Copeland stream compressors for R744 refrigeration

Designed for durability and best-in-class performance in CO_2-transcritical applications.

COPELAND
Engineered for Sustainability

Designed for durability and best-in-class performance in CO_2-transcritical applications

Stream series of 4 cylinder CO_2 compressors is the ideal solution for R744 medium temperature cascade and booster systems. It is characterized by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. All compressors are equipped with Copeland compressor electronics technology and offer the possibility to diagnose system-related problems faster or even before they occur.

The Stream series is the ideal choice for medium temperature transcritical applications as well as for low temperature cascade and booster applications requiring high standstill pressures up to 90 bar suction. The use of transcritical compressors in medium, transcritical side as well as on the low temperature, subcritical side ensures that in case of power outage, the refrigeration system features full resilience and no operation disruption.

Advanced features

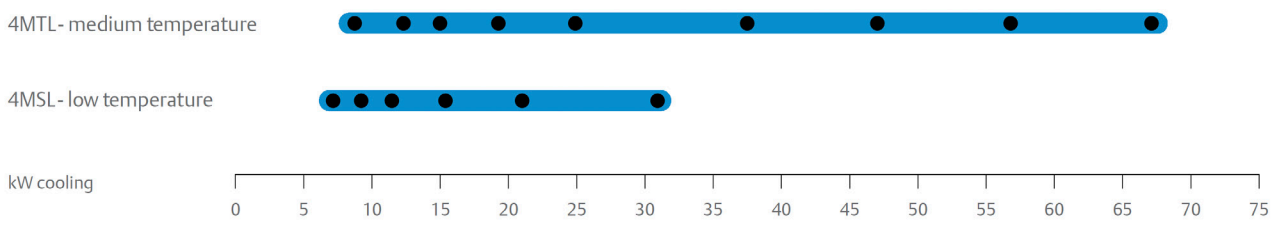
- Stepless capacity modulation via inverter from 25 to 70 Hz
- Copeland compressor electronics technology

Features and benefits

Stream provides flexibility in pack design and operation:

- Compact dimensions
- Integrated high pressure relief valve
- Discharge temperature protection
- Service valve 360° rotation for ease of piping design
- 2 sight glasses for mounting of oil management control and visual inspection
- One additional sight glass for oil visual inspection at run time
- One oil port for oil equalization in parallel system
- Oil splasher system ensuring lubrication at constant and variable speed

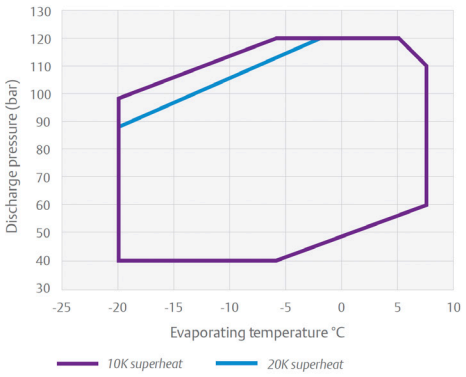
Stream compressor line-up



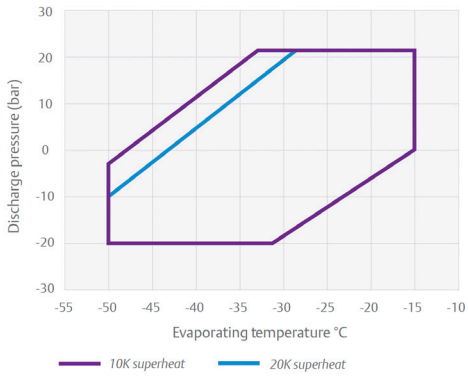
Conditions for 4MTL: EN12900 R744: Evaporating -10°C, Gas cooler exit: 35°C/ 90 bar, Superheat: 10K for medium temperature
Conditions for 4MSL: EN12900 R744: Evaporating -35°C, Condensing -5°C, Superheat 10K, Subcooling 0K for low temperature

