Bourdon tube pressure gauge, stainless steel
For the process industry, safety version
Models 232.30 and 233.30

For further approvals, see page 6

Applications

- Increased safety requirements for personal protection
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive environments
- Oil and gas industry, chemical and petrochemical industries, power engineering and also water and wastewater technology

Special features

- Safety version with solid baffle wall (Solidfront) designed in compliance with the requirements of EN 837-1 and ASME B40.100
- Excellent load-cycle stability and shock resistance
- With case filling (model 233.30) for applications with high dynamic pressure loads and vibrations
- EMICOgauge version, to avoid fugitive emissions
- QR code on dial links to instrument-specific information



Bourdon tube pressure gauge, model 232.30, NS 100 [4"]

Configurator

Standard articles

Description

This high-quality Bourdon tube pressure gauge has been designed especially for increased safety requirements within the process industry.

The use of high-quality stainless steel materials and the robust design are geared to applications in the chemical and process engineering industries. Thus the instrument is suitable for liquid and gaseous media, also in aggressive environments.

Scale ranges of 0 … 0.6 to 0 … 1,600 bar [0 ... 10 to 0 ... 20,000 psi] ensure the measuring ranges required for a wide variety of applications.

WIKA manufactures and qualifies the pressure gauge in accordance with the standards EN 837-1 and ASME B40.100. This safety version is made up of a non-splintering window, a solid baffle wall between measuring system and dial and a blow-out back. In the event of a failure, the operator is protected at the front side, as media or components can only be ejected via the back of the case.

The QR code on the dial allows instrument-specific information such as the serial number, the order number, certificates and other product data to be retrieved from the internet easily and in the long term.

WIKA
Smart in sensing

Data sheets showing similar products:
Standard version; NS 63 [2 ½"], 100 [4"] and 160 [6"]; models 232.50 and 233.50; see data sheet PM 02.02
Bourdon tube pressure gauge with switch contacts; models PGS23.100 and PGS23.160; see data sheet PV 22.02
Monel version, NS 63 [2 ½"], 100 [4"] and 160 [6"]; models 262 and 263; see data sheet PM 02.33

Specifications

Basic information	
Standard	■ EN 837-1 ■ ASME B40.100
	For information on the “Selection, installation, handling and operation of pressure gauges”, see Technical information IN 00.05.
Further version	■ Oil- and grease-free for oxygen ■ Per NACE [1] MR0175 / ISO 15156, use in H_2S-containing environments in oil and gas production ■ With pre-volume deflagration flame arrester 2) for connection to zone 0 (EPL Ga); model 910.21; see data sheet AC 91.02 ■ Monel version; models 262 and 263; see data sheet PM 02.33 ■ EMICOgauge, to avoid fugitive emissions; instrument hook-up with instrumentation valves, see page 11
Nominal size (NS)	■ Ø 63 mm [2 ½"] ■ Ø 100 mm [4"] ■ Ø 160 mm [6"]
Connection location	■ Lower mount (radial) ■ Lower back mount [3]
Window	Laminated safety glass (NS 63 [2 ½"]: Polycarbonate)
Case	
Design	Safety level “S3” per EN 837-1 With solid baffle wall and blow-out back Scale ranges ≤ 0 ... 16 bar [≤ 0 ... 300 psi] with compensating valve to vent and reseal case
Material	■ Stainless steel 1.4301 (304) ■ Stainless steel 1.4571 (316 Ti)
Ring	Bayonet ring, stainless steel
Mounting	■ Without ■ Panel mounting flange, stainless steel ■ Panel mounting flange, polished stainless steel ■ Surface mounting lugs on the back, stainless steel
Case filling (model 233.30)	■ Without ■ Glycerine ■ Glycerine-water mixture for NS 100 [4"] and 160 [6"] with scale range ≤ 0 ... 2.5 bar [≤ 0 ... 40 psi] or for NS 63 [2 ½"] with scale range ≤ 0 ... 4 bar [≤ 0 ... 60 psi] ■ Silicone oil
Movement	■ Stainless steel ■ everlast® version

