RL-HPJ

Hand Pallet Jack Scale

Technical Manual

RICE LAKE®
WEIGHING SYSTEMS

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PN 183812 Rev B

An ISO 9001 registered company

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www.ricelake.com

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1.0 Introduction

The Pallet Jack Scale is ideal for handling and weighing pallets or standardized containers directly where they are located, saving time and money.

The durable and precise Pallet Jack Scale is equipped with high performance weighing electronics and features a multi-functional program that helps perform daily tasks.

Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Safety

Safety Signal Definitions:

DANGER ***Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.***

WARNING ***Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.***

CAUTION ***Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.***

IMPORTANT ***Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.***

General Safety

Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

WARNING

Failure to heed could result in serious injury or death.

This Pallet Jack Scale is designed to weigh exclusively on standardized pallets.

Never load the scale beyond the maximum capacity stated on the plate of the weight readout instrument.

Do not use the scale in environments where there is the danger of fire or explosion.

Do not load the forks when they are raised, not even partially.

Before using the pallet jack, ensure it is in working order.

To achieve a correct weight, the forks need to be raised at least 2-4 inches to avoid the frame from rubbing against anything.

Do not expose the Pallet Jack Scale to atmospheric agents (sun, rain, etc.).

Use the Pallet Jack Scale in non-condensing environments with moderate temperature and humidity levels

Use the Pallet Jack Scale where there are no vibrations.

Do not use of solvents or aggressive substances to clean the Pallet Jack Scale.

Do not to make any modifications to the Pallet Jack Scale.

Do not use the Pallet Jack Scale when it no longer fulfills the safety criteria.

Do not use flammable products to clean the Pallet Jack Scale or the pallets.

Do not subject the indicator to moisture.

Anything not specifically described in this manual is considered improper use of the equipment.

1.2 Features

- Heavy-gauge steel with a durable powder coat finish
- Large 1" tall, high contrast digits, which are clearly visible even in poor lighting conditions on a clear LCD display
- Waterproof membrane keyboard with 17 functional keys
- Configuration, calibration and diagnostics all from the indicator keyboard
- Standard 45.25" (1150 mm) fork length
- Standard 26.75" (680 mm) fork width
- Maximum lifting height of the forks: 7.75" (200 mm) from the ground
- Height of completely lowered forks: 3.125" (80 mm) from the ground
- Polyurethane steering wheels and double loading rollers offer greater stability
- Four stainless steel IP68 load cells
- Handlebar with height control lever
- Weight indicator in IP65 stainless steel water-resistant enclosure, which is easy to clean and resistant to harsh and corrosive environments
- Removable rechargeable battery and set-up for 24/7 continuous use kit or battery operation
- Rechargeable battery is removable and mounted on the pallet jack
- One month of operating time with typical non continuous use due to its programmable automatic power saving function (80 hours of operating time with continuous use)

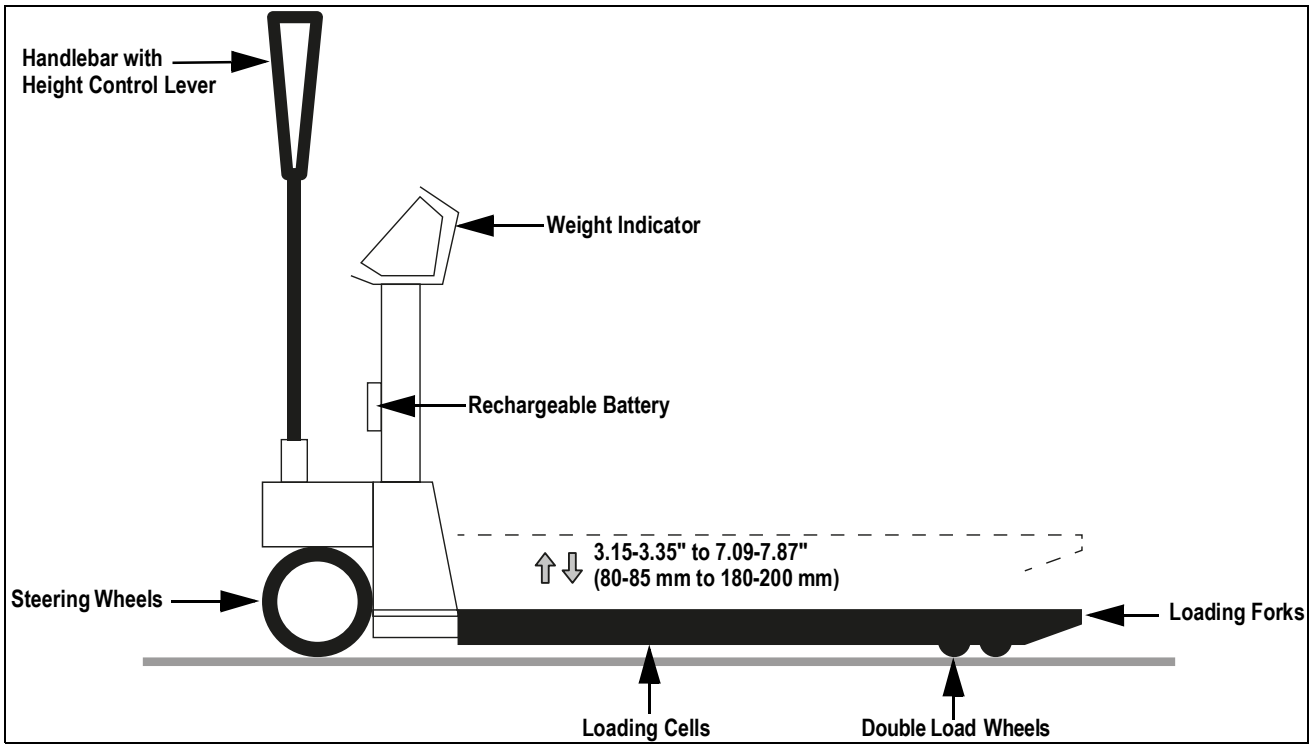


Figure 1-1. Pallet Jack Scale

2.0 Installation

This section describes procedures for unpacking and assembly of the Pallet Jack Scale.

2.1 Unpacking

Immediately after unpacking, visually inspect the Pallet Jack Scale to ensure all components are included and undamaged. The shipping carton should include the following:

If any parts were damaged in shipment, notify Rice Lake Weighing Systems and the shipper immediately.

- Fork Assembly
- Handlebar
- Indicator Stand
- Battery
- Charger
- M8 x 20 mm Screws (3)
- M8 Washers (3)
- M10 x 15 mm Screws (4)
- M10 Washers (4)

Recommended Tools (Not Provided)

- 2.5 mm hex key
- 6 mm hex key
- 8 mm hex key

2.2 Indicator Stand Assembly

Refer to Figure 2-1 and the steps within this section to assemble the indicator stand to the main fork assembly.

1. Cut the red zip tie holding the wire sleeve to the pallet jack chassis.
2. Place the indicator stand on the fork assembly, being careful not to pull or pinch the load cell wires (Figure 2-1-A).

Note ***The load cells of the pallet jack come wired to the indicator.***

3. Ensure the stand is properly supported and seated correctly.
4. Feed excess wire sleeve up into the indicator stand.
5. Remove the four screws that secure the front plate to the indicator stand using a 2.5 mm hex key.
6. Secure indicator stand with four M10 x 15 mm screws and M10 washers using an 8 mm hex key (Figure 2-1-A).
7. Reattach the front plate to the indicator stand, using the provided hex screws (4) (Figure 2-1-B).

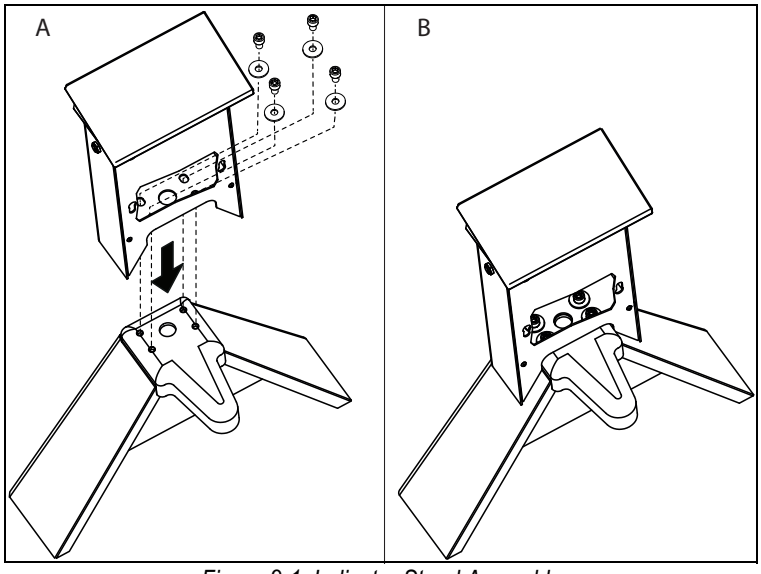


Figure 2-1. Indicator Stand Assembly

2.3 Handlebar Assembly

Follow the steps within this section to assemble the handlebar to the main fork assembly.

1. Remove the hex screws (3) from the steering column of the fork assembly using an 6 mm hex key (Figure 2-2-A).
2. Place base of handlebar into the steering column of fork assembly then secure base of handlebar into the steering column of the fork assembly using the hex screws (3), removed in Step 1, using an 6 mm hex key (Figure 2-2-B).

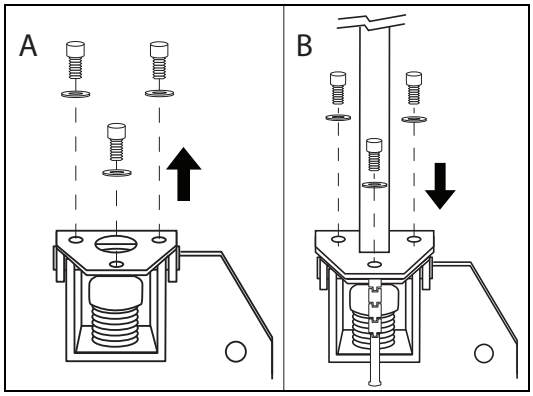


Figure 2-2. Handlebar Attachment

3. Direct the handlebar chain into the handlebar and through the center hole in the pivot pin (Figure 2-3-A).
4. Push down on the steering column lever and hold down to assist in joining the handlebar chain with the lifting connection lever. Navigate the end of the chain into the groove in the lifting connection lever. Ensure the bottom catch of the chain is below the lever and seated completely into the groove for a good connection (Figure 2-3-B).
5. Release the steering column lever, further engaging the handlebar chain with the connection lever (Figure 2-3-C).

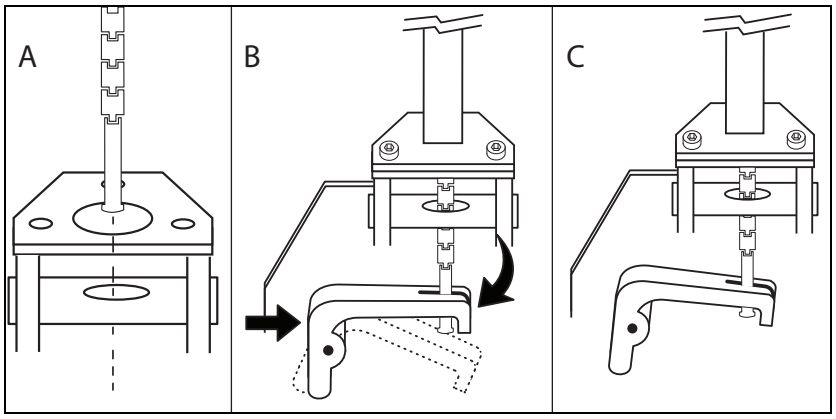


Figure 2-3. Connecting the Handlebar Chain

2.4 Battery Installation

Refer to Figure 2-4 and the steps within this section to install the battery into the indicator stand.

1. Connect the wire connector inside the column to the battery.
2. Slide the battery into the indicator stand at a slight angle and turn counterclockwise to lock it in place.

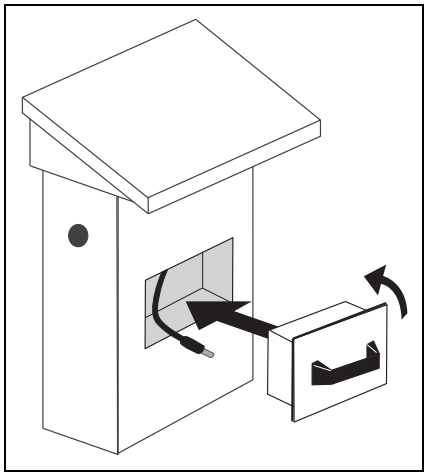


Figure 2-4. Battery Installation

IMPORTANT ***It is recommended that the battery be disconnected if the unit will not be used for 30 days or longer.***

2.5 Printer Installation

For printer installation information, see the RL-HPJ Hand Pallet Jack Scale Printer Kit Installation Addendum (PN 190986).

See Table 5-4 and Table 5-5 on page 42 for printer default and configuration information.

Function	Setting	Description
CoN.Prn	Node	tiChee (thermal printer)
CoN.Prn	baud	9600
CoN.Prn	bit	n.8.1
CoN.Prn	CtS	Enul
CoN.Prn	Power.P	Eht.off
Clock		Yes

Table 2-1. Required Settings

3.0 Operation

This section describes procedures for operation of the Pallet Jack Scale.

The Pallet Jack Scale is an electronic weighing system directly installed on a pallet jack.

See the following information before use:

3.1 Pallet Jack Controls

The raised load is moved forward or backward by the handlebar, which controls the steering wheels.

3.1.1 Height Control Lever Positions

The height control lever has three available positions inside the upper handle: center, down or up.

Center - Transport Position

The handlebar is completely free for transport maneuvers. Allowing the pallet jack to be moved in any direction.

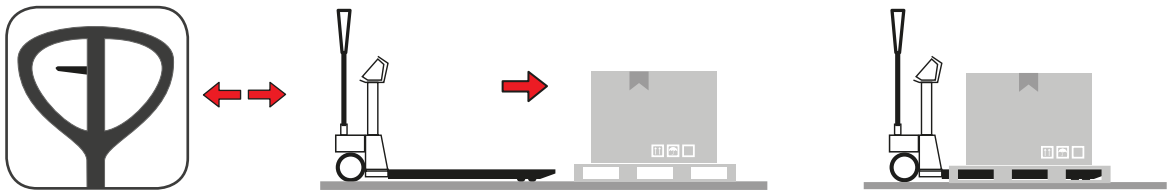


Figure 3-1. Transport Position

Down - Lift Position

Push the height control lever to the down position. Move the handlebar down and up to lift up the forks of the pallet jack. Continue this movement until the forks are raised at least two inches off the ground to move the Pallet Jack Scale.

CAUTION ***A return spring pushes handlebar back to its upright position. Do not let go of handlebar until it is upright.***

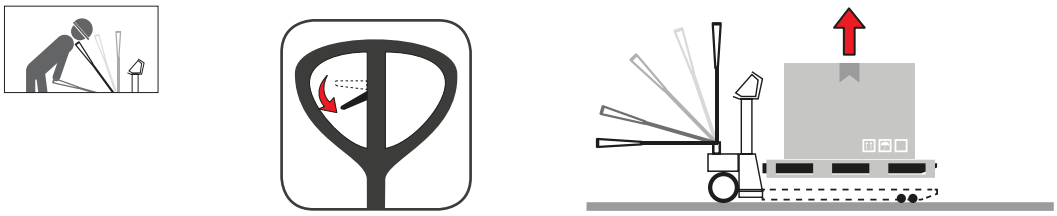


Figure 3-2. Lift Position

Up - Lower Position

Pull the height control lever to the up position to lower the load. The descent speed is controlled by a valve that opens when the lever is firmly pulled to the end of its stroke.

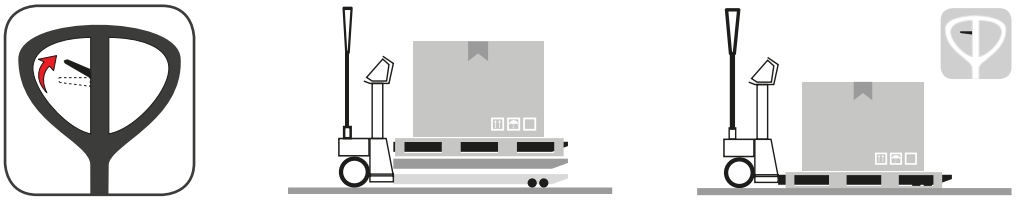


Figure 3-3. Lower Position

Note ***Raise or lower the pallet jack only when stationary.***

3.2 General Use Guidelines

The Pallet Jack Scale must only be used on solid level surfaces and maneuvered when in the normal position. Review and adhere to the following figures that illustrate correct and incorrect use techniques of the Pallet Jack Scale.

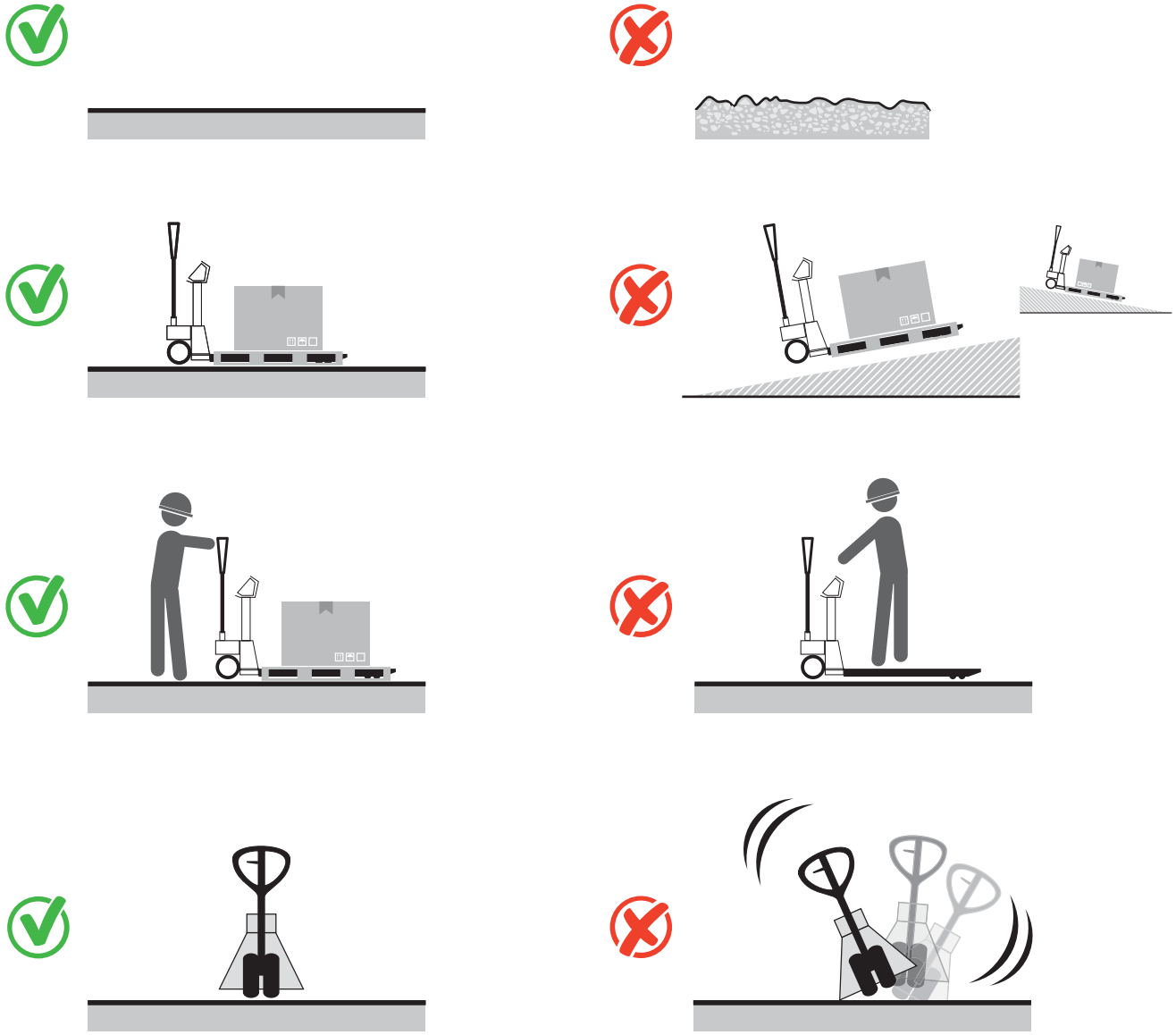


Figure 3-4. General Use Guidelines

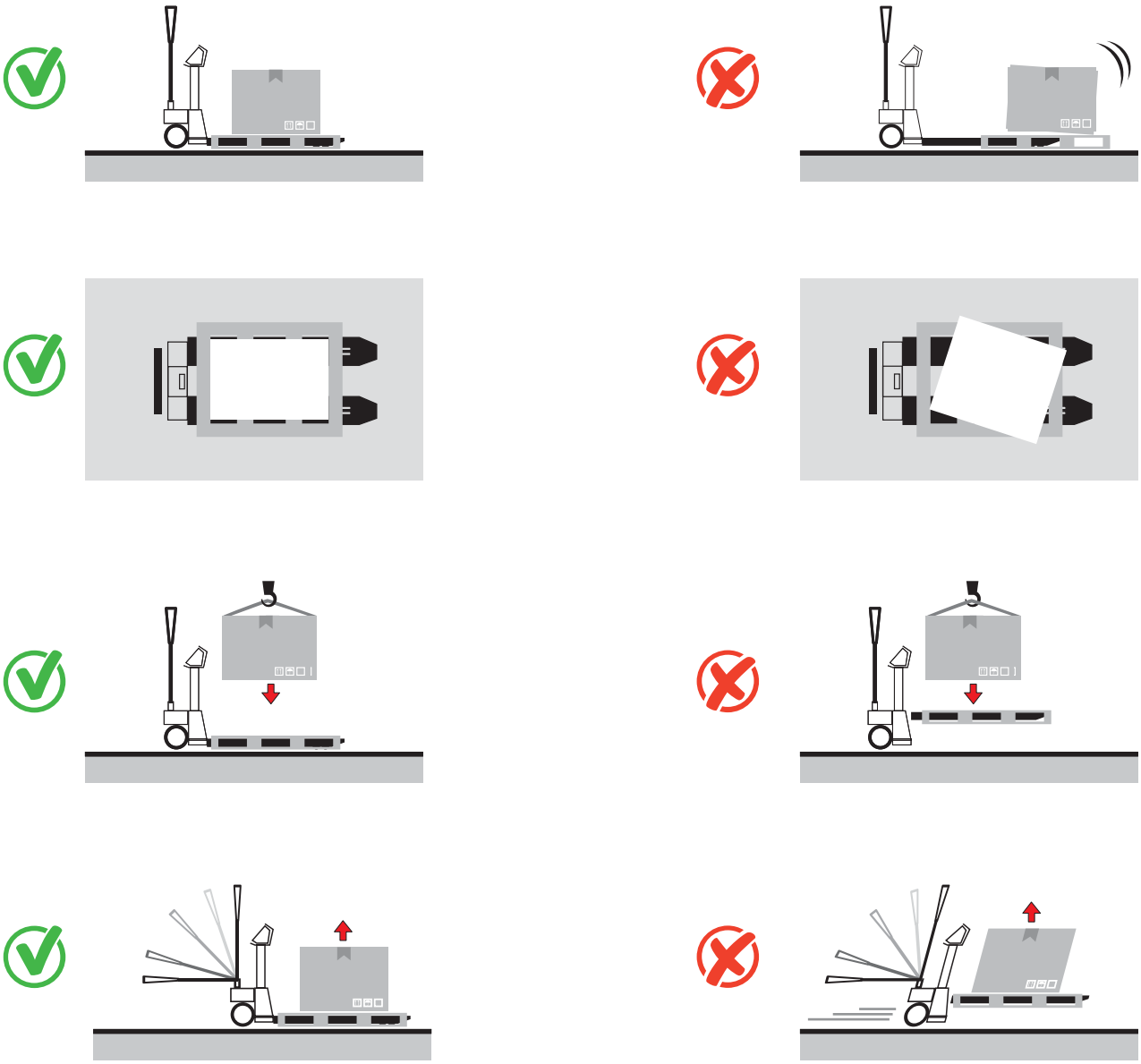


Figure 3-5. General Use Guidelines (Continued)

3.3 The Indicator Display and Keys

The LED numeric display consists of six 7-segment digits. If a negative number is displayed, the first digit is used to display -, reducing the number of available digits to five.

