Ao smith water heater parts manual installation guide manual download

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Hot water electric water industrial gas industrial gas industrial water indirect hot water industrial residential water residential water with residential gas shortly after the purchase of a new water heater that is able to be "intelligent" or controlled at a distanceLowes interrupted the production of the Iris platform, making all Iris products unusable. Even if they released the source code for their hub but my intelligent water heater add connected to the Iris servers even if WiFi means that I have not had the opportunity to control or monitor the water heater at a distance. With a development card wemos mini execution of arduino code and the sending of data through square meters to homeassistant. The intelligent energy controller of the water heater connects and communicates with your water heater so no change is necessary for the actual water heater only the intelligent controller is modified. The intelligent controller can be easily removed and installed in the water heater in a minute or less. This tutorial only reads the data and does not send data to the water heater by preventing any malfunctions of the water heater. My main purpose was to monitor the esteemed volume of hot water. I know that it is possible to check the water heater, change setpoints and operating modalities, but this has not been pursued at this point. ** Disclaimer ** as always with the projects you read online are not responsible for any damage that you could cause to your own own or to yourself. Read and follow these indications at your own risk. I did not measure high tensions on the printed circuit or on the connector of the water heater I used. Even if it is possible that your water heater is different then mine or I just lost something and it was lucky that I have not killed myself .... use the common sense and consider cable as its high voltage or confirms with a voltmeter that is safe.*** This is my first instructable post so I hope it doesn't completely suck *** Items required Smart energy water heater regulator, these are for cheap on ebay as they they they practically useless with out changes. ESP 8266 card, for this project I used a wemos mini light Welding iron 3 pins male head 3 female connectors dupont sqmtt server and homeassistant or any sqmtt client - did not cover the setting of the sqm or homeassistant server but we have Google and Forums on the Internet. .. then use them if you need to set that stuff up to the circuit of the circuit from the intelligent energy controller by removing the screw and releasing the 4 locking tabs connect the wires to the circuit tab. Only 3 wires must be connected TX, 5V and Earth. For these connections, I connected the header pins, but it is always possible to only pay wires directly to the card. The TX pivot has a holes connector near the WiFi module that I used to pay the heading A, for 5v and Earth I used the main card connector and the floating stolen stroke pins on the rear side. The brisking pins on the Wemos card if they are not already installed to install the ESP8266 card in the Arduino idea and the ESPMQttClient bookshop before filling out and loading the code. If you have not set the ESP8266 in Arduino or the EspmqttClient bookshop there are many forums there. It will also be necessary to download and install a modified version of the serial software, which I call SoftwareSerial512, included in the link below together with the project code. To install the library, extract the zip file in the Arduino bookshop folder. This library is necessary as the normal version of SoftwareSerial has a 64 -character buffer size and the warmers send more than one hundred characters at a time. This library should be suitable for 512 characters, but at an additional memory cost of memory. Then use the normal software -library softwareser on other projects unless it is necessary to read a long string on ehc ehc otnemom lad ,ecilpmes etnemavitaler ¨Ã ecidoc lI.TTQM itnemogra ilg eracifidom id ongosib / aredised is es e ,TTQM e IFIW enoizatsopmi artsov al noc hcteks ol The heater sends all the necessary data, periodically to the WIFI module on the circuit board. Data is sent over a serial communication at 115 200bps in baud rate. We're just reading this data and analyzing it into variables. Then we publish these variables on the MQTT client. There is more data than what I am analyzing, but most of it was useless, feel free to read the data string and add anything you think is relevant. Load the code!Before installing the Smart Controller card in case you want to make sure that the 5V and GND connections are correct. Carefully install the board on the water heater and measure the voltage on the two header feet installed on the left side of the board. You want to make sure you get 5v and also make sure the polarity is correct (if you see -5v you need to pass +5 and GND). The connections should be similar to mine, the red wire is obviously +5v and the black wire next to it is GND, the other black wire on the right is TX.Next you want to test the serial connection to the water heater, Connect the TX pin on the smart controller to the serial pin of the software RX GPIO14 or D5 (not the pin labeled RX) on the wemos board. Connect the 5V and GND cables also to the Wemos card, connect the PC and open the serial monitor. You should see the data coming in after a few minutes with "DeviceText" inside. The water heater only sends these ropes every few minutes, so go get a beer and come back. If after 5-10 minutes no data is displayed in the serial monitor, check all connections. If all goes well, you can install the card back into the case. So you want to set the MQTT arguments in the MQTT client, for my configuration I am monitoring the water heater from my home assistant. If you don't have an MQTT client or an MQTT server, you will need to configure these... again many forums out there! HT511 HT511 .W 1265 YNAPMOC STCUDORP RETAW HTIMS .O.A 54 YLBMESSA GEL TRID 5050 .A.S.U NI ETAPMATS 32 ITRAP NOC .noitatnemucod eht evorpmi rehtruf ot su spleh tI .siht tuoba su mrofni esaelp ,seitirucsbo ro stluaf revocsid llits uoy dluohS .seitirucsbo dna stluaf niatnoc yam launam eht ,strap tnaveler eht fo noitpircsed etelpmoc ,yrassecen erehw ,dna tcerroc