

Furthermore, better surface structures, as well as smaller remaining wall thicknesses, are achieved by this process.

The water assisted molding technology is employed mainly for component parts where large cross sections and channel lengths are to be applied. Such component parts are, for example, media-carrying lines in the automotive sector. Also, as a result of the good surface qualities, different component parts in the sanitary area are produced with this process.



View without operating terminal

Gasdosing Station

The **MAXIMATOR Gasdosing Station** is designed for the high-pressure dosing of gas for the physical foaming of plastics. The physical foaming is applied in the process variants extrusion foaming, polyurethane foaming and pressure-die casting foaming (microcellular foaming).

DSD 500

Gasdosing Station for up to 500 bar

The MAXIMATOR DSD 500 Gasdosing Station compresses the gas with air driven Maximator gas booster to pressures up to 500 bar and doses very uniformly, also in case of severe back-pressure fluctuation, through an innovative mass-flow regulation concept and the highly-dynamic Maximator 3/3-way proportional pressure control valve.

The gas volume is measured on the pressure side. The mass-flow regulation is insensitive to temperature and adapts optimally to pressure variations with constant dosing quantity.

The measured values are visualized. Because of the precise injection flow regulation, production fluctuations under the same product, material and process conditions can be reduced.

- Generation of a constant, uniform microcellular foam structure
- Injection flow capacity is controlled extremely precisely, as well as independently of pressure and temperature in the extruder (also in case of very small dosing quantities)
- automatic adjustment to extruder pressure reduces start-up process
- a high-dynamic control valve responds promptly to process changes
- Insensitive to gas bubbles in the liquid CO₂ - no extensive cooling required

Application

In case of physical foaming, the gas dosing station injects the gas (propellant) into the extruder under high pressure via an injection valve. The gas quantity can be adjusted directly and adapted to the polymer and the foam density to be achieved.

At the tool outlet, a sudden, large pressure drop leads to a supersaturation of the melts with the propellant. The gas is again released from the polymer and thus forms a consistent, microcellular foam structure.

Technical Data

	DSD/500/30	DSD/500/60
Proportioning volume (min./max.)	0,2 - 30,0 kg/h CO ₂	2,0 - 60,0 kg/h CO ₂
Proportioning range	0,2 - 3 / 0,5 - 10 / 2 - 30 kg/h	2 - 30 / 6 - 60 kg/h
MAXIMATOR Gas Booster (Nos.)	DLE30-75-2-GU-C (1)	DLE30-75-2-GU-C (2)
Extruder pressure	max. 350 bar	
Medium	CO ₂ / N ₂	
Flow capacity CO ₂ with high pressure supply –liquid-	max. 30,0 kg/h	max. 60,0 kg/h
Flow capacity CO ₂ with riser pipe bottles –liquid-	max. 20,0 kg/h	max. 40,0 kg/h
Flow capacity N ₂ with gas bottle inlet pressure 200 bar down to 20 bar	min. 2,0 kg/h	min. 4,0 kg/h
Air drive pressure*	6 – 10 bar	
PLC	Siemens S7	
Control Panel	5,7" , visualisation 320x240	
Weight	approx. 275 kg	approx. 320 kg
Dimensions (W/D/H)	720 / 685 / 1830 mm	

*Operation with 4 bar air drive pressure is possible, but this will reduce the flow capacity.