



Outdoor Cooling

Indoor Cooling

Air Handler

STULZ CyberHandler Condensing Unit

Air Cooled Remote Condensing Unit
For use with STULZ CyberHandler Air Handling Units
(50 & 60 Hz Data)

STULZ



Our Mission

STULZ mission is to be the premier provider of energy efficient temperature and humidity control solutions for mission critical applications.

STULZ is dedicated to providing innovative solutions for critical temperature and humidity control needs. STULZ designs and manufactures specialized, energy efficient, environmental control equipment. STULZ serves a diverse marketplace; our customers represent a variety of industries including telecommunications, information technology, medical, financial, educational, industrial process and government. Our world-class "island" manufacturing processes takes place in a

modern, 150,000 ft² facility located in Frederick, MD USA. STULZ combines a global network of sales and service companies with an extensive factory engineering staff and highly flexible manufacturing resources dedicated to providing world-class quality, innovation and customer service.

This commitment to excellence, along with a standard two year warranty, fast lead times, and outstanding customer service, make STULZ the perfect choice for all your environmental control needs.

ISO-9001 Quality Registered

STULZ is committed to satisfying customer expectations by meeting and exceeding requirements. Our Quality Policy ensures that every Employee is committed to Customer Satisfaction, Teamwork and utilizing Continuous Process Improvement methods in order to deliver an exceptional product. We will continually measure our performance to improve the effectiveness of our quality management system.

STULZ CyberHandler Condensing Units

Designed to be the most efficient and reliable condensing units in the industry. The unit is an air-cooled, heat rejection condensing unit with a vertical air discharge pattern to be used with refrigerant based cooling equipment.

Typical applications include:

- Internet/Web Hosting
- Telecommunications
- Financial/Banking
- Insurance
- Airlines/Mass Transit
- Legal Services
- Entertainment
- Government
- Colleges/Universities
- Data Centers
- Computer/LAN Rooms
- Telecommunications Rooms
- Co-location Centers
- ISP (Internet Service Providers)
- ASP (Applications Service Providers)
- Hospital Operating & Isolation Rooms



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Model Nomenclature			
RCU-XXX-AX			
RCU	Capacity (kW)	Cooling Method	Qty of Independent Cooling Circuits
Remote Condensing Unit	070	A - Air Cooled	2
	115		4
	140		6
	230		
	345		

