PRINT-X
RIFLE SUPPRESSOR FAMILY

OPERATOR MANUAL

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WARNING!

Suppressed firearms make less noise than non-suppressed firearms, it's easy to forget that they are still firearms. It's of vital importance to remember that a sound suppressed firearm is just as dangerous as a non-suppressed firearm and the same safe handling procedures apply.

Failure to follow the operating instructions can result in serious injury to the user and damage to the firearm. Suppressors are devices that are attached to the muzzle, the muzzle flash hider or a compensator.
A requirement for safe operation is the mounting of the suppressor as described in this operating manual.

Under normal conditions any suppressor will become very hot. This is especially true when fired in full automatic mode. For your safety it is important to allow the suppressor to cool down before touching it in any way, this includes removing the suppressor from the weapon. It is also important not to let the suppressor touch any material or equipment while hot, such as nylon webbing or ammunition pouches.

EYE PROTECTION MUST BE WORN!

SAFETY GOGGLES MUST BE WORN WHEN DISASSEMBLING AND REASSEMBLING THE GUN. PARTS CAN GET INTO THE EYES IF HANDLED INCORRECTLY.

EAR PROTECTION MUST BE WORN!

SUITABLE HEARING PROTECTION MUST ALWAYS BE WORN WHEN SHOOTING WITH A FIREARM.

Inhaltsverzeichnis

1. General rules

READ MANUAL BEFORE USE.

1.1 Safety rules

1. Consider every weapon loaded until checked personally by the individual operator.
2. User installation or removal of the suppressor must be accomplished in accordance with the instructions contained in this operator manual.
3. Serious injury to the user may result from an improperly installed suppressor.
4. Always wear eye and ear protection when shooting.
5. Check the suppressor for tightness before each use.
6. Don’t touch the suppressor after shooting - Suppressors quickly become very hot.

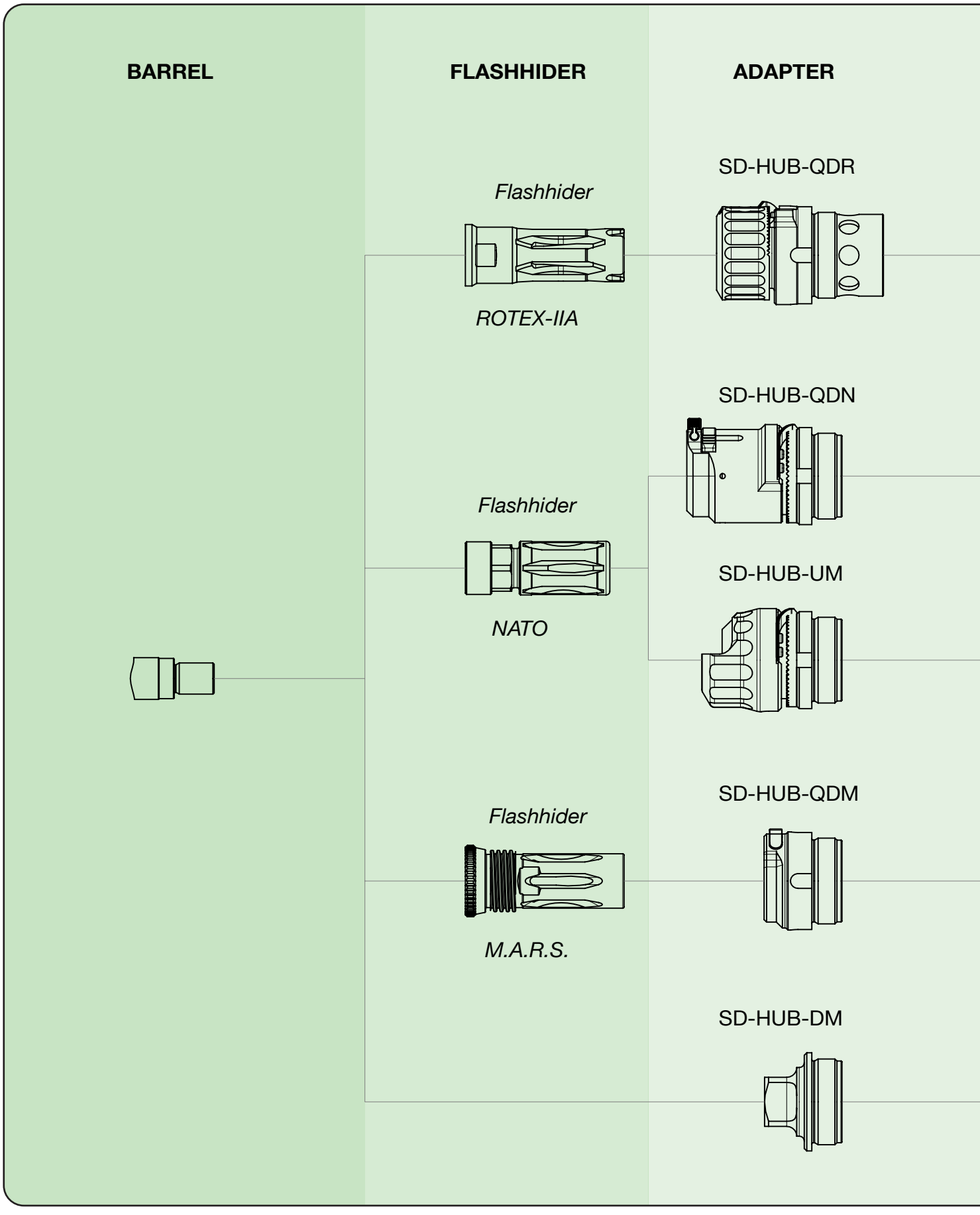
1.2 Full automatic firing issues

Suppressors designed for automatic firearms can be used in fully automatic fire mode. However, it must be taken into account that there is an enormous heat effect when shooting in the fully automatic fire mode. Therefore, it is recommended to shoot with the suppressor on in short bursts and not to fire more than 90 rounds (3 x 30 round magazines). Afterwards, stop shooting if possible and let the suppressor cool down to prevent permanent damage to the suppressor. Eventual further restrictions by the weapon manufacturer must be followed.

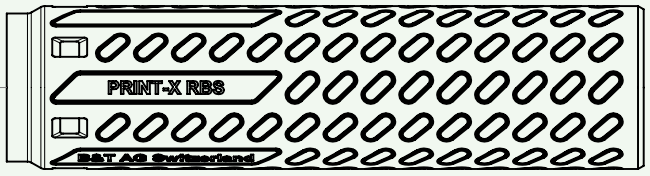
1.3 Impact of the shooting position

The additional weight of the suppressor at the muzzle and the different gas conditions directly after the muzzle can change the ballistics of the gun and the point of impact. It is therefore important that the point of impact is always checked with the suppressor and the ammunition before a mission and adjusted if necessary.