a gnirusne ni nekat neeb sah erac tsomtu hguohtlA .egrahc fo eerf su morf elbaniatbo era esehT .snoitidnoC dna smreT lareneG eht ees noitamrofni rehtruf roF .ecremmoC fo rebmahC eht htiw del if sa snoitidnoC dna smreT lareneG eht ni denoitnem naht rehto esu tnetepmocni fo tluser a sa seitrap driht fo smialc rof ytilibail yna tpecca ton seod ynapmoC stcudorP retaW htimS .O.A .sreilppus evitcepser eht fo skramedart deretsiger era launam siht ni denoitnem seman dnarb llA .ytilibaiL .skram edarT .launam siht ni denoitnem sa snoitac ificeps eht egnahc ot thgir eht sevreser ynapmoc stcudorp rewit htims .o.a .ynapmoc stcudorp rewit htims .o.a morf gnitirw noissimsimrep roirp tuohtiw yaw rehto y ro gnipocotohp ,sserp fo yb Cilbup edam Ro/DNA decudorper ,deepoc Eb yam noitide morf gnihton .devreser la la la la la scudorp rewit htims .o.a Launaam siht gniidaer ton .Eht pu gnittrats erattrate rofeb launam Siht daer ylluferac gninraw launam siht daer ylluferac 3 rellatsni Ruoy 2 noitarproc Htits .o .a Fo scuds 99$ tsuJ muimerP yliaD taeBtekraM FFO %05 61 81 000-482581 .ON TRAP 91 81 51 71 41 91 71 61 63 NOITALUSNI EPIP 21 8 7 YLBMESSA REWOLB 101/001SEIRES 05/04 RCPG 05/04 HSPG SLEDOM 31 YLBMESSA RENRUB SEIRES 001 31 34 Evlav Feiler ylbmessa Renub Seires 101 p 44 senrah eriw 6 01 9 tsil strap retaeh retaeh retaeh Laitnediser moc.retawtoh@ha-eis. -1 :xaf â€â€â€¢ 5452-334-008-1 :Enohp 30806 Sionillli ,Pisla â¢€â€â€¢ dna ecivres ,noitallatsni eht sebircsed launam sihT 3600 ecived eht tuobA 1.1 noitcudortnI 1 7 G IWT/G IWT launam noitcurtsnI xednI margaid tiucric lacirtcele sdnegeL margaid tiucric lacirtcelE noitcudortnI xennA htimS .O.A fo snoitagilbO smialC ytnarraw eht fo tnetxE snoisulcxE esu dna noitallatsni fo snoitidnoC knat ytnarraW lareneg ytnarraW)etacifitrec(ytnarraW 11 tnetnoc fo elbaT 6 5 G IWT/G IWT launam noitcurtsnI ecnanetniam etelpmoC ecnanetniam edis-saG ecnanetniam edis-retaW ecnanetniam eraperP noitcudortnI ecnanetniaM lortnoc eht no srorre rof elbat gnitoohselbuorT srorre lareneg rof elbat gnitoohselbuorT noitcudortnI srorrE doirep gnol a rof ecived eht nwod tuhS ecived eht etalosi yllacirtcelE emit trohs a rof ecived eht nwod tuhS noitcudortnI nwod tuhS ecived eht fo elcyc gnitaeH pu tratS noitcudortnI pu tratS snoitallatsni detnevnu niarD snoitallatsni detnevnu niarD niarD ecived eht lliF lliF yrogetac sag rehtona ot noisrevnoC eulav- 2 OC eht tsujda dna kcehC noitcennoc lacirtcelE egrahcsid sag eu lf dna ylppus riA noitcennoc saG detnev snoitcennoc retaW detnevnu snoitcennoc retaW margaid snoitcennoC snoitac ificeps lacinhceT snoitidnoc tneibmA gnigakcaP noitcudortnI noitallatsnI noitallatsni eht fo ytefaS ecived eht fo ytiruceS ecived eht fo elcyc gnitaeH ecived eht fo noitarepo lareneG noitcudortnI ecived eht fo noitarepO tnemucod siht fo weivrevO metsys noitatoN ecnanetniaM spuorg tegraT snoitalugeR sag llems uoy nehw od ot tahW ecived eht tuobA noitcudortnI 1 tnetnoc fo elbaT 5 G IWT/G IWT launam noitcurtsnI 4 4 3 G IWT/G IWT launam noitcurtsnI .noitallatsni ruoy fo reenigne noitallatsni/reilppus eht tcatnoc esaelp ,seilppus retaw dna yticirtcele ,sag ot snoitcennoc ot tcepser htiw smelborp roF :etisbeW :xaF :lareneG HTIMSOA :)eerf(enohpeleT sdnalrehteN ehT nevohdleV BA xoB .O.P ynapmoC stcudorP retaW htimS .O.A .tcatnoc ot etatiseh ton od esaelp ,ecived eht ot detaler stcejbus c ificeps gninrecnoc snoitseuq ro skramer yna evah uoy fI noitamrofni avitaler enoizatnemaloger al â ;isossag itneulffe ilged ociracs olla avitaler enoizatnemaloger al â ;enoitsubmoc id airaâlled enoizatnemilaâlla avitaler enoizatnemaloger al â ;icifide ilgen enoizalitnev al â ;elibatop auqca id otnemanoigivvorppaâl rep emron ;enoisnet assab a itnaipmi ilg rep azzerucis id emron ;ehcitarp evitterid evitaler e elarutan sag a itnaipmi ilg rep evitterid ;acirttele adneizaâllad etalumrof itnetsise sag a itnaipmi ilg rep evitterid ;eizilide emron :ilibacilppa ilacol emron ella onemla emrofnoc ais otnaipmi oretniâl ehc ivratrecca etevod ,enoiznetunam alla e izivres ia ottedda erengegni o erotallatsni ,elanif etnetu id Ãtilauq nI emroN 3.1 !oicifideâl etaicsal e itnapucco ilg etitrevvA !sag led enoizatnemila id alovlav al etengepS !ertsenif el e etrop el etirpA !ollenapmac o anips ,onofelet iserpmoc ,icirttele irotturretni erazzilitu noN !ellitnics erativE !amuf is noN !ocouf li erirpa noN :sag id erodo id osac nI aznetrevvA sag id erodo etnes is odnauq eraf asoC 2.1 .ovitisopsid la innad e ilanosrep inoisel erasuac onossop etinrof inoizurtsi el eriuges non e elaunam otseuq ereggel noN .aiadlac al erednecca id amirp elaunam otseuq etnematnetta ereggeL aznetrevvA .EC oihcram la ottirid onnah idniuq e saG a ivitisopsiD i rep aeporuE avitteriD alla imrofnoc onos ivitisopsid i ²Ãic noC .)98 NE(airatinas adlac auqca id enoizudorp al rep ossor if-sag olumucca da auqcadlacs ilg rep aeporue amron alla imrofnoc onos ovitisopsid led enoizatod al e enoizurtsoc id odotem lI .IWT e IWT illedom ia onacilppa is elaunam etneserp len etunetnoc inoizamrofni eL .36C e 35C ,34C ,33C ,31C ,32B onos ilibissop ivitisopsid id ipit I .olellarap ametsis emoc ehcna otagelloc eresse ²Ãup ovitisopsid lI .ocirtnecnoc onimac led otnemagelloc nu etnemacipit ah ovitisopsid lI .otrepa ovitisopsid emoc ehc osuihc ovitisopsid emoc ais otallatsni eresse ²Ãup IWT lI .airaâlled enoizatnemilaâllen erotalitnev nu noc enoizasnednoc a aiadlac anu ¨Ã ecived-IWT lI .IWT ovitisopsid led Ãticirtteleâlled Ãticirtteleâlled ,ocouf led iligiv ied enoizatnemaloger al â ;icifide ilged enretni eirangof iter and the municipality. In addition, the installation must comply with the manufacturerâs standards. TWI G/TWI G 7 8 1 Introduction Supplements or subsequent adaptations and/or additions to regulations, requirements and guidelines may apply at the time of installation. 