Diaphragm manometer EN 837-3, 100/160 mm
Version for chemical applications - Type PC...-

- **NG 100 AND 160 MM WITH HORIZONTAL MEASURING FLANGE**
- **WITHOUT OR WITH GLYCERINE FILLING**
- **INSTALLATION OF ELECTRICAL CONTACT DEVICES**
- **VARIOUS PRESSURE CONNECTIONS AND MATERIALS**

DESCRIPTION

Diaphragm manometers with horizontal measuring flanges for chemical applications are suitable for measuring thin liquids (threaded connection G ½ B) and especially contaminated and highly viscous media (e.g. open connection flange) in over- and underpressure ranges from -1 to 0 bar and 0/0.6 - 25 bar. The devices are made from solid stainless steel and are suitable for challenging environments and media. They are highly shock-resistant and have a high level of overpressure protection.

When the device is used in a shock-prone environment, the glycerine filling acts as a shock absorber for all components.

Electrical contacts have been provided for the alarm and switch functions.

TECHNICAL DATA

Nominal size	100 and 160 mm
Housing	bayonet housing for chemical applications made from material number 1.4301, 100 and 160 mm, ventilated
Ring	bayonet ring made from material number 1.4301
Measuring flange	Ø 160 mm for display ranges ≤ 250 mbar Ø 100 mm for display ranges ≥ 400 mbar
Indicators	niro, wear-and-tear- and corrosion-resistant
Dial	white aluminium with black label
Indicators	black aluminium
Front pane	laminated safety glass
Indication ranges according to EN 837-3	0 - 10 mbar to 0 - 40 bar with PTFE film from 0 - 40 mbar, corresponding vacuum areas
Quality class EN 837-1	± 1.6% according to EN 837-3 (for a Class 2.5 protective film)
Overpressure safeguard	1.3 times, or 5 times from 0.5 bar onwards up to a maximum of 40 bar (restrictions for versions with contacts)
Environmental temperature	- 10° C to + 50°C, permissible medium temperature 100°C
Medium temperature	+ 60°C (soft solder), + 100°C (hard solder on request)
Capacity according to EN 837-1	for static load: maximum scale value for alternating load: 0.9 times to 5 times the maximum scale value, maximum 40 bar
Pressure connection	bottom, G ½ B (standard) ½" NPT or M 20 x 1.5 - for PTFE lining with an enlarged channel opening - optionally with open flange - for food or sterile connections - other flange versions
Protection type EN 60529	IP 65 = filled devices, G-addition IP 54 = unfilled devices
Measuring system attenuator	glycerine filling (for vibration, avoids formation of condensation water)
Additional devices	glycerine filling, adjustable indicator, drag indicator, limit contacts, safety version, high level of accuracy

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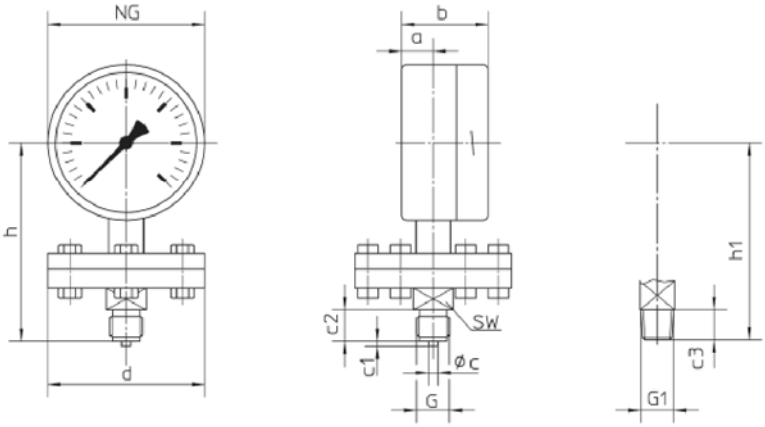
Housing designs, dimensions and mass

