

To: All Fujitsu Sales Organizations

Subject: Wind Baffle Use

November 1st, 2020

Introduction

The following discussion of Wind Baffle use applies to all Fujitsu Halcyon and Airstage J-Series outdoor units, which feature a horizontally mounted fan and motor. Wind baffle use does not apply to Airstage V-Series outdoor units, with a vertically mounted fan and motor.

Discussion

“Windmilling” is an occurrence where, when the outdoor unit is off, the fan rotates in the opposite direction. This condition is caused by wind gradient, or wind shear conditions. Typically, windmilling may occur at threshold speeds of 25 MPH (22 knots) and higher, when the outdoor unit fan is at or near perpendicular to the wind direction. Windmilling which occurs when the outdoor unit remains OFF is not a concern. However, when the unit turns on, the fan motor torque may not be able to overcome the fan inertia, resulting in a nuisance shutdown of the system.

Installation of wind baffles prevent the outdoor unit fan from “windmilling” in the opposite direction, by effectively disrupting the wind path into the outdoor unit. Small, resultant eddy currents will have minimal, if no contributing affect to windmilling.

Application

- Halcyon- All AOU* outdoor units
- Airstage- All J-Series outdoor units
 - J-IIS (shown)
 - J-II
 - J-III



Note: Wind baffle use does not affect the low ambient cooling operating range:

Wind Speed Categorization

Wind baffle use should be considered in any location where Fujitsu outdoor units can be exposed to high wind conditions. The Beaufort Scale below can be used as a reference for quantifying wind speed conditions. Generally, any geographical location where a Halcyon or J-Series outdoor unit is to be installed with sustained winds of a Beaufort number of 6 or higher, should consider wind baffle use.

Beaufort Number	Avg. Wind Speed (MPH)	Description
0	0 - 1	Calm
1	1 - 3	Light air
2	3 - 7	Light breeze
3	7 - 12	Gentle breeze
4	12 - 17	Moderate breeze
5	17 - 24	Fresh breeze
6	24 - 30	Strong breeze
7	30 - 38	High wind, near gale
8	38 - 46	Gale
9	46 - 54	Severe gale
10	54 - 63	Storm
11	63 - 73	Violent storm
12	73 - 99	Hurricane force

Wind baffle application may also be discretionary based upon unit location and regional conditions. The Beaufort Scale is to be used as a general reference only.

Model Selection

Airstage J-Series

Model Number	Wind Baffle Number
AOU36RLAVS	UTZ-DUWBUA
AOU48RLAVS	
AOU36RLAVM	UTZ-DUWBTA*
AOU48RLAVM	
AOU60RLAVM	
AOU72RLAVL	UTZ-DUWBRA*
AOU96RLAVL	
AOU120RLAVL	

*Package contents includes (2) wind baffled for dual fan units.

Halcyon

AOU9RL2	UTZ-DUWBCA
AOU12RL2	
AOUG09LMAS1	UTZ-DUWBG2A
AOUG12LMAS1	
AOUG09LZAS1	UTZ-DUWBG3A
AOUG12LZAS1	
AOUG15LZAS1	
AOUG09LZAH1	
AOUG12LZAH1	
AOUG15LZAH1	
AOU18RLXFZ	UTZ-DUWBVWA
AOU24RLXFZ	
AOU45RLXFZ	UTZ-DUWBUA
AOU45RLXFZ	
AOU30RLXEH	UTZ-DUWBYA*
AOU42RGLX	
AOU48RGLX	
AOU18RLXFW1	UTZ-DUWBVWA
AOU24RLXFW1	
AOU18RLXFWH	
AOU24RLXFWH	
AOU30RLXB	
AOU36RLXB	
AOU18RLX	
AOU24RLX	
AOU36RLX	
AOU18RLXFZH	
AOU24RLXFZH	
AOU36RLXFZH	
AOU18RGLX	
AOU24RGLX	
AOU30RGLX	
AOU36RGLX	

*Package contents includes (2) wind baffled for dual fan units.

