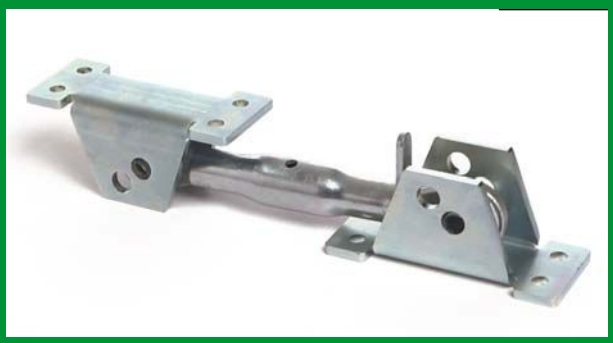
Тензодатчики веса и весовые модули

Каталог продукции **LAUMAS**



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Эл. почта mfd@nt-rt.ru || Сайт: https://laumas.nt-rt.ru/

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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LAUMAS®

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A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PLATFORM	PAGE
	A1.1	**SINGLE POINT**		
	**AF**	5, 15, 50 kg	150x150 mm	**6**
	**AS**	0.25, 0.5, 1 kg	200x200 mm	**8**
	**ALL**	3, 5, 10, 15, 20, 30, 50 kg	250x350 mm	**10**
	**PRC**	6, 15, 30, 50 kg	350 x 350 mm	**12**
	**AU**	3, 6, 15 kg 30, 50 kg	250 x 400 mm 400 x 600 mm	**14**
	**AZL**	10, 15, 20, 30, 50, 100 kg	400 x 400 mm	**16**
	**AZLI**	10, 20, 50 kg	400 x 400 mm	**18**
		100, 200, 300, 500 kg	800 x 800 mm	
	**AZS**	10, 30, 50, 100, 200 kg	400 x 400 mm	**20**
	**PTC**	30, 50, 75, 100, 150 kg	400 x 400 mm	**22**
	**AM**	60, 100, 150, 200, 300 kg	400 x 400 mm	**24**
	**APL**	50, 100, 150, 200, 300, 500 kg	600 x 600 mm	**26**
	**PEC**	75, 150, 300, 500 kg	600 x 600 mm	**28**
	**AR**	500, 1000 kg	800 x 800 mm	**30**
	**ATL**	1000, 2000 kg	1200 x 1200 mm	**32**

AF

SINGLE-POINT LOAD CELL for platforms 150x150 mm

Manufactured according to OIML R60 standards

Capacity from 5 kg to 50 kg

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.05%
- PROTECTION CLASS IP65

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
5		•	•	•	150 x 150	0.13	AF5
15		•	•	•	150 x 150	0.13	AF15
50		•	•	•	150 x 150	0.13	AF50

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

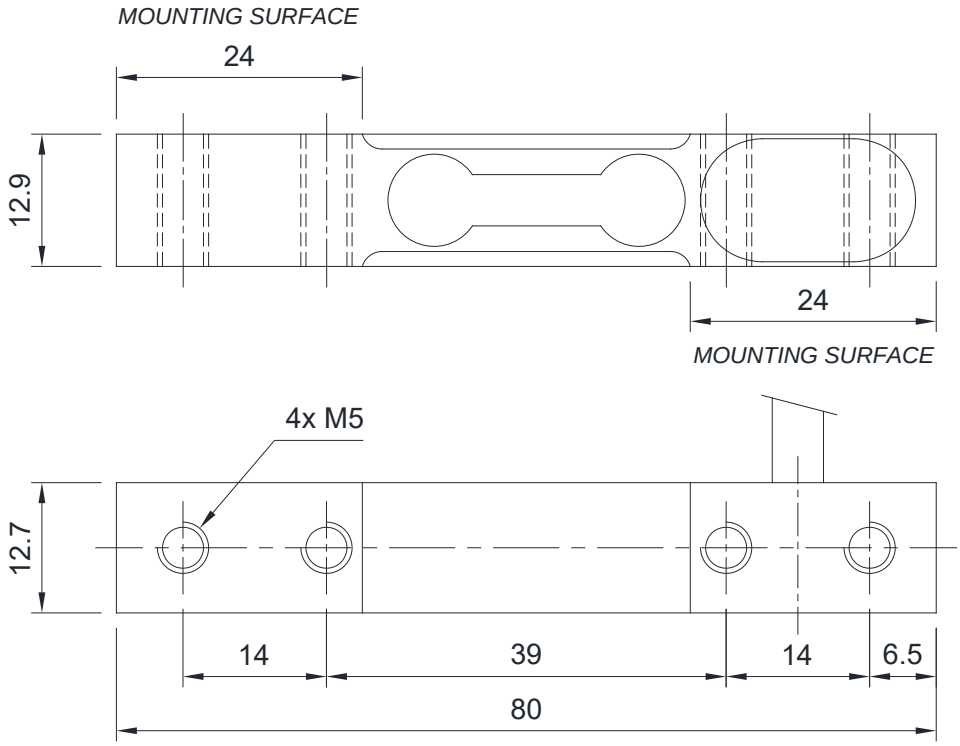
	ATEX II 1GD *(zone 0-1-2-20-21-22)*
	IECEx *(zone 0-1-2-20-21-22)*
	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

AF

SINGLE-POINT LOAD CELL for platforms 150x150 mm

LAUMAS®

DIMENSIONS (mm)



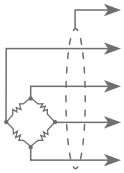
TECHNICAL FEATURES

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	0-4%
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 lenght	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm²



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

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

ISO 9001
ISO 14001

AS

SINGLE-POINT LOAD CELL for platforms 200x200 mm

Manufactured according to OIML R60 standards

Capacity from 0.25 kg to 1 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.03%
- PROTECTION CLASS IP65

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
0.25		•	•	•	200 x 200	0.1	AS025
0.5		•	•	•	200 x 200	0.1	AS05
1		•	•	•	200 x 200	0.1	AS1

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

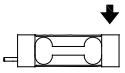
	ATEX II 1GD *(zone 0-1-2-20-21-22)*
	IECEx *(zone 0-1-2-20-21-22)*
	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

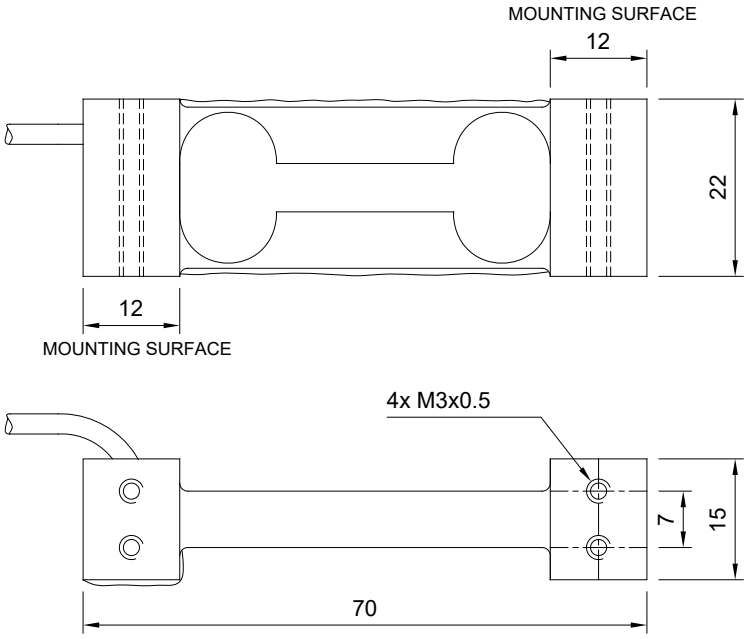
AS

SINGLE-POINT LOAD CELL for platforms 200x200 mm

LAUMAS®

DIMENSIONS (mm)





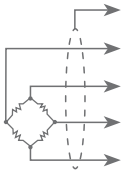
TECHNICAL FEATURES

Material	Aluminum alloy
Nominal load (E max)	0.25 - 0.50 - 1.00 kg
Combined error	≤ ±0.03%
Protection class	IP65

Rated output	1 mV/V ±15%	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)	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 lenght	3 m
Cable diameter	2.5 mm
Cores	6 x 0.20 mm²



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

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

ISO 9001
ISO 14001

ALL

SINGLE-POINT LOAD CELL for platforms 250x350 mm

IP65

Capacity from 3 kg to 50 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.02% (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS C3	C4	C5					PLATFORM (mm)	NET WEIGHT (kg)	CODE
	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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

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

OIML R60 C4/C5

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

NTEP - compliant to the metrological standards of United States and Canada

COMPLEMENTARY ACCESSORIES

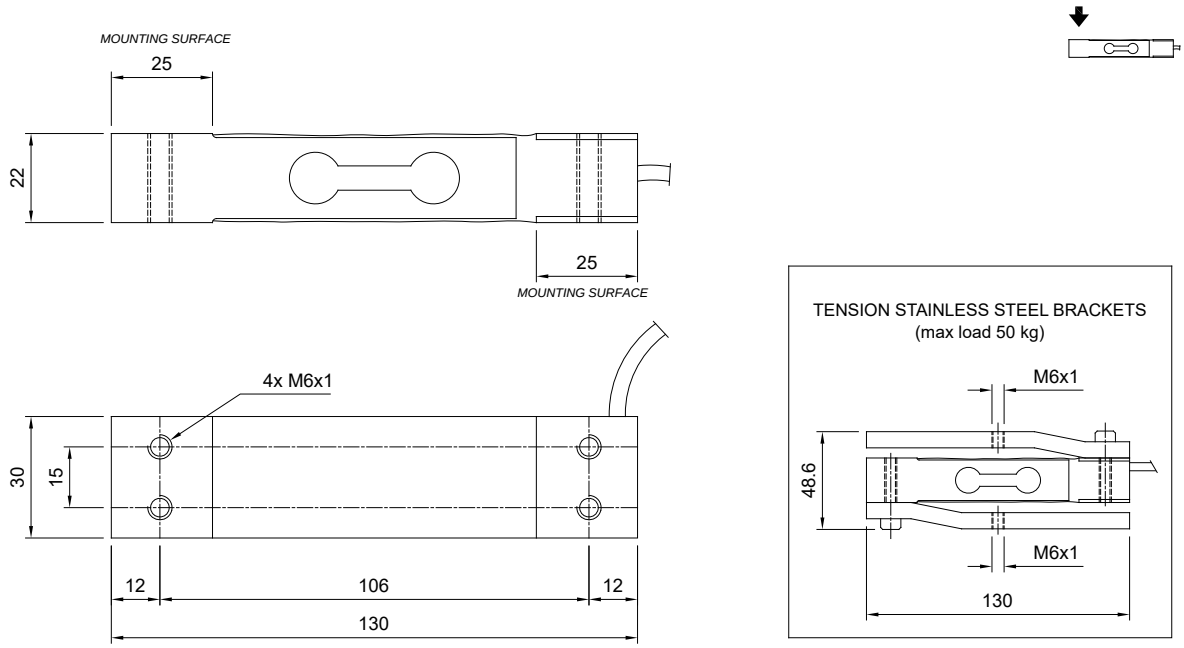
	DESCRIPTION	CODE
	Pair of stainless steel tension brackets. Maximum static load: 50 kg.	STAFFEALL

ALL

SINGLE-POINT LOAD CELL for platforms 250x350 mm

LAUMAS®

DIMENSIONS (mm)



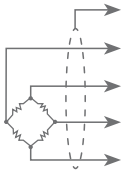
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	3.8 mm
Cores	4 x 0.20 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

PRC

SINGLE-POINT LOAD CELL for platforms 350x350 mm

Manufactured according to OIML R60 standards

Capacity from 6 kg to 50 kg

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP67

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

ON REQUEST

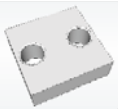
CERTIFICATIONS

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

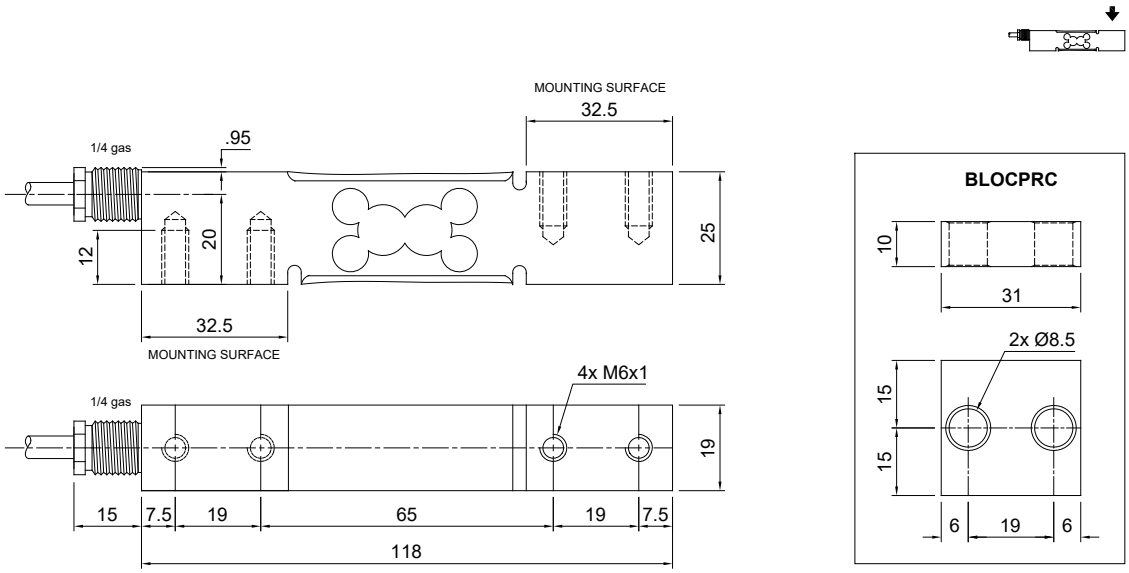
	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOCPRC

PRC

SINGLE-POINT LOAD CELL for platforms 350x350 mm

LAUMAS®

DIMENSIONS (mm)



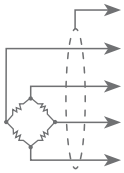
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	5 mm
Cores	6 x 0.20 mm²



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

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

ISO 9001
ISO 14001

AU

SINGLE-POINT LOAD CELL for platforms 250x400 / 400x600 mm

Manufactured according to OIML R60 standards

Capacity from 3 kg to 50 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP65

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
	3	•	•	•	250 x 400	0.5	AU3
	6	•	•	•	250 x 400	0.5	AU6
	15	•	•	•	250 x 400	0.5	AU15
	30	•	•	•	400 x 600	0.5	AU30
	50	•	•	•	400 x 600	0.5	AU50
		ON REQUEST					

CERTIFICATIONS

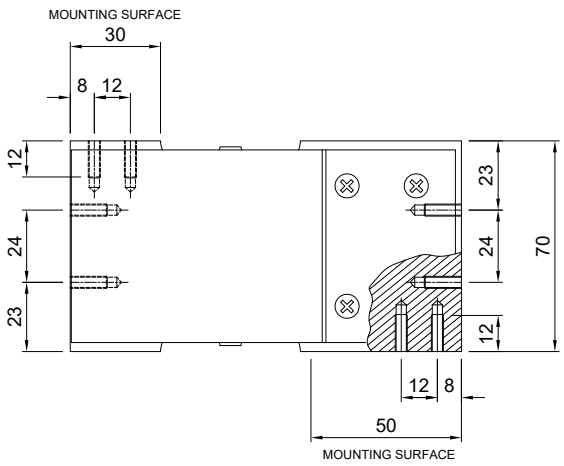
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

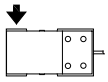
AU

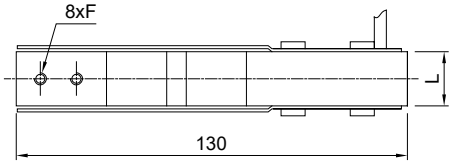
SINGLE-POINT LOAD CELL for platforms 250x400 / 400x600 mm

LAUMAS®

DIMENSIONS (mm)







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

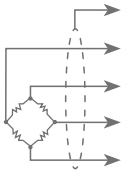
TECHNICAL FEATURES

Material	Aluminum alloy
Nominal load (E max)	3 - 6 - 15 - 30 - 50 kg
Combined error	≤±0.02%
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	0.025%	Ultimate overload (% of full scale)	200%
Max supply voltage without damage	15 V	Deflection at nominal load	0.5 mm

ELECTRICAL CONNECTIONS

Cable lenght	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm²



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

AZL

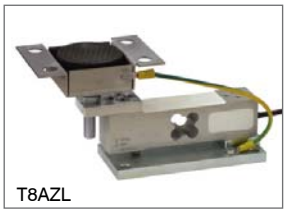
SINGLE-POINT LOAD CELL for platforms 400x400 mm

IP65

Capacity from 10 kg to 100 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.02% (0.017% C4)
- PROTECTION CLASS IP65

MOUNTING KIT



T8AZL

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

CAPACITY kg	ACCURACY CLASS C3	C4					PLATFORM (mm)	NET WEIGHT (kg)	CODE
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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

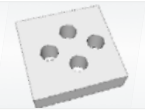
IECEx *(zone 0-1-2-20-21-22)*

OIML R60 C4

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

NTEP - compliant to the metrological standards of United States and Canada

COMPLEMENTARY ACCESSORIES

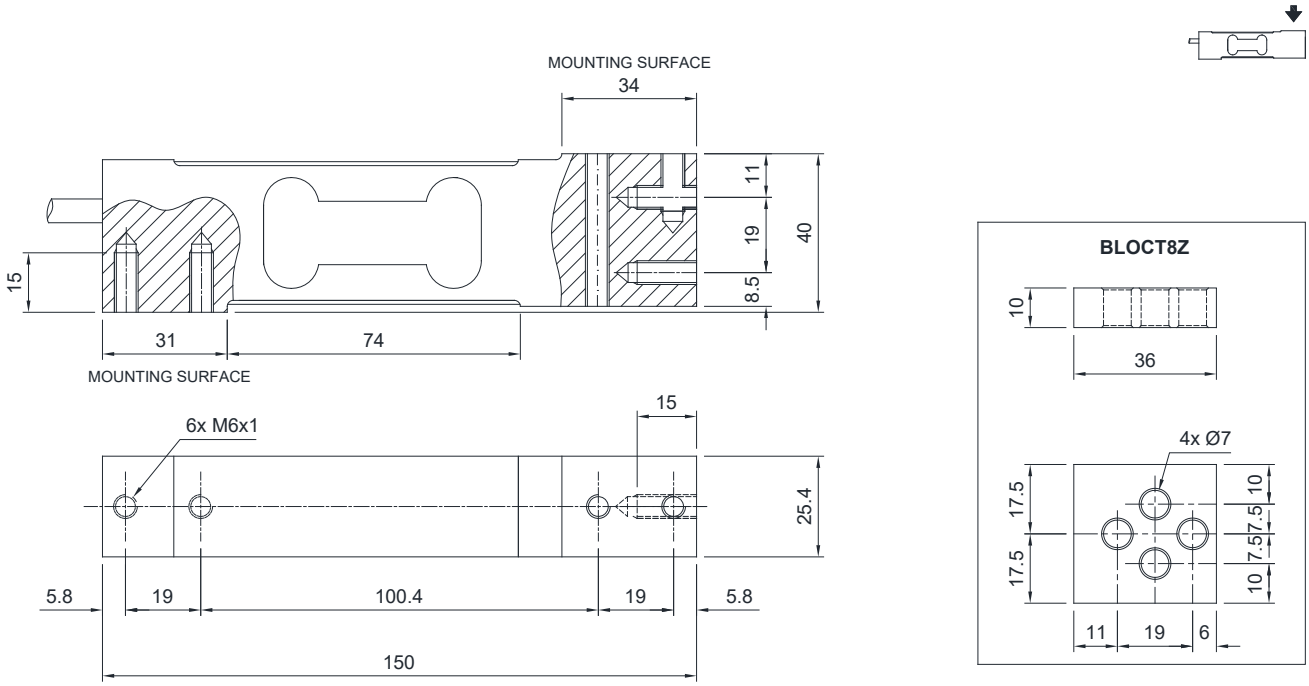
	DESCRIPTION	CODE
	Galvanized steel drawn block.	BLOCPRC

AZL

SINGLE-POINT LOAD CELL for platforms 400x400 mm

LAUMAS®

DIMENSIONS (mm)

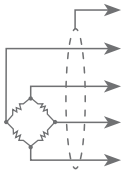


TECHNICAL FEATURES

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 lenght	6 m
Cable diameter	5 mm
Cores	6 x 0.20 mm²



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

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

ISO 9001
ISO 14001

AZLI

SINGLE-POINT LOAD CELL for platforms 400x400 / 800x800 mm

LAUMAS®

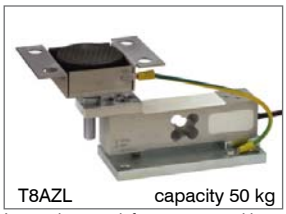
IP68 IP69K

Capacity from 10 kg to 50 kg

Capacity from 100 kg to 500 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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 C3	C4					PLATFORM (mm)	NET WEIGHT (kg)	CODE
	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 Custom Union standards

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)*

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

OIML R60 C4

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

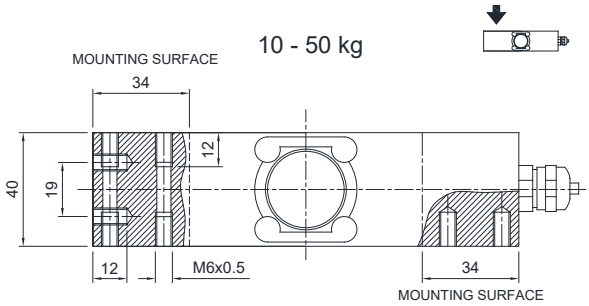
NTEP - compliant to the metrological standards of United States and Canada

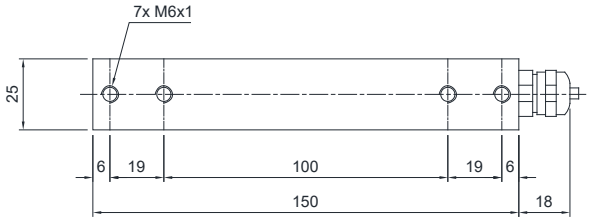
AZLI

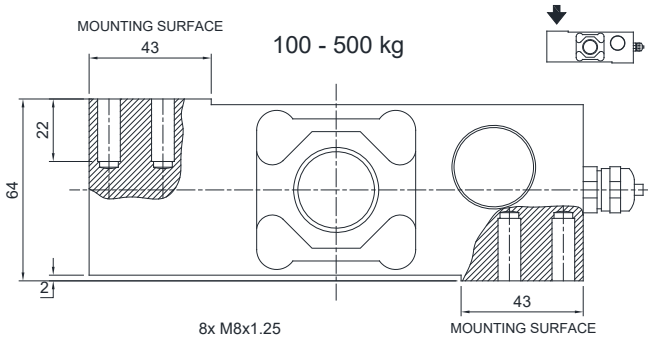
SINGLE-POINT LOAD CELL for platforms 400x400 / 800x800 mm

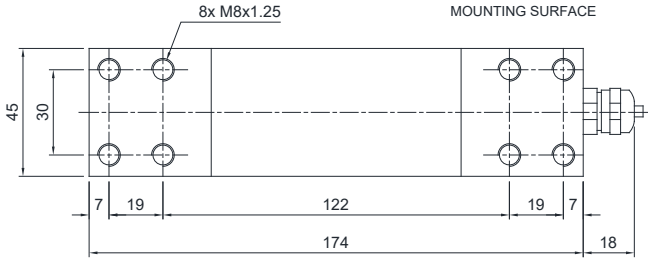
LAUMAS®

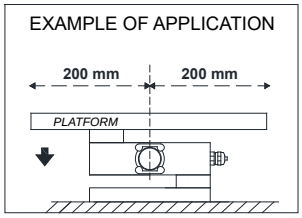
DIMENSIONS (mm)

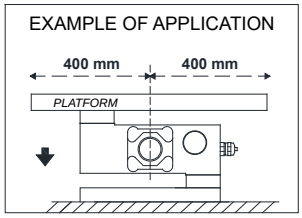












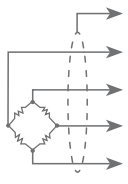
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm²



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

■ where provided

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

ISO 9001
ISO 14001

AZS

SINGLE-POINT LOAD CELL for platforms 400x400 mm

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

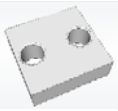
- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.03%
- PROTECTION CLASS IP67

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
10		•	•	•	400 x 400	1	AZS10
30		•	•	•	400 x 400	1	AZS30
50		•	•	•	400 x 400	1	AZS50
100		•	•	•	400 x 400	1	AZS100
200		•	•	•	400 x 400	1	AZS200
		ON REQUEST					

CERTIFICATIONS

EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

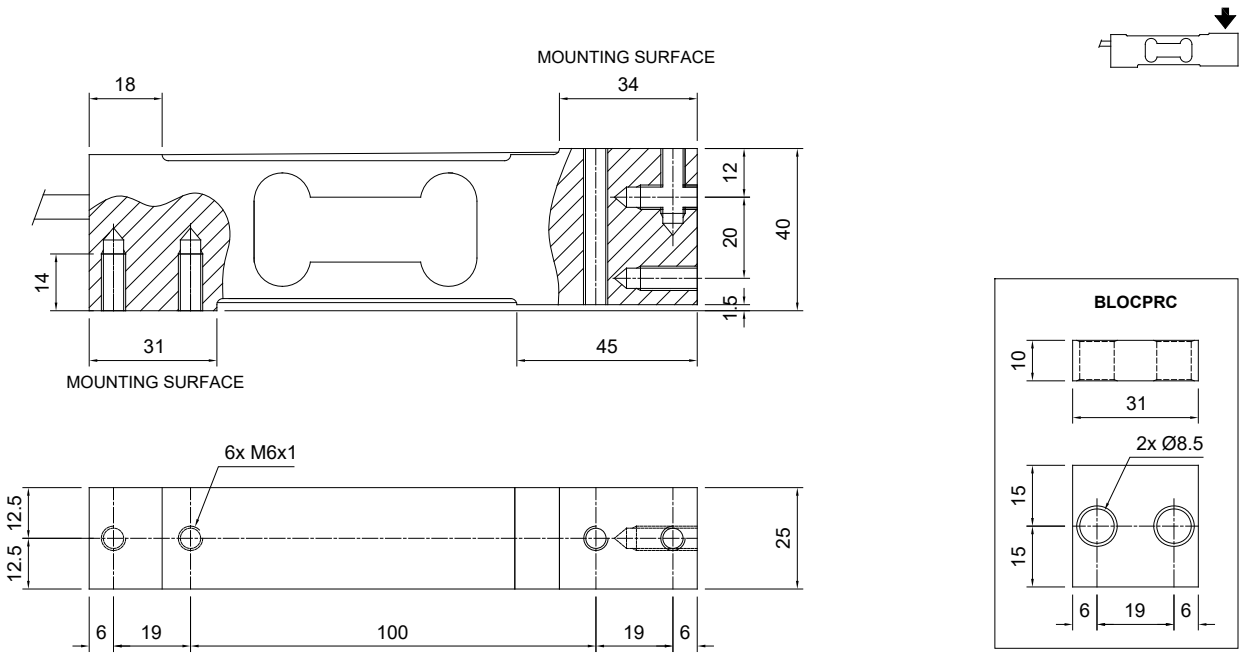
	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOCPRC

AZS

SINGLE-POINT LOAD CELL for platforms 400x400 mm

LAUMAS®

DIMENSIONS (mm)



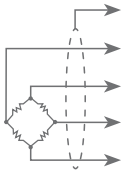
TECHNICAL FEATURES

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 lenght	6 m
Cable diameter	5 mm
Cores	6 x 0.20 mm²



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

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

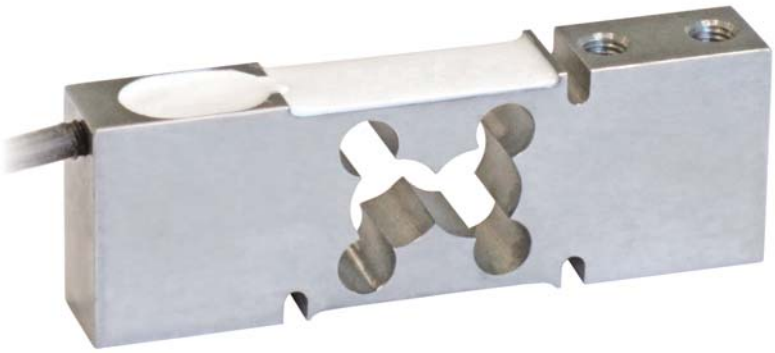
ISO 9001
ISO 14001

PTC

SINGLE-POINT LOAD CELL for platforms 400x400 mm

Manufactured according to OIML R60 standards

Capacity from 30 kg to 150 kg



- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP67

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
30		•	•	•	400 x 400	0.75	PTC30
50		•	•	•	400 x 400	0.75	PTC50
75		•	•	•	400 x 400	0.75	PTC75
100		•	•	•	400 x 400	0.75	PTC100
150		•	•	•	400 x 400	0.75	PTC150
		ON REQUEST					

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

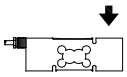
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

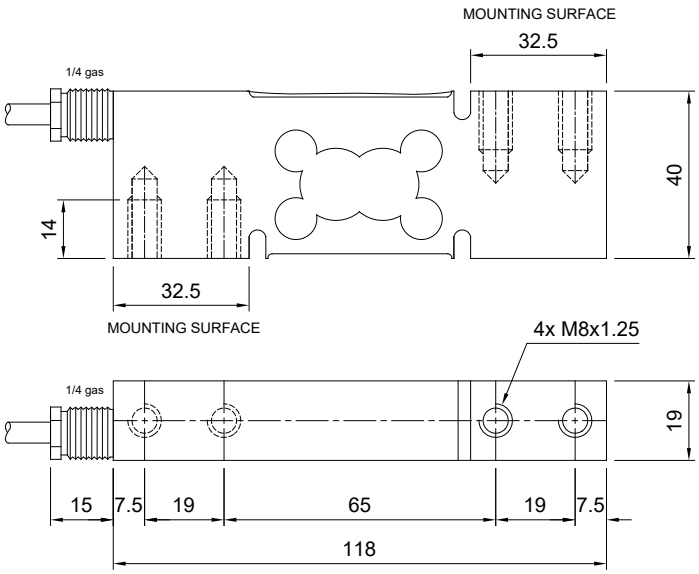
PTC

SINGLE-POINT LOAD CELL for platforms 400x400 mm

LAUMAS®

DIMENSIONS (mm)





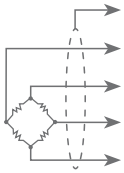
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	4 mm
Cores	6 x 0.20 mm²



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

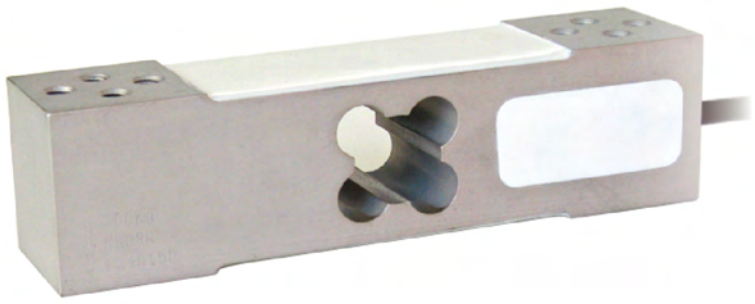
ISO 9001
ISO 14001

AM

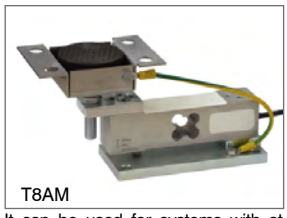
SINGLE-POINT LOAD CELL for platforms 400x400 mm

IP65

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 ≤ ±0.02% (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP65

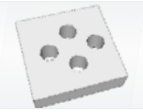
CAPACITY	kg	ACCURACY CLASS C3	C4	C5					PLATFORM (mm)	NET WEIGHT (kg)	CODE
60		•	•	•	•	•	•	•	400 x 400	0.6	AM60
100		•	•	•	•	•	•	•	400 x 400	0.6	AM100
150		•	•	•	•	•	•	•	400 x 400	0.6	AM150
200		•	•	•	•	•	•	•	400 x 400	0.6	AM200
300		•	•	•	•	•	•	•	400 x 400	0.6	AM300

ON REQUEST

CERTIFICATIONS

OIML	OIML R60 C3
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
OIML	OIML R60 C4/C5
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres
NTEP	NTEP - compliant to the metrological standards of United States and Canada

COMPLEMENTARY ACCESSORIES

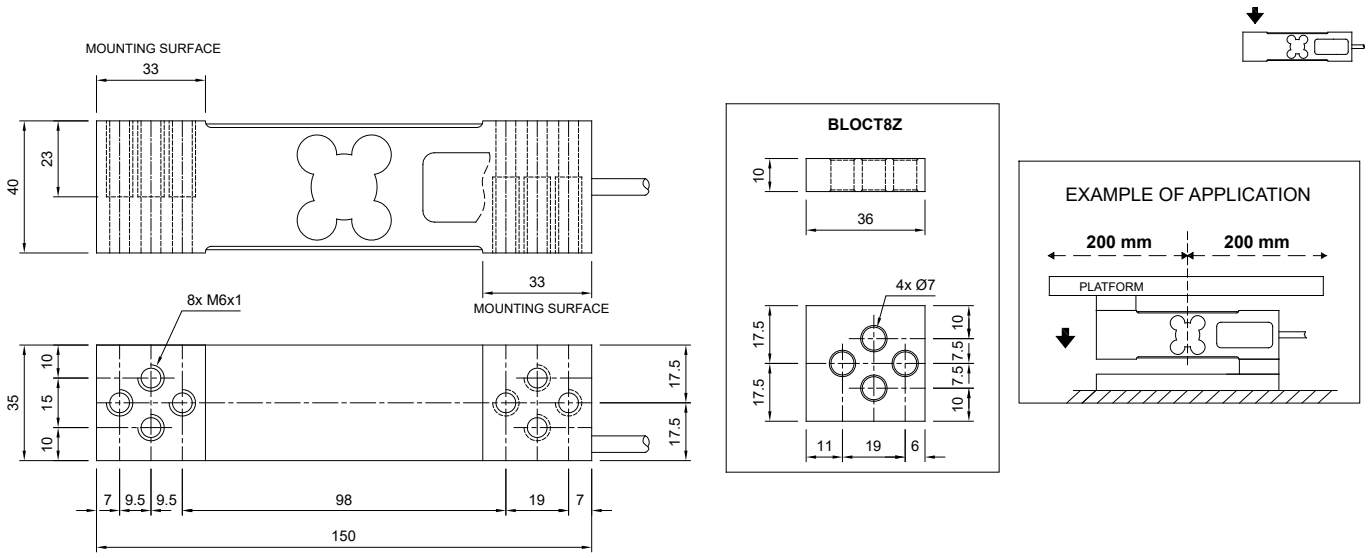
	DESCRIPTION	CODE
	Stainless steel and rubber waterproof kit.	IP68AMPRE
	Galvanized steel drawn block.	BLOCT8Z

AM

SINGLE-POINT LOAD CELL for platforms 400x400 mm

LAUMAS®

DIMENSIONS (mm)



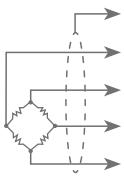
TECHNICAL FEATURES

Material	Aluminum alloy		
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	C5 • 5000
Nominal load (E max)	60 - 100 - 150 - 200 - 300 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	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 lenght	3 m
Cable diameter	5 mm
Cores	4 x 0.20 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

APL

SINGLE-POINT LOAD CELL for platforms 600x600 mm

IP65

Capacity from 50 kg to 500 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.02% (0.017% C4)
- PROTECTION CLASS IP65

CAPACITY	kg	ACCURACY CLASS C3	C4				PLATFORM (mm)	NET WEIGHT (kg)	CODE
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 Custom Union standards

CERTIFICATIONS ON REQUEST

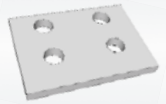
ATEX II 1GD *(zone 0-1-2-20-21-22)*

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

OIML R60 C4

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

COMPLEMENTARY ACCESSORIES

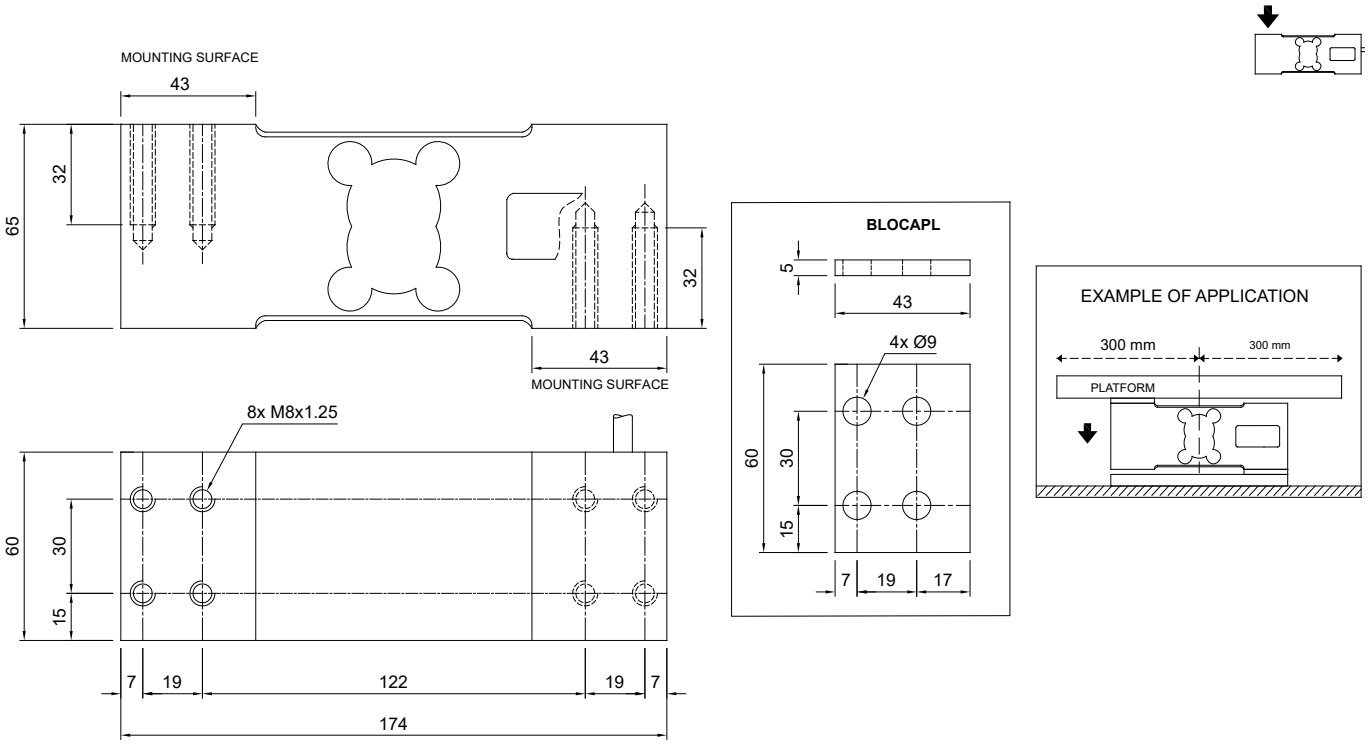
	DESCRIPTION	CODE
	Stainless steel and rubber waterproof kit (Ø 107x245 mm cable gland included)	IP68APLPRE
	Stainless steel drawn block.	BLOCAPL

APL

SINGLE-POINT LOAD CELL for platforms 600x600 mm

LAUMAS®

DIMENSIONS (mm)



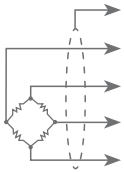
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	6 mm
Cores	6 x 0.20 mm²



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

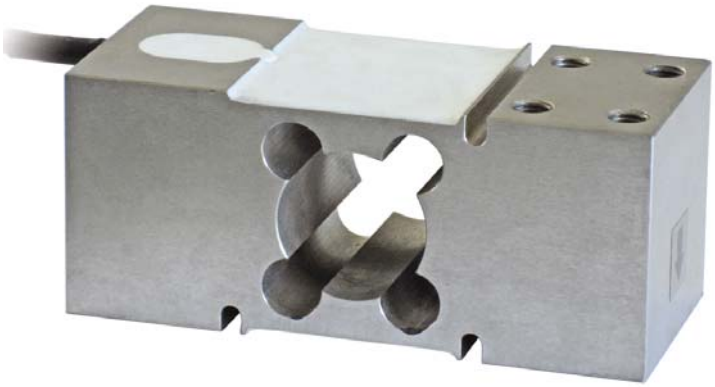
The Company reserves the right to make changes to the technical data, drawings and images without notice.

