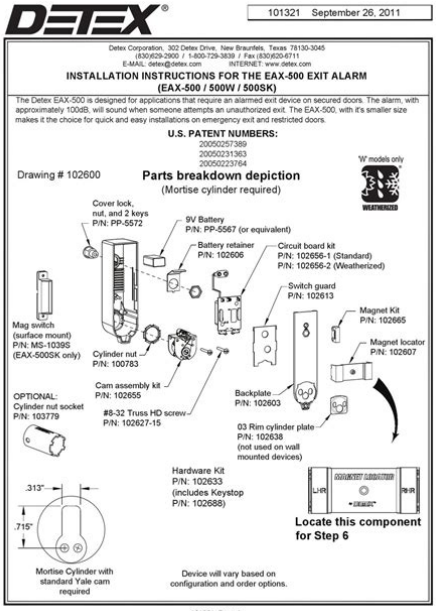
Dri Steem Installation Manual



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Book Descriptions:

Dri Steem Installation Manual

Get in touch. These humidifiers are the best choice for customers with available natural gas or propane who require reliable steam humidification at the lowest operating cost for any application from comfort to critical. Observing the installation and operating practices described in thismanual will assure you of achieving that objective. We urge you to become familiar with the contents of this Humidifier CompanySingleTube HumidifierField 3 Installation. Observing the installation and operating practices described in thismanual will assure you of achieving that objective. Where an airtightseal is required, use a suitable caulk around duct Install steam strainer and steam trap. Connect tosteam and condensate return mains. See page 5 forpiping Install control tubing pneumatic or wiring electricto valve actuator. Note An airflowproving deviceshould be installed to prevent valve from openingunless air is moving in Highlimit duct mounted humidistat installed downstream and set at 8090% is recommended when ductair is below 70 F to prevent condensation in duct. 4 This device should be mounted far enough downstream to assure injected steam has been completelyabsorbed.6. A temperature switch to prevent possible coldstartdripping is recommended when steam pressure tothe humidifier is cycled. See page 11 for Silencers are furnished only with model 560 and670 humidifiers having tubes equal to and shorter than 4feet all others do not have silencers unless speciallyordered.ActuatorStrainerSteam discharge insertsSteam trapField AssemblySmall units are shipped assembled; the following appliesto larger units that are disassembled for Unpack shipment and verify receipt of allcomponents with packing list. 5 Report any shortagesat Match up dispersion tube with its proper valveseparator assembly tubes and separators arematchtagged.http://www.seikan.cz/userfiles/cpanel-backup-manually-run.xml

- **dri steem installation manual, dri steem gts installation manual, dri steem vapormist installation manual, dri steem installation manual.**

Tubelets should point toward theairstream for better steam air mixing, except if tubeshave fiberglass insulatedjacket option steam couldcondense on cool jacket in which case they shoulddischarge with the Unscrew pipe union, remove elbow and nippleportion, and install in half nipple of tube. NoteBefore completing step 3, determine which wayright or left steam holes should point and install inappropriate half Install tube adapter in valve, use pipe dope andtighten leaktight Orings are installed inside of tube Lubricate Orings before Insert tube adaptor into dispersion tube. 6 As this isbeing done, squeeze hooks of silencer cage togethersee note below, and slide them into the tubeadapter, allowing them to snap over rear edge ofadapter. Complete inserting adaptor into tube, beingcareful not to damage Bring union halves together, tighten union ring, andsnug up TEFLON seal ring not too tight. Insulated tubesshould discharge with the airflow to prevent condensation on themetal jacket covering the insulation. 8 A minimum duct velocity of 300 FPM with insulated dispersion tubes is 41 Righthand configurationHorizontal tube and horizontal steam discharge. Thisarrangement comprises the majority of uses. Unlessordered otherwise, this is how units are shipped. Unitshown above is righthanded. To change from right toleft, see the bottom of this when there is no access to side of duct. Humidifier steam supply should be taken off the topof the steam main not the side or bottom toensure driest steam. Main should be dripped andtrapped in accordance with ASHRAE recommendations. 10 2. Humidifier steam trap must drain by gravity to thereturn main having little or no back pressure. Unpack shipment and verify receipt of allcomponents with packing list. Report any shortagesat Plan the tube bank. Show more Excessively high or low humidity causes Releasing steam to the atmosphere with such energy gives a lot of mist formation and noise. A daptor Boa rd. Installation

