BRONZE ATTACK 500 NOZZLE

A500-SM & CM NOZZLE

Selectable or Constant Flow Firefighting Nozzle

Rev: B

15TH FEBRUARY 2021

Delta Fire Ltd

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ASSISTANCE

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IN LINE WITH OUR POLICY OF CONTINUOUS IMPROVEMENT, WE RESERVE THE RIGHT TO AMEND ANY SPECIFICATION WITHOUT NOTICE

Shown with British Instantaneous Adaptor (full range of International adaptors available)

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1.0 Introduction

WARNING

This manual is intended to provide the basic instructions for the operation and maintenance of Delta Nozzles. Please carefully study and understand these operating instructions before use since they contain important safety information.

Operating this Nozzle without understanding the manual and receiving proper training can be dangerous.

All Delta Nozzles should only be operated by trained personnel who are familiar with the potential hazards in using this type of equipment.

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- The Delta Attack 500 Nozzle is suited to a wide range of firefighting scenarios and if maintained properly will provide the user with many years of trouble free service.
- Manufactured from bronze, the Attack 500 Nozzle is suitable for continuous use with salt water and resilient to harsh environments - ideal for the Marine & Offshore markets.
- The Delta Attack 500 Nozzle is available with all major international fittings and BSP male or female inlet swivel connections.
- Specially profiled Stainless Steel Ball Valve provides ease of rapid nozzle opening & closing (pulsing).
- Pattern Shaper/Front Bumper twists to adjust the stream pattern from flush position from shut off through a full range of spray angles to straight stream.
- Stainless Steel Spinning Turbine Teeth producing high performance spray patterns.

Low Maintenance

Stainless Steel Spinning Teeth

A Ten Year Warranty backed up by excellent customer service and support

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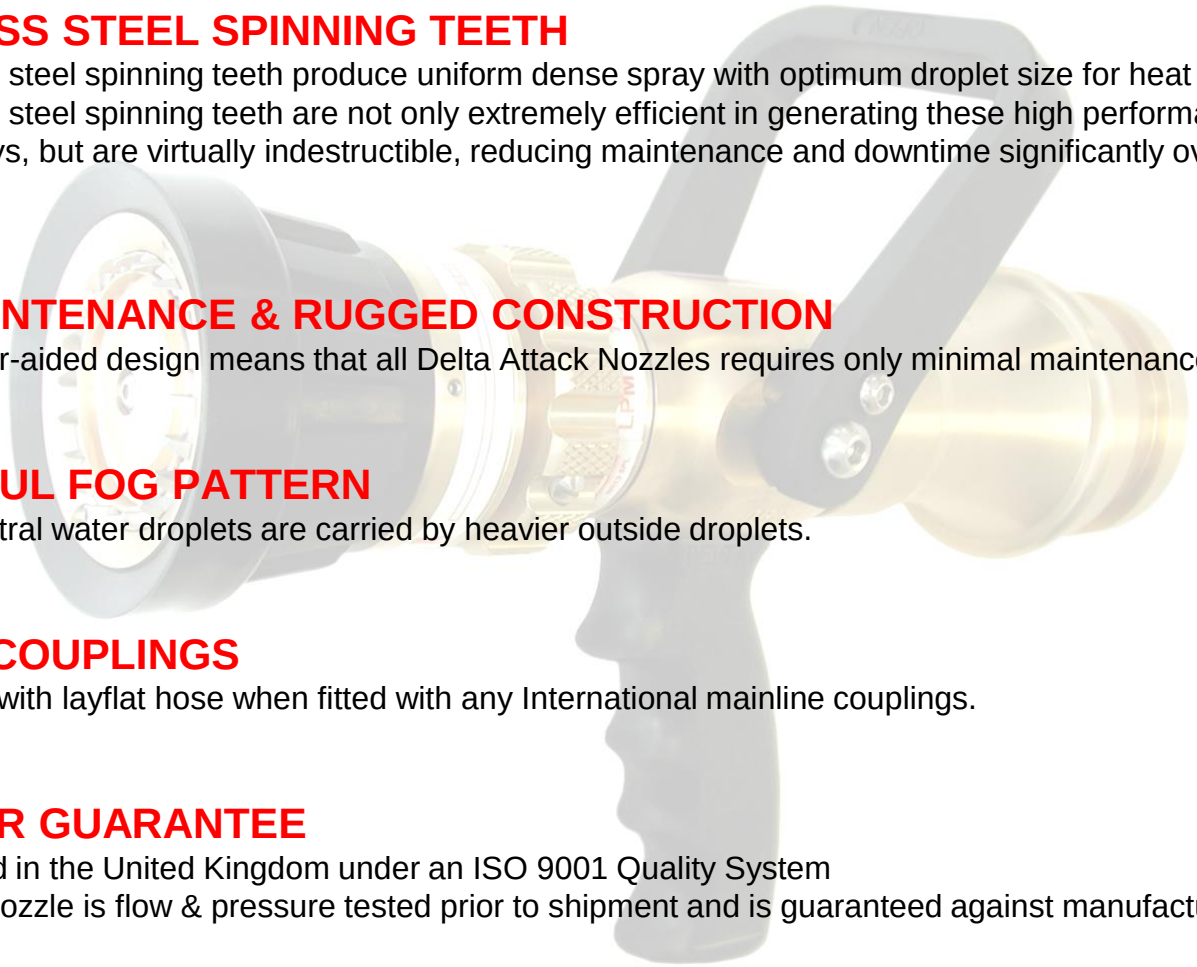

STAINLESS STEEL SPINNING TEETH

The stainless steel spinning teeth produce uniform dense spray with optimum droplet size for heat absorption. The stainless steel spinning teeth are not only extremely efficient in generating these high performance uniform sprays, but are virtually indestructible, reducing maintenance and downtime significantly over the life of the nozzle.

LOW MAINTENANCE & RUGGED CONSTRUCTION

The computer-aided design means that all Delta Attack Nozzles requires only minimal maintenance.

POWERFUL FOG PATTERN

Very fine central water droplets are carried by heavier outside droplets.

HOSE & COUPLINGS

Ideal for use with layflat hose when fitted with any International mainline couplings.

TEN YEAR GUARANTEE

Manufactured in the United Kingdom under an ISO 9001 Quality System
Each Delta Nozzle is flow & pressure tested prior to shipment and is guaranteed against manufacturing defect for 10 years.

