SPU Series
Packaged Air Conditioners

Range: 420 to 1200 MBH (35 to 100 TR)

High Capacity Packaged Units With Tropical Hermetic Compressor

R410a
Environment Friendly

50 Hz

Table of Contents

OTHER COOLEX PRODUCTS

1. Air Cooled Screw Water Chillers
2. Air Cooled Scroll Water Chillers
3. Air Handling Units
4. Ducted Split Units
5. Concealed Split Units
6. Fan Coil Units

About RIC

Refrigeration Industries & Storage and Oil Services Company, occupies a leading position as one of the largest industrial companies in Kuwait which established in 1973, it plays a proactive role in providing various services and diverse activities such as manufacturing, storage, and oil services to meet the needs of customers both inside and outside Kuwait.

Since its inception, RIC has been committed to excellence and advancing its progress, leading to the establishment of the brand (Coolex) in 1986, a true milestone in the Kuwaiti market as the first in the region in the sector of manufacturing air conditioning systems and cooling solutions.

Furthermore, the company has consistently empowered its workforce, enhanced safety and competitiveness, and utilized innovative technologies to launch new products that meet the needs of various sectors, contributing to expansion and supporting growth and prosperity.

To ensure the highest performance in the future, RIC harnesses its continuous research to enhance efficiency and quality, while continuing its efforts to manufacture products capable of adapting to climate, environmental, and energy challenges.

Facts throughout the years

1973 Warehouses were established by Amiri Decree.

1979 RIC Constructed the Medical Cold Stores Complex, the world's largest at that time.

1980 RIC Air Conditioning manufacturing plant set up in Sulaibya.

1981 Production of Package & Mini-Split A/Cs started under York-Gulf.

1984 RIC was listed in Kuwait Stock Exchange.

1986 COOLEX brand Production Launched.

1991 RIC rebuilt the manufacturing plant destroyed during the war.

1997 Achieved ISO Certification ISO 9001:1994.

2002 ETL Designed testing lab became fully operational.

2004 Privatization of RIC.

2010 COOLEX becomes the first A/C Unit to Pass MEW's new regulations.

2010 RIC Factory Renovation and Expansion into neighboring countries.

2012 Achieved UL & AHRI Certification for Coolex Units.

2014 Achieved SASO Certification for Concealed Ducted Split Series.

2014 Achieved EUROVENT Certification for Air Handling Units AHU.

2014 Achieved UL Certification for Air Cooled Chillers.

2015 Achieved ISO 17025 Certification for Psychrometric Laboratory.

2016 Achieved Energy Efficiency Certification for Concealed Ducted Split Series & Rooftop Package units (Kingdom of Bahrain).

2016 Acquisition of Gulf Paramount for Electrical Services Company.

2021 Acquisition of Kuwait Pipes Industries & Oil Services factory, resulting in a change of the company's name from Refrigeration Industries & Storage Co. to Refrigeration Industries & Storage and Oil Services Co.

نبذة عن الشركة

تتبوأ شركة صناعات التبريد والتخزين والخدمات النفطية مكانة رائدة باعتبارها واحدة من أكبر الشركات الصناعية في دولة الكويت، والتي تأسست عام 1973 لتؤدي دوراً غير استباقي في تقديم خدمات متعددة وأنشطة متنوعة كالتصنيع والتخزين والخدمات النفطية لتلبية مختلف احتياجات العملاء داخل الكويت وخارجها.

ومنذ انطلاقة الشركة وهي تعمل على إبراز التميز ومواصلة مسيرة التقدم مما مكنها من تأسيس العلامة التجارية (كولكس) عام 1986 والتي جاء ميلادها إنجازاً حقيقياً في السوق الكويتي باعتبارها الأولى في المنطقة في قطاع تصنيع أنظمة التكييف وحلول التبريد في الكويت.

وعلى صعيدٍ متصل، دأبت الشركة على تمكين قوتها العاملة وتعزيز السلامة والقدرة التنافسية والاستفادة من التقنيات المبتكرة لإطلاق منتجات جديدة تلبي مختلف القطاعات وتسهم في تحقيق التوسع والذي من شأنه يدعم النمو والازدهار.

ولضمان أعلى أداء في المستقبل، تسخر الشركة بحوثها المستمرة لتعزيز الكفاءة والجودة كما تواصل جهودها لتصنيع منتجات قادرة على التكيف مع تحديات المناخ والبيئة والطاقة.

حقائق وتواريخ

1973 تم إنشاء المستودعات بناء على مرسوم أميري.

1979 عهدت وزارة الصحة الكويتية لشركة صناعات التبريد بإنشاء مجمع مستودعات مخازن التبريد الطبية، وقد كان هذا المجمع حينها هو الأضخم من نوعه على مستوى العالم، وقد وصلت تكلفته إلى 12,000,000 دينار كويتي.

1980 تم إنشاء مصنع مكيفات الهواء التابع لشركة صناعات التبريد في الصليبية.

1981 بدء إنتاج أجهزة التكييف المدمجة والمنفصلة الصغيرة تحت علامة York-Gulf.

1984 تم قيد شركة صناعات التبريد في سوق الكويت للأوراق المالية.

1986 بدء إنتاج مكيفات علامة كولكس.

1991 قامت شركة صناعات التبريد بإعادة بناء مصنعها الذي دمرته الحرب.

1997 الحصول على شهادة الآيزو 1994:9001

2002 بدء تشغيل مختبر فحص وحدات التكييف (ETL)

2004 خصخصة شركة صناعات التبريد.

2010 كانت وحدات كولكس أول وحدات تكييف هواء تجتاز اللوائح التي أقرتها (وزارة الكهرباء والماء).

2010 تم تجديد مصنع شركة صناعات التبريد وبدء التوسع والتصدير إلى الدول المجاورة.

2012 الحصول على شهادة UL و AHRI لأجهزة التكييف كولكس.

2014 الحصول على شهادة SASO لأجهزة التكييف المنفصلة.

2014 الحصول على شهادة EUROVENT لأجهزة مناولة الهواء.

2014 الحصول على شهادة UL لمبردات الهواء الشيلر.

2015 الحصول على شهادة الأيزو ISO 17025 لمختبر السيكرومترية.

2016 الحصول على شهادة كفاء الطاقة لأجهزة التكييف المنفصلة و الوحدات المدمجة (مملكة البحرين).

2016 الاستحواذ على شركة بارامونت الخليج للخدمات الكهربائية.

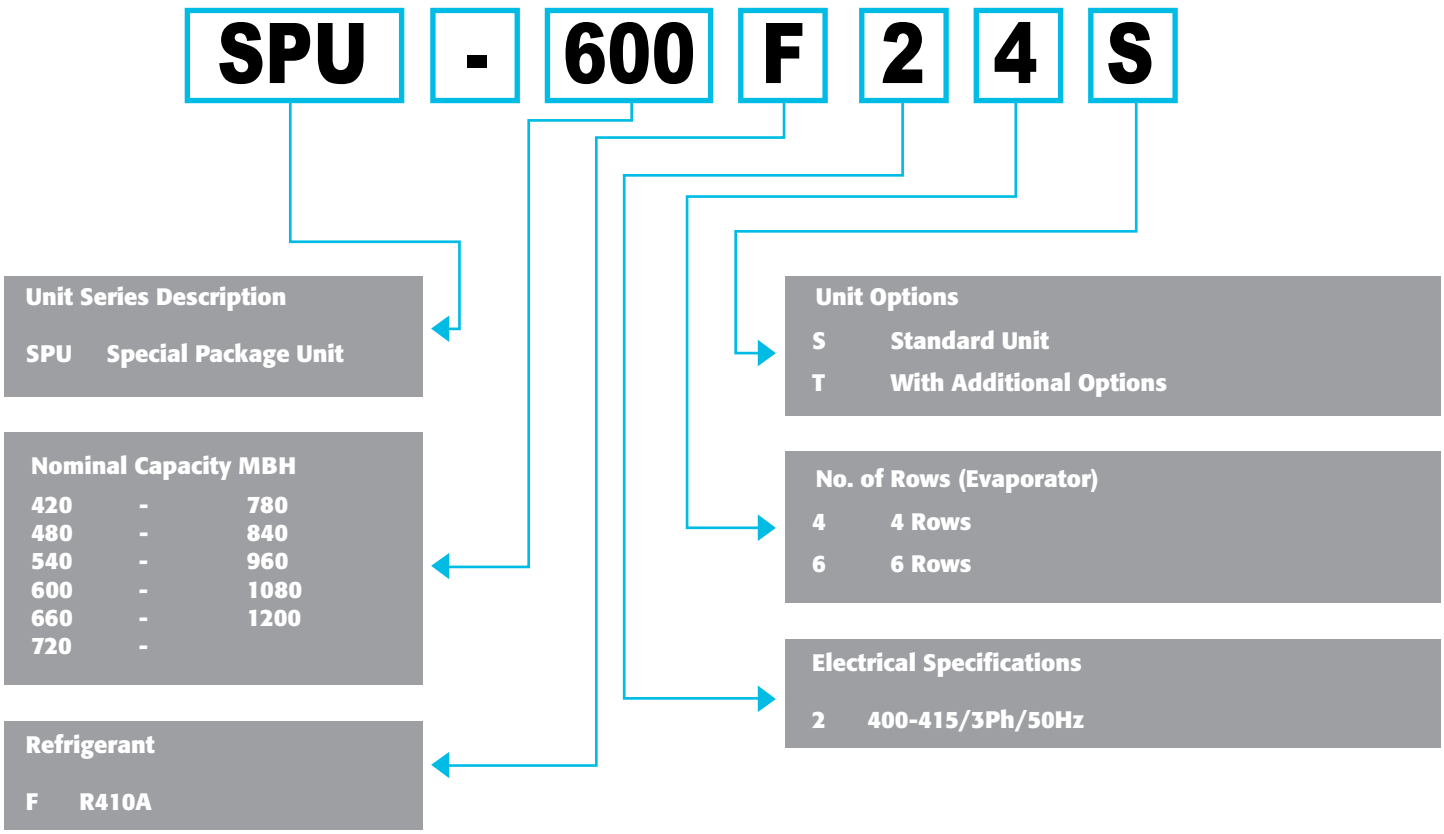
2021 الاستحواذ على مصنع الشركة الكويتية لصناعة الأنابيب والخدمات النفطية مما أدى على إثره تغيير اسم الشركة من شركة صناعات التبريد والتخزين إلى شركة صناعات التبريد والتخزين والخدمات النفطية.

Features / Benefits

- Statically and dynamically balanced belt driven Centrifugal, DIDW Forward Curved fan, designed for low sound operation.
- Double skin units with 1" fiberglass insulation for a better indoor air quality.
- Painted electro-static powder coat, zinc coated steel panels provide additional protection against rust and discoloration in areas with high UV factor.
- Cooling coils are made of inner grooved copper tubes with mechanically bonded hydrophilic aluminum fins that provide optimum heat transfer.
- Standard factory installed thermostatic expansion vales (TXV).
- Motors are Totally Enclosed Fan Cooled (TEFC) type, IP55 Protected, 4 Pole Class F insulation conform to relevant IEC standards.
- Standard sloped drain pan with 8 mm polyethylene insulation.
- Low resistance aluminum washable filters having frontal access for removal.
- Easy panel removal of side panel allows access to serviceable components.
- Minimum of two refrigerant independent circuits which provide efficient part load operation.

The new series of Coolex Package Units air conditioner are designed and manufactured to provide comfort cooling for commercial and industrial applications with the optimum performance, high efficiency, reliability, ease of service & maintenance and capable to operate at extremely ambient conditions up to 125°F.

NOMENCLATURE



OUT STANDING FEATURES

Superior Efficiency

- High EER (Energy Efficiency Ratio) exceeds the new ASHRAE 90.1 efficiency levels
- Low power consumption
- High volumetric efficiency scroll compressors
- Designed to operate at severe ambient temperature up to 52°C without tripping

Quiet operation

- Low noise level compressors, condenser fans and evaporator blower
- Compact physical footprint
- Special designed refrigerant piping in addition to the insulation for the evaporator section.

Controls

- Microprocessor Controller
- Single point power supply
- Color coded wires
- Weather proof Control panel

Quality Assurance

All units in the SPU series are :

- Factory run tested.
- Produced in an ISO 9001-2015 listed manufacturing facility.
- Constructed in compliance with ASHRAE 15 safety requirements.
- AHRI rated cooling coils

STANDARD SPECIFICATIONS

General

- The Package Units (SPU) are factory assembled cooling or combination of cooling and heating with electric heater, suitable for outdoor installation mounting on the roof or ground.
- The packaged unit consists of scroll compressors, cooling coil, condenser coil, fans, electric heater (optional), control wiring and interconnecting piping-all factory assembled.
- The units are rated and tested in accordance with ARI 340/360 standard.

