

August-2023-DYSMD

# DAMPER



**DONG YANG AIR-CONDITIONING Co., Ltd.**

## APPLICATION

- Low Leakage when shut-off
- Block smoke in the ducts in case of fire

## FEATURES OF DYSMD

- **Low Pressure Resistant Blade Shape**  
Diamond shaped blade reduces the pressure drop and sound level across the damper.
- **Soft and Contact-easy Blade Seal**  
Soft and contact-easy blade seal gives good contact with adjacent blade seal and this reduces leakage rates.
- **Round Shaped Stainless Steel Jamb Seal**  
Stainless steel material jamb seal is shaped round and has good elasticity. This gives smooth sliding and good contact between the blades and jamb seal.
- **Good Persistence**  
Constructed with SGHC(Gal'v steel) and stainless materials. Special painting and coating are also available on option.
- **Air Performance and Leakage Rate AMCA Licensed**  
Ratings of leakage and pressure drop shown results from the tests based on AMCA Publication 511.

## STANDARD CONSTRUCTION

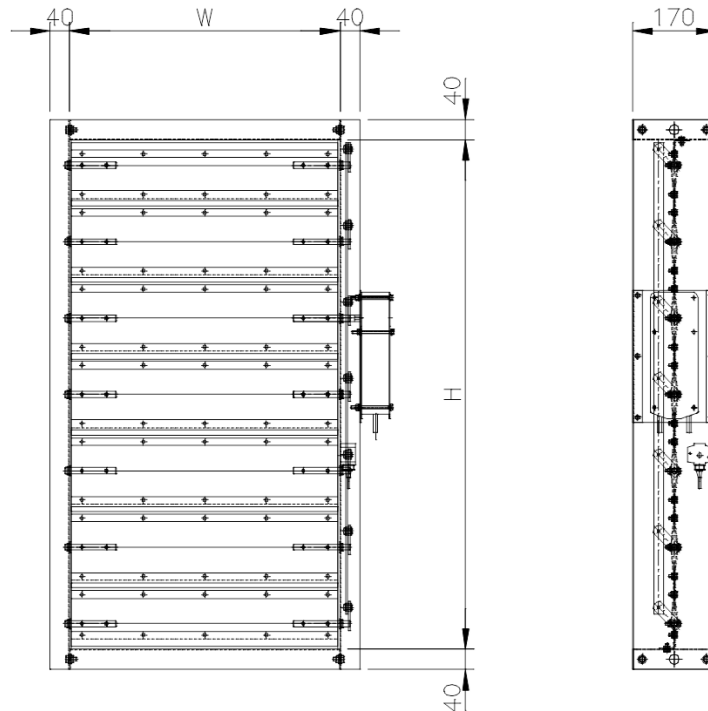
- |                     |  |
|---------------------|--|
| ■ <b>Frame</b>      | Channel shaped steel, Gal'v steel or stainless steel 304         |
| ■ <b>Blade</b>      | Double skinned diamond shape, Gal'v steel or stainless steel 304 |
| ■ <b>Link</b>       | Stainless steel 304  |
| ■ <b>Shaft</b>      | Stainless steel 304  |
| ■ <b>Bearing</b>    | Sleeve bearing   |
| ■ <b>Jamb seal</b>  | Stainless steel spring plate                                     |
| ■ <b>Blade seal</b> | Stainless steel spring plate                                     |



DONG YANG AIR-CONDITIONING Co., Ltd. certifies that DYSMD Model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and air leakage ratings only.



## STANDARD DIMENSIONS



- 40mm or different frame height for flange is available as a standard.

#### ■ Standard Manufacturing Size

Description	Standard Dimensions	Max. Size	Min. Size
Height (H)	100mm ~ 1,000mm	1,000mm	100mm
Width (W)	100mm ~ 500mm	500mm	100mm

- The largest face area of this damper is 0.3m<sup>2</sup> per set.
- Two or more dampers are assembled on the job site for dampers larger than the standard size.  
For larger dampers than upper standard size, please contact us.

