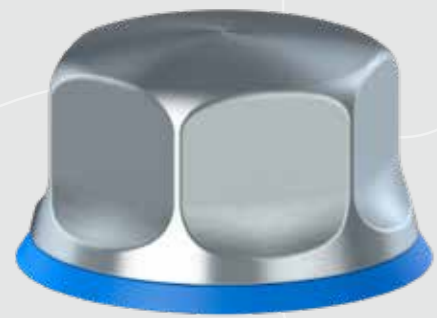
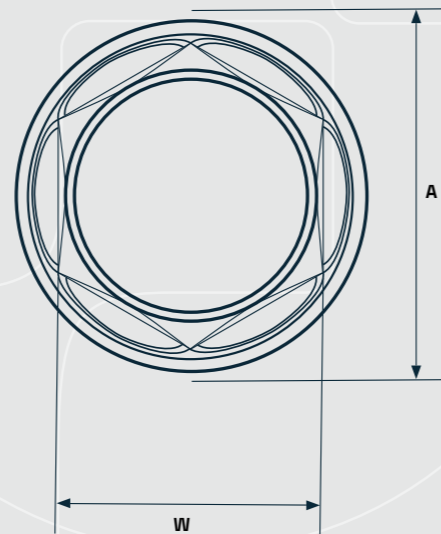
Minimized water usage

Certified hygienic nuts with blue NBR rubber seals is the right choice of nuts to be used on all machinery in all certified hygienic wash-down environments. The NBR rubber seal blocks out water and bacteria and also prevents a non-hygienic metal-to-metal assembly. Round-headed and self-draining surfaces with a maximal roughness of 0.8 µm Ra.

The design of the nuts does not deviate from the sizes of current standard nuts. Therefore, wrench sizes, thread heights etc. all remains the same making it very easy to upgrade and replace standard nuts. NGI's certified hygienic nuts are used for floor-mounting of certified hygienic levelling feet in order to ensure compliance with current legislation towards hygienic design.

The NLXH is used when the length of exposed bolt thread is adapted to the nut's B2 measurement.

- Certified in accordance with 3-A (RPSCQC)
- Certified in accordance with EHEDG hygienic standard TYPE EL - CLASS I AUX
- Minimizes cleaning time and water consumption
- Surfaces with a maximal roughness of 0,8 µm Ra
- Available in sizes M5-M24



Certified hygienic nuts - NLXH

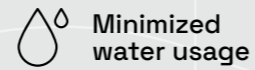
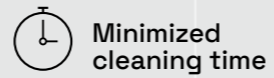


CERTIFIED HYGIENIC NUTS



THREAD T	TIGHTENING TORQUE [Nm]	TOTAL HEIGHT B1 [mm]	THREAD LENGTH B2 [mm]	W [mm]	OUTER DIAMETER A [mm]	ITEM CODE
M05	4,4	6,5	4,5	8	11,5	NLXH-M05
M06	8,6	8	5,5	10	12,8	NLXH-M06
M08	21,0	10	6,5	13	17,3	NLXH-M08
M10	38,0	12	8	16	21,1	NLXH-M10
M12	68,0	14	9	18	25,8	NLXH-M12
M16	122,0	17	10,5	24	31,9	NLXH-M16
M20	307,0	20	13	30	38,9	NLXH-M20
M24	507,0	22	14	36	46,1	NLXH-M24

