



AWG TURBO STRIKE EN 15182-1/EN 15182-2/EN 15182-4



Shut-off, flow-adjustable hollow nozzle for the discharge of extinguishing water in the form of a full jet and a spray jet with variable angle.

Can be used in electrical installations up to a nominal voltage of 380 kV.

FOREWORD

Applicable standards and regulations

The design and construction of the AWG Turbo Strike was carried out in accordance with the relevant provisions laid down by these directives and the harmonised standards:

- DIN EN 15182-1:2019-11 | DIN EN 15182-2:2019-09 |
DIN EN 15182-4:2019-08

Portable equipment for projecting extinguishing agents supplied by fire fighting pumps – Part 1, 2 and 4

Conversions and modifications

Unauthorised conversions or modifications to the Turbo Strike are prohibited without written consent from the manufacturer.

AWG Fittings GmbH accepts no liability for damage caused by conversions or modifications, improper handling by the customer or by third parties commissioned by the customer, or caused by non-compliance with these instructions.

Other relevant documents

Apart from this manual, no other applicable documents are required for the safe handling of the AWG Turbo Strike.

The data sheet for these devices can be downloaded for information purposes from the Internet: www.awg-fittings.com

Copyright

This operating manual is valid for all AWG Turbo Strike nozzles.

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Subject to technical changes and errors.

These instructions and the other applicable documents are not subject to any automatic change service. The latest version can be obtained from the manufacturer.

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1 Introduction

This manual contains important information regarding your personal safety. This manual must be read and understood by all persons who handle or use the device during any phase of its life cycle.

The manual must be close at hand at the place of use throughout the device's life cycle. All persons handling the device must be able to consult the manual at any time. The manual must be handed over along with the device when the device is sold.

1.1 Key to the symbols

- ✓ This check mark indicates a prerequisite that must be fulfilled before a task can be carried out.

1. These numbered items list all the steps making up a task.

Safety information



DANGER

Red signal bar and the signal word DANGER

Hazard with a high degree of risk, *resulting in death or serious injury* if not avoided.



WARNING

Orange signal bar and the signal word WARNING

Hazard with a high degree of risk that *may result in death or serious injury* if not avoided.



CAUTION

Yellow signal bar and the signal word CAUTION

Hazard with a low degree of risk that *may result in minor injuries* if not avoided.

General information

IMPORTANT

Blue signal bar and the signal word **IMPORTANT**

Instructions on how to *avoid damage to property*. These instructions are not related to potential physical injuries.



INFORMATION

This info box contains general information and tips for using the device.

1.2 Figures

The illustrations in this manual are given by way of example. Differences between a technical illustration and the actual state of affairs are therefore possible.

The text contains a reference to an illustration with the item number in brackets: (Fig. 2/4) refers to Item 4 in Figure 2.



Representation

The Turbo Strike nozzles are shown in the illustrations with the internal thread adapter.

2 Safety Information

The AWG Turbo Strike nozzles described here are in line with the state of the art as well as the recognised safety regulations. The safety and health protection requirements have been met. Nevertheless, its use may give rise to hazards for the user or third parties or cause damage to the device itself or other material assets.

2.1 General safety instructions

- The device may only be operated in accordance with these instructions and in perfect condition.
- The operators must have received the necessary training to be able to handle the device properly.
- Unauthorized modifications or the installation of additional components not approved by the manufacturer endanger the proper functioning of the device.
 - Modifications to the device are prohibited
 - Only use accessories approved by the manufacturer
- The operator is responsible for safety in the vicinity of the device, in particular for compliance with the general safety regulations. This includes ensuring, before using the device, that all protective devices are fully in place and functional.

2.2 Safety during operation

- Observe all safety rules and protective measures applicable for use at the place of use.
- Make sure the device does not get damaged during transport, installation, commissioning, operation or maintenance.
- The safety regulations laid down in the country-specific service regulations for fire-fighters (for example in Germany the Feuerwehrdienstvorschrift FwDV) or the corresponding internal company regulations must be observed.

