

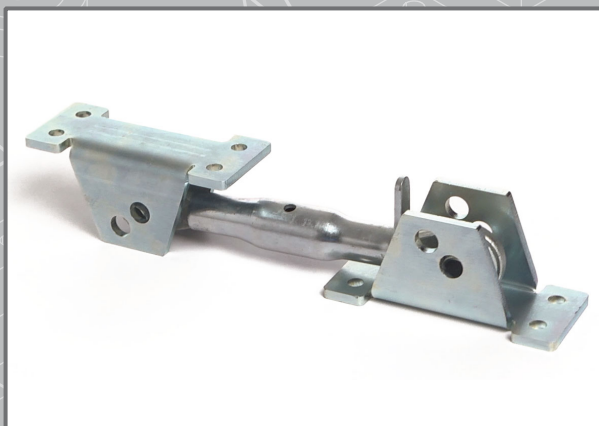
## PRODUCTS CATALOG



**A1** LOAD CELLS



**A2** MOUNTING KIT



**A3** COMPLEMENTARY ACCESSORIES

## Certifications



## Load cells and mounting kits

LAUMAS offers a wide range of load cells of the most common types in the main industrial sectors providing for each of them the quality, availability and assistance.

### Load cells

Single point, shear beam, double shear, bending, tension, compression, low profile, pin, anchor, wire rope measuring, pre-amplified, column, foot brake, for weighing bridge, digital, load limiters.

### Mounting kits for load cells

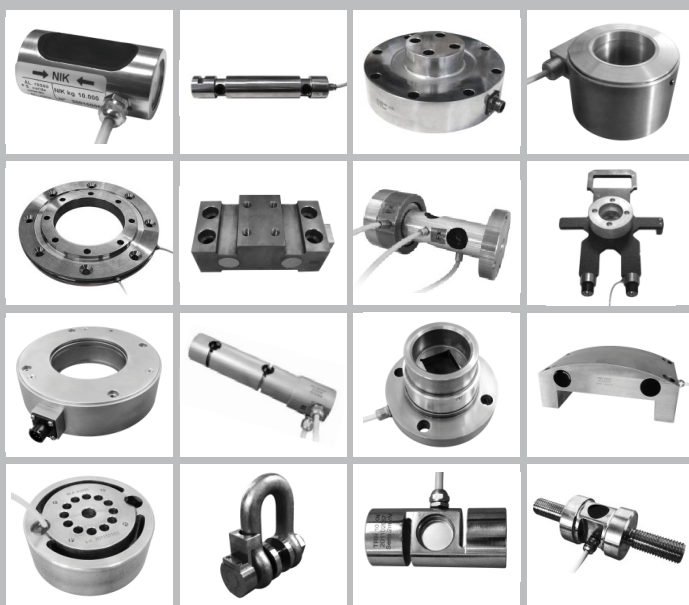
For all load cells, LAUMAS is able to provide suitable mounting accessories, with the aim of obtaining the correct application of the cell and maximum reliability and accuracy, and compatibly with the mechanical, electrical and pneumatic connections present on the weighing structure.

## Production of load cells on CUSTOMER'S REQUEST

LAUMAS designs and manufactures "CUSTOM" load cells to offer the best solutions to customer needs.

Customizations are designed to solve specific problems or meet particular needs of applications in special conditions.

- Pre-amplified load cells
- Biaxial and triaxial
- Two strain gauges Wheatstone bridges
- Torque detection
- Special cables high / low temperature with non-standard thermal compensation



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	CAPACITY	PLATFORM	PAGE
<b>A1.1</b>	<b>SINGLE POINT</b>		
	<b>AF</b> 5, 15, 50 kg	150x150 mm	<b>6</b>
	<b>AS</b> 0.25, 0.5, 1 kg	200x200 mm	<b>8</b>
	<b>ALL</b> 3, 5, 10, 15, 20, 30, 50 kg	250x350 mm	<b>10</b>
	<b>PRC</b> 6, 15, 30, 50 kg	350 x 350 mm	<b>12</b>
	<b>AU</b> 3, 6, 15 kg 30, 50 kg	250 x 400 mm 400 x 600 mm	<b>14</b>
	<b>AZL</b> 10, 15, 20, 30, 50, 100 kg	400 x 400 mm	<b>16</b>
	<b>AZLI</b> 10, 20, 50 kg	400 x 400 mm	<b>18</b>
	100, 200, 300, 500 kg	800 x 800 mm	
	<b>AZS</b> 10, 30, 50, 100, 200 kg	400 x 400 mm	<b>21</b>
	<b>PTC</b> 30, 50, 75, 100, 150 kg	400 x 400 mm	<b>23</b>
	<b>AM</b> 60, 100, 150, 200, 300 kg	400 x 400 mm	<b>25</b>
	<b>APL</b> 50, 100, 150, 200, 300, 500 kg	600 x 600 mm	<b>27</b>
	<b>PEC</b> 75, 150, 300, 500 kg	600 x 600 mm	<b>29</b>
	<b>AR</b> 500, 1000 kg	800 x 800 mm	<b>31</b>
	<b>ATL</b> 1000, 2000 kg	1200 x 1200 mm	<b>33</b>





Manufactured according to OIML R60 standards

**Capacity from 5 kg to 50 kg**



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.05\%$
- PROTECTION CLASS IP65

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>5</b>	150 x 150	0.13	AF5
	<b>15</b>	150 x 150	0.13	AF15
	<b>50</b>	150 x 150	0.13	AF50

## CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

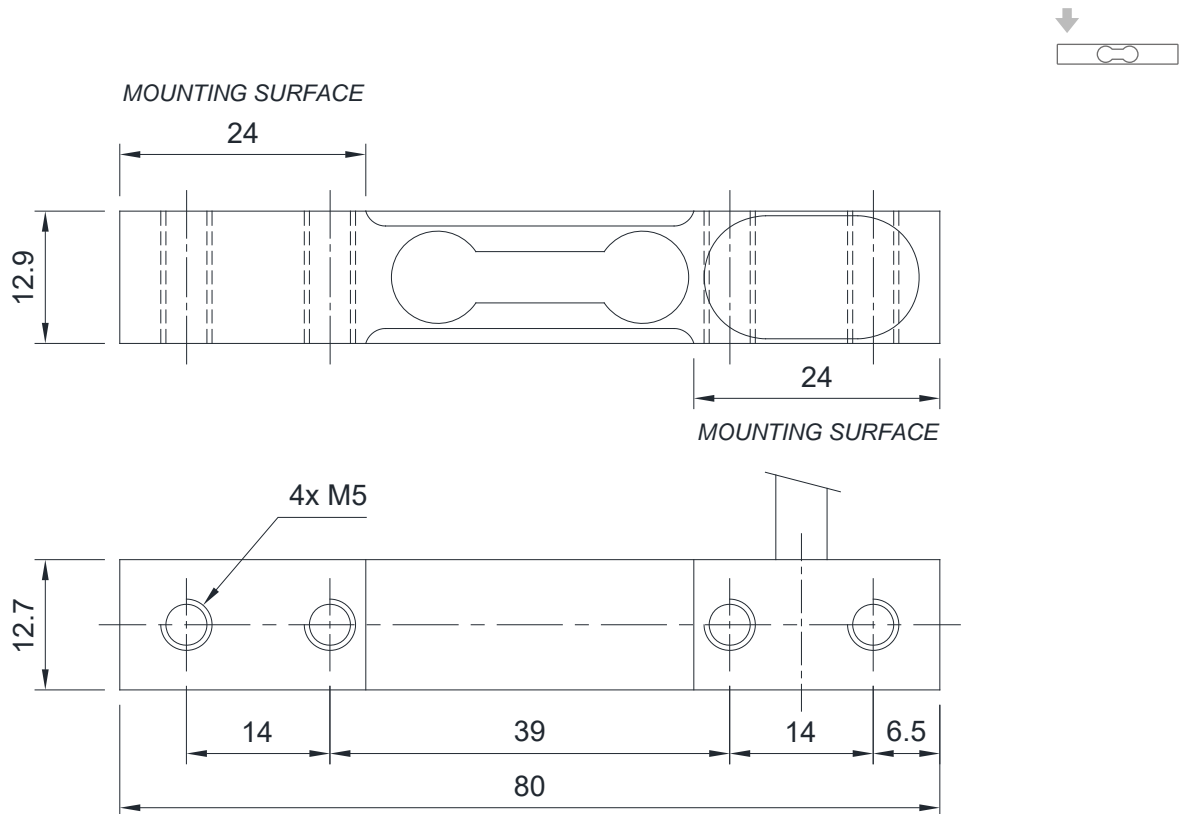


IECEX (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)

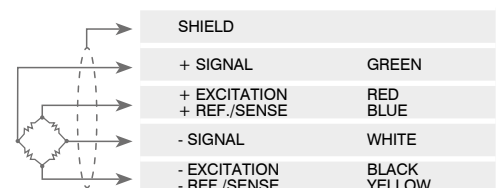


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	5 - 15 - 50 kg		
Combined error	≤ ±0.05%		
Protection class	IP65		
Rated output	3 mV/V ±10%	Input resistance	410 Ω ±40
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>2000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.05%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	10 V	Deflection at nominal load	0.5 mm

### ELECTRICAL CONNECTIONS

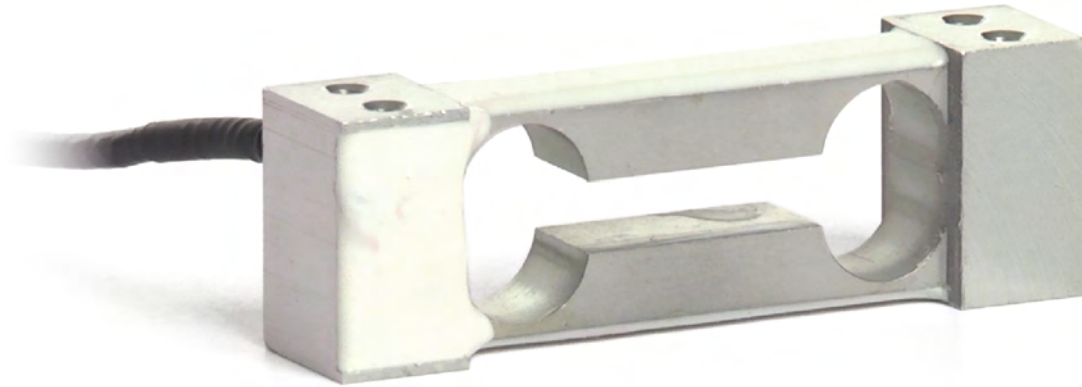
Cable length	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 0.25 kg to 1 kg**



- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP65

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>0.25</b>	200 x 200	0.1	AS025
	<b>0.5</b>	200 x 200	0.1	AS05
	<b>1</b>	200 x 200	0.1	AS1

## CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

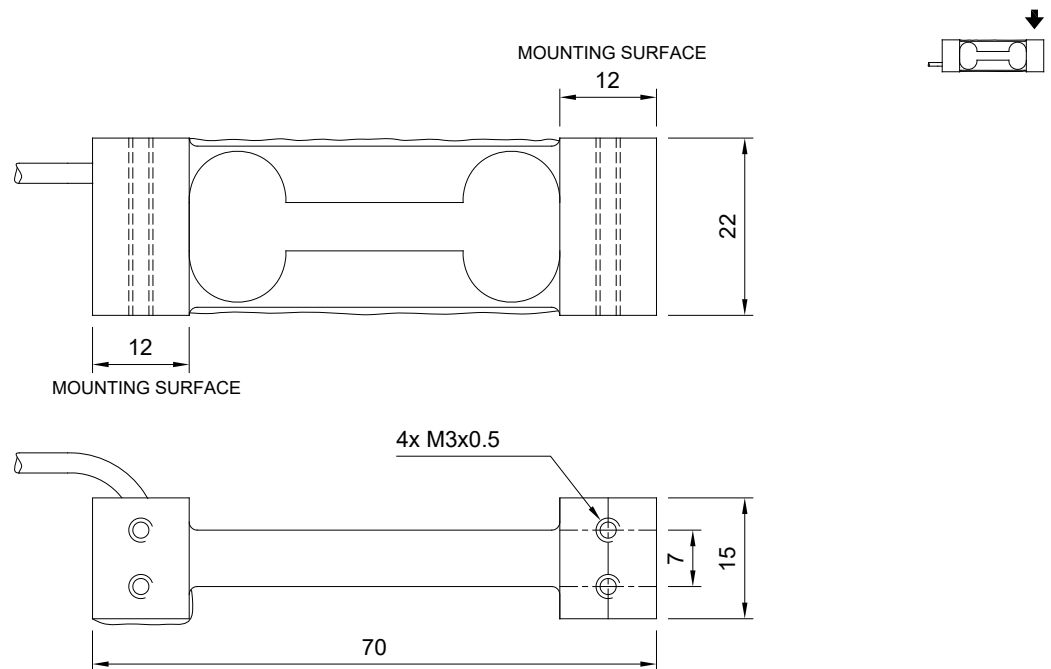


IECEX (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## DIMENSIONS (mm)

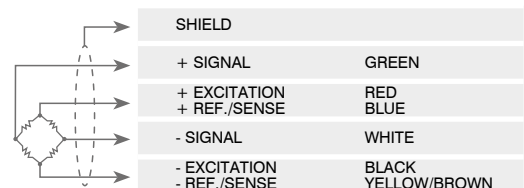


## TECHNICAL FEATURES

Material	Aluminum alloy		
Nominal load (E max)	0.25 - 0.50 - 1.00 kg		
Combined error	$\leq \pm 0.03\%$		
Protection class	IP65		
Rated output	1 mV/V $\pm 15\%$	Input resistance	410 $\Omega \pm 10$
Temperature effect on zero	0.0025% $^{\circ}\text{C}$	Output resistance	350 $\Omega \pm 3$
Temperature effect on span	0.0025% $^{\circ}\text{C}$	Zero balance	$\pm 2\%$
Compensated temperature range	-10 $^{\circ}\text{C}$ / +40 $^{\circ}\text{C}$	Insulation resistance	>2000 M $\Omega$
Operating temperature range	-20 $^{\circ}\text{C}$ / +60 $^{\circ}\text{C}$	Safe overload (% of full scale)	200%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	400%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

## ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	2.5 mm
Cores	6 x 0.20 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.

**Capacity from 3 kg to 50 kg**

- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS					PLATFORM (mm)	NET WEIGHT (kg)	CODE
		C3	C4	C5					
3		•	•	•	•	•	250 x 350	0.2	ALL3
5		•	•	•	•	•	250 x 350	0.2	ALL5
10		•	•	•	•	•	250 x 350	0.2	ALL10
15		•	•	•	•	•	250 x 350	0.2	ALL15
20		•	•	•	•	•	250 x 350	0.2	ALL20
30		•	•	•	•	•	250 x 350	0.2	ALL30
50		•	•	•	•	•	250 x 350	0.2	ALL50

ON REQUEST

**CERTIFICATIONS**

OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

## CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEX (zone 0-1-2-20-21-22)



OIML R60 C4/C5



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres



NTEP - Complies with United States regulations for legal for trade use

**COMPLEMENTARY ACCESSORIES**

## DESCRIPTION

Pair of stainless steel tension brackets.  
Maximum static load: 50 kg.

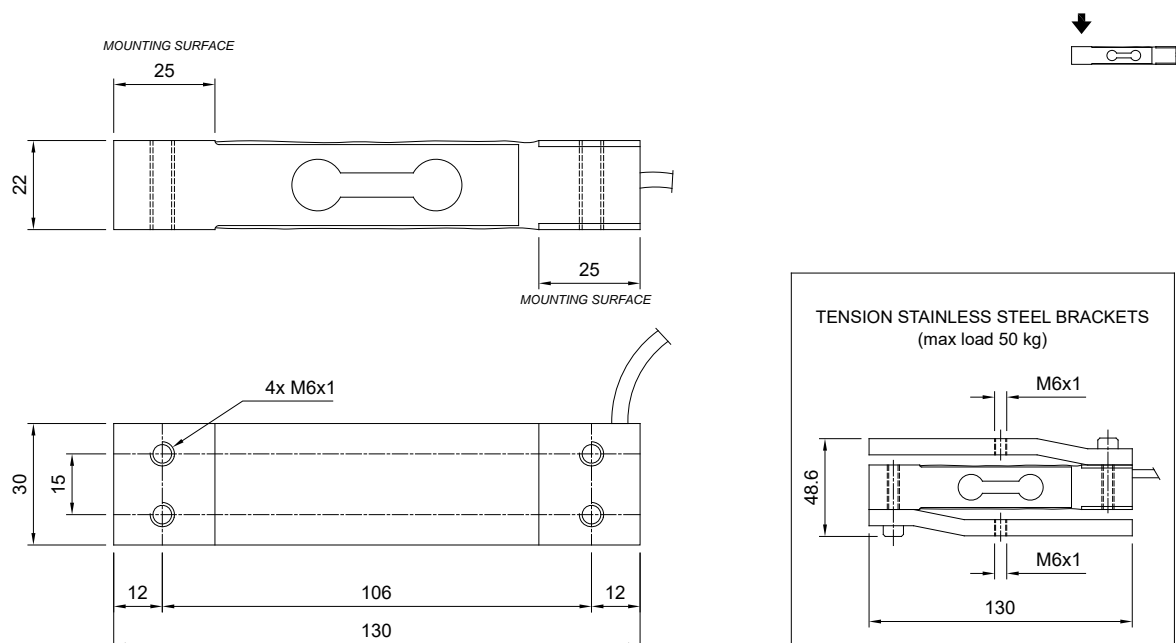
## CODE

STAFFEALL

# ALL

## SINGLE-POINT LOAD CELL for platforms 250x350 mm

### DIMENSIONS (mm)

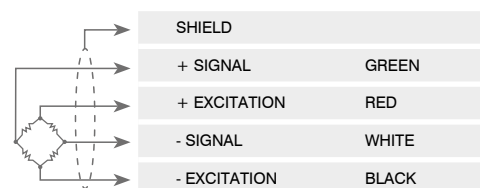


### TECHNICAL FEATURES

Material	Aluminum alloy		
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	C5 • 5000
Nominal load (E max)	3 - 5 - 10 - 15 - 20 - 30 - 50 kg		
Minimum verification interval (V min)	E max / 10000	E max / 15000	E max / 20000
Combined error	≤ ±0.02%	≤ ±0.017%	≤ ±0.014%
Protection class	IP65		
Rated output	2 mV/V ±10%	Input resistance	409 Ω ±6
Temperature effect on zero	0.0017% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0014% °C	Zero balance	≤ ±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.015%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.5 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	3.8 mm
Cores	4 x 0.20 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 6 kg to 50 kg**



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>6</b>	350 x 350	0.4	PRC6
	<b>15</b>	350 x 350	0.4	PRC15
	<b>30</b>	350 x 350	0.4	PRC30
	<b>50</b>	350 x 350	0.4	PRC50

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

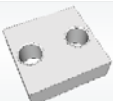
CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UK CA** )

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## COMPLEMENTARY ACCESSORIES

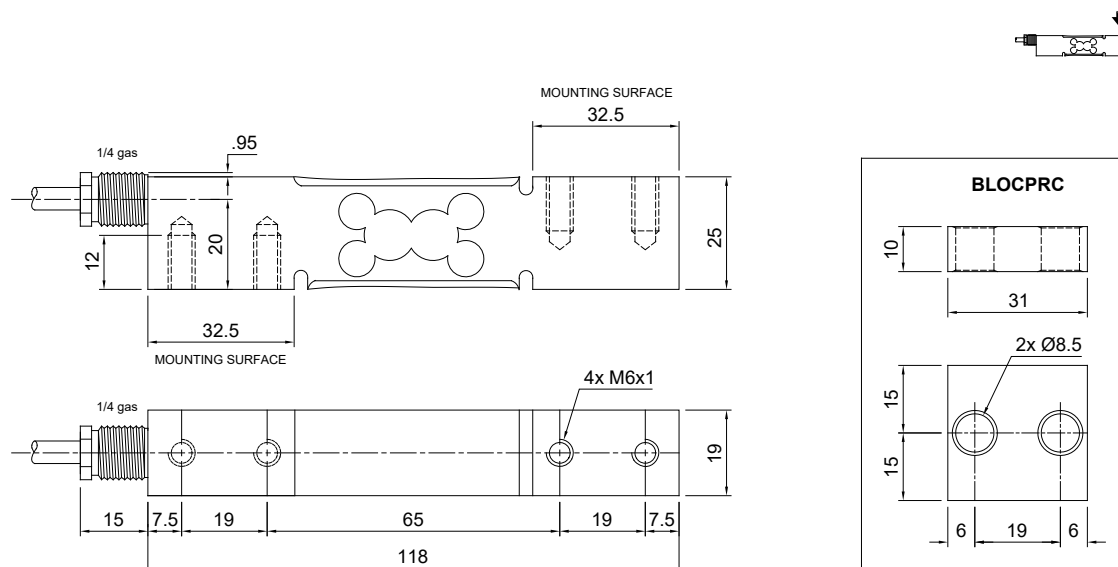
	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOCPRC

# PRC

## SINGLE-POINT LOAD CELL for platforms 350x350 mm

**LAUMAS®**

### DIMENSIONS (mm)

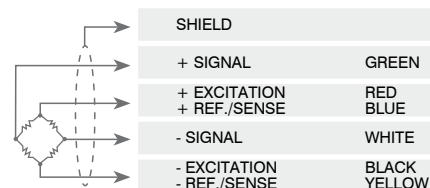


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	6 - 15 - 30 - 50 kg		
Combined error	≤ ±0.02%		
Protection class	IP67		
Rated output	2 mV/V ±10%	Input resistance	380 Ω ±10
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.002% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	6 x 0.20 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

## Capacity from 3 kg to 50 kg



- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP65

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>3</b>	250 x 400	0.5	AU3
	<b>6</b>	250 x 400	0.5	AU6
	<b>15</b>	250 x 400	0.5	AU15
	<b>30</b>	400 x 600	0.5	AU30
	<b>50</b>	400 x 600	0.5	AU50

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

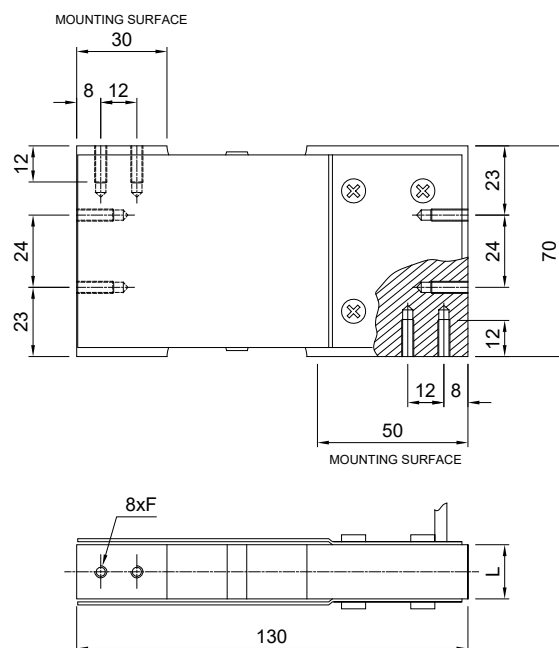
### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## DIMENSIONS (mm)



	3 - 6 - 15 kg	30 - 50 kg
L	18	30
F	M4x0.7	M6x1

## TECHNICAL FEATURES

Material	Aluminum alloy		
Nominal load (E max)	3 - 6 - 15 - 30 - 50 kg		
Combined error	$\leq \pm 0.02\%$		
Protection class	IP65		
Rated output	2 mV/V $\pm 10\%$	Input resistance	410 $\Omega \pm 10$
Temperature effect on zero	0.0025% $^{\circ}\text{C}$	Output resistance	350 $\Omega \pm 3$
Temperature effect on span	0.0025% $^{\circ}\text{C}$	Zero balance	$\pm 2\%$
Compensated temperature range	-10 $^{\circ}\text{C}$ / +40 $^{\circ}\text{C}$	Insulation resistance	>2000 M $\Omega$
Operating temperature range	-20 $^{\circ}\text{C}$ / +60 $^{\circ}\text{C}$	Safe overload (% of full scale)	120%
Creep at nominal load in 30 minutes	0.025%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.5 mm

## ELECTRICAL CONNECTIONS

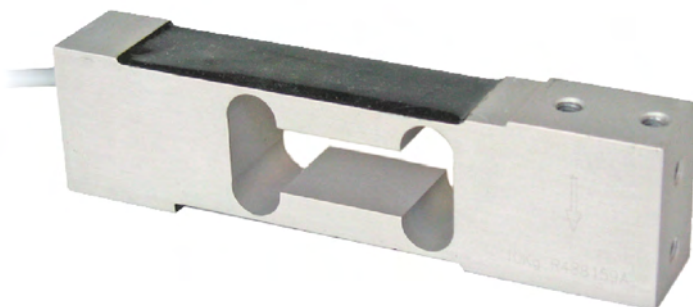
Cable length	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm <sup>2</sup>



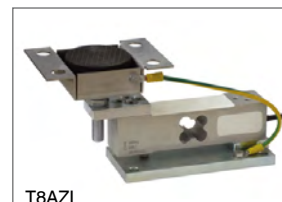
The Company reserves the right to make changes to the technical data, drawings and images without notice.



Capacity from 10 kg to 100 kg



MOUNTING KIT



T8AZL

It can be used for systems with at least 3 load cells connected in parallel

- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS				PLATFORM (mm)	NET WEIGHT (kg)	CODE
		C3	C4					
10		•	–	•	•	400 x 400	0.4	AZL10
15		•	•	•	•	400 x 400	0.4	AZL15
20		•	•	•	•	400 x 400	0.4	AZL20
30		•	•	•	•	400 x 400	0.4	AZL30
50		•	•	•	•	400 x 400	0.4	AZL50
100		•	–	•	•	400 x 400	0.4	AZL100

ON REQUEST

**CERTIFICATIONS**

OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

## CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEX (zone 0-1-2-20-21-22)



OIML R60 C4



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres



NTEP - Complies with United States regulations for legal for trade use

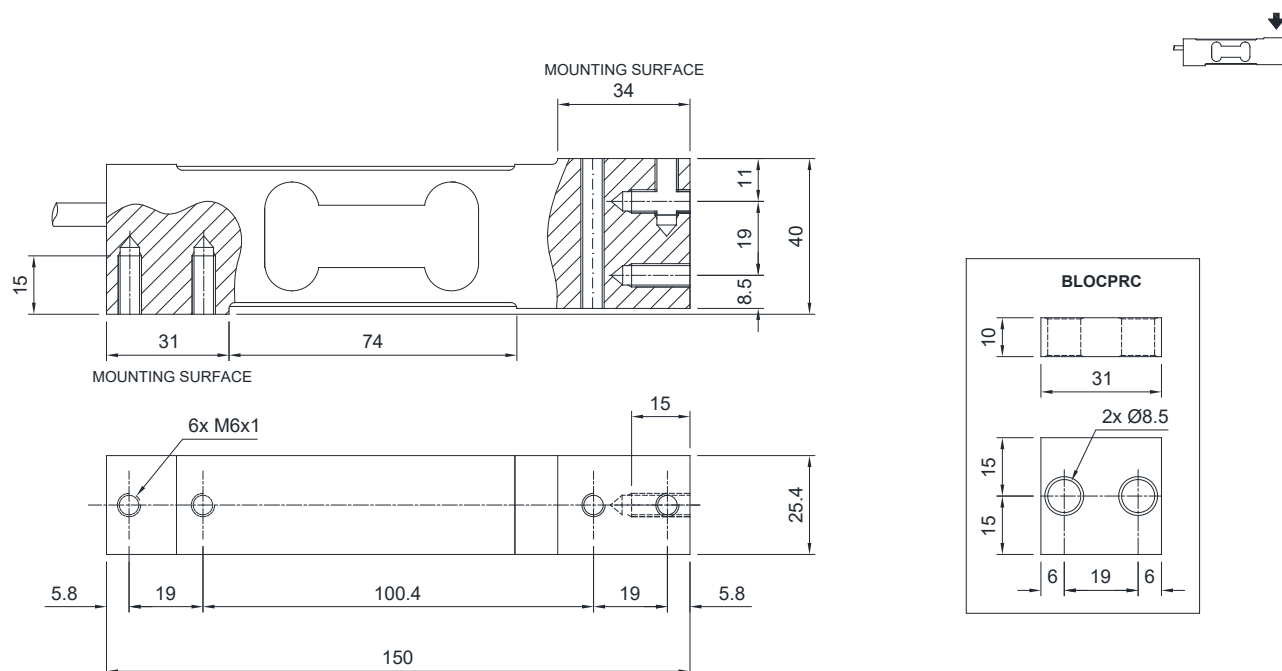
**COMPLEMENTARY ACCESSORIES**

	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOPCRC

# AZL

## SINGLE-POINT LOAD CELL for platforms 400x400 mm

### DIMENSIONS (mm)

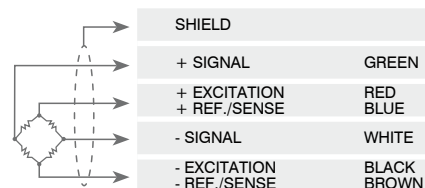


### TECHNICAL FEATURES

Material	Aluminum alloy		
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	
Nominal load (E max)	10 - 15 - 20 - 30 - 50 - 100 kg	15 - 20 - 30 - 50 kg	
Minimum verification interval (V min)	E max / 12000	E max / 15000	
Combined error	≤ ±0.02%	≤ ±0.017%	
Protection class	IP65		
Rated output	2 mV/V ± 10%	Input resistance	409 Ω ± 6
Temperature effect on zero	0.0017% °C	Output resistance	350 Ω ± 3
Temperature effect on span	0.0014% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥ 5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.5 mm

### ELECTRICAL CONNECTIONS

Cable length	6 m
Cable diameter	5 mm
Cores	6 x 0.20 mm <sup>2</sup>

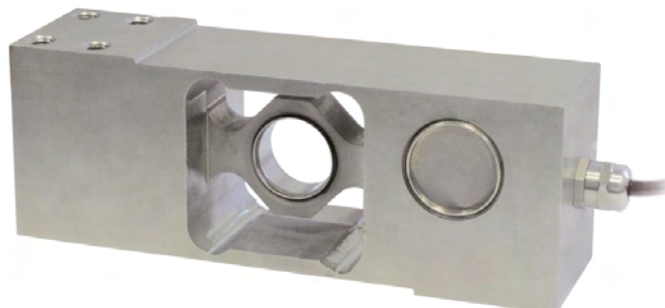
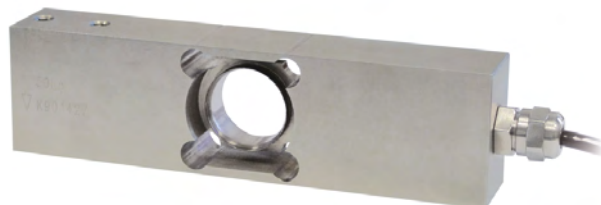


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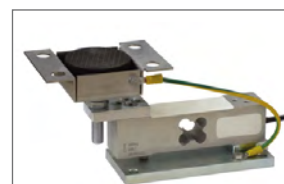
Capacity from 10 kg to 50 kg

Capacity from 100 kg to 500 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4)
- PROTECTION CLASS IP68

MOUNTING KIT



T8AZL capacity 50 kg

It can be used for systems with at least 3 load cells connected in parallel

CAPACITY	kg	ACCURACY CLASS				PLATFORM (mm)	NET WEIGHT (kg)	CODE
		C3	C4					
10		•	•	–	•	400 x 400	0.9	AZLI10
20		•	•	•	•	400 x 400	0.9	AZLI20
50		•	•	•	•	400 x 400	1	AZLI50
100		•	–	•	•	800 x 800	2.7	AZLI100
200		•	–	•	•	800 x 800	2.7	AZLI200
300		•	–	•	•	800 x 800	2.8	AZLI300
500		•	–	•	•	800 x 800	2.8	AZLI500

ON REQUEST

**CERTIFICATIONS**

OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

## CERTIFICATIONS ON REQUEST



Declaration of conformity + IP69K marking protection rating  
 Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)  
 Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEx (zone 0-1-2-20-21-22)



OIML R60 C4

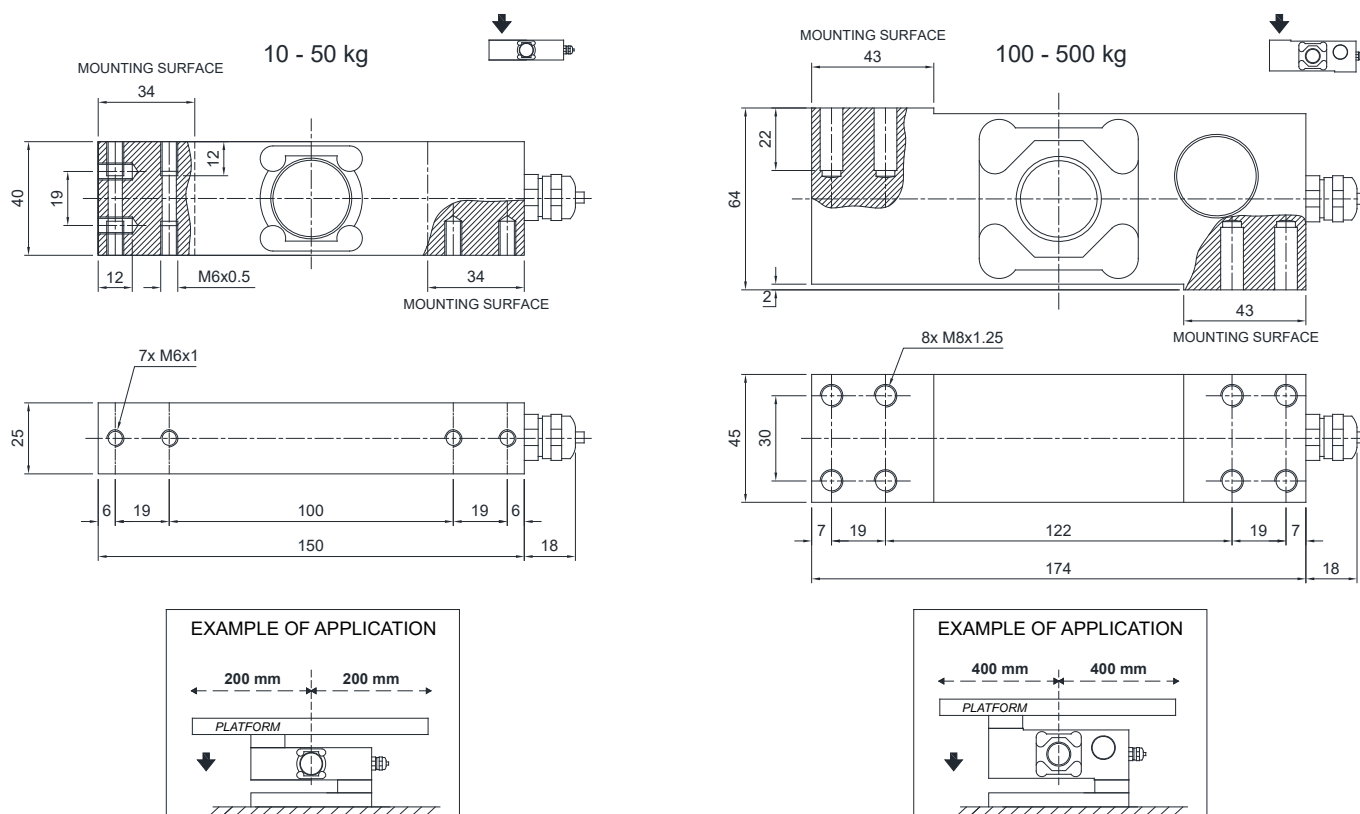


Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres



NTEP - Complies with United States regulations for legal for trade use

## DIMENSIONS (mm)

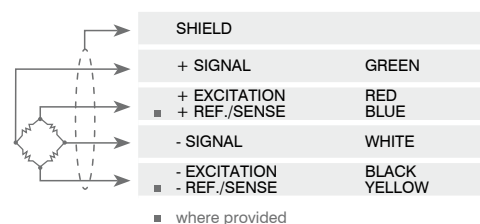


## TECHNICAL FEATURES

Material	17-4 PH Stainless steel	
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000
Nominal load (E max)	10 - 20 - 50 - 100 - 200 - 300 - 500 kg	10 - 20 - 50 kg
Minimum verification interval (V min)	E max / 10000	E max / 40000
Combined error	≤ ±0.02%	≤ ±0.017%
Protection class	IP68	
Rated output	2 mV/V ± 10%	Input resistance 350 Ω ± 3.5
Temperature effect on zero	0.0017% °C	Output resistance 350 Ω ± 3.5
Temperature effect on span	0.0014% °C	Zero balance ± 2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance ≥ 5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale) 150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale) 300%
Max supply voltage without damage	18 V	Deflection at nominal load 0.5 mm

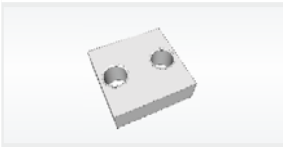
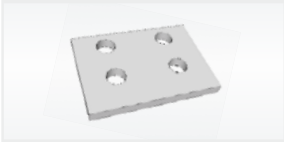
## ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.

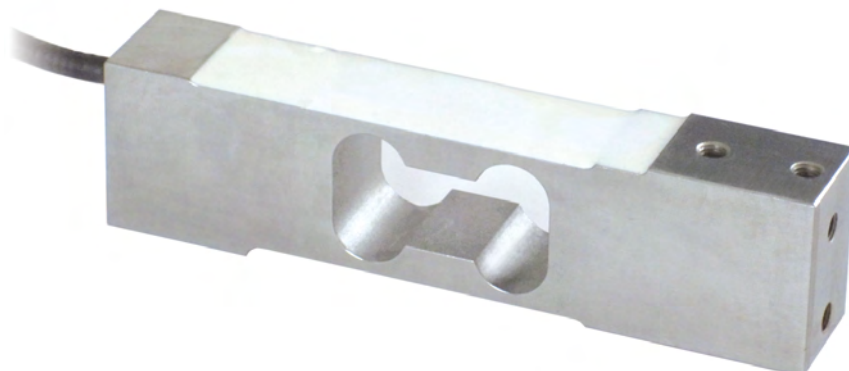
**COMPLEMENTARY ACCESSORIES**

	DESCRIPTION	CODE
	Stainless steel drawn block for capacities up to 50 kg.	BLOCPRC
	Stainless steel drawn block for capacities from 100 to 500 kg.	BLOCAPL

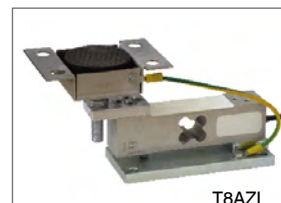


Manufactured according to OIML R60 standards

**Capacity from 10 kg to 200 kg**



**MOUNTING KIT**



**T8AZL**

It can be used for systems with at least 3 load cells connected in parallel

- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP67

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>10</b>	400 x 400	1	AZS10
	<b>30</b>	400 x 400	1	AZS30
	<b>50</b>	400 x 400	1	AZS50
	<b>100</b>	400 x 400	1	AZS100
	<b>200</b>	400 x 400	1	AZS200

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

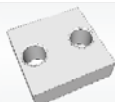
CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

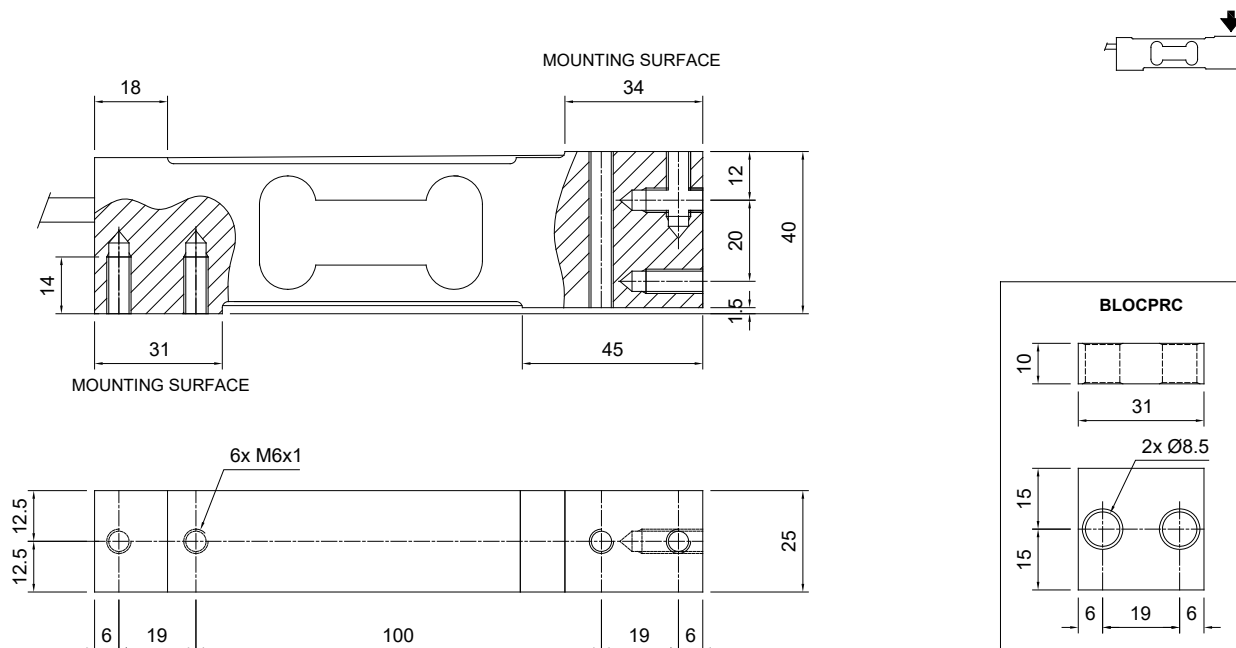
## COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOPCRC

# AZS

## SINGLE-POINT LOAD CELL for platforms 400x400 mm

### DIMENSIONS (mm)

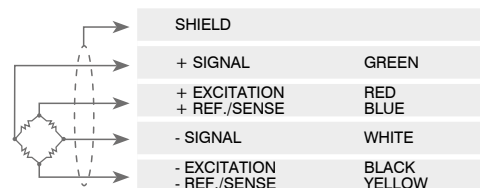


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	10 - 30 - 50 - 100 - 200 kg		
Combined error	≤ ±0.03%		
Protection class	IP67		
Rated output	2 mV/V ±10%	Input resistance	385 Ω ±30
Temperature effect on zero	0.0025% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0025% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>2000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.5 mm

### ELECTRICAL CONNECTIONS

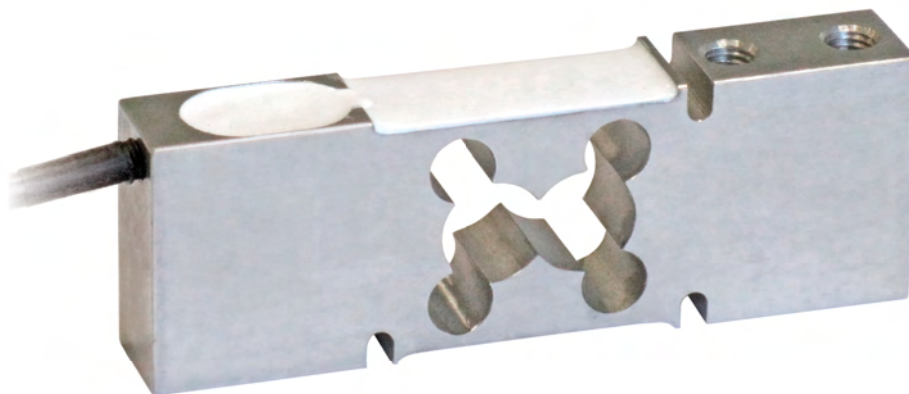
Cable length	6 m
Cable diameter	5 mm
Cores	6 x 0.20 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 30 kg to 150 kg**



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>30</b>	400 x 400	0.75	PTC30
	<b>50</b>	400 x 400	0.75	PTC50
	<b>75</b>	400 x 400	0.75	PTC75
	<b>100</b>	400 x 400	0.75	PTC100
	<b>150</b>	400 x 400	0.75	PTC150

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

**IECEx** IECEx (zone 0-1-2-20-21-22)

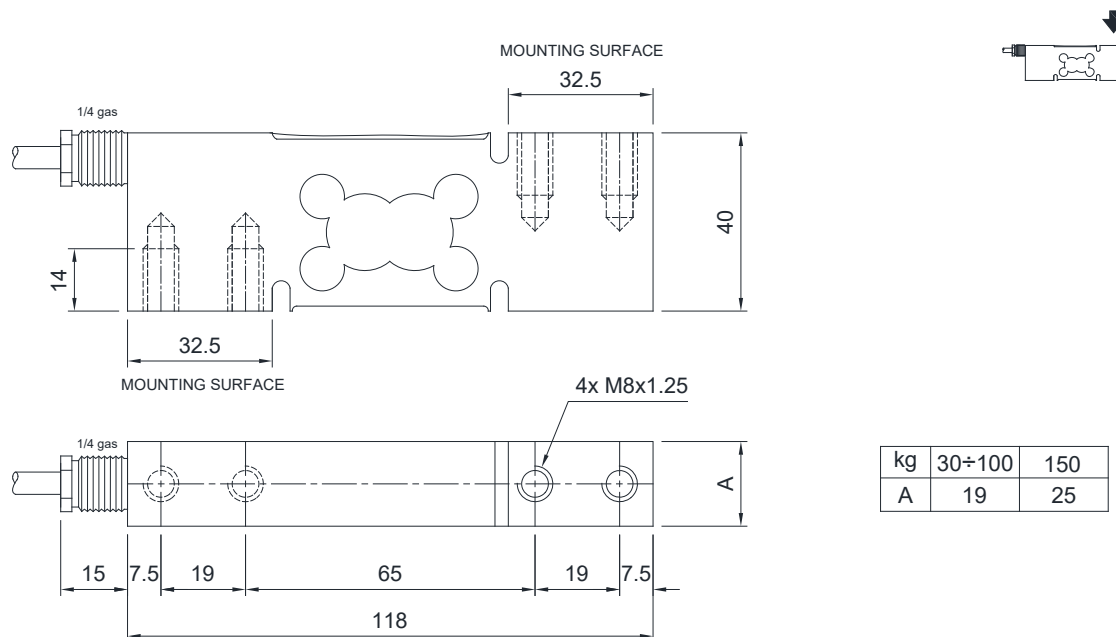
**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

# PTC

## SINGLE-POINT LOAD CELL for platforms 400x400 mm

**LAUMAS®**

### DIMENSIONS (mm)



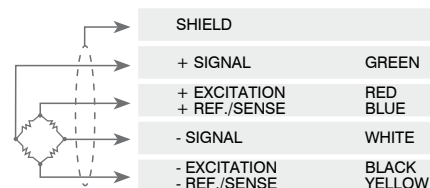
kg	30=100	150
A	19	25

### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	30 - 50 - 75 - 100 - 150 kg		
Combined error	≤ ±0.02%		
Protection class	IP67		
Rated output	2 mV/V ± 10%	Input resistance	385 Ω ± 30
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ± 5
Temperature effect on span	0.002% °C	Zero balance	± 1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	> 5000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

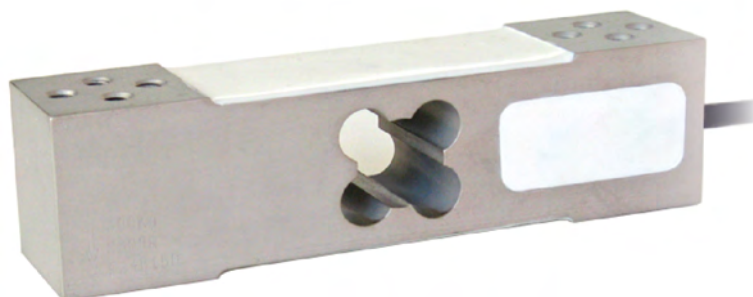
Cable length	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm <sup>2</sup>



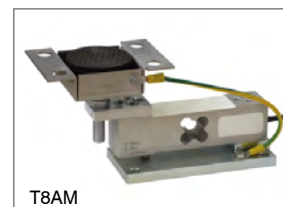
The Company reserves the right to make changes to the technical data, drawings and images without notice.



Capacity from 60 kg to 300 kg



MOUNTING KIT



T8AM

It can be used for systems with at least 3 load cells connected in parallel

- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS					PLATFORM (mm)	NET WEIGHT (kg)	CODE
		C3	C4	C5					
60		•	•	–	•	•	400 x 400	0.6	AM60
100		•	•	–	•	•	400 x 400	0.6	AM100
150		•	•	–	•	•	400 x 400	0.6	AM150
200		•	•	–	•	•	400 x 400	0.6	AM200
300		•	•	•	•	•	400 x 400	0.6	AM300

ON REQUEST

**CERTIFICATIONS**

OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UKCA)



IECEx (zone 0-1-2-20-21-22)



OIML R60 C4/C5



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres



NTEP - Complies with United States regulations for legal for trade use

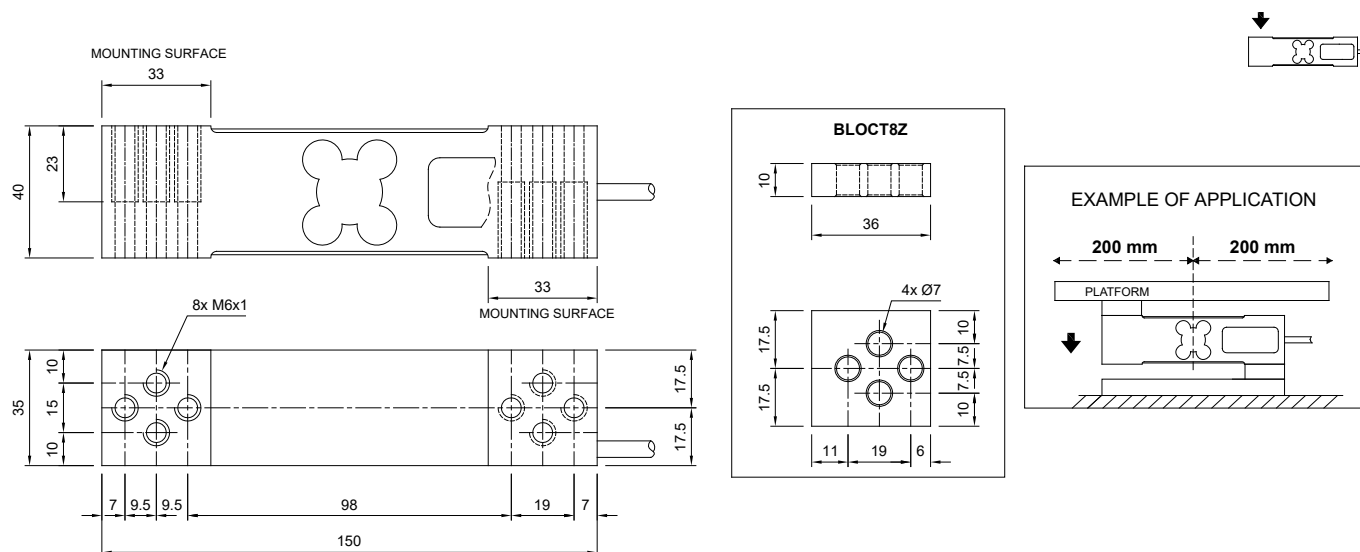
**COMPLEMENTARY ACCESSORIES**

	DESCRIPTION	CODE
	Stainless steel and rubber waterproof kit.	IP68AMPRE
	Galvanized steel drawn block.	BLOCT8Z

# AM

## SINGLE-POINT LOAD CELL for platforms 400x400 mm

### DIMENSIONS (mm)



### TECHNICAL FEATURES

Material	Aluminum alloy			
	C3 • 3000	C4 • 4000	C5 • 5000	
OIML R60 Accuracy class • Verification intervals	60 - 100 - 150 - 200 - 300 kg		300 kg	
Nominal load (E max)	E max / 10000		E max / 20000	
Minimum verification interval (V min)	≤ ±0.02%	≤ ±0.017%	≤ ±0.014%	
Combined error	IP65			
Protection class	Rated output	2 mV/V ±10%	Input resistance	406 Ω ±6
	Temperature effect on zero	0.003% °C	Output resistance	350 Ω ±3
	Temperature effect on span	0.002% °C	Zero balance	≤ ±2%
	Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
	Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
	Creep at nominal load in 30 minutes	0.025%	Ultimate overload (% of full scale)	300%
	Max supply voltage without damage	18 V	Deflection at nominal load	0.5 mm

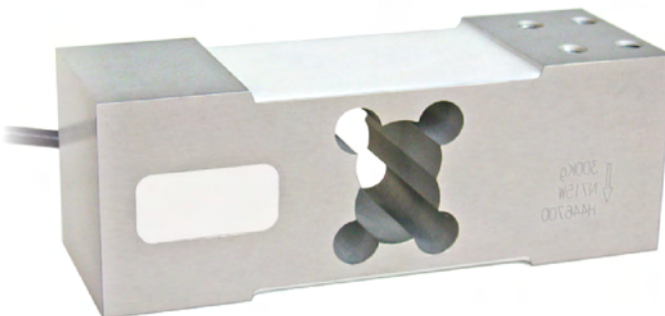
### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	4 x 0.20 mm <sup>2</sup>





## Capacity from 50 kg to 500 kg



- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS			PLATFORM (mm)	NET WEIGHT (kg)	CODE
		C3	C4				
50		•	–	•	600 x 600	1.7	APL50
100		•	–	•	600 x 600	1.7	APL100
150		•	•	•	600 x 600	1.7	APL150
200		•	•	•	600 x 600	1.7	APL200
300		•	•	•	600 x 600	1.7	APL300
500		•	•	•	600 x 600	1.7	APL500

ON REQUEST

## CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

## CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) ( - )
- IECEx (zone 0-1-2-20-21-22)
- OIML R60 C4
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

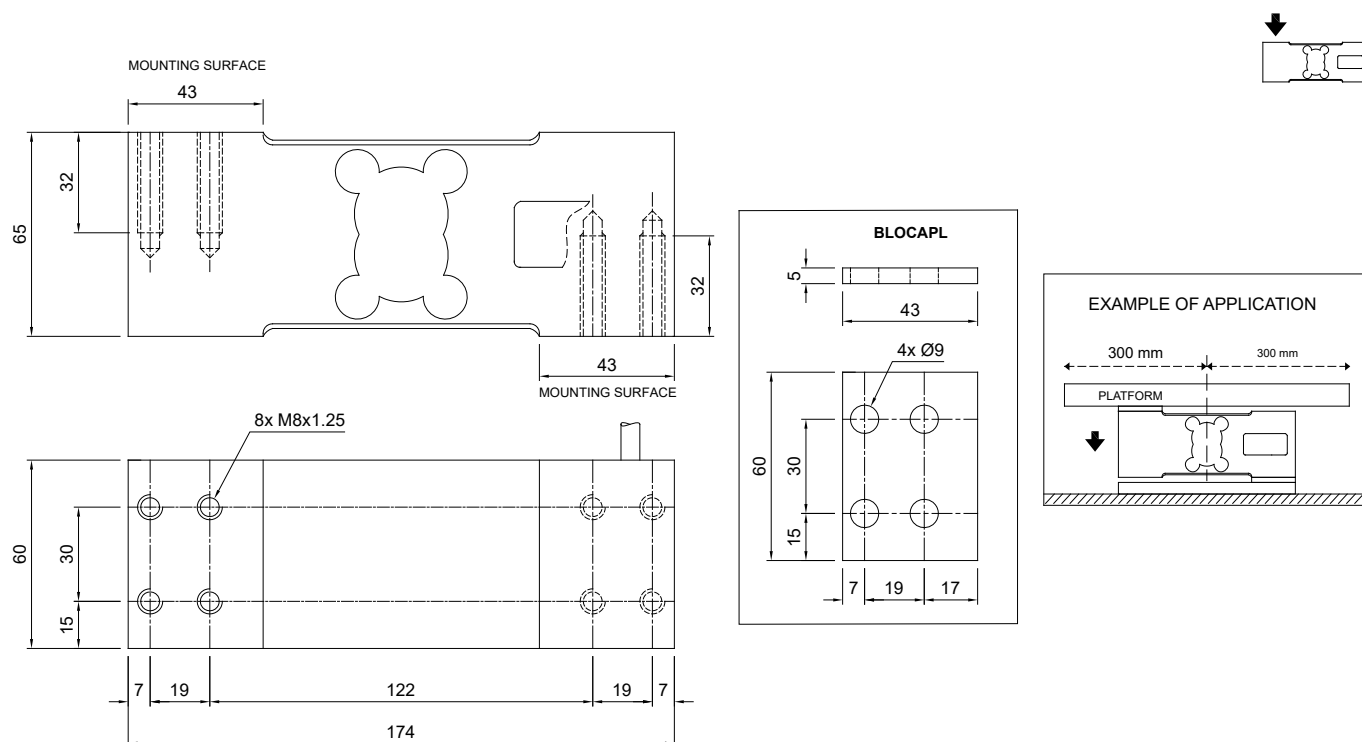
## COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Stainless steel and rubber waterproof kit (Ø 107x245 mm cable gland included)	IP68APLPRE
	Stainless steel drawn block.	BLOCAPL

