

# Class A1 Flue Size Selector

# Hepworth

## TERRACOTTA

**For performance and safety it is important that the correct flue size is specified. This 'Quick Guide' Selector shows you how to specify the right flue size every time.**

### Step One – Fireplace Size

The Building Regulations 2000 (Approved Document J) 'Combustion appliances and fuel storage systems - 2010 edition' specifies that for fireplaces with openings larger than 500mm x 550mm, the flue liner size is based on a nominal cross-sectional area (NCSA) equal to 15% of the face area of the fireplace opening.

To calculate this figure, first multiply the Width (W) by the Height (H), then multiply this value by 15%.

#### Example:

W 550mm x H 550mm = 302,500.  
302,500 x 15% = 45,375 = NCSA.

### Step Two – Flue Size

Select the correct Flue Size from the table below.

In the first column of the table find the next highest Flue Size to the NCSA you calculated in Step One.

Read across to Column Two to find the recommended Flue Size.

### Step Three – Clay Flue Liner

Select the correct Hepworth Clay Flue Liner product from the table.

A choice of different lengths and bends is available for each flue size.

### Advisory Service

Advice should be sought when proposing to construct flues with an area of:

a) more than 15% of the total face area of the fireplace openings; or b) more than 120,000mm<sup>2</sup>.

### Flue Liner Bends

Where bends are used they should be angled at no more than 45° to the vertical (max 4 no. 45° bends per flue). For further information see paragraph 1.49 of Approved Document J. Straight lines are preferable as they offer least resistance to the passage of flue gases. This design also assists flue cleaning, sweeping and inspection.

### Clay Flue Liner Benefits

**Performance:** The Hepworth (Class A1) Clay Flue Liner provides enhanced thermal shock loading resistance in soot fire conditions > 1000°C. It also provides a significant barrier against acidic attack (life expectancy: in excess of 50yrs).

### Jointing the Flue Liner Sections:

The joints are sealed using a specially formulated thermal cement, Hepworth product code Y108. This cartridge contains sufficient cement to seal approx 4 x joints – based upon 225mm diameter flue liners.

Flue Size: NCSA mm <sup>2</sup>	Recommended Flue Size	Hepworth Class A1 Flue Liner Products to BS EN 1457-1:2012	Description/ Specification YE
12,260	125mm internal dia round	YC10C1 YC13C1 YC14C1	300mm high 22.5° bend 30° bend
17,660	150mm internal dia round	YC16C1 YC19C1 YC20C1	300mm high 22.5° bend 30° bend
26,870	185mm internal dia round	YD10C1 YD11C1 YD14C1 YD15C1 YD16C1	180mm high 300mm high 22.5° bend 30° bend 37.5° bend
31,600	185mm square	YG10C1 YG11C1 YG14C1 YG15C1 YG16C1	180mm high 300mm high 22.5° bend 30° bend 37.5° bend
39,740	225mm internal dia round	YE10C1 YE11C1 YE14C1 YE15C1 YE16C1	180mm high 300mm high 22.5° bend 30° bend 37.5° bend
48,000	225mm square	YH17C1 YH18C1 YH21C1 YH22C1 YH23C1	180mm high 300mm high 22.5° bend 30° bend 37.5° bend
49,060	250mm internal dia round	YF10C1 YF11C1 YF12C1 YF13C1	180mm high 300mm high 22.5° bend 30° bend
70,650	300mm internal dia round	YF15C1 YF16C1 YF17C1 YF18C1 YF19C1	180mm high 300mm high 22.5° bend 30° bend 37.5° bend
87,400	300mm square	YJ15C1 YJ16C1 YJ17C1 YJ18C1	180mm high 300mm high 22.5° bend 30° bend



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