2.3 Qualifications of the operators

Persons handling or using the Turbo Strike must be technically qualified and trained. They must be aware of all risks involved in handling the device. The Turbo Strike may only be used by persons who have been trained and instructed in the operation of the device in accordance with the country-specific fire service regulation (in Germany: FwDV) or corresponding internal company regulations.

Different qualifications are required for personnel performing the different types of activity.

Instructed personnel:

Transport / use / cleaning as well as "Basic" functional testing

Technical personnel:

Maintenance as well as "Standard" and "Advanced" functional testing

2.4 Personal protective equipment

When using the AWG Turbo Strike nozzles, personal protective equipment must be worn, in accordance with the country-specific fire service regulation (e.g. in Germany: FwDV) or with internal company regulations.

3 Description

3.1 Function

With the AWG Turbo Strike nozzles, a full jet or a spray jet from 0° to 120° can be generated at a selectable flow rate.

The extinguishing agent discharge is started and stopped with the hand lever.

By turning the nozzle head (jet form sleeve) the spraying angle is changed between full jet and the different settings for the spray jet.

Full jet If the jet pipe head is in the full jet position, a focused jet with a long throwing distance and corresponding mechanical penetration force of the water flow is achieved.

Spray jet In the other positions of the nozzle head, an atomised spray jet covering an area is generated. The spectrum ranges from a concentrated spray pattern to a wide filled spray cone.

Flush In this position, dirt particles can be removed from the nozzle in the direction of flow.

The water droplets are reflected by the fixed sprocket, creating a filled spray cone.

The turbo wheel, which rotates quickly in the spray jet, is used for fine atomisation of the spray jet.

3.2 Intended use

- > Fire-fighting with both full jet and spray jet
- > When used with foam agent (with foam attachment accessory): fighting fires involving non-polar liquids (petrol, oil)

Only use the device in technically sound condition and in accordance with the intended purpose and with safety and potential dangers in mind.

3.3 Foreseeable misuse

- > Conversion or modification
- > Operation in technically unsound condition
- > Operation outside the approved characteristic values
- > Fitting of spare parts or accessories that are not approved or not suitable for the operating conditions
- > Placing the nozzle in direct fire, embers or on hot surfaces

3.4 Characteristic values

Designation	Reference / nominal pressure	Flow rate grid * at reference pressure	Spray angle
Turbo Strike 150 HP	6 / 40 bar	20/40/100/150	0° – 120°
Turbo Strike 230 HP	6 / 40 bar	50/100/150/230	0° – 120°

* The flow rate grid designates the flow rate in [l/min] at the reference pressure of 6 bar in the specified grid steps of the Turbo Strike.

