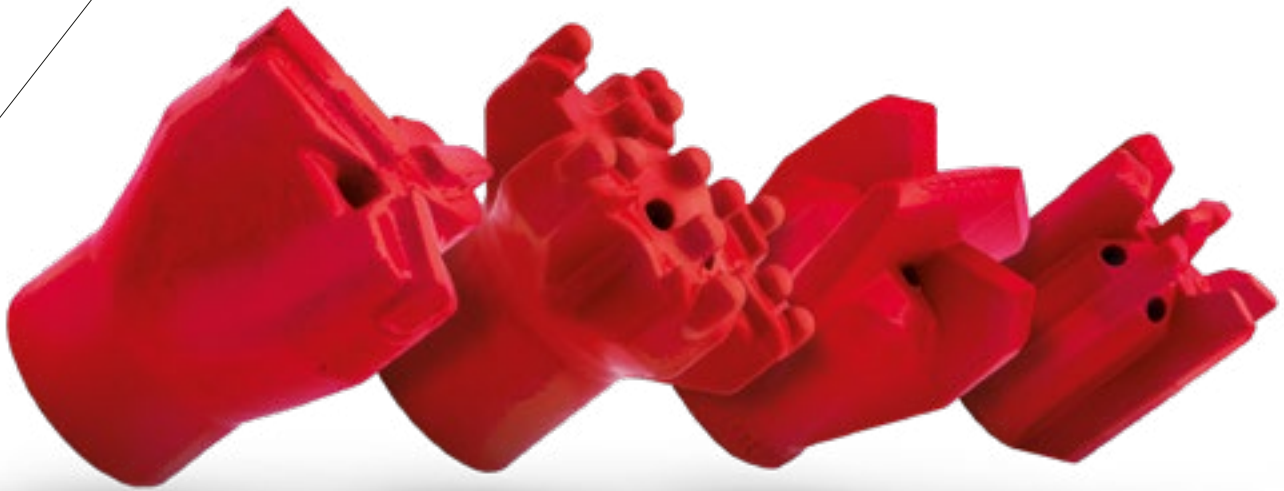


READY TO EXCEED.



# WEAR PARTS + CONSUMABLES

PRODUCT INFORMATION

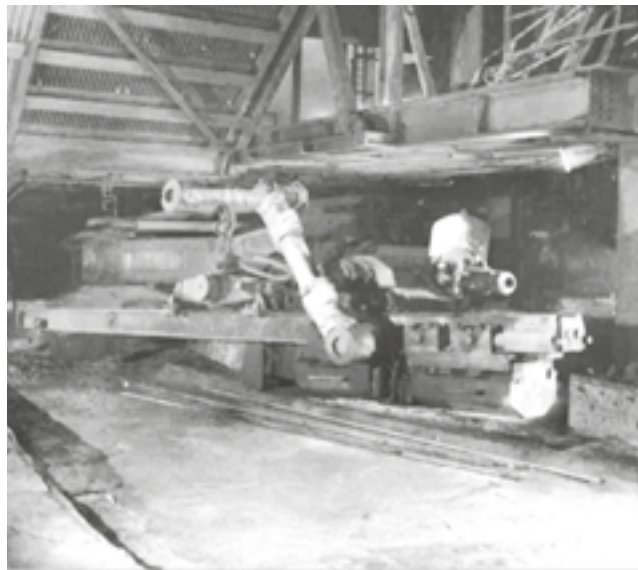
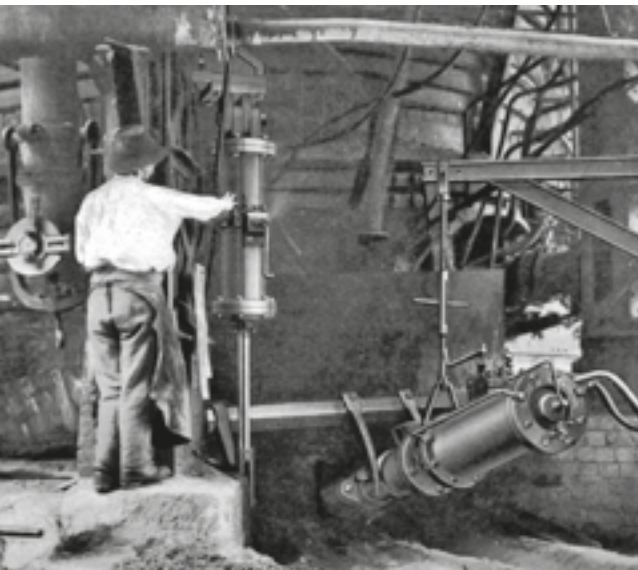


# INTRODUCTION

## TAPPING MEASURING TECHNOLOGY

TMT is the fusion of two extraordinary companies which have merged their experience and expertise to ensure tapping solutions on a high-end level.

Many leading companies in the metal-producing industry trust our expertise, benefit from our ideas and rely on our team of highly qualified experts for their projects.



### BEGINNINGS

Around 1900, the first clay guns were manufactured at Dango & Dienenthal in Siegen.

In comparison to today's high end equipment, they could be considered rather simple, but demanding pneumatic constructions with a single cylinder, which made work around the taphole areas of blast furnaces easier and less dangerous.

Thereby, the furnace workers still had to operate in a dangerous area, but instead of plugging the taphole by hand, only had to fill the machine with clay and plug the tap hole by maneuvering the clay gun into an appropriate position.

Employing clay guns did not only improve working safety, but also enhanced the productivity of blast furnaces, because interrupting the air-flow became unnecessary.

### IMPROVEMENTS

In 1979, the first full reverse hammer was manufactured at Paul Wurth in Luxembourg. This taphole drill was operating based on a pneumatic hammer unit. It considerably improved the safety of taphole operators. Later around 1997, both TMT mother companies introduced fully hydraulic taphole drills and reverse hammer drills. Those are still today the state-of-the-art of tapping technology, as only they satisfy the high demands for performance, reliability and safety.

## ROAD TO ZERO EMISSION

The whole steel industry is facing major challenges with regards to CO2 neutrality by 2050. There is still a long way to go.

However, TMT with its own factory in Haiger is already contributing to this target.

Large areas of our factory roof top are equipped with a photovoltaic system. The generated energy is used to run our factory.

The cooperation with TMT enables our partners/customers to improve their carbon footprint.

## STILL STRIVE FOR MORE

Since the early beginnings TMT has constantly developed and improved their taphole machinery to suit customers needs and requirements for a highly efficient and safe taphole operation.

Are you ready to exceed?



# HOW WE EXCEED

**PERFORMANCE IS THE RESULT OF  
THE INTERACTION BETWEEN MACHINES,  
WEAR PARTS AND CONSUMABLES.**

As an Original Equipment Manufacturer of all these components, TMT understands the requirements best.

Only the use of original wear parts and the proper adjustment of machine settings and consumables ensure that performance-targets are met, costs are reduced and the operational safety is maximized.



## REFERENCES

# 30 YEARS OF EXPERIENCE

# KEEP INCREASING YOUR PROFIT

Based on 30+ years of experience the people of TMT know a lot about drilling and plugging of tap holes.

