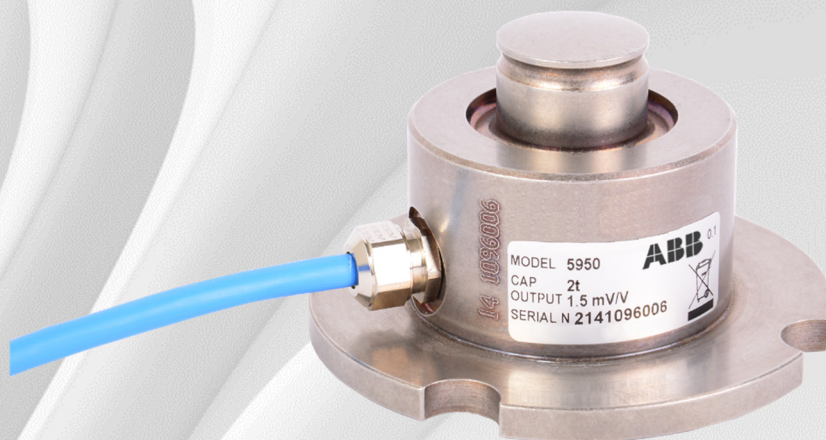


ABB MEASUREMENT & ANALYTICS | DATA SHEET

# 9QGPS5950

## Low profile compression load cell



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## **Measurement made easy**

Load cell combining high capacity, low design and cost effective solution

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**Stainless steel**

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**IP rating IP 67**

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**Low design**

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**Cost effective solution**

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**Sturdy design**

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**Easy to install**

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**Whole range of mounting kits available**

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**Available options (non exhaustive list)**

- ATEX intrinsic safety
- High service temperature (up to 150 °C [302 F])

## Applications

The load cell 9QGPS5950 is perfectly designed to the following applications:

- Silos, tanks or hoppers weighing
- Reactors weighing
- Industrial force measurement where space is limited

## Materials

Model 5950	Model 5955
Stainless steel	Coated steel

## Capacities

(0.3) - (0.5) - (0.75) - (1) - (1.5) - 2 - 3 - 5 - 7.5 - 10 - (15) - 20 t\*

\* 20 t only available with 0.5 % accuracy class

## Explosion protection (Option)

ATEX intrinsic safety:

