

Notice of Non Compliance

DATE: _____

In terms of the SOUTH AFRICAN NATIONAL STANDARD (SANS) 10254, 10106, 1352 and the National Consumer Protection Act; all owner/users of a maintained, replaced or repaired hot water heating system comply to these standards, and any non-compliance of the respective South African National Standard must be notified in writing to the user/owner.

This Non-compliance notice which shall form part of PIRB Certificate of Compliance No: _____, hereby informs you in writing of the respective SANS non-compliant areas of your installation. It is further noted that that if the respective area's of non-compliance of the installation are not made compliant it may result in any future warranty/guarantee/insurance being voided.

SANS Ref	Description	Compliant	Non Compliant	Critical Area of Safety
SANS 1352 HEAT PUMPS				
4.1.1.1	Are all the components used in the system of an approved type and matched in terms of the pressure rating of the system			
4.1.3.1	All materials utilised are so selected that they are clearly for all expected conditions of use			
	Are marked clearly for the purpose of identification			
	All plastic components in direct sunlight are UV protected			
4.1.3.2	Pipe and fittings utilised comply in terms of SANS 10252-1			
4.1.3.3	Heat pump installed is an approved product (SABS)			
4.1.3.4	Hot water cylinder complies with SANS 151			
4.1.3.5	Drain valve installed complies to SANS 1808-53			
4.1.3.6	Pressure control valve			
	Temperature pressure valve			
	Vacuum breakers			
	All comply to SANS 198			
4.1.3.8	All the materials and components fittings and fixtures operate safely and effectively, can withstand sustained temperatures up to 40deg (cold water) and 70deg (hot water)			
4.1.3.10	Non return/ check valves comply to SANS 1808-10			
4.1.3.11	Where an intergrated heat pump is installed, unit complies to SANS 151			
4.3.2	The pressure rating of the system does not exceed 600kpa			
4.3.3	Components of the system have been installed, in such a manner that the hot and cold water pressure to mixers is balanced			
4.3.4.2	The storage capacity of hot water has been calculated in terms of SANS 10252- Part 1			
4.3.4.3	Where failure of the heat pump or short term boosting of the hot water is required, an auxilary back up electrical connection has been installed			
4.3.5	The heat pump and components are located and installed in accordance with the manufacturers specification in such a manner and position that ensures			
a	Safe and effective operation of the system			
b	Safe and effective removal of components or spare parts			
c	To ensure discharge of condensation water from heat pump unit			
d	Adequate provision for airflow and ventilation are sufficient to ensure performance of the heat pump			
e	Installed to ensure no build up of water/ ice/ debris/ dirt			
f	Noise transmission is kept below 45decibels especially during evenings			
g	Pipe design and installation minimises length and directional changes are minimal			
h	Heat pump electrical supply is effective and safe			
i	Heat pump is orientated correctly and should be installed in order to absorb maximum radiation (true north)			
j	Installation cannot be adversely affected by high winds/ heavy rains/ excessive water discharges onto heat pump which can effect the heat pump and its efficiency negatively			
k	In the event of the heat pump being installed above the HWC, provision is made to ensure heat pump cannot be drained			
4.4	Plumbing installation complies to			
	SANS 10254			
	SANS 10252-1			
	RELEVANT LOCAL BYLAWS			
	MANUFACTURERS SPECIFICATIONS			
	HAS BEEN INSTALLED BY A PIRB REGISTERED PLUMBER			
4.5	Electrical installation work and ancillary equipment complies with the relevant legislation			

