



B&T SD-RIFLE

SUPPRESSOR FAMILY

## OPERATOR MANUAL



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TM-SD\_RIFLE-00-EN

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**WARNING!**

Suppressed firearms produce less noise than non-suppressed firearms, but it should still be remembered that it is a firearm. It is essential to follow the same safety rules as for a non-silenced firearm.

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

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.

## 1. General rules

Read the 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 manual.
3. Serious injury to the user may result from an improperly installed suppressor.
4. Always wear eye and ear protection when shooting.
5. Do not touch the suppressor directly after shooting.

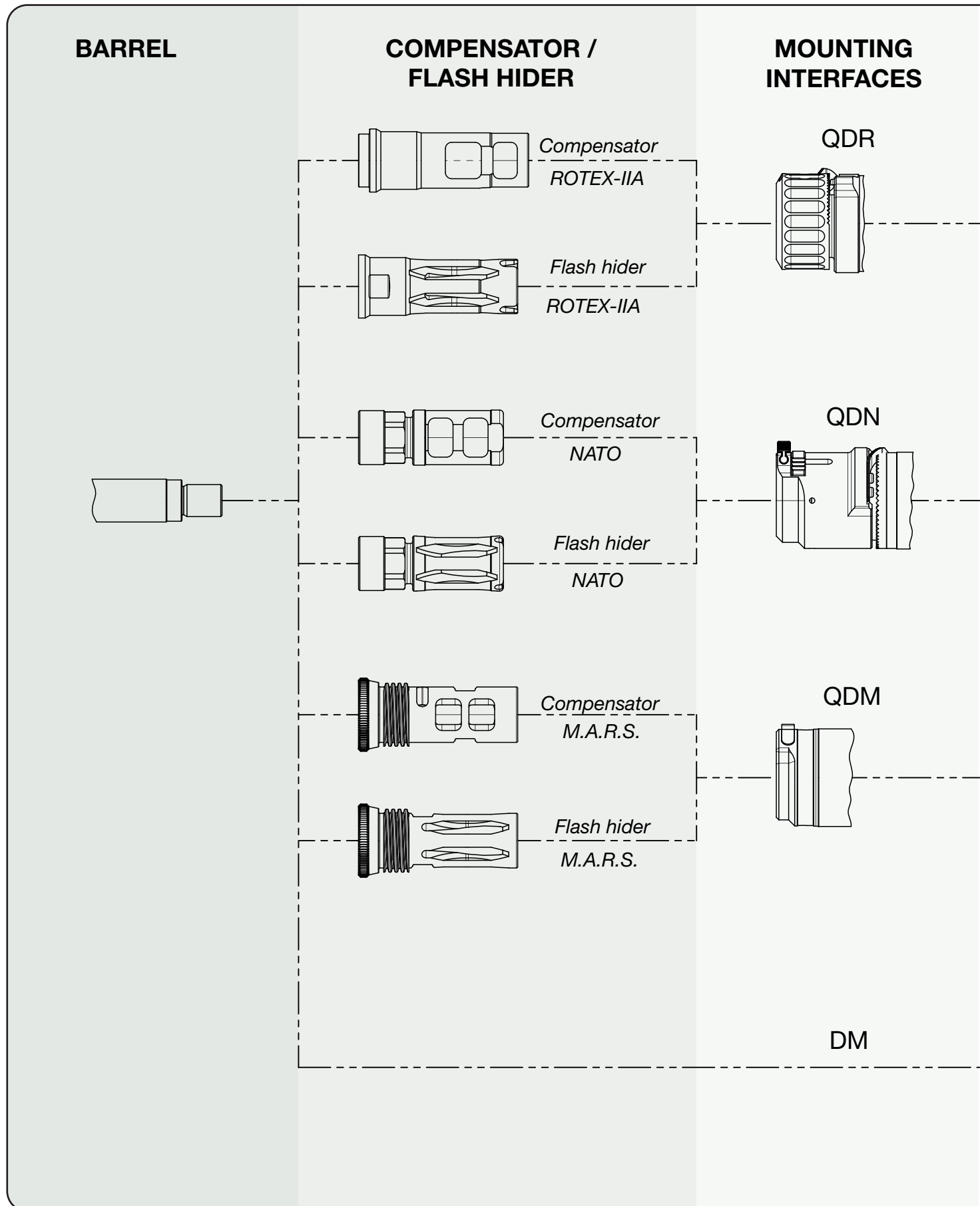
### 1.2 Restrictions for firing in full-automatic fire

