Horne Engineering Ltd
Po Box 7, Rankine Street
Johnstone, Renfrewshire
Scotland, PA5 8BD
Tel: 01505 321455
Fax: 01505 336287
Email: technical@horne.co.uk
Web: www.horne.co.uk

Pipe Cover Kit for Aluminium Shower Panels with In-Line Thermal Disinfection Unit (ILTDU) Fitted

INSTALLATION INSTRUCTIONS

Installation requirements and specifications

Note that this Pipe Cover Kit is ONLY suitable for the Horne Range of **Aluminium** Shower Panels. It is not suitable for the Horne Range of Stainless Steel Panels; a separate Pipe Cover Kit is available to suit the Stainless Steel panel range.

There are two different lengths of Pipe Cover Kit available for Aluminium Shower Panels – 465mm long and 940mm long. Please ensure that you have the appropriate length for your application.

Ensure that you have been supplied with the correct Pipe Cover Kit and that the Pipe Cover is long enough to fully cover the gap between the panel and the ceiling.

Fit the Aluminium Shower Panel to the wall in accordance with the Installation Instructions supplied. Note that in order to fully comply with WRAS requirements, a single approved check valve should be fitted at each inlet

Identify the components of the pipe cover kit by comparing the contents with the drawing shown on Page 4.

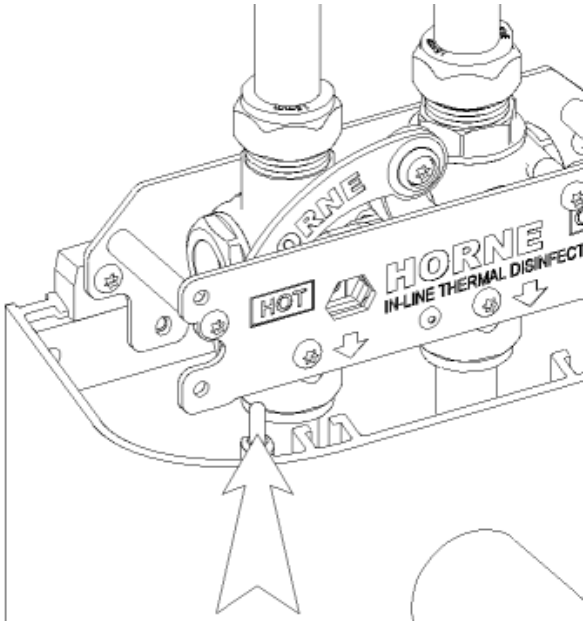


Fig. 1

The Width Brace (Item 8) is already factory fitted to the panel to support the ILTDU.

Put the two Alignment Pins (Items 6) into the circular recesses in the Channel Section of the Shower Panel. See Fig. 1.

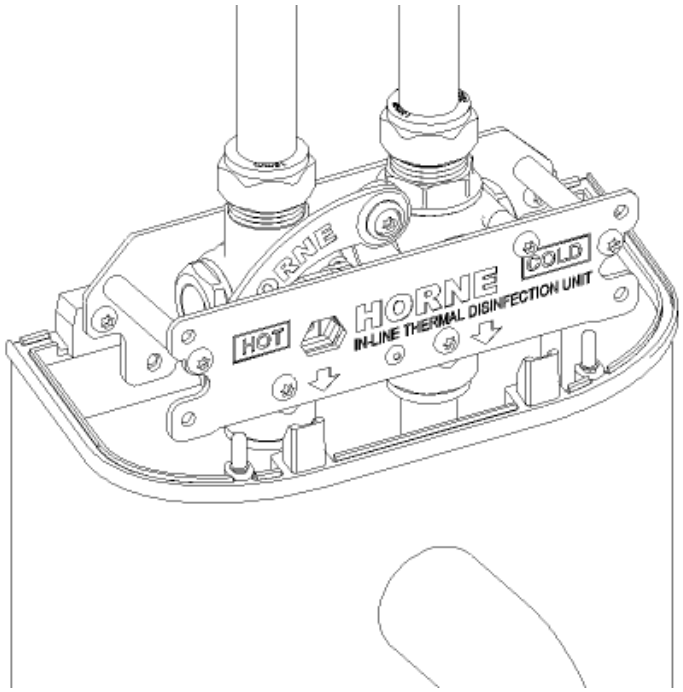


Fig. 2

Place the shaped Gasket (Item 5) onto the top of the Shower Panel, noting that it only fits one way, and that the rectangular legs engage with the rectangular recesses in the Channel Section of the Shower Panel. See Fig. 2.

