



Intelligent Truck Scale Weighing with Pendeo[®] Truck & Combics Pro

Weighing System - Overview



Weighing System - Benefits



Easy and fast installation

- Search function for Pendeo® Truck
- Automatic corner correction possible

Highest reliability

- Monitoring of each load cell
- Unsusceptible output signal
- Immediate error recognition
- Maximum resistance to lightning strike

100% compatibility with analogue PR 6221

Weighing System – Pendeo® Truck



The Pendeo® Truck builds on the precision, stability and quality of proven Sartorius products.

Your benefits are:

- Short weighing time due to an extremely compact design
- Maximum reliability due to hermetically sealed stainless steel housing
- Proven lightning protection by a special strain-gauge technology
- High EMC compatibility (10 V/m)
- Suitable for use in ATEX zone 2/22
- Additional reliability due to diagnostic function with e.g. overload counter, temperature display...

Weighing System – Combics Pro



The Combics Pro is above all characterized by its intuitive operator guidance and, with the TRUCK application, it is the first choice for reliable Truck weighing.

- Intuitive operator guidance
incl. Pendeo® Truck installation routine
- Large, easy-to-read colour display
- High-quality IP69K stainless steel housing
- Extensive database function and
internal alibi memory
- Data security through allocation of user rights
- Batching function on Truck scales

Weighing System – PR 6024/68S – Digital Junction Box



The PR 6024/68S junction box is a connection unit for up to 8 load cells from the Pendeo® range. The colour coding of the connection blocks enables intuitive connection of the load cells

- Stainless steel housing (IP68, IP69K)
- Connection of up to 8 Pendeo® load cells
- High EMC compatibility (10 V/m)
- Suitable for use in ATEX zone 2/22

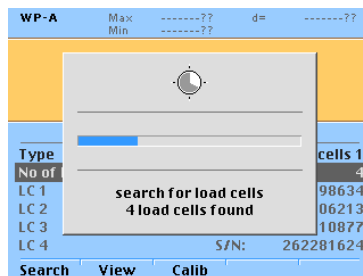
PR 6024/02S Power Supply Unit



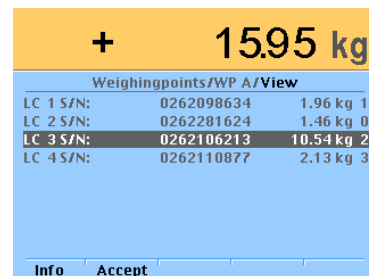
The high-quality power supply unit ensures reliable energization for the load cells.

- High-quality stainless steel housing (IP68, IP69K)
- Reliable power supply for up to 8 Pendeo® load cells
- Broad voltage input 100 V – 240 V
- High EMC compatibility (10 V/m)
- Suitable for use in ATEX zone 2/22

