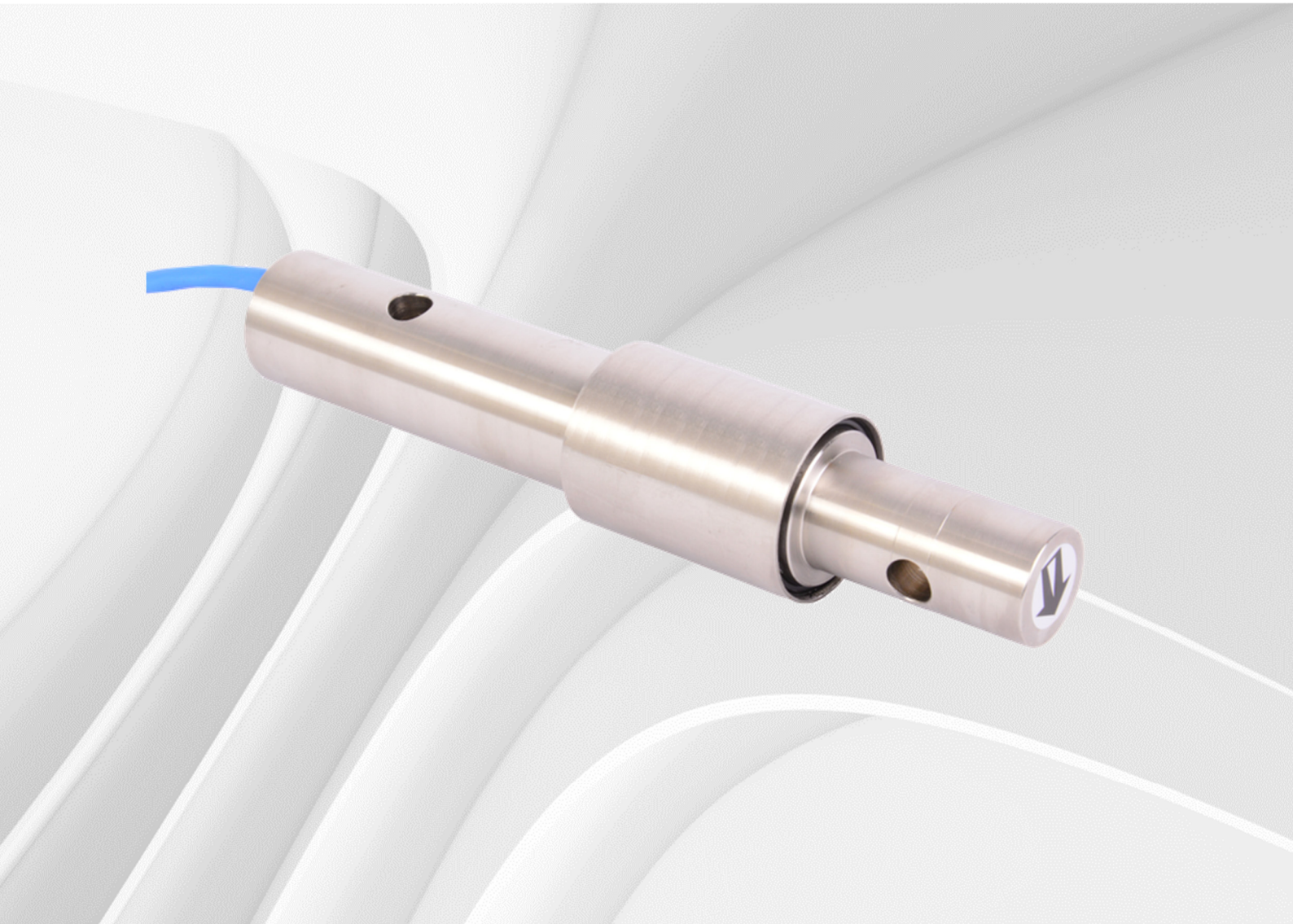
ABB MEASUREMENT & ANALYTICS | DATA SHEET

9QGPS4500

Shear beam load cell



Measurement made easy

Load cell for silo weighing combining a sturdy design with an easy installation

Stainless steel

IP rating IP 67

Cost effective solution

Sturdy design

Easy to install

Mounting kits available with following properties

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

Available options (non exhaustive list)

