

Semi-Hermetic Reciprocating Compressors

Emerson Climate Technologies offers different ranges of semi-hermetic reciprocating compressors with distinct levels of performance and technical characteristics depending on the application requirements.

BRAND CHANGE



Brand Change

To harmonize Emerson’s semi-hermetic compressor ranges in terms of color and branding, Emerson is changing the product brand and the nomenclature of the semi-hermetic compressors for the K & L-Series and the Discus-range. In the future, we will start using the well-known ‘Copeland brand products’ label replacing “DWM Copeland” and change the compressor color from grey to black.

By this initiative, all compressor products from Emerson with both scroll and piston technology are using one and the same branding and color: Copeland™ brand products – painted in black. Our customers can better focus their marketing and communications efforts leading to improved brand and company recognition.

Over time, our product range will be streamlined to only one compressor model line. The reed valve compressors of the 2- to 8-cylinder S-series will gradually be replaced by the puck design valve compressors of our Stream and Discus series. This results in reduced inventory lines at our distribution partners. Emerson Climate Technologies will provide you with a full model list to support you in the transition phase.

The S-Series:
Its design is based on traditional “reed” valve plates similar to what is used in reciprocating compressors offered by other manufacturers. The performance of such compressors meets basic market requirements but cannot compete with Discus compressors in terms of efficiency. The S-Series ranges from 1.5 to 70 hp and is composed of K, L, 2S, 3S, 4S and 8S presented in this catalogue.



S-Series 6 Cylinder

The Discus Range:
It is broadly recognized as the most efficient compressor whatever the running condition. This range is mainly used in refrigeration medium and low temperature applications where system efficiency is a priority for the end-user. The key difference between Discus and other reciprocating compressors lies in its valve plate design. Traditional “reed” valves are replaced by ‘puck’ type valves that are integrated in the valve plate. This special design eliminates the dead volume at the



Discus 2 Cylinder

end of the compression and allows for the highest compressor efficiency. To date, no other reciprocating compressor is able to match Discus in terms of performance. Available from 4 to 60 hp, they are referred to as 2D, 3D, D4D, D6D and 8D in this catalogue.

The Stream Series:

Emerson Climate Technologies has introduced Stream, a brand new line of semi-hermetic 4 and 6 cylinder compressors. The series provides best in class performance for today’s HFC-based and uprising natural and low GWP refrigerants, significantly reducing cost of operation and environmental impact compared to competing products.

The range is made of 4 and 6 cylinder models, available for inverter applications, and 4 and 6 cylinder digital models for continuous capacity modulation. The compressors can be fitted with a dedicated sound shell for sound sensitive applications.

The new Emerson Climate Technologies line-up of 4 cylinder compressors for CO₂-transcritical applications is the ideal solution for R744 medium temperature cascade and booster systems. It is characterised by a design pressure of 135 bar. Refrigerant flow and heat transfer have been optimized for best performance. In combination with the CO₂-subcritical scroll for the low temperature refrigeration side, Emerson Climate Technologies offers the most energy efficient package available on the market today.

With advanced protection and diagnostics features for system reliability, reduced service costs and increased equipment uptime, the Stream series is built to last in today’s modern changing world.



Stream 4 Cylinder



Stream 6 Cylinder



Stream Digital 4 Cylinder



Stream Digital 6 Cylinder



Stream 4 Cylinder for R744



Sound Shell for Stream

Emerson CoreSense™ Diagnostics for Refrigeration

Emerson CoreSense Diagnostics is an innovative technology for Copeland Stream refrigeration compressors. It goes beyond compressor protection by assisting in system diagnosis and optimization. Providing service engineers with detailed information at the right time, system-related problems can be diagnosed faster or even before they occur. Supermarket operators benefit from increased system uptime, reduction in food loss and reduced maintenance costs.

Technical Specification

- Power supply 120/240V AC, 24V AC
- Front end: 2 x LED, green/red, yellow
- Communication protocol (Modbus®RTU)
- Bus to system controller: RS 485, 3-wire, (+, GND,-)
- Discharge temperature sensor
- Current sensor and sensor module
- Flash memory
- Alarm reset button
- IP 54

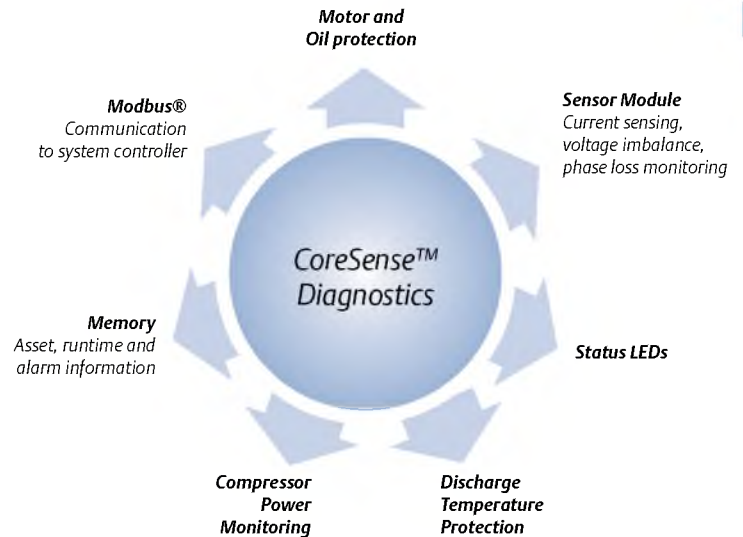
Benefits

- Reduce applied system costs
- Manage on-site compressor data
- Facilitate predictive maintenance & advanced diagnostics
- Reduce maintenance costs
- Increase system uptime / reduce food loss
- Power consumption monitoring

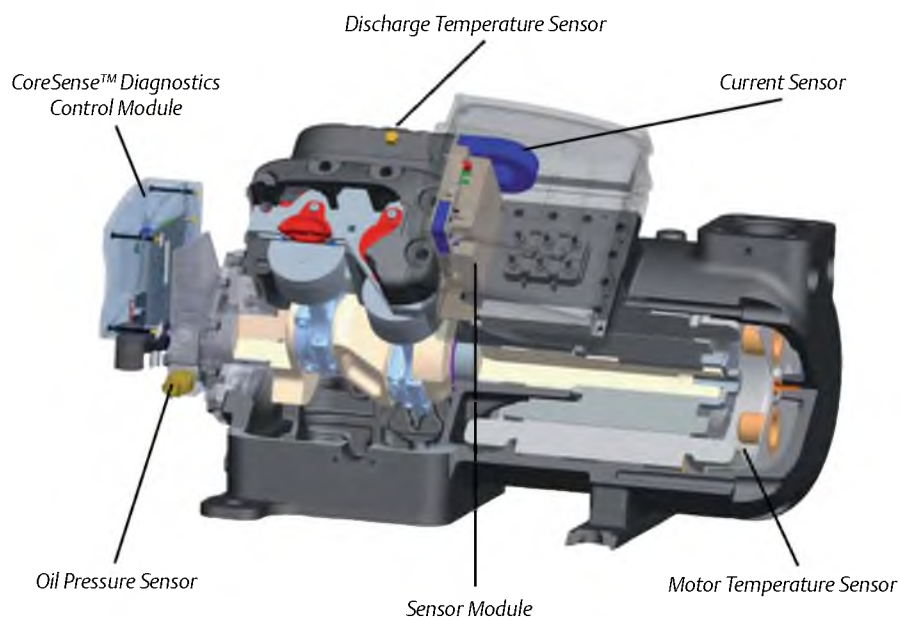


Emerson CoreSense Diagnostics for Refrigeration. Ensuring Best Performance over Full Lifetime.

Functions



Scope of Supply



K and L Reciprocating Compressor Range

Small 2-cylinder semi-hermetic reciprocating compressors for medium and low temperature refrigeration applications and transport refrigeration.

Designed on the principle of standard reed valve type technology, these compressors feature an internal oil pump that guarantees optimum reliability in all operating conditions.

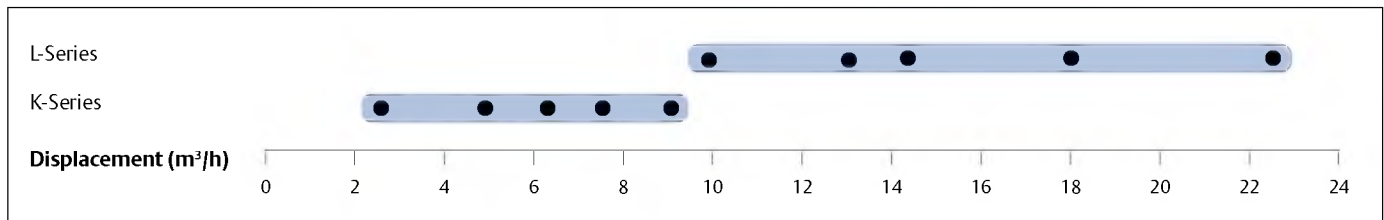
The K-series ranges from 0.5 to 2 hp and the L-series from 2 to 4 hp and provide cooling capacities from 1.5 to 9 kW in medium temperature (R404A, -10/45°C) and 0.5 to 3.5kW in low temperature (R404A, -35/40°C).

These compressors are qualified for R404A, R507, R134a and R22.



K-Series compressor

K & L Compressor Line-up



Conditions EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

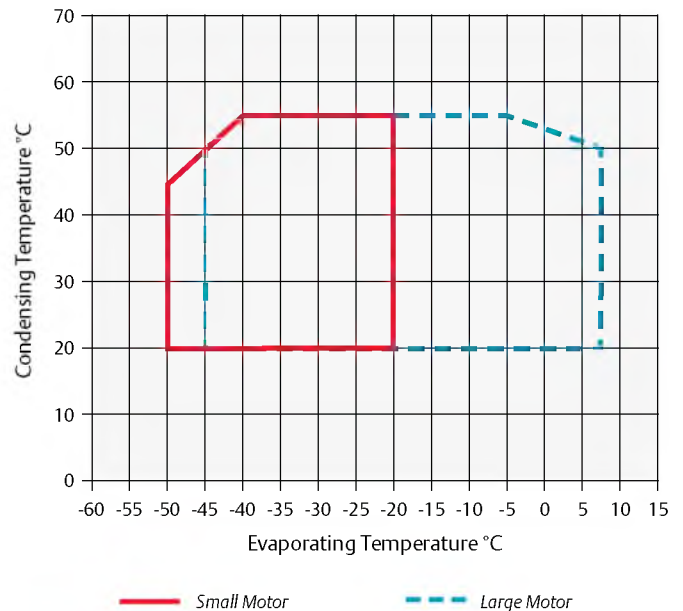
Features and Benefits

- Large operating envelope from 5°C to -45°C evaporating and up to 55°C condensing
- Two motor sizes per displacement, optimized for different applications
- Compact and light compressors
- Ideal for condensing unit or transport applications
- Integrated oil pump for maximum reliability

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)/ High Side PS 28 bar (g)

Operating Envelope R404A



Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1 m (dBA) **
										3 Ph *	3 Ph *	3 Ph *	
KM-7X	0.8	4.0	1.8	1.9			0.65	365/235/280	39	EWL	2.4	12.2	45
KJ-10X	1.0	5.1	2.5	1.9			0.65	365/235/280	39	EWL	3	16	45
KSJ-15X	1.5	6.3	3.2	1.9			0.65	365/235/280	40	EWL	3	20	53
KL-20X	2.0	7.4	3.7	2.1			0.65	365/235/280	39	EWL	4	20	
KSL-20X	2.0	9.1	4.6	1.9			0.65	365/235/280	40	EWL	5	20	
LE-20X	2.0	9.9	4.6	2.2			2.00	470/330/385	78	EWL	6	38	51
LF-30X	3.0	12.9	6.5	2.2			2.00	470/330/385	80	EWL	7	53	51
LJ-30X	3.0	14.5	7.2	2.1			2.00	470/330/385	83	EWL	8	53	52
LL-40X	4.0	18.2	9.2	2.2			2.00	470/330/385	87	EWL	10	69	63
KM-5X	0.5	4.0			0.6	1.1	0.65	365/235/280	39	EWL	2	12	45
KJ-7X	0.8	5.1			0.8	1.1	0.65	365/235/280	39	EWL	2	12	45
KSJ-10X	1.0	6.3			1.0	1.1	0.65	365/235/280	40	EWL	3	16	50
KL-15X	1.5	7.4			1.2	1.2	0.65	365/235/280	39	EWL	3	20	47
LF-20X	2.0	12.9			1.6	1.1	2.00	470/330/385	80	EWL	5	38	51
LJ-20X	2.0	14.5			1.9	1.2	2.00	470/330/385	78	EWL	6	38	52
LL-30X	3.0	18.2			2.6	1.3	2.00	470/330/385	85	EWL	7	53	52
LSG-40X	4.0	22.5			3.5	1.4	2.00	470/330/385	77	EWL	9	69	63

