USER MANUAL

ZSP-150-F
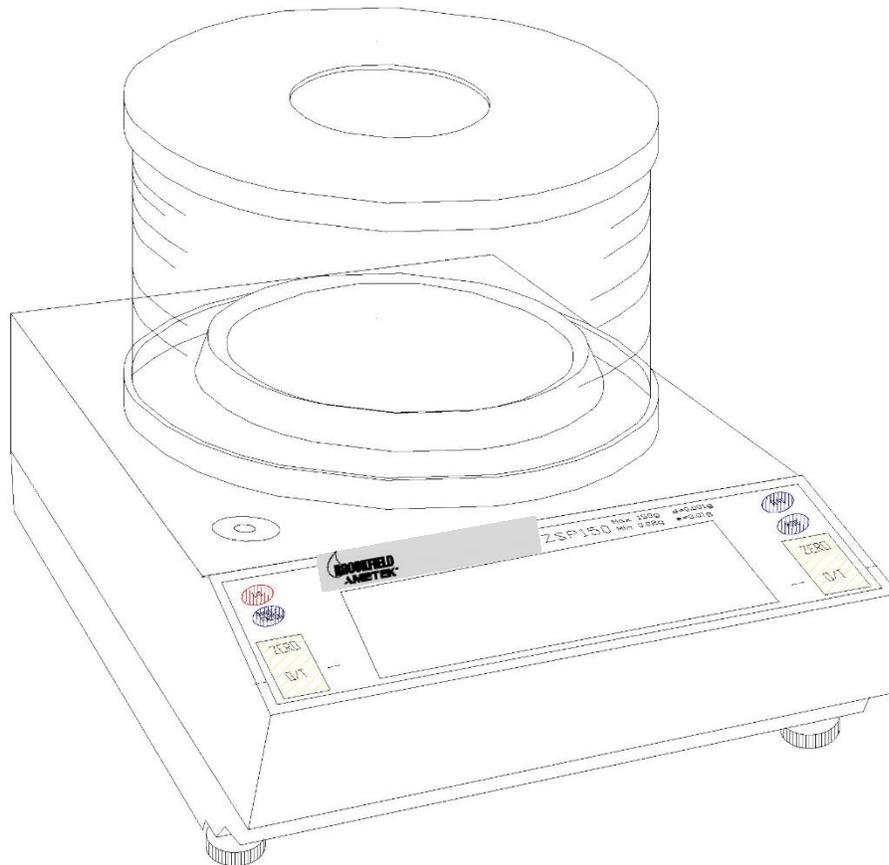## ELECTRONIC BALANCE

March 2020

P/N 700-0102-E

Setup and Operation Manual

Thank you for choosing a Zeta Series SP-150 (ZSP-150-F) Electronic Balance from AMETEK Brookfield. We are pleased to provide you with a balance designed and manufactured for years of reliable service and proudly made in the USA.

Please read this manual completely before using your balance. This information will enable you to fully utilize your balance and should be located nearby to be used as a quick reference guide. The balance is intended to be used only in the manner outlined in this manual. Misuse of the balance may cause product failure.

