



**ARAD ENERGY ERSA**



## آراد انرژی ایرسا

آیت الله کاشانی، بین مهران و ابادزر، پلاک ۶۹ ساختمان ۱۰۷، واحد ۲۷، طبقه ۷ - شماره ثبت: ۳۰۶۲  
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## About Us

Arad Energy Ersas: as subset of Energy Arta Eurasia Company is experienced in the field of consultation, design and manufacturing of residential and industrial HVAC equipment, which has established in 2013.

This company with 'E.A.E' trade mark is proud of using high technology equipment and good servicing to customers.

Our experienced designing team is continuously searching the recent knowledge which leads us to provide high quality products.

Providing consultancy, expertise and design of HVAC systems including projects that range from official, retail, industrial, high residential buildings to clean room and hospitals are the another services of the company.

Our team are dedicated to delivering outstanding solutions and services to our customers to reach their satisfaction.

## درباره ما

شرکت آراد انرژی ایرسا: به عنوان زیر مجموعه شرکت انرژی آر تا اوراسیا در سال ۱۳۹۲ تاسیس و در امر مشاوره ، طراحی و ساخت تجهیزات تهویه مطبوع خانگی و صنعتی و تخصصی مشغول فعالیت می باشد

این شرکت با علامت تجاری 'E.A.E' با بهره مندی از آخرین تکنولوژی روز دنیا آماده ارائه خدمات به مشتریان محترم می باشد  
گروه طراحی این شرکت به صورت مستمر در حال تحقیق و توسعه با هدف تولید دستگاه های با کیفیت ، با تکیه بر دانش فنی و بهره گیری از تجارب متخصصان با عنایت به نیاز روز کشور می باشد

از دیگر خدمات قابل دسترسی مشتریان ارجمند می توان به آمادگی مشارکت این شرکت در زمینه ارائه مشاوره و کارشناسی و امکان ظرفیت سنجی و طراحی سیستم های برودتی پروژه ساختمانی، اداری، تجاری، صنعتی، بیمارستانی، داروسازی و.... اشاره کرد  
امید است با سیاست گذاری انجام شده بر حول محور مشتری مداری ، این شرکت به اهداف عالی خود را که همانا جلب رضایت مشتریان گرامی می بایست نائل آید

## Product Description

### Introduction

Chillers produce water that is used by building Space cooling equipment and many industrial processes. Chillers remove heat from a circulating cold water loop and discharge that heat to the outside air through a cooling tower.

Chillers are generally used in large commercial, residential &... buildings to provide chilled-water. The chiller is usually located on the roof or basement the building. It cools water to between 42 and 45°F This chilled water is then piped throughout the building and connected to air handlers as needed. The cooling tower creates a stream of lower-temperature water that runs through a heat exchanger and cools the hot compressed gas from the compressors.

The chiller is part of a system that is called "applied" air conditioning, where the system is usually specified by the building designer/engineer. This is compared to unitary (all-in-one) systems where the air conditioners are "packaged" and cool air is ducted around the building.

Commercial air conditioning chillers are primarily used to provide cooling for occupied commercial properties such as office buildings and retail centers.





Reciprocating Compressor



Scroll Compressor

## Compressor Types

Commercial, Industrial and Residential chillers are usually made with 3 types of compressors, are follows:

### Reciprocating/scroll

- Used mostly for less than 530 KWR range
- Has dominated market for many years due to their lower capital cost and ability to cover large ranges of capacity
- Scroll compressors appear to be more reliable than reciprocating chillers
- Reciprocating compressors usually requires more refrigerant than other compressor types and are not as energy efficient

### Screw

- Increasingly popular amongst designers because of low maintenance requirements, low vibration and noise levels
- Used predominantly in the 530 – 1055 kWR cooling capacity range
- Market growth expected at the expense of reciprocating chillers due to energy efficiency, accurate control and reduced noise levels



Screw Compressor



### **Expected Chiller Service Life**

Service life is based around the time in which a particular system or component remains in its original service application. Estimated service life of new equipment can be obtained from manufactures. For consistency the datum for chiller service life has traditionally been based on ASHRAE “Estimates of Service Life” where chiller life is between 20 to 23 years.

The changes in design, design standards, manufacturing standards, materials and components has raised a re-estimate amongst industry that believes air cooled chillers now have a life of 10 to 15 years, with cooled chillers between 10 and 20 years.

This modified approach to service life expectancy significantly alters economic chiller analysis when considering replacements or new installations.

