



2026



SAFE BOMB DISPOSAL

**WATER ABRASIVE SUSPENSION (WAS) CUTTING
FOR EOD, IEDD & DEMILITARIZATION**

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www.ant-ag.com/en/eod



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About Us.

INTRODUCTION

ANT Applied New Technologies AG has been a leading specialist in cold Water Abrasive Suspension (WAS) cutting for more than 25 years. Our expertise spans projects in the energy sector, oil & gas, and process industries. We also have decades of operational and project experience in EOD, IEDD, and demilitarization – proven in cooperation with public authorities, military EOD units, and DEMIL facilities.

- More than 25 years of experience
- Over 100 international patents and systems in operation
- ISO 9001 / 14001 certified

OUR VISION: WATERJET CUTTING FOR OUR FUTURE



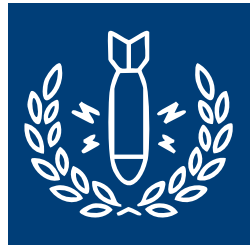


Our Mission.

EOD teams, Improvised Explosive Device Disposal (IEDD) units, and demilitarization operations depend on reliable technology. Especially for Render Safe Procedures (RSP), operator safety, reliability, and a high degree of mobility are essential. ANT provides proven Water Abrasive Suspension (WAS) systems designed to meet these operational requirements.

EOD – EXPLOSIVE ORDNANCE DISPOSAL

Unexploded ordnance (UXO), aged or modified explosive devices, underwater hazards, and urban environments often make detonation impossible or unacceptable. This is where controlled cutting from a safe stand-off distance is essential.



Typical Applications (up to 500 m stand-off distance):

- Expose fuzes, controlled severing or removal
- Section bomb casings
- Remote underwater cutting

IEDD – IMPROVISED EXPLOSIVE DEVICE DISPOSAL

When dealing with IEDs, VBIEDs, suspicious vehicles, or containers, the objective is not destruction, but the safe execution of the Render Safe Procedure while preserving forensic evidence and minimizing unnecessary damage and risk to operators.

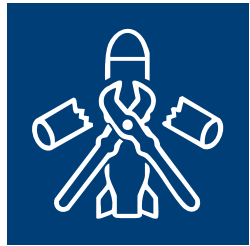


Typical Applications (up to 200 m stand-off distance):

- Open and render safe IEDs
- Forensic approach with minimal collateral damage
- Compatible with various ROV platforms
- Compact system with rapid setup

DEMILITARIZATION – MUNITION STOCKPILE REDUCTION

Large munition stockpiles must be processed safely, efficiently, and in an environmentally responsible manner for subsequent treatment steps – for example by reducing the NEQ (Net Explosive Quantity) to levels suitable for thermal treatment or recycling.



Our Solution:

- Cut munitions into manageable sections
- Defined preparation for the next processing step (e.g. NEQ reduction)
- Reliable, repeatable processes – even for high-volume operations

Why ANT?

With the MACE series and the miniMACE, ANT offers field-proven Water Abrasive Suspension (WAS) cold cutting technology (up to 700 bar) – without sparks, without heat, and with minimal kinetic energy. The systems can be operated remotely (camera-guided, long hose lengths) and are modularly scalable – from ROV deployment to stationary production lines or autonomous EOD trailers. The result: certified, precise cuts while preserving forensic evidence (no heat-affected zone), and rapid operational readiness. Flexible for a wide range of materials (including steel up to 50 mm), compatible with various manipulators, and sustainable using water and garnet sand.

DEVELOPED BY EOD OPERATORS FOR EOD OPERATORS.