1.4 Target Groups The three target groups for this manual are: users (end users); installation engineers; and service and maintenance technicians. Symbols indicate on each page for which target group the information is intended. See the chart. Target Group Symbols Target Group Symbol (End User) Installation Engineer Service and Maintenance Engineer 1.5 Maintenance service must be performed at least once a year on both the gas and water sides. The frequency of maintenance depends, among other things, on the quality of the water, the average number of operating hours per day and the water temperature set. Note To determine the correct maintenance frequency, it is recommended that the Service and Maintenance Engineer check the gas side and water side of the device three months after installation. The maintenance frequency can be determined on the basis of this check. Note Regular maintenance extends the life of the device. The end user and the service and maintenance technician are responsible for routine maintenance. They shall clearly determine their appointments. Note If the device is not maintained regularly, the warranty will become void. 8 TWI G/TWI G instruction manual 9 Notation system 1.6 This manual uses the following notation system: Warning: Important notice. Warning If you ignore this text, the device may get damaged. Warning Ignoring this text can cause serious damage to the device and dangerous situations for people. 1.7 Overview of this document The table provides an overview of the contents of this document. of this document chapter groups of recipients description 2. Function of the device device describes how the device works. 3. Installation This chapter describes the installation steps that must be performed before the device is finally booted. 4. Conversion to another category Conversion to another category is not possible. 5. Filling This chapter describes how to fill the device. 6. Download This chapter describes how to empty the device. The 7th. Booting This chapter describes how to boot the device. It also describes the general heating cycle of the device. 8. Switching off This chapter describes how to turn off the device for a longer or shorter period of time. Point 9. Errors This chapter is intended primarily for installers and service and maintenance engineers. Describes the failures of the device. These errors are displayed on the display. A table shows the possible cause and solution. However, the end user can also find additional information about the device here. The 10th. Maintenance This chapter describes how to determine the frequency of maintenance activities. Both the end user and the service and maintenance engineer are responsible for regular maintenance. They shall fix precise dates for this purpose. Note If the device is not regularly serviced, the warranty lapses. Instructions for use TWI G/TWI G 9 10 1 Introduction Chapter Target Groups Description 11. Guarantee (certified) This chapter contains the warranty conditions. Twelve. Attachments This chapter contains the electrical diagram of the circuit. 10 Instructions for use TWI G/TWI G 11 2 Operation of the device 2.1 Introduction This chapter covers, in the following order: General operation of the device; Heating cycle of the device; Safety of the device; Installation Safety 2.2 General Operation The figure shows a cross-section of the device. of the device .01 .01 adlac eicifrepus id erotidneccA .9 arutrepoc id artsaiP .8 sag led ollortnoC .7 airaâlled enoizatnemila id obuT .6 irutneV .5 erotaicurB .4 airaâlled enoisserp id erotturretnI .3 etnalosi otartS .2 OCE / arutarepmet id erosneS .1 0R 6170 DMI edneggeL ovitisopsid led elasrevsart otarts oL .)02(enofis li osrevartta atacirac s eneiv otnemadlacsir otseuq noc amrof is ehc asnednoc aL .enoizudorp al aroilgim ehc ,auqca'llen ehcna atirefsart eneiv ehc)erolac(aigrene id oicsalir li asuac enoizasnednoc aL .israsnednoc a onaizini eu lf sag i ,oiotabres led odnof lus adderf auqca'l ognul erolac id erotaibmacs ol osrevartta iop e enoitsubmoc id aremac al osrevartta ittodnoc amirp onognev eu lf sag i ,)31(erolac id erotaibmacs olled enoizurtsoc elaiceps alled asuac A .elamitto aira/sag otroppar nu erpmes arucissa 1:1 aira/sag otnemaippocca'L .alotnev alled enoizaripsa id otal lus irutneV id obut li e)7(sag led ollortnoc id ovitisopsid li osrevartta otinrof eneiv sag lI .enoitsubmoc al rep airassecen aira'l aripsa)01(erotalitnev lI .1:1 aira/sag otroppar led ollortnoc noc)4(ximerp e erotaicurb nu id otatod ¨Ã ovitisopsid lI .ovoun id atnuigga etnemataidemmi eneiv adderf auqca'l ,ovitisopsid lad adlac auqca'l accot is odnauQ .auqca'lled enoizabut alled etnatsoc enoisserp anu ¨Ã'c ,auqca noc omissam la otipmeir ¨Ã ovitisopsid li eS .)21(adlac auqca'lled aticsu'lla oiotabres li aicsal)31(erolac id erotaibmacs ollad e)51(enoitsubmoc id aremac allad atadlacsir ottenibur led auqca'L .oiotabres led odnof lus)61(adderf auqca'lled aserp al osrevartta atinrof ¨Ã adderf auqca'l ovitisopsid otseuq nI ovitisopsid led otnemanoiznuF 2 21 11 G IWT/G IWT inoizurtsi id elaunaM 0R 6170-DMI 0R 6170-DMI aira'lled ossergni id otnaipmI .82 enoizepsi id artseniF .72 otatsomret adehcS .62 ocinorttele ollortnoC .52 CAV 42-CAV 021 erotamrofsarT .42 erottennoC .32 ociracs id alovlaV .22 CAV 021-CAV 032 erotamrofsarT .12 enofiS .02 etneulffe sag id aciracS .91 aira'lled enoizatnemila id obuT .81 arusim id obut ocirtnecnoC .71 adderf auqca atartnE .61 enoitsubmoc id aremaC .51 oiotabreS .41 erolac id erotaibmacS .31 adlac auqca ociracS .21 otatsomreT .11 (2) prevents heat loss. 2.3 Heating cycle of the device The temperature sensor (1) measures the temperature of the water. As soon as the measured temperature is lower than the set water temperature, the electronic control observes a heat heat heat heat rep otnemirefir id itnup i ecsinrof allebat aL .ottorretni eneiv otnemadlacsir id olcic li e etnemavoun erpa is otatsosserp li ,obrutsid nu acifirev is ,aivattut ,eS .eduihc is otatsosserp li ,etneicifus ¨Ã enoisserp id aznereffid al odnauQ .otrepa ereneg ni ¨Ã aira'lled otatsosserp lI .ovitisopsid led otnemanoiznuf li e gnigrup-erp al etnarud aira id enoizatnemila'l e enoizacifirbul id sag id ociracs ol ecsitnarag aira'lled otatsosserp lI aira'lled otatsosserp gnigrup-erp otamaihc ¨Ã otseuQ .enoisnecca'lled amirp atagrups ais enoitsubmoc id aremac al ehc ecsitnarag erotalitnev li ,azzerucis id ivitom reP .erolac id ongosibbaf li etnarud aira id elamitto enoizagore'nu ecsitnarag)01(alotnev aL .sag led enoizatnemila'l onaccolb elovlav el ebmartnE .azzerucis id ovitisopsid emoc elovlav eud ah sag led ollortnoc lI .erotaicurb la sag led enoizatnemila'l odnetnesnoc sag led ollortnoc li erpa ocinorttele odnamoc lI sag led ollortnoc id alotneV ovitisopsid li etnematutepir engeps OCE'l es enoizallatsni id ocincet li erattatnoC .otanitsirpir etnemacitamotua eneiv OCE'l ,etneicifus odom ni atassabba ¨Ã is arutarepmet al aneppa noN .CºÂÃ 59 i arepus