

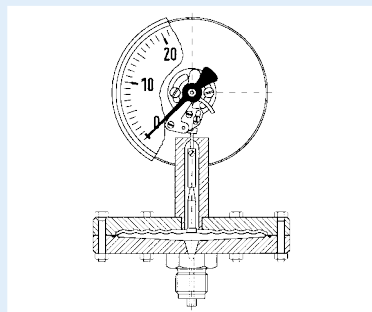
# Diaphragm pressure gauges for chemical applications EN 837-3



- For low pressure ranges
- High overload protection
- High resistance
- Optional flange connections



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**Application** For corrosive gaseous and liquid media, also for use in corrosive environments. With open connection flange also suitable for viscous and polluted media.  
! For measuring gas or vapour, observe the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 4

**Nominal size**  
100 – 160

**Accuracy class (EN 837-3/6)**  
1.6

**Ranges (EN 837-3/5)**  
0/10 to 0/250 mbar (flange Ø 160)  
0/0.4 to 0/25 bar (flange Ø 100)

**Application area**  
Static load: full scale value  
Dynamic load: 0.9 x full scale value

**Overpressure safety**  
High overload: Up to 5 x FSD,  
max. 40 bar / max. 2.5 bar  
with measuring flange Ø 160 mm

## Operating temperature range

Medium:  $T_{max} = +100\text{ °C}$   
Ambient:  $T_{min} = -20\text{ °C}$   
 $T_{max} = +60\text{ °C}$

## Temperature performance

Indication error when the temperature of the measuring system deviates from the normal temperature of 20 °C:  
rising temperature approx.  $\pm 0.8\%$  / 10 K  
falling temperature approx.  $\pm 0.8\%$  / 10 K  
of full scale value

## Degree of protection

IP 54 (EN 60529)

## Standard version

**Connection**  
Stainless steel 316 Ti/316 L, bottom  
G½B – spanner size SW 22 (EN 837-3/7,3)

**Lower measuring flange**  
Stainless steel 316 Ti/316 L

**Upper measuring flange**  
Stainless steel 304

**Measuring element**  
Diaphragm  
Measuring flange Ø 100: Duratherm  
Measuring flange Ø 160: stainless steel  
316 Ti/316 L

**Seal**  
FPM (Viton)

**Movement**  
Stainless steel

**Dial**  
Aluminium, white  
Dial marking black

**Pointer**  
Aluminium, black

**Housing**  
Stainless steel 304 with blow-out

**Bayonet type bezel**  
Stainless steel 304

**Window**  
Laminated safety glass

## Options

- Safety housing
- Overpressure safety 10 x FSD  
(measuring flange Ø 100 to max. 40 bar,  
measuring flange Ø 160 to max. 2.5 bar)
- Electrical contacts

- Glycerine filling ( $\geq 40$  mbar,  
 $\leq 250$  mbar accuracy class 2.5)
- Wetted parts with special coating
- Open connection flanges as per EN/ASME



See page 127 for prices.

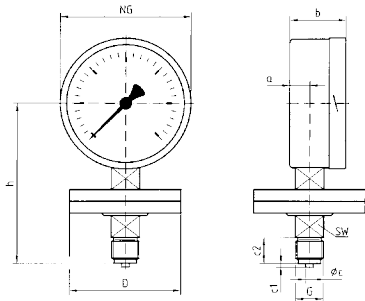
# Diaphragm pressure gauges for chemical applications

Type D 4 – NG 100/160

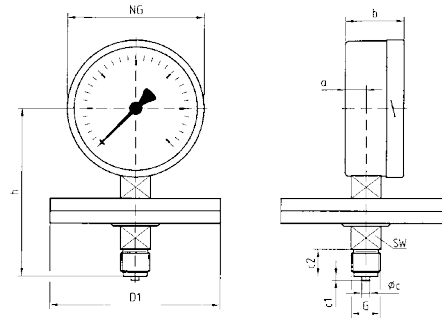
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## Housing types and dimensions