PROPRIETARY RIGHTS NOTICE

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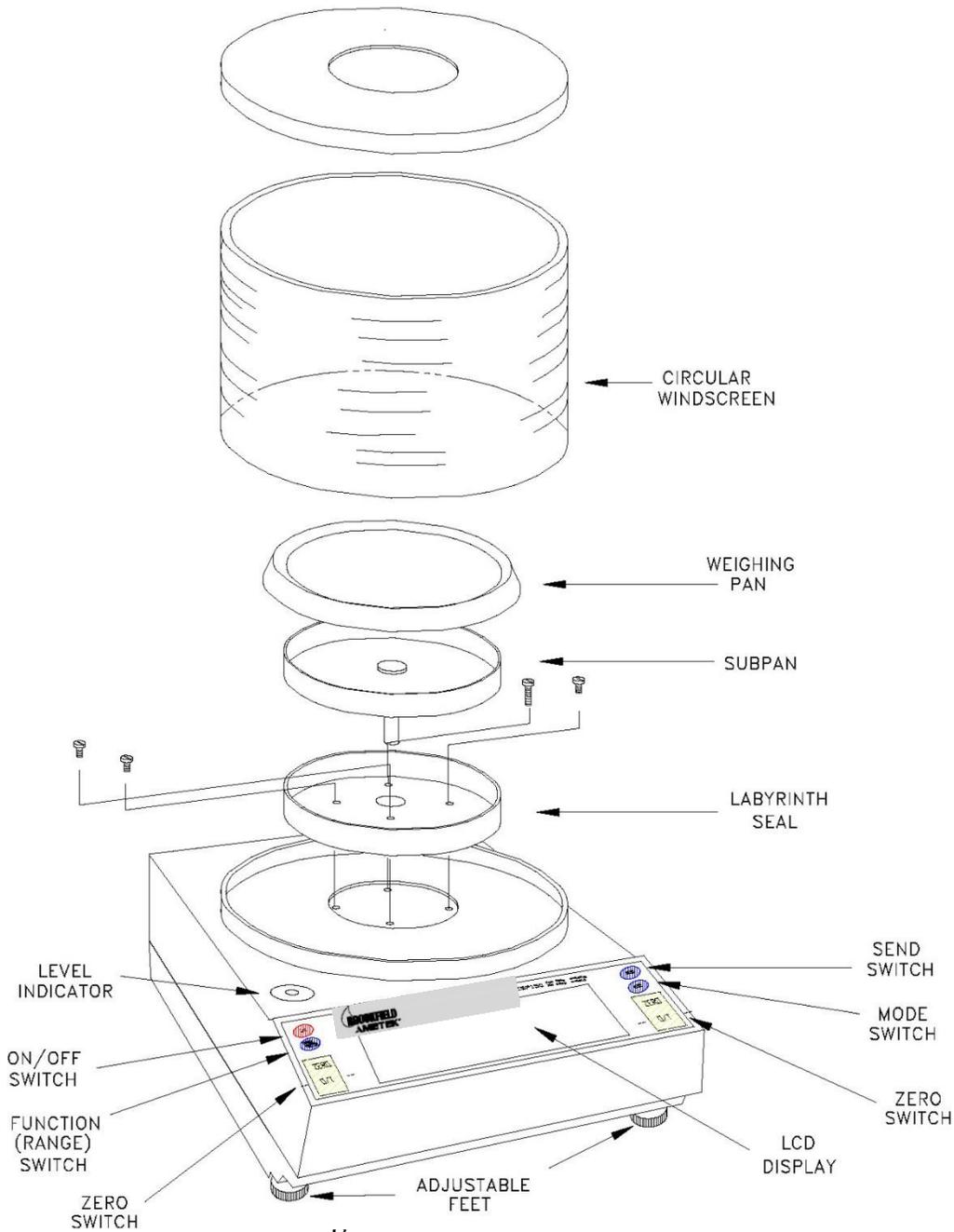
Table of Contents

Unpacking and Setup

The balance, weighing pans, remote power supply and windscreen are packed in a foam support to protect them from shock during shipping and handling. Save and reuse all packing material for future shipments. A null modem cable, a 100g weight and this user's manual are also packed with the balance. Refer to **Balance Kit Contents and Part Numbers** on page **17** for a complete list of the contents of the kit and the associated part numbers.

CIRCULAR WINDSCREEN

WEIGHING PAN

SUBPAN

LABYRINTH SEAL

SEND SWITCH

MODE SWITCH

ZERO SWITCH

LCD DISPLAY

ADJUSTABLE FEET

LEVEL INDICATOR

ON/OFF SWITCH

FUNCTION (RANGE) SWITCH

ZERO SWITCH

Operating Environment

The environment in which your balance is used is very important. Air movement, temperature changes, vibrations, direct sunlight, etc. influence the performance of high precision balances. Therefore, place your balance on a solid, sturdy surface that is free of air currents and vibration and not in direct sunlight. The surface should not be magnetic and should be located away from doors, windows, heaters, air conditioners and fans.

Leveling the Balance

Adjust (turn) the front feet (see Figure 2) to level the balance by centering the bubble in the level indicator, which is shown in Figure 1. Turning the foot as shown below raises that side of the balance and an opposite adjustment lowers it. Turn both feet together to raise or lower the front of the balance. When properly adjusted the metal center shaft of the assembly will protrude from the center of the plastic foot and will support the balance. The plastic foot will be raised up against the bottom of the balance and will not be touching the weighing table.

Thumbwheel turns but stays in the same position on case. The Shaft is what moves in and out but does not rotate. This design prevents walking of balance and scratching of table top while leveling.

Rotating Thumbwheel('s) as shown causes Shaft to extend out of case and RAISES Front of Balance.
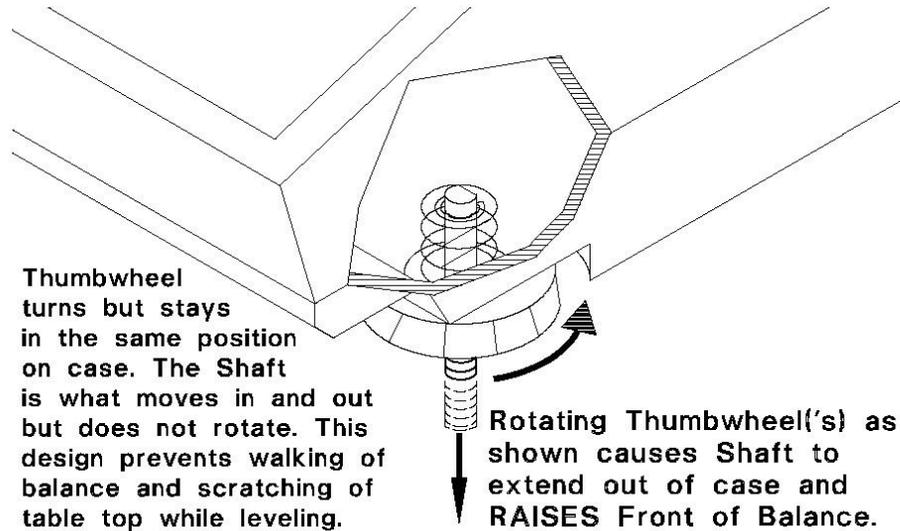
Figure 2 - Leveling the Balance

