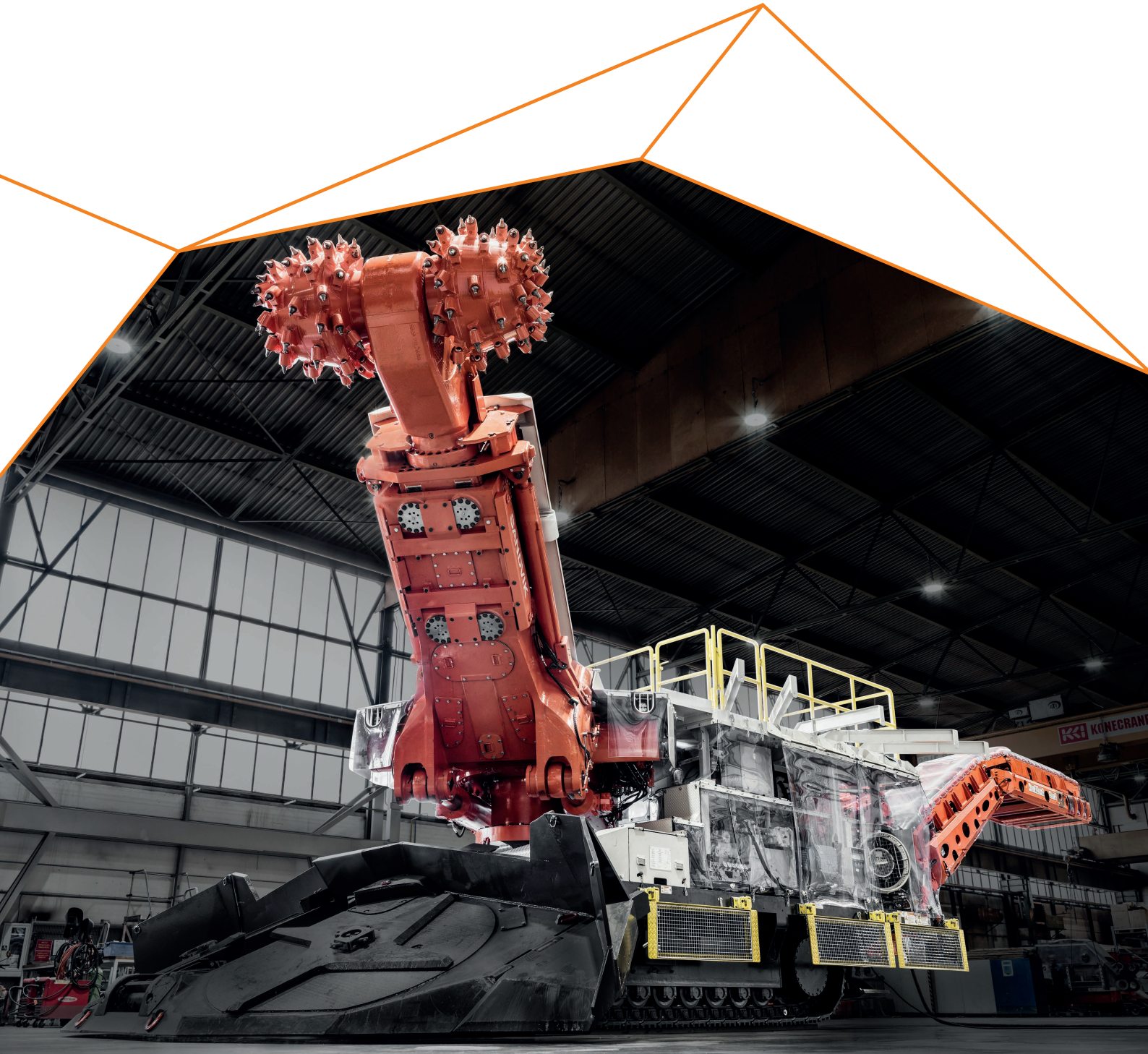
SANDVIK MT521
ROADHEADER

PRODUCT LEAFLET



SANDVIK MT521

Sandvik's MT series roadheaders with their geometrically optimized, transverse cutter heads offer superior cutting performance in a wide range of applications referring to different rock types and rock formations – from mineral / ore production of soft and little abrasive saline and industrial minerals to tunnel and underground cavern excavations in medium strong and medium abrasive rock / rock mass conditions consisting of e.g., sandstone, marl, chalk, etc.

