

**Telescopic excavators**  
**Special machines**  
**Equipment**  
**Attachments**

**TML**  
**TML**  
***working solutions***

# ENGINEERING, DESIGN AND MANUFACTURE

## TML manufactures:

- Telescopic excavators
- Telescopic booms
- Converter tap hole drilling machines
- Slag raking machines
- Charging machines
- Telescopic tunnelling machines
- Blast furnace runner servicing machines
- Shooter
- Special equipments
- Attachments
- Special machines for:
  - Aluminium and copper plants
  - Steel mills
  - Tunnelling
  - Construction and redevelopment
  - Mining

Besides the manufacture and sale of our machines, equipment and attachments, we also have expertise in engineering, project planning, solution finding, consulting and carrying out studies.

**In other words, we design individual solutions for your requirements,** relying on our long years of experience and the innovative know-how of our design engineers. A high level of flexibility as well as a distinctive demand for quality ensures optimal performance, in today's and future markets.

**An advantage: Working hand in hand,** we develop solutions for problems together with our customers. After a detailed study of the working areas and intensive discussions with the responsible personnel, the result is quite often an extremely specific requirement. Our engineers then design the appropriate solution for each case.

**Reaching the goal together:** After concluding the analysis and development phase, the findings are presented as a feasibility study. The customer can then decide to place an order for the manufacture of the machine or equipment accordingly. Once the order has been accepted, it is processed and all the technical data is collected

into a detailed overview making up a technical specification. This is the basis for perfect planning in the design, manufacturing and realisation phase.

**High quality standards:** Maintaining a high standard means continuous development. Qualified personnel, in the planning department as well as in the manufacturing shop, is a fundamental requirement for achieving quality and increasing know-how. Our employees regularly take part in specialist seminars. TML has been certified to DIN EN ISO 9001 since 1994. In the manufacturing shop, welding is done in accordance with DIN 18808, Part 7 and numerous procedure tests are carried out. We produce quality and prove it.

**The use of modern technology** in every department secures quality and boosts efficiency. In design and development, we utilise the latest types of 3D-CAD and finite element analysis design and development programs.

All work carried out is finally checked by modern test procedures.



Our service and production teams regularly extend their qualifications. This guarantees quick and well-qualified customer support. Replacement of original spare and wear parts can be carried out in a minimum of time in our specialised workshops. We are also perfectly set up to carry out inspections, ser-

VICES and repairs on site. High quality work from the planning through to manufacturing and final customer satisfaction is our primary maxim.

**Every machine that we supply is our recommendation and at the same time our commitment.**

The personal after-sales service, i.e. on-site repairs, training, servicing and commissioning of machines is only natural for us.

**Our logistic system** ensures fast service and direct availability of:

- **Original TML – Replacement parts in several locations**
- **Experienced, well trained personnel in our after-sales service department**



We tackle problems and develop solutions hand in hand with our customers, on site of course.



The latest computer technology secures a high quality standard in the design department, i.e. 3-D CAD.



In spite of modern technology, numerous stages in the production are precisely handcrafted.



All of the production stages undergo strict inspection.



Final assembly and adjustments by experienced personnel ensure the smooth running of our machines.



Inspections by independent quality organisations, e.g. German TÜV, are part of our quality assurance programme.



Safe and professional transportation secures delivery on time.



Our highest priority is customer satisfaction: Whoever uses a TML machine realises the advantages.

# WORKING AREAS

## Metallurgic industry

- Ladle shop
- Converter platform
- Torpedo ladles
- Electro-Arc-Furnace
- Tundish
- R.H. snorkel degassing
- Converter tap hole
- Blast furnace
- Electrolysis furnace
- Blast furnace runners

**Models: Unidachs excavators, TN & TS booms, Converter tap hole drilling machines, slag raking machines, blast furnace and pit furnace debricking machines, special machines for aluminium and copper plants and steel mills.**

A hot working place can be considered as the toughest operating conditions for man and for the machine! Through the use of special design characteristics and high quality materials for the components, our products allow faster, more exact and more effective working on the job. The results are reduced downtime for furnaces, ladles and converters thanks to our machines. We know from customer experience that through the use of TML machines and booms considerable savings can be achieved in:

- Refractory materials
- Downtimes
- Energy use

**TML Machines can be used universally** and offer a high degree of flexibility. For specific applications we will design and manufacture special machines upon request or alternatively special booms for standard hydraulic excavators.