Connecting to an Electrical Outlet

The balance is supplied with a 115/230 VAC, 50/60 Hz automatic switching, remote power supply with five international plug adapters. This power supply will work with most electrical outlets. However, before making any connections, verify that the power (VAC) requirement shown on the power supply is compatible with the AC power outlet to which the balance will be connected and the proper plug adapter for your outlet is installed on the power supply.

First, plug the round connector into the rear panel receptacle.

Then, plug the power supply into an AC outlet.

NOTE: Your balance must be plugged in and switched on for at least one (1) hour, then calibrated, prior to use. Please see the calibration instructions on page **10**.

AMETEK BROOKFIELD recommends that the balance be plugged into an electrical outlet at all times. This ensures that the balance is always warmed up and ready to use.

The On/Off Button (I/O)

Press the ON/OFF (I/O) button one time to turn on the balance and observe the turn-on sequence shown below.

During this sequence the balance is doing an automatic systems check to verify it is functioning properly. After the balance has been plugged in and turned on, allow it to warm up for at least 1 hour, then follow the Auto-calibration instructions (page **10**) to calibrate the balance.

Figure 3 - Turn-On Sequence

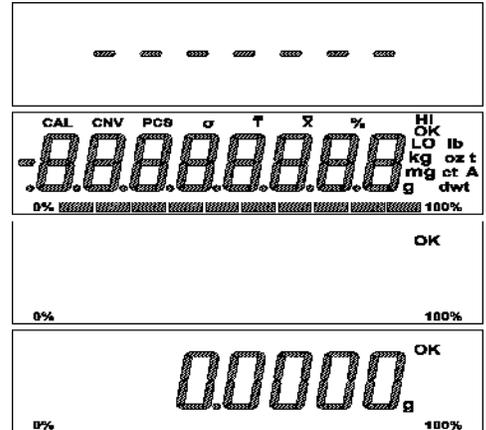## RS-232 Interface Cable

Your balance is equipped with a bi-directional RS-232 compatible interface. The included Null Modem Cable (P/N 200-0069) is a custom cable manufactured to the following diagram. Only this cable will provide the connections necessary for the ZSP-150-F Balance to communicate with the Computrac® Vapor Pro® series of moisture analyzers.

ZSP-150-F's Null Modem Cable

Connecting the ZSP-150-F to the Vapor Pro® / Vapor Pro Rx®

The balance is configured to interface directly with the Vapor Pro® series of Moisture Analyzers. Weight readings at the balance can be transmitted directly to the Vapor Pro® or Vapor Pro® Rx through the null modem cable connection.

To enable this communication between the balance and the Vapor Pro® / Vapor Pro® Rx:

- Power to both units should be switched OFF.
- Connect the null modem cable (P/N 200-0069) to the RS-232 connector at the rear of the balance. Connect the other end of the cable to the balance connector at the rear of the Vapor Pro®/ Vapor Pro® Rx.
- Switch the power to both units ON.
- On the Vapor Pro®/ Vapor Pro® Rx, press the **[Menu]** key.
- Use the **[Down]** key to highlight the SETUP MENU.
- Press the **[Selct]** key to access this menu.
- Highlight the EXT BALANCE SETUP option and press **[Selct]**.
- Highlight and select the SELECT BALANCE DRIVER option.
- Use the **[Edit]** key to select AZISP150 as the external balance.
- Press **[Quit]** and then **[Accpt]** key to program this option.
- Select the CHECK BALANCE COMM option to verify the cable is connected and that the Vapor Pro®/ Vapor Pro® Rx and the balance are communicating.
- Use the **[Esc]** key to return to the MAIN MENU.

If the Communication Check is not successful, the balance's communication settings need to be reset to their factory presets. Refer to **RS-232 Front Panel Configuration** on page **12** for instructions on resetting the balance to the required factory presets.

Using the ZSP-150-F with the Vapor Pro®/ Vapor Pro® Rx

- From the MAIN MENU on the connected Vapor Pro®/ Vapor Pro® Rx, select the MEMORY START MENU and then ADD/EDIT MEMORY START.
- Access the memory start to be edited using the **[Up]** or **[Down]** keys and the **[Selct]** key.
- At the SAMPLE WEIGHT ENTRY MODE option, select DIGITAL BALANCE.

