

UL-AU Certificate

Certificate

UL-AU-230006 rev3

Issue date

2025-06-25

Expiration date

2033-11-01



www.jasanz.org/register

This is to acknowledge that

Hilti (Aust.) Pty. Ltd

1G Homebush Bay Drive, PO Box 3217, Rhodes, NSW 2138, Australia

has had

Firestopping Cast In Device

Model(s):

Hilti Firestop Cast In Device CP 680-P/PX

evaluated and meets the requirements of the standard

AS 1530.4:2014 and AS 4072.1:2005

The designated Certificate Holder is entitled to use the UL-AU Mark for the Certified Product manufactured at the production site(s) identified above, in accordance with the UL-AU Mark Scheme Service Agreement.

Only those Products bearing the UL-AU Mark for Australia should be considered as being covered by UL's UL-AU Mark Service.

A blue ink handwritten signature.

Stuart Foster (Certification Officer)

Certification Body:

UL International New Zealand Limited,
54 Tarndale Grove, Albany, Auckland 0632, New Zealand.

All dates are in Year-Month-Day format (YYYY-MM-DD).



UL-AU Certificate

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Original Date of Certification: 2023-11-01

Date of Revision: 2025-06-25

Listing Category and File Ref: AUEC.RS5417

Certification Marking: The UL-AU mark shall appear on certified products only and shall be used only in accordance with the UL-AU Mark Scheme Service Terms

Minimum size is not specified, as long as the Mark is legible

The following Supplementary Information shall be placed adjacent to the Certification Mark;

Firestopping – Fire Collars and Cassettes

AS 1540.4

Manufacturer: Hilti AG,

Feldkircherstrasse 100, FL-9494 Schaan, Liechtenstein Internet: www.hilti.com

Production Sites (Factory): Hilti Plant 4a.

Trade Name or Trademark:

Hilti Firestop Cast In Device CP 680-P/PX

Model Details:

Hilti Firestop Cast In Device CP 680-P/PX

UL-AU Certificate

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Additional Information:

Details of revision: Update of UL-AU certificate based on new supporting evidence from FAS 190023 RIR2.4, Section 3.4.7.

Remove production sites Hilti Plant 5a and Hilti Plant 14 from scope of certificate.

This certificate is evidence that prototypes of the nominated products and their configurations as detailed in Appendix A conform to the following parameters:

1. Have been tested to AS 1530.4:2014 and AS 4072.1:2005 or an equivalent or more severe test and the Fire Resistance Level (FRL) nominated in Appendix A was achieved by the prototype for each nominated assembly of service penetration, building element and protection method configuration, without the assistance of an active fire suppression system.

2. Test results are detailed in a confidential test report that may be available from the certificate holder upon request. The information regarding the test parameters is included in the confidential technical file.

(i) the method and conditions of the test;

(ii) form of construction of the tested prototype; and

(iii) that restraint complied with AS 1530.4.

3. Testing was conducted at multiple locations by suitably accredited laboratories that are accredited by a signatory to the International Accreditation Cooperation Mutual Recognition Arrangement (ILAC-MRA) as recognised by NATA who is also a signatory body to this Agreement. The data has been reviewed by UL against the relevant accreditation schedules.

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

Appendix A

Conforming product configurations to achieve nominated FRL's

A.1 Specific Parts for Hilti Firestop CP 680-P/PX:

Technical description of product:

Hilti Firestop Cast-in Device CP 680-P/PX is a pipe closure device that is cast into rigid walls and floors.

Hilti Firestop Cast-in Device CP 680-P/PX consists of a plastic housing, an intumescent inlay and rubber seal for the purpose of smoke and draft stop, air or water tightness and airborne sound insulation.

Hilti Firestop Cast-in Device CP 680-P/PX is supplied in several sizes – see table below.

Pipe sealing size	For plastic pipes with nominal outside diameter range (mm)	For metal pipes (including copper, Ferrous or Brass)
CP 680-P/PX 2"	32 - 63	Up to DN50
CP 680-P/PX 3"	50 - 75	DN25 to DN80
CP 680-P/PX 4"	90 - 110	DN50 to DN100
CP 680-P/PX 6"	125 - 160	DN100 to DN150

The assigned FRL in Appendix applicable to copper, brass and ferrous (steel and iron) also applies to other metal pipes with lower heat conductivity than the unalloyed steel and a melting point of minimum 1100 °C, e.g. low alloyed steel, cast iron, stainless steel, Ni alloys, galvanized steel.

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
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Date of Revision: 2025-06-25

	<p>Intended use:</p> <p>Hilti Firestop Cast-in Device CP 680-P/PX is intended to form a part of a penetration seal, which is used to maintain the fire resistance of a separating element (rigid wall or floor) when and where services with plastic, composite pipes and insulated metal pipes as single penetrations pass through.</p> <p>Annex 2 gives details of penetration for which fire resistance tests were carried out. This certificate covers assemblies installed in accordance with the provisions given in Annex 2.</p> <p>For details on diameters, wall thicknesses, pipe materials, pipe insulation and pipe standards see Annex 2.</p> <p>Pipes shall be perpendicular to the seal surface. The pipe penetration seal is intended for in piping systems for non-combustible liquids and fluids, for pneumatic dispatch systems and for pipes in centralised vacuum-cleaning systems.</p> <p>The assessment does not cover the avoidance of destruction of the seal or of the abutting building element(s) by forces caused by temperature changes in case of fire. This has to be considered when designing the piping system.</p>
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A.1.1 DESCRIPTION OF THE PRODUCT AND ANCILLARY PRODUCT(S)	
Hilti Firestop Cast-in Device CP 680-P/PX	
<p>The Cast-in device consists of a plastic housing, an inlay with different number of intumescent layers, and a rubber gasket.</p> <p>In case of greater floor thicknesses (>150mm) the Cast-in device length can be increased through an extension tube.</p> <p>Technical product literature: Installation instruction Hilti Firestop Cast-in Device CP 680-P/PX (according to Annex 3).</p>	

A.1.1.1 Abbreviations used in drawings	
Abbreviation	Description
A ₁	Hilti Firestop Cast in CP 680-P/PX
C	Plastic Pipe
D	Pipe insulation
d _c	Pipe diameter (nominal outside diameter)
E	Building element (wall, floor)
s ₁	Minimum distance between single penetration seals
t _c	Pipe wall thickness
t _D	Insulation thickness
t _E	Thickness of the building element
L _D	Length of Insulation

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
 Original Date of Certification: 2023-11-01
 Date of Revision: 2025-06-25

