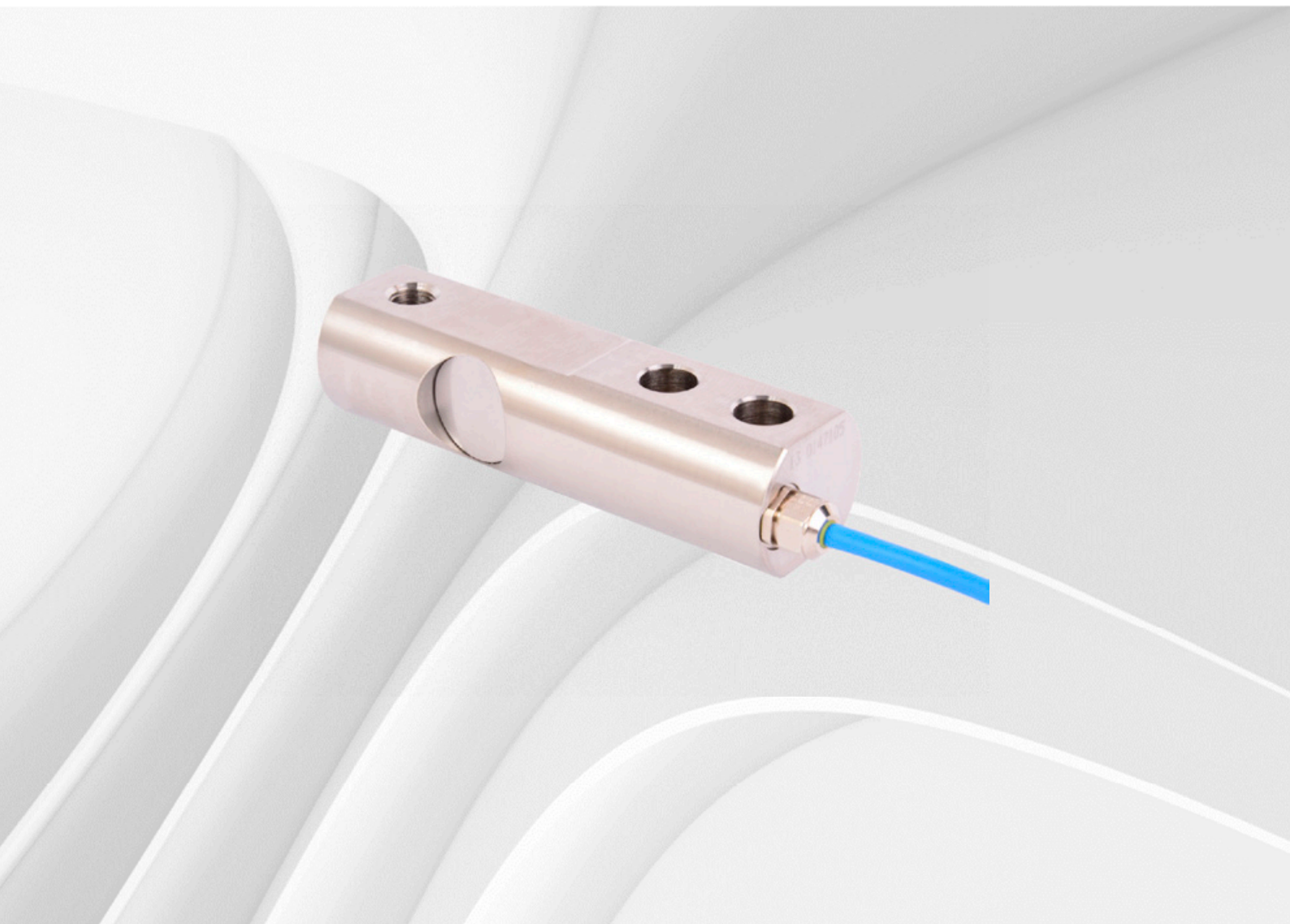


ABB MEASUREMENT & ANALYTICS | DATA SHEET

# 9QGPS5510

Shear beam load cell



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## Measurement made easy

Universal load cell combining sturdy design, high accuracy and low cost.

