

instruments

Single-Use
Ophthalmic Instruments



First Quality in Ophthalmology



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Single-Use Ophthalmic Instruments

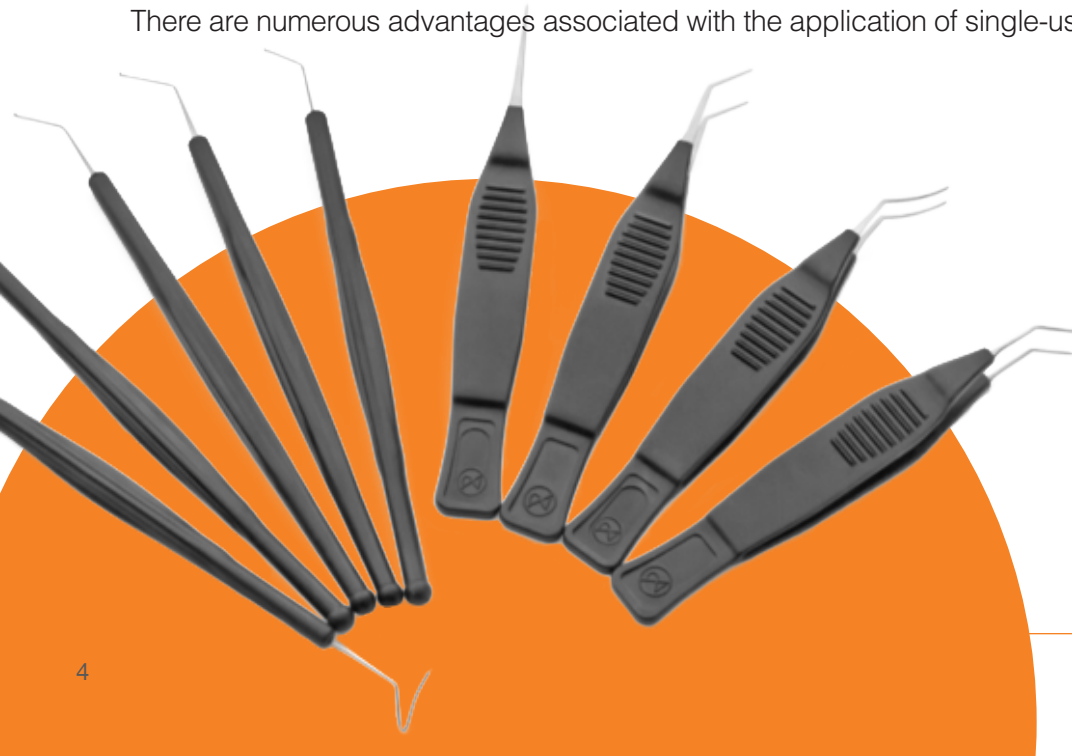
1stQ designs and manufactures high quality single-use micro-surgical instruments for ophthalmic procedures¹.

Our design process produces single-use instruments to exacting standards with an exceptional price/performance ratio.

The instrument tips are manufactured through an innovative and proprietary production technology, and the design of the ergonomic handle meets the highest requirements of precision instruments.

Because of this unique concept there is no compromise on precision when using these single-use instruments.

There are numerous advantages associated with the application of single-use instrumentation:



- Efficient use and safety
- Cost efficiency
- Guaranteed performance and sterility.



The instruments are sterilized by ethylene oxide sterilization (ETO). They come in boxes with 10 units/ each, packed in blister or pouch. The application of single-use instruments eliminates the labor-intensive processes that are necessary when reusable instruments are used, such as recording, labelling, cleaning, disinfecting, control, packing, sterilization, transport and storage together with documentation requirements². As a result, there are significant savings in resources and costs in the clinic.



In addition to function-oriented and high-quality individual components, 1stQ's product range also includes a comprehensive range of drape packs for all ophthalmic applications.

We produce customized procedure packs as per individual requirements and take care of logistic services. The packs may be complemented by special accessory products.

By using procedure packs, a variety of benefits can be achieved in the operating theatre, such as optimized material usage, reduced administrative costs, time saving, and a frictionless workflow.



