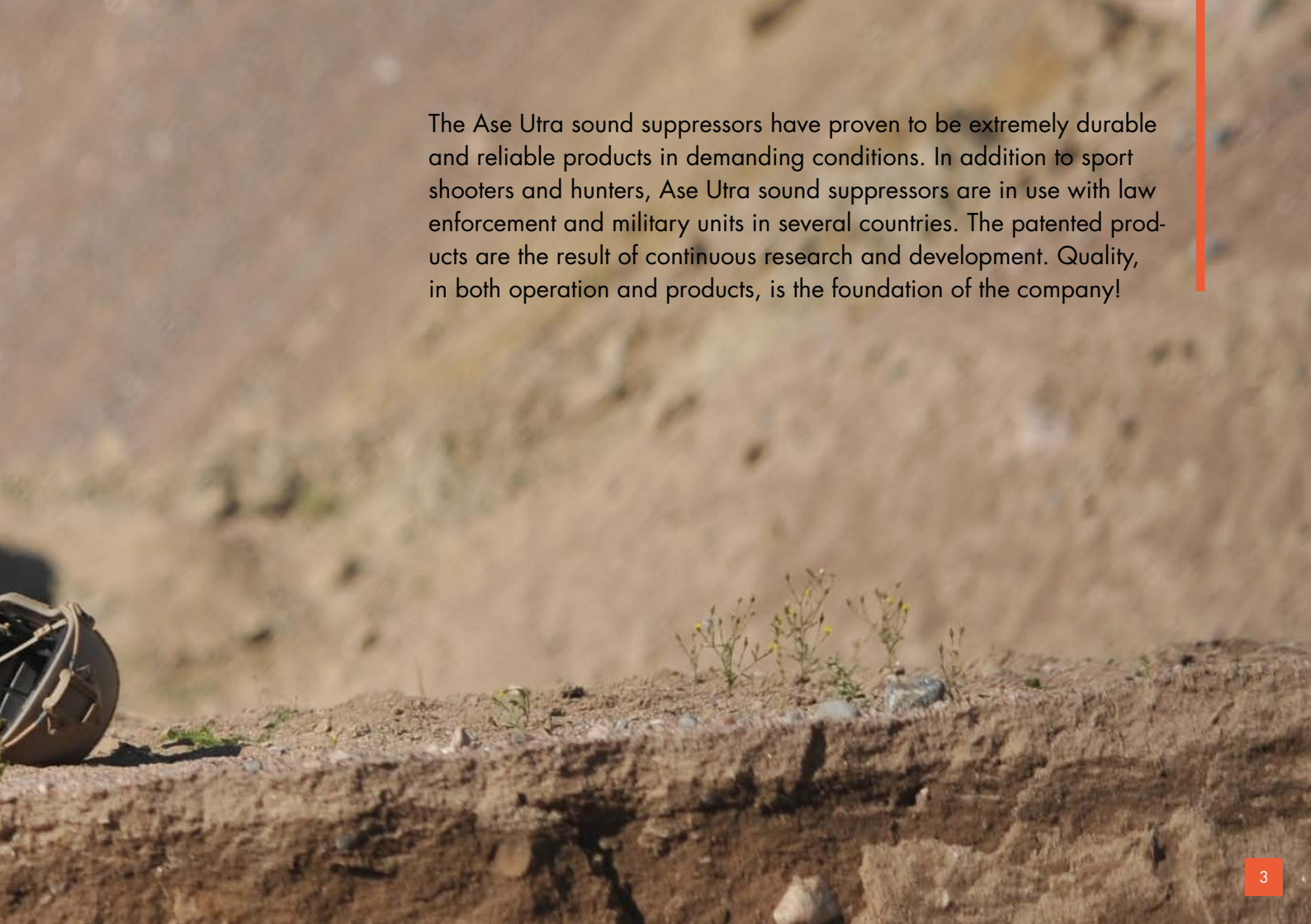
SOUND suppressors

ASE UTRA

Ase Utra OY is one of the largest manufacturers of sound suppressors in the world. Since 1994 Ase Utra has developed and manufactured sound suppressors for the needs of

- Hunters and sport shooters
- Military and law enforcement users.



The Ase Utra sound suppressors have proven to be extremely durable and reliable products in demanding conditions. In addition to sport shooters and hunters, Ase Utra sound suppressors are in use with law enforcement and military units in several countries. The patented products are the result of continuous research and development. Quality, in both operation and products, is the foundation of the company!

