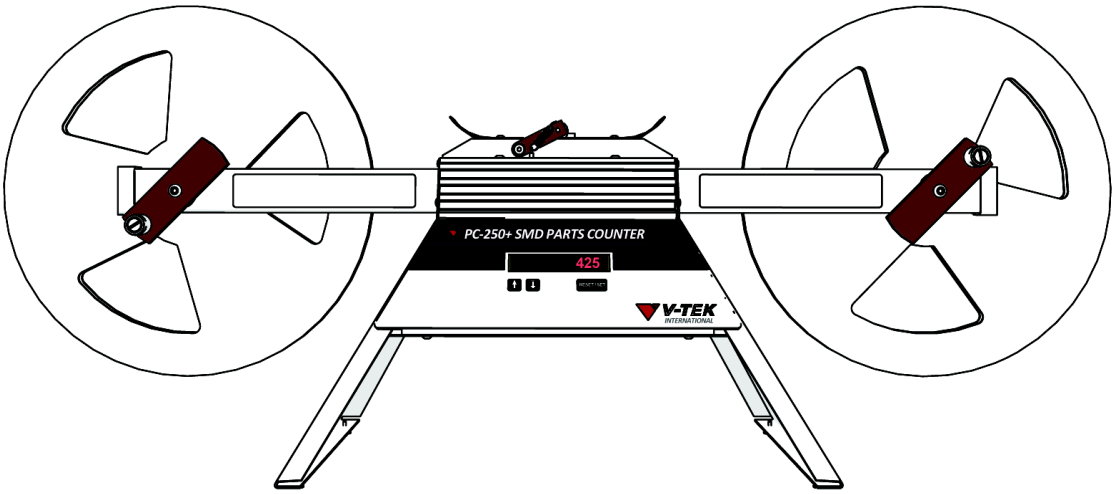


PC-250+

SMD Taped Parts Counter
Operator's Manual

V-TEK, Inc.
751 Summit Avenue
Mankato, MN 56001
(P) 507-387-2039
www.vtekusa.com

User's Guide # 61567842

EC Declaration of Conformity

Manufacturers Name: V-TEK Inc.
Manufacturers' Address: 751 Summit Avenue
Mankato, MN 56001 USA

Declare that the machinery described below complies with applicable health and safety requirements of Part 1 of Annex 1 of the Machinery Directive 2006/42/EC and EMC Directive 2004/108/EC. Confidential technical documentation has been compiled in accordance with Part A of Annex VII of Machinery Directive 2006/42/EC and is available to European national authorities on written request only. If a request is received documentation will be delivered on a CD or by post.

Description: Taping & Inspection Machines.
Model Number: PC 250+
Specification: Parts Counter
Serial Number/s: 201XXXXXXX

The following standards have either been referred to or been complied with in part or in full as relevant:

EN ISO 12100:2010	Safety of machinery	- Safety of machinery - General principles for design - Risk assessment and risk reduction
EN ISO 13849-1:2008	Safety of machinery	- Safety Related Parts of Control Systems – Part 1 General Principals for Design
EN ISO 13732-1:2008	Safety of machinery	- Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces
EN 614-1:2006+A1:2009	Safety of machinery	- Ergonomic design principles - Part 1: Terminology and general principles
EN 614-2:2000+A1:2008	Safety of machinery	- Ergonomic design principles - Part 2: Interactions between the design of machinery and work tasks
EN 953:1997+A1:2009	Machinery Safety	- General requirements for the design and construction of guards
EN 13850: 2008	Safety of machinery	- Emergency-stop equipment, Principals for Design
EN 60204-1:2006/A1:2009	Safety of machinery	- Electrical Equipment of Machines
EN ISO 11202/A1 1997	Acoustics	- Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions.
EN 61000-6-3:2007	EMC	- Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-1: 2007	EMC	- Generic standards - Immunity for residential, commercial and light-industrial environments

Full Name of responsible person and place of signing

Christina Hogan

Place V-TEK Inc. **Position** Vice President

Signature **Date** 02/03/2012

EC REP
QNET BV
Hommerterweg 286
6436 AM Amstenrade
The Netherlands

Preface

The PC-250+ SMD Taped Parts Counter is built with the following standard features:

- Accepts 7 inch and 13 inch reel diameters with standard equipment reel widths from 8 to 56 mm
- Bidirectional counting (will subtract count when the direction of tape travel is reversed)
- Accurate counting of surface mount devices in embossed or punched carrier tape, 2 mm pitch or larger
- Large stable base allows the unit to be used without securing it to the worktable surface
- All metal construction and an attachment point provide ESD protection for sensitive components
- Makes an ideal tape inspection platform in addition to its counting function
- Will not kink or bend tape
- Equipped with battery backup for operation away from AC power outlets

This User's Guide describes how to setup and operate the PC-250+ SMD Taped Parts Counter. It should be read and thoroughly understood before operating the machine.

Theory of Operation

The intended use of the PC-250+ SMD Taped Parts Counter is to count taped reels of individually sealed components. Use of this equipment in any other way is not recommended.

The operator loads a reel of taped parts to be counted on the right *Reel Spindle*. The tape is then fed between the *Idler Wheel* and the *Sprocket Wheel* and under the right side of the *Tape Guide*, ensuring the sprocket holes of the carrier tape are engaged with the *Sprocket Wheel* teeth. The *Tape Guide* is then adjusted to accommodate the tape width. The tape is positioned so the leading edge of the first component lines up with the index mark on the *Tape Guide*.

Once the tape is loaded, the tape pitch is determined and entered on the LED screen, resetting the count to zero.

The operator then loads an empty reel on the left *Take-up Spindle*. The tape is advanced by manually turning the left crank (Take-up side crank) until the tape can be attached to the *Take-up Reel Hub*.

The operator continues to advance the tape until the last component reaches the index mark on the *Tape Guide*. The number of parts counted is displayed on the *LED Display*. When the entire reel has been counted, the carrier tape is rewound onto the original reel by manually turning the right crank (Feed side crank).

Machine Details

Operating Temperature

0 Degrees Celsius to + 60 Degrees Celsius

Although all of the components used on the machine will withstand the temperature range of 0 degrees Celsius to +60 degrees Celsius, such temperature may decrease the life of some of the components. The recommended rating is 0 degrees Celsius to +50 degrees Celsius.

Humidity

5% to 90% non-condensing

Physical Specifications

Height: 12 inches (30 cm)

Width: 30 inches (76 cm)

Depth: 16 inches (40 cm)

Weight: 14.5 pounds (6.4 kg)

Power Required

- 120/230 VAC, 50-60 Hz
- Four AA batteries allow portability

Intended Use

The intended use of the PC-250+ SMD Taped Parts Counter is to count taped reels of individually sealed components. Use of this equipment in any other way is not recommended.

Operating Environment

The PC-250+ is designed to be operated in a temperature controlled, light, industrial setting. The machine should be installed on a flat, dry, stable surface in a well lit area (ambient lighting of 200 to 300 Lux (Lumens/m2).

The recommended climate is between 5 - 90% non-condensing humidity with a room temperature between 0 - 50 degrees Celsius.

> **Note**: Although all of the components used on the machine will withstand the temperature range of 0 to 60 degrees Celsius, such temperature may decrease the life of some of the components.

The intended electrical environment is Pollution Degree 2 and Over Voltage Category II.

Misuse

The user is protected from moving parts and exposure to objects being ejected under pressure by metal enclosures. The PC-250+ should never be operated with these enclosures removed.

Safety Precautions

General Precautions

Only qualified personnel with the proper technical training, experience working on this type of equipment, and awareness of the possible hazards should perform maintenance on the PC-250+.

The PC-250+ should be installed on a level and stable surface before any operation or maintenance is performed.

Observe the following safety precautions when working with the PC-250+.

Maintenance
Always disconnect the power source from the machine before removing access panels to perform any maintenance required. Please refer to Chapter 1 of this manual before performing maintenance on the machine.

ACReceptacle
Connect the power cord to the machine before plugging it into an outlet.

Contact Information

V-TEK, Inc.
751 Summit Ave
Mankato, MN 56001
TEL: (507) 387-2039
website: http://www.vtekusa.com

For customer service, please refer to the Customer Service Contact Sheet at the back of this manual.

