

Fire Protection and Acoustic Performance

SunPipe Fire Guard Fire Resistant Ceiling Diffusers

Monodraught have developed a new ceramic based ceiling diffuser for use in conjunction with the complete SunPipe range , to provide up to 2 hours fire resistance.

Consisting of a tough, multi-layered glass/ceramic laminated construction which, in sheet form, can provide up to 4 hours fire resistance. The Fire Guard has an acoustic interlayer to provide a sound and fire resistant solution.

The glazed assembly is set into a galvanised steel or stainless steel frame with an intumescent seal.

□ **Acoustic Diffusers** □ □ In its standard form, a basic SunPipe system, comprising a 600mm length, will achieve a reduction of approximately 18dBa. There are two options for acoustic ceiling diffusers to achieve sound attenuation, of either an 18mm overall thickness Soundguard acoustic system with 5mm clear ceramic, 2mm acoustic interlayer, 6mm float glass, a further 1.5mm acoustic interlayer and 4mm toughened stipple obscure glass, which achieves an acoustic performance of Rw 41 db / Rtra 36 dBA.

Alternatively, a 40mm double glazed sealed unit, with the same specifications as above plus a 12mm cavity and a 10mm toughened float glass internally, will produce Rw 45 db / Rtra 37 dBA.

Total Thickness	Impact (BS6026)	Rm. (dB)	Rw. (dB)	Rtra (dB)	Weight (Kg/m ²)	Light Transmission (%)	U Value (W/m ² k)
9mm	Class B	34	37	33	21	85	5.30

Sleev-it 'Fire Choke' Fire Collars

□ Fitted above a plaster board ceiling and thereby leaving the SunPipe ceiling diffusers unaffected. Sleev-it 'Fire Choke' collars are designed to prevent the spread of smoke and fire through a □ or □ by crushing the SunPipe, when the aluminium is subjected to fire giving up to 2 hours protection.

Each 'Fire Choke' collar contains 'Intumex', an intumescent graphite compound and Alpha Fire

1032-2-SP, a woven fibreglass fabric coated with specially formulated micronised aluminium powder.

Manufactured in 0.9mm mild steel, the fire choke collar is supplied in two halves, which clamp onto the SunPipe aluminium tube.

The 'Fire Choke' patented system contains the expanding intumescent material which crushes the aluminium SunPipe when the temperature in the room exceeds 150°C. The Alpha Firescreen SP fabric is secured inside each section of the fire collar, laying between the wall of the SunPipe and the 'Intumex' graphite compound within the fire collar casing. Once the intumescent material expands as a reaction to the increase in temperature, it becomes encased within two pillows of woven fibreglass fabric as it virtually blows up the fabric like a balloon, spreading outwards from both sections to the inside of the steel casing of the 'Fire Choke' collar. This produces a drumskin effect across the opening, which contains the heated char from the exfoliated intumescent material, therefore stopping off the penetration against fire, smoke and hot gases.