

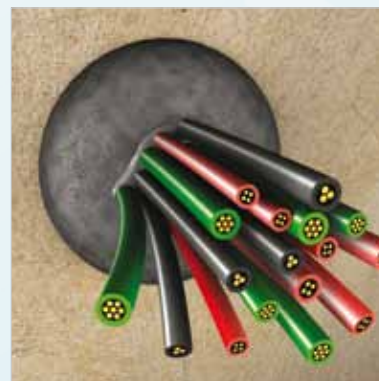
Basic Requirements for Creating a Penetration

Determine the required period of fire resistance of the element, and for loadbearing structures, ascertain the required load. The area to be sealed requires the same fire resistance as the complete floor or wall construction. In order to ensure the stability of the services is maintained under fire conditions, we recommend that all services must be adequately supported at maximum 250mm away from the wall or floor on both sides of the penetration. System fixings, impact protection and suspension elements must be steel. Monal alloys, aluminium etc are not permitted. Accessories such as guard-rails, steel angles, threaded rods. Suspension elements etc. must only be fixed to adjacent solid substrates such as concrete or masonry.



General Information

- ⇒ For interior use only
- ⇒ Under wet areas or humid conditions the surface of the seal must be painted.
- ⇒ For applications in floor no supporting structure is required.
- ⇒ Suitable for single or bundles of cables, for measurement and control lines, combustible and non-combustible pipes with or without insulation.
- ⇒ Maximum opening size in wall or floor is in accordance with the maximum cored hole diameter
- ⇒ Simple and exact fit, easily cut using standard tools.
- ⇒ Painting is possible; adhesion and compatibility must be checked.

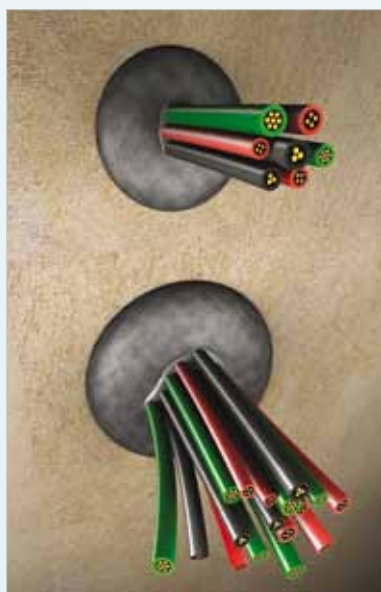


Application conditions

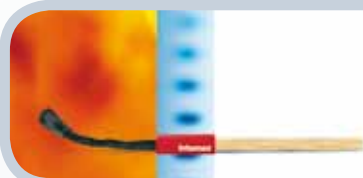
- ⇒ No known limits in respect to ambient conditions in the building during installation.



Application



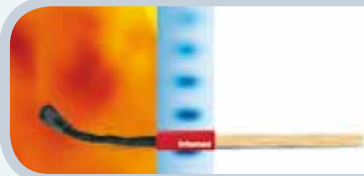
Consumption Data	Maximum capacity of services is 60 % of the aperture area (in consideration of currently valid electrical standards)		
Installation	Openings in walls and floors have to be closed on both sides; off centre annular gaps are permissible; A minimum spacing between cored holes/plugs is not required;		
Wall/Floor	For use in all solid wall and floor constructions with a minimum thickness of 150 mm and a minimum density of 650 kg/m ³		
Type	Minimum cored hole diameter (mm)	Maximum cored hole diameter (mm)	Installation depth (mm)
Intumex® FP 65	40 mm	65 mm	60 mm
Intumex® FP 80	50 mm	80 mm	60 mm
Intumex® FP 110	80 mm	110 mm	60 mm
Intumex® FP 125	100 mm	125 mm	60 mm
Intumex® FP 140	110 mm	140 mm	60 mm
Intumex® FP 170	140 mm	170 mm	60 mm
Intumex® FP 210	180 mm	210 mm	60 mm
Intumex® FP 260	220 mm	260 mm	60 mm



