



I Application

The NDL (Non Dead Leg T Valve) diaphragm valves, manually or pneumatically operated, are specially designed for use on aseptic processes in the pharmaceutical industry. The valves are widely used at points of use in the loops of purified water (PW) or water for injections (WFI).

I Operating principle

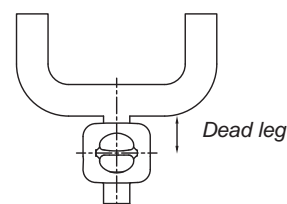
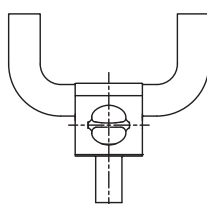
The diaphragm provides the body seal as well as the seat seal. There are no paths to the outside environment and, as such, the valve is suitable for aseptic processes. When the valve is being closed, a pressure pad which supports the diaphragm moves towards the sealing face on the body. As the pressure plate moves, the diaphragm flexes and is forced down onto the seat area in the centre of the body, thus, closing off the flow path through the body.

The valve can be actuated either manually or pneumatically and controlled by control units and solenoid valves.

A standard diaphragm valve is used to shut the flow of a line, an NDL type valve shuts only one outlet of the main line.

I Design and features

Comparing with a traditional diaphragm valve, the dead leg of an NDL valve is reduced to a minimum due to the design of the valve, and the pharmaceutical normatives like ASME BPE prioritise this condition.



Broad flexible range based upon a modular design concept with key components being common with other valves.

Autoclavable stainless steel bonnets and handles.

Handle with stroke limiter.

Hygienic design of the handles.

The valve body is machined out of a stainless steel block.

Completely drainable design.

Traceability of components.

I Technical specifications

Materials:

Parts in contact with the product

Stainless steel AISI 316L (1.4404)

Other stainless steel parts

Stainless steel AISI 304 (1.4301)

Plastic parts

PP + 30 GF

Diaphragm

EPDM (according to FDA 177.2600 and USP Class VI)

Surface finish:

Internal

$Ra \leq 0,5 \mu m$

External

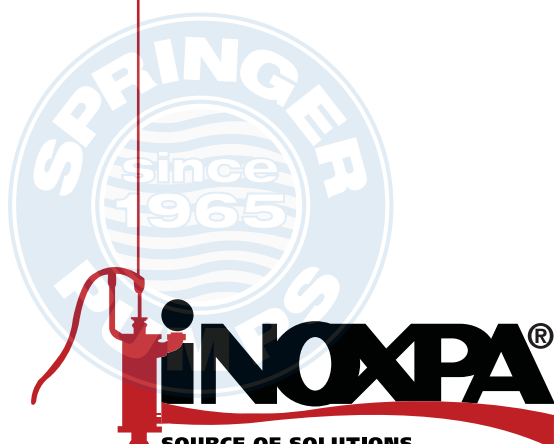
Bright polish

Available sizes

DN $\frac{3}{4}$ " - DN 3"

Connections

Clamp OD / Weld



I Technical specifications

Operating limits:

Max. working temperature (St.St. actuator)	-20 °C to +90 °C (EPDM)	-4°F to +194°F
	+140 °C (SIP, max. 30 min)	284°F
Max. working pressure (according to the model)	10 bar	145 PSI
Compressed air pressure	6-8 bar	87-116 PSI

I Options

Diaphragm: FPM, VMQ (according to FDA 177.2600 and USP class VI)

and PTFE / EPDM separate (according to FDA 177.2600).

Stainless steel bonnet with plastic or stainless steel handle.

Pneumatic actuator with stroke limiter.

Pneumatic actuator with external switch.

Control box with switches and solenoid valves.

Materials and roughness certificates.

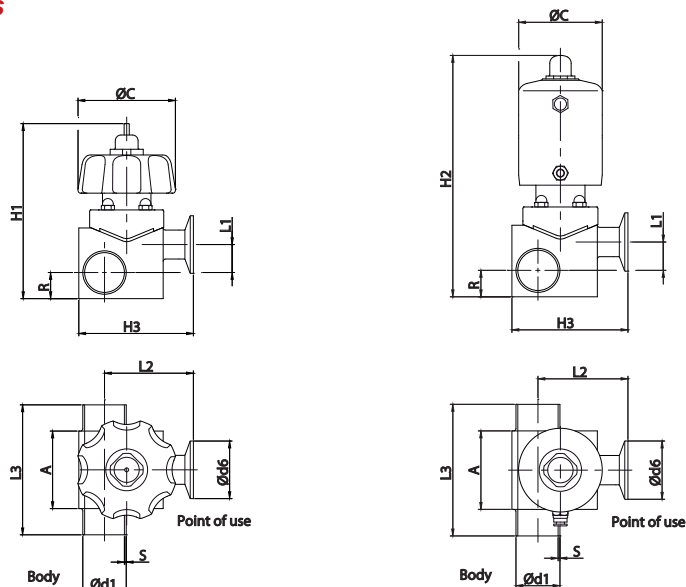
I Pressure range

Size	DN	Handle		Actuator	
	Point of use	[bar]	[PSI]	[bar]	[PSI]
N°1	½"	10	145	8	116
N°2	¾"	10	145	8	116
	1"				
N°3	1½"	10	145	8	116
N°4	2"	6	87	6	87

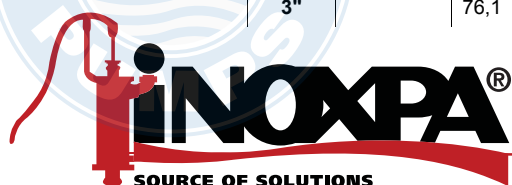


The information is for guidance only. We reserve the right to modify any material or feature without notice in advance.
Photos are not binding. For further information, please, consult our web site. www.inoxpa.com

I Dimensions



Size	DN		Ø d1	S	Ø d6	A	H1	H2	H3	Ø C	R	L1	L2	L3
	Body	Point of use												
N°1	1/2"	1/2"	12,7	1,65	25,4	38	93	149	70,5	60	10,5	13	53	86
	3/4"		19		25,4		98	154	70		12,5	16	56	
	1"		25,4		50,5		104	160	76,5		15,5	19	60	
	1 1/2"		38,1		50,5		118	174	88,5		22,5	26	66	
	2"		50,8		64		131	187	92		29,5	32	72	
N°2	3/4"	3/4"	19	1,65	25,4	68	133	189	91	89	13,5	14	68	114
	1"		25,4		50,5		139	195	91		15	18	71	
	1 1/2"		38,1		50,5		154	210	100		23	25	77,5	
	2"		50,8		64		167	223	114		30	30	84	
	1"	1"	25,4	1,65	50,5	68	139	195	90	89	15	18	71	114
	1 1/2"		38,1		50,5		154	210	100		23	25	78	
	2"		50,8		64		167	223	114		30	30,5	84	
	2 1/2"		63,5		77,5		179	235	127		37	35,5	90	
N°3	3"	1 1/2"	76,1	1,65	91	95	195	251	140	89	46	43	97	140
	1 1/2"		38,1		50,5		184	292	126		25	24	102	
	2"		50,8		64		195	303	140		30	30	108	
	2 1/2"		63,5		77,5		208	317	151,5		36,5	37	115	
N°4	3"	2"	76,1	1,65	91	130	224	332	164	134	46	43	121	176
	2"		50,8		64		252	333	155		29	35	123	
	2 1/2"		63,5		77,5		275	421	167		47	41	129	
	3"		76,1		91		285	430	177,5		49	48	136	



The information is for guidance only. We reserve the right to modify any material or feature without notice in advance.
Photos are not binding. For further information, please, consult our web site. www.inoxpa.com