



Tecumseh®

R-290 PROPANE

NATURAL REFRIGERANT

R-290



COOLING FOR A BETTER TOMORROW™

TECHNOLOGY AND SUSTAINABILITY

Combine performance and electricity savings. Develop high-performance solutions, equipped with refrigerants with little or no global warming potential, obtained through research and innovation.

Design and manufacture new generations of established products and seek an increasingly better world for the next generations.

The power of the machines must be accompanied by the appreciation of the environment and people.

This is technology. This is sustainability. This is Tecumseh.

DO TODAY, THINK ABOUT TOMORROW.



Cooling for a Better Tomorrow™

www.tecumseh.com



Tecumseh



S
I
N
U
T
E
N
Z
C
O
O

INTRODUCTION

COMPRESSORS

50 Hz EN12900
50 Hz ASHRAE
60 Hz ASHRAE
MASTERFLUX

CONDENSING UNITS

TOOLS





INTRODUCTION

R-290 PROPANE

NATURAL REFRIGERANT

TECUMSEH's commitments to the planet and facilitating the energy transition are strong and concrete. Historically, the company has developed innovative solutions to effectively reduce carbon dioxide emissions and promoted the use of low-GWP refrigerants. Our offers are eco-friendly and meet the high requirements of the eco design directive UE2015-1095.

European regulation F-gas 517/2014 defined the CO₂ emission reduction volumes; it drastically reduces the use of HFCs (hydrofluorocarbons) since 2015 with an accentuated decrease from 2018. Standards EN60335-2 and EN 378 defines safety and environmental requirements. The switchover to fluids with GWP < 150 offers Tecumseh a further reason to innovate and improve its proposal for technical solutions.

R-290, natural refrigerant, is a long term solution. It allows a proven reduction of energy consumption of refrigeration systems compared to traditional refrigerants. Due to better thermal properties, it has higher energy efficiency when compared to R-404A, R-134a. The tests carried out show a significant decrease in the refrigerant charge required for the operation of the installation. It is a natural continuity of the solutions for direct relaxation for the refrigeration housed groups.

For several months, Tecumseh has been working to validate a complete offer with R-290 in commercial refrigeration. This brochure is the results of it. The ranges presented meet the criteria of safety, performance, economy, reliability and respect of the environment you are expecting from the Tecumseh.

Conversion Examples from R-404A to R-290 (50Hz) - LBP & L/MBP applications EN12900
Evaporation temp. -35°C, condensing temp. 40°C, return gas temp. 20°C, subcooling 0K

COMPRESSOR	AE2410Z-FZ	AE2415Z-FZ	AE2425Z-FZ	CAJ2440Z-FZ	CAJ2446Z-FZ	CAJ2464Z-FZ
from...	120 W	194 W	329 W	476 W	627 W	
R-404A	0.77 COP	0.90 COP	1.02 COP	0.97 COP	1.04 COP	
	▼	▼	▼	▼	▼	▼
COMPRESSOR	TCW380U-GS	TCW413U-GS	AEX428U-FZ	ALX440U-FZ	CAJ2446U-FZ	CAJ2464U-FZ
to...	121 W	203 W	347 W	528 W	586 W	
R-290	0.95 COP	1.18 COP	1.15 COP	1.31 COP	1.12 COP	

Conversion Examples from R-134a and R-404A to R-290 (50Hz) - MBP applications EN12900
Evaporation temp. -10°C, condensing temp. 50°C, return gas temp. 20°C, subcooling 0K

COMPRESSOR	AE4440Y-FZ	AE4450Y-FZ	AE4460Y-FZ	CAJ4513Y-FZ
from...	471 W	619 W	689 W	1453 W
R-134a	1.51 COP	1.62 COP	1.52 COP	1.68 COP
	▼	▼	▼	▼
COMPRESSOR	AE4440Z-FZ	AE4450Z-FZ	AE4460Z-FZ	CAJ9510Z-FZ
from...	486 W	642 W	784 W	1289 W
R-404A	1.37 COP	1.39 COP	1.43 COP	1.48 COP
COMPRESSOR	TC4430U-FZ	AE4450U-FZ	AE4460U-FZ	CAJ4513U-FZ
to...	471 W	688 W	738 W	1478 W
R-290	1.93 COP	1.62 COP	1.5 COP	1.65 COP

RANGES



APPLICATION

Displacement (cc)
Displacement (in³)

- 1 - Celar wine cooler
- 2 - Chest freezer
- 3 - Cold room
- 4 - DC powered refrigerator
- 5 - Dry and bakery showcase
- 6 - Floral cooler
- 7 - Frozen island
- 8 - Glass door merchandiser
- 9 - Ice cream freezer
- 10 - Ice cream showcase
- 11 - Ice machine
- 12 - Professional kitchen
- 13 - Last mile delivery
- 14 - Milk cooler
- 15 - Open air merchandiser
- 16 - Reach in cooler freezer
- 17 - Scientific freezer
- 18 - Sushi case
- 19 - Up right freezer
- 20 - Vending machine

Notes, summarized features and benefits.

CU - Condensing unit.

Cond Unit and CRS is for indoor installation.
Infinee is for outdoor installation.

* VTC inverter compressor equipped with inteliCOOL™ technology. Variable capacity continuous learning, precise temperature control. Alarm and diagnosis local and remote.

**
The Sierra is very well suited to transport applications such as over the road trucks, boats and military applications.
Tandem compressor increases refrigeration capacity.

Eco-friendly waterchiller, propane (R-290) and Glycol.
Equiped with semi-hermetic inverter compressor.

COMPRESSOR MODEL NOMENCLATURE

C AJ 4 5 18 U - FZ

Tension

AA	115V 1~ 60Hz
FZ	220-240V 1~ 50Hz
HZ	208-220V 1~ 60Hz
XA	100V 1~50Hz / 115V 1~60Hz
DS	115-127V 1~60Hz
GS	220V 1~50/60Hz

U=R-290

Cooling capacity

Corresponding to the two first figures of the cooling capacity expressed in Btu/h.
In this example total digits 5, with cooling capacity 18 means 18000 Btu/h at 60Hz

Number of digits composing the cooling capacity

Primary application Parameters

2 = Low / -23.3°C T evap. / +54.5°C T cond. / +32°C RG / +32°C Liquid / Motor starting High

4 = High / +7.2°C T evap / +54.5°C T cond. / +35°C RG / +35°C Liquid / Motor starting High

W, X = Low Medium / -23.3°C T evap. / +54.5°C T cond. / +32°C RG / +32°C Liquid / Motor starting High

Product range: AJ, AE, HG, TC, AL (compressor family - first two digits)

No letter = single-phase starting torque

C = single-phase high starting torque

T = three-phase

VTC COMPRESSOR MODEL NOMENCLATURE

VTC X 4 15 U - MD 5 C

Release Variant - C. Cu (Cuprum)

Inverter Control - 5. Inverter Driven

Voltage (V/RPM) - MD. 250 / 2500 - 4500

Refrigerant - U. R-290

Cooling capacity

Corresponding to the two first figures of the cooling capacity (Btu/h).

In this example total digits 4, with cooling capacity 15 means 1500 Btu/h at 3600 rpm

Number of digits composing the cooling capacity

Cooling Capacity - X. L/MBP : -35°C to -5°C and Hight start torque - HST

Compressor Family (First 3 digits) : VTC



CONDENSING UNITS MODEL NOMENCLATURE

AE 4 4 25 U H

H = High suction pressure (-15°C to + 15°C)

B = Low pressure (-40°C to -10°C)

M = Medium and high suction pressure (-25°C to +15°C)

U = R-290

Cooling capacity

Corresponding to the two first figures of the cooling capacity expressed in Btu/h. In this example total digits 4, with cooling capacity 25 means 2500 Btu/h at 60Hz

Number of digits composing the cooling capacity

Primary application Parameters

2 = Low / -23.3°C T evap. / +54.5°C T cond. / +32°C RG / +32°C Liquid / Motor starting High

4 = High / +7.2°C T evap / +54.5°C T cond. / +35°C RG / +35°C Liquid / Motor starting High

Product range: AE (compressor family - first two digits)

Compressors or units supplied with oil under nitrogen pressure with suspension clearances.

APPLICATION RANGE

APPLICATION CODE	APPLICATION PRESSURE	EVAPORATING TEMPERATURE RANGE											
		-40°F -40°C	-31°F -35°C	-22°F -30°C	-13°F -25°C	-4°F -20°C	5°F -15°C	-40°F -10°C	23°F -5°C	32°F 0°C	41°F 5°C	50°F 10°C	59°F 15°C
2	LBP												
4	M/HBP												
X, W	L/MBP										FOR ALX		

SERIAL LABEL



REFERENCE	DESIGNATION
A	Voltage
B	Frequency
C	Phase number
D	Bill of material number
E	Refrigerant
F	Model number
G	Serial number
H	Maximum allowable pressure
I	Minimum and maximum temperature
J	Test pressure 1.1 * Ps
K	Registration number of the notified body
L	Test date
M	Free volume

COMPRESSOR LABEL



REFERENCE	DESIGNATION
A	Compressor Model Code
B	Bill of Materials Code (BOM)
C	Serial Number
D	2D Code
E	Nominal Voltage and Frequency
F	LRA - Locked Rotor Current
G	Refrigerant



