

Chemical seals for hygienic pressure applications DAXX series

All stainless steel, flush diaphragm

Rapid assembly and disassembly

Fluid temperature up to 150°C depending on pressure, measuring device or mounting.

3-A authorization (N°1118) :

- DANC, sterilization in place (SIP), cleaning in place (CIP)
- DAEF, DAEL, DADF, DADL cleaning out of place

Complies with FDA and EHEDG recommendations

Wetted surface roughness: arithmetic average surface roughness $R_a \leq 32 \mu\text{inch}$ ($\leq 0.8 \mu\text{m}$)

Electropolishing option: housing and diaphragm arithmetic average surface roughness $R_a \leq 16 \mu\text{inch}$ ($\leq 0.4 \mu\text{m}$), laser weld $R_a \leq 32 \mu\text{inch}$ ($\leq 0.8 \mu\text{m}$)

Diaphragm material : 1.4435 - Hastelloy option C276/2.4819

Hygienic seals are designed for systems needing contact surfaces that are rigorously clean and totally safe. The function of the chemical seal is to isolate the pressure gauge from the process fluid, preventing bacteria developing inside the pressure gauge's sensing element.

The fluid pressure being measured acts on the diaphragm and is transmitted to the pressure gauge by a neutral transmitting liquid.

The quick release coupling and flush diaphragm facilitates easy cleaning.

The following connection systems are offered :

CLAMP system to NF E 29521, ISO 2852 and DIN 32676 standards

NUT system to SMS 1145 standard

NUT system to DIN 11 851 standard

NUT system according to BS 4825 (RJ-IDF)

CLAMP system compatible with VARIVENT® model



Specifications

Compatibility table of hygienic seals with pressure gauges (direct mounting)

Range in bar according to the temperature	Fluid temperature: -20 ... 100°C		
	Ambient temperature: -10 ... 50°C		
	MEX2 (Ø50) - MEX3 (Ø63)	MX35 (Ø100)**	MEX5 (Ø100)
DN25 (DANC/DADL/DAEL)	0 ... 4 to 0 ... 25	0 ... 4 to 0 ... 25	Not available
1"1/2 / DN32 - DN38 - DN40 + DAVA DN25	0 ... 2,5 to 0 ... 40	0 ... 2,5 to 0 ... 4	0 ... 6 to 0 ... 40
2" / DN50 - DN51 + DAVA DN40/125	0 ... 1 to 0 ... 40	0 ... 1 (*)	0 ... 1,6 to 0 ... 40
1"1/2 / DN32 - DN38 - DN40 + DAVA DN25	-1 ... 3 to -1 ... 39	-1 ... 3	-1 ... 5 to -1 ... 39
2" / DN50 - DN51 + DAVA DN40/125	-1 ... 1,5 to -1 ... 39	-1 ... 1,5	-1 ... 3 to -1 ... 39
DN25 (1)	-1 ... 3 to -1+24	-1 ... 3 to -1 ... 24	Not available

Range in bar according to the temperature	Fluid temperature: -20 ... 150°C		
	Ambient temperature: -10 ... 70°C		
	MEX2 (Ø50) - MEX3 (Ø63)	MX35 (Ø100)**	MEX5 (Ø100)
DN25 (DANC/DADL/DAEL)	0 ... 6 to 0 ... 25	0 ... 6 to 0 ... 25	Not available
1"1/2 / DN32 - DN38 - DN40 + DAVA DN25	0 ... 4 to 0 ... 40	0 ... 4 to 0 ... 6	0 ... 10 to 0 ... 40
2" / DN50 - DN51 + DAVA DN40/125	0 ... 1,6 to 0 ... 40	0 ... 1,6	0 ... 2,5 to 0 ... 40
1"1/2 / DN32 - DN38 - DN40 + DAVA DN25	-1 ... 5 to -1 ... 39	-1 ... 5	-1 ... 9 to -1 ... 39
2" / DN50 - DN51 + DAVA DN40/125	-1 ... 3 to -1 ... 39	Not available	-1 ... 3 to -1 ... 39
DN25 (2)	-1 ... 5 to -1 ... 24	-1 ... 5 to -1 ... 24	Not available

(*) class 2.5

(1) Fluid : -10°C + 100°C

(2) Fluid : -10°C + 120°C

Note:** The MX35 is a pressure gauge DN100 stainless steel, class 1.6 specially designed to be mounted on seals only in the range above. D type and G½ connection exclusively. This pressure gauge is not available separately.

