



MUGUET[®] DISC-CUTTER SYSTEM

Robot-Ready Disc-Cutter Supporting System for TBM Maintenance

The **MUGUET[®] disc-cutter system** is a patented supporting solution designed to simplify and secure **TBM disc-cutter installation and removal**. Originally developed to enable robotic operations with **TELEMACH**, MUGUET[®] also delivers significant benefits for **manual and diver-assisted maintenance**. Its simplified and robust design reduces handling time, improves safety, and ensures full compatibility with automated maintenance systems.

Key benefits

- ± Significant improvement in **safety and ergonomics**
- ± Simplified disc-cutter handling and maintenance
- ± Fully **robot-ready** design
- ± Compatible with **manual, diver, and robotic operations**
- ± Proven, patented, and scalable solution for large TBM projects

INNOVATIVE SOLUTIONS FOR TUNNEL CONSTRUCTION



System Description

The MUGUET[®] system is a **19" disc-cutter supporting mechanism** developed and patented by BYTP, with **Palmieri** as the exclusive supplier.

Key design features:

- › **Single mechanised supporting part**
- › Only **two screws** to lock or unlock the disc-cutter
- › No complex disassembly sequence
- › Designed for easy and repeatable handling

Compared to standard supporting systems requiring up to 11 parts to be dismantled, MUGUET drastically simplifies disc-cutter maintenance.



Robot & Diver Compatibility

- › Fully compatible with **TELEMACH robotic operations**
- › Mandatory disc-cutter type within the robot operating range
- › Also recommended for **diver-operated positions** outside the robot reach, due to ease of use and reduced handling effort

Automation-Ready Design

The MUGUET® system has been specifically designed to support automation:

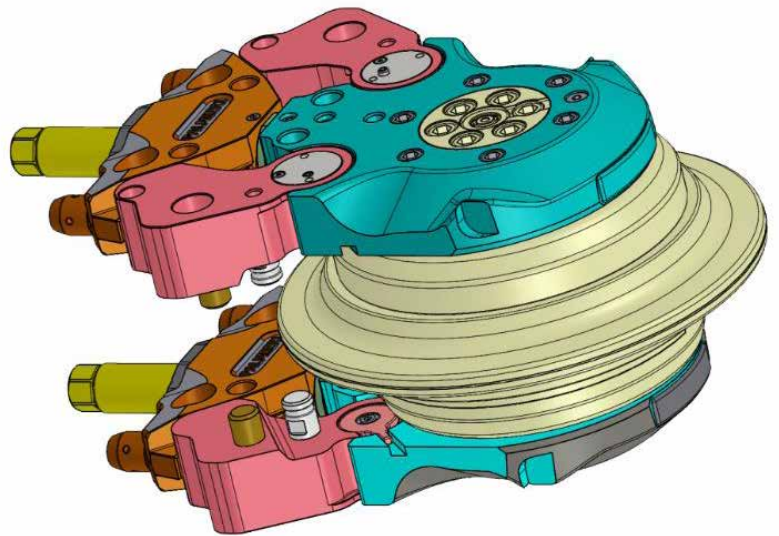
- › Integrated reference features for vision-based localisation
- › Compatible with robotic gripping and screwdriving tools
- › Reliable positioning for automated locking and unlocking
- › Consistent geometry for repeatable robotic operations

Performance & Efficiency

- › Faster disc-cutter replacement compared to standard systems
 - › Reduced maintenance time and downtime
 - › Lower physical effort and improved ergonomics
- Increased repeatability and reliability of operations

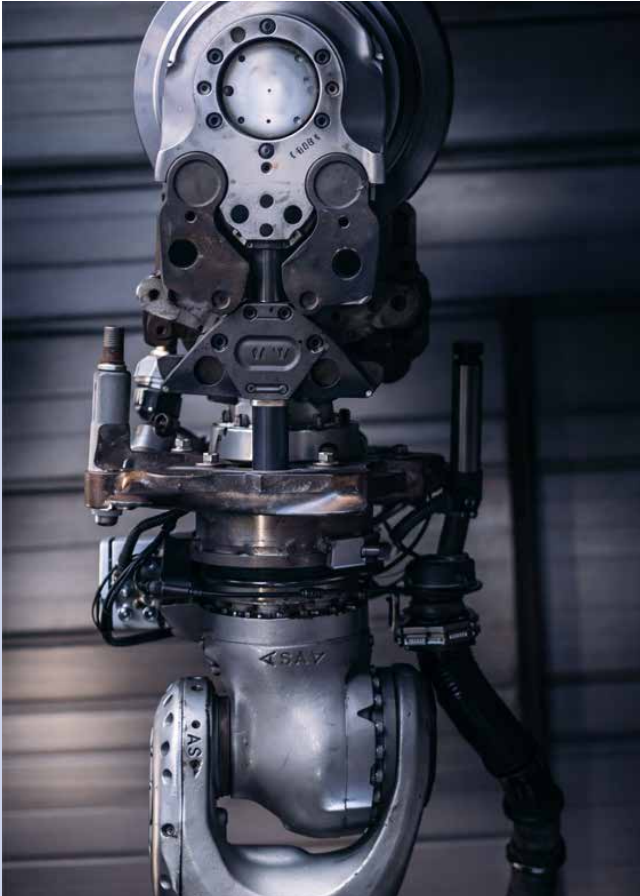
Proven Technology

- › Successfully deployed on major TBM projects
- › Used in conjunction with **TELEMACH** for more than **1,000 automated disc-cutter replacements**
- › Validated through extensive testing and operational feedback



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www.tunnelbytp.com



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