A.2 RESISTANCE TO FIRE CLASSIFICATION OF PENETRATION SEALS MADE OF HILTI FIRESTOP Cast-in Device CP 680-P/PX							
Overview intended use of pipes ¹ and reference to relevant section							
Application	Pipe material	Hilti collar size	Diameter (mm)	Total pipe wall thickness (mm)	Hilti collar configuration	FRL	Rigid floor $\geq 550 \text{ kg/m}^3$ Details (see section)
Stack/straight pipe	uPVC	2"	40	2	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.1
			50	2.2			
			65	2.7			
		3"	80	2.9			
		4"	100	3.5			
6"	150	5	Cast in collar sleeve shall remain uncut at all times				
Elbow inside collar	uPVC	2"	40	2	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.2
			50	2.2			
			65	2.7			
		3"	80	2.9			
		4"	100	3.5			
6"	150	5	Cast in collar sleeve shall remain uncut at all times				
Stack/straight pipe	PP-MD	2"	40	1.8	Cast in collar sleeve can be cut or remain uncut	-/120/120	A.2.2.3
			50	1.8			
		3"	75	1.9			
		4"	110	2.7			
Stack/straight pipe	HDPE	2"	40-60	3	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.4
			70	3			
		3"	70	3			
		4"	90, 100	3.5, 4.3			
Elbow inside collar	HDPE	2"	40-60	3	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.5
			70	3			
		3"	90, 100	3.5, 4.3			
		4"	90, 100	3.5, 4.3			
Elbow inside collar	uPVC-SC	4"	100	3.5	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.6
		6"	150	5	Cast in collar sleeve shall remain uncut at all times		
Stack/straight pipe	uPVC-SC	4"	100	3.5	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.7
		6"	150	5	Cast in collar sleeve shall remain uncut at all times		

Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Sealant depth (mm)	Backing config.	Pipe insulation config.	FRL	Rigid floor $\geq 550 \text{ kg/m}^3$ Details (see section)
Copper, ferrous or brass	2" or 3"	23-65	0.91	30	PEF backing rod, CF 116 or mineral rock wool	None	-/240/-	A.2.2.8.1
	3", 4" or 6"	80-100	1.22					
	100-125	1.42						
Copper, ferrous (steel and iron)	6"	125-150	1.63			-/120/-		

¹ According to technical literature of pipe manufacturers

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Sealant depth (mm)	Backing config.	Pipe insulation config.	Insulation length	FRL	Rigid floor $\geq 550 \text{ kg/m}^3$
									Details (see section)
Copper, ferrous or brass	2" or 3"	23-65	0.91	30	PEF backing rod, CF 116, CF-F 750 GV, CF 126 or mineral rock wool	Mineral stone/rock wool insulation or performed mineral stone/rock wool insulation installed on top side of the floor only	365	-/240/120	A.2.2.8.2
	3", 4" or 6"	80-100	1.22				500		
		100-125	1.42				600		
Copper, ferrous (steel and iron)	6"	125-150	1.63			725	-/120/120		

Pipe config.	Pipe material	Collar size*	Pipe nominal size, DN (mm)	Hilti collar config.	FRL	Rigid floor $\geq 550 \text{ kg/m}^3$
						Details (see section)
Multiple collars connected in a row	UPVC, UPVC-SC, HDPE	2", 3", 4"	All approved systems up to DN 110	Cast in collar sleeve can be cut or remain uncut	-/240/240	A.2.2.9
		6"	All approved systems up to DN 160	Cast in collar sleeve shall remain uncut at all times	-/240/240	
	PP-MD	2", 3", 4"	All approved systems up to DN 110	Cast in collar sleeve can be cut or remain uncut	-/120/120	
	Copper, ferrous or brass	2", 3", 4", 6"	All approved systems up to DN 125	Cast in collar sleeve can be cut or remain uncut with insulation	-/240/120	
	Copper, ferrous (steel or iron)	6"	All approved systems up to DN 150		-/120/120	
	Copper, ferrous or brass	2", 3", 4", 6"	All approved systems up to DN 125	Cast in collar sleeve can be cut or remain uncut without insulation	-/240/-	
	Copper, ferrous (steel or iron)	6"	All approved systems up to DN 150		-/120/-	
Blank seal with installed CP 680 series collar	-	Up to 6"	-	2 x Hilti CFS-PL Firestop Plugs cut to size, 150 mm minimum seal thickness	-/120/120	A.2.2.10

Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Sealant depth (mm)	Additional protection	Pipe insulation config.	Insulation length	FRL	Rigid wall $\geq 550 \text{ kg/m}^3$
									Details (see section)
Copper, ferrous or brass	2" or 3"	23-65	0.91	30	CP 680-P/PX cast in collar	None	365	-/240/-	A.2.4.1
	3", 4" or 6"	80-100	1.22				500		
		100-125	1.42				600		
Copper, ferrous (steel and iron)	6"	125-150	1.63			725	-/120/-		

Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Sealant depth (mm)	Additional protection	Pipe insulation config.	Insulation length	FRL	Rigid wall $\geq 550 \text{ kg/m}^3$
									Details (see section)
Copper, ferrous or brass	2" or 3"	23-65	0.91	30	CP 680-P/PX cast in collar	Mineral stone/rock wool insulation or performed mineral stone/rock wool insulation installed on top side of the floor only	365	-/240/120	A.2.4.2
	3", 4" or 6"	80-100	1.22				500		
		100-125	1.42				600		
Copper, ferrous (steel and iron)	6"	125-150	1.63			725	-/120/120		



UL-AU Certificate

Certificate No: UL-AU-230006 rev3
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Date of Revision: 2025-06-25

A.2.1 General information

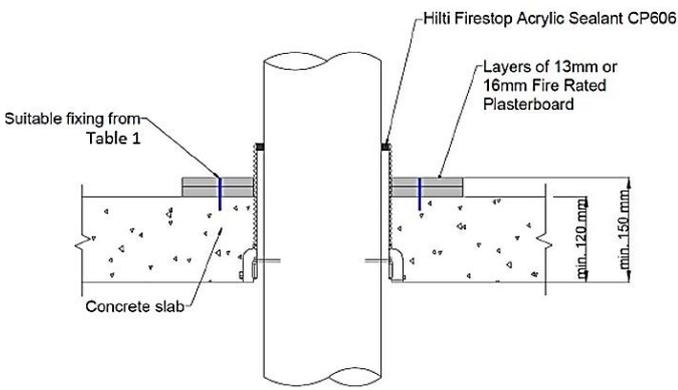
A.2.1.1 Rigid floor

The floor must have a minimum thickness of 150 mm and comprise concrete with a minimum density of 550 kg/m³.

For situations where local aperture/beading is required for slabs less than 150 mm thick, 120 mm thick concrete slabs shall be fitted locally with a combination of 13 mm and 16 mm plasterboard covers to achieve an FRL - /120/120.