Pressure gauge accuracy (20°C)

MEX2 (Ø50) - MEX3 (Ø63) : class 1.6
 MX35 (Ø100) : class 1.6 except 0+1 bar (class 2.5)
 (the MX35 has an MEX3 tube and block mounted in an MEX5 case)
 MEX5 (Ø100) : class 1

Max. range

0+40 bar or -1+39 bar

www.baumer.com/process



Baumer

Data sheet A43.01

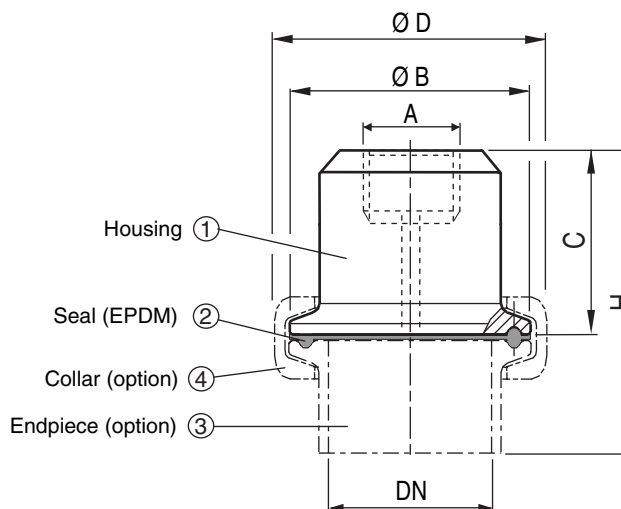
Design and specifications subject to change without notice

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Range of hygienic seals, dimensions

DANC (CLAMP according to NF E 29521 / ISO 2852 / DIN 32676 standards

DAVA - VARIVENT®

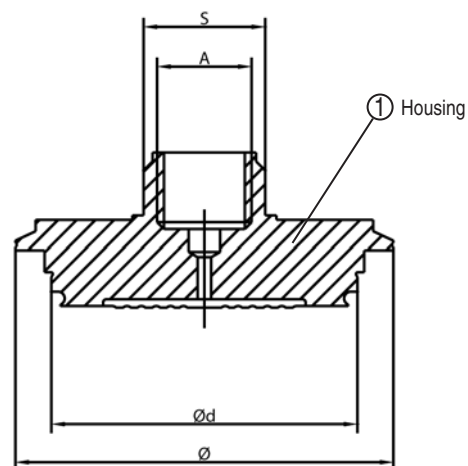


Dimensions mm

DN to NF E 29521 ISO 2852 std	DN to DIN 32676 std	A	Ø B	C	D	H	Weight Kg ①+②
DN25 & 38	DN25 & 40	G½ or G¼	50.5	32 ¹⁾	66	~60	0.200
DN51	DN50	G½ or G¼	64	32 ¹⁾	79	~65	0.320

Other nominal diameters on request

¹⁾ for G¼, C = 30

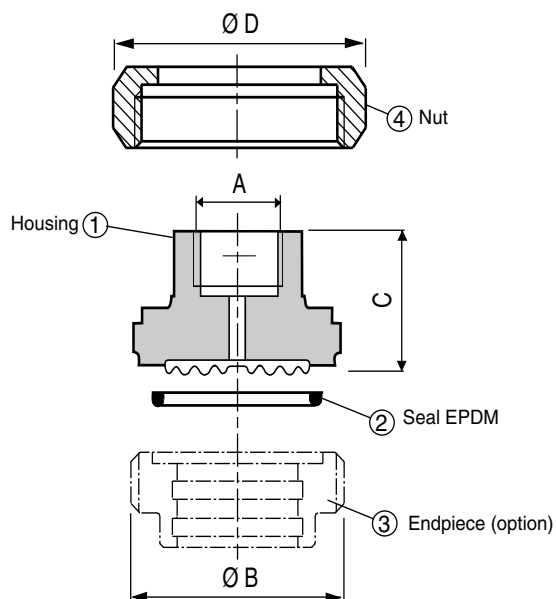
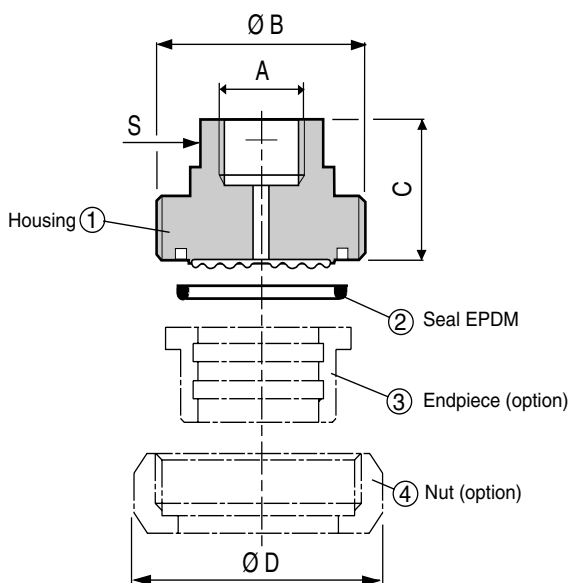


Dimensions mm

DAVA VARIVENT®	DN	A	D	S /Flats	Weight Kg ①
	25	G½ ou G¼	50	27	0.200
	40/125	G½ ou G¼	68	27	0.320

DAEF (SMS 1145 with threaded housing)

DAEL (SMS 1145 with smooth housing)



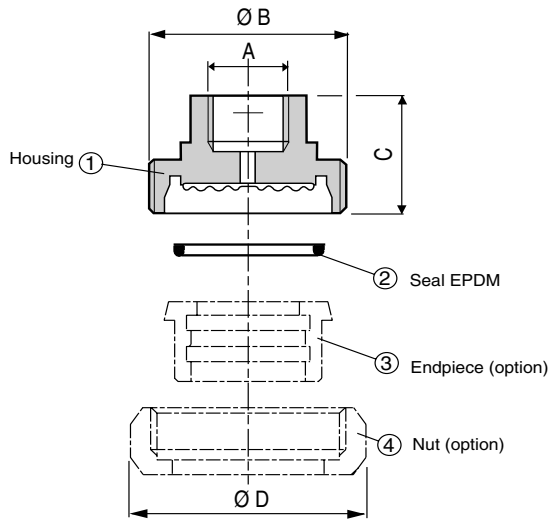
Dimensions mm

Model	DN mm or in.	A	Ø B to SMS std	C	D	dimensions ①+②+③+④	Weight Kg ①+②	Weight Kg ①+②+④	S
DAEF (SMS 1145)	DN38 (1½")	G½ or G¼	60 x 1/6	32	74	~55	0.400		27
	DN51 (2")	G½ or G¼	70 x 1/6	32	84	~55	0.480		27
DAEL (SMS 1145)	DN25 (1")	G½ or G¼	40 x 1/6	32 ¹⁾	51	~50	0.160	0.310	
	DN38 (1½")	G½ or G¼	60 x 1/6	33 ¹⁾	74	~55	0.300	0.540	
	DN51 (2")	G½ or G¼	70 x 1/6	33 ¹⁾	84	~60	0.420	0.730	