Unit Casing

Panels are fabricated from hot dipped G90, Zinc coating and zero spangle galvanized steel, oven-baked powder coated. The unit is provided with an integral weather resistant control panel for outdoor application. Panels and access doors are provided for inspection and access for all internal parts.
"The evaporator section is double skin insulated from all sides with 1"" thick fiber glass insulation for a better indoor air quality."

Compressor

The compressors are hermetic scroll type provided with crankcase heater, internal pressure relief valve which provides high pressure protection to the refrigerant system and rubber vibration isolators for quiet and efficient operation. The compressors are equipped with internal motor protector for safe operation. The compressors are built to NF, VPE, CSA, & UL certification.

Evaporator Coils

The coils are built up of ripple finned seamless copper tubes and mechanically bonded to scientifically designed pre coated aluminum louvered fins. The assembled coils are factory leak tested under water at a pressure of 350 psig for quality and leak free units.

Condenser Coils

The coils are built up of ripple finned seamless copper tubes and mechanically bonded to scientifically designed pre coated aluminum louvered fins. The assembled coils are factory leak tested under water at a pressure of 700 psig for quality and leak free units.

Evaporator Fan

The units are provided with centrifugal Forward curve fans which are statically and dynamically balanced belt driven, designed for low sound level operation.

Evaporator Blower Motor

Motors are totally enclosed fan cooled (TEFC) type with class F insulation for weather protection with permanently lubricated bearings and automatic thermal protection.

Condenser Fans

Condenser air fan is of the propeller type, aluminum blade with a direct drive motor upward discharge and provided with fan grille mounted in casing.

Condenser Fan Motor

Motors are totally enclosed air-over type with class F insulation for weather protection with permanently lubricated bearings and automatic thermal protection.

Drain Pan

The drain pan is fabricated of painted galvanized steel with insulation.

Air Filter

High dust holding capacity, low resistance filter. It can be cleaned with regular water and prolonged use. It consists of 2" metal aluminum mesh with unique pattern.

Refrigerant Circuit

SPU series comes complete, as standard, with properly sized refrigerant lines including thermostatic expansion valve, sight glass, filter drier, automatic high and low pressure switch and full operating charge of R410A in each circuit.

Control Panel

The control panel enclosure is fabricated out of heavy gauge sheet steel powder coated bake finished. Internal power and and control wiring is neatly routed, properly anchored and all wires are identified with cable markers as per NEC standard applicable to HVAC units. Major components used in the control panel are UL approved.

MICROPROCESSOR BASED CONTROLLER

The Units (SPU) are provided with technologically advanced Microprocessor based controller, incorporating the following benefits and features:

- Anti-recycling timing device
- Compressor lock out function
- Balance loading of compressors
- Compressors lead-lag operation
- Pump down option
- Fault diagnostics
- Indicator lights for high & low pressure safety

OPTIONAL SPECIFICATIONS

Construction

- Anti-corrossion coating for coils
- Copper fins for evaporator and/or condenser
- Stainless steel drain pan
- Special Air filter material
- Filter box with High Efficiency Bag filters
- Sand trap louver

Electrical

- Electric heater
- Compressor circuit breaker
- Blower motor circuit breaker
- Condenser fan motor circuit breaker
- External overload for condenser fan motor
- Mild ambient kit
- Anti - ice thermostat
- Air flow switch
- Ultra violet light
- Wi-Fi Thermostat
- Multi Stage Thermostat
- Modbus connectivity

Refrigeration

- Pump down kit
- Hot gas bypass kit
- High & Low Pressure gauges
- Rotalock valve for compressor
- Replaceable filter drier with mechanical shut-off valve
- Adjustable high/low pressure switch

Coolex App

Wi Fi Module

Typical Thermostat

SELECTION PROCEDURE

The below example illustrates the selection procedure to assist using this catalog to select the appropriate SPU unit that meets the design requirements.

Altitude [ft]	Correction factor
Sea level	1
1000	0.996
2000	0.990
3000	0.984
4000	0.980
5000	0.974
6000	0.965
7000	0.960

Example :

Design requirements

- Total cooling capacity 585 [MBH]
- Sensible cooling capacity 425 [MBH]
- Design ambient temperature 95 [°F]
- Evaporator air flow 17500 [CFM]
- Evaporator entering temperature DB/WB 80/67 [°F/°F]
- Altitude 2000 [ft]
- Power supply 415V /3Ph /50Hz

*Using the correction factor table at the specified altitude, thereby the required capacity will be:

Corrected capacity = Required capacity /corr. factor

Corrected total capacity = 585 [MBH]/0.99
= 591 MBH

Corrected sensible capacity = 425 [MBH]/0.99
= 429 MBH

From the cooling capacity at performance data tables (page 12), the closest selection model to the required capacity is SPU-600. From the performance table:

Total capacity = 599.5 [MBH]

Sensible capacity = 454.5 [MBH]

GENERAL DATA (4 ROWS)

Outdoor Units			SPU-420	SPU-480	SPU-540	SPU-600	SPU-660	SPU-720	SPU-780	SPU-840	SPU-960	SPU-1080	SPU-1200
Cooling Capacity (Nominal)	MBH		421.2	480.2	540.5	599.5	660.4	720.0	780.4	840.8	959.5	1079.1	1199
	KW		123.5	140.7	158.4	175.7	193.6	211.0	228.7	246.4	281.2	316.3	351.4
Compressor	Type		Hermetic Scroll										
	Quantity		4										
	Refrigerant		R410A										
	Refrigerant circuits		4										
	Expansion device type		Thermostatic Expansion Valve										
Condenser Fan	Type		Propeller										
	Diameter, mm		762		800		762		800		762		800
	No. of fans		4				6				8		
	Motor Enclosure/Ins Class		Totally Enclosed Air Over, Class F										
	Nominal HP x Qty		1.5 x 4		2.0 x 4		1.5 x 6		2.0 x 6		1.5 x 8		2.0 x 8
	RPM		900										
Condenser Coil	Type		Enhanced Aluminum Fins & Inner Grooved Copper Tubes										
	Rows - FPI		3-14										
	Total Face area	ft²	79.2				118.8				158.4		
Evaporator Blower	Type		Centrifugal Forward Curve										
	Motor Enclosure/Ins Class		Totally Enclosed Fan Cooled, Class F										
	Nominal HP @ 0.7" External Static Pressure		10		15						20		25
Evaporator Coil	Type		Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes										
	Rows - FPI		4-12	4-14	4-12	4-16	4-16		4-12		4-14		4-16
	Total Face area	ft²	26.0	29.2	33.9	37.0	43.8		52.1		58.3	64.4	72.2
Air Filter	Type		Washable aluminum mesh										
	Thickness (in)		2										
Drain Pipe	mm X TPI		42 X 11.5										
Weight	kg		2015	2050	2195	2380	3205	3220	3390	4060	4220	4490	4580

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperature and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

GENERAL DATA (6 ROWS)

Outdoor Units		SPU-420	SPU-480	SPU-540	SPU-600	SPU-660	SPU-720	SPU-780	SPU-840	SPU-960	SPU-1080	SPU-1200
Cooling Capacity (Nominal)	MBH	438.2	492.9	554.7	599.5	686.5	740.8	811.1	875.1	996.1	1117.3	1234.5
	KW	128.4	144.5	162.6	175.7	201.2	217.1	237.7	256.5	291.9	327.5	361.8
Compressor	Type	Hermetic Scroll										
	Quantity	4										
	Refrigerant	R410A										
	Refrigerant circuits	4										
	Expansion device type	Thermostatic Expansion Valve										
Condenser Fan	Type	Propeller										
	Diameter, mm	762		800		762		800		762	800	
	No. of fans	4				6				8		
	Motor Enclosure/Ins Class	Totally Enclosed Air Over, Class F										
	Nominal HP x Qty	1.5 x 4		2.0 x 4		1.5 x 6		2.0 x 6		1.5 x 8	2.0 x 8	
	RPM	900										
Condenser Coil	Type	Enhanced Aluminum Fins & Inner Grooved Copper Tubes										
	Rows - FPI	3-14										
	Total Face area ft²	79.2				118.8				158.4		
Evaporator Blower	Type	Centrifugal Forward Curve										
	Motor Enclosure/Ins Class	Totally Enclosed Fan Cooled, Class F										
	Nominal HP @ 0.7" External Static Pressure	10				15				20		25
Evaporator Coil	Type	Hydrophilic Aluminum Fins & Inner Grooved Copper Tubes										
	Rows - FPI	6-12	6-14	6-12	6-16	6-14		6-12		6-14		6-16
	Total Face area ft²	26.0	29.2	33.9	37.0	43.8		52.1		58.3	64.4	72.2
Air Filter	Type	Washable aluminum mesh										
	Thickness (in)	2										
Drain Pipe	mm X TPI	42 X 11.5										
Weight	kg	2055	2100	2250	2450	3280	3300	3475	4140	4320	4600	4705

Note:

1. Cooling capacities are based on 80°/67°F Evaporating air temperature and 95° Condensing air temperature.

2. The above data maybe changed without prior notice due to continous improvement in quality and performance.

PERFORMANCE DATA TABLES (4 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-420	10500	86	72	440,342	288,325	38.63	395,544	268,651	45.24	387,984	265,698	46.49	373,291	260,018	49.04
		80	67	405,472	281,842	38.01	364,221	262,611	44.46	357,260	259,724	45.69	343,730	254,172	48.17
		74	62	373,034	274,796	37.49	335,083	256,046	43.81	328,679	253,231	45.01	316,232	247,818	47.45
	11400	86	72	447,171	299,680	38.73	400,748	279,553	45.33	392,977	276,570	46.58	377,688	270,751	49.12
		80	67	411,760	292,942	38.11	369,013	273,268	44.54	361,857	270,352	45.77	347,779	264,664	48.25
		74	62	378,819	285,619	37.58	339,492	266,436	43.89	332,908	263,593	45.10	319,957	258,047	47.53
	12300	86	72	452,857	310,649	38.81	405,136	290,178	45.40	397,026	287,109	46.66	381,867	281,415	49.21
		80	67	416,995	303,664	38.18	373,053	283,654	44.62	365,586	280,654	45.84	351,627	275,088	48.33
		74	62	383,636	296,073	37.66	343,209	276,563	43.97	336,339	273,637	45.17	323,497	268,211	47.61
	13200	86	72	457,466	321,245	38.89	414,311	306,779	45.52	405,832	303,626	46.77	389,633	297,642	49.32
		80	67	421,239	314,022	38.26	381,502	299,881	44.73	373,694	296,800	45.95	358,778	290,950	48.44
		74	62	387,540	306,172	37.73	350,982	292,384	44.08	343,799	289,380	45.27	330,076	283,677	47.71
SPU-480	12000	86	72	503,978	333,454	46.40	455,096	314,294	47.61	445,937	310,765	55.59	428,542	304,114	58.61
		80	67	464,068	325,957	45.68	419,057	307,228	46.70	410,624	303,778	54.65	394,606	297,277	57.60
		74	62	426,942	317,808	45.07	385,532	299,547	45.95	377,774	296,184	53.87	363,038	289,845	56.76
	13000	86	72	510,502	346,214	46.52	460,304	326,864	47.72	451,008	323,336	55.70	433,013	316,560	58.72
		80	67	470,076	338,430	45.79	423,852	319,515	46.81	415,293	316,066	54.76	398,723	309,443	57.71
		74	62	432,470	329,969	45.18	389,944	311,527	46.05	382,070	308,164	53.97	366,825	301,707	56.86
	14000	86	72	516,401	358,809	46.61	464,700	339,164	47.81	455,612	335,765	55.79	437,050	328,867	58.81
		80	67	475,507	350,742	45.88	427,900	331,539	46.90	419,532	328,216	54.85	402,440	321,473	57.80
		74	62	437,467	341,973	45.28	393,668	323,250	46.14	385,970	320,011	54.06	370,245	313,436	56.95
	15000	86	72	521,495	371,146	46.70	468,623	351,311	47.89	459,119	347,800	55.87	440,710	341,037	58.91
		80	67	480,198	362,802	45.97	431,513	343,412	46.97	422,762	339,980	54.92	405,811	333,369	57.89
		74	62	441,783	353,732	45.36	396,992	334,827	46.21	388,941	331,480	54.13	373,346	325,035	57.04
SPU-540	13500	86	72	564,464	373,698	52.06	510,372	352,490	60.91	500,636	348,736	62.61	481,158	341,285	66.19
		80	67	519,764	365,296	51.24	469,956	344,565	59.88	460,990	340,895	61.54	443,055	333,612	65.04
		74	62	478,183	356,164	50.55	432,360	335,951	59.02	424,111	332,373	60.65	407,611	325,272	64.07
	14600	86	72	571,597	387,625	52.20	516,082	366,209	61.05	506,319	362,501	62.75	486,400	354,995	66.33
		80	67	526,332	378,910	51.38	475,214	357,975	60.01	466,224	354,351	61.67	447,882	347,013	65.17
		74	62	484,226	369,438	50.69	437,197	349,026	59.15	428,926	345,492	60.78	412,051	338,338	64.21
	15700	86	72	577,946	401,308	52.33	521,404	379,797	61.17	511,438	376,062	62.86	490,839	368,397	66.44
		80	67	532,178	392,286	51.50	480,114	371,258	60.13	470,937	367,607	61.79	451,969	360,115	65.28
		74	62	489,604	382,479	50.81	441,705	361,976	59.27	433,262	358,417	60.89	415,812	351,112	64.32
	16800	86	72	587,020	418,403	52.50	525,673	393,016	61.27	515,398	389,210	62.96	494,749	381,615	66.55
		80	67	540,534	408,996	51.66	484,045	384,180	60.23	474,584	380,459	61.89	455,570	373,035	65.39
		74	62	497,291	398,771	50.97	445,321	374,575	59.37	436,617	370,948	60.99	419,124	363,709	64.42