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1.2 Model Types

Construction & Specification

SPECIFICATION	NG2S604__	NG2S702__	NG2C611__	NG2C613__
MAIN BODY / BARREL	BRONZE	BRONZE	BRONZE	BRONZE
SPINNING TEETH	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
FRONT BUMPER	SHOCKPROOF POLYURETHANE	SHOCKPROOF POLYURETHANE	SHOCKPROOF POLYURETHANE	SHOCKPROOF POLYURETHANE
WEIGHT	3.5 Kg (EXCLUDING INLET)	3.5 Kg (EXCLUDING INLET)	3.5 Kg (EXCLUDING INLET)	3.5 Kg (EXCLUDING INLET)
STANDARD INLET TYPE	1.5” BSP FEMALE (02) 2” BSP MALE (03) 2.5” INST MALE (04)	1.5” BSP FEMALE (02) 2” BSP MALE (03) 2.5” INST MALE (04)	1.5” BSP FEMALE (02) 2” BSP MALE (03) 2.5” INST MALE (04)	1.5” BSP FEMALE (02) 2” BSP MALE (03) 2.5” INST MALE (04)
FLOW RATE	115-230-360-475 lpm @ 6 bar	125-250-375-500 lpm @ 7 bar	360 lpm @ 6 bar	475 lpm @ 6 bar
MAX USE PRESSURE	16 bar	16 bar	16 bar	16 bar
MAX ADVISED WORKING PRESSURE	12 bar	12 bar	12 bar	12 bar
RECOMMENDED INLET PRESSURE	5 - 8 bar	5 - 8 bar	5 - 8 bar	5 - 8 bar
MIN OPERATIONAL PRESSURE [1]	3 bar	3 bar	3 bar	3 bar

[1] Recommended only – Nozzle will function down to 1 bar

⚠ **Use extra caution at higher pressures**

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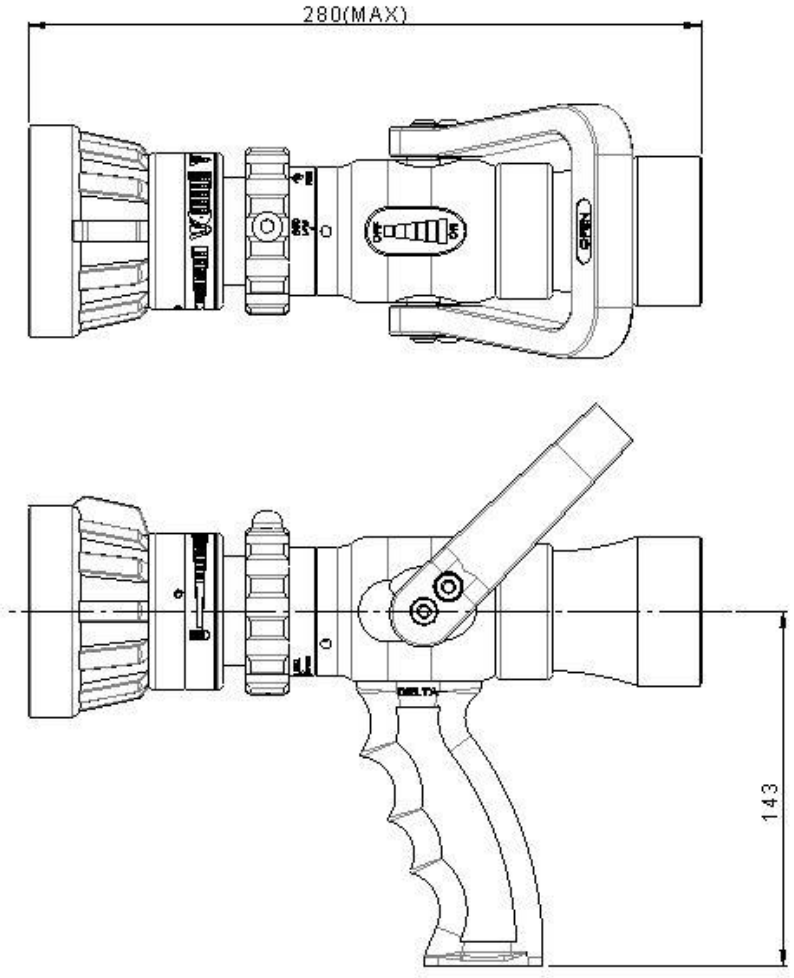
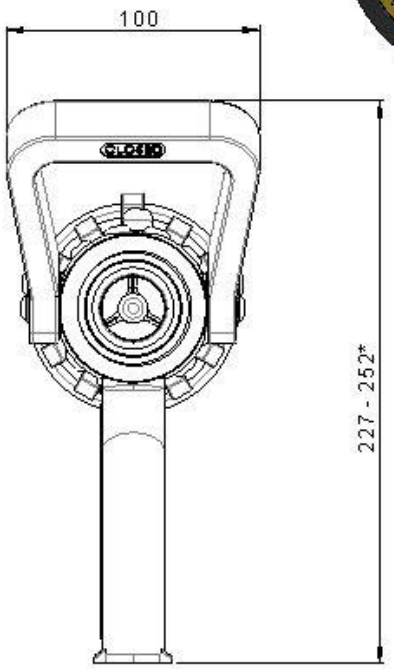
1.3 Drawing GA





