

Enduce E1

Holder/Issued to

Enduce AB

Lärlingsgatan 22 S, 904 22 Umeå, Sverige

Product description

Enduce E1 is a floor drain designed to recover heat energy from greywater. The drain consists of a leakage box made of stainless steel, housing greywater hoses made from rubber material (EPDM), a plate heat exchanger in acid-proof stainless steel (EN 1.4401), greywater-carrying plastic components (PP), certified connection hoses for potable water (CW724R, silicone, and stainless steel EN 1.4301), as well as a potable water distributor and ball valve made of dezincification-resistant low-lead alloy (CW724R).

Incoming hot water is connected to a distributor (CW724R) for branching the hot water to the shower mixer and certified flexible connection hoses to a ball valve with a check valve (CW724R) and a plastic ejector nozzle for hot water cleaning of the heat exchanger. The heat exchanger transfers energy from used shower water to incoming cold water before the preheated cold water is transferred to the shower mixer. The cold water is connected to and from the heat exchanger via connection hoses, where the inlet hose to the heat exchanger is equipped with a check valve. The system operates passively without the need for pumps or electronics.

Cleaning is performed manually by rinsing an inlet filter and using the ball valve knob, which activates the ejector nozzle to flush hot water through the system. If the heat recovery system becomes blocked, greywater is automatically redirected to the drain through an integrated overflow drain with a separate water trap.

The seal against the leakage box is verified with grommets in combination with LK Systems, Purmo, Thermotech, and Uponor protective pipes Ø 25. The connection of media pipes is made using certified half-couplings, dimension G15. The connection dimension for wastewater is Ø 75 mm.

The grate has a load class of K3.

Flow capacity through the drain cover:

Combination	Flow [l/s]	Requirement [l/s]
Plastic mat frame Heat exchanger and overflow open	0,42	$\geq 0,4$ ¹
Plastic mat frame Heat exchanger blocked and overflow open	0,49	-
Tile frame Heat exchanger and overflow open	0,89	$\geq 0,8$
Tile frame Heat exchanger blocked and overflow open	0,55	-

¹ Floor drain only accepts water from one showerhead.

For pressure drop as a function of cold water flow through the heat exchanger, see the comments on page 3.

Intended use

Floor drain for the discharge of normal wastewater from floors with plastic mat or ceramic surface coverings in wet areas. The floor drain recovers heat energy from shower greywater to heat the incoming cold water supply to the shower mixer. The floor drain is installed in concrete or wooden floor structures according to the associated documentation in a space with a waterproof floor. The leakage detection line should be laid with a slope along its entire length and discharge in a room with a waterproof floor.

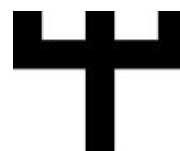
Type Approval C901108 | issue 1 | 2025-04-04
RISE Research Institutes of Sweden AB | Certification

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Akkred. nr. 1002
Produktcertifiering
ISO/IEC 17065

Trade name

Enduce E1

Approval

The product satisfy the requirements set forth in chapter 8, 4 § 3 PBL, in respect to and under conditions stated in this type approval, and are therefore approved in accordance with the provisions of the following sections of Boverket Building Regulations (BBR).

BBR

Waterproof layers	6:5331, 6:9531
Hidden areas in rooms or building components	6:5334, 6:9532
Tap water installations	6:62
Microbial growth	6:622
Tap water	6:623
Back flow prevention	6:624
Design tap water	6:625
Waste water installations	6:641
Design waste water	6:644

Associated documents

250317 Monteringsanvisning Enduce E1

250317 Bruksanvisning Enduce E1

Control

The factory production control (FPC) is monitored by an independent inspection body.

Control plan: Ref no. 1258168 dated 2024-12-11, Inspection body: RISE

When the building proprietor performs inspection at the building site, markings shall be checked to ensure that the correct products have been supplied and that they are used in accordance with the conditions in this type approval and associated documents. Further, the product shall be accompanied by a manufacturer's assurance, certifying that the product has been manufactured in accordance with the documents on which this type approval is based.


Manufacturing place

Production control includes the following place:

Enduce AB, Läringsgatan 22 S, 904 22 Umeå, Sweden

Marking

The product is to be marked at the factory. The marking consists of a label on every packing supplied and includes:

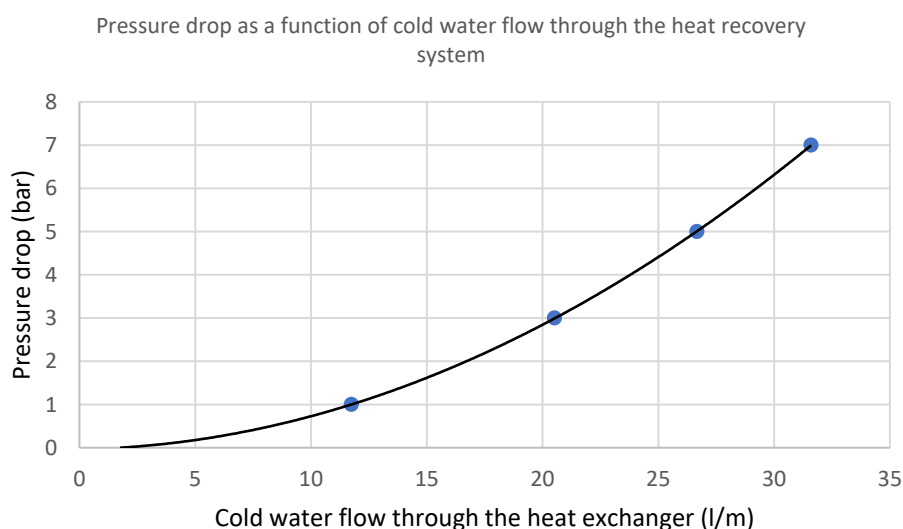
Holder	Enduce AB
Place of manufacturing	Enduce AB, Umeå
Product type designation	Enduce E1
Consecutive manufacture no./date of production	no./date
Type approval number	C901108
Boverket's registered trade mark	
RISE Accreditation number	1002
Inspection body	RISE

Basis for approval

Report O100115-1229418, O100115-1229418-B, O100115-1236859-A-rev1, O100115-1212648, P195613, O100106-1253033, O100115-1250794-A, 1236859-B ENDUCE AB and O100115-1288756 from RISE.

Comments

During installation, the waterproofing layer of the wet room must be compatible with the drain's accompanying waterproofing membrane. Compatible waterproofing layers are specified in the RISE certificate C901073.



Associated documents shall accompany the product or by other means be available to users of the product.

Validity

Valid through 2030-04-03.

The validity of this type approval can be verified at RISE homepage.

The validity of this type approval expires when the type approved product with the intended use according to this type approval shall be CE-marked according to the Construction Products Regulation (EU) 305/2011.



Martin Tillander

This is a translation from the Swedish original document. In the event of any dispute as to its content, the Swedish original shall take precedence.