Operating instructions and security regulations for putting into operation and maintenance of the Double-Disc-Check Valve Type DDC.

Please read carefully !

Security note

Only qualified skilled workers are permitted to install the armature. This should be staff that is well acquainted with setting up, fitting, putting into operation, operating and maintain the equipment. The staff must have a qualification at their disposal which corresponds with their function and occupation, such as:

- Instruction and commitment for the observance of all regional and internal regulations and commitments regarding operation.
- Education in accordance with the standards of security engineering, in application and maintenance of adequate equipments of security and labour protection.
- Training in first aid etc.

Proper maintenance

Inset in pipes for prevention of return flow of the media within the permissible limits of pressure and temperature, observing the chemical and corrosive influences on the valve.

The media-resistance of the valve must be tested for operating conditions.

Danger notes

During operation the valve is under pressure!

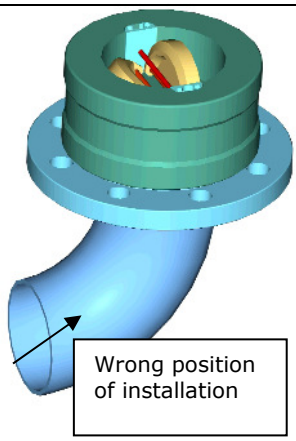
If flange connections or screw plugs are loosened, hot water, steam, corroding liquids or toxic gases will escape. Serious scalds and burns on the whole body are possible! Serious contaminations are possible!

- Work for assembly or maintenance to be done in pressure less condition only.
- During operation, the valve will be hot or extremely cold.
- Work for assembly or maintenance to be done at room temperature only.
- Sharp-edged interior parts can cause cuts on hands.
  Wearing gloves for exchanging the valve is necessary!
- Further measurements, materials and fields of application can be found in the correspondent Data Sheet.

Installation

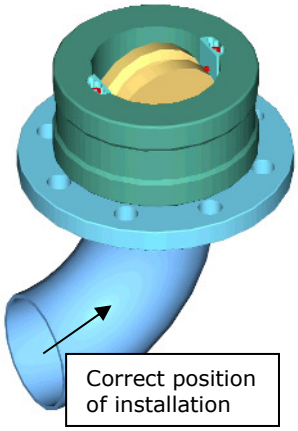
Double-Disc-Check-Valve Type DDC for installation between flanges according to the correspondent drawings (standard PN 10).

- Installation between flanges according to DIN EN 1092-1, PN10 – 40 or ANSI 150 – 300 with the aid of a centre ring. The centre ring between the flanges is executed at the body outside diameter through the flange connecting screws.
- Recommended sealing gaskets:
  - Spiral wound gaskets according to EN 1514-2 / ASME B16.20
  - Flat gaskets according to EN 1514-1 / ASME B16.21
- Overall lengths according to DIN 558-1, basic row 16
- Installation between flanges of other standards on request.
- For special applications corresponding regulations have to be noted, e.g. AD-leaflets (working group for pressure devices) or TRD-directives (technical rules for steam boilers).



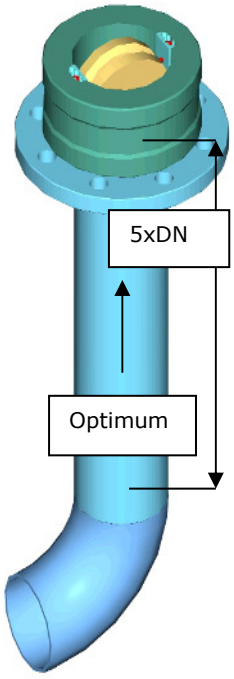
Note direction of flow (direction of arrow on valve body)!

- The Double-Disc-Check Valve Type DDC can be installed in horizontal or vertical piping. In vertical position direction of flow is only possible from bottom to top.
- For oscillatory systems (e.g. compressors, diaphragm pumps etc.) please pay attention that the standard execution corresponds with the operation.
- Double-Disc-Check-Valve must not be built apart.
- Using only original spare parts.
- Functional test.



Important

- Pay attention that the steering of the valve discs is not hindered through the flanged tubes.
- In order to avoid noise or premature wear through flapping valve disc halves, the Double-Disc-Check Valve has to be designed in a way that the flow volume is reached, as seen in the pressure drop diagram.
- If installed on a pump (on pressure side) there should not be a direct fitting to a pump flange or a subsequent bow or bend. In addition there must be allowed a 5 to 10-fold distance of the nominal value at the beginning of the tranquilized zone. The optimal fitting position can be seen in the sketches opposite.



Product classification according to article 9 of directive of pressure devices (DGRL)

Group 1 (Dangerous fluids)

Appendix II (Diagram 6)

Category with pressure limit PN40	**II**	**III**
Nominal size DN	**50-100**	**125-1100**
CE- marking	**CE1250**	**CE1250**
Type DDC	**all**	**all**

Technical data double-disc check valves DDC (PN40) (application limits)

DDC-2727M					
DN050-1200					
t (°C)	-10	RT	150	200	300
Ps (bar)	36.5	36.5	29.2	25.2	19

DDC-2711M					
DN200-1200					
t (°C)	-10	RT	150	200	300
Ps (bar)	36.5	36.5	29.2	25.2	19

DDC-1111M					
DN200-1200					
t (°C)	-200	RT	150	300	500
Ps (bar)	40	40	32.7	25.7	22.8

DDC-6464M					
DN050-1200					
t (°C)	-200	RT	150	300	500
Ps (bar)	40	40	34.4	27.6	24.3

DDC-6565M					
DN050-1200					
t (°C)	-200	RT	150	300	500
Ps (bar)	40	40	32.7	25.7	22.8

DDC-3333M					
DN050-200					
t (°C)	-60	RT	120	200	250
Ps (bar)	16	16	16	13.5	8

Application limits for soft sealing

Soft Sealing		Code
EPDM	-50 bis 130°C	E
NBR	-30 bis 120°C	P
VITON	-20 bis 200°C	V
PTFE	-200 bis 200°C	T

For further technical data please consult the correspondent Data Sheet.