RAVAS

SERVICE MANUAL
RAVAS 520

Rev. 20250114

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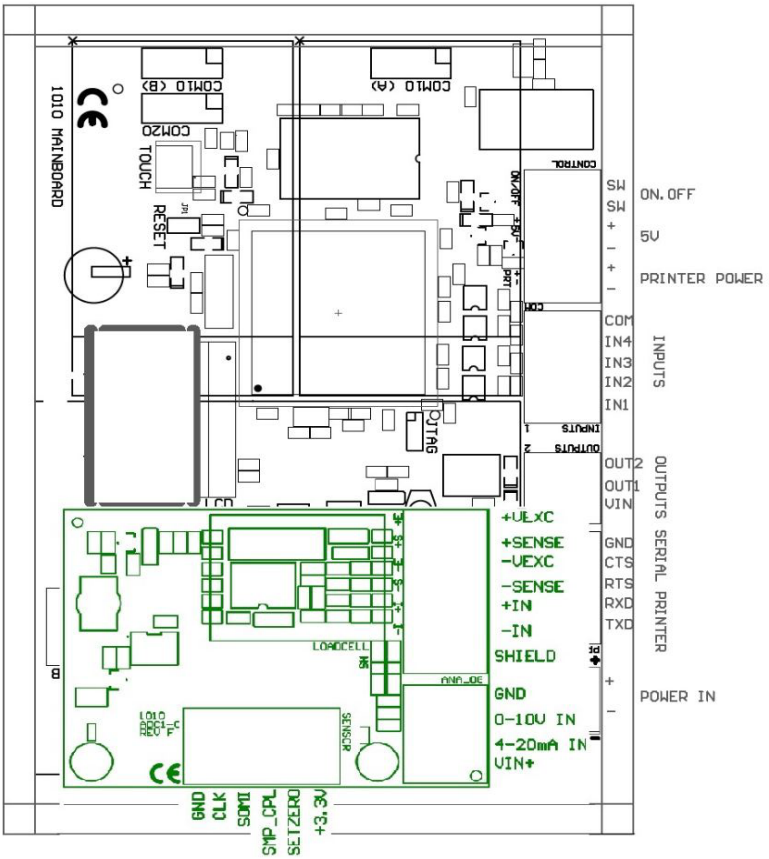
Warning:

Only trained and authorized personnel are allowed to calibrate the scale.