Features



Model RCU-345-A6
Remote Condensing Unit Shown

Remote Condensing Units

For use with STULZ CyberHandler Air Handling Units										
Model RCU-	070-A2		115-A2		140-A2		230-A4		345-A6	
	Imperial	SI	Imperial	SI	Imperial	SI	Imperial	SI	Imperial	SI
Model @ 95°F Amb. -30°F										
Condensing unit Fan Data - EC Direct Driven Axial										
Airflow @ free discharge	21,000 CFM	35,679 m³/h	21,000 CFM	35,679 m³/h	42,000 CFM	71,359 m³/h	42,000 CFM	71,359 m³/h	63,000 CFM	107,038 m³/h
Fan RPM	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Fan Quantity	2	2	2	2	4	4	4	4	6	6
Fan Diameter	25.6"	650 mm	25.6"	650 mm	25.6"	650 mm	25.6"	650 mm	25.6"	650 mm
Power per Fan	4 Hp	3 kW	4 Hp	3 kW	4 Hp	3 kW	4 Hp	3 kW	4 Hp	3 kW
Condensing unit Coil										
95°F Row/Face Area	29.8 ft²	2.77 m²	29.8 ft²	2.77 m²	59.6 ft²	5.54 m²	59.6 ft²	5.54 m²	89.4 ft²	8.31 m²
Compressor - R-410a Scroll										
Quantity	2	2	2	2	4	4	4	4	6	6
Watts Input	8,950	8,950	15,950	15,950	8,950	8,950	15,950	15,950	15,950	15,950
Tot. Heat of Rej.	310 MBH	91 kW	550 MBH	161 kW	620 MBH	192 kW	1,100 MBH	322 kW	1,650 MBH	483 kW
Low Ambient Control - Flooded										
Std. Minimum Op. Amb.	-30°F	-34°C	-30°F	-34°C	-30°F	-34°C	-30°F	-34°C	-30°F	-34°C
Refrigerant Connections - Copper										
Suction Line. OD (Qty.)	5/8" (2)	15.9 mm (2)	7/8" (2)	22.2 mm (2)	5/8" (4)	15.9 mm (4)	7/8" (4)	22.2 mm (4)	7/8" (6)	22.2 mm (6)
Liquid Line. OD (Qty.)	1-1/8" (2)	28.6 mm (2)	1-3/8" (2)	34.9 mm (2)	1-1/8" (4)	28.6 mm (4)	1-3/8" (4)	34.9 mm (4)	1-3/8" (6)	34.9 mm (6)
Physical Data (95°F) (consult factory for 105°F weights and dimensions)										
Dimensions (HxWxD) in / mm	89 x 96 x 38 / 2,261 x 2,438 x 965				89" x 96" x 76" / 2,261 x 2,438 x 1,930				89 x 96 x 114 / 2,261 x 2,438 x 2,896	
Approximate Weight, 60 Hz	1,600 lbs	730 kg	1,600 lbs	730 kg	3,200 lbs	1,450 kg	3,200 lbs	1,450 kg	4,800 lbs	2,180 kg
Approximate Weight, 50 Hz	1,950 lbs	885 kg	1,950 lbs	885 kg	3,900 lbs	1,770 kg	3,900 lbs	1,770 kg	5,850 lbs	2,655 kg

Altitude Correction

Elevation above sea level has an effect on the performance of air cooled condensing unit. Multiply the required capacity by the elevation correction factor in the table below before selecting required condensing unit.

Elevation Correction Factors											
Elevation (ft.)	1,000	2,000	3,000	4,000	5,000	6,000	8,000	10,000	12,000	14,000	16,000
Correction Factor	0.94	0.93	0.90	0.88	0.86	0.83	0.79	0.75	0.71	0.66	0.62

