



# Certificate of Conformity

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## Product designation

**QTEC VDAS COMPACT, Loss Of Pressure (LOP) and Rise of Pressure (ROP), pre-engineered foam water spray vehicular fire extinguishing system**

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

## Agent/distributor

QTEC Fire Services  
5 Buttonwood Place, WILLAWONG, QLD, AUSTRALIA, 4110

## Registrant

QTEC Fire Services  
5 Buttonwood Place, WILLAWONG, QLD, AUSTRALIA, 4110

### Producer

QTEC Fire Services Pty Ltd  
5 Buttonwood Place, WILLAWONG, QLD, AUSTRALIA, 4110

## Conformance criteria and evaluation

The QTEC VDAS COMPACT, Loss Of Pressure (LOP) and Rise of Pressure (ROP), pre-engineered foam water spray vehicular fire extinguishing system has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 5062:2016, 'Fire protection for mobile and transportable equipment'.

## 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.

- VDAS Loss of Pressure (LOP) Systems
  - The system is designed, installed, operated, and maintained, in accordance with the QTEC Fire Services Pty Ltd, VDAS LOP Design, Installation, and Commissioning Manual Edition 1 (Part number QTB970).
  - The fire suppression system is to be only operated between: - 5°C to 60°C.
  - LOP valve operating pressure range: min 1,350 kPa—max. 1,500 kPa.

(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



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- d. Discharge hoses are to be SAE 100R1AT rated, 3/8" push on hose, and meet MSHA 2G flame resistance requirements.
  - e. The tube used must be Annealed Stainless Steel tube 3/8" O.D. X 18 G AS316.
  - f. Foam agents used is VDAS F3 fluorine-free foam for Class A and Class B fires
  - g. Nozzle design and selection, foam filling quantities and cylinder selection must be in accordance with the information and limitations as outlined in the relevant Design, Installation, and Commissioning Manual.
- ii. VDAS Rise-of-Pressure (ROP) Systems
- a. The system is designed, installed, operated, and maintained, in accordance with the QTEC Fire Services Pty Ltd, VDAS ROP Design, Installation, and Commissioning Manual Edition 1 (Part number QTB973).
  - b. The fire suppression system is to be only operated between: - 5°C to 60°C.
  - c. ROP valve operating pressure range: min 1,350 kPa—max. 1,500k Pa.
  - d. LPRM operating pressure range: min 1,000kPa—max 1,200kPa.
  - e. Discharge hoses are to be SAE 100R1AT rated, 3/8" push on hose, and meet MSHA 2G flame resistance requirements.
  - f. The tube used must be Annealed Stainless Steel tube 3/8" O.D. X 18 Ga AS316.
  - g. Foam agents used is VDAS F3 fluorine-free foam for Class A and Class B fires
  - h. Nozzle design and selection, foam filling quantities and cylinder selection must be in accordance with the information and limitations as outlined in the relevant Design, Installation, and Commissioning Manual.

## Producer's description

The QTEC VDAS COMPACT, Loss Of Pressure (LOP) and Rise of Pressure (ROP), pre-engineered foam water spray vehicular fire extinguishing system is designed specifically to cope with the harsh operating conditions experienced by mobile and transportable equipment.

This equipment consists of pressurized cylinders containing Fluorine Free (VDASF3) foam solution, actuation devices to initiate discharge and a discharge network containing nozzles to direct the VDAF3 foam spray on the hazard.

Actuation of the suppression agent in the system occurs when there is a loss of pressure in its actuation circuit or a high heat detected with the LHD wire. The release of the VDASF3 Foam solution is caused by a rise in pressure in its actuation network. However, the automated detection method in both systems utilizes a loss of pressure in their detection circuits or can be provided by Linear Heat Detection fire wire (LHD).

The VDAS COMPACT, Loss of Pressure (LOP) and Rise of Pressure (ROP), pre-engineered foam water spray fire suppression system offers fire suppression capabilities through the combination of Fluorine Free VDASF3 Foam discharged in the form of a finely atomized SPRAY. Strategically positioned nozzles to direct the high velocity foam spray and provide "three dimensional" firefighting properties, allowing the system to suppress pressure fires such as might occur from a ruptured fuel or hydraulic line. The small droplets of VDAF3 foam absorb large amounts of heat and turn to steam which further enhances the three-dimensional firefighting properties of the system. Once discharged, the VDASF3 foam is also suppresses spill or pool fires which may result from the collection or leakage of fuel. The resulting foam blanket provides post fire securement.

