

SmoothAir™ Row Cooling System

>> Foundation of Digital Future



A ATTOM

Efficiency Prefabricated

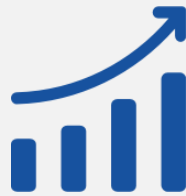
Why Work with Attom

We are experts with data center thermal management system



Quality

Products designed with heart featuring reliable quality and balanced cost to improve your business margin and performance.



Speed

A professional team always standby with service spirit and quick response to support your business agility.



Flexibility

Fully customizable as per your requirements to build your own product solution and boost your own business.

Certifications



Efficiency Prefabricated.



SmoothAir - Row Mount Split DX

Air cooled, row mount, split type, ideal for micro data center, integrated modular data center solutions.

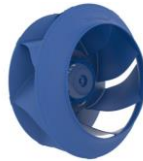
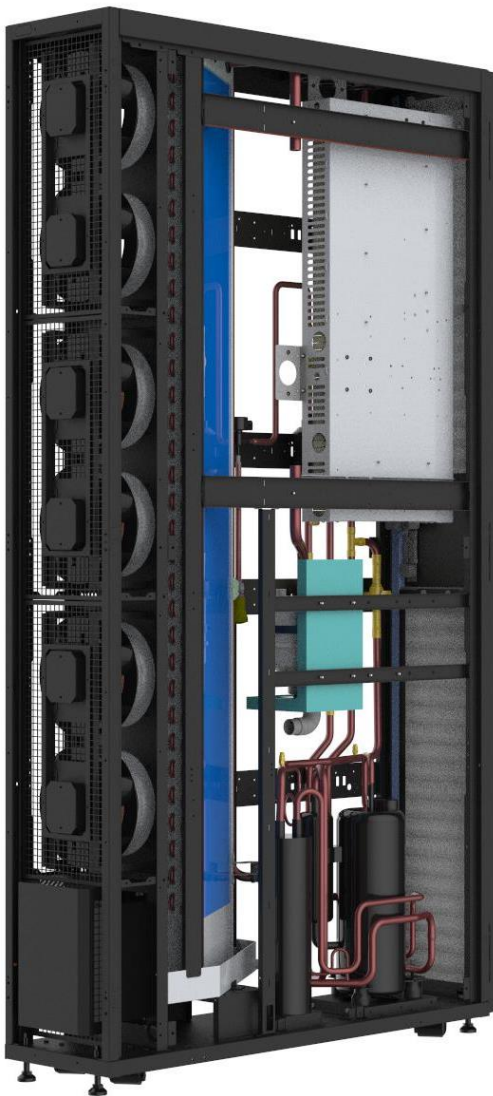
5.6kW – 90.1kW



- 1** Dynamically modulated cooling capacity with inverter compressor maintains temperature within envelop and prevent compressor from cycling during low heat load period.
- 2** Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
- 3** Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
- 4** R410A green refrigerant is highly efficient and no ODP. Optional with R134a refrigerant for high ambient site up to 55C.
- 5** Copper/water piping support bottom and top connections.
- 6** Airflow direction is configurable upon order for easier integration with different types of data center layout.

SmoothAir - Row Mount Split DX

The units designed with top brands components to realize leading level reliability and efficiency.



EC Fan

EC Fan modulates airflow precisely matching heat load while saving energy by adjusting fan speed.



Smart Controller

Intelligent controller automatically monitoring and adjusting the components outputs in the optimized balance.



Electronic Expansion Valve

EEV (electronic expansion valve) precisely maintain the refrigerant flow in the efficient way reducing the compressor/pump power consumption.



Reliable Compressor

Inverter compressor adjusting capacity of whole system per heat load requirement, saving energy during part load application. Working up to 55C ambient with R134a refrigerant option.