1) General information about NACE standards; see data sheet IN 00.21
2) Only for instruments with Ex approval
3) Not available for NS 160 [6"]

Measuring element	
Type of measuring element	Bourdon tube, C-type or helical type
Material	Stainless steel 1.4404 (316L)
Leak tightness	■ Helium tested, leakage rate: $< 5 \cdot 10^{-3}$ mbar l/s ■ Helium tested, leakage rate: $< 1 \cdot 10^{-6}$ mbar l/s

Accuracy specifications		
Accuracy class		
NS 63 [2 ½"]	EN 837-1	Class 1.6
	ASME B40.100	±2 % of measuring span (grade A)
NS 100 [4"], 160 [6"]	EN 837-1	Class 1.0
	ASME B40.100	±1 % of measuring span (grade 1A)
Temperature error	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value	
Reference conditions		
Ambient temperature	+20 °C [68 °F]	

Scale ranges

bar	
0 ... 0.6 [1]	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160
0 ... 4	0 ... 250
0 ... 6	0 ... 400
0 ... 10	0 ... 600
0 ... 16	0 ... 1,000
0 ... 25	0 ... 1,600 [1]

kg/cm²	
0 ... 0.6 [1]	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160
0 ... 4	0 ... 250
0 ... 6	0 ... 400
0 ... 10	0 ... 600
0 ... 16	0 ... 1,000
0 ... 25	0 ... 1,600 [1]

kPa	
0 ... 60 [1]	0 ... 4,000
0 ... 100	0 ... 6,000
0 ... 160	0 ... 10,000
0 ... 250	0 ... 16,000
0 ... 400	0 ... 25,000
0 ... 600	0 ... 40,000
0 ... 1,000	0 ... 60,000
0 ... 1,600	0 ... 100,000
0 ... 2,500	0 ... 160,000 [1]

MPa	
0 ... 0.06 [1]	0 ... 4
0 ... 0.1	0 ... 6
0 ... 0.16	0 ... 10
0 ... 0.25	0 ... 16
0 ... 0.4	0 ... 25
0 ... 0.6	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160 [1]

psi	
0 ... 10 [1]	0 ... 1,000
0 ... 15	0 ... 1,500
0 ... 30	0 ... 2,000
0 ... 60	0 ... 3,000
0 ... 100	0 ... 4,000
0 ... 160	0 ... 5,000
0 ... 200	0 ... 6,000
0 ... 300	0 ... 7,500
0 ... 400	0 ... 10,000
0 ... 600	0 ... 15,000
0 ... 800	0 ... 20,000 [1]

1) Not available for NS 63 [2 ½"]

Vacuum and +/- scale ranges

bar	
-0.6 ... 0 [1]	-1 ... +5
-1 ... 0	-1 ... +9
-1 ... +0.6	-1 ... +15
-1 ... +1.5	-1 ... +24
-1 ... +3	-

MPa	
-0.06 ... 0 [1]	-0.1 ... +0.5
-0.1 ... 0	-0.1 ... +0.9
-0.1 ... +0.06	-0.1 ... +1.5
-0.1 ... +0.15	-0.1 ... +2.4
-0.1 ... +0.3	-

kPa	
-60 ... 0 [1]	-100 ... +500
-100 ... 0	-100 ... +900
-100 ... +60	-100 ... +1,500
-100 ... +150	-100 ... +2,400
-100 ... +300	-

psi	
-30 inHg ... 0	-30 inHg ... +100
-30 inHg ... +15	-30 inHg ... +160
-30 inHg ... +30	-30 inHg ... +200
-30 inHg ... +60	-30 inHg ... +300

1) Not available for NS 63 [2 ½"]

