

Class 1A & Class 1 Low Leakage Volume Control Damper (Flange Type)

SPK 30 Series

SPK 30 - 400



Description

SPK 30-400 Class 1A & Class 1 Low Leakage Volume Control Dampers are recommended for use in multiple Air Conditioning Units with one common air duct system on which one or two A/C Units needs to be isolated during standby mode while the other A/C Unit is on operational mode.

In building pressurization it can be used as an isolation damper to maintain the required pressure in the space.

In office buildings where some occupants are outside most of the time, this type of damper is recommended to shutdown the flow of air when the space is unoccupied on which can save energy consumption.

It is also being used as a fresh air intake damper for Air Conditioning Units where it needs a fresh air damper to be closed upon detection of heavy dust on the fresh air side.

The blades with airfoil construction provides a low pressure drop in the open position for smooth airflow and reduced air turbulence.



SAFID certifies that the Class 1A & Class 1 Low Leakage Volume Control Damper shown herein is licensed to bear the AMCA Seal for Model SPK 30-400. 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 Leakage and Air Performance Ratings.

Test Information

Tested for air leakage in accordance with ANSI / AMCA Standard 500-D-07, Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F.
Tested for air performance in accordance with ANSI / AMCA Standard 500-D-07 (Pressure Drop), Figure 5.3.

Only 150mm blade width is AMCA certified.

Standard Construction

FRAME:

160mm x 30mm x 1.5mm (16 Ga.) galvanized steel formed channel for flange connection.

BLADES:

100mm, 125mm and 150mm wide airfoil shaped blades extruded aluminum.

FINISH:

Frame of mill galvanized.
Blades of mill aluminum.

EXTERNAL LINKAGE:

Galvanized steel side linkage concealed in frame for opposed blade operation.

CASE BEARING:

Brass bearing as standard.
Sintered bronze oilite (optional).

CONTROL SHAFT:

12mm diameter zinc plated mild steel.

TIP SEAL

Bubble type seal.
For Air Leakage "Class 1A" and "Class 1".

SIDE SEAL (Jamb Seal):

Compression type stainless steel grade 304 to close gap between frame and blades.

MINIMUM & MAXIMUM SINGLE SECTION SIZE:

100 x 100mm minimum and 900 x 900mm maximum.

SPK 30 - 410

General construction as type SPK 30-400 damper but with frame, linkage, case bearing, axles and control shaft are from stainless steel (Grade 304).

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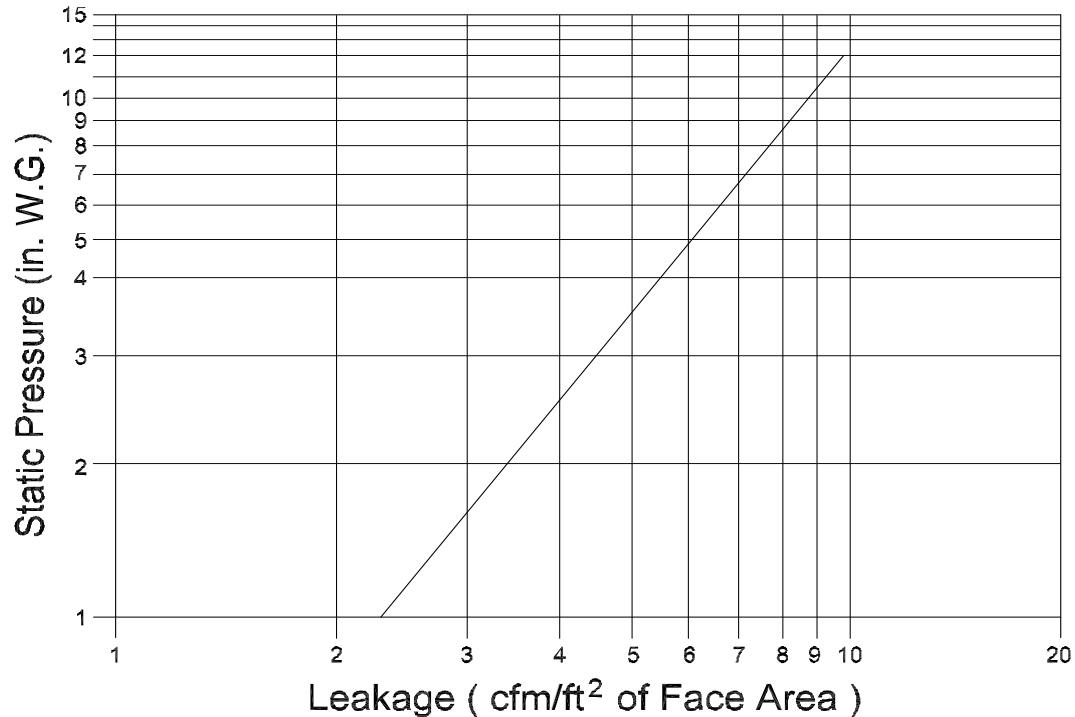
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Class 1A & Class 1 Low Leakage Volume Control Damper