APPLICATIONS CASE STUDIES

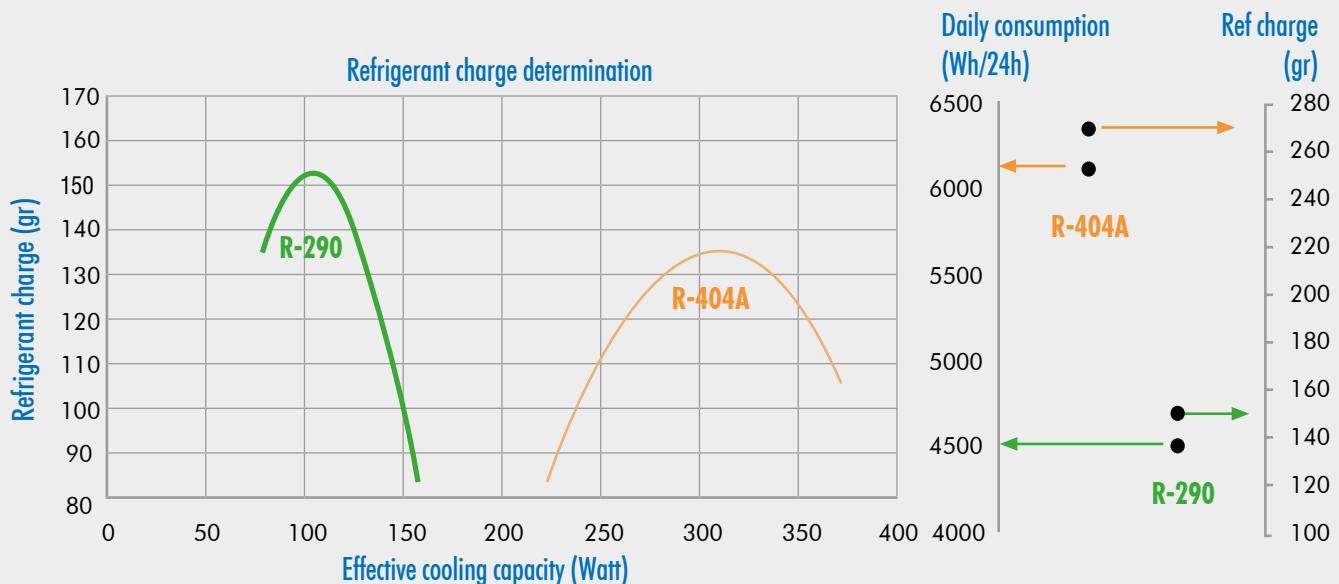
NEGATIVE TEMP - REACH IN CABINET

- Internal volume = 570 L
- Measurements carried out with hermetic compressors
- R-290 compressor, model AE2420U-FZ

The cabinet was retrofitted-adapted to the R-290 refrigerant. The originally R-404A competitor compressor is replaced by an optimized R-290 compressor: AE2420U-FZ. The capillary tube and the refrigerant charge are optimized. Heat exchangers and the boiler are unchanged.

Thanks to the R-290 properties and to the compressor characteristics:

- The end user saves 26,3% of energy cost
- The cabinet cooling capacity and the pull down duration are unchanged
- The R-290 charge is 45% lower than the R-404A one thanks to its R-290 density.



POSITIVE TEMP – ICE MACHINE

- 24 kg/day
- Measurements carried out with hermetic compressors at ambient air and water temperatures 30°C/15°C or 15°C/10°C
- TC4425U-GS running R-290

The ice cube maker was retrofitted - adapted to the R-290 refrigerant. The originally R-404A competitor compressor is replaced by an optimized R-290 compressor: TC4425U-GS. The capillary tube and the refrigerant charge are optimized. Heat exchangers are unchanged.

Thanks to the R-290 properties and to the compressor characteristics:

- The ice cube production increases by 6%
- The application energy consumption reduces by 4%

The R-290 charge is 42% lower than R-404A thanks to its R-290 density



R-290 REFRIGERANT CHARGE	ICE PRODUCTION (KG/DAY)
59	19.8
68	20.7
73	21.2
78	20.5

APPLICATIONS CASE STUDIES

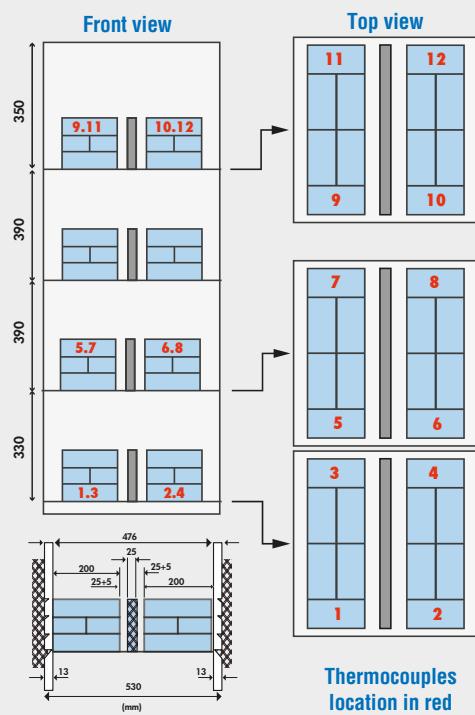
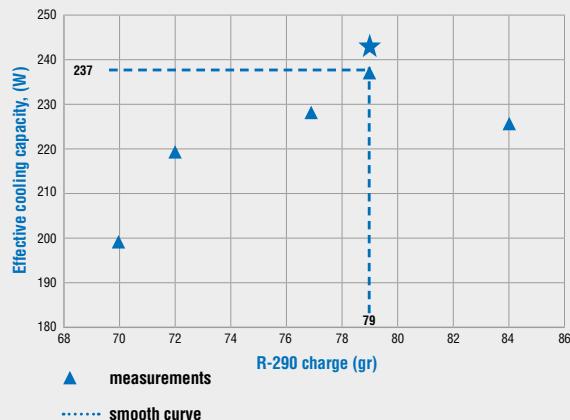
NEGATIVE TEMP - REACH IN CABINET

- Internal volume = 560 L
- Measurements carried out with hermetic compressors.
- R-290 compressor, model AEX433U-FZ

The originally R-290 competitor compressor is replaced by an optimized compressor: AEX433U-FZ. The capillary tube, the refrigerant charge, the heat exchangers and the boilers are unchanged.

Thanks to the new AEX compressor characteristics:

- The end user saves 3% of energy cost
- The cabinet cooling capacity and the pull down duration are unchanged



Thermocouples location in red

CERTIFICATIONS

	COMPRESSORS							COND. UNIT		
	RECIPROCATING					ROTARY		RECIPROCATING		
	TC	VTC	AE ²	AL	AK ²	AJ ²	HG	SIERRA	Cond. Unit	INFINEE
UL	✓	✓	✓	✓	✓			✓	✓	
VDE	✓	✓	✓	✓	✓	✓	✓	✓		
	✓	✓	✓							
IEC	✓									
CCC			✓							
CE	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Note: The above certifications may vary depending on the region in which the product is manufactured.