PEC

SINGLE-POINT LOAD CELL for platforms 600x600 mm

Manufactured according to OIML R60 standards

Capacity from 75 kg to 500 kg



- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP67

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

ON REQUEST

CERTIFICATIONS

EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

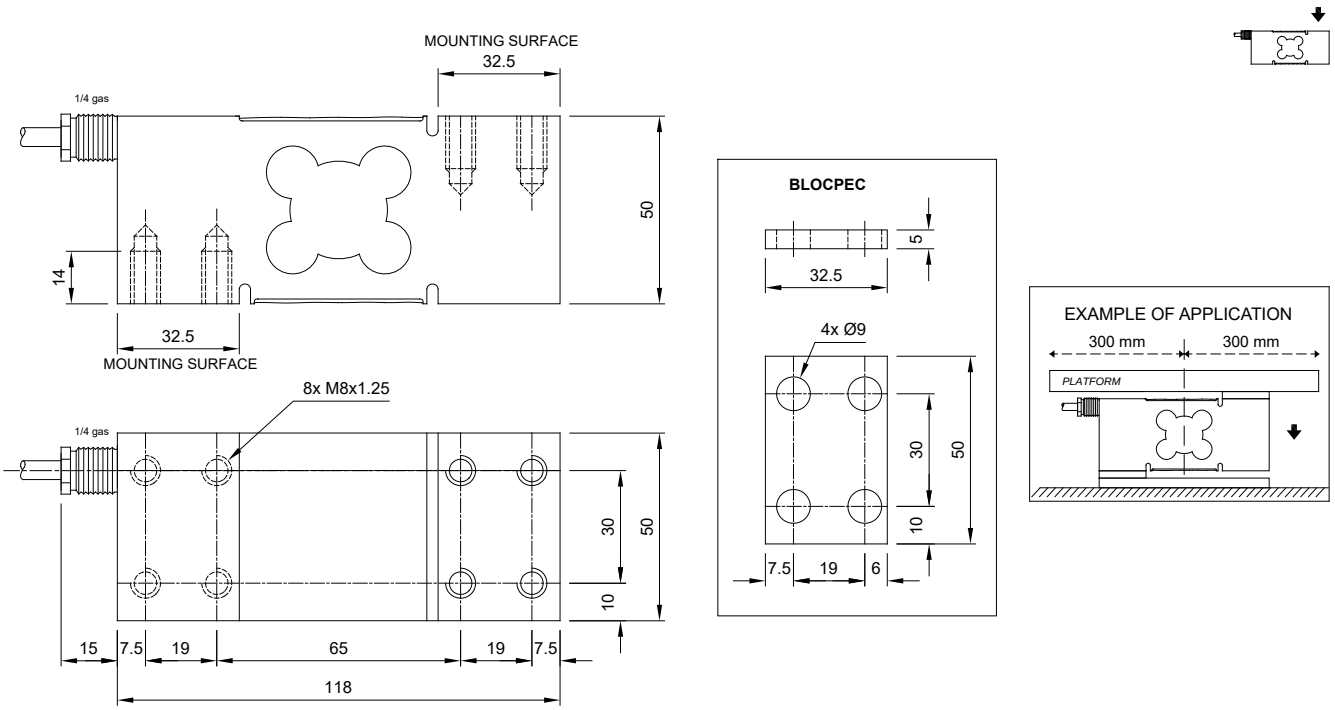
	DESCRIPTION	CODE
	Stainless steel drawn block.	BLOCPEC

PEC

SINGLE-POINT LOAD CELL for platforms 600x600 mm

LAUMAS®

DIMENSIONS (mm)



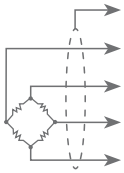
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	5 mm
Cores	6 x 0.20 mm²



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

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

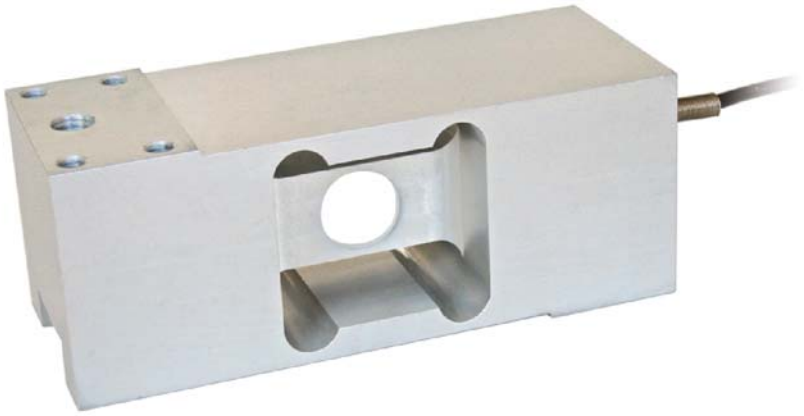
ISO 9001
ISO 14001

AR

SINGLE-POINT LOAD CELL for platforms 800x800 mm

Manufactured according to OIML R60 standards

Capacity from 500 kg to 1000 kg



- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP65

CAPACITY	kg				PLATFORM (mm)	NET WEIGHT (kg)	CODE
500		•	•	•	800 x 800	2.2	AR500
1000		•	•	•	800 x 800	2.3	AR1000

ON REQUEST

CERTIFICATIONS

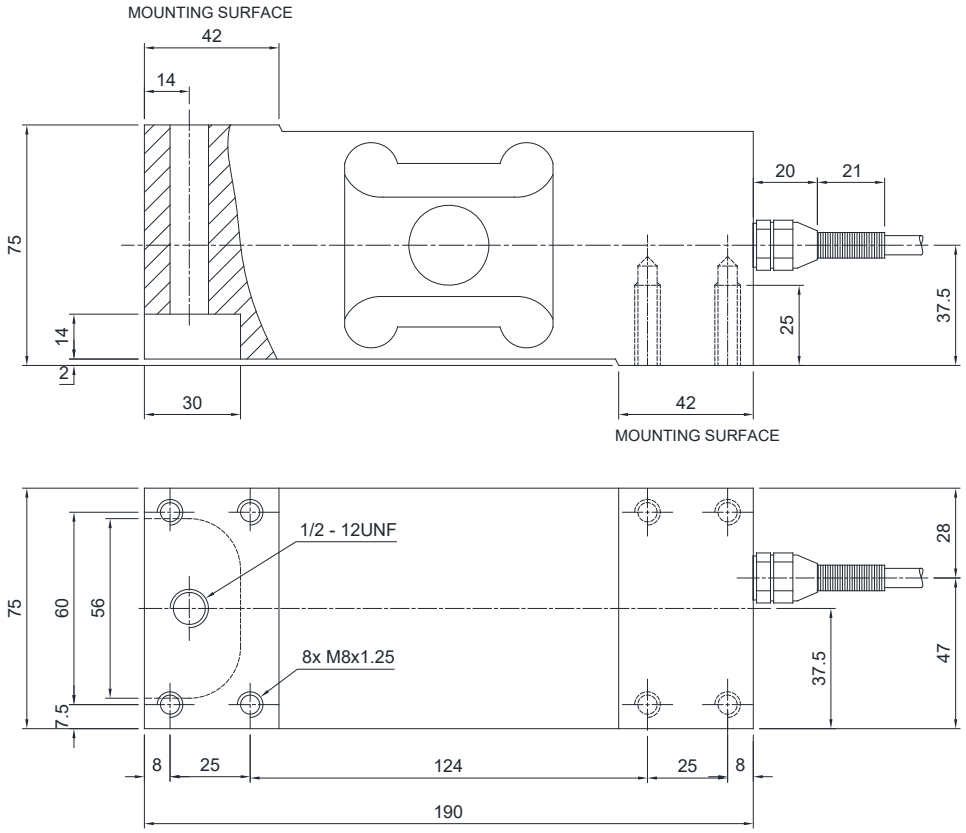
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

AR

SINGLE-POINT LOAD CELL for platforms 800x800 mm

LAUMAS®

DIMENSIONS (mm)



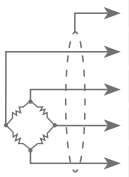
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm²



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

■ where provided

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

ISO 9001
ISO 14001

ATL

SINGLE-POINT LOAD CELL for platforms 1200x1200 mm

IP65

Capacity from 1000 kg to 2000 kg

- ALUMINUM ALLOY
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

	OIML R60 C3
	Complies with the Eurasian Custom Union standards
	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 Custom Union standards for use in potentially explosive atmospheres

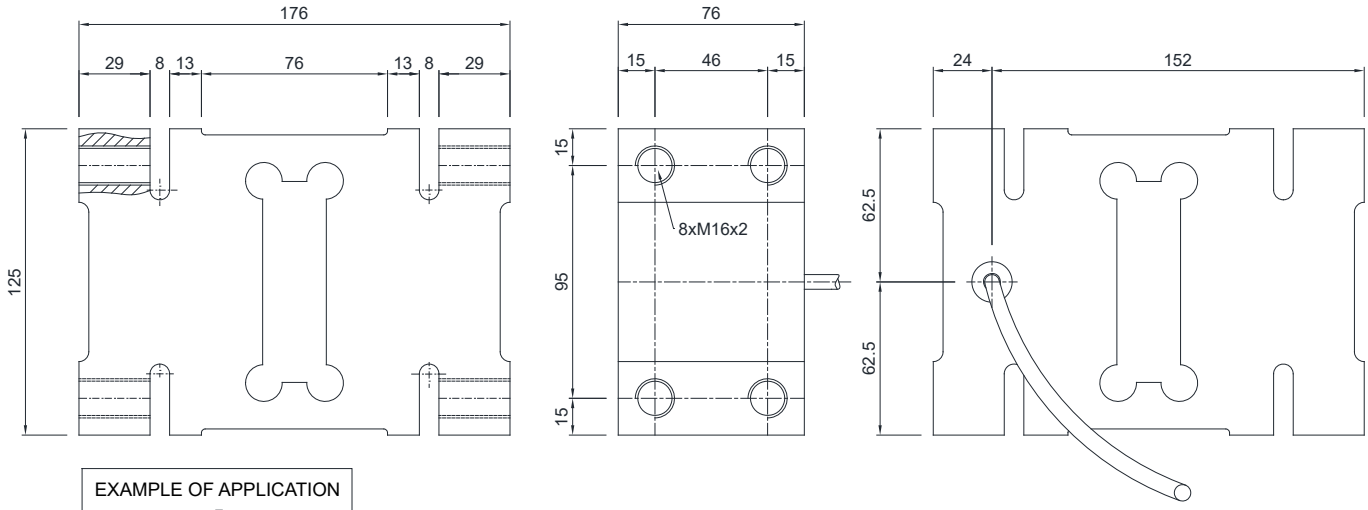
ISO 9001
ISO 14001

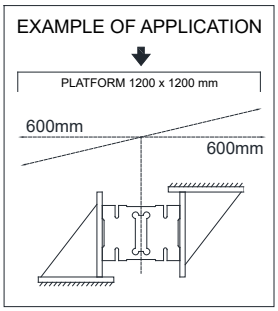
ATL

SINGLE-POINT LOAD CELL for platforms 1200x1200 mm

LAUMAS®

DIMENSIONS (mm)





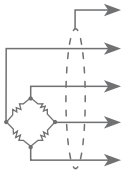
TECHNICAL FEATURES

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 mm²



ISO 9001
ISO 14001

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.2	**BENDING BEAM**	
	**FCK**	5, 10 kg	**36**
	**FCOL**	20, 50, 100, 200, 350, 500 kg	**38**
	**FCAX***	30, 50, 75, 150, 300, 500 kg	**40**
	**FCAL**	50, 75, 150, 300 kg	**42**
	**FTP***	75, 150, 300 kg	**44**
	**FTK***	75, 150, 300 kg	**46**

*) *SHEAR / BENDING BEAM load cells*

FCK
BENDING BEAM LOAD CELLS

Manufactured according to OIML R60 standards

Capacity from 5 kg to 10 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP68

MOUNTING KITS

TFCPV

TFCGP

TFCFSB

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

ON REQUEST

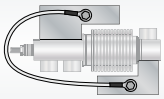
CERTIFICATIONS

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

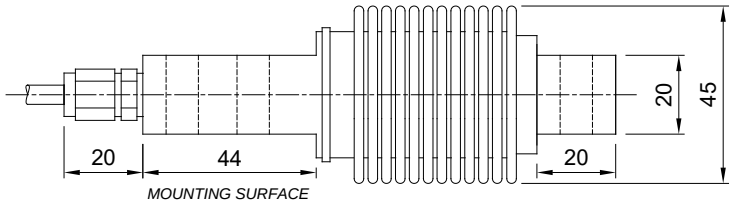
COMPLEMENTARY ACCESSORIES

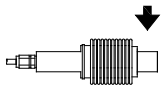
	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 100 kg	STAFFEFCMONT

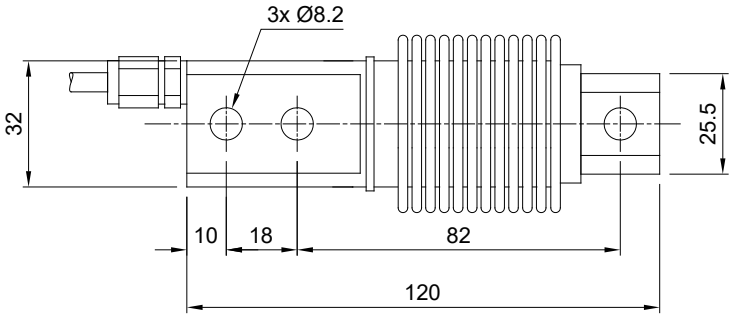
FCK
BENDING BEAM LOAD CELLS

LAUMAS®

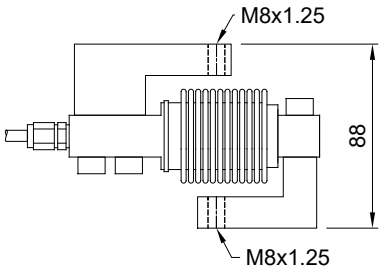
DIMENSIONS (mm)







TENSION STAINLESS STEEL BRACKETS
(max load 100 kg)



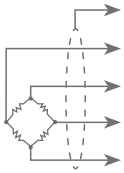
TECHNICAL FEATURES

Material	17-4 PH stainless steel
Nominal load (E max)	5 - 10 kg
Combined error	≤ ±0.02%
Protection class	IP68

Rated output	2 mV/V ±1%	Input resistance	400 Ω ±20
Temperature effect on zero	0.002% °C	Output resistance	352 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	-30 °C / +65 °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 lenght	3 m
Cable diameter	4 mm
Cores	6 x 0.22 mm²



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

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

ISO 9001
ISO 14001

FCOL

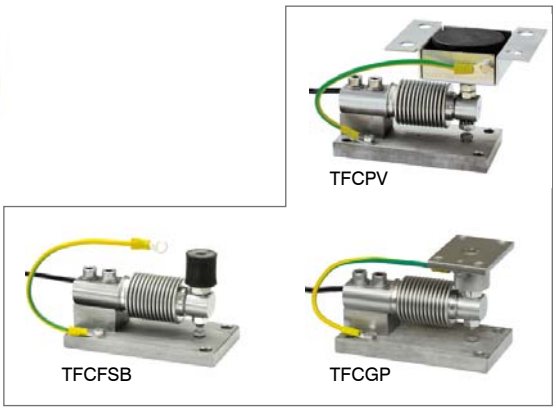
BENDING BEAM LOAD CELLS

IP68

Capacity from 20 kg to 500 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02% (0.017% C4)
- PROTECTION CLASS IP68

MOUNTING KITS



CAPACITY kg	ACCURACY CLASS C3	C4					NET WEIGHT OF LOAD CELL (kg)	CODE
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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

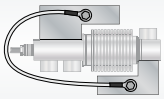
IECEx *(zone 0-1-2-20-21-22)*

OIML R60 C4

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

NTEP - compliant to the metrological standards of United States and Canada

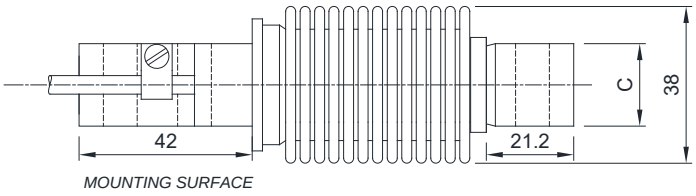
COMPLEMENTARY ACCESSORIES

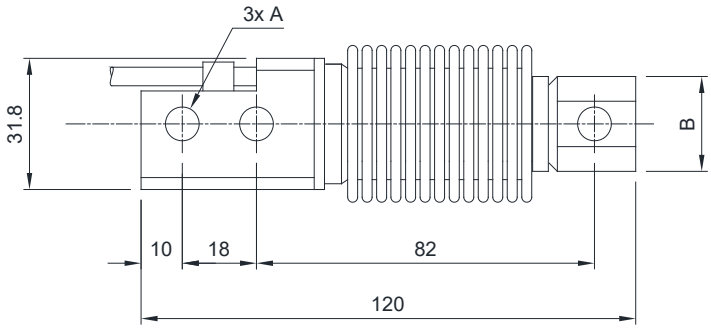
	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 100 kg	STAFFEFCMONT

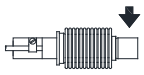
FCOL
BENDING BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)

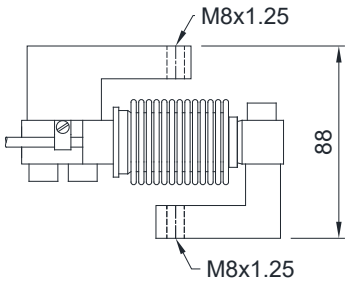






	A	B	C
20-200kg	Ø8.2	23	20
350-500kg	Ø10.3	24	19

TENSION STAINLESS STEEL BRACKETS (max load 100 kg)



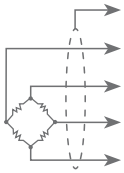
TECHNICAL FEATURES

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 lenght	3 m
Cable diameter	5 mm
Cores	4 x 0.22 mm²



SHIELD	
+ SIGNAL	BIANCO
+ EXCITATION	GREEN
- SIGNAL	RED
- EXCITATION	BLACK

FCAX

BENDING BEAM AND SHEAR LOAD CELLS

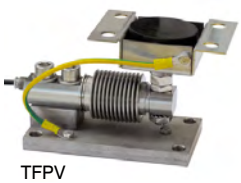
Manufactured according to OIML R60 standards

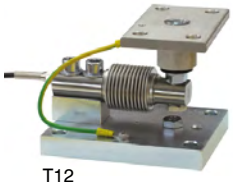
BENDING BEAM: capacity from 30 kg to 500 kg

SHEAR BEAM: capacity from 750 kg to 1500 kg

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP68

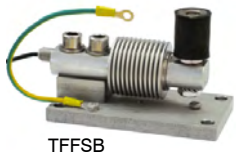
MOUNTING KITS


TFPV


T12


TFGP


TFAST


TFFSB

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

ON REQUEST

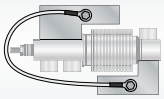
CERTIFICATIONS

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

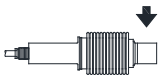
	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 300 kg	STAFFEFCAMONT

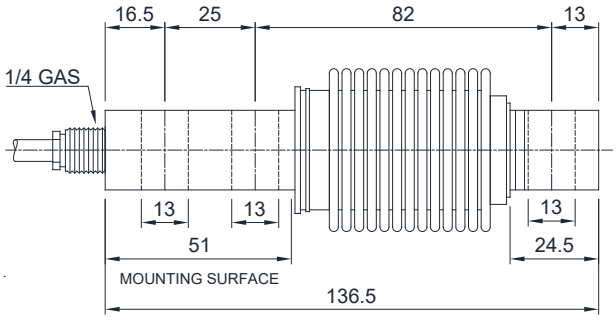
FCAX

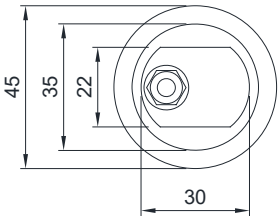
BENDING BEAM AND SHEAR LOAD CELLS

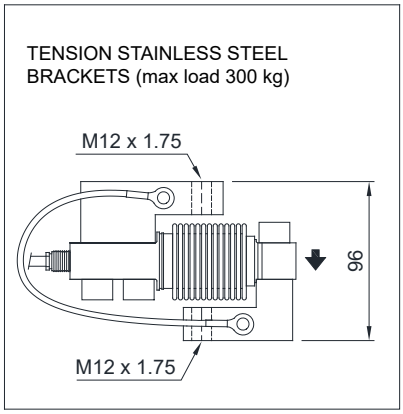
LAUMAS®

DIMENSIONS (mm)









TECHNICAL FEATURES

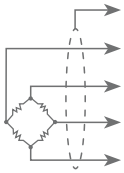
Material	AISI 420 stainless steel
Nominal load (E max)	30 - 50 - 75 - 150 - 300 - 500 - 750 - 1000 - 1500 kg
Combined error	≤ ±0.02%
Protection class	IP68

Rated output	2 mV/V ±0.4%	Input resistance	350 Ω ±5 *
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 / +50 °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 Ω ±20

ELECTRICAL CONNECTIONS

Cable lenght	5 m
Cable diameter	5 mm
Cores	6 x 0.22 mm²



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

FCAL
BENDING BEAM LOAD CELLS

LAUMAS®

IP68

Capacity from 50 kg to 300 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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
		ON REQUEST				

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

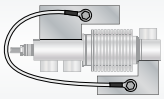
CERTIFICATIONS ON REQUEST

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

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

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

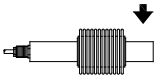
COMPLEMENTARY ACCESSORIES

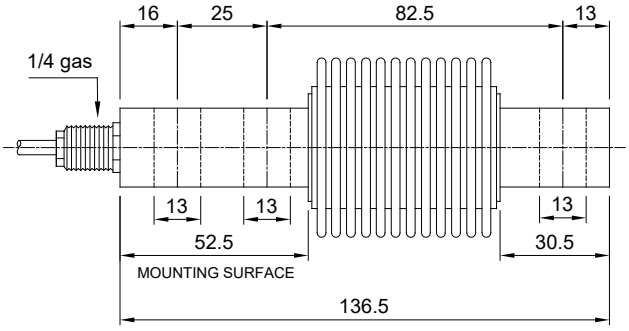
	DESCRIPTION	CODE
	Pair of tension stainless steel brackets. Maximum static load: 300 kg	STAFFEFCAMONT

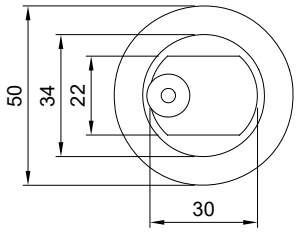
FCAL
BENDING BEAM LOAD CELLS

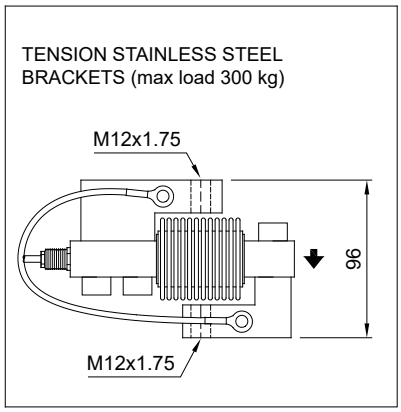
LAUMAS®

DIMENSIONS (mm)









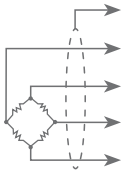
TECHNICAL FEATURES

Material	17-4 PH 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 lenght	3 m
Cable diameter	4 mm
Cores	4 x 0.22 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

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

ISO 9001
ISO 14001

FTP

SHEAR BEAM AND BENDING LOAD CELLS

LAUMAS®

BENDING BEAM: capacity from 75 kg to 300 kg

IP67

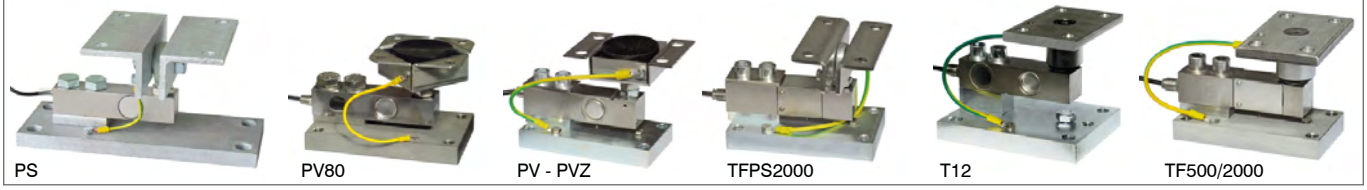
SHEAR BEAM: capacity from 500 kg to 10000 kg

IP68

IP69K

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP67 - IP68

MOUNTING KITS



PS | PV80 | PV - PVZ | TFPS2000 | T12 | TF500/2000

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

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

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)*

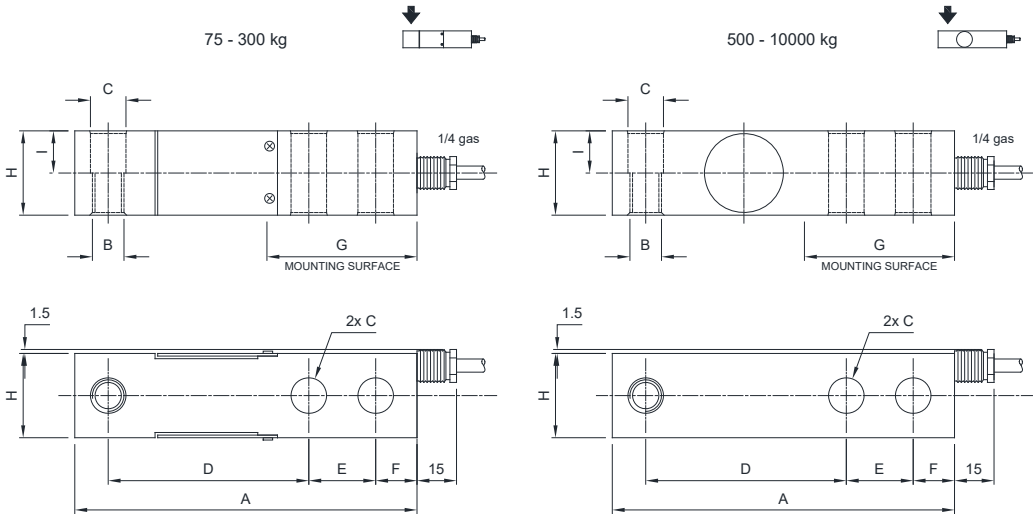
IECEx *(zone 0-1-2-20-21-22)*

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

FTP
SHEAR BEAM AND BENDING LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



	75 - 2000 kg	3000 - 5000 kg	10000 kg
A	130	171.5	222.5
B	M12x1.75	M20x2.5	M24x2
C	Ø 13.5	Ø 21	Ø 26.2
D	76.2	95.3	123.8
E	25.4	38.1	50.8
F	15.7	19.1	25.4
G	52	72.5	102
H	32	38	51
I	16	19	25.5

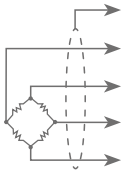
TECHNICAL FEATURES

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 lenght	5 m (75-5000 kg); 10 m (10000 kg)
Cable diameter	5 mm
Cores	6 x 0.25 mm²



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

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

FTK

BENDING BEAM AND SHEAR LOAD CELLS

LAUMAS®

BENDING BEAM: capacity from 75 kg to 300 kg

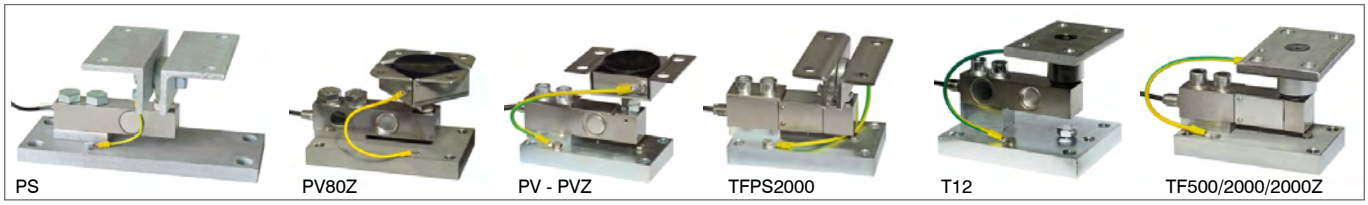
IP67

SHEAR BEAM: capacity from 500 kg to 5000 kg

IP68

- SPECIAL STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP67 - IP68

MOUNTING KITS



PS | PV80Z | PV - PVZ | TFPS2000 | T12 | TF500/2000/2000Z

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

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

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

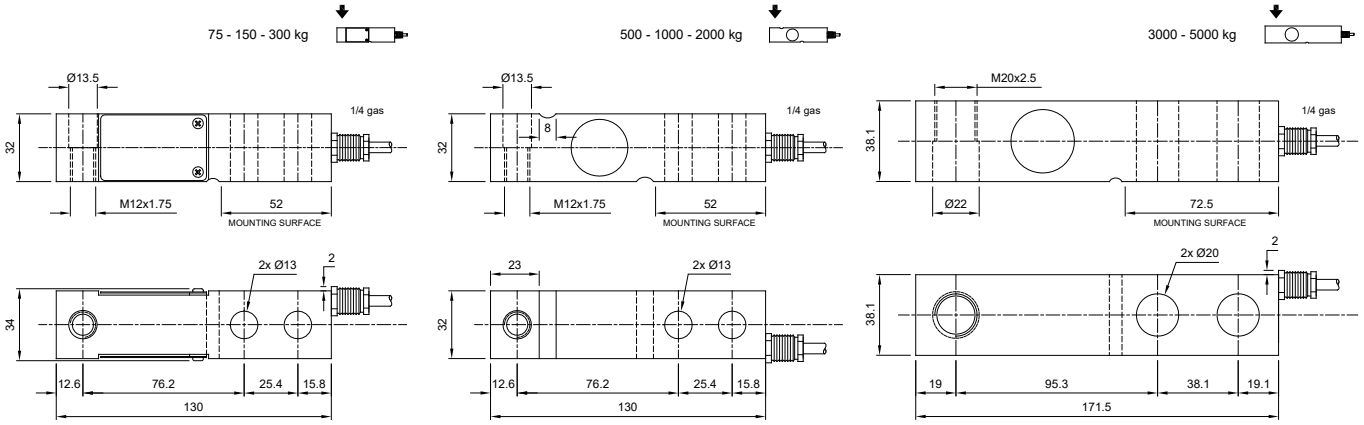
IECEx *(zone 0-1-2-20-21-22)*

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

FTK
BENDING BEAM AND SHEAR LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



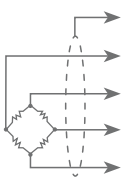
TECHNICAL FEATURES

Material	Special 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 lenght	6 m
Cable diameter	5 mm
Cores	6 x 0.24 mm²



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

COMPLEMENTARY ACCESSORIES

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

ISO 9001
ISO 14001

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.3	**SHEAR BEAM**	
	**FTL**	300, 500, 1000, 2000 kg	**50**
	**FTK***	500, 1000, 2000, 3000, 5000 kg	**46**
	**FT-P**	500, 1000, 2000 kg	**52**
	**FTKL**	500, 1000, 1500, 2000, 3000, 5000 kg	**54**
	**FTZ**	500, 1000, 2000, 5000 kg	**56**
	**FTZA**	500, 1000, 2000, 5000, 7500, 10000 kg	**58**
	**FCAX***	750, 1000, 1500 kg	**40**
	**FTP***	500, 750, 1000, 1200, 1500, 2000, 3000, 5000, 10000 kg	**44**
	**FTH**	5000, 10000 kg	**60**

*) *SHEAR / BENDING BEAM load cells*

FTL
SHEAR BEAM LOAD CELLS

IP68

Capacity from 300 kg to 2000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.017%
- PROTECTION CLASS IP68

MOUNTING KITS

PV - PVZ

TFPS2000

T12

TF500/2000/2000Z

CAPACITY kg	ACCURACY CLASS C3				NET WEIGHT (kg)	CODE
300	•	•	•	•	0.9	FTL300
500	•	•	•	•	0.9	FTL500
1000	•	•	•	•	0.9	FTL1000
2000	•	•	•	•	0.9	FTL2000

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

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

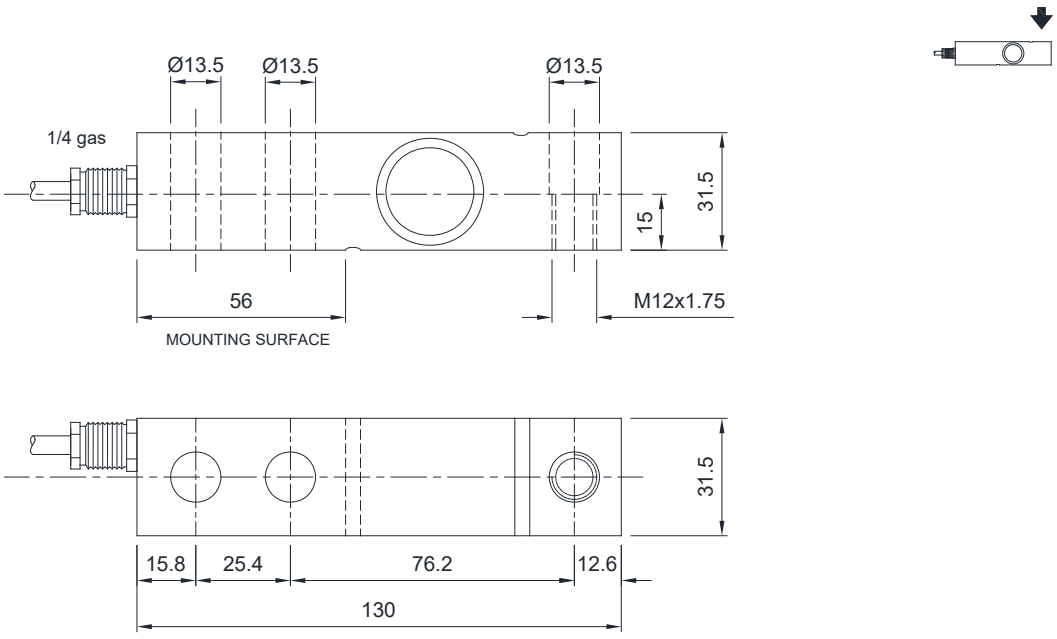
IECEx *(zone 0-1-2-20-21-22)*

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

FTL
SHEAR BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



TECHNICAL FEATURES

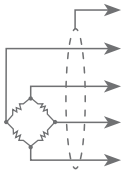
Material	17-4 PH stainless steel
OIML R60 Accuracy class • Verification intervals	C3 • 3000
Nominal load (E max)	300 - 500 - 1000 - 2000 kg
Minimum verification interval (V min)	E max / 10000
Combined error	≤ ±0.017%
Protection class	IP68

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 lenght	5.8 m
Cable diameter	6 mm
Cores	6 x 0.22 mm²



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

FT-P
SHEAR BEAM LOAD CELLS

IP68 IP69K

Capacity from 500 kg to 2000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

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)*

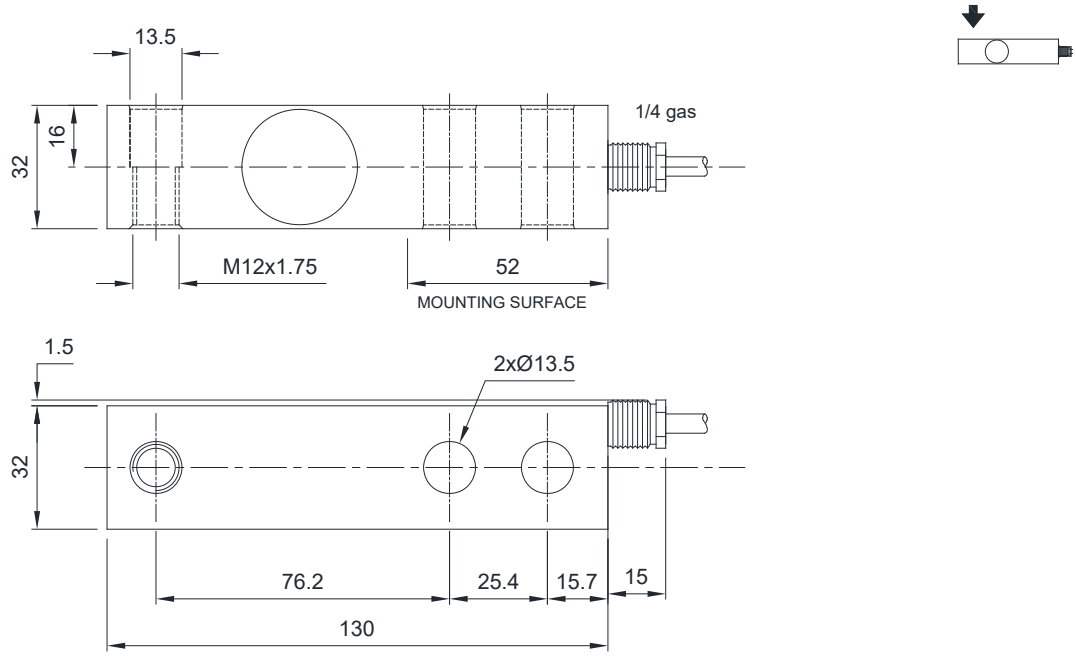
IECEx *(zone 0-1-2-20-21-22)*

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

FT-P
SHEAR BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



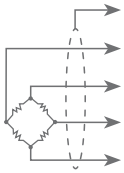
TECHNICAL FEATURES

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 lenght	5 m
Cable diameter	5 mm
Cores	6 x 0.25 mm²



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

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

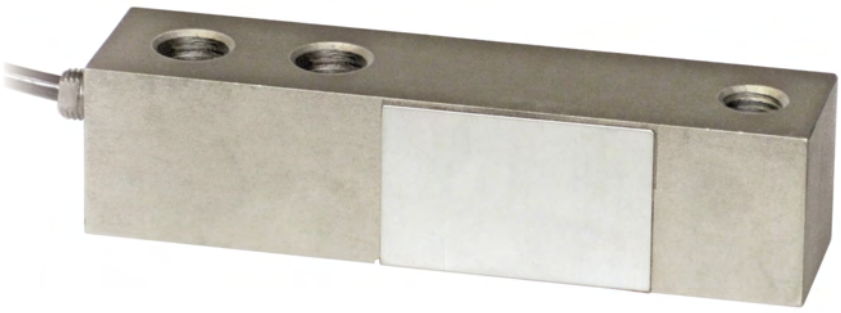
ISO 9001
ISO 14001

FTKL
SHEAR BEAM LOAD CELLS

LAUMAS®

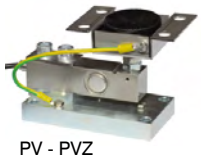
IP67

Capacity from 500 kg to 5000 kg



- SPECIAL STEEL
- COMBINED ERROR ≤ ±0.02% (0.017% C4; 0.014% C5)
- PROTECTION CLASS IP67

MOUNTING KITS


PV - PVZ


TFPS2000


T12


TF500/2000

CAPACITY kg	ACCURACY CLASS C3	C4	C5					NET WEIGHT (kg)	CODE
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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

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

OIML R60 C4/C5

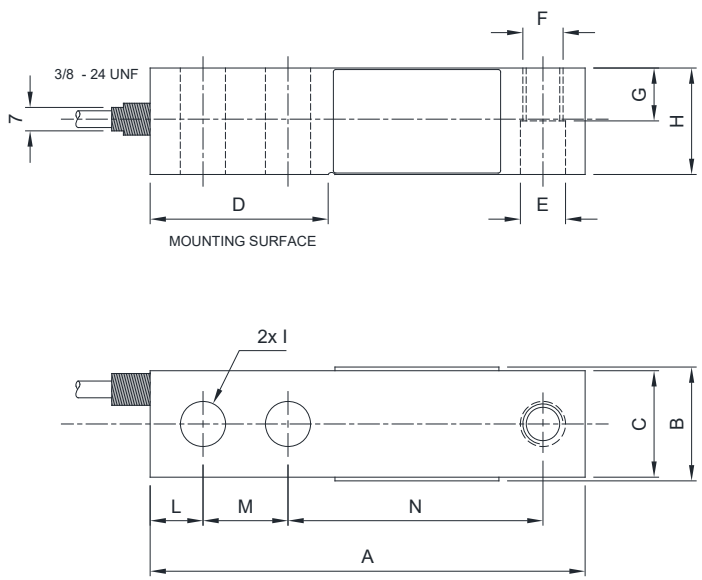
Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

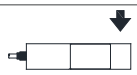
NTEP - compliant to the metrological standards of United States and Canada

FTKL
SHEAR BEAM LOAD CELLS

LAUMAS®

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

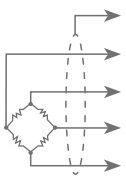
TECHNICAL FEATURES

Material	Special steel			
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000	C5 • 5000	
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 lenght	4 m (500-2000 kg); 6 m (3000-5000 kg)
Cable diameter	5 mm
Cores	4/6 x 0.20 mm²



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

■ where provided

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.

