compressor technical data

identification

model

TAJ4519Z



*Non-contractual picture

certificates

summary

application
HBP

power supply
400V 3~ 50 Hz
440V 3~ 60 Hz

refrigerant
R-452A / R-404A / R-448A / R-449A / R-407C / R-22

horse-power
1 1/2 hp

motor type
3PH

test condition
EN12900

cooling capacity
4246 Watt (R-404A)

efficiency
2.09 Watt/W (R-404A)

technology
Reciprocating

sound power
68 dBA

nominal cooling capacity (*)

refrigerant	Frequency	power input (W)	refrig. capacity (Watt)	efficiency (Watt/W)
R-452A	50HZ	1960	4257	2.17
R-404A	50HZ	2030	4246	2.09
R-448A	50HZ	1867	4261	2.28
R-449A	50HZ	1867	4261	2.28
R-407C	50HZ	1757	4039	2.3
R-22	50HZ	1748	4451	2.55

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

general data

model	AJ4519Z-TZ1C
technology	reciprocating
compressor type	fix-speed
application	HBP
evaporating temp. range	-15°C to 15°C (5°F to 59°F)
horse power	1 1/2 hp
expansion device	capil. tube/expans. valve

mechanical data

displacement	34.5 cm³
motor torque	high (HST)
compressor cooling	fan
oil type / viscosity	P.O.E. / 32 cSt@40°C
oil charge	475 ml
weight	21 kg (46 lb)

compressor technical data

electrical data

motor type	3PH
current MCC	6.3 A
current LRA	23 A
current RLA 50 Hz	4 A
current RLA 60 Hz	4 A
main winding at 25 °C	8.7 ohms

electrical components

overload	Internal

dimensions

length	246 mm (9.7 in)
width	218 mm (8.6 in)
height	280 mm (11 in)
ø external diameter : suction tube	5/8 in (15.9mm)
ø external diameter : discharge tube	3/8 in (9.52mm)

compressor technical data

performance

operating conditions EN12900
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)	1654	2151	2731	3407	4190	5093	6129	7310	8648
	Power Input	(W)	947	1064	1177	1288	1397	1504	1609	1713	1816
	efficiency	(Watt/W)	1.75	2.02	2.32	2.64	3	3.39	3.81	4.27	4.76
	Amps	(A)	2.59	2.71	2.83	2.96	3.09	3.23	3.37	3.52	3.67
40	Refrig. Capacity	(Watt)		1755	2275	2868	3545	4319	5203	6208	7348
	Power Input	(W)		1131	1266	1396	1524	1648	1770	1889	2007
	efficiency	(Watt/W)		1.55	1.8	2.05	2.33	2.62	2.94	3.29	3.66
	Amps	(A)		2.72	2.89	3.06	3.24	3.43	3.62	3.81	4.01
50	Refrig. Capacity	(Watt)			1796	2307	2879	3525	4257	5087	6029
	Power Input	(W)			1333	1496	1655	1809	1960	2108	2252
	efficiency	(Watt/W)			1.35	1.54	1.74	1.95	2.17	2.41	2.68
	Amps	(A)			2.98	3.2	3.43	3.67	3.91	4.15	4.4
60	Refrig. Capacity	(Watt)				1716	2184	2702	3284	3941	4685
	Power Input	(W)				1563	1766	1963	2156	2344	2528
	efficiency	(Watt/W)				1.1	1.24	1.38	1.52	1.68	1.85
	Amps	(A)				3.38	3.66	3.94	4.23	4.53	4.83

