

# Diaphragm-Type Chemical Seals

## For Food, Biochemical and Pharmaceutical Industry

DIN 11 851 • Model 990.18  
SMS Standard • Model 990.19  
IDF Standard • Model 990.20  
APV-RJT Standard • Model 990.21  
Clamp Fitting • Model 990.22

### Chemical Seals

#### Service intended

Chemical seal to combine with bourdon tube pressure gauges or transmitters.

Fast installation and removal for cleaning.

#### Design

Body with diaphragm and integral female or male hygienic-type connection

#### Process connection

Hygienic-type process connection according to DIN-, SMS-, IDF-, APV-RJT-standard or clamp  
DN 25 to DN 50 resp. DN 1 ½", DN 2"

#### Pressure rating

PN 40 or PN 25 maximum

#### Suitable pressure ranges

0 ... 1 bar to 0 ... 40 bar

#### Standard features

##### Body and connection

Stainless steel 1.4571

##### Process connection

Model 990.18: Form D-F DIN 11 851

Model 990.19: SMS union nut

Model 990.20: IDF union nut

Model 990.21: APV-RJT union nut

Model 990.22: Clamp fitting

For feasible sizes see dimensions overleaf

##### Diaphragm

Stainless steel 1.4571, welded with body

##### Sealing ring

NBR (Buna rubber) <sup>1)</sup>

##### Instrument connection

Stainless steel 1.4571

G ½ female per EN 837-1 /7.3.5

##### Filling liquid

Food-compatible



Model 990.18  
with union nut DIN 11 851

#### Optional extras

##### Body and connection

- Stainless steel 1.4404, 1.4435, 1.4541, titanium, Hastelloy B2, C4, C276, Monel, nickel

##### Process connection

- Models 990.18 to 990.21: Male thread instead of union nut  
- Model 990.22: Clamp-coupling, clamp tie, sealing ring  
- Varivent-connection DN 40/50  
- Aseptic and sterile fittings

##### Diaphragm

- Special materials same as body

##### Sealing ring

- PTFE (Teflon)

##### Instrument connection

- G ¼ female  
- Capillary extension welded with body and gauge adaptor G ½ female to fit surface mounting bracket complete stainless steel  
- Cooling tower for directly mounted instrument when fluid temperature > +100 °C

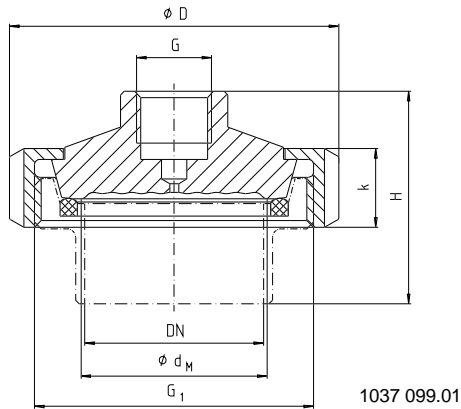
1) Standard supply with model 990.18

## Dimensions

### Standard version

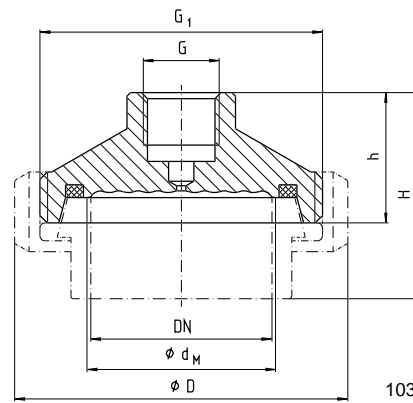
Models 990.18/19/20/21

with union nut



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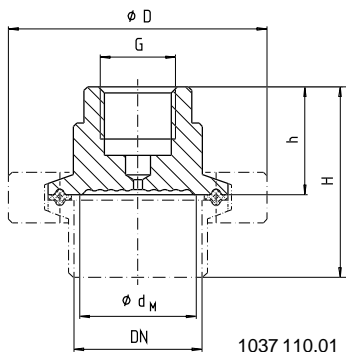
with male thread



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Model	DN <sup>1)</sup> [mm or in.]	PN [bar]	Dimensions [mm]							Weight [kg]	Design
			d <sub>M</sub>	D	H <sub>ca.</sub>	h <sub>ca.</sub>	k	G	G <sub>1</sub>		
Chemical seals with union nut											
990.18 DIN 11 851	25	40	25	63	60	-	21	G ¼	Rd 52 x ⅙	0.40	D-F
	32	40	32	70	69	-	21	G ½	Rd 58 x ⅙	0.50	D-F
	40	40	40	78	55	-	21	G ½	Rd 65 x ⅙	0.75	D-F
	50	25	52	92	59	-	22	G ½	Rd 78 x ⅙	0.80	D-F
	80	25	72	127	78	-	29	G ½	Rd 110 x ¼	1.25	
990.19 SMS-Standard	1 ½	40	40	74	51	-	25	G ½	Rd 60 x ⅙	0.75	
	2	40	52	84	51	-	26	G ½	Rd 70 x ⅙	0.90	
990.20 IDF-Standard	1 ½	40	32	64	53	-	30	G ½	1 ½" IDF	0.70	
	2	40	52	79	53	-	30	G ½	2" IDF	0.85	
990.21 APV-RJT-Stand.	1 ½	40	32	72	60	-	21	G ½	2 <sup>5</sup> / <sub>16</sub> x 8"	0.77	
	2	40	40	86	65	-	22	G ½	2 <sup>7</sup> / <sub>8</sub> x 6"	0.86	
Chemical seals with male thread											
990.18 DIN 11 851	40	40	40	78	55	36	-	G ½	Rd 65 x ⅙	0.85	C
	50	25	52	92	57	36	-	G ½	Rd 78 x ⅙	0.90	C
990.19 SMS-Standard	1 ½	40	40	74	61	38	-	G ½	Rd 60 x ⅙	0.90	
	2	40	52	84	61	38	-	G ½	Rd 70 x ⅙	1.00	
990.20 IDF-Standard	1 ½	40	32	64	63	40	-	G ½	1 ½" IDF	0.73	
	2	40	52	79	63	40	-	G ½	2" IDF	0.88	
990.21 APV-RJT-Stand.	1 ½	40	32	72	60	35	-	G ½	2 <sup>5</sup> / <sub>16</sub> x 8"	0.85	
	2	40	52	86	65	35	-	G ½	2 <sup>7</sup> / <sub>8</sub> x 6"	1.10	

Model 990.22 with clamp connection



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Model	DN [in.] <sup>1)</sup>	PN [bar]	Dimensions [mm]					Weight [kg]
			d <sub>M</sub>	D <sub>ca.</sub>	H <sub>ca.</sub>	h <sub>ca.</sub>	G	
990.22	1 ½	40	32	60	58	35	G ½	0.60
	2	40	40	75	58	35	G ½	0.75
	2 ½	25	52	82	65	35	G ½	0.95
	3	25	72	104	65	35	G ½	1.30

Effective diameter of diaphragm = d<sub>M</sub>

1) Coupling components indicated by dotted lines are available upon inquiry.

### Ordering information

Model / Size, pressure rating and applicable standard of connection / Material of wetted parts / Extension / Size of instrument connection / Filling liquid / Pressure instrument desired / Process conditions as per questionnaire / Optional extras required  
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.  
Modifications may take place and materials specified may be replaced by others without prior notice.



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