

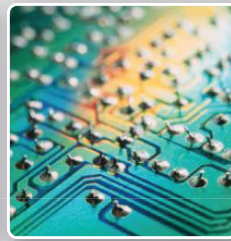
Digital Load Cell

WBK-D / DSB-D / CC-D / CT-D / LS-D

CAS, we have great know-how in weighing and control technology, we design and build our own Load Cell that provides high-accuracy repeatability and correct measurement even in harsh environment. Especially, our digital Load Cell offers various advantages and advanced performance for your system.

CAS LOAD CELL

Ready-made product



CAS

www.globalcas.com

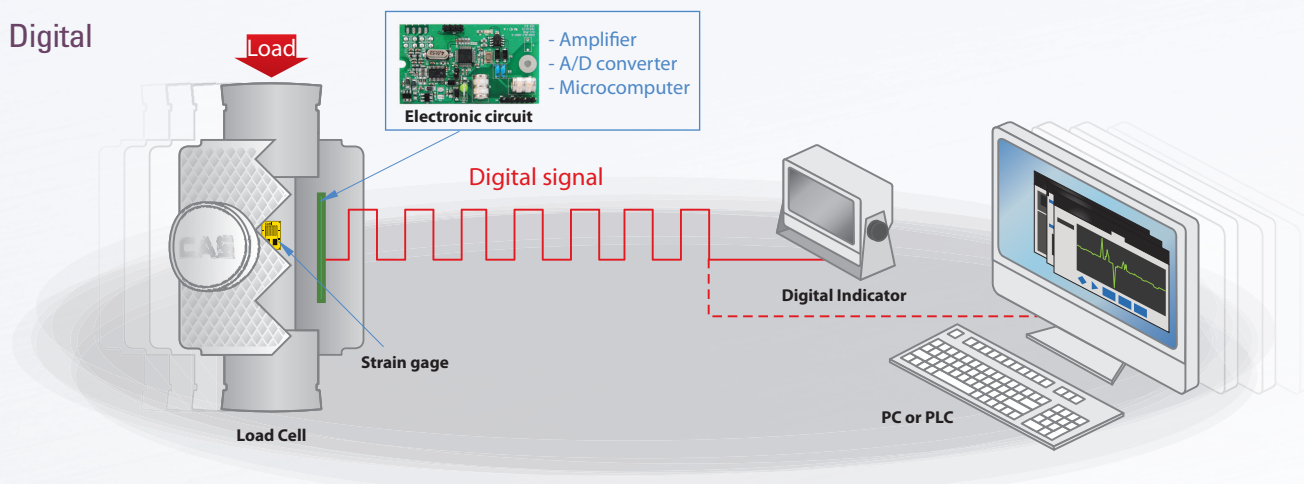
DIGITAL LOAD CELL

Digital Load Cell has a Electronic circuit (including Amplifier, A/D converter and Microcomputer) inside Load Cell. it outputs digital signal(RS-485) corresponding to load.



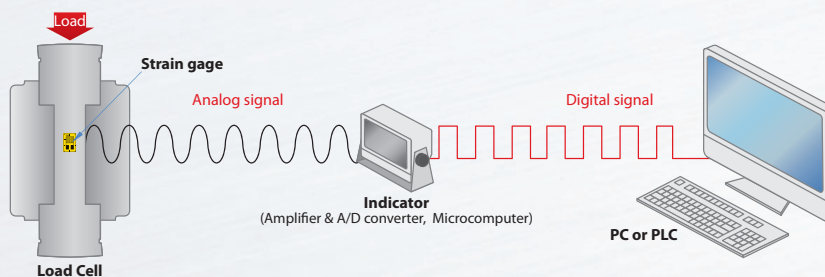
Digital & Analog Load Cell

Digital



Analog

Analog Load Cell outputs the load in minute change of voltage. this voltage signal is indicated to weight value after amplified, A/D converted and calculated.



PRODUCT

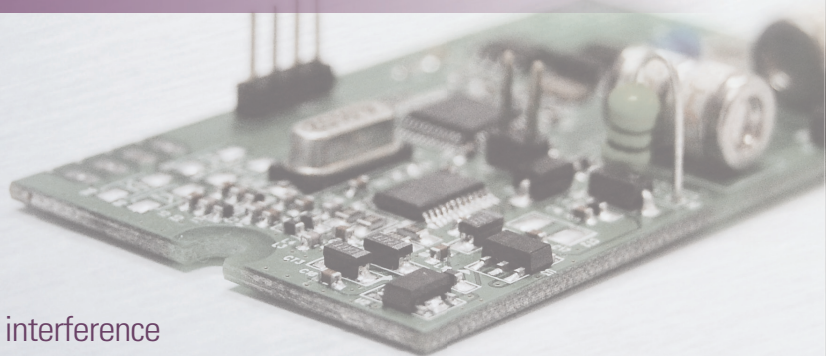
Feature

High resolution and accuracy

- ▶ 300,000 counts of rated output
- ▶ 5000d and better performance than analog Load Cell

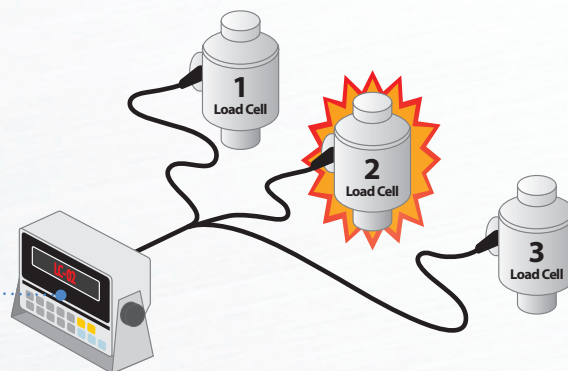
Powerful digital signal against RF & electromagnetic interference

- ▶ RS-485 digital signal
- ▶ RF & electromagnetic interference (RFI & EMI) effects minimized
- ▶ Longer transmission distances (Max. transmission distance: 1,000m)



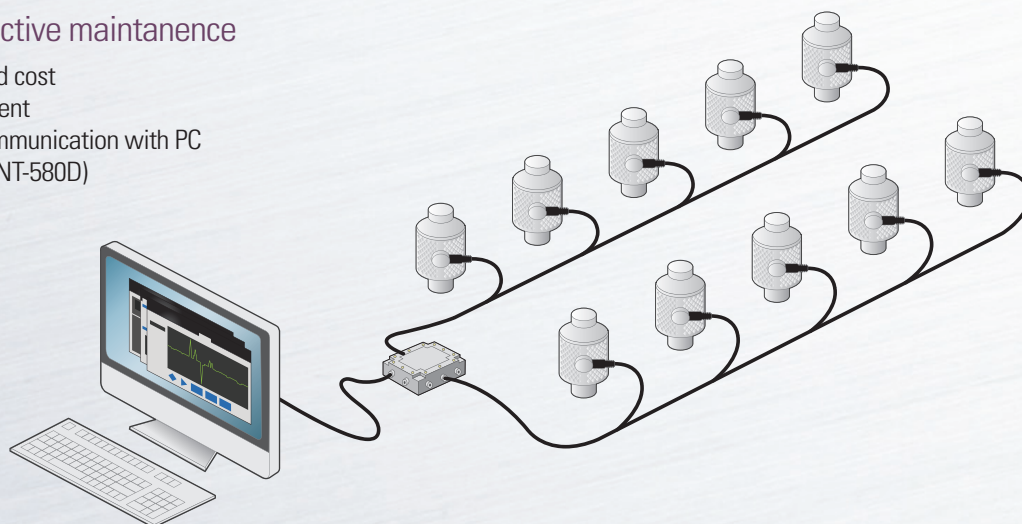
Individual cell diagnostics

- ▶ Load Cells communicate individually to indicator
- ▶ Easy Fault finding and troubleshooting



