

Model CS1 Cotton Inserter



Operation Manual

Dear Customer,

Thank you for purchasing a Pharmafill Model CS1 Cotton Inserter. We at Deitz Company hope you will find that the Model CS1 meets or exceeds your expectations and requirements for an affordable, reliable and innovative addition to your packaging operation.

Pharmafill products are designed and manufactured by Deitz Company Inc., in Wall, NJ, USA. We have manufactured machinery for the bottle filling industry since 1966 and began directly marketing our Pharmafill line in 1993. We are a small (but growing) family-owned business that emphasizes quality, innovation and superior customer service.

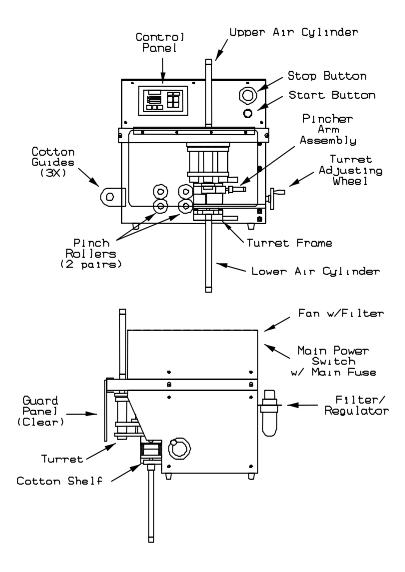
If you have any questions or comments, please contact us by phone or visit our website. Chances are someone whose last name is Deitz will handle you inquiry personally.

Deitz Company Inc. PO Box 1108 1750 Route 34 Wall, NJ, USA 07719 Tel 732-681-0200 Fax 732-681-8468 E-mail <u>support@deitzco.com</u> or <u>support@pharmafill.com</u>

Yours truly,

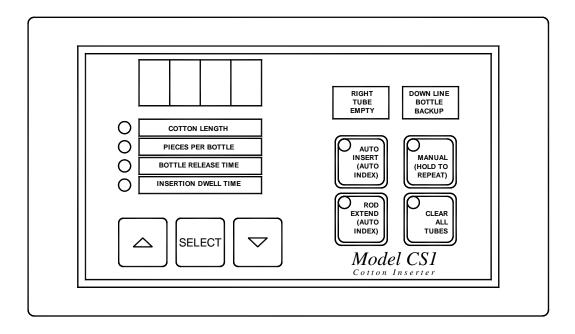
The Deitz Company

Model CS1 Cotton Inserter Features and Components



<u>Pharmafill Model CS1 Cotton Inserter</u> <u>Operating Instructions</u>

SECTION I: OPERATOR PANEL



DISPLAY

The left side of the Operator Panel consists of a 4-digit display, a list of four values which may be displayed and buttons to select and set these values:

Value	Description	Range of Values
Cotton Length	Straight length of cotton piece	2 to 9 inches
Pieces Per Bottle	Number of pieces of cotton per bottle	1 to 10 pieces
Bottle Release Time	Time to let filled bottle move away	0.1 to 5.0 sec
Insertion Dwell Time	Time plunger remains in bottle	0.0 to 5.0 sec

To set or view the display values:

- 1. Press **SELECT** until the red light turns on next to the value you wish to view or set. The value will be displayed.
- 2. Increase the value by pushing the up arrow. Decrease the value by pushing the down arrow. The new value will be displayed.

PUSHBUTTONS

The right side of the Operator Panel contains four pushbutton and two warning indicator lights. Each push button has a small light which turns on while the button is active. There is also an audible "beep" when a button is pressed.

The four buttons on the lower right side of the Operator Panel work as follows:

Label	Type	Function
Auto	On/Off	Will automatically fills start filling cycle when bottle is
Insert		detected by the Bottle Sensor. Disables
		Manual Cycle and Clear All Tubes. Automatic
		operation will stop if Tube Empty lights (see below).
Rod	On/Off	Press to extend and hold the insertion rods. Press again to release.
Extend		Used for set-up and troubleshooting.
(Auto	On/Off	Pressing both the Auto Insert and Extend Rod buttons will
Index)		activate the Auto Index function. The will automatically
		index bottles without inserting cotton. Used when cotton is not
		required but uniform bottle spacing is needed for the next process
		such as automatic capping and banding. The Bottle Release Time
		setting works just as with Auto Insert.
Manual	On while pushed	Starts one fill cycle with or without cotton
(Hold To		or bottle. Hold down for continuous cycling.
Repeat)		
Clear All	On while pushed	Empties cotton from all tubes by running four
Tubes		consecutive fill cycles without feeding cotton.
		Remove bottle from filling station before using
		this function

INDICATOR LIGHTS

The lighted indicators on the upper right side of the Operator Panel work as follows:

Label	Cause	Reaction	Solution
Right	Cotton not	Stops automatic	Turn Auto Cycle off & find cause.
Tube	present in	operation	Then press Manual Cycle to fill
Empty	right-hand tube		tube. Press Auto Cycle to resume
			automatic operation. Catch unfilled
			bottle & recycle.
Downline	Bottles backed-	Stops automatic	Operation resumes automatically when
Bottle	up downline	operation	downline backup clears. Prevents jams when
Backup			next process downline is stopped.

SECTION II: INSTALLATION AND SET-UP

INSTALLATION

1. Connect electric (110 VAC 7A) and compressed air line. Adjust air pressure to **80** PSI.

SET-UP

(See drawing no. TN 0056)

- 1. Switch on Main Power (in back). Cooling fan will start running. Small indicator light on front panel will light.
- 2. Set **Cotton Stop** fully to right end of Cotton Shelf.
- 3. Place clear **Guard Panel** in lowered position.
- 4. Press **Start** button. **Operator Panel** will light up. **Turret** finds home position.
- 5. Press Clear All Tubes pushbutton. All four tubes will be cycled to remove any stray cotton pieces.
- 6. Using the **Operator Panel** (see section I), set values for:
 - a. Cotton Length in inches
 - b. Pieces Per Bottle
 - c. Bottle Release Time in seconds
 - c. Insertion Dwell Time in seconds
- 7. Load cotton:
- a. Raise Guard Panel.
- b. Use one, two or three **Cotton Guide** loops as needed.
- c. Raise upper roller of left set of **Pinch Rollers** by lifting end of roller by hand.
- d. Place cotton so end is between upper and lower roller to trap cotton.
- e. Lower Guard Panel.
- 8. Press **Manual** pushbutton once. The cotton will feed through the right set of rollers and a piece of random length will be produced.
- 9. Raise the Guard Panel and remove the first piece of cotton. Lower the Guard Panel.
- 10. Press Manual pushbutton again. The second piece produced is the exact length that will be repeated each time.

- 11. Raise the guard and adjust the Cotton Stop from right to left to just barely touch end of cotton piece.
- 12. Adjust the **Turret** left or right to center on the length of the cotton piece by turning the **Turret Adjusting**Wheel on the right side of machine (turn clockwise to move turret to right). Numbers on scale on front of **Cotton**Shelf show correct turret position relative to **Cotton Length** setting.
- 13. Press Manual pushbutton twice. This will result in cotton loading into the front tube and the right-hand tube.
- 14. Start conveyor. Set conveyor speed. Place bottles on conveyor.
- 15. Adjust height of machine using handle on front of **Lift Platform**.
- 16. Press **Rod Extend** pushbutton and adjust the position of **Bottle Stop 1** (filling station). Press **Rod Extend** pushbutton again to release. Adjust **Bottle Stop 2** (release distance) to a position one bottle width downstream for Stop 1.
- 17. Adjust **Bottle Sensor** (starts fill action) to detect the bottle at **Stop 1** or any bottle to the left or upstream. Adjust **Backup Sensor** (stops action) to detect bottles backing up from the right or downstream direction (already filled with cotton).
- 18. Press **Auto Insert** pushbutton to begin automatic operation.

