



Fire collars for plastic pipe penetration in combination with **aquatherm PP-R pipes**.

The purpose of a fire collar is to prevent the passage of fire through gaps of compartment walls or floors caused by the collapse and/or melting of combustible services (plastic pipes) in the event of a fire. Fire collars are used to maintain the fire resistance of walls and floors, for a certain period (2-4 hours), when they are penetrated by combustible pipework, e.g. Polypropylene (PP-R).

Aquatherm Australia Pty Ltd has worked closely together with **SNAP Fire Collars** and **Hilti Australia** to get some of their fire collars tested and approved in accordance with **AS1530-2005 & AS4072-2005** in combination with **aquatherm PP-R pipes**.

SNAP Fire Collars



Below information is based on the SNAP website (d.d. 15-05-2013).

For more information and latest test reports, please visit the SNAP website www.snapcollars.com.au

Metal Retro-fit stack fire collars for walls



Description

The **SNAP 32-R** is a metal, Retro-Fit fire collar for 128mm or thicker plasterboard, concrete and masonry walls.

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

Walls

- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameters Ø20, Ø25 and Ø32



Description

The **SNAP 50-R** is a metal, Retro-Fit fire collar for 128mm or thicker plasterboard, concrete and masonry walls.

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

Walls

- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameters Ø20, Ø25, Ø32, Ø40 and Ø50



The **SNAP 63-R** is a metal, Retro-Fit fire collar for concrete floor slabs 150mm or thicker and plasterboard, concrete and masonry walls 128mm or thicker.

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

Walls

- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameters Ø20, Ø25, Ø32, Ø40, Ø50 and Ø63



Certificate of Test

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This is to certify that the element of construction described below was tested by the CSIRO Division of Material Science and Engineering in accordance with Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-2005 on behalf of:

Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product Name: Penetration 1 – Retrofit SNAP63R fire collar protecting a nominal 63-mm PPR pipe

Description: The SNAP63R fire collar consisted of a 0.7-mm thick steel case, 47-mm high with a 69-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 43-mm wide and weighing approximately 50 grams each, lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP63R, dated 5 May 2009, by Snap Fire Systems.

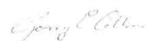
The penetrating service comprised a nominally 53-mm OD PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 10-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the plasterboard. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 18 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.



Garry E Collins
Manager, Fire Testing and Assessments



CSIRO Materials Science and Engineering
14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
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This is to certify that the element of construction described below was tested by the CSIRO Division of Material Science and Engineering in accordance with Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-2005 on behalf of:

Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product Name: Penetration 2 – Retrofit SNAP32R fire collar protecting a nominal 20-mm PPR pipe

Description: The SNAP32R fire collar consisted of a 0.7-mm thick steel case, 32-mm high with a 35-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 26-mm wide and weighing approximately 23 grams each, lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP32R, dated 6 May 2009, by Snap Fire Systems.

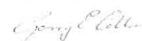
The penetrating service comprised a nominally 20-mm PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 4-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the plasterboard. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 18 June 2009.

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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product Name: Penetration 3 – Retrofit SNAP63R fire collar protecting a nominal 20-mm PPR pipe

Description: The SNAP63R fire collar consisted of a 0.7-mm thick steel case, 47-mm high with a 69-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 43-mm wide and weighing approximately 50 grams each, lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP63R, dated 8 May 2009, by Snap Fire Systems.

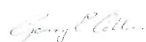
The penetrating service comprised a nominally 20-mm PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 4-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the plasterboard. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 18 June 2009.

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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product Name: Penetration 4 – Retrofit SNAP50R fire collar protecting a nominal 20-mm PPR pipe

Description: The SNAP50R fire collar consisted of a 0.7-mm thick steel case, 47-mm high with 56-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 43-mm wide and weighed approx 45 grams each lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP50R, dated 8 May 2009, by Snap Fire Systems.

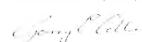
The penetrating service comprised a nominally 20-mm PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 4-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the plasterboard. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 18 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.



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Snap Fire Systems Pty Ltd
448 Newman road
Geelong QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product Name: Penetration 5 – Retrofit SNAP32R fire collar protecting a nominal 32-mm PPR pipe

Description: The SNAP32R fire collar consisted of a 0.7-mm thick steel case, 32-mm high with a 35-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 26-mm wide and weighing approximately 23 grams each, lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP32R, dated 8 May 2009, by Snap Fire Systems.

