

## Regulations applicable for compliance

Generally, when installing a connection from a pressurised unvented hot water cylinder T/PRV to drain, the regulations in force are a combination of Water and Building regs. Specifically, the seven of most concern are;

- WRAS test code sheet 221210 dealing with the dimensional requirements of a tundish being an air break to drain
- Water regulations Schedule 2;15-(1) dealing with the requirements of needing an air break to drain when connecting to a category 5 foul pipe
- Water reg Section 8 Schedule 2 G19.1; G19.3; G19.4 dealing with the requirements of discharge pipes from safety devices
- Building regs G3 (2) determining temperature rating requirements for waste and soil pipes
- Building regs G3 (3)(b) the safe and visible discharge requirements
- Building regs G3 Guidance notes 3.5 - 3.6 discharges to tundish and specifications, outlet size and the use of a mechanical seal
- Building regs H1 guidance: C. section 1:1.3 the prevention of foul air entering the building

The full list and details can be found on our website at [www.hotun.co.uk/issues-and-solutions/regs-applicable-for-compliance](http://www.hotun.co.uk/issues-and-solutions/regs-applicable-for-compliance)  
For boiler PRV connections the rules are slightly different because there is no risk of back contamination, however, the boiler PRV must be able to discharge and there must be no possibility of a blockage in the waste pipe preventing that discharge from occurring

Each boiler manufacturer can have different requirements for the safe and visible means of discharge and the installer should check with the boiler manufacturer to ensure correct installation.

The regulations for temperature rated waste soil pipes will be as above

For the above reasons our products are compatible with all types of sealed/pressurised systems and are temperature rated.

For boiler installations (only) and where the tundish is mounted in an accessible location, **hotun shield** has been designed to provide a safe and visible solution. It will prevent the ends user from accidentally placing their finger in the flow of potentially scalding hot water being discharged from the PRV. It is not sealed so will still allow the discharge to occur even if the D2 pipe is totally blocked.

## Responsibility of installation

All installations connecting a sealed systems PRV to drain, must be carried out by a competent person and meet the water and building regulations. Failure to do so can lead to enforcement action by the regulators and remedial work carried out at the expense of the end user or building occupier.

- Any work carried out on a gas appliance must be done by a person who is duly registered to carry out such work and must be carrying his/her Gas Safe registration card which must be current.
- Any work carried out on a pressurised unvented hot water cylinder of greater than 15 litres capacity, must be done by a person who is duly registered to carry out such work and carry his/her G3 registration card which must be current.

Responsibility of the installation falls to the building owner/occupier if the installation is not compliant and they could be prosecuted and fined if remedial action is not taken however regulation 7.-(2) states that;

"An owner/occupier of premises may be excused responsibility if: the work in question was installed, altered, connected or disconnected by or under the supervision of a contractor approved by the water undertaker and/or the contractor certified that the was in compliance with the Regulations."

It is for these reasons that RA Tech UK Ltd recommends that any building owner or occupier employing a contractor to fit such installations should ensure that the contractor employed is duly qualified to carry out such work and can produce his/her current validation card, such as Water Safe (WS), Gas Safe (GS), G3 etc

## Installation and service records

### Service 1

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

### Service 2

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

### Service 3

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

### Service 4

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

### Service 5

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

### Service 6

Date .....

Installer Name .....

Co. Name .....

Tel. No. ....

Comments .....

Ciphe, WS, GS or G3 registered  Yes  No

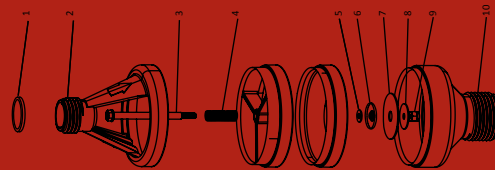
Sign .....

I hereby sign that the service has been carried out in accordance with the instructions

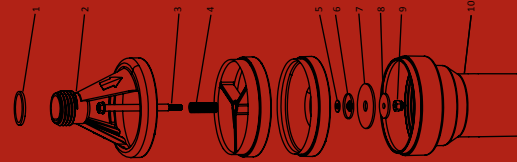


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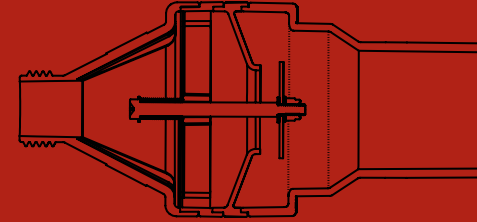
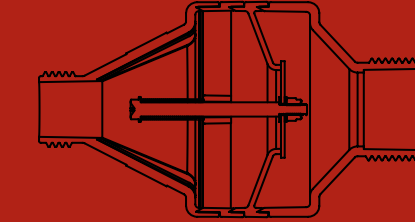


