

# Diaphragm chemical seals D1xx-D2xx-D3xx-D120/D121

A wide choice of configurations to suit customer requirements:

D300 to D314: 0 + 0.16 to 0 + 25 bar and -1 + 0 to -1 + 24 bar

D200 to D214: 0 + 1 to 0 + 40 bar and -1 + 3 to -1 + 24 bar

D100 to D114: 0 + 4 to 0 + 160 bar and -1 + 9 to -1 + 24 bar

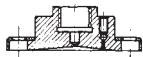
D120 - D121: 0 + 160 to 0 + 1000 bar

These series are designed for gauge pressure measurement from 0.16 to 1000 bar of corrosive fluids within temperature ranges between -60° and +200°C.

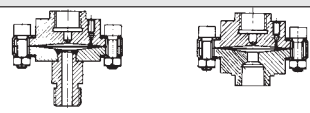
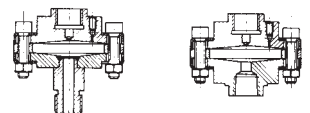
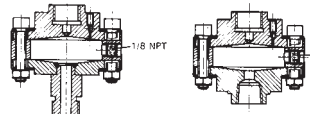
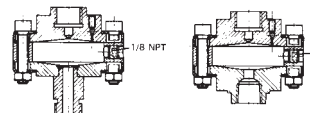
If the pressure indicator or transmitter are damaged, the chemical seal diaphragm keeps the system sealed.



## Chemical seal definition table

	Measurement ranges in bar	0 + 0.16 to 0 + 25 -1 + 0 to -1 + 24 0 + 24 bar absolute	0 + 1 to 0 + 40 -1 + 3 to -1 + 24	0 + 4 to 0 + 160 -1 + 9 to -1 + 24	0 + 160 to 0 + 1000
<b>DX00 and D120 (X = 1 or 2 or 3)</b>	<b>Type of assembly</b>	<b>TOP HOUSING WITH FEMALE THREAD FLUSH DIAPHRAGM</b>			
	Top housing with welded diaphragm	<b>D300</b>	<b>D200 D207<sup>(2)</sup></b>	<b>D100 D107<sup>(1)</sup></b>	<b>D120</b>

M = Male process connection / F = Female process connection

<b>DX01 to DX14 and D121 (X = 1 or 2 or 3)</b>	<b>Type of assembly</b>	<b>TOP HOUSING WITH FEMALE THREAD SCREW-TYPE PROCESS CONNECTION</b>						
		M	F	M	F	M	F	F
	Standard chemical seal with welded diaphragm	<b>D301</b>	<b>D311</b>	<b>D201 D208<sup>(2)</sup></b>	<b>D211 D218<sup>(2)</sup></b>	<b>D101 D108<sup>(1)</sup></b>	<b>D111 D118<sup>(1)</sup></b>	<b>D121</b>
	Standard chemical seal with clamped diaphragm and clamping ring	<b>D302</b>	<b>D312</b>	<b>D202</b>	<b>D212</b>	<b>D102</b>	<b>D112</b>	-
	Chemical seal with cleaning ring and clamped diaphragm	<b>D303</b>	<b>D313</b>	<b>D203</b>	<b>D213</b>	<b>D103</b>	<b>D113</b>	-
	Chemical seal with cleaning ring and welded diaphragm	<b>D304</b>	<b>D314</b>	<b>D204 D209<sup>(2)</sup></b>	<b>D214 D219<sup>(2)</sup></b>	<b>D104 D109<sup>(1)</sup></b>	<b>D114 D119<sup>(1)</sup></b>	-

(1) Reinforced version: P max up to 400 bar

(2) Reinforced version: P max up to 100 bar

### Measurement ranges

Chemical seal mounted on DN 100 pressure gauge  
Fluid temperature: -20°C ≤ T ≤ 100°C  
Ambient temperature: -10°C ≤ T ≤ 50°C

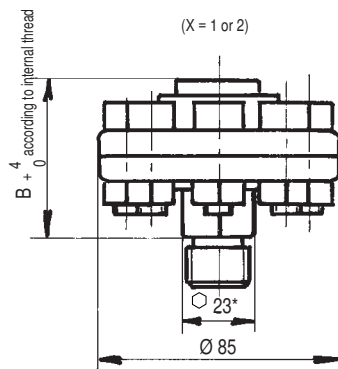
For other service conditions, see our «Chemical Seal Technical Guide»



## Dimensions

Weights given for G1/2 stainless steel models

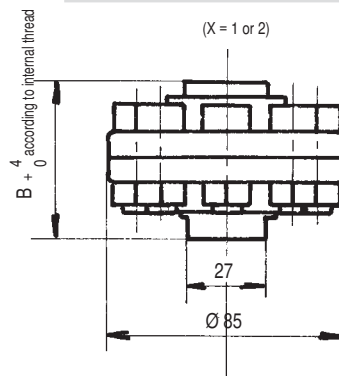
### Series DX01 to DX04



Type	B	Weight kg D101 to D104	Weight kg D201 to D204
D101/201	54	0.965	0.935
D102/202	62	1.215	1.135
D103/203	69	1.425	1.320
D104/204	69	1.425	1.320

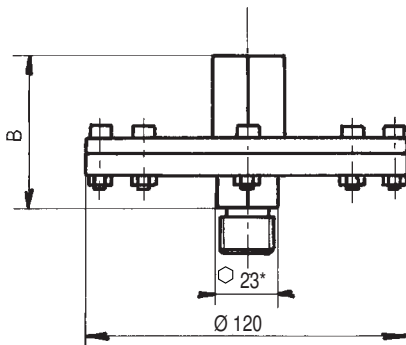
\* □ 22 for monel version

### Series DX11 to DX14 and D121



Type	B	Weight kg D111 to D114	Weight kg D211 to D214	Weight kg D121
D111/211	54	0.975	0.995	-
D112/212	62	1.225	1.195	-
D113/213	69	1.435	1.380	-
D114/214	69	1.435	1.380	-
D121	54	-	-	1.410

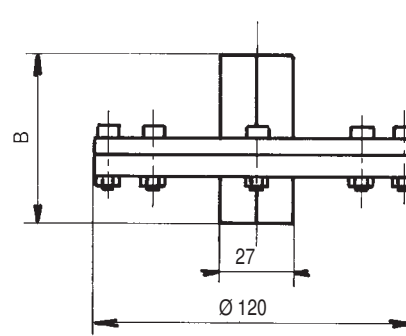
### Series D301 to D304



Type	B	Weight kg
D301	59	1.340
D302	65	1.535
D303	73	1.810
D304	73	1.810

\* □ 22 for monel version

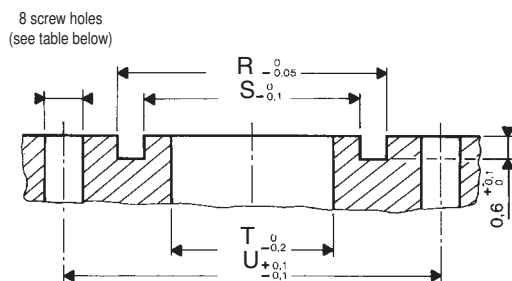
### Series D311 to D314



Type	B	Weight kg
D311	65	1.390
D312	71	1.585
D313	79	1.850
D314	79	1.850

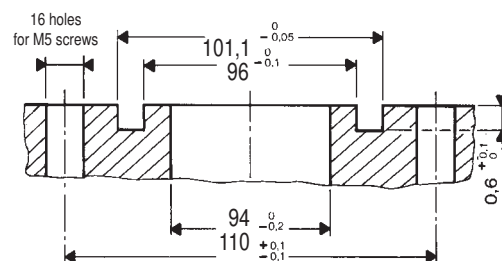
## Flange machining for D100-D200-D300-D120 mounting

### D100 - D200 - D120



	D100	D200	D120
R	50.1	59.1	40.1
S	46	55	36
T	45	54	35
U	65	70	65
Screw	M10	M8	M10

### D300



Sealing gasket		
Type	Material	Dimensions
D1xx	PTFE	Ø49.8 x Ø45.8 x 1
D120/D121	stainless steel 1.4404	Ø40 x Ø36 x 1
D2xx	PTFE	Ø58.8 x Ø54.8 x 1
D3xx	PTFE	Ø101 x Ø97 x 1

# Codification

## Top housing with welded diaphragm

		Dxxxxxx
<b>Type of chemical seal</b>	<b>1'...4' digit</b>	
D100 - D200 - D300 - D107 - D207 - D120		Dxxx
<b>Top housing material</b>	<b>5' digit</b>	
Steel		1
Stainless steel 316L (1.4404)		2
<b>Top housing thread</b>	<b>6' digit</b>	
G 1/2 female		L
G 1/4 female		H
1/2 NPT female		N
1/4 NPT female		8
<b>Diaphragm material</b>	<b>7' digit</b>	
Stainless steel 316L (1.4435)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Tantalum		7
Monel 400 (2.4360)		9
<b>Diaphragm coating</b>	<b>8' digit</b>	
No coating		0
PTFE 0.02mm (1)		1
HALAR 0.2mm (1)		4
Adhesive PTFE lining 0.25mm (2)		2
GOLD 15 µ (3)		7

## Standard chemical seal with welded diaphragm

		Dxxxxxxxx
<b>Type of chemical seal</b>	<b>1'...4' digit</b>	
D101-D111-D108-D118-D201-D211-D208-D218-D301-D311-D121		Dxxx
<b>Top housing material</b>	<b>5' digit</b>	
Steel		1
Stainless steel 316L (1.4404)		2
<b>Top housing thread</b>	<b>6' digit</b>	
G 1/2 female		L
G 1/4 female		H
1/2 NPT female		N
1/4 NPT female		8
<b>Diaphragm material</b>	<b>7' digit</b>	
Stainless steel 316L (1.4435)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Tantalum		7
Monel 400 (2.4360)		9
<b>Diaphragm coating</b>	<b>8' digit</b>	
No coating		0
PTFE 0.02mm (1)		1
HALAR 0.2mm (1)		4
Adhesive PTFE lining 0.25mm (2)		2
GOLD 15 µ (3)		7
<b>Bottom housing material</b>	<b>9' digit</b>	
Steel		1
Stainless steel 316 L (1.4404)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Titanium		8
Monel 400 (2.4360)		9
PVC (10 bar / 40°C max.)		C
PVDF (10 bar / 80°C max.)		D
PPH (10 bar / 60°C max.)		E
PTFE (10 bar / 60°C max.)		F
<b>Bottom housing connection</b>	<b>10' digit</b>	
<b>Male thread (for D101-D108-D201-D301):</b>		
G 1/2		3
1/2 NPT		6
G 3/8		J
3/8 NPT		S
G 1/4		2
1/4 NPT		5
Contact us for other male threads		
<b>Female thread (for D111-D118-D218-D211-D218-D311-D121):</b>		
G 1/2		L
1/2 NPT		N
3/8 NPT		W
G 1/4		H
1/4 NPT		8
Contact us for other female threads		
<b>Lower housing coating (4)</b>	<b>11' digit</b>	
No coating		0
PTFE 0.02mm		1
PTFE 2mm (5)		3
HALAR 0.2mm		4



### Technical limits for construction

- (1) Except for tantalum diaphragm
- (2) Impossible for measurement of vacuum and absolute pressure
- (3) Only stainless steel and Hastelloy welded diaphragms
- (4) The coatings can only be produced on bottom housings with male cylindrical thread
- (5) Max. pressure 10 bar. Max. temperature 100°C.

