



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 1628	15-Oct-2003	Number 14 (Provisional)	Issue date 1-May-2020	30-Apr-2021

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Product designation

Ginge-Kerr, ARGONITE® 300/200/150 bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing Systems

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

Agent/distributor

Kidde Australia
Unit 3, Ground Floor, 10 Ferntree Place, NOTTING HILL, VIC, AUSTRALIA, 3168

Registrant

Kidde Australia
Unit 3, Ground Floor, 10 Ferntree Place, NOTTING HILL, VIC, AUSTRALIA, 3168

Producer

Ginge Kerr Danmark A/S
111 Stamholmen, HVIDOVRE, DENMARK, DK-2650

Conformance criteria and evaluation

The Ginge-Kerr, ARGONITE® 300/200/150 bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing Systems have been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Australian Standard AS 4214-2002, 'Gaseous fire extinguishing systems'.

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. The ambient temperature of the storage cylinders will be between -20°C and 50°C, ISO 14520/EN12094. System design, flow calculation, installation and maintenance of system shall be strictly in accordance with the Ginge-Kerr ARGONITE® Fire Extinguishing Systems Manual, revision 9.
- ii. Pipe sizing, number of nozzles selected and overall design of balanced or unbalanced agent reticulation pipework for this system shall be done with the aid of Calculation Program for ARGONITE® Fire Extinguishing Systems.

(Limitations/conditions of conformance continue)

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



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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.
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- 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.
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- iii. Nozzle Coverage. For systems with no intermediate level nozzles, and designed to operate at the maximum allowable distribution pipe pressure of 60 bar, maximum allowable nozzle height above floor is 5.0 meters. Maximum allowable nozzle horizontal spacing is 6.0 metres in rooms and 3.0 metres in voids.
- iv. Enclosure venting shall be provided and designed to ensure that, when the system is being discharged, the pressure within the enclosure can not become harmful to the enclosure or its occupants. The above Calculation Program includes a reliable means of determining the free area of relief opening which will limit the enclosure over-pressurisation to a safe value.

Producer's description

The Ginge-Kerr, ARGONITE® 300/200/150 bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing Systems are an engineered system which extinguishes fire by using a blend of inert gases to dilute the oxygen content of the air within the protected enclosure. Ginge-Kerr's inert gas fire extinguishing system is marketed as "ARGONITE®" and utilise a mixture of equal parts by volume of argon and nitrogen (50%/50%) in air. As these gases occur naturally in the atmosphere, accidental or deliberate releases of "ARGONITE®" do not contribute to global atmospheric warming or ozone depletion. Other benefits of ARGONITE® (IG-55) are that the mixture does not decompose measurably in extinguishing a fire. As such, toxic or corrosive decomposition products are not found. Heat and breakdown products of the fire itself however can still be substantial and could make the area untenable for human occupancy until proper venting of the enclosure has been made. With the exception of risks involving fuels such as carbon disulphide, methanol, and morpholine, ARGONITE® can be used to protect occupiable areas because the recommended ARGONITE® concentrations result in the atmosphere, within the protected enclosure, having a residual oxygen concentration of between 12% and 14% (oxygen concentration may be less for specific volatile fuels). Such an atmosphere can be inhaled for at least several minutes without risk to health and with little if any discomfort.

The agent storage cylinders of the Ginge-Kerr, ARGONITE®, 300 Bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing System are charged to a pressure of 300 Bar measured at 15°C. The cylinders are available as standard in volume of: 15,91; 67,5 and 80 litres filled with ARGONITE at pressures of 150 Bar, 200 Bar or 300 Bar respectively at filling temperature of 15°C. Ginge-Kerr introduce systems with valve type 01-6471-0150/0200/0300 pneumatically operated capable of an operating pressure of 300 Bar. Where appropriate, selector valves included in the listed equipment can be used to enable a number of separate enclosures to be supplied with agent from a common cylinder bank of capacity somewhat less than that needed to fully supply all enclosures simultaneously. Ginge-Kerr ARGONITE nozzles are offered in sizes from ½" to 1 ½" with orifices of 3 mm to 26 mm. Maximum 30 m² coverage per nozzle is to be used.

