



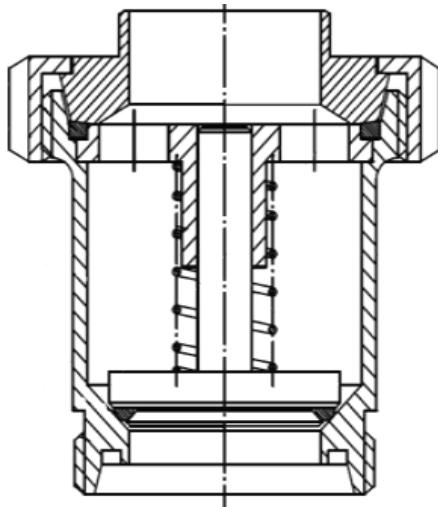
M&S non-return valves are used in process engineering plants to prevent the flow reversal of fluids (liquids or gases) in pipelines.

For example, they prevent the liquid column in a riser pipe from flowing back if a feed pump fails.

For dosing tasks or the merging of fluids, in the event of a pressure difference, penetration into the pipeline with the lower pressure is prevented.

M&S non-return valves are available as between flanges type or screwed type.

NRV cross sectional view



NRV versions



Usage

- To prevent the reversal of flow
 - * for liquids in rising pipes
 - * when combining liquid or gaseous media or dosing, especially with pressure differences in the pipelines.
- To prevent idling of pipelines or pumps.

Features

Versions

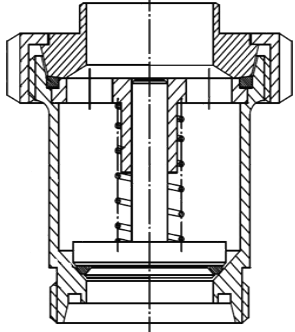
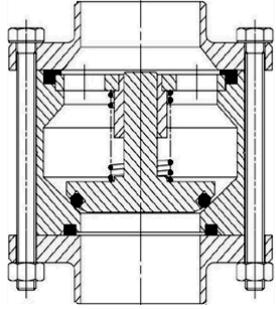
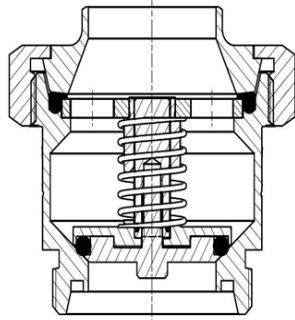
Usage

- Installation in vertical and horizontal pipelines
- Low pressure loss
- Reliable and robust design
- With unbreakable spring even with frequent operations
- With external marking for flow direction
- Between flanges type for easy disassembly even in rigid pipelines
- Special versions on request
 - * NRV MW with screwed-in O-ring in the valve disc (for use with high flow velocities or vacuum)
 - * NRV MW with double bearing of the valve shaft (for hight switching frequency in horizontal installation)

Features

Versions



Usage	Features	Versions
<ul style="list-style-type: none">• Standard<ul style="list-style-type: none">* Non-return valve (NRV) MW, with round thread according to DIN 11851 (figure 1)* Non-return valve (NRV) BF (between flanges), with flanges and counter flanges for welding (figure 2)• Special designs<ul style="list-style-type: none">* NRV MW with screwed-in O-ring in the valve disc (figure 3)* NRV MW with double bearing of the valve shaft (figure 4)• Materials<ul style="list-style-type: none">* Standard: 1.4301 / AISI 304, 1.4404 / AISI 316 L,* Other stainless steels, e.g. titanium or hastelloy on request* Gaskets: EPDM, FKM, NBR (FDA compliant)• Surfaces<ul style="list-style-type: none">* In contact with product: $Ra \leq 1,6 \mu m$* Not in contact with product: $Ra \leq 3,2 \mu m$• Process connections<ul style="list-style-type: none">* NRV-MW<ul style="list-style-type: none">◆ Inlet: male part with pipe dimension according to DIN EN 10357◆ Outlet: welding end with pipe dimension according to DIN EN 10357* NRV-BF<ul style="list-style-type: none">◆ Inlet and outlet: welding ends according to DIN EN 10357* Others on request• Permissible working pressure<ul style="list-style-type: none">* DN 25 - DN 100<ul style="list-style-type: none">◆ 10 bar• Opening pressure<ul style="list-style-type: none">* DN 25 - DN 100<ul style="list-style-type: none">◆ $\leq 0,2 \text{ bar}$• Permissible working temperature<ul style="list-style-type: none">* Depending on gasket material		<p data-bbox="1023 398 1086 427">Fig. 1</p>  <p data-bbox="1023 815 1086 844">Fig. 2</p>  <p data-bbox="1023 1256 1086 1285">Fig. 3</p>  <p data-bbox="1023 1697 1086 1727">Fig. 4</p> 