Concrete build up/aperture bedding detail:

Section view



Front view

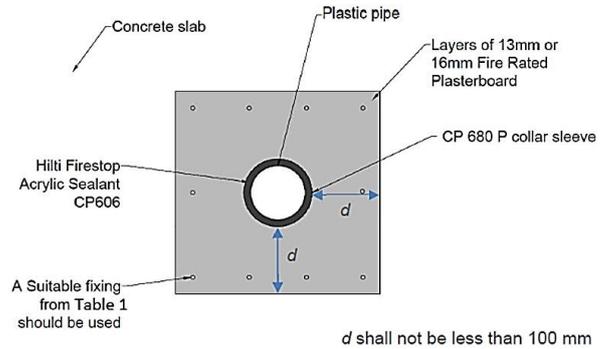


Table 1. Anchor fixing types

Anchoring System		Minimum Size	Solid Concrete Floor
Hilti Screw Anchor	HUS3-P	M6	✓
	HUS3-H		✓
	HUS		✓

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

A.2.2 Penetrating services approved with CP 680-P/PX

A.2.2.1 uPVC pipes in stacked/straight configuration. Pipe protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

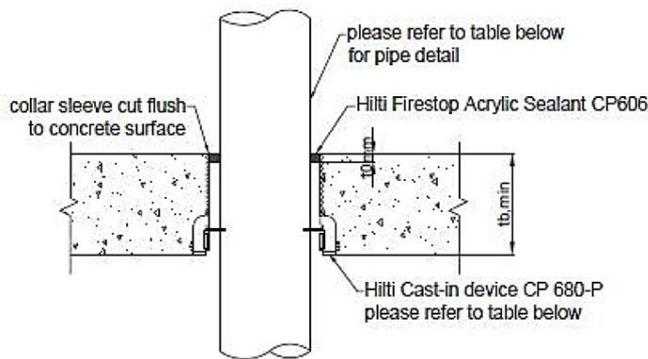
The bare concrete floor separating element thickness (t_b min) must have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration sealing system.

FRL -/240/240 solution, t_b , min = 150 mm

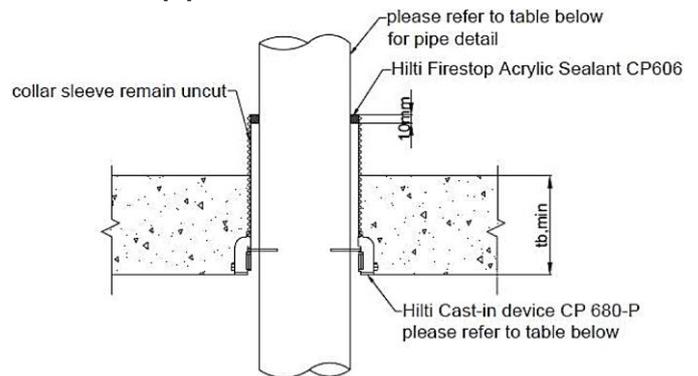
In all pipe configurations, the annular gap between the service pipe and the collar or the sleeve extension shall be filled with Hilti Firestop Acrylic Sealant CP606 to a depth of not less than 10 mm.

If concrete slab thickness is greater than 200 mm, a sleeve coupler or a PVC pipe of appropriate size shall be used to extend the overall collar height up to at least the slab thickness. The sleeve can be flush with the slab top level or remain uncut. The approval also covers uPVC pipe in collar before the concrete pour.

uPVC stack pipe with sleeve cut flush



uPVC stack pipe with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 2"	40	2	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
	50	2.2			
	65	2.7			
CP 680-P/PX 3"	80	2.9			
CP 680-P/PX 4"	100	3.5			
CP 680-P/PX 6"	150*	5	Cast in collar sleeve shall remain uncut at all times		

* Collar sleeve shall remain uncut at all times.

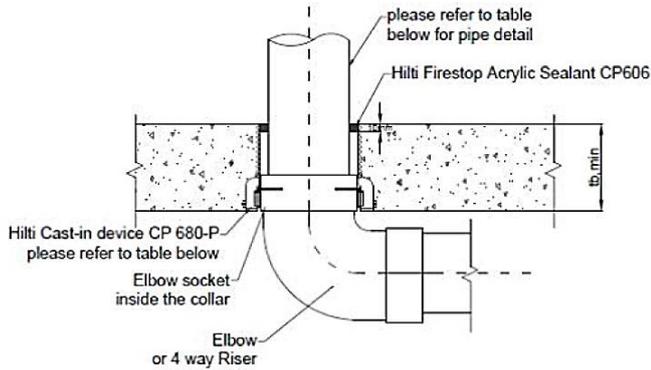
UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

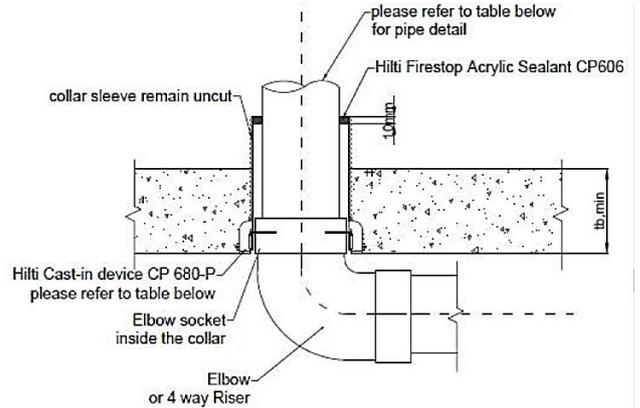
A.2.2.2 uPVC pipes with elbow inside collar protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

uPVC pipe with elbow inside with sleeve cut flush



uPVC pipe with elbow inside with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P/PX configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 2"	40	2	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
	50	2.2			
	65	2.7			
CP 680-P/PX 3"	80	2.9			
CP 680-P/PX 4"	100	3.5			
CP 680-P/PX 6"	150	5	Cast in collar sleeve shall remain uncut at all times		

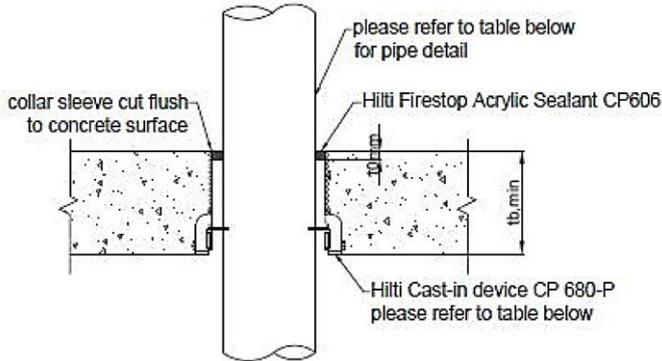
UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

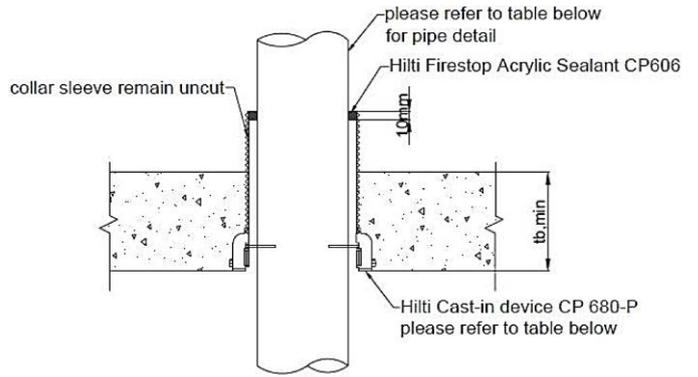
A.2.2.3 PP-MD pipes in stacked/straight configuration. Pipe protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 120 mm.

