

CURTAIN TYPE FIRE DAMPER

MODEL: IBD-2 / IBD-2H

STANDARD CONSTRUCTION

FIRE RATING

UL 555

1-1/2 hours UL classification damper

SS: 333

4 hours rating classification damper

FRAME

Gauge 22 (Galvanized Steel / Stainless Steel)

BLADES

Gauge 24 (Galvanized Steel / Stainless Steel)

FINISH

Mill

CLOSURE LINK

301 stainless steel constant force type
(Horizontal mount only)

FUSIBLE LINK

165°F (74°C) is standard

212°F (100°C) optional

ELECTRO THERMAL LINK [ETL] (OPTION)

UL listed fusible link / release device.

165°F (74°C) is standard.

MOUNTING

Vertical or horizontal on:

Masonry wall

Dry wall system.

MINIMUM SIZE

Vertical installation – 102 x 102 (mm)

Horizontal installation – 152 x 152 (mm)

MAXIMUM SIZE

Single Section

Vertical installation – 750 x 750 (mm)

Horizontal installation – 750 x 750 (mm)

Galvanized Multiple Section Assembly

Vertical installation – 2250 x 2250 (mm)

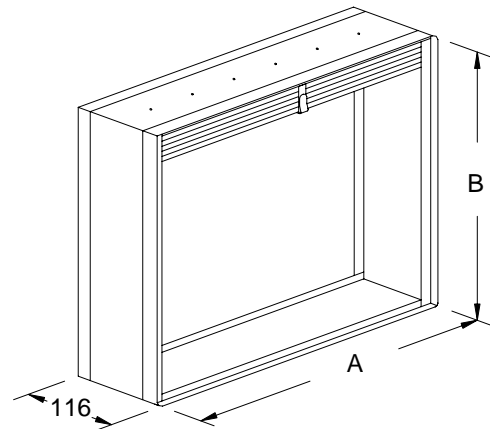
Horizontal installation – 2250 x 2250 (mm)

FEATURES

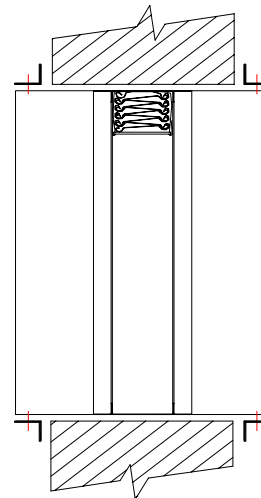
- Each damper is affixed with a 4 hours fire rating classification label by local approved authority.
- Meets SS:333 requirement.

NOTES

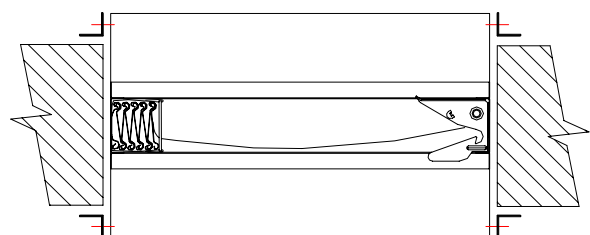
- Damper's dimension is usually about 10 mm smaller than the duct's dimension.
- Sleeve thickness : 1.6mm GI / SS
- Angle flange : 3.0mm GI / SS



VERTICAL MOUNT



HORIZONTAL MOUNT



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TESTING AND PERFORMANCE

Kyodo's Curtain Type Fire Damper is constructed and tested in accordance with BS 476 part 20/UL 555 standard meeting the 4 hours Fire Rating and fulfilling Government Departments and Fire Control Authority requirements throughout British Commonwealth. The fire damper has successfully undergone and passed the stringent tests conducted by the Renown Research Centre and Local Laboratory.

AIR LEAKAGE TEST

Kyodo Curtain Type Fire Damper has successfully passed the low leakage test which conforms to the requirements of ISO 5167 and ISO 7244. At 1.25 kPa static pressure, the leakage measurement is still favourably below the allowable limit set (as shown in the chart)

