

# Plumbing compliance SANS 10254: Installation, replacement and repair of hot water system. What is compliance?

## COMPLIANCE TABLES

Due to the numerous changes in compliance and the regulations/standards (as noted above) and more so due to the critical safety and hazard aspects of pressurised hot water storage vessel, much area of focus has been placed on the hot water storage heater and the relevant standards and regulations relating to the installation and more so the compliance to these standards and regulations.

As a result of these changes, lack of understanding and in some cases misinterpretation or misguidance, a state of confusion and further lack of understanding has crept into the industry sector.

To help mitigate against this the Institute of Plumbing of South Africa in association with the Plumbing Industry Registration Board has a set of Compliance Tables. These Compliance Tables are an industry guideline, and denotes the **critical** requirements that must be undertaken by the plumber when the installation, maintenance, replacement and repair of a fixed electrical hot water storage water heater is done, to meet compliance in terms of the regulations and standards.

**For ease of use the compliance tables are split into:**

1. **Table A: Compliance Table for: The installation of a NEW fixed electric storage water heater (geyser)**
2. **Table B: Compliance Table for: The REPLACEMENT of fixed electric storage water heater (geyser)**
3. **Table C: Compliance Table for: The REPAIRS AND MAINTENANCE of fixed electric storage water heater (geyser)**

It is noted that each respective compliance table will give guidance to the PIRB Auditors when an audit is undertaken for any installation, maintenance, replacement and repair of a fixed electrical hot water storage water heater. It is further noted that if the critical compliance is not met on any of the installation, maintenance, replacement and repair of a fixed electrical hot water storage water heater the respective licensed plumber will be issued a PIRB rectification notice.

**\*This document is to be used in conjunction with IOPSA notice of non-compliance and SANS 10254 & 10252 part 1 & 2**

# Table A:

<b>Compliance Table for: The installation of a <i>NEW</i> fixed electric storage water heater (geyser)</b>		
The following table denotes the critical areas of compliance that must be undertaken by a plumber when a new installation is undertaken of a fixed electric storage water heater (geyser).		
Item	Regulation	Areas of Compliance
1	SANS 10252-Part 1 and SANS 10254	<p>All <b>NEW</b> fixed electrical storage water heater (geyser) installations must comply with all requirements SANS 10252-1 and SANS 10254</p> <p>A “New” installation is defined as:</p> <ul style="list-style-type: none"> <li>- where any fixed electrical storage water heater (geyser) that is not being replaced;</li> <li>- where any fixed electric storage water heating (geyser) installation that forms part of               <ol style="list-style-type: none"> <li>a) a newly constructed dwelling and or building</li> <li>b) an existing dwelling and or building where an additional fixed electrical storage water heating (geyser) is installed</li> </ol> </li> </ul>

# Table B:

<b>Compliance Table for: The <i>REPLACEMENT</i> of fixed electric storage water heater (geyser)</b>		
The following table denotes the critical areas of compliance that must be undertaken by a plumber when a replacement is undertaken of an existing fixed electric storage water heater (geyser).		
Item	Regulation	Critical areas of compliance
1	SANS 10254 & 181	<p>All replacements of a fixed electrical storage water heater (geyser) installations must comply with all requirements of SANS 10252-1 and SANS 10254.</p> <p><b>TEMPERATURE AND PRESSURE VALVE</b></p> <ol style="list-style-type: none"> <li>1. A Temperature and Pressure Valve must be installed.</li> <li>2. The Temperature and Pressure Valve shall have the same pressure rating as other valves used in the system.</li> <li>3. The pressure rating of the Temperature and Pressure Valve may be less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>4. The discharge pipes from the Temperature and Pressure Valve shall               <ol style="list-style-type: none"> <li>a) never be joined together with other discharge pipes,</li> <li>b) led to a discharge point which is visible outside the building and in a position where the discharge from the pipe will not cause a nuisance and cannot become blocked,</li> <li>c) be installed in a manner that will obviate the development of water traps which could prevent the free return of air into the system,</li> </ol> </li> </ol>

