

STS Exhaust Fan Requirements

The STS equipment must be used in a controlled temperature environment. Maintain equipment room temperature between 40 and 105 degrees Fahrenheit. Adequate forced ventilation must be provided across the unit by placing an appropriate exhaust fan opposite an equivalent air intake vent. The fan should be higher than the associated intake vent.

Recommended minimum exhaust fan requirements are as follows:

STS Unit	Minimum CFM
STS-3	500 CFM
STS-5	600 CFM
STS-15	800 CFM
STS-6	1000 CFM
STS-10	1200 CFM
STS-30	1600 CFM

The following are examples of an exhaust fan in the Wall Exhaust Ventilators and intake vents (louvers) found in the Wall Louvers sections from McMaster-Carr (<http://www.mcmaster.com>). The first step is to get the appropriately sized exhaust fan. The 10" blade diameter, 115 VAC, exhaust fan model number 2187K15 produces 600 CFM. This exhaust fan will be good for the STS-3 and the STS-5. This exhaust fan needs an intake louver to replace the air that the fan removes from the room. The intake louver needs to be approximately three times the area of the exhaust fan. In the case of a 10" exhaust fan you will need a louver that is approximately 14" x 18" model number 2038K58 or 16.5" x 16.5" model number 2037K671.

The following are examples of an exhaust fan in the Fans Commercial & Industrial and intake vents (louvers) found in the Fans Shutters sections from Grainger (<http://www.grainger.com>). The first step is to get the appropriately sized exhaust fan. The 12" blade diameter, 115 VAC, exhaust fan stock number 2C791 produces 820 CFM. This exhaust fan will be good for the STS-15. This exhaust fan needs an intake louver to replace the air that the fan removes from the room. The intake louver needs to be approximately three times the area of the exhaust fan. In the case of a 12" exhaust fan you will need a louver that is approximately 18" x 20".

Note: If the exhaust fan is venting to the outside of the building precautions should be taken to protect the fan and equipment room from the elements and animals. This can be accomplished by getting a fan with a built in shutter or adding a shutter or shroud to a fan without one.