FLAT SURFACE FINISHING SOLUTIONS

PRODUCTIVE AND ECONOMICAL WORKPIECE MACHINING DOWN TO NANOMETERS

SLICING | POLISHING | FINE GRINDING | LAPPING | DEBURRING

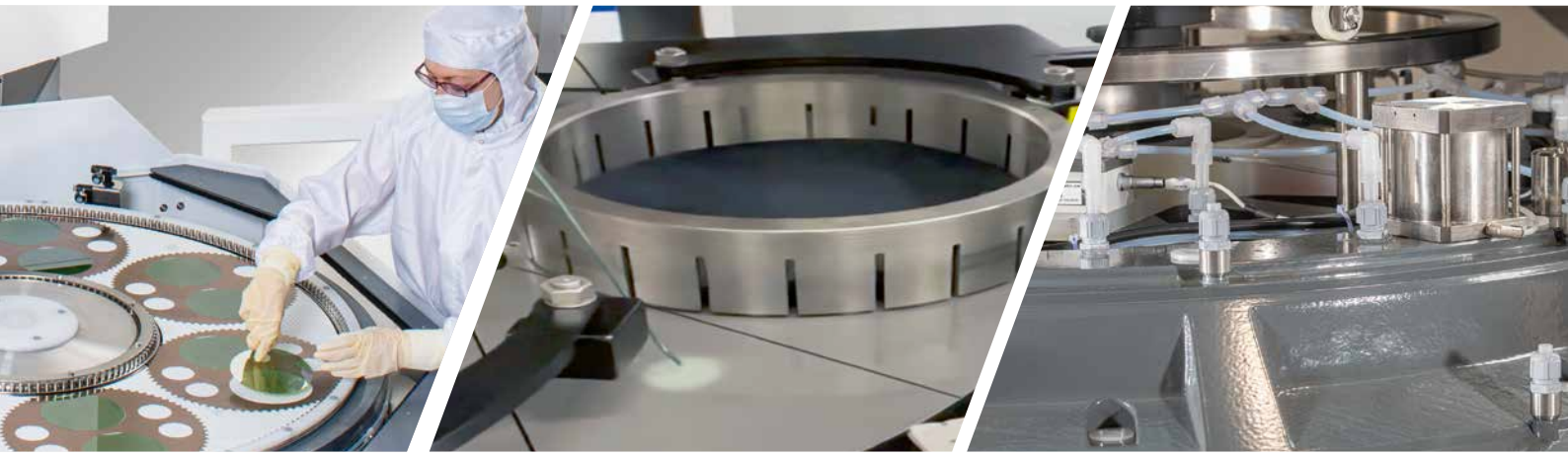
PASSION FOR PRECISION

COMMITMENT AND PASSION FOR TECHNOLOGY

One company, diverse products, passionate employees: LAPMASTER WOLTERS has been a leading global manufacturer of high precision machines and systems for surface finishing of a wide variety of work-pieces for nearly 220 years.

Our products are successfully used wherever the highest requirements with respect to surface quality, plane parallelism, flatness and dimensional accuracy must be realized efficiently.

We offer comprehensive experience and expertise from many industrial sectors, from custom and series production, small businesses as well as international corporations.



AT HOME IN MANY INDUSTRIES

A WIDE RANGE OF MATERIALS AND APPLICATIONS

Our customers around the world include companies from the the optical industry, general industry, automotive industry and the semiconductor industry, for example. Our long-standing focus on these industries results in a profound understanding of their special requirements and technical challenges. We offer high-quality, reliable machining solutions and services for a wide range of materials, parts and applications such as:

OPTICS
- LCD displays
- Photo masks
- Plasma display panels
- ...

GENERAL INDUSTRY
- Precision bearing races
- Ball bearings
- Motor bearings
- ...

AUTOMOTIVE
- Precision piston rings
- Fuel injection systems
- Anti-lock braking systems
- ...

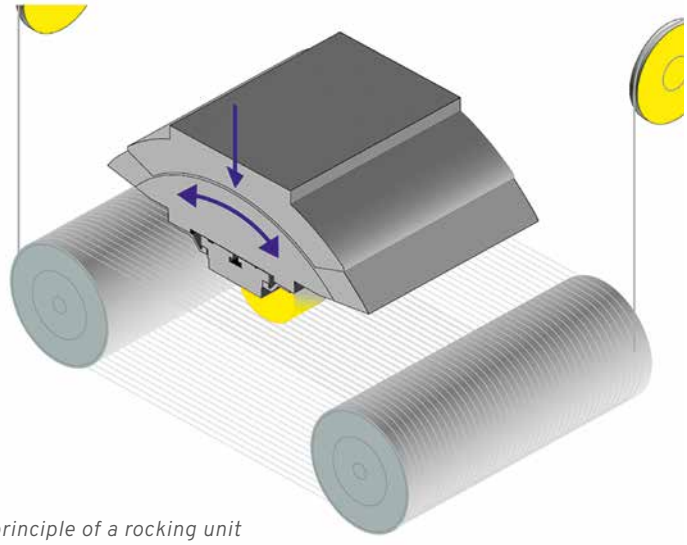
SEMICONDUCTOR
- Silicon
- Silicon carbide
- Gallium nitride
- ...

EXCELLENCE IN SLICING HARD AND BRITTLE MATERIALS

BASED ON 70 YEARS OF EXPERTISE

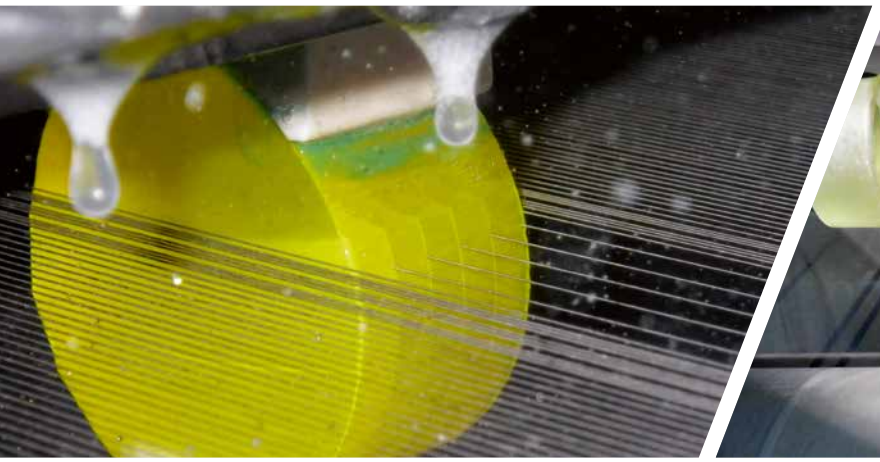
Diamond wire technology has evolved rapidly in recent years to respond to general market requirements. Various workpiece dimensions, tighter quality requirements and higher production capacity ask for a new level of slicing equipment. Since 1953, we have gained the experience and developed the skill required to cut hard and brittle materials into wafers and parts, with the highest quality and lowest kerf loss. Already in the early 1990ies, we introduced the first multi wire saw, at that time for the semiconductor industry. Since then, numerous saw types have been developed, many of them specifically for a market segment and dedicated to a wafer format. Today, we are the leading provider of wire saws.

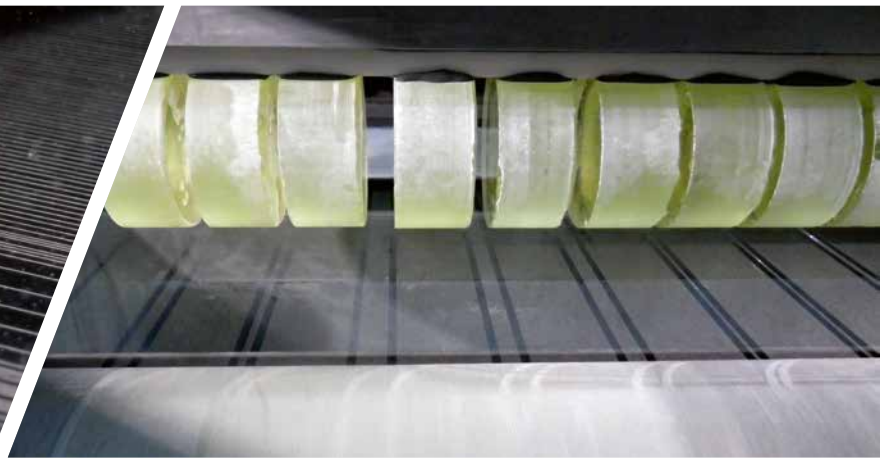
Diamond wire in action



The principle of a rocking unit

Even for newly developed products, proven technologies such as the rocking unit are used if market requirements demands them. The additional movement of the workpiece optimizes the workpiece surface, lowers waviness and ensures maximum precision.