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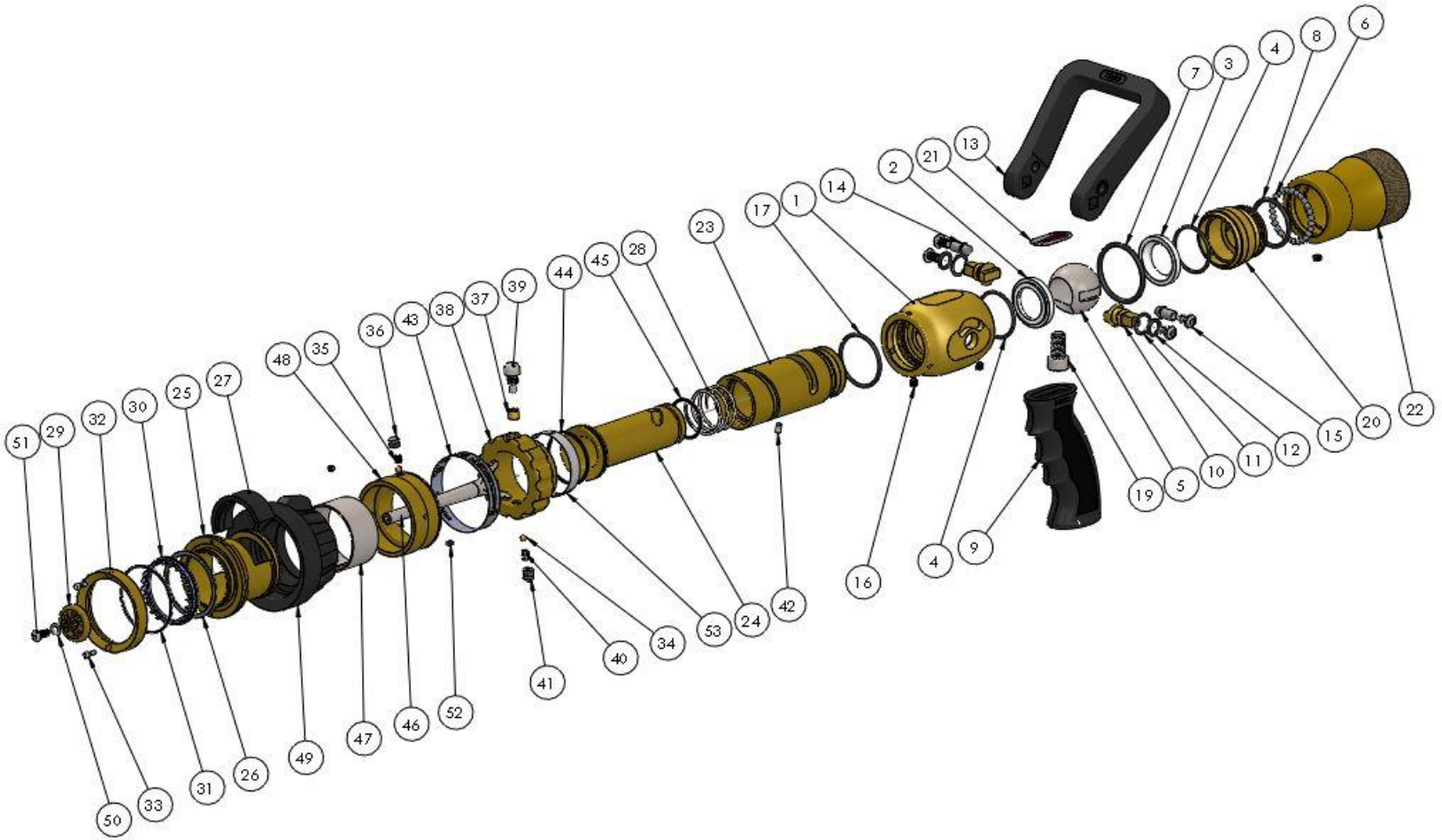
1.4 Illustrated Parts Breakdown



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1.5 Spare Parts List

ITEM NO.	DESCRIPTION	QTY.
1	A500 PUSH FIT BODY	1
2	FRONT 6.7mm SEAL	1
3	REAR BALL 7.00 PTFE SEAL	1
4	REAR SEAL O-RING 34.6X2.4	2
5	STAINLESS STEEL BALL VALVE	1
6	3/16" STAINLESS STEEL BALL	54
7	O-RING 42.86 X 3.53	1
8	INLET COUPLING O-RING 35 X 3	1
9	PISTOL GRIP HANDLE (BLACK)	1
10	DRIVE SPINDLE	2
11	DRIVE SPINDLE WASHER	1
12	O-RING 9.6 X 2.4	2
13	CONTROL HANDLE (BLACK)	1
14	CONTROL HANDLE STOP PIN	2
15	M6 X 10 FLANGED HEAD SCREW	4
16	M5 X 5 GRUB SCREW	2
17	39.35 X 2.62 O-RING	1
18	GRUB SCREW M6 X 4 (A2)	1
19	M10 X 20 SHCS | (A2)	1
20	REAR SEAL HOLDER	1
21	ON - OFF LABEL	1
22	1 1/2" BSP MALE COUPLING	1
23	A500 PUSH FIT BARREL	1
24	A500 PUSH FIT IBS - SELECT FLOW	1
25	A500 PF SHAPER	1
26	A500 ST REAR BEARING	1
27	A500 SHAPER INSERT	1

ITEM NO.	DESCRIPTION	QTY.
28	A500 INNER BARREL SPRING	1
29	A500 PUSH FIT BAFFLE	1
30	A 500 SPINNING TEETH	1
31	A500 PTFE FRONT BEARING	1
32	A500 PUSH FIT RETAINING RING	1
33	RETAINING RING SHCS M3 X10 316/A4	2
34	CLICK BALL 3/16TH TORLON	2
35	CLICK SPRING SHORT	1
36	SHAPER GUIDE CLICK HOLDER SHORT	1
37	A500 PF DRIVE PIN BUSH	1
38	A500 PUSH FIT DIAL COLLAR	1
39	DIAL COLLAR DRIVE PIN	1
40	DIAL COLLAR CLICK SPRING (C6605990)	1
41	DIAL COLLAR CLICK HOLDER STANDARD	1
42	A500 ANTI SPIN PIN	1
43	SHAPER GUIDE LABEL	1
44	40 X 2 O-RING (FRONT IBS)	1
45	29 X 2 O-RING (REAR IBS)	1
46	A500 PUSH FIT STEM	1
47	SHAPER INSERT RETAINING SPRING	1
48	A500 PUSH FIT SHAPER GUIDE	1
49	A500 PUSH FIT BUMPER BLACK	1
50	M5 WASHER - GRADE A4	1
51	M5 X 12 X 0.8P BHS A4	1
52	M4 X 4 SCKT GRUB SCREW A4/316	2
53	SELECT FLOW LABEL	1

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DELTA FIRE

BS EN 15182-1:2019
BS EN 15182-2:2019
BS EN 15182-4:2019

ANNEX C (normative)

Datasheet for hand-held branchpipes for fire service use - Part 2 & Part 4 Combination Branchpipe PN16/PN40

General Data

Manufacturer	Delta Fire Limited
Type	Type 3, variable pattern at selectable flow

Type according to	Style A100-S, A100-RN, A500-S and A500-SM
	EN15182-1:2019 - type 3
	EN15182-2:2019 - type 3
	EN15182-4:2019 - type 3

	A100-S at [Pr] 6 bar	A100-RN at [Pr] 6 bar	A500-S at [Pr] 6 bar	A500-SM at [Pr] 6 bar
Flow Rate settings	30-100-150-230 LPM	30-100-150-230 LPM	125-250-350-450 LPM	125-250-350-450 LPM

Type of spray	Hollow cone spray

Operational Devices	
Fitting System	Full Time restricted swivel
Gripping device	Pistol grip
Open / shut-off device	Hand operated ball valve
Jet / spray system	Rotating element
Flow adjustment system	Rotating element