Suppressors designed for full-automatic weapons can be used in full-automatic firing mode. However, it must be considered that enormous heat is generated when firing in full-automatic fire mode. It is therefore recommended to shoot in short bursts with the suppressor in place and to stop shooting as soon as the suppressor begins to glow, if possible, in order to prevent permanent damage to the suppressor. Any further restrictions imposed by the gun manufacturer must be observed.

### 1.3 Influence on point of impact

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

## 2. Overview - Rifle suppressors and mounting interfaces

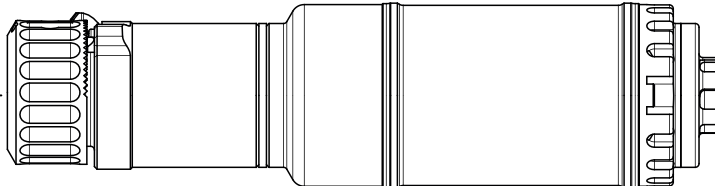


**SUPPRESSOR TYPE**

ROTEX-IIA



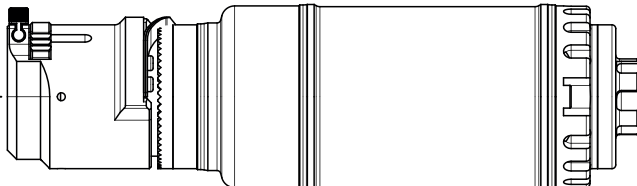
RBS QDR



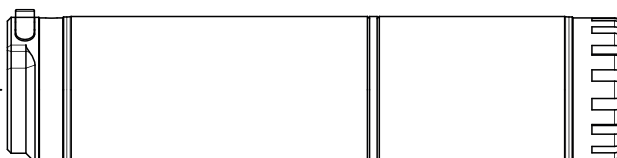
ROTEX-X



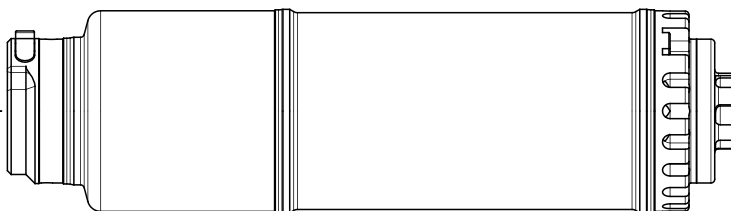
RBS QDN



M.A.R.S. QD



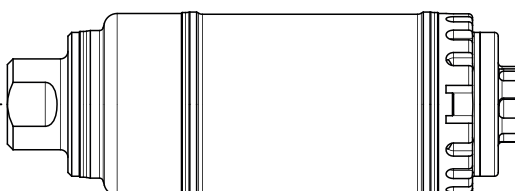
RBS QDM



M.A.R.S. DM



RBS DM



### 3. Description

#### 3.1 Technical data

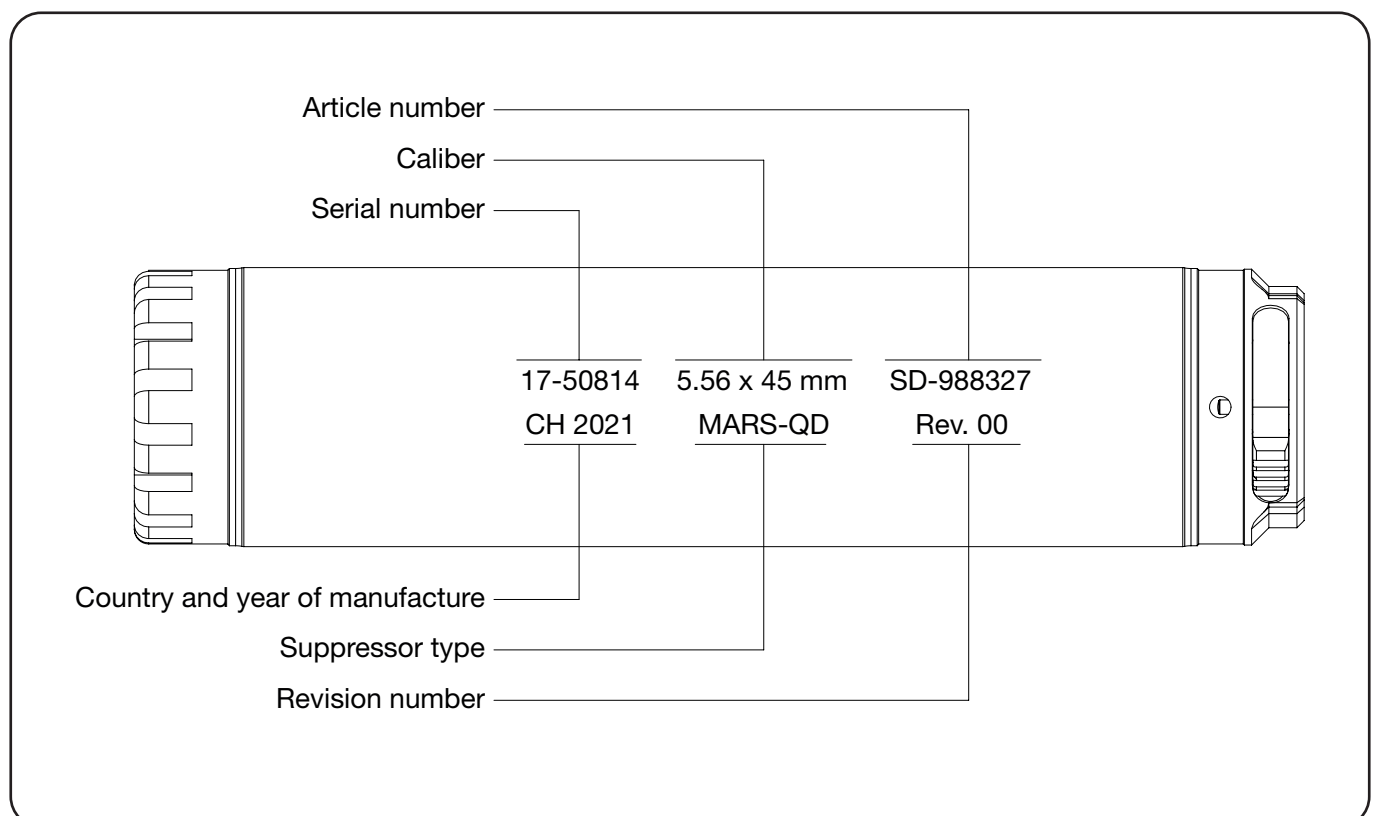
|                             |   |
|-----------------------------|---|
| Manufacturer                | B&T AG - Switzerland                      |
| Article-No.                 | -   |
| Calibers                    | 5.56mm/.223 Rem.                          |
|                             | 7.62mm/.308 Win.                          |