See note on page 17

PERFORMANCE DATA TABLES (6 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-420	10500	92	77	497,115	308,010	39.56	447,630	289,742	46.32	438,560	286,456	47.61	420,775	280,079	50.21
		86	72	459,070	302,684	38.91	413,373	284,732	45.50	404,997	281,503	46.76	388,573	275,236	49.30
		80	67	422,717	295,879	38.28	380,638	278,330	44.71	372,925	275,174	45.94	357,802	269,048	48.43
		74	62	388,899	288,482	37.75	350,187	271,372	44.06	343,091	268,295	45.26	329,178	262,322	47.70
	11400	92	77	503,887	320,314	39.66	453,193	301,941	46.41	443,928	298,643	47.70	426,080	292,344	50.31
		86	72	465,325	314,775	39.00	418,510	296,720	45.59	409,954	293,479	46.84	393,471	287,289	49.39
		80	67	428,476	307,698	38.37	385,368	290,049	44.80	377,490	286,881	46.03	362,313	280,830	48.52
		74	62	394,198	300,006	37.84	354,539	282,797	44.15	347,291	279,709	45.35	333,328	273,809	47.79
	12300	92	77	509,965	332,475	39.74	458,254	314,030	46.50	448,556	310,623	47.78	429,968	304,149	50.39
		86	72	470,937	326,726	39.08	423,183	308,600	45.67	414,227	305,252	46.93	397,062	298,890	49.47
		80	67	433,643	319,380	38.45	389,672	301,662	44.88	381,425	298,389	46.11	365,619	292,170	48.59
		74	62	398,952	311,395	37.92	358,498	294,120	44.23	350,911	290,929	45.42	336,370	284,865	47.86
	13200	92	77	515,344	344,451	39.84	462,403	325,832	46.58	452,901	322,540	47.86	434,117	316,075	50.48
		86	72	475,904	338,495	39.17	427,015	320,198	45.76	418,240	316,963	47.01	400,893	310,610	49.56
		80	67	438,218	330,884	38.54	393,199	312,999	44.97	385,120	309,836	46.19	369,147	303,626	48.68
		74	62	403,160	322,612	38.01	361,743	305,175	44.31	354,310	302,090	45.50	339,615	296,036	47.95
SPU-480	12000	92	77	560,229	349,551	47.39	504,072	328,969	48.78	494,021	325,351	56.80	474,182	318,267	59.90
		86	72	517,354	343,507	46.63	465,495	323,280	47.83	456,213	319,726	55.81	437,893	312,764	58.84
		80	67	476,385	335,784	45.90	428,633	316,012	46.92	420,086	312,537	54.87	403,216	305,732	57.83
		74	62	438,274	327,390	45.29	394,342	308,112	46.16	386,479	304,724	54.08	370,959	298,089	56.98
	13000	92	77	567,451	363,271	47.51	509,936	342,549	48.89	499,581	338,881	56.91	479,441	331,795	60.02
		86	72	524,024	356,989	46.75	470,910	336,626	47.94	461,348	333,021	55.92	442,749	326,058	58.96
		80	67	482,526	348,963	46.02	433,619	329,057	47.03	424,814	325,534	54.97	407,688	318,727	57.94
		74	62	443,924	340,239	45.41	398,929	320,831	46.27	390,829	317,396	54.18	375,073	310,759	57.09
	14000	92	77	574,008	376,856	47.62	515,164	355,963	49.00	504,632	352,282	57.01	483,964	345,112	60.12
		86	72	530,079	370,340	46.85	475,738	349,808	48.05	466,013	346,191	56.02	446,926	339,145	59.06
		80	67	488,102	362,014	46.12	438,064	341,943	47.13	429,109	338,407	55.07	411,534	331,520	58.04
		74	62	449,054	352,963	45.50	403,019	333,395	46.37	394,780	329,947	54.28	378,612	323,232	57.19
	15000	92	77	579,592	390,159	47.71	519,604	369,141	49.09	508,877	365,438	57.10	487,791	358,207	60.21
		86	72	535,235	383,413	46.94	479,839	362,758	48.13	469,932	359,120	56.11	450,460	352,013	59.15
		80	67	492,850	374,793	46.20	441,841	354,602	47.22	432,719	351,045	55.15	414,789	344,099	58.12
		74	62	453,422	365,423	45.59	406,493	345,737	46.45	398,101	342,269	54.36	381,605	335,497	57.27
SPU-540	13500	92	77	631,343	394,878	53.28	568,983	372,061	62.34	558,033	368,125	64.07	535,755	360,179	67.75
		86	72	583,026	388,050	52.42	525,438	365,627	61.25	515,327	361,759	62.95	494,753	353,951	66.54
		80	67	536,856	379,326	51.59	483,829	357,407	60.22	474,518	353,626	61.87	455,574	345,993	65.38
		74	62	493,908	369,842	50.89	445,123	348,472	59.35	436,557	344,785	60.97	419,128	337,344	64.41
	14600	92	77	639,215	410,080	53.44	575,460	387,139	62.48	564,858	383,389	64.23	541,547	375,193	67.90
		86	72	590,295	402,989	52.57	531,420	380,445	61.40	521,629	376,760	63.10	500,102	368,706	66.69
		80	67	543,550	393,929	51.73	489,337	371,891	60.35	480,321	368,290	62.02	460,499	360,416	65.52
		74	62	500,066	384,080	51.04	450,190	362,594	59.49	441,896	359,082	61.12	423,659	351,406	64.55
	15700	92	77	645,972	424,964	53.57	581,187	401,994	62.61	569,895	398,048	64.35	546,306	389,871	68.03
		86	72	596,535	417,616	52.70	536,709	395,043	61.52	526,281	391,166	63.22	504,497	383,130	66.81
		80	67	549,296	408,227	51.86	494,207	386,161	60.48	484,605	382,371	62.13	464,546	374,516	65.64
		74	62	505,352	398,021	51.16	454,670	376,507	59.61	445,837	372,812	61.23	427,382	365,153	64.67
	16800	92	77	652,320	439,796	53.70	585,811	416,514	62.72	574,804	412,719	64.46	550,819	404,497	68.14
		86	72	602,397	432,191	52.82	540,979	409,312	61.63	530,814	405,583	63.33	508,664	397,502	66.92
		80	67	554,693	422,474	51.98	498,139	400,109	60.59	488,779	396,464	62.24	468,383	388,565	65.75
		74	62	510,318	411,913	51.28	458,288	390,107	59.71	449,677	386,553	61.33	430,912	378,851	64.77

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PERFORMANCE DATA TABLES (4 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-600	15000	86	72	631,600	421,923	56.87	570,969	398,330	66.96	560,013	394,133	68.90	537,424	385,552	73.08
		80	67	581,583	412,437	55.93	525,754	389,374	65.79	515,665	385,272	67.68	494,866	376,883	71.77
		74	62	535,057	402,126	55.15	483,694	379,640	64.82	474,412	375,640	66.67	455,276	367,461	70.67
	16100	86	72	638,538	436,361	57.04	576,579	412,598	67.11	565,477	408,405	69.05	542,583	399,824	73.24
		80	67	587,972	426,550	56.10	530,920	403,321	65.94	520,697	399,223	67.83	499,616	390,835	71.92
		74	62	540,934	415,886	55.31	488,446	393,238	64.96	479,041	389,243	66.81	459,647	381,064	70.82
	17200	86	72	644,778	450,609	57.18	581,176	426,529	67.24	569,940	422,339	69.17	547,388	413,991	73.40
		80	67	593,718	440,478	56.24	535,153	416,939	66.06	524,807	412,844	67.95	504,040	404,683	72.08
		74	62	546,221	429,466	55.46	492,341	406,516	65.08	482,822	402,523	66.93	463,717	394,566	70.98
	18300	86	72	651,022	464,917	57.33	585,698	440,462	67.37	574,827	436,453	69.30	551,072	427,744	73.51
		80	67	599,468	454,464	56.39	539,317	430,559	66.19	529,307	426,640	68.08	507,433	418,127	72.18
		74	62	551,511	443,102	55.60	496,172	419,795	65.20	486,962	415,974	67.05	466,838	407,674	71.08
SPU-660	16500	86	72	694,293	456,405	58.93	623,936	428,667	69.24	610,542	423,905	71.17	585,739	413,953	75.08
		80	67	639,312	446,143	57.97	574,526	419,030	68.03	562,194	414,374	69.92	539,354	404,646	73.74
		74	62	588,167	434,990	57.16	528,564	408,554	67.02	517,218	404,015	68.88	496,206	394,530	72.62
	17700	86	72	702,273	471,085	59.06	630,038	443,309	69.35	616,973	438,323	71.29	591,571	428,696	75.20
		80	67	646,660	460,494	58.09	580,145	433,342	68.14	568,115	428,468	70.03	544,725	419,058	73.85
		74	62	594,927	448,981	57.28	533,734	422,508	67.13	522,666	417,756	68.99	501,147	408,581	72.73
	19000	86	72	710,046	487,347	59.17	636,734	459,255	69.47	623,193	454,151	71.41	597,335	444,476	75.32
		80	67	653,818	476,390	58.20	586,311	448,930	68.25	573,843	443,941	70.15	550,032	434,483	73.97
		74	62	601,512	464,480	57.39	539,406	437,707	67.24	527,935	432,842	69.10	506,029	423,621	72.84
	20300	86	72	717,180	503,131	59.28	642,240	474,766	69.57	628,401	469,608	71.50	601,887	459,796	75.41
		80	67	660,386	491,819	58.31	591,381	464,092	68.35	578,638	459,050	70.24	554,223	449,459	74.06
		74	62	607,555	479,523	57.50	544,071	452,490	67.34	532,347	447,574	69.19	509,886	438,222	72.93
SPU-720	18000	86	72	757,050	502,132	63.13	679,832	471,896	73.21	666,112	466,618	76.21	638,215	455,972	80.46
		80	67	697,100	490,843	62.07	625,996	461,286	71.84	613,363	456,127	74.84	587,675	445,720	78.99
		74	62	641,332	478,572	61.18	575,916	449,754	70.70	564,294	444,724	73.70	540,661	434,577	77.76
	19400	86	72	765,933	519,573	63.27	686,891	489,527	73.35	673,357	484,399	76.35	644,736	473,623	80.60
		80	67	705,279	507,891	62.20	632,496	478,521	71.97	620,034	473,508	74.97	593,680	462,974	79.13
		74	62	648,857	495,194	61.31	581,896	466,558	70.83	570,431	461,671	73.83	546,186	451,400	77.90
	20800	86	72	774,549	537,872	63.41	693,730	507,124	73.46	679,241	501,700	76.46	650,475	491,007	80.72
		80	67	713,213	525,779	62.34	638,793	495,723	72.08	625,452	490,420	75.08	598,964	479,968	79.24
		74	62	656,156	512,635	61.45	587,690	483,329	70.93	575,416	478,160	73.93	551,047	467,968	78.01
	22200	86	72	782,000	555,357	63.53	699,613	524,384	73.57	684,901	518,937	76.57	655,731	508,211	80.83
		80	67	720,074	542,871	62.46	644,211	512,595	72.19	630,664	507,270	75.19	603,804	496,785	79.35
		74	62	662,468	529,299	61.56	592,674	499,780	71.04	580,211	494,588	74.04	555,499	484,366	78.11