TMT helps you to choose the right components for an optimized process which will save cost and eventually result in an increase of profitability.





## RELIABLE AND PREPARED FOR ALL CASES

## DELIVERY IN SHORT TIME

At our new production facility located in Haiger / Germany, right in the centre of Europe, we keep our stock levels for all standard components and raw materials on high levels which enables us to serve our customers reliably and in a very reasonable time.

We are set up to handle emergency cases and ensure a dispatch within 24 hours from order of all standard consumables like drill bits and other standardised wear items.

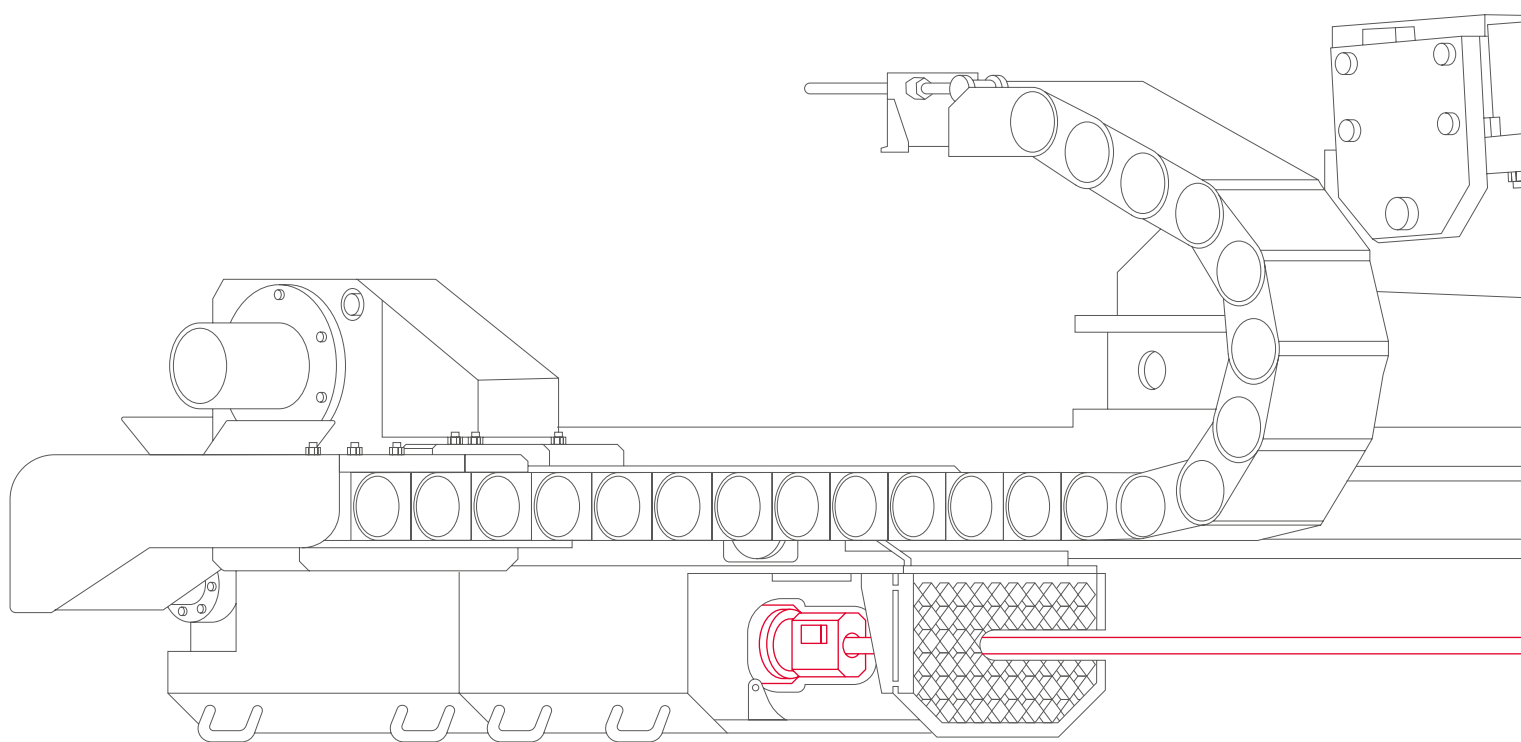
## WEAR PARTS AVAILABLE

Keeping the production running at a steady pace is an essential challenge.

Therefore we have stored up to 3,000 tons of material and more than 150,000 drill bits in our warehouse in Haiger, Germany, to ensure fast and reliable delivery.