When a test is run using that memory start parameter, the Vapor Pro®/ Vapor Pro® Rx will automatically check for data communication. The weight readings from the external balance will be displayed on the Vapor Pro®/ Vapor Pro® Rx display. Follow the display prompts to proceed through the weighing and testing sequence.

Connecting the ZSP-150-F to the Vapor Pro® XL

The balance is configured to interface directly with the Vapor Pro® series of Moisture Analyzers. Weight readings at the balance can be transmitted directly to the Vapor Pro® XL through the null modem cable connection.

To enable this communication between the balance and the Vapor Pro® XL:

- Power to both units should be switched OFF.

- Connect the null modem cable (P/N 200-0069) to the RS-232 connector at the rear of the balance. Connect the other end of the cable to the TCI/BALANCE connector at the rear of the Vapor Pro® XL.

- Switch the power to both units ON.

Using the ZSP-150-F with the Vapor Pro® XL

- From the MAIN MENU on the connected Vapor Pro® XL, select TEST PROGRAMS.

- Use the arrows keys to locate the desired Test Program and touch it to highlight it.

- Press [VIEW] to access the Test Program.

- Select TEST START OPTIONS.

- Set SAMPLE WEIGHT ENTRY: to Balance.

- Touch the top left corner of the screen to return to the previous screen or press the silver Home button below the LCD to return to the Main Screen

When a test is run using this Test Program, the Vapor Pro® XL will automatically check for data communication. The weight readings from the external balance will be displayed on the Vapor Pro® XL display. Follow the instrument display prompts to proceed through the weighing and testing sequence.
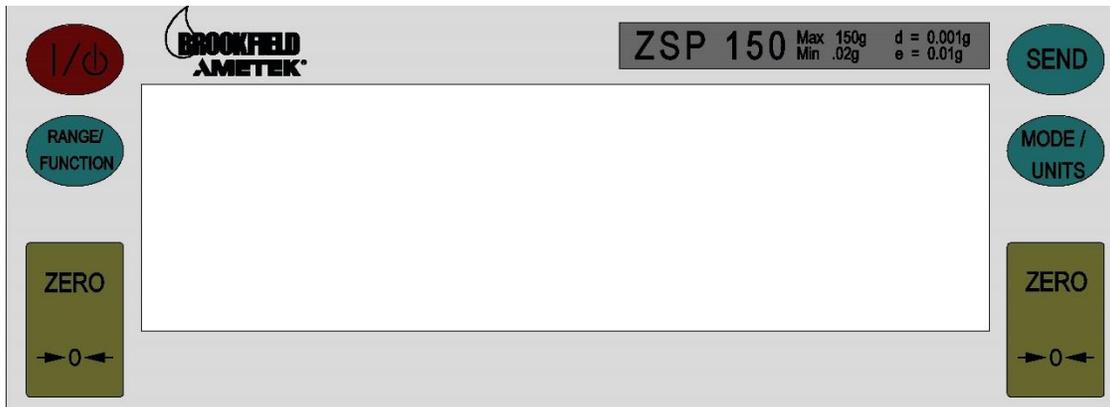
Figure 4 - Balance Front Panel

The ON/OFF (I/O) Button

The ON/OFF (I/O) button is located in the upper left corner of the balance's front panel. When the balance is off, pressing the button will start the turn-on sequence shown in Figure 3. During this sequence the balance is doing an automatic systems checkout to ensure it is functioning properly.

When the balance is on, pressing the ON/OFF button will turn off the balance.

The ZERO Buttons

There are two (2) ZERO buttons. Pressing either button at any time returns the display to zeros. When a weighing that has been zeroed out is removed from the weighing pan, a negative reading is displayed. To return the display to zeros, press one of the ZERO buttons.

The MODE Button

Pressing the MODE button starts the unit of weight cycle as follows: grams (g), carats (ct), pennyweights (dwt), troy ounces (ozt), ounces (oz), pounds (lb), kilograms (kg), and milligrams (mg). When the desired unit of weight appears, press the MODE button a second time to select that unit of weight.

The SEND Button

The SEND button is not normally employed in everyday usage of the balance, although it is used in certain specific configuration procedures, as detailed later in this manual.

The RANGE/FUNCTION Button

Pressing the RANGE/FUNCTION button begins the following menu cycle:

• PCS – Front panel parts counting	**See Appendix A (p. 18) for details**
• HI OK LO – Checkweighing	**See Appendix B (p. 19) for details**
• CAL 1 – Auto-calibration	**See Auto-calibration on p. 10**
• CAL 2 – Linearity – Factory Use Only	**DO NOT USE**
• *T* – Live animal weighing	**See Appendix C (p. 20) for details**
• % - Percent weighing	**See Appendix D (p. 21) for details**

To select the desired function, press the MODE button when it appears on the display.

CAL 2 is set at the factory and should never require further adjustment. The procedure for CAL 1 begins below. For the other functions listed in the RANGE/FUNCTION menu cycle, refer to the appendices, beginning on page 18.

