



Installation Instructions

Drive-Up Transaction Systems

VSI-1000

and

VSI-1000-VDO

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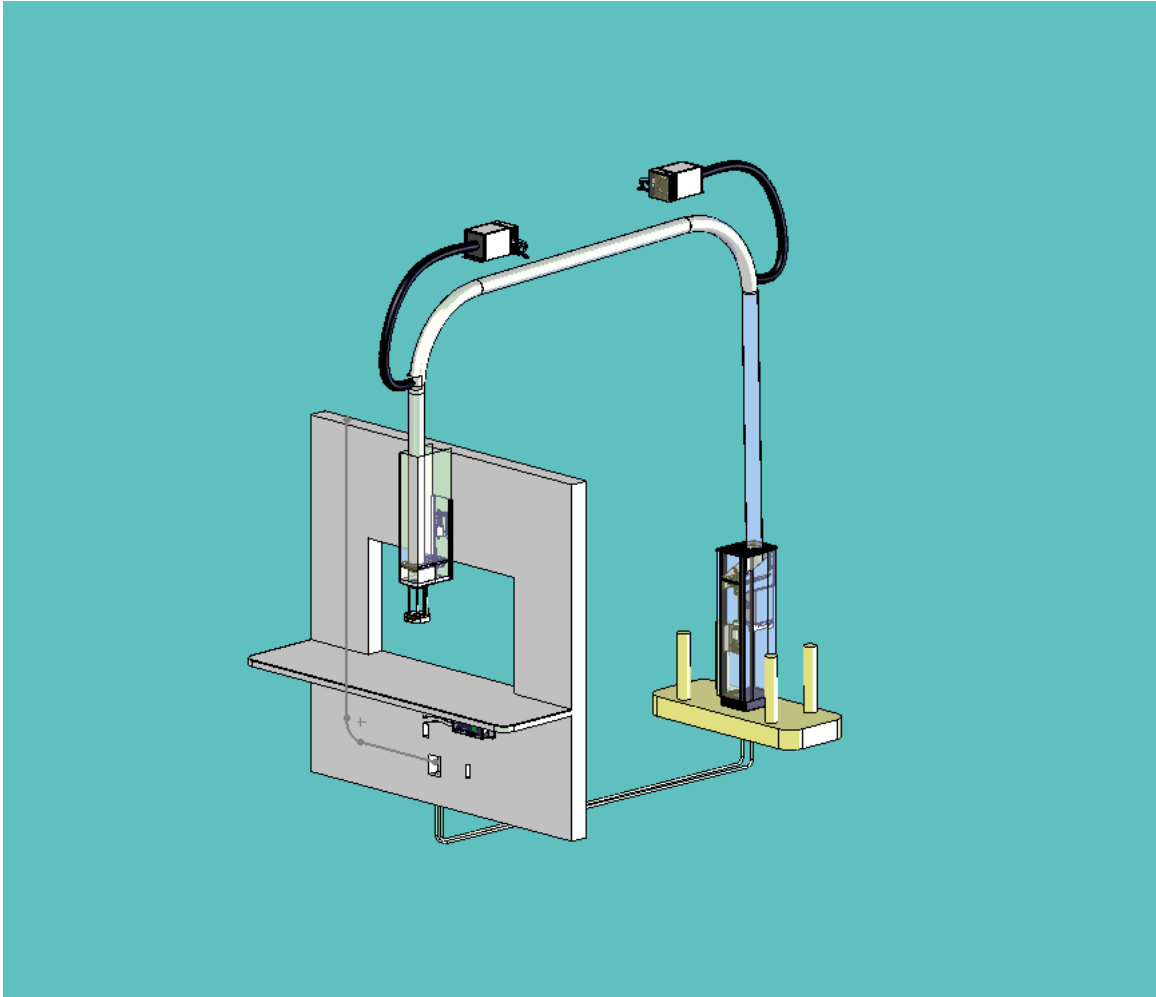


Table of Contents

| | | |
|-----------------------------------|--------------------|-------------|
| Electrical Specifications | Section 100 | <i>Page</i> |
| System Overview | Section 200 | <i>Page</i> |
| Installation Steps | Section 300 | <i>Page</i> |
| Installing Teller Unit | Section 310 | <i>Page</i> |
| Installing Customer Unit | Section 320 | <i>Page</i> |
| Installing Blower Packs | Section 330 | <i>Page</i> |
| Installing the Tubing | Section 340 | <i>Page</i> |
| Wire Routing | Section 400 | <i>Page</i> |
| Wiring Customer Unit | Section 410 | <i>Page</i> |
| Wiring Teller Unit | Section 420 | <i>Page</i> |
| System Setup & Testing | Section 500 | <i>Page</i> |
| Audio & Video System | Section 600 | <i>Page</i> |
| Audio Authority | Section 610 | <i>Page</i> |
| Greyfield | Section 660 | <i>Page</i> |
| Control Schematics | Section 700 | <i>Page</i> |
| Trouble Shooting | Section 800 | <i>Page</i> |
| Parts List | Section 900 | <i>Page</i> |