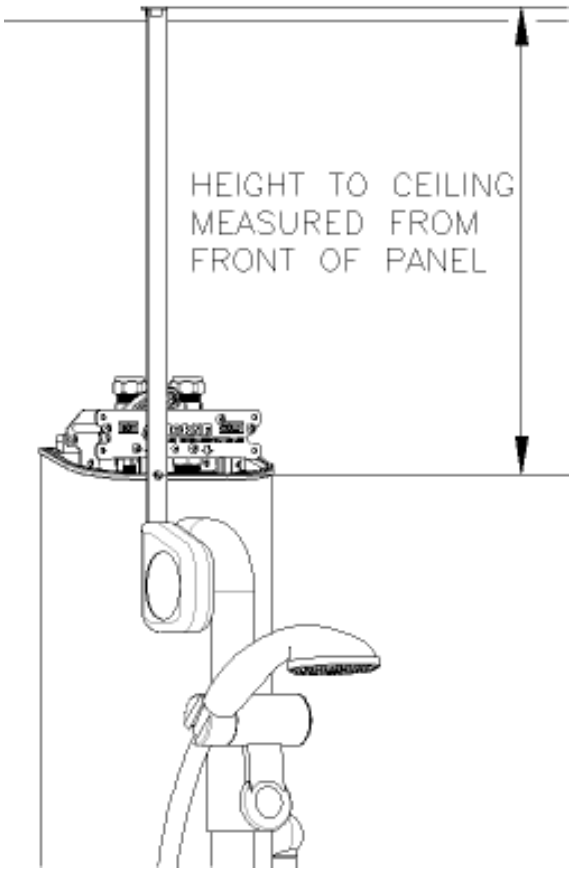


Fig. 3

Slide the Pipe Cover (Item 4) down into place, engaging with both the Alignment Pins (Items 6) and the Gasket (Item 5). If the Pipe Cover is too long to do this, then measure the gap between the ceiling and the panel and cut the square TOP end of the Pipe Cover to make the Pipe Cover 15mm **SHORTER** than the gap using a saw suitable for use with aluminium. **NB. DO NOT CUT THE ANGLED END OF THE PIPE COVER** or it will not fit neatly onto the top of the Shower Panel. See Fig. 3 and 4.

