CI/SfB (37.5) Xn6
Uniclass L416
May 2002

LOFT ACCESS TRAPS

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The new 2002 energy conservation requirements of Approved Documents L1 and L2 mean that a loft trap needs to be a high-performance product. Site-constructed traps are no longer adequate.

Air leakage: the Approved Documents set limits for air leakage. In Approved Document L1 for dwellings, compliance can be achieved by following the Robust Details (see References), or by pressure-testing the building to demonstrate performance. In Approved Document L2 for buildings other than dwellings, this testing is mandatory (except for buildings under 1000m² gross floor area).

U-value: when using the Target U-value or Carbon Index methods of compliance, both Approved Documents stipulate a maximum U-value of 0.35W/m²K for parts of a roof (which would include a loft trap); Robust Details section 8.04 has the same requirement.

Glidevale Loft Access Traps

- Glidevale traps have been redesigned, re-engineered and manufactured to BS EN ISO 9001 to meet the demands of the new Approved Documents for both thermal insulation and airtightness.
- All loft traps have integral closed-cell seals which significantly reduce water vapour migration into the loft space, reducing condensation risk.
- The seals also virtually eliminate heat loss by air movement around the trap door and exceed the airtightness requirement of the Approved Documents, as demonstrated by test.
- The traps provide continuity of thermal insulation at ceiling level, substantially reducing heat loss by conduction through the trap.
- Options with rigid insulation meet the minimum U-value requirement of the Approved Documents.
- Optional key-operated security bolts for tenanted properties or public areas.
- Half-hour fire resistance with Class 0 flame spread option on LA5 type.
- Suitable for standard 600mm joist centres.

LOFT ACCESS TRAPS

DESCRIPTION

Each Glidevale Loft Access Trap comprises:
- a frame which is fixed into a trimmed opening and has a seal to the ceiling, and
- a trap door which is thermally insulated and has a flexible closed cell seal between door and frame.

Composition

LA1: The trap door is injection-moulded polypropylene with rigid insulation or expanded polystyrene infill and a black PVC back. An integral latch and anti wind uplift mechanism prevents the trap from becoming dislodged if there is a severe wind gusting. Options: two lockable bolts.

LA2: The trap door is injection-moulded polypropylene with rigid insulation or expanded polystyrene infill and a black PVC back, attached to the frame by two hinges. Options: one lockable bolt.

LA5: The standard trap is 6mm stoved finish hardboard with glass fibre infill and PVC back.
For 30 minutes fire resistance the face of the trap is 6mm Masterboard with spray-applied vinyl finish and rigid insulation. The trap incorporates pressed metal support brackets. The frame is also fitted with an intumescent strip.

Frame: All frames are injection-moulded polypropylene with closed-cell foam vapour seals.

Accessories

An access pole is supplied for opening the hinge-down model LA2.
The LA4 Loft Ladder is aluminium in two telescoping sections, mounted on hinge brackets which are fixed to the ceiling joist or loft boarding, not to the trap itself. Supplied with a pole to enable the ladder to be pulled down. Suitable for floor-to-floor heights of 2210 to 2670mm.

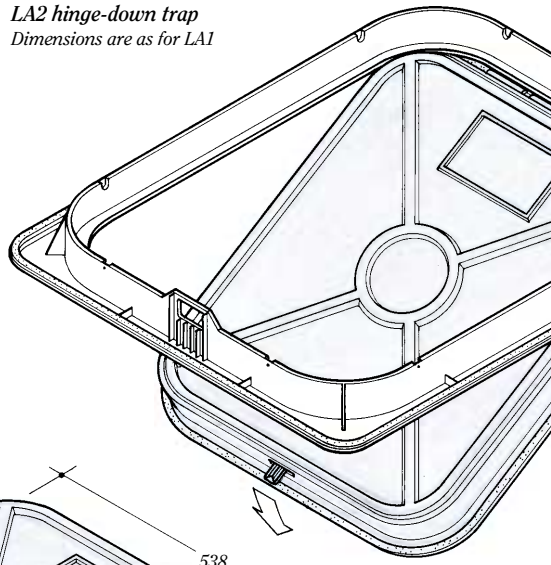
Sizes

All models meet or exceed the NHBC minimum opening size (NHBC Standards 7.2-D14), and suit 600mm joist centres. They can be used for other joist centres by cutting a joist and trimming the opening (subject to structural considerations).