**hotun**



**hotun**

**hiflo**



Item	Component	hotun <sup>®</sup> Supplied with product	hotun hiflo <sup>®</sup> Supplied with product
1	Rubber Inlet connector O ring seal**	Supplied with product	hotun hiflo <sup>®</sup>
2	Inlet connector	15mm tap connector*	Supplied with product
3	302 SS Shoulder Bolt	15mm tap connector*	15mm tap connector*
4	302 SS Spring		
5	M3 302 SS std washer		
6	Top hat washer		
7	EPDM Sealing diaphragm		
8	Plain large plastic washer		
9	M3 302 SS nylok nut		
10	Outlet connector	22mm Compression*	32mm HDPE/Universal

\*Inlet and outlet connector are not supplied unit as standard

\*\*Note Rubber Inlet seal supplied with unit. MUST be used. Never use fibre washer.

Operations, installation,  
Service & Warranty instructions



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# Product Description

**hotun** & **hotun hiflo** are tundishes with visible means of discharge, an air break to drain and an inbuilt non-return odour seal. They are fully compliant with water and building regulations (when fitted in accordance with these installation instructions) allowing a connection to be made directly from a sealed systems pressure (and/or temperature) relief valve (PRV) via **hotun** or **hotun hiflo** to a local foul waste or drain pipe provided that (in particular) it can be demonstrated that the drain/waste pipes can safely withstand the temperatures expected to be discharged.

**hotun**, **hotun hiflo** and **hotun shield** are temperature rated up to 100°C. Its unique and bespoke design allows both trickle and full volume discharges from any pressurised sealed system PRV to be discharged through **hotun** or **hotun hiflo** and piped directly to drain. The sprung, non-return odour seal allows the flow of water through but then returns to an air tight sealed position preventing foul odours coming back up from the waste pipes or drains. It can withstand a 4" drain pressure test. Inlet connection is via a standard tap connector with the rubber seal (provided). Outlet connection is 22mm compression (**hotun**) & 32mm HDPE or universal fitting compatible plain socket (**hotun hiflo**).



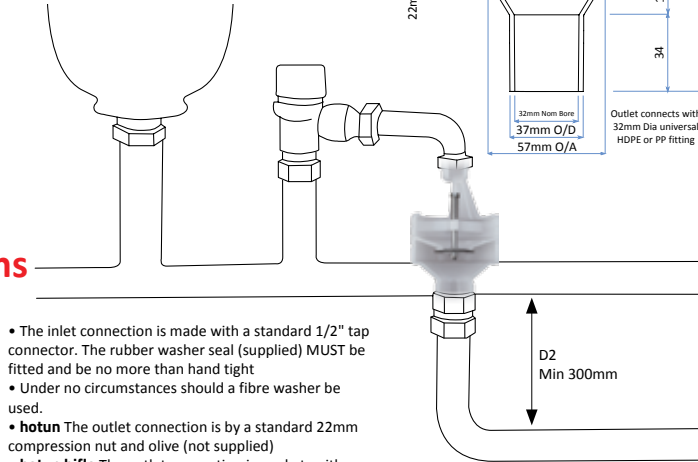
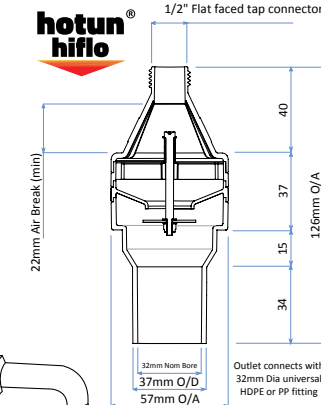
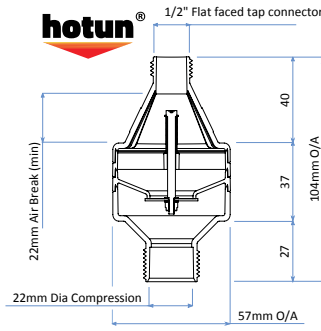
non-compliant installation

# Installation Instructions

- hotun** & **hotun hiflo** must be fitted in compliance with all current Building, Water Regulations and/or boiler manufacturers requirements
- For Unvented hot water installations**, generally;
  - The tundish must be mounted in a vertical section of pipework as close as possible to the temperature/pressure relief valve, with no more than 600mm of pipework between the valve outlet and the connection to the tundish
  - Any discharge should be visible at the tundish
  - All pipework (D1 & D2), must be installed in accordance with G3 requirements, full details can be found on our website [www.hotun.co.uk/issues-and-solutions/regs-applicable-for-compliance](http://www.hotun.co.uk/issues-and-solutions/regs-applicable-for-compliance)
  - The discharge pipe (D2) from the tundish should have a vertical section of pipe of at least 300mm long before any elbows or bends and should be made from a material that can be demonstrated to withstand the expected temperatures of the water discharged
  - The 22mm outlet connection to **hotun** must be made with pulled or swept bends. Elbows may restrict full discharge flowrate
  - The (D2) discharge pipe should not be connected to a soil discharge stack or waste pipe unless it can be demonstrated that stack is capable of safely withstanding the expected temperatures of the water discharged and must contain a mechanical seal, not incorporating a water trap, which allows water into the drain without allowing foul air to be ventilated through the tundish. Both **hotun** and **hotun hiflo** are compliant both having a mechanical seal

