

Static Fittings:
Immersion, Inline and Flow-Through

Retractable Fittings:
SensoGate, Ceramat

Fittings





Static Fittings



Flow-Through Fittings

for applications in a bypass
or directly in the process flow



ARF 101

PVC flow-through fitting for direct mounting of a 12-mm sensor

Simple installation directly in the pipeline with DN 50 adhesive tee.

For all sensors with PG 13.5 connection, 12 mm diameter and 120 mm length.

PVC



ARF 200/202

Compact flow-through fittings made of stainless steel, with one sensor mounting location

Optimal for low sample throughput such as in the bypass.

For sensors with G 1" or NPT 1" thread or via adapter for sensors with PG 13.5 connection.

Also for high temperatures and pressures.

Process connection via cutting ring coupling or female G 1/4" or NPT 1/4" thread.

Impermeable and therefore also suitable for measuring trace oxygen.

Stainless steel 1.4571
Hastelloy C 22



ARF 201

Compact flow-through fitting made of plastic, with one sensor mounting location.

Ideal for low sample throughput.

For sensors with G 1" or NPT 1" thread or via adapter for sensors with PG 13.5 connection.

Material:

Polypropylene

Process connection:

Female thread G 1/4" or NPT 1/4"

PP-H



ARF 203

Compact stainless steel flow-through fitting for sensors and fittings with 25-mm Ingold socket.

ARF 210

Flow-through fitting made of stainless steel with a large number of sensor connections.

ARF 215

Flow-through fitting made of plastic, with a large number of sensor connections.

Ideal for low sample throughput.
For use with SensoGate retractable fittings, the SE 605 (H) conductivity sensor or ARI 106 (H) inline fitting.
Also for high temperatures and pressures.
Process connection:
Female thread G 1/4" or NPT 1/2".

Modular design with flanged or threaded process connections.
For measurements in main stream or bypass. Also for high temperatures / pressures.
Impermeable and therefore also suitable for measuring trace oxygen.

Modular design with flanged or threaded process connections.
Can be used for measuring in main stream or bypass.
Materials:
PP H for standard applications and PVDF for chemically complex applications.

Stainless steel 1.4571
Hastelloy C 22

Stainless steel 1.4571



PP-H, PVDF



Static Fittings

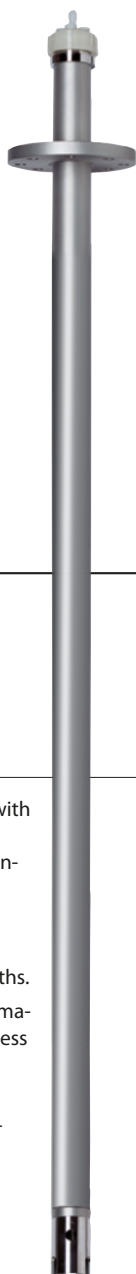
Immersion Fittings

for measurements in
basins, tanks and channels

			
<p>ARD 170</p> <p>Simple and safe submersible fitting for Memosens sensors.</p> <p>With encapsulated Memosens cable für immersion depths up to 10 meters. Mobile fitting for measurements in basins, tanks and channels.</p> <p>Sensor: 1 x PG 13,5</p>	<p>ARD 50 (EL)</p> <p>Modular fitting with a broad range of functionality (Ø 50 mm).</p> <p>Immersion fitting adaptable to practically all processes.</p> <p>Sensor adapters: 1x PG 13.5 with optional rinse function, SE 655(X)/SE 656(X), NPT ¾" as required</p> <p>Reliable function and very simple maintenance.</p> <p>Easy sensor removal/installation with just ½ turn of a coupling nut.</p> <p>Sensor removal both upward and downward.</p> <p>Rinse function for cleaning the sensors without opening or dismantling the fitting (internal rinse medium feed incl. check valve).</p> <p>ARD 50/75 EL with equipotential bonding for use in hazardous locations.</p>	<p>ARD 75 (EL)</p> <p>Modular fitting with a broad range of functionality (Ø 75 mm).</p> <p>Fitting adaptable to practically all processes.</p> <p>Sensor adapters: 3x PG 13.5 / 1x PG 13.5 with pressurization, SE 604/605/630 (G1) SE 670/SE 680, SE 655/SE 656 (G ¾") NPT ¾" / NPT 1"</p>	<p>ARD 250</p> <p>Safe and easy process integration of sensors with PG 13.5 thread (Ø 50 mm).</p> <p>Simple fitting for measuring in tanks, basins and channels for the safe installation of sensors for measuring pH value, conductivity or oxygen.</p> <p>The special design facilitates sensor replacement.</p>
<p>PP-H, PP-EL</p>	<p>ARD 50: PP-H, PVDF ARD 50 EL: PP-EL</p>	<p>ARD 75: PP-H, PVDF ARD 75 EL: PP-EL</p>	<p>PP-H</p>

Inline Fittings

for chemical and
hygienic applications



ARD 220

Universal immersion fitting made of stainless steel (Ø 63 mm).