Simple installation & effective maintenance

- ▶ Shortening installation time and cost
- ▶ Convenient Load Cell replacement
- ▶ Diagnosing by independent communication with PC or Digital indicator (CI-200D & NT-580D)



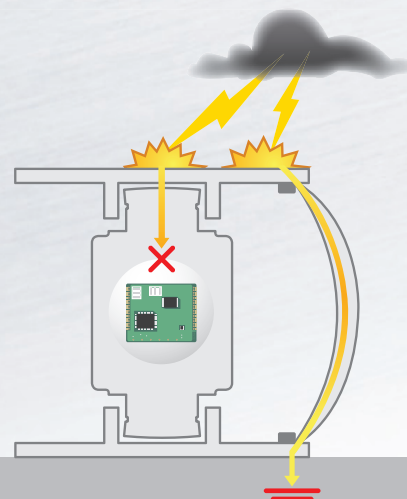
DLC works (PC software)

- ▶ Diagnosis function
- ▶ Real time data analysis of digital Load Cell
- ▶ Data capture function
- ▶ Digital 4 corner compensation
- ▶ Simple scale function - multi scale supported



Built-in lightning protection (only for WBK-D & DSB-D)

- ▶ Protecting internal components and reduce damage due to lightning surge (Direct protection range : $\pm 2kV$)



WBK-D | Digital Compression Load Cell



Features

- ▶ Simple installation and effective maintenance
- ▶ High accuracy
- ▶ RS-485 digital output
- ▶ Stainless steel construction
- ▶ IP68 and hermetic sealing
- ▶ Diagnosis function
- ▶ Built-in lighting protection
- ▶ Maximum transmission distance : 1,000m

Options

- ▶ Accessory set

DESCRIPTION

The WBK-D digital Load Cell is designed for use in truck scales and process weighing applications.

It is a stainless steel compression Load Cell with a digital output signal. Using the digital output, the user can communicate with each Load Cell independently and have the additional advantages of a digital calibration.

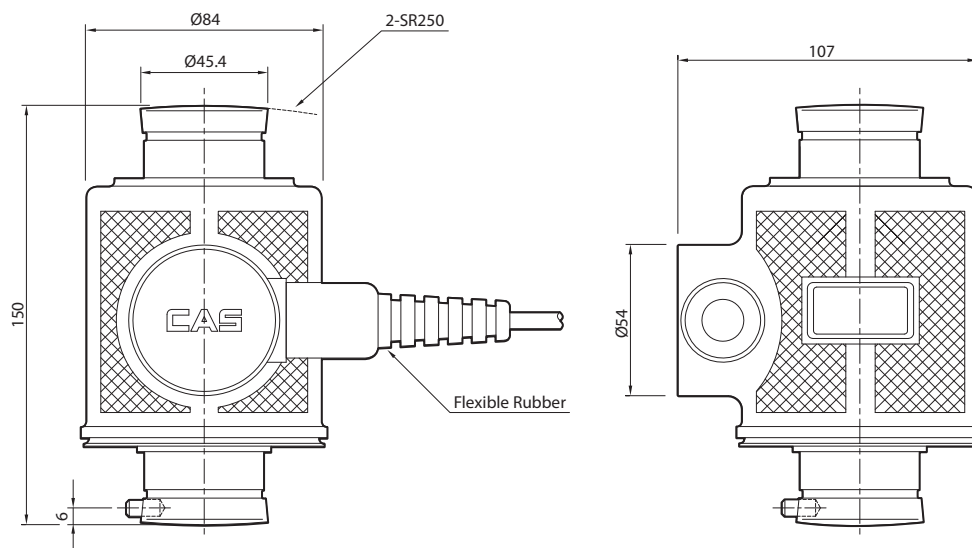
Specification

Capacity(R.L.)		tf	10, 20, 25, 30
Maximum number of verification intervals(n)		-	5,000
Rated Output		counts	300,000
Zero Balance		counts	± 300
Non-Linearity		% R.O.	< 0.015
Hysteresis		% R.O.	< 0.015
Combined Error		% R.O.	< 0.015
Repeatability		% R.O.	< 0.01
Creep for 30min		% R.O.	< 0.017
Temperature Effect on	-Zero Value	% R.O./10°C	0.014
	-Output Value	% R.O./10°C	0.011
Compensated Temperature Range		°C	-10 ~ +40
Operating Temperature Range		°C	-40 ~ +70
Excitation Voltage	-Minimum	V	6
	-Recommended	V	9
	-Maximum	V	24
Insulation Resistance		MΩ	≥ 2,000
Safety Overload		% R.C.	150
Material		-	Stainless steel
Communication		-	RS-485 (2wire)
Communication Rate		kbit/sec	19.2
Maximum Transmission Cable Length		m	1,000
Warm-up Time from Cold Start		minutes	15
Asynchrone Interface Baudrate		Baud	9,600 ~ 115,200
Number of bus addresses		-	Max. 32

Application

- ▶ Truck scale
- ▶ Hopper and silo scale

Dimension



DSB-D | Digital Double Shear Beam Load Cell



Features

- ▶ Simple installation and effective maintenance
- ▶ High accuracy
- ▶ RS-485 digital output
- ▶ IP67 protection class
- ▶ Diagnosis function
- ▶ Built-in lighting protection
- ▶ Maximum transmission distance : 1,000m

Options

- ▶ Ball type accessory
- ▶ Ball type accessory(Including options base)

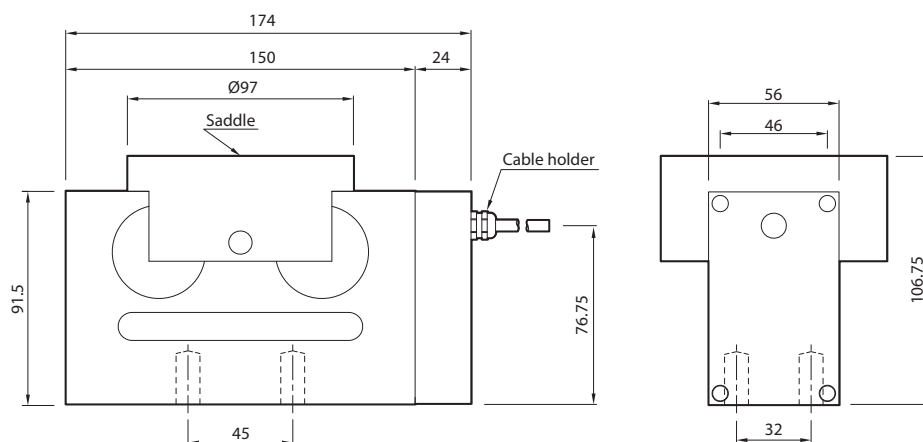
DESCRIPTION

The DSB-D is suitable for use in truck scales in high capacities. It is constructed of nickel plated steel and sealed to IP67. The DSB-D is a digital double shear beam load cell. Via the digital output, the user can communicate with each Load Cell independently and have the additional advantages of a digital calibration,

Specification

Capacity(R.L.)		tf	10, 20, 25, 30
Maximum number of verification intervals(n)		-	5,000
Rated Output		counts	300,000
Zero Balance		counts	± 300
Non-Linearity		% R.O.	< 0.015
Hysteresis		% R.O.	< 0.015
Combined Error		% R.O.	< 0.015
Repeatability		% R.O.	< 0.01
Creep for 30min		% R.O.	< 0.017
Temperature Effect on	-Zero Value	% R.O./10°C	0.014
	-Output Value	% R.O./10°C	0.011
Compensated Temperature Range		°C	-10 ~ +40
Operating Temperature Range		°C	-20 ~ +70
Excitation Voltage	-Minimum	V	6
	-Recommended	V	9
	-Maximum	V	24
Insulation Resistance		MΩ	≥ 2,000
Safety Overload		% R.C.	150
Material		-	Nickel plated steel
Communication		-	RS-485 (2wire)
Communication Rate		kbit/sec	19.2
Maximum Transmission Cable Length		m	1,000
Warm-up Time from Cold Start		minutes	15
Asynchrone Interface Baudrate		Baud	9,600 ~ 115,200
Number of bus addresses		-	Max. 32