3.5 Overview

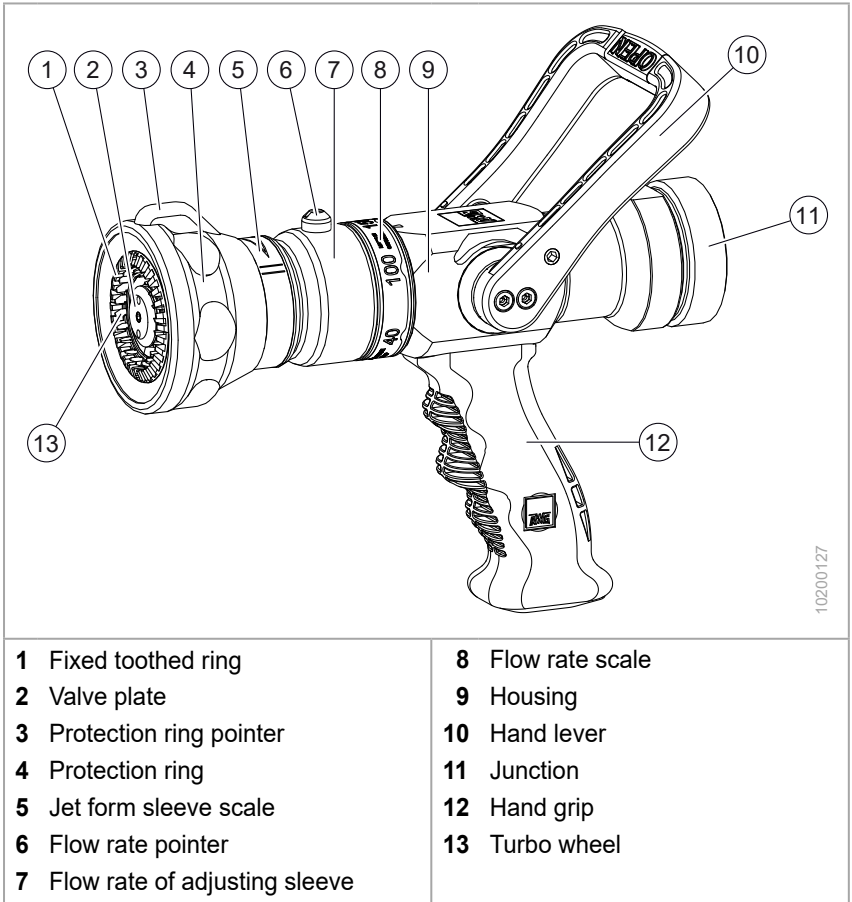


Fig. 1 Overview of Turbo Strike (example model 150 HP)

4 Delivery, transport, storage

4.1 Delivery

The Turbo Strike has been carefully packaged at AWG Fittings GmbH.

- After unpacking, check the delivery for damage and verify completeness.
- Any damage must be immediately reported to the carrier.
- If parts are missing, immediately inform the responsible specialist dealer or AWG Fittings GmbH.
- The packaging material is recyclable, please dispose of it in an environmentally-friendly manner.

For Turbo Strike nozzles with a threaded connection, a suitable coupling must be fitted by the dealer or customer before commissioning or screwed tightly to a hose.

Turbo Strike nozzles with a mounted coupling are ready for connection and immediate use.



WARNING

Observe operating pressure

If the TurboStrike is screwed together with a PN16 coupling, the Turbo Strike may only be used with a nominal pressure of PN16.

- Pay attention to the operating pressure of the clutch when using it.

4.2 Transport in a vehicle, storage

- ✓ Turbo Strike has run dry.

The Turbo Strike can be transported and stored in any position.

Especially during transport in a vehicle, the Turbo Strike must not move around. If necessary, secure the Turbo Strike using a belt. During transport, the Turbo Strike must not be damaged by other heavy equipment.

To ensure proper functioning, the Turbo Strike may only be stored in a clean condition. The Turbo Strike must not be stored constantly pressurised with water.

We recommend open storage so that any residual water can drain off and the seal of the shut-off unit is relieved.

5 Use

5.1 Notes



WARNING

Hazards during use

The handling of foam agents can be hazardous to health.
The strength of the water jet can be dangerous.

- Wear personal protective equipment in accordance with country-specific fire service regulations.
- Always wear eye protection.
- Do not point it at people or animals.



CAUTION

Reaction forces

Depending on the inlet pressure, reaction forces may occur during operation.

- Safe handling must be ensured. If necessary, the nozzle must be held by several persons (see country-specific fire service regulations).
- Increased recoil forces can occur especially when switching to the flushing position.



CAUTION

Attach adapters correctly

Danger of injury due to loosening of adapter connections.

- Always insert the adapters up to the stop and couple them fully.

IMPORTANT

Product information for foam concentrates

Observe the information on health hazards and potential environmental hazards (e.g. water hazard class) provided in the safety data sheet and other product information for the foam concentrates used



Use of different foam concentrates

Note the compatibility of different foam concentrates with each other.



Hand grip

The Turbo Strike nozzle can be operated without a handle (description of assembly/disassembly in Chapter 7.2). The function of the nozzle is not affected.

- Screw in a threaded pin as protection against contamination.

Extinguishing in electrical installations / rated voltage up to 380 kV *

If the control distances according to DIN VDE 0132, Table 3: guideline values H-5-10, are adhered to, a full jet of water from the Turbo Strike in the highest flow position has sufficient resistance according to DIN VDE 0132 to prevent a voltage flash-over at high voltages of up to 380 kV.

For low voltage up to 1 kV, the guide values N-1-5 must be observed.

