





With WINTERSTEIGER the future belongs to you.

The spirit of sport inspires us and moves us forward. Looking forward brings new technologies and tomorrow's victories. With our innovative developments and products, we are a trustworthy partner for our customers and winter athletes. Together always a ski length ahead.

Beyond this, the long service life, the constant quality of the finish and a wide range of machine types make WINTERSTEIGER a perfect partner for all those who want to provide a first-class ski and snowboard service.

The following pages illustrate in detail what the world market leader can offer you.



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Discovery

Calculate tomorrow's success today.

Fully Automated Service System for Skis and Snowboards.

WINTERSTEIGER has succeeded in making the trend-setting Discovery: A machine that provides skis and snowboards with the perfect finish while simultaneously making future success easier to calculate.

The Discovery is designed to grow with your business. Parallel, in fact, with your service requirements. Its modular construction with three basic modules allows you to expand capacities and add new service offerings selectively. As a result the future becomes easier to plan for and your risk is minimized considerably.

Skis or snowboards over 90 cm in length are held and guided through the machine using not bridges and suction cups but two parallel saddles each with 8 clamping cylinders.



Your benefits summed up:

- Maximum throughput rate
- No bridges and suction cups due to innovative feed system
- Largest buffer capacity on the market due to conveyor magazine
- No pre-sorting due to laser measurement
- Upgradeable due to modular construction
- Racing structures due to Race Service Software



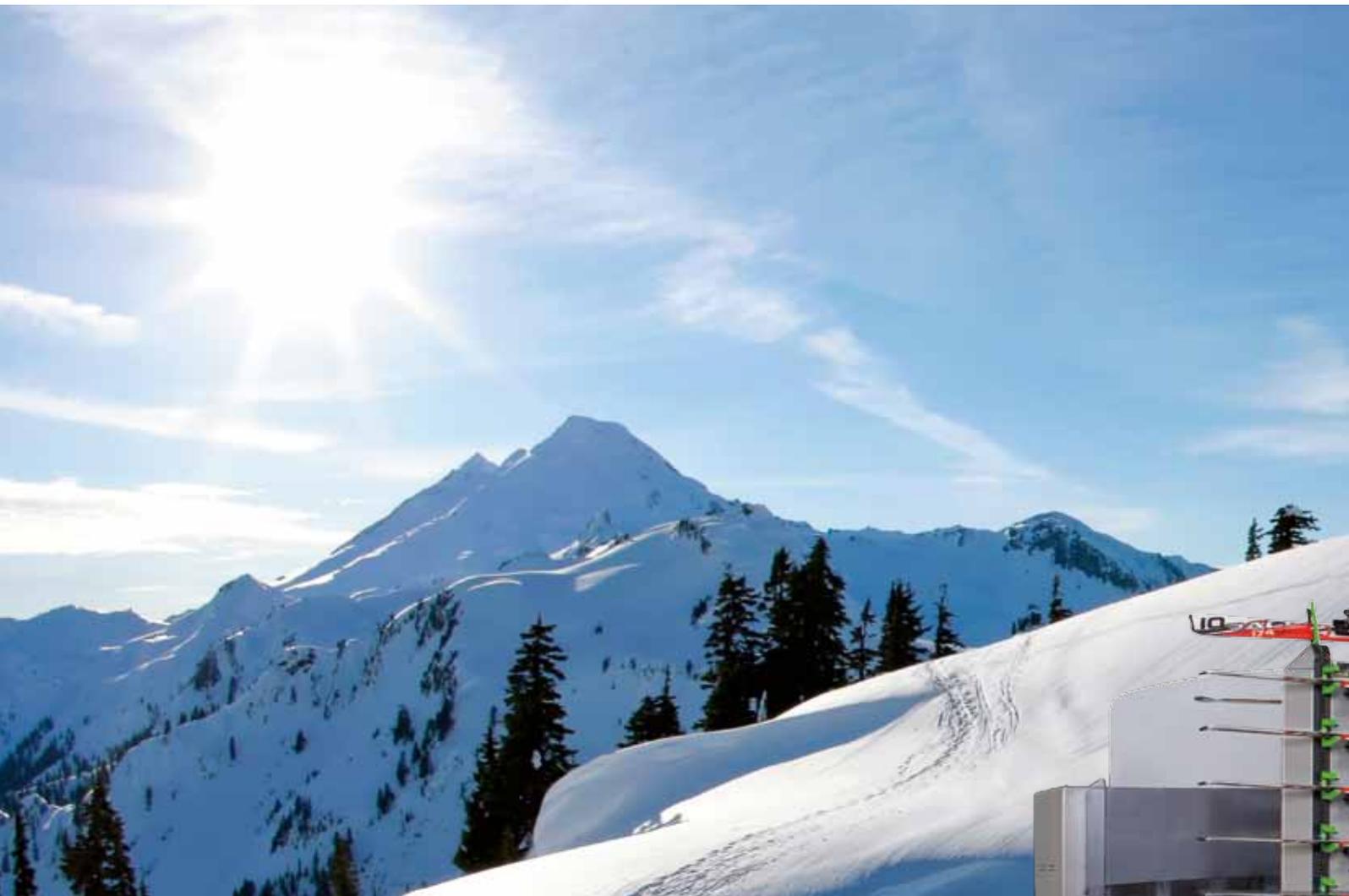
Some of your competitors try to save time by stopping their watches. They probably haven't heard about the Discovery's modular concept!