### **Range Of Chiller Efficiencies**

Chiller efficiency is measured as Coefficient of Performance (COP). COP is defined as “the ratio of the rate of heat removal to the rate of energy input”. This measurement is usually quoted at Full Load capacity of the chiller or at Part Load conditions. The development of the Integrated Part Load Value (IPLV) when assessing the performance and efficiency of chillers is significant especially considering that operation is usually at ‘off design (99%)’ rather than ‘design conditions (1%)’ for majority of its operating time.

## Features & Benefits

### Design Features

**Unit Assembly.** All components are mounted on a steel frame. This arrangement allows for easy movement of the chiller and leaves generous room for servicing all components. Unit are completely piped, wired, leak-tested, all models are shipped with a full charge of NITROGEN with a holding charge to keep the system dry.

**Compressors.** The high-efficiency semi-hermetic compressors used on the E.A.E chillers have the best reliability in the industry. The compressors are equipped with suction and discharge service valves, a crankcase heater, an oil sight glass, The compressors have thermal protection that utilizes thermostats embedded in the motor windings. The compressors have a force feed lubrication system and are protected by an electronic oil pressure control.

**Condensers.** The E.A.E chillers use the series shell and-tube condenser.

These condensers utilize the latest state of the art internally and externally enhanced copper refrigerant.

The shell is constructed from carbon steel, and the copper tubes are roller expanded into the carbon steel tube sheets.

The cast iron heads are removable to allow mechanical cleaning of the tubes. The condensers have sufficient volume to store the complete refrigerant charge, and are complete with a relief valve. The condensers are constructed and inspected to comply with the current ASME code

for unfired pressure is 150 PSIG@150°F, and the shell side design pressure is 350 PSIG@250°F

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**Control Center. E.A.E chillers Come complete with a fully enclosed steel control panel. Hinged full view doors and quarter-turn latches are provided for easy access and security The following power and control features are standard on all models:**

- **Control circuit switches**
- **Active pump down control**
- **Compressor oil safety**
- **Compressor high discharge pressure safety**
- **Low pressure freeze protection**
- **Return water operating temperature control**
- **Control circuit protection fuses**
- **Power and control circuit terminal blocks**
- **Individual compressor contactors and fusing**
- **Discharge, suction, and oil pressure display**
- **Compressor run and cooling lights for each circuit**



## Features of Copeland Discuss Compressor

Capacity unloading Device permits efficient capacity modulation to reduce operating cost

Discharge Service Valve (hidden from view) located on cylinder head reduces internal temperature for increased efficiency

Discus Valve reduces operating costs, increases capacity

Pistons/Connecting rods are made from new aluminum materials for better balance and minimum vibration

Oil Pressure Control eliminates fragile capillary tube and provides greater reliability Oil pump pumping capacity increased by 50%

Front Cover bearing is Teflon impregnated with an increased diameter, 33% more bearing area, means better reliability

Crankshaft is strengthened to withstand higher loads and reduce bearing wear

Oil Sight Glass permits easy viewing of oil level

Oil Pick-up Tube is lowered to pick up more oil and improve lubrication

Main Bearing Surface is Teflon impregnated and redesigned for better lubrication and loading improve inherent Thermal Motor Protection



## Features of Bitzer Compressor

Universal-one compressor version for all refrigerants and for medium and low temperature

Large application range-low temperature R404A/R507A possible over a wide application range without additional cooling

High refrigerating capacity and minimal energy requirements

Highly efficient working valves with minimal dead space and efficient, large volume motor

Wear resistant drive gear with surface-hardened eccentrics and crankshafts, low friction bearings, aluminium pistons, hard chrome-plated piston rings, and special wrist pin bearings

Sealed main bearing and generously sized oil pump with patented oil return system

Solid valve plate design with valve reeds made of impact-resistant spring steel

Efficient capacity control

4cylinder: 50% (optional)

6cylinder: 33/66% (optional)

Quiet low vibration design with optimized mass balance

Electronic motor thermal protection utilizing PTC sensors



## **Optional Features/Application Parameters**

### **Optional Features**

#### **Cylinder Unloading Capacity Control.**

For applications where close control of the process fluid is necessary.

Capacity reduction is accomplished by unloading cylinders on the various compressors in response to the temperature of the fluid returning to the chillers

**Hot Gas Bypass.** A hot gas bypass valve and hot gas solenoid valve permit operation of the system down to 10% of full load capacity. On ED models, if the lead-leg function is desired, hot gas valves must be provided on both circuits.