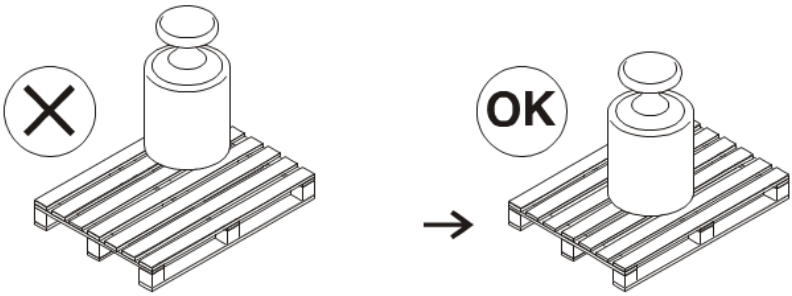


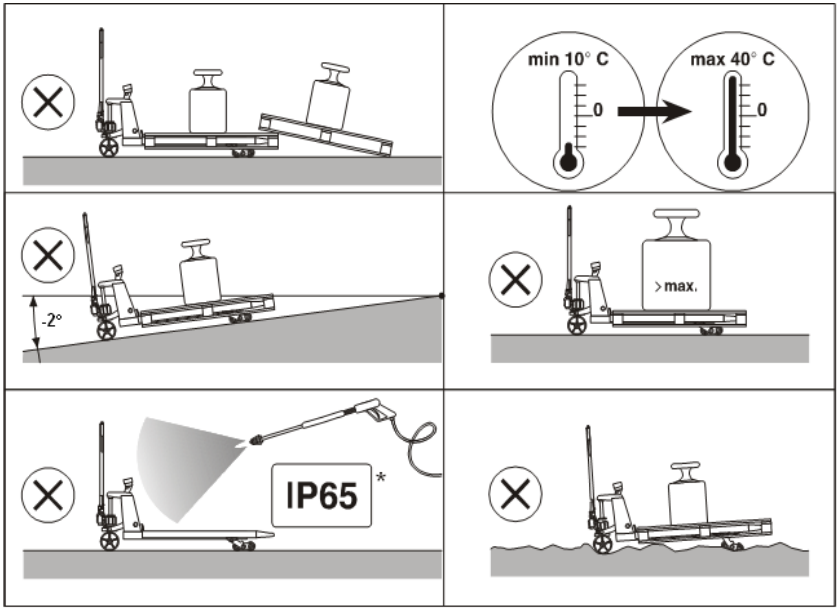
We would like to inform you about the fact that this RAVAS product is 100% recyclable on the basis that the parts are processed and disposed off in the right manner.

More information can be found on our website: www.ravas.com

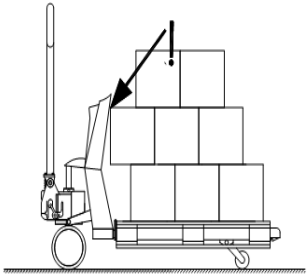
1. Calibration

1.1 Preparing for calibration: accurate weighing

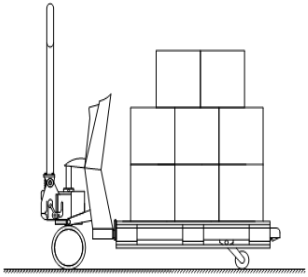




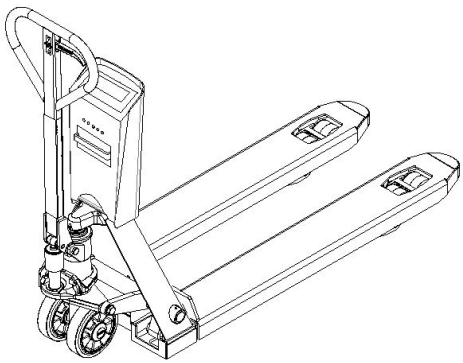
* excl.



Wrong way of lifting the load



Correct way of lifting the load

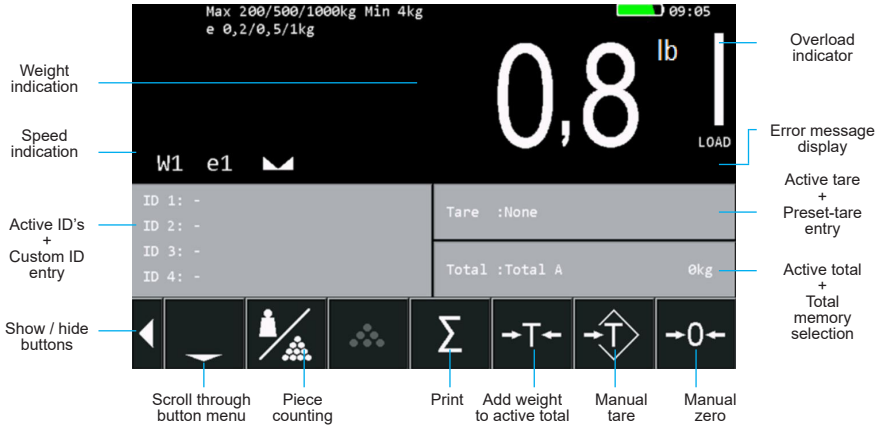


Check the zero reading before each weighing!

Before each weighing it is necessary to check whether the system is unloaded and free.

If the indicator does not determine the zero point automatically, it must be done manually using the >0< key.

