DORN BRACHT

Dornbracht

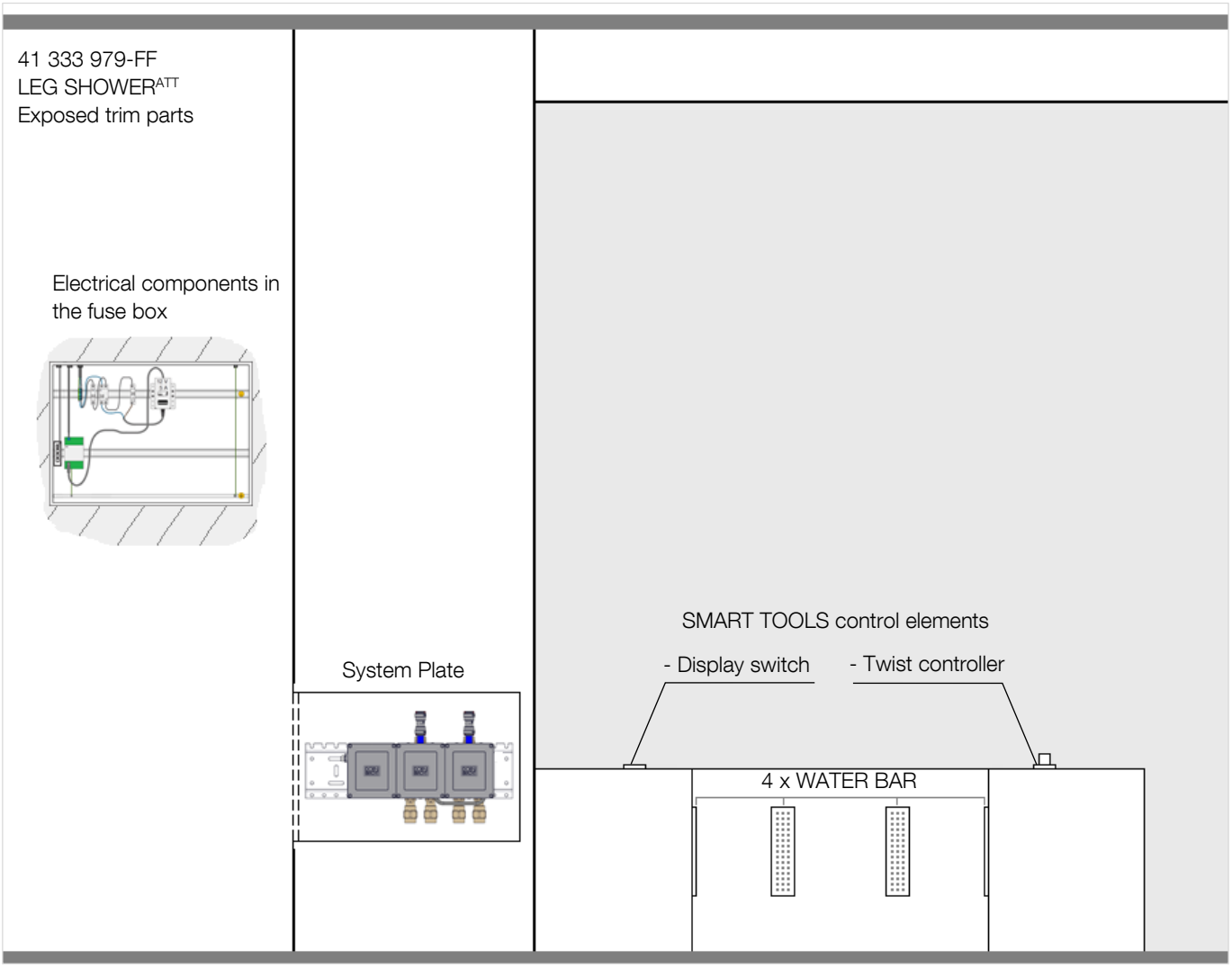
Leg Shower^{ATT}

Planning guide

Version 1.1

Culturing Life

Exposed trim components



Electrical components supplied (in the fuse box)

– DC filter 1 x 5 A

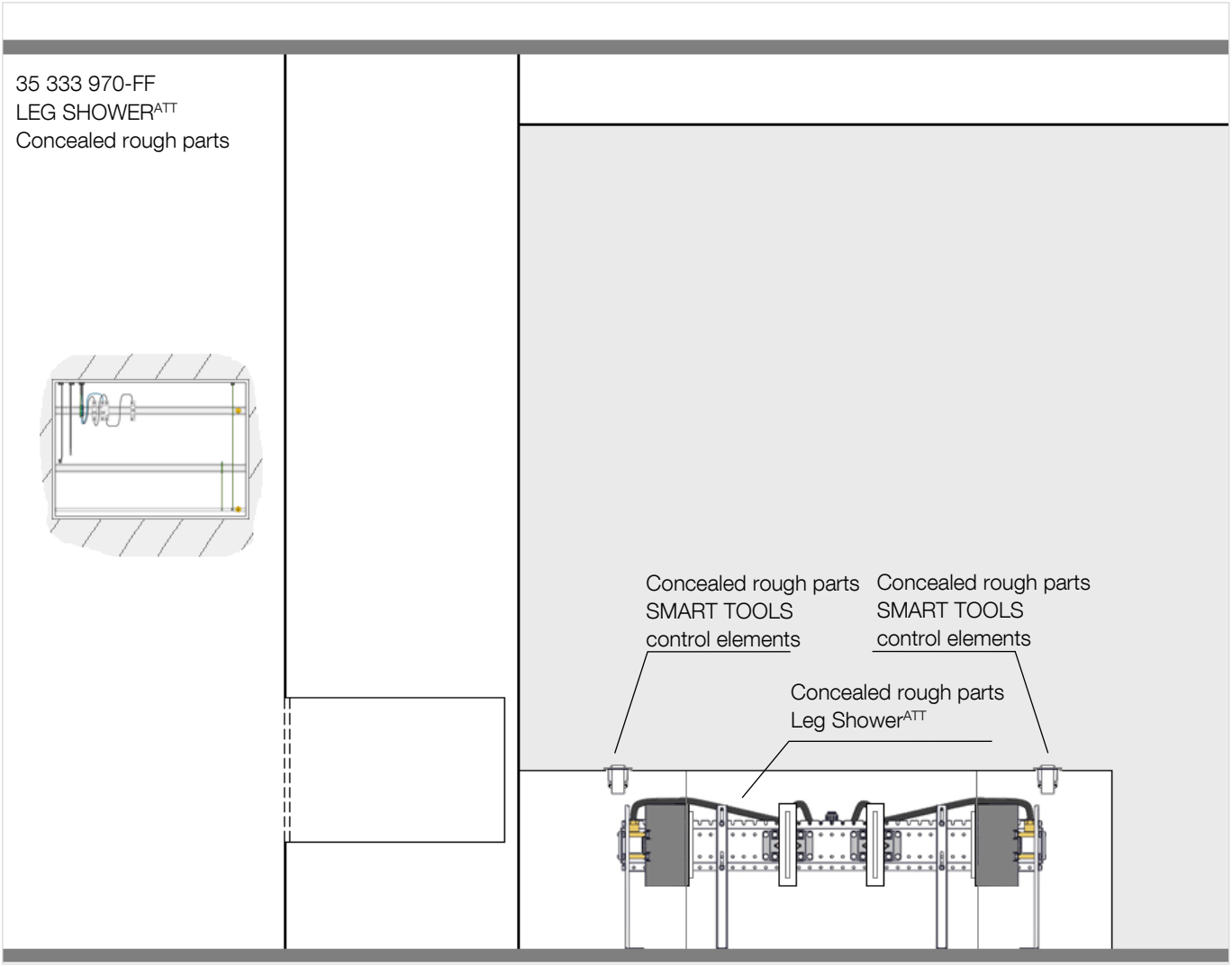
– 1 x power supply unit 100 – 240 V AC / 12 V DC, 5 A

It is obligatory for technical planning, installation and initial commissioning to be accompanied by a certified service partner or by booking a Dornbracht service package.

Detailed information on the service package can be found at www.dornbracht-professional.com.

Installation of the water pipes, cables and conduits must be planned.

Concealed rough components

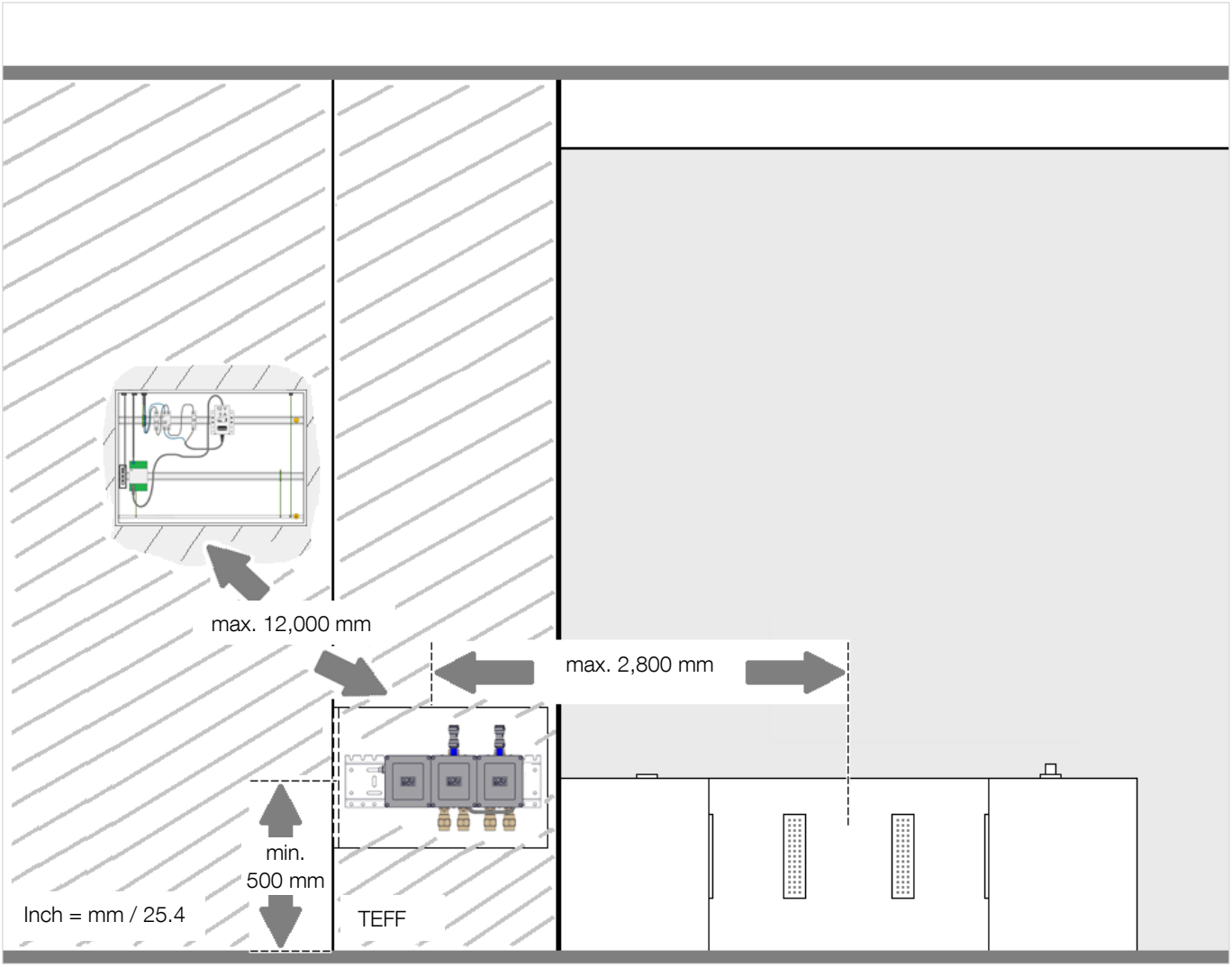


Additional components supplied but not shown:

Electrical components
– 1 x cable (12 V DC, 5 A)
– 1 x equipotential bonding cable (4 mm² / AWG 11)
– 2 x VBUS cable

Plumbing components
– 2 x stop valve (DN 20)
– 2 x dirt trap (DN 20)
– 2 x y press and flush device
– 2 x feed pipes (DN 13)

Positioning



Observe the regulations for protection zones according to DIN VDE 0100, Part 701 (IEC 60364-7-701).

Fuse box with electrical components

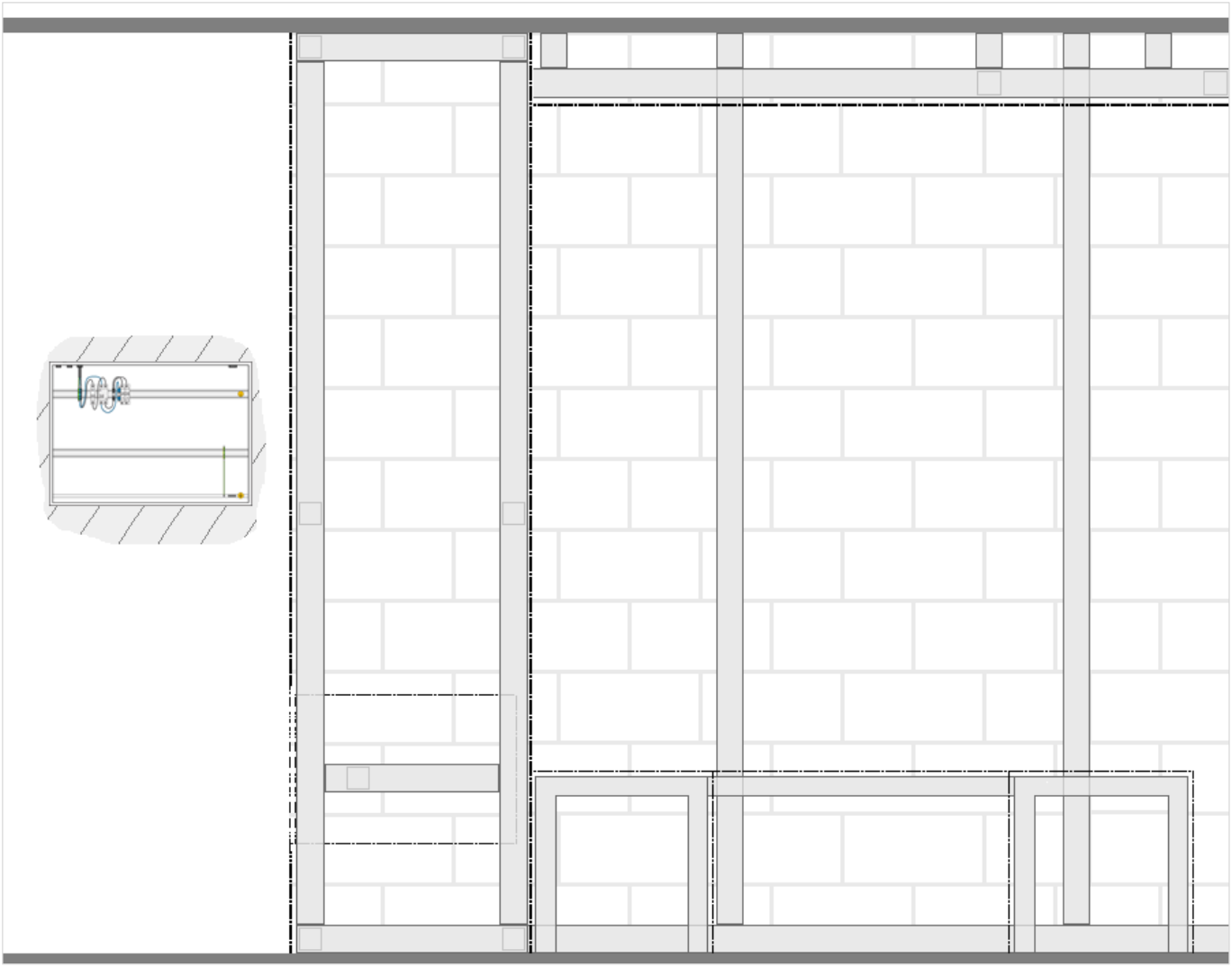
– 12,000 mm / 39 ft 4-3/8" maximum distance to the System Plate
– Outside the wet zone
– Accessible for inspection
– 5 – 35 °C / 41 – 95 °F ambient temperature

System Plate

– 2,800 mm / 9 ft 2-1/4" maximum distance to the centre of the concealed rough parts for the LEG SHOWER^{ATT}
– 500 mm / 1 ft 7-3/4" minimum height difference between the top edge of the finished floor (TEFF) and the System Plate (centre of the xGRID track)
– Outside the wet zone
– Accessible for inspection
– 5 – 40 °C / 41 – 104 °F ambient temperature

The System Plate and power supply installations must be physically separate. The System Plate must not be installed above the power supply.

Pre-wall system



The recess depths required for the System Plate, the LEG SHOWER^{ATT} concealed rough parts and the SMART TOOLS control elements make it essential to have a pre-wall system at the wall and bench.

The System Plate can be perfectly positioned in a lightweight wall.

Provide a bench construction with adequate structural strength. The top of the bench needs to slope slightly so that the water can drain.

The proper execution of the pre-wall installation, can ensure compliance with soundproofing, heat insulation and fire protection standards.

Pre-wall installation systems are available from various suppliers (e.g. Geberit, Tece, Viega, etc.).

Pre-wall installations can also be implemented with C-profiles (e.g. Knauf, Rigips Saint-Gobain, Sheetrock, Siniat, etc.).

Wood can also be used, unless this contravenes the regulations of the country concerned.

Operating conditions

Area of application

The product is not designed for outdoor use.
Dornbracht must be consulted before operating the device in a steam, chlorine or salt-laden atmosphere.
Water quality must be ensured by installing a filter or a water conditioning system.
Large differences in pressure between cold and hot water supply must be balanced.

Maximum permissible relative humidity (without condensation)	95 %

Permissible ambient temperatures

System Plate	5 – 40 °C /	41 – 104 °F
SMART TOOLS control elements	5 – 35 °C /	41 – 95 °F
Storage	5 – 35 °C /	41 – 95 °F

Store somewhere dust-free and dry.

Permissible operating temperatures

Measuring point: eVALVE		
Cold water temperature	5 – 20 °C /	41 – 68 °F
Recommended cold water temperature	15 °C /	59 °F
Hot water temperature	55 – 65 °C /	131 – 149 °F
Recommended hot water temperature	60 °C /	140 °F
Thermal disinfection (max. 10:00 mins.)	< 75 °C /	< 167 °F

Flow pressure

Measuring point: eVALVE			
Permissible flow pressure	250 – 400 kPa /	36 – 58 psi /	2.5 – 4 bar
Recommended flow pressure	300 kPa /	44 psi /	3 bar
Maximum difference in flow pressure between HW + CW	100 kPa /	14,5 psi /	1 bar
Recommended difference in flow pressure between HW + CW	≤ 50 kPa /	≤7 psi /	≤ 0.5 bar

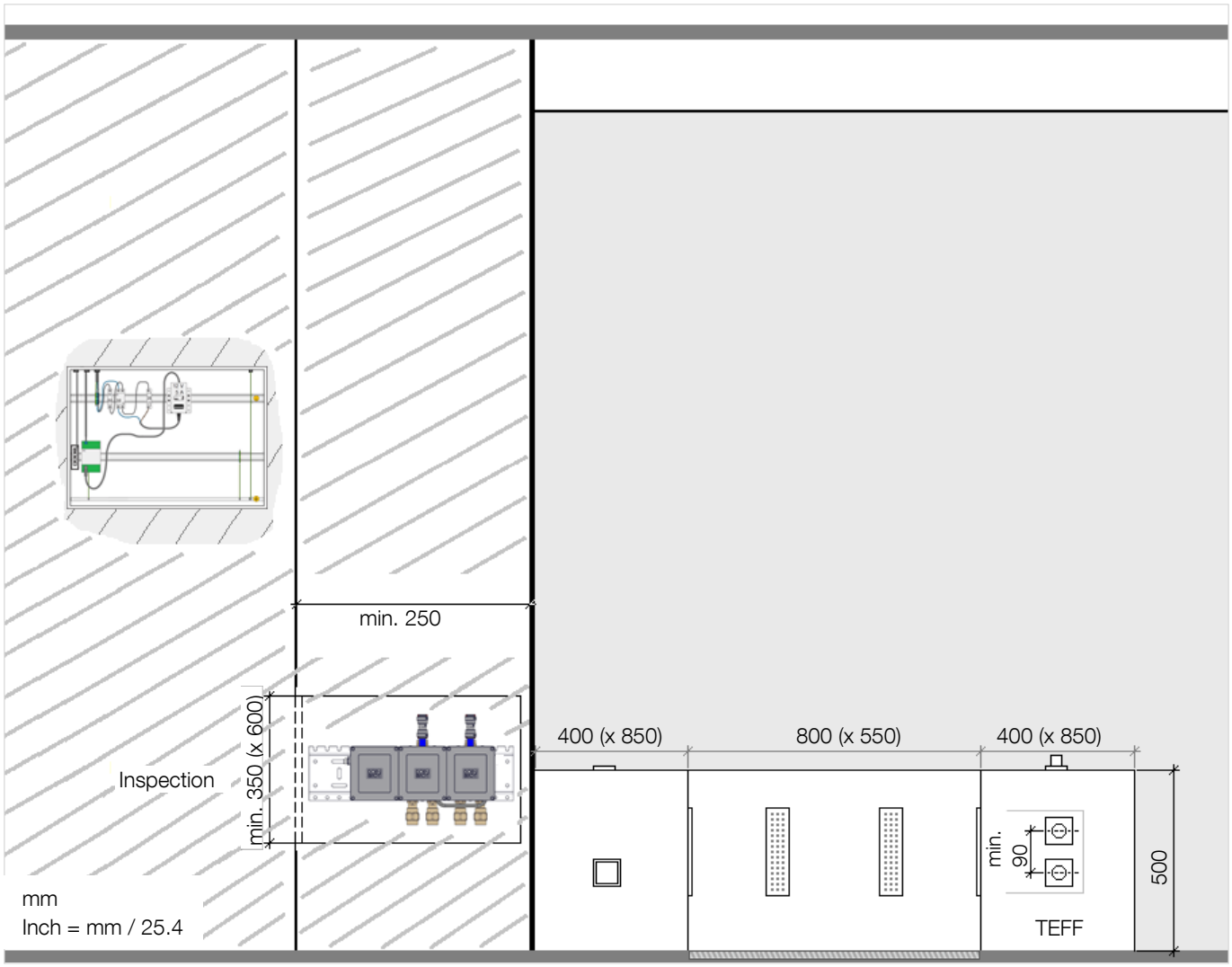
Fit a speed-controlled pressure booster in the main pipe, if necessary.