SmoothAir - Row Mount Split DX

Technical Data

| Indoor Unit | S-005RA | S-007RA | S-012RA | S-017RA | S-020RA | S-025RA | S-030RA | S-040RA | S-050RA | S-065RA | S-075RA | S-090RA |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Total Cooling-kW | 5.6 | 7.6 | 12.8 | 17.6 | 21.2 | 25.1 | 31.1 | 40.9 | 51.2 | 65.7 | 76.8 | 90.1 |
| SHR-% | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Air Volume-m3/h | 2000 | 2250 | 2400 | 4500 | 4920 | 5000 | 5800 | 8000 | 10000 | 12000 | 13500 | 16000 |
| Mount Type | Row | Row | Row | Row | Row | Row | Row | Row | Row | Row | Row | Row |
| Cooling Type | DX | DX | DX | DX | DX | DX | DX | DX | DX | DX | DX | DX |
| Height-mm | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| Depth-mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Width-mm | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 600 | 600 | 600 | 900 | 900 |
| Weight-kg | 210 | 213 | 233 | 253 | 258 | 260 | 320 | 360 | 420 | 460 | 540 | 620 |
| Reheat-kW | 3.0 | 3.0 | 3.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 |
| Hum.(optional)-kg/h | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 3 | 3 | 3 | 3 | 3 | 3 |
| Power Input ¹⁾ | 208-240V /50-60Hz /1Ph-2Ph | 208-240V /50-60Hz /1Ph-2Ph | 208-240V /50-60Hz /1Ph-2Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph | 380-415V /50-60Hz /3Ph |
| FLA-A ¹⁾ with heating | 28.2 | 37.3 | 48.7 | 27.0 | 26.7 | 27.9 | 34.6 | 37.7 | 48.1 | 60.6 | 70.8 | 84.6 |
| FLA-A ¹⁾ with hum. | 33.3 | 42.4 | 53.8 | 32.1 | 31.8 | 33.0 | 39.7 | 47.9 | 58.3 | 70.8 | 81.0 | 94.8 |
| Power Input ²⁾ | - | - | 380-415V /50-60Hz /3Ph | 200-230V /50-60Hz /3Ph | 200-230V /50-60Hz /3Ph | 200-230V /50-60Hz /3Ph | 200-230V /50-60Hz /3Ph | 200-230V /50-60Hz /3Ph | - | - | - | - |
| FLA-A ²⁾ with heating | - | - | 20.9 | 49.4 | 48.8 | 51.1 | 63.2 | 68.9 | - | - | - | - |
| FLA-A ²⁾ with hum. | - | - | 22.0 | 52.5 | 52.0 | 54.2 | 66.4 | 75.1 | - | - | - | - |
| Power Input ³⁾ | - | - | - | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph | 460V /60Hz /3Ph |
| FLA-A ³⁾ with heating | - | - | - | 22.3 | 22.1 | 23.1 | 28.6 | 31.1 | 39.7 | 50.1 | 58.5 | 69.9 |
| FLA-A ³⁾ with hum. | - | - | - | 26.5 | 26.3 | 27.3 | 32.8 | 39.6 | 48.2 | 58.6 | 66.9 | 78.4 |
| Standard Outdoor | | | | | | | | | | | | |
| Unit Model | KSF08AN | KSF12AN | KSF18AN | KSF24AN | KSF32AN | KSF38AN | KSF42AN | KSF52AN | KSF62AN | KSF85AN | KSF52AN | KSF62AN |
| Unit Qty | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |

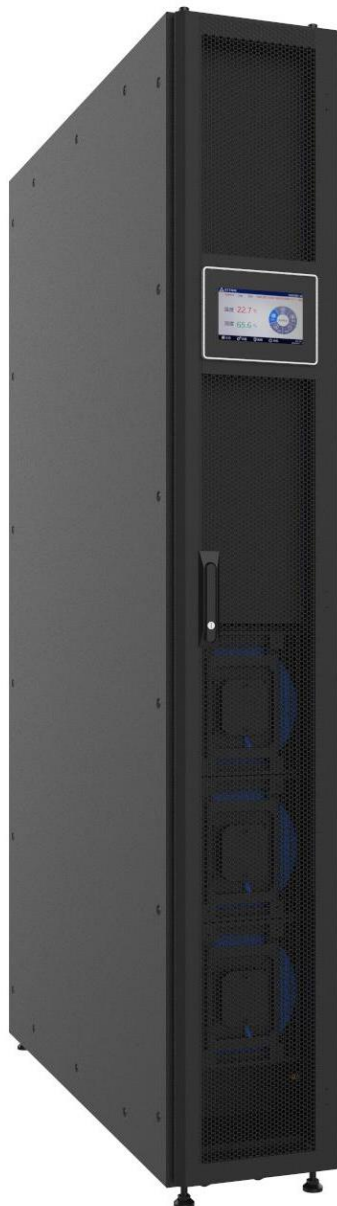
Notes:

1. Air flow is based upon standard fan speed setting. Fan modulates per real loads.
2. Cooling Capacity based on 37°C/24%RH return air and 45°C condensing temperature.
3. FLA of indoor unit includes FLA of outdoor unit, and outdoor unit power connected from indoor unit.
4. SNMP monitoring port, dual power input, and leaking detection are optional.
5. Standard unit works -15°C above outdoor temperature, select low temperature kit to run for -35C outdoor ambient temperature.