The keys are used to navigate through menus, select digits within numeric values, and increment/decrement values.

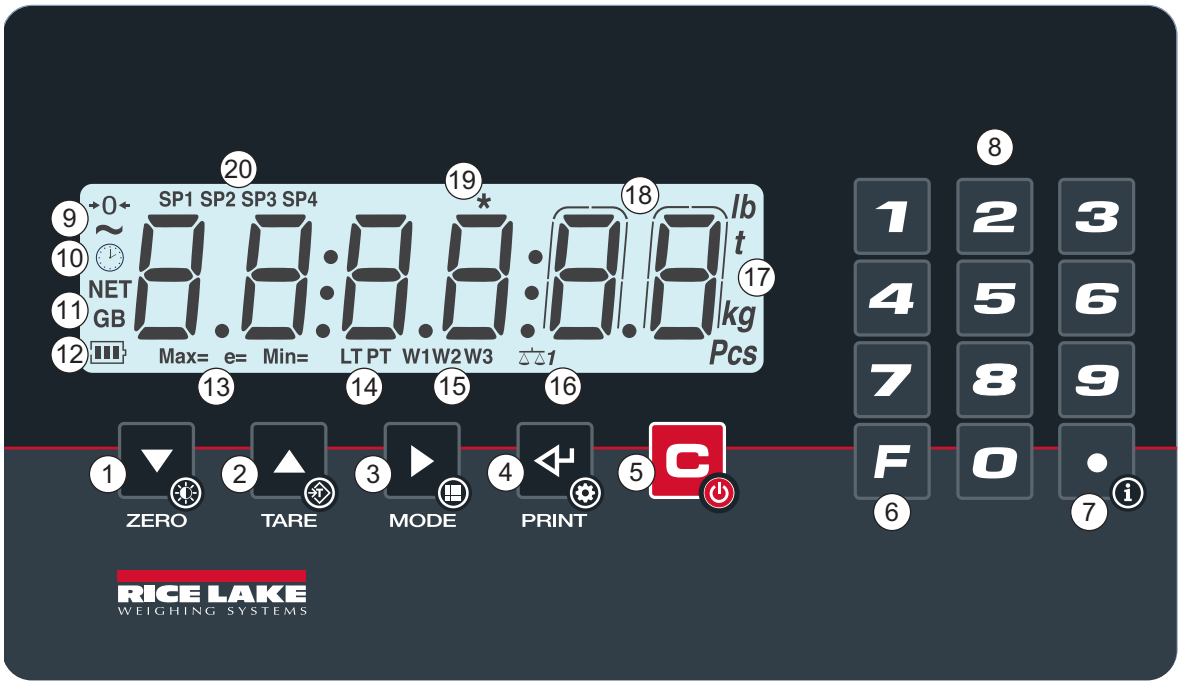


Figure 3-6. Indicator Display and Keys

Item No.	Description
1	Sets the current gross weight to zero; also used as the down key to navigate menus or to edit a value
2	Performs one of several predetermined Tare functions; also used as the up key to navigate menus or to edit a value
3	Performs one of several predetermined Mode functions; also used as the right key to edit a value
4	Accepts menu, parameter settings or numeric value; sends print data to a communication port when in weigh mode
5	Turns the scale on and off; also used as a back key in navigation or cancel an entry
6	Puts the indicator into the function menu
7	Decimal key; also calls up information if available
8	Numeric keys
9	The scale is unloaded and at zero (gross)
	The weight is unstable
10	The time is being shown on the display
11	The weight displayed is a net weight; There is a saved tare
	The weight displayed is a gross weight
12	Battery level
13	Metrics are being displayed
14	A locked tare is active
	A manual tare is active
15	Indicate the range of active weighing
16	Indicates the number of the scale (1 is always shown)
17	Units of measurement - Pounds (lb), tons (t), kilograms (kg), grams (g), number of pieces (Pcs)
18	The weight is being displayed in high resolution
19	This means a key is pressed; In some operating modes, it means that a specific function is active
20	These indicate the active relay ports (only with the optional board)

Table 3-1. Annunciator and Key Descriptions

3.4 General Navigation

Use the following scheme for navigation within the menus and parameters.

-  and  move down and up (vertically) to different menu options and to scroll through parameters
-  serves as an enter key for selecting menu options, parameters and parameter values
-  serves as a back key and when pushed multiple times returns the unit to the weigh mode

3.5 Editing Numeric Values

Use the following scheme for numeric entry when using the five main buttons.

The numeric keypad can also be used for numeric value entry.

-  to scroll right (horizontally) to each digit
-  and  to scroll through the numeric options at each digit location
-  serves as an enter key for confirming the numeric value entry
-  serves as a back key to cancel the numeric value entry

3.6 Weighing Procedure

3.6.1 Power on the Indicator

Note ***Unload the Pallet Jack Scale before turning on.***

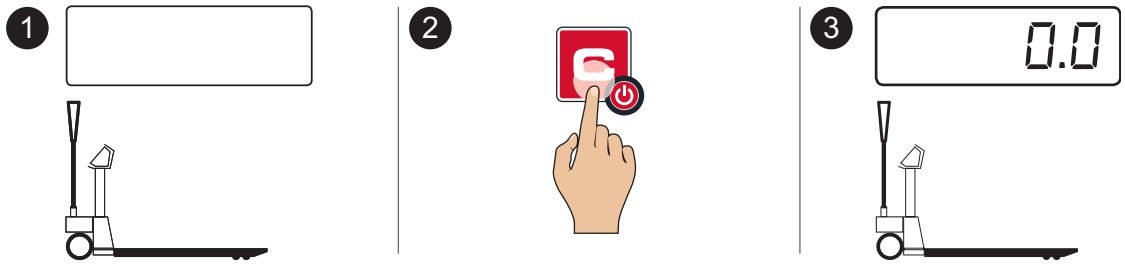


Figure 3-7. Indicator Power On

3.6.2 Put the Pallet Jack in Position

Figure 3-8. Pallet Jack in Position

3.6.3 Lift the Load and Read the Weight

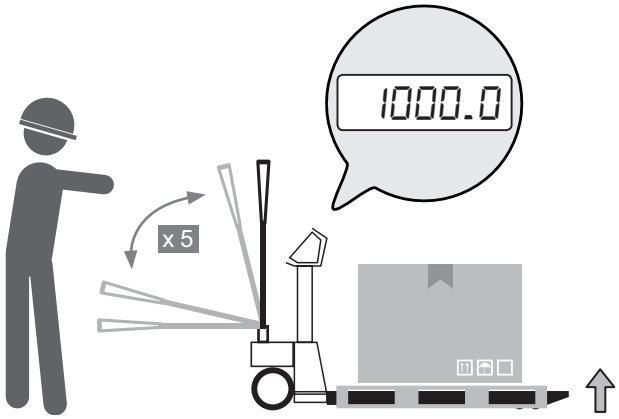


Figure 3-9. Lift the Load and Read Weight

3.7 On

Press to turn the Pallet Jack Scale on.

3.8 Off

Press and hold to turn the Pallet Jack Scale off.

3.9 Zero

Press to zero the Pallet Jack Scale. →0← displays when scale is zeroed.

3.10 Regulation of the Display Brightness

Press and hold to change the display brightness. Use and to scroll between brightness options.

Press to store the brightness setting or press to cancel and return to the weigh mode.

3.11 Automatic Tare

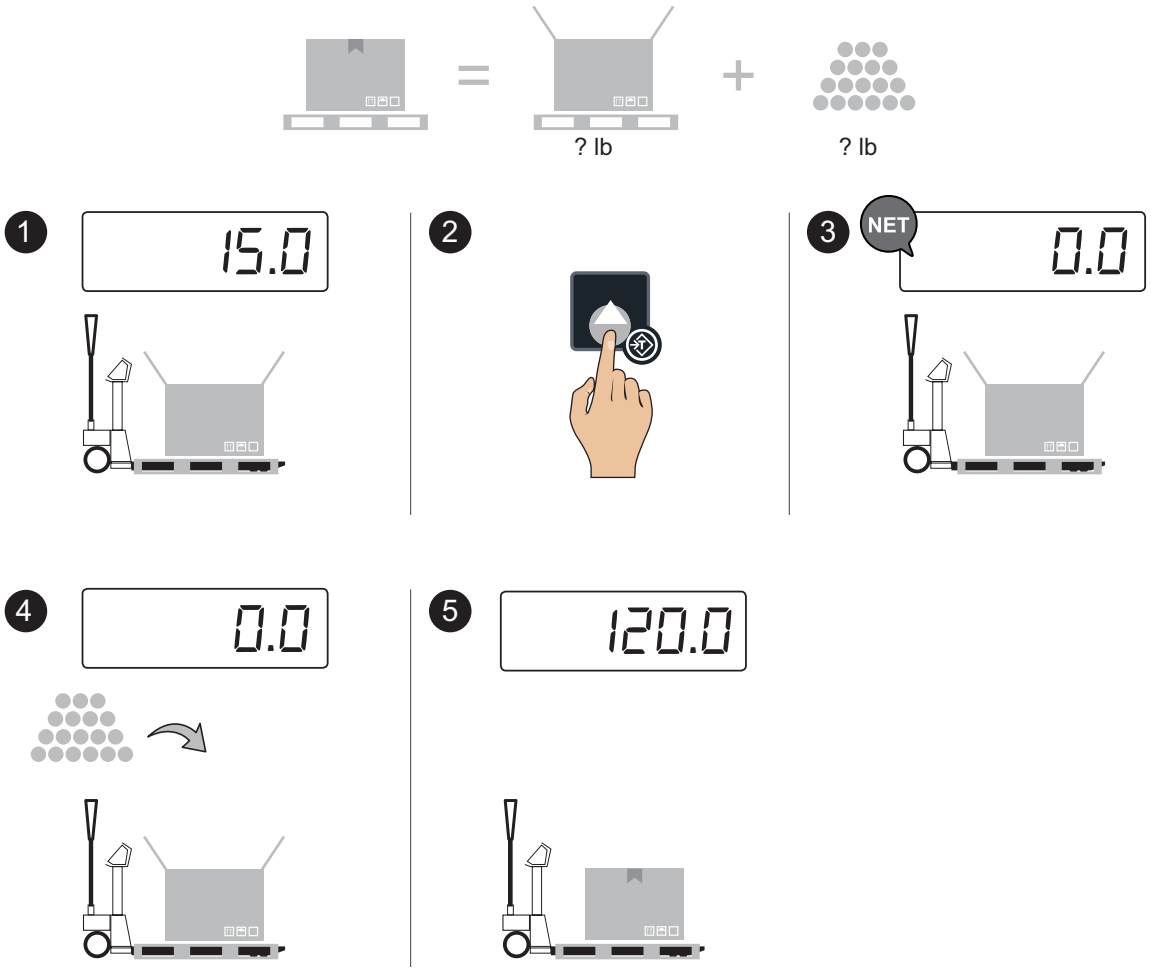


Figure 3-10. Automatic Tare

3.12 Tare Deletion

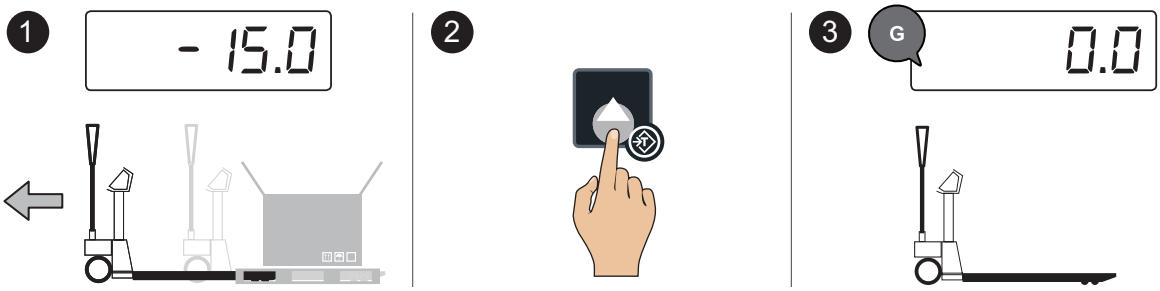
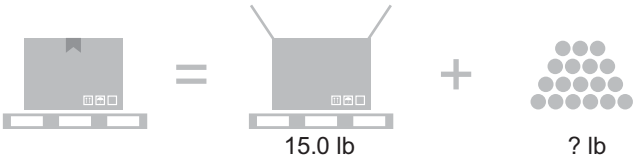


Figure 3-11. Tare Deletion

3.13 Preset Tare (Pt)



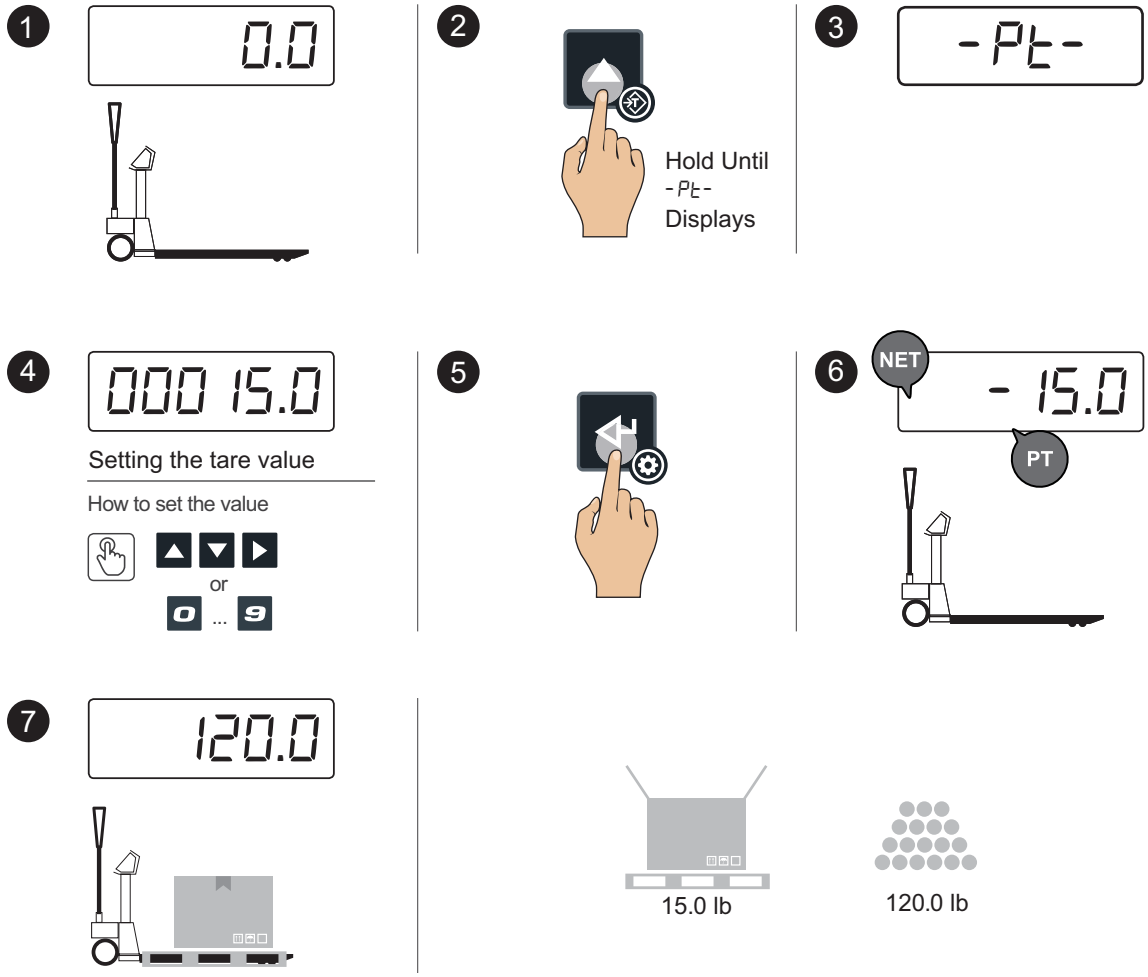


Figure 3-12. Preset Tare

If the pallet jack has a number keypad, it is possible to enter the tare quickly:

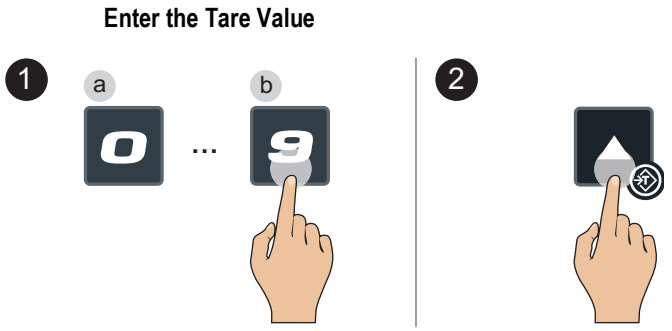
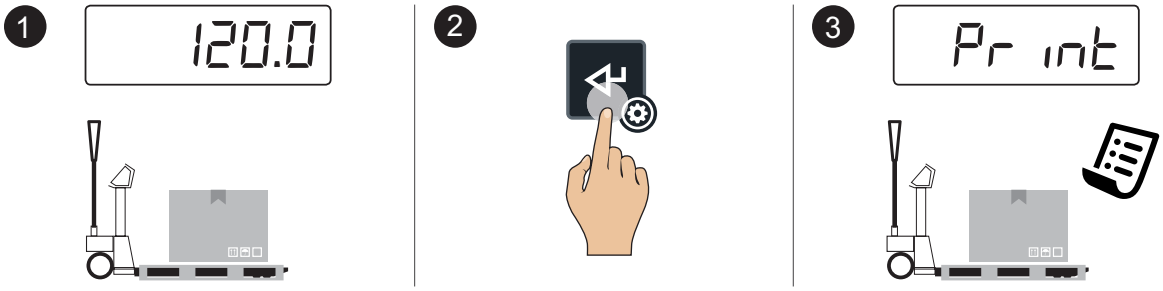


Figure 3-13. Enter Tare Value

3.14 Print (and Reprint of the Last Ticket)



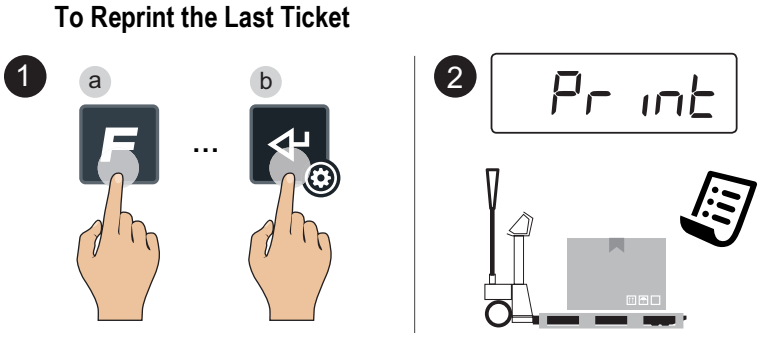


Figure 3-14. Ticket Printing

3.15 Information

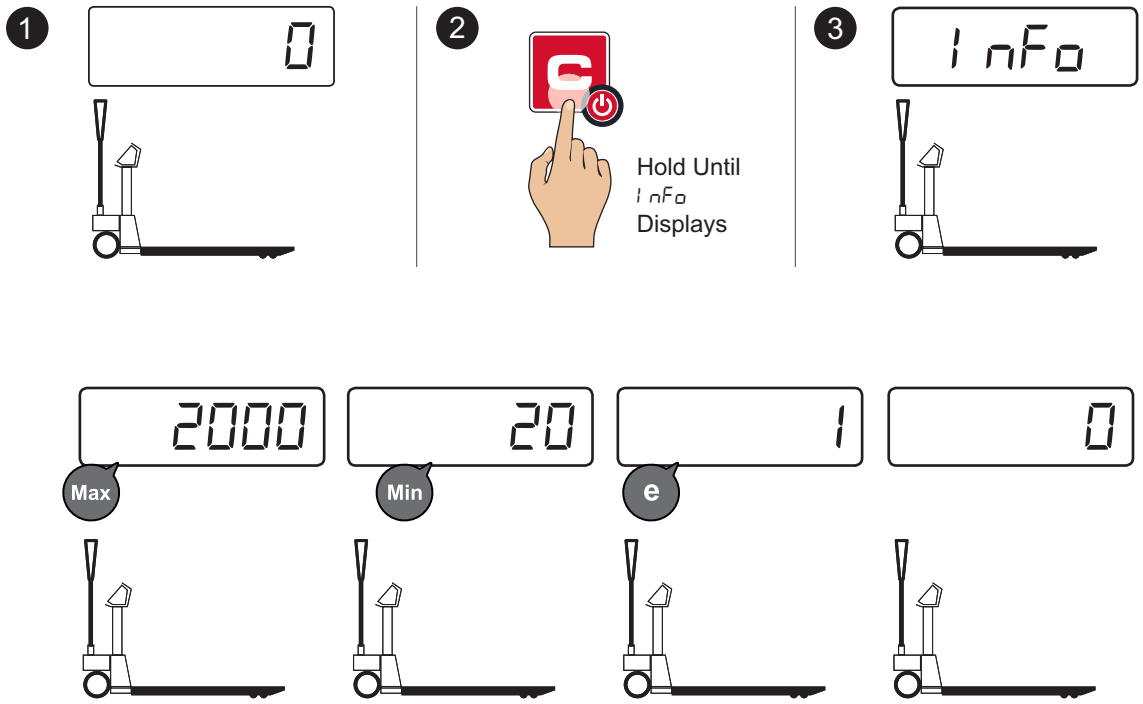


Figure 3-15. Information

3.16 Tare Log

This memorizes the most commonly used tares (up to 30), to simplify retrieval with quick selection.