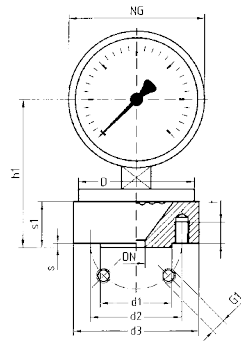
Bottom connection, measuring flange Ø 100



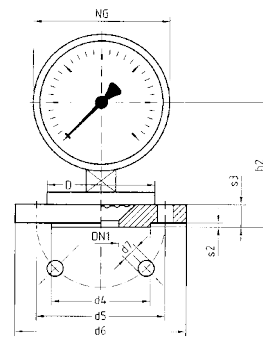
Bottom connection, measuring flange Ø 160



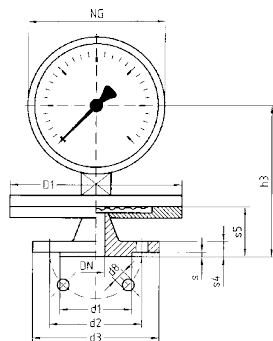
Connection flange as per EN 1092-1, DN 25  
Measuring flange Ø 100



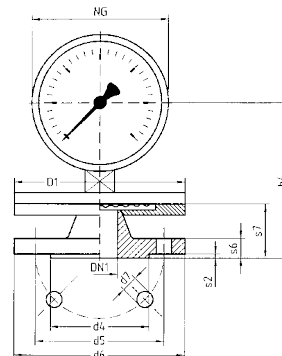
Connection flange as per EN 1092-1, DN 50  
Measuring flange Ø 100



Connection flange as per EN 1092-1, DN 25  
Measuring flange Ø 160



Connection flange as per EN 1092-1, DN 50  
Measuring flange Ø 160



### Dimensions (mm)

Nominal size (NG)	a	b	Øc	c1	c2	d1	d2	d3	d4	d5	d6	d7	d8	D	D1	DN	DN1	G	G1	h	h1
100	20	55	6	3	20	68	85	115	102	125	165	4x18	4x14	100	160	25	50	G½B	4xM12	127	111
160	20	55	6	3	20	68	85	115	102	125	165	4x18	4x14	100	160	25	50	G½B	4xM12	156	141

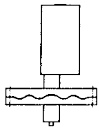
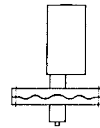
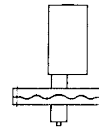
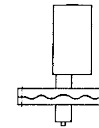
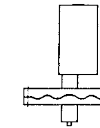
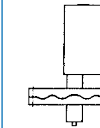
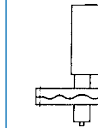

Nominal size (NG)	h2	h3	h4	s	s1	s2	s3	s4	s5	s6	s7	t	SW
100	101	129	137	2	30	3	20	18	48	20	56	12	22
160	131	159	167	2	30	3	20	18	48	20	56	12	22