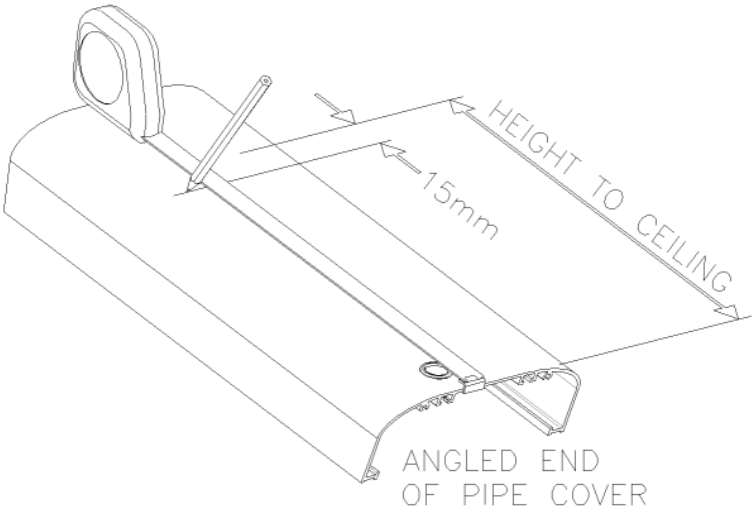
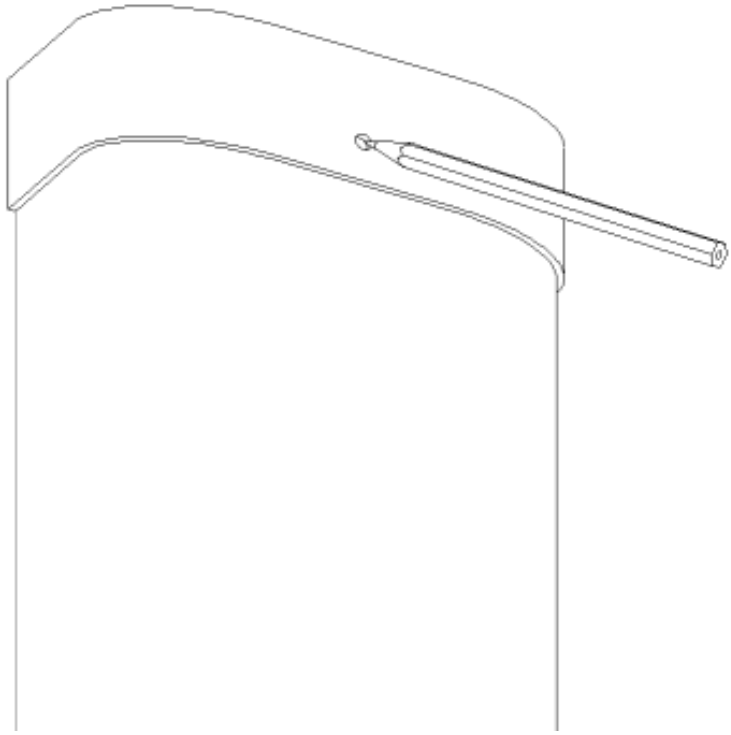


Fig. 4



Slide the Pipe Cover down into place and check for fit. The top of the Pipe Cover should be approx. 15mm from the ceiling when pressed firmly into place. Position the Saddle over the top of the Pipe Cover and against the ceiling with the hole in its lower position. Mark through the hole in the Saddle onto the Pipe Cover. See Fig. 5.

Fig. 5

Remove the Saddle (Item 3) and Pipe Cover (Item 4) and drill the Pipe Cover (Item 4) with a 7 mm drill where marked. See Fig. 6.

Replace the Saddle (Item 3) and Pipe Cover (Item 4) and put in the screw to mark the wall. If appropriate, drill the wall to take the screw, or fit appropriate wall plugs. **N.B. Make sure that no debris enters the ILTDU during this if the pipe drops have not been installed.**