Release of ARGONITE® in an enclosure (Total Flooding) means that the minimum design concentration is created within the entire room volume. In areas where space may be a restriction when installing a central bank system and the authority having jurisdiction will allow for a modular systems, cylinders located single or multiple units within the room may be used. The total quantity of ARGONITE® stored and the number of nozzles shall be that as required for a central bank system.

Technical specification

The following details are a representative extract of the technical specification for the Ginge-Kerr, ARGONITE® 300/200/150 bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing Systems and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Basic engineering data:

1.	Typical ARGONITE® concentration in enclosure after discharge.	40% v/v
2.	Minimum allowable ARGONITE® concentration in enclosure after discharge.	34% v/v
3.	Maximum allowable time to attain 95% of applicable minimum extinguishing concentration in enclosure (after initiation of discharge valve)(120 sec to attain minimum design concentration)	60 sec
4.	Allowable temperature range of equipment operation.	-20°C to 50°C
5.	Nominal internal volume of storage cylinder.	15,9; 67,5 and 80 litres
6.	Charging pressure of storage cylinder.	150, 200 or 300 bar @ 15°C
7.	Nett usable cylinder contents (mass basis).	6,3; 26,73 and 31,68 kg
8.	Nett usable cylinder contents (volume @ 15°C & 101.3 kPa absolute).	4,47; 18,99 and 22,5 m³

Supplementary information



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The components that have been evaluated and form part of the listed system include the following:

1. Cylinders

Description	DS/IN. num.	Rev.
Argonite cylinder 67.5 L with valve, 01-6471-0150 WP: 150 bar	01-1311-5900	0
Argonite cylinder 67.5 L with valve, 01-6471-0200 WP: 200 bar	01-1312-5900	0
Argonite cylinder 67.5 L with valve, 01-6471-0300 WP: 300 bar	01-1314-5900	0
Argonite cylinder 80.0 L with valve, 01-6471-0150 WP: 150 bar	01-1321-5900	0
Argonite cylinder 80.0 L with valve, 01-6471-0200 WP: 200 bar	01-1322-5900	0
Argonite cylinder 80.0 L with valve, 01-6471-0300 WP: 300 bar	01-1324-5800	0
Argonite cylinder 80.0 L with valve, 01-6471-0300 WP: 300 bar	01-1324-5900	0
Argonite cylinder 15.9 L with valve, 01-6471-0150 WP: 150 bar	01-1331-5900	0
Argonite cylinder 15.9 L with valve, 01-6471-0200 WP: 200 bar	01-1332-5900	0
Argonite cylinder 15.9 L with valve, 01-6471-0300 WP: 300 bar	01-1334-5900	0

