



Single-vendor system solutions
Systems for producing pipe and sheet from C-PVC

Engineering Value

Krauss Maffei
Berstorff

Your system supplier with process competence Systems for producing pipes and sheets from C-PVC

Process competence

When it comes to making products from C-PVC, many years of experience in extrusion technology are a major success factor. KraussMaffei Berstorff machines are engineered for optimal processing of all C-PVC compounds on the market today (with an increased chlorine content of 62-69% and a density of 1.50 to 1.55 g/cm³). In particular, the machines are engineered specifically for these materials. The screw geometry is matched to the material and all flow channels – even in the tools (e.g. pipe-heads and flat sheet dies) – are chrome-plated. A screw geometry conceived specifically for C-PVC processing guarantees control of optimum mass temperature and shear rates. The twin-screw extruders for pipe production are equipped with maintenance-free internal temperature conditioning for the screws. KraussMaffei Berstorff offers a product portfolio featuring seven twin-screw extruders delivering outputs of up to 800 kg/h. With our pipeheads and downstream units, it is possible to produce pipes ranging from 12 mm to 500 mm in diameter; pipes at the lower end of the diameter range can even be produced by means of the eco-

nomical twin-strand approach. For sheet extrusion, you can choose between three models with outputs of up to 800 kg/h. The screws can also be temperature-conditioned both externally and internally.

Premium-quality wear resistance

As early as the C-PVC processing stage, particular attention must be paid to achieving perfect wear resistance. That's why all KraussMaffei Berstorff machines are equipped with fully chrome-plated screws and adapters. We also use fully chrome-plated die sets and tools as well as hardened polishing stack rollers with a

high-gloss chrome-plated finish. Screws are molybdenum-welded as standard; barrels are deep-nitrided for strong hardness and excellent hardness depth. To ensure even greater wear resistance, we can optionally provide tungsten-carbide-armored screws and bi-metal barrels for the parallel twin-screw extruders. These processing units boast a service life many times longer than that of the standard equipment specification.

Output

		Pipe extrusion series						
		KMD	KMD	KMD	KMD	KMD	KMD	KMD
		43 K/R-CPVC	53 K/R-CPVC	63 K/R-CPVC	75-32/R-CPVC	90-32/R-CPVC	114-32/R-CPVC	133-32/R-CPVC
Output range [kg/h]		35 – 110 *	60 – 190 *	80 – 270 *	120 – 270 *	180 – 400 *	250 – 560 *	360 – 800 *
		Sheet extrusion series						
		KMD 90-32/PL-CPVC		KMD 114-32/PL-CPVC		KMD 133-32/PL-CPVC		
Output range [kg/h]		180 – 400 *		250 – 560 *		360 – 800 *		

* Output subject to formulation used



Conical twin-screw extruder for manufacturing C-PVC pipes



Parallel twin-screw extruder for manufacturing C-PVC pipes and sheets

C-PVC pipes

Applications and products

C-PVC pipe, sheet and moldings are generally used where products must combine high mechanical strength with excellent resistance to high temperatures.

Usual sheet dimensions:

Width: 1220 to 1560 mm

Thickness: 3 to 20 mm

Usual pipe dimensions:

Cut-to-length approx. 5 – 6 m long

External diameters of 12 – 500 mm

Pressure classes: PN 2.5 (SDR 81) /

PN 4 (SDR 51) / PN 6 (SDR 34.4) /

PN 10 (SDR 21) / PN 16 (SDR 13.6) /

PN 25 (SDR 9)

Because of their greater chemical resistance to acids and bases, C-PVC products are also used to build systems and equipment for the chemical and semi-conductor industries.

Other applications:

- Pipes and fittings for sprinkler systems
- Pipes, sheet and fittings for hot and cold water applications
- Pipes, sheet and fittings for industrial applications (hot galvanizing, bleaching in the paper industry, fertilizer production)
- Pipes and fittings for heating and waste water systems and for the solar energy industry
- Pipes and fittings for ventilation ducts and smoke extractors
- Sheet to build containers, e.g., tanks for acids and bases
- Cleanroom equipment
- Semiconductor manufacturing systems
- Pharmaceutical manufacturing systems and equipment

Your benefits:

- Economical production due to a high degree of automation
- Optimum procedural concept for processing C-PVC on both conical and parallel 32D twin-screw extruders
- Special screw geometries adapted to the plasticizing and enthalpy requirements of the many and varied C-PVC material formulations
- Perfect wear resistance, with molybdenum-welded screws and deep-nitrided barrels
- Steady, constant processing over very long production runs
- Maximum output with homogeneous melt
- Excellent price/performance ratio



Installation of C-PVC pipes



C-PVC pipes and moldings in the chemical industry



Installed piping for the transport of chemical substances

Single-vendor system solutions

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KraussMaffei Berstorff offers you complete turnkey systems for producing C-PVC pipe and sheet. Our machines help to guarantee economical production with a high degree of automation combined with consistent process performance. Semifinished products impress with their high heat deflection temperature and tensile strength thanks to a relatively high chlorine content. They also exhibit strong resistance to acids, bases, and oxidizing media such as chlorine, ozone and saltpeter. C-PVC products are flame and corrosion resistant, they can be mechanically processed without difficulty and lend themselves outstandingly to gluing and welding due to their relatively high surface tension. C-PVC products can be used in the temperature range $-40\text{ }^{\circ}\text{C}$ to $+95\text{ }^{\circ}\text{C}$.



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Boosting cost-efficiency for you

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