ISO 9001
ISO 14001

FTZ
SHEAR BEAM LOAD CELLS

LAUMAS®

IP67

Capacity from 500 kg to 5000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

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

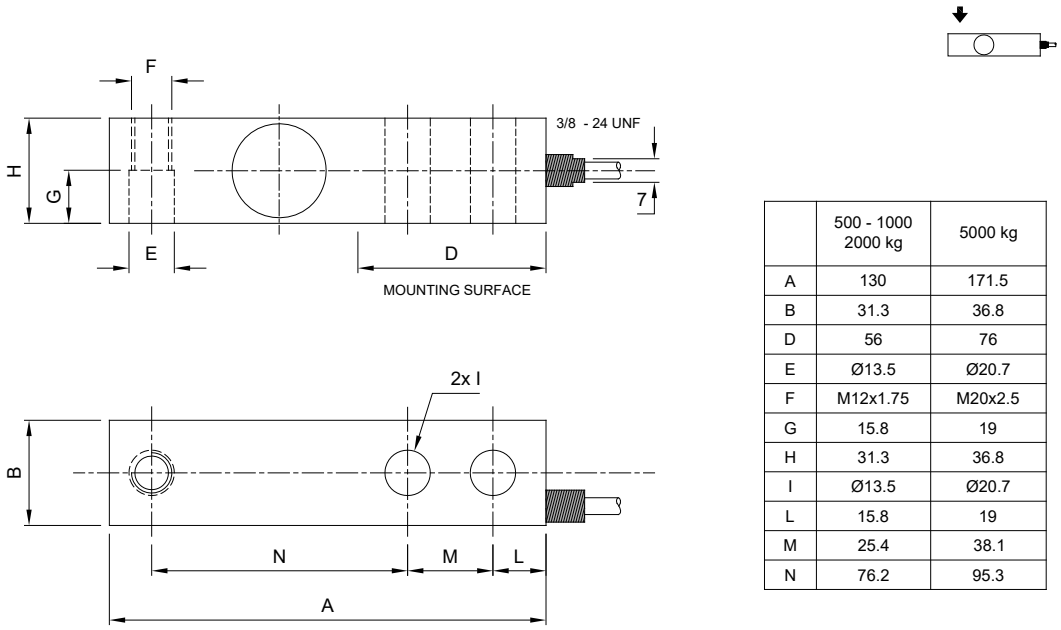
IECEx *(zone 0-1-2-20-21-22)*

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

FTZ
SHEAR BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



	500 - 1000 2000 kg	5000 kg
A	130	171.5
B	31.3	36.8
D	56	76
E	Ø13.5	Ø20.7
F	M12x1.75	M20x2.5
G	15.8	19
H	31.3	36.8
I	Ø13.5	Ø20.7
L	15.8	19
M	25.4	38.1
N	76.2	95.3

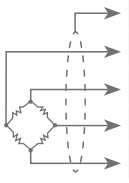
TECHNICAL FEATURES

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 lenght	5 m
Cable diameter	5 mm
Cores	4/6 x 0.20 mm²



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

■ where provided

ISO 9001
ISO 14001

FTZA

SHEAR BEAM LOAD CELLS

IP68

Capacity from 500 kg to 10000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02% (0.0170% C4)
- PROTECTION CLASS IP68

CAPACITY kg	ACCURACY CLASS C3	C4				NET WEIGHT (kg)	CODE
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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

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

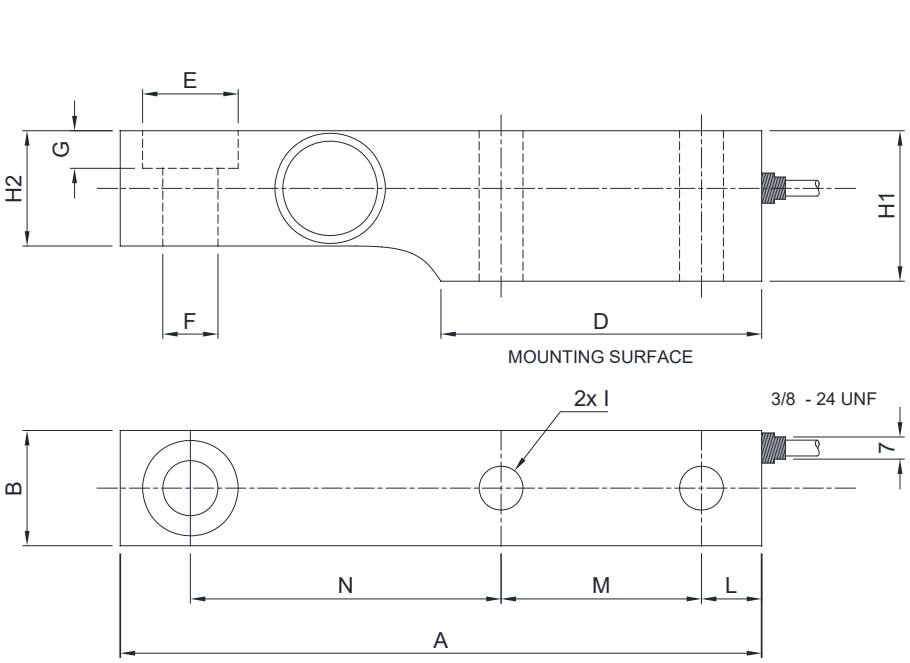
OIML R60 C4

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

FTZA
SHEAR BEAM LOAD CELLS

LAUMAS®

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

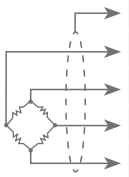
Material	17-4 PH stainless steel	
OIML R60 Accuracy class • Verification intervals	C3 • 3000	C4 • 4000
Nominal load (E max)	500 - 1000 - 2000 5000 - 7500 - 10000 kg	500 - 1000 - 2000 kg
Minimum verification interval (V min)	E max / 10000	E max / 15000
Combined error	≤ ±0.02%	≤ ±0.017%
Protection class	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 lenght	5 m (500-7500 kg); 10 m (10000 kg)
Cable diameter	5 mm
Cores	4/6 x 0.20 mm²



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

■ where provided

FTH

SHEAR BEAM LOAD CELLS FOR ON-BOARD VEHICLE WEIGHING

Manufactured according to OIML R60 standards

Capacity from 5000 kg to 10000 kg

- SPECIAL STEEL
- COMBINED ERROR ≤ ±0.1%
- PROTECTION CLASS IP68

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

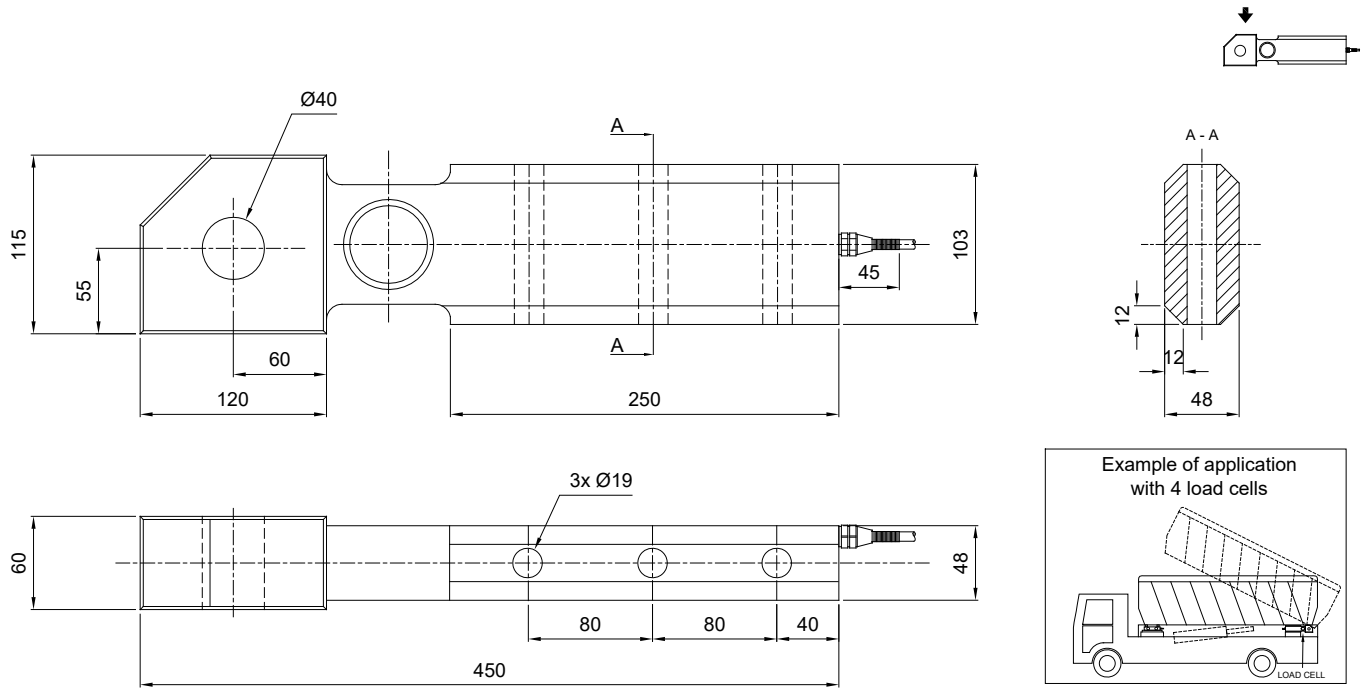
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

FTH

SHEAR BEAM LOAD CELLS FOR ON-BOARD VEHICLE WEIGHING

LAUMAS®

DIMENSIONS (mm)



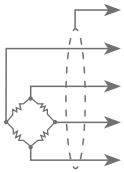
TECHNICAL FEATURES

Material	Special steel
Nominal load (E max)	5000 - 10000 kg
Combined error	≤ ±0.1%
Protection class	IP68

Rated output	1 mV/V ±0.5%	Input resistance	400 Ω ±20
Temperature effect on zero	0.005% °C	Output resistance	352 Ω ±3
Temperature effect on span	0.005% °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)	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 lenght	10 m
Cable diameter	6 mm
Cores	6 x 0.24 mm²



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

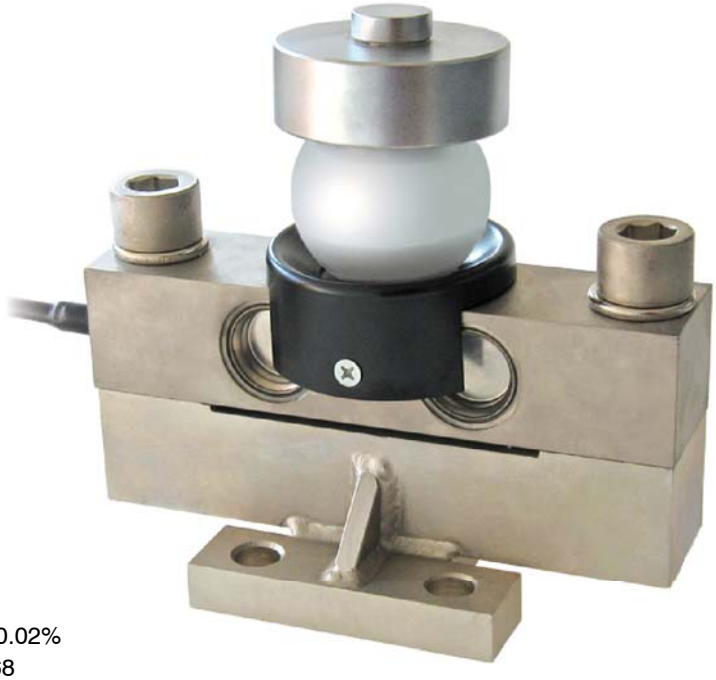
	CAPACITY	PAGE
A1.4	**DOUBLE SHEAR BEAM**	
 **DTL**	2500 kg	**64**
 **DTX**	20 klb ÷ 60 klb 9 ton ÷ 27 ton	**68**

DTL
DOUBLE SHEAR BEAM LOAD CELLS

LAUMAS®

IP68

Capacity 25000 kg



MOUNTING KIT

VCOKDTL

- SPECIAL STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP68

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

CERTIFICATIONS

OIML	OIML R60 C3
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

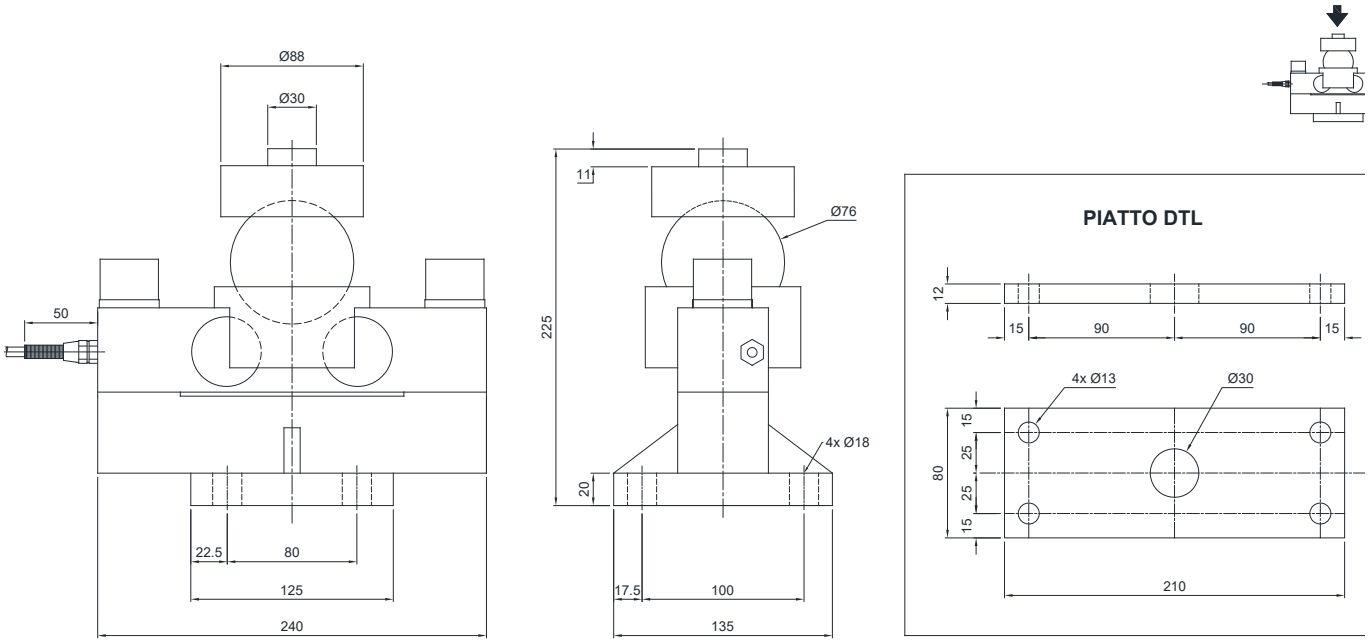
	DESCRIPTION	CODE
	Galvanized steel plate.	PIATTODTL

Rev. 0.0

DTL
DOUBLE SHEAR BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



Weight = 16 kg

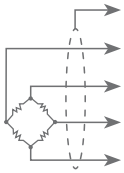
TECHNICAL FEATURES

Material	Special 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 lenght	20 m
Cable diameter	6 mm
Cores	4 x 0.22 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

DTL
DOUBLE SHEAR BEAM LOAD CELLS

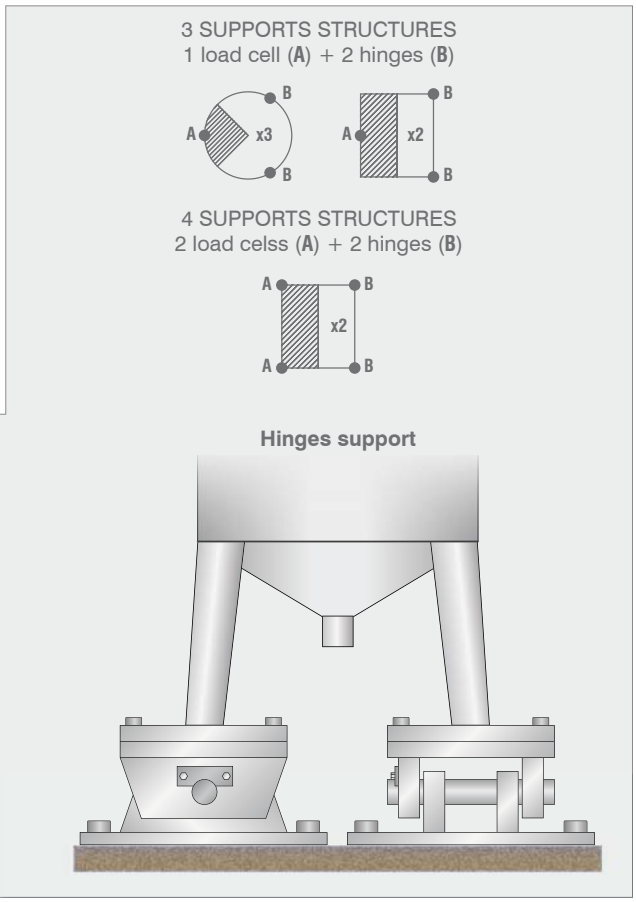
LAUMAS®

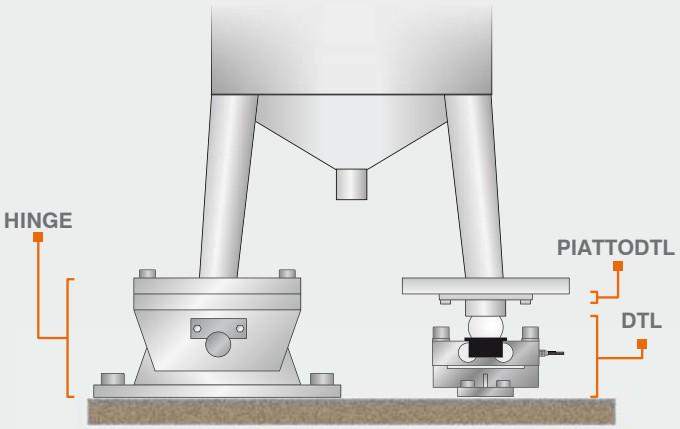
APPLICATION

- 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 uniformlyare required). The electronic weight display will show the effective weight multiplying the signal by two or three, depending on the application.

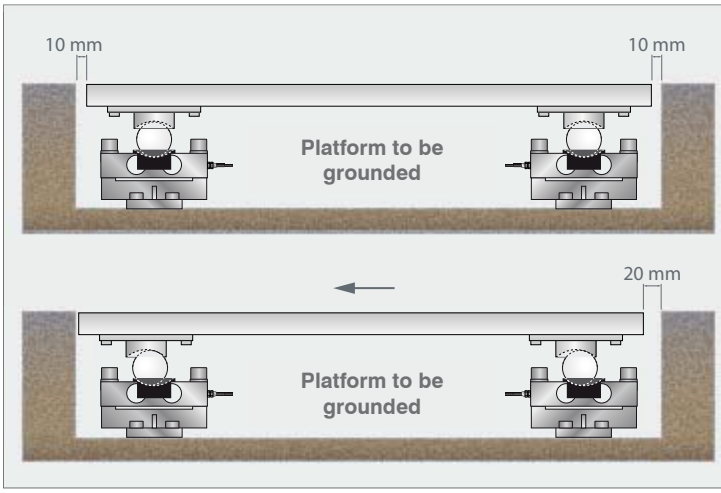


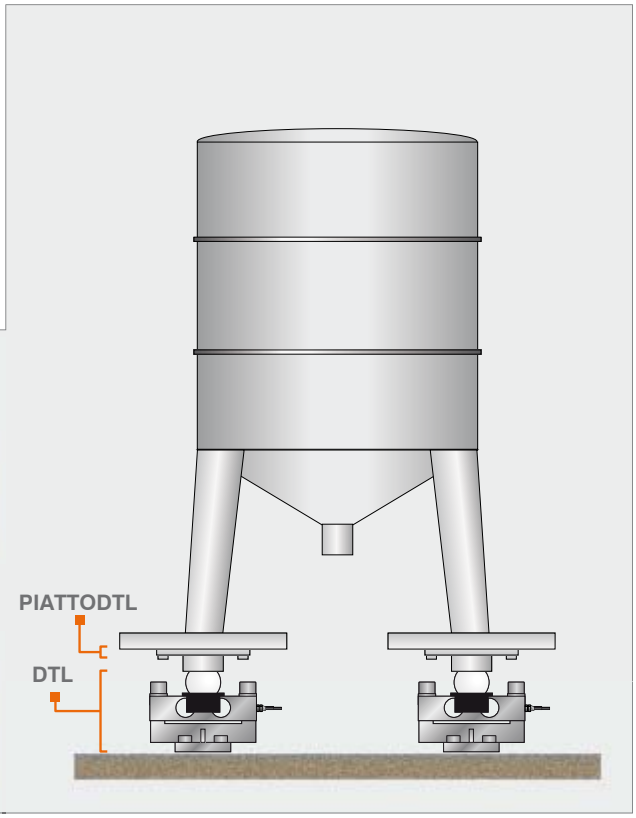


- WEIGHING STRUCTURES NOT SUBJECT TO KNOCKS OR WIND EFFECT

  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 on increase of the structure.



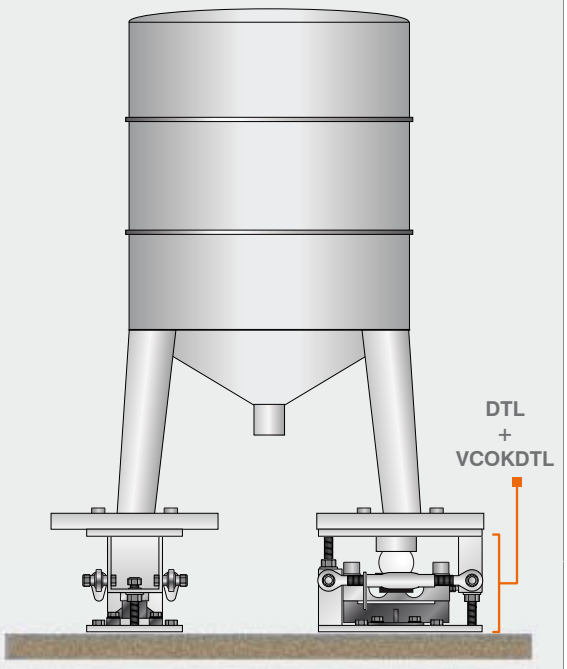


DTL
DOUBLE SHEAR BEAM LOAD CELLS

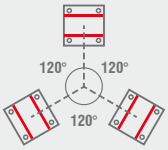
LAUMAS®

- WEIGHING STRUCTURES SUBJECT TO KNOCKS OR WIND EFFECT

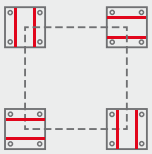
  The VCOKDTL mounting kit is equipped with two stay rods against lateral forces with an ultimate tensile strength of 10000 kg each, and two threaded rods (22 mm diameter) with nuts to use as a jack for the insertion and extraction of the cells and with two self-locking nuts for anti-tilt function.To ensure 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

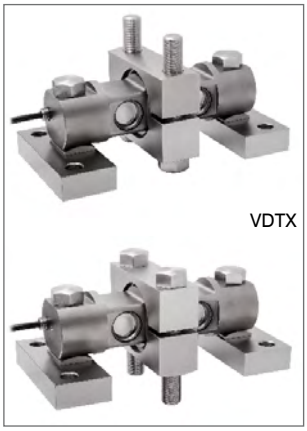


DTX
DOUBLE SHEAR BEAM LOAD CELLS

IP68

Capacity from 20 klb to 60 klb

MOUNTING KIT



VDTX

- NICKEL PLATED ALLOY STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP68

CAPACITY kg	ACCURACY CLASS C3				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 Custom Union standards

CERTIFICATIONS ON REQUEST

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

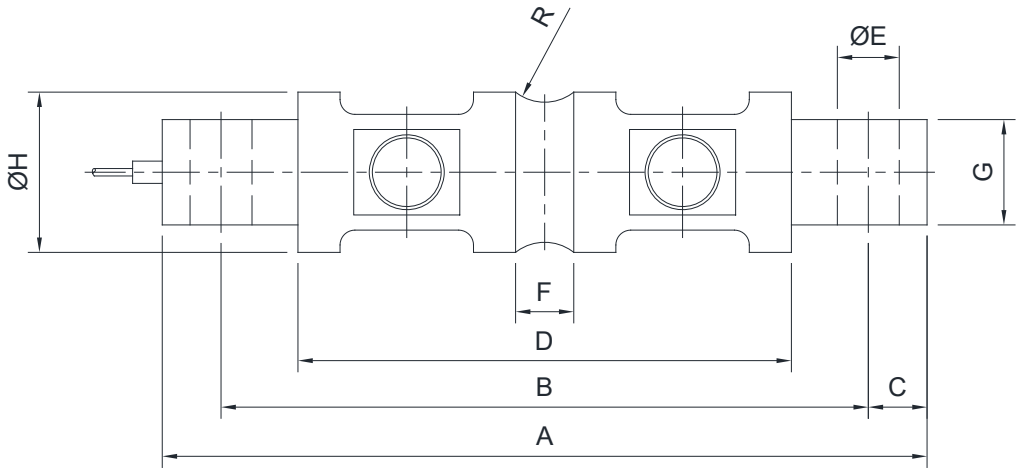
IECEx *(zone 0-1-2-20-21-22)*

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

DTX
DOUBLE SHEAR BEAM LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



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

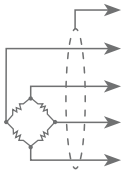
TECHNICAL FEATURES

Material	Nickel plated alloy 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 lenght	9 m
Cable diameter	5 mm (20klb) / 8 mm (30klb-60klb)
Cores	4 x 0.22 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

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

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.5	**COMPRESSION-LOW PROFILE**	
	**CK**	200, 500, 1000, 2500 kg	**72**
	**CLS**	1000, 2000, 5000 kg	**74**
	**CBL**	250, 500, 1000, 2500, 5000, 7500, 10000, 12500, 15000, 30000, 50000, 100000 kg	**76**
	**CBX**	15000, 30000, 50000 kg	**80**
	**CBLS**	200000, 300000, 500000, 750000 kg	**83**

CK

COMPRESSION LOAD CELLS - LOW PROFILE

Manufactured according to OIML R60 standards

Capacity from 200 kg to 2500 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

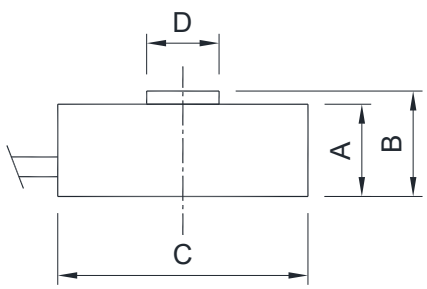
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

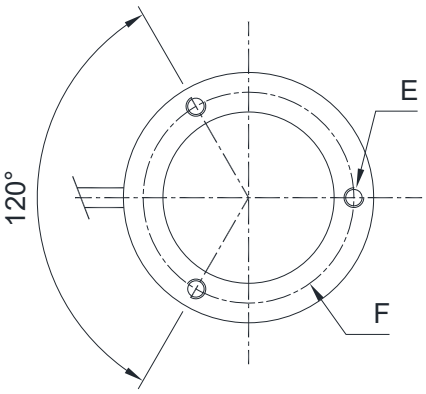
CK

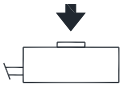
COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

DIMENSIONS (mm)







	kg 200 kg 500	kg 1000 kg 2500
A	8.2	14
B	10	16
C	Ø 32	Ø 38
D	Ø 8.1	Ø 10
E	M3	M3
F	Ø 25.4	Ø 31.4

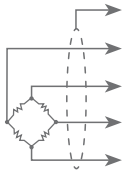
TECHNICAL FEATURES

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 lenght	5 m
Cable diameter	3 mm
Cores	4 x 0.25 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

CLS

COMPRESSION LOAD CELLS - LOW PROFILE

Manufactured according to OIML R60 standards

Capacity from 1000 kg to 5000 kg

MOUNTING KITS

PVCLS

PV80CLS

PSCLS

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±0.03%
- PROTECTION CLASS IP68
- INTEGRATED STAINLESS STEEL LOWER PLATE

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

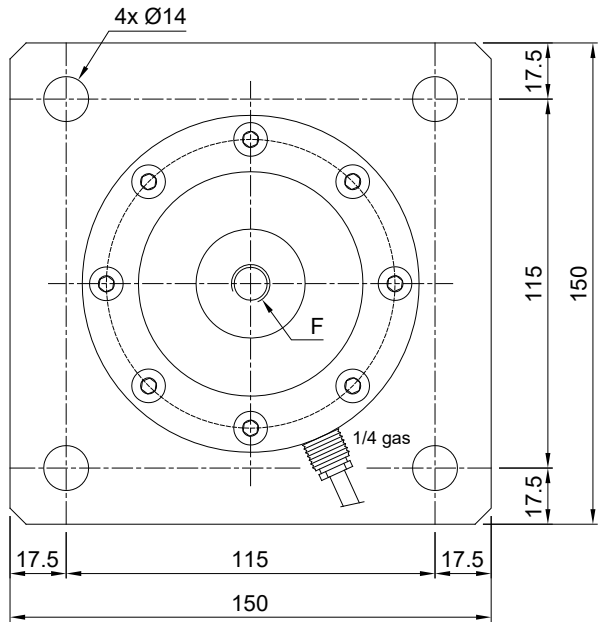
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

CLS

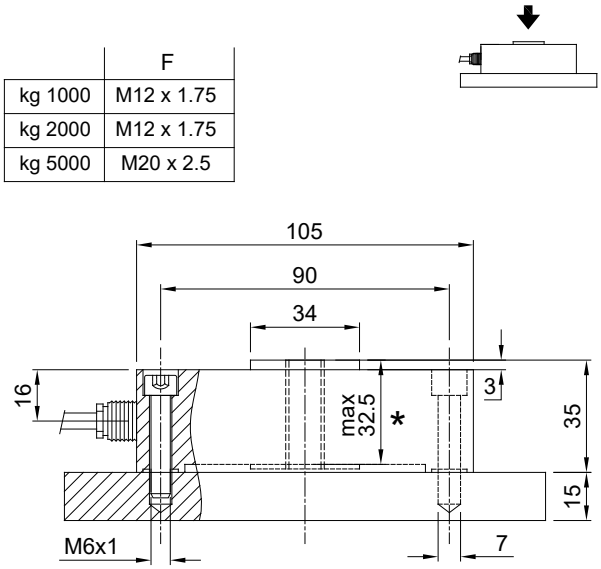
COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

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

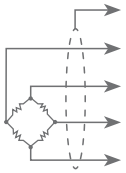
TECHNICAL FEATURES

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 lenght	10 m
Cable diameter	6 mm
Cores	6 x 0.25 mm²



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

CBL

COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

IP68 IP69K

Capacity from 250 kg to 100000 kg

MOUNTING KITS

V10000/10275

V15000/100000

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

CAPACITY kg	ACCURACY CLASS C2	C3					NET WEIGHT (kg)	CODE
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

CBL
COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

CERTIFICATIONS

OIML R60 C2

Complies with the Eurasian Custom Union standards

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)*

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

OIML R60 C3

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

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

TECHNICAL FEATURES

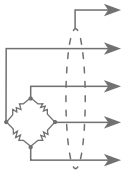
Material	17-4 PH stainless steel		
OIML R60 Accuracy class • Verification intervals	-	C2 • 2000	C3 • 3000
Nominal load (E max)	250 - 500 - 1000 - 15000 kg 30000 - 50000 - 100000 kg	2500 - 5000 kg 7500 - 10000 kg	2500 - 5000 - 7500 kg 10000 - 12500 kg
Minimum verification interval (V min)	-	E max / 15000	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%
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 lenght	5 m*(250-10000 kg); 10 m (12500-100000 kg)
Cable diameter	5 mm
Cores	6 x 0.14 mm²

**) On request: 10 m long cable version*



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

CBL
COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

OPTIONS ON REQUEST

	DESCRIPTION
10 m	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

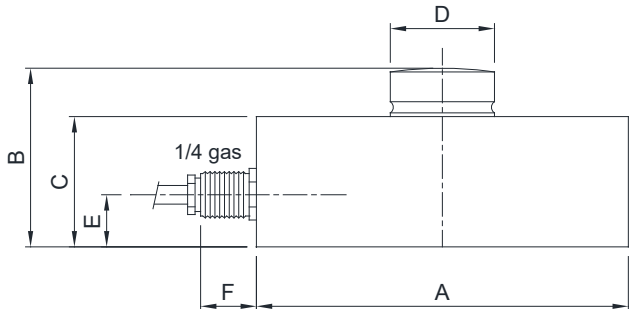
	DESCRIPTION		CODE
	AISI 304 stainless steel threaded upper base for compression load cells.	M12x1.75 mm	BASESUPFIL
	AISI 304 stainless steel turned lower base for compression load cells.	Ø110x22 mm Ø140x23 mm Ø180x23 mm	BINF100 BINF126 BINF165
	Lower plate and turned upper base in AISI 304 stainless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

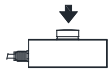
CBL

COMPRESSION LOAD CELLS - LOW PROFILE

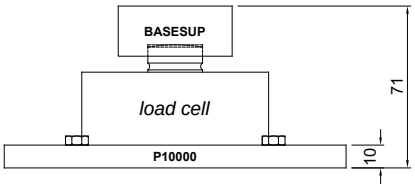
LAUMAS®

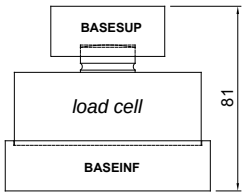
DIMENSIONS (mm)

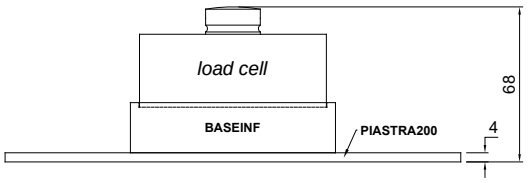




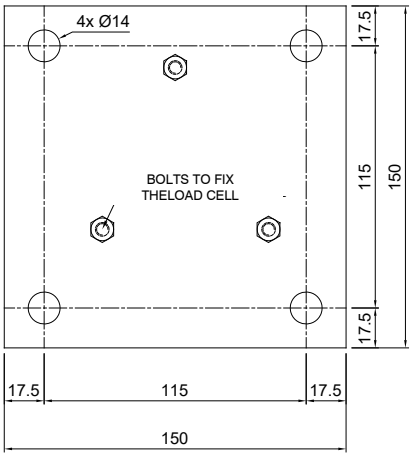
kg	250 : 12500	15000	30000	50000 100000
A	Ø82	Ø100	Ø126	Ø164
B	44	48	54	80
C	32	35	40	60
D	Ø22	Ø28	Ø35	Ø60
E	14	14	14	26
F	15	15	15	15



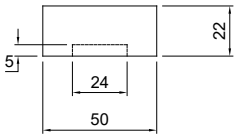




P10000



BASESUP



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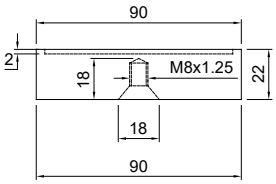
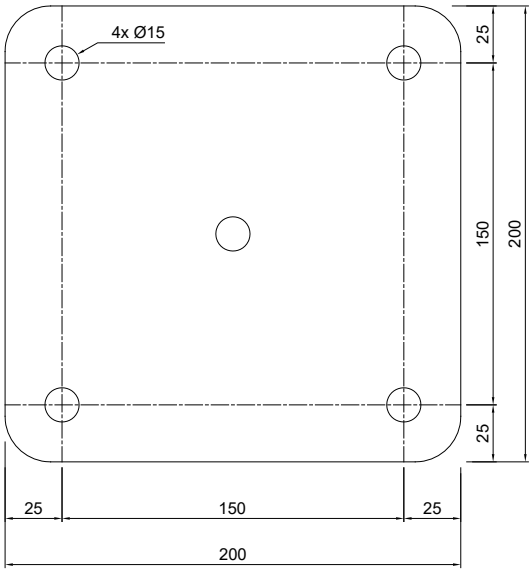
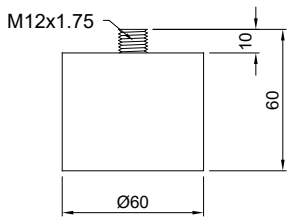


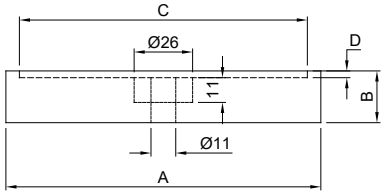
PIASTRA200



BASESUPFIL



BINF



	A	B	C	D
BINF100	Ø110	22	Ø102	2
BINF126	Ø140	23	Ø128	3
BINF165	Ø180	23	Ø167	3

CBX

COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

OIML REFERENCE

IP68

Manufactured according to OIML R60 standards

Capacity from 15000 kg to 50000 kg

MOUNTING KITS

V10000/10275

V15000/100000

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.035%
- PROTECTION CLASS IP68

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom 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

CBX

COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

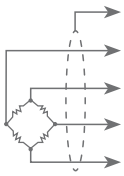
TECHNICAL FEATURES

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

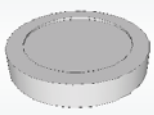
ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

COMPLEMENTARY ACCESSORIES

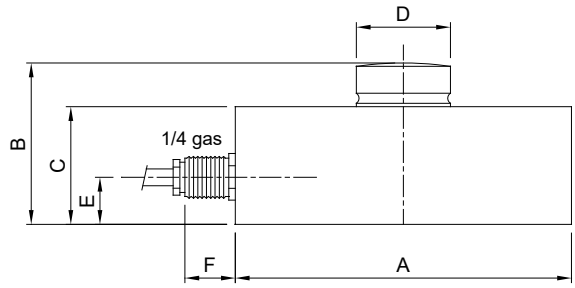
	DESCRIPTION		CODE
	AISI 304 stainless steel threaded upper base for compression load cells.	M12x1.75 mm	BASESUPFIL
	AISI 304 stainless steel turned lower base for compression load cells.	Ø110x22 mm Ø140x23 mm	BINF100 BINF126
	Lower plate and turned upper base in AISI 304 stainless steel. Load cell capacity: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

CBX

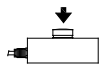
COMPRESSION LOAD CELLS - LOW PROFILE

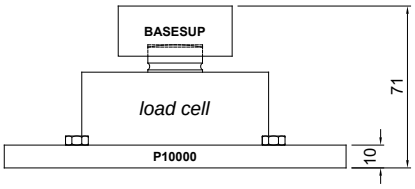
LAUMAS®

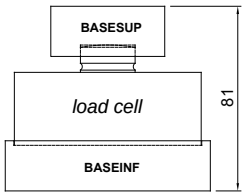
DIMENSIONS (mm)

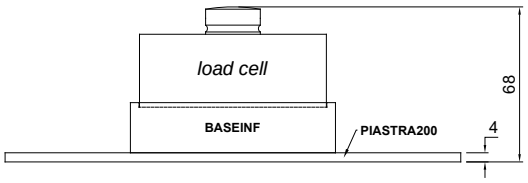


kg	15000	30000	50000
A	Ø82	Ø100	Ø126
B	44	48	54
C	32	35	40
D	Ø22	Ø28	Ø35
E	14	14	14
F	15	15	15

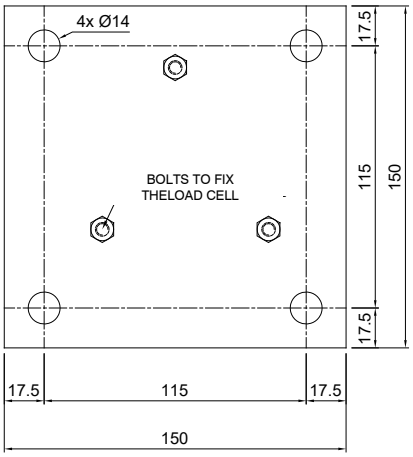




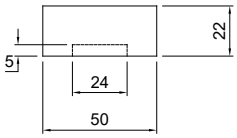




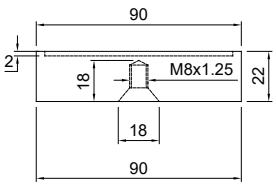
P10000



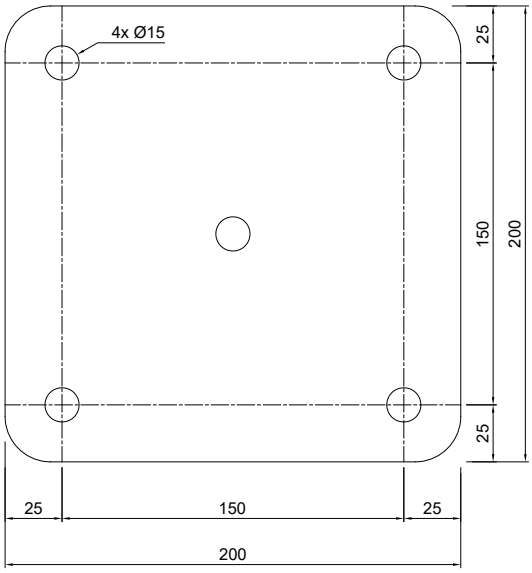
BASESUP



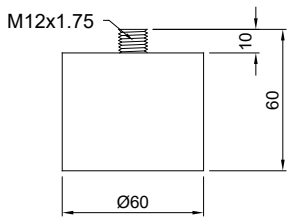
BASEINF



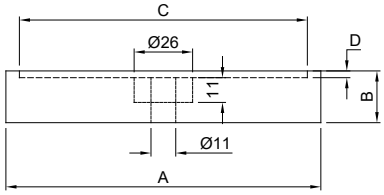
PIASTRA200



BASESUPFIL



BINF



	A	B	C	D
BINF100	Ø110	22	Ø102	2
BINF126	Ø140	23	Ø128	3

CBLS

COMPRESSION LOAD CELLS - LOW PROFILE

Manufactured according to OIML R60 standards

Capacity from 200000 kg to 750000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.10%
- PROTECTION CLASS IP68

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

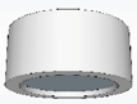
CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom 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



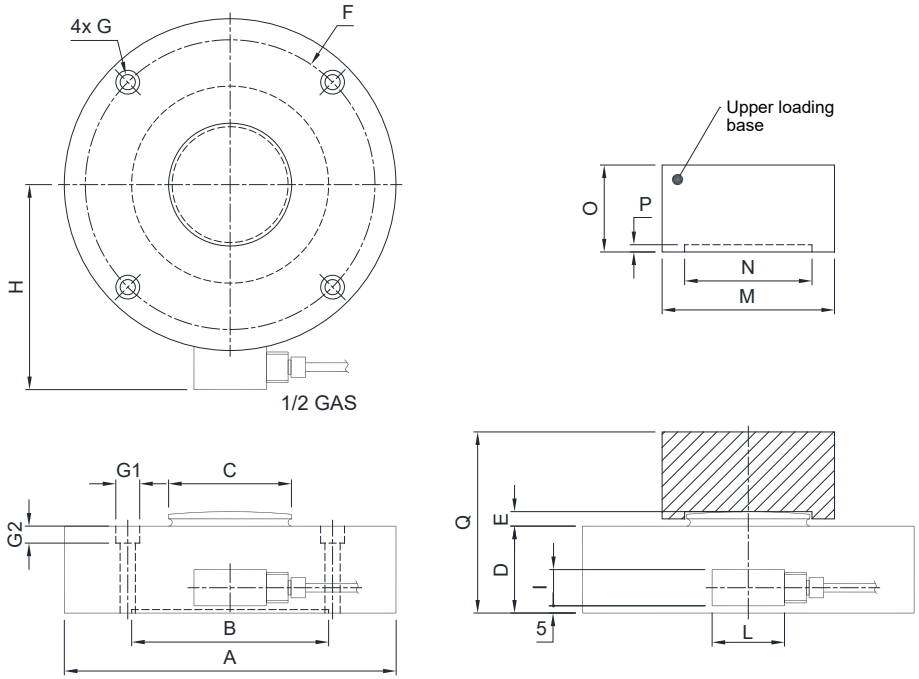
DESCRIPTION			CODE
Upper loading base.	Dimensions:	Maximum static load:	
	Ø119 mm; h=60 mm	200000 kg	BOTTONE200
	Ø198 mm; h=60 mm	300000 kg	BOTTONE
	Ø198 mm; h=89 mm	500000 - 750000 kg	BOTTONE750

CBLS

COMPRESSION LOAD CELLS - LOW PROFILE

LAUMAS®

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

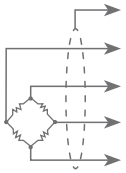
TECHNICAL FEATURES

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	-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	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

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

ISO 9001
ISO 14001

A1 - LOAD CELLS

PRODUCTS CATALOG

	CAPACITY	PAGE
A1.6	**COLUMN**	
 **COK**	15000, 25000, 50000 kg	**87**
 **CO**	25000 kg	**89**
 **COL**	30000, 60000 kg	**91**