Water hardness

Recommended water hardness:	6 – 7 °dH /	107 – 125 ppm $CaCO_3$ /	7.5 – 8.8 °e /	10.7 – 12.5 °fH

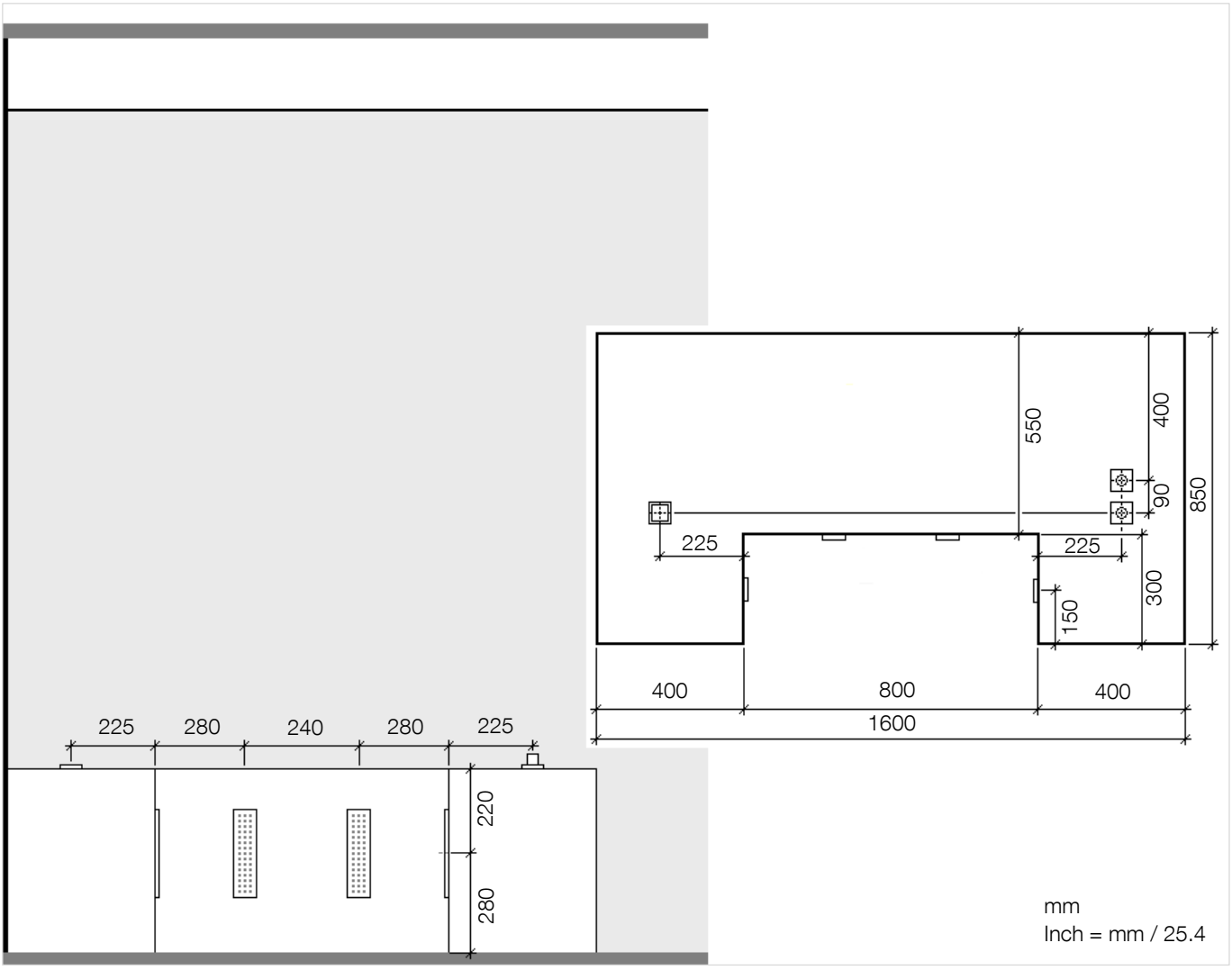
Fit a water softener into the main pipe, if necessary. The reduction in pressure caused by the water softener must be taken into account.

Dimensions



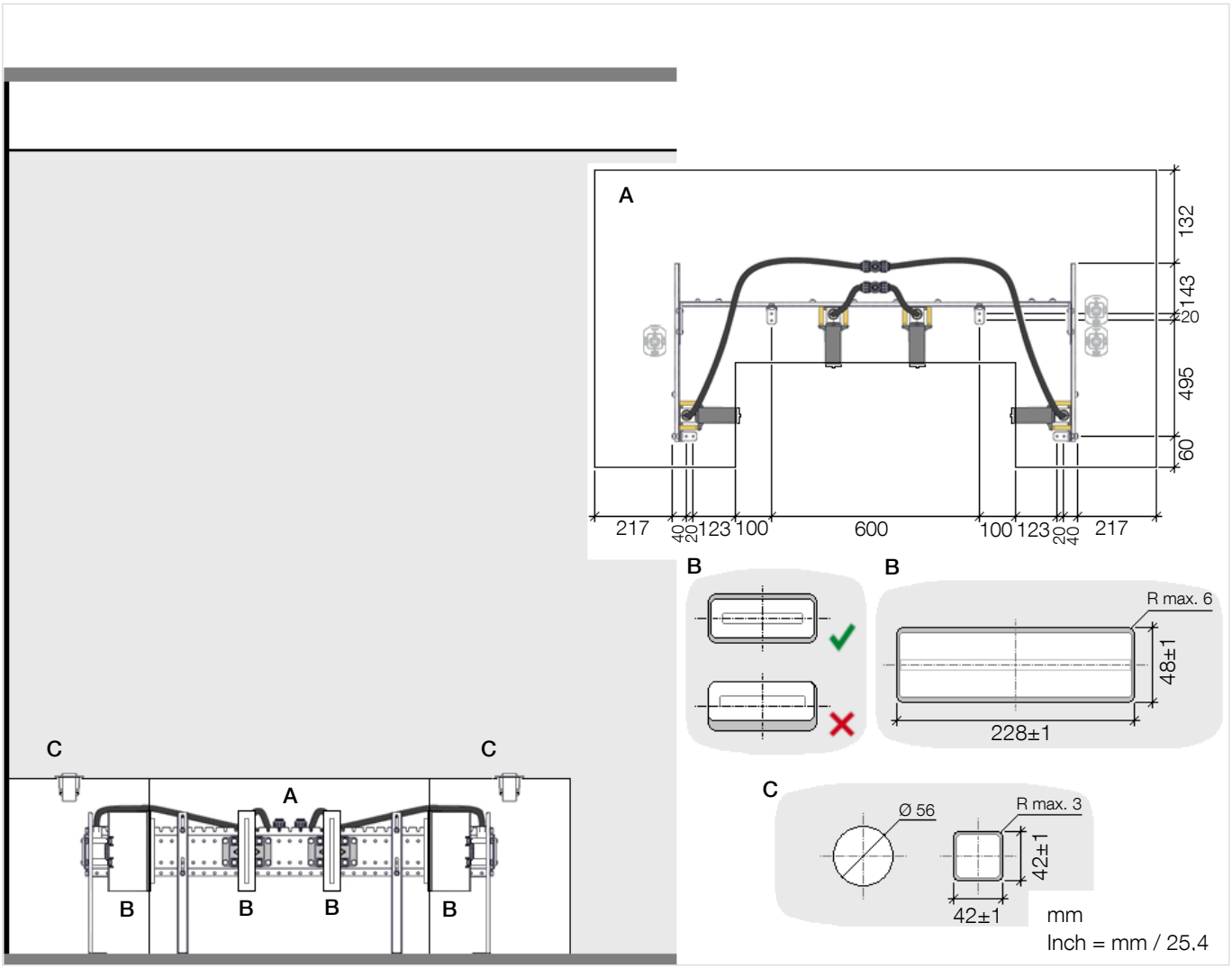
– 350 x 600 mm / 1 ft 1-5/8" x 1 ft 11-5/8" minimum size of the inspection opening
– 250 mm / 10" minimum thickness of the lightweight wall
– 90 mm / 3-1/2" minimum horizontal and / or vertical distance (centre / centre) for SMART TOOLS control elements
  – The distance must never be less than this! –
– 500 mm / 1 ft 7-3/4" minimum seat height
– 800 x 550 mm / 2 ft 7-1/2" x 1 ft 9-5/8" recommended seat size
– 400 x 850 mm / 1 ft 3-5/8" x 2 ft 9-5/8" recommended size of the sides

Standard construction



The positions and dimensions can be adapted to meet individual needs.