PC-250+

Table of Contents

Chapter 1: Operator's Instructions

Contents

Overview of the PC-250+

Front View

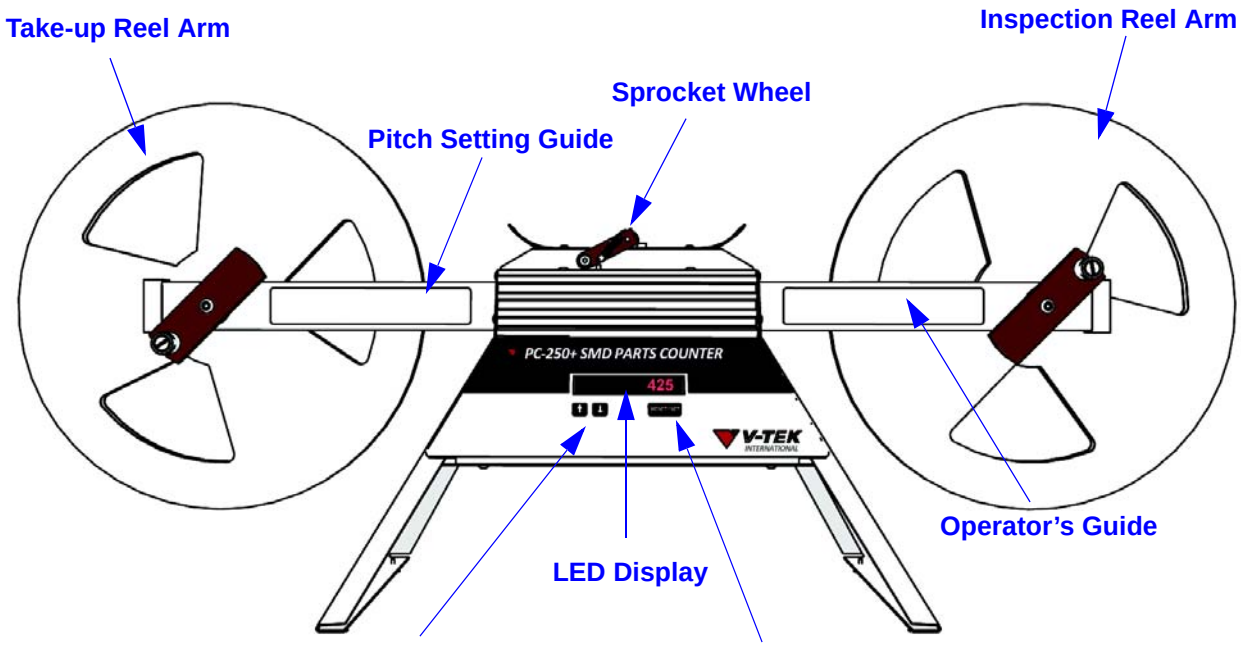


Figure 1.1

Back View

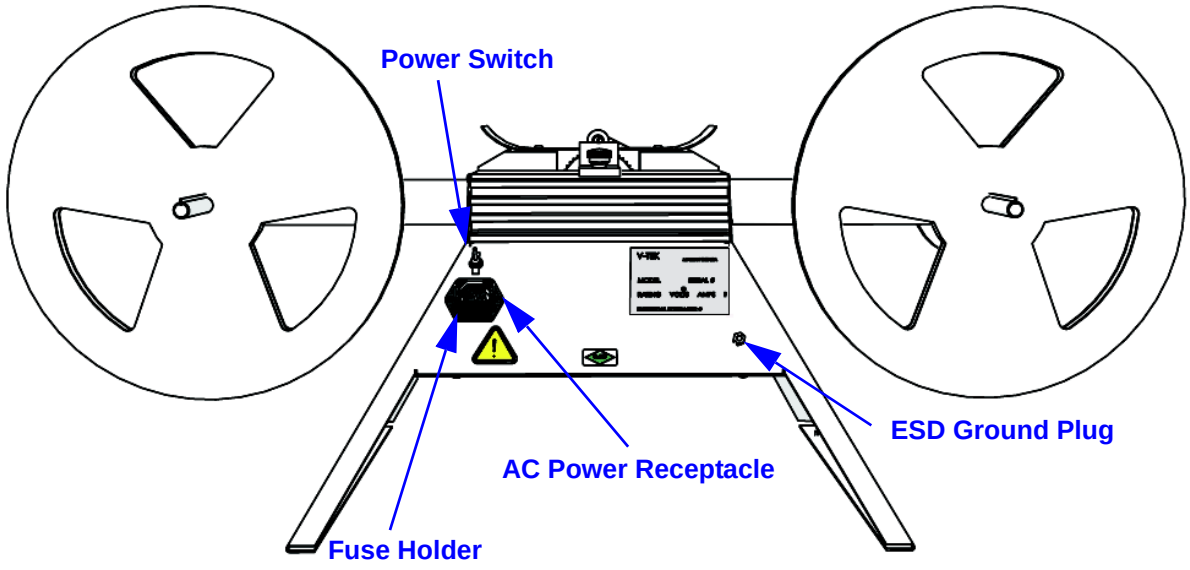
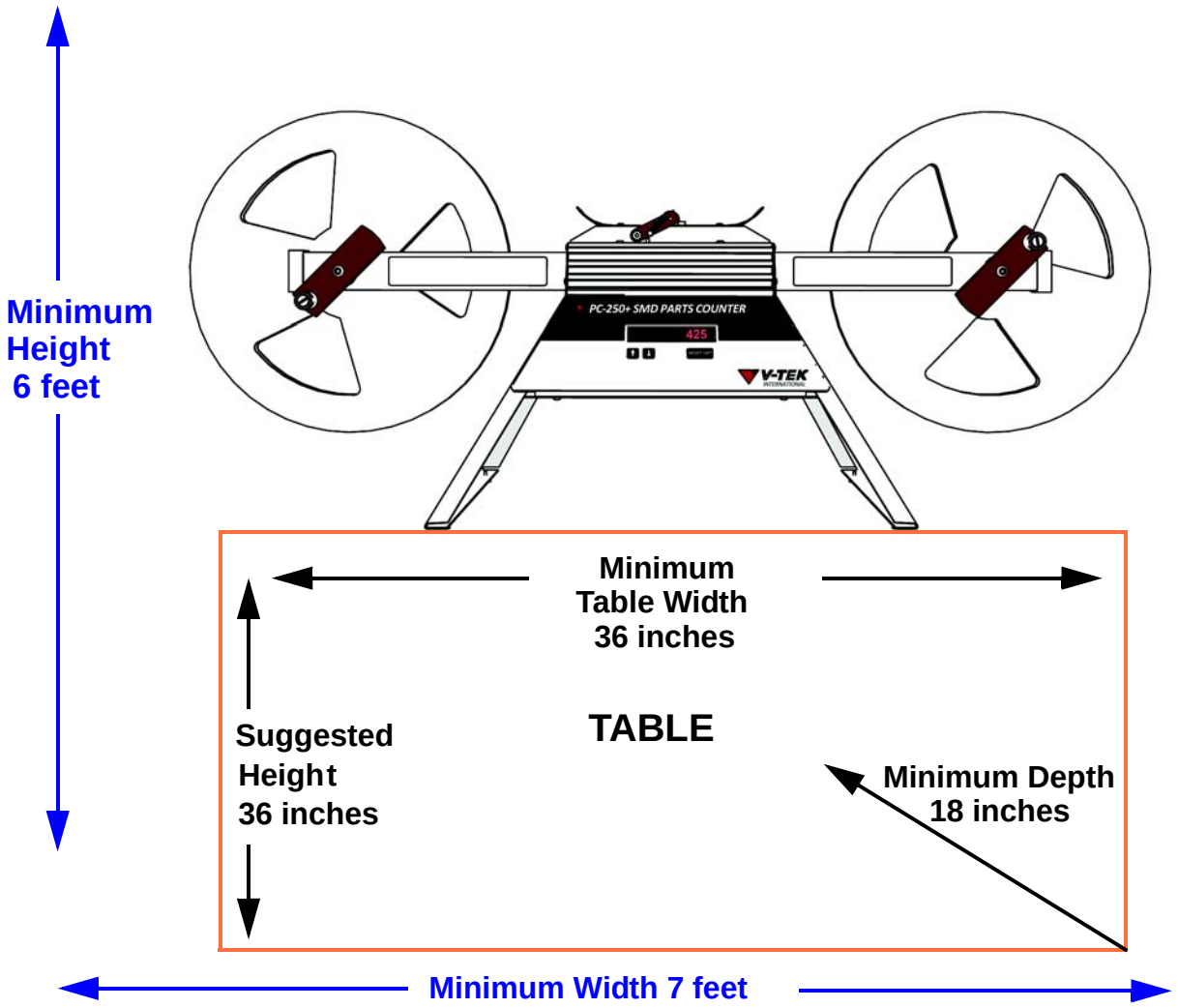