TML Machines are extremely versatile and carry out various jobs, such as:

- Complete debricking work
- Material clearing
- Ladle and converter cleaning
- Skull removal
- Slag clearing

These jobs are mainly carried out in hot condition, reducing downtime considerably so that the vessels are available much faster.



The metallurgical industry offers numerous extreme applications for our machinery. These challenges set the standard for our technological know-how. A small selection of these working areas can be seen in the following illustrations.



Converter mouth cleaning in extremely high temperature.



Unidachs 200 R for blast furnace runner cleaning and de-bricking with remote control.



Slag raking with a PAM 7000.



Unidachs 400 M for hot ladle cleaning and furnaces with ripper hook and remote control.

# WORKING AREAS

## Construction Industry

- Tunnelling
- Grading
- Underwater construction
- Ore, potash and salt mining
- Chipping/scaling work in mines
- Open cast coal mining
- Profiling
- Redevelopment
- Demolition
- Landfill

## Tunnelling/ Mining

**Models: Unidachs excavators, Tunneldachs excavators, TN & TS booms, rotary drum cutters and special machinery.**

Totally convincing: The 360° rotating boom significantly increases working reach flexibility. This allows, for instance, safe header cutting in extreme heights and makes difficult overhead working much easier without endangering the operator.

The telescopic tunnelling machines, or mining machines, combined with the appropriate attachments results in an efficient machine for:

- Tunnel excavation (Ripper bucket)
- Profiling (Hammer or TML rotary drum cutter)
- Chipping/scaling (Ripper hook or hammer)
- Loading (various buckets)

## Construction

**Models: Unidachs excavators, TN, TS & double stroke booms, rotary drum cutters and special machinery.**

**Safety from a distance:** work safety is, and will remain one of the most important concerns on construction sites. Our machines can also be fitted with radio remote controls upon request to allow the operator to work at a safe distance from the danger areas i.e. during demolition work, such as

header cutting where there are dangers from collapsing walls or falling debris. The 360° boom rotation extends the working reach of the demolition arm in all directions. Through their special design, TML machines are suitable for numerous applications. One of our designs is certain to be appropriate for your applications like excavation work and digging in confined areas e.g. under bridges and overhead cables.



The applications are numerous, our solutions even more so. For personal protection in tunnelling and mining, we equip the machines with state of the art emission control systems. Alternatively we can fit electro-hydraulic drives.



Tunnel profiling with TML Tunneldachs.



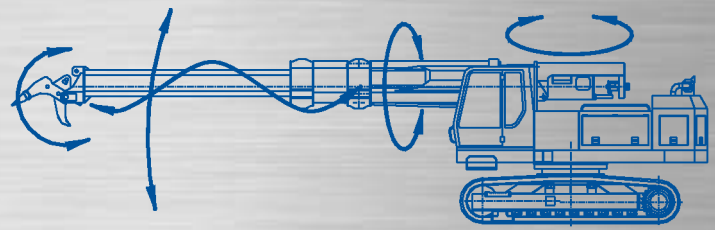
TML double stroke boom TSD for deep canal and shaft excavation.



TML boom with extension for extended grading and sloping work.



TML Unidachs 400BAU working in open pit coal mine.



## MODEL OVERVIEW

- **Telescopic excavators**
  - Unidachs
  - Pneudachs
- **Telescopic tunnelling excavators**
  - Tunneldachs
- **Telescopic booms**
  - TN & TS Series
  - Double stroke booms TSD
- **Converter tap hole drilling machines**
- **Charging machines**
- **Slag raking machines**
- **Crust Breaker**
- **Stationary debricking machines**
- **Attachments**
- **Special machines according to customer specifications**
- **Converter and ladle repair manipulators (Shooter)**

### UNIDACHS

The UNIDACHS is a well known name for machines that have been in use world-wide for generations. Although the technology has been improved over the years, we want this good name to continue in our TML Telescopic excavators. Nowadays our customers take delivery of a TML UNIDACHS equipped with the latest technology and exhibiting the highest quality. This is proven by the long working life of our products.