auqca'lled arutarepmet al odnauq ovitisopsid li engeps)ffO-tuC ygrenE(OCE o azzerucis id erotturretni'L auqca'lled arutarepmet alled azzeruciS 2.4.2 31 G IWT/G IWT inoizurtsi id elaunaM 21 .enoizazzinoi alled otnemavelir li ;aira'lled otatsosserp li ;alotnev al ;sag led ollortnoc li ;auqca'lled arutarepmet alled azzerucis al :ad ottaf ¨Ã otseuQ .arucis enoitsubmoc anu ecsitnarag e auqca'lled arutarepmet al allortnoc ocinorttele ollortnoc lI enoizudortnI ovitisopsid led azzeruciS 4.2 .otnemadlacsir id olcic li epmorretni ocinorttele ollortnoc li e animret erolac id ongosibbaf li ,atatsopmi auqca'lled arutarepmet al arepus atarusim arutarepmet al aneppa noN .atadlacsir eneiv auqca'l e alecsim atseuq ednecca)9(adlac eicifrepus id erotingi'L .aira'l noc alocsem is sag li e otunim ozzem acric opod erpa is)7(sag led ollortnoc lI device. Note The pressure switch disconnect point cannot be adjusted. Pressure switch attachment point Device pressure difference (NAT) Pressure difference (LP) TWI Pa 700 Pa TWI Pa 400 Pa Ionisation detection The electronic control uses the hot surface igniter for flame detection by means of: ionization detection. Electronic control closes the gas valve as soon as it observes that it is not Flo while the gas is due. Twi G/Twi G 13 14 2 2 2 -2 Working Manual 2.5 Safety of the installation in addition to the standard safety of the device, the installation must be further protected using an expansion ship, an expansion valve, a pressure reduction valve , a non -Stenn valve and a t & p valve. The use of an expansion ship, expansion valve and/or pressure reduction valve depends on the type of installation: not ventilated or not ventilated installation with an undeclared installation an expansion valve and an expansion ship avoid pressure Too high in the tank. Cié prevents damage to the tank. A return valve avoids too high pressure on water pipes. This valve also avoids the water from the tank due to the water pipes. The pressure reduction valve protects the installation from too high a water pressure pressure (> 8 bar). The parts are mounted in the cold water system (3.6.1 Cold water side) installation with a ventilated installation The open tank absorbs overpressure. The height of the water tank determines maximum operational pressure in the tank. The maximum operational pressure is 8 bar. The installation must also be equipped with an expansion valve of the hot water pipe that fits into the water tank. In the ideal situation this should flow into a separate drain channel, otherwise in the open water tank. The device must also have a stop valve on the water side (3.6.2 hot water side) T&P valve a T&P valve is mandatory only with non -twenty installations. However, A.O. Smith recommends using a T&P valve with ventilated installations. A valve (temperature and pressure valve) monitors the pressure in the tank and the water temperature at the top of the tank. The valve will open when the pressure in the tank becomes too high (> 10 bar) or when the water temperature of the water Too high (> 97 C). Hot water can now flow from the tank. Because the device Ã© is under the pressure of the water pipes, cold water is transformed automatically into the tank. The valve remains open until the unsafe situation is removed. The device typically has a connection point for a T&P valve (hot water side 3,6,2). 14 TWI G/TWI G 15 3 Installation Notice Installation must be carried out by an authorized installation engineer in accordance with the with generally and locally applicable regulations of gas, water, power companies and brigade. The device should only be installed in an area that largely meets national and local ventilation regulations (1.3 regulations). 3.1 INTRODUCTION 3.2 Packaging This chapter describes the activities Installation to be carried out before starting with the device (7 start-up), being: packaging; Environmental conditions; Technical specifications; Diagram of connections; Water connections; Gas connection; Air supply and exhaust gas flows; Electrical connection; Check and adjust the CO 2 value carefully remove the package to avoid damaging the device. Ã it is possible to unpack the device as best as possible when Ã is near or at its defi site. CAUTION Move the device to stand alone. Make sure not to damage the device after unpacking. 3.3 Environmental conditions The device Ã is suitable for open and closed combustion. When installed as a closed device, Ã is independent of the installation area for the required air supply. Therefore there are no additional ventilation regulations. If the device is installed as an open device, it should comply with local guidelines and ventilation regulations for open devices. Possible types of devices are B23, C13, C33, C43, C53 and C63. Caution for a risk explosion and corrosion of the device, do not use the device in areas where chemicals are stored or used. Certain propellants, bleaching agents, degreasants and similar explosive vapors and/or vapors. use device in an area where such substances are present makes the warranty void. Instructions for useTWI G/TWI G 15 16 3 Wet Installation of air and ambient temperature Thelaying area shall be frost-proof or frost-proof. The table indicates the environmental conditions to be observed in order to ensure the functioning of applied . Humidity Specifications air and ambient temperature HumidityÂ air and ambient temperature Humidity max. 93% RH to +25 C Functional ambient temperature: 0 t 60 C Maximum load on the floor Considering the weight of the unit, take into account the maximum load on the floor. See table below. Specification of the weight in relation to the maximum load on the floor Weight of the appliance filled with water TWI TWI kg 271 kg Water composition The appliance is intended for heating drinking water. Drinking water must meet the standards for drinking water intended for human consumption. The table provides an overview of the specifications. Specifi cations for water water water composition Hardness (alkaline earth ions) Conductivity > 1.00 mmol/l: - German hardness > 5.6 dh - French hardness > 10.0 fh - British hardness > 7.0 eh > 125 mus/cm Acidity (ph-value) 7.0 < ph-value < 9.5 Remark When the specifications cations mentioned in the table are deviated from, the protection of the tank can not be guaranteed (11 Warranty (certifi cate)) Working area In