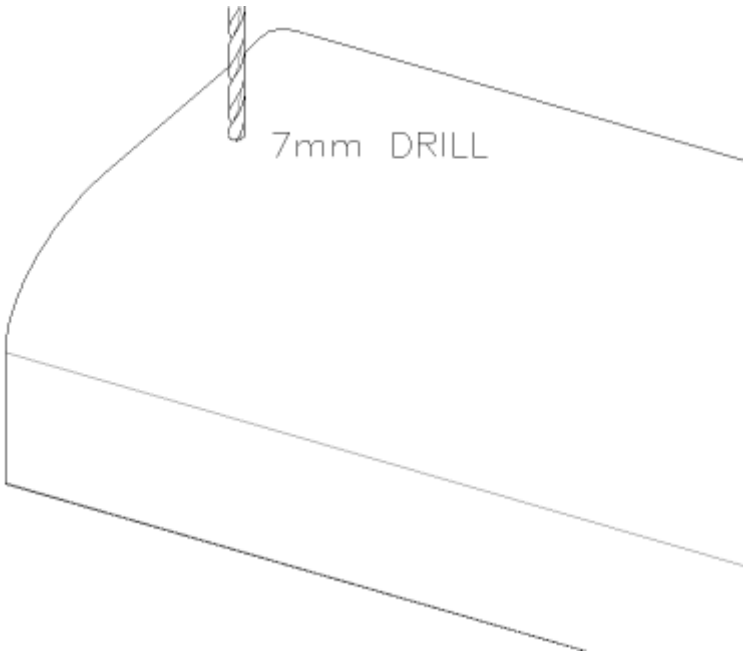
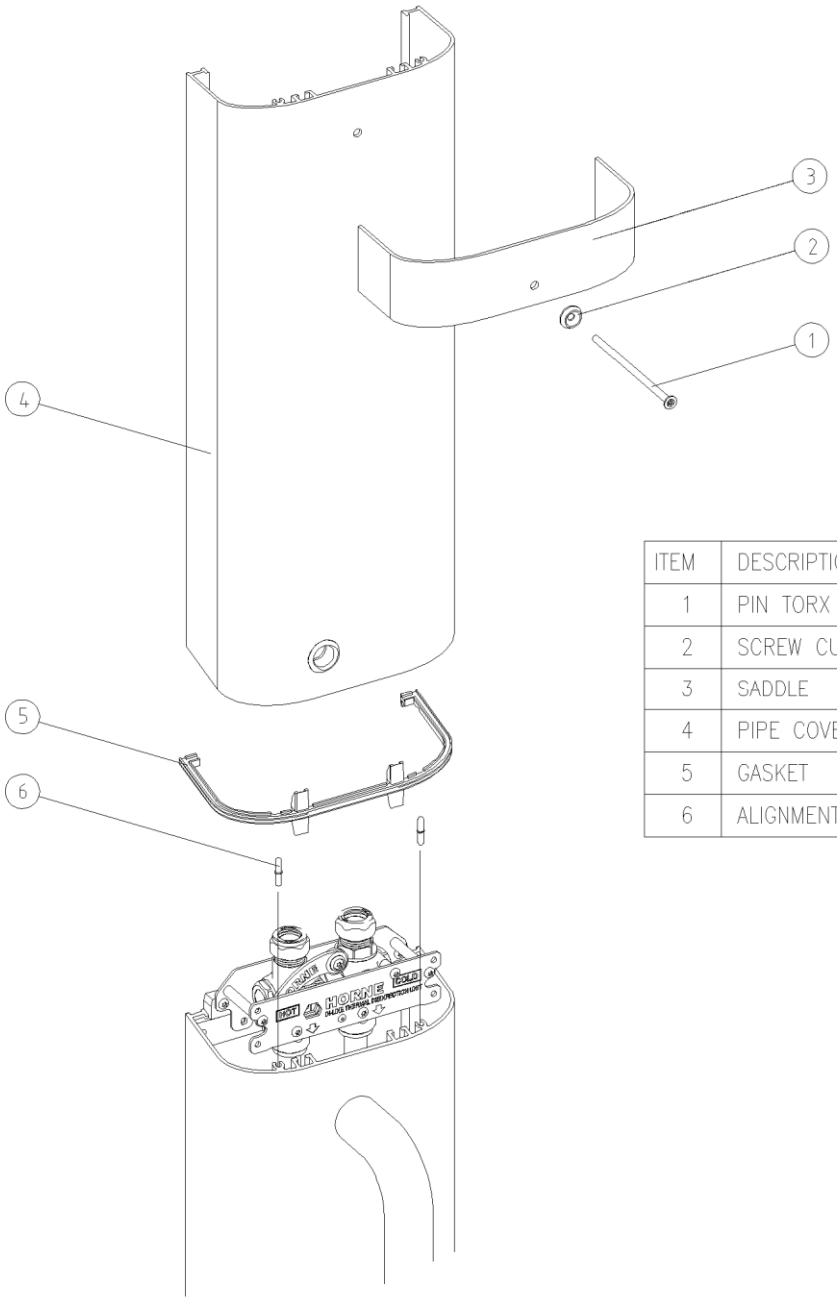


Fig. 6

Finally, assemble the saddle to the cover by putting the Pin-Torx Security Screw (Item 1) through the Screw Cup and through the Saddle and Pipe Cover. **Do not over-tighten the Pin-Torx screw or the Saddle edges will splay out and give a poor appearance.** Silicone sealer can be used at the joint edges if required.