- ATEX intrinsic safety

Applications

The load cell 9QGPS4500 is perfectly designed to the following applications:

- Silos and tanks weighing
- Reactors or hoppers weighing
- Mixers (vibrating)

Capacities

(0.5) - (0.75) - 1 - 1.5 - 2 - 3 - 5 - 7.5 - 10 - 15 - 20 - 30 t

Explosion protection (Option)

ATEX intrinsic safety:

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

Specification

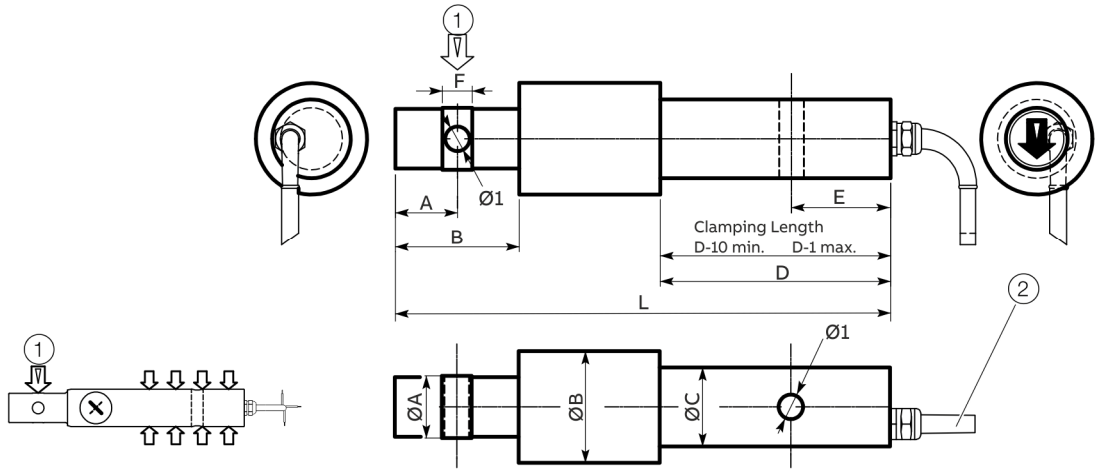
	0.1
Measuring accuracy	
Accuracy class	0.10 % F.S.
Combined error (non-linearity + hysteresis)	< ±0.10 % F.S.
Repeatability error	< ±0.03 % F.S.
Creep error over 30 min.	< ±0.06 % F.S.
Sensitivity tolerance	< ±0.3 %
Temperature coefficient of the sensitivity	< ±0.05 % F.S./10 °C
Temperature coefficient of zero signal	< ±0.035 % F.S./10 °C
Reference temperature	23 °C (73.4 °F)
Temperature data	
Nominal temperature range	–10 to 45 °C (14 to 113 °F)
Service temperature range	–25 to 70 °C (–13 to 158 °F)
Storage temperature range	–50 to 85 °C (–58 to 185 °F)
Electrical Data	
Input resistance	350 Ω ±2 Ω
Output resistance	350 Ω ±2 Ω
Insulation resistance (50 V)	> 5000 MΩ
Reference excitation voltage	10 V DC
Nominal range of excitation voltage	3 to 12 V DC
Nominal sensitivity	2 mV/V
Load limits	
Safe load limit	150 % F.S.
Breaking load	> 300 % F.S.
Static lateral force limit	100 % F.S.
Permissible dynamic loading	50 % F.S.

