

IP 68 solenoid valves for driving safety centres and spray fountain technology

Today it is an important part for driving schools, fire brigades, police departments, and private individuals to train drivers regarding safe handling of their vehicles in hazard areas. Crowded streets, fast cars - the driver must be able to safely control every situation in road traffic today more than ever before.

Driving safety centres

Driving safety centres are planned and built in Germany for this purpose on behalf of the ADAC. On this off road course the driving experience is being thoroughly provided. One of the disciplines is the controlled evasive swerve around an obstacle at full speed and/or emergency stop in front of an obstacle.

Valve technology from Buschjost-MV

Those obstacles are no longer stacked up cardboard boxes but water spray nozzles implanted in the road which in case of need let appear for the driver an unexpected water wall. This surprise effect is of the essence, the water wall must emerge like a flash.

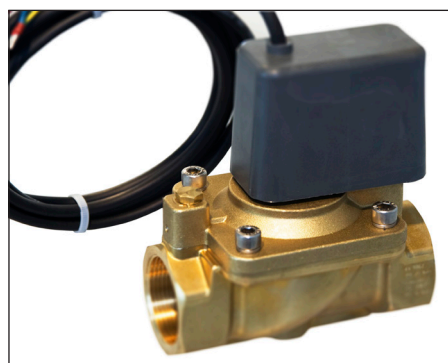
Buschjost MV solenoid valves are preferably used for the nozzle bars, to ensure an effective and reliable procedure.

Valve solutions

The user appreciates the quality of the Buschjost valves from Vlotho/Westphalia:

Developed based on the type 40

- as quick release valves (the opening time is less than 50 msec.),
- with special IP68 protection (high durable moisture), under adverse installation conditions (salts, tyre abrasion) the valves function reliably, not only in summer but also in winter.



However, there are further BJ-valves on the driving area such as those in the ground: water is precious, resources must be used in an economical way.

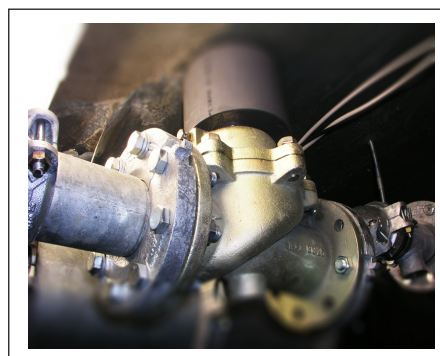
The water circulation principle is used on the parkour with all its advantages and disadvantages. The enormous need of water on the road

is ensured by subterranean cisterns. Through a sophisticated pipe system consisting of pumps and shut-off valves the water is pumped to the surface via the nozzles indicated above. The surface water is collected and taken back via channels to the cisterns. A traffic area can be equipped with up to 4 cisterns each with 15.000 m³. The nominal widths of the pipes are from size DN50 to DN100.

Solenoid valves for safe closing

The general contractor of these plants has decided together with the ADAC's technical planning department in favour of the solenoid valves from the *Buschjost MV* company.

In advance risks have been discussed based on



experiences with other FSZs and the disadvantages of water circulation became evident.

The operation all year round takes a heavy toll:

- tyre abrasion,
- dissolved salts in winter operation
- pollution

All these components enrich the water and make the controls and instruments prone to failure.

To counteract this fact a solenoid valve has been developed which is largely resistant to interferences.

Developed based on the type 24

- Solenoid valve from ND50 to ND100
- direct and self-medium controlled
- galvanized cast housing
- normally closed (NC)
- optimised piston guide to prevent incrustations
- enhanced self-medium control channels

- encapsulated magnetic coil IP68 with cable end of up to 10 m
- flood-proof and suitable for cistern installation.

The operating company has decided against externally controlled valves which are however of a higher reliability at the beginning. But the efforts and costs for making the external pilot air available are too high.

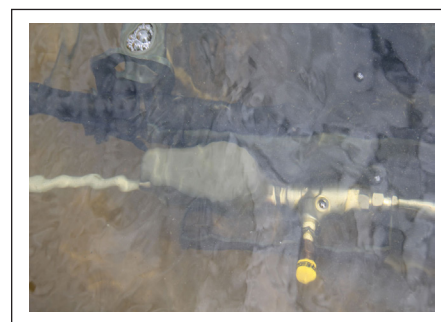
Conclusion after a 4-year operating time

Trouble-free functioning, the upper parts of the valves are replaced, if necessary, within the scope of the yearly revision. The dismantled upper parts are completely overhauled in the works and renewed.

Flood-proof applications

Solenoid valves in the special protection type IP68 for another field of application in water technology:

- Spray fountain technology: underwater installation, choreographic water features, water walls.
- Cisterns: from occasional to permanent flooding
- Manhole sumps: short-time flooding



Besides the direct and self-medium controlled solenoid valves you can use direct externally controlled valves for problematic polluted mediums.

Please contact us with your specific needs.

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