

# AD-T/HD-T Multi-blade Volume Control Damper



**ASLI Multi-Blade Volume Control Dampers** are designed for manual balancing (HD-T, HDR-T) and motorized control (AD-T) in ventilation systems for volume flow and pressure.

## HD-T

HD-T is primary designed for manual balancing application in ventilation systems for volume flow and pressure control. The galvanized steel locking quadrant arm (HD-T) or the OM arm linkage (HD-T OM) is mounted on the shaft for manual operation.



## AD-T

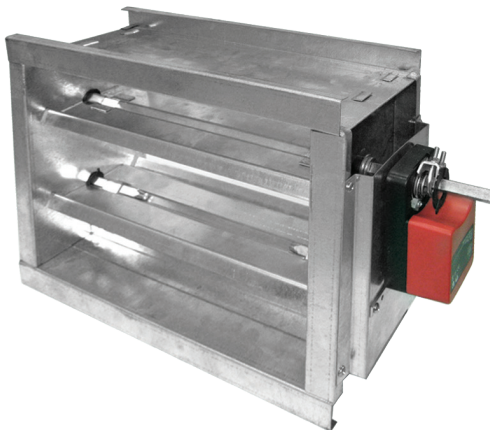
AD-T is primary designed for motorized control in ventilation systems for volume flow and pressure control.

**AD-T-1T:** Actuator mounted exposed at the side of the volume control damper.

**AD-T-2T:** Actuator mounted in a compartment at the corner of the volume control damper.

**AD-T-3T:** Actuator mounted in a compartment at the side of the volume control damper.

**AD-T-4T:** Actuator mounted in an extrusion fitting.



## Materials

Frame: Galvanized steel, 1.2mm thickness.

Blade: Galvanized steel, 1.0mm thickness.

## Blade Dimension Limits

Maximum blade length = 1200mm

Maximum blade width = 160mm

## Axles

Hexagonal bar mild steel.

## Bearing

Plastic sleeve as standard. Bronze bush is optional.

## Connection Type

Slip joint (S) or flange joint for TDC (T).

## Blade Action

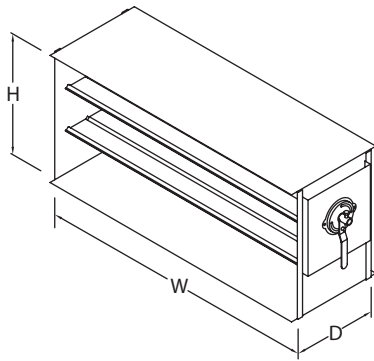
Opposed blade or parallel blade

## Surface Finish

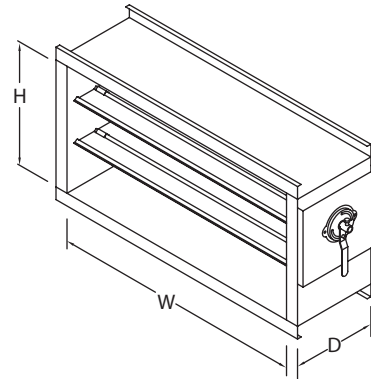
Mill galvanized.

