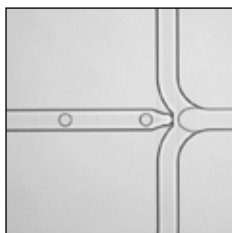# micronit
M I C R O F L U I D I C S

MICROFLUIDIC

RESEARCH PRODUCTS

01/2016

Together with our customers, suppliers and employees
and making use of our knowledge of bio-, micro- and nanotechnology,
we design, develop and produce innovative solutions that contribute
to the welfare of people and their environment.

The Micronit Team

www.micronit.com

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FLUIDIC CONNECT

A USER-FRIENDLY LAB-ON-A-CHIP PLATFORM

The lab-on-a-chip platform Fluidic Connect offers a user-friendly way of creating your own lab-on-a-chip setup within minutes of time. The microfluidic chips within the platform enable micro reaction, cell analysis, droplet generation and many more. The chipholders are durable and robust and compatible with standard laboratory equipment such as syringe pumps and upright and inverted microscopes.

Use Fluidic Connect for your lab-on-a-chip experiments and reduce your time to obtain results!

Key features of Fluidic Connect:
• User-friendly, leak-free connections
• Chemically inert materials
• Large chip viewing area
• Compatible with upright and inverse microscopes
• Building block in a modular system
• Standard and custom chips available

	Fluidic Connect PRO	Fluidic Connect 4515
Chipholders		
Sealing Mechanism	Load 'n Seal	Slide 'n Connect
Chipholder Material	Aluminium	Stainless Steel
Dimensions (L, W, H)	128 x 85,4 x 20 mm	80 x 55 x 9.5 mm
Max. Operating Temperature	80ºC	80ºC (Teflon), 50ºC (Fused Silica)
Max. Operating Pressure	**10 bar**	**100 bar**
Sealing Material	Perlast (FFKM)	PEEK, FEP
Compatible Chip Thickness	1.1 – 2.0 mm	1.1 – 2.0 mm
Compatible Chip Sizes	15 x 15 mm 15 x 30 mm 15 x 45 mm 15 x 60 mm 15 x 90 mm 30 x 30 mm 30 x 45 mm 30 x 60 mm 30 x 90 mm 25 x 75 mm*	15 x 45 mm
Compatible Tubing	1/16 inch OD Teflon, Stainless Steel, PEEK	1/16 inch OD Teflon, Stainless Steel, PEEK , 375 µm OD Fused Silica

*) Microscope Slide Format

FLUIDIC CONNECT PRO CHIPHOLDER

The Load 'n Seal design assures tight connections without the possibility of breaking precious microfluidic chips. By cleverly making use of inserts the holder can easily be adapted to chips of different sizes and thicknesses. It is even capable of connecting multiple chips at once.

Special Features:
• Fast, easy and robust fluidic connections
• Future proof thanks to replaceable inserts
• Holder defined sealing to prevent chip cracking
• Simultaneous connection of multiple chips
• Large chip viewing area possible
• Compatible with upright and inverted microscopes
• Able to connect chips from 15 x 15 mm up to 30 x 90 mm

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO Chipholder incl. inserts for Standard 15 x 45 mm Micronit Chips	Chipholder including inserts for Micronit Standard Chips	FC_PRO_CH4515	**1283**
Fluidic Connect PRO Chipholder Frame	(excluding inserts)	FC_PRO_CH	**1025**

Inserts
for Fluidic Connect PRO Chipholder

Description	Additional Information	Product Code	Price €
Fluidic PRO 4515 Inserts for standard 15 x 45 mm Micronit chips in polymer cartridge	1 x top insert + 1 x bottom insert + adaptors for thin bottom chips	FC_PRO_IN_4515	**258**
Fluidic PRO 1515 Inserts for 15 x 15 mm sized chips (without cartridge)	1 x top insert + 1 x bottom insert + adaptors for thin bottom chips	FC_PRO_IN_1515	**258**
Fluidic PRO 15 Inserts for 15 mm wide chips (without cartridge)	2 x top insert + 2 x bottom insert + adaptors for thin bottom chips	FC_PRO_IN_15	**258**
Fluidic PRO 30 Inserts for 30 mm wide chips (without cartridge)	2 x top insert + 2 x bottom insert + adaptors for thin bottom chips	FC_PRO_IN_30	**258**

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Inserts
for Fluidic Connect PRO Chipholder

Description	Additional Information	Product Code	Price €
Fluidic PRO Custom Inserts for chips from 15 x 15 mm to 30 x 90 mm	Custom made inserts, top and bottom set	FC_PRO_IN_C	**on request**