CAL 1 [Auto-Calibration] - Using an external calibration weight

Perform auto-calibration every time you move your balance. It is extremely important to use high quality weights and verify the balance has been warmed up for at least one (1) hour prior to calibration.

	User Action	Balance Response
1	Remove any containers or weighing samples so that nothing is on the weighing pan, then press the ZERO button.	Zeros are displayed.
2	Press the RANGE/FUNCTION button	Balance display cycles repeatedly through PCS, HI OK LO, CAL 1, CAL 2, *T* and %.
3	Press the MODE button when CAL 1 appears.	CAL 1 and a flashing 0 are displayed.
4	Wait 10 seconds for the balance to stabilize, then press the ZERO button.	The display stops flashing and a solid 0 is displayed. In approximately 15 seconds, when this step is complete, a single weight or two alternating weights will begin flashing on the display.
5	Place one of the flashing weights in the center of the balance's weighing pan.	The display stops flashing the alternating weights and the selected weight is displayed.
6	Wait 10 seconds for the balance to stabilize, then press the ZERO button.	The display will momentarily blink, then the selected weight will continue to be displayed. In approximately 15 seconds, when this step is complete, the display will blank, flash "OK", then display the calibration weight including decimal places. The balance is now calibrated and in the normal weighing mode.
7	Remove the calibration weight.	The display returns to zeros.

CAL 2 - Linearity

Linearity is set in the balance's software at the factory during the manufacturing process. It requires a special set of weights that are not available commercially. When a CAL 1 function is performed the linearity is automatically reset as well. Unless the balance is damaged the linearity will not change. Therefore, CAL 2 should never be performed by the user.

Capacity Tracker

The capacity tracker located between the 0% and 100% at the bottom of the front panel display provides a graphic display of the used and unused portions of the weighing range. Each segment represents 10% of the balance's total capacity. As 10% of the balance's capacity is used the first segment will illuminate. As 20% of the balance's capacity is reached the second segment will light and so on.

Selectable Vibration Filters and Stability Indicator

Balances are equipped with three user-selectable vibration filters, which reduce fluctuating readings in varying weighing conditions. The balance was delivered to you set in the high filtering mode (Fil HI). This is the most aggressive filtering mode. Normal filtering (Fil nor) and low filtering (Fil Lo) can be selected for quieter conditions and faster response.

The stability indicator, OK, is illuminated when the variance of the readings are below the preset stability parameters as selected by the user. The stability indicator is useful in determining the stability of the weighing environment. In normal weighing the OK stability indicator should come on within five seconds after the sample has been placed on the pan and the windscreen is closed. If the stability indicator does not come on or takes a very long time this indicates it is too noisy of an environment for that level. Try improving the environment or raise the filter level To enter the selection mode proceed as follows: To exit the selection mode and return to normal operation, turn the balance off and then back on again at any time.

To enter the filter selection mode, proceed as follows:

	User Action	Balance Response
1	Hold the MODE button down while pressing the ON/OFF button.	OK and the current filter, Fil nor (filtering normal), Fil Lo (filtering low), or Fil HI (filtering high) are displayed.
2	Press the SEND button until the desired vibration filter is displayed.	Displays selected filter.
3	Press the RANGE/FUNCTION button.	**SAVEd** is displayed followed by returning to normal operation.

To exit the selection mode and return to normal operation, turn the balance off and then back on again at any time.

