VTCX360U-MD5C

VARIABLE SPEED COMPRESSOR

250V / 83-150Hz / R-290

GENERAL DATA	
Compressor Model	VTCX360U-MD5C
Compressor Drawing - Universal Mounting Brackets	DCVTC052
Dual Voltage Inverter	030F0207
115-127V Inverter (TAL™)[1]	030F0216
220-240V Inverter (TAL™)[1]	030F0217
85-260V Inverter with Power Factor Corrector (PFC) (TAL™)[1]	030F0218
Inverter Drawing[2]	DGMX0086, DGMX0093
Wiring Diagram[3]	DEMX0056, DEMX0061

1 Usage with 030F0216, 030F0217, 030F0218 approved under UL 60335-2-34 with Annex AA.

2 For 030F0207 inverter model see Drawing DGMX0086. For 030F0216, 030F0217 and 030F0218 models see DGMX0093.

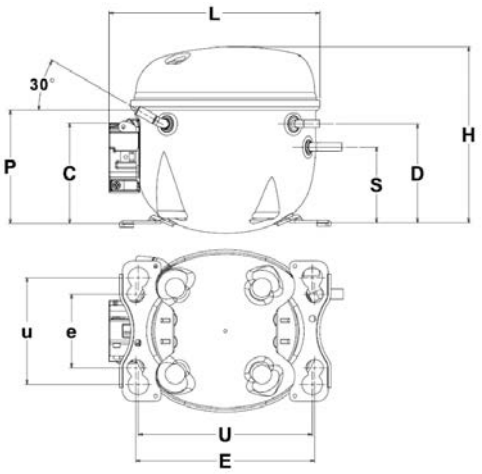
3 For 030F0207 inverter model see Wiring Diagram DEMX0056. For 030F0216, 030F0217 and 030F0218 models see DEMX0061.

APPLICATION DATA	
Application (Commercial Reference)	L/MBP (1/9 – 1/5 hp)
Speed Range	2500 – 4500 rpm
Cooling Capacity Range[4]	432 – 768 BTU/h
Maximum Efficiency[4]	6.05 BTU/Wh
Refrigerant	R-290
Evaporating Temperature Range	-35.0°C to -5.0°C (-31°F to +23°F)
Speed Range	2500 – 4500 rpm
Starting Torque	High Starting Torque (HST)
Cooling System	Fan Cooling (3 m/s)
Expansion Device	Expansion Valve / Capillary Tube

4 Data for ASHRAE32 condition.

DESIGN INFORMATION	
Displacement	3.14 cm^3 (0.19 in^3)
Oil Type / Quantity	POE 10 cSt / 170 ml
Weight - Compressor	7.30 kg
Motor Technology	PMSM

COMPRESSOR DIMENSIONS[5]



Dimension	mm	in
L	200	7.88
H	167	6.59
C	95.6	3.76
P	108	4.25
D	94	3.70
S	72	2.84
E	170	6.69
e	70	2.76
U	165	6.50
u	101.6	4.00

Process tube

I.D.:6.50±0.50mm – Depth: 16.0±1.0mm – Copper

Discharge tube

I.D.:4.97±0.50mm – Depth: 16.0±1.0mm – Copper

Suction tube

I.D.:6.50±0.50mm – Depth: 16.0±1.0mm – Copper

5 Drawing only for reference. Other options may be available. Universal mounting brackets.

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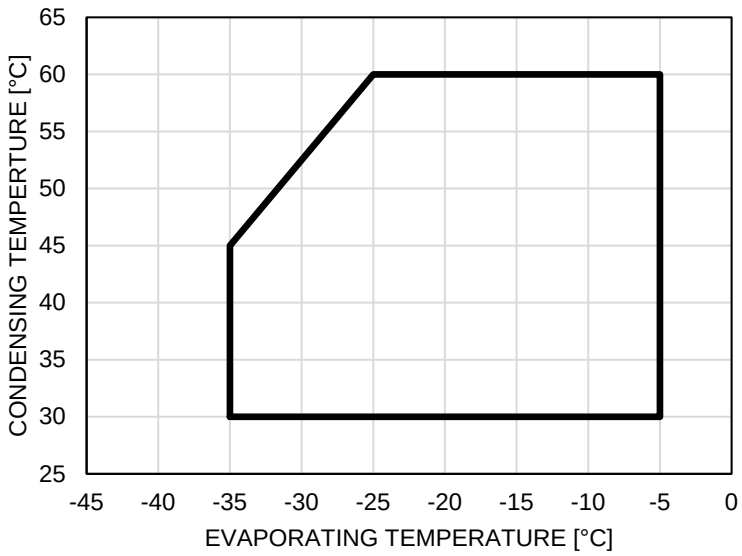
THE VARIABLE SPEED COMPRESSOR CAN NOT BE CONNECTED DIRECTLY TO THE MAINS.
THE COMPRESSOR MUST BE USED WITH THE APPROPRIATE TECUMSEH VARIABLE SPEED INVERTER.