# APL

## SINGLE-POINT LOAD CELL for platforms 600x600 mm

### DIMENSIONS (mm)

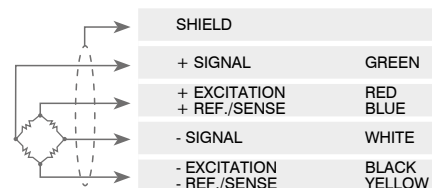


### TECHNICAL FEATURES

Material	Aluminum alloy	
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000
Nominal load (E max)	50 - 100 - 150 - 200 - 300 - 500 kg	150 - 200 - 300 - 500 kg
Minimum verification interval (V min)	E max / 12000	E max / 15000
Combined error	≤ ±0.02%	≤ ±0.017%
Protection class	IP65	
Rated output	2 mV/V ±10%	Input resistance 409 Ω ±6
Temperature effect on zero	0.0017% °C	Output resistance 350 Ω ±3
Temperature effect on span	0.0014% °C	Zero balance ≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance ≥5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale) 150%
Creep at nominal load in 30 minutes	0.015%	Ultimate overload (% of full scale) 300%
Max supply voltage without damage	18 V	Deflection at nominal load 0.5 mm

### ELECTRICAL CONNECTIONS

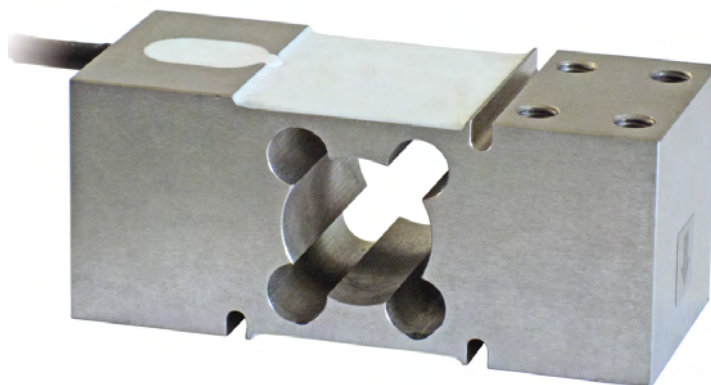
Cable length	3 m
Cable diameter	6 mm
Cores	6 x 0.20 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 75 kg to 500 kg**



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>75</b>	600 x 600	1.8	PEC75
	<b>150</b>	600 x 600	1.8	PEC150
	<b>300</b>	600 x 600	2	PEC300
	<b>500</b>	600 x 600	2	PEC500

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

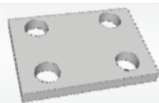
### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UK CA** )

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

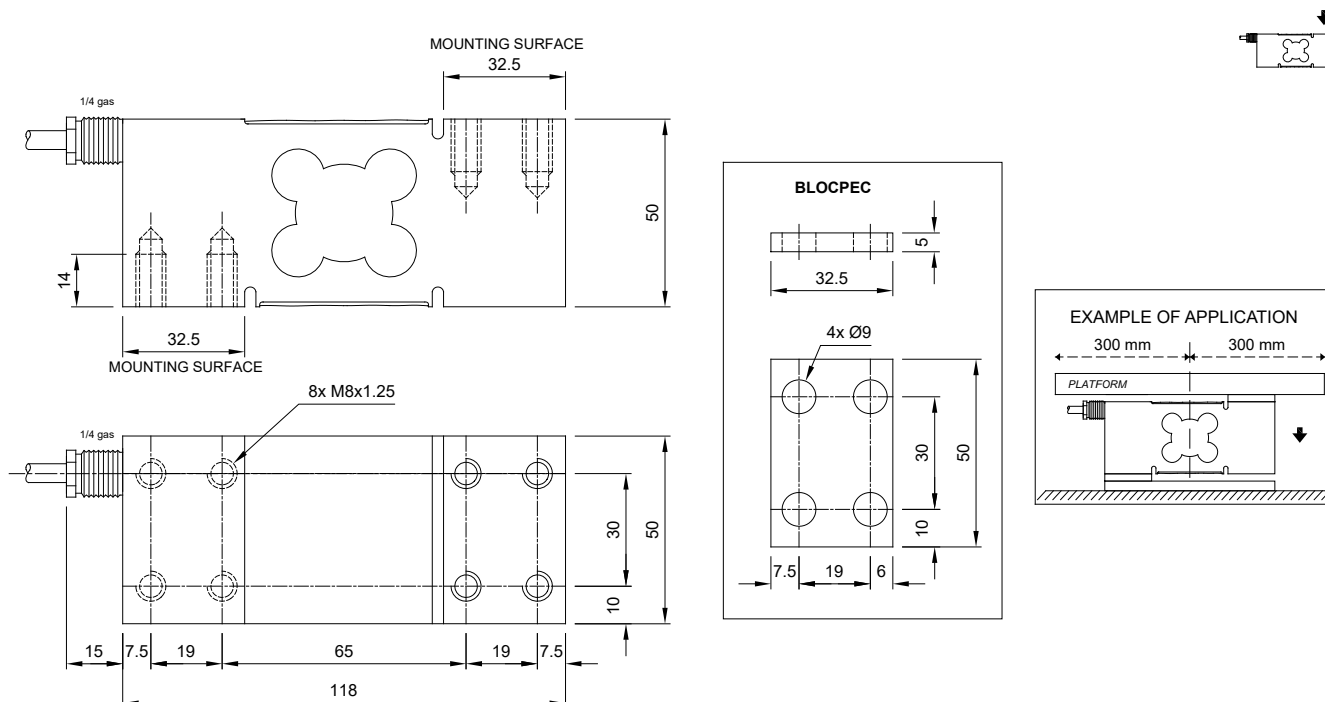
## COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOCEP

# PEC

## SINGLE-POINT LOAD CELL for platforms 600x600 mm

### DIMENSIONS (mm)

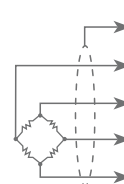


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	75 - 150 - 300 - 500 kg		
Combined error	≤ ±0.02%		
Protection class	IP67		
Rated output	2 mV/V ±10%	Input resistance	385 Ω ±30
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.002% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	6 x 0.20 mm <sup>2</sup>



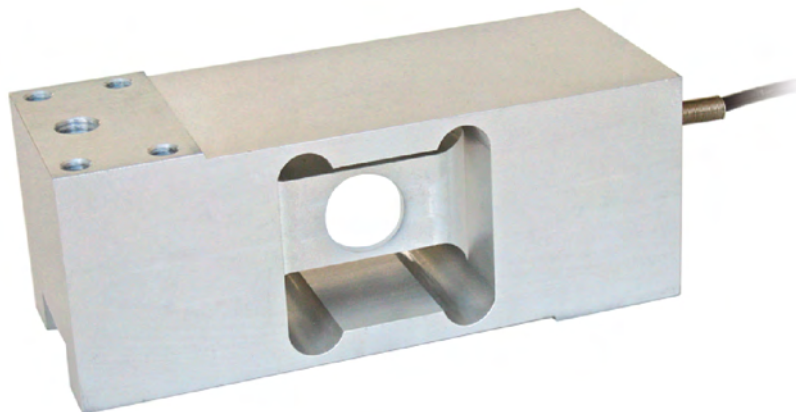
SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION	BLACK
- REF./SENSE	YELLOW

The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

**Capacity from 500 kg to 1000 kg**



- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.05\%$
- PROTECTION CLASS IP65

CAPACITY	kg	PLATFORM (mm)	NET WEIGHT (kg)	CODE
	<b>500</b>	800 x 800	2.2	AR500
	<b>1000</b>	800 x 800	2.3	AR1000

## CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

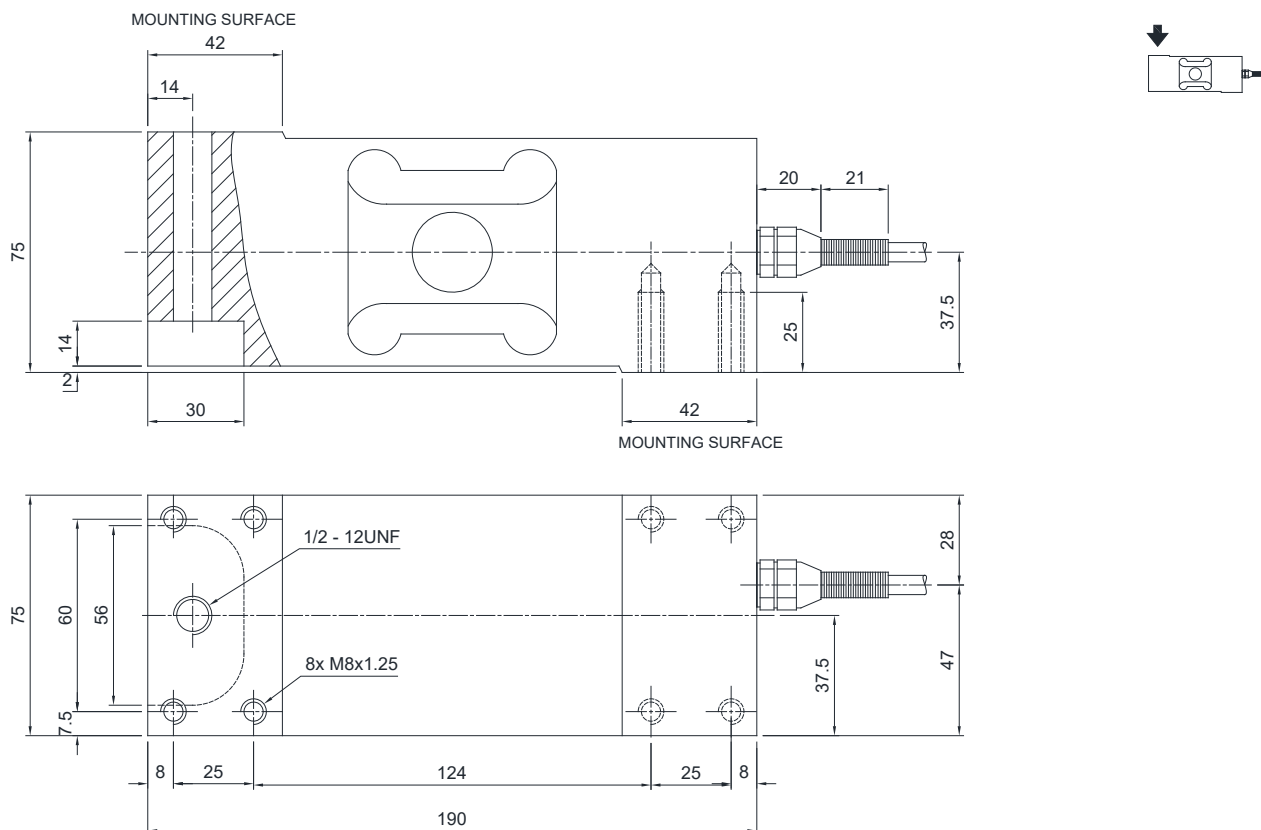


IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## DIMENSIONS (mm)

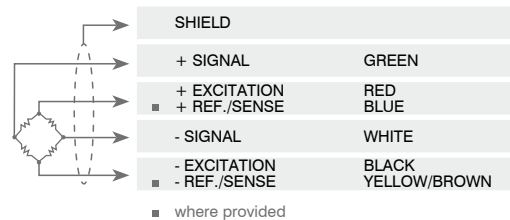


## TECHNICAL FEATURES

Material	Aluminum alloy		
Nominal load (E max)	500 - 1000 kg		
Combined error	≤ ±0.05%		
Protection class	IP65		
Rated output	2 mV/V ±10%	Input resistance	410 Ω ±10
Temperature effect on zero	0.0025% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0025% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>2000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	120%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.5 mm

## ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm <sup>2</sup>









Capacity from 1000 kg to 2000 kg




- ALUMINUM ALLOY
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP65

CAPACITY	kg		PLATFORM (mm)	NET WEIGHT (kg)	CODE
1000		•	1200 x 1200	3.8	ATL1000
2000		•	1200 x 1200	3.8	ATL2000

## CERTIFICATIONS

-  OIML R60 C3
-  Complies with the Eurasian Customs Union standards
-  Equivalent of the CE marking for the United Kingdom
-  Complies with United Kingdom regulations for legal for trade use

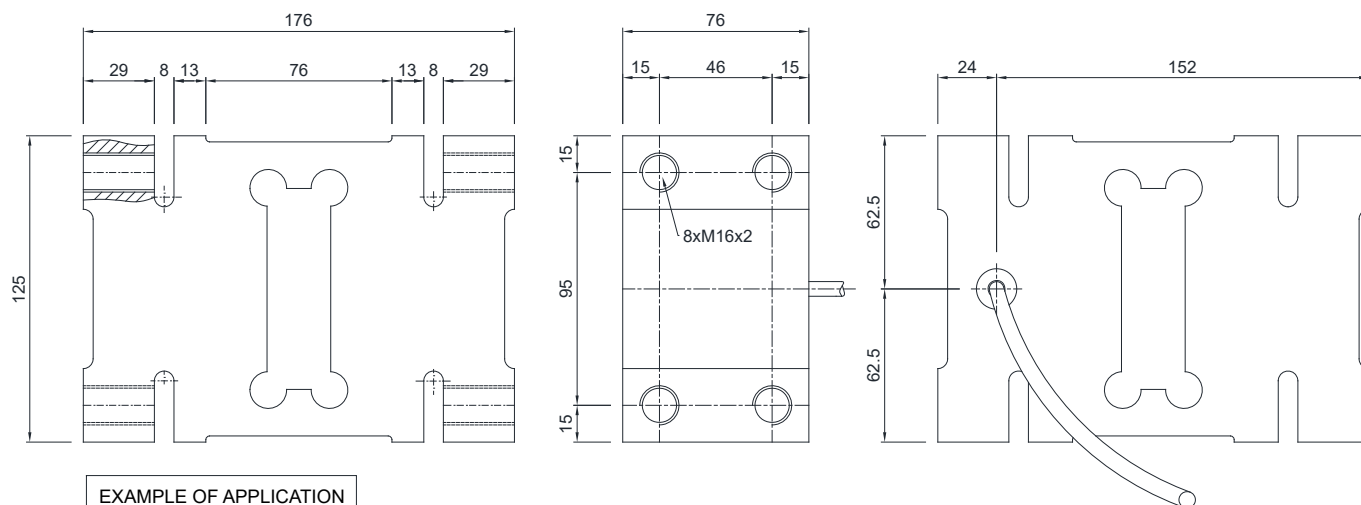
### CERTIFICATIONS ON REQUEST

-  ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
-  IECEx (zone 0-1-2-20-21-22)
-  Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

# ATL

## SINGLE-POINT LOAD CELL for platforms 1200x1200 mm

### DIMENSIONS (mm)









### TECHNICAL FEATURES

Material	Aluminum alloy		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	1000 - 2000 kg		
Minimum verification interval (V min)	E max / 7000		
Combined error	≤ ±0.02%		
Protection class	IP65		
Rated output	2 mV/V ±10%	Input resistance	406 Ω ±6
Temperature effect on zero	0.0017% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0014% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.8 mm

### ELECTRICAL CONNECTIONS

3 m
6 mm
6 x 0.20 mm <sup>2</sup>



	CAPACITY	PAGE
<b>A1.2</b>	<b>BENDING BEAM</b>	
	<b>FCK</b> 5, 10 kg	<b>37</b>
	<b>FCOL</b> 20, 50, 100, 200, 350, 500 kg	<b>39</b>
	<b>FCAX*</b> 30, 50, 75, 150, 300, 500 kg	<b>41</b>
	<b>FCAL</b> 50, 75, 150, 300 kg	<b>43</b>
	<b>FTP*</b> 75, 150, 300 kg	<b>45</b>
	<b>FTK*</b> 75, 150, 300 kg	<b>47</b>

\*) SHEAR / BENDING BEAM load cells





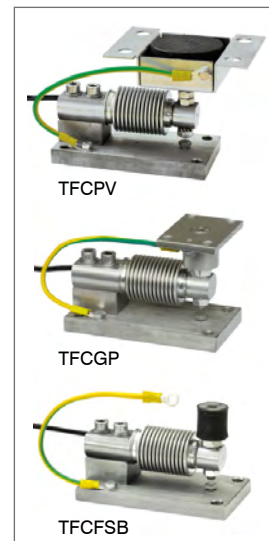
Manufactured according to OIML R60 standards

### Capacity from 5 kg to 10 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68

#### MOUNTING KITS



CAPACITY	kg	NET WEIGHT (kg)	CODE
	5	0.4	FCK5
	10	0.4	FCK10

#### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

##### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

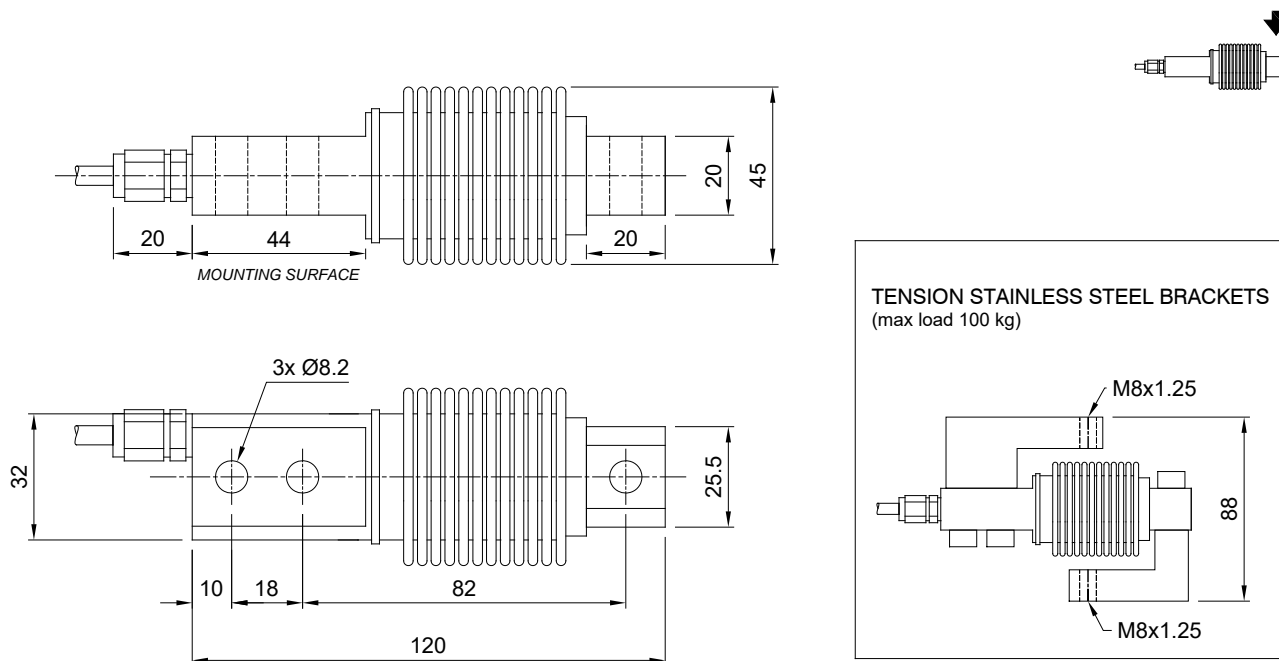
**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

#### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 100 kg	STAFFEFCMONT

### DIMENSIONS (mm)

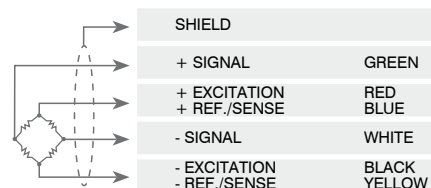


### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	5 - 10 kg		
Combined error	$\leq \pm 0.02\%$		
Protection class	IP68		
Rated output	2 mV/V $\pm 1\%$	Input resistance	400 $\Omega \pm 20$
Temperature effect on zero	0.002% $^{\circ}\text{C}$	Output resistance	352 $\Omega \pm 3$
Temperature effect on span	0.002% $^{\circ}\text{C}$	Zero balance	$\pm 2\%$
Compensated temperature range	-10 $^{\circ}\text{C}$ / +40 $^{\circ}\text{C}$	Insulation resistance	>5000 M $\Omega$
Operating temperature range	-30 $^{\circ}\text{C}$ / +65 $^{\circ}\text{C}$	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	4 mm
Cores	6 x 0.22 mm <sup>2</sup>



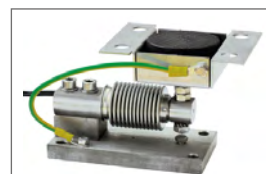


Capacity from 20 kg to 500 kg

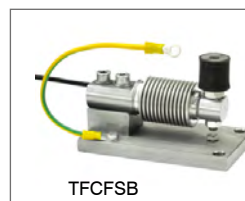


- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4)
- PROTECTION CLASS IP68

MOUNTING KITS



TFCPV



TFCFSB



TFCGP

CAPACITY	kg	ACCURACY CLASS				NET WEIGHT (kg)	CODE
		C3	C4				
20		•	•	–	•	0.4	FCOL20
50		•	•	•	•	0.4	FCOL50
100		•	•	•	•	0.4	FCOL100
200		•	•	•	•	0.4	FCOL200
350		•	•	•	•	0.4	FCOL350
500		•	•	•	•	0.4	FCOL500

ON REQUEST

### CERTIFICATIONS



OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEx (zone 0-1-2-20-21-22)



OIML R60 C4



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

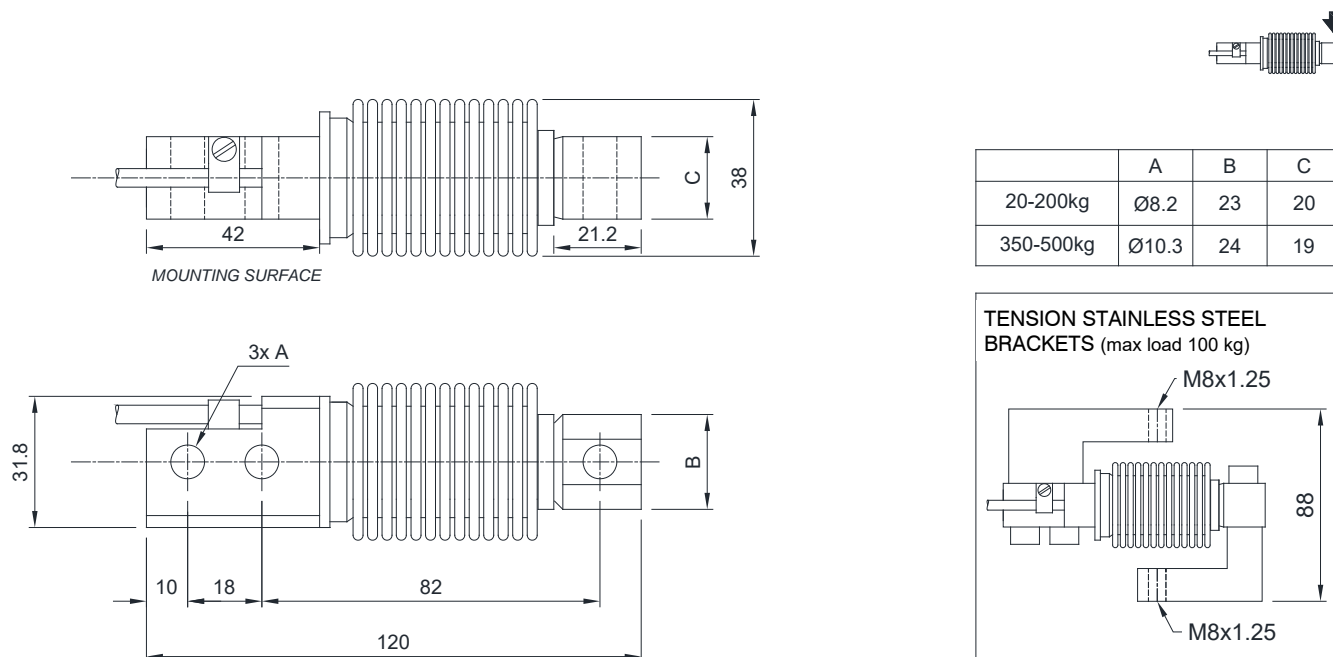


NTEP - Complies with United States regulations for legal for trade use

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 100 kg	STAFFEFMONT

### DIMENSIONS (mm)



### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	
Nominal load (E max)	20 - 50 - 100 - 200 - 350 - 500 kg		
Minimum verification interval (V min)	E max / 10000	E max / 15000	
Combined error	≤ ±0.02%	≤ ±0.017%	
Protection class	IP68		
Rated output	2 mV/V ± 1% *	Input resistance	460 Ω ± 50
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ± 3.5
Temperature effect on span	0.0014% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥ 5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.4 mm

\* Calibrated current output

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	5 mm
Cores	4 x 0.22 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

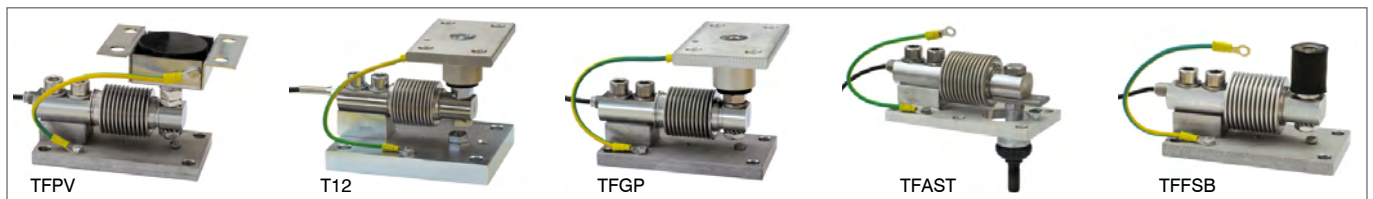
**BENDING BEAM: capacity from 30 kg to 500 kg**

**SHEAR BEAM: capacity from 750 kg to 1500 kg**

- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68



#### MOUNTING KITS



CAPACITY	kg	NET WEIGHT (kg)	CODE
	<b>30</b>	0.6	FCAX30
	<b>50</b>	0.6	FCAX50
	<b>75</b>	0.6	FCAX75
	<b>150</b>	0.6	FCAX150
	<b>300</b>	0.7	FCAX300
	<b>500</b>	0.7	FCAX500
	<b>750</b>	0.7	FCAX750
	<b>1000</b>	0.7	FCAX1000
	<b>1500</b>	0.7	FCAX1500

#### CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEX (zone 0-1-2-20-21-22)

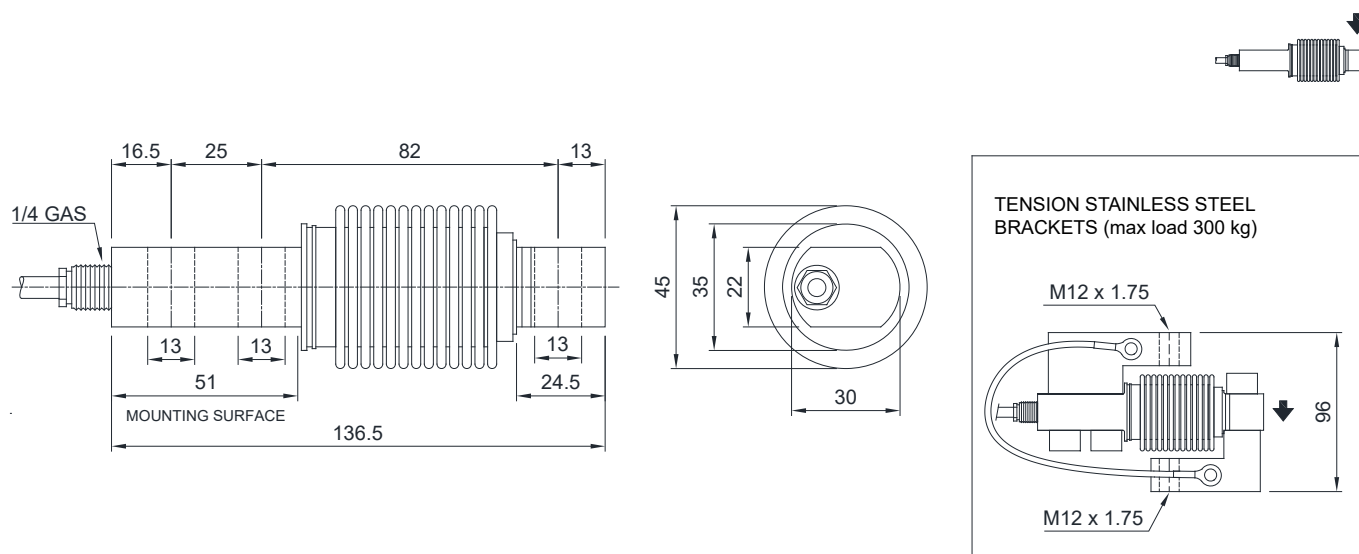


Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

#### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 300 kg	STAFFEFCAMONT

### DIMENSIONS (mm)



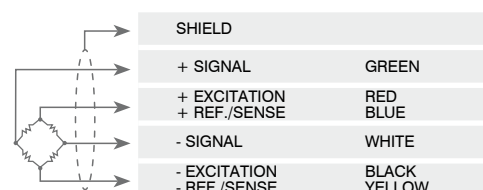
### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	30 - 50 - 75 - 150 - 300 - 500 - 750 - 1000 - 1500 kg		
Combined error	$\leq \pm 0.02\%$		
Protection class	IP68		
Rated output	2 mV/V $\pm 0.4\%$	Input resistance	350 $\Omega \pm 5$ *
Temperature effect on zero	0.002% $^{\circ}\text{C}$	Output resistance	350 $\Omega \pm 5$
Temperature effect on span	0.002% $^{\circ}\text{C}$	Zero balance	$\pm 1\%$
Compensated temperature range	-10 $^{\circ}\text{C}$ / +40 $^{\circ}\text{C}$	Insulation resistance	>5000 M $\Omega$
Operating temperature range	-20 $^{\circ}\text{C}$ / +50 $^{\circ}\text{C}$	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

\* Input resistance for 30, 50, 75, 150, 300 kg capacities: 400  $\Omega \pm 20$

### ELECTRICAL CONNECTIONS

Cable length	5 m
Cable diameter	5 mm
Cores	6 x 0.22 mm <sup>2</sup>

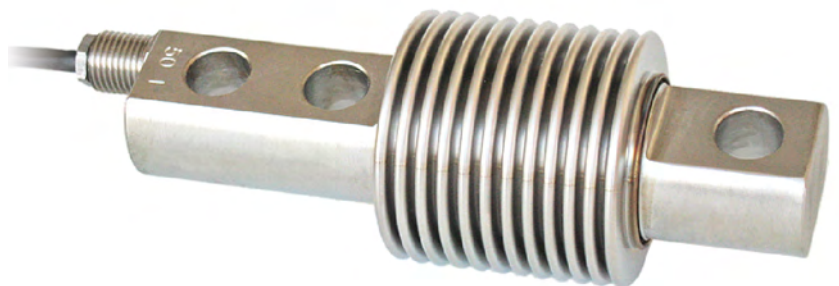


The Company reserves the right to make changes to the technical data, drawings and images without notice.

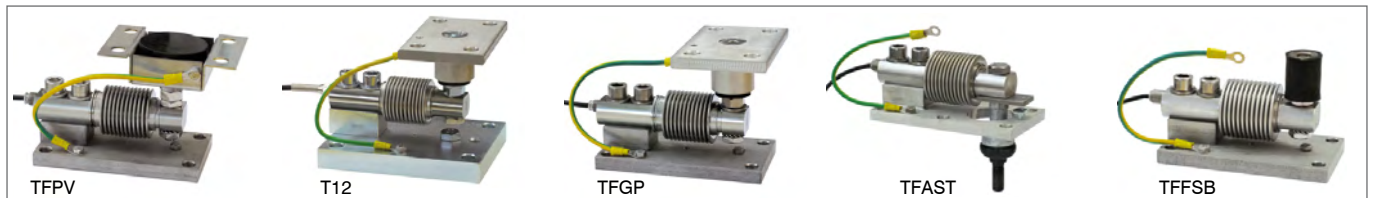


Capacity from 50 kg to 300 kg

- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.017\%$
- PROTECTION CLASS IP68



### MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
50		•	•	0.5	FCAL50
75		•	•	0.5	FCAL75
150		•	•	0.5	FCAL150
300		•	•	0.5	FCAL300

### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

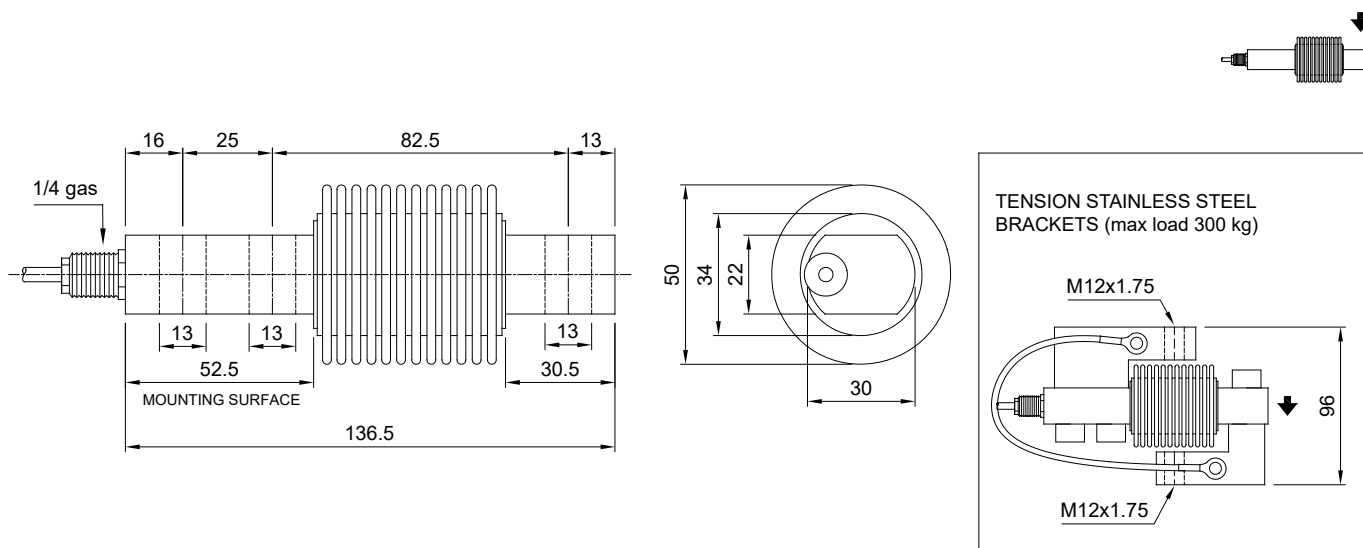
#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) ( - )
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### COMPLEMENTARY ACCESSORIES

DESCRIPTION	CODE
<p>Pair of tension stainless steel brackets. Maximum static load: 300 kg</p>	STAFFEFCAMONT

### DIMENSIONS (mm)

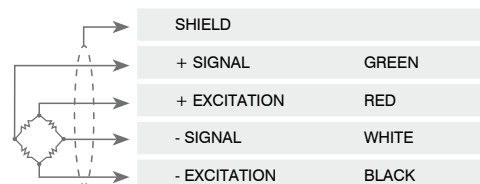


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	50 - 75 - 150 - 300 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.017%		
Protection class	IP68		
Rated output	2.0 mV/V ±0.1%	Input resistance	400 Ω ±20
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0012% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +50 °C	Safe overload (% of full scale)	200%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	4 mm
Cores	4 x 0.22 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



## SHEAR BEAM: capacity from 500 kg to 10000 kg

## BENDING BEAM: capacity from 75 kg to 300 kg



IP67

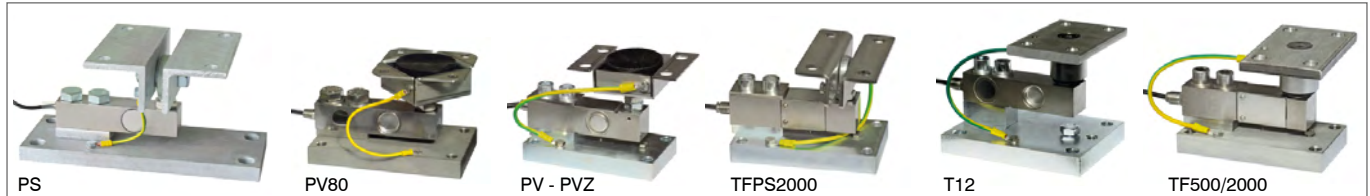


IP68

IP69K

- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67 - IP68

## MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
75		•	•	0.9	FTP75
150		•	•	0.9	FTP150
300		•	•	0.9	FTP300
500		•	•	0.9	FTP500
750		•	•	0.9	FTP750
1000		•	•	0.9	FTP1000
1500		•	•	0.9	FTP1500
2000		•	•	0.9	FTP2000
3000		–	–	1.6	FTP3000
5000		–	–	1.6	FTP5000
10000		–	–	3.8	FTP10000

## CERTIFICATIONS



OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

## CERTIFICATIONS ON REQUEST



Declaration of conformity + IP69K marking protection rating

Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)  
Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

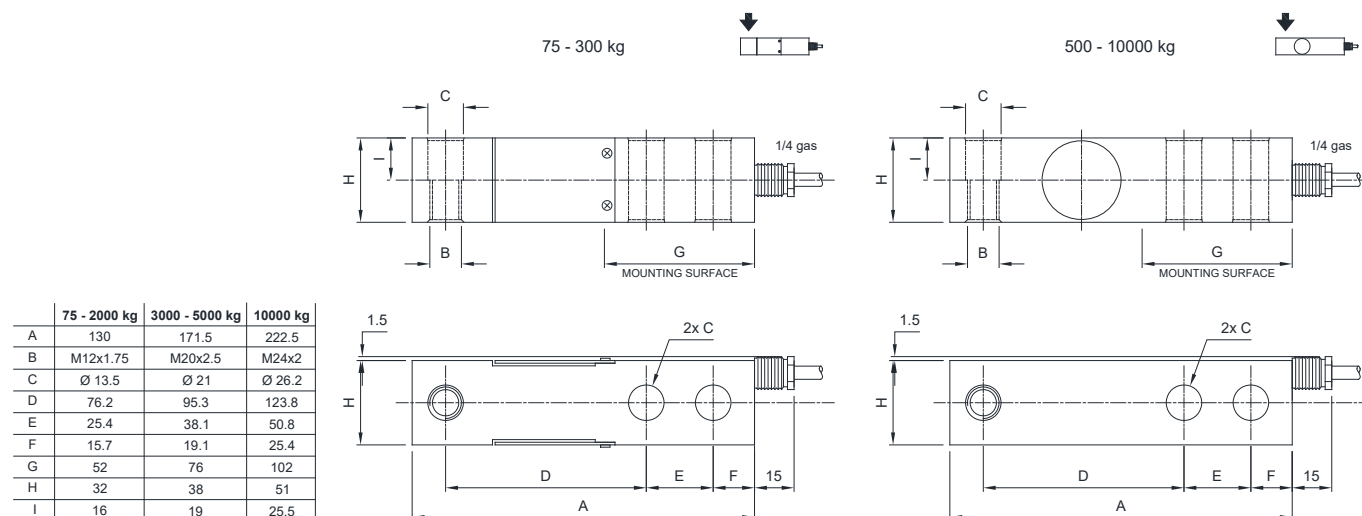


IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)

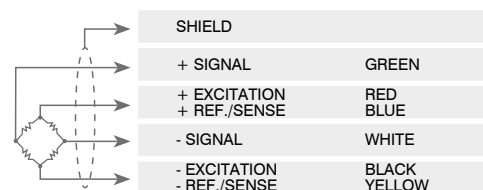


### TECHNICAL FEATURES

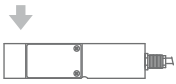
Material	AISI 420 stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		-
Nominal load (E max)	75 -150 - 300 - 500 kg 1000 - 1500 - 2000 kg	3000 - 5000 - 10000 kg	
Minimum verification interval (V min)	E max / 15000		-
Combined error	≤ ±0.02%		
Protection class	IP67 (75 - 300 kg), IP68 (500 - 10000 kg)		
Input resistance	385 Ω ±10	400 Ω ±15	
Output resistance	350 Ω ±3	350 Ω ±5	
Rated output	2 mV/V ±0.1%	Max supply voltage without damage	15 V
Temperature effect on zero	0.002% °C	Zero balance	±2%
Temperature effect on span	0.0012% °C	Insulation resistance	≥5000 MΩ
Compensated temperature range	-10 °C / +40 °C	Safe overload (% of full scale)	150%
Operating temperature range	-20 °C / +70 °C	Ultimate overload (% of full scale)	200%
Creep at nominal load in 30 minutes	0.03%	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

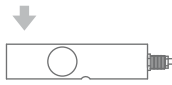
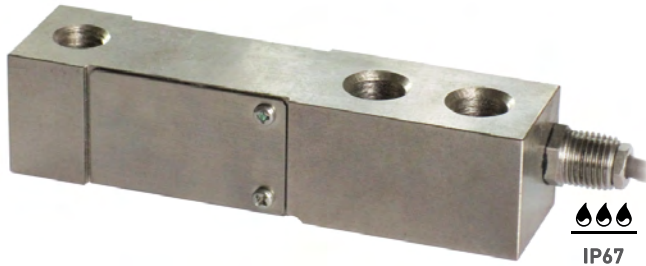
Cable length	5 m (75-5000 kg); 10 m (10000 kg)
Cable diameter	5 mm
Cores	6 x 0.25 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



BENDING BEAM: capacity from 75 kg to 300 kg

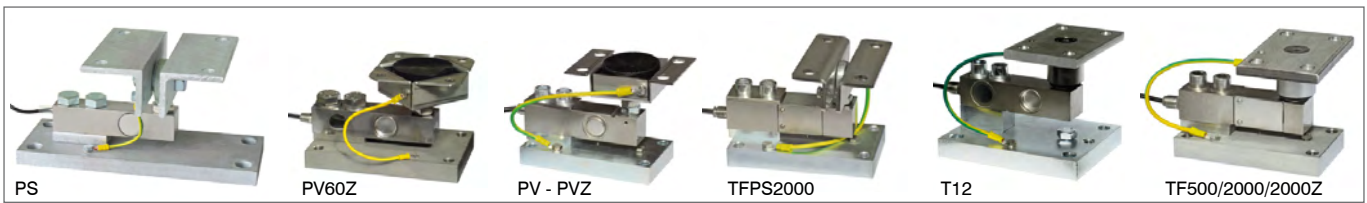


SHEAR BEAM: capacity from 500 kg to 5000 kg



- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67 - IP68

#### MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
75	75	—	—	1	FTK75
150	150	—	—	1	FTK150
300	300	—	—	1	FTK300
500	500	—	—	1	FTK500
1000	1000	•	•	1.1	FTK1000
2000	2000	•	•	1.1	FTK2000
3000	3000	•	•	1.1	FTK3000
5000	5000	•	•	1.1	FTK5000

#### CERTIFICATIONS



OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UKCA)

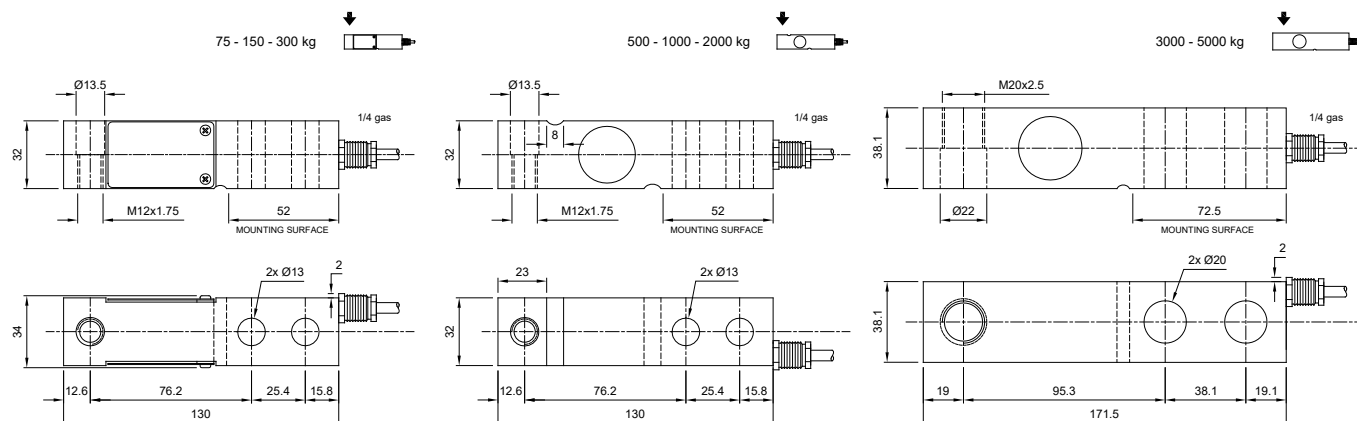


IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)

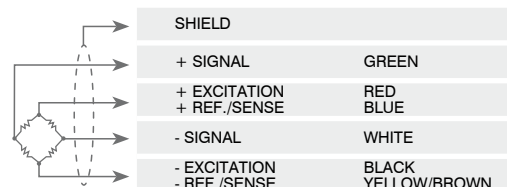


### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	-	C3 • 3000	
Nominal load (E max)	75 -150 - 300 - 500 kg	1000 - 2000 - 3000 - 5000 kg	
Minimum verification interval (V min)	-	E max / 12000	
Combined error	≤ ±0.02%		
Protection class	IP67 (75 - 300 kg), IP68 (500 - 5000 kg)		
Rated output	2 mV/V ±0.1%	Input resistance	400 Ω ±10
Temperature effect on zero	0.002% °C	Output resistance	352 Ω ±2
Temperature effect on span	0.0012% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	250%
Max supply voltage without damage	15 V	Deflection at nominal load	0.6 mm

### ELECTRICAL CONNECTIONS











Cable length	6 m
Cable diameter	5 mm
Cores	6 x 0.24 mm <sup>2</sup>



### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Special steel block for capacities up to 2000 kg.	PIASTRINO

The Company reserves the right to make changes to the technical data, drawings and images without notice.

	CAPACITY	PAGE
	<b>A1.3</b>	<b>SHEAR BEAM</b>
	<b>FTL</b> 300 kg	<b>51</b>
	<b>FTK*</b> 500, 1000, 2000, 3000, 5000 kg	<b>47</b>
	<b>FT-P</b> 500, 1000, 2000 kg	<b>53</b>
	<b>FTKL</b> 500, 1000, 1500, 2000, 3000, 5000 kg	<b>55</b>
	<b>FTZ</b> 500, 1000, 2000, 5000 kg	<b>57</b>
	<b>FTZA</b> 500, 1000, 2000, 5000, 7500, 10000 kg	<b>59</b>
	<b>FCAX*</b> 750, 1000, 1500 kg	<b>41</b>
	<b>FTP*</b> 500, 750, 1000, 1200, 1500, 2000, 3000, 5000, 10000 kg	<b>45</b>
	<b>FTH</b> 5000, 10000 kg	<b>61</b>
	<b>FTP DOP</b> 1000, 6000 kg	<b>63</b>

\*) SHEAR / BENDING BEAM load cells





Capacity 300 kg



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.017\%$
- PROTECTION CLASS IP68

#### MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS		NET WEIGHT (kg)	CODE
	<b>300</b>	<b>C3</b>		0.9	FTL300

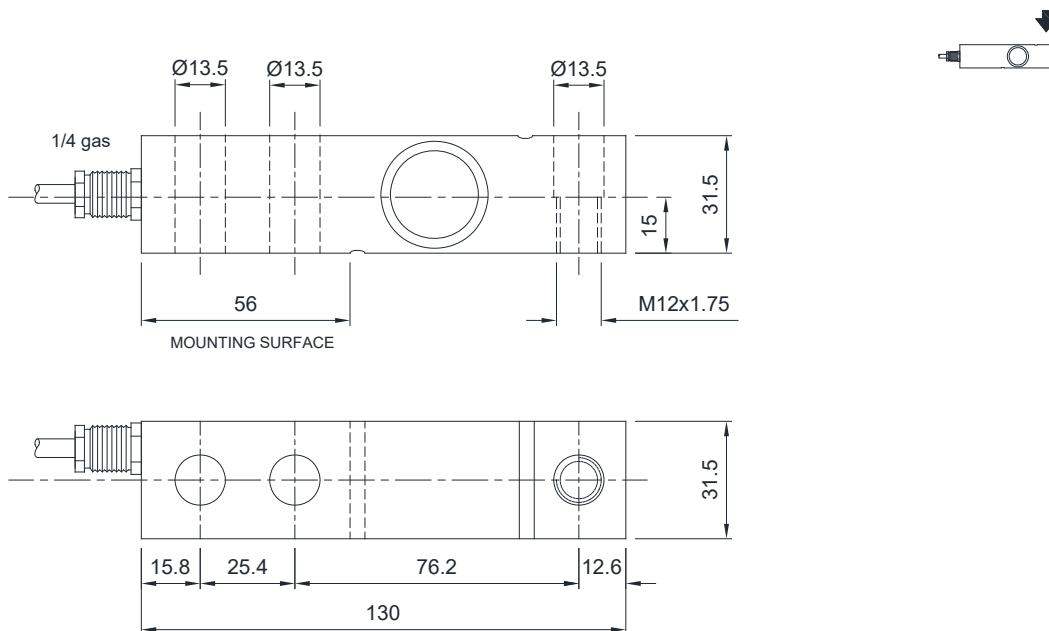
#### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



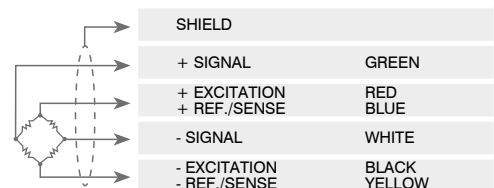
### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	300 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.017%		
Protection class	IP68		
Rated output	2 mV/V ± 0.1% *	Input resistance	400 Ω ± 20
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ± 3
Temperature effect on span	0.0012% °C	Zero balance	± 2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥ 5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

\* Calibrated current output

### ELECTRICAL CONNECTIONS

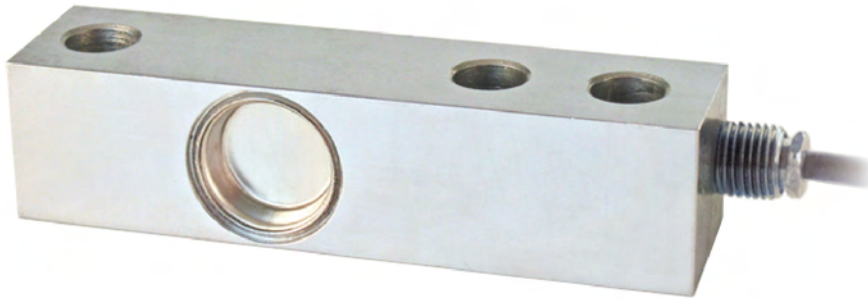
Cable length	5.8 m
Cable diameter	6 mm
Cores	6 x 0.22 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Capacity from 500 kg to 2000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68

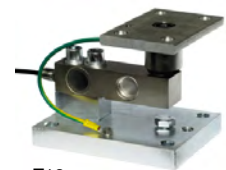
#### MOUNTING KITS



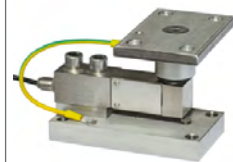
PV - PVZ



TFPS2000



T12



TF500/2000

CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
500		•	•	0.9	FT-P500
1000		•	•	0.9	FT-P1000
2000		•	•	0.9	FT-P2000

#### CERTIFICATIONS



OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST



Declaration of conformity + IP69K marking protection rating

Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)  
Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

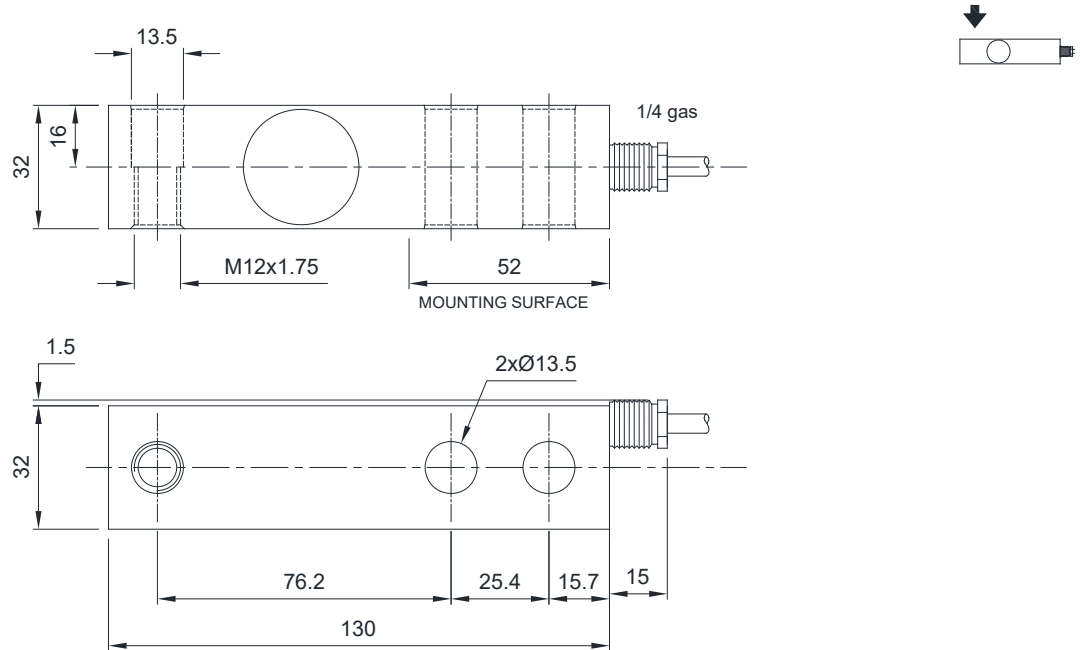


IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



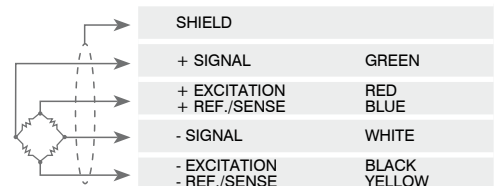
### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	500 - 1000 - 2000 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.02%		
Protection class	IP68		

Rated output	2.0 mV/V ±0.4%	Input resistance	385 Ω ±10
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.0012% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

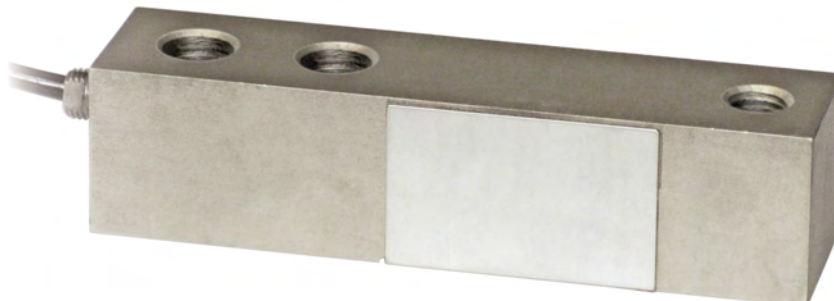
### ELECTRICAL CONNECTIONS

Cable length	5 m
Cable diameter	5 mm
Cores	6 x 0.25 mm <sup>2</sup>





Capacity from 500 kg to 5000 kg



- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP67

#### MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS					NET WEIGHT (kg)	CODE
		C3	C4	C5				
500		•	•	•	•	•	0.8	FTKL500
1000		•	•	•	•	•	0.8	FTKL1000
1500		•	•	•	•	•	0.9	FTKL1500
2000		•	•	•	•	•	0.9	FTKL2000
3000		•	•	•	•	•	1.7	FTKL3000
5000		•	•	•	•	•	1.7	FTKL5000

ON REQUEST

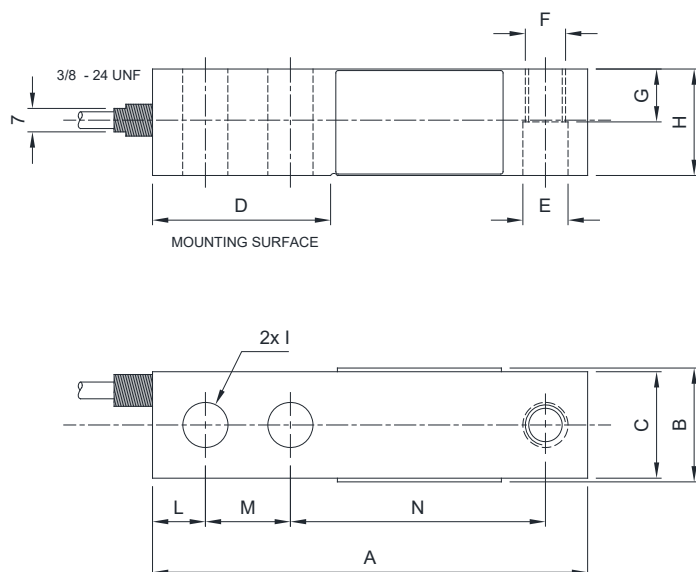
#### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- OIML R60 C4/C5
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres
- NTEP - Complies with United States regulations for legal for trade use

### DIMENSIONS (mm)



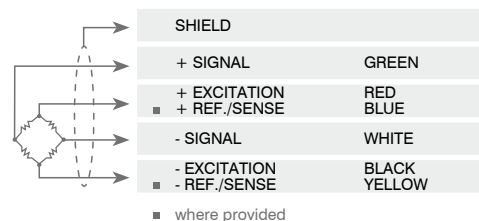
	500 kg	1000 - 1500 2000 kg	3000 - 5000 kg
A	130	130	171.5
B	-	32.8	39.1
C	31.8	31.8	38.1
D	53.2	53.2	76.2
E	Ø13.5	Ø13.5	Ø19.8
F	M12x1.75	M12x1.75	M18x1.5
G	16	16	19.3
H	31.8	31.8	38.1
I	Ø13.5	Ø13.5	Ø19.8
L	15.8	15.8	19.1
M	25.4	25.4	38.1
N	76.2	76.2	95.3

### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel			
OIML R60 Accuracy class • Verification intervals	C3 • 3000		C4 • 4000	
Nominal load (E max)	500 - 1000 - 1500 kg 2000 - 3000 - 5000 kg		500 - 1000 kg 1500 - 2000 kg	3000 - 5000 kg
Minimum verification interval (V min)	E max / 10000	E max / 15000	E max / 20000	E max / 18000
Combined error	≤ ±0.02%	≤ ±0.017%	≤ ±0.014%	
Protection class	IP67			
Rated output	3 mV/V ±0.1%	Input resistance	350 Ω ±3.5	
Temperature effect on zero	0.0018% °C	Output resistance	350 Ω ±3.5	
Temperature effect on span	0.0014% °C	Zero balance	≤ ±1%	
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ	
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%	
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%	
Max supply voltage without damage	18 V	Deflection at nominal load	0.4 mm	

### ELECTRICAL CONNECTIONS

Cable length	4 m (500-2000 kg); 6 m (3000-5000 kg)
Cable diameter	5 mm
Cores	4/6 x 0.20 mm <sup>2</sup>



### COMPLEMENTARY ACCESSORIES

DESCRIPTION	CODE
<p>Special steel block for capacities up to 2000 kg.</p>	PIASTRINO

The Company reserves the right to make changes to the technical data, drawings and images without notice.