* Test report of an accredited test laboratory according to DIN EN ISO/IEC 17025 is available

Distances according to DIN VDE 0132, Table 3

	Low voltage (N) ≤ AC 1 kV or ≤ DC 1.5 kV	High voltage (H) > AC 1 kV or > DC 1.5 kV
Spray jet	1 m	5 m
Full jet	5 m	10 m
Letter symbol	N-1-5	H-5-10

**WARNING****Danger from electric shock**

The use on live electrical installations can result in life-threatening electric shock.

- When extinguishing in electrical installations, observe the prescribed control distances and guideline values as well as the flow position.
- Only use foam agents when electrical systems are disconnected.

5.2 Handling**Required inlet pressure**

At an inlet pressure below the reference pressure of 6 bar, the flow rates indicated on the nozzle are not achieved

Ensure a sufficient flow rate and inlet pressure for the respective extinguishing situation.

- ✓ The water hose for connection to the Turbo Strike is ready at hand.
- ✓ The hand lever is closed (Fig. 2/A).
- ✓ When used with foam agent: The inductor and foam attachment are mounted.

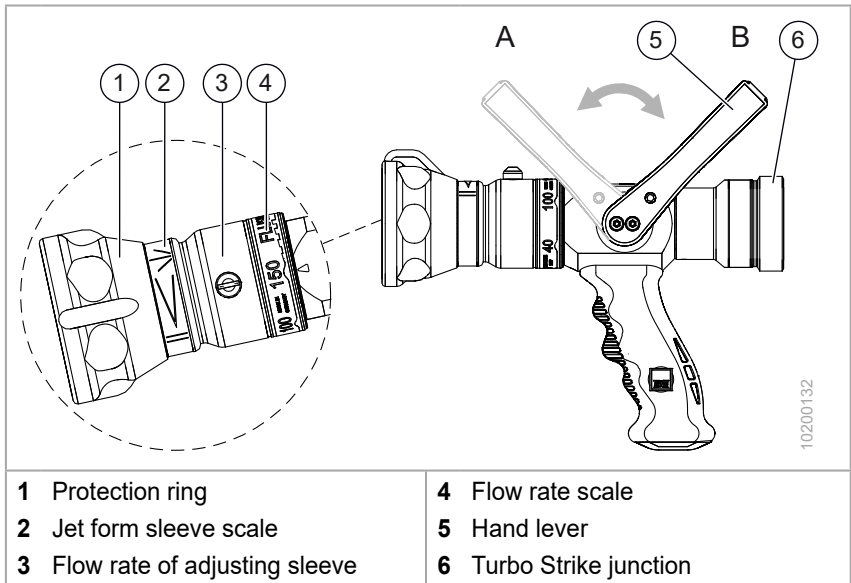


Fig. 2 Handling

Coupling the Turbo Strike and adjusting the flow rate

1. Connect the water hose to the coupling or thread of the Turbo Strike (Fig. 2/6) according to the coupling system used.
2. Set the adjusting sleeve (Fig. 2/3) to the desired flow rate (Fig. 2/4).

The pointer is in the middle position at the top, on the right (2 o'clock position) for the small flow rate and on the left (10 o'clock position) for the large flow rate.

Attention: Turn the adjusting sleeve anti-clockwise beyond the maximum position to set the flushing position. The pointer is at the bottom (7 o'clock position). Do not use the flushing position in the extinguishing insert unintentionally. The flushing position is clearly visible through several detent points.

3. Open the water supply.
The Turbo Strike is ready for use.

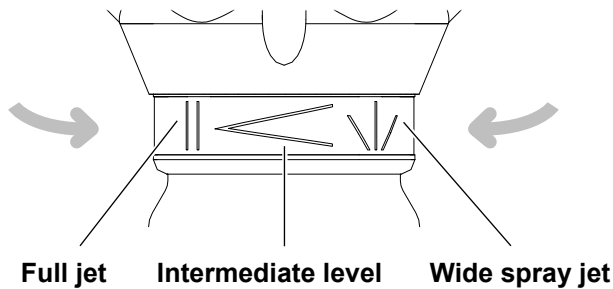
Opening the Turbo Strike and starting the extinguishing agent discharge

1. Point the Turbo Strike at the source of the fire.
2. Pull the hand lever (Fig. 2/5) back towards yourself in the OPEN (Fig. 2/B) position.