		<ul style="list-style-type: none"> <li>d) sized not less than the size of the outlet of the valve for which the pipe is intended,</li> <li>e) Always be of metal and inclined downwards away from the valve.</li> <li>f) Thermal insulation must be installed on 1m Temperature and Pressure discharge pipe.</li> <li>g) Bends shall not be greater than 45°</li> </ul>
2	SANS 10254	<p><b>EXPANSION CONTROL</b></p> <ol style="list-style-type: none"> <li>1. An Expansion Control Valve must be installed on all closed hot water heating system.</li> <li>2. The Expansion Control Valve shall have the same pressure rating as other valves used in the system.</li> <li>3. The pressure rating of the Expansion Control Valve maybe less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>4. An isolating valve, gate valve, non-return valve or any other flow control device shall not be provided between an Expansion Control Valve and the water</li> <li>5. The discharge pipes from Expansion Control valve shall             <ul style="list-style-type: none"> <li>a) never be joined together with other discharge pipes,</li> <li>b) led to a discharge point which is visible outside the building and in a position where the discharge from the pipe will not cause a nuisance and cannot become blocked,</li> <li>c) installed in a manner that will obviate the development of water traps which could prevent the free return of air into the system,</li> <li>d) sized not less than the size of the outlet of the valve for which the pipe is intended.</li> </ul> </li> </ol>
3	SANS 10252-1	<p><b>ISOLATING VALVES</b></p> <p>Isolating valve must be installed:</p> <ol style="list-style-type: none"> <li>1. On the inlet pipe of the Pressure Control Valve (separate to the integral isolating valve of a Pressure Control Valve)</li> <li>2. If applicable on the inlet side of all float valves</li> <li>3. Shall not be provided between any expansion-relief device or vacuum relief device.</li> </ol>
4	SANS 10252-1 10254	<p><b>VACUUM BREAKERS</b></p> <ol style="list-style-type: none"> <li>1. Vacuum control valves shall be installed on both hot and cold water pipes to and from the heater to ensure the water heater is vented.</li> <li>2. Vacuum control valves shall be installed on both hot and cold water pipes to ensure that siphonage of the water heater is prevented.</li> </ol>
5	SANS 10254 198	<p><b>PRESSURE CONTROL VALVE</b></p> <ol style="list-style-type: none"> <li>1. The Pressure Control Valve shall have the same pressure rating as other valves used in the system.</li> <li>2. The pressure rating of the Pressure Control Valve maybe less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>3. The location of the Pressure Control Valve must be related to the required downstream flow-pressures.</li> </ol> <p>See requirements of the Expansion Control Valve if the Pressure Control Valve incorporates an Expansion Control Valve.</p>

6	SANS 10254 10252-1	<p><b>MOUNTING</b></p> <ol style="list-style-type: none"> <li>1. The support structure for the drip tray and water heater, must be placed on tie beams that are supported on load bearing walls, at least grade 5 of SANS 1783-2, of a size 114mm x 30mm or bigger and may not be spaced more than 500mm apart.</li> <li>2. Each foot of water heater must rest on a support beam.</li> <li>3. No water heater or storage tank of capacity exceeding 200 L shall be attached by means of brackets or hangers to a load-bearing masonry or concrete wall or to any other vertical structural element.</li> </ol>
7	SANS 10254 10252-1&2	<p><b>DRIP TRAY</b></p> <ol style="list-style-type: none"> <li>1. Drip tray installed in the correct manner.</li> <li>2. The size of the drip tray shall be such that it will cover the total area of the heater and the associated water control appurtenance</li> <li>3. Drip tray discharge pipe must be installed and sloped and supported towards its outlet to ensure that all water will run out unrestricted.</li> <li>4. Discharge pipe must be suitable for hot water as required in SANS 10252 – 1 section 8 and drainage principles of SANS 10252-2 must be employed (gradients, no 90° elbows on horizontal runs etc.</li> <li>5. Pipe must discharge to outside of building, easily visible.</li> </ol>
8	SANS 10252-1	<p><b>THERMAL INSULATION</b></p> <ol style="list-style-type: none"> <li>1. Thermal insulation must be installed on the hot and cold pipe work as directed in SANS 10252-1 section 6 (*3 m from the hot water outlet, cold pipe first 1m from inlet and first 1m of the Temperature and Pressure discharge pipe) * While the standard reflects all hot water pipes, IOPSA recommended 3m, while the remaining pipework should be noted to the client (see below for written non-compliance).</li> <li>2. Must be a minimum of R-1 rated.</li> </ol>
9		<p><b>PIPE WORK</b></p> <ol style="list-style-type: none"> <li>1. The pipes shall be firmly anchored to prevent water hammer and the dislodgement of joints.</li> </ol>
10	SANS 10252-1 181 1848 198 752 1056-3 776	<p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All Materials, pipes, fittings, components and fixtures used in the replacement must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Connections to all components must be union type for ease of replacement.</li> <li>4. Adequate access must be provided to remove or maintain or replace any component.</li> <li>5. Pipes &amp; pipe fittings, <ol style="list-style-type: none"> <li>a. Copper, Plastic, Stainless steel and mild steel galvanized medium</li> <li>b. All pipes must be fixed as per manufacturer and SANS 10252-1 section 5 and 8.</li> </ol> </li> <li>6. Components <ol style="list-style-type: none"> <li>a. Thermostats – SANS 181</li> </ol> </li> </ol>

