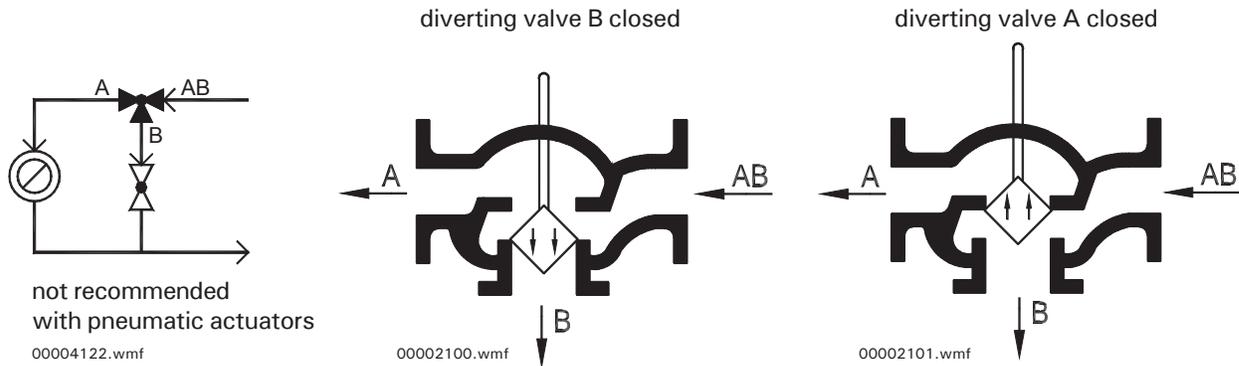


Bälz-electrodyn - control valves and control actuators

12. Three way valve in liquid systems

3-way valves can be installed as mixing- or diverting valves.

A diverting valve: 1 inlet AB, 2 outlets A + B



B mixing valve: 2 inlets A + B, 1 outlet AB

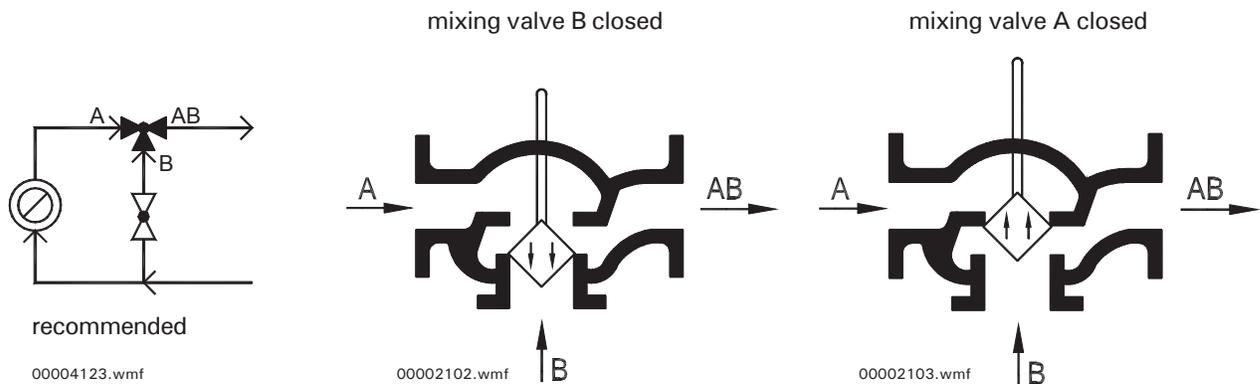


Fig. 129
diverting (A) or mixing valves (B)

A mixing valve is defined as a valve with 2 inlets (A and B) and 1 outlet (AB).
A diverting valve is defined as a valve with 1 inlet (AB) and 2 outlets (A and B).