Further details on: scale ranges	
Unit	■ bar ■ psi ■ kg/cm² ■ kPa ■ MPa
Increased overload safety	■ Without ■ 2-fold ■ 3-fold ■ 4-fold ■ 5-fold
	The possibility of selection depends on scale range and nominal size
Vacuum resistance	■ Without ■ Vacuum-resistant to -1 bar
Dial	
Scale colour	Black
Material	Aluminium
Customer-specific version	■ Without ■ With temperature scale for refrigerant, e.g. for NH3: R 717
	Other scales or customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request
Pointer	
Instrument pointer	Aluminium, black
Mark pointer/drag pointer	■ Without ■ Red mark pointer on dial, fixed ■ Red mark pointer on window, adjustable ■ Mark pointer on bayonet ring, adjustable ■ Red drag pointer on window, adjustable
Pointer stop pin	■ Without ■ At zero point (only for NS 63 [2 ½"]) ■ At 6 o'clock (only for NS 100 [4"], 160 [6"])

→ Other scale ranges on request

Process connection		
Standard	■ EN 837-1 ■ ISO 7 ■ ANSI/B1.20.1	
Size		
EN 837-1	■ G ⅛ B, male thread ■ G ¼ B, male thread ■ G ½ B, male thread ■ M12 x 1.5, male thread ■ M20 x 1.5, male thread	
ISO 7	■ R ¼, male thread ■ R ½, male thread	
ANSI/B1.20.1	■ ¼ NPT, male thread ■ ½ NPT, male thread	
Restrictor	■ Without ■ Ø 0.6 mm [0.024"], stainless steel ■ Ø 0.3 mm [0.012"], stainless steel	
Material (wetted)		
Process connection	Stainless steel 1.4404 (316L)	
Bourdon tube	Stainless steel 1.4404 (316L)	

→ Other process connections on request

Operating conditions		
Medium temperature		
Unfilled instruments	-40 ... +200 °C [-40 ... +392 °F]	
Instruments with glycerine filling	-20 ... +100 °C [-4 ... +212 °F]	
Instruments with silicone oil filling	-40 ... +100 °C [-40 ... +212 °F]	
Ambient temperature		
Unfilled instruments or with silicone oil filling	-40 ... +60 °C [-40 ... +140 °F]	
Instruments with glycerine filling	-20 ... +60 °C [-4 ... +140 °F]	
Pressure limitation		
NS 63 [2 ½"]	Steady	3/4 x full scale value
	Fluctuating	2/3 x full scale value
	Short time	Full scale value
NS 100 [4"], 160 [6"]	Steady	Full scale value
	Fluctuating	0.9 x full scale value
	Short time	1.3 x full scale value
Ingress protection per IEC/EN 60529	■ IP65 ■ IP66 ■ IP54 (for lower back mount)	

Approvals

Logo	Description	Region
CE	**EU declaration of conformity** Pressure equipment directive PS > 200 bar, module A, pressure accessory	European Union
-	**CRN** Safety (e.g. electr. safety, overpressure, ...) For scale ranges ≤ 1,000 bar	Canada

Optional approvals

Logo	Description	Region
CE Ex	**EU declaration of conformity** ATEX directive Hazardous areas - Ex h Gas II 2G Ex h IIC T6 ... T1 Gb X Dust II 2D Ex h IIIC T85°C ... T450°C Db X	European Union
EAC Ex	**EAC** Hazardous areas	Eurasian Economic Community
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	**PAC Ukraine** Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan
-	**CPA** Metrology, measurement technology	China
DNV	**DNV** Ships, shipbuilding (e.g. offshore)	International
-	**KBA**[1)] Automotive	International
	Hydrogen-powered motor vehicles - (EC) no. 79/2009 and (EU) no. 406/2010	
	Components for motor vehicles using natural gas (CNG/LNG) – UN no. R 110	

1) Not available for all versions

Manufacturer's declaration

Logo	Description
-	Pressure Equipment Directive (PED) for maximum allowable pressure PS ≤ 200 bar
-	Suitability for oxygen applications
-	Suitability of wetted materials for drinking water in accordance with the European 4MS initiative
-	Suitability of wetted materials for contact with food in accordance with European regulation (EC) no. 1935/2004
-	Suitability of wetted materials for hydrogen
-	Wetted materials free from substances of animal origin (ADI-free and therefore TSE/BSE-free)
-	Emission protection in accordance with TA-Luft (VDI 2440) 1)

