

Pressure Gauges



Measuring pressure on equipment is indispensable for monitoring and ensuring the smooth functioning and operating safety of these systems.

STAUFF offers a variety of simple pressure measuring devices for liquid and gaseous media. These pressure gauges can be used as both stationary or portable devices. STAUFF addresses the very extensive width of possible system pressures and the strict requirements for precision with a variety of pressure gauge types with different measuring ranges.

The glycerine filled gauge range is available with various connection ports to fit many different installation needs. The pressure gauges can be purchased alone or in a test kit. The kits can be supplied with gauges with different pressure ranges and adaptors to satisfy any requirement.

The analog pressure gauges are primarily designed for permanent installations. STAUFF also offers a digital line for analytical troubleshooting.

These digital pressure gauges are also available as a pressure test kit and also make it possible to perform the many different measurement tasks with the help of adapters and the measuring hose. An important advantage is the possibility to measure pressure peaks with the device, to save them short term and to display them in the display as MIN and MAX values.

A new development of this digital pressure gauge is the wireless data logger, which makes it possible to start pressure measurement series on a machine without a bothersome cable via radio signal and to transfer these to a PC or laptop. This wireless pressure gauge is one of the most affordable types of a wireless data logger.

Information on the Pressure Equipment Directive (PED) 97/23/EC Pressure Equipment Directive (PED)

Our pressure gauges (SPG) conform to the European Standard EN 837-1 and are manufactured and tested according to appropriate requirements. Pressure gauges with a full scale value between 0,5 bar and 200 bar / 7.25 PSI and 2900 PSI come under „Good Engineering Practice“ and must not carry a CE mark (section 3, paragraph 3).

Pressure gauges (SPG) with a full scale value of less than 0,5 bar / 7.25 PSI and loose diaphragm sealings do not come under the PED and must not carry a CE mark. Our pressure gauges (SPG) with a full scale value of > 200 bar / 2900 PSI receive a CE mark according to the conformity procedure.

The CE mark is attached to the outside of the housing (type designation plate).
We are not authorised to CE mark pressure gauges without a company name or a company logo.



Pressure Gauges ▀ Accessories



Single Station Gauge Isolator Valve
(see on page F78, Valves section)



Multi Station Gauge Isolator Valve
(see on page F78, Valves section)



Gauge Isolator Needle Valves
(see on page F79, see Valves section)



Test Hoses - Gauge Adaptor
(see on page B36, STAUFF Test section)



Gauge Adaptor
(see on page B11, STAUFF Test section)



Direct Gauge Adaptor
(see on page B11, STAUFF Test section)



Adjustable Gauge Fitting
(see on page B34, STAUFF Test section)

Pressure Gauge (Analog) ▪ Type SPG



Pressure Gauge (Analog) Type SPG (Stem Mounting)



Pressure Gauge (Analog) Type SPG (Panel Mounting)

Product Description

Area of Application

- Mechanical pressure measurement

Features

- Suitable for hydraulic oil and gaseous media compatible with copper based alloys
- Available in nominal sizes 63 and 100 mm / 2.5 and 4 in
- Thread form: for BSP (G1/4 and G1/2), NPT (1/4 NPT and 1/2 NPT), SAE (7/16–20 UNF)
- Stainless Steel (1.4301) housing
- Acrylic sight glass
- Glycerine filled
- Standard dual scales with pressure indication in bar and PSI
- U-bolt or flange mounting kit on request

Note: Please consult STAUFF before you use SPG with other media.