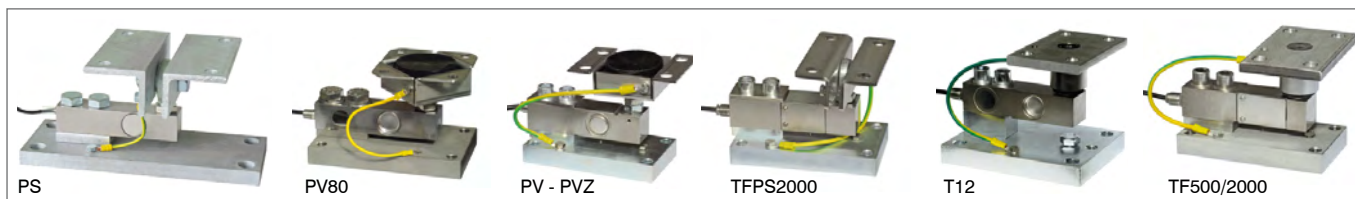


Capacity from 500 kg to 5000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP67

#### MOUNTING KITS



CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
500		•	•	0.9	FTZ500
1000		•	•	0.9	FTZ1000
2000		•	•	0.9	FTZ2000
5000		•	•	1.5	FTZ5000

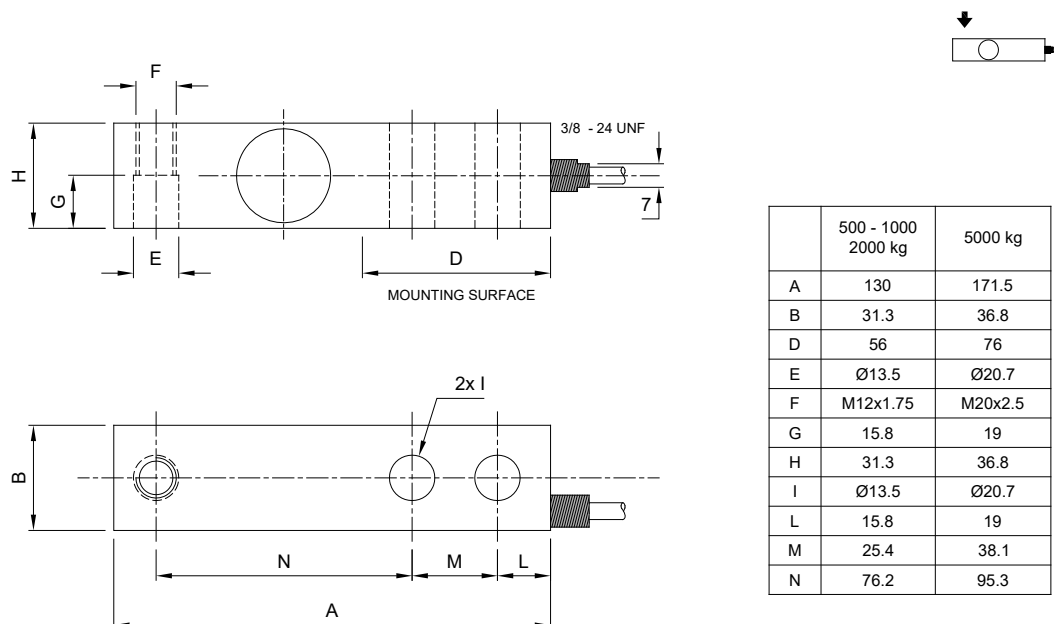
#### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)

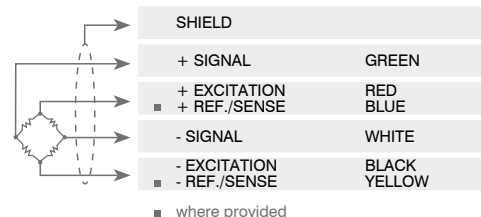


### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	500 - 1000 - 2000 kg	5000 kg	
Minimum verification interval (V min)	E max / 7500	E max / 9000	
Combined error	≤ ±0.02%		
Protection class	IP67		
Rated output	3 mV/V ±0.27%	Input resistance	350 Ω ±3.5
Temperature effect on zero	0.0018% °C	Output resistance	350 Ω ±3.5
Temperature effect on span	0.0014% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-35°C / +65°C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	6 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm <sup>2</sup>



# FTZA

## SHEAR BEAM LOAD CELLS

**LAUMAS®**


Capacity from 500 kg to 10000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.0170% C4)
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS			NET WEIGHT (kg)	CODE
		C3	C4			
500		•	•	•	2.1	FTZA500
1000		•	•	•	2.1	FTZA1000
2000		•	•	•	2.1	FTZA2000
5000		•	–	•	4.2	FTZA5000
7500		•	–	•	4.2	FTZA7500
10000		•	–	•	4.2	FTZA10000

ON REQUEST

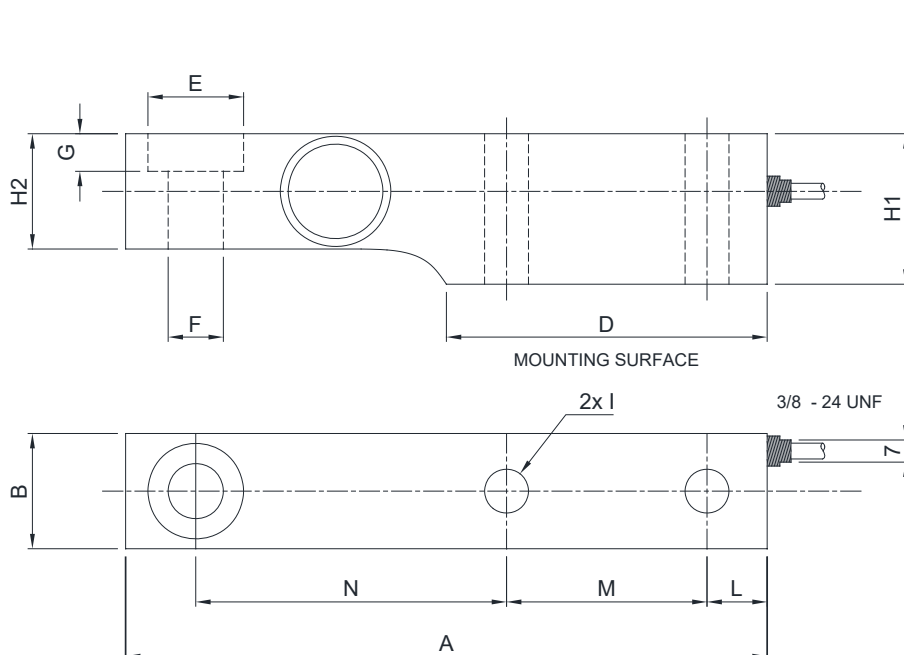
### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- OIML R60 C4
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



	500 kg 1000 kg 2000 kg	5000 kg 7500 kg	10000 kg
A	203.2	235	235
B	36.48	47.5	55
D	101.6	111.2	111.2
E	Ø30.3	Ø41.3	Ø41.3
F	Ø17.5	Ø25.5	Ø25.5
G	11.9	15.75	15.75
H1	47.63	69.9	69.9
H2	36.5	47.6	58.6
I	Ø14	Ø22	Ø25
L	19.05	20.6	20.6
M	63.5	66.7	66.7
N	98.45	123.8	123.8

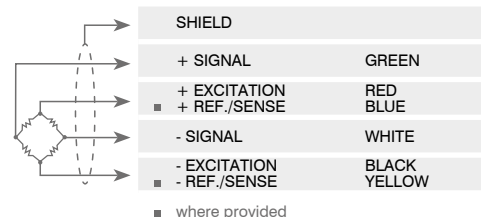
### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	
Nominal load (E max)	500 - 1000 - 2000 5000 - 7500 - 10000 kg	500 - 1000 - 2000 kg	
Minimum verification interval (V min)	E max / 10000	E max / 15000	
Combined error	≤ ±0.02%	≤ ±0.017%	
Protection class	IP68		
Rated output	2 mV/V ± 0.2% *	Input resistance	350 Ω ± 3.5
Temperature effect on zero	0.0018% °C	Output resistance	350 Ω ± 3.5
Temperature effect on span	0.0014% °C	Zero balance	< ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥ 5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.4 mm

\* Calibrated current output

### ELECTRICAL CONNECTIONS

Cable length	5 m (500-7500 kg); 10 m (10000 kg)
Cable diameter	5 mm
Cores	4/6 x 0.20 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 5000 kg to 10000 kg**



- SPECIAL STEEL
- COMBINED ERROR  $\leq \pm 0.1\%$
- PROTECTION CLASS IP68

CAPACITY	kg	NET WEIGHT (kg)	CODE
5000		15.5	FTH5000
10000		16.2	FTH10000

## CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UKCA)

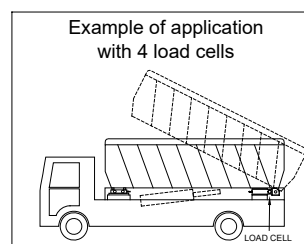
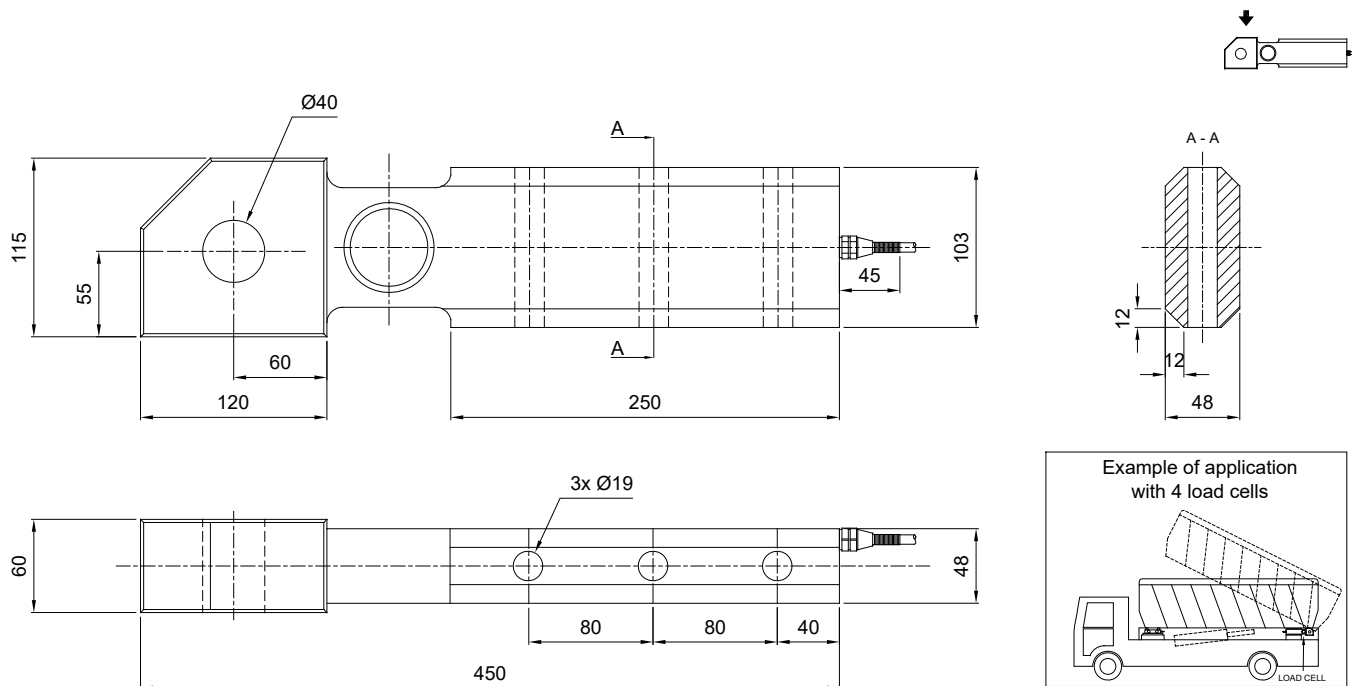


IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## DIMENSIONS (mm)

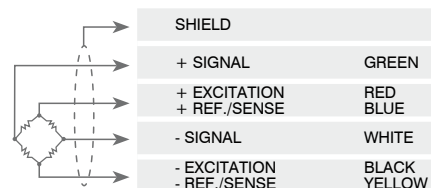


## TECHNICAL FEATURES

Material	Special steel		
Nominal load (E max)	5000 - 10000 kg		
Combined error	$\leq \pm 0.1\%$		
Protection class	IP68		
Rated output	1 mV/V $\pm 0.5\%$	Input resistance	400 $\Omega \pm 20$
Temperature effect on zero	0.005% $^{\circ}\text{C}$	Output resistance	352 $\Omega \pm 3$
Temperature effect on span	0.005% $^{\circ}\text{C}$	Zero balance	$\pm 2\%$
Compensated temperature range	-10 $^{\circ}\text{C}$ / +40 $^{\circ}\text{C}$	Insulation resistance	>5000 M $\Omega$
Operating temperature range	-30 $^{\circ}\text{C}$ / +70 $^{\circ}\text{C}$	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.1%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

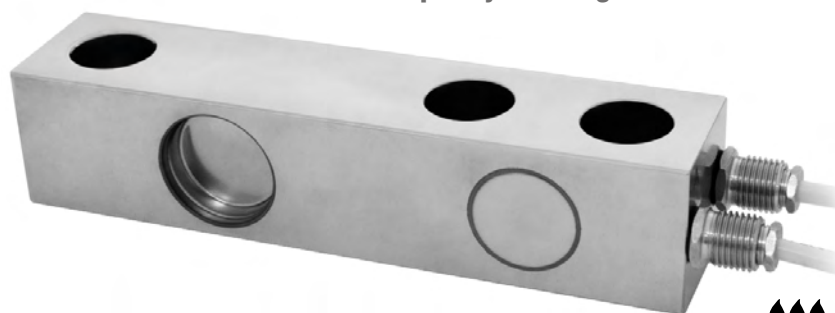
## ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	6 mm
Cores	6 x 0.24 mm <sup>2</sup>



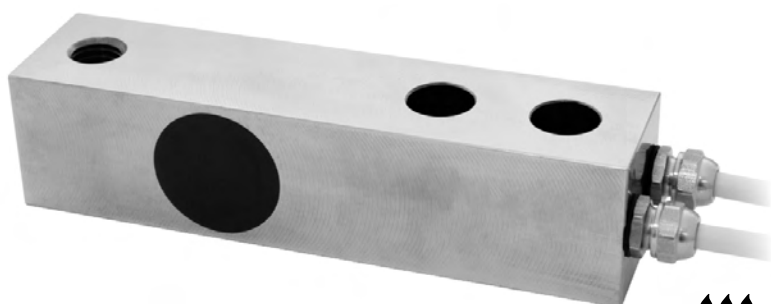


capacity 6000 kg



  
IP68

capacity 1000 kg



  
IP67

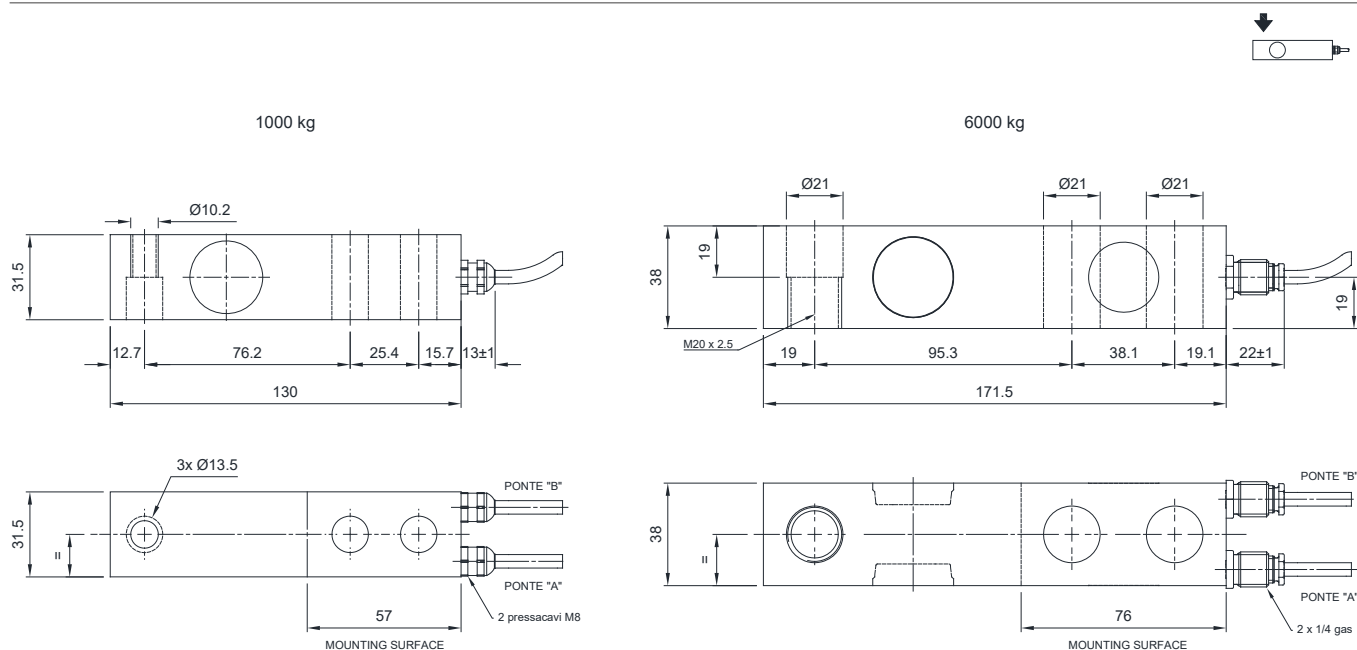
- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP67 - IP68
- TWO OUTPUT CABLES FOR DUAL SAFETY SYSTEMS

CAPACITY	kg	NET WEIGHT (kg)	CODE
	1000	0.93	FTP1000DOP
	6000	1.54	FTP6000DOP

### CERTIFICATIONS

- EAC** Complies with the Eurasian Customs Union standards
- UKCA** Equivalent of the CE marking for the United Kingdom

### DIMENSIONS (mm)

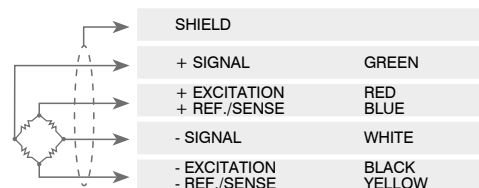


### TECHNICAL FEATURES



Material	17-4 PH stainless steel		
Nominal load (E max)	1000 - 6000 kg		
Combined error	≤ ±0.03%		
Protection class	IP67 (1000 kg) - IP68 (6000 kg)		
Rated output	2 mV/V ±10%	Input resistance	370 Ω ±10
Temperature effect on zero	0.005% °C	Output resistance	355 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.25 mm

### ELECTRICAL CONNECTIONS

Cable length	5 m+5 m (1000 kg); 10 m+10 m (6000 kg)
Cable diameter	5 mm
Cores	6 x 0.25 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.

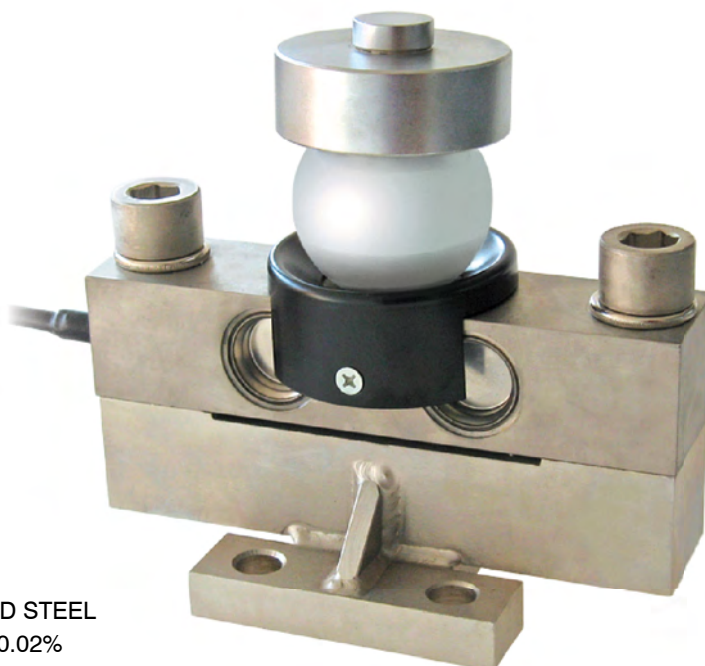
	CAPACITY	PAGE
<b>A1.4</b>		
<b>DOUBLE SHEAR BEAM</b>		
	<b>DTL</b> 25000 kg	<b>67</b>
	<b>DTX</b> 20 klb ÷ 60 klb 9 ton ÷ 27 ton	<b>71</b>



# DTL

## DOUBLE SHEAR BEAM LOAD CELLS

**LAUMAS®**

**Capacity 25000 kg**

**MOUNTING KIT**


- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS		NET WEIGHT (kg)	CODE
25000		C3		16	DTL25000

### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

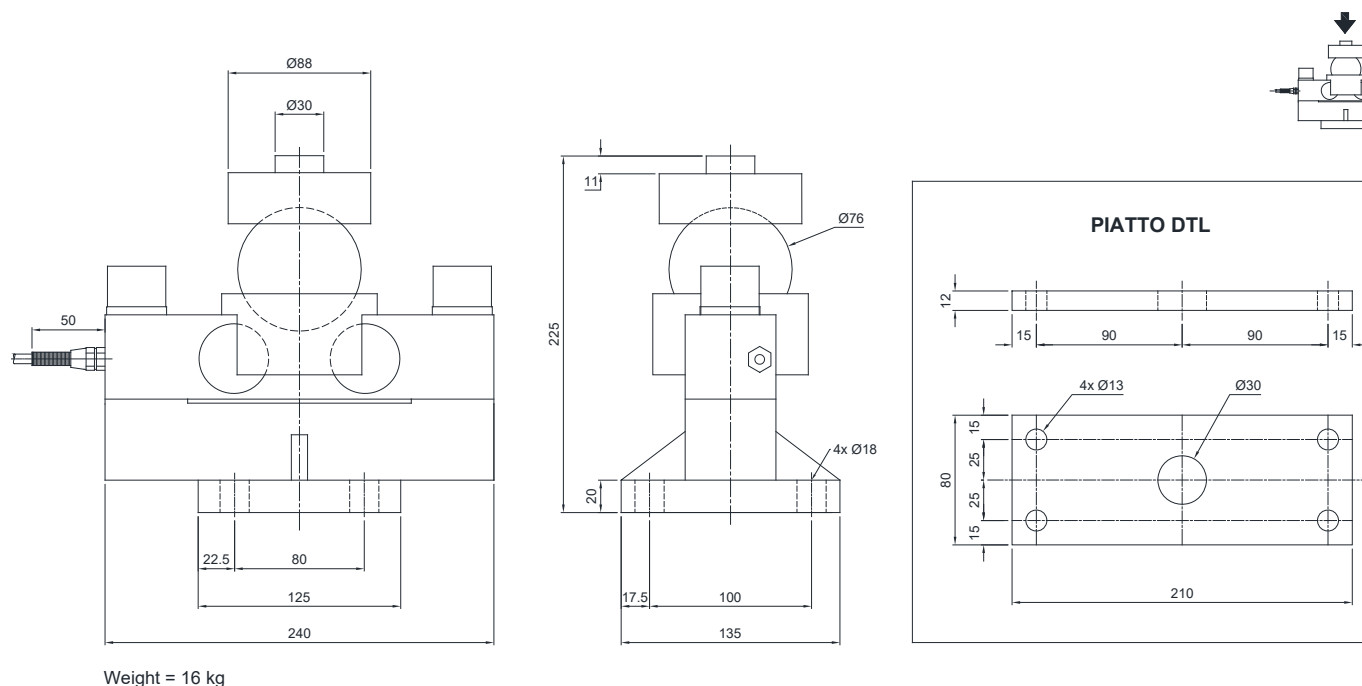
IECEx (zone 0-1-2-20-21-22)

Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Galvanized steel plate.	PIATTODTL

### DIMENSIONS (mm)

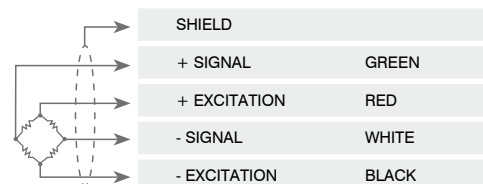


### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	25000 kg		
Minimum verification interval (V min)	E max / 15000		
Combined error	≤ ±0.02%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	700 Ω ±7
Temperature effect on zero	0.002% °C	Output resistance	700 Ω ±7
Temperature effect on span	0.002% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	18 V	Deflection at nominal load	0.6 mm

### ELECTRICAL CONNECTIONS

Cable length	20 m
Cable diameter	6 mm
Cores	4 x 0.22 mm <sup>2</sup>



### APPLICATION

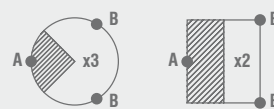
#### ■ LEVEL MEASUREMENTS

"Point support hinge" can be used in combination with the load cells for measuring the level of liquid or weighing powder products that do not require a high degree of precision. It is absolutely necessary that the structure to weight has a uniform shape and is geometrically divisible.

It must be perfectly level and the type of product to be weighed must enable horizontal positioning, as if it were a liquid (otherwise it loading systems which distribute the product/load uniformly are required). The electronic weight display will show the effective weight multiplying the signal by two or three, depending on the application.

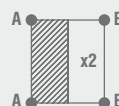
#### 3 SUPPORTS STRUCTURES

1 load cell (A) + 2 hinges (B)

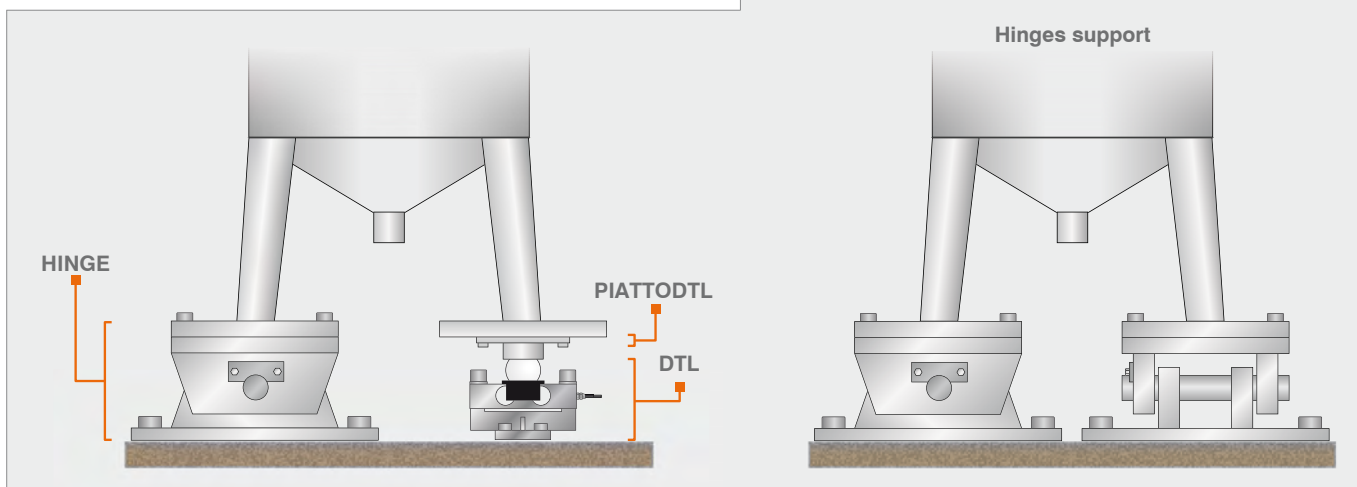


#### 4 SUPPORTS STRUCTURES

2 load cells (A) + 2 hinges (B)



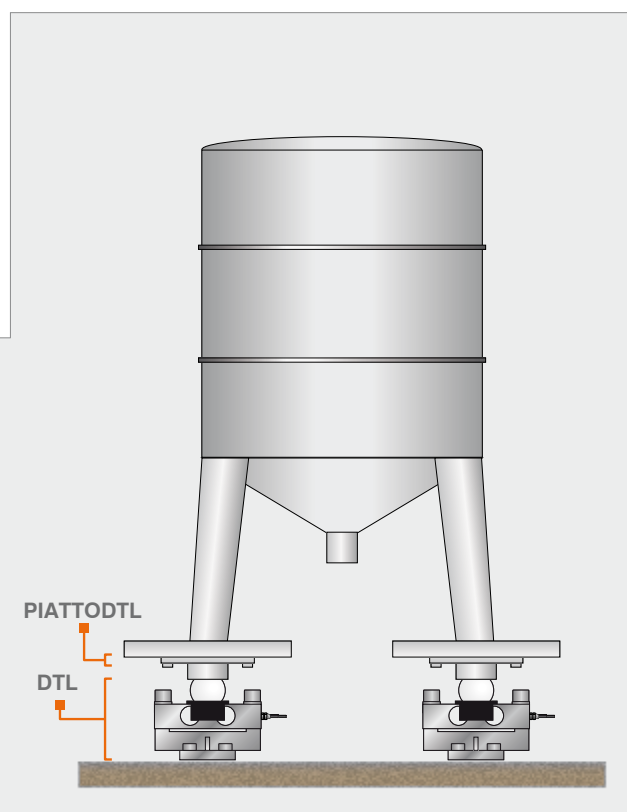
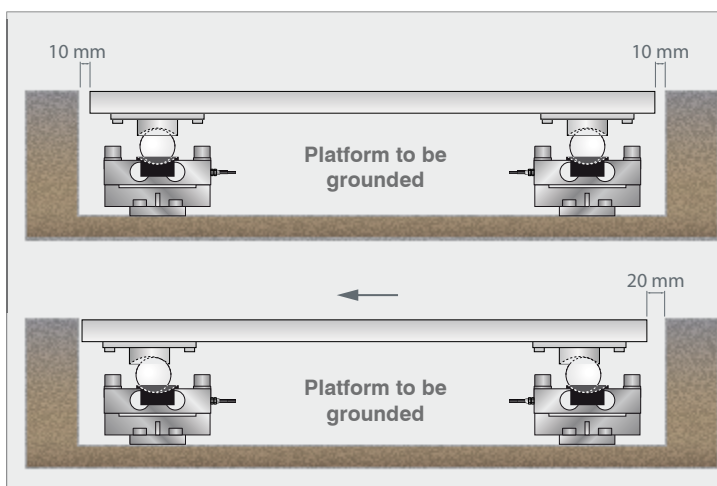
#### Hinges support



#### ■ WEIGHING STRUCTURES NOT SUBJECT TO KNOCKS OR WIND EFFECT

The load cell, equipped with bases plus ball, is designed for weighing structures not subject to knocks or wind effect.

PIATTODTL is designed for facilitate the load cell installation and removal; it will be enough to lift 1 mm the structure. The different bending radius between the ball and the bases which contain it, makes that any side shifts lead to an increase of the structure.



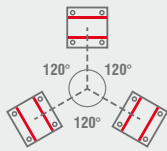
# DTL

## DOUBLE SHEAR BEAM LOAD CELLS

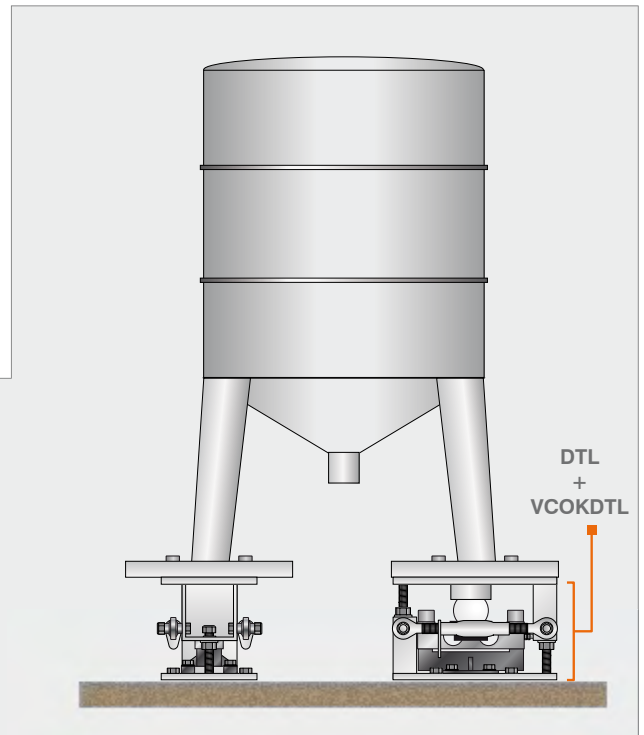
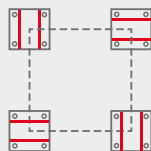
### WEIGHING STRUCTURES SUBJECT TO KNOCKS OR WIND EFFECT

The VCOKDTL mounting kit is equipped with two stay rods against lateral forces with an ultimate tensile strength of 10000 kg each, and two threaded rods (22 mm diameter) with nuts to use as a jack for the insertion and extraction of the cells and with two self-locking nuts for anti-tilt function. To ensure the stability of the structure, the designer must consider further contrivances according to the following conditions: knocks and vibrations; wind effect; seismic conditions; hardness of support structure.

3 SUPPORTS STRUCTURES



4 SUPPORTS STRUCTURES



# DTX

## DOUBLE SHEAR BEAM LOAD CELLS

**LAUMAS®**


Capacity from 20 klb to 60 klb



MOUNTING KIT



VDTX

- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS C3	IECEx	Ex	EAC	EAC	UK TRADE APPROVED	NET WEIGHT (kg)	CODE
20klb / 9 ton		•	•	•	•	•	•	2.7	DTX20KLB
30klb / 13.6 ton		•	•	•	•	•	•	7.75	DTX30KLB
40klb / 18 ton		•	•	•	•	•	•	7.78	DTX40KLB
50klb / 23 ton		•	•	•	•	•	•	8.3	DTX50KLB
60klb / 27 ton		•	•	•	•	•	•	8.5	DTX60KLB

ON REQUEST

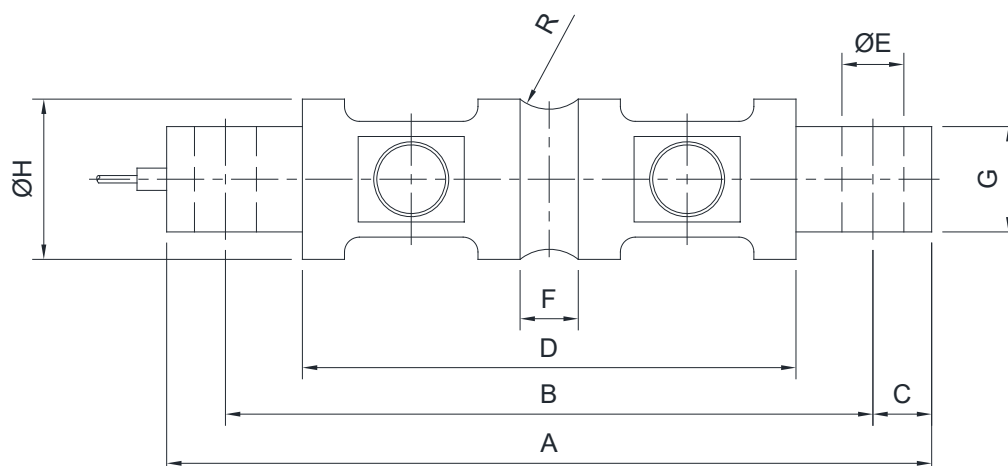
### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



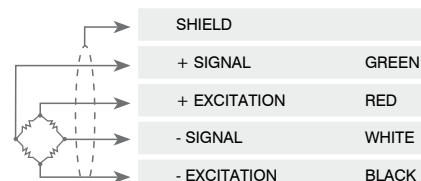
	A	B	C	D	ØE	F	G	ØH	R
<b>20 klb</b>	206	174.6	15.7	133	16.7	21.6	28.4	49.5	12.7
<b>30-60 klb</b>	260	215	22.4	165	27	25.7	60.2	76.2	25.4


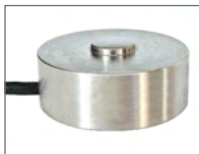




### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	20, 30, 40, 50, 60 klb		
Minimum verification interval (V min)	E max / 10000 - E max / 15000		
Combined error	≤ ±0.023%		
Protection class	IP68		
Rated output	3.0 mV/V ±0.1%	Input resistance	700 Ω ±7
Temperature effect on zero	0.002% °C	Output resistance	700 Ω ±7
Temperature effect on span	0.002% °C	Zero balance	≤ ±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.6 mm

### ELECTRICAL CONNECTIONS

Cable length	9 m
Cable diameter	5 mm (20klb) / 8 mm (30klb-60klb)
Cores	4 x 0.22 mm <sup>2</sup>



	CAPACITY	PAGE
	<b>A1.5</b>	<b>COMPRESSION-LOW PROFILE</b>
	<b>FLC 3A</b> 1000, 2000, 5000, 10000, 20000 kg	<b>75</b>
	<b>CK</b> 200, 500, 1000, 2500 kg	<b>78</b>
	<b>CLS</b> 1000, 2000, 5000 kg	<b>80</b>
	<b>CBL</b> 250, 500, 1000, 2500, 5000, 7500, 10000, 12500, 15000, 30000, 50000, 100000 kg	<b>82</b>
	<b>CBX</b> 15000, 30000, 50000 kg	<b>86</b>
	<b>CBLS</b> 200000, 300000, 500000, 750000 kg	<b>89</b>



# FLC 3A

## HYGIENIC COMPRESSION LOAD CELL

**LAUMAS®**

Capacity from 1000 kg to 20000 kg



EXAMPLE OF INSTALLATION ON HYGIENIC FOOT



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.1\%$
- PROTECTION CLASS IP69K
- CABLE SUITABLE FOR CONTACT WITH FOOD
- ADJUSTABLE HEIGHT
- HYGIENIC DEVICE RPSCQC AUTHORIZED BY 3-A SSI.

CAPACITY	kg	THREAD	NET WEIGHT (kg)	CODE
1000		M12	-	FLC1000M12A3A
2000		M12	-	FLC2000M12A3A
5000		M16	-	FLC5000M16A3A
5000		M20	-	FLC5000M20A3A
10000		M24	-	FLC10000M24A3A
10000		M30	-	FLC10000M30A3A
20000		M36	-	FLC20000M36A3A

Foot not included.

### CERTIFICATIONS



Equivalent of the CE marking for the United Kingdom

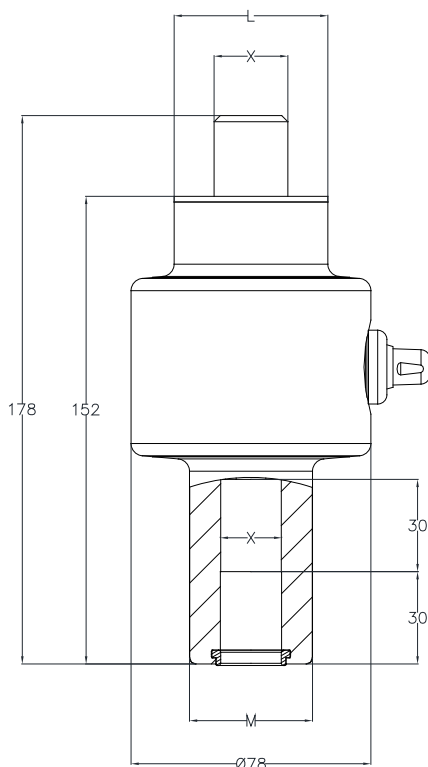


American standard that regulates the design, production and use of hygienic equipment

# FLC 3A

## HYGIENIC COMPRESSION LOAD CELL

### DIMENSIONS (mm)



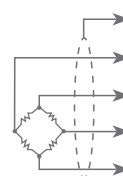
MODELLO	X	L	M
FLC1000M12A3A	M12	24	40
FLC2000M12A3A	M12	24	40
FLC5000M16A3A	M16	30	40
FLC5000M20A3A	M20	35	40
FLC10000M24A3A	M24	50	40
FLC10000M30A3A	M30	50	50
FLC20000M36A3A	M36	50	50

### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load	1000 - 2000 - 5000 - 10000 - 20000 kg		
Combined error	≤ ±0.1%		
Protection class	IP69K		
Rated output	2.0 mV/V ±0.1%	Input resistance	350 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.05%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	5 ÷ 15 VDC	Deflection at nominal load	-

### ELECTRICAL CONNECTIONS

Cable length	5 m: 1000 kg, 2000 kg, 5000 kg, 10000 kg (M24) 10 m: 10000 kg (M30), 20000 kg
Cable diameter	5 mm
Cores	6 x 0.20 mm <sup>2</sup>



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK BROWN

# FLC 3A

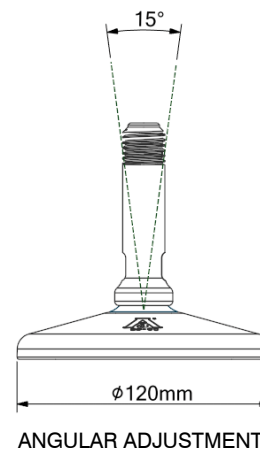
## HYGIENIC COMPRESSION LOAD CELL

### COMPLEMENTARY ACCESSORIES

	CODE	FOR LOAD CELLS
Hygienic foot	FLC273793A	FLC1000M12A3A
	FLC273793A	FLC2000M12A3A
	FLC273803A	FLC5000M16A3A
	FLC273843A	FLC5000M20A3A
	FLCD120M24503A	FLC1000M24A3A
	FLCD120M30503A	FLC1000M30A3A
	FLCD120M36503A	FLC2000M36A3A

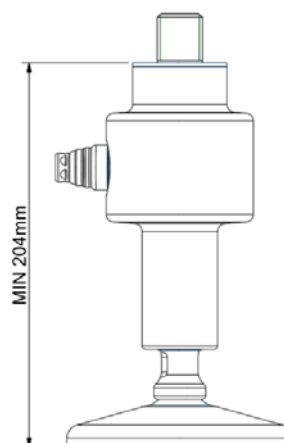
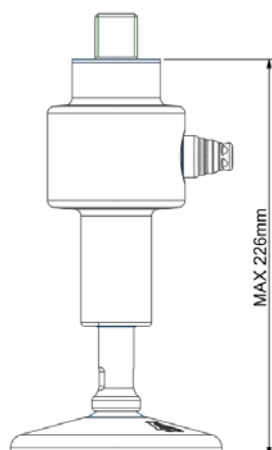
On request: hygienic foot with dowel fastening

For other types of hygienic, non-hygienic feet or customizations contact <https://martinlevelling.it>



### LOAD CELL KIT+FOOT

CODE	FOR LOAD CELLS	HYGIENIC FOOT
FLCLF1000M123A	FLC1000M12A3A	FLC273793A
FLCLF2000M123A	FLC2000M12A3A	FLC273793A
FLCLF5000M163A	FLC5000M16A3A	FLC273803A
FLCLF5000M203A	FLC5000M20A3A	FLC273843A
FLCLF10000M243A	FLC10000M24A3A	FLCD120M24503A
FLCLF10000M303A	FLC10000M30A3A	FLCD120M30503A
FLCLF20000M363A	FLC20000M36A3A	FLCD120M36503A





Manufactured according to OIML R60 standards

**Capacity from 200 kg to 2500 kg**



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.5\%$
- PROTECTION CLASS IP67

CAPACITY	kg	NET WEIGHT (kg)	CODE
200		0.11	CK200
500		0.08	CK500
1000		0.17	CK1000
2500		0.17	CK2500

## CERTIFICATIONS



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

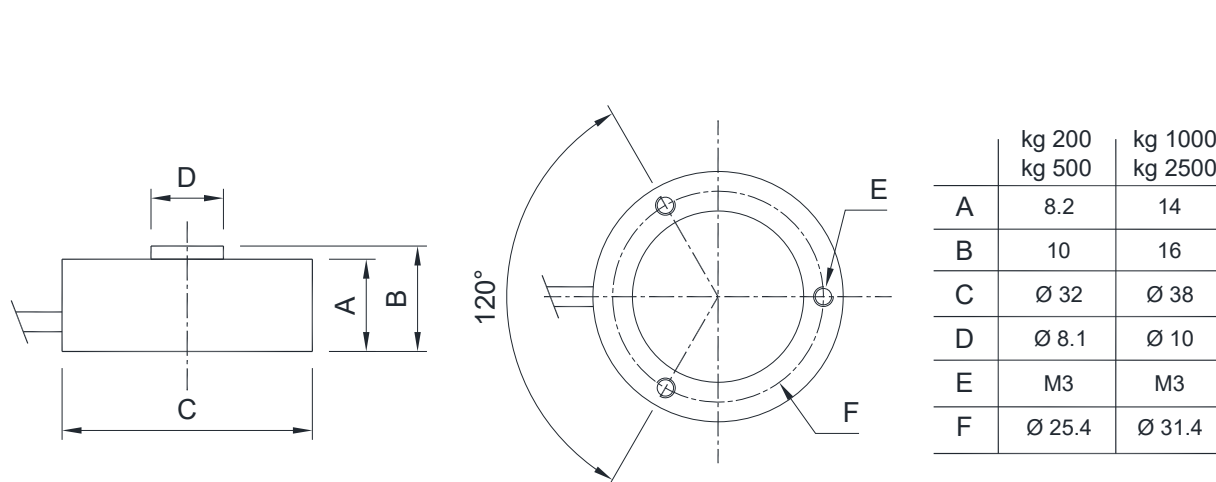


IECEX (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	200 - 500 - 1000 - 2500 kg		
Combined error	≤ ±0.5%		
Protection class	IP67		
Rated output	1 mV/V ±15%	Input resistance	400 Ω ±100
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	120%
Creep at nominal load in 30 minutes	0.3%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	5 m
Cable diameter	3 mm
Cores	4 x 0.25 mm <sup>2</sup>



# CLS

## COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®



Manufactured according to OIML R60 standards

### Capacity from 1000 kg to 5000 kg



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP68
- INTEGRATED STAINLESS STEEL LOWER PLATE

#### MOUNTING KITS



CAPACITY	kg	NET WEIGHT (kg)	CODE
	1000	4.1	CLS1000
	2000	4.1	CLS2000
	5000	4.1	CLS5000

#### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

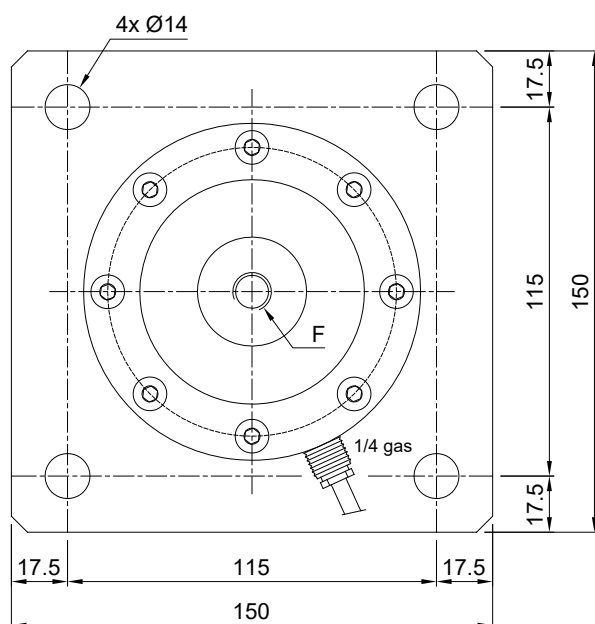
#### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

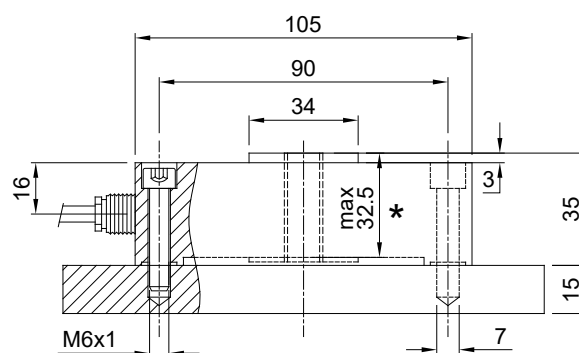
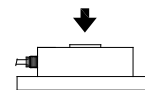
**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



	F
kg 1000	M12 x 1.75
kg 2000	M12 x 1.75
kg 5000	M20 x 2.5



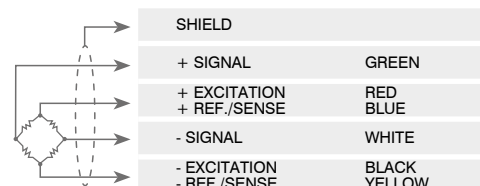
\* WARNING! Max dimension to insert the bolt to allow the cell to perform properly

### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	1000 - 2000 - 5000 kg		
Combined error	≤ ±0.03%		
Protection class	IP68		
Rated output	2 mV/V ±0.4%	Input resistance	385 Ω ±10
Temperature effect on zero	0.002% °C	Output resistance	350 Ω ±3
Temperature effect on span	0.012% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	250%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	6 mm
Cores	6 x 0.25 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Capacity from 250 kg to 100000 kg



MOUNTING KITS



- 17-4 PH STAINLESS STEEL (on request AISI 420 stainless steel version; not OIML approved)
- COMBINED ERROR  $\leq \pm 0.03\%$  (0.02% C3)
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS				NET WEIGHT (kg)	CODE
		C2	C3				
250		-	-	-	-	1.1	CBL250
500		-	-	-	-	1.1	CBL500
1000		-	-	-	-	1.1	CBL1000
2500		•	•	•	•	1.1	CBL2500
5000		•	•	•	•	1.1	CBL5000
7500		•	•	•	•	1.1	CBL7500
10000		•	•	•	•	1.1	CBL10000
12500*		-	•	•	•	1.6	CBL12500
15000		-	-	-	-	2.1	CBL15000
30000		-	-	-	-	3.8	CBL30000
50000		-	-	-	-	8.6	CBL50000
100000		-	-	-	-	9.1	CBL100000

ON REQUEST

(\*) Except for the capacity of 12500kg, which is already OIML R60 C3 approved

### CERTIFICATIONS

	OIML R60 C2
	Complies with the Eurasian Customs Union standards
	Equivalent of the CE marking for the United Kingdom
	Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

	Declaration of conformity + IP69K marking protection rating Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm) IP69K Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)
	Accredia traceable calibration report
	ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UKCA)
	IECEx (zone 0-1-2-20-21-22)
	OIML R60 C3
	Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres
	Complies with the regulations of the Russian Federation for legal for trade use

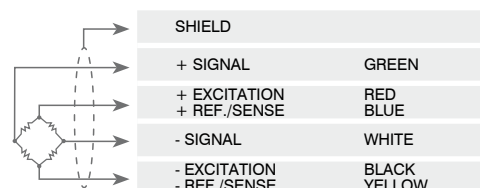
### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	-	C2 • 2000	C3 • 3000
Nominal load (E max)	250 - 500 - 1000 - 15000 kg 30000 - 50000 - 100000 kg	2500 - 5000 kg 7500 - 10000 kg	2500 - 5000 - 7500 kg 10000 - 12500 kg
Minimum verification interval (V min)	-	E max / 15000	E max / 15000
Combined error	≤ ±0.03%	≤ ±0.03%	≤ ±0.02%
Protection class	IP68		
Rated output	2 mV/V ± 0.1%	Input resistance	700 Ω ± 10
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ± 10
Temperature effect on span	0.003% °C	Zero balance	± 1%
Temperature range OIML R60	-10 °C / +40 °C	Insulation resistance	> 10000 MΩ
Compensated temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Operating temperature range	-30 °C / +90 °C	Ultimate overload (% of full scale)	300%
Creep at nominal load in 30 minutes	0.03%	Deflection at nominal load	0.4 mm
Max supply voltage without damage	15 V		




### ELECTRICAL CONNECTIONS

Cable length	5 m*(250-10000 kg); 10 m (12500-100000 kg)
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>






\*) On request: 10 m long cable version



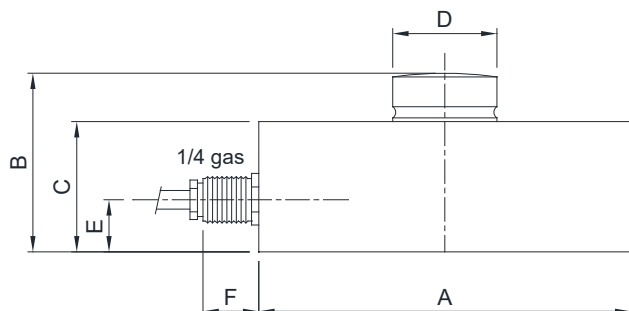
### OPTIONS ON REQUEST

	DESCRIPTION
	10 m long cable version for 250-10000 kg capacities
 AISI 420	AISI 420 stainless steel load cell version (not OIML approved)
	Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems

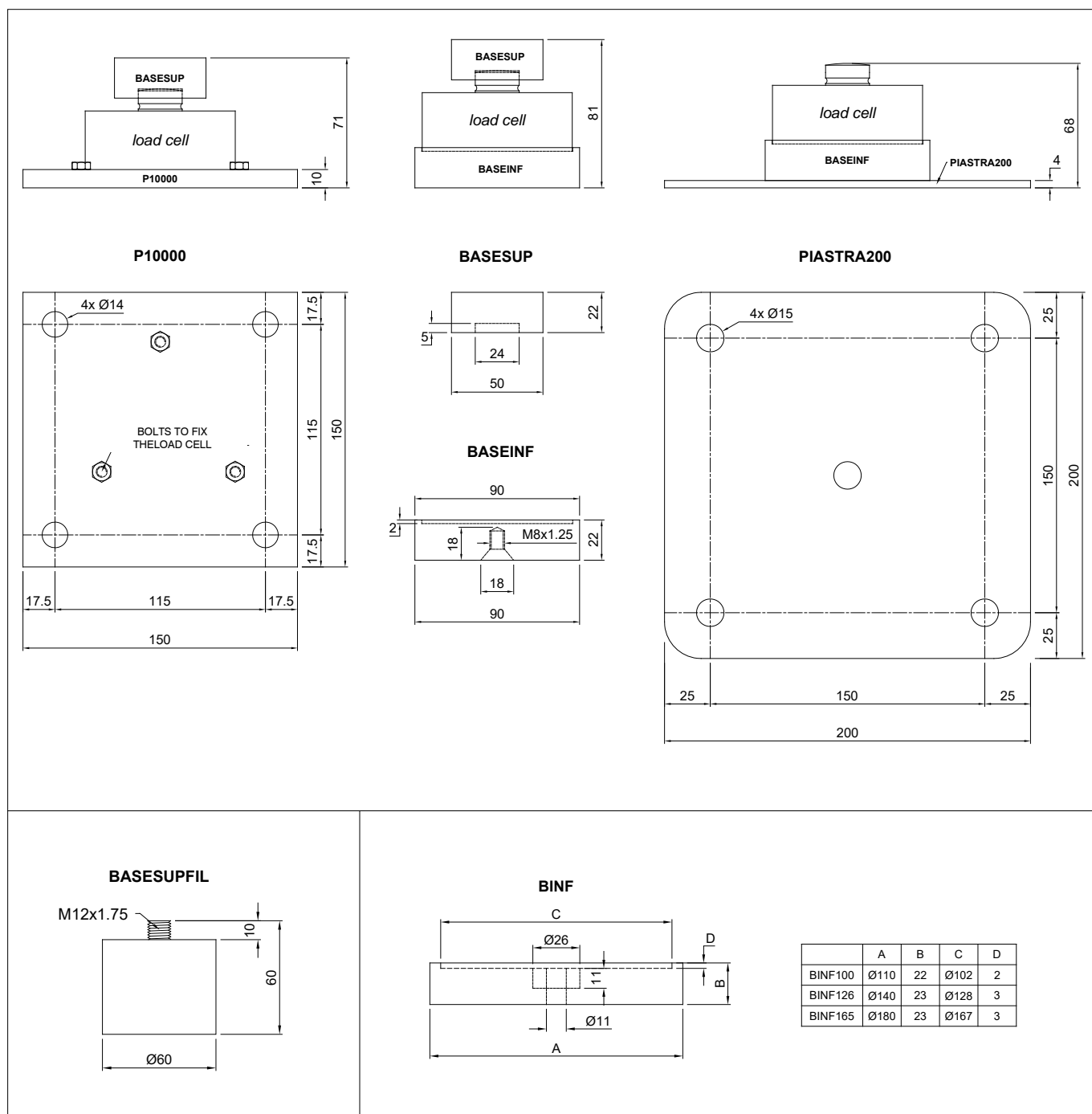
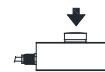
### COMPLEMENTARY ACCESSORIES

	DESCRIPTION		CODE
	AISI 304 stainless steel threaded upper base for compression load cells.	M12x1.75 mm	BASESUPFIL
	AISI 304 stainless steel turned lower base for compression load cells.	Ø110x22 mm Ø140x23 mm Ø180x23 mm	BINF100 BINF126 BINF165
	Lower plate and turned upper base in AISI 304 stainless steel. Load cell capacity: up to 12500 kg.		BASESUP P10000
	Turned upper and lower bases in AISI 304 stainless steel. Load cell capacity: up to 12500 kg.		BASESUP BASEINF
	Lower plate and turned lower base in AISI 304 stainless steel. Load cell capacity: up to 12500 kg.		BASEINF PIASTRA200

### DIMENSIONS (mm)



	250		50000	
kg	12500	15000	30000	100000
A	Ø82	Ø100	Ø126	Ø164
B	44	48	54	80
C	32	35	40	60
D	Ø22	Ø28	Ø35	Ø60
E	14	14	14	26
F	15	15	15	15



# CBX

## COMPRESSION LOAD CELLS - LOW PROFILE

**LAUMAS®**


Manufactured according to OIML R60 standards

Capacity from 15000 kg to 50000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.035\%$
- PROTECTION CLASS IP68

### MOUNTING KITS



CAPACITY	kg	NET WEIGHT (kg)	CODE
15000		1.4	CBX15000
30000		2.2	CBX30000
50000		3.8	CBX50000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

Accredia traceable calibration report

ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### OPTIONS ON REQUEST

#### DESCRIPTION



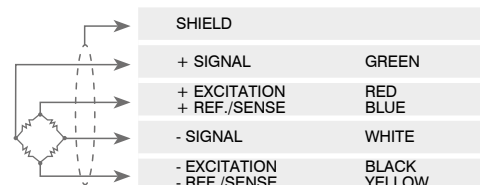
Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems

### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	15000 - 30000 - 50000 kg		
Combined error	≤ ±0.035%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	700 Ω ±5
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>10000 MΩ
Operating temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>



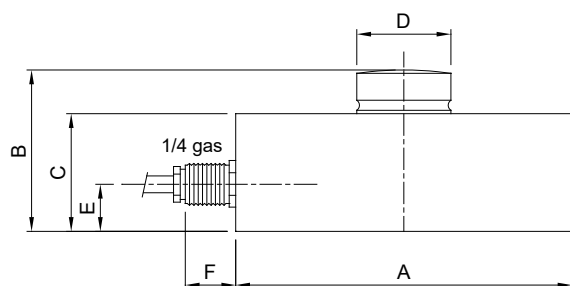
### COMPLEMENTARY ACCESSORIES

	DESCRIPTION		CODE
	AISI 304 stainless steel threaded upper base for compression load cells.	M12x1.75 mm	BASESUPFIL
	AISI 304 stainless steel turned lower base for compression load cells.	Ø110x22 mm Ø140x23 mm	BINF100 BINF126
	Lower plate and turned upper base in AISI 304 stainless steel. Load cell capacity: up to 15000 kg.		BASESUP P10000
	Turned upper and lower bases in AISI 304 stainless steel. Load cell capacity: up to 15000 kg.		BASESUP BASEINF
	Lower plate and turned lower base in AISI 304 stainless steel. Load cell capacity: up to 15000 kg.		BASEINF PIASTRA200
	AISI 304 stainless steel adapter for mounting kit: - V15000 for Ø82 mm load cells - V30000 for Ø100 mm load cells - V100000 for Ø126 mm load cells		ADAT100CBX15T ADAT126CBX30T ADAT165CBX50T

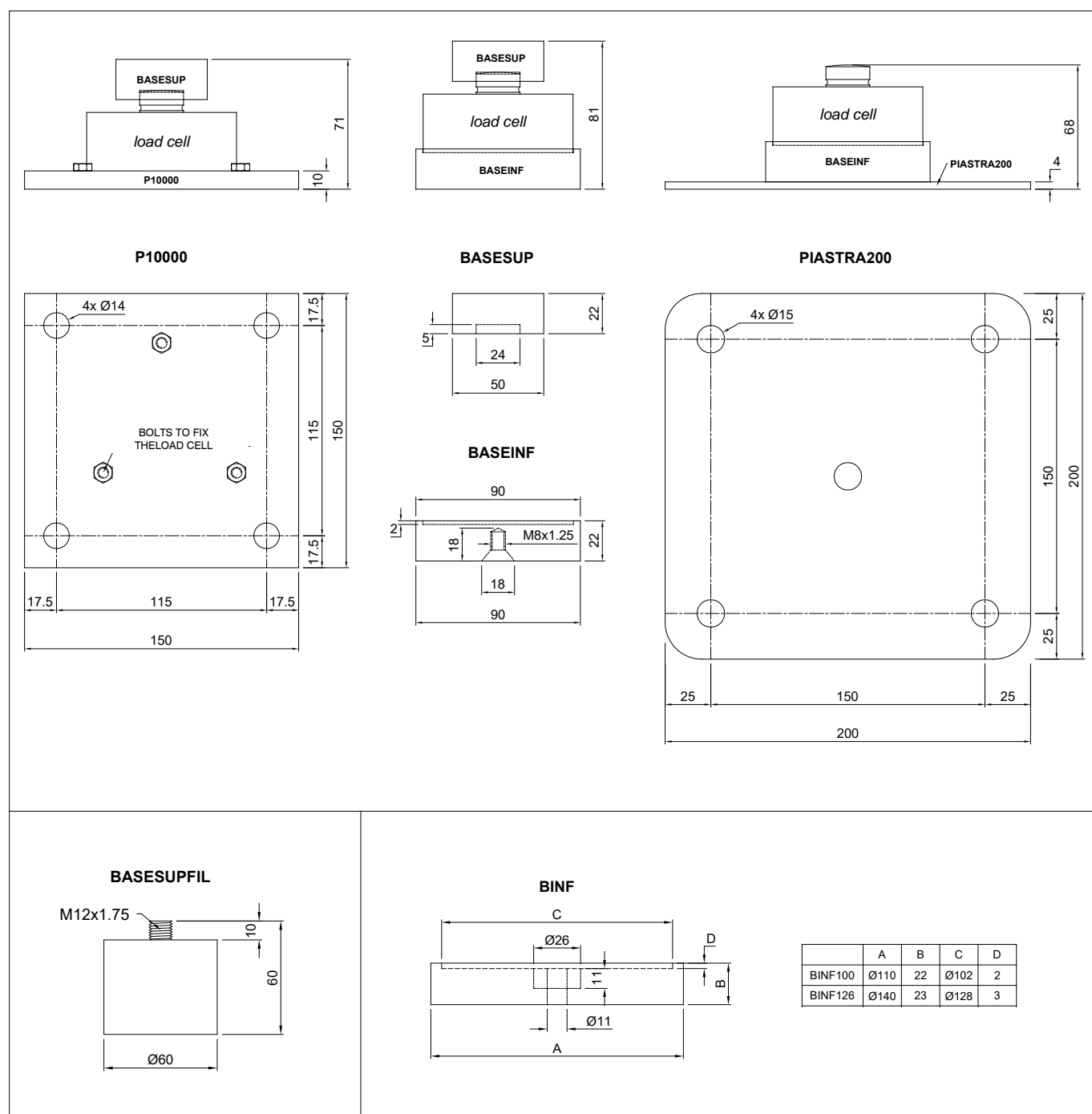
# CBX

## COMPRESSION LOAD CELLS - LOW PROFILE

### DIMENSIONS (mm)



kg	15000	30000	50000
A	Ø82	Ø100	Ø126
B	44	48	54
C	32	35	40
D	Ø22	Ø28	Ø35
E	14	14	14
F	15	15	15



# CBLS

## COMPRESSION LOAD CELLS - LOW PROFILE

**LAUMAS®**


Manufactured according to OIML R60 standards

Capacity from 200000 kg to 750000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.10\%$
- PROTECTION CLASS IP68

CAPACITY	kg	NET WEIGHT (kg)	CODE
200000		20	CBLS200000
300000		42	CBLS300000
500000		60	CBLS500000
750000		60	CBLS750000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

✓ Accredia traceable calibration report

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UK CA** )

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres


### OPTIONS ON REQUEST

#### DESCRIPTION



Two redundant strain gauges Wheatstone bridges (350  $\Omega$ ) with two output cables; for dual safety systems

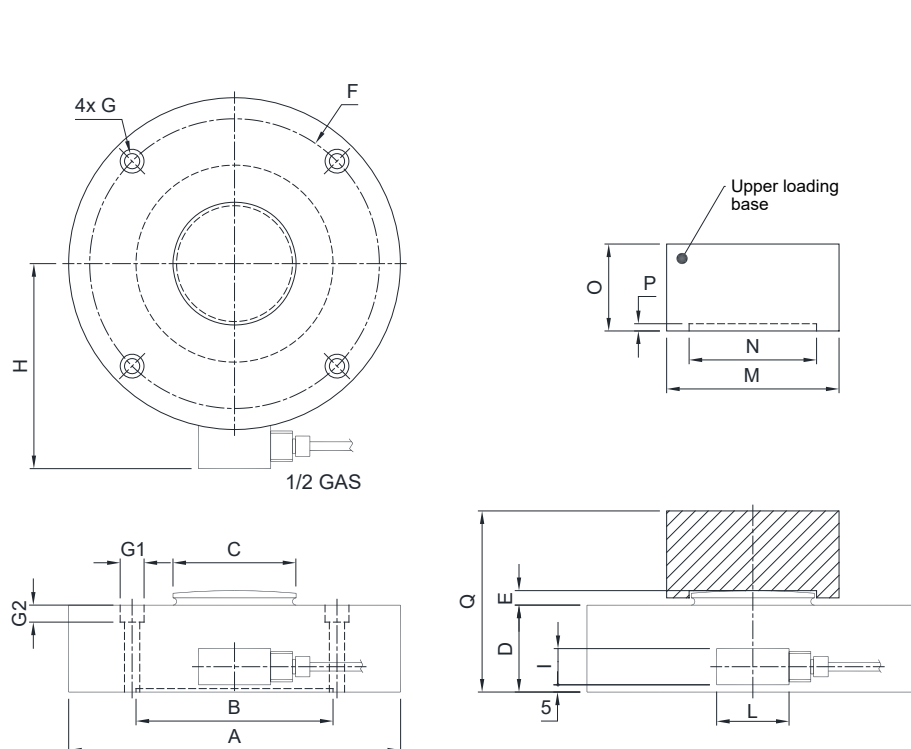
### COMPLEMENTARY ACCESSORIES

DESCRIPTION	CODE
 Upper loading base.	Dimensions:                      Maximum static load: Ø119 mm; h=60 mm                      200000 kg <b>BOTTONE200</b> Ø198 mm; h=60 mm                      300000 kg <b>BOTTONE</b> Ø198 mm; h=89 mm                      500000 - 750000 kg <b>BOTTONE750</b>

# CBL5

## COMPRESSION LOAD CELLS - LOW PROFILE

### DIMENSIONS (mm)



	200t	300t	500-750t
A	Ø229	Ø299	Ø299
B	Ø136.5	Ø228	Ø230
C	Ø87	Ø155	Ø155
D	60	73	106
E	10	12	14
F	Ø200	Ø260	Ø260
G	Ø10.5	Ø12.5	Ø12.5
G1	Ø16.5	Ø18.5	Ø18.5
G2	10.5	12.5	12.5
H	142±1	180±2	180±2
I	30	25	25
L	60	50	50
weight	20kg	42kg	60kg

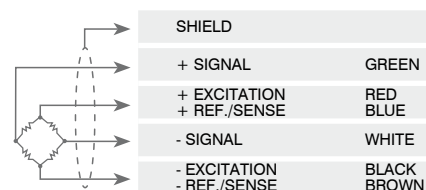
	200t	300t	500-750t
M	Ø119	Ø198	Ø198
N	Ø88	Ø156	Ø158
O	60	60	89
P	5	5	9
Q	125	140	200





### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	200000 - 300000 - 500000 - 750000 kg		
Combined error	≤ ±0.10%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	700 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>



	CAPACITY	PAGE
<b>A1.6</b>	<b>COLUMN</b>	
	<b>COK</b> 15000, 25000, 50000 kg	<b>93</b>
	<b>COD</b> 25000, 50000 kg	<b>95</b>
	<b>CO</b> 25000 kg	<b>98</b>
	<b>COL</b> 30000, 60000 kg	<b>100</b>

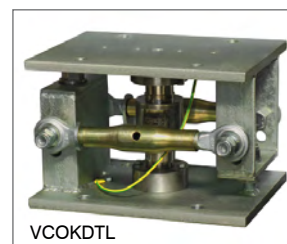




Capacity from 15000 kg to 50000 kg



MOUNTING KIT



- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS C3			NET WEIGHT (kg)	CODE
15000		•	•	•	3.3	COK15000
25000		•	•	•	3.5	COK25000
50000		•	•	•	3.7	COK50000
25000		•	•	•	4	COK25000AR
Anti-rat Cable						

ON REQUEST

### CERTIFICATIONS



OIML R60 C3



Complies with the Eurasian Customs Union standards



Equivalent of the CE marking for the United Kingdom



Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST



ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)



IECEx (zone 0-1-2-20-21-22)



Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres



Complies with the regulations of the Russian Federation for legal for trade use

### COMPLEMENTARY ACCESSORIES



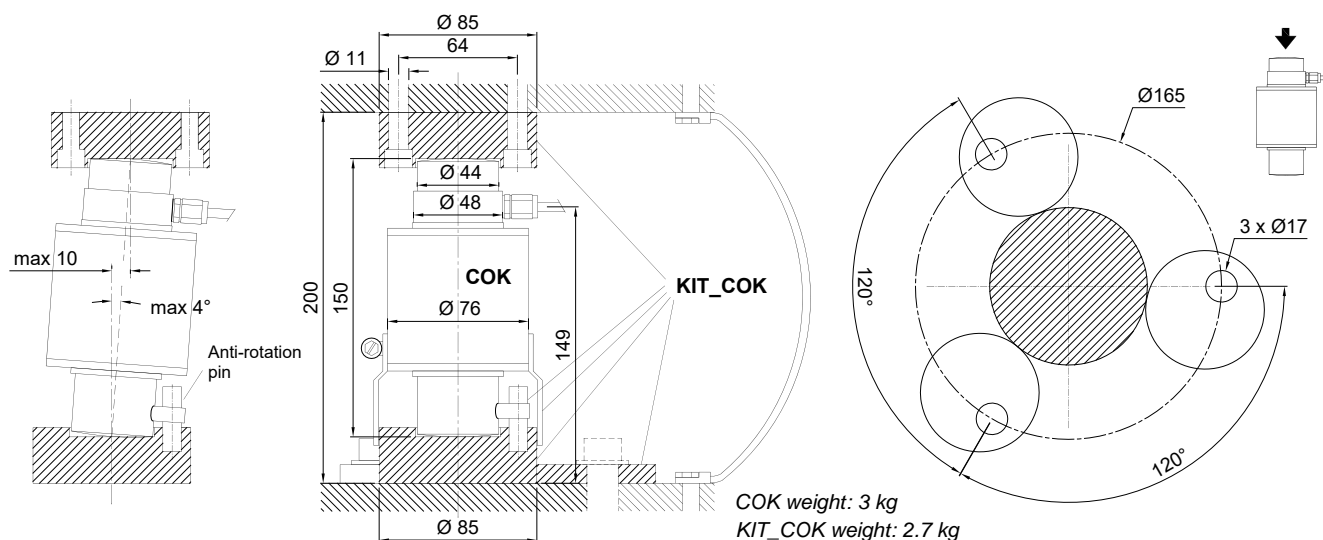
#### DESCRIPTION

AISI 5140 nickel plated steel accessory composed by anti-rotation system, protective rubber seal, 2 bases (upper and lower) and 3 self-centering cylindrical plates.

#### CODE

KITCOK

### DIMENSIONS (mm)



### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	15000 - 25000 - 50000 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.02%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	780 Ω ±20
Temperature effect on zero	0.002% °C	Output resistance	700 Ω ±10
Temperature effect on span	0.002% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-30 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	250%
Max supply voltage without damage	15 V	Deflection at nominal load	0.6 - 1 mm

### ELECTRICAL CONNECTIONS

Cable length	20 m
Cable diameter	6 mm
Cores	6 x 0.22 mm <sup>2</sup>

SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK YELLOW



### DESCRIPTION

- AISI 4340 nickel-plated steel body and AISI 304 stainless steel shell
- Combined error  $\leq \pm 0.014\%$
- IP69K protection rating
- Two-connector digital output
- Compatible with WINOX BGE and WTAB BGE
- Anti-rat cable, length: 7 m, equipped with connector on both ends
- Load cell bases with anti-rotation mechanism
- Earthing cable
- Pipe clamps
- Lightning and electrical shock protection

CAPACITY	kg	ACCURACY CLASS C5	NET WEIGHT (kg)	CODE
25000		•	3.5	COD25000CC
50000		•	3.7	COD50000CC

### CERTIFICATIONS



OIML R60 C



Equivalent of the CE marking for the United Kingdom




Declaration of conformity + IP69K marking protection rating

*Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)*

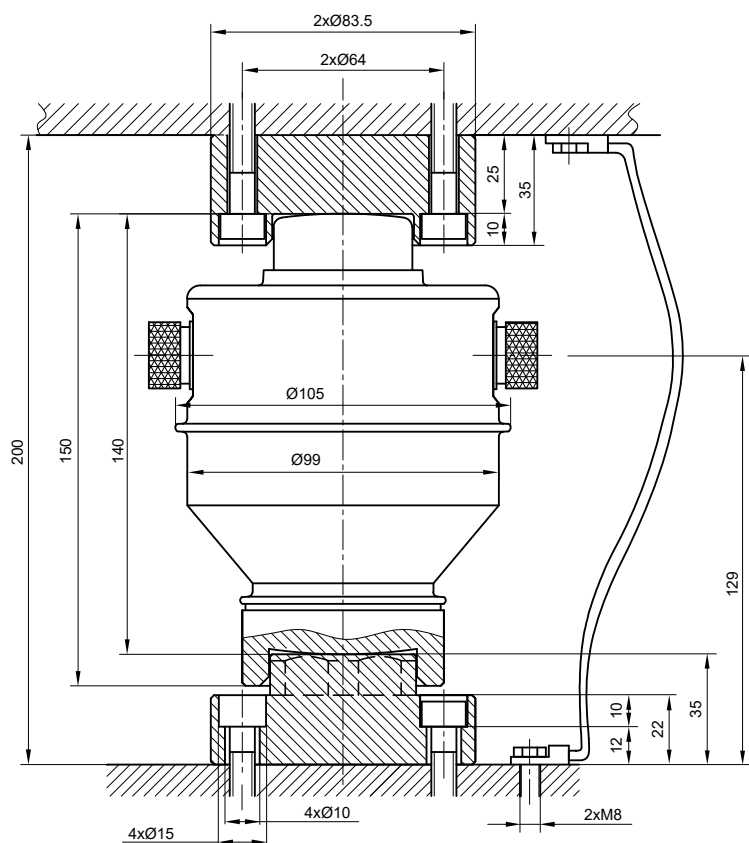
IP69K

*Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)*

### OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Anti-rat cable for connecting to indicator, length: 20 m, equipped with connector on one end only.	CAVOCONDIG

### DIMENSIONS (mm)

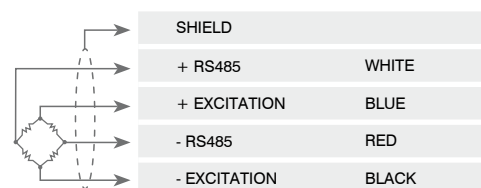


### TECHNICAL FEATURES

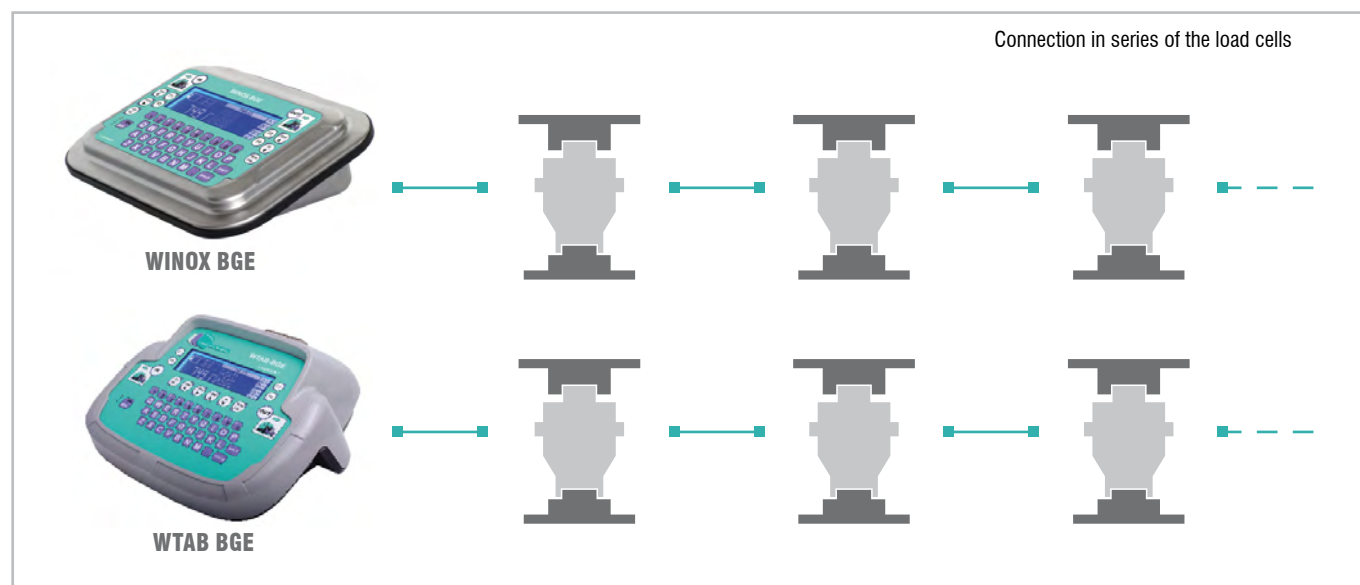
Material	AISI 4340 nickel-plated steel body and AISI 304 stainless steel shell		
<b>OIML R60 Accuracy class • Verification intervals</b>	<b>C5 • 5000</b>		
Nominal load (E max)	25000 - 50000 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.014%		
Protection class	IP69K		
Temperature effect on zero	0.0015% °C	Recommended power supply voltage	9 ÷ 12 VDC
Temperature effect on span	0.0015% °C	Safe overload (% of full scale)	150%
Compensated temperature range	-10 °C / +40 °C	Ultimate overload (% of full scale)	300%
Operating temperature range	-30 °C / +70 °C	RS485 serial interface	Halfduplex
Creep at nominal load in 30 minutes	0.02%	Maximum transmission distance	1200 m
Max supply voltage without damage	20 VDC		

### ELECTRICAL CONNECTIONS

Cable length	7 m
Cable diameter	8.8 mm
Cores	4 x 0.2 mm <sup>2</sup>



### EXAMPLE OF APPLICATION





Capacity 25000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.017\%$
- PROTECTION CLASS IP68
- LIGHTNING PROTECTION

CAPACITY	kg	ACCURACY CLASS			NET WEIGHT (kg)	CODE
25000		C4			2.4	CO25
ON REQUEST						

### CERTIFICATIONS

- OIML R60 C4
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

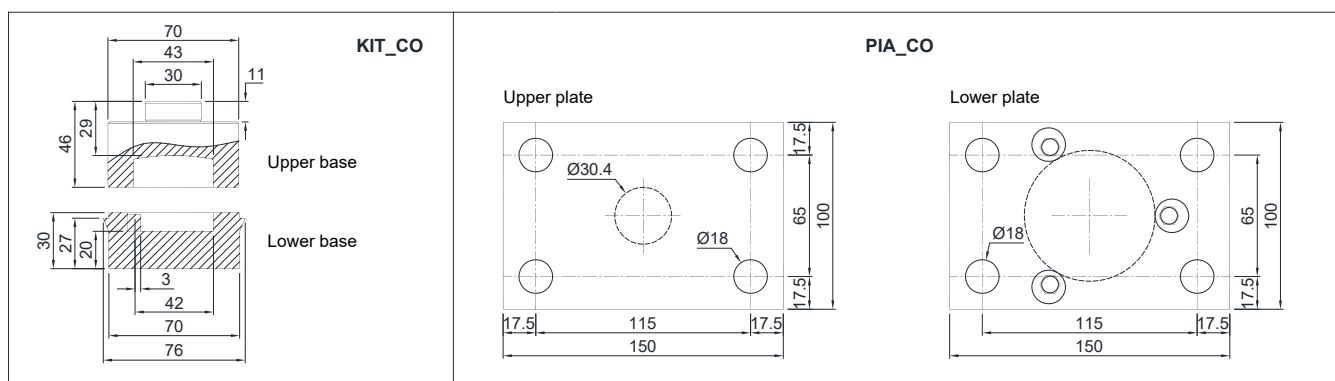
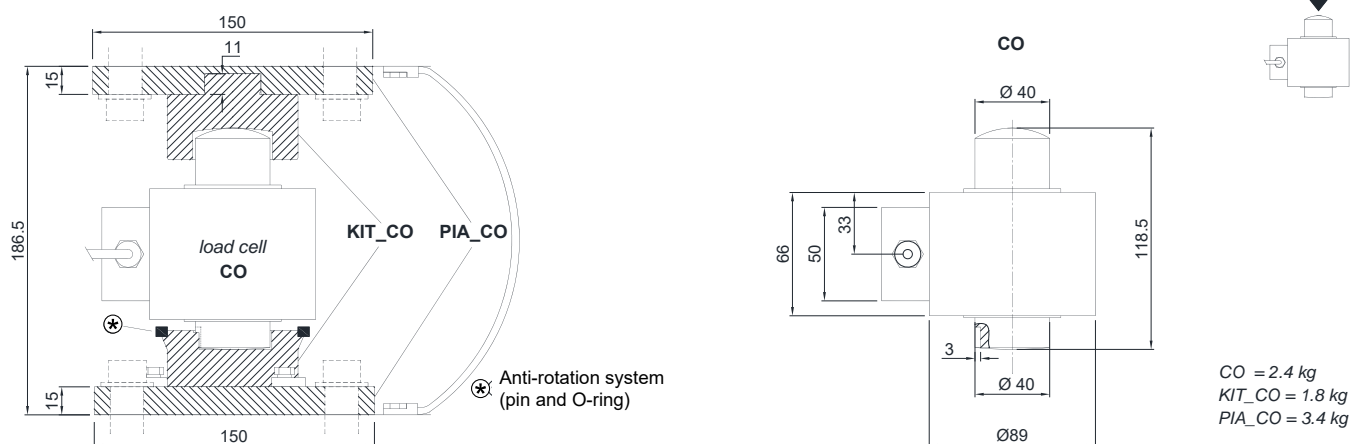
#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres
- Complies with the regulations of the Russian Federation for legal for trade use

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Stainless steel accessory composed by anti-rotation system with O-ring and 2 bases (upper and lower).	KITCO
	Kit composed by 2 AISI 5140 nickel plated steel plates (upper and lower) for KIT_CO bases.	PIACO

### DIMENSIONS (mm)

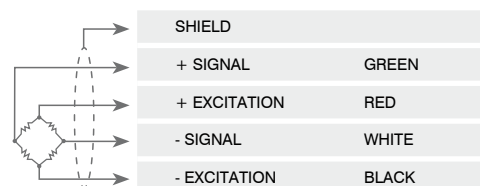


### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C4 • 4000		
Nominal load (E max)	25000 kg		
Minimum verification interval (V min)	E max / 15000		
Combined error	≤ ±0.017%		
Protection class	IP68		
Rated output	2 mV/V ±1%	Input resistance	700 Ω ±7
Temperature effect on zero	0.002% °C	Output resistance	700 Ω ±7
Temperature effect on span	0.002% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-30 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.02%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.6 - 1 mm

### ELECTRICAL CONNECTIONS

Cable length	15 m
Cable diameter	5 mm
Cores	4 x 0.24 mm <sup>2</sup>





Capacity from 30000 kg to 60000 kg



MOUNTING KIT



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.017\%$
- PROTECTION CLASS IP68

CAPACITY	kg	ACCURACY CLASS C4			NET WEIGHT (kg)	CODE
30000		•	•	•	2.5	COL30000
60000		•	•	•	3.5	COL60000

ON REQUEST

### CERTIFICATIONS

- OIML R60 C4
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

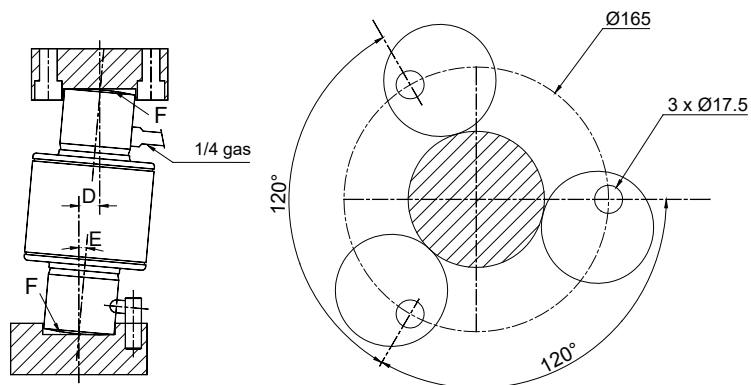
#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) ( - )
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres
- Complies with the regulations of the Russian Federation for legal for trade use

### COMPLEMENTARY ACCESSORIES

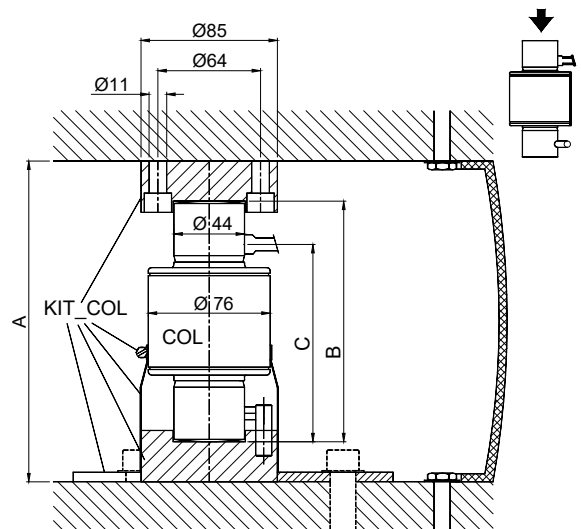
	DESCRIPTION	CODE
	Hardened AISI 420 stainless steel accessory composed by anti-rotation system, protective rubber seal, 2 bases (upper and lower) and 3 self-centering cylindrical plates.	KITCOL

### DIMENSIONS (mm)



	A	B	C	D max.	E (max. angle)	F (curvature radius)	weight
COL 30000	200	150	123	13	5°	160°	2.3 kg
COL 60000	260	210	153	11	3°	220°	3.7 kg

KIT\_COL weight = 3 kg



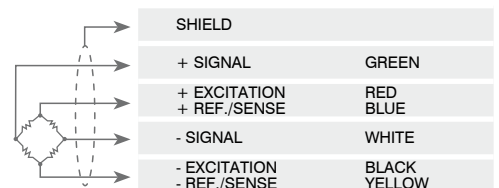
### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	C4 • 4000		
Nominal load (E max)	30000 - 60000 kg		
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.017%		
Protection class	IP68		
Rated output	2 mV/V ±0.1% *	Input resistance	800 Ω ±30
Temperature effect on zero	0.002% °C	Output resistance	700 Ω ±10
Temperature effect on span	0.0012% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Operating temperature range	-30 °C / +70 °C	Safe overload (% of full scale)	120%
Creep at nominal load in 30 minutes	0.016%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.6 - 1 mm

\* Calibrated current output

### ELECTRICAL CONNECTIONS

Cable length	20 m
Cable diameter	6 mm
Cores	6 x 0.22 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



	CAPACITY	PAGE
<b>A1.7</b>	<b>COMPRESSION / TENSION</b>	
<b>CLBT</b>	50, 100, 500 kg	<b>104</b>
<b>CL</b>	500, 1000, 2000, 5000, 10000, 20000, 30000, 60000, 100000, 150000, 200000 kg	<b>106</b>
<b>CLK</b>	2000, 5000, 10000, 20000 kg	<b>108</b>



# CLBT

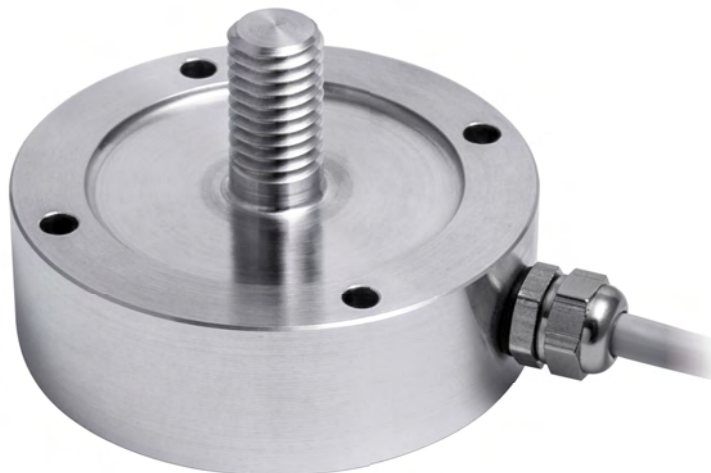
## COMPRESSION / TENSION LOAD CELLS

**LAUMAS®**


Manufactured according to OIML R60 standards

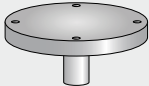
Capacity from 50 kg to 500 kg

- 50-100 kg: ALUMINIUM ALLOY (AVIONAL)
- 500 kg: 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.05\%$
- PROTECTION CLASS IP65



CAPACITY	kg	NET WEIGHT (kg)	CODE
	50	0,15	CLBT50
	100	0,15	CLBT100
	500	0,25	CLBT500

### COMPLEMENTARY ACCESSORIES

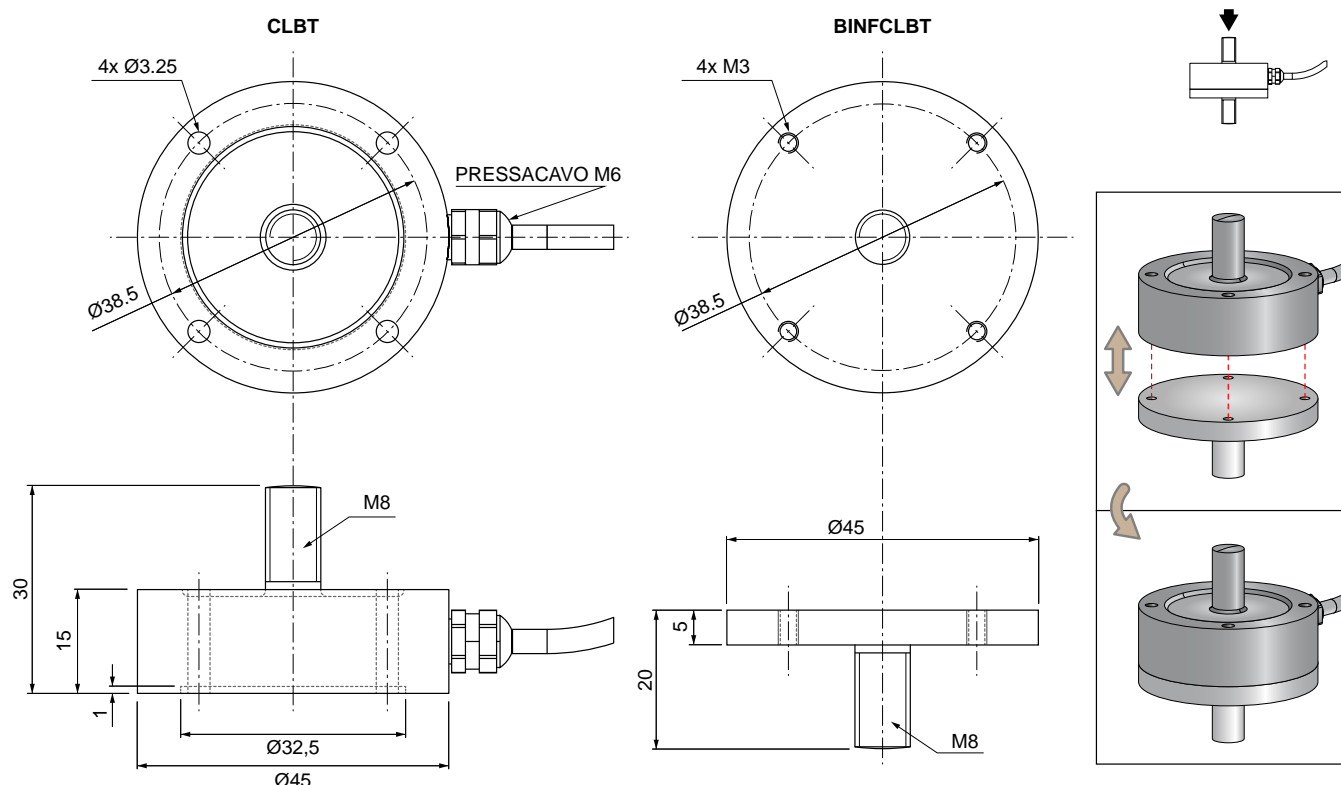
	DESCRIPTION	CODE
	Lower base	BINFCLBT

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

### DIMENSIONS (mm)

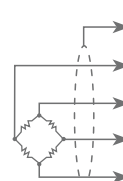


### TECHNICAL FEATURES

Material	Aluminium alloy (Avional)	17-4 PH stainless steel	
Nominal load (E max)	50 - 100 kg	500 kg	
Combined error	≤ ±0.05%		
Protection class	IP65		
Rated output	2 mV/V ±10%	Input resistance	700 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 20 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	5 ÷ 15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	5 m
Cable diameter	5 mm
Cores	6 x 0.088 mm <sup>2</sup>

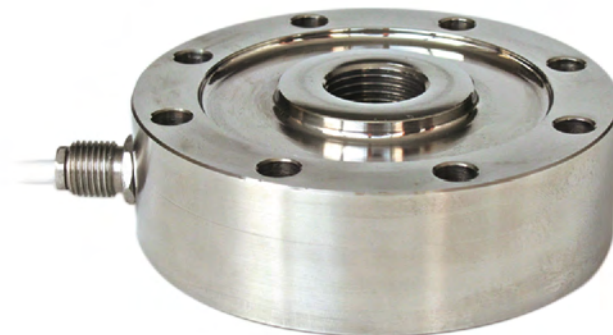


SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK BROWN



Manufactured according to OIML R60 standards

Capacity from 500 kg to 200000 kg



- 17-4 PH STAINLESS STEEL
- BIDIRECTIONAL TENSION AND COMPRESSION
- COMBINED ERROR  $\leq \pm 0.05\%$
- PROTECTION CLASS: IP68 (500 - 60000 kg) - IP67 (100000 - 200000 kg)

CAPACITY	kg	NET WEIGHT (kg)	CODE
	500	1.2	CL500
	1000	1.2	CL1000
	2000	1.2	CL2000
	5000	1.7	CL5000
	10000	1.8	CL10000
	20000	4.8	CL20000
	30000	5.3	CL30000
	60000	5.4	CL60000
	100000	12	CL100000
	150000	-	CL150000
	200000	-	CL200000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

Accredia traceable calibration report

ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

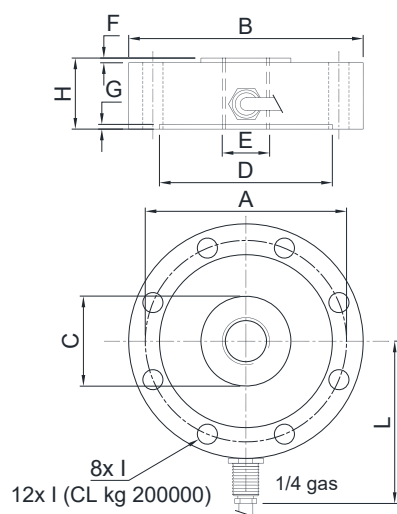
### OPTIONS ON REQUEST

#### DESCRIPTION



Two redundant strain gauges Wheatstone bridges (350  $\Omega$ ) with two output cables; for dual safety systems.

### DIMENSIONS (mm)



	kg 500 kg 1000 kg 2000	kg 5000 kg 10000	kg 20000 kg 30000 kg 60000	kg 100000	kg 150000	kg 200000
A	Ø 85	Ø 94	Ø 136	Ø 175	Ø 213	Ø 254
B	Ø 99	Ø 109	Ø 164	Ø 219	Ø 249	Ø 299
C	Ø 31	Ø 38	Ø 70	Ø 88	Ø 140	Ø 170
D	Ø 72	Ø 78	Ø 113	Ø 135	Ø 176	Ø 210
E	M20 x 1.5	M24 x 2	M48 x 3	M64 x 4	M72 x 4	M90 x 6
F	2	2	5	5	5	5
G	1.5	1.5	2	3	3	3
H	30	35	50	70	70	80
I	Ø 8.5	Ø 8.5	Ø 16.5	Ø 26	Ø 26	Ø 26
L	68.5	73.5	101	128.5	143.5	168.5
Weight	1.1	1.4	5	11	16	26

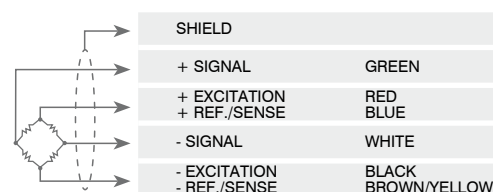


### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	500 - 1000 - 2000 - 5000 - 10000 - 20000 - 30000 - 60000 - 100000 - 150000 - 200000 kg		
Combined error	≤ ±0.05%		
Protection class	IP68 (500 - 60000 kg), IP67 (100000 - 200000 kg)		
Rated output	2 mV/V ±0.3%	Input resistance	700 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.3%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

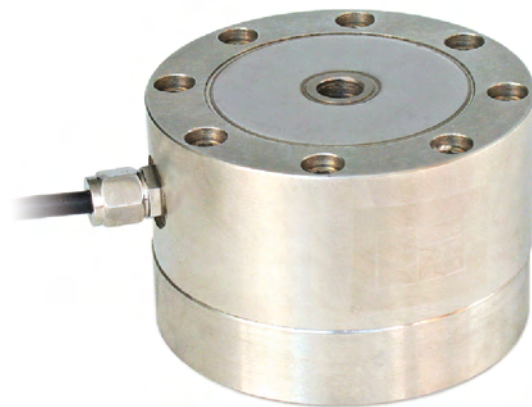
Cable length	5 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>





Manufactured according to OIML R60 standards

Capacity from 2000 kg to 20000 kg



- SPECIAL STEEL
- BIDIRECTIONAL TENSION AND COMPRESSION
- COMBINED ERROR  $\leq \pm 0.05\%$  (0.1% capacities 10000 kg and 20000 kg)
- PROTECTION CLASS IP67

CAPACITY	kg	NET WEIGHT (kg)	CODE
	2000	4.2	CLK2000
	5000	5.8	CLK5000
	10000	10.5	CLK10000
	20000	11	CLK20000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

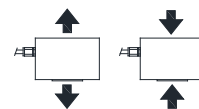
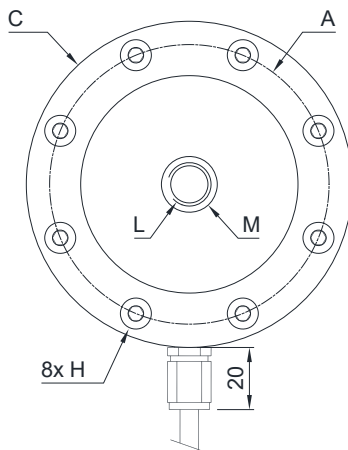
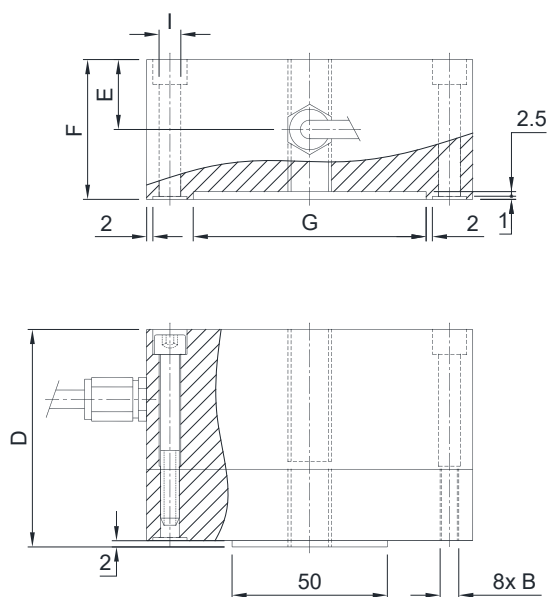
#### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



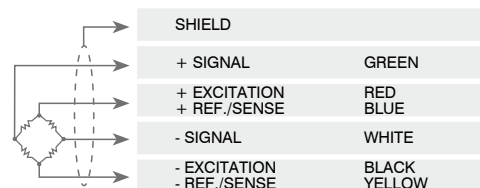
	2000 kg	5000 kg	10000 kg 20000 kg
A	Ø90	Ø104.5	Ø133
B	M6x1	M8x1.25	M10x1.5
C	Ø105	Ø120	Ø155
D	70	80	90
E	22.5	25	27.5
F	45	50	55
G	Ø75	Ø84	Ø106
H	M6 x 55	M8 x 65	M10 x 75
I	Ø7	Ø9	Ø11
L	M14x2	M20x1.5	M30x2
M	18	28	50
Weight	4.2 kg	6 kg	10.5-11 kg

### TECHNICAL FEATURES


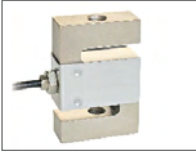



Material	Special steel		
Nominal load (E max)	2000 - 5000 kg	10000 - 20000 kg	
Combined error	≤ ±0.05%	≤ ±0.1%	
Protection class	IP67		
Rated output	2 mV/V ±0.3%	Input resistance	352 Ω ±3
Temperature effect on zero	0.002% °C	Output resistance	400 Ω ±20
Temperature effect on span	0.002% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	12 m
Cable diameter	6 mm
Cores	6 x 0.24 mm <sup>2</sup>



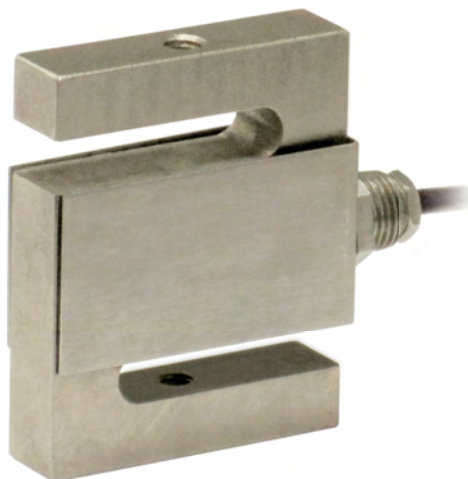
The Company reserves the right to make changes to the technical data, drawings and images without notice.

	CAPACITY	PAGE
<b>A1.8</b>	<b>TENSION (COMPRESSION)</b>	
	<b>SA</b> 15, 30, 60 kg	<b>112</b>
	<b>SL</b> 25, 100, 200, 300, 500, 1000, 2500 kg	<b>114</b>
	<b>CTOL</b> 50, 100, 200, 300 kg  500, 1000, 2500, 5000 kg	<b>116</b>
		
	<b>CTL</b> 100, 200, 300, 500, 1000, 2500, 5000, 7500, 10000, 12500 kg	<b>118</b>





Capacity from 15 kg to 60 kg



- AISI 4140 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS C3		NET WEIGHT (kg)	CODE
15		•	•	0.28	SA15
30		•	•	0.28	SA30
60		•	•	0.28	SA60

### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

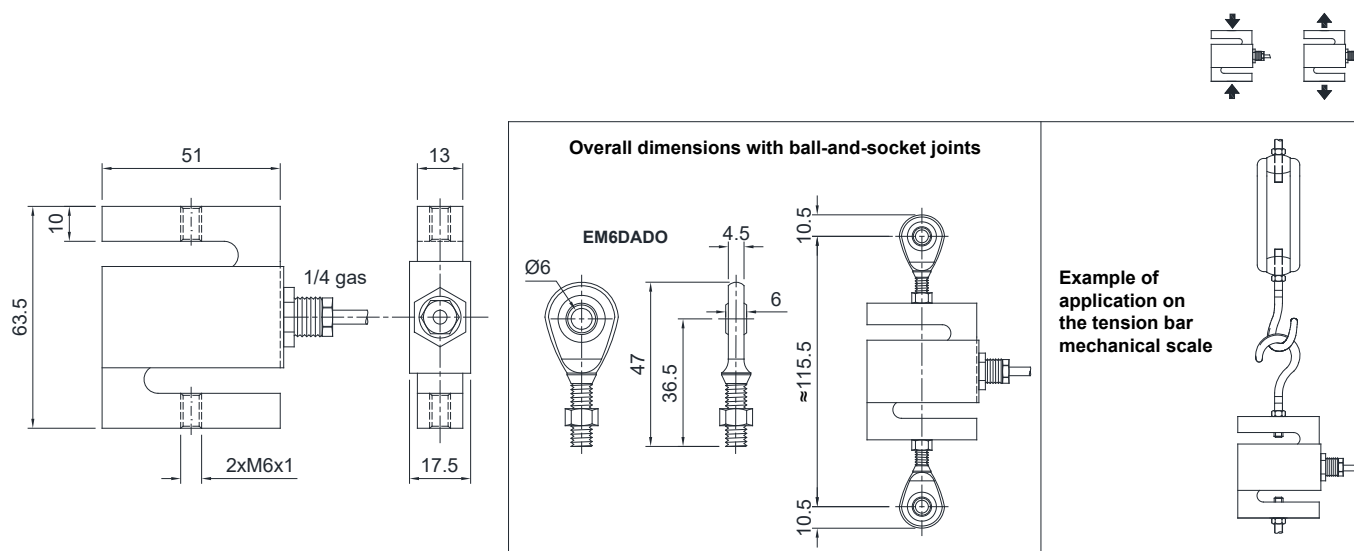
#### CERTIFICATIONS ON REQUEST

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Dimensions: M6x1 Load cell capacity: 15÷60 kg galvanized C45 steel ball-and-socket joint with nut.	EM6DADO

### DIMENSIONS (mm)

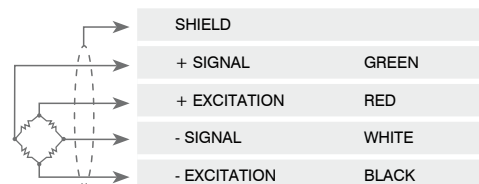


### TECHNICAL FEATURES

Material	AISI 4140 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	C3 • 3000		
Nominal load (E max)	15 - 30 - 60 kg		
Minimum verification interval (V min)	E max / 8000		
Combined error	≤ ±0.02%		
Protection class	IP65		
Rated output	2 mV/V ± 10%	Input resistance	381 Ω ± 10
Temperature effect on zero	0.0017% °C	Output resistance	350 Ω ± 10
Temperature effect on span	0.0013% °C	Zero balance	± 1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	> 5000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	120%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.2 mm

### ELECTRICAL CONNECTIONS

Cable length	3 m
Cable diameter	4 mm
Cores	4 x 0.24 mm <sup>2</sup>

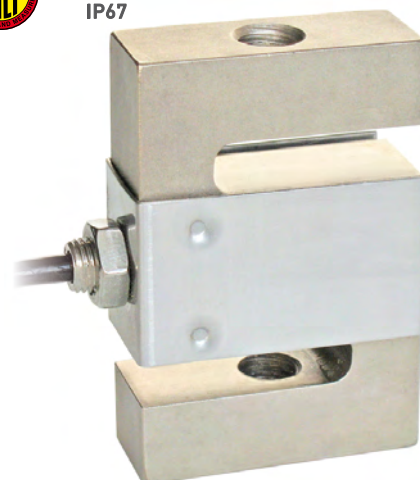


The Company reserves the right to make changes to the technical data, drawings and images without notice.