MULTI WIRE SAWS FOR SLICING HIGH VOLUMES

SLICING TECHNOLOGIES FOR SPECIAL MATERIALS

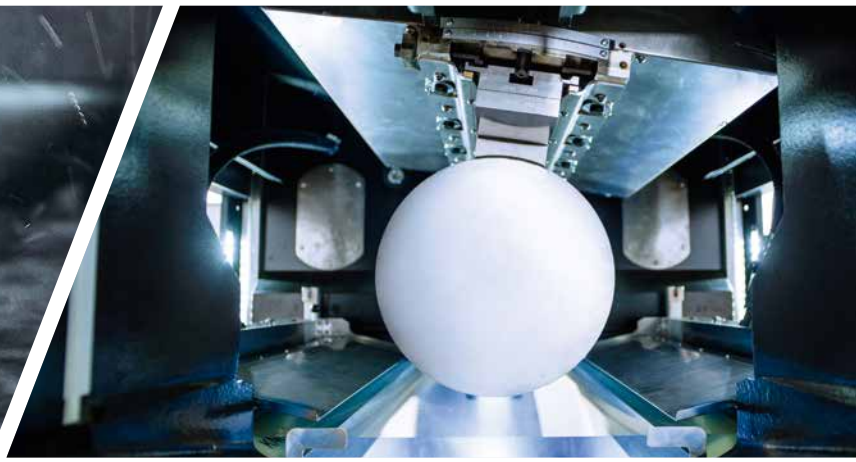
Lapmaster Wolters has set the technological standard for slicing hard and brittle materials with the biggest possible material and cost savings. In semiconductor, photovoltaic, optical, magnets and other industries, a substantial growing list of applications use environmentally friendly diamond wire technology. Higher slicing speed, a longer wire web and ultra-thin diamond wires enable increasing numbers of wafers and parts to be sliced faster at top quality and with outstanding precision. If material hardness or surface properties require other solutions, the slurry process is the alternative technology.

DW292

DW288

The DW288 as well as the DW292 platform allow broad flexibility in terms of different workpiece dimensions – equipped with a workpiece rocking unit and other additional features to ensure customers benefits:

- Low temperature dependency
- Stabilized slicing conditions
- Higher material yield
- Lower downstream process efforts



SUSTAINABILITY AND LATEST TECHNOLOGY

INNER DIAMETER SAWS COVER A WIDE RANGE OF WORKPIECE SIZES

Balancing economical and technologically advanced production with today's requirement for sustainability can be challenging. The factory overhauled Inner Diameter or Outer Diameter saws represent a part of the solution and the step in the right direction in terms of sustainable business models. This involves disassembling machines that are 30 years old or more down to their basic components, bringing all mechanical and electrical parts up to today's standards, implement a user friendly high automatic HMI and combine all to a high precision state of the art equipment.

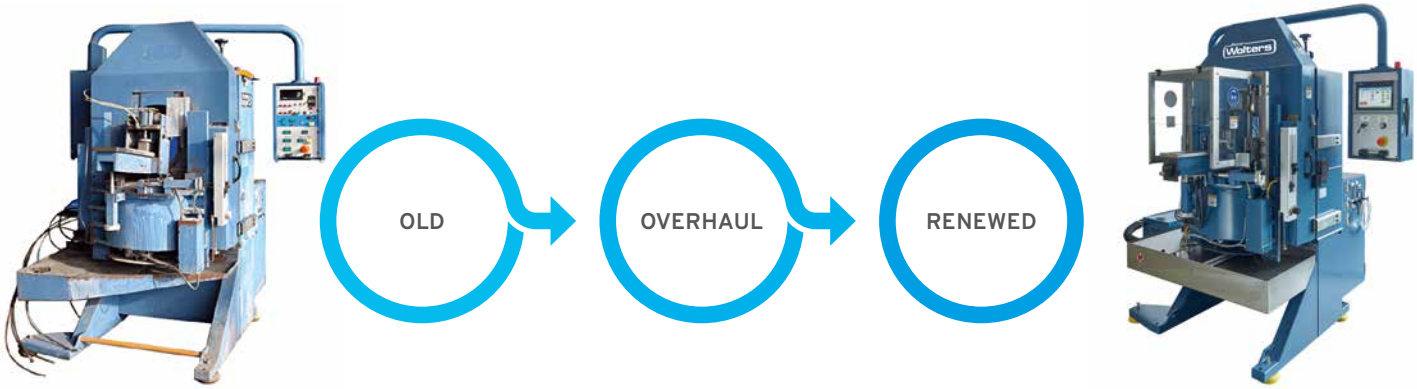
TS207

TS23

The models TS23, TS207 as well as the TS121 show high flexibility, allowing a wide range of workpiece sizes and various dimensions to be sliced. Despite the given flexibility, the highest degree of accuracy and stability is still ensured. Accordingly, these products are used in the optical sector, for semiconductor materials, magnets, ceramics, sapphire and in various other industries.

FACTORY OVERHAULED INNER-DIAMETER SAWS

MAXIMUM FLEXIBILITY AT MAINTAINED PERFORMANCE



All electrical components of the machine are replaced and a new control system is implemented. The operation takes place via touchscreen with a new HMI platform.

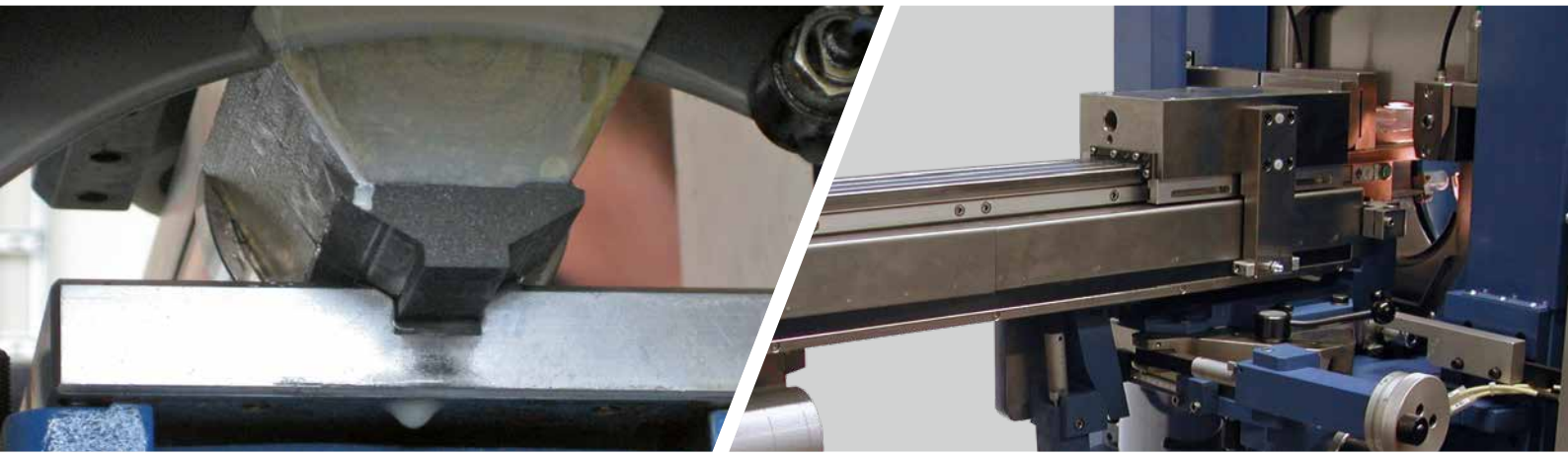
Mechanically, the machine is completely disassembled, repainted and all parts are reassembled in a revised state.

YOUR BENEFITS

- Extended life time of a proven production equipment
- State-of-the-art control and electrical components
- Guaranteed availability of spare parts
- New ID-blade monitoring system linked to the HMI
- New drip pan and sludge collector
- Quality check according to test record
- 1 year warranty as on new machines

ADDITIONAL OPTIONS

- Electrical feed
- Rotary system
- Automatic wafer removal system
- Variable blade rotation speed
- Additional equipment
- Spare part package
- Maintenance and service contract



FACTORY OVERHAULED PARTS

BEARING OVERHAUL, WIRE GUIDE GROOVING AND COATING

YOUR BENEFITS

- Improved consistency of slicing quality
- Increased yield
- Reduced production downtime
- Comprehensive approval testing ensures safe and trouble-free operation of the overhauled parts