# CONTEN



12 - 15

**ADAPTERS +  
UPGRADE-KITS**

WEAR PARTS

18 - 19

**DRILL RODS +  
PERCUSSION RODS**

CONSUMABLES

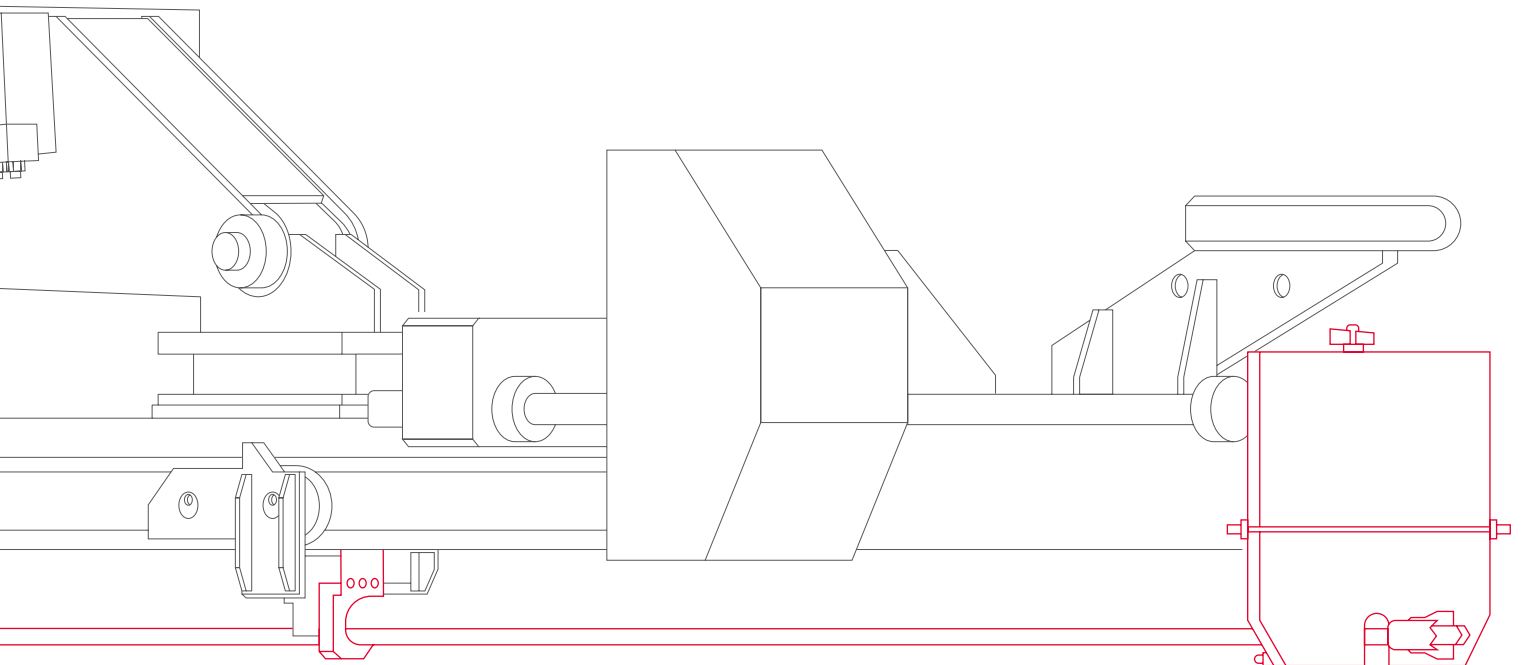
20 - 25

**DRILL BITS**

CONSUMABLES



# NT



26 - 29

## FURTHER EQUIPMENT

CONSUMABLES

CONTENT

# WEAR P



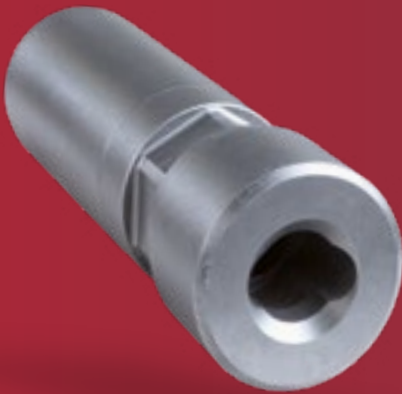
**KEYWAY  
CONNECTION**



**BAYONET  
CONNECTION**

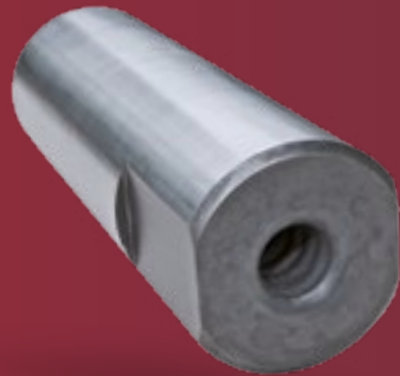
WITH SELF-CENTRING SYSTEM

# PARTS



**BAYONET  
CONNECTION**

WITHOUT SELF-CENTRING SYSTEM



**THREAD  
CONNECTION**

## ADAPTERS

WITH

### KEYWAY CONNECTION



INDIVIDUAL PARTS:



#### LEG SPRING

IDENT NO

300 3527 / Ø 4  
300 5689 / Ø 5



#### LOCKING PIN

IDENT NO

260.126



#### FLOW STOPPER

IDENT NO

300 5670 / Ø 27  
300 5671 / Ø 24



#### KEY

IDENT NO

300 5940 / 8,0  
300 5941 / 7,1  
300 5942 / 6,3



#### CHECK VALVES

IDENT NO

300 3720 / Ø 27  
300 3719 / Ø 24

WITH STANDARD

### BAYONET CONNECTION



INDIVIDUAL PARTS:



#### FLUSHING PIPE

IDENT NO

300 6216 / Ø 24



#### FLOW STOPPER

IDENT NO

300 5670 / Ø 27  
300 5671 / Ø 24



#### CHECK VALVES

IDENT NO

300 3720 / Ø 27  
300 3719 / Ø 24



WITH SELF-CENTRING

## BAYONET CONNECTION



INDIVIDUAL PARTS:



### FLUSHING PIPE

IDENT NO

300 6216 / Ø24



### FLOW STOPPER

IDENT NO

300 5670 / Ø27  
300 5671 / Ø24



### CHECK VALVES

IDENT NO

300 3720 / Ø27  
300 3719 / Ø24

WITH

## THREAD CONNECTION



INDIVIDUAL PARTS:



### FLOW STOPPER

IDENT NO

300 5670 / Ø27  
300 5671 / Ø24



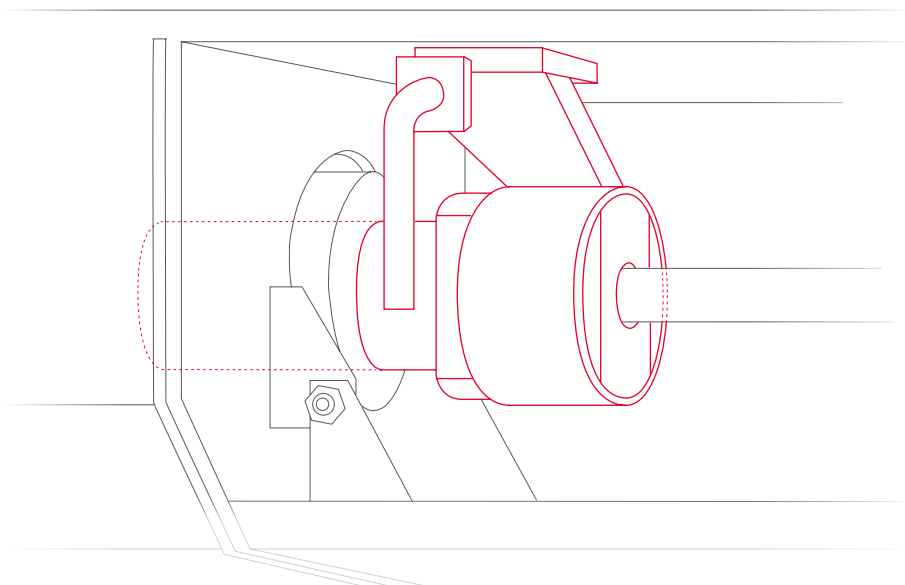
### CHECK VALVES

IDENT NO

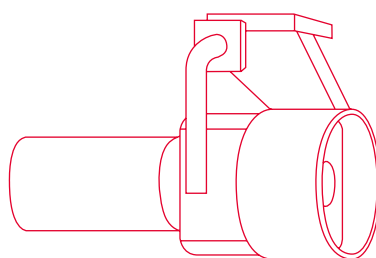
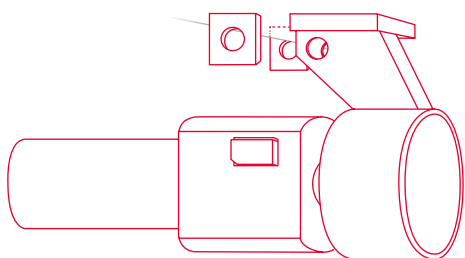
300 3720 / Ø27  
300 3719 / Ø24



# WEDGE SAFETY DEVICE



**IN USE** / ASSEMBLED



## APPLICATION

### SIMPLE LOCK

This type of Wedge Safety Device without additional security elements combines the usual simple wedge connection with safe handling and is the next step towards reducing potential sources of danger.

The use of this unit is checked individually due to the different types of drill hammers.