Options

- Protective rubber cap
- Additional scale readings including personalisation
- U-bolt and flange mounting kits are available separately as spare parts

Technical Data

- Pressure gauge according to EN 837-1
- Subject to technical modifications

Accuracies

SPG-063:	1.6 (± 1.6 % FS* as per EN 837-1)
SPG-100:	1.0 (± 1.0 % FS* as per EN 837-1)

Permissible Temperatures

- Ambient: -20 °C ... +60 °C / -4 °F ... +140 °F
- Media: max. +60 °C / max. +140 °F

Protection Ratings

- IP 65: for all manometer SPG 100 and SPG 063 > 16 bar / 232 PSI
IP 65 protection rating: Dust tight and protected against water jets
- IP 54: for all manometer SPG 063 ≤ 16 bar / 232 PSI due to pressure compensation opening
IP 54 protection rating: Dust protected and protected against splashing water

Order Codes



① Series and Type

Stainless Steel Pressure Gauge	SPG
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② Size

63 mm, with G1/4 or 1/4 NPT connection	063
100 mm, with G1/2 or 1/2 NPT connection	100

③ Pressure Ranges

-1 ... 1,5 bar / -14.5 ... 21 PSI	(-1)-(1,5)
-1 ... 3 bar / -14.5 ... 43 PSI	(-1)-00003
0 ... 10 bar / 0 ... 145 PSI	00010
0 ... 16 bar / 0 ... 232 PSI	00016
0 ... 25 bar / 0 ... 362 PSI	00025
0 ... 40 bar / 0 ... 580 PSI	00040
0 ... 60 bar / 0 ... 870 PSI	00060
0 ... 100 bar / 0 ... 1450 PSI	00100
0 ... 160 bar / 0 ... 2320 PSI	00160
0 ... 250 bar / 0 ... 3625 PSI	00250
0 ... 400 bar / 0 ... 5801 PSI	00400
0 ... 600 bar / 0 ... 8702 PSI	00600
0 ... 680 bar / 0 ... 9862 PSI	00680
0 ... 700 bar / 0 ... 10152 PSI	00700
0 ... 1000 bar / 0 ... 14503 PSI	01000

Note: Others on request. Information always refer to the pressure setting of the outside scale.

④ Styles of Scales

bar / PSI (bar outside/PSI inside - standard option)	01
bar	02
PSI	03
PSI / bar (PSI outside/ bar inside)	05
kPa / PSI (kPa outside/ PSI inside)	10

Note: Others on request.

⑤ Adaption

Stem mounting	S
Panel mounting	P

⑥ Process Connection

G1/4 (only SPG 063)	B04
G1/2 (only SPG 100)	B08
1/4 NPT (only SPG 063)	N04
1/2 NPT (only SPG 100)	N08
7/16–20 UNF (only SPG 063)	U04

Note: Others on request.

⑦ Accessories

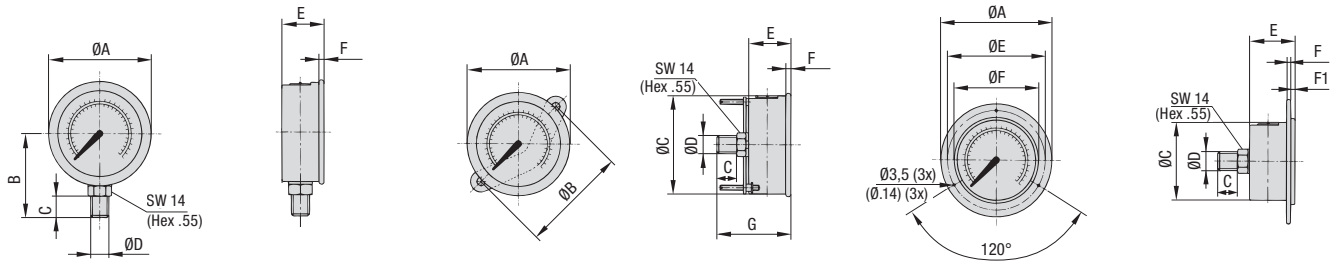
No accessory	(none)
U-bolt assembly	U
Front flange assembly (for panel mount only)	F
Rear flange assembly	R
U-bolt and front flange assembly (for panel mount only)	UF

⑦ Accessories (for Stem Mount only)

Protective rubber cap	G
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For further information on this product, please see page B34, STAUFF Test section.