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

## Specification

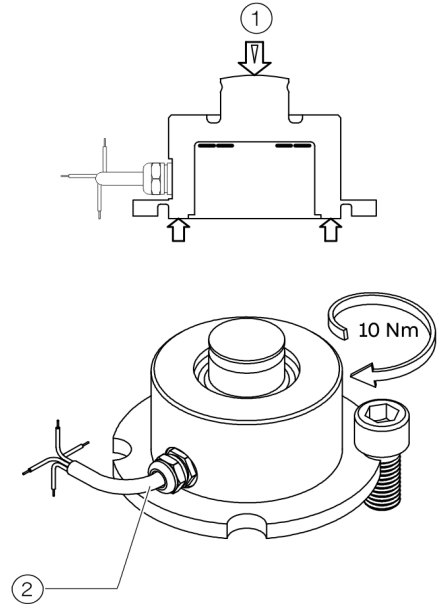
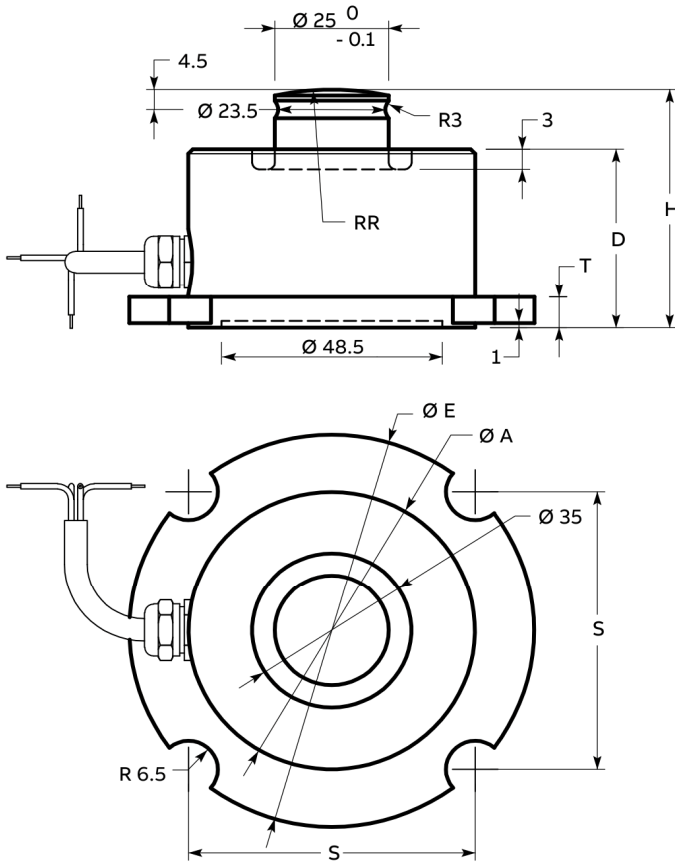
	0.5	0.25	0.1
<b>Measuring accuracy</b>			
Accuracy class	0.5 % F.S.	0.25 % F.S.	0.1 % F.S.
Combined error (non-linearity + hysteresis)	< ±0.5 % F.S.	< ±0.25 % F.S.	< ±0.10 % F.S.
Repeatability error	< ±0.25 % F.S.	< ±0.1 % F.S.	< ±0.03 % F.S.
Creep error over 30 min.	< ±0.2 % F.S.	< ±0.1 % F.S.	< ±0.06 % F.S.
Sensitivity tolerance	< ±0.5 %	< ±0.3 %	< ±0.3 %
Temperature coefficient of the sensitivity	< ±0.1 % F.S./10 °C	< ±0.05 % F.S./10 °C	< ±0.05 % F.S./10 °C
Temperature coefficient of zero signal	< ±0.1 % F.S./10 °C	< ±0.035 % F.S./10 °C	< ±0.035 % F.S./10 °C
Reference temperature	23 °C (73.4 °F)	23 °C (73.4 °F)	23 °C (73.4 °F)
<b>Temperature data</b>			
Compensated temperature range	-10 to 45 °C (14 to 113 °F)	-10 to 45 °C (14 to 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 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 to 185 °F)
<b>Electrical Data</b>			
Input resistance	700 Ω ±2 Ω	700 Ω ±2 Ω	700 Ω ±2 Ω
Output resistance	700 Ω ±2 Ω	700 Ω ±2 Ω	700 Ω ±2 Ω
Insulation resistance (50 V)	> 5000 MΩ	> 5000 MΩ	> 5000 MΩ
Reference excitation voltage	10 V DC	10 V DC	10 V DC
Nominal range of excitation voltage	3 to 12 V DC	3 to 12 V DC	3 to 12 V DC
Nominal sensitivity	1.5 mV/V	1.5 mV/V	1.5 mV/V
<b>Load limits</b>			
Safe load limit	150 % F.S.	150 % F.S.	150 % F.S.
Breaking load	> 300 % F.S.	> 300 % F.S.	> 300 % F.S.
Static lateral force limit	10 % F.S.	10 % F.S.	10 % F.S.
Permissible dynamic loading	40 % F.S.	40 % F.S.	40 % F.S.