Electrical Specifications

Section 100

Voltage: 110 Volt AC single phase 60 Hertz Grounder Power Supply
Protection: Branch Circuit Over current Protection, 20 Amps Maximum
Wire Gauge: 12 AWG Minimum

Power Outlets Required Per Lane

Two separate 20 Amp Outlets in Canopy for Blower Operation (Per Lane)

One 15 Amp 2 Plug Outlet for Lane Control Unit (Per Lane) (normal placement under teller counter, or control closet; both plugs are used, one for the Control Unit, one for the Low Speed Re-Circulation Control Unit)

One 15 Amp 2 Plug Outlet in Customer Unit on Island (addition power maybe required in cold environments; Recommended GFI Protection)

One 15 Amp Outlet under Teller Counter for Teller Audio/Video Consol (Per Teller Station) (Unit requires power transformer; a multiplex transformer may be used)

Theory of Operations and System Controls

Controls

Teller Unit

- Power Switch -applies low voltage output to controls, turns system on / off
- Send Button -energizes blowers to send carrier to customer unit
- Call Button -brings carrier back to teller unit

Customer Unit

- Send Button - sends carrier to teller
- Call Button -calls teller, activates audio / video system

Control Panel

- Power Switch -applies power to control panel and may be used to reset system electronics
- Fuse Holder -power protection to the transformer

Operation

System Activation

- turn power on at the control panel, this power switch is left on all the time
- turn power switch on at the teller unit, this initializes the system, 24 VAC slide gate motor at the teller unit opens. 24 VAC slide gate motor at the customer unit closes (6 second run time)

Teller Send Cycle

- press the send button, solid state relays for the teller blower and customer blower are energized; teller blower runs 4 seconds; customer blower continues to run until variable timer turns off; duration for customer blower will vary according to length of run; when the customer blower relay timer turns off, the slide gate motors run for 6

seconds in the opposite directions, returning the system to their previous positions completing the send cycle

Customer Send Cycle

Teller Call Cycle

-pressing the call button at the teller unit activates the same sequence as pressing the send button on the *customer* unit; energizes relays for the customer and teller blowers; customer blower runs for 4 seconds and turns off; duration of run time for the teller blower will vary from system to system, but will be the same in either cycle; when the teller blower stops, both slide gates motors run in opposite directions for 6 seconds; this completes the call cycle or end of send cycle from the customer unit.

Low Speed Blower Operation

- operation of the low speed blower is performed by turning the power switch on.
- the low speed blower is used to reduce condensation in the tube system
- This unit can be left on during seasonal times that require reduction of condensation

SECTION 300

INSTALLATION STEPS

The VSI 1000 Drive-Up System can be installed in 8 steps

- 1.) Site Evaluation
- 2.) Installing the Teller Unit
- 3.) Installing the Customer Unit
- 4.) Installing the Blower Packs
- 5.) Installing the Tubing
- 6.) Installing the Control Units
- 7.) Connecting the Customer and Teller Units
- 8.) System Set-Up and Testing

Step 1

Site Evaluation

-Confirm location for control units; there are two control units; System control and Low speed blower control; *the best location is in a control closet; they can also be located under the teller counter or in the drop ceiling overhead. The low speed control unit will need to be located where access is easy for seasonal requirements.*

-Before starting the installation check to see that proper AC power outlets have been installed

-verify conduit installation for control wires to the blower units and to the customer (*island*) unit

-verify teller unit locations for multiple lanes

SECTION 310

Step 2

Installing Teller Unit

-Note: The teller unit must be installed on a wall that will support 100 lbs. select the appropriate hardware

- 1.) Make a vertical mark on the wall centerline of the unit's final location
- 2.) Remove cowling
- 3.) Place unit on wall at correct height and mark holes. (*see mount detail drawing*) Bottom mounting holes should be 81-3/4" from floor. Center mount holes are 85-3/4" from floor
- 4.) Bottom of teller unit should be approximately 17" above the countertop.
- 5.) Using proper mounting hardware, mount unit to the wall, check for level and plumb, then firmly secure it.
- 6.) Make a mark on the ceiling identifying centerline of tubing by using a plumb-bob up from the Mounted Teller Unit
- 7.) Drill a 5" hole on the centerline mark for tubing installation
- 8.) Do not replace cowling at this time

SECTION 320

STEP 3

Installing Customer Unit

-Note: The customer unit must be installed on a concrete slab, verify conduit stub-ins will be located within the unit. Overhead conduit can be utilized if required.

