

# TUNNEL-DRILLS-VISION

## Automatic re-positioning system for Tunnel Drill machine



The **TUNNEL-DRILLS-VISION** is a device that shows and stores the relative position of a Tunnel Drilling Machine. After the storage the system is able to re-position the drill rig in one of the 20 stored positions automatically. The position set is composed of 6 relative movements, two elongation and one rotation for each leg (front and rear leg of the machine).

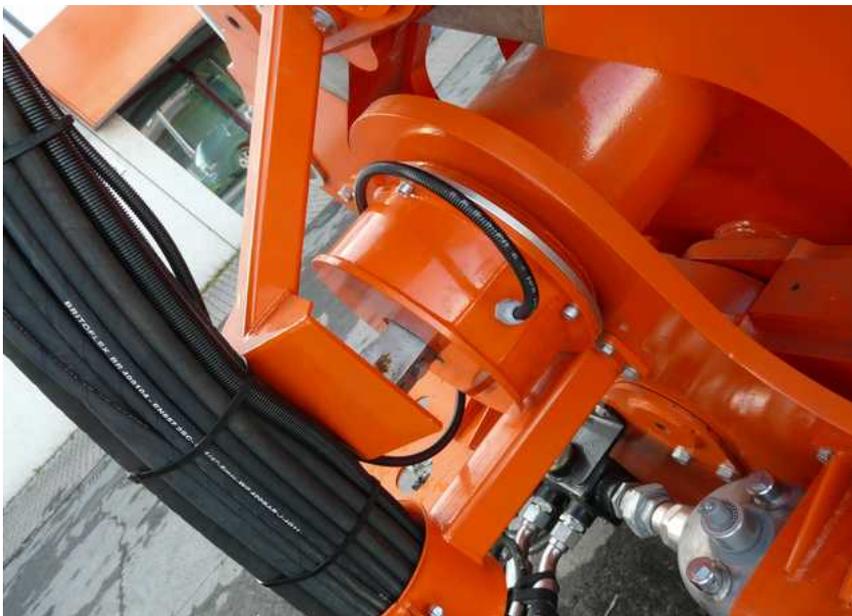
MEASURED MOVEMENTS	DIGITAL OUTPUT
Front Base Elongation Front Rotation Front Leg Elongation Rear Base Elongation Rear Rotation Rear Leg Elongation	12 digital output (ON-OFF) for the control of the 6 movements, each one with a reverse command  Enable movements digital output  Alarm Digital Output used to show dangerous machine position

For each one of the 6 movements monitored, the system can control the actuation in two directions, UP and DOWN using two digital outputs for each movement. There is also one digital output used to alert the operator if the machine is in a dangerous stability position.

**TUNNEL-DRILLS-VISION** can store up to 10 relative positions. After each one of this position has been stored, the operator can anytime start a automatic re-positioning procedure. The operator can manage the 10 slot for the storage of the position relating the positions that will never be used or editing new one.

By editing some parameters like speed of the automatic movements, intervention time, and precision range, the operator can control the precision of the repositioning obtained.

The central unit has a ON/OFF button that let the operator be able to switch off the system at any time very quickly in order have a fast stop of the movements in case of dangers.



The position stored are relative to a fixed positioning of stabilizers and tracks. Moving tracks or stabilizers, even if we perform a re-positioning procedure, the real absolute position of the mast will not be the one we were looking for, so storage and repositioning has to be performed maintaining tracks and stabilizers always in the same position.

**TUNNEL-DRILLS-VISION** uses CAN BUS as communication bus to all the sensors, so it decrease the number of cables needed to monitor the entire system.

#### Main technical characteristics

- ✓ 7" display with polycarbonate keyboard
- ✓ USB slot used to download data stored
- ✓ Mechanical protection: IP65 (DIN40050)
- ✓ Power: 24 V DC (18-36V), 8 W
- ✓ Working temperature range: -10° C + 60° C
- ✓ Connector oriented design