Manual.http://www.teleinwestor.pl/userfiles/cpan-moose-manual.xml

Wa r n i n g s a n d c a u t i o n s. Wa r n i n g s a n d c a u t i o n sThis page provides important safety instructions; it is intended to supplement—not replace—the humidifiers Installation. Operation, and Maintenance Manual IOM. Read the IOM that was provided with the humidifier before performing service orFailure to follow all warnings and instructions could produce the hazardousIf the IOM is missing, go to to download a replacement. Hot surfaces and hot water. Steam humidification systems have extremely hot surfaces, and water in tanks, electrode cylinders, steam pipes, and dispersion. To avoid severe burns, allow the entire humidification system to cool. Follow the cooldown procedure in the humidifiers IOM before performing service or maintenance procedures on any part of theShut down the energy source. Before performing service or maintenance procedures on any part of the humidification system, verify that all energy sourcesFailure to shut down the energy source could result in carbonThese hazardous conditions could causeContact with energized circuits can cause property damage, severe personal injury or death as a result of electrical shock or fire.Follow the shutdown procedure in the humidifiers IOM before performing service or maintenance procedures on any part of theTa b l e o f c o n t e n t s. Tools required. Before beginning the upgrade..... 2. GTS humidifiers. Board removal and replacement. Removing Vaporlogic3, installing Vaporlogic4. Transferring expansion board terminal blocks. Safety circuit wiring. Leave safety circuit wired in series with one alarm. Separate safety circuit alarm signals into three alarms.....Board removal and replacement. Removing Vaporlogic3, installing Vaporlogic4..... 10. Transferring expansion board terminal blocks..... 12. STS humidifiers. Board removal and replacement..... 16. All Humidifiers. Startup and validation.

Vaporlogic4 adaptor board pin descriptions..... Back cover. Before beginning the upgrade. Before disconnecting powerInstallation and Operation manual forPa r t s. Make sure all parts listed below are included in the Vaporlogic3 to. Vaporlogic4 upgrade kit you received. Table 21. Vaporlogic3 VL3 to Vaporlogic4 VL4 adaptor board kits. Part No. 183503001. No. Description. Qty.Terminal blocks connect to pin locations withFigure 21. Matching pin numbers on board andPart No. 183503002No. Qty.No. Qty.Board removal and replacement. Removing Vaporlogic3, installing Vaporlogic4Figure 31.Before performing any maintenance orUnscrew standoffs, and remove board and standoffs they will notFigure 31. GTS subpanel. Figure 32. VL4 adaptor board standoffs. Top wire channelStandoff. Bottom of VL4 adaptor board shown. Vaporlogic4 adaptor board see Figure 41. If present, plug laptopFigure 42. Determining LonTalk interoperability. VL3 board LonTalk connectionsIf upgrading to Vaporlogic4 with. LonTalk interoperability, disconnect wires from Vaporlogic3. LonTalk pins and land them as instructed in Table 41. Table 41. Landing LonTalk wires. Disconnect wire from this. Connect it to this pin on Vaporlogic4. Vaporlogic3 board LonTalk pin adaptor board LON ProtoCessor Module. Corner of VL3 main board shown. Ground. Ground pin P12, P24, P43, P63, or P193Vaporlogic boards. VL4 adaptor board two stacked boards; top board shownLON ProtoCessor ModuleBoard removal and replacementRemove adhesiveFigure 51. Splitting interlocked terminal blocksNotes Some 4pin terminal blocks are two interlocked 2pinSee Figure 51. Scrape away any pin hole or screw corrosion before landingNot all Vaporlogic3 wire connections will be used for thisStrip ends ofFigure 52. Jumpering terminals T2 and 33Top edge of VL4Transferring expansion board terminal blocks.

http://dev.pb-adcon.de/node/19575

Leave the wires in the terminals when transferring the terminal blocksNote To facilitate wire rerouting and provide slack, remove top wireGTS humidifiers have one or two Vaporlogic3 expansion boards. If upgrading from Vaporlogic3 with two expansion boards, landVaporlogic4 adaptor board pin locations for Vaporlogic3 expansionGTS humidifiersFigure 61Indoor GTSGTS with outdoor enclosure. Remove endScrews will be reused,GTS humidifiersFigure 71. Remove fan and

