

PARTNER IN STAINLESS STEEL

KHTEC<sup>®</sup>



fast | precise | flexible

## CO<sub>2</sub> Membrane System

Manual | Semi Automatic | Fully Automatic-Systems

The professional ways of  
**adjusting CO<sub>2</sub> and O<sub>2</sub>** in beverages



BEVERAGE



WINE



Manual units



Semi automatic units



Fully automatic units

## PROPERTIES OF ALL KH CO<sub>2</sub> MEMBRANE SYSTEMS

### CO<sub>2</sub> adjustment and carbonation on exact target value

- CO<sub>2</sub> 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 CO<sub>2</sub> on target value, independent of initial value
- Integrated physical control model with fast line-up to requested CO<sub>2</sub> value
- Inline, directly serving the bottling line

### One system, suitable for every wine

- CO<sub>2</sub> adjustment in white and rosé wines
- Inline Carbonation up to 9 g/l (option 12 g/l)
- Removal of CO<sub>2</sub>, for example in young red wines after Malolactic Fermentation
- At the same time removal/adjustment of O<sub>2</sub>
- Various flow rates with different models and sizes
- Removal of oxygen and nitrogen with adjustment of CO<sub>2</sub>
- Carbonation only with System Carbo, for example for sparkling wine, cocktails and fruit juice

## SIZES AND SPECIFICATIONS

### Different models – same precision

Typr CO <sub>2</sub> Membrane	Maximum production flow	Maximum CO <sub>2</sub> dosage	Membrane surface	Dimensions (length/width/height)
<b>System Carbo, all sizes</b>	Depending on membrane size; see product flow details below	Depending on membrane size; see max. CO <sub>2</sub> dosing details below	Depending on membrane size; see details below	Depending on unit size; see details below
<b>System 50</b>	5.000 l/h	7 kg/h	20 m <sup>2</sup>	1000x600x1900 mm
<b>System 100</b>	10.000 l/h	14 kg/h	2 x 20 m <sup>2</sup>	1000x760x1900 mm
<b>System 250</b>	25.000 l/h	70 kg/h	140 m <sup>2</sup>	1200x760x1900 mm
<b>System 350</b>	35.000 l/h	140 kg/h	2 x 140 m <sup>2</sup>	1500x900x1900 mm
<b>System 450</b>	45.000 l/h	210 kg/h	3 x 140 m <sup>2</sup>	2000x1000x1950 mm

## PERFORMANCE

Program	Max. flow rate (l/h)						Recommended Temperature	CO <sub>2</sub>	Oxygen
	System Carbo all sizes	System 50	System 100	System 250	System 350	System 450			
CO <sub>2</sub> adjustment	Only high Carbonation possible	5.000	10.000	25.000	35.000	45.000	5–25°C	adjustment* 0–3 g/l	removal* 50–99%
Carbonation	Product flow depending on size of membran; see ->	1.500	5.000	12.000	20.000	28.000	5–15°C	adjustment* 3–9 g/l 1–5 bar	removal* 50–90%
Degassing	Active degassing not possible - no vacuum pump included	2.500	5.000	12.000	20.000	28.000	15–25°C	removal* 50–90%	removal* 50–90%
O <sub>2</sub> adjustment (optional)	Active degassing not possible - no vacuum pump included	5.000	10.000	25.000	35.000	45.000	10–20°C	removal* 50–90%	adjustment* 0,5–10 mg/l

\*CO<sub>2</sub> dosage rate up to its physical limit. Gas removal is depending on temperature, flow rate and membrane integrity.

## COMPARATIVE TABLE

### KH CO<sub>2</sub> 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 <sub>2</sub> and simultaneous O <sub>2</sub> adjustment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated CO <sub>2</sub> adjustment and simultaneous O <sub>2</sub> and N <sub>2</sub> removal	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated CO <sub>2</sub> adjustment during temperature or flow changes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sample tap	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gas supply - valves automated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automated and fully integrated CO <sub>2</sub> control (Anton Paar/Carbo 510)	✓	–	–	–	✓	✓	✓	✓	✓	✓	✓
Onboard vacuum pump	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Optical O <sub>2</sub> 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 <sub>2</sub> adjustment for red wine	–	–	–	–	–	–	–	✓	✓	✓	✓
<b>Options</b>											
Integrated pressure and feed pump	●	–	–	–	●	●	●	●	●	●	●
Remote display/2nd display	●	–	–	–	●	●	●	●	●	●	●
Integrated CIP unit	●	–	–	–	●	●	●	●	●	●	●
2nd oxygen sensor at product inlet	–	–	–	–	●	●	●	●	●	●	●
Anton Paar Carbo QC-Box - CO <sub>2</sub> measurement	●	●	●	●	●	●	●	●	●	●	●
Anton Paar Carbo C-Box - CO <sub>2</sub> and O <sub>2</sub> 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

**KH**TEC®

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