

MDV SYSTEMS FOR SURFACE-MIX BURNERS

MDV gas metering systems for the flexible production and flow control of fuel gases, oxygen or air; especially designed for surface-mix burners.

Benefits

- the flexible arrangement of metering valves (2 or 3 gases) provides the flexibility to meet the gas supply requirements of various types of processing machinery
- subsequent changes of machine parameters, e.g. capacities or number of burners, can be easily accomplished because of the modular design
- all parameters can be adjusted with the burners in sight due to the installation of the metering valves close to the burners
- the perfect repeatability of the parameter setting enables the initial setting of the burners before actually starting the process. This results in reduced set-up times as well as in minimised cost of rejects during start-up.
- low assembly cost due to very convenient assembly of mixing and metering valves without any additional pipe work, brackets or housings
- integrated WITT safety technology to prevent dangerous flashbacks or back burns into the gas supply system protecting life and equipment



Please indicate the individual gases as well as number and capacities of the required burners when ordering!

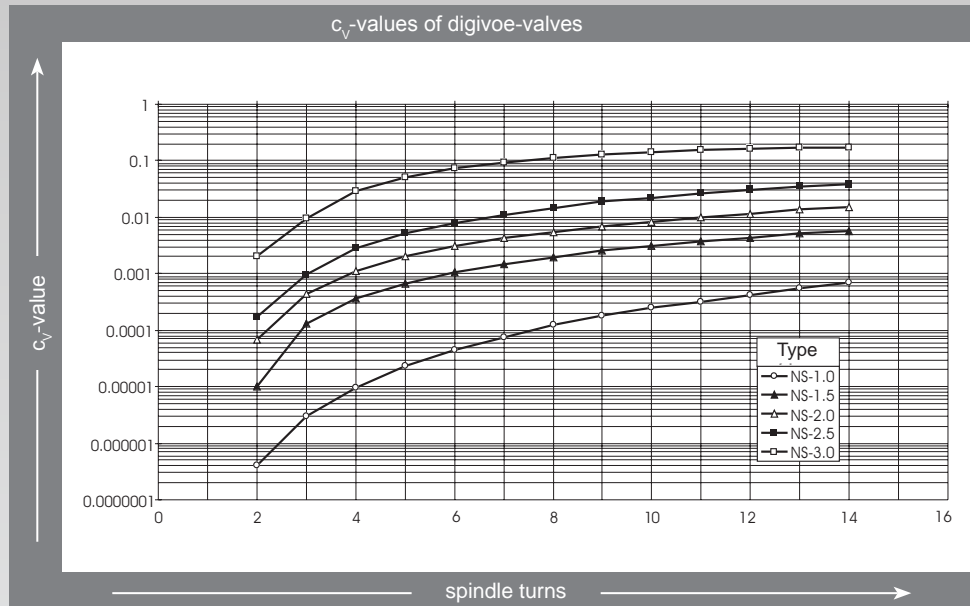
Product Information

Type	MDV Systems for Surface-Mix Burners	Weight	dependent on number of valves
Gases	fuel gases such as natural gas, methane, propane, hydrogen, acetylene with oxygen and/or air	Dimensions (HxWxD)	dependent on number of valves
Mixing range	dependent on the gases	Shut-off valves	solenoid valves, 24 V DC or 230 V AC
Gas inlet pressures	0.3 to max. 10 bar	Approvals	Company certified according to ISO 9001:2000 and ISO 14001 CE-marked according to: - EMC 2004/108/EC - Low Voltage Directive 2006/95/EC
Gas outlet pressures	dependent on the back pressure of the burners		
Flow capacity (air)	approx. 10 NI/min to 1,000NI/min (other quantities on request)		
Repeatability	better $\pm 1\%$ abs.		
Gas connections	dependent on valve block size		
Material	aluminium, brass, stainless steel		

Technical Data

FLOW CALCULATION OF DIGIVOE-VALVES

Characteristic curve

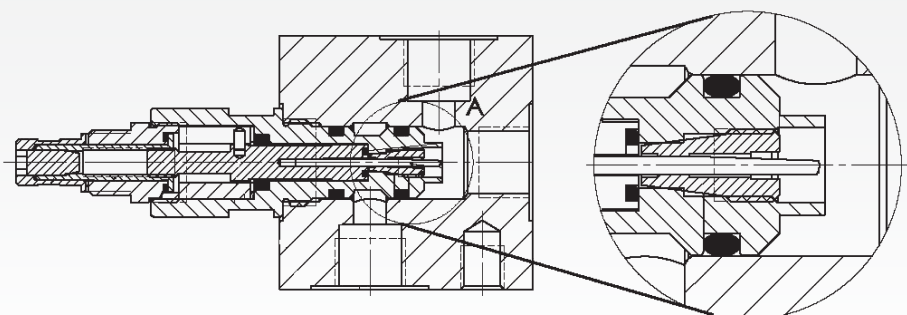


Formulas

Pressure drop	Gas flow in Nm ³ /h
$\Delta P < \frac{P_v}{2}$	$Q_n = \frac{C_v \cdot 514}{\sqrt{\rho_n \cdot \vartheta_n}} \sqrt{\Delta P \cdot P_h}$
$\Delta P > \frac{P_v}{2}$	$Q_n = \frac{C_v \cdot 257 \cdot P_v}{\sqrt{\rho_n \cdot \vartheta_n}}$

Symbol	Description	Unit
Q _n	Gas flow	Nm ³ /h
K _v	Flow coefficient from curve	Nm ³ /h
ΔP	Pressure drop = P _v -P _h	bar
P _v	Inlet pressure	bar absolute
P _h	Outlet pressure	bar absolute
ρ _n	Density at norm conditions: 0 °Celsius, 1013 hPa	Kg/Nm ³
ϑ _n	Gas temperature upstream the valve	Kelvin

Sectional drawing



Technical Data

C01/10 subject to change