### Capacity from 25 kg to 2500 kg

- AISI 4340 NICKEL PLATED STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$  (0.017% C4)
- PROTECTION CLASS IP67



CAPACITY	kg	ACCURACY CLASS				NET WEIGHT (kg)	CODE
		C3	C4				
25		–	–	–	–	0.4	SL25
100		•	•	•	•	0.6	SL100
200		•	•	–	•	0.6	SL200
300		•	•	–	•	0.6	SL300
500		•	•	•	•	0.7	SL500
1000		•	•	•	•	0.9	SL1000
2500		•	•	•	•	1.6	SL2500

ON REQUEST

### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

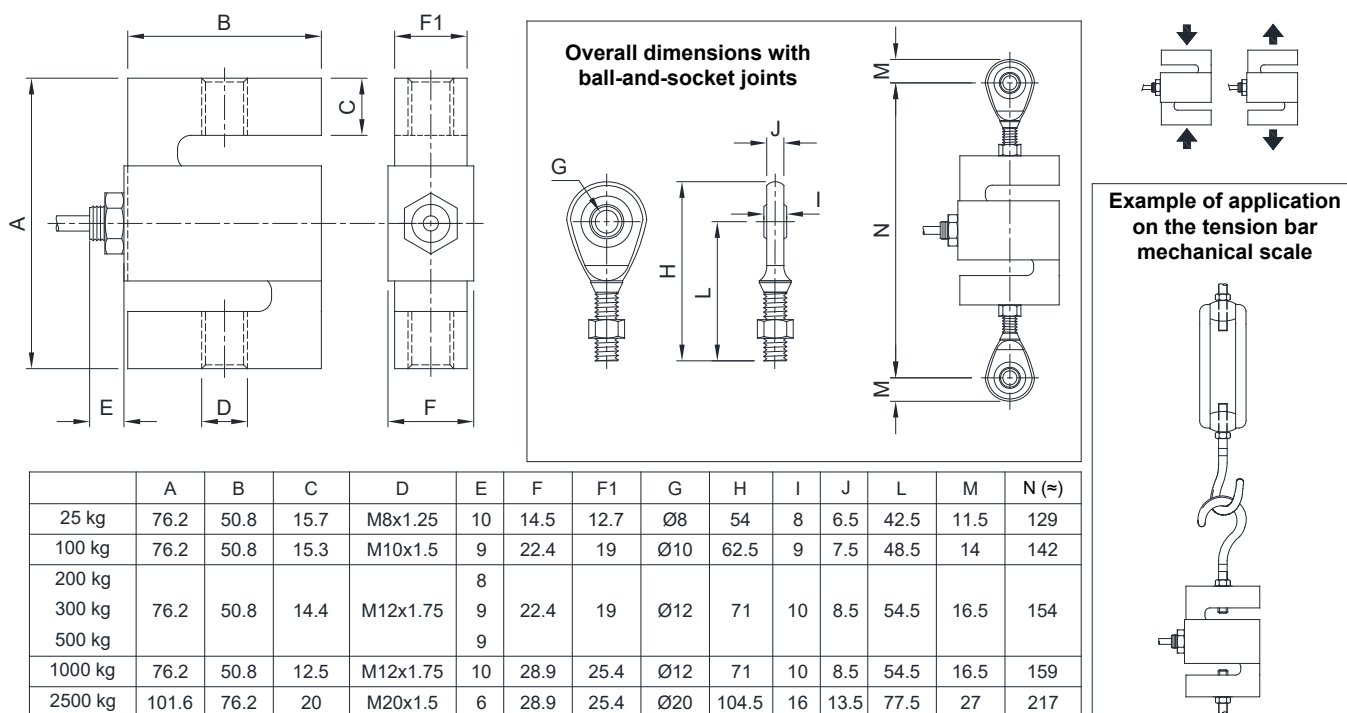
- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)
- IECEx (zone 0-1-2-20-21-22)
- OIML R60 C4
- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres
- NTEP - Complies with United States regulations for legal for trade use

### COMPLEMENTARY ACCESSORIES



DESCRIPTION	DIMENSIONS	LOAD CELL CAPACITY	CODE
Ball-and-socket joint with nut:			
stainless steel	M12x1.75	200-1000 kg	EM12DADOINOX
	M20x1.5	2500 kg	EM20DADOINOX
galvanized C45 steel	M8x1.25	25 kg	EM8DADO
	M10x1.5	100 kg	EM10DADO
	M12x1.75	200-1000 kg	EM12DADO
	M20x1.5	2500 kg	EM20DADO

### DIMENSIONS (mm)

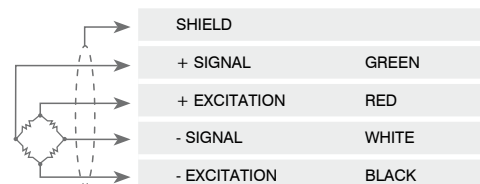


### TECHNICAL FEATURES

Material	AISI 4340 nickel plated steel		
OIML R60 Accuracy class • Verification intervals	-	C3 • 3000	C4 • 4000
Nominal load (E max)	25 kg	100 - 200 - 300 kg 500 - 1000 - 2500 kg	100 - 200 - 300 kg 500 - 1000 - 2500 kg
Minimum verification interval (V min)	-	E max / 10000 E max / 15000	E max / 20000
Combined error	≤ ±0.02%	≤ ±0.02%	≤ ±0.017%
Protection class	IP67		
Rated output	2 mV/V ±0.2%	Input resistance	350 Ω ±3.5
Temperature effect on zero	0.0015% °C	Output resistance	350 Ω ±3.5
Temperature effect on span	0.0017% °C	Zero balance	±1%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-35 °C / +65 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	18 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	5 m (25 - 300 kg); 10 m (500 - 2500 kg)
Cable diameter	5 mm
Cores	4 x 0.24 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

Capacity from 50 kg to 300 kg



- AISI 420 STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP67

Capacity from 500 kg to 5000 kg



CAPACITY	kg	NET WEIGHT (kg)	CODE
50		0.7	CTOL50
100		0.7	CTOL100
200		0.7	CTOL200
300		0.7	CTOL300
500		0.7	CTOL500
1000		1.4	CTOL1000
2500		1.4	CTOL2500
5000		2.7	CTOL5000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UKCA** Equivalent of the CE marking for the United Kingdom

CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UKCA** )

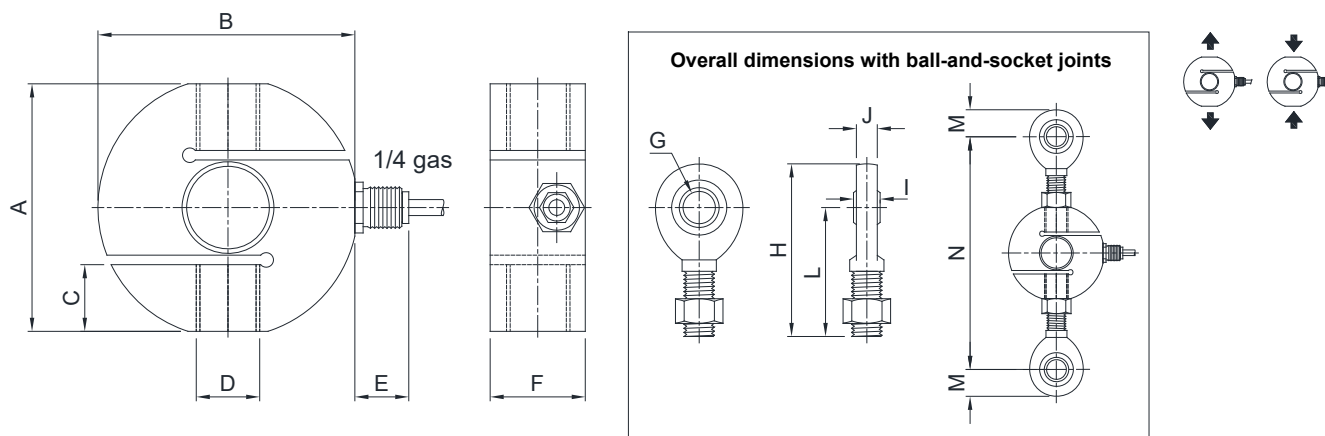
**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	DIMENSIONS	LOAD CELL CAPACITY	CODE
	Ball-and-socket joint with nut:			
	stainless steel	M12x1.75	50-500 kg	EM12DADOINOX
		M16x2	1000 kg	EM16DADOINOX
		M20x1.5	2500 kg	EM20DADOINOX
		M24x2	5000 kg	EM24DADOINOX
	galvanized C45 steel	M12x1.75	50-500 kg	EM12DADO
		M16x2	1000 kg	EM16DADO
		M20x1.5	2500 kg	EM20DADO
		M24x2	5000 kg	EM25DADO

### DIMENSIONS (mm)



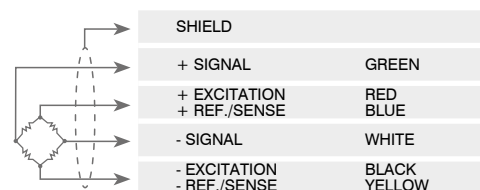
	A	B	C	D	E	F	G	H	I	J	L	M	N (≈)
50 kg 500 kg	59.5	63.5	14.5	M12x1.75	17	22	Ø12	71	10	8.5	54.5	16.5	140
1000 kg	78	82	21	M16x2	17	30	Ø17	92	14	11.5	69.5	22.5	176
2500 kg	78	82	21	M20x1.5	17	30	Ø20	104.5	16	13.5	77.5	27	191
5000 kg	90	102	24	M24x2	17	45	Ø25	126	20	17.5	94.5	31.5	230

### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	50 - 100 - 200 - 300 - 500 - 1000 - 2500 - 5000 kg		
Combined error	≤ ±0.03%		
Protection class	IP67		
Rated output	2 mV/V ±0.4%	Input resistance	385 Ω ±30
Temperature effect on zero	0.0025% °C	Output resistance	350 Ω ±10
Temperature effect on span	0.0025% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +40 °C	Insulation resistance	>2000 MΩ
Operating temperature range	-20 °C / +60 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	250%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	6 mm
Cores	6 x 0.20 mm <sup>2</sup>

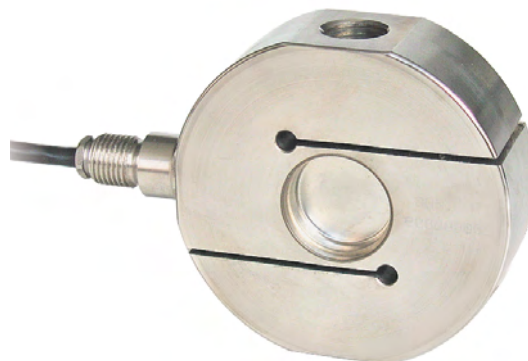


The Company reserves the right to make changes to the technical data, drawings and images without notice.



Capacity from 100 kg to 12500 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.02\%$
- PROTECTION CLASS IP68



CAPACITY	kg	ACCURACY CLASS C3			NET WEIGHT (kg)	CODE
100		–	–	–	0.7	CTL100
200		–	–	–	0.7	CTL200
300		–	–	–	0.7	CTL300
500		•	•	•	1.4	CTL500
1000		•	•	•	1.4	CTL1000
2500		•	•	•	1.4	CTL2500
5000		•	•	•	2.6	CTL5000
7500		•	•	•	2.7	CTLA7500
10000		•	•	•	3.7	CTLA10000
12500		•	•	•	4.8	CTL12500

ON REQUEST

### CERTIFICATIONS

- OIML R60 C3
- Complies with the Eurasian Customs Union standards
- Equivalent of the CE marking for the United Kingdom
- Complies with United Kingdom regulations for legal for trade use

#### CERTIFICATIONS ON REQUEST

- Declaration of conformity + IP69K marking protection rating  
Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)  
Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)

- Accredia traceable calibration report

- ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

- IECEx (zone 0-1-2-20-21-22)

- Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

- Complies with the regulations of the Russian Federation for legal for trade use


### OPTIONS ON REQUEST

#### DESCRIPTION

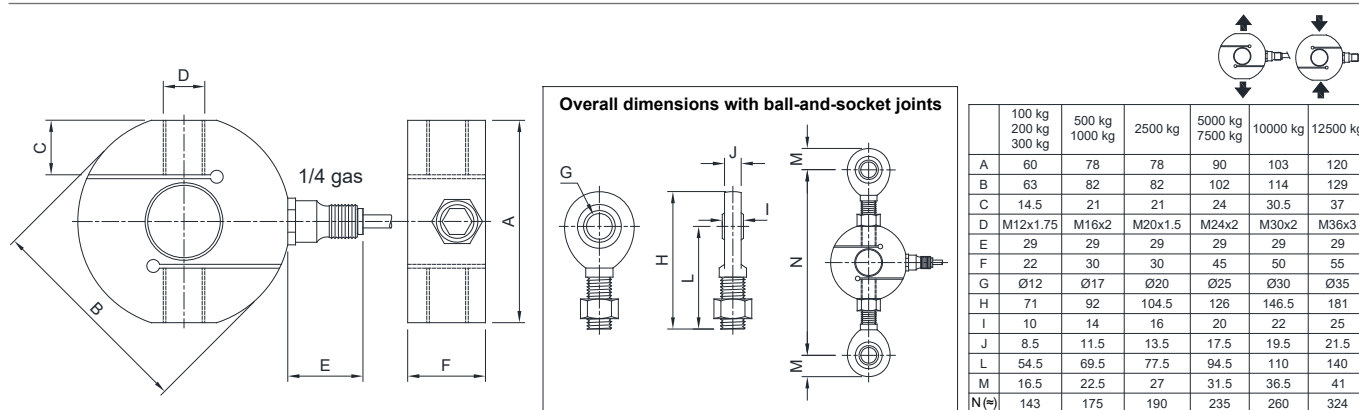


Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems.

### COMPLEMENTARY ACCESSORIES

	DESCRIPTION	DIMENSIONS	LOAD CELL CAPACITY	CODE
	Ball-and-socket joint with nut:			
	stainless steel	M12x1.75	100-300 kg	EM12DADOINOX
		M16x2	500-1000 kg	EM16DADOINOX
		M20x1.5	2500 kg	EM20DADOINOX
		M24x2	5000-7500 kg	EM24DADOINOX
	galvanized C45 steel	M12x1.75	100-300 kg	EM12DADO
		M16x2	500-1000 kg	EM16DADO
		M20x1.5	2500 kg	EM20DADO
		M24x2	5000-7500 kg	EM25DADO
		M30x2	10000 kg	EM30DADO
M36x3		12500 kg	EM35DADO	

### DIMENSIONS (mm)

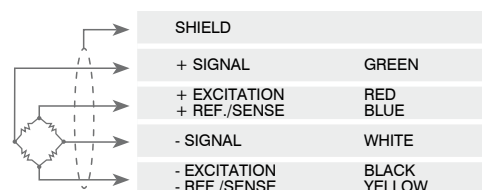


### TECHNICAL FEATURES



Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	-		C3 • 3000
Nominal load (E max)	100 - 200 - 300 kg		500 - 1000 - 2500 - 5000 kg 7500 - 10000 - 12500 kg
Minimum verification interval (V min)	E max / 10000		
Combined error	≤ ±0.02%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	350 Ω ±5
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±2
Temperature effect on span	0.003% °C	Zero balance	±1%
Temperature range OIML R60	-10 °C / +40 °C	Insulation resistance	≥5000 MΩ
Compensated temperature range	-20 °C / +70 °C	Safe overload (% of full scale)	150%
Operating temperature range	-30 °C / +90 °C	Ultimate overload (% of full scale)	300%
Creep at nominal load in 30 minutes	0.05%	Deflection at nominal load	0.3 mm
Max supply voltage without damage	15 V		

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.

	CAPACITY	PAGE
<b>A1.9</b>	<b>TENSION</b>	
	<b>TAL</b> 5000, 10000, 20000 kg	<b>122</b>
	<b>TBT</b> 30000, 40000, 50000, 60000, 100000, 250000 kg	<b>124</b>





Manufactured according to OIML R60 standards

### Capacity from 5000 kg to 20000 kg



- 17-4 PH STAINLESS STEEL
- HOLES FOR STANDARD SHACKLES
- COMBINED ERROR  $\leq \pm 0.03\%$
- PROTECTION CLASS IP68

CAPACITY	kg	NET WEIGHT (kg)	CODE
	<b>5000</b>	4.5	TAL5000
	<b>10000</b>	4.6	TAL10000
	<b>20000</b>	6.6	TAL20000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

✓ Accredia traceable calibration report

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UK CA** )

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

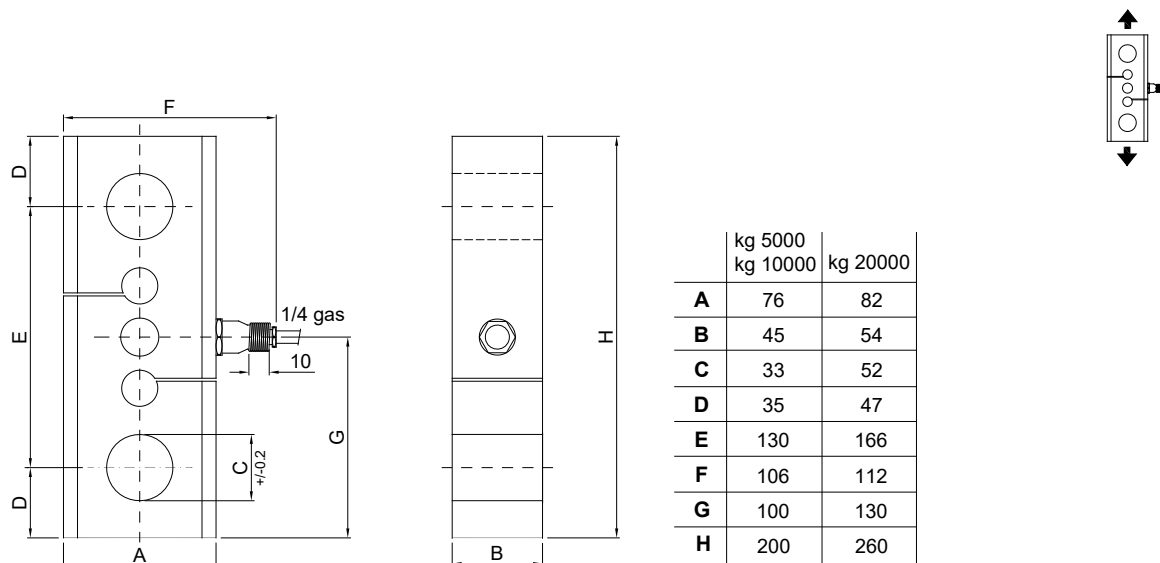
### OPTIONS ON REQUEST

#### DESCRIPTION



Two redundant strain gauges Wheatstone bridges (350  $\Omega$ ) with two output cables; for dual safety systems.

### DIMENSIONS (mm)

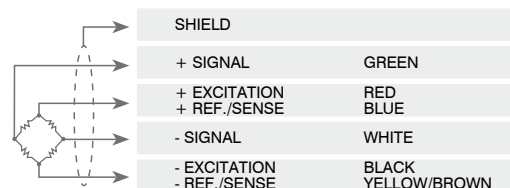


### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	5000 - 10000 - 20000 kg		
Combined error	≤ ±0.03%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	350 Ω ±5
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.003% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

Capacity from 30000 kg to 250000 kg



- 17-4 PH STAINLESS STEEL
- HOLES FOR STANDARD SHACKLES
- COMBINED ERROR  $\leq \pm 0.08\%$
- PROTECTION CLASS IP68

CAPACITY	kg	NET WEIGHT (kg)	CODE
30000		-	TBT30000
40000		-	TBT40000
50000		-	TBT50000
60000		-	TBT60000
100000		-	TBT100000
250000		-	TBT250000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

✓ Accredia traceable calibration report

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

**IECEx** IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

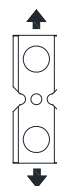
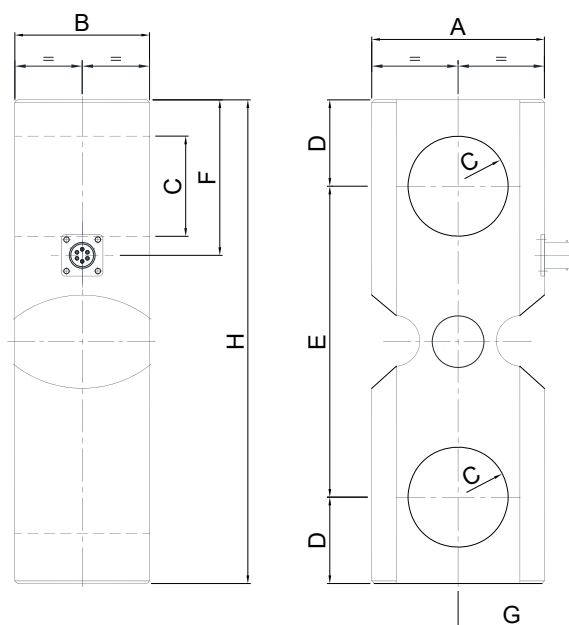
### OPTIONS ON REQUEST

#### DESCRIPTION



Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems.

### DIMENSIONS (mm)



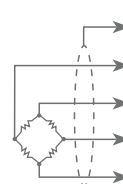
	kg 30000 kg 40000 kg 50000 kg 60000	kg 100000	kg 250000
A	100	127	240
B	78	88	110
C	Ø 58	Ø 71	Ø 102
D	50	70	120
E	180	200	360
F	90	120	185
G	65	68	136
H	280	340	600

### TECHNICAL FEATURES

Material	AISI 420 stainless steel		
Nominal load (E max)	30000 - 40000 - 50000 - 60000 - 100000 - 250000 kg		
Combined error	≤ ±0.08%		
Protection class	IP68		
Rated output	1.0 mV/V ±0.1%	Input resistance	350 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	6 mm
Cores	6 x 0.14 mm <sup>2</sup>

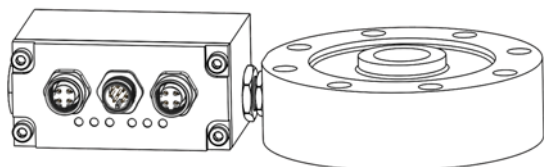


SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK BROWN



		PAGE
<b>A1.10</b>	<b>DIGITAL LOAD CELLS</b>	
<b>LCB</b>		<b>128</b>





EXAMPLE OF APPLICATION WITH LOAD CELL



### DESCRIPTION

- LCB transforms an analog load cell (mV/V output) into a digital one; it can also be used on existing load cells to digitize the weighing system.
- Conceived for IoT applications (Internet of Things).
- PC configuration software via micro USB port.
- Status LED of the communication interface.
- Mounting: wired or integral to the load cell body via standard 1/4 GAS fitting (specific adapters for different threads are supplied on request).
- IP67 AISI 304 stainless steel box (dimensions: 90x40x107 mm including flying connectors).
- 3x IP67 M12 flying connectors included in the supply.



LCB WITH FLYING CONNECTORS

### INPUTS/OUTPUTS AND COMMUNICATION

- 1 micro USB port.
- 3 relay outputs controlled by the setpoint values or via protocols.
- 2 digital inputs: status reading via serial communication protocols.
- 1 load cell input.

#### PC CONFIGURATION SOFTWARE



#### MICRO USB FOR PC CONFIGURATION



### CERTIFICATIONS

- EAC** Complies with the Eurasian Customs Union standards
- UK CA** Equivalent of the CE marking for the United Kingdom

### FIELD BUSES



### INTERFACES AND FIELDBUSES

	CODE	
<b>RS485.</b> Male M12 circular connector, A-coded, 5-pin. Female M12 circular connector, A-coded, 5-pin. Baud rate: 2400, 4800, 9600, 19200, 38400, 115200 (bit/s).	LCBRS485	<i>coming soon</i>
<b>RS485 + analog output.</b> Current: 0÷20 mA; 4÷20 mA (up to 400 Ω). Voltage: 0÷10 V; 0÷5 V (min 2 kΩ). Male M12 circular connector, A-coded, 5-pin. Female M12 circular connector, A-coded, 5-pin.	LCBRS485ANA	
<b>IO-Link.</b> 2x male M12 circular connector, A-coded, 4-pin. The instrument works as <i>device</i> in a IO-Link network.	LCBIOLINK	
<b>CANopen.</b> Male M12 circular connector, A-coded, 5-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as <i>slave</i> in a CANopen synchronous network.	LCBCANOPEN	
<b>CC-Link IE.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a CC-Link IE network.	LCBCCLINKIE	<i>coming soon</i>
<b>CC-Link.</b> Male M12 circular connector, A-coded, 4-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as <i>Remote Device Station</i> in a CC-Link network and occupies 3 stations.	LCBCCLINK	<i>coming soon</i>
<b>Profibus DP.</b> Male M12 circular connector, B-coded, 5-pin. Female M12 circular connector, B-coded, 5-pin. The instrument works as <i>slave</i> in a Profibus DP network.	LCBPROFIBUS	<i>coming soon</i>
<b>Modbus/TCP.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Modbus/TCP network.	LCBMODBUSTCP	
<b>Ethernet TCP/IP.</b> Female M12 circular connector, D-coded, 4-pin. The instrument works in an Ethernet TCP/IP network and it is accessible via web browser.	LCBETHETCP	<i>coming soon</i>
<b>Ethernet/IP.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>adapter</i> in an Ethernet/IP network.	LCBETHEIP	
<b>Profinet IO.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>device</i> in a Profinet IO network.	LCBPROFINETIO	
<b>EtherCAT.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in an EtherCAT network.	LCBETHERCAT	
<b>POWERLINK.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Powerlink network.	LCBPOWERLINK	
<b>SERCOS III.</b> 2x female M12 circular connectors, D-coded, 4-pin. The instrument works as <i>slave</i> in a Sercos III network.	LCBSERCOSIII	

### MAIN FUNCTIONS

- Connections to:
  - PLC via analog output or fieldbuses;
  - PC/PLC via RS485 (up to 99 instruments with line repeaters, up to 32 without line repeaters);
  - up to 4 load cells in parallel by junction box.
- TCP/IP WEB APP: integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via PC software) and real calibration (with sample weights and the possibility of weight linearization up to 5 points).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.
- Semi-automatic tare (net/gross weight) and preset tare.
- Semi-automatic zero.
- Direct connection between RS485 and RS232 without converter.
- Configuration backup and restore via PC software.

### BASE PROGRAM

- Hysteresis and setpoint value setting.


### SINGLE PRODUCT LOADING PROGRAM





- 99 settable formulas.
- Automatic fall calculation.
- Tolerance error control.
- Precision batching through slow function.
- Precision batching through tapping function.
- Consumption storage.
- Batching start via external contact or fieldbus.

### TECHNICAL FEATURES

Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 4 (350 Ω) - 4/6 wires • 3.3 VDC/40 mA
Linearity • Analog output linearity	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift	<0.0005% full scale/°C • <0.003% full scale/°C
A/D Converter	24 bit (16000000 points) - 4.8 kHz
Divisions (with measurement range ±10 mV and sensitivity 2 mV/V)	±999999 • 6.6 nV/d
Measurement range	±26 mV
Usable load cells sensitivity	±7 mV/V
Conversions per second	300/s
Decimals • Display increments	0÷4 • x1 x2 x5 x10 x20 x50 x100
Digital filter • Readings per second	10 levels • 5÷600 Hz
Relay outputs	3 - max 115 VAC/150 mA - 24 VDC/200 mA
Digital inputs	2 - 5÷24 VDC
Micro USB port	B type - USB 2.0 (full-speed)
Humidity (condensate free)	85%
Storage temperature	-30 °C +80 °C
Working temperature	-20 °C +50 °C

### OPTIONS ON REQUEST

	DESCRIPTION	CODE
	Load cell + LCB wiring.	LCBCOL

	CAPACITY		PAGE
<b>A1.11</b>	<b>SPECIAL LOAD CELLS</b>		
<b>A1.11.1</b>	<b>pin</b>		
 <b>LAU</b>	5000, 10000, 20000 kg		<b>133</b>
<b>A1.11.2</b>	<b>for foot brake</b>		
 <b>LPED</b>	100 kg		<b>135</b>
<b>A1.11.3</b>	<b>anchor</b>		
 <b>CA</b>	30000, 50000, 75000, 100000, 125000, 150000, 180000, 250000 kg		<b>137</b>
	CAPACITY	ROPE Ø MM	PAGE
<b>A1.11.4</b>	<b>wire rope measuring</b>		
 <b>FUN</b>	2000 kg 4000 kg 10000 kg 20000 kg 40000 kg	6÷14 mm 10÷18 mm 16÷26 mm 24÷36 mm 24÷36 mm	<b>139</b>

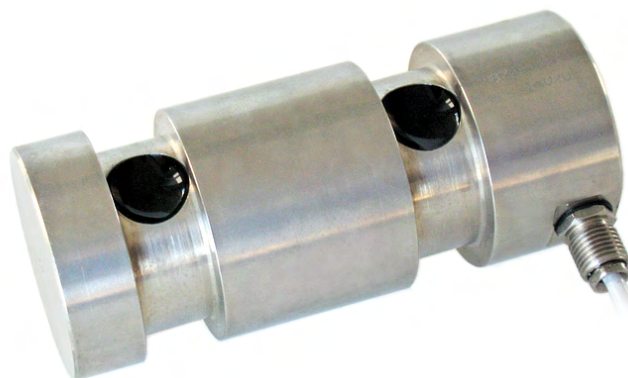




Manufactured according to OIML R60 standards

### Capacity from 5000 kg to 20000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.1\%$
- PROTECTION CLASS IP67



CAPACITY	kg	NET WEIGHT (kg)	CODE
	5000	2.9	LAU5000
	10000	3.2	LAU10000
	20000	3.4	LAU20000

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

Accredia traceable calibration report

ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

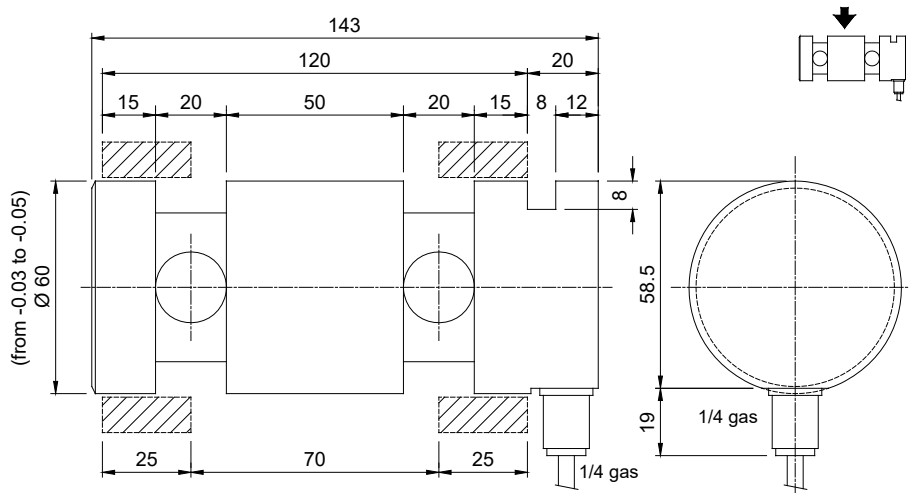
### OPTIONS ON REQUEST

#### DESCRIPTION



Two redundant strain gauges Wheatstone bridges (350  $\Omega$ ) with two output cables; for dual safety systems

### DIMENSIONS (mm)

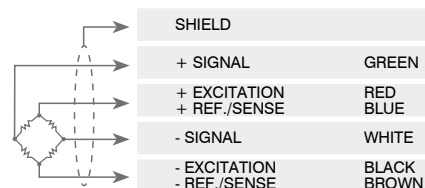


### TECHNICAL FEATURES

Material	17-4 PH stainless steel		
Nominal load (E max)	5000 - 10000 - 20000 kg		
Combined error	≤ ±0.1%		
Protection class	IP67		
Rated output	1 mV/V ±0.1%	Input resistance	350 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	350 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	400%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Manufactured according to OIML R60 standards

## Capacity 100 kg



- ALUMINUM
- COMBINED ERROR  $\leq \pm 0.08\%$
- PROTECTION CLASS IP65
- FLEXIBLE CABLE

CAPACITY	kg	NET WEIGHT (kg)	CODE
	<b>100</b>	0.4	LPED100

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UKCA** Equivalent of the CE marking for the United Kingdom

### CERTIFICATIONS ON REQUEST

Accredia traceable calibration report

ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UKCA)

IECEx (zone 0-1-2-20-21-22)

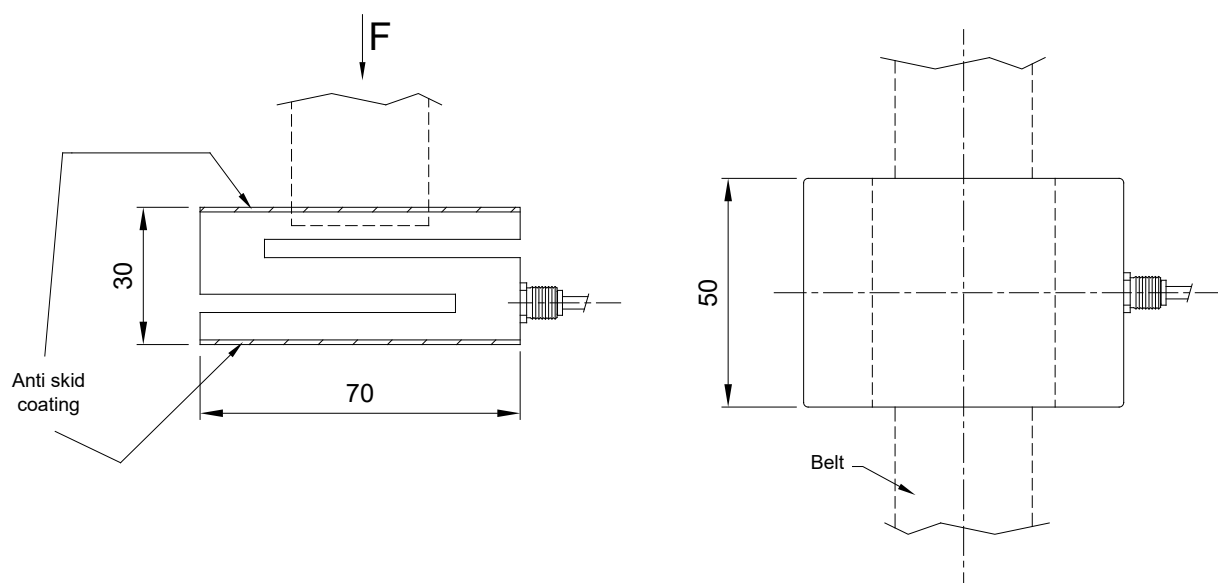
**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

## OPTIONS ON REQUEST

### DESCRIPTION



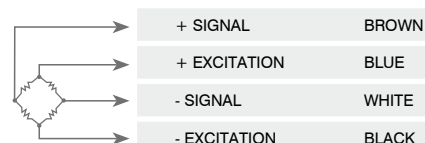
Two redundant strain gauges Wheatstone bridges (350  $\Omega$ ) with two output cables; for dual safety systems

**DIMENSIONS (mm)****TECHNICAL FEATURES**

Material	Aluminum		
Nominal load (E max)	100 kg		
Combined error	$\leq \pm 0.08\%$		
Protection class	IP65		
Rated output	1 mV/V $\pm 0.2\%$	Input resistance	350 $\Omega$ $\pm 50$
Temperature effect on zero	0.005% $^{\circ}\text{C}$	Output resistance	350 $\Omega$ $\pm 5$
Temperature effect on span	0.003% $^{\circ}\text{C}$	Zero balance	$\pm 1\%$
Compensated temperature range	-20 $^{\circ}\text{C}$ / +70 $^{\circ}\text{C}$	Insulation resistance	>5000 M $\Omega$
Operating temperature range	-30 $^{\circ}\text{C}$ / +90 $^{\circ}\text{C}$	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.25 mm

**ELECTRICAL CONNECTIONS**

Cable length	2 m
Cable diameter	5 mm
Cores	4 x 0.25 mm <sup>2</sup>





Manufactured according to OIML R60 standards

### Capacity from 30000 kg to 250000 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR  $\leq \pm 0.1\%$
- PROTECTION CLASS IP68

CAPACITY	kg	Ø INTERNAL	Ø EXTERNAL	NET WEIGHT (kg)	CODE
30000		50 mm	163 mm	-	CA50/30T
50000		50 mm	163 mm	-	CA50/50T
75000		50 mm	163 mm	-	CA50/75T
50000		75 mm	163 mm	-	CA75/50T
75000		75 mm	163 mm	-	CA75/75T
75000		120 mm	229 mm	-	CA120/75T
100000		120 mm	229 mm	-	CA120/100T
125000		120 mm	229 mm	-	CA120/125T
125000		165 mm	275 mm	-	CA165/125T
150000		165 mm	275 mm	-	CA165/150T
180000		165 mm	275 mm	-	CA165/180T
180000		225 mm	320 mm	-	CA225/180T
250000		225 mm	320 mm	-	CA225/250T

### CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UK CA** Equivalent of the CE marking for the United Kingdom

#### CERTIFICATIONS ON REQUEST

✓ Accredia traceable calibration report

⚡ ATEX II 1GD (zone 0-1-2-20-21-22) (CE - UK CA)

IECEx (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### OPTIONS ON REQUEST

#### DESCRIPTION



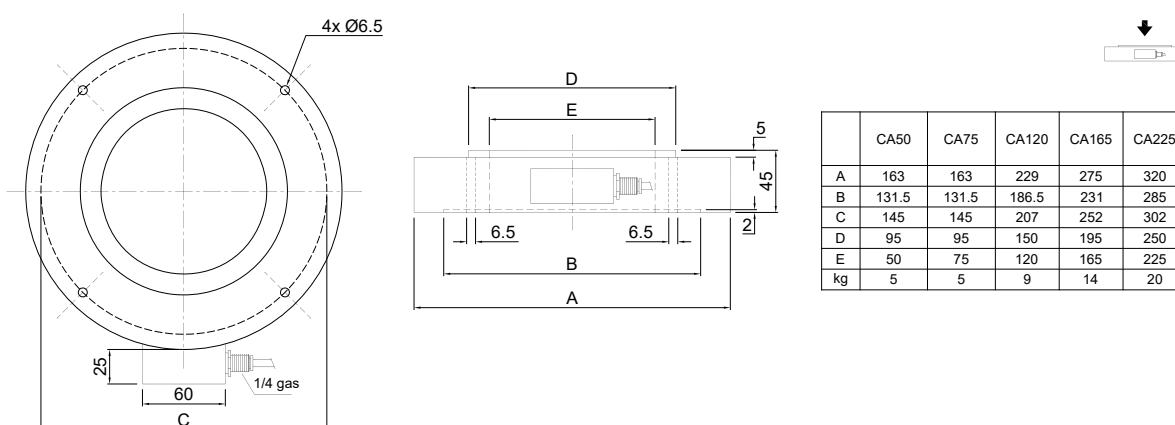
Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems.

### COMPLEMENTARY ACCESSORIES



DESCRIPTION	DIMENSIONS		CODE
Galvanized steel plates for load distribution.	for load cell:		
Upper plate	Ø98x25 mm	CA50/ ...	PIAS50CASUP
Lower plate	Ø170x25 mm		PIAS50CAINF
Upper plate	Ø98x27.5 mm	CA75/ ...	PIAS75CASUP
Lower plate	Ø170x25 mm		PIAS75CAINF
Upper plate	Ø150x27.5 mm	CA120/ ...	PIAS120CASUP
Lower plate	Ø240x30 mm		PIAS120CAINF
Upper plate	Ø199x30 mm	CA165/ ...	PIAS165CASUP
Lower plate	Ø290x30 mm		PIAS165CAINF
Upper plate	Ø250x30 mm	CA225/ ...	PIAS225CASUP
Lower plate	Ø330x35 mm		PIAS225CAINF

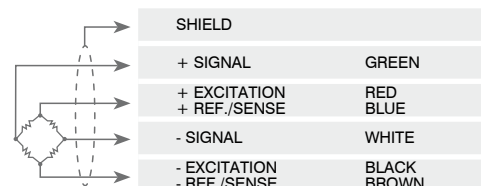
### TECHNICAL FEATURES - DIMENSIONS



Material	17-4 PH stainless steel		
Nominal load (E max)	30000 - 50000 - 75000 - 100000 - 125000 - 150000 - 180000 - 250000 kg		
Combined error	≤ ±0.1%		
Protection class	IP68		
Rated output	2 mV/V ±0.1%	Input resistance	700 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	700 Ω ±5
Temperature effect on span	0.005% °C	Zero balance	±1%
Compensated temperature range	-20 °C / +70 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +90 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

### ELECTRICAL CONNECTIONS

Cable length	5 m
Cable diameter	5 mm
Cores	6 x 0.14 mm <sup>2</sup>





Manufactured according to OIML R60 standards

**Capacity from 2000 kg to 40000 kg**

- AISI 4140 NICKEL PLATED STEEL
- LOAD LIMITING ACCURACY  $\pm 2\%$  ON FULL SCALE
- PROTECTION CLASS IP67
- SUITABLE AS LOAD LIMITER FOR LIFTING EQUIPMENT
- RAPID MOUNTING (also on pre-existing lifting systems)



WIRE ROPE TENSION	kg	DIAMETER ROPE (mm)	NET WEIGHT (kg)	CODE
up to	<b>2000</b>	Ø 6 ÷ Ø 14	2.4	FUN6141T1T
up to	<b>4000</b>	Ø 10 ÷ Ø 18	2.4	FUN10182T1T
up to	<b>10000</b>	Ø 16 ÷ Ø 26	2.4	FUN16265T2T
up to	<b>20000</b>	Ø 24 ÷ Ø 36	7.5	FUN243610T3T
up to	<b>40000</b>	Ø 24 ÷ Ø 36	7.5	FUN243620T5T

## CERTIFICATIONS

**EAC** Complies with the Eurasian Customs Union standards

**UKCA** Equivalent of the CE marking for the United Kingdom

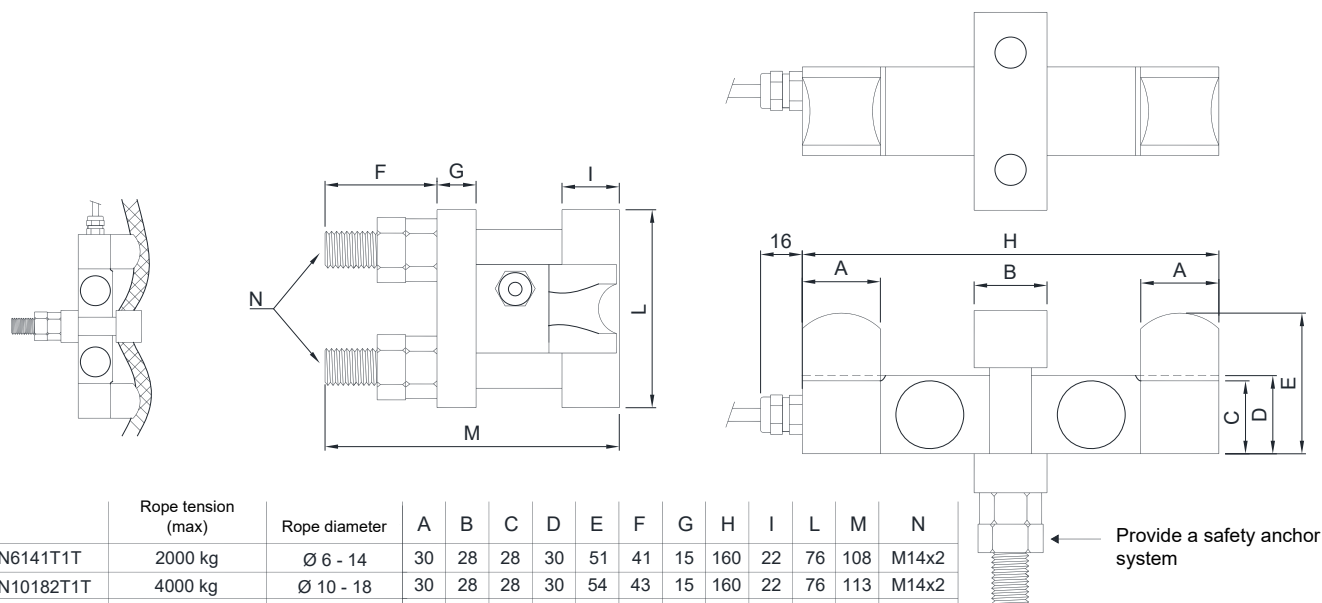
### CERTIFICATIONS ON REQUEST

**Ex** ATEX II 1GD (zone 0-1-2-20-21-22) ( **CE - UKCA** )

**IECEx** (zone 0-1-2-20-21-22)

**EAC Ex** Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

### DIMENSIONS (mm)



	Rope tension (max)	Rope diameter	A	B	C	D	E	F	G	H	I	L	M	N
FUN6141T1T	2000 kg	Ø 6 - 14	30	28	28	30	51	41	15	160	22	76	108	M14x2
FUN10182T1T	4000 kg	Ø 10 - 18	30	28	28	30	54	43	15	160	22	76	113	M14x2
FUN16265T2T	10000 kg	Ø 16 - 26	30	28	28	30	56	43	15	160	22	76	119	M14x2
FUN243610T3T	20000 kg	Ø 24 - 36	45	39	40	45	82	67	24	260	34	108	173	M18x2,5
FUN243620T5T	40000 kg	Ø 24 - 36	45	39	40	45	82	67	24	260	34	108	173	M18x2,5

### SCREW TIGHTENING TORQUES

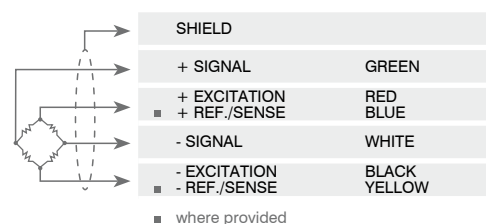
Diameter of the steel cable (mm)	5	6 - 6.5	7 - 8	9 - 10	11 - 13	14	15 - 16	17 - 19	20 - 22	23 - 26	28 - 30	32 - 34	36 - 40
Tightening torque (Nm)	2.0	5.2	6.0	9.0	20	25	30	42	51	67	75	88	106

### TECHNICAL FEATURES

Material	AISI 4140 nickel plated steel		
Nominal load (E max)	2000 - 4000 - 10000 - 20000 - 40000 kg		
Load limiting accuracy on full scale	±2%		
Protection class	IP67		
Rated output	3 mV/V ±0.1%	Input resistance	450/750/1050 Ω ±50
Temperature effect on zero	0.005% °C	Output resistance	350/700/1000 Ω ±20
Temperature effect on span	0.005% °C	Zero balance	±2%
Compensated temperature range	-10 °C / +50 °C	Insulation resistance	>5000 MΩ
Operating temperature range	-30 °C / +70 °C	Safe overload (% of full scale)	150%
Creep at nominal load in 30 minutes	0.03%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.5 mm

### ELECTRICAL CONNECTIONS

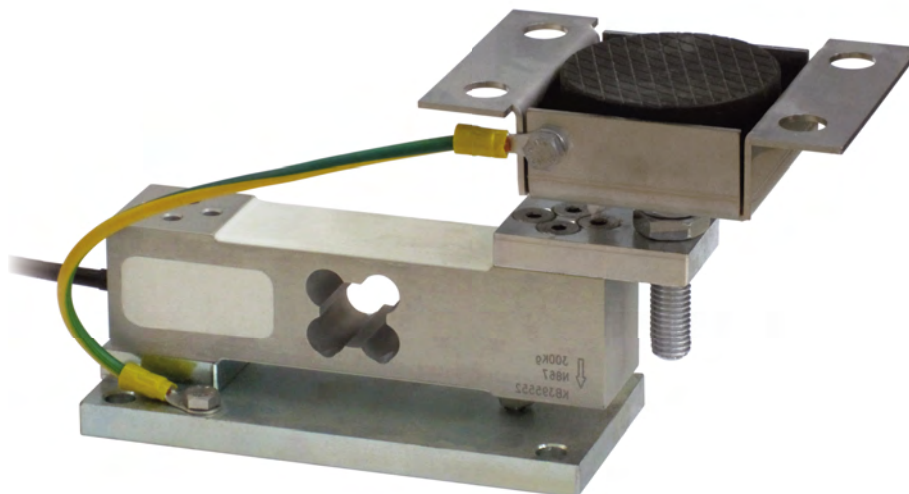
Cable length	6 m
Cable diameter	5 mm
Cores	4/6 x 0.14 mm <sup>2</sup>





	APPLICATION RANGE	FOR LOAD CELLS	PAGE
<b>A2.1</b>	<b>for SINGLE POINT load cells</b>		
<b>T8</b>	up to 300 kg	AZL, AZLI, AZS, AM	<b>143</b>

A large area of the page is filled with horizontal dotted lines, intended for handwritten notes or comments.

**Series load cells:           AZLI - AZL - AZS - AM****Up to 300 kg application range**

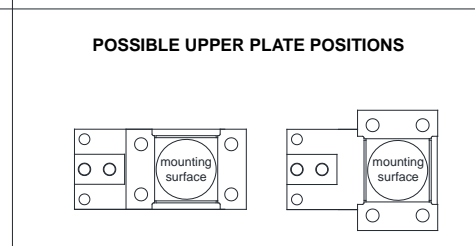
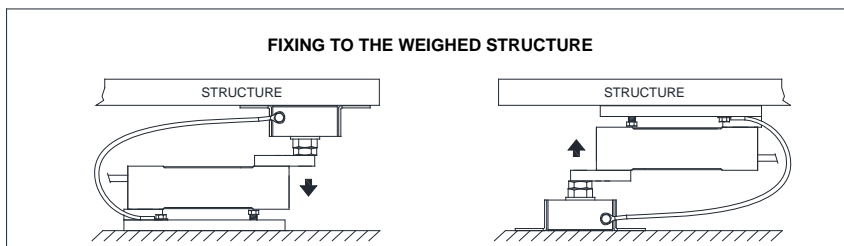
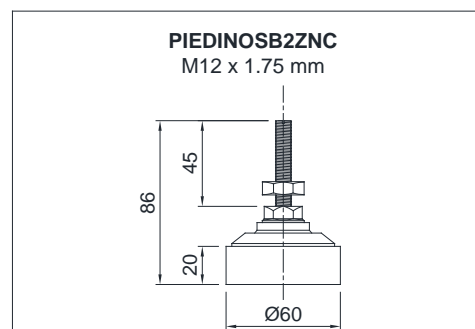
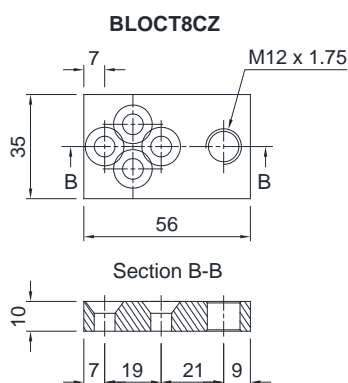
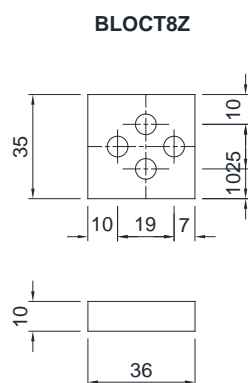
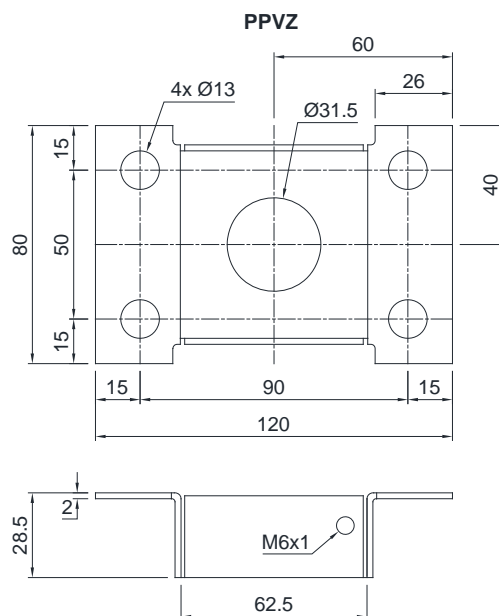
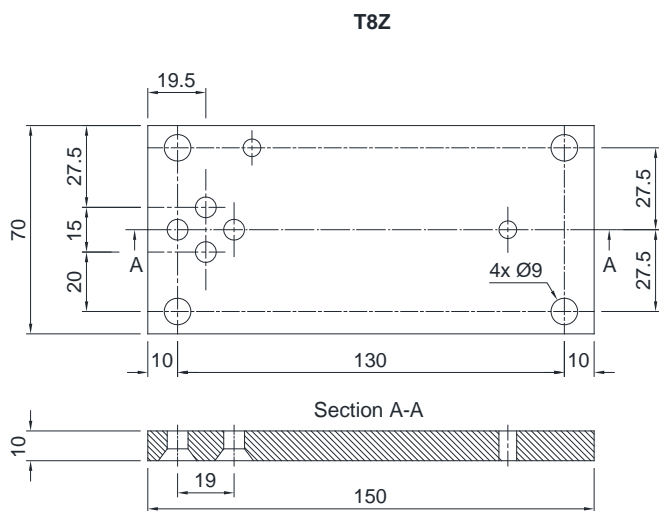
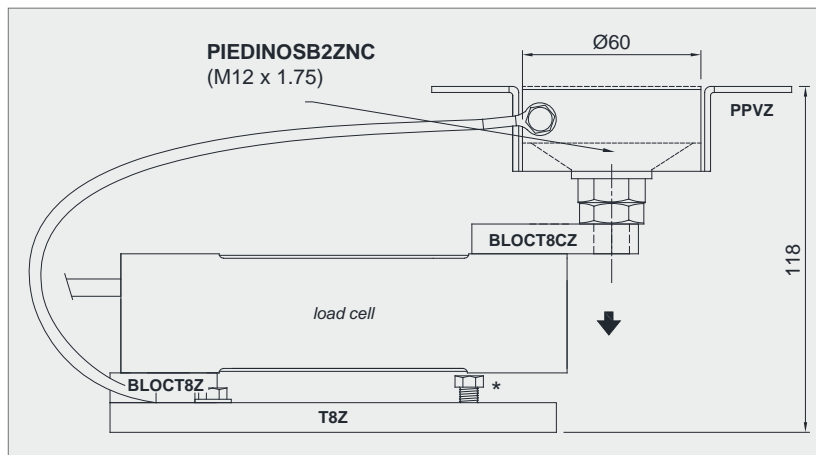
MAX STATIC LOAD   kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>200</b>	AZLI (max 50 kg) - AZL - AZS	1.7	T8AZL
<b>300</b>	AM	1.7	T8AM

*Load cell not included***DESCRIPTION**

- Adjustable upper plate in galvanized steel (PPVZ).
- Lower plate and block in galvanized steel.
- Constraint against lateral forces and anti-tilt by nickel-plated self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.
- It can be used for systems with at least 3 load cells connected in parallel.

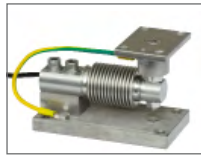
### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the support base of the foot, you must proceed to adjust foot height.

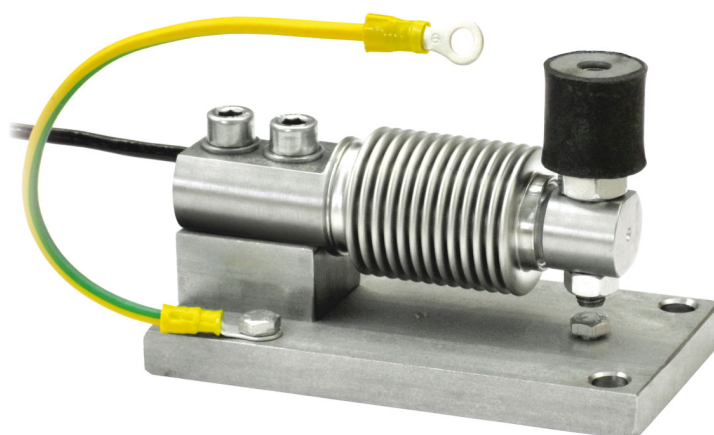


Rev. 0.0

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	APPLICATION RANGE	FOR LOAD CELLS	PAGE	
<b>A2.2</b>	<b>for BENDING BEAM load cells</b>			
	<b>TFCFSB</b>	up to 300 kg	FCK, FCOL	<b>147</b>
	<b>TFCPV</b>	up to 300 kg	FCK, FCOL	<b>149</b>
	<b>TFCGP</b>	up to 300 kg	FCK, FCOL	<b>151</b>
	<b>TFFSB</b>	up to 500 kg	FCAL, FCAX	<b>153</b>
	<b>TFAST</b>	up to 500 kg	FCAL, FCAX	<b>155</b>
	<b>TFPV</b>	up to 1500 kg	FCAL, FCAX	<b>157</b>
	<b>TFGP</b>	up to 1500 kg	FCAL, FCAX	<b>159</b>
	<b>T12</b>	up to 2000 kg	FCAL, FCAX FTL, FTK, FTKL, FTP, FT-P, FTZ	<b>161</b>



**Series load cells: FCK - FCOL****Up to 300 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>300</b>	FCK - FCOL	1.2	TFCFSB

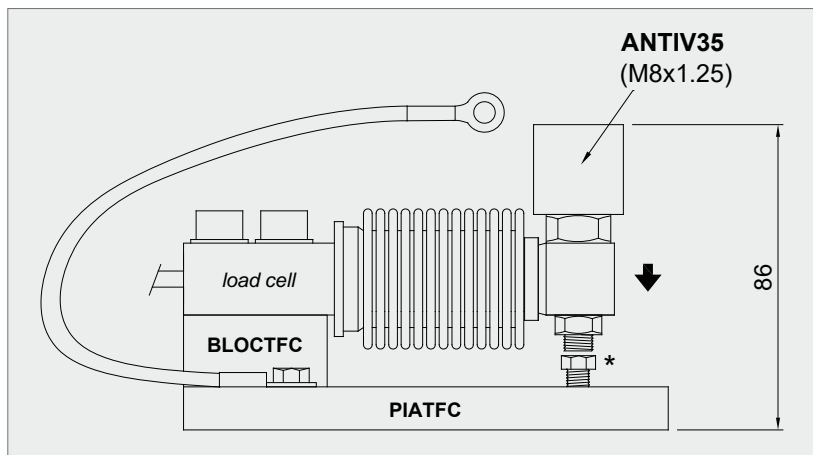
*Load cell not included.*

## DESCRIPTION

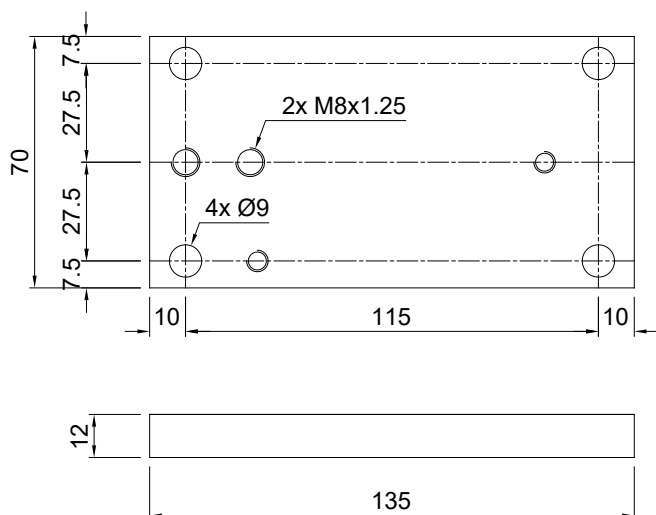
- Compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

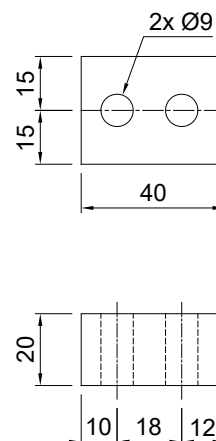
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Connect the structure to be weighed by means of copper wire, then connect all the lower plates to the earthing system.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts otherwise adjust the height.



