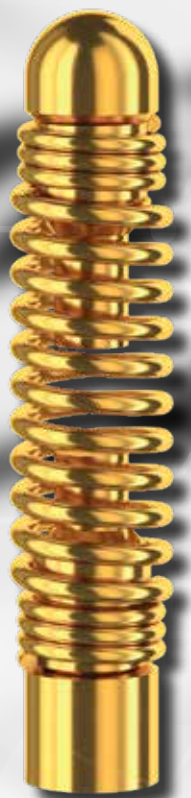


Medtec-Special

Products & Services



Pogo Pins for Medical Applications

Medical devices are subject to much stricter requirements than standard electronics. High quality electrical components are therefore a critical necessity in the development and manufacture of medical devices.

FIXTEST has been supplying pogo pins and connectors to medical device manufacturers for many years. By focusing on stable production processes and constant quality control measures, we ensure reliable spring contact solutions for demanding applications.



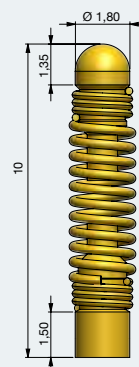
20-190319.100

Technical data

Recommended travel	1,00 mm
Temperature range	-55 - 350°C
Rated current	2 A
Typical resistance	30 mΩ

Our helical pogo pin 20-190319.100 pin is specially designed for use in medical devices that require sterilisation.

In its design, we have eliminated all enclosed spaces that are difficult for disinfectants to reach. The open geometry allows all surfaces to be thoroughly rinsed and easily dried.



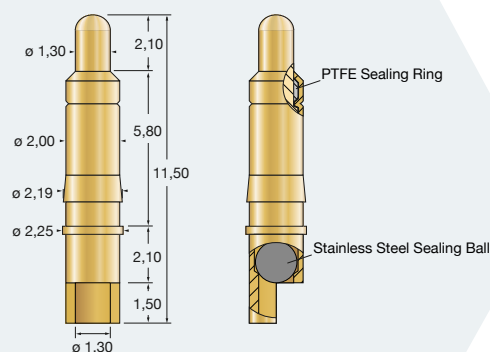
FK-762

Technical data

Recommended travel	1,5 mm
Temperature range	-55 - 120°C
Rated current	3 A
Typical resistance	30 mΩ

The FK-762 has a PTFE sealing ring to prevent fluids from entering the probe body during cleaning processes, particularly in autoclaves. Designed to withstand a minimum of 5 autoclave cycles, it has proven to last up to 20 cycles.

The FK-762 is not only used in medical devices, but also in many applications where a seal is required on the probe body, such as sports or outdoor equipment.



Coatings

	Shiny Gold	Hard Gold	Pure Silver	White Bronze	Silver Graphite
Biocompatibility	Biocompatible*, antimicrobial**	Not biocompatible	Biocompatible*, antimicrobial**	Biocompatible*, anti-allergenic, antimicrobial** surface. Diffusion barrier against non-ferrous metals.	Not biocompatible
Characteristics	Very good resistance to corrosion, does not tarnish. Excellent conductivity, low contact resistance. Easy to clean, autoclavable. Gold alloy with 2% silver.	Very good conductivity. High wear resistance. Very good abrasion resistance. Used for electrical contacts e.g. for hearing aids. Easy to clean.	Very good conductivity, low contact resistance. Highest degree of purity. Can be deposited in high layer thicknesses. Can start up. Relatively soft.	Good electrical conductivity, low contact resistance. Good oxidation resistance, significantly better than silver. shine-preserving. Easy to clean, autoclavable.	Suitable for connectors with an increased number of mating cycles due to the lubricating properties of graphite. Not suitable for direct contact with the patient.
Conductivity	●●●	●●●	●●●	●●	●●●
Corrosion protection	●●●	●●●	●	●●●	●●
Degree of hardness	●●	●●●	●	●●	●●

* biocompatible: materials or assemblies that have no negative influence on living beings in their environment

** antimicrobial: a chemical substance which, in low concentrations, acts against microorganisms, either destroying them or inhibiting their growth
This is just an excerpt from our coating program which is specifically relevant to medical technology. Other coating options on request.

