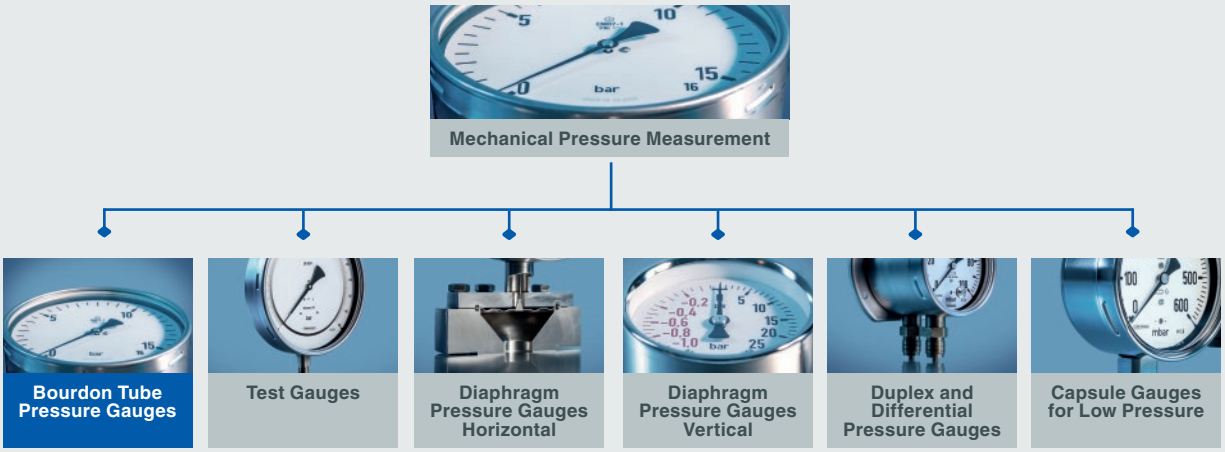
Heading 1

Mechanical Pressure Measurement

Bourdon tube pressure gauges

ARMANO Messtechnik GmbH



Quality Made in Germany

Mechanical Pressure Measurement

The ARMANO Messtechnik GmbH represents tradition and innovation in the production and distribution of precision pressure and temperature measuring instruments, which have an excellent reputation worldwide – for more than 100 years.

We are continually developing customer-specific solutions for a variety of applications requiring pressure and temperature measuring technology. Their use is manifold and there are always new applications.

Mechanical pressure gauges are indicating pressure measuring instruments for gauge, absolute and differential pressure.

For the optimal solution of various applications, we distinguish between the following product categories: Bourdon tube pressure gauges, Bourdon tube test gauges, diaphragm pressure gauges (horizontal / vertical diaphragm), duplex and differential pressure gauges and capsule gauges for low pressure.

In this brochure, you will find our standard range of mechanical pressure measuring instruments from our product range Bourdon tube pressure gauges, including additional electrical accessories.

Your instrument is not listed here? Jointly, we will find a suitable solution for your application.
Do not hesitate to contact us!

Our Products at a Glance

Mechanical Pressure Measurement

Electronic Pressure Measurement

Chemical Seal Mounting

Calibration Technology

Mechanical Temperature Measurement

Electrical Temperature Measurement

Thermowells & Accessories

Applications

Bourdon tube pressure gauges are suitable for the measurement of positive and negative overpressures between 0 – 0.6 and 0 – 6000 bar for liquid or gaseous media. The information given in DIN EN 837-2 have to be considered for the selection of the suitable measuring instrument. In particular, it has to be ensured that the medium does not corrode any of the wetted parts.

Fields of Application

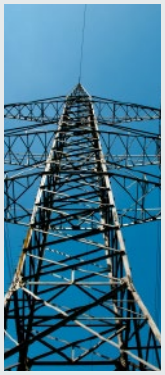
Our high-quality pressure gauges are applicable in a wide range of fields. With our impressive customer solutions for various industries, we show you which ones are suitable for you!

Chemistry & Petrochemistry

Engineering

Oil and Gas

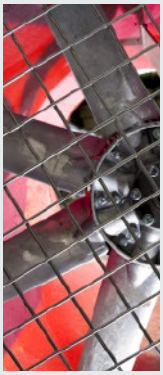
Energy



Shipbuilding Industry

Rail Cars

Building Services and Refrigeration Engineering



Customer Solutions

Numerous customer solutions are available for almost all models. Thus, only a few examples are specified below. Further possibilities can be found in the data sheets or other technical documents of the respective models. Further individual special configurations are available upon request.
No matter what requirements and needs your application has, together with our technicians we will find an ideal solution for you – please contact us!