Sandvik tunneling roadheaders let you focus on the essential: breaking through to the other side with minimum fuss. Powered electro-hydraulically, these machines are designed and constructed to excavate underground infrastructure and produce ore continuously without using explosives that cause damaging vibrations to the surroundings of the excavations and emit harmful fumes affecting the underground operating personnel. The smooth and completely controlled excavation process of these mechanical excavation machines especially makes them very suitable for underground construction projects in urban areas as well as for rehabilitation of already existing tunnels and underground caverns interfering with sensitive underground infrastructure, also kept in use during the rehabilitation work.

Sandvik MT521 is an electrically powered and crawler mounted boom-type roadheader especially engineered to cut rock / rock mass of up to 100 MPa unconfined (uniaxial) compressive strength (UCS) in regular case, and in extreme cases of even up to 120 MPa in tunneling applications, where vibration emission might be a serious and significant problem. This extremely powerful 100+ tons-class roadheader has a very effective transversal cutter head mounted on an extremely robust and stabilized telescopic cutter boom.

Sandvik MT521 has an extended field of operation for mechanized tunnelling in usual rock formations. The robust stabilized telescopic cutter boom is ideal for optimum cutting power application, maintaining high productivity together with energy efficiency, which lowers overall operating and tunneling costs. The MT521 is available as PLC (Programmable Logical Controller) controlled machine with a lot of options for customized application.