Cutouts



A – Concealed rough part LEG SHOWER^{ATT}

B – Concealed rough part WATER BARS

C – SMART TOOLS control elements

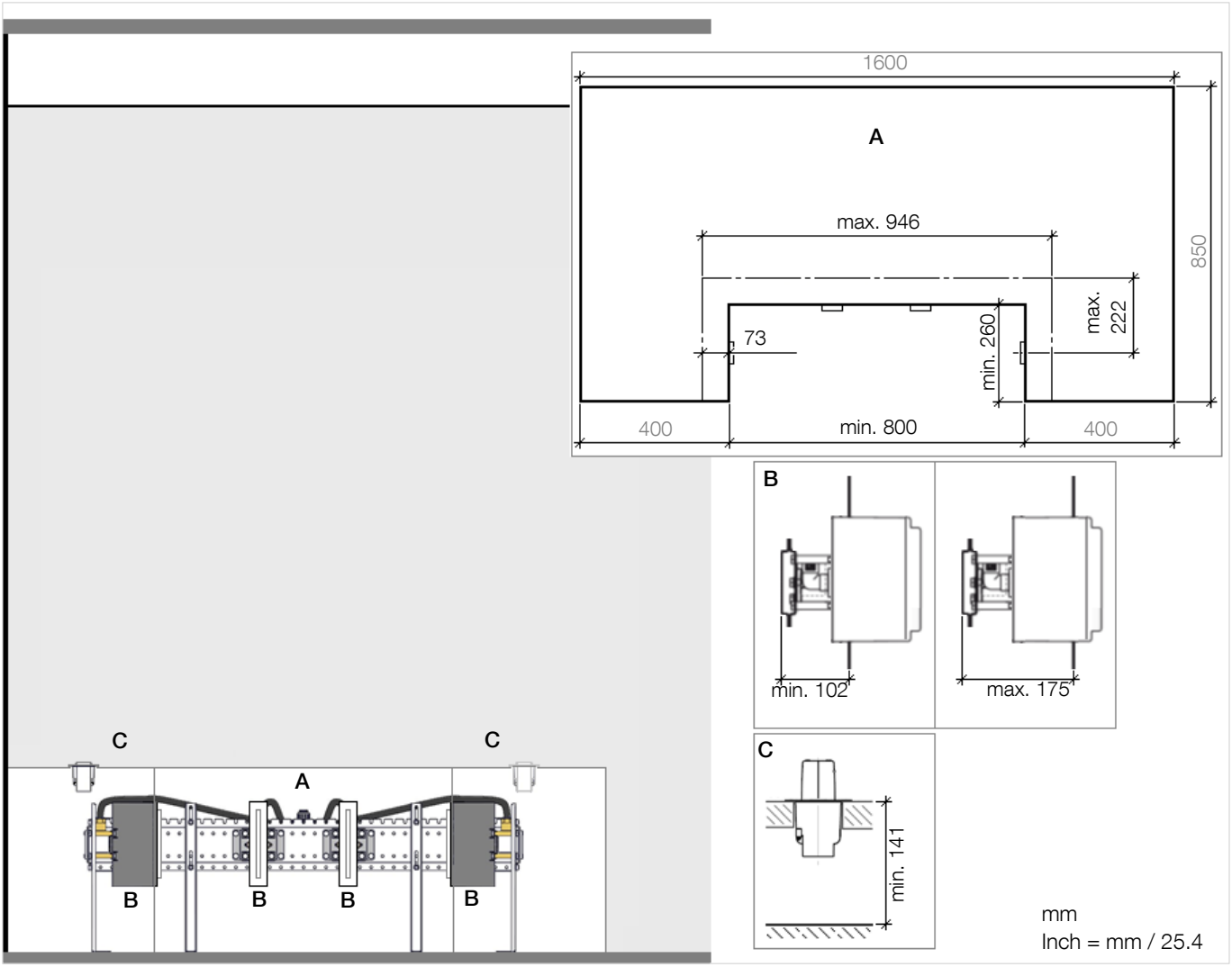
! The concealed rough parts of SMART TOOLS control elements, LEG SHOWER^{ATT} and the VBUS cable must be fitted and tested before the bench is closed. Relevant openings must be taken into account.

For the SMART TOOLS control elements:

– Ø 56 mm / Ø 2-1/4" drilled hole in the panelling for the concealed rough parts

– 42 ± 1 mm x 42 ± 1 mm / 1-5/8" x 1-5/8" cutout in the construction (tiles, natural stone, etc.)

Pre-wall system



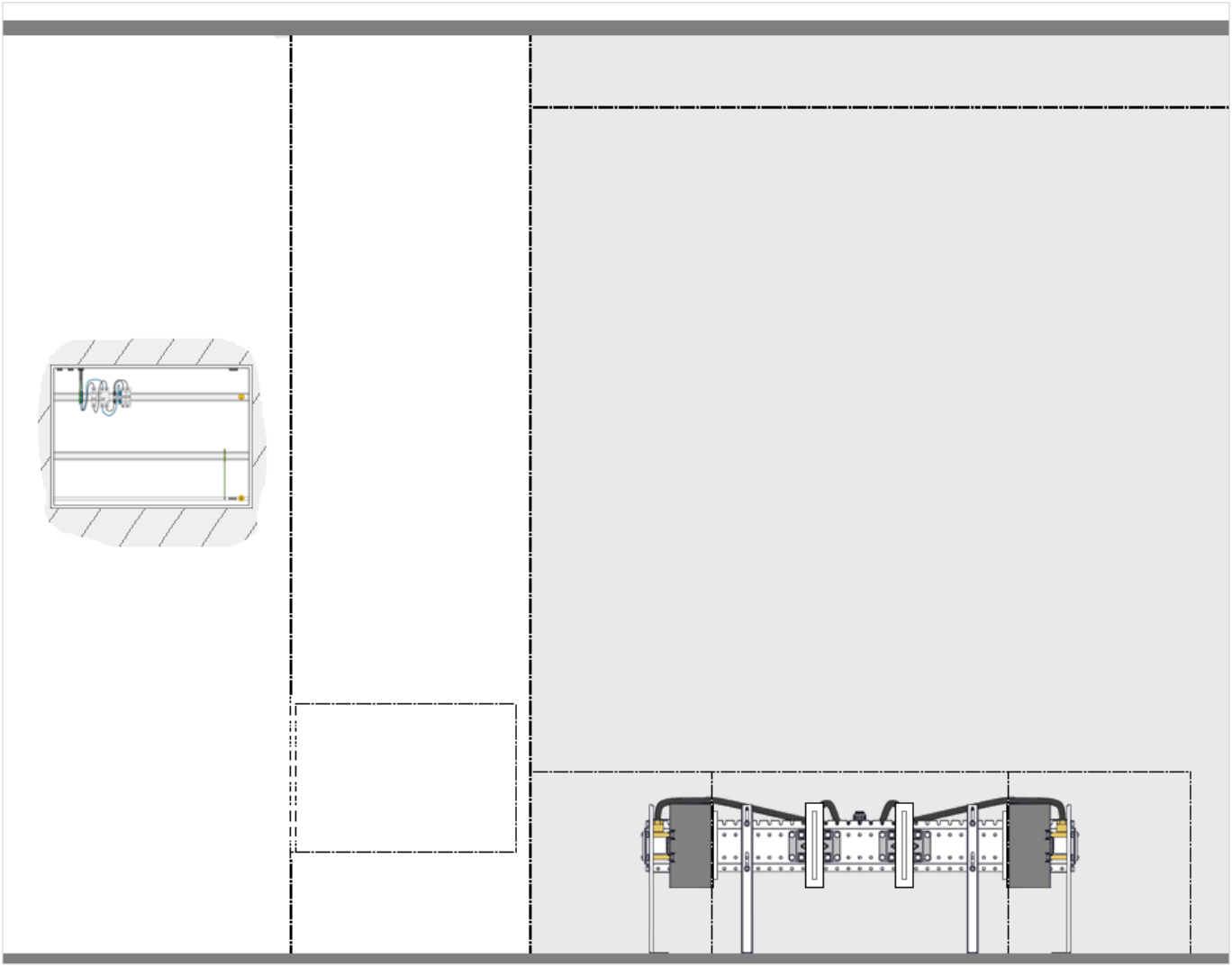
Note the recess depths of the components.

The LEG SHOWER[ATT] concealed rough parts are fitted below the bench surface.

The concealed rough parts SMART TOOLS control elements are fitted in the surface panelling of the bench.

– 30 mm / 1-1/8" possible maximum thickness of the panelling for the SMART TOOLS control elements.
– 7 – 25 mm / 1/4" – 1" construction (tiles, natural stone, etc.), possible in front of the (plasterboard, etc.), panelling for the SMART TOOLS control elements.

Leg Shower[ATT]



A floor with adequate structural strength for the LEG SHOWER[ATT] (weight: 12 kg / 26.5 lbs (US)) is essential.

It is essential for the LEG SHOWER[ATT] to be permanently fixed to the floor.

The weight of the bench construction must not be carried by the LEG SHOWER[ATT].

