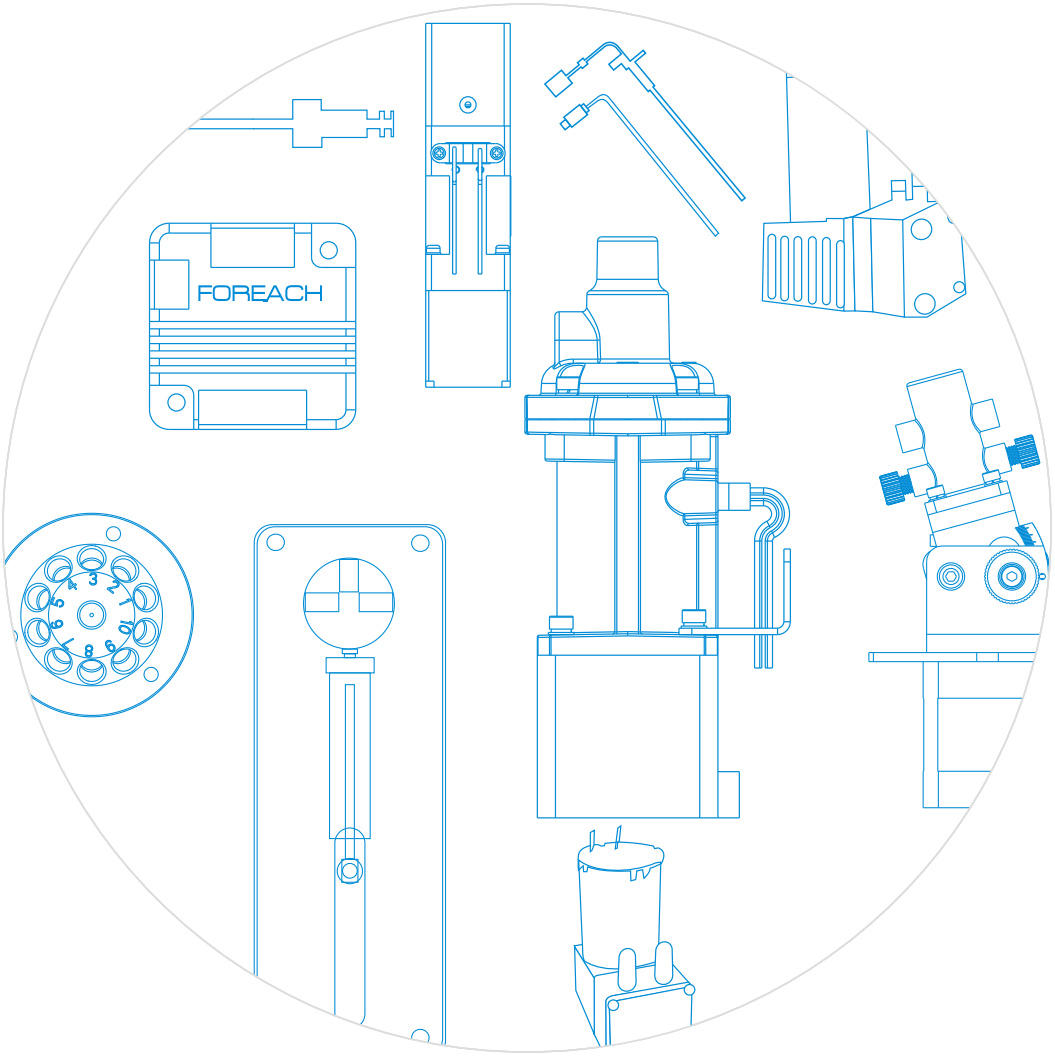
FOREACH | 流体从未如此简单
MAKE FLOW EASY



A PROVIDER OF MICROFLUIDIC COMPONENTS AND SYSTEM DESIGN SERVICES

Pumps · Valves · Intelligent Drive Controllers · Probes · Tubing & Fittings



10+
10-Years Experience In Microfluidics

5000+
5000+ Products

30+
Products are Available in 30+ Countries

2500+
2500+ Cumulative Customers

Founded in 2012, Shenzhen Foreach Technology Co., Ltd. focuses on the research & development and production of precise control technology in microfluidics and key components of medical devices, environmental and laboratory equipment, etc. Foreach provides a variety of products including pumps, valves, probes, tubing & fittings. Piston pumps are widely used in the fields of biochemistry, chemiluminescence, etc., and Foreach's piston pumps have been dominating the Chinese IVD market for years, thereby having become a preference in the industry. With our cutting-edge Inner Wall Polishing, Foreach's sampling probes have excellent performance and customization is available. With thousands of tubing & fittings, Foreach has replaced most of homogeneous products of foreign brands. Foreach always treats innovation as the foundation, continuously invests in the research and development of cutting-edge microfluidic technology, conducts foreseeing scientific research, and builds up new standards for microfluidic applications. Foreach has become a microfluidic component provider with comprehensive products and high brand recognition in the Chinese market.

Foreach is determined to become the leader in microfluidics. With rich technological creativity, Foreach will continue committing to opening the intelligent era of microfluidic control together with our customers, and be dedicated to enabling our partners' success.

Vision: To be the leader in microfluidics

Value: Practicality and Honesty, Pursuing Excellence and Enabling Customers' Success

Code of Conduct: **F**ocused, **O**riginal, **R**eliable, **E**xcellent, **A**ctive, **C**ooperative, and **H**onest

Mission: Foreach is committed to having an in-depth insight into global microfluidic demands of automated analytical instruments, carrying out deep research to break through technical barriers, providing our customers with excellent and reliable products and system solutions, and dedicated to enable our partners' success.

Qualification & Certificates

We work and grow together with our customers, and provide excellent service to them with Foreach's spirit of concentration, professionalism and efficiency.