3.16.1 Store a Tare

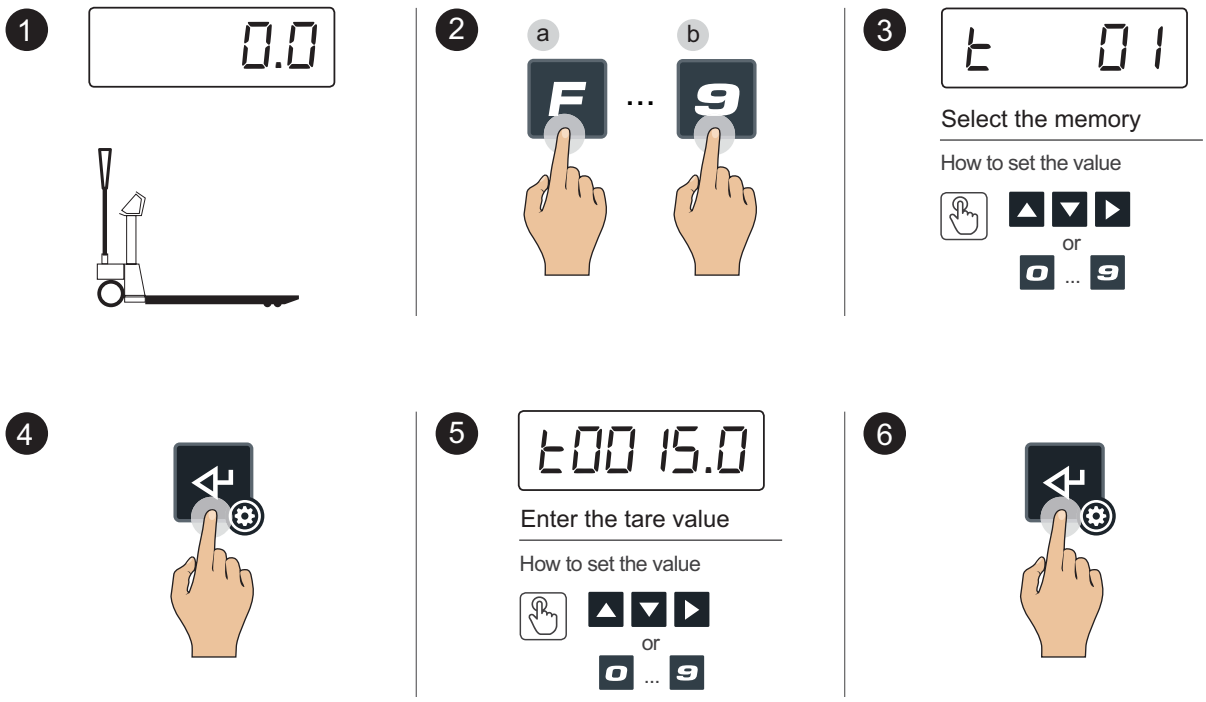


Figure 3-16. Store a Tare

3.16.2 Retrieve a Stored Tare

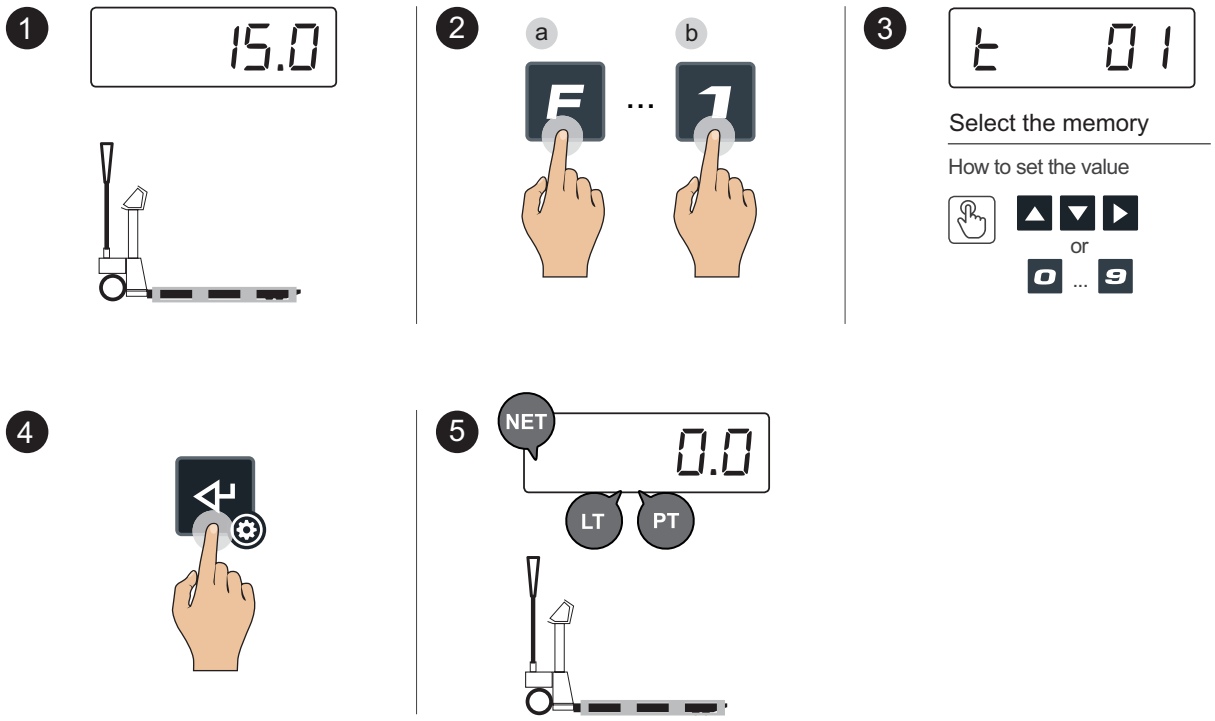


Figure 3-17. Retrieve Stored Tare

3.17 Automatic Tare Deletion

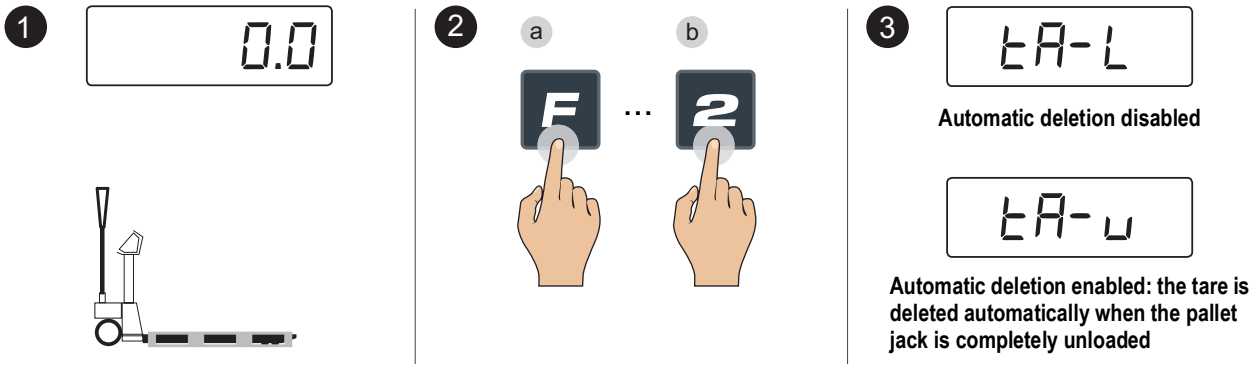


Figure 3-18. Automatic Tare Deletion

3.18 Number IDs

The instrument is equipped with two sets of memory for temporary registration of numerical codes that can be used to identify the product, operator and lot. The entered codes are printed on the ticket.

3.18.1 Enter the ID

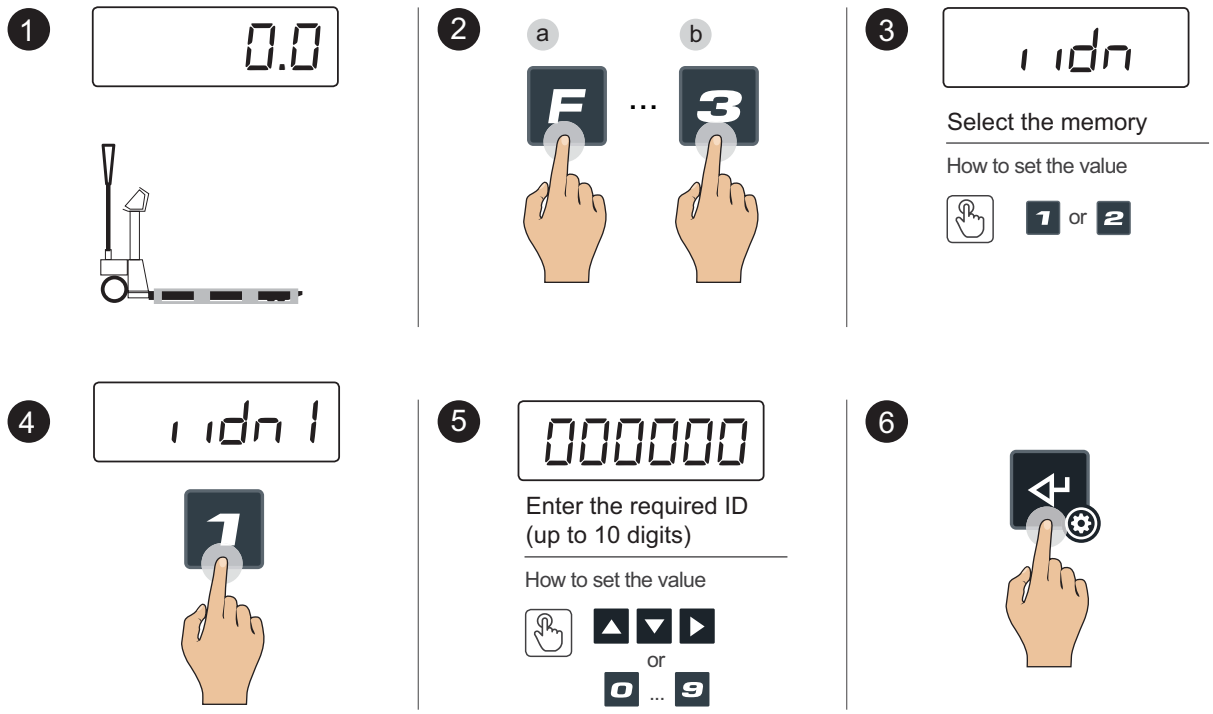


Figure 3-19. Enter the ID

3.18.2 Enable Automatic ID Deletion

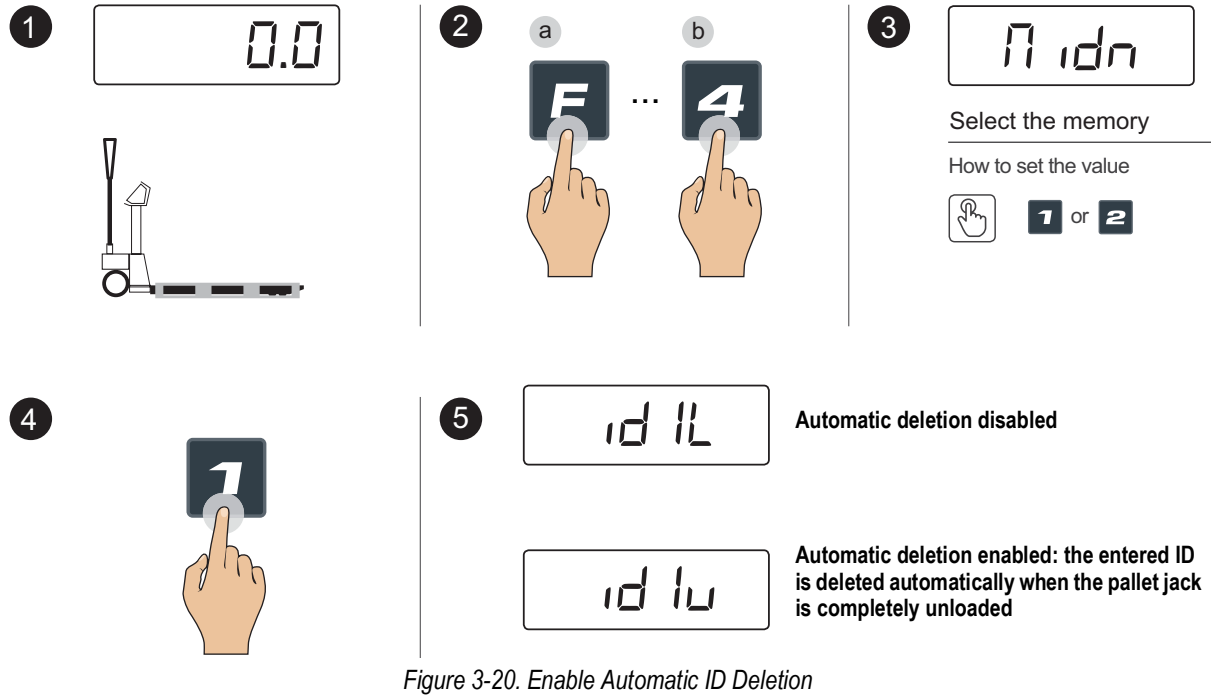


Figure 3-20. Enable Automatic ID Deletion

Note ***The numerical IDs zero automatically when turning off the scale.***

3.19 Date and Time (Optional)

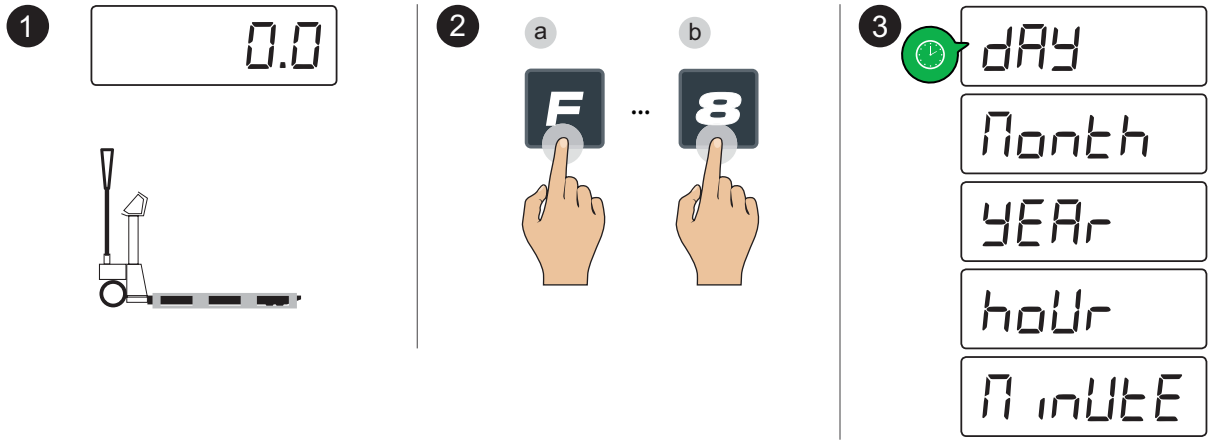


Figure 3-21. Date and Time

4.0 Functions

4.1 Access the Function Menu

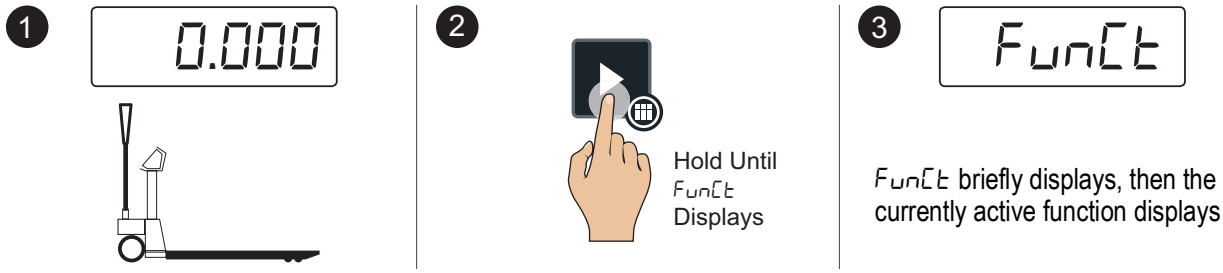


Figure 4-1. Access the Function Menu

4 Select Function

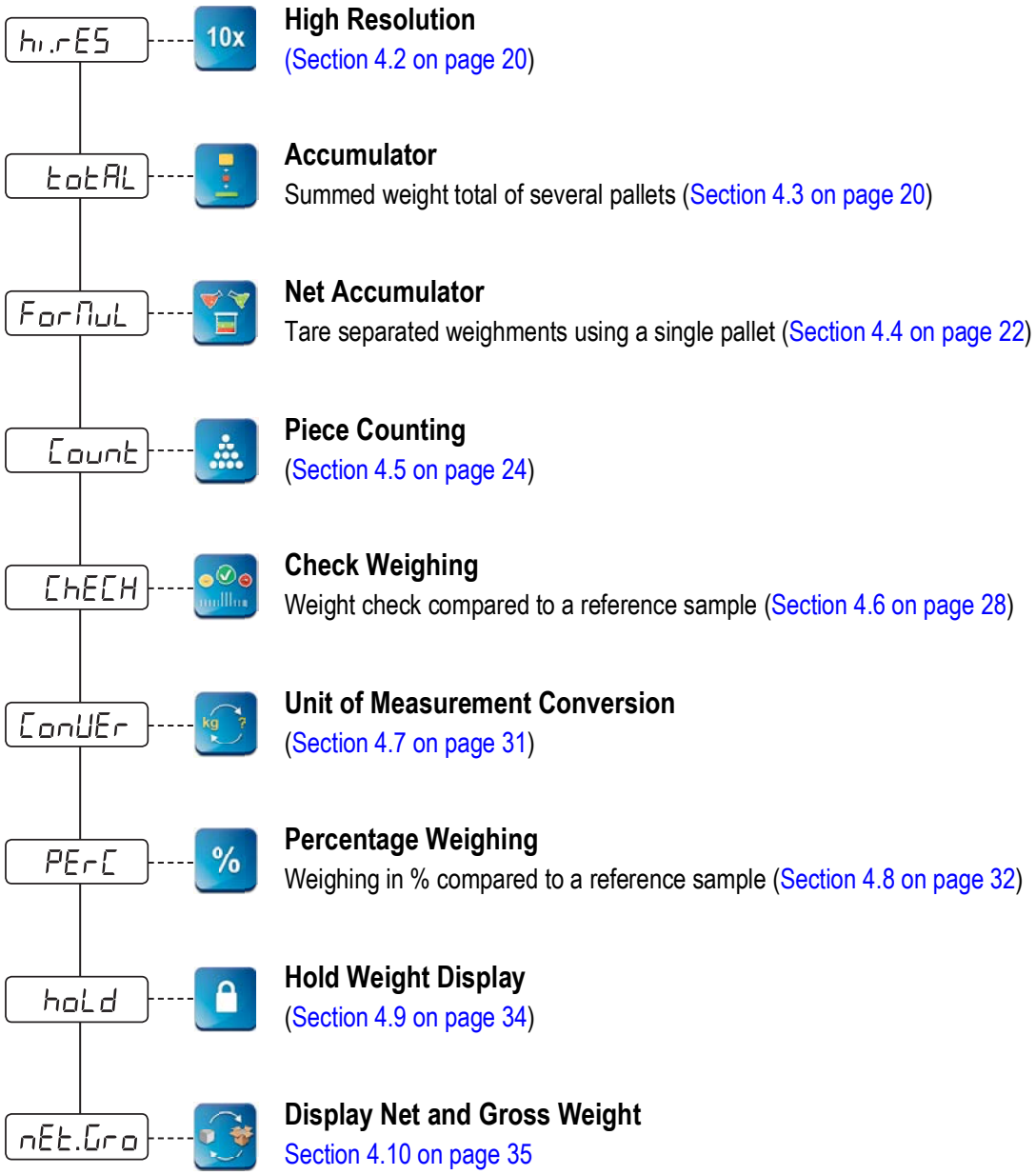


Figure 4-2. Select Funtion

4.2 High Resolution

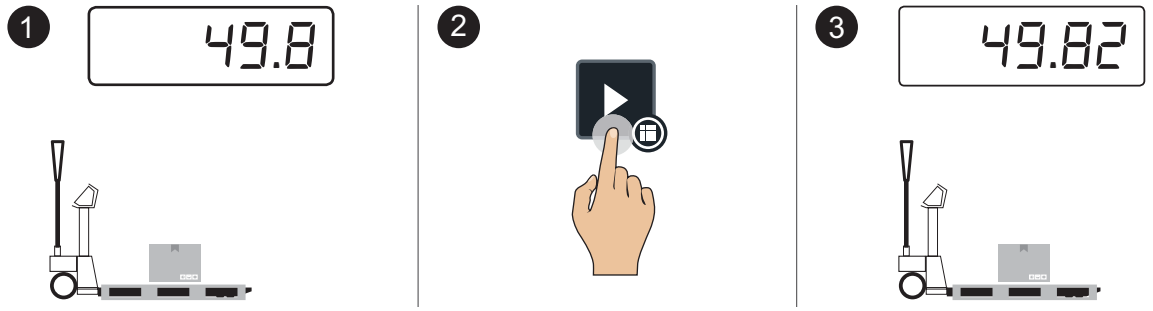


Figure 4-3. High Resolution

Note ***Push*** ***to expand the weight resolution by one decimal point, up to three decimal positions.***