PP-MD stack pipe with sleeve cut flush



PP-MD stack pipe with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P configuration	Sealant configuration	FRL t_b , min = 120mm*
CP 680-P/PX 2"	40	1.8	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/120/120
	50	1.8			
CP 680-P/PX 3"	75	1.9			
CP 680-P/PX 4"	110	2.7			

* For FRL -/120/120 solution, t_b , min = 120 mm

To achieve an FRL of -/120/120 on a 120 mm bare concrete floor, leave the CP 680 P/PX uncut. No build up is required.

If the CP 680 P/PX collar is to be cut flush, a minimum concrete floor separating element thickness (including Local aperture building/build-up) required is 150 mm. Local aperture building/build-up is allowed using layers of 13 mm or 16 mm thick fire grade plasterboard to increase the concrete floor thickness to minimum 150 mm. Please refer to Section A.2.1.1 for aperture building/build-up details.

UL-AU Certificate

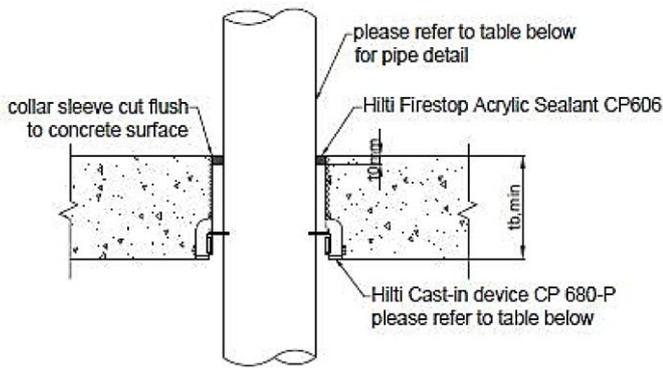
Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

For FRL -/240/240 solution, t_b , min = 150 mm
Hilti collar CP 680 P configuration 1 (CC1): Hilti cast in collar CP 680 P/PX collar sleeve can remain uncut or cut flush during the installation.
Hilti collar CP 680 P/PX configuration 2 (CC2): Hilti cast in collar CP 680 P/PX collar sleeve must remain uncut during the installation, for this collar configuration.

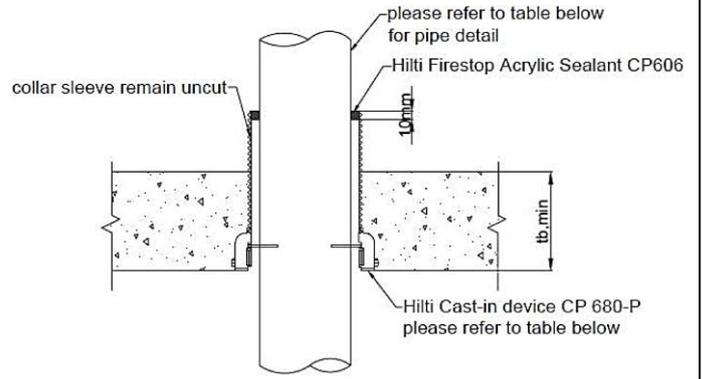
A.2.2.4 HDPE pipes in stacked/straight configuration with sleeve uncut

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

HDPE stack pipe with sleeve cut flush



HDPE stack pipe with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P/PX configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 2"	40-60	3	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
CP 680-P/PX 3"	70	3			
CP 680-P/PX 4"	90, 100	3.5, 4.3			
CP 680-P/PX 6"	125-150	4.9-6.2	Cast in collar sleeve shall remain uncut at all times		

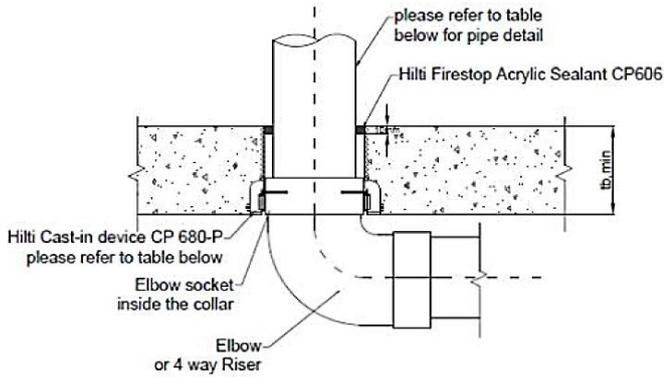
UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

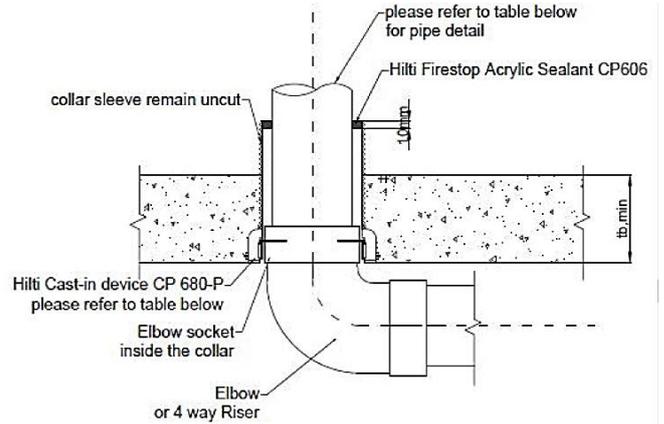
A.2.2.5 HDPE pipes with elbow inside collar protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

HDPE pipe with elbow inside with sleeve cut flush



HDPE pipe with elbow inside with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P/PX configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 2"	40-60	3	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
CP 680-P/PX 3"	70	3			
CP 680-P/PX 4"	90-100	3.5, 4.3			
CP 680-P/PX 6"	125-150	4.9-6.2	Cast in collar sleeve shall remain uncut at all times		