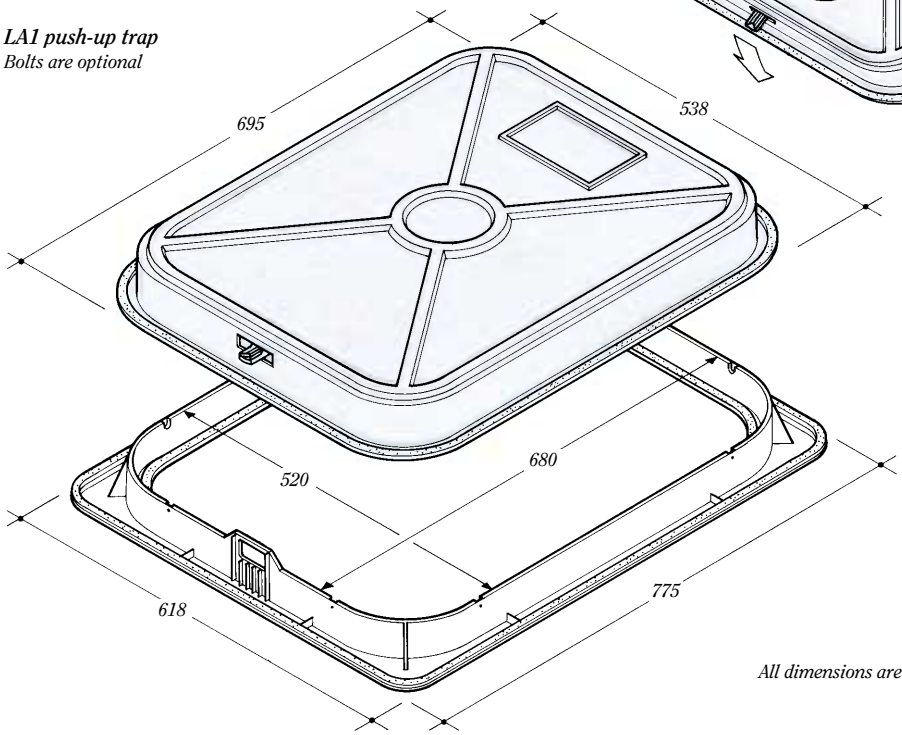
Appearance

LA1 and LA2 trap and frame have a lightly textured scuff-resistant white finish, which blends unobtrusively with a classic brilliant white ceiling.
All frames have the same finish, and cover the edges of the ceiling hole to give a neat appearance.
LA5 trap door is matt white.