#### ■ Standard Height per Number of Blades (H mm)

No. of Blade	1	2	3	4	5	6	7
Height (H)	180	330	480	630	780	930	1,000

- For non-standard height, we use one or two eccentric blade(s) to avoid big air blockage.

#### ■ For Installation of Actuator

- Installation method and accessories for actuator vary with type and model of actuator.  
Please contact us for installation of actuator.
- We also supply dampers with installation work of actuators.

#### ■ Shaft for Driving

- Shaft size  $\phi 12$
- Protruded length Length of shaft varies with the type and model of actuator.  
Please contact us for installation of actuator.

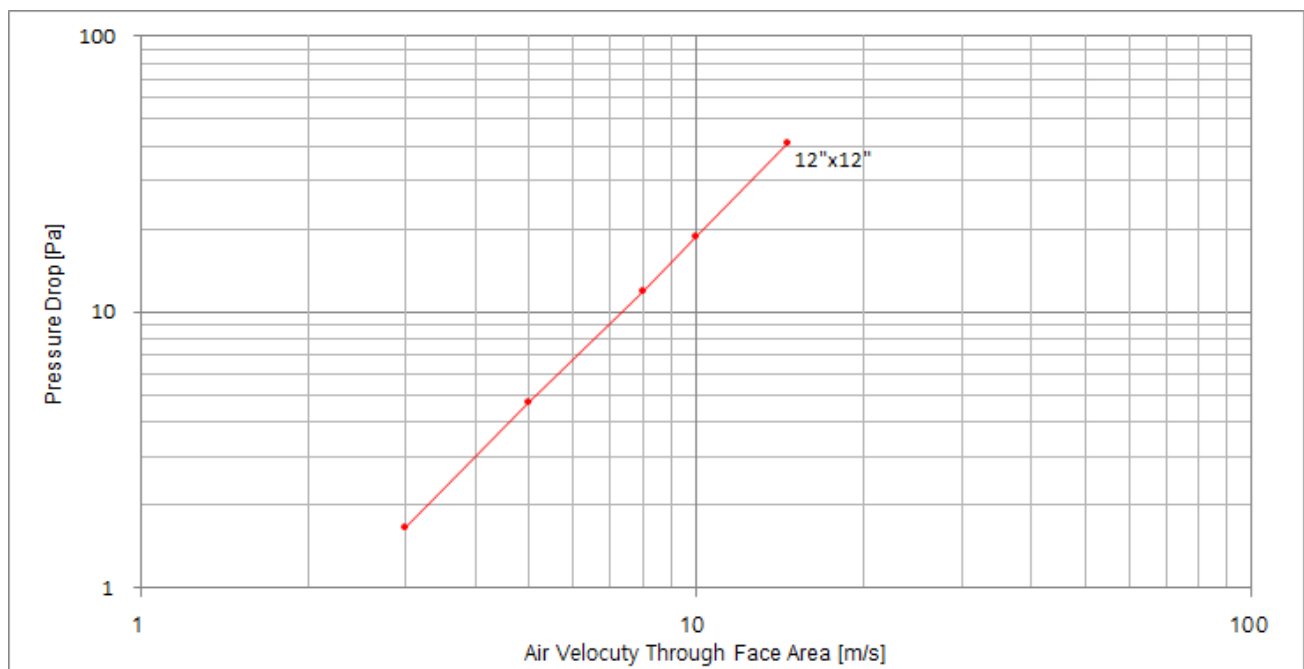
## PRESSURE DROP OF DYSMD

### ■ Articles Related to the Test

- Tested for air performance in accordance with  
ANSI / AMCA Standard 500-D, Figure 5.3
- Tested Damper Size                      305 × 305



DONG YANG AIR-CONDITIONING Co., Ltd. certifies that DYSMD Model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and air leakage ratings only.



### ■ The Trend of Pressure Drop Across the Damper

- Dampers with higher face velocity have bigger pressure drop.
- Dampers with larger face area at a certain velocity have smaller pressure drop.
- Bigger difference between width and height makes bigger pressure drop in the dampers with same face velocity and area.