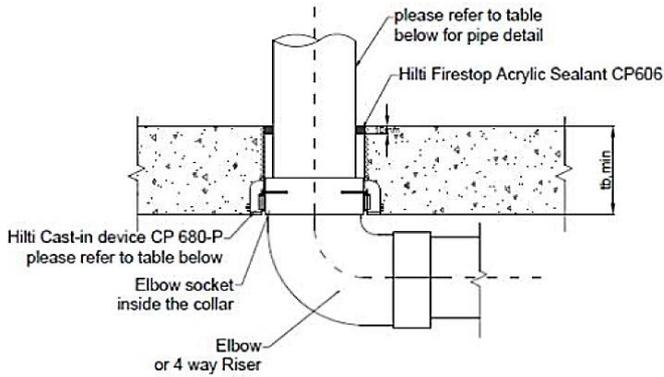
UL-AU Certificate

Certificate No: UL-AU-230006 rev3
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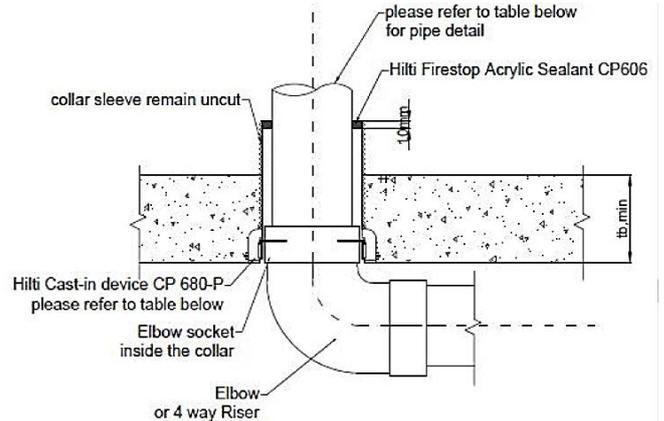
A.2.2.6 uPVC-SC pipes with elbow inside collar protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

uPVC-SC pipe with elbow inside with sleeve cut flush



uPVC-SC pipe with elbow inside with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P/PX configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 4"	100	3.5	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
CP 680-P/PX 6"	150	5	Cast in collar sleeve shall remain uncut at all times		

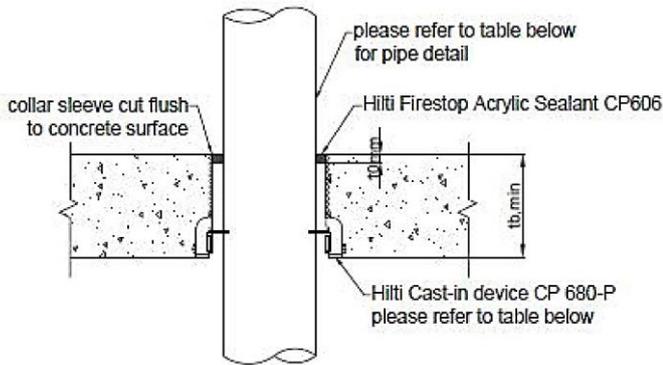
UL-AU Certificate

Certificate No: UL-AU-230006 rev3
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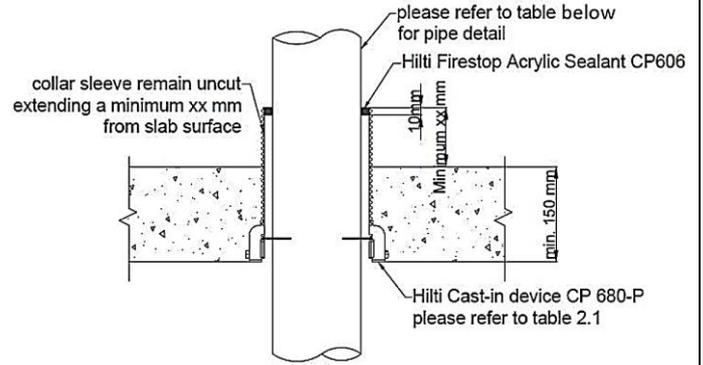
A.2.2.7 uPVC-SC pipes in stacked/straight configuration. Pipe protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

uPVC-SC stack pipe with sleeve cut flush



uPVC-SC stack pipe with sleeve uncut



Collar size	Pipe nominal size, DN (mm)	Nominal total pipe wall thickness (mm)	Hilti collar CP 680P/PX configuration	Sealant configuration	FRL t_b , min = 150mm
CP 680-P/PX 4"	100	3.5	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
CP 680-P/PX 6"	150	5	Cast in collar sleeve shall remain uncut at all times		

UL-AU Certificate

Certificate No: UL-AU-230006 rev3

Original Date of Certification: 2023-11-01

Date of Revision: 2025-06-25

A.2.2.8 Metal pipes protected with Hilti CP 606 in rigid floors

The floor must have a minimum bare concrete separating element thickness of 120 mm. Aperture framing/beading shall be applied to achieve necessary thickness of 150 mm locally. Build up is not required for floors with thickness equal to or greater than 150 mm.

The metal pipe must be positioned in the core hole such that the annular gap on all sides is maximum of 25 mm. The gap must be filled with Hilti CP 606 to a minimum depth of 30 mm backed with PE backing rod or mineral stone/rock wool. Annular gaps beyond 25 mm and up to 60 mm are allowed provided that the gap is sealed with CP 606 to a min depth of 30 mm backed with 33% compressed mineral wool with a minimum density of 60 kg/m³ as shown in Figure C below. Where the annular gap is inconsistent around the pipe (i.e., less than 25 mm on one side and greater than 25 mm on the other side), 33% compressed mineral wool is only required in those areas where the gap is over 25 mm. The backing rod may be omitted if CP 606 sealant is applied to the full depth of the floor with a maximum annular gap of 25 mm. If the annular gap is zero, Hilti CP 606 can be applied in a 30 mm high x 5 mm thick fillet around the pipe as shown in Figures B and E.

The FRL assigned applies to the insulation configuration where PVC pipe section or Hilti cast in collar CP 680 P/PX casted in floor remains in the concrete floor.

PEF backing rod can be open or closed, sealant can be filled to full depth of the floor with a maximum annular gap of 25 mm, so that the use of backing rod can be ignored.