# Benefits

- The compact size of **hotun** and **hotun hiflo** allow them to be fitted in the smallest of spaces with ease
- There is a visible means of discharge acting as a warning, allowing the end user to seek expert assistance to rectify any issues before they become a problem
- Due to the careful design of the internal components the products can deal with trickle and full flow discharge conditions.
- hotun** has a maximum flow capacity of 12 litres/minute
- hotun hiflo** can handle up to 18 litres/minute
- The products can be fitted to any unvented hot water heater or sealed system boiler PRV discharge pipe
- There is no risk of any contamination from a blocked and backed up foul waste pipe or drain to enter into the wholesome water supply (unvented hot water cylinders only)
- hotun** & **hotun hiflo** are a cost effective and affordable installation methods
- By allowing a connection to be made to a local waste pipe or foul drain, means that there is no need for drilling holes through external walls saving time and money
- Inlet and outlet connections are made with standard plumbing connections
- Fit **hotun** or **hotun hiflo** for a fully compliant installation



- The inlet connection is made with a standard 1/2" tap connector. The rubber washer seal (supplied) MUST be fitted and be no more than hand tight
- Under no circumstances should a fibre washer be used.
- hotun** The outlet connection is by a standard 22mm compression nut and olive (not supplied)
- hotun hiflo** The outlet connection is made to either a 32mm dia, high density polyethylene (HDPE) universal or 32mm dia polypropylene (PP) universal fitting
- Discharge pipework (D2)** The use of standard push fit and solvent weld is generally not allowed for connections to PRV's due to the temperatures normally expected. If push fit or solvent weld waste pipework is used as a discharge pipe, then the installer MUST be able to demonstrate, if it comes under scrutiny to the local council building control officer, that the installation is compliant. For this reason, RA Tech UK Ltd recommend the universal adoption of only using HDPE or PP waste pipework.
- For boiler installations**
  - Boiler manufacturers do not give specific requirements for the fitting of tundishes, therefore good practice should be observed per unvented installation principles
  - For single pipe boiler PRV and condensate solutions the condensate should be connected below the tundish. In this instance, under NO circumstances should any of the discharge pipe (D2) be run in copper tube due to the

non compatible nature of the condensate liquid/vapour and copper  
 • RA Tech UK recommend that for above counter boiler installations, hotun shield should also be installed as a safety feature



Compliant installation using hotun

# Service, Maintenance & Warranty

## In service warning indication

**hotun** & **hotun hiflo** are products that allow the safe but visible discharge of water from a sealed systems Pressure (and/or Temperature) Relief Valve (PRV). Water passing through **hotun** & **hotun hiflo**, indicates that there is something wrong with the system or installation

THIS WARNING SHOULD NOT BE IGNORED

If you notice water passing through the product you should call a competent and qualified Gas Safe or G3 accredited engineer who will diagnose the issue and give advice to the correct remedial action.

## Service

As part of the hotun & hotun hiflo 5 year warranty terms, it is important that the product is serviced and the service record is filled out on an annual basis by a suitably qualified engineer. When the service is carried out, in conjunction with the boiler or water heater annual service, there should be only minimal additional cost. The service record (attached to these instructions) is your validation of the warranty terms and should be kept in a safe place and will be needed in the unlikely event that a claim under warranty is made.

- The product must be inspected for its correct operation.
- The unit should be visually checked for any obstructions on the inlet from the upper to the lower chamber and removed as necessary
- The valve allows for both trickle and full flow volumes to pass through.
- Trickle. Release the PRV valve to allow a small quantity of water to flow into the product. The valve should hold until the chamber is approximately half full and then release. If the chamber fills to just below the spillover level there is something wrong with the mechanism. Depress the spring to ensure its smooth operation. Re-test the flow, if the valve fails to operate satisfactorily, the spring may have become damaged and need to be replaced (see replacement instructions below).
- Full volume. Depress the PRV valve until fully open for about 5 seconds, the volume of water released should pass through the unit without it spilling over. Should a spillover occur, it must be first determined if the correct product has been used and is compatible for the installation.
- For ease of reference hotun should only be used on small unvented water heaters (less than 15 litres) unless the installer checks (and verifies on the product registration card), that the flow rate from the system's PRV discharge is less than 12L/minute. hotun hiflo should be used for all other installations.

