

PEX DOMESTIC FIRE SPRINKLER SYSTEM



FIRE INDUSTRY SUPPLIES

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**AUSTRALIA FIRST
PEX PIPING
FOR DOMESTIC
FIRE SPRINKLER
SYSTEMS**





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CPG PEX DOMESTIC FIRE SPRINKLER SYSTEM.

The CPG PEX Domestic Fire Sprinkler System is designed to be used in potable cold water systems.

The CPG pipe is a multi-layer composite system.

It consists of an inner layer of cross-linked polyethylene (PE-X), an adhesive layer, an aluminium layer, an adhesive layer, an outer layer of distinctive orange coloured cross-linked polyethylene (PE-X) in sizes 25 mm to 32mm.

The colour orange is unique and easily identified.

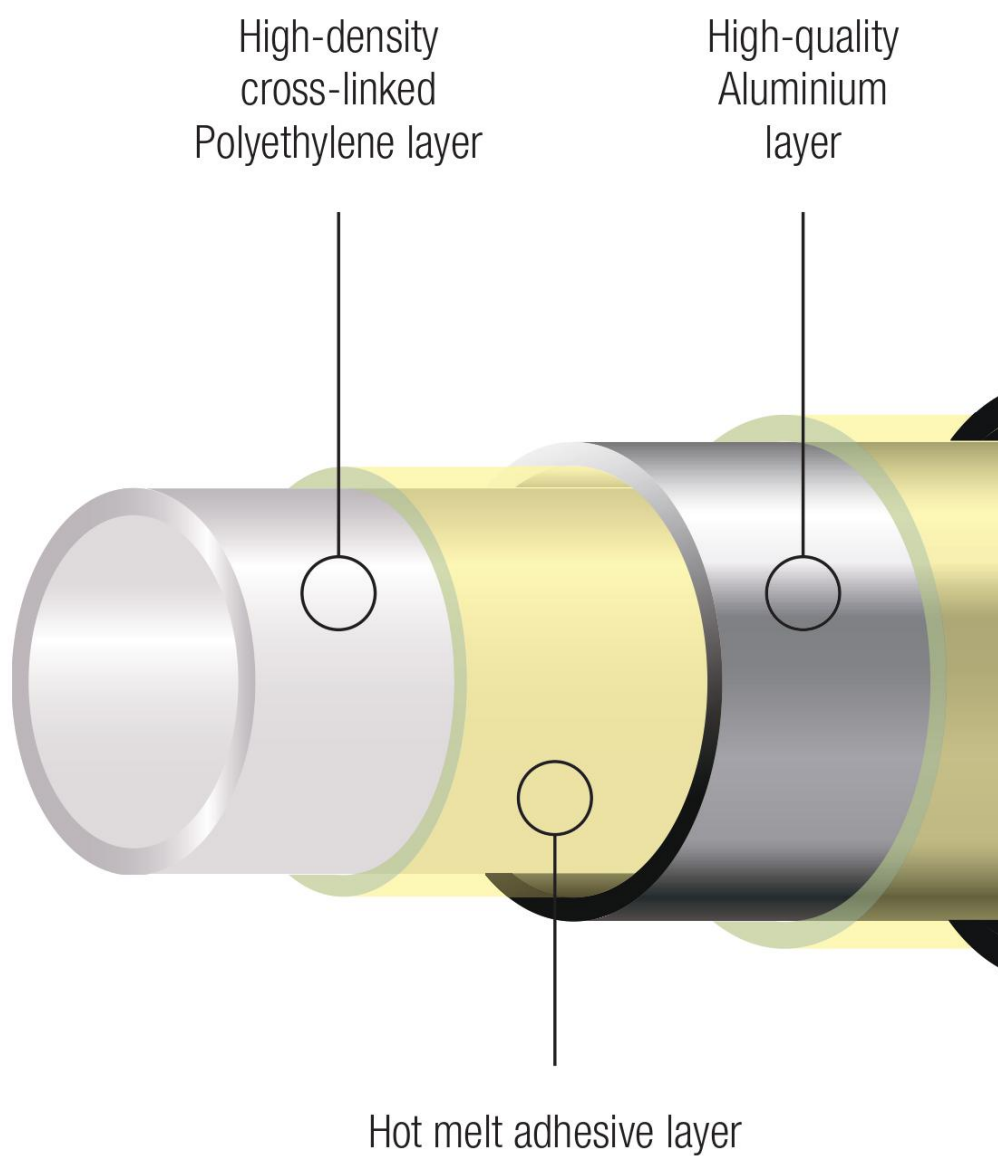
The pipe and fittings have been certified in accordance with AS4176.2 & AS4176.3.