Connection Kits
for Fluidic Connect PRO Chipholder

Description	Additional Information	Product Code	Price €
Teflon Connection Kit contains five meter capillaries (1/16'' OD, 250 µm ID), five nuts	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	FC_PRO_TF_KIT	**139**
Tubing to Pump Connection Kit contains luer-lock adaptors and unions for 1/16 inch tubing	Connects the tubing to your pump or other tubing	FC_CO_KIT	**98**
Electrical Connection Kit PRO contains 5 cables with probes and banana plug connector and a set of ferrules	Connects your device to with standard laboratory equipment	FC_PRO_EL_KIT	**253**
PEEK Connection Kit Contains five meter tubing (1/16'' OD, 250µm ID), and 5 FFKM perfluoroelastomer ferrules (Perlast)	Excellent chemical resistance to a wide range of chemicals Bio-compatible Excellent steam resistance Temperature resistant (up to 100 °C)	FC_PRO_PK_KIT	**149**

Filters
for Fluidic Connect PRO chipholder

Description	Additional Information	Product Code	Price €
Set of 2 in-line filters material: PEEK, 2 µm porosity	contains 4 connectors placement between PTFE tubing with a 1/16'' OD	FC_FILTERS	**119**

Accessories
for Fluidic Connect PRO chipholder

Description	Additional Information	Product Code	Price €
Pack of 5 FFKM (Perlast) perfluoroelastomer nuts	Re-usable, excellent chemical resistance, excellent steam resistance, high temperature resistance, FDA, USP Class VI and 3A compliant	FC_PRO_FFKM_KIT.05	**98**
Pack of 10 FFKM (Perlast) perfluoroelastomer nuts		FC_PRO_FFKM_KIT.10	**155**
Teflon Plugs Contains 10 PTFE (Teflon) plugs	To block channel inlet / outlets	FC_PTFE_PLUG	**21**

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FLUIDIC CONNECT 4515 CHIPHOLDER

The basic tool for lab-on-a-chip experiments. Fluidic Connect 4515 is a user-friendly chipholder providing leak-free fluidic connections. It enables to work safely with high pressure (up to 100 bar / 1450 psi). Includes inverter frame, for use on upright microscopes, and user manual.

Special Features:
- Easy chip handling thanks to polymer cartridge
- High pressure connections
- Low dead-volume connections
- Electrical connections
- Compatible with all standard Fluidic Chips
- Compatible Fluidic PRO 45 x 15 mm custom chips

Description	Additional Information	Product Code	Price €
Fluidic Connect 4515 Chipholder		FC_FC4515	**1283**

Chip holder selection

In the following cases Micronit advises to use the Fluidic Connect 4515 holder instead of the Fluidic Connect PRO holder.

- Fluidic pressures above 10 bar
- With Fused Silica capillaries (need for minimal dead volume)
- With Stainless steel tubing
- When a smaller footprint is necessary

Connection Kits
for Fluidic Connect 4515 Chipholder

Description	Additional Information	Product Code	Price €
Teflon Connection Kit; Contains five meter capillaries (1/16" OD, 250 µm ID), five ferrules and nuts	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	FC_TF_KIT	**139**
Fused Silica Connection Kit; Contains five meter capillaries (375µm OD, 150 µm ID), five ferrules and nuts	Ideal for low dead volume (20-90 nl) connections and thin bottom chips. Chemically resistance	FC_FS_KIT	**294**
Stainless Steel Connection Kit; contains five pieces of 50 cm tubing (1/16" OD, 250 µm ID), five ferrules and nuts	Ideal for high pressure experiments where a solid connection is required	FC_SS_KIT	**180**
Electrical Connection Kit; contains five cables with a nut and probe (OD=0.76 mm) with banana plug connector. Maximum voltage 30V (DC), and 60V (AC)	Makes easy connections to on-chip electrodes	FC_EL_KIT	**160**
Tubing to Pump Connection Kit; contains luer-lock adaptors and unions for 375 µm OD fused silica, 1/16 inch teflon of stainless steel tubing	Connects the tubing to your pump or other tubing	FC_CO_KIT	**98**

Accessories
for Fluidic Connect 4515 chipholder

Description	Additional Information	Product Code	Price €
5 Nanoport Nuts and Ferrules	Compatible with the FC_FS_KIT	FC_NP_KIT	**201**
5 Flat-bottom Nuts and Ferrules	Compatible with the FC_TF_KIT and FC_SS_KIT	FC_FB_KIT	**98**

FLUIDIC CHIPS

All the chips are made of borosilicate glass and are delivered in a polymer (PP) cartridge of 75 x 25 mm which is compatible with the Fluidic Connect 4515 chipholder and the Fluidic Connect PRO chipholder.

