

CHAPTER 8 ASEPTIC VALVE RANGE FOR PHARMA AND BIO PROCESSING

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PROCESS VALVES

Rieger Aseptic Valves fulfill the high requirements of pharma and bioprocessing plants. Valve bodies are either machined from solid bar. Welded constructions with T-pieces are also available.



TANK OUTLET VALVES

Rieger Aseptic Tank Outlet Valves are especially designed for applications in pharma and bioprocessing applications. The very compact design allows an easy integration in aseptic production lines or underneath tanks and fermenters. The PTFE bellows guarantee hermetic sealing against the environment.

ACTUATORS

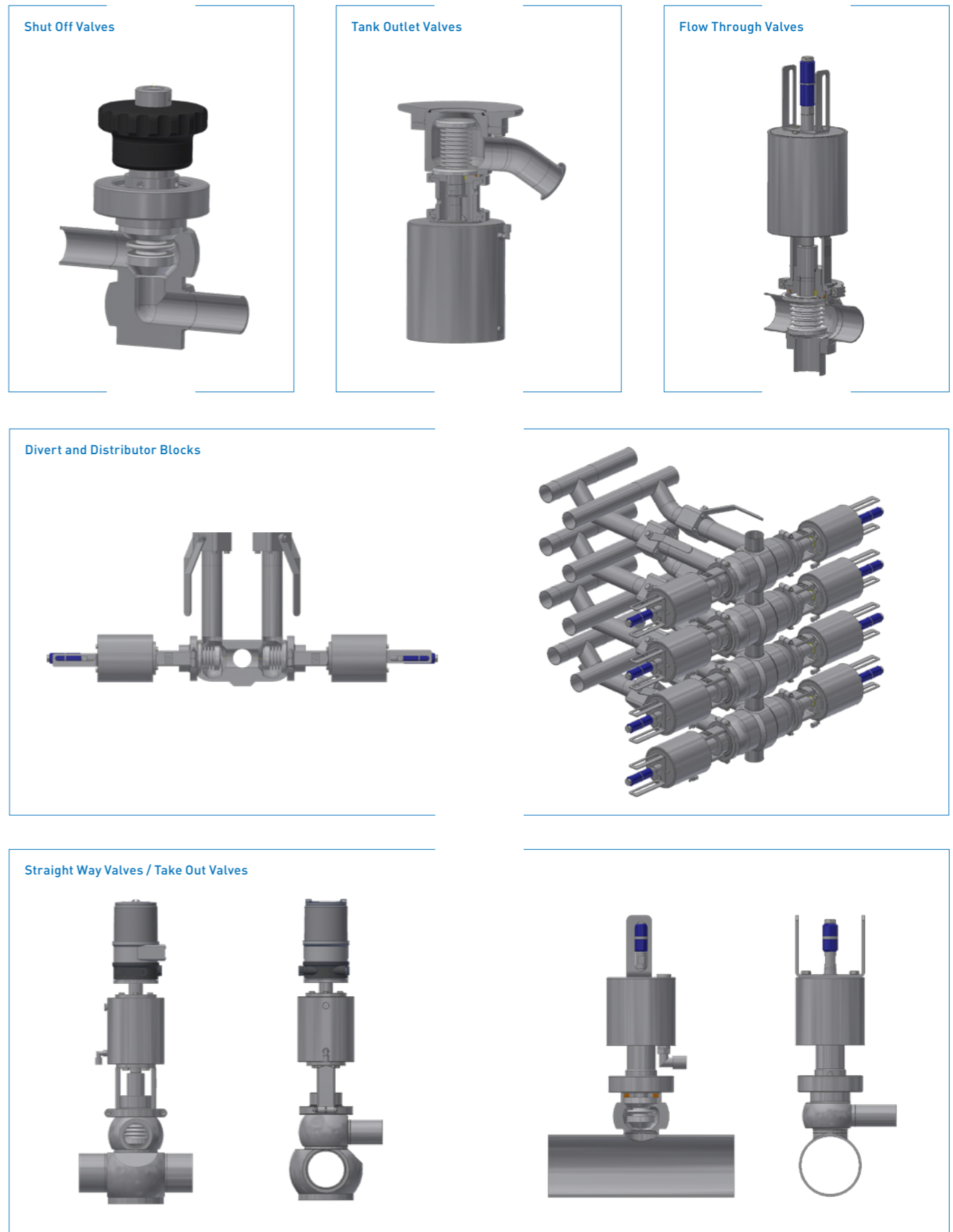
/ pneumatic actuators are available in normally closed, normally open version or air/air
/ manual actuators with hand wheel

PTFE BELLOW

/ complies with FDA
/ USP Class VI
/ ATEX-classification (please see separate checklist)