**THIS REVOLUTIONARY
ALTERNATIVE MAKES
INSTALLATION JOB QUICKER
AND EASIER.**

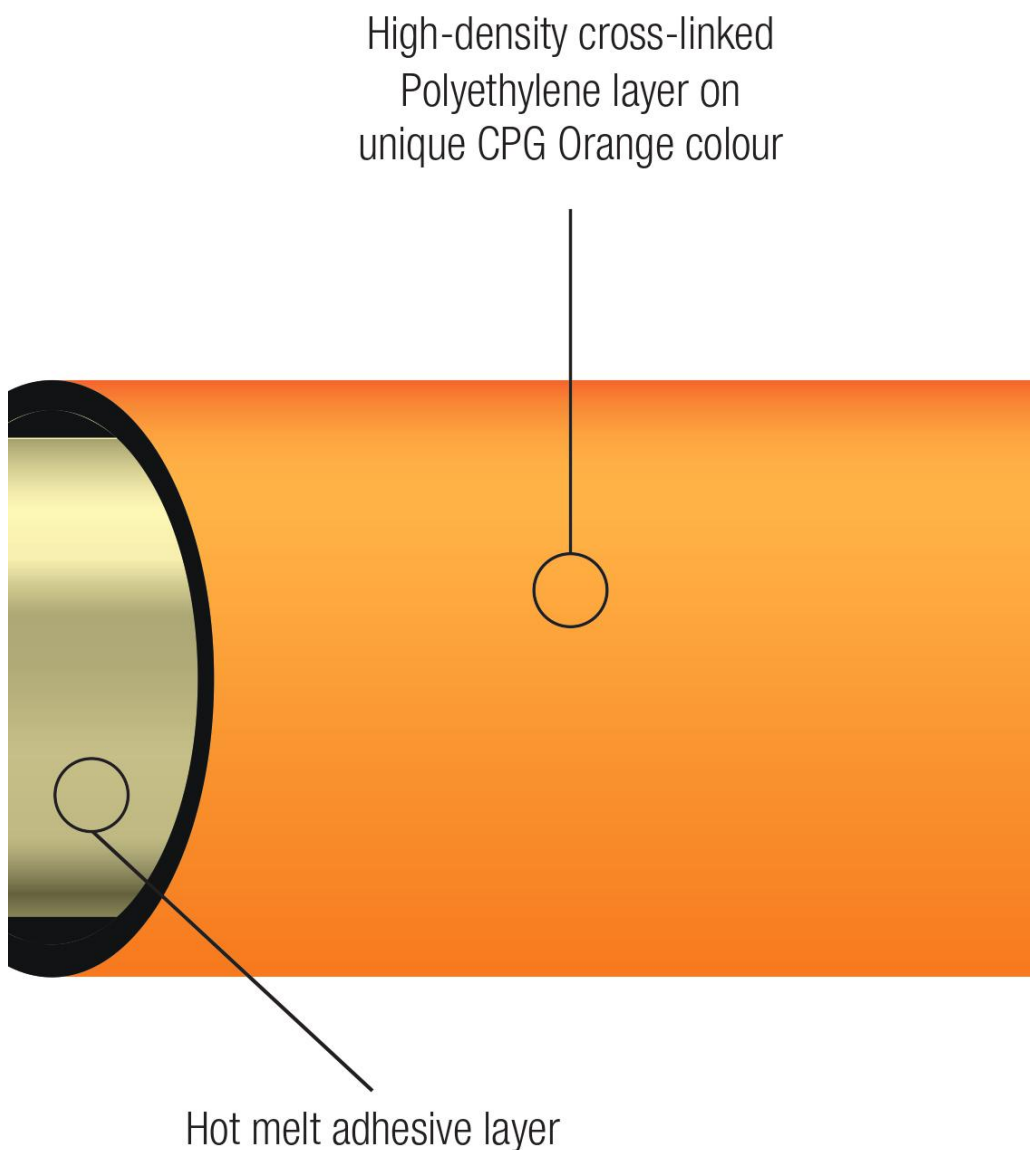
KEY CPG PEX FEATURES

- Hygienic and non-toxic
- Lowering material and labour costs
- Flexible
- High temperature and high pressure resistance
- Corrosion resistance
- Light weight
- Easily identified
- Convenient and reliable installation
- 25 year warranty
- Oxidation resistance
- No welding required for installation

CPG PEX PIPE LAYER DIAGRAM



The CPG PEX Domestic Fire Sprinkler System pipe is a five layer construction. The pipe consists of a layer of welded aluminium with polyethylene inner and outer layers which are bonded together with a special purpose hot melt adhesive.



SYSTEM DESCRIPTION

The FPAA101D sprinkler system is a fire sprinkler system supplied from the building's drinking water supply system for buildings which are less than 25 m in effective height and contain Class 2 and 3 parts.

The FPAA101D sprinkler system extends from the building's drinking water supply system on each floor. This configuration eliminates the need for a dedicated sprinkler system (i.e. dedicated water supply, tapping, pump set, control valve assembly, riser, etc.).

Each floor has a branch from the building's drinking water supply riser to feed both the sprinkler system and drinking water supply system for that floor level. The branch includes an isolation valve to allow the simultaneous isolation of both the drinking water supply system and sprinkler system for that floor level. Downstream of this isolation valve, the sprinkler system is separated from the drinking water supply system at a tee to serve the sprinklers and toilets. The sprinkler system incorporates a backflow prevention device downstream of the tee and then reticulates throughout the floor level.

