



User manual

AQUASTAR

High pressure hand nozzle with selectable flow rate and stream pattern, 180 lpm, spinning teeth

MOP_LAM_01403_EN_A - 24/02/2017

DESIGNATION	DESCRIPTION
Product type	Hand nozzle
Product	AQUASTAR, high pressure hand nozzle with selectable flow rate and stream pattern, 180 lpm, spinning teeth
Product reference concerned by the manual	Ref: 39585
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• Note

POK SAS reserves the right to change or modify the specifications of its products at any time to incorporate the latest technological and regulatory developments. The information contained in this document is subject to change without notice.

• General Warning



Before using or installing the equipment, it is essential for the safety of people and equipment, to read the information contained in this operating manual before using the equipment. The use, maintenance, or any other operation of the equipment, must be carried out exclusively by personnel informed of safety rules and trained in the use of this material.

The non-compliance of safety instructions can be dangerous and cause serious bodily harm and/or property damage.

• Security



This symbol indicates important safety tips. Pay careful attention to prevent serious bodily harm and/or property damage.



This symbol indicates instructions that must be observed to ensure smooth operation of the device. Please always make sure to follow all the necessary precautions.



This symbol indicates useful information to know and understand the correct operation of the device.

• Introduction

Please read the information contained in this manual before using or operating the equipment.

The use, maintenance or any other operation of the equipment, must be carried out exclusively by personnel informed of safety rules and trained in the use of the equipment.

While using the fire nozzle (use, maintenance, installation, ...) it is important to wear personal protective equipment.

• Dismantling and Warranty

This product is guaranteed for a period of one years for any manufacturing defect, except with special written agreement.

The exploded views and parts lists are not a dismantling manual.

Any dismantling or maintenance operation of the device must be done with the water supply turned off.

Dismantling and/or modification of the equipment outside POK SAS factory is allowed only in compliance with procedures described in this manual, and therefore does not affect the warranty.

If the equipment is repaired, the spare parts must be supplied by POK SAS. Otherwise, the technical specifications in this document will no longer be valid, the warranty will be invalid and the manufacturer's responsibility will no longer be committed.

If a maintenance operation leads to a deterioration of parts, the guarantee may not be applicable if the procedure is not carried out in accordance with this manual.

Although it is not explicitly stated in instructions, use and wear of protective equipment are obligatory during maintenance operations. POK SAS cannot be responsible for any damage or accident which may occur during the dismantling. If this obligation is not met, please refer to the tools instructions guides for more details.

Only POK is able to guarantee proper functioning and security of the equipment following a disassembly. Accordingly, POK SAS cannot be held liable for any incidents caused as a result of the dismantling outside of its workshops.

Do not modify the equipment, it may not work properly or be dangerous for use. Any modification not approved by POK SAS will void the warranty.

• Use

Please respect the technical limitations of the equipment.

The equipment should not be used if a component is damaged or missing.



Disrespect of safety instructions and use of the branchpipe over the recommended pressure can be dangerous and even cause death.

It is important to know and respect the safety rules regarding your operating environment.

In case of fire that occurs near or caused by electrical installations, it is imperative to:

- 1) Cut of power supply as soon as possible
- 2) Maintain a safe distance of at least 1 meter up to 1,000 volts.
- 3) To use a spray with a minimum 30° angle.

Before placing the nozzle in service, check :



- 1) No part is damaged, broken or missing.
- 2) that the coupling is perfectly connected to the hose.
- 3) that the swivel fitting freely.
- 4) the opening and closing of the valve.
- 5) That the flush ring works properly
- 6) That the flow pattern selector rotates and slides properly.

POK SAS is not responsible of any accident that may occur during operation caused by improper use or non-compliance with safety requirements.