Security & Sustainability

Safe

1stQ guarantees 100% sterility and functionality of the single-use instruments. The risk of surgically induced infections is significantly reduced³. Every surgical procedure is provided with a brand new instrument which has successfully passed all quality tests related to functionality and sterility.

Ecological

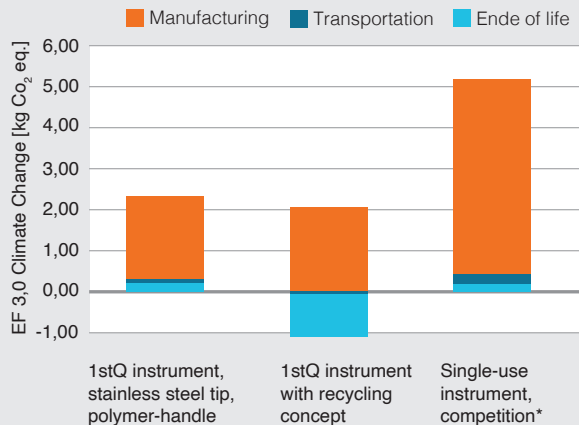
The reduction of our carbon footprint and a responsible approach to all resources are key to our processes.

The CO₂ footprint of 1stQ instruments with polymer handles is significantly lower than that of single-use instruments which are completely manufactured from stainless steel⁴.

The 1stQ recycling concept further optimizes the CO₂ balance. Only 1/5 of the CO₂ emission is incurred⁵. What we cannot reduce, we compensate through CO₂-absorbing tree plantations in Germany.



Comparison 1stQ single-use instruments with competition
Carbon footprint Screening, kg CO₂ Aq/100 units)



* conventional manufacturing technology in Asia, mainly handmade from steel

Economic

1stQ single-use instruments have a positive influence in the costs of running an operating room, achieving increased efficiencies in logistics and in the OR workflow.

The high cost for the purchase of resterilizable instruments as well as their documented reprocessing and release for each individual operation is therefore avoided.

Fair and social

The single-use instruments of 1stQ are manufactured under ethical and fair working conditions in Germany. The degree of automation is very high, so that the instrument tips require only minor finishing, while maintaining the highest level of craftsmanship.

The documentation of the work instructions is structured transparently according to ISO standard 13485:2016, so that qualification and further training of the employees is guaranteed.

Forceps

The **handles** are developed according to the IEC62366 standard (usability).

Their **patented, ergonomic design** offers an excellent tactile control, ensures precision in handling and always guarantees 100% aligned forceps tips.

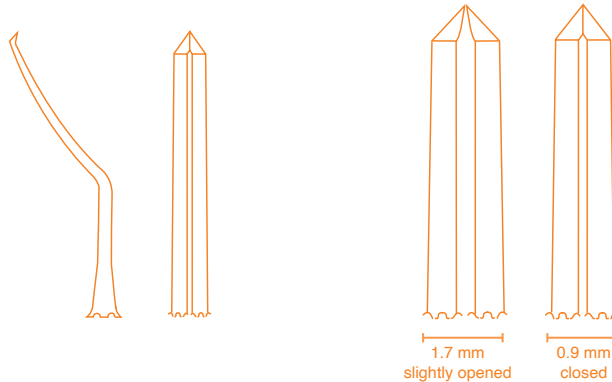
The material used has **excellent mechanical properties** and, despite its low weight, it is hard, scratch-resistant and break-proof. And it can be recycled!



The tips are manufactured in ultramodern automated production processes. This ensures consistent quality and precision.

**Capsulorhexis Forceps
G10010**

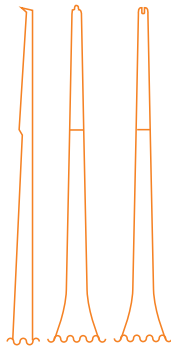
- Sharp Tips, 10.0 mm Curved Jaws
- 80 mm Handle, Overall Length 102 mm
- For sub 2.0 mm incisions



Enlarged image
G10010

**Suturing Forceps, straight
G10020**

- 0.12 mm 1 x 2 Teeth, 6.5 mm Tying Platforms
- 80 mm Handle, Overall Length 100 mm



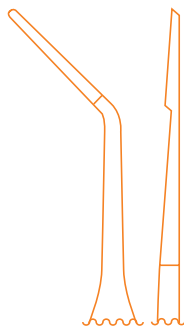
**Notched Forceps
G10032**

- 10 mm atraumatic tips, 0.25 mm notch
- 80 mm Handle, Overall Length 100 mm



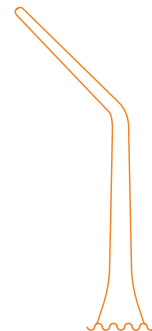
**Tying Forceps, angled
G10031**

- 6.5 mm Tying Platforms
- 80 mm Handle, Overall Length 100 mm



**IOL Forceps, angled
G10050**

- 0.5 x 8.7 mm Rounded Tips, 45° Angled Jaws
- 80 mm Handle, Overall Length 100 mm



Hooks, Manipulators, Choppers



The **patented, ergonomic handle design** of the single and double-ended instruments simplifies surgical application through excellent tactile control.

The instruments can be used for safe intraocular application with the fingertips and the design allows the orientation of the instrument tip to be detected without the need to look.

The handle made of copolymer (ABS) has **numerous positive mechanical properties**. Despite its low weight, it is hard, scratch-resistant, break-resistant, easy to use - and can be recycled.

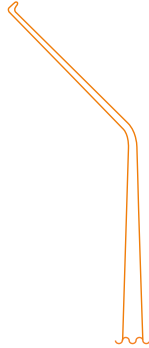
The tips are manufactured in ultramodern automated production processes. This ensures a high consistent quality of the micro-precision instruments.



Hooks, Manipulators

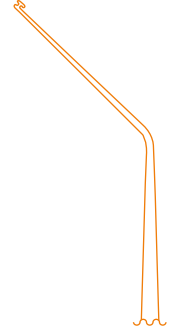
Sinskey Hook, angled G20030

- Ø 0.2 mm x 0.5 mm Hook, 10 mm 45° Shaft
- 100 mm Handle, Overall Length 123 mm



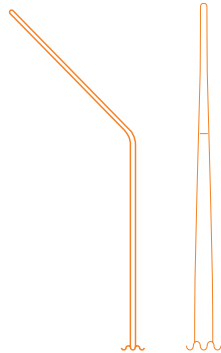
Push-Pull Hook, angled G20070

- 0.2 mm x 0.5 mm Hook, 10 mm 45° Shaft
- 100 mm Handle, Overall Length 123 mm



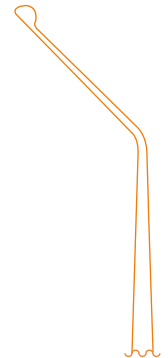
Spatula 0.50 x 0.30, angled G20040

- 0.5 mm x 0.3 mm x 10 mm Flattened Tip, 45° Shaft
- 100 mm Handle, Overall Length 126 mm



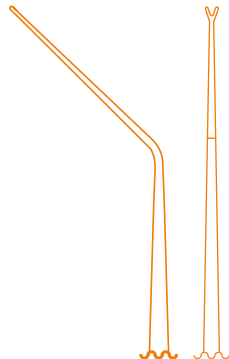
Drysdale Manipulator, angled G20090

- 0.9 mm x 1.3 mm Paddle Tip, 10 mm 45° Shaft
- 100 mm Handle, Overall Length 123 mm



Y-Hook, angled G20041

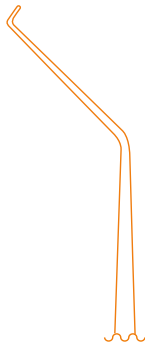
- 2 x 0.12 mm Tips, 10 mm 45° Shaft
- 100 mm Handle, Overall Length 126 mm



Choppers

Nagahara Phaco Chopper, angled G20050

- Horizontal Chopper
0.2 mm x 1.35 mm Wedge
Tip, 10 mm 45° Shaft
- 100 mm Handle,
Overall Length 123 mm



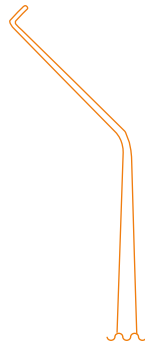
Neuhann Chopper, angled G20052

- Vertical Chopper
0.6 mm x 1.40 mm Tip,
Semi-Sharp, 10 mm 30° Bent Shaft
- 100 mm Handle,
Overall Length 123 mm



Phaco Chopper Stop & Chop, angled G20051

- 0.2 mm x 1.50 mm Cylindrical
Tip, 10 mm 45° Shaft
- 100 mm Handle,
Overall Length 123 mm



Double-Ended Instruments

The use of double-ended instruments further reduces the number of instruments on the operating table.