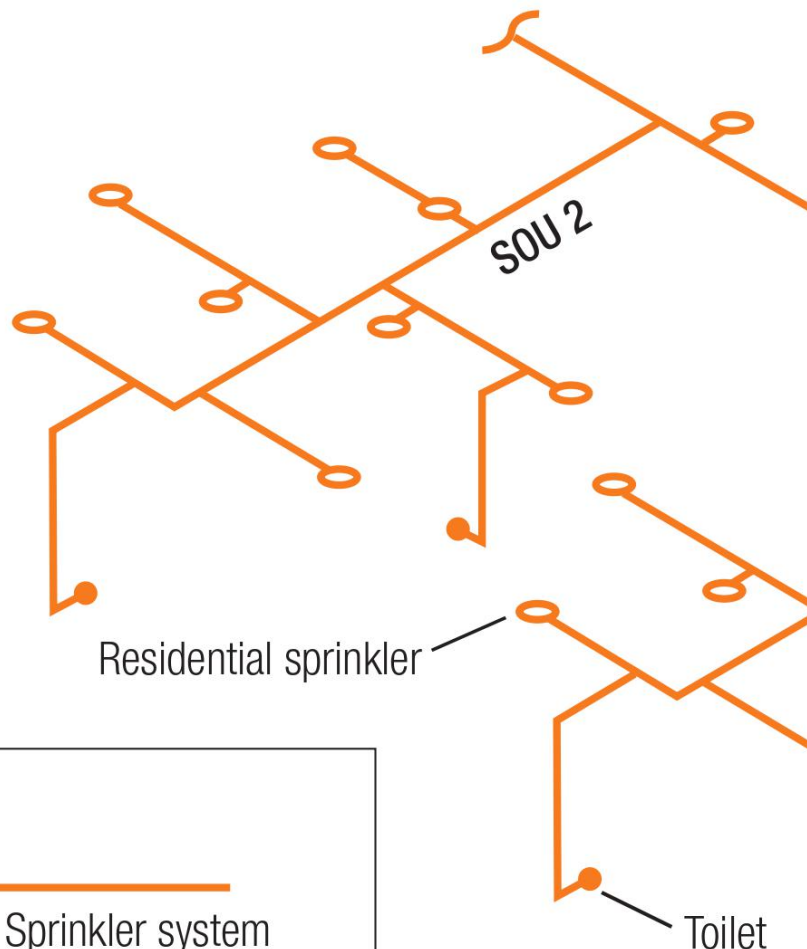
The FPAA101D sprinkler system has the added benefit of having a regularly monitored water supply. Because the sprinkler system is supplied by the building's drinking water supply system, any interruption or reduction in drinking water supply to domestic appliances (taps, showers, etc.) indicates an interruption or reduction in the water supply to the FPAA101D sprinkler system.

See Sample System Diagram on following page for an illustration of this system configuration.

NOTES:

1. A building with an FPAA101D sprinkler system would have two pipes entering each Class 2 or 3 SOU:
 - The drinking water supply pipe (as present); and
 - The FPAA101D sprinkler system pipe.
2. The connection of the toilets to the sprinkler system pipework effectively provides multiple points of end of-line monitoring of that floor level.

SAMPLE SYSTEM DIAGRAM



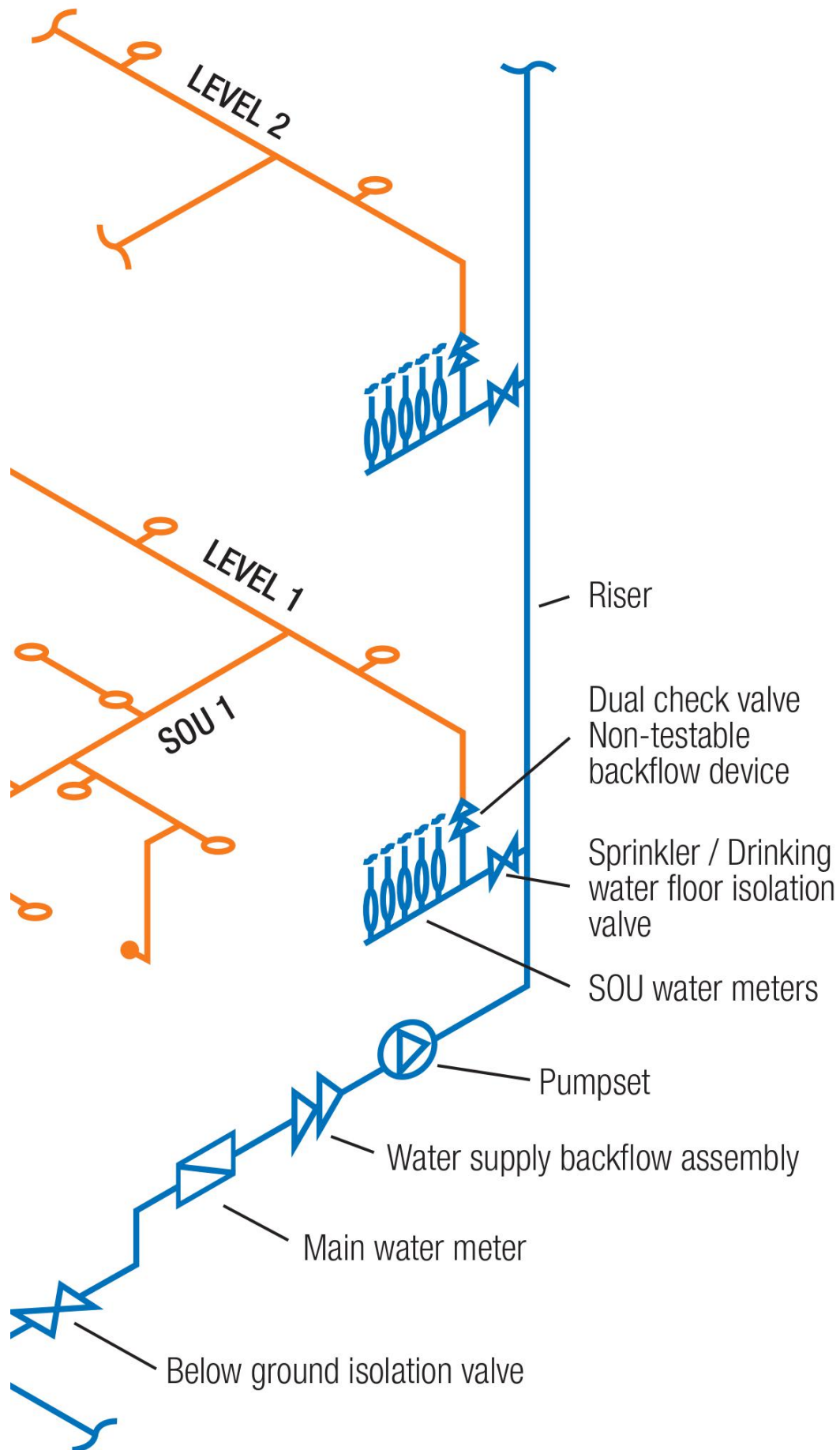
KEY:

FPAA101D Sprinkler system

Drinking Water Supply

NOTE:

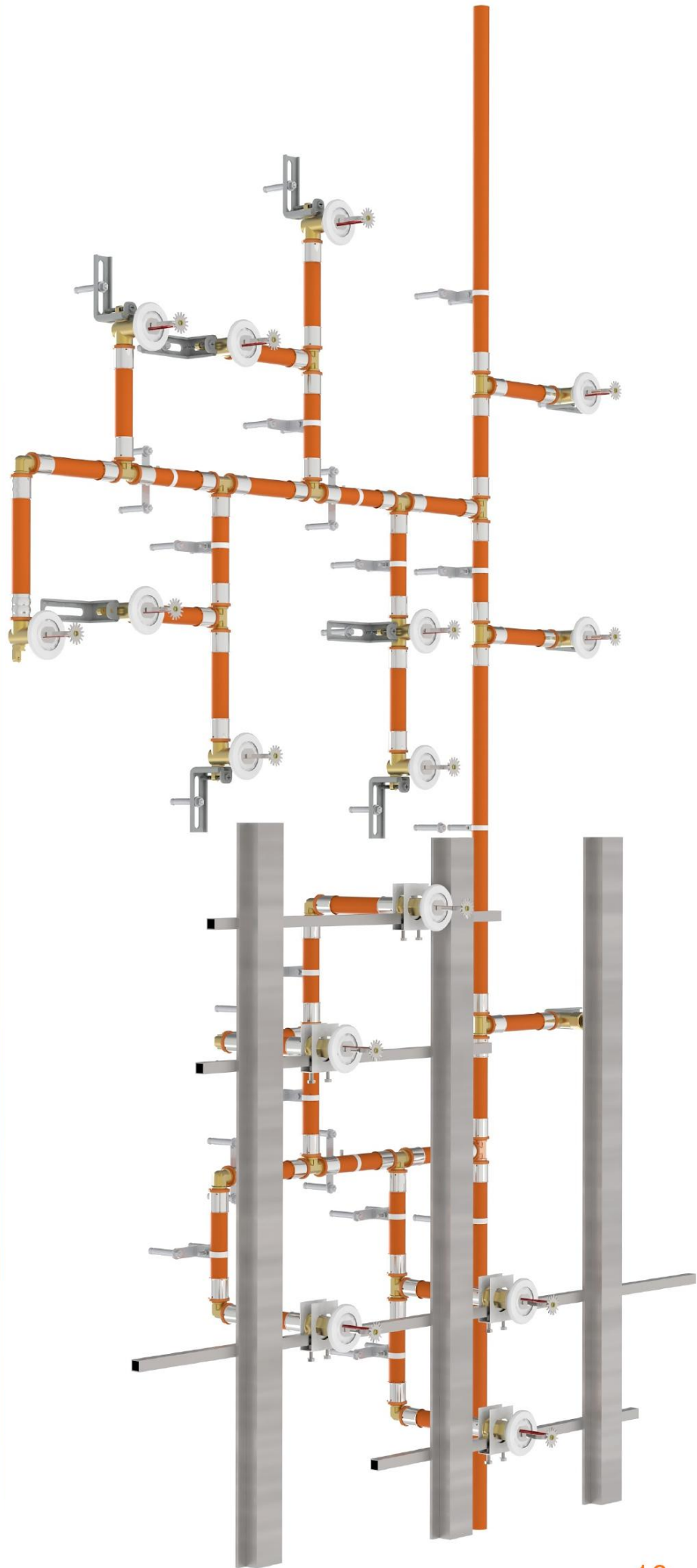
The sprinkler system pipework shall be designed and installed so that no part of any pipework containing stagnant water is more than 3 meters in lineal length.