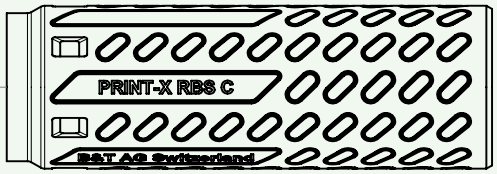
2. Overview - Rifle suppressors and mounting interfaces



SUPPRESSOR BODY



PRINT-X RBS



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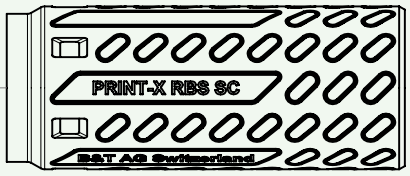

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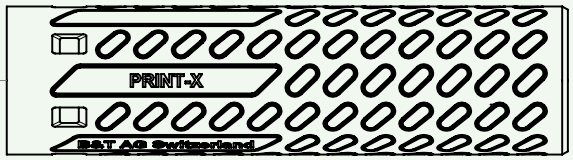

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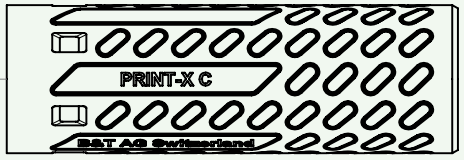

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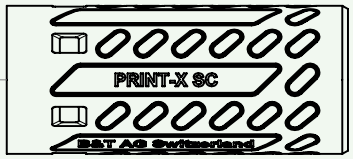

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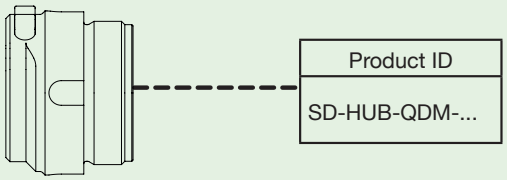
3. Overview - HUB Adapters

HUB QDM Cal. 5.56/.223 7.62/.308



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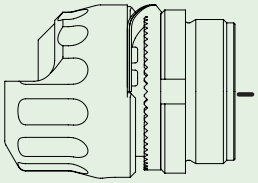
HUB UM NATO Cal. 5.56/.223 7.62/.308



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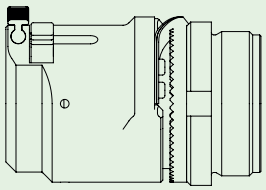
HUB QDN Cal. 5.56/.223 7.62/.308



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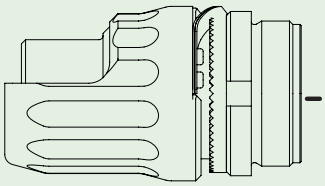
HUB UM HK G3-G36



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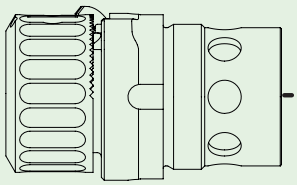
HUB QDSF Cal. 5.56/.223



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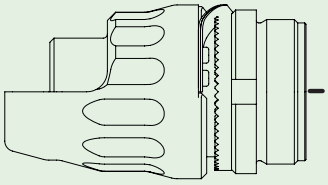
HUB UM SIG SG55X



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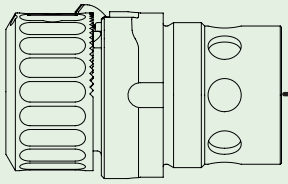
HUB QDSF Cal. 7.62/.308



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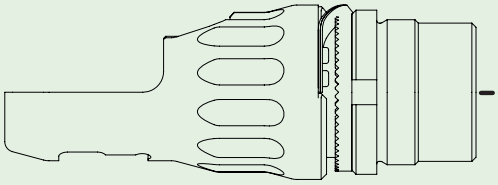
HUB UM Springfield M14



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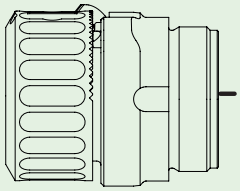
HUB QDASR Cal. 5.56/.223 7.62/.308



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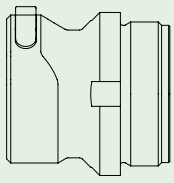
HUB QDAAC Cal. 5.56/.223 7.62/.308



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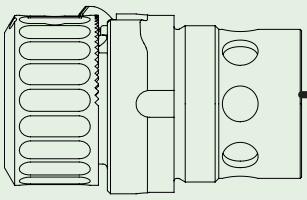
HUB QDR Cal. 5.56/.223 7.62/.308



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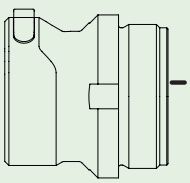
SD-HUB-QDR-762-...

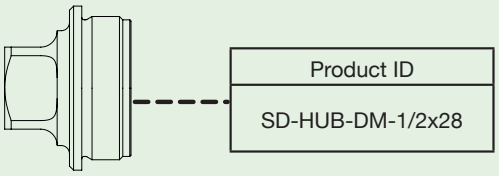
HUB QDAU



Product ID
SD-HUB-QDAU-...

Other threads on request.

HUB DM ½"-28 UNEF



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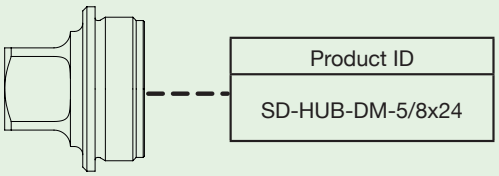
SD-HUB-DM-1/2x28

HUB DM 5/8"-24 UNEF



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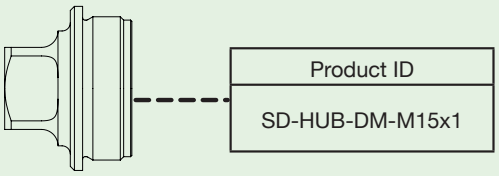
SD-HUB-DM-5/8x24

HUB DM M15x1



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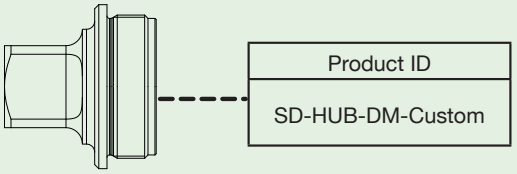
SD-HUB-DM-M15x1

HUB-DM-Custom



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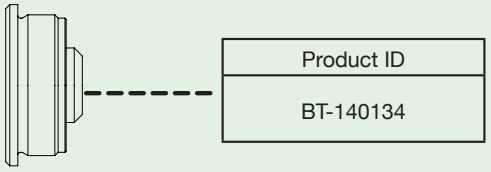
SD-HUB-DM-Custom

HUB DM M15x1



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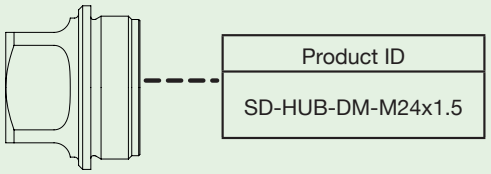
HUB DM M24x1.5