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Air Leakage Performance

Air Leakage Data



36 in. x 36 in. (914mm x 914mm) (Face Area = 9 ft ²)		
Static Pressure (in. W.G.)	Leakage (cfm/ft ²)	Air Leakage Classification
1	2.336	Class 1A
2	3.549	Class 1
4	5.498	Class 1
6	6.646	Class 1
12	9.796	Class 1

Allowable Air Leakage To Achieve Leakage Classification (cfm/ft ²)					
Leakage Class	at 1 in. W.G.	at 2 in. W.G.	at 4 in. W.G.	at 6 in. W.G.	at 12 in. W.G.
1A	3	N/A	N/A	N/A	N/A
1	4	5.6	8	9.8	13.8
2	10	14	20	24.5	34.6
3	40	56.5	80	98	138.5

Data are based on a torque of 24.6 in.-lb/ft² applied to close and seat the damper during the test.



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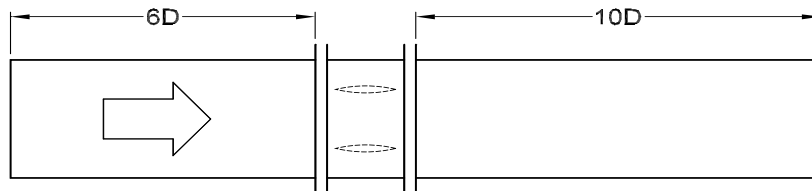
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SPK 30 Series