1) only for EMICOgauge, see page 10

Certificates (option)

Certificates	
Certificates	■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy) ■ 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts, indication accuracy) ■ PCA calibration certificate, traceable and accredited in accordance with ISO/IEC 17025 ■ Calibration certificate by a national accreditation body, traceable and accredited in accordance with ISO/IEC 17025 on request
Recommended calibration interval	1 year (dependent on conditions of use)

Patents, property rights

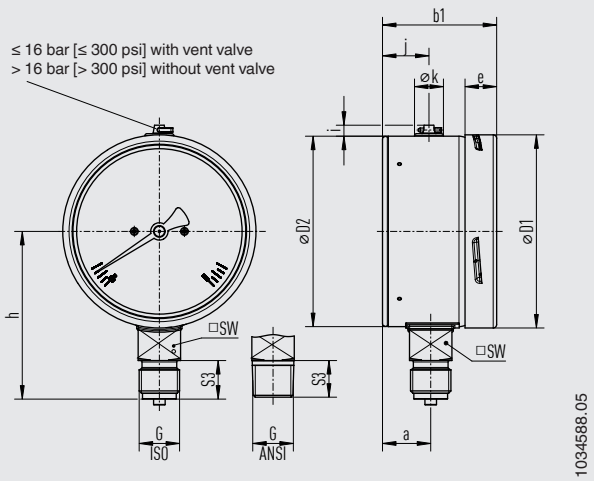
Patent number	Description
US Design D1051747S, CPC CN 01677074, DE Design 402022100171, EU Design 402022100171, IR Design DM/222416, EU 3D trademark 018659564	Design patent WIKA blue identity

The WIKA blue identity design is protected in various countries under various rights.

→ For approvals and certificates, see website

Dimensions in mm [in]

Lower mount (radial)



NS	Weight	
	Model 232.30	Model 233.30
63 [2 ½"]	approx. 0.20 kg [0.44 lb]	approx. 0.26 kg [0.57 lb]
100 [4"]	approx. 0.65 kg [1.43 lb]	approx. 1.08 kg [2.38 lb]
160 [6"]	approx. 1.30 kg [2.87 lb]	approx. 2.34 kg [4.94 lb]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]									
		h ±1 [0.04]	a	b1 ±0.5 [0.02]	D1	D2	i [1]	j	k	S3	SW
63 [2 ½"]	G ¼ B	54 [2.13]	17.5 [0.69]	42 [1.65]	63.5 [2.5]	62 [2.44]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	14 [0.55]
100 [4"]	G ¼ B	87 [3.43]	25 [0.98]	59.5 [2.34]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	22 [0.87]
	G ½ B	87 [3.43]	25 [0.98]	59.5 [2.34]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	22 [0.87]
	M20 x 1,5	87 [3.43]	25 [0.98]	59.5 [2.34]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	22 [0.87]
160 [6"]	G ¼ B	111 [4.37	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	13 [0.51]	22 [0.87]
	G ½ B	118 [4.65]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	20 [0.79]	22 [0.87]
	M20 x 1,5	118 [4.65]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	20 [0.79]	22 [0.87]