Some of your competitors think that for a successful future they have to put all their eggs in one basket. We say step by step, or module by module. This way you are always on the safe side.





Some of your competitors think success is a fixed quantity of service revenue. However, you know that success can be expanded at any time with each module.





Some of your competitors find there is power in size.
Well yes, sometimes your competitors are right about that.



The intelligent modular design of the Discovery.
What makes you so sure?

Pre-Grinding Module

Save Time.

- Side edge grinding with grinding belt
- Base and base edge grinding with grinding belt



The great advantage of the pre-grinding module? You can dispense with expensive, time-consuming manual pre-grinding of skis and snowboards! The result is a higher throughput rate and quicker turnaround with your customer's skis.

The servo-pneumatic grinding pressure controller ensures an even grind and the best possible preparation for stone/disc grinding. In addition, oscillation of the grinding belt extends its service life considerably.



Stone/Disc Grinding Module

Increase Quality.

- Base grinding with oscillating stone
- Base edge grinding using Ceramic Disc Finish
- Side edge grinding using Ceramic Disc Finish
- Drying

The stone/disc grinding module is a prime example of the highest standards that WINTERSTEIGER applies in all areas. This expansion stage ensures precise, and above all, constant quality for edge grinding. What's more, the stone/disc grinding module is also a tool for gaining customers: Individual and easy adaptation of the grinding parameters allows you, for example, to address the very demanding target group of ski and snowboard racers.

Servo-pneumatic pressure adaptation to the geometry of skis and snowboards guarantees an even grind over the entire length of the base, and also the side and base edges. This end-to-end approach offers remarkable advantages in terms of profitability for ski and snowboard rentals.



Waxing Module

Reduce Your Work Stages.

- De-tuning
- Hot waxing/reheating
- Structure brushing/polishing

The waxing module finishes the ski and leaves it ready for use. There is no need for any other time-consuming work stages. During de-tuning, rust is removed from the tip and tail areas of the ski/snowboard and then the tip is polished. The sophisticated roller technology makes it possible to evenly distribute the wax on every ski and snowboard. The oscillating wax roller improves the waxing result and promotes the absorption of more wax through the base with the added hot air forced into the base within the system.

You can also eliminate the time-consuming task of subsequently removing excess wax. The structure/polishing brush achieves gleaming results. Excess wax is removed and the structure is opened and revealed.



Simple. Fast. Modular. Ahead of Its Time.



No bridges or suction cups.

Two saddles running in parallel each with 8 clamping cylinders hold the skis or snowboards (when over 90 cm in length) and guide them through the machine. Which means every ski and every snowboard can be serviced regardless of its surface.