1.2 Operating key functions of indicator

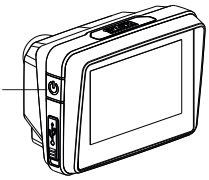


1.3 Display Functions

kg	Display shows weight in kilograms
lb	Display shows weight in pounds
NET	Display shows net weight
TARE	Display shows tare weight
M	Display shows subtotal memory active
Not level	Make sure the mast is vertical
Bad calibration	no calibration has been done

1.4 Start calibration procedure: first go into the service menu

1



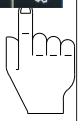
Switch on the indicator by pressing the On/Off button.

2

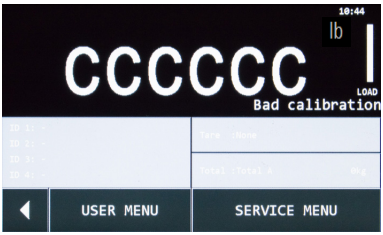
Press the arrow down 2 times to scroll through the buttons.

3

Press the settings symbol.

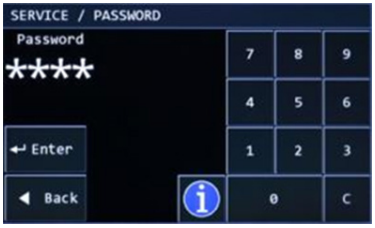


4



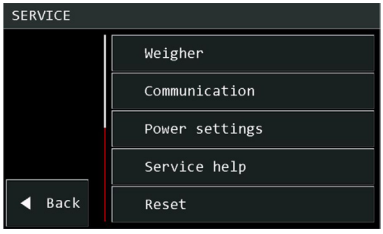
Now press 'Service Menu'.

5



Enter the password (5220) and confirm with enter.

6

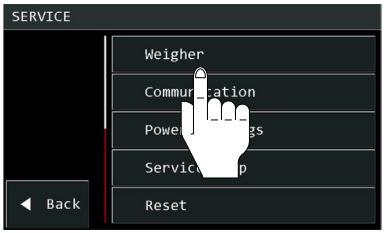


You are now in the service menu.

1.5 Set the scale capacity

It is important to set the scale capacity according to your forklift truck's capacity because some other parameters like zero tracking and display unit will change accordingly.

1



Select 'Weigher' in the service menu.

2

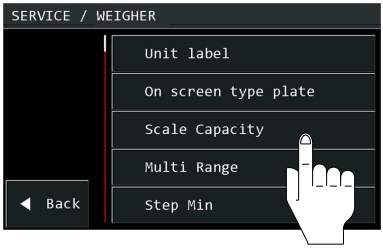
Select 'Settings'. When your system is legal for trade (NTEP) continue with step 3a. Otherwise continue with step 3b.

3a

When your system is legal for trade (NTEP) you have to enter the TAC code.

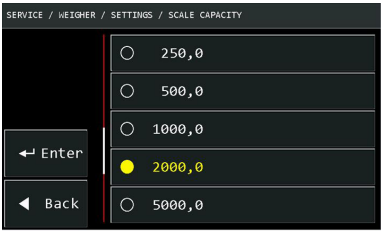
Confirm with 'Enter'.

3b



Select 'Scale capacity'.

4



Select the correct scale capacity (as shown on the indicator's machine sticker) and confirm with enter.

Scale capacity.

< 2,000 lb	select 2,000
2,001-5,000 lb	select 5,000
5,001-10,000 lb	select 10,000
10,001-20,000 lb	select 20,000
20,001-50,000 lb	select 50,000
50,001-99,000 lb	select 99,000
99,001-200,000 lb	select 200,000

NOTE: If the preferred scale capacity is not in the list, select CUSTOM and enter the capacity you want.

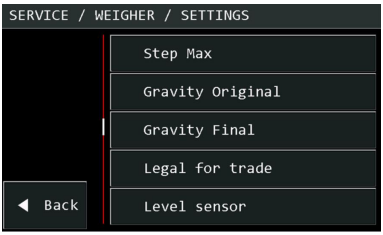
1.6 Change weigher settings

Once you entered the settings in the service menu (via ‘Service’ - ’Weigher’ - ‘Settings’) there is a scroll down menu from which you can select the setting you wish to change. In total there are 15 different settings to enter, see the pictures (1-3) below.