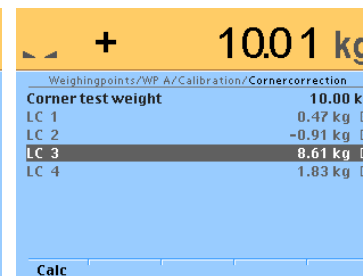
Intuitive Installation Procedure



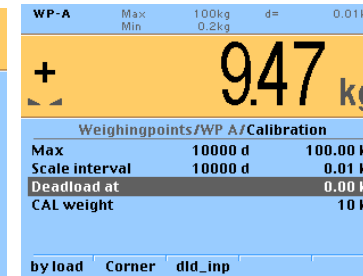
No need to enter load cell parameter



Assignment of the load cell position under the weighbridge

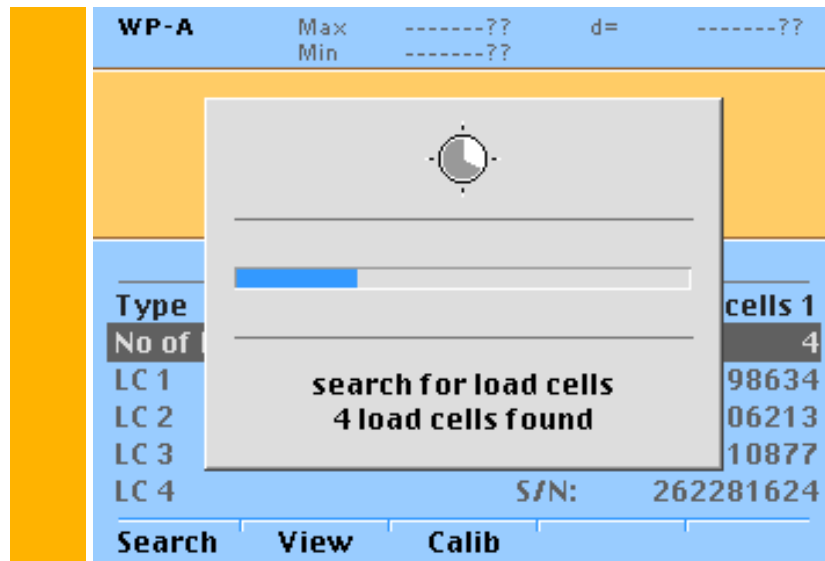


Easy corner adjustment w/o potentiometer or soldering of resistances



Easy entry of the calibration parameter

Installation Procedure – Load Cell Search



- Automatic search function to find all connected load cells
- No entry of load cell data required
- Calibration parameter are saved in the load cell
- Identification of the connected load cell with the serial number

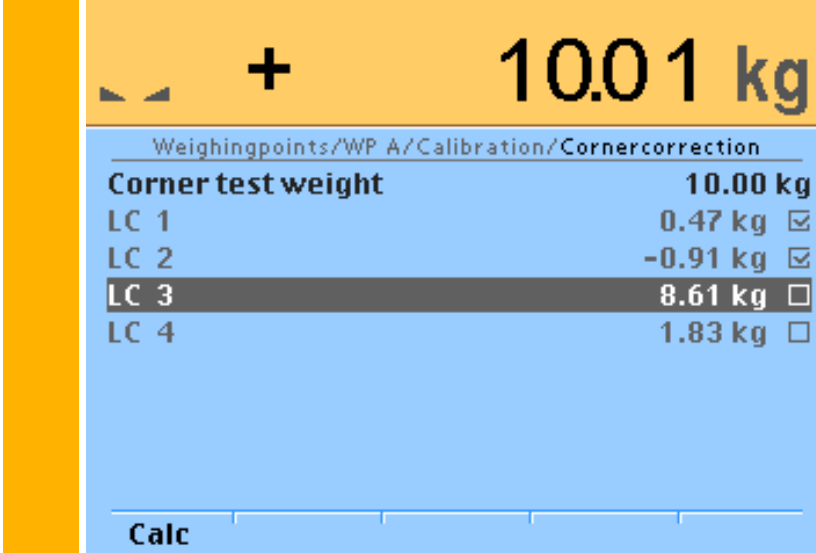
Installation Procedure – Load Cell Assignment

+ 15.95 kg			
Weighingpoints/WP A/View			
LC 1 S/N:	0262098634	1.96 kg	1
LC 2 S/N:	0262281624	1.46 kg	0
LC 3 S/N:	0262106213	10.54 kg	2
LC 4 S/N:	0262110877	2.13 kg	3

Info Accept

- Assignment of the load cells to its position under the weighbridge.
- Automatic detection of the charged load cell
- The indicator saves the sequence and each load cell will be assigned to a corner

Installation Procedure – Corner Adjustment




The screenshot shows a scale display with a yellow header bar containing a plus sign and the weight '10.01 kg'. Below the header is a blue menu with the path 'Weighingpoints/WP A/Calibration/Cornercorrection'. The menu lists four load cells (LC 1 to LC 4) with their respective weights and checkboxes. LC 3 is highlighted with a dark grey bar. At the bottom of the menu is a 'Calc' button.

Corner test weight	Weight	Checkbox
LC 1	0.47 kg	<input checked="" type="checkbox"/>
LC 2	-0.91 kg	<input checked="" type="checkbox"/>
LC 3	8.61 kg	<input type="checkbox"/>
LC 4	1.83 kg	<input type="checkbox"/>

- Easy corner adjustment without potentiometer or soldering of resistances
- Electronic compensation of the different corner signals with special algorithm
- Monitoring of the individual load cell signal

Installation Procedure – Calibration

WP-A	Max	100kg	d=	0.01kg
	Min	0.2kg		
				
Weighingpoints/WP A/Calibration				
Max		10000 d		100.00 kg
Scale interval		10000 d		0.01 kg
Deadload at				0.00 kg
CAL weight				10 kg
by load Corner dld_inp				