- 1.) Locate the Customer Unit over conduit stub-ins; measure 7 ½” from front of base to front edge of island; check conduit for clearance. *(see mount detail drawing)*
- 2.) Drill a hole approximately 13 5/8” from island edge into concrete at center of unit’s final position *(after marking the hole remove the customer unit for drilling)*
- 3.) Position the unistrut so that the hole is in the middle of the base; Screw the anchor bolt into the center hole
- 4.) With the strut at a 45 degree angle, place the Customer Unit over the strut; Turn the strut 45 degrees engaging the base
- 5.) Re-measure 7 ½” from the front of the base to front edge of island; check for plumb and level; shim unit if necessary; lock strut into place by tightening the anchor bolt
- 6.) Re-check measurements, plumb and level; Caulk the base
- 7.) Make a mark on the canopy identifying centerline of tubing by using a plumb-bob up from the Mounted Customer Unit
- 8.) Drill a 5” hole on the centerline mark for tubing installation

SECTION 330

STEP 4

Installing Blower Pack

-*Note:* any configuration or number of blowers may be used given your particular conditions such as length of run, weight to be carried or amount of lift required. Your situation will not affect the way the system is wired or piped for air-flow. The system air lines may be piped in PVC tubing or flexible hose with respect to a minimal size required for good flow.

- 1.) Mount blowers in horizontal position with rubber air check valve facing up, blower nipple pointed to allow easy tube routing to air take-offs on bends *Note: Blowers are marked for teller or customer units; teller blower has 2 extra wires for winterize box*
- 2.) If using PVC tubing on blower line, seal coupling to blower with silicone sealer so as to allow future removal for service if required
- 3.) Check to see that electrical cord reaches outlet, if not have electrical contractor install electrical outlet in this area
- 4.) Air take-offs on Teller and Customer bends must be located at the bottom of the installed bend

SECTION 340

STEP 5

Installing the Tubing

GENERAL PRACTICE:

- 1.) Chamfer the insides diameter of all tube ends (straight and bends) 1/16" x 45 degrees
- 2.) De-burr and thoroughly clean all the tube ends and all the couplings before cementing
- 3.) Test fit all connections before cementing; the inside diameters of tubes ends should be equal and concentric to the inside diameters of associated couplings; If one diameter is smaller than the other, chamfer the smaller size tube end
- 4.) Use the applicator to apply a full even layer of cement on the pipe equal to the coupling socket depth. Coat the coupling with a medium layer of cement
- 5.) Assemble the two parts while the cement is wet; twist the pieces one way and then the other to spread the cement evenly and eliminate air pockets; hold the parts firmly together for 30 seconds; allow 3 minutes dry time to the new joint

Installing PVC tube into the Teller Unit

Note; it is recommended to install a service section of approximately 1 foot to aid in the removal of the slide gate or teller unit if service is required.

- 1.) check break assembly "T" for burrs and clean
- 2.) install slide coupler on to "T" and insert prepped 1 foot PVC pipe; this is a dry coupling DO NOT GLUE
- 3.) install second slide coupling to top of 1 foot service pipe DO NOT GLUE THIS COUPLING

this is a dry fit that will be taped in place for service removal if required

- 4.) fit PVC pipe section from service coupling to 90 degree bend
- 5.) check that blower connection hole is on the downwards pointing part of the bend; clean and install coupling with glue to connection pipe (*from teller unit service pipe at 90 degree bend*)
- 6.) tape slide coupling into place on PVC service section to PVC pipe going to 90 degree bend; make sure coupling is evenly spaced on both PVC pipes

Installing PVC tubing into Customer Unit

Note; clear tubing is installed from customer unit into canopy

- 1.) cut clear tubing to desired length to go from customer unit into canopy
- 2.) install bezel caps on clear PVC pipe
- 3.) install clear PVC pipe into customer unit **THIS IS A DRY FIT; DO NOT GLUE** make sure that Customer Unit top is in place.
- 4.) Install slide coupler onto the top of the clear PVC tubing to the 90 degree bend
- 5.) check that blower connection hole is on the downwards pointing part of the bend
- 6.) tape coupling securely into place

SECTION 400

Wire Routing

- 1.) All wire should be routed in such a manner as to be free of sharp edges and secured in such a manner as to not create wear or chaffing.
- 2.) Make all electrical connector's the splice type

Wires from:

| | | |
|------------------|-----------------|---------------------------------|
| Control unit to: | Teller unit | 22 Gauge 4 Wire Grn/Red/Blk/Wht |
| | Teller unit | 16 Gauge 3 Wire Red/Blk/Wht |
| | Teller blower | 22 Gauge 2 Wire Blk/Red |
| | Customer unit | 22 Gauge 4 Wire Grn/Red/Blk/Wht |
| | Customer unit | 16 Gauge 3 Wire Red/Blk/Wht |
| | Customer blower | 22 Gauge 2 Wire Black/Red |
| Winterize box: | Teller blower | 22 Gauge 2 Wire Blk/Red |

Wires are marked on the control unit; run wires from the control units to their respective locations; wires running to the Customer Unit should run in underground conduit to the Customer Island area.

Wires running to the blowers and Teller Unit should run in conduit to the ceiling area; they may be routed in the ceiling and canopy without conduit