Requirements

	Number of the relevant subclause of this part of this Standard	Item	BS EN 15182-4:2019 A100-S Test result 6 bar	BS EN 15182-4:2019 A100-RN Test result 6 bar	BS EN 15182-2:2019 A500-S Test result 6 bar	BS EN 15182-2:2019 A500-SM Test result 6 bar
OPERATING AND HANDLING		Dimension (mm) (Max)	270 x 240 x 100	270 x 240 x 100	280 x 240 x 100	280 x 240 x 100
		Mass (Kg)	1.6	1.6	1.6	1.7
		Torques needed for moving operating elements (N-m)				
		Lever				
		Valve Handle	1.6 Nm	1.6 Nm	1.6 Nm	1.6 Nm
		Flow adjustment element	0.7 Nm	0.7 Nm	0.7 Nm	0.7 Nm
		Jet adjustment element	0.7 Nm	0.7 Nm	0.7 Nm	0.7 Nm
		Rotating inlet element	1.2 Nm	1.2 Nm	1.2 Nm	1.2 Nm
		Flow adjustment Rotation from minimal to maximal flow	95°	95°	95°	95°
		Jet adjustment Rotation from straight jet to wide spray jet with a minimal spray angle of 100°	160°	160°	158°	158°
PERFORMANCE		Effective throw (m)				
		Spray jet (m)	30	30	45	45
		Wide spray jet: angle	120°	180°	120°	120°
		Narrow spray jet: angle	30°	30°	30°	30°
PHYSICS		Sensitivity to frost (°C)	Passed	Passed	Passed	Passed
		Sensitivity to heat (°C)	Passed	Passed	Passed	Passed
		Non-obstruction test (mm)	Passed	Passed	Passed	Passed
		Burst pressure (bar)	Passed	Passed	Passed	Passed

ANNEX C (normative)

Datasheet for hand-held branchpipes for fire service use - Part 2 & Part 4 Combination Branchpipe PN16/PN40

General Data

Manufacturer	Delta Fire Limited
Type	Type 2, variable pattern at constant flow

Type according to	Style A100-C, A500-C, A500-CM and A500-CM+
	EN15182-1:2019 - type 2
	EN15182-2:2019 - type 2
	EN15182-4:2019 - type 2

Flow Rate settings	A100-C at [Pr] 6 bar	A500-C at [Pr] 6 bar	A500-CM at [Pr] 6 bar	A500-CM+ at [Pr] 6 bar
	230 LPM	450 LPM	450 LPM	550 LPM

Type of spray	Hollow cone spray

Operational Devices	
Fitting System	Full Time restricted swivel
Gripping device	Pistol grip
Open / shut-off device	Hand operated ball valve
Jet / spray system	Rotating element
Flow adjustment system	Rotating element

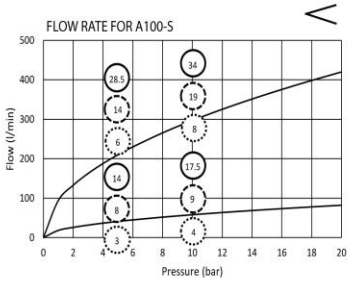
Requirements

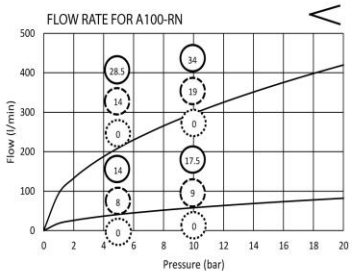
	Number of the relevant subclause of this part of this Standard	Item	BS EN 15182-4:2019 A100-C Test result 6 bar	BS EN 15182-2:2019 A500-C Test result 6 bar	BS EN 15182-2:2019 A500-CM Test result 6 bar	BS EN 15182-2:2019 A500-CM+ Test result 6 bar
OPERATING AND HANDLING		Dimension (mm) (Max)	270 X 240 X 100	280 X 240 X 100	280 X 240 X 100	280 X 240 X 100
		Mass (Kg)	1.6	1.6	3.7	3.7
		Torques needed for moving operating elements (N-m)				
		Lever				
		Valve Handle	1.6 Nm	1.6 Nm	1.6 Nm	1.6 Nm
		Flow adjustment element	0.7 Nm	0.7 Nm	0.7 Nm	0.7 Nm
		Jet adjustment element	0.7 Nm	0.7 Nm	0.7 Nm	0.7 Nm
		Rotating inlet element	1.2 Nm	1.2 Nm	1.2 Nm	1.2 Nm
		Flow adjustment Rotation from minimal to maximal flow	95°	95°	95°	95°
		Jet adjustment Rotation from straight jet to wide spray jet with a minimal spray angle of 100°	160°	158°	158°	158°
PERFORMANCE		Effective throw (m)				
		Spray jet (m)	30	45	45	45
		Wide spray jet: angle	120°	120°	120°	120°
		Narrow spray jet: angle	30°	30°	30°	30°
PHYSICS		Sensitivity to frost (°C)	Passed	Passed	Passed	Passed
		Sensitivity to heat (°C)	Passed	Passed	Passed	Passed
		Non-obstruction test (mm)	Passed	Passed	Passed	Passed
		Burst pressure (bar)	Passed	Passed	Passed	Passed