| Function                    | Rifle suppressor                          |
| Material                    | Stainless Steel & Thermax® / Inconel® 625 |
| Surface treatment           | Sandblasted                               |
| Colour                      | Black/Grey - Cerakote coating on request  |
| Service Life                | Min. 5.000 Rounds                         |
| Full auto capable           | Yes                                       |
| Ambient temperature for use | -45°C...70°C                              |

All product specifications are subject to change without notice.

Published data are mean values and therefore not suitable acceptance criteria.

**For specific technical data, please refer to the data sheet of the specific suppressor. The data sheet designation corresponds to the item number (see chapter „3.2 Type designation“ on page 8)**

#### 3.2 Type designation



### 3.3 Nomenclature



### 3.4 Mounting Interfaces

#### 3.4.1 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.



#### 3.4.3 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.



#### 3.4.2 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.



#### 3.4.4 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.

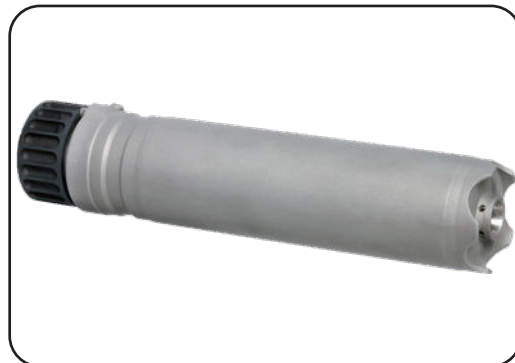


## 3.5 Suppressors

### 3.5.1 ROTEX-IIA

The B&T ROTEX-IIA suppressor achieves excellent sound suppression and maximum suppression of muzzle flash.