Dimension



Application

- ▶ Truck scale
- ▶ Hopper and silo scale

CC-D | Digital Compression Load Cell



Features

- ▶ Simple installation and effective maintenance
- ▶ High accuracy
- ▶ RS-485 digital output
- ▶ Compression loading
- ▶ Wide range of capacity 20kg~20,000kg
- ▶ Diagnosis function
- ▶ Maximum transmission distance : 1,000m

Options

- ▶ Load button type accessory
- ▶ Ball type accessory

Application

- ▶ Hopper and Tank scale
- ▶ Truck scale

DESCRIPTION

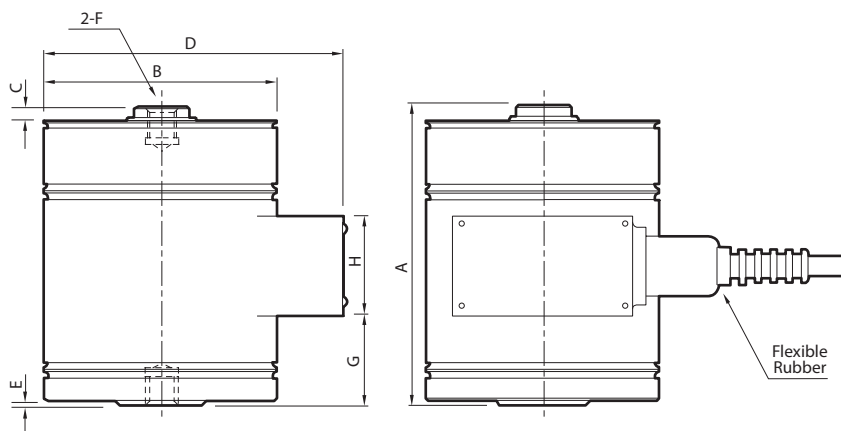
The CC-D is a digital compression Load Cell. It is suitable for use in truck scales and process weighing applications such as hopper scales and tank scales.

Via the digital output, the user can communicate with each Load Cell independently and have the additional advantages of digital calibration.

Specification

Capacity(R.L.)		kgf	20, 50, 100, 200, 300, 500, 1K, 2K, 3K, 5K 10K, 20K
Maximum number of verification intervals(n)		-	5,000
Rated Output		counts	300,000
Zero Balance		counts	± 300
Non-Linearity		% R.O.	< 0.02
Hysteresis		% R.O.	< 0.02
Combined Error		% R.O.	< 0.02
Repeatability		% R.O.	< 0.01
Creep for 30min		% R.O.	< 0.017
Temperature Effect on	-Zero Value	% R.O./10°C	0.014
	-Output Value	% R.O./10°C	0.011
Compensated Temperature Range		°C	-10 ~ +40
Operating Temperature Range		°C	-20 ~ +70
Excitation Voltage	-Minimum	V	6
	-Recommended	V	9
	-Maximum	V	24
Insulation Resistance		MΩ	≥ 2,000
Safety Overload		% R.C.	150
Material		-	Painted steel
Communication		-	RS-485 (2wire)
Communication Rate		kbit/sec	19.2
Maximum Transmission Cable Length		m	1,000
Warm-up Time from Cold Start		minutes	15
Asynchrone Interface Baudrate		Baud	9,600 ~ 115,200
Number of bus addresses		-	Max. 32

Dimension



Capa.	A	ØB	C	D	E	F	G	H	Cable(m)
20/50/100kgf	115	89	6	115	1.5	M12 x 1.25	38.5	38	5
200/300/500kgf	115	89	5	115	1.5	M12 x 1.25	35	38	
1tf	115	89	5	115	1.5	M12 x 1.25	35	38	
2/3/5tf	148	89	9	115	1	M24 x 2.0	38.6	38	
10tf	215	127	12	152	1.6	M39 x 2.0	75.6	38	10
20tf	290	165	15	193	1.6	M50 x 2.0	107.6	38	

CT-D | Digital Tension Load Cell



DESCRIPTION

The CT-D is a digital tension Load Cell. It is suitable for use in process weighing applications such as hopper scales and silo scales.

Via the digital output, the user can communicate with each Load Cell independently and have the additional advantages of digital calibration, corner compensation, quick and easy fault finding and replacement of a Load Cell with a weighing system.

Specification

Capacity(R.L.)		kgf	20, 50, 100, 200, 300, 500, 1K, 2K, 3K, 5K 10K, 20K
Maximum number of verification intervals(n)		-	5,000
Rated Output		counts	300,000
Zero Balance		counts	± 300
Non-Linearity		% R.O.	< 0.02
Hysteresis		% R.O.	< 0.02
Combined Error		% R.O.	< 0.02
Repeatability		% R.O.	< 0.01
Creep for 30min		% R.O.	< 0.017
Temperature Effect on	-Zero Value	% R.O./10°C	0.014
	-Output Value	% R.O./10°C	0.011
Compensated Temperature Range		°C	-10 ~ +40
Operating Temperature Range		°C	-20 ~ +70
Excitation Voltage	-Minimum	V	6
	-Recommended	V	9
	-Maximum	V	24
Insulation Resistance		MΩ	≥ 2,000
Safety Overload		% R.C.	150
Material		-	Painted steel
Communication		-	RS-485 (2wire)
Communication Rate		kbit/sec	19.2
Maximum Transmission Cable Length		m	1,000
Warm-up Time from Cold Start		minutes	15
Asynchrone Interface Baudrate		Baud	9,600 ~ 115,200
Number of bus addresses		-	Max. 32

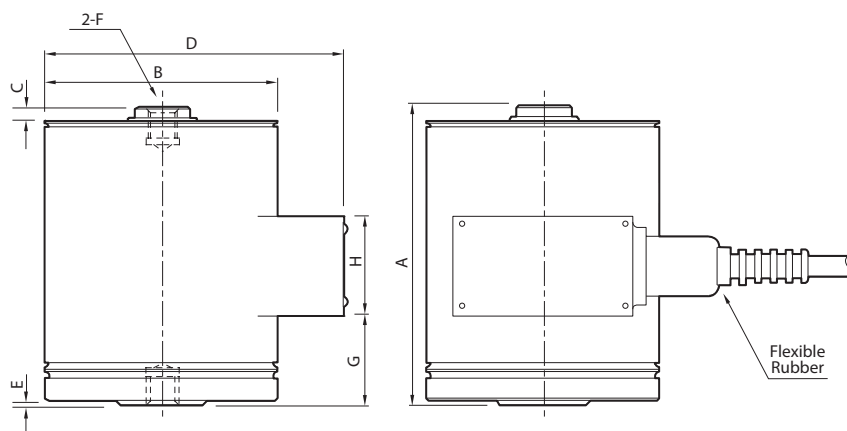
Features

- ▶ Simple installation and effective maintenance
- ▶ High accuracy ▶ RS-485 digital output
- ▶ Tension loading ▶ Diagnosis function
- ▶ Wide range of capacity 20kg~20,000kg
- ▶ Maximum transmission distance : 1,000m

Options

- ▶ Rod End accessory (20~1K : M12 x 1.25)
- ▶ Rod End accessory (2~5K : M24 x 2.0)
- ▶ Rod End accessory (10K : M39 x 2.0)
- ▶ Rod End accessory (20K : M50 x 2.0)