• Limits of use

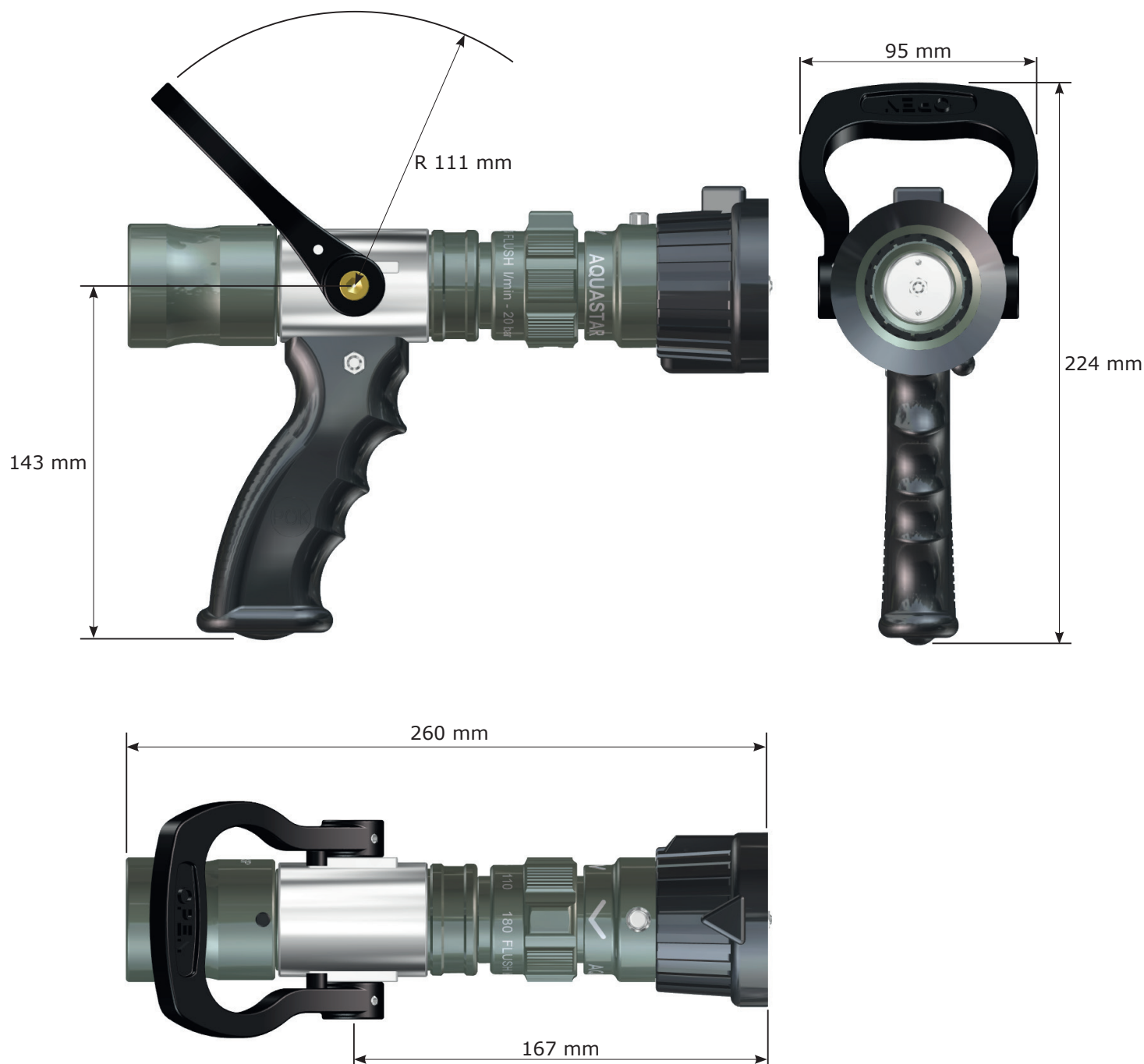


Our nozzles are guaranteed for a maximum operating pressure of PN 40.
Our nozzles are guaranteed to resist a maximum of 60 bar in a closed position.
Without explicit written authorization from POK, the warranty will be void if the pressures listed above are exceeded.