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PERFORMANCE DATA TABLES (6 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-600	15000	92	77	705,800	429,347	58.34	636,010	419,784	68.64	624,212	415,575	70.63	598,413	406,436	74.93
		86	72	651,784	421,923	57.36	587,336	412,526	67.41	576,440	408,389	69.35	552,616	399,408	73.55
		80	67	600,170	412,437	56.41	540,825	403,251	66.23	530,792	399,207	68.13	508,855	390,428	72.22
		74	62	552,156	402,126	55.62	497,559	393,170	65.24	488,329	389,227	67.10	468,146	380,668	71.12
	16100	92	77	713,246	460,814	58.52	642,682	435,585	68.81	630,257	431,215	70.79	603,684	421,933	75.09
		86	72	658,661	452,846	57.52	593,497	428,053	67.58	582,023	423,759	69.51	557,484	414,637	73.70
		80	67	606,502	442,664	56.57	546,498	418,429	66.39	535,933	414,232	68.28	513,337	405,315	72.37
		74	62	557,982	431,598	55.78	502,779	407,969	65.40	493,058	403,876	67.25	472,270	395,182	71.27
	17200	92	77	720,773	476,663	58.69	648,350	451,115	68.98	635,674	446,708	70.93	609,380	437,637	75.26
		86	72	665,612	468,421	57.69	598,731	443,315	67.74	587,025	438,984	69.64	562,744	430,070	73.87
		80	67	612,902	457,890	56.74	551,318	433,348	66.55	540,539	429,114	68.41	518,180	420,401	72.54
		74	62	563,870	446,443	55.94	507,212	422,514	65.56	497,296	418,386	67.38	476,726	409,891	71.43
	18300	92	77	727,171	492,197	58.85	653,205	448,212	69.10	640,558	462,067	71.07	612,952	452,645	75.38
		86	72	671,520	483,686	57.85	603,214	440,462	67.86	591,536	454,077	69.78	566,042	444,818	73.99
		80	67	618,342	472,812	56.89	555,446	430,559	66.67	544,692	443,868	68.54	521,218	434,817	72.65
		74	62	568,875	460,991	56.10	511,010	419,795	65.67	501,117	432,772	67.51	479,520	423,947	71.54
SPU-660	16500	92	77	781,424	486,332	60.37	699,454	456,231	70.90	685,158	451,081	72.89	655,556	440,491	76.89
		86	72	721,621	477,923	59.35	645,924	448,343	69.63	632,722	443,281	71.58	605,386	432,874	75.48
		80	67	664,476	467,178	58.37	594,773	438,263	68.42	582,617	433,315	70.32	557,445	423,142	74.13
		74	62	611,318	455,499	57.56	547,192	427,306	67.40	536,008	422,482	69.26	512,850	412,564	73.00
	17700	92	77	790,724	503,140	60.50	706,450	472,648	71.02	691,777	467,431	73.01	662,382	457,066	77.02
		86	72	730,210	494,441	59.48	652,385	464,475	69.74	638,835	459,349	71.69	611,690	449,163	75.61
		80	67	672,385	483,324	58.50	600,723	454,033	68.52	588,245	449,022	70.42	563,250	439,065	74.25
		74	62	618,594	471,241	57.69	552,665	442,682	67.51	541,186	437,796	69.37	518,190	428,088	73.12
	19000	92	77	799,017	520,821	60.63	713,660	490,386	71.14	698,259	484,983	73.12	668,255	474,539	77.13
		86	72	737,868	511,816	59.60	659,043	481,907	69.87	644,820	476,597	71.80	617,113	466,333	75.72
		80	67	679,436	500,309	58.62	606,854	471,072	68.64	593,757	465,881	70.53	568,244	455,849	74.36
		74	62	625,081	487,801	57.80	558,306	459,295	67.62	546,257	454,234	69.47	522,784	444,453	73.22
	20300	92	77	807,268	538,602	60.74	719,997	507,873	71.25	704,367	502,455	73.22	673,681	491,889	77.24
		86	72	745,488	529,289	59.72	664,895	499,092	69.97	650,461	493,767	71.90	622,124	483,383	75.82
		80	67	686,453	517,389	58.73	612,242	487,871	68.75	598,951	482,665	70.63	572,858	472,515	74.46
		74	62	631,537	504,454	57.91	563,263	475,674	67.73	551,035	470,599	69.57	527,029	460,702	73.32
SPU-720	18000	92	77	843,202	527,557	64.64	755,870	495,601	75.02	740,069	489,923	78.02	708,405	478,636	82.38
		86	72	778,672	518,435	63.53	698,023	487,032	73.58	683,431	481,451	76.58	654,190	470,360	84.84
		80	67	717,009	506,780	62.45	642,747	476,082	72.20	629,311	470,627	75.20	602,385	459,785	79.36
		74	62	659,648	494,110	61.56	591,327	464,180	71.05	578,966	458,861	74.05	554,194	448,290	78.12
	19400	92	77	854,243	547,334	64.81	763,658	514,704	75.16	747,584	509,013	78.16	715,672	497,801	82.52
		86	72	788,868	537,870	63.69	705,215	505,804	73.72	690,371	500,212	76.72	660,901	489,193	80.98
		80	67	726,397	525,777	62.61	649,369	494,432	72.34	635,701	488,966	75.34	608,564	478,195	79.50
		74	62	668,286	512,633	61.71	597,420	482,071	71.18	584,845	476,742	74.18	559,879	466,240	78.26
	20800	92	77	862,887	566,374	64.95	751,221	516,047	75.29	754,628	528,014	78.29	722,046	516,714	82.66
		86	72	796,849	556,581	63.82	693,730	507,124	73.85	696,876	518,884	76.85	666,787	507,780	81.11
		80	67	733,747	544,067	62.74	638,793	495,723	72.46	641,690	507,218	75.46	613,985	496,364	79.63
		74	62	675,047	530,465	61.84	587,690	483,329	71.31	590,355	494,538	74.31	564,866	483,954	78.39
	22200	92	77	871,226	585,410	65.07	777,296	552,457	75.41	761,295	546,931	78.41	727,791	535,435	82.77
		86	72	804,550	575,288	63.94	717,809	542,905	73.96	703,032	537,474	76.96	672,092	526,176	81.22
		80	67	740,838	562,354	62.86	660,966	530,699	72.57	647,359	525,390	75.57	618,870	514,346	79.73
		74	62	681,571	548,295	61.96	608,089	517,431	71.42	595,571	512,255	74.42	569,360	501,488	78.49

See note on page 17

PERFORMANCE DATA TABLES (4 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-780	19500	86	72	819,878	537,919	70.86	738,720	505,828	83.26	723,079	499,756	85.67	694,974	488,926	90.41
		80	67	754,952	525,825	69.67	680,221	494,455	81.78	665,819	488,520	84.13	639,940	477,933	88.76
		74	62	694,556	512,680	68.67	625,803	482,094	80.54	612,553	476,307	82.85	588,744	465,985	87.39
	21000	86	72	829,989	556,557	71.03	746,902	524,208	83.42	730,915	518,088	85.83	702,005	507,110	90.58
		80	67	764,263	544,044	69.83	687,755	512,422	81.93	673,034	506,440	84.28	646,413	495,709	88.92
		74	62	703,122	530,443	68.83	632,735	499,612	80.69	619,191	493,779	83.00	594,700	483,316	87.54
	22500	86	72	776,910	546,821	71.18	754,330	542,347	83.57	738,290	536,290	85.98	708,407	525,080	90.72
		80	67	715,387	534,527	69.98	694,595	530,154	82.08	679,825	524,233	84.43	652,309	513,275	89.06
		74	62	658,156	521,164	68.98	639,027	516,900	80.84	625,439	511,127	83.14	600,124	500,443	87.68
	24000	86	72	847,546	593,074	71.32	760,070	559,880	83.69	744,805	554,180	86.11	714,404	542,896	90.85
		80	67	780,429	579,740	70.12	699,880	547,292	82.19	685,824	541,720	84.56	657,831	530,690	89.19
		74	62	717,995	565,246	69.11	643,890	533,610	80.95	630,958	528,177	83.27	605,204	517,422	87.81
SPU-840	21000	86	72	884,700	579,498	77.21	799,923	545,903	90.41	784,044	539,721	92.91	754,186	528,179	97.98
		80	67	814,641	566,469	75.96	736,577	533,629	88.85	721,956	527,586	91.30	694,462	516,304	96.25
		74	62	749,470	552,307	74.92	677,651	520,289	87.55	664,199	514,396	89.95	638,905	503,396	94.80
	22500	86	72	895,178	598,170	77.36	808,208	564,209	90.55	792,339	558,109	93.06	761,860	546,488	98.14
		80	67	824,290	584,721	76.11	744,206	551,524	88.99	729,594	545,561	91.44	701,528	534,202	96.40
		74	62	758,346	570,103	75.07	684,670	537,735	87.69	671,227	531,922	90.10	645,406	520,847	94.95
	24000	86	72	904,582	616,518	77.50	815,639	582,233	90.69	799,606	576,149	93.20	768,134	564,290	98.27
		80	67	832,948	602,657	76.25	751,049	569,142	89.13	736,286	563,195	91.58	707,306	551,603	96.53
		74	62	766,312	587,590	75.20	690,965	554,914	87.82	677,383	549,115	90.22	650,721	537,813	95.08
	25500	86	72	913,120	634,604	77.63	822,519	600,076	90.80	806,366	594,016	93.32	774,309	582,060	98.40
		80	67	840,810	620,337	76.37	757,384	586,584	89.24	742,510	580,661	91.70	712,992	568,974	96.65
		74	62	773,545	604,828	75.32	696,793	571,920	87.93	683,109	566,144	90.34	655,952	554,749	95.20
SPU-960	24000	86	72	1,013,601	667,893	85.72	914,723	629,008	101.16	897,070	622,189	104.09	862,850	609,069	110.14
		80	67	933,335	652,877	84.27	842,286	614,866	99.35	826,032	608,200	102.21	794,521	595,376	108.12
		74	62	858,668	636,555	83.07	774,903	599,495	97.84	759,949	592,995	100.65	730,959	580,491	106.44
	25600	86	72	1,023,935	687,964	85.90	923,538	649,016	101.34	905,644	642,191	104.27	869,507	628,499	110.31
		80	67	942,850	672,496	84.45	850,404	634,424	99.53	833,926	627,753	102.39	800,651	614,368	108.28
		74	62	867,422	655,684	83.24	782,371	618,564	98.02	767,212	612,059	100.82	736,599	599,009	106.60
	27200	86	72	1,033,728	707,930	86.06	931,500	668,749	101.51	913,232	661,850	104.43	876,792	648,201	110.48
		80	67	951,867	692,014	84.60	857,735	653,713	99.69	840,914	646,970	102.54	807,359	633,628	108.45
		74	62	875,718	674,713	83.39	789,116	637,370	98.18	773,641	630,795	100.97	742,771	617,787	106.76
	28800	86	72	1,042,005	727,373	86.20	937,704	687,833	101.63	920,086	681,255	104.57	883,319	667,623	110.63
		80	67	959,489	711,020	84.74	863,447	672,369	99.81	847,225	665,938	102.68	813,369	652,613	108.60
		74	62	882,730	693,244	83.52	794,372	655,560	98.29	779,447	649,290	101.10	748,300	636,298	106.90