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature 40°C															
R404A		Cooling Capacity (kW)						R404A		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
KM-5X	0.2	0.6	0.8	1.3				KM-5X	0.3	0.5	0.6	0.7			
KM-7X	0.2	0.5	0.8	1.3	2.0	2.5	3.6	KM-7X	0.3	0.5	0.6	0.8	0.9	0.9	1.0
KJ-10X	0.3	0.7	1.0	1.8	2.8	3.4	4.9	KJ-10X	0.4	0.7	0.8	1.0	1.2	1.3	1.4
KJ-7X	0.4	0.8	1.1	1.8				KJ-7X	0.5	0.7	0.8	1.0			
KSJ-10X	0.5	1.0	1.4	2.3				KSJ-10X	0.7	0.9	1.1	1.3			
KSJ-15X	0.5	1.0	1.4	2.3	3.5	4.2	6.1	KSJ-15X	0.6	0.9	1.0	1.3	1.6	1.7	1.8
KL-15X	0.6	1.2	1.6	2.6				KL-15X	0.8	1.0	1.2	1.5			
KL-20X	0.4	1.1	1.5	2.6	4.1	5.0		KL-20X	0.6	0.9	1.1	1.4	1.7	1.8	
KSL-20X	0.7	1.5	2.0	3.3	5.1	6.1		KSL-20X	0.8	1.2	1.4	1.9	2.3	2.5	
LE-20X		1.1	1.7	3.2	5.1	6.4	9.4	LE-20X		1.0	1.2	1.6	2.0	2.2	2.5
LF-20X		1.6	2.3	4.0				LF-20X		1.4	1.7	2.2			
LF-30X	0.7	1.9	2.6	4.6	7.2	8.8	12.8	LF-30X	1.0	1.6	1.9	2.4	2.9	3.1	3.4
LJ-20X		1.9	2.8	5.0				LJ-20X		1.6	1.9	2.6			
LJ-30X	0.8	2.1	2.9	5.1	8.0	9.8	14.2	LJ-30X	1.1	1.8	2.1	2.8	3.3	3.6	3.9
LL-30X	0.9	2.6	3.7	6.5				LL-30X	1.1	2.0	2.4	3.3			
LL-40X	1.1	2.7	3.7	6.4	10.2	12.6	18.4	LL-40X	1.4	2.2	2.6	3.3	4.0	4.3	4.8
LSG-40X	1.4	3.5	4.8	8.2				LSG-40X	1.6	2.6	3.1	4.1			

Suction Gas Return 20°C / subcooling OK
 High Discharge Temp - Additional cooling required

Condensing Temperature 40°C															
R134a		Cooling Capacity (kW)						R134a		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15
KM-5X		0.7	1.2	1.5	2.3	2.8		KM-5X		0.5	0.6	0.6	0.6	0.7	
KJ-7X		0.9	1.6	2.0	3.0	3.7		KJ-7X		0.6	0.7	0.7	0.8	0.9	
KSJ-10X		1.2	2.0	2.5	3.8	4.6		KSJ-10X		0.7	0.8	0.9	1.0	1.0	
KL-15X		1.4	2.3	2.8	4.3	5.2		KL-15X		0.8	1.0	1.1	1.3	1.3	
KSL-15X		1.7	2.8	3.5	5.3	6.5		KSL-15X		1.0	1.3	1.4	1.6	1.7	
KSL-20X		1.7	2.9	3.7	5.6	6.7		KSL-20X		1.0	1.2	1.4	1.6	1.6	
LE-20X		1.5	2.8	3.6	5.6	6.9		LE-20X		1.0	1.3	1.4	1.5	1.6	
LF-20X		2.2	3.8	4.9	7.5	9.1		LF-20X		1.2	1.6	1.7	1.9	2.0	
LJ-20X		2.6	4.3	5.4	8.3	10.1		LJ-20X		1.6	1.9	2.1	2.4	2.5	
LL-30X		3.2	5.5	7.0	10.9	13.2		LL-30X		1.9	2.4	2.6	3.0	3.1	
LSG-40X		4.3	7.2	9.0	13.7	16.6		LSG-40X		2.3	2.9	3.2	3.7	3.9	

Suction Gas Return 20°C / Subcooling OK
 High Discharge Temp - Additional cooling required

Capacity Data

Condensing Temperature 40°C															
R22		Cooling Capacity (kW)						R22		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
KM-5X		0.4	0.6	1.2	1.9	2.3		KM-5X		0.4	0.5	0.7	0.8	0.8	
KM-75/-7X		0.4	0.6	1.2	1.9	2.4	3.5	KM-75/-7X		0.4	0.5	0.7	0.8	0.8	0.9
KJ-10X		0.7	0.9	1.6	2.6	3.2	4.7	KJ-10X		0.6	0.7	0.9	1.0	1.1	1.2
KJ-75/-7X	0.3	0.7	0.9	1.6	2.5	3.1		KJ-75/-7X	0.4	0.6	0.7	0.9	1.0	1.1	
KSJ-10X	0.4	0.9	1.2	2.0	3.2	3.9		KSJ-10X	0.5	0.8	0.9	1.1	1.3	1.4	
KSJ-15X		0.9	1.2	2.1	3.3	4.0	5.7	KSJ-15X		0.8	0.9	1.1	1.3	1.4	1.5
KL-15X	0.5	1.0	1.4	2.4	3.7	4.6		KL-15X	0.6	0.9	1.1	1.3	1.5	1.7	
KSL-20X		1.3	1.8	3.0	4.7	5.7		KSL-20X		1.1	1.3	1.6	1.9	2.1	
LE-201/-20X		1.1	1.6	2.9	4.8	6.1	9.1	LE-201/-20X		1.1	1.3	1.7	2.0	2.1	2.3
LF-201/-20X	0.6	1.6	2.3	4.1	6.7	8.3		LF-201/-20X	1.0	1.4	1.7	2.2	2.7	2.9	
LF-301/-30X		1.6	2.3	4.1	6.8	8.4	12.2	LF-301/-30X		1.4	1.7	2.2	2.6	2.8	3.0
LJ-201/-20X	0.8	1.9	2.7	4.8				LJ-201/-20X	1.1	1.6	1.9	2.5			
LJ-301/-30X		1.9	2.6	4.8	7.8	9.6	13.8	LJ-301/-30X		1.6	1.9	2.5	3.0	3.2	3.5
LL-301/-30X	1.1	2.5	3.5	6.2				LL-301/-30X	1.4	2.0	2.4	3.1			
LL-401/-40X		2.5	3.5	6.2	9.8	12.0	17.2	LL-401/-40X		2.0	2.4	3.0	3.7	3.9	4.3
LSG-401/-40X	1.6	3.5	4.8	7.9				LSG-401/-40X	1.8	2.7	3.2	4.0			

Suction Gas Return 20°C / Subcooling OK
 High Discharge Temp - Additional cooling required

Discus™ Reciprocating Compressor Range

From 2 to 8 cylinder semi-hermetic reciprocating compressors for medium / low temperature refrigeration applications.



The key difference between Discus and traditional reciprocating technologies lies in the valve plate design. The Discus valve plate allows gas to flow into the cylinders with a minimum heat gain, while suction cavities are designed to smoothly route the gas to minimize losses. These effects lead to:

- Superior cooling capacity due to no re-expansion volume
- Up to 10% higher efficiency compared to conventional “cost-effective” reed type compressors
- Lower operating costs for the end-user

The Discus ranges from 5 to 60 hp and provide cooling capacities from 8 to 96 kW in medium temperature (R404A, -10/45°C) and 2 to 35 kW in low temperature (R404A, -35/40°C). These compressors are qualified for R404A, R507, R134a and R22. All Discus compressors are designed to deliver maximum performance and reliability:

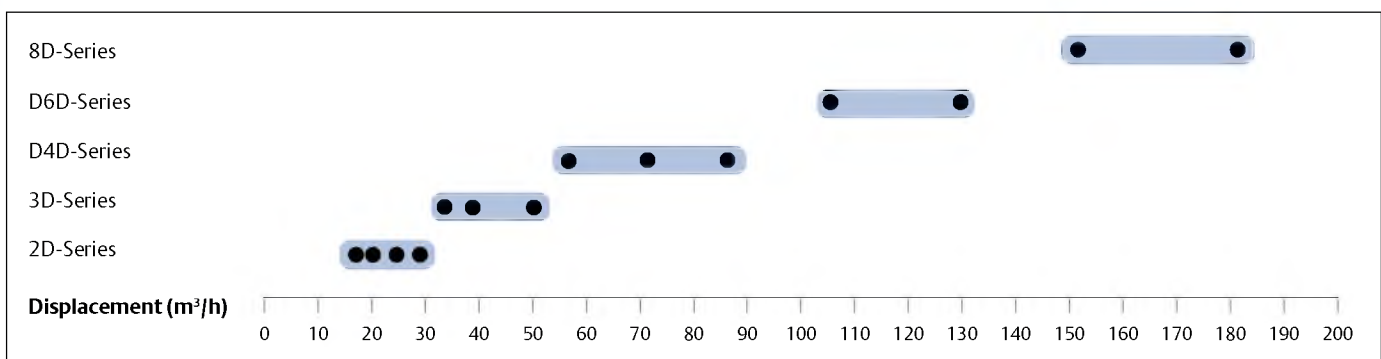
- Discus “puck” valve integrated into the valve plate for highest performance whatever the operating condition
- Positive displacement high flow oil pump guarantees high oil feeding pressure for good lubrication and bearings’ cooling



Discus compressor

- PTFE coated bearings for especially low friction and good protection at start up
- Electronic motor protection module
- Availability of two motor sizes per displacement. The small motor covers all refrigeration applications while the large motor can be used in comfort or inverter applications

Discus Compressor Line-up



Conditions: EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

Features and Benefits

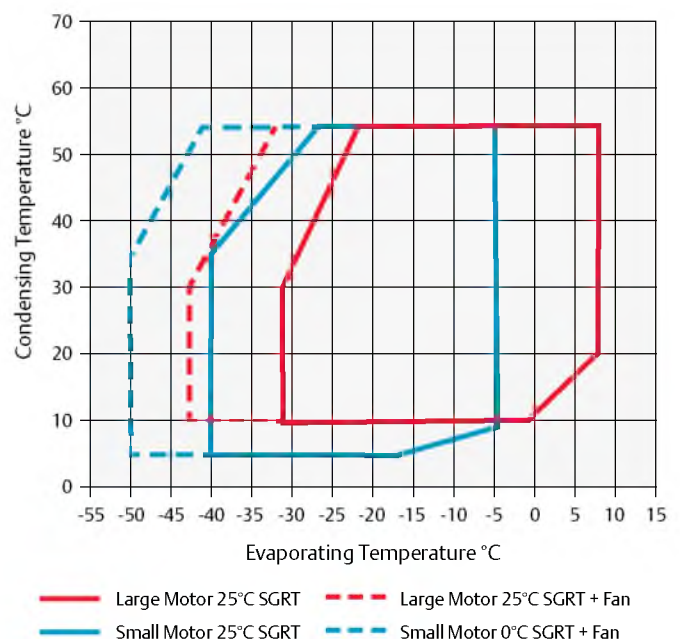
- Highest level of efficiency available on the market, whatever the refrigerant and operating condition
- Integrated oil pump and Electronic Oil Pressure Switch OPS2 for maximum reliability
- Two motor sizes per displacement, optimized for different applications
- Large operating envelope that allows medium and low temperature applications to be covered by one single model with condensing limit as low as 5°C
- Provide cooling capacity modulation either by cylinder head blocked suction or with use of frequency inverters from 25 to 60Hz
- Multi-refrigerant compressor range – one model to cover all standard refrigerants

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)/ High Side PS 28 bar (g)

Refer to Emerson's Select 7.7 selection software for individual model operating envelopes and other refrigerants.