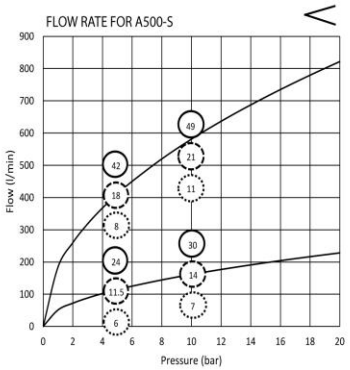
Flow - Pressure Chart

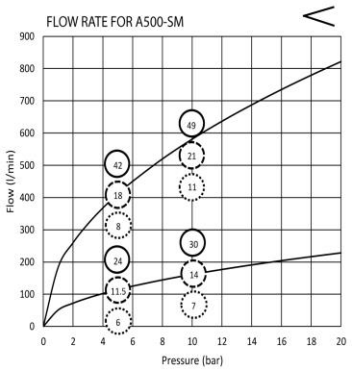
1.6 Annex C

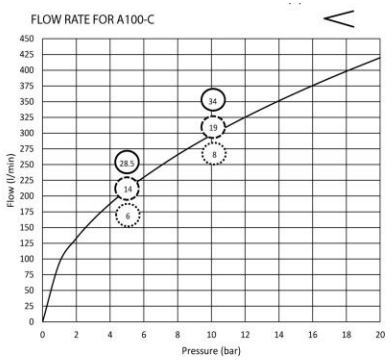
EN15182-1 2019, EN15182-2 2019

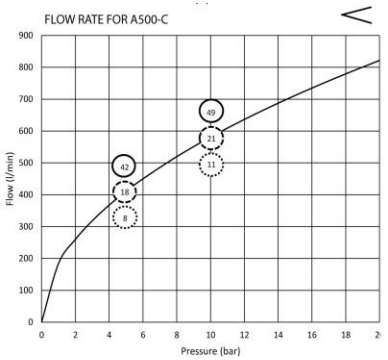


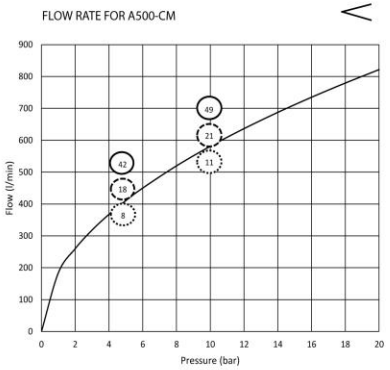


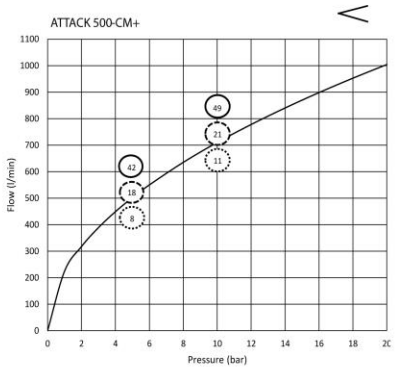












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PRODUCT CAUTIONS

For use with water or standard fire fighting foams only.

Flush immediately after use with fresh water after using with foam, salt or brackish water.

Delta Fire Nozzles are configured for optimum performance and must never be altered in any way unless authorized by the manufacturer in writing.

PRODUCT WARNINGS

The Nozzles should only be operated by trained personnel who are fully conversant with the substantial reaction forces that all Nozzles with similar flows exhibit. Rapid charging with water may cause a pressure surge which has the potential to cause an injury and damage the Nozzle and associated equipment. Always aim the Nozzle in a safe direction before pressurizing with water.

DO NOT exceed the maximum pressure rating of the Nozzle. Exceeding this has the potential to cause an injury or damage the Nozzle.

Delta Attack Nozzles require an adequate supply of Nozzle pressure and / or flow in order to provide an effective fire fighting stream. An inadequate water supply will produce an ineffective water stream, and could result in injury, death or loss of property.

Water is a conductor of electricity and the application of water on to high voltage equipment can cause injury or death by electrocution. The amount of current that may be carried back to the Nozzle will depend on the following factors:

- Whether the stream is solid jet or broken spray pattern.
- The line voltage or equipment voltage.
- Distance from the Nozzle.
- Volume of the stream.

The purity of the water - foam solutions and brackish or salt water may be more conductive. Some guidance is given in BS EN 15182-1 : 2007.

Operatives should always inspect their Delta Attack Nozzle prior to and after each use; to ensure it is in good operating condition. See Section 3.0 Field Maintenance for further details.

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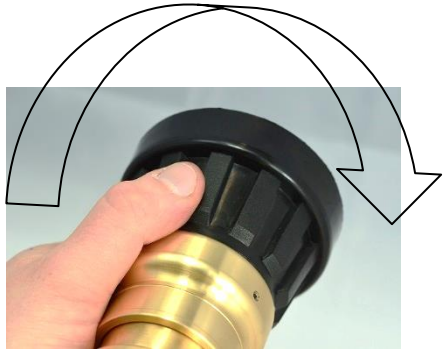
Front Bumper Spray Pattern

The Delta Nozzles have full water stream pattern control from straight stream to wide spray/fog.

A. Delta Attack 500 Nozzles have full pattern control from straight stream to wide fog. Turning the Bumper head clockwise (as seen from the operating position behind the Nozzle) moves the Nozzle to straight stream full jet position. Turning the Front Bumper counter clockwise will result in an increasingly wider spray pattern.

B. The Nozzle reaction is greatest when the Nozzle is in the full jet position. The Nozzle operator must be prepared for a change in reaction as the pattern is changed.



C. If the Nozzle gets out of control or away from the operator, retreat from the Nozzle immediately and DO NOT attempt to regain control whilst flowing water.

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Maintenance Checks

WARNING

Operatives should always inspect their Delta Attack Nozzle prior to and after each use; to ensure it is in good operating condition.

All Delta Nozzles are designed to provide years of reliable low maintenance use and are designed to resist the rigors of operational use. However, as a primary operational fire fighting tool on which fire fighter safety and life depends, they must be properly maintained and periodically inspected at intervals according to use and must always be inspected for proper function before each and every operational use.

As a minimum the following should always be checked before use:-

- ✓ There is no obvious damage such as missing, broken or loose parts, damaged labels etc.
- ✓ The Front Bumper Pattern Shaper turns freely and adjusts pattern through the full jet/spray range.
- ✓ No excessive wear or play on the controls.
- ✓ No water leaks.

If any of the above or any other abnormal characteristics are observed, or any controls are either inoperable or difficult to operate, then the Nozzle should be immediately withdrawn from service. The Nozzle must not be used in operational service until the problem has been corrected.

Additional periodic checks are also recommended.

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WARNING

Delta Nozzles should always only be used for their intended purpose of water delivery and the following should be avoided:

- ❑ Using the Nozzle as a forcible entry tool.
- ❑ Operating above the maximum rated pressure.
- ❑ Prolonged exposures to temperatures above +55° C or below -25° C.
- ❑ Not draining and allowing water to freeze inside the Nozzle.
- ❑ Dropping the Nozzle from excessive height.

Any Nozzle removed from service for repair and or maintenance should be fully tested by a qualified Nozzle technician prior to placing the Nozzle back into service.