General Features

Selection Criteria

A detailed description of the selection criteria can be found in the commentary of the DIN e. V. “Überdruckmessgeräte nach DIN EN 837” (“Overpressure measuring instruments according to DIN EN 837”, available in German only), published by the Beuth Verlag. Please compare the selection criteria for pressure gauges described in our operating instruction, which can be found as pdf file on our website.

Standard Material Combinations

(for the wetted parts)
Depending on the process, a wide range of materials are applied to meet the demands on temperature resistance, mechanical strength and chemical resistance. Additionally, we provide particularly economic, material-saving construction types for special materials. There, only the wetted parts are made of the special material.

Ordering code	Pressure ranges	Connection	Bourdon tube
– 1		brass	bronze
	high ranges	brass	stainless steel 316L
– 3		stainless steel 316L	stainless steel 316L
	high ranges	stainless steel 316L	NiFe alloy
– 6	for almost all models	Monel	Monel

Process Connections

With only a few exceptions, our Bourdon tube pressure gauges are available with the following process connections according to DIN EN 837-1:

- G ¼ B (¼" BSP) up to NCS 63
- G ½ B (½" BSP) from NCS 80

Almost all models are available with the following connections without any extra charges:

- ¼" NPT or M 12x1.5 up to NCS 63
- ½" NPT or M 20x1.5 from NCS 80

Please note:
Process connection G ¼ B, ¼" NPT and M 12x1.5 according to DIN EN 837-1
max. pressure range 600 bar (type – 1)
1000 bar (type – 3)

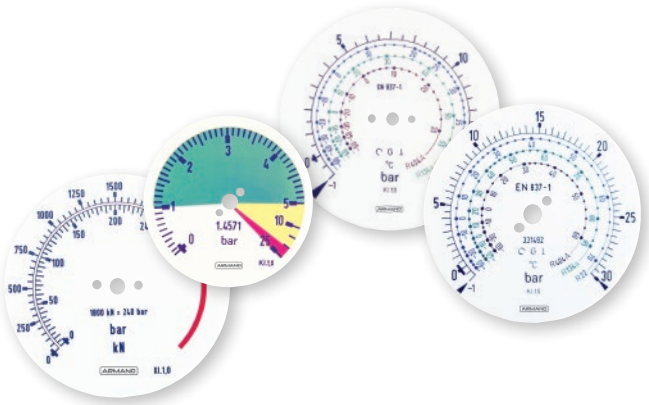
Further versions are available as customised product.

Pressure Ranges

Bar is the preferred pressure unit according to DIN EN 837-1. In this model overview, the available pressure ranges are indicated in bar. Beyond that, there are several further pressure units available, e.g. psi, mmWS, kg/cm², kPa, MPa. Multiple scales are available as well.
Special scales can be manufactured upon request.
For applications in refrigeration engineering, our pressure gauges can be provided with temperature scales for the different refrigerants.

Case Fillings

Case fillings are applied for difficult operating conditions, such as vibrations and high pressure variations or to avoid condensation (outdoor installations). The standard filling liquid is glycerin (models …G) or a special oil for pressure gauges with mounted additional electrical accessory (models …Oe). For lower temperatures, silicone oil is used.
For further details on temperature limitations, see page 7.



General Features

Construction

The measuring systems of Bourdon tube pressure gauges are designed regardless of measurand and pressure range. Each measuring system has a socket with process connection on the one side and connection of the measuring element (Bourdon tube) on the other side. Depending on the nominal pressure, this Bourdon tube is designed in circular form (for smaller nominal pressures) or in helical form (for higher nominal pressures). The movement transmits the motion of the measuring element, which is proportional to the pressure, into a rotary pointer motion, enabling the pressure to be indicated on the scale of the dial. These components form a constructional unit ready for measurement. Case, ring and window serve as protection against external influences.

Bourdon Tube Measuring System, Circular Form

Bourdon Tube Measuring System, Helical Form

Media

for gaseous and liquid media

Pressure Ranges

from 0 – 0.6 bar
to 0 – 6000 bar

Metrological Information

Accuracy according to DIN EN 837-1 and DIN 16 001

The scope of both standards depends on the pressure range of the Bourdon tube pressure gauge. DIN EN 837-1 applies to instruments with pressure ranges up to 1600 bar. For pressure ranges over 1600 bar, DIN 16 001 is to be applied.

DIN EN 837-1

According to DIN EN 837-1, the accuracy class includes the combination of the error variables non-linearity, hysteresis and friction. The maximum permissible measurement error applies to each measuring point within the pressure range. In addition, DIN EN 837-1 specifies that the hysteresis error at each measuring point must not exceed the value of the accuracy class, i.e. the hysteresis must not exceed 50 % of the permissible error band.