Largest buffer capacity on the market.

Loading and unloading of the Discovery is achieved via mobile conveyor magazines for up to 16 skis. Simply load the conveyor magazine, select the program and have more time for other activities.



No pre-sorting.

The Discovery automatically identifies the length, width and sidecut of skis and snowboards with its laser measuring system.

The full program.

The Discovery includes all of WINTERSTEIGER's grinding programs. Simply switch on the machine, select the program and off you go.

Maximum throughput rate.

The Discovery achieves the highest throughput rate of all automatic grinding machines with disc grinding.

Time for Perfect Grinding.

Rapid developments in ski technology continue. Constant innovation has made skis and snowboards into high-tech products. Our contribution to this innovation: the Discovery including all WINTERSTEIGER's programs for base and edge grinding.



Structural diversity.

The Discovery includes all of WINTERSTEIGER's tried and tested grinding programs. In addition, the grinding stone can have various structures to meet the individual requirements of bases and snow conditions. This is achieved with the Discovery's 3-stage diamond dresser system.

Pure innovation.

Predicted revolutions take place in real life at WINTERSTEIGER. So it is no surprise to find that WINTERSTEIGER's Race Service Software is opening completely new horizons for parameter-controlled racing structures in the Discovery too. For example, the Discovery can determine and adjust the parameters for any specific structure automatically based on the input selection of snow/air temperature, type of snow, air humidity and discipline. An overview of the data is clearly displayed on the control panel's large touch screen monitor. Programming of the new software was carried out in close cooperation with the Austrian Ski Team (ÖSV).

Material saving.

Stepped oscillation of the grinding stone considerably increases its service life. The entire surface of the grinding stone is used to the fullest, greatly extending the time between replacements and dressing. This saves you both time and money.

Linear structure

Angular crossed structure

Arrow structure

Wave structure

Linear arrow structure

Triple structure

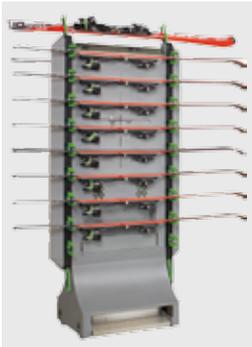
Quattro structure



3 Modules. 10 Machine Versions.

The Discovery is designed to grow with your business. The modular construction with its three basic modules - Pre-Grinding, Stone/Disc Grinding and Waxing allows you to adapt it to your individual requirements.

Conveyor Magazine



P Pre-Grinding Module



S Stone/Disc Grinding Module



F Waxing Module



Conveyor Magazine



- Automatic loading for 16 skis
- Mobile conveyor magazine
- Largest buffer capacity on the market

- Side edge grinding with oscillating grinding belt for skis and snowboards
- Base and base edge grinding with grinding belt for skis and snowboards

- Base grinding with oscillating stone for skis and snowboards
- Base edge grinding with Ceramic Disc Finish for skis and snowboards
- Side edge grinding with Ceramic Disc Finish for skis and snowboards
- Drying

- De-tuning
- Hot waxing/reheating
- Structure brushing/polishing

- Automatic removal for 16 skis
- Mobile conveyor magazine
- Largest buffer capacity on the market

The Discovery's innovative modular concept harmonizes perfectly with your service needs. Whether you're experiencing good times or expecting even better, you can expand service capacities quickly and flexibly. You can reduce your risk when making further investment decisions.