Process connection with thread per ISO 7

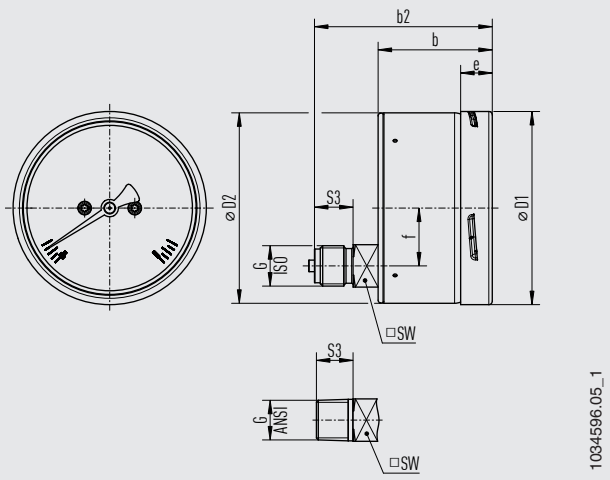
NS	G	Dimensions in mm [in]									
		h ±1 [0.04]	a	b1 ±0.5 [0.02]	D1	D2	i [1]	j	k	S3	SW
63 [2 ½"]	R ¼	54 [2.13]	17.5 [0.69]	42 [1.65]	63.5 [2.5]	62 [2.44]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	14 [0.55]
100 [4"]	R ¼	80 [3.15]	25 [0.98]	59 [2.32]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	22 [0.87]
	R ½	86 [3.39]	25 [0.98]	59 [2.32]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	19 [0.75]	22 [0.87]
160 [6"]	R ¼	111 [4.37]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	13 [0.51]	22 [0.87]
	R ½	117 [4.61]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	13 [0.51]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]									
		h ±1 [0.04]	a	b1 ±0.5 [0.02]	D1	D2	i [1]	j	k	S3	SW
63 [2 ½"]	¼ NPT	54 [2.13]	17.5 [0.69]	42 [1.65]	63.5 [2.5]	62 [2.44]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	14 [0.55]
100 [4"]	¼ NPT	80 [3.15]	25 [0.98]	59 [2.32]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	22 [0.87]
	½ NPT	86 [3.39]	25 [0.98]	59 [2.32]	100 [3.94]	99 [3.90]	6 [0.24]	24 [0.94]	15 [0.59]	19 [0.75]	22 [0.87]
160 [6"]	¼ NPT	111 [4.37]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	13 [0.51]	22 [0.87]
	½ NPT	117 [4.61]	27 [1.06] [2]	64 [2.52] [3]	161 [6.34]	159 [6.26]	6 [0.24]	27 [1.06]	15 [0.59]	13 [0.51]	22 [0.87]

1) With span > 16 bar [> 300 psi] the instrument is designed with a blind plug; i =1,5 [0,06]
2) With span ≥ 100 bar [1.500 psi] a = 41,5 [1,63]
3) With span ≥ 100 bar [1.500 psi] b1 = 79 [3,11]

Model 232.30, lower back mount



NS	Weight
63 [2 ½"]	approx. 0.20 kg [0.44 lbs]
100 [4"]	approx. 0.65 kg [1.43 lbs]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]							
		b	b2 ±0.5 [0.02]	D1	D2	e	f	S3	SW
63 [2 ½"]	G ¼ B	42 [1.65]	63 [2.48]	63.5 [2.5]	62 [2.44]	12.5 [0.49]	19 [0.75]	13 [0.51]	14 [0.55]
100 [4"]	G ¼ B	59 [2.32]	85 [3.35]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	13 [0.51]	22 [0.87]
	G ½ B	59 [2.32]	92 [3.62]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	20 [0.79]	22 [0.87]
	M20 x 1,5	59 [2.32]	92 [3.62]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	20 [0.79]	22 [0.87]

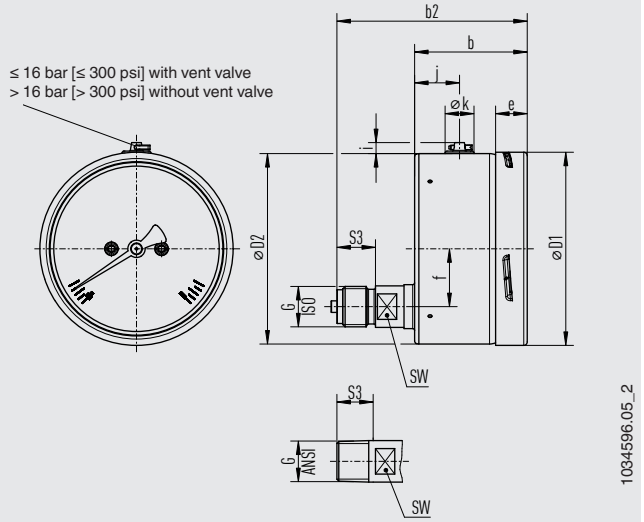
Process connection with thread per ISO 7