The ROTEX-IIA suppressor is only available as a QDR (quick detachment) variant.



### 3.5.2 ROTEX-X

The B&T ROTEX-X suppressor is one of the lightest and most compact suppressors produced.

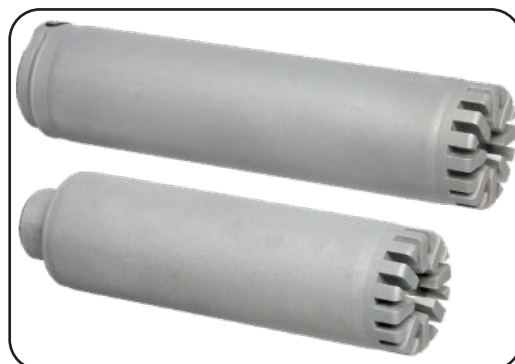
The ROTEX-X suppressor is only available as a QDN (quick detachment) variant. Compatible with standard NATO compensator and flash hiders.



### 3.5.3 M.A.R.S.

The B&T M.A.R.S. (Miniature Assault Rifle Suppressor) suppressor is a lightweight and compact suppressor. The muzzle flash and the muzzle blast are suppressed to the maximum thanks to the Multi-Y end cap.

The weight and length are optimally minimised. The M.A.R.S. suppressor is available as a DM variant (direct mount) or as a QDM variant (quick detachment).



### 3.5.4 RBS

The RBS (Reduced Backpressure Suppressor) suppressors feature an optimised design that maximally reduces the back-pressure effects on the weapon while still achieving high suppression performance.

The RBS suppressors are available as QDR, QDN, QDM and DM variants and can therefore be interchanged with existing suppressors.



## 4. Mounting & Dismounting

### 4.1 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.

### 4.2 Dismounting of existing flash hider / compensator

If a QDR, QDN or QDM 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.



### 4.3 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.



### 4.4 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.



## 4.5 Mounting a DM suppressor

Applies to types M.A.R.S. DM and RBS DM.

- 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.



## 4.6 Dismounting a DM suppressor

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



## 5. Operation

### 5.1 Mounting a QDR suppressor

Applies to suppressor types ROTEX-IIA and RBS QDR.

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

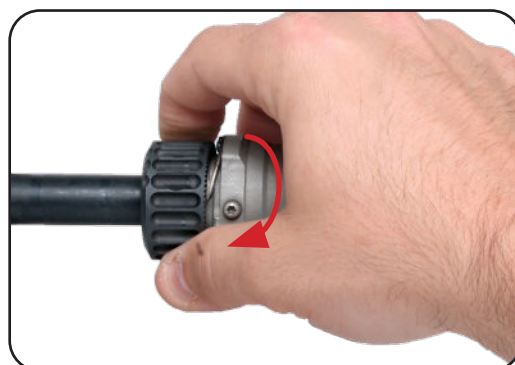
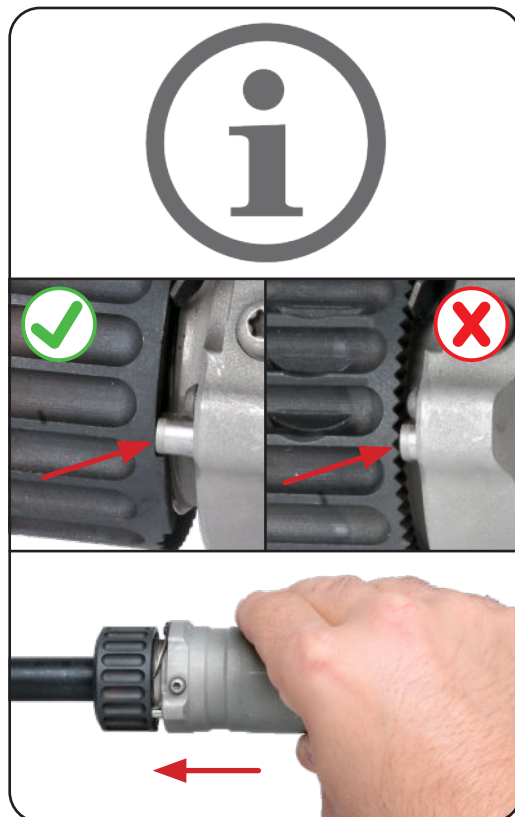
- b. Unscrew the nut on the suppressor till the mechanical stop.

