

HILTI CP 680-N Cast in Firestop device

The enclosed pages are taken from the
Hilti Firestop Systems Manual
Edition April 2011
Supported by additional standard details

For Material Safety data sheets
visit the technical library at www.hilti.co.uk/cfs

<p>Hilti (Gt Britain) Ltd TECHNICAL ADVISORY SERVICE TELEPHONE 0161 886 1144</p>

Quality Management System Certification

Standard: ISO 9001:2008

Issued by: The Swiss Association for Quality and Management Systems SQS.

Registration No: 12455 (The current certificate can be downloaded from www.hilti.co.uk)

Field of activity: Market Organisation.

Note: The certificate of Hilti (Gt. Britain) Ltd. is a sub-certificate to the master certificate of Hilti Aktiengesellschaft, FL-9494 Schaan with the field of activity: Research, Development, Manufacturing, Sales and Service.

Don't just use Hilti Firestop Products, use our Hilti Accredited Firestop Contractors

It is the combination of a quality conscious and third party accredited manufacturer working in close co-operation with a selected group of third party accredited installers that can offer you the best value.

Here are some of the benefits available to you by using this co-operation:-

- Reduce your liability; liability that comes from poor or incorrect installation and performance of products.
- Efficient Project Management based on the co-operation of a specialised manufacturer with a specialist contractor
- Commercially designed, effective Fire Protection solutions
- Products that adhere to 3rd party product conformity schemes such as FM, UL and Certifire.

These approvals are an assurance of product and manufacturer quality, they can also have an influence on the building insurance premium reducing the service costs of the building.

- Solutions that have been tested for long term performance.
- Solutions that offer business continuity and protections of premises.
- Certification of conformity of work completed.
- Installation work audited by FIRAS on site to ensure compliance with manufacturers' recommendations and Building regulations.
- Installer with site based manufacturer support.
- Installer having available site based manufacturers support when needed.
- Clear and comprehensive documentation of installation.
- Comprehensive support documentation for proposed solutions.
- Clarity and assistance understanding the role of Passive Fire measures in modern building construction.



Product Accreditation

Hilti Firestop Systems have been certified by a wide variety of international bodies, such as FM, UL, Certifire and iBMB

As part of this process products are monitored on an on-going basis so you can have absolute confidence in the quality and standard of the product you are specifying.

Installation Accreditation

Hilti-Accredited Firestop Contractors are also third party certified (e.g. FIRAS or LPCB).

This means that they work to agreed industry standards, employ trained operatives and are subject to on-site audits and inspection of representative samples of the work carried out to ensure compliance with manufacturers' recommendations and Building Regulations

Further details about Hilti accredited Firestop Contractors and the support that we can offer you can be obtained by telephoning Freephone 0800 083 8889 (GB only).



Association for Specialist Fire Protection

Hilti is proud to support and be a member of The Association for Specialist Fire Protection (ASFP)

ASFP Vision

To offer the industry it serves with:

- Knowledge / guidance on all aspects of 'built-in' fire protection
- Technical support / impartial advice
- Direction through industry authority

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FS 084 - 01	Hilti CP 680-N Mixed Services
FS 092 - 01	Hilti CP 680-N Pipes through Solid Floor

Data summary	Additional Properties of CP 680N
Data summary	CP 680-N - BREEAM Criteria summary
Data summary	CP 680-N - NBS specification clauses

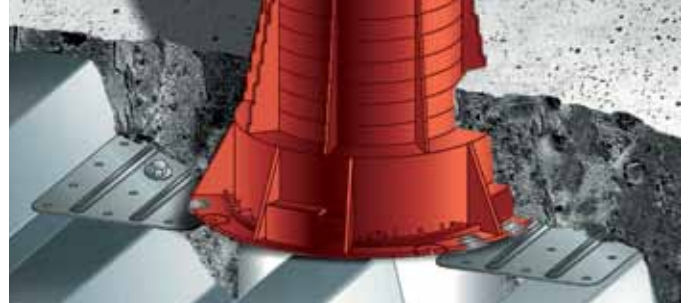
CAD files of the standard details FS ***-** can be downloaded from the technical library at www.hilti.co.uk/cfs