Pressure Gauge (Analog) ▪ Type SPG



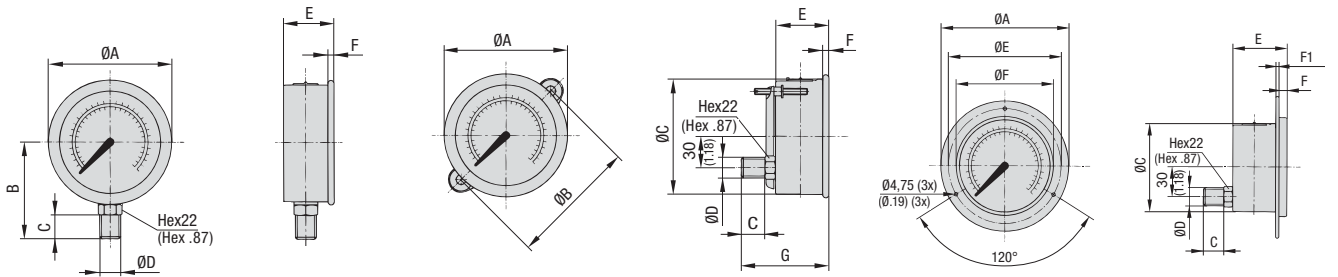
SPG 063 ... S ...

SPG 063 ... P ... U

SPG 063 ... P ... F

Dimensions SPG 063

Version Pressure Gauge	Dimension (mm/in)											
	ØA	ØB	ØC	ØD	ØE	ØF	B	C	E	F	F1	G
SPG-063	69	-	-	G1/4	-	-	54	15	32	6,5	-	-
	2.72	-	-	1/4 NPT	-	-	2.13	.59	1.26	.26	-	-
				7/16-20 UNF								
SPG-063 ... U	69	72	62	G1/4	-	-	-	15	32	6,5	-	56
	2.72	2.83	2.44	1/4 NPT	-	-	-	.59	1.26	.26	-	2.20
				7/16-20 UNF								
SPG-063 ... F	85	-	62	G1/4	75	68	-	15	32	2	2	-
	3.35	-	2.44	1/4 NPT	2.95	2.68	-	.59	1.26	.008	.008	-
				7/16-20 UNF								



SPG 100 ... S ...

SPG 100 ... P ... U

SPG 100 ... P ... F

Dimensions SPG 100

Version Pressure Gauge	Dimension (mm/in)											
	ØA	ØB	ØC	ØD	ØE	ØF	B	C	E	F	F1	G
SPG-100	107	-	-	G1/2	-	-	87	23	48	8	-	-
	4.21	-	-	1/2 NPT	-	-	3.43	.91	1.89	.31	-	-
SPG-100 ... U	107	107	100	G1/2	-	-	-	23	48	8	-	81,5
	4.21	4.21	3.94	1/2 NPT	-	-	-	.91	1.89	.31	-	3.21
SPG-100 ... F	132	-	100	G1/2	116	107	-	23	48	8	1,25	-
	5.20	-	3.94	1/2 NPT	4.57	4.21	-	.91	1.89	.31	.05	-

* FS = Full Scale

Dimensional drawings: All dimensions in mm (in).

Pressure Gauge (Digital) - Type SPG-DIGI



Product Description

The SPG-DIGI Digital Pressure Gauges are intended to measure and display pressures in hydraulic systems, particularly for oils, lubricants and water. They can display the current measured values, as well as minimum and maximum values, with an accuracy of 0,5 % of full scale.

The SPG-DIGI Digital Pressure Gauges are available individually, or as part of a complete pressure test kit. They are very sturdy, reliable, easy to use and come with the CE mark (evidence of conformity compliance).