- Class 1.6 up to NCS 80
- Class 1.0 from NCS 100

DIN 16 001

DIN 16 001 specifies the accuracy class in the same way except that the hysteresis error at each measuring point must not exceed twice the value of the accuracy class, i.e. each measuring point must be within the tolerance band and the hysteresis may cover the entire width of the error band.
Please regard possible limitations in the data sheets!

Load Limits

To guarantee a long service life, the pressure range should be selected in a way to ensure that the pressure load does not exceed 75 % of the full scale value for steady loads or 60 % of the full scale value for dynamic loads.
It is also recommended not to use the initial range (up to approx. 20 %) of the pressure gauge for measurements, because there the permissible measurement deviation is the largest in relation to the measured value.

The following maximum load limits are to be regarded:

According to DIN EN 837-1			According to DIN 16 001
Nominal case sizes	**100, 125, 160, 250, 4½" and 96 x 96, 144 x 144**	**40, 50, 63, 80**	**100, 160**
at steady load	full scale value	75 % of the full scale value	75 % of the full scale value
max. permissible overpressure	1.3-times measuring span	full scale value	full scale value

Temperature Limitations

- Medium temperature:

Ordering code	Case	Joint	Unfilled	Filled
– 1		soft soldered	+60 °C (+140 °F)	+60 °C (+140 °F)
		silver brazed	+100 °C (+212 °F)	+100 °C (+212 °F)
	plastic	silver brazed		+70 °C (+158 °F)
– 3	stainless steel		+200 °C (+392 °F)	+100 °C (+212 °F)
	plastic		+100 °C (+212 °F)	+70 °C (+158 °F)

- Storage temperature: –40 / +70 °C (–40 / +158 °F)
  for glycerin filling –20 / +70 °C (–4 / +158 °F)
  for silicone filling –20 / +60 °C (–4 / +140 °F)

- Ambient temperature:

unfilled	standard	–40 / +60 °C (–40 / +140 °F)
	customised	–60 / +60 °C (–76 / +140 °F)
filled	standard	–20 / +60 °C (–4 / +140 °F)
	customised	–40 / +60 °C (–40 / +140 °F)

Please regard possible limitations in the data sheets.
Please contact us if you require instruments with higher or lower temperature limitation.

- Reference temperature: +20 °C (+68 °F)

If the operating temperatures of the measuring system (resilient element and movement) deviate from the reference temperature, additional deviations of the pressure indication do occur. These can be up to 0.5 % of the span per 10 K.

Dial/Standard Scales/Scale Division

Dial inscriptions, pressure range, scale divisions and figures on the scale are designed according to DIN EN 837-1 or DIN 16 001. The standard dial is white with black inscription. Pressure gauges from NCS 80, to a great extent also NCS 63, are provided with a clearly identifiable instrument number on the dial.

Nominal Case Sizes 80, 100, 160, 250, 4½", 96 x 96, 144 x 144

Pressure ranges according to DIN EN 837-1 in bar		Smallest subdivision of the scale (bar)
vacuum	–1 200 / 0 mbar	20 mbar
	–1 / 0	0.02
	–0.6 / 0	0.01
compound range	–1 / +0.6	0.05
	–1 / +1.5	0.05
	–1 / +3	0.1
	–1 / +5	0.1
	–1 / +9	0.2
	–1 / +15	0.5
pressure	0.2 – 1	0.02
	0 – 0.6	0.01
	0 – 1	0.02
	0 – 1.6	0.05
	0 – 2.5	0.05
	0 – 4	0.1
	0 – 6	0.1
	0 – 10	0.2
	0 – 16	0.5
	0 – 25	0.5
	0 – 40	1
	0 – 60	1
	0 – 100	2
	0 – 160	5
	0 – 250	5
	0 – 400	10
	0 – 600	10
	0 – 1 000	20
	0 – 1 600	50
	0 – 2 500[1)]	50
	0 – 4 000[1)]	100
	0 – 5 000[1)]	100
	0 – 6 000[1)]	100

Pressure ranges in psi		Smallest subdivision of the scale (psi)
vacuum	–30" Hg / 0	–0.2" Hg
compound range	–30" Hg / +15	–0.5" Hg / +0.2
	–30" Hg / +30	–1" Hg / +0.5
	–30" Hg / +60	–1" Hg / +1
	–30" Hg / +100	–2" Hg / +1
	–30" Hg / +160	–5" Hg / +2
	–30" Hg / +200	–5" Hg / +2
	–30" Hg / +300	–10" Hg / +5
pressure	3 – 15	0.2
	0 – 10	0.1
	0 – 15	0.1
	0 – 30	0.2
	0 – 60	0.5
	0 – 100	1
	0 – 160	2
	0 – 200	2
	0 – 300	2
	0 – 400	5
	0 – 600	5
	0 – 800	10
	0 – 1 000	10
	0 – 1 500	10
	0 – 2 000	20
	0 – 3 000	20
	0 – 4 000	50
	0 – 5 000	50
	0 – 6 000	50
	0 – 10 000	100
	0 – 15 000	100
	0 – 20 000	200
	0 – 30 000	200
	0 – 35 000	200
	0 – 40 000	500
	0 – 50 000	500
	0 – 60 000	500