Electrical Data

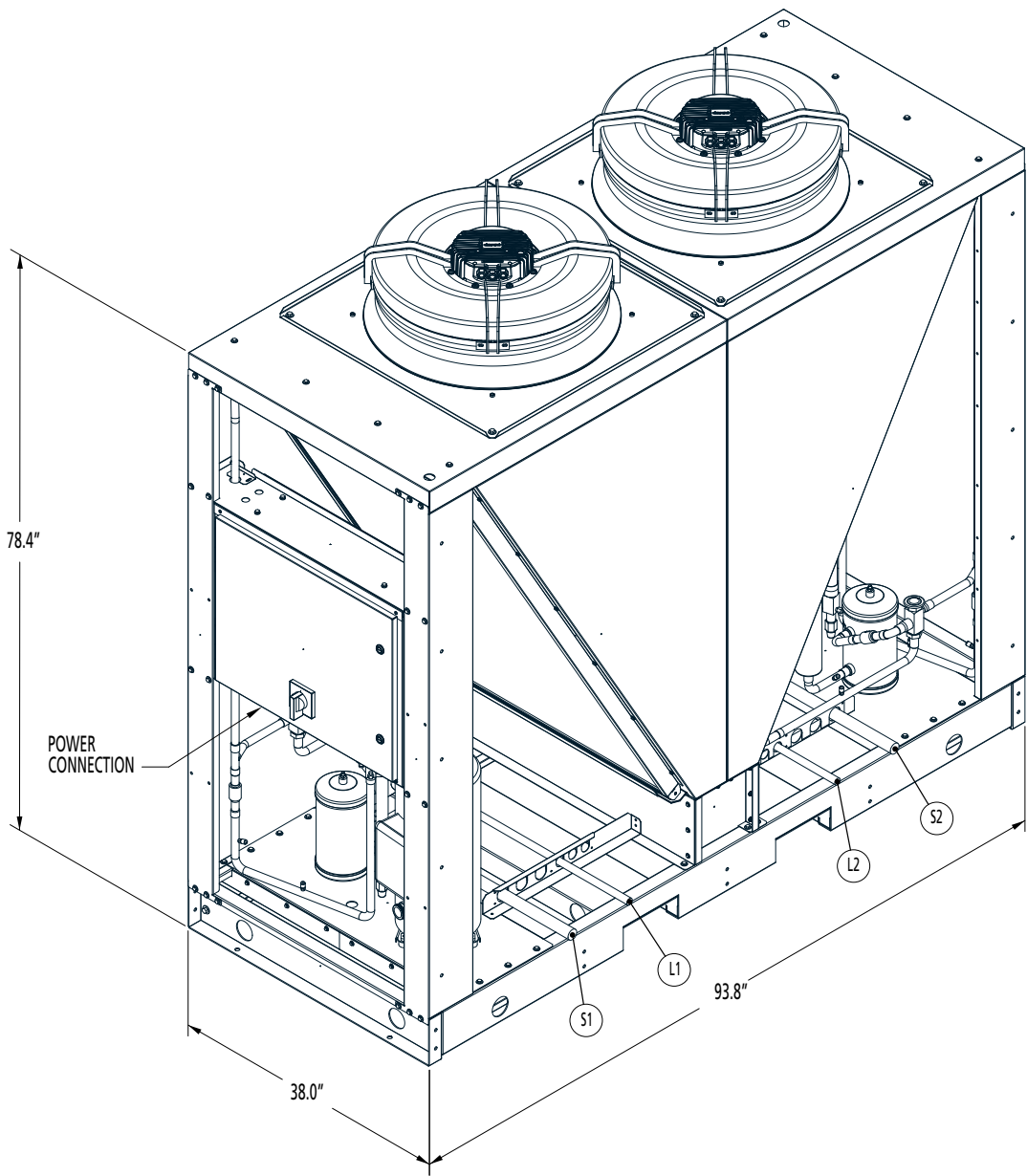
Remote Air-Cooled Condensing Units (Standard 95°F ambient at sea level)									
Model	400/3/50			460/3/60			575/3/60		
	FLA	MCA	MFS	FLA	MCA	MFS	FLA	MCA	MFS
RCU-070-A2	36.9	5039	60	35.3	49.7	60	28.1	37.3	50
RCU-115-A2	66.3	85.4	110	52.1	67.3	90	48.1	66.1	90
RCU-140-A4	73.7	97.2	110	70.5	94.7	110	56.2	71.2	80
RCU-230-A4	132.5	162.2	175	104.1	127.9	150	96.2	125.6	150
RCU-345-A6	198.8	239.1	225	156.1	188.5	200	144.3	185.1	200