SCOPE OF WORK

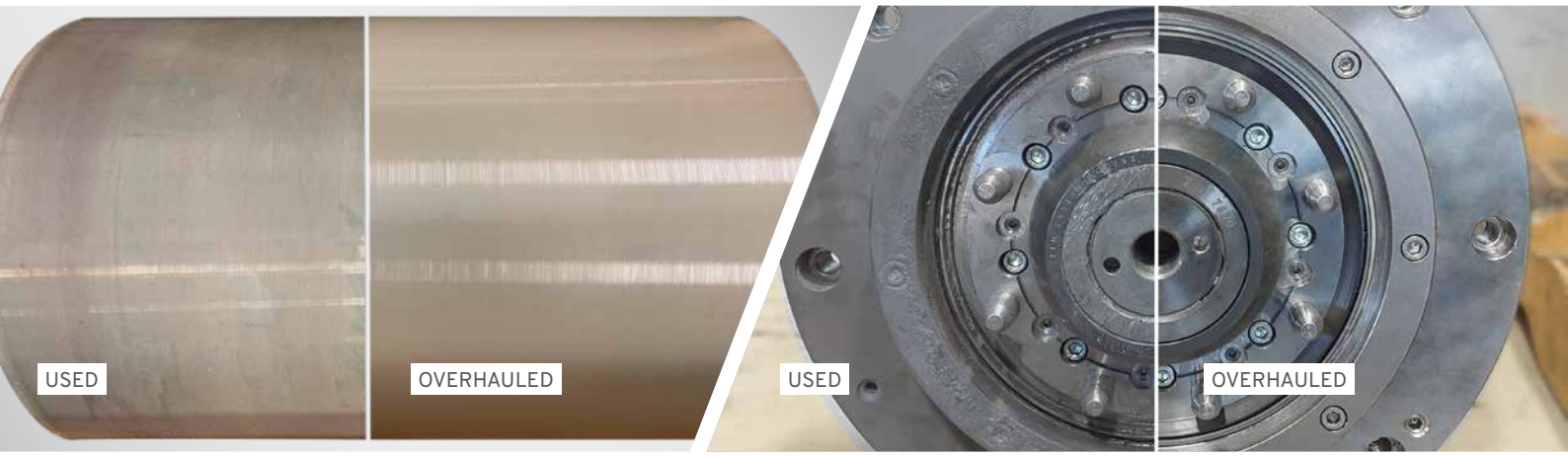
- Quality inspection
- Surface condition inspection
- Cleaning
- Replacement of wear parts
- Re-coating / re-grooving (wire guide roller)
- Overhauling and testing (bearing)

OVERHAULING OF WIRE GUIDE ROLLS (WGR)

- Essential to ensure good performance as a core part of a wire saw
- Direct influence on slicing quality
- Over time of use, WGR are wearing out, reducing performance and wafer quality
- New coating, new grooves, and replacement of worn mechanical components ensure smooth rotation of the WGR and wire web
- Any type of WGR and grooving possible, flexible in customer specific requirements

OVERHAULING OF BEARINGS

- Essential to ensure a constant production quality
- Direct influence on slicing quality
- Over time of use, parts are wearing out, reducing the stability of the bearing and wafer quality
- Overhauled bearings ensure smooth rotation of the WGR and wire web
- Bearing overhaul service can be provided for almost all wire saw and bearing types in our portfolio



MULTI WIRE SAW – PRODUCT OVERVIEW

DEVELOPED FOR PRECISION






TECHNICAL DATA	DW288S4	DW288S6	DW292	DW296	DS261
SLICING TECHNOLOGY	Diamond Wire/Slurry	Diamond Wire	Diamond Wire/Slurry	Diamond Wire	Slurry
Ø Workpiece [mm]	205 (Option: 230)	166	305 / 205	☐ 210 / ☐ 182	305 (Option: 450)
Load length [mm]	420	650	650	860	400
# Wire Guide Rollers	2	2	3 / 2	3 / 2	3
Workpiece Rocking	±12°	±12°	±8°	–	–
Dimensions [L × W × H] [m]	3.8 × 1.8 × 3.0	3.7 × 1.8 × 3.0	Machine: 2.6 / 3.3 × 2.0 x 3.0 El. Cabinet: 0.5 × 2.0 × 2.2	Machine: 3.0 × 1.5 x 3.1 El. Cabinet: 0.9 × 2.0 × 2.2	4.1 × 3.3 × 3.3
Weight approx. [t]	11.1	12.0	9.3 /10.7	10.9	12.0

WE RESERVE THE RIGHT FOR TECHNICAL CHANGES!

ANNULAR SAW – PRODUCT OVERVIEW

FACTORY OVERHAULED AS GOOD AS NEW





TECHNICAL DATA	TS23	TS207	TS121	TS116
TECHNOLOGY	Inner Diameter Saw	Inner Diameter Saw	Outer Diameter Saw	Outer Diameter Saw
Ø Workpiece [mm]	50–153	100–215	☐ 320 × 140	☐ 140 × 50
Load length [mm]	650	2100 (Option: 2400)	500	300
Dimensions [L × W × H] [m]	1.7 × 1.7 × 2.1	3.6 × 4.4 × 2.5	Machine: 1.5 × 1.3 × 2.3 El. Cabinet: 0.6 × 1.0 × 2.0	Machine: 1.3 × 1.0 × 1.9 El. Cabinet: 0.6 × 1.0 × 2.0
Weight approx. [t]	1.5	8.5	2.4	2.0
Product availability	To be provided by the customer for factory overhaul as well as available on request		To be provided by the customer for factory overhaul	

WE RESERVE THE RIGHT FOR TECHNICAL CHANGES!

TWO SIDES – ONE GOAL

ULTIMATE PRECISION FOR ALL MATERIALS AND INDUSTRIES

Our double-side batch processing machines from the Peter Wolters AC series meet the highest technological standards and requirements. No matter whether it is fine grinding, lapping, honing, deburring or polishing: With the proven machines of the AC series, you can produce workpieces of unmatched precision down to microns. The AC series offers the necessary performance and process reliability to be able to flexibly and economically react to changing requirements – now and in the future.

The AC machine series offers unbeatable precision and productivity, from the attractively equipped basic model to the high-end outfitting, for small and large workpieces.

MAXIMUM PRECISION FOR ALL PROCESSES

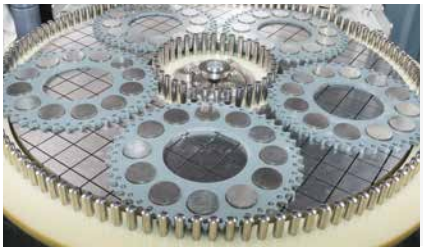
Processing with the AC machines occurs in batches where the workpieces are loaded into workpiece carriers. During this process, the working wheels and inner pin rings are driven. This allows the workpiece carriers to rotate on the pin ring via the external teeth. This type of relative movement between the workpiece and tool leads to a very uniform load of the tool surface as well as to an extremely flat material removal and a high surface quality of the workpieces.

F = FINE GRINDING

With fine grinding, we refer to the machining of workpieces with bonded CBN or diamond grain. The grinding wheels are optimally specified for the respective application.

H = HONING

With honing, the working wheels also have bonded grain as the fine grinding process. Abrasive grain such as silicon carbide, corundum or aluminum oxide are used.

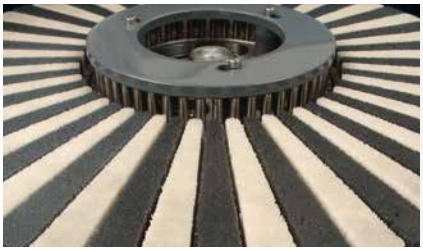


L = LAPPING

Lapping is a machining process with loose grain contained in a medium, the lapping compound. During lapping, rolling grain is used, which can achieve very high surface qualities.

P = POLISHING

During polishing the loose polishing grain contained in a paste or polishing emulsion mechanically engages with the surface of the material. This achieves the highest surface qualities.



D = DEBURRING

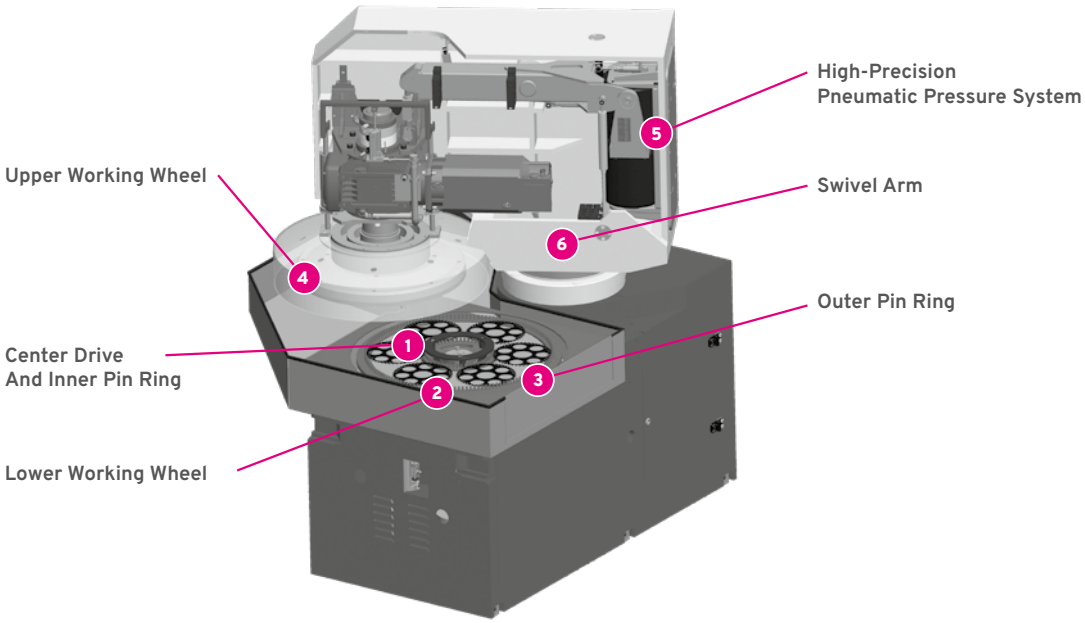
During deburring of workpieces on an AC machine, brushes are used as working wheels. The individual threads of the tools contain abrasive material, such as silicon carbide, ceramics or diamond.