Dimension



Capa.	A	ØB	C	D	E	F	G	H	Cable(m)
20/50/100kgf	115	89	6	115	1.5	M12 x 1.25	38.5	38	5
200/300/500kgf	115	89	5	115	1.5	M12 x 1.25	35	38	
1tf	115	89	5	115	1.5	M12 x 1.25	35	38	
2/3/5tf	148	89	9	115	1	M24 x 2.0	32	38	
10tf	215	127	12	152	1.6	M39 x 2.0	75.6	38	10
20tf	290	165	15	193	1.6	M50 x 2.0	107.6	38	

Application

- ▶ Hopper and silo scale

LS-D | Digital Pan Cake Load Cell



Features

- ▶ Simple installation and effective maintenance
- ▶ High accuracy
- ▶ High reliability against fatigue and side force
- ▶ RS-485 digital output
- ▶ Tension and compression loading
- ▶ Paint finished steel construction
- ▶ Wide range of capacity 1,000kg~300,000kg
- ▶ Diagnosis function
- ▶ Maximum transmission distance : 1,000m

Options

- ▶ Accessory for compression
- ▶ Accessory for tension
- ▶ Ball type accessory

Application

- ▶ Hopper and tank scale
- ▶ Tension & compression testing machine

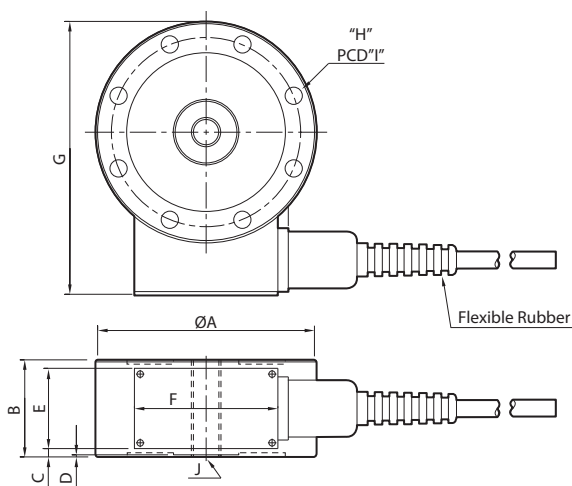
DESCRIPTION

The LS-D is a digital pan cake universal Load Cell. It is suitable for use in hopper scales, silo scales and testing machines for both tension and compression loading. Via the digital output, the user can communicate with each Load Cell independently and have the additional advantages of digital calibration, corner compensation, quick and easy fault finding and replacement of a Load Cell with a weighing system.

Specification

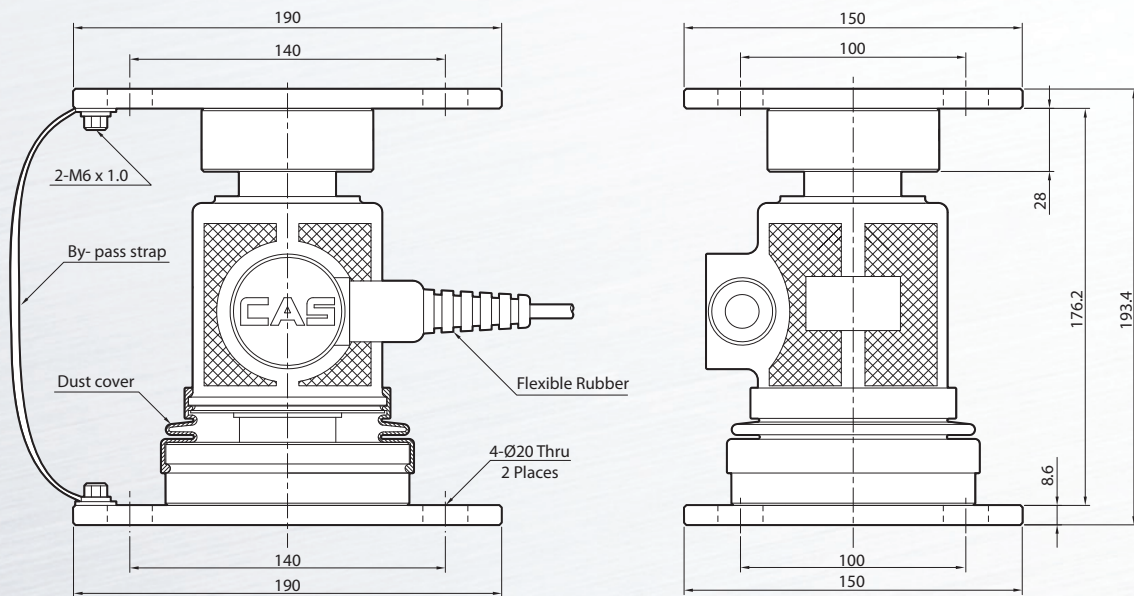
Capacity(R.L.)		tf	1, 2, 3, 5, 10, 20, 30, 50, 100, 200, 300
Maximum number of verification intervals(n)		-	5,000
Rated Output		counts	300,000
Zero Balance		counts	± 300
Non-Linearity		% R.O.	< 0.02
Hysteresis		% R.O.	< 0.02
Combined Error		% R.O.	< 0.02
Repeatability		% R.O.	< 0.01
Creep for 30min		% R.O.	< 0.017
Temperature Effect on	-Zero Value	% R.O./10°C	0.014
	-Output Value	% R.O./10°C	0.011
Compensated Temperature Range		°C	-10 ~ +40
Operating Temperature Range		°C	-20 ~ +70
Excitation Voltage	-Minimum	V	6
	-Recommended	V	9
	-Maximum	V	24
Insulation Resistance		MΩ	≥ 2,000
Safety Overload		% R.C.	150
Material		-	Painted steel
Communication		-	RS-485 (2wire)
Communication Rate		kbit/sec	19.2
Maximum Transmission Cable Length		m	1,000
Warm-up Time from Cold Start		minutes	15
Asynchrone Interface Baudrate		Baud	9,600 ~ 115,200
Number of bus addresses		-	Max. 32

