



fast | precise | flexible

Gas Management System

Manual | Semi Automatic | Fully Automatic-Systems

The professional way to
adjust CO₂ and O₂ for your beverage.



BEVERAGE



WINE



Manual units



Semi automatic units



Fully automatic units

PROPERTIES OF ALL KH CO₂ MEMBRANE SYSTEMS

CO₂ adjustment and carbonation on exact target value

- CO₂ adjustment, without any gas bubbles, based on diffusion
- Carbonation and removal of oxygen and nitrogen at the same time, in one single pass
- Faster (up to 10%) filling speed in white wine due to less foaming
- Adjustment of CO₂ on target value, independent of initial value
- Integrated physical control model with fast line-up to requested CO₂ value
- Inline, directly serving the bottling line

One system, suitable for every wine

- CO₂ adjustment in white and rosé wines
- Inline Carbonation up to 9 g/l (option 12 g/l)
- Removal of CO₂, for example in young red wines after Malolactic Fermentation
- At the same time removal/adjustment of O₂
- Various flow rates with different models and sizes
- Removal of oxygen and nitrogen with adjustment of CO₂
- Carbonation only with System Carbo, for example for sparkling wine, cocktails and fruit juice

SIZES AND SPECIFICATIONS

Different models – same precision

Type CO ₂ Membrane	Maximum production flow	Maximum CO ₂ dosage	Membrane surface	Dimensions (length/width/height)
System Carbo, all sizes	Depending on membrane size; see product flow details below	Depending on membrane size; see max. CO ₂ dosing details below	Depending on membrane size; see details below	Depending on unit size; see details below
System 50	22 gpm	7 kg/h	20 m ²	1000x600x1900 mm
System 100	44 gpm	14 kg/h	2 x 20 m ²	1000x760x1900 mm
System 250	110 gpm	50 kg/h	140 m ²	1200x760x1900 mm
System 350	154 gpm	100 kg/h	2 x 140 m ²	1500x900x1900 mm
System 450	198 gpm	120 kg/h	3 x 140 m ²	2000x1000x1950 mm

PERFORMANCE

Program	Max. flow rate (gpm)						Recommended Temperature	CO ₂	Oxygen
	System Carbo all sizes	System 50	System 100	System 250	System 350	System 450			
CO ₂ adjustment	Only high Carbonation possible	22	44	110	154	198	5–25°C	adjustment* 0–3 g/l	removal* 50–99%
Carbonation	Product flow depending on size of membran; see ->	7	22	53	88	123	5–15°C	adjustment* 3–9 g/l 1–5 bar	removal* 50–90%
Degassing	Active degassing not possible - no vacuum pump included	11	22	53	88	123	15–25°C	removal* 50–90%	removal* 50–90%
O ₂ adjustment (optional)	Active degassing not possible - no vacuum pump included	22	44	110	154	198	10–20°C	removal* 50–90%	adjustment* 0,5–10 mg/l

*CO₂ dosage rate up to its physical limit. Gas removal is depending on temperature, flow rate and membrane integrity.

COMPARATIVE TABLE

KH CO₂ Membrane System - product overview and configuration options

Configuration/System	System Carbo	Manual			Semi			Auto			
	All sizes	50	100	250	100	250	350	100	250	350	450
Touch Display	7"	7"	7"	7"	9"	9"	9"	15"	15"	15"	15"
Automated CO ₂ and simultaneous O ₂ adjustment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated CO ₂ adjustment and simultaneous O ₂ and N ₂ removal	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated CO ₂ adjustment during temperature or flow changes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sample tap	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gas supply - valves automated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated and fully integrated CO ₂ control (Anton Paar/Carbo 510)	✓	–	–	–	✓	✓	✓	✓	✓	✓	✓
Onboard vacuum pump	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optical O ₂ monitoring	●	●	●	●	●	●	●	✓	✓	✓	✓
Membrane cleaning	MAN	MAN	MAN	MAN	MAN	MAN	MAN	✓	✓	✓	✓
Membrane drying	MAN	MAN	MAN	MAN	MAN	MAN	MAN	✓	✓	✓	✓
Membrane conservation	MAN	MAN	MAN	MAN	MAN	MAN	MAN	✓	✓	✓	✓
Product valves	MAN	MAN	MAN	MAN	MAN	MAN	MAN	✓	✓	✓	✓
Remote control	●	–	–	–	●	●	●	✓	✓	✓	✓
Online support	●	–	–	–	●	●	●	✓	✓	✓	✓
Datalogging (365 days)	–	–	–	–	–	–	–	✓	✓	✓	✓
Automated O ₂ adjustment for red wine	–	–	–	–	–	–	–	✓	✓	✓	✓
Options											
Integrated pressure and feed pump	●	–	–	–	●	●	●	●	●	●	●
Remote display/2nd display	●	–	–	–	●	●	●	●	●	●	●
Integrated CIP unit	●	–	–	–	●	●	●	●	●	●	●
2nd oxygen sensor at product inlet	–	–	–	–	●	●	●	●	●	●	●
Anton Paar Carbo QC-Box - CO ₂ measurement	●	●	●	●	●	●	●	●	●	●	●
Anton Paar Carbo C-Box - CO ₂ and O ₂ measurement	●	●	●	●	●	●	●	●	●	●	●

✓ = included or fully automated ● = not included but optimal possible – = not included MAN = manually

The KH Membrane Systems

Providing a top technology system, enabling the user to adjust gases automatically in wine and other beverages

- Improved bottling performance
- Easy to operate
- Innovative and established technology
- Approved systems
- Far more than one hundred reference units in Europe and other leading wine countries around the world

Your local contact:

KH Tec Inc.
P.O. Box 4318 | Napa, CA 94558-0431 | USA
Cell: (707) 637-7584
info@khtecinc.com

KH TEC[®]

KH TEC GmbH	KH vessel TEC GmbH	KH process TEC GmbH
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An der Hessel 5 | D-75038 Oberderdingen | Germany
Phone +49 (0) 7045/980-0 | Fax +49 (0) 7045/980-27 | info@kh-tec.de

KHTECINC.COM