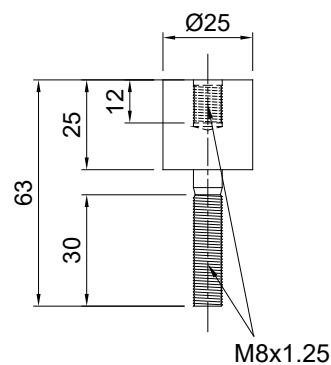
**PIATFC**



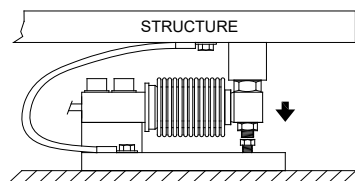
**BLOCTFC**

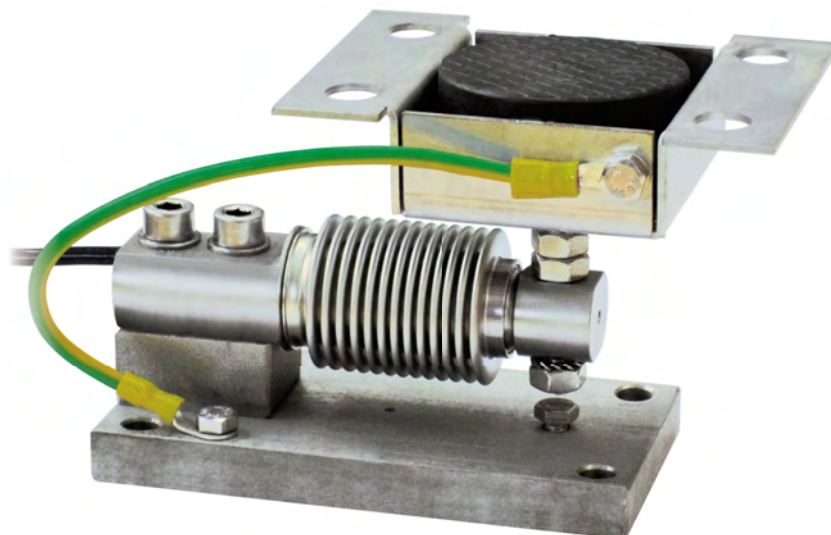


**ANTIV35**



**FIXING TO THE WEIGHED STRUCTURE**



**Series load cells: FCK - FCOL****Up to 300 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
200	FCK - FCOL	1.7	TFCPV
200	FCK - FCOL	1.7	TFCPVZ
300	FCOL (350 - 500 kg)	1.7	TFCPV10
300	FCOL (350 - 500 kg)	1.7	TFCPVZ10

*Load cell not included*

## DESCRIPTION

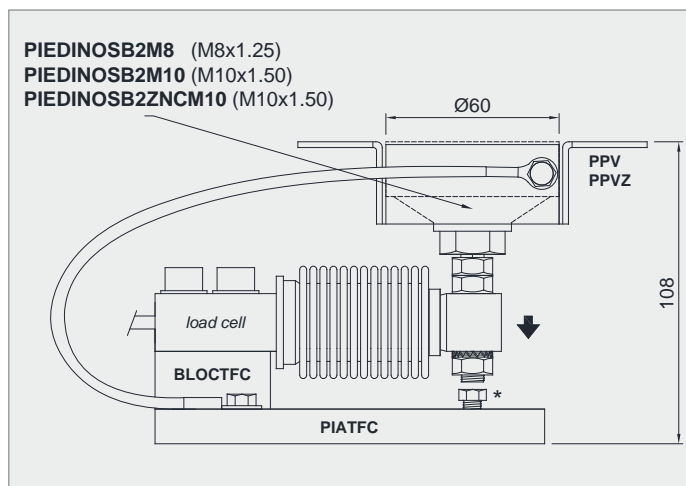
- Adjustable upper plate in AISI 304 stainless steel (PPV) or galvanized steel (PPVZ).
- Lower plate and block in AISI 304 stainless steel.
- Constraint against lateral forces and anti-tilt by AISI 304 stainless steel (TFCPV, TFCPVZ, TFCPV10) or galvanized steel (TFCPVZ10) self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Partial height adjustment.
- Locking screw to avoid damage during transport and installation.

# TFCPV

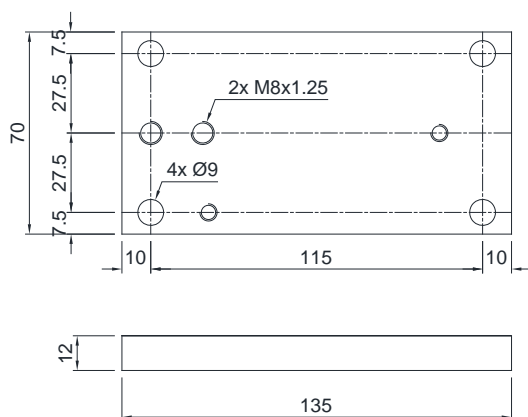
## MOUNTING KIT for BENDING BEAM load cells

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

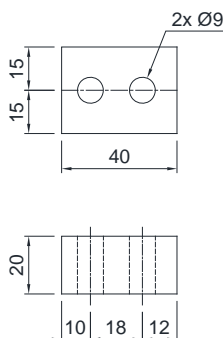
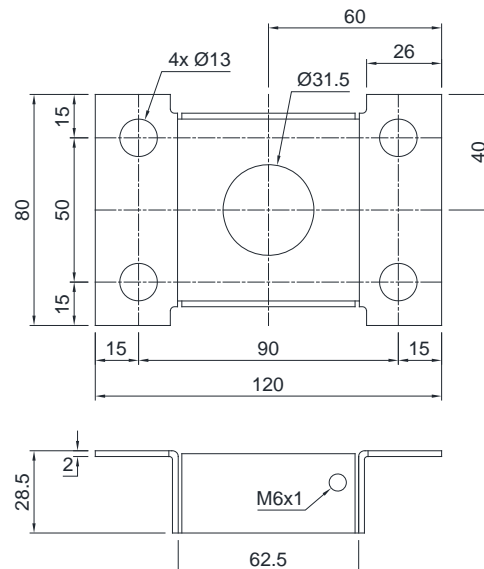
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



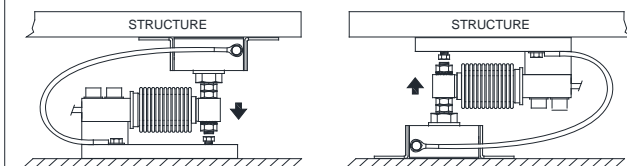
PIATFC



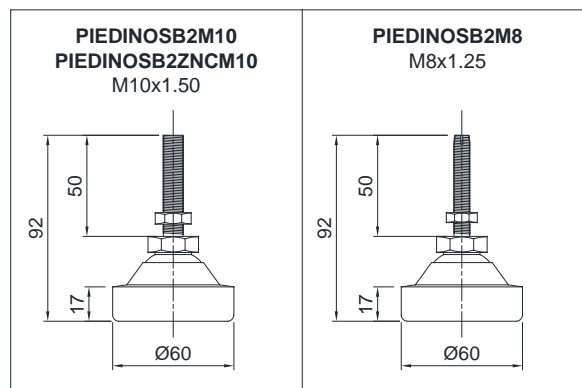
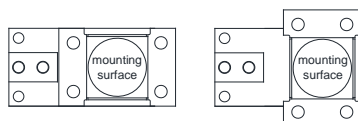
BLOCTFC

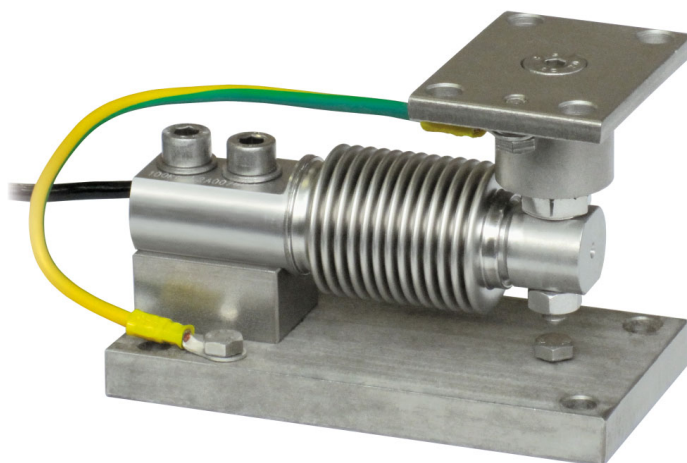
PPV  
PPVZ

#### FIXING TO THE WEIGHED STRUCTURE



#### POSSIBLE UPPER PLATE POSITIONS



**Series load cells: FCK - FCOL****Up to 300 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>300</b>	FCK - FCOL	1.3	TFCGP

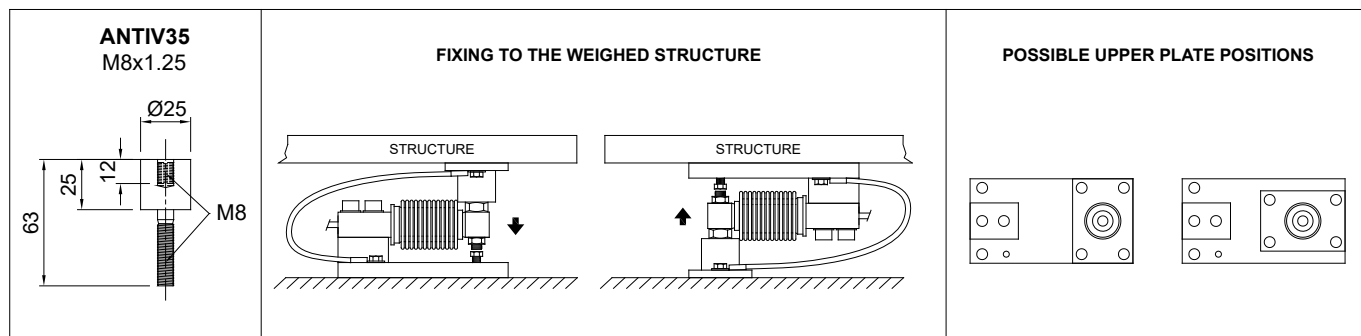
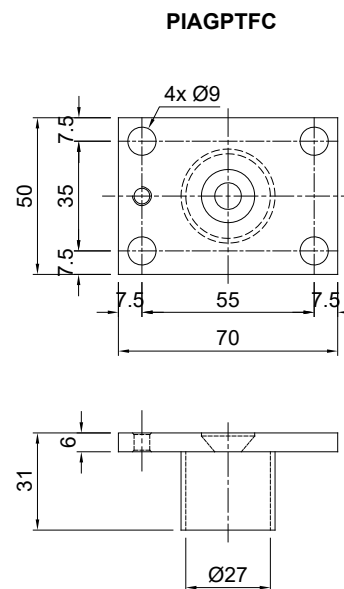
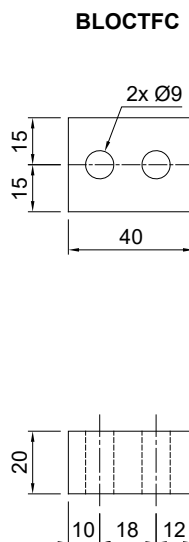
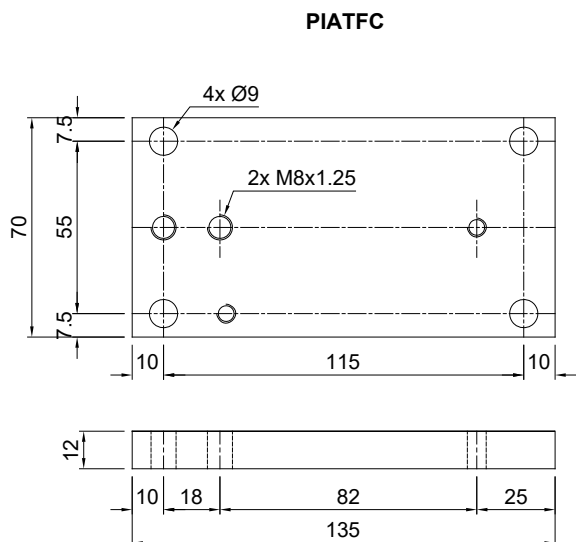
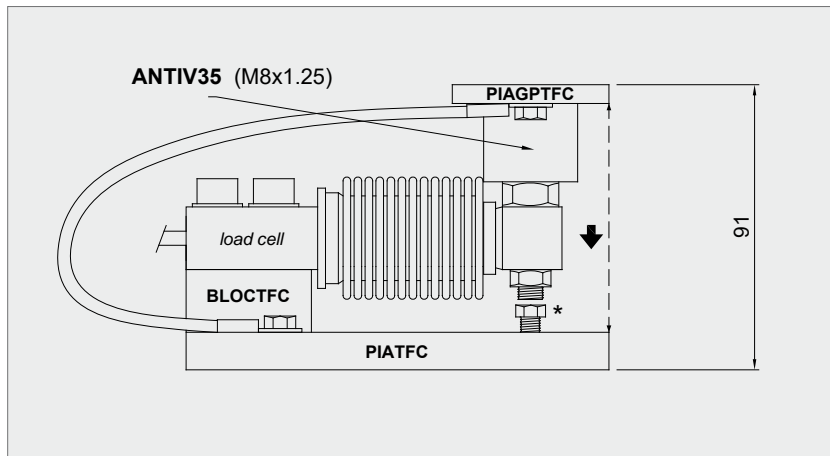
*Load cell not included.*

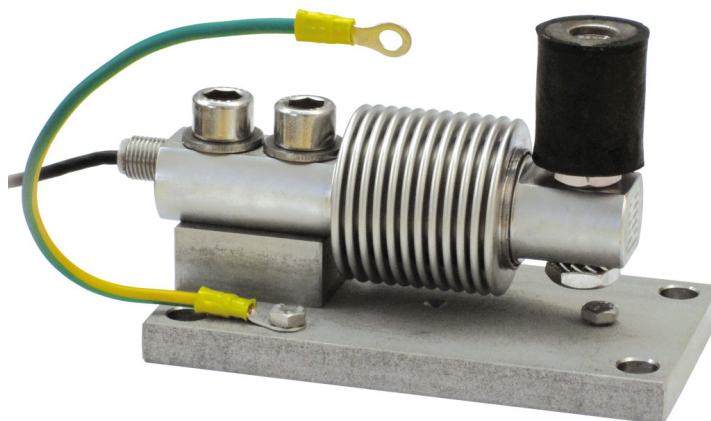
## DESCRIPTION

- Upper plate with a compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



**Series load cells: FCAL - FCAX****Up to 500 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>500</b>	FCAL - FCAX	1.5	TFFSB

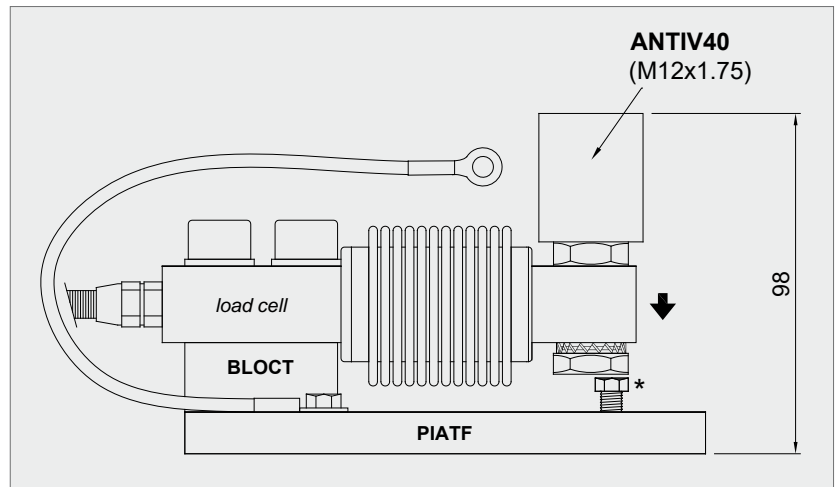
*Load cell not included.*

## DESCRIPTION

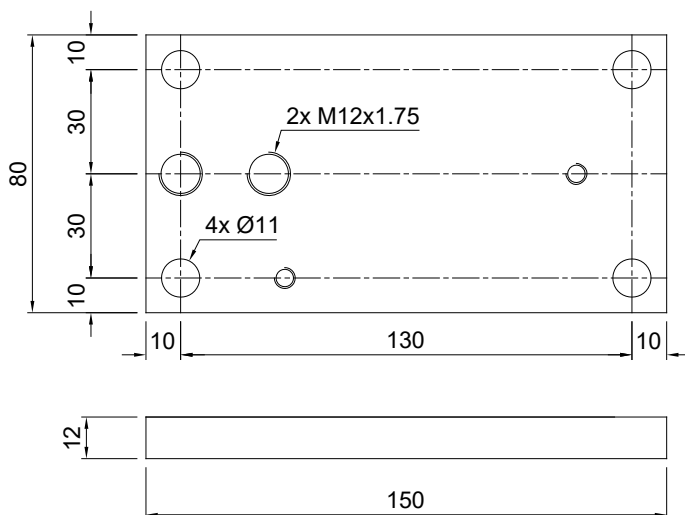
- Compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

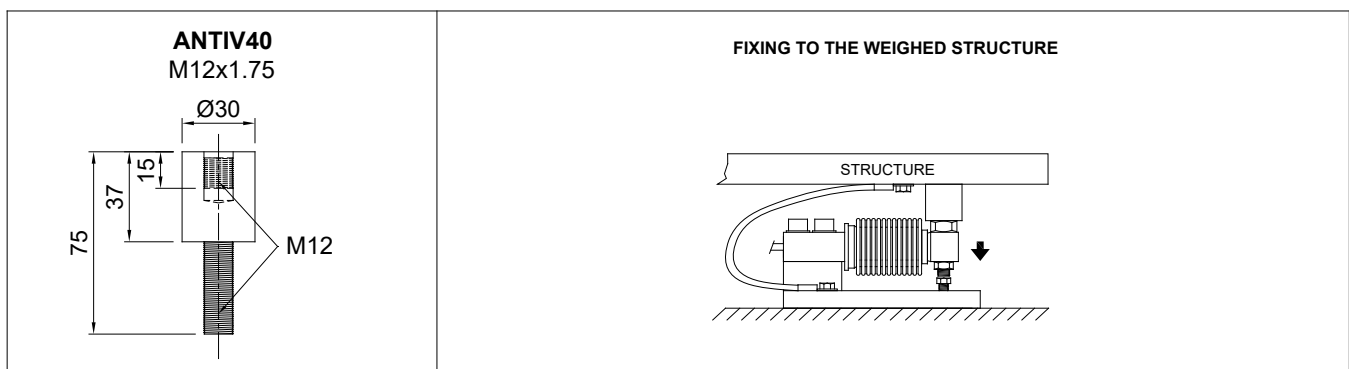
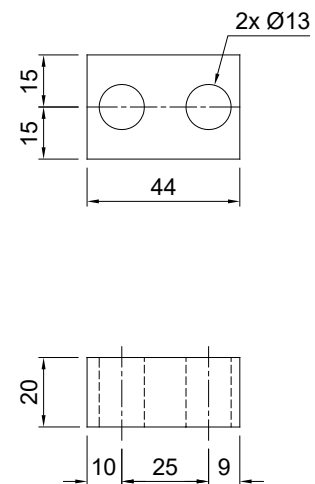
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Connect the structure to be weighed by means of copper wire, then connect all the lower plates to the earthing system.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts otherwise adjust the height.



PIATF



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**Series load cells: FCAL - FCAX****Up to 500 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>500</b>	FCAL - FCAX	1.5	TFAST

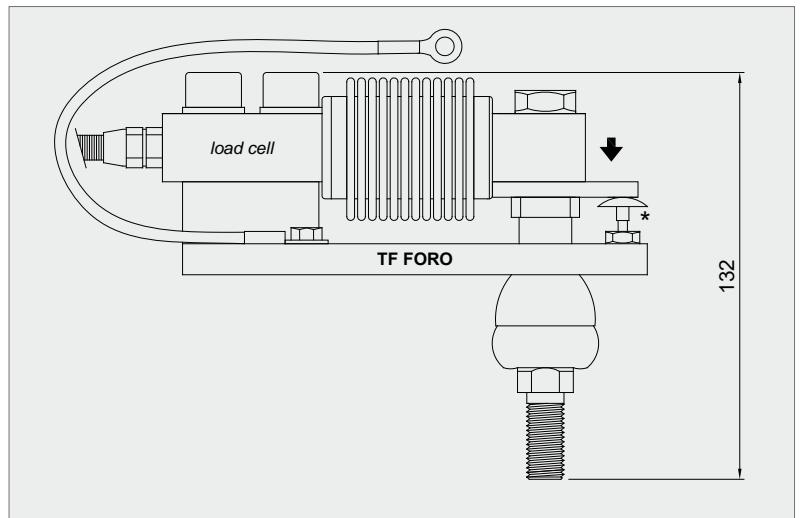
*Load cell not included.*

## DESCRIPTION

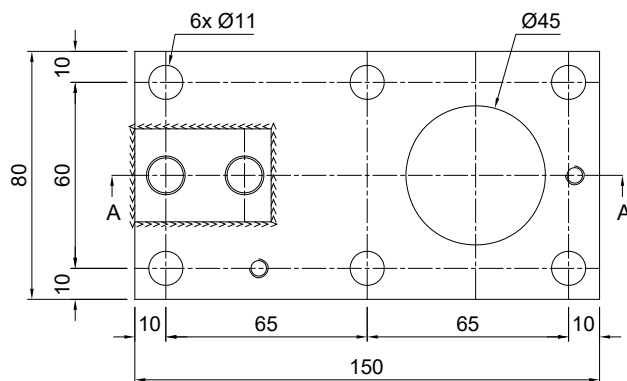
- Aluminum alloy tension ball joint.
- AISI 304 stainless steel lower plate.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

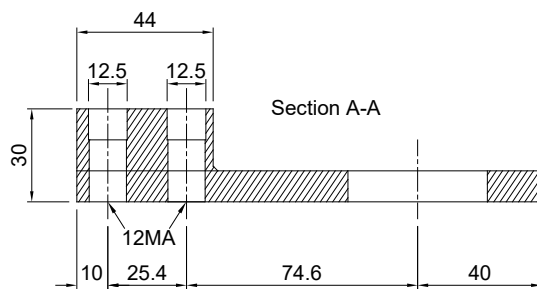
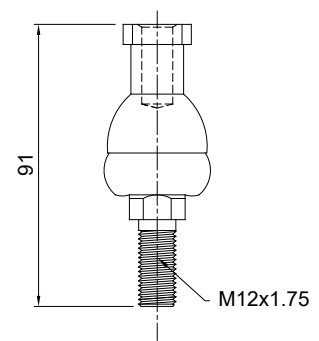
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Connect the structure to be weighed by means of copper wire, then connect all the lower plates to the earthing system.



TF FORO

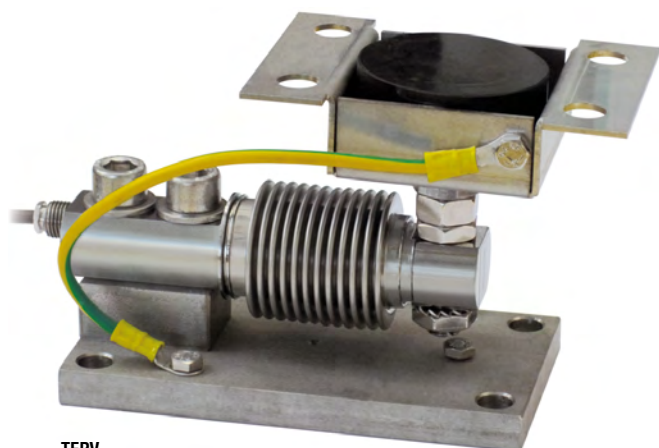


Tension ball joint

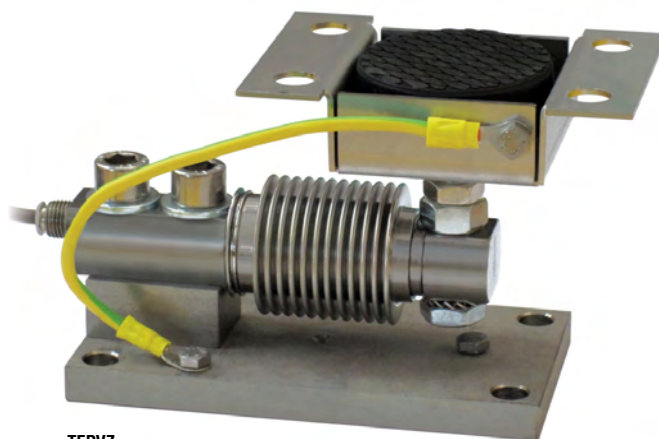


Series load cells: FCAL - FCAX

Up to 1500 kg application range



TFPV  
TFPV2000



TFPVZ

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
500	FCAL - FCAX	2	TFPV
500	FCAL - FCAX	2	TFPVZ
1500	FCAX	2	TFPV2000

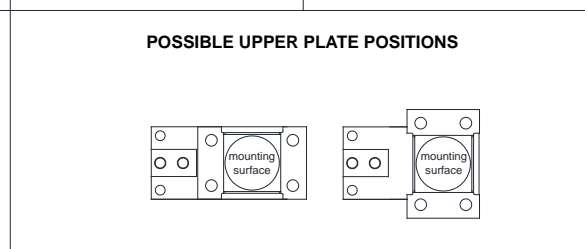
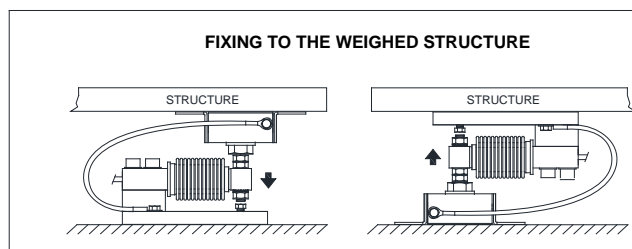
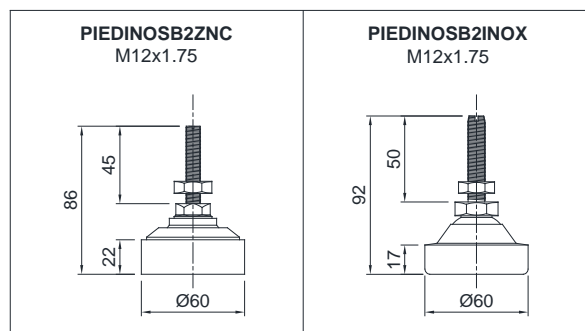
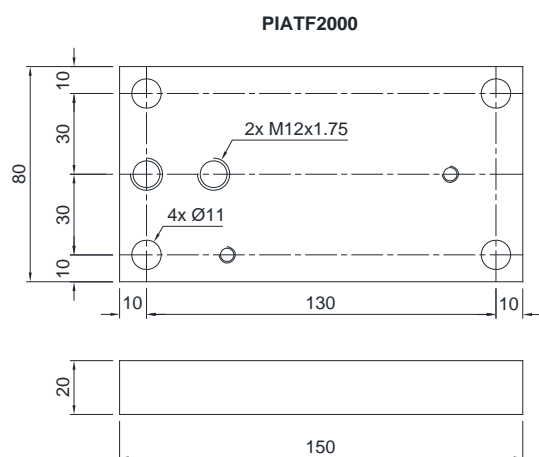
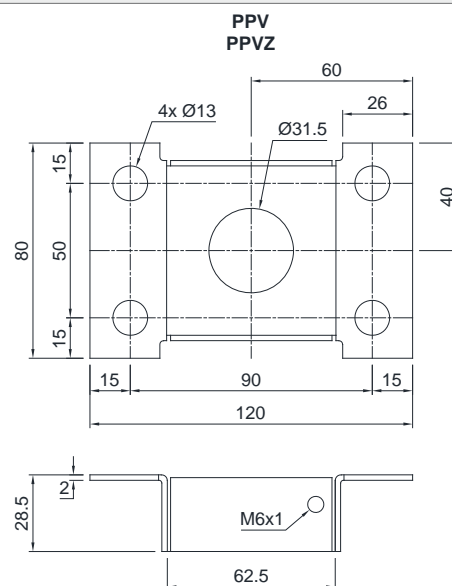
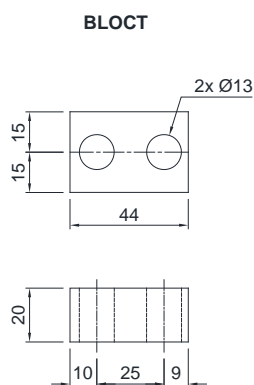
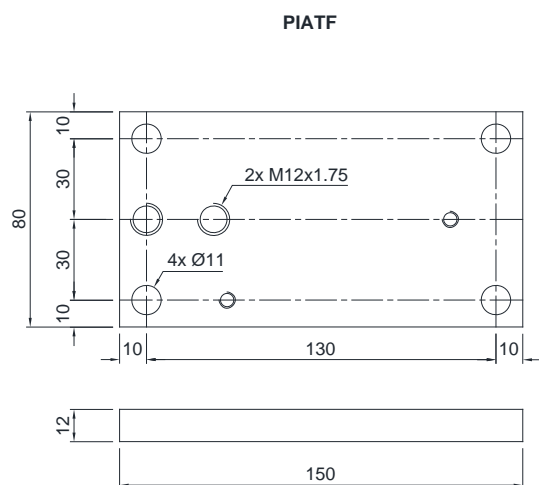
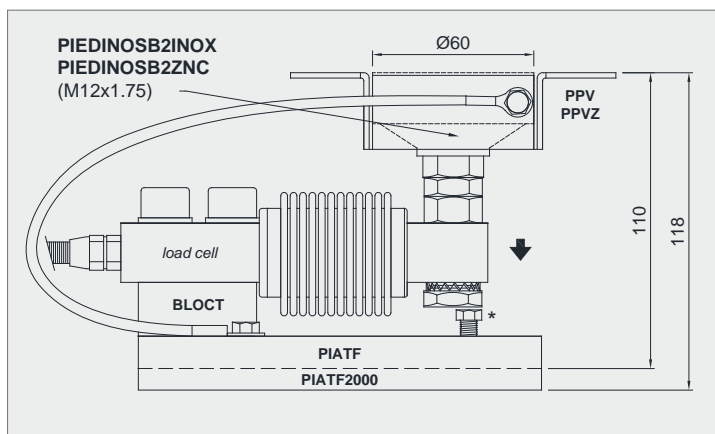
Load cell not included.

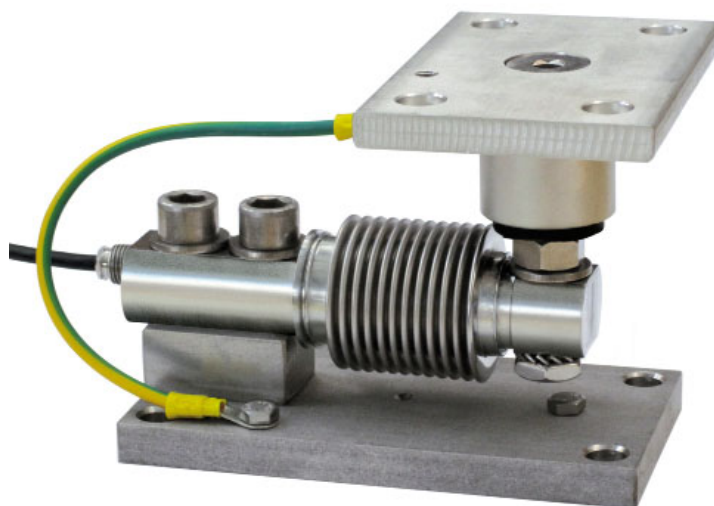
## DESCRIPTION

- Adjustable upper plate in AISI 304 stainless steel (PPV) or galvanized steel (PPVZ).
- Lower plate and block in AISI 304 stainless steel.
- Constraint against lateral forces and anti-tilt by AISI 304 stainless steel (TFPV, TFPV2000) or galvanized steel (TFPVZ) self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Partial height adjustment.
- Locking screw to avoid damage during transport and installation.

## DIMENSIONS AND TECHNICAL SPECIFICATIONS

- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



**Series load cells: FCAL - FCAX****Up to 1500 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>500</b>	FCAL - FCAX	2.3	TFGP
<b>1500</b>	FCAL - FCAX	2.3	TFGP2000

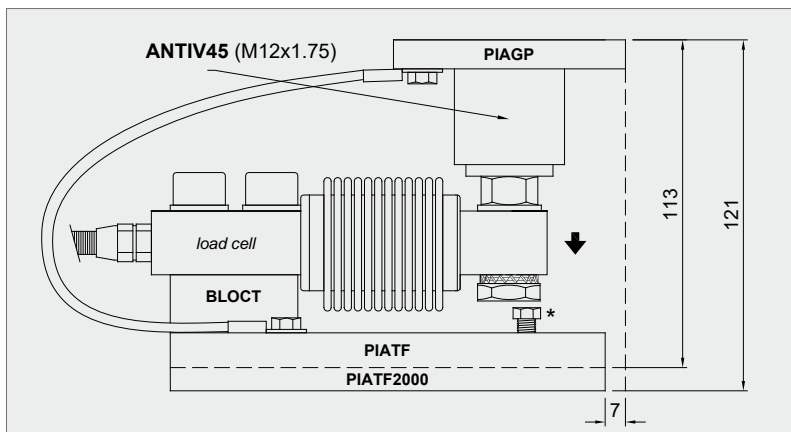
*Load cell not included.*

## DESCRIPTION

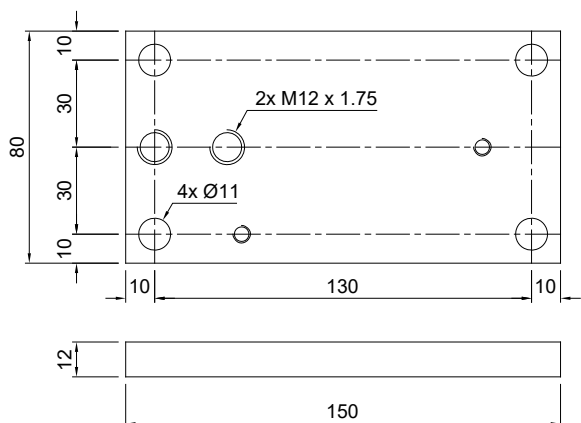
- Upper plate with a compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

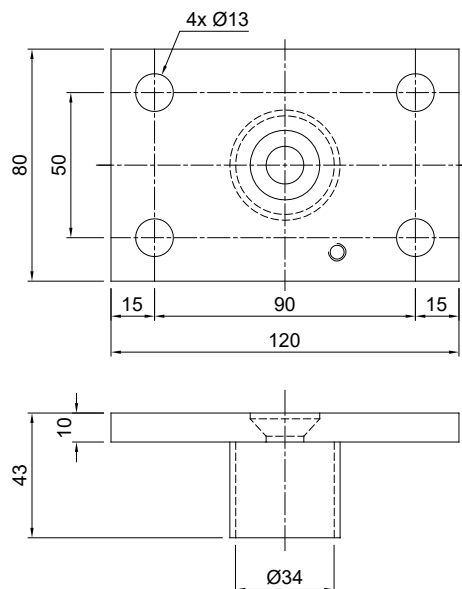
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



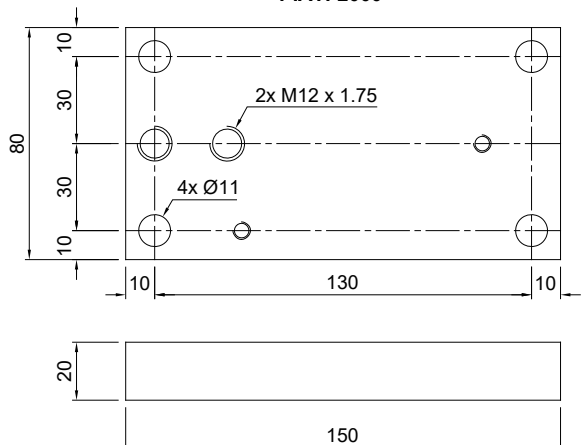
PIATF



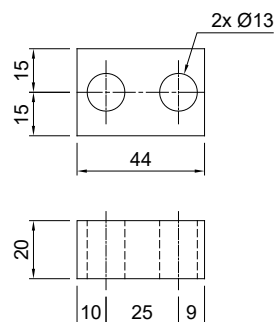
PIAGP



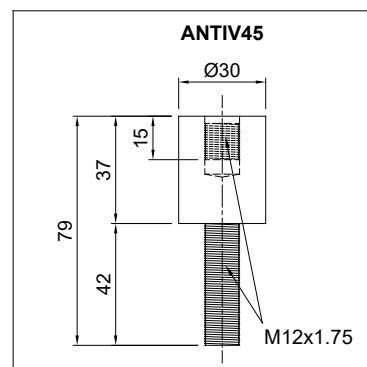
PIATF2000



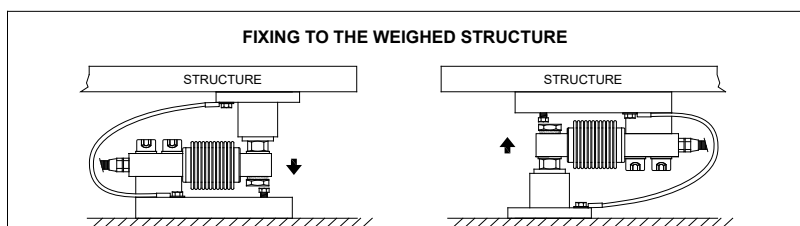
BLOCT



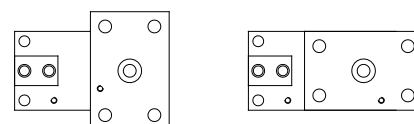
ANTIV45



FIXING TO THE WEIGHED STRUCTURE

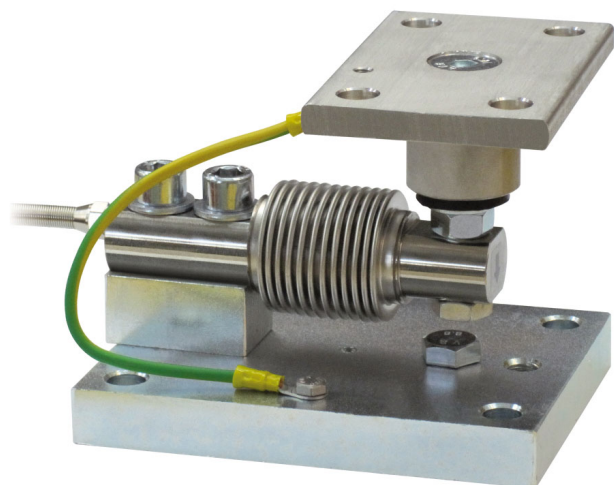


POSSIBLE UPPER PLATE POSITIONS

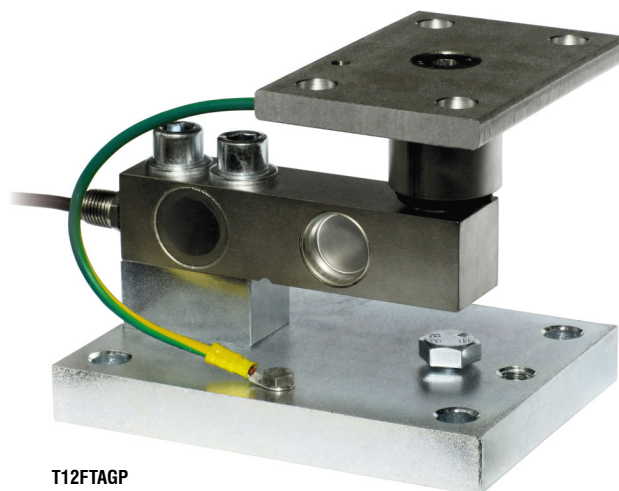


**Series load cells: FCAL - FCAX - FTL - FTK - FTKL - FTP - FT-P - FTZ**

**Up to 2000 kg application range**



**T12FCAGP**



**T12FTAGP**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>1500</b>	FCAL - FCAX	4	T12FCAGP
<b>2000</b>	FTL - FTK - FTKL - FTP - FT-P - FTZ	4	T12FTAGP

*Load cell not included.*

## DESCRIPTION

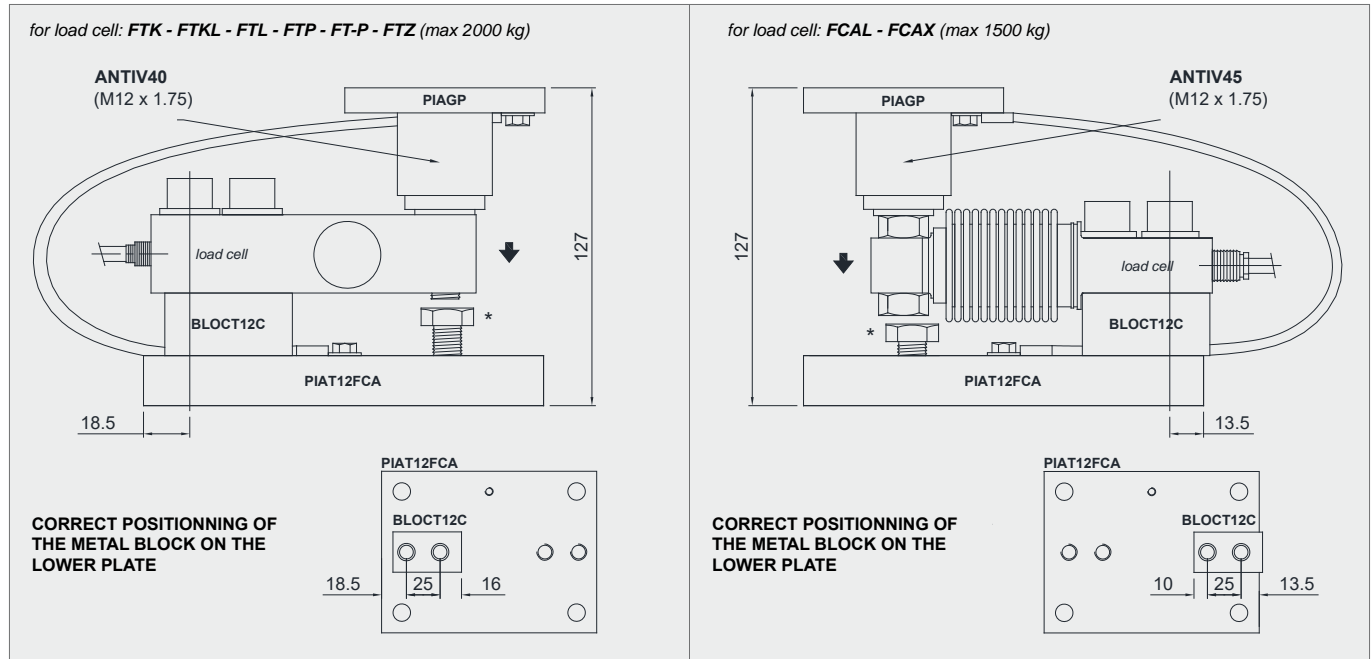
- Upper plate with a compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in galvanized steel.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

# T12

## MOUNTING KIT for BENDING BEAM load cells

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

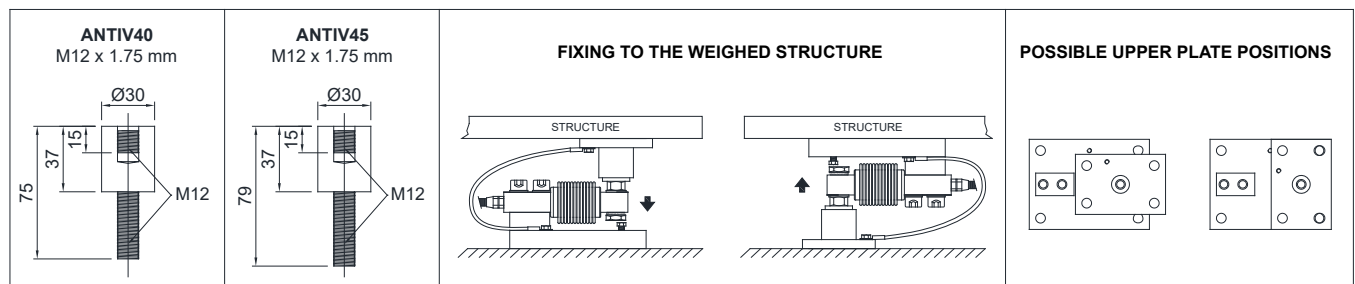
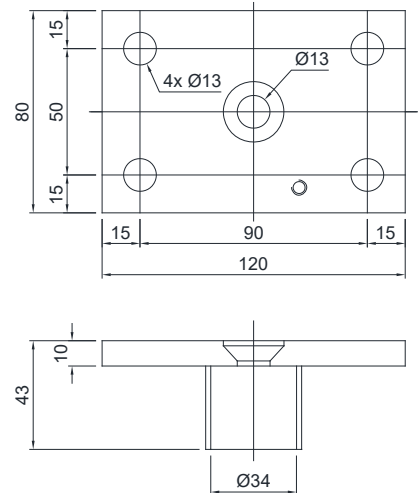
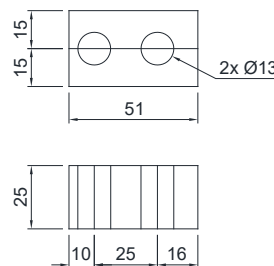
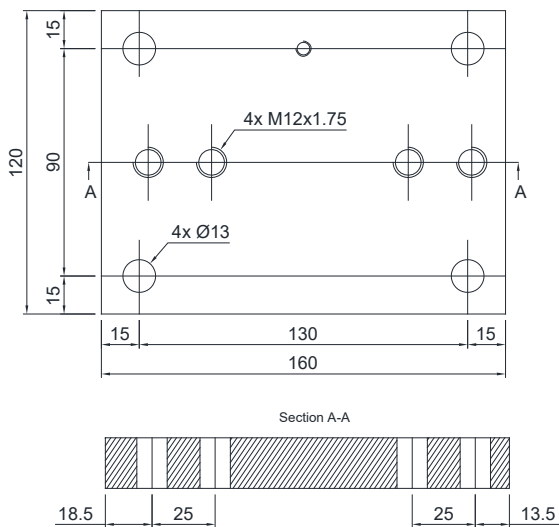
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



PIAT12FCA


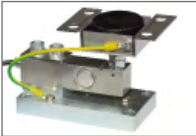
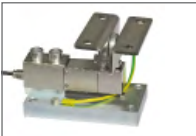


BLOCT12C

PIAGP



Rev. 0.0

The Company reserves the right to make changes to the technical data, drawings and images without notice.

	APPLICATION RANGE	FOR LOAD CELLS	PAGE
<b>A2.3</b>	<b>for SHEAR BEAM load cells</b>		
	<b>TF500/2000</b> up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	<b>165</b>
	<b>PV - PVZ</b> up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	<b>167</b>
	<b>TFPS2000</b> up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	<b>169</b>
	<b>PV80 PV60Z</b> up to 5000 kg	FTK, FTP, FTZ	<b>171</b>
	<b>PS</b> up to 10000 kg	FTK, FTP, FTZ	<b>173</b>



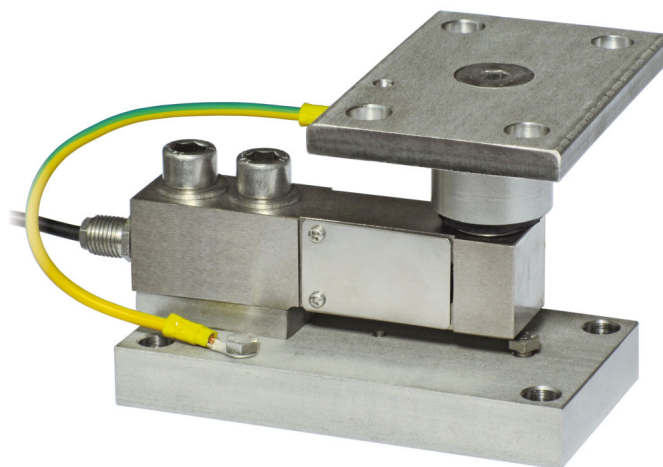
# TF500/2000

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

Series load cells: FTL - FTK - FTKL - FTP - FT-P - FTZ

Up to 2000 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
500	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.3	TF500
2000	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.9	TF2000
2000	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.9	TF2000Z

*Load cell not included.*

## DESCRIPTION

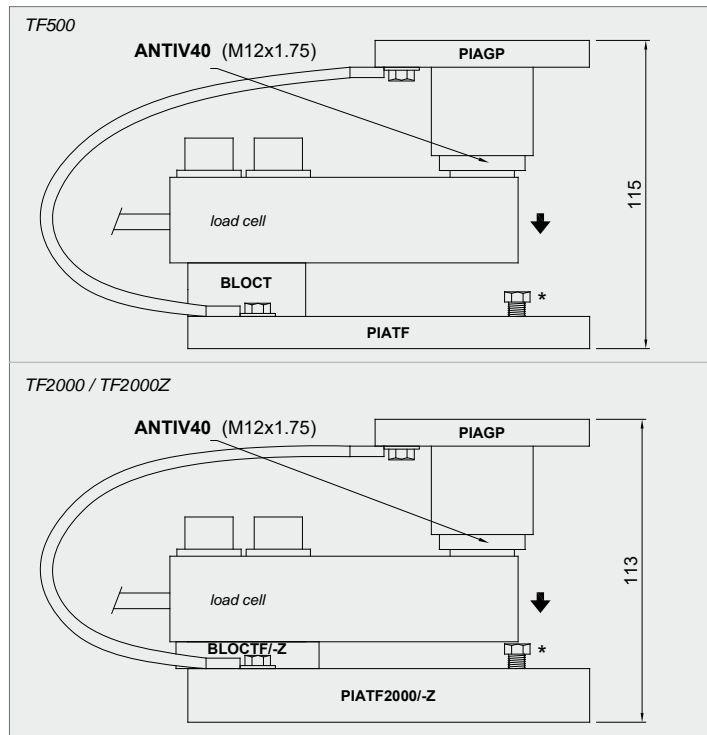
- Upper plate with a compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel (TF500, TF2000) or in galvanized steel (TF2000Z).
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

# TF500/2000

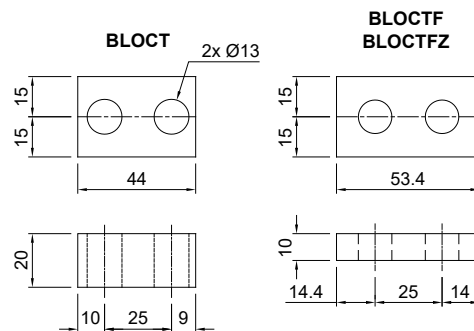
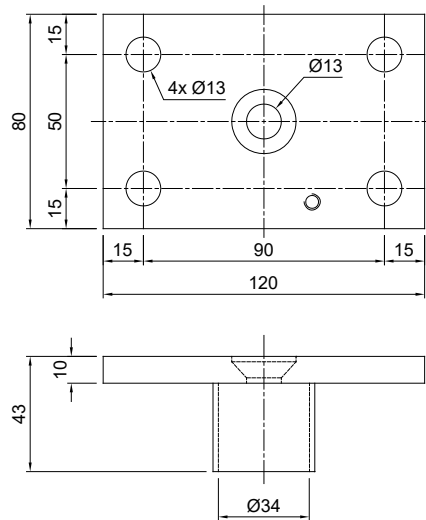
## MOUNTING KIT for SHEAR BEAM load cells

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

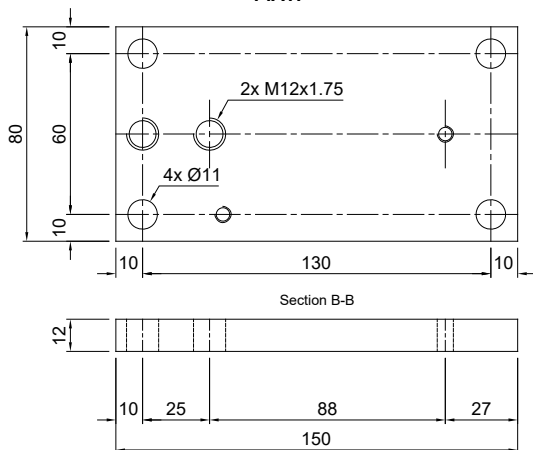
- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



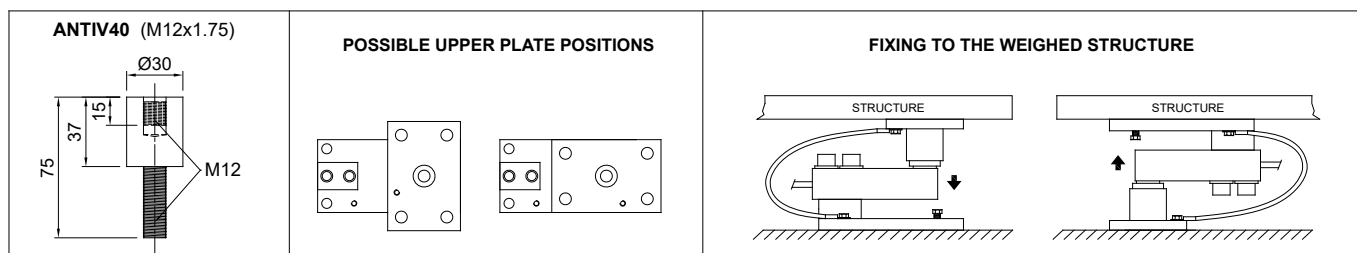
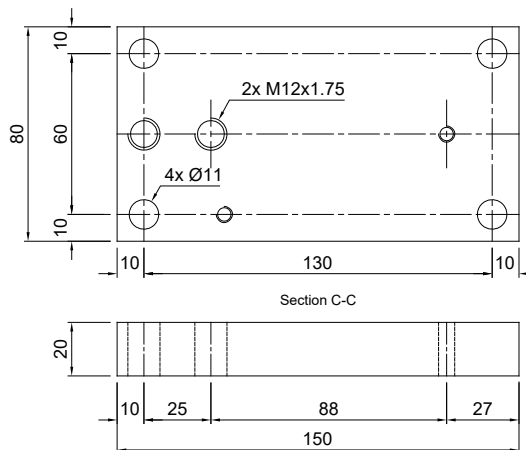
PIAGP



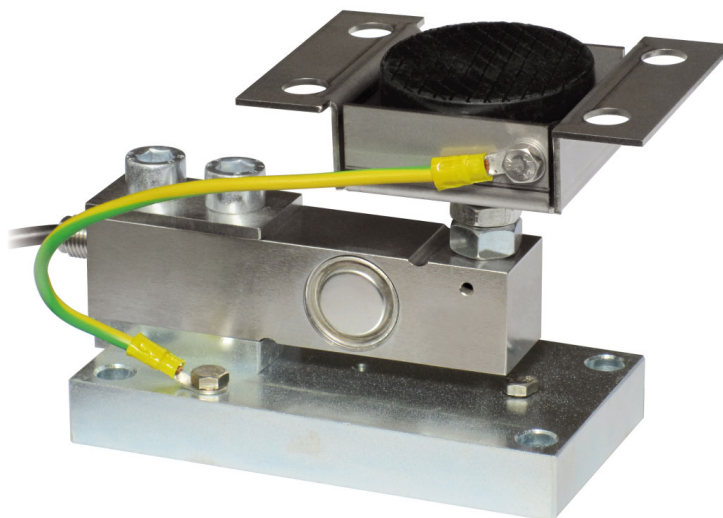
PIATF



PIATF2000 PIATF2000Z



The Company reserves the right to make changes to the technical data, drawings and images without notice.