### EASY MOUNTING

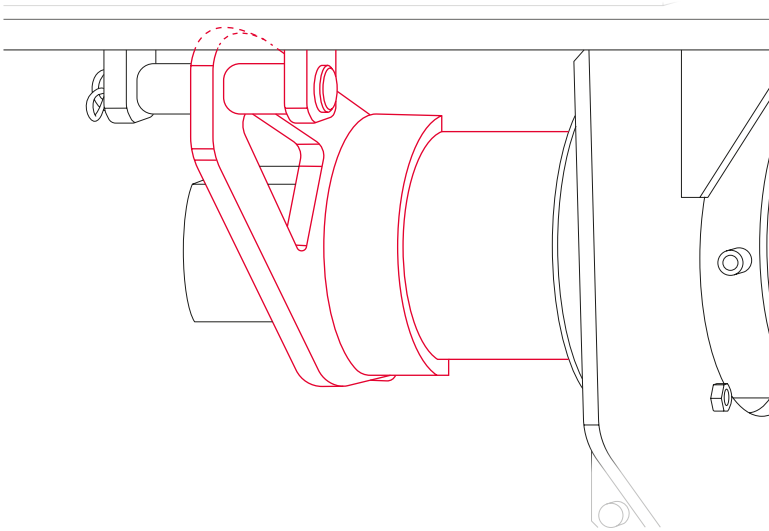
To secure the drill bar by means of a wedge, a safety device can be mounted on different types of drill hammers.

Due to the slidable design, the drill bar can be easily mounted as usual. After moving the safety device until it is locking, the position of the wedge is fixed and losing is impossible.

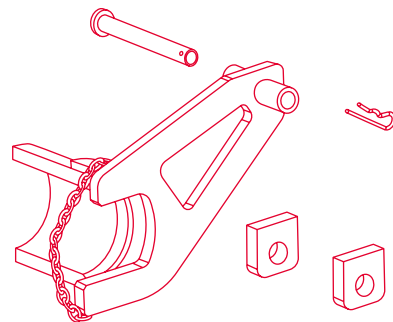
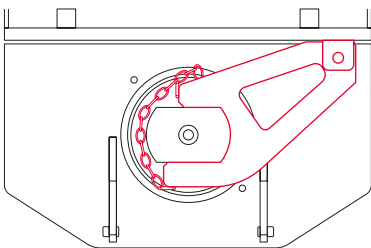


# ADAPTER RELEASE DEVICE

FOR THE BAYONET ADAPTER AND WEDGE ADAPTER



**IN USE** / ASSEMBLED



## APPLICATION

### SECURE ATTACHEMENT

In conjunction with the TMT adapters, the use of a release device is possible with various types of drill hammers. The holding device is securely attached to the hammer drill carriage and surrounds the key surface of the adapter.

### SAFE EXCLUSION

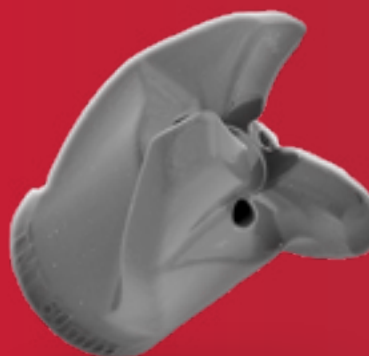
Upon actuation of the rotary hammer in opposite directions to the thread direction, the adapter is released and can then be safely removed by installation personnel. The use of this device is checked individually due to the different types of drill hammers.