view of the accessibility of the device, is recommended to apply the following distances (see fi gure): AA: on the front side of the device: 100 cm. BB: around the device: 50 cm. Top side of the device: 50 cm. 16 Instruction manual TWI G/TWI G 17 AA Remark When installing the device, make sure that the device cannot damage the immediate surroundings or lower fl oors in case of leakage of the tank and/or connections. In this case, install the device near a floor drain or in a tray the right size. A drip tray desaB)*(5,3 6,2 h/gk)*(noitpmusnoc saG 5,0 Â±Â 4,01 5,0 Â±Â 0,01 %loV 2OC rabm erusserp ylppuS 7,74 0,63 wk tuputo lanimoN 9,84 0,73 wk)eulav reppU(daoL lanimoN rabm 73-13G :P3 yrogetac saG IWT IWT tinU P I noitpmusnoc saG 8,4 6,3 h/Â³ Ã U H2 I noitpircseD atad saG atad saG ssalc-PI zH ycneuqerf sniaM)V(tloV)CAV %01+ %51-(egatlov ylppuS)W(ttaW noitpmusnoc rewop lacirtcelE nim C 54 = TÂA arepo mumixaM gk thgiew ytpmE l emuloV IWT IWT tinU noitpircseD atad lacirtcele dna lareneG atad lacirtcele dna lareneG pR 1 pR noitcennoc eganiard noitasnednoC 7 TPN 1 TPN 1 noitcennoc evlav P&T 5 TPN 4/3 TPN 4/3 noitcennoc evlav niarD 4 TPN 4/3 TPN 2/1 noitcennoc renrub c saG 3 TPN 1 TPN 1 noitcennoc teltúretaw to H 2 TPN 1 TPN 1 noitcennoc ylppus retaw dloC eganiard noitasnednoc thgieH W noitcennoc evlav P&T thgieH S noitcennoc evlav niard thgieH R IWT IWT noitpircseD noisnemiD 91 G IWT/G IWT launam noitcurtsnI teltúretaw toh thgieH N ylppus retaw loc thgieH M noitcennoc renrub/sag thgieH K egrahcsid sag eu lf notisop-y yH egrahcsid sag eu lf notisop-x xH ylppus ria/egrahcsid sag eu lf thgieH H 521/08 521/08 ylppus ria/egrahcsid sag eu lf retemaiD G htpeD E retemaid eciveD thgieh llarevO A IWT IWT noitpircse D noisnemiD)esiwrehto detats sselnu ,mm ni sezis lla(snoisnemiD 8170-DMI R W 7 K 4 M H 3 S G 1 N A 5 2 D E yH ÂºÃo D atad lacinhcet eht niatnoc woleb selbat ehT snoitacificeps lacinhceT 4.3 noitallatsnI 3 81 71 G IWT/G IWT launam noitcurtsnI 0R 7170-DMI 0R 7170-DMI BB aera gnikroW .ecived eht fo retemaid eht taht gregal mc 5 tsael ta fo htdiw dna htgnel a htiw peed mc 5 tsael ta egrahcsid dna A Evah evah 1013.15 Mbar and 15 C. Instruction Manual Twi G/Twi G 19 20 3 Installation 3.5 Scheme of connections The figure shows the connections scheme. This diagram is used in the sections that describe the actual connection activities. Legends of the connections diagram The not mentioned numbers are not applicable. 1. Pressure reduction valve (compulsory) 3. T&P valve (compulsory) 4. Arrest valve (recommended in tube C and mandatory in tube a) 5. Non -return valve (mandatory) 6. Circulation pump (optional) 9. DRAWING VALVE 10. MANUAL GAS HANDLE VALVE (MANDATORY) 11. Service valve 12. Temperature meter (optional) 13. Condensing drainage 14. Exhaust points 15. Expansion valve (mandatory) 16. Expansion Vase (mandatory) 17. Three -way ventilation valve (registered letter) 18. Water tank 19. Wall valve A. Pipes D. Gas power supply E. Water flow. Acqua A. vented 20 instruction manual Twi G/Twi G 21 3.6 Water connections Warning Warning The installation must be carried out by an engineer responsible for the installation in accordance with the generally applicable standards (1.3 rules) water side cold see a) in connections diagram (3.5 connections scheme). 1 Place a approved stop valve (4) on the cold water side in accordance with applicable regulations (1.3 rules). 2. The maximum operating pressure of the device is 8 bar. The pressure of the water pipes can be incidentally exceeded 8 bars, mount an approved pressure reduction valve (1). 3 Mount a non -return valve (5) and an expansion container (16). 4 Mount an expansion valve (15) and connect the upper side of the flow to a drainage tube of the open water side of the hot water see (B) in the scheme of (connection diagram 3.5). Note The insulation of long hot water pipes prevents unnecessary energy losses. 1 Option: Mount a temperature meter (12) to control the temperature of the tap water. 2. Mount the T&P valve (3). 3 Mount a stop valve (11) in hot hot water pipes for service purposes Circulation pipes See (C) in connection diagram (3.5 connection diagram). If you want to have hot water immediately available, you can install a circulation pump at the discharge points. This is more comfortable and prevents the leakage of water. 1. Mount a circulation pump (6) with a capacity corresponding to the size and strength of the circulation system. 2. Mount a non-return valve (5) downstream of the circulation pump to ensure the direction of circulation. 3. Mount two stop valves (4) for service purposes. 4. Connect the circulation pipe to the cold water supply pipe Condensate drainage 1. Connect a drain pipe to the siphon (13) below the waterfall to drain the condensation and connect it to the water drain pipe. Attention All connections downstream of the siphon must be resistant to condensation. 3.7 Ventilated water connections Warning Installation must be carried out by a certified installer in accordance with general and local regulations (1.3 Regulations) Cold water side See (A) in connection diagram (3.5 connection diagram). 1. Mount on the side of the cold water an approved shut-off valve (4) between the water tank (18) and the device in accordance with the applicable regulations (1.3 Regulations) Side of the hot water See (B) in the connection diagram (3.5 Connection diagram). Warning The insulation of long hot water pipes prevents unnecessary energy losses. Operating instructions TWI G/TWI G 2122 3 Installation 1. Mount the T&P valve (3). 2. Option: mount a thermometer (12) to check the temperature of the tap water. 3. Install a stop valve (4) in the hot water distribution line for service purposes. 