Operating Envelope R404A



Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @1 m (dBA) **
										3 Ph*	3 Ph*	3 Ph*	
2DC-50X	5.0	16.8	7.9	2.3	2.1	1.2	2.30	590/330/470	132	AWM	9	55	65
2DD-50X	5.0	19.3	9.7	2.4	2.8	1.3	2.30	590/330/470	132	AWM	10	55	65
2DL-40X	4.0	23.7	12.0	2.3	3.8	1.4	2.30	590/330/470	131	AWM	11	55	64
2DL-75X	7.5	23.7	12.2	2.4	3.6	1.3	2.30	590/330/470	136	AWM	14	70	66
2DB-50X	5.0	28.0	14.6	2.3	4.6	1.4	2.30	590/330/470	131	AWM	13	55	64
2DB-75X	7.5	28.0	14.9	2.4	5.0	1.5	2.30	590/330/470	136	AWM	16	70	66
3DA-50X	5.0	32.2	16.3	2.2	5.7	1.4	3.70	655/370/480	146	AWM	16	55	69
3DA-75X	7.5	32.2	17.2	2.4	5.2	1.3	3.70	680/370/480	152	AWM	18	106	70
3DC-100X	10.0	38.0	20.6	2.5	6.5	1.4	3.70	680/370/480	164	AWM	21	121	70
3DC-75X	7.5	38.0	19.8	2.3	7.0	1.4	3.70	655/370/480	150	AWM	18	70	71
3DS-100X	10.0	49.9	27.1	2.3	9.6	1.5	3.70	680/370/480	162	AWM	24	121	71
3DS-150X	15.0	49.9	27.5	2.3	9.1	1.4	3.70	710/370/490	166	AWM	29	129	71
8DH-500X	50.0	151.0	81.7	2.4	26.3	1.4	7.60	835/475/610	330	AWM	88	458	79
8DL-370X	37.0	151.0	81.4	2.3	28.0	1.4	7.60	835/475/610	323	AWM	74	349	77
8DJ-600X	60.0	181.0	98.0	2.3	32.7	1.4	7.60	835/475/610	331	AWM	108	476	80
8DT-450X	45.0	181.0	96.0	2.3	34.7	1.5	7.60	835/475/610	335	AWM	91	441	78
Previous Generation - Replacement by Stream compressors													
D4DF-100X	10.0	56.0	29.1	2.3	9.7	1.4	3.30	680/535/605	179	AWM	27	105	76
D4DA-200X	20.0	56.0	30.2	2.4	9.2	1.4	3.30	650/535/495	196	AWM	33	175	72
D4DH-250X	25.0	70.8	38.6	2.4	12.2	1.4	3.30	670/535/495	209	AWM	42	199	72
D4DL-150X	15.0	70.8	38.4	2.3	13.1	1.4	3.30	680/535/605	205	AWM	35	156	77
D4DT-220X	22.0	84.7	46.5	2.3	16.2	1.5	3.30	700/535/795	215	AWM	43	175	78
D4DJ-300X	30.0	84.7	46.6	2.3	15.4	1.4	3.30	690/535/495	214	AWM	53	221	74
D6DH-350X	35.0	160.0	56.6	2.3	18.7	1.4	3.30	760/580/490	246	AWM	64	304	76
D6DL-270X	27.0	106.0	54.4	2.2	19.0	1.4	3.30	740/580/490	242	AWM	54	199	80
D6DJ-400X	40.0	127.0	68.1	2.3	22.3	1.4	6.80	760/580/545	261	AWM	83	304	76
D6DT-320X	30.0	127.0	66.2	2.2	23.6	1.4	6.80	740/580/700	261	AWM	62	255	81

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature 40°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	Model	-45	-35	-30	-20	-10	-5		5	Model	-45	-35	-30	-20	-10
2DC-50X		2.1	3.0	5.4	8.8	11.0	16.5	2DC-50X		1.7	2.1	2.7	3.3	3.6	3.8
2DD-50X		2.8	3.9	6.8	10.8	13.2	19.3	2DD-50X		2.2	2.5	3.3	3.9	4.1	4.3
2DL-40X	1.2*	3.8	5.1	8.5	13.2	16.2		2DL-40X	1.8*	2.7	3.2	4.1	4.9	5.3	
2DL-75X		3.6	4.9	8.4	13.4	16.5	24.1	2DL-75X		2.7	3.1	4.0	4.8	5.1	5.5
2DB-50X	1.7*	4.6	6.2	10.4	16.0	19.4		2DB-50X	2.2*	3.2	3.8	4.9	5.9	6.3	
2DB-75X		5.0	6.6	10.7	16.4	20.0	28.8	2DB-75X		3.4	3.9	5.0	5.9	6.3	6.9
3DA-50X	2.0*	5.7	7.4	11.9	17.9	21.7		3DA-50X	2.7*	4.0	4.7	5.9	6.9	7.3	
3DA-75X		5.2	7.2	12.2	18.9	23.1	33.4	3DA-75X		3.9	4.6	5.9	6.9	7.3	7.6
3DC-100X		6.5	8.9	14.7	22.7	27.6	39.7	3DC-100X		4.5	5.3	6.8	7.9	8.4	8.7
3DC-75X	2.8*	7.0	9.1	14.4	21.6	26.1		3DC-75X	3.4*	4.9	5.6	7.0	8.2	8.7	
3DS-100X	4.0*	9.6	12.5	19.8	29.5	35.5		3DS-100X	4.7*	6.5	7.5	9.4	11.1	11.7	
3DS-150X		9.1	12.2	19.9	30.2	36.5	51.9	3DS-150X		6.3	7.4	9.4	11.1	11.6	12.0
8DH-500X		26.3	35.7	58.8	89.3	108.0	153.5	8DH-500X		19.1	22.1	27.9	32.8	34.7	37.3
8DL-370X	10.8*	28.0	36.9	59.3	88.8	106.5		8DL-370X	13.2*	19.5	22.4	27.9	32.7	34.7	
8DJ-600X		32.7	44.0	71.3	107.0	128.5	181.0	8DJ-600X		23.0	26.8	33.7	39.5	41.9	45.5
8DT-450X	14.2*	34.7	44.9	70.6	105.0	125.5		8DT-450X	16.9*	23.7	27.2	34.0	40.2	42.8	
Previous Generation - Replacement by Stream compressors															
D4DF-100X	3.5*	9.7	12.8	20.9	32.0	38.7		D4DF-100X	4.4*	6.8	8.0	10.2	12.0	12.7	
D4DA-200X		9.2	12.8	21.6	33.2	40.4	57.9	D4DA-200X		6.5	7.8	10.1	11.9	12.6	13.3
D4DH-250X		12.2	16.6	27.6	42.4	51.6	73.9	D4DH-250X		8.8	10.3	13.1	15.4	16.3	17.5
D4DL-150X	5.1*	13.1	17.2	27.6	41.7	50.5		D4DL-150X	6.2*	9.1	10.5	13.3	15.6	16.6	
D4DT-220X	6.6*	16.3	21.2	33.7	50.7	61.1		D4DT-220X	7.7*	11.2	13.0	16.2	19.0	20.1	
D4DJ-300X		15.4	20.7	33.8	51.0	61.5	86.9	D4DJ-300X		10.6	12.5	15.9	18.8	19.9	21.4
D6DL-270X	7.5*	19.1	24.8	39.7	59.8	72.1		D6DL-270X	9.2*	13.6	15.7	19.8	23.4	24.9	
D6DH-350X		18.8	25.2	41.0	61.9	74.7	106.0	D6DH-350X		13.0	15.3	19.5	22.9	24.2	26.1
D6DJ-400X		22.3	30.0	49.1	74.8	90.7	130.0	D6DJ-400X		15.8	18.6	23.7	28.0	29.9	32.8
D6DT-320X	9.0*	23.6	30.9	48.9	72.3	86.2		D6DT-320X	11.3*	16.4	18.9	23.6	27.9	29.8	

Suction Gas Return 20°C / Subcooling OK

*Suction Superheat 10K / Subcooling OK

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	Model	-30	-20	-10	-5	5	10		15	Model	-30	-20	-10	-5	5
2DC-50X		4.1	7.4	9.6	15.1	18.5		2DC-50X		2.1	2.7	2.9	3.3	3.3	
2DD-50X		4.9	8.7	11.2	17.4	21.3		2DD-50X		2.5	3.1	3.4	3.8	3.9	
2DL-75X		6.3	10.9	13.9	21.5	26.2		2DL-75X		3.1	3.9	4.2	4.8	4.9	
2DB-75X		8.3	13.5	16.9	25.4	30.7		2DB-75X		3.9	4.7	5.1	5.7	5.8	
3DA-75X		9.2	15.4	19.5	29.9	36.3		3DA-75X		4.5	5.5	5.9	6.4	6.5	
3DC-100X		11.3	18.5	23.2	35.3	42.7		3DC-100X		5.3	6.4	6.9	7.6	7.7	
3DS-150X		15.8	24.8	30.8	46.0	55.4		3DS-150X		7.4	8.8	9.4	10.3	10.5	
8DH-500X		40.0*	70.6	88.9	135.0	163.5		8DH-500X		22.0*	26.6	28.7	31.8	32.5	
8DJ-600X		47.9*	84.6	106.5	162.0	195.5		8DJ-600X		25.9*	31.8	34.6	39.2	40.6	
Previous Generation - Replacement by Stream compressors															
D4DA-200X		17.2	28.0	34.9	52.3	63.1		D4DA-200X		7.7	9.4	10.3	11.4	11.7	
D4DH-250X		22.7	35.7	44.5	66.3	79.2		D4DH-250X		10.9	12.6	13.5	15.0	15.5	
D4DJ-300X		26.5	41.2	50.8	74.8	89.6		D4DJ-300X		12.9	15.7	17.0	19.2	20.0	
D6DH-350X		33.6	53.1	66.0	98.4	118.0		D6DH-350X		15.6	19.0	20.5	22.8	23.3	
D6DJ-400X		38.9	61.8	77.0	115.5	138.5		D6DJ-400X		18.5	22.8	24.9	28.1	29.1	

Suction Gas Return 20°C / Subcooling OK

*Suction Superheat 10K / Subcooling OK

Capacity Data

Condensing Temperature 40°C															
R134a		Cooling Capacity (kW)						R134a		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15
2DC-50X		2.4*	4.7*	6.3*	10.3	12.7	15.4	2DC-50X		1.6*	2.0*	2.1*	2.3	2.3	2.3
2DD-50X		3.1*	5.8*	7.6*	12.2	15.0	18.1	2DD-50X		1.9*	2.3*	2.5*	2.7	2.7	2.6
2DL-40X		4.0	7.2	9.2	14.4	17.6		2DL-40X		2.3	2.8	3.1	3.4	3.5	
2DL-75X		3.6*	6.8*	8.9*	14.3	17.5	21.2	2DL-75X		2.1*	2.7*	3.0*	3.3	3.4	3.4
2DB-50X		5.2	9.1	11.6	17.9	21.8		2DB-50X		2.6	3.3	3.6	4.0	4.1	
2DB-75X		4.5*	8.2*	10.6*	17.0	20.7	25.0	2DB-75X		2.6*	3.3*	3.5*	3.9	4.0	4.0
3DA-50X		6.0	10.2	12.9	19.8	24.1		3DA-50X		3.0	3.7	4.0	4.4	4.5	
3DA-75X		5.1*	9.6*	12.5*	20.1	24.5	29.7	3DA-75X		3.1*	3.8*	4.1*	4.5	4.6	4.5
3DC-100X		6.8*	12.0*	15.3*	24.2	29.5	35.6	3DC-100X		3.7*	4.5*	4.8*	5.2	5.2	5.2
3DC-75X		7.4	12.5	15.7	23.9	29.0		3DC-75X		3.6	4.5	4.8	5.3	5.4	
3DS-100X		9.7	16.2	20.4	31.0	37.5		3DS-100X		4.7	5.9	6.4	7.2	7.4	
3DS-150X		9.7*	16.3*	20.6*	31.7	38.3	45.8	3DS-150X		5.0*	6.2*	6.6*	7.3	7.4	7.3
8DH-500X		28.6*	47.9*	60.9*	95.6	116.5	140.5	8DH-500X		15.5*	18.8*	20.2*	22.2	22.7	22.9
8DL-370X		31.4	51.6	64.5	97.3	117.5		8DL-370X		15.1	18.5	19.9	22.2	22.8	
8DJ-600X		34.4*	57.5*	72.9*	114.0	138.0	166.5	8DJ-600X		18.1*	22.2*	24.0*	26.8	27.7	28.2
8DT-450X		38.7	62.1	77.1	115.0	139.0		8DT-450X		18.4	22.5	24.4	27.5	28.5	
Previous Generation - Replacement by Stream compressors															
D4DF-100X		11.2	18.6	23.4	35.7	43.4		D4DF-100X		5.5	6.6	7.1	7.9	8.1	
D4DA-200X		11.0*	18.6*	23.6*	36.6	44.3	53.2	D4DA-200X		5.1*	6.4*	7.0*	7.9	8.2	8.4
D4DH-250X		13.5*	22.9*	29*	44.9	54.4	65.2	D4DH-250X		7.0*	8.7*	9.4*	10.4	10.6	10.6
D4DL-150X		15.0	24.5	30.5	45.7	55.2		D4DL-150X		7.0	8.7	9.4	10.5	10.9	
D4DJ-300X		16.5*	27.8*	35.1*	54.3	65.7	78.9	D4DJ-300X		8.3*	10.4*	11.4*	13.2	14.0	14.5
D4DT-220X		18.4	29.7	37.0	55.4	66.9		D4DT-220X		8.6	10.5	11.4	12.7	13.1	
D6DH-350X		19.8*	33.5*	42.5*	66.2	80.3	96.6	D6DH-350X		10.4*	13.1*	14.3*	16.0	16.5	16.6
D6DL-270X		21.4	35.7	44.9	68.1	82.5		D6DL-270X		10.1	12.5	13.6	15.4	15.9	
D6DJ-400X		24.6*	40.5*	50.9*	78.5	94.7	113.5	D6DJ-400X		12.2*	15.3*	16.9*	19.6	20.6	21.2
D6DT-320X		26.8	43.2	53.7	80.1	96.5		D6DT-320X		12.7	15.6	16.9	19.1	19.9	