All tips of the single ended instruments can be integrated into the double ended instruments and combined with each other.

Positive sustainability effects are achieved at the same time: less processed raw material, reduction of packaging, lower CO₂ emissions.



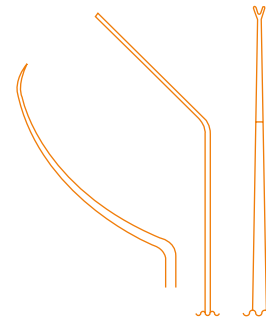
Neuhann Chopper –
Spatula, double-end
G20120

Combination of G20052
(Neuhann Chopper) and
G20040 (Phaco-Spatula)



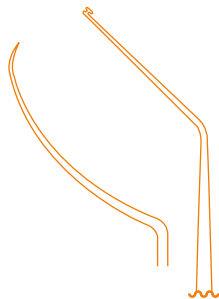
Neuhann Chopper –
Y-Hook, double-end
G20122

Combination of G20052
(Neuhann Chopper) and
G20041 (Y-Hook)



Sauder Chopper –
Push-Pull, double-end
G20121

Combination of G20052
(Neuhann Chopper) and
G20070 (Push-Pull Hook)

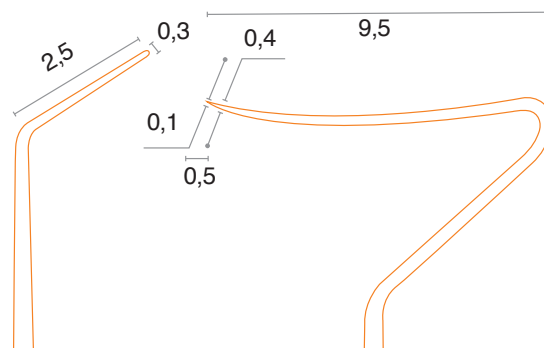
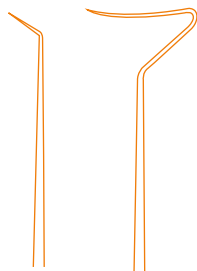


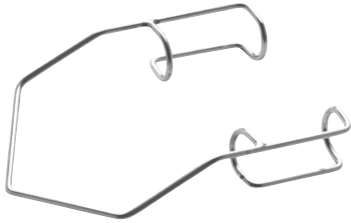
Lasik Instrument

Lasik – Spatula, double-end
G20110

For the manipulation of the
corneal flap

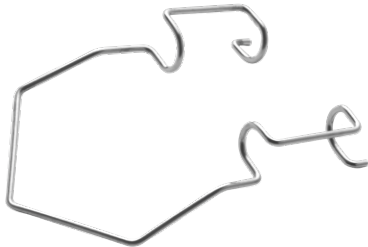
Combination of Spatula and
Manipulator





**Barraquer Wire Speculum
G30010**

- 6.5 mm x 14.5 mm
Closed Blades
 - Ø 1 mm Wire
 - 30 mm Wide
-



**Kratz-Barraquer
Wire Speculum
G30020**

- 6.5 mm x 14 mm
Open Blades
 - Ø 0.9 mm Wire
 - 30 mm Wide
-

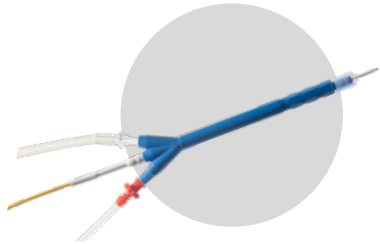


**Barraquer Wire Speculum
G30030**

- 6.5 mm x 14.5 mm
Closed Solid Blades
 - Ø 1 mm Wire
 - 30 mm Wide
-

RLE or Cataract surgery with 100% Single-Use Instruments!

Through Q instruments Sets surgery becomes safer and more economical.