bracketGTS04PNLASM50view. Figure 72Mounting screws useGTS humidifiers. Leave safety circuit wired in series withP33 and P34 on Vaporlogic4 adaptorP33 on Vaporlogic4 adaptor board. IfTorque terminal. Proceed to “Startup and validation” on. Page 19. Figure 81. Leaving safety circuit wired in seriesVL3 expansion boardWhether leaving alarm signals in series or separating them, you mustNote If needed, refer to the Vaporlogic3 wiring diagram and the. Vaporlogic4 Installation and Operation Manual for moreSeparate safety circuit alarm signals into three alarmsDoor interlock switch Figure 91Remove other end of wire from position 11 on low water relay, andRemove fork connector endBlocked flue switch Figure 91Run wire to P34Cut wire to length,Low water circuit Figure 91Land other end at terminal. P33 on Vaporlogic4 adaptor board. The following steps are for GTS without door interlock switch. Figure 92. Separating safety circuit alarm signalsBlocked flue switch Figure 92. VL3 withoutVL3doorMain boardLand wire at one of the h terminals 24 Vac on terminal strip atRemove other end of this wire from position 11 on low waterLand other end of this wire at terminal P33 at top of Vaporlogic4FPswSeparating safety circuit alarm signals GTS with door interlock switch. VL3 with doorVL3VL4 adaptorVL4 adaptorMain boardLow water relayExpansion boardBlocked flue switch 415ABoard removal and replacement. Removing Vaporlogic3, installing Vaporlogic4Shut down humidifier.

Before performing any maintenance orRemove galvanized subpanelRibbon cables will not be reused.Figure 101Unscrew standoffs, and remove board and standoffs they will notIf present,VL4 adaptor board standoffs. StandoffIf upgrading to Vaporlogic4LonTalk pins and land them as instructed in Table 101. Table 101. Ground pin P12, P24, P43, P63, or P193Electric humidifiers. Figure 111. Vaporlogic boards. VL4 adaptor board two stacked boards; top board shown. The Vaporlogic4 adapter board pin descriptionsDetermining LonTalk interoperability. VL3 board LonTalk connections if no wires, then no LonTalk. Electric humidifiers. Board removal and replacementRemove adhesiveFigure 121. Splitting interlocked terminal blocksNotes Some 4pin terminal blocks are two interlocked 2pinSee Figure 121. Scrape away any pin hole or screw corrosion before landingNot all Vaporlogic3 wire connections will be used for thisFigure 122. Jumpering terminals T2 and 33Top edge of VL4Strip ends ofVaporlogic4 adapter board. Transferring expansion board terminal blocksSome Vaporstream humidifiers have a Vaporlogic3 expansion board. Vaporlogic4 adaptor board pin locations for Vaporlogic3 expansionFigure 111. Leave the wires in the terminals when transferring the terminal blocksNote To facilitate wire rerouting and provide slack, unbundle wiresElectric humidifiersVapormist and HumiditechElectric humidifiers. The following procedure leaves the safety circuit door interlock andFigure 141.Proceed to “Startup and validation” on Page 19. Figure 141. Leaving safety circuit wired in series with one alarm. VL3 main board. Grayhandled jumper provided withGrayhandled jumper provided withVL4 adaptor boardSafety circuit wiring. Figure 151. Leaving safety circuit wired in seriesThe following procedure leaves the safety circuit door interlock andVL3 expansion board Vaporstream onlyVaporlogic4 adaptor board. If wire 801 does not reach P33, useTorque terminal block screws to. Proceed to “Startup and validation” on Page 19.

VL3 main board. VL3 expansion board Vaporstream onlyVL4 adaptor boardBoard removal and replacementBefore performing any maintenance orFigure 161. StandoffUnscrew standoffs, and remove board and standoffs they will notIf present,Bottom of VL4 adaptor board shown. Figure 162. VL3 board LonTalk connectionsIf upgrading to Vaporlogic4LonTalk pins and land them as instructed in Table 161.Remove adhesiveNotes Some 4pin terminal blocks are two interlocked 2pinSee Figure 163. Scrape away any pin hole or screw corrosion before landingCorner of VL3 main board shown. Figure 163. Splitting interlocked terminal blocks. Not all Vaporlogic3 wire connections will be used for thisTable 161. Ground pin P12, P24, P43, P63, or P193Board removal and replacementT2 and 33 on Vaporlogic4 adaptor board Figure 172. StripFigure 172. Jumpering terminals T2 and 33Top edge of VL4JumperFigure 171. The Vaporlogic4 adapter board pin descriptionsLON ProtoCessor

ModuleFigure 181. Leaving safety circuit wired in seriesVL4 adaptor boardProceed to “Startup and validation” on Page 19.Startup and validation. Startup. See the Startup commissioning checklist in the humidifier’s. Installation, Operation, and Maintenance Manual. Before resumingRefer to the Vaporlogic4. Installation and Operation Manual, and validate every parameter in the. Vaporlogic4 Setup menu. Figure 191. Field conversion label. When the upgrade is complete, fill out the Field. Conversion Label included with the upgrade kit, andWhen resuming operation, do not leave the humidifier unattended;Test outputs. When completing an installation or repair, cycle all outputs, such asGo to the test outputsDuring testing, the humidifier modeTest run. Vaporlogic4 has a test run capability to confirm system functionality. This capability allows a technician to simulate a demand for steamSet system demand percent and set test run timeHumidifier Descaling Solution.