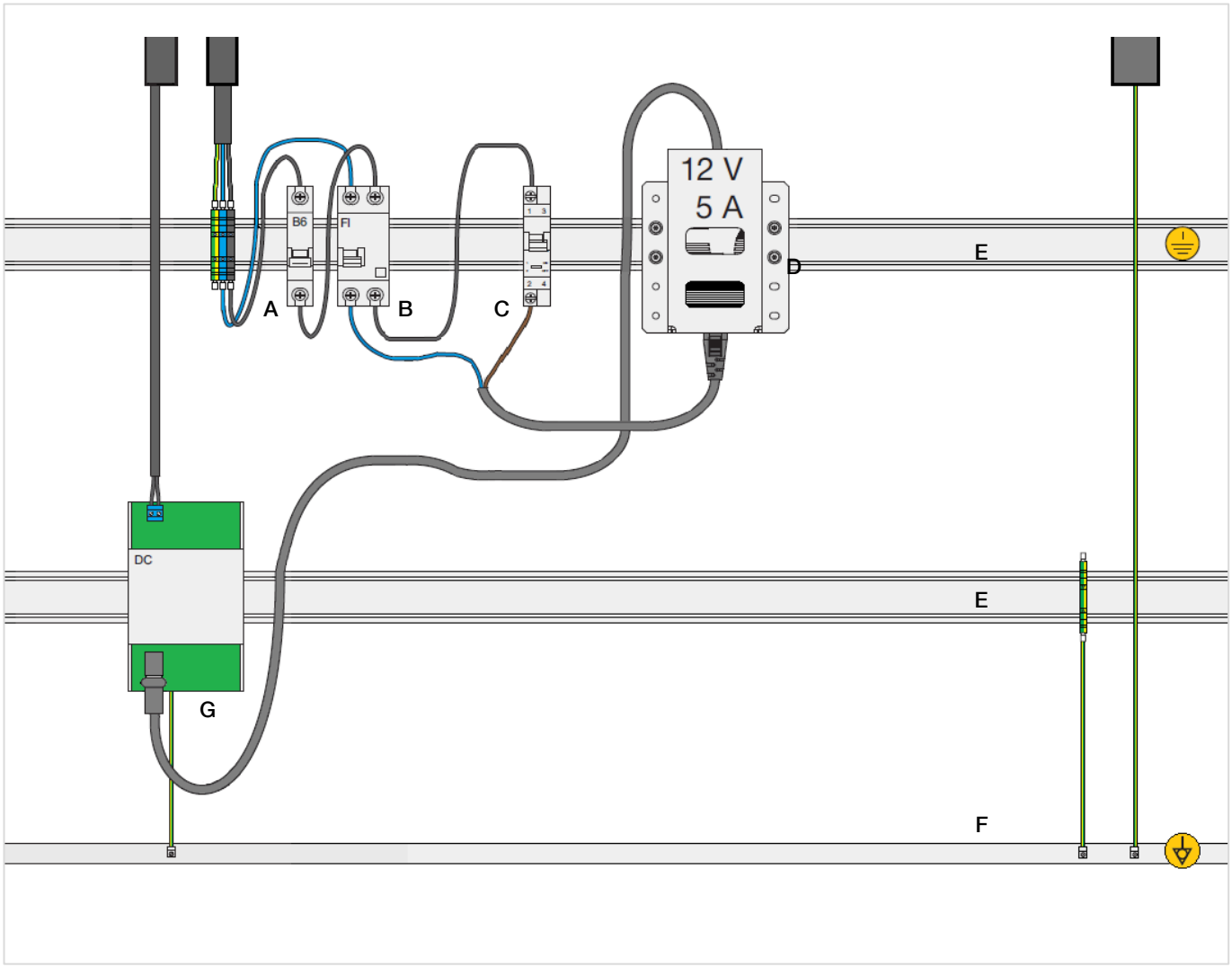
⚠ It takes 2 people to fit the concealed rough parts!

⚠ Wear protective gloves.

The fasteners included in the scope of delivery are only suitable for fixing in concrete.

The customer must provide suitable fixing materials for the particular floor.

Fuse box



Space required for electrical components in the fuse box: min. 500 x 500 x 150 mm / 1 ft 7-3/4" x 1 ft 7-3/4" x 6" (inside).

Electrical components (scope of supply)

D – Power supply unit 100 – 240 V AC / 12 V DC, 5 A

G – DC filter 1 x 5 A

The following circuit breakers and electrical components are to be provided by the customer:

A – Safety cut-out (6 A, type B)

B – Ground fault circuit interrupter (30 mA, 2-pin, type A)

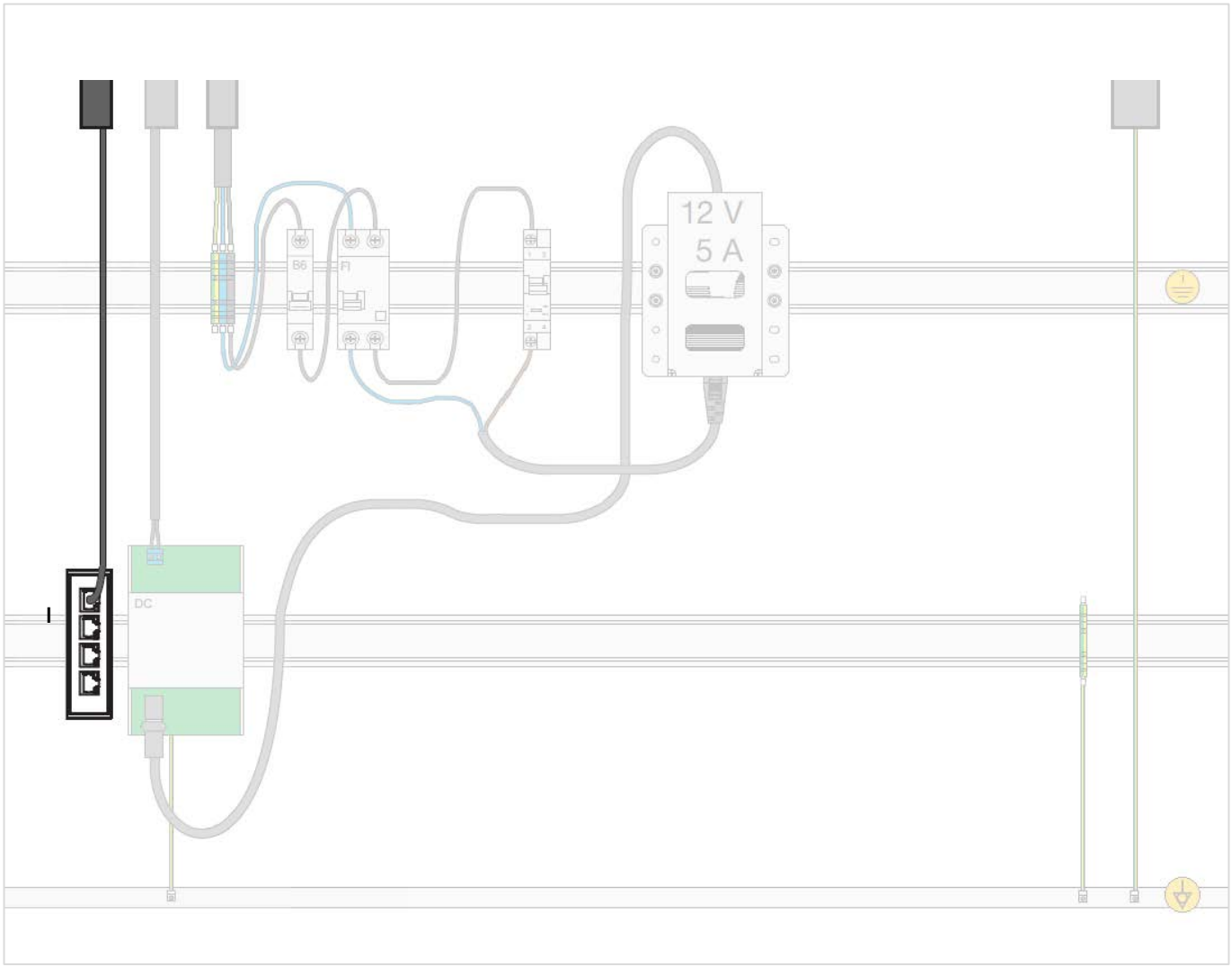
C – 1 x circuit-breaker switch (16 A)

E – 2 x rail mounting TS 35

F – Equipotential bonding rail

The equipotential bonding rail must be connected to the main earthing bar.

Network connection

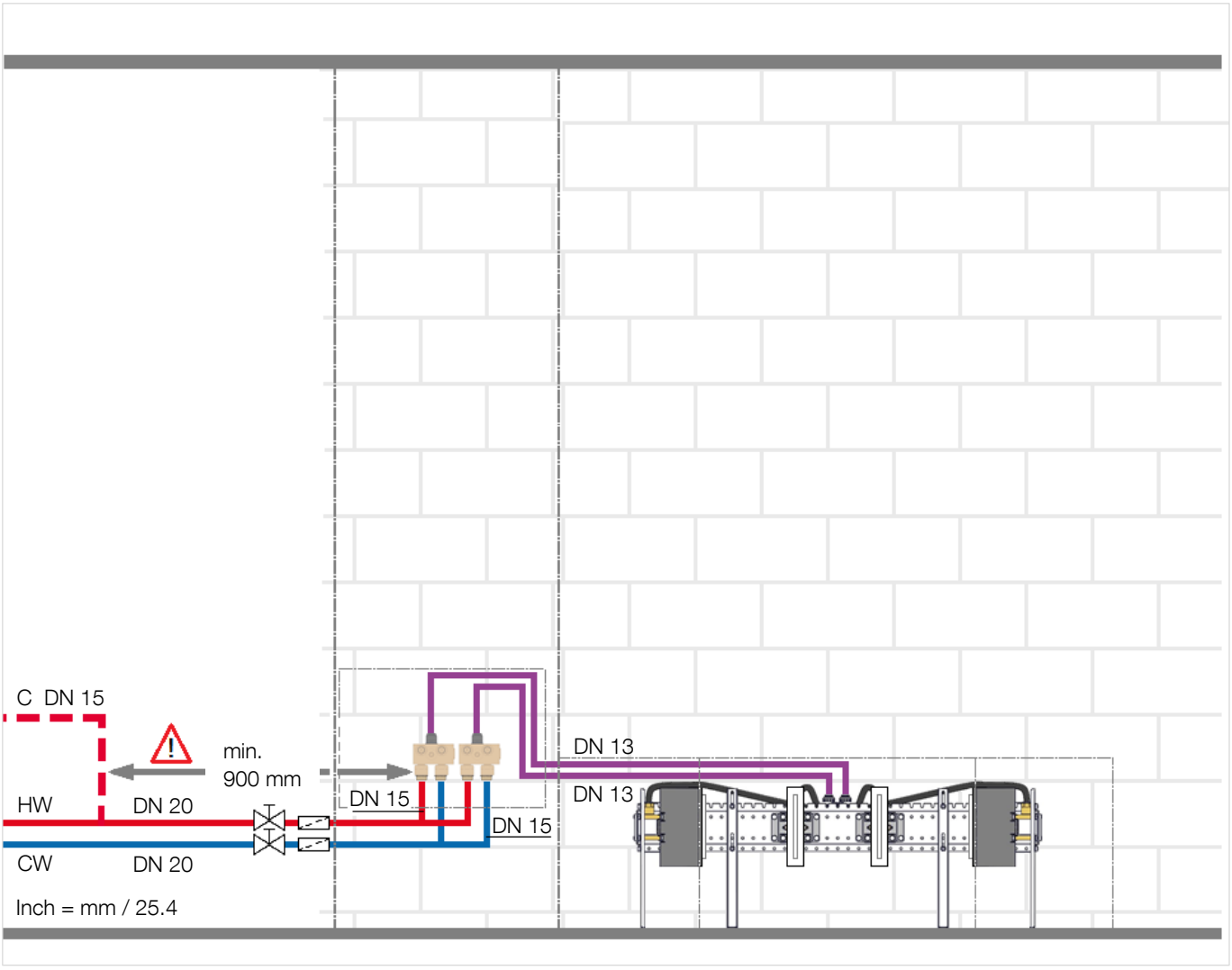


The network connection allows:
– Operation from a mobile device (SMART WATER APP)
– Integration in Smart Home systems (Open Interface)
– Connection to other media (e.g. light and sound systems)

Dornbracht recommends consulting a system integrator.