4.3 Accumulator

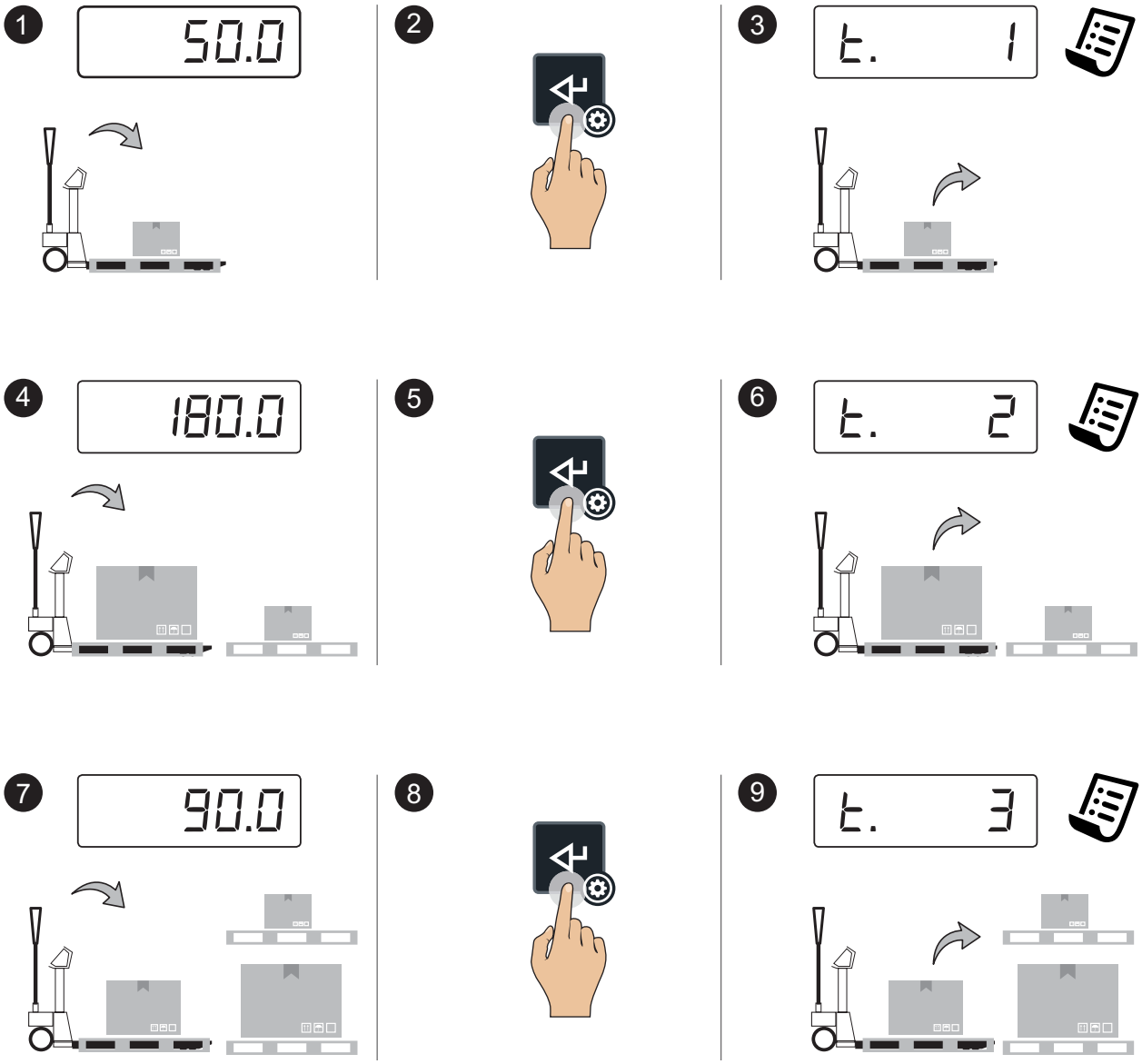


Figure 4-4. Accumulator

4.3.1 Display Accumulator

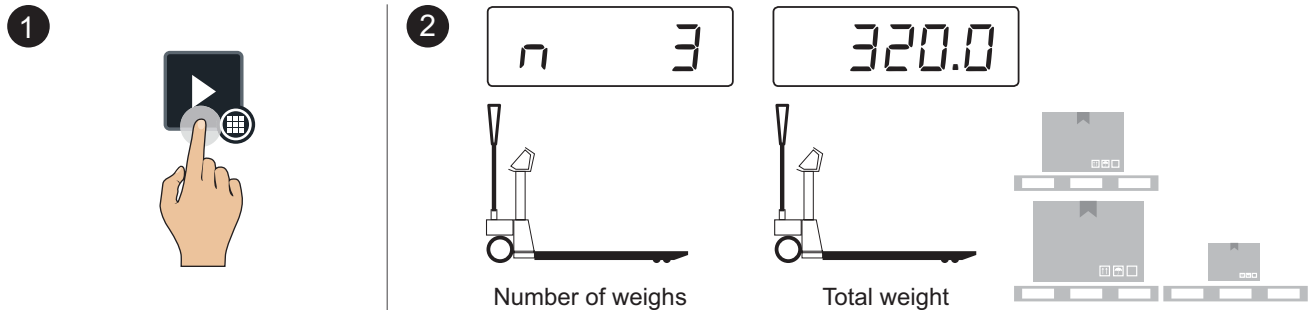


Figure 4-5. Display Accumulator

Note ***F + 7 also displays the current total without resetting it.***

4.3.2 Reset Accumulator

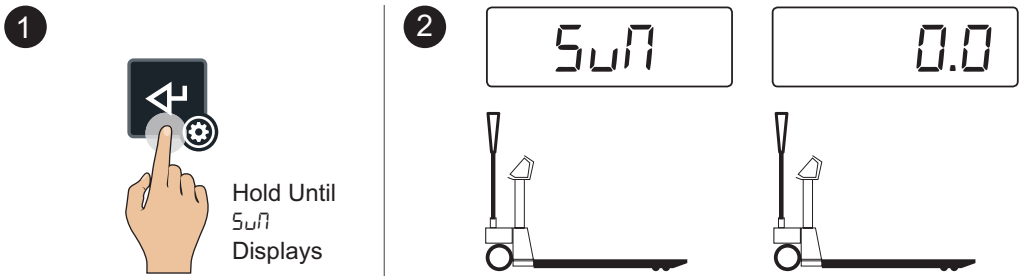


Figure 4-6. Reset Accumulator

4.3.3 Print Accumulator

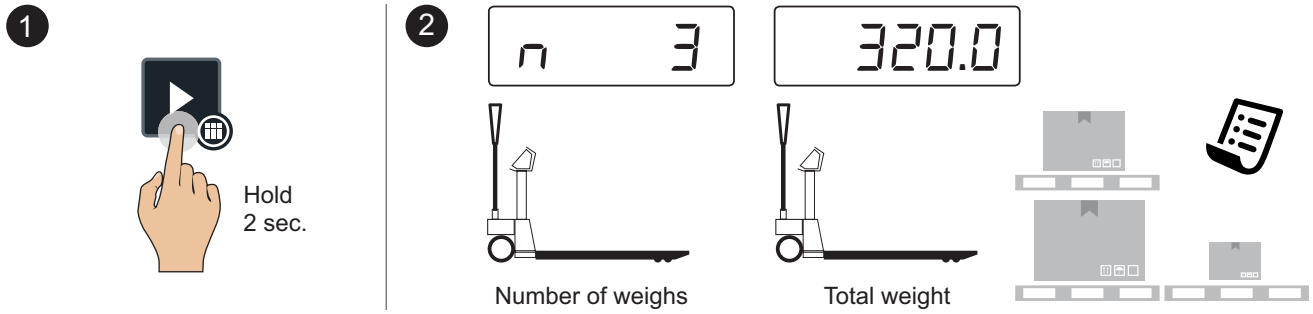


Figure 4-7. Print Acculator

4.4 Net Accumulator

4.4.1 Accumulate the Net Weights

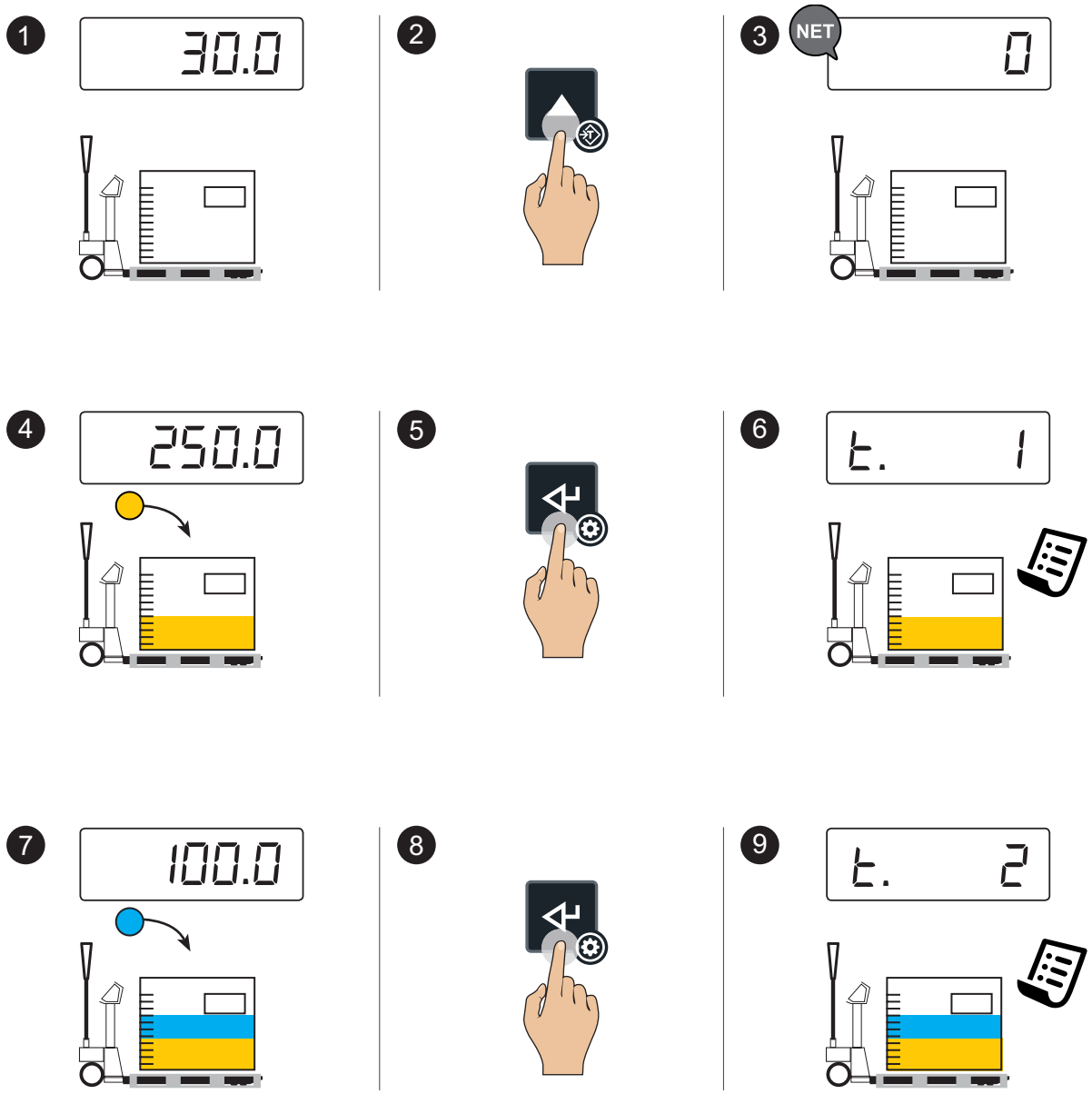


Figure 4-8. Accumulate the Net Weights

4.4.2 Briefly Display Total

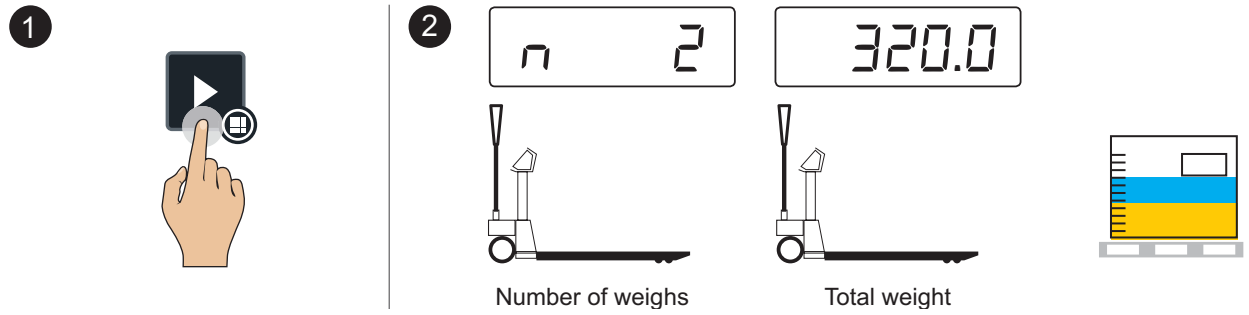


Figure 4-9. Briefly Display Total

Note ***F + 7 also displays the current total without resetting it.***

4.4.3 End and Reset Total

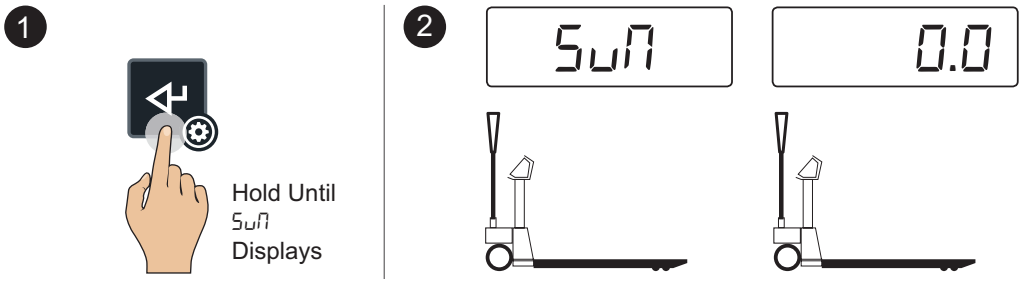


Figure 4-10. End and Reset Total

4.4.4 Print and Reset Grand Total

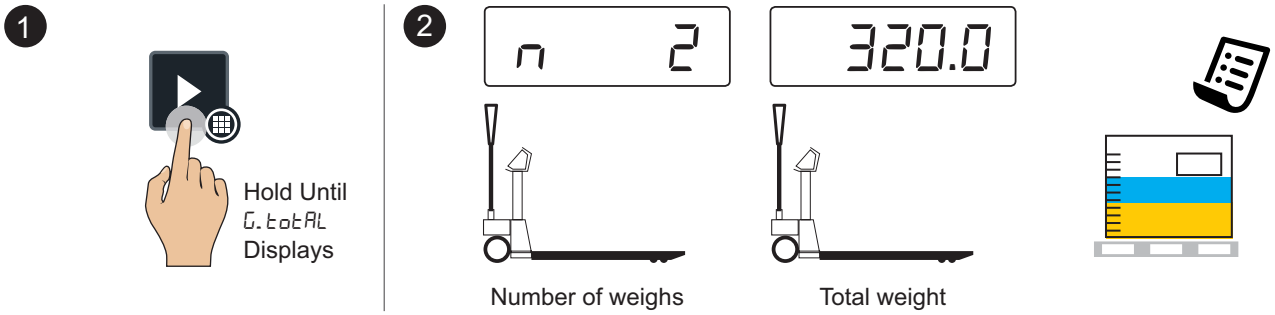


Figure 4-11. Print and Reset Grand Total

4.5 Piece Counting

4.5.1 Sample and Count

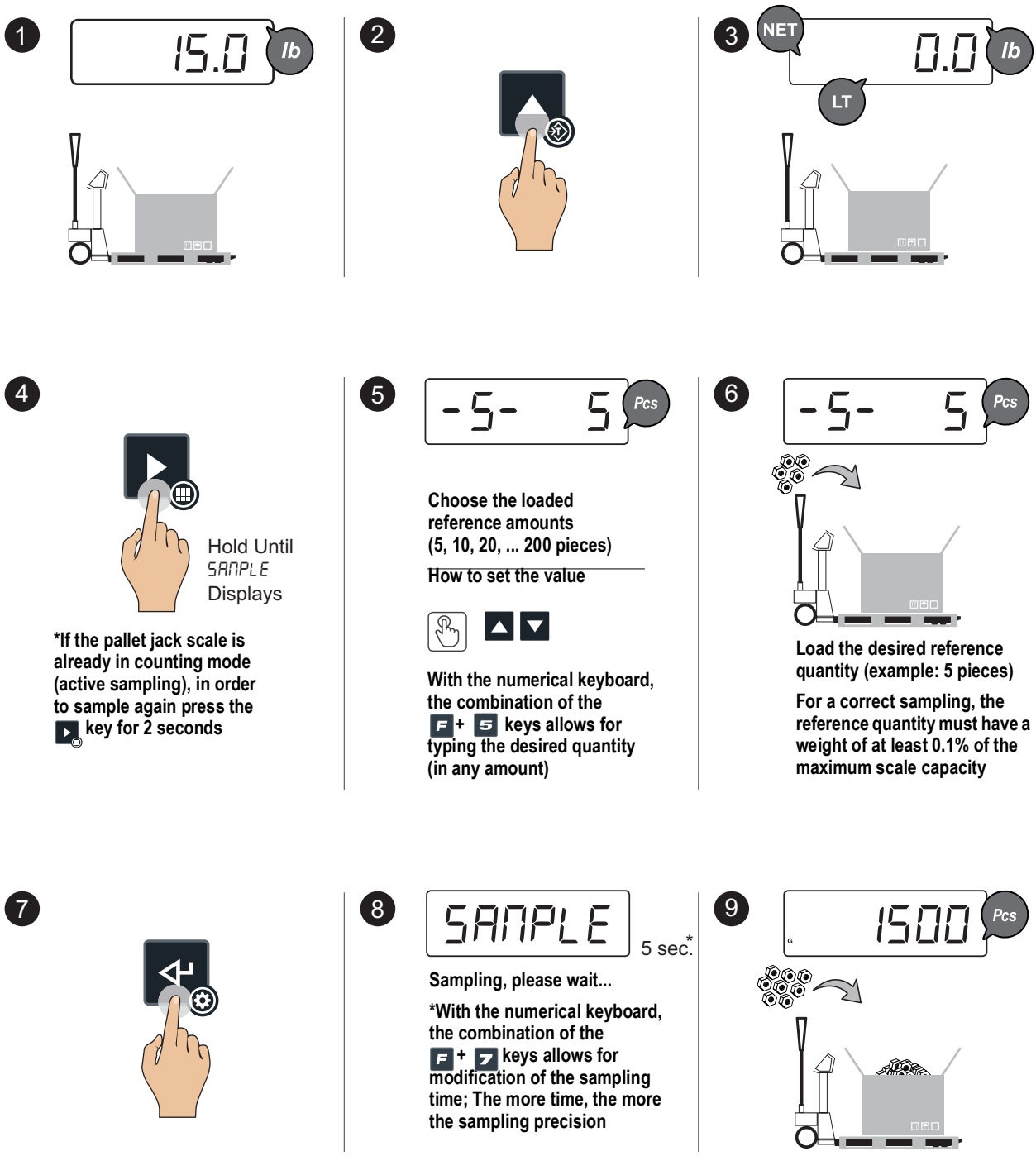


Figure 4-12. Sample and Count

4.5.2 Switch Between Piece and Weight

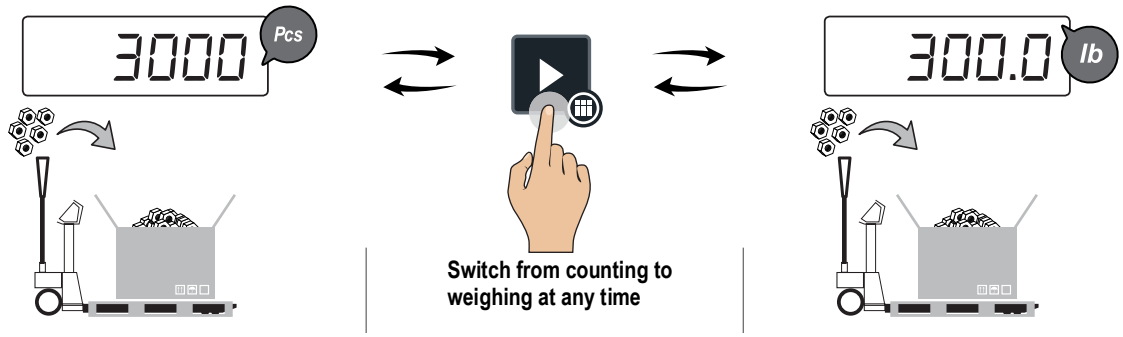


Figure 4-13. Unit Swap

4.5.3 Average Piece Weight Units

Grams is the default unit for the average piece weight. Refer to the steps below to change the unit of measurement for the average piece weight.Options include grams, kilograms, tons and pounds.