Revision History

May 2011	First release
May 2011	Minor error correction this page
July 2011	Data summaries added
May 2013	Update

Cast-in firestop device CP 680 N

The new standard in firestop design for pipes and cables



Applications

- New buildings in construction phase
- Sealing pipes from 32 mm to 160 mm in penetrations through fire rated floor compartments. Tested and approved in accordance with BS 476 Part 20: 1987, UL 1479 and ASTM E 814
- Suitable for: plastic, insulated and non-insulated metal pipes waste water pipes, fresh water pipes
- Dust and fibre-free environments, such as computer centres, hospitals and laboratories

Advantages

- One step installation
- The most economical way to seal pipes through floors
- No trip hazard
- No diamond drilling
- No working at height to fit collars/wraps
- No additional mastic or back filling required for standard conditions
- Plastic lid stops rainwater during construction

Technical data

CP 680	
Fire rating	Up to 3 hours
Base materials	Concrete
Colour	Red
Total height of the device - 250 mm (10")	

Designation	Outside diameter of the flange	Total height of the device	Outside diameter of the top section
CP 680- N 75/2.5"	6.4" (162 mm)	10" (250 mm)	3.25" (83 mm)
CP 680 N 110/4"	8.5" (215 mm)	10" (250 mm)	4.83" (123 mm)
CP 680 N 160/6"	11.1" (282 mm)	10" (250 mm)	7.03" (179 mm)

Designation	Height of the extension	Maximum dimension of the metal plate when fixed to the device
CP 680 N metal-deck adaptor 75/2.5"	Min. 3.7" (93 mm)	12" x 7" (325 mm x 180 mm)
CP 680 N metal-deck adaptor 110/4"	Min. 3.9" (100 mm)	12" x 8" (375 mm x 215 mm)
CP 680 N metal-deck adaptor 160/6"	Min. 4" (102 mm)	19" x 11" (485 mm x 282 mm)

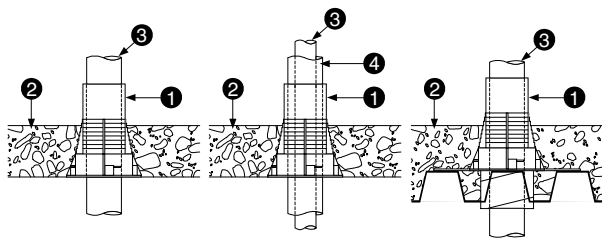
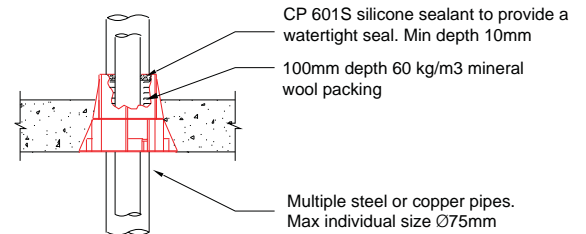
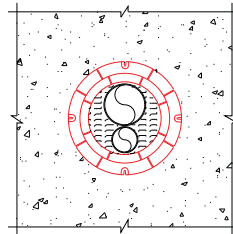
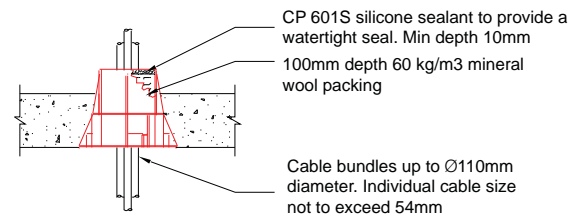
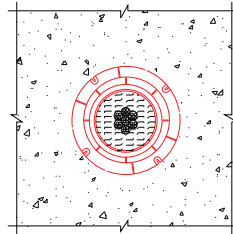
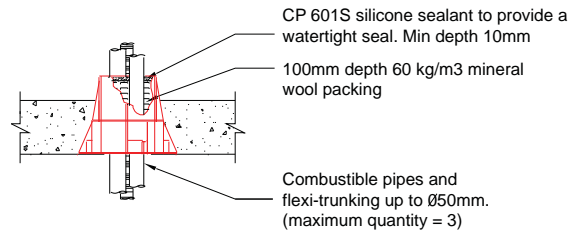
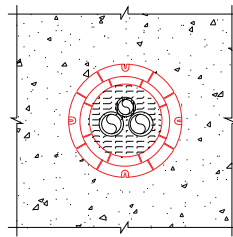