When you select one of the settings (e.g. unit label, see pictures 1a and 1b), you can change the setting accordingly.

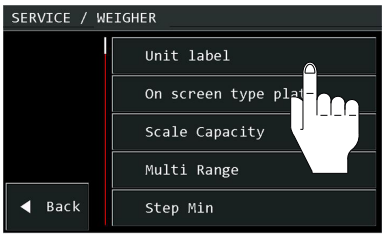
1

2



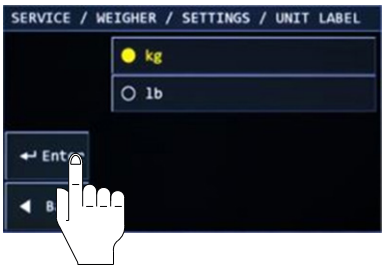
3

1a



For example: To change the unit label select ‘unit label’.*

1b

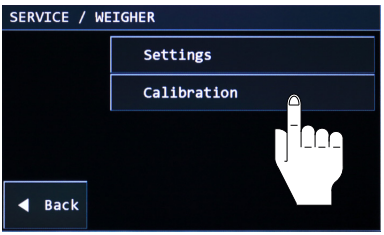


Choose your preference kg or lb and press ‘enter’.

*** Note when changing unit label:** The calibration value does not change accordingly. For lb to be displayed you need to perform a new calibration.

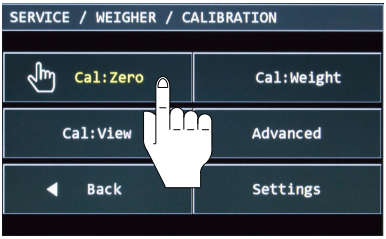
1.7 Go into the calibration menu and perform a zero calibration

1



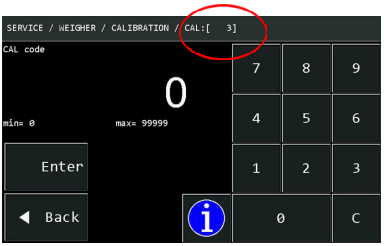
Go into ‘service menu’, select ‘weigher’, and select ‘Calibration’.

2



Calibrate as suggested by the hand.
Start with ‘Cal: Zero’.

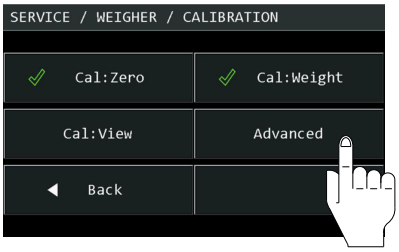
3



When your system is legal for trade (NTEP) you have to enter the CAL code.

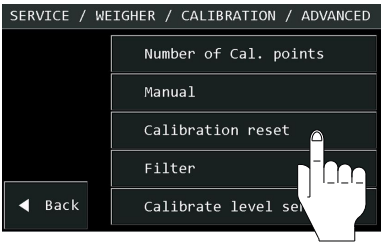
Confirm with ‘Enter’.

4



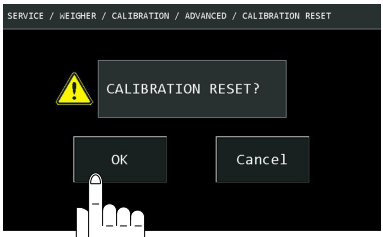
If a calibration is already done, it is indicated by a green check mark in front of a Cal point. When you wish to re-calibrate, select ‘Advanced‘.

5



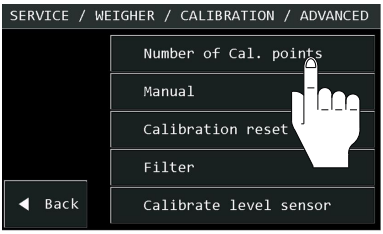
Select ‘Press ‘Calibration reset’.