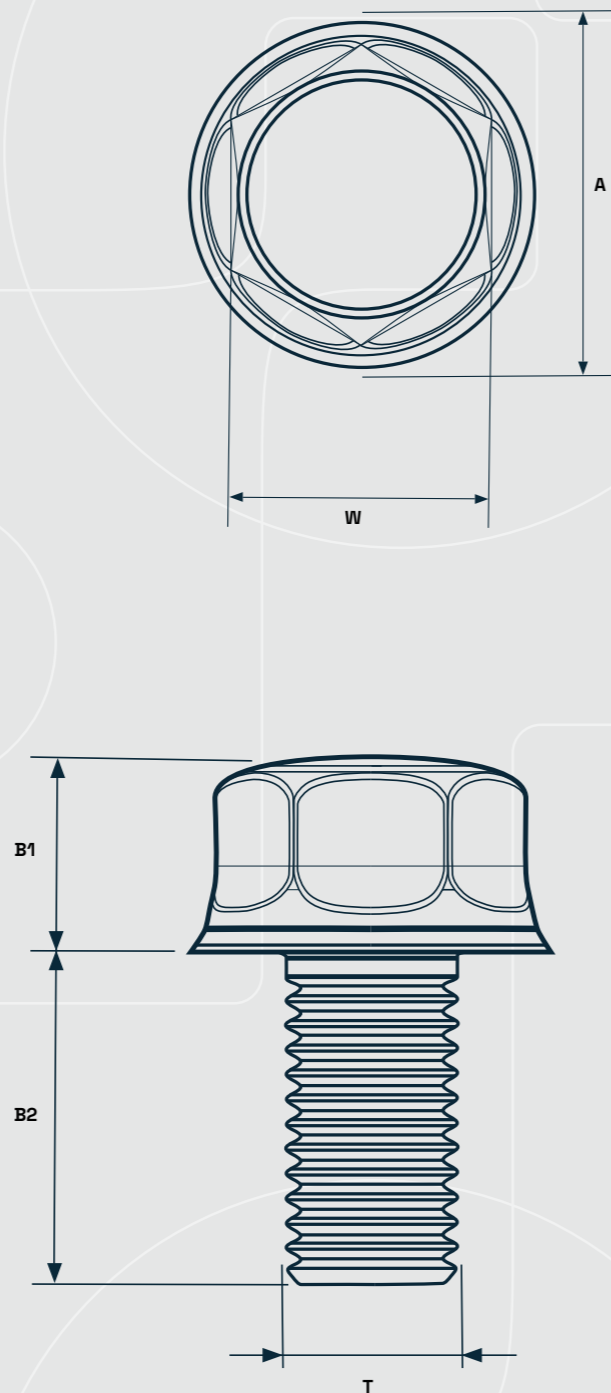
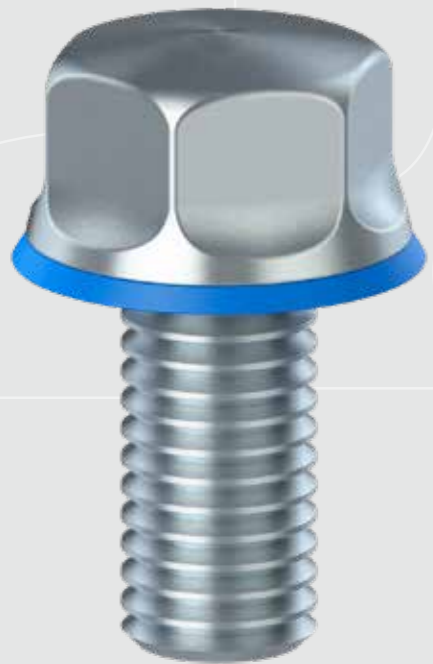
Certified hygienic bolts - BXH



NGI is now able to offer certified hygienic bolts with blue NBR rubber seals. The NBR rubber seal blocks out water and bacteria and also prevents a non-hygienic metal-to-metal assembly.

The bolts have self-draining surfaces with a maximal roughness of 0.8 µm Ra. The design of the bolts does not deviate from the sizes of current standard bolts. Therefore, wrench sizes, thread heights etc. all remains the same making it very easy to upgrade and replace standard bolts. This is the right choice of bolts to be used on all machinery in all certified hygienic wash-down environments.

- Certified in accordance with 3-A (RPSCQC)
- Certified in accordance with EHEDG hygienic standard TYPE EL - CLASS I AUX
- Minimizes cleaning time and water consumption
- Surfaces with a maximal roughness of 0,8 µm Ra
- Available in sizes M5-M24



Certified hygienic bolts - BXH



CERTIFIED HYGIENIC BOLTS



THREAD T	TIGHTENING TORQUE [Nm]	HEAD HEIGHT B1 [mm]	THREAD LENGTH B2 [mm]	W [mm]	OUTER DIAMETER A [mm]	ITEM CODE
M05	4,4	6,5	10	8	11,5	BXH-M05-10
M05	4,4	6,5	16	8	11,5	BXH-M05-16
M05	4,4	6,5	20	8	11,5	BXH-M05-20
M06	8,6	8	12	10	12,8	BXH-M06-12
M06	8,6	8	16	10	12,8	BXH-M06-16
M06	8,6	8	20	10	12,8	BXH-M06-20
M06	8,6	8	25	10	12,8	BXH-M06-25
M06	8,6	8	30	10	12,8	BXH-M06-30
M08	21,0	10	16	13	17,3	BXH-M08-16
M08	21,0	10	20	13	17,3	BXH-M08-20
M08	21,0	10	25	13	17,3	BXH-M08-25
M08	21,0	10	30	13	17,3	BXH-M08-30
M08	21,0	10	40	13	17,3	BXH-M08-40
M10	38,0	12	20	16	21,1	BXH-M10-20
M10	38,0	12	25	16	21,1	BXH-M10-25
M10	38,0	12	30	16	21,1	BXH-M10-30
M10	38,0	12	35	16	21,1	BXH-M10-35
M10	38,0	12	40	16	21,1	BXH-M10-40
M10	38,0	12	45	16	21,1	BXH-M10-45
M12	68,0	14	20	18	25,8	BXH-M12-20
M12	68,0	14	25	18	25,8	BXH-M12-25
M12	68,0	14	30	18	25,8	BXH-M12-30
M12	68,0	14	35	18	25,8	BXH-M12-35
M12	68,0	14	40	18	25,8	BXH-M12-40
M16	122,0	17	35	24	31,9	BXH-M16-35
M16	122,0	17	40	24	31,9	BXH-M16-40
M20	307,0	20	40	30	38,9	BXH-M20-40
M16	122,0	17	XX *)	24	31,9	BXH-M16-XX
M20	307,0	20	XX *)	30	38,9	BXH-M20-XX
M24	507,0	22	XX *)	36	46,1	BXH-M24-XX