Suction Gas Return 20°C / Subcooling OK

*Suction Superheat 10K / Subcooling OK

Capacity Data

Condensing Temperature 40°C															
R22		Cooling Capacity (kW)						R22		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
2DC-50X				4.9	8.4	10.6	15.9	2DC-50X				2.4	2.9	3.1	3.4
2DD-50X				5.8	9.8	12.3	18.4	2DD-50X				2.8	3.4	3.6	3.9
2DL-400 DC	1.4	3.1	4.3	7.4	11.7			2DL-400 DC	1.7	2.5	2.9	3.7	4.4		
2DL-75X				7.4	12.2	15.2	22.7	2DL-75X				3.5	4.2	4.5	4.9
2DB-500 DC	1.9	4.0	5.4	9.1	14.2			2DB-500 DC	2.3	3.2	3.6	4.5	5.2		
2DB-75X				9.5	15.0	18.4	26.7	2DB-75X				4.3	5.1	5.4	5.8
3DA-500 DC	2.1	4.5	6.0	10.1				3DA-500 DC	2.2	3.4	4.0	5.0			
3DA-75X				10.7	17.3	21.4	31.6	3DA-75X				5.0	5.9	6.3	6.6
3DC-750 DC	2.7	5.4	7.3	12.5				3DC-750 DC	2.8	4.0	4.7	6.1			
3DC-100X				12.9	20.6	25.4	37.2	3DC-100X				5.9	7.0	7.4	7.8
3DS-1000 DC	3.4	7.5	10.2	17.2				3DS-1000 DC	3.9	5.7	6.6	8.4			
3DS-150X				17.7	27.4	33.4	48.3	3DS-150X				8.1	9.4	10.0	10.6
8DH-500X				48.4*	79.3	97.6	143.0	8DH-500X				24.6*	28.9	30.7	33.1
8DJ-600X				58.0*	95.1	117.0	171.5	8DJ-600X				29.2*	34.8	37.3	41.0
Previous Generation - Replacement by Stream compressors															
D4DF-1000 DC	3.8	7.8	10.5	17.4				D4DF-1000 DC	3.7	5.8	6.8	8.8			
D4DA-200X				20.1	31.3	38.2	55.5	D4DA-200X				8.7	10.4	11.0	11.9
D4DL-1500 DC	6.0	11.6	15.2	23.6				D4DL-1500 DC	5.9	8.5	9.8	12.2			
D4DH-250X				25.7	39.5	48.1	69.3	D4DH-250X				11.5	13.6	14.4	15.6
D4DT-2200 DC	7.6	13.9	17.9	28.2				D4DT-2200 DC	7.2	10.0	11.5	14.3			
D4DJ-300X				30.7	46.4	56.2	80.4	D4DJ-300X				13.9	16.5	17.7	19.5
D6DH-350X				38.4	59.0	71.9	103.5	D6DH-350X				17.5	20.5	21.8	23.6
D6DL-2700 DC	7.5	15.0	19.9	32.1				D6DL-2700 DC	8.0	11.8	13.7	17.0			
D6DT-3200 DC	9.7	18.7	24.4	37.8				D6DT-3200 DC	10.0	14.4	16.6	20.1			
D6DJ-400X				44.6	69.0	84.3	122.0	D6DJ-400X				20.8	24.9	26.7	29.3

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required

Copeland™ Stream With CoreSense™ Diagnostics, Semi-Hermetic Reciprocating Compressors For HFC

Stream series 4 and 6 cylinder compressors provide best-in-class performance, thereby significantly reducing cost of operation and environmental impact compared to competing products. With advanced protection and diagnostics features for system reliability, reduced service costs and increased equipment uptime, Stream series is built to last in today's modern changing world.



Copeland Stream compressor
Designed to Deliver Best-in-Class Performance

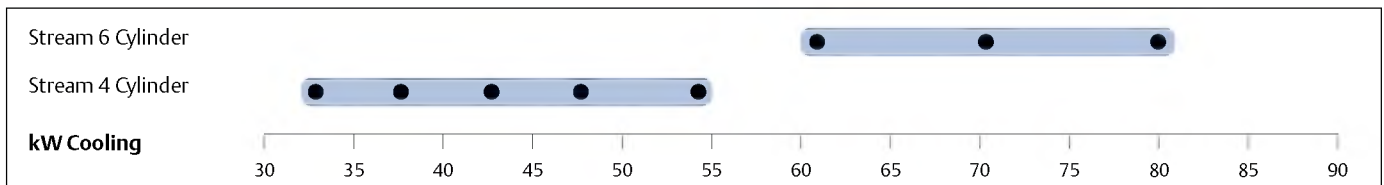
Features and Benefits

- Range of 16 models from 62 to 153m³/h
- Best-in-class seasonal efficiencies, up to 15% higher than market standard
- Multi-refrigerant compressor as it is compatible with R404A, R134a, R407F, R407A/C and R22
- Stepless capacity modulation by means of inverter or Digital modulation
- Wide Operating Envelope covering Low and Medium Temperature Refrigeration without cooling fan
- Reduced sound level, dimensions and weight by up to 45 kg

CoreSense Diagnostics Features

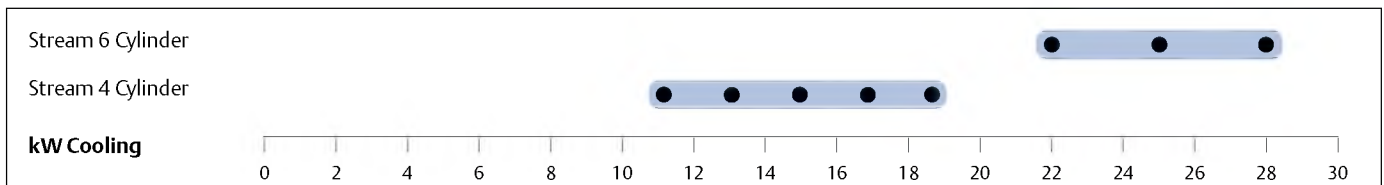
- Motor and oil protection
- Storage of compressor asset and advanced runtime information
- Runtime/alarm signalling using multi-colour LED flash-codes
- Communication to system controller via Modbus®
- Individual compressor power monitoring

Stream Line-up with R404A, Medium Temperature



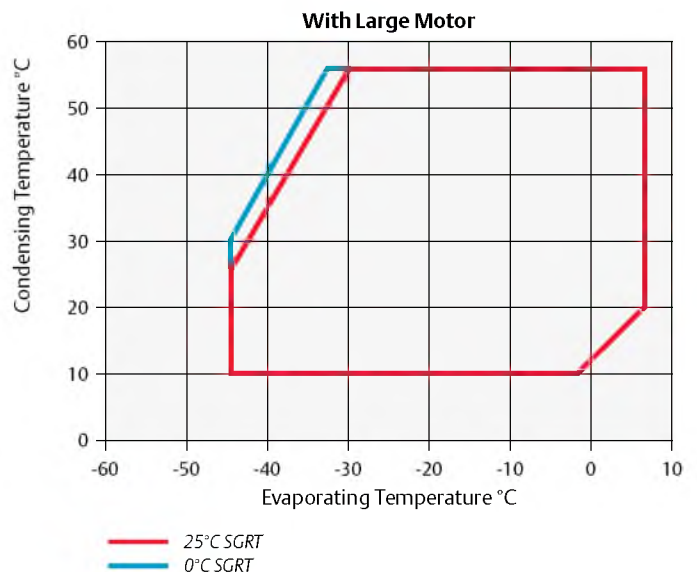
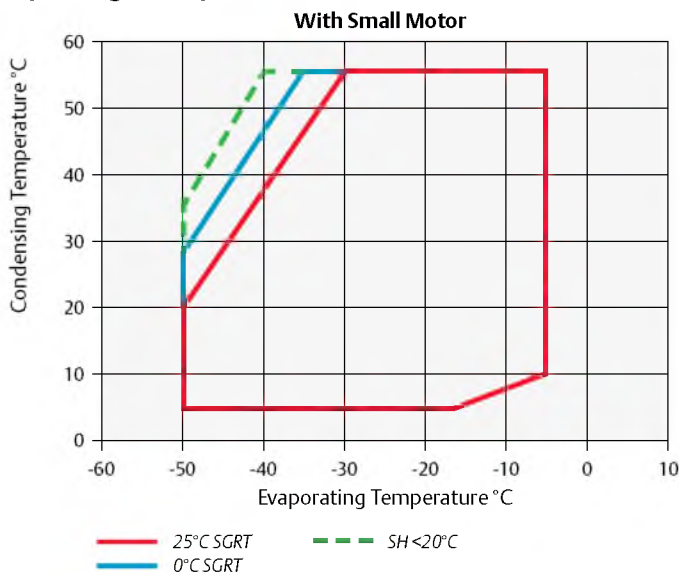
Conditions: EN12900 R404A: Evaporating -10° C, Condensing 45° C, Suction Gas Temperature 20° C, Subcooling 0K

Stream Line-up with R404A, Low Temperature



Conditions: EN12900 R404A: Evaporating -35° C, Condensing 40° C, Suction Gas Temperature 20° C, Subcooling 0K

Operating Envelope R404A



Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar(g) / High Side PS 28 bar(g)

Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @1m (dBA)**	
										3Ph*	3Ph*	3Ph*	1)	2)
4MF-13X	13	62	31.6	2.3	10.7	1.4	3.3	638/501/452	177	AWM	30.8	105	68	70
4MA-22X	22	62	32.7	2.4	10.5	1.4	3.3	638/501/452	177	AWM	36.3	175	68	75
4ML-15X	15	71	38.4	2.3	13.3	1.5	3.3	638/501/452	180	AWM	35.4	156	69	71
4MH-25X	25	71	38.5	2.4	12.4	1.4	3.3	657/501/452	187	AWM	41.6	199	69	75
4MM-20X	17	78	42.0	2.3	15.1	1.5	3.3	657/501/452	182	AWM	39.0	175	70	71
4MI-30X	27	78	42.8	2.4	14.4	1.5	3.3	657/501/452	188	AWM	46.6	221	70	75
4MT-22X	22	88	47.6	2.3	17.0	1.5	3.3	657/501/452	183	AWM	44.5	175	71	73
4MJ-33X	33	88	47.6	2.4	16.2	1.5	3.3	657/501/452	190	AWM	52.9	221	71	74
4MU-25X	25	99	53.1	2.3	18.6	1.4	3.3	657/501/452	186	AWM	51.9	199	73	72
4MK-35X	32	99	53.5	2.3	18.3	1.4	3.3	688/501/452	202	AWM	61.1	255	72	74
6MM-30X	27	120	64.2	2.3	22.7	1.4	3.3	695/547/450	215	AWM	59.7	255	72	78
6MI-40X	35	120	64.6	2.3	21.9	1.4	3.3	695/547/450	219	AWM	71.4	304	72	78
6MT-35X	32	135	72.4	2.3	25.6	1.5	3.3	725/547/450	221	AWM	67.3	255	73	77
6MJ-45X	40	135	72.4	2.3	24.3	1.4	3.3	725/547/450	223	AWM	81.5	304	74	79
6MU-40X	40	153	81.4	2.3	28.4	1.4	3.3	757/547/450	225	AWM	75.8	304	75	78
6MK-50X	50	153	80.9	2.3	27.3	1.4	3.3	773/547/450	230	AWM	92.9	393	76	80

1) MT = Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

2) LT = Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature: 40°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MA-22X		10.5	14.3	23.6	36.0	43.5	62.0	4MA-22X		7.3	8.6	11.0	13.0	13.7	14.7
4MF-13X	3.6*	10.7	14.1	22.8	34.8	42.2		4MF-13X	5.0*	7.4	8.7	11.0	13.1	13.9	
4MH-25X		12.4	16.7	27.5	42.2	51.3	73.6	4MH-25X		8.6	10.1	13.0	15.4	16.3	17.5
4ML-15X	4.8*	13.3	17.4	27.9	42.0	50.8		4ML-15X	6.3*	9.0	10.5	13.3	15.8	16.7	
4MI-30X		14.4	19.4	31.2	46.8	56.3	79.5	4MI-30X		9.8	11.5	14.5	17.0	18.0	19.5
4MM-20X	5.7*	15.1	19.6	30.9	46.1	55.4		4MM-20X	7.1*	10.1	11.6	14.6	17.1	18.2	
4MJ-33X		16.2	21.4	34.6	52.4	63.4	90.4	4MJ-33X		10.9	12.6	16.1	19.0	20.2	21.8
4MT-22X	6.7*	17.0	21.9	34.7	52.0	62.7		4MT-22X	8.0*	11.5	13.2	16.6	19.5	20.7	
4MK-35X		18.3	24.0	38.8	58.9	71.3	102.0	4MK-35X		12.6	14.6	18.5	22.0	23.5	25.7
4MU-25X	7.2*	18.6	24.1	38.5	58.1	70.2		4MU-25X	9.0*	12.9	14.9	18.8	22.3	23.7	
6MI-40X		21.9	28.9	46.7	70.8	85.8	122.5	6MI-40X		15.2	17.6	22.2	26.1	27.7	30.1
6MM-30X	8.9*	22.7	29.3	46.5	70.2	85.1		6MM-30X	11.0*	15.7	18.1	22.5	26.3	27.8	
6MJ-45X		24.3	32.3	52.5	79.5	96.1	136.5	6MJ-45X		16.8	19.6	24.9	29.5	31.4	33.9
6MT-35X	10.3*	25.6	33.0	52.5	79.3	95.9		6MT-35X	12.3*	17.5	20.1	25.3	29.7	31.5	
6MK-50X		27.3	36.3	58.7	88.6	107.0	152.0	6MK-50X		19.4	22.5	28.3	33.5	35.9	39.9
6MU-40X	11.0*	28.4	36.8	58.7	89.0	108.0		6MU-40X	13.8*	19.7	22.7	28.5	33.6	35.8	

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

Capacity Data

R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				11.9*	20.2*	25.7*	40.0	4MA-22X				5.9*	7.3*	7.9*	8.7
4MF-13X				12.3	20.4	25.6	38.9	4MF-13X				5.8	7.2	7.8	8.7
4MH-25X				13.6*	23.3*	29.6*	46.3	4MH-25X				7.1*	8.7*	9.4*	10.4
4ML-15X				15.0	24.5	30.5	46.0	4ML-15X				6.9	8.5	9.3	10.4
4MI-30X				15.3*	25.7*	32.5*	50.6	4MI-30X				7.6*	9.4*	10.3*	11.4
4MM-20X				16.6	27.0	33.6	50.3	4MM-20X				7.7	9.4	10.2	11.4
4MJ-33X				17.2*	28.7*	36.3*	56.3	4MJ-33X				8.7*	10.7*	11.5*	12.8
4MT-22X				19.1	30.6	38.1	57.2	4MT-22X				8.7	10.8	11.7	13.1
4MK-35X				19.3*	32.2*	40.7*	63.1	4MK-35X				9.7*	12.2*	13.3*	14.9
4MU-25X				20.7	33.9	42.3	63.8	4MU-25X				9.8	12.2	13.3	15.1
6MI-40X				22.4*	38.0*	48.3*	75.8	6MI-40X				12.0*	14.6*	15.8*	17.8
6MM-30X				25.2	40.7	50.7	76.1	6MM-30X				11.7	14.6	15.8	17.7
6MJ-45X				25.8*	43.1*	54.6*	85.1	6MJ-45X				13.0*	16.2*	17.8*	20.3
6MT-35X				28.5	46.0	57.1	85.2	6MT-35X				13.3	16.5	17.9	20.0
6MK-50X				26.5*	46.1*	59.2*	94.0	6MK-50X				15.2*	18.8*	20.5*	23.3
6MU-40X				31.5	50.6	62.9	94.5	6MU-40X				14.6	18.4	20.1	23.0

Suction Gas Return 20°C, Subcooling 0K
 * Suction Superheat 10K, Subcooling 0K

R407F	Cooling Capacity (kW)							R407F	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				20.7*	34.8	43.0	63.8	4MA-22X				10.2*	12.4	13.2	14.4
4MH-25X				24.2*	40.4	49.9	73.8	4MH-25X				11.9*	14.4	15.4	16.8
4MI-30X				26.9*	44.4	54.8	80.7	4MI-30X				13.1*	15.8	17.0	18.6
4MJ-33X				30.2*	49.5	60.9	89.8	4MJ-33X				14.8*	17.8	19.2	21.1
4MK-35X				33.7*	55.3	68.3	101.0	4MK-35X				16.8*	20.4	22.1	24.4
6MI-40X				41.2*	67.9	83.5	122.5	6MI-40X				20.2*	24.4	26.2	28.9
6MJ-45X				45.8*	75.2	92.6	136.0	6MJ-45X				22.9*	27.6	29.7	32.8
6MK-50X				51.3*	84.5	104.0	153.5	6MK-50X				25.8*	31.3	33.7	37.5

Suction Gas Return 20°C, Subcooling 0K
 * Suction Superheat 10K, Subcooling 0K

Capacity Data

R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MA-22X				22.1	34.5	42.2	61.2	4MA-22X				9.6	11.5	12.2	13.1
4MF-13X DC	4.2*	8.6*	11.5*	19.2*				4MF-13X DC	4.0*	6.4*	7.5*	9.7*			
4MH-25X				25.9	39.8	48.4	69.9	4MH-25X				11.6	13.7	14.5	15.7
4ML-15X DC	6.0*	11.7*	15.3*	23.7*				4ML-15X DC	5.9*	8.5*	9.8*	12.3*			
4MI-30X				28.3	42.9	51.9	74.3	4MI-30X				12.9	15.3	16.3	18.0
4MM-20X DC	7.0*	12.8*	16.6*	26.0*				4MM-20X DC	6.7*	9.3*	10.6*	13.2*			
4MJ-33X				31.8	48.1	58.2	83.3	4MJ-33X				14.4	17.1	18.3	20.1
4MT-22X DC	7.8*	14.4*	18.6*	29.2*				4MT-22X DC	7.5*	10.4*	11.9*	14.8*			
4MK-35X				36.0	54.5	66.0	94.4	4MK-35X				16.3	19.4	20.7	22.8
4MU-25X DC	8.9*	16.3*	21.0*	33.1*				4MU-25X DC	8.5*	11.8*	13.5*	16.8*			
6MI-40X				43.5	66.9	81.5	117.5	6MI-40X				19.8	23.3	24.7	26.7
6MJ-45X				47.4	73.4	89.5	129.5	6MJ-45X				22.1	26.5	28.3	31.2
6MK-50X				53.7	83.2	101.5	147.0	6MK-50X				25.1	30.0	32.1	35.4

Suction Gas Return 20°C, Subcooling 0K

* Suction Superheat 10K, Subcooling 0K

Additionally Cooling required

Copeland™ Stream Digital with CoreSense™ Diagnostics for Continuous Capacity Modulation

Stream Digital series 4 and 6 cylinder compressors provide an alternative means of continuous modulation to inverter. Digital modulation is the most simple and precise method of capacity control and helps to contain applied costs associated with modulation.

Digital technology is based on controlling a high cycle solenoid valve fitted on one of the cylinder heads based on cycle time. The valve actuates a piston that controls the flow of gas into the suction area of the Stream valve plate.

The compressor always run at constant speed which resolves the challenges related to oil return, mechanical and electrical stress on the system.

All compressors are equipped with CoreSense technology and offer the possibility to diagnose system related problems faster or even before they occur.

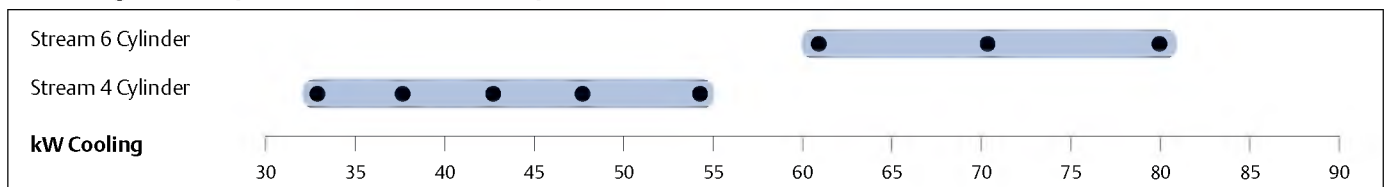


Copeland Stream Digital compressor

Features and Benefits

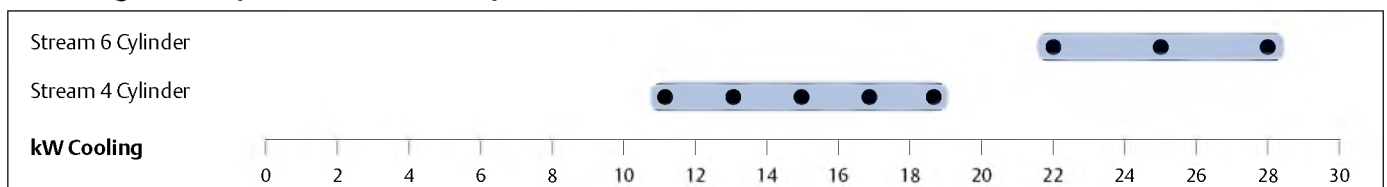
- Range of 16 Models from 62 to 153 m³/h
- Multi-refrigerant compressor as it is compatible with R404A, R407F, R407A/C, R134a and R22
- Continuous modulation from 50–100% (4-cylinder) and 33–100% (6-cylinder) ensuring a perfect match of capacity and power to refrigeration load
- Economical and reliable alternative to frequency inverters
- Precise suction pressure control with associated energy savings and stable evaporating temperatures
- Quick and easy integration into refrigeration equipment, similar to any other standard compressor
- Possibility to easily retrofit existing installations with digital cylinder head kit
- No vibrations or mechanical stress on system piping and compressor parts
- Reduced compressor cycling for longer contactor and compressor life
- Emerson CoreSense Diagnostics technology providing advanced protection, diagnostics and preventive maintenance

Stream Digital Line-up with R404A, Medium Temperature



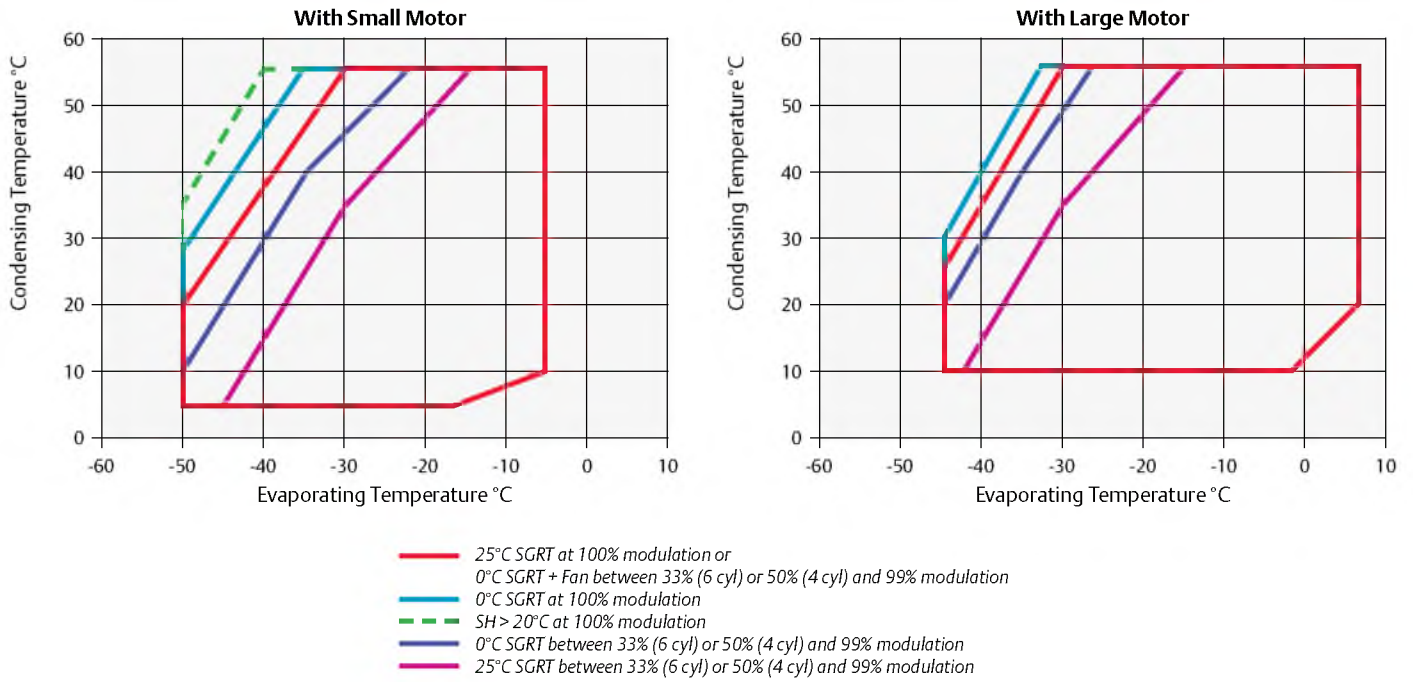
Conditions: EN12900 R404A: Evaporating -10° C, Condensing 45° C, Suction Gas Temperature 20° C, Subcooling 0K

Stream Digital Line-up with R404A, Low Temperature



Conditions: EN12900 R404A: Evaporating -35° C, Condensing 40° C, Suction Gas Temperature 20° C, Subcooling 0K

