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

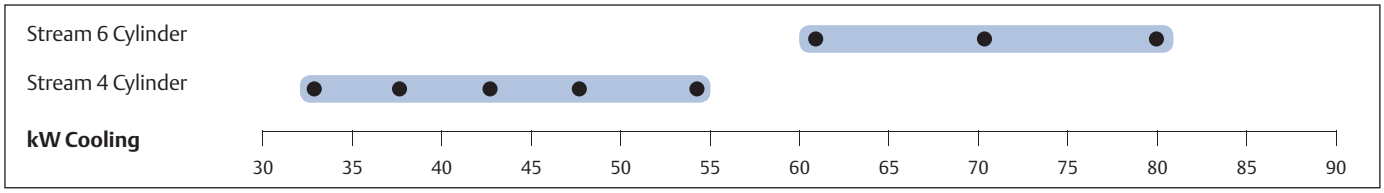
Stream Digital series 4 and 6 cylinder compressors provide an alternative means of continuous modulation to inverter. Digital modulation is the most simple and precise method of capacity control and helps to contain applied costs associated with modulation.
Digital technology is based on controlling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

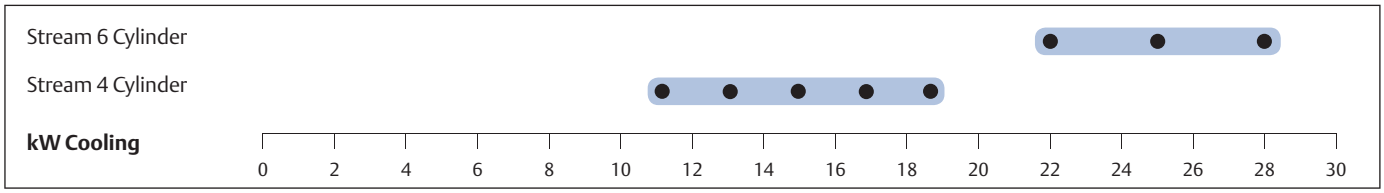
- Range of 16 Models from 62 to 153 m^3/h
- Multi-refrigerant compressor as it is compatible with R404A, R134a, R407A/C and R22
- Continuous modulation from 50–100% (4-cylinder) and 33–100% (6-cylinder) ensuring a perfect match of capacity and power to refrigeration load
- Economical and reliable alternative 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

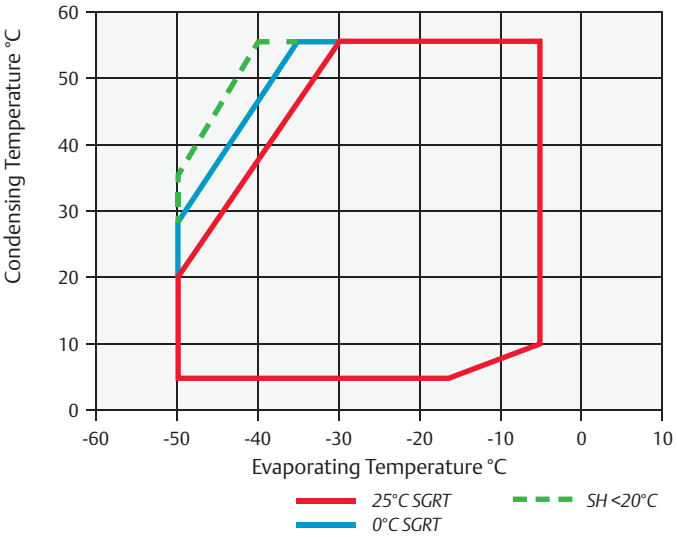
Stream Digital Line-up with R404A, Low Temperature



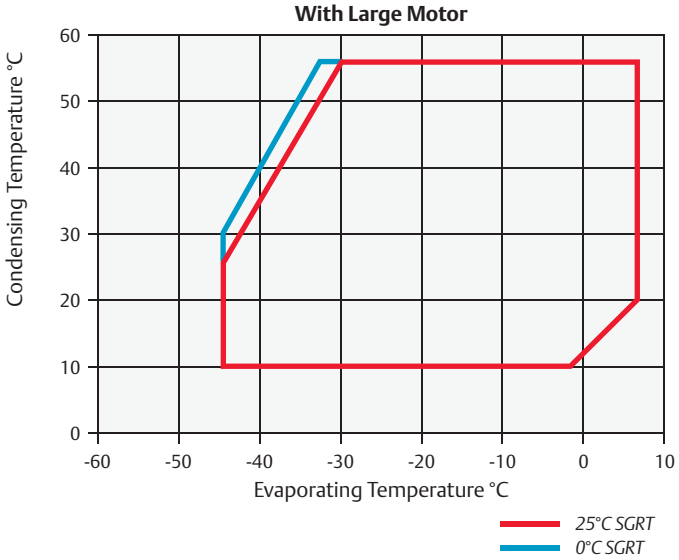
Conditions: EN12900 R404: Evaporating -35° C, Condensing 40° C, Suction Gas Temperature 20° C, Subcooling 0K

Operating envelope R404A- full load -100% modulation

With Small Motor



With Large Motor



Technical Overview

R404A	Nominal hp	Capacity (kW) 1)	COP 1)	Capacity (kW) 2)	COP 2)	Displacement (m3/h)	Oil Quantity (l)	Length/ Width/Heigth (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*	1)	2)
All Preliminary Data														
4MFD-13X	13.0	33.4	2.4	11.4	1.4	61.7	3.30	636/503/450	177	AWM	26	105	69	73
4MAD-22X	22.0	33.6	2.4	10.8	1.4	61.7	3.30	636/503/450	178	AWM	36	175	69	75
4MLD-15X	15.0	38.7	2.3	13.2	1.5	71.4	3.30	636/503/450	180	AWM	35	156	70	72
4MHD-25X	25.0	38.8	2.4	12.5	1.4	71.4	3.30	655/503/450	187	AWM	39	199	70	74
4MMD-20X	20.0	42.6	2.3	14.7	1.5	78.0	3.30	655/503/450	182	AWM	39	175	71	73
4MID-30X	30.0	42.8	2.4	13.9	1.4	78.0	3.30	655/503/450	188	AWM	47	221	71	76
4MTD-22X	22.0	47.8	2.3	16.5	1.5	87.7	3.30	655/503/450	183	AWM	45	175	72	74
4MJD-33X	33.0	48.0	2.3	16.0	1.4	87.7	3.30	655/503/450	190	AWM	53	221	72	75
4MUD-25X	25.0	54.2	2.3	18.7	1.5	99.5	3.30	655/503/450	186	AWM	52	199	73	73
4MKD-35X	35.0	54.4	2.3	17.7	1.4	99.5	3.30	687/503/450	202	AWM	61	255	73	75
6MMD-30X	30.0	61.8	2.3	21.6	1.4	120.5	3.30	723/550/447	215	AWM	60	255	73	79
6MID-40X	40.0	64.2	2.4	20.3	1.4	120.5	3.30	723/550/447	219	AWM	71	304	73	79
6MTD-35X	35.0	70.4	2.3	25.1	1.5	135.1	3.30	723/550/447	221	AWM	67	255	75	79
6MJD-45X	45.0	72.4	2.3	23.6	1.4	135.1	3.30	773/550/447	223	AWM	81	304	75	80
6MUD-40X	40.0	79.8	2.2	28.4	1.4	153.2	3.30	773/550/447	225	AWM	75	306	77	81
6MKD-50X	50.0	82.1	2.2	26.6	1.4	153.2	3.30	773/550/447	230	AWM	93	393	77	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