## Note

If the flow rate from the PRV discharge (Boilers and large unvented installations) exceeds 12L/minute and **hotun** has been installed, RA Tech UK Ltd will not be responsible or liable, for any warranty claim or subsequent claims for damages.

- If the correct product has been used, the engineer needs to determine if there is a downstream blockage in the D2 pipework or that the product is at fault. If the D2 pipework has been determined clear of blockages and the valve arrangement in the product has been checked for smooth operation then it may be that either the spring/valve assembly will need to be replaced or a new product installed under a warranty claim (see adjacent warranty return details).

## Instructions for replacing Spring and/or odour seal

- Isolate pipework upstream of the tundish
- Remove the connection nuts and remove the unit (making sure that the rubber seal 1 is retained for re-use as necessary)
- Hold the shoulder bolt 3 using No 1 pozi drive or M3 5.5mm hex socket from the top and remove the M3 nyloc bolt 4 accessible from the outlet
- Remove the washers 5, 6, 7 & 8 from the outlet and the withdraw the shoulder bolt and spring 4 from the top of the unit.
- Replacement is the reverse of removal but extreme care should be taken with the handling of the delicate spring.
- If the spring is suspected of being damaged it must be replaced.
- When retightening the nyloc nut it must gently pinch the EPDM seal but not be overtightened. If it is overtightened the odour seal may not function as intended.
- Tighten just enough that the seal does not rotate plus 1/8th of a turn more
- Use only RA Tech UK Ltd manufactured springs and seals, which can be purchased as a separate service kit

## hotun shield

Note: **hotun shield** is to be used just for boiler installations. It must never be used on an unvented installations, doing so will potentially allow category 5 contaminated water to enter the wholesome water stored in the cylinder. A boiler does not have a potential cross contamination issues and the shield is used, in an over counter type installation, to prevent the possibility of an end user placing their finger in the flow of potentially boiling water

## Specification

- hotun** has a maximum flow throughput rate of 12L/min
- hotun hiflo** has a tested flow throughput rate of at least 18L/min

Both units have trigger volumes of between 5-30ml of water. They are rated for use up to 100°C and occasional temperatures of up to 110°C

Please note that for optimal discharge rates for **hotun**, the 22mm D2 outlet pipework should be made with pulled bends. Short radius elbows will reduce the maximum flow from the tundish outlet to the waste discharge pipe

## 5 yr Product and labour warranty

**hotun** and **hotun hiflo** are covered for 5 years for a replacement unit and the cost of labour to replace (limited to £35 plus vat) due to any manufacturing fault or defect plus a further 5 years cover for a replacement unit only, subject to the terms below; Both units are designed, when correctly serviced, to give many years of trouble free service. The warranty is honoured provided that;

- The unit has been installed and serviced by a suitably competent installer Eg, Ciphe, Water Safe, Gas Safe, G3;
- the unit is registered via the online registration form at [www.hotun.co.uk/product-registration](http://www.hotun.co.uk/product-registration) within 14 days of installation;
- and the service records (attached to this manual) being filled out at the time of service by a suitably qualified person.

On the rare occasion that the unit should be needed to be replaced, the engineer should simply fill out the online warranty claims form, copy this page and service record card over and send it (together with the suspected defective product) to RA Tech UK Ltd to claim a full refund, plus (Max E35 +VAT) labour and first class post costs against a new product. RA Tech UK Ltd will refund the full claim either by cheque or bank transfer. NB The RA Tech UK Ltd Warranty only covers the cost of replacement unit and limited labour costs plus carriage, we do not cover for subsequent damages of any kind due to its characteristic of providing a visible warning and being an air break to drain allowing the unit to flood over if there is a downstream blockage.

## Warranty

To validate the Warranty the product must be registered. The installer must certify that the product has been installed in accordance with the correct standards and his details and signature must be filled out on this form or on the website [www.hotun.co.uk/product-registration](http://www.hotun.co.uk/product-registration) Product fitted **hotun** / **hotun hiflo** (delete as appropriate)

## Installer details

Name.....

Company.....

Phone no.....

email.....

Date of installation.....

Are you a qualified Water Safe, G3, Ciphe or Gas safe installer Y / N  
 Certificate No.....

Have you informed the end user that to keep the product in warranty it needs an annual service Y/N

I hereby certify that the product has been installed in accordance with the instructions and relevant water, building (and/or) boiler manufacturers instructions.

Signed.....

hotun® hotun hiflo® and hotun shield® are all registered trade marks of RA Tech UK Ltd