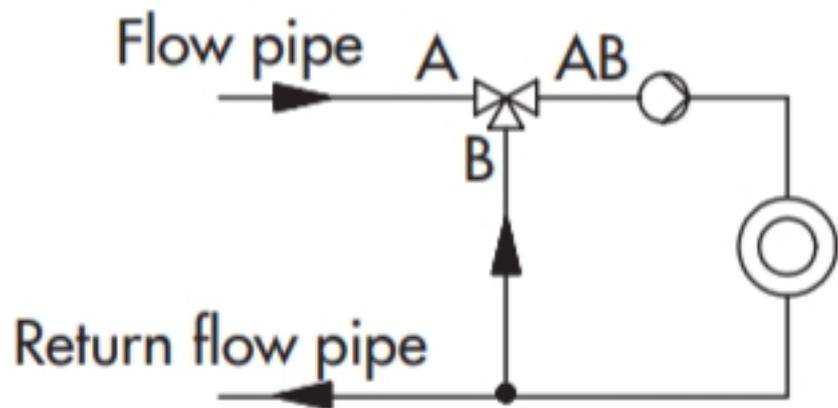
3-way valves can be installed as mixing or diverting valves. In the upper figures the three - way valve is shown as a diverting valve. In both end - positions (plug in upper position or plug in lower position) the plug will shortly before it has reached the seat be pressed into seat by the flow. With large pressure drops this may lead in these positions to a hammering of the plug. That is why a diverting valve of such design can only be installed with low differential pressures and only as a motorized valve, not as pneumatic valves. We limit max. diff. pressure to 0,6 bar for all diverting valves.

In comparison to that, the lower figures show the 3-way valve as mixing valves. In this case shortly before the plug reaches the end positions it is pushed away from the seat. These conditions are dynamically more favourable and therefore, it is recommended to install the three - way valve always as mixing valve, a mixing valve can easily handle higher differential pressures without hammering.

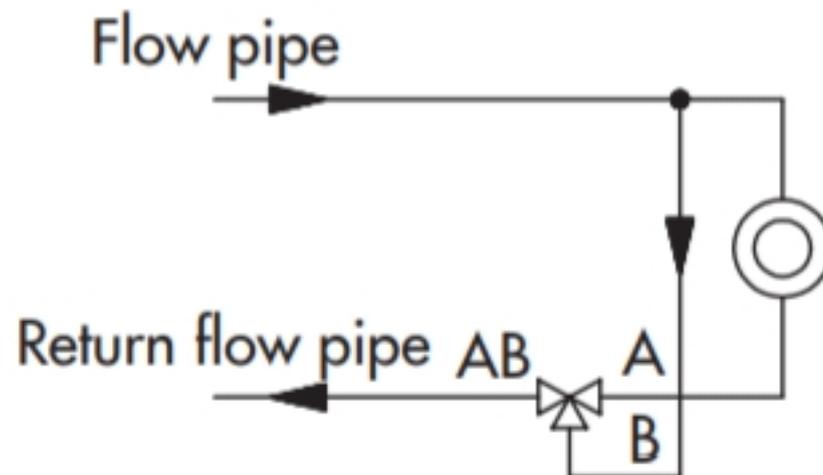
Baelz limits for diverting valves the max. admissible differential pressure to 0,6 bar;
pneumatic operated valves must never be installed as diverting valves!

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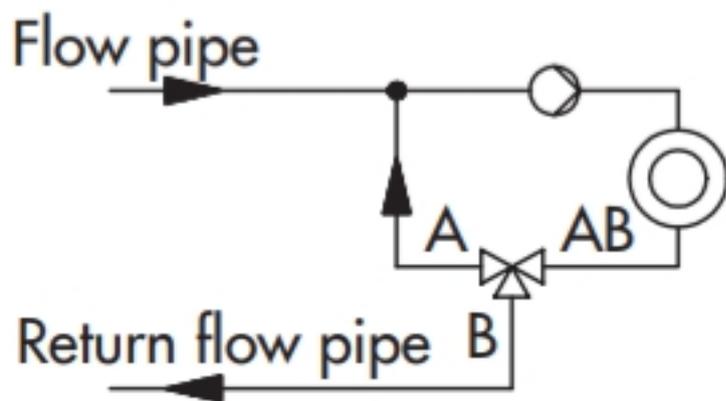
Mixing valve
for mixing service



For diverting service



Diverting valve
for mixing service



For diverting service