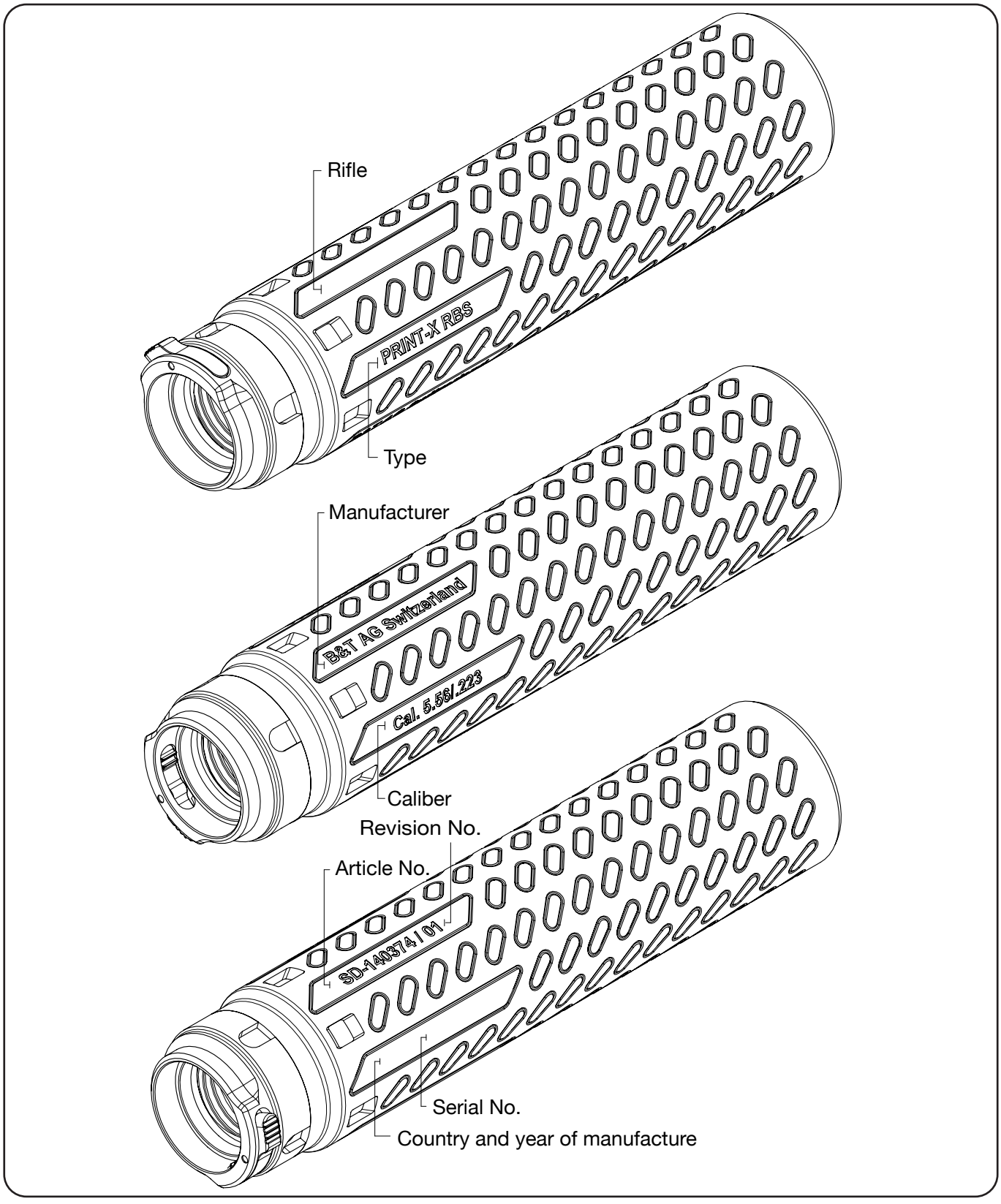
Product ID
SD-HUB-DM-M24x1.5

4. Description

4.1 Technical data

Refer to the data sheet of the corresponding suppressor.

4.2 Type designation



4.3 Nomenclature

4.4 Mounting Interfaces

4.4.1 QDR

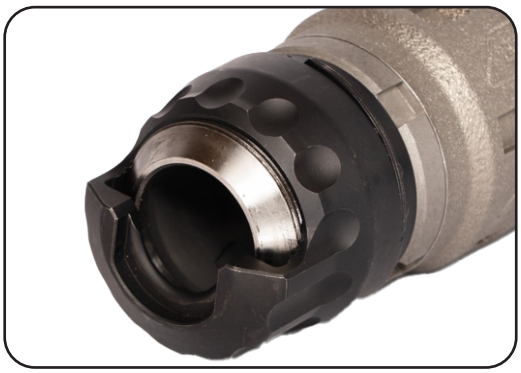
With the QDR (Quick Detachment - Rotex-IIA) system, the suppressor is mounted on a B&T compensator or flash hider.
With the Quick Detachment - QDR system, the suppressor can be fitted or removed by the shooter in a few seconds without any tools.

4.4.2 QDN

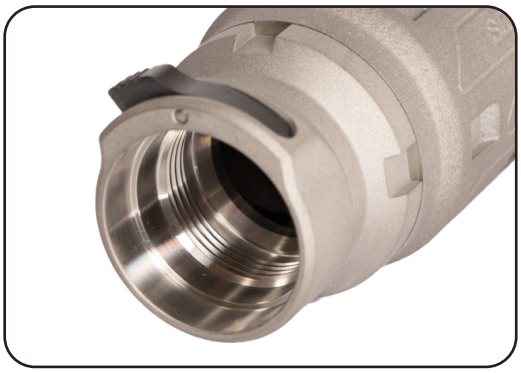
With the QDN (Quick Detachment - NATO) system, the suppressor is mounted on a standard NATO compensator or flash hider.
With the Quick Detachment - QDN system, the suppressor can be put on or taken off by the shooter, with one hand, without any tools.

4.4.3 UMN

With the UMN (Universal Mount - NATO) system, the suppressor is mounted on a standard NATO compensator or flash hider.
With the Universal Mount - UMN system, the suppressor can be put on or taken off by the shooter, without any tools. The UMN system is extremely easy to use, designed for maximum field suitability and maximum tolerance to operating errors.

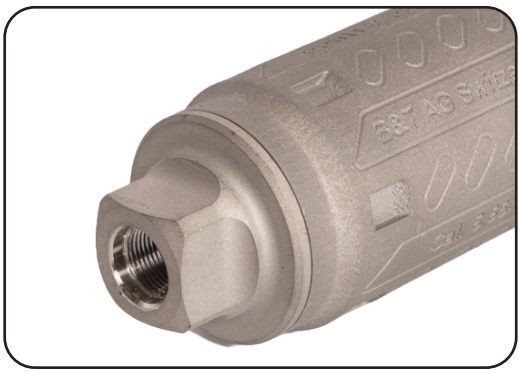


4.5.2 QDM



With the QDM (Quick Detachment - M.A.R.S) system, the suppressor is mounted on a B&T M.A.R.S. compensator or flash hider with trapezoidal thread. Because the flash hider is located in the first chamber of the suppressor, the QDM system results in very compact suppressors.
With the quick release system - QDM, the suppressor can be put on or taken off by the shooter in a few seconds, without any tools.

4.5.3 DM



With DM (Direct Mount), the suppressor is mounted directly on the barrel.
Direct mounting is the easiest way to mount a suppressor on a weapon.
Mounting and dismounting are done with tools.

4.5 Suppressor bodys

4.5.1 PRINT-X

The B&T PRINT-X suppressor body is one of the lightest and most compact suppressors produced. The suppressor bodies are available as Inconel and Titan variants.
The Inconel variant offers maximum resistance to the highest shot loads in the shortest possible time due to its full Inconel body design.
Due to the hybrid construction of titanium combined with Inconel blast baffle and Inconel cover, the titanium variant offers a minimum weight with high fatigue strength and low flash generation.

4.5.4 PRINT-X RBS

The B&T PRINT-X RBS (Reduced Backpressure Suppressor) suppressor body combines the advantages of the PRINT-X suppressor in the titanium or Inconel variant with the patented backflow optimized design of the B&T RBS suppressors. The RBS design maximally reduces backpressure effects on the gun and shooters while still providing very high sound reducing performance and low flash generation.

5. Mounting & Dismounting
5.1 HUB Adapters

5.1.1 Mounting options

The HUB Adapter can be mounted in three ways:

1. Mounting with torque
   » The connection may become loose during firing
   » The connection is easy to disconnect

2. Mounting with Rocksett® medium strength
   » The connection will only come loose during firing in extreme cases
   » The connection can be disconnected with little effort
   » see section „5.1.2 Mounting with Rocksett® medium strength“

3. Mounting with Rocksett® high strength
   » The connection does not detach during firing
   » The connection can no longer be disconnected
   » see section „5.1.4 Mounting with Rocksett® high strength“

Advice	
	The same adhesive is used for both the medium strength and the high strength connection with Rocksett®, the difference lies in the processing.

5.1.2 Mounting with Rocksett® medium strength

a. Clean and degrease the threaded area of the suppressor body and adapter with isopropyl alcohol or acetone and a nylon brush
   » Make sure the area is free of dirt and grease/oil.
b. Allow the degreased area to dry
   » Do not touch the degreased area during further handling to prevent re-contamination.

c. Apply a thin layer of Rocksett® to both sides of the thread
   » If a thick layer is applied, the curing of the adhesive does not work properly.

d. Screw the two parts together and let the connection dry for at least 24 hours.

