



## SF Series

## All Stainless Steel Pressure Gauge

### Features

- Accuracy Class 1.6, Class 2.5 (40 mm)
- Wide range vibration application
- All Stainless steel construction
- Knock-down system back and front flange
- DIN case, bayonet lock design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1000 bar

### Application

SF Series is a premium design pressure gauge with fully stainless steel construction, liquid fillable and with various option used in extreme corrosive and severe environment. It is used on pneumatic control system, control panel, pressure regulator, valve positioner, analyzer, pneumatic actuator, etc. Industries coverage are Oil & Gas On & Offshore ,power plants, steel mining, process, pulp and paper water & sewage and petrochemical plants.

### Technical Specification

- Nominal Size  
40, 50, and 63 mm
- Accuracy Class  
Class 1.6 (Ø 50, 6.3 mm)  
Class 2.5 (Ø 40mm)
- Ingress Protection  
IP 65 (Weather tight)
- Connection Size  
G<sup>1</sup>/<sub>8</sub>, G<sup>1</sup>/<sub>4</sub>, G<sup>1</sup>/<sub>2</sub> or NPT
- Scale Range  
Pressure 0.. 1000 bar  
Vacuum -1 bar.. 0  
Compound -1.. 24 bar
- Tube Element Shape  
P ≤ 100 bar in C tube  
P > 100 bar in helicoil
- Filling  
Dry or liquid filled
- Operating Temperature  
Ambient temperature -30°.. +70°C  
Medium temperature 180°C Max.
- Temperature Error  
Additional error when pressure element temperature deviates from reference temperature +20°C (+68°F) be ±0.4% / 10°C (50°F) rising or falling
- Over Pressure Limit  
130% of F.S. P ≤ 100 bar  
115% of F.S. P > 100 bar
- Dial Graduation  
Black graduation on white for single range  
Black and red graduation on white for dual ranges

### Design Material

- Casing and Bezel Ring  
SS 304, bayonet lock case (50..63 mm)  
SS 304, Crimped case (40mm)
- Sensing Element  
Stainless steel 316
- Connection  
Stainless steel 316
- Window  
Plain instrument glass
- Window gasket  
Industrial rubber seal
- Pointer  
Black painted aluminium
- Dial Plate  
Aluminium alloy

### Ordering Code



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SF Dial <sup>①</sup><Pressure range> <sup>②</sup>Mounting <sup>③</sup>- Connection <sup>④</sup>- Filling <sup>⑤</sup>\*Option <sup>⑥</sup>

①	Dial Size
150	1 1/2" or 40 mm
200	2" or 50 mm
250	2 1/2" or 63 mm

③	Mounting
D	Bottom / Direct connection
B	Center back connection
W	Bottom conn., back flange / Wall
S	Back conn., back flange / Surface
P	Back conn., front flange / Panel
U	Back connection with U-clamp

④	Connection size
G8	G 1/8"
N8	1/8"NPT
G4	G 1/4"
N4	1/4"NPT

⑤	Filling
D	Dry
G	Glycerine filled
S	Silicone oil filled

⑥	Option
CD	Custom dial layout
SU	Stainless unit range
SS	Stainless steel 316 case and bezel
BB	Blow out back case
SG	Laminated safety glass
O2	Oxygen service cleaning
OC	Other connection thread

