



## CERTIFICATE OF FIRE APPROVAL


This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

<b>Manufacturer</b>	Akron Brass Company
<b>Address</b>	343 Venture Blvd Wooster OH 44691 United States of America (USA)
<b>Type</b>	HOSE NOZZLE
<b>Description</b>	Hose Nozzle – Type: 'TURBOJET' Type 3 Dual Purpose Spray/Jet nozzles Model Nos. 1702, 1720, 1733 and 1772
<b>Specified Standard</b>	EN 15182-1:2007 EN 15182-2:2007

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	18 January 2017	Expiry date	17 March 2020
Certificate No.	SAS F150054/M2	Signed	 <small>Lloyd's Register EMEA</small>
Sheet No	1 of 4	Name	S. Abraham Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

**Note:**

**This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.**

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
18 January 2017	SOUTSO/SFS/TA /RDS/SA/WP26193894 &WP22426494

**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F150054/M2**

This Design Appraisal Document (schedule) forms part of the Certificate.

**APPROVAL DOCUMENTATION**

Akron Brass Company, Engineering Reports for nozzle types 1702, 1720 and 1733 all dated 30 June 2010.

Akron Brass Company Report for Nozzle type 1772 dated 25 November 2013.

Lloyd's Register Chicago Office, USA, Certificate of Test No. CGO0951115/1 dated 18 June 2010.

Akron Brass Company Report for Nozzle type 1772 (for 6 bar nozzle) dated 24 October 2014.

Akron Brass Company Drawings No: D44218\_16 (for Nozzle types: 1702, and 1772), No: D45933\_07 (for Nozzle type: 1720), No: D47645\_01 (Nozzle Body for 6 & 7 bar style 1772 nozzle), No: C47641\_00 (Discharge Tube for 6 bar style 1772 nozzle), No: C47642\_00 (Discharge Tube for 7 bar style 1772 nozzle), No: C47644\_00 (Pattern Sleeve for 6 & 7 bar style 1772 nozzle)

**CONDITIONS OF CERTIFICATION**

1. Dual purpose type nozzles with spray/jet operation, types: 1702, 1720, 1733 and 1772
2. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype
3. Minimum operating performance characteristics:

Model No.1702 (1 inch/25mm dia.)

Pressure (bar)	Jet Flow Rate (Litres/min)	Effective Throw of Jet at 30 Degrees (m)
7	230	26.5
7	150	24
7	100	18
7	50	12

Model No.1720 (1.5 inch/38mm dia.)

Pressure (bar)	Jet Flow Rate (Litres/min)	Effective Throw of Jet at 30 Degrees (m)
7	475	42.5
7	360	40
7	230	28
7	115	18



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Model No.1733 (2.5 inch/65mm dia.)

Pressure (bar)	Jet Flow Rate (Litres/min)	Effective Throw of Jet at 30 Degrees (m)
7	950	40
7	750	39
7	550	36
7	475	34

Model No.1772 (1 inch/25mm dia.)

Pressure (bar)	Jet Flow Rate (Litres/min)	Effective Throw of Jet at 30 Degrees (m)
7	250	32
7	150	27.2
7	100	23.9
7	50	19.2

Model No.1772 (1 inch/25mm dia.)

Minimum Operating Pressure (bar)	Jet Flow Rate (Litres/min)	Effective Throw of Jet at 30 <sup>0</sup> (metres)
6	235	27.7
6	167	24.7
6	121	21.9
6	75	20.8

**NOTE**

Performance testing was generally in accordance with SOLAS II-2, Regulations 10.2.1.6 & 10.2.3.1. The maximum pressure at any hydrant shall not exceed that at which the effective control of a fire hose can be demonstrated.



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## Lloyd's Register EMEA

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#### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F150054/M2

##### PLACE OF PRODUCTION

Akron Brass Company  
343 Venture Blvd  
Wooster  
OH 44691  
United States of America (USA)



Saji Abraham  
Senior Specialist  
Southampton Technical Support Office  
Marine & Offshore Lloyd's Register

##### Supplementary Type Approval Terms and Conditions

*This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).*