NS	G	Dimensions in mm [in]							
		b	b2 ±0.5 [0.02]	D1	D2	e	f	S3	SW
63 [2 ½"]	R ¼	42 [1.65]	63 [2.48]	63.5 [2.5]	62 [2.44]	12.5 [0.49]	19 [0.75]	13 [0.51]	14 [0.55]
100 [4"]	R ¼	59 [2.32]	85 [3.35]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	13 [0.51]	22 [0.87]
	R ½	59 [2.32]	91 [3.58]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	19 [0.75]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]							
		b	b2 ±0.5 [0.02]	D1	D2	e	f	S3	SW
63 [2 ½"]	¼ NPT	42 [1.65]	63 [2.48]	63.5 [2.5]	62 [2.44]	12.5 [0.49]	19 [0.75]	13 [0.51]	14 [0.55]
100 [4"]	¼ NPT	59 [2.32]	85 [3.35]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	13 [0.51]	22 [0.87]
	½ NPT	59 [2.32]	91 [3.58]	100 [3.94]	99 [3.9]	16.5 [0.65]	30 [1.18]	19 [0.75]	22 [0.87]

Model 233.30, lower back mount



NS	Weight
63 [2 ½"]	approx. 0.28 kg [0.62 lbs]
100 [4"]	approx. 1.08 kg [2.38 lbs]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]									
		b	b2 ±0.5 [0.02]	D1	D2	f	i [1)]	j	k	S3	SW
63 [2 ½"]	G ¼ B	42 [1.65]	68 [2.68]	63.5 [2.5]	62 [2.44]	19 [0.75]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	11 [0.43]
100 [4"]	G ¼ B	59 [2.32]	93 [3.66]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	17 [0.67]
	G ½ B	59 [2.32]	102 [4.01]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	17 [0.67]
	M20 x 1,5	59 [2.32]	102 [4.01]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	17 [0.67]

Process connection with thread per ISO 7

NS	G	Dimensions in mm [in]									
		b	b2 ±0.5 [0.02]	D1	D2	f	i [1)]	j	k	S3	SW
63 [2 ½"]	R ¼	42 [1.65]	68 [2.68]	63.5 [2.5]	62 [2.44]	19 [0.75]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	11 [0.43]
100 [4"]	R ¼	59 [2.32]	93 [3.66]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	17 [0.67]
	R ½	59 [2.32]	99 [3.89]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	17 [0.67]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]									
		b	b2 ±0.5 [0.02]	D1	D2	f	i [1)]	j	k	S3	SW
63 [2 ½"]	¼ NPT	42 [1.65]	68 [2.68]	63.5 [2.5]	62 [2.44]	19 [0.75]	6 [0.24]	18 [0.71]	15 [0.59]	13 [0.51]	11 [0.43]
100 [4"]	¼ NPT	59 [2.32]	93 [3.66]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	13 [0.51]	17 [0.67]
	½ NPT	59 [2.32]	99 [3.89]	100 [3.94]	99 [3.9]	30 [1.18]	6 [0.24]	24 [0.94]	15 [0.59]	20 [0.79]	17 [0.67]

