



No. 3 April 2017

piggy[®] Magazine

The ones with the piggybank

New

piggySonic[®] Mark 3

4 possibilities, one system

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The new ease
of welding

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Aspiration with the
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piggySonic® Mark 3

4 possibilities, one system



*Just like always
in life: the choice
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or a neat and
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room.*

The versatile ultrasonic polishing system with many possibilities.

Overview of the system

Just like always in life: The choice is yours. A whole load of things lying around at your workplace, or a neat and tidy workplace with ample elbow room.

We recommend you the **piggySonic® Mark 3**. It offers you nothing but benefits:

You can control 3 different drives with a single control unit: ultrasonic, high-power micromotors with and without carbon brushes.

They perfectly equip you for almost all polishing tasks.

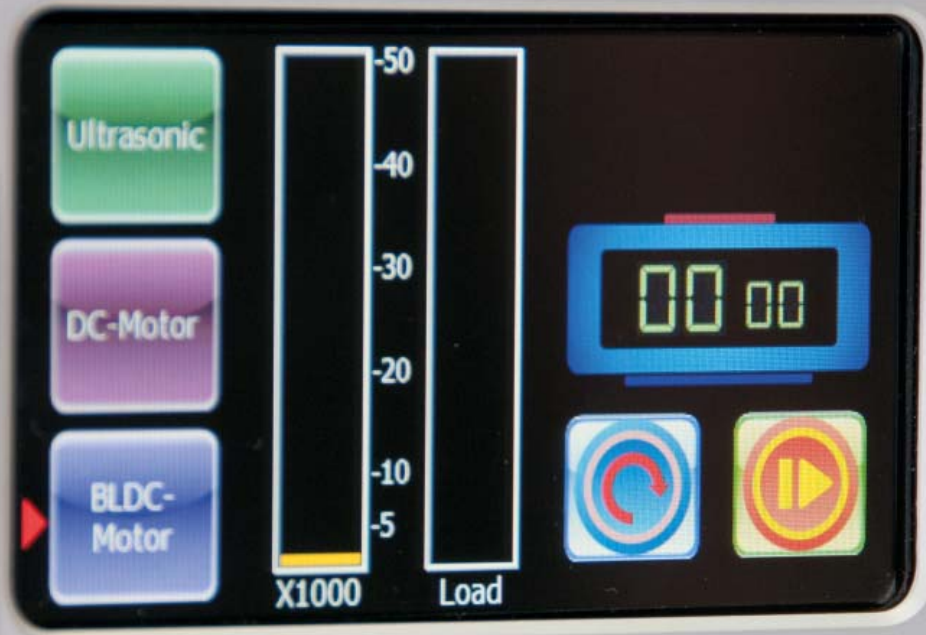
Let's first of all take a look at the **control unit**.

The best **piggySonic®** of all times can be seen here, fully equipped. It provides you everything you need.

The compact control unit, the ingenious **piggy®Cabinet** with 2 drawers and the optimum rack for the ultrasonic handpiece, the filing machine and the powerful brushless micromotor.

Plus the dimmable LED light. Everything within the smallest space and always close at hand.

piggySonic® Mark 3



The new **piggySonic® Mark 3** control unit is provided with a touchscreen.

The desired handpiece is selected on the left.

The left bar (x1000) shows you the amount of output that you have set for the handpiece. Here you can see the speed for example. The right-hand diagram indicates the currently requested output.

At the top right - inside the blue box - a chronometer is visible. The button for the direction of rotation can be found on the left underneath the timer. This is where you activate the TURBO key in ultrasound mode.

The electronics have been completely newly structured and are enclosed in a robust steel housing.

The **front panel** is clearly arranged and structured in such a way that operation is simply child's play. Most things are controlled via the touchscreen in conjunction with the corresponding rotary knob. We have arranged the connections for the handpieces above one another; in practice, this ensures much less cable salad. Both handles protect the front panel and are made for easy transport.