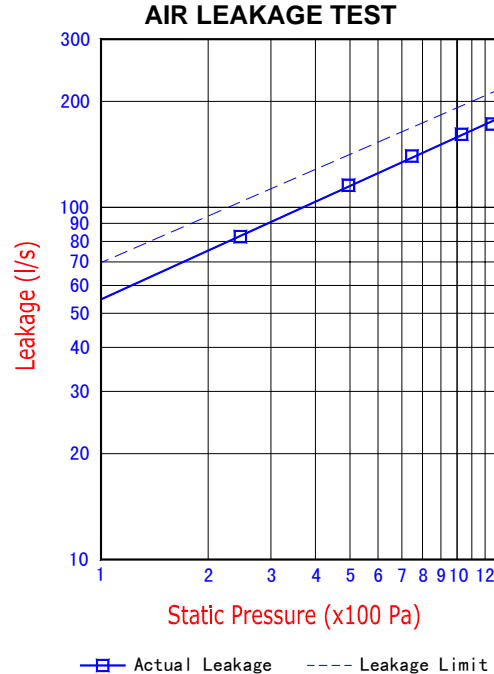
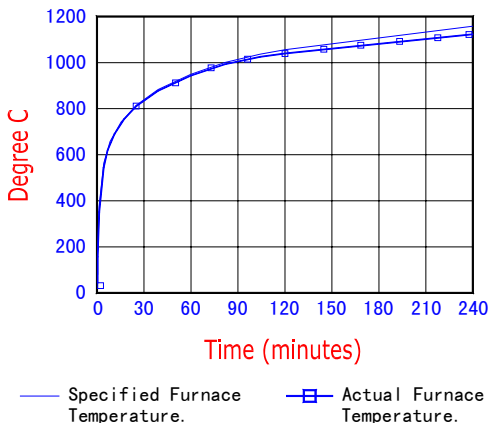
FIRE RESISTANCE TEST

The Fire Damper has been tested for fire resistance based on BS 476 part 20 and UL 555 standards. At 53 seconds into the test, the fusible link disconnects releasing and closing the Fire Damper. Here the temperature is allowed to increase to 836°C for the first 30 minutes of the test, the testing ceases at 1158°C and the temperature is cooled off for the subsequent 240 minutes. Throughout the test, no physical change to the fire damper noted which apparently has passed the fire resistance test.

Apart from the above, the damper had been tested to BS476 part 22:1987 to comply the authority requirement. Method acceptance is based on Method of Fire Resistance of Non-load bearing elements of construction – Determination of the Fire Resistance of Partition.

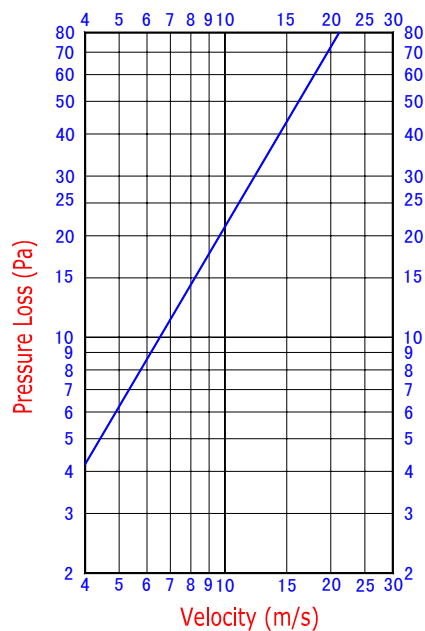
SPRING CLOSING FORCE/ RELIABILITY TEST

The Spring Closing Force / Reliability Test was conducted on the Kyodo Fire Damper. The result showed that after 250 operations the damper showed no evidence of wear or damages.



The Model IBD-2 Type was tested for airflow and pressure loss according to the AMCA 500: "Test Method for Louvers, Dampers and Shutters." Result of test is as shown in the chart.

PRESSURE DROP CHART



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FIRE RESISTANCE TEST ON KYODO FIRE DAMPER

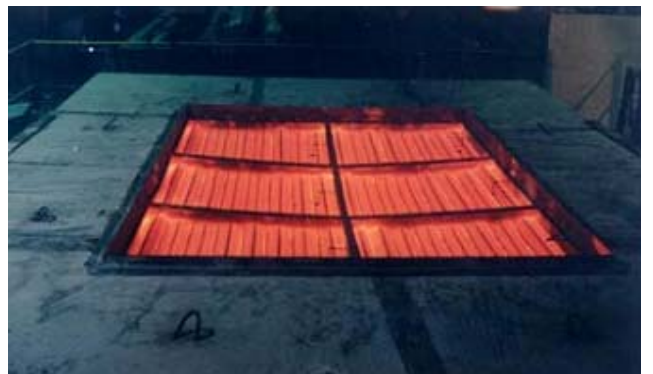
Fire Damper before the Fire Resistance Test



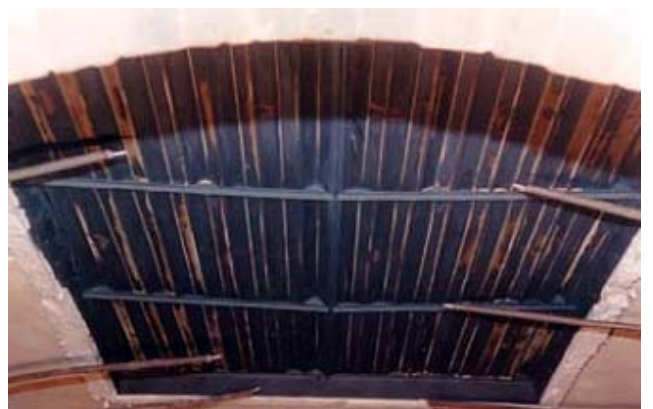
Fire Damper after 60 minutes of testing



Fire Damper after 180 minutes of testing



Fire Damper after 240 minutes of testing
(Fire Resistance Test ended)