The penetrating service comprised a nominally 32-mm PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 5-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the plasterboard. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of +120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik **Date of Test:** 18 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins

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Snap Fire Systems Pty Ltd
448 Newman road
Geelong QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1360.

Product name: Penetration 6 – Retrofit SNAP50R fire collar protecting a nominal 50-mm PPR pipe

Description: The SNAP50R fire collar consisted of a 0.7-mm thick steel case, 47-mm high with 59-mm diameter opening. Two layers of soft intumescent wraps, 4-mm thick x 43-mm wide and weighed approx 45 grams each lined the internal circumference of the collar. One collar was fixed to each side of the plasterboard wall in a back-to-back configuration using three 6-mm diameter bolts fixed through the wall and the holes in the brackets of the two collars and fastened with nuts. The collar detail is shown in drawing numbered SNAP50R, dated 8 May 2009, by Snap Fire Systems.

The penetrating service comprised a nominally 50-mm PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 8-mm, penetrating the plasterboard wall through a close-fitting cut-out hole. The pipe projected horizontally, approximately 2000-mm above the plasterboard and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 181 minutes
Insulation	-	no failure at 181 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of +120/120. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik **Date of Test:** 18 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins

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High-top floor waste and showers (H-FWS)



Description

The SNAP H-50-FWS is a High-Top, Cast-In fire collar for concrete slabs 150mm or thicker.

Available with a rubber ring that seals against the pipe. (H50FWS-RR)

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

- Floor waste and shower applications
- For use with **aquatherm PP-R Faser SDR 7,4 pipes** diameters Ø20-50 (Stack Only)



Description

The SNAP H-100-FWS is a High-Top, Cast-In fire collar for concrete slabs 150mm or thicker.

Available with a rubber ring that seals against the pipe (H100FWS-RR)

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA compliant for the Following Uses:

- Floor waste and shower applications
- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameters Ø50-110 (Stack Only)



Low-top floor waste and showers (L-FWS)



Description

The **SNAP L-50-FWS** is a Low-Top, Cast-In fire collar for concrete slabs 150mm or thicker.

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

- Floorwaste and shower applications
- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameter Ø50

High-top stack



Description

The **SNAP H-150-S** is a High-Top, Cast-In fire collar for concrete slabs 150mm or thicker.

Available with a rubber ring that seals against the pipe (**H150FWS-RR**)

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses:

- Stack application
- For use with **aquatherm PP-R Faser SDR7,4 pipes** diameter Ø160

Metal collars cast-in



Description

The **SNAP 125C** is a High-Top, Cast-In fire collar for concrete slabs 150mm or thicker.

Tested in accordance with AS1530.1-2005 & AS4072.4-2005

BCA Compliant for the Following Uses

- Stack application
- For use with **aquatherm PP-R Faser SDR7,4 pipe** diameter Ø125mm



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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 1 – Cast-in SNAP (H/L) 100 PWS fire collar protecting a nominal 110-mm PPR pipe

Description: The SNAP (H/L) 100 fire collar consisted of a 1.5-mm thick polypropylene case, 140-mm diameter and 95-mm high, excluding the top cone. The total height of the collar was 285-mm. The collar incorporated three springs; these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 4-mm thick x 85-mm wide and weighing approximately 150 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside.

The penetrating service comprised a nominally 110-mm OD PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 15-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	no failure at 241 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/240/240. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins
Manager, Fire Testing and Assessments



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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 2 – Cast-in SNAP METAL 160 fire collar protecting a nominal 160-mm PPR pipe

Description: The SNAP METAL 160 fire collar consisted of a 1.2-mm thick steel case, 190-mm diameter and 130-mm high. The collar incorporated four springs; these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 5-mm thick x 127-mm wide and weighing approximately 300 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside. On the unexposed face of the concrete slab, a 25-mm high x 50-mm wide concrete hob was cast around half of the pipe's circumference, to increase the total thickness of the slab to approximately 175-mm.