Unit clearances

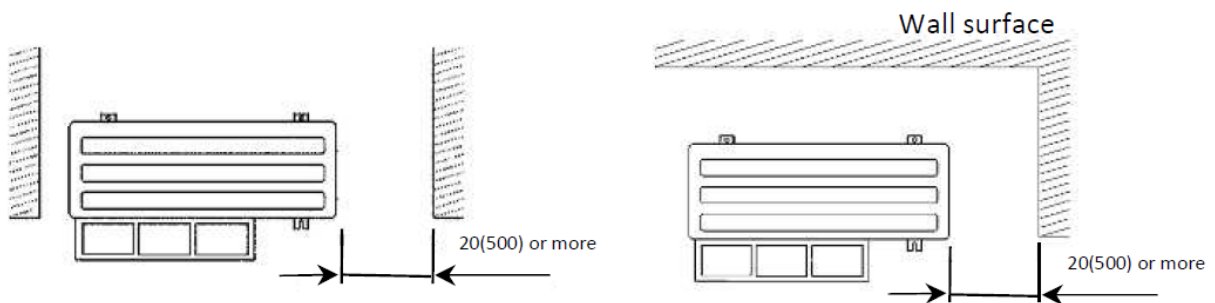
Application and installation of wind baffles will affect unit side clearances only. There are no changes to front and rear clearances when using the wind baffles. The clearances stated in this section, when installing wind baffles, supersedes clearances detailed in the Installation Manual and Design and Technical Manuals.

Side clearance- See Fig. 1

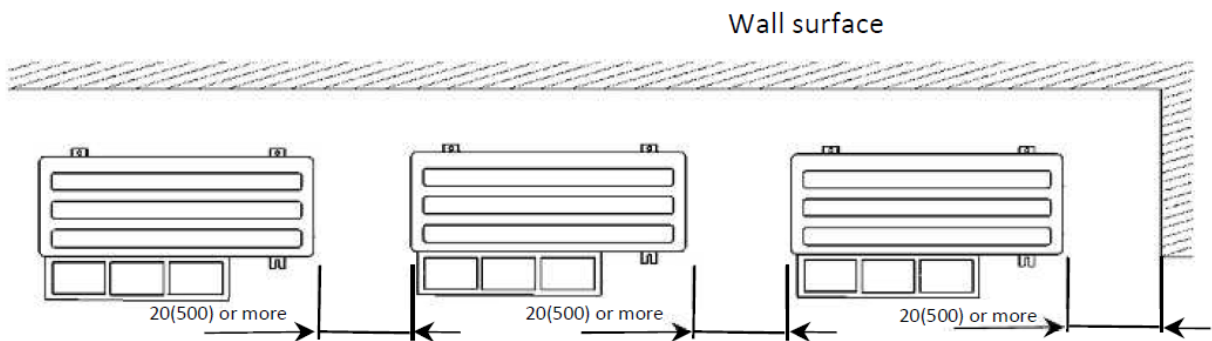
- a. (1) One-unit installation- Minimum side clearance to a wall or other obstruction is increased to 20" (500mm)
- b. (2) Multiple unit installation- Minimum side clearance between units increased to 20" (500mm)

Fig. 1.

(1) One unit Installation Unit : in (mm)



(2) Multiple unit Installation Unit : in (mm)



Installation

Please refer to the applicable wind baffle Installation Manual for each model. Use only the provided self-tapping screw(s) provided.

IMPORTANT- USE OF SCREWS OTHER THAN PROVIDED, OR LOCATING SCREWS IN LOCATIONS OTHER THAN DETAILED IN THE WIND BAFFLE INSTALLATION MANUAL MAY RESULT IN SEVERE OUTDOOR UNIT DAMAGE. IF A REPLACEMENT SCREW IS NECESSARY, USE ONLY A #8, 1/2" LENGTH.

For additional information or for any questions regarding this bulletin, please contact your local Fujitsu Distributor, Manufacturers Representative or your Fujitsu Sales Representative.