Adsorption Chiller
InvenSor LTC 90 e plus

invensor
making life cooler

Wide range of capacities and highly efficient

Cooling capacity between 30 and 105 kW – integrated hydraulics
The automatic capacity adjustment enables highly efficient operation with a cooling capacity range from 30-105 kW. Powerful high-efficiency pumps, mixers and valves are integrated ready for operation.

Easy set-up and automatic operation: InvenSor smart control
The integrated system controller offers a variety of options to adapt to each application and special customer requirements. Comprehensive measurement technology simplifies installation and commissioning and enables larger automatic control of the system. The machine is prepared for remote control.

Maintenance-free cooling chamber: InvenSor ActiVac®
The automatic pressure system developed by InvenSor ensures constant optimum operating pressure. Maintenance is needed only on the hydraulic components. The vacuum chamber is maintenance-free.

LTC 90 e plus: integrated hydraulics
The LTC 90 e plus combines all the basic components for thermal cooling in one device. It contains a properly controlled hydraulic unit: This means that all water circuits for the driving energy, cooling distribution and recooling can be connected directly.

LTC 90 e plus-FC: integrated hydraulics and free-cooling function
The FC model enables further energy savings as it can cool directly via the outside unit if outside temperatures are cold enough, without using heat to drive the chiller.

Dimensions of the machine
Length ..... 2,080 mm
Height ..... 1,940 mm
Width ..... 2,540 mm
Weight LTC 90 e plus ..... 4,500 kg
Weight LTC 90 e plus-FC ..... 4,515 kg

Connections
Nominal widths (EN1092-2)
Drive (2x) ..... DN 65 / PN16
Cooling (2x) ..... DN 80 / PN16
Recooling (2x) ..... DN 80 / PN16

General technical specifications								
Output range – cooling		kW | RT	30 – 105 | 8.5 – 29.9					
COP_{th} maximum			0.75					
Max. overpressure		bar	4					
Electrical Connection		V~ | Hz | A	230 | 50/60 | max. 28.5					
Approx. electrical power consumption		W	75					
Approx. electrical power consumption (incl. pumps)		W	2,685 | EER = 33 *(utilization of max. external pressure head)*					
Nominal data			**Cooling circuit**		**Recooling circuit**		**Drive circuit**	
Volume flows		l/h	19,800		34,200		18,900	
Temperatures – possible application		°C | °F	10-25 | 50-77		20-37 | 68-99		60-99 | 140-210	
Available ext. pressure head		mbar	400		400		300	
Specifications at higher driving temperatures		**"85°C (185°F) Point"**						
COP_{th}			0.6	**(0.64)**				
Performance (kW)	**(Hi-eFF)**	kW	88.5	**(78.0)**	235.5	**(199.5)**	148.5	**(121.5)**
Performance (RT)	**(Hi-eFF)**	RT	25.2	**(22.2)**	67.0	**(56.7)**	41.8	**(34.5)**
Temperatures – cooling system inlet (IN)		°C | °F	18.0 | 64.4		27.0 | 80.6		85.0 | 185.0	
Temperatures – cooling system outlet (OUT)		°C | °F	14.0 | 57.2		33.0 | 91,4		78.0 | 172.4	
Specifications at lower driving temperatures		**"72°C (162°F) Point"**						
COP_{th}			0.65	**(0.68)**				
Performance (kW)	**(Hi-eFF)**	kW	75.0	**(66.0)**	190.5	**(163.5)**	115.5	**(97.5)**
Performance (RT)	**(Hi-eFF)**	RT	21.3	**(18.8)**	54.2	**(46.5)**	32.8	**(27.7)**
Temperatures – cooling system inlet (IN)		°C | °F	18.0 | 64.4		27.0 | 80.6		72.0 | 161.6	
Temperatures – cooling system outlet (OUT)		°C | °F	14.5 | 58.1		32.0 | 89.6		66.5 | 151.7	