Air Performance

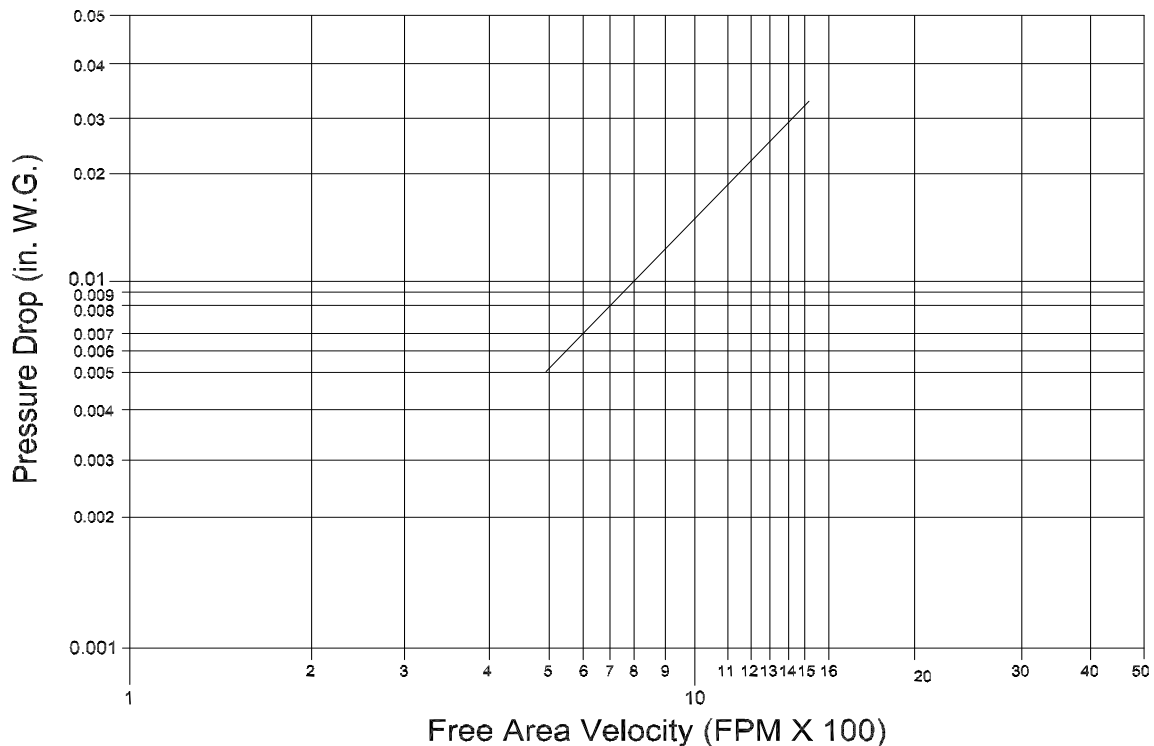
Pressure Drop



AMCA Test Figure 5.3

Pressure Drop at Face Area Velocity

Damper Size: 12in. x 12in. - Fully open blades



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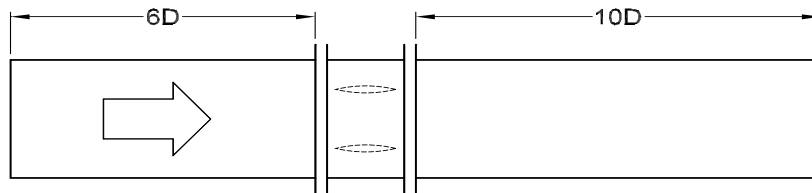
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Air Performance