ZSP-150-F Rear Panel

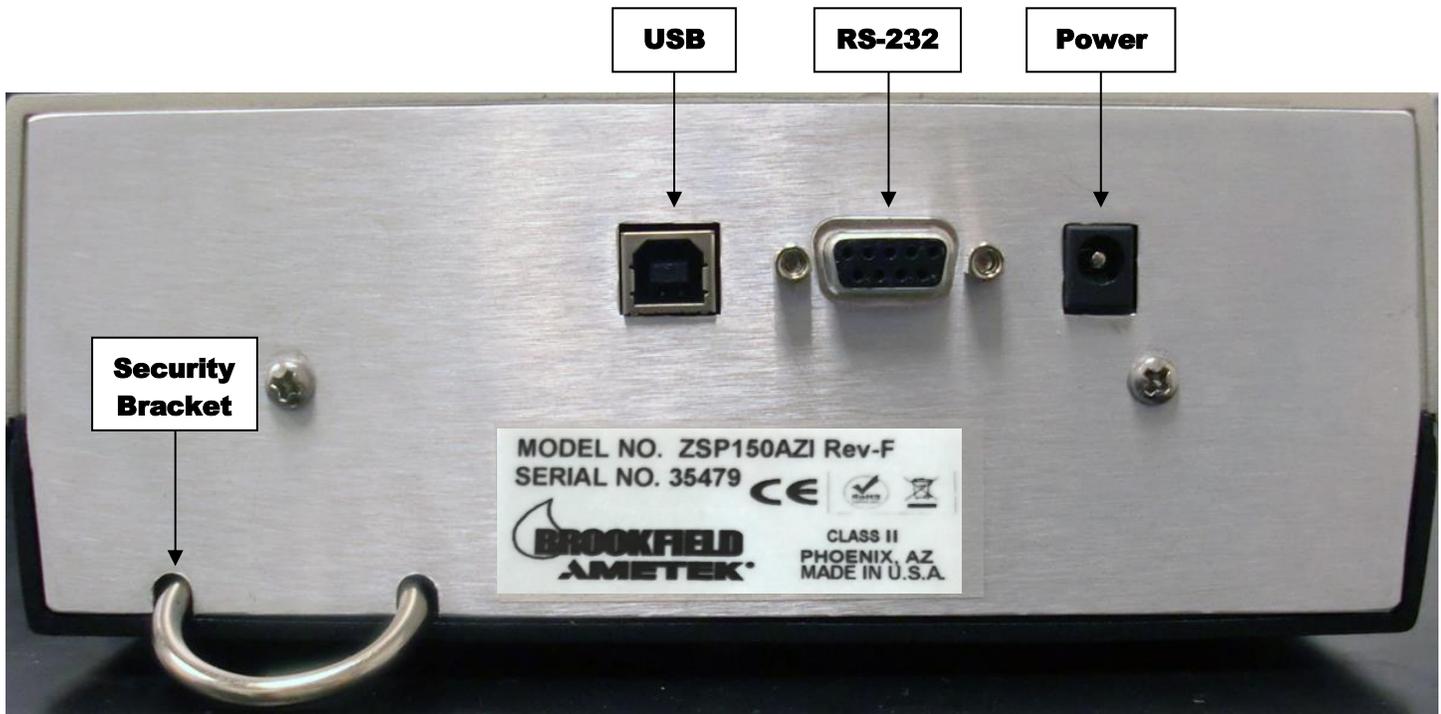The rear panel of the ZSP-150-F provides the power connector, an RS-232 connector, a USB connector and a security bracket. The security bracket may be used to provide a convenient method of securing the balance.

ZSP-150-F Rear Panel

RS-232 Front Panel Configuration

The RS-232 Configuration Mode allows changes to the baud rate, front panel control, software protocol, parity and auto send parameters. The balance is preconfigured at AMETEK Brookfield to communicate with the Computrac® Vapor Pro® moisture analyzers.

Any changes to the recommended configuration will affect communication with the Vapor Pro® / Vapor Pro® Rx or Vapor Pro® XL.

It is not necessary to follow the entire configuration procedure on the next page if only one parameter is to be changed. Follow steps 1 and 2, and then use the MODE button to cycle through the different parameters. When the parameter to be changed is displayed, toggle the setting using the SEND button until the desired setting is displayed. Save the setting using the RANGE / FUNCTION button. The balance will confirm by displaying "SAVEd" and then return to normal operation.

To enter RS-232 configuration mode, proceed as follows:

	Procedure	Display Reading
1	Hold the SEND button down while pressing the ON/OFF button	The current baud rate is displayed
2	Press the SEND button until br 9600 is displayed.	**br 9600**
3	Press the MODE button to move to the next parameter: PARITY	The current parity setting, PA EVEn, PA odd or PA none is displayed.
4	Press the SEND button until PA none is displayed.	**PA none**
5	Press the MODE button to move to the next parameter: AUTO SEND	The current auto send setting, AS OFF or AS on is displayed.
6	Press the SEND button until AS ON is displayed.	**AS ON**
7	Press the MODE button to move to the next parameter: CONTINUOUS SEND.	The current continuous send setting, CS OFF or CS on is displayed.
8	Press the SEND button until CS OFF is displayed.	**CS OFF**
9	Press the MODE button to move to the next parameter: SEND WHEN STABLE (SS).	The current send when stable setting, SS OFF or SS on is displayed.
10	Press the SEND button until SS OFF is displayed.	**SS OFF**
11	Press the MODE button to move to the next parameter: DISPLAY BLANKING.	The current display blanking setting, bL on or bL OFF is displayed.
12	Press the SEND button until bL OFF is displayed.	**bL OFF**
13	Press the RANGE / FUNCTION button.	**SAVEd** is displayed followed by returning to normal operation.

Changing any of these settings from the factory presets is NOT recommended, and will affect communication with the Computrac® Vapor Pro® moisture analyzers.

If any of the preset values are changed, use the above instructions to restore the balance's ability to communicate with the Computrac® Vapor Pro® by resetting the values to the preset defaults listed.

Verify the balance's ability to communicate with the Vapor Pro® / Vapor Pro® Rx as detailed in **Connecting the ZSP-150-F to the Vapor Pro®** on page **7**.