F.S.: Full scale

Dimensions

Load cell model 9GPS4500 stainless steel

Easy mounting shear-beam, Range 0.5 to 30 t
All dimensions in mm (in)



(1) Force direction

(2) Cable length (CL): see table below

Figure 1: Dimensions, easy mounting shear-beam

Capacities t	A	B	D	E	F	L	Ø 1	Ø A Ø B (max)	Ø C	CLm (ft)	H1	L1	L2	Weight Kg (lb)
0.5 to 3	25	50	93	40	8	200	10	25	40	31.75	6	125	285	120	1.48
	(0.98)	(1.97)	(3.66)	(1.57)	(0.31)	(7.87)	(0.39)	(0.98)	(1.57)	(1.20)	(20)	(4.90)	(11)	(4.70)	(3.30)
5 to 7.5			93	40	12	200	10	40	49	49	6	125	285	120	3
			(3.66)	(1.57)	(0.47)	(7.87)	(0.39)	(1.60)	(1.90)	(1.90)	(20)	(4.90)	(11)	(4.70)	(6.60)
10 to 15			105	20	24	200	16	60	62	62	12	174	405	150	3.4
			(4.13)	(1.79)	(0.94)	(7.87)	(0.63)	(2.36)	(2.4)	(2.4)	(39)	(6.90)	(16)	(5.90)	(7.50)
20			145	60	24	240			62	62		174	405	150	4.3
			(5.71)	(2.36)	(0.94)	(9.45)			(2.4)	(2.4)		(6.90)	(16)	(5.90)	(9.50)
30			145	60	30	240		78 (3.1)	78 (3.1)			206.5	450	200	8
			(5.71)	(2.36)	(1.18)	(9.45)						(8.10)	(18)	(7.90)	(18)

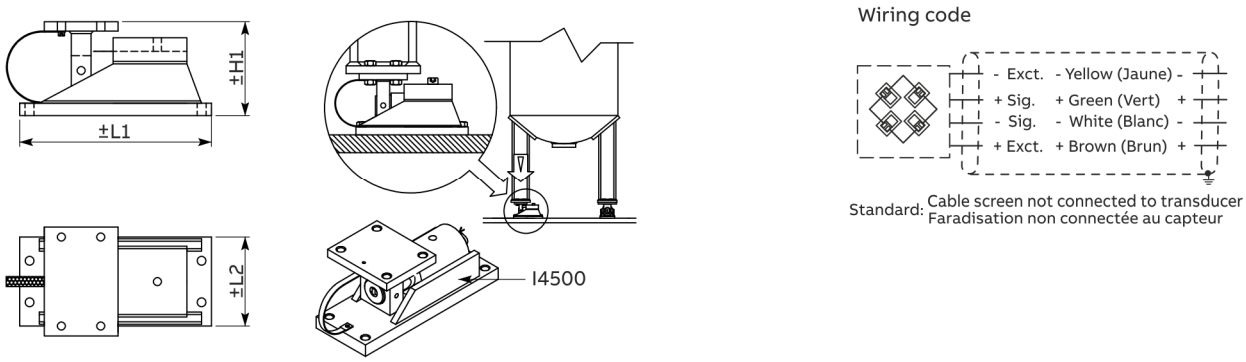


Figure 2: Accessories

Accessories

Load cells model I4500 stainless steel, model I4505 caoted steel
Easy mount for model 9GPS4500, Range 0.5 to 30 t
All dimensions in mm (in)