Tecumseh

13

REFRIGERATION COMPRESSORS

50HZ
EN12900



TC

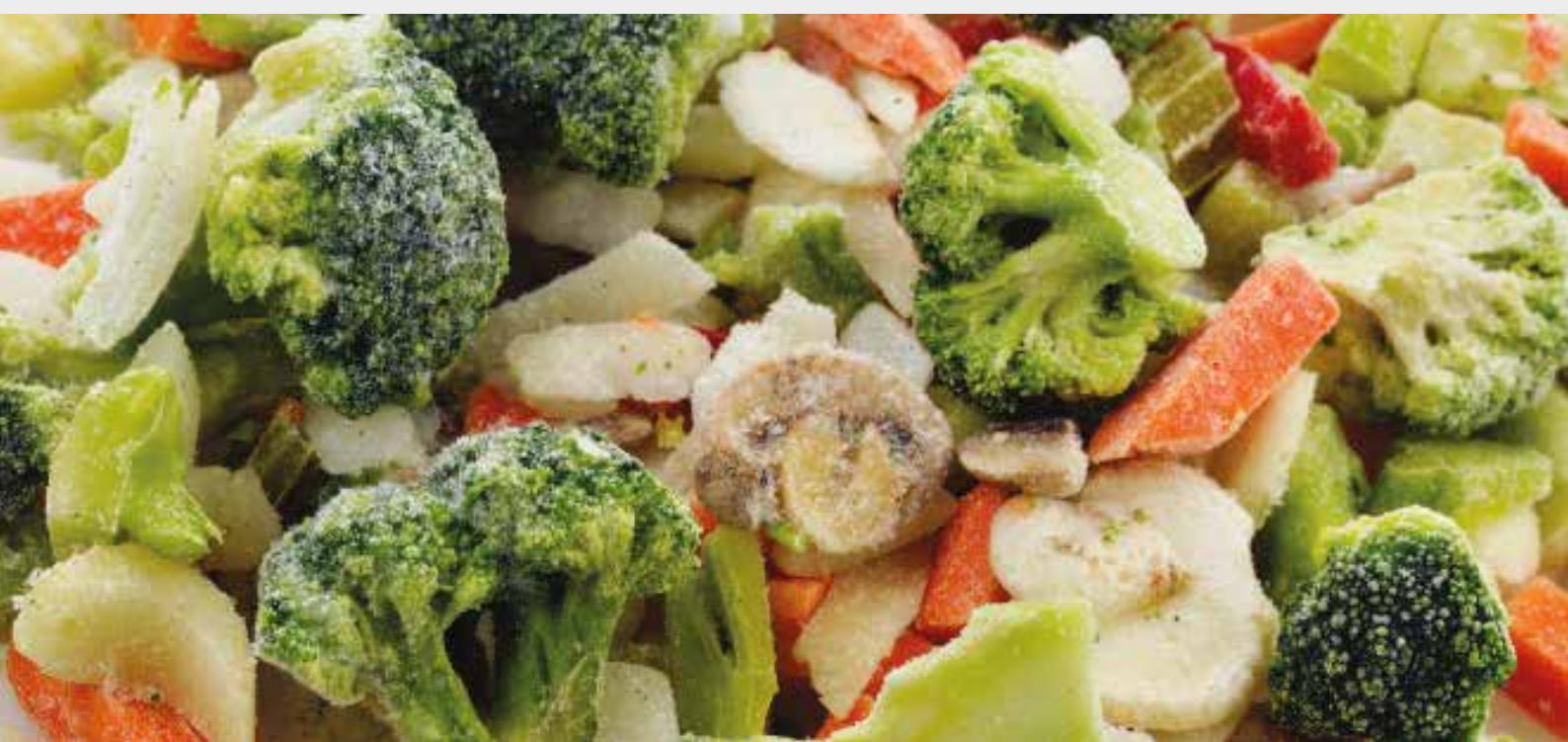
50Hz

L/MBP

MODEL NUMBER	DIS-PLACE-MENT (cm³)	MOTOR	COOLING CAPACITY (W) 40° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-35°C / 40°C / RG 20°C / SC OK)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-35°	-30°	-25°	-20°	-15°	-10°	-5°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
TCW330U	1.83	CSIR	46	60	78	99	125	155	191	53	1.02	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.3	168
TCW350U	2.72	CSIR	68	89	114	145	183	227	279	77	1.09	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.3	168
TCW360U	3.14	CSIR	79	103	134	170	214	266	327	85	1.01	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.5	168
TCW380U	4.19	CSIR	105	138	179	227	286	355	437	121	0.95	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.5	168
TCW390U	4.75	CSIR	126	158	202	257	324	401	487	144	1.24	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.5	168
TCW410U	6.06	CSIR	145	190	244	310	388	481	590	166	1.19	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.5	168
TCW413U	6.93	CSIR	177	231	296	374	467	578	709	203	1.18	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.6	168
TCX415U	7.84	CSIR	185	241	309	393	495	622	778	213	1.01	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.6	168

HBP

MODEL NUMBER	DIS-PLACE-MENT (cm³)	MOTOR	COOLING CAPACITY (W) 40° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-10°C / 50°C / RG 20°C / SC OK)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-15°	-10°	-5°	0°	5°	10°	5°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
TC4425U	4.75	CSIR	298	371	456	555	671	807	963	370	1.95	6.35-1/4"	4.76-3/16"	6.35-1/4"	GS	8.5	168
TC4430U	6.06	CSIR	380	473	582	708	856	1029	1229	471	1.93	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ	8.5	168
TC4440U	7.84	CSIR	440	547	675	828	1006	1212	1448	533	1.53	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ	8.5	168




VTC

50Hz

L/MBP (Inverter)

MODEL NUMBER	DISPLACEMENT (cm ³)	MOTOR	COOLING CAPACITY (W) EN12900: Ambient 32°C, suction gas 20°C Evaporation temperature (°C):			Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			speed (RPM)	-35° / 40°	-10° / 45°	Suction	Discharge	Process			
VTCX360U-MD5C	3.14	PMSM	2500	70	205	7.88/8.00mm 0.310/0.315in	6.99/7.12mm 0.275/0.280in	7.88/8.00mm 0.310/0.315in	115-240V	7.3	167.4
			3000	82	240						
			3500	102	293						
			4000	115	331						
			4500	126	379						
VTCX410U-MD5C	6.06	PMSM	2500	132	398	7.88/8.00mm 0.310/0.315in	6.99/7.12mm 0.275/0.280in	7.88/8.00mm 0.310/0.315in	115-240V	7.45	167.4
			3000	155	462						
			3500	194	563						
			4000	218	635						
			4500	233	717						
VTCX415U-MD5C	7.84	PMSM	2500	172	501	7.88/8.00mm 0.310/0.315in	6.99/7.12mm 0.275/0.280in	7.88/8.00mm 0.310/0.315in	115-240V	7.45	167.4
			3000	220	613						
			3500	247	724						
			4000	260	798						
			4500	288	907						
VTCX419U-ME5C	9.74	PMSM	2000	164	501	7.88/8.00mm 0.310/0.315in	6.99/7.12mm 0.275/0.280in	7.88/8.00mm 0.310/0.315in	180-240V	7.96	167.4
			2500	218	627						
			3000	264	752						
			3500	308	900						
			4000	331	999						
			4500	353	1121						
VTCW424U-MD5C	12.47	PMSM	2000	222	648	7.88/8.00mm 0.310/0.315in	6.99/7.12mm 0.275/0.280in	7.88/8.00mm 0.310/0.315in	180-240V	7.96	167.4
			2500	291	811						
			3000	349	967						
			3500	410	1150						
			4000	448	1275						
			4500	498	1435						





AE²

50Hz

LBP / L/MBP

MODEL NUMBER	DIS-PLACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-35°C / 40°C / RG 20°C / SC OK)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-35°	-30°	-25°	-20°	-15°	-10°	-5°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
AE2410U	5.48	CSIR	99	142	195	260	339	433	x	113	0.79	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ	10.5	210
AE2415U	8.85	CSIR	160	227	306	399	509	636	x	183	0.93	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ, AA	10.6	210
AE2420U	10.96	CSIR	238	317	410	522	654	808	x	274	1.04	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	10.6	210
AEX424U	12.01	CSIR	229	321	435	569	723	894	1082	264	0.96	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	10.7	210
AEX428U	13.24	CSIR	244	342	463	606	770	953	1153	281	0.95	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ, DS	10.7	210
AEX433U	15.09	CSIR	282	394	535	699	888	1099	1330	324	0.94	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	10.7	210

HBP

MODEL NUMBER	DIS-PLACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-10°C / 50°C / RG 20°C / SC OK)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-15°	-10°	-5°	0°	5°	10°	5°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
AE4425U	5.02	CSIR	257	331	418	520	639	777	938	318	1.50	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ	10	200
AE4430U	6.12	CSIR	308	397	501	622	763	926	1116	382	1.54	6.35-1/4"	4.76-3/16"	6.35-1/4"	FZ	10.1	200
AE4440U	8.02	CSIR	416	525	654	807	986	1196	1441	508	1.58	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	10.2	210
AE4450U	10.33	CSIR	565	709	879	1080	1316	1593	1916	688	1.62	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	10.5	210
AE4460U	12.01	CSIR	592	765	968	1207	1488	1816	2197	738	1.50	9.5-3/8"	6.35-1/4"	6.35-1/4"	FZ	11.2	210





AL

50Hz

MODEL NUMBER	DIS-PLE- ACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):										PERFORMANCES: EN12900 (-35°C / 40°C / RG 20°C / SC 0K)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-35°	-30°	-25°	-20°	-15°	-10°	-5°	0°	+5°	QPF (W)	COP (W/W)	Suction	Discharge	Process				
ALX430U	15	CSR	316	424	559	719	906	1118	1355	1617	1904	363	1.32	7.9-5/16"	6.35-1/4"	FZ	13	214		
ALX435U	17.7	CSR	395	517	662	832	1030	1258	1517	1810	2139	454	1.28	7.9-5/16"	6.35-1/4"	FZ	13	214		
ALX440U	20	CSR	459	603	770	966	1190	1444	1444	2054	2413	528	1.31	7.9-5/16"	6.35-1/4"	FZ	14	214		

AJ²

MODEL NUMBER	DIS-PLE- ACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-10°C / 50°C / RG 20°C / SC 0K)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-35°	-30°	-25°	-20°	-15°	-10°	-5°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
CAJ2446U	26.2	CSR	510	681	893	1155	1477	1870	x	586	1.12	12.7-1/2"	7.9-5/16"	6.35-1/4"	FZ,XA,HZ	22	268
CAJ2464U	34.5	CSR	720	990	1286	1619	2003	2450	x	827	1.16	12.7-1/2"	9.5-3/8"	6.35-1/4"	FZ,XA,HG	23	268

MODEL NUMBER	DIS-PLE- ACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (-10°C / 50°C / RG 20°C / SC 0K)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-15°	-10°	-5°	0°	5°	10°	15°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
CAJ4513U	25.95	CSR	1181	1543	1984	2516	3151	3904	4787	1478	1,68	12.7-1/2"	7.9-5/16"	6.35-1/4"	FZ	21,9	280
CAJ4518U	34.45	CSR	1604	2128	2738	3449	4275	5234	6343	2034	1,59	12.7-1/2"	9.5-3/8"	6.35-1/4"	FZ	22,2	280



HG

50Hz

HBP (Rotary)

MODEL NUMBER	DIS-PLACE-MENT (cm ³)	MOTOR	COOLING CAPACITY (W) 45 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):							PERFORMANCES: EN12900 (10°C / 50°C / RG 20°C / SC 0K)		Diam. for tubing O.D. (mm/inches)			VOLTAGE available	WEIGHT (kg)	HEIGHT (mm)
			-15°	-10°	-5°	0°	5°	10°	15°	QPF (W)	COP (W/W)	Suction	Discharge	Process			
HG4467U	9.5	CSR	585	728	893	1085	1309	1568	1868	709	1.90	9.5-3/8"	7.9-5/16"	-	FZ	12	163
HG4492U	12.75	CSR	789	980	1202	1462	1765	2117	2525	955	1.97	12.7-1/2"	7.9-5/16"	-	FZ	12.5	163
HG4512U	16.12	CSR	1023	1263	1544	1873	2256	2702	3219	1235	1.99	12.7-1/2"	7.9-5/16"	-	FZ	13.2	163





REFRIGERATION COMPRESSORS

50HZ
ASHRAE





TC

50Hz

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TC1370U-GS6B	3.79	0.23	PTCCSR/PTCSR	610	179	4.86	1.42	220	8.5	18.74

M/HBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TC4430U-FZ1B	6.06	0.37	CSIR	2900	850	9.32	2.73	220 - 240	8.56	18.87
TC4440U-FZ1B	7.84	0.48	CSIR	3710	1087	8.34	2.44	220 - 240	8.61	18.98

L/MBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TCW330U-GS6D	1.83	0.11	CSIR	225	66	3.19	0.93	220	7.95	17.53
TCW350U-GS1B	2.72	0.17	PTCSR	430	126	4.55	1.33	220	8.36	18.43
TCW350U-GS8B	2.72	0.17	CSIR	430	126	4.55	1.33	220	8.36	18.43
TCW360U-GS8A	3.14	0.19	CSIR	500	147	4.57	1.34	220	8.3	18.30
TCW380U-GS8A	4.19	0.26	CSIR	700	205	4.46	1.31	220	8.36	18.43
TCW390U-GS8E	4.75	0.29	CSIR	760	223	4.75	1.39	220	8.6	18.96
TCW410U-GS8E	6.06	0.37	CSIR	980	287	4.75	1.39	220	8.6	18.96
TCW410U-FZ7C	6.06	0.37	PTCCSR / PTCSCR	1000	293	5.80	1.70	220 - 240	8.78	19.36
TCW413U-FZ7C	6.93	0.43	PTCCSR	1135	333	5.66	1.66	220 - 240	8.78	19.36
TCW413U-GS8E	6.93	0.43	CSIR	1140	334	4.92	1.44	220	8.63	19.03
TCX415U-GS8B	7.84	0.48	CSIR	1300	381	4.68	1.37	220	8.6	18.96

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.