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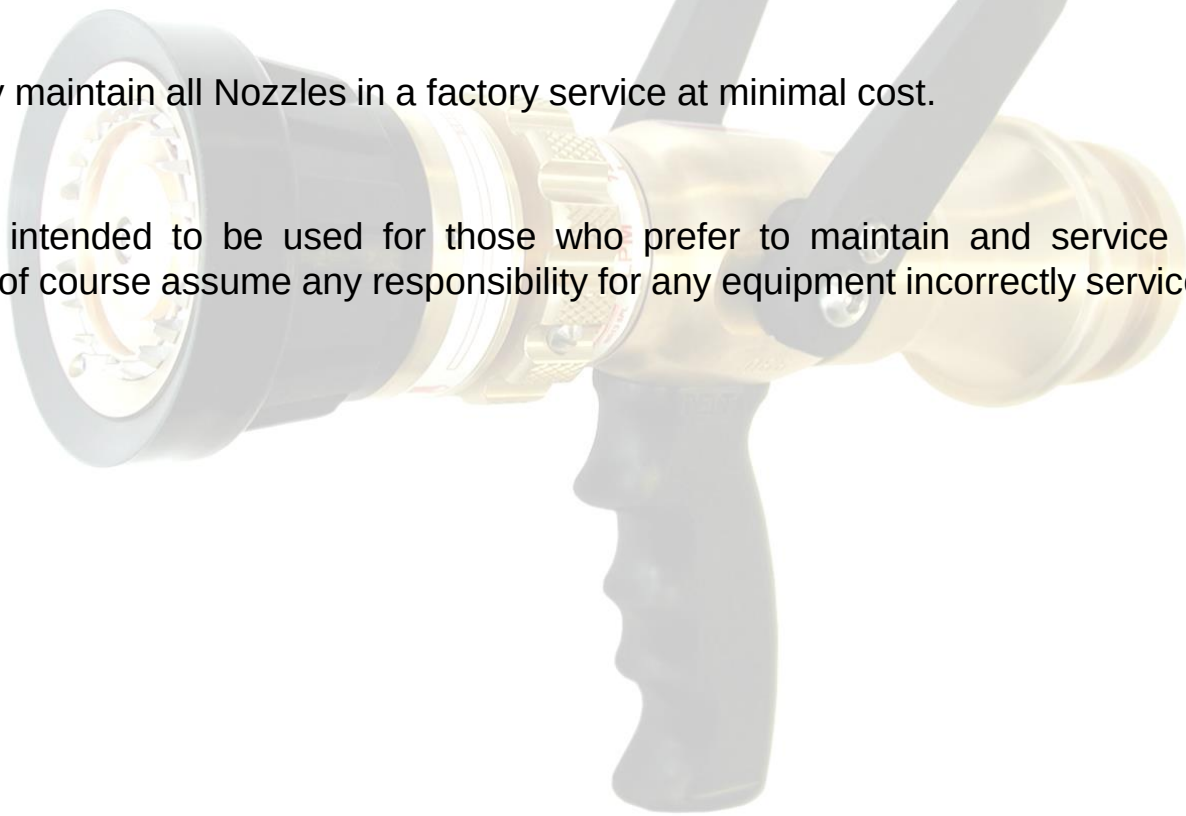
3.2 Maintenance

Routine Ongoing Maintenance & Service

The Delta Bronze Attack 500-SM & CM Nozzles are manufactured in the UK to the very highest engineering standards under an ISO9001 Quality Management Standard and will provide years of valuable service with occasional inspection and service.

Delta Fire will fully maintain all Nozzles in a factory service at minimal cost.

These notes are intended to be used for those who prefer to maintain and service their own Nozzles. Delta Fire cannot of course assume any responsibility for any equipment incorrectly serviced by the end user.



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INSPECTION

The Nozzle should always be examined before each operational use in accordance with the field inspection procedures described in section 4. In addition, it is recommended that there is a routine inspection program which covers all these points in a secondary inspection which also ensures that the Nozzle is kept clean, and all normal functions are checked.

Periodic lubrication will help ensure smooth operation and free up any dry stiffening actions.

The recommended lubricant is a silicone spray grease Ambersil AMS4 or equivalent.

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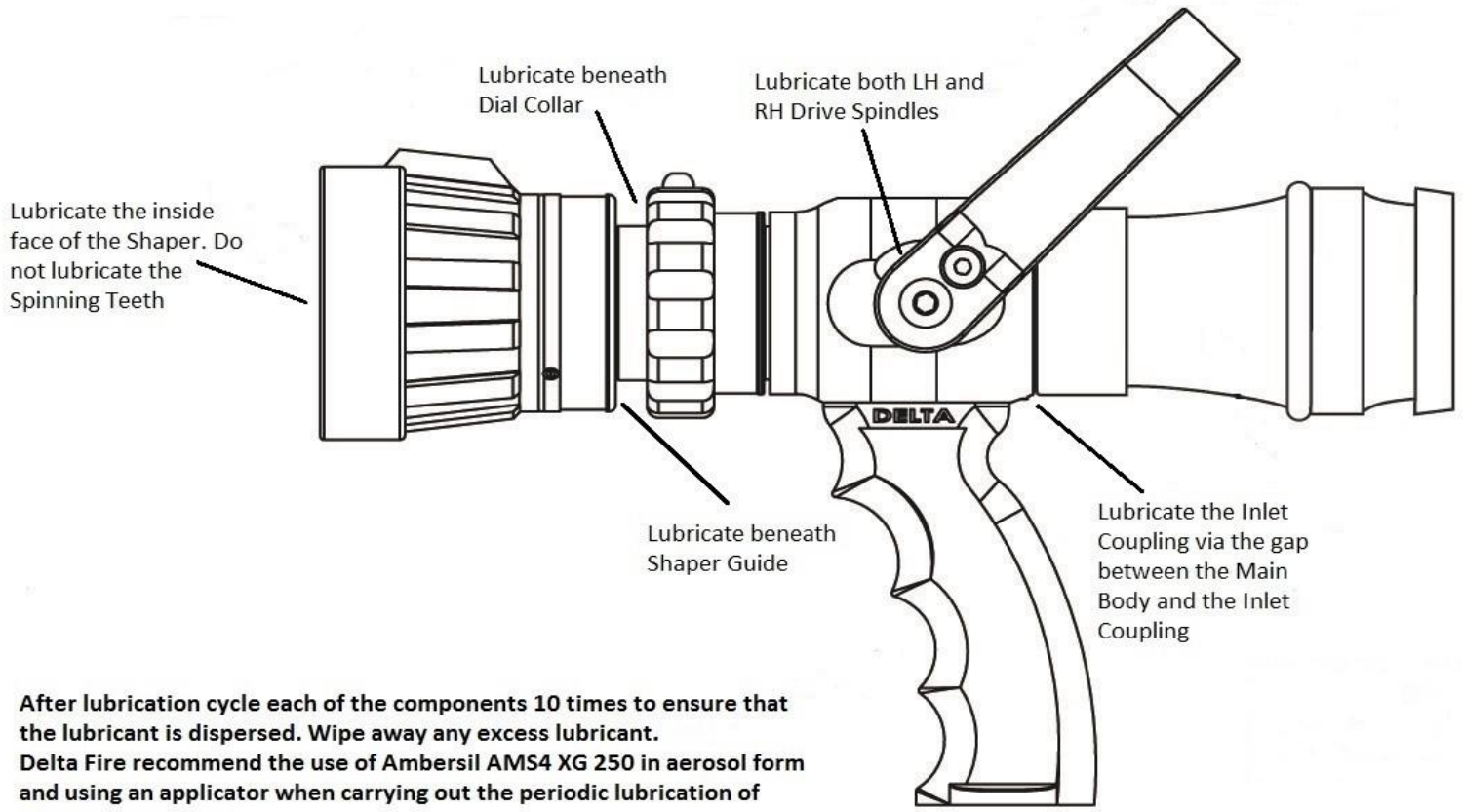
3.2.2 Maintenance