# AD-T/HD-T Multi-blade Volume Control Damper

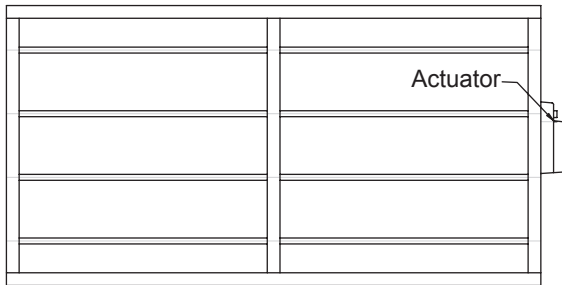
## AD-T/HD-T Construction Illustrations



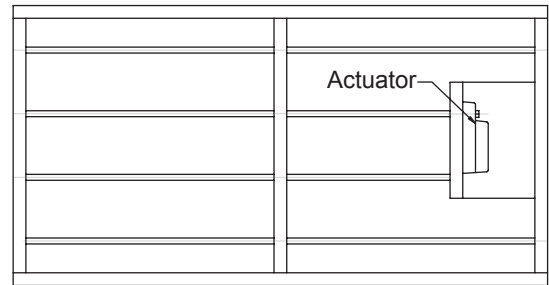
HD-T - Slip Joint



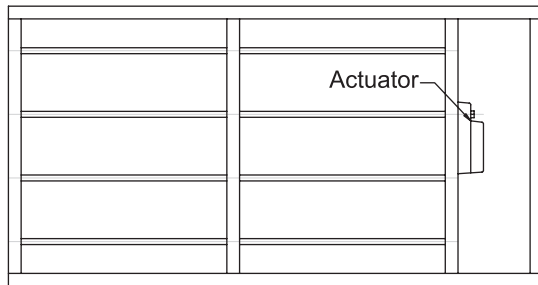
HD-T - Flange Joint



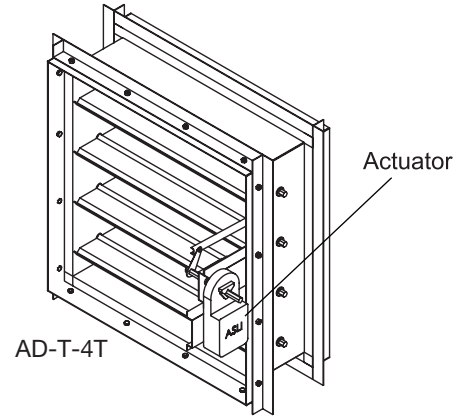
AD-T-1T



AD-T-2T



AD-T-3T



AD-T-4T

## Recommended Installations

- HD-T/AD-T can be installed with blade running horizontally or vertically.
- HD-T/AD-T is intended to be self-supporting only in the largest single section size. Bracing is required in multiple section damper assemblies to support the weight of the assembly and to hold against system pressure. It is recommended that appropriate bracing to support damper horizontally at least once for every 8 feet of damper width. More bracing may be required for vertical assemblies and higher system pressure.

# AD-T/HD-T

## Multi-blade Volume Control Damper

Duct Velocity (m/s)	Total Pressure Drop	Degree of Blade Deflection							
		10	20	30	40	50	80	70	80
1	Pt. (Pa)	<5	<5	<5	7	20	65	300	1400
	NC	<35	<35	<35	<35	42	53	67	>80
2	Pt. (Pa)	<5	<5	10	28	80	250	1250	>1500
	NC	<35	<35	28	47	56	66	>80	>80
3	Pt. (Pa)	<5	7	22	60	180	550	>1500	>1500
	NC	<35	38	46	55	65	75	>80	>80
4	Pt. (Pa)	<5	11	40	110	300	1000	>1500	>1500
	NC	<35	45	52	60	70	>80	>80	>80
5	Pt. (Pa)	5	18	60	180	500	>1500	>1500	>1500
	NC	45	50	56	65	75	>80	>80	>80
10	Pt. (Pa)	18	70	220	650	>1500	>1500	>1500	>1500
	NC	58	65	72	80	>80	>80	>80	>80

- Pt = total pressure drop
- NC = noise criteria

### NC Correction factor

Damper Area (m <sup>2</sup> )	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1	1.25	1.5	2	3	4
K	-10	-7	-5	-4	-3	-2	-1	0	+1	+2	+3	+5	+6

Example:

Given: Damper area = 0.5 m<sup>2</sup>, Degree of blade deflection = 30, air velocity = 5 m/s

Find: Total pressure drop, NC

Refer to table above, Pt = 60 Pa and NC = 56 - 3 = 53

### AD-T/HD-T Order Code *Unit : mm*

Mode	Neck Size (W X H X D)	Connection Type (Left)	Connection Type (Right)
AD-T HD-T	1000mm X 1000mm X 150mm	Slip Joint (S) Flange Joint for TDC (T)	Slip Joint (S) Flange Joint for TDC (T)

Example: HD-T-1000mmX1000mmX150mm-TT