

# **RÜEGER**

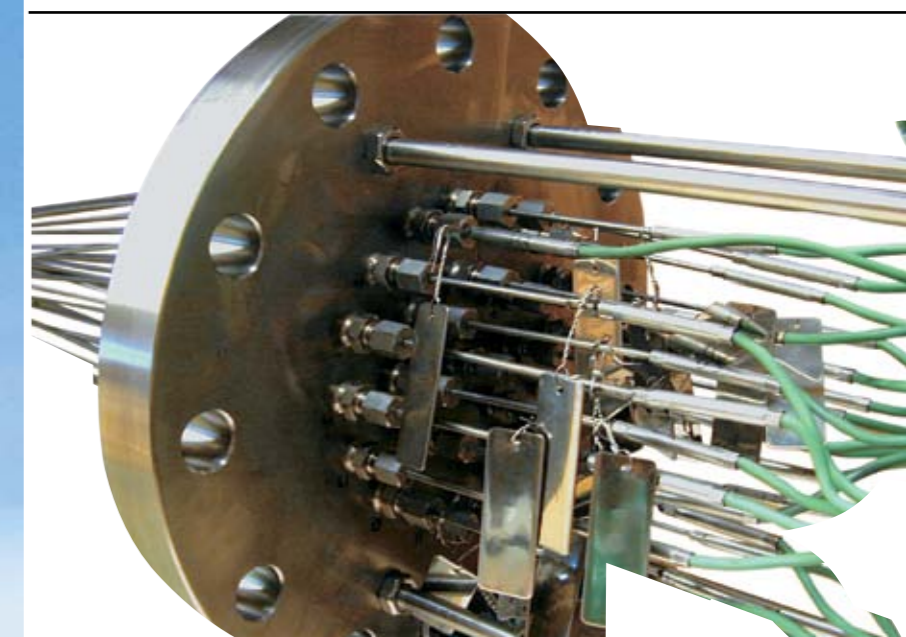
**SPECIAL DESIGN TEMPERATURE SENSORS**



## Multipoint

Multipoint sensors measure temperature at different points in a vessel. They provide an ideal temperature profile for reactors, crackers and tanks. They are custom designed to fit your application and offer the most efficient cost, maintenance, and data acquisition solution. With a single pipe penetration, it enables several points to be read for a complete temperature profile and is constructed to withstand high temperatures and pressures simultaneously. The assemblies can be of any length.

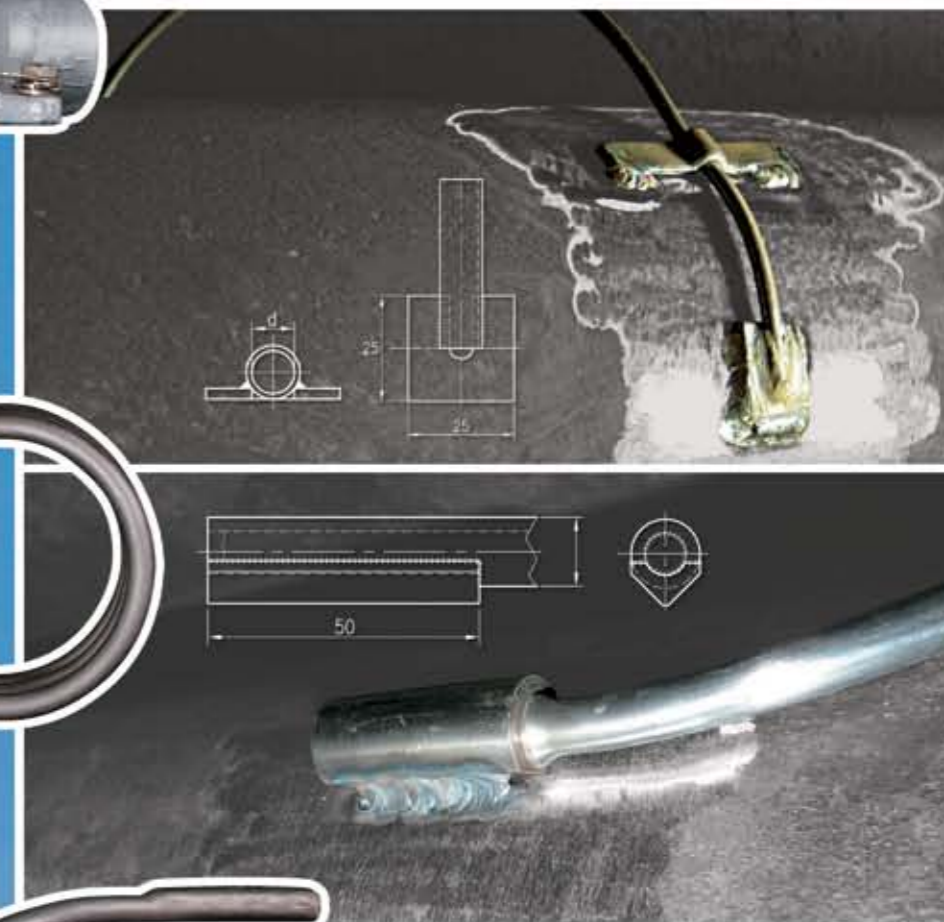
With more than 60 years' experience in temperature measurement instruments and, specifically, in multipoint sensors, RÜEGER has dedicated a sensor engineering team to diversify its product range through constant research and development.