**Series load cells: FTL - FTK - FTKL - FTP - FT-P - FTZ****Up to 2000 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
2000	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.7	PV
2000	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.7	PVZ

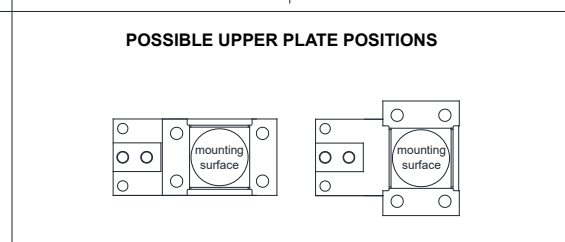
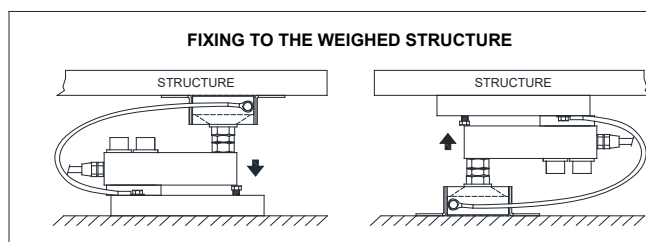
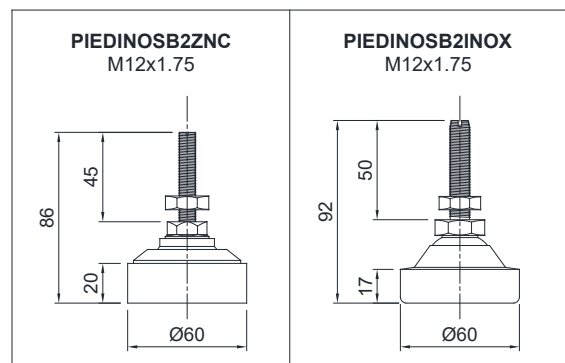
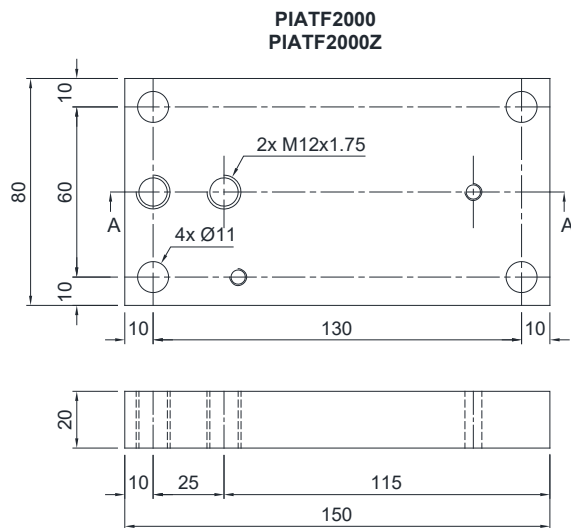
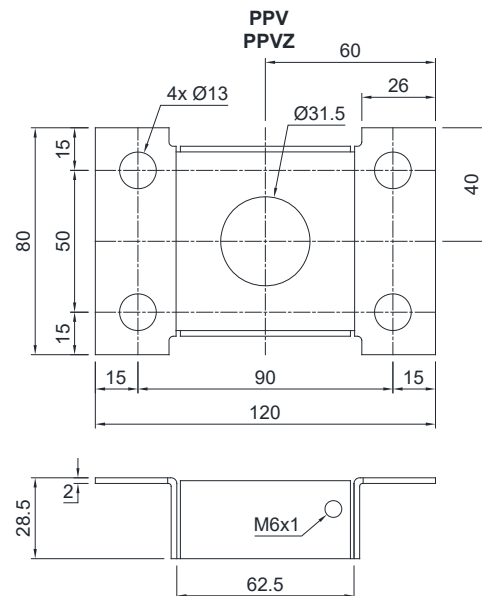
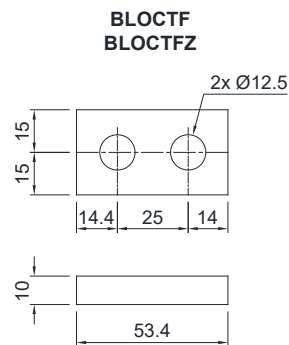
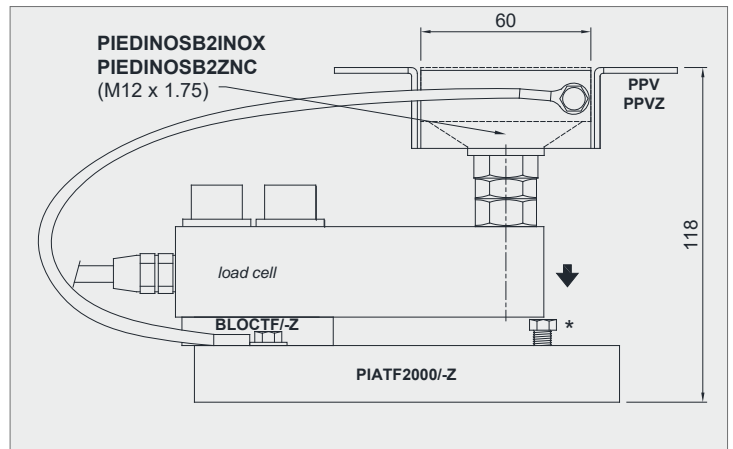
*Load cell not included.*

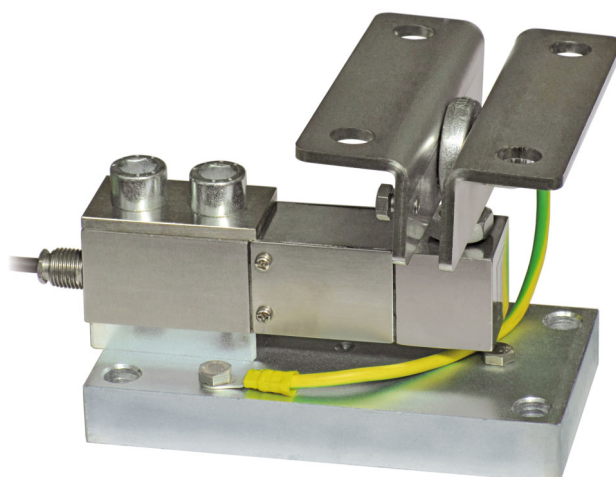
## DESCRIPTION

- Adjustable upper plate in AISI 304 stainless steel (PPV) or galvanized steel (PPVZ).
- Lower plate and block in AISI 304 stainless steel (PV) or galvanized steel (PVZ).
- Constraint against lateral forces and anti-tilt by AISI 304 stainless steel (TFPV, TFPV2000) or galvanized steel (TFPVZ) self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



**Series load cells: FTL - FTK - FTKL - FTP - FT-P - FTZ****Up to 2000 kg application range**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>2000</b>	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.7	TFPS2000
<b>2000</b>	FTL - FTK - FTKL - FTP - FT-P - FTZ	2.7	TFPS2000INOX

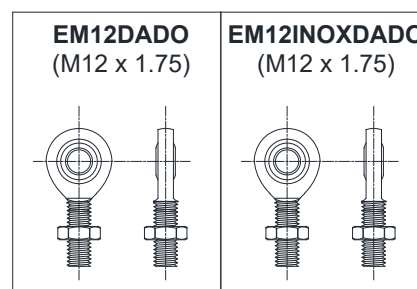
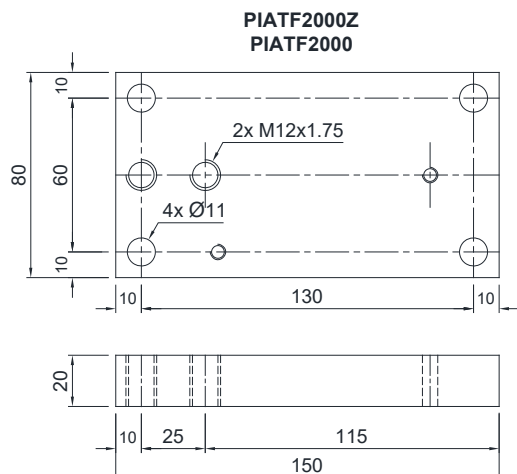
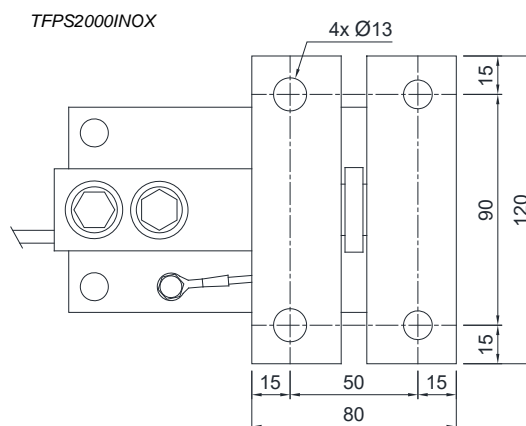
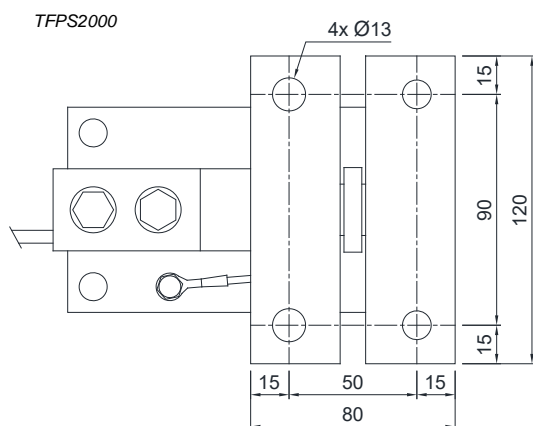
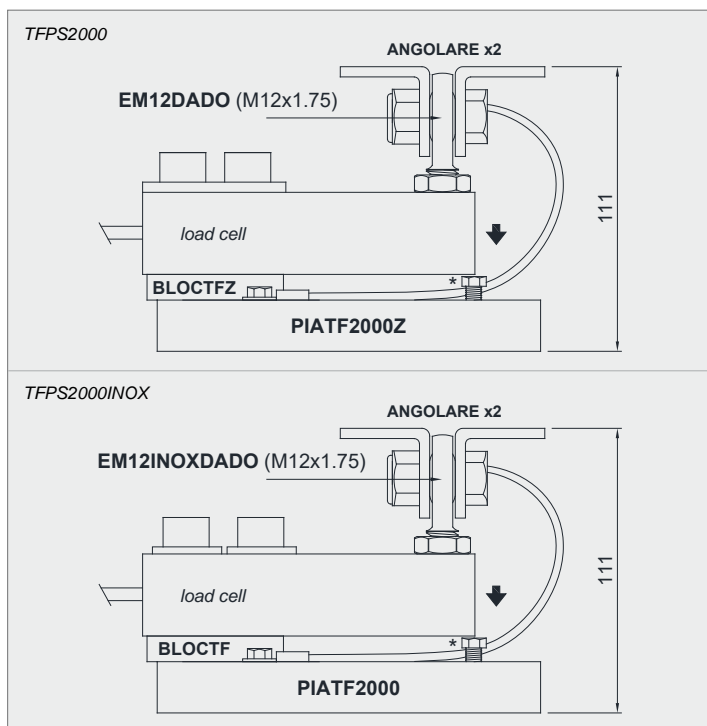
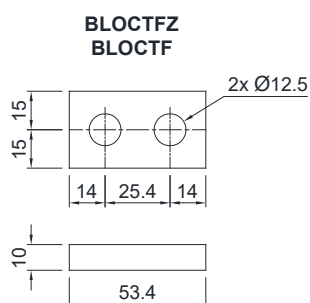
*Load cell not included.*

## DESCRIPTION

- AISI 304 stainless steel upper plate.
- Lower plate and block in galvanized steel (TFPS2000) or in stainless steel (TFPS2000INOX).
- Constraint against lateral forces and anti-tilt by means of ball-and-socket joint with nut in galvanized C45 steel (TFPS2000) or in stainless steel (TFPS2000INOX).
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- During the transport and installation the lock (\*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.

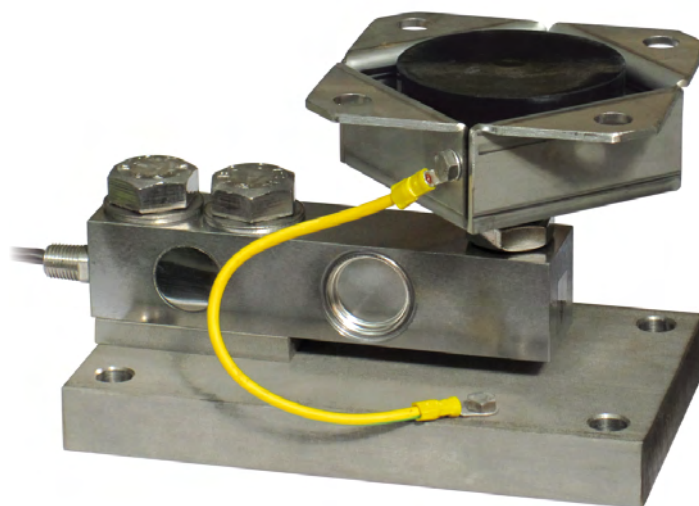


# PV80 - PV60Z

MOUNTING KIT for SHEAR BEAM load cells

Series load cells:           FTP - FTZ - FTK

Up to 5000 kg application range



MAX STATIC LOAD   kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>5000</b>	FTP - FTZ	6.9	PV80
<b>5000</b>	FTK	6.7	PV60Z

*Load cell not included.*

## DESCRIPTION

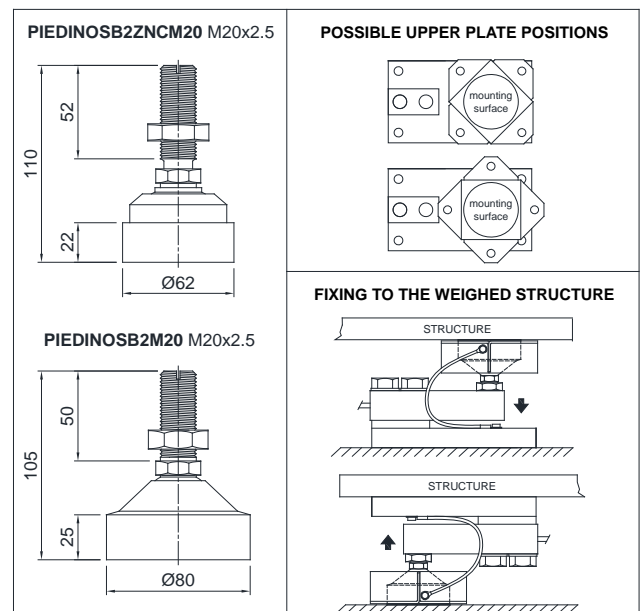
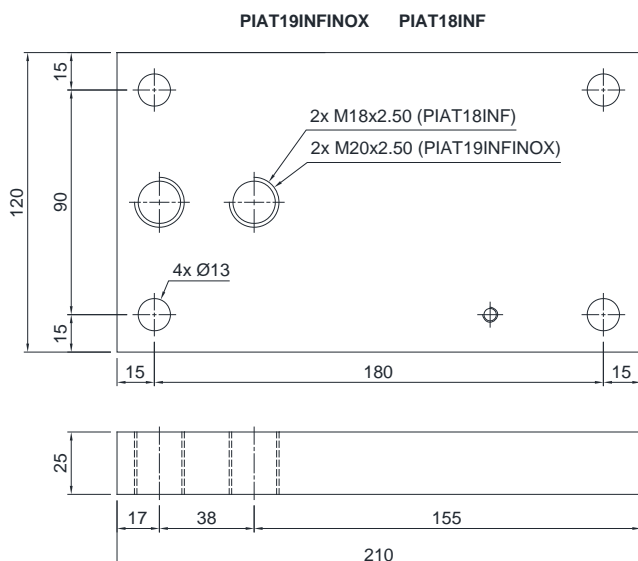
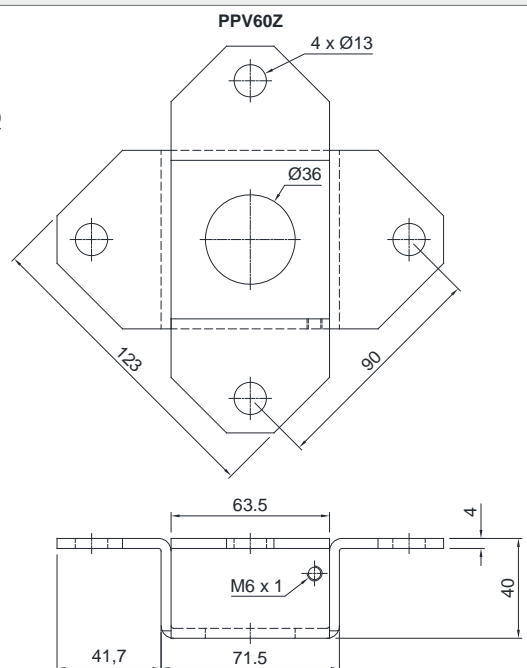
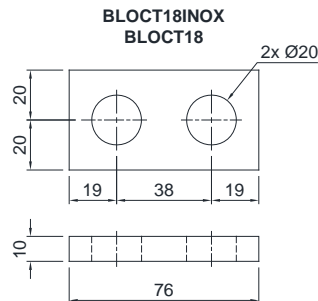
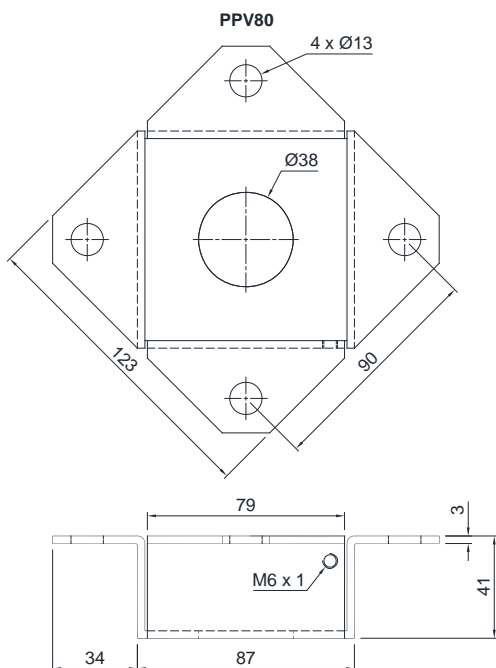
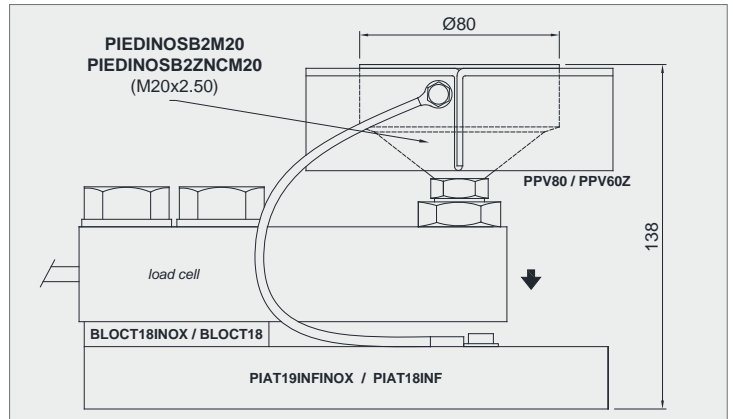
- Adjustable upper plate in AISI 304 stainless steel (PPV80) or galvanized steel (PPV60Z)
- Lower plate and block in AISI 304 stainless steel (PV80) or galvanized steel (PV60Z).
- Constraint against lateral forces and anti-tilt by AISI 304 stainless steel (PV80) or galvanized steel (PV60Z) self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.

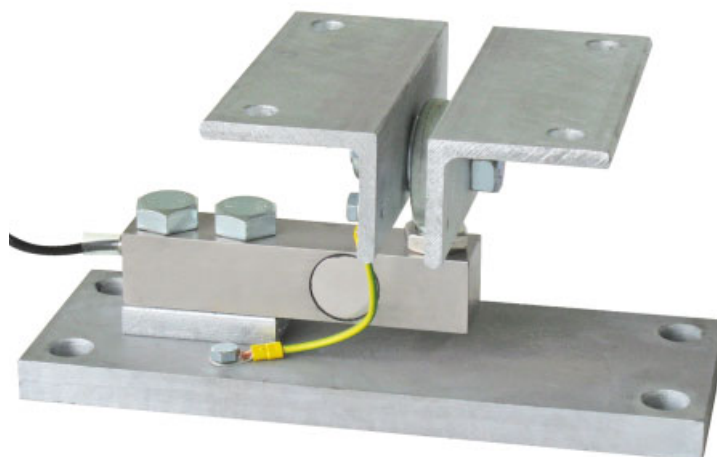
# PV80 - PV60Z

## MOUNTING KIT for SHEAR BEAM load cells

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you must proceed to insert a shim before fixing the bolts.



**Series load cells:            FTP - FTZ - FTK****Up to 10000 kg application range**

MAX STATIC LOAD    kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>5000</b>	FTK - FTP - FTZ (3000 - 5000 kg)	10.5	PS
<b>10000</b>	FTP	15.5	PS10T

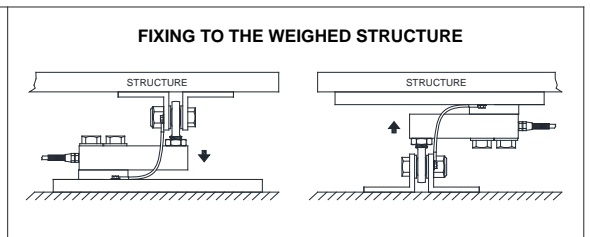
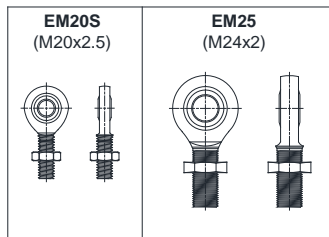
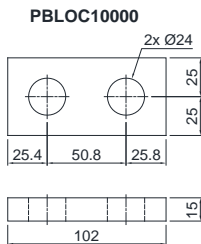
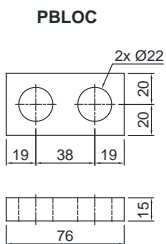
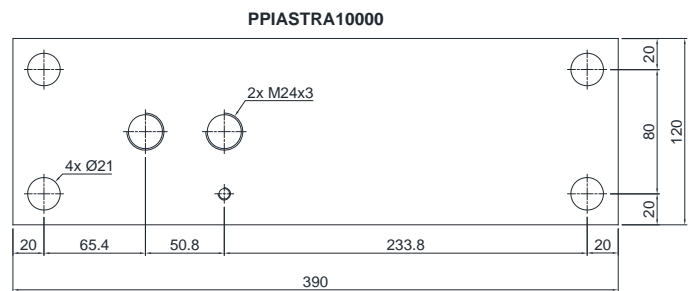
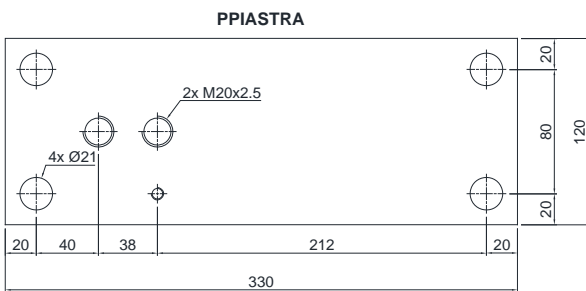
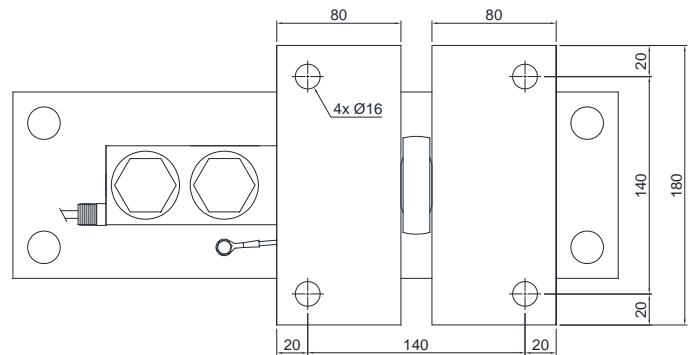
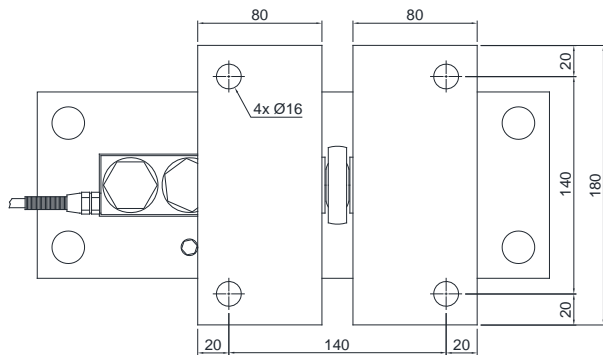
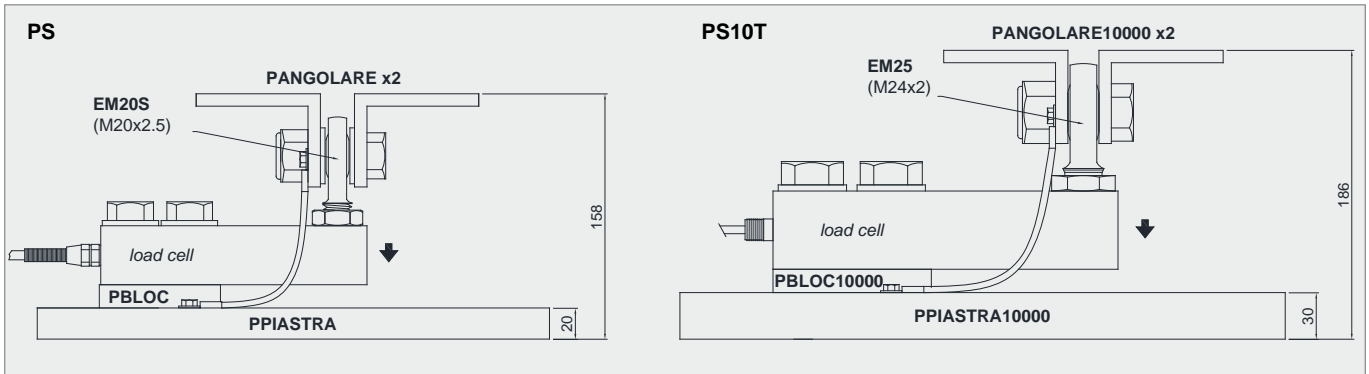
*Load cell not included.*

## DESCRIPTION

- Upper plate, lower plate and hot galvanized steel block.
- Constraint against lateral forces and anti-tilt by ball-and-socket joint.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.

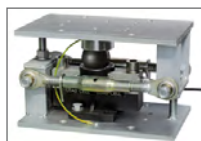
### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- Interconnect the plates to the earthing.
- In case of structure with four-point support, proceed to the height adjustment, if one-point does not touch the upper part of the mounting kit.



Rev. 0.0

The Company reserves the right to make changes to the technical data, drawings and images without notice.

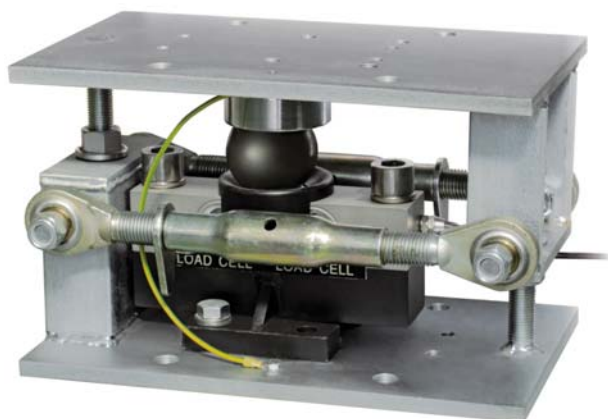


	APPLICATION RANGE	FOR LOAD CELLS	PAGE
<b>A2.4</b>	<b>for DOUBLE SHEAR BEAM / COLUMN load cells</b>		
<b>VCOKDTL</b>	up to 50000 kg	DTL, COL, COK	<b>177</b>
<b>VDTX</b>	up to 60klb/27 ton	DTX	<b>179</b>

Lined area for notes, consisting of multiple horizontal dotted lines.

**Series load cells: DTL - COL - COK**

**Up to 50000 kg application range**



**DOUBLE SHEAR BEAM load cells**



**COLUMN load cells**

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>50000</b>	DTL - COL - COK	39	VCOKDTL

*Load cell not included.*

## DESCRIPTION

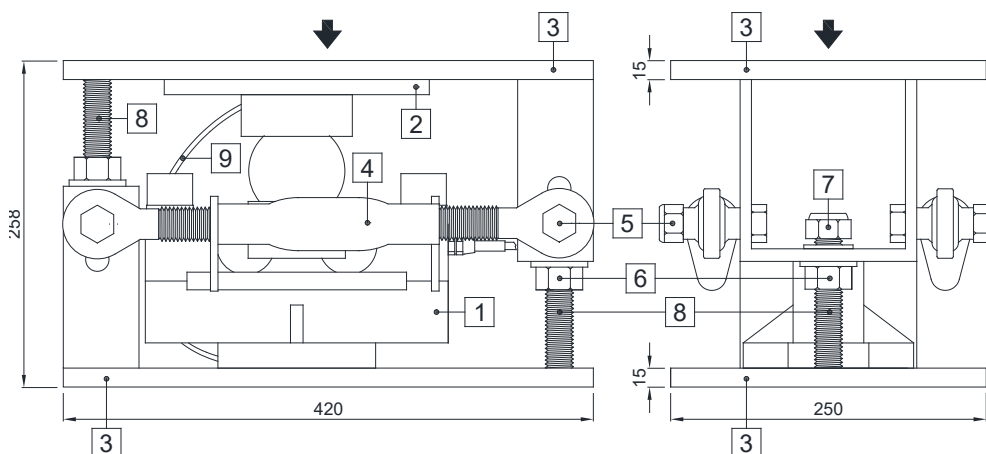
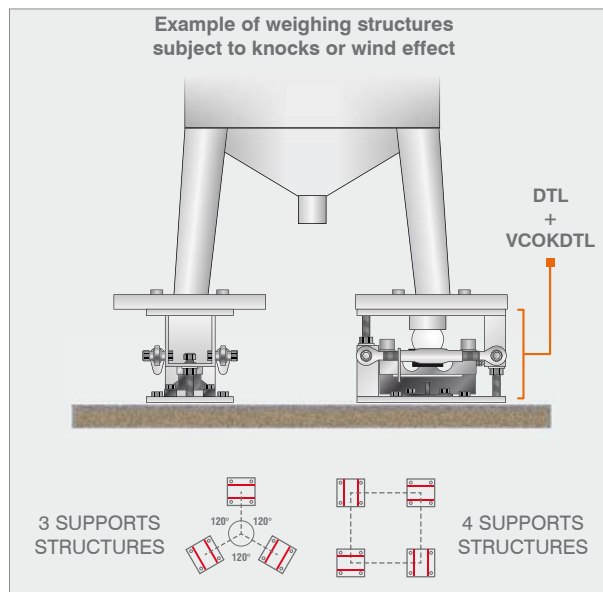
- Galvanized steel upper and lower plate.
- Galvanized steel plate (for DOUBLE SHEAR BEAM load cell).
- Upper and lower bases (for COLUMN load cell).
- Two integrated galvanized steel stay rods with dual ball-and-socket joints suitable to counter the lateral force.
- Anti-tilt constraint consisting of two threaded rods with self-locking nut.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

Upper and lower plates **3** must rest completely on not deformable surfaces. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support structure.

#### for DOUBLE SHEAR BEAM load cells (DTL):

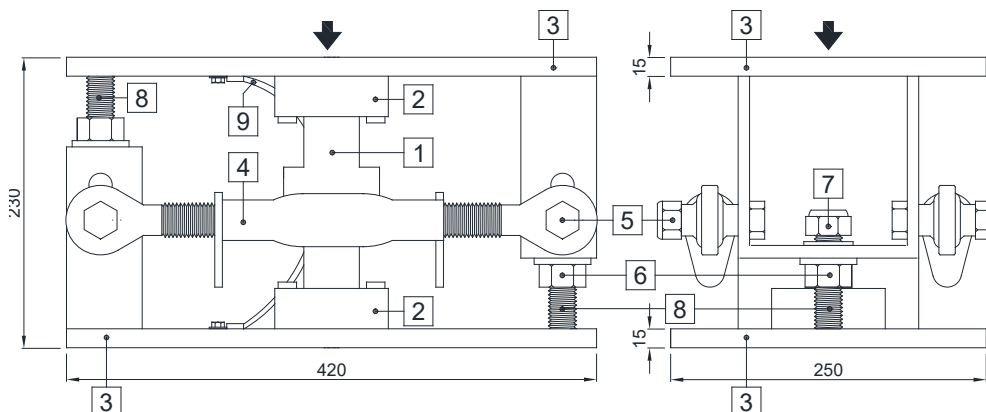
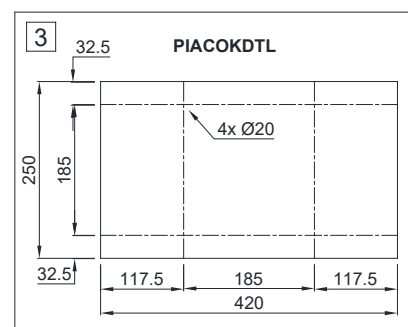
- Install the weighed system using only the mounting kit without the load cell **1** and inserting in its place a piece of pipe ( $\varnothing 40 \times 220$  mm): unscrewing the nuts **5** and take off one of the two threaded rods **4** and the plate **2**.
- To finish the installation (weldings, etc.), take off the piece of pipe and the plate **2**; to place the plate **2** on the load cell **1** and insert them in mounting kit.
- Fix the load cell and the plate by using the bolts provided.
- Connect lower and upper plates **3** to the earthing system **9** then loosen nuts **6**; verify that the threaded rod **8** slides into the hole; turn anti-tilt nuts **7** to a distance of 1 mm from plate.



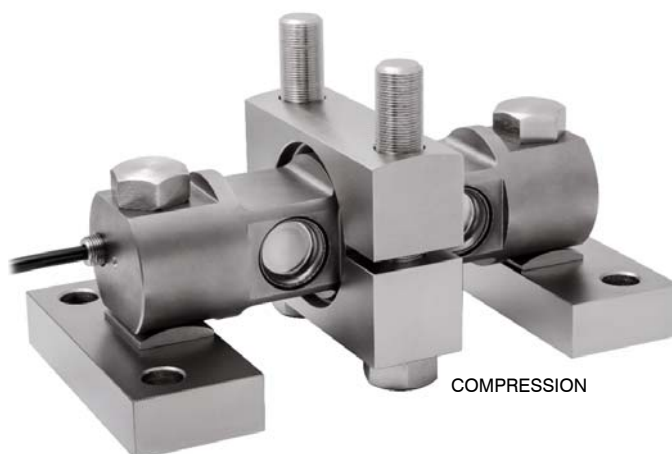
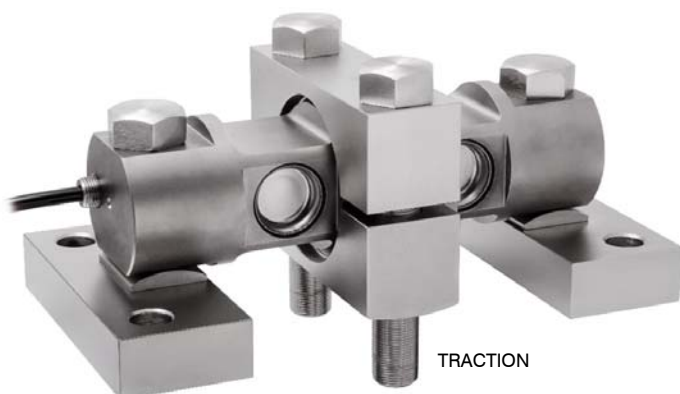
- Load cell.
- Galvanized steel plate (PIATTODTL).
- Galvanized steel upper and lower plates (PIACOKDTL).
- Galvanized steel turnbuckle with horizontal constrainer function (TENDITORE300).
- Self-locking nut  $\varnothing 18$ .
- Nut  $\varnothing 22$  to be used as jack.
- Anti-tilt self-locking nut  $\varnothing 22$ .
- Threaded rod  $\varnothing 22$ .
- Copper wire for earthing connection.

#### for COLUMN load cells (COL - COK):

- Install the weighed system using only the mounting kit without the load cell **1** and inserting in its place a piece of pipe ( $\varnothing 44 \times 152$  mm): unscrewing the nuts **5**, take off one of the two threaded rods **4** and the lower base **2**.
- To finish the installation (weldings, etc.), take off the piece of pipe and the lower base **2**; replace the load cell **1** on the lower base **2** and insert them in mounting kit.
- Connect lower and upper plates **3** to the earthing system **9** then loosen nuts **6**; verify that the threaded rod **8** slides into the hole; turn anti-tilt nuts **7** to a distance of 1 mm from plate.



- Load cell.
- Upper and lower bases.
- Galvanized steel upper and lower plates (PIACOKDTL).
- Galvanized steel turnbuckle with horizontal constrainer function (TENDITORE300).
- Self-locking nut  $\varnothing 18$ .
- Nut  $\varnothing 22$  to be used as jack.
- Anti-tilt self-locking nut  $\varnothing 22$ .
- Threaded rod  $\varnothing 22$ .
- Copper wire for earthing connection.

**Series load cells: DTX****Up to 60 klb/27 ton application range****DESCRIPTION**

- Nickel-plated steel alloy mounting kit for rigid attachment of the load cell.
- It prevents horizontal movement.

MAX STATIC LOAD **klb / c.a. ton****60 klb / 27 ton**

FOR LOAD CELLS

DTX 30 klb ÷ 60 klb

NET WEIGHT (kg)

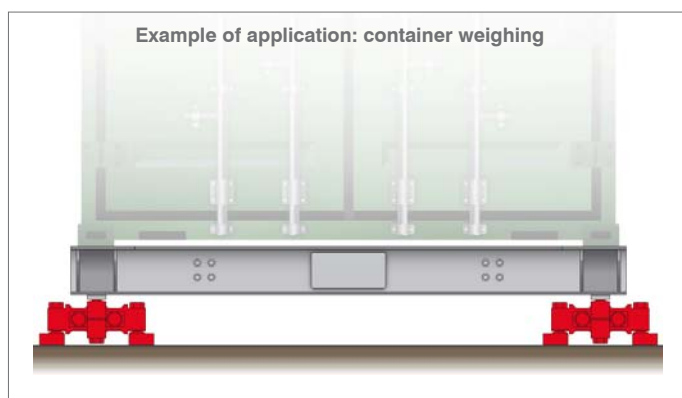
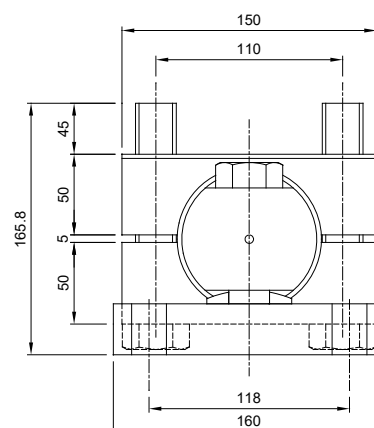
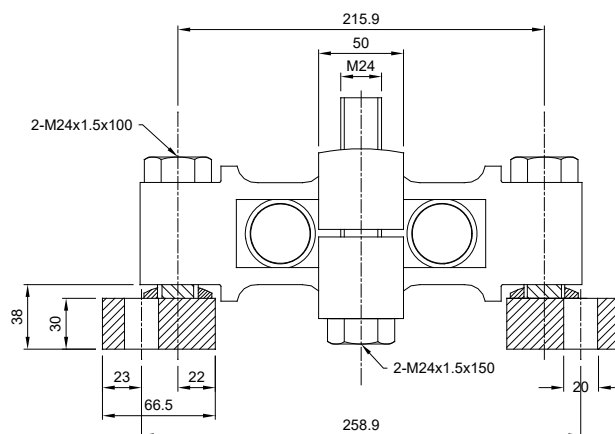
16.9

CODE






VDTX

*Load cell not included.***DIMENSIONS AND TECHNICAL SPECIFICATIONS**

The base plates must be placed on non-deformable surface. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support structure.



Example of application: container weighing

	APPLICATION RANGE	FOR LOAD CELLS	PAGE
<b>A2.5</b>	<b>for COMPRESSION-LOW PROFILE load cells</b>		
	<b>PVCLS</b> up to 2000 kg	CLS	<b>182</b>
	<b>PV80CLS</b> up to 5000 kg	CLS 5000 kg	<b>184</b>
	<b>PSCLS</b> up to 5000 kg	CLS 1000 - 2000 kg CLS 5000 kg	<b>186</b>
	<b>V10000/ 10275</b> up to 15000 kg	CBL, CBX	<b>188</b>
	<b>V15000/ 100000</b> up to 100000 kg	CBL, CBX	<b>190</b>



**Series load cells:            CLS****Up to 2000 kg application range**

MAX STATIC LOAD    kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>2000</b>	CLS (1000 - 2000 kg)	0.6	PVCLS

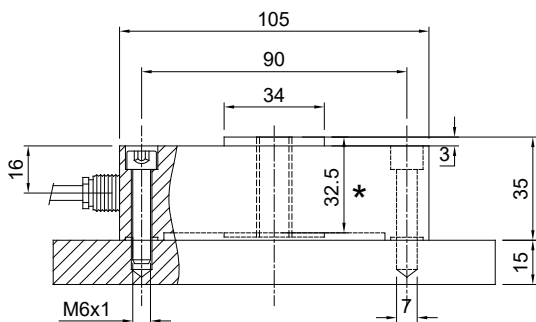
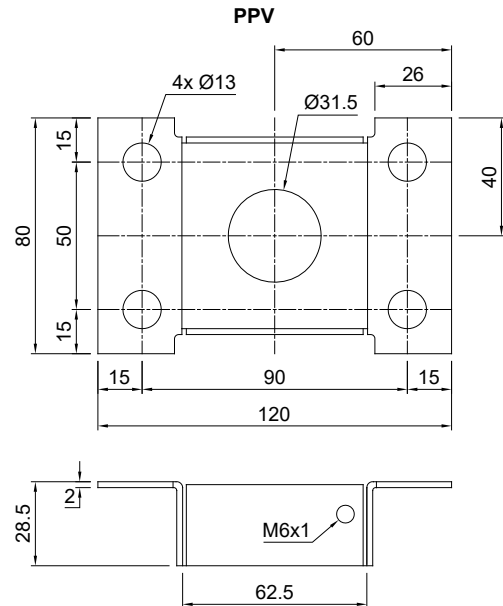
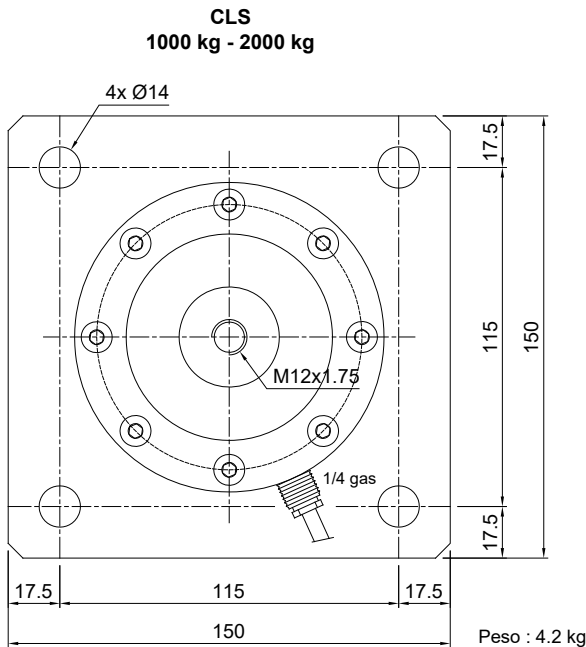
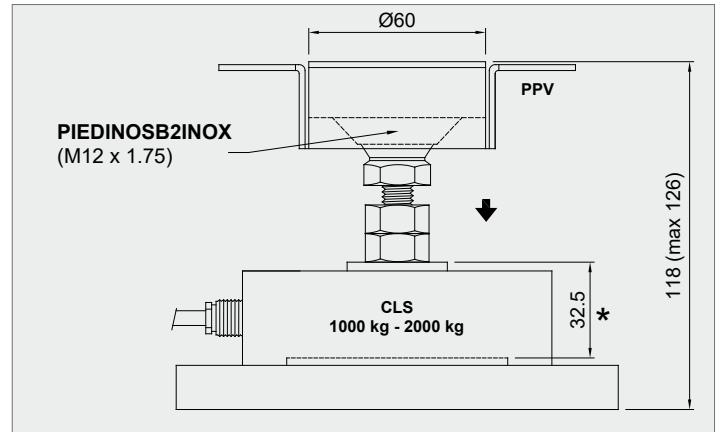
*Load cell not included.*

## DESCRIPTION

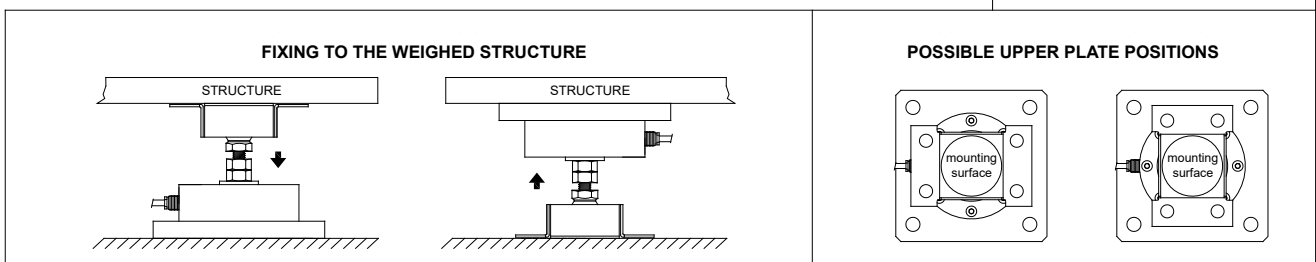
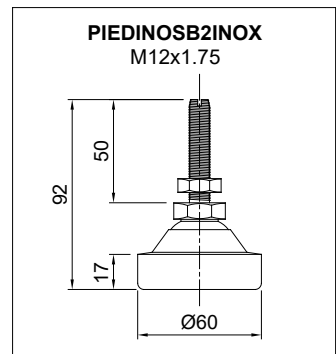
- Adjustable upper plate in AISI 304 stainless steel (PPV).
- AISI 304 stainless steel lower plate.
- Constraint against lateral forces and anti-tilt by stainless steel self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- Finished the installation by means of a copper wire, connect the upper supporting plate with the lower supporting plate, then connect all the lower plates to the earthing system.
- In case of structure with four-point support, if one-point does not touch the support base of the foot, you must proceed to adjust foot height.



**\* WARNING!**  
Max dimension to insert the bolt to allow the cell to perform properly



# PV80CLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series load cells: **CLS**

Up to 5000 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>5000</b>	CLS (5000 kg)	1.5	PV80CLS

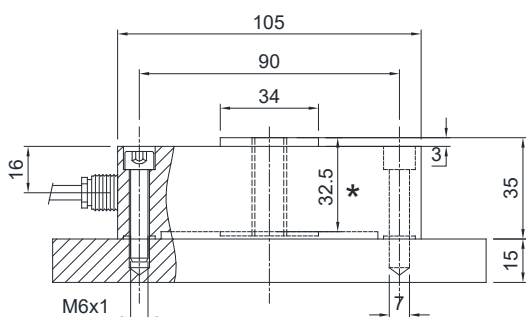
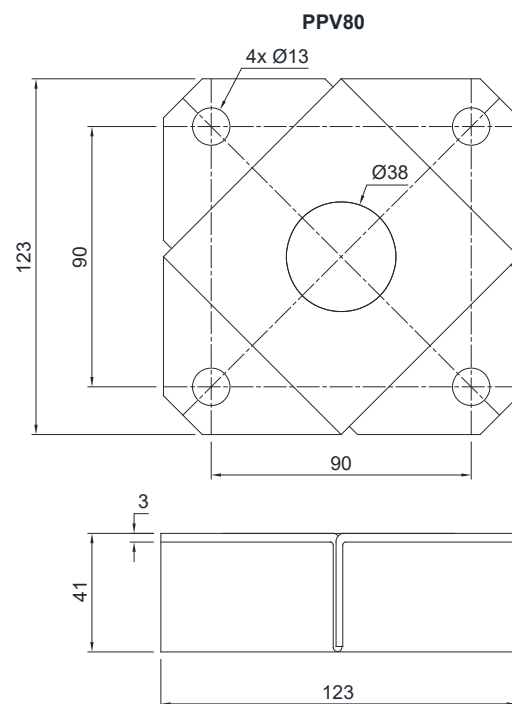
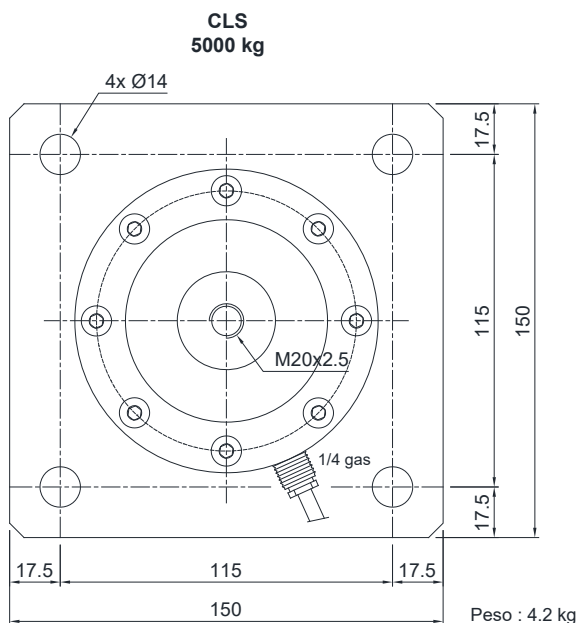
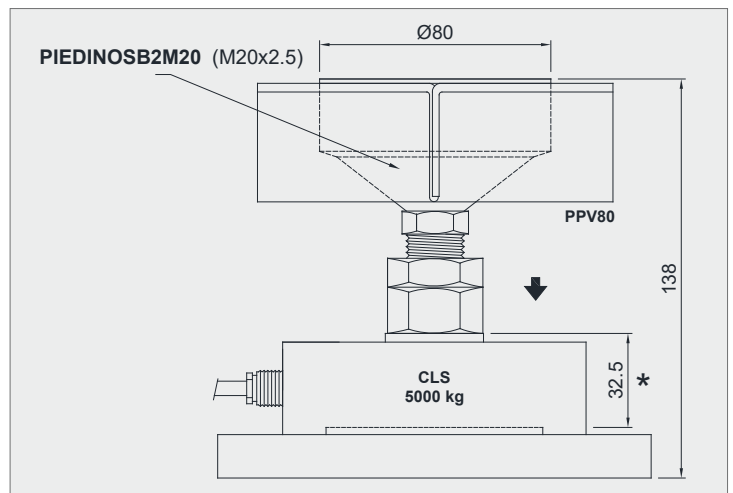
*Load cell not included.*

## DESCRIPTION

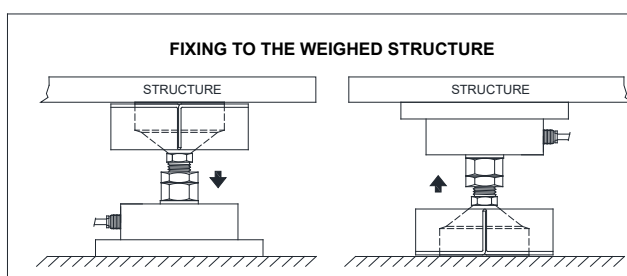
- Adjustable upper plate in AISI 304 stainless steel (PPV80).
- AISI 304 stainless steel lower plate.
- Constraint against lateral forces and anti-tilt by stainless steel self-centring joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

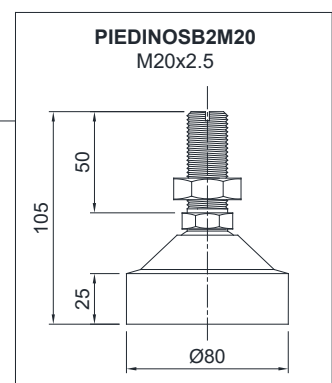
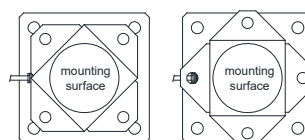
- Finished the installation by means of a copper wire, connect the upper supporting plate with the lower supporting plate, then connect all the lower plates to the earthing system.
- In case of structure with four-point support, if one-point does not touch the support base of the foot, you must proceed to adjust foot height.

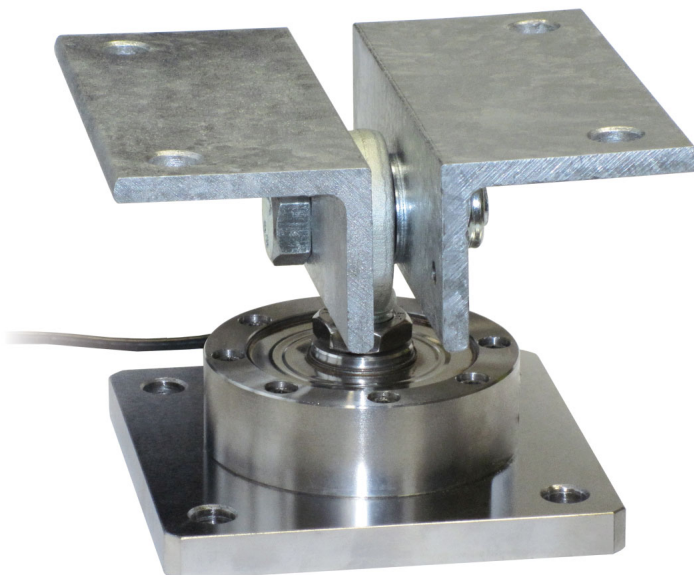


\* **WARNING!**  
Max dimension to insert the bolt to allow the cell to perform properly



#### POSSIBLE UPPER PLATE POSITIONS



**Series load cells:            CLS****Up to 5000 kg application range**

kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>2000</b>	CLS 1000-2000 kg	3.6	PSCLS2000
<b>5000</b>	CLS 5000 kg	3.6	PSCLS

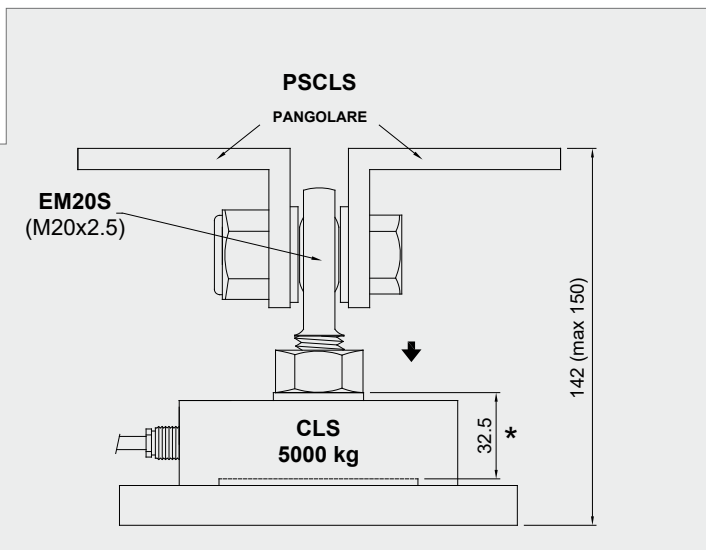
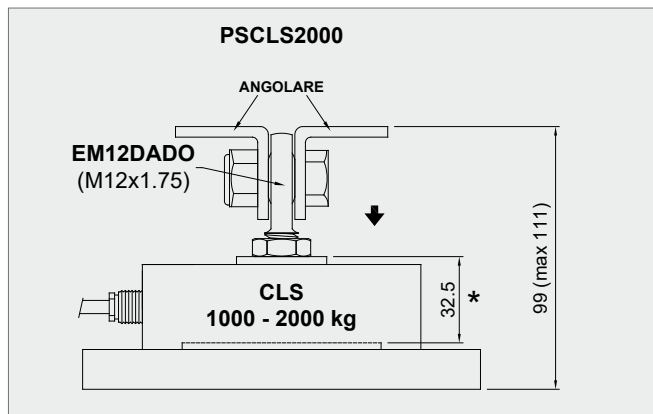
*Load cell not included.*

## DESCRIPTION

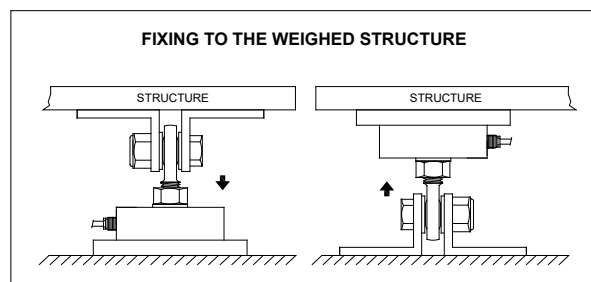
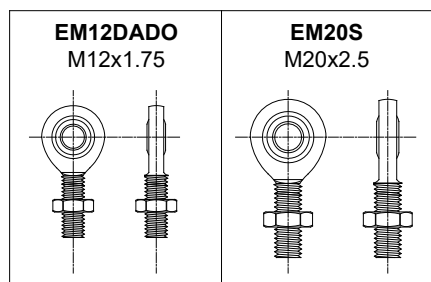
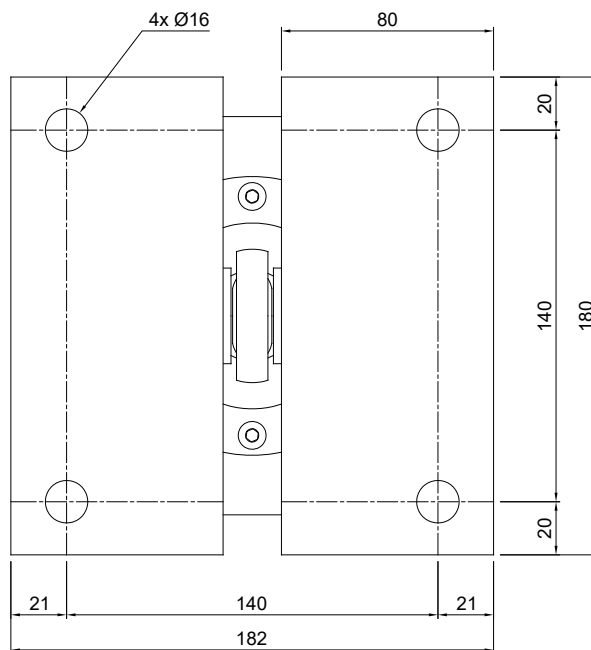
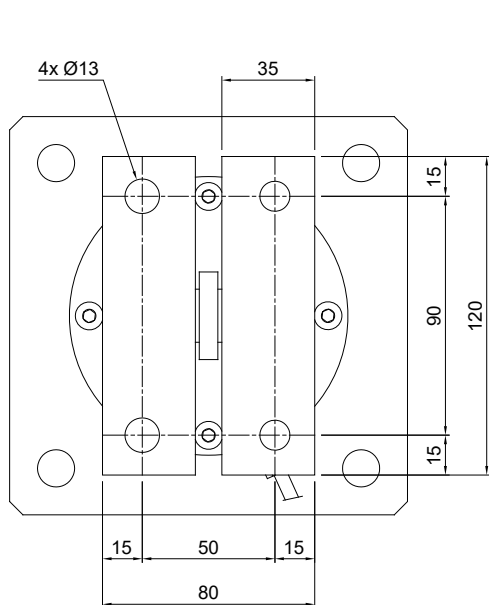
- Adjustable upper plate in hot galvanized steel.
- AISI 304 stainless steel lower plate.
- Constraint against lateral forces and anti-tilt by ball-and-socket joint
- Compensation for any misalignments of the support plates of the structure.
- Adjustable height.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- Finished the installation by means of a copper wire, connect the upper supporting plate with the lower supporting plate, then connect all the lower plates to the earthing system.