## LEAKAGE PERFORMANCE OF DYSMD

## ■ Articles Related to the Test

- Tested for air leakage in accordance with ANSI / AMCA Standard 500-D, Figure 5.5
- Torque  $82.86\text{Nm/m}^2$  ( $68.13\text{in-lb/ft}^2$ ) applied to close and Applied to Dampers seat the damper during the test
- Air leakage is based on operation between  $0^\circ\text{C}$  to  $49^\circ\text{C}$

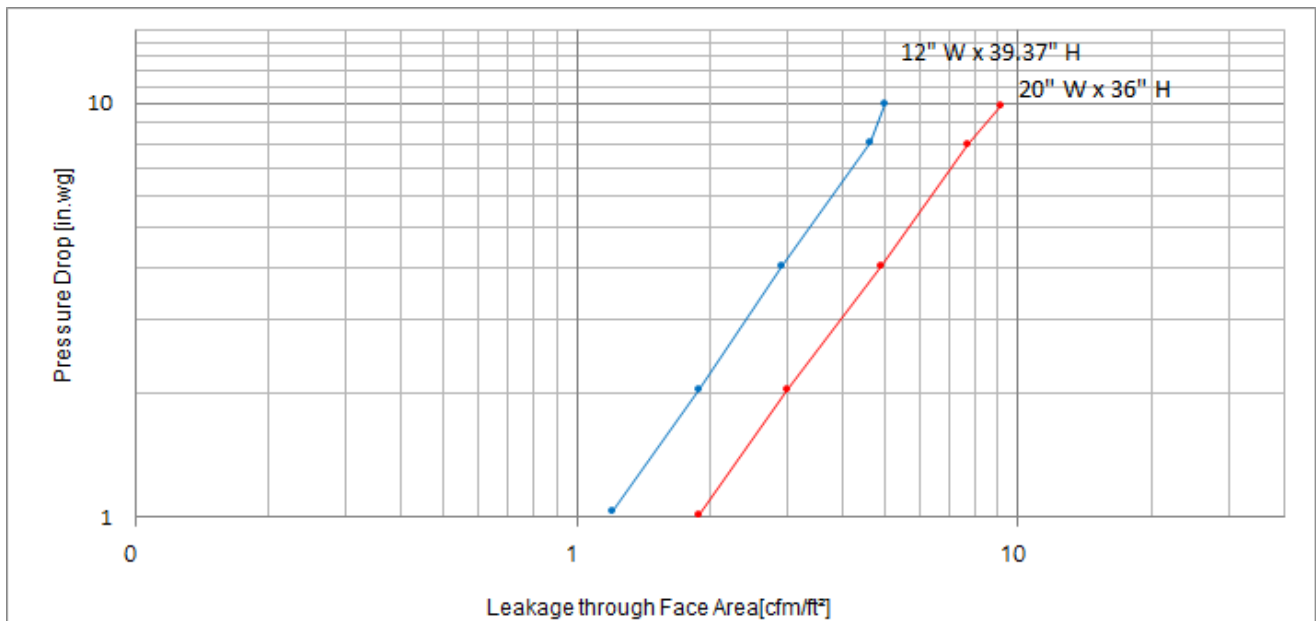


DONG YANG AIR-CONDITIONING Co., Ltd. certifies that DYSMD Model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and air leakage ratings only.

## ■ Leakage Class (The AMCA Certified Ratings Seal applies only to the following leakage class for the volume control dampers.)

Leakage Class			
1 in. wg	4 in. wg	6 in. wg	8 in. wg
1A	1	1	1

## ■ Leakage Rate (The AMCA Certified Ratings Seal does not apply to the following leakage chart.)



## ■ The Trend of Leakage Rate Across the Damper

- Higher pressure difference across the damper gives more air leakage.
- Smaller damper at certain pressure difference across the damper has more air leakage per unit area.