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PERFORMANCE DATA TABLES (6 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-780	19500	92	77	922,439	572,916	76.65	828,413	538,287	89.34	810,741	531,900	91.81	777,623	520,019	96.67
		86	72	851,844	563,010	75.40	765,014	528,980	87.78	748,695	522,703	90.20	718,111	511,027	94.94
		80	67	784,387	550,352	74.19	704,433	517,087	86.29	689,406	510,951	88.64	661,244	499,538	93.28
		74	62	721,636	536,593	73.18	648,078	504,160	85.04	634,254	498,177	87.35	608,345	487,050	91.89
	21000	92	77	934,128	593,794	76.84	837,143	558,641	89.51	810,520	545,382	91.98	785,743	540,432	96.86
		86	72	862,639	583,526	75.57	773,076	548,981	87.95	748,490	535,951	90.35	725,610	531,087	95.12
		80	67	794,327	570,407	74.36	711,856	536,639	86.45	689,217	523,902	88.80	668,149	519,147	93.45
		74	62	730,781	556,147	73.36	654,908	523,223	85.20	634,080	510,804	87.50	614,697	506,168	92.06
	22500	92	77	944,169	614,229	77.00	845,454	578,981	89.68	818,633	565,267	92.14	792,568	560,449	97.00
		86	72	871,911	603,608	75.73	780,751	568,970	88.11	755,983	555,493	90.51	731,912	550,758	95.26
		80	67	802,864	590,037	74.52	718,924	556,178	86.61	696,117	543,004	88.95	673,952	538,376	93.59
		74	62	738,635	575,286	73.51	661,410	542,274	85.35	640,427	529,429	87.65	620,036	524,916	92.20
	24000	92	77	953,859	634,649	77.14	852,890	599,017	89.82	824,805	584,512	92.26	799,384	560,140	97.15
		86	72	880,859	623,675	75.88	787,618	588,660	88.25	761,682	574,405	90.63	738,207	550,455	95.41
		80	67	811,104	609,653	74.66	725,247	575,425	86.74	701,365	561,491	89.07	679,749	538,079	93.73
		74	62	746,216	594,412	73.65	667,227	561,039	85.48	645,255	547,454	87.77	625,369	524,627	92.34
SPU-840	21000	92	77	997,181	618,449	79.05	897,651	581,710	92.56	879,873	575,269	95.13	845,230	562,811	100.34
		86	72	920,867	607,755	77.74	828,953	571,652	90.93	812,536	565,322	93.43	780,544	553,079	98.52
		80	67	847,943	594,091	76.48	763,308	558,800	89.36	748,191	552,612	91.80	718,733	540,645	96.77
		74	62	780,108	579,239	75.43	702,244	544,830	88.05	688,336	538,797	90.44	661,234	527,129	95.32
	22500	92	77	1,008,752	639,189	79.22	906,754	602,105	92.72	889,469	595,929	95.29	853,266	583,663	100.50
		86	72	931,551	628,137	77.90	837,359	591,694	91.08	821,397	585,625	93.59	787,965	573,571	98.67
		80	67	857,782	614,015	76.64	771,049	578,391	89.50	756,351	572,459	91.96	725,566	560,675	96.92
		74	62	789,160	598,664	75.59	709,365	563,931	88.19	695,843	558,147	90.60	667,521	546,658	95.46
	24000	92	77	1,019,595	659,819	79.37	915,351	622,413	92.86	897,597	616,152	95.44	860,948	603,300	100.65
		86	72	941,565	648,410	78.05	845,298	611,650	91.22	828,903	605,498	93.73	795,059	592,868	98.82
		80	67	867,003	633,832	76.78	778,359	597,899	89.64	763,263	591,884	92.10	732,099	579,539	97.07
		74	62	797,643	617,986	75.73	716,091	582,951	88.33	702,202	577,087	90.74	673,531	565,050	95.61
	25500	92	77	1,029,093	680,073	79.51	923,544	642,643	93.00	904,430	635,968	95.56	867,520	623,169	100.78
		86	72	950,336	668,313	78.19	852,865	631,531	91.36	835,214	624,971	93.85	801,128	612,394	98.95
		80	67	875,079	653,288	76.92	785,327	617,332	89.78	769,073	610,920	92.21	737,687	598,625	97.19
		74	62	805,073	636,956	75.86	722,501	601,899	88.46	707,547	595,647	90.85	678,672	583,660	95.73
SPU-960	24000	92	77	1,137,939	710,707	87.87	1,024,818	669,294	103.70	1,003,879	661,758	106.68	963,851	647,475	112.90
		86	72	1,050,852	698,418	86.34	946,388	657,721	101.80	927,052	650,315	104.71	890,087	636,280	110.78
		80	67	967,635	682,715	84.88	871,444	642,933	99.98	853,639	635,694	102.81	819,601	621,975	108.75
		74	62	890,224	665,647	83.66	801,729	626,860	98.46	785,348	619,802	101.24	754,033	606,425	107.05
	25600	92	77	1,151,413	733,781	88.09	1,033,677	691,258	103.88	1,013,365	684,046	106.87	972,675	669,709	113.11
		86	72	1,063,295	721,094	86.56	954,569	679,305	101.98	935,812	672,218	104.90	898,236	658,129	110.99
		80	67	979,093	704,881	85.09	878,977	664,033	100.15	861,705	657,105	103.00	827,105	643,332	108.95
		74	62	900,765	687,259	83.87	808,659	647,432	98.62	792,769	640,677	101.42	760,936	627,249	107.25
	27200	92	77	1,162,272	756,027	88.26	1,042,873	713,435	104.06	1,021,872	706,063	107.04	979,948	691,459	113.27
		86	72	1,073,322	742,954	86.72	963,061	701,099	102.15	943,668	693,855	105.06	904,952	679,503	111.14
		80	67	988,326	726,251	85.25	886,796	685,336	100.31	868,939	678,255	103.16	833,290	664,226	109.10
		74	62	909,260	708,094	84.03	815,853	668,202	98.79	799,424	661,299	101.57	766,626	647,621	107.40
	28800	92	77	1,171,468	777,795	88.41	1,051,024	735,304	104.21	1,029,577	727,862	107.20	987,219	713,249	113.45
		86	72	1,081,815	764,346	86.87	970,588	722,590	102.30	950,783	715,276	105.22	911,667	700,916	111.32
		80	67	996,146	747,161	85.40	893,728	706,344	100.46	875,491	699,195	103.31	839,472	685,158	109.27
		74	62	916,454	728,482	84.17	822,229	688,685	98.93	805,452	681,715	101.73	772,314	668,029	107.56

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PERFORMANCE DATA TABLES (4 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-1080	27000	86	72	1,139,271	756,313	97.04	1,029,265	713,210	111.71	1,009,542	705,616	118.17	969,932	690,476	125.32
		80	67	1,049,052	739,309	95.39	947,758	697,175	109.65	929,597	689,752	116.03	893,124	674,952	123.01
		74	62	965,128	720,826	94.02	871,937	679,745	107.93	855,229	672,508	114.25	821,674	658,078	121.09
	28800	86	72	1,151,208	779,575	97.28	1,038,772	736,106	111.92	1,018,888	728,547	118.39	978,912	713,429	125.56
		80	67	1,060,044	762,048	95.63	956,512	719,556	109.86	938,203	712,167	116.24	901,392	697,389	123.25
		74	62	975,240	742,997	94.25	879,991	701,567	108.14	863,146	694,363	114.46	829,281	679,954	121.32
	30600	86	72	1,162,338	802,640	97.50	1,047,480	758,767	112.13	1,028,193	751,513	118.60	986,423	735,903	125.75
		80	67	1,070,293	784,594	95.84	964,530	741,708	110.07	946,771	734,617	116.46	908,308	719,358	123.44
		74	62	984,669	764,979	94.46	887,368	723,165	108.34	871,029	716,251	114.67	835,643	701,374	121.51
	32400	86	72	1,171,900	825,186	97.69	1,055,928	781,356	112.32	1,036,070	773,960	118.79	993,087	758,060	125.93
		80	67	1,079,098	806,634	96.04	972,310	763,788	110.25	954,024	756,559	116.63	914,445	741,017	123.61
		74	62	992,770	786,468	94.65	894,525	744,694	108.52	877,702	737,645	114.84	841,289	722,491	121.68
SPU-1200	30000	86	72	1,266,727	846,092	110.26	1,144,237	798,409	130.43	1,122,209	789,976	134.30	1,077,872	773,133	142.71
		80	67	1,166,416	827,069	108.39	1,053,625	780,458	128.08	1,033,342	772,215	131.87	992,516	755,751	140.08
		74	62	1,073,102	806,393	106.83	969,335	760,947	126.13	950,674	752,910	129.84	913,114	736,857	137.89
	32000	86	72	1,279,553	872,464	110.57	1,154,376	824,377	130.70	1,133,070	816,323	134.60	1,087,270	799,131	142.98
		80	67	1,178,225	852,849	108.69	1,062,961	805,843	128.35	1,043,343	797,970	132.16	1,001,170	781,164	140.34
		74	62	1,083,967	831,527	107.13	977,924	785,697	126.39	959,875	778,021	130.12	921,076	761,635	138.14
	34000	86	72	1,291,981	898,818	110.87	1,164,464	850,402	130.98	1,142,022	842,010	134.85	1,095,778	824,845	143.25
		80	67	1,189,670	878,610	108.98	1,072,250	831,282	128.62	1,051,586	823,079	132.40	1,009,004	806,300	140.60
		74	62	1,094,496	856,645	107.41	986,470	810,500	126.66	967,459	802,502	130.36	928,283	786,143	138.40
	36000	86	72	1,302,159	924,397	111.12	1,172,347	875,637	131.19	1,149,695	867,258	135.05	1,102,253	849,812	143.46
		80	67	1,199,042	903,614	109.23	1,079,509	855,950	128.82	1,058,651	847,760	132.60	1,014,966	830,706	140.81
		74	62	1,103,118	881,023	107.65	993,148	834,552	126.86	973,959	826,566	130.56	933,769	809,939	138.61

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PERFORMANCE DATA TABLES (6 ROWS)

Model	Air Flow	Condenser Ambient Temperature [°F]													
	CFM	Air Flow		95			115			118.4			125		
		DB	WB	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input	Capacity Btu/Hr		kW Input
				Total	Sen.		Total	Sen.		Total	Sen.		Total	Sen.	
SPU-1080	27000	92	77	1,276,376	801,801	99.56	1,150,114	755,695	114.63	1,127,901	747,725	121.17	1,082,514	731,561	128.52
		86	72	1,178,695	787,937	97.83	1,062,095	742,629	112.47	1,041,582	734,796	118.92	999,668	718,911	126.10
		80	67	1,085,354	770,222	96.17	977,988	725,932	110.39	959,100	718,275	116.76	920,505	702,748	123.78
		74	62	998,526	750,966	94.78	899,749	707,784	108.66	882,372	700,319	114.97	846,864	685,179	121.84
	28800	92	77	1,291,100	828,016	99.84	1,161,181	781,216	114.88	1,138,866	773,315	121.42	1,092,384	756,962	128.78
		86	72	1,192,291	813,699	98.11	1,072,315	767,708	112.71	1,051,708	759,943	119.17	1,008,783	743,873	126.35
		80	67	1,097,874	795,404	96.44	987,399	750,447	110.63	968,423	742,858	117.01	928,898	727,149	124.02
		74	62	1,010,044	775,519	95.05	908,407	731,686	108.89	890,949	724,286	115.21	854,586	708,970	122.08
	30600	92	77	1,302,748	853,277	100.08	1,170,729	806,306	115.10	1,148,497	798,520	121.63	1,100,319	781,763	128.99
		86	72	1,203,048	838,523	98.34	1,081,132	792,364	112.93	1,060,601	784,712	119.38	1,016,111	768,245	126.56
		80	67	1,107,779	819,671	96.67	995,518	774,549	110.84	976,613	767,070	117.21	935,645	750,973	124.22
		74	62	1,019,156	799,179	95.27	915,876	755,185	109.10	898,484	747,893	115.41	860,793	732,198	122.27
	32400	92	77	1,313,938	878,504	100.30	1,179,720	831,281	115.31	1,156,711	823,304	121.83	1,108,610	806,743	129.21
		86	72	1,213,381	863,314	98.55	1,089,435	816,907	113.13	1,068,187	809,068	119.57	1,023,767	792,794	126.77
		80	67	1,117,294	843,904	96.87	1,003,163	798,541	111.04	983,598	790,878	117.40	942,695	774,970	124.43
		74	62	1,027,911	822,806	95.48	922,910	778,577	109.30	904,910	771,106	115.59	867,280	755,595	122.48
SPU-1200	30000	92	77	1,412,667	891,684	113.14	1,273,275	841,088	133.75	1,248,654	832,303	137.71	1,198,093	814,400	146.34
		86	72	1,304,555	876,266	111.17	1,175,831	826,545	131.29	1,153,094	817,912	135.16	1,106,402	800,318	143.57
		80	67	1,201,248	856,565	109.27	1,082,717	807,962	128.93	1,061,781	799,523	132.70	1,018,787	782,324	140.92
		74	62	1,105,148	835,151	107.70	996,100	787,763	126.96	976,839	779,535	130.66	937,284	762,766	138.71
	32000	92	77	1,427,996	920,948	113.50	1,285,470	869,916	134.07	1,260,676	861,186	138.03	1,208,490	842,937	146.65
		86	72	1,318,711	905,024	111.52	1,187,092	854,874	131.60	1,164,196	846,295	135.47	1,116,004	828,362	143.88
		80	67	1,214,283	884,676	109.62	1,093,086	835,654	129.23	1,072,004	827,268	133.01	1,027,628	809,738	141.22
		74	62	1,117,140	862,559	108.04	1,005,639	814,763	127.26	986,243	806,586	130.96	945,417	789,494	139.00
	34000	92	77	1,441,680	949,815	113.82	1,296,570	898,492	134.37	1,272,408	890,082	138.33	1,217,777	871,179	146.94
		86	72	1,331,347	933,392	111.84	1,197,342	882,956	131.90	1,175,030	874,692	135.76	1,124,580	856,115	144.16
		80	67	1,225,918	912,407	109.93	1,102,525	863,105	129.52	1,081,980	855,026	133.29	1,035,525	836,867	141.49
		74	62	1,127,845	889,596	108.34	1,014,323	841,527	127.54	995,421	833,651	131.24	952,683	815,945	139.27
	36000	92	77	1,451,756	977,538	114.07	1,305,416	926,369	134.62	1,281,074	917,982	138.58	1,227,337	899,584	147.21
		86	72	1,340,652	960,635	112.07	1,205,512	910,351	132.14	1,183,033	902,109	136.00	1,133,409	884,029	144.43
		80	67	1,234,486	939,038	110.16	1,110,048	889,883	129.76	1,089,349	881,827	133.53	1,043,654	864,154	141.76
		74	62	1,135,727	915,562	108.57	1,021,244	867,636	127.77	1,002,201	859,781	131.47	960,162	842,550	139.53