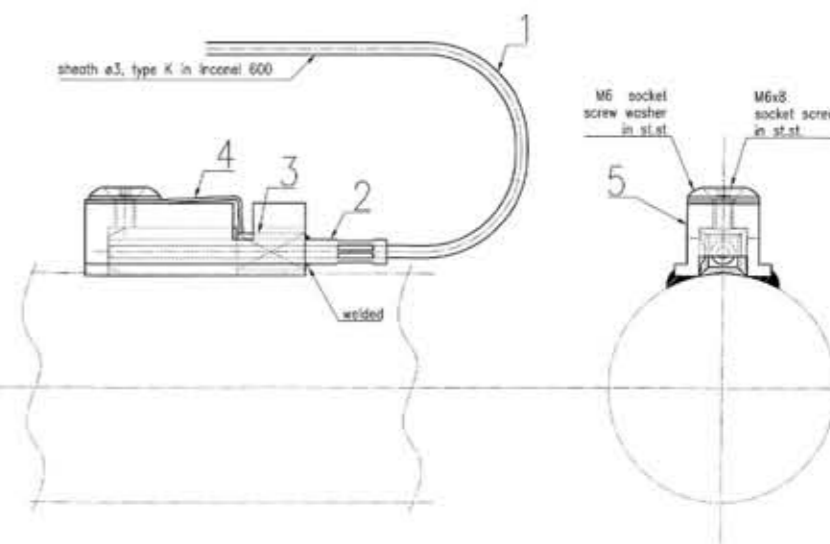
## Skin

*Skin sensors are designed to measure temperature on pipes, inside or outside vessels, reactors, walls and on other flat surfaces.*

RÜEGER has taken skin thermocouple design to the next level. We provide advanced technical solutions with an optimized contact between the sensor and the surface to measure, producing the best response time.



RÜEGER has developed a unique interchangeable skin sensor that makes it possible to replace the sensor easily, thereby reducing maintenance and construction costs and doing away with the need for pipe drilling and thermowell assembly.



**Extra Low Temperature / Cryogenic**

*These sensors measure extra-low temperature, such as liquefied gas contained in tanks that are on shore or on ships.*

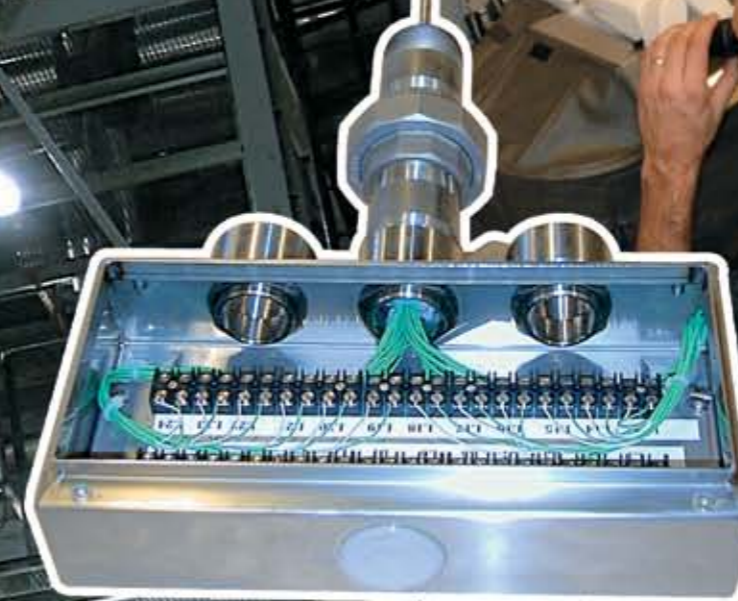
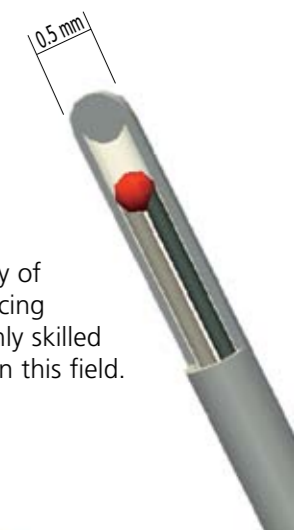
RÜEGER takes special care by choosing the appropriate components (including sheath, wire, connectors and fittings) to ensure that our sensors operate optimally at extreme temperatures.