This display is executed as a **touchscreen**. Lightly touch the desired drive and set to the correct speed. As soon as you start, a timer runs in the display that indicates, for as long as you continue with this processing operation, how long you have already been working. As time goes by, you therefore develop a sound sense of the time required for the individual working stages.

If you enjoy working with a **foot switch**, this can be connected to the rear panel. This is where you will also find the connection for the LED lights.

You can control all functions using the easy to operate touchscreen.



It is best to stand the control unit on the **piggy®Cabinet**. There you have 2 drawers (250 x 170 x 55 mm) in which you can neatly store tools and chuck keys, etc.



A cleverly designed rack is provided with an ingenious recess for the filing machine. The machine can be put away in a flash. In a single move, the machine is back in your hand and off you go again. The ultrasonic handpiece, the brushless motor. Everything in its place. Everything is at a perfect reaching height and even the cables hang tidily. Let's now just take a look at the various different drives.



The foot switch is used to start and stop all 3 drives. This can be highly practical at times if both hands are currently occupied.

The left-hand picture shows you once again the advantages of the **piggy®Cabinet handpiece rack**.



The selection for ultrasonic can be seen on this display. The output has already been defined. The start button has not yet been pressed, which is why nothing is displayed yet in the load diagram and the chronometer is not yet running.

The best aspect in ultrasound mode is the **Turbo key**. In conjunction with the large ultrasonic handpiece, it brings a substantial increase in performance.

If you would like to see and hear how powerful ultrasound can be, you should watch this video.

www.diesporschweine.de/english/video_piggysonic3

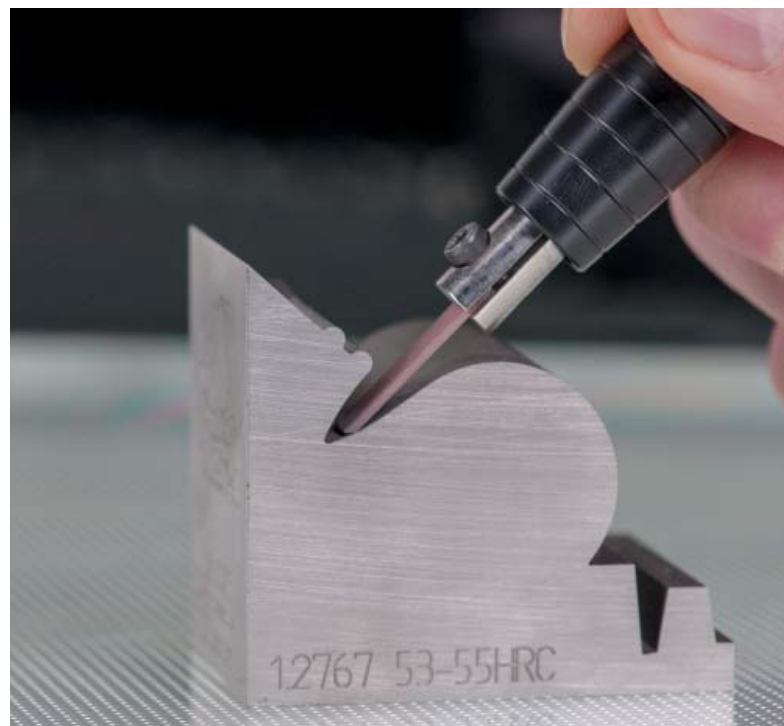


First of all we have: ultrasonic

What is special about it and where should it be used?

The special aspect is the extremely short stroke of a maximum of 40 μm . This short stroke gives you perfect control. Moreover, this tiny stroke moves up to 30,000 times a second. That is what makes ultrasonic so effective.

We therefore also have the answer to the question of where to use ultrasonic: in the difficult places in a mould that you used to process laboriously by hand. Wherever small or minute surfaces need to be polished, ultrasonic does the work by far more quickly.