Operating envelopes

4MTL transcritical applications

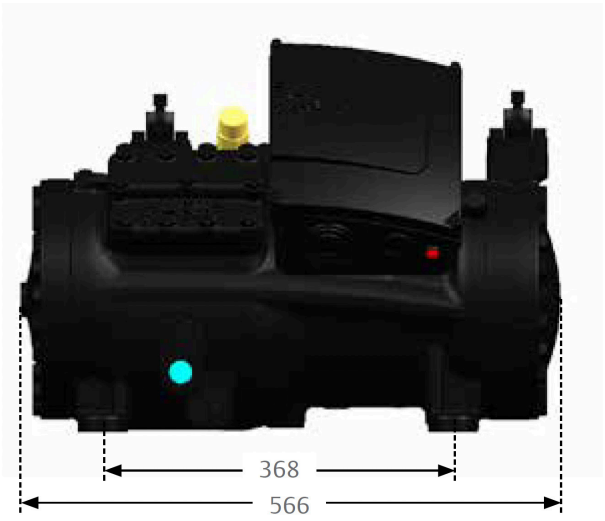


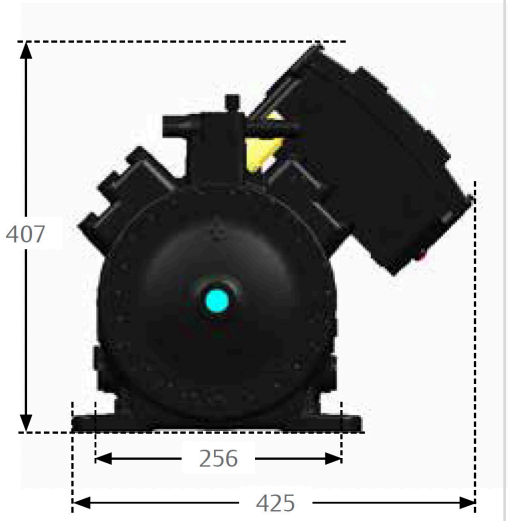
4MSL subcritical applications



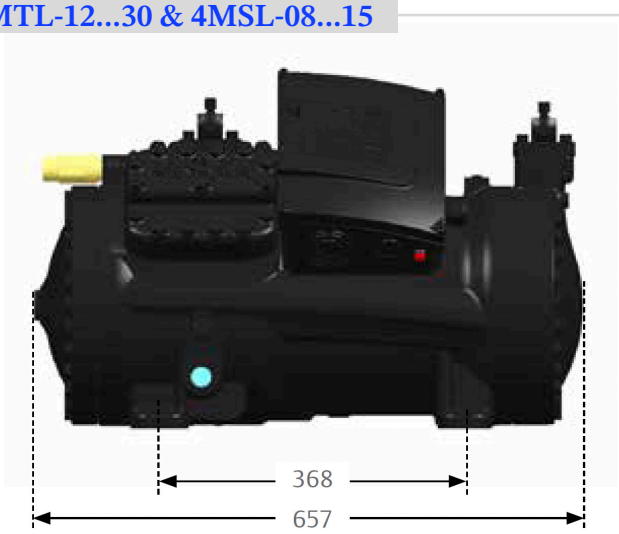
*Dimensions**

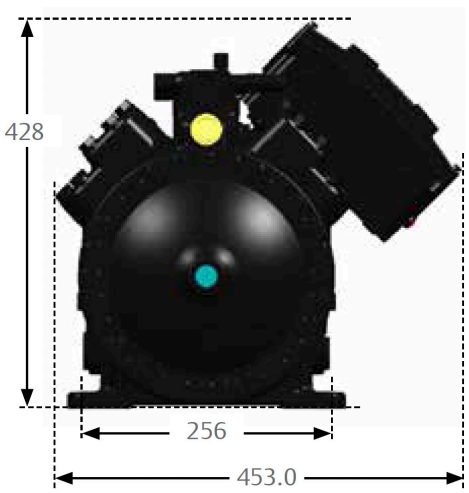
4MTL-05...09 & 4MSL-03...06



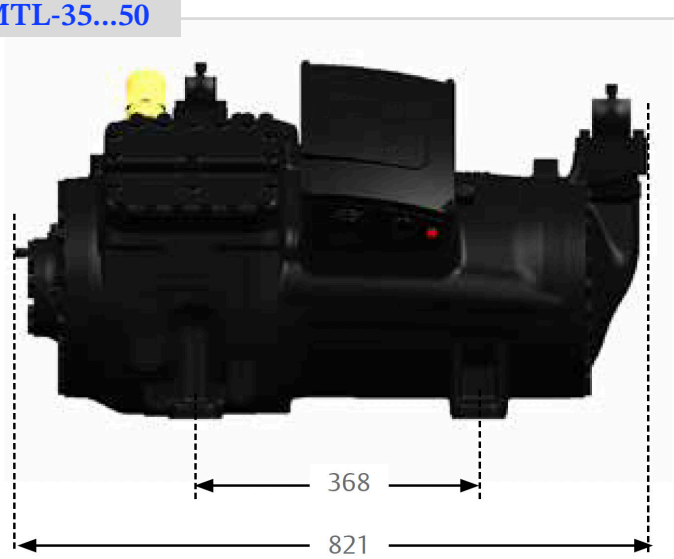


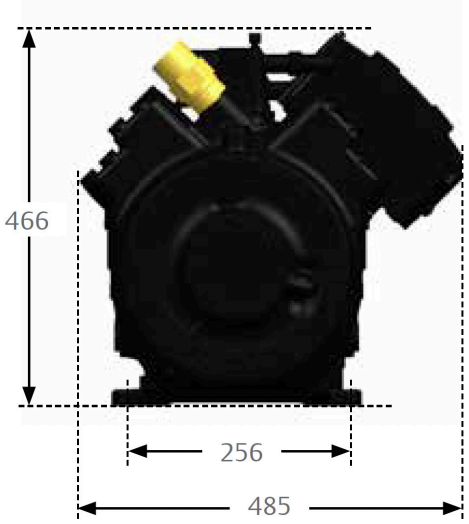
4MTL-12...30 & 4MSL-08...15





4MTL-35...50





* Dimensions in mm

Technical overview

R744	Nominal horsepower (hp)	Displacement (m3/h)	Capacity (kW)	COP	Oil Quantity (l)	Net Weight (kg)	Standstill pressure (high/ low side) bar
4MTL-05	5.0	4.6	8.8	1.62	1.5	123	135/90
4MTL-07	6.5	6.2	11.8	1.66	1.5	124	
4MTL-09	9.0	7.4	14.6	1.67	1.5	123	
4MTL-12	12.0	9.5	19.2	1.70	1.8	170	
4MTL-15	15.0	12.5	25.2	1.75	1.8	170	
4MTL-30	30.0	17.9	37.0	1.80	1.8	175	