Features

- Bar graph display (drag indicator)
- Background lighting
- Zero correction
- Battery charge display

Order Codes



① Series

Pressure Gauge **SPG**

② Type

Digital pressure measurement and display **DIGI**

③ Pressure Ranges

-1 ... 16 bar / -14.5 ... 232 PSI	B0016
0 ... 100 bar / 0 ... 1450 PSI	B0100
0 ... 400 bar / 0 ... 5801 PSI	B0400
0 ... 600 bar / 0 ... 8702 PSI	B0600

④ Process Connection

G1/4	B
7/16-20 UNF	U

⑤ Calibration

Without calibration certificate	(none)
With calibration certificate	CAL

Pressure Ranges

Version	Pressure Range (bar/PSI)	Maximum Pressure (bar/PSI)	Burst Pressure (bar/PSI)
B0016	-1 ... 16	40	50
	-14.5 ... 232	580	725
B0100	0 ... 100	200	800
	0 ... 1450	2900	11603
B0400	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0600	0 ... 600	1200	2200
	0 ... 8702	17404	31908

Technical Data

Materials

- Housing made of die-cast Zinc with TPE rubber protective covering
- Wetted parts: Stainless Steel 1.4404, NBR, ceramic
- Gaskets: NBR (Buna-N®) FPM (Viton®) or EPDM upon request

Dimensions and Weight

- Diameter: 79 mm / 3.11 in
- Depth: 33 mm / 1.30 in
- Weight: 540 g / 1.19 lbs

Display

- Text display 4 1/2-digit
- Size: 50 x 34 mm / 1.97 x 1.34 in
- Actual value display: 15 mm / .59 in
- MIN-/MAX or FS* display: 8 mm / .31 in
- Units: bar, PSI, Mpa, kPa, mbar
- Peak pressure measurement with 10 ms sampling rate
- Lighted measured value display

Accuracy

- ±0,25 % FS* typ. / ±0,5 % FS* max.
- Resolution: 4096 steps

Permissible Temperatures

- Ambient: -10 °C ... +50 °C / +14 °F ... +122 °F
- Media: -20 °C ... +80 °C / -4 °F ... +176 °F
- Storage: -20 °C ... +60 °C / -4 °F ... +140 °F

- Relative humidity: < 85 %
- Battery life: max. 1500 hours (operating without lighting, 2 x 1,5 V DC AA (LR6-AA) Alkaline Mignon)

Process Connections

- G1/4 or 7/16-20 UNF made of 1.4404 Stainless Steel

- Vibration: IEC 60068-2-6 / 10 ... 500 Hz / 5 g
- Shock: IEC 60068-2-27 / 11 ms / 25 g
- Load cycles (10⁶): 100

Protection Rating

- IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

Pressure Gauge (Digital) Wireless - Type SPG-DIGI-W



PC adaptor SPG-DIGI-W-PC only included in the SMB-DIGI-W Pressure Test Kit

Order Codes



① Series

 Pressure Gauge **SPG**

② Type

 Digital pressure measurement and display (wireless) **DIGI-W**

③ Pressure Ranges

-1 ... 16 bar / -14.5 ... 232 PSI	B0016
0 ... 100 bar / 0 ... 1450 PSI	B0100
0 ... 400 bar / 0 ... 5801 PSI	B0400
0 ... 600 bar / 0 ... 8702 PSI	B0600

④ Process Connection

 G1/4 **B**
 7/16-20 UNF **U**

⑤ Calibration

 Without calibration certificate **(none)**
 With calibration certificate **CAL**

Pressure Ranges

Version	Pressure Range (^{bar} / _{PSI})	Maximum Pressure (^{bar} / _{PSI})	Burst Pressure (^{bar} / _{PSI})
B0016	-1 ... 16	40	50
	-14.5 ... 232	580	725
B0100	0 ... 100	200	800
	0 ... 1450	2900	11603
B0400	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0600	0 ... 600	1200	2200
	0 ... 8702	17404	31908

Technical Data

Materials

- Housing made of die-cast Zinc with TPE rubber protective covering
- Wetted parts: Stainless Steel 1.4404, NBR, ceramic
- Gaskets: NBR (Buna-N®)
FPM (Viton®) or EPDM upon request