> **Settings Summary:**
> **br   9600**
> **PA   NONE**
> **AS   ON**
> **CS   OFF**
> **SS   OFF**
> **bL   OFF**

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
The display is blank	Balance not turned on	Press ON/OFF button
	Power cable not plugged in	Plug in power cable
	No power from AC outlet	Turn on circuit breaker or change AC outlets
OL appears on display	Maximum capacity exceeded	Reduce container weight
		Weigh sample in smaller increments
UL appears on display	Pan is not in place	Ensure pan is positioned properly
	Balance is out of range	Press ZERO button
Display is unstable	Drafts/air currents present	Install windscreen or relocate balance
	Vibrations present	Isolate or relocate balance
Weight readings are incorrect	Balance is out of calibration	Re-calibrate balance
	Balance is not level	Level balance
	Balance was not re-zeroed	Press ZERO before weighing
	Unit of weight set incorrectly	Select desired weighing unit (p. 9)
	Sample touching windscreen	Reposition sample
Display stays in turn-on sequence	Sub-pan and/or weighing pan not in place	Place pan(s) on balance
	Excessive draft or vibration	Isolate or relocate balance
	Power supply connected to wall outlet before balance	Unplug from wall outlet, wait 5 seconds, re-plug into wall outlet.
Partially lit display, "weird"/"garbage" characters on the display	"Live" cord plugged into balance	Unplug from wall outlet, wait 5 seconds, re-plug into wall outlet.

ZSP-150-F Specifications

Weighing Mode	Single Range
Capacity	150 g
Readability	0.001 g
Tare Range	0-150 g
Repeatability (Standard Deviation)	0.001 g
Linearity	±0.0015 g
Stabilization Time	User Selectable
Weighing Speed	Adaptive
Update Interval	200 ms
Data Interface	RS-232 bidirectional interface is standard. Baud rates are 4800, 9600 and 19,200
Pan Size	Circular 4.5 inch diameter
Operating Temperature	5 °C to 40 °C
Relative Humidity	80% for temperatures up to 31 °C decreasing linearly to 50% at 40 °C
Power Supply	Automatic switching 115/230 Volts AC, 50/60 Hz ± 10%
Windscreen	Circular 6 inch diameter x 3.5 inches high
Housing (W x D x H)	7.5" x 11.25" x 3.25"
Weight	≈ 9.5 lbs

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Shielded interconnect cables and shielded power cords must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device.

Changes or modifications not expressly approved by AMETEK Brookfield could void the user's authority to operate the equipment.

Limited Warranty

This AMETEK Brookfield Electronic Balance and its accessories are warranted against defects in materials and workmanship for one (1) year from the date of delivery. During the warranty period, AMETEK Brookfield will repair, or, at its option, replace at no charge, components that prove to be defective. The equipment must be returned, shipping prepaid, to AMETEK Brookfield's product service facility. This limited warranty does not apply if the equipment is damaged by accident or misuse or as a result of service or modification by other than an AMETEK Brookfield service facility. The foregoing warranty is in lieu of all other warranties expressed or implied including but not limited to any implied warranty of merchantability, fitness, or adequacy for any particular purpose or use. AMETEK Brookfield shall not be liable for any special, incidental or consequential damages whether in contract, tort or otherwise.

Extended Warranty

Extended warranty coverage can be purchased in a one, two or three year term at the time of balance purchase. Details are included on a separate information sheet accompanying the balance or by calling AMETEK Brookfield at 1-800-528-7411.

Returned Goods Policy

Should it become necessary to return any item to AMETEK Brookfield for any reason, please contact our Customer Service Department at (800) 235-3360 or (602) 470-1414 to obtain a Return Materials Authorization (RMA) Number. When you call, please be ready to provide the serial number and a description of the problem. Frequently we can provide self-help information that will eliminate the need for returning the unit(s). You may also obtain an RMA Number by contacting Customer Service by e-mail at customerservice.computrac@ametek.com or through the AMETEK Brookfield Home Page at http://www.azic.com.

If equipment return is required, please pack the item in the original box and packing material. As an alternate, place equipment in a snug-fitting box, then pack that box in a larger box with at least four inches of packing material between the two boxes. AMETEK Brookfield does not assume responsibility for under-packed items.

Please include the RMA# and the name and phone number of the person we should contact regarding repair question(s).

Balance Kit Contents and Part Numbers

The ZSP-150-F Electronic Balance is available from AMETEK Brookfield as two different part numbers, depending on your local line voltage, with contents as described below.