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**Stainless steel**

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**IP rating IP 67**

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**Sturdy design**

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**Complies with OIML / R60 up to 3000 d for scales in class III (EN 45501)**

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### Mounting kits available with following properties

- Stabilization without tension rods
- Compensation of thermal dilatations and of default of parallelism

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### Available options (non exhaustive list)

- ATEX intrinsic safety
- Amplified output (V or mA) and digital output signal (RS-232C, RS-485, USB)
- Dual Wheatstone bridge
- IP rating IP 68
- High service temperature -50 to 180 °C (-58 to 356 °F)

## Applications

The load cell 9QGPS5510 is perfectly designed to the following applications:

- Low profile scales, pallet, platform scales
- Packaging, batching and filling machines
- Reactors, tanks, vessel or hoppers weighing

## Capacities

0.5 - (0.75) - 1 - 1.5 - 2 t

## Explosion protection (Option)

ATEX intrinsic safety

- Ex II 1GD Ex ia IIC T6 or T4 Ga Ex ia IIIC T80°C Da

## Specification

	A3	C1	0.03 %	C3
Accuracy class	3000 d*	3000 d OIML	3000 d <sup>1</sup>	3000 d OIML
Combined error (nonlinearity and hysteresis)	< ± 0.03 % F.S.	< ± 0.05 % F.S.	< ± 0.03 % F.S.	< ± 0.02 % F.S.
Repeatability error	< ± 0.015 % F.S.	< ± 0.02 % F.S.	< ± 0.015 % F.S.	< ± 0.01 % F.S.
Creep error over 30 min.	< ± 0.03 % F.S.	< ± 0.04 % F.S.	< ± 0.025 % F.S.	< ± 0.02 % F.S.
Sensitivity tolerance	< ± 0.2 % F.S.	< ± 0.3 % F.S.	< ± 0.2 % F.S.	< ± 0.1 % F.S.
Temperature coefficient of the sensitivity	< ± 0.1 % F.S./10 °C	< ± 0.02 % F.S./10 °C	< ± 0.015 % F.S./10 °C	< ± 0.009 % F.S./10 °C
Temperature coefficient of zero signal	< ± 0.05 % F.S./10 °C	< ± 0.03 % F.S./10 °C	< ± 0.023 % F.S./10 °C	< ± 0.013 % F.S./10 °C
Reference temperature	23 °C (73.4 °F)	23 °C (73.4 °F)	23 °C (73.4 °F)	23 °C (73.4 °F)
<b>Temperature data</b>				
Nominal temperature range	-10 to 45 °C (14 to 113 °F)	-10 to 45 °C (14 to 113 °F)	-10 to 45 °C (14 ... 113 °F)	-10 to 45 °C (14 to 113 °F)
Service temperature range	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 to 158 °F)	-25 to 70 °C (-13 ... 158 °F)	-25 to 70 °C (-13 to 158 °F)
Storage temperature range	-50 to 85 °C (-58 to 185 °F)	-50 to 85 °C (-58 to 185 °F)	-50 to 85 °C (-58 ... 185 °F)	-50 to 85 °C (-58 to 185 °F)
<b>Electrical data</b>				
Input resistance	352 Ω ± 2 Ω	352 Ω ± 2 Ω	352 Ω ± 2 Ω	352 Ω ± 2 Ω
Output resistance	352 Ω ± 2 Ω	352 Ω ± 2 Ω	352 Ω ± 2 Ω	352 Ω ± 2 Ω
Insulation resistance (50 V)	> 5000 MΩ	> 5000 MΩ	> 5000 MΩ	> 5000 MΩ
Reference excitation voltage	10 V	10 V	10 V	10 V
Nominal range of excitation voltage	3 to 12 V	3 to 12 V	3 to 12 V	3 to 12 V
Nominal sensitivity	2 mV/V	2 mV/V	2 mV/V	2 mV/V
<b>Load limits</b>				
Safe load limit	150 % F.S.	150 % F.S.	150 % F.S.	150 % F.S.
Breaking load	> 300 % F.S.	> 300 % F.S.	> 300 % F.S.	> 300 % F.S.
Static lateral force limit	100 % F.S.	100 % F.S.	100 % F.S.	100 % F.S.
Permissible dynamic loading	50 % F.S.	50 % F.S.	50 % F.S.	50 % F.S.