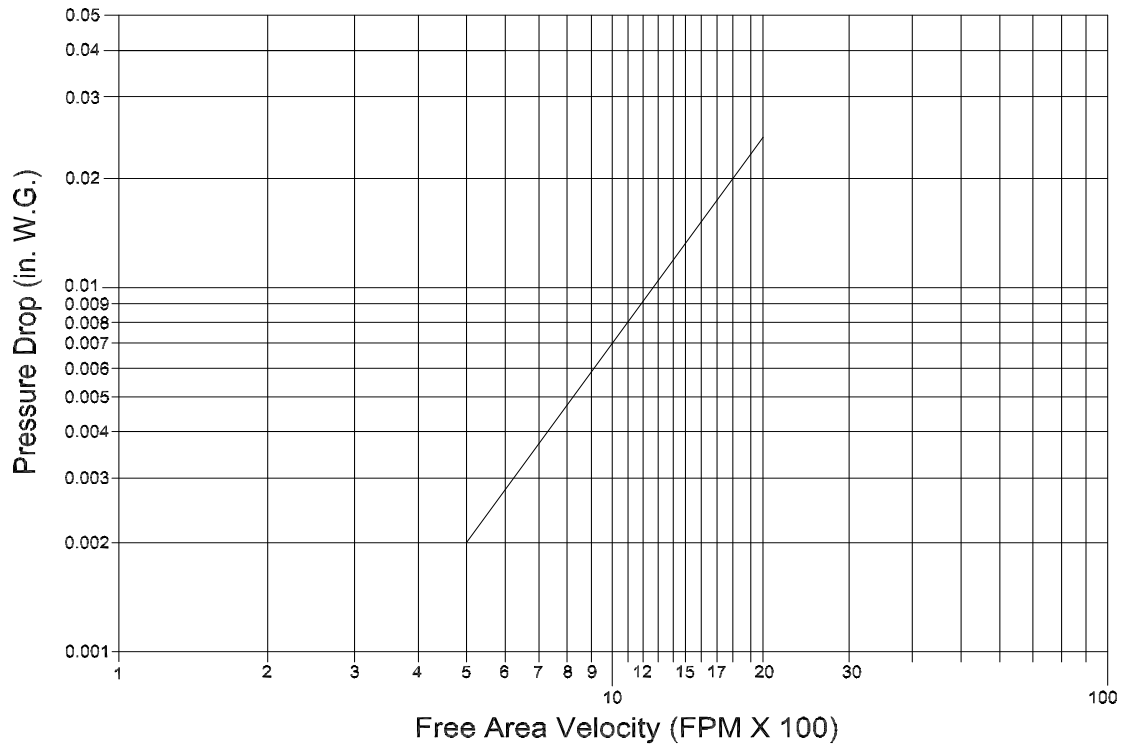
Pressure Drop



AMCA Test Figure 5.3

Pressure Drop at Face Area Velocity

Damper Size: 24in. x 24in. - Fully open blades



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Figure 5.4. Air leakage is based on operation between 32 °F and 120 °F.

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(Pressure Drop), Figure 5.3.

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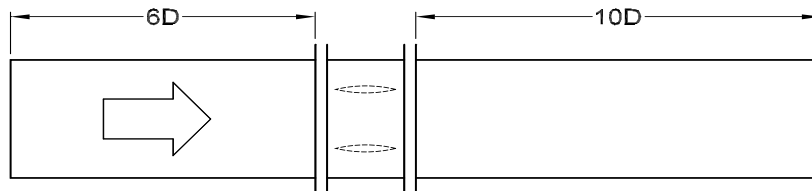
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Air Performance

