



BROEN-LAB EMERGENCY SHOWER SYSTEMS

General instructions about installation, maintenance and operation

94G0053 - Rev. 24.05.2022

These instructions are based upon the most common international norms, EN15154 1, 2 & 5 and ANSI Z 358.1. Remember to follow the norm, that applies with your geographical area.

EN15154 1, 2 & 5 is set by the European committee for Standardization. Part 1 covers "Plumbed-in body showers for laboratories", Part 2 covers "Plumbed-in eye wash units" and Part 5 covers "Water overhead body showers for sites other than laboratories".

ANSI Z 358.1 is set by the American National Standard Institute. It covers Emergency Eyewash and Shower Equipment.

EN15154-1, 2 & 5

English

Page 2

EN15154-1, 2 & 5

Danish

Page 4

ANSI Z 358.1

English

Page 6

EN15154-1, 2 & 5 INSTALLATION OF EMERGENCY SHOWERS

BROEN-LAB Emergency showers are used as first aid in accidents causing burns, scalds, chemical contamination etc. on the human body or eye. The wording "Emergency shower" refers in the following to the complete range of body, eye and hand-held showers.

Placement: Less than 20 meter without obstacles from potential injury or max. 10 seconds from potential injury.

Open space: There must be an open space under the body shower of at least 400 mm in radius. See picture 1.

A marking on the floor is advisable to remind the workers to keep the area clear.

Water quality: Mains water only. Drinking water or equivalent quality.

Minimum dynamic pressure: As indicated on sticker on product. Must be obtained during operation.

Flow rate: Body shower 60 l/min
Eye shower 6 l/min per shower head

Water available for: Min. 15 minutes

Water temperature: Recommended between 15 - 37° C (idealy 20 - 25° C)

Spray pattern: At a distance of 700 mm below the shower head, 50 (± 10) % of the volume of water delivered shall fall in a circle with a radius of 200 mm. See picture 2.

Safety signs: Signs in accordance to ISO 3864-1 is included in the package. See our recommendations for mounting height in picture 3.

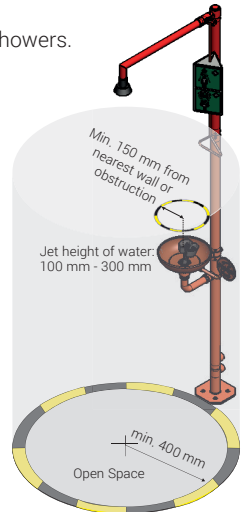
For Australia signs according to AS 4775 / AS 1319 are included aswell.

Mounting height: See table 1 and picture 3.

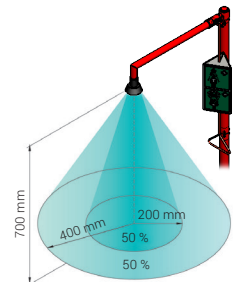
1. Eye shower, distance from floor	1000 ± 200 mm
2. Distance between sign and product	Max. 250 mm *
3. Sign on the wall, distance from floor	Max. 2000 mm *
4. First aid plan, distance from floor	Max. 1500 mm *
5. Triangular sign, distance from product	Max. 250 mm *
6. Eye wash station, distance from floor	Max. 1700 mm *
7. Service sign, distance from floor	Max. 1400 mm *
8. Pull rod, distance from floor	Max. 1750 mm
9. Body Shower, distance from floor	2200 ± 100 mm
10. Sign placed	Center of pullrod

Table 1: Mounting height

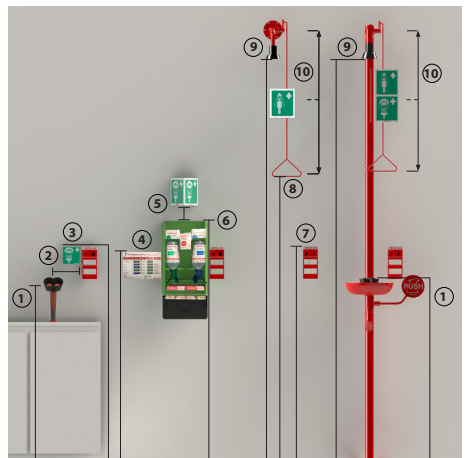
* Recommendation from BROEN-LAB



Picture 1: Open space



Picture 2: Spray pattern



Picture 3: Mounting height

TEST AND MAINTENANCE OF EMERGENCY SHOWERS

According to the EN15154-1 the manufacturer shall supply a method and frequency for testing. BROEN-LAB recommends following the EN15154-5, that says that emergency showers shall be tested at least monthly or more according to national regulations if required.