COK
COLUMN LOAD CELLS

IP68

Capacity from 15000 kg to 50000 kg

MOUNTING KIT

VCOKDTL

- SPECIAL STEEL
- COMBINED ERROR ≤ ±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 Anti-rat Cable	•	•	•	•	•	4	COK25000AR

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

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

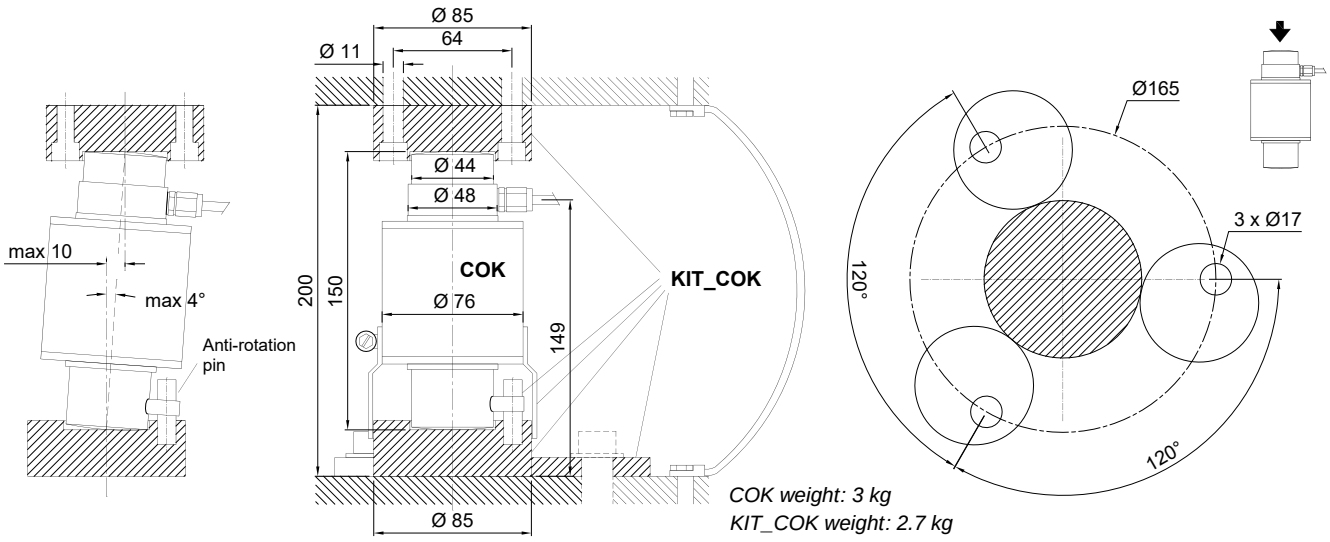
COMPLEMENTARY ACCESSORIES

	DESCRIPTION	CODE
	Special steel accessory composed by anti-rotation system, protective rubber seal, 2 bases (upper and lower) and 3 self-centering cylindrical plates.	KITCOK

COK
COLUMN LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



COK weight: 3 kg
KIT_COK weight: 2.7 kg

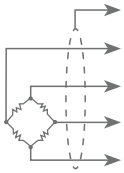
TECHNICAL FEATURES

Material	Special 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 lenght	20 m
Cable diameter	6 mm
Cores	6 x 0.22 mm²



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

ISO 9001
ISO 14001

CO
COLUMN LOAD CELLS

LAUMAS®

IP68 · SHOCK PROTECTION DEVICE

Capacity 25000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.017%
- PROTECTION CLASS IP68
- LIGHTNING PROTECTION

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

CERTIFICATIONS

OIML R60 C4

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

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

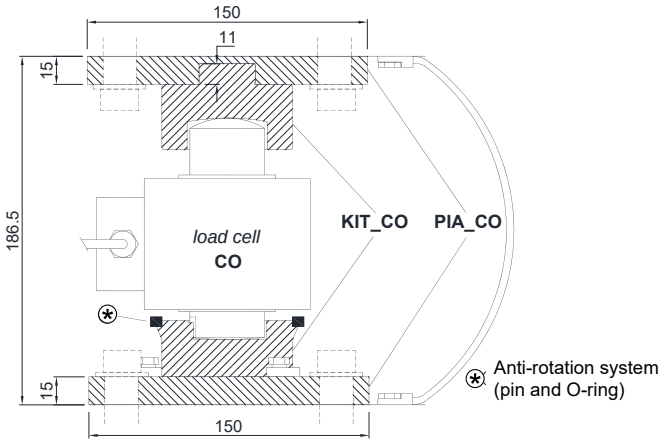
COMPLEMENTARY ACCESSORIES

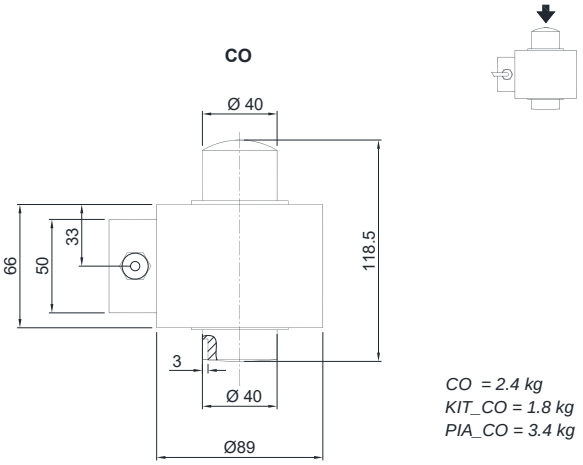
	DESCRIPTION	CODE
	Stainless steel accessory composed by anti-rotation system with O-ring and 2 bases (upper and lower).	KITCO
	Kit composed by 2 special steel plates (upper and lower) for KIT_CO bases.	PIACO

CO
COLUMN LOAD CELLS

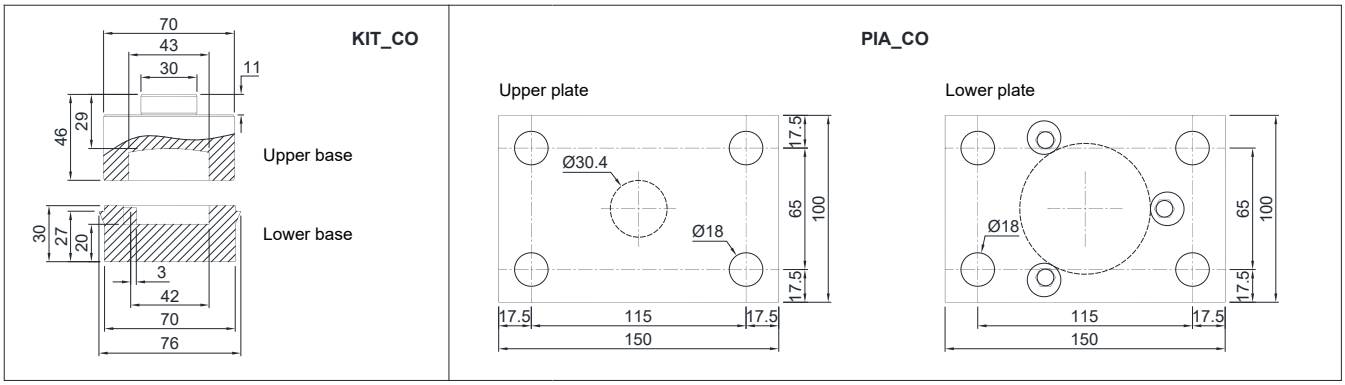
LAUMAS®

DIMENSIONS (mm)





CO = 2.4 kg
KIT_CO = 1.8 kg
PIA_CO = 3.4 kg



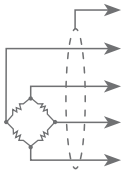
TECHNICAL FEATURES

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 lenght	15 m
Cable diameter	5 mm
Cores	4 x 0.24 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

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

ISO 9001
ISO 14001

COL
COLUMN LOAD CELLS

LAUMAS®

IP68

Capacity from 30000 kg to 60000 kg

MOUNTING KIT

VCOKDTL

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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 Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

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

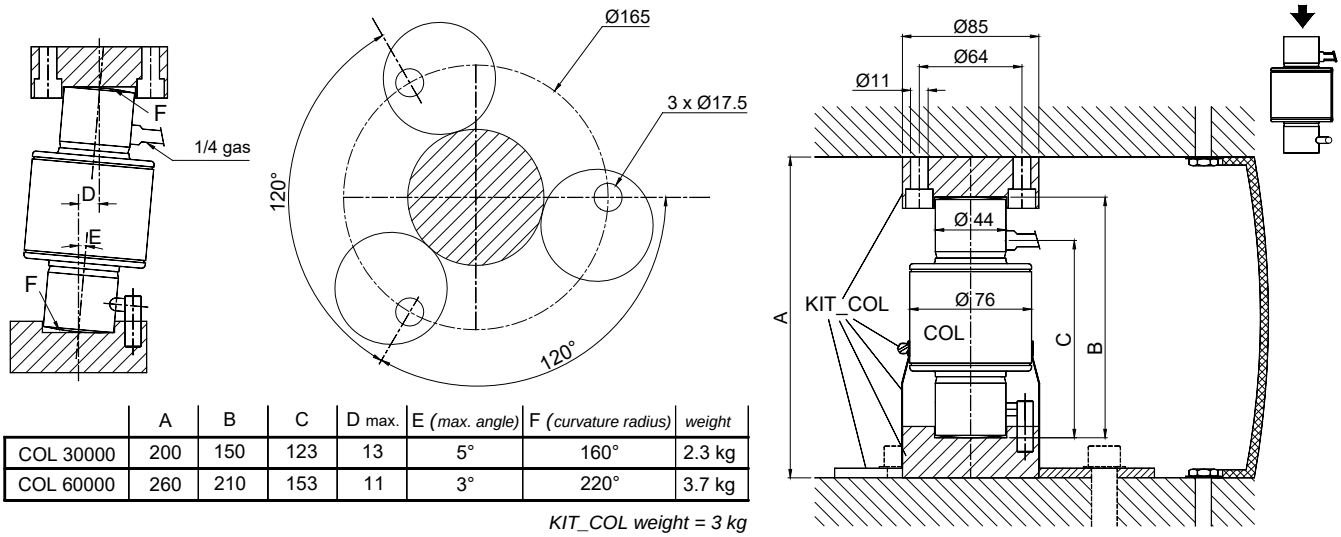
COMPLEMENTARY ACCESSORIES

	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

COL
COLUMN LOAD CELLS

LAUMAS®

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

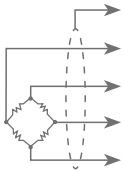
Material	17-4 PH stainless steel
OIML R60 Accuracy class • Verification intervals	C4 • 4000
Nominal load (E max)	30000 - 60000 kg
Minimum verification interval (V min)	E max / 10000
Combined error	≤ ±0.017%
Protection class	IP68

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 lenght	20 m
Cable diameter	6 mm
Cores	6 x 0.22 mm²



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

ISO 9001
ISO 14001

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.7	**COMPRESSION / TENSION**	
	**CLBT**	50, 100, 500 kg	**95**
	**CL**	500, 1000, 2000, 5000, 10000, 20000, 30000, 60000, 100000, 150000, 200000 kg	**97**
	**CLK**	2000, 5000, 10000, 20000 kg	**99**

CLBT

COMPRESSION / TENSION LOAD CELLS

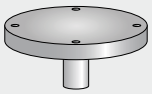
Manufactured according to OIML R60 standards

Capacity from 50 kg to 500 kg

- 50-100 kg: ALUMINIUM ALLOY (AVIONAL)
- 500 kg: 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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

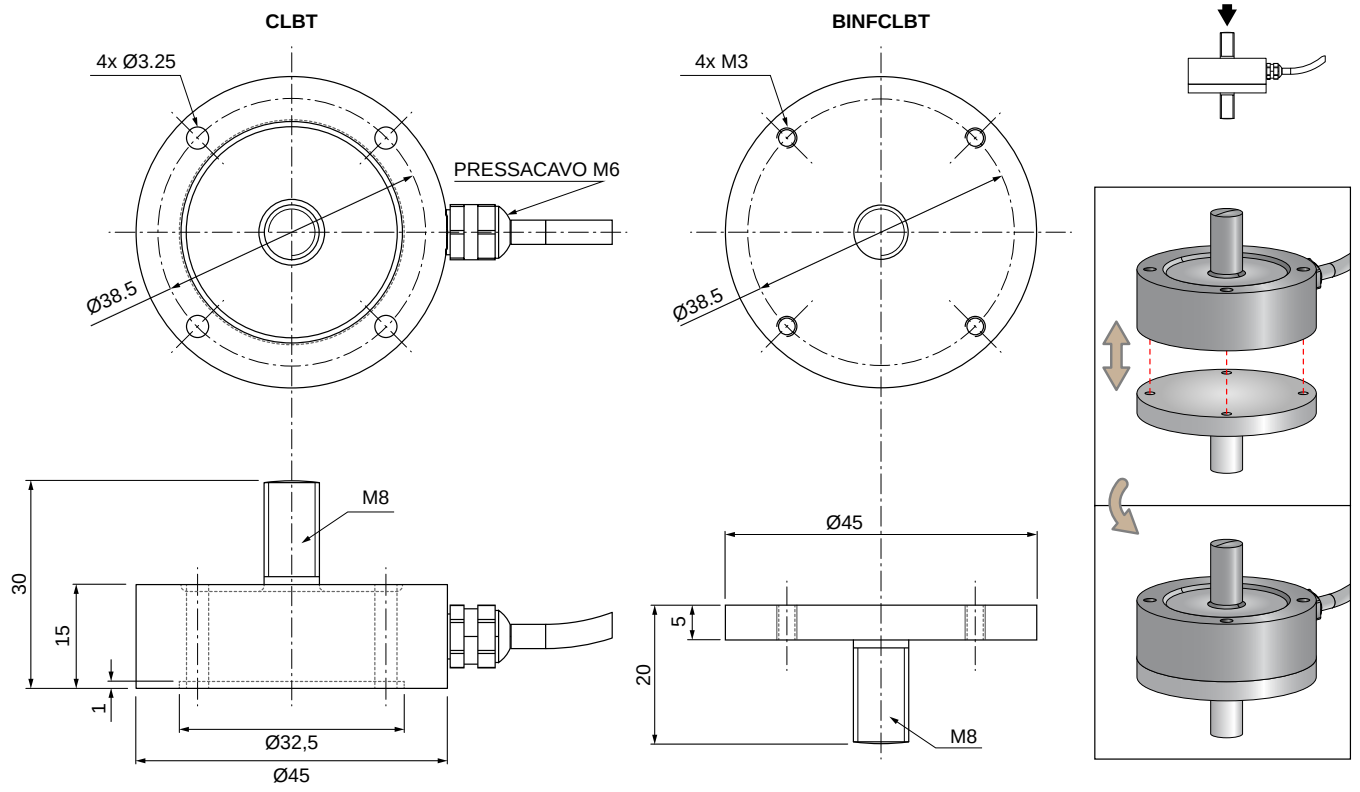
Complies with the Eurasian Custom Union standards

CLBT

COMPRESSION / TENSION LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



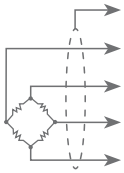
TECHNICAL FEATURES

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	-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 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 lenght	5 m
Cable diameter	5 mm
Cores	6 x 0.088 mm²



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

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

ISO 9001
ISO 14001

CL
COMPRESSION / TENSION LOAD CELLS

LAUMAS®

OIML REFERENCE · IP67 · IP68

Manufactured according to OIML R60 standards

Capacity from 500 kg to 200000 kg

- 17-4 PH STAINLESS STEEL
- BIDIRECTIONAL TENSION AND COMPRESSION
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

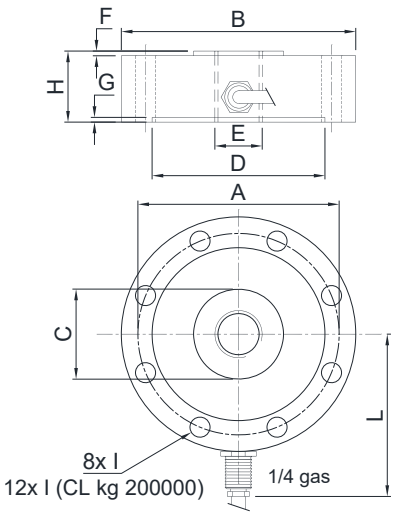
OPTIONS ON REQUEST

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

CL
COMPRESSION / TENSION LOAD CELLS

LAUMAS®

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 x1.5	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

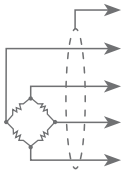
TECHNICAL FEATURES

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	-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	0.3%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

ELECTRICAL CONNECTIONS

Cable lenght	5 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

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

ISO 9001
ISO 14001

CLK

COMPRESSION / TENSION LOAD CELLS

Manufactured according to OIML R60 standards

Capacity from 2000 kg to 20000 kg

- SPECIAL STEEL
- BIDIRECTIONAL TENSION AND COMPRESSION
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

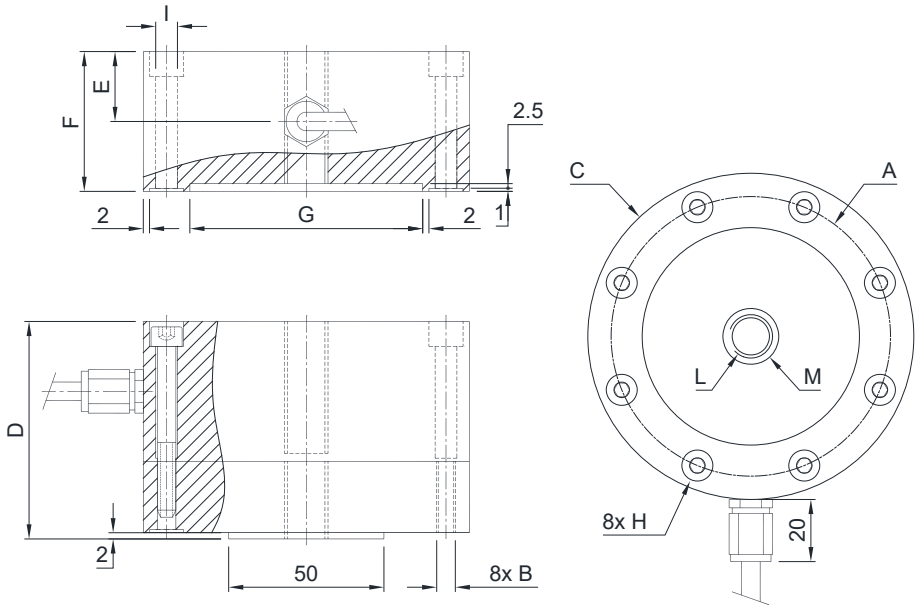
EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
Ex	ATEX II 1GD *(zone 0-1-2-20-21-22)*
IECEx	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

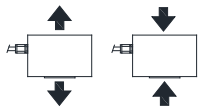
CLK

COMPRESSION / TENSION LOAD CELLS

LAUMAS®

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

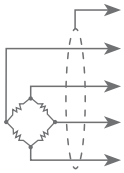
TECHNICAL FEATURES

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 lenght	12 m
Cable diameter	6 mm
Cores	6 x 0.24 mm²

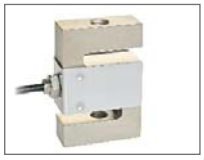


SHIELD	
+ SIGNAL	GREEN
+ EXCITATION + REF./SENSE	RED BLUE
- SIGNAL	WHITE
- EXCITATION - REF./SENSE	BLACK YELLOW

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.8	**TENSION (COMPRESSION)**	
	**SA**	15, 30, 60 kg	**103**
	**SL**	25, 100, 200, 300, 500, 1000, 2500 kg	**105**
	**CTOL**	50, 100, 200, 300 kg	**107**
		500, 1000, 2500, 5000 kg	
	**CTL**	100, 200, 300, 500, 1000, 2500, 5000, 7500, 10000, 12500 kg	**109**

SA

TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

IP65

Capacity from 15 kg to 60 kg

- SPECIAL STEEL
- COMBINED ERROR ≤ ±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
			ON REQUEST				

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

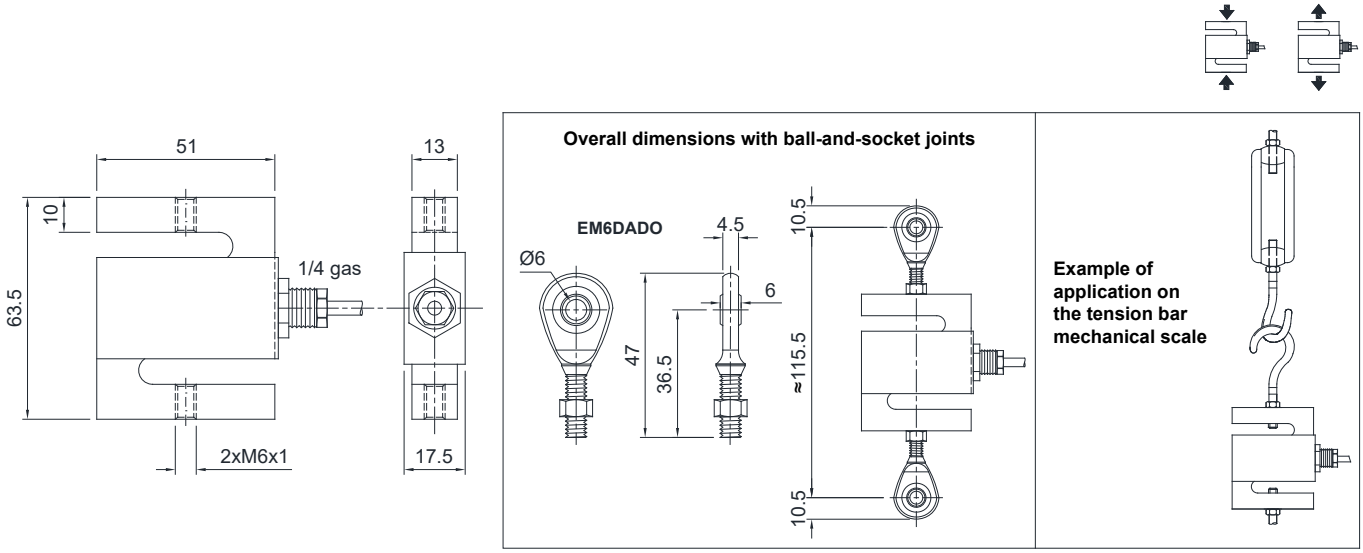
DESCRIPTION	Dimensions:	Load cell capacity:	CODE
Special steel ball-and-socket joint with nut.	M6x1	15÷60 kg	EM6DADO

Rev. 0.0

SA
TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



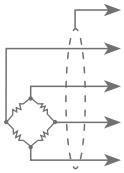
TECHNICAL FEATURES

Material	Special 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 lenght	3 m
Cable diameter	4 mm
Cores	4 x 0.24 mm²



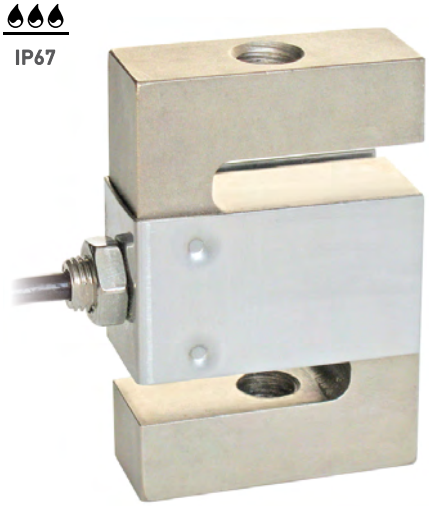
SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

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

SL

TENSION (COMPRESSION) LOAD CELLS

IP67



Capacity from 25 kg to 2500 kg

- SPECIAL STEEL
- COMBINED ERROR ≤ ±0.02% (0.017% C4)
- PROTECTION CLASS IP67

CAPACITY kg	ACCURACY CLASS C3	ACCURACY CLASS C4					NET WEIGHT (kg)	CODE
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 Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

NTEP - compliant to the metrological standards of United States and Canada

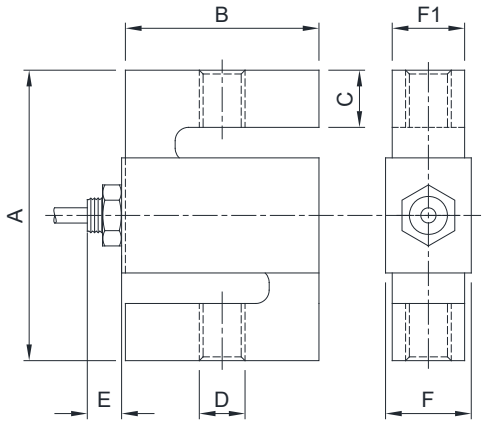
COMPLEMENTARY ACCESSORIES

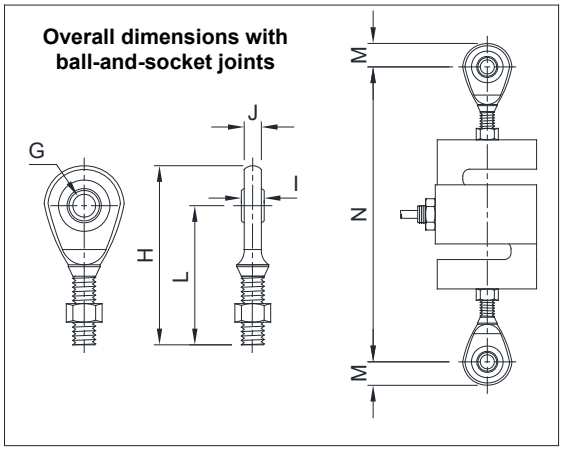
DESCRIPTION	Dimensions:	Load cell capacity:	CODE
Special steel ball-and-socket joint with nut.	M8x1.25	25 kg	EM8DADO
	M10x1.5	100 kg	EM10DADO
	M12x1.75	200-1000 kg	EM12DADO
	M20x1.5	2500 kg	EM20DADO

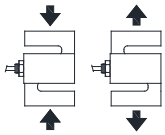
SL
TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

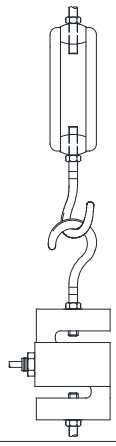
DIMENSIONS (mm)







Example of application on the tension bar mechanical scale



	A	B	C	D	E	F	F1	G	H	I	J	L	M	N (≈)
25 kg	76.2	50.8	15.7	M8x1.25	10	14.5	12.7	Ø8	54	8	6.5	42.5	11.5	129
100 kg	76.2	50.8	15.3	M10x1.5	9	22.4	19	Ø10	62.5	9	7.5	48.5	14	142
200 kg					8									
300 kg	76.2	50.8	14.4	M12x1.75	9	22.4	19	Ø12	71	10	8.5	54.5	16.5	154
500 kg					9									
1000 kg	76.2	50.8	12.5	M12x1.75	10	28.9	25.4	Ø12	71	10	8.5	54.5	16.5	159
2500 kg	101.6	76.2	20	M20x1.5	6	28.9	25.4	Ø20	104.5	16	13.5	77.5	27	217

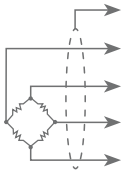
TECHNICAL FEATURES

Material	Special 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 lenght	5 m (25 - 300 kg); 10 m (500 - 2500 kg)
Cable diameter	5 mm
Cores	4 x 0.24 mm²



SHIELD	
+ SIGNAL	GREEN
+ EXCITATION	RED
- SIGNAL	WHITE
- EXCITATION	BLACK

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

ISO 9001
ISO 14001

CTOL

TENSION (COMPRESSION) LOAD CELLS

Manufactured according to OIML R60 standards

Capacity from 50 kg to 300 kg

- AISI 420 STAINLESS STEEL
- COMBINED ERROR ≤ ±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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

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 Custom Union standards for use in potentially explosive atmospheres

COMPLEMENTARY ACCESSORIES

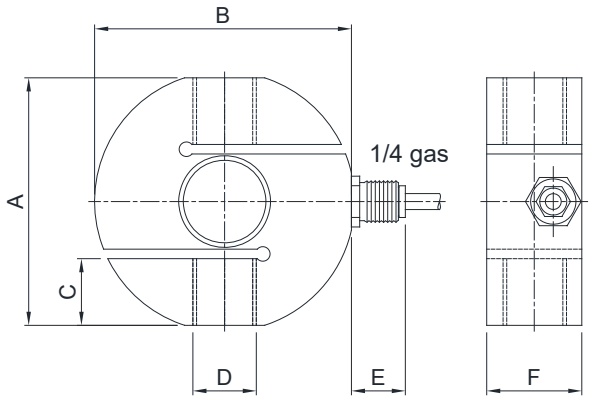
DESCRIPTION	Dimensions:	Load cell capacity:	CODE
Special steel ball-and-socket joint with nut.	M12x1.75	50-500 kg	EM12DADO
	M16x2	1000 kg	EM16DADO
	M20x1.5	2500 kg	EM20DADO
	M24x2	5000 kg	EM25DADO

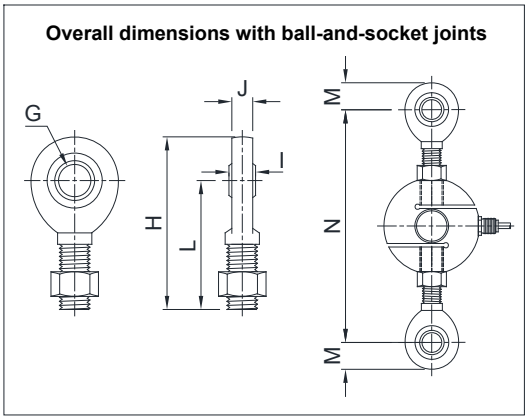
CTOL

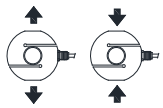
TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

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

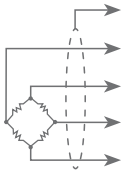
TECHNICAL FEATURES

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 lenght	10 m
Cable diameter	6 mm
Cores	6 x 0.20 mm²



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

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

CTL

TENSION (COMPRESSION) LOAD CELLS

IP68 IP69K

Capacity from 100 kg to 12500 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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	CTL7500
10000	•	•	•	•	•	3.7	CTL10000
12500	•	•	•	•	•	4.8	CTL12500

ON REQUEST

CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Custom Union standards

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)*

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

Complies with the Eurasian Custom 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.

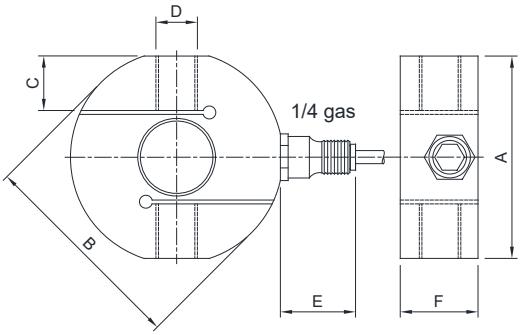
CTL
TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

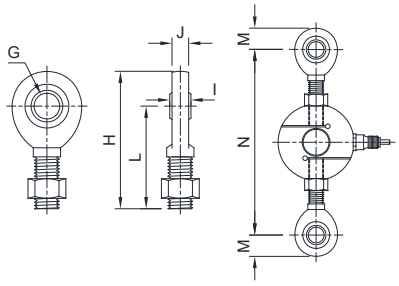
COMPLEMENTARY ACCESSORIES

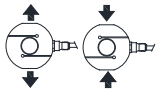
	DESCRIPTION			CODE
	Special steel ball-and-socket joint with nut.	Dimensions:	Load cell capacity:	
		M12x1.75	100-300 kg	EM12DADO
		M16x2	500-1000 kg	EM16DADO
		M20x1.5	2500 kg	EM20DADO
		M24x2	5000-7500 kg	EM25DADO
		M30x2	10000 kg	EM30DADO
		M36x3	12500 kg	EM35DADO

DIMENSIONS (mm)



Overall dimensions with ball-and-socket joints





	100 kg 200 kg 300 kg	500 kg 1000 kg	2500 kg	5000 kg 7500 kg	10000 kg	12500 kg
A	60	78	78	90	103	120
B	63	82	82	102	114	129
C	14.5	21	21	24	30.5	37
D	M12x1.75	M16x2	M20x1.5	M24x2	M30x2	M36x3
E	29	29	29	29	29	29
F	22	30	30	45	50	55
G	Ø12	Ø17	Ø20	Ø25	Ø30	Ø35
H	71	92	104.5	126	146.5	181
I	10	14	16	20	22	25
J	8.5	11.5	13.5	17.5	19.5	21.5
L	54.5	69.5	77.5	94.5	110	140
M	16.5	22.5	27	31.5	36.5	41
N (≈)	143	175	190	235	260	324

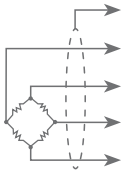
TECHNICAL FEATURES

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%
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	15 V	Deflection at nominal load	0.3 mm

ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

ISO 9001
ISO 14001

A1 - LOAD CELLS

PRODUCTS CATALOG

LAUMAS®

		CAPACITY	PAGE
	A1.9	**TENSION**	
	**TAL**	5000, 10000, 20000 kg	**113**
	**TBT**	30000, 40000, 50000, 60000, 100000, 250000 kg	**115**

TAL
TENSION LOAD CELLS

LAUMAS®

Manufactured according to OIML R60 standards

Capacity from 5000 kg to 20000 kg

- 17-4 PH STAINLESS STEEL
- HOLES FOR STANDARD SHACKLES
- COMBINED ERROR ≤ ±0.03%
- PROTECTION CLASS IP68

CAPACITY	kg				NET WEIGHT (kg)	CODE
5000		•	•	•	4.5	TAL5000
10000		•	•	•	4.6	TAL10000
20000		•	•	•	6.6	TAL20000

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

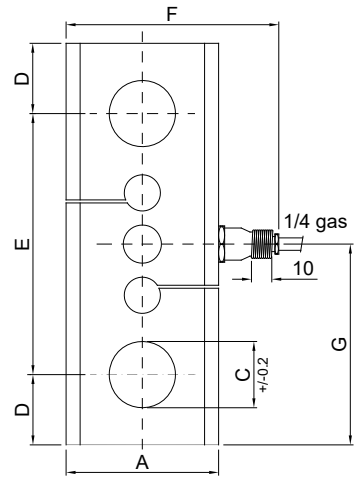
OPTIONS ON REQUEST

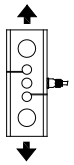
	DESCRIPTION
	Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems.

TAL
TENSION LOAD CELLS

LAUMAS®

DIMENSIONS (mm)





	kg 5000 kg 10000	kg 20000
A	76	82
B	45	54
C	33	52
D	35	47
E	130	166
F	106	112
G	100	130
H	200	260

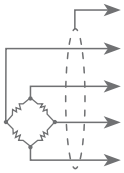
TECHNICAL FEATURES

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	-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	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

ISO 9001
ISO 14001

TBT
TENSION LOAD CELLS

LAUMAS®

Manufactured according to OIML R60 standards

Capacity from 30000 kg to 250000 kg

- 17-4 PH STAINLESS STEEL
- HOLES FOR STANDARD SHACKLES
- COMBINED ERROR ≤ ±0.08%
- PROTECTION CLASS IP68

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

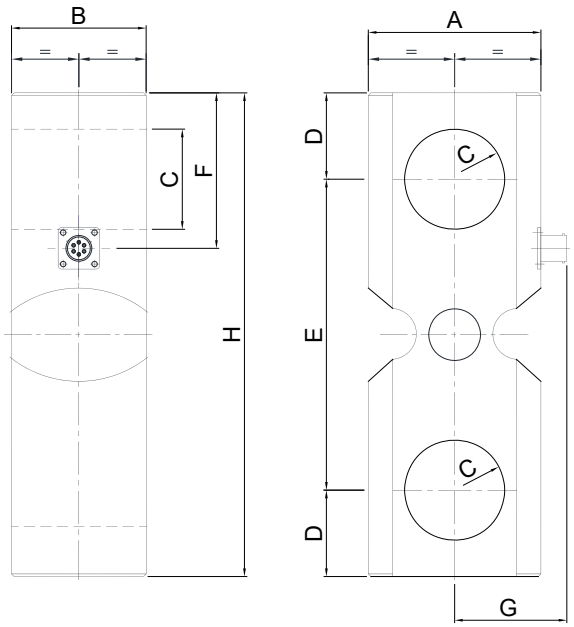
OPTIONS ON REQUEST

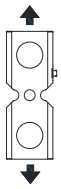
	DESCRIPTION
	Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems.

TBT
TENSION LOAD CELLS

LAUMAS®

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

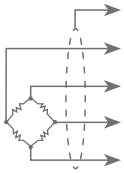
TECHNICAL FEATURES

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	-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	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.3 mm

ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	6 mm
Cores	6 x 0.14 mm²



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

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

ISO 9001
ISO 14001

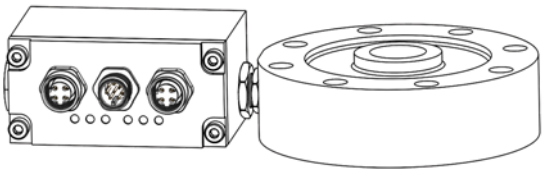
		PAGE
A1.10	DIGITAL LOAD CELLS	
LCB		119

LCB

UNIVERSAL LOAD CELLS DIGITIZER

RS485 ANALOG OUTPUT IP67

COMING SOON



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 ¼ GAS fitting (specific adapters for different threads are supplied on request).
- 2x M4 fixing holes for wall mounting via anchor plate (not included in the supply).
- IP67 AISI316 stainless steel box (dimensions: 97x38x82 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

Complies with the Eurasian Custom Union standards

FIELDBUSES

MODBUS RTU MODBUS/TCP ETHERNET POWERLINK EtherCAT EtherNet/IP IO-Link

PROFIBUS PROFINET CC-Link CC-Link IE CANopen SERCOS interface ETHERNET TCP/IP

ISO 9001
ISO 14001

LCB
UNIVERSAL LOAD CELLS DIGITIZER

LAUMAS®

INTERFACES AND FIELDBUSES

	CODE	
RS485. 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	*coming soon*
RS485 + analog output. 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	
IO-Link. **2x** male M12 circular connector, A-coded, 4-pin. The instrument works as *device* in a IO-Link network.	LCBIOLINK	
CANopen. Male M12 circular connector, A-coded, 5-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as *slave* in a CANopen synchronous network.	LCBCANOPEN	
CC-Link IE. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a CC-Link IE network.	LCBCCLINKIE	*coming soon*
CC-Link. Male M12 circular connector, A-coded, 4-pin. Female M12 circular connector, A-coded, 5-pin. The instrument works as *Remote Device Station* in a CC-Link network and occupies 3 stations.	LCBCCLINK	*coming soon*
Profibus DP. Male M12 circular connector, B-coded, 5-pin. Female M12 circular connector, B-coded, 5-pin. The instrument works as *slave* in a Profibus DP network.	LCBPROFIBUS	*coming soon*
Modbus/TCP. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a Modbus/TCP network.	LCBMODBUSTCP	
Ethernet TCP/IP. 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	*coming soon*
Ethernet/IP. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *adapter* in an Ethernet/IP network.	LCBETHEIP	
Profinet IO. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *device* in a Profinet IO network.	LCBPROFINETIO	
EtherCAT. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in an EtherCAT network.	LCBETHERCAT	
POWERLINK. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a Powerlink network.	LCBPOWERLINK	
SERCOS III. **2x** female M12 circular connectors, D-coded, 4-pin. The instrument works as *slave* in a Sercos III network.	LCBSERCOSIII	

LCB

UNIVERSAL LOAD CELLS DIGITIZER

LAUMAS®

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.
- 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.
- TCP/IP WEB APP
  Integrated software in combination with the Ethernet TCP/IP version for remote supervision, management and control of the instrument.

COMING SOON

CE-M version: 2014/31/EU-EN45501:2015-OIML R76:2006

- System parameters management protected by qualified access via software (password), hardware or fieldbus.
- Weight subdivisions displaying (1/10 e) via PC software.
- Three operation mode: single interval or multiple ranges or multi-interval.
- Net weight zero tracking.
- Calibration.
- Alibi memory (option on request).

BASE PROGRAM

- Hysteresis and setpoint value setting.