*) M16-M24 available xx length upon request.

UV lighting used to expose bacteria

- THE CERTIFIED HYGIENIC LEVELLING FOOT IS CLEAN
- THE SPINDLE OR THE FULLY-THREADED LEVELLING FOOT IS INFECTED WITH BACTERIA
- FULLY-THREADED VS HYGIENIC - IT TAKES 28% MORE RESSOURCES TO REACH THE SAME LEVEL OF CLEANABILITY ON A FULLY-THREADED FOOT
- RESSOURCES COULD BE TIME, WATER, MONEY, DETERGENTS, ETC.

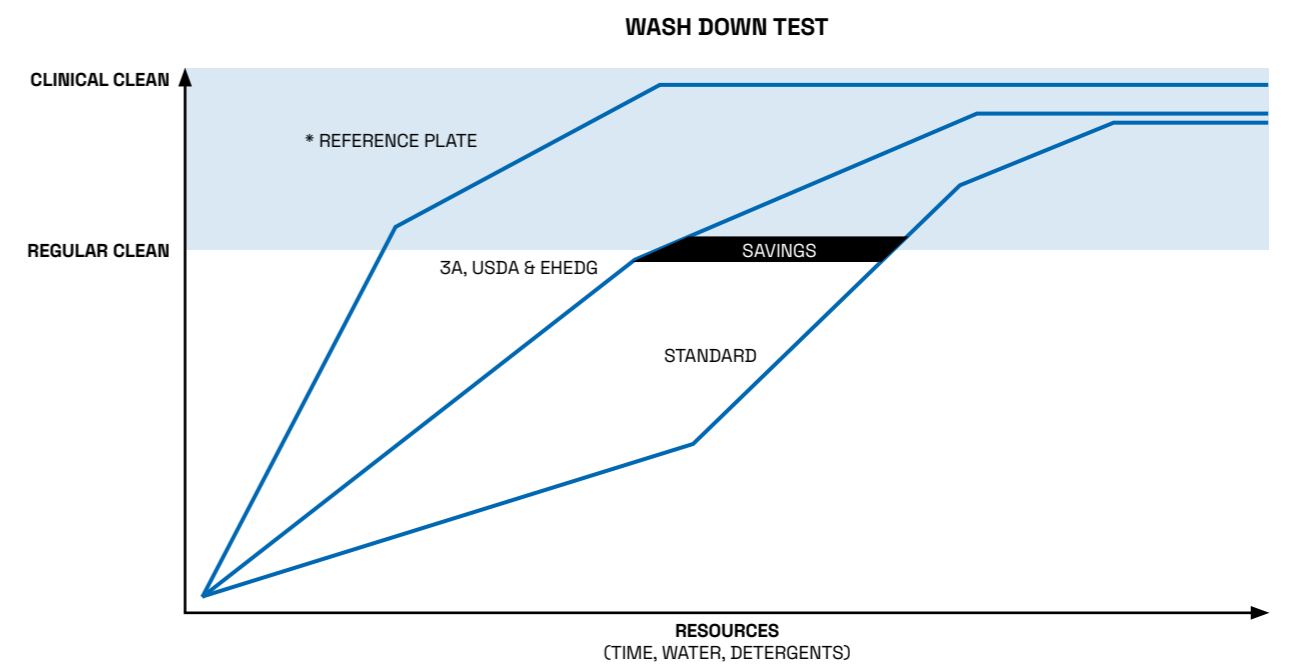
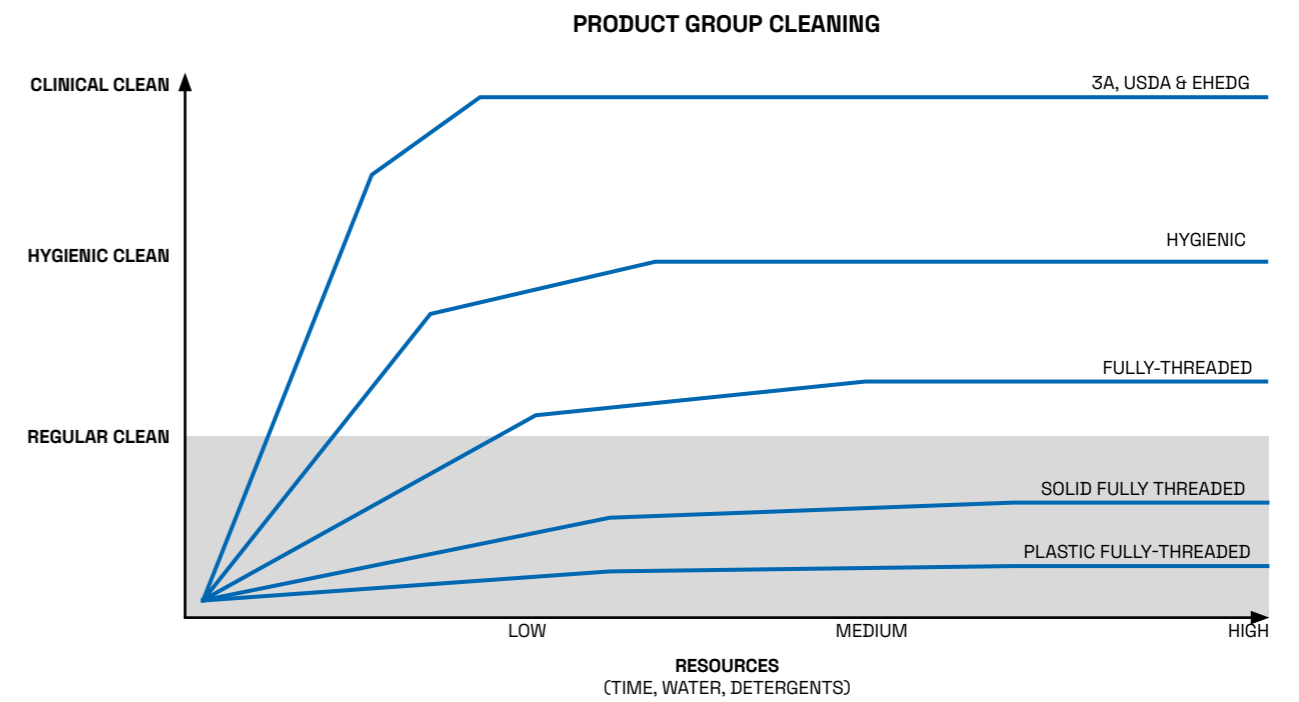
ESTIMATED SAVINGS
28%