Nominal Case Sizes 40, 50, 63

Pressure ranges according to DIN EN 837-1 in bar		Smallest subdivision of the scale (bar)
vacuum	–1 200 / 0 mbar	50 mbar
	–1 / 0	0.02
	–0.6 / 0	0.02
compound range	–1 / +0.6	0.05
	–1 / +1.5	0.1
	–1 / +3	0.1
	–1 / +5	0.2
	–1 / +9	0.2
	–1 / +15	0.5
pressure	0.2 – 1	0.02
	0 – 0.6	0.02
	0 – 1	0.02
	0 – 1.6	0.05
	0 – 2.5	0.1
	0 – 4	0.1
	0 – 6	0.2
	0 – 10	0.2
	0 – 16	0.5
	0 – 25	1
	0 – 40	1
	0 – 60	2
	0 – 100	2
	0 – 160	5
	0 – 250	10
	0 – 400	10
	0 – 600	20
	0 – 1 000	20

Pressure ranges in psi		Smallest subdivision of the scale (psi) NCS 40, 50	NCS 63
vacuum	–30" Hg / 0	–1" Hg	–0.5" Hg
compound range	–30" Hg / +15	–1" Hg / +0.5	–1" Hg / +0.5
	–30" Hg / +30	–2" Hg / +1	–1" Hg / +0.5
	–30" Hg / +60	–5" Hg / +2	–2" Hg / +2
	–30" Hg / +100	–5" Hg / +2	–5" Hg / +2
	–30" Hg / +160	–10" Hg / +5	–5" Hg / +2
	–30" Hg / +200	–10" Hg / +5	–10" Hg / +5
	–30" Hg / +300	–10" Hg / +10	–10" Hg / +5
pressure	3 – 15	0.5	0.2
	0 – 10	0.2	0.1
	0 – 15	0.5	0.2
	0 – 30	1	0.5
	0 – 60	2	1
	0 – 100	2	1
	0 – 160	5	2
	0 – 200	5	2
	0 – 300	10	5
	0 – 400	10	5
	0 – 600	20	10
	0 – 800	20	10
	0 – 1 000	20	10
	0 – 1 000	50	20
	0 – 2 000	50	20
	0 – 3 000	100	50
	0 – 4 000	100	50
	0 – 5 000	200	100
	0 – 6 000	200	100
	0 – 10 000	200	100
	0 – 15 000	–	200

[1)] pressure ranges according to DIN 16 001

Certificates and Approvals

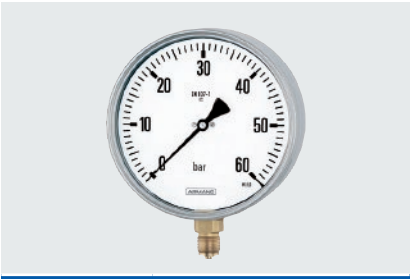
Standards

Our company is certified according to the highest quality standards and our product portfolio meets the highest quality demands. We do not only manufacture according to product-specific instrument standards, we also offer versions with special approvals for application areas with specific requirements. The ARMANO Messtechnik GmbH is certified according to DIN EN ISO 9001.

SIL 2
SIL 3

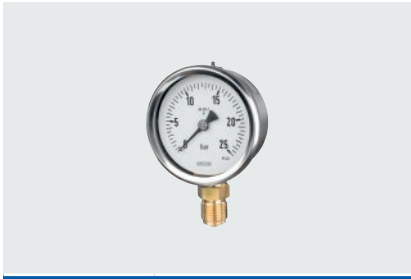
Standard Pressure Gauges

Comprehensive descriptions of available options and special versions for all models can be found in the respective data sheets. The latest versions of the documents are available for download on our website www.armano-messtechnik.com.