SECTION III: SPECIFICATIONS

Product size range

Continuous coil, cotton or synthetic 6 to 20 gram, low density.

Max. Continuous Speed	Length Setting	Rate per min.
(Revised 3/99)	2	88
	3	84
	4	80
	5	76
	6	72
	7	68
	8	64
	9	60

Electrical

Voltage 115 VAC 60 Hz

Current 7A (inrush) 5A (continuous)

Fuses

Main 7A SloBlo (313)

24 VDC Power supply 5A SloBlo (313)

5 VDC 1A (312)

Size (without Lift Platform) Inches: 26.5 W x 23 D x 24.5 H

Centimeters: 68 W x 59 D x 63 H

Weight (without Lift Platform) 150 lb.

68 Kg

SECTION IV: OPTIONS AND MAINTENANCE ITEMS (prices as of 11/02)

Options

AD1029 CS1 Secondary Tamper Assembly

AD1035 Cotton Box Cover Assembly (center draw, no breaks)

Maintenance Items

(also see Preventative Maintenance document in Section 10 Technical Documents)

Insertion Air Cylinder life expectancy varies widely with each installation, usually due to air supply quality (oil, water). Insertion Air Cylinders may be returned to the factory to be rebuilt, at no charge other than shipping costs for the 2-year warranty period (from date of machine purchase) and for a small charge of \$25 thereafter. Swapping out a complete assembly will take 10 minutes each. Swapping out the cylinder only and wiper will take up to 30 minutes each (requires complete disassembly). You may also purchase the seal kit to do-it-yourself, but we are not responsible for the quality of your work.

Assemblies

AD1034-1F CS1 Upper Air Cylinder Assembly

AD1034-2F CS1 Lower Air Cylinder Assembly

AD1071 CS1 Rebuild Parts Kit

(1) FM3283F, (2) P0156, (1) P0157

Parts Only

P0158 CS1 Upper Air Cylinder ONLY

(Also purchase one P0157)

FMA3044-1 CS1 Lower Air Cylinder ONLY

(Also purchase one P0157)

FM3283F Cylinder Internal Seal Set

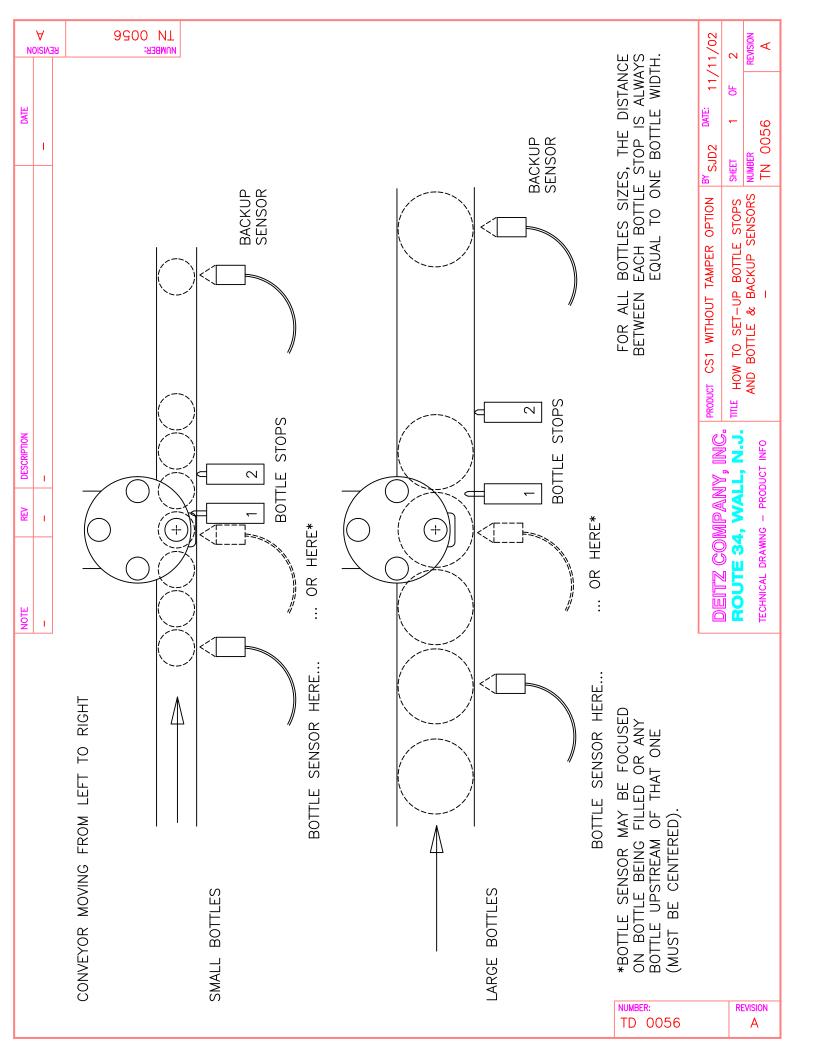
P0157 Air Cylinder Rod Wiper (1 per cylinder ass'y)

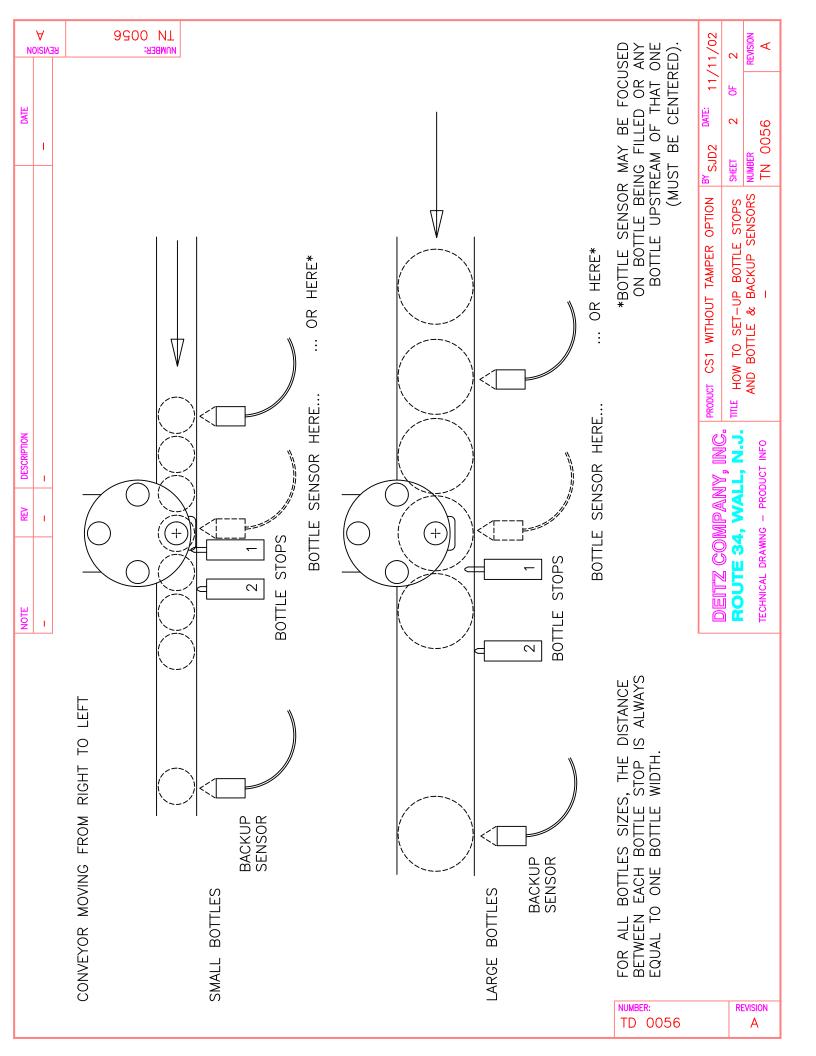
P0156 Brass Air Fitting 10-32 to ¼" Tube

