

PENETRATION	SYSTEM	BUILDING ELEMENT	FRL	PRODUCT	APPLICATION / MOUNTING DETAIL	APPROVAL REF.	MAX. SIZE	CONDITION
WALL	WM1	Masonry	-/120/-	LVH44	Mounted in steel casing in penetration	FC02643, FC017	1200mm x >10m, >10m x 1200mm	
	WM2	Masonry	-/240/-	LVH44	Cased steel casing in penetration	C91525	250x250mm	
	WM3	Masonry	-/120/-	LVH44	NO casing in penetration	FC02643	600mm x >10m, >10m x 600mm	
	WM4	Masonry	-/120/-	LVH44	NO casing - surface mounted over penetration	FC01740	600x600mm	max hole size 500mm x 500mm
	WM5	Masonry	-/120/-	LVH-0	Steel sleeve in penetration	22774-01	450mm diameter	
	WM6	Masonry	-/240/-	LVH-0	Steel sleeve in penetration	22774-01	150mm diameter	
	WM7	Masonry	-/120/-	LVH-0SS	Stainless steel sleeve in penetration	22774-01	450mm diameter	
	WM8	Masonry	-/120/-	LVH-0	Spiral duct sleeve grouted into penetration (angle free)	FC02008	300mm diameter	
	WM9	Masonry	-/120/-	LVH	Hi-Flo mounted in steel casing in penetration	FC02588	250mm x 400mm	
	WM10	Masonry	-/120/-	LVH0	Hi-Flo steel sleeve in penetration	FC02588	250mm diameter	
	WM11	Masonry	-/120/-	LVH44	NO casing with various fixing brackets	FC01854/FC02512	600mm x >10m	
	WH1	CSR Hebel75SS	-/120/-	LVH44	Mounted in steel casing in penetration	FC02525	1200 H x 600mm W *dual panel	400mm max if single in panel
	WH2	CSR Hebel75SS	-/120/-	LVH-0	Steel sleeve in penetration	FC02525	450mm dia. *dual panel	400mm max if single in panel
	WH5	CSR Hebel75SW	-/120/-	LVH44	Mounted in steel casing in penetration	FC02525	1200 H x 600mm W *dual panel	400mm max if single in panel
	WH4	CSR Hebel75SW	-/120/-	LVH-0	Steel sleeve in penetration	FC02525	450mm dia. *dual panel	400mm max if single in panel
	WH5	CSR Hebel75SW	-/120/-	LVH44	Mounted in steel casing to underside of slab	FC02495	300mm x 300mm	
	WH6	CSR Hebel75SW	-/120/-	LVH-0	Steel sleeve positioned tight to underside of slab	FC02495	150mm diameter	
	WH7	CSR Hebel75SW	-/120/-	LVH44	Mounted in steel casing to underside of slab with S angles	FC02495	300mm x 300mm	
	WS1	CSR Security wall	-/90/90	LVH44	Mounted in steel casing in penetration	WFRA45955	600x600mm	
	WS2	CSR Security wall	-/90/-	LVH-0	Steel sleeve in penetration	WFRA45955	300mm diameter	
	WP1	FRP/Board 2 x 1 layer	-/120/-	LVH44	Mounted in steel casing in penetration	FC01870	600mm x 600mm	
	WP2	FRP/Board 3 layers	-/120/-	LVH44	Mounted in steel casing in penetration	FC01870	600mm x 600mm	
	WP3	FRP/Board 2 x 2 layers	-/120/-	LVH-0	Steel sleeve in penetration	FC02205	450mm diameter	
	WP4	FRP/Board 25mm liner+ 2 layers	-/120/-	LVH-0	Steel sleeve in penetration	FC02205	450mm diameter	
	WP5	FRP/Board 3 layers + 1 layer pad	-/120/-	LVH-0	Steel sleeve in penetration	FC02205	450mm diameter	
	WP6	FRP/Board 3 layers	-/120/-	LVH-0	Steel sleeve in penetration	FC02205	450mm diameter	
	WP7	FRP/Board 2 x 2 -rs	-/120/-	LVH44	NO casing in penetration	FC01854/FC02512	600mm x 600mm	