Dimension

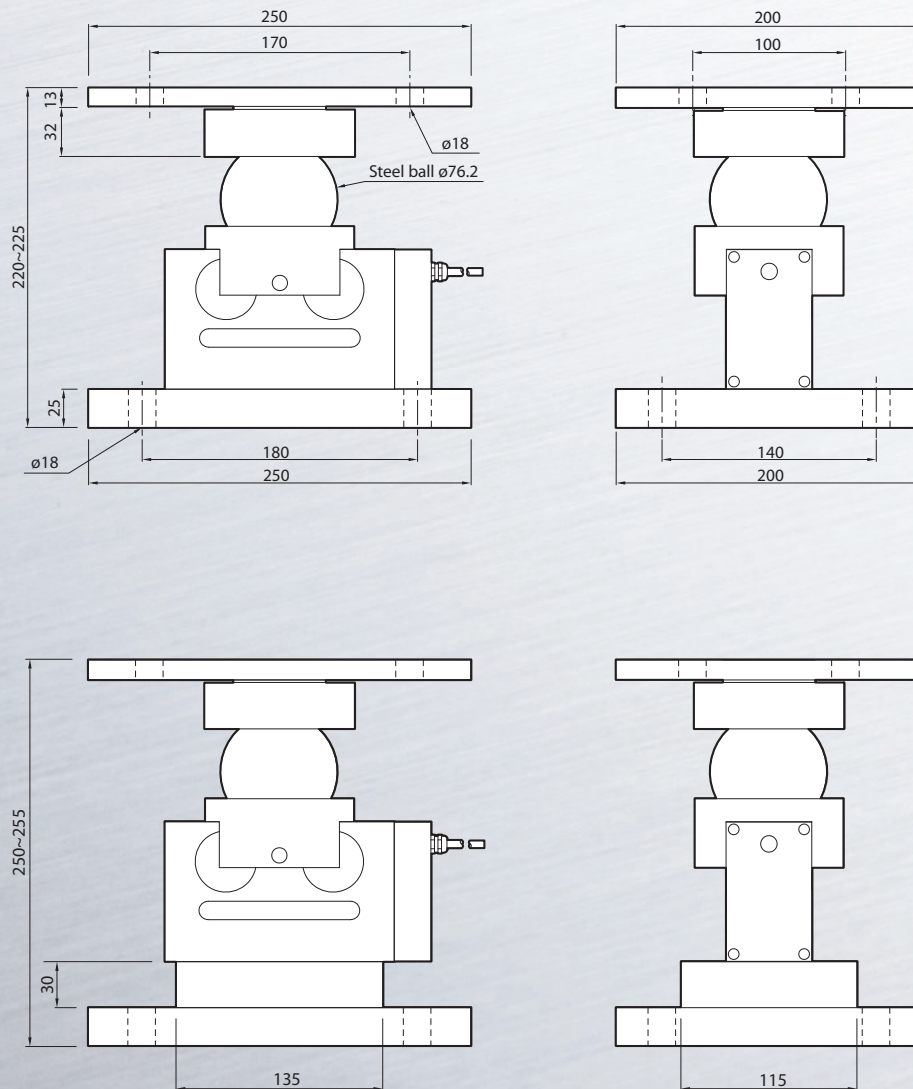


Capa.	A	B	C	D	E	F	G	H	I	J
1/2/3tf	112.0	46.0	4.0	1.0	38.0	68.0	141.5	8-Ø7.1	97.2	M16 x 2.0
5tf	120.0	46.0	4.0				149.9	8-Ø9.0	103.2	M18 x 1.5
10tf	138.0	60.0	11.0				169.5	8-Ø11	117.6	M24 x 2.0
20/30tf	184.0	80.0	21.0				218	8-Ø14	157.6	M39 x 2.0
50tf	200.0	60.0	11.0				234.5	12-Ø14.5	170.0	M45 x 3.0
100tf	278.0	90.0	2.0				314.3	16-Ø16.3	229.0	M70 x 3.0
200tf	355.0	108.0	35.0				392.2	12-Ø26	298.0	M90 x 3.0
300tf	355.0	108.0	35.0				392.2	12-Ø28	298.0	M100 x 3.0

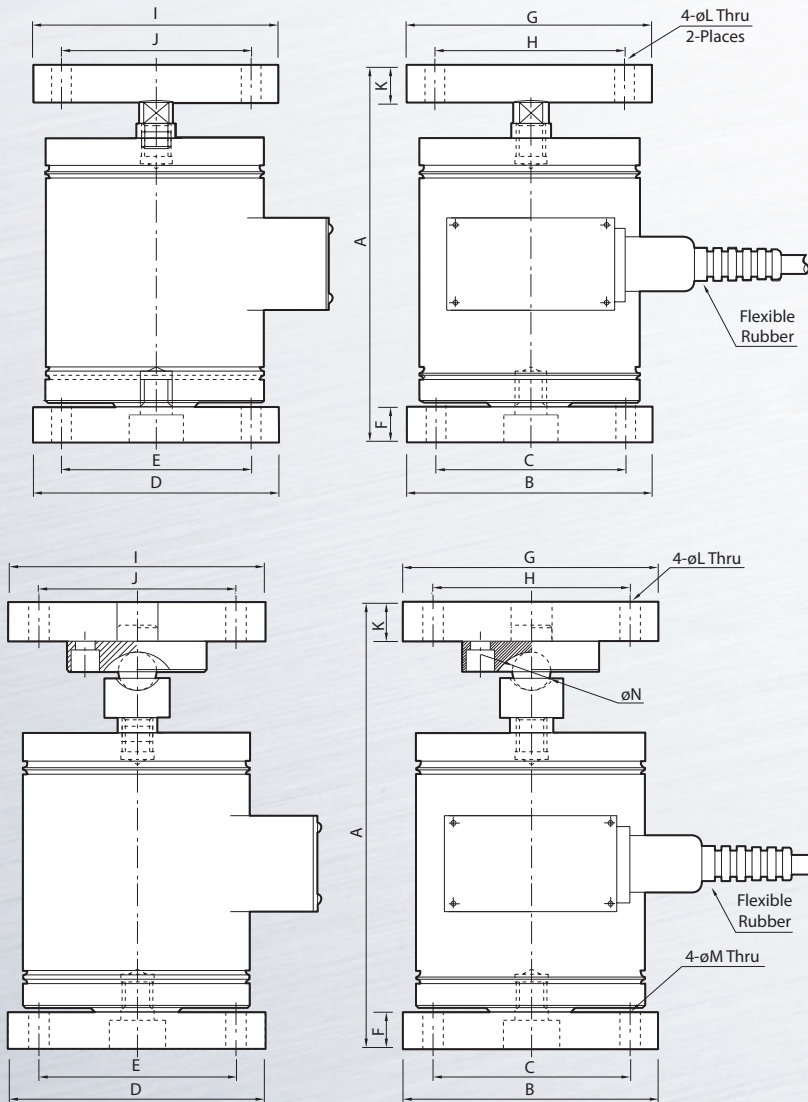
Dimensions(WBK-D)



Dimensions(DSB-D)



Dimensions(CC-D)



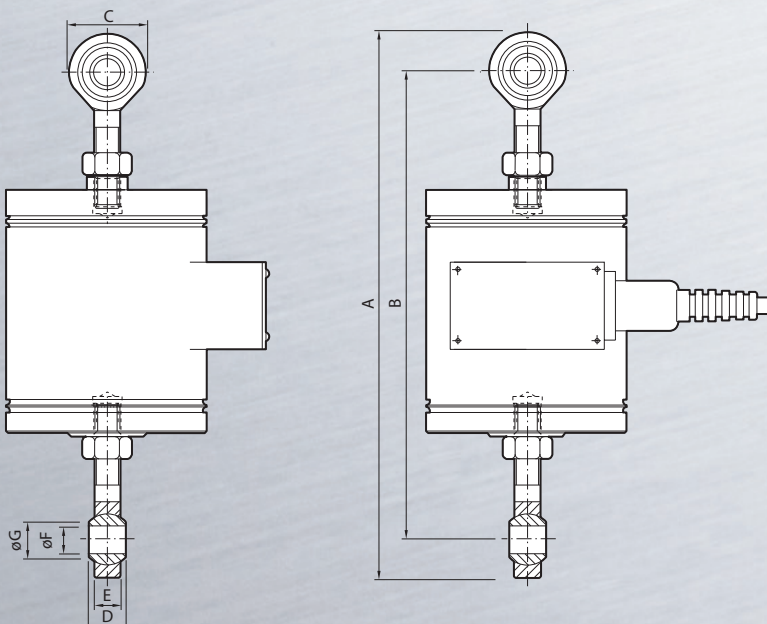
Load button ▶

Capa.	A	B	C	D	E	F	G	H	I	J	K	L
20kgf~1tf	153.7	100	77	100	77	15	100	77	100	77	15	8
2tf~5tf	210.3	130	105	130	105	23	130	105	130	105	23	12
10tf	303	160	125	160	125	30	165	125	165	125	30	14
20tf	375.5	200	150	200	150	30	200	150	200	150	30	14

Ball type ▶

Capa.	A	B	C	D	E	F	G	H	I	J	K	L	M	N
20kgf~1tf	175	100	77	100	77	15	100	77	100	77	15	8	8	15
2tf~5tf	252	130	105	130	105	23							12	
10tf	333	160	125	160	125	30	130	105	130	105	23	12	14	30
20tf	375.5	200	150	200	150	30								

