

## Klinger Manometer Serie 100

Bourdon tube pressure gauges for general purpose  
 Watertight casing, dry or liquid filled execution  
 NS 40, 50, 63, 80 and 100  
 Ranges included between 1 and 600 bar.

These instruments are manufactured for all those industry sectors which require highest quality pressure gauges with stainless steel casing and phosphor bronze pressure element.



### TECHNICAL FEATURES

- **Nominal sizes**

- NS 40, 50, 63, 80 and 100.

- **Casing**

- case and crimped ring in AISI 304 SS. (ex. G).

- **Protection degree (according to EN 60529)**

- IP 65.

- **Window**

- plastic.

- **Blow-out device**

- blow out plug.

- **Filling liquid**

- glycerine.

- **Pressure connection (according to EN 837-1)**

Brass with Gas (BSP), BSPT or NPT thread as F dimension shown in SP tables, otherwise only on request, different from those indicated.

- **Pressure element**

- Phosphor bronze for execution 1
- AISI 316L Stainless Steel for execution 2

- **Welding**

- see table page 3 for execution 1
- TIG for execution 2

- **Movement**

- brass for execution 1
- Stainless Steel for execution 2

- **Ranges (according to EN 837-1)**

- **Maximum value:**

- 600 bar.

- **Graduation:**

- pressure gauges: 0+1; 0+1,6; 0+2,5; 0+4; 0+6; 0+10; 0+16; 0+25; 0+40; 0+60; 0+100; 0+160; 0+250; 0+400; 0+600;
- vacuum gauges: -1+0. (divisions as per table C1 at page 5)
- other graduations not normalized for single or double range (on request only).

- **Unit of pressure:**

- bar, kPa, Mpa, kg/cm<sup>2</sup> and psi for single or double range.

- **Scale angle:**

- 270°.

• **Working pressures (referred to full scale deflection)**

- steady from 1/10 to 3/4;
- fluctuating from 1/10 to 2/3;
- pulsating from 1/10 to 1/2.

• **Over-pressures (occasionally allowed)**

- 125% of full scale value for measuring range  $\leq 100$  bar;
- 115% of full scale value for measuring ranges from  $> 100$  to  $\leq 600$  bar.

• **Pointer**

- aluminium not adjustable.

• **Dial**

- white aluminium with black figures.

• **Accuracy (according to EN 837-1)**

- class 1,6

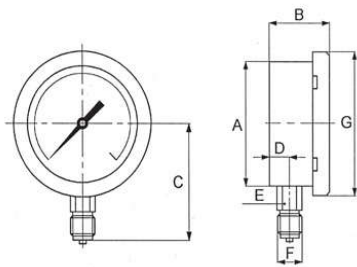
• **Ambient temperature**

- $-20 \div +60$  °C

• **Service conditions**

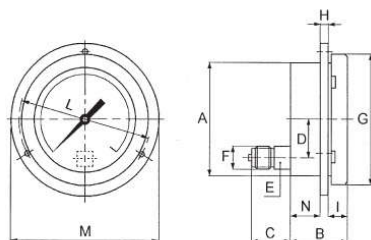
- see table at page 3

**Pressure gauges for general purpose table SP 108**



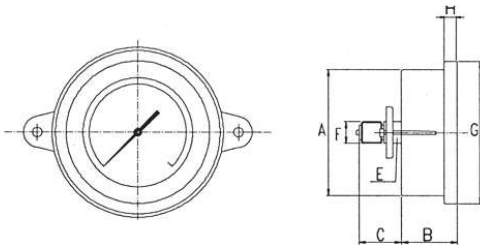
DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D es. F
40	41	25	42	8,5	11	1/8	47							0,06 0,08
50	51	29	51	9	14	1/4	59							0,10 0,14
63	61	31	53	9,5	14	1/4	69							0,18
80	80	31	65	10	14	1/4	89							0,21 0,36
100	101	34	87	11	22	1/2	110							0,89

**Pressure gauges for general purpose table SP 111**



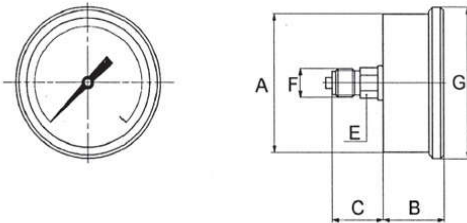
DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D es. F
63	63	30	27	0	14	1/4	69	2,5	6	75	84	21,5	3,6	0,21
80	82	31	27	19	14	1/4	89	1	12	95	110	18	5	0,25 0,40
100	101	34	40	29	22	1/2	110	1	17	118	132	16	6	0,92