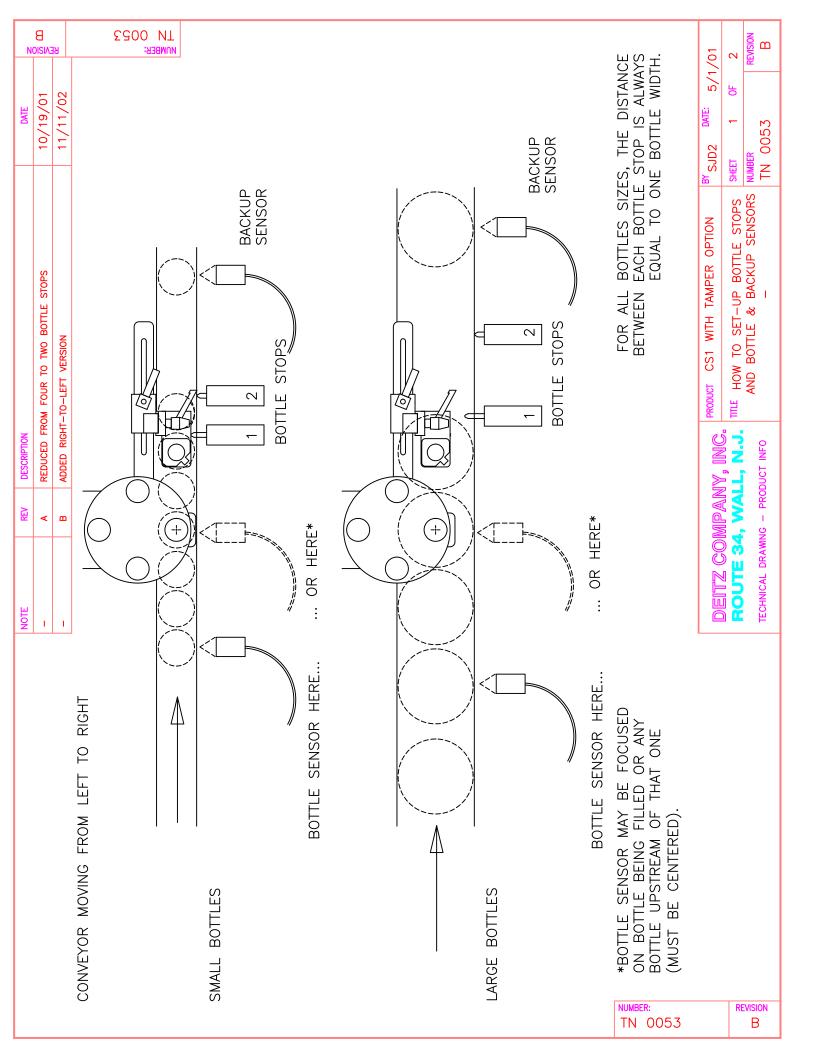
SECTION V: $\underline{\textbf{TECHNICAL NOTES/DRAWINGS}}$

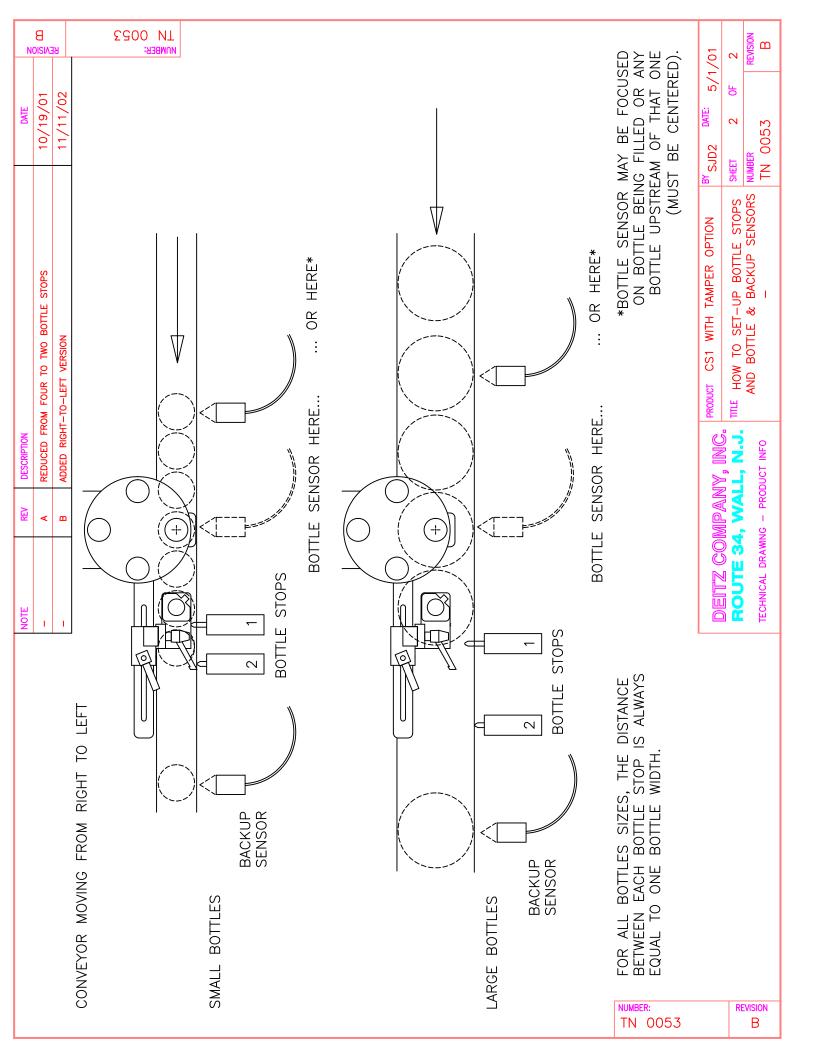
(documents follow after last page)

1. TN0056 pg 1 of 2	Downstream gating set-up, conveyor moving L to R (normal), PLC v 4.0 and up. $ \label{eq:local_problem}$
2. TN 0056 pg 2 of 2	Downstream gating set-up, conveyor moving R to L (unusual), PLC v 4.0 and up. $ \label{eq:plc} % \begin{subarray}{ll} \end{subarray} % sub$
3. TN 0053 pg 1 of 2	Downstream gating set-up, with optional tamper unit installed, conveyor moving L to R (normal), PLC v 4.0 and up.
4. TN 0053 pg 2 of 2	Downstream gating set-up, with optional tamper unit installed, conveyor moving R to L (unusual), PLC v 4.0 and up.
5. SC 1003 (7 pgs)	Electrical schematic (wiring diagram)
6. SC 1013 (4 pgs)	Pneumatic schematic (air line diagram)
7. AD1086-PARTS	Parts List: Wear, Spare and Service Parts
8. AD0994_CCD	Contact Compliance Document
9. AD0994_PM	Preventative Maintenance Document