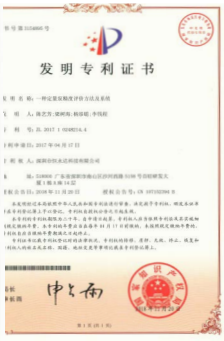








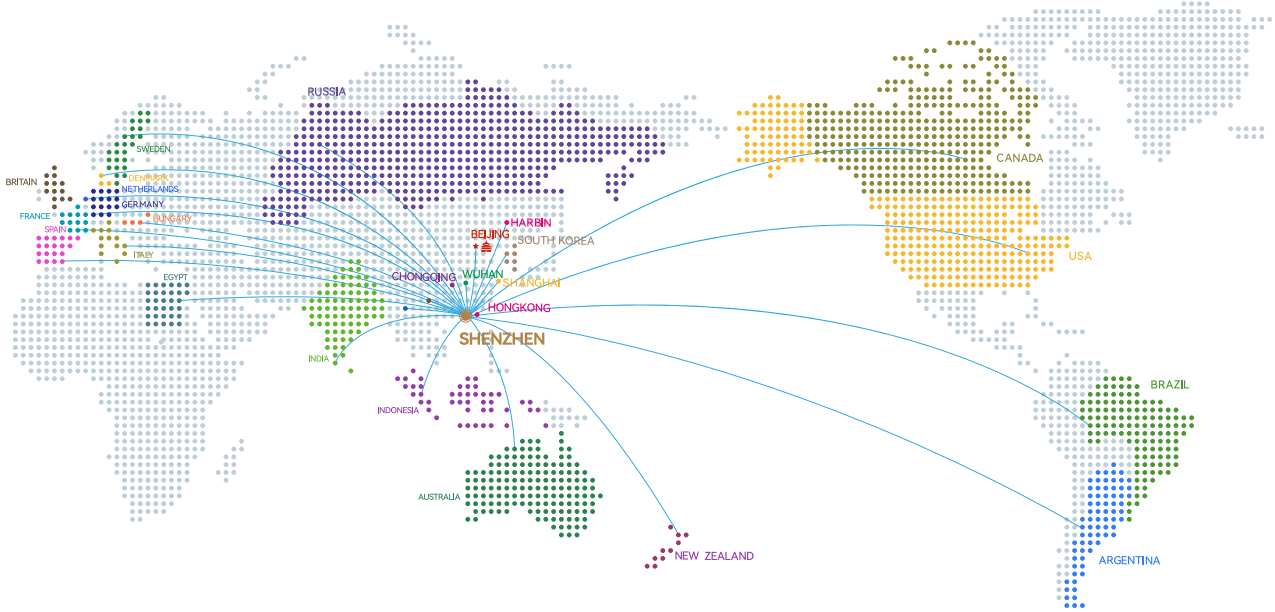




TO BE THE LEADER IN MICROFLUIDICS

Taking the long view & Serving the world

Commit to providing complete solutions to our partners from around the globe, in order to assist our customers' improvement and sustainable development.



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PUMPS



VALVES



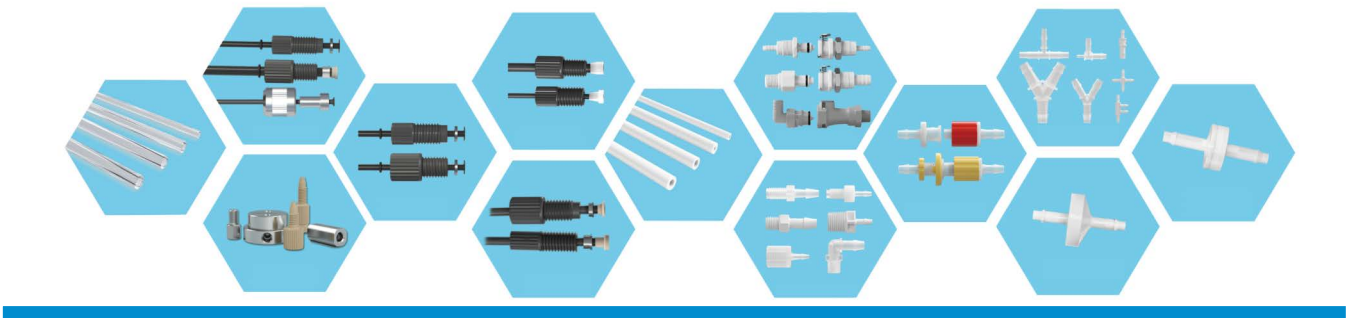
INTELLIGENT SENSORS & CONTROLLERS



PROBES



TUBING & FITTINGS



1 PUMPS

ALS - Zero Backlash Piston Pump



ACCURACY
ACC < 0.5% (at full stroke)

PRECISION
CV < 0.5% (at full stroke)

ZERO BACKLASH
No backlash compensation

Stable Performance

Range	μL	50 100 250 500 1000
Piston Material	/	Ceramics (ZrO_2 or Al_2O_3), PEEK, sapphire
Stroke	mm	12.7
Recommended Max. Speed	rpm	600
Step Angle	°	0.9
Lead	mm	1
Precision (at full stroke)	%	≤0.5
Backlash (at full stroke)	%	≤0.5
Total Number of Steps	Step	5080
Fluid Pressure	MPa	≤0.3
Lifetime	Cycles	5 Million
Port	/	2 x 1/4 28UNF, 2 x M6

TM - Ultra-micro Piston Pump



ACCURACY
ACC < 0.5% (at full stroke)

LIGHTWEIGHT
96 grams

RANGE
50, 100, 250 and 500μL

Compact and lightweight
Preference of POCT devices

Range	μL	50	100	250	500
Piston Material	/	Ceramics (ZrO_2 or Al_2O_3), PEEK, sapphire			
Stroke	mm	12.7			
Recommended Max. Speed	rpm	600			
Step Angle	°	1.8			
Lead	mm	1			
Precision (at full stroke)	%	<0.5			
Backlash (at full stroke)	%	<2			
Total Number of Steps	/	2540			
Fluid Pressure	MPa	<0.3			
Lifetime	Cycles	3 Million			
Port	/	6-40UNF			

SM - Micro Piston Pump



ACCURACY

ACC < 0.5% (at full stroke)

PRECISION

CV < 0.5% (at full stroke)

RANGE

50, 100, 250, 500 and 1000μL

Compatible with solenoid valves
ISC micro stepper motor driver available

Range	μL	50	100	250	500	1000
Piston Material	/	Ceramics (ZrO_2 or Al_2O_3), PEEK, sapphire				
Stroke	mm	12.7				
Recommended Max. Speed	rpm	600				
Step Angle	°	1.8				
Lead	mm	1.27				
Precision (at full stroke)	%	0.5				
Backlash (at full stroke)	%	<1				
Total Number of Steps	/	2000				
Fluid Pressure	MPa	≤0.3				
Lifetime	Cycles	5 Million				
Port	/	M6 or 1/4-28UN				

EA - Piston Pump



ACCURACY

ACC < 0.5% (at full stroke)

PRECISION

CV < 0.5% (at full stroke)

RANGE

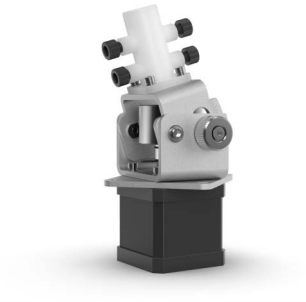
50, 100, 250, 500, 1000, 2500, 5000, 10000 and 20000μL

Various piston materials such as PEEK and sapphire

Compatible with solenoid valves and ISC micro stepper motor driver

Range	μL	50	100	250	500	1000	2500	5000	10000	20000
Piston Material	/	Ceramics (ZrO_2 or Al_2O_3), PEEK, or sapphire								
Stroke	mm	12.7					12.7	12.7	25.4	25.4
Recommended Max. Speed	rpm	600					600	600	600	300
Step Angle	°	1.8								
Lead	mm	1.27					1.27	1.27	1.27	2.54
Precision (at full stroke)	%	0.5								
Backlash (at full stroke)	%	<1								
Total Number of Steps	/	2000					2236	2000	4000	4000
Fluid Pressure	MPa	≤0.3								
Lifetime	Cycles	5 Million								
Port	/	M6 or 1/4-28UNF								

RPL - Valveless Pump



- Accurate and stable, high reliability
- Great chemical compatibility, wide range of applicable fluids
- Adjustable revolution rate and volume, flexible and easy to use
- Volume adjustment without disassembling the pump

Range	μL	50-300	300-1200
Speed	rpm	5-300	
Accuracy (at full stroke)	%	< 2	
Precision (at full stroke)	%	< 0.5	
Proof Pressure	kPa	150	
Lifetime	Cycles	20 Million	
Dimensions	mm	78x78x145	78x78x160
Port of Operating Fluid	/	1/4-28UNF	G1/8 (with default quick disconnects)
Port of Washing Fluid	/	1/4-28UNF	

DRPL - Valveless Pump



- Fluid ratio options: 1:9 and 1:19
- Accurate and stable, high reliability
- Great chemical compatibility, wide range of applicable fluids
- Adjustable revolution rate and volume, flexible and easy to use