② Dual ranges			Single range		
Bar	& Psi		Bar or kg/cm2	Psi	kPa
-1..0	-30"Hg.. 0		-1..0	-30"Hg.. 0	-100.. 0
-1..0.6	-30"Hg.. 8		-1..0.6	-30"Hg.. 10	-100.. 60
-1..1.5	-30"Hg.. 20		-1..1.5	-30"Hg.. 15	-100.. 150
-1..3	-30"Hg.. 40		-1..3	-30"Hg.. 30	-100.. 300
-1..5	-30"Hg.. 70		-1..5	-30"Hg.. 60	-100.. 500
-1..9	-30"Hg.. 130		-1..9	-30"Hg.. 150	-100.. 900
-1..15	-30"Hg.. 200		-1..15	-30"Hg.. 200	-100.. 1500
-1..24	-30"Hg.. 350		-1..24	-30"Hg.. 300	-100.. 2400
0.. 0.1	0.. 15		0.. 0.1	0.. 15	0.. 100
0.. 0.16	0.. 23		0.. 0.16	0.. 20	0.. 160
0.. 0.25	0.. 35		0.. 0.25	0.. 30	0.. 250
0.. 0.4	0.. 60		0.. 0.4	0.. 60	0.. 400
0.. 0.6	0.. 85		0.. 0.6		0.. 600
0.. 0.7	0.. 100		0.. 0.7	0.. 100	0.. 700
0.. 1.0	0.. 150		0.. 1.0	0.. 150	0.. 1000
0.. 1.6	0.. 230		0.. 1.6	0.. 200	0.. 1600
0.. 2.5	0.. 350		0.. 2.5	0.. 300	0.. 2500
0.. 4.0	0.. 600		0.. 4.0	0.. 600	0.. 4000
0.. 6.0	0.. 850		0.. 6.0		0.. 6000
0.. 7.0	0.. 1000		0.. 7.0	0.. 1000	0.. 7000
0.. 10.0	0.. 1500		0.. 10.0	0.. 1500	0.. 10000
0.. 16.0	0.. 2300		0.. 16.0	0.. 2000	0.. 16000
0.. 25.0	0.. 3500		0.. 25.0	0.. 3000	0.. 25000
0.. 40.0	0.. 6000		0.. 40.0	0.. 6000	0.. 40000
0.. 60.0	0.. 8500		0.. 60.0		0.. 60000
0.. 70.0	0.. 10000		0.. 70.0	0.. 10000	0.. 70000
0.. 100.0	0.. 15000		0.. 100.0	0.. 15000	0.. 100000

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## SF Series

## All Stainless Steel Pressure Gauge

### Features

- Accuracy Class 1.0
- Wide range application
- All stainless steel construction
- Knock-down system back and front flange
- Bayonet lock case design
- Over pressure up to 30% of Full Scale
- Restrictor screw standard
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1600 bar



### Application

SF Series is a premium design pressure gauge with fully stainless steel construction, liquid fillable and with various option used in extreme corrosive & severe environment. SF series can be incorporate with most accessories such as Diaphragm Chemical seal, Siphon, Dampener, etc..to further extend it usages. Commonly, uses in Process industries, Mining, Power plants, Steel mills, Pulp & Paper, Water & Sewage, Petrochemical plants, etc..

### Technical Specification

- Nominal Size  
100 and 150 mm
- Accuracy Class  
Class 1.0
- Ingress Protection  
IP 65 (Weather tight)
- Connection Size  
G $\frac{1}{2}$  or  $\frac{1}{2}$ NPT
- Scale Range  
Pressure 0.. 2500 bar  
Vacuum -1 bar.. 0  
Compound -1.. 24 bar
- Tube Element Shape  
P  $\leq$  100 bar in C tube  
P > 100 bar in helicoil
- Filling  
Dry or liquid filled
- Operating Temperature  
Ambient temperature -30 $^{\circ}$ .. +70 $^{\circ}$ C  
Medium temperature 180 $^{\circ}$ C Max.
- Temperature Error  
Additional error when pressure element temperature deviates from reference temperature +20 $^{\circ}$ C (+68 $^{\circ}$ F) be  $\pm$ 0.4% / 10 $^{\circ}$ C (50 $^{\circ}$ F) rising or falling
- Over Pressure Limit  
130% of F.S. P  $\leq$  100 bar  
115% of F.S. P > 100 bar
- Dial Graduation  
Black graduation on white for single range  
Black and red graduation on white for dual ranges



### Design Material

- Casing and Bezel Ring  
Stainless steel 304 and blow out back case
- Sensing Element  
Stainless steel 316
- Connection  
Stainless steel 316
- Window  
Plain instrument glass
- Window gasket  
Industrial rubber seal
- Pointer  
Black painted aluminium
- Dial Plate  
Aluminium alloy



### Ordering Code



**B** BRO THOTERM  
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SF Dial <sup>①</sup> <Pressure range> <sup>②</sup> Mounting <sup>③</sup> - Connection <sup>④</sup> - Filling <sup>⑤</sup> \*Option <sup>⑥</sup>