COMPRESSOR OPERATING ENVELOPE



COMPRESSOR PERFORMANCE

ASHRAE32 [1][2] - 220V / 60Hz (030F0207 / 030F0217 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	54.4	(130)	-23.3	(-10)	432	(126)	72.9	0.72	5.92	(1.73)
3000	54.4	(130)	-23.3	(-10)	507	(148)	85.4	0.82	5.94	(1.74)
3600	54.4	(130)	-23.3	(-10)	622	(182)	103.0	0.97	6.04	(1.77)
4000	54.4	(130)	-23.3	(-10)	697	(204)	115.1	1.06	6.05	(1.77)
4500	54.4	(130)	-23.3	(-10)	768	(225)	129.3	1.16	5.94	(1.74)
2500	54.4	(130)	-6.7	(20)	879	(257)	99.8	0.94	8.81	(2.58)
3000	54.4	(130)	-6.7	(20)	1047	(306)	117.8	1.08	8.89	(2.60)
3600	54.4	(130)	-6.7	(20)	1279	(375)	143.3	1.29	8.93	(2.61)
4000	54.4	(130)	-6.7	(20)	1436	(421)	161.4	1.43	8.90	(2.61)
4500	54.4	(130)	-6.7	(20)	1615	(473)	184.1	1.59	8.77	(2.57)

(1) Test condition with Ambient: 32.2°C (90°F); Return Gas: 32.2°C (90°F); Liquid: 32.2°C (90°F).
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

EN12900 [1][2] – 220V / 50Hz (030F0207 / 030F0217 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	40	(104)	-35	(-31)	240	(70)	51.8	0.55	4.64	(1.36)
3000	40	(104)	-35	(-31)	280	(82)	60.5	0.62	4.63	(1.35)
3600	40	(104)	-35	(-31)	347	(102)	75.2	0.75	4.62	(1.35)
4000	40	(104)	-35	(-31)	391	(114)	85.3	0.83	4.58	(1.34)
4500	40	(104)	-35	(-31)	429	(126)	95.9	0.93	4.48	(1.31)
2500	45	(113)	-10	(14)	700	(205)	86.5	0.85	8.09	(2.37)
3000	45	(113)	-10	(14)	818	(239)	99.8	0.97	8.20	(2.40)
3600	45	(113)	-10	(14)	999	(292)	123.5	1.16	8.09	(2.37)
4000	45	(113)	-10	(14)	1130	(331)	141.8	1.31	7.97	(2.33)
4500	45	(113)	-10	(14)	1293	(379)	165.0	1.51	7.83	(2.29)

(1) Test condition with Ambient: 32°C (90°F); Return Gas: 20°C (68°F); Subcooling: 0 K.
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

COMPRESSOR PERFORMANCE

ASHRAE32 (1)(2) - 220V / 60Hz (030F0218 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	54.4	(130)	-23.3	(-10)	432	(126)	76.5	0.40	5.64	(1.65)
3000	54.4	(130)	-23.3	(-10)	507	(148)	89.1	0.45	5.69	(1.67)
3600	54.4	(130)	-23.3	(-10)	622	(182)	106.5	0.53	5.84	(1.71)
4000	54.4	(130)	-23.3	(-10)	697	(204)	118.3	0.58	5.89	(1.72)
4500	54.4	(130)	-23.3	(-10)	768	(225)	132.0	0.63	5.82	(1.70)
2500	54.4	(130)	-6.7	(20)	879	(257)	103.3	0.51	8.51	(2.49)
3000	54.4	(130)	-6.7	(20)	1047	(306)	120.9	0.59	8.66	(2.53)
3600	54.4	(130)	-6.7	(20)	1279	(375)	145.3	0.71	8.80	(2.58)
4000	54.4	(130)	-6.7	(20)	1436	(421)	162.4	0.79	8.84	(2.59)
4500	54.4	(130)	-6.7	(20)	1615	(473)	183.3	0.88	8.81	(2.58)