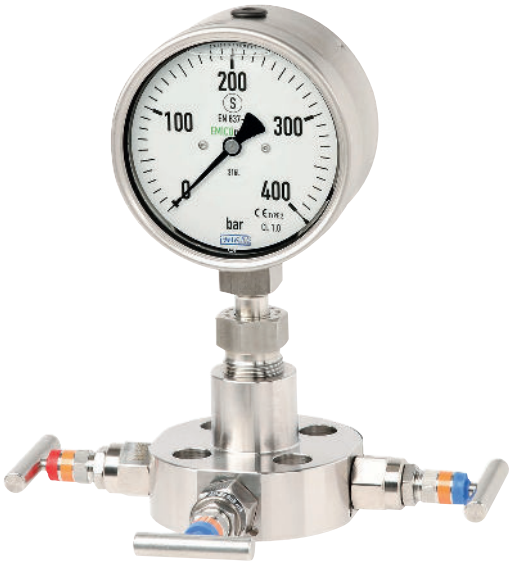
1) With span > 16 bar [> 300 psi] the instrument is designed with a blind plug; i =1,5 [0,06]

EMICOgauge
Instrument hook-up with instrumentation valves

The EMICOgauge instrument hook-up, consisting of pressure gauge and instrumentation valve, minimises the number of leakage points and thus reduces the risk of media escaping into the environment. In order to guarantee the system's leak tightness, an additional leak test is carried out in advance, for each individual component.

During mounting, the 360° swivel adapter connection of the EMICOgauge enables quick alignment of the pressure gauge with simultaneous pressure sealing. With this design, maintenance and dismounting of the pressure gauge and valve are also easy. WIKA can guarantee the leak tightness of the assembly for up to 20 mounting and dismounting operations.

The possible combinations of pressure gauges and the attachable valve models IV1, IV2 and IVM are very large. Since special pressure connections are often required for specific applications, a large number of variants have been defined for the EMICOgauge in order to avoid adapters, which would otherwise be needed, with their 2 additional sealing points.



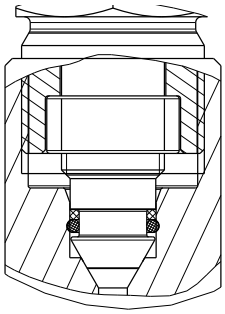
EMICOgauge consisting of model 232.30, NS 100 [4"] and mounted instrumentation valve

Advantages

- Significantly reduced risk of fugitive emissions, since the version for “fugitive emissions” complies with TA-Luft (VDI 2440)
- Fully tested and ready-to-install solution of an instrument-valve assembly
- Reduction of leakage paths in pressurised systems
- 360° swivel connection (swivel adapter) enables easy replacement and positioning of pressure gauges
- For various applications in chemical and petrochemical plants such as gas processing and production

Special pressure sealing

The redundant sealing from metal/metal seat and an additional O-ring sealing with support ring ensures the required leak tightness of the measuring assembly in addition to a long service life.



Specifications

Basic information for pressure gauges	
Nominal size (NS)	Ø 100 mm [4"]
Scale range	Between 0 ... 0.6 bar and 0 ... 420 bar
	As well as corresponding measuring spans for other units and +/- scale ranges
Connection location	Lower mount (radial)

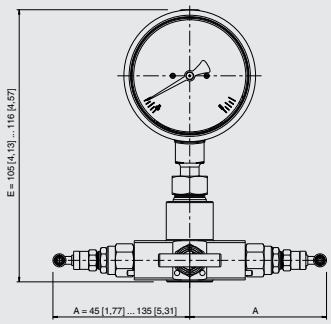
Assembly	
Mounting type	EMICOgauge connection: 360° swivel connection (swivel adapter) with special pressure sealing Spare part: 5 x sealing set consisting of O-ring and support ring; article no. 14525042
Instrumentation valve	■ For instrument version of IVM → See data sheet AC 09.17 ■ Model IV10, IV11 or IV2 → See data sheets AC 09.22 and AC 09.19

