



# SALES INFORMATION

0245-2020 // 2020-AUG-11 // INTRODUCTION ECOLINE CO<sub>2</sub>

## BITZER ECOLINE COMPRESSORS FOR CO<sub>2</sub> TRANSCRITICAL APPLICATIONS

### CKH3 Product phase out

BITZER offers the optimum efficiency for all CO<sub>2</sub> applications and markets.

The new BITZER ECOLINE Compressors for CO<sub>2</sub> Transcritical applications replace the former OCTAGON series. The compressors were updated to meet customer demands in regards to improved efficiency, low oil carry over rate and easy compressor operation by the BITZER IQ Module.

The ECOLINE+ series is a further-developed version of the proven ECOLINE reciprocating compressor series. By using the refrigerant CO<sub>2</sub>, innovative line-start permanent-magnet(LSPM) motors and optional intelligent electronics, the series achieves the highest energy efficiency values currently possible.

The following products will be affected:

	<b>Octagon</b> CKH3 Model		<b>ECOLINE</b> New CKHE3 Model		<b>ECOLINE+</b> New Model		
//	4PTC-6K	→	<b>4PTE-6K</b>	//	<b>4PTEU-6LK</b>	CKHE3 // CKHE3+	
	4PTC-7K	→	<b>4PTE-7K</b>	//	<b>4PTEU-7LK</b>		
	4MTC-7K	→	<b>4MTE-7K</b>	//	<b>4MTEU-7LK</b>		
	4MTC-10K	→	<b>4MTE-10K</b>	//	<b>4MTEU-10LK</b>		
	4KTC-10K	→	<b>4KTE-10K</b>	//	<b>4KTEU-10LK</b>		
	New	→	<b>4KTE-12K</b>				
<hr/>							
	<b>Octagon VARISPEED</b> Old Model		<b>ECOLINE VARISPEED</b> New Model				
//	4PTC-7.F3K	→	<b>4PTE-7.F3K</b>		CKHE3F		
	4MTC-10.F4K	→	<b>4MTE-10.F4K</b>				
	4KTC-10.F4K	→	<b>4KTE-10.F4K</b>				

# SALES INFORMATION

0245-2020 // 2020-AUG-11 // INTRODUCTION ECOLINE CO<sub>2</sub>

- Compressors of the ECOLINE+ range (CKHE3+) have a LSPM motor.
- The mechanical capacity control VARISTEP (CRII) is available for ECOLINE and ECOLINE+ compressors in combination with the IQ Module.
- Compressors of the ECOLINE VARISPEED range are with integrated frequency inverter.
- A marine version is also available for both CKHE3 compressor types.
- Optionally available is the IQ Module, CM-RC-01 for the new ECOLINE / ECOLINE+ product range.

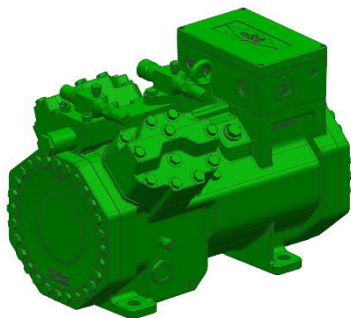
## Facelift

### CKHE3

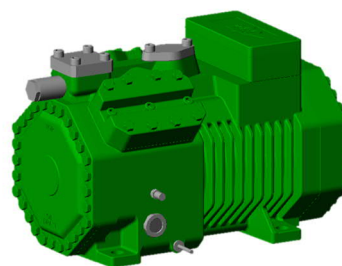
#### // KEY FEATURES

- Fully interchangeable with the existing CKH3
- Higher energy efficiency
- Lower pulsation
- Lower oil carry over rate
- Higher volumetric efficiency

### NEW CKHE3 DESIGN



### CKH3 DESIGN



// **Cylinder Head:** A lower pulsation is achieved. Additionally, the cylinder head can be equipped with the capacity control VARISTEP in combination with the BITZER IQ Module (**ECOLINE+ models only**). A next step towards higher energy efficiency and lower noise emission.

// **Valve plate:** New and optimized valve plate.

# SALES INFORMATION

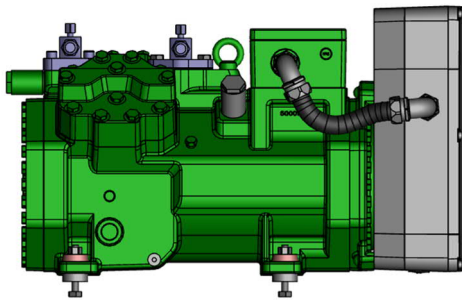
0245-2020 // 2020-AUG-11 // INTRODUCTION ECOLINE CO<sub>2</sub>

**// Terminal box:** The new and larger terminal box provides more space for electric connections, allowing a faster and easier installation / service. Higher currents can be supplied due to a larger terminal plate.