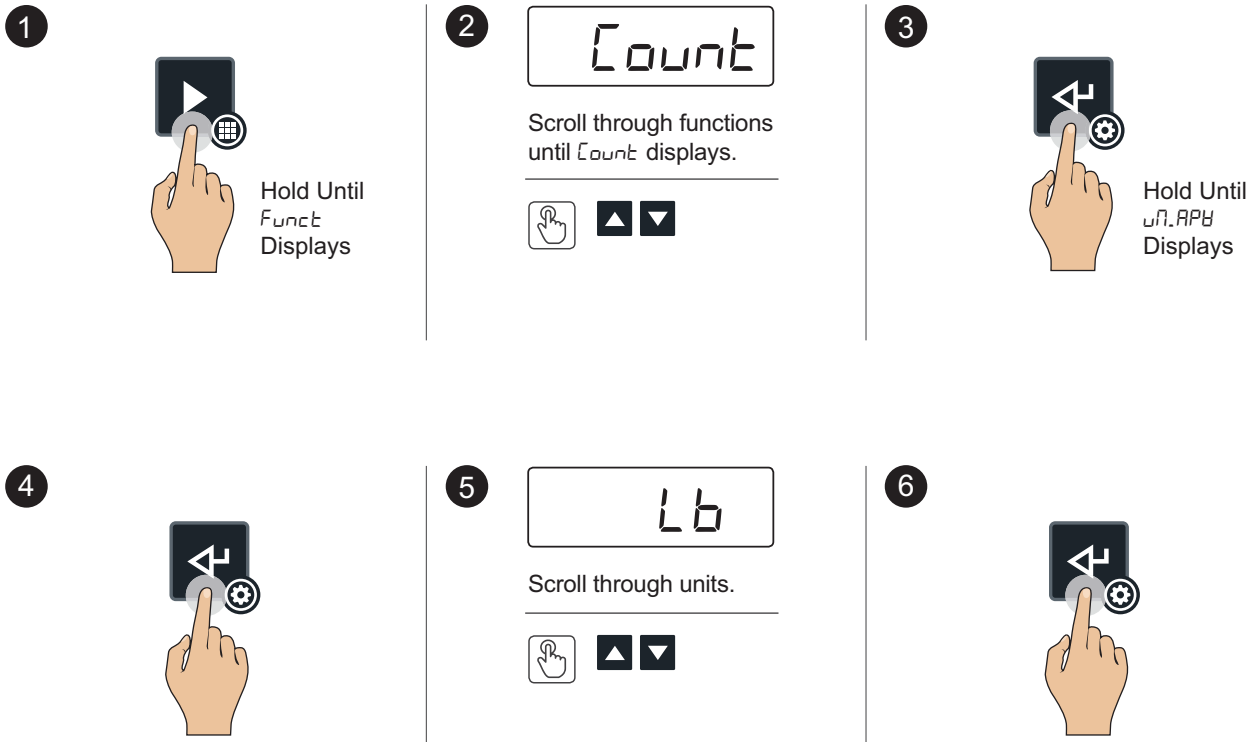


Figure 4-14. Average Piece Weight Units

Note ***The units will default back to grams upon exiting the counting function.***

4.5.4 Enter the Average Piece Weight

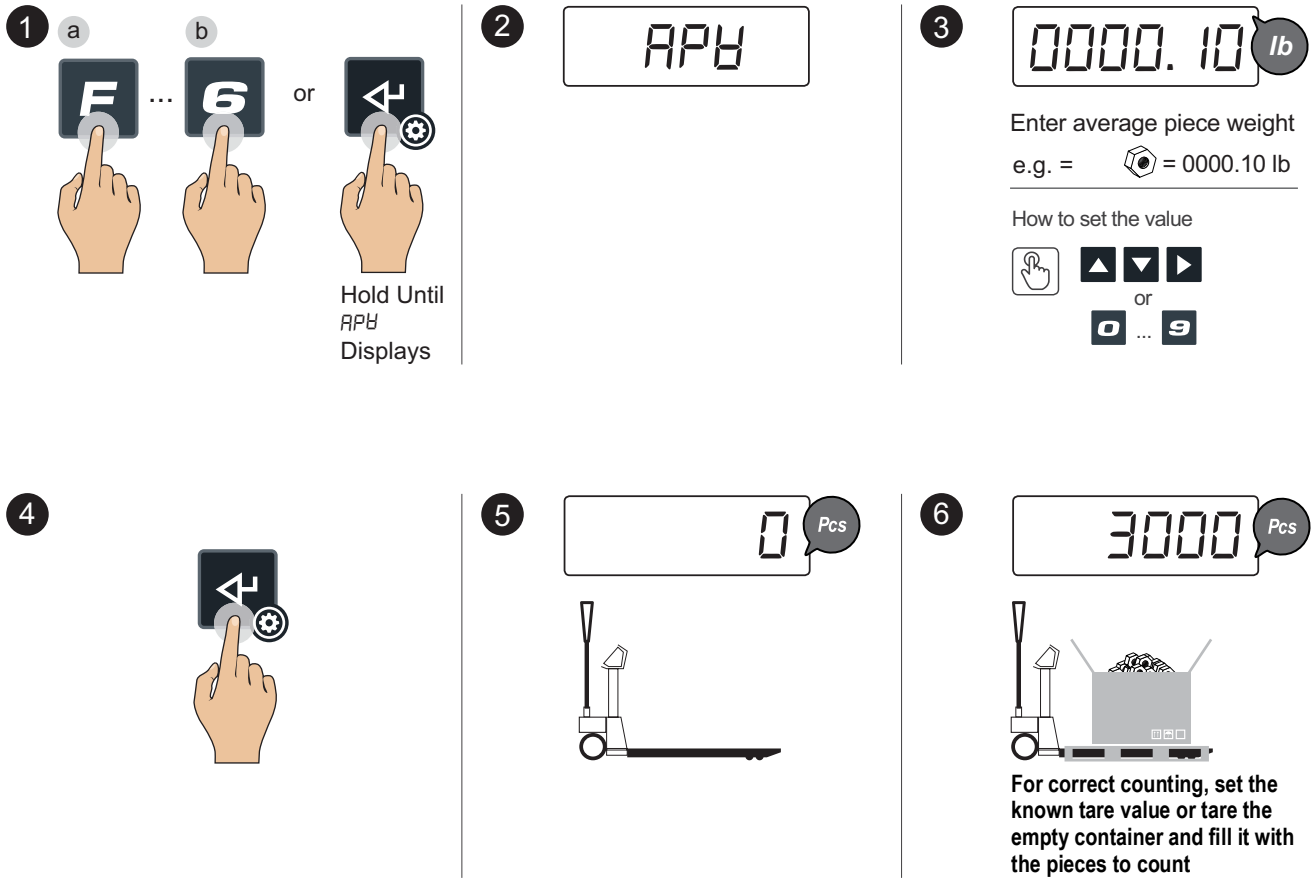
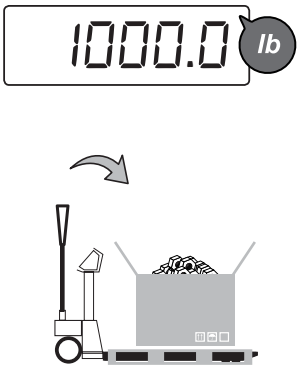


Figure 4-15. Enter the Average Piece Weight

Note ***The average piece weight unit defaults to grams. If necessary, see Section 4.5.3 on page 25 to change between units.***

4.5.5 Total Load Count

1



2 Manually set the tare value (pallet + container).

a ... b

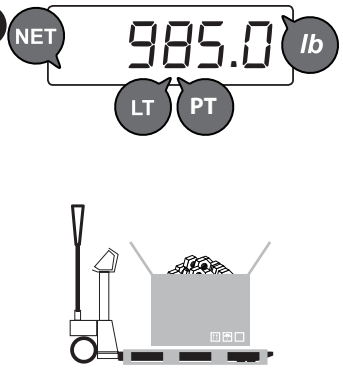
Hold Until -Pt- Displays

How to set the value

or

0 ... 9

3



4

Hold Until SAMPLE Displays

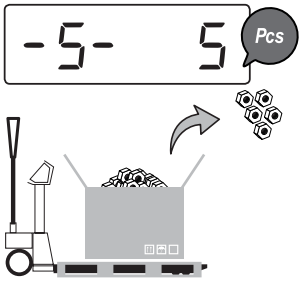
5

Select the desired reference quantity (5, 10, 20, ... 200 pieces)

How to set the value

Using the number keyboard, press F + 5 to type in any amount.

6 Pick up the sampling pieces (5, 10, 20, 30, 40, 50, 60, 75, 100, 200 pieces).



7

8

5 sec.*

Sampling, please wait…

*With the numerical keyboard, the combination of the F + 7 keys allows for modification of the sampling time.
The more the time, the more the sampling precision.

9

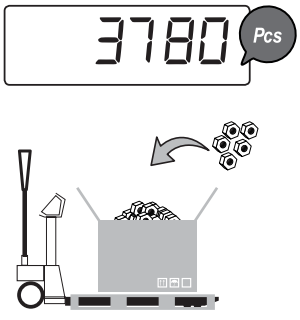


Figure 4-16. Total Load Count

4.6 Check Weighing

Note

Section 4.6.1 only works for the initial setup of a known target value. Refer to Section 4.6.4 on page 29 and Section 4.6.6 on page 30 to update the target, min and max weights after initial setup.

4.6.1 Check Weighing with a Known Target Value

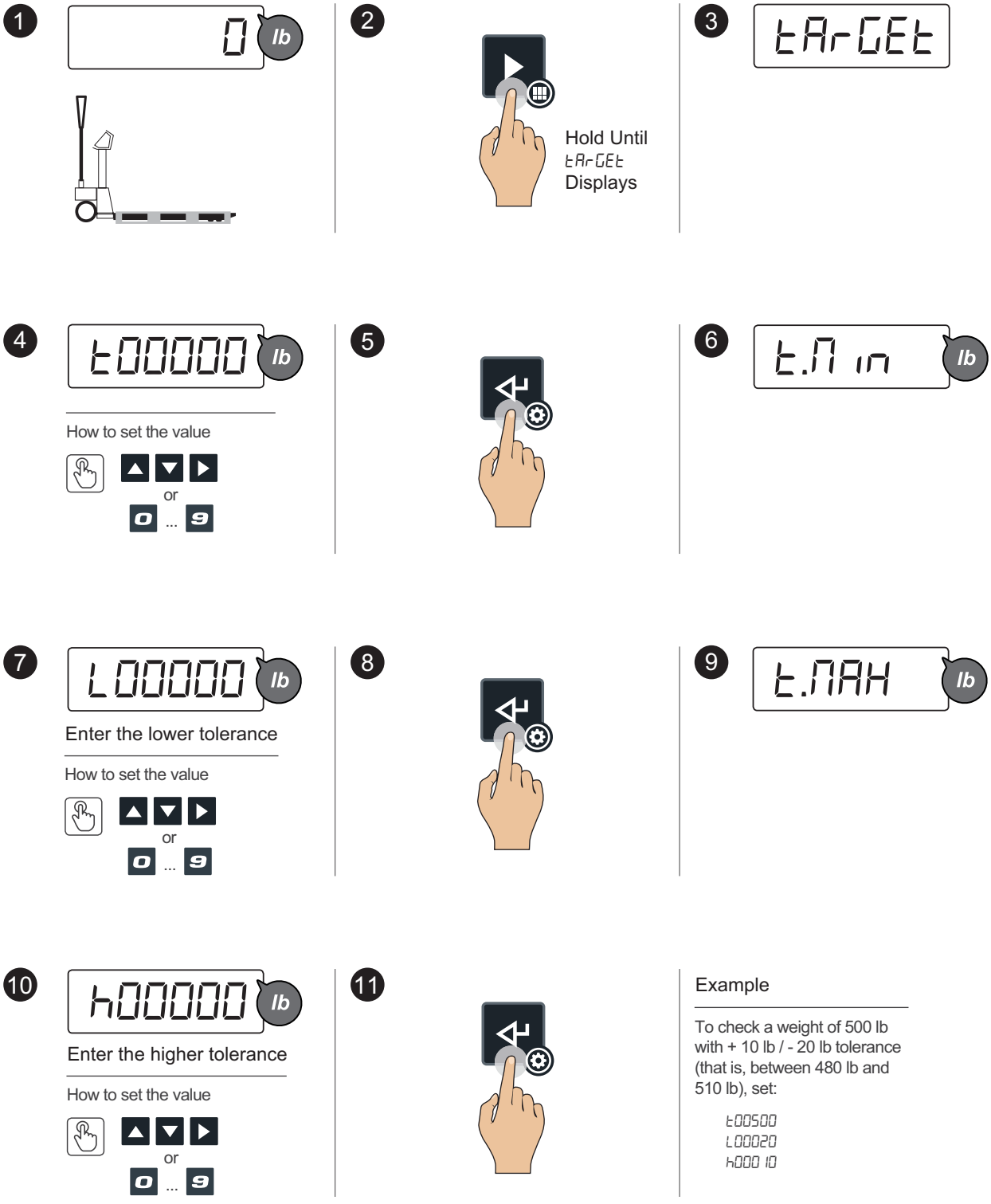


Figure 4-17. Check Weighing with a Known Target Value

4.6.2 Check Weighing with an Acquired Value

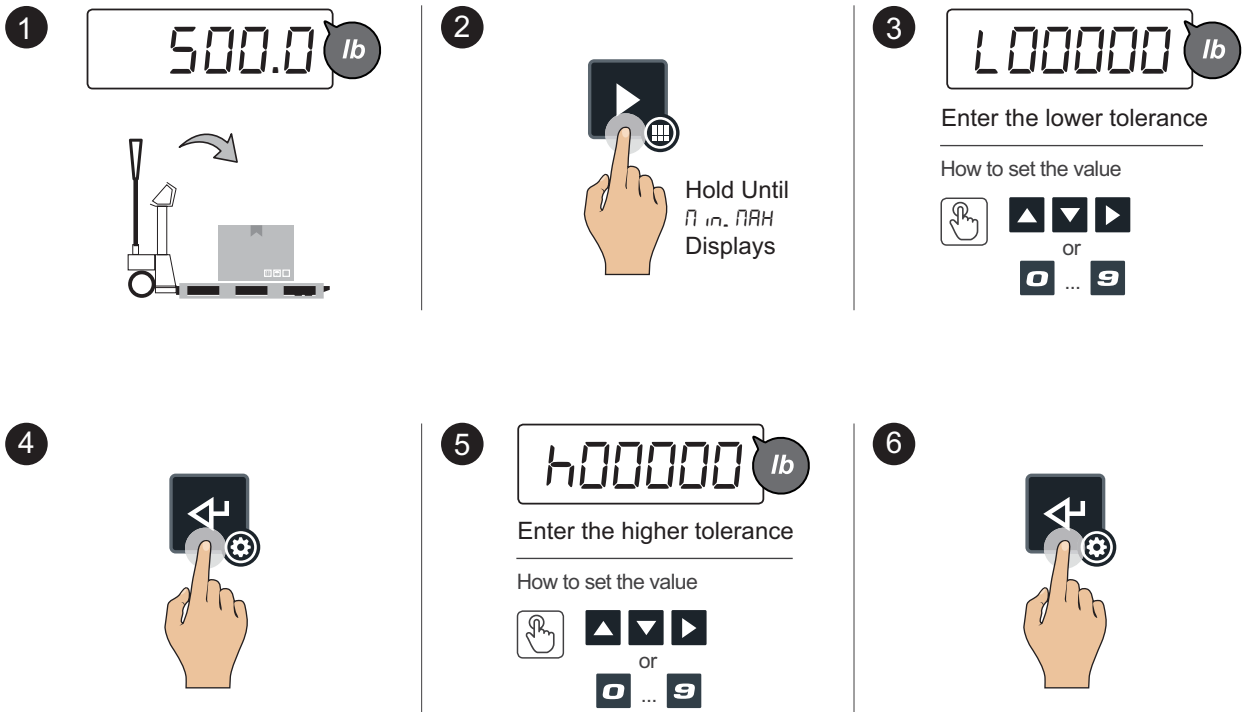


Figure 4-18. Check Weighing with an Acquired Value

4.6.3 Check Weighing Display Messages

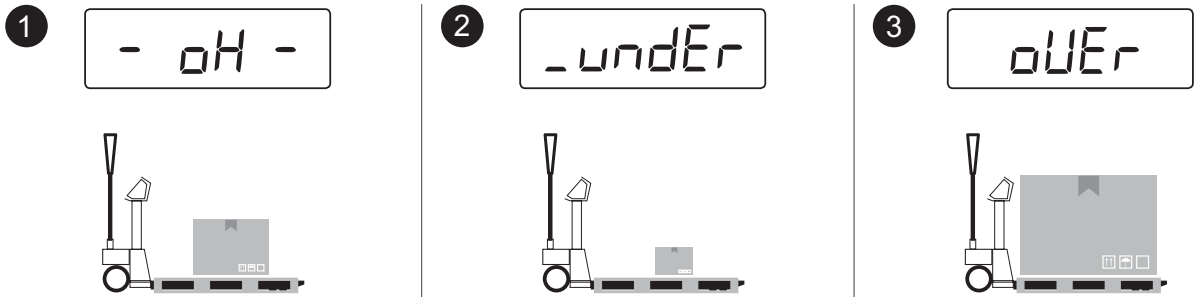


Figure 4-19. Check Weighing Display Messages

4.6.4 Updating the Known Target Value

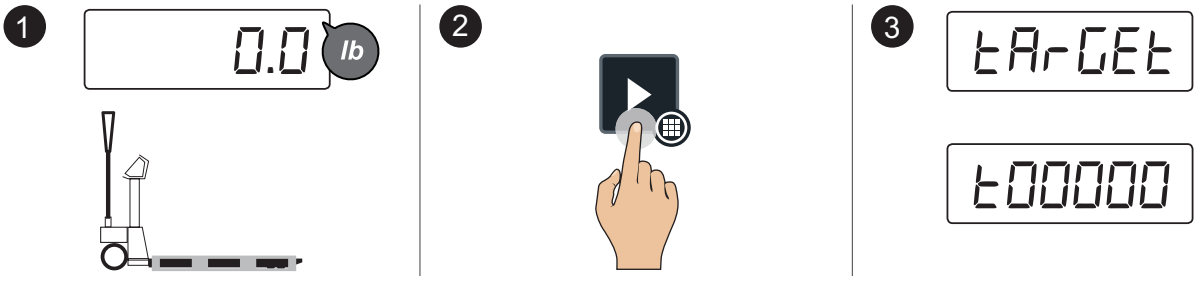


Figure 4-20. Updating the Known Target Value

4.6.5 Updating the Acquired Value

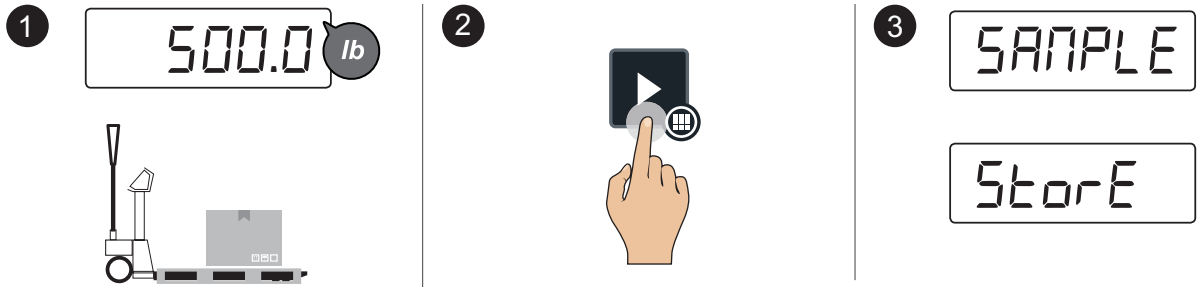


Figure 4-21. Updating the Acquired Value

4.6.6 Edit the Min and Max Values

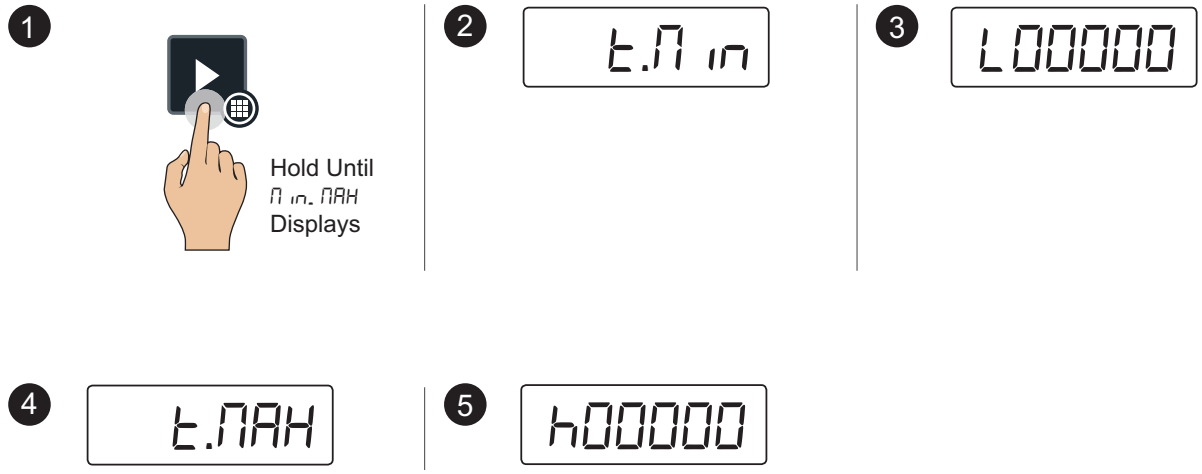


Figure 4-22. Edit the Min and Max Values

4.7 Unit of Measurement Conversion

4.7.1 Standard Conversion

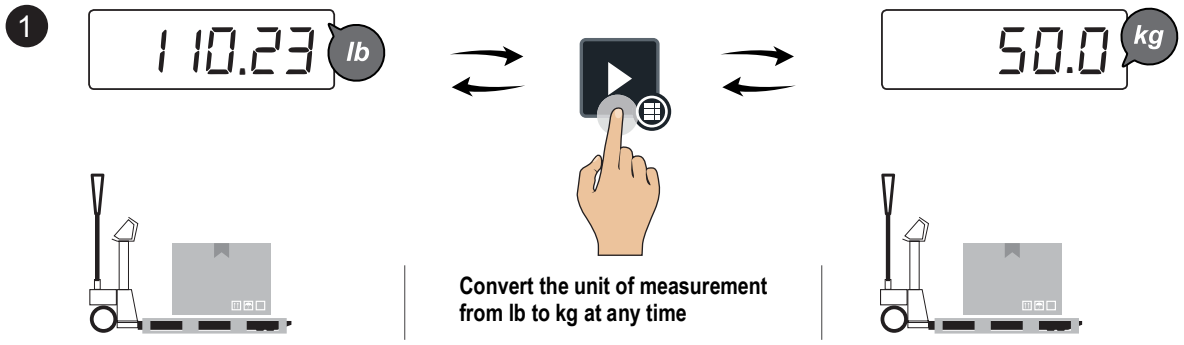


Figure 4-23. Standard Conversion

4.7.2 Conversion Factor

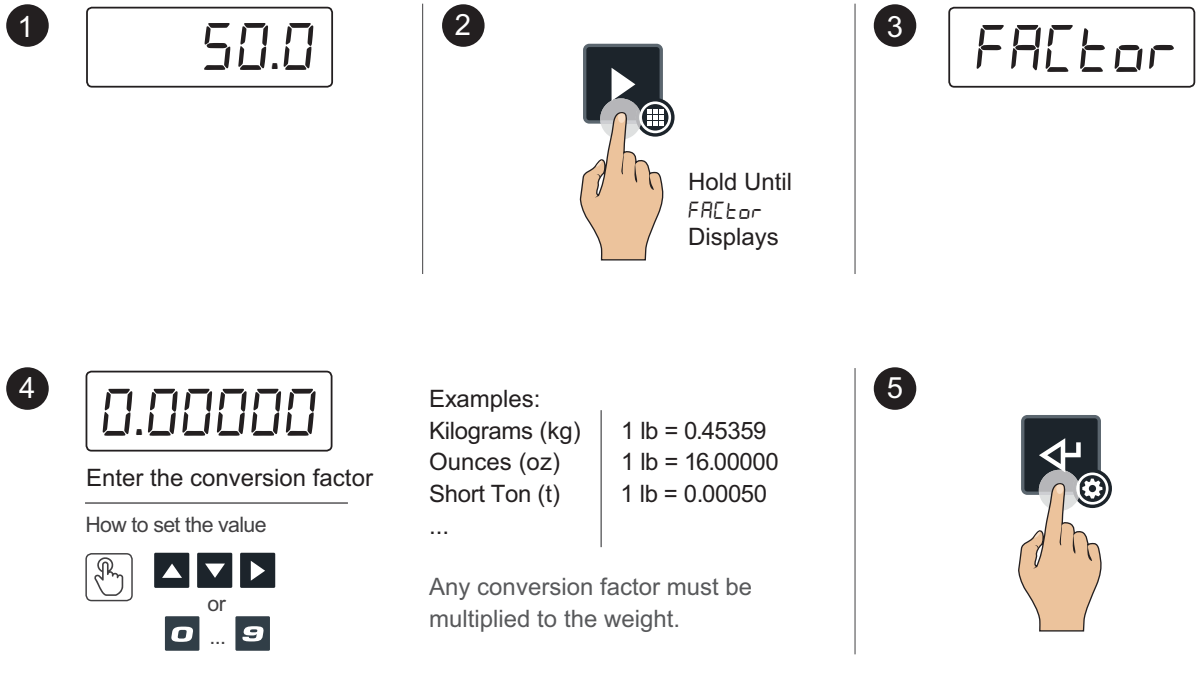


Figure 4-24. Conversion Factor

Note ***To remove the user set conversion factor, follow Steps 1-3 and then press C once the factor value displays.***