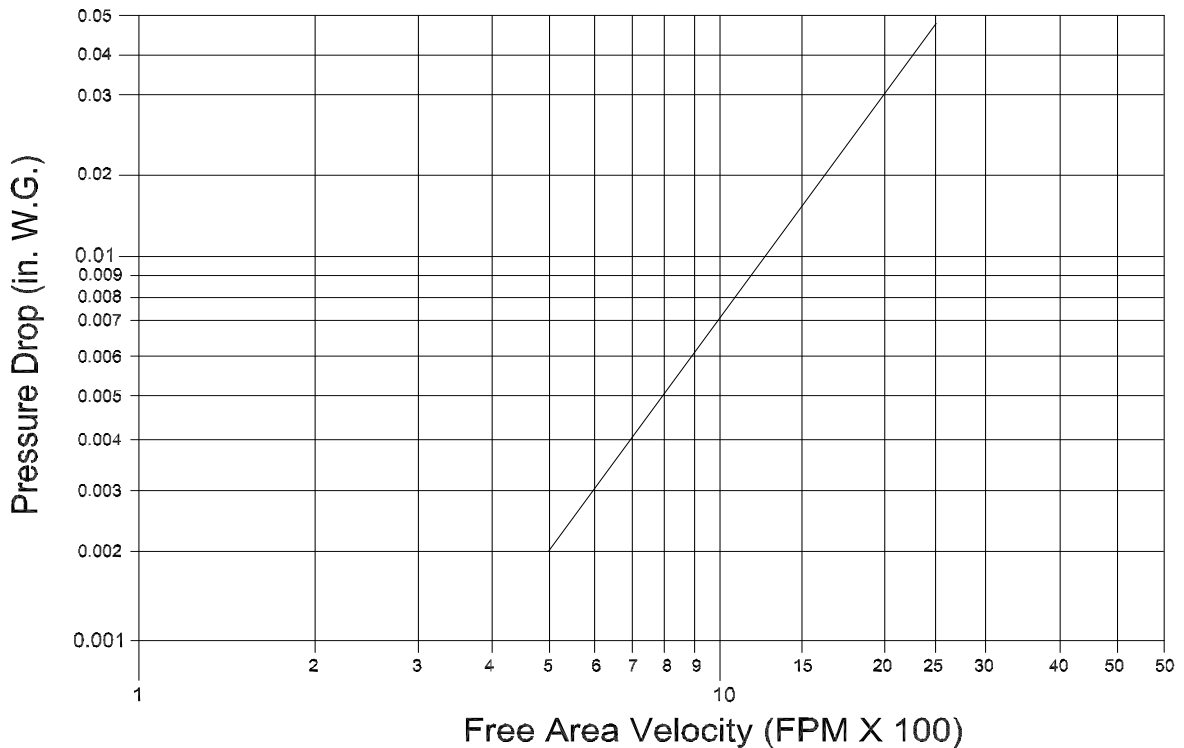
Pressure Drop



AMCA Test Figure 5.3

Pressure Drop at Face Area Velocity

Damper Size: 36in. x 36in. - Fully open blades



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Safid Dampers

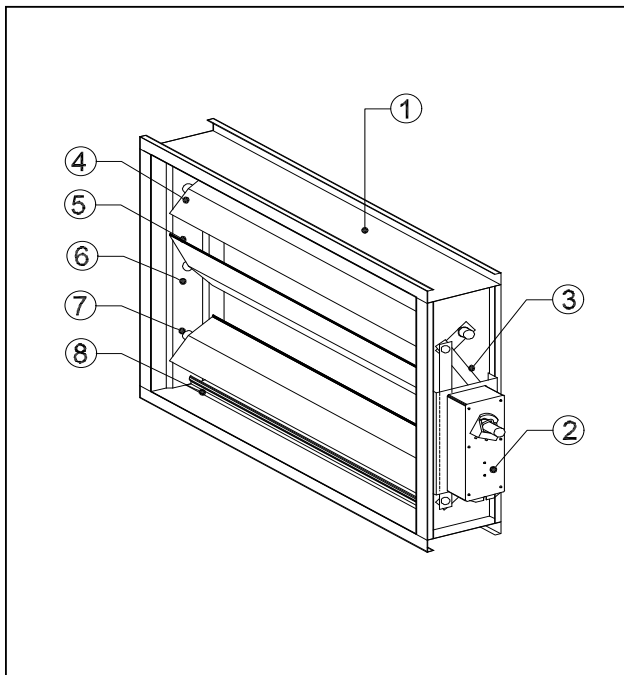
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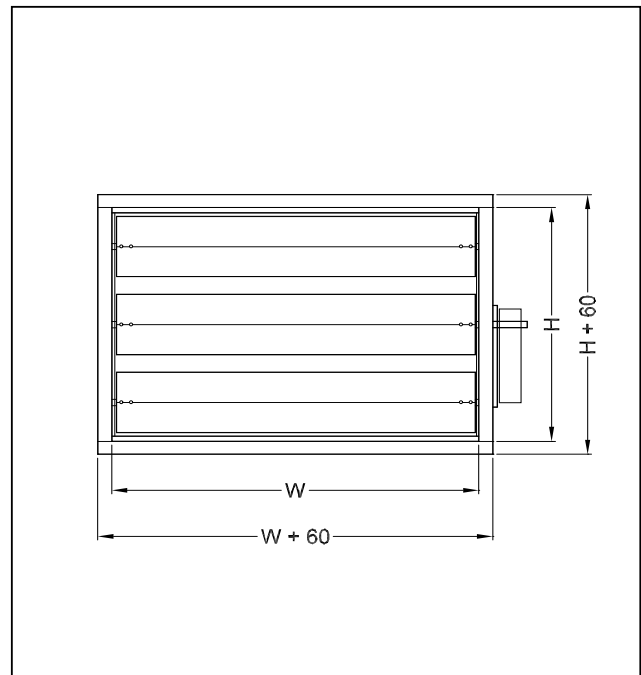
Dimensions

1 - Casing	3 - Side Linkage	5 - Tip Seal	7 - Bearing
2 - Actuator	4 - Blade	6 - Side Seal (Jamb Seal)	8 - Landing Angles