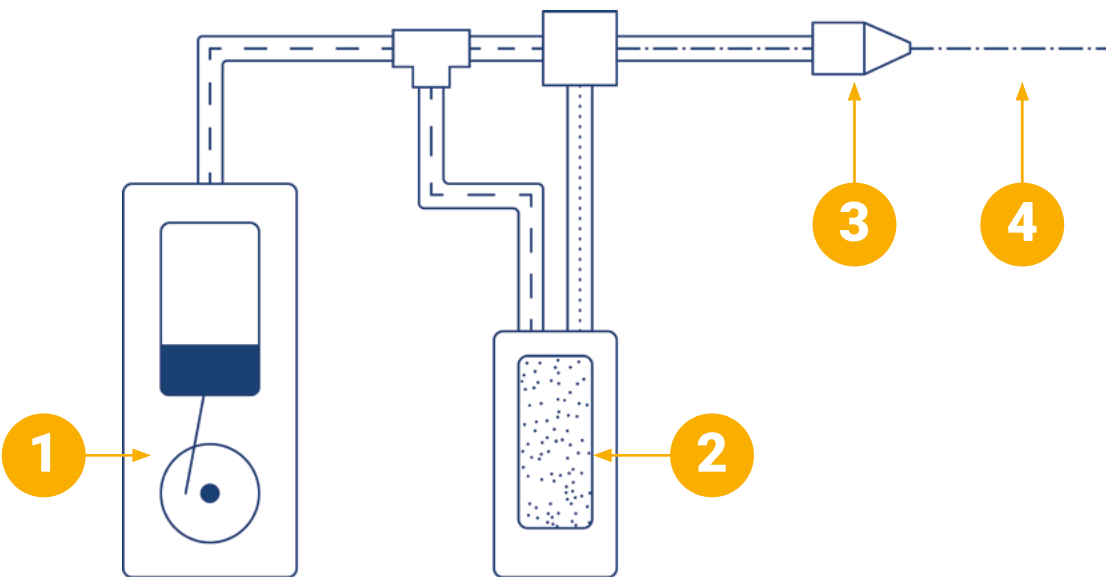


SAFE. REMOTE. MODULAR. FAST SETUP.
SUSTAINABLE. PRECISE.



The Power of Water.

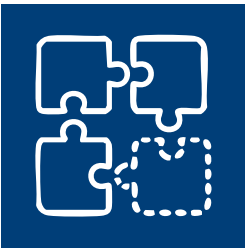
EFFICIENT. SAFE. SUSTAINABLE.



1	High-Pressure Pump (HPP) Water pressurized up to 700 bar
2	Abrasive Mixing Unit (AMU) The abrasive is added inside the AMU
3	Manipulators / Cutting Nozzles The Water Abrasive Suspension is accelerated through the nozzle to supersonic speed
4	Cutting Result Cold, precise cutting – no heat, minimal reaction forces

Modular Systems.

Our mobile systems can be configured to meet your specific operational requirements. They consist of the key components of a Water Abrasive Suspension (WAS) system and can be expanded with additional components and accessories depending on the application.





High Pressure Pump
HPP 700-6

Abrasive Mixing Unit
AMU 700-12 / AMU 700-20

Manipulation Systems
e.g. 3-Axis cutting table

Certified Safety.

ANT products comply with international standards.



Mobile Trailer Solutions.

EVERYTHING ON BOARD – RAPID DEPLOYMENT

The mobile EOD trailer integrates the complete MACE equipment into a single, self-contained system. Power supply, water, and abrasive supply are all on board. Integrated hose and cable management enables extended safety distances, while a camera system provides a clear view of the operation. The trailer also offers space for telecommunications, documentation, and can be operated by a small team in a short time. Thanks to its modular design, optional equipment such as a generator, additional tanks, or an ROV dock can be integrated to suit your operational requirements – from urban response scenarios to remote field operations.

INTRODUCTION TO
OUR EOD TRAILER

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EOD USE CASE
ANIMATION -->



MACE. 700 BAR

HIGH PERFORMANCE & BUILT FOR ENDURANCE

The MACE mobile Water Abrasive Suspension (WAS) cutting system combines the AMU 700-12 and HPP 700-6 into a modular solution for EOD. Combined with hydraulic equipment and hydraulic manipulation systems, MACE is particularly suited for bomb disposal applications, providing extended stand-off distances and reliable, repeatable performance. Suitable for stationary installations, trailer-based systems, or field deployment.

Key Features:

- Up to 500 m stand-off distance
- Approx. 14 kg abrasive (30 kg with AMU XL)
- Approx. 20 min cutting time per fill (optional MACE XL: approx. 45 min)
- Cuts steel up to 50 mm



AMU 700-12



HPP 700-6



Base Fuse Manipulator



Multiflex Circular cutter plus



3-Axis Cutting table

miniMACE. 450 BAR

SELF-CONTAINED & ROV-READY

The miniMACE is a self-contained system integrating an internal combustion engine, High-Pressure Pump (HPP), and Abrasive Mixing Unit (AMU). Designed for accessing and rendering safe Improvised Explosive Devices (IEDs), it is also suitable for applications in hazardous industrial environments. The operator panel allows precise control of the cutting speed as well as the axes of compatible manipulation systems, enabling safe remote operation with high precision.