APPLICATIONS AND AREAS OF USE

/ WFI and PW
/ Injection Solutions
/ Fermentations
/ Vaccines
/ Filling Machines





ADVANTAGES OF RIEGER ASEPTIC VALVES

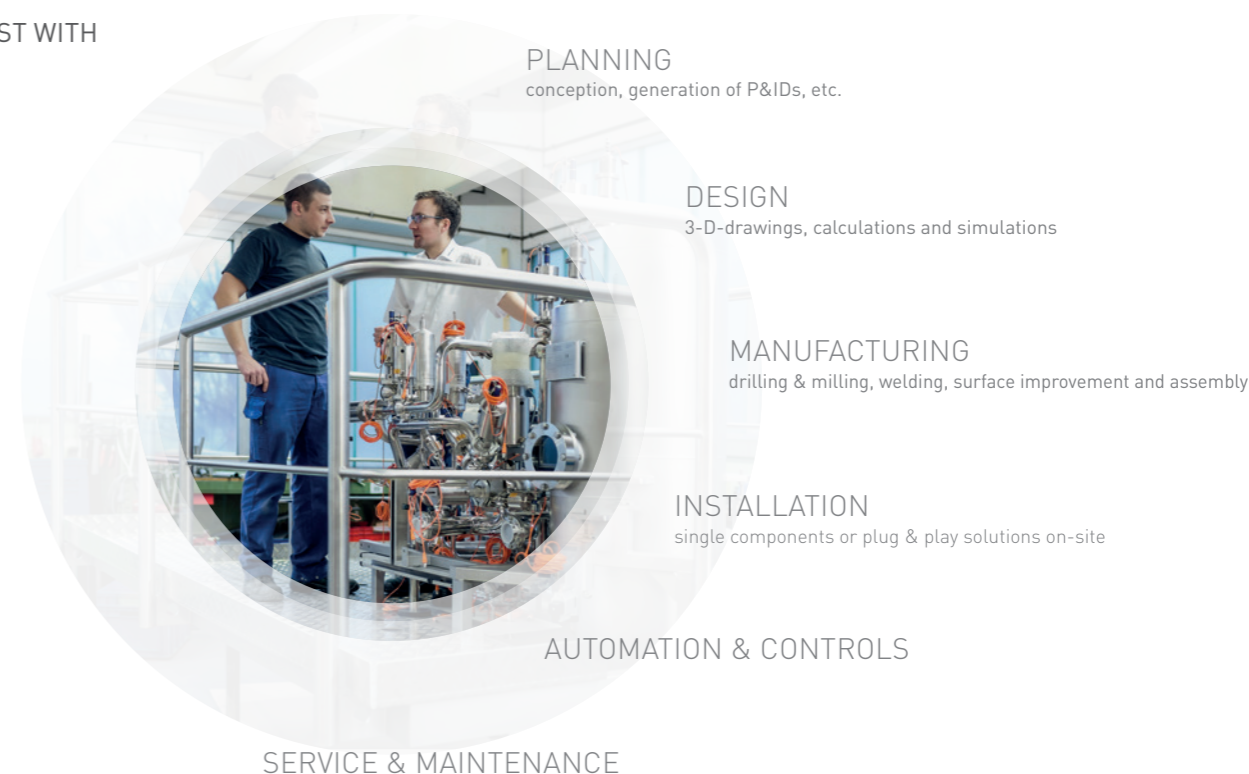
- / PTFE bellows FDA conformance, meets 3-A standards and EG 1935/2004
- / dead space free design
- / high durability due to improved pressure stability
- / folds remain separated in open valve position allowing optimum cleanability
- / low adhesion on PTFE bellows
- / valves available with DIN, ISO and OD tube sizes



RIEGER AS A SOLUTION PROVIDER

Rieger manufactures not only valves, but also complex valve systems and units. This is done in close collaboration with renowned OEMs and plant manufacturers or directly with end customers. These aseptic or hygienic systems are used in plants of the brewery and beverage industry, in dairies and in the food and pharmaceutical industry worldwide.

WE CAN ASSIST WITH



FROM STANDARD TO THE CUSTOMIZED SOLUTION — HOW WE DO IT

1. YOUR CHALLENGE

Your challenge in the production process is the start for our collaboration.

2. INITIAL INTERVIEW

On-site in your facility we establish a common understanding of your project plan and exchange technical information about our scope of supply.

3. REALITY CHECK

Sometimes the opportunities seem to be unlimited. But does a customized solution always make sense? Together with you we define the frame conditions and prioritise the timeline, the scope of supply and costs for your project.

4. SOLUTION FINDING PROCESS

Our design drafts will be discussed together with you as a common basis. Together with you we work iteratively during the development of the solution.

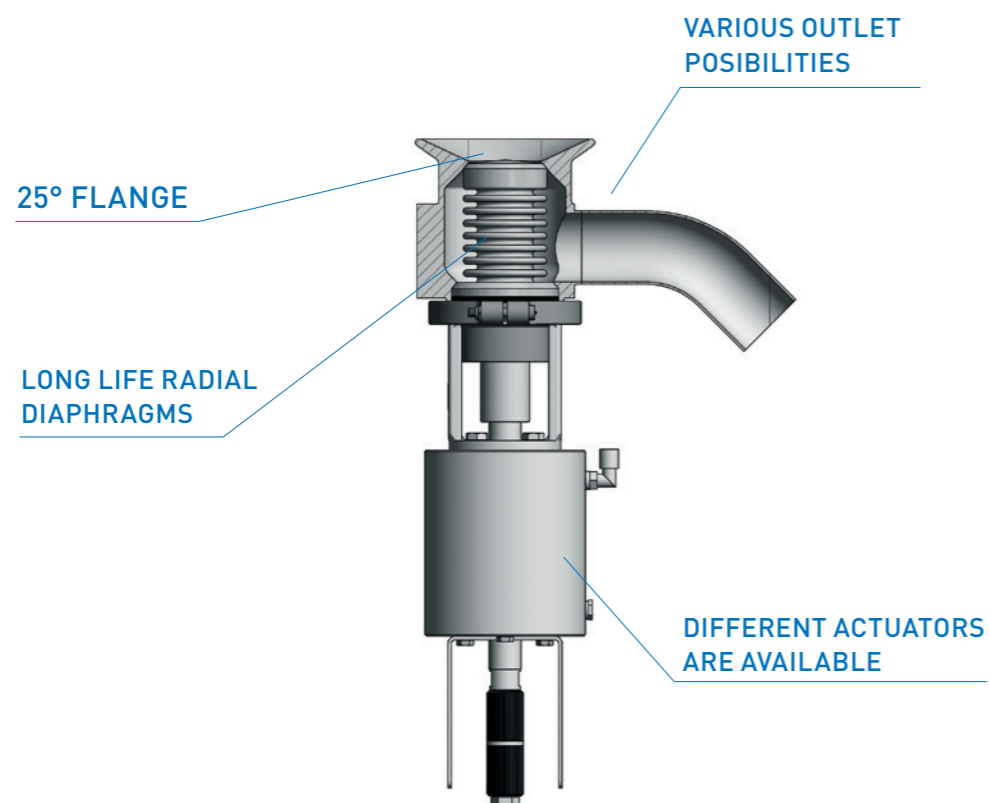
4. CALCULATION AND PLANNING

With finalization of the requirement specification our project engineers launch the planning internally including calculations and correspondence with suppliers. As a result you'll receive our quotation for your customized solution.