2. Fixating components, accessories and valves

Description	DS/IN. num.	Rev.
Wall mounting rail 1 – 10 cylinders For: 67.5 / 80 L cylinders	01-8121/30-1000	4
Bracket single cylinder row For: 67.5 / 80 L cylinder	01-8131-0000	3
End cover for mounting rail for 01 8121/30-1000 and 15-9090-0002/7/11/13	01-8131-0002	3
Clamp for manifolds	01-8132/47-0000	2
Bracket for manifold	01-8160-0150/0830	1
Clamping bolts; 41 mm wall bracket/wooden spacer assemblies For: 67.5 / 80 L cylinders in 1, 2 and 3 rows	01-8337-0100/0300	1
Cylinder bracket For: Single 15.9 L cylinder	03-4572-0000	1
Wooden spacer 1x1 For: 67.5 / 80.0 L cylinder	03-8161-0000	2
Wooden spacer 1x2 For: 67.5 / 80.0 L cylinder	03-8162-0000	2
Wooden spacer 1x3 For: 67.5 / 80.0 L cylinder	03-8163-0000	2
Wooden spacer 2x2 For: 67.5 / 80.0 L cylinder	03-8164-0000	1
Wooden spacer 2x3 For: 67.5 / 80.0 L cylinder	03-8165-0000	1
Clamping bar 1 x 2 For: 67.5 / 80.0 L cylinder	03-8266-0000	1
Clamping bar 1 x 3 For: 67.5 / 80.0 L cylinder	03-8267-0000	1
Clamping bar 1 x 1 For: 67.5 / 80.0 L cylinder	03-8268-0000	1
Distance pipe 3/4" For : 15.9 / 67.5 / 80.0 L cylinders Multiple rows	03-8331-0000	3
Cross for activation line, 3 x 1/4" 60° cone, 1 x 1/4" swivel WP: 300 bar	01-4130-0000	3
Pressure regulator For pilot manifold WP: 300 bar	01-6017-0000	3
1/4" Ball valve with vent For pilot manifold WP: 40 bar	01-6205-0000	0
1/4" Ball valve with vent, 2 switches For pilot manifold WP: 40 bar	01-6210-0000	2
Handle for Actuator on Diverter Valve WP: N.A	01-6240/46-0001	1
Ball valves 1/2" – 2" with dual action pneumatic actuator For: distribution system WP: 355 - 500 bar	01-6240/46-0000	4
Non-return valve with connection for actuator WP: 300 bar	01-6363-0000	4
Check valve 3/4" NPT x 1/2" BSP 60° cone For: welded manifold WP: 300 bar	01-6454-0000	5
Check valve 1/2" BSP x 1/2" BSP 60° cone For: welded manifold WP: 200 bar	01-6455-0000	1
Pneumatic Argonite cylinder valve 150 Bar cylinder pressure	01-6471-0150	4
Cylinder connection, Male 25E EN629-1		

Issued by

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Description	DS/IN. num.	Rev.
Pneumatic Argonite cylinder valve 200 bar cylinder pressure Cylinder connection, Male 25E EN629-1	01-6471-0200	4
Pneumatic Argonite cylinder valve 300 bar cylinder pressure Cylinder connection, Male 25E EN629-1	01-6471-0300	4
Contact gauge unit Gold contacts. N.C. For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7171-1150/1300	3
Contact gauge unit Gold contacts. N.O. For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7171-2150/2300	0
Release unit, incl. manual Solenoid valve, 24 VDC Gold contacts For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7172-1150/1300	3
Release unit, incl. Manual Solenoid valve, 24 VDC, EExd IIC T6 Switch gold contacts For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7172-1159/1309	2
Release unit, incl. manual solenoid valve, 24 VDC Gold contacts. Normally Open For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7172-2150/2300	0
Release unit, incl. manual Solenoid valve, 24 VDC, EExd IIC T6 Switch gold contacts Normally Open For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7172-2159/2309	0
Release unit Solenoid valve, 24 VDC Gold contacts For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7173-1150/1300	3
Solenoid valve unit Solenoid valve, 24 VDC, EExd IIC T6 For valve: 01-6471-0150/0200/0300 WP: 150/200/300 bar	01-7173-1159/1309	2
Male adapter union ø6 x 1/4" MA. BSP 60° cone AISI 316 WP: 300 bar	15-8667-0615	2
Male adapter union ø1/4" x 1/4" MA. BSP 60° cone AISI 316 WP: 300 bar	15-8667-0616	1
T Piece for activation line, 2 x 60° cone, 1 x swivel WP: 300 bar	15-8685-0651	3
Tube ø6 x 1 mm seamless AISI 316 WP: 300 bar	15-9255-0000	N.A.
Tube ø1/4" x 0.89 mm seamless AISI 316 WP: 300 bar	15-9255-0011	N.A.