Table 1: (F.S.: full scale)

\* Except thermal drifts

Specifications subject to change without notice

## Dimensions

### Load cell model 9QGPS5510

All specified dimensions are in mm (in.)

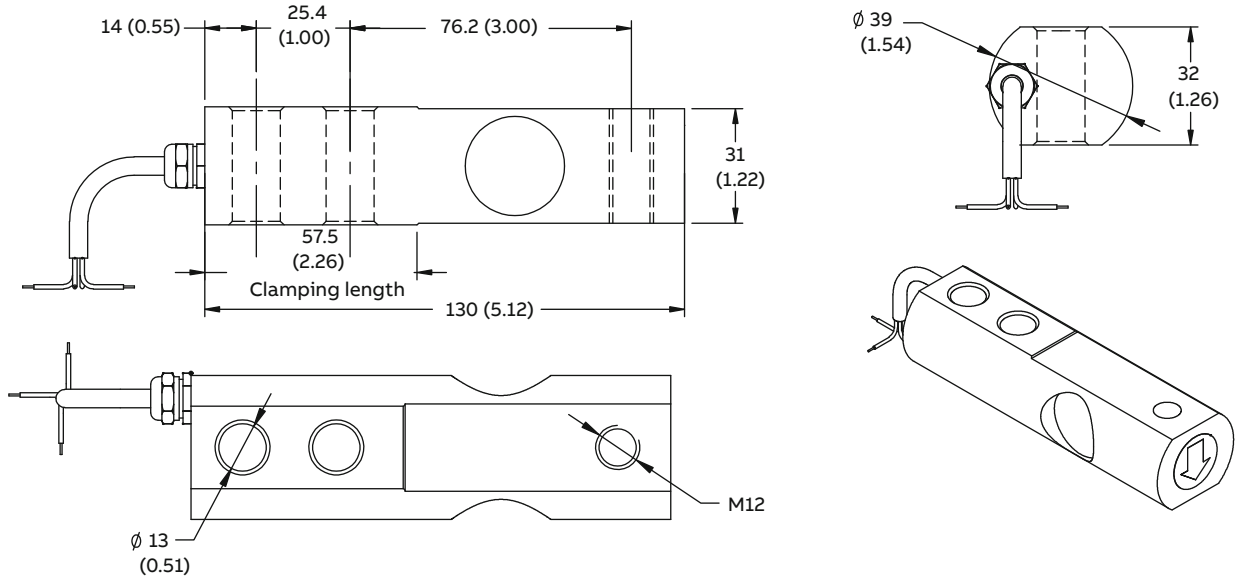


Figure 1: Dimensions

Ref. Item	Capacities t	Weight kg (lb)
5510-A	0.5 to 2	0.95 (2.10)