6



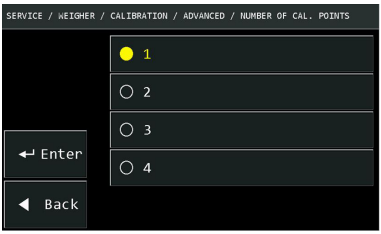
Confirm with ‘Ok’.

7



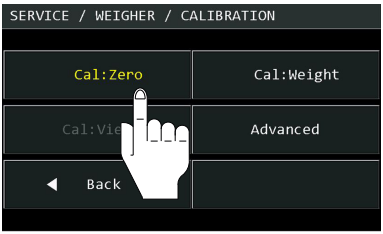
Select ‘Number of Cal. points’ to select 1 - 4 CAL. points.

8



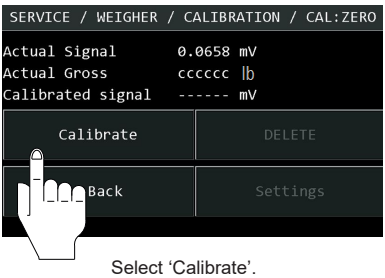
Select the number op points you wish to calculate. Then press ‘Enter’ or ‘Back’.

9



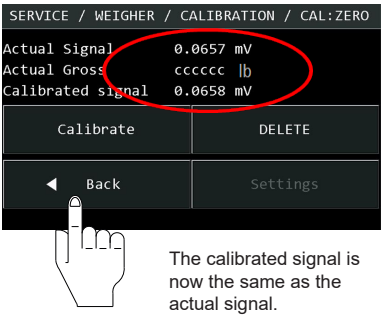
Select ‘Cal:zero’ to perform a zero calibration.

10



Select ‘Calibrate’.

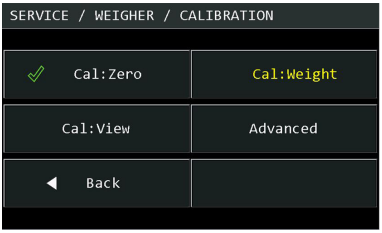
11



The calibrated signal is now the same as the actual signal.

Press ‘Back’.

12

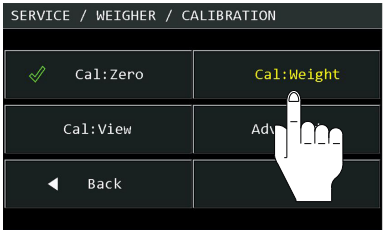


The zero calibration is finished now and marked with a green check mark.

To continue with the weight calibration, see instructions in the next section.

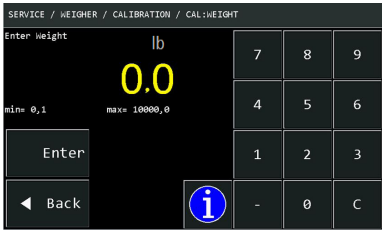
1.8 Execute weight calibration

1



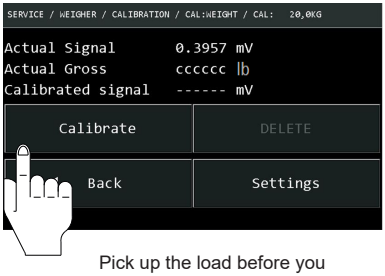
Select ‘Cal:weight’.

2



Enter the weight of the load you are going to use for calibration and confirm with ‘Enter’.

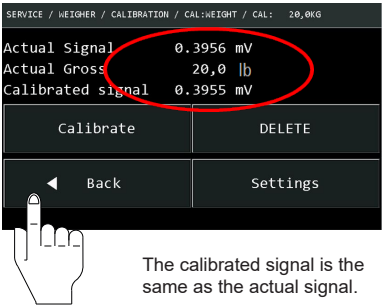
3



Pick up the load before you start the calibration!

Select ‘Calibrate’.

4



The calibrated signal is the same as the actual signal.

Press ‘Back’.

