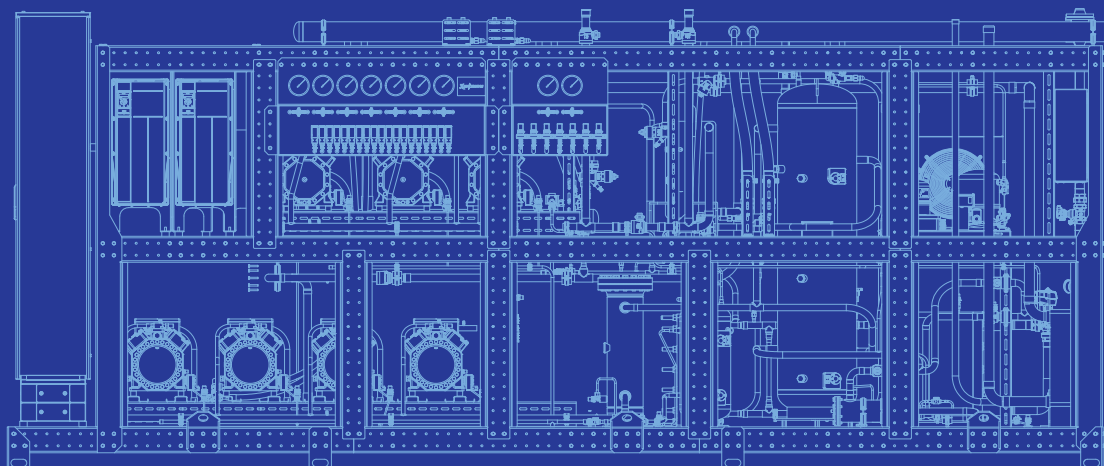




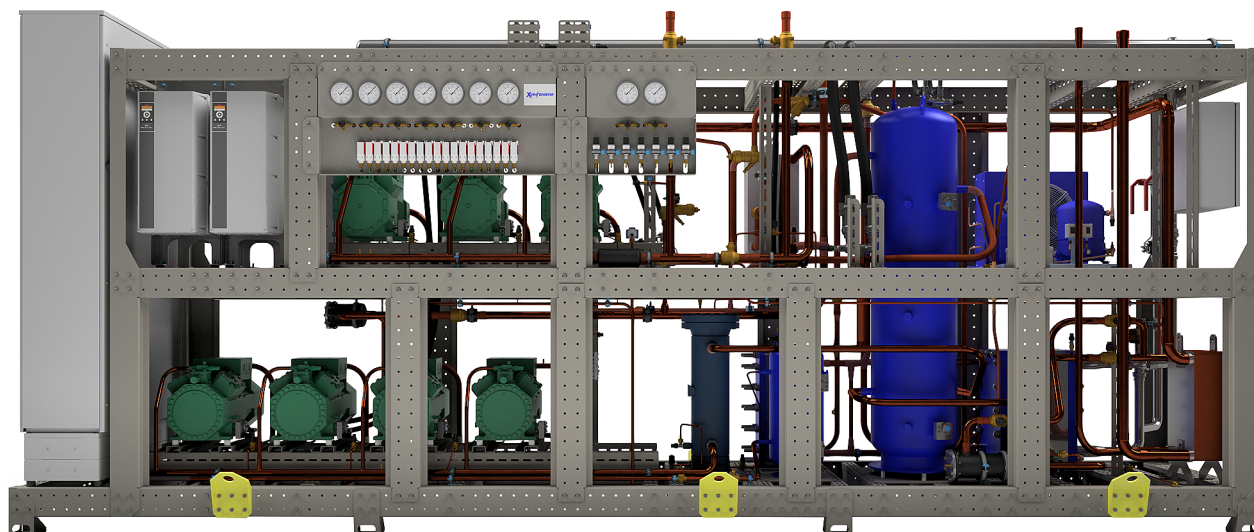
REFRIGERATION UNIT SERIES I-CU WITH NATURAL REFRIGERANT R744 (CO₂)