Table 2: Other capacities and dimensions on request

## Accessories

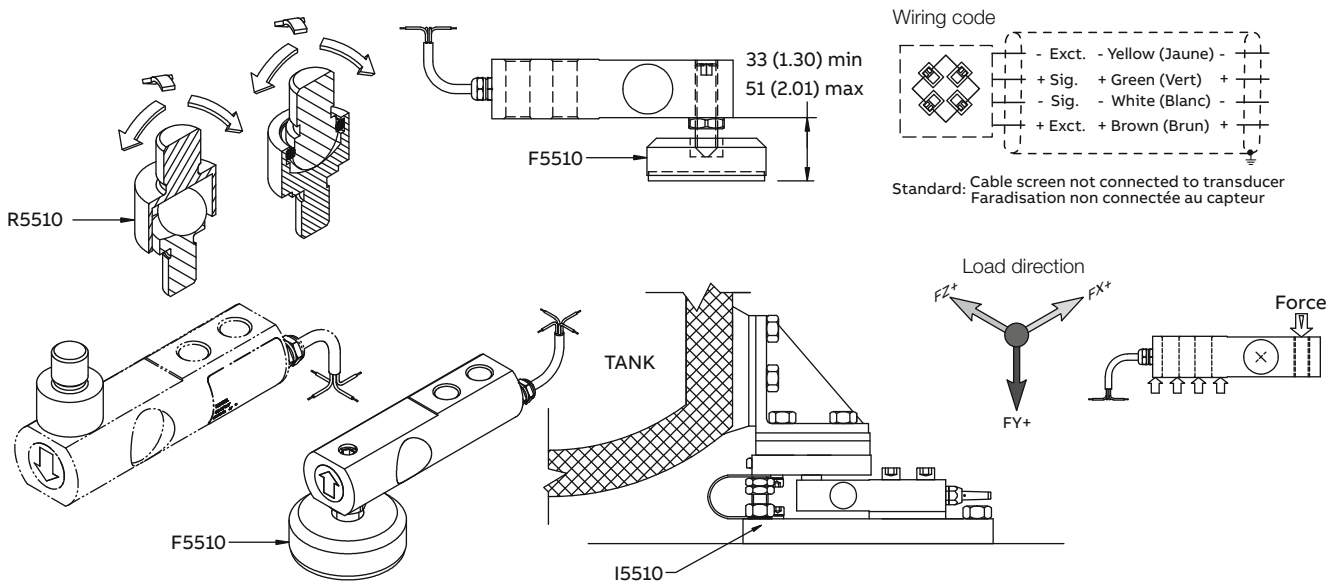


Figure 2: Accessories



### Mounting accessories model F5510 (stainless steel)

For load cells 9QGPS5510

All specified dimensions are in mm (in).