SHAFTWALL DUCT	WSW1	Masonry	-/120/-	LVH44	Mounted in riser branch (angle free system)	FC01869	300 x 300mm or 90,000mm2	
	WSW2	Masonry	-/120/-	LVH44	Mounted in riser branch tight to slab with packer	FC02436	90,000mm2	
	WSW3	Masonry	-/120/-	LVH-0	Mounted in riser branch (angle free system)	FC02455	300mm diameter	
	WSW4	FRP/Board 3 layers	-/120/-	LVH44	Mounted in riser branch tight to slab with packer	FC02436	300 x 300mm or 90,000mm2	
	WSW5	FRP/Board 3 layers	-/120/-	LVH44	Mounted in riser branch tight to slab with IBS rod & mastic	FC02436	300 x 300mm or 90,000mm2	
	WSW6	FRP/Board 3 layers	-/120/-	LVH-0	Mounted in riser branch (angle free system)	FC02455	300mm diameter	
	WSW7	FRP/Board 3 layers	-/120/-	LVH44	Mounted in riser branch (angle free system)	FC01869	300 x 300mm or 90,000mm2	
	WSW8	FRP/Board 2 x 2 layers	-/120/-	LVH44	Mounted in riser branch (angle free system)	FC01869	300 x 300mm or 90,000mm2	
	WSW9	FRP/Board 2 x 2 layers	-/120/-	LVH-0	Mounted in riser branch (angle free system)	FC02455	300mm diameter	
	WSRF1	Retrofit shaftwall option	-/120/-	LVH44	Retrofit fixing tabs in existing damper housings	FC02101	300x300mm	
FLOOR / SLAB	FL1	Concrete slab	-/120/-	LVH44	No casing in penetration	FC02643/FC01963	Upto 1200mm x >10m or >10m x 1200mm	
	FL2	Concrete slab	-/240/180	LVH44	Cased steel casing in penetration	FSP0687	300x300mm	
	FL3	Concrete slab	-/120/120	LVH44	Mounted in steel casing in penetration	FC01796	600x600mm	
	FL4	Concrete slab	-/120/-	LVH-0	Steel sleeve in penetration	FC01866	300mm diameter	
	FL5	Concrete slab	-/120/-	LVH44	NO casing - surface mounted over or under penetration	FC01740	600x600mm	max hole size 500mm x 500mm
	FL6	Concrete slab	-/120/-	LVH-0	NO steel sleeve in penetration	F91687	250mm diameter	
	FL7	Concrete slab	-/120/-	LVH44	Steel casing, modular banked together	FC01963	1200mm x 1200mm	
CEILING	CE1	FRP/Board 2 ply ceiling	-/60/60	LVH44	P/Board clad encl. (60 min RISF Incipient rated)	40904	600x600mm -	
	CE2	FRP/Board 2 ply ceiling	-/60/60	LVH44	P/Board clad encl. open end (60 min RISF Incipient rated)	C91474	300mm x 300mm	exhausting into ceiling void
	CE3	FRP/Board 2 ply ceiling	-/90/90	LVH-0	P/Board panel & IFD (90 min RISF Incipient rated)	FP3572	150mm diameter	
	CE4	FRP/Board 2 ply ceiling	-/90/90	LVH Hi-Flo	P/Board clad 3 way enclosure (90 min RISF Incipient rated)	FAR2925	Incorporates 150mm Hi-Flo	
DOOR	FD1	LVH-D in Firecore fire doors	-/120/30	LVH-D	Fitted to maxi & mini fire doors	COT388	600 x 300mm or 450 x 450mm	
	FD2	LVH-D in Pyropanel fire doors	-/120/30	LVH-D	Fitted to pandor, FR & pyrolite fire doors	COT442	600 x 600mm, 600 x 300mm, 450 x 450mm	
	FD3	LVH-D in Trafalgar E-core doors	-/120/30	LVH-D	Fitted to maxi & mini fire doors	FC01211	600 x 300mm or 450 x 450mm (up to 2 off per leaf)	