DROPLET GENERATOR CHIPS

Microfluidic droplet generators are excellent tools for generating highly reproducible microsized droplets with much higher precision and repeatability compared to conventional methods. Two designs are available; a focussed flow and a T-shaped design. Typical droplet sizes are 10-70 micrometer in diameter.
Uncoated droplet generators are suitable for making oil-in-water droplets. The hydrophobic coated droplet generators are suitable for making water-in-oil droplets.

T-Shaped
Droplet Generator

Focussed Flow
Droplet Generator

Droplet Generator Chips - uncoated

Description	Product Code	Price €
Focussed Flow Droplet Generators (small droplets) Channel Width: 100 μm Channel Depth: 20 μm Droplet Size: 10-50 μm	FC_FFDG.2_PACK	**121** Pack of 3 Chips
Focussed Flow Droplet Generators (large droplets) Channel Width: 500 μm Channel Depth: 100 μm Droplet Size: 50-100 μm	FC_FFDG.2.50_PACK	**121** Pack of 3 Chips
T-Shaped Droplet Generators Channel Width: 100 μm Channel Depth: 20 μm Droplet Size: 10-50 μm	FC_TSDG.2 _PACK	**121** Pack of 3 Chips

Coated Droplet Generator Chips

Description	Product Code	Price €
Coated Focussed Flow Droplet Generators (small droplets) Channel Width: 100 µm Channel Depth: 20 µm Droplet Size: 10-50 µm	FC_FFDG.C.2_PACK	**214** Pack of 3 Chips
Coated Focussed Flow Droplet Generators (large droplets) Channel Width: 500 µm Channel Depth: 100 µm Droplet Size: 50-100 µm	FC_FFDG.C.2.50_PACK	**214** Pack of 3 Chips
Coated T-Shaped Droplet Generators Channel Width: 100 µm Channel Depth: 20 µm Droplet Size: 10-50 µm	FC_TSDG.2 _PACK	**214** Pack of 3 Chips

Do you want different features for your droplet generators?

Please ask us to have your own custom made droplet generator, e.g.
• With more inlets or outlets
• With different channel parameters
• With integrated electrodes
• In Fused Silica / Quarz glass

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MICROREACTOR CHIPS

Micronit offers different standard microreactor configurations. The microreactor chips have two inlets and one outlet. Two fluids can be injected separately and will mix by diffusion, without turbulence. The chemical reaction time of the fluids is determined by the pressure or the channel length. The FC_R50.332.3 has a thin 145 micrometer bottom plate making it suitable for confocal microscopy.

Glass Microreactor Chips

Description	Product Code	Price €
Thin Bottom Microreactor Chips* Channel length: 330 mm (meander, 2 inlets, 1 outlet) Channel width: 50 μm Channel depth: 20 μm Internal Volume: 0.3 μl	FC_R50.332.3_PACK	**121** Pack of 3 Chips
Microreactors (0.3 Microliter) Channel length: 330 mm (meander, 2 inlets, 1 outlet) Channel width: 50 μm Channel depth: 20 μm Internal Volume: 0.3 μl	FC_R50.332.2_PACK	**121** Pack of 3 Chips
H-Microreactor (2 inlets, 2 outlets) Channel length: 15 mm (straight channel, 2 inlets, 2 outlets) Channel width: 150 μm Channel depth: 150 μm Internal Volume: 1.25 μl	FC_H150.015.2_PACK	**121** Pack of 3 Chips

*) If you use the Fluidic Connect 4515 Chipholder it is recommended to use fused silica connections (FC_FS_KIT) with nanoport ferrules in combination with the thin bottom chips.