This is how your future could look:



Discovery S



Discovery PS / SS / SF



Discovery PSS / PSF / SSS / SSF



Discovery PSSF / SSSF

Discovery

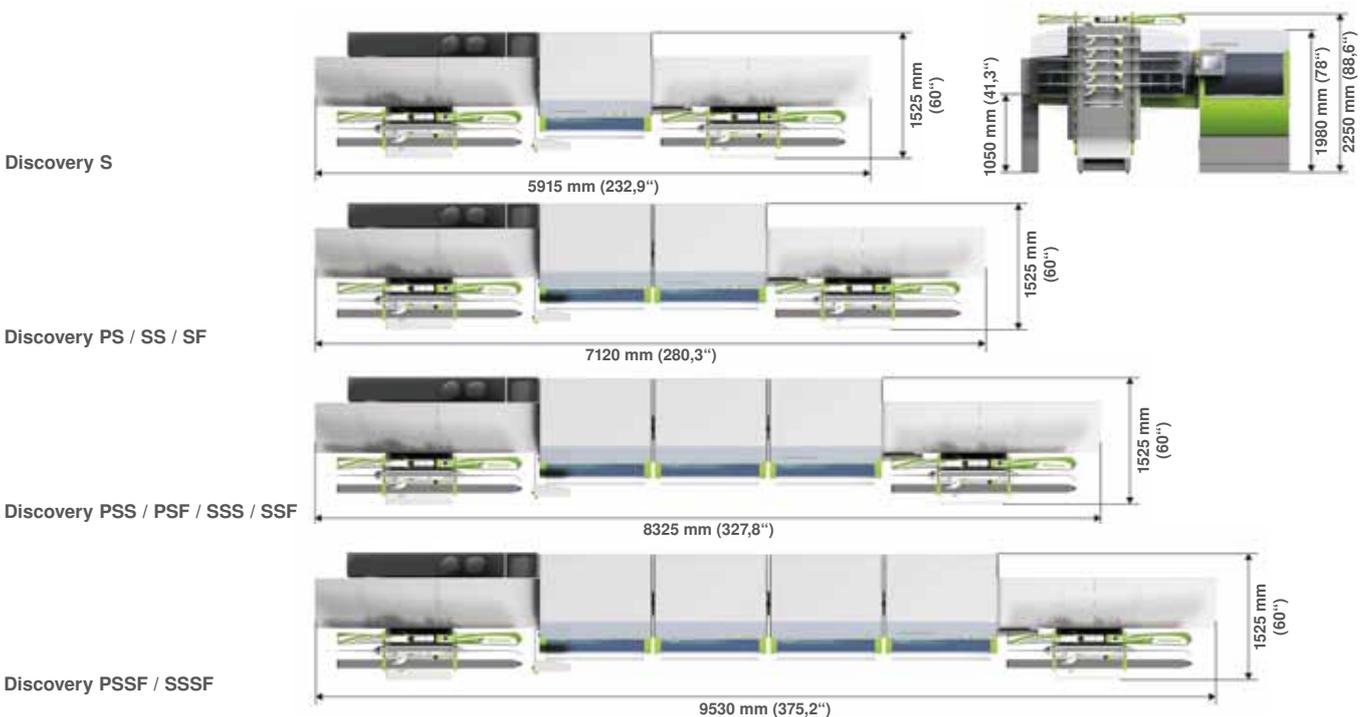
Figures. Data. Facts.

Technical specifications

	P Pre-Grinding Module	S Stone/Disc Grinding Module	P Waxing Module
Processing width	Ski 40 – 180 mm Snowboard 150 – 340 mm		40 – 340 mm
Accessories	Side edge belt 30 x 1400 mm Base belt 350 x 1935 mm	Stone Ø 300 x 350 mm Discs Ø 154 x 40 mm	Tip brush Ø 155 x 350 mm Wax roller Ø 155 x 350 mm Structure/polishing brush Ø 155 x 350 mm
Speed	Side edge belt 1450 rpm Base belt 500 - 1700 rpm	Stone 200 – 2000 rpm Dressing speed 3 - 35 mm/s	Tip brush 1000 rpm Wax roller 500 rpm Structure/polishing brush 750 rpm
Grinding force	Side edge 5 - 149 N Base 100 - 400 N	Stone 100 – 500 N Disc 5 - 75 N	Tip brush Wax roller Structure/polishing brush 5 - 200 N
Feed speed	3 – 15 m/min		