(1) Test condition with Ambient: 32.2°C (90°F); Return Gas: 32.2°C (90°F); Liquid: 32.2°C (90°F).
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

EN12900 (1)(2) – 220V / 50Hz (030F0218 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	40	(104)	-35	(-31)	240	(70)	55.4	0.30	4.34	(1.27)
3000	40	(104)	-35	(-31)	280	(82)	64.2	0.34	4.36	(1.28)
3600	40	(104)	-35	(-31)	347	(102)	79.0	0.41	4.40	(1.29)
4000	40	(104)	-35	(-31)	391	(114)	89.1	0.46	4.38	(1.28)
4500	40	(104)	-35	(-31)	429	(126)	99.6	0.51	4.31	(1.26)
2500	45	(113)	-10	(14)	700	(205)	90.2	0.47	7.76	(2.27)
3000	45	(113)	-10	(14)	818	(239)	103.4	0.53	7.91	(2.32)
3600	45	(113)	-10	(14)	999	(292)	126.4	0.63	7.90	(2.31)
4000	45	(113)	-10	(14)	1130	(331)	143.8	0.72	7.86	(2.30)
4500	45	(113)	-10	(14)	1293	(379)	165.4	0.83	7.82	(2.29)

(1) Test condition with Ambient: 32°C (90°F); Return Gas: 20°C (68°F); Subcooling: 0 K.
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

APPLICATION CONDITION 1 (1)(2) - 220V / 60Hz (030F0218 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	35	(95)	-25	(-13)	442	(129)	60.2	0.33	7.33	(2.15)
3000	35	(95)	-25	(-13)	528	(155)	72.4	0.38	7.30	(2.14)
3600	35	(95)	-25	(-13)	653	(191)	88.8	0.45	7.35	(2.15)
4000	35	(95)	-25	(-13)	730	(214)	99.6	0.49	7.33	(2.15)
4500	35	(95)	-25	(-13)	802	(235)	111.6	0.52	7.19	(2.11)

(1) Test condition with Return Gas: 32°C (90°F); Liquid: 32°C (90°F).
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

APPLICATION CONDITION 2 (1)(2) – 220V / 50Hz (030F0218 CONTROLLER)

	COND. TEMP.		EVAP. TEMP.		COOLING CAPACITY		POWER	CURRENT	EFFICIENCY	
RPM	°C	(°F)	°C	(°F)	BTU/h	(W)	W	A	EER	(COP)
2500	45	(113)	-10	(14)	715	(209)	86.0	0.45	8.32	(2.44)
3000	45	(113)	-10	(14)	835	(245)	98.5	0.50	8.47	(2.48)
3600	45	(113)	-10	(14)	1020	(299)	120.5	0.60	8.47	(2.48)
4000	45	(113)	-10	(14)	1154	(338)	137.1	0.68	8.42	(2.47)
4500	45	(113)	-10	(14)	1320	(387)	157.6	0.79	8.38	(2.45)

(1) Test condition with Return Gas: 32°C (90°F); Subcooling: 0 K.
(2) Tolerance for cooling capacity, input current and input power are ±5%. Tolerance for efficiency is ±7%.