INNOVATION CONSISTENTLY IMPLEMENTED

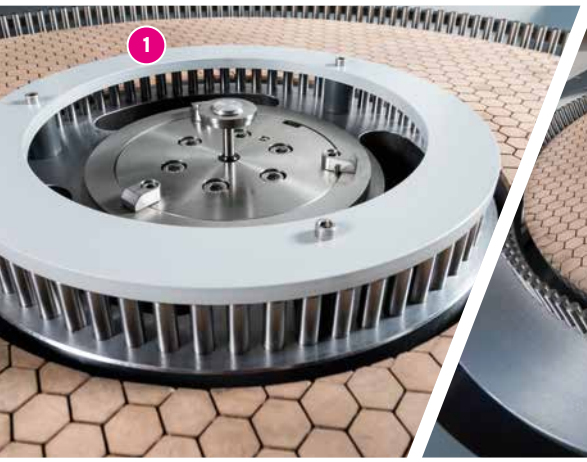
GROUNDBREAKING MACHINE CONCEPT FOR YOUR SUCCESS

The highly productive double-side machines from the AC series are designed according to the latest technology and impress with the integrated concept. Due to its modular design, this combines excellent operability with the precision of the latest control, drive and measurement technology. Quickly removable machine trim guarantees the best accessibility. The upper working wheel that automatically swivels out after the end of the process optimizes the ergonomic accessibility to the working area for loading and unloading the workpieces.

Durability, reliability, diversity of applications – from delicate to solid workpieces – the AC series sets standards in terms of productivity and precision.



Inner Pin Ring And Measuring Control



Lower Working Wheel

Outer Pin Ring With Electric Height Adjustment

COMPLETE DEPENDABILITY, UNMATCHED POWER

Peter Wolters AC machines are based on proven core components, such as a high-precision pneumatic pressure system, contactless micro-measuring sensor, powerful drive technology and the Siemens PLC control. The software has been developed in-house which makes it possible to intuitively operate the machine entirely by menus. The complete upper part of the machine can be swiveled out for optimal access to the working area.
The machines are available with different epicyclic workholder drive systems, drive powers and wheel speeds to match the widest possible range of workpieces. This ensures an optimal machine configuration for every application.

The AC series is available with the well-known, proven and tested additional components, such as gap formation, the leveling device and fine grinding media supply or lapping or polishing media dosing. Accessories, such as the measuring sensors and post-process measurement provide data for the statistical process control and offer process reliability when machining critical workpieces.
DataCare®, the self-developed analysis tool, records all data of the control system and is therefore the perfect platform for analytical process evaluation, optimization and error analysis.
Choose from our comprehensive AC portfolio – and find the customized solution for any of your requirements.

UPPER WORKING WHEEL WITH SAFETY GUARD

The safety guards of the AC machine series are made of transparent plexiglas standardly. All safety guards are designed in a split way. With just a few steps, they can be removed to ensure optimal access to the upper working wheel.

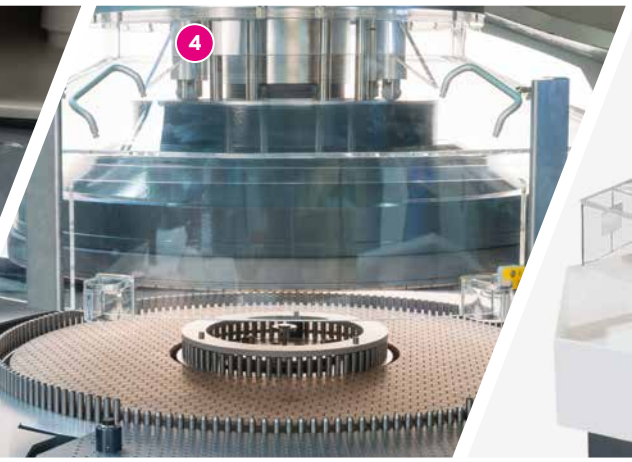
SWIVEL ARM

From the AC 535 to the AC 2000, the machines are equipped with a swivel arm. After the process ends, the upper working wheel swivels out. This function allows very good access to the process area and simplifies the loading and unloading for the operator.

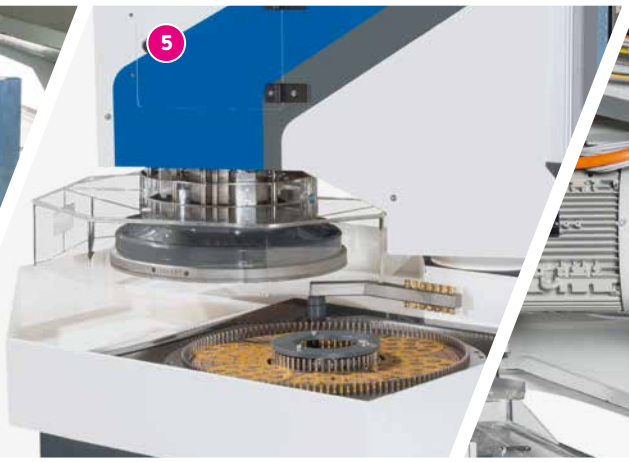
HIGH-PRECISION PRESSURE SYSTEM

The process of the upper working wheel as well as the pressure build-up and the force regulation in the process occur through a pneumatically-controlled system. The entire pressure controll occurs through the machine control system and is continuously controlled and visualized.

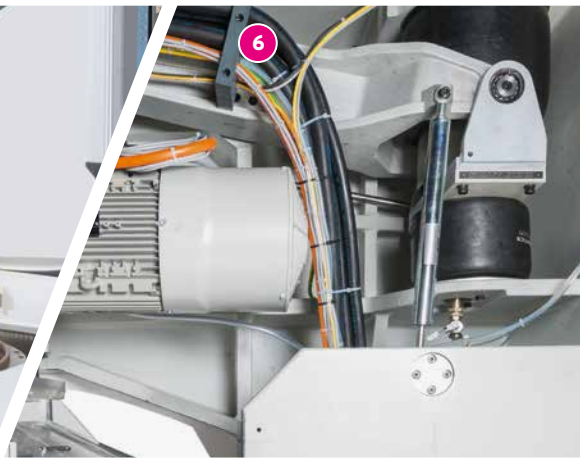
Upper Working Wheel With Safety Guard



Swiveled Out Swivel Arm



High-Precision Pneumatic Pressure System



AUTOMATION SOLUTIONS

PERFECT WORKFLOWS AND TOP PERFORMANCE

We continuously work on opportunities and ways to improve your production processes and your productivity. Our intelligent automation solutions for the machines of the AC series are based on practical developments with high benefits for the user.
A variety of modular, ready-made and tested hardware and software solutions are available for the realization of your requirements.

You determine the degree of automation by selecting the modules required. The modular technology creates clear conditions in terms of clarity during project planning and allows for a gradual establishment of the degree of automation.
With our system solutions that have been proven under hardest conditions, we ensure that our automation components can be combined with each other perfectly.