Technical specifications Cleaning Instructions

The resources required to clean NGI's levelling feet depends largely on the design of the levelling foot and the environment in which the levelling foot is used.

It is possible to use all known detergents to clean the levelling feet as long as the instructions provided by the supplier is complied with.

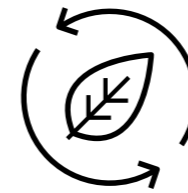


* Reference plate = Stainless steel plate with surface less than Ra 0,8

Product Innovation

Innovating for tomorrow
Investing in research & development

NGI Innovation - the Sustainable Way



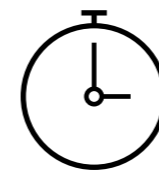
Stainless steel - Recyclable materials

80% of our products can be recycled. We are working on initiatives to make this percentage even higher.



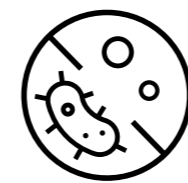
Hygienic seals - Resource saving

Permit easy cleaning and reduce water consumption.



High Quality - Longer lifetime

Our products are very high quality which means they have a longer lifetime than corresponding components.



Hygienic design - Protecting consumers

We make sure that the components do not constitute a hygiene risk through innovative and uncompromising design.

Maximum **12-HOURS RESPONSE TIME** to customer enquiries
QUICK ORDER CONFIRMATION (within 24 hours)
 Incoming orders packed and **SHIPPED THE SAME DAY**

World-wide delivery **1-6 DAYS**
 Optional **EXPRESS DELIVERY** (next day)
TRACK & TRACE on all shipments

WHY NGI?

1-4 DAYS
DELIVERY IN
SCANDINAVIA

4-6 DAYS
DELIVERY IN REST
OF WORLD

NO MINIMUM ORDER QUANTITIES
 No levelling **PROJECT IS IMPOSSIBLE** for NGI

NGI offers **ALL TYPES OF HIGH-QUALITY LEVELLING FEET** at competitive prices
 NGI is the **ONLY MANUFACTURER IN THE WORLD** of certified hygienic levelling feet
 Country-specific key account consultants with **LOCAL LANGUAGE SKILLS**