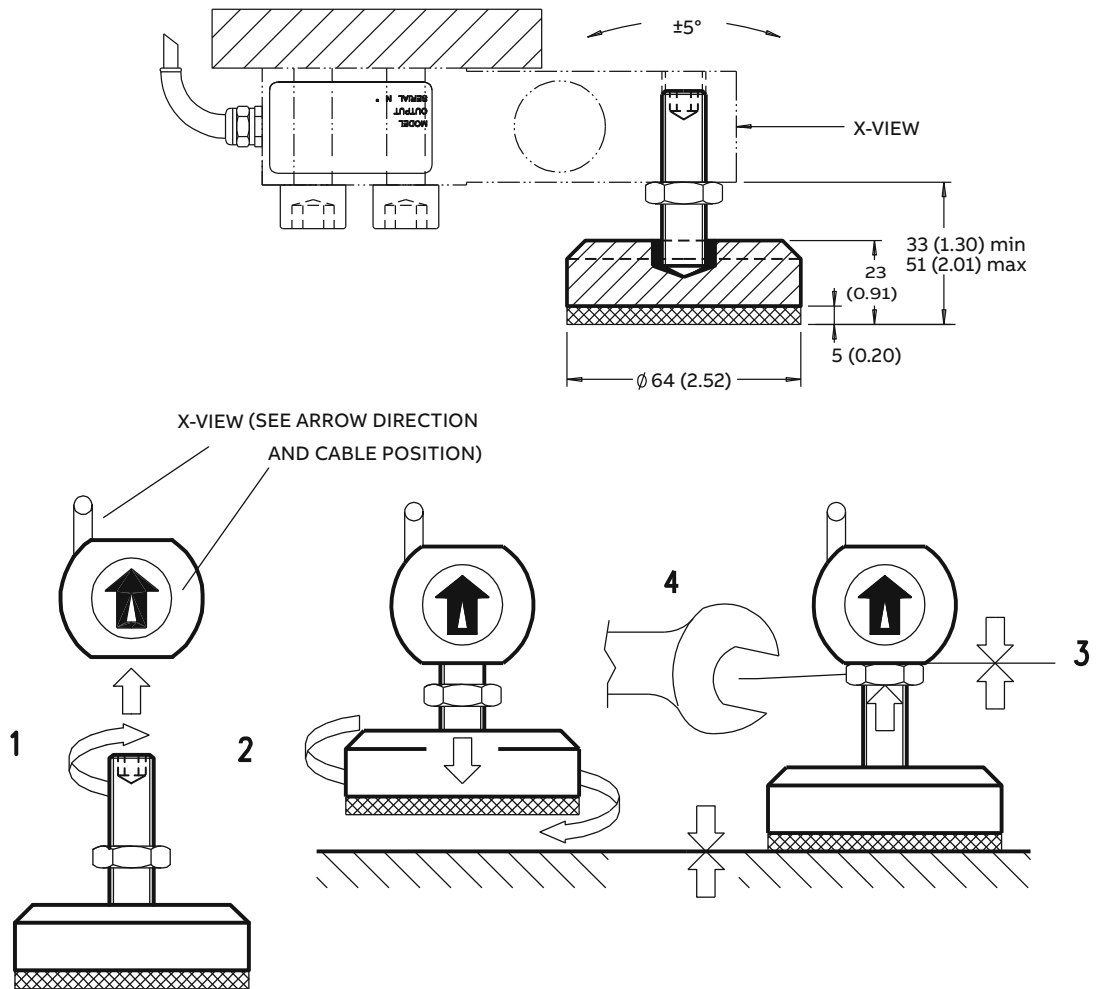


Figure 3: Mounting accessories

Ref. Item	Capacities t
F5510-A	0.5 to 2

Table 3: Other capacities and dimensions on request

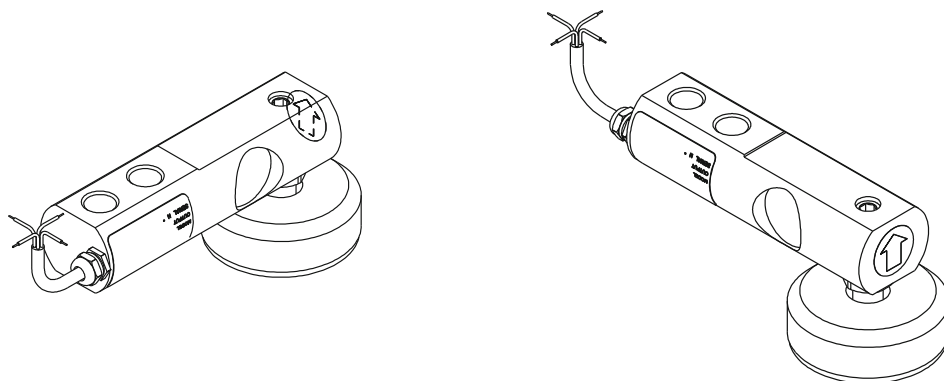


Figure 4: Other views

### ...Dimensions

#### Easy mount model I5510 (stainless steel), model I5515 (alloy steel)

For load cells 9QGPS5510

All specified dimensions are in mm (in.)