The extinguishing agent discharge is started. As soon as the hand lever is moved forward again to the CLOSED (Fig. 2/A) position, the extinguishing agent discharge stops.

Varying the spray angle

1. By turning the protection ring (Fig. 2/1) you can switch between full and spray jet during use:



The three positions are audibly and clearly noticeably fixed by locking in place.

Close the Turbo Strike

1. Push the hand lever (Fig. 2/5) forward to the CLOSED (Fig. 2/A) position away from the body.

Flushing out the Turbo Strike

1. Close the Turbo Strike (CLOSED position).
2. When using foam concentrates, interrupt their supply.
3. Turn the adjusting sleeve (Fig. 2/3) into the flushing position (turn the adjusting sleeve beyond the maximum position to the 7 o'clock position).
4. Open the Turbo Strike (OPEN position).

The flushing position can be noticed when the Turbo Strike rattles. Dirt particles up to 4.5 mm diameter are rinsed out.

Perform multiple flushes if necessary.



Flushing process during use

A flushing process may also be necessary during use if dirt particles get into the Turbo Strike. This can be recognised by an uneven, disturbed spray pattern.

In this case you can switch directly to the flushing position:

– Turn the adjusting sleeve into the flushing position and flush it out for as long as necessary.

Attention: Only rinse if the situation in use allows it (observe self-protection).

Uncouple the Turbo Strike

1. When using foam concentrates, interrupt their supply.
2. Close the hand lever and the water supply.
3. Open the Turbo Strike to reduce the pressure.
Attention When you open the Turbo Strike, water comes out.
4. Disconnect the water hose from the coupling or thread of the Turbo Strike (Fig. 2/6) according to the coupling system used.

Attention Water may emerge when the couplings are released.

5.3 Visual inspection after each use

- ✓ The Turbo Strike is separated from the water supply.
 - ✓ The Turbo Strike must not be contaminated with foam agent. If necessary, flush the Turbo Strike again as described in the previous section.
1. Check the Turbo Strike and, in particular, the toothed ring and the valve plate on the nozzle head for visible damage.
Attention Do not continue to use damaged components!
If you discover any damage, this must be reported to the person or department responsible.
 2. Check that the hand lever as well as the adjusting sleeve and the nozzle head of the Turbo Strike can be operated (unpressurised).

6 Functional test

6.1 Prerequisites

All testing of the AWG Turbo Strike nozzle must be carried out in accordance with the manufacturer's technical documentation and must be documented if necessary.

The following inspections are defined for the Turbo Strike:

- Mandatory BASIC Inspection after each use
- Mandatory STANDARD Inspection every 12 months
- Optional ADVANCED Inspection every 12 months

The STANDARD and ADVANCED inspections may only be carried out by qualified personnel who have been trained for these inspections:

- Fire-fighters who have received training as fire-fighting equipment maintenance technicians or persons with equivalent qualifications
- or, if desired, directly by the manufacturer

Inspection by the manufacturer

AWG Fittings GmbH offers an inspection as part of its service offering. Send us the Turbo Strike, and you will receive the inspected device back at the agreed date. You will find a return delivery form on our website www.awg-fittings.com. If required, a rental device can also be provided.



Documenting the inspection result

To meet the requirements for occupational safety and accident prevention, the test results for each test must be documented. Please observe the country-specific regulations. For Germany you will find a test chart in accordance with the DGUV (German statutory accident insurance) requirements as download from www.awg-fittings.com

Keep the documented test result as proof.

6.2 Performing the inspection



CAUTION

Performing the inspection safely

Some inspection steps are performed with pressurised systems.

- Observe the safety regulations.
- Put on personal protective equipment.
- Do not put other persons in danger.

6.2.1 BASIC Inspection after each use

1. Check the Turbo Strike for visible damage.
2. Depending on the equipment, check the toothed ring and valve plate on the nozzle head for contamination and damage.
3. Check that the hand lever can be operated (unpressurised).
4. Check that the nozzle head and the adjusting sleeve can be operated.
5. Check whether the nozzle inlet can be freely rotated through 360°.