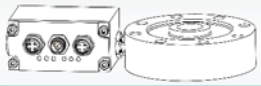
SINGLE PRODUCT LOADING PROGRAM

- 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

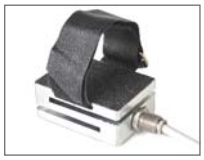
Power supply and consumption	12÷24 VDC ±10%; 5 W
Number of load cells • Load cells supply	up to 4 (350 Ω) - 4/6 wires • 3.3 VDC/40 mA
Linearity • Analog output linearity	<0.01% full scale • <0.01% full scale
Thermal drift • Analog output thermal drift	<0.0005% full scale/°C • <0.003% full scale/°C
A/D 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
	COMING SOON Alibi memory.	OPZWALIBI

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

ISO 9001
ISO 14001

	CAPACITY	PAGE
A1.11	**SPECIAL LOAD CELLS**	
A1.11.1	**pin**	
 **LAU**	5000, 10000, 20000 kg	**124**
A1.11.2	**for foot brake**	
 **LPED**	100 kg	**126**
A1.11.3	**anchor**	
 **CA**	30000, 50000, 75000, 100000, 125000, 150000, 180000, 250000 kg	**128**

	CAPACITY	ROPE Ø MM	PAGE
A1.11.4	**wire rope measuring**		
 **FUN**	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	**130**

LAU
PIN LOAD CELLS

Manufactured according to OIML R60 standards

Capacity from 5000 kg to 20000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.1%
- PROTECTION CLASS IP67

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

ON REQUEST

CERTIFICATIONS

Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

- Accredia traceable calibration report
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

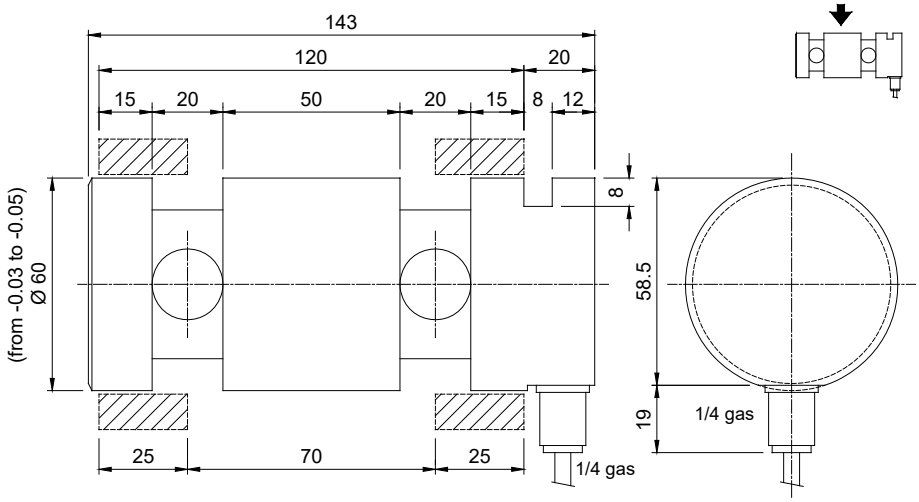
OPTIONS ON REQUEST

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

LAU
PIN LOAD CELLS

LAUMAS®

DIMENSIONS (mm)



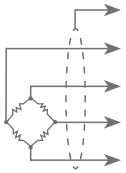
TECHNICAL FEATURES

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	-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	0.03%	Ultimate overload (% of full scale)	400%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

ELECTRICAL CONNECTIONS

Cable lenght	10 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

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

ISO 9001
ISO 14001

LPED

COMPRESSION LOAD CELL FOR FOOT BRAKE

Manufactured according to OIML R60 standards

Capacity 100 kg

- ALUMINUM
- COMBINED ERROR ≤ ±0.08%
- PROTECTION CLASS IP65
- FLEXIBLE CABLE

CAPACITY	kg				NET WEIGHT (kg)	CODE
	100	•	•	•	0.4	LPED100
		ON REQUEST				

CERTIFICATIONS

EAC	Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

	Accredia traceable calibration report
	ATEX II 1GD *(zone 0-1-2-20-21-22)*
	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

OPTIONS ON REQUEST

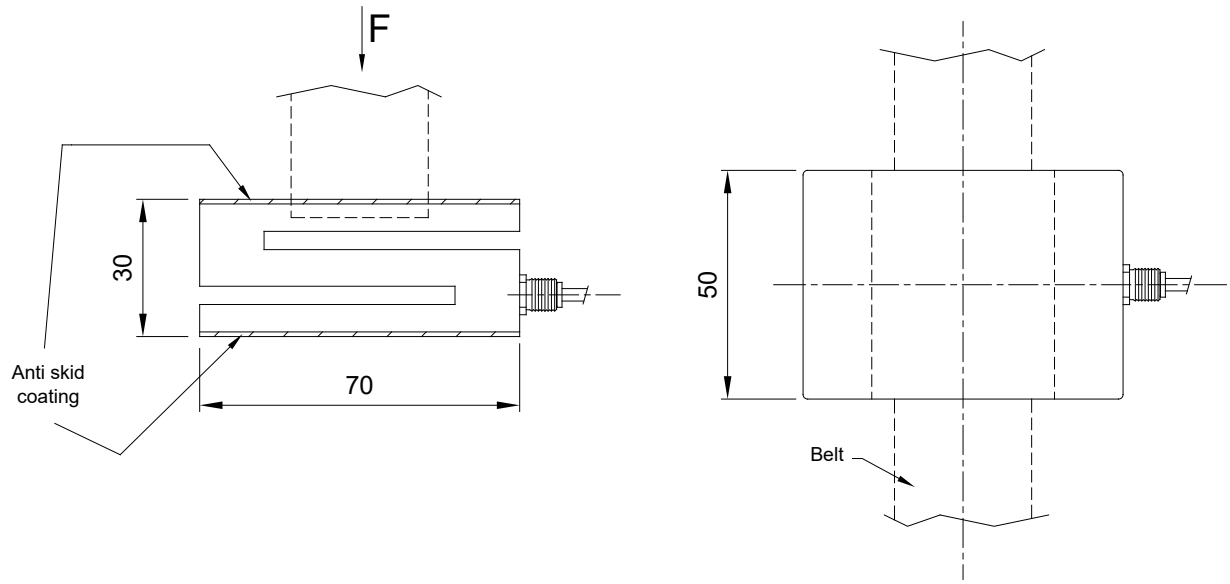
	DESCRIPTION
	Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems

LPED

COMPRESSION LOAD CELL FOR FOOT BRAKE

LAUMAS®

DIMENSIONS (mm)



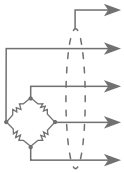
TECHNICAL FEATURES

Material	Aluminum
Nominal load (E max)	100 kg
Combined error	≤ ±0.08%
Protection class	IP65

Rated output	1 mV/V ±0.2%	Input resistance	350 Ω ±50
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	-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	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.25 mm

ELECTRICAL CONNECTIONS

Cable lenght	2 m
Cable diameter	5 mm
Cores	6 x 0.25 mm²



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

ISO 9001
ISO 14001

CA
ANCHOR LOAD CELLS

Manufactured according to OIML R60 standards

Capacity from 30000 kg to 250000 kg

- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±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
		ON REQUEST					

CERTIFICATIONS

EAC	Complies with the Eurasian Custom Union standards
	CERTIFICATIONS ON REQUEST
	Accredia traceable calibration report
	ATEX II 1GD *(zone 0-1-2-20-21-22)*
	IECEx *(zone 0-1-2-20-21-22)*
EAC Ex	Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

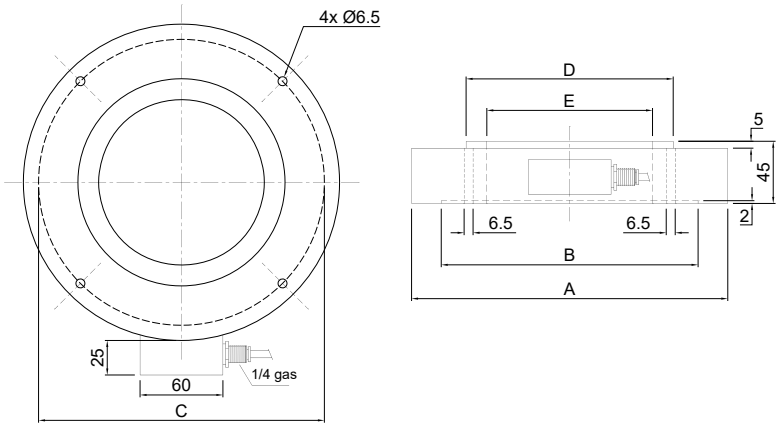
OPTIONS ON REQUEST

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

COMPLEMENTARY ACCESSORIES

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

TECHNICAL FEATURES - DIMENSIONS



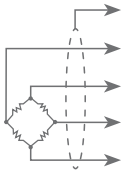
	CA50	CA75	CA120	CA165	CA225
A	163	163	229	275	320
B	131.5	131.5	186.5	231	285
C	145	145	207	252	302
D	95	95	150	195	250
E	50	75	120	165	225
kg	5	5	9	14	20

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	-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	0.03%	Ultimate overload (% of full scale)	300%
Max supply voltage without damage	15 V	Deflection at nominal load	0.4 mm

ELECTRICAL CONNECTIONS

Cable lenght	5 m
Cable diameter	5 mm
Cores	6 x 0.14 mm²



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

FUN

LOAD CELLS FOR WIRE ROPE MEASURING

Manufactured according to OIML R60 standards

Capacity from 2000 kg to 40000 kg

- SPECIAL STEEL
- LOAD LIMITING ACCURACY ±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	2000	•	•	•	Ø 6 ÷ Ø 14	2.4	FUN6141T1T
up to	4000	•	•	•	Ø 10 ÷ Ø 18	2.4	FUN10182T1T
up to	10000	•	•	•	Ø 16 ÷ Ø 26	2.4	FUN16265T2T
up to	20000	•	•	•	Ø 24 ÷ Ø 36	7.5	FUN243610T3T
up to	40000	•	•	•	Ø 24 ÷ Ø 36	7.5	FUN243620T5T

ON REQUEST

CERTIFICATIONS

EAC Complies with the Eurasian Custom Union standards

CERTIFICATIONS ON REQUEST

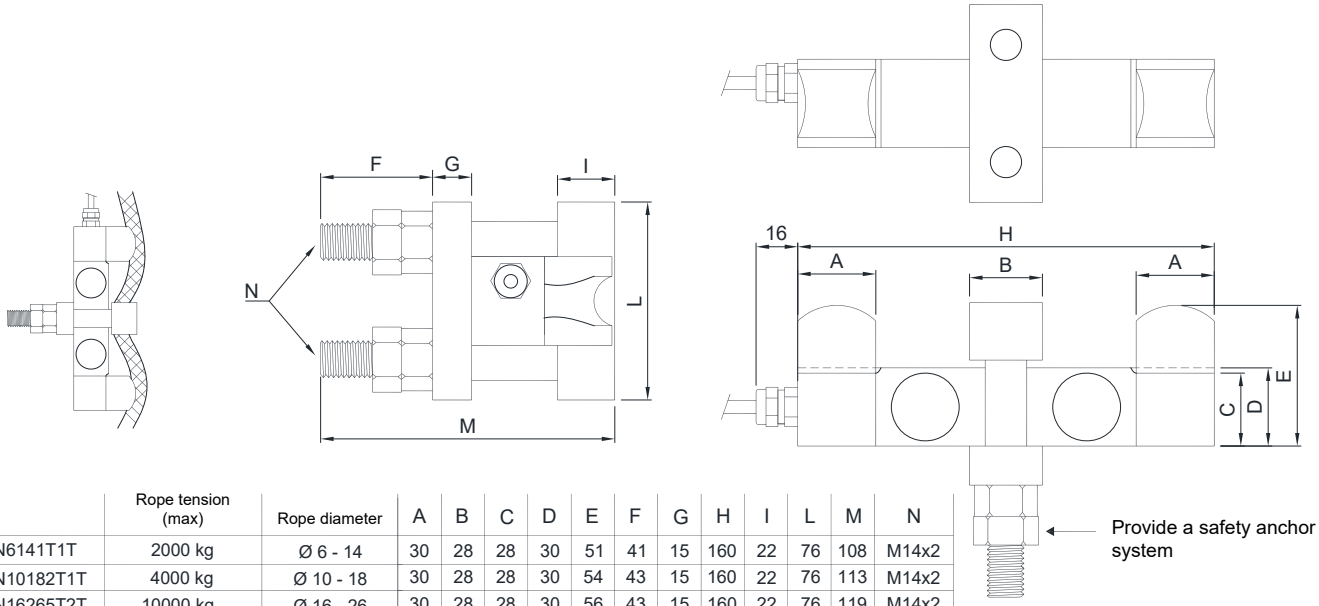
- ATEX II 1GD *(zone 0-1-2-20-21-22)*
- IECEx *(zone 0-1-2-20-21-22)*
- EAC Ex Complies with the Eurasian Custom Union standards for use in potentially explosive atmospheres

FUN

LOAD CELLS FOR WIRE ROPE MEASURING

LAUMAS®

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

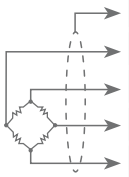
TECHNICAL FEATURES

Material	Special 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 lenght	6 m
Cable diameter	5 mm
Cores	4/6 x 0.14 mm²



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

■ where provided

A2 - MOUNTING KITS

PRODUCTS CATALOG

LAUMAS®

	APPLICATION RANGE	FOR LOAD CELLS	PAGE
A2.1	**for SINGLE POINT load cells**		
T8	up to 300 kg	AZL, AZLI, AZS, AM	**134**

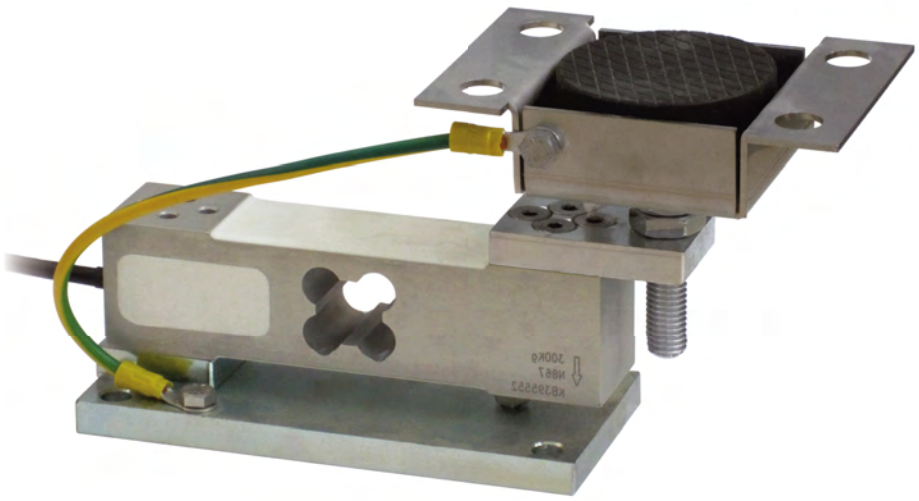
T8

MOUNTING KIT for SINGLE POINT load cells

LAUMAS®

Series laod cells: **AZLI - AZL - AZS - AM**

Up to 300 kg application range



MAX STATIC LOAD kg		NET WEIGHT (kg)	CODE
200	AZLI (max 50 kg) - AZL - AZS	1.7	T8AZL
300	AM	1.7	T8AM

Load cell not included

DESCRIPTION

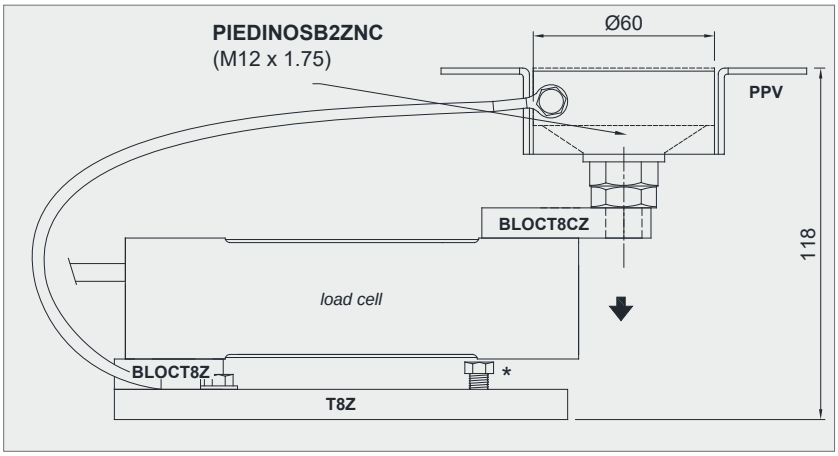
- Adjustable upper plate in AISI 304 stainless steel (PPV).
- Lower plate and block in galvanized steel.
- Constraint against lateral forces and anti-tilt by nickel-plated self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.
- It can be used for systems with at least 3 load cells connected in parallel.

T8

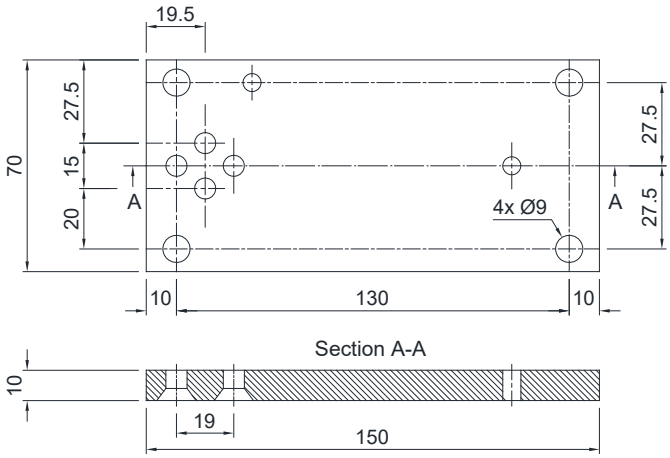
MOUNTING KIT for SINGLE POINT load cells

DIMENSIONS AND TECHNICAL SPECIFICATIONS

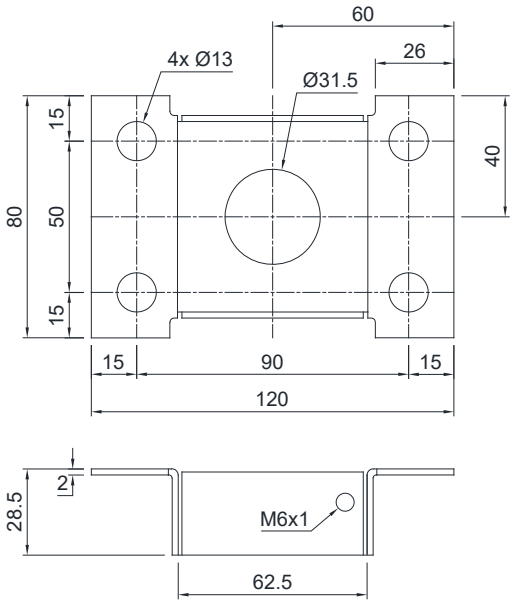
- During the transport and installation the lock (*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the support base of the foot, you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



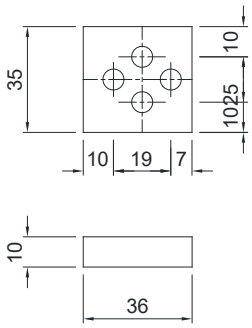
T8Z



PPV



BLOCT8Z



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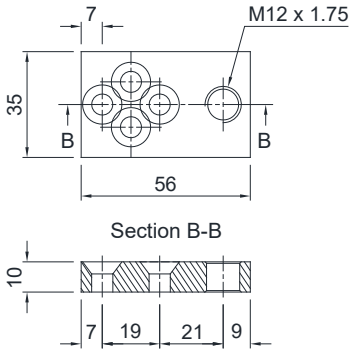
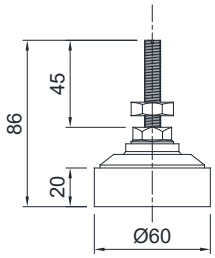
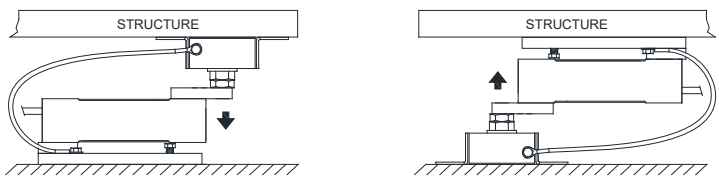


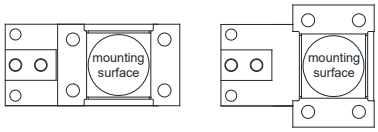
PIEDINOSB2ZNC
M12 x 1.75 mm



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



ISO 9001
ISO 14001

A2 - MOUNTING KITS

PRODUCTS CATALOG

LAUMAS®

		APPLICATION RANGE	FOR LOAD CELLS	PAGE
	A2.2	**for BENDING BEAM load cells**		
	**TFCFSB**	up to 200 kg	FCK, FCOL	**138**
	**TFCPV**	up to 300 kg	FCK, FCOL	**140**
	**TFCGP**	up to 300 kg	FCK, FCOL	**142**
	**TFFSB**	up to 500 kg	FCAL, FCAX	**144**
	**TFAST**	up to 500 kg	FCAL, FCAX	**146**
	**TFPV**	up to 1500 kg	FCAL, FCAX	**148**
	**TFGP**	up to 1500 kg	FCAL, FCAX	**150**
	**T12**	up to 2000 kg	FCAL, FCAX FTL, FTK, FTKL, FTP, FT-P, FTZ	**152**

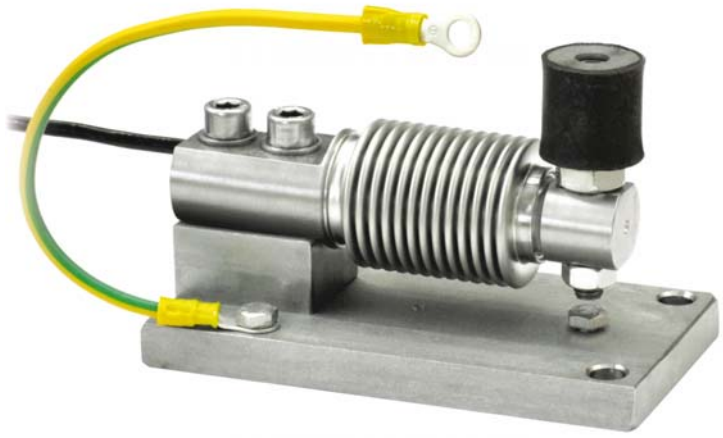
TFCFSB

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod cells: FCK - FCOL

Up to 200 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
200	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

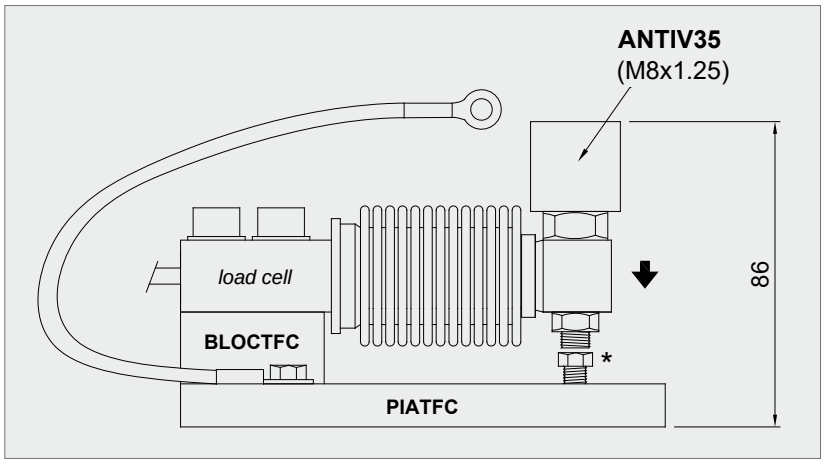
TFCFSB

MOUNTING KIT for BENDING BEAM load cells

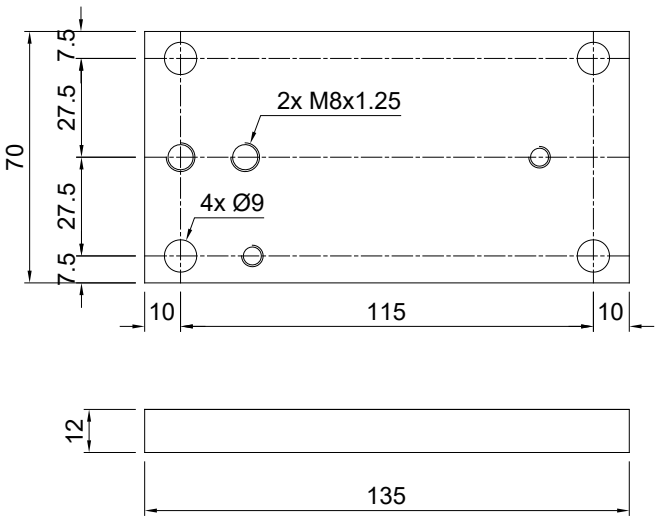
LAUMAS®

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



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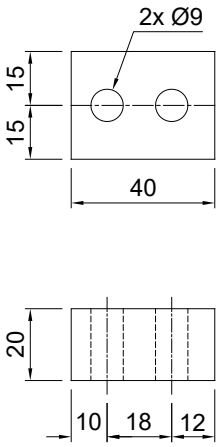
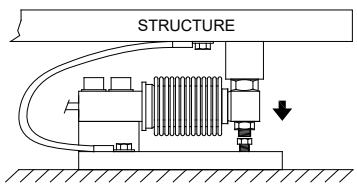
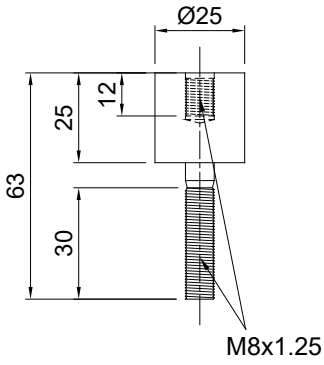


FIXING TO THE WEIGHED STRUCTURE



ANTIV35



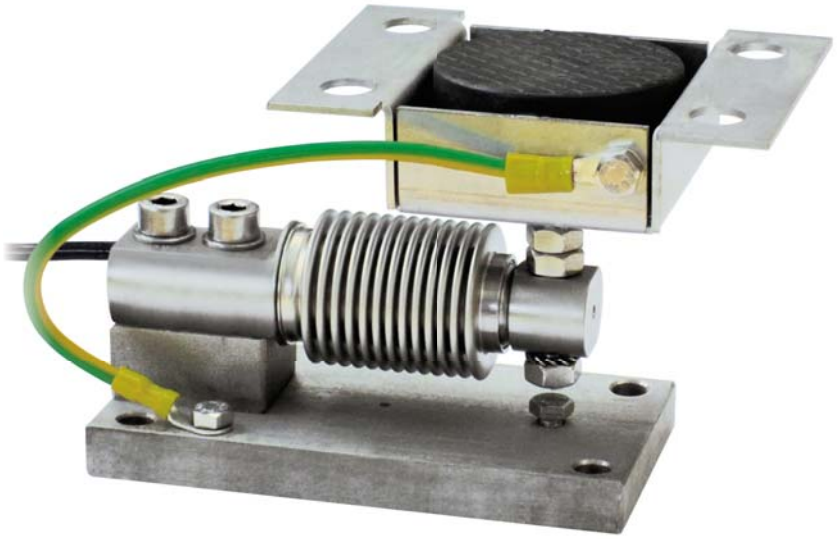
TFCPV

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod 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
300	FCOL (350 - 500 kg)	1.7	TFCPV10

Load cell not included.

DESCRIPTION

- Adjustable upper plate in AISI 304 stainless steel (PPV).
- Lower plate and block in AISI 304 stainless steel.
- Constraint against lateral forces and anti-tilt by in stainless steel self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Partial height adjustment.
- Locking screw to avoid damage during transport and installation.

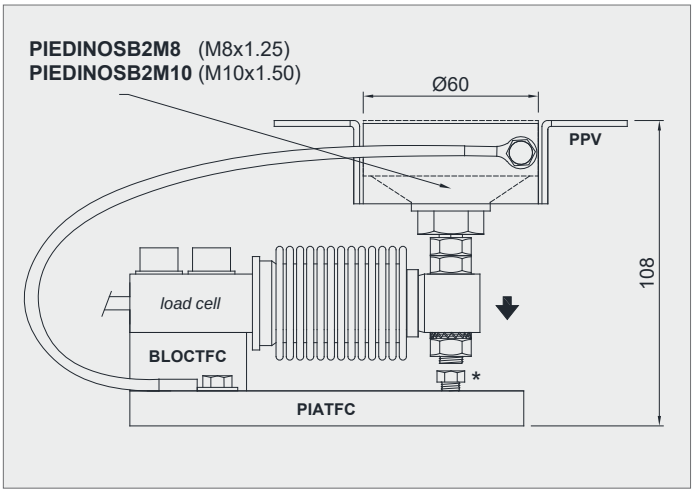
TFCPV

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

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.



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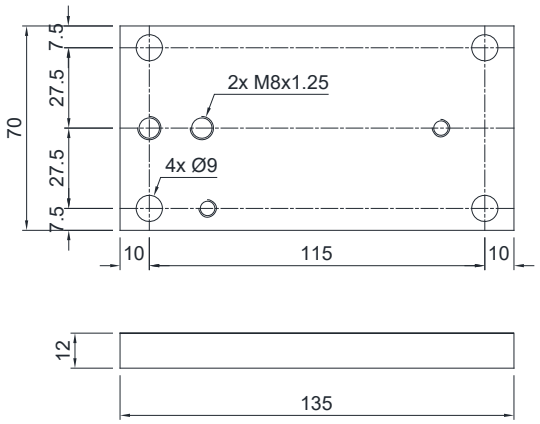

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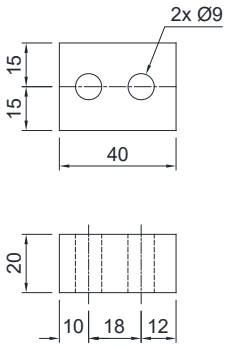
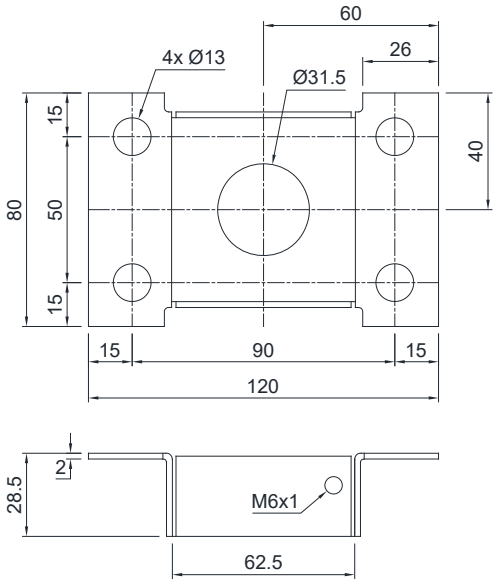
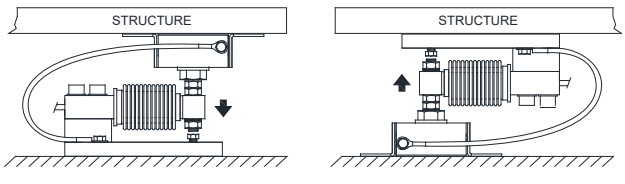


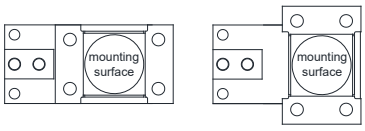
PPV



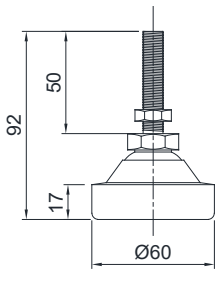
FIXING TO THE WEIGHED STRUCTURE



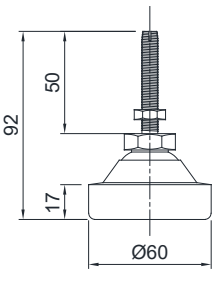
POSSIBLE UPPER PLATE POSITIONS



PIEDINOSB2M10
M10x1.50



PIEDINOSB2M8
M8x1.25



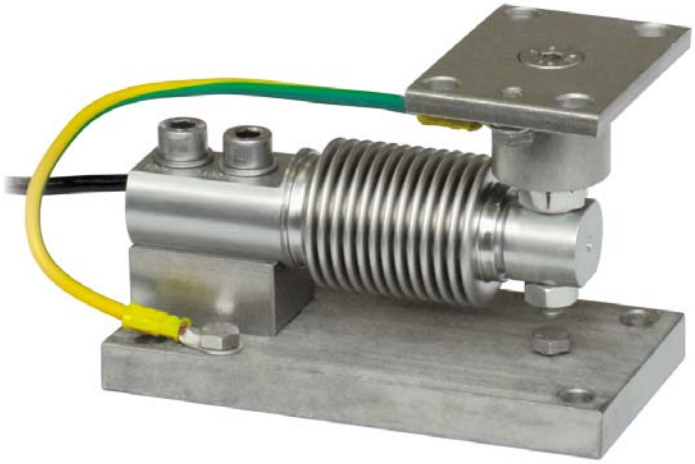
TFCGP

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod cells: FCK - FCOL

Up to 300 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
300	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

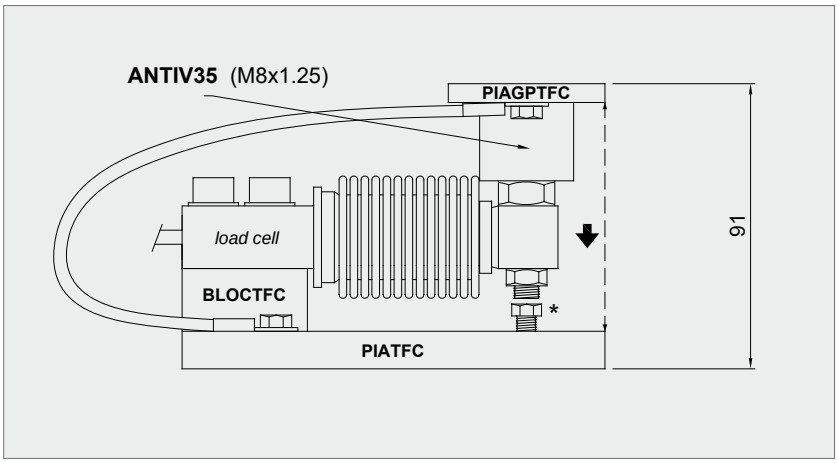
TFCGP

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

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.



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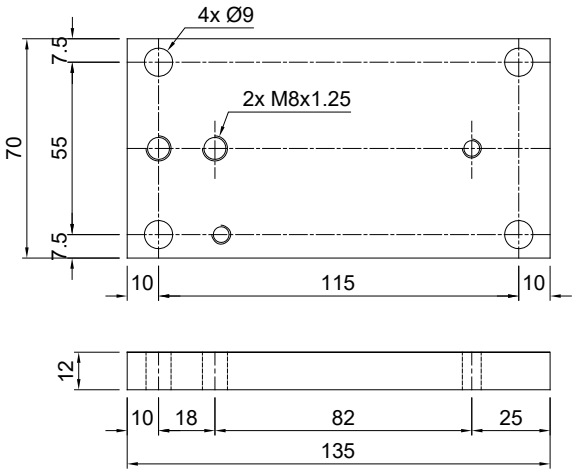

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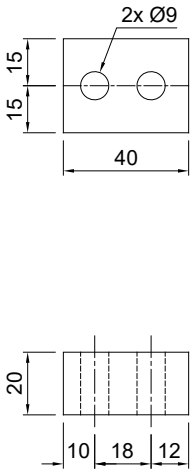

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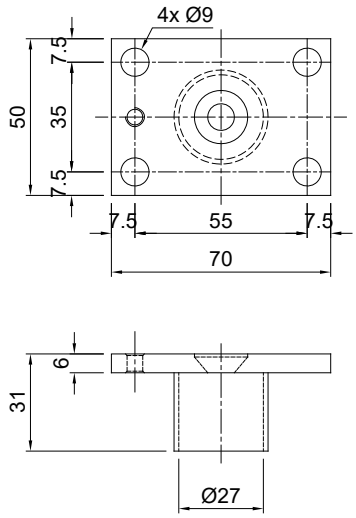
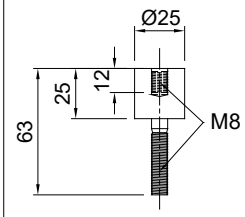
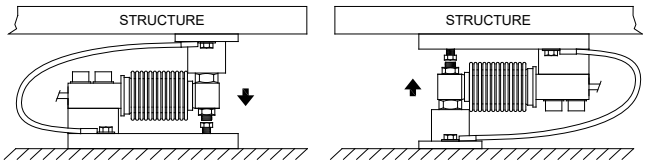


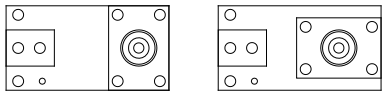
ANTIV35
M8x1.25



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



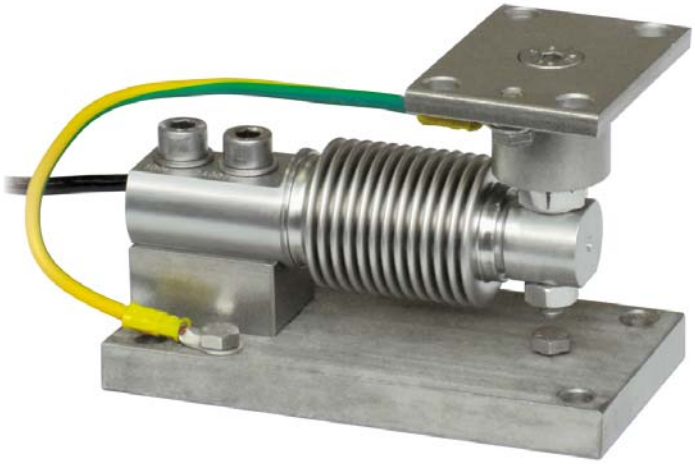
TFCGP

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod cells: FCK - FCOL

Up to 300 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
300	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

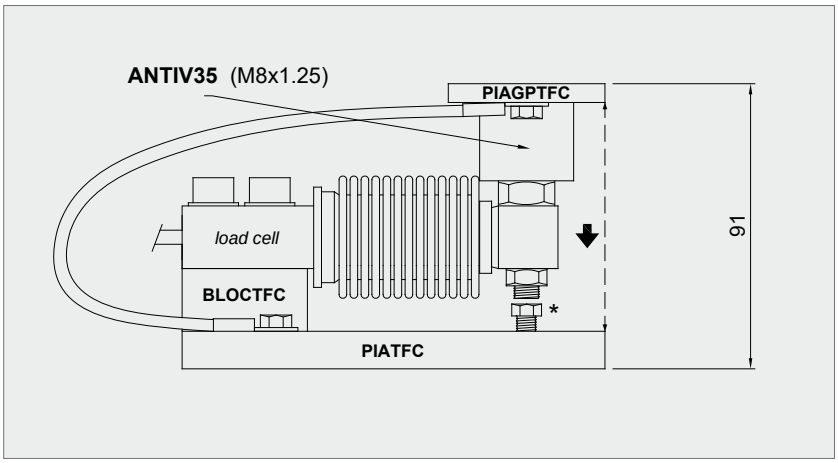
TFCGP

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

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.



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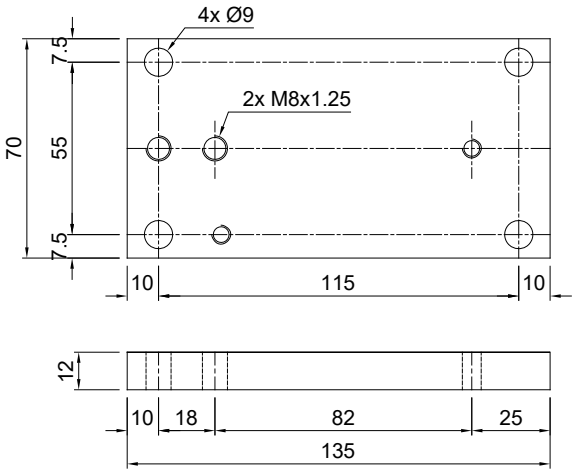

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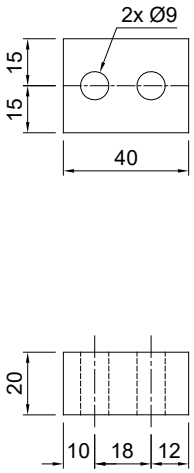

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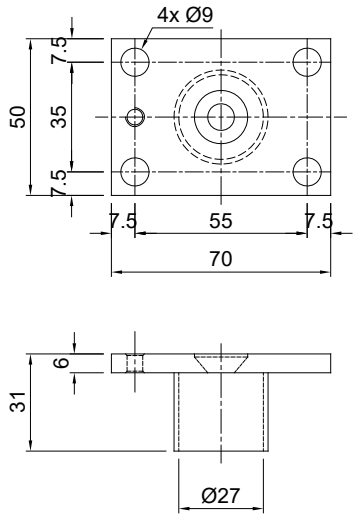
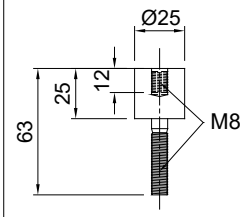
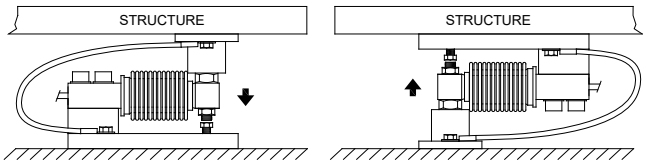


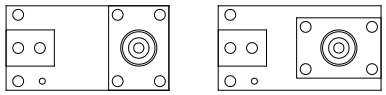
ANTIV35
M8x1.25



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



TFAST

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod cells: **FCAL - FCAX**

Up to 500 kg application range

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
500	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.

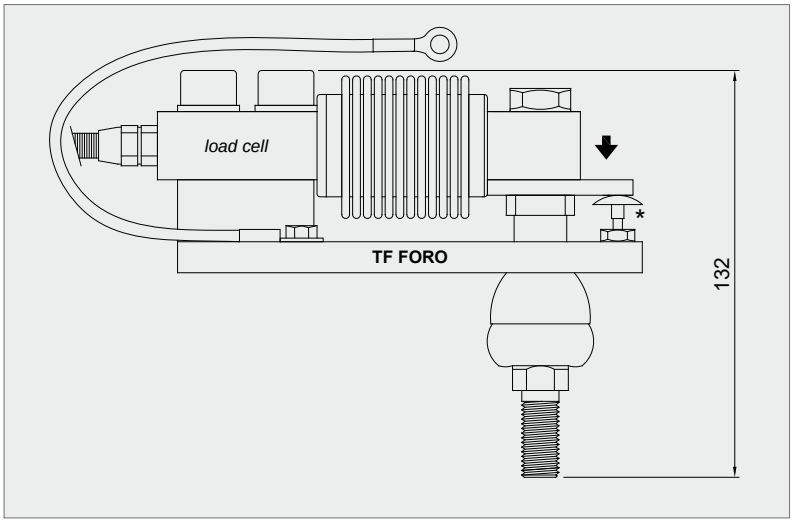
TFAST

MOUNTING KIT for BENDING BEAM load cells

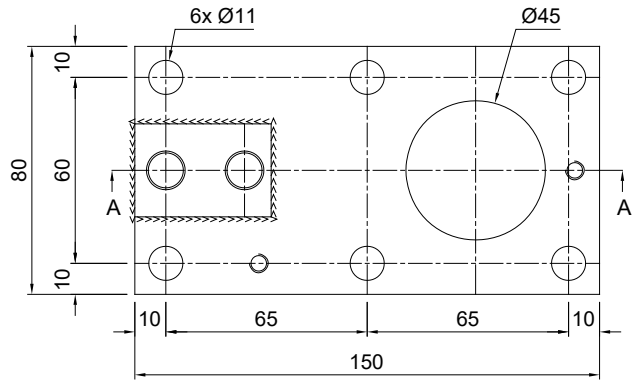
LAUMAS®

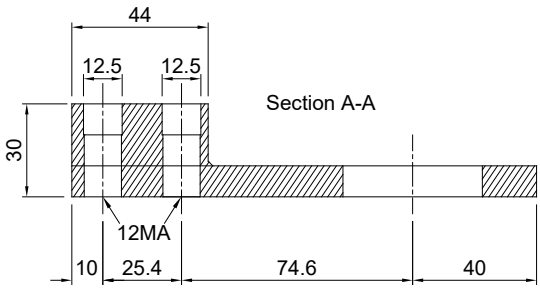
DIMENSIONS AND TECHNICAL SPECIFICATIONS

- 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.