Figure 1.2

Preparing the Work Area

The PC-250+ is a table-top machine which needs to be placed on a flat, stable surface in a well lit area that is a minimum of 6' high x 7' wide x 4'deep (2m x 2.2m x 1.3m). When positioning the PC-250+, choose an area that is not located below overhead gantries, walkways or power lines to ensure objects or liquids cannot be dropped on the machine from overhead.



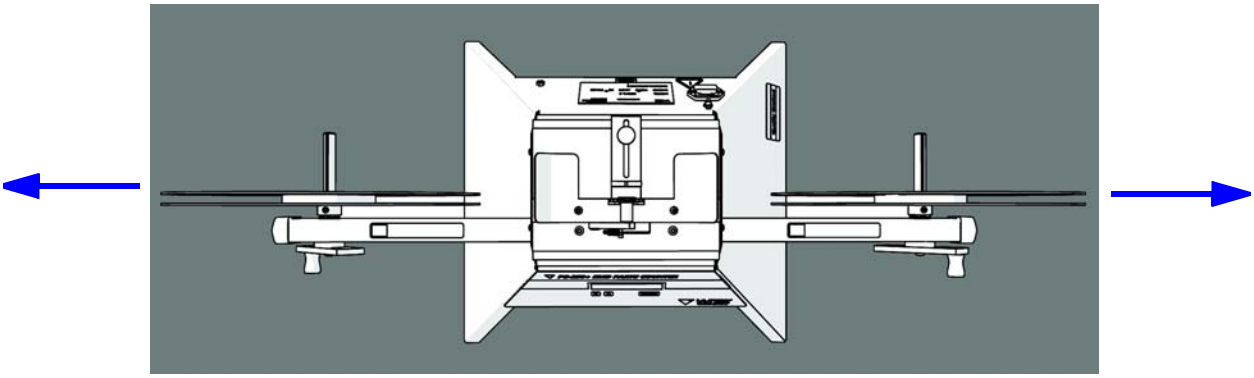
Choose a table that is at least 36" wide by 18" deep to provide sufficient space for the assembled machine when it is fully loaded with a variety of tape reel sizes.

Ideally the table height should be adjustable so the machine height can be easily adjusted to suit operators of varying heights. The objective is to position the PC-250+ controls so they are easily accessible for operation and maintenance. The suggested level is 36" (900 mm) above the floor, but this may vary from one operator to another.

The table's working surface should have a slope of no more than 5 degrees and be capable of supporting a load of 30 pounds (14 kg).

When loading, unloading or running the PC-250+, the operator should stand in front of the machine to assure easy access. This position also allows the operator to view all parts of the PC-250+ while it is in operation.

Allow at least 24" clearance at the front and sides of the machine for easy access and operation. (Pictured in the overhead view below.)



Allow 24 inches clearance on front and sides.

The PC-250+ will also require access to a 120/230 VAC, 50-60 Hz power supply. Locate the machine so electrical power cables can be routed away from areas where personnel are expected to move. It is recommended that cables be routed overhead or underground. If cables must be routed over the floor, cover them with rubber ramps.

Getting Started

Initial Power-up

Power is applied to the PC-250+ when an AC power cord to plugged into the AC power receptacle found on the back panel of the parts counter and the power switch is turned on. The PC-250+ is grounded through the AC power cord. AC power is fused using (2) 5mm x 20mm 1 amp fuses installed in the holder located directly beneath the AC power plug.

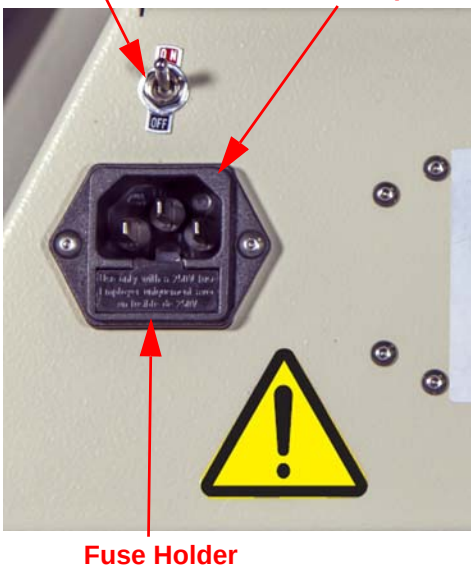


Figure 1.3

Battery Power

The PC-250+ is also equipped with battery backup power so that the counter can be operated away from an AC outlet. The battery access panel is located on the bottom panel of the counter. It required four standard AA batteries. The estimated length of the battery backup is forty-eight hours of continuous operation.

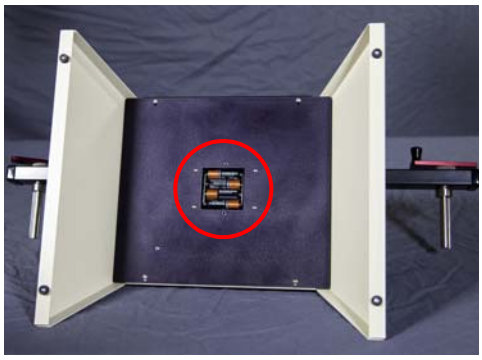


Figure 1.4

Pitch Setting Display

Each time the PC-250+ is powered up, the current counting pitch will be displayed for three seconds. Then the PC-250+ will display a count of zero. It is then ready to begin counting reels using the pitch that was displayed.

Operation

Determining the Carrier Tape Pitch

The pitch of a carrier tape is the distance from the center of one pocket to the center of the next pocket. Follow the steps below to determine the pitch.

1. Hold the free end of the carrier tape over one of the *Pitch Setting Guides* which are located on the counter's reel support arm. Position the center of the first pocket over the (0) mark.

2. Note which of the numbered lines appears at the center of the next pocket after the first. This number is the pitch value of the carrier tape.

3. If the pitch is different from the current pitch setting on the parts counter, enter the new pitch value by following the steps below. If the pitch setting does not need to be adjusted, proceed to the *Preparing to Count a Reel* section on the next page.

Figure 1.5

Setting the Counting Pitch of the PC-250+

1. Once the pitch of the carrier tape has been determined, press and hold the **RESET** button on the PC-250+. Release the button after two beeps have sounded.

2. The current pitch setting will be displayed on the *LED Display*. This value can be increased or decreased using the **UP** and **DOWN Arrow** buttons.

3. Once the desired pitch setting is reached, press the **RESET** button again to save the setting into the counter's memory. The PC-250+ will beep twice again to notify the operator that the new pitch setting was saved. The count will be reset to zero and the LED display will return to displaying the current parts count.

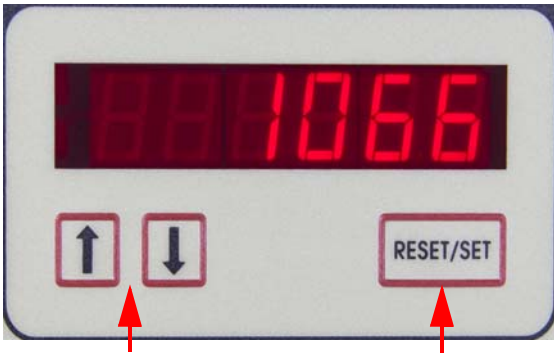


Figure 1.6

Preparing to Count a Reel

1. Loosen the adjustment knob on the tape adjuster guide and slide the tape adjuster guide back towards the rear of the counter to allow ample room for the width of the carrier tape.

