

# Pressure gauge

stainless steel, liquid filled series 2940

case dim 100 mm

E 02.09.02

Ed.23.02

<b>Application</b>	Pressure gauge in stainless steel with liquid filling Suitable for aggressive media and environments where pulsation and vibration exist
<b>Design</b>	EN 837-1
<b>Series</b>	<b>2940</b>
<b>WIKA model</b>	233.50
<b>Case size</b>	Nominal size dim 100 mm
<b>Accuracy</b>	Class 1,0%
<b>Case</b>	Stainless steel 1.4301 with bayonet ring Option with case in stainless steel 316Ti Option with epoxy- or PTFE-coating
<b>Filling</b>	Filling glycerine 99,7% (86,5% pressure ranges $\leq 2,5$ bar) Compensating valve to vent case in pressure ranges $\leq 16$ bar Option with silicone oil or glycerine for food applications
<b>Window</b>	Laminated safety glass. Option with polycarbonate
<b>Pressure element</b>	Stainless steel 316L
<b>Movement</b>	Stainless steel
<b>Dial</b>	Aluminium, white with black lettering
<b>Pressure unit</b>	Bar. Option with unit bar/Pa, bar/psi, kPa, MPa, psi
<b>Pressure connection</b>	G3/8", G1/2" or 1/2"NPT male. Option G1/4" or 1/4"NPT Option with mounted restrictor
<b>Mounting</b>	Lower or back mount, also with back flange, front flange or triangular bezel with clamp
<b>Ingress protection</b>	IP 65 acc.to EN 60529/IEC 529
<b>Pressure limitation</b>	Full scale value by steady pressure 90% of full scale value by fluctuating pressure By short time pressure 1,3 x of full scale value Option with overpressure safe 2 x full scale value
<b>Permissible temperature</b>	Medium temperature max +100°C Ambient temperature -20+60°C Option: Ambient temperature -40+60°C with filling silicone M50
<b>Certificates</b>	Certificate EN 10204 can be delivered as options Test report wetted parts EN 10204-2.2 Inspection certificate wetted parts EN 10204-3.1
<b>Calibration</b>	Option with accredited calibration with calibration certificate according to ISO/IEC 17025:2018 (SWEDAC)
<b>Production options</b>	Explosion protection ATEX Ex h Design acc.to NACE Sour Gas Service Pressure element in monel (type 263.50) Silicone free design Dial with colored sectors or with customer logo



**2940**  
Lower mount



**2941**  
Back mount



**2945**  
Lower mount  
back flange



**2947**  
Back mount  
front flange



**2948**  
Back mount  
bezel and clamp



**2949**  
Lower mount  
front flange

# Pressure gauge

stainless steel, liquid filled series 2940

case dim 100 mm

E 02.09.02



Pressure range	Interval	Divisions
0-0,6 bar	0,01	60
0-1 bar	0,02	50
0-1,6 bar	0,05	32
0-2,5 bar	0,05	50
0-4 bar	0,1	40
0-6 bar	0,1	60
0-10 bar	0,2	50
0-16 bar	0,5	32
0-25 bar	0,5	50
0-40 bar	1,0	40
0-60 bar	1,0	60
0-100 bar	2,0	50
0-160 bar	5,0	32
0-250 bar	5,0	50
0-400 bar	10,0	40
0-600 bar	10,0	60
0-1000 bar	20,0	50
-1/0 bar	0,02	50
-1/+1,5 bar	0,05	50
-1/+3 bar	0,1	40
-1/+5 bar	0,1	60
-1/+9 bar	0,2	50
-1/+15 bar	0,5	50
-1/+24 bar	0,5	50

## Accuracy

### Max permissible error 1,0%

The accuracy is expressed as a percentage of full scale range. Permissible error 1,0% will cover 0% till 100% of scale range with a reference temperature of +20°C.

Ex. Pressure range 0-10 bar has an error of  $\pm 0,1$  bar

### Temperature effect

Temperature of the measuring system over or under the reference temperature +20°C will effect the accuracy with 0,4 percentage per +10°C. With a medium temperature of +40°C the accuracy will be  $\pm 1,8\%$ .