Fire suppression systems are primarily intended to suppress fires by eliminating the supply of oxygen, Category A fuel sources, Category B flammable substances, and isolating ignition sources such as chemical reactions, heat, electrical and mechanical energies. It is not their intended purpose to function as the primary fire extinguishing system.

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## Technical specification

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

### Schedule of components and/or assemblies

The following is a schedule of validated components and/or assemblies of the certified/listed equipment.

Part number	Description
<b>CYLINDER ASSEMBLIES</b>	
<b>VDAS COMPACT LOP Cylinder Assembly Complete VERTICAL</b>	
QTA 10/12-L	10L Cylinder Assy Complete-LOP
QTA 16/20-L	16L Cylinder Assy Complete-LOP
QTA 20/25-L	20L Cylinder Assy Complete-LOP
QTA 24/30-L	30L Cylinder Assy Complete-LOP
<b>VDAS COMPACT LOP Cylinder Assembly Complete HORIZONTAL</b>	
QTA 16/20-LH	16L Cylinder Assy Complete-LOP
QTA 20/25-LH	20L Cylinder Assy Complete-LOP
QTA 24/30-LH	30L Cylinder Assy Complete-LOP
<b>VDAS COMPACT ROP Cylinder Assembly Complete VERTICAL</b>	
QTA 10/12-R	10L Cylinder Assy Complete-ROP
QTA 16/20-R	16L Cylinder Assy Complete-ROP
QTA 20/25-R	20L Cylinder Assy Complete-ROP
QTA 24/30-R	30L Cylinder Assy Complete-ROP
<b>VDAS COMPACT ROP Cylinder Assembly Complete HORIZONTAL</b>	
QTA 16/20-RH	16L Cylinder Assy Complete-ROP
QTA 20/25-RH	20L Cylinder Assy Complete-ROP
QTA 24/30-RH	30L Cylinder Assy Complete-ROP
<b>BRACKETS</b>	
S-EXB-FLS-WVBPC9	9 litre
QTB450-PC	Bracket - COMPACT Series 16/20ltr and 20/25lt powder coated
QTB 451-PC	Bracket - COMPACT Series 20/30lt powder coated
QTB400	Weld on bracket lug 60mm x 12 mm
<b>REMOTE ACTUATORS: ROP TYPE</b>	
QTB602	Std c/w bracket and cover (red)
QTB602/NC	ROP Actuator - No Cartridge
QTB602/A	ROP Actuator - No Cartridge (Suit ANSUL)
QTB277	Co2 142gm cartridge
QTB277-OR	Co2 142gm cartridge c/w O-ring
QTB603	Bulkhead complete
QTB603/NC	ROP Bulkhead Complete N/C
<b>REMOTE ACTUATORS: LOP TYPE</b>	
QTB609	LOP Remote 9lt External
QTB611	LOP Remote External Bulkhead
QTB613	External complete with cover
QTB614	Remote Bung and Cap
<b>NOZZLE ASSEMBLIES</b>	
QTB040-C	Nozzle COMPACT Assy, single straight 3/8"
QTB041-45	Nozzle COMPACT Assy, Single angle 45 3/8"
QTB043/B-C	Nozzle COMPACT Single end
QTB053-C	Nozzle COMPACT Assy, compact 90/90
QTB054-C	Nozzle COMPACT Assy, compact 90/45
QTB057-C	Nozzle COMPACT Assy, compact 45/45
QT 0233-ZP	Tube Nozzle Drill Guide Plated
QTB 095	Single Tube Nozzle Assy 3/8" (No Nozzle Tip or Dust Cap)
<b>NOZZLE &amp; COMPONENTS</b>	
QTB065	4.8 Nozzle tips (Medium Flow) (Bim 8)
QTB062	Brass Dust caps c/w wire retainer*
QTB083	Silicone Dust Cap
QT 0009/C-ZP	Nozzle Bracket (COMPACT Remote Blk Hd bracket)