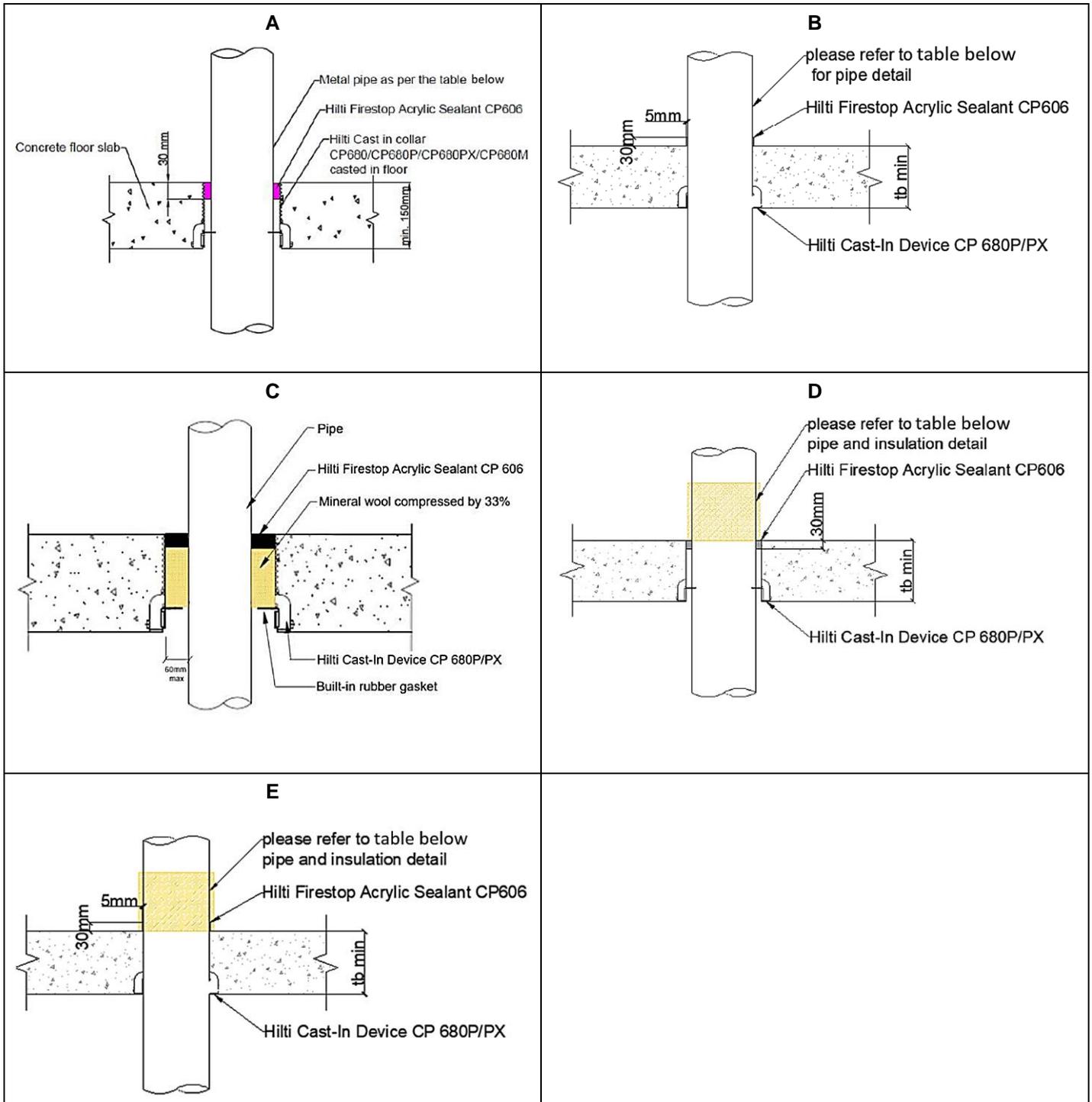
The metal pipe shall be copper, brass and ferrous (steel and iron) pipes specified in the table below, stainless and galvanised pipes are also included.

Pipe insulation can either be mineral stone/rock wool with greater density and thickness, or 38 mm and 50 mm thick Brandford Fibertex 450. Moreover, any equivalent mineral insulation fibre insulation with a minimum density of 80 kg/m³ and a minimum thickness of 38 mm can optionally be used. Mineral stone/rock wool insulation must be overlapped by a minimum length equivalent to the pipe diameter. Such overlap is not required for preformed mineral stone/rock wool section.

If concrete slab thickness is greater than 200 mm, a sleeve coupler f a PVC pipe of appropriate size shall be used to extend the overall collar height up to at least the slab thickness.

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
 Original Date of Certification: 2023-11-01
 Date of Revision: 2025-06-25



UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

A.2.2.8.1 Metal pipe configuration as per Figure A								
Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Allowable annular seal width (mm)	Sealant depth (mm)	Backing config.	Pipe insulation configuration	FRL
Copper, ferrous or brass	2" or 3"	23-65	0.91	25, or up to 60 mm with mineral wool infill (figure C)	30	PEF backing rod, CF 116, CF-F 750 GV, CF 126 or mineral rock wool	None	-/240/-
	3", 4" or 6"	80-100	1.22					
		100-125	1.42					
Copper, ferrous (steel and iron)	6"	125-150	1.63					-/120/-

*Note: Where there are two or more options for Hilti collar CP 680 P size, the max annular gap of 25 mm must be taken into consideration.

A.2.2.8.2 Metal pipe configuration as per Figure C									
Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Allowable annular seal width (mm)	Sealant depth (mm)	Backing config.	Pipe insulation config. *	Insulation length	FRL
Copper, ferrous or brass	2" or 3"	23-65	0.91	25, or up to 60 mm with mineral wool infill (figure C)	30	PEF backing rod, CF 116, CF-F 750 GV, CF 126 or mineral rock wool	Mineral stone/rock wool insulation or performed mineral stone/rock wool insulation installed on top side of the floor only	365	-/240/120
	3", 4" or 6"	80-100	1.22					500	
		100-125	1.42					600	
Copper, ferrous (steel and iron)	6"	125-150	1.63				725	-/120/120	

*Note: 38 mm or 50 mm thick Bradford Fibertex 450 insulation can be optionally used. Moreover, any equivalent mineral fibre insulation with a minimum density of 80 kg/m³ and a minimum thickness of 38 mm can optionally be used.

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Certificate No: UL-AU-230006 rev3

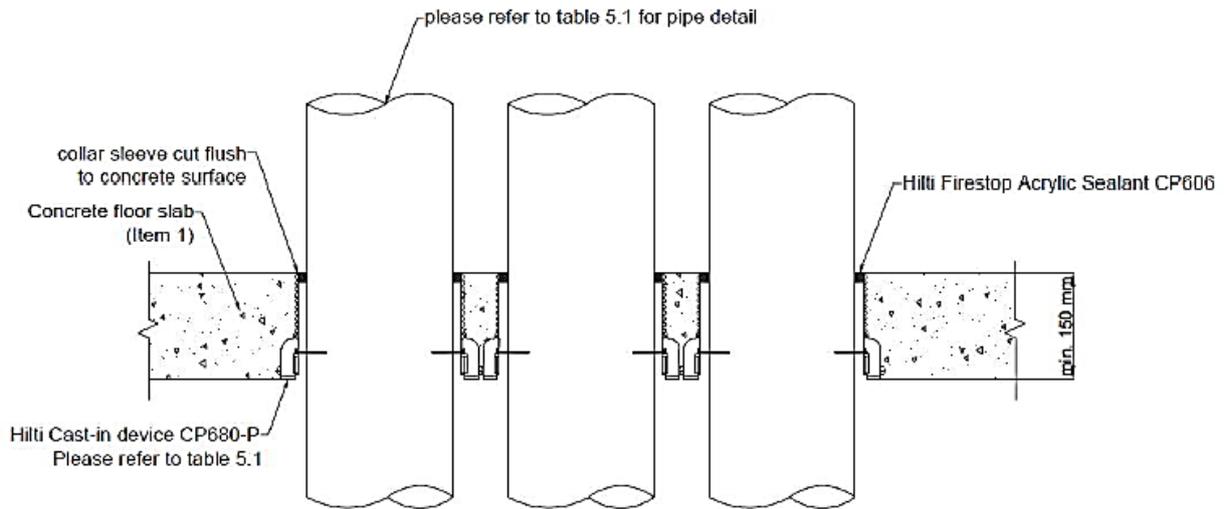
Original Date of Certification: 2023-11-01