CONTENT

# CONSUM



**DRILL RODS +  
PERCUSSION RODS**



**DRILL BITS**

WITHOUT CARBIDE

# MABLES



## DRILL BITS

WITH CARBIDE



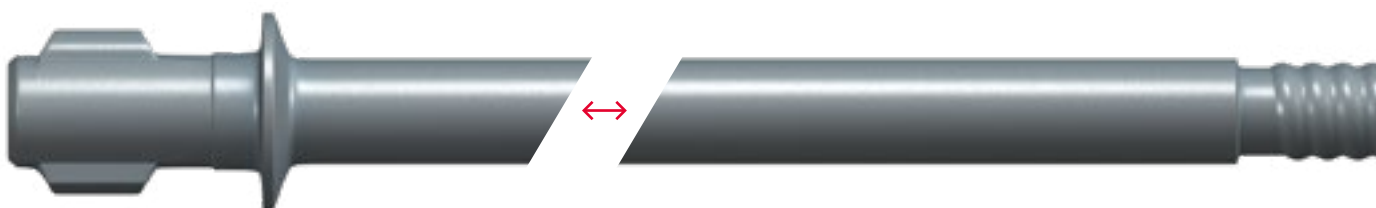
## WEAR PARTS

FOR TAPHOLE DRILLS + CLAY GUNS

# RODS

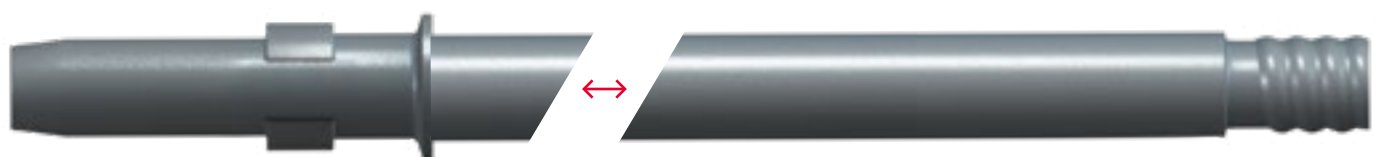
## DRILL RODS + PERCUSSION RODS

### DRILL RODS



#### SELF-CENTRING BAYONET CONNECTION

Outside diameters (mm): 31.8 / 35 / 38  
Wall thickness (mm): 6.3 / 7.1 / 8



#### NON-SELF-CENTRING BAYONET CONNECTION

Outside diameters (mm): 31.8 / 35 / 38  
Wall thickness (mm): 6.3 / 7.1 / 8



#### KEYWAY CONNECTION

Outside diameters (mm): 31.8 / 35 / 38  
Wall thickness (mm): 6.3 / 7.1 / 8



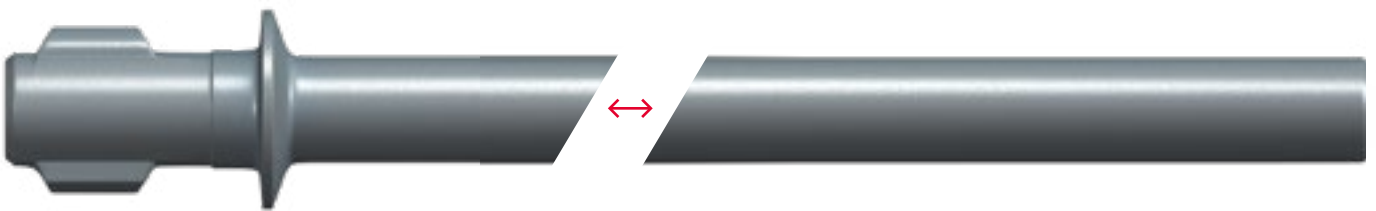
#### THREAD CONNECTION

Outside diameters (mm): 31.8 / 35 / 38  
Wall thickness (mm): 6.3 / 7.1 / 8



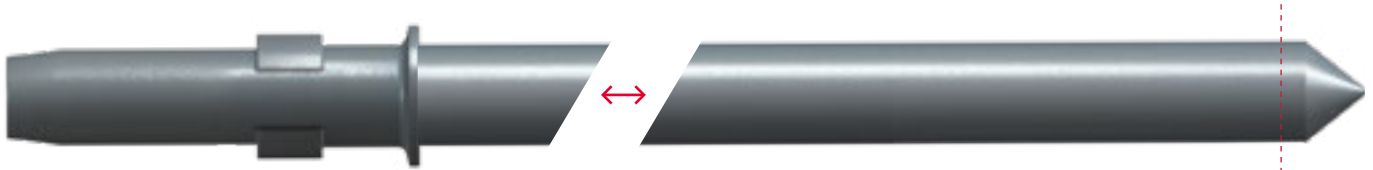


## PERCUSSION RODS



### SELF-CENTRING BAYONET CONNECTION

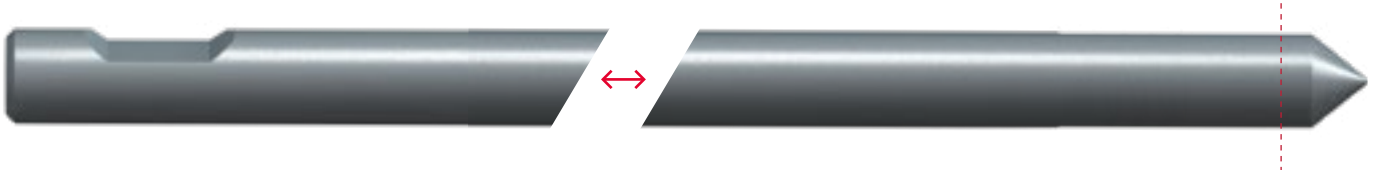
Diameters (mm):  
32 / 35 / 38 / 42 / 45 / 50



### NON-SELF-CENTRING BAYONET CONNECTION

With and without cone end

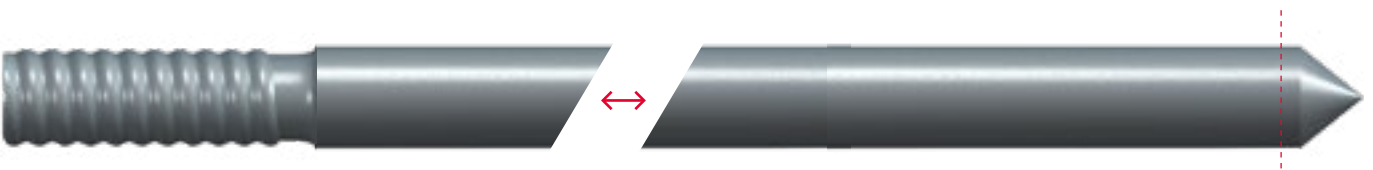
Diameters (mm):  
32 / 35 / 38 / 42 / 45 / 50



### KEYWAY CONNECTION

With and without cone end

Diameters (mm):  
32 / 35 / 38 / 42 / 45 / 50



### THREAD CONNECTION

With and without cone end

Diameters (mm):  
32 / 35 / 38 / 42 / 45 / 50

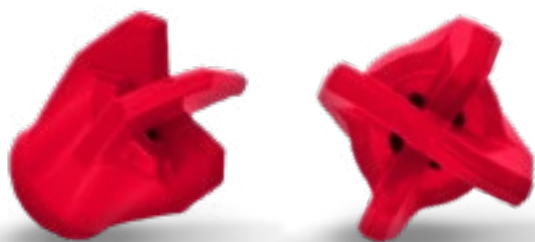
# DRILL BITS

## WITHOUT CARBIDE



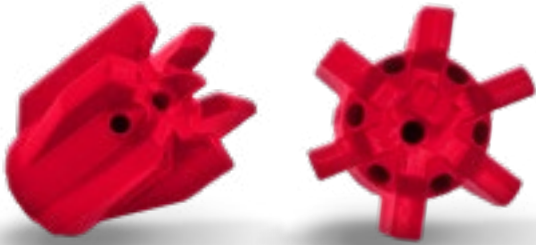
### RACER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003200	TMT-RC-40-R 32	40 mm	R 32 left
3003201	TMT-RC-42.5-R 32	42.5 mm	R 32 left
3003202	TMT-RC-45-R 32	45 mm	R 32 left
3003203	TMT-RC-47.5-R 32	47.5 mm	R 32 left
3003204	TMT-RC-50-R 32	50 mm	R 32 left
3003205	TMT-RC-52.5-R 32	52.5 mm	R 32 left
3003206	TMT-RC-55-R 32	55 mm	R 32 left
3003207	TMT-RC-57.5-R 32	57.5 mm	R 32 left
3003208	TMT-RC-60-R 32	60 mm	R 32 left
3003209	TMT-RC-62.5-R 32	62.5 mm	R 32 left
3003210	TMT-RC-65-R 32	65 mm	R 32 left
3003212	TMT-RC-70-R 32	70 mm	R 32 left
3003214	TMT-RC-75-R 32	75 mm	R 32 left



### CUTTER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003300	TMT-CT-40-R 32	40 mm	R 32 left
3003301	TMT-CT-42.5-R 32	42.5 mm	R 32 left
3003302	TMT-CT-45-R 32	45 mm	R 32 left
3003303	TMT-CT-47.5-R 32	47.5 mm	R 32 left
3003304	TMT-CT-50-R 32	50 mm	R 32 left
3003305	TMT-CT-52.5-R 32	52.5 mm	R 32 left
3003306	TMT-CT-55-R 32	55 mm	R 32 left
3003307	TMT-CT-57.5-R 32	57.5 mm	R 32 left
3003308	TMT-CT-60-R 32	60 mm	R 32 left
3003309	TMT-CT-62.5-R 32	62.5 mm	R 32 left
3003310	TMT-CT-65-R 32	65 mm	R 32 left
3003312	TMT-CT-70-R 32	70 mm	R 32 left
3003314	TMT-CT-75-R 32	75 mm	R 32 left



## MILLER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003800	TMT-ML-40-R 32	40 mm	R 32 left
3003801	TMT-ML-42.5-R 32	42.5 mm	R 32 left
3003802	TMT-ML-45-R 32	45 mm	R 32 left
3003803	TMT-ML-47.5-R 32	47.5 mm	R 32 left
3003804	TMT-ML-50-R 32	50 mm	R 32 left
3003805	TMT-ML-52.5-R 32	52.5 mm	R 32 left
3003806	TMT-ML-55-R 32	55 mm	R 32 left
3003807	TMT-ML-57.5-R 32	57.5 mm	R 32 left
3003808	TMT-ML-60-R 32	60 mm	R 32 left
3003809	TMT-ML-62.5-R 32	62.5 mm	R 32 left
3003810	TMT-ML-65-R 32	65 mm	R 32 left
3003812	TMT-ML-70-R 32	70 mm	R 32 left
3003814	TMT-ML-75-R 32	75 mm	R 32 left
3003816	TMT-ML-80-R 32	80 mm	R 32 left