MARK	DESCRIPTION
1	Body
2	Flow rate adjustment ring
3	Stream pattern adjustment ring
4	Head bumper with tactile indicators for stream pattern
5	Shutoff handle
6	Pistol handle with polyurethane cover
7	Swivel inlet 3/4" BSP female thread Note: A different coupling is available upon request. See our catalogue for more information on couplings.
8	Stem
9	Spinning teeth

AQUASTAR - High pressure hand nozzle with selectable flow rate and stream pattern, 180 lpm, spinning teeth



Weight: 1,62 Kg

• Construction

DESIGNATION	DESCRIPTION
Body, stem, stem axle and screws	• Stainless steel
Coupling	• Aluminium alloy
Rings, bore and inlet ring	• Aluminium alloy • Hard anodisation
Shutoff handle	• Polyamide
Head bumper and pistol handle	• Polyurethane
Valve axle	• Brass

• Hydraulic Characteristics

DESIGNATION	DESCRIPTION
Flow rate	• 180 lpm @ 20 bar
Max. working pressure	• 40 bar
Test pressure	• 60 bar
Flow rate adjustment	• By turning flow rate adjustment ring • 55, 110 and 180 lpm - Position "FLUSH" at stop
Type of diffusion	• Spinning teeth • Hollow cone diffusion
Stream pattern adjustment	• By turning head ring • Straight stream, attack stream (35°) or full fog diffusion spray (130°)
Shutoff	• With ball valve