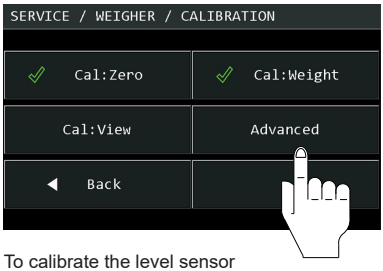
5

The weight calibration is now done and marked with a green check mark.

To continue with the level sensor calibration, see instructions in the next section.

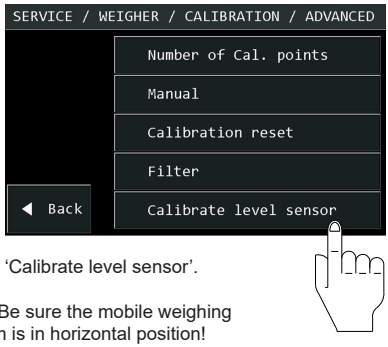
1.9 Execute level sensor calibration

1



To calibrate the level sensor select ‘Advanced’.

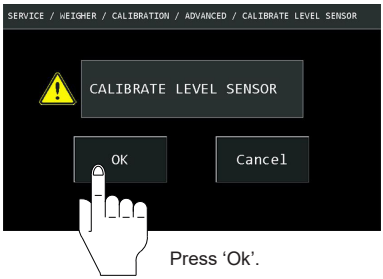
2



Select ‘Calibrate level sensor’.

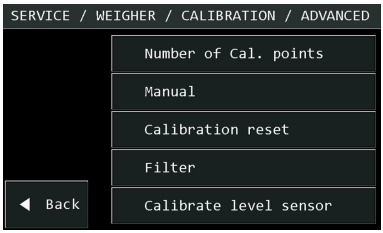
Note: Be sure the mobile weighing system is in horizontal position!

3



Press ‘Ok’.

4

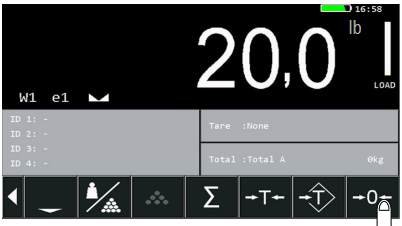


Press ‘Back’ 4x!

The display will show the calibrated weight.

1.10 Set zero

1

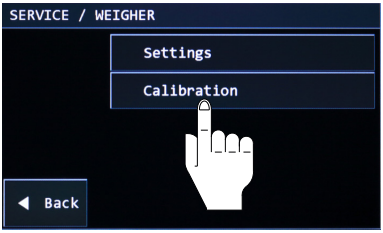


When the screen doesn't show zero, set zero manually. Press the zero button.

1.11 Delete a calibration point

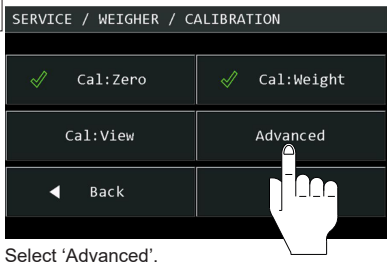
Only do this if you wish to re-calibrate.

1



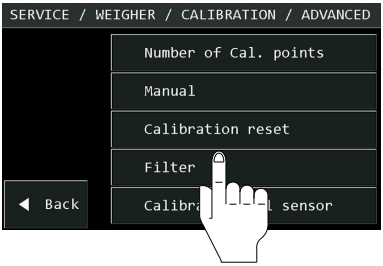
Select the 'Calibration' menu.

2



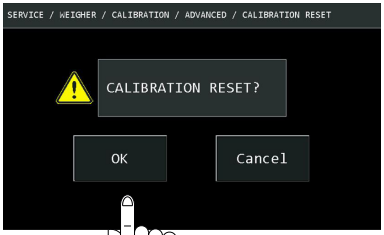
Select 'Advanced'.

3



Select 'Calibration reset'.

4



Confirm with 'OK'.