RCh/RChG[1)]	
Case/ring	bayonet ring case stainless steel
Case filling	without/with
Accuracy	class 1.0
Nominal size	100, 160, 250 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1600 bar
Data sheet	1201

RChg/RChgG[1)]	
Case/ring	crimped-on ring case stainless steel
Case filling	without/with
Accuracy	class 1.0
Nominal size	100, 125, 160 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1600 bar
Data sheet	1202



RChg 80 RChgG 80	
Case/ring	crimped-on ring case stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar and 0 – 1000 bar)
Nominal size	80 mm
Wetted parts	– 1 brass – 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1203

RCh 63[1)] RChG 63[1)]	
Case/ring	bayonet ring case stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar and 0 – 1000 bar)
Nominal size	63 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1211

RChg 63[1)] RChgG 63[1)]	
Case/ring	crimped-on ring case (polished) stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar and 0 – 1000 bar)
Nominal size	63 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1212

[1)] – 3v welded construction type available

Standard Pressure Gauges

RChg 40 – 3v RChgG 40 – 3v	
Case/ring	crimped-on ring case (polished) stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar)
Nominal size	40 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 1 bar to 0 – 600 bar
Data sheet	1221

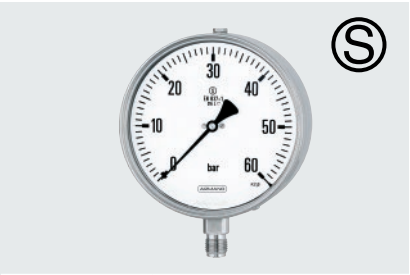
RChg 50 – 3[1)] RChgG 50 – 3[1)]	
Case/ring	crimped-on ring case (polished) stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar)
Nominal size	50 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 1 bar to 0 – 600 bar
Data sheet	1232

[1)] – 3v welded construction type available

Safety Pressure Gauges

Safety Version

RSCh 63 RSChG 63	
Case/ring	bayonet ring case stainless steel
Case filling	without/with
Accuracy	class 1.6 class 2.5 (at 0 – 600 bar and 0 – 1000 bar)
Nominal size	63 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1610

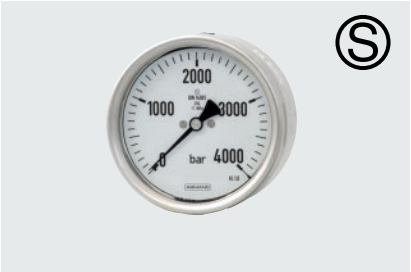


Safety Version

RSCh/RSChG	
Case/ring	bayonet ring case stainless steel
Case filling	without/with
Accuracy	class 1.0
Nominal size	100, 160 mm
Wetted parts	– 1 brass – 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1600 bar[1)]
Data sheet	1600

Safety Version

RSChg 160 – 3v RSChgG 160 – 3v	
Case/ring	crimped-on ring case stainless steel
Case filling	without/with
Accuracy	class 1.0
Nominal size	160 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 1600 bar[1)]
Data sheet	1602



High Pressure Gauge According to DIN 16 001

RSCh/RSChG	
Specifics	break-proof solid front, blow-out back, bottom high-pressure connection for ¼" tube, with 60° sealing cone, female thread M 16x1.5 or 9/16" – 18 UNF
Case/ring	bayonet ring case stainless steel
Case filling	without/with
Accuracy	class 1.0
Nominal size	100, 160 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 2000 bar to 0 – 6000 bar
Data sheet	1640

[1)] pressure ranges > 1600 bar according to DIN 16 001 (see data sheet 1640)

Special Pressure Gauges

Square Gauges

RQS

Specifics	square case front narrow rim for the installation into switch panels and control panels
Case/ring	square case galvanised steel black
Case filling	without/with
Accuracy	class 1.0
Nominal size	96, 144 mm
Wetted parts	– 1 brass – 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1500

Caisson Gauge

RCaiCh 160

Specifics	holding chain stainless steel, adjustable pointer, 2 bottom vents
Case/ring	bayonet ring case stainless steel
Case filling	without
Accuracy	class 1.0
Nominal size	160 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 0.6 bar to 0 – 16 bar
Data sheet	1800

Process Gauge

RPG/RPGG 4½"

Specifics	break-proof solid front, blow-out back, integrated rear flange US Standard Process Gauge
Case/ring	plastic screw ring PBTP (thermoplastic)
Case filling	without/with
Accuracy	Grade 2A according to ASME B40.1 (0.5 %)
Nominal size	4½"
Wetted parts	– 3 stainless steel 316L – 6 Monel
Pressure ranges	0 – 0.6 bar to 0 – 1000 bar
Data sheet	1401

Subsea Gauge

RChG 100 – 3
RChG 160 – 3

Specifics	IP68, application to a water depth of 3 000 m (10 000 ft) dial aluminum black, scale white
Case/ring	bayonet ring case stainless steel
Case filling	with
Accuracy	class 1.0
Nominal size	100, 160 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 1600 bar
Data sheet	1810