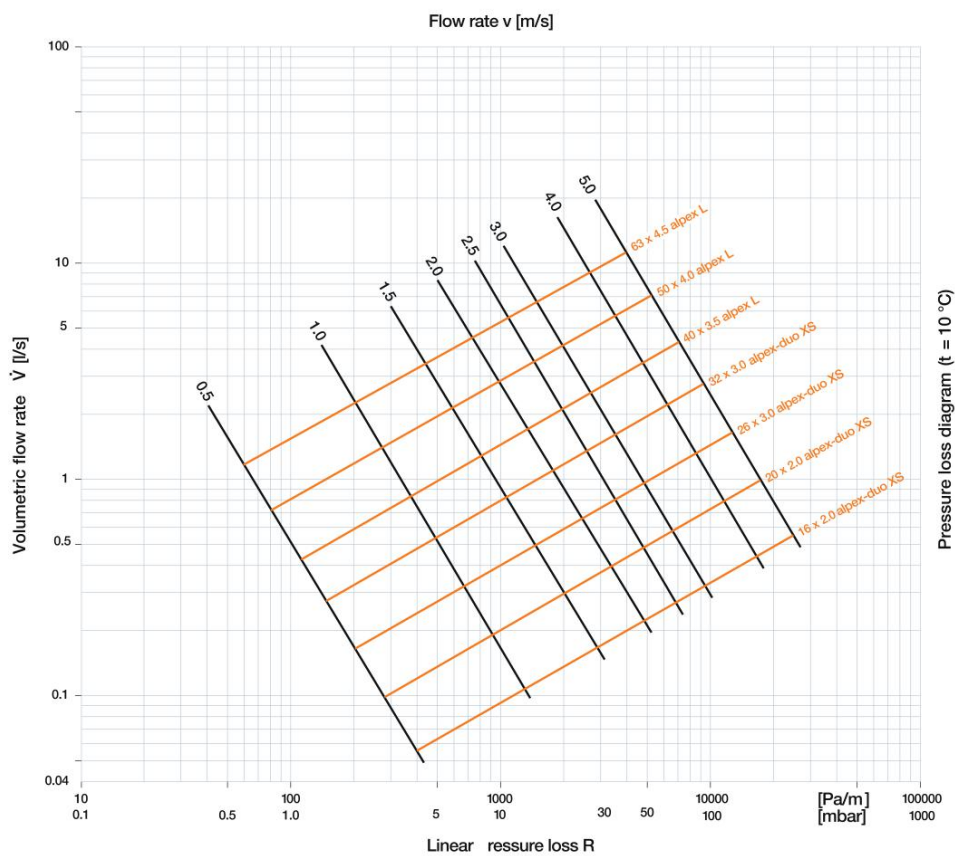
TOP VIEW



BOTTOM VIEW



WATER PRESSURE LOSS DIAGRAM



WATER PRESSURE LOSS TABLE FOR FITTINGS

FITTING	SIZE (mm)	EQUIVALENT LENGTH (m)
Straight Coupling	25	0.07
	32	0.07
Reducing coupling	32 x 25	0.07
Straigh Male Coupling	25	0.05
	32	0.06
Equal 90° Elbow	25	0.10
	32	0.11
Equal Tee	25	0.16
	32	0.18
Male Tee	25	0.15
	32	0.16
Female Tee (long)	25 x 50	0.18
	32 x 50	0.18
	25 x 90	0.24
	32 x 90	0.24
Female Elbow 90° (long)	25 x 90	0.15
	32 x 90	0.15
Female Coupling	25 x 90	0.09
	32 x 90	0.09
Female Elbow 90° Copper	25	0.11
	32	0.13
Female Tee Copper	25	0.14
	32	0.15

WATER PRESSURE LOSS TABLE FOR PIPES

CALCULATION OF POTABLE WATER - PRINCIPALS

PIPE SIZE											
Ø 16 x 2 mm			Ø 20 x 2.2 mm			Ø 25 x 2.6 mm			Ø 32x 3.4 mm		
Volumetric flow	Pressure Loss		Volumetric flow	Pressure Loss		Volumetric flow	Pressure Loss		Volumetric flow	Pressure Loss	
Q	Hf	(kPa/m)	Q	Hf	(kPa/m)	Q	Hf	(kPa/m)	Q	Hf	(kPa/m)
(l/s)			(l/s)			(l/s)			(l/s)		
0.16	1.79		0.16	0.52		0.16	0.17		0.16	0.05	
0.19	2.46		0.19	0.72		0.19	0.23		0.19	0.07	
0.22	3.23		0.22	0.94		0.22	0.31		0.22	0.09	
0.25	4.09		0.25	1.20		0.25	0.39		0.25	0.12	
0.27	4.71		0.27	1.38		0.27	0.45		0.27	0.14	
0.32	6.46		0.32	1.89		0.32	0.61		0.32	0.19	
0.37	8.45		0.37	2.47		0.37	0.80		0.37	0.24	
0.42	10.69		0.42	3.13		0.42	1.01		0.42	0.31	
0.48	13.69		0.48	4.01		0.48	1.29		0.48	0.39	
0.53	16.44		0.53	4.81		0.53	1.56		0.53	0.47	
0.64	23.31		0.64	6.83		0.64	2.21		0.64	0.67	
0.74	30.51		0.74	8.93		0.74	2.89		0.74	0.87	
0.85	39.43		0.85	11.55		0.85	3.73		0.85	1.13	
0.96	49.40		0.96	14.46		0.96	4.67		0.96	1.42	
1.06	59.35		1.06	17.38		1.06	5.61		1.06	1.70	
1.33	90.36		1.33	26.45		1.33	8.55		1.33	2.59	
1.59	125.77		1.59	36.82		1.59	11.90		1.59	3.61	
1.86	168.16		1.86	49.23		1.86	15.91		1.86	4.82	
2.12	214.27		2.12	62.73		2.12	20.27		2.12	6.14	
2.39	267.54		2.39	78.33		2.39	25.30		2.39	7.67	
2.65	323.92		2.65	94.84		2.65	30.64		2.65	9.29	