BoreLock fast attach system

The BoreLock fast attach mounting system is our newest generation of fast attach mounts.

The BoreLock mount provides a simple to operate and secure attachment to many of the common weapon models available. BoreLock mounting suppressors are available from 5.56 mm NATO up to .338 LM calibre.

Suppressors equipped with the BoreLock mount are designated with the letters BL.

BoreLock HiPer flash hider

4-prong design provides excellent visual signature reduction

Tapered surface before attachment thread effectively blocks fouling from entering the mounting surfaces and allows for ease of attachment and removal.

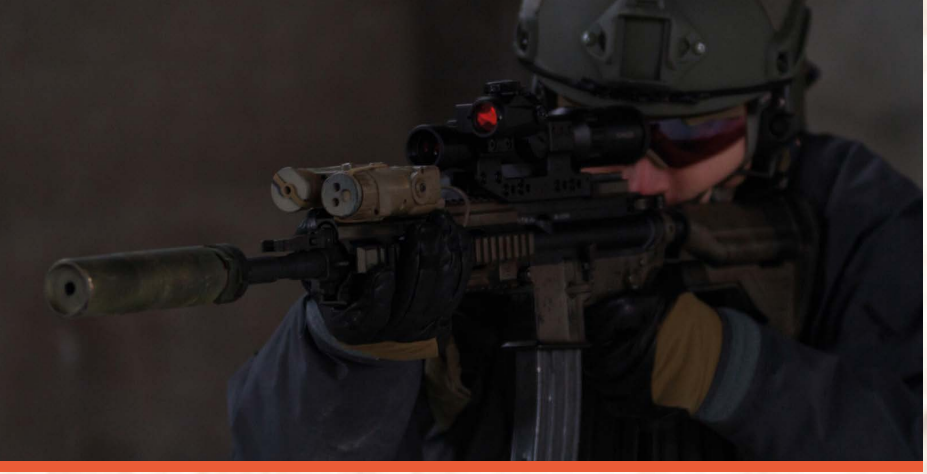
BoreLock .30/.338 cal muzzle brake

Tapered surface before attachment thread effectively blocks fouling from entering the mounting surfaces and allows for ease of attachment and removal.

Universal bore size for calibres from .30 up to .338

4-position adjustable mount allows for a secure fit

Two part design of the brake provides for a secure, simple and quick installation. No washers or shims required



jet-Z™ CQB-BL / CQBS-BL SUPPRESSORS

- Lightweight, ultra-compact assault rifle suppressors designed for use on 5.56 NATO assault rifles
- Fully welded, sealed construction that utilizes the patented jet-Z baffle design.
- Due to the updated design, the new models are lighter and even more robust!

	CALIBRE	WEIGHT	OVERALL LENGTH / ADDED LENGTH*	DIAMETER	NET SOUND SUPPRESSION**	MATERIAL	FINISH
jet-Z CQB-BL	5.56 mm NATO	550-555 g	175 / 115 mm	40 mm	15-31 dB (A)	Carbon steel	Manganese phosphate
jet-Z CQBS-BL	5.56 mm NATO	465-470 g	145 / 85 mm	40 mm	15-27 dB (A)	Carbon steel	Manganese phosphate

*Over HiPer flash hider
** Suppressed sound pressure level with most 5.56 mm calibre assault rifles:Right handed shooter,
Left ear c. 131-135 dB, right ear c. 137-144 dB (unsuppressed level c. 158-162 dB)1 metre left of the muzzle, 134-143 dB (unsuppressed level c. 165-167 dB)

jet-Z™ CQB-BL Minimi SUPPRESSOR

- Light weight and compact suppressor designed for use on 5.56 mm NATO calibre Minimi and Para Minimi light machineguns.
- The suppressor mounts using the BoreLock flash hider, without any permanent modifications to the weapon.

	CALIBRE	WEIGHT	OVERALL LENGTH / ADDED LENGTH*	DIAMETER	NET SOUND SUPPRESSION	MATERIAL	FINISH
jet-Z CQB-BL Minimi	5.56 mm NATO	670 g	170 / 115 mm	40 mm	1 m left of the muzzle 25-27 dB (A) shooters ear, 21-22 dB (A)	Carbon steel	Manganese phosphate

*Over HiPer flash hider

jet-Z™ COMPACT-BL SUPPRESSOR

- Lightweight and compact rifle suppressor designed for use on 7.62 NATO assault and sniper rifles.
- Due to the updated design, the new model is lighter and has better flash suppression performance, especially on barrel lengths of 16" and shorter
- Various BoreLock flash hider mounts are available, to adapt the suppressors to various rifle types,