Date of Revision: 2025-06-25

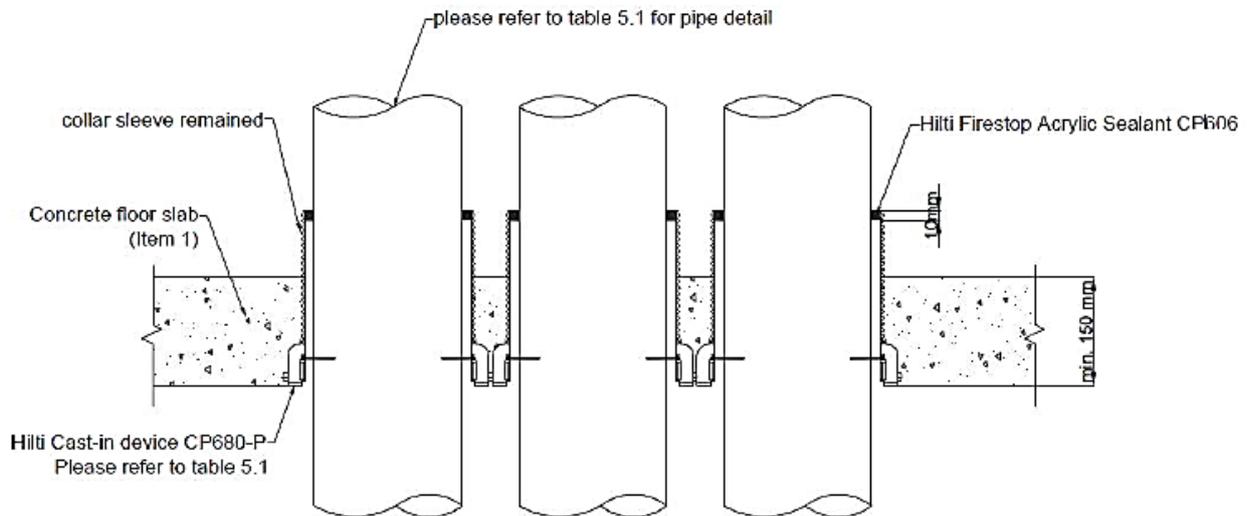
A.2.2.9 Multiple stack pipe penetrations protected with Hilti CP 680 P/PX cast in collar through concrete floor fire separating element

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 150 mm. The FRL of the concrete floor separating element governs the FRL of the penetration system.

Multiple stack pipe with sleeve cut flush



HDPE stack pipe with sleeve uncut



UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

Pipe config.	Pipe material	Collar size*	Pipe nominal size, DN (mm)	Hilti collar CP 680 P/PX config.	Sealant config.	FRL tb, min = 150 mm
Multiple collars connected in a row	UPVC, UPVC-SC, HDPE	2", 3", 4"	All approved systems up to DN 110	Cast in collar sleeve can be cut or remain uncut	10 mm depth of CP 606 applied in the annular gap between the pipe and the collar sleeve	-/240/240
		6"	All approved systems up to DN 160	Cast in collar sleeve shall remain uncut at all times		-/240/240
	PP-MD*	2", 3", 4"	All approved systems up to DN 110	Cast in collar sleeve can be cut or remain uncut		-/120/120
	Copper, ferrous or brass	2", 3", 4", 6"	All approved systems up to DN 125	Cast in collar sleeve can be cut or remain uncut with mineral wool insulation#	30 mm depth of CP 606 applied in the annular gap between or in a fillet around the pipe	-/240/120
	Copper, ferrous (steel or iron)	6"	All approved systems up to DN 150			-/120/120
	Copper, ferrous or brass	2", 3", 4", 6"	All approved systems up to DN 125	Cast in collar sleeve can be cut or remain uncut without mineral wool insulation		-/240/-
	Copper, ferrous (steel or iron)	6"	All approved systems up to DN 150			-/120/-

*Only PP-MD less than 110 mm is included as per the above table, if PP-MD is present in a multiple collar configuration with other type of pipes, the FRL of the whole system is limited to -/120/120.

For mineral wool insulation wrapping lengths, refer to section A.2.2.8.2

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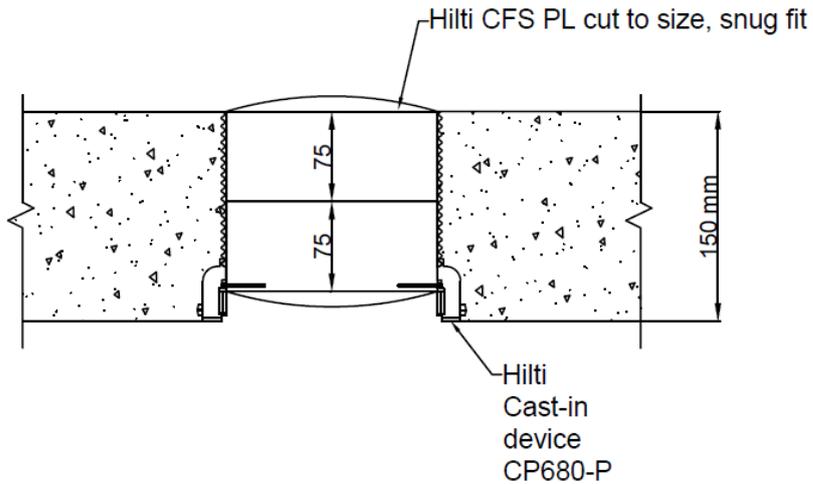
Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

A.2.2.10 Blank seals

The bare concrete floor separating element thickness (t_b , min) shall have a minimum thickness of 120 mm. Aperture framing/beading shall be applied to achieve necessary thickness of 150 mm locally. Build up is not required for floors with thickness equal to or greater than 150 mm.

The FRL of the concrete floor separating element governs the FRL of the penetration system.

Blank seals



Seal	Collar size	Seal configuration	FRL
blank seal with installed CP 680 series collar in floor	up to 6"	2 X CFS - PL Hilti firestop plug cut to size, 150 mm minimum seal thickness	-/120/120

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

A.2.3 General information

A.2.3.1 Rigid wall
 The wall must have a minimum thickness of 150 mm and comprise concrete with a minimum density of 550 kg/m³.