WARRANTY

CPG pex domestic fire sprinkler system carries a 25 Years warranty from the of purchase

This warranty covers any faults caused by defective manufacturing of the fittings under the brand name of Copper Press. It does not cover faults arising from incorrect installation. This warranty will apply only under following clauses:

Installation Must Be Carried Out:

- By A Licensed Plumber/ Fire Sprinkler Fitter
- In Accordance With CPG Installation Instructions.
- In Accordance With The Relevant Local And National Plumbing Codes And Standards.

This Warranty Does Not Include:

- Faulty Workmanship.
- Normal Wear And Tear.
- Lack Of Maintenance.
- Incorrect Installation Method.
- Misuse Of The Product.

TESTING

All CPG PEX fittings have undergone a rigorous testing program including:

- Prototype testing
- Watermark testing
- Material in contact with drinking water
- Press testing every product in the range
- Press testing every tool and Jaw

CPG PEX fittings have undergone stringent testing by an accredited laboratory to ensure compliance with AS 4176.2 & AS 4176.3.

These tests were witnessed and verified by an Accredited Certifying Body (ACB) who issued a Type Test Certification.

MAKING A JOINT

01

Cut the pipe to the required length with a pipe cutter.



02

Ream the pipe by pushing the reamer into the pipe and turning. This cuts the pipe end straight while cutting chamfers on the inside and outside of the pipe end. The design of the reamer will prevent shavings from falling into the pipe.



03

Inspect the stainless steel sleeve for any cracks and the fit over the pipe to be flush with pipe end.



04

Crimp the sleeve with a crimping tool.

- a. locate the tools jaws tight against the collar
- b. compress the sleeve by closing the battery crimping tool until the handles meet and make a "clicking" sound, do this only once.



PRODUCT RANGE

PEX PIPE

CODE	AVAILABLE SIZE/S
------	------------------

FR-2025	25mm x 5.5m
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FR-2632	32mm x 5.5m
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STRAIGHT COUPLING

CODE	AVAILABLE SIZE/S
------	------------------

FN1-25	25mm
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FN1-32	
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REDUCING COUPLING

CODE	AVAILABLE SIZE/S
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FN1R-3225	32x25mm
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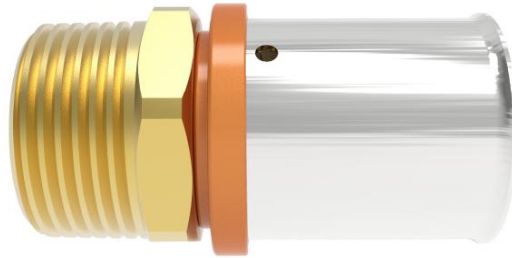


MALE COUPLING

CODE	AVAILABLE SIZE/S
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FN3-25100	25mm x 1" BSP
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FN3-32125	32mm x 1 1/4" BSP
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EQUAL ELBOW

CODE	AVAILABLE SIZE/S
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FN12-25	25mm
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FN12-32	32mm
---------	------



EQUAL TEE

CODE	AVAILABLE SIZE/S
------	------------------

FN24-25	25mm
---------	------

FN24-32	32mm
---------	------



MALE TEE

CODE	AVAILABLE SIZE/S
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FN32-257525	25mm x 3/4" BSP x 25mm
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FN32-327532	32mm x 3/4" BSP x 32mm
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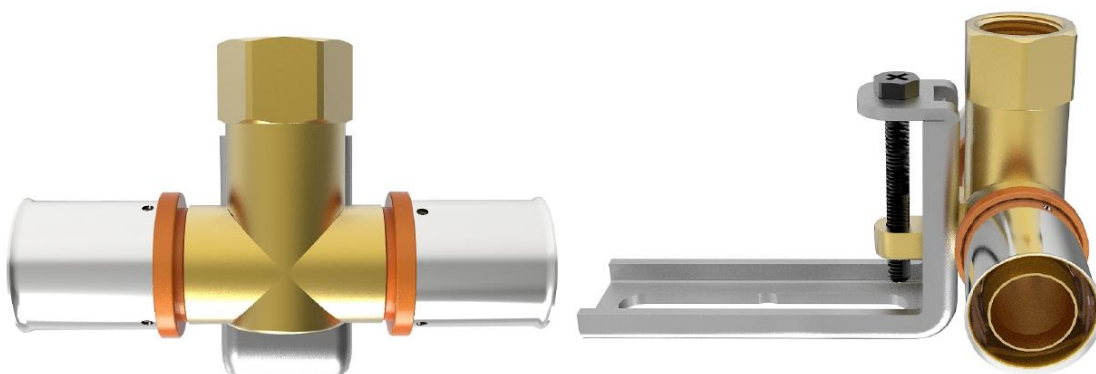


