The advantages of QUANTUM chillers

Superior technology becomes customer value

Feature QUANTUM	Value to the customer	Reason
TURBO COMPRESSOR	• Low operating costs • Low noise emissions • Low vibration	• Compressor design allows full load and part load EER • Chiller with minimal internal losses, high ESEER value • High efficiency = low energy loss = low noise emissions and vibration
OIL-FREE	• Clear, compact machine design • Low space requirement • Simple positioning • Low operating costs • High level of operational safety and on-site safety	• No components required for oil return (separators, lines, valves), therefore less malfunctions and/or leakages • No oil change required • Higher EER since heat transfer in refrigeration circuit is not impaired by oil • In case of leakages: no flammable oil, no hazard to groundwater
FREQUENCY CONVERTER ON EVERY COMPRESSOR	• Low operating costs • Low investment costs in system periphery • Steady cooling medium temperature	• Efficient in part load, infinite power control • Part load control without additional periphery in chilled water distribution net • QUANTUM control with high control accuracy
OPENFLASH ECONOMIZER	• Low operating costs • Small chiller footprint	• Increased EER values, especially in case of high temperature differences between cooling and heating medium • Optimizes refrigeration process and increases refrigeration capacity at unchanged chiller footprint
MULTI-COMPRESSOR DESIGN (UP TO 7 PARALLEL)	• High level of operational safety	• Redundancy (other compressors take over in case of failure) • Compressor change is possible during operation
FLOODED TUBE BUNDLE EVAPORATOR	• Low operating costs • Clear, compact chiller design • Low pressure loss on side of cooling medium	• Low temperature difference between cooling medium and refrigerant • Low superheating of refrigerant • High-performance finned tubes
DURABLE, HIGH-QUALITY FITTINGS AND SENSORS	• Low maintenance and servicing costs • High level of operational safety	• High quality and easy replacement of components – without interference in refrigeration circuit • Low susceptibility to errors or failures
CONTROL WITH PLC	• Adaptation to individual customer requirements • High level of operational safety	• Numerous control and regulation possibilities as standard solutions • High-quality industrial standard
START-UP CURRENT < 5 A	• Stable electrical mains supply	• No current peaks during start-up, staggered start-up
NO IDLE CURRENT COMPENSATION	• Low investment costs in system periphery	• No drop of power factor in part load
PROTECTION CLASS IP54	• High level of operational safety	• Touch guard, protection against spray water
MADE IN GERMANY	• High level of operational safety	• High-quality, professional workmanship • Compliance with quality safety standards

The remote diagnosis and monitoring system COOLCARE allows customers to further reduce their maintenance and servicing costs and ECODENSER helps them to utilise waste heat in an environmentally compatible and cost-cutting way.

QUANTUM

	Capacity range Technical features	Water or air?	Inside or outside?	Customer benefits	… in one word
X	• 300 kW–2500 kW • Refrigerant R-134a • High recooling temperatures	Water-cooled	Compact chiller for inside installation	Flexible application: • Dry and wet cooling • Heat recovery • Heat pump	All-round chiller
G	• 300 kW–2000 kW • Refrigerant R-1234ze with GWP < 1 • High recooling temperatures	Water-cooled	Compact chiller for inside installation	Sustainable and environmentally compatible: • meets all current environmental requirements • very small ecological footprint. In addition: all advantages of QUANTUM X	Green
W	• 400 kW–3800 kW • Refrigerant R-134a • Low recooling temperatures	Water-cooled	Compact chiller for inside installation	• Extremely efficient • Highest ESEER value • Maximum full load and part load EER	Efficiency chiller
A	• 300 kW–1600 kW • Refrigerant R-134a	Air-cooled	Compact chiller for outside installation	• No additional installations for heating medium circuit	Compact refrigeration
GA	• 300 kW–1000 kW • Refrigerant R-1234ze with GWP < 1	Air-cooled	Compact chiller for outside installation	Sustainable and environmentally compatible: • meets all current environmental requirements • very small ecological footprint In addition: all advantages of QUANTUM A	Green compact refrigeration
S	• 300 kW–2800 kW • Refrigerant R-134a • Machine unit inside + condenser outside	Air-cooled	Inside installation of a partial chiller unit	• Efficient overall systems depending on space situation • No additional pump for heating medium	Customized
GS	• 300 kW–2000 kW • Machine unit inside + condenser outside • Refrigerant R-1234ze with GWP < 1	Air-cooled	Inside installation of a partial chiller unit	• Efficient overall systems depending on space situation • No additional pump for heating medium	Customized
P	• 2500 kW–6000 kW • Refrigerant R-134a	Water-cooled	Compact chiller for inside installation	100 % adaptation to customer requirements	Customized
MARENUM	• Starting at 300 kW • Refrigerant R-134a	Water-cooled	Compact chiller for inside installation	Specially adapted to maritime requirements, civil and non-civil	Seaworthy

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Climate neutral printed, ID: 10876-1604-1018 | FSC® certified: C106855