

The precision welding technology.  
The new **PUK 5**.



**PUK 5**

# The new PUK 5 developed for goldsmiths.

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Weld on findings, easily add metal, weld adjacent to Stones and pearls, weld silver (alloys), fill porosity, attach workpieces prior to soldering, weld seams, and much more - all no problem with the PUK.



**Compact and versatile WIG impulse welding device** that is very close to laser welding in terms of working method and range of applications. On workpieces with a thickness of 0.2 mm or greater, it is an effortless process to produce robust welds.

The PUK5 precision welding equipment puts a whole host of possible applications for jewellery production at your fingertips. Structures made from sheet or wire elements can be just as easily done as tack welds and repairs to jewellery parts, restoring missing parts or filling of pores by applying welding wire - and many more options, the PUK5 is able to produce anything from the smallest of repairs to volume production, and even the most extraordinary of new creations.

### **PUK's operating principle is as simple as it is ingenious:**

If the tip of the electrode on the welding hand piece touches the workpiece, the welding process starts automatically. At the contact point, under an inert gas atmosphere, a melting process with a diameter of between 0.3 and 3.0 mm takes place (depending on material and setting).

In addition to many precious metal alloys such as gold, silver and platinum, many non-ferrous metals such as copper and tin alloys, many steels, titanium and aluminium alloys are suitable for welding. All alloys suitable for laser or TIG welding can also be welded with the PUK5.



# Facts, that speak for themselves.

## SUPERIOR WELDING CHARACTERISTICS

- Consistently reproducible high-quality welding results with all materials suitable for welding
- Precise positioning of the spot welds
- Very low, controllable development of heat
- Welding possible on even the thinnest of materials
- Welding in protective atmosphere



## QUALITY „MADE IN GERMANY“ BY LAMPERT

- 3 year warranty!
- Tested product safety: CE conformity
- DIN CERTCO certified eye protection in all Lampert eye protection systems
- Very low initial costs and for consumer materials, maintenance-free technology - excellent price/performance ratio

## COMPACT SIZE - FITS INTO EVERY WORKSHOP

## SIMPLE AND INTUITIVE TO OPERATE

### NEW: THE PATENT-PENDING SYSTEM FOR WELDING PROCESS MONITORING

- New software for contact monitoring of the hand piece
- Prevention of welding errors through interruption of weld if excessive pressure is applied to the electrode
- Increase in service life of electrode tip
- Prevention of tungsten inclusions on sensitive surfaces or on workpieces and materials that still require further processing
- Improvement in the overall weld quality through more uniform processing
- Error prevention in the handling: Increase in process reliability and more consistent quality for larger quantities
- Learning function: More rapid and simpler learning of correct welding procedure, especially for beginners.

**NEW:** Faster progress to better results - ‚blind operation‘ with single-handed operation. Concentration remains focused on the workpiece.

**NEW:** Smoothing function in response to rising temperatures on the welding area to further improve the flow properties of certain metals (e.g. of highly conductive metals such as silver)

**NEW:** Preselection of two different welding cycles

**NEW:** Even higher-performance LED lighting in our new premium welding microscopes. More uniform illumination of the working area - more flexible use of the microscope. These microscopes can also be used as fully equipped workplace microscopes - not just for welding.

**NEW:** Individual device set-up using the settings menu, e.g. preselection of welding cycle, calling operating levels up on screen and hiding them again, e.g. program memory, expert level, tack welding ...

# The operating concept for the new PUK5: simple, intuitive, user-friendly.



Extremely simple touchscreen operation  
**NEW:** Now with slide function!

Select metal - select welding situation - weld!

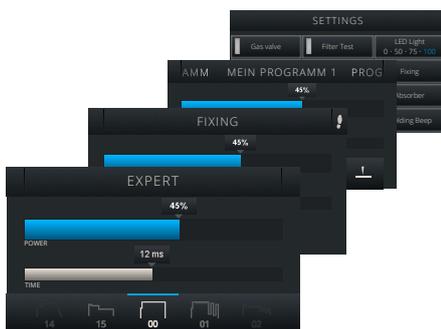
Easily review the optimum setting ranges for the selected welding task

Pre-set programs for standard metals such as gold, silver and platinum, and for common welding situations

**NEW:** Setting of parameters for 'Power', 'Time' and menu navigation with a single rotary controller.

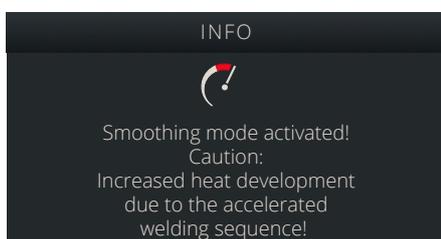
**NEW:** Setting of 'Power' and 'Time' also by a swiping action on the high-contrast display.

Help and assistance functions accessible at any time



**NEW:** Optimised 'Settings' menu with scope on demand for enabling or disabling practical additional functions such as the expert menu with 15 different welding curves, the program memory for 20 proprietary programs or the fix-welding function.

The selection of basic functions such as lighting, welding sequence or choice of language is a quick and easy process.