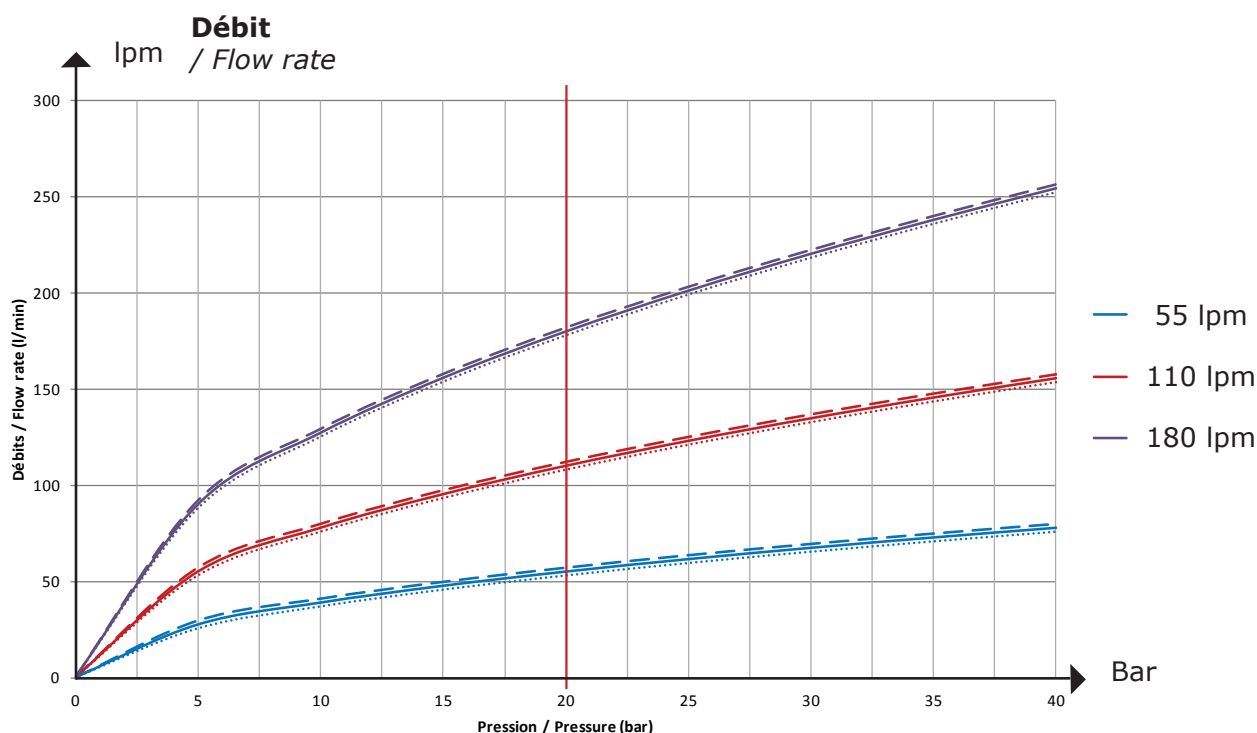
• Mechanical Characteristics

DESIGNATION	DESCRIPTION
Inlet	• Swivelling, 3/4" BSP female thread Note: A different coupling is available upon request. See our catalogue for more information on couplings.
Filter	• Yes, stop particles larger than Ø 5 mm
Flush	• By flow rate adjustment ring rotation

1 - General data

1.1 - Manufacturer	POK
1.2 - Type	AQUASTAR
1.3 - Flow rate at P_R	180 lpm @ 20 bar
1.4 - Selectable flow rate	55, 110 and 180 lpm
1.5 - Type of diffusion	Hallow cone diffusion

2 - Flow rate / pressure curve



Throw range in meters, at 20 bar

	55 lpm	110 lpm	180 lpm
Straight stream range (m)	20	27	32

3 - Mechanical System

3.1 - Connection system	Swivelling
3.2 - Gripping device	Pistol handle
3.3 - Opening / closing device	With ball valve
3.4 - Straight stream / Fog stream device	Rotating part
3.5 - Flow rate adjustment system	Rotating part
3.6 - System of purge or flush	Rotating part

4 - Prescriptions

	Number of the party and of the corresponding paragraph of the standard EN 15182	DESCRIPTION	Test results
CONTROL and HANDLING	- 2 / § 4.2.1	Dimensions (mm)	260 x 95 x 224
	- 2 / § 4.2.1	Weight (kg)	1.62
		Torques needed for moving operating elements (N.m)	
		Lever	
	- 2 / § 4.2.2.1	Shutoff handle	
		Selectable flow rate element (N.m)	
	- 2 / § 4.2.2.1	Selective flow pattern ring	
	- 2 / § 4.2.2.1	Inlet swivel coupling	
	- 2 / § 4.2.3	Flow rate adjustment Rotation from minimum to maximum flow rate	90°
	- 2 / § 4.2.4	Jet adjustment Rotation from straight stream to full fog with a minimum spray angle of 100°	155°
PERFORMANCES	- 2 / § 4.3.3	Effective throw (m)	32
		Spray	
	- 2 / § 4.3.4	Full fog: angle	130°
	- 2 / § 4.3.5	Narrow spray: angle	35°
PHYSICS	- 1 / § 7.2.2	Cold resistance (°C)	-25°C
	- 1 / § 7.2.1	Heat resistance (°C)	+80°C
	- 1 / § 6.3.1	Non-obstruction test (mm)	5
	- 2 / § 4.3.5	Brusting pressure (bar)	> 100

5 - Certified by:

POK SAS

ZI Les Guignons
10400 Nogent-Sur-Seine

• Before applying pressure

- **1** - Verify that there are no missing or damaged pieces.
- **2** - Check that the fire nozzle is correctly connected to a water supply.

Note: To obtain optimal performance, respect the following limits:

- Flow rate: 180 lpm
- usage pressure: 20 bar

• Opening

The shutoff handle allow a smooth opening and closing, and avoid water hammer.



