

SLOVENSKI STANDARD
oSIST prEN 15154-5:2018
01-julij-2018

Varnostne prhe za prvo pomoč - 5. del: Nadglavne vodne prhe za spiranje telesa za uporabo zunaj laboratorijev

Emergency safety showers - Part 5: Water overhead body showers for sites other than laboratories

Sicherheitsnotduschen - Teil 5: Körperduschen mit Überkopfbrause und Wasseranschluss für andere Standorte als Laboratorien

Douches de sécurité - Partie 5: Douches à eau verticales pour le corps utilisées ailleurs que dans les laboratoires

Ta slovenski standard je istoveten z: prEN 15154-5

ICS:

| | | |
|-----------|---|--|
| 11.160 | Prva pomoč | First aid |
| 71.040.10 | Kemijski laboratoriji. Laboratorijska oprema | Chemical laboratories. Laboratory equipment |

oSIST prEN 15154-5:2018

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 15154-5

May 2018

ICS 71.040.10

English Version

**Emergency safety showers - Part 5: Water overhead body
showers for sites other than laboratories**

Douches de sécurité - Partie 5: Douches à eau
verticales pour le corps utilisées ailleurs que dans les
laboratoires

Sicherheitsnotduschen - Teil 5: Körperduschen mit
Überkopfbrause und Wasseranschluss für andere
Standorte als Laboratorien

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 332.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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| Contents | Page |
|---|-------------|
| European foreword | 3 |
| Introduction | 4 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Performance | 6 |
| 4.1 Classification..... | 6 |
| 4.2 Wash-off time..... | 6 |
| 4.3 Flow rate of water | 7 |
| 4.4 Water distribution | 7 |
| 4.5 Time to rated flow..... | 8 |
| 4.6 Combination showers equipped with a hand-held shower | 8 |
| 4.7 Water quality and water temperature | 8 |
| 5 Design requirements for the installation | 9 |
| 5.1 General..... | 9 |
| 5.2 Clearance..... | 9 |
| 5.3 Entry to the shower | 9 |
| 5.4 Materials and geometry..... | 9 |
| 6 Activation system | 9 |
| 6.1 General..... | 9 |
| 6.2 Valves..... | 9 |
| 6.3 Automatic release | 9 |
| 7 Shower head | 10 |
| 8 Mechanical stability of tank showers | 10 |
| 9 Information for marking, installation, service use and maintenance | 10 |
| 9.1 Marking and labelling..... | 10 |
| 9.2 Instruction handbook..... | 10 |
| Annex A (informative) General guidance | 12 |
| A.1 Water temperature..... | 12 |
| A.2 Guidelines to recommended installation | 12 |
| A.3 Cleaning | 12 |
| A.4 Testing..... | 12 |
| Bibliography | 13 |

European foreword

This document (prEN 15154-5:2018) has been prepared by Technical Committee CEN/TC 332 “Laboratory equipment”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

EN 15154 consists of the following parts under the general title *Emergency safety showers*

- *Part 1: Plumbed-in body showers for laboratories*
- *Part 2: Plumbed-in eye wash units*
- *Part 3: Non-plumbed-in body showers*
- *Part 4: Non-plumbed-in eyewash units*
- *Part 5: Water overhead body showers for sites other than laboratories*
- *Part 6: Plumbed-in multiple nozzle body showers for sites other than laboratories*

This document prEN 15154-5 is part of a series of standards on emergency safety showers, which it rounds off by dealing with body showers and combinations with eye showers and hand-held showers used on sites other than laboratories (see Table 1).

Table 1 — Subject areas covered under the EN 15154 series of standards and by this part 5 of EN 15154

| Part of EN 15154 | Type | Laboratories | Sites – other than Laboratories | Non plumbed-in | Plumbed-in |
|--|---------------|----------------|---------------------------------|----------------|------------|
| 1 | Body shower | X ^c | | | X |
| 2 | Eye-wash unit | X | X | | X |
| 3 | Body shower | X ^a | X ^a | X ^a | |
| 4 | Eyewash unit | X | X | X | |
| 5 | Body shower | | X ^c | X ^b | X |
| 6 | Body shower | | X | | X |
| ^a Non plumbed-in body showers affected by EN 15154-3 are fixed, transportable or portable. ^b Non plumbed-in body showers affected by EN 15154-5; Tank showers and Trailer-mounted. ^c In possible combination with eye wash units. | | | | | |

NOTE Attention is drawn to national regulations in some European countries, e. g. Germany, requesting to connect emergency safety showers to a water supply where available.

prEN 15154-5:2018 (E)**Introduction**

Emergency safety body showers for sites other than laboratories are designed and intended to be installed in close range of persons working in a potentially hazardous area exposed to the risks of burning/burns and/or hazardous chemical substances getting splashed onto all or part of the body.