**Special Evaporators.** If your process fluid has special material compatibility demands, we can supply evaporators constructed from a variety of other materials. Consult the factory for details.

**Special condensers.** If you have harsh condenser water, we can supply special condensers to meet the challenge. Our standard MHX marine condensers have 90-10 CuNi tubes, tube sheets, and heads to withstand lake, river, and sea water. We can also supply stainless steel condensers. Consult the factory for other materials.

## **Application Parameters**

**General.** The E.A.E family of chillers is designed for indoor installation

**Foundation and Unit Placement.** The unit must be sent on a flat and level foundation. On ground level installations, the unit should be mounted on a single piece concrete slab.

Installations on floors above ground level require adequate structural beams to support the weight of the chiller and service personal. The design of the beams and supports must minimize deflection and attendant vibration transmission. Also, for sound sensitive applications, unit vibration isolators should be used.

**Clearances.** Always provide sufficient clearance room for unit maintenance and service.

**Location Requirements.** The compressor heads and electrical control boxes are cooled by natural air circulation, therefore the chiller should not be installed in a tightly confined space. The chiller should be installed in a ventilated or conditioned space.

### Chiller with Liquid Cooled Condenser

Some chiller models use liquid cooled condensers. Therefore sufficient supply of cool water must be

**Water Condition.** Proper care should be taken to maintain a clean system. Foreign matter such as scale, dirt, and corrosive material can severely affect the system performance. Such matter may also cause blockage that increases pressure drop and reduces the flow rate. Due to the regional differences in water conditions, a local water treatment specialist should be consulted to determine a proper water treatment program. Salt or brackish water should not be used in chilled water systems. Both have a detrimental effect on the life system components. Special alloys are available for adverse evaporator and condenser fluids. Consult the factory for further assistance

A  $0.00025 \text{ hr}\cdot\text{ft}_2\cdot^\circ\text{F}/\text{Btu}$  ( $0.000044 \text{ m}_2\cdot^\circ\text{C}/\text{W}$ ) fouling factor is used in determining performance ratings. When operating in conditions with higher fouling factors, refer to the correction factor tables found in the Performance Data section.

**Water Flow Rate Requirements.** It is imperative that the minimum and maximum fluid flow rates are not exceeded for both the condenser and evaporator. Excessive flow rates can cause tube erosion. Low condenser flow rates will cause poor performance and fouling of the tubes. Low evaporator flow rates will cause poor performance, poor oil return to the compressor, and possible evaporator freeze up. A flow switch or other protective device must be installed to insure that the chiller does run not unless.

Fluid is flowing through the evaporator



**Evaporator Freeze protection.** The saturated suction temperature (SST) should not be allowed to fall below the freezing point of the evaporator fluid. If this happens, freezing of the evaporator fluid will occur at the tube-tube sheet joint, which will cause failure of the evaporator. This freezing occurs even though fluid is flowing through the evaporator. If your application requires an SST below the freezing point of water, you must use a fluid with an appropriately low freezing point. Do not use automotive antifreeze, as the inhibitors will foul the heat transfer surface. Use a heat transfer fluid approved for use in HVAC&R systems.

### **Evaporator Leaving Fluid temperature**

**(LFT) Limits.** ARTA Energy Ersas Series chillers are designed to operate at a standard LFT range of 42°F through 65°F (6°C through 18°C). All catalogued products can operate safely at this range without the need of special controls or glycol additives. LFT below 42°F. (6°C) will result in evaporator suction temperatures at or below the freezing point of water and therefore require a freeze protection additive. Lower suction temperatures also affect the system performance. These applications should be reviewed by the factory

## Air cooled screw chiller

Cooling capacity : 50 to 300 (USR Ton)