LA2 hinge-down trap
Dimensions are as for LA1



LA1 push-up trap
Bolts are optional



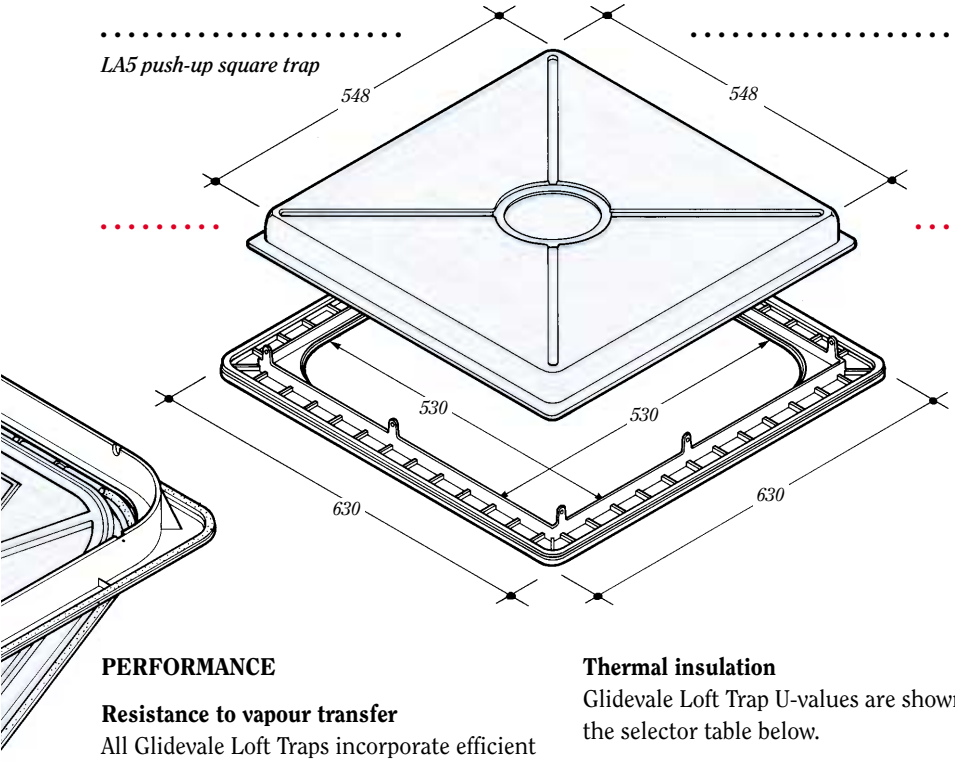
All dimensions are mm

LOFT TRAP SELECTOR

Model	Operation	Hatch opening nominal size (mm)	Insulation	U-value (Wm^2/K)
LA1	Push-up	680 x 520	Rigid insulation or expanded polystyrene	0.35 0.77
LA2	Hinge-down	680 x 520	Rigid insulation or expanded polystyrene	0.35 0.77
LA5	Push-up	530 x 530	Glass fibre	0.60
LA5 fire rated	Push-up	530 x 530	Rigid insulation	0.35

* Options - must be specified

LA5 push-up square trap



PERFORMANCE

Resistance to vapour transfer
All Glidevale Loft Traps incorporate efficient vapour seals which limit the transfer of moisture-laden air into the roof space. They can be used to meet the requirements of Approved Documents F2 (BS5250), Robust Details 2001, and the recommendations of BRE Digest 270.

Thermal insulation
Glidevale Loft Trap U-values are shown in the selector table below.

Wind uplift
The tight fit of Glidevale Loft Traps holds them in place; weighting or latching is not needed in normal conditions such as air movement caused by doors opening and closing in airtight houses.
Where exposure to gusts of wind through external doors might cause uplift, the LA1 trap includes an anti wind uplift mechanism, or the LA2 hinge-down trap can be specified.

Fire
Surface spread of flame
Surface spread of flame is not required by Building Regulations Approved Document B2, Section 7.3. See technical requirements.
Fire resistance
LA5: with Masterboard facing and installed in appropriate construction, can provide 30 minutes fire resistance with Class 0 surface spread of flame.
Fire performance is demonstrated by independent tests; copies of test reports are available for inspection.

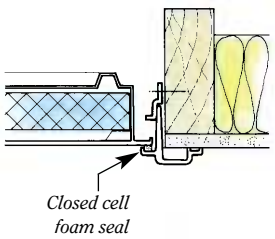
Fire performance flame spread	fire resistance	Accessories standard	optional
Not required under Building Regs. Approved Document B2, Section 7.3	-	Integral latch and anti wind uplift mechanism	Two security bolts
Not required under Building Regs. Approved Document B2, Section 7.3	-	Integral latch and access pole	One security bolt Loft ladder (LA4)
Not required as above	-	-	-
Class 0 and	30 minutes*	Masterboard facing and intumescent strips	

INSTALLATION

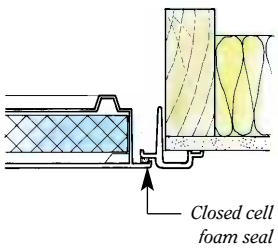
Full instructions, fixing screws and a householder's guide to maintenance are supplied with each unit. Main points are given here.
Where joists are at 600mm centres, trim the ends of the opening with softwood cross-members.
Where joists are at closer centres or the trap is to be installed across the joists, cut back one joist and trim the opening. Pack out to the correct opening size if necessary.
Note: In a trussed rafter roof the ceiling joists form part of the trusses, and additional bracing may be required to maintain the integrity of the roof structure. If in doubt, seek advice from the truss manufacturer.
Where a heavily-textured or relief-patterned ceiling finish is specified, leave a 50mm smooth margin all round the trap opening to ensure a good seal.