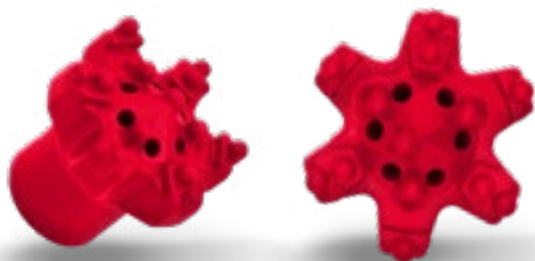


## SLITTER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003460	TMT-SL-40-R 32	40 mm	R 32 left
3003461	TMT-SL-42.5-R 32	42.5 mm	R 32 left
3003462	TMT-SL-45-R 32	45 mm	R 32 left
3003463	TMT-SL-47.5-R 32	47.5 mm	R 32 left
3003464	TMT-SL-50-R 32	50 mm	R 32 left
3003465	TMT-SL-52.5-R 32	52.5 mm	R 32 left
3003466	TMT-SL-55-R 32	55 mm	R 32 left
3003467	TMT-SL-57.5-R 32	57.5 mm	R 32 left
3003468	TMT-SL-60-R 32	60 mm	R 32 left
3003469	TMT-SL-62.5-R 32	62.5 mm	R 32 left
3003470	TMT-SL-65-R 32	65 mm	R 32 left
3003472	TMT-SL-70-R 32	70 mm	R 32 left
3003474	TMT-SL-75-R 32	75 mm	R 32 left

## DRILL BITS

### WITHOUT CARBIDE



#### SLUGGER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003150	TMT-SG-80-R 32	80 mm	R 32 left
3003151	TMT-SG-90-R 32	90 mm	R 32 left
3003152	TMT-SG-100-R 32	100 mm	R 32 left
3003153	TMT-SG-110-R 32	110 mm	R 32 left
3003154	TMT-SG-120-R 32	120 mm	R 32 left

### WITH CARBIDE



#### TURNER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003600	TMT-TN-HM-40-R 32	40 mm	R 32 left
3003601	TMT-TN-HM-42,5-R 32	42,5 mm	R 32 left
3003602	TMT-TN-HM-45-R 32	45 mm	R 32 left
3003603	TMT-TN-HM-47,5-R 32	47,5 mm	R 32 left
3003604	TMT-TN-HM-50-R 32	50 mm	R 32 left
3003605	TMT-TN-HM-52,5-R 32	52,5 mm	R 32 left
3003606	TMT-TN-HM-55-R 32	55 mm	R 32 left
3003607	TMT-TN-HM-57,5-R 32	57,5 mm	R 32 left
3003608	TMT-TN-HM-60-R 32	60 mm	R 32 left
3003610	TMT-TN-HM-65-R 32	65 mm	R 32 left
3003612	TMT-TN-HM-70-R 32	70 mm	R 32 left
3003614	TMT-TN-HM-75-R 32	75 mm	R 32 left
3003616	TMT-TN-HM-80-R 32	80 mm	R 32 left

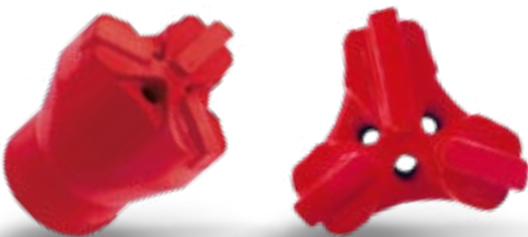


# WITH CARBIDE



## SCRAPER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3005962	TMT-SC-HM-45-R 32	45 mm	R 32 left
3005964	TMT-SC-HM-50-R 32	50 mm	R 32 left
3005965	TMT-SC-HM-52.5-R 32	52.5 mm	R 32 left
3005966	TMT-SC-HM-55-R 32	55 mm	R 32 left
3005968	TMT-SC-HM-60-R 32	60 mm	R 32 left
3005970	TMT-SC-HM-65-R 32	65 mm	R 32 left



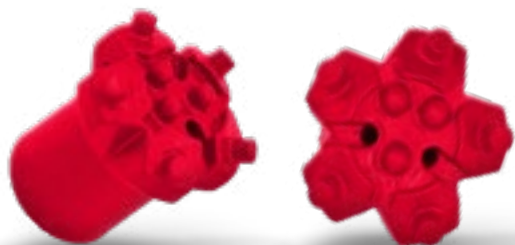
## GRAVER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003400	TMT-GV-HM-40-R 32	40 mm	R 32 left
3003401	TMT-GV-HM-42.5-R 32	42.5 mm	R 32 left
3003402	TMT-GV-HM-45-R 32	45 mm	R 32 left
3003403	TMT-GV-HM-47.5-R 32	47.5 mm	R 32 left
3003404	TMT-GV-HM-50-R 32	50 mm	R 32 left
3003405	TMT-GV-HM-52.5-R 32	52.5 mm	R 32 left
3003406	TMT-GV-HM-55-R 32	55 mm	R 32 left
3003407	TMT-GV-HM-57.5-R 32	57.5 mm	R 32 left
3003408	TMT-GV-HM-60-R 32	60 mm	R 32 left
3003409	TMT-GV-HM-62.5-R 32	62.5 mm	R 32 left
3003410	TMT-GV-HM-65-R 32	65 mm	R 32 left
3003411	TMT-GV-HM-67.5-R 32	67.5 mm	R 32 left
3003412	TMT-GV-HM-70-R 32	70 mm	R 32 left
3003414	TMT-GV-HM-75-R 32	75 mm	R 32 left
3003416	TMT-GV-HM-80-R 32	80 mm	R 32 left



## DRILL BITS

# WITH CARBIDE



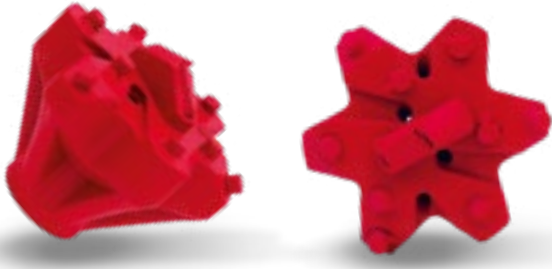
## SLUGGER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3003643	TMT-SG-HM-45-R 32	45 mm	R 32 left
3003644	TMT-SG-HM-50-R 32	50 mm	R 32 left
3003658	TMT-SG-HM-52.5-R 32	52.5 mm	R 32 left
3003645	TMT-SG-HM-55-R 32	55 mm	R 32 left
3003659	TMT-SG-HM-57.5-R 32	57.5 mm	R 32 left
3003646	TMT-SG-HM-60-R 32	60 mm	R 32 left
3003660	TMT-SG-HM-62.5-R 32	62.5 mm	R 32 left
3003647	TMT-SG-HM-65-R 32	65 mm	R 32 left
3003648	TMT-SG-HM-70-R 32	70 mm	R 32 left
3003649	TMT-SG-HM-75-R 32	75 mm	R 32 left
3003650	TMT-SG-HM-80-R 32	80 mm	R 32 left
3003651	TMT-SG-HM-90-R 32	90 mm	R 32 left
3003652	TMT-SG-HM-100-R 32	100 mm	R 32 left
3003653	TMT-SG-HM-110-R 32	110 mm	R 32 left
3003654	TMT-SG-HM-120-R 32	120 mm	R 32 left



