

CARBOLAC CO2 METERING IN DIARY

...qualitative and economic optimization in rennet cheese production

Carbon Dioxide (CO₂) is a natural ingredient of milk and cheese that features very interesting characteristics.

Its application as an additive in cheese production is therefore highly effective and absolutely safe. According to EU Guideline 95/2, Appendix 1, CO₂ (E290) is permitted in the EU to be added to all food-stuffs as an additive without restriction. A labeling obligation does not currently exist for the dairy applications presented.



Cost reduction as a result of:

Less microbial or animal rennet addition at lowered pH (ca. -30% at -0.1 pH, -40% at -0.2 pH), less culture application, less washing water

More process safety as a result of:

Standardization, optimized pH value, higher anaerobic (prevention of harmful germs), stabilized protein structures (CO₂ binds as hydrogen carbonate to casein structures).

Shorter production times as a result of:

Shorter pre-ripening of cheese milk (protein swelling improved by CO₂), more standardization – uniform production process in connection with the application of DVS cultures

Quality improvement as a result of:

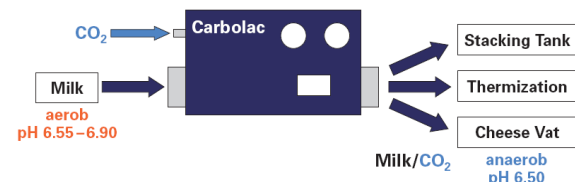
Less dry matter variation (< + 0.5%), increased synthesis, firmer texture in the product with uniform water content in connection with the application of DVS cultures

Benefits:

- Cost reduction
- Process safety
- Process time reduction
- Fully automatic gas pressure regulation with safe on & off switching
- Quality improvement
- CIP-capable as standard feature, no hygiene considerations
- Easy operation
- No electric energy supply necessary

Functional description:

The Carbolac technique can be applied to virtually all dairy facilities. It is compact, installation is easy and quickly done. Only a few prerequisites have to be taken into consideration.



Technical data:

Stainless steel design:	1.4571
CO ₂ metering:	0.05 to 4 g/l milk
Preliminary gas pressure:	> 6.5 bar
3 levels of milk flow performance:	
	M 10: up to 15 cbm/h
	M 60: up to 54 cbm/h
	M 80: up to 72 cbm/h
Dimensions (H x W x L):	150mm x 240mm x 100mm
Weight:	13 kg to 17 kg
Milk pressure:	1 bar to 10 bar
Milk line connections:	as desired
Inline metering:	with suction injector
Electrical connection:	none
Accessory:	Remote control Automatic control

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