5.1.3 Dismounting Rocksett® medium strength

a. Soak the whole silencer in hot water for 20 minutes or more.

b. Separate the adapter from the suppressor by pulling both parts in different directions using the appropriate tool.

Advice	
ⓘ	For PRINT-X suppressors use a hook wrench 40/42mm. For PRINT-X RBS suppressors use a hook wrench 45-50mm. For DM silencers use a square spanner 20 or the BT-tool (Article Nr.: T-232458).

For more information see *Rocksett TIP Sheet*.

5.1.4 Mounting with Rocksett® high strength

a. Clean and degrease the threaded area of the suppressor body and adapter with isopropyl alcohol or acetone and a nylon brush
   » Make sure the area is free of dirt and grease/oil.
b. Allow the degreased area to dry
   » Do not touch the degreased area during further handling to prevent re-contamination.

c. Apply a thin layer of Rocksett® to both sides of the thread and allow the adhesive to air dry for 24 hours when not assembled.
   » If a thick layer is applied, the curing of the adhesive does not work properly.

d. After 24h, heat both parts in an oven for 20 min at 80° C (175° F).
e. Allow both parts to cool to room temperature.

f. Apply a thin layer of Rocksett® to the thread of the hub adapter and screw both parts together.

g. Allow the bolted parts to air dry for 24 hours.
h. After 24h, heat both parts for 20 min at 80° C (175° F) in an oven and let them cool down to room temperature.

5.2 Muzzle device

5.2.1 Required tools

The following tools are required for mounting and dismounting work:

» Open-end wrench	Removal of existing flash hider/compensator
» Torque wrench	Tightening torque min. 50 Nm.
» Vise	With soft jaws

** The appropriate spanner size can be found in the data sheet of the specific suppressor.*

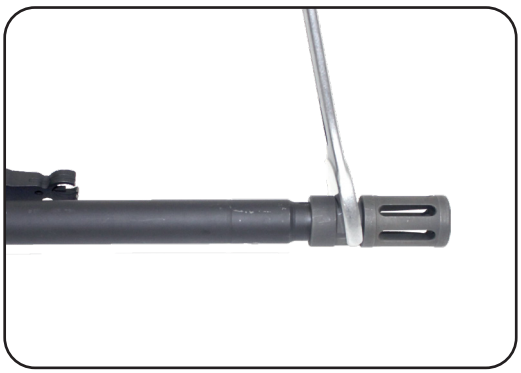
SAFETY ADVICE!	
⚠	For all mounting and dismounting work, do NOT clamp the weapon on the receiver, grip or stock! If it is not possible to clamp the weapon to the barrel, contact the manufacturer.

ADVICE!	
ⓘ	The thread on the muzzle, as well as on the flash hider/compensator, can be equipped with a righthand or a lefthand thread.

5.2.2 Dismounting of existing flash hider / compensator

If a Print-X / Print-X RBS with a QDR, QDN or QDM Adapter suppressor is mounted and the mounted flash hider/compensator is equipped with a corresponding interface, this step can be skipped.

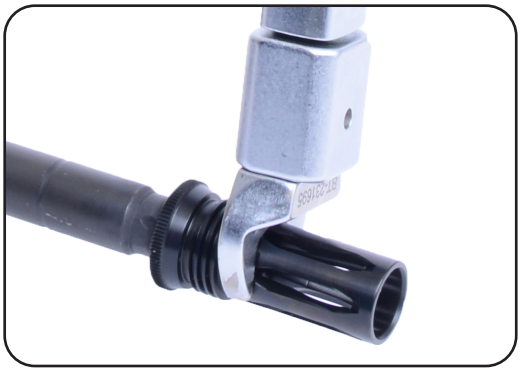
a. Clamp the barrel in a vice with soft jaws.
b. Loosen and remove the existing flash hider/compensator.



5.2.3 Mounting of flash hider / compensator with QD-Interface

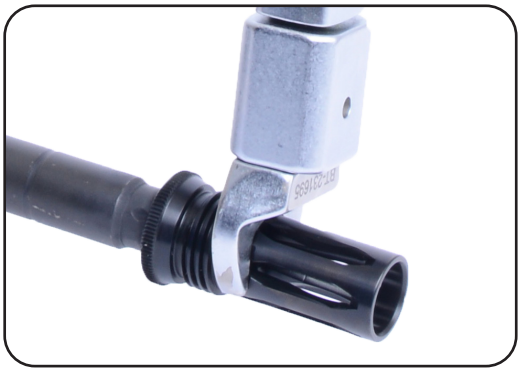
a. Clean the barrel thread and make sure it is free from dirt and mechanical damage.
b. Apply a few drops of Loctite 603® to the thread and spread evenly.
c. Screw the flash hider/compensator onto the muzzle thread and tighten until it is hand-tight on the thread

d. Clamp the barrel in a vice with soft jaws
e. Tighten the flash hider / compensator with a torque wrench and a suitable socket spanner to a torque of 50 Nm.



5.2.4 Dismounting of flash hider / compensator with QD-Interface

a. Clamp the barrel in a vice with soft jaws.
b. Loosen and remove the flash hider/compensator.



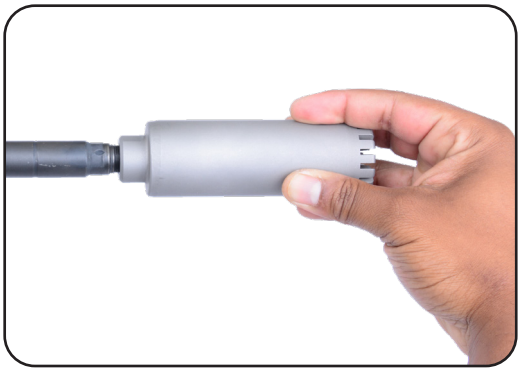
5.3 Suppressor

5.3.1 Mounting a DM suppressor

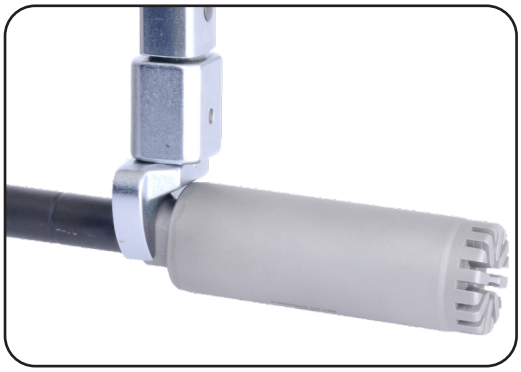
Applies to types Print-X / Print-X RBS suppressors with a DM HUB adapter

a. Clean the barrel thread and ensure that it is free from dirt and mechanical damage.

b. Apply a few drops of Loctite 603® to the thread and spread evenly.
c. Screw the suppressor hand tight onto the muzzle thread.
d. Before tightening with the torque wrench, check that the barrel and suppressor are correctly aligned.

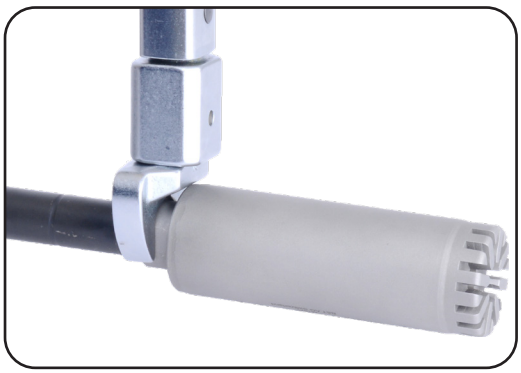


e. Clamp the barrel in a vice with soft jaws.
f. Tighten the suppressor with a torque wrench and a suitable socket spanner to a torque of 50 Nm.