Fluid Ratio	/	1:9	1:19
Speed	rpm	60-300	
Accuracy (at full stroke)	%	2	
Precision (at full stroke)	%	0.5	
Flow Rate Qmin	mL/min	60	72
Flow Rate Qmax	mL/min	300	360
Dimensions	mm	180x83.7x75	
Lifetime	Cycles	20 Million	
Port of Operating Fluid	/	1/4-28UNF (of Reagent A), G1/8 (of Reagent B)	
Port of Washing Fluid	/	1/4-28UNF (of Reagent A), 1/4-28UNF (of Reagent B)	

HMD - Syringe Pump with Solenoid valve



- Single, 2, 3, 4, 6 and 8 channels available
- Short turn time and long lifetime
- Syringe sizes from 25μL to 25mL
- RS-232, RS-485 and CAN interface
- Excellent chemical compatibility

Travel	mm	30	60
Number of Channels	/	1	1- 8
Full Stroke Time	s	1.2 - 1200	1.2 - 9600
Plunger Speed	mm/s	0.025 - 60	0.00625 - 60
Resolution	/	Standard mode: 3000 or 6000 increments; Microstep mode: 24000 or 48000 increments	
Range (glass syringe)	/	25μL - 25mL	
Accuracy (at full stroke)	%	≤0.05 (250μL or above), ≤0.1 (100μL or below)	
Valve Configuration	/	2-port or 3-port	2-port non-distribution or 3-port distribution
Operating Pressure	/	-75kPa - 0.2MPa	-75kPa - 0.1MPa
Interface	/	RS-232, RS-485, CAN	

HLD - Syringe Pump with Rotary Valve



- Little dead volume of rotary valves
- Short turn time
- Syringe sizes from 25μL to 25mL
- Excellent chemical compatibility

Travel	mm	30	60
Number of Channels	/	1	
Full Stroke Time	s	1.2 - 1200	1.2 - 9600
Plunger Speed	mm/s	0.025 - 60	0.00625 - 60
Resolution	/	Standard mode: 3000 or 6000 increments, Microstep mode: 24000 or 48000 increments	
Range (glass syringe)	/	25μL - 25mL	
Accuracy (at full stroke)	%	≤0.05 (250μL or above), ≤0.1 (100μL or below)	
Valve Configuration	/	3-port non-distribution (Y-shaped) or 9-port distribution	
Operating Pressure	/	-75kPa - 0.68MPa	
Interface	/	RS-232, RS-485, CAN	

SMTP0 – Pipetting Pump



- Prevent cross contamination
- No tubing, priming- and maintenance-free
- Accurate, stable, lightweight and compact

Volume	µL	50	100	250	500	1000
Drive Design	/	Bipolar lead screw stepper motor with 4 leads				
Motor Speed	pps	1 - 3000				
Resolution	µL/step	0.02	0.05	0.125	0.25	0.5
Total Number of Steps	/	2000				
Operating Noise	dBA	<60				
Operating Environment	/	15°C to 40°C and 20% to 95% RH at 40°C, non condensing				
Storage Environment	/	-20°C to 65°C and 30% to 85% RH, non condensing				
Media Temperature	°C	15 - 40				
Power Requirement	/	24V DC, 500 mA				

SMTP2 - Pipetting Pump



- Liquid level detection using pressure, capacitance, or a Hybrid mode
- Real-time pressure data streaming for dispense and aspirate verification or blocked tip detection
- Allow for daisy-chaining of up to 16 pumps
- Cover kits and disposable tips available

Volume	µL	250, 1000
Drive Design	/	Bipolar lead screw stepper motor with 4 leads
Liquid Level Detection	/	Pressure based (pLLD), capacitive (cLLD), hybrid (hLLD)
Resolution	/	Standard mode 0.319 µL/step with 3143 increments/full stroke,
	/	High-Resolution mode 0.02 µL/microstep with 48000 increments/full stroke
Interface	/	RS232, RS485, CAN
Addressing	/	Up to 16 pumps
Operating Environment	/	15°C to 40°C and 20% to 95% RH at 40°C, non condensing
Storage Environment	/	-20°C to 65°C and 30% to 85% RH, non condensing
Power Requirement	/	24V DC, 500 mA

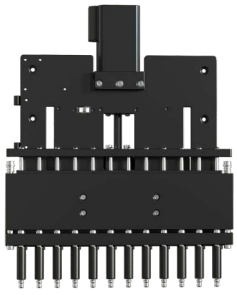
SMTP4 – Pipetting Pump



- No tubing or priming
- Accurate and stable
- Lightweight, compact and maintenance-free
- Integrated tip ejection

Volume	µL	100	500
Drive Design	/	Bipolar lead screw stepper motor with 4 leads	
Motor Speed	pps	1 - 3000	
Resolution	µL/step	0.05	0.25
Total Number of Steps	/	2000	
Steps of Tip Ejection	/	550	
Operating Environment	/	15°C to 40°C and 20% to 95% RH at 40°C, non condensing	
Storage Environment	/	-20°C to 65°C and 30% to 85% RH, non condensing	
Power Requirement	/	24V DC, 500 mA	

SSTP2 - 12-channel Pipetting Pump



- High-accuracy control by closed-loop motor with encoder
- Integrated tip ejection
- Position detection, lost speed precaution and lost speed detection

Number of Channels	/	12		
Inter-Channel Spacing	mm	18		
Volume	µL	400		
Resolution	µL/Step	0.126		
Stroke	mm	31.85		
Accuracy of Each Channel	µL	v≤10	v≤50	v > 50
	%	△ < ±10	△ < ±5	△ < ±3
Precision of Each Channel	µL	v≤10	v≤50	v > 5
	%	Cv < 3	Cv < 2	Cv < 2
Lifetime	Cycles	1.7 Million		

DPL - Diaphragm Pump



- Supports 12V/24V brushed or brushless motors
- Offers 300 mL/min and 600 mL/min options
- Long lifespan up to 10,000 hours

Model	/	DPL30	DPL60
Free-Flow Rate	mL/min	300mL/min	600mL/min
Rated Pressure	Kpa	100	
Self-Priming Height	m	5	3
Tubing Connection	mm	Ø3.2mm	
Storage Temperature	℃	-10 ~ +40	
Service Life	h	1000(Rated Voltage, Continuous Operation)	
Pump Head	/	PPS	
Diaphragm	/	EPDM/FFKM	

HPP - High Pressure Pump



- Pressure range from 0 to 40MPa
- Constant priming without pressure fluctuation
- Wetted materials: stainless steel and sapphire
- Self-cleaning function of the plunger
- Compact design, easy to install and disassemble fittings

Model	/	HPP-1PS1
Volume	μL	7.85
Accuracy	%	2
Precision	%	1
Operating Pressure	MPa	0-40
Lifetime	Cycles	50 Million
Port	/	10-32UNF
Wetted Materials	/	Stainless steel, sapphire and inert plastics
Plunger Materials	/	Sapphire

2 VALVES

6010 – Solenoid Valve



- Reliable performance, easy to install
- Compact and lightweight
- Stand-alone or integrated installation, suitable for various applications
- Compatible with VFC power saver module, which enables it to continuously work for a long time
- Short response time and low pumping volume

Type	/	Base mounted (with or without sub-plate), body ported (for flexible tubing)
Valve Construction	/	Rocker type diaphragm valve
Operating Pressure	/	-75kPa - 0.25MPa
Response Time	ms	15
Orifice Diameter	mm	1.4
Flow Rate	Cv	0.03
Rated Voltage	V	12, 24
Allowable Voltage Fluctuation	/	±10% of rated voltage
Diaphragm Materials	/	EPDM, Viton, FFKM
Proof Pressure	MPa	0.38