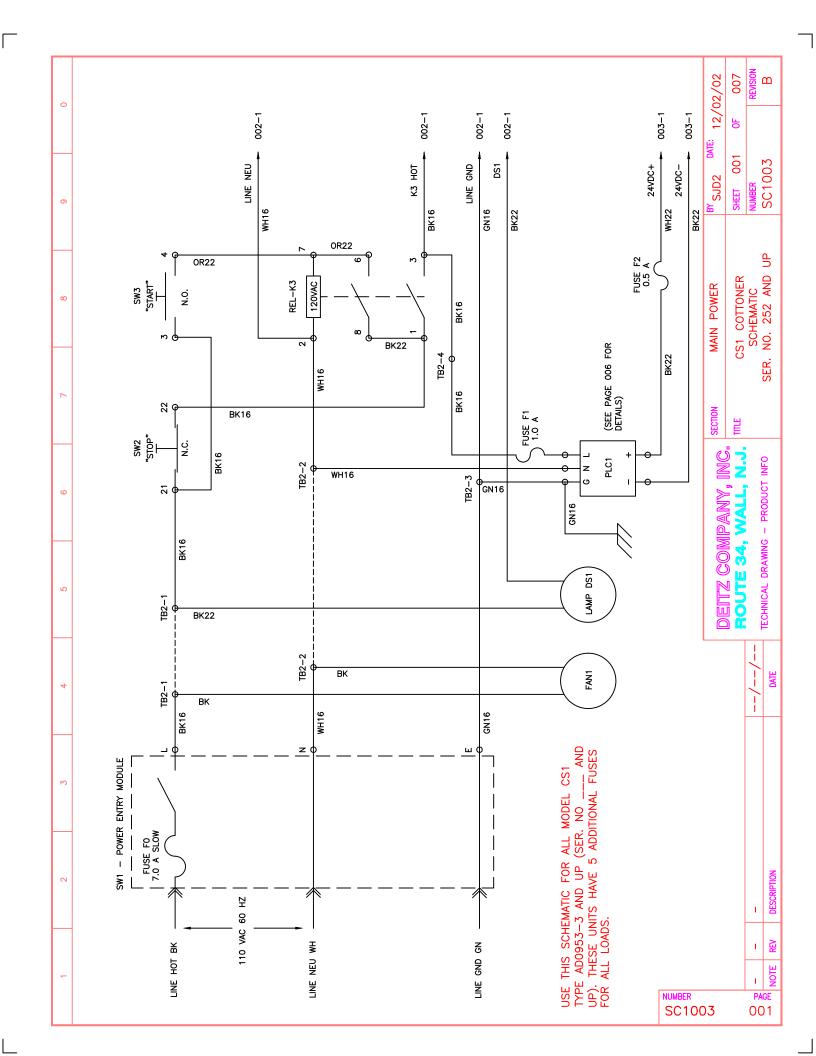


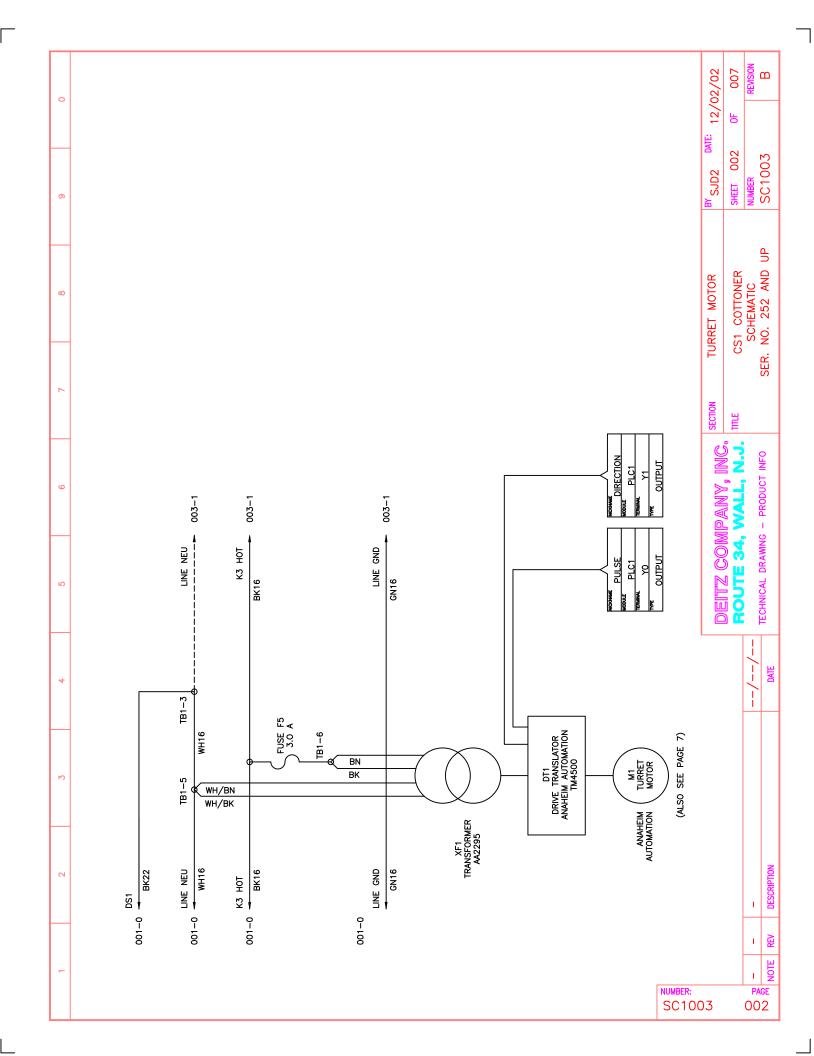


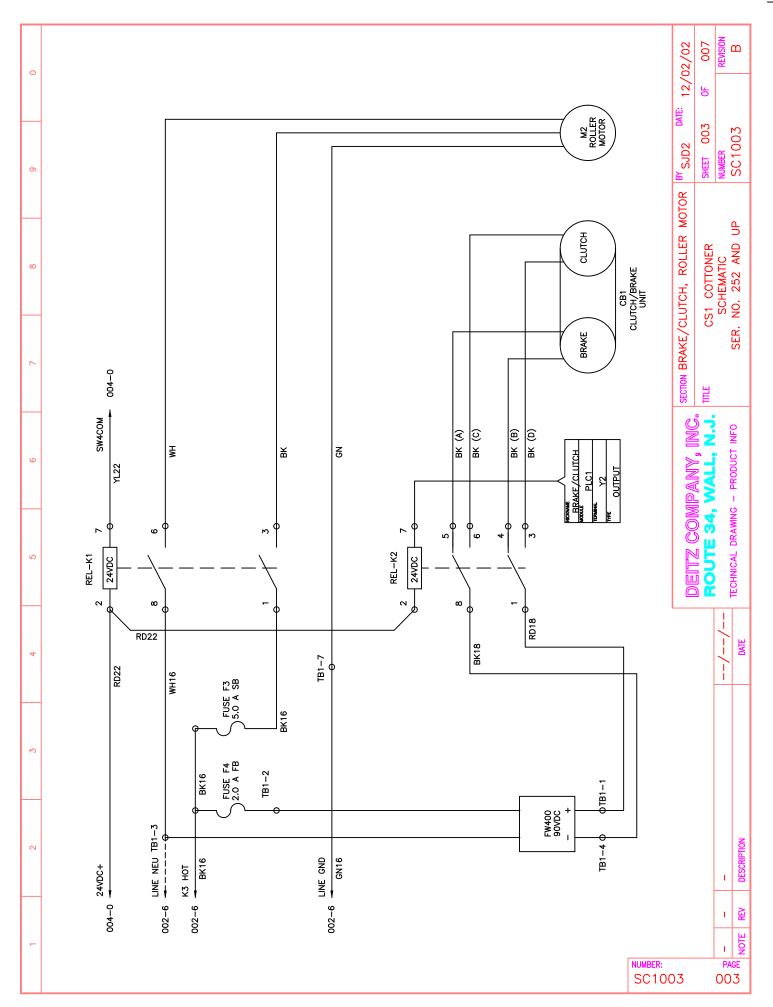


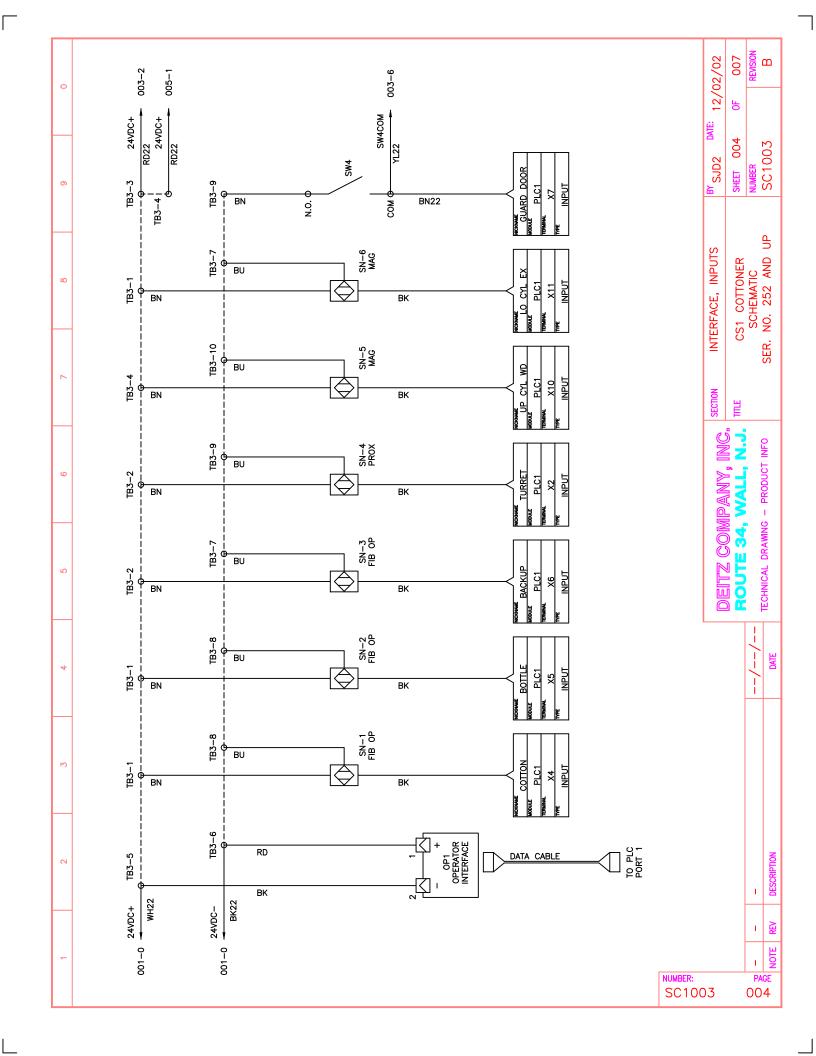
0	MULTI-PIN CONNECTOR (SOLDERED) (SOLDERED)	^{BY} SJD2 DATE: 12/02/02	OF O	SC1003 B
ω	SYMBOL +24VDC	NOTES AND REVISIONS	CS1 COTTONER SCHEMATIC	ER. NO. 252 AND UP
7	J OR	SECTION	TILE .	S
9	NOTES AND REVISIONS MAIN POWER TURRET MOTOR INTERFACE, INPUTS VALVE OUTPUTS PLC DETAILS TURRET DRIVE DETAILS	DEITZ COMPANY, ING.	:_:	TECHNICAL DRAWING - PRODUCT INFO
ιΩ	0. NOTES AND 1. MAIN POWER 2. TURRET MOTI 3. BRAKE/CLUTI 4. INTERFACE, I 5. VALVE OUTPU 6. PLC DETAILS 7. TURRET DRIV		ROUTE 34, WALL,	TECHNICAL DRAWING
4	2008 – 08 – 08 – 08 – 08 – 08 – 08 – 08		12/31/02	DATE
ю	1. ADPED FUSES F1—F5	ADDED PAGE 0 (THIS PAGE)	NFO PAGE PLC-YO & -COM	
2	FISE "FO" WAS "F	ADDED PAGE 0 (T	ADDED GENERAL INFO PAGE CORRECTED PG. 7 PLC-YO	DESCRIPTION
		1	∢	E REV
←	NUMBER SC100)3	PA OO	SE OO