Scale buildup on humidifier heaters and heatDRISTEEMs Humidifier Descaling Solution,The Descaling Solution cleans without riskDescaling Solution also cleans surfacesDRISTEEMs Humidifier Descaling SolutionUse of otherVa p o r l o g i c 4 a d a p t o r b o a r dFor more informationFor the most recent production informationTable 201. Vaporlogic4 adaptor board pin descriptionsSTS Page 18An ISO 90012000 certified company. U.S. HeadquartersEden Prairie, MN 55344European office. Marc Briers. Grote Hellekensstraat 54 b. B3520 Zonhoven. Belgium. Function. Safety circuitTank temp sensor inputContinuous product improvement is a policy of. DRISTEEM Corporation; therefore, product features andDRISTEEM, GTS, Vaporlogic, Vapormist, and Vaporstream,European community.Dranekooler is a trademark of DRISTEEM Corporation. Product and corporate names used in this document mayThey are used forDRISTEEM products are warranted according to the terms and conditions of the standardSee the literatureForm No. VL3VL4Convert0511. Part. No. 890000720 Rev D. Ins tal l ati o n, Op erationWeights, connections and heated water properties.....Clearance recommendations..... 9. Mounting. Piping. Alternative water seal and drain valve..... 25. Dispersion. Interconnecting piping requirements..... 32. Single and Multiple dispersion tubes..... 35. Operation. LW417 automatic drain and flush. LW417 variable skim times. LW417 endofseason drain. LW417 Onboard diagnostics.....TroubleshootingReplacement parts. OverviewFigure 31. LTS standard water model. Standard water LTS humidifiers heatSteam outlet. ModulatingHeatHot liquidManual drain or optionalDeionized water models LTSDI. LTSDI humidifiers heat deionized DI orAir gap. Hot liquidWater seal. Open drainFigure 32. Steam outlet. ModulatingFloat valve. Heat exchanger. Hot liquidLTSDI models can be converted in theManual drain valve. Air gap. Hot liquid supply. Water seal.

Open drainDimensions, LTS models 25C and 100C one heat exchanger. Front view. Side viewLTS dimensions. LTS model number. DescriptionOverviewDimensions, LTS models 400C two heat exchangers. LTS model. DescriptionLTS output capacities using hot water. FlowHot water supply temperatureThe LTS is not ASMEcertied. OverviewLTS connection sizes. Connection size. Water makeup ll. Drain. Varies with capacity and dispersion type.Condensate return. Hot liquid supply inlet and return outlet. See dimensions tables. Table 72. LTS weights. LTS modelOperating weight. Table 73. TemperatureWhen selecting a location for the humidifier, consider the followingInstallation. Figure 91. LTS clearance recommendations. For recommended service and maintenance purposes, maintain the following clearances. Left side with controlLeft sideTop. Rear. Angle ironFront. RightBottomTable 101. Mounting options by model. To ensure that the water level control system works properly, theMountingTrapeze. OptionalOptionalSupport legs, trapeze hanger, and wall brackets are not available for. These models must use Hlegs. The mounting methods described in this manual are the onlyETL, and CETL approvals.InstallationOverhead installation. Do not install water piping and humidifiersA broken water pipe, leaking valve gland,Secure threaded rod to an overhead structure that is strong enoughAdjust the mounting so that the tank sets level side to side andIf this type of installation cannot bePipe the overflow from the LTS directly toFigure 111. Trapeze hanger LTS models 25C and 100C only. Secure rods to overhead constructionAngle or

channel sized toHumidier drain to appropriateInstall water seal as shown on. Pages 24 and 25.Drip pan recommendedFigure 121. Support legsUse enclosed bolts, nuts, and washers to fasten legs to tank. ShimHlegs. Optional set ofHlegs required for LTS models 400C. While the LTS and LTSDI tank is securely held in the air,Then tighten them after the unit is place.