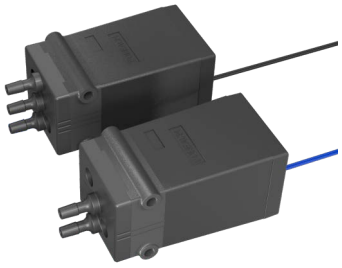
6907 – Solenoid Valve



- Reliable performance
- Super-compact and lightweight
- Stand-alone or integrated installation
- Short response time

Valve Construction	/	Direct operated diaphragm valve
Operating Pressure	MPa	-0.075 - 0.15
Response Time	ms	< 10
Orifice Diameter	mm	0.8
Flow Rate	Cv	0.005
Rated Voltage	V	24
Allowable Voltage Fluctuation	/	±10% of rated voltage
Diaphragm Materials	/	EPDM, FFKM, Viton
Proof Pressure	MPa	0.2

6VMK - Solenoid Valve



- Long lifetime
- Short response time
- Type: 2-port N.C., 3-port

Type	/	2-port N.C.	3-port
Rated Voltage	V	12, 24	
Power	W	2.8	3.4
Operating Pressure	kPa	-70 - 200	
Flow Rate (Air)	Cv	0.08	
Orifice Diameter	mm	2	
Response Time	ms	≤30	
Ambient Temperature	℃	5 - 50	
Diaphragm Materials	/	EPDM, Viton	
Lifetime	Cycles	5 Million	

PV90 – Pinch Valve



- Reliable performance, easy to install, low noise
- Compatible with VFC power saver module
- Little vibration when switching, short response time
- Easy tubing replacement, reliable installation
- Zero dead volume

Model	/	699001	699002
Valve Construction	/	2-position 3-port	
Rated Voltage	V	12 (±5%)	24 (±5%)
Response Time	ms	≤200	
Type of Actuation	/	Direct operated	
Max. Tube Ineffective Area Ratio	/	0.2	
Coil Power Consumption	W	3.5	
Type of Coil Insulation	/	Class F (155℃)	
Clamping Force	daN	≥2.2	
Proof Pressure	kPa	150	

PV91 – Pinch Valve



- Reliable, easy to install, low noise, wide applications
- Compatible with VFC power saver module
- Little vibration when switching, short response time
- Easy tubing replacement, reliable installation
- Zero dead volume

Model	/	699003
Valve Construction	/	2-position 3-port
Rated Voltage	V	12 (±5%)
Response Time	ms	≤200
Type of Actuation	/	Direct operated
Max. Tube Ineffective Area Ratio	/	0.2
Coil Power Consumption	W	8
Type of Coil Insulation	/	Class F (155℃)
Clamping Force	daN	≥2.2
Proof Pressure	kPa	150

MRV3 – Rotary Valve



- Little dead volume
- Corrosion-resistant and high-temperature resistant wetted materials
- Select the optimal switching path automatically
- Distribution and non-distribution available

Number of Ports	/	4 6 8 10	24
Diameter of Ports	mm	0.8, 1.5	0.5
Inner Volume	μL	8, 27	3
Thread	/	1/4-28UNF	6-40UNF
Proof Pressure	Mpa	0.68	
Wetted Materials	/	PEEK, UPE, sapphire	
Turn Time	s/Cycle	≤2	
Motor Reduction Ratio	/	1:10	
Starting Torque	N·m	0.6	
Interface	/	RS232, RS485	
Power	W	12.5	

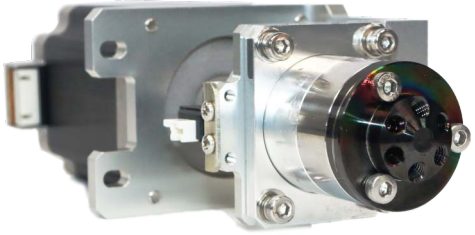
SRV2 – Rotary Valve Component



- Great chemical compatibility
- No leakages or blockages, little dead volume
- Distribution & Non-distribution
- Compatible with syringe series XLP, XC, HLD3/6, etc.

Number of Ports	/	3	4	6	9
Diameter of Ports	mm	1			
Proof Pressure	MPa	0.4			
Dead Volume	μL	6			
Wetted Materials	/	PEEK, UPE			
Port Fittings	/	1/4-28UNF			
Replaceable Part	/	Rotor			
Driving Torque Needed	N·m	0.2-0.4			
Weight	g	30-60			
Operating Temperature	℃	15-40			
Operating Humidity	%RH	20-80 (40℃, no condensation)			

HRV - High Pressure Valve



- Great chemical compatibility, suitable for high pressure application
- Precise rotation and stable injection
- Replaceable rotors

Number of Ports	/	6	
Diameter of Ports	mm	0.4	
Thread	/	10-32UNF	
Proof Pressure	MPa	10 (Distribution)	14 (Non-distribution)
Wetted Materials	/	Stainless steel, inert plastics	
Turn Time	s/Cycle	≤2	
Lifetime	Cycles	50,000 (Rotor), 1 Million (Stator)	
Operating Torque	N·m	0.35	
Starting Torque	N·m	0.6	

3 INTELLIGENT SENSORS & CONTROLLERS

PDM - Pressure Sensor



- Compact, fast and accurate
- Threshold values can be set
- Great chemical compatibility
- Simple and easy-to-read signals

Pressure Range	kPa	200	400	500	700
Body Materials	/	PEEK, Acetal			
Rated Voltage	V	5			
Output Signal	V	5			
Interface	/	UART, RS232			
Protocol	/	Modbus RTU, customized			

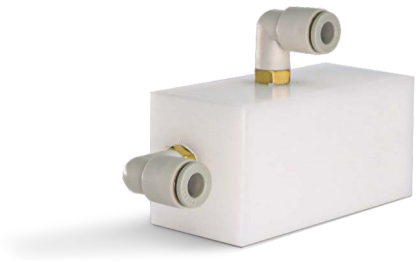
LLD - Liquid Level Detector



- Precise capacitance measuring with a resolution of 1fF
- One-side detection available
- Modbus RTU protocol communication frame structure
- Cascading of multiple servers available
- Liquid level detection, collision detection, dual signal of liquid level and collision output function available

Measuring Range	pF	±16
Min. Volume of Liquid	μL	100
Rated Voltage	V	5
Output Signal	V	5
Interface	/	RS232, RS485
Protocol	/	Modbus RTU

TDS – Water Quality Detector



- Accurate, stable and fast
- Threshold values can be set
- Easy connection

Measuring Range	μs/cm	0.01-5
Body Materials	/	Acetal
Resolution	μs/cm	0.01
Rated Voltage	V	5
Output Signal	V	5
Interface	/	RS232, UART
Dimensions	mm	99.5 x 34 x 57
Tube ID	mm	4.0, 12.7

ABD - Air Bubble Detector



- Threshold values can be set
- Open collector output
- Compact, precise and stable
- Various standard tubing sizes available

Tube OD	mm	1.6 2.0 2.5 3.2 4.8 6.0 6.4
Tubing Materials	/	PU , PVC, PTFE, PFA, FEP, etc. (transparent tubing)
Rated Voltage	V	5
Output Signal	V	5
Interface	/	UART
Output	/	Open collector output

ISC - Micro Stepper Motor Driver



- Supports offline operation
- High precision motor algorithm
- Supports cascading of multiple devices
- Strong aluminum housing and good heat dissipation
- Integrated two 24V PWM adjustable output interface, two 5V digital signal inputs

Model	/	ISC1000	ISC2000
Rated Voltage	V	24	
Rated Current	A	0-2	0-4
Housing Materials	/	Aluminum	
Protocol	/	Customized, CANopen	
Interface	/	RS232, RS485, CAN	

VFC – Power Saver Module for Solenoid Valves



- Energy-saving solution for solenoid valves
- Waterproof and insulated
- Remarkably shortens response time of valves

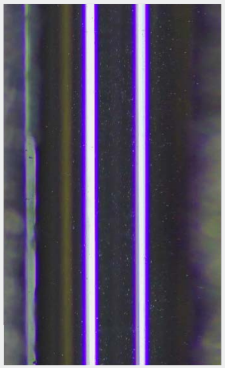
Input Voltage	V	8-30
Energy-saving Ratio	%	4, 9, 12 (customization available)
IP Rating	/	IP55

4 PROBES

Special mirror polishing technology with inner and outer wall roughness up to Ra0.01, effectively improves inner and outer wall finish and reduces the risk of system cross contamination; precise capacitance matching technology can stabilize capacitance accuracy ±2pF; customized process and tooling can ensure consistency in mass production.

