



Certificate of Conformity

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afp - 1250	11-Oct-1999	Number 24	24-Apr-2026	30-Apr-2027	

Product designation

Ansul, PIRANHA™, pre-engineered restaurant fire suppression system

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

Agent/distributor

Tyco Fire Protection Products
Level 3, 37 Dalmore Drive, Caribbean Park, SCORESBY, VIC, AUSTRALIA, 3179

Registrant

Tyco Fire Protection Products
Level 3, 37 Dalmore Drive, Caribbean Park, SCORESBY, VIC, AUSTRALIA, 3179

Producer

Tyco Fire Protection Products
One Stanton Street, MARINETTE, WI, UNITED STATES, 54143-2542

Conformance criteria and evaluation

The Ansul, PIRANHA™, pre-engineered restaurant fire suppression system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

- Underwriters Laboratories Standard UL 300, 'Standard for Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment'.
- SSL Appraisal Specification FAS-111, 'Wet Chemical Pre-Engineered Fixed Fire Suppression Systems for Restaurant Cooking Areas'.

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.

- An installed Ansul Piranha system is subject to its design and maintenance complying with the limitations and requirements contained in the Ansul Piranha System Design, Installation, Recharge and Maintenance Manual, Revision 6, dated 2-Apr-2013 (Part No. 418087-6).

(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

Kai Loh

Executive Officer – ActivFire Scheme



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- ii. The water supply shall be designed and installed such that a pressure of at least 228 kPa is available at the inlet of each PIRANHA™ automatic water-control valve in the system when the simultaneous flow through each valve is at least 38 litres/minute. The water supply installation shall also limit the maximum residual pressure at inlet to the automatic water-control valves to 690 kPa.
- iii. Pressure vessels (containers) are registered in accordance with the relevant safety regulations in the jurisdiction in which they are used.

Producer's description

The Ansul, PIRANHA™, pre-engineered restaurant fire suppression system is a gas-cartridge expelled, water-assisted, tank-stored wet-chemical solution type fixed system which initially discharges "PRX™" Liquid Fire Suppressant solution from its nozzles, followed by an indefinite period of water discharge through the same nozzles. The system is operated automatically by mechanical and/or electrical means, and has remote manual back-up actuation by cable-pull/electrical means.

The PIRANHA™, system is designed to extinguish or suppress restaurant cooking area fires involving equipment such as deep fat fryers, tilt-skillets and braising pans, griddles, range-tops, woks, upright broilers, chain-broilers, electric and gas radiant char-broilers which use lava rock, natural charcoal, or mesquite wood, and their associated exhaust canopies, grease-filters, plenums, and duct work.

The PIRANHA™ Regulated Release Assemblies are each housed in a common-dimensioned stainless-steel cabinet, and are available with mechanical, electro-mechanical, or pneumatic type actuation provisions. The pneumatically-actuated type is intended to be slave-actuated from either of the other two actuation options, and is not available with remote manual-pull back-up actuation. The automatic mechanical actuation of the mechanical and electro-mechanical options is by means of a series-connected fusible-link and tension wire-rope cable system. The electro-mechanical type release assembly includes micro-switches for providing automatic shut-down of electricity and gas supply to the cooking equipment simultaneously with the PIRANHA™ system actuation. It also includes a pull-type electric alternating current (Vac) solenoid for actuation of the system via electrical detection or remote automatic/manual actuation provisions. Detection, actuation and control systems include the ANSUL® Restaurant Electric Detection (RED) Technology. Up to 5 (five) PIRANHA™ Regulated Release Assemblies can be connected in parallel to a common agent-distribution system provided that the system has a maximum of 39 nozzles. Each Regulated Release Assembly cabinet can accommodate *one only* solution tank of 5.7 litres, 8.5 litres, or 11.4 litres capacity.

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Technical specification

The following details are a representative extract of the technical specification for the Ansul, PIRANHA™, pre-engineered restaurant fire suppression system and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

PIRANHA™ Regulated Release Assemblies:

Approximate cabinet dimensions:	600 H x 520 W x 190 Deep (mm)
Solution tank capacities:	5.7 litres (PIRANHA-7, max. 7 nozzles) 8.5 litres (PIRANHA-10, max. 10 nozzles) 11.4 litres (PIRANHA-13, max.13 nozzles)
Solution tank test pressure:	31.0 bar
Solution tank minimum burst pressure:	62.1 bar
Pressure of expellant nitrogen:	10.3 bar (set outlet pressure of regulator)
Nitrogen relief valve setting:	13.1 bar
Rated voltage of pull-solenoid:	120 Vac 60 Hz. (intermittent duty)
Minimum water supply:	38 litres/minute @ 228 kPa, at inlet to each automatic water control valve.