• Adjusting the flow rate and flush

Adjustable flow rate and flush by swivelling flow rate ring. The available flow rates are engraved on the flow rate adjustment ring. By rotating the ring to the desired setting, the flow rate will be set to this value at the 20 bar (290 PSI) reference pressure.

A tactile indicator permits the user to know the maximum flow setting even in total darkness and while wearing firefighting gloves (conform to EN 659).

This ring also has a position marked FLUSH. This position permits the removal of particles which could interfere with the proper hydraulic operation of the nozzle.



Position
55 lpm



Position
110 lpm



Position
180 lpm



Position
FLUSH



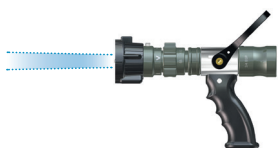
• Jet adjustment

Selectable stream pattern: a continuous rotation of the head ring allows the user to progress from a straight stream to a narrow spray "Flash Over" (35°), to a full fog diffusion cone (130°) forming a wall of water.

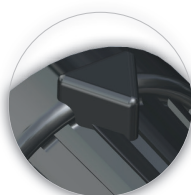
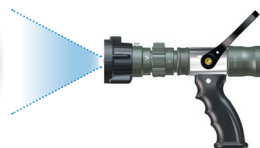
Tactile and visual indicators permit the user to know the type of stream even in total darkness and while wearing firefighting gloves. in compliance to standard EN 659.



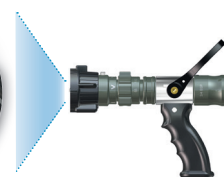
STRAIGHT STREAM



NARROW SPRAY



FULL FOG DIFFUSION



• assembly/disassembly

The inlet coupling leaks or does not swivel freely

- Remove the screw mark 19
- Remove all ball bearings mark 17 while turning the coupling mark 18
- Remove the inlet coupling mark 18
- Replace inlet gasket mark 20
- Clean and apply grease (Loctite 8106) to the ball bearing seat mark 15 and 18
- Apply grease mark 20 (Loctite 8106)
- Install inlet coupling mark 18 on the body mark 15
- Insert all ball bearings mark 17
- Glue (Loctite 243) and screw mark 18 up to the slight contact with the balls, then unscrew 1/4 of a turn

The shutoff leaks

Ensure that no foreign body prevents the shutoff from closing. If there is not any, return us the nozzle.

The flow pattern ring doesn't turn

- Unscrew the set screw mark 33 (beware of the spring mark 29 and the ball bearing mark 30)
 - Remove the head bumper mark 37
 - Unscrew the guide mark 32
 - Remove the guidance ring mark 31
 - Replace inlet gasket mark 24
 - Clean and grease (Loctite 8106) the guidance ramp and the surfaces of the mark 25 - 23 and 31 being in touch.
 - Install the guidance ring mark 31
 - Glue (Loctite 243) and screw guide mark 32 up to the slight contact with the bore mark 23, then unscrew 1/8 of a turn.
- Ensure that the head ring turns freely then install the head bumper mark 37
- Install the spring mark 29 then the ball bearing mark 30 in the index mark 33 then glue (Loctite 243) and screw everything in place on the head ring mark 31 up to the slight contact with the bore mark 23, then unscrew 1/8 of a turn.

The spinning teeth is broken or doesn't turn

- Remove the head bumper mark 37
- Remove the screw mark 35
- Remove the head ring mark 34 and spinning teeth mark 44
- Clean contact areas between spinning teeth, head ring mark 34 and the guidance ring mark 36.
- If some teeth are missing or damaged, replace spinning teeth mark 44
- Reassemble the spinning teeth mark 44 and the head ring mark 34 without grease.
- Glue (Loctite 243) and tight 3 screws mark 35
- Replace the head bumper mark 37