6. EXECUTION

The project is launched with a kick-off meeting and the communication with you is only done via one single point of contact of our team. We are happy to assist you with the installation or assembly on site or by conducting maintenance on your equipment.

BASIC CONFIGURATION



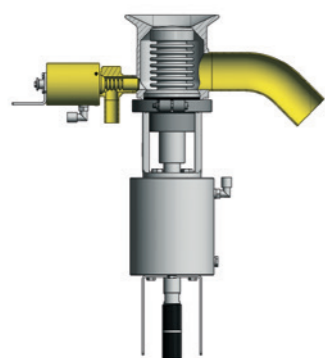
Rieger Aseptic Tank Outlet Valves are especially designed for applications in pharma and bioprocessing applications, but can also be used in other aseptic applications as well.

The well-proven PTFE-bellow technology along with the very compact design allow best cleanability and full drainability of the valve. The valves convince through an easy integration in aseptic production lines or underneath tanks and fermenters.

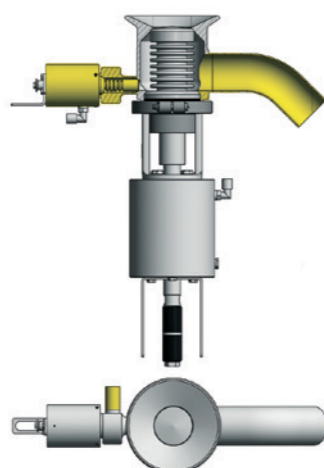
The PTFE bellows guarantee hermetic sealing against the environment.

ADAPPTIONS

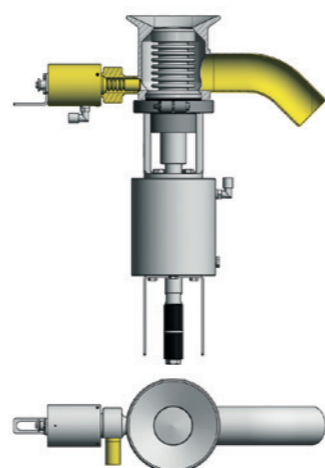
Tank Outlet Valves with flush/steam valve downwards



Tank Outlet Valves with flush/steam valve to the back



Tank Outlet Valves with flush/steam valve to the front



CONSTRUCTION OF THE VALVE

- / compact valve body
- / optional with attached flush/steam valve
- / with 25° angle on flange for better drainability or with 7° angle on flange for applications with mixers

EFFICIENCY

- / long life-time of PTFE bellow
- / low pressure drop
- / no dome and no sump in valve due to ball-shaped valve body
- / valve completely drainable

ABSOLUTE PRODUCT SAFETY

- / bodies made of solid bar provide higher product safety
- / technically vacuum safe
- / folds of PTFE-bellows stay open for best cleanability
- / flexible use for nearly every medium
- / one-piece sealing in contact with product
- / hermetic separation between process and environment

SERVICEABILITY

- / exchange of gaskets without special tools
- / actuators completely maintainable
- / rebuild of actuators from spring to close (NC) to spring to open (NO) and vice versa possible
- / low requirement of air supply
- / insert of valve can be completely disassembled to the bottom

MATERIAL

- / in contact with product 1.4404/AISI 316L
- / optional 1.4435/AISI 316L
- / not in contact with product 1.4301/AISI 304
- / all Valves are available in special alloys, such as Hastelloy® C-22, 1.4539/904L, 1.4529, AL-6XN® and others.

GASKETS

- / PTFE bellows PTFE TFM 1705
- / metal bellows 1.4571/1.4404
- / O-rings/gaskets EPDM or FKM (other materials on request)

TEMPERATURES

- / maximum continuous operation 130 °C* (EPDM) 121 °C* (PTFE)
- / steam sterilization 150 °C* (EPDM) 135 °C* short-time approx. 20 min (PTFE)

PRESSURE

- / closing pressure 6 bar standard, 10 bar and higher pressures available upon request
- / air pressure min. 6 bar / max. 10 bar

SURFACES

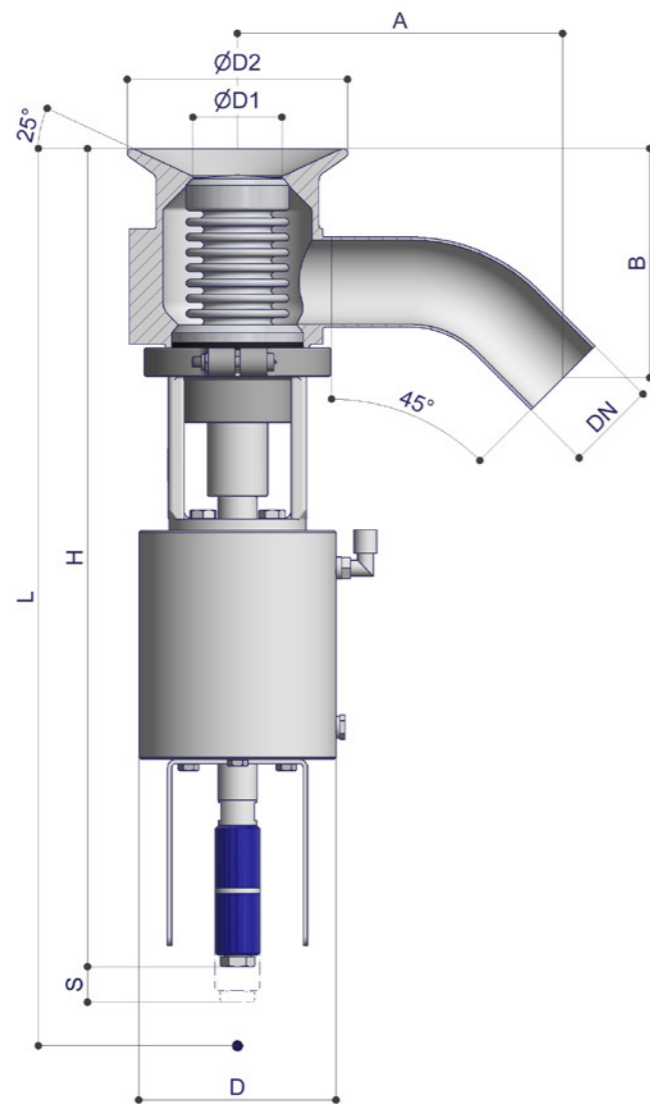
- / in contact with product Ra ≤ 0,8 µm [32 µin] mechanically polished
- / not in contact with product Ra ≤ 1,6 µm [63 µin] mechanically polished
- / higher quality surface finishes and e-polishing available upon request