Tecumseh

21



50Hz

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TCW360U-GS3H	3.14	0.19	PTCSCR	530	155	5.52	1.62	220	7.5	16.5
TCW380U-GS3H	4.19	0.26	PTCSCR	690	202	5.48	1.61	220	8.1	17.9
TCW410U-GS3H	6.06	0.37	PTCSCR	940	276	5.08	1.49	220	8.3	18.3
TCW413U-GS3H	6.93	0.42	PTCSCR	1150	337	5.48	1.61	220	8.4	18.5



MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
ALX430U-FZ1A	15.09	0.93	CSIR	2325	681	5.18	1.52	220 - 240	13.2	29.1
ALX430U-FZ3A	15.09	0.93	CSR	2270	665	5.81	1.70	220 - 240	13.1	28.88
ALX435U-FZ1A	17.71	1.09	CSIR	2800	820	5.12	1.50	220 - 240	15	33.07
ALX435U-FZ3A	17.71	1.09	CSR	2850	835	5.79	1.70	220 - 240	13.1	28.88
ALX440U-FZ3A	19.95	1.22	CSR	3190	935	5.70	1.67	220 - 240	13.6	29.98

22 COMPRESSORS



50Hz

LBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
AE2410U-FZ1A	6.12	0.38	CSIR	850	249	4.19	1.23	220 - 240	10.2	22.49
AE2410U-GS1A	6.12	0.38	CSIR	850	249	4.19	1.23	220	10.2	22.49
AE2413U-GS1A	7.33	0.45	CSIR	1050	308	4.09	1.20	220	10.22	22.53
AE2415U-FZ1A	8.85	0.54	CSIR	1250	366	4.28	1.25	220 - 240	10.2	22.49
AE2415U-GS1B	8.85	0.54	CSIR	1350	396	4.38	1.28	220	11.3	24.91
AE2420U-GS1B	10.96	0.67	CSIR	1600	469	4.49	1.32	220	11.1	24.47
AE2420U-FZ1B	10.96	0.67	CSIR	1700	498	4.37	1.28	220 - 240	11.25	24.8

L/MBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
AEX419U-FZ1C	10.33	0.63	CSIR	1630	478	4.89	1.43	220 - 240	11.3	24.91
AEX424U-FZ3B	12.01	0.74	CSR	2000	586	5.18	1.52	220 - 240	11.3	24.91
AEX428U-FZ3B	13.24	0.81	CSR	2085	611	5.06	1.48	220 - 240	11.3	24.91
AEX433U-FZ3C	15.09	0.93	CSR	2435	713	5.21	1.53	220 - 240	11.5	25.35

M/HBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
AE4425U-FZ1A	5.02	0.31	CSIR	2250	659	8.82	2.58	220 - 240	9.4	20.72
AE4430U-FZ1A	6.12	0.38	CSIR	2700	791	8.57	2.51	220 - 240	9.6	21.16
AE4440U-FZ1A	8.02	0.49	CSIR	3600	1055	8.85	2.59	220 - 240	9.5	20.94
AE4440U-GH1A	8.02	0.49	CSIR	3600	1055	8.85	2.59	230	10.6	23.37
AE4450U-FZ1A	10.33	0.63	CSIR	4750	1392	8.48	2.48	220 - 240	10.5	23.15
AE4460U-FZ1C	12.01	0.74	CSIR	5600	1641	8.83	2.59	220 - 240	11.1	24.47

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.



50Hz

LBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
AK2424U-XA3B	17.45	1.07	CSR	1827	535	3.91	1.15	100	35.00	77.16
AK2431U-XA3B	20.43	1.25	CSR	2165	634	4.26	1.25	100	35.00	77.16
AK2431U-FZ3B	20.43	1.25	CSR	2498	732	4.87	1.43	220 - 240	35.00	77.16
AK2431U-XN3B	20.43	1.25	CSR	2540	744	4.80	1.41	200 - 220	35.00	77.16

M/HBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
AK4482U-XA3B	15.63	0.96	CSR	6700	1963	9.70	2.84	100	35.00	77.16
AK4482U-FZ3B	15.63	0.96	CSR	6904	2023	10.55	3.09	220 - 240	35.00	77.16
AK4482U-XD3B	15.63	0.96	CSR	7020	2057	10.56	3.09	200	35.00	77.16
AK4492U-XA3B	17.50	1.07	CSR	6882	2016	9.00	2.64	100	35.00	77.16
AK4492U-XN3B	17.45	1.07	CSR	9153	2682	9.05	2.65	200 - 220	35.00	77.16
AK4511U-XA3B	20.43	1.25	CSR	11921	3493	9.66	2.83	100	35.00	77.16

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.



LBP*

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY Standard TE		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
CAJ2446U-XA	26.2	1.61	CSR	3610	1058	4.88	1.43	100	21	46.3
CAJ2446U-FZ	26.2	1.61	CSR	3626	1062	4.82	1.41	220 - 240	21	46.3
CAJ2464U-XA	34.5	2.12	CSR	4978	1459	4.68	1.37	100	21	46.3
CAJ2464U-FZ	34.5	2.12	CSR	5194	1522	4.95	1.45	220 - 240	21	46.3

* Standard TE: Evap. temp. -23.3°C / -10°F - Cond. temp. 54.5°C / 130°F - Return gas temp. 32°C / 90°F - Superheat 55.3K - Subcooling 22.5°K - Liquid 32°C / 90°F

M/HBP**

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY Standard TE		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
CAJ4513U-FZ	25.95	1.59	CSR	10523	3083	8.87	2.60	220 - 240	21.9	48.3
CAJ4518U-FZ	34.45	2.11	CSR	14397	4218	8.73	2.56	220 - 240	22.2	48.9

** Standard TE: Evap. temp. +7.2°C / 45°F - Cond. temp. 54.5°C / 130°F - Return gas temp. 18.2°C / 65°F - Superheat 11K - Subcooling 8.3°K - Liquid 46.2°C / 115°F



HG

50Hz

M/HBP (Rotary)

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
HG4467U-FZ3A	9.50	0.58	CSR	4634	1358	10.60	3.11	220 - 240	11.00	24.25
HG4492U-FZ3A	12.75	0.78	CSR	6317	1851	10.60	3.11	220 - 240	11.40	25.13
HG4512U-FZ3A	16.12	0.99	CSR	7964	2333	10.50	3.08	220 - 240	11.90	26.23



VTC

L/MBP (Inverter)

MODEL NUMBER	DISPLACEMENT		RPM	COOLING CAPACITY	
	cm ³	in ³		Btu/h	W
VTCX360U-MD5C	3.14	0.19	2500 - 4500	432 - 768	127 - 225
VTCX410U-MD5C	6.06	0.37	2500 - 4500	848 - 1410	248 - 413
VTCX415U-MD5C	7.84	0.48	2500 - 4500	1093 - 1826	320 - 535
VTCX419U-ME5C	9.74	0.60	2000 - 4500	1166 - 2241	342 - 657
VTCW424U-ME5C	12.47	0.77	2000 - 4500	1482 - 2961	434 - 868
VTC1424U-MD5C	12.47	0.77	2500 - 4500	1818 - 3126	533 - 916



Tecumseh

25

REFRIGERATION COMPRESSORS

60HZ
ASHRAE





TC

60Hz

LBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TC1370U-GS6B	3.79	0.23	PTCCSIR/PTCSIR	740	217	5.17	1.51	220	8.5	18.74
TC1370U-DS6B	3.79	0.23	PTCCSIR/PTCSR	750	220	5.24	1.54	115 - 127	8.5	18.74
TC1370U-DS7C	3.79	0.23	PTCCSR/PTCSR	755	221	5.79	1.70	115 - 127	8.8	19.4
TC1410U-DS7C	6.06	0.37	PTCCSR/PTCSR	1130	331	5.82	1.71	115 - 127	8.73	19.25
TC1410U-ES7C	6.06	0.37	PTCCSR/PTCSR	1170	343	5.91	1.73	220	8.85	19.51
TC1413U-DS7C	6.93	0.43	PTCCSR/PTCSR	1330	390	5.78	1.69	115 - 127	8.77	19.33
TC1413U-DS7F	6.93	0.43	PTCCSR/PTCSR	1350	396	5.72	1.68	115 - 127	8.77	19.33
TC1413U-ES7C	6.93	0.43	PTCCSR/PTCSR	1350	396	5.82	1.71	220	8.8	19.4

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.