2. Place an empty take-up reel onto the left reel spindle and the reel to be counted onto the right reel spindle.

3. Lift the idler wheel from the sprocket wheel. Then feed the carrier tape under the right side of the tape guide and engage the sprocket holes of the carrier tape with the teeth of the sprocket wheel. Replace the idler wheel to secure the carrier tape onto the sprocket wheel.

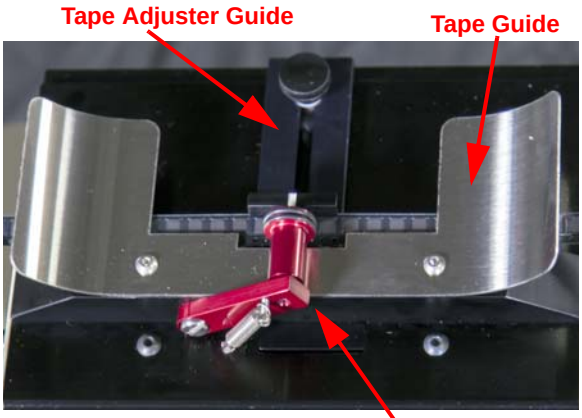


Figure 1.7

4. Once the carrier tape is positioned securely, slide the tape adjuster guide forwards until the edge of the carrier is in the groove of the tape guide but has enough play to move through the guide freely. Tighten the adjustment knob to secure the tape adjuster guide in place.

Counting a Reel

1. Position the tape with the leading edge of the first component lined up with the index mark on the top of the tape adjuster guide.

2. Press the RESET button on the front panel to zero the current count.

3. Advance the tape by turning the left (Take-up) crank until the leading end is far enough to reach the hub of the take-up reel and attach it.

4. Continue advancing the carrier tape through the counter onto the take-up reel until the last component reaches the index mark on the tape guide. The number of parts that have passed the index mark will be displayed on the LED display.

5. When finished with counting the reel, rewind the carrier tape back onto the original reel by turning the right (Feed Reel) crank.

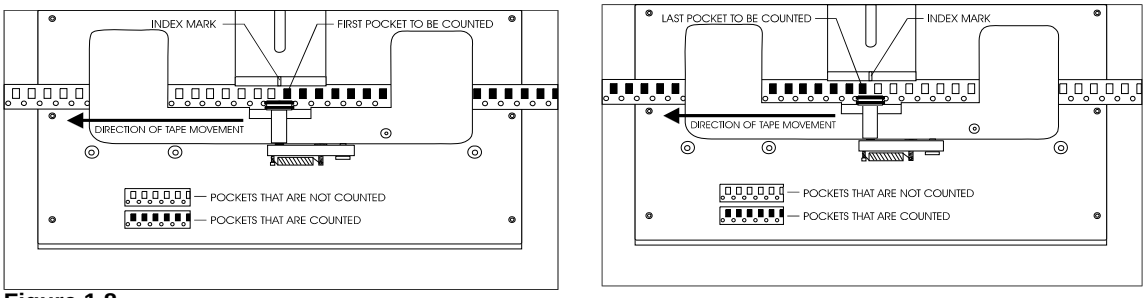


Figure 1.8

Counter Calibration Procedure

It is recommended that the PC-250+ be calibrated once a year.

Making Calibration Reels

Two reels of known quantity must be made to use as calibration standards. The recommended calibration standards are two reels of empty carrier tape that are 600 pockets in length. it is also recommended that two calibration reels with different pitch settings be prepared. Follow this procedure to make the calibration reels:

1. Mark one pocket of empty carrier tape about 36 inches in from the end.

2. Manually count 600 pockets, including the marked pocket, and then put a mark on the 600th pocket.

3. Have the count verifying manually by another person. Do not use the counter for verification.

4. Trim the tape off at about 36 inches past the second mark.

5. Wind the tape onto the reel and label the reel as a "Counter Calibration Reel of 600 Pockets."

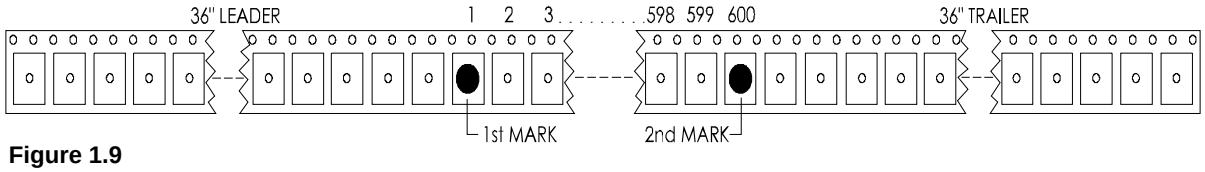


Figure 1.9

Count the Calibration Reels

Count both of the calibration reels that were made for calibration, using the same method as described in the Operation section of this chapter. Use the reference marks on the calibration reels as the start and stop points.

Certify Calibration

The counter module must display the exact value of the calibration standard for calibration to be successful. If calibration is successful, the counter should be marked with a calibration sticker in accordance with the policies of the company performing the calibration. This should apply to both calibration reels.

Errors

If the displayed value is incorrect, perform the calibration procedure again to make sure there was no error in the first procedure. If the value is still incorrect, manually recount the calibration standard to make sure there is no error in the value of the standard. If an error is found, perform the calibration procedure again. If the displayed value is still incorrect and no errors are found in the standard or the procedure, the counter must be repaired.

Optional Items

PC-250+ Extended Arms

The extender arms are an option for the PC-250+ Parts Counter. They are designed to accommodate bulk carrier tape reels up to 22 inches in diameter. It is a simple process to install the extended arms to the standard PC-250+. Follow this procedure to install the extended arms:

1. Remove the black rubber end caps from the ends of the standard PC-250+ reel support arms.

2. Loosen the bolt on the extender arm at the location marked by the arrow.

3. Attach the extender arm, making sure to line up the frames of the two arms and tighten both bolts securely.

4. Repeat this procedure for the other arm.

Pen Holder

The pen holder option for the PC-250+ is designed to hold a pen above the carrier tape to be used for marking the top surface of the cover tape.

There are two types of pens the pen holder is designed to use: the Pentel white marker with a fine tip (#10316) or a Pilot silver marker.

Follow this procedure to setup the pen holder for use:

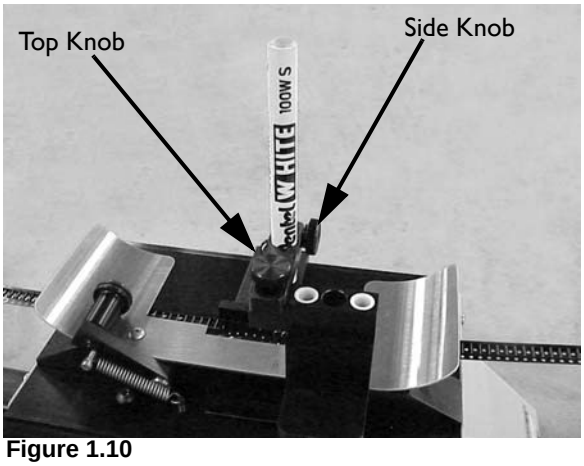


Figure 1.10

1. Place the pen into the pen holder. Turn the side knob to clamp the pen into place.

2. Adjust the height using the side knob so that when the pen holder is pushed down, the pen tip will touch the top surface of the cover tape. The top knob can be adjusted to move the pen in and out of the holder.

Maintenance Instructions

The PC-250+ is designed to require very little maintenance. The tape path and the area under the tape guide should be cleaned with a soft-bristled brush to remove accumulated dust and debris on an as needed basis. No other maintenance is required.

There are no internal parts that can be serviced by the customer/user.

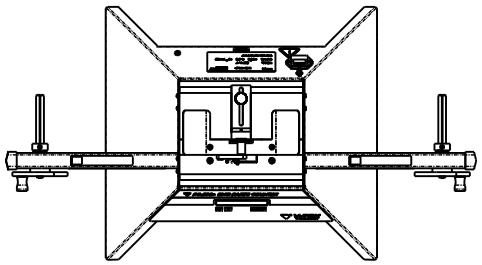
If any problems are encountered while using the PC-250+, contact your V-TEK service representative, referring to the Customer Service Contact sheet located at the back of this manual.

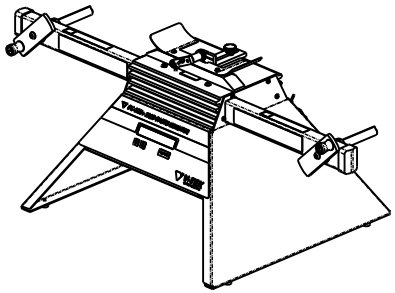
Spare Parts List

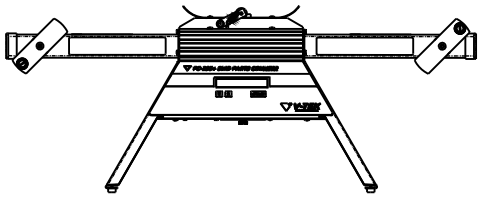
PC-250+

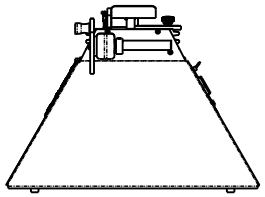
Part Number	Description	Quantity
102515	On/Off switch	1
103592	Power supply	1
104853	Miniature optical encoder	1
104856	Cable for optical encoder	1
105405	Firmware & chip	1
109092	Membrane Keypad	1
111169	Pitch Decal	2
150044	Circuit board (needs firmware)	1
250088	Counter crank key	2
261040	Counter tape guide	1
290605	**Drive Idler Assembly (Includes items below)**	
204054	Bearing	2
209011	Spring	1
212011	O-ring	2
234004	Shoulder screw 3/16x3/4	1
234010	Shoulder screw 1/4x1/8	1
250052	Idler wheel	1
250077	Idler arm	1
	Drive Sprocket Assembly	
204052	Bearing	2
207022	Spacer 1/4x.016	1
260971	Main shaft	1
260972	Drive sprocket 50 pin	1
	Tape Guide Assembly	
217005	Knob	1
250094	Tape adjuster base	1
261015	Tape adjuster guide	1

REVISIONS				
ECO #	REV.	DESCRIPTION	DATE	APPROVED
	A	RELEASED	12/12/2012	PVO
	B			
2799	C	REPLACE PART NUMBER 109056 WITH PART NUMBER 1009058	6/18/2014	RH
2841	D	ADD MISSING PARTS TO MODEL AND BOM. (2) PART NUMBER 207051 AND (2) PART NUMBER 238011.	12/17/2014	RH
2861	E	REMOVE PART NUMBER 103537 AND ADD PART NUMBER 103592	6/15/2015	RH
2918	F	REPLACE PARTS 104853, 260971 WITH 104856, 269285	12/6/2016	PVO
2937	G	REPLACE 109058 WITH 109092	5/10/2017	PVO
3016	H	REMOVED PART 111120	1/3/2018	PVO









UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES: .XXX ± 0.005
.XX ± 0.010
.X ± 0.015
ANGULAR: MACHINED ± 0.1°
BEND ± 0.5 °
SURFACE: 32

GENERAL NOTES:
- INTERPRET GEOMETRIC TOLERANCING PER ANSI Y14.5
- BREAK ALL SHARP EDGES .010 MAX UNLESS NOTED
- CHAMFER ALL HOLES .015 X .015 ±.010 UNLESS NOTED
- ALL MATERIALS, COATINGS, & CLEANING PROCESSES MUST RESULT IN RoHS COMPLIANT PART
- DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	RH	11/13/2014
ENG APPR.	PVO	~

V-TEK INTERNATIONAL / ROYCE INSTRUMENTS

TITLE:

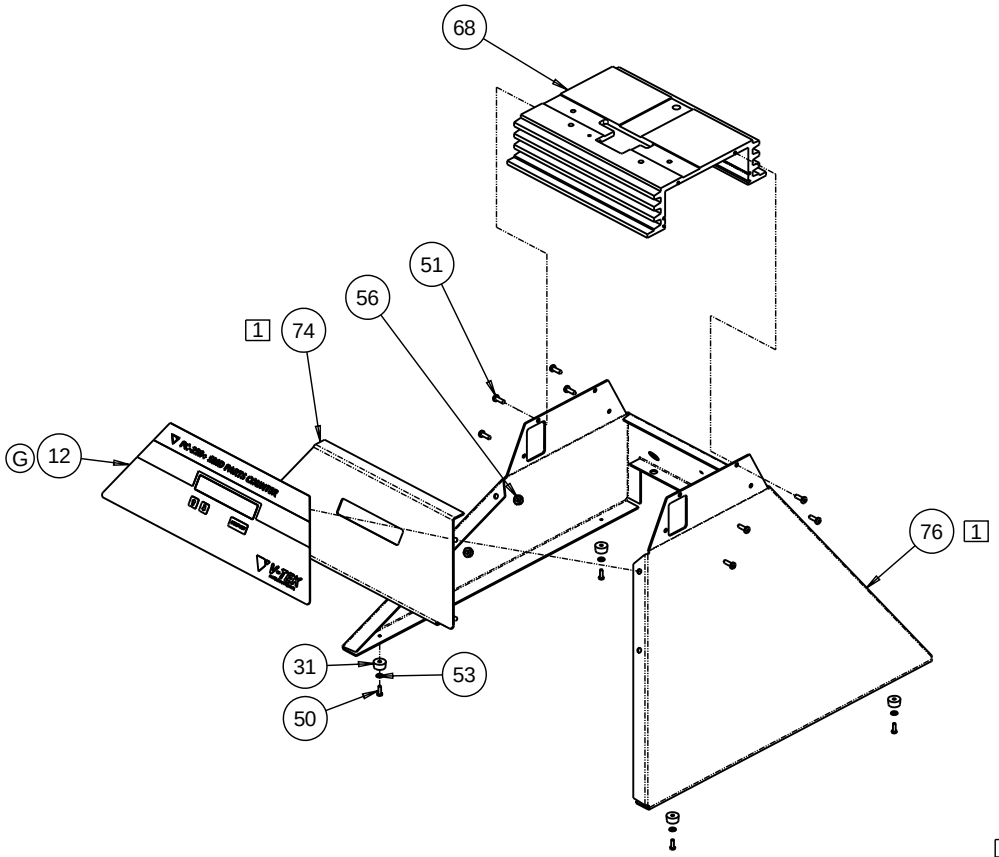
COUNTER PC250+

MATERIAL

FINISH

SIZE **B** | DWG. NO. EMEPC250+ | REV H

WEIGHT (lbs): 15.57



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
12	109092	MEMBRANE SWITCH PAD, PC250+	1
31	217210	RUBBER FOOT	4
50	236010	PPH TCS 4-40x3/8"	4
51	236016	PHILLIPS HEAD, TAPPING, 6 X 1/2 SS	8
53	238042	M3 SS FLAT WASHER	4
56	239053	#8-32 LOCK NUT	4
68	261011	BASEPLATE	1
74	261072	FRONT PANEL	1
76	261084	MAIN FRAME	1

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES: .XXX ± 0.005
.XX ± 0.010
.X ± 0.015
ANGULAR: MACHINED ± 0.1°
BEND ± 0.5 °
SURFACE: 63

GENERAL NOTES:
- INTERPRET GEOMETRIC TOLERANCING PER ANSI Y14.5
- BREAK ALL SHARP EDGES .010 MAX UNLESS NOTED
- CHAMFER ALL HOLES .015 X .015 ±.010 UNLESS NOTED
- ALL MATERIALS, COATINGS, & CLEANING PROCESSES MUST RESULT IN RoHS COMPLIANT PART
- DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	RH	11/13/2014
ENG APPR.	PVO	~

TITLE:

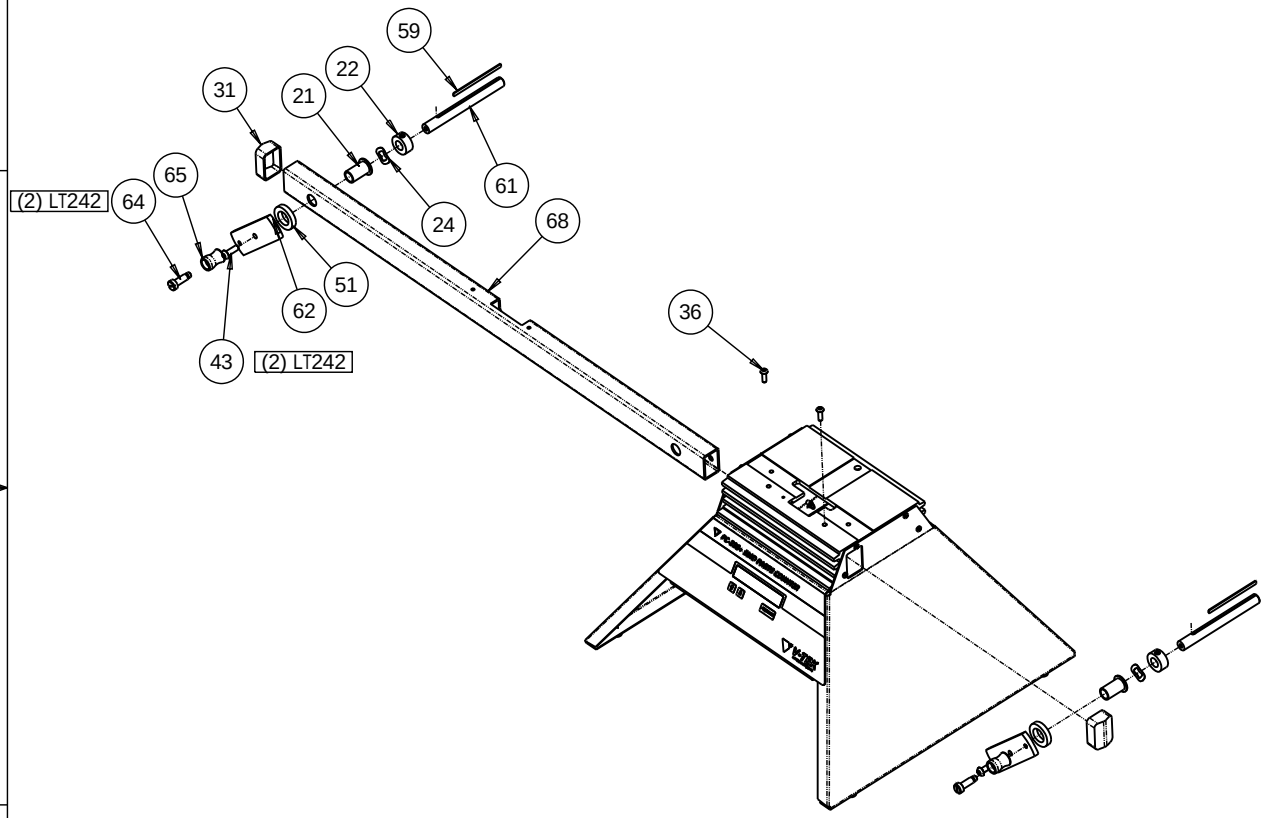
COUNTER PC250+

MATERIAL

FINISH

SIZE B | DWG. NO. EMEPC250+ | REV H

WEIGHT (lbs): 15.57



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
21	205015	BUSHING	2
22	206052	COLLAR 1/2X7/16	2
24	207051	SPACER (WAVY WASHER)	2
31	217301	END CAP RUBBER	2
36	222027	AS BHCS #10-32 x 5/8	2
43	223062	SS BHCS 1/4-20 x 3/4	2
51	238011	WASHER, FLAT FELT	2
59	250088	COUNTER CRANK KEY	2
61	250099	CRANK SHAFT	2
62	253348	PC-25 CRANK ARM	2
64	257627	SHOULDER BOLT	2
65	257628	KNOB	2
68	261012	REEL SUPPORT ARM	1

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES: .XXX ± 0.005
.XX ± 0.010
.X ± 0.015
ANGULAR: MACHINED ± 0.1°
BEND ± 0.5 °
SURFACE: 63

GENERAL NOTES:
- INTERPRET GEOMETRIC TOLERANCING PER ANSI Y14.5
- BREAK ALL SHARP EDGES .010 MAX UNLESS NOTED
- CHAMFER ALL HOLES .015 X .015 ±.010 UNLESS NOTED
- ALL MATERIALS, COATINGS, & CLEANING PROCESSES MUST RESULT IN RoHS COMPLIANT PART
- DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	RH	11/13/2014
ENG APPR.	PVO	~

TITLE:

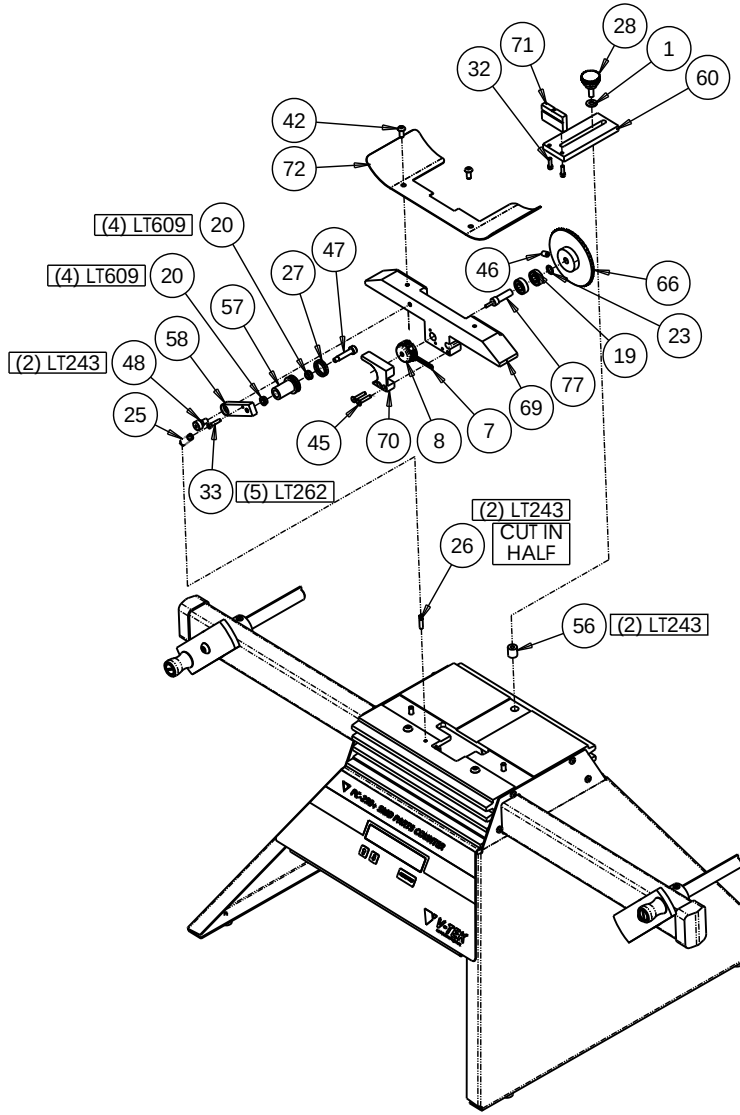
COUNTER PC250+

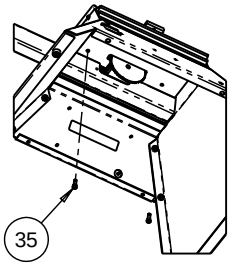
MATERIAL

FINISH

SIZE **B** | DWG. NO. EMEPC250+ | REV H

WEIGHT (lbs): 15.57





ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	14282	NYLON SPACER .203 ID .437 OD .031	1
7	104854	CABLE FOR OPTICAL KIT ENCODE	1
8	104856	ENCODER OPTICAL MINIATURE	1
19	204052	BEARING	2
20	204054	BEARING	2
23	207022	SPACER 1/4 X .016	1
25	209011	SPRING, STAINLESS STEEL	1
26	209101	SPRING ANCHOR	1
27	212011	ORING 015 NEOPRENE	2
28	217005	KNOB, 10-32 MALE STUD	1
32	221002	SS SHCS #4-40 x 3/8	2
33	221003	SS SHCS #4-40 x 1/2	1
35	221027	SS SHCS #8-32 x 1/2	2
42	223034	SS BHCS #8-32 x 3/8	2
45	224001	AS FHCS #4-40 x 5/8	2
46	230071	10-24 X 5/16 STEEL SET SCREW	1
47	234004	SHOULDER SCREW 3/16 X 3/4 SS	1
48	234010	SHOULDER SCREW SS 1/4 X 1/8	1
56	240007	THREADED INSERT 1-32ID, 3/8-16	1
57	250052	IDLER WHEEL	1
58	250077	PC-25 IDLER ARM	1
60	250094	TAPE ADJUSTER BASE	1
66	260972	DRIVE SPROCKET (50 PIN)	1
69	261013	COUNTER GUIDE BLOCK	1
70	261014	ENCODER GUARD	1
71	261015	TAPE ADJUSTER GUIDE	1
72	261040	COUNTER TAPE GUIDE	1
77	269285	MAIN SHAFT	1

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES: .XXX ± 0.005
.XX ± 0.010
.X ± 0.015
ANGULAR: MACHINED ± 0.1°
BEND ± 0.5 °
SURFACE: 63

GENERAL NOTES:
- INTERPRET GEOMETRIC TOLERANCING PER ANSI Y14.5
- BREAK ALL SHARP EDGES .010 MAX UNLESS NOTED
- CHAMFER ALL HOLES .015 X .015 ±.010 UNLESS NOTED
- ALL MATERIALS, COATINGS, & CLEANING PROCESSES MUST RESULT IN RoHS COMPLIANT PART
- DO NOT SCALE DRAWING

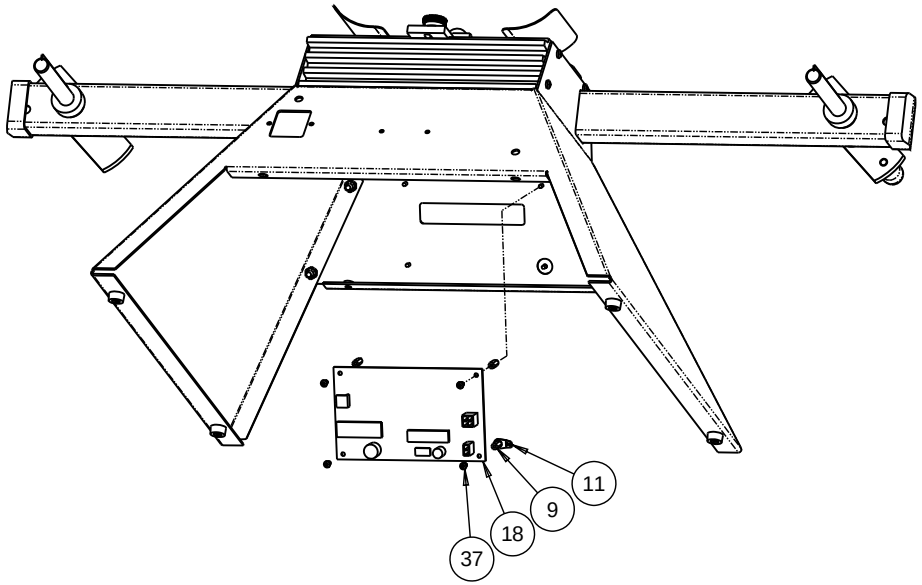
	NAME	DATE
DRAWN	RH	11/13/2014
ENG APPR.	PVO	~

V-TEK INTERNATIONAL ROYCE INSTRUMENTS

TITLE:

COUNTER PC250+

MATERIAL	SIZE	DWG. NO.	REV
FINISH	B	EMEPC250+	H
	WEIGHT (lbs): 15.57		SHEET 4 OF 9



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
9	106043	STANDOFF 4-40 1/2"	4
11	107001	SOLDER LUG	1
18	150044	CIRC BRD COMPLETE	1
37	223008	SS BHCS #4-40 x 1/4	4

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TITLE:

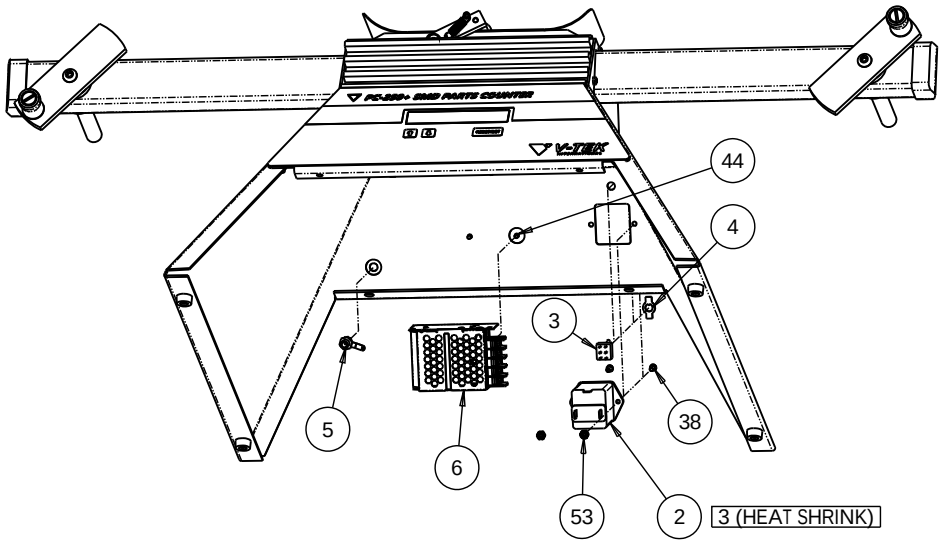
COUNTER PC250+

MATERIAL

FINISH

SIZE **B** | DWG. NO. EMEPC250+ | REV H

WEIGHT (lbs): 15.57 | SHEET 5 OF 9



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
2	101908	FILTER AC ENTRY FUSED	1
3	102515	SWITCH	1
4	102564	SWITCH PLATE	1
5	102629	BANANA JACKS UNINSULATED	1
6	103592	POWER SUPPLY 5V UNIVERSAL ESD	1
38	223011	SS BHCS #4-40 x 3/8	2
44	223711	SS BHCS M3 x 6mm	2
53	239051	4-40 NYLOK NUT	2

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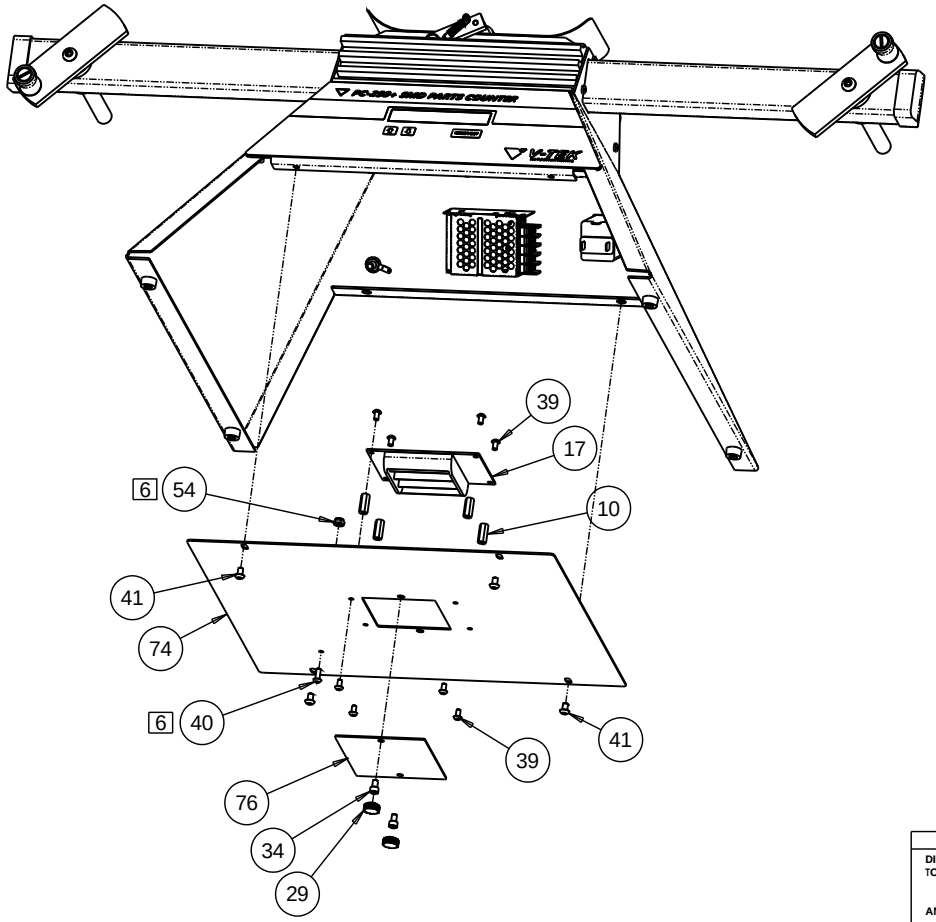