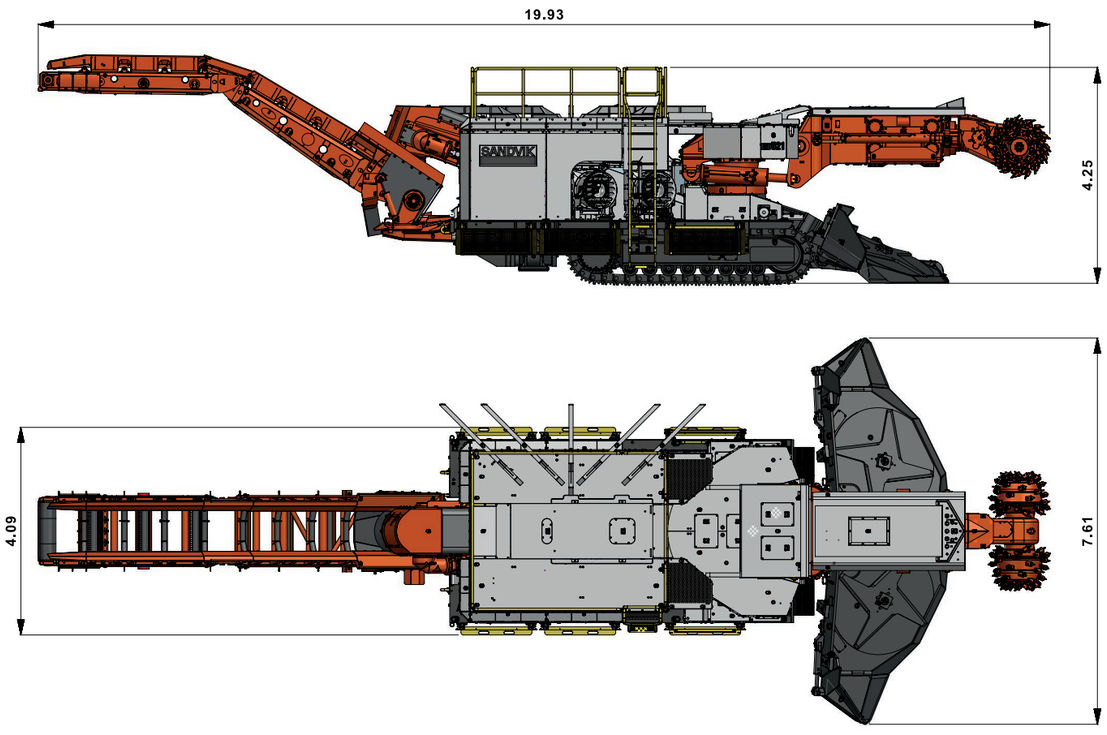
KEY FEATURES AND BENEFITS

- ✔ Improved safety features ensure safe underground working conditions and less operational hazards
- ✔ Robust track assembly for perfect cutting stabilization and fast machine relocation
- ✔ Optional on-board cable reel or diesel power pack for quick and easy machine relocation
- ✔ Optional roadheader guidance system significantly improves profile accuracy and decreases tunneling cost
- ✔ Cutronic® enables semi-automated cutting and assists roadheader operation for rookies in mechanical rock excavation
- ✔ Various digitalization options optimize machine application (tele-remote operation, fleet data as well as telemetry data monitoring via Racoon and SmartMate software solutions, etc.)

TECHNICAL DATA

Machine model	MT521
Total weight +/-5 (t)	~124
Ground pressure (MPa)	~0.19-0.23
Overall length w/wo slewing belt conveyor, min. (m)	~20/~13
Height w/wo cabin, min (m)	~5.33/~4.25
Loading table width w/wo extension (m)	~7.81/~4.62
Cutter boom telescope (mm)	~1200
Cutting height, max. (m)	~7.1
Cutting width, max. (m)	~10.3
Undercut - extended telescope, max. (mm)	~1000
Cutting speed, 50 Hz (m/sec)	~3.3
Maximum navigable in- & decline gradient (°)	±18
Maximum navigable side gradient, max. (°)	±5
Navigable cone radius, min. (m)	~25
Navigable basin radius, min. (m)	~20
Electric supply voltage (V)	1000/1140
Cutter motor (kW)	315
Tramming speed, max. (m/min)	~15
Total installed power (kW)	537

DIMENSIONS



NEW OPERATIONAL FEATURES BOOSTING EXCAVATION PERFORMANCE AND PROFITABILITY

NEW OPERATOR CABIN

- Modern, state-of-the-art design
- Excellent operator comfort
  - Increased operator working space
  - Air suspension operator seat
  - Effective air condition system
  - Efficient dust filtration system
  - Improved i-panel / HMI design
- Better all-around view
- Two seat option for operator training
- Improved dust sealing
- Enhanced vibration reduction

NEW SANDVIK BOOM CONTROL

- Hydraulics upgrade for stabilization of cutting unit
- New hydraulic installations for advanced cutting
- New optimized machine control software

SPEED CONTROLLED TRAMMING FOR BETTER MACHINE TRAMMING BEHAVIOR

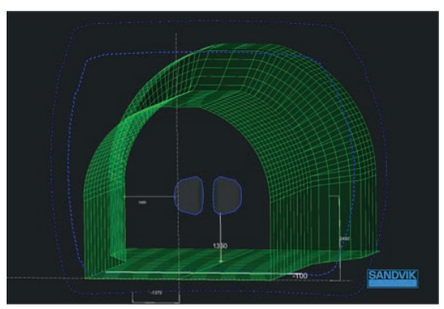
- Optimization of crawler track system
- Update of electrics with new sensors
- New software for better tramming control due to self-learning algorithm

FLEET DATA MANAGEMENT (FDM) / MYSANDVIK READY FOR EQUIPMENT CONNECTIVITY, DATA COLLECTION AND DATA TRANSFER

- Data collection and data transfer
- Data analysis for improved operations
- Connected equipment

IMPROVED CUTRONIC® FOR MORE EFFECTIVE AND MORE ACCURATE CUTTING

- Tremendously increased profiling speed as well as profiling accuracy
- Fully proportional cutterhead position control
- Smoother operation and performance optimized speed control of cutterhead movement in all cutting directions
- Significantly improved suitability for complex tunneling applications



