

Planning a disabled toilet



Can you use a standard 430mm height toilet for disable access?

- Yes
- No**

The correct height for the toilet pan is?

- 430mm
- 480mm**
- 520mm
- 600mm

What height should the washbasin be set at, for use from WC

- 680-700mm
- 720-740mm**
- 760-780mm
- 800-820mm

In what position should the flush handle be located?

- In the centre
- Near the corner wall
- **Near the transfer location**
- Does matter

How far should the centre of the pan be located away from the corner wall?

- 400mm
- **500mm**
- 600mm
- Does not matter

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Cold water booster

1. Name the 4 components

- A Hydraulic Accumulator
- B Pressure switch
- C Pump motor
- D Pressure regulator

2. The backflow prevention device fitted to this unit is a weir overflow type AB, what category of fluid will this protect up to?

Fluid category 5

3. What does device B do?

The pressure pump controls the starting and stopping of the pump.

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Domestic hot water

Level 3 unit 304 Domestic hot water



You may have seen or installed the item in the picture. You may have been asked to maintain, adjust or commission this unit, but how confident are you. Can you get the following question correct?

What is the item called?

Thermostatic mixing valve

In what approved document will you find information on hot water supply and systems?

- **Building regulations document G**

The hot water supply to a bath in a household environment should be limited to what temperature?

Answer

G3 building regs 3.65 *The hot water supply temperature to a bath should be limited to a maximum of **48°C** by use of an in-line blending valve or other appropriate temperature control device, with a maximum temperature stop and a suitable arrangement of pipework.*

The hot water supply to a bath in a health care environment should be limited to what temperature?

Answers

3.3 *The severity of scalding depends upon the temperature of the water and the length of time the skin is exposed to it. The maximum set hot water temperatures for outlets accessible to patients, residents, visitors and staff are given in Table 1.*

Table 1 Maximum set hot water temperatures

Application	Maximum set hot water temperature °C
Bidet	38
Shower	41
Washbasin	41
Bath	44
Bath	46

1 For washbasins, washing under running water is assumed.

2 Bath fill temperatures of more than 44°C should only be considered in exceptional circumstances where there are particular difficulties in achieving an adequate bathing temperature. If a temperature of more than 44°C is to be used then a safe means of preventing access to the hot water should be devised to protect vulnerable patients.

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Flue Faults

1. Daniel was asked to service this opened flue appliance, he noticed that a component was missing at the top of the draught diverter. What should have been fitted?



A draught hood connector
(flue starter)

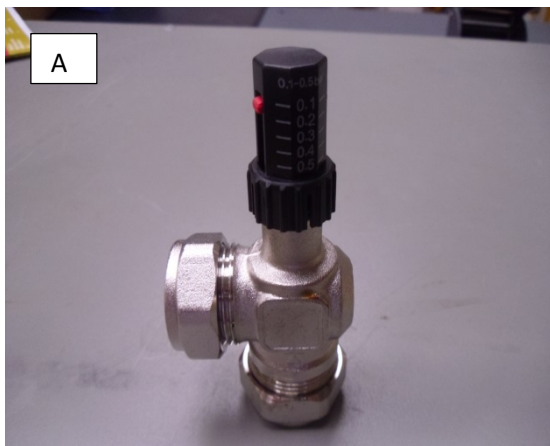
2. The minimum distance of **600mm** straight flue pipe should be installed before the first bend.

3. Can the appliance in the picture be installed in a bathroom?
No

4. What British standard covers flue systems?
BS 5440 PT1

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Central heating components



1. What component is in the picture A?

Automatic bypass

2. What size pipework should be connected to fitting A?

22mm

3. In what location should this component be fitted?

A before the pump and between the flow and return

B After the pump and between the flow and return

C After the zone valve and between the flow and return

D Between the vent pipe and the cold feed to the boiler

4. What is the component in picture B?

Tundish

5. Component B will connect to D1 and D2 pipes on an unvented cylinder. What is the maximum length of D1 pipe

600mm

6. What is the minimum length of D2 pipe before a bend?

300mm

7. What is the maximum length a 22mm D2 pipe can be installed without bends?

9 metres

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Gas rates

Daniel is to carry out a landlord certificate to an open flue boiler, when checking the burner pressure he notices it is far too high. What effect could this have on the appliance?

- Incomplete combustion
- The flue not able to handle the extra products of combustion
- Excessive boiler temperature
- **All of the above**

Daniel goes to check the gas rate at the meter. Installed is a U6 metric meter. To check the gas rate of the appliance he is working on, does he?

- Turn all gas appliance in the house on to full rate
- **Only turn on the appliance he is working on**

Daniel takes a reading at the gas meter before he starts the test and a reading after he completes his test, how much time should be allowed for the test?

- 1 minute
- **2 minutes**
- 3 minutes
- 4 minutes

Daniels first reading is 00867 466m³ and his second reading is 00867 511m³. Over 1 hour how much gas in m³/hr would the appliance consume?

- 1.85m³/hr
- 1.42m³/hr
- **1.35m³/hr (00867 511 minus 00867 466= 0.045x 30mins=1.35m³/hr)**
- 1.64m³/hr

When Daniel did his calculation he used a CV of 38.6 MJ/m³ and he found the appliance had an input rating of:

- 17.23 kW
- 12.42kW
- **14.43 kW (1.35x38.6/3.6=14.43kw)**
- 15.00kW

When checking the data plate on the boiler he noticed it was a range rated boiler, with a maximum heat input of 11.5 KW, should he

- Pass the boiler, it's been working Ok with no issues
- **Carry out further investigation to why the gas rate is high**
- Decrease the gas pipe size to the boiler
- Turn down the boiler thermostat, so the boiler will reach temperature quicker.

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Tools to Remember

Josh came across some old plumbing tools in the shed can you identify them?

- A. Immersion spanner
- B. Immersion spanner

- C. Immersion spanner
- D. Foot prints
- E. Drain Auger
- F. Stilsons
- G. Box Spanner
- H. Thermostatic radiator valve decorating cap
- I. Hole cutter