CONNECTIONS STANDARD-PIPE CLASSES

- / DIN 11850-R2 (DIN 11866-A)
- / O.D.-Tube (DIN 11866-C)
- / DIN EN ISO 1127 (DIN 11866-B)

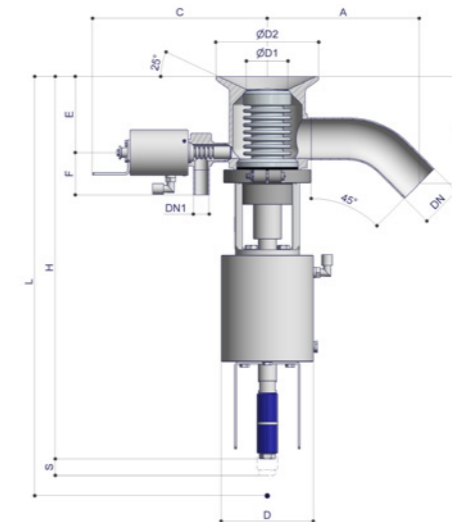
* dependent upon operating conditions

Tank Outlet Valves without flush/steam valve
with 25° angle on flange



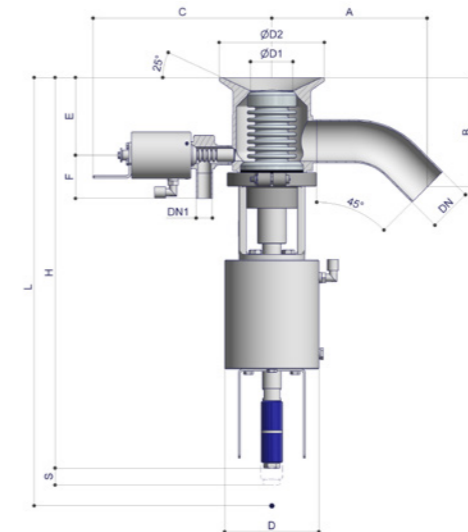
DN	A	B	D	D1	D2	H	L	S	kg	Reference Number	Price
1"	132	99	67	23	90	244	320	10	3,5	42710.2001.05.0024.32	on request
1 1/2"	152	113	88	35	105	381	474	12,5	7,5	42710.2001.05.0026.32	on request
2"	183	129	111	50	124	451	556	15,5	14	42710.2001.05.0027.32	on request
2 1/2"	202	149	132	66	149	509	632	21,5	18	42710.2001.05.0028.32	on request
3"	224	172	172	81	179	628	773	32	30	42710.2001.05.0029.32	on request

Tank Outlet Valves with flush/steam valve 1/2" downwards
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	1/2"	12,7 x 1,65	132	99	194	67	23	90	63	41	244	320	10	5	42710.2001.05.2224.32	on request
1 1/2"	38,1 x 1,65	1/2"	12,7 x 1,65	152	113	201	88	35	105	78	44	381	474	12,5	8,5	42710.2001.05.2226.32	on request
2"	50,8 x 1,65	1/2"	12,7 x 1,65	183	129	211	111	50	124	91,5	-	451	556	15,5	16	42710.2001.05.2227.32	on request
2 1/2"	63,5 x 1,65	1/2"	12,7 x 1,65	202	149	216	132	66	149	112	-	509	632	21,5	20	42710.2001.05.2228.32	on request
3"	76,2 x 1,65	1/2"	12,7 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2001.05.2229.32	on request

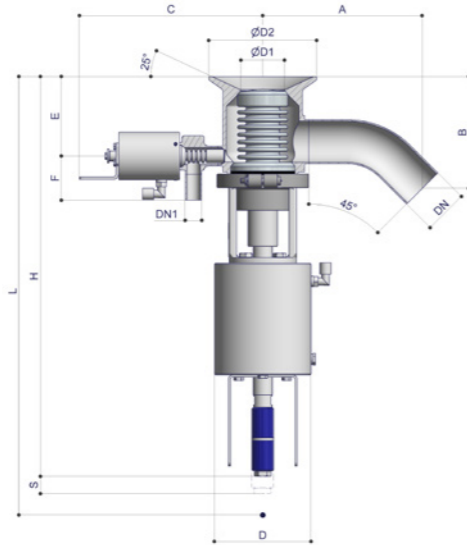
Tank Outlet Valves with flush/steam valve 3/4" downwards
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	3/4"	19,05 x 1,65	132	99	194	67	23	90	63	44	244	320	10	5	42710.2001.05.2324.32	on request
1 1/2"	38,1 x 1,65	3/4"	19,05 x 1,65	152	113	201	88	35	105	78	51	381	474	12,5	9	42710.2001.05.2326.32	on request
2"	50,8 x 1,65	3/4"	19,05 x 1,65	183	129	211	111	50	124	91,5	51	451	556	15,5	15	42710.2001.05.2327.32	on request
2 1/2"	63,5 x 1,65	3/4"	19,05 x 1,65	202	149	216	132	66	149	112	51	509	632	21,5	20	42710.2001.05.2328.32	on request
3"	76,2 x 1,65	3/4"	19,05 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2001.05.2329.32	on request