50HZ R-404A

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1764	2268	2853	3530	4312	5209	6234	7398	8713
	Power Input	(W)	1003	1122	1238	1350	1459	1565	1668	1769	1867
	efficiency	(Watt/W)	1.76	2.02	2.3	2.62	2.96	3.33	3.74	4.18	4.67
	Amps	(A)	2.74	2.86	2.98	3.1	3.23	3.36	3.49	3.63	3.77
40	Refrig. Capacity	(Watt)	1384	1849	2369	2958	3626	4385	5248	6225	7328
	Power Input	(W)	1058	1199	1334	1466	1592	1715	1834	1949	2061
	efficiency	(Watt/W)	1.31	1.54	1.78	2.02	2.28	2.56	2.86	3.19	3.56
	Amps	(A)	2.72	2.88	3.05	3.22	3.39	3.57	3.75	3.93	4.12
50	Refrig. Capacity	(Watt)		1406	1864	2366	2922	3545	4246	5038	5931
	Power Input	(W)		1244	1412	1575	1732	1884	2030	2172	2309
	efficiency	(Watt/W)		1.13	1.32	1.5	1.69	1.88	2.09	2.32	2.57
	Amps	(A)		2.94	3.16	3.37	3.59	3.82	4.05	4.28	4.51
60	Refrig. Capacity	(Watt)			1333	1749	2195	2683	3225	3833	4518
	Power Input	(W)			1449	1655	1854	2047	2234	2415	2589
	efficiency	(Watt/W)			0.92	1.06	1.18	1.31	1.44	1.59	1.74
	Amps	(A)			3.31	3.57	3.84	4.11	4.39	4.67	4.95

compressor technical data

performance

operating conditions EN12900
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)	1457	1943	2512	3179	3957	4860	5903	7098	8459
	Power Input	(W)	883	990	1097	1203	1308	1412	1514	1613	1708
	efficiency	(Watt/W)	1.65	1.96	2.29	2.64	3.02	3.44	3.9	4.4	4.95
	Amps	(A)	2.41	2.52	2.64	2.77	2.9	3.03	3.17	3.31	3.45
40	Refrig. Capacity	(Watt)		1592	2109	2702	3386	4175	5081	6120	7305
	Power Input	(W)		1062	1187	1311	1433	1553	1669	1782	1891
	efficiency	(Watt/W)		1.5	1.78	2.06	2.36	2.69	3.04	3.43	3.86
	Amps	(A)		2.55	2.71	2.88	3.05	3.23	3.41	3.6	3.78
50	Refrig. Capacity	(Watt)			1691	2215	2808	3486	4261	5147	6158
	Power Input	(W)			1259	1416	1570	1720	1867	2009	2146
	efficiency	(Watt/W)			1.34	1.56	1.79	2.03	2.28	2.56	2.87
	Amps	(A)			2.81	3.03	3.26	3.49	3.72	3.96	4.19
60	Refrig. Capacity	(Watt)				1719	2226	2797	3444	4182	5024
	Power Input	(W)				1486	1688	1884	2076	2263	2443
	efficiency	(Watt/W)				1.16	1.32	1.48	1.66	1.85	2.06
	Amps	(A)				3.21	3.49	3.78	4.08	4.37	4.67

50HZ R-449A*

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1457	1943	2512	3179	3957	4860	5903	7098	8459
	Power Input	(W)	883	990	1097	1203	1308	1412	1514	1613	1708
	efficiency	(Watt/W)	1.65	1.96	2.29	2.64	3.02	3.44	3.9	4.4	4.95
	Amps	(A)	2.41	2.52	2.64	2.77	2.9	3.03	3.17	3.31	3.45
40	Refrig. Capacity	(Watt)		1592	2109	2702	3386	4175	5081	6120	7305
	Power Input	(W)		1062	1187	1311	1433	1553	1669	1782	1891
	efficiency	(Watt/W)		1.5	1.78	2.06	2.36	2.69	3.04	3.43	3.86
	Amps	(A)		2.55	2.71	2.88	3.05	3.23	3.41	3.6	3.78
50	Refrig. Capacity	(Watt)			1691	2215	2808	3486	4261	5147	6158
	Power Input	(W)			1259	1416	1570	1720	1867	2009	2146
	efficiency	(Watt/W)			1.34	1.56	1.79	2.03	2.28	2.56	2.87
	Amps	(A)			2.81	3.03	3.26	3.49	3.72	3.96	4.19
60	Refrig. Capacity	(Watt)				1719	2226	2797	3444	4182	5024
	Power Input	(W)				1486	1688	1884	2076	2263	2443
	efficiency	(Watt/W)				1.16	1.32	1.48	1.66	1.85	2.06
	Amps	(A)				3.21	3.49	3.78	4.08	4.37	4.67

