



TYROLIT PROJECT SERVICES

Machines, tools and project support
at the highest level

Premium grinding tools since 1919
www.tyrolit.com

TYROLIT

The TYROLIT Group

TYROLIT is one of the world's leading manufacturers of grinding and dressing tools as well as a system provider for the construction industry.

Since 1919, our innovative tools have made an important contribution to the technological development in many industries. TYROLIT offers tailored grinding solutions for various applications, as well as a comprehensive assortment of standard tools for customers all over the world.

Headquartered in Schwaz (Austria), the family-owned business combines the strengths of being a part of the dynamic Swarovski Group with a century's worth of individual corporate and technological experience.



TYROLIT headquarters in Schwaz (Austria)

Facts & Figures



80,000+
products



29
production sites



4,500+
employees worldwide



37
sales locations



500+
worldwide patents

Sales companies in Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, India, Indonesia, Italy, the Netherlands, Norway, Poland, Portugal, Russia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, the UAE, the UK and the USA. Distributors in 65 other countries.

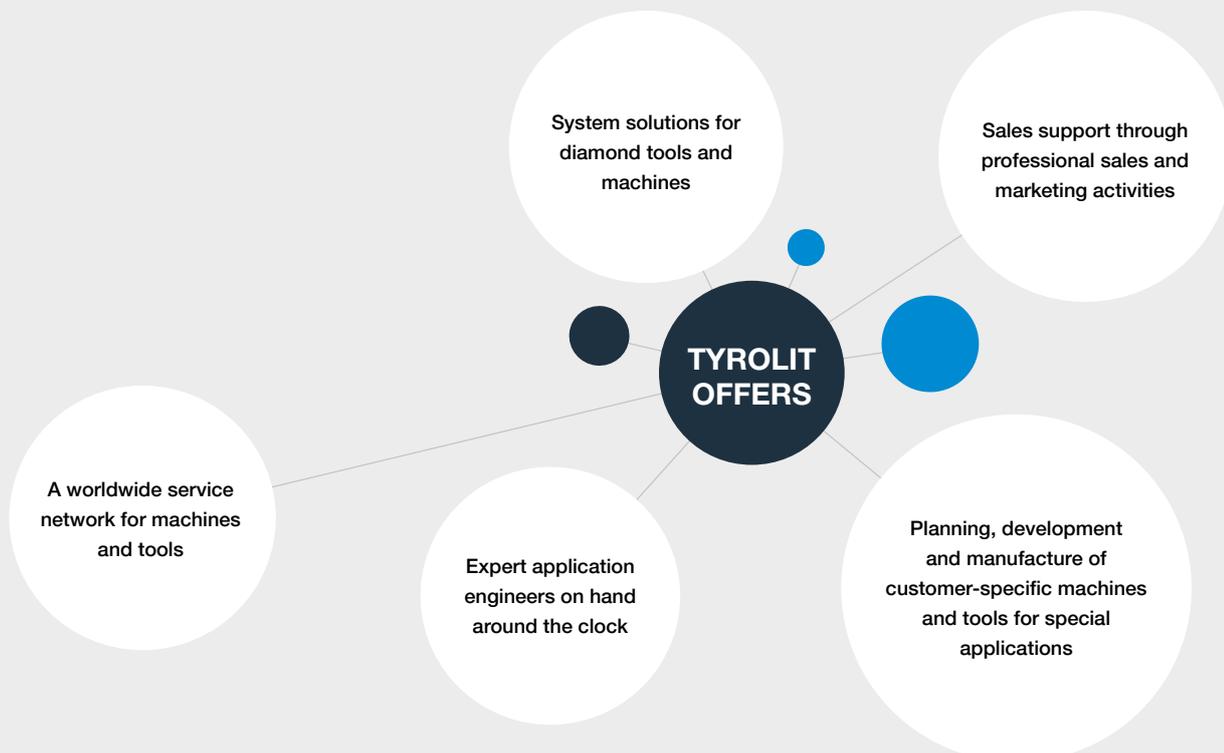
The Construction business unit

As a pioneer in the development and manufacturing of machinery and diamond tools for the construction industry, our partners benefit from our long-time experience and know-how as a system provider. In the construction division, TYROLIT is therefore the leading system supplier for drilling systems, wall- and wire saws, floor saws and surface treatment.

In addition to an extensive standard range of products for various applications such as drilling as well as wire or wall sawing, TYROLIT also offers individual services for special applications of all types.