- 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.

### 5.2 Dismounting a QDR suppressor

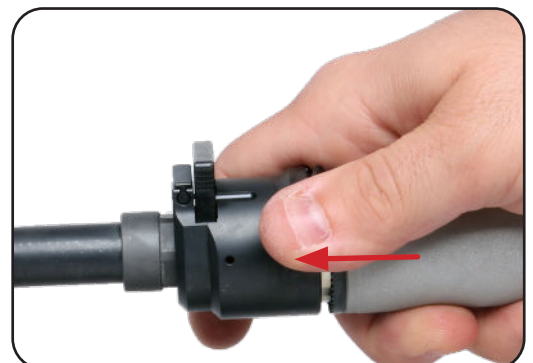
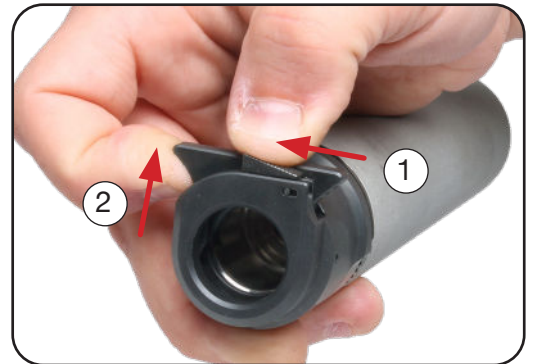
- a. Loosen the nut on the suppressor in counter-clockwise direction till the mechanical stop.
- b. Pull the suppressor off the flash hider / compensator.



### 5.3 Mounting a QDN suppressor

Applies to suppressor types ROTEX-X and RBS QDN.

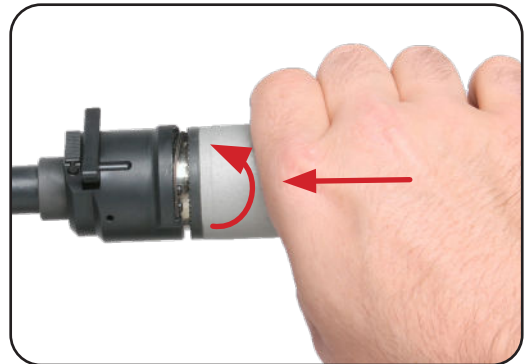
- a. Clean the contact surfaces on the suppressor and flash hider / compensator and make sure that they are free from dirt and mechanical damage.
- b. Push the knob to the left and pull the slider out as far as it will go. It locks in the open position. If the slider is already in the open position, this step can be skipped.
- c. Loosen the suppressor body by approximately one turn in an 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.



#### 5.4 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.



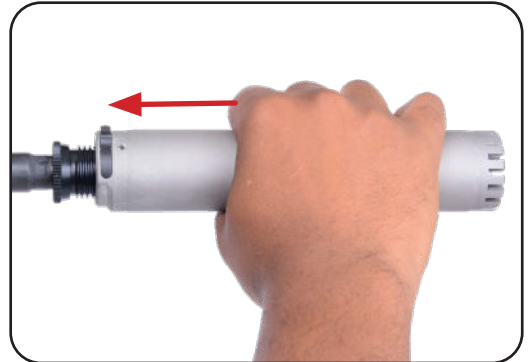
## 5.5 Mounting a QDM suppressor

Applies to suppressor types M.A.R.S. QD and RBS QDM.

- 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.



## 5.6 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.



## 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 „4. Mounting & Dismounting“ on page 12 and/or see chapter „5. Operation“ on page 15)

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.