Operating Envelope R404A



Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1m (dBA)**	
										3Ph*	3Ph*	3Ph*	1)	2)
4MFD-13X	13	62	31.3	2.3	9.5	1.3	3.3	638/501/452	177	AWM	30.8	105	68	70
4MAD-22X	22	62	32.4	2.4	9.3	1.3	3.3	638/501/452	177	AWM	36.3	175	68	75
4MLD-15X	15	71	38.0	2.3	12.1	1.3	3.3	638/501/452	180	AWM	35.4	156	69	71
4MHD-25X	25	71	38.1	2.4	11.1	1.3	3.3	657/501/452	187	AWM	41.6	199	69	75
4MMD-20X	17	78	41.6	2.3	13.7	1.4	3.3	657/501/452	182	AWM	39.0	175	70	71
4MID-30X	27	78	42.3	2.4	13.0	1.3	3.3	657/501/452	188	AWM	46.6	221	70	75
4MTD-22X	22	88	47.2	2.3	15.4	1.4	3.3	657/501/452	183	AWM	44.5	175	71	73
4MJD-33X	33	88	47.1	2.4	14.6	1.4	3.3	657/501/452	190	AWM	52.9	221	71	74
4MUD-25X	25	99	52.2	2.3	16.9	1.3	3.3	657/501/452	186	AWM	51.9	199	73	72
4MKD-35X	32	99	53.0	2.3	16.5	1.3	3.3	688/501/452	202	AWM	61.1	255	72	74
6MMD-30X	27	120	63.6	2.3	20.6	1.3	3.3	695/547/450	215	AWM	59.7	255	72	78
6MID-40X	35	120	64.0	2.3	19.7	1.3	3.3	695/547/450	219	AWM	71.4	304	72	78
6MTD-35X	32	135	71.7	2.3	23.2	1.3	3.3	725/547/450	221	AWM	67.3	255	73	77
6MJD-45X	40	135	71.7	2.3	21.9	1.3	3.3	725/547/450	223	AWM	81.5	304	74	79
6MUD-40X	40	153	80.5	2.3	25.7	1.3	3.3	757/547/450	225	AWM	75.8	304	75	78
6MKD-50X	50	153	80.1	2.3	24.5	1.3	3.3	773/547/450	230	AWM	92.9	393	76	80

1) MT = Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

2) LT = Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Return Temperature 0°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X		8.1*	11.7*	23.4	35.6	43.1	61.3	4MAD-22X		7.3*	8.6*	11.0	13.0	13.7	14.7
4MFD-13X		8.3*	11.5*	22.6	34.5	41.8		4MFD-13X		7.4*	8.7*	11.0	13.1	13.9	
4MHD-25X		9.6*	13.7*	27.2	41.7	50.7	72.9	4MHD-25X		8.6*	10.1*	13.0	15.4	16.3	17.5
4MLD-15X		10.6*	14.5*	27.6	41.6	50.2		4MLD-15X		9.0*	10.5*	13.3	15.8	16.7	
4MID-30X		11.4*	16.2*	30.9	46.3	55.7	78.7	4MID-30X		9.8*	11.5*	14.5	17.0	18.0	19.5
4MMD-20X		12.2*	16.4*	30.6	45.6	54.8		4MMD-20X		10.1*	11.6*	14.6	17.1	18.2	
4MJD-33X		12.9*	17.8*	34.2	51.9	62.7	89.5	4MJD-33X		10.9*	12.6*	16.1	19.0	20.2	21.8
4MTD-22X		13.7*	18.4*	34.3	51.5	62.1		4MTD-22X		11.5*	13.2*	16.6	19.5	20.7	
4MKD-35X		14.5*	20.0*	38.4	58.3	70.6	101.0	4MKD-35X		12.6*	14.6*	18.5	22.0	23.5	25.7
4MUD-25X		14.9*	20.1*	38.1	57.5	69.5		4MUD-25X		12.9*	14.9*	18.8	22.3	23.7	
6MID-40X		17.3*	28.6*	46.2	70.1	84.9	121.5	6MID-40X		15.2*	17.6*	22.2	26.1	27.7	30.1
6MMD-30X		18.2*	29.0*	46.0	69.5	84.3		6MMD-30X		15.7*	18.1*	22.5	26.3	27.8	
6MJD-45X		19.2*	32.0*	51.9	78.7	95.1	135.0	6MJD-45X		16.8*	19.6*	24.9	29.5	31.4	33.9
6MTD-35X		20.5*	32.7*	52.0	78.5	94.9		6MTD-35X		17.5*	20.1*	25.3	29.7	31.5	
6MKD-50X		21.4*	36.0*	58.1	87.7	106.0	150.5	6MKD-50X		19.4*	22.5*	28.3	33.5	35.9	39.9
6MUD-40X		22.6*	36.5*	58.1	88.1	107.0		6MUD-40X		19.7*	22.7*	28.5	33.6	35.8	

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				11.8*	20.0*	25.4*	39.6	4MAD-22X				5.9*	7.3*	7.9*	8.7
4MFD-13X				12.1	20.2	25.4	38.5	4MFD-13X				5.8	7.2	7.8	8.7
4MHD-25X				13.5*	23.1*	29.3*	45.8	4MHD-25X				7.1*	8.7*	9.4*	10.4
4MLD-15X				14.8	24.2	30.2	45.5	4MLD-15X				6.9	8.5	9.3	10.4
4MID-30X				15.1*	25.4*	32.2*	50.1	4MID-30X				7.6*	9.4*	10.3*	11.4
4MMD-20X				16.5	26.7	33.3	49.8	4MMD-20X				7.7	9.4	10.2	11.4
4MJD-33X				17.0*	28.5*	35.9*	55.7	4MJD-33X				8.7*	10.7*	11.5*	12.8
4MTD-22X				18.9	30.3	37.7	56.7	4MTD-22X				8.7	10.8	11.7	13.1
4MKD-35X				19.1*	31.9*	40.3*	62.5	4MKD-35X				9.7*	12.2*	13.3*	14.9
4MUD-25X				20.5	33.5	41.9	63.2	4MUD-25X				9.8	12.2	13.3	15.1
6MID-40X				22.2*	37.6*	47.8*	75.1	6MID-40X				12.0*	14.6*	15.8*	17.8
6MMD-30X				24.9	40.3	50.2	75.3	6MMD-30X				11.7	14.6	15.8	17.7
6MJD-45X				25.6*	42.7*	54.0*	84.3	6MJD-45X				13.0*	16.2*	17.8*	20.3
6MTD-35X				28.2	45.5	56.5	84.4	6MTD-35X				13.3	16.5	17.9	20.0
6MKD-50X				26.2*	45.7*	58.6*	93.1	6MKD-50X				15.2*	18.8*	20.5*	23.3
6MUD-40X				31.2	50.1	62.3	93.6	6MUD-40X				14.6	18.4	20.1	23.0

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

Capacity Data

R407F	Cooling Capacity (kW)							R407F	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
All Preliminary Data															
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				20.5*	34.4	42.6	63.1	4MAD-22X				10.2*	12.4	13.2	14.4
4MHD-25X				23.9*	40.0	49.4	73.1	4MHD-25X				11.9*	14.4	15.4	16.8
4MID-30X				26.6*	44.0	54.2	79.9	4MID-30X				13.1*	15.8	17.0	18.6
4MJD-33X				29.8*	49.0	60.3	88.9	4MJD-33X				14.8*	17.8	19.2	21.1
4MKD-35X				33.3*	54.8	67.6	100.0	4MKD-35X				16.8*	20.4	22.0	24.4
6MID-40X				40.7*	67.2	82.6	121.5	6MID-40X				20.2*	24.4	26.2	28.9
6MJD-45X				45.3*	74.5	91.6	135.0	6MJD-45X				22.9*	27.6	29.7	32.8
6MKD-50X				50.7*	83.7	103.0	151.5	6MKD-50X				25.8*	31.3	33.7	37.5

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

* Suction Superheat 10K, Subcooling 0K

R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Condensing Temperature: 40°C								Condensing Temperature: 40°C						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
Model	-45	-35	-30	-20	-10	-5	5	Model	-45	-35	-30	-20	-10	-5	5
4MAD-22X				22.1	34.5	42.1	61.2	4MAD-22X				9.6	11.4	12.2	13.1
4MFD-13X DC	4.2	8.6	11.5	19.2				4MFD-13X DC	4.0	6.4	7.5	9.7			
4MHD-25X				25.9	39.8	48.5	69.9	4MHD-25X				11.6	13.64	14.5	15.7
4MLD-15X DC	6.0	11.6	15.2	23.7				4MLD-15X DC	5.9	8.5	9.8	12.3			
4MID-30X				28.3	42.9	51.9	74.3	4MID-30X				12.8	15.2	16.3	18.0
4MMD-20X DC	7.0	12.8	16.5	26.0				4MMD-20X DC	6.7	9.3	10.6	13.2			
4MJD-33X				31.8	48.1	58.2	83.3	4MJD-33X				14.4	17.1	18.3	20.1
4MTD-22X DC	7.8	14.4	18.5	29.2				4MTD-22X DC	7.8	10.4	11.8	14.8			
4MKD-35X				36.0	54.5	66.0	94.4	4MKD-35X				16.3	19.4	20.7	22.8
4MUD-25X DC	8.9	16.3	21.0	33.1				4MUD-25X DC	8.5	11.8	13.4	16.8			
6MID-40X				43.5	66.9	81.5	117.6	6MID-40X				19.8	23.3	24.7	26.7
6MMD-30X DC	9.2	17.7	23.1	35.8				6MMD-30X DC	9.4	13.7	15.7	19.1			
6MJD-45X				47.4	73.4	89.5	129.6	6MJD-45X				22.1	26.5	28.3	31.2
6MTD-35X DC	10.3	19.9	25.9	40.2				6MTD-35X DC	10.6	15.3	17.6	21.4			
6MKD-50X				53.7	83.2	101.5	147.0	6MKD-50X				25.1	30.0	32.1	35.4
6MUD-40X DC	11.7	22.5	29.4	45.5				6MUD-40X DC	12.0	17.4	19.9	24.2			

Suction Gas Return 20°C, Subcooling 0K, 100% loaded

Additional Cooling required

Copeland™ Stream Compressors with CoreSense™ Diagnostics for R744-Transcritical Applications

Stream series of 4 cylinder CO₂ 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 CoreSense technology and offer the possibility to diagnose system-related problems faster or even before they occur.

Features and Benefits

Stream provides for flexibility in pack design and operation:

- Compact dimensions
- Integrated high and low 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

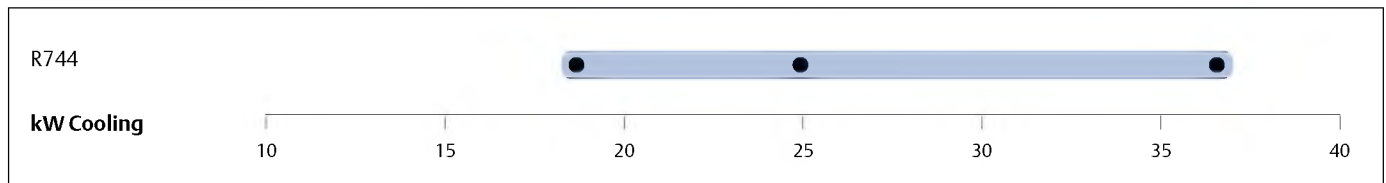
Designed for durability and performance in R744 applications:

- Low sound, low vibration and large discharge chamber to eliminate pulsation
- High design pressures of 135 bar (high side) and 90 bar (low side)
- Burst pressures in excess of safety factor 3
- Cylinder head and discharge plenum design minimizing heat transfer to suction side
- Stepless capacity modulation via inverter from 30 to 70Hz
- CoreSense™ Diagnostics
- Individual compressor power consumption monitoring



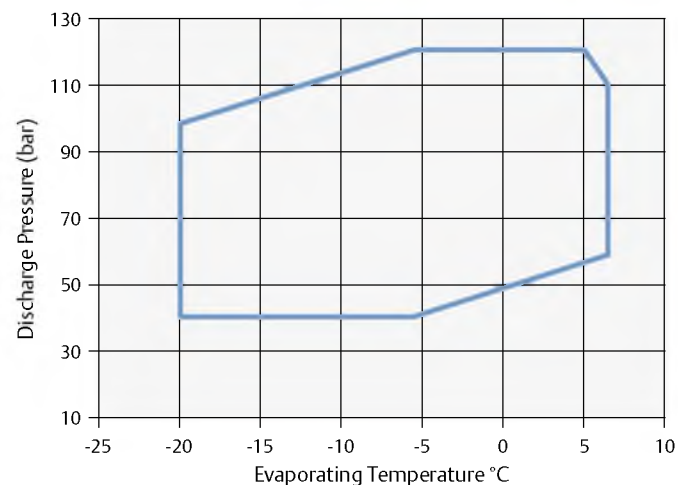
*Copeland Stream Compressors for R744 Refrigeration
Designed for Durability and Best-in-Class
Performance in R744 Transcritical Applications*

Stream Line-up for R744



Conditions: EN12900 R744: Evaporating -10°C, Gas cooler exit: 35°C/ 90 bar, Superheat: 10K

Operating Envelope R744



Technical Overview

R744	Nominal hp	Displacement (m ³ /h)	Capacity (kW)	COP	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1m (dBA)**
								3 Ph*	3 Ph*	3 Ph*	
4MTL-12X	12	9.5	18.3	1.7	3.30	697/445/422	170	AWM	26	145	69
4MTL-15X	15	12.5	24.9	1.8	3.30	697/445/422	170	AWM	35	156	72
4MTL-30X	30	17.9	36.5	1.8	3.30	697/445/422	175	AWM	50	221	75