INNER WALL POLISHING

Reduce the risk of cross contamination and liquid hanging, better cleaning effect of probe core



Inner Wall Polishing Sample



Reducing Region Polishing Sample



Raw Materials

Polishing Sizes
Inner Diameter 0.3-2mm

Polishing Types
Mirror Polishing of Straight Probes & Reducers



Sampling Probe

1. For reagents or samples
2. Inner and outer wall roughness Ra0.1- Ra0.01
3. Min. diameter: 0.3, Min. volume of suction and discharge: 1.5μL
4. The probe core can be indented, and the probe tip shape can be selected according to different volume requirements, including tip V and straight reducer



Puncturing Probe

1. Sampling probes for puncturing, multiple exhaust port directions available, and pressure relief groove optional
2. Thick wall without deformation
3. Surface can be chrome-plated to increase the number of the punctures
4. Laser welding, neat and beautiful



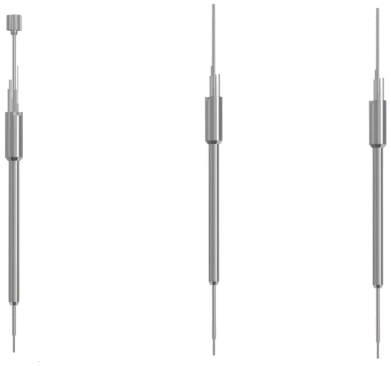
Rinsing probe

1. Single, double, and multiple heads available
2. Various coatings available
3. Laser welding, neat and beautiful



Stirrer

1. Flat, spiral, and perpendicular blades available
2. Integral molding, high coaxiality
3. Good mixing effect
4. Various coating colors available

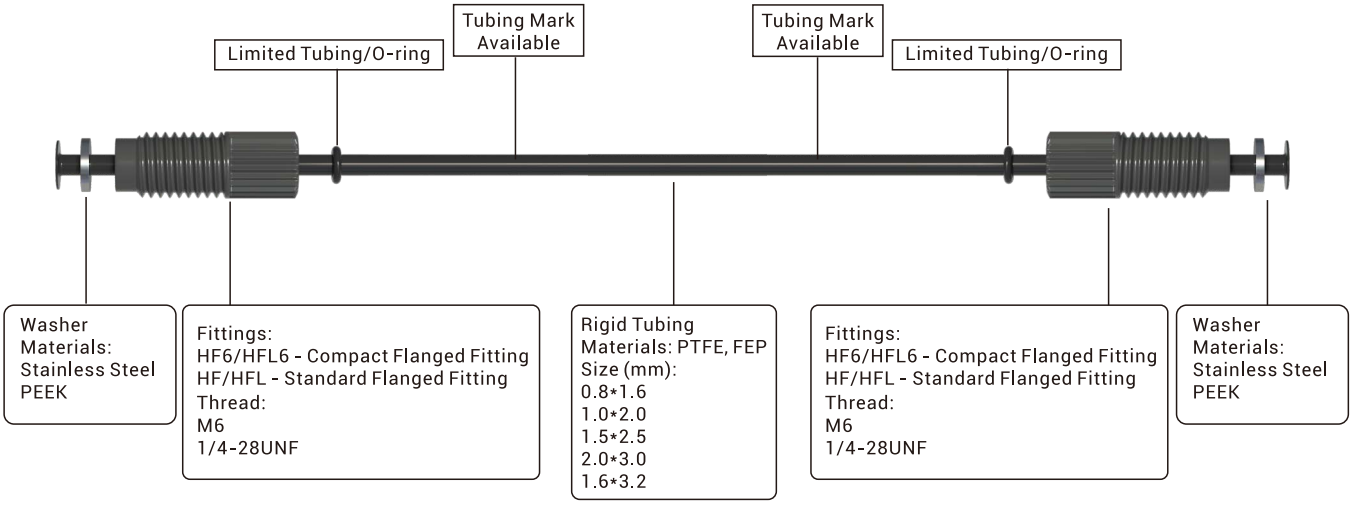


Heating Probe

1. Heating function
2. Probe tip reducer available, integrated molding, non-welding
3. Built-in NTC thermistor, heating coil, temperature protection switch
4. Connected to liquid level detection cable, compatible with liquid level sensor

