Dimensioning of gas extinguishing systems
Basis for an optimised dimensioning of gas extinguishing systems are fluid-mechanical equations specifying the connection between the technical data of system components (e.g. pipe diameters, resistance coefficients of fittings), the specific characteristics of the extinguishing medium and the physical conditions prevailing during the flooding (e.g. flow velocity, pressure in pipes and at nozzles). Furthermore, the balance equations must, of course, be fulfilled. All this results in the data required for designing the system, such as discharge time, pipe diameters, nozzle diameters and pressures.

Performance characteristics and features of the VdS calculation programs
The programs have the following features:
> indication of required design quantities
> dimensioning of pipework (including nozzles and, if required, restrictors)
> calculation of discharge time upon design of entire gas extinguishing system
> determination of required pressure relief opening (recommended values)
> calculation of expected values for oxygen and gas concentration
> graphic display of pipework

The program can simultaneously calculate:
> 40 calculation zones
> 450 pipe sections
> 200 nozzles

VdS calculation programs
VdS Schadenverhütung offer calculation programs for the following extinguishing gases:
> CO₂
> non liquefied inert gases: nitrogen, argon, IG 541 and IG 55
> halocarbon gases: HFC 227ea and FK-5-1-12

The results of the calculation programs are based on the following guidelines: VdS 2093, VdS 2380 and 2381.

You can also have the design quantities dimensioned in accordance with CEA, ISO or NFPA specifications or guidelines.

Program configuration
The program is based on Windows™ and operated with keyboard and mouse.

The user enters the data into different input masks displayed in the form of tabs. The first tab provides general information on the respective project. Afterwards, you can enter the pipework via graphic input, generating an isometric projection.
Requirements to PC and software
Minimum technical requirements for the VdS program are:
- an personal computer with the operating system Windows98 or higher and 5MB free disc space.

Target group
The VdS calculation programs offer a tool to project planners and installers for representing the flow conditions of a gas extinguishing system and determining the required design data.

VdS calculation programs
Licences for VdS calculation programs for the dimensioning of gas extinguishing systems can be ordered from VdS. Prices are available on request.

Program versions in German are available for the following extinguishing gases:
- CO₂, nitrogen, argon, IG 55 and IG 541.

English program versions are available for the following extinguishing gases:
- CO₂, nitrogen, argon, IG 55, IG 541, HFC 227ea and FK-5-1-12.

Individual company-specific program adjustments and program trainings are available on request.

Contact
If you have any questions, please do not hesitate to contact us. Call us, write or e-mail to:

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