5.3.2 Dismounting a DM suppressor

a. Clamp the barrel in a vice with soft jaws.
b. Loosen and remove the suppressor.

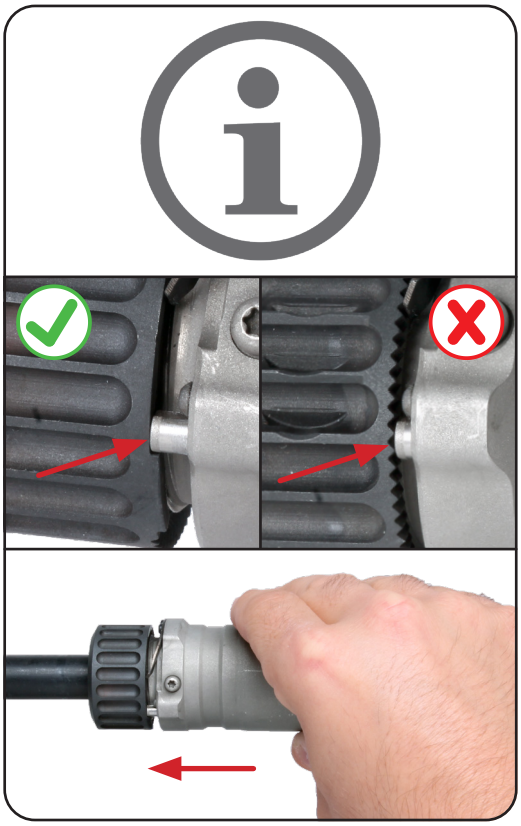


5.3.3 Mounting a QDR suppressor

Applies to suppressors with a QDR adapter.

a. Clean the contact surfaces on the suppressor and flash hider / compensator and make sure that they are free from dirt and mechanical damage.

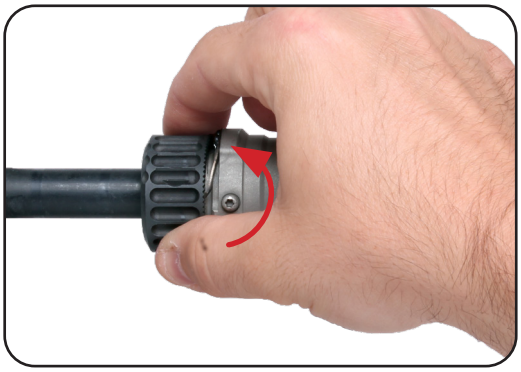
b. Unscrew the nut on the suppressor till the mechanical stop.



c. Slide the suppressor over the flash hider / compensator and turn it until the pin in the suppressor engages in the groove in the flash hider / compensator.

d. Tighten the nut on the suppressor clockwise until the suppressor is firmly seated on the flash hider / compensator.

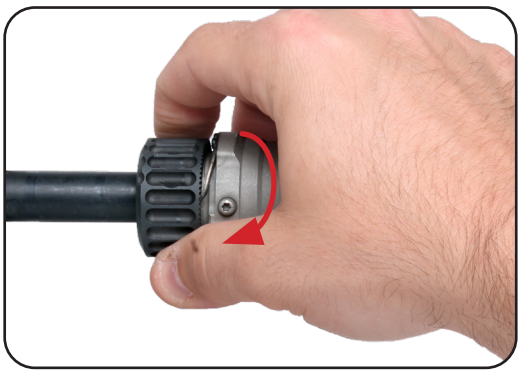
e. Before firing, check that the barrel and suppressor are properly aligned and free of obstructions.



5.3.4 Dismounting a QDR suppressor

a. Loosen the nut on the suppressor in counter-clockwise direction till the mechanical stop.

b. Pull the suppressor off the flash hider / compensator.

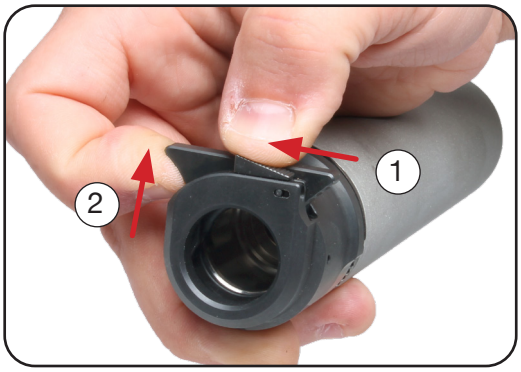


5.3.5 Mounting a QDN suppressor

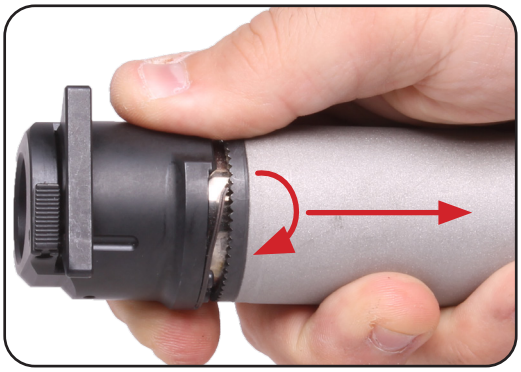
Applies to suppressors with a QDN adapter.

a. Clean the contact surfaces on the suppressor and flash hider / compensator and make sure that they are free from dirt and mechanical damage.

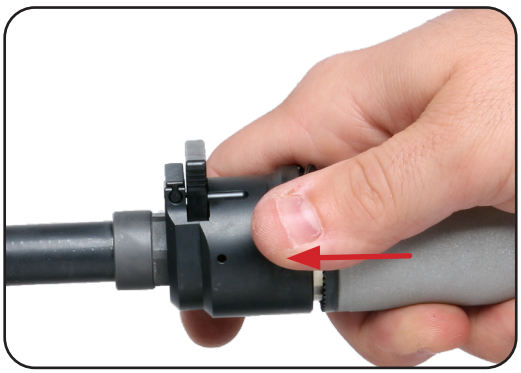
b. Push the knob to the left and pull the slider out as far as it will go. It locks in the open position. If the slider is already in the open position, this step can be skipped.



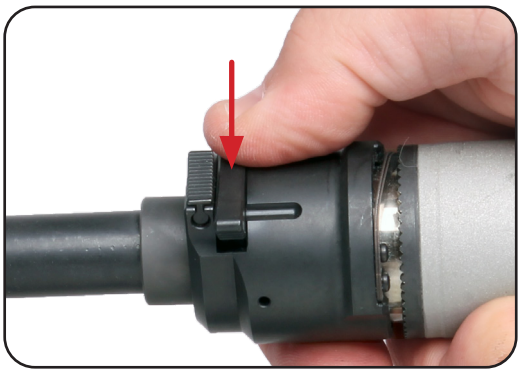
c. Loosen the suppressor body by approximately one turn in a counter-clockwise direction. If the suppressor body has already been loosened, this step can be skipped.



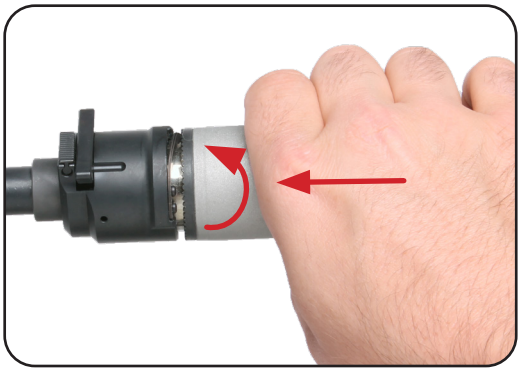
d. Slide the suppressor over the flash hider/compensator and align the slide parallel to the flats of the flash hider/ compensator



e. Push the slider down till it snaps audibly into position.