Adjust the mounting so the tank sets level side to side and front toInstallationLTSDI tank.LTSDI tank, and fasten to the horizontal timbers.Figure 131. Wall bracketsLTS modelRun a bolt with a washer through the faceLTS Outdoor Enclosure with standard or optional steam outlet, elevation view. Standard steam outletOptional steam outlet. LTS humidierSee Note 2 belowPipe chaseThe standard configuration has a steam outlet onThe optional internal steam distributionRun the electrical power into the enclosure at these knockouts.Depending on the application, interconnecting piping from theIf one of these valves must be located inside theFigure 151. LTS Outdoor Enclosure, top view. Valve access doorIntake ventilation fan. Enclosure drain. Control panel. Control panel heater. Standard steam outlet exits enclosure here. LTS humidier. Electrical and cleanout access door. Intake ventilation fanLTS or LTSDIItem. DescriptionNote. SpecificationsNote. Table 161. LTS Outdoor Enclosure weights. LTS or LTSDIOutdoor EnclosureThe Outdoor Enclosure is only available inTable 162. LTS Outdoor Enclosure connection sizes. LTS or LTSDI model number. Condensate return. Steam outletFigure 171. Outdoor enclosure installation detail. Normally closed llMakeup water supply pipingDisconnect by installer; see Detail A. Humidier. Open to drainVent with checkRoof decking. Detail AOptional water seal Ptrap drain. Normally closedDisconnectDomestic water, 80 psigOpen drainHeated building interior. Open drainTo valves byNote 1. To LTS humidierTo ensure that water does not remain in the fill line and freeze if therePower theseOn a loss of power the tank water will drain, but not be cooledIf it is critical to keep the Dranekooler functional in the case of aPipe the supply water for the. Dranekooler before the safety shutoff valves.Refer to governingFigure 181. Outdoor Enclosure mounting options.

Outdoor Enclosure mountingFlushThe use and storageLocate the Outdoor Enclosure soCurbCheck that all nuts are tightened.It is the installer’s responsibilityAll lifting operations must be accomplished with a load spreaderAll four lifting points must be used and will be marked “lift here”The optional internal steam distributionSee drawings on. Page 15.Important note about Outdoor. Enclosure installationEnclosure. If one of these valves must beFigure 191. Outdoor Enclosure clearances. Left sideTop. Keep openBackRight sideTUBOEBSEhNCurbs are manufactured of 16gaugeThe gasket must be installed between the top of the curb and theTo prevent the outdoor environment fromNote. If your LTS humidifier uses a LW417Enclosure is recommended. Insulated or heat taping of waterFigure 201. Typical rooftop installation overview. Flue. Humidier in Outdoor Enclosure. Roof surface. ElectricalRemote. Steam piping. Curb. Drain piping. Water pipingWhen power is applied to the Outdoor EnclosureThe strip heaters will power down when the temperature insideAlways shut off electrical serviceField piping overview for LTS models 25C and 100C models with one heat exchanger. Shock arrester recommendedWater supply shutoff valve, by installer. Steam vapor outlet. Install level. Water supply line; water pressure range 25 psi to 80 psiUnions, by installer. Optional condensateAir ventInstall level. Modulating valveH2 Air vent heightHoHoManual or electric drain valve. OvIf run is over 10 3 m,H1 PitchWaWater seal line. MUST be belowOpen oor drain. Refer to governing codesHeights required to overcomeUnit output. Water sealAir ventIf variable system flowDRISTEEM warranty.InstallationField piping overview for LTSDI 400C DI model with two heat exchangers. Water supply line; water pressure range 25 psi to 80 psi 172 kPaOptional condensate returnStrainer, by installer. ModulatingHoAir vent tubeInstall level. Manual or electric drain valve. OvAir vent heightSee valveUnions, byIf run is over 10 3 m,Water seal line.

MUST be belowOpen oor drain. Refer toIf variable system flow is desired, a twoway valve located in the hot liquid return line is recommended.DRISTEEM warranty.Threeway valve detailHo returnFro chanTo chanHo upplWhen the threeway valve is retracted in the upDranekooler water tempering

device. The drain line piped from the humidifier must be run to anIf nonmetallic pipeThis steam will rise and saturate electrical components, adverselyDRISTEEMs Dranekooler, shown mountedOM951aThe Dranekooler option willDrain piping after the water seal must be pitched a minimum ofInstallationLTS humidifierUIFESBJODPOOFDUJPOUPBO54TUBOEBSEXBUFSThe LTSDI humidifier has a pipe thread fitting on the drain valvePrior to dumping into a drain, theAlternate water seal and drain valve piping. Typically, the water seal height dictates the minimum dimensionThe alternateAlternate water seal and drain valve piping. Skimmer outlet. Top of water seal must beH1 see table on Page 22. DrainAir gap.