GAP LOADING TABLES

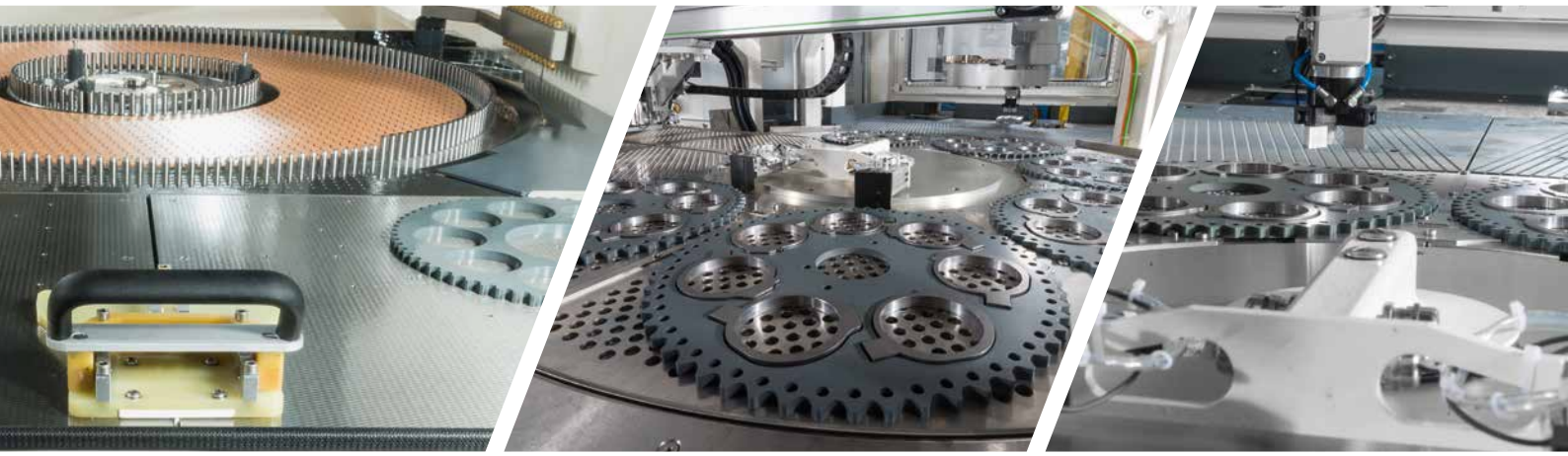
Do you want to optimally use your AC machine? Our gap loading tables make it possible to prepare the follow-up batch already during the process time and they can be flexibly used for different workpieces.

TWIN LOADER AND ROBOT CELL

The Twin Loader impresses with the automatic and simultaneous loading and unloading of two workpiece carriers from your AC machine. When combined with a robot cell, it ensures maximum productivity.

CUSTOMER-SPECIFIC AUTOMATION

Would you like to implement your own ideas for automation? In cooperation with our partners, we also offer customer-specific solutions for the automation of our AC machines, which are individually tailored to your requirements.



THE AC SERIES LEADS TO SUCCESS

OUR COMPETITIVE ADVANTAGES STRENGTHEN YOUR MARKET POSITION

THE HIGHLIGHTS OF THE AC SERIES

- Swiveling upper working wheel for optimal access to the working area
- Optimal surface quality, flatness, thickness tolerance and plane parallelism with tightest tolerances on the workpiece
- High-precision contactless measuring control for maximum switch-off accuracies
- Wide machine portfolio – from the AC 400 to the AC 2000, always suitable for customer-specific workpiece sizes and output quantities
- Modular machine concept – flexible configurations for all customer requirements
- Patented cooling labyrinth in the working wheel carriers for extreme temperature stabilization over the entire tool surface

YOUR ADVANTAGES AT A GLANCE

MACHINE FEATURES	CUSTOMER BENEFIT / COMPETITIVE ADVANTAGE
Different machine versions for fine grinding, lapping, polishing, honing and deburring	Ideal machine adaptation to the process requirements
Robust design with cast iron base frame	Excellent vibration damping
Bearings with the highest accuracy levels	High rigidity and precision
Leading process and technology expertise	Customized process development ensures the highest level of productivity
Three separately controllable drives (upper wheel, lower wheel and inner pin ring)	Optimal surface quality, flatness, thickness tolerance and plane parallelism can be achieved with tightest tolerances on the workpiece
Remote maintenance solution RangeCare® via mobile communications or VPN	Short-term online service support
Different degrees of automation	Unit cost reduction, shortened loading and unloading times as well as non-productive times, consistent workpiece qualities
High-precision pneumatic pressure system of the upper working wheel	Excellent machining results due to compliance with the freely programmable process parameters

TECHNICAL DATA	AC 400		
VERSION	F, P	L, P, D	F, D
Wheel diameter [mm]	425 / 445 / 475	425 / 445 / 475	534
Ring width [mm]	120 / 150	120 / 150	150
Max. load pressure [daN]	300 / 500	300 / 500	500 / 800
Upper / lower drive power [kW]	3 / 4	2	6 / 12
Upper / lower drive speed [rpm]	175 / 320	100	175 / 320
Center drive power [kW]	1.2	1.2	1.5
Center drive speed [rpm]	100	100	100
Working wheel cooling	wheel cooling optional	wheel cooling optional	wheel cooling optional
Machine dimensions [H × W × D] [mm]	2200 × 800 × 1545	2200 × 800 × 1545	1900 × 1500 × 1500
Machine weight without switch cabinet [kg]	1750*	1750*	2000
Max. workpiece thickness [mm]	50	50	50
Max. workpiece diameter [mm]	100	100	150

TECHNICAL DATA	AC 880	AC 1000	
VERSION	F	F	H
Wheel diameter [mm]	900	1050	1050
Ring width [mm]	260	292	292
Max. load pressure [daN]	1300 / 2300	1500 / 2500	1500 / 2500
Upper / lower drive power [kW]	18 / 36	24 / 36	24
Upper / lower drive speed [rpm]	150 / 300	150 / 250	150
Center drive power [kW]	4 / 6	6	6
Center drive speed [rpm]	65 / 95	94	94
Working wheel cooling	wheel cooling	wheel cooling	wheel cooling
Machine dimensions [H × W × D] [mm]	2400 × 2400 × 2400	2450 × 2400 × 2400	2450 × 2400 × 2400
Machine weight without switch cabinet [kg]	7000	7000	7000
Max. workpiece thickness [mm]	100	100	100
Max. workpiece diameter [mm]	260	290	290

TECHNICAL DATA	AC 1250		AC 1500	
VERSION	F	H	F	L, P
Wheel diameter [mm]	1250	1250	1500 / 1554	1470 / 1554
Ring width [mm]	349	349	443 / 536	454.5 / 497
Max. load pressure [daN]	2500 / 4000	2500 / 4000	3000	1500
Upper / lower drive power [kW]	36 / 70	36	50	18
Upper / lower drive speed [rpm]	120 / 200	120	145	60
Center drive power [kW]	6 / 9	6	9	4
Center drive speed [rpm]	65 / 90	65	95	60
Outer drive power [kW]	./.	./.	./.	4.5
Outer drive speed [rpm]	./.	./.	./.	10
Working wheel cooling	wheel cooling	wheel cooling	wheel cooling	wheel cooling
Machine dimensions [H × W × D] [mm]	2600 × 2500 × 2750	2600 × 2500 × 2750	2510 × 3560 × 2900	2510 × 3560 × 2900
Machine weight without switch cabinet [kg]	7800	7800	8200	8200
Max. workpiece thickness [mm]	100	100	125	125
Max. workpiece diameter [mm]	320	320	500	500

*with switch cabinet

AC 535		AC 700		
F	L, P	F	F, H, D	L, P
630	534 / 562	720	720	740 / 760
170	150 / 180	200	200	220 / 240
500 / 800	500 / 800	1000 / 1800	1000 / 1800	1000 / 1800
6 / 12	3.5 / 6	24 / 36	12	12
175 / 320	100 / 175	300 / 420	160	160
1.5	1.5	2.5	2.5	2.5
100	100	83	83	83
without wheel cooling	wheel cooling	wheel cooling	wheel cooling optional	wheel cooling
1900 × 1500 × 1500	1900 × 1500 × 1500	2200 × 1900 × 1900	2200 × 1900 × 1900	2200 × 1900 × 1900
2000	2000	4000	4000	4000
50	50	75	75	75
170	150	200	200	200

AC 1200 eco	
P	L
1220	1180
425	385
1000	1000
12 / 18	12
50 / 90	50
3.5	3.5
50	50
wheel cooling	wheel cooling
2500 × 2700 × 2450	2500 × 2700 × 2450
7300	7300
50	50
340	340

AC 2000	
P	L
1809 / 1935	1809 / 1935
560 / 686	560 / 686
4000	4000
46	46
40	40
7.5	7.5
50	50
7.5	7.5
7.5	7.5
wheel cooling	wheel cooling
3050 × 3450 × 3500	3050 × 3450 × 3500
19500	19500
200	200
600	600

SINGLE-SIDE PROCESSING

ACHIEVING HIGH STANDARDS OF FLATNESS AND SURFACE FINISH

LAPMASTER lapping and polishing machine systems, when used with conventional abrasive, diamond superabrasive, or polishing media, can remove stock and finish virtually any solid material to customer specific requirements.

Our machines are engineered to finish surfaces so flat you can measure them in lightbands ... surfaces so smooth, it is possible to get leak-proof mating without gasketing. All our lapping and polishing machines provide the proper balance between rate of stock removal, finishing and flatness.

Model 36
Floor standing, pneumatic lift version

Model 20SL
Benchtop, open face version with guard

FLOOR STANDING MACHINES

LAPMASTER floor standing machines are specially designed and built to withstand extreme conditions within a production environment while requiring minimal maintenance. These units are available with lapping / polishing platens from 24″ up to 212″ in diameter.

BENCHTOP MACHINES

Our most popular style of machine, these units are offered with 15″ or 20″ lapping /polishing platens, are compact enough to fit on a standard workbench, and are extremely cost effective. The 20″ can be equipped with a pneumatic pressure plate system for applications requiring high PSI component loading.