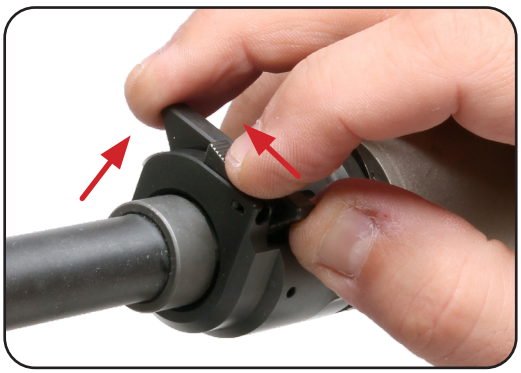
f. Tighten the suppressor clockwise until it is firmly seated on the flash hider / compensator.
g. Before firing, check that the barrel and suppressor are properly aligned and free of obstructions.



5.3.6 Dismounting a QDN suppressor

a. Loosen the suppressor body by approximately one turn.

b. Push the knob to the left and pull the slider out as far as it will go.
c. Pull the suppressor off the flash hider / compensator.

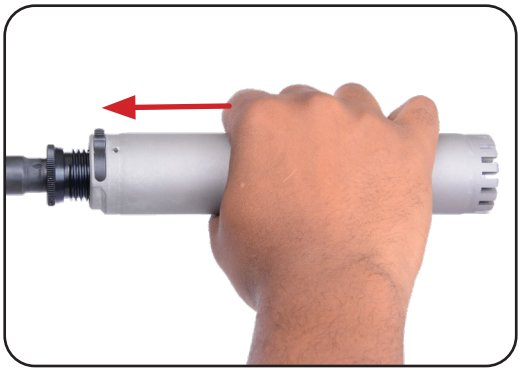


5.3.7 Mounting a QDM suppressor

Applies to suppressors with a QDM adapter.

a. Clean the trapezoidal thread on the suppressor and flash hider / compensator and make sure that they are free from dirt and mechanical damage

b. Screw the suppressor onto the thread of the flash hider/ compensator until the locking latch makes contact.



c. Press the locking latch and tighten it clockwise until the suppressor is firmly seated on the thread.
d. Before firing, check that the barrel and suppressor are properly aligned and free of obstructions.

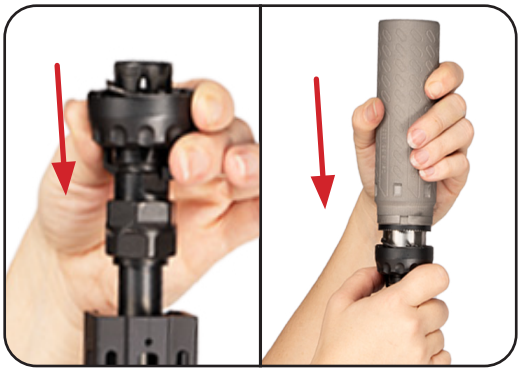
5.3.8 Dismounting a QDM suppressor

a. Press the locking latch and loosen it counter-clockwise until the suppressor clears the thread.
b. Pull the suppressor off the flash hider / compensator.

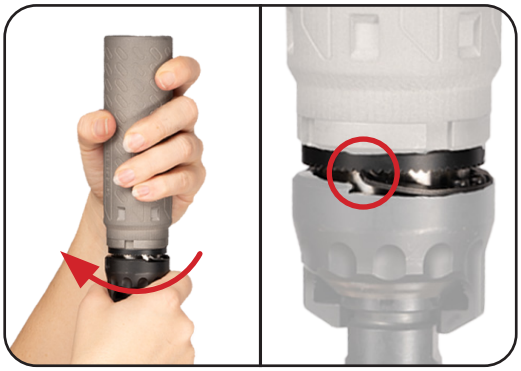
5.3.9 Mounting an UMN suppressor

a. Unscrew the nut from the suppressor body.

b. Slide the nut over the flash hider.
c. Slide the suppressor body over the flash hider.

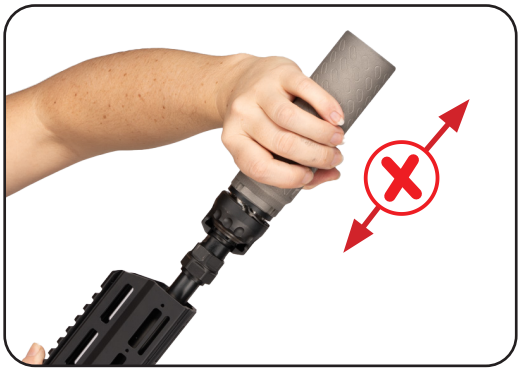


d. Screw the suppressor body anticlockwise while holding the nut on its place. Screw the suppressor handtight.
   » The suppressor should not move in direction of the barrel.



Advice	
ⓘ	At first, the suppressor can be screwed practically without any resistance. As soon as the spring is on the toothed gear, the resistance will be stronger.

e. Check firm seat of the suppressor on the barrel.



5.3.10 Dismounting an UMN suppressor

a. Unscrew the suppressor body clockwise while holding the nut on its place.

Advice	
ⓘ	As long as the spring touches the toothed gear some resistance can be felt. Later, the resistance decreases and there will be almost no noise while turning.

b. Remove the suppressor body from the barrel.

c. Remove the nut from the barrel.

6. Maintenance

6.1 Storage

Store guns with installed suppressor upside down, with the barrel pointing downward, to prevent any residue from cleaning agents or condensed water from running down the barrel.

6.2 Field maintenance

Perform field maintenance on the following occasions:

- » Prior to use and after a longer period of non-use.
- » Daily in case of regular use.
- » Immediately after a suspicious incident.

Regular maintenance in the field / operation includes the following measures:

1. Visual inspection of the interior for foreign particles and cracks.
2. Visual inspection of the outer surfaces for cracks and dents, especially in the muzzle area.
3. Shake the suppressor to determine if any loose particles are audible.
4. Check proper mounting and dismounting of the suppressor.
5. Lubricate the threads on the flash hider / compensator with a film of oil.
6. Check suppressor for tight fit.

SAFETY ADVICE!	
	If the suppressor shows cracks, dents, damage in the muzzle area, loose particles, excessive contamination by carbon particles or other irregularities, it may no longer be used and must be presented to the unit armourer, firearms technician or manufacturer immediately.

6.3 Workshop maintenance

Execute the periodic workshop maintenance if one or more of the following criteria are fulfilled:

- » If sand, mud, water or other liquids got inside the suppressor and then had to be fired without being able to remove the residue from the inside.
- » Immediately after a suspicious incident.
- » 1500 rounds have been fired or at the latest every 2 years
- » The effect of the suppressor has decreased noticeably.

To perform a correct inspection of the suppressor, it must be disassembled from the gun in any case (see chapter „5.3 Suppressor“ on page 19).

The periodic workshop maintenance includes the following measures:

1. Visual inspection of the interior for foreign particles and cracks.
2. Visual inspection of the outer surfaces for cracks and dents, especially in the muzzle area.
3. Shake the suppressor to determine if any loose particles are audible.
4. Clean and degrease the muzzle tread and/or the contact surfaces on the flash hider / compensator with a small brush and inspect for defects.
5. Seal the suppressor with a plug and fill with “SchleTek Suppressor-Cleaner Evolution” (or other suitable solvent) for at least 8 hrs.
6. If a QD flash hider / compensator is installed, place it in a container filled with “SchleTek Suppressor-Cleaner Evolution” for at least 8 hours.
7. Rinse the suppressor and, if applicable, the flash hider / compensator with warm water.
8. Blow out the suppressor and, if applicable, the flash hider / compensator with compressed air.
9. Lubricate the thread on the muzzle, the flash hider /compensator, if applicable the thread on the suppressor as well as the outside of the suppressor with a film of oil.