STULZ CyberHandler

RCU-070/115-A2 Air Cooled Condensing Units

Dimensional Data - RCU-070/115-A2

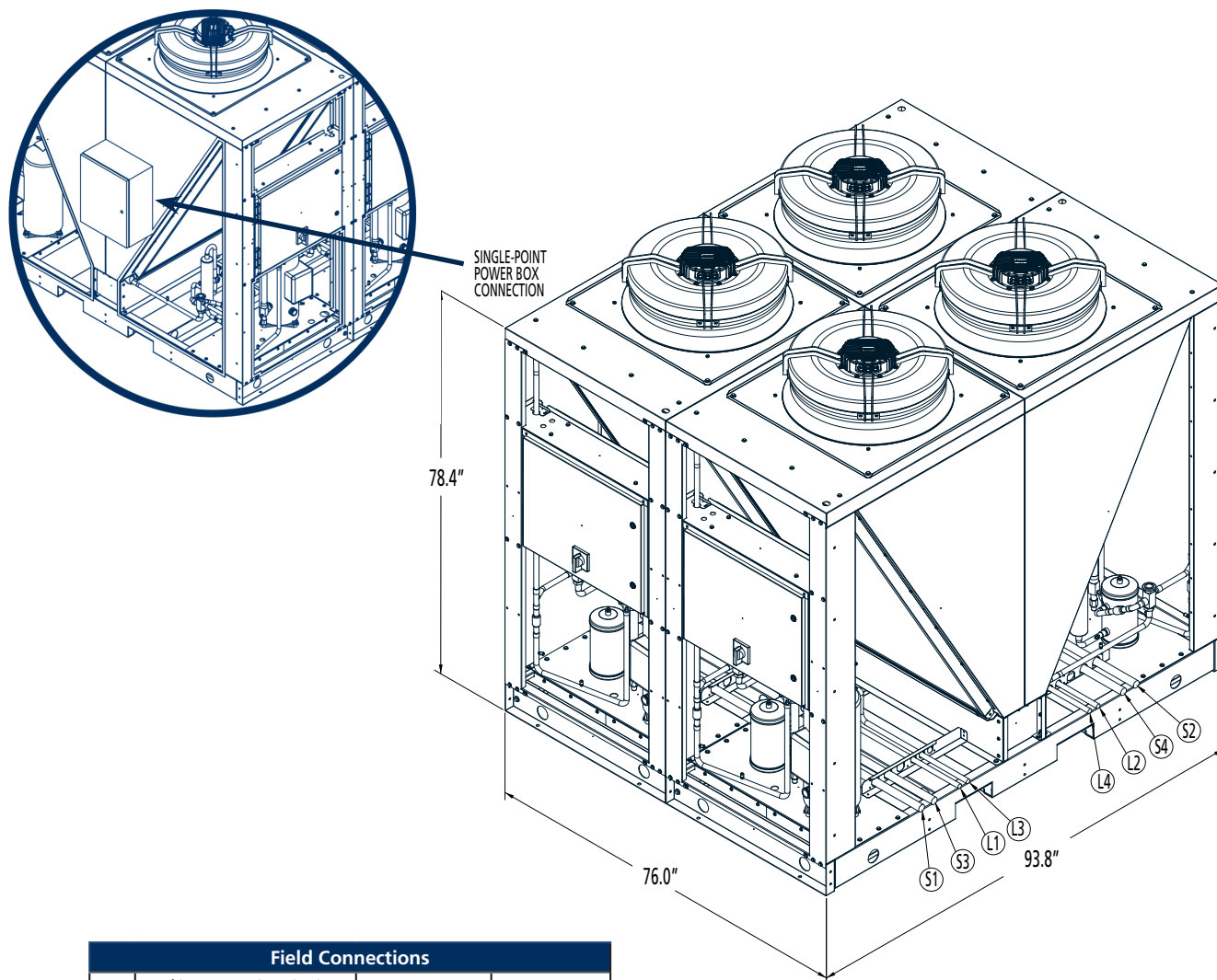


Field Connections			
S1	Refrigerant Suction Circuit 1	Copper Sweat	See Page 5
S2	Refrigerant Suction Circuit 2	Copper Sweat	See Page 5
L1	Refrigerant Liquid Circuit 1	Copper Sweat	See Page 5
L2	Refrigerant Liquid Circuit 2	Copper Sweat	See Page 5"