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

compressor technical data

performance

operating conditions EN12900
conditions DEW

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

50HZ R-407C

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1310	1751	2279	2906	3646	4513	5520	6680	8008
	Power Input	(W)	828	936	1038	1137	1232	1323	1411	1497	1580
	efficiency	(Watt/W)	1.58	1.87	2.19	2.56	2.96	3.41	3.91	4.46	5.07
	Amps	(A)	2.27	2.38	2.5	2.61	2.73	2.84	2.96	3.07	3.19
40	Refrig. Capacity	(Watt)		1443	1923	2483	3137	3899	4783	5800	6967
	Power Input	(W)		990	1116	1236	1352	1464	1572	1676	1778
	efficiency	(Watt/W)		1.46	1.72	2.01	2.32	2.66	3.04	3.46	3.92
	Amps	(A)		2.38	2.55	2.71	2.88	3.05	3.21	3.38	3.55
50	Refrig. Capacity	(Watt)		1110	1545	2043	2615	3276	4039	4918	5926
	Power Input	(W)		1008	1169	1323	1473	1617	1757	1892	2024
	efficiency	(Watt/W)		1.1	1.32	1.54	1.78	2.03	2.3	2.6	2.93
	Amps	(A)		2.39	2.61	2.83	3.06	3.28	3.5	3.73	3.95
60	Refrig. Capacity	(Watt)			1159	1597	2091	2654	3301	4045	4899
	Power Input	(W)			1175	1376	1571	1760	1944	2122	2296
	efficiency	(Watt/W)			0.99	1.16	1.33	1.51	1.7	1.91	2.13
	Amps	(A)			2.69	2.97	3.25	3.53	3.82	4.1	4.39

50HZ R-22

Condensing	Evaporating	(°C)	-20	-15	-10	-5	0	5	10	15
40	Refrig. Capacity	(Watt)	1970	2461	3038	3698	4439	5258	6152	7118
	Power Input	(W)	1240	1303	1370	1440	1514	1590	1671	1754
	efficiency	(Watt/W)	1.59	1.89	2.22	2.57	2.93	3.31	3.68	4.06
	Amps	(A)	2.47	2.54	2.61	2.69	2.78	2.87	2.97	3.08
50	Refrig. Capacity	(Watt)	1534	1974	2488	3074	3729	4451	5236	6080
	Power Input	(W)	1174	1291	1407	1522	1635	1748	1858	1968
	efficiency	(Watt/W)	1.31	1.53	1.77	2.02	2.28	2.55	2.82	3.09
	Amps	(A)	2.34	2.48	2.63	2.78	2.94	3.1	3.26	3.43
60	Refrig. Capacity	(Watt)		1461	1921	2442	3020	3653	4337	5068
	Power Input	(W)		1278	1444	1604	1758	1906	2048	2184
	efficiency	(Watt/W)		1.14	1.33	1.52	1.72	1.92	2.12	2.32
	Amps	(A)		2.44	2.66	2.88	3.1	3.33	3.55	3.77

performance

operating conditions EN12900
conditions DEW

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

60HZ R-452A

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1902	2483	3131	3865	4702	5661	6760	8018	9451
	Power Input	(W)	1127	1294	1438	1568	1692	1819	1958	2117	2306
	efficiency	(Watt/W)	1.69	1.92	2.18	2.47	2.78	3.11	3.45	3.79	4.1
	Amps	(A)	2.37	2.57	2.77	2.98	3.2	3.43	3.66	3.9	4.15
40	Refrig. Capacity	(Watt)		1995	2600	3264	4005	4842	5792	6873	8105
	Power Input	(W)		1317	1514	1688	1847	2001	2158	2327	2516
	efficiency	(Watt/W)		1.51	1.72	1.93	2.17	2.42	2.68	2.95	3.22
	Amps	(A)		2.55	2.79	3.03	3.28	3.54	3.81	4.08	4.36
50	Refrig. Capacity	(Watt)			2031	2621	3261	3971	4768	5670	6695
	Power Input	(W)			1549	1775	1978	2167	2351	2538	2737
	efficiency	(Watt/W)			1.31	1.48	1.65	1.83	2.03	2.23	2.45
	Amps	(A)			2.82	3.1	3.38	3.68	3.97	4.28	4.6
60	Refrig. Capacity	(Watt)				1942	2478	3057	3696	4413	5228
	Power Input	(W)				1829	2085	2318	2537	2751	2968
	efficiency	(Watt/W)				1.06	1.19	1.32	1.46	1.6	1.76
	Amps	(A)				3.18	3.5	3.83	4.16	4.51	4.86