Polycarbonate Microreactor Chips

Description	Product Code	Price €
Polycarbonate Microreactor Chips (6 Microliter) Channel length: 332 mm (meander, 2 inlets, 1 outlet) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 6 µl	FC_R150.332.2_PC_PACK	**121** Pack of 3 Chips
Polycarbonate Microreactor Chips (13 Microliter) Channel length: 760 mm (meander, 2 inlets, 1 outlet) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 13 µl	FC_R150.676.2_PC_PACK	**121** Pack of 3 Chips
H-Microreactor (2 inlets, 2 outlets) Channel length: 15 mm (straight channel, 2 inlets, 2 outlets) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 1.25 µl	FC_H150.015.2_PC_PACK	**121** Pack of 3 Chips

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Cyclic Olefin Copolymer Microreactor Chips

Description	Product Code	Price €
Cyclic Olefin Copolymer Microreactor Chips (6 Microliter) Channel length: 332 mm (meander, 2 inlets, 1 outlet) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 6 µl	FC_R150.332.2_COC_PACK	**121** Pack of 3 Chips
Cyclic Olefin Copolymer Microreactor Chips (13 Microliter) Channel length: 760 mm (meander, 2 inlets, 1 outlet) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 13 µl	FC_R150.676.2_COC_PACK	**121** Pack of 3 Chips
H-Microreactor (2 inlets, 2 outlets) Channel length: 15 mm (straight channel, 2 inlets, 2 outlets) Channel width: 150 µm Channel depth: 110 µm Internal Volume: 1.25 µl	FC_H150.015.2_COC_PACK	**121** Pack of 3 Chips

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MICROMIXER CHIPS

Triple layer chips offering very short mixing times, ideally mixed conditions and efficient mixing even at low pressures. The structures are Powderblasted.
Use the tear-drop mixer for mixing of fluids with low Reynolds numbers (Re<100) and the swirl mixer for high Reynolds numbers (Re>50).

Teardrop Micromixer

Swirl Micromixer

Description	Product Code	Price €
Teardrop Micromixers Channel Width: 200 µm Channel depth: 150 µm Internal Volume: 2 µl	FC_TD26_PACK	**340** Pack of 2 Chips
Swirl Micromixer Channel Width: 200 µm Channel depth: 150 µm Internal Volume: 1 µm	FC_SW11_PACK	**340** Pack of 2 Chips

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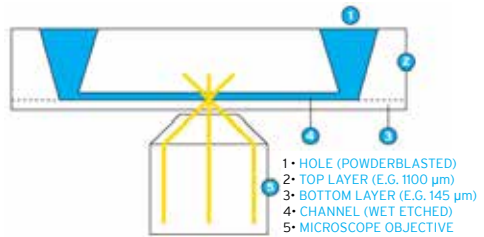M I C R O F L U I D I C S

FLOWCELLS

These thin bottom flowcells are ideal for experiments such as cell, particle or DNA imaging. One chip contains 3 flow cells of different widths.
The thin 145 micrometer bottom plate of the FC_FLC50.3 makes it suitable for confocal microscopy.

Description	Product Code	Price €
Thin Bottom Flow Cell Channel Widths: 500 µm, 1000 µm, 1500 µm Channel Depth: 50 µm Internal Volume: 1.0 µl, 1.9 µl, 2.9 µl	FC_FLC50.3_PACK	**121** Pack of 3 Chips

If you use the Fluidic Connect 4515 Chipholder it is recommended to use fused silica connections (FC_FS_KIT) with nanoport ferrules in combination with the thin bottom chips.

1 • HOLE (POWDERBLASTED)
2 • TOP LAYER (E.G. 1100 µm)
3 • BOTTOM LAYER (E.G. 145 µm)
4 • CHANNEL (WET ETCHED)
5 • MICROSCOPE OBJECTIVE

CROSS CHANNEL CHIPS

Microfluidic chips with two channels crossing each other. Also suitable for focused flow applications or droplet generation as well as capillary electrophoresis. The FC_X3550CH.3 has a thin 145 micrometer bottom plate making it suitable for confocal microscopy.

Description	Product Code	Price €
Cross Channel Chips Channel Width: 50 µm Channel Depth: 20 µm Internal Volume: 0.1 µl	FC_X3550CH.2_PACK	**121** Pack of 3 Chips
Cross Channel Chips (Thin Bottom)* Channel Width: 50 µm Channel Depth: 20 µm Internal Volume: 0.1 µl	FC_X3550CH.3_PACK	**245** Pack of 3 Chips

*) If you use the Fluidic Connect 4515 Chipholder it is recommended to use fused silica connections (FC_FS_KIT) with nanoport ferrules in combination with the thin bottom chips.

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ENHANCED OIL RECOVERY CHIPS

Pack of 3 chips containing a channel structure representing an actual physical rock structure. The chips contain either a uniform, random or a physical rock structure network. These microfluidic chips can be used in Enhanced Oil Recovery research, reservoir engineering, as well as for environmental research. They are for instance used to verify simulation models of rock-pore structures in the EOR field.