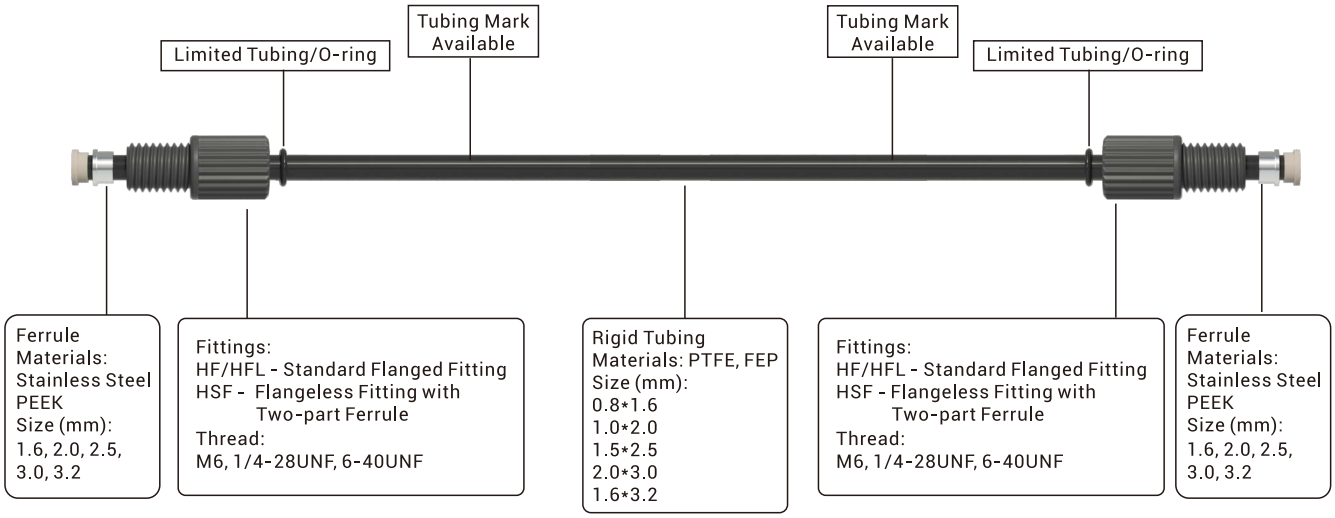
5 TUBING & FITTINGS

TA - Flanged Tubing Assemblies



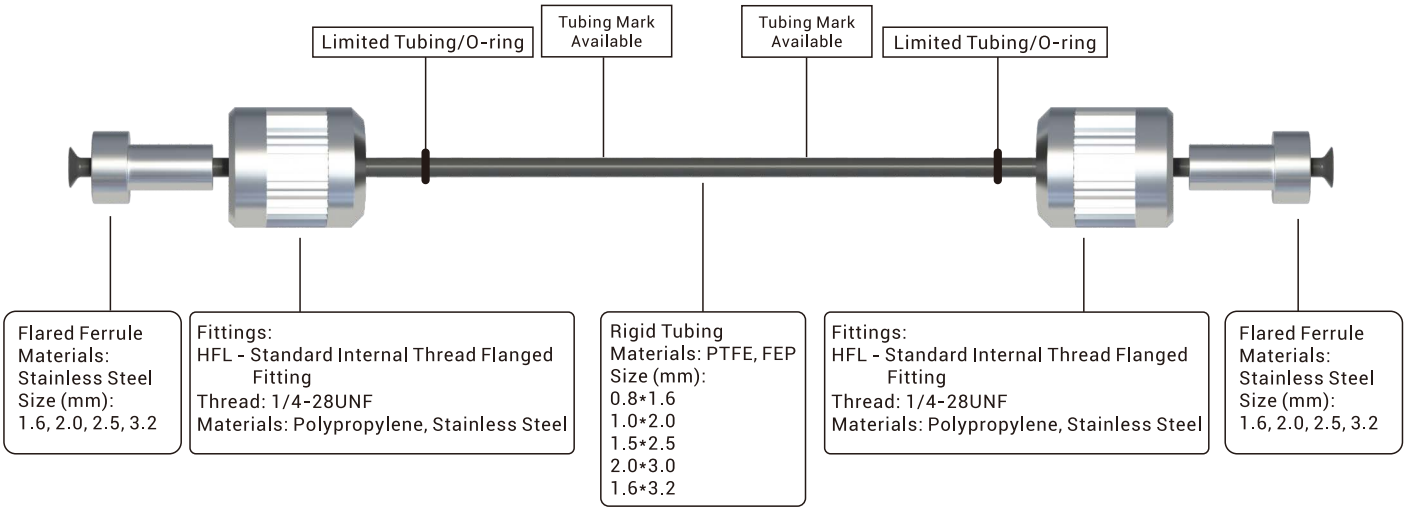
- Flange sealing for reliable connection
- Stable performance, secure connection under vibration
- Easy to install, can be used repeatedly

TA - Flangeless Tubing Assemblies with Two-part Ferrule



- Flange sealing for reliable connection
- Stable performance, secure connection under vibration
- Easy to install, can be used repeatedly

TA - Flare-flanged Tubing Assemblies



- Tapered sealing for reliable connection
- Easy and quick to install without tool
- Tubing flanged in 109°, suitable for coned external thread

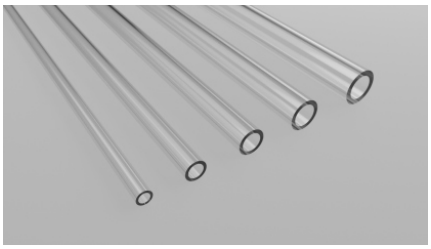
PVC Tubing



- Smooth inner wall, transparent and soft
- No phthalate esters
- Crack-resistant and durable
- Anti-oxidation and anti-pollution
- Easy to insert and unplug fittings with reliable connection
- Excellent chemical compatibility

Density	g/cm³	1.18
Tensile Strength	MPa	14.3
Flexural Strength	MPa	68
Dielectric Constant	KV/mm	4
Water Absorption	%	0.12
Operating Temperature	°C	-42 - +75
Coefficient of Linear Expansion	cm/cm/°C	$6X10^{-5}$
Melting Temperature	°C	185
Brittleness Temperature	°C	-46
Hardness	A	55, 65

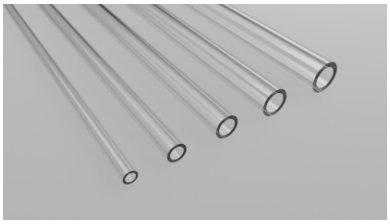
FEP Tubing



- Wide range of operating temperature, excellent performance at low temperature
- Excellent chemical resistance and inertness
- Slippery surface, non-stick to liquid
- High transparency
- UV-resistant

Density	g/cm³	2.13
Tensile Strength	MPa	27.6
Flexural Strength	MPa	18.5 (ASTM D790)
Dielectric Constant	KV/mm	2.1 (IEC60243-1)
Water Absorption	%	0.01 (ASTM D570)
Hardness	D	50, 60
Operating Temperature	°C	-230 - 205
Coefficient of Linear Expansion	cm/cm/°C	$9.9X10^{-5}$
Melting Temperature	°C	260
Brittleness Temperature	°C	-250

TPU Tubing



- High chemical resistance and abrasion resistance, lightweight, anti-staining and anti-flatulence
- Remarkable hydrolysis resistance
- Medium flow is clearly visible due to high transparency of tubing
- Widely used in medical machinery, food, water quality and environmental protection industries, etc.

Density	g/cm³	1.22
Tensile Strength	MPa	46
Flexural Strength	MPa	83
Dielectric Constant	KV/mm	2.8
Water Absorption	%	1.5 (ASTM D570)
Hardness	/	80A, 85A, 95A, 64D
Operating Temperature	°C	-30 - 70
Coefficient of Linear Expansion	cm/cm/°C	$9X10^{-5}$
Melting Temperature	°C	185
Brittleness Temperature	°C	-40

PTFE Tubing



- Operating temperature from -101 to 260°C
- Excellent chemical resistance and inertness
- Extremely low coefficient of friction, difficult for liquids to adhere
- High pressure resistance

Density	g/cm³	2.2
Tensile Strength	MPa	27.6
Flexural Strength	MPa	174 (ASTM D790)
Dielectric Constant	KV/mm	2.1 (IEC60243-1)
Water Absorption	%	0.05 (ASTM D570)
Hardness	D	50, 65
Operating Temperature	°C	-101 - 260
Coefficient of Linear Expansion	cm/cm/°C	$1.2X10^{-5}$
Melting Temperature	°C	327

PEEK Tubing



- Resistant to halogenated salts, strong acids and alkalis, strong cache liquid and other liquids
- Excellent mechanical properties
- Operating temperature from -180 to 225°C, good self-lubrication, radiation resistance

Density	g/cm³	1.32
Tensile Strength	MPa	180
Flexural Strength	MPa	265 (ASTM D790)
Dielectric Constant	KV/mm	24
Water Absorption	%	0.2 (ISO 62)
Operating Temperature	°C	-180 - 225
Coefficient of Linear Expansion	cm/cm/°C	$4.5X10^{-5}$
Melting Temperature	°C	343

Rigid Tubing Fittings



This series offers externally threaded fittings designed for high-integrity connections. Utilizing reliable seals formed by snap rings, ferrules, and gaskets, they accommodate rigid tubing in various polymer materials including PTFE, FEP, and PFA.

The fittings are made from high-performance engineering polymers such as PPS, PEEK, PVDF, and POM, providing excellent chemical resistance, temperature stability, and mechanical strength.

Thread options include 1/4"-28 UNF, M6×1, M5×1, and 10-32 UNF, ensuring compatibility across a wide range of system ports.

