

COMPRESSOR DEFINITION

Designation	VEX Y11C
Nominal Voltage/Frequency	230 V 43-160 Hz
Engineering Number	513908311

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 43-160	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	BPM		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	10.85	[cm ³] (0.662 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	24.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	5	[kg] (11.02 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 43-160 Hz 3~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	CF02D01 M 0.0 X	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	INVERTER CF02D01 M 0	
6 Start winding resistance		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (43/160 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (43/160 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (43/160 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V2000RPM			ASHRAEHBP32 Static		Evaporating temperature (Condensing temperature)		7.2°C (44.96°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
447	113	131	75	0.60		5.96	1.50	1.75

TEST CONDITIONS: @220V3000RPM			ASHRAEHBP32 Static		Evaporating temperature (Condensing temperature)		7.2°C (44.96°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
652	164	191	111	0.88		5.87	1.48	1.72

TEST CONDITIONS: @220V1300RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
297	75	87	52	0.43	0.93	5.71	1.44	1.67

TEST CONDITIONS: @220V4000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
822	207	241	146	1.16	2.58	5.63	1.42	1.65

TEST CONDITIONS: @220V4800RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
904	228	265	170	1.33	2.84	5.32	1.34	1.56

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1300RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	168	42	49	30	0.23	0.53	5.54	1.40	1.62
-30	(-22)	221	56	65	36	0.27	0.69	6.20	1.56	1.82
-25	(-13)	287	72	84	41	0.31	0.90	6.95	1.75	2.04
-20	(- 4)	368	93	108	47	0.35	1.16	7.81	1.97	2.29
-15	(+ 5)	465	117	136	53	0.39	1.46	8.82	2.22	2.58
-10	(+14)	581	146	170	58	0.43	1.83	9.97	2.51	2.92
-5	(+23)	717	181	210	63	0.47	2.27	11.31	2.85	3.31

TEST CONDITIONS: @220V1300RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	154	39	45	31	0.24	0.48	4.93	1.24	1.45
-30	(-22)	206	52	61	38	0.28	0.65	5.46	1.38	1.60
-25	(-13)	272	68	80	45	0.33	0.85	6.05	1.52	1.77
-20	(- 4)	352	89	103	52	0.39	1.10	6.71	1.69	1.96
-15	(+ 5)	449	113	131	60	0.45	1.41	7.46	1.88	2.19
-10	(+14)	565	142	166	68	0.52	1.78	8.33	2.10	2.44
-5	(+23)	702	177	206	75	0.58	2.22	9.33	2.35	2.73

TEST CONDITIONS: @220V1300RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	140	35	41	32	0.25	0.44	4.39	1.11	1.29
-30	(-22)	191	48	56	40	0.29	0.60	4.84	1.22	1.42
-25	(-13)	256	65	75	49	0.36	0.80	5.30	1.33	1.55
-20	(- 4)	336	85	99	58	0.43	1.06	5.79	1.46	1.70
-15	(+ 5)	434	109	127	68	0.52	1.37	6.34	1.60	1.86
-10	(+14)	552	139	162	79	0.61	1.74	6.97	1.76	2.04
-5	(+23)	691	174	202	90	0.71	2.18	7.69	1.94	2.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	216	55	63	35	0.27	0.68	6.13	1.54	1.80
-30	(-22)	292	74	86	42	0.31	0.92	6.98	1.76	2.05
-25	(-13)	377	95	110	48	0.36	1.18	7.76	1.96	2.27
-20	(- 4)	475	120	139	56	0.41	1.49	8.52	2.15	2.50
-15	(+ 5)	589	148	172	63	0.46	1.85	9.34	2.35	2.74
-10	(+14)	722	182	211	70	0.51	2.28	10.27	2.59	3.01
-5	(+23)	877	221	257	77	0.56	2.77	11.38	2.87	3.34

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	192	48	56	38	0.28	0.60	5.02	1.27	1.47
-30	(-22)	263	66	77	45	0.33	0.82	5.81	1.46	1.70
-25	(-13)	345	87	101	53	0.39	1.08	6.49	1.63	1.90
-20	(- 4)	441	111	129	62	0.46	1.39	7.11	1.79	2.08
-15	(+ 5)	555	140	163	71	0.54	1.75	7.76	1.95	2.27
-10	(+14)	689	174	202	81	0.62	2.17	8.49	2.14	2.49
-5	(+23)	847	213	248	91	0.70	2.68	9.37	2.36	2.74

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	175	44	51	39	0.29	0.55	4.49	1.13	1.32
-30	(-22)	245	62	72	46	0.34	0.77	5.26	1.33	1.54
-25	(-13)	327	82	96	56	0.41	1.03	5.89	1.48	1.73
-20	(- 4)	425	107	124	66	0.49	1.34	6.44	1.62	1.89
-15	(+ 5)	542	137	159	78	0.58	1.71	6.97	1.76	2.04
-10	(+14)	681	172	199	90	0.68	2.15	7.55	1.90	2.21
-5	(+23)	845	213	248	102	0.79	2.67	8.24	2.08	2.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-35	(-31)	250	63	73	45	0.34	0.78	5.50	1.39	1.61
-30	(-22)	338	85	99	54	0.40	1.06	6.23	1.57	1.82
-25	(-13)	442	111	130	63	0.46	1.39	7.04	1.77	2.06
-20	(- 4)	567	143	166	72	0.53	1.78	7.93	2.00	2.32
-15	(+ 5)	718	181	210	81	0.60	2.26	8.90	2.24	2.61
-10	(+14)	898	226	263	90	0.69	2.83	9.96	2.51	2.92
-5	(+23)	1114	281	326	100	0.78	3.52	11.11	2.80	3.25