SANS Ref	Description	Compliant	Non Compliant	Critical Area of Safety
5.2.1	All materials, components, fixtures are clearly marked to ensure are suitable for expected conditions and for Identification Purposes			
5.2.2	Is all of the equipment on which the safety of the hot water system depends, clearly marked in order to prevent faulty adjustments, or prevention of equipment from being replaced with incorrect items			
5.3.1	Is the heat pump installed in a manner that will ensure required clearances as per manufacturer			
5.3.2	Where the heat pump is vertically mounted; loads are carried in terms of SANS 10400			
	Is mounted using correct brackets and fixtures as specified by the manufacturer			
b	The feet of the horizontally installed heat pump are secured to a plinth or stand			
c	The heat pump is mounted to ensure that no build up of debris or sand can occur			
d	Anti vibration mountings are installed and secured correctly to ensure no noise transmission occurs			
5.3.3	Where an intergrated heat pump is installed; the heat pump is mounted on a secure horizontal base which provides load bearing support			
	Installed in a manner to ensure no build up of debris and water			
	An externally mounted unit is not supported with soft wood frames or beams			
5.3.1	Heat pump is mounted level to ensure no vibration			
5.4.1.1	Where the heat pump is installed in a position that any leakage from the unit or components can cause damage in any manner; a drip tray is installed which complies to SANS 1848			
5.4.1.2	The tray is mounted and secured in terms of SANS 10254			
5.4.1.3	The drip tray has the required discharge pipe, and is led to discharge in an area that is visible externally, and in a position that can cause no damage to property			
	The connection between drip tray and discharge pipe is water tight			
5.5.1	Heat pump pipework is sized correctly			
	Height of vertical pumped pipework does not exceed 3m			
	Total distance of 11m is not exceeded in terms of pipe run, between heat pump and the HWC - this distance includes the 3m vertical pipework			
	The pipework minimises length and directional changes			
5.5.2	Pipe sizes for the system are as per the connections from the heat pump			
5.5.3	Where required have steps been taken to prevent airlocks			
	Pipework layout ensures removal of air from the system when filling			
5.5.4	Pipework is installed in such a manner to ensure that no water hammer occurs			
5.5.5	Circulation loop is secured in the correct manner, ensuring no water hammer and dislodgement of joints			
5.5.6	Union type fittings are utilised for connections to heat pump, HWC and components, to ensure ease of removal or maintenance			
5.5.7	All joints are leak tight			
5.5.8	Copper pipes comply to SANS 460			
5.5.9	Plastic and composite pipe and fittings installed are in accordance with the Standard in terms of SANS 10252-1; specific to the materials installed			
5.6.2	Circulation pumps for pressure boosting or primary and circulation in the distribution, are suitable for the operating temperature and resistant to corrosion			
5.6.3	Installed pump is not audible above back ground noise			
	The inlet and outlet of the pump connections are fitted with full way valves			
5.7.1	Metal pipes of different materials installed are installed in such a manner as to ensure galvanic action cannot occur			
5.7.2	Where galvanised and copper are utilised within the system, the copper pipe and fittings are installed downstream of the galvanised			
5.9.1	All pipes and fittings and associate pipework are insulated as per requirements of SANS 10252/ SANS 10400-XA/ SANS 204			
	Lagging has a minimum R1 thermal resistance			
	Externally exposed insulation is protected from sunlight and moisture			
5.9.2	Heat pump is orientated to ensure maximum solar radiation			
5.9.3	Pipe layout is such that primary circulation loops length is minimized			
5.10.1	Installed strainer complies to SANS 1808-58			
5.10.2	Strainer is installed on the inlet connection of the heat pump			
	Strainer is downstream of an isolation valve			
5.10.3	The installed strainer is such that the strainer can be serviced and inspected without having to be disconnected			
	Trapped debris cannot fall back into the pipe when sieve is removed (strainer must face down)			
	Is installed such that servicing can be carried out without isolating main water supply to dwelling			

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	Draining of the heat pump cannot occur when strainer is removed			
5.12.1	Isolating valves are installed on both supply and return lines within 1.5m of the heat pump			
5.12.2	Isolating valves are fullbore type (which limit effects of scale build up)			
5.13	Vacuum breakers are installed as per SANS 10254 or as per the manufacturers specifications within the parameters set by SANS 10254			
5.14	The heat pump is furnished with a condensate discharge pipe which is positioned in a manner that will not cause a nuisance or damages			
	Is led to a position which is visible and cannot be blocked			
	Discharge pipe is installed such that there are no water traps			
	Appropriate material has been used			
	Utilised material for the discharge pipe is as per manufacturers specifications			
	Discharge pipe is not connected directly to any soil or waste drainage system			
6.1	Intergrated heat pump or electric water heater complys to SANS 151			
6.2.2	ENSURE ANY NON COMPLIANCE TO SANS 10254 IS GIVEN TO THE OWNER/USER IN WRITING			
6.3	The draw off for the water supply to the heat pump from the HWC is within 500mm of the geyser			
6.4.1	Temperature pressure valve is installed such that a minimum of 15mm of the prope protrudes into the geyser			
6.4.2	No modification or galvanised fittings have been made to the body of temperature pressure valve			
6.5	The thermostat to the HWC has not been replaced by any device that does not comply to SANS 151			
6.6.1	Where a split type heat pump system is installed, the hot water return to the hot water cylinder does not affect the stratification layers within the hot water cylinder			
	Or that the heat pump return water is not drawn from the hot water outlet to the system			
6.6.2	The method and components used in terms of the hot water return line prevents stratification layers being affected and is installed as per the manufacturers specifications			