Remote Condensing Units

RCU-140/230-A4 Air Cooled Condensing Units



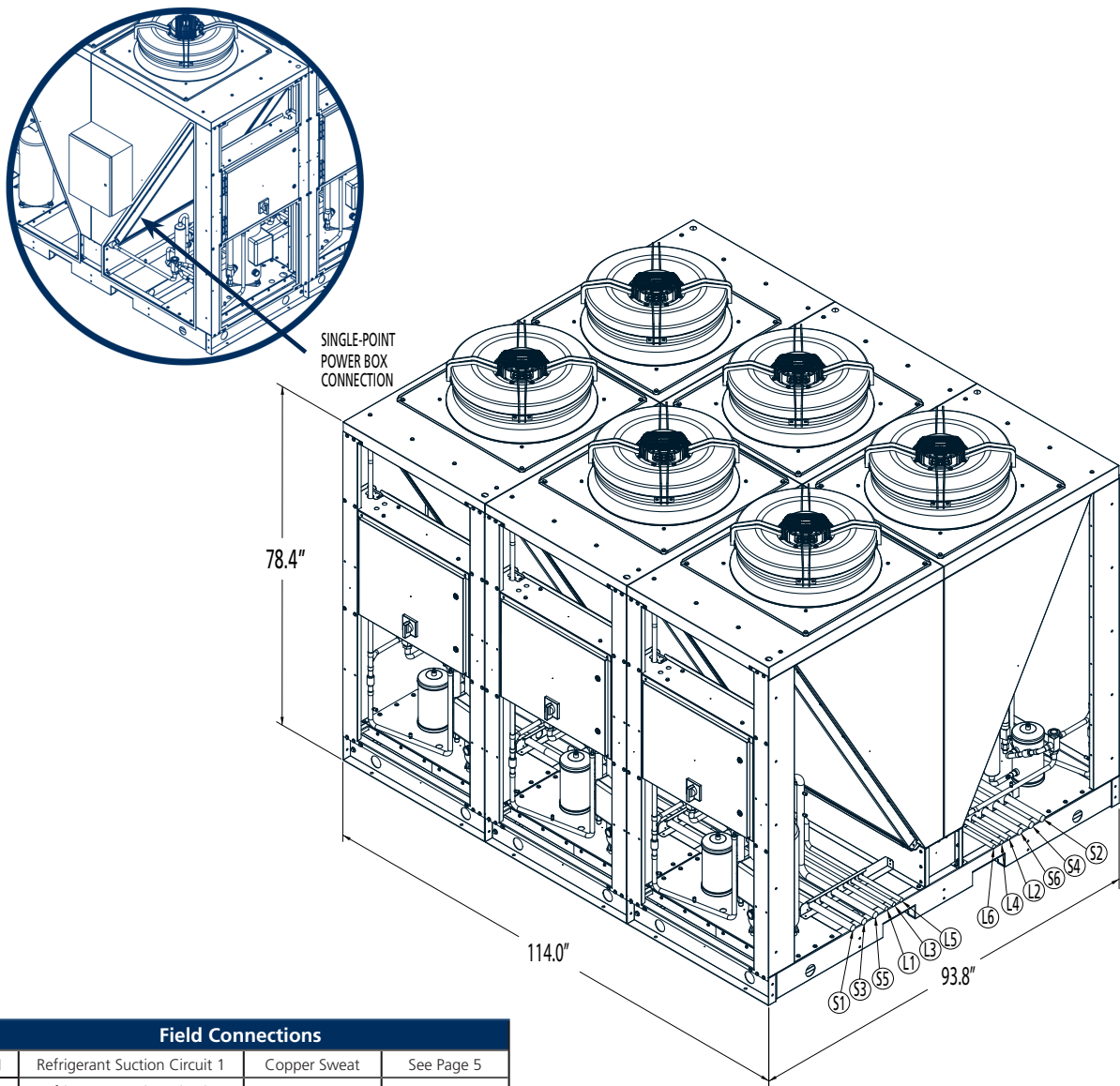
Field Connections			
S1	Refrigerant Suction Circuit 1	Copper Sweat	See Page 5
S2	Refrigerant Suction Circuit 2	Copper Sweat	See Page 5
S3	Refrigerant Suction Circuit 3	Copper Sweat	See Page 5
S4	Refrigerant Suction Circuit 4	Copper Sweat	See Page 5
L1	Refrigerant Liquid Circuit 1	Copper Sweat	See Page 5
L2	Refrigerant Liquid Circuit 2	Copper Sweat	See Page 5
L3	Refrigerant Liquid Circuit 3	Copper Sweat	See Page 5
L4	Refrigerant Liquid Circuit 4	Copper Sweat	See Page 5