## TAPHOLE REAMER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
3005982	TMT-TR-210-R 32	210 mm	R 32 left
3005983	TMT-TR-245-R 32	245 mm	R 32 left
3005984	TMT-TR-260-R 32	260 mm	R 32 left
3005985	TMT-TR-300-R 32	300 mm	R 32 left



## PUNCHER

IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
300 37 90	TMT-PC-HM-80-R 32	80 mm	R 32 left
300 37 91	TMT-PC-HM-90-R 32	90 mm	R 32 left
300 37 92	TMT-PC-HM-100-R 32	100 mm	R 32 left
300 37 93	TMT-PC-HM-110-R 32	110 mm	R 32 left
300 37 94	TMT-PC-HMC-120-R 32	120 mm	R 32 left
300 37 95	TMT-PC-HM-125-R 32	125 mm	R 32 left

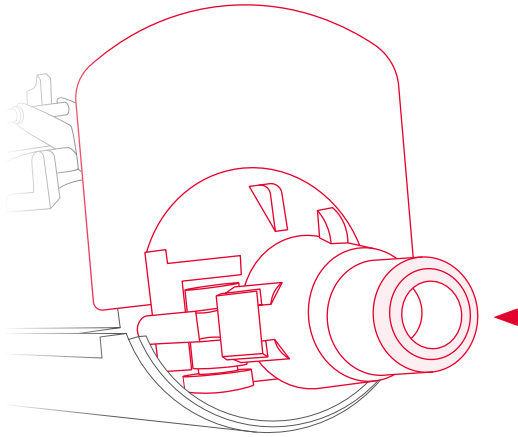


## STARTER BIT

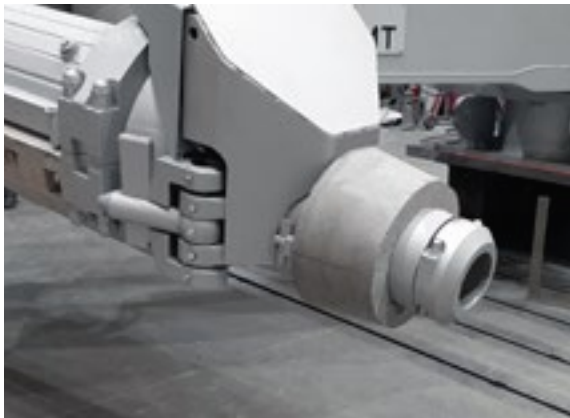
IDENT NO	DESCRIPTION	Ø DRILL BIT	THREAD
300 59 92	TMT-ST-HM-80-R 32	80 mm	R 32
300 59 93	TMT-ST-HM-80-R 38	80 mm	R 38

# NOZZLE PROTECTION

FOR TAPHOLE DRILLS + CLAY GUNS



**IN USE** / ASSEMBLED

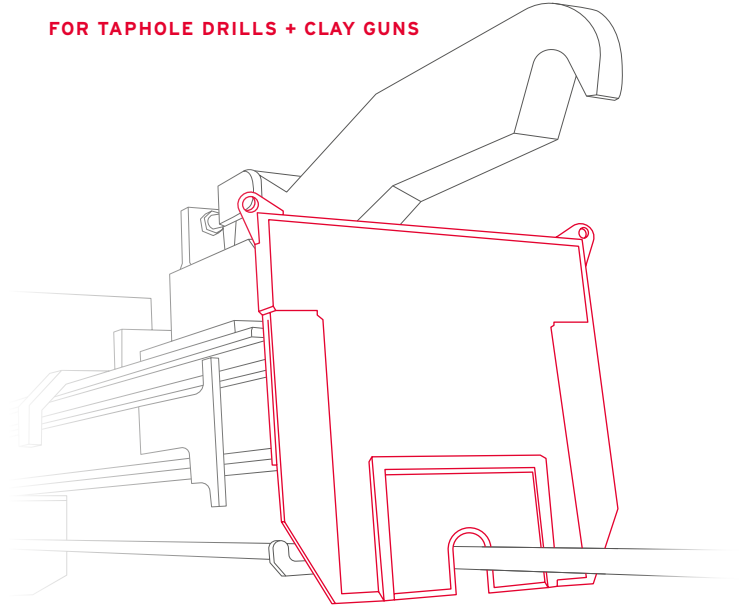


## USAGE

In order to protect components of the clay gun and taphole drill from iron projections and heat radiation and considerably extend their life time, TMT offers to upgrade your equipment with protections specifically designed and made of special refractory concrete.

# PROTECTIVE SHIELD

FOR TAPHOLE DRILLS + CLAY GUNS



**IN USE** / ASSEMBLED



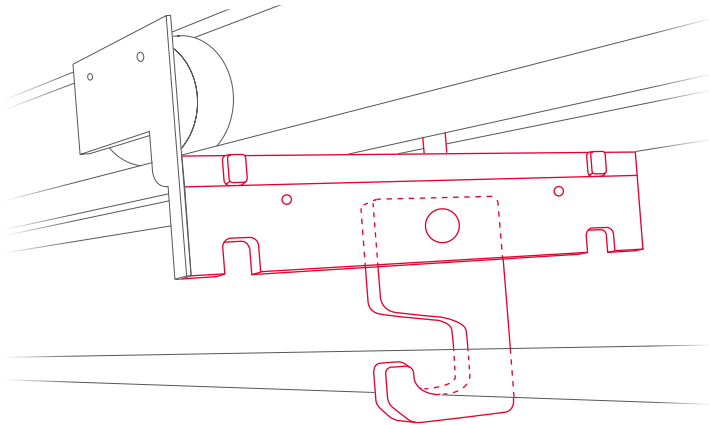
## USAGE

By tapping into the blast furnace hot fluid metal spatters out and sparks are spraying. To protect humans and sensitive parts of the technical equipment, TMT machines have pre-installed protective shields.

The latest design of protection shields makes use of special refractories which increase the lifetime of these parts and help reducing the maintenance costs.

# CENTRING DEVICE

FOR TAPHOLE DRILLS + CLAY GUNS



**IN USE** / ASSEMBLED



## USAGE

The centring device prevents excessive bending of the bar.

Using original parts helps the operators to drill a straight taphole channel and protect the taphole.