The drawing on Page 4 shows the exploded assembly view of the Pipe Cover and Saddle installation.



ITEM	DESCRIPTION	No OFF
1	PIN TORX SECURITY SCREW	1
2	SCREW CUP	1
3	SADDLE	1
4	PIPE COVER (465mm or 940mm)	1
5	GASKET	1
6	ALIGNMENT PIN	2

MATERIAL : –

HORNE ENGINEERING LTD.
JOHNSTONE
RENFREWSHIRE

PART :
PIPE COVER KIT FOR ILTDU PANELS

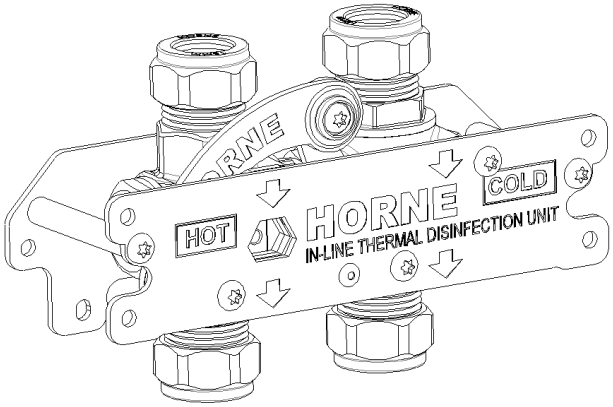
PRODUCT :
ALUMINIUM SHOWER PANELS WITH ILTDU

SCALE	DO NOT SCALE
DRAWN	GDP 17–6–09
CHECKED	
ISSUE	1

DR'G. No. 10334B

OPERATING INSTRUCTIONS ADDENDUM

In-Line Thermal Disinfection Unit (ILTDU) Supplied with TSV1 Shower Panels.



Foreword

The Horne In-Line Thermal Disinfection Unit (ILTDU) is a device that enables system hot water to be simply and reliably passed through the Shower in order to thermally disinfect the downstream pipework, the TSV1 Shower Valve, the Shower Hose and the Shower Handset. Thermal disinfection is the preferred method of eliminating pseudomonas and legionella bacteria. The ILTDU is housed on top of the Shower Panel inside the Pipe Cover.

Connect up the supplies, Leak-Test, and Commission the ILTDU

Ensure that the installation is free from leaks and then commission the ILTDU as follows:

- The ILTDU will not operate as intended unless it is configured exactly as shown in Fig. 3. It is expressly not permissible to swap over inlets and outlets, or hot and cold pipework, even if these are done symmetrically. Check the plumbing against the connections shown in Fig. 3.
- *Before* inserting the OPERATING KEY, open the supplies and run the outlet until normal temperature at the outlet is reached. Measure and record this temperature. Ensure that the HOT water pipe to the mixing device is HOT, and that the COLD water pipe to the mixing device is COLD.
- Insert the OPERATING KEY into the ACCESS SLOT on the front plate.
- Turn the OPERATING KEY exactly a half turn clockwise, until you feel the mechanism reaching the end stop. The short leg of the OPERATING KEY should now be pointing upwards, towards the inlet pipework.