Key Features:

- Max. 450 bar, 3.5 l pressure vessel
- Approx. 5 kg abrasive
- Approx. 16 min cutting time per fill
- Cuts steel up to 25 mm



miniMACE



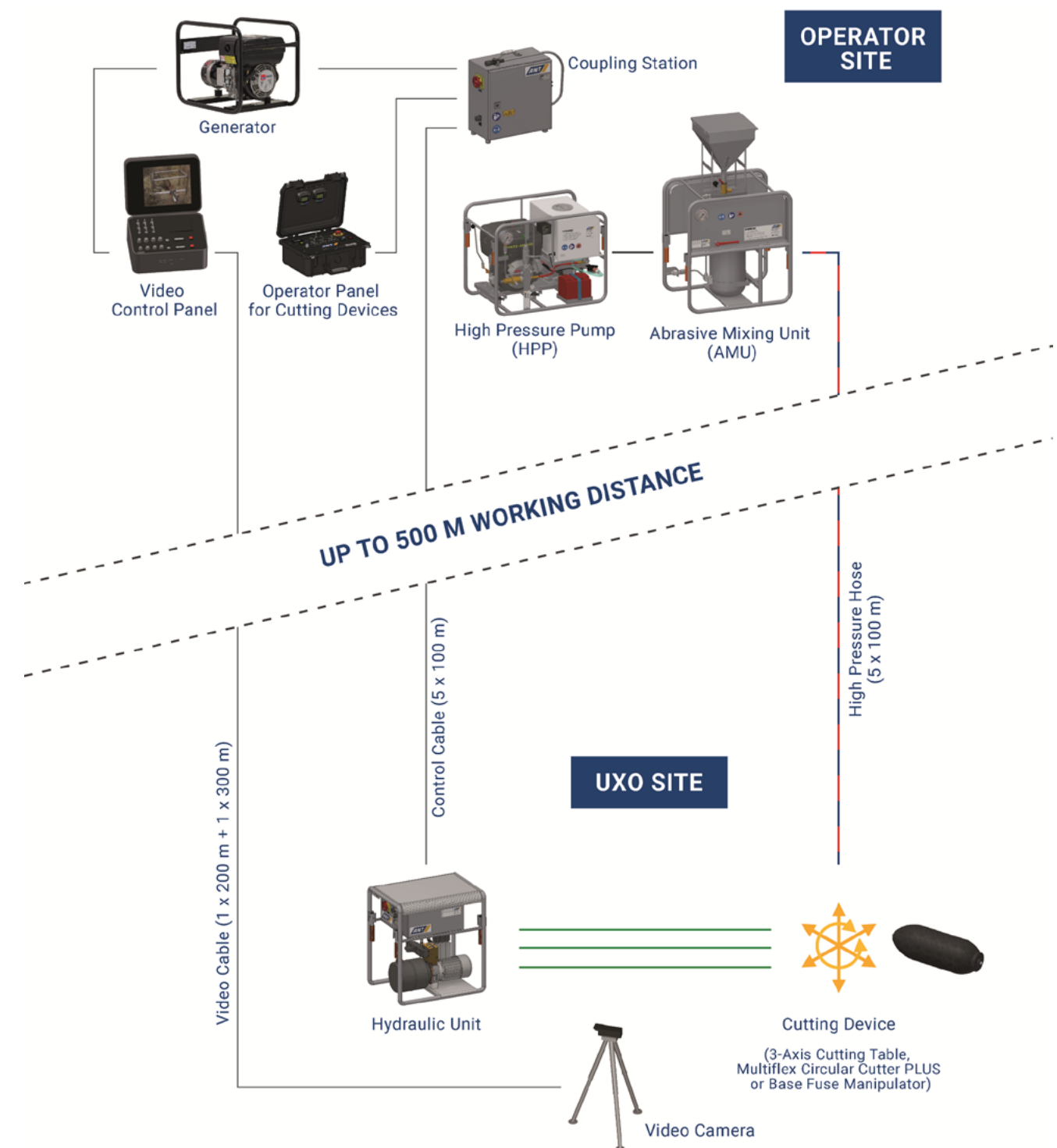
2-Axis-Cutting Table



INTRODUCTION
TO OUR
EOD TRAILER
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MACE Setup.



Core Components.