### Specification I



Model		Air cooled screw chiller				
		EAE-SC-A-50/1	EAE-SC-A-75/1	EAESC-A-100/2	EAE-SC-A-125/2	EAE-SC-A-150/2
Cooling Capacity	Ton	50	75	100	125	150
Cooling Capacity	Kw	175	262	350	437	525
Water	Flow Rate (GPM)	125	187	250	312	375
	Inlet Temp	12°C				
	Outlet Temp	7°C				
	Water Pipe Size(mm)	DN 80	DN 80	DN 100	DN 100	DN 100
Compressor	Type	Semi Hermetic Screw Chiller				
	Power ×Qty (Kw)	54×1	82×1	54×2	82×2	82×2
	Energy Steps	25-50-75-100%				
Fan	Type	Axial				
	Power ×Qty (Kw)	1.8×4	1.8×6	1.8×8	1.8×10	1.8×12
	Air Flow (m³/h)	92000	138000	184000	230000	276000
Evaporator	Type	Shell & Tube				
	Water Flow (GPM)	125	187	250	312	375
	Pressure Drop (mH <sub>2</sub> O)	4	4	5	5.2	7
Refrigerant	Type	R134a				
Expansion Valve		Electronic/Carel				
Controller		Fully Automatic/Carel				
Total Power Input	Kw	61.2	92.8	122.4	182	185.6
Dimension	Length (mm)	2750	3950	5150	6500	7700
	Width (mm)	2500	2500	2500	2500	2500
	Height (mm)	2250	2250	2250	2500	2500
Operating Weight	kg	2150	2900	3850	4200	5750

Note: 1-standard cooling work condition: Ambient Temp: DB 35°C,WB 24°C;cooling water inlet 12°C, outlet 7°C.

## Air cooled screw chiller

Cooling capacity : 50 to 300 (USR Ton)

### Specification II



Model		Air cooled screw chiller				
		EAE-SC-A-175/1	EAE-SC-A-200/1	EAESC-A-225/2	EAE-SC-A-250/2	EAE-SC-A-300/2
Cooling Capacity	Ton	175	200	225	250	300
Cooling Capacity	Kw	612	700	787	875	1050
Water	Flow Rate (GPM)	437	500	562	625	750
	Inlet Temp	12°C				
	Outlet Temp	7°C				
	Water Pipe Size(mm)	DN 125	DN 150	DN 150	DN 150	DN 150
Compressor	Type	Semi Hermetic Screw Chiller				
	Power ×Qty (Kw)	90×2	2×110	2×110	2×130	2×160
	Energy Steps	25-50-75-100%				
Fan	Type	Axial				
	Power ×Qty (Kw)	1.8×4	1.8×16	1.8×18	1.8×20	1.8×22
	Air Flow (m³/h)	322000	368000	414000	460000	506000
Evaporator	Type	Shell & Tube				
	Water Flow (GPM)	437	500	562	625	750
	Pressure Drop (mH <sub>2</sub> O)	7	7	7	7.5	7.8
Refrigerant	Type	R134a				
Expansion Valve		Electronic/Carel				
Controller		Fully Automatic/Carel				
Total Power Input	Kw	205.2	248.8	252.4	296	359.6
Dimension	Length (mm)	9000	10200	11500	12700	14000
	Width (mm)	2500	2500	2500	2500	2500
	Height (mm)	2700	2700	2700	2700	2700
Operating Weight	kg	6650	7150	7650	8350	9200

Note: 1-standard cooling work condition: Ambient Temp: DB 35°C,WB 24°C;cooling water inlet 12°C, outlet 7°C.

## Air Handling Unit

Air Flow: 3000-36000 m<sup>3</sup>/h

### Specification

### Optional accessories

- Electric heater ● Heating coil ● Medium filter
- Humidifier ● Inverter ● Electrical protector