60HZ R-404A

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	2028	2618	3271	4005	4839	5790	6876	8114	9522
	Power Input	(W)	1194	1365	1512	1643	1767	1893	2030	2186	2372
	efficiency	(Watt/W)	1.7	1.92	2.16	2.44	2.74	3.06	3.39	3.71	4.01
	Amps	(A)	2.51	2.71	2.92	3.13	3.34	3.57	3.8	4.03	4.27
40	Refrig. Capacity	(Watt)	1532	2102	2707	3366	4097	4916	5842	6892	8083
	Power Input	(W)	1163	1397	1596	1771	1930	2082	2236	2400	2584
	efficiency	(Watt/W)	1.32	1.51	1.7	1.9	2.12	2.36	2.61	2.87	3.13
	Amps	(A)	2.47	2.7	2.94	3.18	3.43	3.68	3.94	4.21	4.48
50	Refrig. Capacity	(Watt)		1554	2108	2687	3310	3994	4756	5614	6586
	Power Input	(W)		1380	1641	1868	2071	2256	2435	2615	2806
	efficiency	(Watt/W)		1.13	1.28	1.44	1.6	1.77	1.95	2.15	2.35
	Amps	(A)		2.72	2.99	3.26	3.54	3.83	4.12	4.41	4.71
60	Refrig. Capacity	(Watt)			1483	1979	2491	3035	3630	4292	5041
	Power Input	(W)			1647	1935	2189	2417	2629	2833	3039
	efficiency	(Watt/W)			0.9	1.02	1.14	1.26	1.38	1.52	1.66
	Amps	(A)			3.07	3.37	3.68	3.99	4.31	4.64	4.97

compressor technical data

performance

operating conditions EN12900
conditions DEW

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

60HZ R-448A*

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1675	2243	2880	3606	4441	5403	6511	7785	9244
	Power Input	(W)	1050	1205	1340	1464	1585	1708	1842	1994	2170
	efficiency	(Watt/W)	1.59	1.86	2.15	2.46	2.8	3.16	3.53	3.91	4.26
	Amps	(A)	2.21	2.39	2.58	2.79	3	3.22	3.45	3.68	3.91
40	Refrig. Capacity	(Watt)		1810	2410	3076	3826	4680	5657	6776	8057
	Power Input	(W)		1237	1421	1585	1738	1885	2035	2195	2371
	efficiency	(Watt/W)		1.46	1.7	1.94	2.2	2.48	2.78	3.09	3.4
	Amps	(A)		2.4	2.62	2.85	3.09	3.34	3.59	3.85	4.11
50	Refrig. Capacity	(Watt)			1912	2516	3181	3927	4772	5736	6838
	Power Input	(W)			1463	1680	1877	2061	2239	2419	2607
	efficiency	(Watt/W)			1.31	1.5	1.7	1.91	2.13	2.37	2.62
	Amps	(A)			2.67	2.93	3.21	3.5	3.79	4.08	4.38
60	Refrig. Capacity	(Watt)				1946	2526	3163	3875	4684	5606
	Power Input	(W)				1738	1992	2224	2443	2655	2868
	efficiency	(Watt/W)				1.12	1.27	1.42	1.59	1.76	1.95
	Amps	(A)				3.03	3.35	3.67	4.01	4.35	4.69