The look of the machines has changed over the years and the operators control them with extremely sensitive joysticks from a modern ergonomically designed cab. The motion flexibility of the boom and the attachments is comparable with the "human arm" except that the boom rotates 360° continuously. Even those furthest corners can be reached.

### CONVERTER SHOOTER



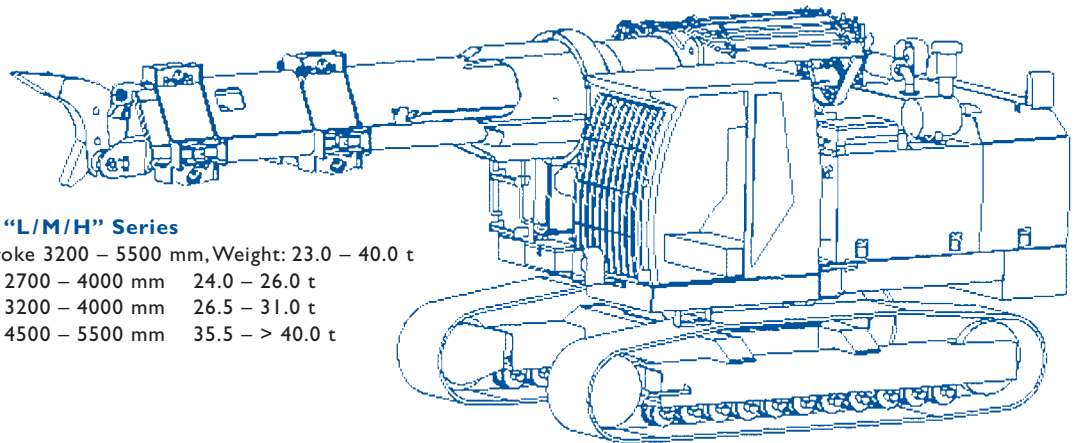
### PNEU-DACHS

The PNEUDACHS, in its design and capability, is equivalent to the UNIDACHS, but is fitted on a mobile, wheeled undercarriage. The PNEUDACHS is suitable for traveling long distances to different locations, or where crawler tracks cannot be used on the floor.

### TUNNEL-DACHS

The TUNNELDACHS has been specially designed for working in tunnels and mines. The TML telescopic tunnelling excavator is compact and strong, and equipped with appropriate attachments and components for environmental protection.

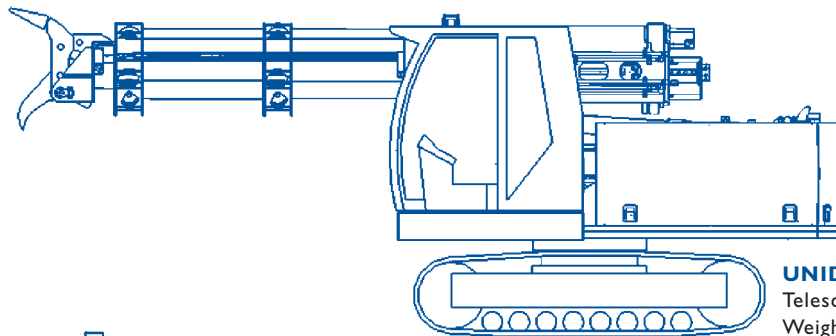
**Through combining the machines and attachments, our customers can always make the best choice for their applications.**