3. Hoses

Description	DS/IN. num.	Rev.
Flex hose 1/4" x 2 x 90° Couplings: 60° steel, zinc plated WP: 300 bar	01-3271-0100/0200	4
Flex hose 1/4" straight Couplings: 60° steel, zinc plated WP: 300 bar	01-3272-0100/0300	4
Flex hose 1/4" with 1 x 90°, 1 x straight Couplings: 60° steel, zinc plated WP: 300 bar	01-3273-0050/0200	5
Discharge hose 1/2" 60° cone x M25 x 1,5 60° cone Couplings: Steel, zinc plated WP: 300 bar	01-3284-0100/0200	2

4. Manifolds

Description	DS/IN. num.	Rev.
Manifold outlet, Fe/NPT For: 2 – 10 cylinders, single row, WP: 200 bar	01-3506-2011/2019	2
Manifold outlet, Fe/NPT For: 4 – 20 cylinders, two rows, WP: 200 bar	01-3506-2021/2029	2
Manifold outlet, Fe/BSP For: 2 – 10 cylinders, single row, WP: 300 bar	01-3506-3011/3019	3
Manifold outlet, Fe/NPT For: 4 – 20 cylinders, two rows, WP: 300 bar	01-3506-3021/3029	3
Manifold outlet, Fe/BSP For: 2 – 10 cylinders, single row, WP: 300 bar	01-3506-3111/3119	2
Manifold outlet, Fe/BSP For: 4 – 20 cylinders, two rows, WP: 300 bar	01-3506-3121/3129	2
Diverter Valve System Pilot Manifold Assembly for 2/3/4 and 5 Diverter Valves, WP: 150/200/300 bar	01-3508-0002/5	0

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5. Restrictors

Description	DS/IN. num.	Rev.
Restrictor 1/2" – 2" for socket mounting NPT, Male – NPT, Female WP: 300 bar	01-3701-1030/5360	6
Restrictor 1" – 2" for nipple mounting NPT, Female – NPT, Female WP: 300 bar	01-3702-3050/5360	7
Restrictor 1/2" – 2" for socket mounting NPT, Male – BSP, Female WP: 300 bar	01-3703-1030/5360	6
Restrictor 1" – 2" for nipple mounting NPT, Female – BSP, Female WP: 300 bar	01-3704-3050/5360	6
Restrictor 1/2" for single cylinder BSP, Male NPT, BSP, Female WP: 300 bar	01-3705/6-1030/1070	4
Adapter for MA NPT – FE BSP, 1/2" – 2" WP: 150 bar	01-3710-1000/5000	0
Orifice plate, ø15 – ø70 Class 1500 flanges WP: 200 bar	01-3801-1150/4700	1
Orifice plate, ø15 – ø70 For: JIS standard flanges WP: 200 bar	01-3802-1150/4700	1
Orifice plate, ø15 – ø70 For: Class 2500 stand. Flanges WP: 300 bar	01-3803-1150/4700	2
Orifice plate, ø15 – ø70 For: JIS standard flanges WP: 300 bar	01-3804-1150/4700	0

6. Discharge nozzles

Description	DS/IN. num.	Rev.
Argonite nozzle assembly Threaded: BSPT	01-3465-1200/1500	3
Argonite nozzle assembly Threaded: NPT	01-3465-2200/2500	3

7. Pressure Indicators/relief and cylinder valve actuators

Description	DS/IN. num.	Rev.
Pressure relief device for 150 / 200 / 300 bar. Burst pressure: Max. 300 / 450 bar For: Distribution manifolds	01-6653-0001/0103	3
Pressure gauge 1/2" down ø100 mm. 0-600 bar, x 100 kPa For: Distribution manifolds	01-7221-0300	1
Pressure switch high (PSH) For distribution piping WP: 90 bar	03-5713-0000	2
Leak valve, 1/4" BSP FE For: Actuator line WP: 300 bar.	01-3388-0000	3
Leak valve, 1/4" BSP MA/FE For: Actuator line WP: 300 bar.	01-3388-0001	0
Manual release unit WP: 300 bar	01-4162-0000	3