- Flow rate:** Test if the flow rate is according to the description on the left; 60 l/min for body showers and 6 l/min per shower head for eye shower.
A BROEN-LAB test trolley or measuring cylinder can be used for this purpose.
- Water quality:** Make a visual test of the water to see, if the water is clear, and therefore in accordance with the requirement for drinking water quality or equal.
- Spray pattern:** The water must be distributed in a conical shape in accordance with picture 2.
A BROEN-LAB test trolley can be used for this purpose.

To comply with EN15154-5 the test needs to be documented.

- Maintenance:** BROEN-LAB recommends emptying the hand-held eye shower head as much as possible after using the eye shower. To do this, the handheld eye shower is held upside down when it is closed.

To avoid limescale deposits, the outer wetted parts (shower head, rubber cap and handle if necessary) should be wiped dry with a clean cloth. Limescale deposits on the shower head and other parts can thus be greatly reduced. This can extend the service life of the shower head until it is decalcified or replaced.

BROEN-LAB recommends to only use cleaning material which is explicitly provided for this type of application, preferably a mild, citric acid-based cleaner. We do not recommend mixing different cleaning agents. After cleaning, rinse thoroughly with clean water to remove any cleaner residue.

OPERATION OF EMERGENCY SHOWERS

- Activation:** Water will flow automatically once the valve is opened.

Body shower	Pull down the pull rod to open the valve fully
Eye wash	Push activation arm back to open the valve fully
Hand-held eye shower	Squeeze the red handle to open the valve fully

- Plan of action:** If an accident arise, follow the steps below

- Start flushing immediately - every second counts
- Remove contaminated clothing, which is not stuck to skin
- In case of an eye injury, keep the eyelid open when continuing flushing
- Call for medical assistance and follow their instructions

- Inform employees:** All employees should have knowledge about

- How to prevent accidents/injuries
- How to react, should an accident arise
- The location of the emergency showers
- How to operate the emergency showers
- How to help injured person in the best way

DS/EN15154-1, 2 & 5 INSTALLATION AF NØDBRUSERE

BROEN-LAB nødbrusere bruges til førstehjælp ved uheld i forbindelse med forbrændning, skoldning, kemisk forurening og lignende af krop og øjne. Termen "Nødbruser" henviser i det følgende dokument til den komplette serie af krops-, øjen- og håndbrusere.

Placering: Mindre end 20 meter uden forhindringer fra den potentielle skade eller max. 10 sekunder fra den potentielle skade

Frit område: Der skal være et frit område under bruseren på min. 400 mm i radius. Se billede 1.

Det anbefales at dette område markeres på gulvet, for at påminde medarbejderne om at holde dette område frit.

Vandkvalitet: Tilsætning må kun ske til hovedvandforsyning. Vandet skal være af drikkevandskvalitet eller lignende.

Minimum dynamisk tryk: Som indikeret på klistermærket på produktet. Skal opretholdes under brug.

Vandgennemstrømning: Kropsbruser 60 l/min
Øjenbruser 6 l/min pr. brusehoved

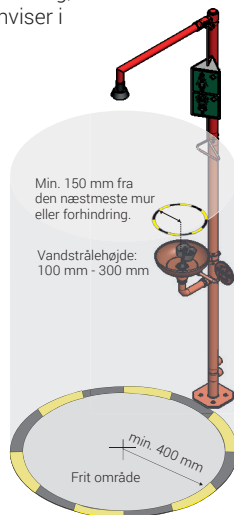
Vand tilgængelig i: Min. 15 minutter

Vandtemperatur: Anbefalet mellem 15 - 37° C (ideelt 20 - 25° C)

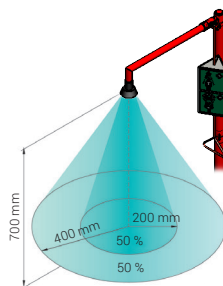
Vandspredning: På en afstand af 700 mm under bruserhovedet, skal 50 (± 10) % af den leverede vandvolumen falde i en cirkel med en radius på 200 mm. Se billede 2.