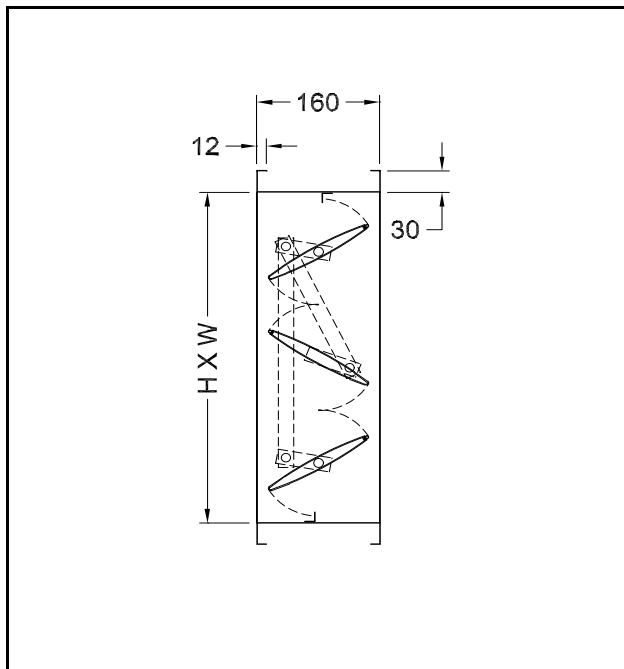
Flange Type



Flange Type



Flange Type, Opposed Blades



Standard Sizes

WIDTH (mm)	HEIGHT (mm)	NUMBER OF BLADES FOR		
		100mm	125 mm	150mm
150	100	1	-	-
200	150	-	-	1
200	200	2	-	-
250	250	-	2	-
300	300	-	-	2
350	350	1	2	-
400	400	1	-	2
450	450	-	-	3
500	500	2	-	2
550	550	-	2	2
600	600	-	-	4
650	650	2	-	3
700	700	1	-	4
750	750	-	-	5
800	800	2	-	4
850	850	1	-	5
900	900	-	-	6

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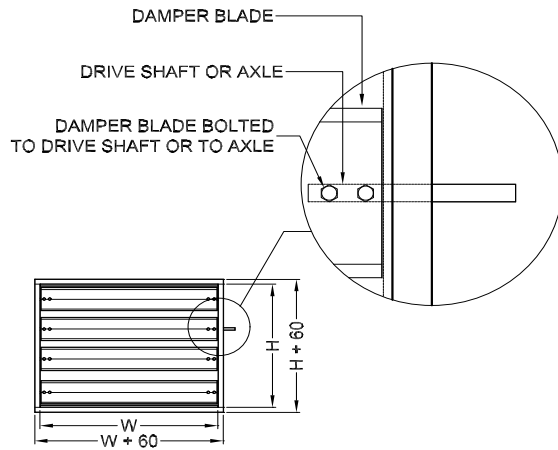
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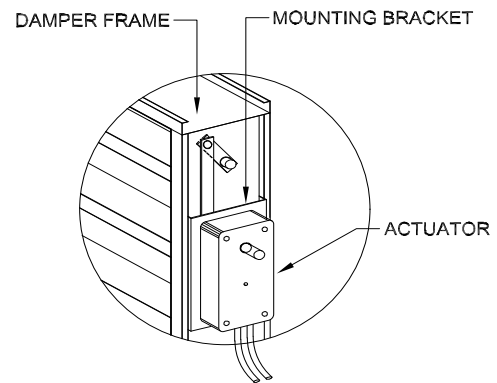
SPK 30 Series