Cleaning Services

	Spray cleaning	Dive cleaning	Ultrasonic cleaning	Injection flooding	Dry cleaning
Description	Aqueous cleaning medium is specifically applied to the component using nozzles. Contamination is removed by the high kinetic energy of the water jet. Pressures between 2 and 20 bar.	The workpiece is immersed in the cleaning medium; the chemical effect of the cleaning medium dissolves contaminants such as oils, grease and metal shavings.	Based on the cavitation effect. Vibrations triggered by ultrasound cause tiny bubbles in the sonicated liquid. These implode and thus remove the deposited dirt particles.	The medical component is flooded with the cleaning medium in a cleaning chamber. The high volume and media pressures create a washing machine effect.	Removal of adhering contamination using vacuum technology or compressed air. Is usually used as pre cleaning in combination with other procedures.
Application example	Suitable for components with low complexity/simple geometry.	Ideal for complex geometric components. When immersed, the cleaning medium reaches all parts of the component.	Ideal for precision mechanical components with heavy contamination and the highest cleanliness requirements. Suitable for electrical and electronic components and assemblies.	Ideal for complex geometric components with hard-to-reach areas. Mainly for pre-cleaning components that are contaminated with oils, emulsions or chips.	Cleaning without the use of liquid media often used as an intermediate and preliminary cleaning.
Suitable for clean rooms	yes	yes	yes	yes	yes
Advantages	Is mainly done with water-based cleaning agents and is therefore usually environmentally friendly.	It is a relatively simple cleaning process, so it can be carried out inexpensively.	Gentle exposure to ultrasound. Very high cleaning effect, as the vacuum bubbles reach every corner of the component to be cleaned. Environmentally friendly with water-based cleaning agents.	By changing the pressure in the cleaning chamber (pressure/suction), areas can also be reached that are difficult to clean with other cleaning methods.	Re-contamination or corrosion caused by moisture will be avoided. No penetration of moisture into sensitive components is possible.

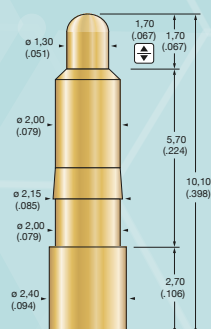
Battery Probes in Connectors

Pogo pins for general connectivity purposes are called Battery probes at FIXTEST. Battery probes are versatile spring loaded contact probes that are characterised by a robust design, a high longevity and usually a decent rated current.

They are ideal for applications with intermittent connections like in charging and docking stations or in modular designed devices. Quick changes of tool heads or battery packs do not require plugs or cables.

Spring loaded connections are stable and reliable even under rugged conditions like vibrations from vehicles or helicopters.

Our FK-714 is one example that features a bias ball design for high vibration resistance.



FK-714

Technical data

Recommended travel	1,00 mm
Temperature range	-55 - 250°C
Rated current	5 A
Typical resistance	15 mΩ



Battery Probes are often used in connector pairs with one spring loaded side and one rigid side.

We offer turnkey solutions by designing, manufacturing, assembling and wiring complete connectors.



About FIXTEST

FIXTEST Prüfmittelbau GmbH is your reliable partner for all kinds of spring loaded contact solutions.

Since our foundation in 1984, we have been designing and manufacturing spring contact probes and test fixtures for demanding applications, mainly for electrical and functional testing of electronic components and devices.

FIXTEST is based in the town of Engen near Lake Constance and the Swiss border. We are perfectly located between the Black Forest and Switzerland - both with a long history in precision watchmaking. This allows us to work with many partners with exceptional experience in precision machining and quality control.



Tuttlingen, the so called „World Centre of Medical Technology“ is only 15 minutes from Engen.

With our ISO 9001:2015 Quality Management System and ISO 14001:2015 Environmental Management System certifications, we are constantly reviewing and improving our quality control processes and our environmental impact.

We are also in the process of obtaining ISO 13485 certification.

In recent years we have focused on developing solutions to meet the growing needs of the EV and battery industries. Reducing the diameter of probes while increasing the current rating has led to amazing results in power density.

Our product range:

- Test Probes for In-Circuit & Functional Testing
- Semiconductor Fine Pitch Test Probes
- Battery Probes
- High Current Probes
- Kelvin Contacts
- High Frequency Probes
- Cable Harness Test Probes
- LED Colour Verification Sensors

- Custom Spring Probes
- Custom Test Solutions



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