Sikkerhedsskilte: Skilte i henhold til ISO 3864-1 er inkluderet i pakken. Se vores anbefalinger til monteringshøjde på billede 3.

Monteringshøjde: Se billede 3 og tabel 1.



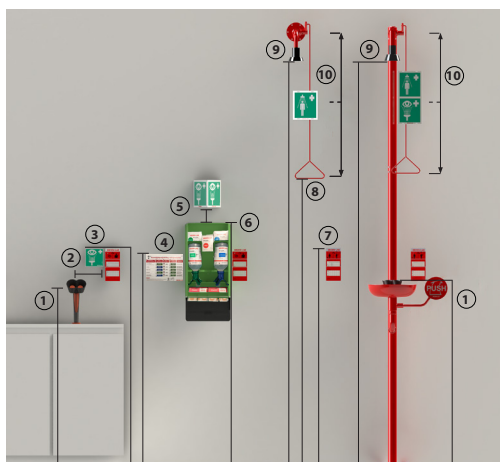
Billede 1: Frit område



Billede 2: Vandspredning

1. Øjenbruser, afstand fra gulv	1000 +/- 200 mm
2. Afstand mellem produkt og skilt	Max. 250 mm *
3. Væghængt skilt, afstand fra gulv	Max. 2000 mm *
4. Førstehjælpsplan, afstand fra gulv	Max. 1500 mm *
5. Trekantet skilt, afstand fra gulv	Max. 250 mm *
6. Øjenskylle station, afstand fra gulv	Max. 1700 mm *
7. Serviceskilt, afstand fra gulv	Max. 1400 mm *
8. Trækstang, afstand fra gulv	Max. 1750 mm
9. Kropsbruser, afstand fra gulv	2200 +/- 100 mm
10. Skilteplacering	Midt på trækstang

Tabel 2: Monteringshøjde



Billede 3: Monteringshøjde

* Anbefaling fra BROEN-LAB

DS/EN15154-1, 2 & 5

TEST OG VEDLIGEHOLD AF NØDBRUSERE

I henhold til EN15154-1 skal fabrikanten informere om metode og hyppighed for test test. BROEN-LAB anbefaler at følge EN15154-5, der siger, at nødbrusere skal testes mindst en gang om måneden eller mere i henhold til nationale regler, hvis det kræves.

- Vandgennemstrømning:** Test om vandgennemstrømningen er i henhold til beskrivelsen til venstre; 60 l/min for kropsbrusere og 6 l/min pr. bruserhoved for øjenskyllere. En BROEN-LAB test trolley eller målebæger kan bruges til dette formål.
- Vandkvalitet:** Lav en visuel kontrol af vandet for at se, om vandet er klart, og dermed overholder kravet om drikkevandskvalitet eller lignende.
- Vandspredning:** Vandet skal falde i en konisk form i henhold til billede 2. En BROEN-LAB test trolley eller målebæger kan bruges til dette formål.

For at være i overensstemmelse med EN15154-5, skal testen dokumenteres.

- Vedligeholdelse:** BROEN-LAB anbefaler at tømme det håndholdte øjenbruserhoved så meget som muligt efter brug af øjenbruseren. For at gøre dette holdes den håndholdte øjenbruser på hovedet, når den er lukket.

For at undgå kalkaflejring skal de ydre våde dele (brusehoved, gummihætte og håndtag om nødvendigt) tørres af med en ren klud. Kalkaflejring på brusehovedet og andre dele kan således reduceres kraftigt. Dette kan forlænge brusehovedets levetid, indtil det er afkalket eller udskiftet.

BROEN-LAB anbefaler kun at bruge rengøringsmiddel, som udtrykkeligt er beregnet til denne type anvendelse, helst et mildt, citronsyrebaseret rengøringsmiddel. Vi anbefaler ikke at blande forskellige rengøringsmidler. Efter rengøring skylles grundigt med rent vand for at fjerne eventuelle rengøringsrester.