Special Pressure Gauges

Ultrapure Gas Pressure Gauge with ECD Quality

RCh 63	
Specifics	connection ¼" NPT or VCR-F, VCR-M or VCR-M short, for VCR connection increased surface finish in the inlet port, Ra 0.2 – 0.4 µm
Case/ring	bayonet ring case stainless steel
Accuracy	class 1.6
Nominal size	63 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 250 bar
Data sheet	1211

Ultrapure Gas Pressure Gauge with ECD Quality and Safety Version

RSCh 63	
Specifics	connection ¼" NPT or VCR-F, VCR-M or VCR-M short, for VCR connection increased surface finish in the inlet port, Ra 0.2 – 0.4 µm
Case/ring	bayonet ring case stainless steel
Accuracy	class 1.6
Nominal size	63 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	0 – 0.6 bar to 0 – 250 bar
Data sheet	1610

Can Puncturing Gauge

RCh 63	
Specifics	bottom connection with cannula connection, needle Ø 5 mm, rubber seal NBR
Case/ring	bayonet ring case stainless steel
Accuracy	class 1.6
Nominal size	63 mm
Wetted parts	– 1 brass
Pressure ranges	–1 / 0, –1 / 0.6, –1 / 1.5 bar
Data sheet	1211, T01-000-022

Special Pressure Gauges

Combi Gauges for Rail Cars

Rg....Fz/RChg...Fz

Specifics	combi gauge according to DIN 38030:2009 with u-clamps for panel mounting and with direct and indirect lighting as combi gauges
Case/ring	crimped-on ring case galvanised or stainless steel crimped-on ring aluminum black anodised
Accuracy	class 1.6 (NCS 60) class 1.0 (NCS 80, 100)
Nominal size	60, 80, 100 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 6, 0 – 10, 0 – 12 bar
Data sheet	1901

Combi Gauges for Rail Cars

RChg 125 – 1 Fz

Specifics	combi gauge according to DIN 38030:2009 with u-clamps for panel mounting and with direct and indirect lighting as combi gauges special nominal size 125
Case/ring	crimped-on ring case stainless steel crimped-on ring aluminum black anodised
Accuracy	class 1.0
Nominal size	125 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 6, 0 – 10, 0 – 12 bar
Data sheet	1901.1

SF_6 Gas Density Monitor

RChg/RChgOe/RChgN 100 – 3 SF6

Case/ring	crimped-on ring case stainless steel
Case filling	RChg – without RChgOe – special oil RChgN – nitrogen
Accuracy	class 1.0 at +20 °C (NCS 100) class 2.5 at –20 / +60 °C
Nominal size	100 mm
Wetted parts	– 3 stainless steel 316L
Pressure ranges	e.g. –0.1 / +0.9 MPa
Data sheet	1902

SF_6 Gas Density Monitor

RChgN 63 – 3 SF6

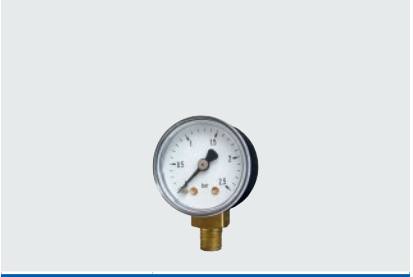
Case/ring	crimped-on ring case stainless steel
Case filling	RChgN – nitrogen
Accuracy	class 1.0 at +20 °C class 2.5 at –20 / +60 °C
Nominal size	63 mm
Wetted parts	– 3 stainless steel 316L gas-shielded arc welding, leakage rate < 10^{-9} mbar l/s
Pressure ranges	spans 2.5 to 16 bar gauge or absolute pressure
Industry Brochure SF6	

SF_6 Gas Density Indicator

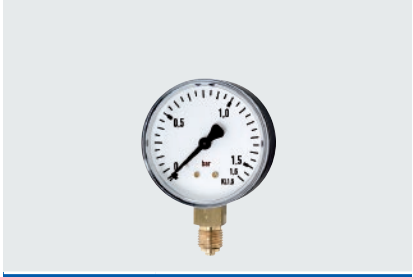
RChg 63 – 3 r SF6

Case/ring	crimped-on ring case stainless steel
Case filling	RChg – without
Accuracy	class 1.0 at +20 °C class 2.5 at –20 / +60 °C
Nominal size	63 mm
Wetted parts	– 3 stainless steel 316L gas-shielded arc welding, leakage rate < 10^{-9} mbar l/s
Pressure ranges	spans 1.6 to 16 bar gauge or absolute pressure
Industry Brochure SF6	