Materials - Construction

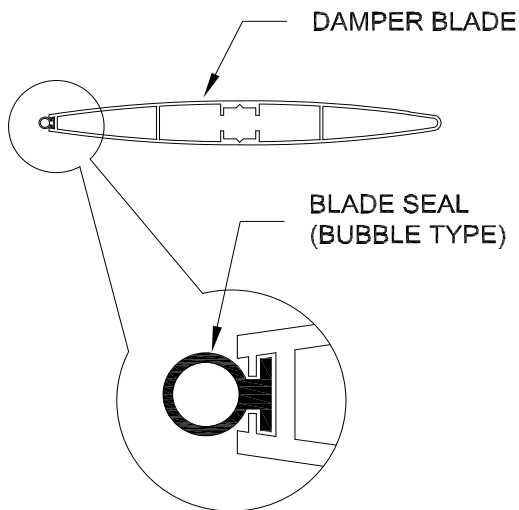
Axle and Drive Shaft fixing details



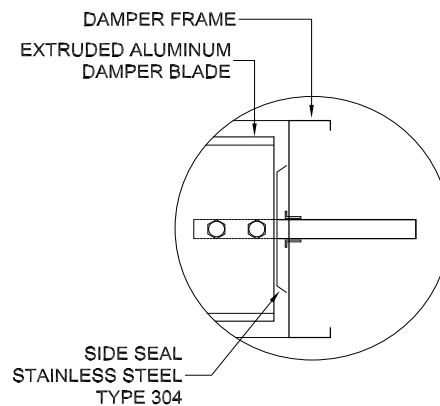
Mounting Bracket for Actuator



Blade Seal



Side Seal or Jamb Seal



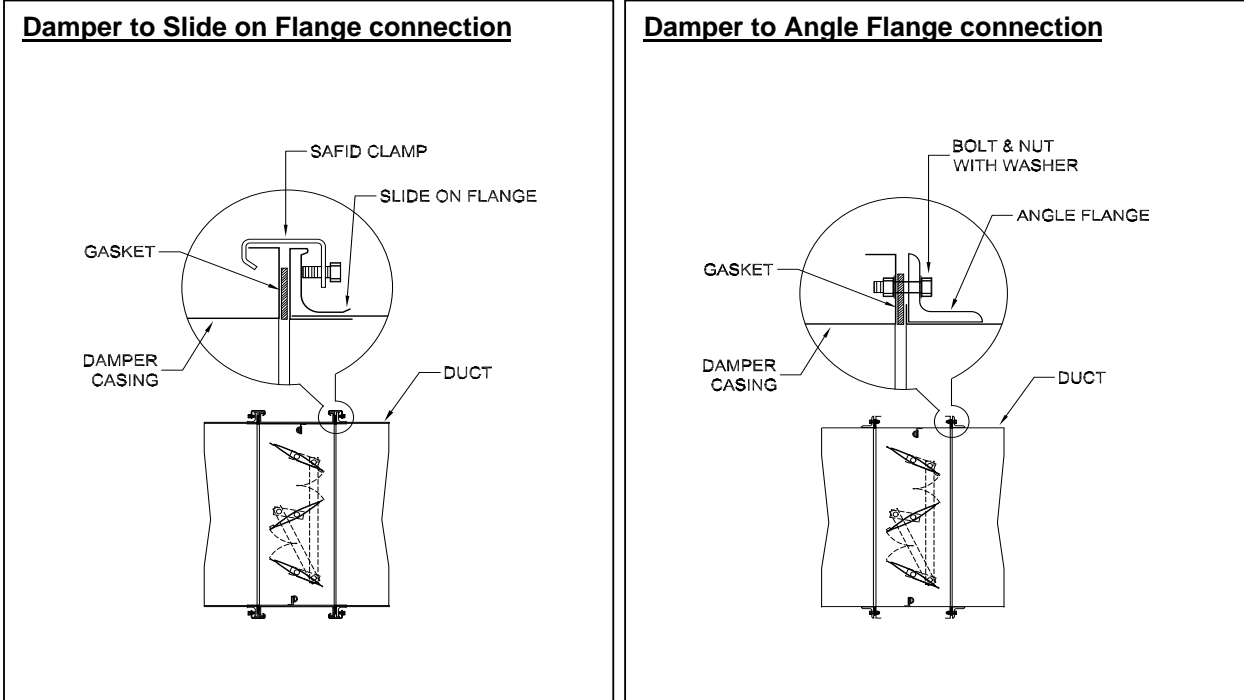
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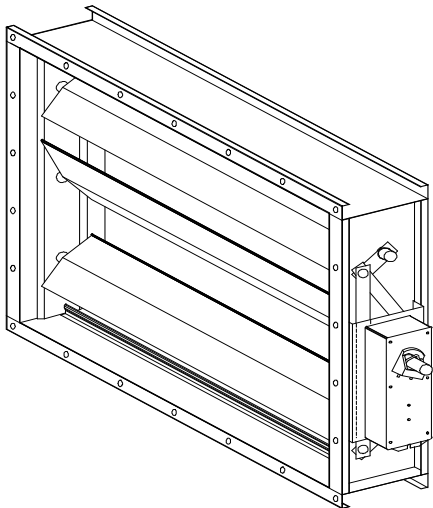
SPK 30 Series

