



# Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 487</b>	5-Dec-1991	Number 14	Issue date 26-Apr-2019	30-Apr-2020

Page 1 of 3

## Product designation

**Grinnell, grooved fittings**

(Refer to the Schedule/enclosures for further specified details)

## Agent/distributor

Tyco Fire Protection Products  
Level 3, 95 Coventry Street, SOUTHBANK, VIC, AUSTRALIA, 3006

## Registrant

Tyco Fire Protection Products  
Level 3, 95 Coventry Street, SOUTHBANK, VIC, AUSTRALIA, 3006

### Producer

Tyco Malaysia  
886 Lot, C1 and C2 Jalan Suban, Taman Perindustrian Subang, PETALING JAYA, 47500 DARUL EHSAN, MALAYSIA

## Conformance criteria and evaluation

The Grinnell, grooved fittings have been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Underwriters Laboratories - Evaluation and listing, 'UL listing'.

## Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker  
Executive Officer – ActivFire Scheme



# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 487</b>	5-Dec-1991	Number 14	Issue date 26-Apr-2019	30-Apr-2020
				Page 2 of 3

## Producer's description

The Grinnell, grooved fittings are universally utilised for joining pipe in a wide variety of piping systems. These fittings are designed to provide minimum pressure drop and uniform strength. Depending on styles and sizes, grooved fittings are provided in various materials including malleable iron, ductile iron, forged steel or segmented welded steel.

## Technical specification

The following details are a representative extract of the technical specification for the Grinnell, grooved fittings and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

- Housing:** Malleable Iron conforming to ASTM A-47 or Ductile Iron conforming to ASTM A-536
- Coatings:** Rust inhibiting paint - Colour: red (standard).  
Hot dipped zinc galvanised (optional).  
For other coating requirements contact Tyco - Fixed Products Group.
- Gasket:** Grade E(EPDM) or Grade T (BUNA-N) Elastomers with properties as designated by ASTM D-2000 for each gasket grade.
- Bolts/nuts:** Heat treated, oval-neck track head bolts & heavy hex nuts of carbon steel conforming to ASTM A-183.  
Bolts & nuts are provided zinc electroplated as standard.

Model	Type	Sizes (Nominal)	
Figure 730 THR	Clamp-T™ Threaded Branch	50 mm x 65 mm x 80 mm x 100 mm x  125 mm x 150 mm x 200 mm x	15 mm \ 20 mm \ 25 mm \ 32 mm \ 40 mm 15 mm \ 20 mm \ 25 mm \ 32 mm \ 40 mm 15 mm \ 20 mm \ 25 mm \ 32 mm \ 40 mm \ 50 mm 15 mm \ 20 mm \ 25 mm \ 32 mm \ 40 mm \ 50 mm \ 65 mm \ 80 mm 32 mm \ 40 mm \ 50 mm \ 65 mm \ 80 mm 32 mm \ 40 mm \ 50 mm \ 65 mm \ 80 mm \ 100 mm 65 mm \ 80 mm \ 100 mm
Figure 730 GRV	Clamp-T™ Grooved Branch	65 mm x 80 mm x 100 mm x 125 mm x 150 mm x 200 mm x	32 mm \ 40 mm 32 mm \ 40 mm \ 50 mm 32 mm \ 40 mm \ 50 mm \ 80 mm 32 mm \ 40 mm \ 50 mm \ 80 mm 32 mm \ 40 mm \ 50 mm \ 80 mm \ 100 mm 80 mm \ 100 mm
Figure 5105	90° Elbows	25 mm, 32 mm, 40 mm, 50 mm, 65 mm, 80 mm, 100 mm, 125 mm, 150 mm, 200 mm	
Figure 201	45° Elbows	25 mm, 32 mm, 40 mm, 50 mm, 65 mm, 80 mm, 100 mm, 125 mm, 150 mm, 200 mm, 250 mm, 300 mm	
Figure 219 / 519S	Equal Tees	25 mm, 32 mm, 40 mm, 50 mm, 65 mm, 80 mm, 100 mm, 125 mm, 150 mm, 200 mm, 250 mm, 300 mm	
Figure 250	Concentric Reducers	40 mm x 50 mm x 80 mm x 100 mm x 150 mm x 200 mm x 250 mm x 300 mm x	25 mm 25 mm, 32 mm, 40 mm 50 mm 25 mm, 50 mm, 80 mm 50 mm, 80 mm 100 mm, 150 mm 100 mm, 150 mm, 200 mm 150 mm, 200 mm, 250 mm.
Figure 260	Caps	25 mm, 32 mm, 40 mm, 50 mm, 65 mm, 80 mm, 100 mm, 125 mm, 150 mm, 200 mm, 250 mm, 300 mm	

# Schedule to Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
<b>afp - 487</b>	5-Dec-1991	Number 14	Issue date 26-Apr-2019	30-Apr-2020
				Page 3 of 3

## Friction resistance:

(Expressed as equivalent length of straight pipe)

Nominal Size	Pipe O.D.	Elbows		Tee	
		90°	45°	Branch	Run
25 mm	33.4 mm	0.6 m	0.3 m	1.4 m	0.6 m
50 mm	60.3 mm	1.1 m	0.6 m	2.6 m	1.1 m
80 mm	88.9 mm	1.5 m	0.9 m	4.0 m	1.5 m
100 mm	114.3 mm	2.1 m	1.1 m	4.9 m	2.1 m
125 mm	141.3 mm	2.6 m	1.4 m	6.4 m	2.6 m
150 mm	168.3 mm	3.0 m	1.5 m	7.6 m	3.0 m
200 mm	219.1 mm	4.0 m	2.0 m	10.1 m	4.0 m
250 mm	273.0 mm	5.2 m	2.6 m	12.5 m	5.2 m
300 mm	323.9 mm	6.1 m	3.0 m	15.2 m	6.1 m
350 mm	355.6 mm	7.0 m	5.5 m	19.8 m	7.0 m
400 mm	406.4 mm	7.6 m	6.1 m	23.8 m	7.6 m
450 mm	457.2 mm	10.1 m	7.0 m	26.8 m	10.1 m
500 mm	508.0 mm	11.0 m	7.6 m	29.9 m	11.0 m
600 mm	609.6 mm	12.2 m	9.1 m	36.6 m	12.2 m