\* WARNING! Max dimension to insert the bolt to allow the cell to perform properly



# V10000/10275

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series load cells: CBL - CBX

Up to 15000 kg application range



V10000



V10275

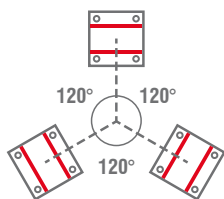
MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
15000	CBL (250 ÷ 12500 kg) - CBX (15000 kg)	5.7	V10000
15000	CBL (250 ÷ 12500 kg) - CBX (15000 kg)	6.9	V10275

Load cell not included.

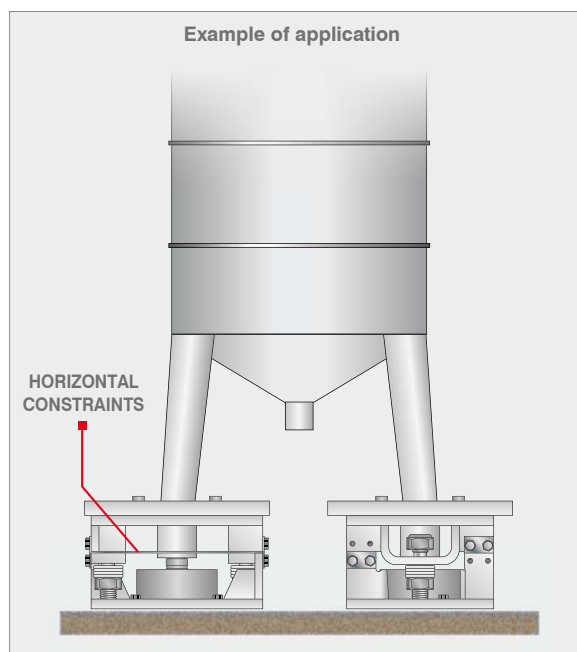
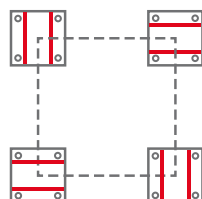
## DESCRIPTION

- AISI 304 stainless steel upper and lower plates.
- AISI 304 stainless steel laminas against lateral forces.
- Anti-tilt constraint consisting of two threaded rods with self-locking nut.

HORIZONTAL CONSTRAINTS  
ORIENTATION  
IN STRUCTURES WITH  
3-POINTS SUPPORT



HORIZONTAL CONSTRAINTS  
ORIENTATION  
IN STRUCTURES WITH  
4-POINTS SUPPORT

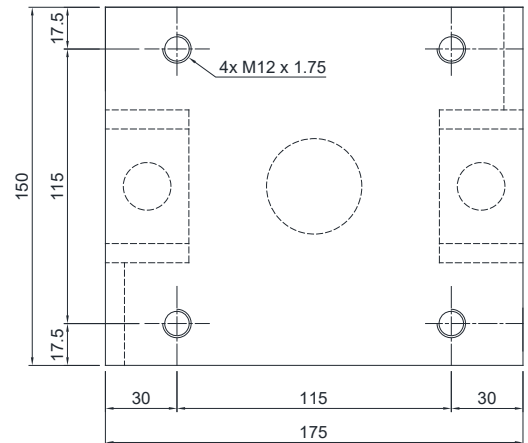


### DIMENSIONS AND TECHNICAL SPECIFICATIONS

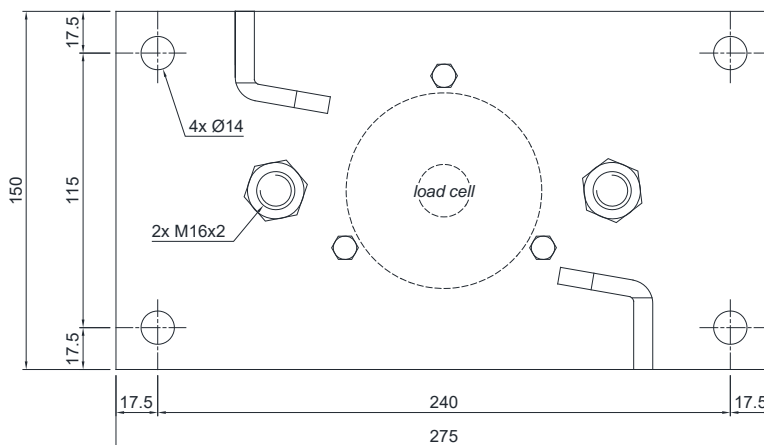
Upper and lower plates **2** must rest completely on not deformable surfaces. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support structure.

- Install the weighed system using only the mounting kit without the load cell **1** and inserting in its place a piece of pipe (1-2 mm higher than the load cell).
- To finish the installation (weldings, etc..), remove the piece of pipe and then removing the bolts to fix the the load cell **7** insert the load cell **1** in mounting kit.
- Connect lower and upper plates **2** to the earthing system then loosen nuts **5**; verify that the threaded rod **4** slides into the hole; turn anti-tilt nuts **6** to a distance of 1 mm from plate.
- Tighten the three bolts to fix the load cell **7**.

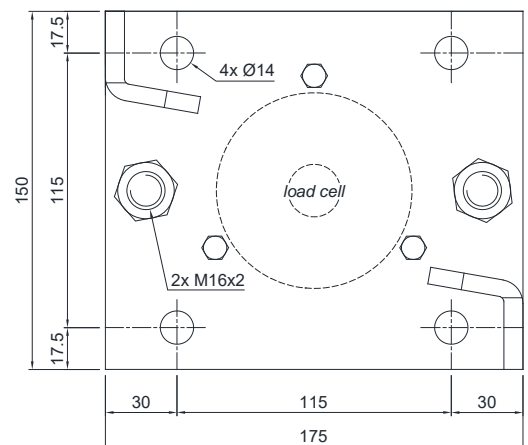
Upper plate



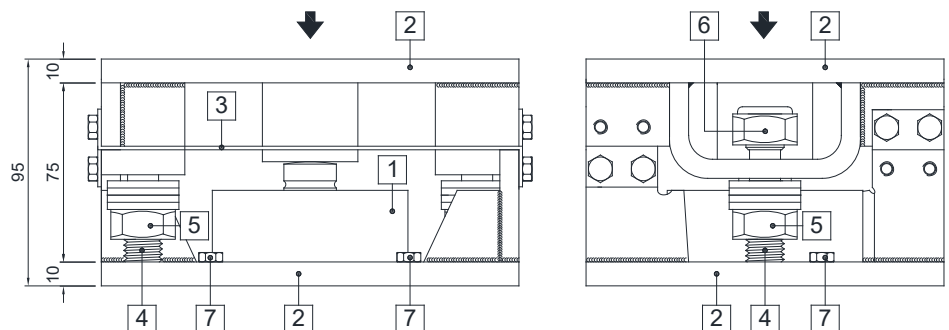
V10275 - Lower plate



V10000 - Lower plate



- 1 Load cell.
- 2 AISI 304 stainless steel upper and lower plates.
- 3 AISI 304 stainless steel laminas with horizontal constraint function.
- 4 Threaded rod.
- 5 Nut to be used as jack.
- 6 Anti-tilt self-locking nut.
- 7 M6 bolts to fix the load cell.



# V15000/100000

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

Series load cells: **CBL - CBX**

Up to 100000 kg application range

**DESCRIPTION**

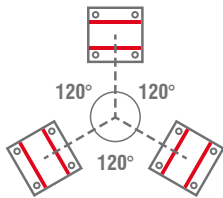
- AISI 304 stainless steel upper and lower plates.
- AISI 304 stainless steel laminas against lateral forces.
- Anti-tilt constraint consisting of two threaded rods with self-locking nut.



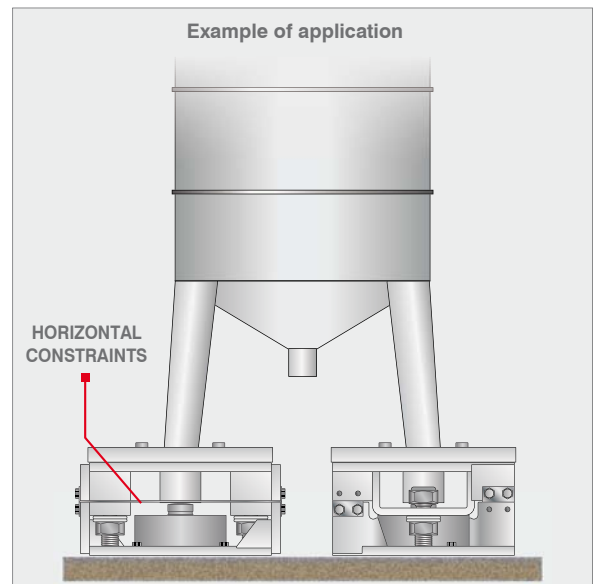
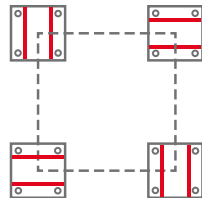
MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
<b>30000</b>	CBL (15000 kg) - CBX (30000 kg)	9	V15000
<b>50000</b>	CBL (30000 kg) - CBX (50000 kg)	17.5	V30000
<b>100000</b>	CBL (50000 kg) - CBL (100000 kg)	33.5	V100000

Load cell not included.

HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 3-POINTS SUPPORT



HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 4-POINTS SUPPORT



**COMPLEMENTARY ACCESSORIES**

	DESCRIPTION	CODE
	AISI 304 stainless steel adapter: V15000 for load cells: Ø82 mm V30000 for load cells: Ø100 mm V100000 for load cells: Ø126 mm	ADAT100CBX15T ADAT126CBX30T ADAT165CBX50T
	Galvanized steel turnbuckle with dual ball-and-socket. Net weight: 2.10 kg Working load: 2500 kg      Ultimate overload: 10000 kg	TENDITORE300
	Galvanized steel anchor plate for TENDITORE300 Net weight: 1.5 kg	PTEND

Rev. 0.0

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

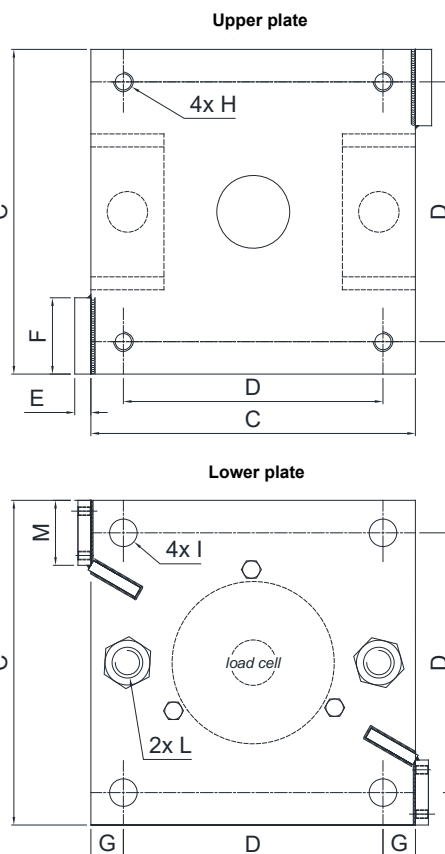
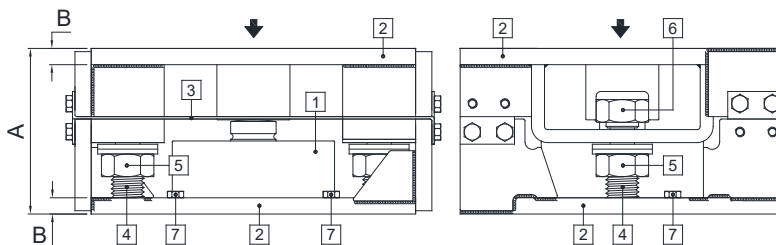
Upper and lower plates **2** must rest completely on not deformable surfaces. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support structure.

- Install the weighed system using only the mounting kit without the load cell **1** and inserting in its place a piece of pipe (1-2 mm higher than the load cell).
- To finish the installation (weldings, etc..), remove the piece of pipe and then removing the bolts to fix the the load cell **7** insert the load cell **1** in mounting kit.
- Connect lower and upper plates **2** to the earthing system then loosen nuts **5** ; verify that the threaded rod **4** slides into the hole; turn anti-tilt nuts **6** to a distance of 1 mm from plate.
- Tighten the three bolts to fix the load cell **7**.

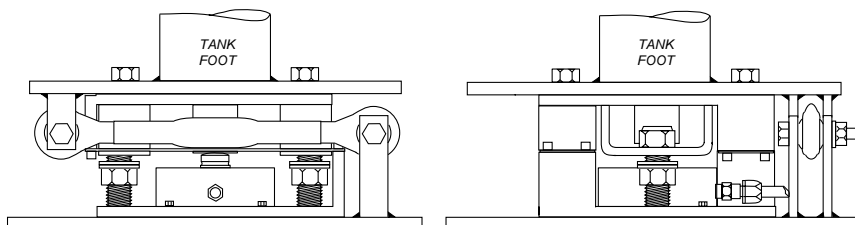
	A	B	C	D	E	F	G	H	I	L	M	Weight
V15000	102	10	200	160	10	47	20	M12x1.75	Ø17	M20x2.5	40	9 kg
V30000	132	12	250	185	12	70	32.5	M18x2.5	Ø20	M24x3	60	17 kg
V100000	155	15	320	250	15	95	35	M20x2.5	Ø23	M30x3.5	70	34 kg

Dimensions (mm)

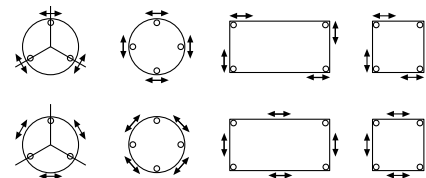
- 1** Load cell.
- 2** AISI 304 stainless steel upper and lower plates.
- 3** AISI 304 stainless steel laminas with horizontal constraint function.
- 4** Threaded rod.
- 5** Nut to be used as jack.
- 6** Anti-tilt self-locking nut.
- 7** M6 bolts to fix the load cell.



### Application example: how to make further horizontal constraints with the TENDITORE300 accessory

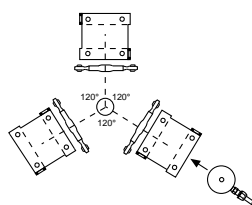


CONSTRAINTS PLACEMENT ON 3/4 SUPPORTS:  
the horizontal constraints can be positioned both on supports and on the four sides, centrally between two supports.

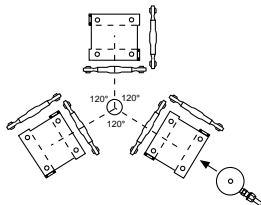


#### STRUCTURE WITH 3-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT

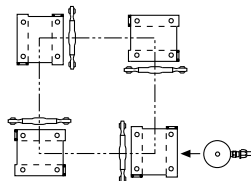


2 CONSTRAINTS FOR SUPPORT

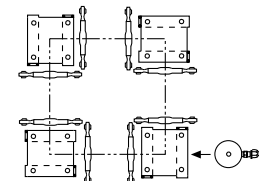










#### STRUCTURE WITH 4-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT



2 CONSTRAINTS FOR SUPPORT



	APPLICATION RANGE	FOR LOAD CELLS	PAGE	
	<b>A3.1</b>	<b>Horizontal constraints for mounting kits</b>		
	<b>TENDITORE300 PTEND</b>	up to 100000 kg	-	<b>194</b>
	<b>A3.2</b>	<b>Self-centring joint feet</b>		
	<b>PIEDINOSB2</b>	up to 5000 kg	-	<b>196</b>
	<b>A3.3</b>	<b>Adjustable upper plate for self-centring joint foot.</b>		
	<b>PPV PPVZ PPV80 PPV60Z</b>	up to 5000 kg	-	<b>198</b>
	<b>A3.4</b>	<b>Accessory with ball to compensate for any misalignments of the support plates</b>		
	<b>ACCSFER</b>	up to 5000 kg	FTL, FTK, FT-P, FTKL, FTZ, FTP, CLS	<b>199</b>
	<b>A3.5</b>	<b>Compression joint</b>		
	<b>ANTIV</b>	up to 2000 kg	FCOL, FCK, FTKL, FTL, FCAL, FCAX, FTP, FT-P, FTK, FTZ, CLS	<b>200</b>
	<b>A3.6</b>	<b>Ball-and-socket joint with nut</b>		
	<b>EM-DADO</b>	up to 112 kN (dynamic) up to 146 kN (static)	-	<b>201</b>
	<b>A3.7</b>	<b>Spherical plain thrust bearings</b>		
	<b>SNODOGE</b>	up to 10000 kg	FTL, FTK, FT-P, FTKL, FTZ, FTP, CLS	<b>202</b>
	<b>A3.8</b>	<b>Level measurements - false cells</b>		
	<b>ML</b>	up to 100000 kg	-	<b>203</b>

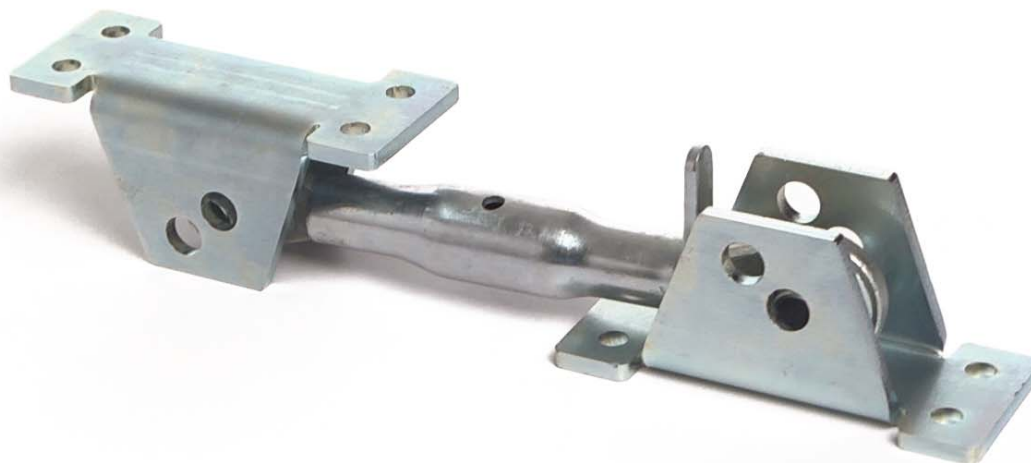


# TENDITORE300 - PTEND

Horizontal constraints for mounting kits

LAUMAS®

Up to 100000 kg application range



## DESCRIPTION

## CODE

Galvanized steel turnbuckle with dual ball-and-socket.

Net weight: 2.10 kg  
Working load: 2500 kg  
Ultimate overload: 10000 kg

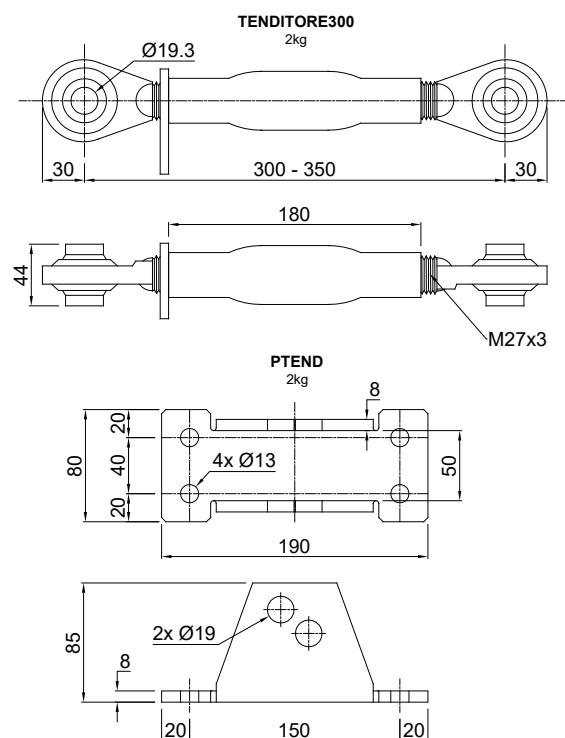
TENDITORE300

Galvanized steel anchor plate for TENDITORE300

Net weight: 1.5 kg

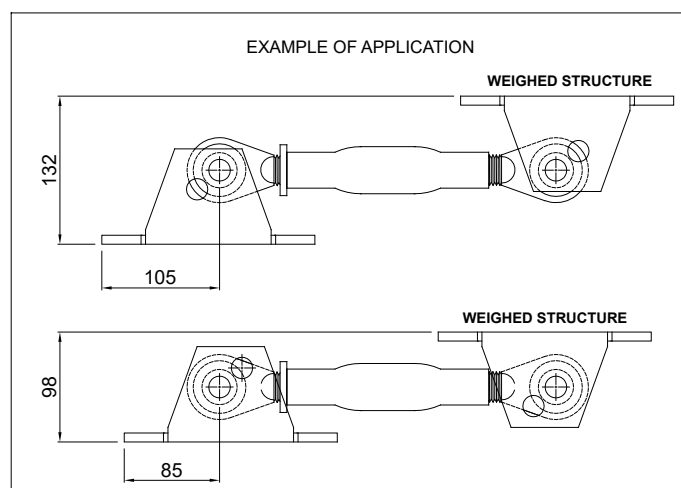
PTEND

## DIMENSIONS



## DESCRIPTION

- Suitable for static applications; place the constraints in a horizontal position.
- Turnbuckle lock for constraint adjustment.



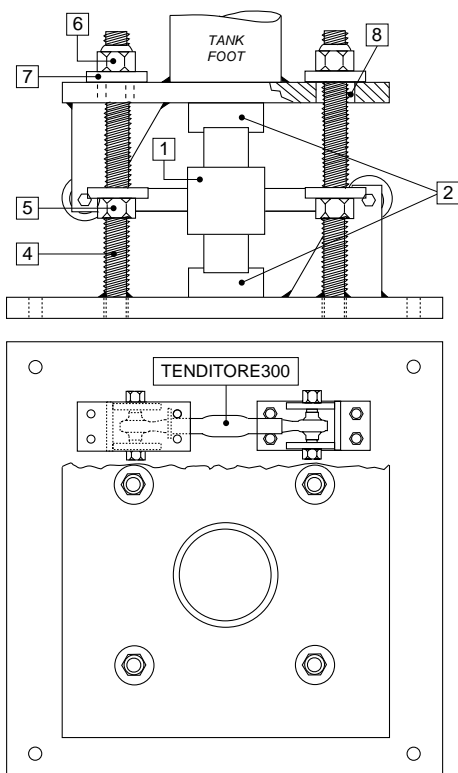
## Horizontal constraints for mounting kits

### APPLICATION EXAMPLE: HOW TO MAKE MOUNTING KITS WITH HORIZONTAL CONSTRAINTS

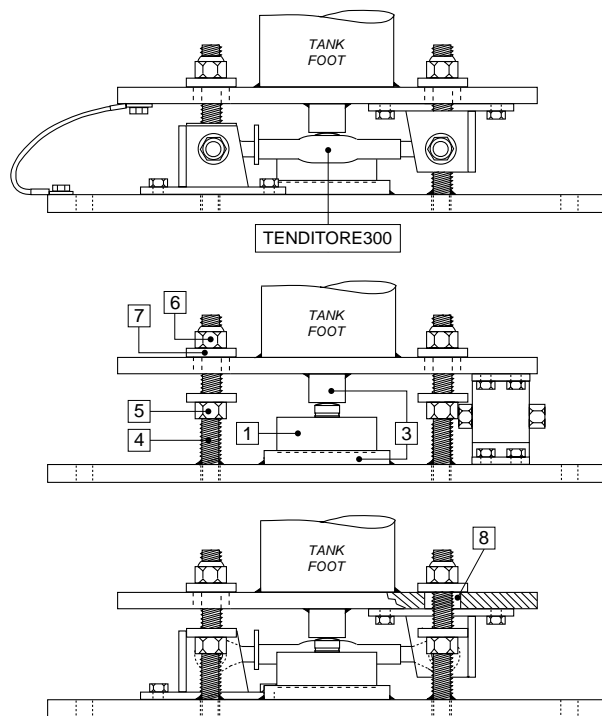
By a copper wire, connect the upper supporting plate with the lower supporting plate, then link together the lower plates to the earthing system.

To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support structure.

#### Application example with column load cells

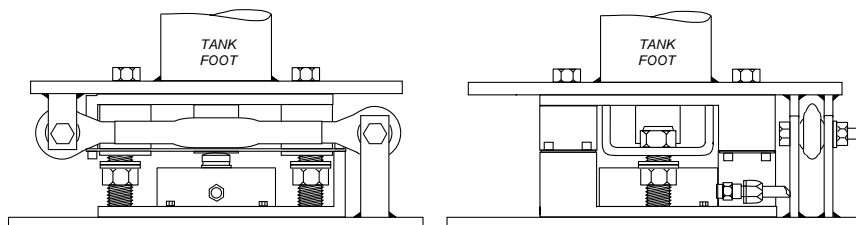


#### Application example with compression load cells

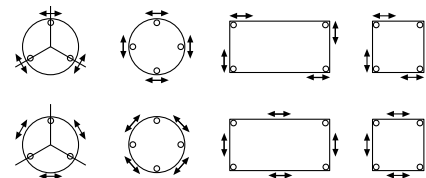


- 1 Load cell.
- 2 Mounting kit for column load cell.
- 3 AISI 304 stainless steel upper and lower bases.
- 4 Threaded rod.
- 5 Nut to be used as jack.
- 6 Anti-tilt self-locking nut.
- 7 Washer.
- 8 Hole diameter 20 mm larger than the bolt.

#### Application example with V15000 - V30000 - V100000 mounting kits

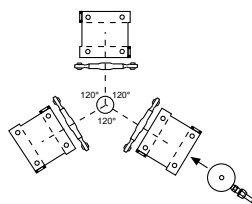


CONSTRAINTS PLACEMENT ON 3/4 SUPPORTS: the horizontal constraints can be positioned both on supports and on the four sides, centrally between two supports.

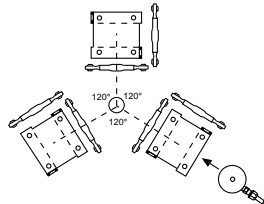


#### STRUCTURE WITH 3-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT

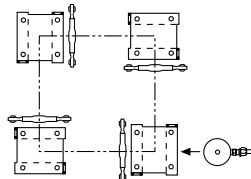


2 CONSTRAINTS FOR SUPPORT

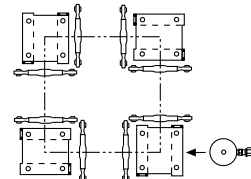


#### STRUCTURE WITH 4-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT



2 CONSTRAINTS FOR SUPPORT



# PIEDINOSB2

Self-centring joint feet

LAUMAS®

For BENDING BEAM and SHEAR BEAM load cells

Up to 5000 kg application range

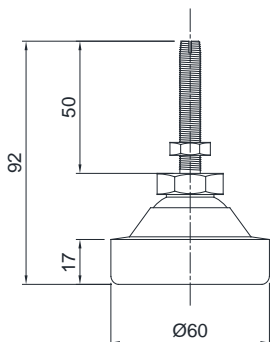


MAX STATIC LOAD	kg	THREAD	DIMENSIONS	MATERIAL	NET WEIGHT (kg)	CODE
500		M8	Ø60 x H 92 mm		0.3	PIEDINOSB2M8
500		M10	Ø60 x H 92 mm		0.3	PIEDINOSB2M10
2000		M12	Ø60 x H 92 mm	stainless steel	0.4	PIEDINOSB2INOX
2000		M12	Ø60 x H 78 mm		0.4	PIEDINOPXC1
5000		M20	Ø80 x H 105 mm		0.9	PIEDINOSB2M20
2000		M12	Ø60 x H 78 mm		0.4	PIEDINOPXC
2000		M12	Ø60 x H 86 mm	galvanized steel	0.4	PIEDINOSB2ZNC
5000		M20	Ø62 x H 110 mm		0.9	PIEDINOSB2ZNCM20

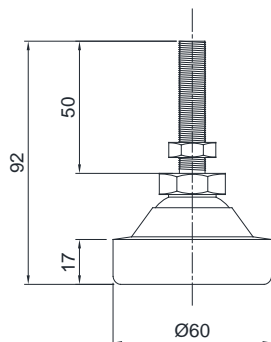
Nuts and washers included.

### DIMENSIONS AND APPLICATION

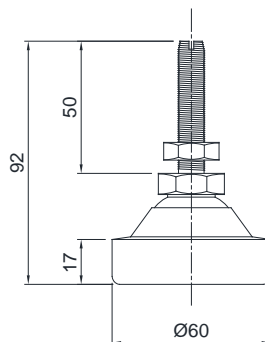
**PIEDINOSB2M8**  
M8x1.25



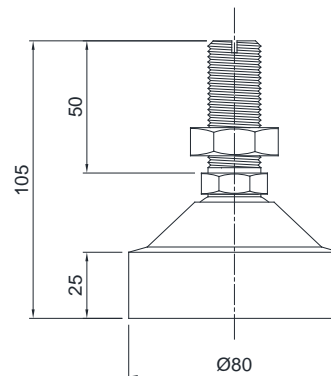
**PIEDINOSB2M10**  
M10x1.5



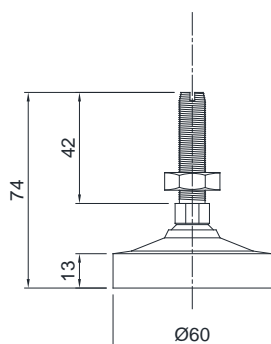
**PIEDINOSB2INOX**  
M12x1.75



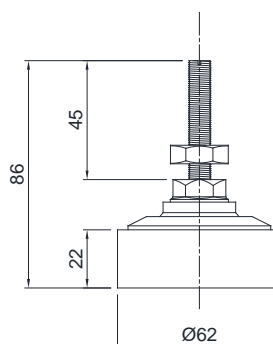
**PIEDINOSB2M20**  
M20x2.5



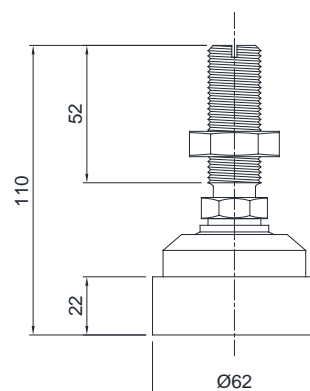
**PIEDINOPXCI**  
**PIEDINOPXC**  
M12x1.75



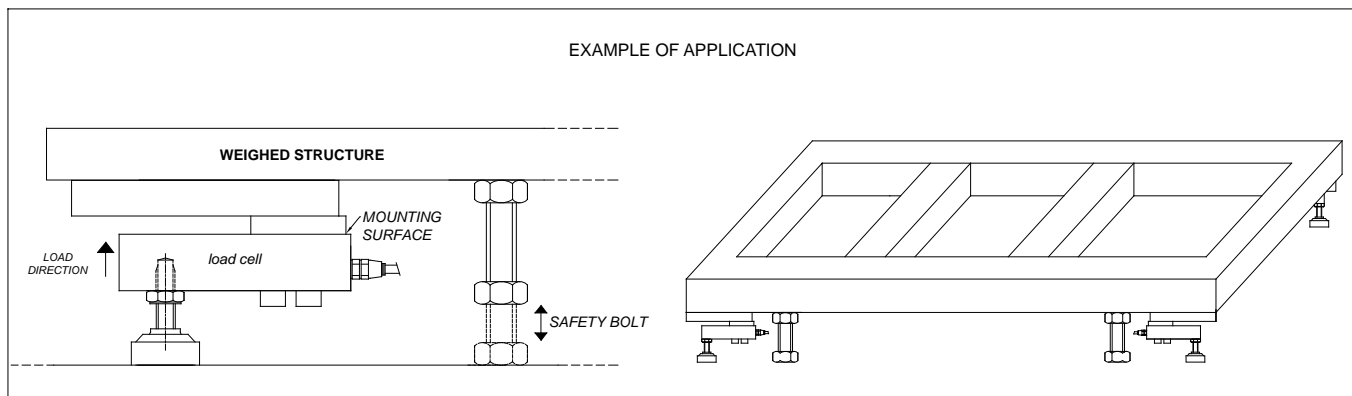
**PIEDINOSB2ZNC**  
M12x1.75



**PIEDINOSB2ZNCM20**  
M20x2.5



### EXAMPLE OF APPLICATION



## Adjustable upper plate

### For SINGLE POINT, BENDING BEAM, SHEAR BEAM and COMPRESSION load cells

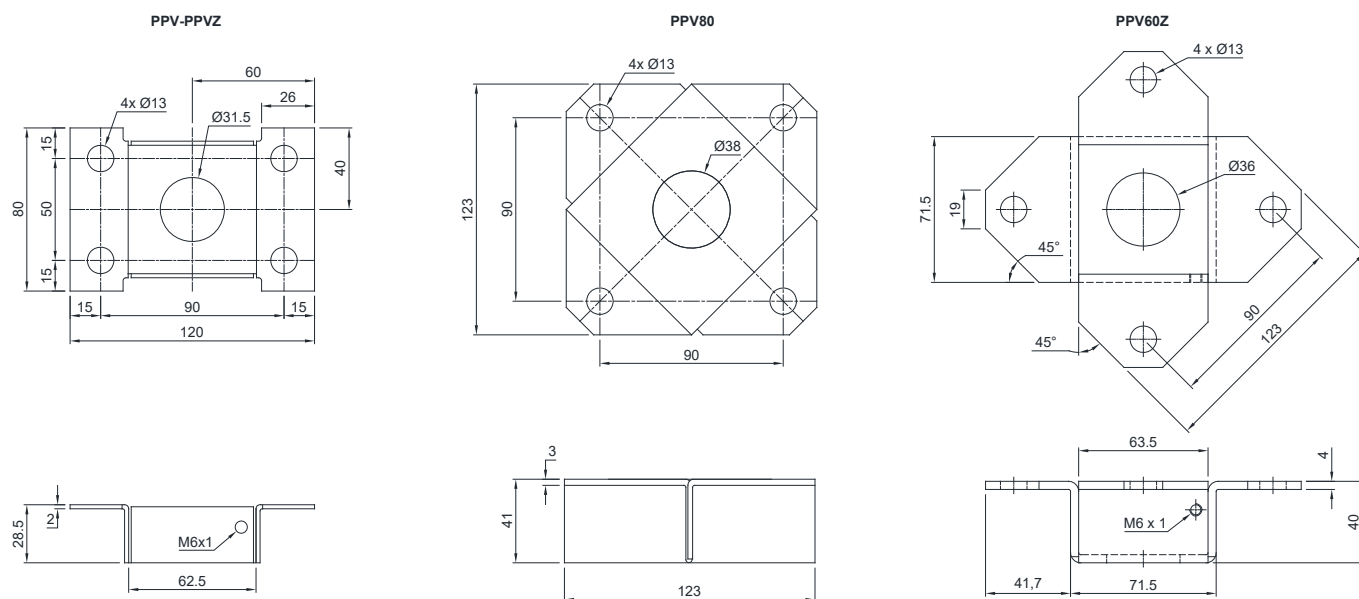
- Plates for constraint against lateral forces and anti-tilt.
- For self-centring joint foot.

Up to 5000 kg application range



MAX STATIC LOAD kg		NET WEIGHT (kg)	CODE
2000	AISI 304 stainless steel	200	PPV
2000	galvanized steel	200	PPVZ
5000	AISI 304 stainless steel	600	PPV80
5000	galvanized steel	641	PPV60Z

### DIMENSIONS (mm)



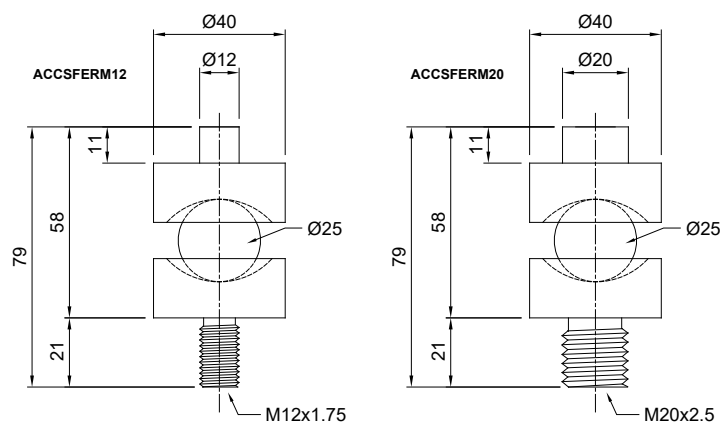
The Company reserves the right to make changes to the technical data, drawings and images without notice.

Up to 5000 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	DIMENSIONS	NET WEIGHT (kg)	CODE
2000	FTL - FTK - FT-P - FTKL FTZ - FTP - CLS	M12x1.75	0.3	ACCSFERM12
5000	FTK - FTKL - FTZ (5000 kg) FTP (3000-5000 kg) - CLS (5000 kg)	M20x2.5	0.4	ACCSFERM20

### DIMENSIONS AND APPLICATION

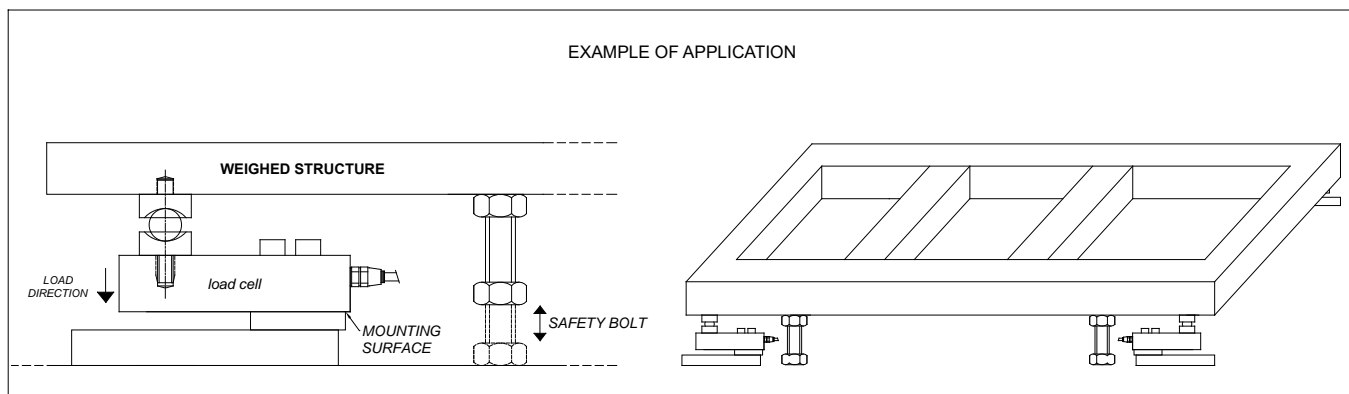


### DESCRIPTION

- Stainless steel accessory with ball to compensate for misalignment of the support plates.



### EXAMPLE OF APPLICATION



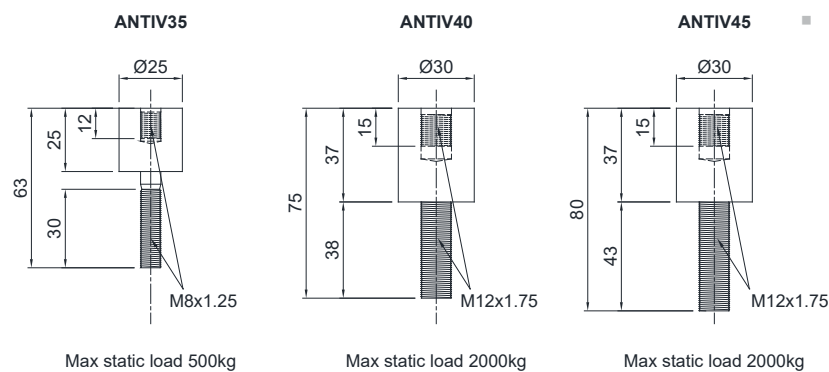
The Company reserves the right to make changes to the technical data, drawings and images without notice.

Up to 2000 kg application range



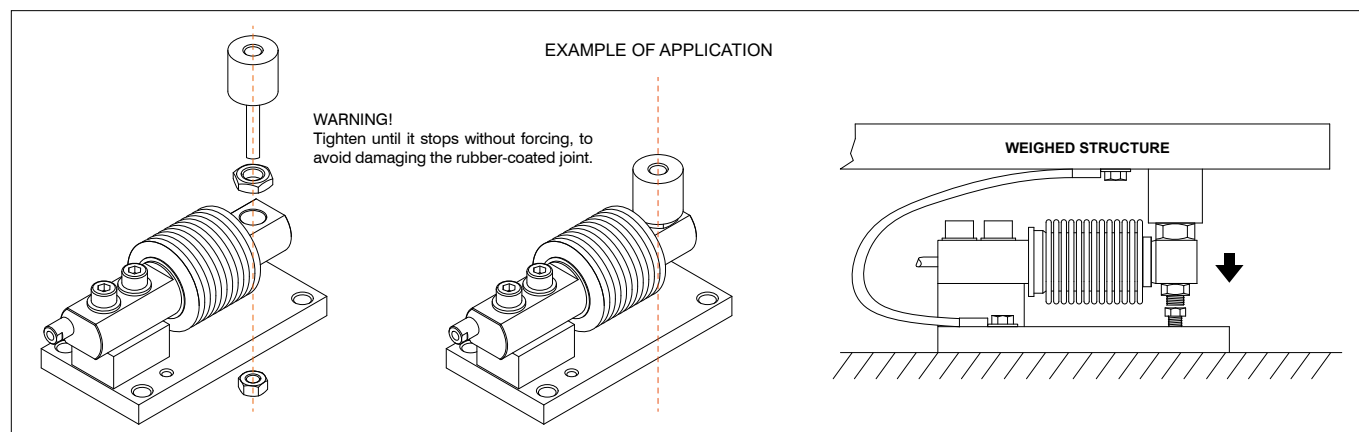
MAX STATIC LOAD kg	FOR LOAD CELLS	DIMENSIONS	NET WEIGHT (kg)	CODE
500	FCOL - FCK	M8x1.25	0.04	ANTIV35
2000	FTKL - FTL - FCAL - FCAX - FTP FT-P - FTK- FTZ - CLS	M12x1.75	0.1	ANTIV40
2000	FCAL - FCAX	M12x1.75	0.1	ANTIV45

### DIMENSIONS AND APPLICATION



### DESCRIPTION

- Stainless steel and rubber compression joints to compensate for any misalignments of the support plates.



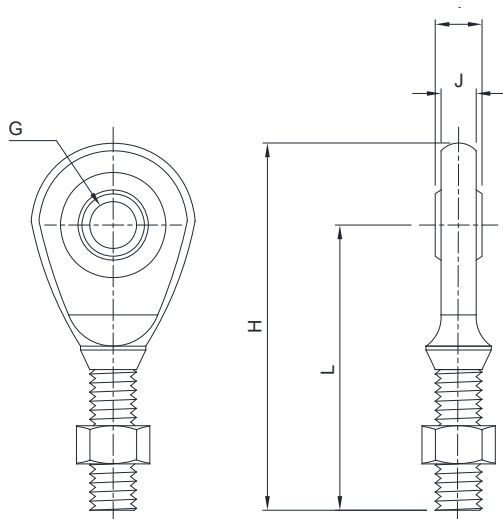
The Company reserves the right to make changes to the technical data, drawings and images without notice.



For TENSION (COMPRESSION) load cells

THREAD	MATERIAL	LOAD RATINGS kN		NET WEIGHT (kg)	CODE
		DYNAMIC	STATIC		
M12	stainless steel	10.8	24.5	0.08	EM12DADOINOX
M16		21	45	0.19	EM16DADOINOX
M20		30	60	0.30	EM20DADOINOX
M24		48	83	0.60	EM24DADOINOX
M6	galvanized C45 steel	3.6	8.1	0.02	EM6DADO
M8		5.8	12.9	0.04	EM8DADO
M10		8.6	17.6	0.06	EM10DADO
M12		11	24.5	0.08	EM12DADO
M16		22	45	0.19	EM16DADO
M20		31	60	0.30	EM20DADO
M24		51	83	0.60	EM25DADO
M30		65	110	0.93	EM30DADO
M36	112	146	1.45	EM35DADO	

## DIMENSIONS



CODE	THREAD	G	H	I	J	L
EM12DADOINOX	M12x1.75	Ø12	72	10	8.5	55
EM16DADOINOX	M16x2	Ø17	88.5	14	11.5	65.5
EM20DADOINOX	M20x1.5	Ø20	104	16	13.5	77
EM24DADOINOX	M24x2	Ø25	124	20	18	92

EM6DADO	M6x1	Ø6	47	6	4.5	36.5
EM8DADO	M8x1.25	Ø8	54	8	6.5	42.5
EM10DADO	M10x1.5	Ø10	62.5	9	7.5	48.5
EM12DADO	M12x1.75	Ø12	71	10	8.5	54.5
EM16DADO	M16x2	Ø17	92	14	11.5	69.5
EM20DADO	M20x1.5	Ø20	104.5	16	13.5	77.5
EM25DADO	M24x2	Ø25	126	20	17.5	94.5
EM30DADO	M30x2	Ø30	146.5	22	19.5	110
EM35DADO	M36x3	Ø35	181	25	21.5	140

The Company reserves the right to make changes to the technical data, drawings and images without notice.

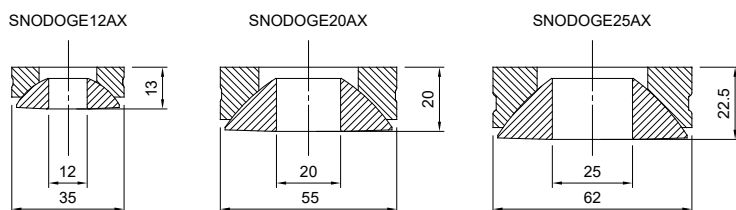
Series load cells: **FTL - FTK - FT-P - FTKL - FTZ - FTP - CLS**

Up to 10000 kg application range



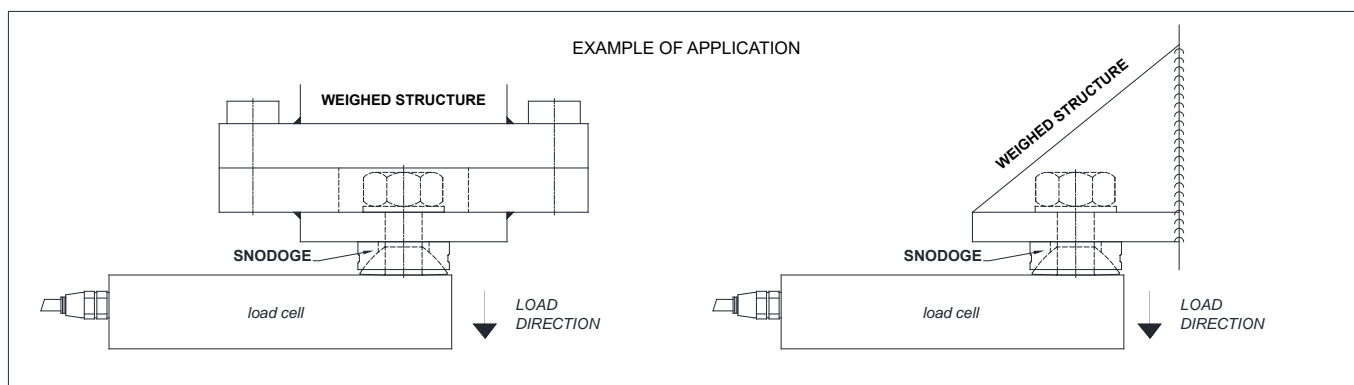
MAX STATIC LOAD kg	DESCRIPTION	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
2000	Spherical plain bearings	CLS, FTK, FTKL, FTL, FTP, FT-P, FTZ	0.07	SNODOGE12AX
5000	Kit composed by spherical bearing (cod. SNODOGE20AX), galvanized bolt (20x80 mm) and washer (22x60 mm).	CLS (5000 kg), FTK (3000-5000 kg), FTKL, FTZ (5000 kg), FTP (3000-5000 kg)	0.3	SNODOGE20AXKIT
10000	Kit composed by spherical bearing (cod. SNODOGE25AX), galvanized bolt (24x100 mm) and washer (26x72 mm).	FTP 10000 kg	0.9	SNODOGE25AXKIT

### DIMENSIONS AND APPLICATION



### DESCRIPTION

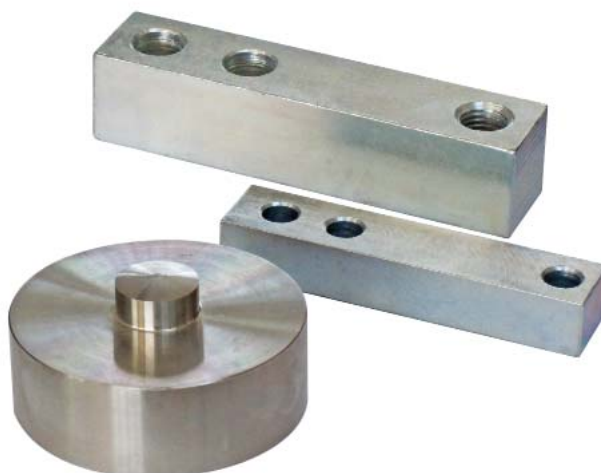
- Carbon steel spherical plain bearings joints to compensate for misalignment of the support plates.



The Company reserves the right to make changes to the technical data, drawings and images without notice.



Up to 100000 kg application range



CAPACITY	kg	EQUIVALENT TO LOAD CELLS	MATERIAL	NET WEIGHT (kg)	CODE
<b>BENDING BEAM</b>					
<b>200</b>		FCK (5-10 kg) - FCOL (20-200 kg)	Galvanized steel	0.5	FALSAFC
<b>1500</b>		FCAL (30-300 kg) - FCAX (30-1500 kg)	Galvanized steel	0.6	FALSAFCA
<b>SHEAR BEAM</b>					
<b>2000</b>		FTP (75-2000 kg) - FTL (300 kg) FTK (500-2000 kg) - FTKL (500-2000 kg) FTZ (500-2000 kg)	Galvanized steel	0.9	FALSAFT
<b>5000</b>		FTP (3000-5000 kg) - FTK (3000-5000 kg) FTKL (3000-5000 kg) - FTZ (5000 kg)	Galvanized steel	1.6	FALSAFTI5000
<b>COMPRESSION-LOW PROFILE</b>					
<b>15000</b>		CBL (250-12500 kg) - CBX (15000 kg)	Stainless steel	1.4	FALSA82
<b>30000</b>		CBL (15000 kg) - CBX (30000 kg)	Stainless steel	2.2	FALSA100
<b>50000</b>		CBL (30000 kg) - CBX (50000 kg)	Stainless steel	4	FALSA127
<b>100000</b>		CBL (50000-100000 kg)	Stainless steel	10.5	FALSA165

## DESCRIPTION

- Structural mechanical steel elements that can be used in combination with the load cells for measuring the level of liquid or weighing powder products that do not require a high degree of precision.
- They do not transmit any electrical signals.
- They can be mounted on the same mounting kits as the load cells.

### DIMENSIONS AND TECHNICAL SPECIFICATIONS

- To enable use of the false cells, it is absolutely necessary that the structure to weigh has a uniform shape and is geometrically divisible. It must be perfectly level and the type of product to be weighed must enable horizontal positioning, as if it were a liquid (otherwise, loading systems which distribute the product/load uniformly are required).
- Mounting kits should be used for all supports (also for those with false cells), because, apart from simplifying and optimising cell assembly, they enable future replacement of false cells with real versions, accuracy and the reliability of the weighing process needs to be improved.
- The weight indicator will show the effective weight multiplying the signal by two or three, depending on the application.

**STRUCTURE WITH 3-POINTS SUPPORT**  
1 LOAD CELL + 2 FALSE CELLS

Signal mV x 3

Signal mV x 2

**STRUCTURE WITH 4-POINTS SUPPORT**  
2 LOAD CELLS + 2 FALSE CELLS

Signal mV x 2

C = SUPPORT FOOT WITH LOAD CELL  
F = SUPPORT FOOT WITH FALSE CELL

	FALSAFC	FALSAFCA
A	120	137
B	30	30
C	10	17.5
D	18	24.5
E	82	81.5
F	Ø9.5	Ø13
G	Ø8.5	Ø13
H	20	22

	FALSAFT	FALSAFTI5000
A	130	171.5
B	32	40
C	15	19
D	25.5	38
E	76	95
F	Ø14	Ø22
G	Ø14	Ø20
H	32	38
I	M12	M20

	FALSA82	FALSA100	FALSA127	FALSA165
A	Ø82	Ø100	Ø126	Ø165
B	32	35	40	60
C	Ø22	Ø28	Ø35	Ø60
H	44	48	54	80

	FALSA82	FALSA100	FALSA127	FALSA165
A	Ø82	Ø100	Ø126	Ø165
B	32	35	40	60
C	Ø22	Ø28	Ø35	Ø60
H	44	48	54	80



## JUNCTION BOXES

Stainless steel or ABS junction boxes, including equalization boards or parallel connection boards, to connect from 1 to 4 or from 5 to 8 load cells.  
IP67 protection rating.  
Lightning and electrical shock protection versions.  
ATEX II 1GD certified versions.

**PRODUCTS VIDEO on [www.laumas.com](http://www.laumas.com)**



Watch the presentation video of each product.



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