

# DIAPHRAGM TYPE CHEMICAL SEAL



DRUCK & TEMPERATUR

## Quick coupling

**Process connection:  
Grooved union nut or  
Thread connection acc. to DIN 11 851  
and SMS Norm or  
Clamp connection**



### Description

Diaphragm seals are used when media can falsify the pressure measurement due to high temperature, high viscosity (pasty media) or their tendency to crystallize.

They transmit the process pressure to the pressure measuring device, whereby the diaphragm seal hermetically separates the medium and the measuring device from each other.

Hygiene regulations, for example in the pharmaceutical or food and beverage industry, which require residue-free cleaning of the measuring point and thus a sterile process sequence, can be met when using a diaphragm seal with a quick connection.

Due to the design, the process connection can be released quickly and easily and the pressure chamber can be cleaned easily.

The wetted parts of these diaphragm seals are made of stainless steel as standard. In connection with a bourdon tube pressure gauge or pressure sensor, they can be used for pressure ranges from 0...0.6 bar to 0...40 bar.

For special requirements, the wetted parts can be made of special materials.

The liquid used to transfer the process pressure to the pressure measuring device is suitable for use with food.

### Features

- various process connections
- Quick coupling
- front flush diaphragm
- Filling liquids suitable for use with food
- Special materials for extreme applications

### Pressure ranges

0...0,6 bar up to 0...40 bar

### Applications

Plant and apparatus construction  
Food industry  
Beverage industry  
Pharmaceutical industry  
Process technology

Type 1011, 1012, 1013, 1018, 1030



Type	1030	1012	1011	1013	1018		Options
Process connection	with union nut		with thread connection		Clamp		
	DIN 11851 DN25 DN32 DN40 DN50	SMS Norm 1½" 2"	DIN 11851 DN25 DN32 DN40 DN50	SMS Norm 1½" 2"	ISO 2852 DN25 DN38 DN51 DN63,5 DN76,1	DIN 32676 DN15 DN20 DN25 DN32 DN40 DN50	APV-ISS, APV-RJT, IDF-Norm, Tri-Clamp, others on request  Other sizes on request
Material diaphragm seal and process connection	1.4435						Others on request
Measuring device connection	G1/2 female						Bore d8 for welding with a pressure gauge connection D8x5, others on request, whereby NPT is not recommended
Surface roughness of the wetted parts	Ra < 0,8µm						Ra < 0,4µm
Diaphragm	1.4435						Others on request
effective membrane Ø dM	see charts on the following pages						
Union nut	1.4301					-	Others on request, reinforced union nut
Nominal pressure	see charts on the following pages						
Filling liquid	Vegetable oil						Others on request
Reference temperature	+20°C standard for diaphragm seal systems with an attached measuring device						Adjustment of a maximum different working temperature (please specify when ordering)
More options Accessories	Capillary line and cooling element						

Important information on the selection of diaphragm seals

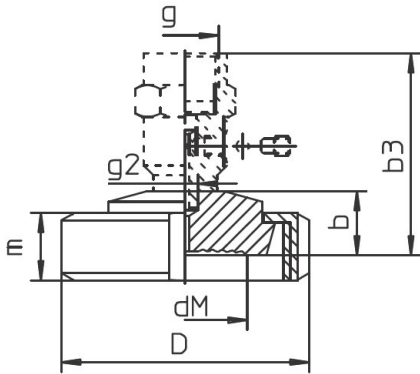
The process pressure to be measured is transmitted from the diaphragm seal to the pressure measuring device with the aid of a liquid. For reasons related to the system and in order not to expose the measuring device to impermissibly high temperatures, the diaphragm seal and measuring device can be connected to one another via capillary lines (length up to a maximum of 15 m). The temperature gradient between the MSR device and the diaphragm seal can be several 100 ° C. As a result, temperature-related measurement errors are possible, which can be multiple of the accuracy of the measuring device.

Matching of the chemical seal and pressure measuring instrument therefore requires expertise, and we shall be pleased to assist you.

We recommend you to request our special questionnaire on service conditions and order data.

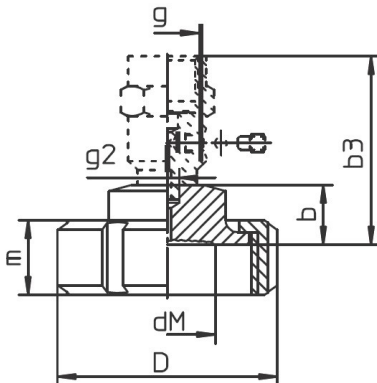
**Dimensional drawing** Dimensions in mm

**Type 1030 DIN 11 851**



DN	PN	for pipe outer Ø x wall thickness	Pipe inside Ø	b	b3	D	dM	Outer Ø membrane	g	g2	m	t <sub>k</sub> - value	Weight (kg)
20	40	23 x 1,5	20	20	63	54	21	23	G1/2	Ø8	20	5,5	0,33
25		29 x 1,5	26			63	26	28				2,8	0,47
32		35 x 1,5	32			70	32	34			21	1,4	0,56
40		41 x 1,5	38			78	38	40				0,8	0,67
50	25	53 x 1,5	50	20	63	92	48	50	G1/2	Ø8	22	0,4	0,89
65		70 x 2	66			112	60	62			25	0,82	1,41
80		85 x 2	81			127	72	75			30	0,64	1,65