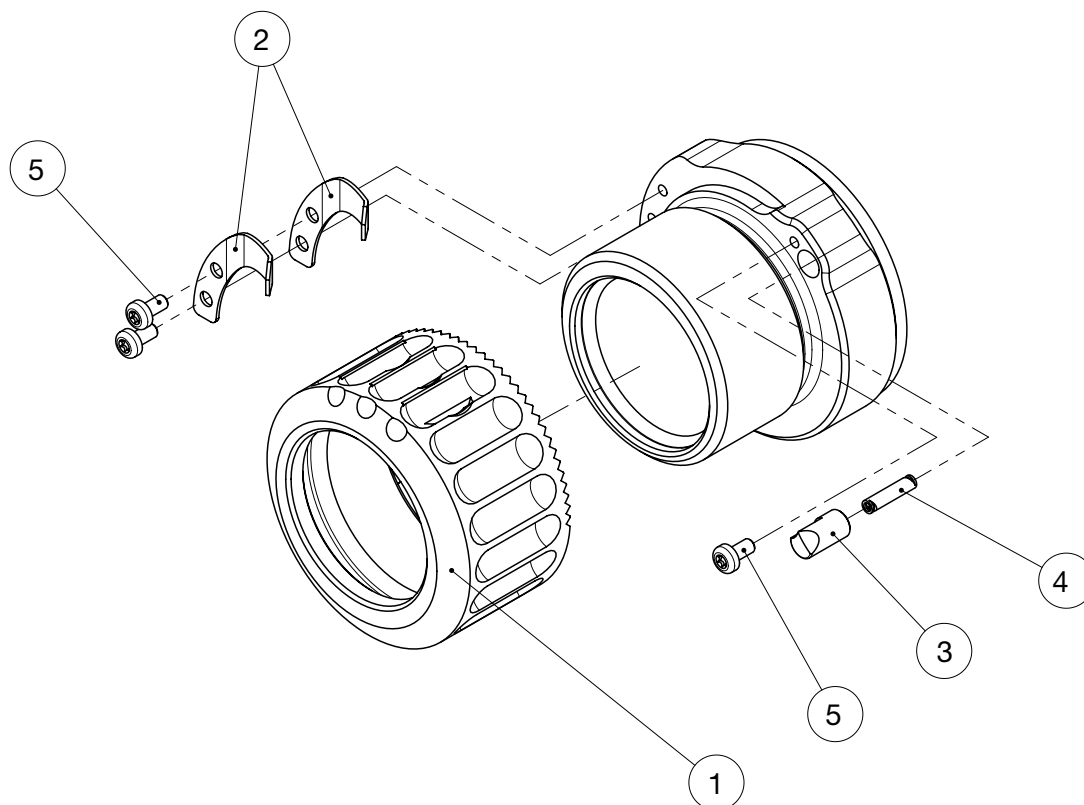
#### SAFETY ADVICE!