The flow pattern ring doesn't turn

- Remove the flow pattern ring as detailed above
- Unscrew the set screw mark 28 (beware of the spring mark 29 and the ball bearing mark 30)
- Remove the bore mark 25
- Remove the flow rate ring mark 27
- Replace inlet gasket mark 24 and 26
- Clean and grease (Loctite 8106) the guidance ramp and the surfaces of the mark 25 - 23 - 27 and 31 being in touch.
- Replace the flow rate ring mark 27 with spring mark 29 and ball mark 30
- Replace the bore mark 25

- Glue (Locite 243) and screw flow rate index mark 28 until a slight contact with bore mark 23 and untight on a 1/8 revolution
- Ensure that the flow rate ring turns freely
- Reassemble the flow pattern ring as detailed above

• Cleaning

It is recommended to clean the nozzle with clean water inside and outside after each use (manoeuvres have to be carried under pressure).

It is recommended to dis-assemble the nozzle once a year if the nozzle is used continuously with salt or brackish water. Clean and dry all components, gaskets, O rings and grease them as per POK Procedure provided with the spare parts kit available on order. This service can be provided by our workshop, please contact us for pricing.

If the nozzle is not working properly, ensure that there is no foreign object preventing it from functioning properly. In this case, please contact us to obtain the procedures of disassembly or return the product for a repair in our factory.

• Spare parts

Some parts such as gaskets are likely to be changed more or less often depending on the frequency of use, conditions of use or storage. Please contact our sales department for the prices and after sales conditions. Refer to the schedule in this document to identify the replacement parts.

• Handling / Transport / Storage

General Information

When unpacking the equipment after transport, check that there is no mechanical damage and/or loose parts in the interior of the package. In case of damage, the carrier must be informed immediately. In this case, do not put the equipment into use.

Delivery Information

POK equipment is delivered in a double-walled cardboard box. We use timing equipment to prevent products from bumping into each other. The package is securely closed with adhesive tape. A delivery note is included with the equipment.

Shipment of Equipment

In case of reshipping the equipment, or transferring the shipment to other sites, the shipping process above should be followed.

Storage of Equipment

When storing the device, it is recommended to keep it in its original packaging to protect from humidity, dust and kept at normal room temperature.

MARK	QTY	DESIGNATION	REF
36	1	Gasket Ø38 x Ø2,5	-
37	1	Head bumper	-
38	1	Cross piece	23171
39	1	Stem axle	23172
40	1	Cap nut	-
41	1	Stem	8116
42	1	Nut H M4	-
43	1	Centering cross piece	-
44	1	Spinning teeth	149

MARK	QTY	DESIGNATION	REF
1	1	Body	17733
2	1	Ball Ø25	40117
3	1	Left valve axle	40119
4	1	Right valve axle	40118
5	2	O'ring N°7	-
6	2	Elastic pin Ø4 x 25	-
7	1	Shutoff handle	17739
8	2	Ø4 x 15 pin for shutoff handle	13480
9	1	Pistol handle cover	24160
10	1	Screw CS M5 - 20	-
11	1	Nut H M5	-
12	2	Gasket for ball Ø 20	17735
13	2	O'ring Ø30 x Ø2	-
14	2	O'ring N°25	-
15	1	Swivel inlet pipe section	17738
16	1	Outlet section	23195
17	29	Ball Ø4	-
18	1	Inlet coupling 3/4" BSP female thread	18719
19	1	Screw STHC PL M6-4	-
20	1	O'ring N°27	-
21	1	Filter	1449
22	1	Flat gasket for bottom thread 3/4" BSP	-
23	1	Bore	39218
24	3	Gasket Ø30 x Ø2	-
25	1	Inner Bore	23165
26	1	Gasket Ø22 x Ø2	-
27	1	Flow rate ring	30501
28	1	Flow rate index	23168
29	2	Index spring	8019
30	2	Ball Ø 6,35	-
31	1	Head ring	23190
32	1	Stream guide	23170
33	1	Index knob for ball Ø 6,35	27204
34	1	Spinning teeth holder	144
35	3	Screw STHC PL M4 - 5	-

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