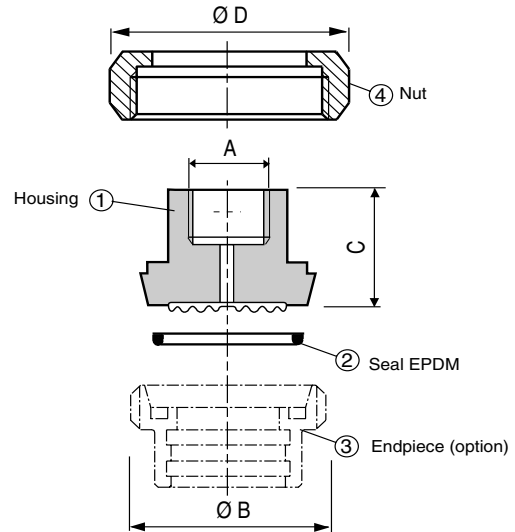
Other nominal diameters on request

¹⁾ for G¼, C = 28

DADF (DIN 11851 with threaded housing)



DADL (DIN 11851 with smooth housing)



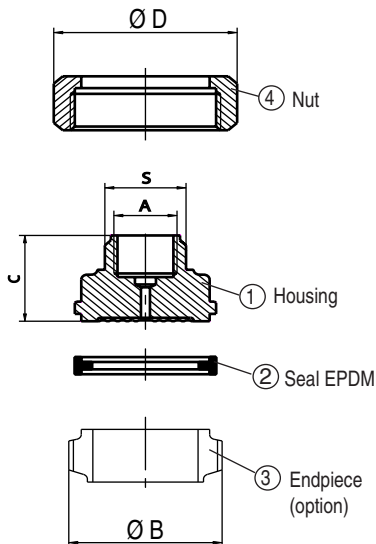
Dimensions mm

Model	DN mm	A	Ø B to DIN std	C ³⁾	D	dimensions ①+②+③+④	Weight Kg ①+②	Weight Kg ①+②+④
DADF (DIN 11851)	DN32	G½ or G¼	58 x 1/6	40 ²⁾	70	~58	0.360	
	DN40	G½ or G¼	65 x 1/6	40 ²⁾	78	~59	0.460	
	DN50	G½ or G¼	78 x 1/6	42 ²⁾	92	~63	0.580	
DADL (DIN 11851)	DN25	G½ or G¼	52 x 1/6	37 ¹⁾	63	~59	0.230	0.420
	DN32	G½ or G¼	58 x 1/6	37 ¹⁾	70	~62	0.290	0.500
	DN40	G½ or G¼	65 x 1/6	37 ¹⁾	78	~63	0.360	0.610
	DN50	G½ or G¼	78 x 1/6	37 ¹⁾	92	~65	0.530	0.880

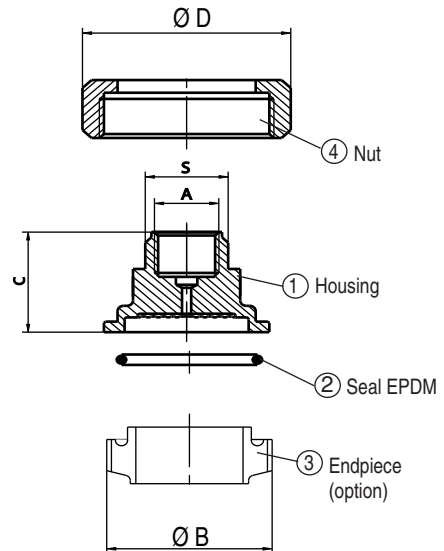
Other nominal diameters on request

- 1) for G¼, C = 31
- 2) for G¼, C = 35
- 3) Reduced height option

DAIL (IDF according to BS 4825 part 4)



DARL (RJT according to BS 4825 part 5)



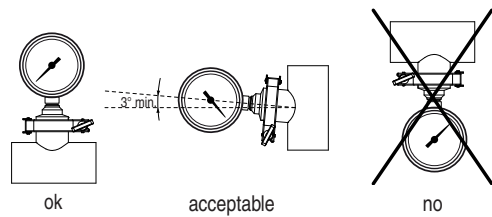
	DN	A	B	C	D Hexagonal	S /flats	Dimensions	Weight kg ① + ② + ④
DAIL (IDF)	1 1/2"	G½ or G¼	50.7 8x1	35	60	27	60	540
	2"	G½ or G¼	64.2 8x1	27	75	27	52	700
DARL (RTJ)	1 1/2"	G½ or G¼	58.4 8x1	38	65	27	60	440
	2"	G½ or G¼	72.7 6x1	33	79	27	55	590

Limits of use

If the temperature of the process fluid exceeds 150°C, a type ASIP D or equivalent cooling element needs to be fitted between the diaphragm seal and the measuring device.