Ordering

Order description	Package Contents	Package Quantity	Item number
Cast-in device CP 680 N -75/2.5"	18 x CP 680 N cast-in firestop device (32 - 75mm Dia.)	18 pc	00282694
Cast-in device CP 680 N -110/4"	8 x CP 680 N cast-in firestop device (80 - 110mm Dia.)	8 pc	00282695
Cast-in device CP 680 N -160/6"	8 x CP 680 N cast-in firestop device (125 - 170mm Dia.)	4 pc	00282696
Adapter CP 680 N 75/2.5"	2 x wing clips and a cardboard extension tube for CP 680 N-75/2.5" (metal-deck adaptor)	1 pc	00333551
Adapter CP 680 N 110/4"	2 x wing clips and a cardboard extension tube for CP 680 N-110/4" (metal-deck adaptor)	1 pc	00333552
Adapter CP 680 N 160/6"	2 x wing clips and a cardboard extension tube for CP 680 N-160/6" (metal-deck adaptor)	1 pc	00333553
ExtensionCP 680 N /682/4"	For CP 680 N-110/4" extension	1 pc	03413366
ExtensionCP 680 N 6"	For CP 680 N-160/6" extension	1 pc	03413367

Technical Information

For more standard details and technical information register online at the Hilti Firestop Design Centre at www.hilti.co.uk/cfs



① - Cast-In device	CP 680 - 75/2.5"	CP 680 - 110/4"	CP 680 160/6"
② - Concrete floor		Min. 2.5" (63 mm)	
③ - Pipes	Min. dia. 1.5" (32mm). Max. dia. 2.5" (75mm)	Min. dia. 3" (80mm). Max. dia. 4" (110mm)	Min. dia. 5" (125mm). Max. dia. 6" (170mm)
Plastic pipes	PVC, CPVC, ABS & FRPP		
Metal pipes	Steel, Copper, Cast-iron, Conduit		
Electrical conduits	EMP/ENT/PEX		
④ - Insulation	Glass fibre, AB/PVC		

Installation instructions for CP 680 N

Notice

- Before handling, read Material Safety Data Sheet and product label for safe usage and health information.
- Installation instructions for concrete slabs available

Concrete floor with metal decking

For applications, use the correct size CP 680 Metal Deck Adaptor for installed cast-in device and follow the illustrations.

1. Create the opening in the metal-deck Use the correct size CP 680 Metal Deck Adaptor with the installed cast-in device. Size the hole with the plastic extension, and cut the metal deck.

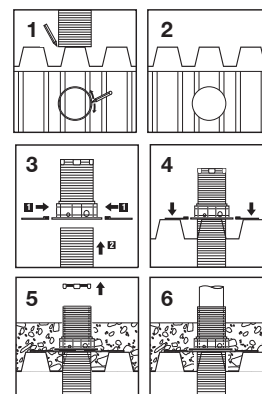
2. Assemble the metal-deck Adaptor. Remove the underside plastic protective cap. Fix the plastic extension and the two metal plates on the CP 680 cast-in firestop device.

3. Fix the CP 680 cast-in firestop device Position the CP 680 at the right place ensuring that the plastic extension has been well positioned in the hole. Screw the two metal plates on the metal deck with the device using Hilti self drilling screws. Before pouring the concrete, make sure the top cap is in place thereby preventing the flow of concrete into the cast-in device.