Process connection	
Standard	
Model IVM	■ In line with ASME B16.5, RF or RJ ■ In line with EN 1092-1, form B1 or B2
Model IV10, IV11 or IV2	■ ANSI/B1.20.1 ■ EN 837-1
Size	
In line with ASME B16.5, RF or RJ	Flange ½" … 2" / class 150 … class 2500
In line with EN 1092-1, form B1 or B2	Flange DN 15 … DN 25 / PN 16 … PN 100
ANSI/B1.20.1	½ NPT, male thread or ½ NPT, female thread
EN 837-1	G ½ B male
Material (wetted)	
Process connection	Stainless steel 1.4404 (316L)
Sealing	O-ring: FKM; backup sealing ring: PEEK

Operating conditions	
Medium temperature	
With unfilled pressure gauge	-20 ... +150 °C [-4 ... +302 °F]
With filled pressure gauge	-20 ... +100 °C [-4 ... +212 °F]
Ambient temperature	-20 ... +60 °C [-4 ... +140 °F]
Leak tightness of the overall system	Fulfills the fugitive emission requirements per TA Luft (VDI 2440), helium tested, leakage rate: < $1 \cdot 10^{-4}$ mbar l/s

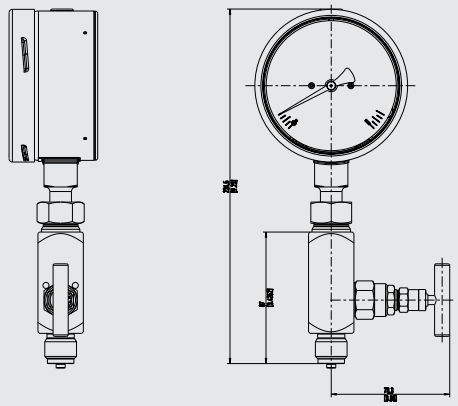
Examples of EMICOgauge, model 232.30, NS 100 [4"] and mounted instrumentation valve

With valve model IVM



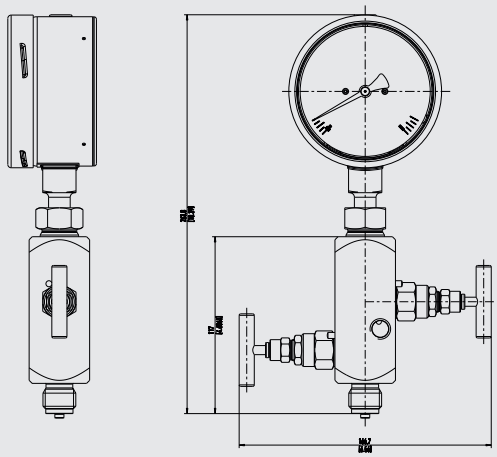
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With valve model IV10



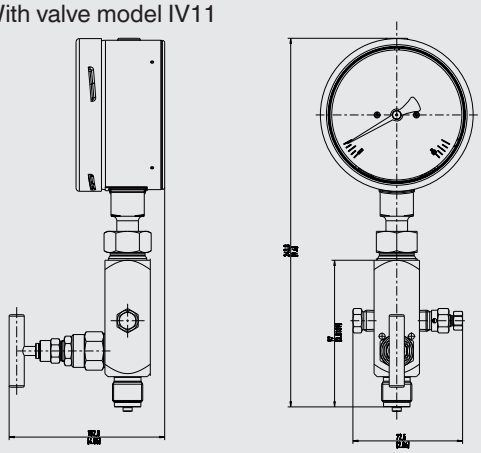
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With valve model IV2



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With valve model IV11



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Accessories and spare parts for models 232.30 and 233.30

Model		Description
	**910.17**	Seals → See data sheet AC 09.08
	**910.15**	Syphons → See data sheet AC 09.06
	**910.13**	Overpressure protector → See data sheet AC 09.04
	**IV1**	Needle valve and multiport valve → See data sheet AC 09.22
	**IV2**	Block-and-bleed valve → See data sheet AC 09.19
	**IVM**	Monoflange, process and instrument version → See data sheet AC 09.17
	**BV**	Ball valve, process and instrument version → See data sheet AC 09.28
	**IBF2, IBF3**	Monoblock with flange connection → See data sheet AC 09.25

Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

Standard articles

Configurator

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