4.8 Percentage Weighing

4.8.1 Percentage Check

Acquire the Reference

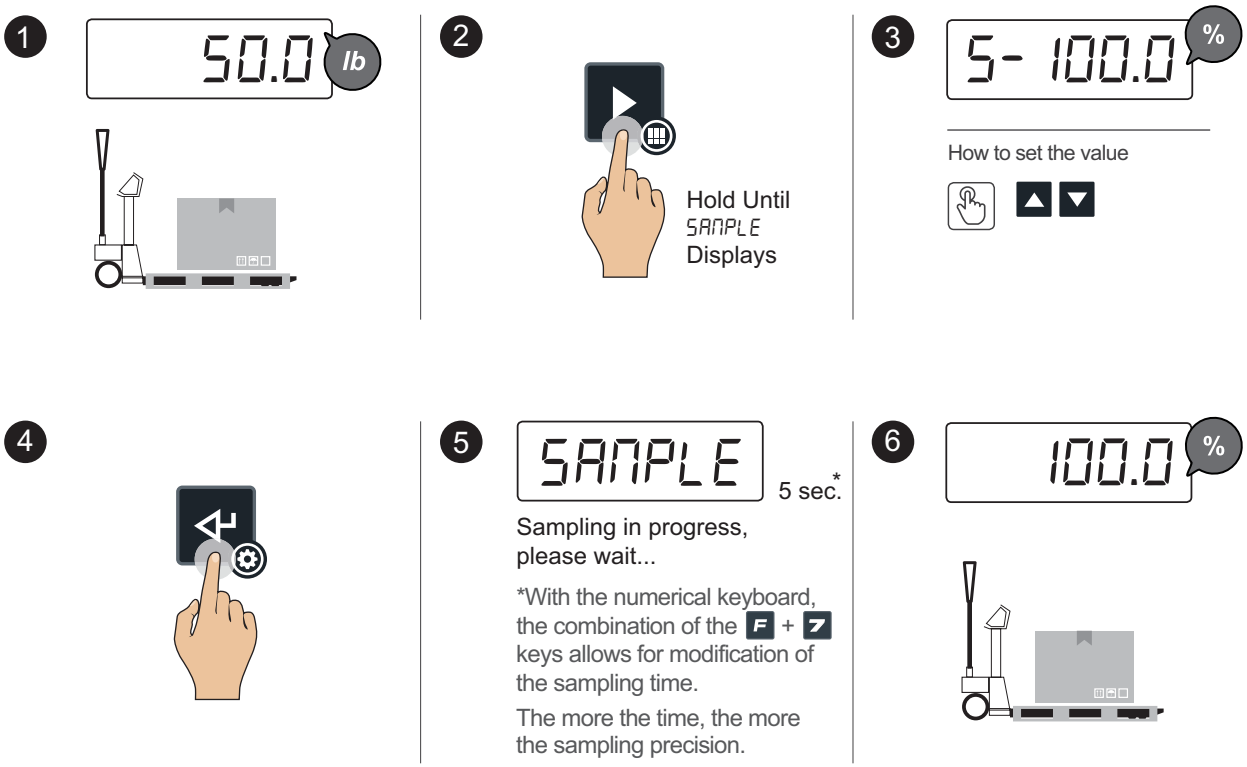


Figure 4-25. Acquire the Reference

Check the Weight

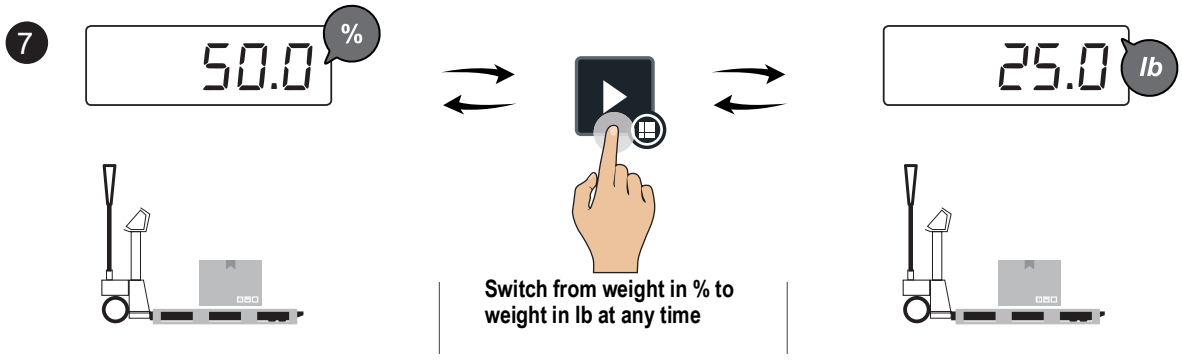


Figure 4-26. Check the Weight

4.8.2 Percentage Metering

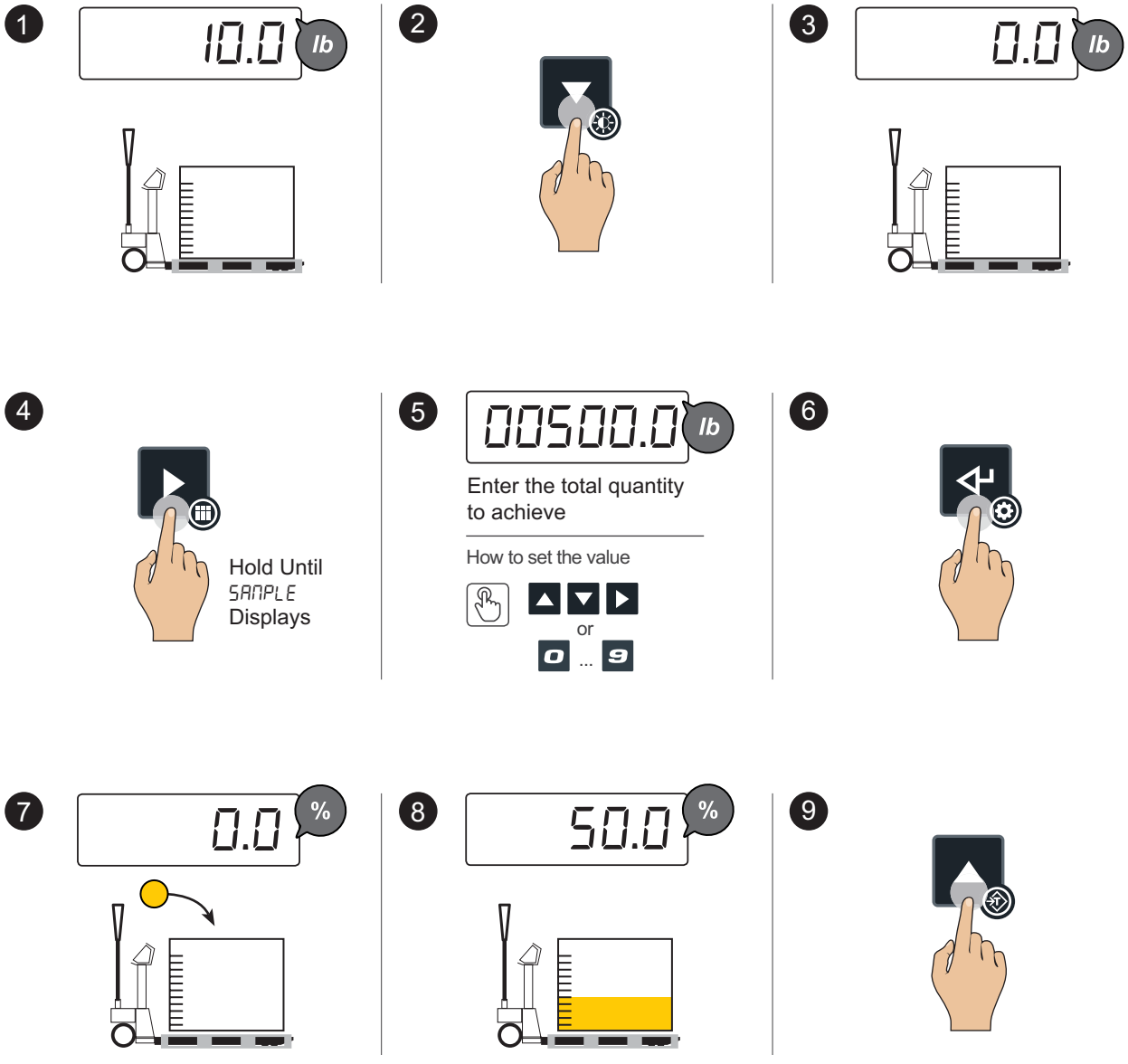


Figure 4-27. Percentage Metering

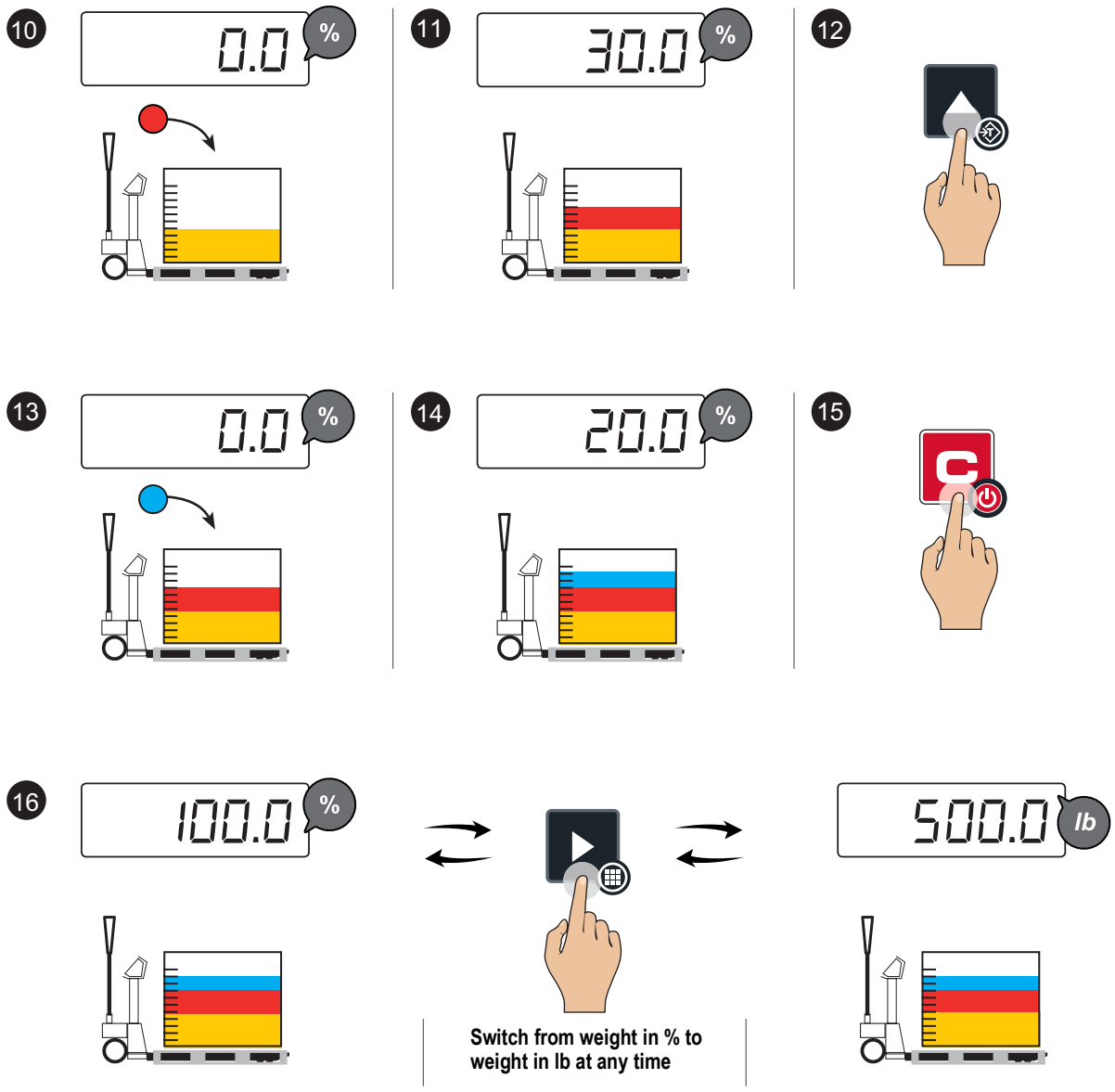


Figure 4-28. Percentage Metering (Continued)

4.9 Hold Weight Display

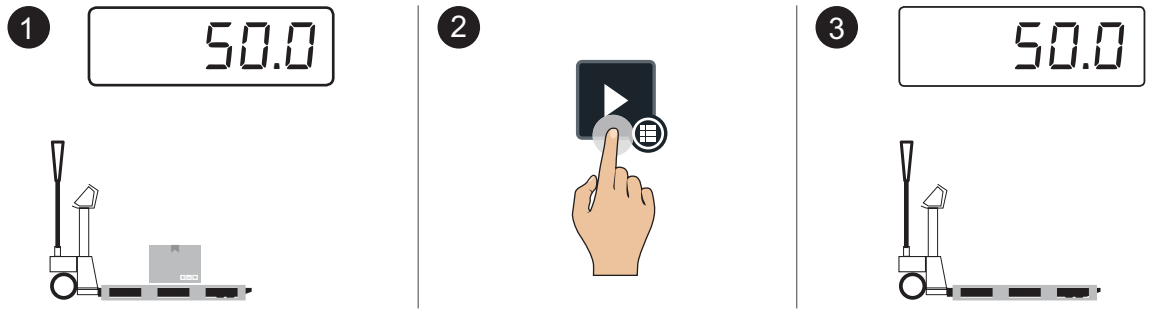


Figure 4-29. Hold Weight Display

Note ***Push*** ***twice to clear hold.***

4.10 Display Net Weight and Gross Weight

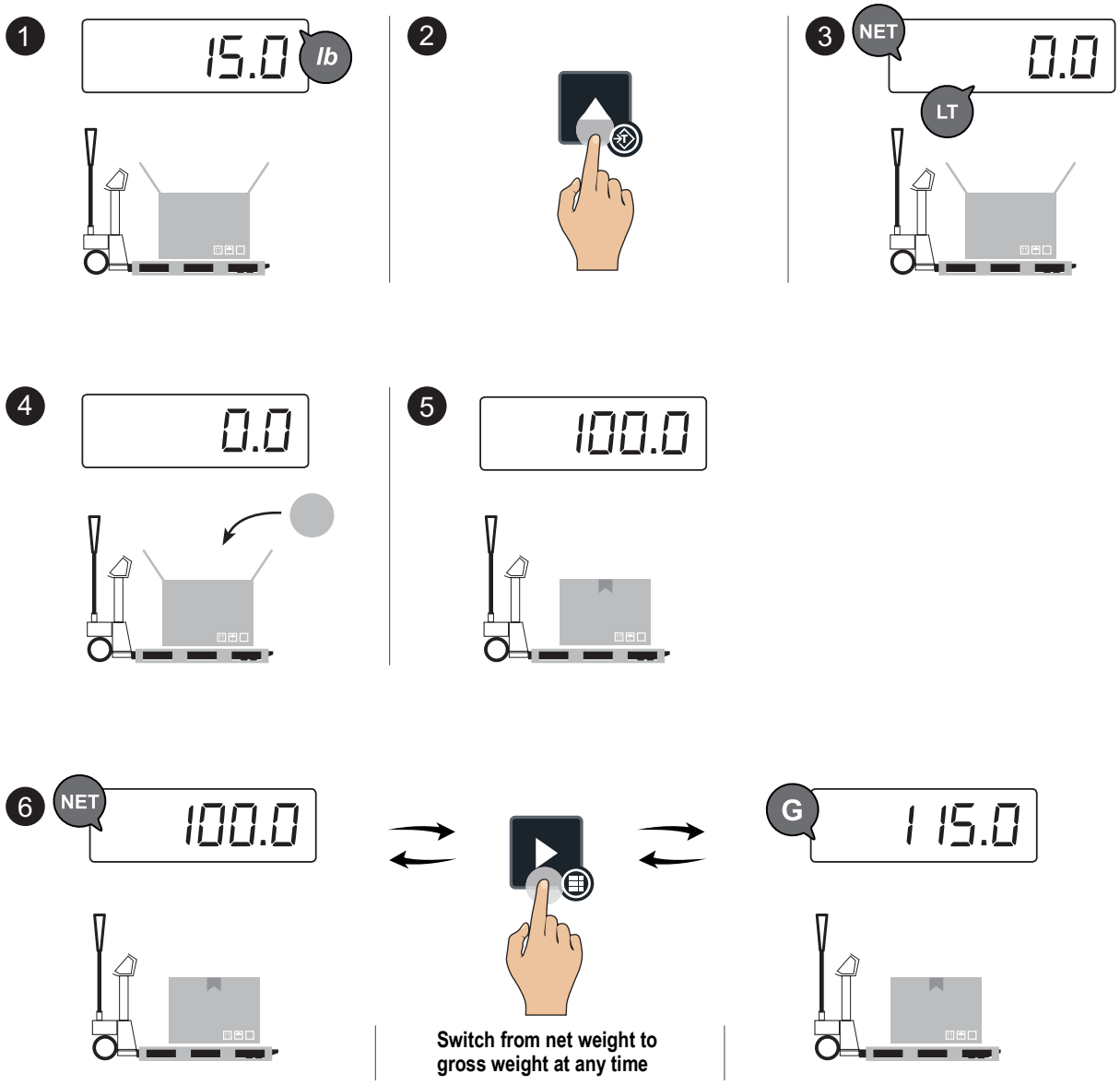


Figure 4-30. Display Net Weight and Gross Weight

4.11 Metrological Information of the Scale

Identification of the Metrological Software

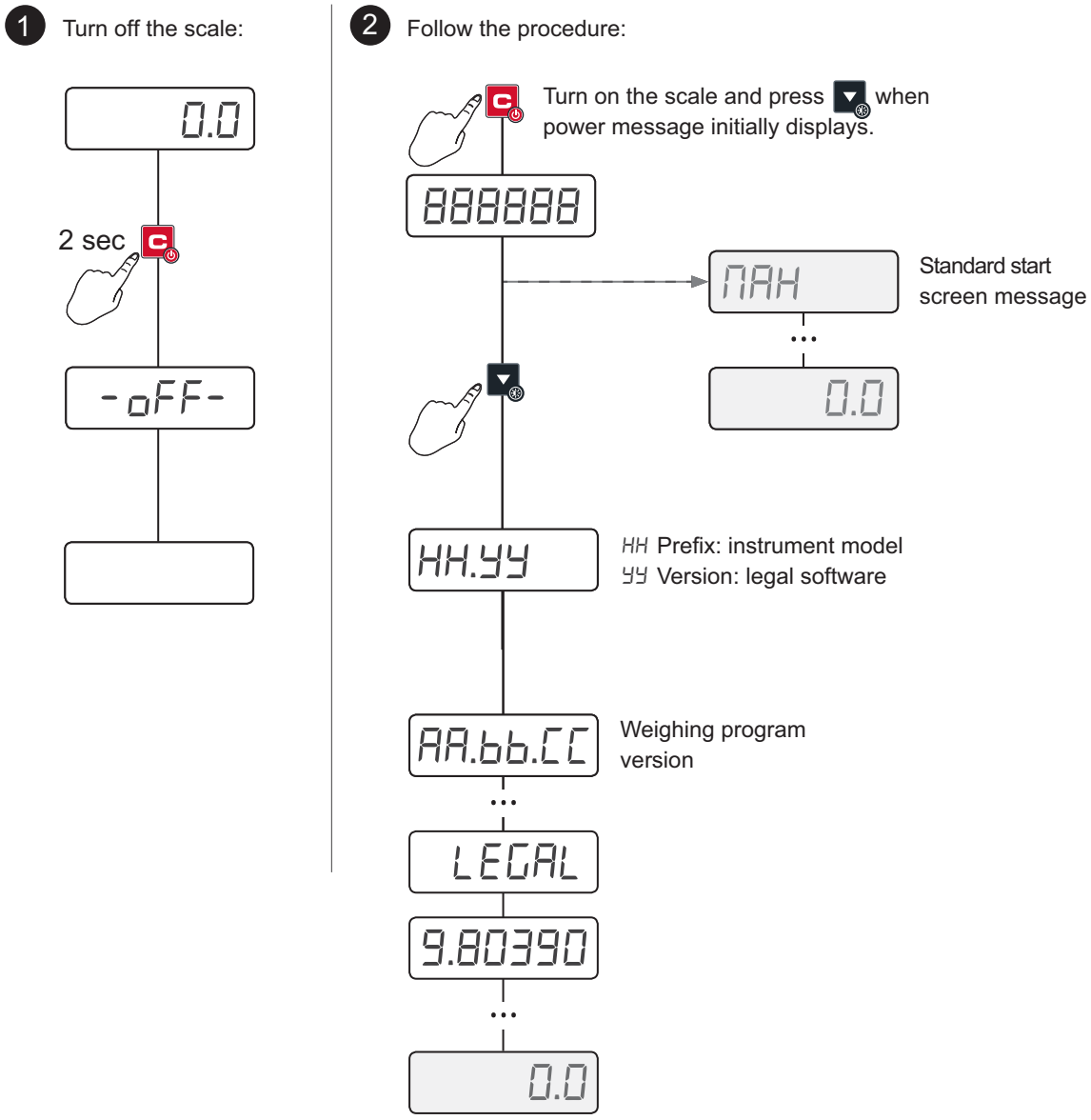


Figure 4-31. Metrological Software Identification

5.0 Configuration

5.1 Access the Configuration Menu

1. Press  to turn the Pallet Jack Scale off.
2. Turn indicator on by pressing  and press  during startup. CAL displays.

5.2 Save and Exit the Configuration Menu

1. Press  multiple times to back out of the menu structure until SAVEP displays.
2. Press  to save or press  to exit without saving.

5.3 Available Configuration Parameters

Refer to Table 5-1 for available parameters within the configuration menu.