Conditions EN12900 R744: Evaporating -10°C, Gas cooler exit: 35°C/90bar, Superheat: 10K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Model		Temperature (°C)	Pressure (bar)	Cooling capacity (kW)					Power Input (kW)				
				Evaporating Temperature (°C)					Evaporating Temperature (°C)				
				-20	-15	-10	-5	0	-20	-15	-10	-5	0
				Equivalent evaporation pressure (bar)					Equivalent evaporation pressure (bar)				
				19,7	22,9	26,5	30,5	34,9	19,7	22,9	26,5	30,5	34,9
4MTL-12X	Condensing	10	45.0	22.2	27.0	32.4	38.6		6.0	5.8	5.4	4.8	
		15	50.9	20.2	24.6	29.6	35.3	41.6	6.7	6.6	6.3	5.9	5.2
		20	57.3	18.2	22.1	26.7	31.9	37.6	7.4	7.4	7.2	6.9	6.4
		25	64.3	15.9	19.4	23.4	28.0	33.1	8.0	8.2	8.2	8.0	7.6
		30	75	12.7	15.6	18.9	22.6	26.7	8.7	8.9	9.1	9.0	8.9
	Gas Cooler	35	90	12.1	14.8	18.0	21.6	25.6	9.9	10.3	10.7	10.8	10.9
		40	100	10.4	13.1	16.0	19.3	22.9	10.6	11.3	11.8	12.1	12.3
		40	110	10.4	13.1	16.0	19.3	22.9	10.6	11.3	11.8	12.1	12.3
4MTL-15X	Condensing	10	45.0	30.3	36.8	44.1	52.4		7.67	7.44	6.98	6.26	
		15	50.9	27.6	33.6	40.4	48.1	56.5	8.54	8.46	8.17	7.63	6.81
		20	57.3	24.8	30.2	36.4	43.4	51.1	9.4	9.47	9.35	8.99	8.37
		25	64.3	21.6	26.4	31.9	38.1	45	10.25	10.45	10.5	10.35	9.93
		30	75	17.3	21.2	25.7	30.7	36.3	11.05	11.45	11.7	11.7	11.45
	Gas Cooler	35	90	16.35	20.1	24.5	29.3	34.5	12.6	13.2	13.7	13.95	13.95
		40	100	14.1	17.65	21.6	26	30.8	13.5	14.45	15.1	15.55	15.8
		40	110	14.1	17.65	21.6	26	30.8	13.5	14.45	15.1	15.55	15.8
4MTL-30X	Condensing	10	45.0	44.7	54.0	64.7	76.8		11.2	10.9	10.3	9.3	
		15	50.9	40.7	49.3	59.2	70.4	82.7	12.4	12.3	12.0	11.3	10.1
		20	57.3	36.6	44.3	53.3	63.5	74.7	13.7	13.8	13.7	13.2	12.4
		25	64.3	32.0	38.8	46.8	55.8	65.8	14.9	15.2	15.3	15.1	14.6
		30	75	25.6	31.2	37.7	45.0	53.0	16.1	16.7	17.0	17.1	16.8
	Gas Cooler	35	90	24.4	29.7	35.9	42.9	50.6	18.3	19.2	19.9	20.3	20.4
		40	100	21.1	26.3	32.0	38.3	45.3	19.6	21.0	21.9	22.6	23.0
		40	110	21.1	26.3	32.0	38.3	45.3	19.6	21.0	21.9	22.6	23.0

S-Series Reciprocating Compressor Range

From 2 to 8 cylinder semi-hermetic reciprocating compressors for medium/low temperature refrigeration and comfort applications.

The S-series ranges from 5 to 70 hp and provide cooling capacities from 11 to 90 kW in medium temperature (R404A, -10/45°C) and 4 to 29 kW in low temperature (R404A, -35/40°C). These compressors are qualified for R404A, R507, R134a, R22 and R407C (some models).

The S-series comprises the 2S, 3S, 4S, 6S and 8S models. It is suction gas cooled and uses reed valve technology, found on all reciprocating compressors except Discus™ and Stream. It is suited for numerous single- or multi-compressor applications such as condensing units or compact compressor packs for medium to large supermarkets.

All compressors are designed for unquestionable reliability:

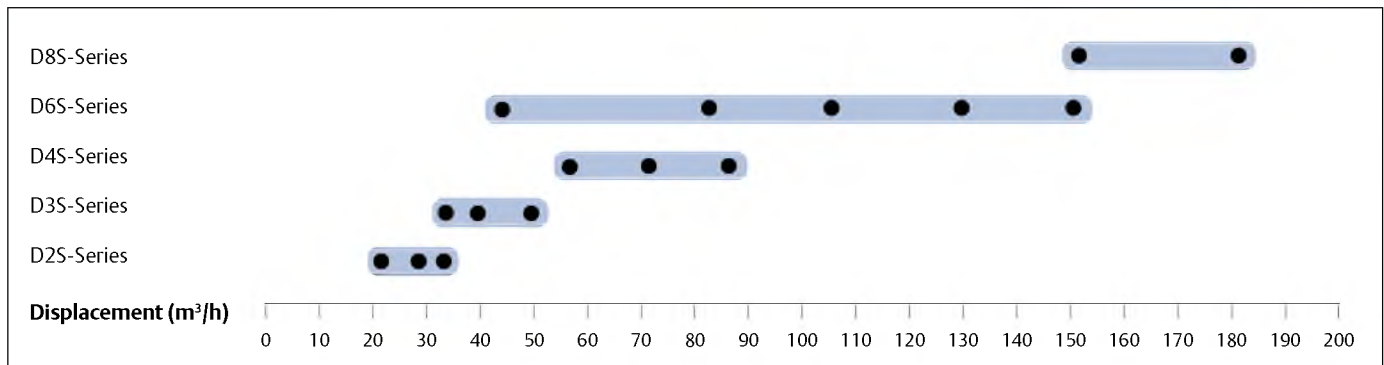
- Positive displacement high flow oil pump guarantees high oil feeding pressure for good lubrication and bearings' cooling
- PTFE coated bearings for especially low friction and good protection at start up
- Aluminium piston with optimized geometry for good performance and resistance to liquid handling
- High temperature resistant Molybdenum piston rings preventing from wear



S-Series Compressor

- Optimized bearing surface dimensions
- Valve reeds of impact resistant spring steel
- Pre-set internal pressure relief valve between suction and discharge that opens if the maximum differential pressure is exceeded
- Electronic motor protection module

S Series Compressor Line-up



Conditions: EN12900, R404A: Evaporating -10°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

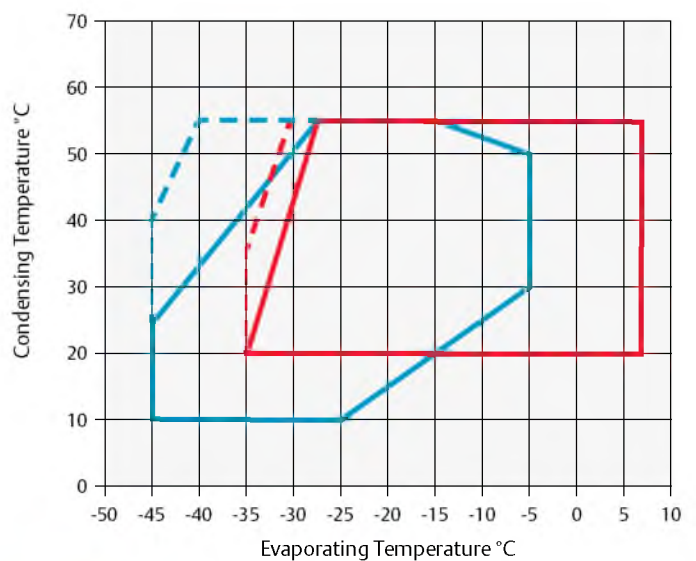
Features and Benefits

- Integrated oil pump and Electronic Oil Pressure Switch OPS2 for durability
- Two motor sizes per displacement, optimized for different applications
- Ability of the refrigeration compressors with small motor size to operate as low as 10°C condensing
- Large operating envelope that allows medium and low temperature applications to be covered by one single model
- Provide cooling capacity modulation either by cylinder head blocked suction or with use of frequency inverters from 25 to 60Hz with the standard AWM motors
- Multi-refrigerant compressor range – one model to cover all standard refrigerants

Maximum Allowable Pressure (PS)

- Low Side PS 22.5 bar (g)/ High Side PS 28 bar (g)

Operating Envelope R404A



- Large Motor 25°C SGRT
- - - Large Motor 25°C SGRT + Fan
- Small Motor 25°C SGRT
- - - Small Motor 0°C SGRT + Fan

Technical Overview

R404A	Nominal hp	Displacement (m ³ /h)	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Oil Quantity (l)	Length/Width/Height (mm)	Net Weight (kg)	Motor Version / Code	Maximum Operating Current (A)	Locked Rotor Current (A)	Sound Pressure @ 1 m (dBA) **
										3 Ph *	3 Ph *	3 Ph *	
D2SA-45X	4.5	22.4	11.1	2.0	3.5	1.2	2.40	560/330/395	90	EWL	11	69	
D2SA-55X	5.5	22.4	11.2	2.0			2.40	560/330/395	90	EWL	13	67	
D2SC-55X	5.5	26.8	13.4	2.0	4.1	1.3	2.40	560/330/395	91	EWL	13	74	67
D2SC-65X	6.5	26.9	13.3	2.0			2.40	560/330/395	91	EWL	16	85	
D2SK-65X	6.5	31.2	15.9	2.0	4.9	1.2	2.40	560/330/395	92	EWL	16	85	
D3SA-75X	7.5	32.2	15.6	2.2			3.70	655/370/480	159	AWM	18	82	
D3SC-100X	10.0	38.0	18.9	2.2			3.70	682/370/480	159	AWM	22	106	
D3SC-75X	10.0	38.0	18.3	2.1	5.5	1.3	3.70	655/370/480	159	AWM	19	82	66
D3SS-100X	10.0	49.9	24.5	2.0	8.2	1.3	3.70	680/370/480	162	AWM	26	109	67
D3SS-150X	15.0	49.9	25.9	2.1			3.70	680/370/480	162	AWM	30	125	
D4SA-200X	20.0	56.0	27.5	2.2			3.30	650/485/495	183	AWM	32	175	70
D4SF-100X	10.0	56.0	27.3	2.1	8.9	1.3	3.30	680/485/495	178	AWM	27	105	72
D4SH-250X	25.0	70.8	35.1	2.1			3.30	670/490/495	194	AWM	42	199	71
D4SL-150X	15.0	70.8	36.4	2.1	11.9	1.4	3.30	680/490/495	186	AWM	36	156	72
D4SJ-300X	30.0	84.5	42.8	2.2			3.30	690/515/495	210	AWM	48	221	70
D4ST-200X	20.0	84.7	43.4	2.1	14.5	1.4	3.30	700/490/495	198	AWM	42	175	72
D6SA-300X	30.0	84.0	41.8	2.2			3.30	740/540/490	214	AWM	50	221	75
D6SF-200X	20.0	84.0	41.8	2.1	13.5	1.4	3.30	740/540/490	212	AWM	38	175	
D6SJ-400X	40.0	127.0	62.7	2.2			6.80	760/565/545	252	AWM	75	304	74
D6ST-300X	32.0	127.0			21.3	1.4	6.80	740/540/545	252	AWM	63	255	
D6ST-320X	32.0	127.0	11.1	2.1	21.3	1.4	6.80	740/540/545	252	AWM	63	255	
D6SU-400X	40.0	151.8	11.1	2.1	26.6	1.4	6.80	740/540/545	265	AWM	78	304	
D6SK-500X	50.0	152.0	73.1	2.1			6.80	770/570/539	268	AWM	89	393	78
D8SH-370X	37.0	151.0	11.1	2.1	24.6	1.4	7.60	835/467/610	314	AWM	71	349	
D8SH-500X	50.0	151.0	78.2	2.2			7.60	835/467/610	326	AWM	95	458	77
D8SJ-450X	45.0	181.0	11.1	2.1	28.7	1.4	7.60	835/527/610	345	AWM	91	441	
D8SJ-600X	60.0	181.0	90.4	2.2			7.60	835/527/610	346	AWM	106	476	76

(1) MT= Conditions EN12900 : Evaporating -10°C, Condensing 45°C, Suction Gas Temperature 20°C, Subcooling 0K

(2) LT= Conditions EN12900 : Evaporating -35°C, Condensing 40°C, Suction Gas Temperature 20°C, Subcooling 0K