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
10	106061	BATTERY MOUNT	4
17	150033	PC250+ BATTERY BACKUP BRD ESD	1
29	217021	KNOB #8 MCMASTER 94052A125	2
34	221025	SS SHCS #8-32 x 1/4	2
39	223024	SS BHCS #6-32 x 1/4	8
40	223025	SS BHCS #6-32 x 3/8	1
41	223033	SS BHCS #8-32 x 1/4	4
54	239052	6-32 NYLOK NUT	1
74	261083	BOTTOM PANEL	1
76	264156	BATTERY ACCESS PANEL	1

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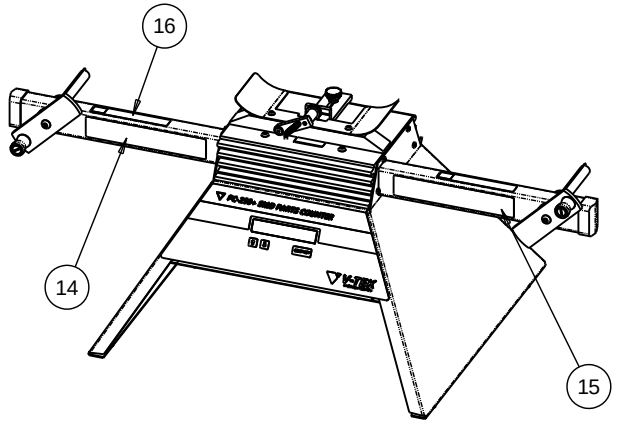

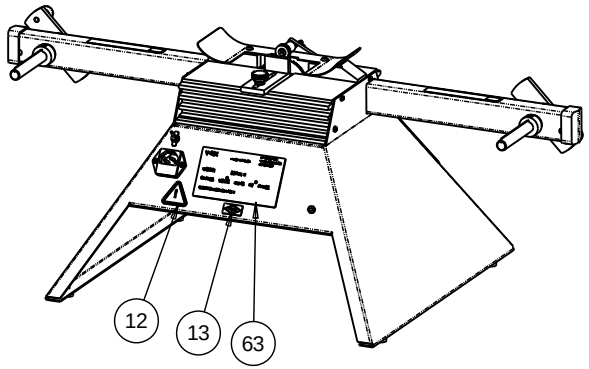

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
12	111004	SAFETY STICKER EX. POINT	1
13	111014	STICKER RoHS DIAMOND	1
14	111117	MCN STKR PC250 INSTR 1-4	1
15	111118	MCN STKR PC250 INSTR 5-10	1
16	111128	PITCH SET GUIDE 2MM	2
63	253864	SERIAL NUMBER PLATE - CE	1

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751 Summit Avenue
Mankato, MN USA 56001

Website: www.vtekusa.com
Email: service@vtekusa.com
Phone: (507) 387-2039

For inquiries regarding spare parts, tape and reel supplies, or the service department, please call or write:

Phone: (507) 387-2039

Email: service@vtekusa.com
Please provide the machine model and serial numbers with all inquiries.

NOTES

PC-250+ Manual

Document List

Section	Description	File Name
Cover	Page 1 of 1	61572622.fm
EC Declaration of Conformity	Page 1 of 1	PC-250+ DOC.pdf
Preface	Page i of iv	61572216.fm
Table of Contents	Page 1 of 1	61567916.fm
Operator's Instructions	Pages 1-10	61572324.fm
Exploded Views	Pages 11-18	EMEPC250+.slddrw
Spare Parts List	Page 1 of 1	61579415.fm
Service and Parts Contacts	Page 1 of 1	61053915.fm
Document List	This Document	61567842.fm
Warranty Document	Page 1 of 1	WI201.16, Rev. 5
Back	Page 1 of 1	61666111.fm

EXPRESS WARRANTY, EXCLUSION AND DISCLAIMER OF UNSTATED WARRANTIES AND LIMITATION OF LIABILITY

V-TEK Inc (V-TEK) manufactures equipment for the Royce Instruments and V-TEK International brands. The following warranty applies to both product lines.

1. V-TEK warrants for one year from date of receipt by end user that equipment manufactured by V-TEK will be free of defects in workmanship and materials.
2. All integrated products purchased by V-TEK and integrated on to V-TEK equipment shall be covered in accordance with the manufacturer's pass through warranty and limited in costs equal to the amount of the manufacturer's pass through warranty.
3. V-TEK's obligation under this warranty applies only to the original Customer and commences when V-TEK is notified of name, address of Customer, and date of receipt of equipment.
4. During the warranty period, V-TEK will replace any defective non-consumable parts returned for that purpose to the designated V-TEK Replacement Parts Center or at V-TEK's option, refund original cost of equipment.
5. Authorization to return Articles purchased from V-TEK must be obtained by Customer before return shipping commences.
6. Credit may be granted, less an appropriate restocking charge of 15 to 20% of invoice amount, depending on the reason for the return and condition of the Articles.
7. Returns should always be carefully packed in original shipping carton and sent via ground service. V-TEK does not assume any liability for damage incurred during shipment.
8. For the first 30 days that you own your V-TEK product, V-TEK will be responsible for ground shipments to and from V-TEK's facility in Mankato, MN, U.S.A. or its designate. For the remainder of your warranty V-TEK will pay freight for returning your product to you after its repair.
9. Customer shall bear all charges for customs duty fees or freight above the ground rate or for articles returned which are not defective.
10. Collect shipments will not be accepted.
11. Insurance coverage during shipping is the responsibility of the Customer. V-TEK does not assume any liability for damage incurred during shipment.
12. The warranty applies only to normal use of the equipment and shall be void if V-TEK determines that defects in or failures of the equipment were caused by the Customer's negligence including the lack of proper preventative maintenance, misuse or accident or by unauthorized repair, alteration or installation.
13. This Warranty does not extend to consumable items or mechanical parts subject to normal wear.
14. Customer's exclusive remedy for claims against V-TEK shall be the repair or replacement of defective equipment and parts.
15. Any modification to the standard configuration of this equipment as delivered will void the warranty, unless V-TEK personnel make the modification.

THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL V-TEK BE LIABLE FOR INCIDENTAL, SPECIAL OR CONSEQUENTIAL PENALTIES OR DAMAGES, INCLUDING LOST PROFITS OR PENALTIES AND/OR DAMAGES FOR DELAY IN DELIVERY OR FAILURE TO GIVE NOTICE OF DELAY EVEN IF V-TEK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

PASS THROUGH WARRANTIES ARE AVAILABLE FROM THE RESPECTIVE MANUFACTURERS**.**

SERIAL NUMBER:

MODEL:

DATE OF MANUFACTURE:

751 Summit Avenue
Mankato, MN 56001

(507) 387-2039 FAX: (507) 387-2257

www.vtekusa.com
Email: info@vtekusa.com