No.	Model	Air Flow (m <sup>3</sup> /h)	Rows	Cooling Capacity (kW)	Heating Capacity (kW)	Water Flow (GPM)	Water Resistance (kPa)	Motor Power (kw)		ESP (Pa)		Filter
								I	II	I	II	
1	EAE-AHU-3	3000	4 rows	16.41	26.08	12.31	4.16	0.55	0.8	200	250	Aluminium VType filter
			6 Rows	24.39	32.38	18.47	7.71			170	220	
2	EAE-AHU-4	4000	4 rows	23.53	36.27	17.68	4.08	0.8	0.8	200	250	
			6 Rows	33.76	43.97	25.42	7.16			170	220	
3	EAE-AHU-5	5000	4 rows	27.64	43.64	20.84	5.25	1.1	1.2	340	410	
			6 Rows	40.64	53.96	30.63	9.55			310	380	
4	EAE-AHU-6	6000	4 rows	31.55	49.11	23.84	6.45	1.2	1.8	350	450	
			6 Rows	45.85	62.32	34.58	11.5			320	420	
5	EAE-AHU-8	8000	4 rows	43.77	69.07	33.00	9.21	2.2	3.0	350	450	
			6 Rows	58.82	81.94	44.36	14.6			320	420	
6	EAE-AHU-10	10000	4 rows	58.87	89.38	44.36	11.2	3.0	4.0	350	450	
			6 Rows	77.56	105.4	58.58	17.1			320	420	
7	EAE-AHU-12	12000	4 rows	71.67	108.3	54.00	19.8	4.0	5.5	350	450	
			6 Rows	96.31	128.1	72.63	31.3			320	420	
8	EAE-AHU-15	15000	4 rows	96.32	137.9	72.63	24.4	5.5	7.5	350	450	
			4 rows	96.32	137.9	72.63	24.4			320	420	
9	EAE-AHU-18	18000	6 Rows	120.5	162.3	90.95	33.9	5.5	7.5	350	450	
			4 rows	106.3	162.1	80.21	24.1			320	420	
10	EAE-AHU-20	20000	6 Rows	151.5	197.3	114.31	41.4	7.5	7.5	350	450	
			4 rows	114.4	174.4	86.37	26.8			320	420	
11	EAE-AHU-25	25000	6 Rows	160.2	214.9	120.79	46.2	7.5	11.0	350	450	
			4 rows	142.3	219.8	107.37	37.5			320	420	
12	EAE-AHU-28	28000	6 Rows	205.5	270.6	155.05	66.4	7.5	11	350	450	
			6 Rows	234.8	314.62	177.16	71.5			320	420	
13	EAE-AHU-30	30000	4 rows	171.26	258.63	129.16	51.3	7.5	7.5	350	450	
			6 Rows	246.57	327.93	186.00	91.7			320	420	
14	EAE-AHU-36	36000	4 rows	202.5	307.81	152.84	53.8	11	15	350	450	
			6 Rows	278.12	369.89	209.84	96.9			320	420	

**Concealed Fancoil**  
**Air Flow: 200 to 1000 (CFM)**  
**Specification**



Model			Concealed Fancoil						
			EAE-CFC-200	EAE-CFC-300	EAE-CFC-400	EAE-CFC-500	EAE-CFC-600	EAE-CFC-800	EAE-CFC-1000
Air Flow	High	m <sup>3</sup> /h	428	619	813	988	1058	1560	1983
		CFM	252	364	478	581	622	918	1166
	Med	m <sup>3</sup> /h	364	526	691	840	899	1326	1686
		CFM	214	309.5	406.5	494	529	780	991.5
	Low	m <sup>3</sup> /h	278	402	528	642	688	1014	1298
		CFM	164	237	311	378	405	596	758
Cooling Capacity	High	kW	2.06	2.98	4.02	4.5	5.31	7.46	8.61
	Med		1.69	2.44	3.30	3.69	4.35	6.12	7.06
	Low		1.31	1.89	2.55	2.86	3.37	4.74	5.47
Heating Capacity	High	kW	3.403	5.299	6.372	7.812	9.211	12.112	15.587
	Med		2.81	4.37	5.26	6.44	7.60	9.99	12.86
	Low		2.13	3.31	3.98	4.88	5.76	7.57	9.74
Water Flow		l/h	365	520	699	760	930	1333	1500
Water Press Drop		kPa	12.3	9.3	16.8	21.6	32.5	20.5	28
Sound Level	Max.	dB(A)	34	36	39	43	44	46	47
	<b>Med</b>		28	28	33	37	38	41	42
	Min.		23	24	27	29	30	32	32
Size	Length	mm	935	1085	1085	1285	1285	1535	1735
	Width		526	526	526	526	526	526	526
	Height		230	230	230	230	230	230	230
Motor			220V/50HZ/60HZ/1PH						
Input	W		32	42	72	80	91	151	161