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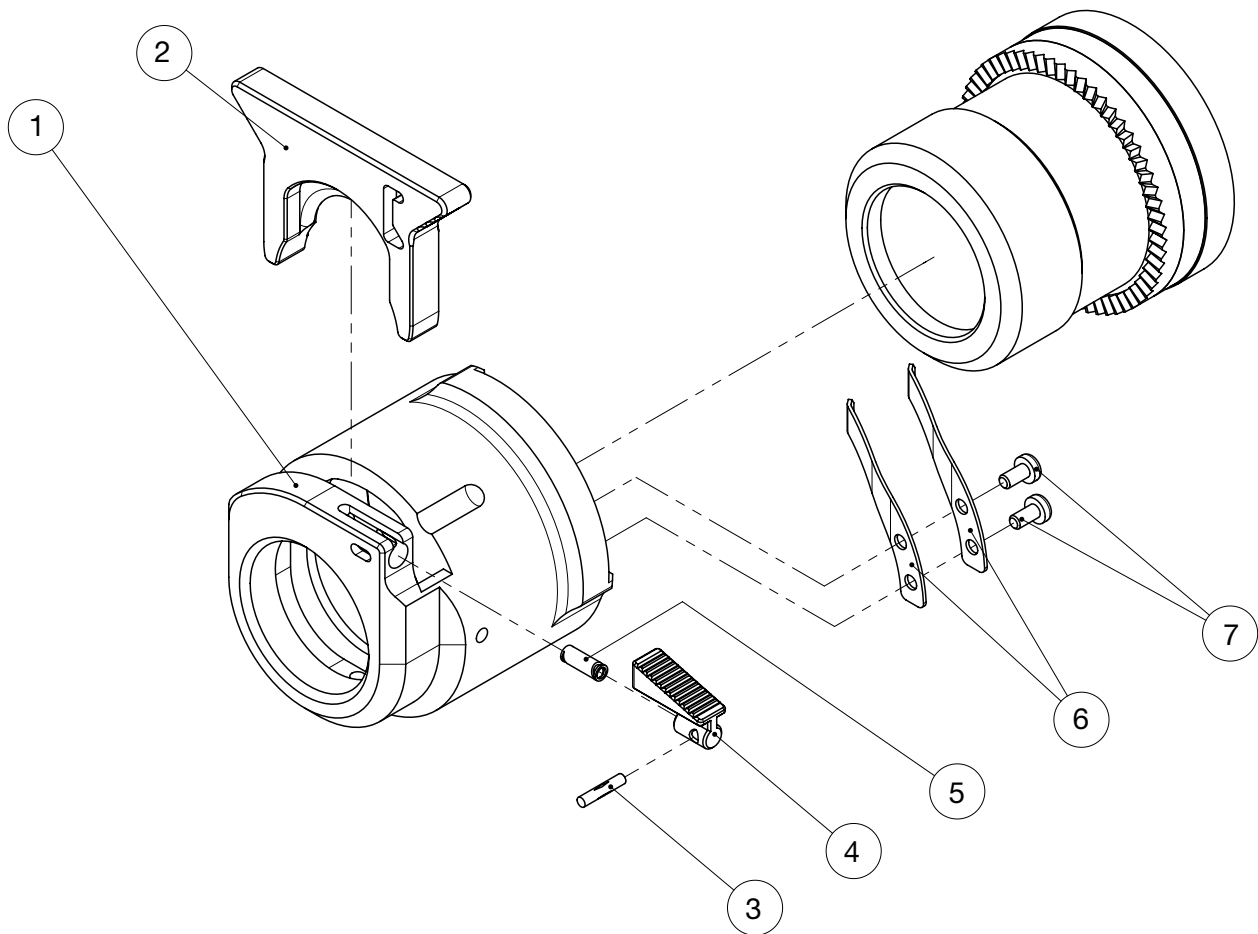
## 7. Spare parts catalogue

### 7.1 Spare parts catalogue QDR



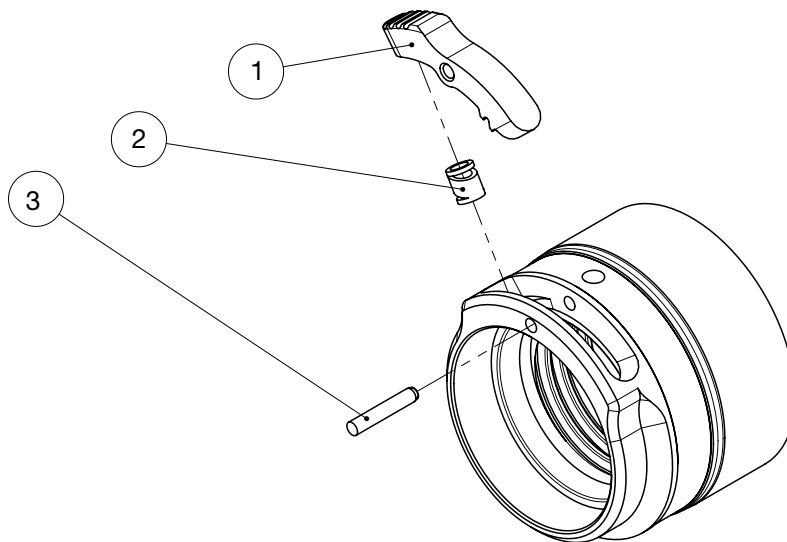
| Pos. | Article-No.       | Description                     |
|------|-------------------|---------------------------------|
| 1    | BT-121709         | SD-Nut M31xPh4 P2 90°           |
| 2    | BT-121602         | Leaf spring 90°                 |
| 3    | BT-121728         | Stop pin                        |
| 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 $\varnothing 1.5 \times 8$ |
| 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       |

## 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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