Physical Rock network   Random Network   Uniform Network

Description	Product Code	Price €
3-pack EOR chips (Physical Rock Network) Top Thickness 1100µm Bottom Thickness: 700µm Channel Width: 50µm Channel Depth: 20µm	FC_EOR.PR.20.2_PACK	**510** Pack of 3 Chips
3-pack EOR chips (Random Network) Top Thickness 1100µm Bottom Thickness: 700µm Channel Width: 50µm Channel Depth: 20µm	FC_EOR.RN.20.2_PACK	**510** Pack of 3 Chips
3-pack EOR chips (Uniform Network) Top Thickness 1100µm Bottom Thickness: 700µm Channel Width: 50µm Channel Depth: 20µm	FC_EOR.UN.20.2_PACK	**510** Pack of 3 Chips

APPLICATION EXAMPLE - ROCK PORE STRUCTURE SIMULATION CHIPS

Micronit also has yearlong experience in making micro models for pore structure research, e.g. for the oil and petrol industries and research. Random patterns and uniform patterns are possible.

• Pore dimensions from 10 µm to 1mm to simulate multiple types of rock like sandstone, limestone, basalt and others
• Pores in glass for perfect optical access
• Monitoring surfactants, gases, oil and aqueous streams through pores
• Solid glass for high pressure (100 bar / 1500psi) and high temperature (100°C)
• Options to go even higher
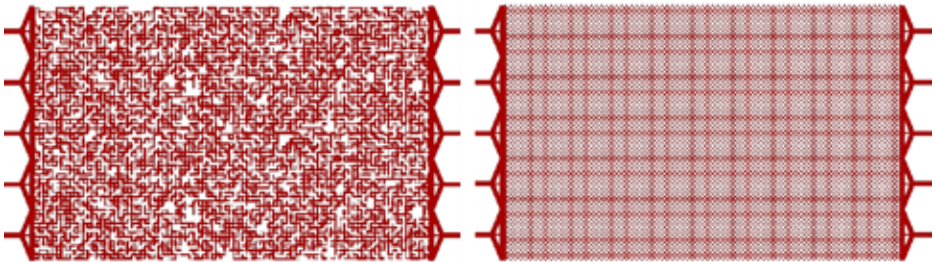
Please ask our experts to have your custom chips made.

FLUIDIC PRO - YOUR CUSTOM CHIP

Micronit Microfluidics BV does not only offer standard products, but also customized microfluidic chips. An affordable way of ordering custom chips compatible with your Fluidic Connect PRO chipholder is to have them developed according to the Fluidic PRO prototyping service. A few design guidelines will reduce the cost and speed up the delivery time.

The Fluidic PRO prototyping service allows your microfluidic designs to be manufactured in a class 100 cleanroom by professionals. Fluidic PRO enables you to stay focussed on your research. It saves you time both in design and lab hours, speeds up your research, makes you more productive and allows you to publish sooner.

Fluidic PRO offers maximum freedom through a wide range of possibilities.

• Customized designs
• Glass or fused silica
• Wide range of channel depths and widths
• Thick- or thin-bottom chips, suitable for confocal microscopy
• Integrated electrodes (Pt, Au, ...)
• Up to 4 different designs per batch
• Small batches starting with only 12 chips

With more than a decade of experience in microfluidic chip manufacturing for science and industry, Micronit is the perfect partner to outsource your microfluidic chip needs.

Standard options include:
• Single depth etched
• Single depth etched with thin bottom
• Single depth etched with electrodes
• Double depth etched
• Fused silica single depth etched
• Single depth powderblasted

How to proceed?
• **Make up to 4 different designs** of a desired channel layout. These can be presented as CAD designs but simple sketches or just wording is also fine.
• **Contact the Micronit sales team** to discuss your requirements and receive a quotation.
• After you have placed the order our microfluidics design experts will transform your designs to CAD designs. We will send the designs back to you for a final check, and after your approval we will start processing.
• **After 4 to 5 weeks**, you will receive your chips and you can start your research.
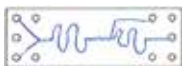
MICROREACTORS

MILLILITER REACTOR

Microreactor technology (MRT) or flowchemistry is an upcoming technology in the pharmaceutical industry and fine-chemistry. The excellent mass- and heat-transfer properties of microreactors give this technology many advantages over batchwise chemistry:

- Higher yield and selectivity
- Inherently safer processes
- Straight forward scaling-up
- Continuous production possible
- Improved reactor control
- Enables new chemistry

MICROREACTOR 1507

The Microreactor 1507 features two inlets for reagents and one for a quench. When the quench is not in use it can be blocked. Static split and recombine structures facilitate mixing at low Reynolds numbers creating almost instant mixing and excellent heat and mass transfer.