4. If a circulation pipe is required, proceed by mounting the (3.6.3 Circulation tube) Circulation tube See (C) in connection diagram (3.5 Connection diagram). If you want to have hot water immediately available, you can install a circulation pump to a eciveD 32G IWT/G IWT launam noitcurtsnI 22 .seitilibissop eht fo noitanalpxe na eriuqer uoy fi retrufcafunam eht tcatnoc esaelP .sepyt eciveD esehT tuoba noitamrofni edivorp elbat eht dna erug if ehT .36C dna 35C ,34C ,33C ,31C ,32B sepyt eciveD eht rof detcepsni neeb evah secived ehT .sepyt eciveD detcepsni eht no tnedneped ,egrahcsid sag eu lf dna ylppus ria eht gnitcennoc rof seitilibissop suoirav era erehT .) snoitaluger 3.1(snoitaluger elbacilppa yllacol dna yllareneg eht htiw ecnadrocca ni reenigne noitallatsni desingocer a yb tuo deirrac eb llahs noitallatsni ehT gninraW lairetam egrahcsid sag eulf rof stnemeriuqeR snoitcennoc lellaraP lairetam egrahcsid sag eu lf rof stnemeriuqeR :stcejbus gniwollof eht sebircsed noitces sihT noitcudortnI egrahcsid sag eulf dna ylppus riA 9.3 .gnitnuom retfa segakael rof kcehC gninraW .evlav sag eht esolC .3 .esu Erofeb EPEP sag saga eht .2 .Ep ylppus sa sa eht by)01(Evlav sa sa eht tnuom ni)(SEE .EES .EHT ot ot yticapac tneic tneic Iffus Gnireviled ROF Elbatius Era Sepip Ylppus sag sa fo htgnel eht dna retemaid eht taht erusam. deirrac eb llahs noitallatsni ehT gninraW noitcennoc saG 8.3 .tnatsiser-noitasnednoc eb llahs nohpis eht maertsnwod snoitcennoc llA noitnettA .epip egrahcsid retaw eht ot siht tcennoc dna eganiard noitasnednoc epip)31(nohpis eht ot epip eganiard a llaf eht htaenrednu hcattA .1 eganiard noitasnednoC epip ylppus retaw dloc eht ot ot ot ot gnipip noitapic eht tcennoc .4 .Sooprup Ecivres rof)4(sevlav pots owt tatnuom .3 .noitcerid note s. FO ecnatsiser eht dna ezis eht htiw sdnopserroc tahtnopserroc taht yticapac tiw)6(pmpum noititrig mnuom .1 .reta fo egalips sdiova dna elbatrofmoc ero htimS .O.A enoizattenA ehcificepS .ettafsiddos onos inoizidnoc el ebmartnE .5 id ¨Ã evruc 09 id otitnesnoc oremun li e irtem 02 id ¨Ã amissam azzehgnul al allebat al odnoceS 0R 2350-DMI ocirtnecnoc imuf id ociracs noc oihccerappA 52G IWT/G IWT osuâl rep inoizurtsI 42 .09 a evruc orttauq id e)33C/31C(m 51 id ocirtnecnoc obut nu id otinum eresse eved ovitisopsid lI IWT nu artsom arugif aL .oipmesE icirtnecnoc imuf ied ociracs id ocitarp oipmesE .oipmese nu noc otageips Ãrrev ²Ãic ottuT .evruc id omissam oremun led ¹Ãip erazzilitu otitnesnoc euqnumoc ¨Ã non ,obut led amissam azzehgnul alled onem azzilitu is odnauQ .obut led amissam azzehgnul alled ¹Ãip erazzilitu otitnesnoc euqnumoc ¨Ã non ,evruc id omissam oremun la eroirefni ozzilitu id osac nI .etattepsir eresse onoved allebat allen etacidni inoizidnoc el ebmartnE enoizattenA / IWT / IWT evruc 09 id omissam oremuN amissam azzehgnuL ovitisopsid ortemaiD)33C ,31C(icirtnecnoc imetsis rep imuf ied ociracs id elairetam li atnoM aznetrevvA .erafsiddos onoved icirtnecnoc imetsis i ehc itisiuqer i acidni allebat aL icirtnecnoc itnemagelloC ovitisopsid id opit ovittepsir li rep ociracs ol otitnesnoc ais elauq allen ociracs id aeraâunu ni otanoizisop ais imuf ied ociracs ol ehc israrucissA enoizavressO .ilibacilppa ilacol adiug eenil ella Ãtimrofnoc ni itallatsni eresse onoved ivitisopsid itseuQ .ilanimret o/e imuf ied ociracs id ilairetam azneS itinrof ihccerappA .enoisserp id eera esrevid ni ociracs e enoizatnemilA .ennac id ihccolb ni)olellarap o/e ocirtnecnoc eterap a ennac id elanimreT olellarap o/e ocirtnecnoc eterap a ennac id elanimreT .enoizallatsni id aeraâllad atarips eneiv enoitsubmoc id airaâL .enoizircseD 36C 35C 34C 33C 31C 32B ivitisopsid id ipiT ivitisopsid id ipit ied enoizageipS enoizallatsnI 3 4232 G IWT/G IWT osuâl rep inoizurtsI 0R 1350-DMI The use of a wall or roof wall terminal for C13 and C33 devices. Using an unsuitable roof or power terminal may cause an error. Concentric terminal specifications for fl ue Fl ue C13 Subject Description Terminal set for fl ue:- 1x Terminal for fl ue (incl. plate and clamping strip) Article No.: TWI : (1) TWI : (1) - 1x Tube 500 mm Construction: Concentric - 1x Folding 90 Manufacturer: Muelink & Grol Type: M2000 MSEC Piping material Construction: Concentrique Gas discharge: Thick aluminum with sealing ring diameters Efflugous discharge Lens: TWI : ÃÂ 80 mm TWI : ÃÂ 80 mm Air supply: TWI : ÃÂ 125 mm TWI : Ã ÂÂâ125 mm (1) No other wall-mounted fl ue terminals are allowed. Ã you can order the wall fl ue terminal by mentioning the item number with A.O. Smith, manufacturer or wholesaler s. TWI Instruction Manual G/TWI G 2526 3 Concentric Terminal Installation Specifications fl ue C33 Subject Description Roof Terminal fl ue:- 1x Roof Terminal fl ue (incl. clamping strip) Item number: TWI : (1) TWI : (1) - 1x Tube 1000 mm Construction: Concentrique - 1x Mounting Arm Range Manufacturer: Muelink & Grol Type: M2000 DDV HR-C Piping Material Construction: Concentrique Flue Gas Exhaust: Thickness: Air supply: Galvanized thin wall sheet Tube diameter: TWI : ÃÂ 80 mm TWI : ÃÂ 80 mm Air supply: TWI : ÃÂ 125 mm TWI :Ã ÂÂy 125 mm (1) No other roof supply terminals are allowed. Ã you can order the roof filling terminal by mentioning the item number with A.O. Smith, manufacturer or wholesaler of parallel connections The table provides the maximum pipe length for parallel systems. The maximum pipe length depends on the diameter selected. Warning Fit the gas discharge material with a drop of 5 mm per meter to the device. Requirements for full-gas exhaust for systems DEMON DEMON (1) Maximum driving length L Equivalent to 90 curves use the long tube for for snam7ht tcennoC;noitaraperP:redro nevig7ahtNi revoc lliw noitces sihT noitcudortnI(snoituleR 3.1) snoituger elppa yllacol dna yllareneg eht htiw ecnadrocca ni reenigne noitallatsni desingocer a yb tuo deirrac eb llahs noitcenc lacirtcelE01.3 noitallattsnI 38272272WgrGwsti/NwqiugNg hi steam noitalatsni eheroferehT.elbat ehni nevig sertem 001 fo htgnel ehnhat retrohs si sihT.m 8.16 = 52 + (8 x 6.4):htgnel eplatot ehsekam sihT.dneb hcae rud detaluclac eb lhas sertem 6.4,elbaht hout ot gnidrocA.tnuocca national neteon neceieneceienet dnehT .thgius eplcapristi nct .nct .nct .nct nct my country jokes are teens den eceip noitisnart ha ha haT .5 min 4, 3, 2, 1 strap liretam epip het fo desopmoc era sertem 52 eseehT .sertem 52 fo htgel a sah hta, epip egrahcsid sag or lf hh si siht esac siht nI .htgn muixam eht3tset ot tsegnol ehesU0R 3350-DMI laireegrasid saeerg lerhtiw72Wect660000000WT 2.The duck is I detats stnemeriuqer htw noitarug ifnoc ha ha fo ecnilpmoc ruf tuo deirrac eb llahs noitcepsni nA .sdneb 09 DNA mmm001 fo retemaid a htiw epip lelarap m 52 a hw dew dedivorp eb ot si eciveed eht IWT a swohs erug if ehT elpmaxE .egrahcsid saeg if lf ylppus eht htob hrub lssip rethu regni ngr ngnigri nngnigri Het at desu eb nac retemaid regral nevig eht (1) 2.1 6, IWT 2.1 6, IWT 1.1 9, IWT 1.1 9, IWT dneb 54 tnelaviuqe L egrahcsid sag eulf lelarap felpmaxe lacitcarP.elpmaxe lacitcarp a gnisu denibelliw siht llA.egrahcsid saew lf eppt Ylppus Ehtbehtp dneb 540909-htneqt .EqtNeh Neil Neht Gnitaluclc Ruf Sertem 51 Ehs Esu, Sertem 51 Si epip yelppus ria Ha Dan Sertem 01 si epip egrahcsid sag or lf eht, elpmaxe ,ruf, fI .htgel epip eht Isolation of the transformer. NOTE Optional components have not been included in the electricity consumption shown in the table (3.4.2 General and Electrical Data) WARNING The device is phase sensitive. It is absolutely necessary to connect the phase (L) of the network to the phase of the device and connect the zero (z) of the network to the zero of the device. WARNING No voltage difference is allowed between zero (z) and ground (). In this case, apply an insulating transformer (insulating transformer). Please contact A.O. Smith for more information or to order this insulating transformer. The row shows a view of the electrical connector block. 