F.S.: Full scale

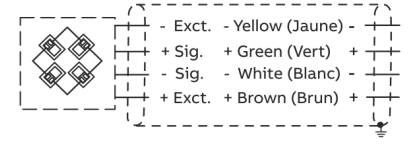
## Dimensions

### Load cell model 9QGPS5950

Compression, Range 0.3 to 15 t (20 t)  
 All dimensions in mm (in)



#### Wiring code



Standard: Cable screen not connected to transducer  
 Faradisation non connectée au capteur

① Force direction

② Cable length: 6 m (19.7 ft)

Figure 1: Dimensions load cell model 9QGPS5950

Capacities t	Ø A	D	H	S	T	Ø E	RR	Max deflection	Weight kg (lb)
0.3 to 5	54.5 (2.1)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.04 to 0.07 (0.0016 to 0.0028)	±1.4 (3.09)
7.5 to 15	59 (2.3)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.08 to 0.15 (0.0031 to 0.0059)	±1.4 (3.09)
20	59 (2.3)	38.5 (1.5)	54 (2.1)	62.9 (2.48)	7 (0.3)	89 (3.5)	60	0.2 (0.0079)	±1.4 (3.09)

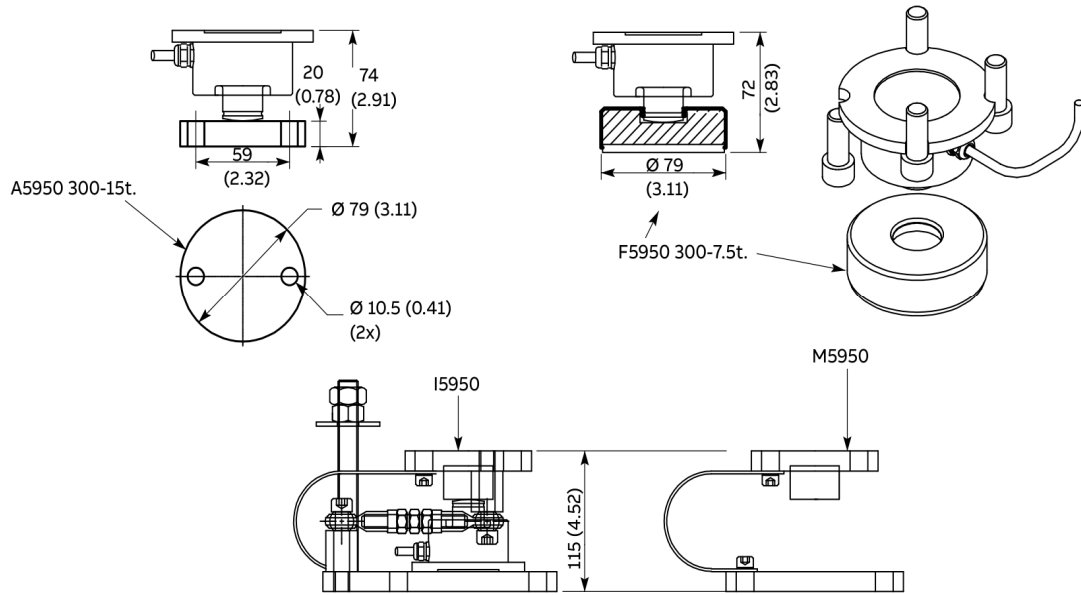


Figure 2: Accessories

## ... Dimensions

### Loading plates for model 9QGPS5950, A5950

All dimensions in mm (in)