**NEW:** The smoothing function accelerates the weld cycle, increasing the heat generated in the welding zone on workpieces. This can facilitate the welding process, e.g. on highly conductive metals and alloys such as silver or aluminium. The surfaces are easier to smooth and model because of the improvement in flow characteristics. At the same time, this function causes greater heating of the workpiece and should therefore also be used with caution.

**NEW:** The patent-pending system for welding process monitoring intervenes actively for you if excessive pressure is applied to the tip of the electrode during the welding process, and/or if the workpiece is guided in too rapidly. In this situation, the process is interrupted automatically and an optical signal in the eye protection system signals operator error. This can prevent a welding malfunction from occurring.

Welding with different levels of contact with the electrode distorts the selected parameters and makes it difficult to obtain consistently uniform welding results. It can cause the electrode get stuck to the workpiece, or can introduce undesirable amounts of tungsten to the surface of the workpiece. This new function improves the total performance of the welding process. It gives rise to more uniform results while also improving the electrode service life, resulting in a more constant quality in your welding results. At the same time, this function helps the newcomer to PUK to learn from Day One how to work properly with the PUK5.

## Our system accessories – for your individual requirements.



### PUK FLOW REGULATOR

An important prerequisite for dependable welding results is the correct flow rate of argon gas.



### OUR RANGE OF WELDING WIRE

Makes PUK operation even easier. The alloys and dimensions of Lampert's welding wires have been specially selected to complement the PUK, and are ideally suited to welding with PUK-precision welding devices: Colour-fast, easy flowing, homogeneous structure, ideal wire thicknesses, mounted on practical spools



### PUK ELECTRODES ,WLA' AND ,INOSTAR'®

Available in different diameters (0.5 mm, 0.6 mm and 0.8 mm) and types (pack of 10 or 100, with or without diamond grinding wheel)



### ELECTRODE GRINDING MOTOR

Simple and rapid grinding of the PUK electrodes. Care of the electrode tips which is vital to very good welding results, is carried out by the grinding motor in the blink of an eye.

# Lampert eye protection systems for precision and remote welding work.

## THE ALLROUNDER - OUR LATEST SM5 WELDING MICROSCOPE



High-calibre microscope with 10-fold magnification, individual adjustment

Powerful LED lighting that can be controlled with 4 brightness levels, optimum illumination of the working area.

**NEW:** LED lighting integrated in the housing of the eye protection system.

**NEW:** The SM5 can be turned in no time at all into a workplace microscope, simply by swivelling away the hand piece arm from the field of view.

Hand supports for comfortable and precise operation

Height and tilt adjustment assure optimum workplace comfort and an ergonomic working position.

## THE ARTICULATED ARM WELDING MICROSCOPE – OUR MOST VERSATILE VARIANT

Microscope lens with 10-fold magnification, individual adjustment

Powerful LED lighting in the head of the microscope that can be controlled with 4 brightness levels, optimum illumination of the working area.

Hydraulic articulated arm, rotary and pivot action in every direction, making work particular ergonomic, even on bulky objects.

Bench stand for individual bench mounting.

Individually adjustable headrest

Also this microscope can be used at any time as a workplace or observation microscope.



All of our systems are equipped with a failsafe LCD eye protection filter for welders. This permanent protective filter against UV and IR radiation eliminates any possibility of eye injuries. With the electronically controlled changeover between light and dark stages (DIN3/DIN11), glare caused by the electric arc is prevented - DIN CERTCO-certified.



## THE ENTRY-LEVEL MODEL OF MICROSCOPE, THE SM03

Microscope lens with 10-fold magnification, individual adjustment

LED lighting in the hand piece retaining arm, optimum illumination of the working area

## THE ALTERNATIVE FOR THE ENTRY-LEVEL USER - OUR LAMPERT OPTIC UNIT



Magnifying glass light, equipped with magnifying lens, 2.25-fold magnification (5 dpt)

Glare-free LED lighting, 7.5 W

The optic unit is particularly well suited to large workpieces that cannot be processed under the microscope.

## THE WELDING HELMET – SENSOR-CONTROLLED

For workpieces that cannot be welded under one of our microscopes or the optic unit.

Also facilitates welding on very large workpieces or sculptures without spatial limitation for PUK users.

In contrast to our PUK eye protection systems, an automatic LCD protective filter is integrated here that is controlled by an optical sensor.



**For daily use, we always strongly advise the use of our Lampert eye protection systems. Sensor-controlled automatic eye protection systems react less rapidly than our actively controlled systems and are therefore only advised for operation over a limited period of time.**



Further information about our welding equipment as well as components and accessories can be found on our website: [www.lampert.info](http://www.lampert.info)

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### User safety comes first

The welder's eye protection systems of the PUK welding equipment have been checked and approved by DIN CERTCO for Lampert.



### Accolades for design and technology

Our welding devices have been distinguished many times not only for their innovative technology but also for their design. This means that our customers can be sure that they are using leading edge technology, without having to forgo an attractive design.



### Tested device safety

Safety is paramount to Lampert. All of our machines and devices are „CE“ tested and certified in accordance with the DIN standards. As such, our customers can depend upon the safety and reliability of our products at all times.



### Quality for high demands

We place utmost importance on the highest production and quality standards; we maintain close contact with our partners and suppliers, and are aware of the reliability of our devices: Therefore, we proudly stand behind our products - Made in Germany!