SmoothAir - Row Mount Package DX

Air cooled, row mount package self-contained type, ideal for data center without space for outdoor condenser

5.6kW – 10.8kW



- 1 Dynamically modulated cooling capacity with inverter compressor maintains temperature within envelope and prevent compressor from cycling during low heat load period.
- 2 Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
- 3 Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
- 4 R410A green refrigerant is highly efficient and no ODP.
- 5 Built in condenser with EC fan speed adjustable to meet tight space application. Optional with duct hose to be connecting to air vent.
- 6 Easy to change G4 air filter and sealed doors help to build a clean and quiet MDC.
- 7 Easy to touch electric box makes service convenient.
- 8 Optional with SNMP communication, condensate pump, water leaking kit.

SmoothAir - Row Mount Package DX

Technical Data

| Indoor Unit | S-005PA | S-007PA | S-010PA |
|---------------------------------|--------------------------|--------------------------|--------------------------|
| Total Cooling-kW | 5.6 | 7.6 | 10.8 |
| SHR-% | 100 | 100 | 100 |
| Air Volume-m ³ /h | 2000 | 2250 | 2500 |
| Mount Type | Row | Row | Row |
| Cooling Type | DX Self-Contained | DX Self-Contained | DX Self-Contained |
| Height-mm | 2000(42U) | 2000(42U) | 2000(42U) |
| Depth-mm | 1200 | 1200 | 1200 |
| Width-mm | 300 | 300 | 300 |
| Weight-kg | 210 | 213 | 233 |
| Reheat-kW | 3.0 | 3.0 | 3.0 |
| Hum.(optional)-kg/h | 1.5 | 1.5 | 1.5 |
| Power Input ¹⁾ | 208-240V/50-60Hz/1Ph-2Ph | 208-240V/50-60Hz/1Ph-2Ph | 208-240V/50-60Hz/1Ph-2Ph |
| FLA - A | 28.2 | 37.3 | 48.7 |
| FLA - A ¹⁾ with hum. | 33.3 | 42.4 | 53.8 |

Notes:

- 1, Air flow is based upon unit speed setting. Fan modulates per real loads.
- 2, Cooling Capacity based on 37°C/24%RH return air and 35°C outdoor temperature.
- 3, SNMP monitoring port, dual power input, condenser air duct and leaking detection are optional.
- 4, Standard unit works -15°C above outdoor temperature, select low temperature kit to run for -35C outdoor ambient temperature.

SmoothAir - Row Mount Chilled Water

Chilled water, row mount, ideal for modular data center and container data center solutions.

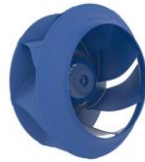
28.9kW – 65.8kW



- 1** Dynamically modulated cooling capacity with motorized ball valve maintains temperature within envelop and prevent water from cycling during low heat load period.
- 2** Air flow modulates with EC fans to match IT equipment requirements. Each fan module is easy to change with quick couple connections.
- 3** Precision cooling controller monitors and protects unit constantly. Easy to be integrated into BMS to display, control and manage the system.
- 4** Touch type color display panel to easily view and control the units.
- 5** Copper piping adopts quick connections and supports bottom and top connections.
- 6** Easy to change G4 air filter and sealed doors help to build a clean and quiet MDC.

SmoothAir - Row Mount Chilled Water

The units are designed with top-brand components to optimize cooling performance within data centers.



EC Fan

EC Fan modulates airflow precisely matching heat load while saving energy by adjusting fan speed.



Smart Controller

Intelligent controller automatically monitoring and adjusting the components outputs in the optimized balance.



Water Valve

ball valve is easily installed with just one bolt. The actuator features a manual button for manual operation and has full-stroke automatic overload protection, eliminating the need for limit switches.