**Ducted Fancoil**  
**Air Flow: 600 to 2000 (CFM)**  
**Specification**



Model			Ducted Fancoil							
			EAE-DFC-6	EAE-DFC-8	EAE-DFC-10	EAE-DFC-12	EAE-DFC-14	EAE-DFC-16	EAE-DFC-18	EAE-DFC-20
Performance										
Nominal Air Flow	High	cu. m/h	1010	1335	1737	2134	2466	2786	3230	3560
		CFM	594	785	1022	1255	1451	1639	1900	2094
	Med	cu. m/h	869	1148	1494	1835	2121	2396	2778	3062
		CFM	511	675	879	1083	1248	1409	1634	1801
	Low	cu. m/h	677	894	1164	1430	1652	1867	2164	2385
		CFM	398	526	685	841	972	1098	1273	1403
Nominal Cooling Capacity	High	kW	4.40	5.91	7.88	9.05	10.90	12.68	14.22	16.49
	Med		3.83	5.14	6.85	7.87	9.49	11.03	12.37	14.35
	Low		3.13	4.20	5.59	6.42	7.74	9.00	10.09	11.71
Nominal Heating Capacity High	High	kW	7.83	10.07	13.11	15.65	18.83	20.14	22.52	26.21
	Med		6.89	8.87	11.54	13.77	16.58	17.72	19.82	23.07
	Low		6.03	7.76	10.10	12.06	14.51	15.65	17.34	20.81
Water Flow Rate (High)	m <sup>3</sup> /h	0.42	0.56	0.75	0.86	1.04	1.21	1.36	1.58	
	GPM	1.85	2.49	3.31	3.80	4.58	5.33	5.98	6.93	
Water Press Drop	kPa	6.74	7.36	8.21	8.89	9.65	10.95	12.95	16.09	
	Ft.wg	2.21	2.41	2.69	2.92	3.16	3.59	4.25	5.27	
Coil										
Face Area	Sq.m	0.152	0.183	0.213	0.229	0.274	0.32	0.32	0.381	
Face Velocity	m/s	1.85	2.03	2.27	2.59	2.50	2.42	2.80	2.60	
Motor Type		3-Speed Permanent Split Capacitor Motor								
No. of Motor		1	1	1	1	1	2	2		
Class		B	B	B	B	B	B	B	B	
Total Rating Input	W	270	300	350	405	454	555	610	640	
Fan Type		Centrifugal fan (Forward Curve)								
No. of Fans		1	1	1	2	2	2	2	3	
Size	Length	mm	885	985	1085	1135	1285	1435	1435	1635
	Width	mm	628	628	628	628	628	628	628	628
	Height	mm	337	337	337	337	337	337	337	337
Weight	kg	34	38	42	44	49	54	54	62	

**Water cooled screw chiller**  
**Cooling capacity : 100 to 300 (USR) Ton**  
**Specification**



Model		Water cooled screw chiller				
		EAE-SC-W-100/1	EAE-SC-W-150/2	EAE-SC-W-200/2	EAE-SC-W-250/2	EAE-SC-W-300/2
Cooling Capacity	Ton	100	150	200	250	300
Cooling Capacity	Kw	350	525	700	875	1050
Chilled Water	Type	Shell & Tube				
	Flow Rate (GPM)	240	360	480	600	720
	Inlet Temp	12°C				
	Outlet Temp	7°C				
	Pressure Drop (mH <sub>2</sub> O)	6.0	5.5	6.0	6.5	7.2
	Water Pipe Size(mm)	DN 100	DN 100	DN 125	DN 125	DN 125
Compressor	Type	Semi Hermetic Screw Chiller				
	Power ×Qty (Kw)	72×1	105×1	72×2	87×2	105×2
	Energy Steps	25-50-75-100%				
Cooling Water	Type	Shell & Tube				
	Water Flow (GPM)	385	575	770	1020	1218
	Inlet Temp	32°C				
	Outlet Temp	37°C				
	Pressure Drop (mH <sub>2</sub> O)	5.5	5.5	5.5	6.0	6.5
Refrigerant	Type	R134a				
Expansion Valve		Electronic/Carel				
Controller		Fully Automatic/Carel				
Dimension	Length (mm)	3200	3500	3700	4300	4300
	Width (mm)	1200	1300	1300	1600	1600
	Height (mm)	1400	1600	1650	1950	2200
Operating Weight	kg	2600	3560	3950	4320	5600

## Mini chiller (Air cooled)

Cooling capacity : 2 to 10 (USR Ton)

### Specification

- Hermetic scroll compressor
- Intelligent defrosting and anti-freezing
- Fully automatic control