		<ul style="list-style-type: none"> <li>b. Safety trays – SANS 1848</li> <li>c. Fixed type water heaters – SANS 151</li> <li>d. Valves – SANS 198</li> <li>e. Float valve – SANS 752</li> <li>f. Isolating valves SANS 1056-3 ball, SANS 776 gate</li> </ul> <p>7. Connections to all components (storage tank, valves, pumps, etc.) must be union type for ease of replacement.</p> <p>8. Adequate access must be provided to remove or maintain or replace any component.</p>
11	SANS 151 198	<p><b>HOT WATER CYLINDER</b></p> <ul style="list-style-type: none"> <li>1. Integrity of hot water cylinder and the valves must meet SANS 151 requirements.</li> </ul>
12	SANS 10254	<p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <ul style="list-style-type: none"> <li>1. When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <i>See annexure A.</i></li> </ul>
13	SANS 10254 10142-1	<p><b>COC (included in current amendments to SANS 10254)</b></p> <ul style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SQAQ registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> <li>2. An electrical COC is required for the electrical connection in accordance with SANS 10142-1 (OHS Act Electrical Regulations)</li> </ul>

**\*NOTE: These tables do not cover all aspects of compliance as required by regulation & standards. You are still responsible to comply with all regulations and standards. Refer to point 12 & Annex A: Non-compliance notice SANS 10254 for guideline to all areas of compliance.**

## Table C:

<p><b>Compliance Table for: The <u>REPAIRS AND MAINTENANCE</u> of fixed electric storage water heater (geyser)</b></p> <p>The following table denotes the critical areas of compliance that must be undertaken by a plumber when a repair/maintenance is undertaken on a fixed electric storage water heater (geyser).</p>		
Item	Regulation	<b>Critical Areas of Compliance</b>
		<ul style="list-style-type: none"> <li>1. All repairs and maintenance of a fixed electrical storage water heater (geyser) installations must comply with all requirements of SANS 10252-1 and SANS 10254.</li> </ul>
1	SANS 10252- Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF A DRIP TRAY</b></p> <p>The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of a drip tray is undertaken.</p>

		<p>Repair/Maintenance shall include the replacement of a drip tray and or installation of a new drip tray to an existing installation.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>DRIP TRAY</b></p> <ol style="list-style-type: none"> <li>1. Drip tray installed in the correct manner.</li> <li>2. Drip tray discharge pipe must be installed and sloped and supported towards its outlet to ensure that all water will run out unrestricted.</li> <li>3. The size of the drip tray shall be such that it will cover the total area of the heater and the associated water control appurtenance</li> <li>4. Discharge pipe must be suitable for hot water as required in SANS 10252 – 1 section 8 and drainage principles of SANS 10252-2 must be employed (gradients, no 90° elbows on horizontal runs etc.</li> <li>5. Pipe must discharge to outside of building, easily visible.</li> </ol> <p><b>MOUNTING</b></p> <ol style="list-style-type: none"> <li>1. The support structure for the drip tray and water heater, must be placed on tie beams that are supported on load bearing walls, at least grade 5 of SANS 1783-2, of a size 114mm x 30mm or bigger and may not be spaced more than 500mm apart.</li> <li>2. Each foot of water heater must rest on a support beam.</li> <li>3. No water heater or storage tank of capacity exceeding 200 L shall be attached by means of brackets or hangers to a load-bearing masonry or concrete wall or to any other vertical structural element.</li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A.</b></p>
2	SANS 10252-Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF A TEMPERATURE AND PRESSURE VALVE</b></p> <p>The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of a Temperature and Pressure Valve is undertaken. Repair/Maintenance shall include the replacement of a Temperature and Pressure Valve and or installation of a Temperature and Pressure Valve to an existing installation.</p>