The main purpose of these devices is to deliver immediately a flushing fluid in a volume sufficient to extinguish flames and/or to flush the body following exposure to injurious substances or heat.

Once this is accomplished, the injured person can proceed to medical care.

iTeh STANDARD PREVIEW
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SIST EN 15154-5:2020

<https://standards.iteh.ai/catalog/standards/sist/8bfa4515-1b89-4480-9ee4-a9c727b94fc3/sist-en-15154-5-2020>

1 Scope

This document is a product specification, giving performance requirements for water overhead emergency safety body showers installed on industrial and logistic sites, (in combination with safety eyewashes and hand-held showers as well),

- a) which are permanently connected to a water supply or
- b) which are equipped with a store tank and optionally connected to an uninterrupted or a temporary water supply.

Emergency safety body showers using fluid other than water are not considered in this standard.

This standard also specifies requirements in respect of installation, adjustment and marking of the showers as well as operation and maintenance instructions to be given by the manufacturer.

NOTE 1 Plumbed-in body showers designed for laboratory facilities are dealt with in EN 15154-1.

NOTE 2 Water multiple nozzle body showers for sites other than laboratories are dealt with in prEN 15154-6.

NOTE 3 Attention is drawn to national regulations which may apply in respect of the installation and use of emergency safety showers

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 420, *Protective gloves — General requirements and test methods*

EN 1991 (all parts), *Eurocodes 1 — Actions on structures*

EN 1991-1-3, *Eurocode 1 — Actions on structures — Part 1-3: General actions — Snow loads*

EN 1991-1-4, *Eurocode 1: Actions on structures — Part 1-4: General actions — Wind actions*

EN 15154-2, *Emergency safety showers — Part 2: Plumbed-in eye wash units*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

emergency safety shower

device specially designed and intended to deliver a flushing fluid to extinguish flames and to sufficiently wash away contaminants or to dilute them, rendering them harmless

[SOURCE: EN 15154-1:2006, 3.1]

prEN 15154-5:2018 (E)**3.2****plumbed-in emergency safety body shower**

emergency safety shower that is permanently connected to a continuous water supply and designed to deliver water sufficient to wash the whole body

3.3**body shower with storage tank tank shower**

emergency safety shower that is self-sufficient and filled by a temporary water supply or which can be optionally connected to a continuous water supply

3.4**additional hand-held shower**

manually-operated spray head fitted to the end of a flexible hose and that can be hand-directed to spray-wash any part of the body

3.5**combination body shower**

emergency safety shower equipped with an emergency safety eye wash unit as defined in 3.7 and/or an additional hand-held shower

3.6**overhead body shower**

emergency safety shower delivering water down over the head via one or more spray heads

3.7**emergency safety eye wash unit**

device specially designed and intended to deliver a flushing fluid to irrigate and flush the eyes and to sufficiently wash away contaminants or to dilute them, rendering them harmless

[SOURCE: EN 15154-2:2006, 3.1]

4 Performance**4.1 Classification**

Body showers for production and logistic sites shall comply with one of the 3 classes given in Table 2.

Table 2 — Classification

| Class | Volume flow rate L/min |
|--------------|----------------------------------|
| I | 30 to 60 |
| II | > 60 to 100 |
| III | > 100 |

4.2 Wash-off time

The shower shall be able to deliver water at a constant manufacturer-specified pressure, and continued for at least 15 min.

NOTE An intervention time of less than 10 s and speedy removal of clothing can help effective decontamination.

4.3 Flow rate of water

4.3.1 Overhead body showers

The water supplied by overhead body showers shall be of a constant flow rate discharged in accordance with one of the three classes given in Table 2 at a flow pressure to be specified by the manufacturer.

At the type test (see 4.4.1), the flow pressure shall be measured with fully opened valve at the point where the shower is connected to the water supply. The measured value shall be indicated in the manufacturer's handbook.