SAFETY ADVICE!	
	If the suppressor shows cracks, dents, damage in the muzzle area, loose particles, excessive contamination by carbon particles or other irregularities, it may no longer be used and must be presented to the unit armourer, firearms technician or manufacturer immediately.

6.3.1 Avoiding corrosion in the suppressor

Moisture inside a suppressor can occur if it is exposed to high humidity (e.g. water, rain...) or if a change in temperature causes condensation inside the suppressor. This moisture is not visible, but can never be completely excluded, even if you did not actually shoot at all and the suppressor was only mounted on the weapon for some time.
This moisture or condensed water, in combination with powder residues, can form a corrosive substance that can damage the suppressor. If this corrosive substance enters the weapon, it can also be damaged. Strong corrosion, including pitting, is hardly to be expected with appropriate care of the suppressor, but in extreme cases could lead to a structural weakening of the suppressor, which is why it must be avoided.

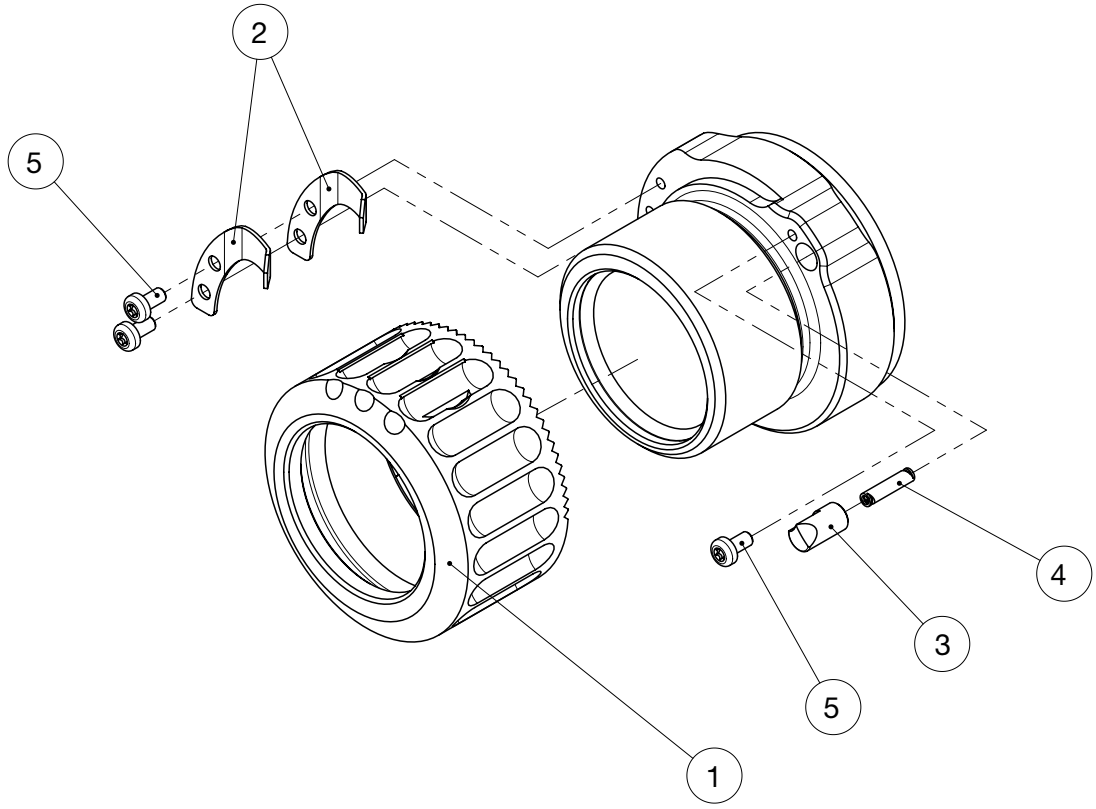
To prevent damage to the suppressor and the weapon due to corrosion, it is important to observe some safety rules:

a. Always store and transport the weapon and suppressor separately from each other, i.e. do not leave the suppressor on the weapon after use; remove it whenever possible.
b. If it is not possible to remove the suppressor from the weapon after use, the weapon should be temporarily stored with the muzzle or suppressor down to avoid that corrosive substances from the suppressor enter the muzzle thread and the weapon.
c. Always keep the inside and outside of the suppressor dry; in case of doubt dry the suppressor before storing it, e.g. putting it in upright position on a radiator (please note weapon legislation!).
d. When cleaning the weapon and suppressor, always remove the suppressor from the weapon first.
e. Clean the suppressor regularly with a suitable cleaning agent (e.g. SchleTek Evolution).

SAFETY NOTICE!	
	If these rules are not followed, the suppressor can be structurally weakened by corrosion and, in extreme cases, burst when the shot is fired! If these rules are not followed, the weapon may become corroded on the muzzle thread, the compensator or the flashhider, inside the barrel as well as in the weapon itself!

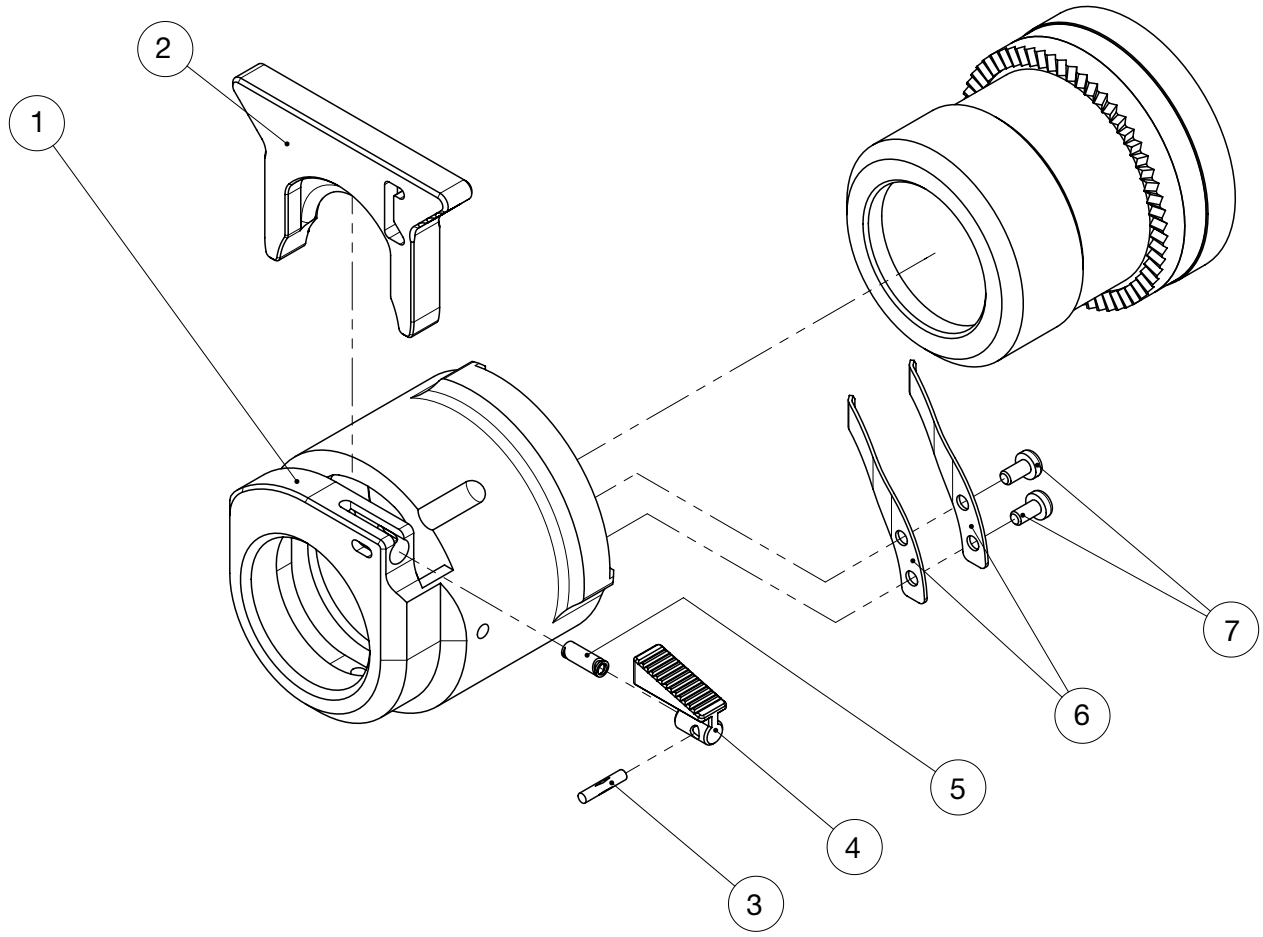
SAFETY NOTICE!	
	If there is any uncertainty as to whether the suppressor is still to be shot, present it to the firearms technician or manufacturer for inspection.