# Codification

## Standard chemical seal with clamped diaphragm and clamping ring

		Dxxxxxxxx
<b>Type of chemical seal</b>	<b>1'...4' digit</b>	
D102-D112-D202-D212-D302-D312		Dxxx
<b>Top housing material</b>	<b>5' digit</b>	
Steel		1
Stainless steel 316L (1.4404)		2
<b>Top housing thread</b>	<b>6' digit</b>	
G 1/2 female		L
G 1/4 female		H
1/2 NPT female		N
1/4 NPT female		8
<b>Diaphragm material</b>	<b>7' digit</b>	
Stainless steel 316L (1.4435)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Tantalum		7
Titanium		8
Monel 400 (2.4360)		9
<b>Diaphragm coating</b>	<b>8' digit</b>	
No coating		0
PTFE 0.02mm (1)		1
HALAR 0.2mm (1)		4
Adhesive PTFE lining 0.25mm (2)		2
<b>Bottom housing and ring material</b>	<b>9' digit</b>	
Steel		1
Stainless steel 316 L (1.4404)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Titanium		8
Monel 400 (2.4360)		9
<b>Bottom housing connection</b>	<b>10' digit</b>	
<b>Male thread:</b>		
G 1/2		3
1/2 NPT		6
G 3/8		J
3/8 NPT		S
G 1/4		2
1/4 NPT		5
Contact us for other male threads		
<b>Female thread (for D112-D212-D312):</b>		
G 1/2		L
1/2 NPT		N
3/8 NPT		W
G 1/4		H
1/4 NPT		8
Contact us for other female threads		
<b>Lower housing and ring coating (4)</b>	<b>11' digit</b>	
No coating		0
PTFE 0.02mm		1
PTFE 2mm (5)		3
HALAR 0.2mm		4

## Standard chemical seal with cleaning ring and clamped or welded diaphragm

		Dxxxxxxxx
<b>Type of chemical seal</b>	<b>1'...4' digit</b>	
D103-D104-D113-D114-D203-D204-D209-D213-D214-D219-D303-D304-D313-314		Dxxx
<b>Top housing materials</b>	<b>5' digit</b>	
Steel		1
Stainless steel 316L (1.4404)		2
<b>Top housing thread</b>	<b>6' digit</b>	
G 1/2 female		L
G 1/4 female		H
1/2 NPTfemale		N
1/4 NPT female		8
<b>Diaphragm material</b>	<b>7' digit</b>	
Stainless steel 316L (1.4435)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Tantalum		7
Titanium (only for D103-D113-D203-D213-D303-D313)		8
Monel 400 (2.4360)		9
<b>Diaphragm coating</b>	<b>8' digit</b>	
No coating		0
PTFE 0.02mm (1)		1
HALAR 0.2mm (1)		4
Adhesive PTFE lining 0.25mm (2)		2
GOLD 15 µ (3)		7
<b>Bottom housing and cleaning ring material (6)</b>	<b>9' digit</b>	
Steel		1
Stainless steel 316 L (1.4404)		2
Uranus B6 (1.4539)		3
Hastelloy B (2.4617)		5
Hastelloy C276 (2.4819)		6
Titanium		8
Monel 400 (2.4360)		9
<b>Bottom housing connection</b>	<b>10' digit</b>	
<b>Male thread:</b>		
G 1/2		3
1/2 NPT		6
G 3/8		J
3/8 NPT		S
G 1/4		2
1/4 NPT		5
Contact us for other male threads		
<b>Female thread (for D113-D114-D213-D214-D219-D313-D314):</b>		
G 1/2		L
1/2 NPT		N
3/8 NPT		W
G 1/4		H
1/4 NPT		8
Contact us for other female threads		
<b>Lower housing and ring coating (7)</b>	<b>11' digit</b>	
No coating		0

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### Technical limits for construction

- (1) Except for tantalum diaphragm
- (2) Impossible for measurement of vacuum and absolute pressure
- (3) Only stainless steel and Hastelloy welded diaphragms
- (4) The coatings can only be produced on bottom housings with male cylindrical thread
- (5) Max. pressure 10 bar. Max. temperature 100°C.
- (6) The cleaning rings are fitted as standard with one 1/8 NPT plug. Option: 1/4 NPT
- (7) No coating possible