- Easy and clear entry of the calibration parameter

Maximum scale value

Step wide

Dead load

Load Cell Information

Weighingpoints/WP A/View/Loadcell info	
Model name	PR6224/100kgC3
Version	0.01.00
Serial no.	262106213
E _{max}	0.1000 t
n _{LC}	100000 e
Y	100000
Z	20000000
LC Overload	0.1500 t
LC Overload counter	0
Temperature	24.7°C

- Load cell type (name, capacity, accuracy)
- Software version
- Serial number
- Maximum capacity
- Max. load cell interval (acc. OIML R60)
- Min load cell verification interval
- Load cell overload
- Overload counter
- Temperature



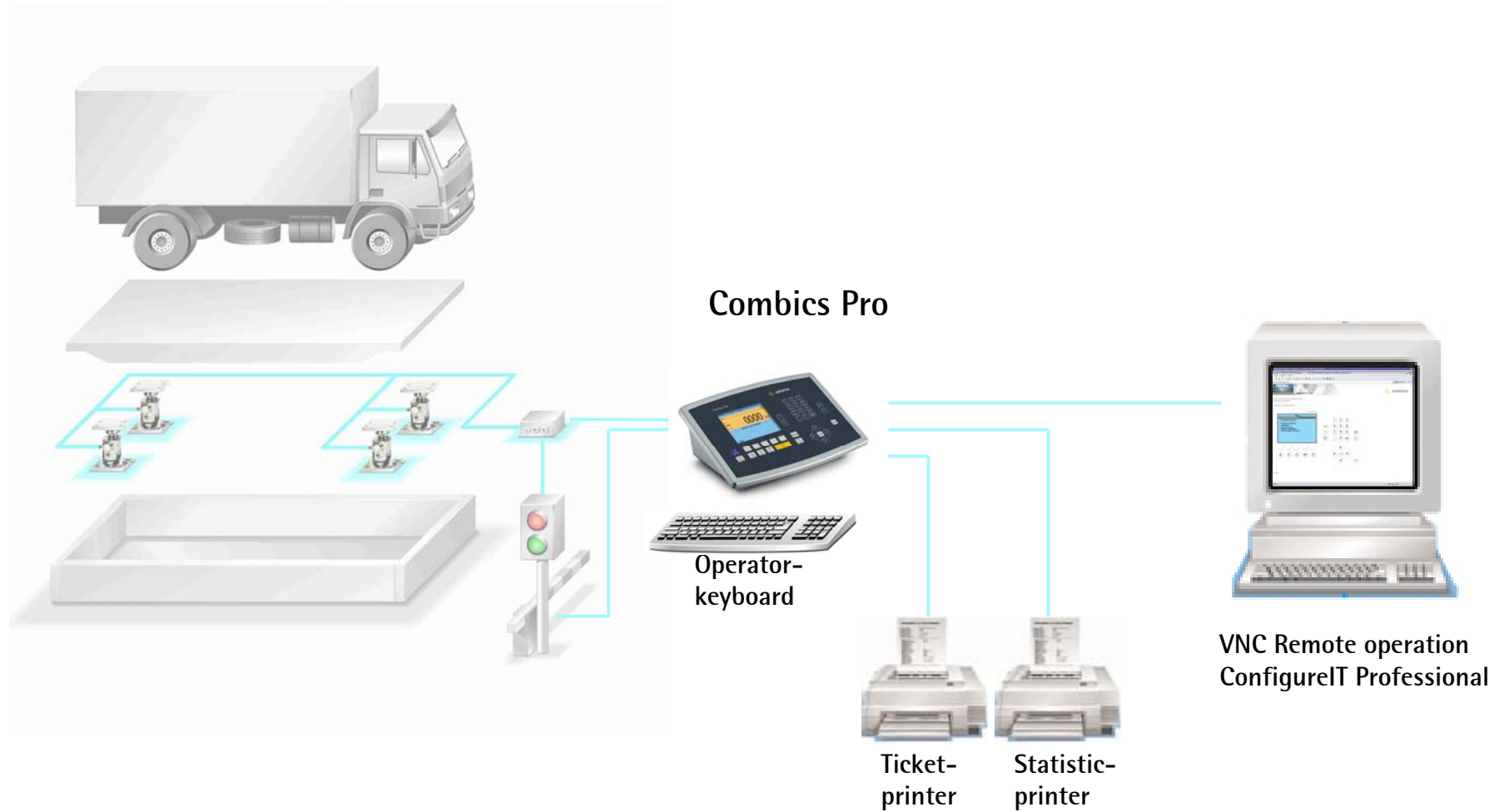
Combics Pro - Application TRUCK

Overview



- 4 Standard weighing procedures (1st, 2nd,..)
- Databases function
- Internal alibi-memory (i.e. 50.000 entries)
- Statistic function
- User management, password
- Pre-defined PLC programs for traffic control
- 3 different printers connectable
- External keyboard (option)
- Power tools