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Part number	Description
<b>MANIFOLDS &amp; CHECK VALVES</b>	
QT 0230	9/16" Inlet Manifold Twin
QTB251	Small 4 port manifold
QTB263	Plug 1/8 npt
QTB264	Plug 1/4 npt
QTB253/B	BRASS Nipple 1/8 npt x 7/16 jic
QTB254/B	BRASS Nipple 1/4 npt x 7/16 jic
QTB252	Check valve input s/s jic 7.1/16x1/4 npt
<b>LPRM</b>	
QTB904/A	1 Ltr LPRM Assy, c/w bracket
QT-Q01	1.1 Ltr Cylinder
<b>LOP PNEUMATIC DETECTION</b>	
QTB281	LOP tube fitting kit x 5 mtrs*
QTB281/A	LOP Tube per meter*
QTB281/B	LOP fittings kit*
QTB275	Pyro tube Rubber Grommet
QTB284	Detection Tube Tee
QTB285	Detection Tube Joiner
QTB286	LOP Tube Tee to Hose
QTB287	Tee 1/4 Detection - 7/16 JICm
<b>HOSE, TUBE &amp; FITTINGS</b>	
QTB154	Hose SAE Push on hose x 3/8 (Red or Black)
QTB155	9/16JICf - 3/8 hose, Push on Hose Tails
QTB239	9/16 - 1/4 BSP Nipple
QTB158	9/16" JICm to 3/8" Push on hose Mail Tail (Brass)
QTB759/B	Brass Nipple, 9/16 jic m/m
QTB240/B	Bulkhead, 9/16 jicm
QTB243/B	Tee, 9/16 jic mmm
QTB244/B	Elbow, 9/16 jic m/f 90
QTB134	Hose LOP 3/16 (Qtec Specialty LOP hose) (304Lm Roll)
QTB115	Brass Re-use end fem 7/16 jic x 3/16
QTB140	Hose SAE 100R1T x 3/16 (Red) (134.11 Lm Roll)
QTB115	Brass Re-use end fem 7/16 jic x 3/16
QTB256/BS	Elbow m/f jic 7/16 90 Brass & Stainless Steel
QTB257/BS	Elbow m/f jic 7/16 45 Brass & Stainless Steel
QTB226	Brass Bulkhead jic 7/16*
QTB261/B	Brass Tee run m/m/m 7/16 jic*
QTB262/BS	Tee run m/m/f 7/16 jic Brass & Stainless Steel
QTB289/BS	Tee, m/f/m 7/16 jic Brass & Stainless Steel
QTB153	3/8" Stainless Steel Tube x 2m
QTB150	3/8" Tube Nut & Sleeve
<b>CLAMPS AND TIES: Stauff Black</b>	
QTB038	Clamp weld on 3/8" tube black hi temp*
QTB039	Clamp weld on 18mm black hi temp*
<b>CLAMPS AND TIES: P-Clamps</b>	
QTB028	P Clamp .62 3/16 LOP Hose Spiral Guarded*
QTB022	P Clamp 1/2 Hose/ Rubber Grommet*
QTB031	P-Clamp 0.38 suit cable
QT 0054-ZP	P-Clamp Bracket 10.5mm x 7mm elongation
QT 0192-ZP	P-Clamp Spacer - Large, Zinc Plated
QT 0193-ZP	P-Clamp Spacer - Small
QTB026	Zip ties medium*
QTB027	Zip ties large*
<b>ELECTRICAL COMPONENTS</b>	
QTB500/16	Cable Gland* 16mm
QTB500/20	Cable Gland* 20mm
QTB500/25	Cable Gland* 25mm
QTB505	Power/fuse lead x 5 mtrs
QTB511/2	Cable/m 2 core
QTB511/4	Cable/m 4 core
QTB536	Cable/m 4 core Hi Temp Silicon
QTB512/12	12 Pin Connector Kit
QTB512/2	2 Pin Connector Kit
QTB512/3	3 Pin Connector Kit
QTB512/4	4 Pin Connector Kit