Bottom connection
(without additional reference letters)



Dimensions (mm) and mass (kg)

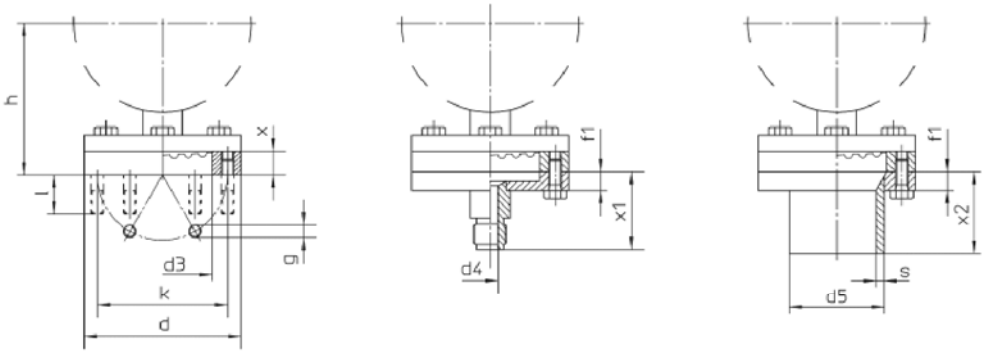
Housing NG	Meas. flange Ø d [1]	a	b	c	c1	c2	c3	G	G1	h ± 2	h1 ± 2	SW	Mass (approx.) [2] PCh	PChG
100	100	20	55	6	3	20	19	G ½ B	½" NPT	127	126	22	1,85	2,25
	160												3,45	3,65
160	100									157	156		2,20	3,20
	160												3,80	4,80

Open flange 2707 a
(including stud bolts if requested)

Optional, appropriate to flange 2707 a:

Threaded connection flange
G 1/2 B or 1/2"NPT, with an
enlarged channel drill-hole

Connection flange with
welded addition
(for measuring flange Ø 100mm)



Dimensions (mm) and mass (kg)

Measuring flange Ø d [1]	d3	d4	d5 [3]	f1	g	h ±2 NG 100	h ±2 NG 160	k	l	x	x1	x2	s	Mass (approx.) [2] NG 100 PCh	NG 100 PChG	NG 160 PCh	NG 160 PChG
100	63,5	10	60,3	12	6 x M 8	96	126	83	25	15	46	50	5	1,65	2,05	2,00	3,00
160	123		—	—	8 x M 8			140				—	—	2,80	3,20	3,15	4,15

[1] Nominal size of measuring flange

[2] The mass of the device may vary considerably, depending on the measuring ranges and the materials used, therefore the information given here is only an indication.

[3] other pipe diameters on request

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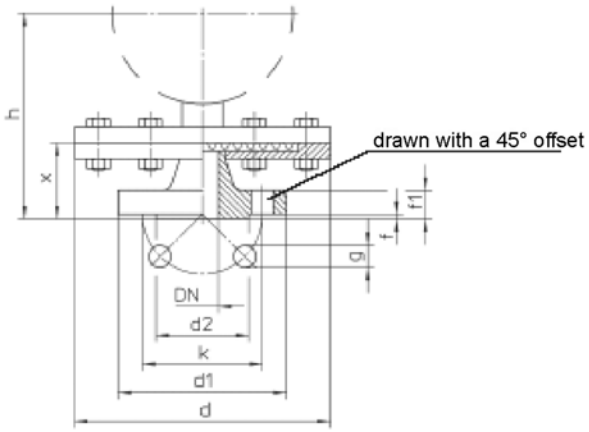
Open flanges according to DIN EN 1092-1, DIN 15, 20, 25 and 50, PN 10 to PN 40

can be inserted onto counterflange according to EN 1092-1 Type 11 (corresponds to the version according to the old DIN 2633, 2635)