## Alternative design

### Low ambient temperature

Special design for ambient temperature down to -70°C

Filling Silicone oil

Type PG23LT datasheet PM 02.22

### Low pressure

Pressure range < 0-0,6 bar

Pressure range from 2,5 mbar to 400 mbar

Type 2960 datasheet E02.17.01

### High pressure

Pressure range > 0-1000 bar

Pressure range 0-1600 bar or 0-2500 bar

Type 2950 HP1 datasheet E02.11.01

### Test gauge

Pressure gauge for testing and calibration 0,6%

Type 332.50 enligt datablad PM 03.06

### Safety version

Safety version EN 837-1 (S3) with

solid baffle wall behind the dial, blow out back

Type 233.30.100 datasheet E02.10.01

### With electrical contact

One or two electrical contact mounted in the case

Max- and/or minfunction







Type PGS23.100 datasheet E02.53.01

# Pressure gauge

stainless steel, liquid filled series 2940

case dim 100 mm







E 02.09.02

Code number case 100 mm scale Bar						
	2940	2940	2940	2945	2945	2945
Mounting	Lower	Lower	Lower	Back flange	Back flange	Back flange
Connection	<b>G3/8"</b>	<b>G1/2"</b>	<b>1/2"NPT</b>	<b>G3/8"</b>	<b>G1/2"</b>	<b>1/2"NPT</b>
0-0,6 bar	29404001	29404501	29405001	29454001	29454501	29455101
0-1 bar	29404002	29404502	29405002	29454002	29454502	29455102
0-1,6 bar	29404003	29404503	29405003	29454003	29454503	29455103
0-2,5 bar	29404004	29404504	29405004	29454004	29454504	29455104
0-4 bar	29404006	29404506	29405006	29454006	29454506	29455106
0-6 bar	29404007	29404507	29405007	29454007	29454507	29455107
0-10 bar	29404008	29404508	29405008	29454008	29454508	29455108
0-16 bar	29404011	29404511	29405011	29454011	29454511	29455111
0-25 bar	29404013	29404513	29405013	29454013	29454513	29455113
0-40 bar	29404015	29404515	29405015	29454015	29454515	29455115
0-60 bar	29404017	29404517	29405017	29454017	29454517	29455117
0-100 bar	29404019	29404519	29405019	29454019	29454519	29455119
0-160 bar	29404020	29404520	29405020	29454020	29454520	29455120
0-250 bar	29404022	29404522	29405022	29454022	29454522	29455122
0-400 bar	29404024	29404524	29405024	29454024	29454524	29455124
0-600 bar	29404025	29404525	29405025	29454025	29454525	29455125
0-1000 bar	29404026	29404526	29405026	29454026	29454526	29455126
-1/0 bar	29404040	29404540	29405040	29454040	29454540	29455140
-1/+1,5 bar	29404066	29404566	29405066	29454066	29454566	29455166
-1/+3 bar	29404067	29404567	29405067	29454067	29454567	29455167
-1/+5 bar	29404068	29404568	29405068	29454068	29454568	29455168
-1/+9 bar	29404069	29404569	29405069	29454069	29454569	29455169
-1/+15 bar	29404071	29404571	29405071	29454071	29454571	29455171
-1/+24 bar	29404072	29404572	29405072	29454072	29454572	29455172