Tank Outlet Valves with flush/steam valve 1" downwards

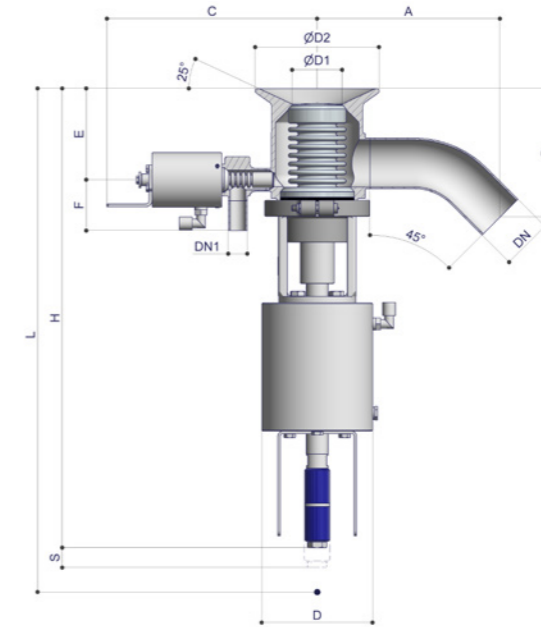
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1 1/2"	38,1 x 1,65	1"	25,4 x 1,65	152	113	268	88	35	105	74	60	381	474	12,5	10	42710.2001.05.2426.32	on request
2"	50,8 x 1,65	1"	25,4 x 1,65	183	129	277	111	50	124	89	70	451	556	15,5	16	42710.2001.05.2427.32	on request
2 1/2"	63,5 x 1,65	1"	25,4 x 1,65	202	149	283	132	66	149	109	60	509	632	21,5	21	42710.2001.05.2428.32	on request
3"	76,2 x 1,65	1"	25,4 x 1,65	224	172	293	172	81	179	134	60	628	773	32	33	42710.2001.05.2429.32	on request

Tank Outlet Valves with flush/steam valve 2" downwards

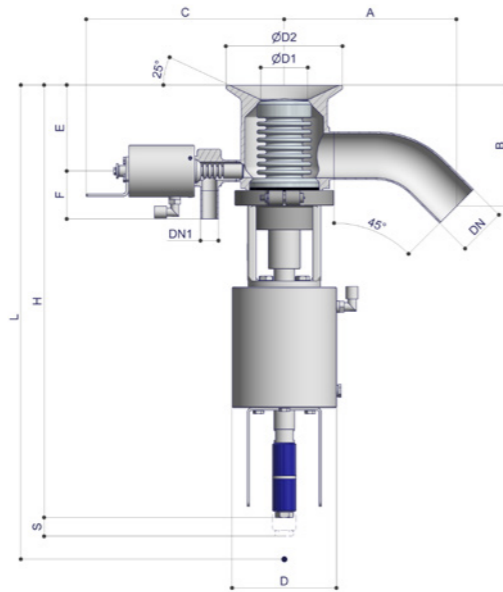
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
3"	76,2 x 1,65	2"	50,8 x 1,65	224	172	435	172	81	179	119	90,5	628	773	32	37	42710.2001.05.2729.32	on request

Tank Outlet Valves with flush/steam valve 1,5" downwards

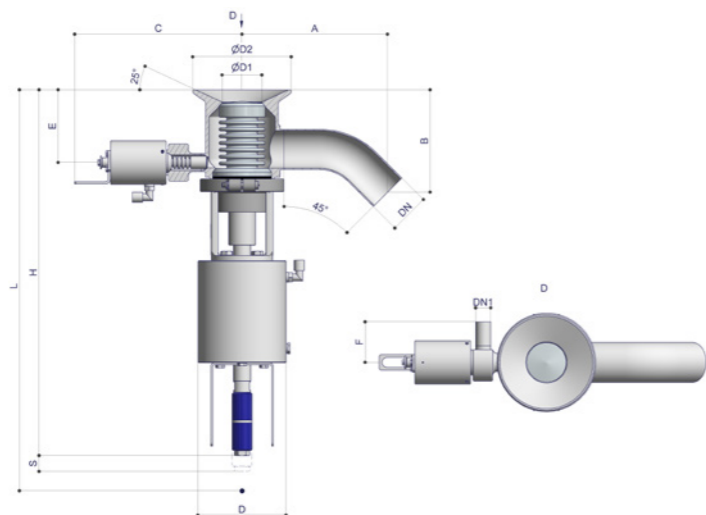
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
2 1/2"	63,5 x 1,65	1 1/2"	38,1 x 1,65	202	149	424	132	66	149	102	72	509	632	21,5	24	42710.2001.05.2628.32	on request
3"	76,2 x 1,65	1 1/2"	38,1 x 1,65	224	172	434	172	81	179	126	72	628	773	32	35	42710.2001.05.2629.32	on request