Frame and edge details

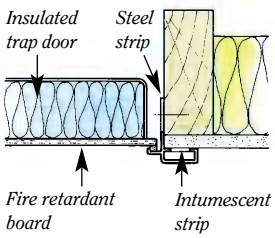
LA1



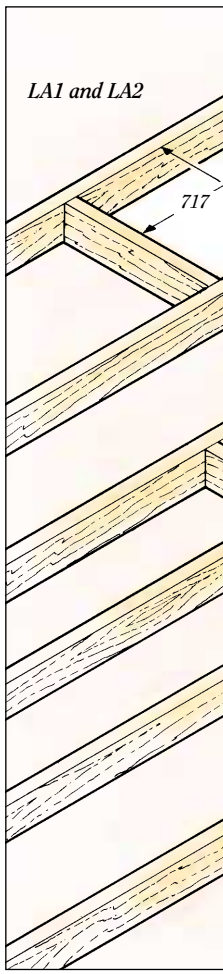
LA2



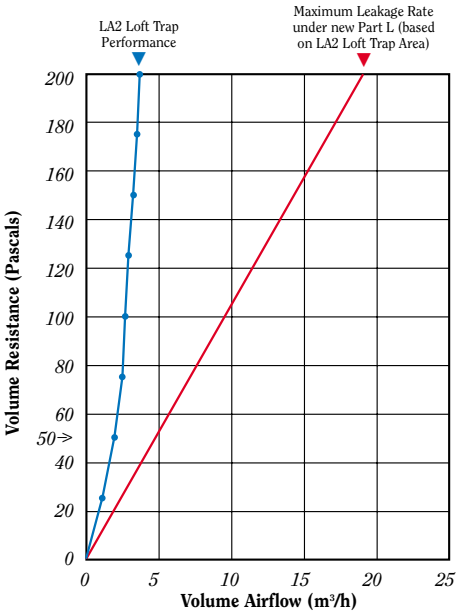
LA5 (fire resisting)

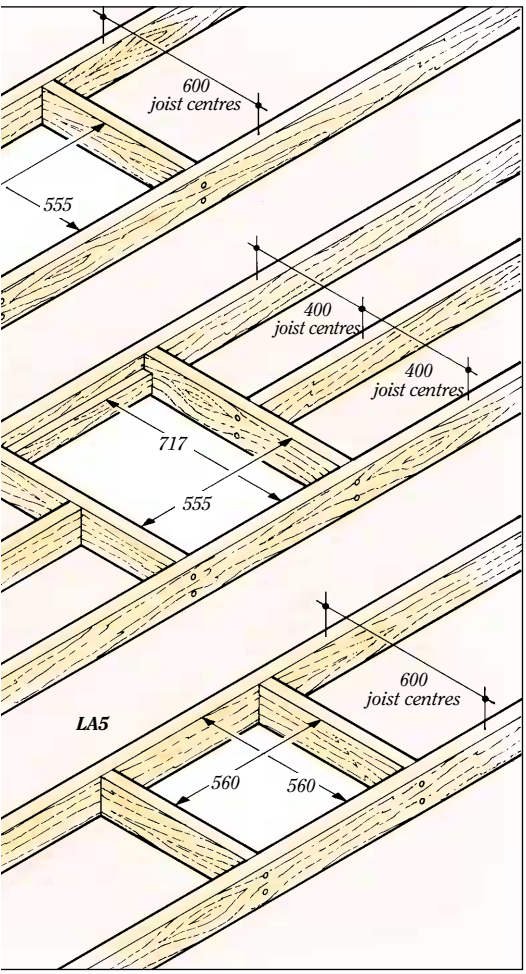


LA1 and LA2



Airtightness performance of LA2 Loft Access Trap compared to the minimum performance provision of Approved Documents L1 and L2





Specification clauses

Select from the following as appropriate:
Loft access traps to be Glidevale complete loft trap and frame units obtainable from:
Glidevale Limited,
2 Brooklands Road, Sale,
Cheshire M33 3SS,
Tel: 0161 962 7113,
Fax: 0161 905 2085,
Email: info@glidevale.com
LA1: push-up trap door of injection-moulded polypropylene with rigid insulation/expanded polystyrene* insulation infill and PVC back, fitted with anti wind uplift mechanism [and two key-operated security bolts*].
LA2: hinge-down trap door of injection-moulded polypropylene with rigid insulation/expanded polystyrene* insulation infill and PVC back, [fitted with key-operated security bolt*].
LA5: push-up trap door of [standard] 6mm stoved finish hardboard with glass fibre quilt infill and PVC back.
30 minutes fire resistance: 6mm Masterboard with spray-applied vinyl finish, and pressed metal support brackets.
Frame fitted with intumescent strip.
Frame: injection-moulded polypropylene with closed-cell vapour seals.
Accessories:
LA4 aluminium Loft Ladder in two telescoping sections, mounted on hinge brackets.
Cranked access pole for loft ladder.
Performance: U-value: 0.35/0.77/0.60* W/m²K.
Class 0 surface flame spread rating to BS 476: Part 7/Building Regulations Approved Document B2 Appendix A and fire resistance 30 minutes to BS 476: Part 22.*
Installation: Install in accordance with manufacturer's instructions.