# CUSTOMIZED VERSIONS

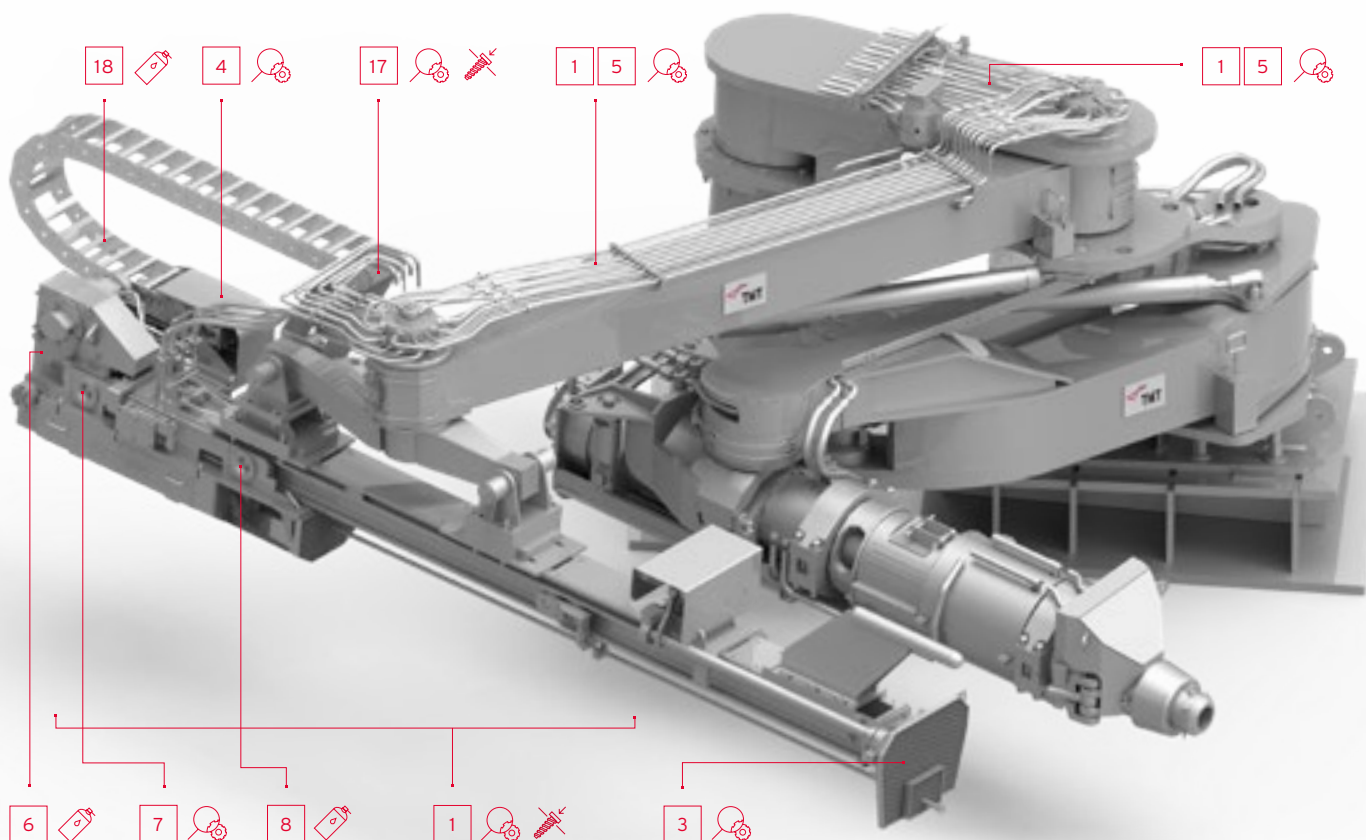
Customized versions and designs for your requirements are available as well. Let's get in touch.

## CONTACT

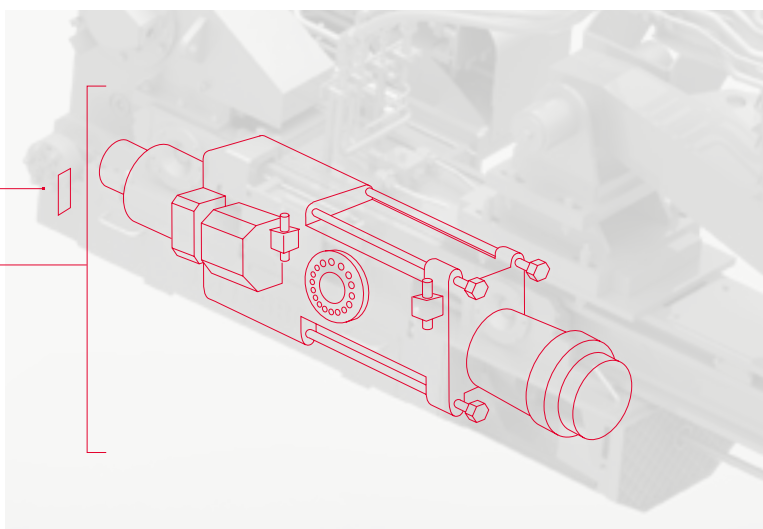
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# INSPECTION + MAINTENANCE



## DETAIL



# INSTRUCTIONS

POS.	CHECK	INTERVENTION		TASK	INFORMATION
1	Daily	Machine and working area		Visual inspection of the machine for: defects, damages, loosened connections, leakages, etc.  Checking of the signal lamps function	Repair any defect immediately
2	Daily	Hydraulic system	 	Check oil level. Check oil temperature. Check dirt indicator of filter elements	Refill oil if necessary. Level must be between MIN and MAX. Replace Filter if it is dirty.
3	Daily	Protective plate		Visual inspection. Check for complete filling with refractory	Repair if necessary
4	Daily	Adapter		Visual Inspection.	Replace Adapter if it is broken
5	Weekly	Pneumatic device Hydraulic device Electric device		Visual Inspection. Check hydraulic pipes, hoses and screwed connections for leakage and damages  Check electric motor for dirt	Repair any defects immediately
6	Weekly	Rollerchain		Lubricate with grease spray. Check roller chain tension.	If too much slack, restretch
7	Weekly	Roller conveyor		Visual inspection.	Clean
8	Weekly	Wheels		Lubricate with grease spray or grease gun.	Repair if necessary
9	Weekly	Oiler		Check oil level. Check oil temperature. Check dirt indicator of filter elements.	Refill oil if necessary; Level must be between MIN and MAX. Replace Filter if it is dirty.
10	Weekly	Central lubrication system	 	Visual inspection.	Refill grease if necessary. Repair if necessary.
11	Weekly	Tightness of hydraulic hoses and screw connections	 	Visual inspection.	Repair if necessary.
12	Weekly	Expansion screw connection to interface: rotator, gearbox and hammer, slide	 	Visual inspection.	Repair if necessary.
13	Weekly	Impact piston striking surface on the drill adapter	 	Visual inspection.	Repair if necessary
14	Weekly	High and Low pressure accumulator	 	Visual inspection. Pressure test.	Repair if necessary. Correct pressure if necessary.
15	Weekly	Flushing tube seal, flushing pipe	 	Visual inspection.	Repair if necessary New set of seals if necessary.
16	Weekly	Hammer lubrication		Visual inspection.	Repair if necessary.
17	Monthly	Suspension	 	Visual inspection. Check all screws on mast for tight fit	Repair if necessary.
18	Monthly	Cable track chain		Lubrication with grease spray	Repair if necessary