PART #		ITEM DESCRIPTION
Y990-0082		**External Balance Kit, 110V/220V**
	Kit Contents:	
	200-0069	Null Modem Cable
	690-0024	100g Weight, NIST Class F or ASTM Class 5
	700-0102	Manual, ZSP-150 External Balance (this manual)
	990-0213	ZSP-150-F External Balance

	Procedure	Display Reading
1	Press the RANGE/FUNCTION button.	Display cycles repeatedly through PCS, HI-OK-LO, CAL1, CAL2, *T*, and %.
2	Press the MODE button while PCS appears on the display,	PCS and 0 flash. This is a prompt to zero the balance with the container you will be using to weigh the initial sample.
3	Place the empty container on the pan, wait 10 seconds, then press the ZERO button.	PCS and 10 flash. This is a prompt to place 10 pieces in the container and press zero.
4	Place 10 pieces in the container, wait 10 seconds, then press the ZERO button.	PCS continues to flash and OK appears on the display while a stable weight is obtained. Then 10.000, or something very close to it appears on the display. The number of decimal places depends on the weight. PCS continues to flash. This prompts you that you may now increase the size of the sample if you wish. The decimal places are an aid. When adding more samples, if the decimal part approaches .5 you cannot be sure of the exact count.
5	If you need a larger sample, add pieces (the balance will count them) until the decimal part is near 0.7 or 0.3. Then press the ZERO button.	The balance will round to the nearest whole number but still show the decimal places. This step may be repeated as many times as you wish.
6	When you are satisfied the sample is large enough, press the ZERO button once again.	The balance rounds to the nearest whole number, the decimal places disappear, and PCS lights steadily.
7	When you wish to count something else, press the MODE button.	You are now back at step 2 with a flashing PCS and 0.
8	If you want to exit the counting mode, press the MODE button again.	You are now in the weighing mode you used just before selecting pieces.

The following procedure checks the weight of individual parts against user-programmed upper and lower weight limits.

	Procedure	Display Reading
1	Press the RANGE/FUNCTION button.	Display cycles repeatedly through PCS, HI-OK-LO, CAL1, CAL2, *T* and %.
2	Press the MODE button when HI-OK-LO appears on the display.	HI, LO and O flash.
3	Press the ZERO button.	HI flashes and zeros are displayed.
4	Place weight on pan that represents the upper limit of the acceptable weight span.	HI flashes and weight is displayed.
5	Press the ZERO button.	LO flashes and upper limit weight is displayed.
6	Remove upper limit weight and place weight on the pan that represents the lower limit.	LO flashes and weight is displayed.
7	Press the ZERO button.	HI-OK-LO briefly appears then OK and the low limit weight are displayed.
8	Remove low limit weight.	LO appears and zeros are displayed.

The balance is now ready to check the weight of parts. The balance displays OK along with the weight of the part if the part is within the selected limits. If the part is too heavy, HI and the weight are displayed. If the part is too light, LO and the weight are displayed. The limits are stored until the balance is turned off. To exit weight checking, press the MODE button and the balance will return to normal operation.

Note: At any time during the *T* procedure you can reach the final reading more quickly by pressing the RANGE/FUNCTION button. This resets the time averaging and allows the balance to reach the final weight faster.

	Procedure	Display Reading
1	Press the RANGE/FUNCTION button.	Display cycles repeatedly through PCS, HI-OK-LO, CAL 1, CAL2, *T,* and %.
2	Press the MODE button when *T* appears on the display.	*T* appears in the display and the balance is now in the time averaging weighing mode.
3	Place a container/cage on the pan.	*T* appears in the display as well as a slowly increasing weight of the container/cage.
4	When the balance has stabilized, press the ZERO button to zero out the container/cage weight.	*T* appears in the display as well as zeros.
5	Remove the container/cage and place the sample/animal in the container/cage.	*T* and a slowly decreasing negative weight are displayed.
6	Replace the container/cage with the enclosed sample/animal on the weighing pan.	After the sample/caged animal is placed on the pan, the weight reading will slowly stop decreasing and then slowly start increasing as the weight reading is averaged over time. When the weight stops drifting upward, you have reached the final time averaged weight reading.
7	If you want to reach the final time averaged weight reading more quickly, press the RANGE/FUNCTION button This resets the time averaging mode.	The final time averaged weight reading is reached more quickly.
8	If you want to exit the time averaging weighing mode, press the MODE button.	The balance returns to normal operation.

Appendix D - Percent Weighing (%)

	Procedure	Display Reading
1	Place an empty container on the weighing pan and press the ZERO button.	Zeros are displayed.
2	Place the sample which represents 100% in the weighing container.	Display indicates the weight of the sample in the unit of measure you have selected.
3	Press the RANGE/FUNCTION button.	Display cycles repeatedly through PCS, HI-OK-LO, CAL1, CAL2, *T,* and %.
4	Press the MODE button when % appears on the display.	Display will indicate % and 100.00. This means that the weight on the pan now represents 100.00%. You are now in the percent weighing mode with all weight readings displayed as a percent of the weight of the sample used in Step 2.
5	If you want to exit the percent weighing mode, press the MODE button.	The balance returns to normal operation.

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AMETEK Brookfield
Zeta Series ZSP-150-F Electronic Balance User's Manual
Part Number: 700-0102

If you have any questions regarding the operation of this instrument, please call our toll-free number (800) 528-7411 or (602) 470-1414. You may also send a fax to (602) 281-1745.

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