Weighing System Load Stand II

Application/Specified usage

- Direct vessel-to-foundation structural member for dependable and accurate continuous inventory monitoring and control
- Level control through dynamic, continuous and accurate weight measurement
- Standard load range from 11 to 450 tons (25,000 to 1,000,000 lbs) per support point
- Thanks to the average measuring accuracy of 0.2 %, an incredible value for this load range, even smallest weight variations are detected

Application Examples

- Storage containers for bulk material or liquids in all types of industries
- Indoor or outdoor containers
- Also possible for skirted silos

Features

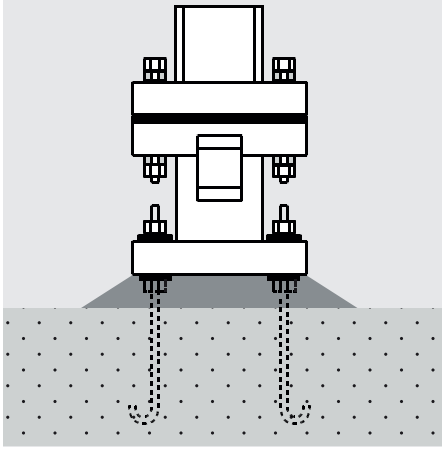
- The solid, monolithic, and firmly bolted assembly ensures stability, tilt resistance and high-precision measurement
  - even with funnel, rat-hole, or bridge formation in the bulk material,
  - also under uneven material loading,
  - under wind load in the outdoor area,
  - without the effect of thermally induced expansion of silo or contents,
  - without effect of density or moisture changes
- The four replaceable mounted strain gauge sensors of the Microcell® type have a fatigue life of > 20 million cycles and 200% overload protection.
  In case of damage, they can be easily field- replaced. This gives the Load Stand II a virtually unlimited service life.
- Half-Bridge Strain Gauge Technology with high signal output for cable length up to 600 m
- Weight loading approval can even meet Seismic applications

Communication

12...30 V DC

Load Stand II

Typical Load Stand II set-up



Specification		
Technical Features	Excitation Voltage - Operating Range	12...30 V DC Half-Bridge
	Maximum Current	15.52 mA @ 12 VDC excitation
	Recommended Supply Voltage	12 V DC
	Functional Integrity	2 x rated load (compression)
	Humidity	100 % Non-condensing
	Protection Class	Designed for outdoor applications
	Materials	Pedestal: Carbon Steel 1.0044 (ASTM A53 GR) Flanges: Carbon Steel 1.0459 (ASTM A36) Finish: Polyester Powder Coating
	Sensor	4 x Microcell II
	Junction Box	Plastic or Stainless Steel
Measurement Accuracy	Non-Linearity/Hysteresis Combined	0.2 % of rated load
	Repeatability	0.2 % of rated load
	Rated Output	320 mV DC @ 12 V DC ±1 %
	No Load Output	±50 mV
Temperature ranges	Ambient Temperature Range	Standard: -18...38 °C (0...100 °F) Mid: 10...66 °C (50...150 °F)
	Operational Temperature Range	-34...66 °C (-30...150 °F) (outside this range the accuracy may be reduced)
	Storage Temperature Range	-34...66 °C (-30...150 °F)

Transport/Storage

- Do not store outside
- Store in an area that is dry and dust-free
- Do not expose to corrosive media
- Protect against solar radiation
- Avoid mechanical shock and vibration
- Storage temperature -34...66 °C (-30...150 °F)
- Relative humidity max. 98 %

Cleaning/Maintenance

- When using a pressure washer, do not point the nozzle directly at the electrical connections.

Reshipment

- Sensors shall be clean and free of media or heat-conductive paste and must not be contaminated with dangerous media!
- Use suitable transport packaging only to avoid damage of the equipment!

Conventional usage

- Not suitable for applications in safety-relevant system parts (SIL).

Standards and guidelines

- Compliance with the applicable regulations and directives is mandatory.