		<p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Connections to all components must be union type for ease of replacement.</li> <li>4. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>TEMPERATURE AND PRESSURE VALVE</b></p> <ol style="list-style-type: none"> <li>1. The Temperature and Pressure Valve shall have the same pressure rating as other valves used in the system.</li> <li>2. The pressure rating of the Temperature and Pressure Valve may be less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>3. The discharge pipes from the Temperature and Pressure Valve shall             <ol style="list-style-type: none"> <li>a. never be joined together with other discharge pipes,</li> <li>b. led to a discharge point which is visible outside the building and in a position where the discharge from the pipe will not cause a nuisance and cannot become blocked,</li> <li>c. be installed in a manner that will obviate the development of water traps which could prevent the free return of air into the system,</li> <li>d. sized not less than the size of the outlet of the valve for which the pipe is intended.</li> <li>e. Always be of metal and inclined downwards away from the valve.</li> <li>f. Thermal insulation must be installed on 1m Temperature and Pressure discharge pipe.</li> </ol> </li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A.</b></p>
3	SANS 10252-Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF AN EXPANSION CONTROL VALVE</b></p> <p>The following c areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of an Expansion Control Valve is undertaken. Repair/Maintenance shall include the replacement of an Expansion Control Valve and or installation of an Expansion Control Valve to an existing installation.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p>

		<ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Connections to all components must be union type for ease of replacement.</li> <li>4. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>EXPANSION CONTROL VALVE</b></p> <ol style="list-style-type: none"> <li>1. The Expansion Control Valve shall have the same pressure rating as other valves used in the system.</li> <li>2. The pressure rating of the Expansion Control Valve maybe less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>3. An isolating valve, gate valve, non-return valve or any other flow control device shall not be provided between an Expansion Control Valve and the water</li> <li>4. The discharge pipes from Expansion Control valve shall             <ol style="list-style-type: none"> <li>a. never be joined together with other discharge pipes,</li> <li>b. led to a discharge point which is visible outside the building and in a position where the discharge from the pipe will not cause a nuisance and cannot become blocked,</li> <li>c. installed in a manner that will obviate the development of water traps which could prevent the free return of air into the system,</li> <li>d. sized not less than the size of the outlet of the valve for which the pipe is intended, and</li> </ol> </li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A.</b></p>
4	SANS 10252-Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF A PRESSURE CONTROL VALVE</b></p> <ol style="list-style-type: none"> <li>1. The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of a Pressure Control Valve is undertaken. Repair/Maintenance shall include the replacement of a Pressure Control Valve and or installation of a Pressure Control Valve to an existing installation.</li> </ol> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable</li> </ol>



		<p>the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</p> <ol style="list-style-type: none"> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Connections to all components must be union type for ease of replacement.</li> <li>4. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>PRESSURE CONTROL VALVE</b></p> <ol style="list-style-type: none"> <li>1. The Pressure Control Valve shall have the same pressure rating as other valves used in the system.</li> <li>2. The pressure rating of the Pressure Control Valve maybe less than the rated pressure of the storage water heater but shall never exceed it.</li> <li>3. The location of the Pressure Control Valve must be related to the required downstream flow-pressures.</li> <li>4. See requirements of the Expansion Control Valve if the Pressure Control Valve incorporates an Expansion Control Valve.</li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A.</b></p>
1.	SANS 10252-Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF A VACUUM CONTROL VALVES</b></p> <p>The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of a Vacuum Control Valves is undertaken. Repair/Maintenance shall include the replacement of a Vacuum Control Valves and or installation of a Vacuum Control Valves to an existing installation.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>VACUUM CONTROL VALVES</b></p> <ol style="list-style-type: none"> <li>1. Vacuum control valves shall be installed on both hot and cold water pipes to and from the heater to ensure the water heater is vented.</li> </ol>

