



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 454	14-Jan-1991	Number 13	Issue date 26-Apr-2019	30-Apr-2020

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Product designation

Tyco Fire Products, Type HV, open, high velocity, directional spray nozzles

(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 Fire Protection Products
8902 North Interstate 27, LUBBOCK, TX, UNITED STATES, 79403

Conformance criteria and evaluation

The Tyco Fire Products, Type HV, open, high velocity, directional spray nozzles have been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Underwriters Laboratories - Evaluation and listing, 'UL listing'.
2. Underwriters Laboratories Canada - Evaluation, follow-up services and listing, 'cUL listing'.
3. Factory Mutual - Evaluation and approval, 'FM approval'.

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.

Specified limitations/conditions, determined from the evaluation for conformity, include the following.

- i. Fire sprinkler equipment, system design and installation should be determined and verified in accordance with the performance and prescribed requirements of the regulations, standards and criteria as specified by the building code and authorities having jurisdiction. Due considerations include the occupancy fire loading, sprinkler location, coverage, response, hydraulic characteristics and other specified requirements relevant to the conformance and effectiveness of the equipment and installed system.

(Limitations/conditions of conformance continue)

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

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- ii. Specific or special requirements in relation to this product must be considered and included in the system design and installation.
- iii. The maximum working pressure is 1210 kPa.
- iv. Optimum water flowing pressure range is 210 to 550 kPa.

Producer's description

The Tyco Fire Products, Type HV, open, high velocity, directional spray nozzles are open (nonautomatic) directional spray nozzles with individual inlet strainers.

They are designed for use in water spray fixed systems for fire protection applications where a high velocity water application may be required, such as for the protection of flammable liquids.

The nozzles feature an integral strainer when individual strainers are required in addition to main pipeline strainers for nozzles having an orifice diameter of 9.5 mm (3/8 inch) or less.

Available in brass or stainless steel, the six patterns of the nozzles provide a wide variety of orifice sizes and distribution characteristics.

As water passes through the internal swirl plate, a swirling action is produced, prior to the water being discharged through the orifice tip of the body, resulting in a solid conical spray pattern of water droplets being discharged over a defined area.

High velocity type nozzles are principally used in water spray systems for the protection of fixed hazards such as transformers, circuit breakers, diesel engines and diesel storage tanks, turbo alternators, lube oil systems, oil fire boilers, and similar hazards. They are capable of rapidly extinguishing oil fires by emulsification, cooling, and smothering. The surface cooling effects of high velocity type nozzles also minimizes the possibility of re-ignition after a fire extinguishment

Technical specification

The following details are a representative extract of the technical specification for the Tyco Fire Products, Type HV, open, high velocity, directional spray nozzles and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Maximum working pressure	1210 kPa (175 psi)
Optimum water flowing pressure range	210 to 550 kPa (30 to 80 psi)

Physical characteristics

Brass assemblies

Body	Brass
Swirl Plate	Brass
Strainer	Brass
Strainer	Copper

Stainless steel assemblies

Body	Type 316
Swirl plate	Type 316
Strainer	Type 316
Strainer	Type 316L

Type designation	K(metric), l/min / kPa ^{0.5}	K, USGPM/psi ^{0.5}
HV14	2.3	1.6
HV17	2.59	1.8
HV26	4.03	2.8
HV37	6.62	4.6
HV45	7.92	5.5
HV60	9.22	6.4

Reference technical data sheet

TFP815, April 2006