Discovery	1 Module		2 Modules		3 Modules			4 Modules	
	S	PS	SS	SF	PSF	SSF	SSS	PSSF	SSSF
Weight kg (lbs)	2250 (4950)	3325 (7315)	3345 (7359)	2955 (6501)	4030 (8866)	4050 (8910)	4265 (9403)	4970 (10934)	4980 (10956)
Water tank volume litre (gal)	225 (60)	450 (120)	450 (120)	225 (60)	450 (120)	450 (120)	450 (120)	450 (120)	450 (120)
Nominal load (kW)	12.6	15.4	14.8	13.3	18.2	17.6	18.1	18.6	18.1
Nominal voltage	3/N AC 400-415 V, 50 Hz								
Rated current (A)	22.3	28.7	27.6	28.6	38.7	37.6	35.3	40.7	39.7
Fuse protection min./max. (A)	25/32	32/32	32/32	32/32	50/60	50/60	50/60	50/60	50/60
Nominal load (kW)	12.6	15.4	14.8	13.3	18.2	17.6	18.1	18.6	18.1
Nominal voltage	3 AC 208-220 V, 60 Hz								
Rated current (A)	38.0	43.8	42.5	43.1	60.0	58.7	53.8	64.3	63.0
Fuse protection min./max. (A)	40/60	45/60	45/60	45/60	65/70	65/70	65/70	65/70	65/70
Capacity max. (pairs/hour)	40	70	70	40	70	70	70	70	70
Compressor (not included)									
Liter output	390 l/min with 6 bar								

We reserve the right to make technical modifications.





Tunejet

Greater performance at lower expense. Automatic Service Station for Skis and Snowboards.

The WINTERSTEIGER Tunejet is an automated service station for both a snowboard or a pair of skis. The Tunejet is as a stone/disc or stone/belt version available. Optional the machine can be equipped with a hot-wax module as well as a manual side edge grinding unit.

The feed system with speeds of up to 15 m/min in grinding mode, automatic measurement of skis and snowboards and ease of handling when clamping them in position all guarantee a high throughput rate.

Tuning with the base facing upwards means that the work is constantly in view. The closed system provides optimum safety in addition to a clean and pleasant working environment.

The WINTERSTEIGER Tunejet is a perfect combination of excellent service quality, high efficiency and ease of operation!



Your benefits summed up:

- High throughput rate
- Simple snowboard tuning
- Hot wax module
- Easy handling
- Low space requirement
- High level of user safety



One machine. Many possibilities.

Compact mixture.

The Tunejet is a compact service station that tunes a snowboard or a pair of skis. The basic version with 400 mm wide stone is optionally available with a belt or ceramic disc unit and offers

an optional hot-wax module as well as an optional side edge grinding unit.

Variable angles.

The optional side edge grinding unit is the ideal complement to the Tunejet SB for a complete edge service and to the Tunejet SD for pre-grinding of side edges. The grinding can be individually adjusted between 86° and 90°.

Tunejet Versions:

Tunejet SB	Stone / Belt Unit
Tunejet SBF	Stone / Belt Unit incl. Hot-Wax Module
Tunejet SD	Stone / Disc Unit
Tunejet SDF	Stone / Disc Unit incl. Hot-Wax Module





Stone Unit

Perfect finish.

A stone width of 400 mm means that all types of skis and snowboards can be tuned. A wide variety of structures can be achieved thanks to the fully variable stone and dressing speed and the ability to adjust the diamond inclination in several stages.

Including racing structures.

The machine calculates a perfect structure and sets itself up automatically based on the input selection of snow/air temperature, type of snow, air

humidity and discipline. Programming and race parameters were carried out in close co-operation with the Austrian Ski Federation (Austria Ski Team).

In motion.

The feed system's oscillation can be switched on and off at any time. The oscillation of the transport sled after each grinding cycle creates even use of the stone over its entire surface. Constant grinding quality increases the service life of the stone.



Disc Unit

A WINTERSTEIGER specialty.

The disc unit provides the Ceramic Disc Finish for side and base edge tuning. The integrated measuring unit identifies the shape of the skis or snowboard automatically ensuring very high operating reliability.