ALWAYS THE OPTIMUM PROCESS FOR THE APPLICATION

What sets LAPMASTER lapping machines and polishing machinery apart from the competition is our versatility. Every machine is designed specifically for our customer's application.
We have no predisposed tendency to promote one specific abrasive technology. The result is the development of the optimum process for the application. No matter what the application calls for, you can be sure that LAPMASTER WOLTERS will provide you with the best possible equipment and process to produce flat surfaces and extremely fine surface finishes with unfailing uniformity.

OPEN FACE / PNEUMATIC LIFT

Our lapping and polishing machines are available in open face or pneumatic lift versions. The primary function of the pneumatic arrangement is to permit loading and unloading to be carried out without the need to lift the pressure weights manually. However, they can also be used to supply additional loading to the components within the conditioning ring should this be required.

Model 72
Pneumatic lift version

Model 96
Open face version

TECHNICAL DATA	MODEL 15SL		MODEL 20SL
VERSION	3-RING	4-RING	3-RING
Plate O.D. [in / mm]	15 / 381	15 / 381	20 / 508
Plate I.D. [in / mm]	3.5 / 89	6 / 153	5 / 127
Ring O.D. [in / mm]	7 / 178	5.63 / 143	9 / 228.6
Ring I.D. [in / mm]	5.5 / 140	4.25 / 108	9.5 / 190.5
Ring height [in / mm]	1.77 / 45	1.58 / 40	2.5 / 63.5
# of ring positions	3	4	3
Pressure plate thickness [in / mm]	1.18 / 30	1.18 / 30	1.5 / 38
Pressure plate weight [lbs / kg]	8.4 / 3.8	4.4 / 2	18.3 / 8.3
Plate RPM	10 – 70	10 – 70	10 – 70
Motor [hp / kW]	0.33 / 0.25	0.33 / 0.25	0.74 / 0.55
Voltage	110 V – 115 V, 1 Phase 60 Hz | 220 – 240 V, 1 Phase 50 Hz		110 V – 115 V, 1 Phase 60 Hz | 220 – 2
Controls	Analogue variable speed	Analogue variable speed	Analogue variable
Dimensions (W × D × H) [in / mm]	29 / 736 × 27.2 / 692 × 18 / 456	29 / 736 × 27.2 / 692 × 18 / 456	32.9 / 836 × 31.1 / 790 × 18.5 /
Weight [lbs / kg] incl. plates	191.4 / 87 *	187 / 85 **	319 / 145 *

* Plus 3 pressure weights (11.7 kg) and 3 rings (9.6 kg) ** Plus 4 pressure weights (8 kg) and 4 rings (8.4 kg)

* Plus 3 pressu

TECHNICAL DATA	MODEL 36				
VERSION	3R OF	3R PL	4R OF	4R PL	3R OF
Plate O.D. [in / mm]	36 / 914	36 / 914	36 / 914	36 / 914	48 / 1219
Plate I.D. [in / mm]	6.7 / 172	6.7 / 172	10.3 / 263	10.3 / 263	8.5 / 216
Ring O.D. [in / mm]	16.4 / 419	16.4 / 419	14.6 / 373	14.6 / 373	22.4 / 570
Ring I.D. [in / mm]	14.4 / 368	14.4 / 368	12.6 / 322	12.6 / 322	19.8 / 505
Ring height [in / mm]	4.0 / 102	4.0 / 102	4.0 / 102	4.0 / 102	4.0 / 102
# of ring positions	3	3	4	4	3
Pressure plate thickness [in / mm]	1.2 / 30	1.2 / 30	0.75 / 19	0.75 / 19	–
Pressure plate weight [lbs / kg]	54 / 24.5	616 / 280	28.6 / 13	616 / 280	–
Plate RPM	58	58	58	58	48
Motor [hp / kW]	5.3 / 4.0	5.3 / 4.0	5.3 / 4.0	5.3 / 4.0	10 / 7.5
Voltage	380 / 500 V, 3 Phase | 230 V, 3 Phase | 50 / 60 Hz				380
Controls	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Dimensions (W × D × H) [in / mm]	55.1 / 1400 × 67.5 / 1715 × 58.1 / 1475	61.6 / 1565 × 67.5 / 1715 × 78.7 / 2000	55.1 / 1400 × 67.5 / 1715 × 58.1 / 1475	61.6 / 1565 × 67.5 / 1715 × 78.7 / 2000	79.1 / 2010 × 64.5 / 1640 × 51.7 / 1313
Weight [lbs / kg] incl. plates	2094 / 950 *	2679 / 1215 **	2116 / 960 ***	2755 / 1300 ****	6380 / 2900 *

* Plus 3 pressure weights (75.0 kg) and 3 rings (70.5 kg) ** Plus 3 rings (70.5 kg)
*** Plus 4 pressure weights (52.0 kg) and 4 rings (72.0 kg) **** Plus 4 rings (80.0 kg)

TECHNICAL DATA	MODEL 72		
VERSION	4R OF	4R PL	
Plate O.D. [in / mm]	72 / 1828.8	72 / 1828.8	
Plate I.D. [in / mm]	18 / 457.2	18 / 457.2	
Ring O.D. [in / mm]	30 / 762	30 / 762	
Ring I.D. [in / mm]	27.25 / 692.15	27.25 / 692.15	
Ring height [in / mm]	7 / 177.8	7 / 177.8	
# of ring positions	4	4	
Pressure plate thickness [in / mm]	–	–	
Pressure plate weight [lbs / kg]	–	–	
Plate RPM	32	32	
Motor [hp / kW]	20 / 15	20 / 15	
Voltage	380 / 480 V, 3 Phase | 50 / 60 Hz (Non-standard voltage available)		
Controls	Adjustable	Adjustable	
Dimensions (W × D × H) [in / mm]	137.8 / 3500 × 122.1 / 3100 × 59.1 / 1500 (without guard) 137.8 / 3500 × 122.1 / 3100 × 64.2 / 1630 (with guard)	137.8 / 3500 × 122.1 / 3100 × 109.2 / 2775	161.4 / 4100 × 133.8 161.4 / 4100 × 133.
Weight [lbs / kg] incl. segments	16755 / 7600 *	26455 / 9750 *	

* Plus 4 rings (400.0 kg)

	MODEL 24			
	3R OF	3R PL	4R OF	4R PL
	24 / 610	24 / 610	24 / 610	24 / 610
	4.4 / 114	4.4 / 114	7.5 / 190	7.5 / 190
	11.2 / 286	11.2 / 286	9.7 / 247	9.7 / 247
	9.7 / 248	9.7 / 248	8.2 / 210	8.2 / 210
	2.8 / 70	2.8 / 70	2.8 / 70	2.8 / 70
	3	3	4	4
	1.2 / 30	1.2/30	1.4 / 35	1.2/30
	24 / 11	187/85	14 / 6.3	187/85
	70	70	70	70
	2 / 1.5	2 / 1.5	2 / 1.5	2 / 1.5
240 V, 1 Phase 50 Hz	230 V, 1 Phase | 230 / 380 V, 3 Phase | 230 V, 1 Phase | 50 / 60 Hz			
speed	Adjustable	Adjustable	Adjustable	Adjustable
470	43.3 / 1100 × 57.9 / 1470 × 46.8 / 1190	50.8 / 1290 × 57.9 / 1470 × 73.8 / 1875	43.3 / 1100 × 57.9 / 1470 × 46.8 / 1190	50.8 / 1290 × 57.9 / 1470 × 73.8 / 1875
	1133 / 514 *	1528 / 693 **	1168 / 530 ***	1636 / 742 ****
re weights (24.9 kg) and 3 rings (18 kg)	* Plus 3 pressure weights (32.7 kg) and 3 rings (22.0 kg) ** Plus 3 rings (22.0 kg) *** Plus 4 pressure weights (30.8 kg) and 4 rings (25.5 kg) **** Plus 4 rings (22.5 kg)			