Parameters	Descriptions
CAL	Calibration (Section 6.0 on page 45)
0.CAL	Zero Calibration – acquisition of the zero point
GrAU	Gravity – set the location of use (if different from that of calibration)
SEr iAL	Configuration of the serial ports (Section 5.4 on page 38)
LAYout	Print layout customization (Section 5.5 on page 39)
F iLtEr	Weighing filter (Section 5.6 on page 42)
SCrEEn	Adjusting the screen display (Section 5.7 on page 42)
bAtt	Using the battery (Section 5.8 on page 42)
ECo. bAt	Energy saving (Section 5.9 on page 42)
AutoFF	Auto off – set to be on (YES) or off (no)
rEMotE	Using the remote control (Section 5.10 on page 43)
rESEt	Factory configuration reset (Section 5.11 on page 43)
d iAG	Diagnostics (Section 5.12 on page 44)
AdUAnC	Advanced (Section 5.13 on page 44)

Table 5-1. Available Configuration Parameters

5.4 Serial Menu (SEr iAL)

Configuration of the serial ports.

Menu Items	Parameters	Descriptions
CoM.PC	ModE	Communication with PC: ondE – on request 485 – on request with code 485 (0 - 99) Cont in – continuous transmission (8 tx/sec) StAbLE – automatic stability transmission Pr int.h – transmission when pressing print button rEPE.G – repeater r.AdC – factory use only
	CoM. SEL	Selecting the COM port for connection with PC/PLC: CoM 1, CoM2
	bAud	Baud rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
	b it	Configuration of serial protocol: n.8. 1, n.8.2, n.7.2, E.7. 1, E.7.2
CoM.Prn	ModE	Communication with Printer: **t iChEt – thermal printer** LAbEL – labeling machine Cont in – continuous transmission (8 tx/sec) StAbLE – automatic stability transmission toPC – manual transmission of string for PC when pressing **Print** button rEPE.G – repeater r.AdC – factory use only See the RL-HPJ Hand Pallet Jack Scale Printer Kit Installation Addendum (PN 190986) to install the RL-HPJ Hand Pallet Jack Scale Printer Kit (PN 188529). See Figure 5-4 on page 41 for an example of a printed ticket.
	bAud	Baud rate: 1200, 2400, 4800, **9600**, 19200, 38400, 57600, 115200
	b it	Configuration of serial protocol: **n.8. 1**, n.8.2, n.7.2, E.7. 1, E.7.2
	CtS	Printer control signal: no, Lo', hiGh, **EMuL** Sub-Settings: nChAr 0-999 (characters sent) t iME 0-9999 (sending time out)
	Po'Er.P	Printer power supply / radio frequency module: no **EHt.oFF** – factory use only P'r. int – printer power supply from indicator via Vaux connector (optional)
NOTE: Bold settings are the default settings for the Thermal Printer (PN 188259). Non-Rice Lake Weighing Systems device default settings may vary.		
AdVAnC	ProtoC	Communication protocol: EHtEnd, Short
	rAd io	Connection port of radio-frequency module (factory use only): oFF CoM 1 – setting of the radio channel (0 - 7) CoM2 – setting of the radio channel (0 - 7)
	ttL.t iL	TTL port / inclinometer activation (factory use only): no, YES
	tErM	Closing character of each print line: Cr, CrLF

Table 5-2. Serial Menu Parameters

5.5 Layout Menu (LAYout)

Parameters for configuring the receipt/label mode.

Menu Items	Parameters	Descriptions
LAnG	-	Setting of the print language: EnGL, dEut, FrAn, ESPA, Ch inES, itAL
ChAr	ChAr 1	Character dimension label mode: Font. 1, Font. 1d, Font.2, Font.2d, Font.3, Font.3d, Font.4, Font.4d, Font.5, Font.5d Character dimension receipt mode: norMAL, doubLE
	ChAr2	
hEAdEr	EnAbLE	Enable header printing: no YES – only 1st totalization totAL – only upon each totalization ALWAYS – also in total
	L inE 1-4	Contents of the header lines: no (visible only in Line 2-4) ChAr 1-2 – refer to Figure 5-3 on page 41 and enter character values for intended content; 24 characters per line; Example (HELLO): 01 032 ↵ 032 *enter character value:* 072 ↵ 02 032 ↵ 032 *enter character value:* 069 ↵ 03 032 ↵ 032 *enter character value:* 076 ↵ 04 032 ↵ 032 *enter character value:* 076 ↵ 05 032 ↵ 032 *enter character value:* 079 C Print/Delete the row being programmed: Press ▶ within Line 1-4; Press ▼ to scroll to dEL.L in or Pr int.L and press ↵
dAtA	GroSS	Gross weight data: YES, no
	tArE	Tare weight data: YES, no
	nEt	Net weight data: YES, no
'E iGhS	-	Progressive weighed: no YES – on each weigh ticket only SuM – on total ticket only ALWAYS – both tickets
t iCHEt	-	Receipt/label progressive: no YES – on each weigh ticket only SuM – on total ticket only ALWAYS – both tickets
CLoCH	-	Date and time: no **YES** – on each weigh ticket only SuM – on total ticket only ALWAYS – both tickets To print tickets with the date and time, select **YES**. See Figure 5-4 on page 41 for an example of a printed ticket.
bArC.39	-	Bar code 39: no YES – on each weigh ticket only SuM – on total ticket only ALWAYS – both tickets
bArC.uP	-	Bar code top margin (mm); Visible only is bArC.39 is active: If ModE = t icHEt (0-9), if ModE = LAbEL (0-999)
bArC.L	-	Bar code left margin (mm); Visible only is bArC.39 is active: If ModE = t icHEt (1-99), if ModE = LAbEL (0-99)

Table 5-3. Layout Menu Parameters

Menu Items	Parameters	Descriptions
bArC.h	-	Bar code height (mm); Visible only is bArC.39 is active: If ModE = t icHEt (1-99), if ModE = LAbEL (0-255)
bArC.dt	Gross	Setting of the weight data; Visible only when bArC.39 is active
	nEt	Setting of the weight data; Visible only when bArC.39 is active
	tArE	Setting of the weight data; Visible only when bArC.39 is active
CoP iES	-	Multi-copy prints: n 1-3
End.t iC	-	Paper outlet for end of label/receipt: no YES – on each weigh ticket only SuM – on total ticket only ALWAYS – both tickets
b.L inE	-	White pre-heating line of the print head (for thermal printer only): no, YES
LAbEL	width	Width dimension: 0-999 (**063**)
	hE iGht	Height dimension: 0-999 (**080**)
	uP.MArG	Top margin: 0-999 (**0 10**)
	L.MArG	Left margin: 0-99 (**06**)
	PEEL	Peeler: YES, no
	GAP	Gap between labels (mm): 0-7 (**3**)
Lb.SAUE	-	Saving of labels in the printer memory; Visible only if ModE = LAbEL
tESt	-	Saving of labels in the printer memory (for label model only) and test print of all formats

Table 5-3. Layout Menu Parameters (Continued)

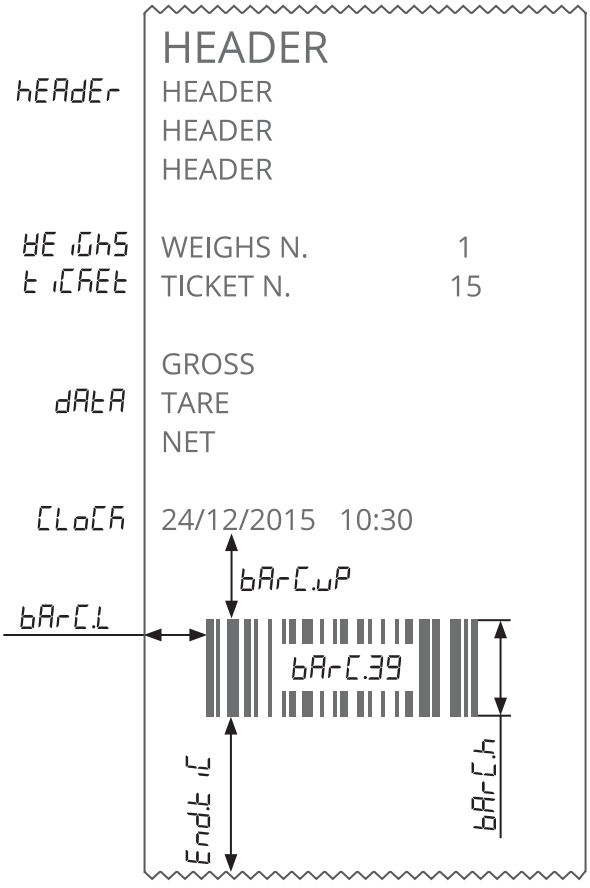


Figure 5-1. Receipt/Label Parameters

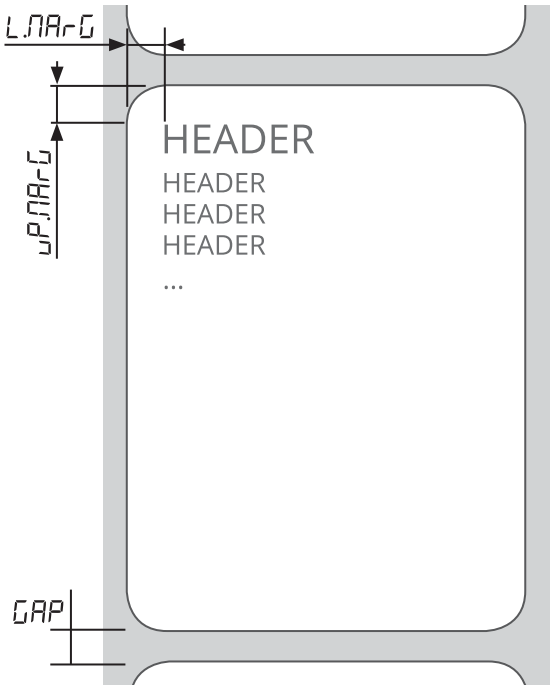


Figure 5-2. Additional Label Parameters

32		47	/	62	>	77	M	92	\	107	k	122	z
33	!	48	0	63	?	78	N	93	]	108	l	123	{
34	"	49	1	64	@	79	O	94	^	109	m	124	|
35	#	50	2	65	A	80	P	95	_	110	n	125	}
36	$	51	3	66	B	81	Q	96	'	111	o	126	~
37	%	52	4	67	C	82	R	97	a	112	p		
38	&	53	5	68	D	83	S	98	b	113	q		
39	'	54	6	69	E	84	T	99	c	114	r		
40	(	55	7	70	F	85	U	100	d	115	s		
41	)	56	8	71	G	86	V	101	e	116	t		
42	*	57	9	72	H	87	W	102	f	117	u		
43	+	58	:	73	I	88	X	103	g	118	v		
44	,	59	;	74	J	89	Y	104	h	119	w		
45	-	60	<	75	K	90	Z	105	i	120	x		
46	.	61	=	76	L	91	[	106	j	121	y		

Figure 5-3. List of Characters

Figure 5-4. Sample Print

5.6 Filter Menu (FiLtEr)

Edits scale reactivity. Useful to adjust the scale to specific needs.

The "0" represents minor filtering and makes the weight more reactive. As the filtering is increased the stability of the weight is also increased. It is recommended to obtain a weight several times, adjusting the filtering until the appropriate compromise between reactivity and stability is achieved.

Settings	Descriptions
StAnd.0 – StAnd.3	Table and floor scales and piece counters
hi.rES.0 – hi.rES.7	High precision scales
dyn.0 – dyn.3	Suspended and oscillating load weighing
SLo!.0 – SLo!.3	Liquid weighing, weigh bridges and weighing with vibrations
do50 – do53	Metering, filling, level check and overloads
r.AdC 0 – r.AbC 5	Filter for specific applications for factory use only

Table 5-4. Filter Menu Settings

5.7 Screen Menu (SCrEEn)

Parameters for adjusting the display.

Parameters	Descriptions
bAH.L it	Back lighting: no, YES, Auto
br iGht	Brightness: brGt 1, brGt2, brGt3, brGt4
LoCH	Display lock (factory use only): no, YES

Table 5-5. Screen Menu Parameters

5.8 Battery Menu (bAtt)

Settings for the battery power supply.

Settings	Descriptions
no	--
AA	4 AA batteries (NA)
Pb	Lead rechargeable battery
n iMh	niMh rechargeable battery (NA)

Table 5-6. Battery Settings

5.9 Eco Battery Menu (ECo.bAt)

Energy consumption settings for battery operation.

Settings	Descriptions
ECo.no	Maximum consumption; maximum reactivity
ECo.Min	Minimum amount of reduced consumption; reduced reactivity
ECo.MEd	Medium amount of educed consumption; reduced reactivity
ECo.MAH	Minimum amount of consumption; scale in standby, power at the touch of a button, automatic switch-off at the end of weighing

Table 5-7. Eco Battery Settings

5.10 Remote Menu (rEMotE)

Settings for the remote control.

Settings	Descriptions
no	--
ir 1	Infrared remote control (4, 18, 19 keys); all keys perform the tare
ir 4	4-key infrared remote control; multi-function mode
ir 18	18-key infrared remote control; multi-function mode
ir 19	19-key infrared remote control; multi-function mode
rF 1	6-key radio-frequency remote control; all keys perform the tare
rF 6	6-key radio-frequency remote control; multi-function mode
rF.br 1	6-key radio-frequency remote control in broadcast mode; all keys perform the tare
rF.br 6	6-key radio-frequency remote control in broadcast mode; multi-function mode

Table 5-8. Remote Control Settings

Note ***The broadcast mode allows sending the control to multiple scales simultaneously.***

5.11 Factory Configuration Reset (rESEt)

Used to reset the indicator to factory configuration settings. The indicator maintains the current calibration memory.

1. Navigate to the configuration menu (Section 5.1 on page 37).
2. Press ▼ to scroll to rESEt.
3. Press ↵. SurEP displays.
4. Press ↵. d iAG displays.
5. Press C to leave the configuration menu and return to the weigh mode. SAUEP displays.
6. Press ↵ to continue with the reset or press C to exit without resetting.

5.12 Diagnostics Menu (diAG)

Read only diagnostic parameters.

Parameters	Descriptions
AdC.uU	Displays input signal in µV; scroll up or down to examine all the channels
diSPLA	Display integrity check of all segments and icons
HEYb	Press any key to verify correct operation with beep and code displays
CtS	Check of status of the control signal from the printer
outPut	Optional digital outputs; check the activation and deactivation of each contact
inPutS	Optional digital inputs; check the activation and deactivation of each input *Example: i.b 1-0 (input not active); i.b 1- 1 (input active)*
SEr.nUM	Serial number of the scale
PrG.UEr	Hardware revision (e.g. rEUS) followed by software version (e.g. 04. 00. 00)
diU. int	Factory use only
AdC.Pnt	Factory use only
bt.AdC	Factory use only
SEr iAL	Factory use only

Table 5-9. Remote Control Parameters

5.13 Advanced Menu (AdUAnC)

Configuration of the advanced parameters.

Menu Items	Parameters	Descriptions
CAL.PAr	dEC iN	Configuration of the decimal point: 0, 0.0, 0.00, 0.000
	d iU	Reading division: 1, 2, 5, 10, 20, 50, 100, 200
	u.M.	Unit of measure: Lb, G, KG, t
	rAnGE 1-3	Enter max scale capacity for a single-range scale or enter range values for multi-range scales; See Section 6.1 on page 45
	E9uAL	Equalization function: no, YES
	n.ChAn	Equalized analog channels: Ch2, Ch3, Ch4 ***Note: Visible only if E9uAL = YES***
E9uAL.P	E9.0-4	Equalization of the empty scale and each individual load cell; See Section 6.2 on page 45 ***Note: Visible only if E9uAL = YES***
CAL.AdU	2Ero	Run the calibration procedure; See Section 6.2 on page 45
MEtroL	0. PErC	Reset percentage via key; with approved scale (0-3) and with non-approved scale (0-50)
	d iU. Stb	Sensitivity of the weight stability control (0-20); e.g. n02
	0. trH	Zero hold function: tr no, tr 1P4, tr 1P2, tr 1, tr 2, tr 4, tr 6, tr 8, tr 10
	on. 2Ero	Reset zero when powered on: no, YES (if YES select reset percentage)
	CAL. AdU	Re-acquisition/adjust calibration points in memory
	CAL. MAn	Factory use only
	d. SALE	Factory use only
HEYb	--	Type of keyboard: norM, EHt
t iLt	--	Inclinometer (factory use only): n.o. (normally open), n.C. (normally closed)
rEACt	--	Reactivation of the totalization or print function: 2Ero – after unloading the plate inSt – when weight is unstable AL'AYS – function always active
LocH.Hb	--	Permanent keyboard lock (excluding the C/power key): no, YES
AL ib i.r	--	Reset of fiscal memory (optional); Visible only if the alibi memory option is present; Reset is not possible if the instrument is approved
P in.tEC	--	Access PIN to configuration menu: no, YES (if yes, enter six digit PIN)
P in.uSE	--	Access PIN to user menus: no, YES (if yes, enter six digit PIN)
dFLt.t	--	Total reset of memory and of calibration to the factory settings

Table 5-10. Advanced Menu Parameters

6.0 Calibration

This section describes procedures for setting calibration parameters and the calibration of the Pallet Jack Scale.

6.1 Calibration Parameters

Set the following parameters before calibrating the Pallet Jack Scale:

- Decimal Point (dEC iN)
- Reading Division (d iU)
- Unit of Measure (u.N.)
- Range 1, Range 2, Range 3 (rAnGE 1-3)
- Equalization (EQuAL)
- Equalized Analog Channels (n.ChAn)

6.2 Complete Calibration Procedure

Follow these steps to set the calibration parameters and complete a calibration:

Note ***Press C at any time to back out one level or multiple times to return to the weigh mode.***

1. Turn indicator on by pressing C and press ▲ during startup. CAL displays.
2. Press ↵. CAL.PAr displays.
3. Press ↵. dEC iN displays (Section 5.13 on page 44).
4. Press ↵. The current decimal setting displays.
5. Press ▼ to scroll through decimal settings and press ↵ to save selection. d iU displays.
6. Press ↵. The current division setting displays (Section 5.13 on page 44).
7. Press ▼ to scroll through division settings and press ↵ to save selection. u.N. displays.
8. Press ↵. The current unit setting displays.
9. Press ▼ to scroll through unit settings and press ↵ to save selection. rAnGE 1 displays.
10. Press ↵. Range 1 value displays. Use the keypad or the numeric entry procedure to set value.

Note ***For single-range scales, Range 1 is set as the max scale capacity.***

11. Press ↵. rAnGE2 displays.

Note ***Range 2 and Range 3 should only be set for multi-range scales.***

For single-range scales press ▼ to scroll to EQuAL and skip to Step 17 on page 46.

12. Press . Range 2 value displays. Use the keypad or the numeric entry procedure to set value.
13. Press . rAnGE3 displays.
14. Press . Range 3 value displays. Use the keypad or the numeric entry procedure to set value.
15. Press . EQuAL displays.
16. Press . Current equalization setting displays (YES or no).
17. Press to scroll through settings and press to save selection. n.ChAn displays.

Note ***n.ChAn is only visible if EQuAL is set to YES.***

18. Press . The current channel setting displays. For the Pallet Jack Scale to work properly, Ch 4 must be the set.
19. Press to scroll through settings and press to save selection. dEC iN displays.
20. Press . EQuAL.P displays.

Note ***EQuAL.P is only visible if the function EQuAL is activated in the CAL.PAr menu (see Section 6.1 on page 45).***

21. Press . EQ 0 displays. (If rESEtP displays press to continue or press to cancel)
22. Make sure *Pallet Jack Scale* is unloaded and press . -oH- briefly displays once the equalization procedure is complete and then EQ 1 displays.
23. Place a test weight about 1/8 of the maximum capacity on the location of load cell 1 (Figure 6-1).

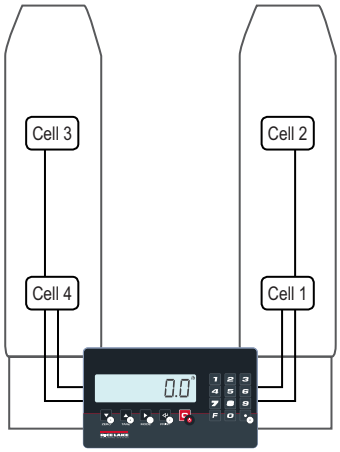


Figure 6-1. Load Cell Locations

24. Press . -oH- briefly displays once the equalization procedure is complete and then EQ 2 displays.

25. Move test weight to the location of load cell 2 (Figure 6-1 on page 46).
26. Press . -oH- briefly displays once the equalization procedure is complete and then E9 3 displays.
27. Move test weight to the location of load cell 3 (Figure 6-1 on page 46).
28. Press . -oH- briefly displays once the equalization procedure is complete and then E9 4 displays.
29. Move test weight to the location of load cell 4 (Figure 6-1 on page 46).
30. Press . E9 oH briefly displays once the equalization procedure is complete and then CAL.AdU displays.
31. Press . 2Ero displays. Make sure Pallet Jack Scale is unloaded.
32. Press . -oH- briefly displays once the calibration procedure is complete and then CAL.Pnt displays.
33. Press . The current setting for the number of calibration points displays.
34. Press to scroll through settings (1-3) and press to save selection. Calibration point 1 value displays.
35. Use the keypad or the numeric entry procedure to set the calibration weight value and press . LoAd displays.
36. Load the weight specified for calibration point 1. -oH- briefly displays once the calibration procedure is complete and then calibration point 2 value displays.
37. Repeat Step 35–Step 36 for calibration point 2 and 3 if needed.
38. Once the calibration procedure is complete for the final calibration point, unLoAd displays.
39. Unload the Pallet Jack Scale. CAL.oH briefly displays and then cAL.Pnt displays.
40. Press four times to back out of the menu. SAUEP displays.
41. Press . StorE briefly displays and then unit returns to weigh mode.

7.0 Maintenance

7.1 Maintenance Warnings

- Before proceeding with the maintenance operation ensure that the pallet jack is in safety mode
- During maintenance operations do not release work residues into the environment
- Only perform the maintenance operations described in this manual; Any unspecified procedures can pose a serious risk to untrained operators and may render the pallet jack unsafe
- Only use original spare parts
- Do not modify the Pallet Jack Scale
- During operation or maintenance, plates and stickers must not be removed, hidden or made illegible
- More complex maintenance and/or repairs must be carried out by authorized personnel only

7.2 Scheduled Maintenance

Scheduled maintenance must be performed by qualified personnel.

Before starting maintenance operations, place the pallet jack on a solid, level surface.

- Ensure that the pallet jack rollers are not obstructed by dirt
- Periodically grease the bearings of the rollers and wheels
- Grease the height control lever guide
- Check the oil level every six months and top off with hydraulic oil IP46 if necessary (Section 7.5 on page 50); Oil must be disposed of in accordance with local and state laws and regulations
- Replace wheels and rollers when they are worn
- For additional minor repairs and solutions, contact an authorized dealer

7.3 Daily Maintenance

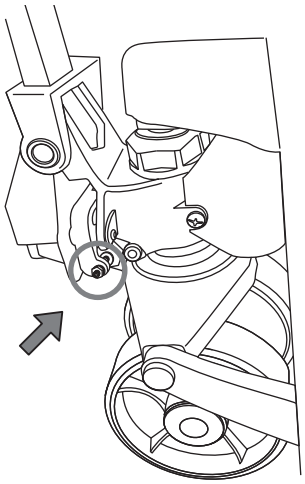
Check the following every day to keep the Pallet Jack Scale in good operating condition.