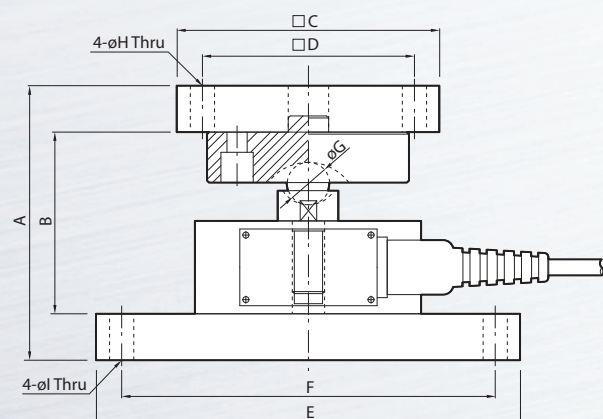
Dimensions(CT-D)



Rod End ▶

Capa.	A	B	C	D	E	F	G
20kgf~100kgf	249.0 ~ 254.0	215.0 ~ 220.0	34.0	16.0	12.0	12.0	15.4
200kgf~1tf	255.0 ~ 260.0	221.0 ~ 226.0					
2tf~5tf	525.0 ~ 530.0	423.0 ~ 428.0	102.0	28.0	27.0	22.0	25.8
10tf	680.0 ~ 685.0	545.0 ~ 550.0	135.0	40.0	38.0	39.0	45.0
20tf	Order-made						

Dimensions(LS-D)

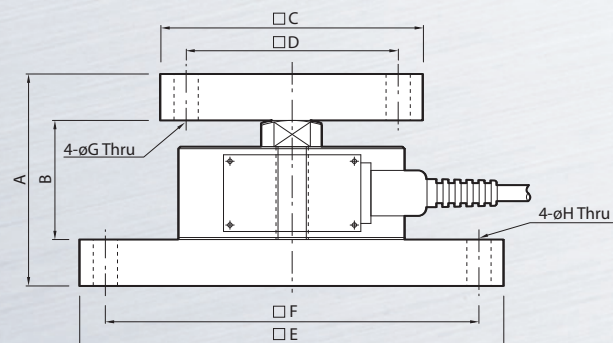


Ball type ▶

Capa.	A	B	C	D	E	F	G	H	I
1tf~3tf	136.0	90.0	130 x 130	105 x 105	210 x 130	185 x 105	21.0	12	12
5tf	145	99.0					30.0		
10tf	166.0	113.0					30.0		
20tf~30tf	196.0	143.0					30.0	14	
50tf~	Order-made								

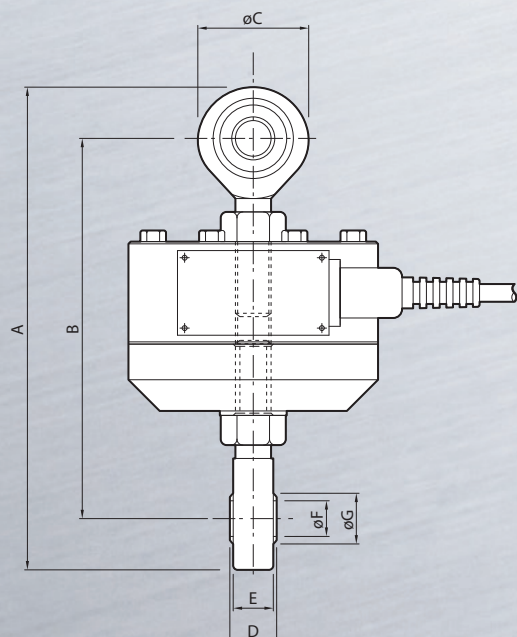
Load button ▶

Capa.	A	B	C	D	E	F	G	H
1tf~3tf	105	59	130 x 130	105 x 105	210 x 130	185 x 105	12	12
5tf	107	61			160 x 160	125 x 125	14	14
10tf	140	80	160 x 160	125 x 125	160 x 160	125 x 125		
20tf~30tf	175	115	200 x 200	150 x 150	200 x 200	160 x 160		
50tf~	Order-made							



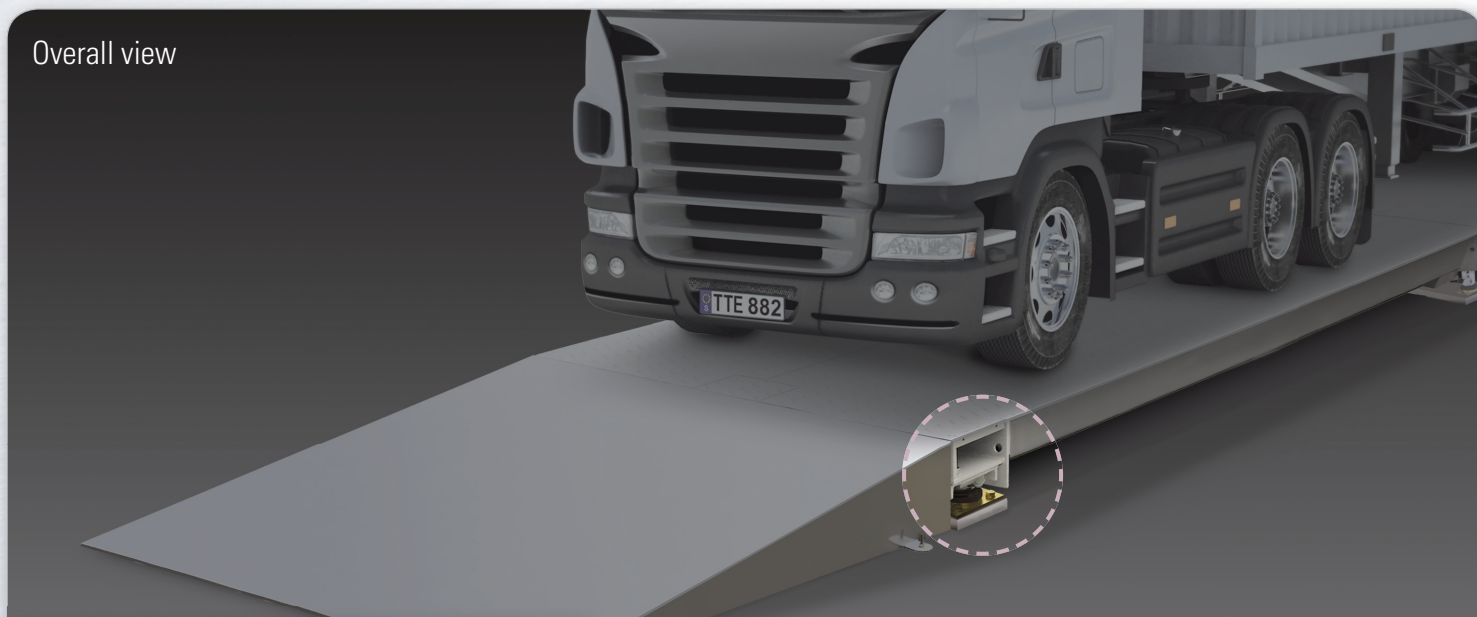
Rod End ▶

Capa.	A	B	C	D	E	F	G
1tf~3tf	216.7 (Max)	170.7 (Max)	50.0	21.0	18.0	16.0	19.3
5tf	257.0 (Max)	197.0 (Max)	60.0	23.0	22.0	18.0	21.9
10tf	430.0 (Max)	328.0 (Max)	102.0	28.0	27.0	22.0	25.8
20tf~30tf	558.0 (Max)	423.0 (Max)	135.0	40.0	38.0	39.0	45.0
50tf~	Order-made						