TC

60Hz

L/MBP

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TCW330U-GS6D	1.83	0.11	CSIR	285	84	3.85	1.13	220	7.95	17.53
TCW330U-DS8B	1.83	0.11	CSIR	300	88	4.2	1.23	115 - 127	8.3	18.3
TCW350U-DS1B	2.72	0.17	PTCSIR	500	147	4.9	1.44	115 - 127	8.3	18.3
TCW350U-GS1B	2.72	0.17	PTCSIR	500	147	4.81	1.41	220	8.36	18.43
TCW350U-GS8B	2.72	0.17	CSIR	500	147	4.81	1.41	220	8.36	18.43
TCW360U-GS8A	3.14	0.19	CSIR	570	167	4.89	1.43	220	8.3	18.3
TCW360U-LS6A	3.14	0.19	CSIR	600	176	4.76	1.39	115	8.27	35.00
TCX380U-DS8B	4.19	0.26	CSIR	785	230	5.25	1.54	115	8.6	18.96
TCW380U-DS6B	4.19	0.26	CSIR	800	234	5.21	1.53	115 - 127	8.6	18.96
TCW380U-GS8A	4.19	0.26	CSIR	845	248	5.12	1.50	220	8.36	18.43
TCW390U-DS6E	4.75	0.29	CSIR / RSIR	870	255	5.1	1.49	115 - 127	8.6	18.96
TCW390U-LS6B	4.75	0.29	CSIR / RSIR	875	256	5.3	1.55	115	8.53	18.81
TCW390U-GS8E	4.75	0.29	CSIR	880	258	5.09	1.49	220	8.6	18.96
TCX410U-DS8B	6.06	0.37	CSIR	1125	330	5.24	1.54	115 - 127	8.6	18.96
TCW410U-DS6B	6.06	0.37	CSIR	1150	337	5.45	1.60	115 - 127	8.6	18.96
TCW410U-GS8E	6.06	0.37	CSIR	1150	337	5.45	1.60	115 - 127	8.6	18.96
TCW413U-DS8E	6.93	0.43	CSIR	1300	381	5.39	1.58	115 - 127	8.6	18.96
TCW413U-GS8E	6.93	0.43	CSIR	1300	381	5.33	1.56	220	8.63	19.03
TCX413U-DS1B	6.93	0.43	CSIR	1310	384	5.25	1.54	115 - 127	8.6	18.96
TCX415U-DS1B	7.84	0.48	CSIR	1470	431	5.17	1.51	115 - 127	8.6	18.96
TCX415U-GS8B	7.84	0.48	CSIR	1490	437	5.21	1.53	220	8.6	18.96
TCW415U-DS8E	7.84	0.48	CSIR	1500	440	5.23	1.53	115 - 127	8.65	19.07
TCW415U-ES8E	7.84	0.48	CSIR	1500	440	4.89	1.43	220	8.7	19.18

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.





TCW OPT

60Hz

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
TCW360U-DS3H	3.14	0.19	PTCSCR	590	173	5.57	1.63	115 - 127	7.4	16.3
TCW360U-GS3H	3.14	0.19	PTCSCR	590	173	5.67	1.66	220	7.5	16.5
TCW380U-DS3H	4.19	0.26	PTCSCR	840	246	5.64	1.65	115 - 127	8.1	17.9
TCW380U-GS3H	4.19	0.26	PTCSCR	840	246	5.71	1.67	220	8.1	17.9
TCW410U-DS3H	6.06	0.37	PTCSCR	1140	334	5.56	1.63	115 - 127	8	17.6
TCW410U-GS3H	6.06	0.37	PTCSCR	1140	334	5.56	1.63	220	8.3	18.3
TCW413U-DS3H	6.93	0.43	PTCSCR	1360	399	5.71	1.67	115 - 127	8.1	17.9
TCW413U-GS3H	6.93	0.42	PTCSCR	1360	399	5.79	1.70	220	8.4	18.5
TCW417U-DS3H	8.87	0.54	PTCSCR	1750	513	5.47	1.60	115 - 127	8.1	17.9
TCW417U-ES3H	8.87	0.54	PTCSCR	1750	513	5.47	1.60	220	8.1	17.9



AL

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		Voltage (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
ALX430U-DS3A	15.09	0.92	CSR	2901	850	5.80	1.70	115 - 127	13.5	29.8
ALX435U-DS3A	17.71	1.08	CSR	3461	1014	5.75	1.69	115 - 127	13.7	30.2

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.



60Hz

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
AE2410U-GS1A	6.12	0.38	CSIR	1000	293	4.33	1.27	220	10.2	22.49
AE2413U-AA1A	7.33	0.45	CSIR	1300	381	4.61	1.35	115	10.3	22.71
AE2413U-GS1A	7.33	0.45	CSIR	1300	381	4.59	1.34	220	10.22	22.53
AE2415U-AA1A	8.85	0.54	CSIR	1550	454	4.33	1.27	115	10.17	22.41
AE2415U-GS1B	8.85	0.54	CSIR	1600	469	4.64	1.36	220	11.3	22.91
AE2420U-AA1A	10.96	0.67	CSIR	2000	586	4.65	1.36	115	10.6	23.37
AE2420U-GS1B	10.96	0.67	CSIR	2000	586	4.88	1.43	220	11.1	24.47
AE2430U-ES3C	14.51	0.89	CSR	2800	820	5.05	1.48	220	11.4	25.13

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
AEX415U-DS1B	7.33	0.45	CSIR	1420	416	4.98	1.46	115 - 127	11.0	24.25
AEX417U-DS1B	8.02	0.49	CSIR	1540	451	4.89	1.43	115 - 127	11.3	24.91
AEX419U-DS1B	9.35	0.57	CSIR	1770	519	4.85	1.42	115 - 127	11.2	24.69
AEX424U-DS3C	12.01	0.74	CSR	2400	703	5.3	1.55	115 - 127	11.5	25.35
AEX428U-DS3C	13.24	0.81	CSR	2550	747	5.3	1.52	115 - 127	11.5	25.35
AEX433U-AA3C	15.09	0.93	CSR	2945	863	5.14	1.51	115	11.5	25.35
AEX433U-DS3C	15.09	0.93	CSR	3010	882	5.27	1.54	115 - 127	11.5	25.35

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm ³	in ³		Btu/h	W	Btu/Wh	W/W		kg	lb
AE4430U-AA1A	6.12	0.38	CSIR	3300	967	8.75	2.56	115	9.7	21.38
AE4435U-AA1A	6.91	0.42	CSIR	3900	1143	8.99	2.63	115	10.33	22.77
AE4440U-AA1A	8.02	0.49	CSIR	4500	1319	9.09	2.66	115	10.2	22.49
AE4460U-AA1C	12.01	0.74	CSIR	6900	2022	8.78	2.57	115	11.2	24.69

30 COMPRESSORS



60Hz

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
AK2424U-XA3B	17.45	1.07	CSR	2500	733	4.71	1.38	115	35	77.16
AK2431UXA3B	20.43	1.25	CSR	3360	984	5	1.47	115	35	77.16
AK2431UXN3B	20.43	1.25	CSR	3166	928	5.06	1.48	208 - 230	35	77.16
AK2447U-AA3C	25.68	1.57	CSR	4651	1363	5.29	1.55	115	35	77.16
AK2447U-NA3C	25.68	1.57	CSR	4539	1330	5.29	1.55	208 - 230	35	77.16

MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY (ASHRAE)		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
AK4482UXA3B	15.63	0.95	CSR	8238	2414	9.8	2.87	115	-	-
AK4482UXD3B	15.63	0.95	CSR	8410	2464	10.45	3.06	208 - 230	-	-
AK4492UXA3B	17.45	1.07	CSR	9167	2686	9.6	2.81	115	-	-
AK4492UXN3B	17.45	1.07	CSR	9362	2743	10.42	3.05	208 - 230	-	-
AK4511UXA3B	20.43	1.25	CSR	11028	3231	9.05	2.65	115	-	-
AK4514UXA3B	25.68	1.57	CSR	14363	4208	9.66	2.83	208 - 230	-	-

Note: ASHRAE (LBP - L/MBP) Evap. Temp. -23.3°C / -10°F. ASHRAE (M/HBP - HBP) Evap. Temp. +7.2°C / 45°F. All fan cooled except TCW OPT.



MODEL NUMBER	DISPLACEMENT		MOTOR	COOLING CAPACITY Standard TE		EFFICIENCY (EER/COP)		VOLTAGE (V)	WEIGHT	
	cm³	in³		Btu/h	W	Btu/Wh	W/W		kg	lb
CAJ2446UHZ	26.2	1.61	CSR	4384	1285	4.65	1.36	208 - 220	20.8	45.86
CAJ2446UXA	26.2	1.61	CSR	4502	1319	4.90	1.44	115	21	46.3
CAJ2464UHZ	34.5	2.12	CSR	5925	1736	4.72	1.38	208 - 220	22.5	49.6
CAJ2464UXA	34.5	2.12	CSR	6208	1819	4.69	1.37	115	21	46.3

*Standard TE: Evap. temp. -23.3°C / -10°F - Cond. temp. 54.5°C / 130°F - Return gas temp. 32°C / 90°F - Superheat 55.3K - Subcooling 22.5K - Liquid 32°C / 90°F


SIERRA03-0982U3
**ROTARY
INVERTER
DC**

COOLING CAPACITY (24V) - DC ARI HBP															Btu/h (Watt)
EVAPORATOR TEMPERATURE															
RPM	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)	
1800	1371	(402)	2563	(751)	3027	(887)	3573	(1046)	4328	(1268)	4824	(1413)	6133	(1796)	
2400	2160	(633)	3702	(1084)	4409	(1291)	5243	(1535)	6332	(1854)	7011	(2053)	8721	(2554)	
3000	2753	(806)	4647	(1361)	5598	(1639)	6721	(1969)	8145	(2385)	9009	(2639)	11122	(3257)	
3600	3203	(938)	5452	(1597)	6648	(1947)	8063	(2361)	9822	(2877)	10872	(3184)	13388	(3921)	
4200	3564	(1044)	6171	(1807)	7614	(2230)	9320	(2730)	11417	(3344)	12652	(3706)	15575	(4561)	