Dimensional Data - RCU-140/230-A4

STULZ CyberHandler

RCU-345-A6 Air Cooled Condensing Units

Dimensional Data - RCU-345-A6



Field Connections			
S1	Refrigerant Suction Circuit 1	Copper Sweat	See Page 5
S2	Refrigerant Suction Circuit 2	Copper Sweat	See Page 5
S3	Refrigerant Suction Circuit 3	Copper Sweat	See Page 5
S4	Refrigerant Suction Circuit 4	Copper Sweat	See Page 5
S5	Refrigerant Suction Circuit 5	Copper Sweat	See Page 5
S6	Refrigerant Suction Circuit 6	Copper Sweat	See Page 5
L1	Refrigerant Liquid Circuit 1	Copper Sweat	See Page 5
L2	Refrigerant Liquid Circuit 2	Copper Sweat	See Page 5
L3	Refrigerant Liquid Circuit 3	Copper Sweat	See Page 5
L4	Refrigerant Liquid Circuit 4	Copper Sweat	See Page 5
L5	Refrigerant Liquid Circuit 5	Copper Sweat	See Page 5
L6	Refrigerant Liquid Circuit 6	Copper Sweat	See Page 5

STULZ CyberHandler Remote Air-Cooled Condensing Units

SUMMARY

The system shall be an outdoor air cooled condensing unit. The system's compressors shall be located with the condensing unit modules. The condensing unit cabinet shall also contain the condensing unit coils, fans, and condensing unit controller and control box.

The condensing unit shall be sized to provide the total heat of rejection of the system, at a 95°F DB ambient temperature, for the corresponding Stulz Air Handling Unit.

The condensing unit shall require only single point main power supply connection. The system shall ship from the Stulz factory with a dry nitrogen holding charge ready for field evacuation and refrigerant charging, unless the system is pre-packaged with a STULZ CyberHandler Air Handling Unit and shipped on a common skid, in which case the system shall be pre-charged at the factory. The condensing unit model number shall be, RCU-()-A() .

DESIGN REQUIREMENTS

The unit shall be designed for outdoor installation.

-30°F Flooded Head Pressure Control

The air cooled system shall incorporate a low ambient flooded head pressure control for year-round A/C system operation down to -30°F DB minimum ambient air temperature. Each refrigerant circuit shall be provided with a factory installed crankcase heater,

liquid refrigerant receiver and head pressure regulating valve for flooding the condensing unit.

Refrigerant

Condensing units shall be designed for use with R-410A.

QUALITY ASSURANCE

The manufacturer shall maintain a set of international standards of quality management to ensure product quality. Prior to shipment, each system shall be subjected to complete operational and functional testing based on predefined procedures.

CABINET

The condensing unit cabinet shall be constructed of a powder coated steel frame with hot dipped galvanized steel base. The condensing unit cabinet shall house the condensing unit coils, fans, fan guards, condensing unit controller and electric box. Receivers will be mounted on the cabinet frame and come pre-piped when required.

MECHANICAL COMPONENTS

AC And EC Axial Fans

The fans shall be direct driven, external rotor-motor integrated in an axial fan unit. The fan blades shall be constructed of a weather resistant, long life coated steel or aluminum. Each fan shall be low noise and low vibration. Each fan impeller shall be dynamically and statically balanced in two planes to minimize vibration during operation.

ELECTRICAL SYSTEM

The electrical system shall conform to National Electrical Code (NEC) requirements. In accordance with NEC Class II circuits, the control circuit shall be 24 volts AC and control circuit wiring shall not be smaller than 18 AWG. All wiring shall be neatly wrapped, run in conduit or cable trays, and routed in bundles. Each wire shall end with a service loop and be securely fastened by an approved method. Each wire in the unit shall be numbered for ease of service tracing.