To keep 3-A requirements :

- gaskets must be self centering and in accordance to 3-A material requirements
- the fittings must be self draining and as short as possible (see drawings)
- the weldings of fitting shall have a roughness $Ra \leq 0.8 \mu\text{m}$ ($\leq 32 \mu\text{inch}$)
- the pressure gauge mounted with the hygienic seal shall not have a window in standard glass



Ordering

		DAxxxxxxx	
Family	1' ... 2' digit		
Chemical seal		DA	
Model	3' ... 4' digit		
CLAMP		NC	
SMS FF (6)		EF	
SMS FL (6)		EL	
DIN FF (6)		DF	
DIN FL (6)		DL	
IDF (1)		IL	
RJT (1)		RL	
VARIVENT® (1)		VA	
Dimensions and types of top housing	5' ... 6' digit		
DN25 according to NF E 29521 ISO2852	DANC		07
DN38 according to NF E 29521 ISO2852			01
DN51 according to NF E 29521 ISO2852			02
DN25 according to DIN 32676			08
DN40 according to DIN 32676			10
DN50 according to DIN 32676			13
DN25 according to SMS 1145	DAEF/DAEL		09
DN38 according to SMS 1145			11
DN51 according to SMS 1145			14
DN25 according to DIN 11851	DADF/DADL		06
DN32 according to DIN 11851			03
DN40 according to DIN 11851			04
DN50 according to DIN 11851			05
DN 1"1/2 IDF according to BS 4825 part 4 (1)	DAIL		15
DN 2" IDF according to BS 4825 part 4 (1)			16
DN 1"1/2 RJT according to BS 4825 part 5 (1)	DARL		17
DN 2" RJT according to BS 4825 part 5 (1)			18
DN 25 (1)	DAVA		19
DN 40/125 (1)			20
Top housing material	7' digit		
Stainless steel 316L			2
Top housing thread	8' digit		
G1/2 female			L
G1/4 female			H
1/2 NPT female			N
1/4 NPT female			8
Diaphragm material	9' digit		
Stainless steel 316L			2
Hastelloy C276 (please call our sales office)			6
Type of assembly	10' digit		
Complete assembly with collar and seal endpiece (1) (5)			1
Upper housing alone (4)			2
Upper housing with seal and nut or collar (2)			3
Electropolished upper housing (4)			5
Electropolished upper housing with seal (2) (4)			6
Upper housing with seal (2) (4)			7

3-A Approval codification (option 1985) : please call our sales office

Code **	Filling fluid (3)	
	Operating temperature	Application
LRS 0	No filling	
LRS 1	-15° ... 150°C	Application food and industry CODEX (FDA approved)
LRS 2	-60° ... 150°C	Other applications
LRS 3	-20° ... 300°C	
LRS 4	-15° ... 150°C	Oxygen-chlorinated products Max. P = 150 bar
LRS7	-20° ... 80°C	Paint application No vacuum scale available Filling under vacuum
LRS10	-20° ... 225°C	Food processing High temperature (FDA approved)

3-A Authorization

DAxx mounted on pressure gauges MEX, MIX, MMX, MEP or transmitters E930/Y930 and TED/YTED pressure switches.

Note: The "3-A" marking is applied on the associated device:

- (1) Codes incompatible with 3-A option
- (2) As standard, the EPDM seal is not compatible with option 3-A. Gaskets according to 3-A requirements on request for DANC ISO DN38 and DN51.
Code : DANC 01 2 x 2 x
DANC 02 2 x 2 x
- (3) 3-A option only with filling fluids : LRS 1 and LRS 10
- (4) Except for DADL, DAEL, DAIL and DARL. Use exclusively the models fitted with nuts (codes 1 or 3).
- (5) Except DANC according to DIN 32676.
- (6) 3A marked models only for cleaning out of place.

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