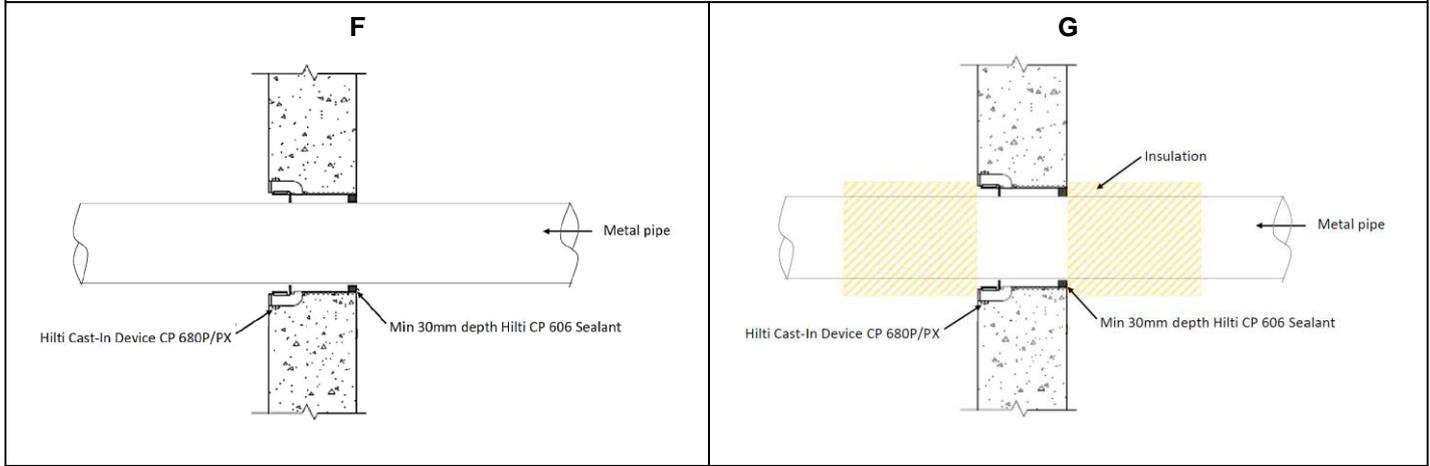
A.2.4 Metal pipes protected with Hilti CP 606 in rigid walls

The wall must have a minimum bare concrete separating element thickness of 150 mm.

The metal pipe must be positioned in the core hole such that the annular gap on all sides is maximum of 25 mm. The gap must be filled with Hilti CP 606 to a minimum depth of 30 mm. Annular gaps beyond 25 mm and up to 60 mm are allowed provided that the gap is sealed with CP 606 to a min depth of 30 mm backed with 33% compressed mineral wool with a minimum density of 60 kg/m³ as shown in Figures F and G below.

The FRL assigned applies to the insulation configuration where PVC pipe section or Hilti cast in collar CP 680 P/PX casted in walls remains in the concrete wall.

The metal pipe shall be copper, brass and ferrous (steel and iron) pipes specified in the table below, stainless and galvanised pipes are also included.



A.2.4.1 Uninsulated metal pipe configuration as per Figure F

Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Allowable annular seal width (mm)	Sealant depth (mm)	Additional protection	Pipe insulation configuration	FRL
Copper, ferrous or brass	2" or 3"	23-65	0.91	25, or up to 60 mm with mineral wool infill	30	CP 680 P/PX cast in collar	None	-/240/-
	3", 4" or 6"	80-100	1.22					-/240/-
100-125		1.42	-/240/-					
Copper, ferrous (steel and iron)	6"	125-150	1.63				-/120/-	

*Note: Where there are two or more options for Hilti collar CP 680 P size, the max annular gap must be taken into consideration.

UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

A.2.4.2 Insulated metal pipe configuration as per Figure G									
Metal pipe material	Collar size*	Pipe nominal size, DN (mm)	Min. pipe wall thickness (mm)	Allowable annular seal width (mm)	Sealant depth (mm)	Additional protection	Pipe insulation config. *	Insulation length	FRL
Copper, ferrous or brass	2" or 3"	23-65	0.91	25, or up to 60 mm with mineral wool infill	30	CP 680 P/PX cast in collar	Mineral stone/rock wool insulation or performed mineral stone/rock wool insulation installed on both sides of the wall	365	-/240/120
	3", 4" or 6"	80-100	1.22					500	
		100-125	1.42					600	
Copper, ferrous (steel and iron)	6"	125-150	1.63				725	-/120/120	

*Note: Where there are two or more options for Hilti collar CP 680 P size, the max annular gap must be taken into consideration.

UL-AU Certificate

Certificate No: UL-AU-230006 rev3

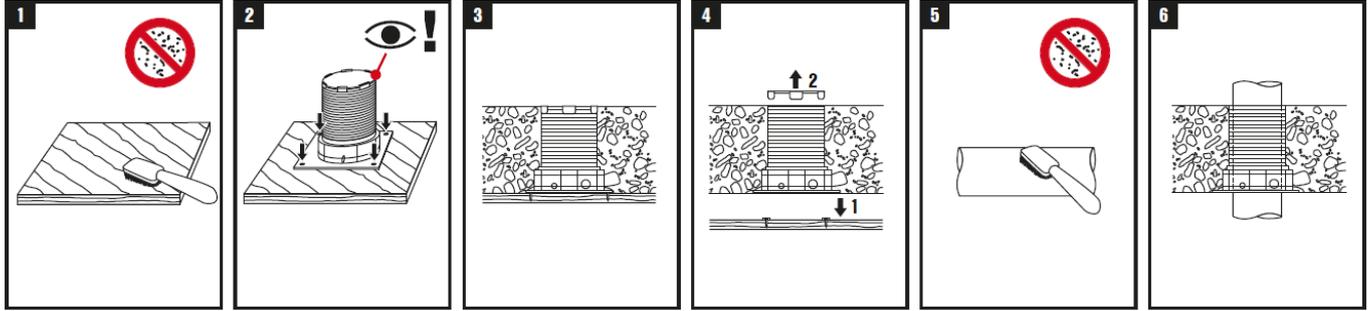
Original Date of Certification: 2023-11-01

Date of Revision: 2025-06-25

A.3 INSTALLATION OF THE PRODUCT AND ANCILLARY PRODUCT(S)

The arrangement and installation of Hilti Firestop Collar CP 680-P/PX shall be done in accordance with the details given below and in Annex 2 for the penetration seal(s).

3.1 CP 680-P/PX installation



UL-AU Certificate

Certificate No: UL-AU-230006 rev3
Original Date of Certification: 2023-11-01
Date of Revision: 2025-06-25

Appendix B

Test report details – report reference.

Name of Test Institute	Owner	Number of Report	Date of Test	Test standard
UL International Germany GmbH	Hilti (Australia) Pty Ltd 1G Homebush Bay Drive PO Box 3217 Rhodes NSW 2138	4790132642-01 date 29.06.2023	29.09.2022	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd P.O. Box 3217 Rhodes NSW 2138 Australia	FRT180461 R1.0 date 29.05.2019	04/03/2019	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd P.O. Box 3217 Rhodes NSW 2138 Australia	FRT180462 R2.0 date 29.05.2019	05/03/2019	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd P.O. Box 3217 Rhodes NSW 2138 Australia	FRT180463 R1.0 date 29.05.2019	06/03/2019	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd P.O. Box 3217 Rhodes NSW 2138 Australia	FRT190095 R1.0 date 26.06.2019	30/05/2019	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd P.O. Box 3217 Rhodes NSW 2138 Australia	FRT190130 R2.0 date 31.07.2019	11/07/2019	AS1530.4-2014
Warringtonfire Australia Pty Ltd	HILTI (Aust.) Pty Ltd 1G Homebush Bay Dr Rhodes NSW 2138 Australia	FRT180322.2, date 10/01/2019	24/10/2018	AS1530.4-2014