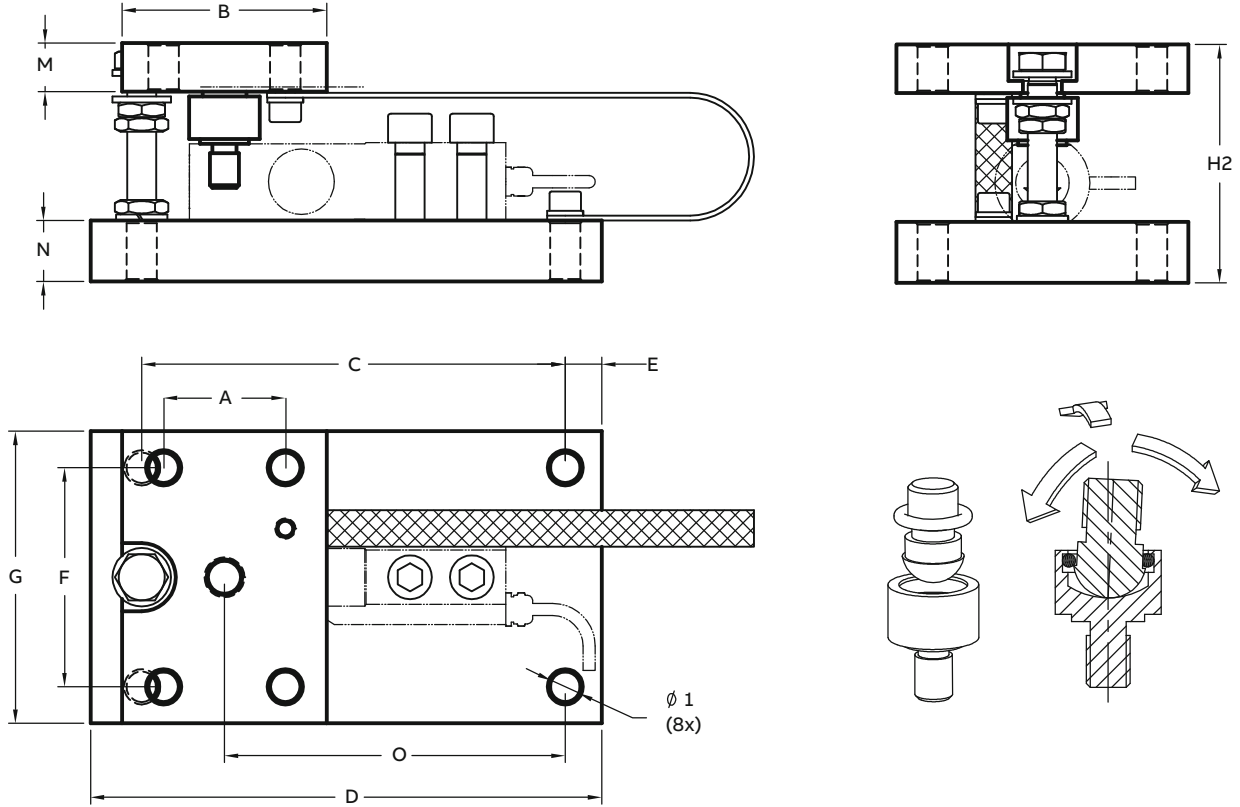


Figure 5: Easy mount

Ref. Item	Capacities t	A	B	C	D	E	F	G	M	N	O	$\varnothing 1$	H2	Weight kg (lb)
I551x-A	0.5 to 2	50	84	174	210	15	90	120	20	25	140	12.5	98	≈ 6.76 (14.90)
		(1.97)	(3.31)	(6.85)	(8.27)	(0.59)	(3.54)	(4.72)	(0.79)	(0.98)	(5.51)	(0.49)	(3.86)	