LEGEND:

CFM : Air flow rate (Ft^3/minute)
DB : Dry bulb temperature (°F)
WB : Wet bulb temperature (°F)
KW : Total Power Input (Kilowatts)

Note:

1. *Cooling capacities are based on 80°/67°F Evaporating air temperarture and 95° Condensing air temperature.*
2. *Direct interpolation is permissible – Do not extrapolate.*
3. *Capacity in KW = (Btu/Hr/12000)*3.517.*

UNIT ELECTRICAL DATA

MODEL	POWER SUPPLY	VOLTAGE RANGE		Condenser Fan Motor		Compressor 1		Compressor 1		Evaporator Blower Motor		MCA	MOCP
	(V-PH-HZ)	MIN.	MAX.	HP	FLA	RLA	LRA	RLA	LRA	HP (KW)	FLA		
SPU-420	415-3-50	374	457	1.5 (4)	3.0	17.9(2)	139.0	14.5(2)	101.0	10.0 (7.5)	16.2	97.5	110
SPU-480	415-3-50	374	457	1.5 (4)	3.0	17.9(2)	139.0	17.9(2)	139.0	10.0 (7.5)	16.2	104.3	110
SPU-540	415-3-50	374	457	2.0 (4)	3.8	20.8 (2)	183.9	17.9 (2)	139.0	15.0 (11.0)	20.7	118.5	125
SPU-600	415-3-50	374	457	2.0 (4)	3.8	20.8 (2)	144.0	20.8 (2)	144.0	15.0 (11.0)	20.7	124.3	125
SPU-660	415-3-50	374	457	1.5 (6)	3.0	27.9	173.0	24.3 (3)	140.0	15.0 (11.0)	20.7	146.5	150
SPU-720	415-3-50	374	457	1.5 (6)	3.0	27.9 (3)	173.0	24.3	140.0	15.0 (11.0)	20.7	153.7	175
SPU-780	415-3-50	374	457	2.0 (6)	3.8	34.3	229.0	27.9(3)	173.0	15.0 (11.0)	20.7	170.0	200
SPU-840	415-3-50	374	457	1.5 (8)	3.0	34.3(2)	229.0	27.9(2)	173.0	15.0 (11.0)	20.7	177.7	200
SPU-960	415-3-50	374	457	1.5 (8)	3.0	34.3(2)	229	34.3(2)	229.0	20.0 (15.0)	26.9	196.7	225
SPU-1080	415-3-50	374	457	2.0 (8)	3.8	42.1(2)	320	34.3(2)	229.0	20.0 (15.0)	26.9	220.6	250
SPU-1200	415-3-50	374	457	2.0 (8)	3.8	42.1(2)	320	42.1(2)	320.0	25.0 (18.5)	34.8	244.1	250

LEGEND:

FLA - Full Load Amps
HP - Horse Power
LRA - Locked Rotor Amps
RLA - Rated Load Amps
MCA - Minimum Circuit Amps
MOCP - Maximum Over Current Protection

FAN PERFORMANCE (4 ROWS)

Model	CFM	External Static Pressure [in.wg]													
		0.40		0.70		1.00		1.25		1.50		1.75		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
SPU-420	10500	662	3.81	733	4.61	802	5.50	858	6.31	914	7.21	970	8.19	1025	9.25
	11400	670	4.29	738	5.11	803	6.00	856	6.79	908	7.67	960	8.59	1011	9.60
	12300	680	4.84	745	4.24	807	6.58	857	7.39	907	8.23	955	9.14	1003	10.11
	13200	691	5.47	754	6.33	813	7.25	862	8.06	909	8.91	955	9.81	1000	10.75
SPU-480	12000	676	4.65	742	5.48	805	6.38	856	7.17	907	8.03	956	8.94	1005	9.92
	13000	688	5.32	752	6.18	812	7.09	860	7.90	908	8.75	955	9.65	1001	10.60
	14000	701	6.07	763	6.97	821	7.91	867	8.74	913	9.60	957	10.50	1001	11.43
	15000	716	6.90	775	7.86	832	8.83	877	9.68	920	10.55	963	11.46	1005	12.41
SPU-540	13500	653	4.89	719	5.79	784	6.77	837	7.64	889	8.58	940	9.56	990	10.59
	14600	663	5.56	726	6.49	787	7.48	837	8.36	886	9.29	934	10.28	982	11.31
	15700	675	6.31	736	7.28	793	8.30	841	9.18	887	10.12	933	11.11	978	12.14
	16800	689	7.17	747	8.16	802	9.21	847	10.12	891	11.07	935	12.06	978	13.10
SPU-600	15000	668	5.83	729	6.76	789	7.76	838	8.65	886	9.58	933	10.56	980	11.60
	16100	680	6.62	739	7.59	796	8.61	843	9.50	888	10.46	933	11.45	977	12.48
	17200	694	7.49	751	8.51	806	9.57	850	10.48	893	11.43	936	12.44	978	13.47
	18300	708	8.47	764	9.53	817	10.63	859	11.57	901	12.55	942	13.55	982	14.61
SPU-660	16500	394	5.51	435	6.54	474	7.67	507	8.67	538	9.75	569	10.87	600	12.06
	17700	400	6.17	438	7.22	476	8.36	506	9.37	536	10.44	566	11.57	595	12.76
	19000	406	6.97	443	8.07	479	9.22	508	10.24	536	11.31	564	12.45	592	13.63
	20300	414	7.86	449	9.00	483	10.19	511	11.22	538	12.31	565	13.44	591	14.64
SPU-720	18000	401	6.35	439	7.41	476	8.55	506	9.56	536	10.63	565	11.77	594	12.95
	19400	408	7.24	445	8.38	480	9.50	509	10.54	537	11.61	564	12.75	592	13.93
	20800	417	8.24	452	9.40	485	10.59	513	11.64	539	12.72	566	13.87	592	15.05
	22200	425	9.36	460	10.56	492	11.80	518	12.87	543	13.98	569	15.15	593	16.34

LEGEND:

RPM : Fan Speed in revolution per minute
BHP : Fan absorbed power

Note:

1. Internal Static pressure is based on pressure drops through evaporator coil, fan casing and 2" washable filters.
2. Blue shaded area indicates the operating range of a standard motor and drive combination.
3.Green shaded area indicates the operating range of a standard motor with non standard drive combination.
4. Gray shaded area indicates operating range using non standard motor and drive combination.
5. To determine the power of motor to be installed, just multiply the value of the absorbed power indicated above by 1.2.

FAN PERFORMANCE (4 ROWS)

Model	CFM	External Static Pressure [in.wg]													
		0.40		0.70		1.00		1.25		1.50		1.75		2.00	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
SPU-780	19500	347	6.30	385	7.59	422	9.02	452	10.29	482	11.66	510	13.08	538	14.58
	21000	351	7.04	387	8.35	421	9.79	450	11.06	478	12.43	506	13.86	533	15.36
	22500	355	7.87	389	9.21	423	10.66	450	11.94	477	13.31	503	14.75	529	16.26
	24000	361	8.81	394	10.19	425	11.65	451	12.95	477	14.32	502	15.75	527	17.27
SPU-840	21000	351	7.04	387	8.35	421	9.79	450	11.06	478	12.43	506	13.86	533	15.36
	22500	355	7.87	389	9.21	423	10.66	450	11.94	477	13.31	503	14.75	529	16.26
	24000	361	8.81	394	10.19	425	11.65	451	12.95	477	14.32	502	15.75	527	17.27
	25500	367	9.83	398	11.26	429	12.76	454	14.08	478	15.44	502	16.89	526	18.40
SPU-960	24000	361	8.81	394	10.19	425	11.65	451	12.95	477	14.32	502	15.75	527	17.27
	25600	367	9.91	398	11.33	429	12.83	454	14.14	478	15.52	502	16.97	526	18.49
	27200	374	11.11	405	12.60	434	14.14	458	15.50	481	16.89	504	18.35	526	19.87
	28800	381	12.44	411	13.99	440	15.60	462	16.97	485	18.39	507	19.88	528	21.41
SPU-1080	27000	313	9.14	344	10.82	375	12.63	400	14.25	425	15.98	449	17.79	473	19.69
	28800	317	10.17	347	11.88	376	13.71	400	15.34	424	17.06	447	18.88	470	20.79
	30600	322	13.31	351	13.07	379	14.92	402	16.57	424	18.30	446	20.24	468	22.04
	32400	327	12.56	355	14.37	382	16.27	404	17.94	425	19.68	447	21.51	468	23.42
SPU-1200	30000	320	10.92	349	12.65	378	14.50	401	16.14	424	17.87	446	19.69	469	21.60
	32000	326	12.27	354	14.06	381	15.95	403	17.61	425	19.36	446	21.19	468	23.10
	34000	332	13.77	359	12.56	385	17.57	406	19.26	427	21.03	448	22.87	468	24.79
	36000	338	15.40	365	17.35	390	19.36	411	21.09	431	22.88	450	24.75	470	26.68

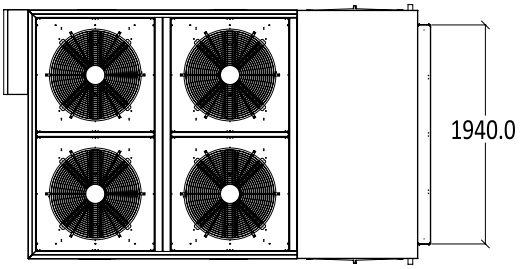
LEGEND:

RPM : Fan Speed in revolution per minute
BHP : Fan absorbed power

Note:

1. Internal Static pressure is based on pressure drops through evaporator coil, fan casing and 2" washable filters.
2. Blue shaded area indicates the operating range of a standard motor and drive combination.
3.Green shaded area indicates the operating range of a standard motor with non standard drive combination.
4. Gray shaded area indicates operating range using non standard motor and drive combination.
5. To determine the power of motor to be installed, just multiply the value of the absorbed power indicated above by 1.2.

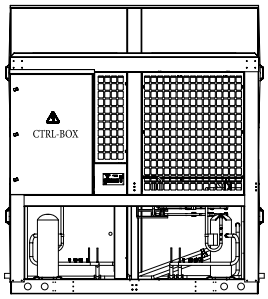
UNIT DIMENSIONS

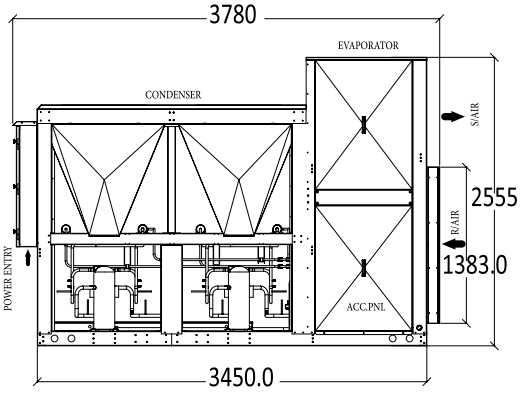


TOP VIEW

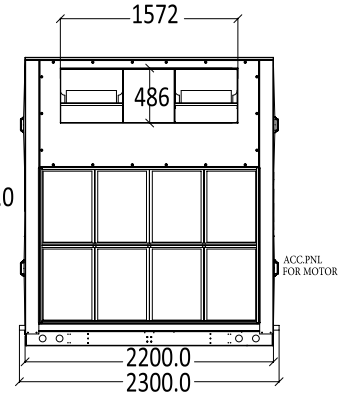
SPU-420/480

(ALL DIMENSIONS ARE IN MM)

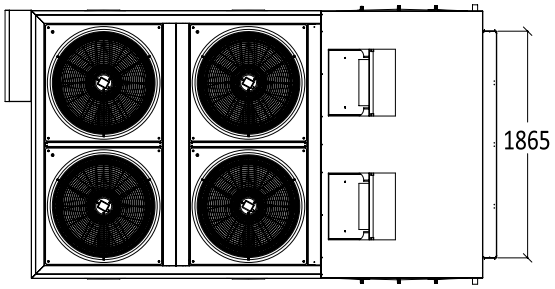




SIDE VIEW



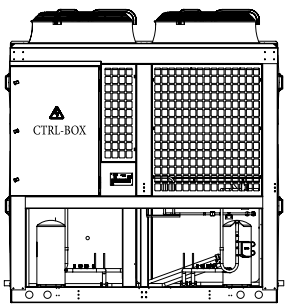
FRONT VIEW

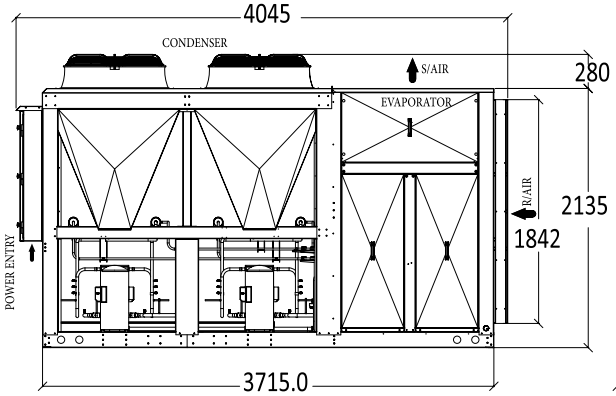


TOP VIEW

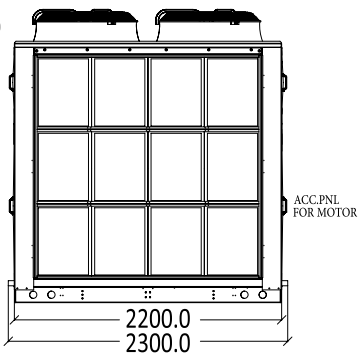
SPU-540/600

(ALL DIMENSIONS ARE IN MM)





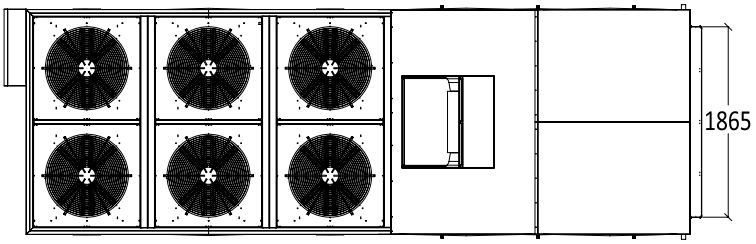
SIDE VIEW



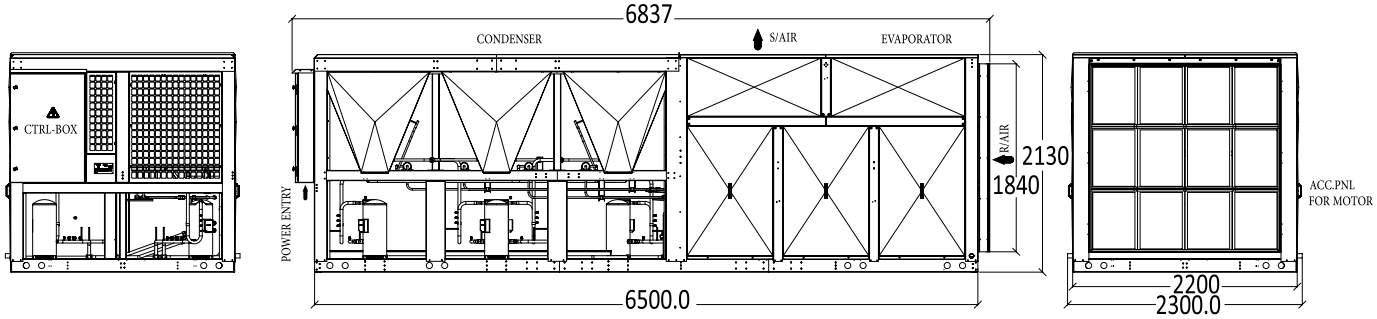
FRONT VIEW

UNIT DIMENSIONS

SPU-660/720
(ALL DIMENSIONS ARE IN MM)



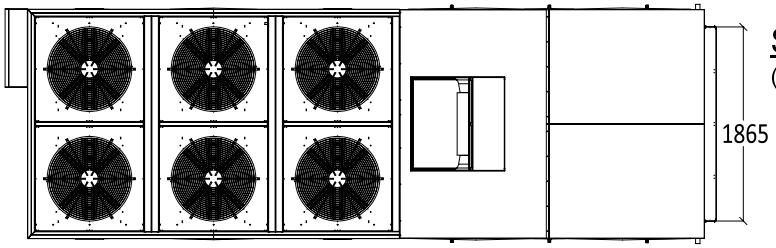
TOP VIEW



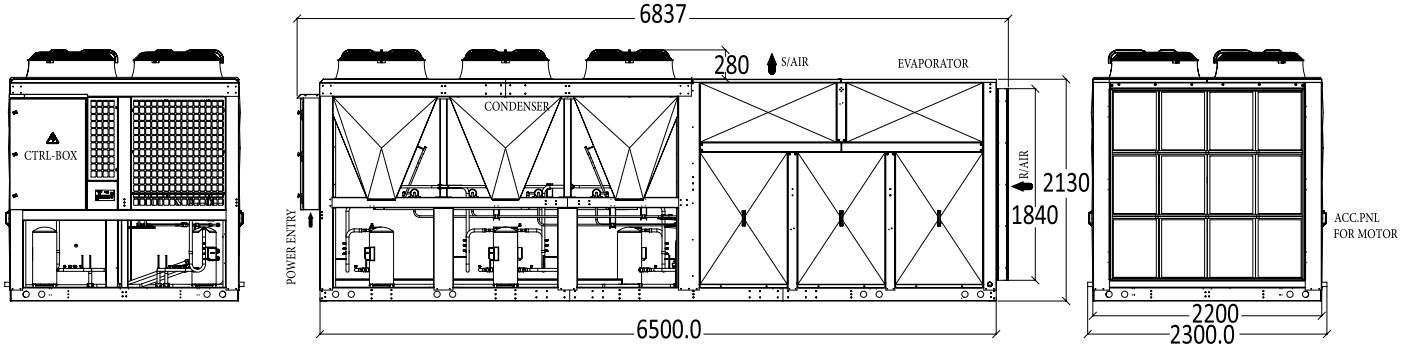
SIDE VIEW

FRONT VIEW

SPU-780
(ALL DIMENSIONS ARE IN MM)



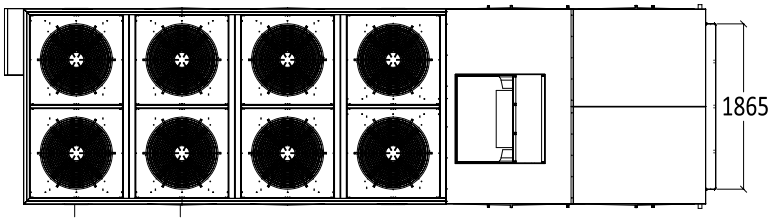
TOP VIEW



SIDE VIEW

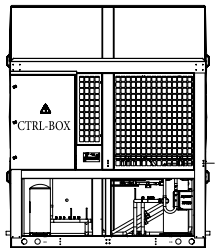
FRONT VIEW

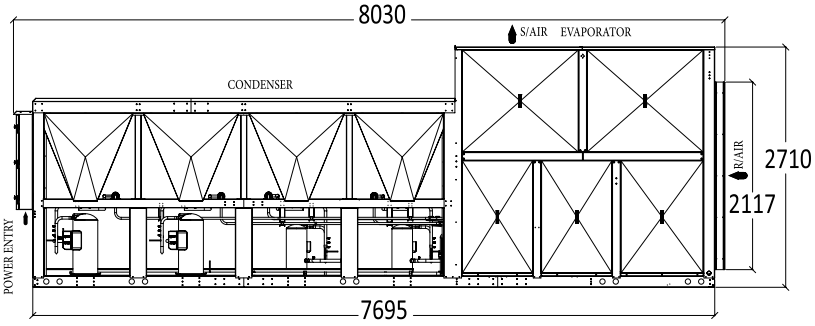
UNIT DIMENSIONS



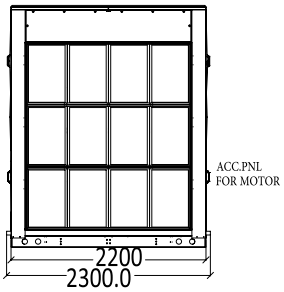
TOP VIEW

SPU-840/960
(ALL DIMENSIONS ARE IN MM)

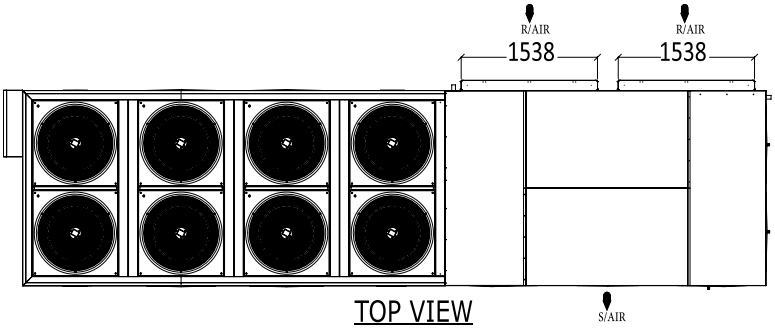




SIDE VIEW

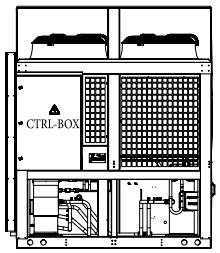


FRONT VIEW

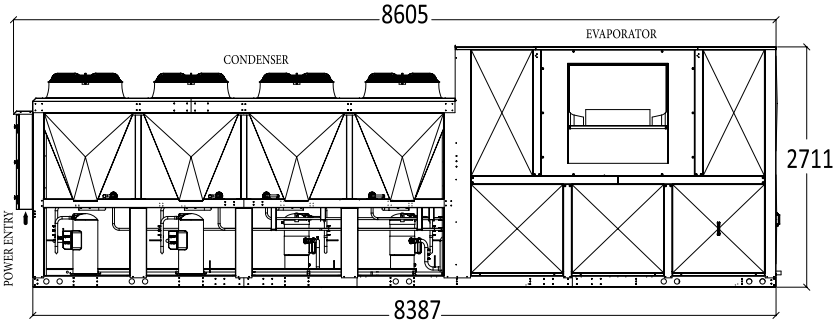


TOP VIEW

SPU-1080/1200
(ALL DIMENSIONS ARE IN MM)



SIDE VIEW



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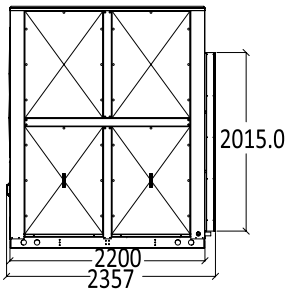
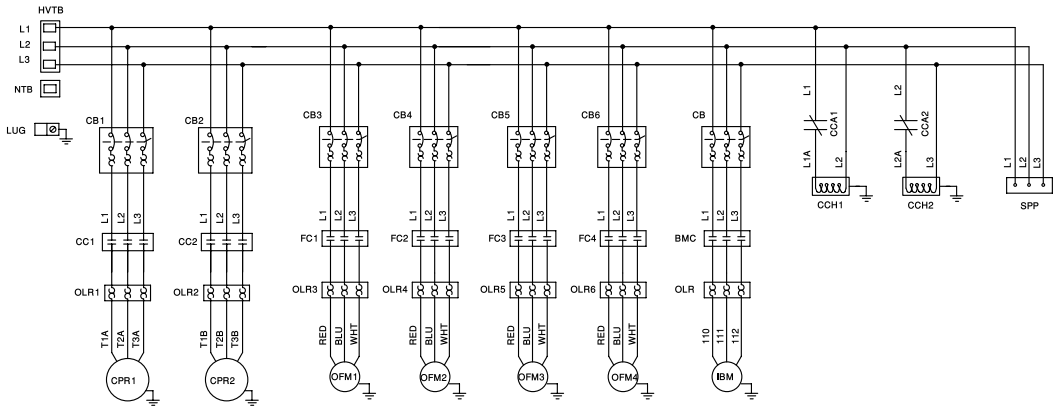
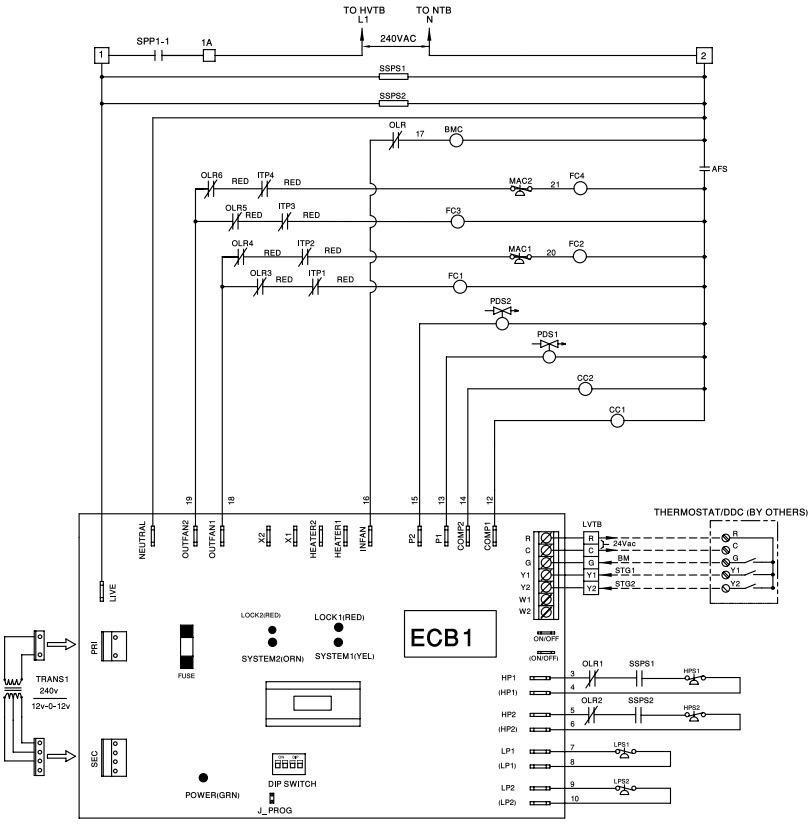