# Standard diaphragm pressure gauges

# Diaphragm pressure gauges for chemical applications

DG: H, PG: 3

1

Type	With glycerine filling				With glycerine filling			
	PF100, D401	PF160, D401	PF100Gly, D801	PF160Gly, D801	PF100Ch, D402	PF160Ch, D402	PF100ChGly, D802	PF160ChGly, D802
Version								
Housing Ø	100	160	100	160	100	160	100	160
Housing	Stainless steel 304 with bayonet bezel							
Measuring element	Diaphragm, see data sheet.							
Lower flange	Steel				Stainless steel 316 Ti/316 L			
Accuracy class	1.6	1.6	1.6*	1.6*	1.6	1.6	1.6*	1.6*
Connection	G½B	G½B	G½B	G½B	G½B	G½B	G½B	G½B
Range (mbar)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
<b>Price €</b>								
0/10	85901401	85951401	---	---	85901402	85951402	---	---
0/16	85902401	85952401	---	---	85902402	85952402	---	---
0/25	85903401	85953401	---	---	85903402	85953402	---	---
0/40	85904401	85954401	85904801	85954801	85904402	85954402	85904802	85954802
<b>Price €</b>								
0/60	85905401	85955401	85905801	85955801	85905402	85955402	85905802	85955802
0/100	85906401	85956401	85906801	85956801	85906402	85956402	85906802	85956802
0/160	85907401	85957401	85907801	85957801	85907402	85957402	85907802	85957802
0/250	85908401	85958401	85908801	85958801	85908402	85958402	85908802	85958802
Range (bar)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
<b>Price €</b>								
0/0,4	85909401	85959401	85909801	85959801	85909402	85959402	85909802	85959802
0/0,6	85910401	85960401	85910801	85960801	85910402	85960402	85910802	85960802
0/1	85911401	85961401	85911801	85961801	85911402	85961402	85911802	85961802
0/1,6	85912401	85962401	85912801	85962801	85912402	85962402	85912802	85962802
0/2,5	85913401	85963401	85913801	85963801	85913402	85963402	85913802	85963802
0/4	85914401	85964401	85914801	85964801	85914402	85964402	85914802	85964802
0/6	85915401	85965401	85915801	85965801	85915402	85965402	85915802	85965802
0/10	85916401	85966401	85916801	85966801	85916402	85966402	85916802	85966802
0/16	85917401	85967401	85917801	85967801	85917402	85967402	85917802	85967802
0/25	85918401	85968401	85918801	85968801	85918402	85968402	85918802	85968802

Blue part no. = in-stock items

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\* ≤ 250 mbar Cl. 2.5, see page 74 for extra charges.

# Extra charges for standard diaphragm pressure gauges / diaphragm pressure gauges for chemical applications

DG: H, PG: 3

1

Open connection flanges	Material	Ranges 10 to 250 mbar Measuring flange Ø 160		Ranges 0.4 to 25 mbar Measuring flange Ø 100	
		Steel	Stainless steel	Steel	Stainless steel
Version	Nominal diameter	Price €	Price €	Price €	Price €
EN 1092-1, PN 40	DN 15				
	DN 20				
	DN 25				
	DN 50				
ASME B 16.5 CL 150	DN ½"				
	DN 1"				
	DN 2"				

Special connection	Material steel	Material stainless steel 316 Ti or 316 L
	Price €	Price €
Channel hole Ø 10 mm		
Groove/tongue as per EN 1092-1		
RJT groove ANSI B16.5		

Special materials for diaphragms	Ranges 10 to 250 mbar Measuring flange Ø 160	Ranges 0.4 to 25 mbar Measuring flange Ø 100
	Price €	Price €
Material		
PTFE film (≥ 40 mbar)		
Silver foil (≥ 160 mbar)	On request	On request
Tantalum foil (≥ 160 mbar)		
Other materials	On request	

Special materials for lower measuring flange (wetted part) for types D402 and D802	Ranges 10 to 250 mbar Measuring flange Ø 160			Ranges 0.4 to 25 mbar Measuring flange Ø 100		
	Connection	Flange, EN 1092-1, DN 15-25 flange ANSI ½", 1"	Flange, EN 1092-1, DN 50 flange ANSI 2"	Connection	Flange, EN 1092-1, DN 15-25 flange ANSI ½", 1"	Flange, EN 1092-1, DN 50 flange ANSI 2"
Material	Price €	Price €	Price €	Price €	Price €	Price €
PTFE lining	On request					
Other materials	On request					

Overpressure safety 10 x FSD (measuring flange Ø 100 to max. 40 bar, measuring flange Ø 160 to max. 2.5 bar)	Ranges 10 to 250 mbar Measuring flange Ø 160	Ranges 0.4 to 25 mbar Measuring flange Ø 100
	Price €	Price €

Blue part no. = in-stock items

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See page 116 for extra charges for electrical contacts.