All specifications apply for operation with water in hydraulic circuits

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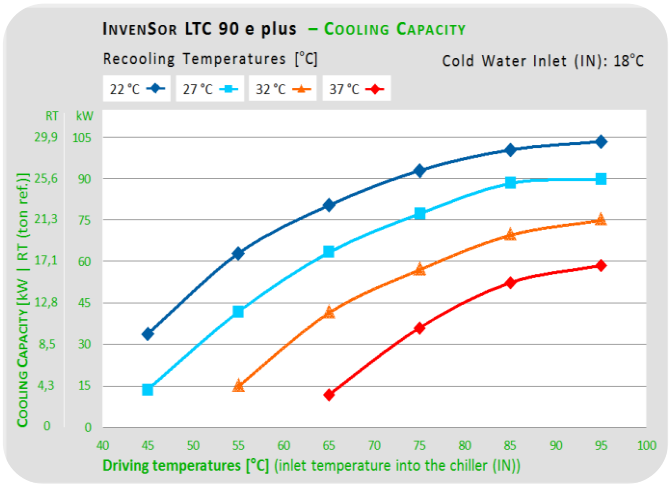
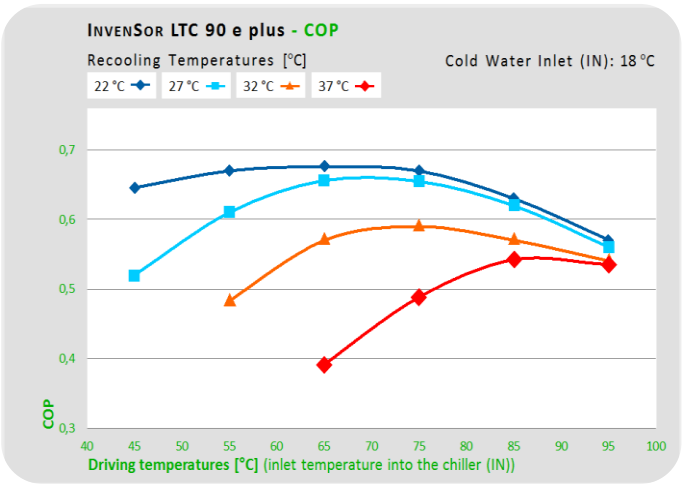
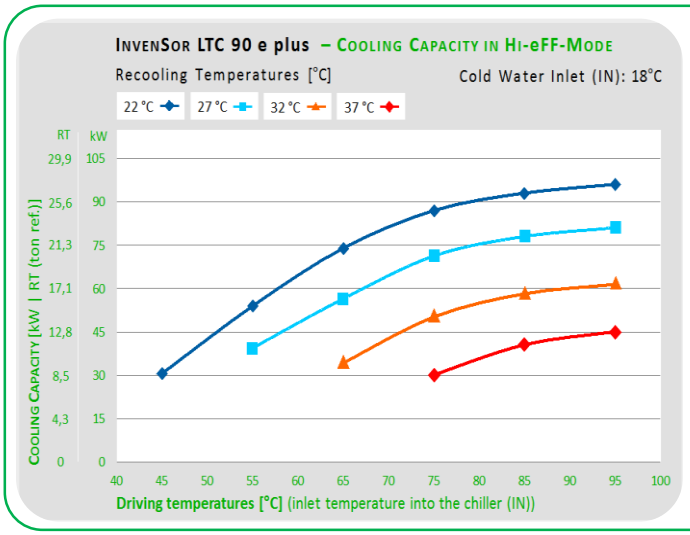
Technical specifications at different conditions

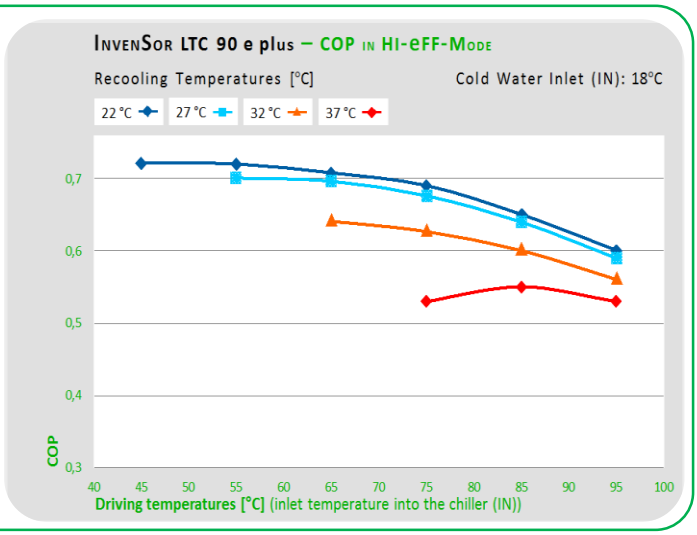
Capacity and COP at different temperatures of recooling and driving energy (nominal values)





Capacity and COP at different temperatures of recooling and driving energy (with high-efficiency-mode activated)





Capacity and COP at different temperatures of driving energy and chilled water (nominal values)