FOCUS ON OPERATIONAL SAFETY

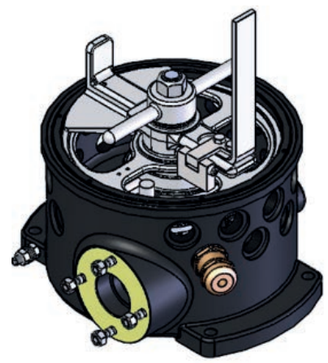
- Improved visibility of new positioned indication and warning lights
- Defined positions for auxiliary installations (cameras, surveying targets, etc.)
- Unified signaling technology for all Sandvik mechanical cutting machines

HYDRAULICALLY ACTIVATED CONVEYOR CHAIN TENSIONING

- Providing more maintenance comfort by elimination of manual interference (from handheld pressurized grease pump to activation of hydraulic cylinder)

ACTIVITY CONTROLLED, CONSUMPTION BASED AND OPTIMIZED GREASING SYSTEM

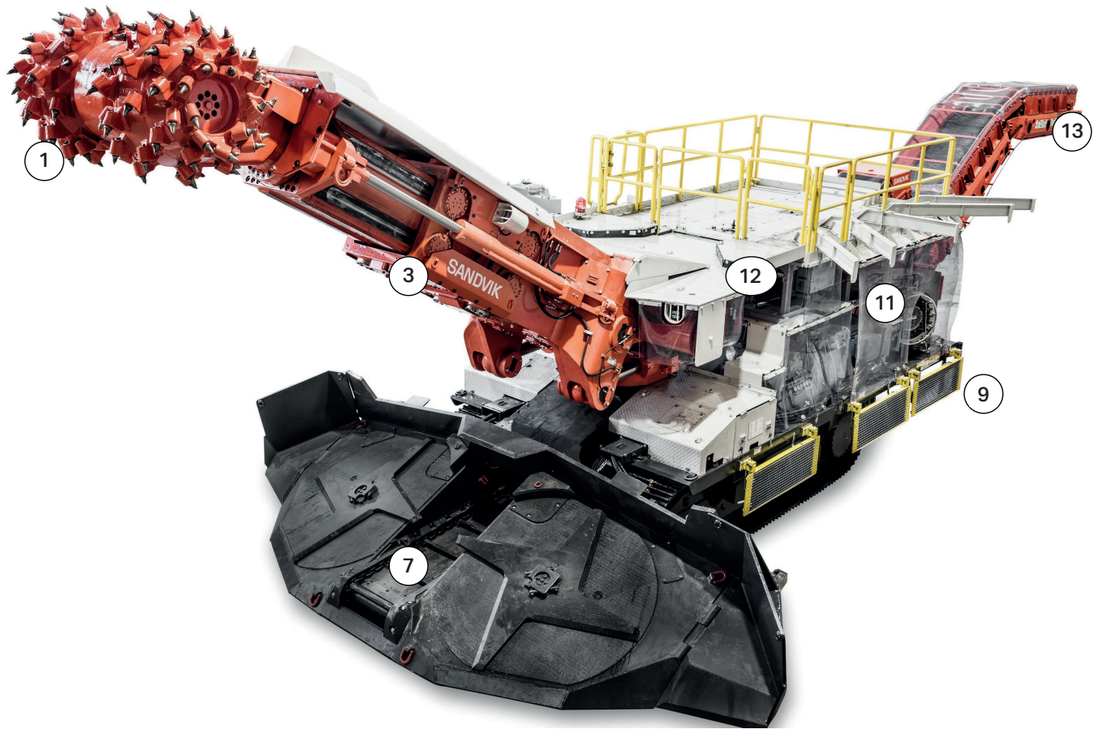
- Optimization of grease consumption at single greasing points
- Most manual greasing points replaced by automated greasing points
- Indication when grease pot is empty
- Special grease hoses
- Better positioning of grease pot from turret to frame for grease refilling