	CALIBRE	WEIGHT	OVERALL LENGTH / ADDED LENGTH*	DIAMETER	NET SOUND SUPPRESSION	MATERIAL	FINISH
jet-Z COMPACT-BL	7.62mm	565 g	203 / 143 mm	40 mm	1 m left of the muzzle 15-28 dB (A) shooters ear, 12-21 dB (A)	Carbon steel	Manganese phosphate

*Over HiPer flash hider

S series SL7-BL SUPPRESSOR

- Compact, stainless steel suppressors designed for use on sniper rifles from .308 Win up to .338 Lapua Mag.
- Excellent sound and flash suppression performance
- The suppressor mounts using the two-part BoreLock muzzle brake, the two-part design of the muzzle brake makes the initial installation quick and simple.

	CALIBRE	WEIGHT	OVERALL LENGTH / ADDED LENGTH	DIAMETER	NET SOUND SUPPRESSION*	MATERIAL	FINISH
S series SL7-BL	.30 .338	600-605 g 665-670 g	176-181 / 131 mm	40 mm	.308 Win, 1m left of the muzzle, 31-33 dB (A) .308 Win, shooters ear, 27-30 dB (A) .338 LM, 1m left of the muzzle, .25+ dB (A) .338 LM, shooters ear, 34+ dB (A)	300 series stainless steel	Blasted stainless finish or CeraKote coating

S series SL4 and SL6-SMG MP5 SUPPRESSORS

- Ultra-compact and light weight 9mm suppressors for the MP5 submachinegun.
- 3-lug mounting system to attach the suppressors to the standard MP5 barrels

	CALIBRE	WEIGHT	OVERALL LENGTH / ADDED LENGTH	DIAMETER	NET SOUND SUPPRESSION*	MATERIAL	FINISH
SL4-SMG	9x19mm	410 g	109 / 75 mm	45 mm	13-15 dB (A)	300 series stainless steel	Blasted stainless finish or CeraKote coating
SL6-SMG		530 g	153 / 120 mm	45 mm	22-25 dB (A)		

General information on firearm sound suppression measurement

The measuring unit of sound suppressor suppression ability is decibel, dB(1/10th Bell), named after the inventor of the telephone, Alexander Graham Bell). It is a measuring unit which is used to measure sound or sound pressure level(SPL).

According to the definition SPL=20 lg (p/ p0), p being the measured pressure and p0 being the pressure level of the human hearing range threshold, 20µPa. From this definition we can deduce that the hearing threshold is 0 db. Normal conversation is 56 dB, a lawnmover 85 dB, a jet plane 135 dB. Firearm discharge sound is peak impulse noise where the highest peak is usually measured.

The threshold for hearing damage for peak impulse noise is c. 140 dB. In front of a artillery piece the SPL is over 185 dB which can lead into death when the lung cells are ruptured, not to mention hearing damage. The SPL for an 5.56 mm calibre M4 carbine is approximately 165 dB, when measured 1 meter left of the muzzle.

When measuring SPL, several filters are used to remove for example the parts deemed unnecessary. The most common filters are the A-filter which strives to describe the characteristics of human hearing and where the low (under 20Hz), inaudible to human hearing sounds are suppressed and the C-filter, where the filtering of the lower sounds is lesser. There is not a very large variable between A or C-filters when measuring gunshot noise.

The major problem in measuring sound suppressor suppression abilities is that the whole range of measuring instruments have to be suitable, must to have fast enough risetime, according to the American MIL-STD-1474D it has to be under 20µs, to be able to react to a suppressed firearm shot, which has been established to be shorter in duration compared to an unsuppressed shot.

The measurements themselves are taken with the microphone 1 meter side from the muzzle of the weapon and at a height of 1.6 meters, directed 90 degrees upward to the trajectory of the bullet.

Without the suppressor, a sufficient statistical certainty is usually accomplished with five shots, with the suppressor attached an average of ten shots and additionally taking notice what is the SPL of the first shot, if there is any First Round Pop (FRP). This FRP is the result of the expanding gases and the oxygen inside of the suppressor converging.

It is typical for SPL measurements that the environment characteristics have an effect in the results so the measurements should be taken in an open land area without reflecting surfaces.

The best comparable results are achieved when the measurements of different suppressors are made at the same event or at least according to the standard procedure; if a manufacturer does not specify their measurement types or their instruments, one should be cautious about the results.

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