7. Spare parts catalogue
7.1 Spare parts catalogue QDR



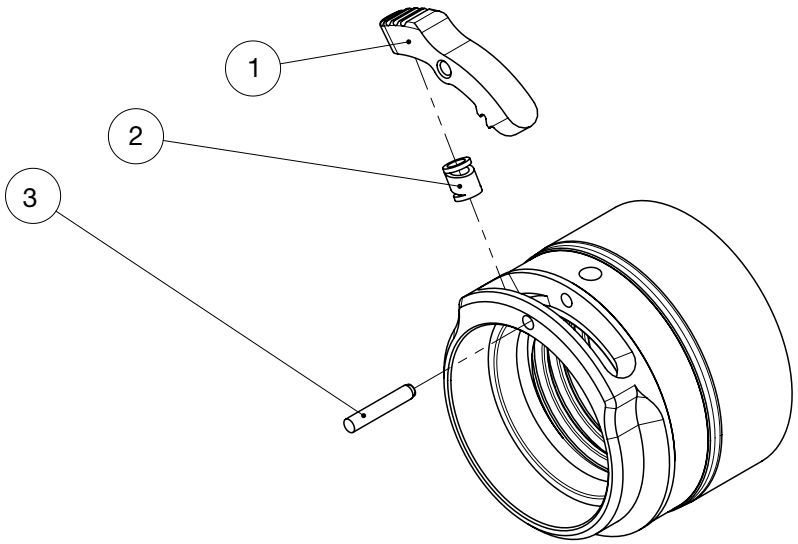
Pos.	Article-No.	Description
1	BT-121709	SD-Nut M31xPh4 P2 90°
2	BT-121602	Leaf spring 90°
3	BT-121728	Stop pin
4	BTN-36-1-5	Compression spring
5	BTN-BN5687-M2x4-E	Torx socket pan head screw M2x4

7.2 Spare parts catalogue QDN



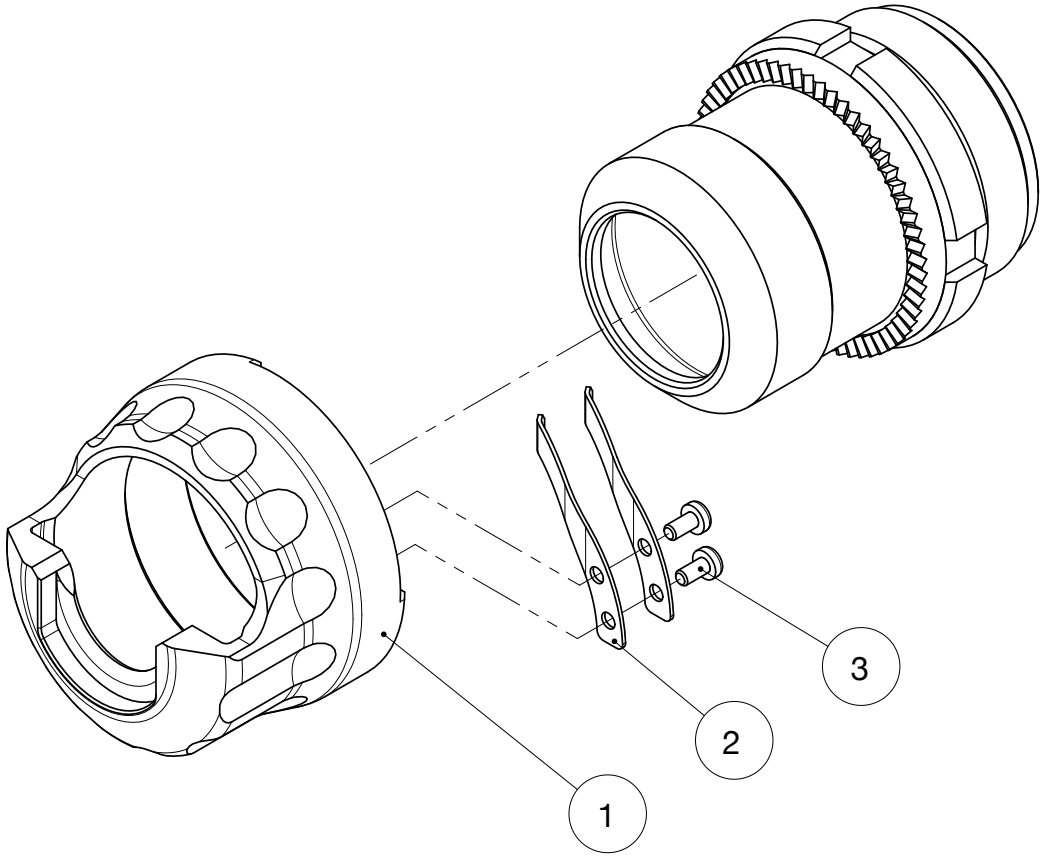
Pos.	Article-No.	Description
1	BT-122491	SD-Nut M33x1
2	BT-122492	Slider
3	BTN-BN889-1.5x8-E	Grooved pin ø1.5x8
4	BT-122493	Knob
5	BTN-36-2-3	Compression spring
6	BT-121602	Leaf spring 90°
7	BTN-BN5687-M2x4-E	Torx socket pan head screw M2x4

7.3 Spare parts catalogue QDM



Pos.	Article-No.	Description
1	BT-122131	Locking latch
2	BTN-1709.2630	Compression spring
3	BTN-BN858-2x12	Parallel pin

7.4 Spare parts catalogue UMN



Pos.	Article-No.	Description
1	BT-121593-...	SD-Nut M33x1
2	BT-121602	Leaf spring 90°
3	BTN-BN5687-M2x4-E	Pan head screw Torx M2x4

8. Accessories
8.1 Cleaning agent

Pos.	Article-No.	Description
	SCT-1986	SchleTek Suppressor-Cleaner Evolution

9. Warranty statement

Warranty claims on behalf of the client are to be explicitly declared as such. During the legal warranty period, B&T provides warranty cover solely for defects that arise as a result of faulty materials, construction errors or poor workmanship. If a warranty claim is justified, B&T will, at its own discretion, either repair or replace the defective good. Costs incurred in transporting the defective good to B&T are borne by the client. Spare parts fitted and replaced become the property of B&T.
Inasmuch as is legally permitted, any other liability of B&T is excluded, in particular liability for damages arising either directly or indirectly from the delivered good itself, from its use or from its defects merchandise is covered by the warranty provisions of the manufacturer. Parts that are naturally subject to wear and tear, damage arising from insufficient maintenance work, non-compliance with operating regulations and cases of force majeure are all excluded from warranty cover. Warranty claims lapse if the client itself or third parties alter or repair the delivered good without the prior written consent of B&T. All product specifications are subject to change without prior notice. Published data are mean values and therefore not suitable acceptance criteria.

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Notes: