



Dual-plate check valves BB 3

GESTRA DISCOCHECK



Engineering steam performance

Improving system safety and reducing costs

Preventing return flows in pipe systems is key to a system's safety and service life. GESTRA DISCOCHECK dual-plate check valves impress with their high quality and optimum performance.

Here at GESTRA, we aim to help our customers achieve more efficient processes, greater productivity, effective energy savings and compliance with legal regulations. Our extensive knowledge of applications and systems puts us in a position to do this.

Every system and every process has its own special requirements. To ensure our product range can cover numerous different applications and processes, we manufacture our dual-plate check valves in various materials, nominal sizes and pressure ratings. With our expert knowledge of steam systems, we can help you choose the best solutions for your requirements.



GESTRA DISCOCHECK Dual-Plate Check Valves BB 3

Our dual-plate check valves BB 3 are developed to ensure the best possible system safety by preventing return flows. Partial opening of the plates remains stable even with a low flowrate. Consequently, the BB 3 can be used without problem even in conditions of fluctuating loads. Thanks to its low weight, the dual-plate check valve is quick and easy to install.

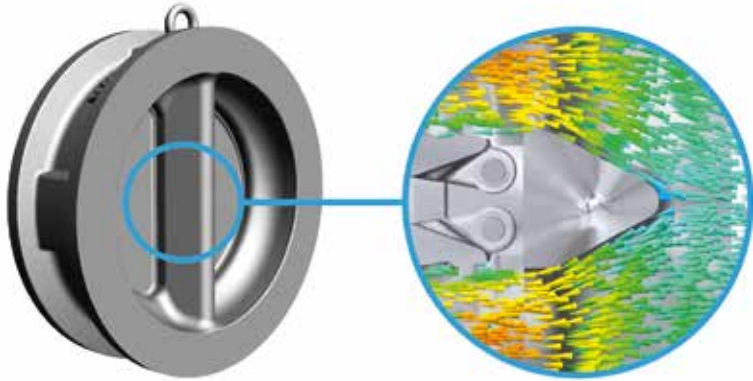
The benefits for you

- › Energy savings due to minimal pressure drop
- › Safe, stable operation even when partially open, for a long service life and reduced operating costs
- › Short face-to-face dimensions as per EN or API save space in your system layout
- › Low weight for easier installation
- › Suitable for liquid, gas and steam (fluid groups 1+2)
- › Satisfies the current Pressure Equipment and ATEX Directives



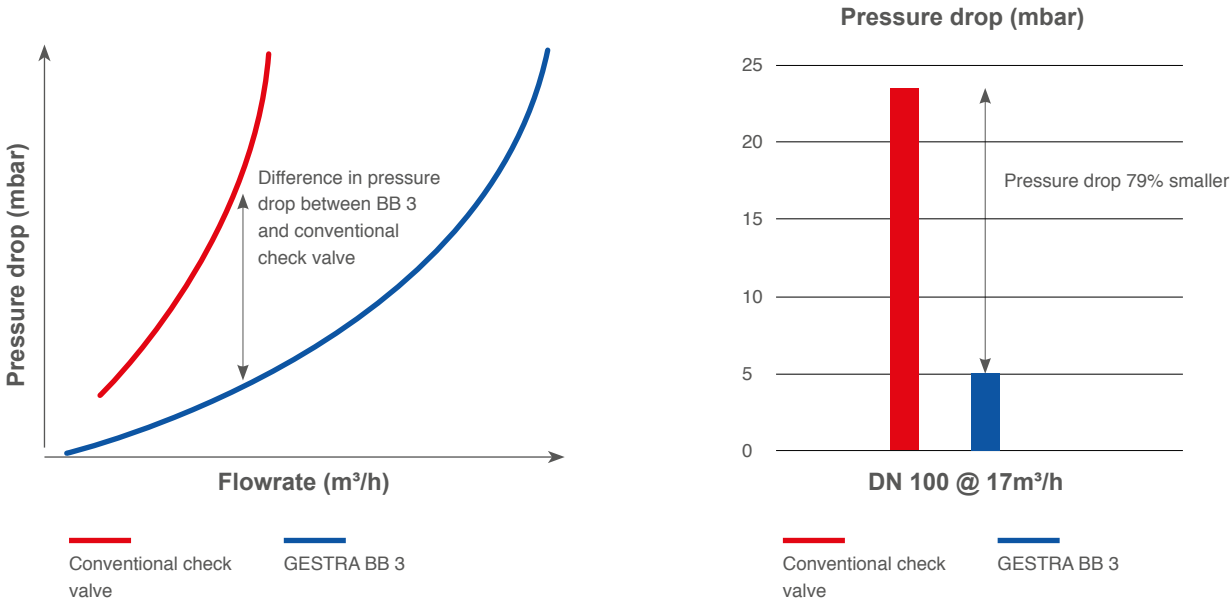
Saving energy costs by minimising pressure drops

To save pump energy costs it is vital to keep pressure drops in the system to a minimum. The CAD-optimised design of our dual-plate check valves prevents unwanted pressure drops and keeps energy costs down.



Pressure drop reduced by up to 79%

The diagrams below illustrate the optimised flow geometry of the BB 3 compared with conventional check valves. The diagram clearly shows that the pressure drop in the BB 3 dual-plate check valve is considerably less than in a conventional check valve. Particularly with larger flowrates the low pressure drop in the BB 3 has a significant effect.



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Technical data

The dual-plate check valve BB 3 is a dual-plate wafer-type valve with four closing springs. It is suitable for use with liquid, gas and steam (hazardous and non-hazardous fluids of Groups 1 and 2), in accordance with the Pressure Equipment Directive.

The BB 3 C of cast steel (1.0619/A216-WCB) is available in the EN series in nominal sizes DN 50 to DN 500 for pressure ratings PN 6 to PN 40. In the ASME series, nominal sizes 2" to 20" are available for pressure ratings CL 150 and CL 300. And for nominal sizes DN 100 to DN 500 or 4" to 20", the BB 3 replaces predecessor models BB 1 and BB 2.

| BB 3 C (cast steel) EN/ASME series | | | | |
|------------------------------------|---------|-----------|---------|------------------------|
| DN | 50 (2") | 65 (2 ½") | 80 (3") | 100 (4") - 500 (20") |
| PN 6-40 | X | X | X | Previously BB 1 / BB 2 |
| Class 150/300 | X | X | X | |

X = addition to BB 1

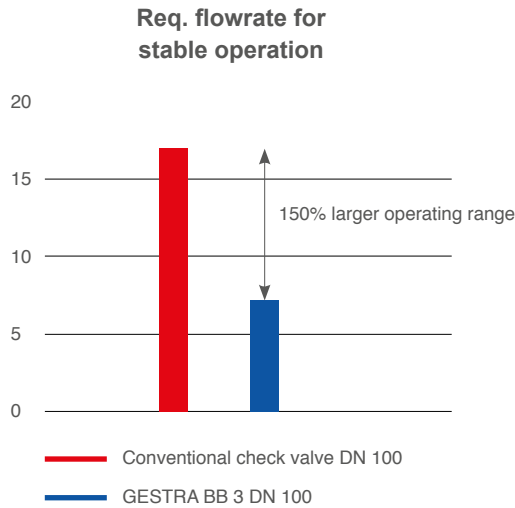
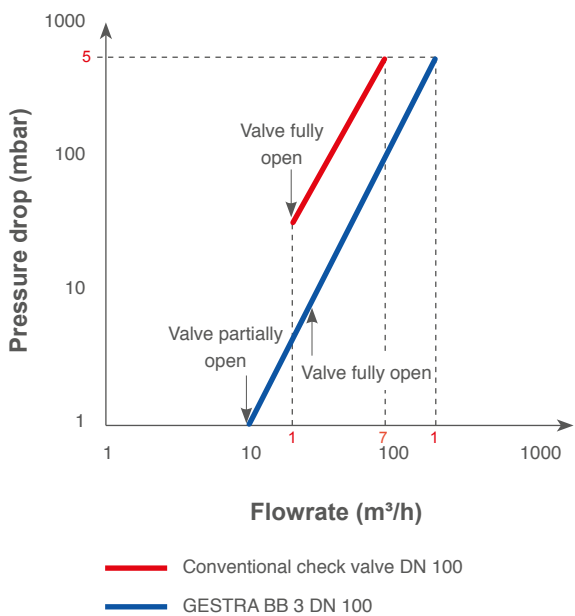
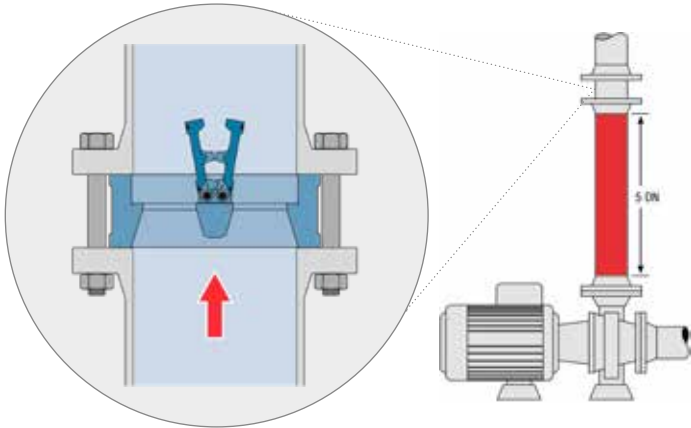
The BB 3 A of stainless steel (1.4408/A351-CF8M) is available in the EN series in nominal sizes DN 50 to DN 500 for pressure ratings PN 6 to PN 40. In the ASME series, nominal sizes 2" to 20" are available for pressure ratings CL 150 and CL 300. The BB 3 A replaces predecessor models BB 1 / BB 2 in the respective nominal sizes.

| BB 3 A (stainless steel) EN/ASME series | |
|---|------------------------|
| DN | 50 (2") - 500 (20") |
| PN 6-40 | Previously BB 1 / BB 2 |
| Class 150/300 | |

Typical uses for a dual-plate check valve BB 3

GESTRA DISCOCHECK dual-plate check valves can be used for liquid, gas and steam. They can be deployed in all areas of industry, e.g. process compressors, water supply, cooling systems, and heating and air conditioning systems. When used in frequency-controlled pumps, in particular, the dual-plate check valve is a significant factor in improved system safety, as shown in the diagram below.

Frequency-controlled pumps are used when flowrates tend to fluctuate. The check valve must therefore be designed to cover a broad load spectrum. The diagram below shows that thanks to its large load spectrum, the dual-plate check valve BB 3 is ideal for this kind of scenario. The load spectrum of a conventional check valve is shown for the purpose of comparison. It is clear that the BB 3 in DN 100 can cover a considerably larger (approx. 150%) operating range than a conventional check valve. This is due, in particular, to the stable partial opening of the dual plates, which is achieved even at low flowrates.





GESTRA AG

Münchener Str. 77 • 28215 Bremen • Germany
Postfach 10 54 60 • 28054 Bremen • Germany

Tel. +49 421 3503-0
Fax +49 421 3503-393

info@de.gestra.com
www.gestra.com

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