POWER CONSUMPTION (24V) - DC ARI HBP							Watt	CURRENT (24V) ARI HBP							Ampere
EVAPORATOR TEMPERATURE								EVAPORATOR TEMPERATURE							
RPM	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	-10°F	10°F	20°F	30°F	40°F	45°F	55°F	
1800	266	350	409	458	481	(887)	3573	11.08	14.58	17.04	19.08	20.05	19.92	18.01	
2400	392	445	498	548	578	(1291)	5243	16.31	18.52	20.74	22.82	24.09	24.22	23.04	
3000	514	542	592	646	687	(1639)	6721	21.43	22.59	24.69	26.92	28.62	29.07	28.73	
3600	637	645	696	756	810	(1947)	8063	26.55	26.89	28.99	31.50	33.76	34.58	35.20	
4200	763	757	810	880	950	(2230)	9320	31.77	31.54	33.77	36.68	39.60	40.86	42.56	

EFFICIENCY (24V) - DC ARI HBP															Btu/h/W (W/W)
EVAPORATOR TEMPERATURE															
RPM	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)	
1800	5.16	(1.51)	7.32	(2.14)	7.40	(2.17)	7.80	(2.28)	9.00	(2.63)	10.09	(2.96)	14.19	(4.15)	
2400	5.52	(1.62)	8.33	(2.44)	8.86	(2.59)	9.57	(2.80)	10.95	(3.21)	12.06	(3.53)	15.77	(4.62)	
3000	5.35	(1.57)	8.57	(2.51)	9.45	(2.77)	10.40	(3.05)	11.86	(3.47)	12.91	(3.78)	16.13	(4.72)	
3600	5.03	(1.47)	8.45	(2.47)	9.56	(2.80)	10.66	(3.12)	12.12	(3.55)	13.10	(3.84)	15.85	(4.64)	
4200	4.67	(1.37)	8.15	(2.39)	9.40	(2.75)	10.59	(3.10)	12.01	(3.52)	12.90	(3.78)	15.25	(4.46)	

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

* dual compressor performance values are approximately 2x capacity, power and current.

COOLING CAPACITY (48V) - DC ARI HBP															Btu/h (Watt)
EVAPORATOR TEMPERATURE															
RPM	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)	
3600	3203	(938)	5452	(1597)	6648	(1947)	8063	(2361)	9822	(2877)	10872	(3184)	13388	(3921)	
4500	3728	(1092)	6515	(1908)	8082	(2367)	9935	(2910)	12201	(3573)	13529	(3962)	16655	(4878)	
5500	4298	(1259)	7688	(2252)	9671	(2832)	12015	(3519)	14848	(4349)	16488	(4829)	20293	(5943)	
6500	5093	(1492)	9096	(2664)	11498	(3367)	14337	(4199)	17740	(5196)	19694	(5768)	24183	(7083)	

EFFICIENCY (48V) - DC ARI HBP															Btu/h/W (W/W)
EVAPORATOR TEMPERATURE															
RPM	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)	
3600	4.87	(1.43)	8.18	(2.40)	9.25	(2.71)	10.33	(3.02)	11.74	(3.44)	12.69	(3.71)	15.35	(4.49)	
4500	4.37	(1.28)	7.72	(2.26)	8.97	(2.63)	10.14	(2.97)	11.50	(3.37)	12.31	(3.61)	14.42	(4.22)	
5500	3.94	(1.15)	7.15	(2.09)	8.43	(2.47)	9.61	(2.81)	10.84	(3.17)	11.54	(3.38)	13.18	(3.86)	
6500	3.75	(1.10)	6.71	(1.97)	7.93	(2.32)	9.03	(2.64)	10.13	(2.97)	10.72	(3.14)	12.03	(3.52)	

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

* dual compressor performance values are approximately 2x capacity, power and current.

SIERRA17-0982U3


**ROTARY
INVERTER
DC**

COOLING CAPACITY (48V) - DC ARI HBP													Btu/h (Watt)	
RPM	EVAPORATOR TEMPERATURE													
	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)
1800	1371	(402)	2563	(751)	3027	(887)	3573	(1046)	4328	(1268)	4824	(1413)	6133	(1796)
2400	2160	(633)	3702	(1084)	4409	(1291)	5243	(1535)	6332	(1854)	7011	(2053)	8721	(2554)
3000	2753	(806)	4647	(1361)	5598	(1639)	6721	(1969)	8145	(2385)	9009	(2639)	11122	(3257)
3600	3203	(938)	5452	(1597)	6648	(1947)	8063	(2361)	9822	(2877)	10872	(3184)	13388	(3921)

POWER CONSUMPTION (48V) - DC ARI HBP							Watt	CURRENT (48V) - DC ARI HBP							Ampere
RPM	EVAPORATOR TEMPERATURE							EVAPORATOR TEMPERATURE							
	-10°F	10°F	20°F	30°F	40°F	45°F		-10°F	10°F	20°F	30°F	40°F	45°F	55°F	
1800	268	353	413	462	486	482	436	5.59	7.36	8.60	9.63	10.12	10.05	9.09	
2400	395	449	502	553	584	587	558	8.23	9.35	10.47	11.52	12.16	12.22	11.63	
3000	519	547	598	652	693	704	696	10.82	11.40	12.46	13.59	14.45	14.67	14.50	
3600	643	651	702	763	818	838	853	13.40	13.57	14.63	15.90	17.04	17.45	17.76	

EFFICIENCY (48V) - DC ARI HBP													Btu/h/W (W/W)	
RPM	EVAPORATOR TEMPERATURE													
	-10°F	(-23°C)	10°F	(-12°C)	20°F	(-7°C)	30°F	(-1°C)	40°F	(4°C)	45°F	(7°C)	55°F	(13°C)
1800	5.11	(1.50)	7.25	(2.12)	7.33	(2.15)	7.73	(2.26)	8.91	(2.61)	10.00	(2.93)	14.05	(4.11)
2400	5.47	(1.60)	8.25	(2.42)	8.77	(2.57)	9.48	(2.78)	10.85	(3.18)	11.95	(3.50)	15.63	(4.58)
3000	5.30	(1.55)	8.49	(2.49)	9.36	(2.74)	10.31	(3.02)	11.75	(3.44)	12.79	(3.75)	15.98	(4.68)
3600	4.98	(1.46)	8.37	(2.45)	9.47	(2.77)	10.56	(3.09)	12.01	(3.52)	12.98	(3.80)	15.70	(4.60)

* all points are at 35°C (95°F) ambient temperature, 18.33°C (65°F) suction, 8.33°C (15°F) subcooling, 54.4°C (130°F) condenser

Tecumseh Masterflux variable-speed rotary compressors are reliable and robust, suited for cold-chain and last-mile delivery.

Masterflux utilizes brushless DC technology, is powered by batteries and enables active-cooling of your mobile containers.

In transporting or storing, Masterflux keeps vaccines and medicines safe where precise temperature control is essential.


www.tecumseh.com


MASTERFLUX®
BY Tecumseh





CONDENSING UNITS

EVAPORATING UNITS



TRADITIONAL CONDENSING UNITS

50Hz



LBP

MODEL NUMBER	REFRIGERATION OUTPUT 40 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):						REFRIG. OUTPUT EN13215 Evap. T -35°C		Aco. P db(A)*	Air flow m³/h	Liq. Rec. Vol.**	Diam. for tubing O.D.		Net/ Gross weight kg	Nº. Dim	VOLTAGE code
	-35°	-30°	-25°	-20°	-15°	-10°	Perf. (W)	COP (W/W)				Suc.	Liqu. Line			
	AE2410UB-FZ	105	146	194	250	314	387	123	0.72	29	340	na	1/4"	1/4"	17/19	M200
AE2415UB-FZ	162	221	287	361	441	530	191	0.85	29	340	na	3/8"	1/4"	17/19	M200	268
AE2420UB-FZ	240	310	390	480	581	693	283	0.97	29	410	na	3/8"	1/4"	17/19	M200	268

* acoustic pressure, 10m free field / **na: not applicable - see dimensions page 35

HBP

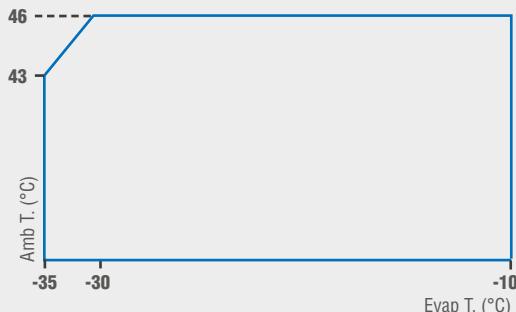
MODEL NUMBER	REFRIGERATION OUTPUT 32 ° cond., 10K superheating, 3K subcooling Evaporation temperature (°C):								REFRIG. OUTPUT EN13215 Evap. T -10°C		Aco. P db(A)*	Air flow m³/h	Liq. Rec. Vol.**	Diam. for tubing O.D.		Net/ Gross weight kg	Nº. Dim	VOLTAGE code
	-25°	-15°	-10°	-5°	0°	5°	15°	Perf. (W)	COP (W/W)	Suc.	Liqu. Line							
	AE4425UH-FZ	162	269	332	399	483	572	783	359	1.54	30	340	na	3/8"	1/4"	17/19	M200	2.4
AE4430UH-FZ	198	331	414	504	617	734	984	447	1.70	29	410	na	3/8"	1/4"	18/19	M200	2.8	
AE4440UH-FZ	277	440	537	636	762	891	1190	580	1.47	38	800	na	3/8"	1/4"	19/21	M200	3.9	
AE4450UH-FZ	372	570	686	805	957	1115	1495	580	1.48	38	980	na	3/8"	1/4"	20/21	M250	5.0	
AE4460UH-FZ	359	592	727	864	1036	1215	1655	789	1.38	40	980	na	3/8"	1/4"	20/21	M250	5.7	

* acoustic pressure, 10m free field / **na: not applicable - see dimensions page 35