I – A network socket (I) wired in accordance with TIA 568A is required to connect the LEG SHOWER[ATT] device to a network. The local network must reside behind a router protected by a firewall.

Standard installation



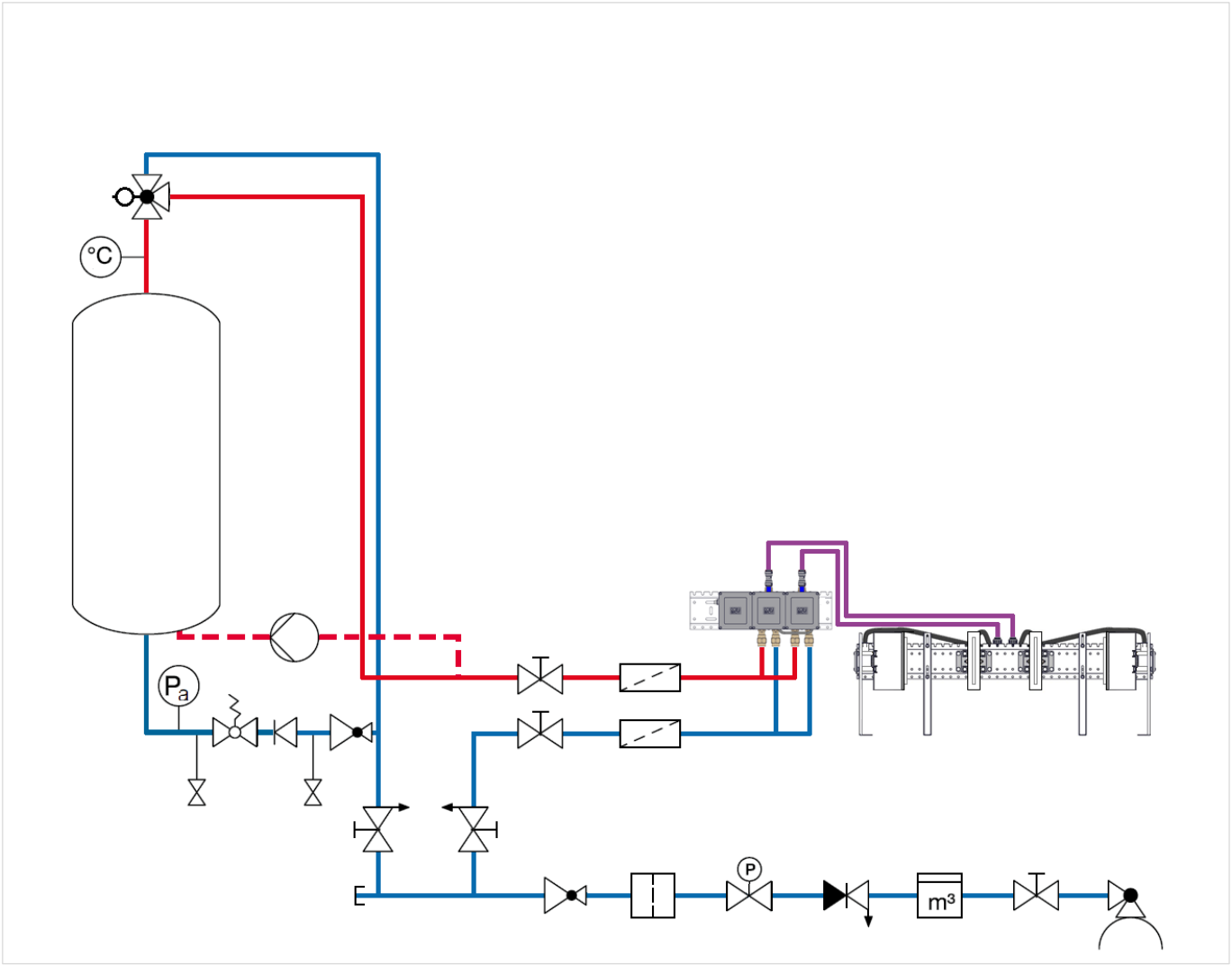
Required nominal diameter (DN) for pipes and fittings:
– DN 20 – Hot and cold water pipe (HW + CW)
– DN 15 – System Plate feed pipes

Scope of supply:
– DN 13 – LEG SHOWER^{ATT} feed pipes

– 900 mm / 2 ft 11-3/8" minimum distance between the circulation pipe connection (C) and the System Plate

The following components for the hot and cold water pipe (HW + CW) must be positioned so that access is possible at all times (accessible for inspection):
– 2 x stop valve (DN 20)
– 2 x dirt trap (DN 20)

Schematic diagram



Typical installation under EN 1717.

Please conform to national statutory regulations, where different.

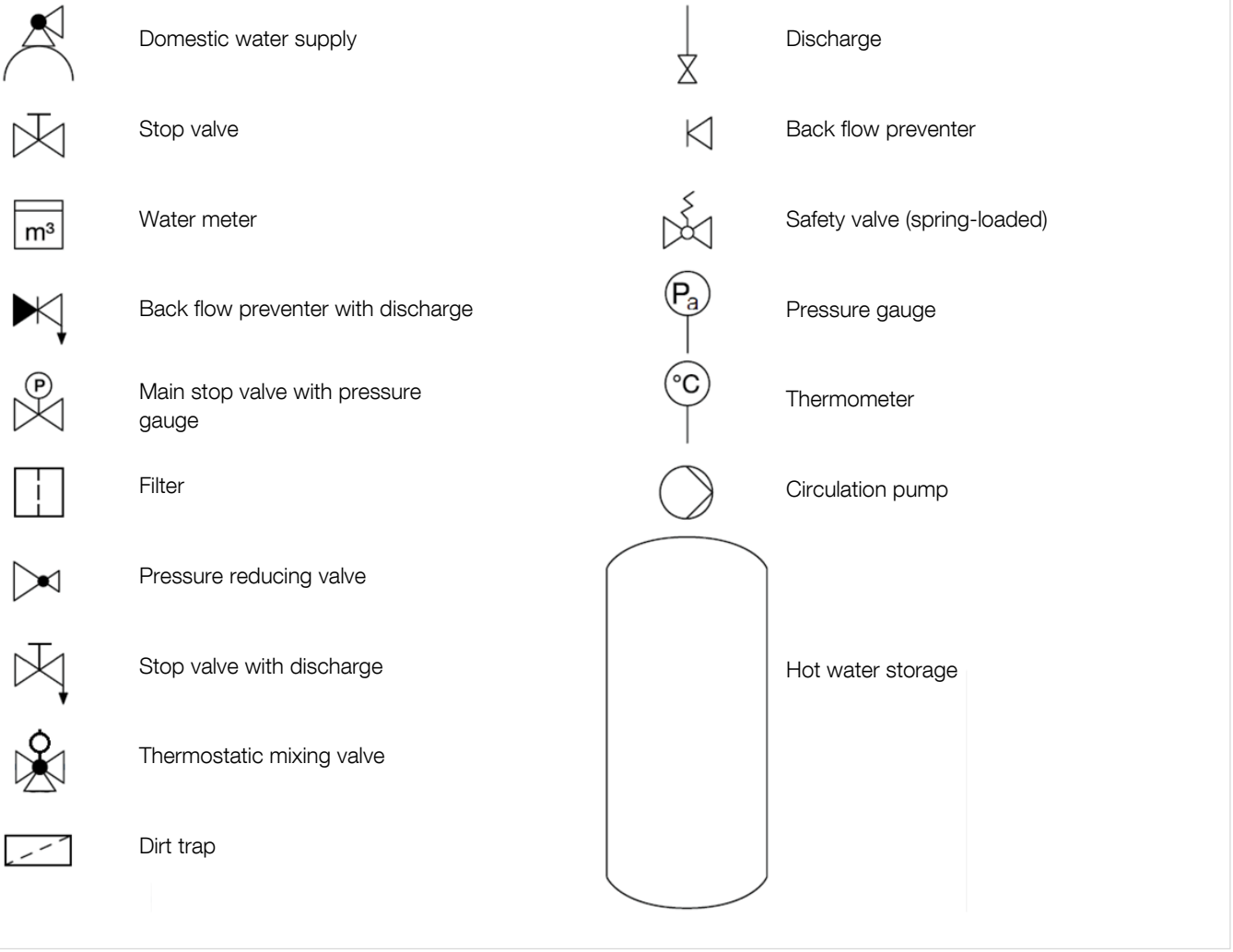
Provided by customer:

– Filter (main pipe)

– Pressure reducing valve (main pipe)

Key on next page

Key


Domestic water supply
Stop valve
Water meter
m³
Back flow preventer with discharge
Main stop valve with pressure gauge
P
Filter
Pressure reducing valve
Stop valve with discharge
Thermostatic mixing valve
Dirt trap
Discharge
Back flow preventer
Safety valve (spring-loaded)
Pa
Pressure gauge
°C
Thermometer
Circulation pump
Hot water storage

Plumbing information

Pipework calculation

The pipework must be calculated in accordance with EN 806-3, DIN 1988-300.

The simultaneous use of all other outlet points must be considered (simultaneity).

Pressure reducing components of the LEG SHOWER^{ATT}:
– Stop valve 1.2 kPa / 0.174 psi / 0.012 bar
– Dirt trap 14 kPa / 2.03 psi / 0.14 bar

Pressure-reducing components provided by the customer:
– Water meter max. 100 kPa / 14.5 psi / 1 bar
– Filter max. 20 kPa / 2.9 psi / 0.2 bar
– Pressure reducing valve (main pipe)
see manufacturer's specification
– Water softener, if necessary
see manufacturer's specification

Install a speed-controlled pressure booster, if necessary (e.g. in accordance with DIN 1988-500).

Hot water system

To choose the perfect hot-water supply – taking additional tapping points and simultaneous use into consideration – an individual determination of requirements (e.g. according to DIN 1988-200, DIN 4708-2, DIN 4753-7, VDI 6003) is absolutely necessary.

If the hot water temperature is set higher than 65 °C / 149 °F, a thermostatic water mixer must be installed downstream of the hot-water supply (e.g. for a solar-heated systems).

If periodic thermal disinfection is required, the customer must provide an appropriate (manually or automatically operated) bypass of the thermostatic water mixer.

Floor drain

To choose the perfect drain – taking the flow rate of the entire installation into consideration – an individual determination of requirements is necessary. (e.g. in accordance with EN 12056-1/-2, DIN 1986-100).