Dimensions and Weight

- Diameter: 79 mm / 3,11 in
- Depth: 33 mm / 1,30 in
- Weight: 540 g / 1,19 lbs

Display

- Text display 4 1/2-digit
- Size: 50 x 34 mm / 1.97 x 1.34 in
- Actual value display: 15 mm / .59 in
- MIN-/MAX or FS* display: 8 mm / .31 in
- Units: bar, PSI, Mpa, kPa, mbar
- Peak pressure measurement with 10 ms sampling rate
- Lighted measured value display

Accuracy

- ±0,25 % FS* typ. / ±0,5 % FS* max.
- Resolution: 4096 step

* FS = Full Scale

Permissible Temperatures

- Ambient: -10 °C ... +50 °C / +14 °F ... +122 °F
- Media: -20 °C ... +80 °C / -4 °F ... +176 °F
- Storage: -20 °C ... +60 °C / -4 °F ... +140 °F

- Relative humidity: < 85 %
- Battery life: max. 800 hours
(operating without lighting, 2 x 1,5 V DC AA (LR6-AA) Alkaline Mignon)

Process Connections

- G1/4 or 7/16-20 UNF made of 1.4404 Stainless Steel

- Vibration: IEC 60068-2-6 / 10 ... 500 Hz / 5 g
- Shock: IEC 60068-2-27 / 11 ms / 25 g
- Load cycles (10⁶): 100

PC Functions

- Read-out data from measured data memory via a radio interface (2,4 GHz)
- Measuring over a distance of max. 50 m / 164.04 ft
- Remote configuration of the gauges

Product Description

In addition to the existing STAUFF product range in the field of digital pressure measuring, the new Wireless Digital Pressure Gauge (SPG-DIGI-W) is now available, allowing a most precise measurement and wireless transmission of values to a PC or notebook.

With its compact design and the ease of operation, the SPG-DIGI-W is actually a single channel wireless data logger. With just a single PC adaptor, you can simultaneously transmit measured values of up to 16 digital pressure gauges over a distance of max. 50 m / 164.04 ft to your computer.

The configuration of the gauges and the inspection of your machinery and equipment can be easily accomplished from your desk, thus allowing the direct evaluation and storage of the measured values. Please note that measured values cannot be displayed in real time.

Features

- Bar graph display (drag indicator)
- Background lighting
- Zero correction
- Battery charge display
- Wireless data logging

Memory Functions

- 5000 measurement values (MAX pressure peaks)
- Setup of storage interval
- Time based recording
- Pressure spike monitoring

Protection Rating

- IP 67 protection rating: Dust tight and protected against powerful water jets; even immersion (up to 1 m / 3.28 ft) in water is possible under defined conditions of pressure and time

Pressure Test Kit (Analog) ▀ Type SMB-20/-15



Product Description

In addition to the individual SPG gauges, the STAUFF Pressure Gauges are also available as part of a pressure test kit.

The SMB Pressure Test Kits are assembled in various versions, in accordance with customer wishes. All pressure test kits are supplied in a handy case with custom-designed foam inserts.

Components

Standard Option SMB-20-1-xxx-C6F

- 1x Test hose (2000 mm length): SMS-20-2000-A-C6F
- 1x Pressure gauge Ø 63 mm: SPG 063-xxx-...
- 1x Gauge adaptor G1/4: SMA20-G1/4-P-OR-C6F
- 1x Direct gauge adaptor G1/4: SMD20-G1/4P-OR-C6F
- 1x Test coupling G1/4: SMK20-G1/4-PC-C6F
- 1x Test coupling M10 x 1: SMK20-M10x1-PA-C6F
- 1x Thread adaptor G3/8: SRS20-G3/8-B-C6F
- 1x Thread adaptor G1/2: SRS20-G1/2-B-C6F