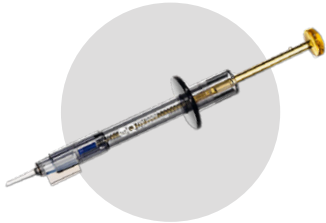
Laser Handpiece

Thanks to the application of the CETUS NanoLaser from A.R.C. Laser, Nuremberg, the nucleus is smoothly photofragmented through a single-use handpiece. The advantages: Very low and thermoneutral use of energy, economical and safe.



I/A Handpieces, Cannulas

Bimanual handles with irrigation opening at the front or coaxial I/A-Handles for 25G - the single-use I/A line offers a wide range of popular and special cannula designs.



IOL Injection Systems

1stQ recommends preloaded IOL systems. Furthermore the non-preloaded 1stINJECT Instrument for sub 2.0 mm incision technique is still available.



Procedure-Packs and Instrument-Sets

We produce customized procedure packs as per individual requirements and take care of logistic services. The packs may be complemented by special accessory products such as special drapes or in combination with single-use instruments.

The complete surgery can be performed with single-use products using the appropriate devices.

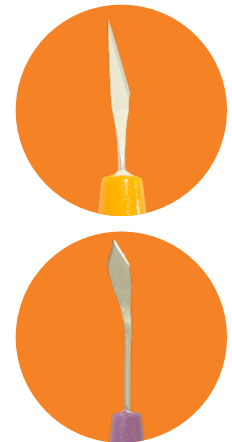
1st EDGE Microsurgical Knives

We are developing and producing medical products that are setting the pace.

1st *EDGE* is an innovative cutting edge design. Micro-thin radii create an edge that engages tissue with only few contact points for lower coefficient of friction and minimized penetration force. Reduced penetration force promotes more precise cellular dissection resulting in superior wound architecture.

Along with a „smarter“ design, the elemental edge of our double bevelled phaco slit knife is also extremely thin. Measuring in at 0.1 mm, it is 40 % thinner than other standard slit knives. This thinness, combined with the 1st *EDGE* finishing technology, provides knives with a diamond-like sharpness unparalleled in standard knives.

1st *EDGE* Knives come in boxes with 6 units/ each.



References

1. Development and production controlled by 1stQ management. Legal Manufacturer according MDD/MDR: Gemma Medical AG, 2555 Bruegg, Mattenstrasse 11, Switzerland, www.gemma-medical.ch, CE0297
2. Comparison of the processes preparation of resterilizable instruments and use of disposable instruments
 - a) reprocessing cycle of reusable instruments according to the BfArM recommendation:
 1. appropriate preparation (pretreatment, collection, pre-cleaning, disassembly, transport); 2. cleaning; 3. in-
intermediate rinsing ; 4. disinfection; 5. rinsing and drying; 6. testing for cleanliness and integrity of surfaces; 7.
maintenance and repair; 8. testing of technical-functional safety; 9. labelling; 10. packaging; 11. sterilization;
12. Release
 - b) Clinical Center of the University of Munich LMU, 9th Steri-Fach-Forum
Complex processes in the preparation, documentation and logistics of reusable instruments. The use of
single-use instruments eliminates the labor-intensive processes and the need for Documentation require-
ments. Additional resources are created, costs are minimized. Instrument cycle Single-use instruments:
1. delivery; 2. use; 3. disposal/collection, recycling
3. Reducing the risk of operation-induced infections
 - a) Sklar Research, Marielba Cancel: disposable medical instruments – the new trend in healthcare, 09/2016
 - b) Ocular Surgery News, Christian Scheib, MD: Single-Use-Instruments deserve consideration in eye
surgery, 12/2016
 - c) CRST Europe, Thierry Amzallag, MD: Single-Use-Instruments Becoming Better Options, 06/2010
 - d) Medical Devices, Market Analysis Singe-Use-Instruments in Ophthalmology, Report Grand View
Research, 10/2019
- 4., 5. Reduction of greenhouse gas emissions „The CO2 footprint of 1stQ single-use instruments with polymer
handles is significantly lower than single-use instruments made entirely of steel. The 1stQ recycling concept
further optimizes the CO2 balance.” 1stQ, Techprotect, screening of the carbon footprint for single-use medical
instruments (SUI), Fraunhofer Institute for Building Physics IBP, life cycle assessment according to ISO 14040
and 14044, data on file.



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