A choice of three different ultrasonic handpieces is available:

	The small one	The normal one	The large one
Length mm	117	122	164
Ø mm	21	28	32
Weight g	130	210	260
Output W	25	40	45
Receptacle	M4	M6	M8
Order no.	31-PSHS	31-PSHK	31-PSHG

The small one

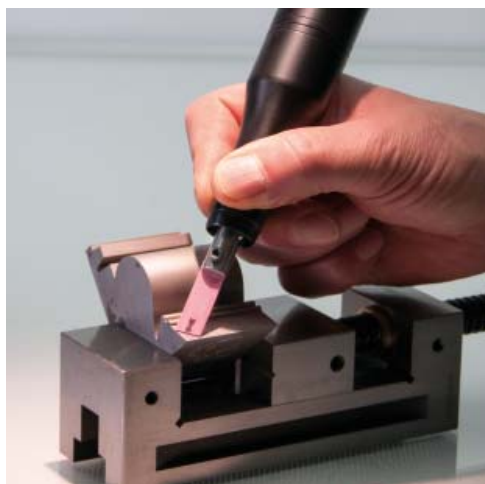
is ideal for working under a microscope or in very narrow areas that you otherwise cannot reach.

The normal one

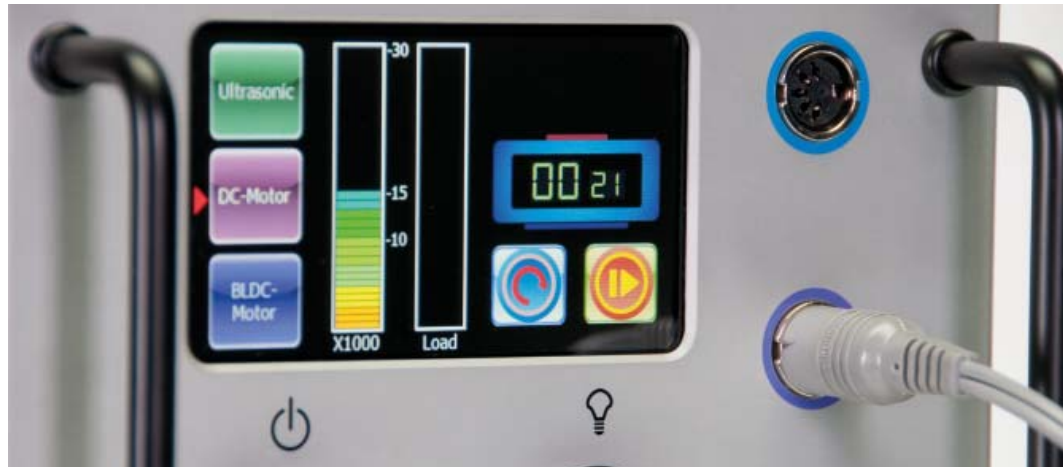
is handy, efficient and rests comfortably in your hand.

The large one

turns into a genuine heavyweight in conjunction with the **pigSonic® Mark 3**. You can now press the TURBO key + on the display and things really get going. As with all good things, there is a limitation here too. Owing to the higher performance, the handpiece soon warms up. The TURBO function is therefore not intended for constant operation, but rather for quick and short, but intensive use instead.



Here you can see the display for micromotors with carbon brushes, i.e. for the filing machine RE 55 for example.



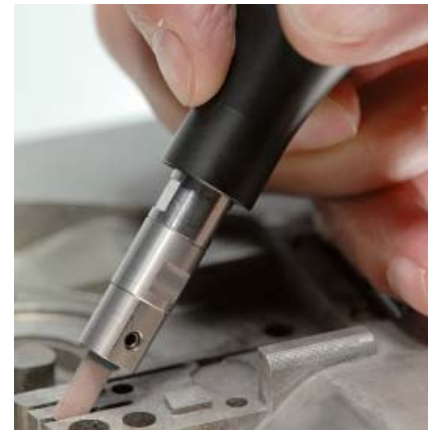
Watch the video about the large handpiece:

www.diesparschweine.de/english/video_piggysonic3_large

A fine selection of holders is available for the individual handpieces, so that you are equipped for any task.