4. Pour the concrete slab to the required thickness

5. Clean the pipe. The flexible sealing membrane ensures the water tightness of the device once the pipe has been passed through. Very dirty pipes with remains of mortar for example, may lead to a loss of the tight seal by damaging this membrane. Very dirty pipes can also disturb expansion of the intumescent material and lead to delays in the closing action during fire. Badly soiled pipes should, therefore, be cleaned.

6. Install the pipe. Pipes can be installed from the top or from the bottom. Remove the plastic protective caps and pass through the pipe breaking the white membrane. If insulation is required pass the pipe through first followed by the insulation. Installation is finished and firestop functional at this stage.



Hilti CP 680N Intumescent Cast-in firestop device

APPLICATION

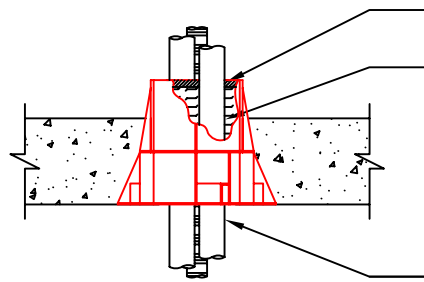
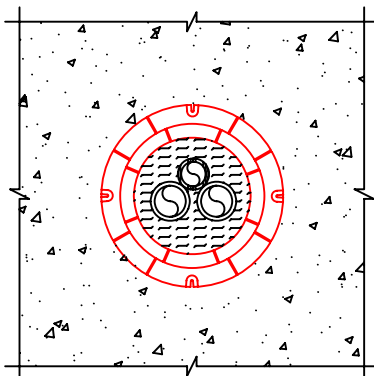


Mixed services passing through

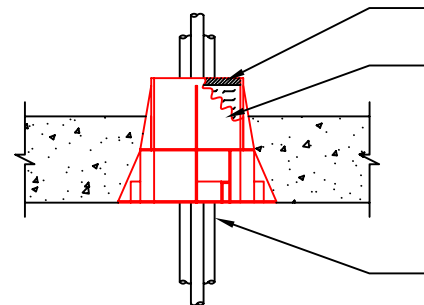
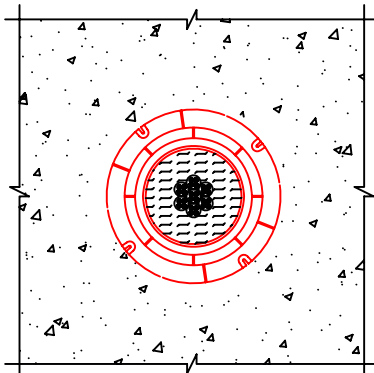
Solid floor

Test	Up to
Fire Integrity	2 hr
Insulation	2 hr
Air Tightness	✓

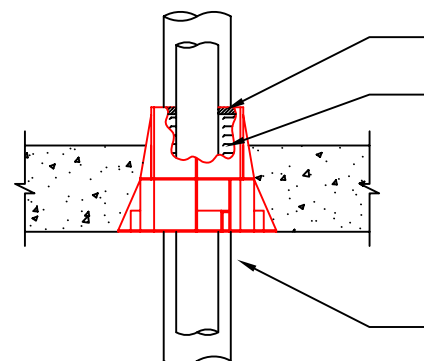
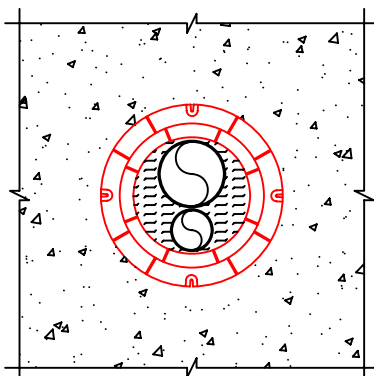
Approvals
BS476 pt 20
EN 1366-3
UL