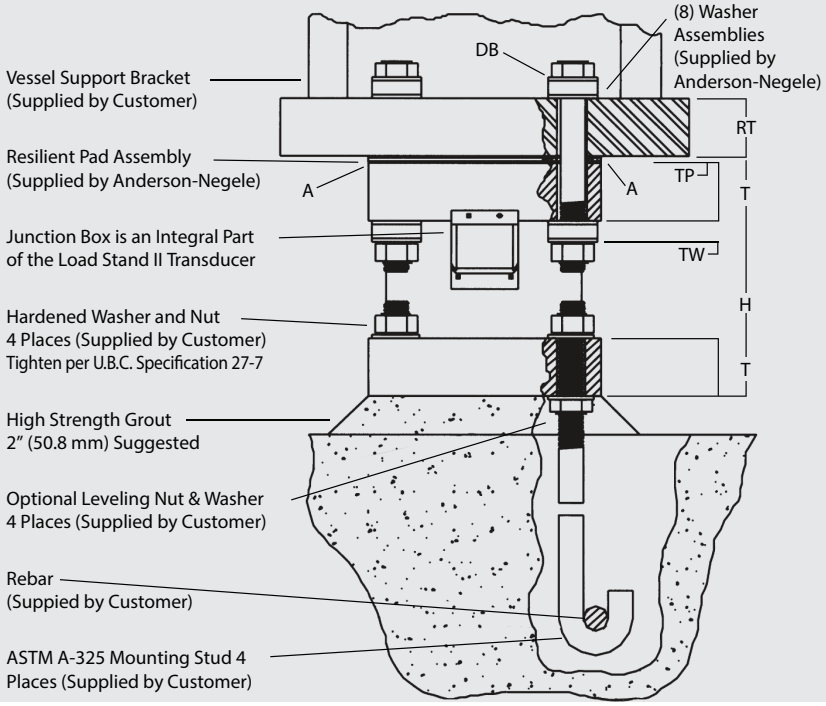
Note on CE

- Applicable directives:
  Electromagnetic Compatibility Directive 2014/30/EU
- Compliance with the applicable EU directives is identified by the CE label on the product.
- The operating company is responsible for complying with the guidelines applicable to the entire installation.

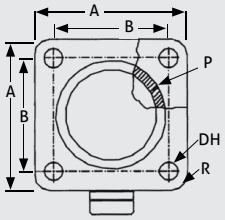
Disposal

- Electrical devices should not be disposed of with household trash. They must be recycled in accordance with national laws and regulations.
- Take the device directly to a specialized recycling company and do not use municipal collection points.

Load Stand II Installation Set-up



Load Stand II Dimensions



Legend

A	Outside Dimension
B	Hole Dimension
DB	Bolt Size
DH	Hole Diameter
DW	Washer Outside Diameter
H	Installed Height
P	Pipe Size
R	Corner Radius
RT	Recommended Thickness
T	Plate Thickness
TP	Pad Thickness
TW	Washer Thickness

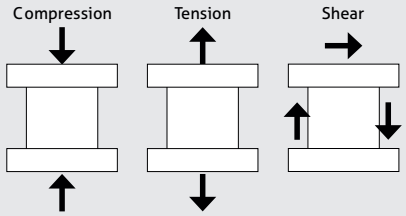
Dimensions

Load Rating lb (kg)	P	A in (mm)	B in (mm)	ØDB[1] in (mm)	DH in (mm)	R in (mm)	H in (mm)	T in (mm)	TP in (mm)	DW in (mm)	TW in (mm)	Weight lb (kg)	RT in (mm)	XX[2] in (mm)
25,000 (11,339)	3.5 SCH 40	6.25 (158.7)	4.25 (107.9)	.625 (15.9)	.875 (22.2)	1.00 (25.4)	7.37 (187.2)	1.25 (31.7)	.37 (9.5)	1.30 (33.0)	.44 (11.2)	31 (14.1)	1.25 (31.7)	.187 (4.7)
50,000 22,679)	4 SCH 120	7.00 (177.8)	4.75 (120.6)	.75 (19.0)	1.00 (25.4)	1.12 (28.4)	9.37 (238)	1.50 (38.1)	.37 (9.5)	1.48 (37.5)	.65 (16.5)	50 (22.7)	1.50 (38.1)	.187 (4.7)
75,000 (34,020)	6 SCH 120	9.80 (248.9)	6.75 (171.4)	1.00 (25.4)	1.25 (31.7)	1.50 (38.1)	12.37 (314.2)	2.00 (50.8)	.37 (9.5)	2.00 (50.8)	.77 (19.6)	127 (57.7)	2.00 (44.5)	.187 (4.7)
100,000 (45,359)	6 SCH 120	9.80 (248.9)	6.75 (171.4)	1.00 (25.4)	1.25 (31.7)	1.50 (38.1)	12.37 (314.2)	2.00 (50.8)	.37 (9.5)	2.00 (50.8)	.77 (19.6)	128 (58.1)	2.00 (50.8)	.187 (4.7)
150,000 (68,040)	8 SCH 120	12.20 (312.4)	8.50 (215.9)	1.25 (31.7)	1.50 (38.1)	1.90 (48.2)	15.37 (390.4)	2.50 (63.5)	.37 (9.5)	2.50 (63.5)	1.03 (26.2)	154 (69.9)	2.50 (50.8)	.187 (4.7)
200,000 (90,718)	8 SCH 160	12.20 (312.4)	8.50 (215.9)	1.25 (31.7)	1.50 (38.1)	1.90 (48.2)	15.37 (390.4)	2.50 (63.5)	.37 (9.5)	2.50 (63.5)	1.03 (26.2)	262 (119.0)	2.50 (63.5)	.187 (4.7)
300,000 (136,077)	12 SCH 140	16.50 (419.1)	12.40 (314.9)	1.75 (44.4)	2.00 (50.8)	1.68 (42.6)	22.00 (558.8)	3.00 (76.2)	.75 (19.1)	3.37 (85.5)	1.05 (26.7)	619 (281.0)	3.00 (76.2)	.187 (4.7)
400,000 (181,440)	14 SCH 140	17.50 (444.5)	13.50 (342.9)	2.00 (50.8)	2.25 (57.2)	2.00 (50.8)	22.75 (577.8)	3.00 (76.2)	.75 (19.1)	3.75 (95.3)	1.05 (26.7)	719 (326.5)	3.00 (76.2)	.187 (4.7)
500,000 (226,796)	16 SCH 140	18.50 (469.9)	14.75 (374.6)	2.00 (50.8)	2.25 (57.2)	1.87 (47.4)	24.50 (622.3)	3.50 (88.9)	.75 (19.1)	3.75 (95.3)	1.05 (26.7)	758 (344.1)	3.50 (88.9)	.187 (4.7)
750,000 (340,194)	20 SCH 140	24.00 (609.6)	19.00 (482.6)	2.50 (63.5)	2.75 (69.8)	2.50 (63.5)	30.00 (76.2)	3.50 (88.9)	.75 (19.1)	4.50 (114.3)	1.05 (26.7)	1,725 (783.2)	3.50 (88.9)	.187 (4.7)
1,000,000 (453,592)	24 SCH 120	27.00 (685.8)	21.50 (546.1)	3.00 (76.2)	3.25 (82.5)	2.75 (69.8)	35.50 (901.7)	4.00 (101.6)	.75 (19.1)	5.50 (139.7)	1.05 (26.7)	2,525 (1,146.4)	4.00 (101.6)	.187 (4.7)