6.2.2 STANDARD Inspection every 12 months

1. Functional test of the hand lever under dynamic load at 10 bar inlet pressure.
2. Leak test at 10 bar inlet pressure (hand lever in closed position).
3. Check the toothed ring and valve plate on the nozzle head for damage.

6.2.3 ADVANCED Inspection every 12 months

- > Depending on features:
Check the coupling torque of the Storz adapter:
Threshold value Storz 25 (D): 1.5 Nm
 Storz 52 (C): 1.5 Nm
 Storz 75 (B): 2.5 Nm

If the coupling torque is below the applicable threshold value, the adapter must be replaced.

- > Threaded version: Check the thread for heavy wear and tear. Replace device if worn.

7 Maintenance

7.1 Inspection and maintenance

Apart from the visual inspection and cleaning of the AWG Turbo Strike, no regular maintenance work is required.

If the shut-off device is hard to operate, lubricate the ball valve with a fully synthetic grease (e.g. OKS 479).

7.2 Repair

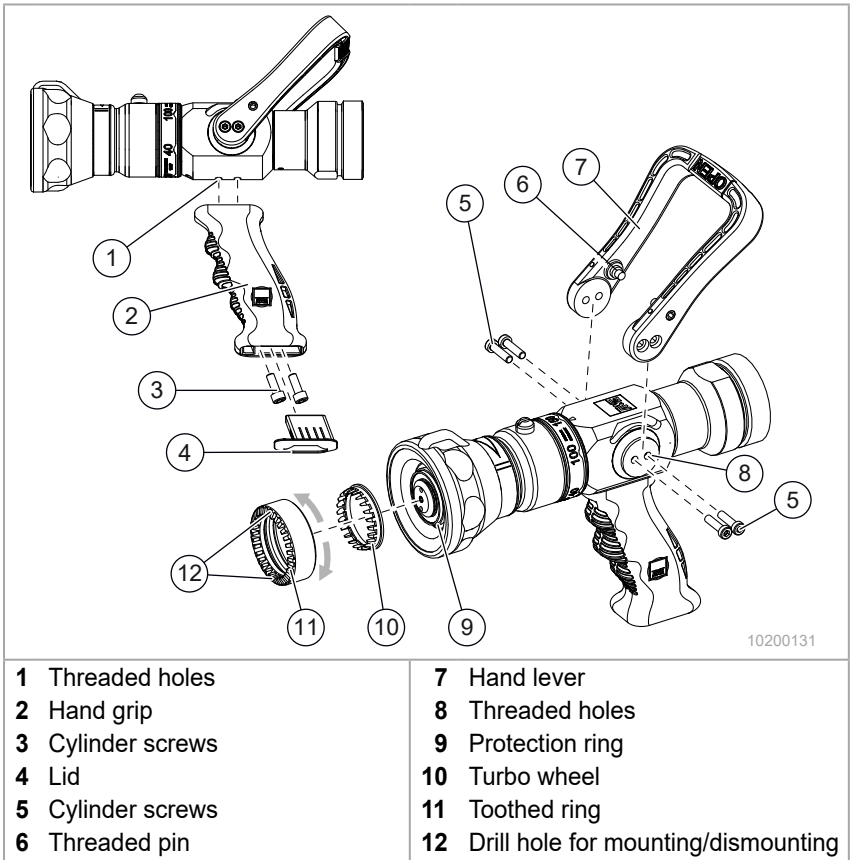


Fig. 3 Replacing the handle and hand lever

Replacing the handle

1. Remove the cover (Fig. 3/4) on the handle; this will damage the cover.
2. Unscrew the two cylinder screws (Fig. 3/3) and remove the handle (Fig. 3/2). Clean the housing if necessary.
3. Insert a cylinder screw into the borehole of the new handle, position the handle on the corresponding threaded hole of the housing (Fig. 3/1) and screw it tight.
4. Insert and tighten the second cylinder screw.
5. Insert the cover in the correct position into the new handle.