CP 601s silicone sealant to provide a watertight seal. Min depth 10mm
 100 mm depth 60 kg/m³ mineral wool packing.
 Combustible pipes and flexi-trunking up to Ø50mm.
 (Maximum quantity = 3)



CP 601s silicone sealant to provide a watertight seal. Min depth 10mm
 100 mm depth 60 kg/m³ mineral wool packing.
 Cable bundles up to Ø110 mm diameter. Individual cable size not to exceed 54 mm



CP 601s silicone sealant to provide a watertight seal. Min depth 10mm
 100 mm depth 60 kg/m³ mineral wool packing.
 Multiple steel or copper pipes Max individual pipe size Ø 75 mm

All services to be supported either side of the seal system. Mineral wool insulation not to extend to the intumescent collar at the base of the device, which might impair its performance.

1. The application limits on this detail are for guidance purposes only. For more detailed information on the full range of available test results please contact a Hilti Firestop Specialist on 0800 886100.
2. The product and application has been fire tested as a minimum to BS 476. It may have additional European and worldwide testing. Please contact Hilti for further information.
3. All installations should be carried out in accordance with Hilti's installation instructions, by competent, experienced installers using Hilti branded products.

03.04.09	Drawn by	R Wakefield		FS	084	Issue	01
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Hilti CP 680N Intumescent Cast-in firestop device

APPLICATION

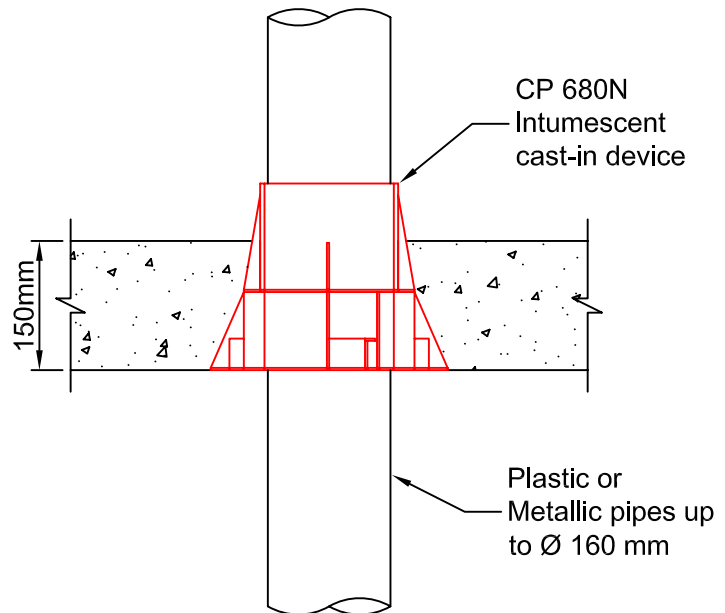
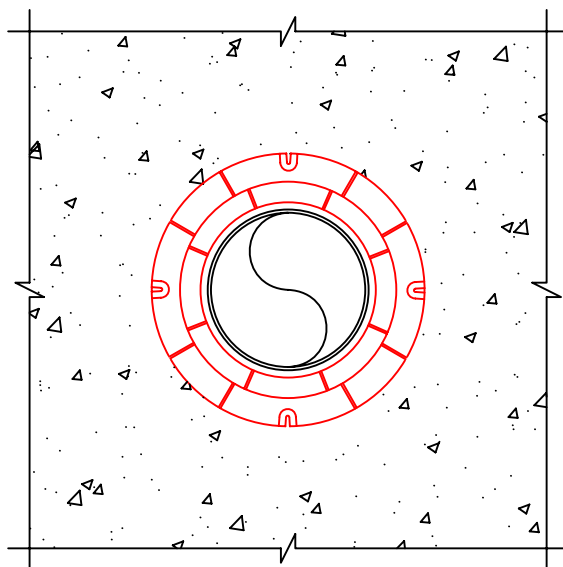