Routine Ongoing Maintenance & Lubrication



After lubrication cycle each of the components 10 times to ensure that the lubricant is dispersed. Wipe away any excess lubricant.
Delta Fire recommend the use of Ambersil AMS4 XG 250 in aerosol form and using an applicator when carrying out the periodic lubrication of moving components.

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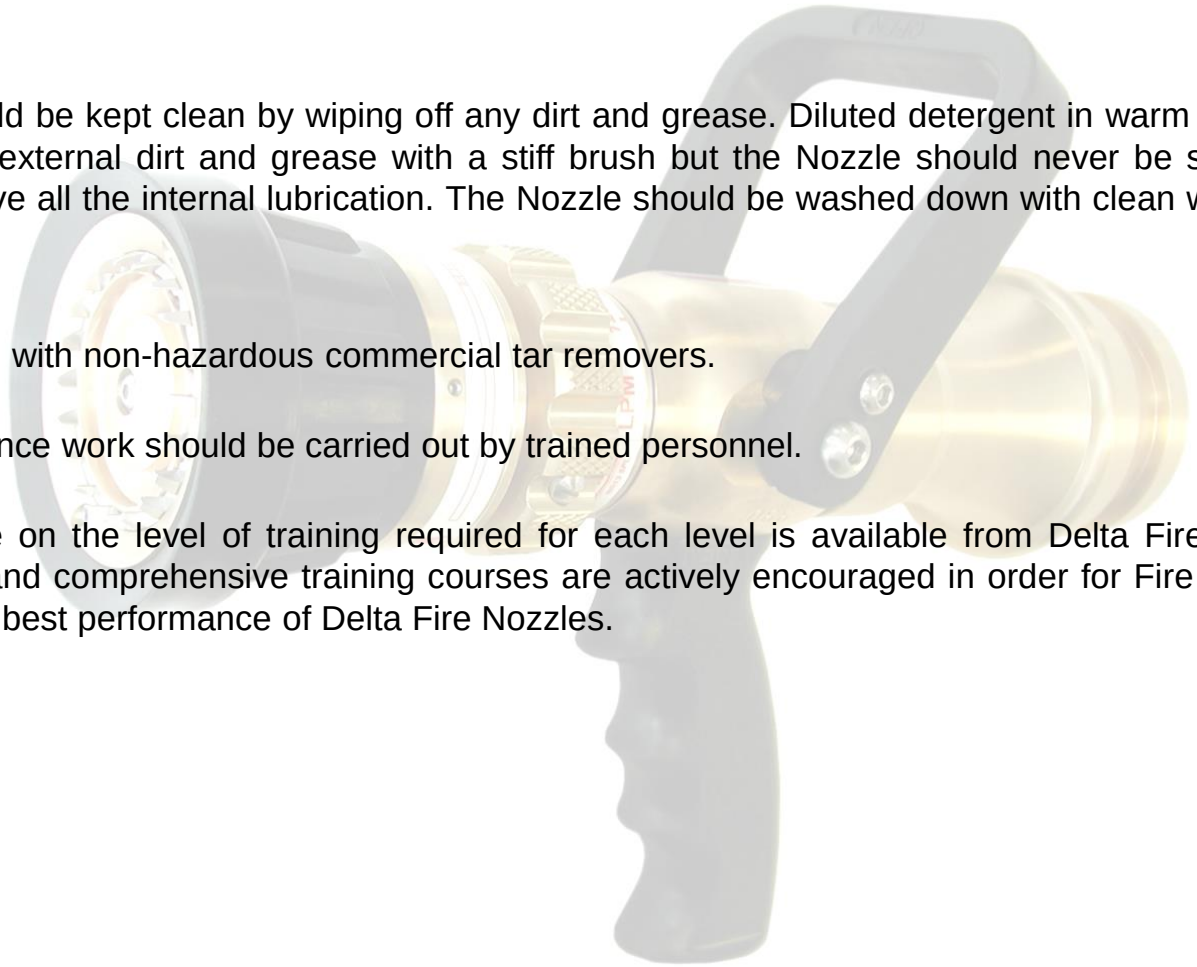

CLEANING

Delta Nozzles should be kept clean by wiping off any dirt and grease. Diluted detergent in warm water may be used to assist removing external dirt and grease with a stiff brush but the Nozzle should never be soaked in detergent since this will remove all the internal lubrication. The Nozzle should be washed down with clean water and dried with a clean cloth.

Tar can be removed with non-hazardous commercial tar removers.

Any other maintenance work should be carried out by trained personnel.

Additional guidance on the level of training required for each level is available from Delta Fire Technical Support Services. Support and comprehensive training courses are actively encouraged in order for Fire Services and other users to ensure the best performance of Delta Fire Nozzles.