TYPICAL WIRING DIAGRAM

WIRING DIAGRAM-PKG UNIT (2COMPRESSOR & 4FAN)





LEGEND:

AFS	–	AIR FLOW SWITCH
ATB	–	AUXILIARY TERMINAL BLOCK
BMC	–	BLOWER MOTOR CONTACTOR
BMCA	–	BLOWER MOTOR CONTACTOR AUXILIARY
CB	–	CIRCUIT BREAKER
CCH	–	CRANKCASE HEATER
CC	–	COMPRESSOR CONTACTOR
CCA	–	COMPRESSOR CONTACTOR AUXILIARY
CPR	–	COMPRESSOR MOTOR
ECB	–	ELECTRONIC CIRCUIT BOARD
FC	–	FAN MOTOR CONTACTOR
HPS	–	HIGH PRESSURE SWITCH
HVTB	–	TERMINAL BLOCK, HIGH VOLTAGE
IBM	–	INDOOR BLOWER MOTOR
ITP	–	INTERNAL THERMAL PROTECTOR-OFM
LPS	–	LOW PRESSURE SWITCH
MAC	–	MILD AMBIENT CONTROL
NTB	–	NEUTRAL TERMINAL BLOCK
OFM	–	OUTDOOR FAN MOTOR
OLR	–	OVER LOAD RELAY
PDS	–	PUMP DOWN SOLENOID
SPP	–	SINGLE PHASE PREVENTER
SSPS	–	SOLID STATE PROTECTIVE SYSTEM
TRANS	–	TRANSFORMER
□	–	TERMINAL BLOCK OR TERMINATION POINT
———	–	FACTORY WIRES & DEVICES
- - - -	–	FIELD WIRES BY OTHERS
———	–	DEVICES BY OTHERS

NOTES

1. ANY WIRE REPLACEMENT, SHOULD BE OF THE 105°C TYPE OR ITS EQUIVALENT.
2. USE COPPER CONDUCTORS ONLY.
3. POWER MUST BE SUPPLIED TO CRANKCASE HEATER FOR A MINIMUM OF 12 HOURS, PRIOR TO SYSTEM START UP. IF POWER SUPPLY HAS BEEN INTERRUPTED FOR A PROLONGED PERIOD, OIL SUMP HEATERS MUST BE ENERGIZED FOR 12 HRS MINIMUM, BEFORE STARTING COMPRESSOR.
4. FUSED DISCONNECT SWITCH OR CIRCUIT BREAKER TO BE PROVIDED BY THE USER, AS PER ELEC. DATA IN INSTALLATION MANL.
5. COMPRESSOR IS PROVIDED WITH INTERNAL OVERLOAD.
6. IF ANY CHANGE IN DIP SWITCH SETTING IS REQUIRED, TURN OFF POWER FIRST & SET REQUIRED SETTING.

PRESSURE SWITCH SETTINGS

NAME	OPEN (PSIG)	CLOSE (PSIG)
LPS	50 ± 7	90 ± 7
HPS	650 ± 15	500 ± 22
MAC	375 ± 15	450 ± 15

ECB DIP SWITCH SETTINGS & LED INDICATORS

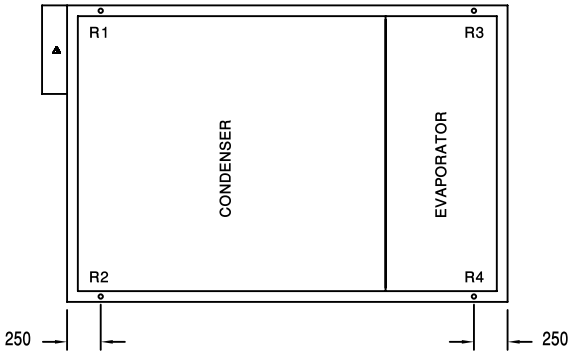
DIP SWITCH FUCTIONS			FACTORY SETTINGS OF DIP SWITCHES
S1	OFF= TEST MODE DISABLE	ON= TEST MODE ENABLE	
S2	OFF= LOAD BALANCE (Comp1/2 Auto Lead Lag)	ON= COMPRESSOR 1 LEAD	
S3	OFF= WITHOUT PUMP DOWN	ON=WITH PUMP DOWN OPTION	
S4	OFF= SINGLE STAGE	ON=DUAL STAGE	

DIP SWITCH#	S1	S2	S3	S4
ON			✓	✓
OFF	✓	✓		

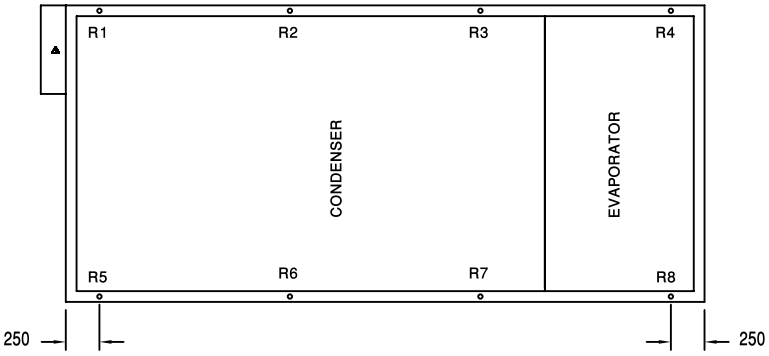
LED INDICATORS	
Green	power on/off indicator
Red	Lock-out due to system fault
Yellow	blinking slow - LPS1 Trip
	blinking fast -SSPS1/OLR1/HPS1 Trip
Orange	blinking slow - LPS2 Trip
	blinking fast -SSPS2/OLR2/HPS2 Trip

LOAD DISTRIBUTION (4 ROWS)

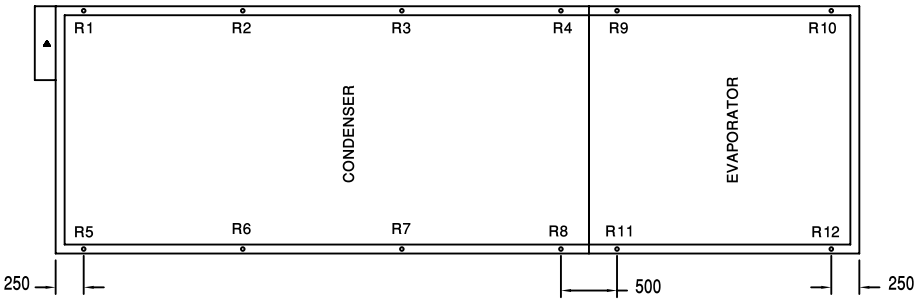
SPU-420/480/540/600
(ALL DIMENSIONS ARE IN MM)



SPU-660/720/780
(ALL DIMENSIONS ARE IN MM)



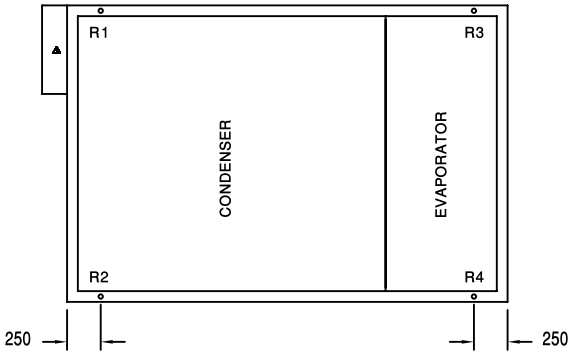
SPU-840/960/1080/1200
(ALL DIMENSIONS ARE IN MM)



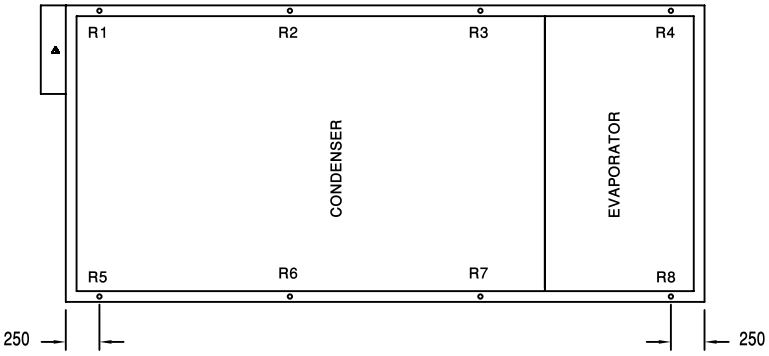
MODEL	LOAD DISTRIBUTION (kg)												Total Weight
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	
SPU-420	571	538	458	449	-	-	-	-	-	-	-	-	2015
SPU-480	581	547	466	457	-	-	-	-	-	-	-	-	2050
SPU-540	622	586	499	489	-	-	-	-	-	-	-	-	2195
SPU-600	674	635	541	530	-	-	-	-	-	-	-	-	2380
SPU-660	433	467	400	367	400	431	369	338	-	-	-	-	3205
SPU-720	435	469	402	368	402	433	371	340	-	-	-	-	3220
SPU-780	458	494	423	388	423	456	391	358	-	-	-	-	3390
SPU-840	399	384	384	310	368	355	355	286	322	348	263	285	4060
SPU-960	439	422	422	341	359	346	346	279	334	362	273	296	4220
SPU-1080	467	449	449	363	382	368	368	297	356	385	291	315	4490
SPU-1200	476	458	458	370	390	375	375	303	363	393	297	322	4580

LOAD DISTRIBUTION (6 ROWS)

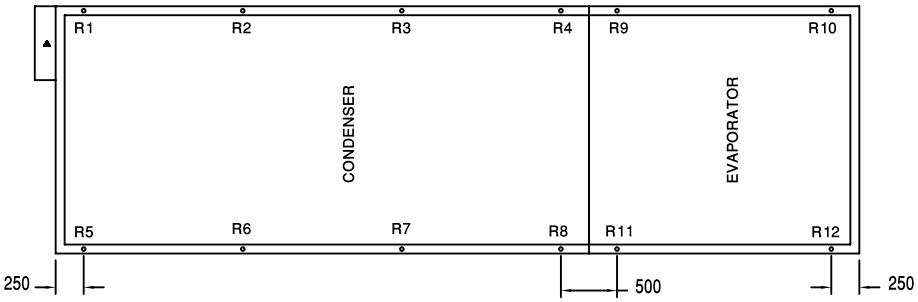
SPU-420/480/540/600
(ALL DIMENSIONS ARE IN MM)



SPU-660/720/780
(ALL DIMENSIONS ARE IN MM)



SPU-840/960/1080/1200
(ALL DIMENSIONS ARE IN MM)



MODEL	LOAD DISTRIBUTION (kg)												Total Weight
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	
SPU-420	582	548	467	458	-	-	-	-	-	-	-	-	2055
SPU-480	595	560	477	468	-	-	-	-	-	-	-	-	2100
SPU-540	637	600	511	501	-	-	-	-	-	-	-	-	2250
SPU-600	694	654	557	546	-	-	-	-	-	-	-	-	2450
SPU-660	443	478	409	375	409	441	378	346	-	-	-	-	3280
SPU-720	446	480	412	378	412	444	380	348	-	-	-	-	3300
SPU-780	470	506	434	398	434	467	400	367	-	-	-	-	3475
SPU-840	407	392	392	316	376	362	362	292	328	355	268	291	4140
SPU-960	449	432	432	349	367	354	354	286	342	371	280	303	4320
SPU-1080	478	460	460	372	391	377	377	304	364	395	298	323	4600
SPU-1200	489	471	471	380	400	385	385	311	373	404	305	330	4705

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Refrigeration Industries & Storage and Oil Services Co. KSC

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