8. Instructions and manuals

Description	DS/IN. num.	Rev.
Instruction, assembly of contact pressure gauge/release unit on Argonite cylinder Valve, 01-6471-0XX0	01-7172-0004	3
Instruction, pressure vent from bursting disc's, cylinder valves	90-000-815	2
Instruction, pressure vent from bursting disc, manifold	90-000-816	Hold
Ginge-Kerr ARGONITE® Fire Extinguishing System Manual	MA-01-9006-0100	3
Ginge-Kerr ARGONITE® System Installation Procedure; Chapter 8	MA-01-9006-0100	4
VdS Calculation Program for ARGONITE® Fire Extinguishing Systems; Chapter 7	MA-01-9006-0100	5
Ginge-Kerr ARGONITE® System Maintenance Procedure; Chapter 14	MA-01-9006-0100	5

9. Warning signs/labels

Description	DS/IN. num.	Rev.
Label for Argonite cylinder 15.9 l, 67.5 l and 80.0 l WP: 150 bar	01-2132-0100/1802	0
Label for Argonite cylinder 15.9 l, 67.5 l and 80.0 l WP: 200 bar	01-2133-0100/1802	0
Label for Argonite cylinder 15.9 l, 67.5 l and 80.0 l WP: 300 bar	01-2134-0100/1802	0
Transport Label, Argonite 150 bar, Yellow	01-2141-0000	0
Transport, Argonite 200 bar, Blue	01-2142-0000	0
Transport Label, Argonite 300 bar, Green	01-2143-0000	0
Warning sign Argonite vent	01-2172-0200	1
Warning sign for access door	01-2173-0200	1
Warning sign for alarm	01-2174-0200	1
Warning sign for Alarm (Extinguishing)	01-2175-0200	0
Warning sign for Door (Extinguishing)	01-2175-0201	0
Warning sign storage room	01-2200-0002	0
Warning sign for access door	01-2233-0200	0
Icon for escape route	01-2234-0000	0

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10. Tools

Description	DS/IN. num.	Rev.
Filling adapter, 01-6471-0XX0, Gauge Connection	01-6477-0000	2
Filling adapter, 01-6471-0XX0, Outlet connection	01-6477-0100	1
Filling adapter, 01-6471-0XX0, Gauge Connection, 1/2" NPT	01-6477-1000	0
Filling adapter, 01-6471-0XX0, Outlet connection, 1/2" NPT	01-6477-1100	0
Test Equipment Oxygen & Pressure	01-7000-0000	0
Torque Wrench Kit	01-9600-0100	0
Cylinder Trolley Electrical	01-9700-0000	0
Pilot Line Test Unit	01-9800-0000	0

Piping and fittings requirements:

All pipework, including pipe fittings, of a Ginge-Kerr, ARGONITE®, 300 bar, Inert Gas, Total-Flood Type Fixed Fire Extinguishing System shall be of standard carbon steel, low temperature carbon steel, Stainless steel AISI 304 or AISI 316 Copper tubing etc.

Wall thickness of alternative pipe qualities selected pipe shall be calculated in accordance with ASME B31.1, Power Piping Code or in accordance with AS 4041 "Pressure Piping" unless manufacturer documentation ensures that the selected pipe will be capable of withstanding the design pressure.

Special corrosion-resistant materials or coatings shall be required in severely corrosive atmospheres.

The internal pressure used for calculation of wall thickness of pipes shall be the maximum peak pressure calculated at the maximum operating temperature.

In sections, where valve arrangement introduces section of closed piping, such sections shall be equipped with a pressure relief device and pressure gauge.

Closed pipe section to be given equal attention as these of the discharge manifold.

A variety of fittings can be used in the distribution pipework, common for all fittings is that they shall be capable of withstanding a test pressure of 1,5 times the maximum pressure that can be present in the pipework.