### Pressure gauges for general purpose table SP 112



DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg
63	61	30	27	0	14	1/4	69	6						0,22
100	101	34	40	29	22	1/2	110	8						0,93

### Pressure gauges for general purpose table SP 115



DN	A	B	C	D	E	F	G	H	I	L	M	N	Ø fori 120°	PESO ~ kg es. D es.
63	61	30	27	0	14	1/4	69							0,19
80	80	31	27	19	14	1/4	89							0,20 0,30
100	101	34	40	29	22	1/2	110							0,86

Welding – service conditions					
Welding	Material		Service conditions		
	Connection	Pressure element	Temperature °C		Pressure bar
			min.	max.	
Tin alloy	Brass	Phosphor bronze	-10	80	100
Silver alloy	Brass	Phosphor bronze	-30	80	600

#### Options

- **Silver Alloy Welding**

- (Option V22)

- **Restrictor**

- Applicable to Pressure Connection to reduce the Process Fluid entry speed (Option V26)

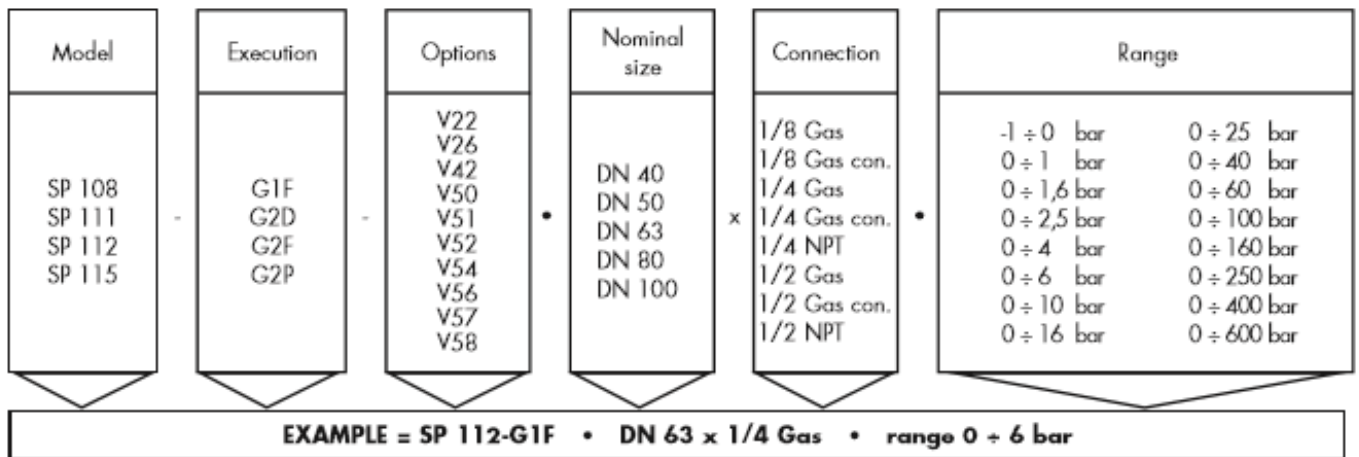
- **Process Connection**

- Not standard (Option V42)

- **Complementary Documents**

- Certificate of Compliance with the order EN 10204 – 2.2
- Technical Documentation
- PED Declaration

## How to order



## Quick order:

Part number	Size	Connection	Range	Wetted parts	Liquidfilling
19100850	Ø 63mm	G 1/4" Lower	0...1	Brass	Glycerine 99%
19100851	Ø 63mm	G 1/4" Lower	0...1,6	Brass	Glycerine 99%
19100852	Ø 63mm	G 1/4" Lower	0...2,5	Brass	Glycerine 99%
19100853	Ø 63mm	G 1/4" Lower	0...4	Brass	Glycerine 99%
19100854	Ø 63mm	G 1/4" Lower	0...6	Brass	Glycerine 99%
19100855	Ø 63mm	G 1/4" Lower	0...10	Brass	Glycerine 99%
19100856	Ø 63mm	G 1/4" Lower	0...16	Brass	Glycerine 99%
19100857	Ø 63mm	G 1/4" Lower	0...25	Brass	Glycerine 99%
19100858	Ø 63mm	G 1/4" Lower	0...40	Brass	Glycerine 99%
19100859	Ø 63mm	G 1/4" Lower	0...60	Brass	Glycerine 99%
19100860	Ø 63mm	G 1/4" Lower	0...100	Brass	Glycerine 99%
19100861	Ø 63mm	G 1/4" Lower	0...160	Brass	Glycerine 99%
19100862	Ø 63mm	G 1/4" Lower	0...250	Brass	Glycerine 99%
19100863	Ø 63mm	G 1/4" Lower	0...400	Brass	Glycerine 99%
19100864	Ø 63mm	G 1/4" Lower	0...600	Brass	Glycerine 99%
19100849	Ø 63mm	G 1/4" Lower	-1...0	Brass	Glycerine 99%