The self-sharpening ceramic discs guarantee precise edge geometry, accurate grinding angles, a smooth edge surface and constant grinding quality over the entire length of the ski and snowboard.



Belt Unit

High throughput.

The Tunejet SB has a belt unit with a 400 mm wide grinding belt in addition to the stone. With a feed speed of up to 15 m/min and fully variable belt speed, the tunejet SB tunes over 30 pairs of skis or snowboards per

hour. Dressing of the belt is automatic and the self-centring contact wheel ensures that the belt runs without distortion. Oscillation of the feed system means that the entire width of the grinding belt is used evenly.



Hot-Wax Module

Shining results.

The hot-wax module available as an option, delivers ready-to-use skis and snowboards. Modern infrared technology assists in the process of achieving the best possible waxing

result. The wax is applied by means of a wax roller. The downstream structure/polishing brush removes excess wax and opens up and reveals the structure.

Visibly safe.

Skis or snowboards are easily and quickly attached to the feed system. Tuning with the base facing upwards has many advantages:

- Grinding of skis and snowboards no matter what type of binding they have, without the use of binding bridges
- The grinding result can be checked at any time

The feed system includes supports that can be adjusted both down the length of the ski or snowboard and across the width, in a matter of seconds. The support system is also designed so that the snowboard base can be ground evenly from tip to tail.



Easily understandable.

The Tunejet is operated using a large color monitor with touch screen technology. Complete service operations as well as individual grinding cycles may be stored and called up again at any time.

The inspection button is a practical feature for checking the grinding result: pushing the button moves the feed system out of the machine. Inspection can be carried out at any time, even in the middle of a grinding program.

Clean work.

The closed system of the Tunejet ensures optimum safety for the operator. The protective polycarbonate hood allows optimum accessibility when open and a clean and pleasant working environment when closed.

Practical details.

The Tunejet has large storage boxes on wheels for accessories and tools located underneath the feed system. It also features a space and connection for the optional emulsion mist separator is provided.

Tunejet

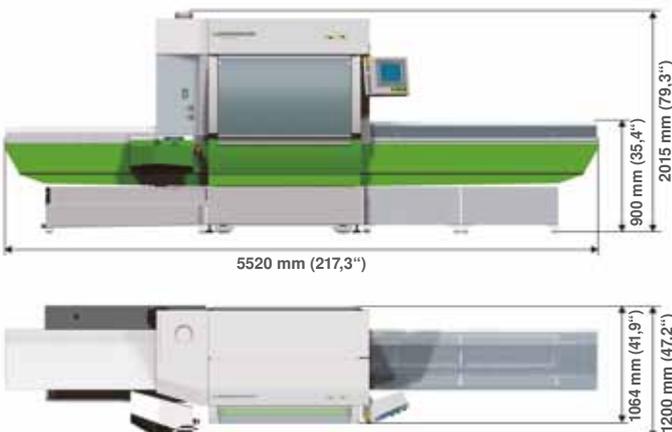
Figures. Data. Facts.