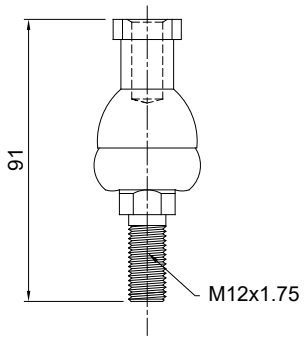


TF FORO





Tension ball joint



Rev. 0.0

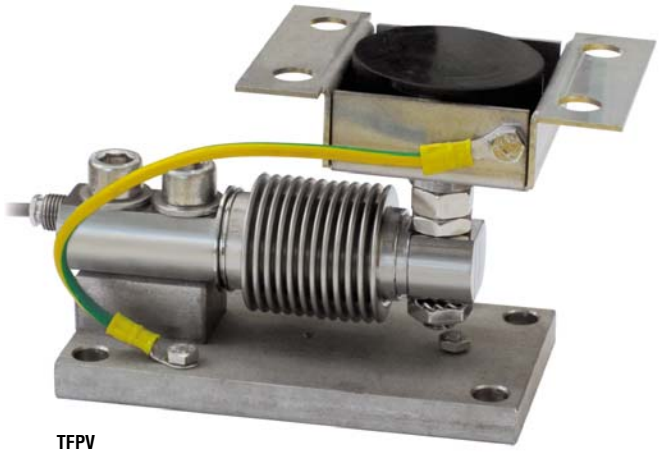
TFPV

MOUNTING KIT for BENDING BEAM load cells

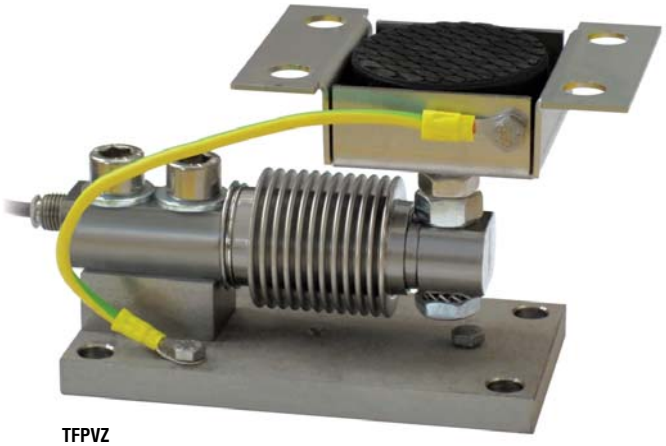
LAUMAS®

Series laod 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).
- Lower plate and block in AISI 304 stainless steel.
- Constraint against lateral forces and anti-tilt in (TFPV, TFPV2000) AISI 304 stainless steel or (TFPVZ) galvanized steel self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Partial height adjustment.
- Locking screw to avoid damage during transport and installation.

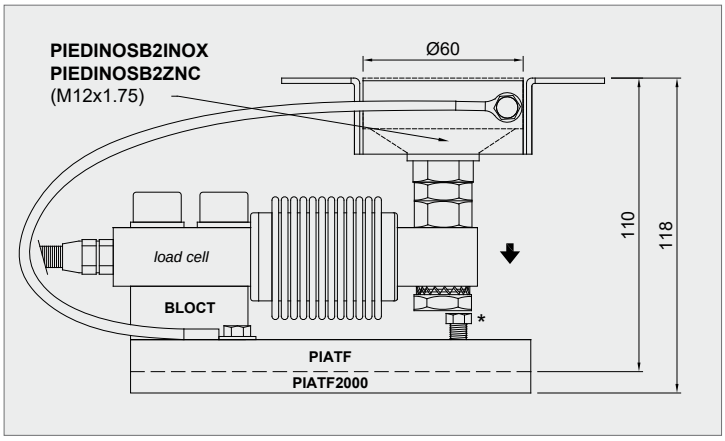
TFPV

MOUNTING KIT for BENDING BEAM load cells

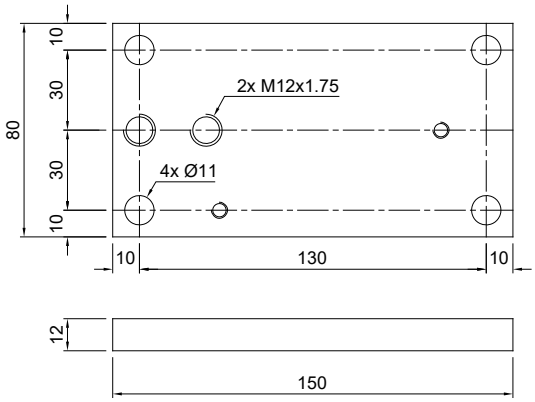
LAUMAS®

DIMENSIONS AND TECHNICAL SPECIFICATIONS

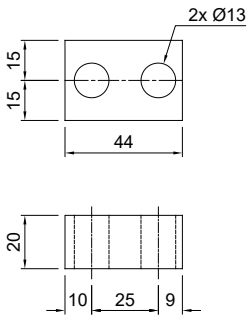
- During the transport and installation the lock (*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you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



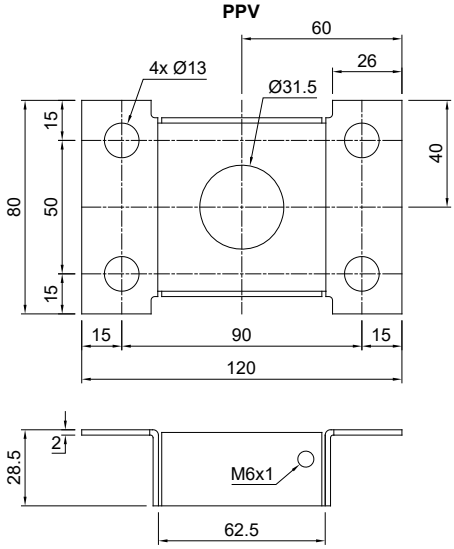
PIATF



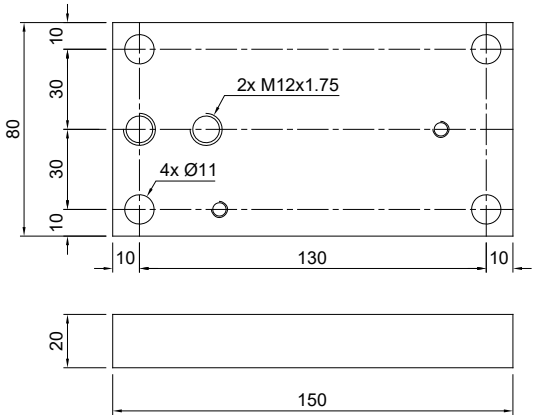
BLOCT



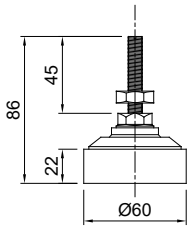
PPV



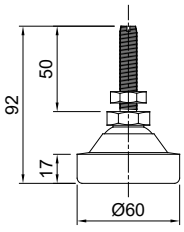
PIATF2000



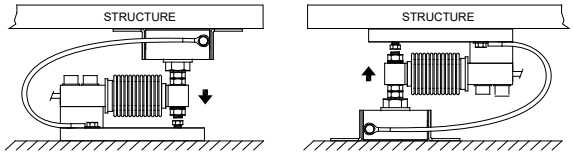
PIEDINOSB2ZNC
M12x1.75



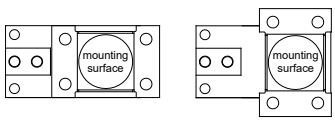
PIEDINOSB2INOX
M12x1.75



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



Rev. 0.0

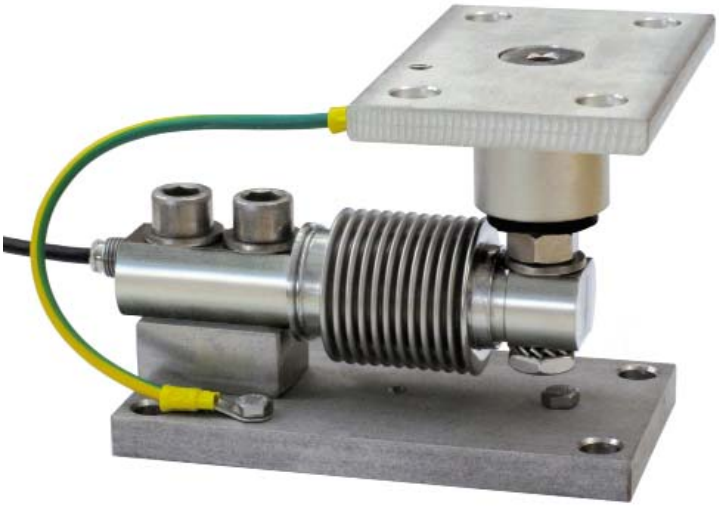
TFGP

MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

Series laod cells: **FCAL - FCAX**

Up to 1500 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
500	FCAL - FCAX	2.3	TFGP
1500	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

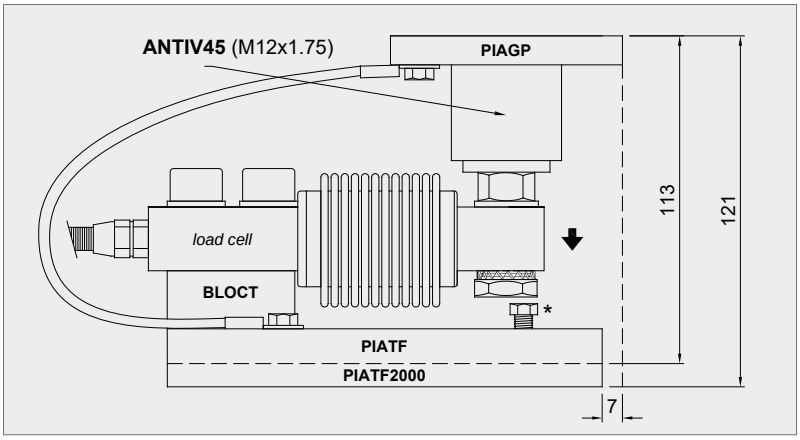
TFGP

MOUNTING KIT for BENDING BEAM load cells

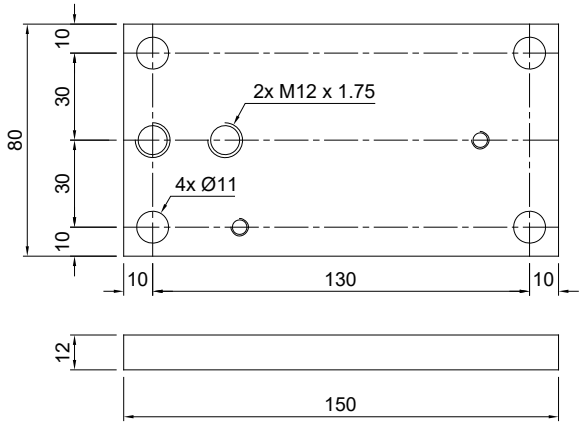
LAUMAS®

DIMENSIONS AND TECHNICAL SPECIFICATIONS

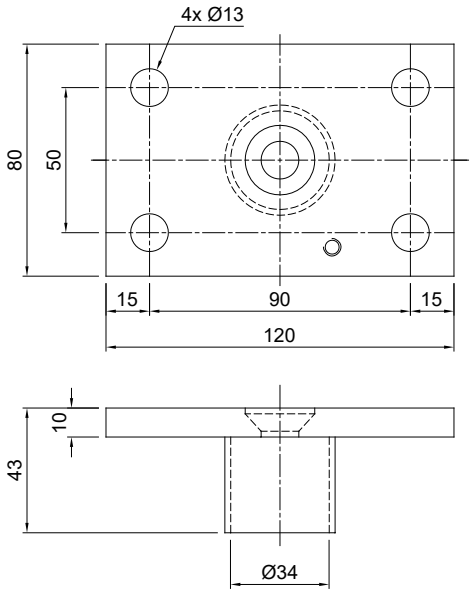
- During the transport and installation the lock (*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit,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



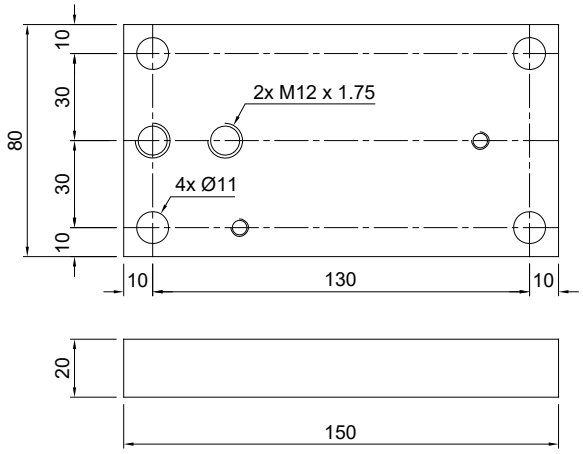
PIATF



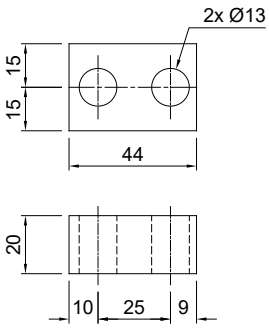
PIAGP



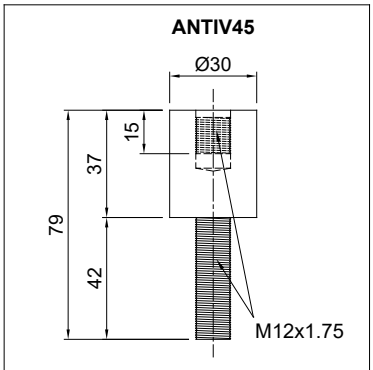
PIATF2000



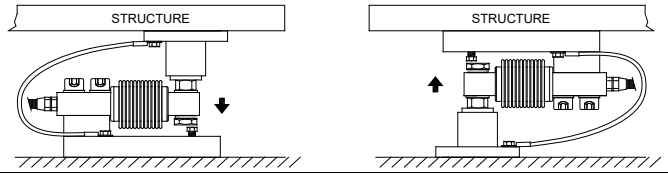
BLOCT



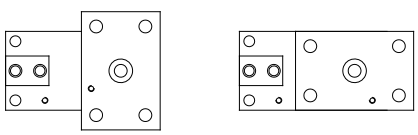
ANTIV45



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



ISO 9001
ISO 14001

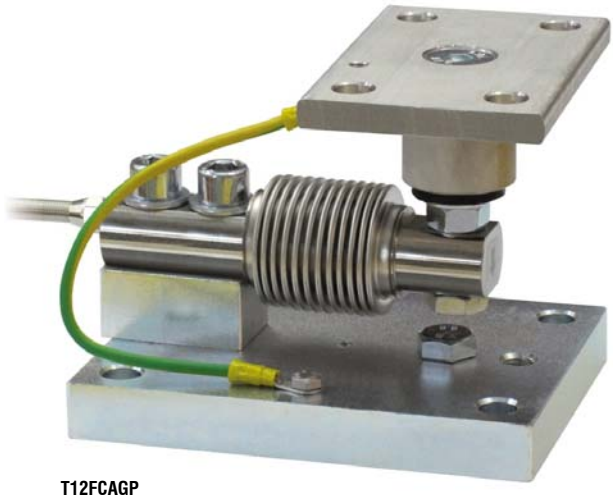
T12

MOUNTING KIT for BENDING BEAM load cells

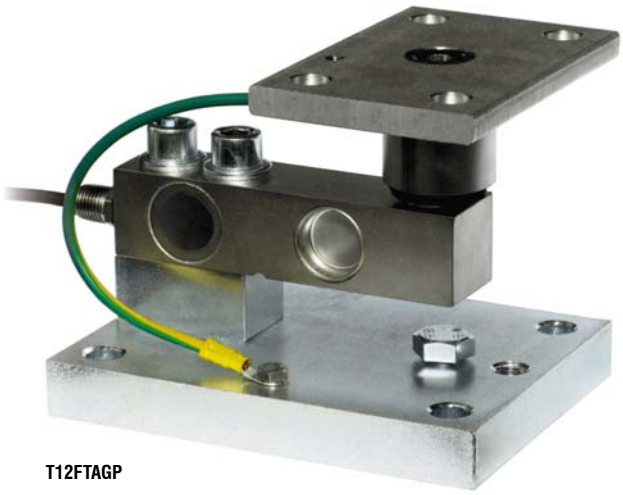
LAUMAS®

Series laod 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
1500	FCAL - FCAX	4	T12FCAGP
2000	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

T12

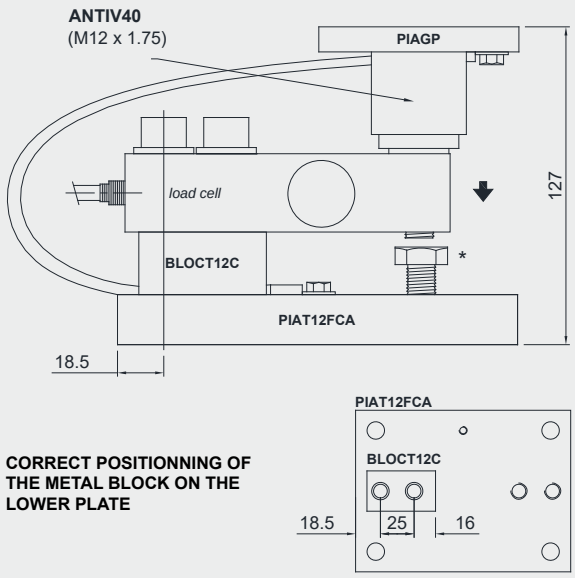
MOUNTING KIT for BENDING BEAM load cells

LAUMAS®

DIMENSIONS AND TECHNICAL SPECIFICATIONS

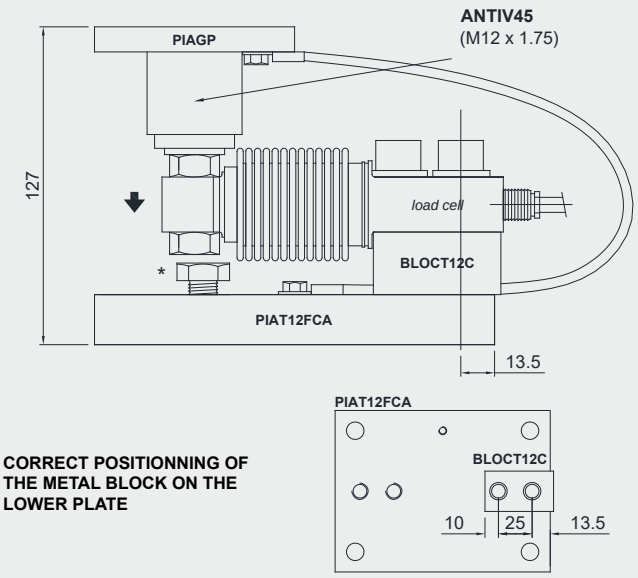
- During the transport and installation the lock (*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the lower plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit,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

for load cell: ***FTK - FTKL - FTL - FTP - FT-P - FTZ*** *(max 2000 kg)*



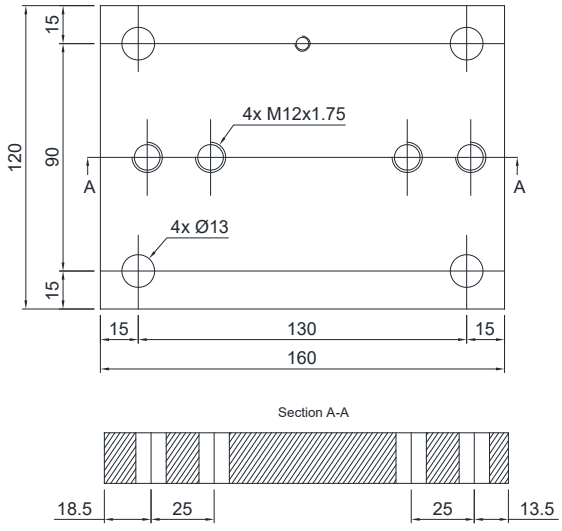
CORRECT POSITIONNING OF THE METAL BLOCK ON THE LOWER PLATE

for load cell: ***FCAL - FCAX*** *(max 1500 kg)*

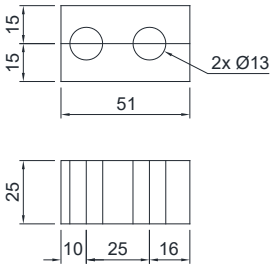


CORRECT POSITIONNING OF THE METAL BLOCK ON THE LOWER PLATE

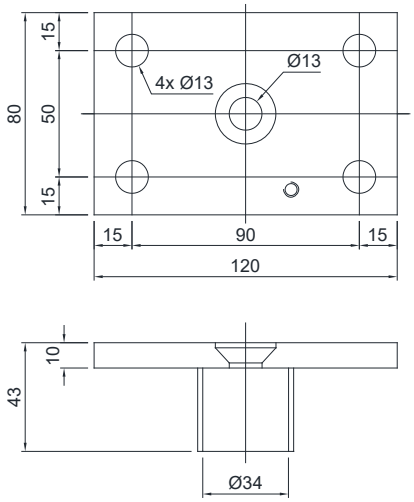
PIAT12FCA



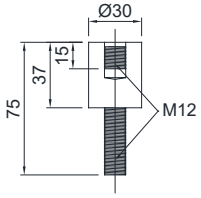
BLOCT12C



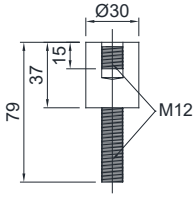
PIAGP



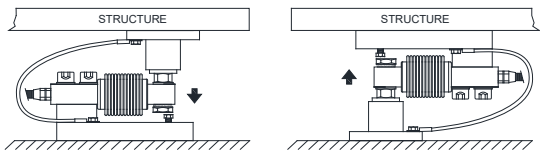
ANTIV40
M12 x 1.75 mm



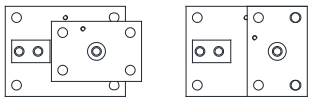
ANTIV45
M12 x 1.75 mm



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



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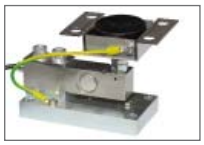
ISO 9001
ISO 14001

A2 - MOUNTING KITS

PRODUCTS CATALOG

LAUMAS®

		APPLICATION RANGE	FOR LOAD CELLS	PAGE
	A2.3	**for SHEAR BEAM load cells**		
	**TF500/2000**	up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	**156**
	**PV - PVZ**	up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	**158**
	**TFPS2000**	up to 2000 kg	FTL, FTK, FTKL, FTP, FT-P, FTZ	**160**
	**PV80 PV60Z**	up to 5000 kg	FTK, FTP, FTZ	**162**
	**PS**	up to 10000 kg	FTK, FTP, FTZ	**164**

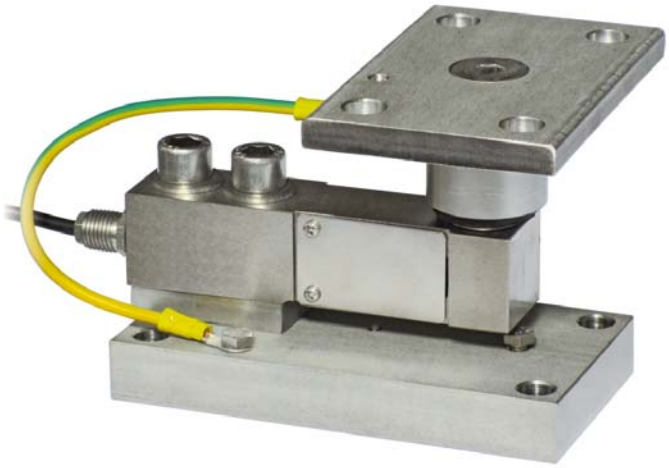
TF500/2000

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

Series laod 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).
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

TF500/2000

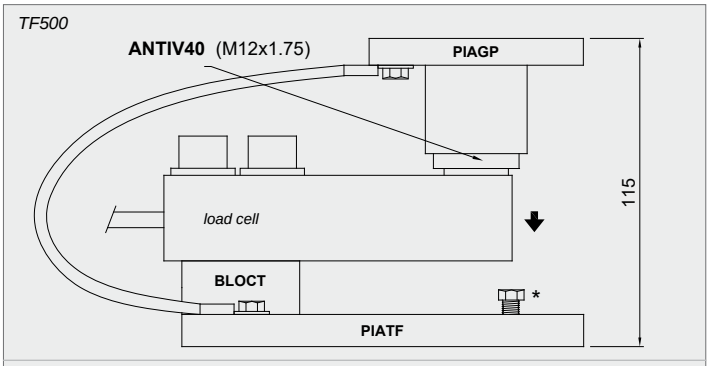
MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

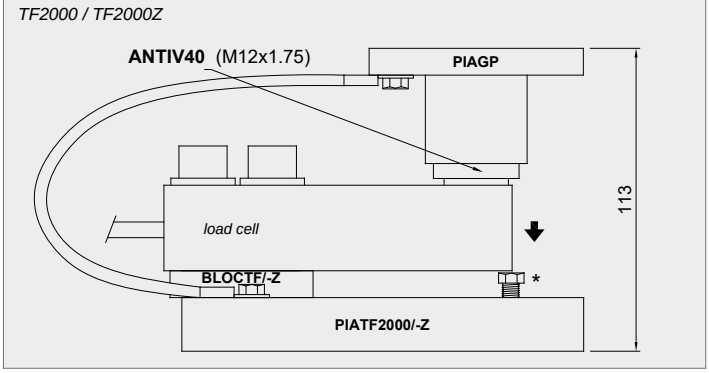
DIMENSIONS AND TECHNICAL SPECIFICATIONS

- 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.

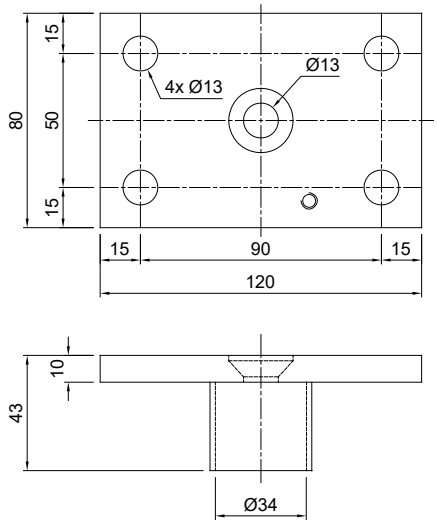
TF500



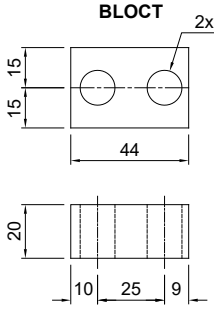
TF2000 / TF2000Z



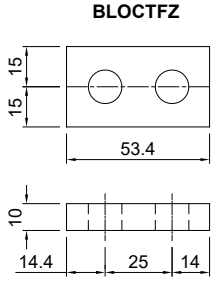
PIAGP



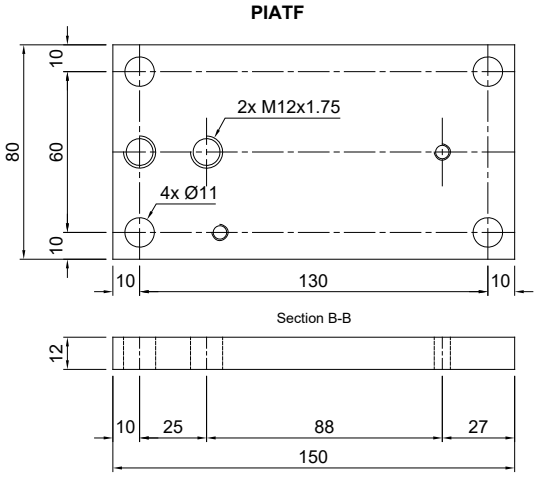
BLOCT



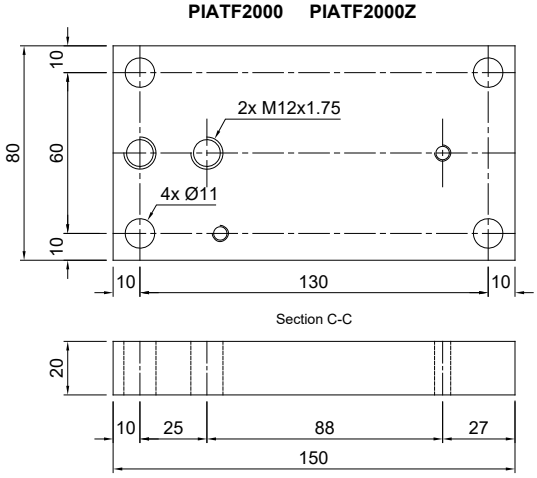
BLOCTF
BLOCTFZ



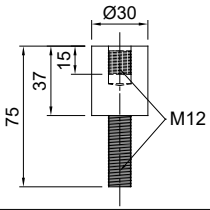
PIATF



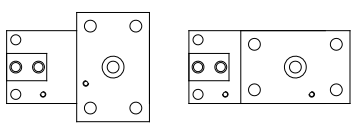
PIATF2000 PIATF2000Z



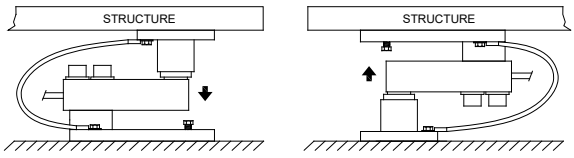
ANTIV40 (M12x1.75)



POSSIBLE UPPER PLATE POSITIONS



FIXING TO THE WEIGHED STRUCTURE



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ISO 9001
ISO 14001

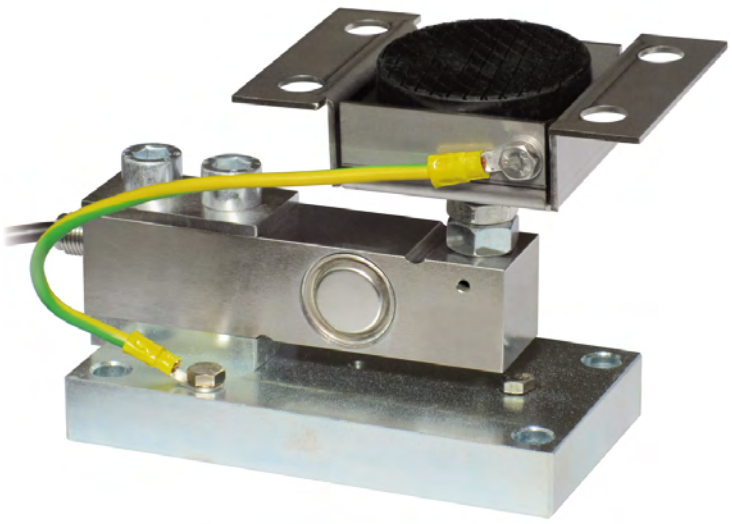
PV - PVZ

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

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

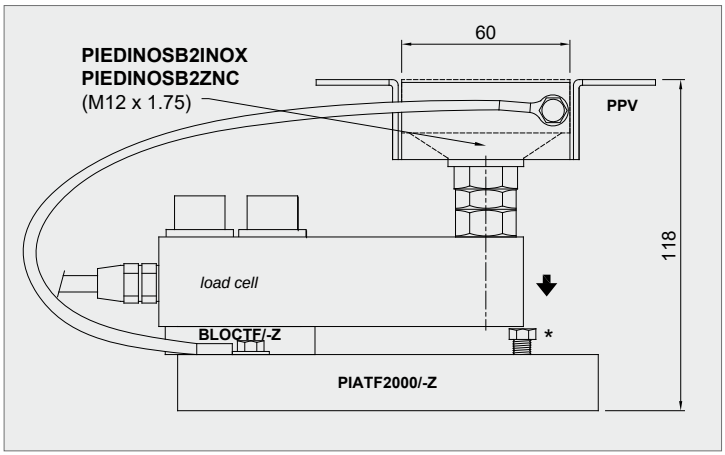
PV - PVZ

MOUNTING KIT for SHEAR BEAM load cells

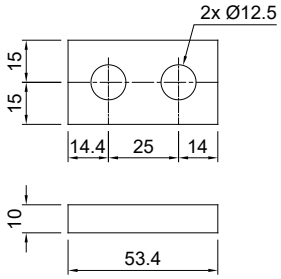
LAUMAS®

DIMENSIONS AND TECHNICAL SPECIFICATIONS

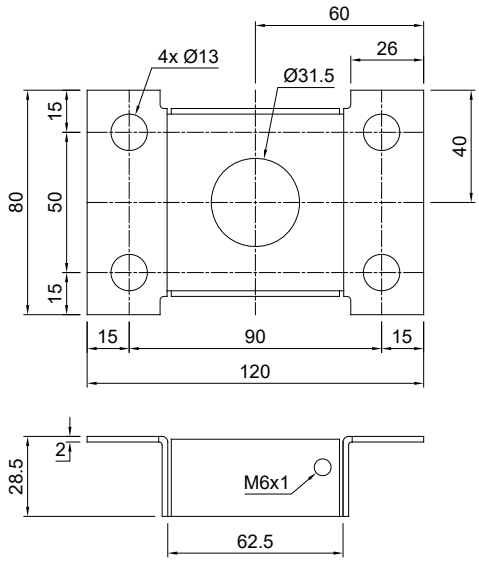
- During the transport and installation the lock (*) must touch under the load cell. After installation, move the lock away from the load cell.
- Interconnect the plates to the earthing.
- In case of structure with four-point support, if one-point does not touch the upper part of the mounting kit, you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



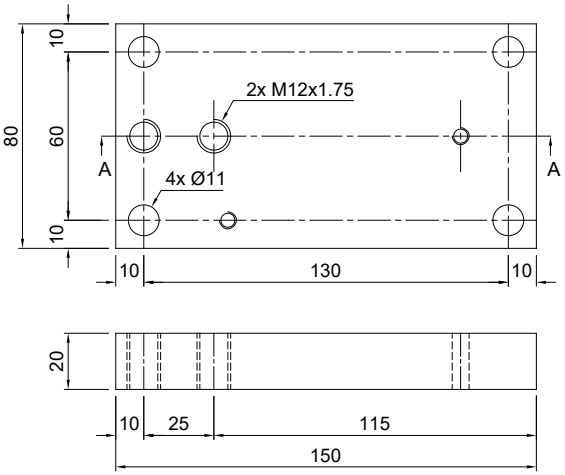
BLOCTF
BLOCTFZ



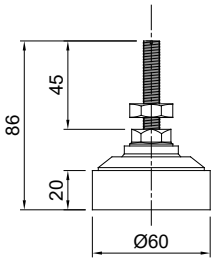
PPV



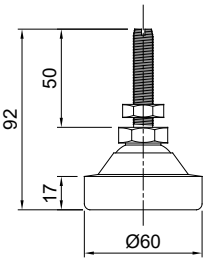
PIATF2000
PIATF2000Z



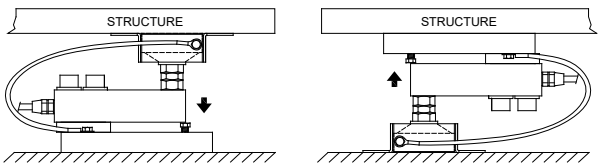
PIEDINOSB2ZNC
M12x1.75



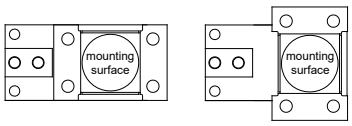
PIEDINOSB2INOX
M12x1.75



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



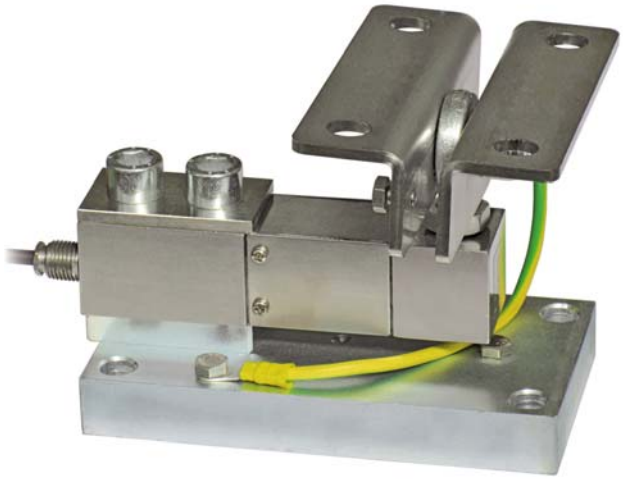
TFPS2000

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

Series laod 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	TFPS2000

Load cell not included.

DESCRIPTION

- AISI 304 stainless steel upper plate.
- Lower plate and block in galvanized steel.
- Constraint against lateral forces and anti-tilt by ball-and-socket joint.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

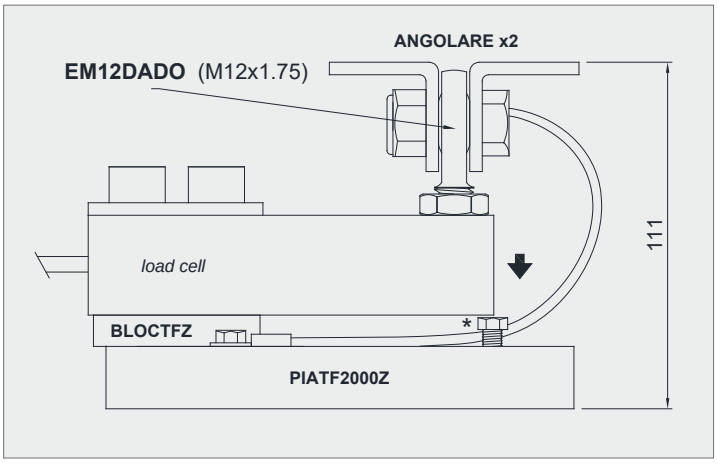
TFPS2000

MOUNTING KIT for SHEAR BEAM load cells

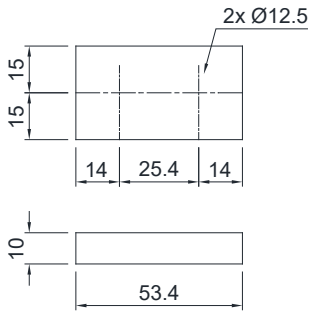
LAUMAS®

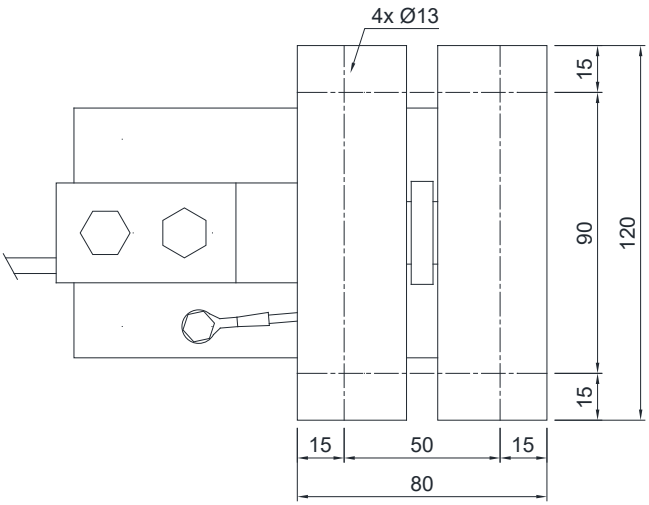
DIMENSIONS AND TECHNICAL SPECIFICATIONS

- 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.

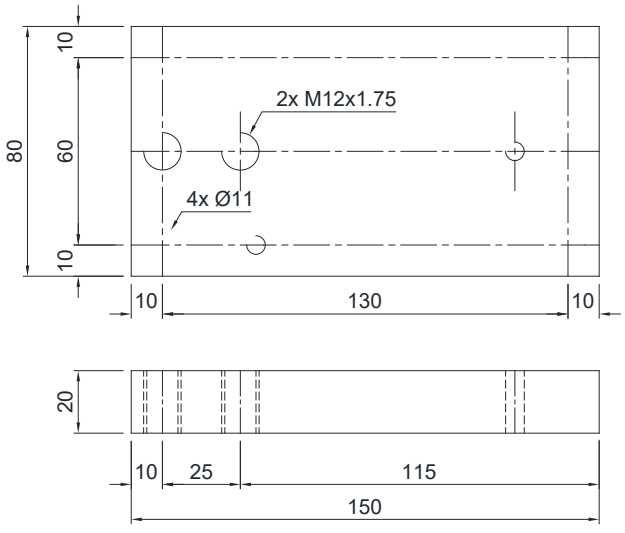


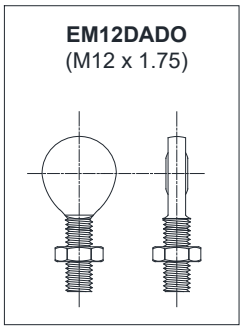
BLOCTFZ





PIATF2000Z





Rev. 0.0

PV80 - PV60Z

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

Series laod cells: **FTP - FTZ - FTK**

Up to 5000 kg application range

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
5000	FTP - FTZ	6.9	PV80
5000	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 in stainless steel self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Adjustable height.
- Locking screw to avoid damage during transport and installation.