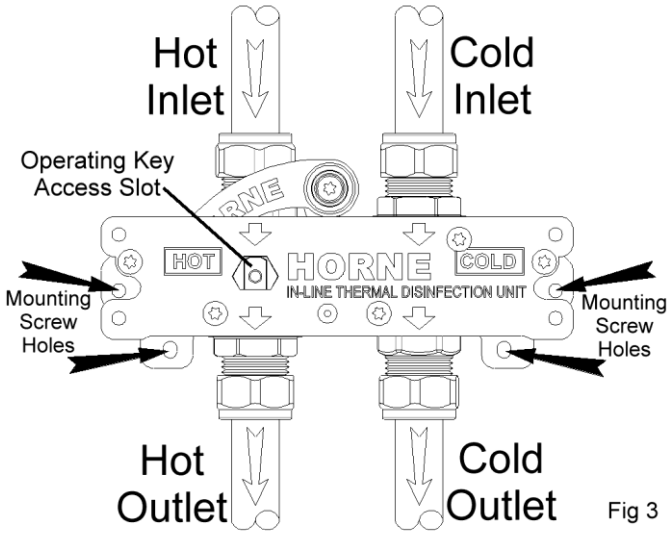


Fig 3

- The OPERATING KEY cannot be removed from the ILTDU in this position. This is intentional, to prevent the ILTDU from being accidentally left in the DISINFECTING MODE.
- Turn on the outlet and ensure that the HOT water pipe between the HORNE ILTDU and the mixing device is HOT, and also that the COLD water pipe between the HORNE ILTDU and the mixing device is HOT. BOTH pipes should be hot (this is how the HORNE ILTDU heats up the mixing device for disinfection purposes).
- Measure the water temperature at the outlet and ensure that it is at system hot water temperature.

- Note that a MINIMUM of 60.0°C is generally required. Temperatures even **slightly** lower than this will result in impractically long disinfection durations being required.
- Turn the OPERATING KEY back half a turn anti-clockwise against the end stop and remove the key. Ensure that the temperature at the outlet rapidly returns to normal.
- Perform a cold water isolation test on the shower to ensure that it is still providing scald protection.
- ALWAYS remove the OPERATING KEY from the HORNE ILTDU when the device is in the PASSIVE MODE. Do NOT leave the OPERATING KEY in the device when in PASSIVE mode.

The HORNE ILTDU is now commissioned.

Commission the Shower Panel by following the instructions for the panel.

Using the HORNE ILTDU

Before the ILTDU is used, a local risk assessment should be undertaken to establish:

- Any bacterial load present and the most appropriate time/temperature regime to deal with it.
- The scalding risk and how to minimise it during disinfection.
- Any necessary precautions to protect sanitary ware from the hot water.
- The most appropriate frequency for a disinfection routine to be scheduled.

- **LOCAL RISK ASSESSMENT SHOULD ALWAYS PREVAIL IN DICTATING THE PARAMETERS FOR DISINFECTION. In absence of this, hot water temperature of 60.0°C or greater, and duration of at least 10 minutes may be used as a starting point. Disinfection efficacy reduces drastically at temperatures even slightly below 60.0°C. Calibrate your thermometer if margins are tight.**

The use of the HORNE ILTDU as fitted to a shower will now be described.