Part number	Size	Connection	Range	Wetted parts	Liquidfilling
19100833	Ø 100mm	G 1/2" Lower	0...1	Brass	Glycerine 99%
19100834	Ø 100mm	G 1/2" Lower	0...1,6	Brass	Glycerine 99%
19100835	Ø 100mm	G 1/2" Lower	0...2,5	Brass	Glycerine 99%
19100836	Ø 100mm	G 1/2" Lower	0...4	Brass	Glycerine 99%
19100837	Ø 100mm	G 1/2" Lower	0...6	Brass	Glycerine 99%
19100838	Ø 100mm	G 1/2" Lower	0...10	Brass	Glycerine 99%
19100839	Ø 100mm	G 1/2" Lower	0...16	Brass	Glycerine 99%
19100840	Ø 100mm	G 1/2" Lower	0...25	Brass	Glycerine 99%
19100841	Ø 100mm	G 1/2" Lower	0...40	Brass	Glycerine 99%
19100842	Ø 100mm	G 1/2" Lower	0...60	Brass	Glycerine 99%

19100843	Ø 100mm	G 1/2" Lower	0...100	Brass	Glycerine 99%
19100844	Ø 100mm	G 1/2" Lower	0...160	Brass	Glycerine 99%
19100845	Ø 100mm	G 1/2" Lower	0...250	Brass	Glycerine 99%
19100846	Ø 100mm	G 1/2" Lower	0...400	Brass	Glycerine 99%
19100847	Ø 100mm	G 1/2" Lower	0...600	Brass	Glycerine 99%
19100832	Ø 100mm	G 1/2" Lower	-1...0	Brass	Glycerine 99%
19100848	Ø 100mm	G 1/2" Lower	-1...3	Brass	Glycerine 99%

**Table C1**

Scale ranges for pressure values between -1 and 1.600 bar acc. to EN

<b>Table C1 (pressure gauges)</b>								
Minimum graduation divisions of pressure gauges versus numeration and accuracy class as per EN								
Graduation	Class 1,6 per SP/NP		Class 1/1,6 per SP/SF/DP/PQ/MP/BP/MA		Class 0,6 per SP/SF/TR		Class 0,25 per CP	
	Division	Division N.	Division	Division N.	Division	Division N.	Division	Division N.
0 ÷ 1	0,05	20	0,02	50	0,01	100	0,005	200
0 ÷ 10	0,5	20	0,2	50	0,1	100	0,05	200
0 ÷ 100	2	20	2	50	1	100	0,5	200
0 + 1000	50	20	20	50	10	100	5	200
-1 ÷ 0	0,05	20	0,02	50	0,01	100	0,005	200
-1 ÷ +9	0,5	20	0,2	50	---	---	---	---
0 ÷ 1,6	0,05	32	0,02	80	0,02	80	0,01	160
0 ÷ 16	0,5	32	0,2	80	0,2	80	0,1	160
0 ÷ 160	5	32	2	80	2	80	1	160
0 + 1600	50	32	20	80	20	80	10	160
-1 ÷ +0,6	0,05	32	0,02	80	---	---	---	---
-1 ÷ +15	0,5	32	0,2	80	---	---	---	---
0 ÷ 2,5	0,1	25	0,05	50	0,02	125	0,01	250
0 + 25	1	25	0,5	50	0,2	125	0,1	250
0 ÷ 250	10	25	5	50	2	125	1	250
0 ÷ 2500	100	25	50	50	20	125	10	250
-1 ÷ +1,5	0,1	25	0,05	50	---	---	---	---
-1 ÷ +24	1	25	0,5	50	---	---	---	---
0 + 0,4	0,01	40	---	---	---	---	---	---
0 ÷ 4	0,2	20	0,1	40	0,05	80	0,02	200
0 ÷ 40	2	20	1	40	0,5	80	0,2	200
0 ÷ 400	20	20	10	40	5	80	2	200
0 ÷ 4000	---	---	100	40	50	80	20	200
-1 + +3	0,1	40	0,1	40	---	---	---	---
0 ÷ 0,6	0,02	30	0,01	60	0,005	120	0,002	300
0 ÷ 6	0,2	30	0,1	60	0,05	120	0,02	300
0 ÷ 60	2	30	1	60	0,5	120	0,2	300
0 ÷ 600	20	30	10	60	5	120	2	300
-1 + +5	0,2	30	0,1	60	---	120	---	---