# Pressure gauge

stainless steel, liquid filled series 2940  
case dim 100 mm

E 02.09.02




Code number case 100 mm scale Bar						
	2941	2941	2947	2947	2948	2948
Mounting	Back	Back	Front flange	Front flange	Clamp	Clamp
Connection	G3/8"	G1/2"	G3/8"	G1/2"	G3/8"	G1/2"
0-0,6 bar	29414001	29414401	29474001	29474401	29484001	29484401
0-1 bar	29414002	29414402	29474002	29474402	29484002	29484402
0-1,6 bar	29414003	29414403	29474003	29474403	29484003	29484403
0-2,5 bar	29414004	29414404	29474004	29474404	29484004	29484404
0-4 bar	29414006	29414406	29474006	29474406	29484006	29484406
0-6 bar	29414007	29414407	29474007	29474407	29484007	29484407
0-10 bar	29414008	29414408	29474008	29474408	29484008	29484408
0-16 bar	29414011	29414411	29474011	29474411	29484011	29484411
0-25 bar	29414013	29414413	29474013	29474413	29484013	29484413
0-40 bar	29414015	29414415	29474015	29474415	29484015	29484415
0-60 bar	29414017	29414417	29474017	29474417	29484017	29484417
0-100 bar	29414019	29414419	29474019	29474419	29484019	29484419
0-160 bar	29414020	29414420	29474020	29474420	29484020	29484420
0-250 bar	29414022	29414422	29474022	29474422	29484022	29484422
0-400 bar	29414024	29414424	29474024	29474424	29484024	29484424
0-600 bar	29414025	29414425	29474025	29474425	29484025	29484425
0-1000 bar	29414025	29414426	29474026	29474426	29484026	29484426
-1/0 bar	29414040	29414440	29474040	29474440	29484040	29484440
-1/+1,5 bar	29414066	29414466	29474066	29474466	29484066	29484466
-1/+3 bar	29414067	29414467	29474067	29474467	29484067	29484467
-1/+5 bar	29414068	29414468	29474068	29474468	29484068	29484468
-1/+9 bar	29414069	29414469	29474069	29474469	29484069	29484469
-1/+15 bar	29414071	29414471	29474071	29474471	29484071	29484471
-1/+24 bar	29414072	29414472	29474072	29474472	29484072	29484472

# Pressure gauge

stainless steel, liquid filled series 2940

case dim 100 mm

E 02.09.02

Code number case 100 mm scale Bar			
	2949	2949	2949
<b>Mounting</b>	Front flange	Front flange	Front flange
<b>Connection</b>	<b>G3/8"</b>	<b>G1/2"</b>	<b>1/2"NPT</b>
0-0,6 bar	29494001	29494501	29495001
0-1 bar	29494002	29494502	29495002
0-1,6 bar	29494003	29494503	29495003
0-2,5 bar	29494004	29494504	29495004
0-4 bar	29494006	29494506	29495006
0-6 bar	29494007	29494507	29495007
0-10 bar	29494008	29494508	29495008
0-16 bar	29494011	29494511	29495011
0-25 bar	29494013	29494513	29495013
0-40 bar	29494015	29494515	29495015
0-60 bar	29494017	29494517	29495017
0-100 bar	29494019	29494519	29495019
0-160 bar	29494020	29494520	29495020
0-250 bar	29494022	29494522	29495022
0-400 bar	29494024	29494524	29495024
0-600 bar	29494025	29494525	29495025
0-1000 bar	29494026	29494526	29495026
-1/0 bar	29494040	29494540	29495040
-1/+1,5 bar	29494066	29494566	29495066
-1/+3 bar	29494067	29494567	29495067
-1/+5 bar	29494068	29494568	29495068
-1/+9 bar	29494069	29494569	29495069
-1/+15 bar	29494071	29494571	29495071
-1/+24 bar	29494072	29494572	29495072

# Pressure gauge




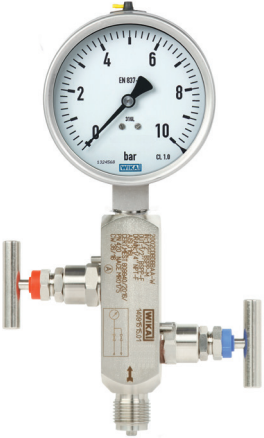
stainless steel, liquid filled series 2940  
case dim 100 mm





E 02.09.02

## Pressure gauge with Instrument Needle valve and Block-and-bleed valve

Material body stainless steel 316L  
With or without mounting bracket hole  
Material packing PTFE or Graphite  
Nominal pressure 6000 psi / 420 bar

With or without vent connection  
NACE Sour Gas Service  
Inspection certificate 3.1 EN 10204  
all wetted parts material