**UNIDACHS "L/M/H" Series**

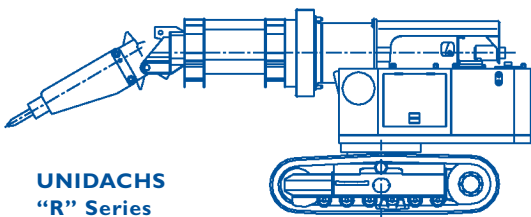
Telescopic stroke 3200 – 5500 mm, Weight: 23.0 – 40.0 t

L	2700 – 4000 mm	24.0 – 26.0 t
M	3200 – 4000 mm	26.5 – 31.0 t
H	4500 – 5500 mm	35.5 – > 40.0 t



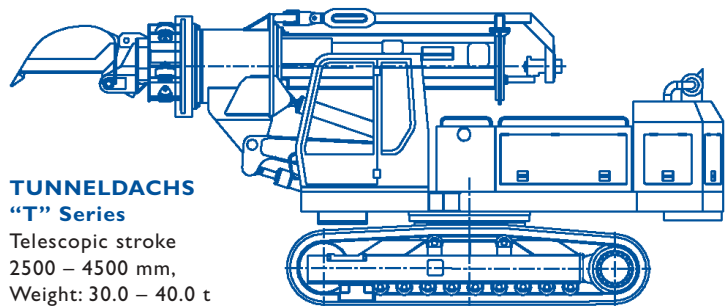
**UNIDACHS "S" Series**

Telescopic stroke 3000 mm,  
Weight: 13.0 – 16.0 t



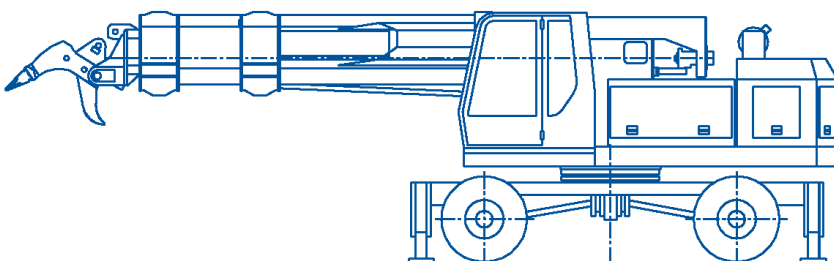
**UNIDACHS  
"R" Series**

Telescopic stroke 2000 mm,  
Weight: 9.0 – 10.5 t,  
with radio remote control



**TUNNELDACHS  
"T" Series**

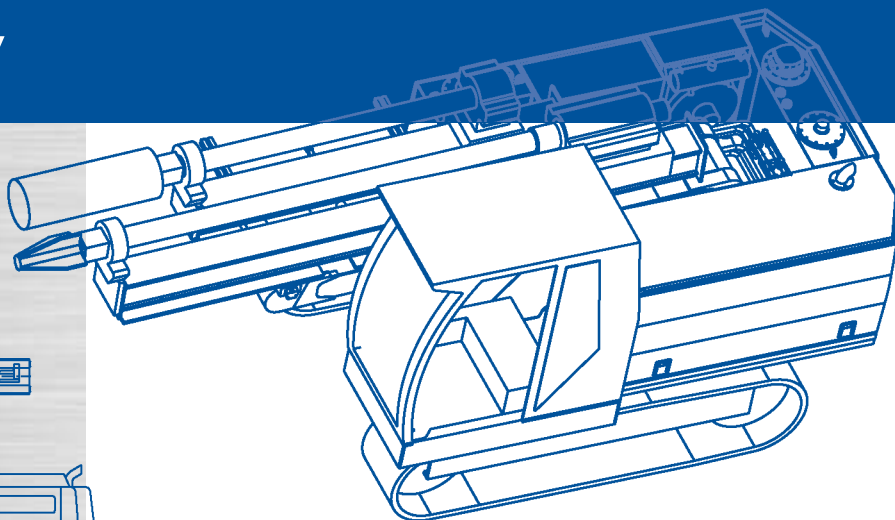
Telescopic stroke  
2500 – 4500 mm,  
Weight: 30.0 – 40.0 t