MODEL 48			MODEL 56			
3R PL	4R OF	4R PL	3R OF	3R PL	4R OF	4R PL
48 / 1219	48 / 1219	48 / 1219	56 / 1422	56 / 1422	56 / 1422	56 / 1422
8.5 / 216	12.9 / 330	12.9 / 330	10.7 / 271	10.7 / 271	14.4 / 368	14.4 / 368
22.4 / 570	20.0 / 508	20.0 / 508	25.2 / 641	25.2 / 641	23 / 585	23 / 585
19.8 / 505	17.0 / 432	17.0 / 432	22.7 / 578	22.7 / 578	20.8 / 530	20.8 / 530
4.0 / 102	4.0 / 102	4.0 / 102	6 / 152	6 / 152	6 / 152	6 / 152
3	4	4	3	3	4	4
1.25 / 32	–	1.25 / 32	–	–	–	–
880 / 400	–	880 / 400	–	–	–	–
48	48	48	48	48	48	48
14.75 / 11	10 / 7.5	14.75 / 11	14.75 / 11	14.75 / 11	14.75 / 11	14.75 / 11
/ 480 V, 3 Phase | 230 V, 3 Phase | 50 / 60 Hz			380 / 480 V, 3 Phase | 50 / 60 Hz (Non-standard voltage available)			
Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
90.9 / 2310 × 64.5 / 1640 × 50.4 / 1280	79.1 / 2010 × 64.5 / 1640 × 51.7 / 1313	84.8 / 2154 × 61.9 / 1560 × 88.1 / 2240	68.9 / 1752 × 80.7 / 2050 × 52 / 1320	68.9 / 1752 × 91.1 / 2315 × 88.6 / 2250	68.9 / 1752 × 80.1 / 2035 × 52 / 1320	68.9 / 1752 × 84 / 2135 × 88.6 / 2250
7363 / 3340 *	6380 / 2900 **	7363 / 3340 **	7187 / 3260 * incl. plates	11089 / 5030 * incl. plates	7187 / 3260 ** incl. segments	11089 / 5030 ** incl. segments
	* Plus 3 rings (111 kg) ** Plus 4 rings (160 kg)				* Plus 3 rings (228.0 kg) ** Plus 4 rings (165.0 kg)	

MODEL 84		MODEL 96
4R OF	4R PL	4R OF
84 / 2133.6	84 / 2133.6	96 / 2438.4
19 / 482.6	19 / 482.6	24.4 / 620
35 / 889	35 / 889	40 / 1016
32 / 812.8	32 / 812.8	37.25 / 946
7 / 177.8	7 / 177.8	5 / 127
4	4	4
–	–	–
–	–	–
24	24	24
30 / 22	30 / 22	25 / 18.64
380 / 480 V, 3 Phase | 50 / 60 Hz (Non-standard voltage available)		380 / 480 V, 3 Phase | 50 / 60 Hz (Non-standard voltage available)
Adjustable	Adjustable	Adjustable
/ 3400 × 65.3 / 1660 (without guard) 8 / 3400 × 74.2 / 1885 (with guard)	161.4 / 4100 × 133.8 / 3400 × 113.8 / 2890	135.8 / 3450 × 127.9 / 3250 × 94.5 / 2400
21440 / 9725 *	26455 / 12000 *	25000 / 11339
	* Plus 4 rings (400.0 kg)	

LINEAR FINISHING DEBURRING SYSTEM BD 300 L

LATEST TECHNOLOGY FOR OUTSTANDING PERFORMANCE AND VERSATILITY

BD 300 L basic machine with up to four deburring units

TECHNICAL DATA	BD 300 L
Max. workpiece width [mm]	270
(with turning station)	125
Burr-Ex® brush units	
Short basic machine version	1 – 2 brush units
Long basic machine version	3 – 4 brush units
• Brush drive power [kW]	5.5
• Brush rotation speed [rpm]	300 – 1800
• Brush head drive power [kW]	1.5
• Head rotation speed [rpm]	30 – 150
• Brush deburring tools per station [qty]	5
• Brush deburring tool Ø [mm]	150
Transport belt speed [m / min]	0.5 – 10
Control	Siemens touch panel

WE RESERVE THE RIGHT FOR TECHNICAL CHANGES!

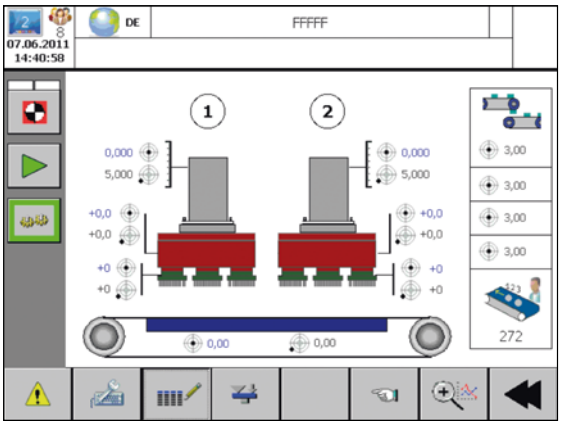
MACHINE FEATURES OF DEBURRING SYSTEM BD 300 L

- 1 – 4 working units
- Simple integration in production lines
- Automatic tool wear compensation
- Integrated degaussing unit
- Siemens touch panel 12″
- Quick change system for rapid tool change
- Automatic brush length measurement
- Turning concepts for double-sided machining
- Exhaust unit
- Return belts to the machine infeed
- RangeCare® remote maintenance solution
- DataCare® complete package
- Possibilities for connecting to companies' own networks

PETER WOLTERS BRUSH DEBURRING SYSTEMS ARE DESIGNED FOR OUTSTANDING LINEAR FINISHING RESULTS

Linear finishing systems by Peter Wolters offer an extremely wide range of deburring and egde rounding solutions. The flexibility is designed to cover a wide range of applications such as precision components, precision-cut and laser-cut parts, turned and milled parts as well as workpieces with large amounts of stamping burrs.

Precision parts for machining on a BD 300 L



User-friendly due to extensive, intuitive operating pictures

With its intuitive touch control, the BD system can easily adapted to users requirements and optimized for different workpieces. Parameters such as thickness, shape and material of the bristle can be precisely adapted.
Peter Wolters linear finsihing systems are available as stand-alone machines or semi and fully automatic solutions.

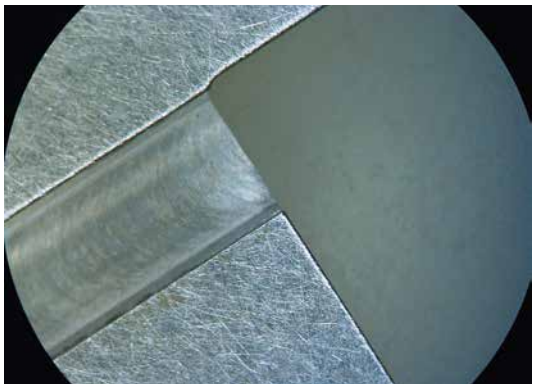
Workpiece dimensions and linear finishing results differ, and so do the requirements for appropriate deburring tools. Peter Wolters widely extended its consumable portfolio to offer users always the right brush for their specific applications.

A selection of brush tools used

DETAILED VIEW OF THE SURFACE QUALITY OF WORK PIECES BEFORE AND AFTER MACHINING WITH THE BD 300-L BY WAY OF COMPARISON

unmachined

machined



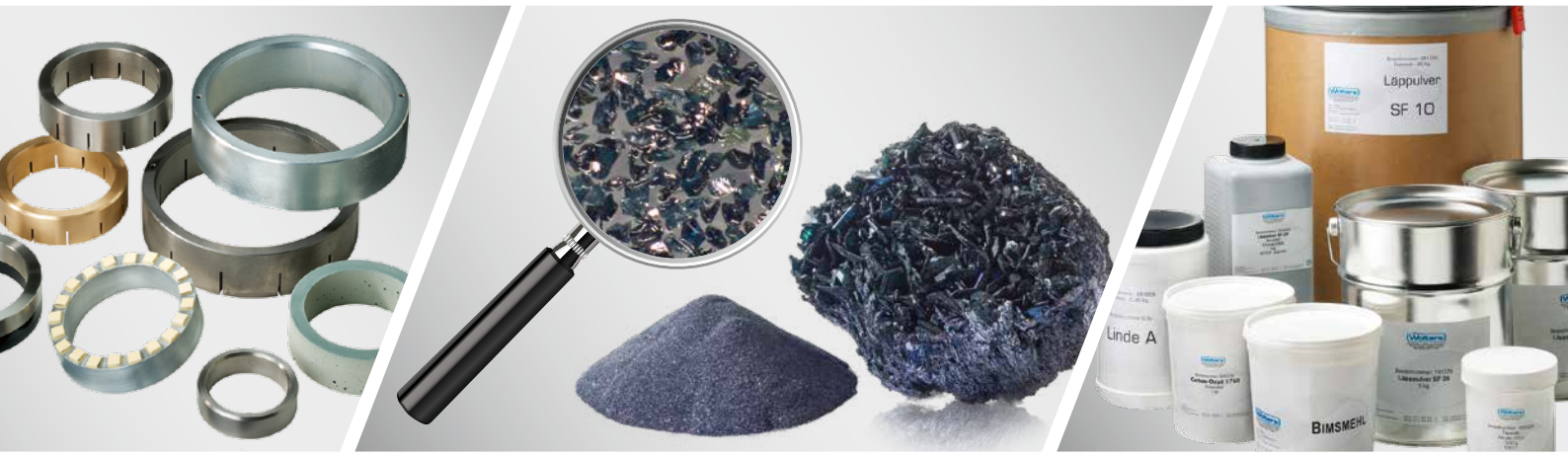
CONSUMABLES

PROVIDING THE BEST OPTIONS FOR EACH PROCESS

Lapmaster Wolters is your one-stop shop for all precision surfacing consumable needs. A broad range of high-quality consumables ensures reliable results in grinding, lapping, and polishing applications. All products are designed to achieve precise finishes and tight geometry tolerances consistently. With first-class support throughout the entire machine lifecycle, Lapmaster Wolters ensures high machine availability and productivity.