ANSUL® Restaurant Electric Detection (RED) Technology

Controller – The ANSUL® RED controller provides the inputs and outputs (I/Os) used to protect up to two hazard areas and activate the release outputs as required. It also provides connections for two additional optional relay modules. All circuits are monitored for open or short conditions.

Linear Detector Wire – The linear detection wire provides fire detection in the protected area. Linear detection wire is available in the following four color-coded temperature offerings:

Temperature Rating	Color of Wire
68 °C (155 °F)	Gray
137 °C (280 °F)	Blue
180 °C (356 °F)	Red
260 °C (500 °F)	Orange

Thermal Detectors – Rate compensating temperature thermal detectors are normally open (NO) mechanical contact closure switches designed to operate at a factory preset temperature

They are available in five preset temperatures.

Temperature Rating
107 °C (225 °F)
162 °C (325 °F)
232 °C (450 °F)
315 °C (600 °F)
385 °C (725 °F)

Relay Board – The relays are intended for use with electric gas valves, alarms, contactors, lights, contractor supplied electric power shut-off devices and other electrical devices that are designed to shut off or turn on when the system is actuated. The relay board is used to add three high-power relays to the controller. Up to two relay boards may be added to a controller. Each relay contains three terminals which can be used to wire the circuit for normally open (NO) or normally closed (NC).

Regulated PAD Release – The regulated PAD release assembly contains the regulated release, expellant gas hose for agent tank hookup, and enclosure knockouts to facilitate installing actuation piping, expellant piping, release wiring, and additional equipment. This regulated release assembly is used in single, double, and multiple-tank systems and must be mounted to a rigid surface. The release can be used to interconnect both the actuation and expellant gas lines as required per system design. The regulator is designed to allow a constant flow of gas into the tank at 7.6 bar (110 psi) for R-102 or 10.3 bar (150 psi) for PIRANHA when the system is actuated. The agent tank must be ordered separately.

Electric Remote Manual Pull Station – The electric remote manual pull station is made out of a molded red composite material. The red color makes the pull station more readily identifiable as the manual means for fire suppression system operation.

Battery – A 12 V 5.0 Ah sealed lead acid (SLA) battery is used to provide backup power for the system in the event there is an AC power failure. The battery provides 24 hours of backup power. **High Temperature Connector Assembly** – The high temperature connector assembly is used to connect two linear detection wires of different temperature ratings within a hood. This is useful when different appliances require different linear wire temperature ratings within a hazard area.

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Fusible link fire detectors:

Fusible link fire detectors for the PIRANHA™ system are available as follows:

Fusible link part number	Temperature rating (°C)	Use where temp. will not exceed (°C)
415739	74	38
415740	100	66
415741	138	107
415742	182	143
415743	232	182
56816	260	204

Expellant gas cartridges:

Ansul AUTOMAN® Cartridges shall be used as follows:

Solution tank model	Maximum number of nozzles per tank	Required size of Ansul nitrogen cartridge
PIRANHA-7	7	LT-20-R
PIRANHA-10	10	LT-30-R
PIRANHA-13	13	LT-30-R

Supplementary information

Schedule of relevant articles

The following schedule is an extract of articles significant and/or related as evidence of conformity.

Reference		Title / description	Date issued (or date validated)	Source
Ident. type	Ident.			
Extract	ul_w3_GOASC.EX3470_v_2020-04-06.pdf	GOASC.EX3470 – Wet Chemical Extinguishing Units Ansul Model R-102, Model Piranha	6-Apr-2020	UL LLC, UL Product iQ platform Underwriters Laboratories Inc., US
Part No.	418087-6	ANSUL Piranha Restaurant System Design, Installation, Recharge, and Maintenance Manual	2-Apr-2013	Tyco Fire Protection Products, US
Form No.	F-2019192-00	ANSUL® Restaurant Electric Detection (RED) Technology	23-Aug-2019	
Part No.	447416-00	Ansul R.E.D. Detection and Actuation System Design, Installation, Recharge and Maintenance Manual	18-Nov-2019	