ASHRAE32 PERFORMANCE CURVE COEFFICIENTS – 030F0207 / 030F0216 / 030F0217				
COEFFICIENT	**COOLING CAPACITY**	**POWER**	**CURRENT**	**MASS FLOW**
C_n	**BTU/h**	**W**	**A**	**lb/h**
C_1	-7.588181798309E+02	3.998281367123E+00	5.257081831689E+00	-5.972340089269E+00
C_2	1.471922870260E-01	-5.166477184048E-02	-1.661534389534E-03	1.356300306497E-03
C_3	3.067505627563E-04	3.123458872215E-05	4.603681165751E-07	2.012714033861E-06
C_4	-2.866843922854E-08	-1.966638564615E-09	-3.858916350283E-11	-1.914490586441E-10
C_5	-6.531520793680E+01	-9.624453943688E-01	6.038792466825E-02	-4.659011345284E-01
C_6	1.124279575759E-01	2.522757537322E-02	1.932675968387E-04	8.426692182247E-04
C_7	6.908988672917E-03	8.528724950877E-04	6.149709794979E-06	5.210533453494E-05
C_8	6.306724142656E+01	3.653220763779E+00	-2.099940296121E-01	4.498913616007E-01
C_9	-3.665915134479E-01	-1.632936188162E-02	4.189498998343E-03	-2.773536926554E-03
C_{10}	-2.329584022981E-03	-2.491308659871E-04	-2.727381032907E-05	-1.404973860163E-05
C_{11}	-7.826807844395E-04	-2.466257598677E-05	6.870932945935E-07	-5.599800445177E-06
C_{12}	-8.977313709879E-09	-6.471202880787E-09	-7.418954634180E-11	-4.139990851247E-11
C_{13}	-2.528181493670E-06	-2.507788366819E-07	-1.562036945050E-09	-1.897897845726E-08
C_{14}	6.313265753732E-06	5.571925641573E-07	-2.338295087179E-09	4.367724702834E-08
C_{15}	3.733002288686E-02	-2.173317512586E-04	-2.945479064032E-05	2.675406757753E-04
C_{16}	-2.458172582374E-02	-7.913082012863E-04	1.528031334352E-05	-1.718286160397E-04
C_{17}	2.603864070494E+00	1.160746753885E-01	-1.420046559474E-03	1.831313705702E-02
C_{18}	1.077958487827E-06	4.701988927327E-07	4.882527275683E-09	6.042503249239E-09
C_{19}	3.217213704611E-04	1.623248652966E-05	9.833634045013E-08	2.294643748741E-06
C_{20}	1.012050730193E-07	-1.224972024859E-07	-6.675247637319E-10	1.172263138569E-09
C_{21}	1.905618459475E-04	1.525972107630E-05	-1.045307507150E-07	1.307596989492E-06
C_{22}	4.024975107633E-03	1.960298108470E-04	3.888551241298E-07	3.264655196525E-05
C_{23}	-2.299774421863E-02	-1.371124586740E-03	8.476959597825E-06	-1.582979403416E-04

PERFORMANCE CURVE EQUATION

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

INPUTS

X_1 = Motor speed (rpm)

X_2 = Evaporating temperature (°C)

X_3 = Condensing temperature (°C)

EN12900 PERFORMANCE CURVE COEFFICIENTS – 030F0207 / 030F0216 / 030F0217				
COEFFICIENT	**COOLING CAPACITY**	**POWER**	**CURRENT**	**MASS FLOW**
C_n	**BTU/h**	**W**	**A**	**lb/h**
C_1	-1.564823504090E+03	1.134913560323E+03	1.286473071578E+01	-9.359637360554E+00
C_2	8.973805308669E-01	1.584971362427E-01	1.867308293406E-03	6.291268390584E-03
C_3	2.864111454724E-04	4.167644281416E-05	2.004123644670E-07	2.087006045457E-06
C_4	-2.174412900604E-08	-3.688195452149E-09	-2.050529439995E-11	-1.742663400638E-10
C_5	-1.233141508447E+02	-1.796660391439E+01	-1.458202751182E-01	-9.134839312392E-01
C_6	5.033439208805E-01	2.304369146833E-01	1.646103019416E-03	5.991047023898E-03
C_7	3.389772706664E-03	2.322140459544E-03	2.513114338468E-05	4.403734604799E-05
C_8	8.552743712300E+01	-7.540445406467E+01	-8.735473592669E-01	4.752749698237E-01
C_9	1.646710375353E-01	1.922757004902E+00	2.120057415118E-02	5.420540289606E-03
C_{10}	-1.485651241874E-02	-1.530450027560E-02	-1.609217288418E-04	-1.420731773470E-04
C_{11}	-1.882410650964E-03	-3.790509113042E-04	-3.122705250602E-06	-1.372294308127E-05
C_{12}	-1.948596552997E-08	-5.861429064530E-12	-3.087744591939E-11	-3.030690771590E-11
C_{13}	3.369787871281E-07	6.312160661276E-07	6.689665692333E-11	2.161148505146E-08
C_{14}	1.957124877494E-05	4.292853617083E-06	3.517390610112E-08	1.505490183412E-07
C_{15}	5.285622108408E-02	7.672679689961E-03	6.339020437807E-05	3.820426388668E-04
C_{16}	-6.050208340343E-02	-1.242775882378E-02	-1.051087695760E-04	-4.525099052337E-04
C_{17}	6.040225836332E+00	9.786602806125E-01	7.965108215956E-03	4.580609824120E-02
C_{18}	2.043232758684E-06	1.902866727102E-07	2.643169281108E-09	1.044203740694E-08
C_{19}	1.594191442620E-04	-2.774877614350E-05	-3.958132698651E-08	5.345053318501E-07
C_{20}	-3.664294530495E-07	1.244394026536E-07	1.933031444000E-09	1.436532557297E-09
C_{21}	5.900754703099E-04	1.257469029774E-04	9.795579351372E-07	4.505651899134E-06
C_{22}	-8.692772058431E-03	-2.055431146949E-03	-1.813065517421E-06	-9.226094156047E-05
C_{23}	-6.745560200920E-02	-1.071359931501E-02	-8.337860217811E-05	-5.144581895138E-04