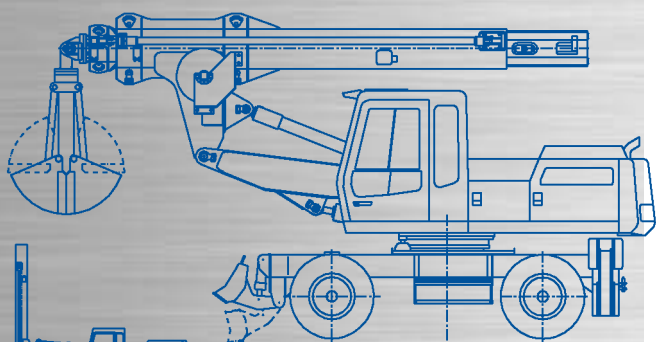
**PNEUDACHS "S - L" Series**

Telescopic stroke 3000 – 4000 mm, Weight: 15.0 – 28.0 t

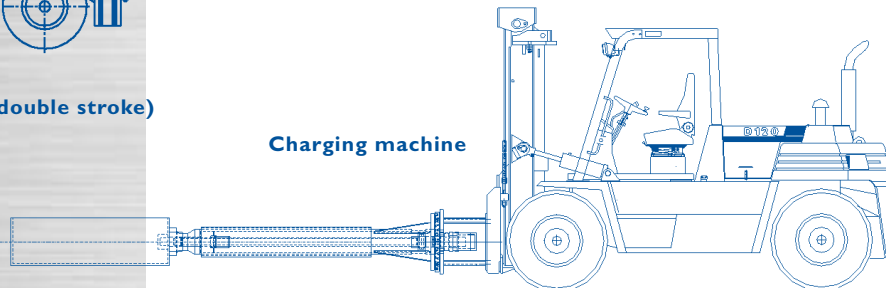
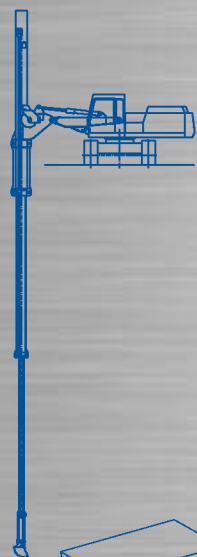
# MODEL OVERVIEW



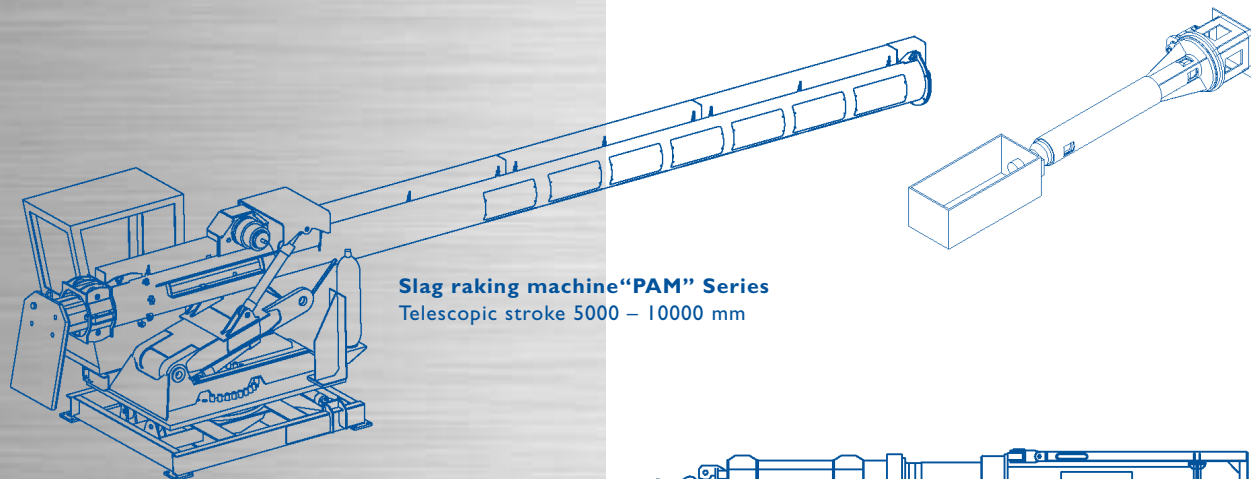
Converter tap hole drilling rig "ABE" Series