Tank Outlet Valves with flush/steam valve 1/2" to the back

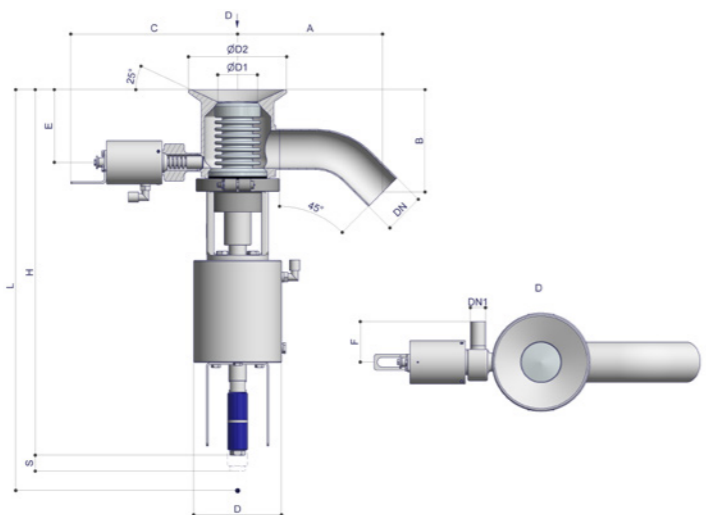
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	1/2"	12,7 x 1,65	132	99	194	67	23	90	63	41	244	320	10	5	42710.2003.05.2224.32	on request
1 1/2"	38,1 x 1,65	1/2"	12,7 x 1,65	152	113	201	88	35	105	78	44	381	474	12,5	8,5	42710.2003.05.2226.32	on request
2"	50,8 x 1,65	1/2"	12,7 x 1,65	183	129	211	111	50	124	91,5	-	451	556	15,5	16	42710.2003.05.2227.32	on request
2 1/2"	63,5 x 1,65	1/2"	12,7 x 1,65	202	149	216	132	66	149	112	-	509	632	21,5	20	42710.2003.05.2228.32	on request
3"	76,2 x 1,65	1/2"	12,7 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2003.05.2229.32	on request

Tank Outlet Valves with flush/steam valve 3/4" to the back

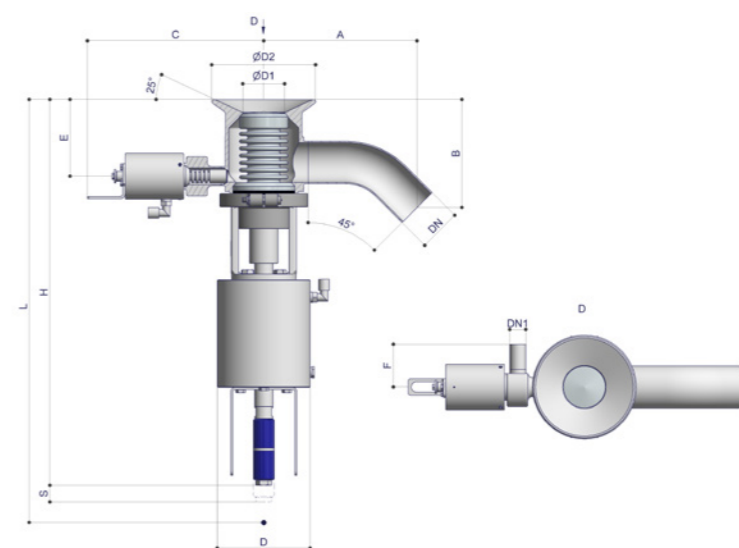
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	3/4"	19,05 x 1,65	132	99	194	67	23	90	63	44	244	320	10	5	42710.2003.05.2324.32	on request
1 1/2"	38,1 x 1,65	3/4"	19,05 x 1,65	152	113	201	88	35	105	78	51	381	474	12,5	9	42710.2003.05.2326.32	on request
2"	50,8 x 1,65	3/4"	19,05 x 1,65	183	129	211	111	50	124	91,5	51	451	556	15,5	15	42710.2003.05.2327.32	on request
2 1/2"	63,5 x 1,65	3/4"	19,05 x 1,65	202	149	216	132	66	149	112	51	509	632	21,5	20	42710.2003.05.2328.32	on request
3"	76,2 x 1,65	3/4"	19,05 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2003.05.2329.32	on request

Tank Outlet Valves with flush/steam valve 1" to the back

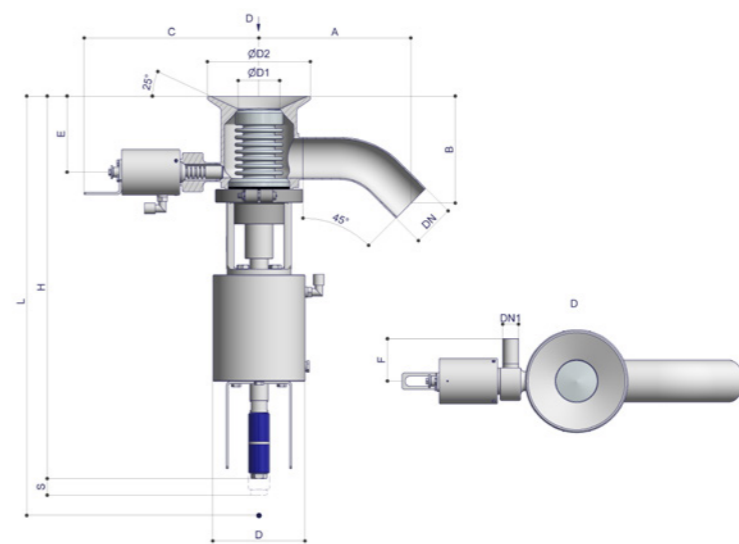
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1 1/2"	38,1 x 1,65	1"	25,4 x 1,65	152	113	268	88	35	105	74	60	381	474	12,5	8,5	42710.2003.05.2426.32	on request
2"	50,8 x 1,65	1"	25,4 x 1,65	183	129	277	111	50	124	89	70	451	556	15,5	16	42710.2003.05.2427.32	on request
2 1/2"	63,5 x 1,65	1"	25,4 x 1,65	202	149	283	132	66	149	109	60	509	632	21,5	20	42710.2003.05.2428.32	on request
3"	76,2 x 1,65	1"	25,4 x 1,65	224	172	293	172	81	179	134	60	628	773	32	-	42710.2003.05.2429.32	on request