Table 4: Other capacities and dimensions on request

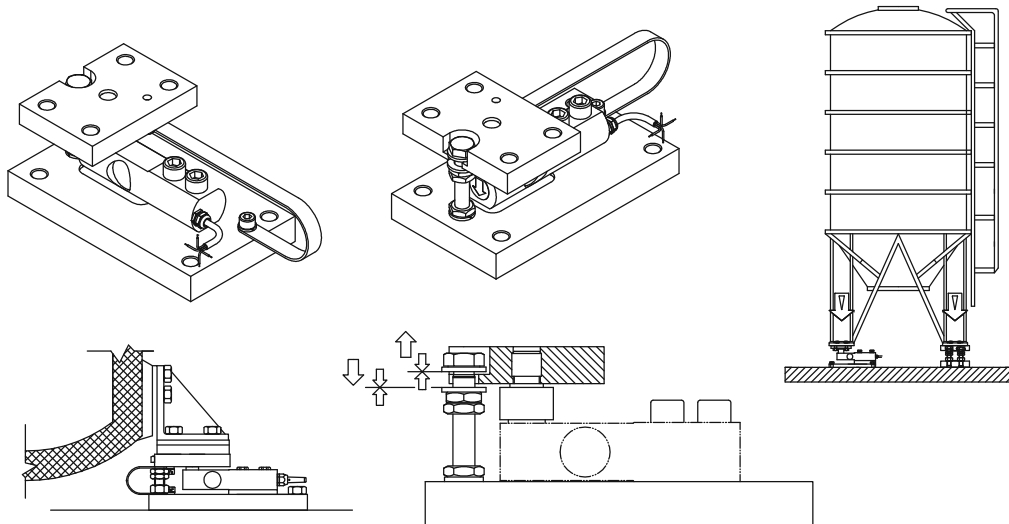


Figure 6: Other views

### Compression ball joint model R5510 (stainless steel)

For load cells 9QGPS5510

All specified dimensions are in mm (in.)

