

Halton UTK – Multi-blade airflow management damper

Overview

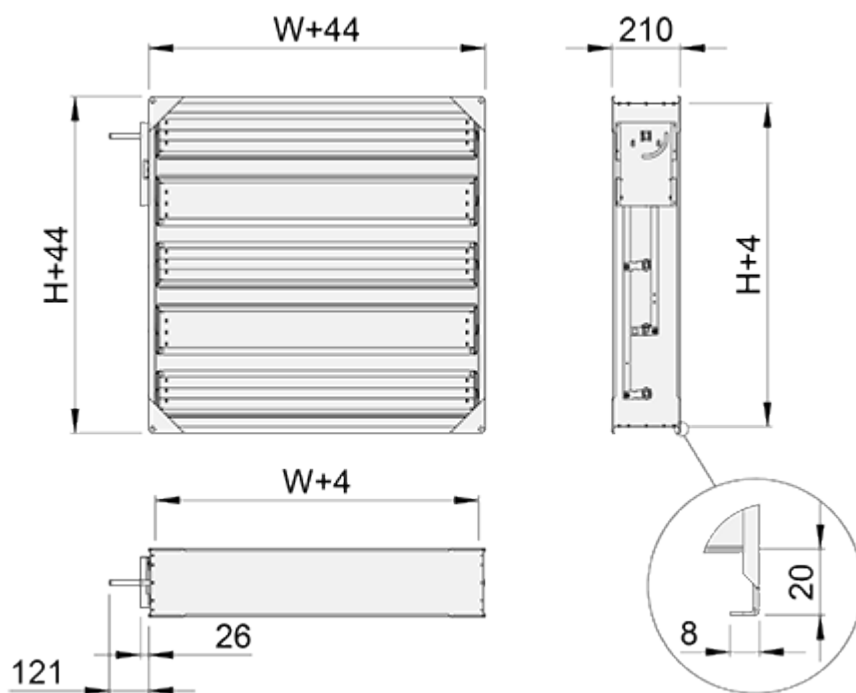
- Shut-off, adjustment, balancing or control damper with opposed blade construction
- Tightness in closed position fulfills EN 1751 class 1 requirements
- Classification of casing leakage EN 1751 class B
- Temperature operation range up to +100°C, optionally up to +200°C
- Galvanised steel design

Product models and accessories

- Model with stainless steel (AISI 316L) design
- Model with insulated casing
- Model with heat-proof design
- Circular duct connections
- Several actuator options

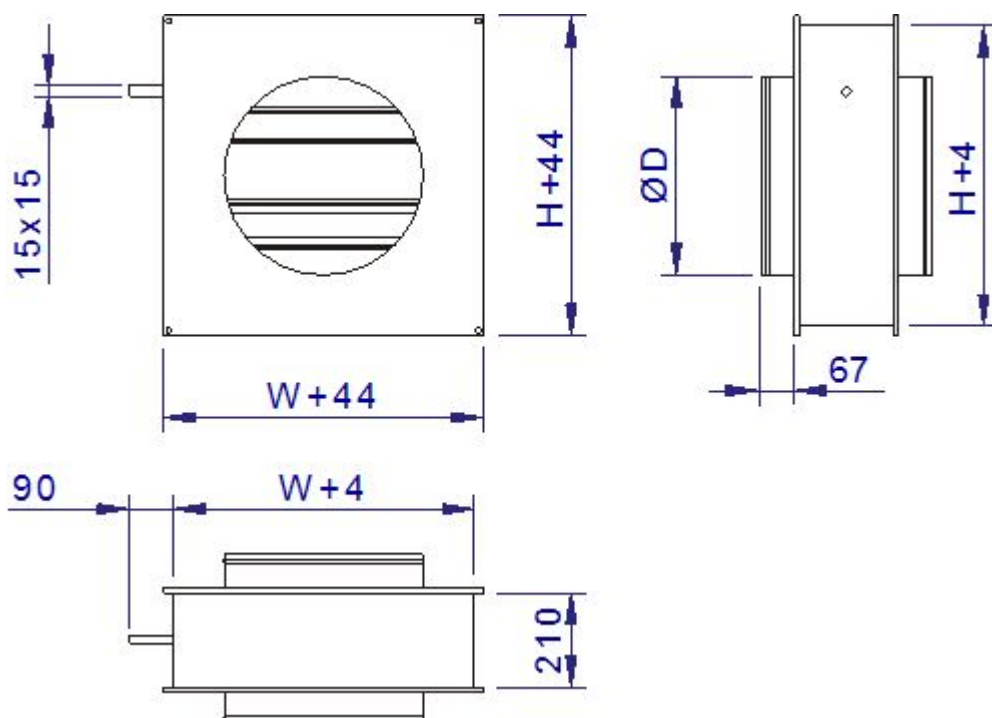
Dimensions

Models with rectangular connections



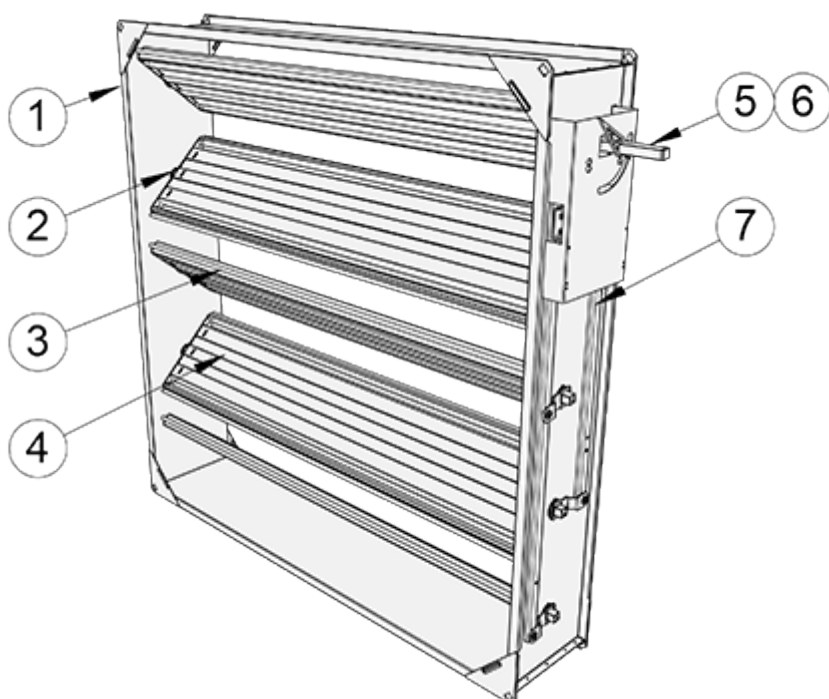
W	H
100, 200, ..., 2400	100, 200, ..., 2400

Models with circular connections (CT=D1 or CT=D2)



ØD	W x H
100	150×150
125	150×150
160	200×200
200	200×200
250	250×250
315	300×300
400	400×400
500	500×500
630	600×600
710	800×800
800	800×800
1000	1000×1000
1250	1300×1300

Material



No.	Part	Material	Note
1	Casing	Galvanised steel	Stainless steel (AISI 316) also available
2	Blade bearings	Alloy of polyamide and molybdenum sulphide (plastic).	Also available: Stainless steel (AISI 304) (BM=SS) Acid proof steel (AISI 316) (BM=AS)
3	Blade gaskets	Silicone	(sandwich design). Acid proof steel (AISI 316L) also available
4	Blades	Galvanised steel	Circular connections
5	Rectangular drive shaft (15x15mm)	Galvanised steel	In conjunction with standard plastic bearings (BM=ST) Acid proof steel (AISI 316) also available (BM=ST)
6	Round drive shaft (Ø15mm)	Acid proof steel	In conjunction with AISI 316 or bronze bearings (BM=AS/SS/BR)
7	Lever mechanism	Galvanised steel	Acid proof steel (AISI 316L) also available

Shaft types and dimensions

Depending on the choice of bearing material, the damper will be equipped with a round or square axle.

On Halton UTK/C dampers with standard bearings (BE=ST) , the damper will be equipped with a square 15x15 mm galvanised steel axle.

On heatproof design Halton UTK/C dampers, and on all dampers with AISI 316/304 or bronze JN5 bearings (BM=AS, BM=SS or BM=BR) a round Ø15mm AISI 316 stainless steel axle will be used.

Accessories

The product models MD=I and MD=J have a double sheet casing with mineral wool insulation. The insulation thickness is 20 mm.

The Halton UTK damper is available equipped with either manual adjustment or actuator operation.

The adjustment and control arrangement options are:

Adjustment and control options	Code	Note
Manual handle adjustment	MO = MA	
Manual extension bar adjustment	AC = BA	Handle extension arrangement
Actuator operation	MO=	See tables below

The damper actuator is selected from the list below according to the operating voltage, control arrangement and the required torque of the damper. The torque of the selected actuator can be higher than the required torque of the damper.

Actuator options

NM-models Torque, damper size ... 10 Nm A<1.2 m²
Manual override operation, mechanical position limit

Actuator type	Code MO	Control arrangement	Operating voltage	Power consumption
NM24A	C1	On-off, 3-point	AC/DC 24 V	3,5 VA
NM230A	C2	On-off, 3-point	AC 230 V	5,5 VA
NM24A-SR	C3	Control signal DC 0...10 V	AC 24 V	4 VA

BF-models Torque, damper size ... 18 Nm / 12 Nm (A<2.5 m²)
Spring return, manual operation, position limit

Actuator type	Code MO	Control arrangement	Operating voltage	Power consumption
BF24	E1	On-off, 2 auxiliary switches	AC/DC 24 V	10 VA
BF230	E3	On-off, 2 auxiliary switches	AC 230 V	12.5 VA
BF120	E7	On-off, 2 auxiliary switches	AC 120 V	12.5 VA

SF-models Torque, damper size ... 20 Nm (A<4 m²)
Spring return, manual operation, position limit

Actuator type	Code MO	Control arrangement	Operating voltage	Power consumption
SF24A	A6	On-off	AC/DC 24 V	7,5 VA
SF24A-S2	A7	On-off, 2 auxiliary switches	AC/DC 24 V	7,5 VA
SFA	A8	On-off	AC 24...240V / DC 24....125 V	18 VA
SFA-S2	A9	On-off, 2 auxiliary switches	AC 24...240V / DC 24....125 V	18 VA
SF24A-SR	A0	Control modulating DC 2...10 V, Position feedback 2...10 V	AC/DC 24 V	7 VA
SF24A-MP	A11	Control modulating, communicative 2...10 V, Position feedback 2...10 V variable	AC/DC 24 V	11 VA

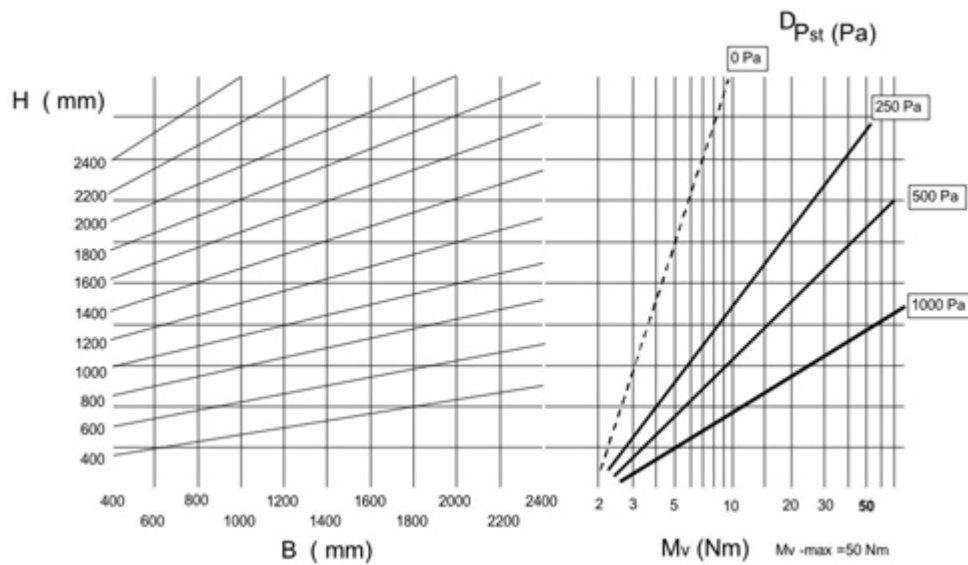
SM-models Torque, damper size ... 18 Nm A<3.3 m²
Manual override operation, mechanical position limit

Actuator type	Code MO	Control arrangement	Operating voltage	Power consumption
SM24A	A1	On-off, 3-point	AC/DC 24 V	4 VA
SM24A-S	A2	On-off, 3-point, 1 auxiliary switch	AC/DC 24 V	4 VA
SM230A	A3	On-off, 3-point	AC 230 V	6 VA
SM230A-S	A4	On-off, 1-wire control, 3-point, 1 auxiliary switch	AC 230 V	6 VA
SM24A-SR	A5	Control signal DC 2...10 V, Position feedback 2...10V	AC/DC 24 V	4 VA
SM24A-MA	M3	Control modulating 4...20 mA, Position feedback 2...10 V	AC/DC 24 V	9 VA

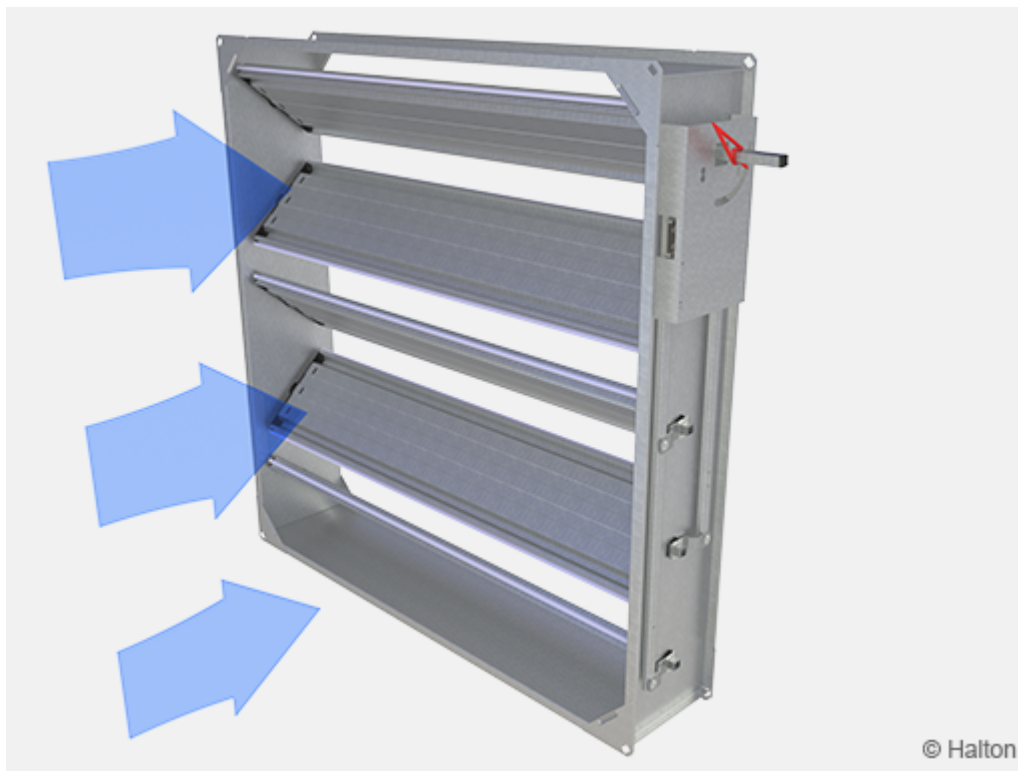
GM-models Torque, damper size ...40 Nm (A<6 m²)
Manual override operation

Actuator type	Code MO	Control arrangement	Operating voltage	Power consumption
GM24A	G1	On-off, 3-point	AC/DC 24 V	6 VA
GM230A	G2	On-off, 3-point	AC 230 V	9 VA

Required torque for Halton UTK-damper actuator



Function



The Halton UTK dampers are used to shut off, adjust or control airflow in ductwork in applications where damper leakage does not have significant importance.

In the closed position the Halton UTK damper leakage class is 1 in accordance with the EN1751 standard.

In the open position the blades are turned in the direction of flow and do not cause significant pressure loss.

Damper sizes conform with the international standards EN 1505, EN1506 and ISO 1707 for rectangular and circular ducts.

The maximum operation temperature of a standard damper is +100°C (for optional models +200°C).

Installation

Install the damper in the ductwork with the blades in horizontal or vertical position.
Fasten the damper in the ductwork using slip joints.

Optional models enable fastening the damper to duct flange by using bolts.
Drill holes in the damper flange if necessary (options L1 & L2).
Use a seal between the flanges in order to tighten the seam.

Fasten the circular connections by riveting or screwing.

Specification

The casing and blades are made from galvanised steel (or stainless steel AISI 316).
The blade gaskets are of silicon (or EPDM- rubber).
The drive shaft socket is of galvanised steel with self-lubricating slide bearings.
The bearing shall is from an alloy of polyamide and molybdenum sulphide (or stainless steel AISI 316 or stainless steel AISI 304 or bronze).

The damper is installed into rectangular ductwork in compliance with EN 1751, or in circular ducts D=100 ... 1250 mm in accordance with EN 1751.

The damper meets the tightness requirements of EN 1751 class 1.
The casing of the damper meets the tightness requirements of EN 1751 class B.

The damper is suitable for either manual adjustment or actuator operation.

Product code

UTK/S-W-H-D, CT-SF-MA-MD-BM-MO-AC-ZT

S = Type of duct connections

R Rectangular connections

C Circular connections

W = Width (mm)

100,+1,...,2400

H = Height (mm)

100,+1,...,2400

D = Connection size (for circular model, C)

100, 125, 160, 200, 250, 315, 400, 500, 630, 710, 800, 1000, 1250

Other options and accessories

CT = Type of circular connection

D2 2 circular connections

D1 1 circular connection

SF = Flange option

NA Slip joints

L1 Slip joints + flange connection

L2 Flange connection, both sides

R2 Flange connection, both sides with holes

MA = Material

CS Steel

AS Stainless steel (EN 1.4404/AISI 316L)

MD = Model

N Standard

H Heat-proof

I Insulated

J Heat-proof and insulated

BM = Bearing material

ST Plastic

AS Stainless steel (AISI 316)

SS Stainless steel (AISI 304)

BR Bronze (JN5)

MO = Actuator type

NA Not assigned

MA Manual handle

E1 BF24 (no fuse), 24V, 18 Nm

E3 BF230 (no fuse), 230V, 18 Nm

E7 BF120 (no fuse), 120V, 18 Nm

P0 Pneumatic, Rot.AT101

A1 SM24A (on-off), 24V, 20 Nm

A2 SM24A-S (on-off), 24V, 20 Nm

A3 SM230A (on-off), 230V, 20 Nm

A4 SM230A-S (on-off), 230V, 20 Nm

A5 SM24A-SR (modulating), 24V, 20 Nm

M3 SM24A-MA (modulating), 24V, 20 Nm

A6 SF24A (on-off), 24V, 20 Nm

A7 SF24A-S2 (on-off), 24V, 20 Nm

A8 SFA (on-off), 24-230V, 20 Nm

A9 SFA-S2 (on-off), 24-230V, 20 Nm
A0 SF24A-SR (modulating), 24V, 20 Nm
A11 SF24A-MP (modulating), 24V, 20 Nm
C1 NM24A (on-off), 24V, 10 Nm
C2 NM230A (on-off), 230V, 10 Nm
C3 NM24A-SR (modulating), 24V, 10 Nm
G1 GM24A (on-off), 24V, 40 Nm
G2 GM230A (on-off), 230V, 40 Nm

AC = Accessories

BA Bar adjustment
S4 S2A Auxiliary switch
L1 Limit switch, 1 pc (IP65)
L2 Limit switch, 2 pcs (IP65)
AR Position indication arrow

ZT = Tailored product

N No
Y Yes (ETO)

Code example

UTT/R-100-100, SF=NA, MA=CS, MD=N, BM=ST, MO=MA, ZT=N