

Flanged chemical seals series D400-D600

The D4x5 and D6xx series chemical seals are particularly recommended for measuring low pressure with a small diameter flange connection.

They complete the D820 flanged chemical seal range with flush diaphragm.

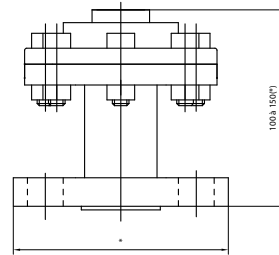


Characteristics

Top housing	Stainless steel 1.4404 / 316L G1/2 or 1/2NPT connection
Diaphragm	Stainless steel 1.4435 / 316L
Sealing	PTFE seal
Lower part	<ul style="list-style-type: none"> Flange connections as per the standards EN 1092-1 / ISO PN / DIN EN 1759-1, ASME B16.5. D4x5 flange, stainless steel 1.4404 with threaded hole. D6xx lower part, BRD type with flat flange from stainless steel 1.4404
Top housing/lower part assembly	stainless steel screws and flange
Operating pressure	according to the table on page 2
Temperature	-60 °C to +200 °C
Options	<ul style="list-style-type: none"> Diaphragm and flange (lower part): see table for other materials Diaphragm and/or flange coating Flange as per other standards (JIS, BS.....)

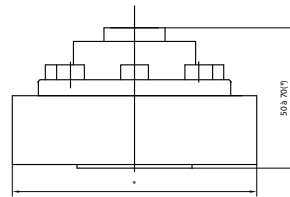
Dimensions

Type D611 - D618 - D621 - D631



Type	D	H
D611	85	101
D618	85	101
D621	85	101
D631	120	106

Type D415 - D425 - D435



Type	D
D415	85
D425	85
D435	120

Selection table

Range of minimum measurements as a function of DN (1)

DN	NSP	Meas. Range bar								
		Absolute(2)	0...0,16	0...0,4	0...0,6	0...1	0...1,6	0...2,5	0...4	0...6
10	3/8"	D631 - D435				D621 - D425				
15	1/2"	D631 - D435				D621 - D425				
20	3/4"	D631 - D435				D621 - D425				
25	1"	D631 - D435				D621 - D425				
32	1" 1/4	D631 - D435				D621 - D425				
40	1" 1/2	D631 - D435				D621 - D425				
50	2"	D631 - D435				D621 - D425				
65	2" 1/2	D631 - D435				D621 - D425				

DN	NSP	Meas. Range bar								
		0...10	0...16	0...25	0...40	0...60	0...100	0...160	0...250	0...400
10	3/8"	D621 - D425				D611 - D415				
15	1/2"	D621 - D425 with coating				D611 - D415				
20	3/4"	D621 - D425 with coating				D611 - D415				
25	1"	D621 - D425 with coating				D611 - D415				

(1) indicative measurement ranges. Chemical seal mounted on the manometer DN100

Temperature of fluid: -20 °C ≤ T ≤ 100 °C

Ambient temperature: -10 °C ≤ T ≤ 50 °C

Other operating conditions: see our "Chemical seal guide"

(2) absolute pressure ≥ 160 mbar abs or 0 -1 bar vacuum scale



Maximum allowed pressure

The max allowed pressure depends on :

- the PN or class of flange
- the flange material
- the standardised pressure/temperature (Rating) ratio of the flange
- the max allowed pressure for the chemical seal at 20 °C

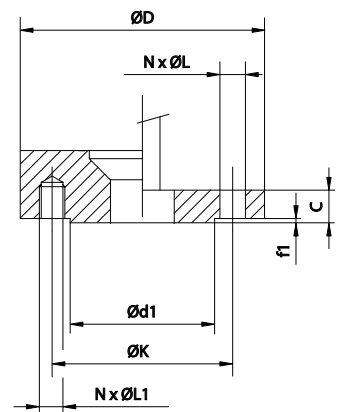
Type		Max. pressure
D631	D435	25 bar
D621	D425	40 bar
D611	D415	160 bar
D618		400 bar

Flange selection

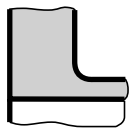

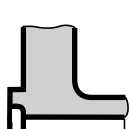
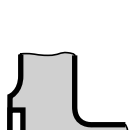
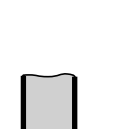
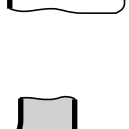
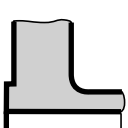
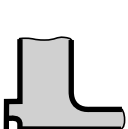
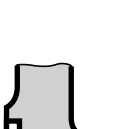
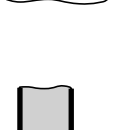
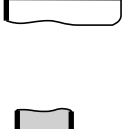
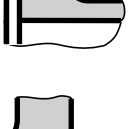
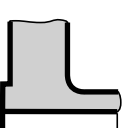
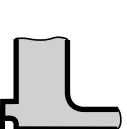

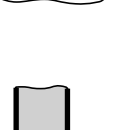
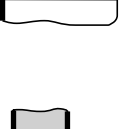
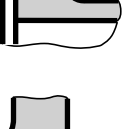
ISO PN			PN16	PN20	PN25	PN40	PN50		PN100	PN150		PN250		PN420	
EN1092-1 / DIN2501		PN10	PN16		PN25	PN40		PN63	PN100		PN160		PN400		
ANSI B16-5 / EN1759-1				150 #			300 #		600 #	900 #		1500 #		2500 #	
DN	NPS	Type													
10		D631/D435	X	X		X									
		D621/D425	X	X		X	X								
15	1/2"	D631/D435	X	X	X	X									
		D621/D425	X	X	X	X	X								
		D611/D415						X	X	X	X	X			
		D618										X	X	X	
20	3/4"	D631/D435	X	X	X	X									
		D621/D425	X	X	X	X	X								
		D611/D415						X	X	X	X	X			
		D618										X	X	X	
25	1"	D631/D435	X	X	X	X									
		D621/D425	X	X	X	X	X								
		D611/D415						X	X	X	X	X			
		D618										X	X	X	
32	1 1/4"	D631/D435	X	X	X	X									
		D621/D425	X	X	X	X	X								
40	1 1/2"	D631/D435	X	X	X	X									
		D621/D425	X	X	X	X	X								
50	2"	D631/D435	X	X	X	X									
65	2 1/2"	D631/D435	X	X	X	X									

Flange dimensions

EN or ANSI B16-5 FLANGES														
ISO	code	ANSI	code	PN	class	ØD	C	ØK	ØL	ØL1 ISO	ØL1 ANSI	N	f1	Ød1
10	A			10/40		90	14	60	14	M12		4	2	40
15	C	1/2"	2	10/40		95	16	65	14	M12		4	2	45
				20	150	89	14.5	60.3	15.8	M14	1/2 UNC	4	1.6	34.9
				50	300	95	16	66.7	15.8	M14	1/2 UNC	4	1.6	34.9
				100	600	95	20.6	66.7	15.8	M14	1/2 UNC	4	6.4	34.9
20	D	3/4"	3	10/40		105	16	75	14	M12		4	2	58
				20	150	99	15.5	69.8	15.8	M14	1/2 UNC	4	1.6	42.9
				50	300	117	15.7	82.6	19	M16	5/8 UNC	4	1.6	42.9
				100	600	117	22.1	82.6	19	M16	5/8 UNC	4	6.4	42.9
25	E	1"	4	10/40		115	16	85	14	M12		4	2	68
				20	150	108	16	79.4	15.8	M14	1/2 UNC	4	1.6	50.8
				50	300	124	17.5	88.9	19	M16	5/8 UNC	4	1.6	50.8
				100	600	124	23.9	88.9	19	M16	5/8 UNC	4	6.4	50.8
40	G	1 1/2"	6	10/40		150	18	110	18	M16		4	3	88
				20	150	127	17.5	98.4	15.8	M14	1/2 UNC	4	1.6	73
50	H	2"	7	10/16		165	18	125	18	M16		4	3	102
				20	150	152	19.1	120.6	19	M16	5/8 UNC	4	1.6	92.1
				25/40		165	20	125	18	M16		4	3	102
65	J	2 1/2"	8	10/16		185	20	145	18	M16		8	3	122
				20	150	178	22.2	139.7	19	M16	5/8 UNC	4		
				25/40		185	22	145	18	M16		8	3	122



