

TYROLIT PROJECT SERVICES

Machines, tools and project support at the highest level



THE TYROLIT GROUP 2

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 familyowned 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, Australia, 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.

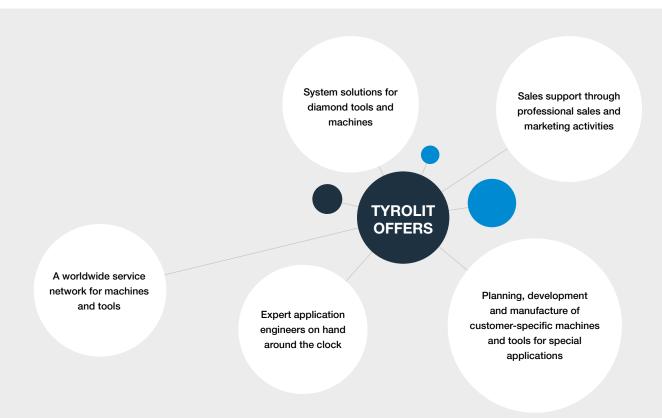
The Construction business unit

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.



TECHNOLOGIES 5

Convincing **technologies**



TGD® – TYROLIT GRAIN DISTRIBUTION

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.

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





P2® - PERMANENT POWER

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.

- High reliability
- Powerful performance
- + Compact design





Modular System

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.

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



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
- + Electric system available upon request



Drilling unit for deep drilling

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

- Switchable direction of rotation (left & right)
- + Inclination = 25° to 90°
- + Diameter = 80 300 mm
- + Centering device
- + Hydraulic pipe clamping
- + Tractive force = 1 000 kg
- + Recommended drive = PPH40RR
- + Total weight = 120 kg
- + Can be dismantled in 10 parts
- Clamping and locking device for loosening and extending tubes



Diamond wire saw on swivel bracket

- + Standard wire saw mounted on swivel bracket
- Vertical and horizontal cuts can be made from a central position
- For rectangular apertures up to approx. 1.2 m side length
- + Electric and hydraulic versions available





Curved track

- + Adjustable to various radii
- + Minimum radius inside = 875 mm
- + Minimum radius outside = 1 200 mm
- + Rail supports welded on
- + Designed for FZ-4S saw heads, other types upon request
- + Can be produced in individual 3 m lengths
- + Combination with straight rails possible

Pilecutter R1500

- + Suitable for cutting pipes or columns
- + For pipes with diameters of 600 1 500 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 8

Tunnel milling with the TPF-8

Whether vertical or horizontal - the new TPF-8 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 (balde diameter min. = 750 mm / max. = 1600 mm) rail length = 1850 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 witdh up to 200 mm

+ Vertical cutting attachment

max. cutting depth = 700 mm (blade diameter = 1 600 mm) min. blade diameter 750 mm



NUCLEAR 9

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

NUCLEAR 10

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 $1\frac{1}{4}$ and $\frac{1}{2}$ chucks
- + Soft start system and LED monitoring display for optimum drilling speed
- + Centring aid for precise drill bit guidance







NUCLEAR 11

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 ATEX

- + Very high cutting performance
- + Extremely long lifetime and noticeable smooth running
- + High number of beads
- + Extremely safe thanks to robust construction



Wire saw SB / SB-E

- + 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







OFFSHORE 12

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 design in lengths of 2.9 m 52.5 m
- + Yellow rubber for better visibility, especially underwater
- + Length tolerances depending on loop length







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 IIA c T3) explosion-hazardous areas. The system, which comprises a hydraulic wire saw and electroplated diamond wire for steel, was tested in accordance with current ATEX Directives by GexCon in Norway. Certification was awarded by DNV Nemko Presafe AS.

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

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











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

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.



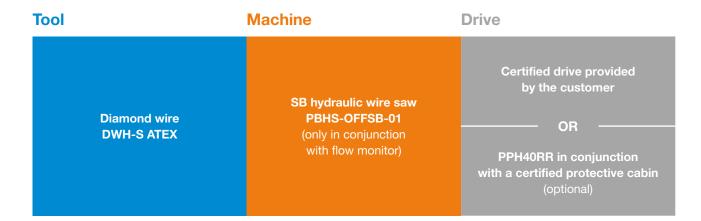
Protective cabin

- + 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.



IN USE WORLDWIDE 15

In use worldwide

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





USA, Gulf of Mexico
Underwater cutting operations



GERMANY, WürzburgRenovation of Bürgerbräu



BULGARIA, Belene
Decommissioning of a nuclear
power plant



GREAT BRITAIN, Glasgow Renovation of Queen Street Tunnel



5 ALGERIA, Annaba Decommissioning of the ship Djebel Amor



AUSTRALIA, Sydney Restoration of Warragamba Dam

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Our worldwide subsidiary companies can be found on our website at www.tyrolit.com