Individual – quick – reliable

Highest standards for quality and service



The TYROLIT Project Services Team

Whether for the controlled decommissioning of offshore installations or nuclear power stations, the expansion and reconstruction of tunnels or for smaller specialist construction projects – TYROLIT is your reliable partner in special construction solutions.

In addition to a wide range of standard products, as well as customisable products, the TYROLIT Project Services Team supports its customers with:

- + Feasibility studies
- + Planning concepts
- + Principle sketches
- + Customised products for machines & tools
- + Project management
- + Training courses

Many years of experience, specialised expertise and countless successfully completed projects have shown that the TYROLIT specialists ensure technically sophisticated and project-related solutions.

The Engineering Office “Eng. Gianguido Corvi” has developed in the years a high-level of experience and knowledge in special device for cutting and drilling in concrete, in rock and iron components with particular specialization for their use in nuclear plants.

- + Design of special machinery and devices (hydraulic, electronic components)
- + FEA Analysis
- + Documentation, Report, User Manual



Large, stationary wire saws for the nuclear industry, developed by Studio Corvi.

Convincing, technologies

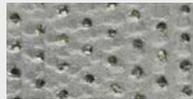


TGD®
TECHNOLOGY

TYROLIT diamond tools with TGD® technology feature intelligently distributed diamonds that enable even load distribution, optimised cooling and a constantly high cutting performance. This significantly extends the tool lifetime and the load on the machines is reduced.

Your advantages:

- + Long lifetime
- + High cutting ability
- + Enhanced efficiency



TGD® Segment



Conventional segment

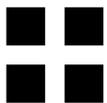


P2®
TECHNOLOGY

P2® – PERMANENT POWER – is a high-frequency technology registered by TYROLIT, which combines the compact design of electrical systems with the reliability and performance of hydraulic systems in a single machine to optimum effect. This innovative drive concept is based on the principle of drive motors with permanent magnets and enables operation at a high torque, with simultaneously reduced motor speeds. The maintenance-friendly layout of the compact devices makes servicing easier and reduces costs.

Your advantages:

- + High reliability
- + Powerful performance
- + Compact design



Modular
TECHNOLOGY

Thanks to the TYROLIT Modular System, individual components can be used for the same area of application and for different applications. This not only makes the work easier and more efficient, it also saves on costs. One part of the TYROLIT Modular System is the ModulDrill™ quick clamping system, for example, which enables our drill motors to be rapidly attached to different TYROLIT drill rigs.

Your advantages:

- + High cost efficiency
- + Efficient working
- + Easy operation



MoveSmart
TECHNOLOGY
powered by ToolSense

With the MoveSmart Technology, TYROLIT machines are connected to the Internet for the very first time. The technology processes real-time user data directly at the construction site and makes it available on various end-user devices. The cloud-based MoveSmart Technology was developed in collaboration with the Austrian start-up ToolSense and provides users and business owners with important machine and usage data, helping them to get the most out of their equipment. Service hours, error reports and pending software updates, for instance, can be recalled anywhere and at any time. This enables better planning, as well as faster and more cost-efficient operation based on real data.

Your advantages:

- + Increased productivity
- + Reduced service times
- + Targeted product development

Reliable products for your success

For special applications in small or large-scale, complex projects, the TYROLIT Project Services Team delivers ingenious solutions which quickly and efficiently bring our partners to their goal.

The following products are adapted according to requirements.

Drill rig for large diameters

- + Versions for drilling diameters from 1 000 – 1 500 mm and drilling depths of up to 2 m
- + Modular setup comprising 2 drill rigs (BC-2)
- + Hydraulic feed on both sides via synchronisation linkages
- + Gear reduction arm adapted to the relevant drilling diameter
 - Diameter up to 1 000 mm (GR1000)
 - Diameter > 1 000 – 1 200 mm (GR1200 special)
 - Diameter > 1 200 – 1 500 mm (GR1500 special)
- + Electric system available upon request



Drilling unit for deep drilling

Sturdy, modular drill rig comprising standard components and new accessory parts.