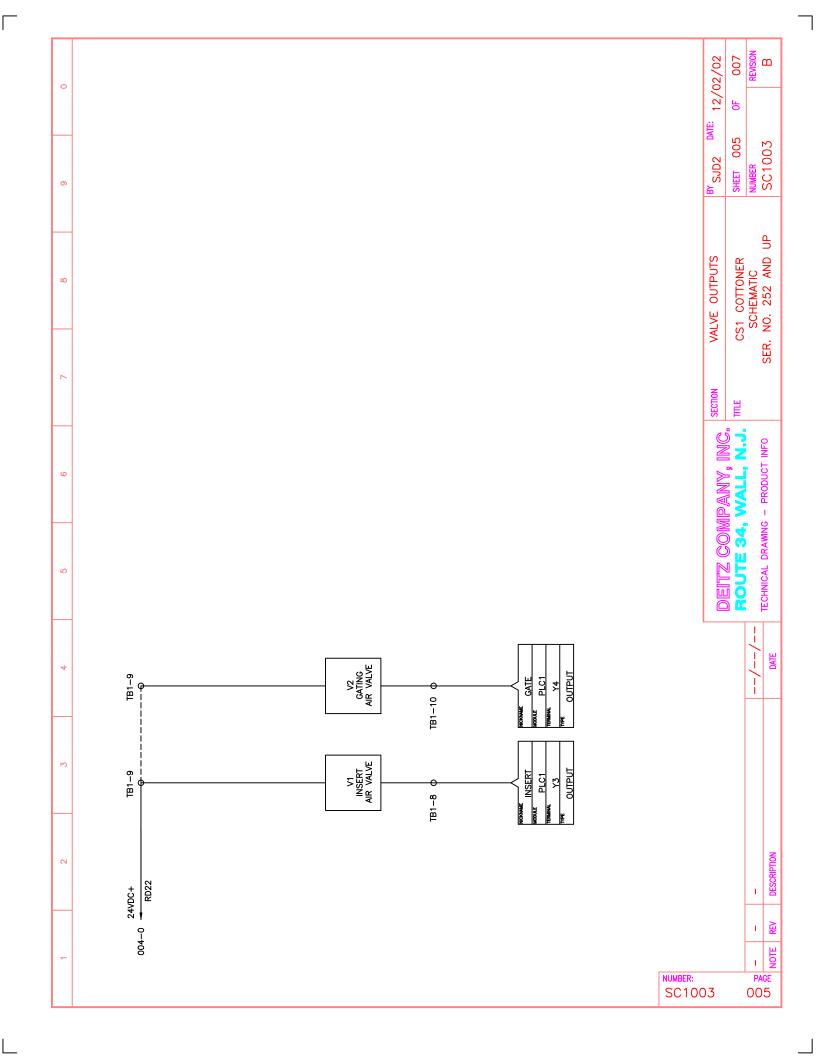
Г

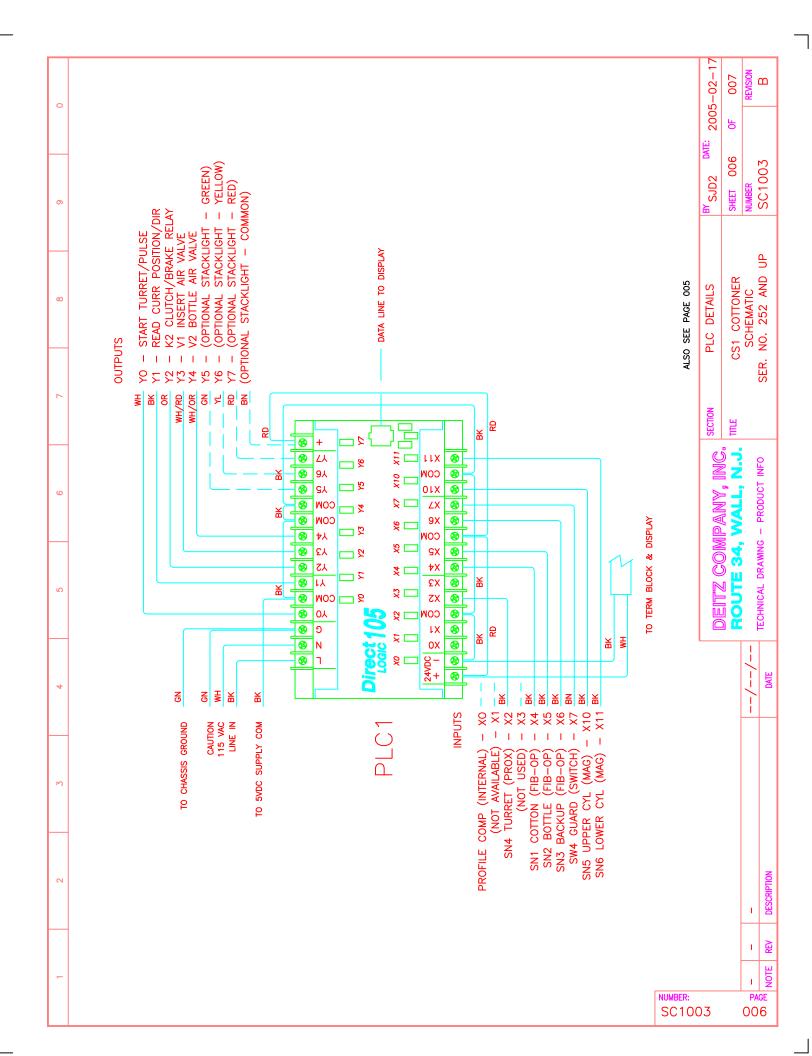


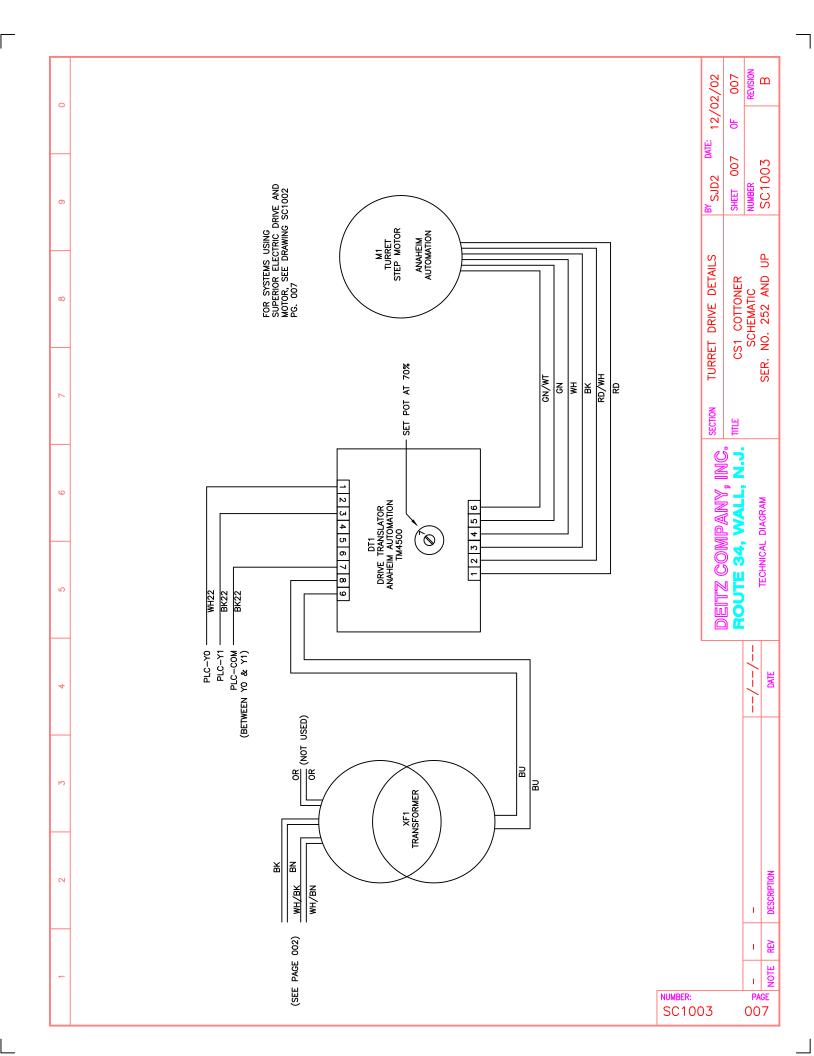


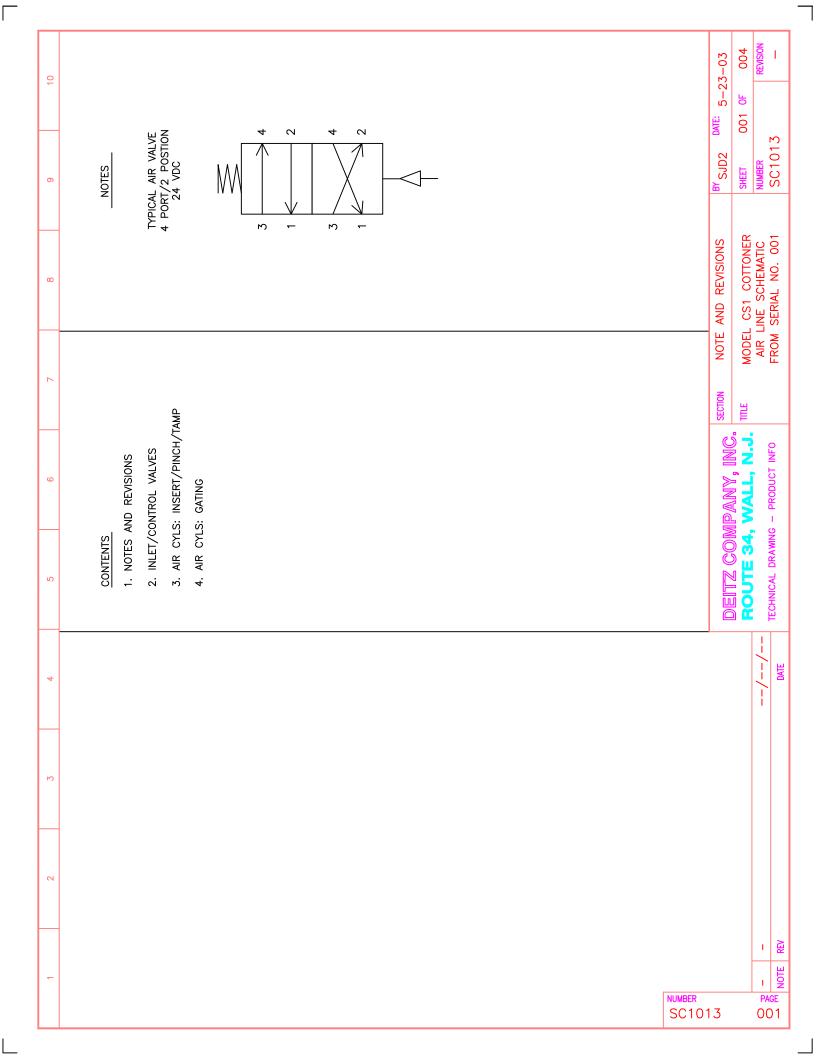


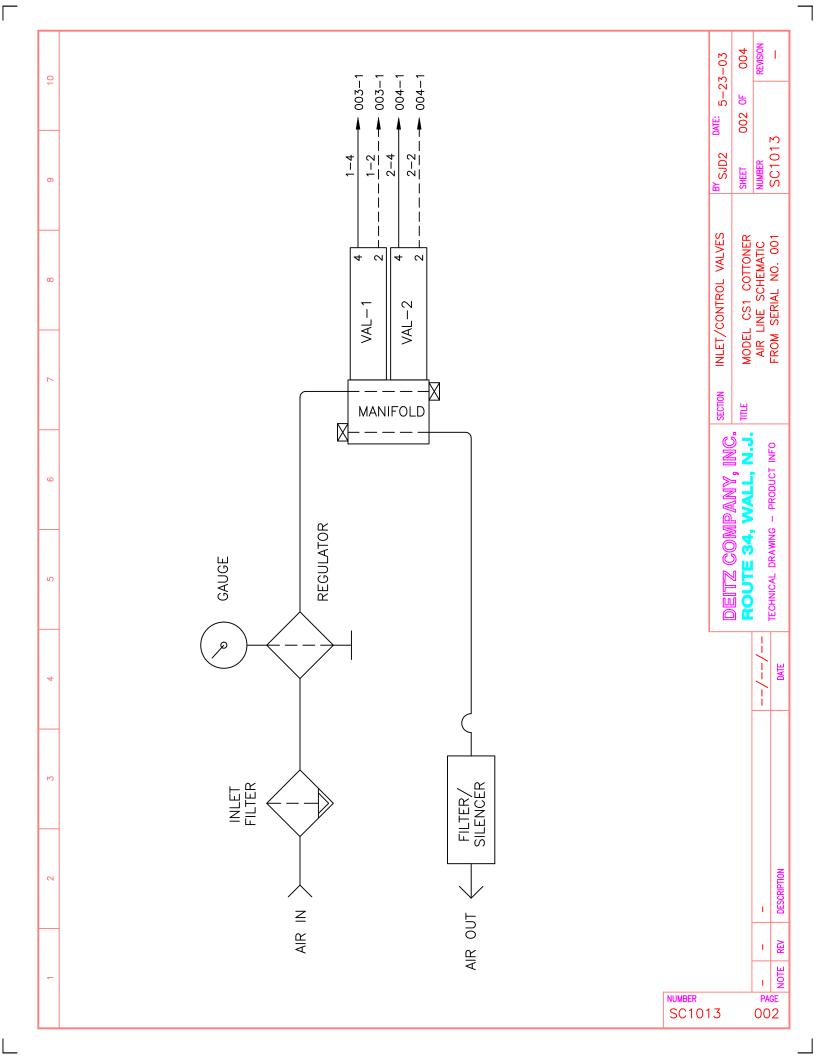


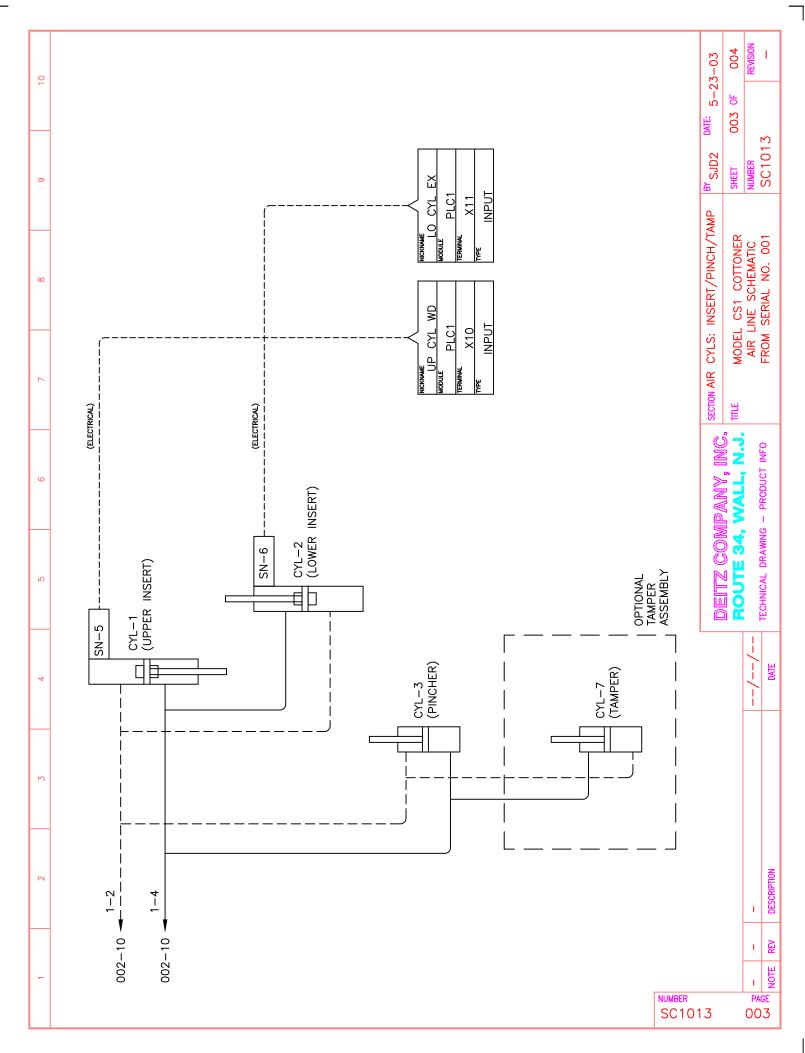




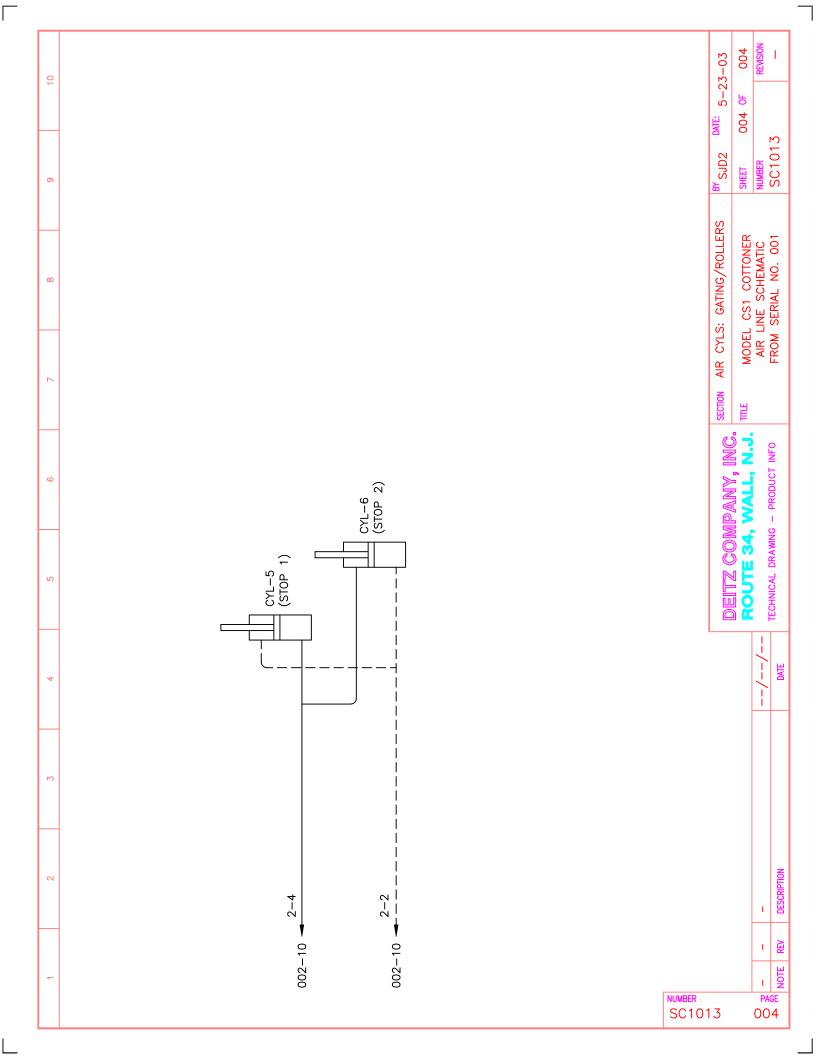








I



Deitz Com	pany Inc Price List	Effective Date: Octobe	er 6, 2008
Part Number	Description Line 1		Price
AD1086-1 C	S1 Wear Parts Kit		
AD1071	CS1 Air Cyl Rebuild Parts Kit		\$40.00
AD1085-1	CS1 Spare Fuse Kit		\$8.00
FM3049-2	CS1/2/10 Air Filter Element		\$7.00
FMA3044-1	CS1 Lower Air Cyl Mod		\$220.00
P0158-7	Air Cyl CS1/CS2 7" Stroke		\$100.00
P5816	Relay, DPST 24VDC		\$23.00
		Total price for this group (above):	\$398.00
AD1086-2 CS	S1 Critical Spare Parts Kit		
AD0991	CS1 Operator Display Unit		\$399.00
FA1014-1	CS1 Pincher Arm Assy LH Inner		\$47.00
FA1014-2	CS1 Pincher Arm Assy RH Outer		\$47.00
FM2978-1	CS1 Cylinder End (Upper)		\$14.00
FM3015-1	CS1,2, &10 Pincher Slide Blk		\$26.00
FM3264F	Air Cylinder Mod's, 1" Stroke		\$89.00
P0141	Air Cyl 1/2 Stroke REVERSE ACT		\$52.00
P0142	AIR VALVE 4 WAY 24VDC 1/4 TUB		\$108.00
P0160	Air Cyl Auto-Sw, w/Led		\$117.00
P0414	Belt, Gear 90XL037(URETHANE)		\$8.00
P1807	Controls PLC CPU 105 Series		\$399.00
P1810	Controls Interconnect Cable		\$33.00
P1822-1	Control Driver		\$279.00
P2736	Flatwasher NYLATRON .262ID X		\$3.00
P5018	Sensor Fib-Op Amplifier		\$176.00
P5814	Relay, DPST 110 VAC		\$23.00
P6501	FULL WAVE RECTIFIER FW400		\$6.00
P6981	Sensor - Proximity Switch PNP		\$184.00

Total price for this group (above):

\$2,010.00

Part Number Description Line 1 **Price CS2 Service Parts** FM2987 CS1 Clear Polycarbonate Front \$79.00 FM3004-2 Stepper Motor Mod's, 2 Stack \$478.00 FM3283F CS1 Cylinder Internal Seals \$14.00 P0109 Air filter/regulator \$112.00 P0110 Air Filter Bracket & Nut \$8.00 P0156 BRASS AIR FITTING 10-32 to 1/4 \$8.00 P0157 Air Cylinder Rod Wiper, 5/16 \$14.00 P0308 Bearing, Oilite .50x.62x.50 \$10.00 P1190 Clutch/Brake \$790.00 P1339 Connector Power Entry Module \$26.00 P1714 CS1 Vinyl Dust Cover \$67.00 P1822-3 Transformer - 100 Watt \$120.00 P2916 Magnetic Latch \$8.00 P2917 Door Strike, Polished Chrome \$5.00 P4413 Motor PS Gearhead AC 120 RPM \$499.00 P6709 Spring Extension .38x1.50L 12. \$9.00 P6924 Switch PB Blk 22 mm \$14.00 P6928 Switch Micro Pin Plunger \$8.00 P6929-1 PB Emer Stop Actuator, Red \$33.00 P6929-3 PB Emer Sw Contact Block \$12.00