Measurement with up to 3 sensors with PG 13.5 connection.
Various sensor adapters, immersion depths.
Various gasket materials and process connections.
Optionally with cleaning equipment or sensor wetting cup.

Stainless steel 1.4571

ARD 230

Universal immersion fitting made of stainless steel (Ø 32 mm).

For a sensor with PG 13.5 connection.
individually adaptable to process conditions thanks to various immersion depths, fitting and gasket materials and process connections.
Resistant to fouling due to seamless design.

Stainless steel 1.4571

ARI 106

Affordable, rugged inline fitting.

For pH, oxygen and conductivity sensors with Ø 12 mm.
Also for pH sensors Ø 12 mm with pressurizable liquid electrolyte.
Can be used in chemical processes and Ex zones.
Process connection for: Ingold sockets

PEEK, PVDF, PP-H, stainless steel 1.4435, titanium, Hastelloy C 22

ARI 106 H

Inline fitting for hygienic applications.

pH, oxygen and conductivity sensors with Ø 12 mm.
Also for pH sensors Ø 12 mm with pressurizable liquid electrolyte.
Process connection for: Ingold sockets or Varivent housing

Stainless steel 1.4435
Hastelloy C 22
PEEK, PVDF



Retractable Fittings

SensoGate

Manual and automatic retractable fittings with pioneering design innovations. Also for applications in hygienic areas.

Saving Time and Money

The patented lock-gate principle reliably prevents leakage of process medium during probe movement, since the rinse and calibration chambers are sealed to the process at all times. Gasket cleaning during the movement and the gimbal bearing of the immersion tube significantly extend the service life of the gaskets.

Advantageous Functionality

The drive unit of the SensoGate fittings can be detached without special tools. A bayonet coupling also ensures easy, fast maintenance of the immersion tube. In case of glass breakage, the process-wetted O-ring can be easily replaced. A special prestressed scraper ring prevents formation of buildup on the immersion tube.



Unique Safety

The retractable fittings are securely shut off from the process while in any position as well as during probe movement. This also applies without restriction to hygienic applications. Unlike ball valve fittings, it is not necessary to have valves upstream or downstream to the cleaning chamber.



Versatile Materials

The SensoGate range is a safe choice thanks to its extreme material diversity, which is geared toward a wide range of applications. This includes high-performance, carbon-fiber-reinforced polymers, which in many cases can replace expensive materials such as titanium or Hastelloy.

Hygienic Applications

Thanks to the possibility of sterilizing the process side and calibration chamber, SensoGate fittings meet all requirements for food and pharmaceutical production. The special design enables directed flow of the rinse medium; the inner, process-side gasket can not only be rinsed by the process but also from the interior of the fitting, which the rinse medium normally cannot reach. The materials and sealing kits are USP-VI compliant.

ATEX Approval

SensoGate fittings are approved for operation in hazardous areas in accordance with the II 1 GD c II marking.





Retractable Fittings

SensoGate for Process Applications

in the chemical industry, energy generation and water/wastewater technology.

PNEUMATIC		MANUAL	PNEUMATIC		MANUAL
					
WA 130 Universal, pneumatically operated retractable fitting for fully automatic operation with the Unical and Unclean controllers. Central multiplug for plug & play connection of the complete media supply (control air, all rinse, cleaning and calibration media) and end position feedback.	WA 131 Universal, pneumatically operated retractable fitting with modular design for simple, commercial controllers. Pneumatic end position feedback.	WA 131 M Manual retractable fitting with unique rotary drive, safe to handle up to 10 bar process pressure. Safe thanks to integrated immersion lock when sensor has been removed. Feedback via electrical limit switches.	WA 132 Universal, pneumatically operated retractable fitting for fully automatic operation with the Unical and Unclean controllers. Combines the pioneering benefits of SensoGate technology with the unrivaled chemical resistance of PTFE.	WA 133 Universal, pneumatically operated retractable fitting with modular design for simple, commercial controllers. Combines the pioneering benefits of SensoGate technology with the unrivaled chemical resistance of PTFE.	WA 133 M Manual retractable fitting with process-wetted parts made of PTFE with maximum chemical resistance. Unique rotary drive, safe to handle up to 10 bar process pressure. Safe thanks to integrated immersion lock when sensor has been removed.
– Effective rinsing, simple maintenance – Modular design, high availability – ATEX approval II 1 GD c II – Almost all standard process connections – High pressure and temperature resistance due to carbon-fiber-reinforced materials			– Effective rinsing, simple maintenance – Modular design, high availability – ATEX approval II 1 GD c II – Almost all standard process connections – High chemical resistance thanks to process-wetted parts made of PTFE		

Large selection of process-wetted materials: 1.4571, 1.4435, PVDF, PEEK, carbon-fiber-reinforced, PP-H, Hastelloy C 22, titanium, PTFE

SensoGate for Hygienic Applications

in the pharmaceutical and food industry.