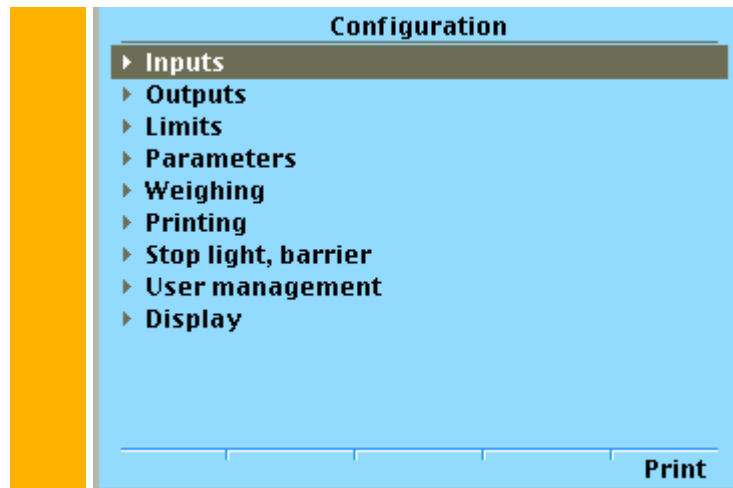
Typical Application Layout



Plug-in Cards

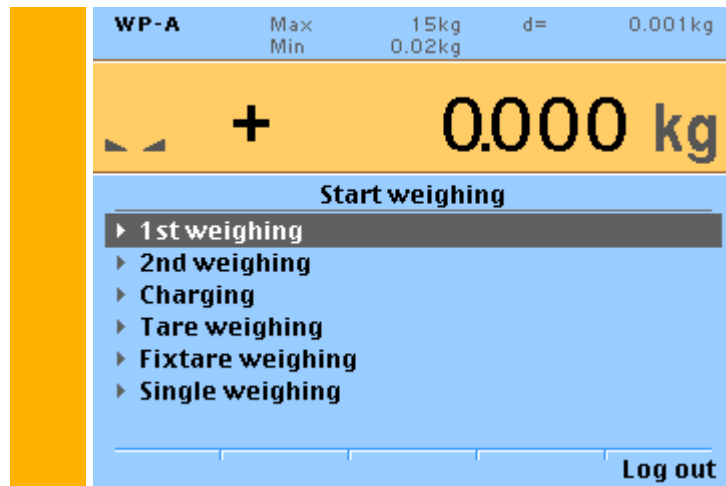
PR 5800/10 Weighing electronics
PR 5510/02 2 serial RS-232 interfaces
PR 5510/04 1 serial RS-232 interface and 1 serial RS-485/RS-422 interface (required for Pendeo® Load Cells)
PR 5510/07 1 analog output, 4 analog inputs
PR 5510/08 BCD output
PR 5510/12 6 optocoupler inputs and 12 optocoupler outputs
PR 1721/31 Profibus-DP slave
PR 1721/32 Interbus-S slave
PR 1721/34 DeviceNet slave
PR 5510/14 Ethernet

Configuration Points



- Input
- Output
- Limits
- Parameters
- Weighing
- Printing
- Traffic lights
- User management
- Display

Weighing Procedures



- First- and second weighing
- Weighing with fix-tare
- Determination of fix-tare
- Single weighing
- Filling