1. Bolts: ASTMA - 325, bolt length determined and supplied by the customer.
2. XX = Maximum thermal deformation allowed. Computed as shown here: X = DH - DB - 1/16" (1.6 mm).

Maximum Frame Loads allowed per AISC 14th Ed.

Model No.	Load Rating	Compression	Tension	Shear
S2-25K	25,000 lbs 11,338 kg	55,810 lbs 25,310 kg	33,068 lbs 14,999 kg	9,165 lbs 4,156 kg
S2-50K	50,000 lbs 22,676 kg	116,138 lbs 52,670 kg	47,618 lbs 21,599 kg	16,227 lbs 7,359 kg
S2-75K	75,000 lbs 34,014 kg	222,838 lbs 101,060 kg	84,654 lbs 38,398 kg	35,102 lbs 15,919 kg
S2-100K	100,000 lbs 45,351 kg	222,838 lbs 101,060 kg	84,654 lbs 38,398 kg	35,102 lbs 15,919 kg
S2-150K	150,000 lbs 68,027 kg	371,511 lbs 168,486 kg	115,737 lbs 52,497 kg	52,468 lbs 23,795 kg
S2-200K	200,000 lbs 90,703 kg	457,519 lbs 207,491 kg	115,737 lbs 52,497 kg	52,468 lbs 23,795 kg
S2-300K	300,000 lbs 136,054 kg	856,097 lbs 388,253 kg	226,845 lbs 102,895 kg	87,952 lbs 39,888 kg
S2-400K	400,000 lbs 181,406 kg	1,043,947 lbs 473,445 kg	258,683 lbs 117,316 kg	113,174 lbs 51,326 kg
S2-500K	500,000 lbs 226,757 kg	1,372,421 lbs 622,413 kg	296,288 lbs 134,394 kg	112,419 lbs 50,984 kg
S2-750K	750,000 lbs 340,136 kg	2,093,619 lbs 949,487 kg	352,096 lbs 159,681 kg	169,760 lbs 76,989 kg
S2-001M	1,000,000 lbs 453,515 kg	2,636,143 lbs 1,195,530 kg	459,880 lbs 208,562 kg	194,012 lbs 87,987 kg



The loads listed above are the maximum ASD loads for the condition listed and are based on the Steel Construction Manual, 14th Edition, of the AISC (American Institute of Steel Construction). Shear and tension values assume mounting hardware is A325 minimum (provided by customer). Higher strength hardware can be used if desired. All load stands must be selected to resist the combined loading effects for the specific jobsite and building code requirements.

Note:

Please contact the Anderson-Negele Technical Support for the determination of the correct Load Stand II type.

Please refer to the Load Stand II Installation & Operation Manual for Ultimate Frame Loads (Material breaking loads).

Order Code

S2 Load Stand II

Load rated

25K	11.340 kg (25.000 lb)
50K	22.680 kg (50.000 lb)
75K	34.020 kg (75.000 lb)
100K	45.360 kg (100.000 lb)
150K	68.038 kg (150.000 lb)
200K	90.720 kg (200.000 lb)
300K	136.100 kg (300.000 lb)
400K	181.437 kg (400.000 lb)
500K	226.800 kg (500.000 lb)
750K	340.200 kg (750.000 lb)
001M	453.600 kg (1.000.000 lb)

Junction Box

1	Plastic, 1-hole entry ea 3/4"
2	Plastic, 2-hole entry ea PG 13.5
S	Stainless Steel, 1-hole entry
T	Stainless Steel, 2-hole entry

Operating temperature

X	Standard Temperature, -18 °C...38 °C (0 °F...100 °F)
M	Mid-Range Temperature, 10 °C...66 °C (50 °F...150 °F)

S2 25K 1 M

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