Total price for this group (above): \$2,314.00

Document Number: AD0994-CCD 9/01/2004 Page 1 of 1



JOHN DEITZ President Deitz Company Inc. 1750 Route 34 PO Box 1108 Wall, NJ USA 07719 Tel 732-681-0200 Fax 732-681-8468 Email sjd2@deitzco.com

PRODUCT COMPLIANCE DATA Model CS1 Cotton Inserter Type AD0994

FOOD COMPLIANCE STATEMENTS

MATERIALS IN DIRECT CONTACT WITH PRODUCT

Deitz Company Inc hereby certifies that the list below contains all the parts of the above-cited machine that come in direct contact with the product, and that those parts are manufactured using raw materials and surface treatments which conform to the requirements of such parts as established by the Food and Drug Administration of the United States. Certificates of compliance for raw materials and treatments are maintained according to our internal Quality Control System.

CONTACT PARTS, MATERIALS AND TREATMENTS

PART NUMBER	DESCRIPTION	MATERIAL	CERTIFICATION
FM2979	Cotton Guide Loops	Acetal	FDA 21 CFR 177.2480
FM2952	Rollers	INOX AISI 304	ASTM Standard
FM3033	Cotton Shelf Guides	INOX AISI 304	ASTM Standard
FM3014	Pincher Arms	INOX AISI 304	ASTM Standard
FM2973	Cotton Shelf	INOX AISI 304	ASTM Standard
FM3034	Stop Plate	INOX AISI 304	ASTM Standard
FM2978	Insert Cylinder Rod Tip	INOX AISI 303	ASTM Standard
FM2961	Tube Extension	Acetal	FDA 21 CFR 177.2480
FM2951	Turret Tube	Polycarbonate	FDA 21 CFR 177.15803
FM2978	Upper Cylinder Rod Top	Acetal	FDA 21 CFR 177.2480

Legal disclaimer: Deitz Company believes the above information to be truthful, based on information provided to us from our suppliers. However, Deitz Company cannot guarantee the accuracy of the reporting, testing or procedures of our suppliers and assumes no liability or obligation as to the same. Deitz Company also assumes no liability as to the suitability of the above materials to the application for which the customer intends to use the machine. It is the customer's responsibility to assure that the above materials meet the customer's requirements.