Technical specifications

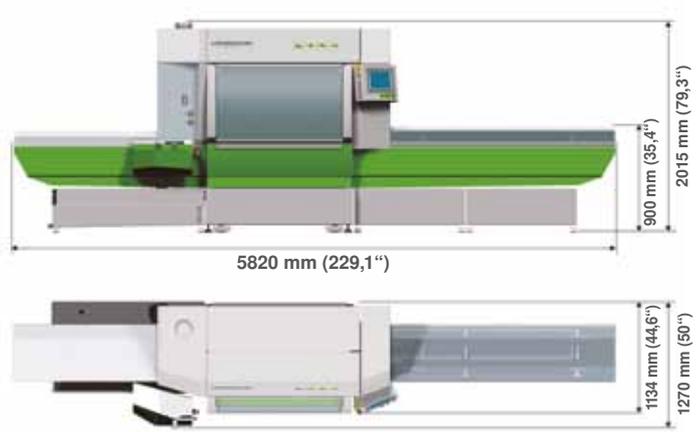
	Tunejet SB Tunejet SBF	Tunejet SD Tunejet SDF
Ski/Snowboard length min. - max.	800 - 2100 mm	
Ski width min. - max.	35 - 140 mm	
Snowboard width min. - max.	140 - 350 mm	
Grinding stone	Ø 300 x 400 mm	
Grinding belt	400 x 1600 mm	
Grinding disc		Ø 185 x 40 mm
Wax roller	Ø 155 x 400 mm	
Structure/polishing brush	Ø 75 x 400 mm	
Edge grinding belt	20 x 1200 mm	
Feed speed min. - max.	3 - 15 m/min	
Speed	Stone 150 - 2000 rpm Dressing speed 3 - 35 mm/s Base belt 500 - 1700 rpm Side edge belt 1420 rpm Wax roller 550 rpm Structure/polishing brush 1000 rpm	Stone 150 - 2000 rpm Dressing speed 3 - 35 mm/s Disc approx. 4000 rpm Wax roller 550 rpm Structure/polishing brush 1000 rpm
Grinding pressure	Stone 100 - 800 N Belt 100 - 500 N	Stone 100 - 800 N Disc 5 - 75 N
Weight	1725 - 1825 kg (3795 - 4015 lbs)	
Water tank volume	225 litre (60 gal)	
Nominal load	11.5 kW (SB), 12.1 kW (SBF)	8.65 kW (SD), 10.6 kW (SDF)
Nominal voltage	3/N AC 400 - 415V, 50Hz	
Rated current	20.9 A (SB), 22.1 A (SBF)	16.4 A (SD), 22.6 A (SDF)
Fuse protection min./max.	25/32 A	25/35 A
Nominal load	11.5 kW (SB), 12.1 kW (SBF)	8.65 kW (SD), 10.6 kW (SDF)
Nominal voltage	3 AC 208-230 V, 60 Hz	
Rated current	36.3 A (SB), 38.2 A (SBF)	28.3 A (SD), 30.2 A (SDF)
Fuse protection min./max.	50/50 A	35/50 A
Capacity (max.)	35 pairs/hour	25 pairs/hour
Compressor (not included)		
Liter output	240 l/min with 6 bar	

Subject to technical changes.

Tunejet SB / Tunejet SD



Tunejet SBF / Tunejet SDF





Ceramic Disc Finish WINTERSTEIGER's speciality.

Consistent research and development work pays off. The disc technology, which has become the industry standard for quality edge finish throughout the world, is an excellent example of this. This technology is used by over 90 % of manufacturers during the production of all their skis and snowboards. WINTERSTEIGER works consistently on the enhancement of this established edge finish technology for the service sector. In the end your customer can expect a perfect grinding result which always remains exactly the same for both, the side edge and the base edge. It is precisely this quality which is guaranteed by WINTERSTEIGER's Ceramic Disc Finish.

Ceramic Disc Finish
means: Constant edge
quality from the first to
the last ski/snowboard!

Have confidence in WINTERSTEIGER's Ceramic Disc Finish:



Edge with traditional belt-grinding - Disadvantages:

- No exact edge geometry
- Rounded edges
- Rough surface

Edge with other surface-grinding discs - Disadvantages:

- Risk of errors being reproduced due to a single point contact surface
- Large-scale angle adjustment

Advantages of WINTERSTEIGER Ceramic Disc Finish:

For the sports shop

- Precise edge geometry
- Precise edge angles along the whole length of the ski or snowboard
- Fine, smooth edge surface
- Always sharp grinding discs

For the rental shop

- Frequent grinding possible thanks to low material removal
- Long life of rental skis
- No need to change belts
- Long life of disc

For the end user

- Improved turning qualities = more fun and faster learning results
- Better grip on hard slopes = increased safety
- Edges remain sharper for a longer period of time
- Easier turning on the edge = CARVING

WINTERSTEIGER complete. Customer services.