The core components of every Water Abrasive Suspension (WAS) cutting system are the High-Pressure Pump (HPP) and the Abrasive Mixing Unit (AMU). The HPP generates the water pressure, while the AMU mixes water and abrasive under pressure to create the Water Abrasive Suspension.

Unlike the modular MACE system, the miniMACE integrates the High-Pressure Pump (HPP), Abrasive Mixing Unit (AMU), and internal combustion engine into one compact, self-contained unit.



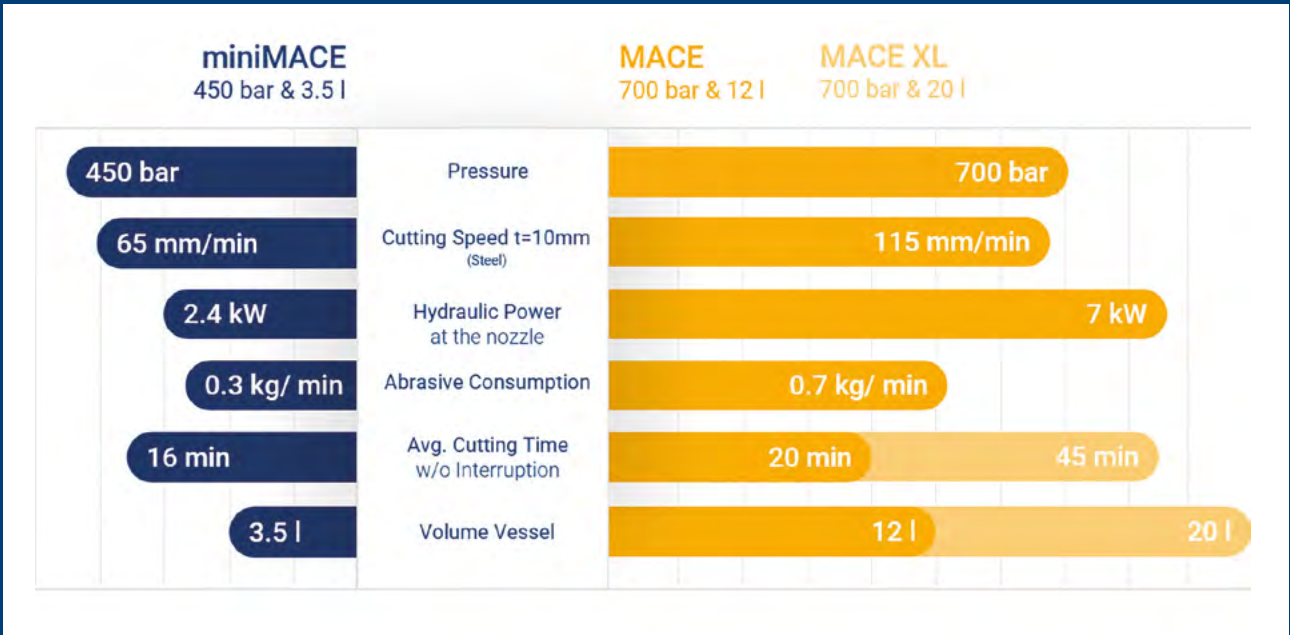
Manipulation Systems.

Manipulation systems and the integrated cutting nozzles are essential for performing cuts with the Water Abrasive Suspension (WAS) cutting process. ANT offers a wide range of mobile manipulation systems specifically designed for remote cutting operations at extended stand-off distances and in hazardous environments.



- Key Features:**
- Remote-controlled cutting nozzle guidance in three axes
 - Modular design
 - Robust construction with a flexible layout
 - Suitable for a wide range of Render Safe Procedures (RSP), including:
 - Deflagration (opening)
 - Fuze removal

miniMACE & MACE





BASE FUSE

MACE



Key Features:

- Suitable for Render Safe Procedures (RSP) on SAP, MC, GP and AP bombs
- Mounted to the bomb base for controlled fuze removal
- Alternative: removal of the bomb base including the fuze
- Quick and easy alignment
- Compact design



MULTIFLEX CIRCULAR CUTTER PLUS

MACE



Key Features:

- No physical contact with the UXO
- Cuts through defined fuze sizes
- Grips and extracts the fuze
- Precise cutting of various diameters
- Laser-assisted alignment
- Versatile application options





2-AXIS CUTTING TABLE

mini
MACE



Key Features:

- Designed for IEDD applications
- Ready for operation within a short time
- Suitable for vertical and horizontal cutting
- Precise control of both axes



EOD Camera System.