2. Parameter settings

Parameter settings for RAVAS 5200			17-12-2018		RAVAS 5200	RAVAS 5200 OIML
Main menu	Sub menus		Description	Settings	Default	Default OIML
User menu						
	Set Time/Date					
		Time	Set time	24-24-24	-	-
		Date	Set date	31-12-1999	-	-
	Display settings					
		Brightness	Adjust display brightnes	0-150%	100%	100%
		Power save	Switch power save mode on/off	Off/On	off	off
		Keys visible	Switch on/off key functions on the display in weighing mode	Off/On	on	on
		Language	Adjust user language	English/German/French/Dutch	English	English
		Decimal point	Select Decimal Point	./,	.	.
		Date format	Set date/ time notation	EU/ US	EU	EU
	Button Functions					
		Printer				
			Function	Print/ Add/ Send/ Alibi	Print	Print
			Location	None/ Row1-3/ Button 1/6	None	None
		Send WiFi				
			Function	Print/ Add/ Send/ Alibi	Send	Send
			Location	None/ Row1-3/ Button 1/6	None	None
		Summing				
			Function	Print/ Add/ Send/ Alibi	Add to total	Add to total
			Location	None/ Row1-3/ Button 1/6	Row1/Button 4	Row1/Button 4
		Tare				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	Row1/Button 5	Row1/Button 5
		Zero				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	Row1/Button 6	Row1/Button 6
		ID1 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None
		ID2 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None
		ID3 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None
		ID4 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None
		PT1 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None
		PT2 SCAN				
			Function	-	-	-
			Location	None/ Row1-3/ Button 1/6	None	None

	Application							
		Basic/ PCS counting/ Totalizing/ Dosing			Select the scale application	Basic/ PCS counting/ Totalizing/ Dosing	Basic	Basic
	Service help							
		Check calibration	(read only)		Only to view the calibration values (for service purposes)	-	-	-
		Alibi			View alibi NR	-	-	-
		Event log			Error and overload logging database	-	-	-
		OIML			View OIML information	-	-	-
		Debug			Screen on whitch sensor inputs can be checked	-	-	-
		Software update			Restart indicator in software update mode	-	-	-
Service menu	(Secured with password) (5220)							
	Weigher							
		Settings (HPT)						
			Unit label		Select scale unit	kg/ lb	kg	kg
			On screen type plate					
			Scale Capacity	(Custom& preset onder 1 parameter)	Set scale capacity (automatically sets other scale parameters)	Custom/1000/2500/5000/10000/20000/50000/100000	2500	2500
					Set maximum capacity of truck (-> sets overload bar)	1-100000 kg	2500 kg	2500 kg
			Multi Range	(was multi range)	Set divisions	0-5000 e	0 e	0 e
			Step min		Set low graduation step	1/2/5/10/20/50/100/200/500/1000	2	2
			Step max		Set high graduation step	1/2/5/10/20/50/100/200/500/1000	5	5
			Gravity Original		Gravitation value of position at calibration	9,000-10,000 m/s2	9,812 m/s2	9,812 m/s2
			Gravity Final		Gravitation value of position for use of scale	9,000-10,000 m/s2	9,812 m/s2	9,812 m/s2
			Legal for trade			NO/ OIML/ NTEP	NO	NO
			Level sensor					
			Auto tare reset			Off/ On	Off	Off
			Zero track			Off/ On	Off	Off
			Zero range			1-1000	10% of Scale capacity	10% of Scale capacity
			Zero supressing		Set zero suppressing	0-100 e	1 e	1 e
			Alibi			Off/ On	Off	Off
		Calibration						
			Cal: Zero					
				Calibrate		Calibrate weight		-	-
				Delete		Delete calibration point		-	-
				Settings		N/A		-	-
			Cal: Weight			Calibrate Span			
				Cal point 1					
					Calibrate	Calibrate weight		-	-
					Delete	Delete calibration point		-	-
					Settings	-		-	-
						Reference weight		0-100000	-	-
			Cal: View						
						View calibration points		-	-	-
			Advanced						
				Number of Cal. Points		Set number of calibration points		1/2/3/4	1	1
				Manual		Manually adjust calibration points		-	-	-
				Calibration reset		Reset all calibration points and settings to factory defaults		OK/ Cancel	-	-
				Filter		Change filter settings (Not reccomended)!		-	-	-
				Calibrate level sensor		Perform a new level sensor neutral position calibration		OK/ Cancel	-	-