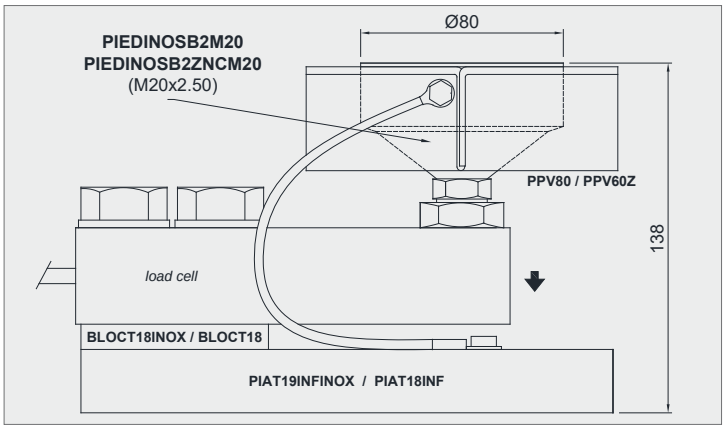
PV80 - PV60Z

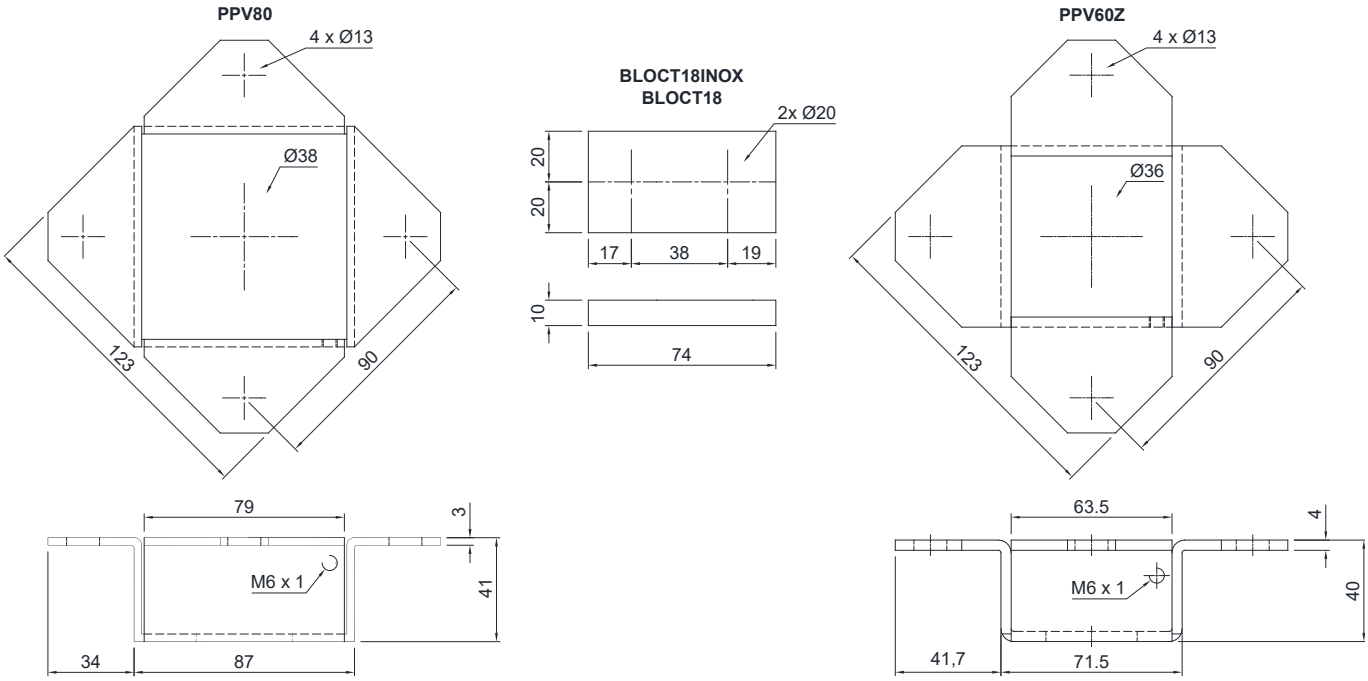
MOUNTING KIT for SHEAR BEAM load cells

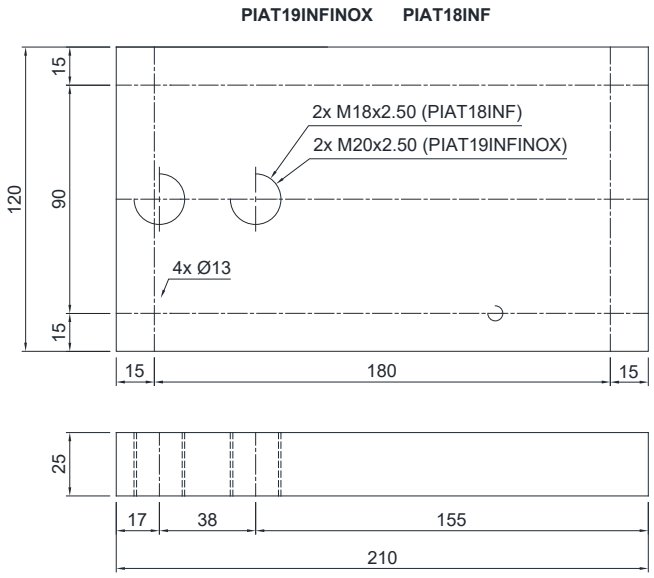
LAUMAS®

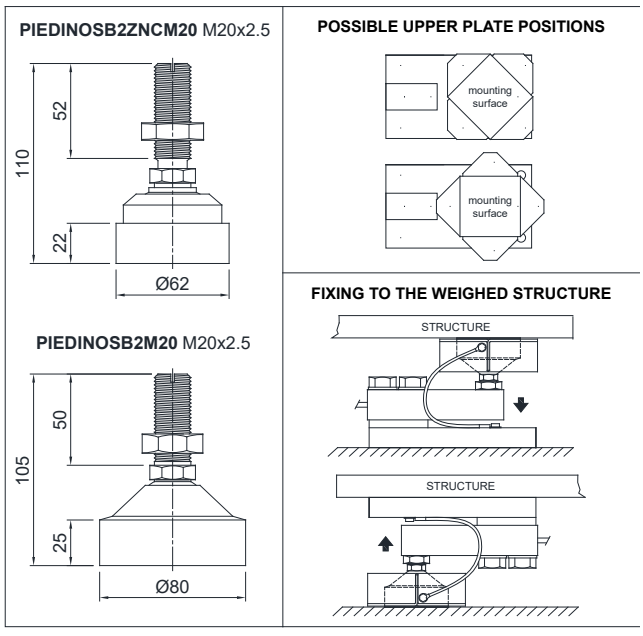
DIMENSIONS AND TECHNICAL SPECIFICATIONS

- 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.









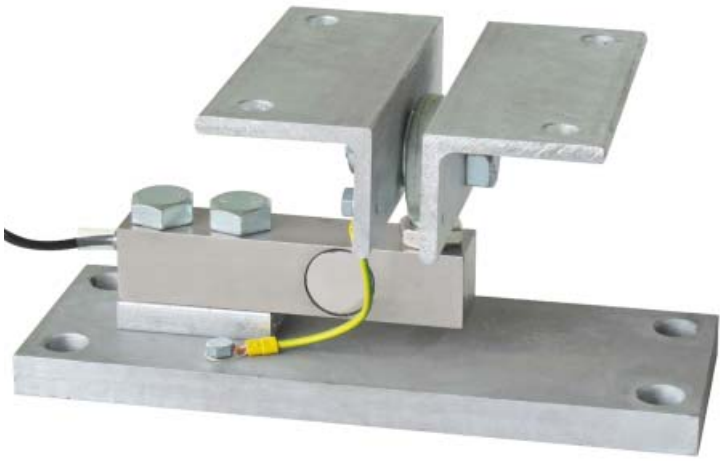
PS

MOUNTING KIT for SHEAR BEAM load cells

LAUMAS®

Series laod cells: FTP - FTZ - FTK

Up to 10000 kg application range



MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
5000	FTK - FTP - FTZ	10.5	PS
10000	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.
- Misalignment compensation of the support plates structure.
- Adjustable height.

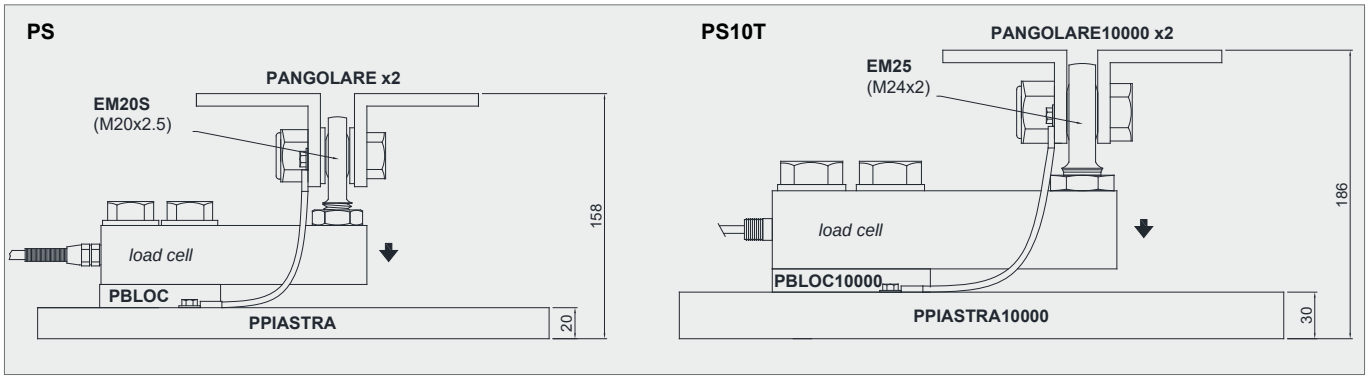
PS

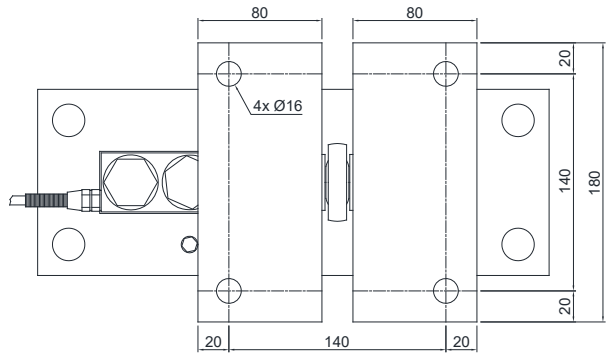
MOUNTING KIT for SHEAR BEAM load cells

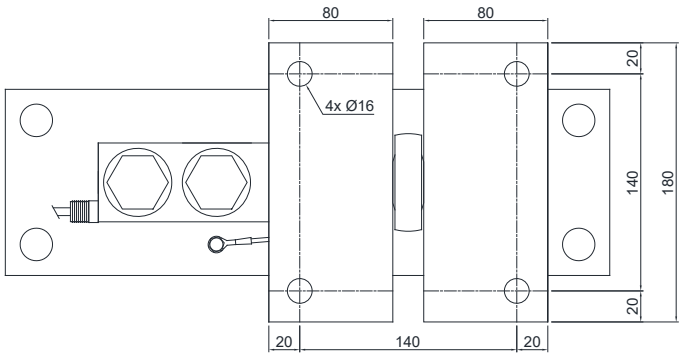
LAUMAS®

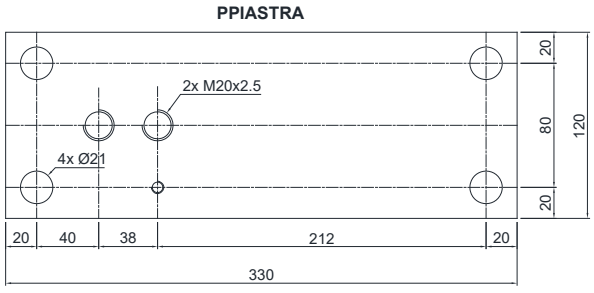
DIMENSIONS AND TECHNICAL SPECIFICATIONS

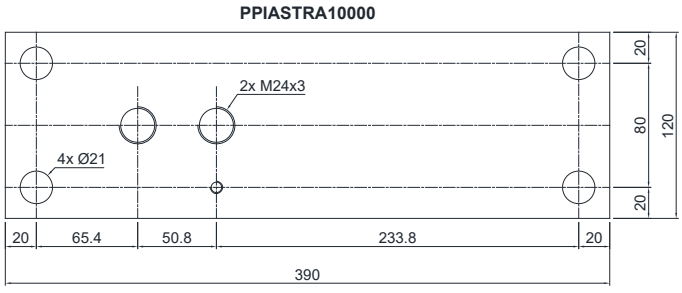
- Interconnect the plates to the earthing.
- In case of structure with four-point support, proceed to the height adjustment, if one-point does not touch the upper part of the mounting kit.

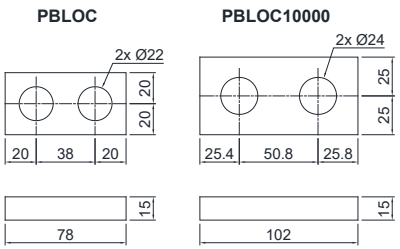


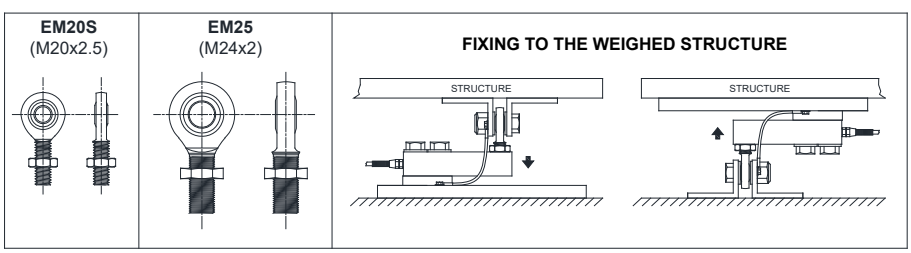






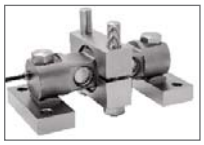






The Company reserves the right to make changes to the technical data, drawings and images without notice.

ISO 9001
ISO 14001

	APPLICATION RANGE	FOR LOAD CELLS	PAGE
A2.4	**for DOUBLE SHEAR BEAM / COLUMN load cells**		
 **VCOKDTL**	up to 50000 kg	DTL, COL, COK	**168**
 **VDTX**	up to 60klb/27 ton	DTX	**170**

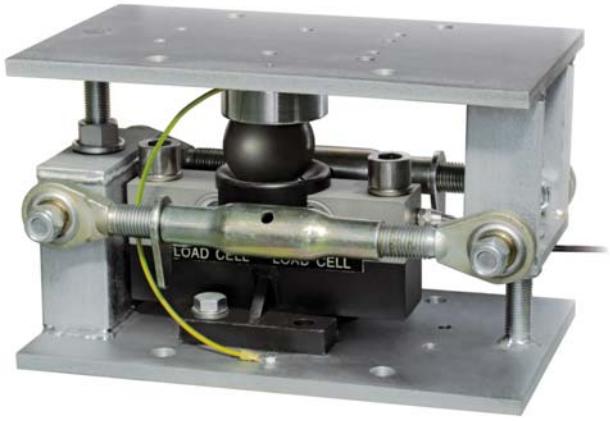
VCOKDTL

MOUNTING KIT for DOUBLE SHEAR BEAM / COLUMN load cells

LAUMAS®

Series laod 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
50000	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.

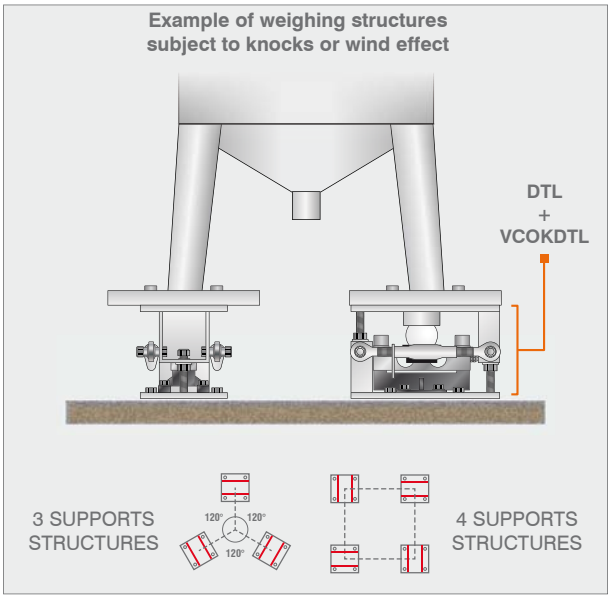
VCOKDTL

MOUNTING KIT for DOUBLE SHEAR BEAM / COLUMN load cells

LAUMAS®

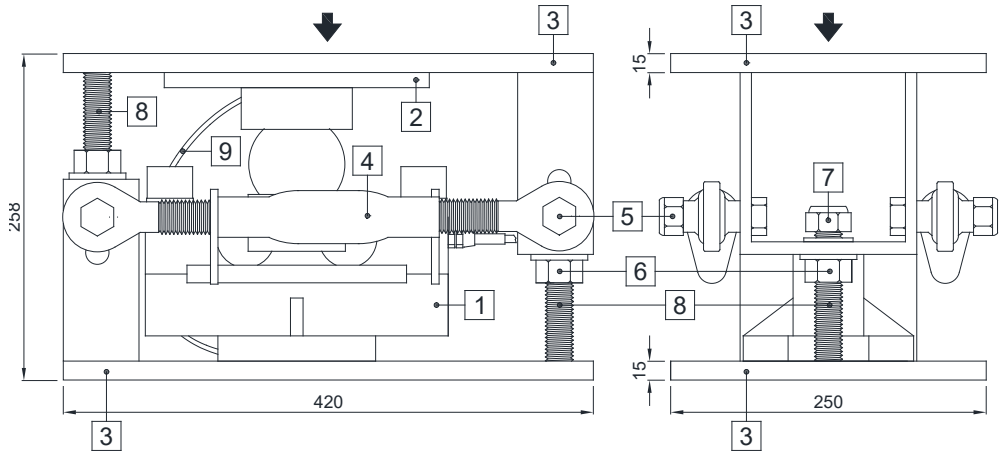
DIMENSIONS AND TECHNICAL SPECIFICATIONS

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):

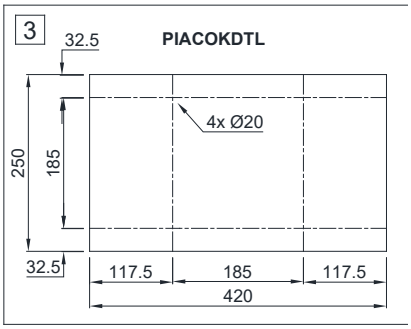
- Install the weighed system using only the mounting kit without the load cell [1] and inserting in its place a piece of pipe (Ø40x220 mm): unscrewing the nuts [5] and take off one of the two threaded rods [4] and the plate [2].
- To finish the installation (weldings, etc..), take off the piece of pipe 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.

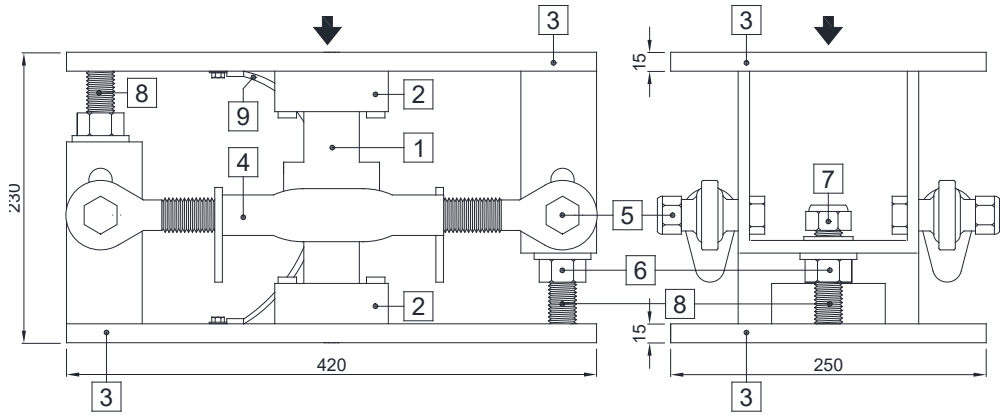


1. Load cell.
2. Galvanized steel plate (PIATTODTL).
3. Galvanized steel upper and lower plates (PIACOKDTL).
4. Galvanized steel turnbuckle with horizontal constrainer function (TENDITORE300).
5. Self-locking nut Ø18.
6. Nut Ø22 to be used as jack.
7. Anti-tilt self-locking nut Ø22.
8. Threaded rod Ø22.
9. 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 (Ø44x152 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.





1. Load cell.
2. Upper and lower bases.
3. Galvanized steel upper and lower plates (PIACOKDTL).
4. Galvanized steel turnbuckle with horizontal constrainer function (TENDITORE300).
5. Self-locking nut Ø18.
6. Nut Ø22 to be used as jack.
7. Anti-tilt self-locking nut Ø22.
8. Threaded rod Ø22.
9. Copper wire for earthing connection.

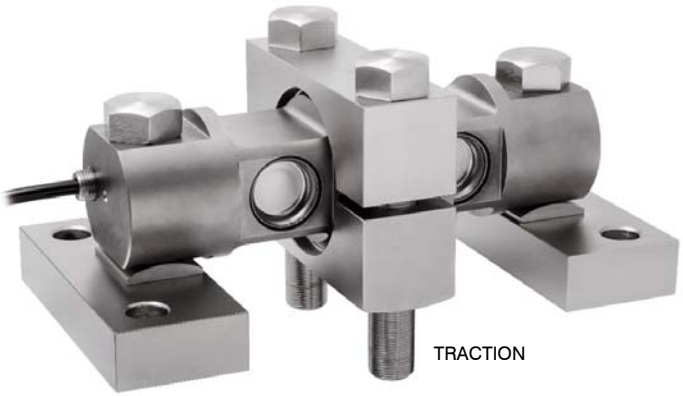
VDTX

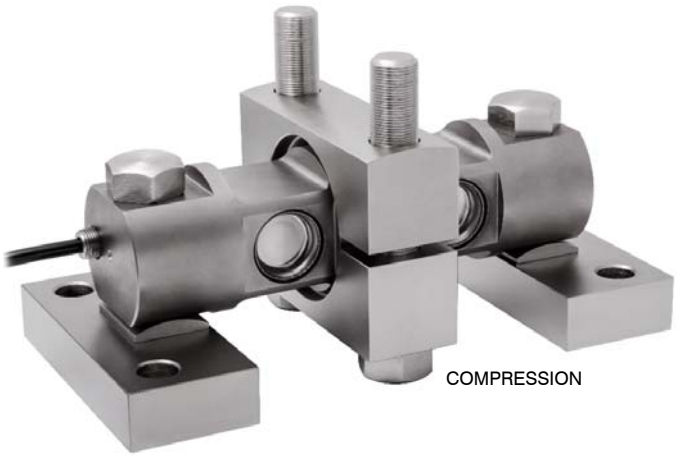
MOUNTING KIT for DOUBLE SHEAR BEAM load cells

LAUMAS®

Series laod cells: **DTX**

Up to 60 klb/27 ton application range





DESCRIPTION

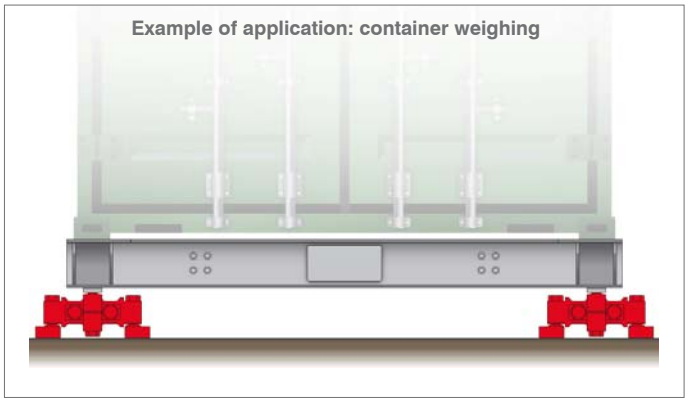
- Nickel-plated steel alloy mounting kit for rigid attachment of the load cell.
- It prevents horizontal movement.

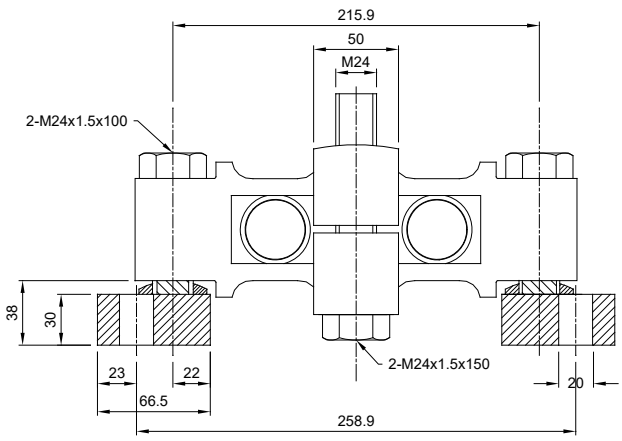
MAX STATIC LOAD klb / c.a. ton	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
60 klb / 27 ton	DTX 30 klb÷60 klb	16.9	VDTX

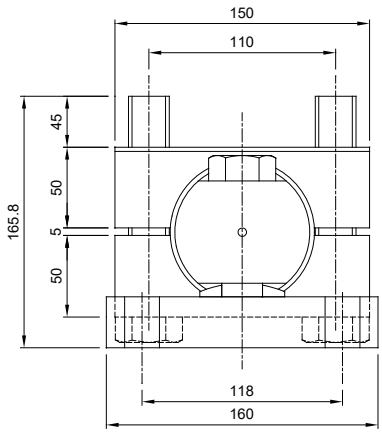
Load cell not included.

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.







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ISO 9001
ISO 14001

A2 - MOUNTING KITS

PRODUCTS CATALOG

LAUMAS®

		APPLICATION RANGE	FOR LOAD CELLS	PAGE
	A2.5	**for COMPRESSION-LOW PROFILE load cells**		
	**PVCLS**	up to 2000 kg	CLS	**173**
	**PV80CLS**	up to 5000 kg	CLS 5000 kg	**175**
	**PSCLS**	up to 5000 kg	CLS 1000 - 2000 kg CLS 5000 kg	**177**
	**V10000/ 10275**	up to 15000 kg	CBL, CBX	**179**
	**V15000/ 100000**	up to 100000 kg	CBL, CBX	**181**

PVCLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series laod cells: CLS

Up to 2000 kg application range

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
2000	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 in stainless steel self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Adjustable height.

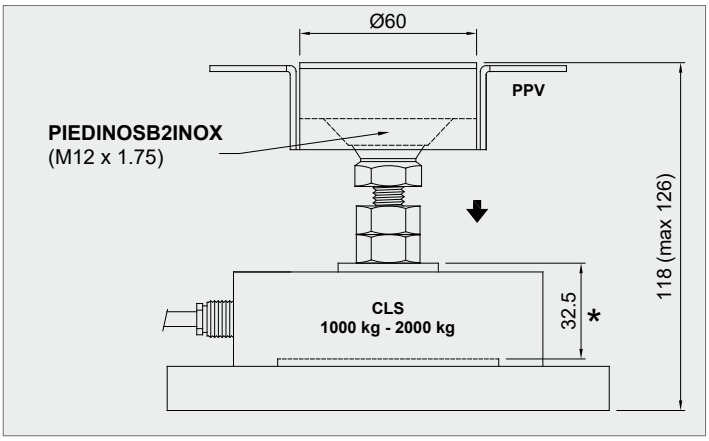
PVCLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

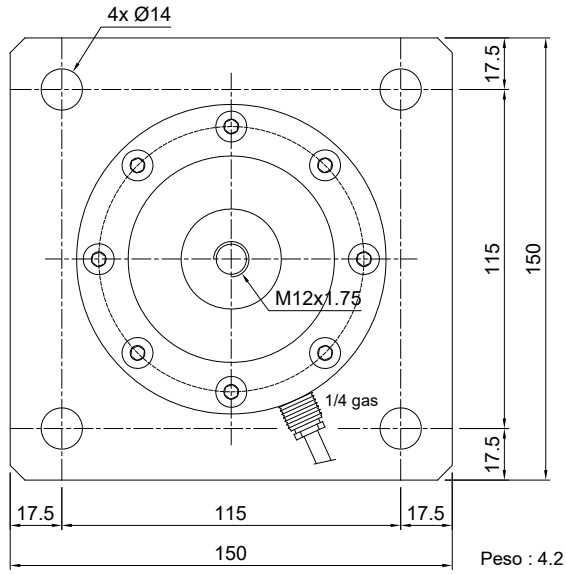
LAUMAS®

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.

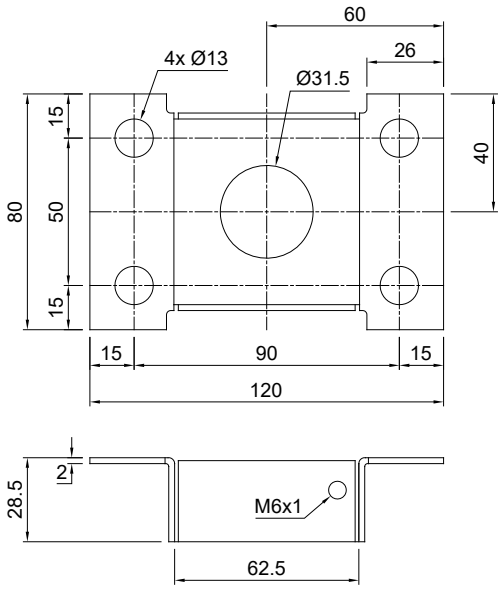


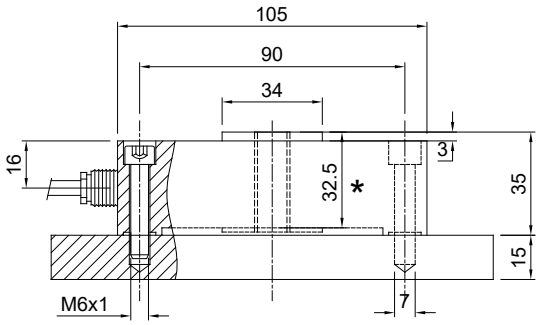
CLS
1000 kg - 2000 kg



Peso : 4.2 kg

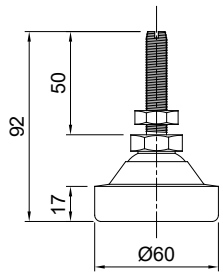
PPV



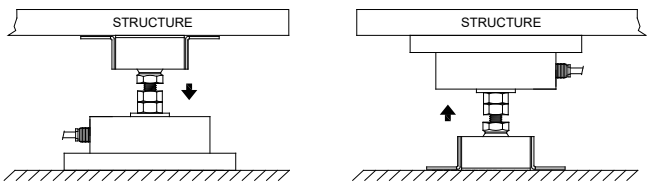


* WARNING!
Max dimension to insert the bolt to allow the cell to perform properly

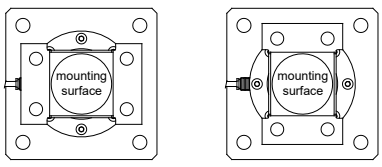
PIEDINOSB2INOX
M12x1.75



FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



ISO 9001
ISO 14001

PV80CLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series laod cells: **CLS**

Up to 5000 kg application range

MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
5000	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 in stainless steel self-centring joint foot.
- Misalignment compensation of the support plates structure.
- Adjustable height.

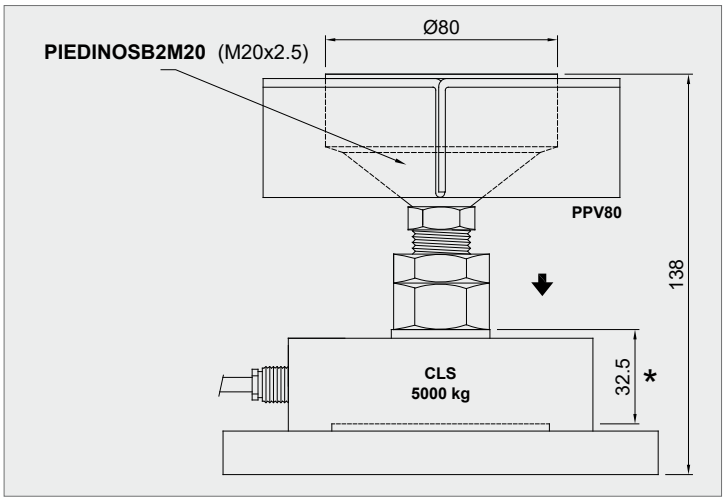
PV80CLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

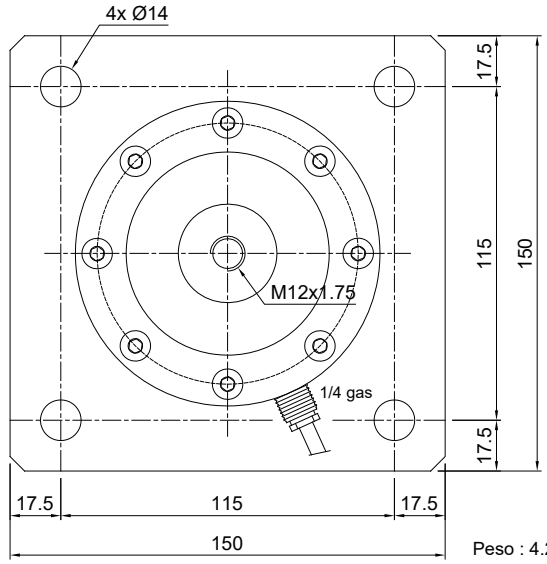
LAUMAS®

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.

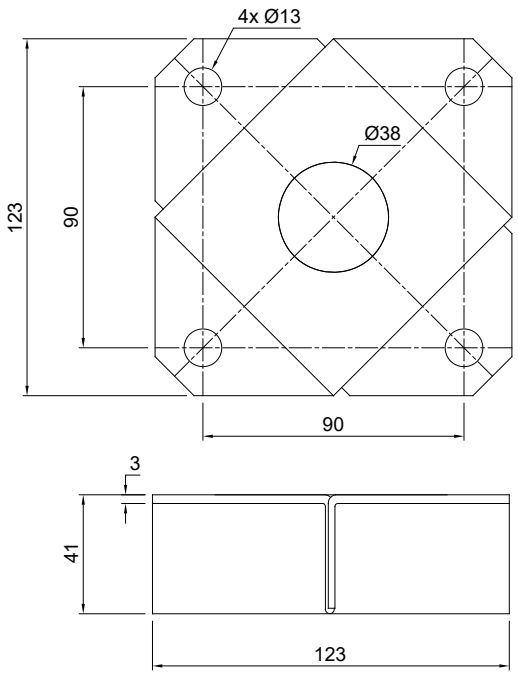


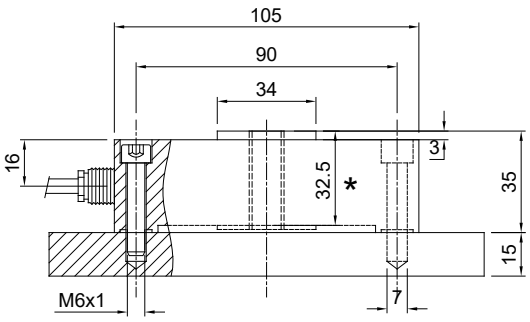
CLS
1000 kg - 2000 kg



Peso : 4.2 kg

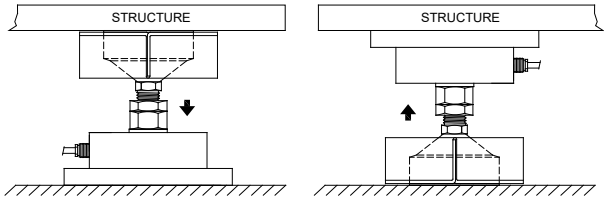
PPV80



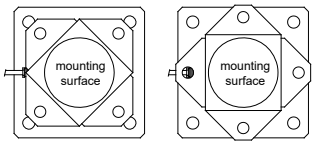


* WARNING!
Max dimension to insert the bolt to allow the cell to perform properly

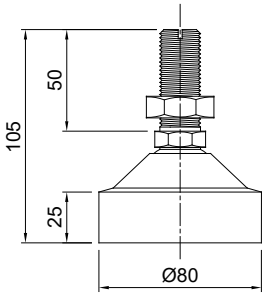
FIXING TO THE WEIGHED STRUCTURE



POSSIBLE UPPER PLATE POSITIONS



PIEDINOSB2M20
M20x2.5



ISO 9001
ISO 14001

PSCLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series laod cells: **CLS**

Up to 5000 kg application range

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

Load cell not included.

DESCRIPTION

- AISI 304 stainless steel or hot worked galvanized upper plate.
- AISI 304 stainless steel lower plate.
- Constraint against lateral forces and anti-tilt by ball-and-socket joint
- Misalignment compensation of the support plates structure.
- Adjustable height.

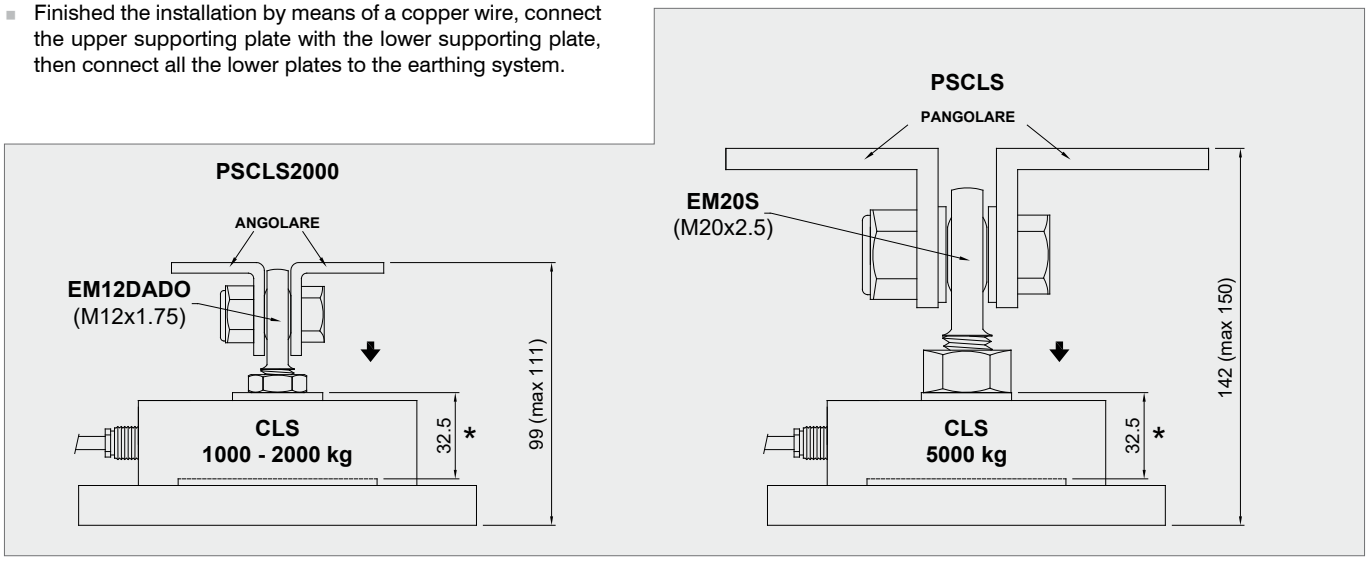
PSCLS

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

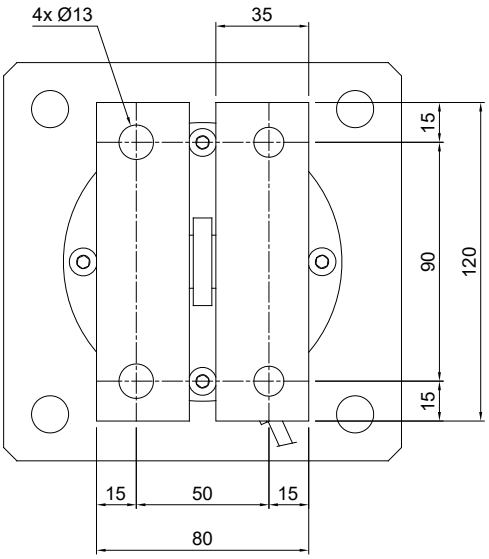
LAUMAS®

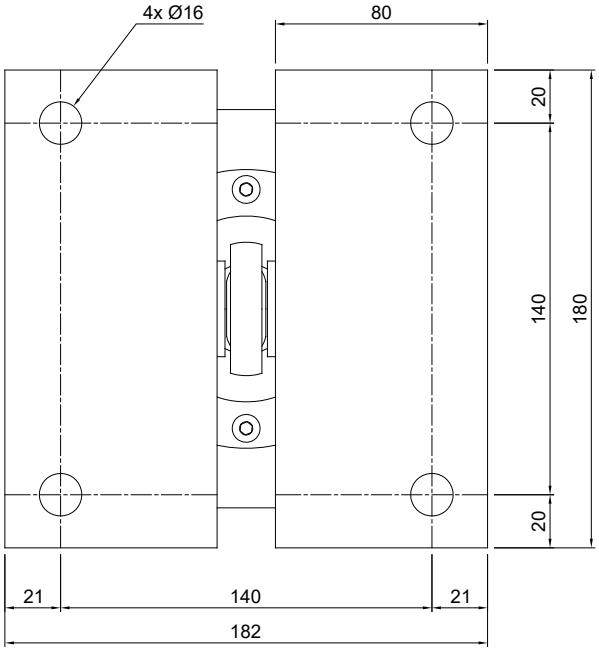
DIMENSIONS AND TECHNICAL SPECIFICATIONS

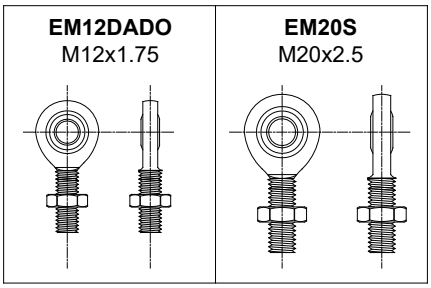
- Finished the installation by means of a copper wire, connect the upper supporting plate with the lower supporting plate, then connect all the lower plates to the earthing system.

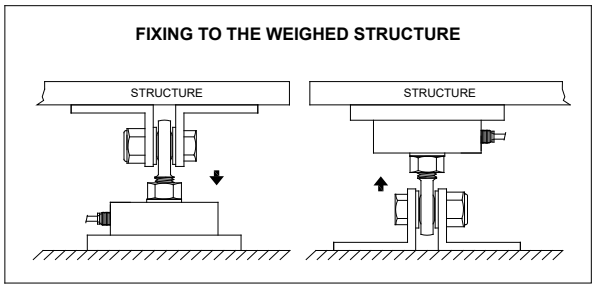


* WARNING! Max dimension to insert the bolt to allow the cell to perform properly









V10000/10275

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

LAUMAS®

Series laod cells: **CBL - CBX**

Up to 15000 kg application range

V10000

V10275

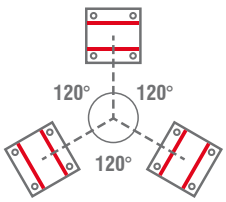
MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
15000	CBL (250 ÷ 12500 kg) - CBX (15000 kg)	5.7	V10000
15000	CBL (250 ÷ 12500 kg) - CBX (15000 kg)	6.9	V10275

Load cell not included.