The EOD Camera System consists of:

- Video Case with display
- 2 x high-resolution cameras with tripods

Key Features:

- Optimized visual feedback for observation and intervention
- 30x optical zoom
- Observation from a safe stand-off distance
- High protection rating for operation in harsh environments
- Battery operation for up to 6 hours, alternatively mains powered
- Full HD monitor for a sharp, detailed image
- Simple and intuitive operation



Video Case with Display



Camera System



Safe Stand-Off Distance.



ROV- OR CAMERA-GUIDED OPERATION

The miniMACE can be seamlessly integrated into EOD/IEDD robots and a wide range of ROV platforms. It extends their capabilities with an effective Water Abrasive Suspension (WAS) cutting tool for Render Safe Procedures (RSP). Operation is carried out via the existing ROV interface, ensuring straightforward integration without additional operator training.

The miniMACE is compatible with common robotic platforms and can also be integrated into existing ROV systems.



UXOR with MACE 700 bar
(Unexploded Ordnance Handling Robot)

KEY BENEFITS FOR ROV OPERATIONS

- Remote operation: Cutting, opening, and penetrating directly from the operator console while maintaining a safe stand-off distance
- Plug-and-play integration using existing power and control interfaces
- No additional infrastructure or on-site installation required
- Enhanced operator safety by eliminating direct contact with hazardous objects
- Cold cutting process: No sparks or heat, with minimal reaction forces
- Compatible with a wide range of EOD robots, from urban and tactical platforms to field ROVs, whether mobile or stationary
- Rapid deployment: Installed and ready for operation within a short time
- Rugged, low-maintenance design for demanding field conditions



References.



WHAT OUR CUSTOMERS SAY



WERNER P.H.M. VAN ROOIJ
(Former Dutch Armed Forces EOD)

“MACE provides a powerful and reliable solution for the safe disposal of unexploded ordnance. Even under the most demanding conditions, UXOs can be processed safely and with confidence.”



ANDONIOS PATAGIAS
(Former Hellenic Army EOD)

“ANT’s technology enables our teams to work at a safe stand-off distance using cold, spark-free cutting. MACE and miniMACE make our EOD operations safer, more efficient, and more predictable.”

Training & Operational Readiness.

Operational capability depends on more than technology alone. It requires well-trained operators, standardized procedures, and a thorough understanding of the system.

The MACE training programs provide hands-on instruction in operation, maintenance, and troubleshooting. This ensures that systems remain mission-ready while operator expertise is documented and transferred sustainably – from initial qualification through to the Train-the-Trainer concept.

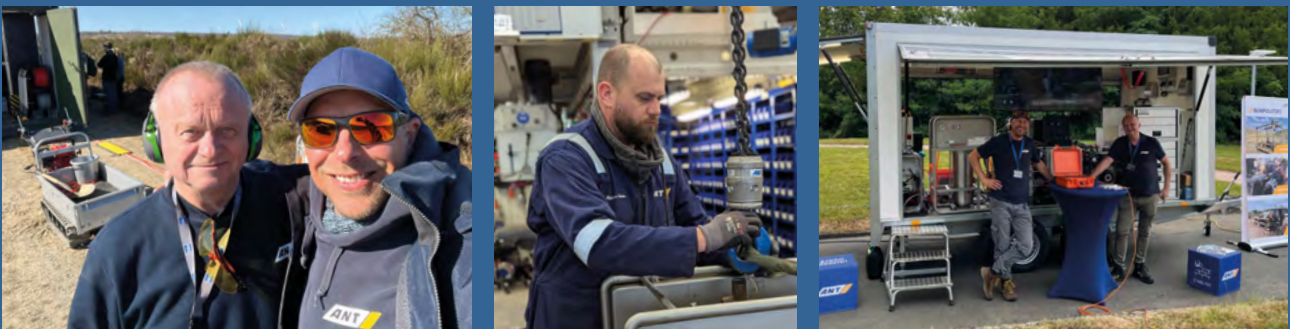
TRAINING MODULES TAILORED TO YOUR NEEDS



YOUR KEY BENEFITS AT A GLANCE

- Fast, hands-on qualification of new operators
- High safety standards for EOD and IEDD operations
- Maximum operational readiness through proactive maintenance
- Standardized procedures for consistent results

PROTECT LIVES. CONTROL RISK.



ANT TRAINING & MAINTENANCE MODULES

Our goal: Transform individual expertise into lasting organizational knowledge. 



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