Standard Option SMB-20-2-xxx/xxx-C6F

- 1x Test hose (2000 mm length): SMS-20-2000-A-C6F
- 2x Pressure gauge Ø 63 mm: SPG 063-xxx-...
- 1x Gauge adaptor G1/4: SMA20-G1/4-P-OR-C6F
- 1x Direct gauge adaptor G1/4: SMD20-G1/4P-OR-C6F
- 1x Test coupling G1/4: SMK20-G1/4-PC-C6F
- 1x Test coupling M10 x 1: SMK20-M10x1-PA-C6F
- 1x Thread adaptor G3/8: SRS20-G3/8-B-C6F
- 1x Thread adaptor G1/2: SRS20-G1/2-B-C6F

Standard Option SMB-20-3-xxx/xxx/xxx-C6F

- 2x Test hose (2000 mm length): SMS-20-2000-A-C6F
- 3x Pressure gauge Ø 63 mm: SPG 063-xxx-...
- 1x Gauge adaptor G1/4: SMA20-G1/4-P-OR-C6F
- 2x Direct gauge adaptor G1/4: SMD20-G1/4P-OR-C6F
- 3x Test coupling G1/4: SMK20-G1/4-PC-C6F
- 3x Test coupling M10 x 1: SMK20-M10x1-PA-C6F
- 1x Thread adaptor G3/8: SRS20-G3/8-B-C6F
- 1x Thread adaptor G1/2: SRS20-G1/2-B-C6F

Standard Option SMB-20/100-1-xxx-C6F

- 1x Test hose (2000 mm length): SMS-20-2000-A-C6F
- 1x Pressure gauge Ø 100 mm: SPG 100-xxx-...
- 1x Gauge adaptor G1/2: SMA20-G1/2-P-OR-C6F
- 1x Direct gauge adaptor G1/2: SMD20-G1/2-P-OR-C6F
- 1x Test coupling G1/4: SMK20-G1/4-PC-C6F
- 1x Test coupling M10 x 1: SMK20-M10x1-PA-C6F
- 1x Thread adaptor G3/8: SRS20-G3/8-B-C6F
- 1x Thread adaptor G1/2: SRS20-G1/2-B-C6F

Note: All test kits also available as SMB-15 version.

Order Codes



① Series

Pressure Test Kit	SMB
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② Types

Test 20	20
Test 15	15

③ Number of Pressure Gauges

1 pressure gauge SPG 063 mm	1
2 pressure gauges SPG 063 mm	2
3 pressure gauges SPG 063 mm	3
1 pressure gauge SPG 100 mm	/100-1

④ Pressure Ranges

-1 ... 3 bar / -14.5 ... 43 PSI	(-1)0003
0 ... 10 bar / 0 ... 145 PSI	010
0 ... 16 bar / 0 ... 232 PSI	016
0 ... 25 bar / 0 ... 362 PSI	025
0 ... 40 bar / 0 ... 580 PSI	040
0 ... 60 bar / 0 ... 870 PSI	060
0 ... 100 bar / 0 ... 1450 PSI	100
0 ... 160 bar / 0 ... 2320 PSI	160
0 ... 250 bar / 0 ... 3625 PSI	250
0 ... 400 bar / 0 ... 5801 PSI	400

Note: Please indicate pressure ranges in bar.
 For one pressure gauge please replace xxx.
 For two pressure gauges please replace xxx/xxx.
 For three pressure gauges please replace xxx/xxx/xxx.

⑤ Material Surface

Steel, zinc/nickel plated	C6F
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For further information on this product please see page B35, STAUFF Test section.