①	Dial Size
500	4" or 100 mm
750	6" or 150 mm
③	Mounting
D	Bottom / Direct connection
B	Lower back connection
W	Bottom conn., back flange / Wall
S	Back conn., back flange / Surface
P	Back conn., front flange / Panel
U	Back connection with U-clamp
④	Connection size
G4	G $\frac{1}{4}$ "
N4	$\frac{1}{4}$ "NPT
G2	G $\frac{1}{2}$ "
N2	$\frac{1}{2}$ "NPT
⑤	Filling
D	Dry
G	Glycerine filled
S	Silicone oil filled
⑥	Option
CD	Custom dial layout
SU	Special unit range
SS	Stainless steel 316 case and bezel
SG	Laminated safety glass
O2	Oxygen service cleaning
OC	Other connection thread

② Dual ranges			Single range		
Bar	&	Psi	Bar or kg/cm <sup>2</sup>	Psi	kPa
-1..0	-30"Hg..	0	-1..0	-30"Hg..	0
-1..0.6	-30"Hg..	8	-1..0.6	-30"Hg..	10
-1..1.5	-30"Hg..	20	-1..1.5	-30"Hg..	15
-1..3	-30"Hg..	40	-1..3	-30"Hg..	30
-1..5	-30"Hg..	70	-1..5	-30"Hg..	60
-1..9	-30"Hg..	130	-1..9	-30"Hg..	150
-1..15	-30"Hg..	200	-1..15	-30"Hg..	200
-1..24	-30"Hg..	350	-1..24	-30"Hg..	300
0..1	0..15		0..1	0..15	0..100
0..1.6	0..23		0..1.6	0..20	0..160
0..2.5	0..35		0..2.5	0..30	0..250
0..4	0..60		0..4	0..60	0..400
0..6	0..85		0..6		0..600
0..7	0..100		0..7	0..100	0..700
0..10	0..150		0..10	0..150	0..1000
0..16	0..230		0..16	0..200	0..1600
0..25	0..350		0..25	0..300	0..2500
0..40	0..600		0..40	0..600	0..4000
0..60	0..850		0..60		0..6000
0..70	0..1000		0..70	0..1000	0..7000
0..100	0..1500		0..100	0..1500	0..10000
0..160	0..2300		0..160	0..2000	0..16000
0..250	0..3500		0..250	0..3000	0..25000
0..400	0..6000		0..400	0..6000	0..40000
0..600	0..8500		0..600		0..60000
0..700	0..10000		0..700	0..10000	0..70000
0..1000	0..15000		0..1000	0..15000	0..100000
0..1600	0..23000		0..1600	0..20000	0..160000

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## SF SERIES

## 8" / 10" All Stainless Steel Pressure Gauge

### Features

- Accuracy Class 1.6 (Option Class 1.0)
- All stainless steel construction
- 8" (200mm) or 10" (250mm) dial design
- Welded wall, surface and panel flanged
- Wide range corrosive application
- DIN case, bayonet lock design
- Over pressure up to 30% of Full Scale
- Excellent vibration resist with liquid filling
- Design scale ranges up to 1600 bar

### Application

SF800-SF900 Series is a premium 8" or 10" design pressure gauge for extreme corrosive and non-corrosive environment, with DIN case and fully stainless steel construction. Liquid fillable case for application with high dynamic pressure vibration. Suitable for uses in process industries, mining, machine tools, power plants, boiler, steel mills, pulp and paper and petrochemical plants.

### Technical Specification

- Nominal Size  
8" (200 mm) and 10" (250 mm)
- Accuracy Class  
Class 1.6, Class 1.0\*
- Ingress Protection  
IP 65 (Weather tight)
- Connection Size  
G $\frac{1}{2}$  or  $\frac{1}{2}$ NPT
- Scale Range  
Pressure 0.. 1600 bar  
Vacuum -1 bar.. 0  
Compound -1.. 24 bar
- Tube Element Shape  
P  $\leq$  100 bar in C tube  
P > 100 bar in helicoil
- Filling  
Dry or liquid filled
- Operating Temperature  
Ambient temperature -30°.. +70°C  
Medium temperature 180°C Max.
- Temperature Error  
Additional error when pressure element temperature deviates from reference temperature +20°C (+68°F) be  $\pm$ 0.4% / 10°C (50°F) rising or falling
- Over Pressure Limit  
130% of F.S. P  $\leq$  100 bar  
115% of F.S. P > 100 bar
- Dial Graduation  
Black graduation on white for single range  
Black and red graduation on white for dual ranges