Particularly good results are obtained with ultrasonic and ceramic fibre files that achieve fine surfaces with high stock removal. You can however also use a "fine grit size" ceramic fibre file (grit size 1200) as a carrier for diamond compounds of up to 3 μm and thus obtain a splendid solution for polishing narrow and deep slots for example.

Diamond files - for example slot or tip files - can likewise be used with ultrasonic with surprisingly good results.



Have you ever experienced the problem when the ceramic-fibre file does not work as it should? The cause of this problem lies in the point-type clamping of conventional holders.

The **SMAX holder** is now available however. If you use it, you can forget the aforementioned problem and enjoy the increased performance of the ceramic-fibre files.

The SMAX holder can be found on page 19 of our 2017 catalogue.



We now come to the next drive:

Micromotors with carbon brushes

We have seen that ultrasound is the ideal solution for small areas in the mould that are difficult to reach. For the larger areas, it makes more sense to work with a filing machine. The RE 55 model has a maximum stroke length of 2 mm, which can be infinitely adjusted to between 700 and 7000 strokes per minute. Transfer of rotating motion into linear motion is performed via a toothed belt and the machine is very quiet running.

Very beautiful results are obtained with the little helper easyLap. easyLap is manufactured from Gesswein grinding files, equipped with a plastic insert and moved via a sophisticated push rod. This design ensures that you have 100% control over work at all times. Just take a little Sparschwein Universal Liquid and off you go.

For work with diamond compounds, we recommend Kemet® XP. This is a composite tool with which you can lap and polish in a single working operation. Which means, you have high stock removal on the one hand (lapping) and a reflective surface on the other hand (polishing). XP has another crucial advantage: It prevents surface errors when polishing steels that are difficult to polish.

The 3rd drive is a brushless micromotor.

The contrivance offers you up to 300 watts of peak output and



The display shows the settings for brushless micromotors. By turning the rotary knob, the desired speed can be adjusted between 3,000 and 50,000 rpm.

A maximum of 300 W is at your disposal. Enough in order to be able to polish powerfully using felts.

By pressing the rotary controller while simultaneously switching the control unit on, you obtain a selection window in which you can limit the maximum speed.

Three speed ranges are available:

up to 15,000 rpm

up to 30,000 rpm

up to 50,000 rpm

Depending on the tool size and task, you select the appropriate speed range and always work under optimum conditions.



is therefore ideal for felt polishing. We recommend you an angle head for polishing that lets you polish powerfully and effectively.

To provide you a clear view of your working area, we have further equipped the **piggySonic® Mark 3** with a powerful **LED light**. A versatile tripod is additionally available so that you can illuminate even the most ghastly places. Depending on the work, you need to be able to adjust the light output. This is why we have also incorporated a dimmer in the control unit.

This all-in-one solution for every purpose provides you reliable basic equipment for your wide array of polishing tasks. Although the **piggySonic® Mark 3** can do considerably more than any other systems, you get it for a sensational price.

To let you convince yourself of the characteristics described, we will be pleased to send you **a system for an 8-day trial**. Free of charge and without any commitment.





A whole lot of dust is generated when working with ultrasonic or while grinding that you do not necessarily want to inhale. Which is why we are now offering you the piggy® Extractor II.