Compatible with 1.6, 2.0, 2.5, 3.0, and 3.2 mm rigid or semi-rigid tubing, the series supports various connection types — ferrule, snap-ring, and face-seal — delivering reliable performance from standard to high-pressure applications.

Flange Fittings: Require tube ends to be processed via a flanging operation. A dedicated sealing gasket is captured between the tube flange and fitting body. Sealing occurs at the fitting's face, ensuring wetted surfaces during fluid transfer consist solely of the tubing material.

Ferrule Fittings: Feature a tapered cone design, eliminating the need for tube flanging. Assembly involves sliding the threaded fitting body and ferrule assembly onto the tube and tightening. Offers tool-free installation, combining economy and durability. Requires matching dedicated ferrules.

Snap Ring Fittings: Consist of a face seal fitting body, a snap ring washer, and a snap ring housing, requiring specialized installation tools. Tube flanging is not required; an interference fit achieves a stress-locking seal between the tube and fitting.

High-Pressure Fittings: Constructed from PEEK or stainless steel with a hand-tightening, single-piece design. Specifically engineered for High-Pressure Liquid Chromatography (HPLC) and Ultra-High-Pressure Liquid Chromatography (UHPLC) systems to withstand extreme pressure conditions.

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon re quest.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Hose Fittings



This series provides a wide range of barbed fittings designed for flexible tubing connections.By inserting the fitting into the tubing lumen, the barb structure induces 20%–50% radial expansion, creating a reliable self-sealing connection.

Compatible with elastic tubing materials such as silicone, TPU, TPE, PU, and PVC.

Product types include tube-to-tube fittings (barbed and panel-mount types) and thread-to-tube fittings (male and female thread-to-barb), enabling quick transitions between flexible hoses and rigid systems.

Available in straight, T, Y, L, cross, and π configurations, with equal-diameter and reducer options for tubing IDs from 1.6 mm to 12.7 mm.

Thread options include 10-32 UNF, 1/4-28 UNF, 1/8-27 NPT, 1/4-18 NPT, G1/8, and M6×1.

Materials are available in PP, PA (nylon), POM, and PVDF, with color choices of white, natural, and black.

Barbed fittings: Push-to-connect hose assemblies enabling multi-channel connections with quick-connect/disconnect operation.

Panel mount barbed fittings: Integrated panel-mount structure secures to equipment enclosures via built-in mounting threads, simultaneously completing internal/external tubing interconnection.

Thread-to-barb fittings: Establish quick transition between hose and rigid systems, enabling convenient connections to external rigid systems.

Female thread-to-barb fittings: Create transition interfaces between hose and rigid systems, specifically designed for internally connected rigid systems.

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon request.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Luer Fittings



The Luer Fittings Series features a dual-design of precision threaded interlock + tapered cone sealing, with the male and female luers securely connected via external threads and supporting both panel-mount and non-panel-mount options.

The 6% precision taper ensures a reliable, leak-proof seal, providing safe and stable high-precision fluid transfer.

Anti-slip grooves or protrusions enhance connection stability, prevent slippage, and ensure reliable performance during infusion, injection, and other high-precision medical procedures.

Compatible tube ID range: 1.6 mm – 3.2 mm

Color options: 8 colors for easy identification and fluid management

Available types: Rotatable Luer, Fixed Luer, Integrated Luer

Easy installation: Plug-and-play design for efficient operation

Applications: Infusion, injection, medical tubing systems, and laboratory equipment

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon request.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Quick Disconnect Couplings



This series of quick disconnect couplings is designed for low-pressure systems, enabling fast, high-flow connections.

Precision-molded from corrosion-resistant POM/PP thermoplastics, the couplings maintain stable performance even when exposed to common chemical reagents.

A clear "click" sound confirms secure engagement, and the thumb-release mechanism allows single-handed quick assembly and disassembly, ensuring operational safety and convenience—ideal for high-frequency medical and industrial applications.

Q20 Series: Tube ID 1.6–6.4 mm (small flow), thread interfaces 1/8-27 NPT and 1/4-28 UNF

Q40 Series: Tube ID 6.4–9.5 mm (medium flow), thread interface 1/4-18 NPT

Q60 Series: Tube ID 9.5–19.0 mm (large flow), thread interfaces 3/8-18 NPT and 1/2-14 NPT

Materials: Housing PP or POM; seals NBR, EPDM, or FKM

Mounting: Panel mount / Non-panel mount

Flow Control: Valved / Non-valved

Connection Types: Straight / 90° elbow / External thread

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon request.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Union



The Female Thread Connector series is designed for reliable connections between rigid tubing, featuring a precision-threaded structure to ensure high sealing performance and stability during fluid transport.

It supports panel mounting and multi-directional branching, providing flexible adaptation to various tubing layouts. Widely applicable in medical, laboratory, and industrial equipment systems.

2-Way Connectors

Supported Ports: M6, U28 threads; tube diameter 2.0 mm

Female Thread Union (2-Way): Male-to-female thread engagement; universal leak-free interface suitable for rigid or flexible tubing systems

Female Squared Thread Union (2-Way): Compact square-profile housing with male-to-female thread engagement; ensures leak-tight performance

Panel Mount Female Thread Union (2-Way): Can be secured to bulkheads for instrument enclosure installation

3-Way Connectors

Materials & Tube Size: PPS, PP; tube diameter 1.5–2.0 mm

Female Thread Tee Connector (3-Way): T-shaped branching for fluid distribution or convergence

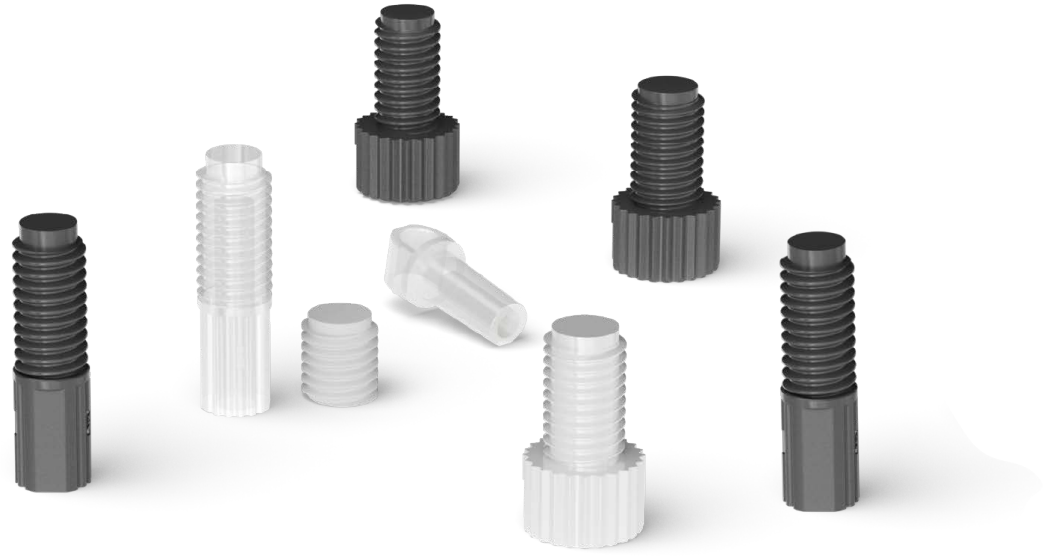
Female Thread Y Connector (3-Way): 120° Y-shaped branching for fluid distribution or convergence

The series features precise construction, easy installation, and reliable sealing, meeting the demands of complex tubing layouts while ensuring safe and stable fluid transport.