**Type 1012 SMS Norm**



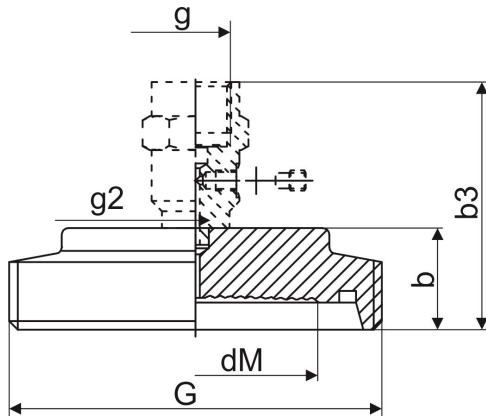
NPS	PN	for pipe outer Ø x wall thickness	Pipe inside Ø	b	b3	D	dM	Outer Ø membrane	g	g2	m	t <sub>k</sub> - value	Weight (kg)
1"	40	25 x 1,2	22,6	20	63	51	19	21	G1/2	Ø8	30	6,5	0,21
1½"		38 x 1,2	35,6			74	32	34				1,4	0,48
2"		51 x 1,2	48,6			84	46	48				0,45	0,78
2½"	25	63,5 x 1,6	60,3	20	63	100	56	58	G1/2	Ø8	30	0,9	1,1
3"		76,1 x 1,6	72,9			114	66	68				0,73	1,59

**Dimensional drawing** Dimensions in mm



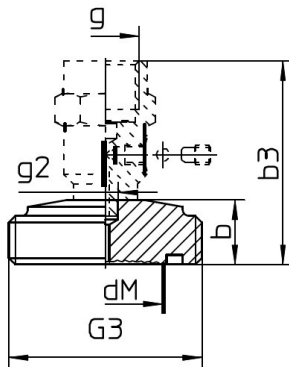
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**Type 1011 DIN 11 851**



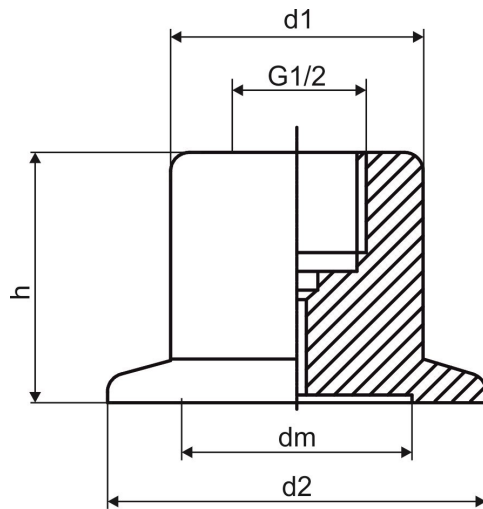
DN	PN	for pipe outer Ø x wall thickness	Pipe inside Ø	b	b3	dM	Outer Ø membrane	g	g2	G	t <sub>k</sub> - value	Weight (kg)
20	40	23 x 1,5	20	20	63	21	23	G1/2	Ø8	Rd 44 x 1/6	5,5	0,28
25		29 x 1,5	26			26	28			Rd 52 x 1/6	2,8	0,31
32		35 x 1,5	32			32	34			Rd 58 x 1/6	1,4	0,35
40		41 x 1,5	38			38	40			Rd 65 x 1/6	0,8	0,42
50	25	53 x 1,5	50	30	73	48	50			Rd 78 x 1/6	0,4	0,55
65		70 x 2	66			60	62			Rd 95 x 1/6	0,82	1,08
80		85 x 2	81			72	75			Rd 110 x 1/4	0,64	1,53

**Type 1013 SMS Norm**



NPS	PN	for pipe outer Ø x wall thickness	Pipe inside Ø	b	b3	dM	Outer Ø membrane	g	g2	G3	t <sub>k</sub> - value	Weight (kg)
1"	40	25 x 1,2	22,6	20	63	19	21	G1/2	Ø8	Rd 40-6	6,5	0,21
1½"		38 x 1,2	35,6			32	34			Rd 60-6	1,4	0,48
2"		51 x 1,2	48,6			46	48			Rd 70-6	0,45	0,78
2½"	25	63,5 x 1,6	60,3	56	58	Rd 85-6	0,9			1,1		
3"											76,1 x 1,6	72,9

**Type 1011, 1012, 1013, 1018, 1030**



Clamp	DN	PN	dm	d1	d2	h	Minimum range	Item No.
<b>ISO 2852</b>	1" (DN25)	40	23	39	50,5	37	16 bar	6315 025
	1 1/2" (DN38)		34	39	50,5	37	2,5 bar	6315 040
	2" (DN51)		42	51,5	64	45	1 bar	6315 050
	2 1/2" (DN63,5)	25	54	51,5	77,5	45	1 bar	6315 065
<b>DIN 32676</b>	25	40	23	39	50,5	37	16 bar	6030 025
	32		28	39	50,5	37	4 bar	6030 030
	40		34	39	50,5	45	2,5 bar	6030 040
	50	25	42	51,5	64	45	1 bar	6030 050

Dimensions of other sizes on request