Flange face definition tables

ISO / ANSI / EN1092-1 FLANGES		
ISO PN 6-10-16-25 and 40 EN1092 -1 PN 10 to 100	ISO PN 20 and 50 EN1759-1 / ANSI Class 150/300	ISO PN 100-150-250-420 EN1759-1 / ANSI Class 600/900/1500/2500
<p>Codes**</p> <p>A </p> <p>Flat Face FF</p> <p>B </p> <p>Raised Face RF</p> <p>C </p> <p>Male tongue</p> <p>D </p> <p>Female groove</p> <p>E </p> <p>Male spigot</p> <p>F </p> <p>Female spigot</p>	<p>Codes**</p> <p>G </p> <p>Raised Face (RF de 1,6)</p> <p>H I large small </p> <p>Male tongue</p> <p>K L large small </p> <p>Female groove</p> <p>M N large small </p> <p>Male spigot</p> <p>O P large small </p> <p>Female spigot</p> <p>Q </p> <p>Ring joint face (RTJ)</p>	<p>Codes**</p> <p>R </p> <p>Raised Face (RF de 6,4)</p> <p>H I large small </p> <p>Male tongue</p> <p>K L large small </p> <p>Female groove</p> <p>M N large small </p> <p>Male spigot</p> <p>O P large small </p> <p>Female spigot</p> <p>Q </p> <p>Ring joint face (RTJ)</p>

State of the sealing surface

Finishing:
standard machining as per Standard

Other finishes on request:

- Stock Finish
- Spiral Serrated
- Concentric Serrated
- Smooth Finish
- Cold Water Finish

Coding

		Dxxxxxxxxxxxx									
Type of diaphragm seal	1' ... 4' digit										
Series D400 and D600		Dxxx									
Top housing material	5' digit										
Stainless steel 316L (1.4404)		2									
Top housing female thread	6' digit										
G 1/2 female		L									
G 1/4 female		H									
1/2 NPT female		N									
1/4 NPT female		8									
Diaphragm material	7' digit										
Stainless steel 316L (1.4435)		2									
Uranus B6 (1.4539)		3									
Hastelloy B2 (2.4617)		5									
Hastelloy C276 (2.4819)		6									
Tantalum		7									
Titanium (5)		8									
Monel 400 (2.4360)		9									
Diaphragm coating	8' digit										
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									
Flange standard (4)	9' digit										
ISO PN flange		1									
ANSI B 16-5 flange		2									
DIN 2501 flange		3									
EN1092-1 flange		4									
EN1795-1 flange		6									
PN (4)	10' digit										
ANSI											
Class 150		1									
Class 300		2									
Class 600		3									
Class 900		4									
Class 1500		5									
ISO/EN											
PN6		A									
PN10		C									
PN16		D									
PN20		E									
PN25		F									
PN40		G									
PN50		H									
PN100		J									
PN150		K									
PN250		L									
DN (4)	11' digit										
ANSI (see table on page 3)		x									
ISO/EN (see table on page 3)		x									
Flange face	12' digit										
See table (Definitions of flange faces on page 2)		x									
Bottom part material (housing and flange)	13' digit										
Steel		1									
Stainless steel 316L (1.4404)		2									
Uranus B6 (1.4539)		3									
Hastelloy B6 (2.4617)		5									
Hastelloy C276 (2.4819)		6									
Titanium		8									
Monel 400 (2.4360)		9									
PVC (8)		C									
PVDF (8)		D									
PPH (8)		E									
PTFE (8)		F									
Bottom housing coating (6)	14' digit										
No coating		0									
PTFE 0.02mm		1									
PTFE 2mm (7)		3									
HALAR 0.2mm (9)		4									
TANTALUM 1 mm (only D425) (9)		8									



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) See Flange-Chemical seal compatibility table/measuring range
- (5) Only clamped diaphragm or welded on titanium top housing. Please contact us.
- (6) No coating possible on chemical seals with cleaning ring. Enter code 0.
- (7) PTFE 2 mm can only be produced on:
D425 ; D435
D621 ; D631 DN ≤ 40 (1"1/2)
Flat or raised face flange
Max. pressure 10 bar
Max. temperature 100 °C
- (8) Only series D621-D631
Limits of use:

PVC	≤ 10 bar	40 °C
PPH	≤ 10 bar	60 °C
PTFE	≤ 6 bar	80 °C
PVDF	≤ 16 bar	40 °C
	≤ 10 bar	80 °C

- (9) Flat or raised face flange only