* 3 Ph: 380-420V/ 50Hz

** @ 1m: sound pressure level at 1m distance from the compressor, free field condition

Capacity Data

Condensing Temperature 40°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	Model	-45	-35	-30	-20	-10	-5		5	Model	-45	-35	-30	-20	-10
D2SA-45X	1.1*	3.5	4.8	7.9	12.2	14.8		D2SA-45X	1.9*	2.9	3.4	4.5	5.4	5.8	
D2SA-55X			4.7	7.9	12.3	15.0	21.5	D2SA-55X			3.3	4.3	5.2	5.6	6.2
D2SC-55X	1.1*	4.1	5.5	9.4	14.7	18.0		D2SC-55X	1.9*	3.2	3.9	5.2	6.3	6.8	
D2SC-65X			5.6	9.4	14.6	17.8	25.6	D2SC-65X			4.2	5.3	6.3	6.7	7.3
D2SK-65X	1.2*	4.9	6.7	11.3	17.5	21.4		D2SK-65X	2.6*	4.0	4.7	6.2	7.5	8.2	
D3SA-75X			6.3	10.9	17.2	21.2	30.9	D3SA-75X			4.2	5.6	7.0	7.5	8.3
D3SC-100X			8.0	13.5	20.9	25.4	36.6	D3SC-100X			5.3	6.9	8.4	9.1	10.0
D3SC-75X	1.6*	5.5	7.5	12.9	20.3	24.9		D3SC-75X	2.8*	4.3	5.2	6.9	8.6	9.4	
D3SS-100X	2.7*	8.2	10.8	17.6	26.8	32.5		D3SS-100X	4.4*	6.2	7.2	9.5	11.9	12.9	
D3SS-150X			11.4	18.6	28.3	34.4	49.2	D3SS-150X			7.6	9.8	11.8	12.7	14.3
D4SA-200X			11.3	19.3	30.4	37.2	54.0	D4SA-200X			7.5	10.0	12.1	13.1	14.4
D4SF-100X	3.0*	8.9	11.9	19.6	30.1	36.6		D4SF-100X	4.4*	6.8	8.0	10.5	12.7	13.6	
D4SH-250X			14.6	24.7	38.7	47.4	68.6	D4SH-250X			9.8	12.9	15.7	16.9	18.8
D4SL-150X	3.8*	11.9	15.9	26.1	40.0	48.6		D4SL-150X	5.6*	8.6	10.2	13.3	16.3	17.6	
D4SJ-300X			17.7	30.5	47.1	57.2	81.2	D4SJ-300X			11.2	15.1	18.5	19.9	22.0
D4ST-200X	5.2*	14.5	19.2	31.3	47.7	57.8		D4ST-200X	6.7*	10.2	12.0	15.8	19.5	21.3	
D6SA-300X			17.2	29.3	46.3	57.1	83.8	D6SA-300X			11.3	15.0	18.3	19.8	21.9
D6SF-200X	4.4*	13.5	18.3	30.3	46.1	55.5		D6SF-200X	6.1*	9.6	11.5	15.3	18.7	20.2	
D6SJ-400X			26.4	44.9	69.4	84.4	121.0	D6SJ-400X			16.6	22.3	27.8	30.2	34.3
D6ST-300X	6.6*	21.3	28.5	46.8	71.2	85.9		D6ST-300X	10.0*	15.5	18.3	23.9	29.3	31.8	
D6ST-320X	6.6*	21.3	28.5	46.8	71.2	85.9		D6ST-320X	10.0*	15.5	18.3	23.9	29.3	31.8	
D6SU-400X	9.4*	26.6	35.0	56.2	84.4	101.5		D6SU-400X	12.4*	18.7	22.0	28.8	35.5	38.6	
D6SK-500X			30.7	52.1	80.9	98.6	142.5	D6SK-500X			19.9	26.5	32.9	35.8	40.0
D8SH-370X	7.9*	24.6	32.9	53.8	81.2	97.6		D8SH-370X	11.2*	17.6	20.9	27.6	33.7	36.3	
D8SH-500X			33.7	55.6	85.9	105.0	150.5	D8SH-500X			23.0	29.1	34.6	36.9	40.1
D8SJ-450X	8.4*	28.7	38.8	64.7	99.5	121.0		D8SJ-450X	13.4*	20.6	24.4	32.0	39.1	42.2	
D8SJ-600X			38.9	64.7	99.6	121.5	174.5	D8SJ-600X			24.3	31.8	38.9	42.1	47.2

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

High Discharge Temp - Additional cooling required

Condensing Temperature 40°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	Model	-30	-20	-10	-5	5	10		15	Model	-30	-20	-10	-5	5
D4SA-200X		15.7*	27.1	33.7	50.6	61.2	73.3	D4SA-200X		7.9*	9.8	10.7	12.0	12.4	12.5
D4SH-250X		19.1*	33.5	41.9	63.3	76.6	92.0	D4SH-250X		9.8*	12.4	13.5	15.3	15.9	16.3
D4SJ-300X		22.8*	40.5	50.5	75.3	90.4	107.5	D4SJ-300X		11.8*	15.3	16.8	18.9	19.6	19.9
D6SA-300X		20.1*	37.3	47.2	72.3	87.9	106.0	D6SA-300X		11.9*	14.7	15.9	18.0	18.7	19.2
D6SJ-400X		34.3*	59.9	74.7	112.0	135.0	162.0	D6SJ-400X		17.6*	22.5	24.7	28.2	29.3	29.8
D6SK-500X		38.6*	70.8	89.1	135.0	163.0	195.5	D6SK-500X		21.1*	26.7	29.2	33.2	34.7	35.7
D8SJ-600X		48.8*	86.4	107.5	160.5	193.0	230.0	D8SJ-600X		25.2*	32.7	35.8	40.5	41.8	42.3
D8SK-700X		53.8*	98.2	124.0	189.0	229.0	276.0	D8SK-700X		29.7*	38.1	41.9	47.7	49.5	50.2

Suction Gas Return 20°C / Subcooling 0K

*Suction Superheat 10K / Subcooling 0K

Capacity Data

Condensing Temperature 40°C															
R134a		Cooling Capacity (kW)						R134a		Power Input (kW)					
		Evaporating Temperature (°C)								Evaporating Temperature (°C)					
Model	-30	-20	-10	-5	5	10	15	Model	-30	-20	-10	-5	5	10	15
D2SA-45X		4.2	7.0	8.9	13.7	16.8		D2SA-45X		2.5	3.0	3.3	3.6	3.7	
D2SC-55X		5.2	8.5	10.7	16.2	19.7		D2SC-55X		2.9	3.6	4.0	4.5	4.6	
D2SK-65X		5.7	9.5	12.0	18.3	22.2		D2SK-65X		3.3	4.2	4.5	5.1	5.4	
D3SC-75X		6.9	11.3	14.3	22.0	27.0		D3SC-75X		3.8	4.8	5.4	6.4	6.9	
D3SS-100X		9.0	14.9	18.7	28.8	35.3		D3SS-100X		5.0	6.4	7.1	8.3	8.8	
D4SA-100X		11.3	18.6	23.1	34.4	41.3		D4SA-100X		5.2	6.6	7.3	8.4	8.8	
D4SF-100X		10.3	17.7	22.4	34.4	41.9		D4SF-100X		5.4	6.9	7.6	8.7	9.1	
D4SH-150X		12.2	21.5	27.4	42.3	51.5		D4SH-150X		6.3	8.2	9.0	10.3	10.5	
D4SL-150X		13.6	23.0	29.0	44.1	53.6		D4SL-150X		6.8	8.7	9.6	11.2	11.8	
D4SJ-200X		17.0	28.0	34.9	52.1	62.6		D4SJ-200X		8.2	10.7	11.9	14.1	15.0	
D4ST-200X		16.5	27.7	34.8	52.9	64.2		D4ST-200X		8.1	10.5	11.6	13.6	14.3	
D6SF-200X		16.1	27.2	34.4	52.6	63.8		D6SF-200X		7.9	10.2	11.3	13.2	13.9	
D6SH-200X		20.5	33.2	41.4	62.0	74.9		D6SH-200X		10.5	13.1	14.5	16.9	17.9	
D6SJ-300X		23.9	39.6	49.7	75.3	91.3		D6SJ-300X		12.2	15.6	17.3	20.4	21.6	
D6ST-300X		24.0	41.1	52.1	79.8	97.1		D6ST-300X		12.4	15.9	17.6	20.4	21.4	
D6ST-320X		24.2	41.3	52.2	79.9	97.2		D6ST-320X		12.3	15.9	17.6	20.5	21.7	
D6SU-400X		29.9	49.6	62.1	93.9	113.5		D6SU-400X		15.2	19.2	21.1	24.5	25.9	
D6SK-400X		27.0	45.5	57.4	88.0	107.0		D6SK-400X		13.7	18.2	20.3	23.6	24.7	
D8SH-370X		28.8	47.9	60.1	90.9	110.0		D8SH-370X		14.8	18.7	20.6	23.8	25.1	
D8SH-400X		27.7	46.7	58.8	89.7	109.0		D8SH-400X		14.0	18.2	20.0	22.8	23.7	
D8SJ-500X		31.9	54.0	68.1	104.0	126.5		D8SJ-500X		17.6	22.1	24.3	28.1	29.6	
D8SJ-450X		33.4	57.4	72.7	111.5	135.5		D8SJ-450X		16.8	21.5	23.7	27.3	28.5	
D8SK-600X		36.1	62.4	79.9	123.0	148.0		D8SK-600X		18.9	24.7	27.6	32.4	33.9	

Suction Gas Return 20°C / Subcooling OK

Capacity Data

Condensing Temperature 40°C															
R22	Cooling Capacity (kW)							R22	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	5		-45	-35	-30	-20	-10	-5	5
Model								Model							
D2SA-45X		2.4*	3.5*	6.9	10.9	13.4		D2SA-45X		2.4*	2.9*	3.8	4.6	4.9	
D2SA-45X Air	1.1*	3.3	4.5	7.4	11.5	14.0		D2SA-45X Air	1.7*	2.5	3.0	3.8	4.6	4.9	
D2SA-55X				6.6	10.9	13.6	20.4	D2SA-55X				3.8	4.5	4.7	5.2
D2SC-55X		2.4*	4.0*	8.4	13.7	16.9		D2SC-55X		2.9*	3.5*	4.6	5.5	5.9	
D2SC-55X Air	1.3*	4.0	5.4					D2SC-55X Air	2.1*	3.1	3.6				
D2SC-65X				9.4	14.6	17.8	25.6	D2SC-65X				5.3	6.3	6.7	7.3
D2SK-65X		3.6*	5.4*	10.3	16.1	19.8		D2SK-65X		3.7*	4.3*	5.5	6.6	7.1	
D3SA-75X				9.5	15.5	19.3	29.0	D3SA-75X				5.1	6.1	6.6	7.2
D3SC-100X				11.7	18.6	23.0	34.4	D3SC-100X				6.3	7.4	7.9	8.6
D3SC-750-DTC	2.0	4.9	6.8	12.0	19.4	23.9		D3SC-750-DTC	2.6	3.9	4.6	6.0	7.5	8.2	
D3SS-150X				16.4	25.6	31.4	46.0	D3SS-150X				8.6	10.3	11.1	12.3
D3SS-1000-DTC	2.6	6.7	9.4	16.3	25.7	31.5		D3SS-1000-DTC	3.5	5.6	6.6	8.6	10.7	11.9	
D4SF-100X			9.2*	16.8*	27.0*	33.3*		D4SF-100X			7.0*	9.0*	10.8*	11.5*	
D4SA-200X				18.0*	29.2	36.0	52.7	D4SA-200X				9.0*	10.7	11.4	12.4
D4SH-250X				22.6*	37.2	45.9	67.2	D4SH-250X				11.3*	13.6	14.6	16.0
D4SL-150X			13.0*	22.4*	35.8	44.0		D4SL-150X			9.1*	11.8*	14.2	15.4	
D4SL-1500-DTC	4.5	9.7	13.3	22.7	35.8	44.0		D4SL-1500-DTC	5.3	7.8	9.1	11.8	14.2	15.4	
D4SJ-300X				25.7*	43.5	53.9	79.6	D4SJ-300X				13.1*	16.1	17.4	19.5
D4ST-200X			15.0*	26.1*	42.0	51.6		D4ST-200X			10.4*	13.5*	16.5	18.0	
D4ST-2000-DTC	5.2	11.2	15.3	26.4	41.9	51.6		D4ST-2000-DTC	6.1	8.9	10.4	13.5	16.5	18.0	
D6SA-300X				24.6*	41.9	52.0	76.8	D6SA-300X				13.4*	16.2	17.3	19.0
D6SF-200X			13.8*	24.8*	39.7*	48.9*		D6SF-200X			10.5*	13.8*	16.6*	17.7*	
D6ST-3200-DTC	7.3	16.1	22.1	38.0	60.0	73.6		D6ST-3200-DTC	9.0	13.4	15.7	20.5	25.8	28.5	
D6SJ-400X				37.2*	63.2	78.3	115.5	D6SJ-400X				20.2*	24.5	26.4	29.3
D6SU-4000-DTC	9.7	21.2	28.9	49.5	77.9	95.5		D6SU-4000-DTC	11.6	16.9	19.7	25.1	30.3	32.7	
D6SK-500X				45.8*	76.2	94.1	139.0	D6SK-500X				23.1*	28.4	30.7	34.3
D8SH-370X			27.1*	46.7*	72.3*	87.6*		D8SH-370X			18.9*	24.5*	29.2*	31.0*	
D8SJ-450X			31.6*	55.1*	87*	107*		D8SJ-450X			21.4*	28.3*	34.4*	36.9*	
D8SJ-600X				53.8*	92.0	114.0	168.5	D8SJ-600X				28.9*	35.0	37.6	41.6
D8SK-700X				62.8*	103.5	127.5	191.0	D8SK-700X				33.8*	41.1	44.3	49.2

Suction Gas Return 20°C / Subcooling OK

*Suction Superheat 10K / Subcooling OK

High Discharge Temp - Additional cooling required