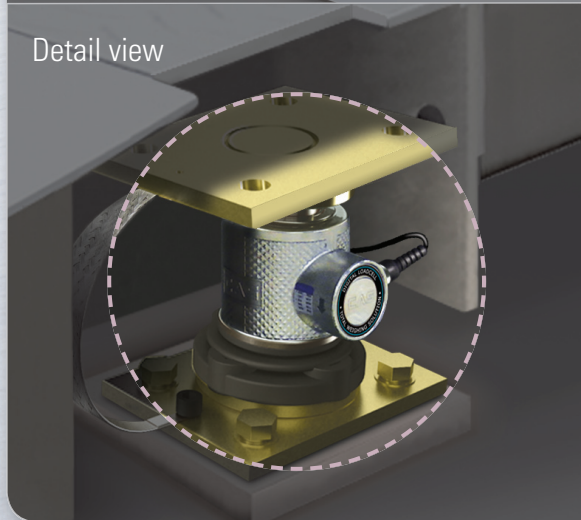


TRUCK SCALE

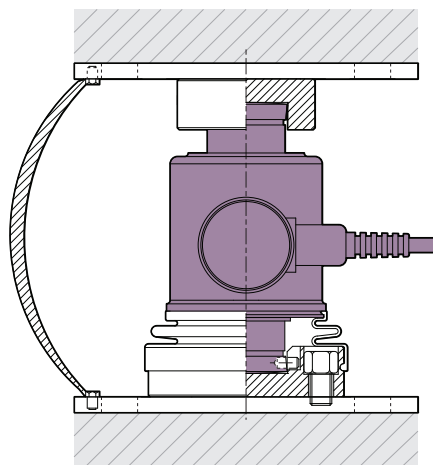
Overall view



Detail view



Dimension



Vehicle weighing

CAS digital Load Cell (WBK-D & DSB-D) is suitable for use in vehicle scales.

It allows high-accuracy, simple installation and effective maintenance with digital signal minimized RFI & EMI. Via waterproof enclosure and lightning protection, it is available in harsh environment.

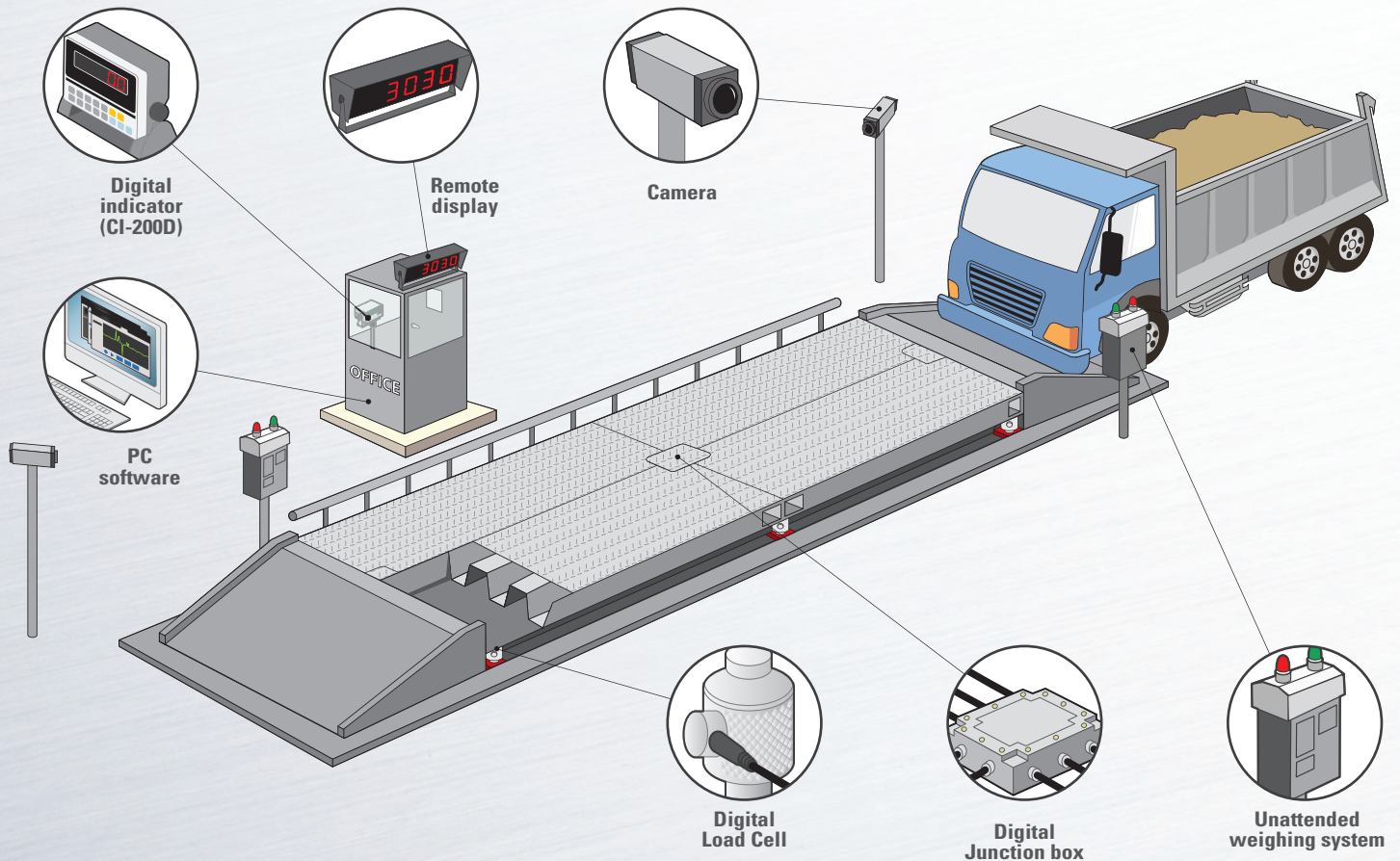


Warehouse & distribution center



Vehicle weighing

Vehicle scales which CAS digital Load Cell is installed offer perfect solution for your business with various equipments.



Digital indicator(CI-200D series)

CI-200D series Digital weighing indicator is the digital version in the CI-200 indicator family, specifically designed to be connected to CAS digital Load Cell. Large & High-visibility LED(25mm)/LCD(24mm) display with weight status information. Numeric keys & 5 function keys to set easily the functions.