Description	Operating Pressure (bar)	Internal Volume (ml)	Channel Width (mm)	Channel Depth (mm)	Product Code	Price €
Microreactor 1507	10	2.4	1.5	1.1	MR_1507.4_MXQ_01	1545
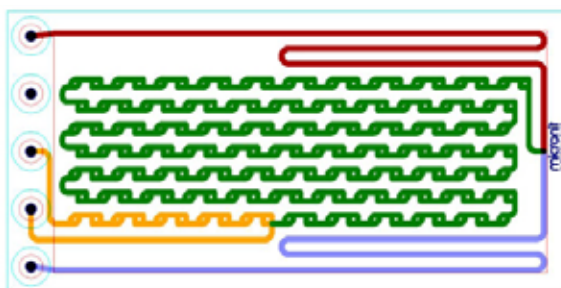
CONNECTION FRAME 1507

The connection frame 1507 is compatible with microreactors of 15 cm x 7 cm. The connection block is made of high grade durable stainless steel to prevent corrosion. The aluminium frame protects the glass reactor during use in the lab. It can easily be connected to peripheral equipment such as HPLC pumps or syringe pumps with Connection Kit 1507.

Operating range (pressure)	0 – 10 bar / 0 – 145 psi
Maximum working temperature	max 80 ºC (teflon connections)
Dimensions	15 x 7.5 x 2 cm
Material	connection block: Stainless steel frame: Aluminium

Description	Product Code	Price €
Connection Frame 1507 Chipholder for easy connection of the Microreactor 1507	MR_FRAME_1507	**1025**

CONNECTION KITS 1507

Contains five meter teflon tubing (1/4" – 28 UNF), five ferrules, and five nuts. The force necessary to tighten the fittings is regulated by the nuts themselves this prevents over tightening.

Description	Product Code	Price €
Connection Kit (1507) Tubing, Ferrules and Nuts	MR_KIT_TF	**155**

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MF STARTER KIT

If you are looking for an all-in-one solution to start your research or you want to do your first steps in microfluidics or need a initial setup for the first steps in your microfluidic product development. Micronit's Microfluidic Starter Kit is your solution.

The Microlfuidic Starter Kit includes:

• Microfluidic chips
• Fluidic Connect PRO Chipholder
• Syringe pumps
• Accessories

Microfluidic chips

A selection of three microfluidic chips: droplet generator, micromixer chip and a microreactor chip. You can choose the chips from the pages 8, 9 and 10 in this brochure.

Fluidic Connect PRO Chipholder

The Load 'n Seal design assures tight connections without the possibility of breaking precious microfluidic chips. By cleverly making use of inserts the holder can easily be adapted to chips of different sizes and thicknesses. It is even capable of connecting multiple chips at once.

Special Features:
• Fast, easy and robust fluidic connections
• Future proof thanks to replaceable inserts
• Holder defined sealing to prevent chip cracking
• Simultaneous connection of multiple chips
• Large chip viewing area possible
• Compatible with upright and inverted microscopes
• Able to connect chips from 15 x 15 mm up to 30 x 90 mm

Syringe Pumps

2 x NE-300 Syringe pumps. These are easy-to-use infusion
pumps with a broad range of flow rates for your
microfluidic applications.

Accessories

Everything you need for starting and running your own
microfluidic system

Description	Product Code	Price €
MF Starter Kit	MF_STARTER_KIT	**4750**

ELECTRICAL IMPEDANCE SPECTROSCOPY PLATFORM

With the FC_Spectro you can make fluidic and electrical connections in a split-second. The platform is easy to set up and is compatible with standard laboratory equipment. The shielded coax cables have SMA connectors which are compatible with most data acquisition measurement systems.

Special Features:

• Fast, easy and robust fluidic and electrical connections;
• durable light-weight design;
• holder defined sealing to prevent chip cracking;
• large chip viewing area possible;
• compatible with upright and inverted microscopes.

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO Chipholder incl. inserts and 8 shielded COAX Cables	The cables have a SMA connector	FC_SPECTRO	**2009**

EIS Chips

The electrodes configuration can be used for both in plane and out plane measurements.

