

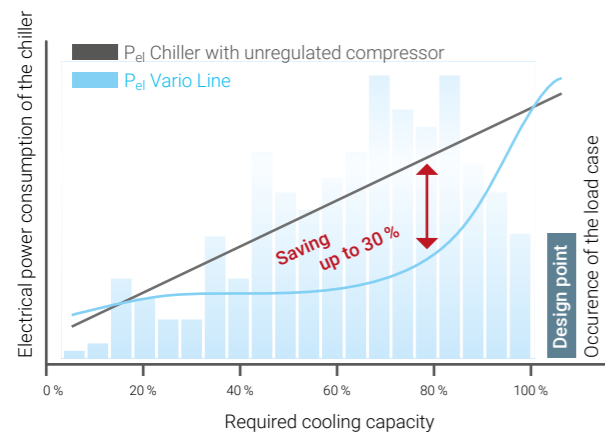
### Custom made performance

## VARIO LINE

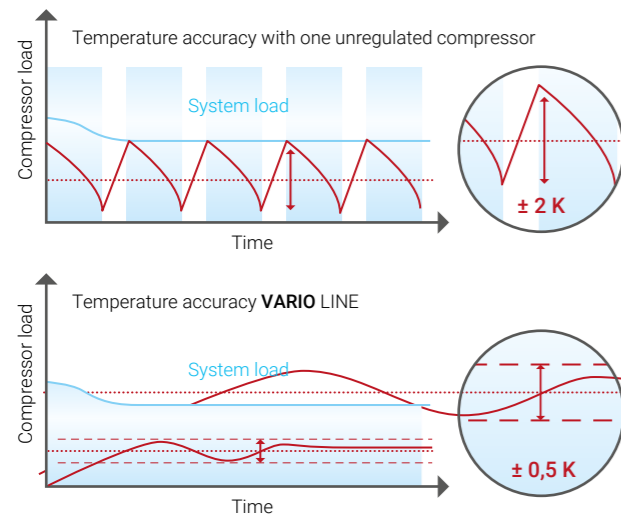
With the performance-enhanced chillers of the Vario-Line, KKT chillers set new standards in process cooling and simultaneously offers its clients a variety of interesting advantages:

#### More efficiency, lower operating costs.

Through standard usage of speed-controlled compressor and ventilator, as well as a constantly regulating expansion valve, the refrigerating capacity of the Vario-Line is automatically adjusted to the existing load profile of the respective application. Thus, only the output, which is actually needed, will be effectively generated.



As a result, not only the reduced noise emission is noticeable. Due to the lower power consumption when operating under partial load, use of the Vario-Line can lower operating costs significantly.



#### High control precision at zero cost.

In addition to the energy-related advantages, it is possible to guarantee a control precision of  $\pm 0.5$  K due to this method of capacity control, even in the basic configuration and without additional components.

#### Digital data management with plain text display.

Due to the sensor data acquisition of all the relevant control-variables such as temperatures, pressures, conductivity or tank fill levels and the controller-software that was developed in-house, all data can be processed further by the customer. With its intuitive menu navigation, the plain text display offers a high level of user comfort. Additionally, a broad range of interface protocols provides the option for remote diagnostics via web and app.

#### Low maintenance costs.

The synergy between the innovative microchannel-technology and the highly efficient refrigerant R410A, tried and tested worldwide, is not only an asset when it comes to energy efficiency. The filling quantity in the hermetically sealed cooling circuit has been reduced to the point where an annual leak-test is no longer necessary for any of the Vario-Line equipment.

#### Great flexibility, broad range of application.

In the standard version, the Vario-Line is suitable for installation both in- and outdoors and ensures safe operation in ambient temperatures of up to 50°C without additional precautionary measures. Due to the use of speed-controlled components, varying voltage supply is not a problem. Furthermore, the Vario-Line has a wide range of options and accessories at your disposal. Thus, highly variable configuration options are created so that each vBoxX can be individually adapted to the needs of each respective client.

#### 100% Ecodesign

Up to 21% more efficient than required by the Ecodesign Regulation.