4MTL-35	35.0	22.7	45.3	1.79	2.8	264	
4MTL-40	40.0	26.6	55.9	1.84	2.8	270	
4MTL-50	50.0	32.0	67.8	1.81	2.8	276	

Conditions: EN12900 R744: Evaporating -10°C, Gas cooler exit:35°C/90 bar, Superheat: 10K
** 3 Ph: 380-420V/ 50Hz

R744	Nominal horsepower (hp)	Displacement (m3/h)	Capacity (kW)	COP	Oil Quantity (l)	Net Weight (kg)	Standstill pressure (high/ low side) bar
4MSL-03	3.0	4.6	7.1	3.33	1.3	120	135/90
4MSL-04	4.6	6.2	9.7	3.51	1.3	120	
4MSL-04	4.6	6.2	9.7	3.51	1.3	120	
4MSL-08	8.0	9.5	15.9	3.60	1.8	170	
4MSL-12	12.0	12.5	21.0	3.72	1.8	170	
4MSL-15	15.0	18.0	31.0	3.84	1.8	170	

EN12900 R744 - LT: Evaporating -35°C, Condensing -5°C, Suction Superheat 10K, Subcooling 0K
** 3 Ph: 380-420V/ 50Hz

For more details, see **copeland.com/en-gb**

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