Tank Outlet Valves with flush/steam valve 1,5" to the back

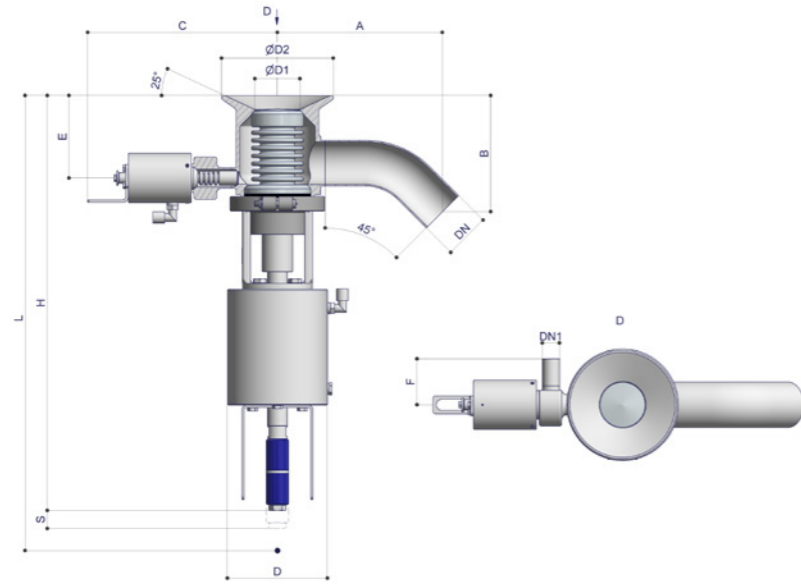
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
2 1/2"	63,5 x 1,65	1 1/2"	38,1 x 1,65	202	149	424	132	66	149	102	72	509	632	21,5	24	42710.2003.05.2628.32	on request
3"	76,2 x 1,65	1 1/2"	38,1 x 1,65	224	172	434	172	81	179	126	72	628	773	32	35	42710.2003.05.2629.32	on request

Tank Outlet Valves with flush/steam valve 2" to the back

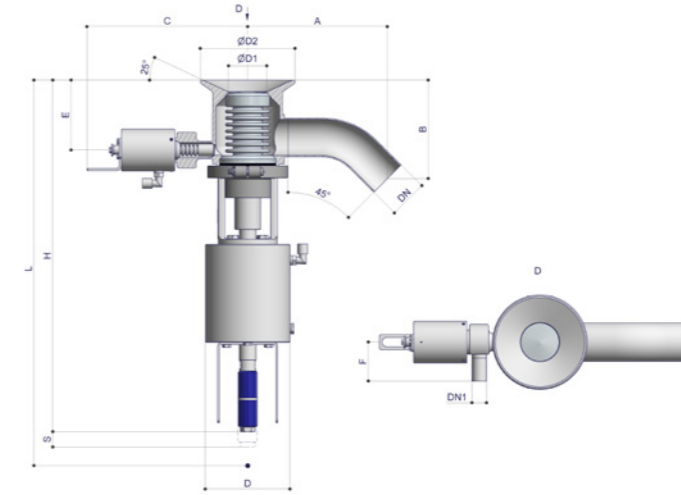
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
3"	76,2 x 1,65	2"	50,8 x 1,65	224	172	435	172	81	179	119	90,5	628	773	32	37	42710.2003.05.2729.32	on request

Tank Outlet Valves with flush/steam valve 1/2" to the front

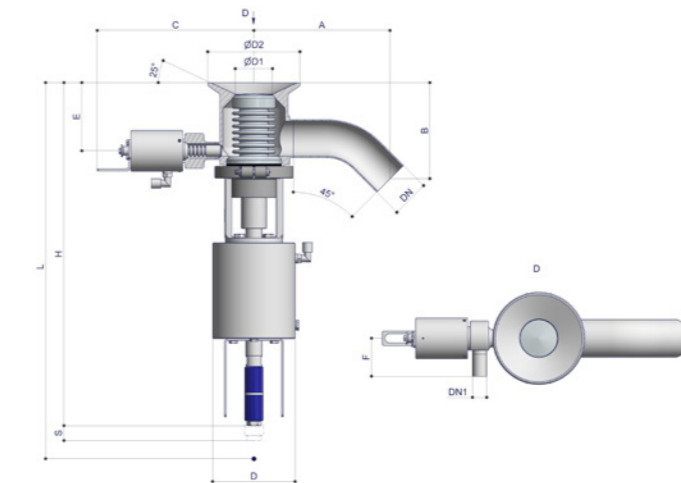
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	1/2"	12,7 x 1,65	132	99	194	67	23	90	63	41	244	320	10	5	42710.2004.05.2224.32	on request
1 1/2"	38,1 x 1,65	1/2"	12,7 x 1,65	152	113	201	88	35	105	78	44	381	474	12,5	8,5	42710.2004.05.2226.32	on request
2"	50,8 x 1,65	1/2"	12,7 x 1,65	183	129	211	111	50	124	91,5	-	451	556	15,5	16	42710.2004.05.2227.32	on request
2 1/2"	63,5 x 1,65	1/2"	12,7 x 1,65	202	149	216	132	66	149	112	-	509	632	21,5	20	42710.2004.05.2228.32	on request
3"	76,2 x 1,65	1/2"	12,7 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2004.05.2229.32	on request