SmoothAir - Row Mount Chilled Water

Technical Data

Technical Data

| Unit | S-025RC | | | S-045RC | | | S-065RC | | |
|---|--------------------------|-------|-------|----------------------|-------|-------|----------------------|-------|-------|
| Water Temperature inlet/outlet - °C | 7/12 | 10/15 | 13/18 | 7/12 | 10/15 | 13/18 | 7/12 | 10/15 | 13/18 |
| Total Capacity – kW (45°C/12%RH Return Air) | 47.1 | 43.2 | 39.3 | 76.0 | 69.6 | 63.2 | 107.6 | 98.6 | 89.6 |
| Sensible Capacity –kW (45°C/12%RH Return Air) | 47.1 | 43.2 | 39.3 | 76.0 | 69.6 | 63.2 | 107.6 | 98.6 | 89.6 |
| Total Capacity –kW (40°C/18% Return Air) | 41.0 | 36.8 | 32.9 | 65.4 | 59.0 | 52.4 | 93.2 | 84.0 | 74.8 |
| Sensible Capacity –kW (40°C/18% Return Air) | 40.8 | 36.8 | 32.9 | 65.4 | 59.0 | 52.4 | 93.0 | 84.0 | 74.8 |
| Total Capacity –kW (37°C/24% Return Air) | 38.8 | 33.0 | 28.9 | 59.8 | 52.4 | 46.0 | 87.0 | 75.0 | 65.8 |
| Sensible Capacity –kW (37°C/24% Return Air) | 36.3 | 33.0 | 28.9 | 59.2 | 52.4 | 46.0 | 83.2 | 75.0 | 65.8 |
| Total Capacity –kW (35°C/26%RH Return Air) | 35.9 | 30.3 | 26.3 | 55.4 | 48.2 | 41.6 | 80.4 | 69.0 | 59.6 |
| Sensible Capacity –kW (35°C/26%RH Return Air) | 33.8 | 30.3 | 26.3 | 54.8 | 48.2 | 41.6 | 77.4 | 69.0 | 59.6 |
| Total Capacity –kW (32°C/30%RH Return Air) | 31.7 | 26.3 | 22.2 | 48.4 | 41.4 | 34.8 | 71.0 | 59.8 | 50.4 |
| Sensible Capacity –kW (32°C/30%RH Return Air) | 29.9 | 26.3 | 22.2 | 48.2 | 41.4 | 34.8 | 68.2 | 59.8 | 50.4 |
| Total Capacity –kW (30°C/34%RH Return Air) | 29.1 | 23.6 | 19.5 | 44.4 | 37.0 | 30.4 | 65.4 | 53.6 | 44.2 |
| Sensible Capacity –kW (30°C/34%RH Return Air) | 27.1 | 23.6 | 19.5 | 43.6 | 37.0 | 30.4 | 62.0 | 53.6 | 44.2 |
| Air Volume -m3/h | 4800 | | | 9000 | | | 11400 | | |
| Mount Type | Row | | | Row | | | Row | | |
| Height –mm | 2000(42U) | | | 2000(42U) | | | 2000(42U) | | |
| Depth –mm | 1100 | | | 1100 | | | 1100 | | |
| Width –mm | 300 | | | 600 | | | 600 | | |
| Weight –kg | 190 | | | 330 | | | 400 | | |
| Reheat-kW | 3.0 | | | 3.0 | | | 3.0 | | |
| Hum.(optional) -kg/h | 1.5 | | | 1.5 | | | 1.5 | | |
| Power Input ¹⁾ | 208-240V/50-60Hz/1Ph-2Ph | | | 380-415V/50-60Hz/3Ph | | | 380-415V/50-60Hz/3Ph | | |
| FLA –A ¹⁾ with heating | 22.7 | | | 13.7 | | | 16.0 | | |
| FLA –A ¹⁾ with hum. | 27.8 | | | 18.8 | | | 26.1 | | |
| Power Input ²⁾ | - | | | 200-230V/50-60Hz/3Ph | | | 200-230V/50-60Hz/3Ph | | |
| FLA –A ²⁾ with heating | - | | | 25.1 | | | 29.2 | | |
| FLA –A ²⁾ with hum. | - | | | 28.1 | | | 35.5 | | |
| Power Input ³⁾ | - | | | 460V/50-60Hz/3Ph | | | 460V/50-60Hz/3Ph | | |
| FLA –A ³⁾ with heating | - | | | 11.3 | | | 13.2 | | |
| FLA –A ³⁾ with hum. | - | | | 15.5 | | | 21.5 | | |

Notes:

1. Air flow is based upon standard fan speed setting. Fan modulates per real loads.
2. SNMP monitoring port, dual power input, 3-way valve and leaking detection are optional.



One-stop Provider of Precision Cooling

Air Cool Platform



Rack Cool

- 3.9- 12kW Split type
- 3.5-5.5kW Package Type

Ceiling Cool

- 12- 36kW Split Type

Wall Cool

- 1.5- 30kW Package Type

Row Cool

- 5.6- 90kW Split Type
- 5.6 – 10.8kW Package Type

Room Cool

- 5.5- 120kW Split DX Type
- 24 – 260 kW CW Type

Liquid Cool Platform



Direct-to-Chip Liquid Cool

- 100kW CDU Rack Mount Type
- 350 – 1500kW CDU Row Mount Type, dry cooler, and water connection kits.

RDx

- 25kW Split DX Type
- 30 – 65 kW CW Type

Immersion Liquid Cool

- 10kW – 2MW immersion cooling tanks, dry coolers and water connection kits.

Efficiency Prefabricated.

We believe the world is
being totally connected.
The digital connections are
creating smart intelligence
and a better future.

We design and deliver
green efficient data
center infrastructure
products to build
foundation of digital
future.



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