OVERVIEW OF CONSUMABLES

- Abrasive Powders
  (Aluminum Oxide, Silicon Carbide, Boron Carbide, Micro-graded Diamond Powder, Micro-graded Alumina Powder, Cerium Oxide)
- Lapping Vehicles
  (Oil Based Lapping Vehicles and Water Based Lapping Vehicles)
- Pre-Mixed Abrasive Slurries
  (Garnet, Aluminum Oxide, Silicon Carbide, and Boron Carbide powder)
- Lapping Compounds/Grinding Compounds
  (Aluminum Oxide, Silicon Carbide, and Boron Carbide powder)
- Polishing Pads
- Diamond Powders
  (Monocrystalline Synthetic- both resin and metal bond, Polycrystalline Synthetic, and Natural diamond powder)
- Diamond Lubricants
  (Each lubricant formulation has been developed to work with a specific diamond compound or slurry to maximize cutting and polishing efficiency)
- Diamond Slurries
  (Most diamond slurries can be manufactured Resin bond, Metal Bond, Polycrystalline, or Natural diamond powders)
- Diamond Paste/Compounds
  (Oil Based Diamond Paste and Water Based Diamond Paste)
- Composite Plates



OUR RANGE OF SERVICES

A TAILOR-MADE SOLUTION FOR EVERY PROBLEM

SPARE PARTS AND WEAR PARTS

To meet all production requirements, it is important to keep machines in good condition. Original spare parts help to maintain a coordinated overall system and thus produce the best possible quality. We are happy to advise you and also help if original parts are no longer available.

- Original parts for our machines
- Wear parts for your process
- Compatibility and system suitability
- Substitutions for obsolete parts

SERVICES

Our team of service technicians covers a wide range of services to help you keep your machine in good condition, solve problems and carry out repairs or optimizations.

- Maintenance
- Inspections
- Machine optimization
- Overhaul
- Repairs
- Assemblies

REPAIR & OVERHAUL

Some components of our machines are subject to wear. It is often worth repairing or overhauling these parts regularly to ensure highly efficient production and the best product quality.

- Overhaul of wire guide rollers and roller bearings for wire saws
- Factory overhaul of Meyer Burger multi wire saws and annular saws
- Reconditioning of workpiece carriers
- Repairs

CARRIERS AND DRESSING RINGS

Carriers play a major role in the smooth running of the workpiece. For this reason, we offer you a design adapted to your production requirements. We draw on our experience with a wide range of materials and workpiece dimensions. Even very thin and fragile workpieces can be machined with carriers specifically designed for these applications.

- Optimum design for your application
- Adaptation to automation systems
- Reconditioning of used carriers

SMART SOLUTIONS

Everyone is talking about digitalization, we use it to your advantage. From remote access and RangeCare® to DataCare® and new AI approaches, we offer you innovative solutions for optimized production.

- Remote services for fast and cost-effective problem solving
- Data concepts to increase the transparency of production parameters
- Innovative AI solutions to optimize production and increase efficiency

RETROFIT & UPGRADE

We support you throughout the entire life cycle of your machine. This includes replacing obsolete parts or components as well as adapting the machine to new developments and requirements.

- Retrofitting of obsolete components to ensure parts availability
- Upgrading to integrate new functions for machine and production optimization
- Adaptation to changing production requirements

PROCESS CONSULTING

With our process experts and the availability of a wide range of lapping, polishing, and fine grinding machines, as well as slicing saws, we can advise you on the application of our machines, carry out trials and jointly design suitable production processes.

- Consultancy from experts with many years of experience
- Extensive range of machines for trials
- Running trials in our application technology department to improve processes or evaluate consumables

SERVICE LEVEL AGREEMENTS & MAINTENANCE CONTRACTS

A reliable and stable production requires well maintained machines as well as quick reactions times in case something happens. A Service Level Agreement helps to arrange what is plannable and prepare for what is not. Select the performance that fit your needs best.

- Scheduled preventive Maintenance
- Reduced downtime of your equipment
- Quick reaction times for remote services
- Quick reaction times for on-site support

REFURBISHMENT

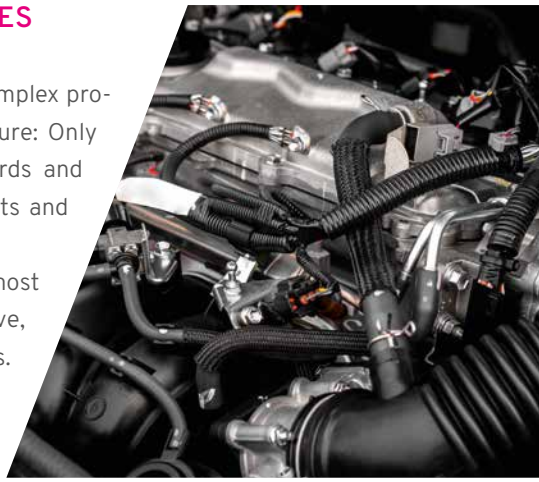
Our machines are characterized by their durability and reliability. Sometimes, however, it may be necessary to give them a general overhaul. We inspect your machine and offer a customized refurbishment. This is often a good opportunity to modernize components or make other adjustments.

- Overhaul of complete components and machines
- Inspections to determine the machine condition
- Combination with value-adding conversions and upgrades

AT HOME IN DEMANDING INDUSTRIES

Ever-shorter development cycles, increasingly complex production processes and massive competitive pressure: Only those companies that achieve high quality standards and precision, maximum productivity, low production costs and short processing times are successful.

Our machines series can be found around the world in almost any industry for good reason, from optics to automotive, hydraulic motors and pumps as well as semiconductors. Designed for maximum precision, a high level of reliability and cost-reducing efficiency, our machines are the decisive key to your competitive advantage.



WE GET YOUR PROCESSES UP TO SPEED

FROM CONSULTATION TO A TURNKEY SYSTEM SOLUTION

COMPREHENSIVE SOLUTIONS FROM ONE PROVIDER

Our customers in high-tech industries have one thing above all else: complex requirements and specific needs. We provide the right solution, no matter for which task or industry, which material or market.

From the first idea to the production support, as your competent partner we provide you with comprehensive system solutions that adapt to your specific production requirements. As standardized as possible, as customized as necessary, and everything from a single source.

MACHINE

The machine portfolio ranges from small compact machines to large fully automated systems. Several options are available to meet individual needs for the respective application.

PROCESS

In addition to the machines, we offer comprehensive and in-depth process development. Our application specialists work continuously to optimize the respective technologies and processes. Customer-specific test setups make it possible to demonstrate the performance capability of our machines.

CONSUMABLES

Our wide range of consumables for various applications offers numerous advantages. They are specifically tailored to the customer's requirements and help to optimize performance, extend the machine's life cycle, save costs, ensure product quality and promote sustainability.

SERVICE

Our global service not only offers spare parts, repairs and maintenance contracts for your systems. The offer reaches well beyond training, machine upgrades and complete overhauls of entire systems.

ANCILLARY UNITS

Ancillary units are an important factor for a successful process. For example, we deliver optimal filtration and cooling systems for the customer process. The complete solution from a single source.

AI READY – PREPARE FOR WHAT COMES NEXT!

SMART DATA COLLECTION ENABLES ADVANCED ANALYTICS

Digitization and advanced analytics are two disrupting technological megatrends, that will change the setup of machines and manufacturing processes in a significant way.
The ability to get valuable insights into live process parameters enables customers to continuously gain knowledge, combined with the possibility to adjust their settings according to specific goals.
Lapmaster Wolters' DataCare® enables customers continous data collection in combination with an advanced analytical approach to perform first data based optimization measures.

What DataCare® can do for you:

- Highest manufacturing quality by maximum process transparency
- Reporting and visualization of historical and live data
- Optimized process stability due to live process adaption possibility
- Storage of all relevant data streams including data export function
- AI ready – Data collection enables setup of artificial solutions

Time is running and so is technological progress! Lapmaster Wolters is aware of its liability towards its customers and their expectations to receive innovations and solutions based on latest technological developments. To meet these expectations Lapmaster Wolters offers holistic solutions based on Artificial Intelligence.

- Optimized throughput
- Single source of truth concept
- Increase of removal rates
- Predictive alarming and reporting
- Maximized machine uptime
- 24/7 availability and data access

LAPMASTER WOLTERS – THINKING GLOBALLY, ACTING LOCALLY

Are you interested in one of our products, need a consultation or would like to have a quote? To contact one of our sales and services offices directly, please visit our locations overview online:

02-2025

PASSION FOR PRECISION