Communication									
	Printer settings								
		Line-feed				adjust line feet after print out	0-100	1	1
		Header				Add header to print out	-	-	-
		Footer				Add footer to print out	-	-	-
	BLT 4,0 on-board								
		Protocol				Set the operation protocol	PC	PC	PC
		Info				View BT status	-	-	-
	RS232 on-board								
		Protocol				Set the operation protocol	None/ PC/ Printer/ RDC	Printer	Printer
		Stopbits				Set number of stopbits	1/2	1	1
		Databits				Set number of databits	7/8	8	8
		Parity				Set parity	None/ Odd/ Even/ Mark/ Space	None	None
		Baudrate				Set bautrate	1200/2400/4800/9600/19200/38400/57600/115200	9600	9600
	USB on-board								
							-		
	COM 10								
		Port settings							
			Protocol			Set the operation protocol	None/ PC/ Printer/ RDC	None	None
				Scale id		Scale id which the indicator is known by in the RDC software	automatically according to Xpico board sn.	xxx	xxx
				Mode Ack/Nack			off/ on	on	on
			Stopbits			Set number of stopbits	1/2	1	1
			Databits			Set number of databits	7/8	8	8
			Parity			Set parity	None/Odd/Even/Mark/Space	None	None
			Baudrate			Set bautrate	1200/2400/4800/9600/19200/38400/57600/115200	9600	9600
	COM 20								
		Port settings							
			Protocol			Set the operation protocol	None/ PC/ Printer/ RDC	None	None
				Scale id		Scale id which the indicator is known by in the RDC software	automatically according to Xpico board sn.	xxx	xxx
				Mode Ack/Nack			off/ on	on	on
			Stopbits			Set number of stopbits	1/2	1	1
			Databits			Set number of databits	7/8	8	8
			Parity			Set parity	None/Odd/Even/Mark/Space	None	None
			Baudrate			Set bautrate	1200/2400/4800/9600/19200/38400/57600/115200	9600	9600
Power settings									
	Power save mode								
		Dim timer				Timer for screen dim function	0-3600 s	60	60
		Sleep timer				Timer for indicator in sleep mode	0-3600 s	300	300
		Deep sleep timer				Timer to set indicator in most energy efficient mode	0-1440 h	8	8
	Power supply					Set the power supply source	Truck supply/ Li-ion14,8V/ 12V/ 24V/ Custom	Truck supply	Truck supply
Service help									
	Check calibration	(read only)				Only to view the calibration values (for service purposes)	-	-	-
	Alibi					View alibi NR	-	-	-
	Event log					Error and overload logging database	-	-	-
	OIML					View OIML information	-	-	-
	Debug					Screen on whitch sensor inputs can be checked	-	-	-
	Software update					Restart indicator in software update mode	-	-	-
Reset									
	Reset settings					Reset only the settings, calibration is kept in touch		-	-
	Reset Calibration					Reset only the calibration, settings are kept in touch	-	-	-
Scale type software						Select the scale type software:	Hy-Q/HPT	HyQ	HyQ

3. RDC - data transfer using WiFi to PC/server using RAVAS RDC software

In ‘SERVICE’ / ‘COMMUNICATION’ / ‘COM10 ‘
Select ‘RDC’

- Mode ACK / NACK >>> should be ‘ON’
- Scale id >>> here you can enter a 3 digit PIN code

This PIN code is used as scale ID and will be used in the CSV file to determine which indicator has sent the data – please make sure you use a unique number
The RDC software will list this number and at the PC you can enter an alias for this scale nr. (for example: ‘Forklift 24’).

Note: make sure that your Xpico settings are correct!
In ‘Tunnel settings’ you need to enter the static IP address of the server and use port number 5555 – see also the Xpico240 or XpicoWi-Fi manual.