Tank Outlet Valves with flush/steam valve 3/4" to the front

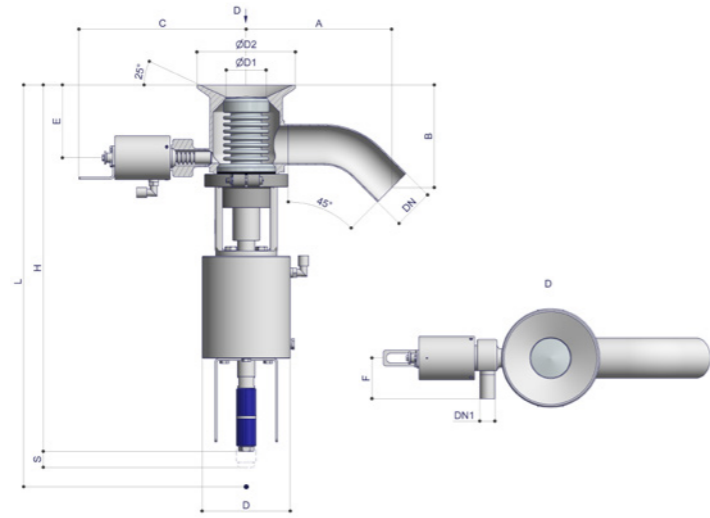
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
1"	25,4 x 1,65	3/4"	19,05 x 1,65	132	99	194	67	23	90	63	44	244	320	10	5	42710.2004.05.2324.32	on request
1 1/2"	38,1 x 1,65	3/4"	19,05 x 1,65	152	113	201	88	35	105	78	51	381	474	12,5	9	42710.2004.05.2326.32	on request
2"	50,8 x 1,65	3/4"	19,05 x 1,65	183	129	211	111	50	124	91,5	51	451	556	15,5	15	42710.2004.05.2327.32	on request
2 1/2"	63,5 x 1,65	3/4"	19,05 x 1,65	202	149	216	132	66	149	112	51	509	632	21,5	20	42710.2004.05.2328.32	on request
3"	76,2 x 1,65	3/4"	19,05 x 1,65	224	172	-	172	81	179	-	-	628	773	32	-	42710.2004.05.2329.32	on request

Tank Outlet Valves with flush/steam valve 1" to the front

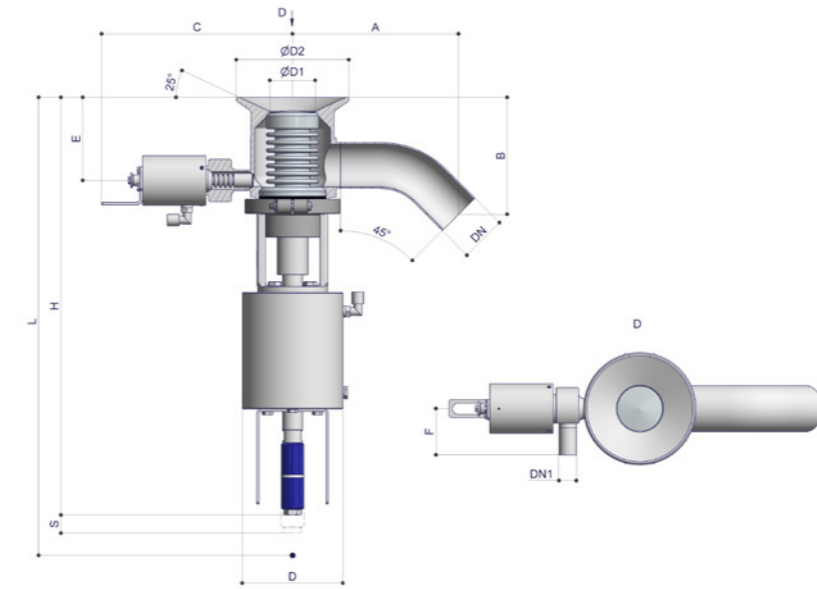
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
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2"	50,8 x 1,65	1"	25,4 x 1,65	183	129	277	111	50	124	89	70	451	556	15,5	16	42710.2004.05.2427.32	on request
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3"	76,2 x 1,65	1"	25,4 x 1,65	224	172	293	172	81	179	134	60	628	773	32	33	42710.2004.05.2429.32	on request

Tank Outlet Valves with flush/steam valve 2" to the front

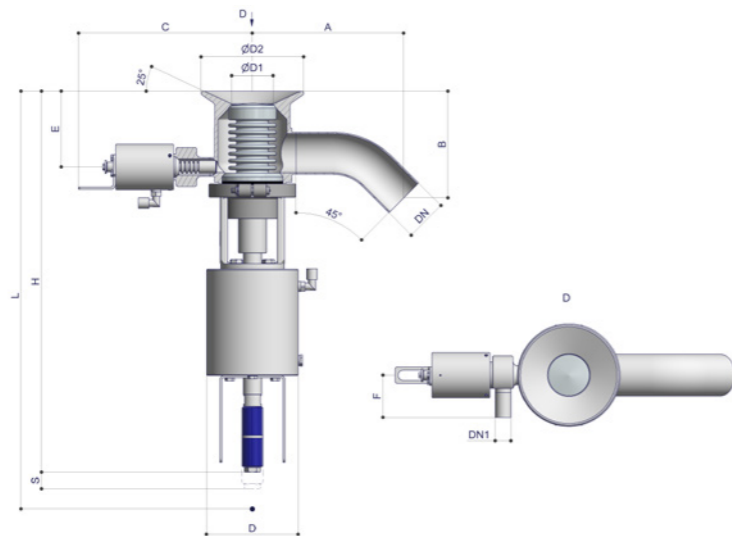
with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
3"	76,2 x 1,65	2"	50,8 x 1,65	224	172	435	172	81	179	119	90,5	628	773	32	37	42710.2004.05.2729.32	on request

Tank Outlet Valves with flush/steam valve 1,5" to the front

with 25° angle on flange



DN Inch	Dimension	DN1 Inch	Dimension	A	B	C	D	D1	D2	E	F	H	L	S	kg	Reference Number	Price
2 1/2"	63,5 x 1,65	1 1/2"	38,1 x 1,65	202	149	424	132	66	149	102	72	509	632	21,5	24	42710.2004.05.2628.32	on request
3"	76,2 x 1,65	1 1/2"	38,1 x 1,65	224	172	434	172	81	179	126	72	628	773	32	35	42710.2004.05.2629.32	on request