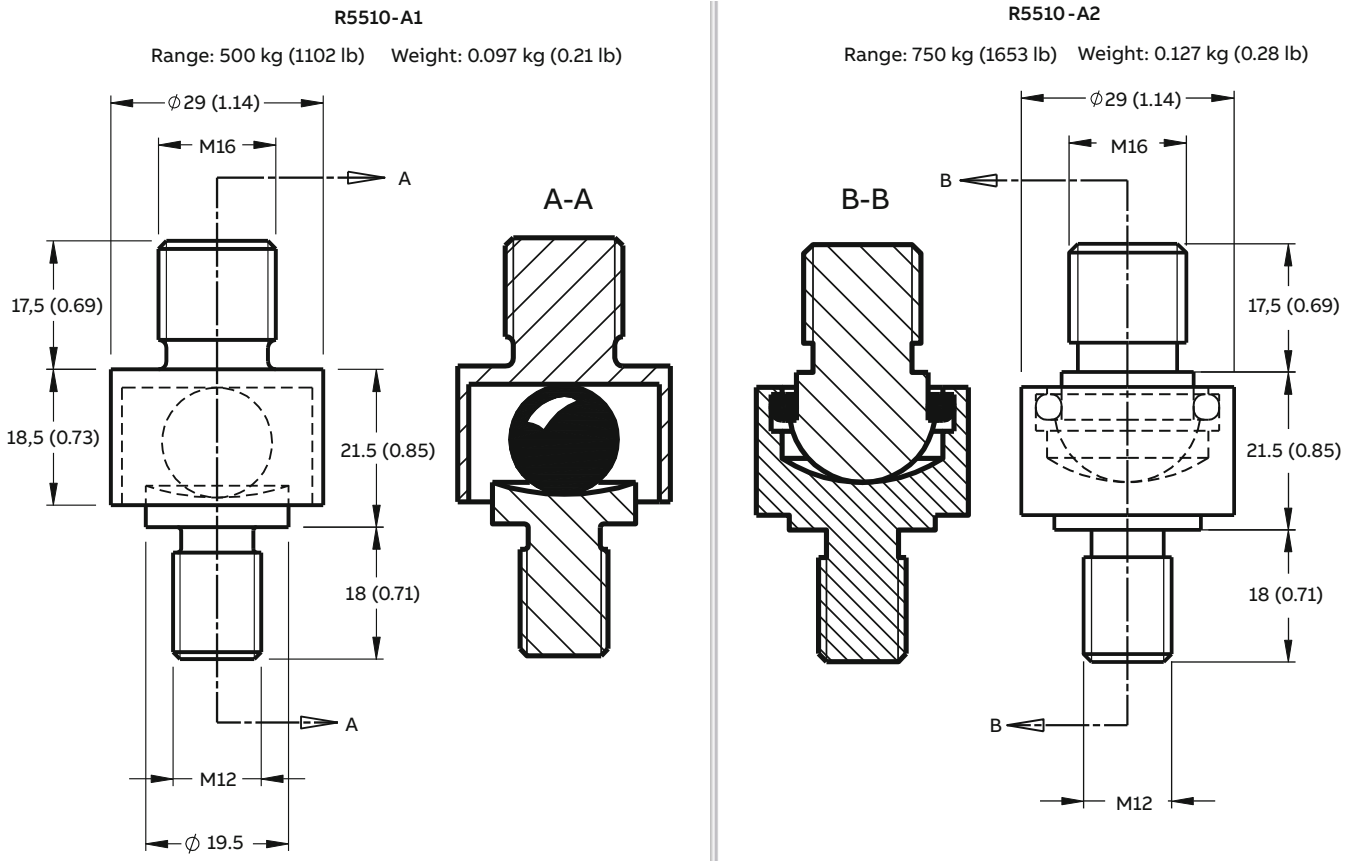


Figure 7: Compression ball joint

Ref. Item	Capacities
R5510-A1	500 kg (1102 lb)
R5510-A2	750 kg (1653 lb) to 2 t

Table 5: Other capacities and dimensions on request

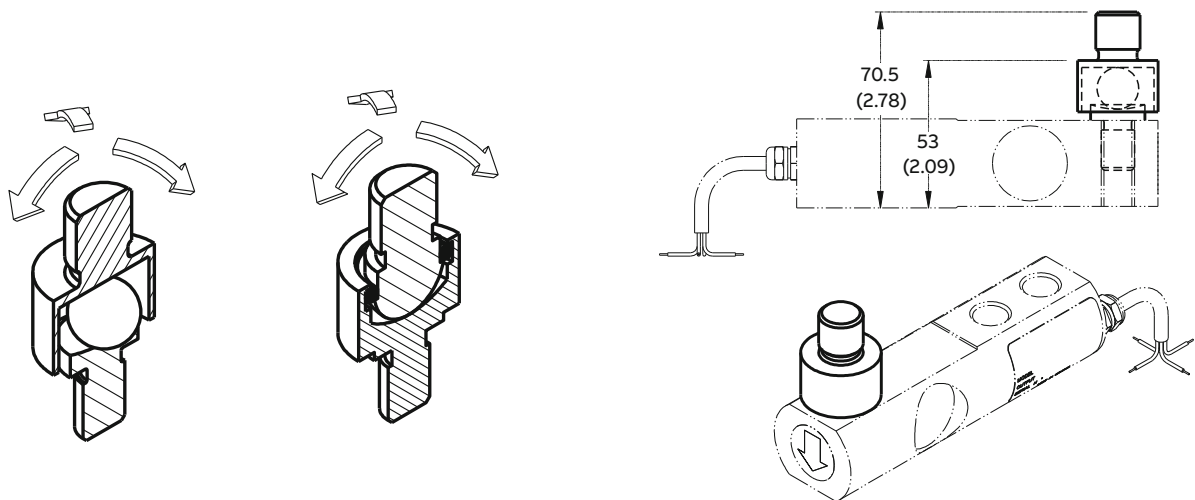


Figure 8: Other views

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## Notes



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**Notes**

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## Notes



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