

## COOLING WATER QUALITY

Klößner DESMA  
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### Requirements for the cooling water in the temperature regulating systems

A water treatment system for the cooling water used in the temperature regulating systems should be standard equipment in each company. This is particularly important in areas with calcareous or aggressive water. Proper water treatment lastingly prevents damage caused by calcification, rust or corrosion in temperature regulating systems, injection moulds, etc.

Cleanliness and hydrological data of the cooling water must satisfy certain requirements. Cooling water that does not meet these requirements must be treated according to its contamination.

It must be ensured that the cooling circuit permanently contains a suitable rust-inhibitor and a decalcifying agent. Furthermore, the water must be free of contamination (such as sand, dirt, chips, etc.). The company operating the machine is responsible for providing the Klößner DESMA rubber injection moulding machines with cooling water of the required quality and volume.

The quality of the employed cooling water must not deviate significantly from the following values.

	D	GB	F	int.
<b>Carbonate hardness:</b>	8 - 10 °dH	10 - 12,5 °e	14,3 - 17,9 °f	143.2 - 179 ppm

<b>additional hydrologic data</b>	<b>Value</b>	<b>Unit</b>
pH value	7,5 - 7,8	
free carbonic acid	8 - 15	mg/dm <sup>3</sup>
related carbonic acid	8 - 15	mg/dm <sup>3</sup>
Oxygen	min. 4.5	mg/dm <sup>3</sup>
Chloride ions	50	mg/dm <sup>3</sup>
Sulphate ions	50	mg/dm <sup>3</sup>
Nitrates and nitrites	10	mg/dm <sup>3</sup>
Ammonia	10	mg/dm <sup>3</sup>
Iron	0,2	mg/dm <sup>3</sup>
Manganese	0,1	mg/dm <sup>3</sup>
Conductivity	500	µS/cm
Dry residue	500	mg/dm <sup>3</sup>
Potassium permanganate consumption	25	mg/dm <sup>3</sup>
Sediments	50	mg/dm <sup>3</sup>

Water supply temperature	20 - 22	°C
Water pressure	2,5 - 4	bars

Klöckner Desma Elastomertechnik GmbH do not assume any liability for malfunctions or damage of injection moulds, machine components or temperature regulating units that result from water of a different water quality.

Consult specialized companies if you have any problems with the water quality.

— Recommendations:

- Nalco Deutschland GmbH, Steinbeisstr. 20-22, 71691 Freiberg/Neckar +49(0)7141703-0
- Langenhahn Chemie Produkte, Postfach 11 11, 71140 Steinenbronn +49(0)71573636
- Schweitzer Chemie GmbH, Postfach 1248, 71688 Freiberg/Neckar +49(0)714168881-0