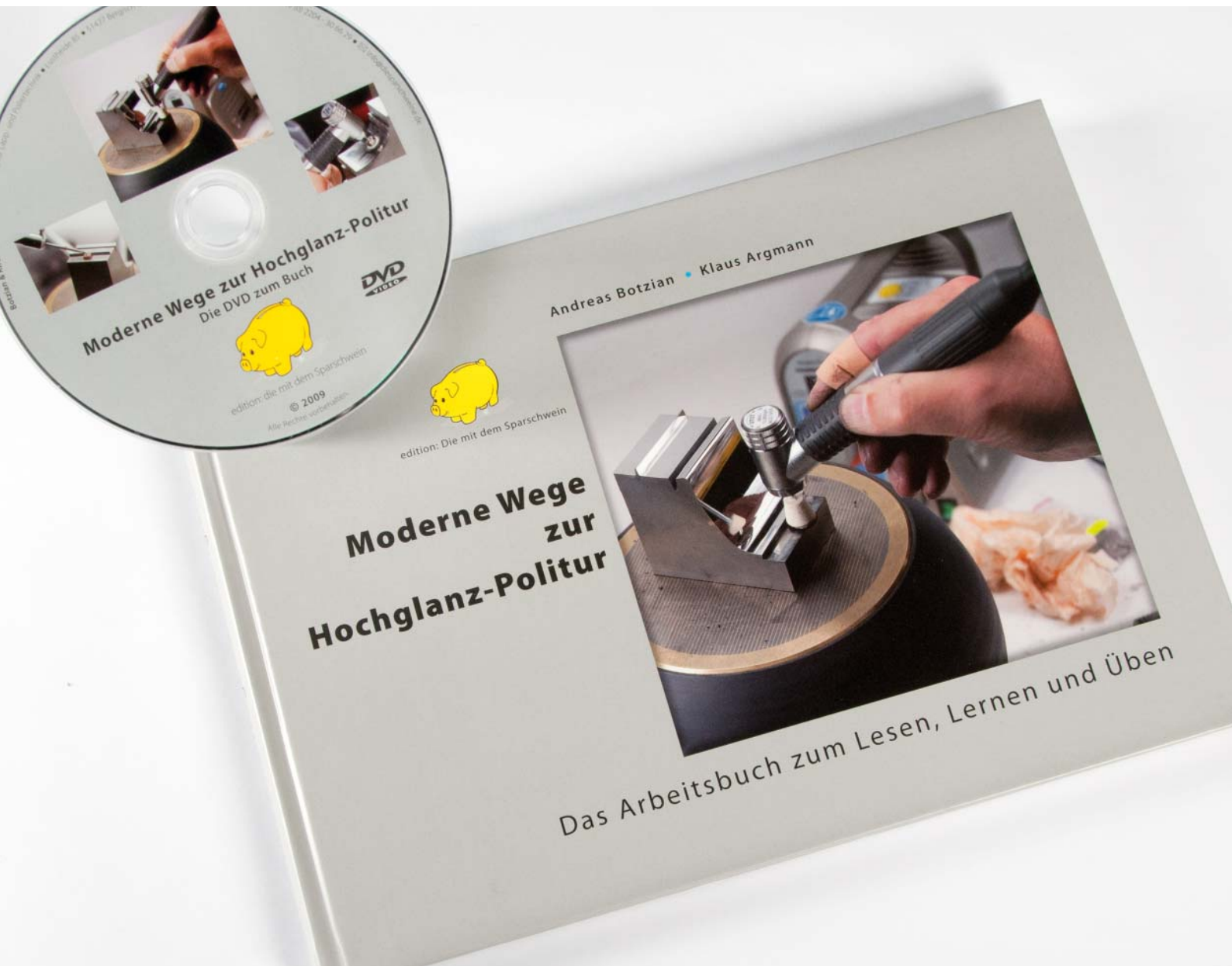
It does a very decent extraction job, is very quiet running and filters up to 99.997% into its 6.4-litre filter bag before only expelling clean air. Highly practical accessories are also available, e.g. the self-supporting suction arm with a funnel and integrated LED lighting, or the table duct. The **piggy® Extractor II** is soundly made, low-maintenance and favourably priced.