Metal & Plastic Pipes
passing through

Solid floor

Test	Up to
Fire Integrity	3 hr
Insulation	2 hr
Air Tightness	✓

Approvals
BS476 pt 20
EN 1366-3
UL



1. The application limits on this detail are for guidance purposes only. For more detailed information on the full range of available test results please contact a Hilti Firestop Specialist on 0800 886100.
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01.05.09	Drawn by	R Wakefield		FS	092	Issue	01
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Additional Properties of CP 680-N – Cast in Firestop device

Property	Test regime	Notes	
Fire	BS 476 - 20		✓
	FM approval (Class 4990)		✓
	ETA		
Acoustic	EN ISO 20 140-10: 1992	Dnw	Blank -37 dB, Pipe-54 dB
Ageing	DAfSTB		✓
	Fire test after ageing		✓
Water resistance	Rain Resistance		✓
	Water tightness	UL 1479	N.R
VOC	LEED 2009	LEED 3.0	7.6 g/l
Chemical Resistance	Contact Hilti Technical Advisory Service with details of type, concentration, duration and ambient temperature of exposure conditions		

N.R Not relevant
 ✓ Meets standard

CP 680-N – Cast in Firestop device - BREEAM criteria

BREEAM Section

Management construction site impact	No power tools required for installation (no energy source required) ✓ Dust free installation ✓ Saves water during application ✓ No water pollution ✓ Low VOC* (air quality) ✓ No ozone depletion potential (ODP) ✓	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
Health and wellbeing	Low global warming potential (GWP) ✓ Smoke and gas tightness ✓ Noise reduction ✓		
Energy	Air tightness ✓ Avoidance of air infiltration ✓		
Materials	Product Carbon Footprint or LCA Data ✓ Thermal insulation		
Waste	Recycling of packaging ✓ Reuse of materials ✓ Re-penetration in existing opening (No waste) ✓		
Product contributes to Green Building under this clause	✓		
Not applicable for this product	NA		
Product makes No contribution to green Building under this clause	x		

CP 680-N – Cast in Firestop device - NBS specification clauses

This page is to be used in conjunction with the NBS Specification clauses in the introduction to the Hilti Firestop Specifiers Binder.

Application: Provision of holes in concrete slabs for pipes and cables incorporating firestop:

E42 ACCESSORIES CAST INTO IN-SITU CONCRETE

PRODUCT

380

DUCTS

- A cast-in plastic sleeve for concrete floors and containing sections of intumescent material, which foams and expands in a fire. The CP680 Cast-in Firestop sleeve is designed to be used to seal PVC, PE and ABS pipes ranging in diameter from 32mm to 160mm with pipe wall thickness from 1.8 to 16.2mm, and insulated and non- insulated metal pipes penetrating a floor. It is also used for cable penetrations through a floor. Coordination must be made with concrete contractor at pre-construction stage.
 - Tested to BS 476: Part 20: 1987.
 - Fire resistance: up to 2 hours
 - Age tested as defined in the DafStb guidelines, with subsequent fire testing.
 - Manufacturer: Hilti (Gt Britain) Ltd, 1Trafford Wharf Road, Manchester M17 1BY, Tel no 0800 886 100, Fax 0800 886 200. Website www.hilti.co.uk
- Product reference: **CP 680 cast-in device**

Visit our web site at www.Hilti.co.uk/cfs to access our **Firestop Design Centre**

Penetration product selector	Other product features	Joints product selector
		
<p>Interactive product selector for firestopping openings through walls and floors</p>	<p>Find out more about the benefits of using Hilti firestop systems</p>	<p>Interactive product selector for wall to wall, top of wall, curtain wall, floor to floor and floor to wall applications.</p>

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- shall be sent to the Company's premises at the Buyer's expense;
- may be subject to a handling charge of £10 or 20% Hilti Gt. Britain Ltd) of the value of the Goods, whichever amount is the greater; and
- Must be in the same condition as originally supplied to the Buyer.
- The Buyer may not cancel an order of the Goods including but without limitation, any Goods that involve special requirements of the Buyer once the order has been inputted onto the Company's ordering system, without the prior written consent of the Company.

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