*Delete as applicable

TECHNICAL REQUIREMENTS

Condensation prevention

Thermal insulation at ceiling level produces a cold roof with an increased condensation risk due to moisture vapour migrating into the loft space from the dwelling below. Most of the water vapour in the roof void comes from washing, drying and cooking within the house. It enters the void by diffusion through the ceiling, and by air movement through gaps around the loft trap, pipes, ceiling roses and cracks.

With a conventional unsealed loft hatch, approximately 50% of vapour transfer by air movement occurs around the hatch cover (BRE Digest 270). With a Glidevale sealed trap this can be cut to almost zero.

Approved Document F2 requires provision to prevent excessive condensation in a roof void above an insulated ceiling. This can be done by following BS 5250, of which clause 9.4 states: "Access doors should either be heavy or clamped, with a compressible seal between them and the frame."

NHBC Standards 7.2-S14 also requires a draughtstripped loft hatch.

Thermal insulation and air tightness

Thermal insulation laid on the ceiling is a simple and cost-effective method of conserving heat and meeting building regulations. However, the loft trap should also be insulated to avoid heat loss. Insulating a conventional trap by laying insulation on it is awkward and not reliable. Heat loss can also occur when the trap is lifted by draughts, allowing warm air to escape around the edges and increasing moisture transfer.

Approved Documents L1 and L2, 2002, set minimum air leakage levels, and a maximum U-value of 0.35W/m²K for parts of roofs (which would include loft traps) when using the Target U-value or Carbon Index methods of compliance.

'Robust details' 2001 recommends full draught stripping of loft hatches and a minimum U-value as above.

'Thermal insulation: avoiding risks' 2002 recommends that loft hatches are insulated and draught sealed, with bolts or catches to ensure seals are compressed.

Fire

Surface spread of flame

Approved Document B2 Section 7 sets limits for flame spread classification of the ceiling surface.

Section 7.3 defines what is classified as a ceiling and in the classification states that "trap doors and their frames" are not included.

Fire resistance

Approved Document B3 Section 9 Concealed spaces (cavities) in some cases requires a fire-resisting ceiling to a roof space, for example above a protected stairway in a house of three or more storeys; see the Approved Document for more details.

Fire resistance defined by test to BS 476: Part 22.

FURTHER INFORMATION

References

Building Regulations 2000
Approved Document B 2000 'Fire safety'
B2 'Internal fire spread (linings)'
B3 'Internal fire spread (structure)'
Approved Document F2 2000 'Condensation in roofs'
Approved Documents L1 and L2
L1, 2002 'Conservation of fuel and power in dwellings'
L2, 2002 'Conservation of fuel and power in buildings other than dwellings'

BS 476 'Fire tests on building materials and structures'
Part 7: 1997 'Method of test to determine the classification of the surface spread of flame of products'
Part 22: 1987 'Methods for determination of the fire resistance of non-loadbearing elements of construction'

BS 5250: 2002 'Control of condensation in buildings'

BRE Digest 270, 1983 (amended)
'Condensation in insulated domestic roofs'

'Thermal insulation: avoiding risks' 2002 edition (BR 262)

Robust Details: 'Limiting thermal bridging and air leakage: Robust construction details for dwellings and similar buildings' 2001, DEFRA and DTLR, The Stationery Office

'Testing buildings for air leakage' CIBSE TM 23: 2000'

NHBC Standards Chapter 7.2 Pitched roofs (2000)

Other products

Glidevale Limited market a wide range of other building products including:

Glidevale roof ventilation products

Glidevale underfloor and wall vents

Glidevale Metro modular rooflights

Protect vapour-permeable membranes

Protect A1 roofing underlay

GLIDEVALE LIMITED
2 Brooklands Road, Sale, Cheshire M33 3SS Tel: 0161-962 7113 Fax: 0161-905 2085
Email: info@glidevale.com Web: www.glidevale.com