The penetrating service comprised a nominally 160-mm OD PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 23-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	223 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/240/180. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins
Manager, Fire Testing and Assessments



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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 3 – Cast-in SNAP (H/L) 100 PWS fire collar protecting a nominal 50-mm PPR pipe

Description: The SNAP (H/L) 100 fire collar consisted of a 1.5-mm thick polypropylene case, 140-mm diameter and 95-mm high, excluding the top cone. The total height of the collar was 285-mm. The collar incorporated three springs; these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 4-mm thick x 85-mm wide and weighing approximately 150 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside.

The penetrating service comprised a nominally 50-mm OD PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 6-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	222 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of -/240/180. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 4 – Cast-in SNAP METAL 125 fire collar protecting a nominal 125-mm PPR pipe

Description: The SNAP METAL 125 fire collar consisted of a 1.2-mm thick steel case, 140-mm diameter and 130-mm high. The collar incorporated four springs; these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 4-mm thick x 85-mm wide and weighing approximately 250 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside. On the unexposed face of the concrete slab, a 25-mm high x 50-mm wide concrete hob was cast around half of the pipe's circumference, to increase the total thickness of the slab to approximately 175-mm.

The penetrating service comprised a nominally 125-mm OD PPR-80 faser composite pipe of SDR7.4 with a wall thickness of 18-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	202 minutes

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Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

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This is to certify that the element of construction described below was tested by the CSIRO Division of Material Science and Engineering in accordance with Australian Standard 1530, Methods for fire tests on building materials, components and structures, Part 4-2005 on behalf of:

Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 5 – Cast-in SNAP (H/L) 50 FWS fire collar protecting a nominal 20-mm PPR pipe

Description: The SNAP (H/L) 50 fire collar consisted of a 1.5-mm thick polypropylene case, 78-mm diameter and 75-mm high, excluding the top cone. The total height of the collar was 182-mm. The collar incorporated three springs: these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 4-mm thick x 57-mm wide and weighing approximately 60 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside.

The penetrating service comprised a nominally 20-mm OD PPR-80 flaser composite pipe of SDRT 4 with a wall thickness of 4-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	no failure at 241 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of ~240/240. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins
Manager, Fire Testing and Assessments



CSIRO Materials Science and Engineering
14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
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This document is issued in accordance with NATA's accreditation requirements

Certificate of Test

No. 2165

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Snap Fire Systems Pty Ltd
448 Newman road
Geebung QLD

A full description of the test specimen and the complete test results are detailed in the Division's sponsored investigation report numbered FSP 1359.

Product name: Penetration 6 – Cast-in SNAP (H/L) 50 FWS fire collar protecting a nominal 60-mm PPR pipe

Description: The SNAP (H/L) 50 fire collar consisted of a 1.5-mm thick polypropylene case, 78-mm diameter and 75-mm high, excluding the top cone. The total height of the collar was 182-mm. The collar incorporated three springs: these were pivoted at the top of the spring cavity and restrained by a nylon fusible link with a melting temperature of 75 °C. A soft intumescent wrap, 4-mm thick x 57-mm wide and weighing approximately 60 grams lined the internal circumference of the collar. The collar was cast into the concrete slab with its base flush with the underside.

The penetrating service comprised a nominally 60-mm OD PPR-80 flaser composite pipe of SDRT 4 with a wall thickness of 8-mm, fitted through the collar's sleeve. The resulting gap between the collar and the pipe was sealed with fire rated sealant. The pipe projected vertically, approximately 2000-mm above the concrete slab and approximately 500-mm into the furnace chamber. The pipe was supported at nominally 1000-mm from the unexposed face of the concrete slab. The pipe was open at the unexposed end and capped on the exposed end with a ceramic fibre plug.

Structural Adequacy	-	not applicable
Integrity	-	no failure at 241 minutes
Insulation	-	no failure at 241 minutes

and therefore for the purpose of Building Regulations in Australia, achieved a fire-resistance level (FRL) of ~240/240. The FRL is applicable for exposure to fire from the same side as tested. This certificate is provided for general information only and does not comply with the regulatory requirements for evidence of compliance.

Testing Officer: Chris Wojcik Date of Test: 15 June 2009.

Issued on the 31st day of July 2009 without alterations or additions.

Garry E Collins
Manager, Fire Testing and Assessments



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Aquatherm Australia Pty Ltd

Unit 6f, 443 West Botany Street Rockdale NSW 2216 I T: (02) 9553 7199 I F: (02) 9553 7899 I E: aquatherm@aquatherm.com.au I www.aquatherm.com.au



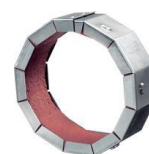
Hilti Fire Collars



Below information is based on the Hilti website (d.d. 15-05-2013).