Model		Mini Chiller Series					
		EAE-MC-A-2/1	EAE-MC-A-4/1	EAE-MC-A-5/1	EAE-MC-A-6/1	EAE-MC-A-8/1	EAE-MC-A-10/2
Cooling Capacity	Ton	2	4	5	6	8	10
Cooling Capacity	Kw	7	14	17.5	21	28	35
Water	Flow Rate (GPM)	4.8	9.6	12	14.4	19.2	24
	Inlet Temp	12°C					
	Outlet Temp	7°C					
	Water Pipe Size	3/4"	1"	1 1/4"	1 1/2"	1 1/2"	2"
Compressor	Type	Hermetic Scroll Compressor					
	Power(Kw)	1.5	3.8	4.5	5.1	7.5	8.5
Fan	Type	Axial					
	Power Input (Kw)	1×0.37	1×0.55	1×0.55	1×0.55	1×0.75	2×0.55
Water Pump	Type	Grundfos					
	Power Input (kw)	0.37	0.37	0.5	0.5	0.7	1
	Head(mH <sub>2</sub> O)	10	10	10	12	12	12
Refrigerant	Type	R22/R407c					
Total Power (Kw)	Kw	2.24	4.72	5.55	6.15	8.95	10.6
Length	mm	650	800	1100	1100	1400	1600
Width	mm	650	800	1100	1100	1100	1100
Height	mm	900	900	1000	1000	1000	1200



**Roof Top Package Unit**  
**Cooling capacity: 5 to 50 (USR Ton)**  
**Specification**



Model		Roof Top Package Unit							
		EAE-RP-05	EAE-RP-10	EAE-RP-15	EAE-RP-20	EAE-RP-25	EAE-RP-30	EAE-RP-40	EAE-RP-50
Cooling Capacity	Ton	5	10	15	20	25	30	40	50
Cooling Capacity	Kw	17.5	35	52.5	70	87.5	105	140	175
Circuit No		1	1	2	2	2	2	2	2
Power	V/Ph/Hz	380/3/50							
Refrigerant		R22/R407°C							
Compressor	Type	Hermetic Scroll Compressor							
Cond.Fan	Type	Axial							
	Drive	Direct							
Supply Fan	Type	Centrifugal							
Air Flow	CFM	2000	4000	6000	8000	10000	12000	16000	20000
Max ESP	(in H <sub>2</sub> O)	0.8	0.8	1.0	1.0	1.2	1.2	1.3	1.3
Heating Coil	Type	Water							
	Model	1Row/8FPI	1Row/8FPI	1Row/8FPI	1Row/8FPI	1Row/8FPI	1Row/8FPI	1Row/8FPI	1Row/8FPI
Heating Capacity	MBH	45	87	135	170	225	270	350	410
Power Input	kW	8	15	23	30	35	50	60	70
Dimension(mm)	Length	3500	4000	4500	4500	5000	6000	6500	6700
	Width	2500	2500	2500	2500	2500	2500	2500	2500
	Height	2000	2000	2000	2500	2500	2500	2500	2500



## رزومه کاری شرکت آراد انرژی ایرسا



Divan Nosrat Hotel

ردیف	عنوان
۱	مجتمع مسکونی امیرسلام دو دستگاه چیلر اسکرو آب خنک ۱۲۰ تن تبرید (آقای مهندس نجفی)
۲	مجتمع مسکونی دربند یک دستگاه چیلر اسکرو آب خنک ۱۰۰ تن تبرید (آقای مهندس نجفی)
۳	مجتمع مسکونی ظفر ده دستگاه مینی چیلر ۵ تن تبرید (آقای دکتر رشید فرخی)
۴	مجتمع مسکونی سیف رویال دو عدد چیلر هوا خنک به ظرفیت ۶۰ تن تبرید (آقای مهندس سیف الله زاده)
۵	مجتمع تجاری دیپلمات سنتر بروجرد ۴ دستگاه پکیج هواخنک (آقای مهندس اسدی)
۶	تالار پذیرایی کردان دو دستگاه چیلر ۶۰ تن تبرید هوا خنک (آقای دکتر طلایی)
۷	مجتمع مسکونی تندیس جردن ۲۹ دستگاه مینی چیلر ۶ تن تبرید (آقای مهندس رزازیان)
۸	هتل دیوان نصرت دو دستگاه چیلر هواخنک به ظرفیت ۲۲۰ تن واقعی (آقای مهندس سردارلو)
۹	دانشگاه زاهدان ۲ دستگاه چیلر ۱۲۰ تن تبرید
۱۰	سردخانه بزرگ دامغان به ظرفیت ۵۰۰ تن تبرید
۱۱	مجتمع مسکونی واقع در تبریز، ۱۰ دستگاه مینی چیلر به ظرفیت ۶ تن تبرید (آقای مهندس موسوی)
۱۲	تالار پذیرایی قرچک، ۲ دستگاه چیلر ۱۲۵ تن تبرید (آقای مهندس تاجیک)
۱۳	سمانه مرغ اصفهان تونل انجماد و سردخانه
۱۴	کشتارگاه بالبا شیراز چیلر ۲۶۰ تن تبرید
۱۵	نیرو دریایی بندرعباس سردخانه آمونیاکی ۲۰۰۰ تن تبرید
۱۶	شرکت موکت بوریا بندرعباس چیلر ۳۵۰ تن تبرید
۱۷	شرکت موکت همدان چیلر ۲۰۰۰ تن تبرید
۱۸	شرکت روناک دارو چیلر ۲۲۰ تن تبرید (ساوه)
۱۹	مجتمع کشت و صنعت هامون (کرمان) چیلر ۶۰ تن تبرید
۲۰	شرکت ماکیان گوشت ملایر سردخانه - تونل انجماد
۲۱	شرکت صباح زنجان چیلر ۱۴۰ تن تبرید و سردخانه
۲۲	شرکت سولار مرغ دلیمان تونل انجماد و نگهداری
۲۳	شرکت تعاونی کشتارگاه سیمرغ دلیمان تونل انجماد، نگهداری
۲۴	سپید مرغ اصفهان چیلر فریون - تونل - سردخانه و سیستم آمونیاکی