- | | |
|---|--|
| <ul style="list-style-type: none"> + Switchable direction of rotation (left & right) + Inclination = 25° to 90° + Diameter = 80 – 300 (1 000) mm + Centering device + Hydraulic pipe clamping + Tractive force = 1 000 kg + Total weight = 120 kg + Special screw drill bits Ø 20 – 252 mm with optional core catcher device and stabilisers on request available | <ul style="list-style-type: none"> + Clamping and locking device for loosening and extending tubes + Different drive variants <ul style="list-style-type: none"> – System DGB1000 hydraulic ModulDrill™ (up to 1 000 mm) – System hydraulic ModulDrill™ (up to 300 mm) – System hydraulic direct (up to 300 mm) – System DGB1000 electric ModulDrill™ (up to 1 000 mm) + Recommended drive = PPH40RR |
|---|--|



Line drilling chassis DSU500

- + The system is based on a drill column on the basis of the Drill rig DRA500, which can be moved on our VAS and VS wall saw rails
- + ModulDrill™ roller support serves as interface to the drill motor
- + Drilling diameter: 100 – 250 mm (max. 400 mm with distance plate $\varnothing + 180$ mm)
- + Electric and hydraulic version possible
- + Simplifies the work of line drilling
- + Reduces the assembly and changeover time



Curved track

- + Adjustable to various radii
- + Minimum radius inside = 875 mm
- + Minimum radius outside = 875 mm
- + Rail supports welded on
- + Designed for FZ-4S saw heads (guide rollers), other types upon request
- + Electric on the basis of WSE2226 possible
- + Combination with straight rails possible

Pilecutter R1500

- + Suitable for cutting pipes or columns
- + For pipes with diameters of 600 – 1500 mm
- + Can also be used underwater (down to 10 m)
- + Assembly and wire loops without sleeve possible (length upon request)
- + Conversion kit for BC2 drill rig available



Tunnel milling

Whether vertical or horizontal - the new tunnel mill enables fast and flexible work in tunnels. It is the first choice when making cuts for drainage, joints, cable laying or profile extensions as well as for cutting out niches or the partial demolition of tunnel walls.



- + Mountable on various carrier devices
- + Modular system, perfect for individual adaptation
- + Extremely flexible and freely extendible
- + 40 kW drive for demanding cutting applications
- + Fully hydraulic basic machine with various add-on units

Mounting versions

- + **Horizontal cut**
max. cutting depth = 700 mm (blade diameter min. = 750 mm / max. = 1 600 mm)
rail length = 1 850 mm
- + **Cutting head/slot cutter**
max. cutting width up to 800 mm
max. cutting depth = 225 mm
blade diameter up to 650 mm
- + **Multiple blade arbour**
blade diameter min. = 600 mm / max. = 1 025 mm
cutting width up to 200 mm
- + **Vertical cutting attachment**
max. cutting depth = 700 mm
(blade diameter = 1 600 mm)
min. blade diameter 750 mm



Controlled decommissioning of nuclear power plants

The controlled decommissioning of nuclear power plants is becoming increasingly relevant and the TYROLIT experts supply the suitable equipment for this purpose, both for dry and wet applications.

According to requirements, a wide standard range of diamond tools and machines or customised solutions are available. The best proven methods and product solutions are as follows:



The TYROLIT Wallshaver

In terms of removing contaminated concrete surfaces, the TYROLIT Wallshaver convinces in every respect:



- + Fully hydraulic basic machine
- + Suitable for removing concrete surfaces or for milling channels into concrete or asphalt surfaces
- + Cutting depth up to 100 mm (blade diameter = 400 mm)
- + Removal by cutting in stages of max. 20 mm
- + Cutting widths from 3.2 to 122 mm
- + Remote control
- + PPH40RR drive (40 kW)
- + Can be used wet and dry
- + Optionally available: extraction system for removing dust and slurry

The TYROLIT Dry Drilling System

The TYROLIT Dry Drilling System is the world's first solution for easy and inexpensive dry drilling of reinforced concrete.

One of a kind

- + Clean working without a compressor – particularly suitable for decommissioning nuclear facilities
- + Low cost, simple operation
- + Excellent results in reinforced concrete
- + Durable dry drill bits in TGD® Technology in various usable lengths and diameters
- + Switchable soft impact function and 1 ¼ and ½ chucks
- + Soft start system and LED monitoring display for optimum drilling speed
- + Centring aid for precise drill bit guidance



TYROLIT wire saw systems

TYROLIT (diamond) wire saw systems are the first choice for cutting existing metal structures, particularly steel elements.



DWM-S / DWH-S / DWH-S ATEX

- + Very high cutting performance
- + Extremely long lifetime and noticeable smooth running
- + High number of beads
- + Extremely safe thanks to robust construction
- + PREMIUM DWM-S: Universal type for steel, non-ferrous metals and heavily reinforced concrete
- + PREMIUM DWH-S / DWH-S ATEX: Special type for steel and non-ferrous metals



Wire saw SB / SB-E / SB-Offshore

- + Large wire storage up to 10 m
- + High power transfer thanks to multiple roller drive
- + Smooth running due to hydraulic wire tensioner
- + Recommended drive = PPH40RR
- + Also available in an electric design in conjunction with the 26 kW motor of the WSE2226



PPH40RR

- + Powerful 40 kW drive
- + 4-stage control for optimal cutting speeds
- + Freedom of movement thanks to remote control; all functions can be adjusted via remote control
- + Rotational direction switch, secondary connections, operating hours counter
- + Plastic cover can be removed without tools.