Pressure Test Kit (Digital) - Type SMB-DIGI /-W

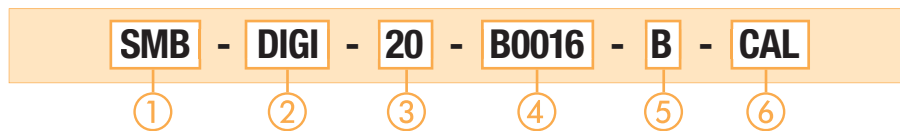


Pressure Test Kit (Digital) Type SMB-DIGI-W



Pressure Test Kit (Digital) Type SMB-DIGI

Order Codes



① Series

 Pressure Test Kit **SMB**

② Types

 SPG-DIGI digital pressure gauge **DIGI**
 SPG-DIGI digital pressure gauge (wireless) **DIGI-W**

③ Adaptor Version

 Adapts to STAUFF Test 20 (M16 x 2) **20**
 Adapts to STAUFF Test 12 (S12,65 x 1,5) **12**

④ Pressure Ranges

-1 ... 16 bar / -14.5 ... 232 PSI	B0016
0 ... 100 bar / 0 ... 1450 PSI	B0100
0 ... 400 bar / 0 ... 5801 PSI	B0400
0 ... 600 bar / 0 ... 8702 PSI	B0600

⑤ Process Connection

G1/4	B
7/16-20 UNF	U

⑥ Calibration

Without calibration certificate	(none)
With calibration certificate	CAL

Pressure Ranges

Version	Pressure Range (bar/PSI)	Maximum Pressure (bar/PSI)	Burst Pressure (bar/PSI)
B0016	-1 ... 16	40	50
	-14.5 ... 232	580	725
B0100	0 ... 100	200	800
	0 ... 1450	2900	11603
B0400	0 ... 400	800	1700
	0 ... 5801	11603	24656
B0600	0 ... 600	1200	2200
	0 ... 8702	17404	31908

Product Description

In addition to the individual SPG-DIGI devices, the STAUFF Digital Pressure Gauges are also available as part of a pressure test kit.

The SMB-DIGI pressure test kits are assembled in various versions, in accordance with customer wishes. All pressure test kits are supplied in a handy case with custom-designed foam inserts.

Along with the SPG-DIGI-W itself, the pressure test kits always contain a PC adaptor with USB connection cable (1,5 m / 4.92 ft).

Components

Standard Option SMB-DIGI

- SPG-DIGI digital pressure gauge
- SDA adaptor (G1/4 to M16 x 2 or S12,65 x 1,5)
- SSV20 or SSV12 hose connector
- SMK20-G1/4-PC-C6F or SKK12-G1/4-PC-C6F test point
- SMK20-M10x1-PA-C6F or SKK12-M10x1-PA-C6F test point
- SRS-G3/8-B-C6F reducing thread adaptor
- SRS-G1/2-B-C6F reducing thread adaptor
- SMS test hose (2 m / 6.56 ft), M16 x 2 or S12,65 x 1,5 connection, pressure-resistant to 600 bar (8702 PSI)
- Operating instructions (multilingual) on CD
- Dust cloth

Standard Option SMB-DIGI-W

- SPG-DIGI-W digital pressure gauge
- PC adaptor SPG-DIGI-W-PC with USB connection
- SDA adaptor (G1/4 to M16 x 2 or S12,65 x 1,5)
- SSV20 or SSV12 hose connector
- SMS test hose (2 m / 6.56 ft), M16 x 2 or S12,65 x 1,5 connection, pressure-resistant to 600 bar (8702 PSI)
- Operating instructions and software (multilingual) on CD
- Dust cloth

Accessories (Connection Adaptors)

Adaptor	Adaption from	to Dimension G
SDA20-G1/4-C6F	G1/4	M16 x 2
SDA15-G1/4-C6F	G1/4	M16 x 1,5
SDA12-G1/4-C6F	G1/4	S12,65 x 1,5
SAD20/15-P-C6F	M16 x 2	M16 x 1,5
SAD20/12-P-C6F	M16 x 2	S12,65 x 1,5
SAD20/10-P-C6F	M16 x 2	Plug-in system

A large number of adaptors are available to connect STAUFF SPG-DIGI and SPG-DIGI-W pressure gauges to other test points and testers. Other adaptors are available.