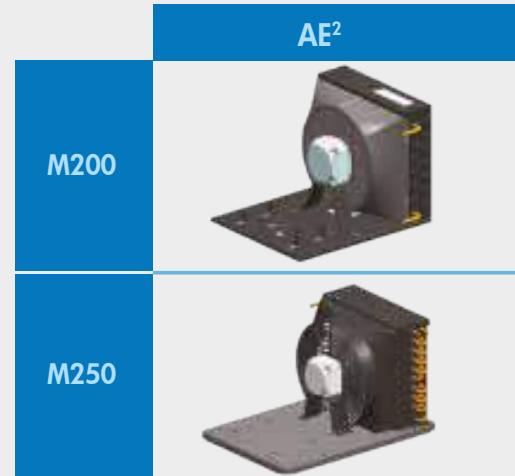


APPLICATION WINDOWS

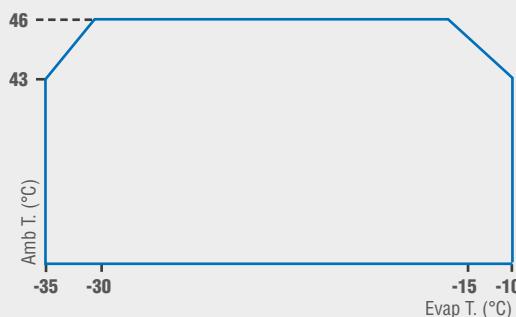
LBP R-290



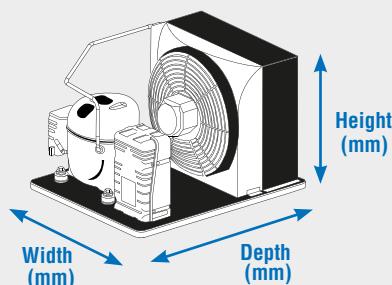
MODEL NUMBER
AE 2410 UB



AE²



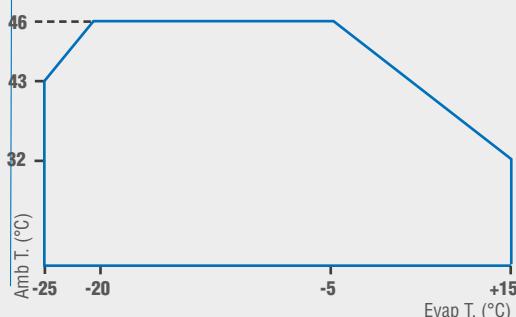
MODEL NUMBER
AE 2415 UB
AE 2420 UB



M/HBP R-290



MODEL NUMBER
AE 4425 UH
AE 4430 UH
AE 4440 UH



MODEL NUMBER
AE 4450 UH
AE 4460 UH

LBP R-290

MODEL NUMBER	Width	Height	Depth	Base
AE2410UB	300	227	374	M200
AE2415UB	300	227	374	M200
AE2420UB	322	257	404	M200

M/HBP R-290

MODEL NUMBER	Width	Height	Depth	Base
AE4425UH	300	227	374	M200
AE4430UH	322	257	404	M200
AE4440UH	334	300	485	M250
AE4450UH	334	300	485	M250
AE4460UH	334	300	485	M250

INFINEE



ECO-FRIENDLY WATER CHILLER

OPTIMIZED FOR REFRIGERATION

Cooling capacity from 7.4 to 20.5 kW

(Outside Air temperature 35°C, Entering/leaving temperature -4/-8°C)



R-290 Propane
natural refrigerant (GWP=3)



Water temperature
down to -8°C



100% Inverter driven



Plug and play

INFINEE


GENERAL FEATURES

WEIGHT	
Unit filled with water weight	400 kg
REFRIGERATION	
Operating pressure (valves) HP/BP	24 bar HP / 18 bar BP
Test pressure	26.4 bar
EVAPORATOR	
Type	Plate
REFRIGERANT	
Type	R290 propane
Propane load	4 kg
Oil type	PAG 68
Oil load	1.6 l
CONDENSER	
Type	Copper tube and aluminium fins
Surface	0.884 m ²
FAN	
Type	Helicoid
Maximum total airflow	6225 m ³ /h
Maximum rotation speed	970 rpm
HYDRAULIC	
Nominal flow	4.47 m ³ /h
Expansion vessel maximum pressure	10 bar
Hydraulic connection	Connector 40/49
ELECTRICITY	
Rated voltage	380-420 V 3~N/PE 50 Hz
Maximum current (MRA)	40.8 A
EMC class	Class B (residential)
EMC (Emissions)	Class B NF EN 61000-6-3 (residential)
EMC (immunity)	Class B NF EN 61000-6-2 (industrial)

SOUND LEVEL	COMPRESSOR FREQUENCY	
	50 Hz	85 Hz
Sound power level (Lw dBA)	79.2	88.1
Pressure level at 10 m (Lp dBA)	51.2	60.1

COOLING CAPACITY

Ambient Temperature (°C)	Compressor Frequency (Hertz)	Output Temp. (°C)	Inlet Temp. (°C)	Cooling capacity (kW)	COP refrigeration	Water + glycol flow (m ³ /h)	COP Machine
35	25	-8	-4	7.42	2.64	1.71	1.92
35	30	-8	-4	8.69	2.60	2.01	1.98
35	35	-8	-4	9.94	2.55	2.29	2.01
35	40	-8	-4	11.1	2.50	2.57	2.02
35	45	-8	-4	12.3	2.44	2.84	2.02
35	50	-8	-4	13.5	2.39	3.11	2.01
35	55	-8	-4	14.6	2.33	3.36	1.99
35	60	-8	-4	15.6	2.27	3.61	1.97
35	65	-8	-4	16.7	2.22	3.85	1.94
35	70	-8	-4	17.7	2.16	4.08	1.91
35	75	-8	-4	18.6	2.10	4.30	1.88
35	80	-8	-4	19.6	2.05	4.52	1.85
35	85	-8	-4	20.5	2.00	4.72	1.81

DIMENSIONS

Height	1 572 mm
Depth with feet	924 mm
Depth	836 mm
Length	1 518 mm

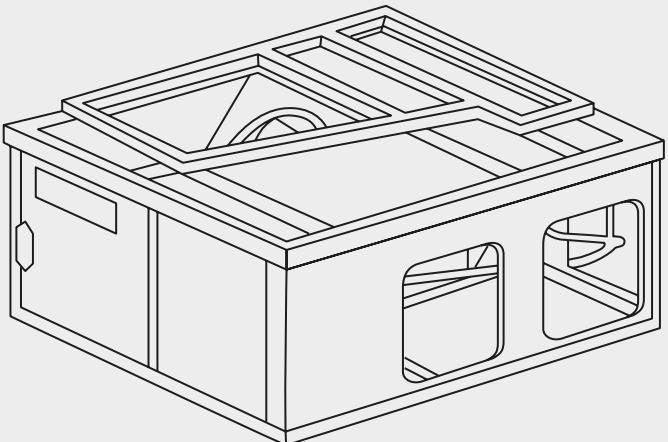
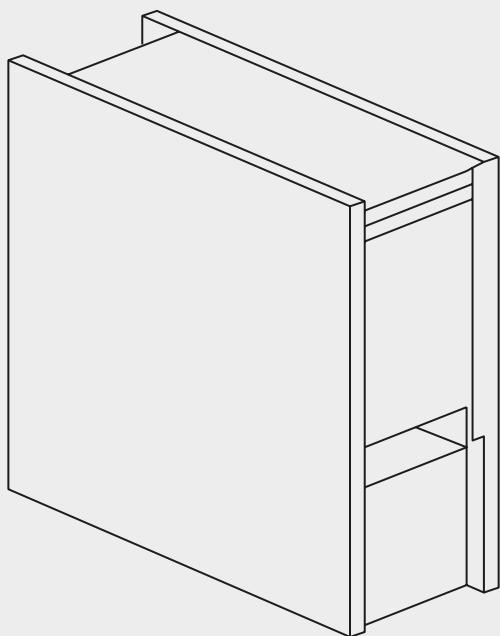
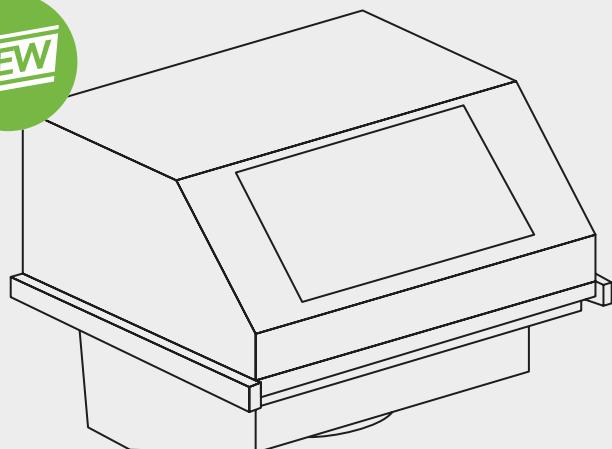
SELF-CONTAINED REFRIGERATION SYSTEM

Fully Customized System

Assembled, Charged, Tested & Ready-to-Cool

Ensuring a Safe & Effortless Transition
to Natural Refrigerant Technology

- ▶ Variable or fixed speed compressors
- ▶ Top, bottom and side loaded options
- ▶ System shipped fully charged



- ▶ Ideal for Supermarkets, Convenience Stores & Professional Kitchens
- ▶ Simple & Safe Drop-and-Go Solution with Natural Refrigerants
- ▶ Compact, Portable System Tailored to Any Installation Requirement



SELF-CONTAINED REFRIGERATION SYSTEM

Custom Solutions

- Top, bottom and side loaded capabilities
- Variable and fixed speed options available
- Compact, portable and easy to move