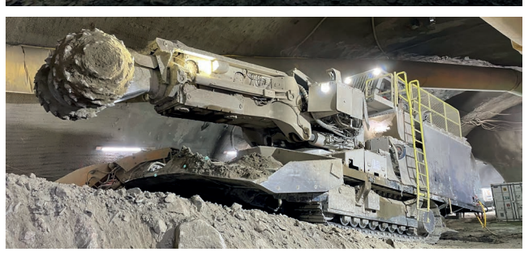
NEW O-RING FACE SEAL HYDRAULIC FITTING STANDARD

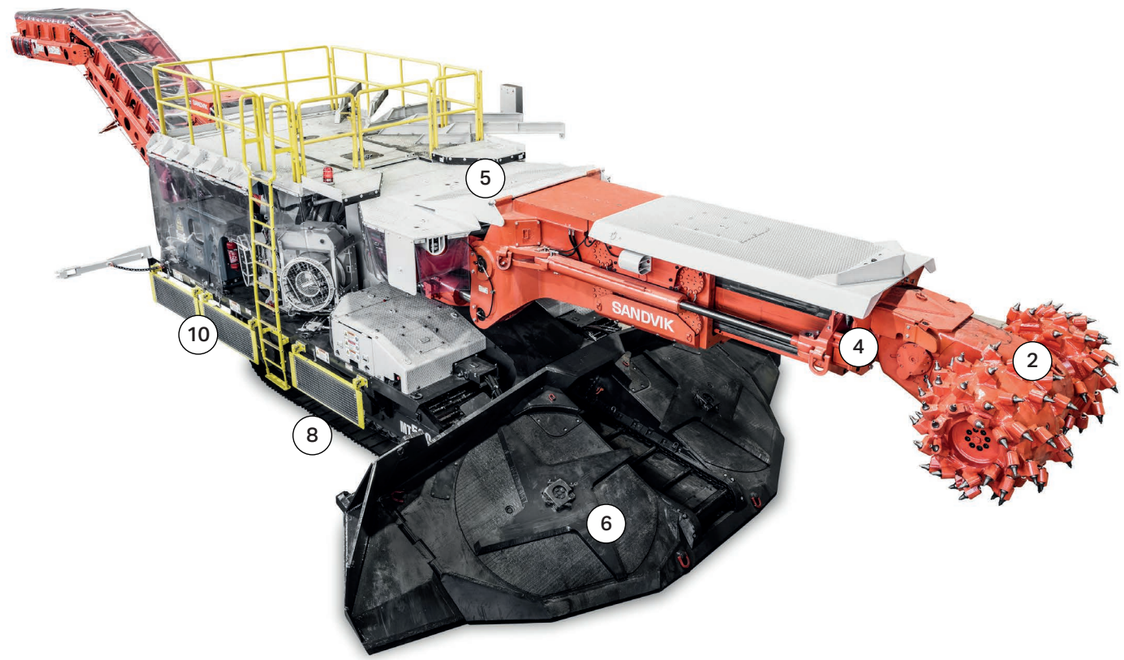
- Unified fitting standard for all Sandvik Mechanical Cutting machines
- Pressure rating sufficient for all Sandvik Mechanical Cutting machines
- Already widely used in entire Sandvik mining machine fleet
- Internationally widely used and easily available
- Already very well known by our customers and generally very frequently used in mining and tunneling applications

KEY COMPONENTS AND FUNCTIONS OF A TYPICAL MT521 TUNNELING ROADHEADER



1. Cutter head designed for a wide range of rock conditions
2. Cutter gearbox for low cutting speed and high torque (Icutroc© cutting technology)
3. Telescopic cutter boom with strong 315 kW electric cutter motor
4. Water spraying system to to extend tool life and to reduce dust
5. Turret with rack and pinion system for constant slewing speed
6. Loading table for collection of cut material
7. Double chain conveyor for material transfer
8. Crawler tracks providing sufficient stability for cutting and good maneuverability for tramming
9. Robust frame with rear stabilizers coping with high cutting forces
10. Modern, state-of-the-art electrical system
11. Hydraulic system with three separate circuits and load sensing technology
12. Automatic lubrication system of most critical greasing points to reduce service effort
13. Slewing belt conveyor providing flexible loading onto material haulage vehicles





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Please contact a Sandvik representative for clarification on specifications and options.