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FIRE DAMPER INSTALLATION

Special attention is needed in the installation of the fire damper. Always ensure that the manufacturer's installation instructions are strictly adhered to. A fire damper, when incorrectly installed may fail to function on the onset of fire. When installing a fire damper the following points should be noted;

1. The wall opening must be larger than the damper by 9mm for each meter in height and width to allow for thermal expansion.
2. The damper should be positioned centrally, so that the horizontal clearance at both sides of the damper is evenly spaced.
3. When the damper is opened, the blade assembly must always be in the 'Open Position's too.
4. Retaining angles are attached to the damper sleeve as shown. These must not be secured to the wall in consideration for the damper expansion during fire outbreak. The retaining angles must not be welded together at the corners of the damper too.
5. The duct must not extend through the wall's opening. It must however be connected to the damper on both sides in such a way that it must not obstruct the operation of the fire damper, though the ducting may be destroyed by the fire.

MAXIMUM SIZES

Vertical

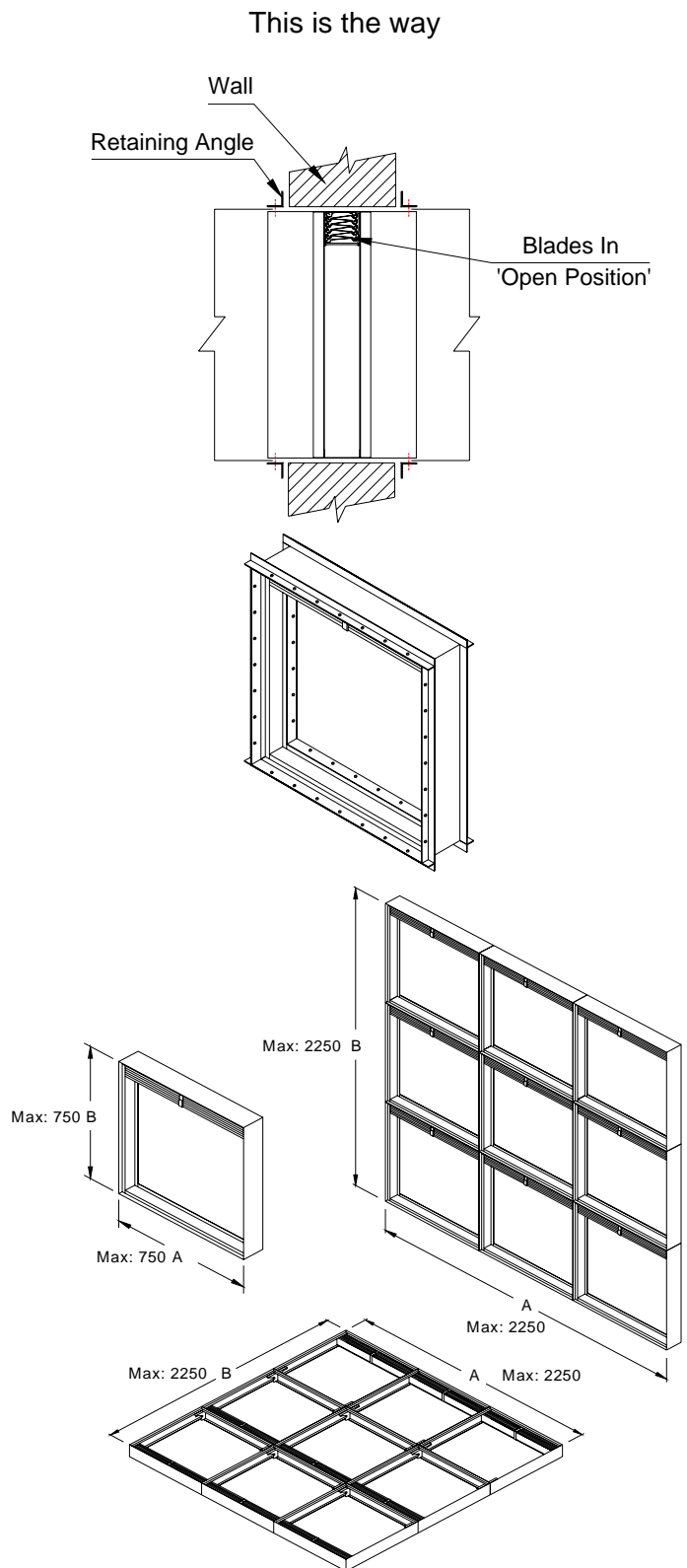
Single Section A750 (mm) x B750 (mm)
Multiple Section A2250 (mm) x B2250 (mm)