4.3.2 Tank showers

The water that is discharged by the tank shower shall have an over-head water volume flow rate out of the three classes according to Table 2.

Flow pressure, maximum deviation of water volume flow rate and duration of water flow shall be specified by the manufacturer and shall be declared in the manufacturer's handbook (see Clause 9).

4.3.3 Combination showers

For combination showers the respective specified water volume flow rates shall be maintained at both the overhead body shower and the eye wash unit and/or the additional hand-held shower even when activated simultaneously.

The emergency safety eye wash unit shall comply with EN 15154-2.

4.4 Water distribution

4.4.1 Type test

The water distribution of overhead emergency safety body showers shall be measured by the following type test procedure.

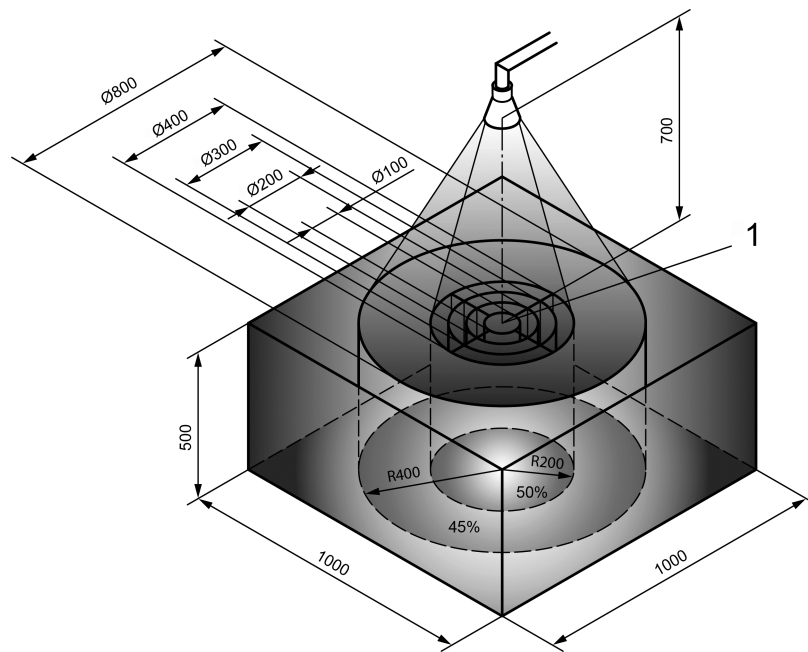
4.4.2 Overhead body showers of classes I and II

At a distance 700 mm below the shower head, (50 ± 10) % of the volume of water delivered shall fall in a circle with a radius r of 200 mm (see Figure 1); the water level in the individual compartments in this circle shall not deviate by more than 30 % from the mean value.

At this measuring level, the area reached by a minimum of 95 % of the water shall be limited to a circle with a radius r of 400 mm.

The velocity of the water spray shall be low enough to be non-injurious to the user.

NOTE All details of this type test procedure are in accordance with the test procedure for laboratory showers given in EN 15154-1.



Key

- 1 cylinder with 4 compartments

Figure 1 — Type testing of water distribution

4.4.3 Overhead body showers of Class III and tank showers

At a distance 700 mm below the shower head, (50 ± 10) % of the volume of water delivered shall fall in a circle with a radius r of 200 mm (see Figure 1).

At this measuring level, the area reached by a minimum of 70 % of the water shall be limited to a circle with a radius r of 400 mm.

For overhead body showers with additional spray nozzles, the water distribution of the overhead spray shall be the same as given in Figure 1. The additional nozzles shall be concentrated on the centre axis of the user and their water volume flow rate shall not dominate the volume flow rate of the overhead spray.

The velocity of the water spray shall be low enough to be non-injurious to the user.

4.5 Time to rated flow

The shower shall be designed to reach its rated flow within 3 s after activation.

4.6 Combination showers equipped with a hand-held shower

The hand-held shower shall be designed to keep water jet outlet pressure from the shower head limited to be non-injurious to the user. Its flow shall be at least 10 l/min.

4.7 Water quality and water temperature

Potable water or water of a similar quality complying with European or national standards is required for body showers.

Materials used in the construction of the shower shall not affect the water quality or contaminate the water supply.

NOTE Guidance on water temperature is given in A.1.