Ball Valve Fittings

Rugged retractable fittings made of stainless steel with large immersion depth and reliable process isolation.

PNEUMATIC

MANUAL

MANUAL



WA 130 H

Hygienic, pneumatically operated retractable fitting for fully automatic operation with the Unical and Uniclean controllers.

Central multiplug for all rinsing, cleaning and calibration media, as well as end position feedback. Additional connection for superheated steam or chemicals.

WA 131 H

Pneumatically operated retractable fitting with modular design for simple, commercial controllers in hygienic applications.

WA 131 MH

Modern manual retractable fitting with unique rotary drive in hygienic design, safe to handle up to 10 bar process pressure.

WA 125

With integrated 2-electrode conductivity sensor (SE 605) for precise, reliable measurement of low and very low conductivity.

WA 126

With the SE 670 digital toroidal conductivity sensor, the fitting provides measurements across a very wide conductivity measurement range.

- All commercial, hygienic process connections
- Modular design
- Effective rinsing
- Easy maintenance
- High availability
- Certified rinse/calibration chamber sterilizability SIP and CIP capable

- Enables sensor maintenance during running processes.
- DIN flange, ANSI flange process connections
- Large immersion depth for use in containers and tanks with large wall thicknesses or pipelines with large nominal widths

Process-wetted materials PVDF, PEEK, carbon-fiber-reinforced, 1.4404, 1.4435 (electropolished) as required.

Wetted material:
Stainless steel
1.4404 / 1.4435
(electropolished).

Housing/sensor:
1.4571, 1.4435
Ball valve:
1.4408, 1.4401

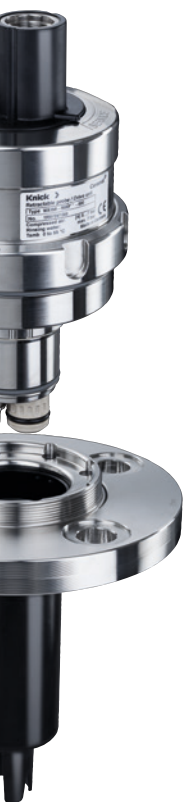
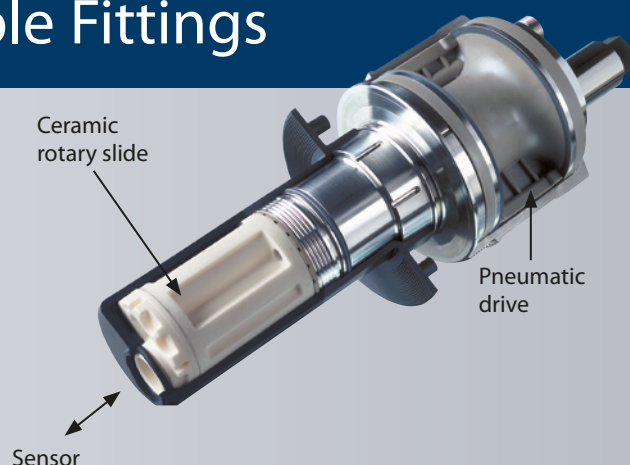
Housing/sensor:
1.4571 / PP
Ball valve:
1.4408, 1.4401



Retractable Fittings

Ceramam

Patented retractable fitting for extreme applications; with ceramic sealing and high resistance.



No O-Ring: No Weak Point

When conventional retractable fittings are used in applications that are highly corrosive, abrasive, fibrous, or leave heavy deposits, high maintenance and increased sensor wear are always an issue. The reason: O-rings for process sealing cannot withstand the extreme chemical and mechanical loads involved for very long. Aside from rapid material and sensor wear, deficient or damaged process seals of retractable fittings increase the risk that technical personnel will come into contact with leaking process media, which can lead to injury.

Ceramic Process Gate for Maximum Process Up-Time

These heavy-duty retractable fittings were developed especially for measurement under difficult conditions. To seal off the calibration chamber from the process, Ceramat features a patented process gate consisting of two aluminum oxide ceramic disks with Mohs hardness 9. They function without the usual high-maintenance polymer gaskets, ensuring long-term service with a consistently high level of tightness even in aggressive media. The ceramic material's extreme hardness and chemical resistance prevent wear of the lapped polished sealing surfaces.