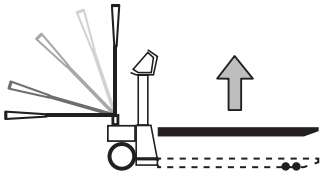
Daily Pallet Jack Scale maintenance is the responsibility of the user.

Below are the daily checks to be carried out to ensure optimal weighing and handling performance:

- Roller and wheel integrity check
- Visual check of the state of the pallet jack frame
- Weight indicator operation check
- Pump operation check

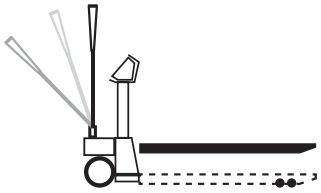
7.4 Regulation of the Forks Lowering



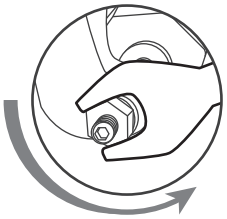


1 Place the forks at the maximum height

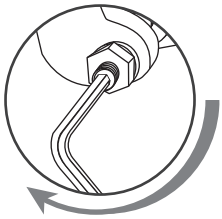
2 Place the height control lever in center position



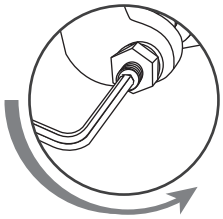
3 Make sure the handlebar is in the upright position



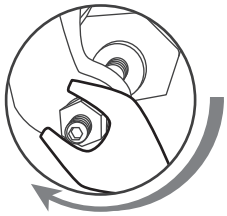
4 Unscrew the locknut to unlock the adjustment screw



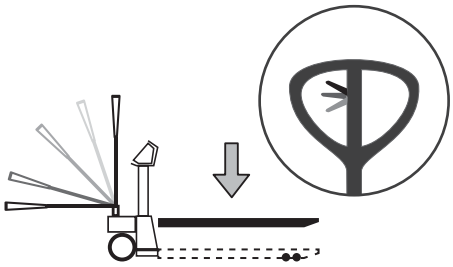
5 Slowly turn the adjustment screw clockwise until the forks start moving downward



6 As soon as the forks start lowering, turn the adjustment screw one and a half turns counterclockwise



7 Tighten the locknut, to lock the adjustment screw



8 Using the height control lever, the downward movement can be initiated from any handlebar position

Figure 7-1. Adjusting Fork Lowering Regulation

IMPORTANT

Make sure it is not possible to raise the forks with the height control lever in the center (transport) position.

Otherwise follow these steps:

1. ***Unlock the locknut***
2. ***Turn adjustment screw half a turn clockwise***
3. ***Re-tighten the locknut***
4. ***Repeat steps as needed***

7.5 Oil Level

Note

Check the oil level EVERY 6 MONTHS.
Only use hydraulic oil, not motor or brake oil.

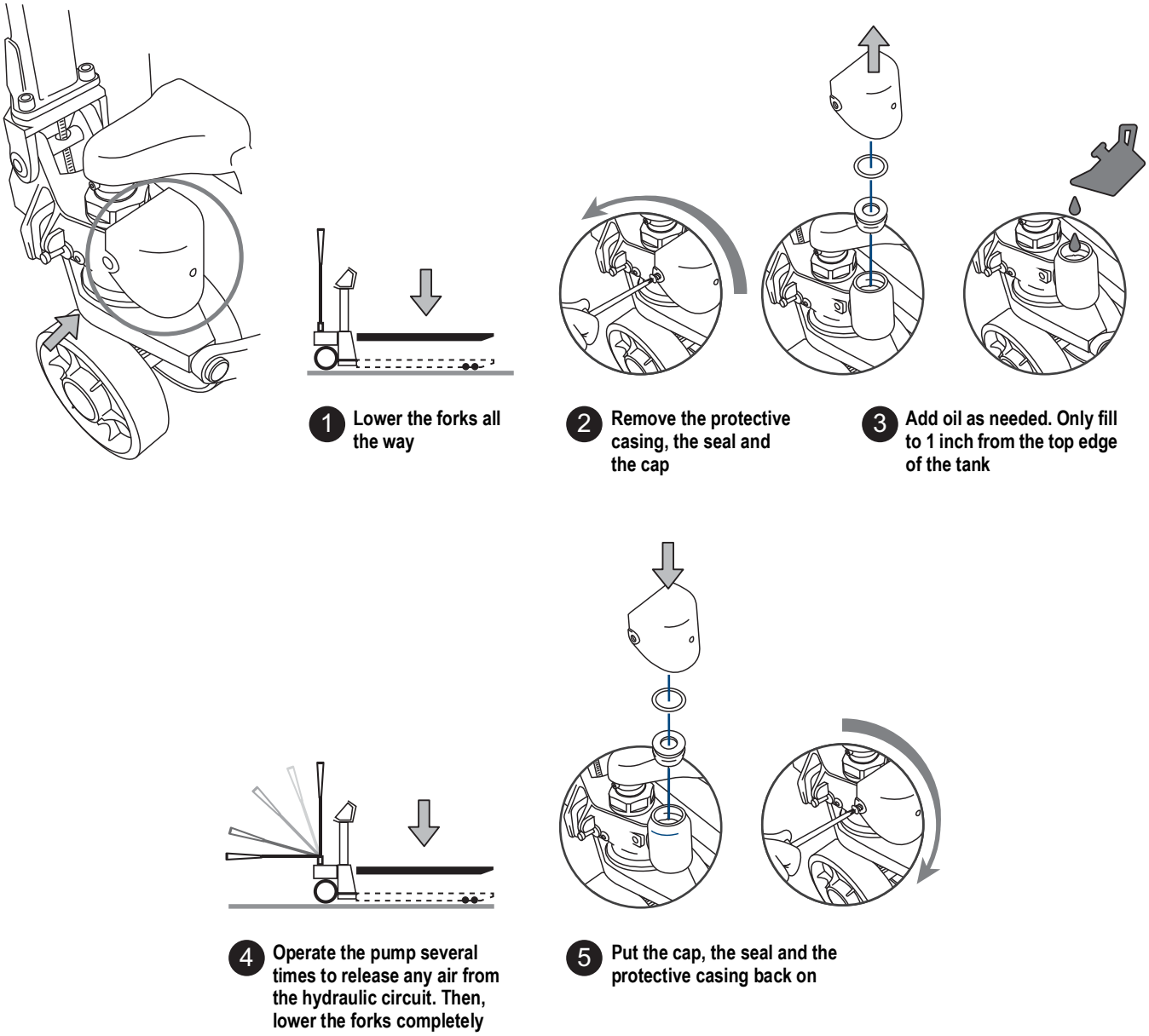


Figure 7-2. Checking the Oil Level

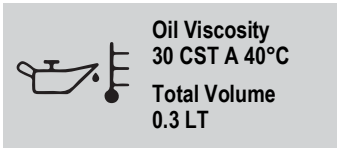


Figure 7-3. Oil Viscosity and Volume Annunciator

7.6 FAQ - Frequently Asked Questions

7.6.1 Print

The Scale Does Not Print

- Another printout is already in progress (bUSY)
- Make sure there is a roll in the printer
- The printer does not switch on
- The weight is unstable (UnStAb)
- The net or gross weight is negative or insufficient for printing (LoU)
- Underload or overload (_ _ _ _ _ _ or - - - - - -) (Un. ouEr)
- The scale was not unloaded after the last printing (no. 0. Un5)
- Trying to print a non-approved weight

7.6.2 Totalization

The Scale Does Not Accumulate

- Make sure there is a roll in the printer
- The printer does not switch on
- The weight is unstable (UnStAb)
- The net or gross weight is negative (LoU)
- Underload or overload (_ _ _ _ _ _ or - - - - - -) (Un. ouEr)
- The scale was not unloaded after the last printing (no. 0. Un5)
- The weight is too low for the weighing operation (LoU)
  - Less than 10 divisions for the accumulator modes
  - Less than “Min” for the approved products (shown on the measuring plate)

The Scale has Lost the Total

- Switching off the scale causes the accumulated totals to be lost

7.6.3 Tare

The Scale Does Not Tare

- The weight is unstable (UnStAb)
- The gross weight is negative (LoU)
- The weight is insufficient
- The weight exceeds the maximum capacity
- The tare function has been deactivated
- In the event of manual tare, the value exceeds the maximum capacity

7.6.4 Weighing

The Scale Does Not Switch On

- Make sure the power cable is connected properly
- Connect the battery charger and try again; If the instrument continues to malfunction, contact the dealer

The Scale Switches Off Suddenly

- Automatic switching off active
- Low battery
- Battery failure
- Power supply line failure

The Scale is Not Reactive

- One of the available energy saving modes has been activated
- An unsuitable weighing filter has been selected

The Scale Display Switches Off and Displays a Dot

- Stand-by mode is active: press a key to reactivate weighing
- Energy saving mode is active: contact the dealer for further details

The Scale Displays a Permanent "2Ero" Message

- The scale is unable to automatically reset the weight because it exceeds the maximum resettable weight at switch-on
- Unload the scale and try again; If the scale continues to have the same problem even when there is nothing on it, contact the dealer

The Weight is Unstable

- Check whether the weighing filter is active
- If the support surface is subjected to vibrations from machinery or moving vehicles, move the scale onto another surface and try again

7.6.5 Pieces Counting

The Scale Does Not Carry Out Sampling

The weight is unstable (Err.not)

The weight is insufficient, add more pieces and try again (Error)

7.7 Weighing Error Messages

Message	Description	Solution
bUSY	Another printout is already in progress	Wait for the printout in progress to be finished and try again
unStAb	The weight is unstable	Check weighing filter; If support surface is subjected to vibrations from machinery or moving vehicles, move scale onto another surface and try again
LoU	The net or gross weight is negative or insufficient for printing	Add weight and try again
un. oUEr	Underload or overload (_ _ _ _ _ _ or - - - - - -)	Completely unload the scale, making sure Δ lights up; reload the weight and try again
no. 0. uns	The scale was not unloaded after the last printing	Completely unload the scale, making sure →0← lights up; reload the weight and try again
Err. Not	The weight is unstable	Wait for stability (the ~ light) and try again
Error	In pieces counting mode, the weight is insufficient for proper sampling	Add more pieces and try again
t iLt	Angle error	Move the pallet jack to a flat surface and try again

Table 7-1. Weighing Error Messages

7.8 Configuration Error Messages

Message	Description	Solution
AL.Err	Alibi memory board (optional) not detected	Check for the presence of the board inside the indicator; If present, check that it is not damaged and is installed correctly
Er. I.b.H	Inputs/outputs board (optional) not detected	Check for the presence of the board inside the indicator; If absent, deactivate any inputs or outputs (parameter inPutS or outPut); If present, check that it is not damaged and is installed correctly
Er.r.b.H		
E9.Err	Unable to perform equalization	Check that the cells are connected properly; Check the signal of each cell in the diagnostic menu (menu d iAG, parameter AdC.uU)
PrEC.	Calibration error	First calibrate the zero point, then proceed with the next points
Err.Pnt	Calibration error	Check the connection of the load cell; Check that the cell signal is stable, valid and greater than that of the previously acquired point
Er 11	Calibration error	Increase the calibration weight
Er 12	Calibration error	Check that the signal coming from the cell increases as the weight loaded on the scale increases; When acquiring the calibration points, use increasing calibration weights
Er 37	Calibration error	Repeat the calibration, checking that the capacity and division have been correctly set
Er 39	Instrument not configured	Reset the factory configurations (menu AdUAnC, parameter dFLt.t)
Er 85	Instrument configured but not calibrated	Perform calibration
C.Er.36	Calibration error	Check that the signal coming from the load cell is not negative
Err.Not	Weight unstable	Check in menu d iAG, parameter AdC.uU that the signal is stable and retry; If the connection of the cells is with 4 wires, check that the sense jumpers are inserted

Table 7-2. Configuration Error Messages

7.9 Wiring Diagram

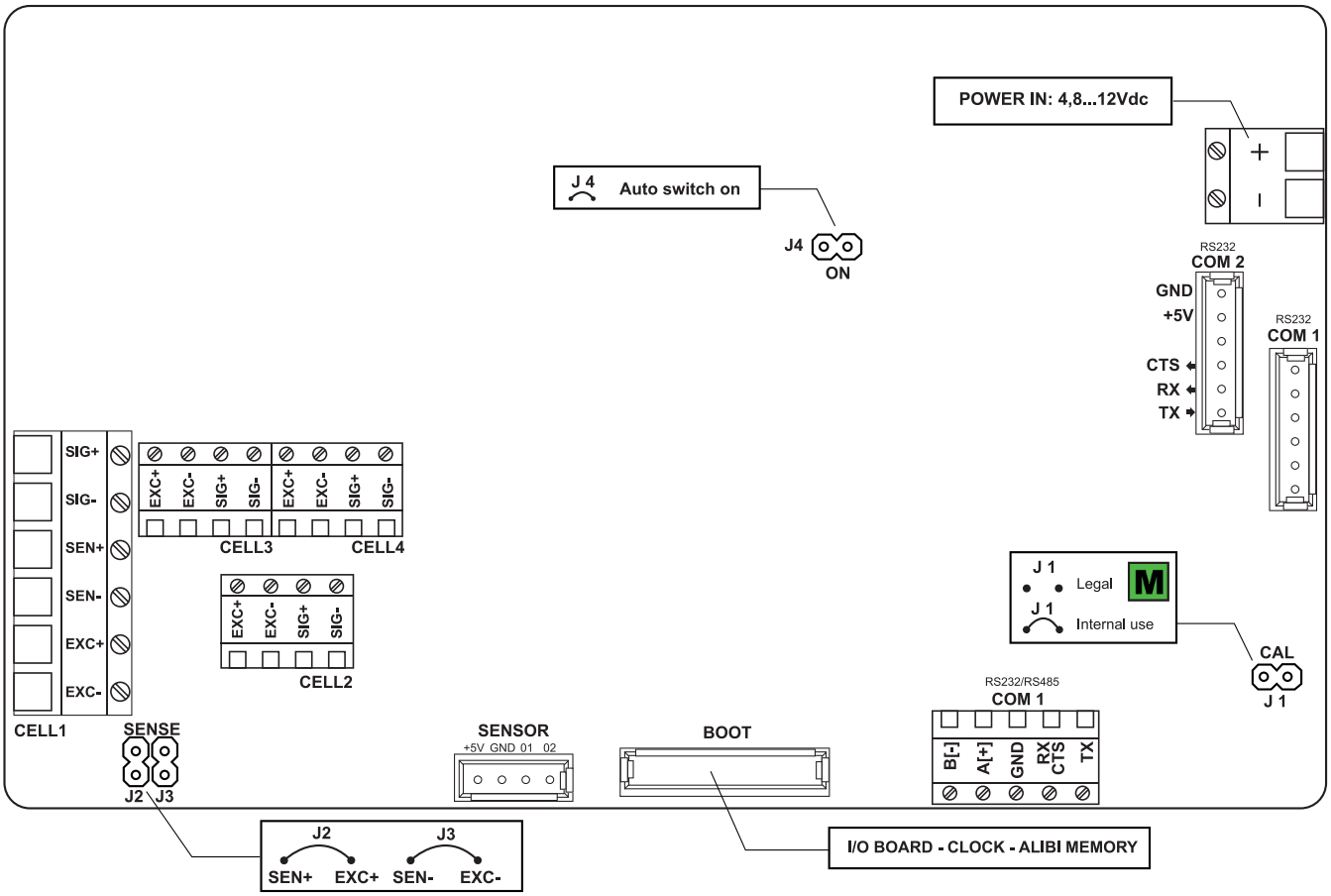


Figure 7-4. Indicator Wiring Diagram

8.0 Compliance

EU DECLARATION OF CONFORMITY

EU-KONFORMITÄTSERKLÄRUNG
DÉCLARATION UE DE CONFORMITÉ

Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake, Wisconsin 54868
United States of America

Type/Typ/Type: RL-HPJ

English We declare under our sole responsibility that the products to which this declaration refers to, is in conformity with the following standard(s) or other regulations document(s).

Deutsch Wir erklären unter unserer alleinigen Verantwortung, dass die Produkte auf die sich diese Erklärung bezieht, den folgenden Normen und Regulierungsbestimmungen entsprechen.

Francais Nous déclarons sous notre responsabilité que les produits auxquels se rapporte la présente déclartion, sont conformes à la/aux norme/s suivante ou au/aux document/s normatif/s suivant/s.

EU Directive	Certificates	Standards Used / Notified Body Involvement
2014/30/EU EMC	-	EN 61000-6-2:2015, EN 61000-6-4:2007+A1:2011, EN61326-1:2013, EN55011:2009 +A1:2010
2014/35/EU LVD	-	EN 61010-1:2010
2011/65/EU RoHS	-	EN 50581:2012
2006/42/EU Machinery	-	EN 13155:2009
		Devices marked with the legal metrology marking: / Geräte, die mit der gesetzlichen Messtechnik gekennzeichnet sind: / Appareils marqués du marquage métrologique légale:
2014/31/EU NAWI	UK 3105	EN 45501 Notified Body involved with module B and D: / Benannte Stelle, die an Modul B und D beteiligt ist: / Organisme notifié impliqué dans les modules B et D: Module B: NMO - 0126 Module D: NMi Certin B.V. - 0122

Signature: Richard Shipman

Type Name: Richard Shipman

Title: Quality Manager

Place: Rice Lake, WI USA

Date: May 3, 2019

9.0 Specifications

9.1 Dimensions

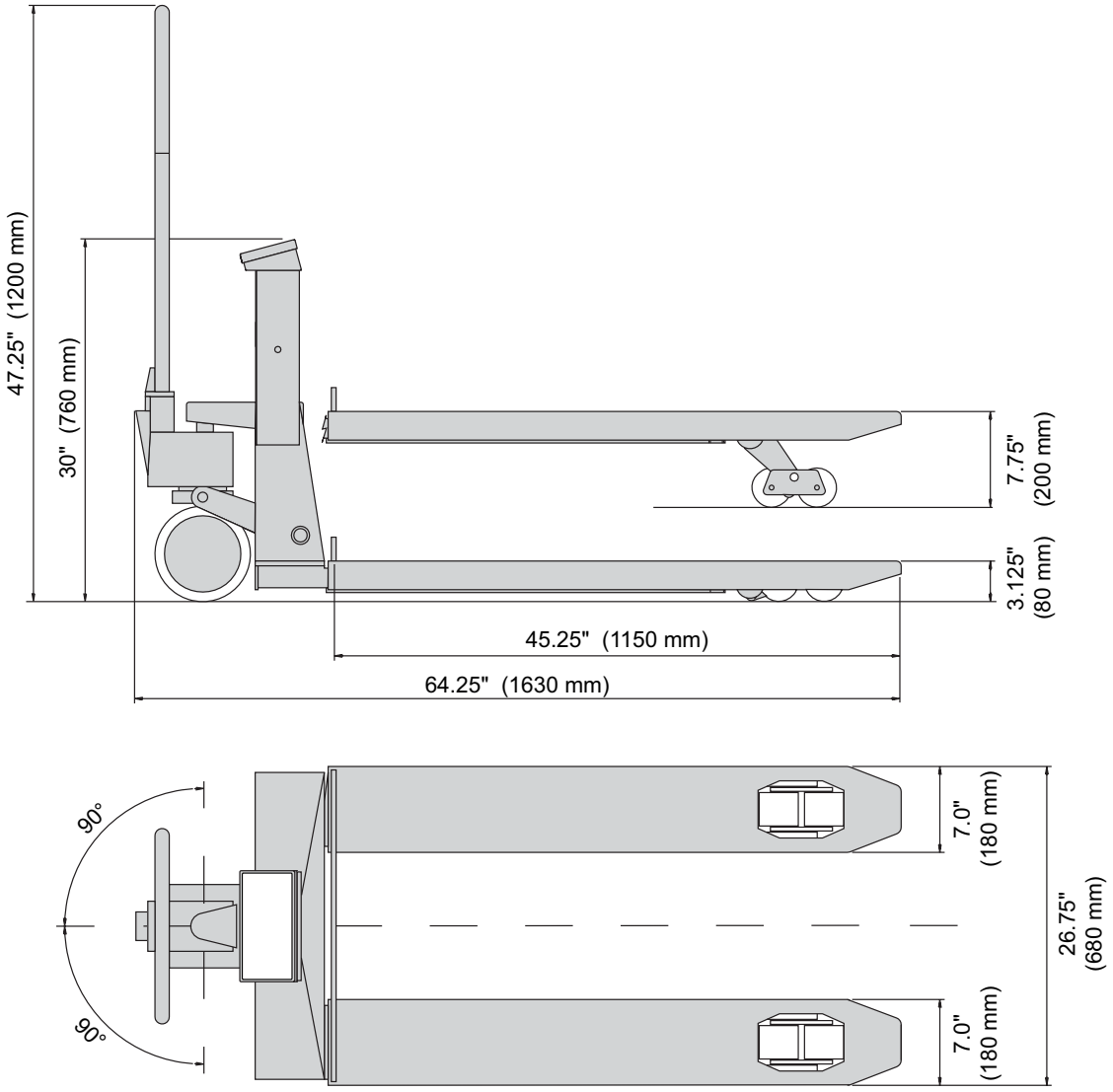


Figure 9-1. Hand Pallet Jack Scale Dimensions

9.2 Technical Specifications

Power Supply
Rechargable battery (6 V - 4,5 Ah)

Battery Charger
110–230 VAC

Displayed Divisions
10 000 e, 3 x 3000 e expandable to 800 000 for internal use (with minimum signal corning from the 1.6 mV/V cell)

Minimum Voltage per Division
0.3 µV

Load Cells
4 – 2.5K kg, 1000 Ω, 3 mV/V, shear beams

Dimensions
64.25" x 26.75" x 27.25" (1639 mm x 1200 mm)

Internal Resolution
1 500 000 counts

Keyboard
Water Resistant polycarbonate membrane keys with tactile and audible feedback

Tare Function
Available on entire range

Auto Power Off
Programmable from 1 – 255 minutes

Low Battery Warning
LoU bAtt displays

Battery Recharge Time
12 hours

Excitation
5 VDC ± 5%, 120 mA: 4 cells

Serial Outputs
2 RS232 ports

Weight
Approximately 295 lb (134 kg)

Capacity
Maximum lifting capacity (5000 lb)

Accuracy
± 0.1% of the maximum capacity

Operating Temperature
14°F to 104°F (-10°C to 40°C)

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WEIGHING SYSTEMS

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