

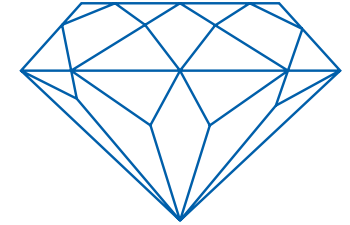
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**MONTANA**<sup>®</sup>  
CRYSTAL GLIDE FINISH



CRYSTAL ONYX



**MONTANA**

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# CRYSTAL ONYX

## HIGH PERFORMANCE SKI SERVICE ROBOT

The two grinding stones makes the CRYSTAL ONYX service robot the optimal machine for pure ski service at rental stations and shops with high service volumes: the output of 45 pairs of skis per hour with 4 stone contacts ensure an efficient process.

The service process is fully automated including automatically measuring the ski length – so the 7 plates adapt to the shape of the ski and ensure fast and safe operation. The built-in PRO-technology uses 2 stones to ensure a perfectly plane ground and structured shovel and tail on all ski models including rockers and twin-tips.

The side edge is then ground to RACE EDGE quality using the new, revolutionary GRIPtech system: for a precise, sharp, and durable edge.

The new 3D-High-Tech-Tuning (HTT) with PRO-technology opens up entirely new tuning options in addition to radial tuning. To finish, the ski is automatically waxed and polished.

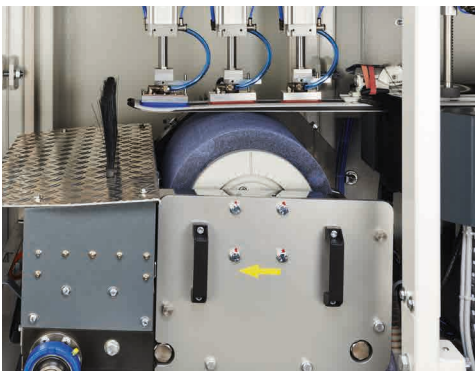
The ONYX with 2 stones and wax aggregate combines high output with ultimate service quality.

### ADVANTAGES

- Highest throughput: 45 pairs of skis per hour with 4 stone contacts
- Large 15" touch display with intuitive navigation
- Automatic length recognition
- PowerVac system for suction of all ski surfaces
- Automatic stone grinding with pressure and force curve
- PRO-technology for especially careful grinding even at the ski tip and tail
- GRIPtech for RACE EDGE quality side edge preparation
- High Tech Tuning of edge coats with force curve and 350 mm tuning stone
- 3D tuning for radial tuning and variably adjustable tuning angle
- NC-controlled servomotors for shuttles
- Waxing and polishing unit
- Integrated remote maintenance
- Ready for „Montana Digital World“

### OPTION

- Compressor with refrigeration dryer
- Oil mist suction system
- Automatic cooler



## BASE GRINDING

- Grinding of all ski models, snowblades and cross-country skis with all bindings
- MONTANA PRO-technology: electronically controlled force curve for precisely defined grinding pressure over the grinding point
- Reproducible grinding results thanks to fully automated rpm adjustment to the diameter of the grinding disc
- Vario structures with speed curve
- 10 steps dressing tool advance of 0.5/100 - 6/100 mm, pneumatically controlled



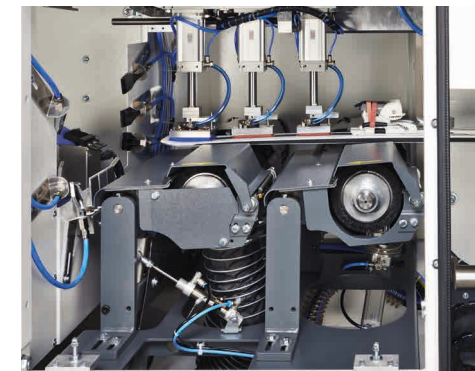
## GRINDING SIDE EDGES WITH GRIPTECH

- Side edges with GRIPtech system for a precise, sharp, and durable edge.
- Easy 87°– 89° edge angle adjustment in 0.5° steps
- Programmable aggregate closing time
- Electronically controlled pressure curves ensure precision aggregate contact with the ski
- Vertical grinding provides a particularly beneficial sharpness and edge shape (microstructure).