### Miniature

*These are used when the volume (or space) available for measuring the temperature is so small that the sensors must be of a very small diameter.*

For centuries, Switzerland has been the country of excellence for miniature manufacturing, producing watches and nanotechnologies. Thanks to highly skilled and trained manpower, RÜEGER is the leader in this field.



**Heavy Industry / Power Generation**

*Heavy industry (turbines, pumps, engines and boilers) demands particularly robust and long-lasting components. This also applies to temperature measurement.*

Thanks to high engineering, the design of RÜEGER's sensors provides the best response to heavy-duty conditions (vibration, abrasion). They combine repeatability and robustness with stability over time.



### Retractable Temperature Sensors

*Depending on applications, pipelines may need to be cleaned and inspected. Special tools are required, such as a pigging system. During these operations, the full section of the pipe must be clear, so thermowells and standard temperature sensors may not be used. Retractable Temperature Sensors meet this technical challenge.*

RÜEGER, a permanent solution provider, has developed a reliable kit that makes it possible.





**... and other Designs**

*Temperature measurement is the most important variable for many processes.*

*Each field has its specifics, which take into consideration:*

- Mechanical conditions
- Chemical conditions
- Particular rules, norms and regulations

Our success in temperature measurement is based on 65 years of experience and continuous growth in this field.

For detailed information, please email your request to [info@rueger.ch](mailto:info@rueger.ch)

**Our Reference list**

ABU DHABI OIL REFINING COMPANY	OMAN GAS CO.
ADCO - ABU DHABI CO. FOR ONSHORE OIL OP	OMAN LNG
ALSTOM POWER	OMV – ÖSTERREICHISCHE MINERALÖLVERWALTUNG
ALUAR – ALUMINIO ARGENTINA	PETROBAS
BANAGAS – BAHRAIN NATIONAL GAS CO.	PETROCHINA
BAPCO – BAHRAIN PETROLEUM CO.	PETRONAS
BASELL POLYOLEFINE GMBH	PETROPLUS REFINING CRESSIER SA
BASF	PETROVIETNAM
BAYER	PGI - SIEMENS POWER GENERATION INDUSTR. APPL.
BP CHEMICALS	PHILLIPS PETROLEUM
BURCKHARDT COMPRESSION	PKN ORLEN
BURGMANN INDUSTRIES GMBH	POGC - PARS OIL & GAS COMPANY
CHEVRON	QAFAC – QATAR FUEL ADDITIVES CO.
CIBA	QAPCO – QATAR PETROLEUM CO.
CNOOC - CHINA NATIONAL OFFSHORE OIL CORP.	QATARGAS – QATAR LIQUEFIED GAS CO.
CTCI CORPORATION	RAFINERIA NAFTY JEDLICZE
EASTMAN	RAS LAFFAN LNG
ENEL	RASGAS – RAS LAFFAN LIQUEFIED NATURAL GAS CO.
EXXON	RELIANCE PETROLEUM LTD
FPCC - FORMOSA PLASTICS CHEMICALS CO.	SABIC - SAUDI BASIC INDUSTRIES CORPORATION
GAS NATURAL SPAIN	SAUDI ARAMCO
GAZ DE FRANCE	SAUDI ELECTRICITY COMPANY
GAZKOMPLEKTEMPEX – NOVY URENGOY	SERONO
GENERAL ELECTRIC	SHANGHAI SECCO PETROCHEMICAL
GIVAUDAN	SHELL
HAMWORTHY COMBUSTION	SIAM MITSUI PTA CO. LTD
HELLENIC PETROLEUM – ASPROPYRGOS	SIEMENS
INDORAMA PETROCHEM LIMITED	SINOPEC
IPCL - INDIAN PETROCHEMICALS CORP. LTD	SIUCI - SOHAR INT. UREA & CHEMICAL INDUSTRIES
JORDAN PETROLEUM REFINERY	SOLVAY
JSC SLAVNEFT – YAROSLAVNEFTORGSIONTEZ	SONATRACH
KNPC – KUWAIT NATIONAL PETROLEUM CO.	SRC - SINGAPORE REFINING CO.
LEBEDINSKI MINING	STATOIL
LOTOS GROUP	SYNGENTA
MIRO - MINERALÖLRAFFINERIE OBERRRHEIN	TAIWAN POWER
MOBIL OIL	TAMOIL
NESTLE	THAI LUBE BASE CO.
NIGC – NATIONAL IRANIAN GAS COMPANY	THAI OIL
NIGERIA LNG	THAI PLASTICS & CHEMICALS
NIOC – NATIONAL IRANIAN OIL COMPANY	TITAN POLYETHYLENE SDN BHD
NIOE&C – NATIONAL IRANIAN OIL ENGINEERING & CONSTRUCTION CO.	TOTAL
NOVARTIS	TUPRAS REFINERY
NPC - NATIONAL PETROCHEMICAL COMPANY	VINACOAL - VIETNAM NATIONAL COAL CORP.



# RÜEGER

MANUFACTURERS OF SENSORS AND GAUGES FOR TEMPERATURE & PRESSURE

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