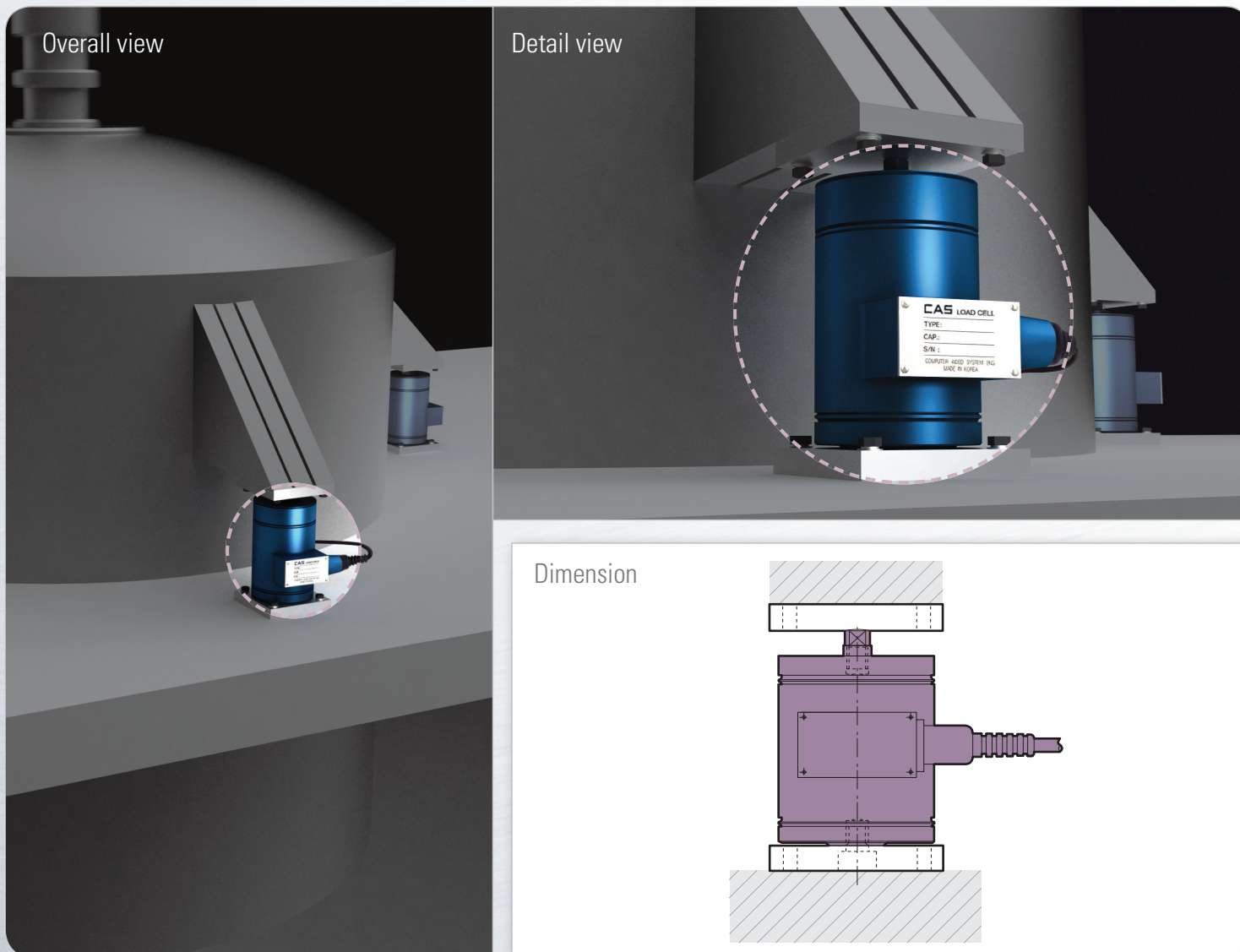
Features

- ▶ Digital Weighing Indicator
- ▶ LED(CI-200D), LCD(CI-201D)
- ▶ Numeric keys
- ▶ RS-232 port : 1EA
- ▶ Diagnosis function of Truck Scale
- ▶ Power: DC adaptor and rechargeable battery
- ▶ Various application: Bench scale, Platform scale, Truck scale(weighbridge) etc.

Application

- ▶ Platform scale
- ▶ Truck scale

HOPPER SCALE



Process weighing-Hopper, tanks, silos

CAS digital Load Cell assembled with Load Cell accessory is ideal for use in Hopper scales, tank scales and silo scales.

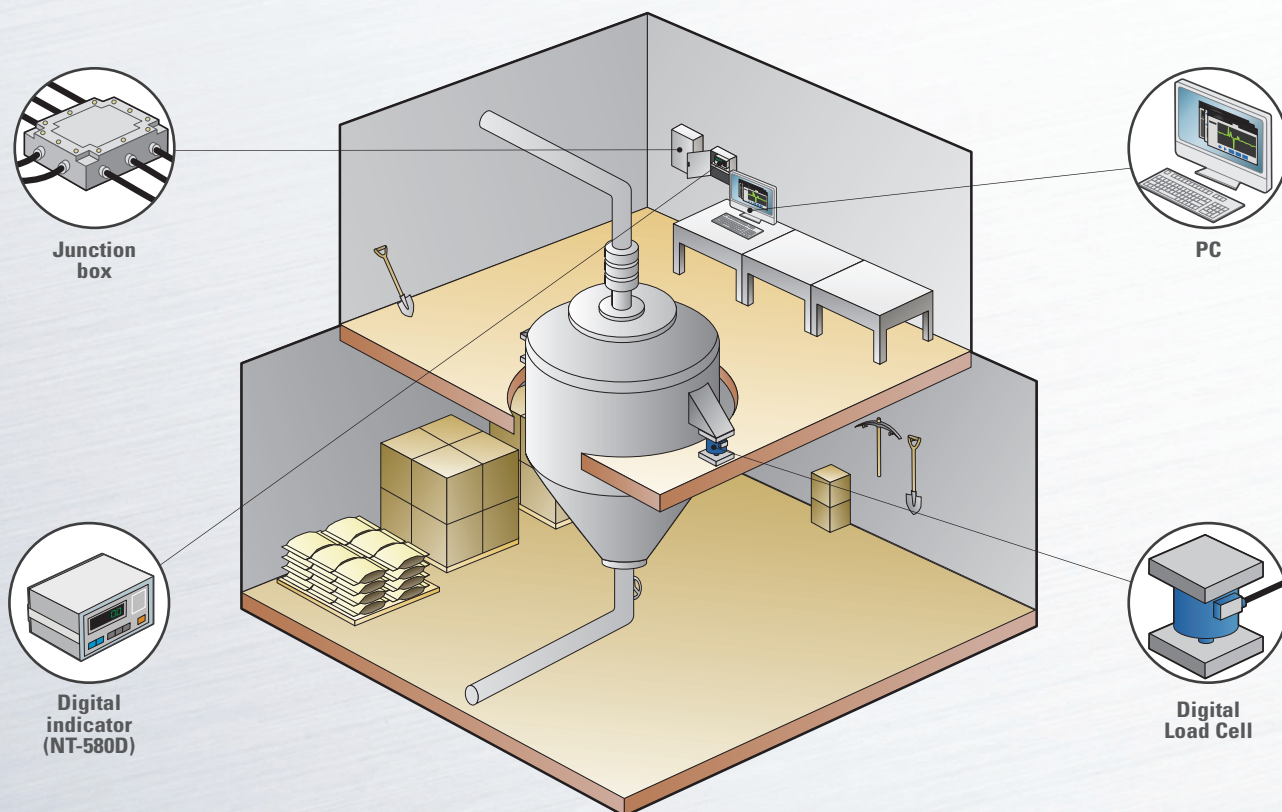
It offers high-accuracy, repeatability and correct measurement in process weighing applications.



Process weighing system

Process weighing

The wide capacity range from 20kg~300t of CAS digital Load Cell allows the weighing of tanks and silo and hoppers of various size with ease. Also, via digital weighing controller NT-580D, you can be offered correct controll and excellent performance for your process weighing system



Digital indicator(NT-580D)

NT-580D Digital weighing controller is the digital version of the NT-580A, specifically designed to be connected to CAS digital Load Cell. 7 digits High-visibility VFD display with weight status information.

Tactile 6-keys to set easily the functions. Via Various interface options, the NT-580D is suitable for from simple weighing to process weighing such as hopper and silo scales.



Features

- ▶ Digital Weighing Controller
- ▶ RS-232 Port : 2EA
- ▶ External relay In/output : 6 input / 8 output
- ▶ Diagnosis function
- ▶ Various applications : Platform scale, Truck scale (weigh bridge) Hopper scale and Packing scale etc
- ▶ Analog out (option): I-out (4~20mA) or V-out (0~10V)

Option

- ▶ 4~20mA or 0~10V, RS-485 interface

Application

- ▶ Platform scale
- ▶ Truck scale
- ▶ Hopper scale
- ▶ Tank scale

Asia

REPUBLIC OF KOREA

Headquarter

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