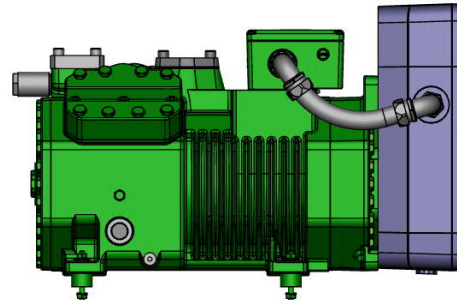
**// Housing:** The suction gas flow is optimized, reducing internal pressure drops. The improved internal thermal separation allows a higher energy efficiency.

## ECOLINE VARISPEED

**CKHE3F DESIGN**



**CKH3 DESIGN**



### Changes

The new ECOLINE CKHE3 series is fully interchangeable with the former CKH3 series:

- **Foot- and connection dimensions of the shut-off valves are identical**

There are some differences between CKH3 and CKHE3 dimensions, see drawings please

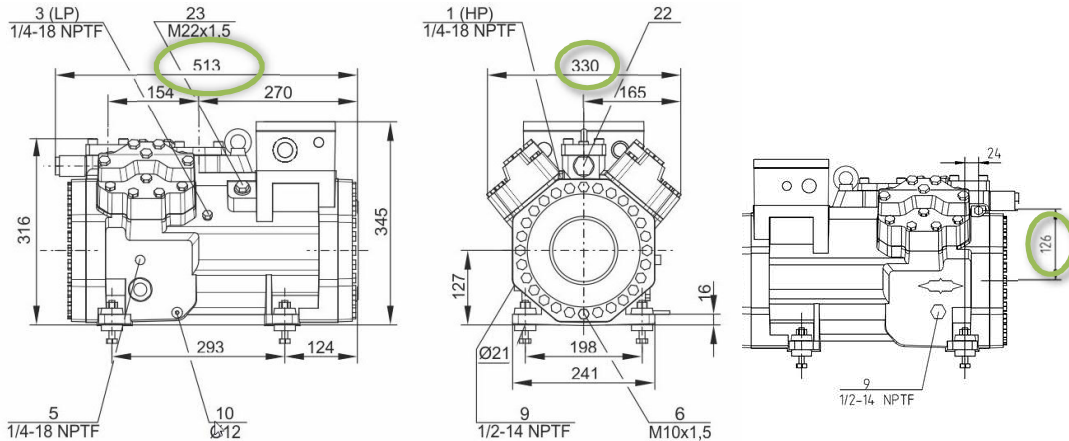
- Identical starting current and locked rotor current
- Identical footprint and connection positions
- Same suction and discharge valve sizes
- Same oil charge
- Same motor codes available
- Small changes in dimensions

	High Pressure Connection	Height	Width	Length
<b>OCTAGON</b>	147 mm	352 mm	298 mm	504 mm
<b>ECOLINE CO<sub>2</sub></b>	126 mm	345 mm	330 mm	513 mm
<b>Diff.</b>	-21 mm	-7 mm	+32 mm	+9 mm

Further details on request.

# SALES INFORMATION

0245-2020 // 2020-AUG-11 // INTRODUCTION ECOLINE CO<sub>2</sub>



## Documentation

The full documentation is available in the BITZER Software and on the BITZER homepage.

Result	Limits	Technical Data	Dimensions	Information	Documentation	Trainings
<b>Documentation</b>						
<a href="#">CP-100-2</a>	PDF	EN   EN   FR		VARIPACK		
<a href="#">KP-130-10</a>	PDF	EN		CO <sub>2</sub> transcritical		
<b>Operating instructions</b>						
<a href="#">KB-130-7</a>	PDF	DE   EN   FR		Supplement to KB-104: Reciprocating compressors for CO <sub>2</sub> transcritical		
<b>Technical Information</b>						
<a href="#">AT-300-1</a>	HTML	DE   EN		Schematic wiring diagrams for BITZER products		
<a href="#">KT-122-2</a>	PDF	DE   EN   FR		Protection Devices SE-B		
<a href="#">KT-150-7</a>	PDF	DE   EN   FR		Oil Heater		
<a href="#">KT-230-2</a>	PDF	DE   EN   FR		Compressor Module CM-RC-01		
<a href="#">KT-400-3</a>	PDF	DE   EN   FR		Part-Winding Motor (PW)		
<a href="#">KT-410-5</a>	HTML	DE   EN		Motor codes for semi-hermetic reciprocating compressors		
<a href="#">KT-420-4</a>	HTML	DE   EN   FR		Operation of BITZER reciprocating compressors with external frequency inverters		
<a href="#">KT-500-8</a>	HTML	DE   EN		BITZER refrigeration oils for reciprocating compressors		

// In case of further questions, please contact:

BITZER Benelux Team

[info@bitzer.be](mailto:info@bitzer.be)

tel: +31 (0)88 99 04 100