REACH, RoHS, and MSDS reports are provided, guaranteeing compliance with international medical device and laboratory standards. This series is the ideal choice for high-performance medical, laboratory, and industrial applications.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Press-In Plugs



This series features Press-In Plugs designed to interrupt fluid flow. Structural types include Threaded Plugs (Standard Threaded Plug, Compact Threaded Plug), Fitting Plugs, Barbed Plugs, and Male Luer Plugs, providing flexible solutions for various tubing layouts.

Available Types: Threaded Plugs, Barbed Plugs, Male Luer Plugs

Thread Specifications: M6 × 1, 1/4-28 UNF, 6-40 UNF

Barbed Plug Tube Compatibility: Tube ID 1.6 mm–3.2 mm

Materials: PVDF, PP, PPS, PAColors: Natural, Black, White

The series features precise design, easy installation, and reliable sealing, meeting the requirements of complex tubing systems while ensuring safe and stable fluid transport. It is an ideal choice for medical, laboratory, and industrial equipment applications.

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon request.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

Barbed Filter & Barbed Check Valve



The barbed filter uses a clamp-style structure to physically intercept particles and other impurities in liquids, providing efficient filtration. Compact design and easy to install, widely used in medical, environmental, and laboratory applications.

Filter Precision: 10μm, 40–60μm, 80–100μm
Tube ID: 2.4 mm, 3.2 mmHousing
Material: PP, PAColor: Natural, Black

The barbed check valve opens under forward fluid pressure and automatically seals against reverse flow, ensuring unidirectional liquid flow and preventing backflow. Barbed-body design provides ultra-low forward cracking pressure and near-zero reverse leakage, with ultrasonic welded construction guaranteeing structural sealing integrity.

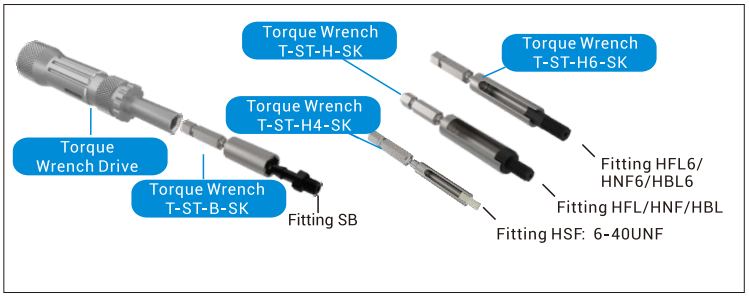
Tube ID: 1.6, 2.4, 3.2, 4.8, 6.4, 7.9, 9.5 mm
Housing Materials: PP or PVDF (natural color available)
Diaphragm Materials: EPDM or FKM
Sealing Types: Diaphragm or Duck-billed

All fittings comply with REACH and RoHS regulations, with MSDS documentation available upon request.

*For detailed selection, please contact sales or scan the QR code for the connector guide.

T - Torque Wrench Drive

- Greatly improves the efficiency
- Easy to carry, fulfils most of the customers' routine needs
- Easy to use



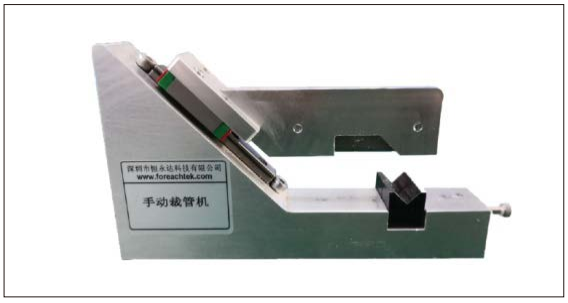
T – Snap-ring Forcep

- Necessary tool for two-part ferrules
- Easy operation

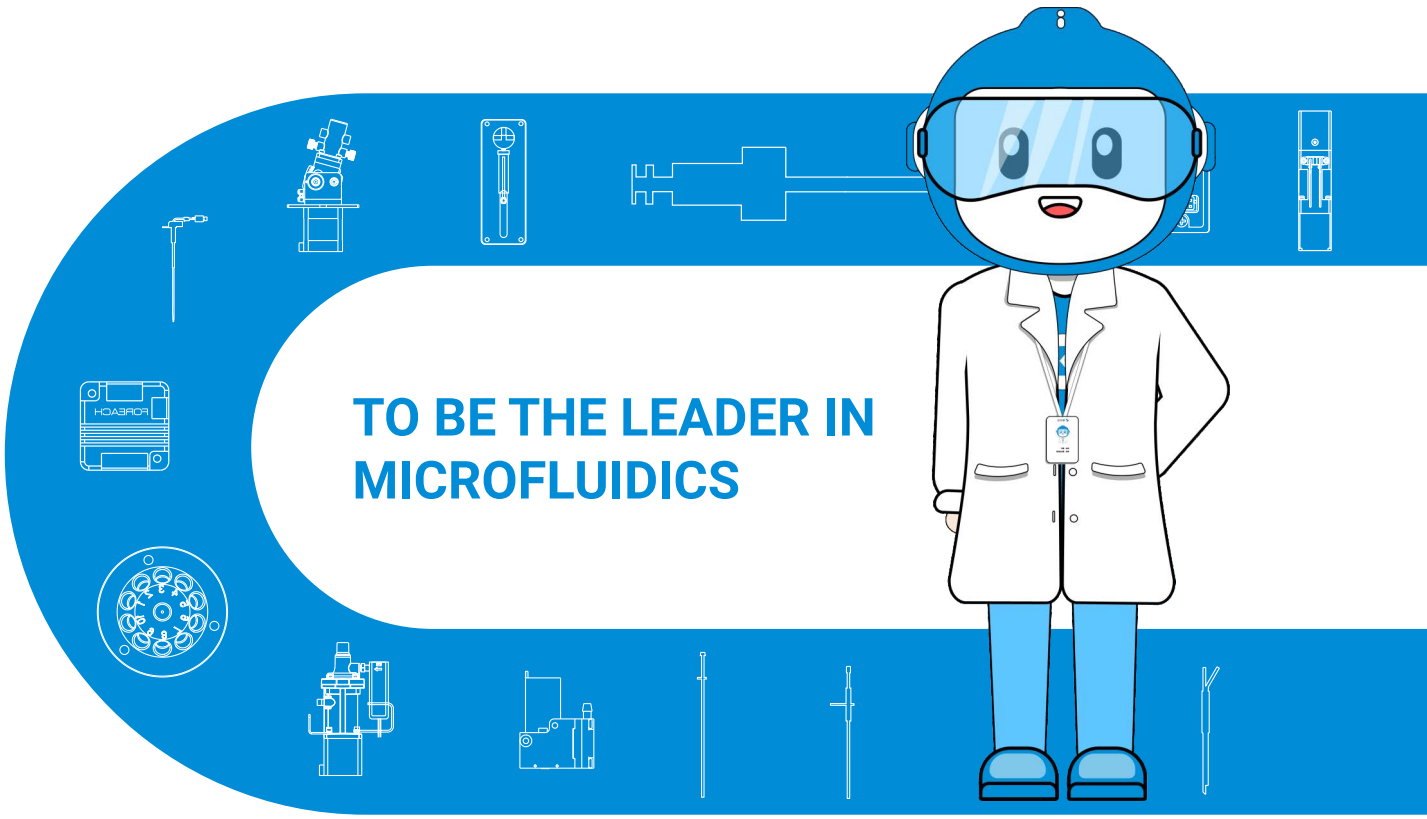


T – Tubing Cutter

- Easy operation, high efficiency
- Flat cuts due to smart design



*For detailed selection, please contact sales or scan the QR code for the connector guide.



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