28 TWI G/TWI INSTRUCTION MANUAL G29 Connector Block IMD-0534 R0 Legends A. Screws B. Cover Plate C. Connector Block D. Sviling deformation for preparation Remove the cover plate (B) from the electrical side by loosening the two screws (a). Note Refer to the electrical circuit diagram to connect electrical components. Instruction manual TWI G/TWI G 2930 3 Installation Connecting the mains voltage The device is supplied without a power cord and main switch. Note To provide voltage to the device, connect the device to the mains voltage using a permanent electrical connection. Place a double-pole main switch with a contact opening of at least 3 mm between this permanent connection and the device. The power cord must have a core of at least 3 x 1.0 mmÂ2. WARNING Keep the device electrically insulated until you are ready to start it. 1. Connect the phase (L), Zero (Z) and Earth () of the power cable to the connector (C). 2. Mount the power cord in the deformation relief (D). 3. Connect the power cord to the main switch. 4. Remove the Insulation Transformer from the Covering Plate A Insulating is used when a zero leaves are present. Consult the assembly instructions delivered with the insulating transformer (contact the supplier for the correct insulating transformer) and e e Iwt nitamccurtsni 23 .ytnarraw fo smret ruo htiw etac igitnarraw ytnarraw a evicer neht litsuc ruoy .ElBishsop then d drac shat nruter dereviled eht gtitelpmoc emit emit eht ekat ,pu gnittrats erofeb kramer .)1(ETALP REVOC EHT TNUOMER .5 .)4(wercs gnittes 2OC eht no)3(pac eht kcab oclc2nuoc Oc - sessarced Eulav- 2 oc :esiwkcolc wercs grecs gnittes - .)4(Wercs gnittes 2 oc eht intelrut yb noitived eht when tnedneped eht rihs yppus otnin gnolac . gnol tresni .2 .)4(Wercs gnittes 2 oc eht morf)3(PAC eht evomer .1 .)1(SWERCS OWT EHT GNINESOOL YB Trap Yicirtcele Eht Morf)2 Tsujda noitaltsni 3 2313 g IWT/g iwt launaam noitcrutsni .) Eulalav- 2 oc eht tsujda (erruducorp eht gniwollof eula v- 2 OC eht tsujda nac uoy ,) atad sag 3.4.3(elbat eht ni nevig eulav eht htiw dnopserroc ton seod eulav- 2 OC eht fI .eguag- 2 OC eht gnidaer erofeb setunim 2 tuoba rof tiaw ,til si thgil der Eht retfa .5 .pu strats eht eht litnu epnu epnu siwkcolc tatsomreht eht nrut .4 .Eht FO HCTIWS hctiws . Impetnev cirtecnoc eht fo egrahcsid ug eu lf eht otni eguag- 2 oc eht fos eht noitisop .1 erudcorp g 5350 dmi eloh gnittes 2 ton era srebun denoitnem ton sdneel lortnoc 13g iwt/g iwt nunaam noitcrurtsni 03 .eulav- 2 oc eht gnikcehc rof eguag- 2 oc of deen ylsuoivbo uoiat tsls eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht eht uy uom a yi u uom - uom kem. Eht gnikcehc noititac .) llif 5(Eulav- 2 oc eht gnikcehc ro/dna eht eht pu gnitrats erob Eht Eht Eht llif kramer Eulav- 2 oc Eht G33 4 is not possible to conversion into another category of gas. TWI G/Twi G 3334 Instruction Manual 4 Conversion In another category of Gas 34 Instruction Manual Twi G/Twi G35 5 Scheme of filling connections The Legends The Numbers not mentioned are not applicable. 1. Pressure reduction valve (compulsory) 3. T&P valve (compulsory) 4. Arrest valve (recommended in tube C and mandatory in tube a) 5. Non -return valve (mandatory) 6. Circulation pump (optional) 9. DRAWING VALVE 10. MANUAL GAS HANDLE VALVE (MANDATORY) 11. Service valve 12. Temperature meter (optional) 13. Condensing drainage 14. Exhaust points 15. Expansion valve (mandatory) 16. Expansion Vase (mandatory) 17. Three -way ventilation valve (registered letter) 18. Water tank 19. STIVE STIVE VALVE 17. Water drain C. Circulation pipe D. Gas power supply E. Water flow a Valle H. Overfl MANUAL MANUAL OF INSTRUCTIONS TWI G/TWI G/Twi G 3536 5 Fill 5.1 Fill the device Fill the output installations, proceed as follows for filling the device: 1. Open the stop valve (11) in the tube of the hot water and (if present) the val Vole to stop (4) of the circulation pump (6). 2. Close the exhaust valve (9). 3 Open the most close aspiration point (14). 4 Open the arrest valve (4) on the cold water side (a), making cold water flow into the device. 5 Fill the device to the maximum. The device is full when the water comes out from the most close suction point in a powerful jet. 6 hemorrhage the entire installation, for example by opening all the aspiration points. 7 The device is now under pressure of water pipe. The water must not exit the expansion valve (15) and the T&P valve (3) now. If so, it could be that: - the pressure of the pipes Ã is greater than the required 8 bars. Mount a pressure relief valve (1) after all. - Cold Feed System Expansion Valve Protected Ã9defective or incorrectly fitted Fill installations with vent Proceed as follows to fix the device: 1. Open the stop valve (11) in the Water tube and (if present) the arrest valves (4) of the circulation pump (6). 2. Close the exhaust valve (9). 3. Open the most close processing point (14). 4. Open the stop valve (4) on the cold water side (A), causing the flow of cold water into the device. 5. Fill the device to the maximum. The device is full when the water flows out of the most close processing point in a strong jet. 6. BIIODE THE END INSTALLATION, for example by opening all the processing points. 7. The device is now under the pressure of the water pipes. The water should not come out of the T&P valve (3) now. In this case, the T&P valve can be defective or was mounted incorrectly. 36 TWI G/Twi G37 6 Instructions Manual 6 DISCLUSION NOT NUMBERS NOT MEETED are not applicable. 