Measuring flange-Ø d = 160 mm

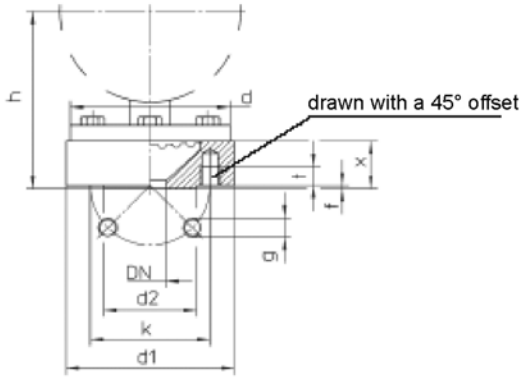


Dimensions (mm) and mass (kg)

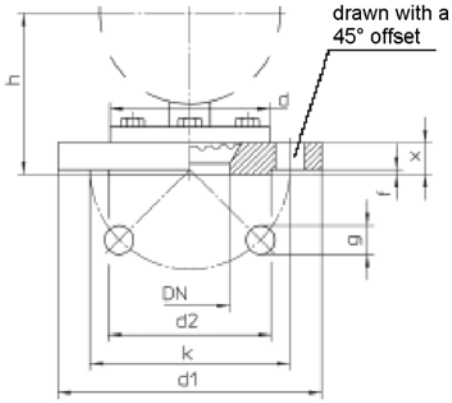
Meas. flange Ø d [1]	DN	d1	d2	f	f1	g	h ±2 NG 100	h ±2 NG 160	k	x	Mass (approx.) [2] NG 100 PCh	NG 100 PChG	NG 160 PCh	NG 160 PChG
160	15	95	45	2	16	4 x 14	127	157	65	48	4,15	4,55	4,50	5,50
	20	105	58		18		129	159	75		4,45	4,85	4,80	5,80
	25	115	68						85		4,60	5,00	4,95	5,95
	50	165	102		20	4 x 18	137	167	125	56	6,05	6,45	6,40	7,40

Measuring flange-Ø d = 100 mm

DN 15, 20 and 25



DN 50



Dimensions (mm) and mass (kg)

Meas. flange Ø d [1]	DN	d1	d2	f	g	h ±2 NG 100	h ±2 NG 160	k	t	x	Mass (approx.) [2] NG 100 PCh	NG 100 PChG	NG 160 PCh	NG 160 PChG
100	15	99	45	2	4 x M 12 [3]	106	136	65	12	30	2,30	2,70	2,65	3,65
	20	105	58					75			2,40	2,80	2,75	3,75
	25	115	68			103	133	85		22	2,50	2,90	2,85	3,85
	50	165	102		4 x Ø 18	101	131	125	—	20	3,60	4,00	3,95	4,95

[1] Nominal size of measuring flange

[2] The mass of the device may vary considerably, depending on the measuring ranges and the materials used, therefore the information given here is only an indication.

[3] including stud bolts if requested

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ORDERING INFORMATION (type key)

Basic type / housing size

P	Diaphragm manometer with a horizontal diaphragm element Standard connection G½ B
… C	Version for chemical application (full stainless steel)
… ST	Bayonet housing CrNi-St, brass connection
… S	Version for chemical applications with safety housing DIN16006/EN 837.1
… … K	Contact device
… … … G	Glycerine filling
… … … OE	Oil filling for limit value transmitter (instead of GL)
… … … … 100 mm	Nominal size 100 mm
… … … … 160 mm	Nominal size 160 mm
… … … … … U	Bottom connection
… … … … … …	Measuring ranges / add-ons / limit values /special features (please enter in plain text or indicate code)

Ordering code - Example: **PCG100/U/2.5 bar/ …**

(Diaphragm manometer for chemical applications, glycerine-filled, 100 mm, bottom connection, 2.5 bar, ... (optional additions such as open flange 2707 …)

Our products are constantly in further development, therefore subjects to modifications.

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