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Part number	Description
QTB512/6	6 Pin Connector Kit
QTB512/8	8 Pin Connector Kit
QTB517-SS	Stainless Steel Pressure Switch, n/o-n/c, duetz 1100 kPa
QTB518-SS	Stainless Steel Pressure Switch, n/o-n/c, duetz 200 kPa
QTB520-SS	Stainless Steel Pressure Switch 800KPA
QTB558-SS	Stainless Steel Pressure Switch 100KPA, C/W 4.7Kohm Resistor
QTB550	Large Alarm Panel Mk2 (Electronic Type) AS5062-2016
QTB554	Small Alarm Panel (Code Reset) AS5062-2016
QTB529	GEM- Solenoid 12 volts
QTB560	End of Line Resistor 4.7 ohms and Housing
QTB549	Linear Wire Green 180°C
QTB528	Cable Assy SSIP-MK1 4 Pole
QTB605	Electrical Remote Complete Bulk Head
QTB606	Electrical Remote Complete With Cover
<b>MISCELLANEOUS PARTS</b>	
QTB405/S	Fastener kit Small
QTB408	weld on tapped block M8
QTB410-12	Spiral Guard 12mm (3/16&1/4)
QTB411	Schrader Valve c/w Brass Cap 1/8*
QTB411-90	Schrader Valve, 90 deg. c/w Brass cap*
QTB411-B	Schrader Valve c/w Brass Cap 1/4*
QTB412	Liquid Filled Gauge 900-1600 kPa
QTB412/LP	Liquid Filled Gauge 800-1200KP
QTB412/BE	Liquid Filled Gauge 900-1600KP - Bottom Entry
S-FR-VDASF3-20	VDAS-F3 Foam 20Ltr (Fluorine Free)
S-FR-VDASF3-5	VDAS-F3 Foam 5Ltr (Fluorine Free)
QTB414	AS5062 Maintenance Record Tag
QT 0244	Cab Plate LOP Remote
QT 0245	Cab Plate Small Alarm Panel
QT 0246	Angle Bracket for Cylinder Brackets
<b>SPARES / EXTRA COMPONENTS</b>	
QTB302/A	Charging Rig, Gauge, Inlet & Outlet valves, Relief valve
QTC9/12	10/12lt Red Cylinder s/steel
QTC0320H	16/20lt Red Cylinder - Horizontal
QTC0320V	16/20lt Red Cylinder - Vertical
QTC0325H	20/25lt Red Cylinder - Horizontal
QTC0325V	20/25lt Red Cylinder - Vertical
QTC0330H	24/30lt Red Cylinder - Horizontal
QTC0330V	24/30lt Red Cylinder - Vertical
QTB 462-12V	12lt Compact Siphon Tube 5/8"
QTB 462-20V	20lt Compact Siphon Tube 5/8"
QTB 462-25V	25lt Compact Siphon Tube 5/8"
QTB 462-30V	30lt Compact Siphon Tube 5/8"
QTB462-SH	20lt, 25lt, & 30lt Compact Horizontal systems only S/S Siphon Tube 5/8"
QTB 715/F3	VDAS COMPACT - Cylinder Label 12lt F3
QTB 716/F3	VDAS COMPACT - Cylinder Label 20lt F3
QTB 717/F3	VDAS COMPACT - Cylinder Label 25lt F3
QTB 718/F3	VDAS COMPACT - Cylinder Label 30lt F3
QTB301	Relief Valve
QTB301/A	Relief Valve Blue Cap
QTB701	Cylinder Band, Blue
QTB702	Blue Band 9lt / 25lt Cylinders
QTB950	LPRM Valve
QTB950 / 1350	LOP Compact Valve HP
QTB911	LOP Compact Valve / LPRM Service Kit
QTB905	LOP Compact Valve / LPRM Piston Assembly
QTB940	ROP Valve Compact
QTB941	ROP Valve Compact Service Kit
QTB942	ROP Valve Compact Stem Assembly
QT 0214	Palm Button, Red Anodized
QT 0038-A	Palm Button Label
QT 0038-PC	Palm Button Powder Coated
QT 0046-OR	LOP Remote Spindles c/w O-Rings
QTB909	LOP Remote Service Kit
QT 0134-OR	ROP Remote Spindles c/w O-Rings

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Part number	Description
QTB908	ROP Remote Service Kit
QTB970	LOP COMPACT Design, Installation and Commissioning Manual Ed.1
QTB973	ROP COMPACT Design, Installation and Commissioning Manual Ed.1
QTB 951	Qttec VDAS Pre Engineered Automatic Fire Suppression System, Loss of Pressure, Design, Installation and Commissioning Manual

## 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 <small>(or date validated)</small>	Source
Ident. type	Ident.			
Report	XF3351/R1	Evaluation for Conformity of the QTEC VDAS Compact, Loss of Pressure (LOP) and Rise of Pressure (ROP), pre-engineered foam water spray vehicular fire suppression system to the requirements of AS 5062:2016	14-Oct-2019	CSIRO Fire Systems Laboratory, AU
Manual	QTB970	Vehicle Detection Actuation Suppression (VDAS COMPACT) LOP Design, Installation and Commissioning Manual Edition 1	5-Sep-2019	CSIRO Fire Systems Laboratory, AU
	QTB973	Vehicle Detection Actuation Suppression (VDAS COMPACT) ROP Design, Installation and Commissioning Manual Edition 1		