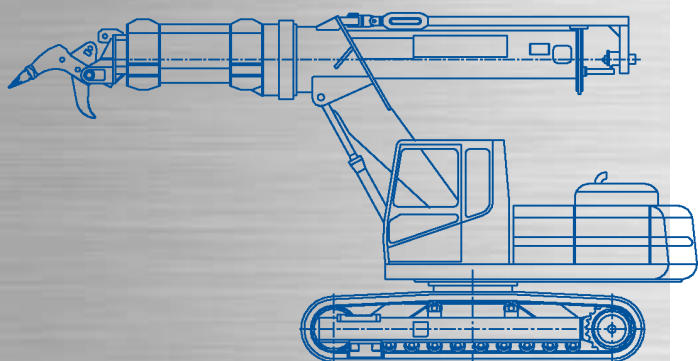
Telescopic boom TSD (double stroke)  
Reach up to 22000 mm



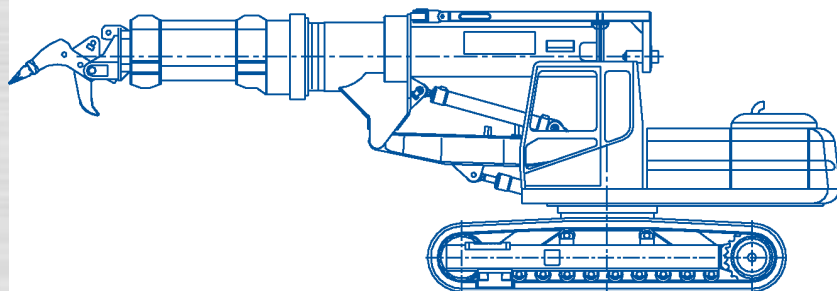
Charging machine



Slag raking machine "PAM" Series  
Telescopic stroke 5000 – 10000 mm



Telescopic boom TN (rigid)  
Telescopic stroke 3000 – 5000 mm

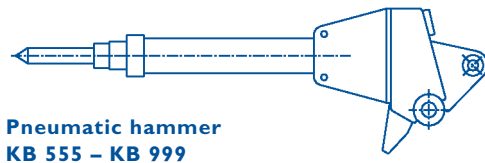


Telescopic boom TS (articulated)  
Telescopic stroke 3000 – 5000 mm

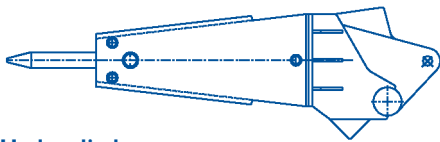
# TOOLS

## Special attachments upon request!

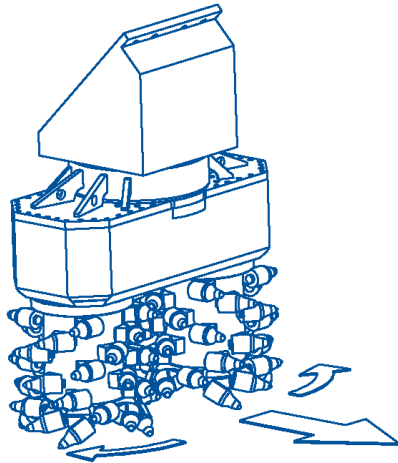
In the interest of technical development, we reserve the right to make modifications without notice.