		<p>2. Vacuum control valves shall be installed on both hot and cold water pipes to ensure that siphonage of the water heater is prevented.</p> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <p>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</p> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A</b></p>
2.	SANS 10252-Part 1 and SANS 10254	<p><b>REPAIRS/MAINTENANCE OF A ISOLATING AND CONTROL VALVES</b></p> <p>The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance of an Isolating or Control Valves is undertaken. Repair/Maintenance shall include the replacement of a Vacuum Control Valves and or installation of Vacuum Control Valves to an existing installation.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>2. Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>3. Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>ISOLATING AND CONTROL VALVES</b></p> <ol style="list-style-type: none"> <li>1. Shall not be provided between any expansion-relief device or vacuum relief device.</li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <p>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</p> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner’s attention. <b>See annex A</b></p>
3.		<p><b>REPAIRS/MAINTENANCE OF A PIPEWORK</b></p> <p>The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance to the hot water systems pipework is undertaken.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>1. All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when</li> </ol>

		<p>applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</p> <ol style="list-style-type: none"> <li>Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>Adequate access must be provided to remove or maintain or replace any component.</li> </ol> <p><b>PIPEWORK</b></p> <ol style="list-style-type: none"> <li>The pipes shall be firmly anchored to prevent water hammer and the dislodgement of joints.</li> <li>Thermal insulation must be installed on the repaired hot and cold pipe work as directed in SANS 10252-1 section 6 (*3 m from the hot water outlet, cold pipe first 1m from inlet and first 1m of the Temperature and Pressure discharge pipe) *While the standard reflects all hot water pipes, IOPSA recommends 3m, while the remaining pipework should be noted to the client (see below for written non-compliance).</li> <li>In the case where the pipe work is totalled replaced and or new pipe work is installed Thermal insulation must be installed on the hot and cold pipe work as directed in SANS 10252-1 section 6 (the whole length of the replaced/installed hot water pipe, cold pipe first 1m from inlet and first 1m of the Temperature and Pressure discharge pipe)</li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b> When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner's attention. <b>See annex A.</b></p>
4.		<p><b>REPAIRS/MAINTENANCE OF A THERMOSTAT/ELEMENT</b> The following critical areas of compliance in terms of the SANS requirements must be undertaken when the repairs/maintenance to the Thermostat and or Element is undertaken. Repair/Maintenance shall include the replacement of a Thermostat and or Element.</p> <p><b>COMPONENTS (INCL. PIPES, FITTINGS AND FIXTURES)</b></p> <ol style="list-style-type: none"> <li>All materials, pipes, fittings, components and fixtures used in the repair/maintenance must meet SANS 10252 – 1 section 5 (when applicable the supplier must be able to provide proof that the component complies to the relevant SANS standard) and must be listed on the JASWIC acceptance list.</li> <li>Materials, pipes, fittings, components and fixtures must be installed as per regulation and manufacturers guidelines.</li> <li>Adequate access must be provided to remove or maintain or replace any component.</li> </ol>

		<p><b>THERMOSTAT</b></p> <ol style="list-style-type: none"> <li>1. The discharge pipes from the Temperature and Pressure Valve shall             <ol style="list-style-type: none"> <li>a) never be joined together with other discharge pipes,</li> <li>b) led to a discharge point which is visible outside the building and in a position where the discharge from the pipe will not cause a nuisance and cannot become blocked,</li> <li>c) be installed in a manner that will obviate the development of water traps which could prevent the free return of air into the system,</li> <li>d) sized not less than the size of the outlet of the valve for which the pipe is intended, and</li> <li>e) in the case of safety valves, always be of metal and inclined downwards away from the valve.</li> <li>f) Thermal insulation must be installed on 1m Temperature and Pressure discharge pipe.</li> </ol> </li> </ol> <p><b>ELEMENT</b></p> <ol style="list-style-type: none"> <li>1. Ensure that siphonage of the water heater is prevented.</li> </ol> <p><b>PLUMBING CERTIFICATE OF COMPLIANCE</b></p> <ol style="list-style-type: none"> <li>1. A plumbing certificate of compliance from the Plumbing Industry Registration Board (PIRB) the SAQA registered professional body for plumbers, shall be issued for the installation, replacement or repair of any plumbing works carried out on the hot water reticulation system.</li> </ol> <p><b>WRITTEN NOTICE OF NON-COMPLIANCE</b></p> <p>When any replacement, repair or maintenance work is being done on any components in the system, a written notice of all non-compliances must be given by the plumber to the owner or occupant for the owner's attention. <b>See annex A.</b></p>
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