Technical data:

piggy® Extractor II

Max. volumetric flow:	180 m ³ /h
Electrical output:	230V-1ph-50/60Hz
Dimensions:	305 x 305 x 450 mm
Noise level:	<58 dBA
Weight:	approx. 8 kg
Filter class:	HEPA filter H13 + filter bag H10





If you would like to find out more, or learn a complete polishing strategy, you should either purchase our **textbook "Modern methods for mirror polishing"** or attend the seminar with the same name.



The book tells you in clear stages, over **256 pages** in size 201 x 297 mm, how you quickly and easily arrive at the required polish. The whole is illustrated by more than **460 photos** and diagrams. There is also an accompanying **DVD with more than 3 hours of** teaching videos. It gives you the chance to watch for once someone else at work.

The book is not cheap. It is however jam packed with useful information and is the only book to date to deal in depth with matters concerning polishing of moulds and tools.



Your trainer Martin Schriever has polished just about everything that exists in toolmaking and mould building with various different professional polishers over the past 30 years.

Dates for 2017

April	25th/26th
May	15th/16th
June	20th/21st
September	19th/20th
October	17th/18th
November	14th/15th
December	12th/13th

During the **seminar Modern methods for mirror polishing**, we show you over 2 informative and work-intensive days how you remove the hard erosion structure, carry out successful uni-directional polishing and arrive at a gleaming high gloss.

We do this by alternating theoretical and practical instruction. In the theoretical units, you learn a wealth of **tips and tricks** multimedially and also of course everything about the **bases** of polishing, together with an **understanding of devices and tools**.

For the practical section, we have prepared you a mould that reserves you all the little nightmares encountered in practice, e.g. a slot. Our **common goal** is that at the end of the 2nd day, you will have completely **mirror polished** this mould in a quality that you can be proud of.

The mould you have polished with belong to you. You can take your mould away with you and show your colleagues what you have learnt.



Sparschweine on tour

Sometimes it may be worthwhile holding a seminar in your company. Four participants should however participate in this case to offset the cost. If you are interested, simply call us + 49 2204 - 30 66 0

Further information about seminars can be found in our 2017 catalogue from page 333 onwards.





- **piggySonic® Mark 3**
Control unit
- Ultrasonic handpiece small
- **with LED spotlight and tripod**
- respectively 1 holder flat 1.1 mm, flat 3.1 mm, round Ø 3.00 mm
- Adapter M6 for Ultraform holders & tools
- Foot switch
- Set of keys
- Handpiece rack

Order no.	€/piece
31-PS3	3,399.00

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- Handpiece rack

+ comfortable
rapid chuck handpiece
with brushless motor with 300 watts and speeds of 1000 to 50,000 rpm

Order no.	€/piece
31-PS3-1	3,999.00



- **piggySonic® Mark 3**
Control unit
- Ultrasonic handpiece small
- **with LED spotlight and tripod**
- respectively 1 holder flat 1.1 mm, flat 3.1 mm, round Ø 3.00 mm
- Adapter M6 for Ultraform holders & tools
- Foot switch
- Set of keys
- Handpiece rack

+ comfortable
rapid chuck handpiece
with brushless motor with 300 watts and speeds of 1,000 to 50,000 rpm

+ **filing and polishing device RE 55**
with a tool receptacle of 6.35 mm, stroke length of 0 - 2 mm and a stroke of 700 - 7,000/min

Order no.	€/piece
31-PS3-2	4,999.00



piggySonic® ultrasonic handpieces without cable

Order no.	Watts		g	€/piece
31-PSHG	45	M8	260	558.00
31-PSHK	40	M6	210	506.00
31-PSHS	25	M4	130	634.00

Cable for ultrasound

Order no.	Description	€/piece
31-PSAK	Spare cable for handpieces 31-PSHK and 31-PSHS	28.00
31-PSAG	Spare cable for handpiece 31-PSHG	28.00