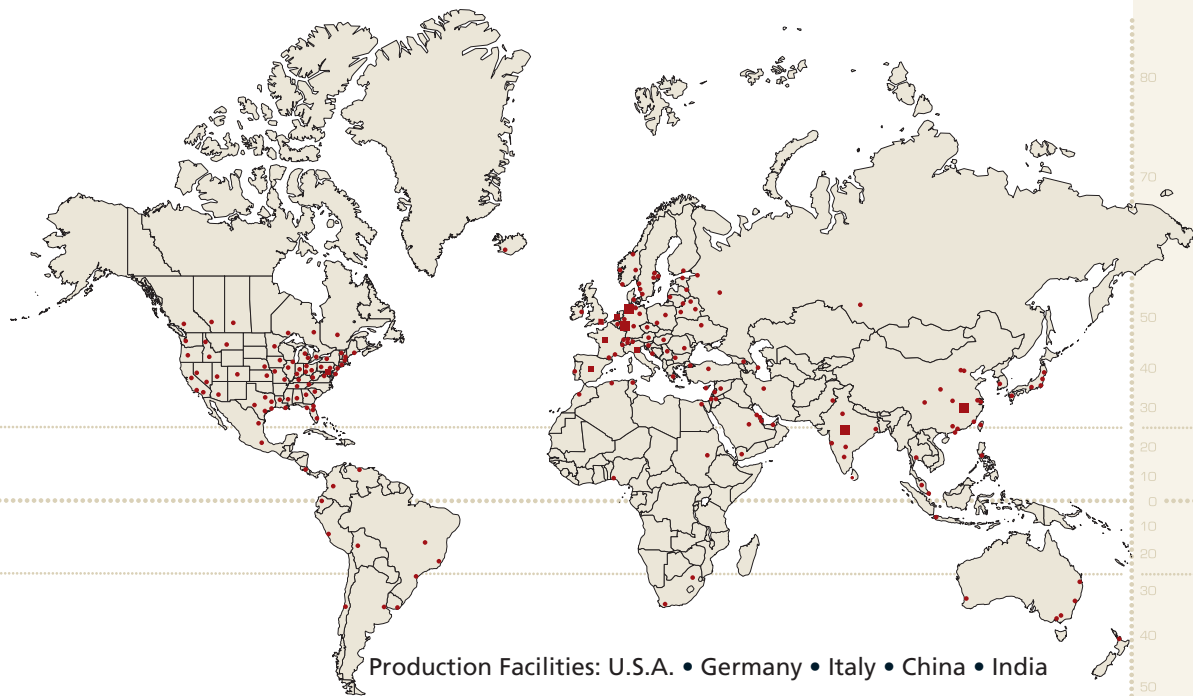
All electrically actuated components shall be easily accessible without reaching over exposed high voltage components or rotating parts. Each high voltage circuit shall be individually protected by circuit breakers or manual motor starters on all three phases. The blower motor shall have thermal and short circuit protection. Line voltage and 24 volt control circuit wiring shall be routed in separate bundles. The electric box shall include all the contractors, starters, fuses, circuit breakers and terminal boards required for operation of the condensing unit.

Main Power Service Switch

The condensing unit shall be provided with a unit-mounted main power circuit breaker, one per RCU module.

CODE CONFORMANCE

The unit shall be designed and built to conform to UL STD 1995, certified to (CAN/CSA C22.2 No. 236) and listed with ETL.



STULZ mission is to be the premier provider of energy efficient temperature and humidity control solutions for mission critical applications.

STULZ Air Technology Systems, Inc.
1572 Tilco Drive, Frederick, Maryland 21704
Phone: 301.620.2033 • Fax: 301.662.5487
E-mail: info@stulz-ats.com

www.STULZ.com



ISO 9001 Quality Management System - Requirements

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Specifications subject to change without notice.