GENERAL NOTES IN TERMS OF SANS 10252-1 APPLICABLE TO ALL INSTALLATIONS

5.1	The materials utilised are suitable for the expected conditions			
5.1.9	Insulation material is minimum R1 rated			
5.4.14	There are no flexible connectors used in order to connect to heat pump/geyser/solar geyser or panel			
5.4.15	Where a non return valve has been installed, a spring type has been used and not a metal on metal flap type			
6.1.3.2	There are no isolating valves installed between the pressure control valve and the hot water cylinder			
6.1.3.3	Isolating valves installed on the hot water installation are of a full-bore type			
6.6.1.1	Safety device installed is compatible with the hot water cylinder, and not rated higher			
	No isolating or non return valve is installed between hot water cylinder and the pressure control valve			
	Safety valve is not restricted (reduced pipe size or damaged)			
	Vacuum breakers are installed correctly and not below the top of the water heater			
	Electrical installation ensures that temp of water is controlled			
6.6.1.5	Expansion relief and temperature discharge pipes are not inter connected			
6.6.2.2	There is no flow contrl fitting of any sort other than a draining tap installed between hot water cylinder and the pressure control valve			
6.6.2.3	All discharge pipes are unobstructed and open to atmosphere			
6.6.5.1	All drain pipes are sized correctly to the connection to which fitted			
	In the event that the discharge pipe distance exceeds 4m, has the drain pipe size increased			
	Discharge pipe has three or less bends			
	Where increased, discharge pipe shall not exceed 9m			
	For each additional bend (over the allotted 3) the discharge pipe length is reduced by 600mm			
	All labour bends are formed, with a centre radius, of a minimum of 5 times the diameter of the drain pipe			
	Drain pipe discharges down and directly out			
	Drainage of both valve and pipe is ensured			
	Installed such that in the event of freezing - cannot be blocked, nor by foreign objects			
	Is used for normal conveyance of discharge water resulting from normal expansion			
	Discharge in a position that is readily seen			
	Discharge does not inconvenience buildings occupants or cause damage to property			
6.6.5.2	Drain pipes from expansion relief/temp pressure valve are not inter connected			
6.7.5.7	Insulation of pipework includes all flow and return piping			
	Insulation of pipework includes cold water supply 1m from the heating or cooling system			
	Insulation of pipework includes pressure relief piping 1m of the connection to the geyser			

SANS Ref	Description	Compliant	Non Compliant	Critical Area of Safety
	Insulation of pipework includes temperature pressure discharge pipe and valve, to 1m from the hot water cylinder			

Code _____ Serial _____ Cylinder Size _____ Pressure Control Valve _____ kPa

This Inspection is a visual Inspection of component(s) and part(s) of your plumbing system as listed. These are reasonably visible and capable of being inspected without I, _____ being a registered Plumber with the Plumbing Industry Registration Board; Reg No: _____ and a current (paid up) member of The Institute of Plumbing South Africa; Member No: _____ hereby confirm that I have inspected the aforementioned property personally and without prejudice, and should the aforementioned membership and registration not be valid, this certificate is null and void to date of termination of membership(s). Further note; The validity of this document expires on change, alteration, replacement or destructution and neccesitates a further PIRB Certificate of Compliance.

Signed: _____ Client: _____ Date: _____

Disclaimer: This document is issued by IOPSA as a guideline for requirements of installation to SANS standards and can be used as a notice of non-compliance. This document is not a certificate of complaine (CoC)