For more information and latest test reports, please visit the Hilti website www.hilti.com.au

Metal Retro-fit fire collars for walls and concrete slabs



Description

The **Hilti CP 644** firestop Retro-fit fire collar for concrete slabs 120mm or thicker and 128mm or thicker plasterboard, concrete and masonry walls.

Tested in general accordance with AS1530.4-2005 and assessed in accordance with AS4072.1-2005

- For use with **aquatherm PP-R Faser SDR7,4** pipes diameters $\varnothing 40$ - $\varnothing 125$ mm

Exova Warringtonfire Aus Pty Ltd
Unit 2, 409-411 Hammond Road
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EWFA CERTIFICATE OF TEST	CERTIFICATE No : SFC 2626600.3	Page 1 of 1
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Report Sponsor	Certificate Issue Date
Hilti (Aust.) Pty Ltd 1G Homebush Bay, Drive Rhodes, NSW 2138	30/01/12

Introduction

The element of construction described below was tested by this laboratory on behalf of the test sponsor in accordance with the stated test standard and achieved the results stated below. Refer to the referenced test report for more information.

Referenced Report	Test Date	Test Standard
EWFA 2626600.3	19/10/2011	AS1530.4-2005.

Description of Service

The test assembly comprised a nominal 1200mm wide x 1200mm high wall system consisting of 64mm steel studs, clad with 2-off layers of 16mm thick fire-rated plasterboard screw fixed to both faces of the frame, that was penetrated by the following services.

Service	Pipe	Collar	FRL
A	40mm Aquatherm PPR	Hilti CP 644-50/1.5"	-/180/120
B	110mm Aquatherm PPR	Hilti CP 644-110/4"	-/180/180
C	125mm Aquatherm PPR	Hilti CP 644-125/5"	-/180/120
D	40mm PE-100	Hilti CP 644-50/1.5"	-/180/120
E	110mm PE-100	Hilti CP 644-110/4"	-/180/120
F	125mm PE-100	Hilti CP 644-125/5"	-/180/180
G	200mm PE-100	Hilti CP 644-200/8"	-/180/60

Notes

THIS CERTIFICATE IS PROVIDED FOR GENERAL INFORMATION ONLY AND DOES NOT COMPLY WITH THE REGULATORY REQUIREMENTS FOR EVIDENCE OF COMPLIANCE.

Reference should be made to the relevant test report to determine the applicability of the test result to a proposed installation and for a full description of the tested construction.
The results of these fire tests may be used to assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

TESTING AUTHORITY	Exova Warringtonfire Aus Pty Ltd
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EWFA CERTIFICATE OF TEST	CERTIFICATE No : SFC 2626601.3	Page 1 of 1
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Report Sponsor	Certificate Issue Date
Hilti (Aust.) Pty Ltd 1G Homebush Bay, Drive Rhodes, NSW 2138	30/01/11

Introduction

The element of construction described below was tested by this laboratory on behalf of the test sponsor in accordance with the stated test standard and achieved the results stated below. Refer to the referenced test report for more information.

Referenced Report	Test Date	Test Standard
EWFA 2626601.1	21/10/2011	AS1530.4-2005.

Description of Service

The test assembly comprised a nominal 1750mm long x 1200mm wide x 120mm thick normal weight reinforced concrete slab, that was penetrated by the following services.

Service	Pipe	Collar	FRL
A	40mm Aquatherm PPR	Hilti CP 644-50/1.5"	-/180/120
B	110mm Aquatherm PPR	Hilti CP 644-110/4"	-/240/120
C	125mm Aquatherm PPR	Hilti CP 644-125/5"	-/120/120
D	40mm PE-100	Hilti CP 644-50/1.5"	-/180/120
E	110mm PE-100	Hilti CP 644-110/4"	-/90/90
F	125mm PE-100	Hilti CP 644-125/5"	-/60/60
G	200mm PE-100	Hilti CP 644-200/8"	-/1

* See reference report for details of rating for this Service

Notes

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Reference should be made to the relevant test report to determine the applicability of the test result to a proposed installation and for a full description of the tested construction.
The results of these fire tests may be used to assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

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