### Design Material

- Casing and Bezel Ring  
Stainless steel 304
- Sensing Element  
Stainless steel 316
- Connection  
Stainless steel 316
- Window  
Mineral glass, 4 mm thickness
- Window gasket  
Industrial rubber seal
- Pointer  
Black painted aluminium
- Dial Plate  
Aluminium alloy

### Ordering Code



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SF Dial <sup>①</sup> <Pressure range> <sup>②</sup> Mounting <sup>③</sup> - Connection <sup>④</sup> - Filling <sup>⑤</sup> \*Option <sup>⑥</sup>

①	Dial Size
800	8" or 200 mm
900	10" or 250 mm
③	Mounting
D	Bottom / Direct connection
B	Lower back connection
W	Bottom conn., back flange / Wall
S	Back conn., back flange / Surface
P	Back conn., front flange / Panel
U	Back connection with U-clamp
④	Connection size
G2	G $\frac{1}{2}$ "
N2	$\frac{1}{2}$ "NPT
⑤	Filling
D	Dry
G	Glycerine filled
S	Silicone oil filled
⑥	Option
CD	Custom dial layout
SU	Special unit range
SE	Electrical contact
CL	Accuracy Class 1.0
MP	Micrometer adjustment pointer
SG	Laminated safety glass
O2	Oxygen service cleaning
OC	Other connection thread

② Dual ranges		Single range		
Bar	& Psi	Bar or kg/cm <sup>2</sup>	Psi	kPa
-1..0	-30"Hg.. 0	-1..0	-30"Hg.. 0	-100.. 0
-1..0.6	-30"Hg.. 8	-1..0.6	-30"Hg.. 10	-100.. 60
-1..1.5	-30"Hg.. 20	-1..1.5	-30"Hg.. 15	-100.. 150
-1..3	-30"Hg.. 40	-1..3	-30"Hg.. 30	-100.. 300
-1..5	-30"Hg.. 70	-1..5	-30"Hg.. 60	-100.. 500
-1..9	-30"Hg.. 130	-1..9	-30"Hg.. 150	-100.. 900
-1..15	-30"Hg.. 200	-1..15	-30"Hg.. 200	-100.. 1500
-1..24	-30"Hg.. 350	-1..24	-30"Hg.. 300	-100.. 2400
0..1	0.. 15	0.. 1	0.. 15	0.. 100
0.. 1.6	0.. 23	0.. 1.6	0.. 20	0.. 160
0.. 2.5	0.. 35	0.. 2.5	0.. 30	0.. 250
0.. 4	0.. 60	0.. 4	0.. 60	0.. 400
0.. 6	0.. 85	0.. 6		0.. 600
0.. 7	0.. 100	0.. 7	0.. 100	0.. 700
0.. 10	0.. 150	0.. 10	0.. 150	0.. 1000
0.. 16	0.. 230	0.. 16	0.. 200	0.. 1600
0.. 25	0.. 350	0.. 25	0.. 300	0.. 2500
0.. 40	0.. 600	0.. 40	0.. 600	0.. 4000
0.. 60	0.. 850	0.. 60		0.. 6000
0.. 70	0.. 1000	0.. 70	0.. 1000	0.. 7000
0.. 100	0.. 1500	0.. 100	0.. 1500	0.. 10000
0.. 160	0.. 2300	0.. 160	0.. 2000	0.. 16000
0.. 250	0.. 3500	0.. 250	0.. 3000	0.. 25000
0.. 400	0.. 6000	0.. 400	0.. 6000	0.. 40000
0.. 600	0.. 8500	0.. 600		0.. 60000
0.. 700	0.. 10000	0.. 700	0.. 10000	0.. 70000
0.. 1000	0.. 15000	0.. 1000	0.. 15000	0.. 100000
0.. 1600	0.. 23000	0.. 1600	0.. 20000	0.. 160000

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