Replacing the hand lever

1. Unscrew the cylinder screws (Fig. 3/5) on each side.
2. Remove the control lever (Fig. 3/7). The threaded pins (Fig. 3/6) remain in their position. Clean the valve housing if necessary.
3. Position the control lever in the correct position on the valve housing using the threaded pins (Fig. 3/6).
4. Apply a medium-strength screw locking agent to the cylinder screws (Fig. 3/5), insert the cylinder screws and tighten them.

Replacing the turbo wheel and toothed ring

1. Insert either the pins of a special tool or, for example, insert two cylindrical pins with a diameter of 3 mm into both holes (Fig. 3/12) and unscrew the toothed ring (Fig. 3/11) anti-clockwise from the protective ring (Fig. 3/9).
2. Remove the turbo wheel (Fig. 3/10) from the protection ring.
3. Clean the protection ring if necessary and check for visible damage.
4. Insert the new turbo wheel into the protective ring.
5. Apply a medium-strength screw locking agent to the toothed ring and screw the toothed ring clockwise into the protective ring using the tool or the cylindrical pins.

Attention: Do not pinch the turbo wheel.

All other repair work on the AWG Turbo Strike nozzle may only be performed by the AWG Fittings GmbH customer service or by an authorised specialist workshop.

If you need technical support, please contact our Service Centre:

AWG Fittings GmbH
Service Centre
D-89177 Ballendorf

Telephone: +49 (0) 73 40 / 91 88 98 880

Email: awg-service@idexcorp.com

We will accept devices in need of repair or maintenance, discuss with you the quickest and cheapest solution, create cost estimates, take care of the execution of the repair work and are at your disposal for any questions.

7.3 Disposal

Observe the local regulations regarding proper waste recycling or disposal.

Materials

Nozzle body:	Aluminium, anodised
Protection ring:	EPDM
Hand lever, handle:	Polyamide

8 Accessories / spare parts

Accessories

- > Foam attachment
for the application of synthetic multigrade foam agents.
- > FIRE-EX Turbo 1000 Insertion Cartridge
for generating wetting agent.

Spare Parts

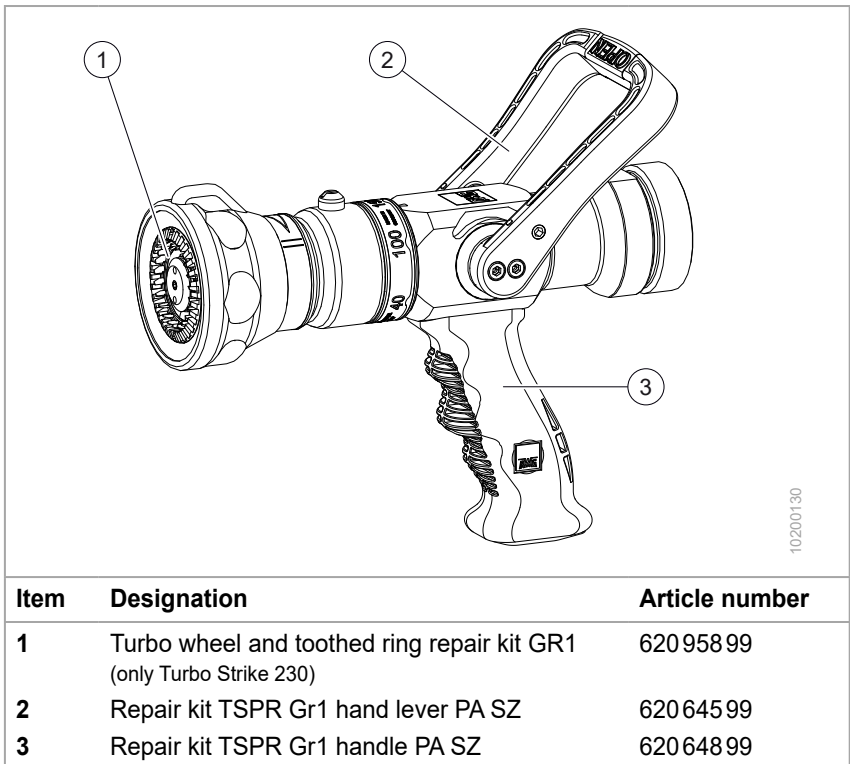


Fig. 4 Spare parts and accessories

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