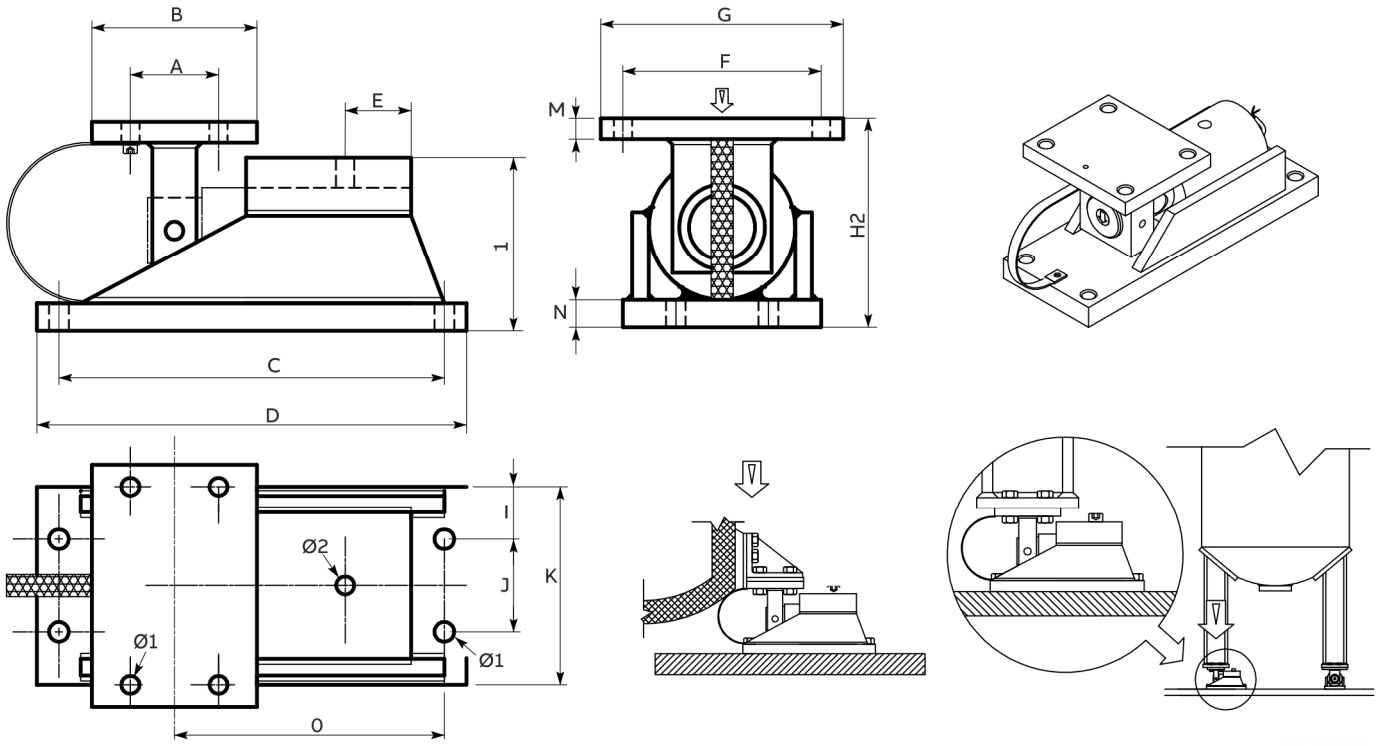


Figure 3: Accessories, easy mount for model 9GPS4500

Capacities t	A	B	C	D	E	F	G	I	J	K	M	N	O	Ø1	Ø2	H1	H2	Weight kg (lb)
0.5 to 3	60	90	255	285	40	90	120	15	90	120	15	20	200	12.5	10.5	100	125	10.6*
	(2.36)	(3.54)	(10.04)	(11.22)	(1.57)	(3.54)	(4.72)	(0.59)	(3.54)	(4.72)	(0.59)	(0.79)	(7.87)	(0.49)	(4.41)	(3.94)	(4.92)	(23)
5 to 7.5																		11.2*
																		(25)
10 to 20 t	110	150	365	405	60	140	180	20	110	150	20	30	260	17	16.5	134	174	23.5**
	(4.33)	(5.91)	(14.37)	(15.94)	(2.36)	(5.51)	(7.09)	(0.79)	(4.33)	(5.91)	(0.79)	(1.18)	(10.24)	(0.67)	(0.65)	(5.28)	(6.85)	(52)
30 t			407	450		157	200	30	157	200	30		273.5	21.5		160	206.5	48**
			(16.02)	(17.72)		(6.18)	(7.87)	(1.18)	(6.18)	(7.87)	(1.18)		(10.77)	(0.85)		(6.30)	(8.13)	(105.82)

* I4505 Ni plated

** I4505 painted

Notes

ABB Automation GmbH
Measurement & Analytics
Force Measurement
Oberhausener Str. 33
40472 Ratingen
Deutschland
Tel: +49 2102 12-2520
Fax: +49 2102 12-1414
Email: forcemeasurement@de.abb.com

abb.com/measurement

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