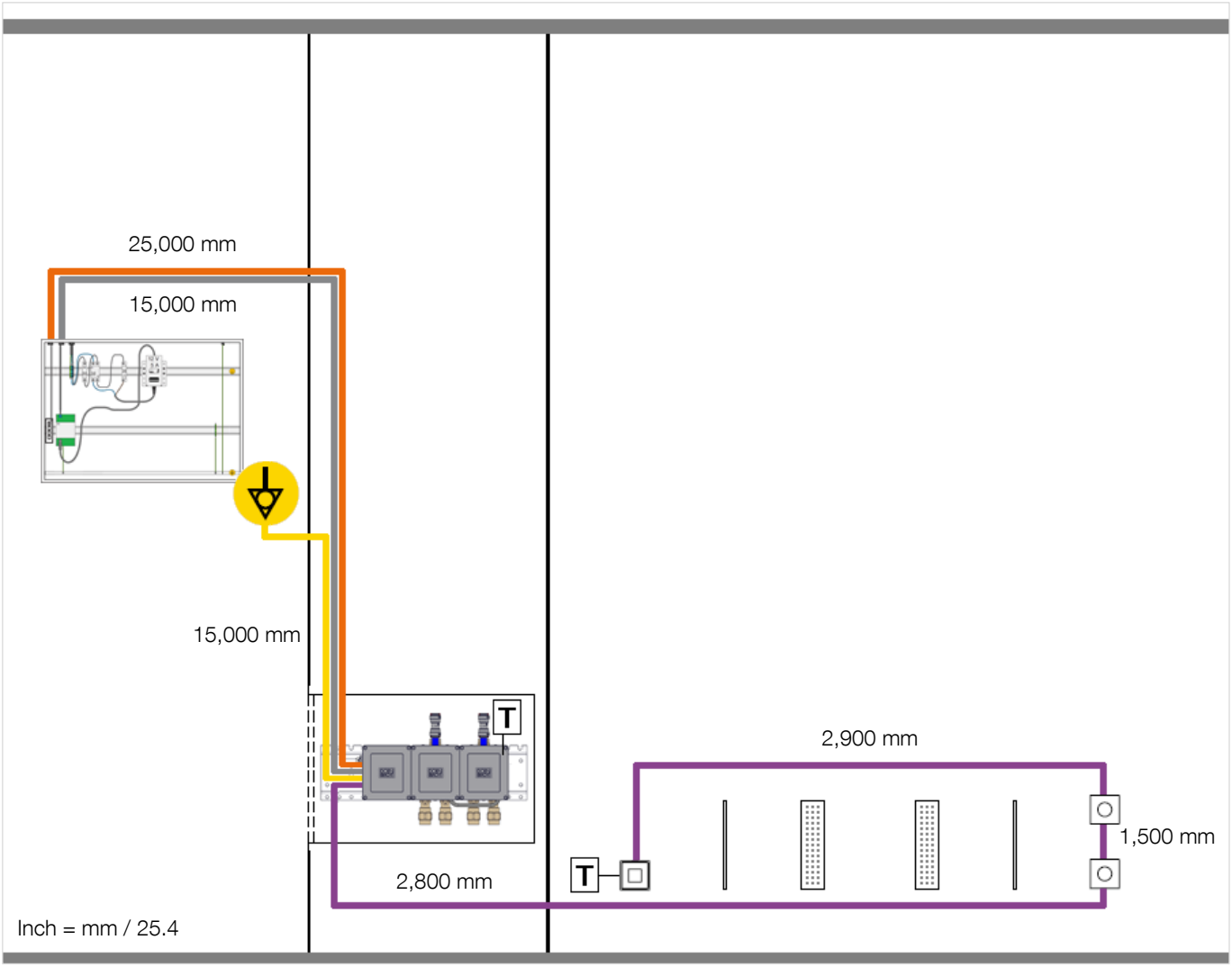
Drainage capacity / drain connection value [DU value]
0.6 l/s / 0.2 gps
Recommended drain pipe size DN 75

Plumbing installation

Flushing of the entire installation with clean water is absolutely necessary (the valid guidelines for the flushing are to be observed). A flushing report has to be created (e.g. EN 806-4 / DIN 1988-200). Flush before fitting the exposed trim parts and commissioning.

A pressure test of the entire installation (without angle valves) is absolutely necessary. The exact procedure for the pressure test (preliminary test / main test) depending on the pipe material used, can be found in the currently applicable directives ((e.g. EN 806-4, DIN 1988-200, etc.). A test report has to be created.

Schematic diagram

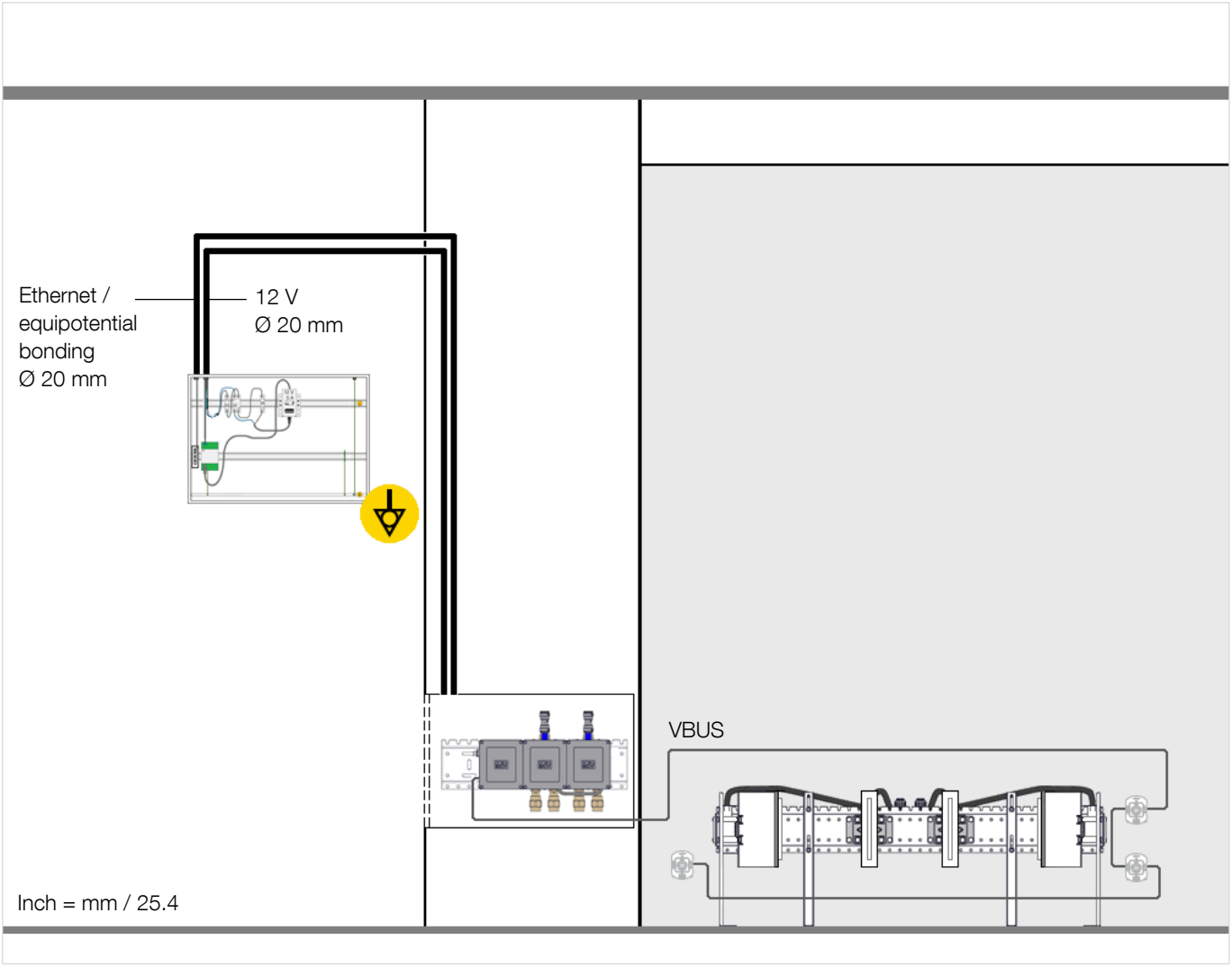


= Cable (12 V DC)
= Ethernet cable (CAT 7)
= VBUS cable
= Equipotential bonding cable (4 mm² / AWG 11)
= Equipotential bonding

T = Terminator

The length specifications relate to the condition on delivery.

Conduits



Do not run the power supply through the same conduit with equipotential bonding or Ethernet.

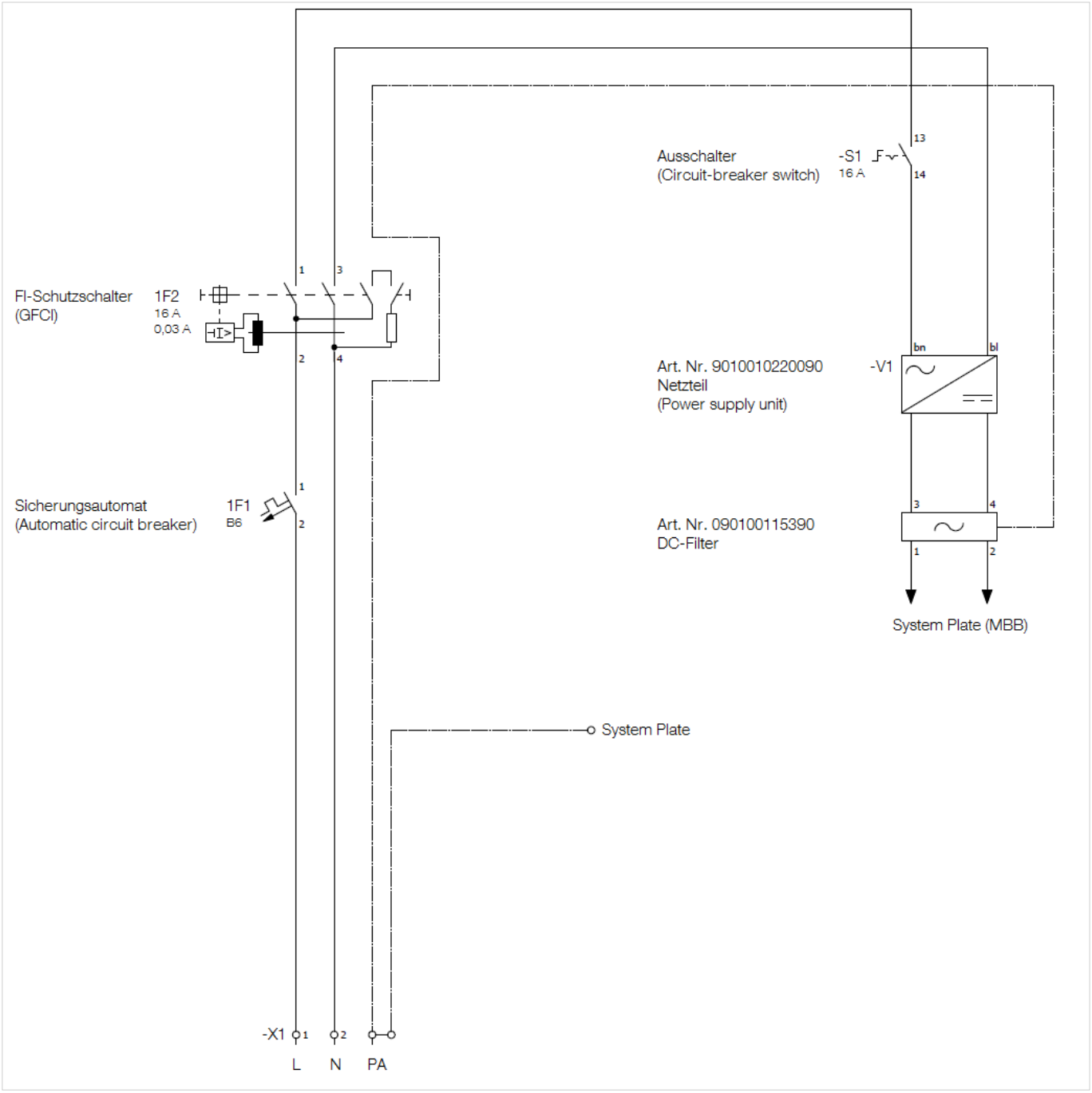
Provided by customer:

– 1 x conduit Ø 20 mm / Ø 3/4" to max. 12,000 mm / 39 ft 4-3/8" (for the equipotential bonding cable and the Ethernet cable from the fuse box to the System Plate)
– 1 x conduit Ø 20 mm / Ø 3/4" to max. 12,000 mm / 39 ft 4-3/8" (for the power supply from the fuse box to the System Plate)

⚠ Do not roll up excess cable lengths. Shorten the excess cable lengths or fasten them in a meandering pattern.

As part of the cable length is required for connection, the conduits must be correspondingly shorter.

Fuse box wiring diagram



Electrical information

Electrical installation

Only connect to the electricity supply when the device is voltage-free.

⚠ Inexpertly completed electrical installations and electrical installations that are not completed as stipulated in this guide can cause electric shocks which could result in serious injury or even death, as well as damage to property.

The electrical installation must be implemented in accordance with IEC 60364-4-41 and DIN VDE 0100 by a qualified electrician. Please conform to national statutory regulations, where different.

The appliances may be connected only to original Dornbracht components.

Equipotential bonding

⚠ Do not create equipotential bonding over water pipes.

It is essential to use and/or install equipotential bonding cables (4 mm² / AWG 11).

Provided by customer:

– Fuse box in accordance with planning requirements
– Safety cut-out (6 A, type B)
– Ground fault circuit interrupter (30 mA, 2-pin, type A)
– 1 x circuit-breaker switch (16 A)
– 2 x rail mounting TS 35
– Equipotential bonding rail
– Network connection in accordance with TIA 568A, if necessary

Safety zones

Observe the regulations for protection zones according to DIN VDE 0100, Part 701 (IEC 60364-7-701).

Please conform to national statutory regulations, where different.

Observe the protection rating of each electrical component, only applicable once the device is fully installed.

The following electrical components must be installed outside safety zones 0 – 2: fuse box, System Plate

As SMART TOOLS control elements are operated by safety extra-low voltage (12 V), they can be installed in safety zone 1.

The VBUS connection of the electrical components (daisy chain) must finish with a terminator.

No more than 5 components should be connected one after the other in the daisy chain.
Dornbracht must be consulted in advance about installations that differ from the planning information.

The total length of the daisy chain may not exceed 30,000 mm / 98 ft 5-1/8".

Technical data

General

Weight

– Concealed rough parts LEG SHOWER^{ATT}, pre-fitted	12 kg / 26.5 lbs (US)
– System Plate	5 kg / 11 lbs (US)

Recess depths

– Concealed rough parts, LEG SHOWER^{ATT}, pre-fitted	1,166 x 510 x 398 mm / 3 ft 9-7/8" x 1 ft 8" x 1 ft 3-5/8"
– Concealed rough parts WATER BAR	min. 102 mm / 4" max. 175 mm / 6-7/8"
– System Plate	min. 72 mm / 2-7/8"
– SMART TOOLS control elements	min. 141 mm / 5-1/2"
– Drilled hole diameter for concealed box	56 mm / 2-1/4"

Electrotechnical data

Power supply

Power supply unit (fuse box)

– Input voltage	100 – 240 V AC
– Output voltage	12 V DC
– Input frequency	50 – 60 Hz
– Maximum power consumption	60 W
– Power consumption (in operation)	6 W

System Plate

– Supply voltage	12 V DC
– Equipotential bonding	4 mm² / AWG 11

SMART TOOLS control elements

– Supply voltage	12 V DC
– Degree of protection	IP X4

Sanitary specifications

The product is intrinsically safe according to EN 1717.

The thermostat meets the requirements according to EN 1111.

Scalding protection (factory-adjusted)	43 °C / 109 °F

Size of the supply lines

Hot and cold water	2 x DN 20

Drainage

– Drainage capacity / drain connection value [DU value]	0.6 l/s / 0.2 gps
– Recommended drain pipe size	DN 75

To choose the perfect drain – taking the flow rate of the entire installation into consideration – an individual determination of requirements is necessary. (e.g. in accordance with EN 12056-1/-2, DIN 1986-100).

Maximum flow at a flow pressure of 300 kPa / 44 psi / 3 bar

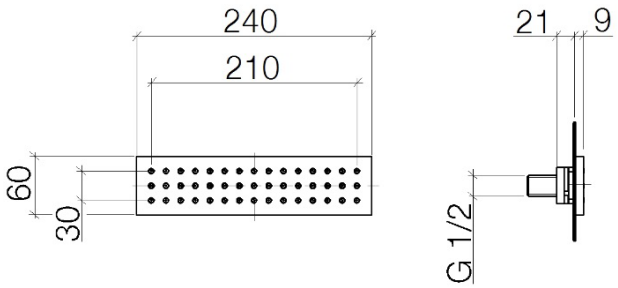
– Total	36 l/min / 9.5 gpm
– REFRESH (0:35 mins.)	9 l / 2.4 gal
– VITALIZE (2:30 mins.)	43 l / 11.4 gal

Safety marks

CE

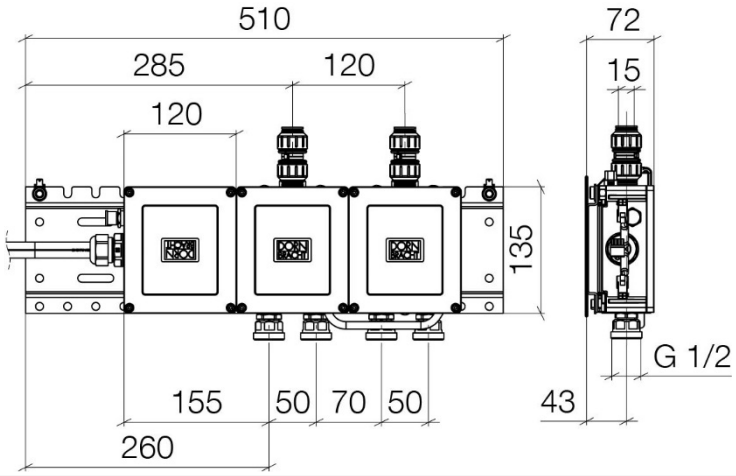
Leg Shower[ATT]

36 517 979 – FF



mm

System Plate



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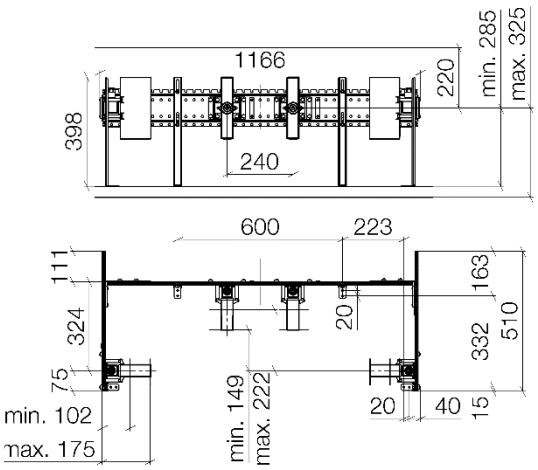
Concealed rough parts
LEG SHOWER[ATT]

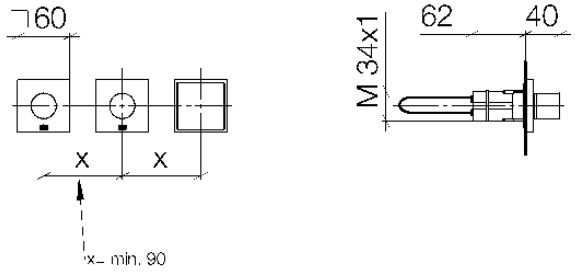


mm

Inch = mm / 25.4

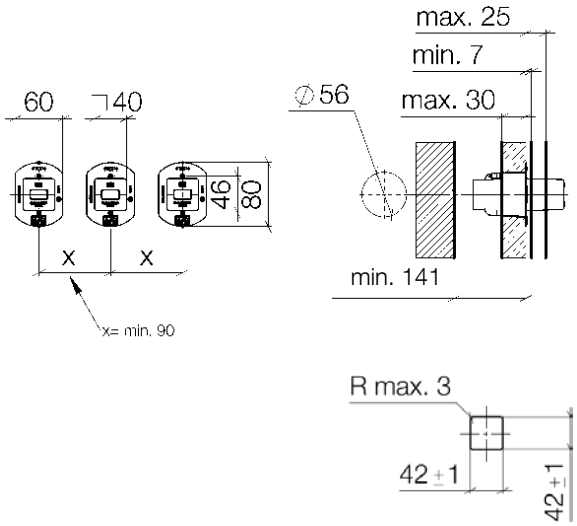
SMART TOOLS control elements

SMART TOOLS control elements



mm

Concealed rough parts
SMART TOOLS control elements



mm

Inch = mm / 25.4

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