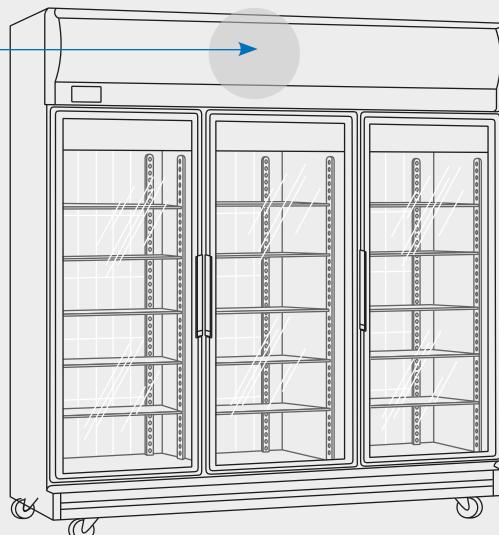
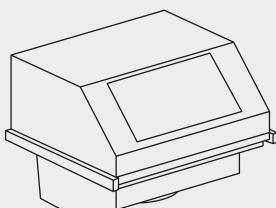
Sustainability

- R-290 refrigerant meets strict DOE requirements
- Meets the growing demand for environmentally-friendly solutions

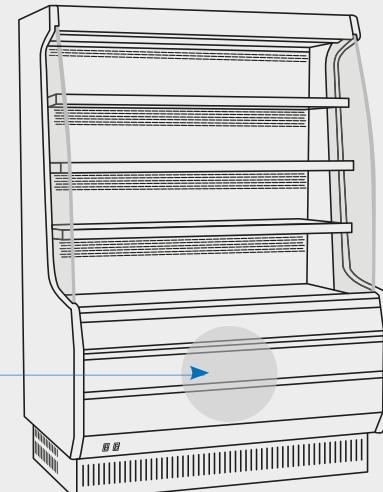
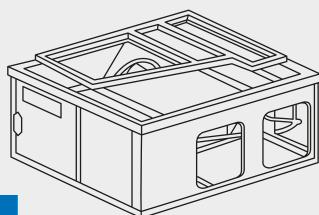
Safety & Serviceability

- Fully assembled, charged, tested and ready-to-cool
- Our investment in R-290 at our manufacturing facility puts safety at the forefront
- If a service issue arises, we will swap out with brand new system

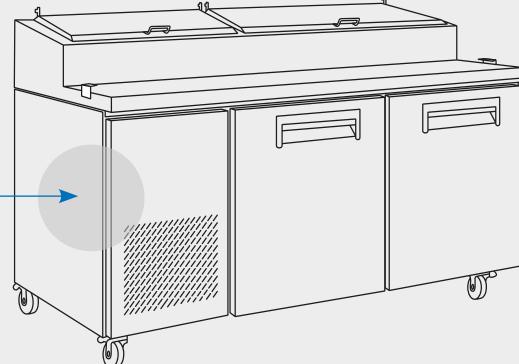
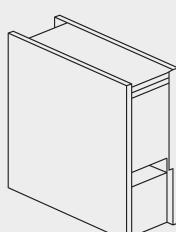
Top Mount CRS



Bottom Mount CRS



Side Mount CRS



Components options available:

- Compressor
- EC fan motors
- Optimized condenser & evaporator coils
- Optional electric heater
- Optional controller

System options available:

- Fully charged systems
Hydrocarbon,
HFC & HFO-blends available
- TXV or electronic expansion valve
- Mechanical or electronic controls
- Evaporative condensate option





TOOLS

TOOLS

COMPLETE AND EFFECTIVE SELECTION SOFTWARE

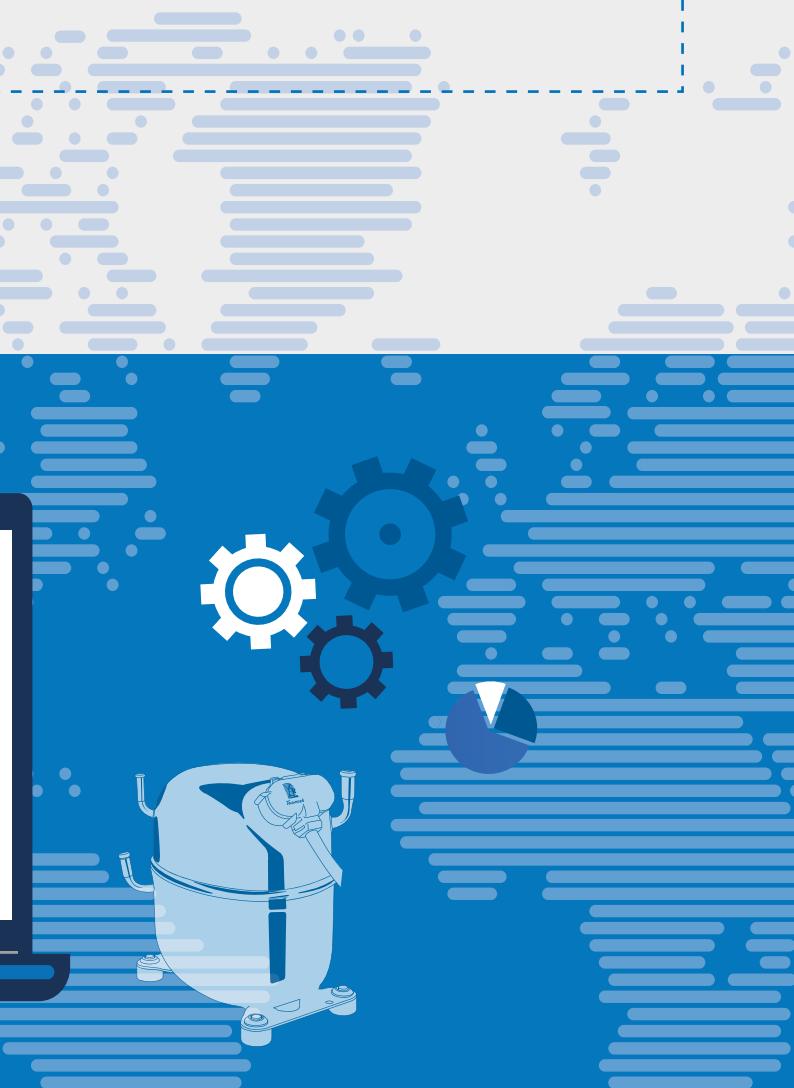
- Selection of the compressor and/or condensing unit according to several parameters: cooling capacity, voltage, refrigerant, compressor technology, and according to different modes governed by standards: EN, ARI, CECOMAF etc. or customised conditions (operating pressure, gas return, useful superheating, subcooling, etc.)
- Performance data and polynomials for refrigerants R-452A, R-448A/R-449A, R-134a, R-513A, R-1234yf and R-290.
- Selection of the model according to the **dew temperature or mean temperature**.
- Notification of **new models**.
- **Obsolete models** identified in a specific tab.
- Access to the **documentation** available: technical sheets, acoustic spectrum, electrical drawings, layout, installation instructions, 3D model.
- Export to Excel and Open Office eases the use of data.
- Automatic update.
- Available in 7 languages.
- Network installation possible.



VERSION 4.6

Download the selection software now, available on the website:
www.tecumseh.com/en/sa/library/selection-software/

SELECT





FOLLOW US

ON **Linkedin**®

THE CROSS REF SOFTWARE

An ergonomic and functional tool allowing you to determine the equivalent Tecumseh compressor from a competing model.

An obsolete refrigerant? A Tecumseh model to replace that of a competitor?
The Cross Ref software is here to help.



www.tecumseh.com

Tecumseh Products Company

Mechanical or Industrial Engineering Ann Arbor, Michigan

Tecumseh do Brasil

Mechanical or Industrial Engineering São Carlos, São Paulo

Tecumseh Europe Middle East & Africa (EMEA)

Mechanical or Industrial Engineering VAULX MILIEU

Tecumseh Products India Pvt Ltd

Mechanical or Industrial Engineering Faridabad

Tecumseh Euro-Malaysia Sdn Bhd

Mechanical or Industrial Engineering Pelabuhan Klang, Selangor

TParts

TParts, digital solution for spare parts selection :

- ▶ a simple, clear and quick tool to identify the spare parts of a product grouped by function: refrigeration, ventilation, electrical, housing, control and hydraulic.
- ▶ More than 30 million Tecumseh Europe compressors and condensing units serial numbers available, representing all finished products launched on the market since 2000.



<https://tparts.tecumseh.com/en>



TParts

DETERMINE



REPLACE



WWW.TECUMSEH.COM

NORTH AMERICA

5683 Hines Drive Ann Arbor, Michigan 48108 USA
Tel: +1 734 585 9500 / Fax: +1 734 352 3700

BRASIL

Rua Ray Wesley Herrick 700 13565-090 São Carlos SP BRAZIL
Tel: +55 16 3362 3000 / Fax: +55 16 3363 7219

EUROPE

2, Avenue Blaise Pascal 38090 Vaulx Milieu FRANCE
Tel: +33 4 74 82 24 00 / Fax: +33 4 74 82 24 44

MALAYSIA

Nº 18, Jalan Sultan Mohamed 4 Selat Klang Utara
42000 Port Klang Selangor Darul Ehsan MALAYSIA
Tel: +60 3 3176 3886 / Fax: +60 3 3176 3890

INDIA

38 K M Stone Delhi Mathura Road Ballabgarh,
Haryana, India 121 004 INDIA
Tel: +91 129 2298000

CHINA

Tecumseh Compressor (Guangzhou) Co., Ltd Room 634,
Wuzi Building 201 Guangbao Avenue Guangzhou
Free Trade Zone CHINA
Tel: +86 20 8221 8072 / Fax: +86 20 8205 7456

MIDDLE EAST

Tecumseh Products Middle East Office A1616 16th Floor
Tower A JAFZA One Jebel Ali Free Zone Dubai
UNITED ARAB EMIRATES
Tel.: +971 04 333 8306

© 2021 Tecumseh Products Company. All rights reserved. Note: in an effort to continuously improve, Tecumseh reserves the right to change the data contained in this document without notice.