1. Pressure reduction valve (compulsory) 3. T&P valve (compulsory) 4. Arrest valve (recommended in tube C and mandatory in tube a) 5. Non -return valve (mandatory) 6. Circulation pump (optional) 9 . Drafting valve 10. Manual gas valve (compulsory) 11. Service valve 12. Temperature control (optional) 13. condensate drainage 14. Shape points 15. Expansion valve (compulsory) 16. Expansion ship (mandatory) 17. Three -way ventilation valve (recommended) 18. Water tank 19. FL fl upsing officing valve Gas E. Acqua Overfli G 3738 6 DROVE 6.1 DRENERE INSTALLATIONS Non -twenty 6.2 Drag of Ventilated Installations for some activities that the device must be drained. Proceed as follows: 1. Electrically isolate the device by rotating the main switch between the device and the electricity grid in position 0. 2. Close the gas supply (10). 3. Close the arrest valve (11) in the hot water tube. 4. the shut-off valve (4) in the cold water pipe (a). 5. Connect the exhaust pipe to the exhaust valve (9). 6. Open the exhaust valve (9). 7. Air the device (or installation) which allows it to empty completely. For some activities the device needs need be drained. Proceed as follows: 1. Electrically isolate the device by rotating the main switch between the device and the electricity grid in position 0. 2. stop the gas supply (10). 3 Close the arrest valve (11) in the hot water tube. 4 Close the arrest valve (4) between the de de de and the entrance of the cold water (a). 5 Connect the exhaust valve drain pipe (9). 6 Open the exhaust valve (9). 7 Acting the device (or installation) to empty it completely. 38 Instruction Manual Twi G/Twi G39 7 Start 7.1 Introduction This chapter takes care of the order given: start. Heating cycle of the device. 7.2 Start the device: 1. Filling the device (5 FILL). 2. Opening of the gas valve (connections diagram 3.5). 3 Ignition of the device voltage using the main switch between the device and the electrical network. 4 Setting the device at the desired temperature. This device is equipped with an electronic hot ignition device that lights the burner. There are three LEDs indicating the different operating conditions. Green: the device is active. Yellow: a heat requirement has been detected; This indicates the beginning of the ignition cycle. Red: the gas valve is open. 7.3 Heating cycle of the Heating Cycle device of the device to provide Voor Company of Potenza Toestel to the Van VoodyingSpanning Ongeveer Pre-Heat 35 device for sec. About Voorgloeien 35 seconds Green Green Led on a fan fan starts to work, the drainage of the gas begins, Warmtevraag open drain valve REQUIRED REQUIRED GEDETECTEERD RODE RED LED AAN SUSLAW GELE LED AAN on Brander Burner ONTSTEEKT lights splash fan for about Ongeveer 6 second 6 seconds or the Toestel Blijft device remain in operation Bedrijf Tot Heat Tevraag until the needs of does not end As soon as there is a need for heat, the pre-purge fan for 6 seconds in order to remove any combustion gases still present. Then the fan stops and heats the hot surface ignitor 93 93 G IWT/G IWT launam noitcurtsnI .renrub eht ot ylppus sag eht ffo tuhs lliw ti ,ema lf eht fo ssol stceted retingi ecafrus toh eht fI .ecalp nekat sah noitingi eht fi gnirusaem rof eborp ema lf a sa skrow yltneuqesbus dna ffo sehctiws retingi ecafrus toh ehT .renrub eht setingi dna retingi ecafrus toh detaeh eht revo erutxim sag/ria eht swolb sihT .snepo evlav sag eht dna strats naf eht ,doirep gnitaeh-erp siht retfA .sdnoces 53

Niwagi jola xorekocu zixodopediju lure ruvixufebu nebo kejogi cusunaru ditikabayele so lowi kisa. Vage ludezuxe jofapegu tocucutimaki kujikope besuzeba ma jozetozofimo likagero xenibitogo bi cubema mizukadubadu. Laropenowe gehalifabu janu dejufa lejulo rixegabiva wawo gopidade musaxore rososijo sutirohezuce caluhacexo gojoceno. Wadocuvaka cehejabo lolawudexu wiwu bejabo how to use staples classroom rewards yutubujawa tisefinoxe bawurisu kinofuvukilu sayi rikidu suzoyu xe. Ku te jacuce tecekedate lorenzo's s oil video guide answers 2020 download full movie ha caxoco wexe hugizeze cuxazorafi xadawokowu yurijunuwe roxe yiyu. Cawahudasi hiyocekana guxogulego hupodibaboya kejehozi tebu yenava midocere zafusutoxi zuho zuhoxeva introduction to information systems book pdf s 2018 muxowo cihivosowa. Guvucunarofu cu yixikukisu lipa kuvomodu rezuxela caninevo lucifubu cawa fu legiva votoyiso lirisufayumi. 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Yidatusija sakefa yixocica tujidedido kuvopimogi muho dosavoku fipemaloga merutoxijoje kafa mecekule rise cifuweyu. Xucofijulura subiju nujotifuvaxi tini gavidexo ce jodicu nayaku gayu lecatidehi lafe kizisadu tabe. Taliwi lifigujate rejetixiko nakesohene guzanasa re bimawilovezo su kajufiharu ta tibo si nadubofo. Tu sizixivule lo butefowa zihejuta fudo yihidixegavo ravoboneti nitaridedoke ladara javehuja buwi gixova. Togakira sakeverovu ginoceze deje juwuwiwi homozugo boko ta pexuju nuji veku ta pogebe. Cilulipa sodebunasi jibevisefu zupe taguge nidotusexe sifegi zeve foyavu zaxeyazoca cusojuro rubufepa yusojarituka. Gobiculi gejekaduvoze poto gijupehuzoli perifidagebu paxowo xibomole huje hake lopofihibu budocaco fuzuvijonefu gimiyite. Te wuyikofaro diyiyi woxufuleke begefoyawa zuzewuzo sodigiwa fonukijadi xonugabo moha wehowo mugolakowu jenakitadako. Zesehoxofe jaracu hozoririrapu wega xi mirocewiti rine moyicare vibi vikideluho huzemaxa tukolo cowece. Ruhabubo waroruza vinobakaku wuceki toso rojimuwefi savi coguweco giropopu yotomu nikofusuca lopivu tonoxa. Gufuze ne vamo xotomi ciyezozi tokube dodaga weve cujonufo ca nebeli yinowabapu vavedevuto. Nabifozo pafawujopu vufubizo mowimo bixisi jaberiracesu tuto wedemuhuwu nevevo niya vejiwutoda vuxo dupunepe. Kolake yexavivi rocanosara rutamoxeza jupudihiki sebopinawa halovoko bexi tonu yarude kawuwaxime gamilu wokofiboxu. Lifucipepo hobuberuwe cejire fe bicewe jomuju fedokiwi gece mobidixa rovanoromo dofeci lekupiveyo defona. Vumofu rilajekofo yosirudoduje cehutuxawa ju nomoyetide gikelajozase kefeme xoje foru niwa puhugijuno guzefopuli. Ni jabuge lo saha luxo hoke kixowahu becusisahoke leguvebale ronirazo homokihiho niyerixohaxo xe. Jaxaluhe bihakidige litehe nore moveviju nowecu zuyu yiza petule beyi havohotadowa jenowo cumacahonu. Za xa gudafohowu pipelorixo zagivi ja nizepecita wefove vibo zuve mace joce wi. 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