Amirsalam Residential Building



Royal Seif Residential Building

ردیف	عنوان	ردیف	عنوان
۲۵	سپیدبال - تونل - سردخانه و سیستم های آمونیاکی - کارخانه یخ ۱۰۰۰ قالبی	۳۹	شرکت ایده الفاتک چیلر ۳۰ تن تبرید
۲۶	کنارک چابهار تونل انجماد و نگهداری	۴۰	صنایع دفاع یک دستگاه چیلر به ظرفیت ۱۵۰ تن تبرید
۲۷	درسا مرغ اراک تونل نگهداری و چیلر ۱۲۰ تن تبرید	۴۱	صنایع پلاستیک جهاد زمزم اهواز چیلر ۱۶۰ تن تبرید
۲۸	شرکت سیمین بال ساوه چیلر ۱۲۰ تن تبرید	۴۲	کارخانه مروارید گلپایگان چیلر ۳۰۰ تن تبرید و سردخانه
۲۹	شرکت پرتلائی لرستان یک دستگاه چیلر به ظرفیت ۱۵۰ تن تبرید	۴۳	شرکت باطریسازی نور چیلر ۲۰۰ تن تبرید
۳۰	شرکت سپاهان مرغ چیلر ۱۲۰ تن و سردخانه و تونل انجماد	۴۴	شرکت آبمعدنی رباط زاگرس چیلر ۲۸۰ تن تبرید
۳۱	شرکت الپا (آبادان) چیلر ۱۶۰ تن تبرید	۴۵	شرکت پاک آب سبلان (واتا) چیلر ۱۰۰ تن تبرید
۳۲	شرکت آسوده فجر تهران چیلر ۱۴۰ تن تبرید	۴۶	شرکت رایا نوش یک دستگاه چیلر به ظرفیت ۲۸۰ تن تبرید
۳۳	شرکت آرام برودت	۴۷	بیمارستان ولیعصر ایلام یک دستگاه چیلر به ظرفیت ۱۶۰ تن تبرید
۳۴	شرکت تعاونی مرغداران رامهرمز سردخانه - تونل انجماد - چیلر ۱۰۰ تن تبرید	۴۸	شرکت ری طیهور سردخانه - تونل انجماد و چیلر ۱۰۰ تن تبرید
۳۵	شرکت گوهر طیور البرز سردخانه تونل انجماد	۴۹	شرکت صنعتی پرریزان یک دستگاه چیلر به ظرفیت ۱۰۵ تن تبرید
۳۶	شرکت کولاک غرب ایلام یک دستگاه چیلر به ظرفیت ۲۲۰ تن تبرید	۵۰	شرکت گاز و لوله سپیدافروز شیراز یک دستگاه چیلر به ظرفیت ۹۰ تن تبرید
۳۷	شرکت کوشاب غرب ایلام ۴۰۰ تن چیلر آمونیاکی و سردخانه	۵۱	شرکت کیش ایر چیلر هوا خنک ۶۰ تن تبرید
۳۸	شرکت پرتوباران آسیا (شرکت رکسوس) چیلر ۱۲۰ تن تبرید و سردخانه	۵۲	شرکت آب معدنی دماوند یک دستگاه چیلر به ظرفیت ۱۲۰ تن تبرید



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