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-35	(-31)	240	60	70	48	0.35	0.75	5.02	1.26	1.47
-30	(-22)	324	82	95	58	0.42	1.02	5.59	1.41	1.64
-25	(-13)	424	107	124	68	0.50	1.33	6.22	1.57	1.82
-20	(- 4)	544	137	159	79	0.58	1.71	6.92	1.74	2.03
-15	(+ 5)	690	174	202	90	0.68	2.17	7.67	1.93	2.25
-10	(+14)	865	218	253	102	0.79	2.73	8.49	2.14	2.49
-5	(+23)	1075	271	315	115	0.90	3.40	9.37	2.36	2.75

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[W]	[A]
-35	(-31)	223	56	65	48	0.36	0.70	4.61	1.16	1.35
-30	(-22)	305	77	89	60	0.44	0.96	5.08	1.28	1.49
-25	(-13)	403	101	118	72	0.53	1.26	5.60	1.41	1.64
-20	(- 4)	520	131	152	85	0.64	1.63	6.15	1.55	1.80
-15	(+ 5)	662	167	194	98	0.76	2.08	6.75	1.70	1.98
-10	(+14)	833	210	244	113	0.89	2.63	7.38	1.86	2.16
-5	(+23)	1038	262	304	129	1.03	3.28	8.06	2.03	2.36

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	380	96	111	69	0.51	1.19	5.52	1.39	1.62
-30	(-22)	504	127	148	80	0.60	1.58	6.28	1.58	1.84
-25	(-13)	659	166	193	94	0.72	2.07	6.99	1.76	2.05
-20	(- 4)	847	213	248	111	0.85	2.66	7.66	1.93	2.25
-15	(+ 5)	1069	269	313	128	1.01	3.36	8.34	2.10	2.44
-10	(+14)	1327	334	389	147	1.17	4.19	9.05	2.28	2.65
-5	(+23)	1623	409	476	165	1.34	5.13	9.82	2.47	2.88

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	352	89	103	71	0.52	1.10	4.93	1.24	1.44
-30	(-22)	474	119	139	85	0.64	1.48	5.61	1.41	1.64
-25	(-13)	626	158	184	101	0.77	1.97	6.23	1.57	1.82
-20	(- 4)	811	204	238	119	0.93	2.55	6.82	1.72	2.00
-15	(+ 5)	1030	260	302	139	1.10	3.24	7.42	1.87	2.18
-10	(+14)	1284	324	376	159	1.28	4.05	8.06	2.03	2.36
-5	(+23)	1576	397	462	180	1.46	4.98	8.76	2.21	2.57

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	318	80	93	71	0.53	1.00	4.45	1.12	1.30
-30	(-22)	436	110	128	87	0.66	1.37	5.03	1.27	1.48
-25	(-13)	585	147	171	105	0.82	1.84	5.57	1.40	1.63
-20	(- 4)	765	193	224	126	1.00	2.41	6.09	1.53	1.78
-15	(+ 5)	979	247	287	148	1.18	3.08	6.62	1.67	1.94
-10	(+14)	1228	309	360	171	1.38	3.87	7.18	1.81	2.10
-5	(+23)	1513	381	443	194	1.58	4.79	7.81	1.97	2.29

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4800RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[W]				[W]	[A]	[kg/h]	[Btu/Wh]
-35	(-31)	537	135	157	104	0.82	1.68	5.20	1.31	1.52
-30	(-22)	681	172	199	125	0.98	2.13	5.53	1.39	1.62
-25	(-13)	921	232	270	154	1.20	2.89	5.98	1.51	1.75
-20	(- 4)	1215	306	356	185	1.43	3.82	6.55	1.65	1.92
-15	(+ 5)	1521	383	446	210	1.65	4.79	7.25	1.83	2.12
-10	(+14)	1797	453	527	224	1.79	5.67	8.07	2.03	2.37
-5	(+23)	2000	504	586	221	1.84	6.32	9.04	2.28	2.65

TEST CONDITIONS: @220V4800RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[W]				[W]	[A]	[kg/h]	[Btu/Wh]
-35	(-31)	488	123	143	106	0.84	1.53	4.59	1.16	1.34
-30	(-22)	633	160	186	128	1.01	1.98	5.02	1.26	1.47
-25	(-13)	869	219	255	158	1.23	2.73	5.51	1.39	1.61
-20	(- 4)	1153	291	338	189	1.47	3.62	6.05	1.53	1.77
-15	(+ 5)	1442	364	423	216	1.68	4.54	6.67	1.68	1.95
-10	(+14)	1696	427	497	232	1.83	5.35	7.35	1.85	2.15
-5	(+23)	1870	471	548	231	1.87	5.91	8.11	2.04	2.38

TEST CONDITIONS: @220V4800RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[W]				[W]	[A]	[kg/h]	[Btu/Wh]
-35	(-31)	431	109	126	110	0.86	1.35	3.94	0.99	1.16
-30	(-22)	583	147	171	131	1.04	1.83	4.54	1.14	1.33
-25	(-13)	820	207	240	160	1.27	2.57	5.12	1.29	1.50
-20	(- 4)	1099	277	322	192	1.51	3.45	5.71	1.44	1.67
-15	(+ 5)	1377	347	404	219	1.73	4.34	6.30	1.59	1.85
-10	(+14)	1613	406	473	235	1.88	5.09	6.90	1.74	2.02
-5	(+23)	1763	444	517	234	1.93	5.58	7.51	1.89	2.20

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard FMX		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 10° up + 10° to Back		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 63° up + 49° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		