



tecumseh

FH4538Z-XG1A

380-420V 3~ 50 Hz / 460V 3~ 60 Hz

Compressor

HBP

R-404A / R-448A / R-449A / R-452A

Voltage Code : XG

Refrigerant	Frequency	Nominal Cooling Capacity (*)		Sound Power ISO3745 / ISO 3743-1
		Watts	BTU/h	
R-452A	50HZ / 60HZ	8192 / 9666	27936 / 32963	76 dBA
R-404A	50HZ / 60HZ	8011 / 9312	27318 / 31754	
R-448A	50HZ / 60HZ	8205 / 9681	27978 / 33012	
R-449A	50HZ / 60HZ	8205 / 9681	27978 / 33012	

(*) Operating conditions EN12900 : Dew / T°Cond. 50°C / T°Evap 5°C / T°Return gas temp. 20°C / T°Subcooling 0K



*Non-contractual picture

Dimensions

Weight	31.1 kg (69 lb)
Length	274 mm (10.8 in)
Width	288 mm (11.3 in)
Height	354 mm (13.9 in)

Certificates



General

Compressor Type	Reciprocating
Displacement (cc)	63
Horse Power	3-1/2 hp
Compressor Cooling	Fan
Evaporating Temp. Range	-15°C to 15°C (5°F to 59°F)
Oil Type	P.O.E. / 32 cSt@40°C
Oil Charge (cc)	1140

Electrical

Motor Type	3PH
Main Winding (Ohm)	3.95
Current RLA 50Hz (A)	5.68
Current RLA 60Hz (A)	5.59
Current LRA (A)	45
Overload	Internal
- Time Check	3.0-10s / 25 A
- Open Temp / Close Temp	105 °C / 69 °C

Note : Tecumseh reserves the right to change information contained in this document without notification.



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Conditions DEW

Return gas temp. : 20 °C
Subcooling : 0 K

50HZ R-452A

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	2932	3943	5114	6474	8048	9863	11945	14322	17019
	Power Input (W)	1460	1664	1850	2014	2151	2257	2327	2357	2341
	Amps (A)	3.37	3.64	3.88	4.08	4.25	4.4	4.53	4.65	4.76
40	Refrig. Capacity (Watt)		3101	4162	5365	6739	8308	10101	12143	14461
	Power Input (W)		1747	1990	2216	2419	2595	2739	2846	2913
	Amps (A)		3.69	4.04	4.34	4.61	4.84	5.05	5.24	5.41
50	Refrig. Capacity (Watt)			3169	4210	5377	6696	8192	9894	11827
	Power Input (W)			2081	2366	2632	2876	3091	3275	3421
	Amps (A)			4.13	4.55	4.93	5.27	5.57	5.85	6.09
60	Refrig. Capacity (Watt)				3026	3980	5042	6237	7592	9134
	Power Input (W)				2471	2799	3108	3393	3650	3875
	Amps (A)				4.66	5.18	5.64	6.05	6.43	6.78

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50HZ R-404A

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	3096	4075	5218	6547	8088	9864	11900	14218	16844
	Power Input (W)	1545	1749	1934	2095	2224	2315	2363	2359	2298
	Amps (A)	3.56	3.83	4.05	4.24	4.4	4.52	4.6	4.65	4.66
40	Refrig. Capacity (Watt)	2339	3242	4262	5422	6747	8261	9988	11950	14174
	Power Input (W)	1591	1841	2080	2301	2499	2666	2796	2884	2921
	Amps (A)	3.52	3.89	4.21	4.5	4.76	4.98	5.16	5.31	5.42
50	Refrig. Capacity (Watt)		2366	3259	4246	5351	6598	8011	9614	11431
	Power Input (W)		1906	2189	2461	2717	2951	3155	3323	3449
	Amps (A)		3.91	4.34	4.73	5.08	5.4	5.68	5.93	6.14
60	Refrig. Capacity (Watt)			2227	3036	3917	4893	5989	7228	8635
	Power Input (W)			2286	2600	2905	3195	3463	3702	3907
	Amps (A)			4.43	4.92	5.37	5.79	6.17	6.51	6.83



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Conditions DEW

Return gas temp. : 20 °C
Subcooling : 0 K

50HZ R-448A*

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	2611	3563	4689	6017	7576	9394	11500	13923	16692
	Power Input (W)	1377	1562	1737	1892	2022	2117	2172	2177	2126
	Amps (A)	3.18	3.42	3.64	3.84	4	4.13	4.23	4.3	4.32
40	Refrig. Capacity (Watt)		2851	3872	5056	6431	8027	9871	11993	14421
	Power Input (W)		1651	1874	2085	2279	2446	2579	2672	2715
	Amps (A)		3.49	3.8	4.08	4.34	4.57	4.76	4.92	5.04
50	Refrig. Capacity (Watt)			3016	4056	5249	6622	8205	10026	12114
	Power Input (W)			1976	2240	2493	2728	2937	3113	3247
	Amps (A)			3.92	4.31	4.67	5	5.3	5.56	5.78
60	Refrig. Capacity (Watt)				3046	4056	5208	6529	8050	9798
	Power Input (W)				2369	2679	2978	3258	3513	3734
	Amps (A)				4.48	4.95	5.4	5.81	6.19	6.53