The material also features resistance to high temperatures and enables sterilization with superheated steam. The flat-body ceramic gate relies on counter-rotating ceramic disk movement to release the opening for the sensor or securely seal it off from the process. It is mounted in a fixed exterior housing made of PEEK, PVDF, stainless steel, Hastelloy or titanium. Fibers or other solids in the process medium do not clog as they would with other gate mechanisms. Instead, the locking rotation chops or minces them with the sharp edges of the ceramic openings. The (no-wear) process sealing and modular construction of the retractable fittings allow the drive to be disassembled for sensor adjustment, cleaning or replacement while the process is still in operation.

Optical Sensors

Ceramam is also suitable for use with the optical probes of modern process spectroscopy such as UV/VIS/NIR/IR/Raman, which are mounted directly to the pipeline or reactor. Optical probes require a completely clear sensor view into the process. Due to their design, this is impossible with conventional push rod fittings.

For Tough Applications

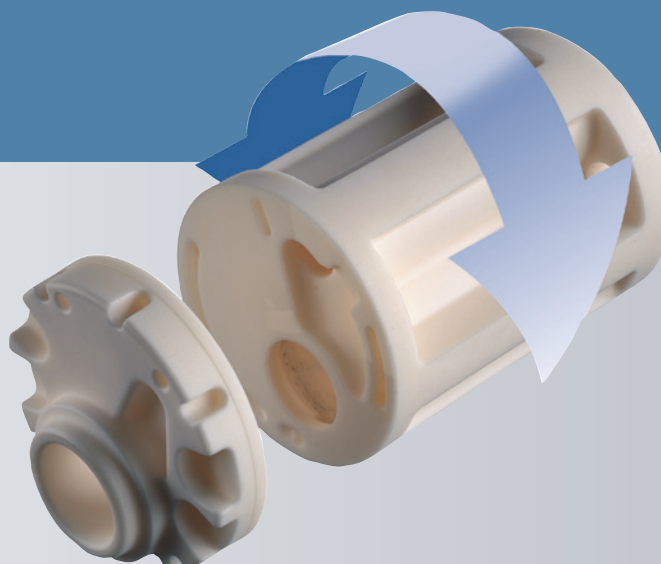
- Highly corrosive processes (chlorine production, phosgenation)
- Processes with buildup or abrasive and scaling solids: flue gas desulfurization, gas scrubber, sugar production (1st + 2nd carbonation), dyes and pigment synthesis, special crust-forming industrial wastewater
- Pulpy, fibrous media (cellulose, cosmetics, food)
- Organic and sticky residue (refinery wash waters, starch production)
- Processes with highly toxic substances, e.g., phosgene gas

Facts and Features

- Virtually wear-resistant
- Sterilizable
- Plug & play thanks to central multiplug
- Drive easy to replace under process conditions
- Cyclone rinsing for optimum cleaning effect

Ceramat

Retractable fittings with ceramic sealing to the process.



Ceramat WA 150/153 / 155

Pneumatic retractable fitting with application-specific process connections.

Retractable fitting with ceramic sealing for extreme conditions.

Ceramat WA 150 / 153:
for 12-mm sensors (225 mm length)
and PG 13.5 connection

Ceramat WA 155:
for optical sensors with a diameter of
12 mm or ½".

- Superior sensor immersion depths
Ceramat WA 150: 135 mm
Ceramat WA 153 / 155: 23 ... 105 mm
- Wide selection of process connections:
Loose flange (DN, ANSI), dairy pipe, clamp,
BioControl, Varivent

Choice of process-wetted materials:

- Ceramat WA 150: PVDF (carbon-fiber-reinforced)
PEEK (carbon-fiber-reinforced)
- Ceramat WA 153/155: Stainless steel 1.4404
titanium, Hastelloy C 22



Ceramat WA 154/156

Pneumatic retractable fitting with variable immersion depth up to 300 mm.

Retractable fitting with ceramic sealing and large immersion depth for extreme conditions.

Ceramat WA 154:
for 12-mm sensors (225 mm length)
and PG 13.5 connection

Ceramat WA 156:
for optical sensors with a diameter of
12 mm or ½".

Torsion protection for fiber-optic sensors.

- Superior sensor immersion depth:
23 ... 300 mm
- Process connections: Loose flange (DN, ANSI),
dairy pipe, clamp, BioControl, Varivent

Choice of process-wetted materials:

- Stainless steel 1.4404
- Titanium
- Hastelloy C 22



Ceramat WA 160

Pneumatic retractable immersion fitting with variable immersion depth up to 2000 mm.

Stainless-steel fitting
for 12-mm sensors.
Up to 2000 mm immersion depth.
For application in tanks,
basins and channels.

- Standard sensor length (225 mm)

Choice of process-wetted materials:

- Stainless steel 1.4571
- Polished stainless steel 1.4435
- PP-H
- PVDF



Interface Technology

Indicators

Industrial Transmitters

Portables

Laboratory Meters

Sensors

Fittings

Knick

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