Maximum capacity of services is 60 % of the aperture area; also with off centre annular gaps; a minimum spacing between cored holes/plugs is not required

Drill hole size	Application examples
Drill hole Ø 60 up to 250 mm	Blank penetration
Drill hole Ø 60 mm	PVC pipe up to 20 mm diameter, 0.5 mm thickness 2 cables in PVC pipe 5 x 1.5 mm ²
	One cable up to diameter = 22 mm (H07V-K 4 x 10 mm ²)
	Metal pipe up to 19 mm diameter, 2 mm thickness with ≥10 mm combustible or non-combustible insulation
	Cable bundle up to 48 mm diameter (NYM, H07V-K4)
	PVC and PU pipe up to 1 x 8/1 mm and 2 x 12/1 mm
Drill hole Ø 120 mm	PVC pipe up to 50 mm diameter, 1.2 mm thickness 5 cables in PVC pipe (H07V-K) 5 x 2.5 mm ²
	Cable up to 75 mm (N2XSEY 3 x 150 mm ²)
	Cable bundle up to 93 mm diameter (NYM, H07V-K4))
	Cable bundle up to 75 mm diameter 5 x 4 x 10 mm ² + 25 x 5 x 2.5 mm ² (H07RN-F)
	Metal pipe up to 50 mm diameter, 2.3 mm thickness with ≥10 mm combustible or non-combustible insulation
	PVC pipe up to 50 mm diameter, 1.2 mm thickness
Drill hole Ø 200 mm	PVC pipe up to 75 mm diameter, 2.3 mm thickness
	5 cables 5 x 2.5 mm ² (H07V-K) 2 NIRO metallic pipes up to 12 mm diameter, 2 mm thickness PVC and PU pipe up to 1 x 8/1 mm and 2 x 12/1 mm
	Cable N2XSEY 3 x 150 mm ² 10 telecommunication lines (10 mm diameter each) 63 cables 5 x 2.5 mm ² (H07-RN-F)
	Copper pipe up to 89 mm diameter, 2 mm thickness with ≥10 mm combustible or non-combustible insulation
	PE pipe up to 75 mm diameter, 2.3 mm thickness
Drill hole Ø 250 mm	PE pipe up to 90 mm diameter, 3 mm thickness
	10 cables 20 x 2 x 0.6 mm ² (F-YAY) Cable bundle 10 pc. 4 x 10 mm ² (H07RN-F) Cable tray 200 x 95 mm (perforated)
	20 cables 5 x 2.5 mm ² (H07RN-F) PE pipe up to 50 mm diameter, 1.8 mm thickness Copper pipe up to 32 mm diameter, 1.8 mm thickness with ≥10 mm combustible or non-combustible insulation Cable tray 200 x 50 mm (perforated)
	Metal pipe up to 110 mm diameter, 2.9 mm thickness with ≥32 mm combustible or non-combustible insulation
	Cable bundle 10 pieces, 4 x 10 mm ² (H07-RN-F, etc.) 10 telecommunication lines (10 mm diameter each) Cable tray 200 x 95 mm (perforated)
	Cable bundle up to 100 mm diameter 16 x 4 x 10 mm ² (H07RN-F)





Installation: wall and floor condition

- ⇒ Seal formed from precast Intumex® FP of size to match aperture diameter
- ⇒ Mark services with a pen on the backside of the plug
- ⇒ Cut plug to size using standard tools. Allow for a slight minus tolerance of between 5 to 10 % (e.g. For a plastic pipe with 100 mm diameter, the opening diameter should be between 95 mm and 90 mm)
- ⇒ Around both single cables and cable bundles apply Intumex MG
- ⇒ Compress and insert the plug into the opening with the convex side visible. The plug should be flush with the surface of the wall and/or floor.
- ⇒ Fix identification label