Horizontal

Single Section A750 (mm) x B750 (mm)
Multiple Section A2250 (mm) x B2250 (mm)

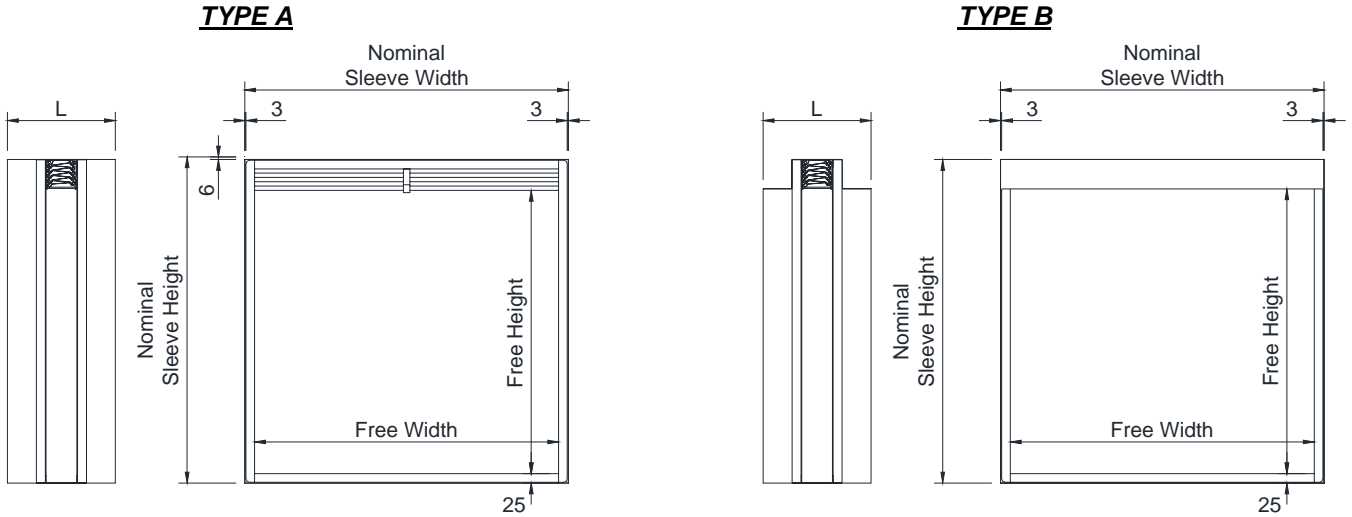
MINIMUM SIZES

Vertical A102 (mm) x B102 (mm)
Horizontal A152 (mm) x B152 (mm)



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DIMENSION INFORMATION



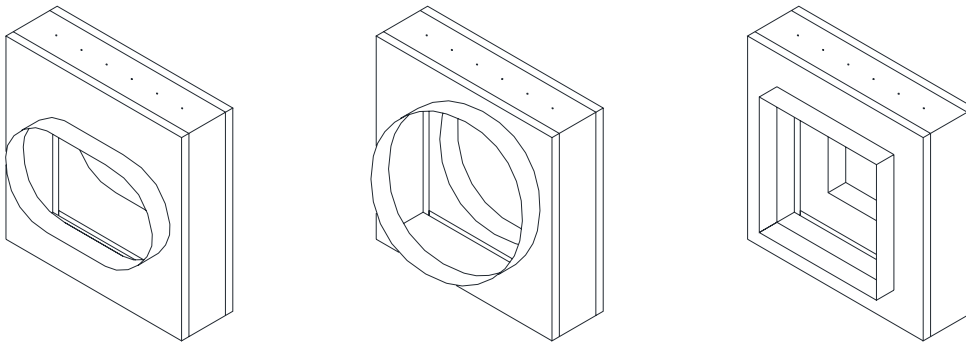
Sleeve Height	150	200	250	300	350	400	450	500	550	600	650	700	750
Free Height	100	140	185	230	280	320	370	420	460	510	550	600	650

Free width of damper equals Nominal Sleeve Width minus 56 mm.

L: Minimum 175 mm.

TYPE C

The damper adaptors permit the connection of ducts of smaller cross sectional area of the dampers. The smaller ducts may be square, rectangular, circular or oval.



ORDERING INFORMATION:

Order can be made as follows:

- 1) With or without Approved Authority label.
- 2) With or without UL label.
- 3) Sizes ordered must indicate the width, height and depth (Wall thickness).
- 4) Vertical or Horizontal mounting.