FEMALE TEE

CODE	AVAILABLE SIZE/S
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FN30-2505025	25mm x 1/2" x 50mm BSP x 25mm
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FN30-3205025	32mm x 1/2" x 50mm BSP x 32mm
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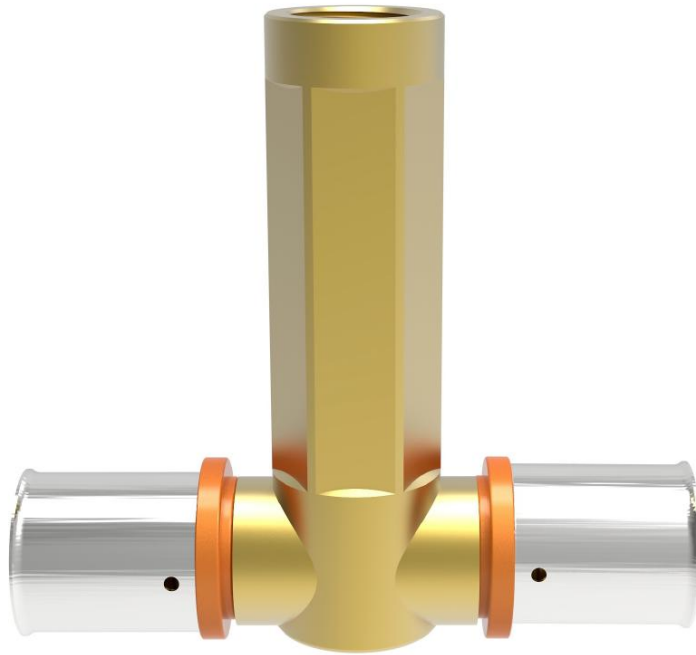


FEMALE TEE

CODE	AVAILABLE SIZE/S
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FN30-2505090	25mm x 1/2" x 90mm BSP x 25mm
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FN30-3205090	32mm x 1/2" x 90mm BSP x 32mm
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FEMALE ELBOW

CODE	AVAILABLE SIZE/S
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FN14-25050	25mm x 1/2" BSP x 50mm
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FN14-32050	32mm x 1/2" BSP x 50mm
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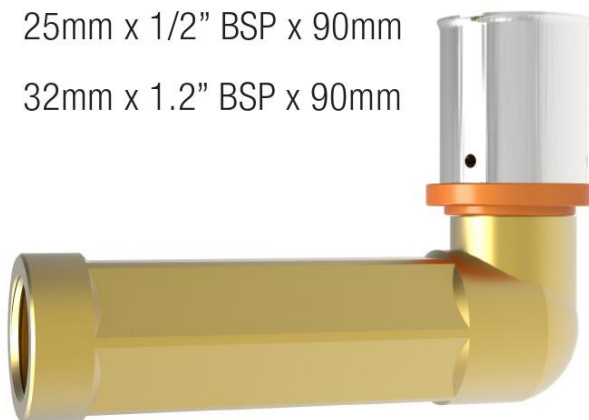


FEMALE ELBOW

CODE	AVAILABLE SIZE/S
------	------------------

FN14-2505090	25mm x 1/2" BSP x 90mm
--------------	------------------------

FN14-3205090	32mm x 1.2" BSP x 90mm
--------------	------------------------



FEMALE COUPLING

CODE	AVAILABLE SIZE/S
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FN2-2505090	25mm x 1/2" BSP x 90mm
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FN2-3205090	32mm x 1/2" BSP x 90mm
-------------	------------------------

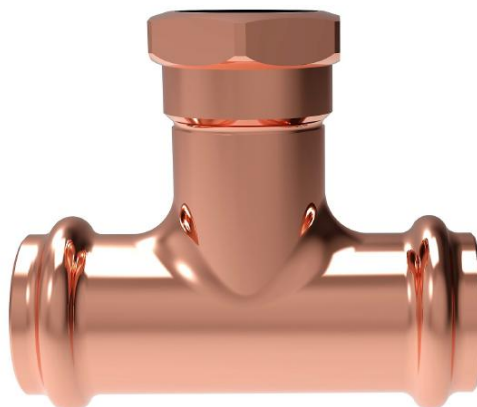


FEMALE TEE

CODE	AVAILABLE SIZE/S
------	------------------

FCN30-2505025	DN 25mm x 1/2" BSP x DN25
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FCN303205032	DN 32mm x 1/2" BSP x DN32
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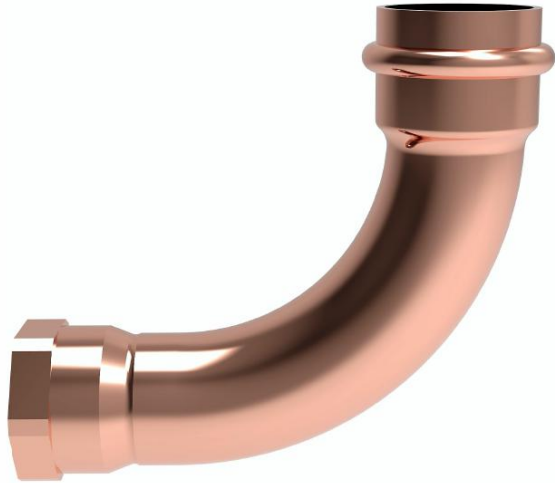