WINTERSTEIGER sees its mission not only in the manufacture of innovative products for optimum customer benefit. Our demands and expectations go far beyond that. We understand the need for an accompanying partnership process that includes a range of optional services:

From planning to implementation

WINTERSTEIGER provides complete system solutions for individual customer-specific requirements in all aspects of rental and servicing of skis and snowboards, including 3D planning, amortization and profitability analyses.

Strong customer service team

A large team of extremely well-trained service technicians takes comprehensive care of the following:

- Machine set up
- Training courses
- Service stop-bys
- Preventive maintenance
- Advice
- Modifications
- Problem solving
- Repairs
- Support
- Fast spare parts supply

Staff at the ready

On request, WINTERSTEIGER can also provide you with qualified staff for the entire ski season. Your benefits:

- No searching for skilled staff
- WINTERSTEIGER technicians with ski servicing expertise
- Calculable wage costs

Individually tailored finance packages

WINTERSTEIGER can offer you individually tailored finance packages, e.g. leasing or invoicing according to servicing demand.

Marketing Partnership

WINTERSTEIGER will support you in advertising your ski service. Together we will optimize your efficiency using professional advertising materials.



Victories are developed in the mind. And with WINTERSTEIGER.

WINTERSTEIGER is the world market leader in service and rental solutions for the entire ski and snowboard sport. Sport shops, rental stations, well known ski and snowboard producers as well as leading ski federations trust in the system solutions and first class service from WINTERSTEIGER.

WINTERSTEIGER develops innovative system solutions for the rental and service of ski and snowboards. With this we concentrate highly on and take into consideration the various needs of our customers as well as recognizing the trends early enough to allow them to be brought into the product development.

With this strategy WINTERSTEIGER has established itself as competent partner in the planning and development of service work shops and rental stations. We accompany our customers starting with the evaluation of customer needs, the planning, financing solutions, trainings, personnel leasing, professional marketing support, all the way to our reliable after-sales-service.

The product range of Division SPORTS at a glance:

- Fully automatic service stations
- Base and edge grinding machines
- Base repair and binding adjustment equipment
- Waxing machines
- Rental software
- Rental, depot and drying systems



Who is on top,
sees much further.



WINTERSTEIGER. A Global Player. Worldwide.

WINTERSTEIGER is the world market leader in its three divisions SPORTS, SEEDMECH and WOODTECH. Our success is based on customer proximity which we enjoy due to a globally-structured, tightly-knit sales and service network and sophisticated and future-oriented planning. In this we are guided by the following principles:

■ According to the „**Progress Principle**“ we are consistently extending our lead with targeted investments in research and development.

■ By the „**Quality and Productivity Principle**“ we mean both computer-assisted planning and design, which result directly in fully automated production processes, as well as strict quality assurance management, which ensures continuous control from design to after-sales service.

■ We meet the „**Qualification Principle**“ with optimally trained employees. Continuous professional development is an essential part of our strategy.

■ On one hand we see the „**Sustainability Principle**“ as our permanent contribution to long-term success, while on the other it represents a clear commitment to conserving natural resources.

The result:

- 15 subsidiaries
- 60 representatives worldwide
- Sales distribution in 130 countries
- 85 % export share
- World market leader in all three divisions

Division SPORTS

Total solutions for rental and servicing of skis and snowboards.



Division SEEDMECH

Total solutions for agricultural field experiments.



Division WOODTECH

Total solutions for precise thin-cutting of wood.



Headquarters located in Ried im Innkreis, Upper Austria

Success begins with the right decisions. At the right time.
We look forward to you!



WINTERSTEIGER
Thinking about tomorrow.

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Poland: Ikatur, Mogilany, **Romania:** Maxalpin SRL, Brasov, **Russia:** Gorimpex SARL, Moscow, **Slovakia/Czech Republic:** Snow-How CR s.r.o., Ricany-Jazlovice,
Slovenia: Tobos d.o.o., Škofja Loka, **Spain:** Manufacturas Deportivas Viper S.A., Barcelona, **South Korea:** Himazone, Seoul