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30	Refrig. Capacity (Watt)	2611	3563	4689	6017	7576	9394	11500	13923	16692
	Power Input (W)	1377	1562	1737	1892	2022	2117	2172	2177	2126
	Amps (A)	3.18	3.42	3.64	3.84	4	4.13	4.23	4.3	4.32
40	Refrig. Capacity (Watt)		2851	3872	5056	6431	8027	9871	11993	14421
	Power Input (W)		1651	1874	2085	2279	2446	2579	2672	2715
	Amps (A)		3.49	3.8	4.08	4.34	4.57	4.76	4.92	5.04
50	Refrig. Capacity (Watt)			3016	4056	5249	6622	8205	10026	12114
	Power Input (W)			1976	2240	2493	2728	2937	3113	3247
	Amps (A)			3.92	4.31	4.67	5	5.3	5.56	5.78
60	Refrig. Capacity (Watt)				3046	4056	5208	6529	8050	9798
	Power Input (W)				2369	2679	2978	3258	3513	3734
	Amps (A)				4.48	4.95	5.4	5.81	6.19	6.53

* Due to very high discharge temperature especially on LBP conditions, please strictly refer to Tecumseh Guidelines & Marketing Bulletin when using this refrigerant.



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60HZ R-452A

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	3530	4779	6187	7788	9614	11700	14077	16779	19839
	Power Input (W)	1774	2058	2307	2523	2709	2871	3010	3131	3237
	Amps (A)	3.49	3.76	4.01	4.23	4.43	4.61	4.79	4.97	5.15
40	Refrig. Capacity (Watt)		3714	5004	6437	8044	9860	11917	14248	16887
	Power Input (W)		2085	2414	2705	2964	3194	3397	3579	3741
	Amps (A)		3.79	4.14	4.45	4.73	4.98	5.22	5.45	5.66
50	Refrig. Capacity (Watt)			3795	5043	6416	7946	9666	11611	13812
	Power Input (W)			2455	2827	3161	3463	3734	3979	4202
	Amps (A)			4.18	4.6	4.98	5.32	5.64	5.93	6.21
60	Refrig. Capacity (Watt)				3650	4771	5999	7368	8909	10657
	Power Input (W)				2890	3304	3680	4023	4336	4622
	Amps (A)				4.61	5.12	5.57	5.99	6.38	6.73

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60HZ R-404A

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	3672	4866	6218	7759	9519	11527	13814	16409	19343
	Power Input (W)	1835	2115	2360	2569	2743	2883	2990	3063	3103
	Amps (A)	3.57	3.83	4.07	4.27	4.45	4.6	4.73	4.82	4.89
40	Refrig. Capacity (Watt)	2708	3825	5048	6408	7935	9658	11608	13814	16307
	Power Input (W)	1799	2150	2466	2748	2997	3213	3397	3549	3670
	Amps (A)	3.54	3.88	4.2	4.48	4.75	4.98	5.19	5.37	5.52
50	Refrig. Capacity (Watt)		2763	3844	5010	6289	7713	9312	11115	13152
	Power Input (W)		2148	2528	2875	3191	3475	3729	3952	4145
	Amps (A)		3.87	4.27	4.64	4.98	5.3	5.59	5.85	6.08
60	Refrig. Capacity (Watt)			2651	3607	4626	5737	6970	8356	9923
	Power Input (W)			2576	2981	3355	3700	4015	4301	4559
	Amps (A)			4.28	4.73	5.16	5.56	5.93	6.28	6.59



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60HZ R-448A*

Condensing	Evaporating (°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity (Watt)	3142	4319	5672	7238	9050	11144	13553	16313	19458
	Power Input (W)	1673	1932	2165	2371	2548	2695	2809	2890	2937
	Amps (A)	3.29	3.53	3.76	3.97	4.16	4.33	4.47	4.59	4.67
40	Refrig. Capacity (Watt)		3414	4656	6066	7678	9526	11646	14073	16840
	Power Input (W)		1970	2270	2545	2793	3012	3202	3360	3486
	Amps (A)		3.59	3.89	4.18	4.45	4.7	4.92	5.12	5.28
50	Refrig. Capacity (Watt)			3614	4859	6262	7858	9681	11765	14146
	Power Input (W)			2333	2675	2993	3285	3549	3784	3988
	Amps (A)			3.97	4.35	4.71	5.05	5.36	5.64	5.9
60	Refrig. Capacity (Watt)				3674	4861	6195	7712	9447	11433
	Power Input (W)				2774	3161	3524	3862	4172	4454
	Amps (A)				4.43	4.9	5.33	5.75	6.14	6.49

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30	Refrig. Capacity (Watt)	3142	4319	5672	7238	9050	11144	13553	16313	19458
	Power Input (W)	1673	1932	2165	2371	2548	2695	2809	2890	2937
	Amps (A)	3.29	3.53	3.76	3.97	4.16	4.33	4.47	4.59	4.67
40	Refrig. Capacity (Watt)		3414	4656	6066	7678	9526	11646	14073	16840
	Power Input (W)		1970	2270	2545	2793	3012	3202	3360	3486
	Amps (A)		3.59	3.89	4.18	4.45	4.7	4.92	5.12	5.28
50	Refrig. Capacity (Watt)			3614	4859	6262	7858	9681	11765	14146
	Power Input (W)			2333	2675	2993	3285	3549	3784	3988
	Amps (A)			3.97	4.35	4.71	5.05	5.36	5.64	5.9
60	Refrig. Capacity (Watt)				3674	4861	6195	7712	9447	11433
	Power Input (W)				2774	3161	3524	3862	4172	4454
	Amps (A)				4.43	4.9	5.33	5.75	6.14	6.49

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