



Designing the Proper DOAS Schedule

Knowing what parameters to schedule is an **essential** part of specifying DOAS (Dedicated Outdoor Air System) equipment. When it comes to bid day, you want to make sure that the right DOAS unit is quoted (and ordered) to meet the performance and expectations of your design.

EQUIPMENT SCHEDULE

Energy Recovery						Supply Fan					
Mark Name	Qty	Model	ERT Type	Mounting Location	Weight	Outdoor Air Volume	Supply ESD ¹	Supply TSD ¹	F RPM	Supply BHP ¹	Supply Motor
DOAS-1	1	RVE-40-41-30H-15A-J	Wheel	Outdoor	3,447 lb	4,000 CFM	0.5 in. wg	3.574 in. wg	2208	3.719	(1) 5 hp
Exhaust Fan						Electrical					
Exhaust Air Volume	Exhaust ESD ¹	Exhaust TSD ¹	F RPM	Exhaust BHP ¹	Exhaust Motor	Voltage	Frequency	Phase	Line MCA	Line BCP ¹	
4,000 CFM	0.5 in. wg	2.057 in. wg	2025	2.969	(1) 3 hp	480	60	3	43.8	50	

Design Parameters

- Summer/Winter Dry Bulb & Wet Bulb
- Summer/Winter Return Air Dry Bulb & Wet Bulb

What goes into the unit (outdoors/indoors) will affect heating, cooling, and energy recovery performance. It is critical to list those conditions to ensure the proper unit is being selected and to avoid any load issues once installed in the field.

Outdoor Air Volume

For partial recirculation (mixed air) conditions, it is also important to list the outdoor air volume as this value is often forgotten. A mixed air condition will change the entering air conditions to the cooling/heating device and is an important value when sizing equipment.

Energy Recovery Performance

- Minimum ERR (Enthalpy Recovery Ratio aka Effectiveness) as a percentage
- Wheel Leaving Air Temperatures (Summer/Winter)

Not all energy wheels are the same! To ensure that the right energy wheel is selected, specifying a benchmark that other manufacturers have to meet is critical. This ensures that you will recover the energy required to meet your designed heating/cooling loads.

Radiated Sound Values per AMCA Standard 320-08

We all know that silence is golden and sound is critical in certain applications.

Minimum ISMRE (Integrated Seasonal Moisture Removal Efficiency)

An ISMRE value rates the performance of a 100% OA DX-unit and depicts how the unit operates at different times of the year. This value is specific to 100% outside air units and is required to show compliance with ASHRAE Standard 90.1.

Equipment schedules with this information can be generated from Greenheck's selection programs CAPS and eCAPS. Schedules are in a PDF or CSV file that can be imported into Excel & AutoCAD which helps save you time and energy.

For more information on DOAS equipment schedules, please contact your local Brucker Sales Representative.

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