Controlled decommissioning of offshore installations

Whether for topside cutting orders or underwater cutting work, whether during running operation or on decommissioned facilities – the TYROLIT experts understand their customers' requirements. A special highlight of the product range is the world's first ATEX-certified wire saw system, which can be used in explosion-hazardous areas.



DWH-SL & DWM-SL wire loops

- + Spliced version in lengths from 2.41 – 52.5 m;
Special design up to 80 m possible
- + Yellow rubber for better visibility,
especially underwater
- + Length tolerances depending
on loop length
- + Up to 15 m length: ± 5 mm
> 15 m – 34 m: ± 15 mm
> 34 m – 52.5 m: ± 30 mm



The only ATEX-certified wire saw system worldwide



TYROLIT is the world's first supplier to present an ATEX-certified wire saw system for use in Zone 1 (EX Zone 1, II 2G, Ex h IIA T3 Gb) explosion-hazardous areas.

The system, which comprises the hydraulic wire saw SB and electroplated diamond wire DWH-S ATEX for steel, was tested and certified in accordance with current ATEX Directives 2014/34/EU by Gexcon in Norway.

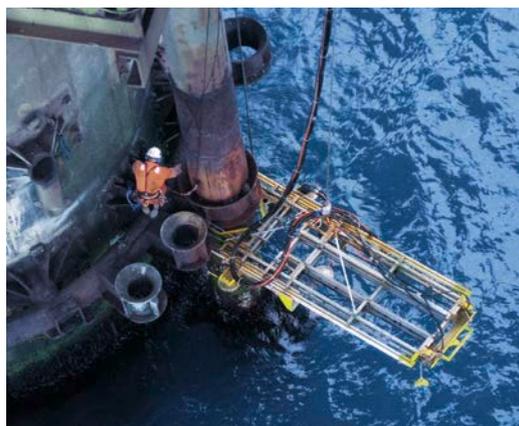
This revolutionary cutting technology of the highest standard enables working on complex projects in explosion-hazardous environments as supplied by no other competitor worldwide.



SB Offshore

- + Certified for explosion hazardous areas (EX Zone 1, II 2G, Ex h IIA T3 Gb)
- + Modular, combinable system comprising DWH-S ATEX diamond wire, SB Offshore hydraulic wire saw and drive.*
- + For all metals except titanium, magnesium and zirconium
- + Wire speed = 10 – max. 18 m/s
- + Only for wet cutting
- + With machine, only in conjunction with flow monitor

* Certified drive, either provided by customer or alternatively PPH40RR in a certified protective cabin (upon request).





PPH40RR Offshore

- + Version specially designed for the use on oil platforms
- + Voltage range 400 – 440 V / 60/50 Hz
- + Integrated voltmeter for reading the current voltage



Protective cabin

- + Certified protective cabin for PPH40RR
- + Certified remote control
- + Small and transportable unit in pallet size
- + Integrated emergency stop function in the event of failure of the water supply to the wire saw (in conjunction with flow monitor)
- + Overpressure system and integrated cooling



A modular system for your specific application

Depending on the requirements or existing machines, different product offerings are available.

Tool

**Diamond wire
DWH-S ATEX**

Machine

**SB hydraulic wire saw
PBHS-OFFSB-01**
(only in conjunction with flow monitor)

Drive

Certified drive provided by the customer

OR

PPH40RR in conjunction with a certified protective cabin (optional)

In use worldwide

The TYROLIT Project Services Team supports its customers in numerous (major) construction projects around the globe.



1 **USA, Gulf of Mexico**
Underwater cutting operations



2 **NORWAY, Trøndelag**
Decommissioning of shipwreck



3 **BULGARIA, Belene**
Decommissioning of a nuclear power plant



4 **GREAT BRITAIN, Glasgow**
Renovation of Queen Street Tunnel



5 **ALGERIA, Annaba**
Decommissioning of the ship Djebel Amor



6 **AUSTRALIA, Sydney**
Restoration of Warragamba Dam

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Our **worldwide subsidiary companies** can be found
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