## RADIAL TUNING

- High-Tech-Tuning (HTT) ensures a finely polished edge with a minimal tuning angle for best gliding and turning capabilities for skis
- NC drives for the dressing unit of the tuning discs: highest precision at high speeds
- 3D-High-Tech-Tuning (HTT) for variably adjustable tuning angle
- Electronically controlled cutting speed
- MONTANA PRO-technology: Electronically controlled force curves for precisely defined grinding pressure over the grinding point



## AUTOMATIC WAXING 2-STEP WAX SYSTEM

- Wax application with heated waxing roll
- Polishing with separate brush
- Option: WinTheRace covering



## LOADING, FULLY AUTOMATIC OUTPUT

- Automatic ski length recognition
- Automatic suction plate adjustment
- Automatic centring
- Automatic loading and unloading via magazine for up to 5 pairs of skis with bindings
- PowerVac suction system for every ski surface
- Ergonomically ideal working height

- Fully graphic colour touch display with new, intuitive navigation for quick and easy access to all functions
- Network-enabled PC control with Windows Embedded 7



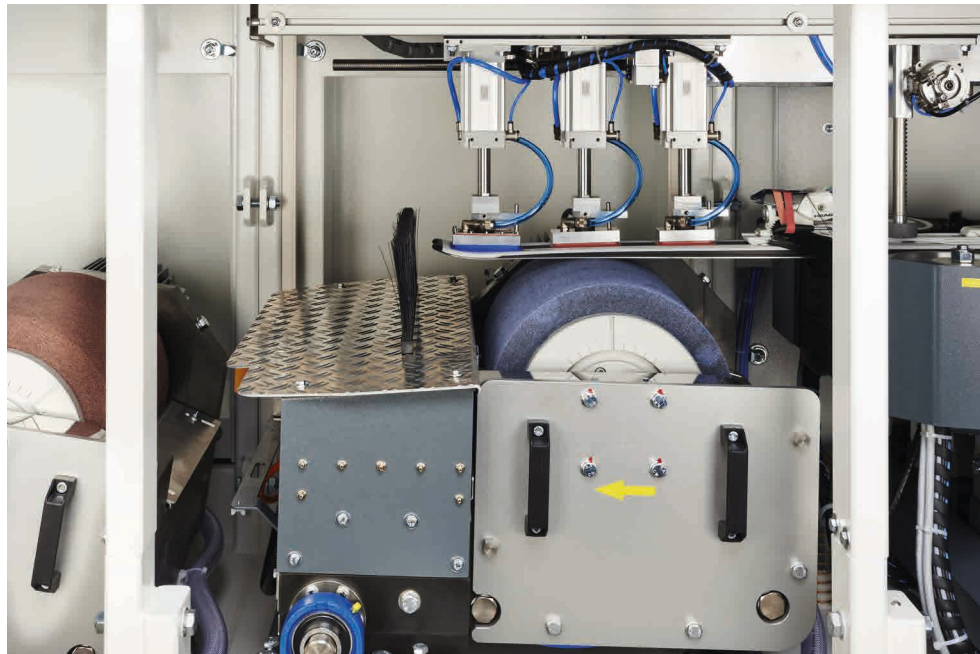


## PRO-TECHNOLOGY

### OPTIMAL FOR ROCKER SKIS

With this development grinding is controlled even more precisely – and can even grind the shovel and the tail. The resulting structures are outstanding.

**Detailed description**  
**page 9**



## GRIPtech SYSTEM

### THE REVOLUTION FOR SIDE EDGES

The new MONTANA GRIPtech system grinds in a vertical direction. For a precise, sharp, and durable edge. All functional areas of the sports equipment are gently ground to RACE EDGE quality from start to finish, without grooves.

**Detailed description**  
**page 10**



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FEATURES	CRYSTAL ONYX
Loading:	automatic
Adjust for vacuum plates:	automatic
Stones:	2
PRO-technology:	•
Side edge:	GRIPtech
3D-Tuning:	•
Step motor to control wheel dressing and tuning:	•
Waxing / Polishing:	•
Ski blow off unit:	•

- standard

TECHNICAL DATA	CRYSTAL ONYX
Rated power:	max. 17.3 kW
Voltage:	3 x 400 volt / 50/60 Hz, special voltage via trafo
Fuses:	3 x 30 A
Stone width:	180 mm
Stone speed:	300 to 1.900 u/min
Cutting speed:	6 to 32 m/s
Feed:	5 to 30 m/min
Compressed air:	min. 6 bar, 1.100 l/min
Total weight:	3.900 kg incl. coolant mixture
Tank volume:	425 l

## DIMENSIONS CRYSTAL ONYX