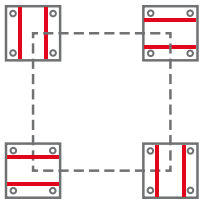
DESCRIPTION

- 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.

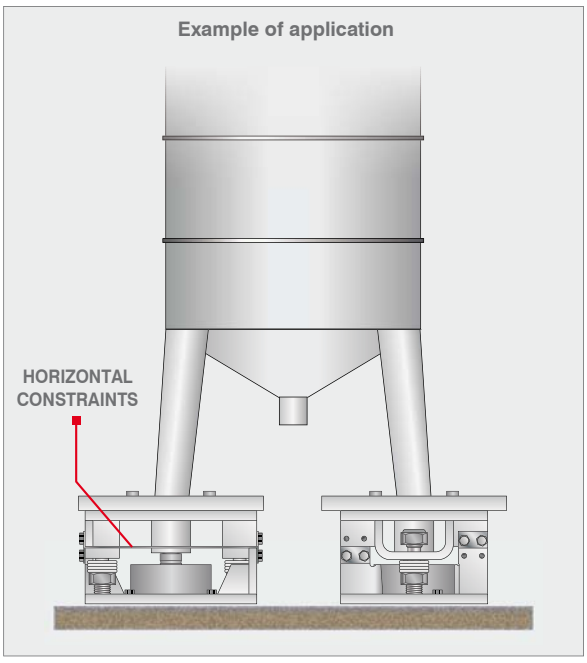
HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 3-POINTS SUPPORT



HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 4-POINTS SUPPORT



Example of application



ISO 9001
ISO 14001

V10000/10275

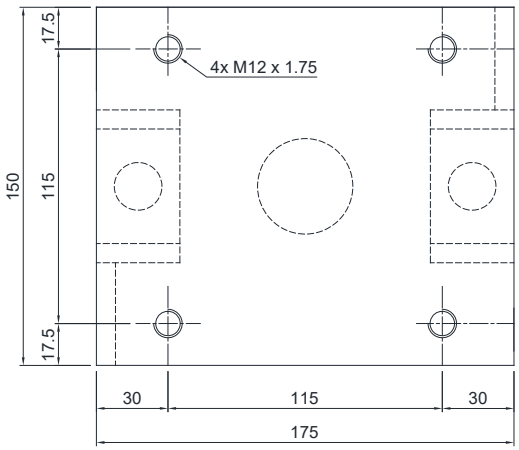
MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

DIMENSIONS AND TECHNICAL SPECIFICATIONS

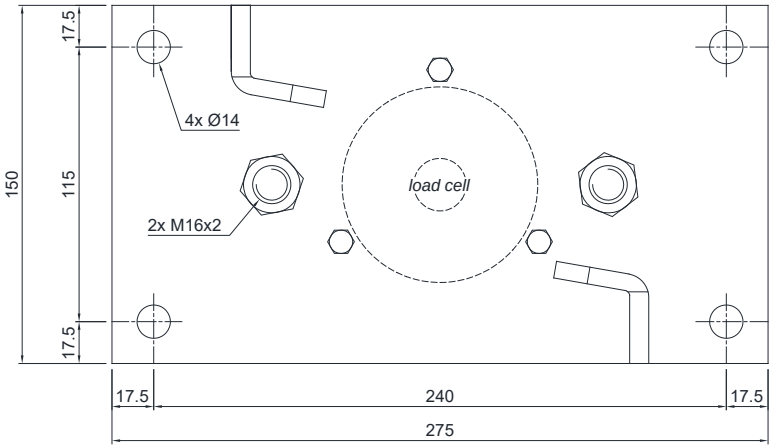
Upper and lower plates [2] must rest completely on not deformable surfaces. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support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

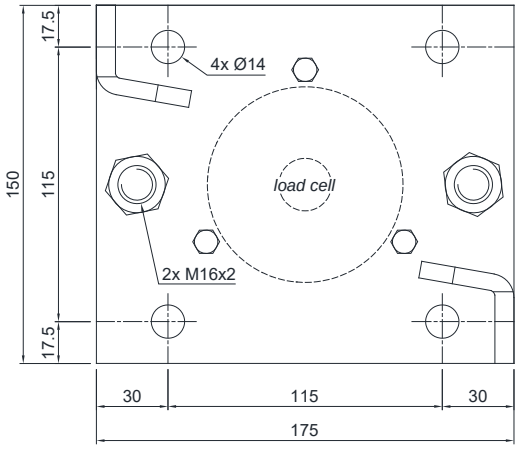
Upper plate



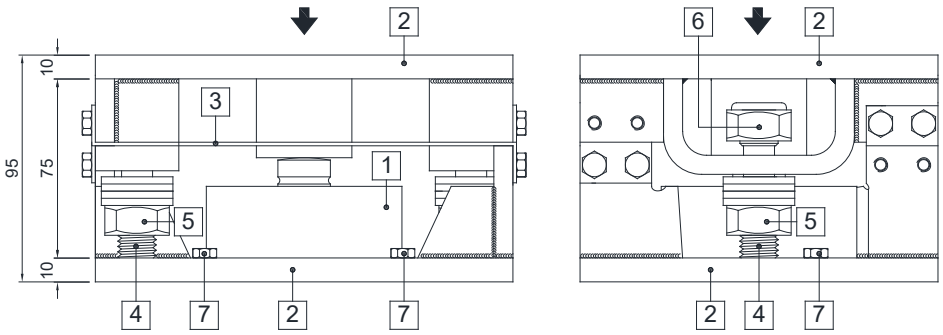
V10275 - Lower plate



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

LAUMAS®

Series laod cells: CBL - CBX

Up to 100000 kg application range

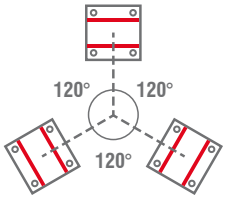
DESCRIPTION

- 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.

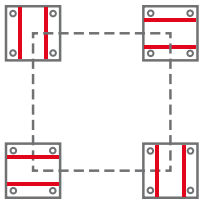
MAX STATIC LOAD kg	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
30000	CBL (15000 kg) - CBX (30000 kg)	9	V15000
50000	CBL (30000 kg) - CBX (50000 kg)	17.5	V30000
100000	CBL (50000 kg) - CBL (100000 kg)	33.5	V100000

Load cell not included.

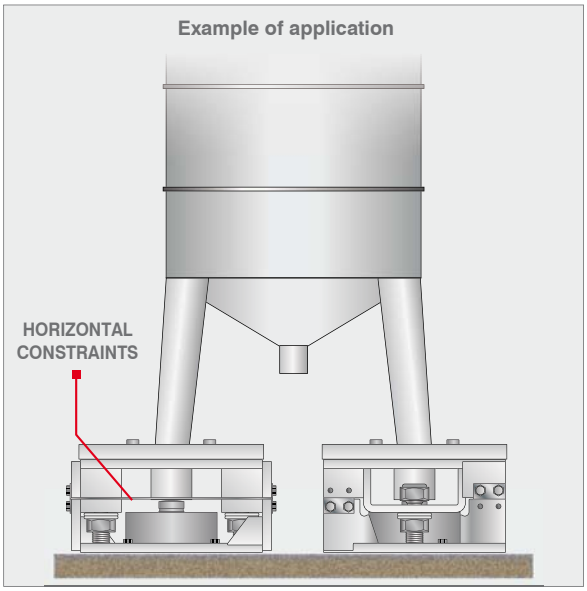
HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 3-POINTS SUPPORT



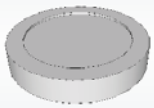
HORIZONTAL CONSTRAINTS ORIENTATION IN STRUCTURES WITH 4-POINTS SUPPORT



Example of application



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

V15000/100000

MOUNTING KIT for COMPRESSION-LOW PROFILE load cells

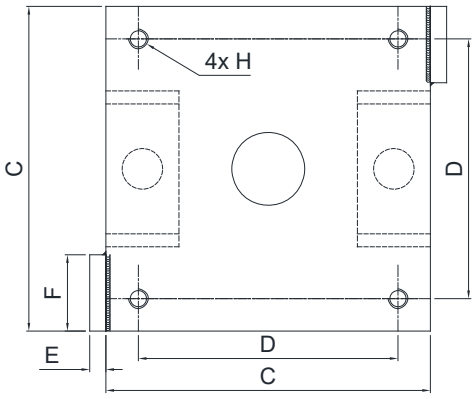
LAUMAS®

DIMENSIONS AND TECHNICAL SPECIFICATIONS

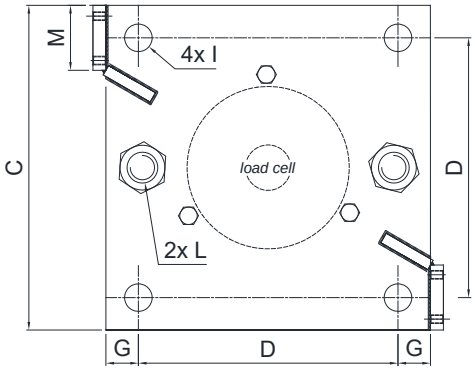
Upper and lower plates [2] must rest completely on not deformable surfaces. To ensure the stability of the structure, the system designer must predict any further precaution against side shifts and anti-tilt in function of: knocks and vibrations, wind effect, seismic conditions and hardness of support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



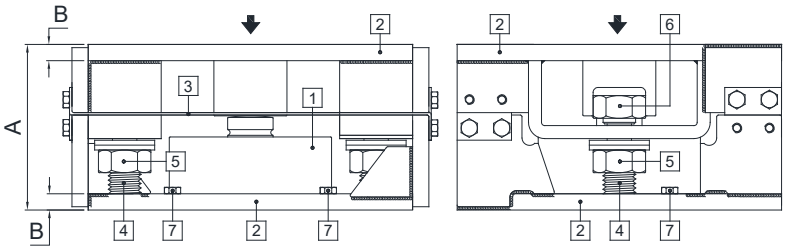
Lower plate



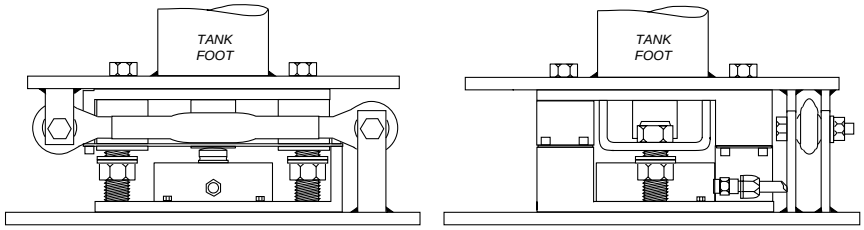
	A	B	C	D	E	F	G	H	I	L	M	Weight
V15000	102	10	200	160	10	47	20	M12x1.75	Ø17	M20x2.5	40	9 kg
V30000	132	12	250	185	12	70	32.5	M18x2.5	Ø20	M24x3	60	17 kg
V100000	155	15	320	250	15	95	35	M20x2.5	Ø23	M30x3.5	70	34 kg

Dimensions (mm)

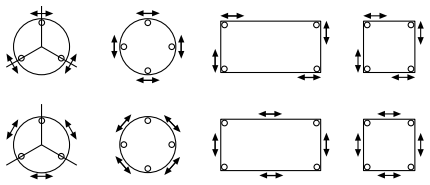
[1] Load cell.
[2] AISI 304 stainless steel upper and lower plates.
[3] AISI 304 stainless steel laminas with horizontal constraint function.
[4] Threaded rod.
[5] Nut to be used as jack.
[6] Anti-tilt self-locking nut.
[7] M6 bolts to fix the load cell.



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

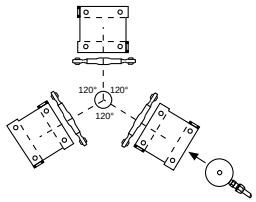


CONSTRAINTS PLACEMENT ON 3/4 SUPPORTS: the horizontal constraints can be positioned both on supports and on the four sides, centrally between two supports.

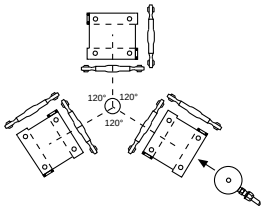


STRUCTURE WITH 3-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT

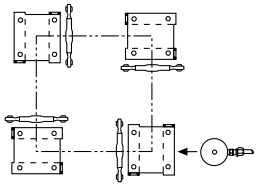


2 CONSTRAINTS FOR SUPPORT

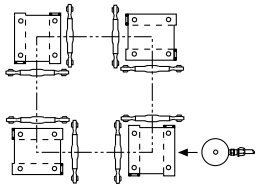


STRUCTURE WITH 4-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT



2 CONSTRAINTS FOR SUPPORT



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

A3 - COMPLEMENTARY ACCESSORIES

PRODUCTS CATALOG

LAUMAS®

	APPLICATION RANGE	FOR LOAD CELLS	PAGE
A3.1	**Horizontal constraints for mounting kits**		
TENDITORE300 PTEND	up to 100000 kg	-	**185**
A3.2	**Self-centring joint feet**		
PIEDINOSB2	up to 5000 kg	-	**187**
A3.3	**Adjustable upper plate for self-centring joint foot.**		
PPV PPV60Z PPV80	up to 5000 kg	-	**189**
A3.4	**Accessory with ball to compensate for misalignment of the support plates**		
ACCSFER	up to 5000 kg	FTL, FTK, FT-P, FTKL, FTZ, FTP, CLS	**190**
A3.5	**Compression joint**		
ANTIV	up to 2000 kg	FCOL, FCK, FTKL, FTL, FCAL, FCAX, FTP, FT-P, FTK, FTZ, CLS	**191**
A3.6	**Spherical plain thrust bearings**		
SNODOGE	up to 10000 kg	FTL, FTK, FT-P, FTKL, FTZ, FTP, CLS	**192**
A3.7	**Level measurements - false cells**		
ML	up to 100000 kg	-	**193**

TENDITORE300 - PTEND

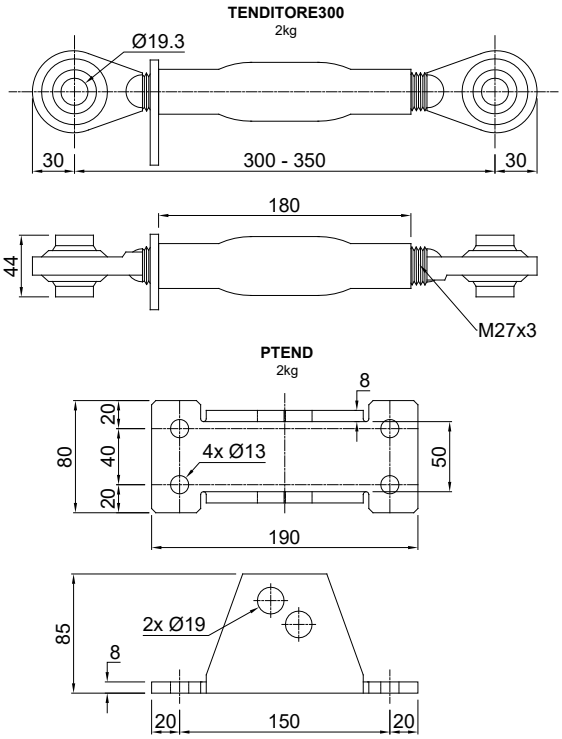
Horizontal constraints for mounting kits

LAUMAS®

Up to 100000 kg application range

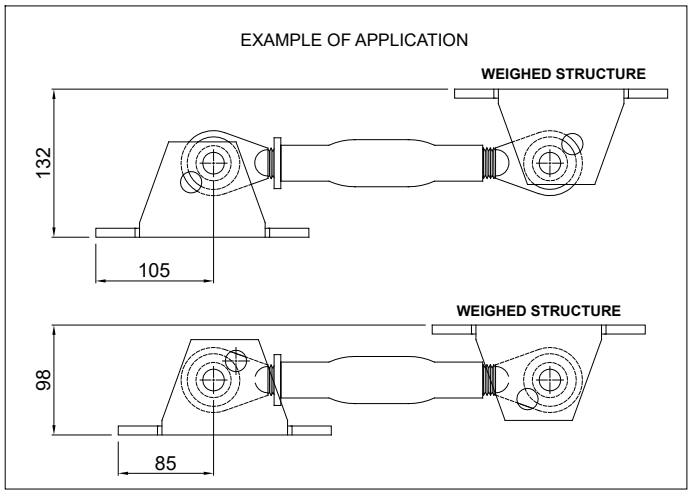
	DESCRIPTION	CODE
	Galvanized steel turnbuckle with dual ball-and-socket. Net weight: 2.10 kg Working load: 2500 kg Ultimate overload: 10000 kg	TENDITORE300
	Galvanized steel anchor plate for TENDITORE300 Net weight: 1.5 kg	PTEND

DIMENSIONS



DESCRIPTION

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



TENDITORE300 - PTEND

Horizontal constraints for mounting kits

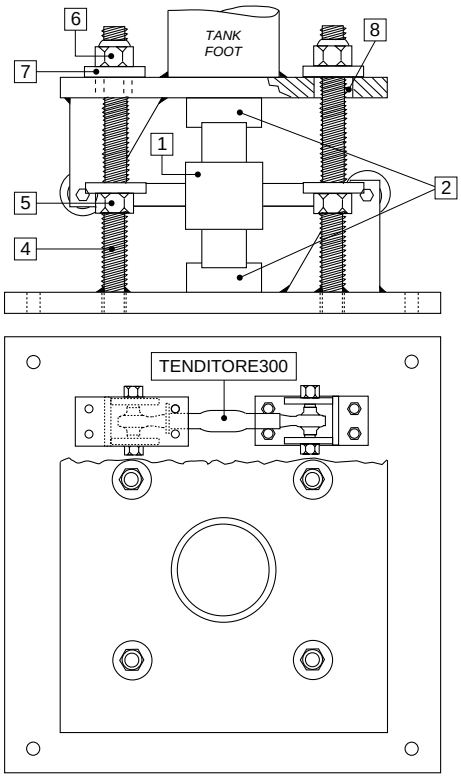
LAUMAS®

APPLICATION EXAMPLE: HOW TO MAKE MOUNTING KITS WITH HORIZONTAL CONSTRAINTS

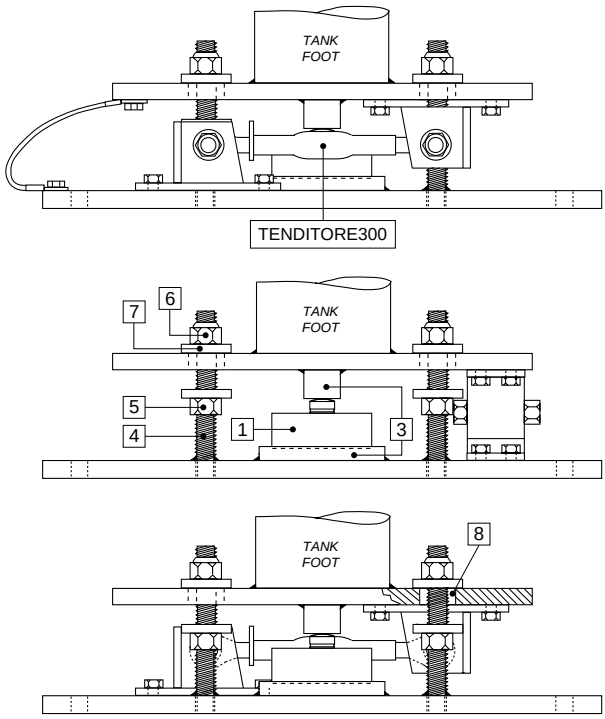
By a copper wire, connect the upper supporting plate with the lower supporting plate, then link together the lower plates to the earthing system.

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

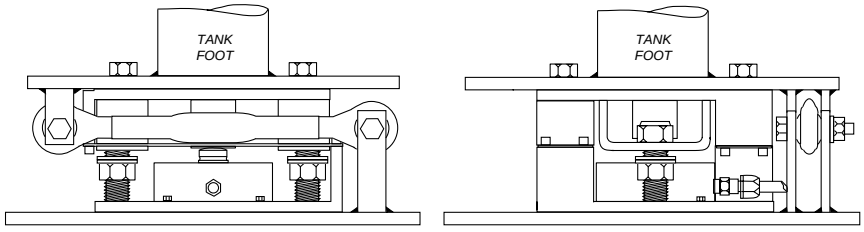


Application example with compression load cells

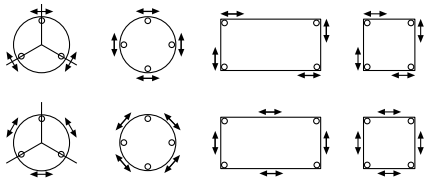


1. Load cell.
2. Mounting kit for column load cell.
3. AISI 304 stainless steel upper and lower bases.
4. Threaded rod.
5. Nut to be used as jack.
6. Anti-tilt self-locking nut.
7. Washer.
8. Hole diameter 20 mm larger than the bolt.

Application example with V15000 - V30000 - V100000 mounting kits

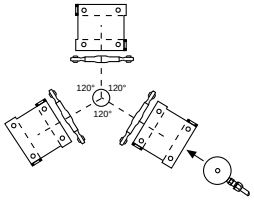


CONSTRAINTS PLACEMENT ON 3/4 SUPPORTS: the horizontal constraints can be positioned both on supports and on the four sides, centrally between two supports.

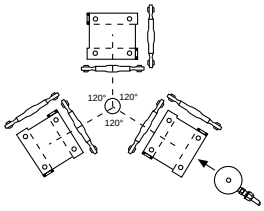


STRUCTURE WITH 3-POINTS SUPPORT

1 CONSTRAINT FOR SUPPORT

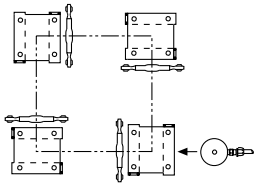


2 CONSTRAINTS FOR SUPPORT

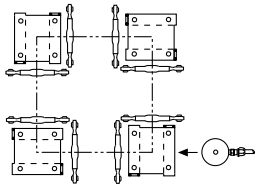


STRUCTURE WITH 4-POINTS SUPPORT

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	PIEDINOPXCI
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.

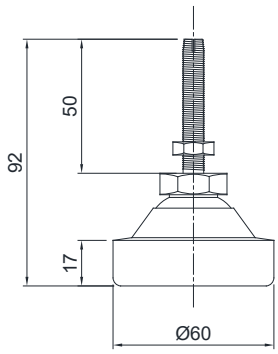
PIEDINOSB2

Self-centring joint feet

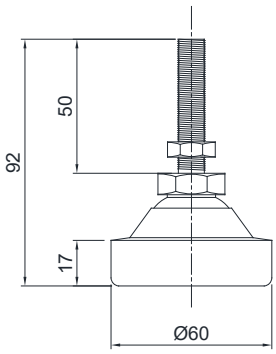
LAUMAS®

DIMENSIONS AND APPLICATION

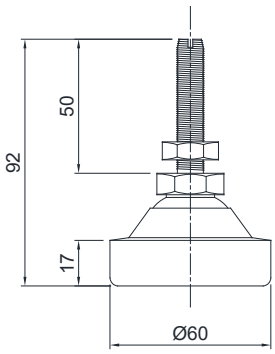
PIEDINOSB2M8
M8x1.25



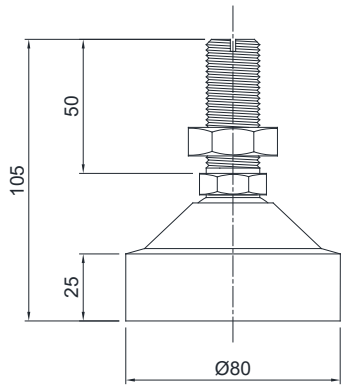
PIEDINOSB2M10
M10x1.5



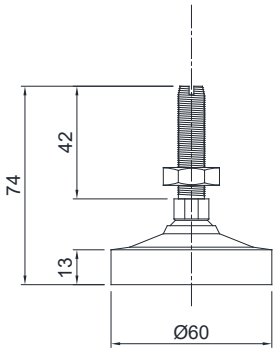
PIEDINOSB2INOX
M12x1.75



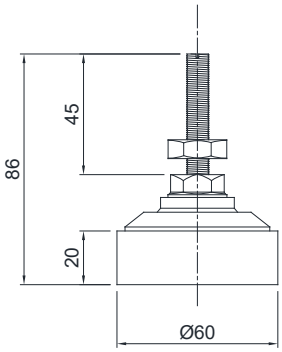
PIEDINOSB2M20
M20x2.5



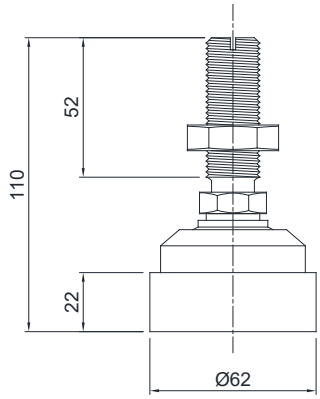
PIEDINOPXCI
PIEDINOPXC
M12x1.75



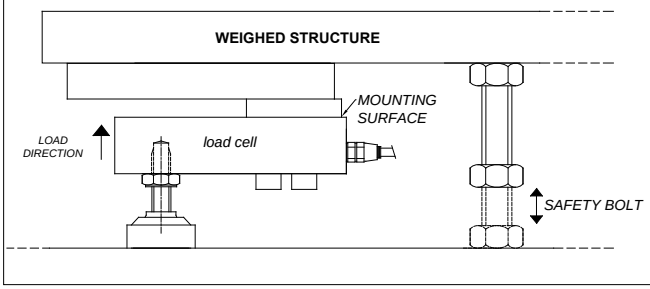
PIEDINOSB2ZNC
M12x1.75

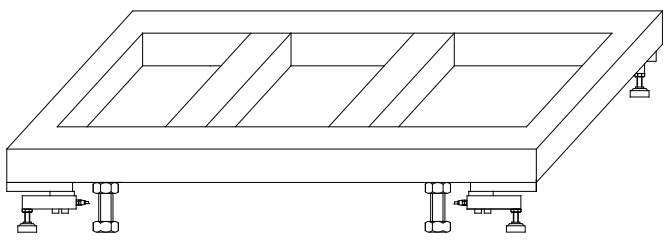


PIEDINOSB2ZNCM20
M20x2.5



EXAMPLE OF APPLICATION





PPV - PPV60Z - PPV80

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

PPV

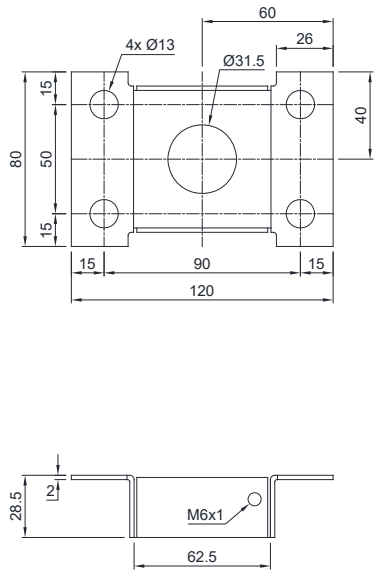
PPV60Z

PPV80

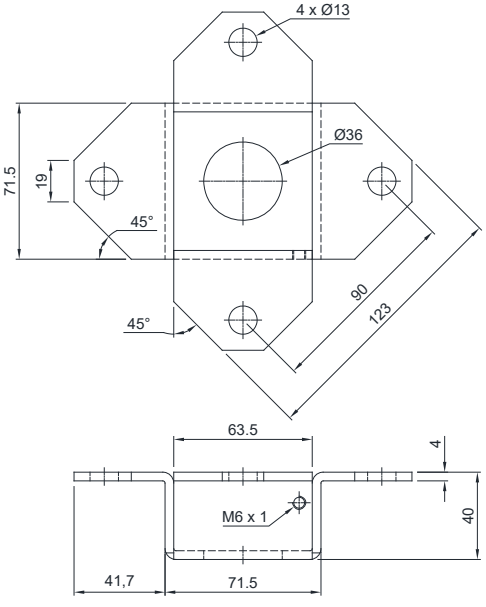
MAX STATIC LOAD kg		NET WEIGHT (kg)	CODE
2000	AISI 304 stainless steel	200	PPV
5000	galvanized steel	641	PPV60Z
5000	AISI 304 stainless steel	600	PPV80

DIMENSIONS (mm)

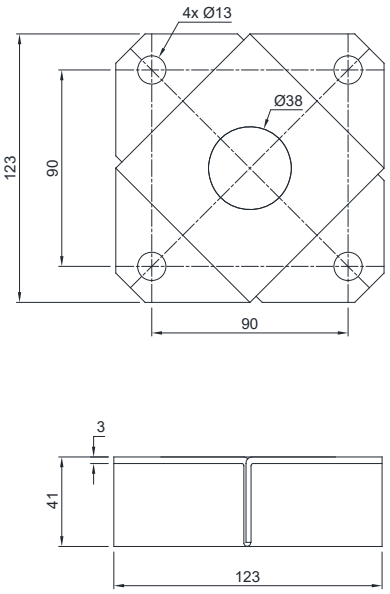
PPV



PPV60Z



PPV80



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ISO 9001
ISO 14001

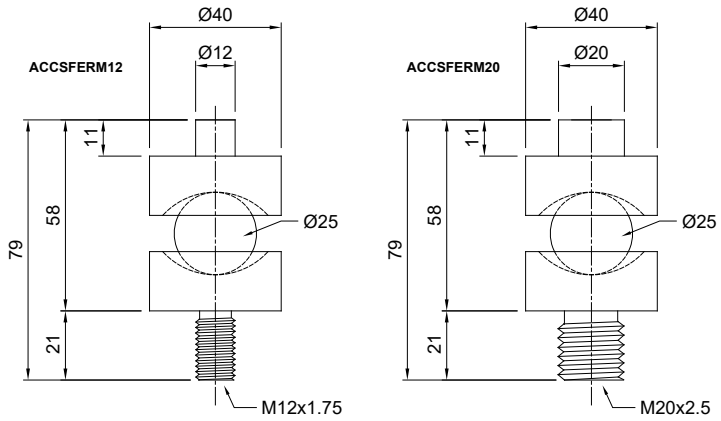
ACCSFER

Accessory with ball

Up to 5000 kg application range

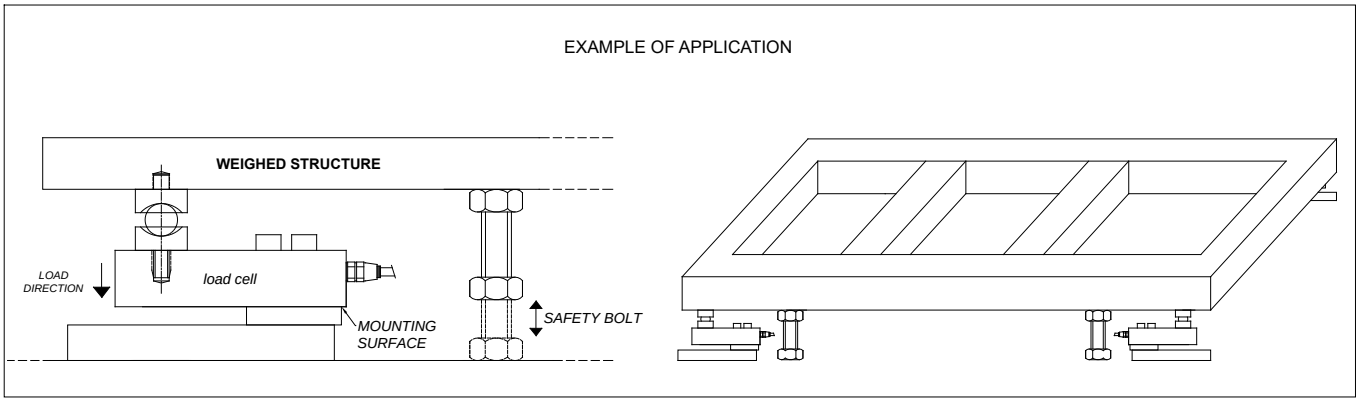
MAX STATIC LOAD kg	FOR LOAD CELLS	DIMENSIONS	NET WEIGHT (kg)	CODE
2000	FTL - FTK - FT-P - FTKL FTZ - FTP - CLS	M12x1.75	0.3	ACCSFERM12
5000	FTK - FTKL - FTZ (5000 kg) FTP (3000-5000 kg) - CLS (5000 kg)	M20x2.5	0.4	ACCSFERM20

DIMENSIONS AND APPLICATION



DESCRIPTION

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



ANTIV
Compression joint

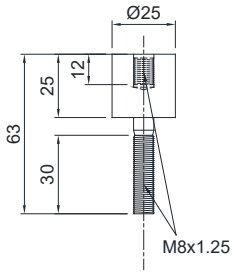
LAUMAS®

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

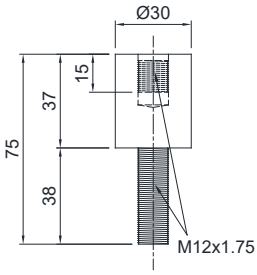
DIMENSIONS AND APPLICATION

ANTIV35



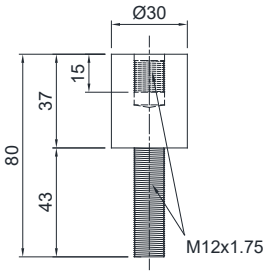
Max static load 500kg

ANTIV40



Max static load 2000kg

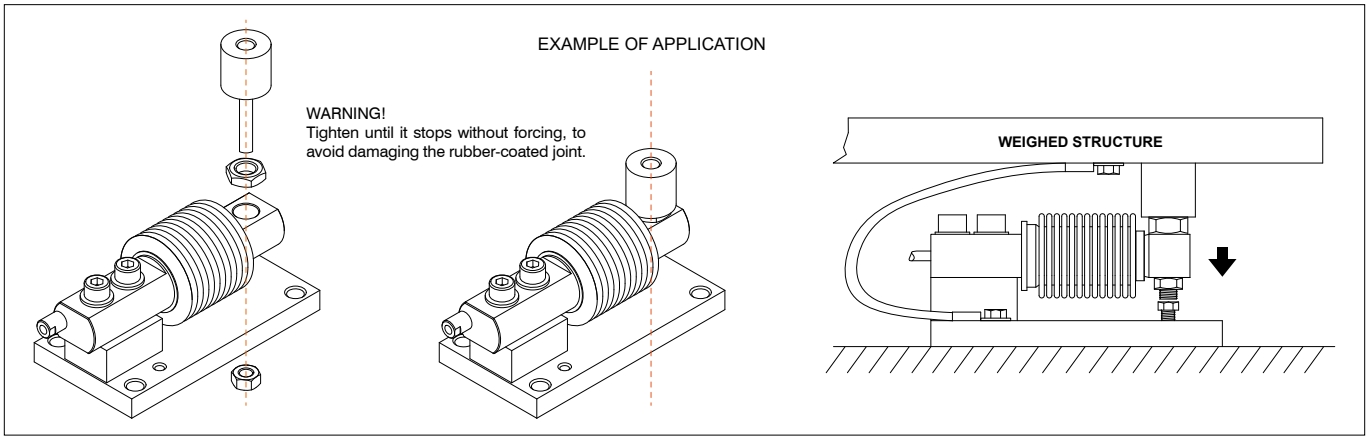
ANTIV45



Max static load 2000kg

DESCRIPTION

- Stainless steel and rubber compression 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.

ISO 9001
ISO 14001

SNODOGE

Spherical plain bearings

LAUMAS®

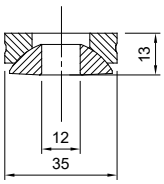
Series laod cells: **FTL - FTK - FT-P - FTKL - FTZ - FTP - CLS**

Up to 10000 kg application range

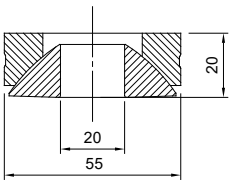
MAX STATIC LOAD kg	DESCRIPTION	FOR LOAD CELLS	NET WEIGHT (kg)	CODE
2000	Spherical plain bearings	CLS, FTK, FTKL, FTL, FTP, FT-P, FTZ	0.07	SNODOGE12AX
5000	Kit composed by spherical bearing (cod. SNODOGE20AX), galvanized bolt (20x80 mm) and washer (22x60 mm).	CLS (5000 kg), FTK (3000-5000 kg), FTKL, FTZ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

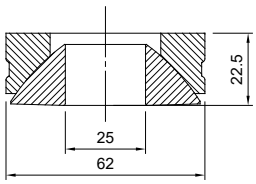
SNODOGE12AX



SNODOGE20AX



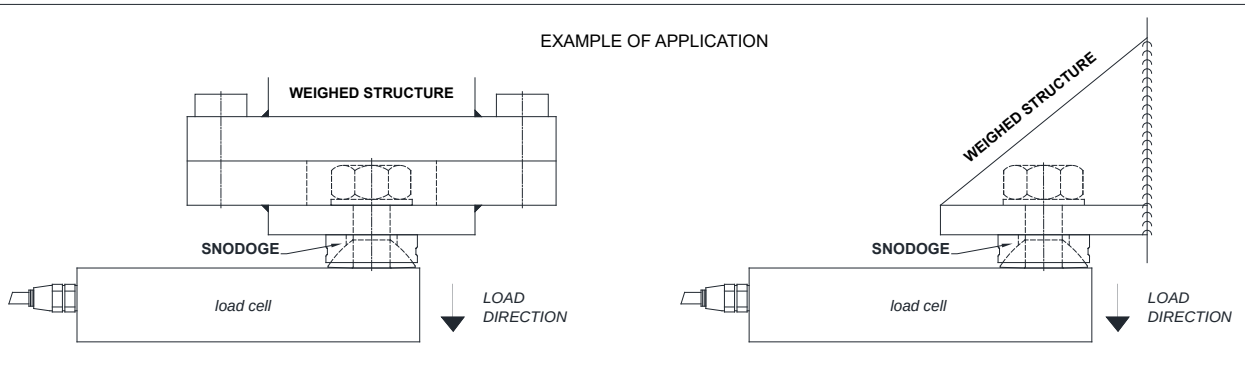
SNODOGE25AX



DESCRIPTION

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

EXAMPLE OF APPLICATION



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ISO 9001
ISO 14001

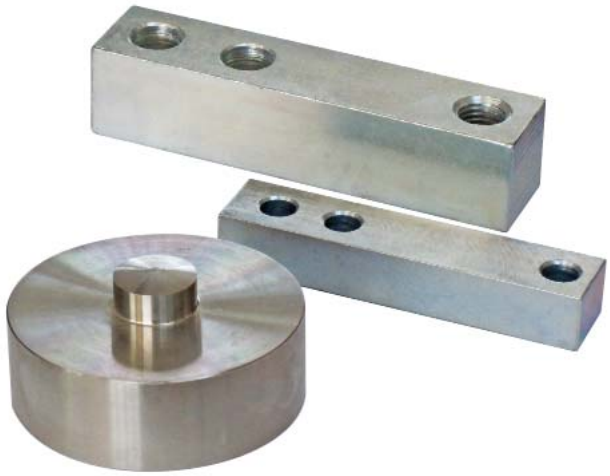
ML

Level measurements - false cells

LAUMAS®

CE

Up to 100000 kg application range



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

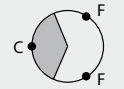
DESCRIPTION

- 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.

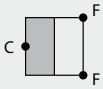
DIMENSIONS AND TECHNICAL SPECIFICATIONS

- 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

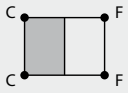


Signal mV x 3



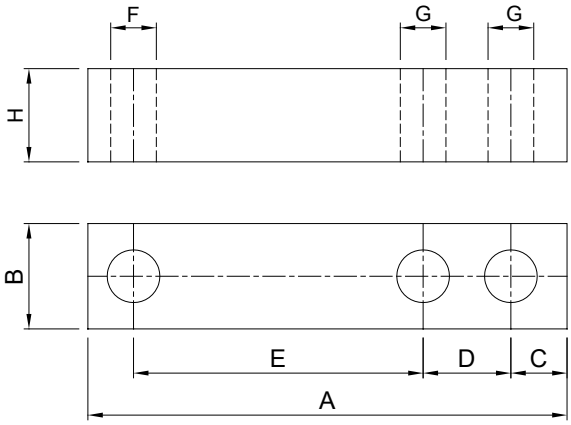
Signal mV x 2

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

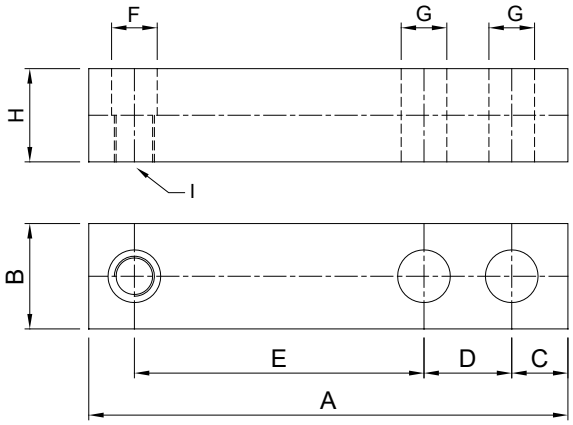


Signal mV x 2

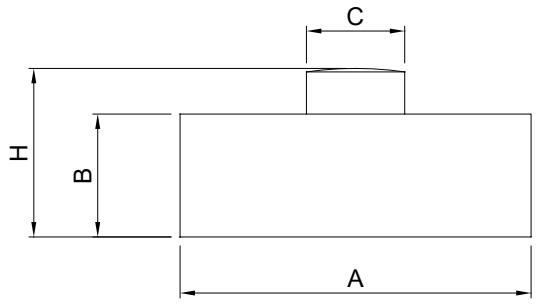
C = SUPPORT FOOT WITH LOAD CELL
F = SUPPORT FOOT WITH FALSE CELL



	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

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
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Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
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