PERFORMANCE CURVE EQUATION

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

INPUTS

X_1 = Motor speed (rpm)

X_2 = Evaporating temperature (°C)

X_3 = Condensing temperature (°C)

ASHRAE32 PERFORMANCE CURVE COEFFICIENTS – 030F0218				
COEFFICIENT	**COOLING CAPACITY**	**POWER**	**CURRENT**	**MASS FLOW**
C_n	**BTU/h**	**W**	**A**	**lb/h**
C_1	-7.588181798309E+02	-8.953262064606E-01	2.936811566498E+00	-5.972340089269E+00
C_2	1.471922870260E-01	-4.578302447408E-02	-9.309304954499E-04	1.356300306497E-03
C_3	3.067505627563E-04	3.023363403307E-05	2.535203599473E-07	2.012714033861E-06
C_4	-2.866843922854E-08	-1.987925951203E-09	-2.113340571347E-11	-1.914490586441E-10
C_5	-6.531520793680E+01	-8.325189608149E-01	3.292851298283E-02	-4.659011345284E-01
C_6	1.124279575759E-01	3.200743252364E-02	8.870323103454E-05	8.426692182247E-04
C_7	6.908988672917E-03	8.414477158951E-04	3.301839203485E-06	5.210533453494E-05
C_8	6.306724142656E+01	3.741472399328E+00	-1.169547530103E-01	4.498913616007E-01
C_9	-3.665915134479E-01	-1.689457306566E-02	2.320202355236E-03	-2.773536926554E-03
C_{10}	-2.329584022981E-03	-2.386042827701E-04	-1.503740147227E-05	-1.404973860163E-05
C_{11}	-7.826807844395E-04	-2.410079409110E-05	3.827599846726E-07	-5.599800445177E-06
C_{12}	-8.977313709879E-09	-6.320388840262E-09	-3.953407281827E-11	-4.139990851247E-11
C_{13}	-2.528181493670E-06	-2.406972311743E-07	-8.354848402315E-10	-1.897897845726E-08
C_{14}	6.313265753732E-06	5.326177107412E-07	-1.368180663707E-09	4.367724702834E-08
C_{15}	3.733002288686E-02	-1.308750425437E-04	-1.627778706093E-05	2.675406757753E-04
C_{16}	-2.458172582374E-02	-8.091151902931E-04	8.734623574314E-06	-1.718286160397E-04
C_{17}	2.603864070494E+00	1.102118446870E-01	-7.908842841573E-04	1.831313705702E-02
C_{18}	1.077958487827E-06	4.335928673123E-07	2.680809764083E-09	6.042503249239E-09
C_{19}	3.217213704611E-04	1.397776010790E-05	5.734022941327E-08	2.294643748741E-06
C_{20}	1.012050730193E-07	-1.196514700060E-07	-3.421145133365E-10	1.172263138569E-09
C_{21}	1.905618459475E-04	1.481357513322E-05	-6.086427705929E-08	1.307596989492E-06
C_{22}	4.024975107633E-03	1.166306595850E-04	3.391874497586E-07	3.264655196525E-05
C_{23}	-2.299774421863E-02	-1.301562587912E-03	4.840224699487E-06	-1.582979403416E-04