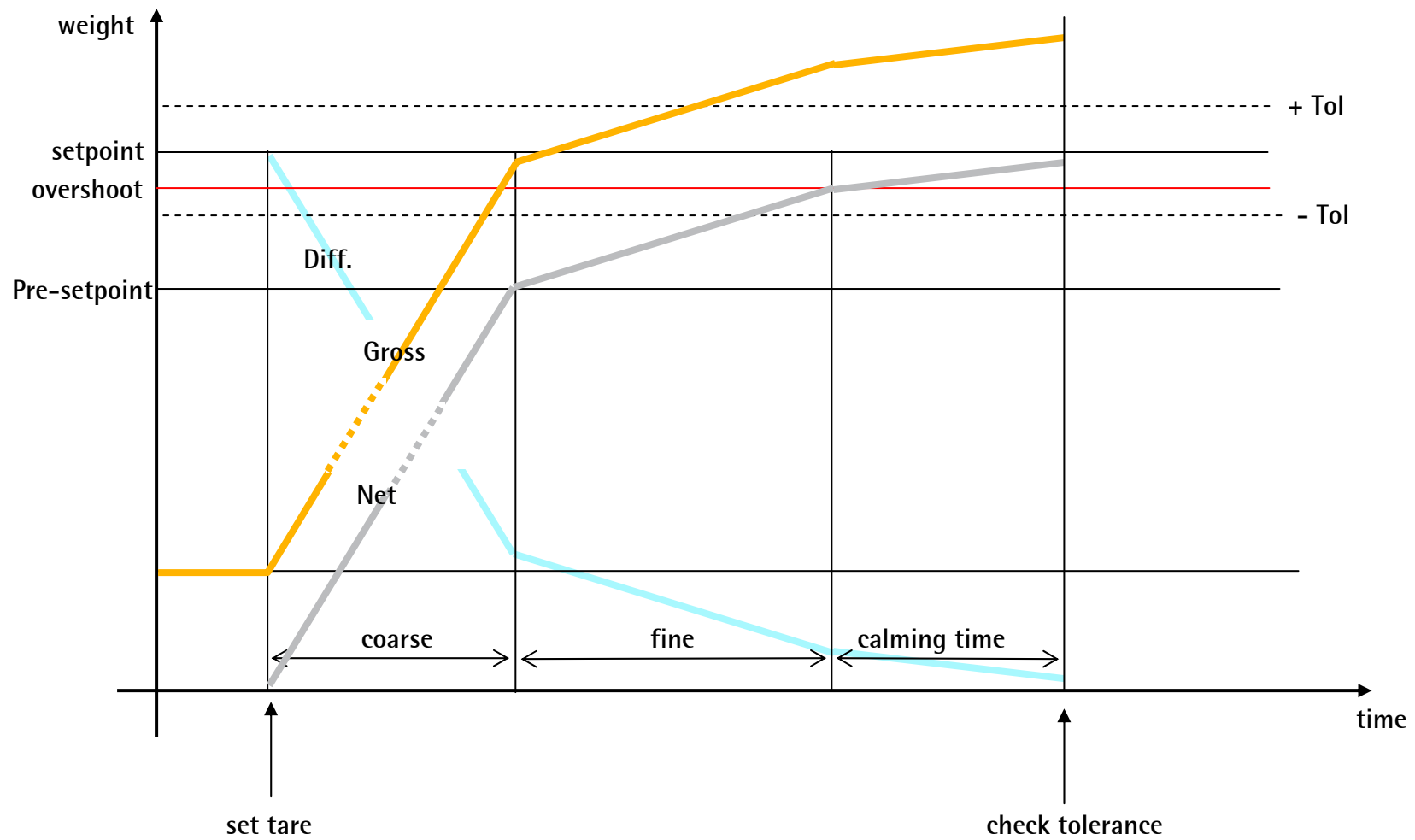
- Each weighing has a specific ticket design.
- Tickets are free configurable with NLE without programming knowledge.

Filling Mode



- Density per product can be saved to enter the setpoint in liter, m³, ...
- 3 different filling mode can be used
 - net filling
 - manual filling
 - register component
- Charged material is included in the statistic database
- Simulation - For demo purposes weighing point A or weighing point B can be run in a simulation mode to show the filling procedure in the B1 mode.
- Additional licence required

Filling Mode „net filling“



Example ticket for filling procedure

Ticket No.	2	Scale	CISPRO
User	Admin		

customer	Müller		
	Hamburg		
	Street No. 1		
	Department APD		
from/to	Schulze		
	Hamburg		

Truck	WL-JD 411		
Product	Water		

Set point		1.210	kg
Set point		1.235	l
2008.02.02	11:46:13		
1. Weight	A	<00.280	kg>
2008.02.02	11:46:27		
2. Weight	A	<01.492	kg>
Net	A	<01.212	kg>
Net		1.237	l

Sequence number/ Scale Name

User

Customer Address

Delivery Address

Truck Name

Product

Thank you for your attention.