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4.1 Full-Service Procedure

Maintenance & Lubrication

Tools Required

- Allen Key No. 2
- Allen Key No. 2.5
- Allen Key No. 3
- Allen Key No. 5
- Allen Key No. 8
- Torque Driver
- Small / Medium Screwdriver
- Rear Seal Holder Tool
- Loctite 222 Light Duty
- Silicone Grease Lubricant

All threads must be thoroughly degreased before re-applying Loctite

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Maintenance & Lubrication

Main Body Assembly

- Unscrew 3 x M5 Grub Screw from the Main Body. Unscrew M6 Grub Screw in the Main Body and remove all 26 Stainless Steel Balls. Remove O ring and discard.
- Unscrew M6 Grub Screw in the Booster Coupling. Remove all 27 Stainless Steel Balls. Remove O ring and discard. Unscrew M5 Grub Screw until the Rear Seal Holder can be removed from the Main Body.
- Remove the Control Handle Screws and remove the Control Handle by gently pulling the handle open and lifting it off of the Main Body.
- Remove Stainless Steel Ball Valve and Control Drive Spindles and replace the O rings. Replace the Front PTFE Seal and check that the O ring is in position.
- Apply silicone grease to the Control drive Spindle O ring and reposition inside the Main Body. Refit the Stainless Steel Ball Valve ensuring that the profiled part of the Ball Valve is at the bottom of the Main Body.
- Refit the Control Handle ensuring that the orientation is correct.
- With the Control Handle full open, reposition the Rear Seal Holder. Move the Control Handle to the closed position and tighten a further ¼ turn.
- Apply Loctite 222 to the M5 Grub Screw and to the new Control Handle Screws. Tighten to 1.6Nm.
- Refit new O-Ring to the Rear Seal Holder, apply silicone grease and push Coupling into position. Secure Coupling by refitting 27 Stainless Steel Balls. Degrease threaded hole and new M6 Grub Screw. Apply Loctite 222 and refit M6 Grub Screw.

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Maintenance & Lubrication

Front Nozzle

- Remove the Baffle Screw. Separate the Baffle from the Stem. Unscrew the Indicator Drive Pin and the Click Holder from the Dial Collar and slide the Dial Collar off the Barrel Assembly.
- Remove the Shaper Guide Screws and the Click Holder and slide the Shaper Guide off the Barrel Assembly.
- Unscrew the Retaining Ring Screws and remove the Retaining Ring, Stainless Steel Spinning Teeth and both PTFE Bearings.
- Apply light pressure to the Bumper to push it off of the Barrel Assembly. Remove the Shaper Drive Insert.
- Remove the Shaper. Remove both the Brass Bush and the Anti Spin Pin. The Inner Barrel Slider can now be removed from the Barrel Assembly. Clean thoroughly and replace and re-grease both O rings. Re-grease the groove.
- Align the slot in the Inner Barrel Slider with the hole in the Barrel for the Anti Spin Pin. Apply pressure to the Inner Barrel Slider and re-locate the Brass Bush and Anti Spin Pin.
- Fit the Shaper to the Barrel and secure by refitting the Shaper Drive Insert. Align the location keys on the Bumper with the recesses on the Shaper. Push the Bumper into position by sliding it over the Shaper ensuring that it’s pushed fully forward.
- Align the narrow spray indicator on the Shaper Guide with the raised bumper indicator. To secure the Shaper Guide, apply Loctite 222 to the 3 screws and tighten to 1.2Nm. Place firstly the Spring and then the Torlon Ball inside the Small Click Holder, apply Loctite 222 and refit.

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Maintenance & Lubrication

Front Nozzle Cont'd

- Re-position the Dial Collar so that the larger hole is over the Brass Bush. Apply Loctite 222 to the Indicator Drive Pin and tighten to 2.5Nm. Place firstly the Spring and then the Torlon Ball inside the Standard Click Holder, apply Loctite 222 and refit.
- Refit both PTFE Bearings, Stainless Steel Spinning teeth and the Retaining Ring. Apply Loctite 222 to Retaining Ring screws and tighten to a torque of 1.6 Nm. Check that the Spinning Teeth rotate freely.
- Reposition the Stem ensuring that it is seated in the recess of the Barrel correctly. Secure Baffle to Stem by applying Loctite 222 and tightening to 2.5Nm.
- Fit a new Stem Stabilising Washer & push the assembled Front End into the Main Body and reintroduce 27 Stainless Steel Balls via the M6 hole. Apply Loctite 222 and refit the M6 Retaining Grub Screw.
- Ensure that the high flow position and the narrow spray angle have been selected. Rotate the assembled front end until the Indicator Drive Pin and Bumper Indicator are correctly aligned with the Main Body. Secure in position by applying Loctite 222 to the 3 x M5 Grub Screws. Tighten screws to 2.5 Nm.

- Leave to stand for 1 hour before performing a full function test

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Lloyd's Register

Current issue date: 14 August 2021
Expiry date: 13 August 2024
Certificate identity number: 10388475

Original approval(s):
ISO 9001 - 28 July 2016

Certificate of Approval

This is to certify that the Management System of:

Delta Fire Ltd

Rackheath, Wendover Road, Rackheath Industrial Estate, Norwich, NR13 6LH, United Kingdom

has been approved by Lloyd's Register to the following standards:

ISO 9001:2015

Approval number(s): ISO 9001 – 0015918

The scope of this approval is applicable to:

ISO 9001:2015
Design and manufacture of foam and water spray equipment and systems. Manufacture and testing of fire hose assemblies. Manufacture, service and repair of nozzle assemblies. Testing of foam samples to established acceptance criteria.

This certificate is a continuation of a previous approval from another certification body as follows:

Previous original ISO 9001 approval on 02-FEB-1998, SGS certificate number GB96/6511

David Derrick

Area Operations Manager UK & Ireland

Issued by: Lloyd's Register Quality Assurance Limited

UKAS

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Delta Fire Ltd, Wendover Road, Rackheath Industrial Estate, Norwich, NR13 6LH, warrants the original purchaser of its Delta fire fighting Nozzles and to any beneficiary to whom legal title of the Nozzles is transferred, that the Nozzles shall be free from defect in either parts, material or workmanship for a period of ten years from the date of purchase.

The obligation of Delta Fire Ltd under this warranty is limited to the replacing or repairing of the Nozzles, at the option of Delta Fire Ltd, which are shown by the company to be in a defective condition through either a material or workmanship fault. In order to claim under this warranty the claimant must return the Nozzles for examination by Delta Fire Ltd within a reasonable period.

If Delta Fire Ltd determines that there is a defect attributable to Delta Fire Ltd then it shall repair or replace, at its option, the Nozzle within a reasonable time and assume the cost of the repair or replacement.

Delta Fire Ltd shall have no obligation under the limited warranty if the Nozzles have been misused or neglected. This includes failure to provide reasonable maintenance or if the Nozzles have been altered in any way without the permission of Delta Fire Ltd.

This is a limited express warranty only and Delta Fire Ltd disclaims any implied warranties of merchantability or of fitness for any particular purpose. Since Delta Fire Ltd cannot control the manner or use of its products after their sale, Delta Fire Ltd will not be responsible for any consequential or indirect damages whether to person and/or property due to improper service or misuse.

There is no warranty of any nature by Delta Fire Ltd beyond that stated in this document unless agreed in writing.

Delta Fire Ltd

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