PERFORMANCE CURVE EQUATION

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

INPUTS

X_1 = Motor speed (rpm)

X_2 = Evaporating temperature (°C)

X_3 = Condensing temperature (°C)

EN12900 PERFORMANCE CURVE COEFFICIENTS – 030F0218				
COEFFICIENT	**COOLING CAPACITY**	**POWER**	**CURRENT**	**MASS FLOW**
C_n	**BTU/h**	**W**	**A**	**lb/h**
C_1	-1.564823504090E+03	1.169679940008E+03	6.905875635930E+00	-9.359637360554E+00
C_2	8.973805308669E-01	1.266708484200E-01	1.143167939340E-03	6.291268390584E-03
C_3	2.864111454724E-04	4.329996145255E-05	9.834061833162E-08	2.087006045457E-06
C_4	-2.174412900604E-08	-3.771183286612E-09	-1.054824823971E-11	-1.742663400638E-10
C_5	-1.233141508447E+02	-1.560386099503E+01	-8.833212750687E-02	-9.134839312392E-01
C_6	5.033439208805E-01	2.182302864760E-01	9.155400903141E-04	5.991047023898E-03
C_7	3.389772706664E-03	2.250393631334E-03	1.386661623085E-05	4.403734604799E-05
C_8	8.552743712300E+01	-7.577205227886E+01	-4.760168152284E-01	4.752749698237E-01
C_9	1.646710375353E-01	1.893182981345E+00	1.168166735594E-02	5.420540289606E-03
C_{10}	-1.485651241874E-02	-1.488098948625E-02	-8.926576196084E-05	-1.420731773470E-04
C_{11}	-1.882410650964E-03	-3.373131310038E-04	-1.848360957388E-06	-1.372294308127E-05
C_{12}	-1.948596552997E-08	-1.544978364734E-09	-1.075783041025E-11	-3.030690771590E-11
C_{13}	3.369787871281E-07	5.068765976670E-07	2.874126970261E-10	2.161148505146E-08
C_{14}	1.957124877494E-05	3.882327393595E-06	2.048003907033E-08	1.505490183412E-07
C_{15}	5.285622108408E-02	6.757124729404E-03	3.799928251413E-05	3.820426388668E-04
C_{16}	-6.050208340343E-02	-1.108291629967E-02	-6.184316050151E-05	-4.525099052337E-04
C_{17}	6.040225836332E+00	8.715042434487E-01	4.715526514275E-03	4.580609824120E-02
C_{18}	2.043232758684E-06	2.207019012465E-07	1.292438431714E-09	1.044203740694E-08
C_{19}	1.594191442620E-04	-2.388173006538E-05	-2.888605006919E-08	5.345053318501E-07
C_{20}	-3.664294530495E-07	7.481614612585E-08	1.259339653033E-09	1.436532557297E-09
C_{21}	5.900754703099E-04	1.137963741606E-04	5.713434871359E-07	4.505651899134E-06
C_{22}	-8.692772058431E-03	-1.801194310604E-03	-1.302043041070E-06	-9.226094156047E-05
C_{23}	-6.745560200920E-02	-9.594675502797E-03	-4.901887799047E-05	-5.144581895138E-04

PERFORMANCE CURVE EQUATION

$$Y = C_1 + C_2 X_1 + C_3 X_1^2 + C_4 X_1^3 + C_5 X_2 + C_6 X_2^2 + C_7 X_2^3 + C_8 X_3 + C_9 X_3^2 + C_{10} X_3^3 + C_{11} X_1 X_2 X_3 + C_{12} X_1^2 X_2 X_3 + C_{13} X_1 X_2^2 X_3 + C_{14} X_1 X_2 X_3^2 + C_{15} X_1 X_2 + C_{16} X_1 X_3 + C_{17} X_2 X_3 + C_{18} X_1^2 X_2 + C_{19} X_1 X_2^2 + C_{20} X_1^2 X_3 + C_{21} X_1 X_3^2 + C_{22} X_2^2 X_3 + C_{23} X_2 X_3^2$$

INPUTS

X_1 = Motor speed (rpm)

X_2 = Evaporating temperature (°C)

X_3 = Condensing temperature (°C)

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