BETJENING AF NØDBRUSERE

- Aktivering:** Vandet vil strømme automatisk, når ventilen åbnes
- | | |
|----------------------|---|
| Kropsbruser | Træk trækstangen ned for at åbne ventilen helt |
| Øjenskyller | Skub aktiveringsarmen tilbage for at åbne ventilen helt |
| Håndholdt øjenbruser | Klem på det røde håndtag for at åbne ventilen helt |

- Handlingsplan:** Hvis der opstår en ulykke, skal du følge nedenstående trin
- Start skylningen med det samme - hvert sekund tæller
 - Fjern forurenede tøj, som ikke sidder fast på huden
 - I tilfælde af øjenskade skal øjenlåget holdes åbent, mens skylningen fortsættes
 - Ring efter lægehjælp og følg deres instruktioner

- Information til medarbejderne:** Alle medarbejdere skal have viden om
- Hvordan man forebygger ulykker/skader
 - Hvordan man skal reagere, hvis der skulle ske en ulykke
 - Placeringen af nødbruserne
 - Sådan betjenes nødbruserne
 - Hvordan man hjælper tilskadekomne bedst muligt

INSTALLATION OF EMERGENCY SHOWERS

BROEN-LAB emergency showers are used as first aid in accidents causing burns, scalds, chemical contamination etc. on the human body or eye. The wording "Emergency shower" refers in the following to the complete range of body, eye and hand-held eye showers.

Placement: Approx 55 ft (16.8 m) to be reached within 10 seconds when walking

Open space: There must be an open space under the body shower of at least 40.6 cm (16 in.) in radius. See picture 1.

A marking on the floor is advisable to remind the worker to keep the area clear.

Water quality: Mains water only. Drinking water or equivalent quality.

Minimum dynamic pressure: As indicated on sticker on product. Must be obtained during operation.

Flow rate:

Body shower	75.7 l/min (20.0 gpm)
Eye wash	1.5 l/min (0.4 gpm)
Eye/face wash	11,4 l/min (3.0 gpm) - if it has two heads

Water available for: Min. 15 minutes

Water temperature: Recommended between 16 - 38°C (60 - 100°F)

Spray pattern: At a distance of 152.4 cm (60 in.) above the floor, the water shall fall in a circle with a diameter of 50.8 cm (20 in.) See picture 2.

Safety signs: Signs in accordance to ISO 3864-1 is included in the package. See our recommended mounting heights in picture 3.

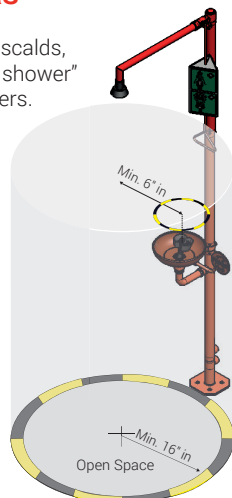
For Australia signs according to AS 4775 / AS 1319 are included as well.

Mounting height: See table 1 and picture 3.

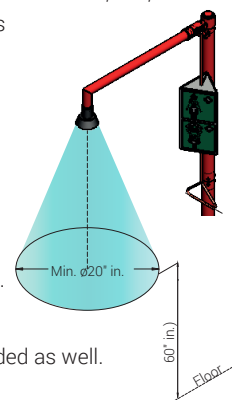
1. Eye shower, distance from floor	83.8 - 134.6 cm (33 - 53 in)
2. Distance between sign and product	Max. 25.4 cm (10 in) *
3. Sign on the wall, distance from floor	Max. 200,6 cm (79 in) *
4. First aid plan, distance from floor	Max. 149.9 cm (59 in) *
5. Triangular sign, distance from product	Max. 25.4 cm (10 in) *
6. Eye wash station, distance from floor	Max. 175.3 cm (69 in) *
7. Service sign, distance from floor	Max. 139.7 cm (55 in) *
8. Pull rod, distance from floor	Max. 175.3 cm (69 in) *
9. Body Shower, distance from floor	208.3 - 243.8 cm (82 - 96 in)
10. Sign placed	Center of pullrod