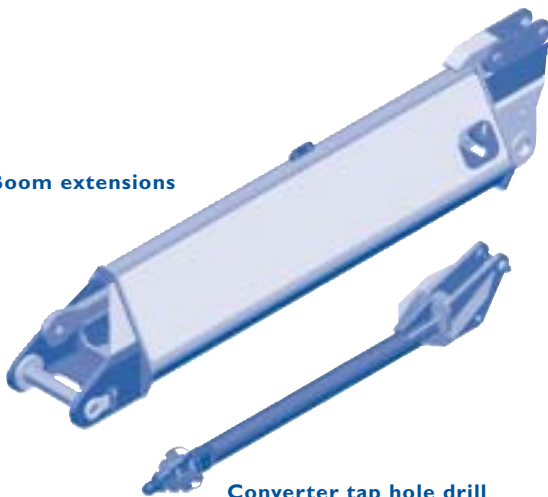
**Pneumatic hammer**  
KB 555 – KB 999



**Hydraulic hammer**

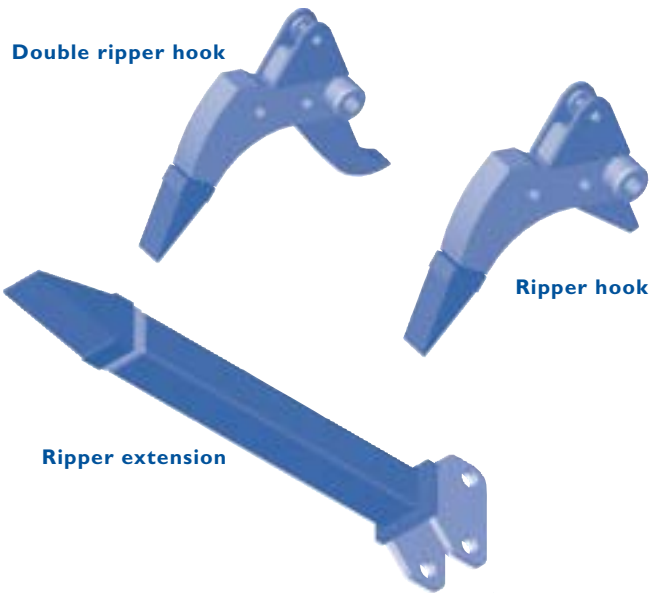


**TML Rotary drum cutter**



**Boom extensions**

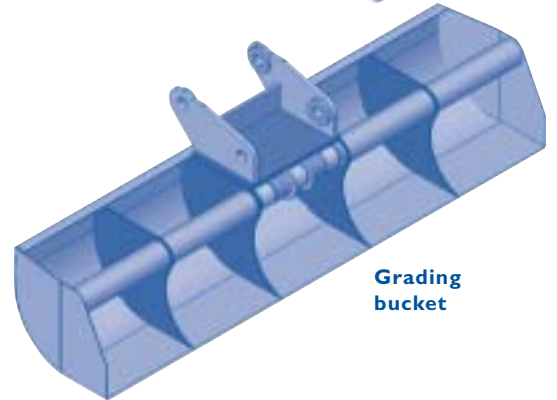
**Converter tap hole drill**



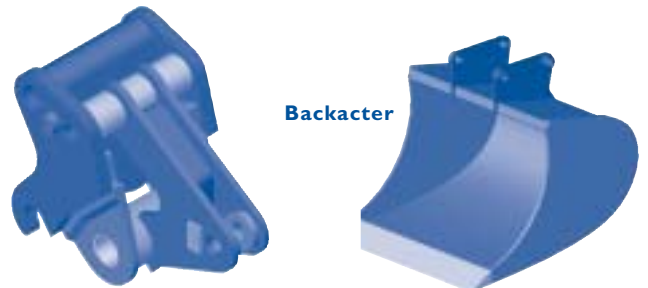
**Double ripper hook**

**Ripper hook**

**Ripper extension**



**Grading bucket**



**Backacter**

**Quick couplers**

**Belt cleaning unit**





**“MADE IN GERMANY”**

**TML Technik designs and manufactures its products in Germany. The company is based in Monheim near Düsseldorf with good connections to international airports. This advantageous location supports our strategic logistics system and is a sound foundation for a fast service.**

**“WORLDWIDE”**

**Efficient agents and TML subsidiary companies represent us in many countries worldwide to guarantee the customer contact on an international level.**

**TML**  
**working solutions**

**TML Technik GmbH**

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