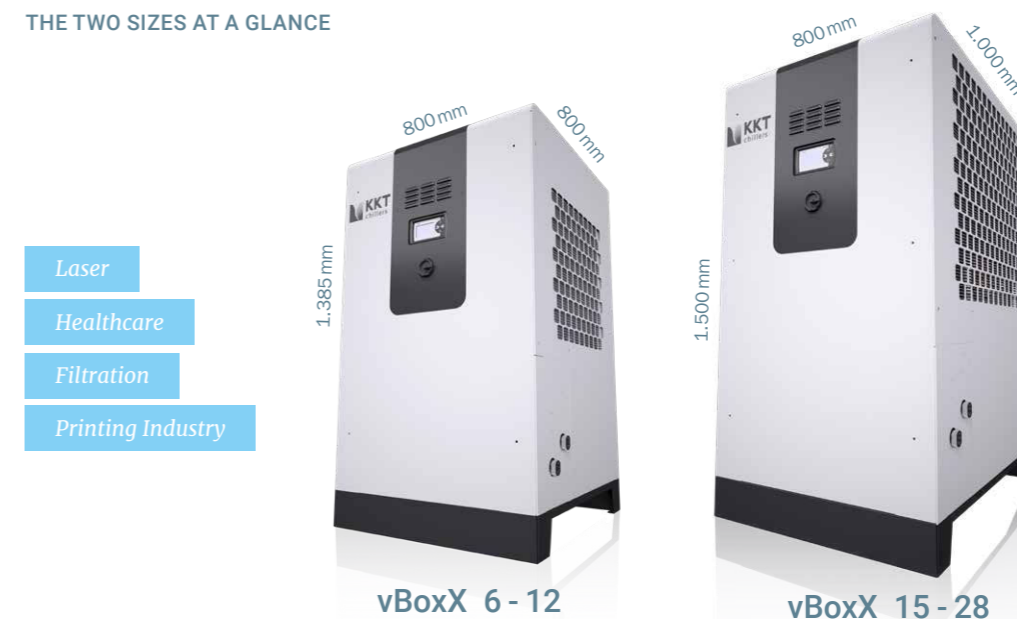
Make use of the Vario-Line's edge on technology!

### TECHNICAL DATA

Vario Line	vBoxX 6	vBoxX 8	vBoxX 10	vBoxX 12	vBoxX 15	vBoxX 18	vBoxX 24	vBoxX 28
Net cooling capacity <sup>1)</sup> $t_{w2} = 20^\circ\text{C}, t_{amb} = 32^\circ\text{C}$	6,2 kW	8,2 kW	10,2 kW	12,4 kW	15,3 kW	18,3 kW	24,5 kW	28,5 kW
Net cooling capacity <sup>1)</sup> $t_{w2} = 20^\circ\text{C}, t_{amb} = 40^\circ\text{C}$	6,2 kW	8,2 kW	10,2 kW	10,7 kW	14,3 kW	18,3 kW	24,3 kW	25,9 kW
Refrigerant	R410A							
GWP	2088							
Charge of refrigerant	1,6 kg		1,8 kg		2,5 kg	3,2 kg	3,4 kg	
CO <sub>2</sub> equivalent	3,3 t CO <sub>2</sub>		3,8 t CO <sub>2</sub>		5,2 t CO <sub>2</sub>	6,7 t CO <sub>2</sub>	7,1 t CO <sub>2</sub>	
Ambient temperature range	-25 °C - 50 °C							
Max. air flow rate	4.400 m <sup>3</sup> /h				8.200 m <sup>3</sup> /h			
Coolant	Water or Water/Glycol							
Tank volume Tank 1	100 l				160 l			
Coolant outlet temperature	-10 °C - 30 °C						5 °C - 30 °C	
Temperature constancy	± 0,5 K							
Coolant flow	1,1 m <sup>3</sup> /h	1,4 m <sup>3</sup> /h	1,8 m <sup>3</sup> /h	2,1 m <sup>3</sup> /h	2,6 m <sup>3</sup> /h	3,1 m <sup>3</sup> /h	4,8 m <sup>3</sup> /h	4,8 m <sup>3</sup> /h
Pumping pressure	3 bar							
Sound pressure level <sup>2)</sup>	54 dB(A)				59 dB(A)			
Operating voltage	400 V / 3 Ph / 50 Hz or 480 V / 3 Ph / 50 Hz or 400 V / 3 Ph / 60 Hz							
Power consumption <sup>1,1)</sup>	2,6 kW	3,4 kW	4,3 kW	5,1 kW	4,8 kW	5,5 kW	8,5 kW	9,9 kW
Protection class	IP 44							
Weight <sup>3)</sup>	265 kg				340 kg			
Water connection	Rp 1"				Rp 1 1/2"			
Length	800 mm				1.000 mm			
Width	800 mm				800 mm			
Height	1.385 mm				1.500 mm			

<sup>1)</sup> 50Hz, without pump | <sup>1,1)</sup> 50Hz, without pump, at operating point  $t_{w2} = 20^\circ\text{C}, t_{amb} = 40^\circ\text{C}$  | <sup>2)</sup> in 5m distance without reflection at full speed, without airfilter  
<sup>3)</sup> net, without charge of coolant

### THE TWO SIZES AT A GLANCE



- Laser
- Healthcare
- Filtration
- Printing Industry