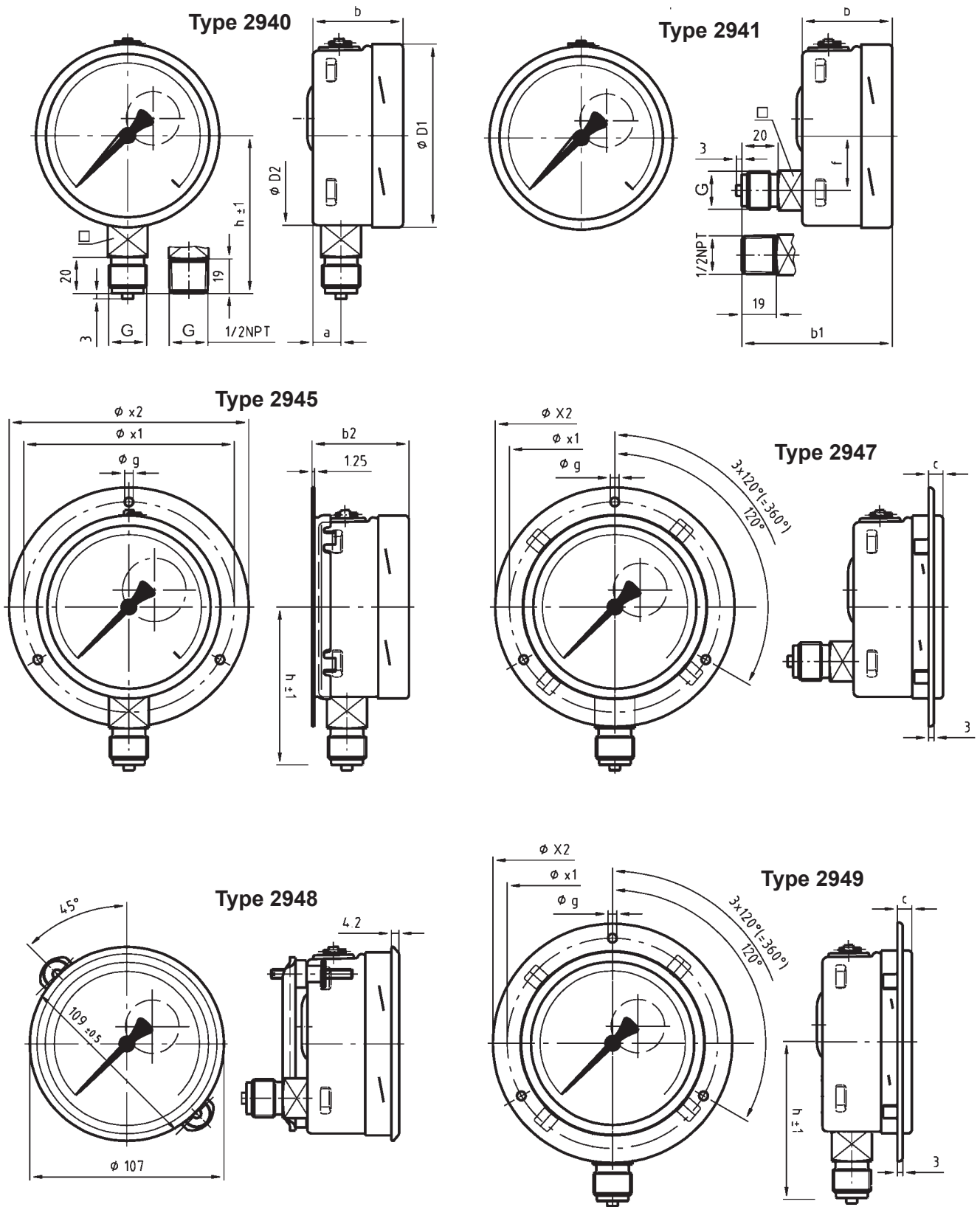
IV10	IV11	IV201	IV202
Needle valve	Needle valve	Block-and-bleed valve	Block-and-bleed valve
Standard	Multiport	Square form angled	Square form in-line
Female x female/male	Female x female/male	Female x female/male	Female x female/male
			

IV212	IV211	IVM2	IBF1
Block-and-bleed valve	Block-and-bleed valve	Monoflange	Monoblock
Flat form in-line	Flat form angled	Flange connection	Flange connection
Female x female	Female x female	Different versions	Different versions
			

# Pressure gauge

stainless steel, liquid filled series 2940  
case dim 100 mm

E 02.09.02



Dim Ø	a	b	b <sub>1</sub>	b <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	x <sub>1</sub>	x <sub>2</sub>	g	h±1	f	c	kg	G
100	15,5	49,5	83	53,5	101	99	116	132	4,8	87	30	8	0,8	G3/8-G1/2-1/2NPT