Description	Product Code	Price €
Electrical Impedance Spectroscopy Chips Top Thickness: 1100 µm Bottom Thickness: 700 µm Channel width: 30 µm Channel depth: 28 µm Spacing between electrodes: 20 µm Height difference top - bottom electrodes: 28µm	FC_EIS30.30.2_PACK	**407** Pack of 2 Chips

Connection Kits
for Fluidic Connect PRO Chipholder

Description	Additional Information	Product Code	Price €
Teflon Connection Kit contains five meter capillaries (1/16" OD, 250 µm ID), five nuts	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	FC_PRO_TF_KIT	**139**

RESEALABLE FLOW CELL PLATFORM

The Fluidic Connect PRO Resealable Chip holder with inserts is designed to connect our straight and extended resealable flow cell chips. The Load 'n Seal design asures tight connections without the possibility of breaking the resealable flow cell chips. To-gether with the Teflon Connection Kit PRO, that contains the tubing and the perfluo-roelastomer ferrules, you have the best solution for the resealable flow cells.

Special Features:
• Fast, easy and robust fluidics connections
• Future proof thanks to replaceable inserts
• Durable light-weight design
• Holder defined sealing to prevent chip cracking
• Large chip viewing area possible
• Compatible with upright and inverted microscopes

Fluidic Connect PRO Resealable Chipholder

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO Resealable Incl. inserts for 15x45 mm Micronit resealable flow cells	Chipholder including inserts for Micronit resealable flow cells	00746	**1645**

Resealable Flow Cell Chips

These resealable flowcells are ideal for experiments were access to the fluidic surfaces is necessary either before, after or before and after performing microfluidic experiments. Application examples are cell culturing, enzyme reaction studies, and sensor integration

Description	Product Code	Price €
6-Pack Resealable FC 4515, Extended 10mm Acccess to fluidic surfaces Internal Volume: 43 µl	00740	**480** Pack of 6 Sets
6-Pack Resealable FC 4515, Straight 5mm Acccess to fluidic surfaces Internal Volume: 12 µl	00741	**480** Pack of 6 Sets

Connection Kits
for Fluidic Connect PRO Resealable chipholder

Description	Additional Information	Product Code	Price €
Teflon Connection Kit PRO contains five meter capillaries (1/16" OD, 250 µm ID), five nuts	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	FC_PRO_TF_KIT	**139**
Teflon Connection Kit PRO, 1mm ID contains 15 meter capillaries (1/16" OD, 1 mm ID), five ferrules	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	00753	**225**

Inserts
for Fluidic Connect PRO Resealable chipholder

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO Insert Resealable for 15x45 mm Micronit resealable flow cells	1 x top insert + 1 x bottom insert + adaptors for straight and extedend resealable flow cells	00745	**650**

Accessories
for Fluidic Connect PRO Resealable chipholder

Description	Additional Information	Product Code	Price €
Pack of 5 FFKM (Perlast) perfluoroelastomer nuts	Re-usable, excellent chemical resistance, excellent steam resistance, high temperature resistance, FDA, USP Class VI and 3A compliant	FC_PRO_FFKM_KIT.05	**98**
Pack of 10 FFKM (Perlast) perfluoroelastomer nuts		FC_PRO_FFKM_KIT.10	**155**

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ORGAN-ON-CHIP PLATFORM

The Load 'n Seal design asures tight connections without the possibility of breaking the Organ-On-Chip devices. Together with the Teflon Connection Kit PRO, 1mm ID, that contains the tubing and the perfluoroelastomer ferrules, you have the best solution for the Organ-On-Chip devices.

Special Features:
• Fast, easy and robust fluidics connections
• Future proof thanks to replaceable inserts
• Durable light-weight design
• Holder defined sealing to prevent chip cracking
• Large chip viewing area possible
• Compatible with upright and inverted microscopes

Fluidic Connect PRO OOC Chipholder

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO OOC Incl. inserts for 15x45 mm Micronit Organ-on-Chip devices	Chipholder including inserts for Micronit Organ-on-Chip devices	00750	**1645**

Organ-on-Chip Devices

By placing the membrane layer between the top and bottom layer two seperate flow chambers are created. This allows the flow of two different fluids, either liquids or gases, on either side of the membrane.