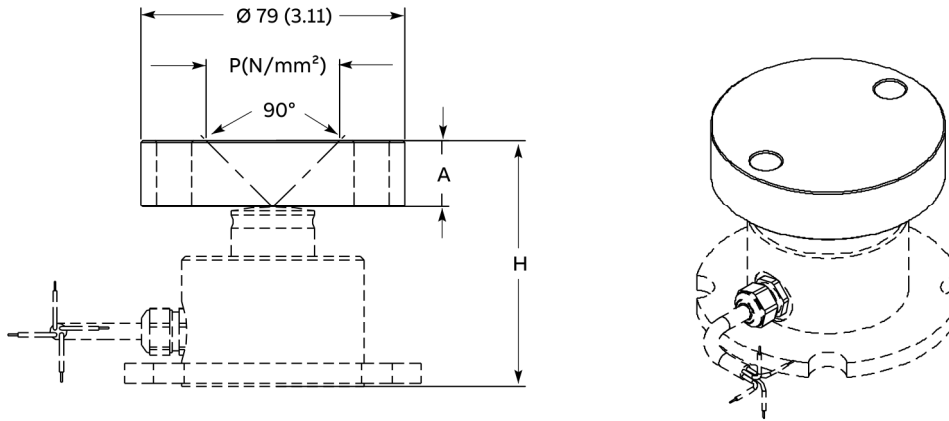


Figure 3: Dimensions loading plates for model 9QGPS5950

Ref. Item*	Capacities t	A	H	P (N/mm <sup>2</sup> )	Weight kg (lb)
A5950-AB	0.3 to 15	20 (0.79)	74 (2.91)	±120 (15 t)	±0.76 (1.68)
A5950-C	20	25 (0.98)	79 (3.11)	±100	±0.95 (2.09)

\*Material: stainless steel

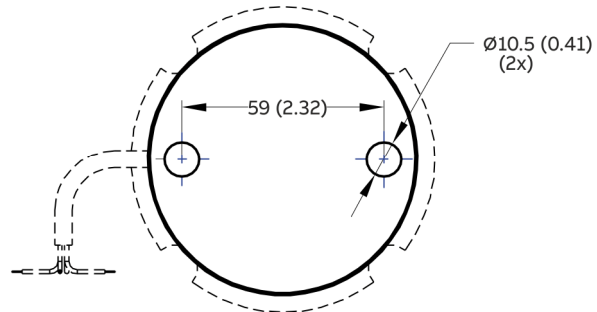


Figure 4: Other view

R00161



### Easy mount for model 9QGPS5950

Load cells model I5950 stainless steel (including rod ends), model I5955 alloy steel  
 Capacities 0.3 to 20 t  
 All dimensions in mm (in)