Table 1: Mounting height

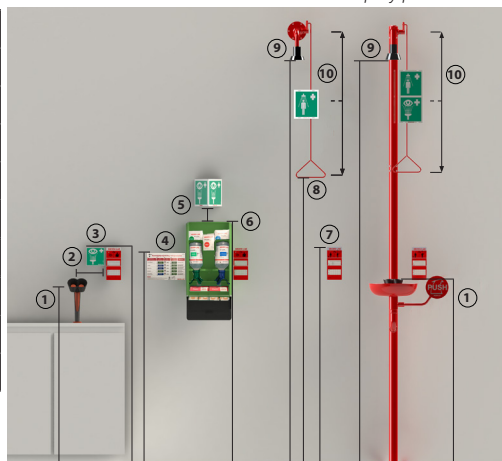
* Recommendation from BROEN-LAB



Picture 1: Open space



Picture 2: Spray pattern



Picture 3: Mounting height

TEST AND MAINTENANCE OF EMERGENCY SHOWERS

Emergency safety showers should be tested at least every week or more according to national regulations if required.

Flow rate: Using a flowmeter or other means, determine that the rate of flow according to the recommendations; 75.7 l/min (20 gpm) for body shower, and 1.5 l/m (0.4 gpm) for eye wash. A BROEN-LAB test trolley or measuring cylinder can be used for this purpose.

Water quality: Make a visual test of the water to determine, if the water is clear, and therefore in accordance with the requirement for drinking water quality or equal.

Temperature: Using a temperature gauge or other means, determine that the flushing fluid is tepid.

Spray pattern: Measure the diameter of the spray pattern in accordance with picture 2. A BROEN-LAB test trolley can be used for this purpose.

Maintenance: BROEN-LAB recommends emptying the hand-held eye shower head as much as possible after using the eye shower. To do this, the hand-held eye shower is held upside down when it is closed.

To avoid limescale deposits, the outer wetted parts (shower head, rubber cap and handle if necessary) should be wiped dry with a clean cloth. Limescale deposits on the shower head and other parts can thus be greatly reduced. This can extend the service life of the shower head until it is decalcified or replaced.

BROEN-LAB recommends to only use cleaning material which is explicitly provided for this type of application, preferably a mild, citric acid-based cleaner. We do not recommend mixing different cleaning agents. After cleaning, rinse thoroughly with clean water to remove any cleaner residue.

OPERATION OF EMERGENCY SHOWERS

Activation: Water will flow automatically once the valve is opened.

Body shower	Pull down the pull rod to open the valve fully
Eye wash	Push activation arm back to open the valve fully
Hand-held eye shower	Squeeze the red handle to open the valve fully

Plan of action: If an accident arise, follow the steps below

- Start flushing immediately - every second counts
- Remove contaminated clothing, which is not stuck to skin
- In case of an eye injury, keep the eyelid open when continuing flushing
- Call for medical assistance and follow their instructions

Inform employees: All employees should have knowledge about

- How to prevent accidents/injuries
- How to react, should an accident arise
- The location of the emergency showers
- How to operate the emergency showers
- How to help injured person in the best way

Warning!

Before the installation of your BROEN-LAB emergency shower, all debris which may cause leaks must be thoroughly flushed from the system. Should a fault appear in this product, and the system was found not to have been flushed out, the warranty will be void.

Warnung!

Vor der Installation einer BROEN-LAB Notdusche, müssen eventuell vorhandene Schmutzreste, die Undichtheiten verursachen können, aus dem Leitungssystem entfernt werden. Auftretende Fehler, die auf eine nicht erfolgte Spülung zurückzuführen sind, bedingen das Erlöschen jeglicher Gewährleistungsansprüche.

Advarsel!

Inden BROEN-LAB nødbrusere installeres, SKAL vandledningen gennemsykles for urenheder - som kan blive årsag til utætheder. Fejl, der opstår pga. manglende gennemsykning, dækkes ikke af den garanti, BROEN-LAB yder.

Waarschuwing!

Voordat u de BROEN-LAB nooddouche installeert, moet u de waterleiding doorspoelen zodat evt. vuil dat de oorzaak kan worden van lekkages, verwijderd wordt. Fouten die ontstaan vanwege het nalaten van doorspoelen, worden niet door de garantie die BROEN-LAB verleent, gedekt.

Contact a specialist

– and find out more about what BROEN-LAB can do for your business

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