SANDEEP ENGINEERS

LIFE SAFETY DAMPERS FOR FIRE & SMOKE

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CIRCULAR DAMPERS

The Low Leakage Design Circular Dampers Body Is Rolled From Metal(Carbon Steel/Stainless Steel) In Cylinder Formation And Welded. Flanges, Which Are Generally Rolled Into Ring Formation From Steel Section, Are Welded On Both Side Of The Body For For Intersecting The Shafts. Bearing Housing Have Needle Roller Bearing On Top End And Needle Roller Bearing & Thrust Bearing Or S.S. Ball Or Bottom End. Two Piece Design Shaft Has Been Provided To Hold The Disc (Which Is Fabricated From Steel Sheet) In Place. The Steel Flat Bend In Half Circle, Welded Inside The Body, On Both Side Disc, As Stopper For The Disc, Limiting To 90 Degree Movement As Well As Reducing The Leakage In Flow In Fully Closed Condition Of Damper. In Case Of Application In More Than 200 Degree C, Gap Between Disc And Body Are Kept More Than Normal Than The Provision Of Metal Expansion Due To Heat.

Damper Length (Flange To Flange Distance) With Single Flag Design Is Generally Decided As Per The Placement Position Of damper On Process Line Or Duct. In Case Of Single Flap/ Disc Damper And Having Inside Diameter More Than 200mm If The Line /Duct Has No Bend At Either Side Of Damper Length Are Kept Generally 200mm By Which Cost Will Be Economical And At Open Condition Of Damper Disc/Flap, Will Not Be Obstructed By Process Line Or Duct. When Process Line /Duct Has Bend At Either Side Of Damper, Then The Length Should Be 1:1 Means The Same Side Or More Than The Diameter Of Damper.

Circular Dampers Are Also Manufactured With Multiouver Design, Either In Parallel Louver Or In Variable Inlets Vane Design. Circular Dampers With Vertical Movement As Gates Or Guillotine Damper.Due To Metal To Metal Construction The Leakage Rate Is 2 To 3 Between Damper And Inner Body And The Disc And The Leakage Rate May Be Reduced By Providing Rubber Or Teflon Gasket On Disc Stopper Ring For Low And Normal Temperature (Upto100 Degree C) Application. CONTROL DAMPERS with 99.5% Sealing Efficiency Can Be Manufactured With Stainless Steel Sealing Or With Specially Designed Rubber Sealing.

An Appropriate Hand Leaver With Or Without Gear Box, Provide For Manually Operated Damper. A Suitable Mounting Stand, Welded On The Outside Of The Damper Body To Fix The Actuator And Connect It To Damper Shaft




RECTANGLE DAMPERS SLIDE GATES

The Rectangular Dampers Are Generally Used For Either Volume Control Or Isolation Application. They Are Generally Fabricated From Sheet Metal Including Mild Steel, Stainless Steel, and Aluminum Etc.

Rectangular Dampers Are Manufactured Generally Designed In Single Louvers Or Multiouver Or Aerofoil Pattern.The Frame Of Rectangular Damper Is Bended In 90 Degree Channel Having Specified Flange To Flange Distances. The Louvers, With 'V' Shaped Edge; Are Between Bearing Housing, Which Are Welded On Frame At Both Ends Of Louver. Needle Roller Bearing Are Provided To Have Smooth Movement Of Connecting Shafts.

Louver/Flaps Are Parallel Or In Opposed Position. The Partition Are Provided In The Middle Of The Frame To Support The Connecting Shafts In Case The Frame Width Is More Than 1400mm. In Case The Damper Width Is More Than 2800mm, 2nos Of Damper Are Pleased In Single Damper Frame With 2nos Of Actuation Device.

Due To Metal Construction, The Leakage Rate Is Approximately 2 To 3% Between The Frame Inside The Louver Edge. Sealing Efficiency Can Be Increased To 99.5% With Stainless Steel Jam Seal Provided Inside The Frame.

Rectangular Dampers Can Be Actuated Manually, Pneumatically Or Electrically And Can Be Controlled For 2 Position (On/Off) Or Proportional (Regulating) Having Input Control Signed (4-20mA/0-10 V.C.D) from DCS, PLC or PID.

NOTE:- Actuated Rectangular Multiouver Dampers Are Economical Than The Size Circular Dampers Are Since The Torque Requirement For Rectangular Dampers Are Much Less Than Single Flaps Circular Dampers.

The Slide Gate Construction Are Very Similar As Of Rectangular Dampers Are Expect Louver /Flaps Will Have A Vertical Movement Can Be Achieved With Screw & Nut Or Rack Pinion Arranged.

The Body & Flap For Such Dampers May Vary Between 3mm To 25mm Thickness Of Metal Sheet.