

# TWYER 4" (110mm) STORM RESISTANT HIDDEN MULLION LOUVER MODEL TWY420S



## TEST TO STANDARD ANSI/AMCA 500-L-2007 WIND DRIVEN RAIN TEST

### DESIGN DATA:

To maintain a **CLASS A (99%) effectiveness** rating with a 13m/s wind speed and a rainfall rate of 75mm/hr

- Maximum intake core velocity 0.5m/s
- Maximum intake free area velocity 1.0m/s
- Intake pressure drop 12pa
- Intake capacity 0.64m<sup>3</sup>/s

\*louver tested with 1m<sup>2</sup> core area, mill finish and no screen

Free Area Ratio: 60% (Excluding frame factor)

### SUGGESTED SPECIFICATIONS:

**1. GENERAL:** Furnish and install where indicated on the drawings TWYER 4" (110mm) STORM RESISTANT HIDDEN MULLION TYPE LOUVER MODEL TWY420S as manufactured by TWYER LIMITED.

Complete details shall be submitted to the architect for approval prior to fabrication.

**2. MATERIAL:** Frames and blades to be fabricated from Stainless Steel grade 316 with hairline finished. Blade to be minimum 0.04 (1.03mm) thick. Blade spacing to be at a pitch of 2" (50mm) and secured directly to jambs and mullions of rear module via blade braces at normal 48 (1219mm) centres which depends on the wind load calculation. Louvers design to incorporate a flat front edge of minimum 12mm to blend with the building line and to be a drainable system with architectural line front appearance Louvers to be installed in accordance with the manufacturer's recommended procedures to ensure complete water integrity performance of louver system. Louvers to be furnished with 0.05" (12.7mm) mesh screen if necessary.

**3. STRUCTURAL DESIGN:** Structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than \_\_\_\_ kPa (Note: If this paragraph is omitted or if the design wind load is not specified, the louvers will be manufactured in self-supporting units up to a maximum of 1219 mm wide by 2400mm high. Any additional structural supports required to adequately secure these unit within the opening shall be the responsibility of others.

**4. FINISH:** Louvers shall be in Stainless Steel Grade 316 with hairline finishes.



**TWY420S** Discharge Coefficient  
Cd = 0.310 (Class 2)

### WIND DRIVEN RAIN PERFORMANCE:

The louver test was based on a 39.370" (1.00m) x 39.370" (1.00m) core area unit tested at a rainfall rate of 3 inches per hour (75mm/hr) and with a wind directed to the face of the louver at a velocity 29.1 mph (13m/s). The test data shall show the water penetration effectiveness rating at each corresponding ventilation rate.

|                                      |             |     |                 |     |                 |     |             |      |
|--------------------------------------|-------------|-----|-----------------|-----|-----------------|-----|-------------|------|
| Core Ventilation Rate (m/s):         | 0.0         | 0.5 | 1.0             | 1.5 | 2.0             | 2.5 | 3.0         | 3.5  |
| Core Ventilation Rate (ft/min):      | 0           | 98  | 195             | 293 | 391             | 487 | 585         | 682  |
| Free Area Ventilation Rate (ft/min): | 0           | 198 | 396             | 595 | 794             | 990 | 1189        | 1386 |
| Rating effectiveness:                | A           | A   | B               | B   | C               | C   | D           | D    |
| Effectiveness Rating:                | A=1 to 0.99 |     | B=0.989 to 0.95 |     | C=0.949 to 0.80 |     | D=0.80 to 0 |      |