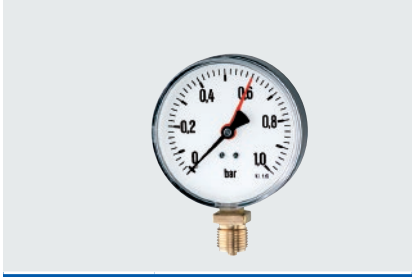
Low Cost Pressure Gauges



RE 40 – 1 RE 50 – 1	
Case/ring	steel case black
Window	snap-in polycarbonate
Accuracy	class 1.6
Nominal size	40, 50 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 1 bar to 0 – 400 bar
Data sheet	1132



RE 63 – 1	
Case/ring	steel case black
Window	snap-in polycarbonate
Accuracy	class 1.6 class 2.5 (at 600 bar)
Nominal size	63 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 0.6 bar to 0 – 600 bar
Data sheet	1110

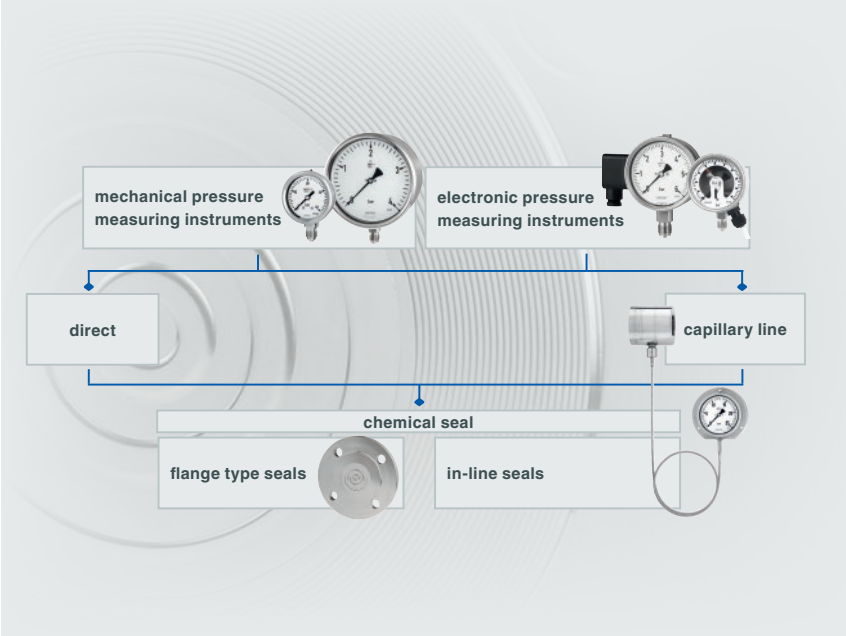


RE 100 – 1	
Case/ring	steel case black
Window	snap-in polycarbonate
Accuracy	class 1.6
Nominal size	100 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 0.6 bar to 0 – 600 bar
Data sheet	1120

RgG 63 – 1	
Case/ring	crimped-on ring case stainless steel
Case filling	with
Accuracy	class 1.6
Nominal size	63 mm
Wetted parts	– 1 brass
Pressure ranges	0 – 1 bar to 0 – 600 bar
Data sheet	1112

Chemical Seal Mounting

Chemical seals extend the fields of application of measuring instruments for pressure, vacuum, compound ranges, and absolute pressure, i.e. Bourdon tube pressure gauges, pressure transmitters and others. Here, pressure ranges of just a few mbar up to 1000 bar and higher can be realised. Chemical seals can be mounted directly, or via cooling element/capillary line between chemical seal and measuring instrument.

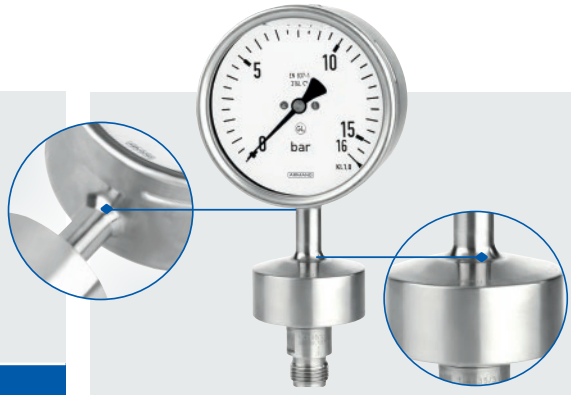


Basically, chemical seals consist of a body with process connection and a diaphragm as separating element, which prevents the medium from entering the measuring unit. Especially for media that are toxic and environmentally damaging, or if the corrosion resistance of the wetted parts has to be guaranteed, the application of chemical seals is inevitable. Chemical seals are also used if processes and regulations set particularly high hygienic standards, e.g. in food, bio and pharmaceutical industries (free of medium wetted dead spaces). For some process connections, certifications according to 3-A and/or EHEDG are available.