FEMALE ELBOW

CODE	AVAILABLE SIZE/S
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FCN16-25050	DN 25mm x 1/2" BSP
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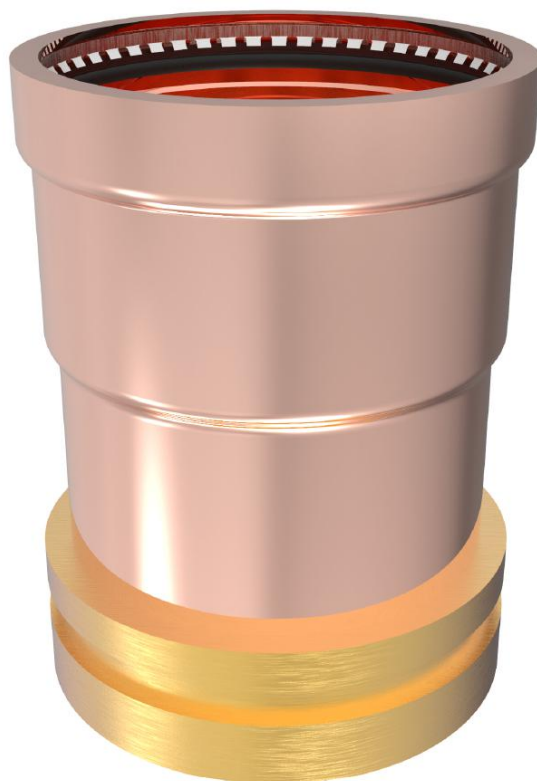
FCN16-32050	DN 32mm x 1/2" BSP
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ROLL GROVE ADAPTOR (FOR FIRE HYDRANTS)

CODE	AVAILABLE SIZE/S
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CN103-100	DN100
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SPRINKLER HEADS

SPRINKLER HEAD STANDARD

CODE	AVAILABLE SIZE/S
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F1RES49	N/A
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CONCEALED SPRINKLER HEAD

CODE	AVAILABLE SIZE/S
------	------------------

RFC49	N/A
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TOOLS

BATTERY OPERATED CRIMPING TOOL

[U PROFILE JAWS FOR PEX CRIMPING : 16 - 32 mm]

[V PROFILE JAWS FOR COPPER CRIMPING : 15 - 32 mm]



PIPE CUTTER / 16-32mm



TRIANGLE REAMER



ACCESSORIES

END BRACKETS

CODE	DESCRIPTION
SF-CT60S SF-CT80S	Clamps for T-Grid Ceiling 60 and 80 mm.



PIPE MARKER

CODE	DESCRIPTION
CPGPM	Adhesive pipe marker for identification.



END BRACKETS

CODE	DESCRIPTION
SF-CHC	Clamps for Hat Channel Ceiling.



SQUARE BAR

CODE	DESCRIPTION
FDSB	Square bar for installation of flexible sprinkler hose in ceiling grid.



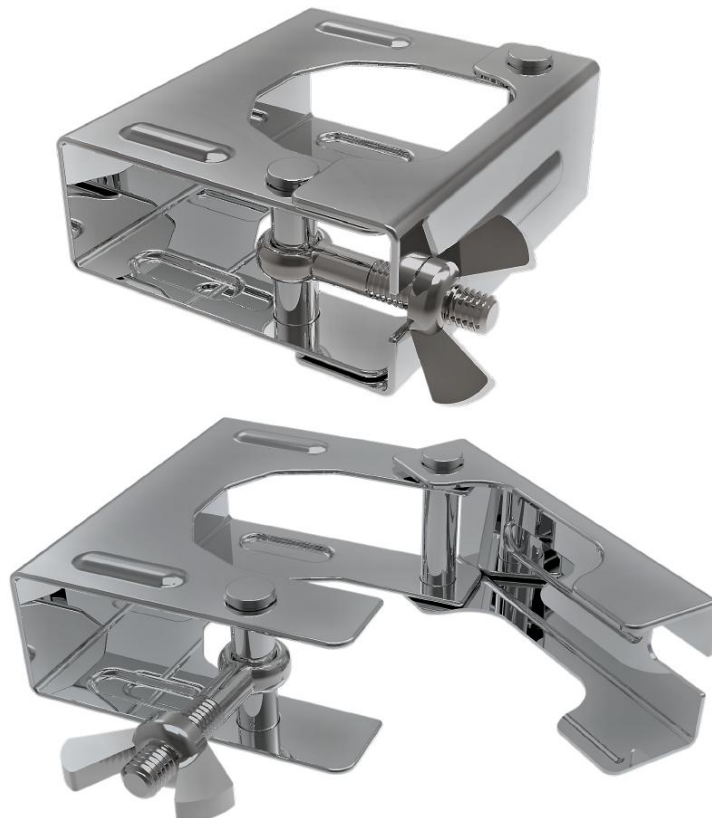
CENTER BRACKET

CODE	DESCRIPTION
SF-BC3	Long grid bracket for use with concealed sprinklers.



CENTER BRACKET OPEN GATE

CODE	DESCRIPTION
SF-BOG-BL1	Bracket open gate with butterfly bolt lock



NOTES



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