60HZ R-449A*

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1675	2243	2880	3606	4441	5403	6511	7785	9244
	Power Input	(W)	1050	1205	1340	1464	1585	1708	1842	1994	2170
	efficiency	(Watt/W)	1.59	1.86	2.15	2.46	2.8	3.16	3.53	3.91	4.26
	Amps	(A)	2.21	2.39	2.58	2.79	3	3.22	3.45	3.68	3.91
40	Refrig. Capacity	(Watt)		1810	2410	3076	3826	4680	5657	6776	8057
	Power Input	(W)		1237	1421	1585	1738	1885	2035	2195	2371
	efficiency	(Watt/W)		1.46	1.7	1.94	2.2	2.48	2.78	3.09	3.4
	Amps	(A)		2.4	2.62	2.85	3.09	3.34	3.59	3.85	4.11
50	Refrig. Capacity	(Watt)			1912	2516	3181	3927	4772	5736	6838
	Power Input	(W)			1463	1680	1877	2061	2239	2419	2607
	efficiency	(Watt/W)			1.31	1.5	1.7	1.91	2.13	2.37	2.62
	Amps	(A)			2.67	2.93	3.21	3.5	3.79	4.08	4.38
60	Refrig. Capacity	(Watt)				1946	2526	3163	3875	4684	5606
	Power Input	(W)				1738	1992	2224	2443	2655	2868
	efficiency	(Watt/W)				1.12	1.27	1.42	1.59	1.76	1.95
	Amps	(A)				3.03	3.35	3.67	4.01	4.35	4.69

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

compressor technical data

performance

operating conditions EN12900
conditions DEW

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

60HZ R-407C

Condensing	Evaporating	(°C)	-25	-20	-15	-10	-5	0	5	10	15
30	Refrig. Capacity	(Watt)	1506	2022	2613	3296	4091	5016	6088	7327	8751
	Power Input	(W)	986	1138	1268	1383	1491	1600	1717	1850	2007
	efficiency	(Watt/W)	1.53	1.78	2.06	2.38	2.74	3.14	3.55	3.96	4.36
	Amps	(A)	2.07	2.26	2.45	2.63	2.82	3.02	3.21	3.41	3.62
40	Refrig. Capacity	(Watt)		1641	2197	2826	3544	4371	5324	6422	7684
	Power Input	(W)		1153	1335	1494	1639	1777	1917	2065	2229
	efficiency	(Watt/W)		1.42	1.65	1.89	2.16	2.46	2.78	3.11	3.45
	Amps	(A)		2.23	2.46	2.69	2.91	3.15	3.38	3.62	3.87
50	Refrig. Capacity	(Watt)		1225	1748	2321	2962	3691	4524	5481	6580
	Power Input	(W)		1116	1358	1570	1761	1937	2107	2279	2459
	efficiency	(Watt/W)		1.1	1.29	1.48	1.68	1.91	2.15	2.41	2.68
	Amps	(A)		2.21	2.48	2.74	3.01	3.29	3.56	3.84	4.13
60	Refrig. Capacity	(Watt)			1290	1808	2372	3002	3715	4531	5467
	Power Input	(W)			1336	1610	1854	2078	2287	2491	2696
	efficiency	(Watt/W)			0.97	1.12	1.28	1.44	1.62	1.82	2.03
	Amps	(A)			2.49	2.8	3.12	3.43	3.75	4.08	4.41

60HZ R-22

Condensing	Evaporating	(°C)	-20	-15	-10	-5	0	5	10	15
40	Refrig. Capacity	(Watt)	2512	3023	3652	4396	5252	6215	7282	8450
	Power Input	(W)	1369	1513	1653	1788	1919	2045	2165	2281
	efficiency	(Watt/W)	1.84	2	2.21	2.46	2.74	3.04	3.36	3.7
	Amps	(A)	2.29	2.48	2.66	2.83	3	3.17	3.33	3.48
50	Refrig. Capacity	(Watt)	1960	2424	2990	3654	4412	5261	6197	7215
	Power Input	(W)	1289	1499	1699	1890	2073	2245	2409	2563
	efficiency	(Watt/W)	1.52	1.62	1.76	1.93	2.13	2.34	2.57	2.81
	Amps	(A)	2.16	2.42	2.68	2.93	3.17	3.41	3.65	3.88
60	Refrig. Capacity	(Watt)		1795	2308	2902	3573	4318	5133	6011
	Power Input	(W)		1482	1744	1993	2227	2448	2655	2849
	efficiency	(Watt/W)		1.21	1.32	1.46	1.6	1.76	1.93	2.11
	Amps	(A)		2.37	2.7	3.03	3.35	3.66	3.97	4.28

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