Welded Connections – DW-Line (Double Weld)

RCh 63 – 3 vDW RChG 63 – 3 vDW	
Case/ring	bayonet ring case stainless steel welded
Case filling	without/with
Accuracy	class 1.6
Nominal size	63 mm
Wetted parts	stainless steel
Pressure ranges	0 – 1 bar to 0 – 600 bar
Data sheet	1211.7

RCh/RChG – 3 vDW	
Case/ring	bayonet ring case stainless steel welded
Case filling	without/with
Accuracy	class 1.0
Nominal size	100, 160 mm
Wetted parts	stainless steel
Pressure ranges	0 – 0.6 bar to 0 – 600 bar
Data sheet	1201.7



- Pressure gauge welded with chemical seal – not screwed
- No external filling orifices – leakage cannot occur
- Parts are easy to clean externally

Additional Electrical Accessories

Additional electrical accessories can be integrated in Bourdon tube pressure gauges. Limit switch contact assemblies close or open electric or pneumatic circuits. With the adjustable pointer and the key, the limit setting pointers can be adjusted to the required value on the entire range of the scale. When exceeding or falling below the adjusted reference value, the actual value pointer triggers the switch.

With Limit Switch

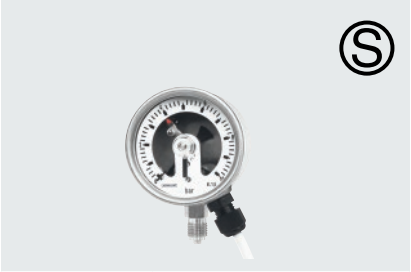
RCh/RChOe		
Case/ring	bayonet ring case stainless steel	
Nominal size	100, 160 mm	
Additional electrical accessory type	low-action contact magnetic contact electronic contact inductive contact pneumatic contact	S M E I P
Degree of protection	IP54 IP65 (model RChOe)	
Data sheet	1201.90	

With Limit Switch

RSCh/RSChOe		
Specifics	safety version	
Case/ring	bayonet ring case stainless steel	
Nominal size	100, 160 mm	
Additional electrical accessory type	low-action contact magnetic contact electronic contact inductive contact pneumatic contact	S M E I P
Degree of protection	IP54 IP65 (model RSChOe)	
Data sheet	1600.90	

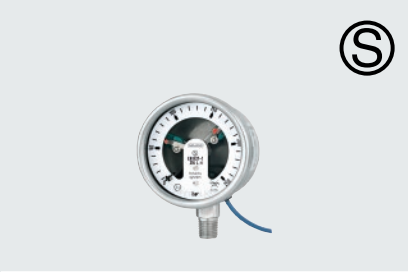
With Limit Switch

RQS		
Specifics	square case	
Case/ring	front narrow rim steel black	
Nominal size	96, 144 mm	
Additional electrical accessory type	low-action contact magnetic contact electronic contact inductive contact pneumatic contact	S M E I P
Degree of protection	–	
Data sheet	1500.90	



With Magnetic Contact

RSCh 63		
Specifics	safety version	
Case/ring	bayonet ring case stainless steel	
Nominal size	63 mm	
Additional electrical accessory type	magnetic contact	M
Degree of protection	IP54	
Data sheet	1610.91	



With Inductive/Electronic Contact

RSCh 63		
Specifics	safety version	
Case/ring	bayonet ring case stainless steel	
Nominal size	63 mm	
Additional electrical accessory type	electronic contact inductive contact	E I
Degree of protection	IP54	
Data sheet	1610.92	

With Reed Contact

RSCh 63		
Specifics	safety version	
Case/ring	bayonet ring case stainless steel	
Nominal size	63 mm	
Additional electrical accessory type	reed contact	R
Degree of protection	IP54	
Data sheet	1610.94	

Enquiries and Orders

We are pleased to offer our help and answer any of your questions and provide background information on our pressure gauges. We can only optimise the measuring instrument for your specific case of application when receiving exact, complete information on the process or a precise specification of the required measuring system.

We have prepared checklists for you to help you with the specification of your instruments.

PDF versions as fillable document and for printing can be found at www.armano-messtechnik.com (Downloads / Checklists).

With Reed Contact

RCh 63		
Case / ring	bayonet ring case stainless steel	
Nominal size	63 mm	
Additional electrical accessory type	reed contact	R
Degree of protection	IP54	
Data sheet	1211.94	

With Integrated Pressure Transmitter DMU

RSCh / RSChOe	
Specifics	safety version
Case / ring	bayonet ring case stainless steel
Nominal size	100, 160 mm
Additional electrical accessory type	pressure transmitter piezoresistive sensor thin film sensor
Degree of protection	IP54 IP55 (model RSChOe)
Data sheet	9631

Any Questions?

Contact Us!

Our agencies worldwide and in Germany: