

Konvekta

LTD

ENERGY SAVING AND
ISOLATION DAMPERS

K100, K100-U
K200, K200-U

APPLICATIONS

- Multi leaf dampers primarily used in air conditioning and ventilation systems for volume control, pressure control and isolation.
- This range of dampers are energy saving, reducing air loss considerably over standard products, the K100 & K100-U incorporate insulated blades for improved thermal performance and noise reduction.
- Direct fixing to inlet louvres to form one assembly.
- Room isolation in manufacture of pharmaceutical products.
- Agricultural stores.
- System sterilization.

BLADE SELECTION



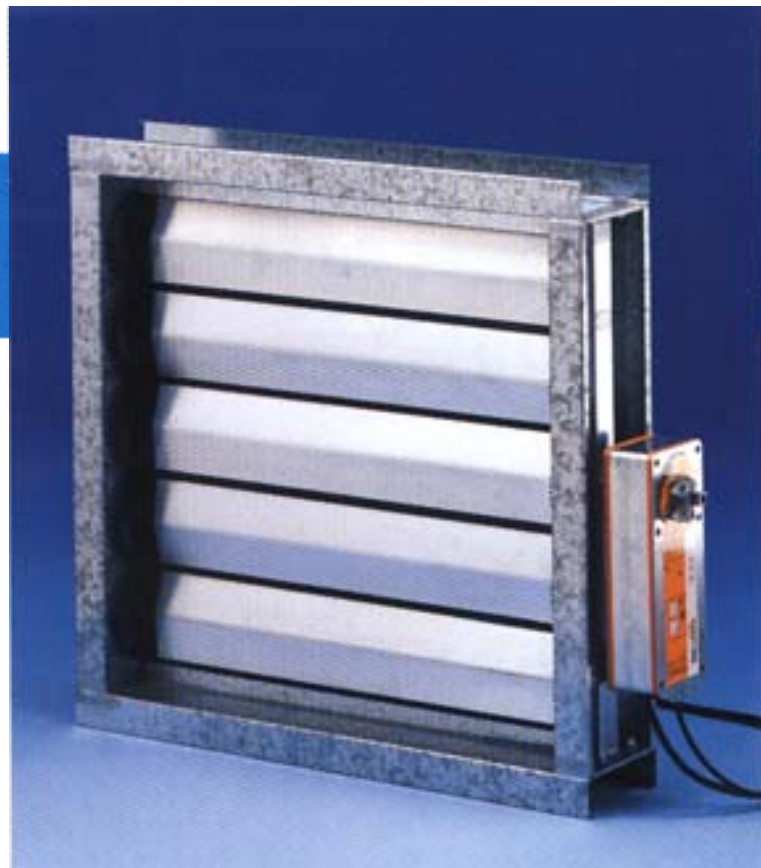
K100 - Low leakage
c/w thermally insulated
blades.

K100-U - Ultra low
leakage c/w thermally
insulated blades.



K200 - Low leakage.

K200-U - Ultra low
leakage.



FEATURES

- K100-U & K200-U ultra low leakage dampers meet the stringent DIN 1946 part 4 standard for blade leakage.
- K100 & K100-U dampers incorporate thermal insulation within the blade section.
- High strength galvanised channel casing.
- Aerofoil section extruded aluminium blade with integral blade edge seal.
- Opposed blade action for optimum control.
- Individual blade coupling by ABS gears running in maintenance free Acetal bushes, forming non-ferrous gearing system.
- Manual, electrical & pneumatic, factory fitted control options.
- Large single modules and multi assemblies.
- Flanged and spigoted casings.

PERFORMANCE DATA

Figure No.1 - Air Leakage vs. Pressure Differential

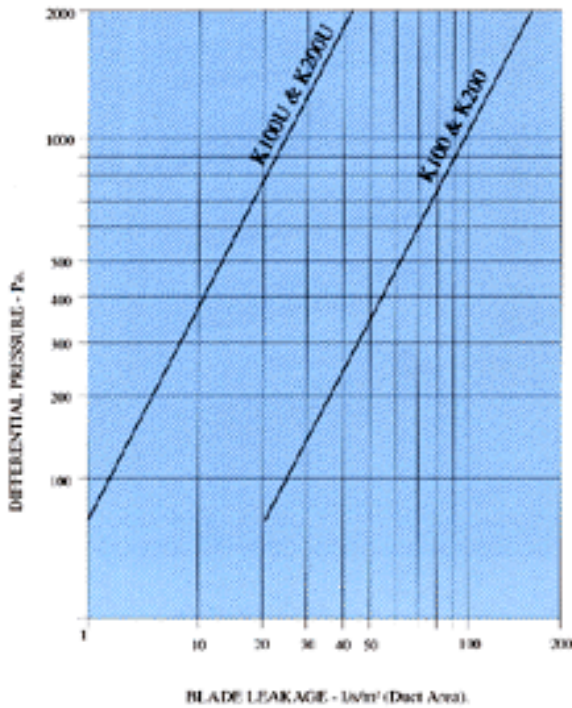
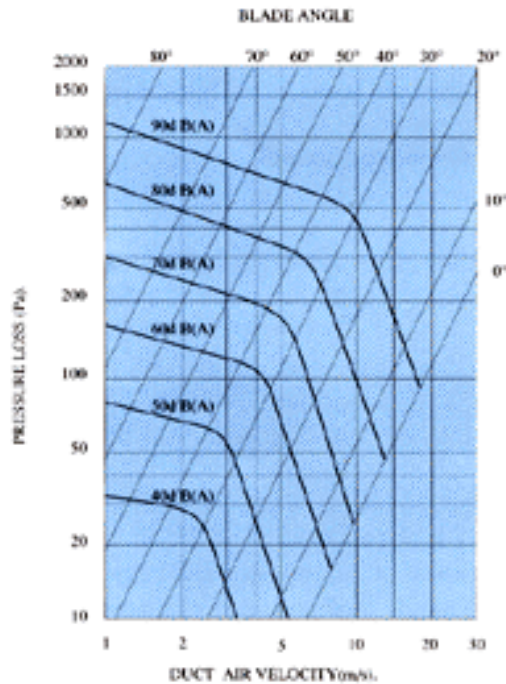
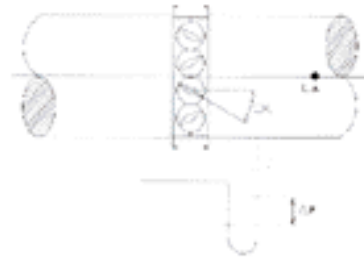


Figure No. 2 - Pressure Drop/Regenerated Noise vs. Velocity



- The K100-U and K200-U Ultra Low Leakage dampers more than satisfy the minimum air leakage requirements of all known codes & standard. DIN 1946 Part 4 - 10m³/hr/m² @ 100 pa..

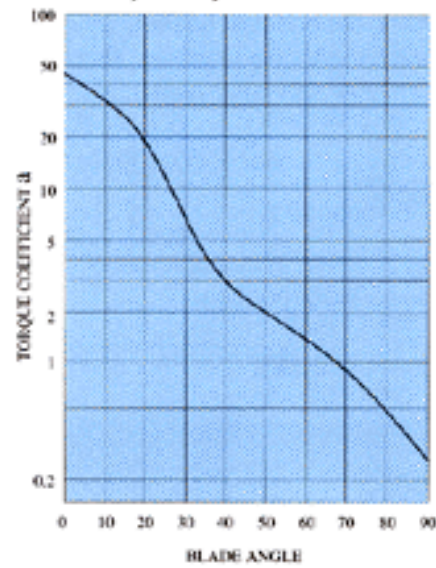


LA -A-Weighted sound power level related to a 0.5m² duct (dB(A))

Correction Factors for noise levels

A (m²)	0.5	1.0	1.5	2.0	3.0	4.0
K (db)	0	+3	+5	+6	+8	+9

Figure No.3 - Damper Torque



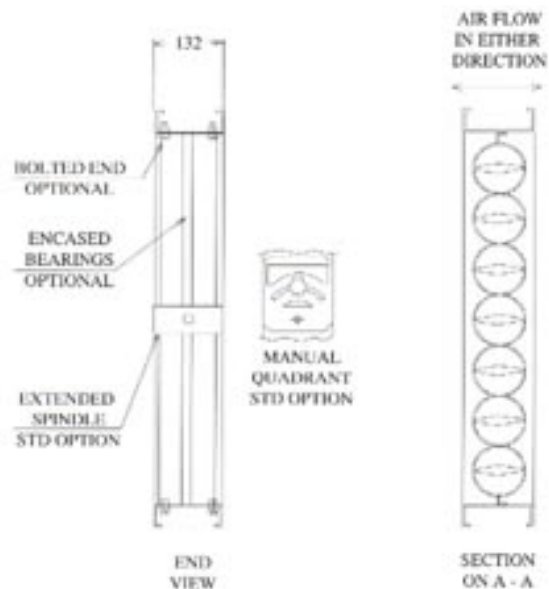
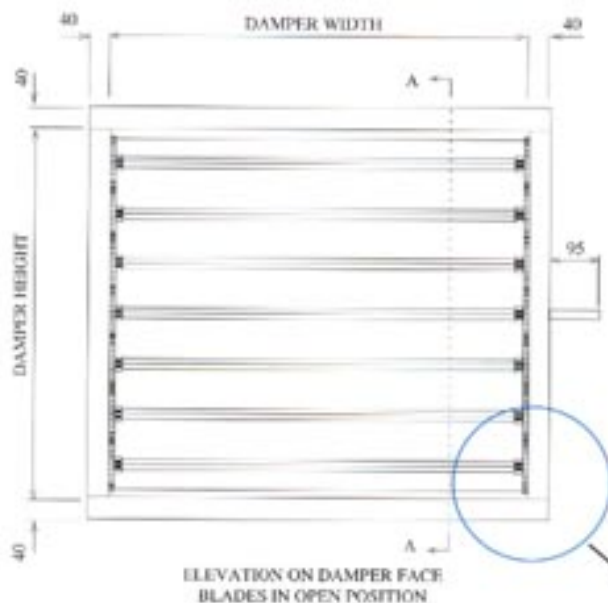
- Damper torque due to Aerodynamic loading

$$T_{air} = \frac{a \times \Delta p \times A}{100}$$
- Damper torque required to close the dampers

$$T_c = 20A$$

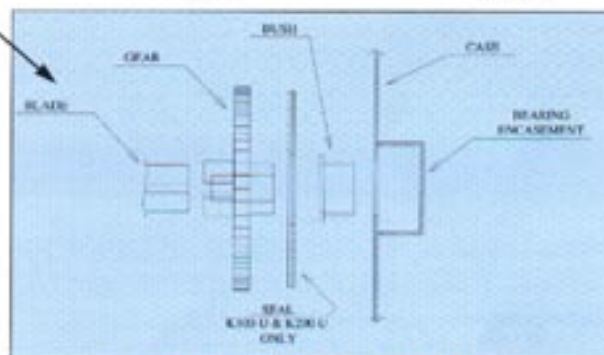
a - Torque coefficient
 Δp - Total pressure difference across damper (Pa)
 A - Damper area (m²)
 T - Torque (Nm)

CONSTRUCTION DATA



SIZE RANGE

- K100, K200 - 100 W x 108 H to 1500 W x 1508 H in a single module.
- K100-U, K200-U - 100 W x 108 H to 1000 W x 1008 H in a single module.
- Circular, flat oval, spigoted & flanged units available.



CONTROL OPTIONS

- M- Manual operated quadrant
- E- Extended spindle for motorisation (by others).

FACTORY FITTED ACTUATORS

- Electrical actuator options
- 24/240/110 volt units
- Double acting/open-close, modulating, spring return
- Pneumatic actuator options
- Double acting/open-close, modulating, spring return

MULTIPLE DAMPER ASSEMBLIES

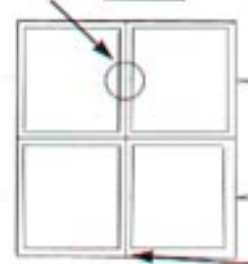
- Damper modules interlocked together with push fit installation.



The K100-U & K200-U damper require individual control to each module.



Socket & spindle push fit arrangement



Bolting arrangement for multi-assemblies

DAMPER/LOUVRE ASSEMBLIES



Direct coupling of low leakage damper and weather louvre to form weather/air infiltration proof combination

For larger assemblies refer to Technical Sales

SPECIFICATIONS

Description:-

K100 - Low leakage energy saving volume control damper.
K100-U - Ultra low leakage energy saving volume control damper. Blade leakage in accordance with DIN 1946 part 4.
K200 - Low leakage shut off volume control.
K200-U - Ultra low leakage isolation volume control damper. Blade leakage in accordance with DIN 1946 part 4.

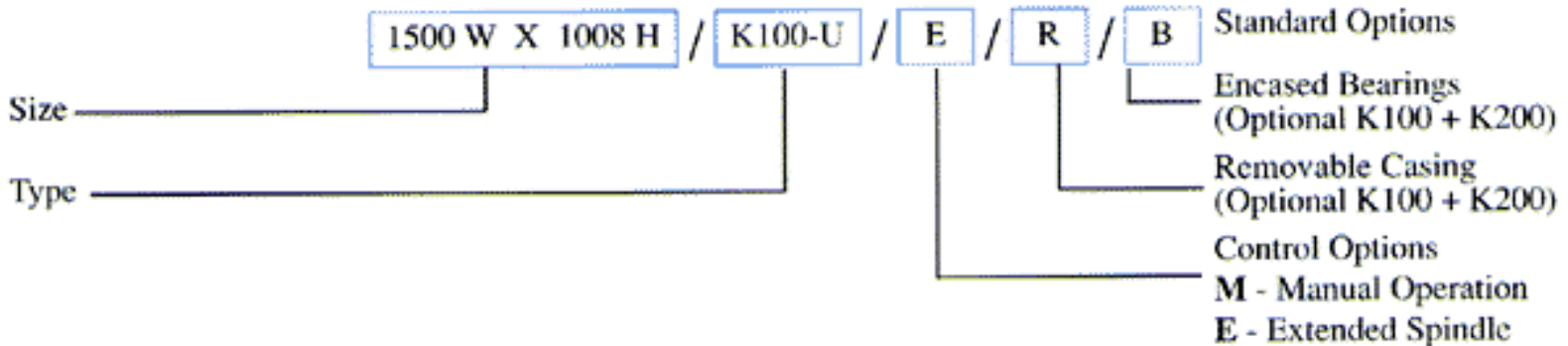
Construction:-

Casing - 1.2mm thick galvanised mild steel casing 132mm deep and 40mm flanges c/w 10mm return edge for flange clamps, removable side casings optional.
Blades - Aerofoil section extruded aluminium blades 103mm wide c/w PVC hollow section edge seals. K100 and K100-U blade sections filled with thermal insulation.
Gears - ABS plastic gear fitted with intergral stub spindle. K100-U and K 200-U gear fitted with foam/felt seals.
Bushes - Hard Acetal, incorporating locking rib K100-U and K200-U bushe encased as standard.

OPERATING CONDITIONS

Temperature - - 10°C to + 40°C
Pressure - \pm 2500 Pa
Velocity - up to 20m/s

ORDERING



WORKS TESTING

K100-U and K200-U dampers can be works tested to prove their compliance with DIN 1946 part 4 by customers request

SPECIALS

- Damper casing materials of 316 grade stainless steel, aluminium and PVC available.
- Dampers incorporating oilite bearings.
- Parallel bladed dampers.
- Special non-corrosive blade treatments.
- Flanged drillings.
- Damper case sizes to suit customer's requirements.



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