Description	Product Code	Price €
12-Pack OOC Membrane Layers, PET 0.45µm, Transparent (Early Adopter version) Mebrane Surface: ~1cm² Membrane Pore Size: 0.45µm Membrane Pore Density: 1.6E6	00738	**895** Pack of 12 Layers
4-Pack Top and Bottom OOC Layers (Early Adopter version) Channel Width: 11mm, 2 channel, 1x on top and 1x on bottom of membrane Channel Depth: ~200µm (per channel)	00739	**645** Pack of 4 Sets

Connection Kits
for Fluidic Connect PRO Chipholder

Description	Additional Information	Product Code	Price €
Teflon Connection Kit PRO, 1mm ID contains 15 meter capillaries (1/16'' OD, 1 mm ID), five ferrules	Resistant to high temperatures, chemically resistant, ideal for low friction requirements	00753	**225**

Inserts
for Fluidic Connect PRO OOC chipholder

Description	Additional Information	Product Code	Price €
Fluidic Connect PRO Insert OOC for 15x45 mm Micronit Organ-on-Chip devices	1 x top insert + 1 x bottom insert + adaptors for straight and extedend flow cells	00749	**650**

Accessories
for Fluidic Connect PRO OOC chipholder

Description	Additional Information	Product Code	Price €
Pack of 5 FFKM (Perlast) perfluoroelastomer nuts	Re-usable, excellent chemical resistance, excellent steam resistance, high temperature resistance, FDA, USP Class VI and 3A compliant	FC_PRO_FFKM_KIT.05	**98**
Pack of 10 FFKM (Perlast) perfluoroelastomer nuts		FC_PRO_FFKM_KIT.10	**155**

CHIP ELECTROPHORESIS KIT

EOF Kit 9015 is an on-chip electrophoresis kit suitable
for applications requiring electro-osmotic flow (EOF)
in combination with optical or fluorescence detection.
The kit enables to carry out capillary electrophoresis
experiments based on EOF.
The kit contains 2 glass microchips, a chip holder and
high voltage cables. The bottom of the holder is open,
making it possible to put it on an inverted microscope
for optical inspection or detection.

CE Chips

The EOF kit 9015 is compatible with all Micronit standard CE chips without integrated
electrodes. Standard, the kit is supplied with one chip X3550 and one chip T3550.

High Voltage

Four high voltage leads are permanently attached onto the chip holder. The cables
are supplied with SHV-BNC plugs, that can be connected directly to a high voltage
sequencer or compatible high voltage power supply. The integrated safety interlock
switch ensures that the high voltage sequencer cannot be started without the cover
placed on the holder.

Specifications	
Dimensions (L, W, H), without cables	127 x 85.5 x 28 mm, suitable for use with microscopes accepting microtiterplates
Materials	Stainless steel bottom plate, POM cover block
Wetted materials	POM (black) Viton Platinum Borosilicate glass (CE chip)
Max. Operating Temperature	80ºC
Capacity of the wells	300 µl
Min. volume required in the wells	20 µl
Maximum separation voltage	6 kV

MICROFLUIDICS

EOF Kit 9015

Description	Additional Information	Product Code	Price €
Capillary Electrophoresis Kit	Contains 2 chips, chip holder and cables	EOF9015	**3039**

The EOF9015 Capillary Electrophoresis Kit is compatible with standard Micronit CE microfluidic chips and with customized chips in the Fluidic PRO platform.

Capillary Electrophoresis Chips

Capillary Electrophoresis (CE) Chips with either double T or cross injection. Separation length of 35 mm.
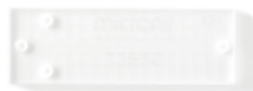
Description	Product Code	Price €
3-Pack T3550 CE Chip Pack Type of Injection: Double T Separation Length (mm): 35 Channel width (µm): 50 Channel Depth (µm): 20	CH_T3550_PACK	**121** Pack of 3 Chips
2-Pack T8050 CE Chip Pack Type of Injection: Double T Separation Length (mm): 80 Channel width (µm): 50 Channel Depth (µm): 20	CH_T8050_PACK	**245** Pack of 2 Chips
3-Pack X3550 CE Chip Pack Type of Injection: Cross Separation Length (mm): 35 Channel width (µm): 50 Channel Depth (µm): 20	CH_X3550_PACK	**121** Pack of 3 Chips
3-Pack X3550 CE Chip Pack Type of Injection: Cross Separation Length (mm): 80 Channel width (µm): 50 Channel Depth (µm): 20	CH_X8050_PACK	**245** Pack of 2 Chips

Delivery: Ex Works

VAT: Prices are exclusive 21% VAT for deliveries in The Netherlands. The transaction will be taxed at 0% based on Table II, a, post 6 of the Dutch VAT act assuming your entity is allowed to reclaim VAT. We reserve the right to charge for additional VAT if your entity turns out not to qualify as a VAT entrepreneur.
It is crucial that in the ordering process you supply us with the correct VAT Identification code of the ship to address and confirm it qualifies as a VAT entrepreneur.

![micronit MICROFLUIDICS]

Product Development

Design

Prototyping

Manufacturing

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