JOHN DEITZ President Deitz Company Inc. 1750 Route 34 PO Box 1108 Wall, NJ USA 07719 Tel 732-681-0200 Fax 732-681-8468 Email sjd2@deitzco.com

Monthly

1. Pincher Assembly

- a. Inspect condition of pincher arms, looking for cracks in the bend area. Replace both arms if any cracks are found.
- b. Check up-and-down free play of pincher arm at pivot screw. If excessive, tighten pivot screws, in small increments and re-inspect. Some free play is necessary for arms to move freely.
- c. Check open-close free play. If excessive, replace slide block.
- d. Check that space between pincher arms when closed = ½ inch. Adjust by turning threaded air cylinder rod into or out of slide block.
- e. Check that locknut on air cylinder rod is tight against slide block

2. Turret Assembly

- a. By hand, move turret assembly back and forth. Look for freeplay at turret pulley and motor pulley. Tighten as necessary.
- b. Inspect condition of belt. Replace if necessary.
- c. Inspect condition of turret tubes for cracking. Replace if necessary.

Rollers

a. Inspect surfaces for scratched or gouges. Replace if necessary.

4. Guard Door

- a. Inspect condition of magnetic catches. Replace if necessary.
- b. Inspect condition and function of safety switch. Replace if necessary.
- c. Inspect condition of clear panel. Replace if necessary.

5. Miscellaneous

- a. Clean or replace cooling fan air filter.
- b. Check all external hardware for tightness.
- c. Check condition of all external electrical and fiber optic cables for wear or damage. Replace if necessary.

Annually

- 1. Roller Drive Unit (internal)
 - a. Remove covers and inspect drive unit. Clean internal spaces prior to inspection.
 - b. Inspect condition of belts and chains. Replace if necessary.
 - c. Inspect condition of bearings and shafts in roller pivot block. Replace if necessary.
 - d. Inspect condition of linkage on roller pressure air cylinder. Replace if necessary.

2. Carriage Drive Unit (internal)

- a. Inspect condition of turret horizontal drive screw. Clean and lubricate screw with a small amount of lithium grease.
- b. Inspect condition of hand wheel and handle. It should turn easily and turret should move side to side smoothly.