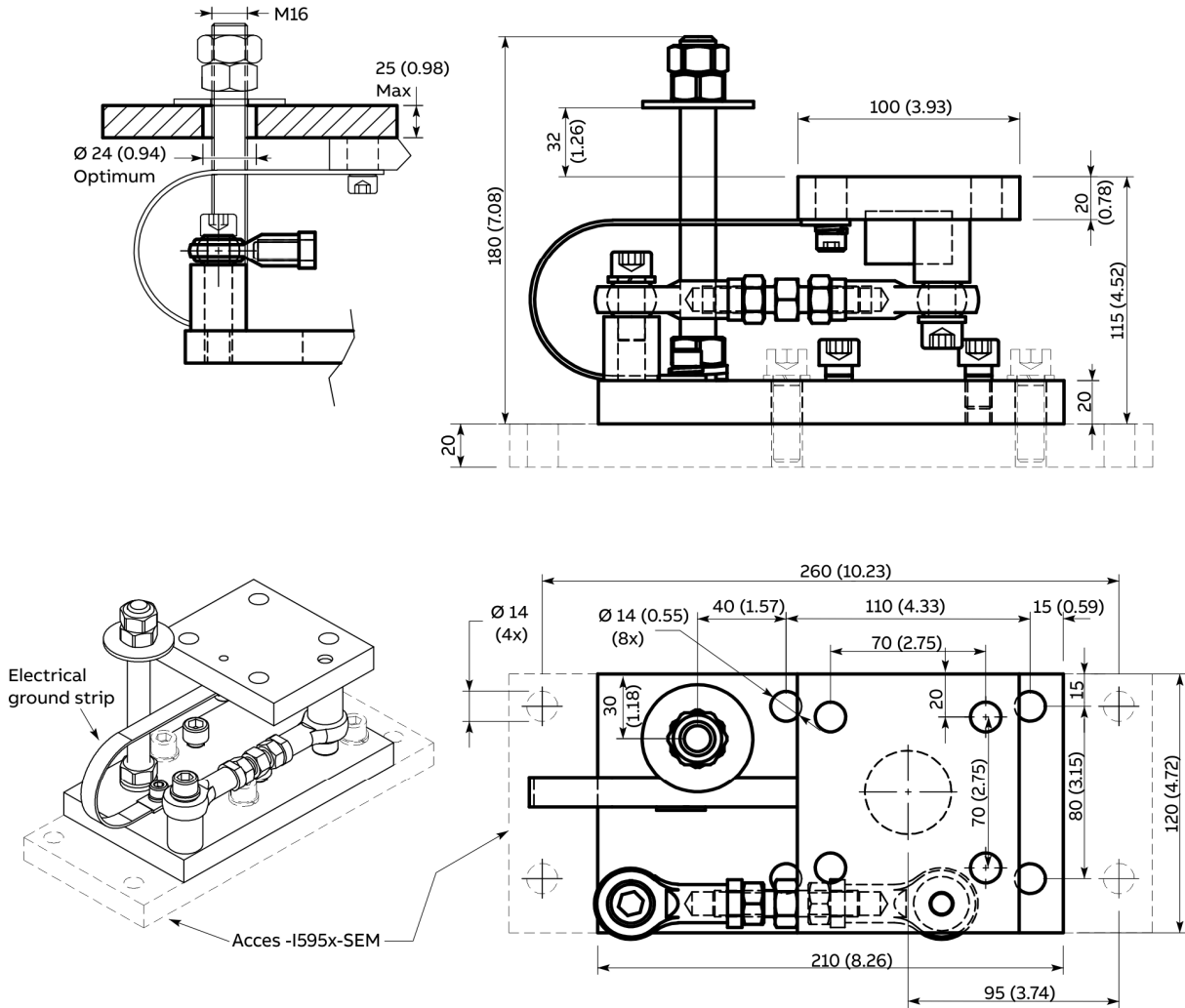


Figure 5: Dimensions accessories

## ... Dimensions

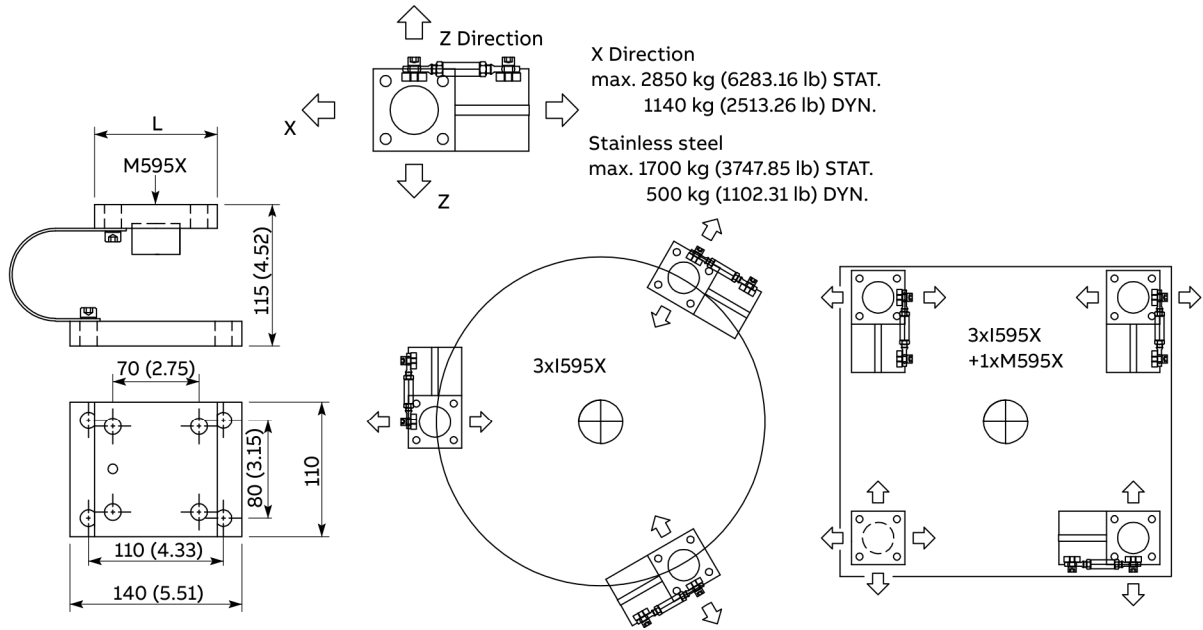
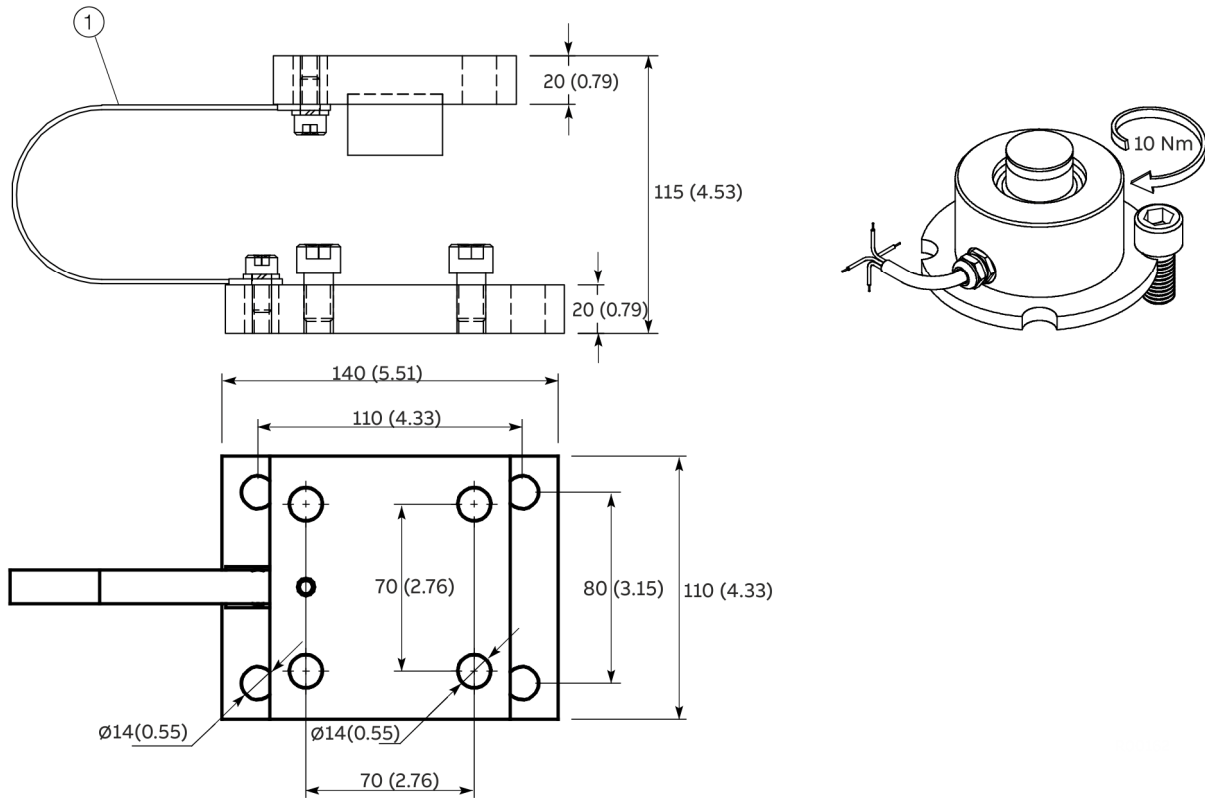


Figure 6: Other views



### Mounting plates for model 9QGPS5950

Load cells model M5950 stainless steel, model M5955 alloy steel  
 Capacities 0.3 to 20 t  
 All dimensions in mm (in)



① Electrical ground strap

Figure 7: Mounting plates for model 9QGPS5950

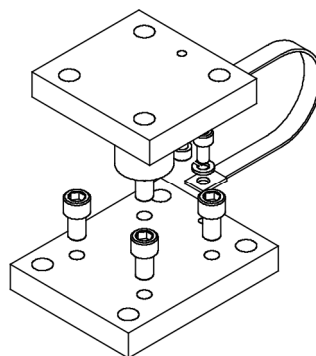


Figure 8: Other view



## Notes

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## Notes

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