Installation Details



Flange Drilling Details

Flange drilling details



Flange Drilling Details

W in mm	H in mm	No. of Holes W Dim.	No. of Holes H Dim.
150	150	2	2
200	150	2	2
300	300	3	3
400	300	4	3
500	300	4	3
450	450	4	4
500	450	4	4
600	450	5	4
700	450	6	4
800	450	7	4
900	450	8	4
600	600	5	5
700	600	6	5
800	600	7	5
900	600	8	5
750	750	6	5
800	750	7	5
900	750	8	5
900	900	8	8

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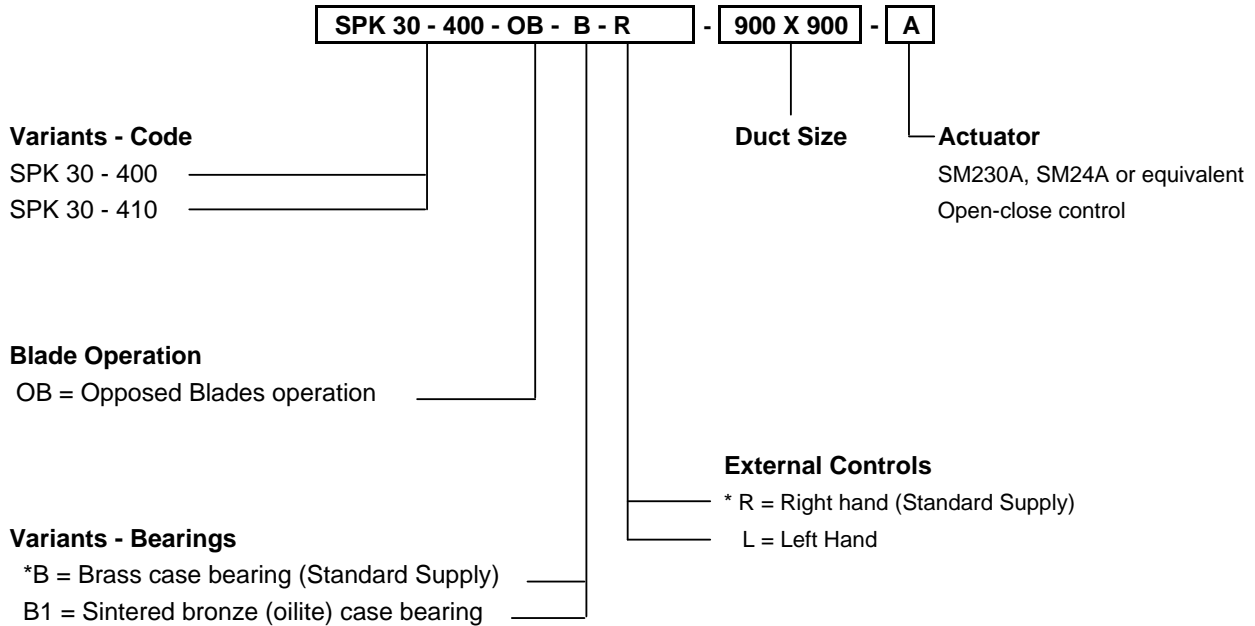
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Order Details

Order Code



* - Stands for standard supply.

ORDER EXAMPLE

STANDARD

Make: SAFID

1. Type : SPK 30 - 400 - OB - B - R - 900 x 900 - A
2. Type : SPK 30 - 400 - OB - B1 - R - 900 x 900 - A

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