TRANSCRITICAL REFRIGERATION STATION





Transcritical refrigeration station



Model range of systems

	Mini	Midi	Maxi	Special
Cooling capacity MT + IT, kW	15-110	75-350	200-750	100-1000
Cooling capacity LT, kW	0-50	0-180	100-550	100-1000
Number of MT + IT compressors	2	2-6	2-8	–
Number of LT compressors	0-2	0-4	0-6	–
LT compressors, type	2-cylinder (max. 2CSL-6K)	2,4-cylinder (max. 4CSL-12K)	2,4-cylinder (max. 4NSL-30K)	2,4,6-cylinder
MT, IT compressors, type	4-cylinder (max. 4CTE-30K)	4-cylinder (max. 4CTEU-30LK)	6 cylinder (max. 6CTEU-50LK)	4,6 cylinder
Number of receivers	1	1	1 – 3	1 – 4
Maximum volume of the receiver, m ³	120	up to 200	up to 200	–
Standard pressures, atm.	30/52/120	30/52/120	30/52/120	30/52/120
Width, mm	800	1000	1150	–
Height, mm	2000	2000	2200	–
Length, mm	2000-3000	2000-7500	3000-9000	–
Weight, kg	1000-2000	2000-4000	2000-8000	up to 10000

Standard options

	Mini	Midi	Maxi	Special
LT liquid separator / recuperator (with LT compressors)	Standard	Standard	Standard	Standard
Liquid injection (with LT compressors)	Standard	Standard	Standard	Standard
Filter set	Standard	Standard	Standard	Standard
Shut-off valve set	Standard	Standard	Standard	Standard
Low CO ₂ Relay	Standard	Standard	Standard	Standard
Inverter to lead compressor	Standard	Standard	Standard	Standard
Danfoss controller	Standard	Standard	Standard	Standard
Preheater for flash gas line	Standard	Standard	Standard	Standard

Additional options

	Mini	Midi	Maxi	Special
Controller Carel, Wurm	+	+	+	+
2 inverters for LT compressors	—	+	+	+
2 inverters per MT compressors	—	+	+	+
2 inverters for IT compressors	—	+	+	+
Heat exchanger recuperation (high potential)	+	+	+	+
Heat exchanger recuperation (low grade)	—	+	+	+
Heat recovery pumping station	+	+	+	+
Permanent magnet motor for compressor with inverter	—	+	+	+
Liquid ejector	—	—	+	+
Gas ejector	—	—	+	+
Street performance	+	+	+	+
High level CO ₂ relay	+	+	+	+
Level sensor in the CO ₂ receiver	—	—	+	+
Gas cooler bypass (winter package)	—	+	+	+
Backup controller	—	+	+	+
High pressure redundant valve kit	—	+	+	+
Emergency CO ₂ cooler	+	+	+	+
Liquid separator MT	—	+	+	+
60 bar suction and receiver	—	+	+	+
Electricity meter	+	+	+	+
Air cooler between LT and MT	+	+	+	+
Liquid cooler between LT and MT	—	—	+	+
Additional cooler between LT and MT	—	+	+	+
Insulation of hot surfaces	+	+	+	+
Polymer coated receiver insulation	+	+	+	+
Liquid cooling module	—	+	+	+
Pumping station for liquid cooling module	—	+	+	+
Gas station	—	+	+	+
Electrical connection of the control panel	—	+	+	+

Global trend of production "INGENIUM"

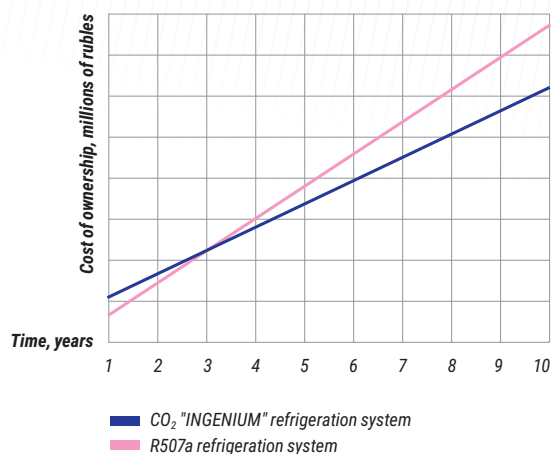
CO₂ technology



Our CO₂ competencies

- 19 objects
- Training center
- Introduction of modern technologies
- Own production of CO₂ units

Cost of ownership comparison chart for a 10-year period



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