- Ensure that the Hot Water Temperature available is consistent with that recommended by the local risk assessment. Note that a minimum of 60.0°C is normally required for disinfection.
- Ensure that no vulnerable people are able to access the outlet while the disinfection process is underway.
- Perform a cold water isolation test on the TMV being disinfected. If the cold water isolation test is satisfactory then proceed with the disinfection procedure. If the TMV does not pass the test, then address that, before proceeding, by following normal maintenance procedures for the TMV. These are described in the Instructions for the Shower Panel.
- Fully turn on the shower, and then insert the OPERATING KEY into the HORNE ILTDU. Turn the OPERATING KEY one half turn clockwise, against the end stop. The OPERATING KEY will remain in the HORNE ILTDU during this time – it cannot be removed.
- The red warning triangle attached to the OPERATING KEY serves as a highly visible reminder that the ILTDU is in DISINFECTING MODE. For this reason, do not use the OPERATING KEY should the red warning triangle be missing.
- **Note: Do NOT remove the Shower Hose or the Shower Handset during thermal disinfection; it is vital that each of these parts is fully thermally disinfected.**
- **If any kind of filter is fitted to the outlet then we suggest that this is replaced with a clean filter before thermal disinfection, because the existing filter can act as a reservoir of concentrated bacteria and may lead to retrograde contamination of the Shower.**
- Measure the temperature of the water coming out of the shower head. This should rise to system hot water temperature. When it reaches the minimum temperature recommended by the local risk assessment, start timing, and permit the water to run for the required duration. Measure the temperature during this time to ensure that the temperature is maintained at the required high level. If the temperature does not reach the required level, or is not maintained at the required level, stop the process and address the water temperature. Satisfactory disinfection cannot be assured otherwise.
- After the water has run for the required time at the required temperature, turn the OPERATING KEY one half turn anti-clockwise back to its original position, again against the end stop, and then remove the key. Always remove the OPERATING KEY whenever the ILTDU is returned to the PASSIVE mode. Do not leave the OPERATING KEY in the ILTDU when it is in PASSIVE mode.
- Let the shower run for a few minutes and monitor the temperature to make sure the water temperature drops to a safe and comfortable limit.
- Perform a cold water isolation test on the TMV and ensure that it closes off the hot water supply, and is thus still preventing scalding, then check that the correct mixed water temperature is re-established. If the TMV does not pass the cold water isolation test, perform regular maintenance operations on the TMV, and do not allow use of the shower panel until the TMV satisfactorily prevents hot water flow on isolation of the cold inlet.
- Record the parameters of the disinfection process on a record sheet (see page 8 of this document, or download a customisable sheet from www.horne.co.uk)

- Note that disinfecting is a separate process from cleaning. This process will disinfect the TMV and pipework, but will not, in itself, clean the system. It is advisable to perform a high velocity flushing procedure, using an appropriate Horne Flushing Kit for the Shower, to encourage removal of loosened biofilm and accumulated debris. The use of a Horne Flushing Kit permits full-bore flushing and bypasses flow regulators within the TMV in order to ensure flushing the pipework with the maximum water velocity possible.

Maintenance

The HORNE ILTDU has no user serviceable parts, and does not require any ongoing maintenance, other than occasional cleaning and lubrication of the metal link mechanism to prevent jams.

If the ILTDU fails to work properly, it should be replaced. No attempt should be made to disassemble the ILTDU.

If the OPERATING KEY is lost, do not attempt to operate the ILTDU without it. It will not operate satisfactorily, the ILTDU could be damaged, and it could be dangerous. Replacement Keys (Part No 6236) can be ordered from Horne Engineering Ltd (contact details on front cover).

HORNE ENGINEERING LTD

RECORD SHEET for HORNE In-Line Thermal Disinfection Unit (ILTDU)
(Integral to Horne TSV1 Shower Panel)

In-Service Usage Record		
Establishment:	Location of ILTDU:	Shower Outlet protected: ....

Date:	**Facilities Operator**	**Elevated velocity flush carried out too?**	**Yes/No**
Temperature measured at outlet during thermal disinfection: ....°C	Duration of thermal Disinfection: .... mins	cfu count before use: (if appropriate)	cfu count after use: (if appropriate) ....

Date:	**Facilities Operator:**	**Elevated velocity flush carried out too?**	**Yes/No**
Temperature measured at outlet during thermal disinfection: ....°C	Duration of thermal Disinfection: .... mins	cfu count before use: (if appropriate)	cfu count after use: (if appropriate) ....

Date:	**Facilites Operator:**	**Elevated velocity flush carried out too?**	**Yes/No**
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Temperature measured at outlet during thermal disinfection: ....°C	Duration of thermal Disinfection: .... mins	cfu count before use: (if appropriate)	cfu count after use: (if appropriate) ....

Date:	**Facilites Operator :**	**Elevated velocity flush carried out too?**	**Yes/No**
Temperature measured at outlet during thermal disinfection: ....°C	Duration of thermal Disinfection: .... mins	cfu count before use: (if appropriate)	cfu count after use: (if appropriate) ....

(Note: Photocopy this page, or download from: www.horne.co.uk)