

# AIRTIGHT DAMPER

## RI - Class 4C

**R** The **RI** airtight damper certified Class 4C according to EN 1751. It is designed to **shut off the cross sections** of a ventilation ductwork.. The **RI** damper is suitable for clean room applications and biosafety level 4 laboratory



### CODIFICATION

- R** ———> **Gamme R** - Clean rooms
- X** ———> **I** - High airtightness - small dimensions

### CONSTRUCTION

		Characteristics	Options
Frame	Material	Galvanized steel Z275	Stainless steel AISI 304L or 316L
	Thickness	2 mm	
	Drilling	Ø10 mm in each angle	Standard F2A drilling with a pitch of 165 mm (see catalogue p100) or specific drilling
	Width	185 mm	
	Flanges	36 mm	
	Bearings	Teflon	Bronze
Blades	Material	Galvanized steel Z275	Stainless steel AISI 304L or 316L
	Thickness	1 x 2 mm and 1 x 1.5 mm	
	Shaft	Ø 15 mm	
	Pitch	175 mm	
	Seals	EPDM	
Linkage		Opposed blade operation Zinc-coated steel	Stainless steel AISI 304L or 316L
Control		Manual: Control shaft Ø16 mm effective length 84 mm equipped with lever Motorized: Control shaft Ø16 mm effective length 125mm	Adaptation for actuator Supply of actuator and factory assembly
Airtightness - Leakage rate (EN 1751)		Upstream/downstream airtightness class 4 Frame airtightness class C	
Acceptable pressure		1 200 Pa for a length of L = 1 m	
Operating temperature		From -20°C to +80°C	
Dimensions		Height from 180 to 695 mm Length from 200 to 700 mm	

# AIRTIGHT DAMPER

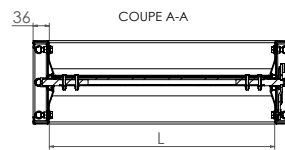
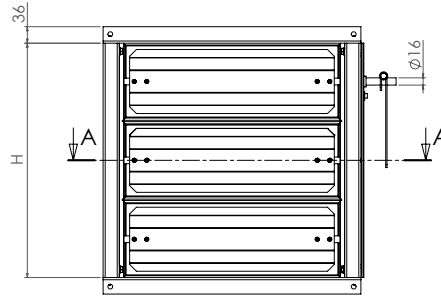
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## DIMENSIONS

4 heights available :

- 180 mm
- 345 mm
- 520 mm
- 695 mm

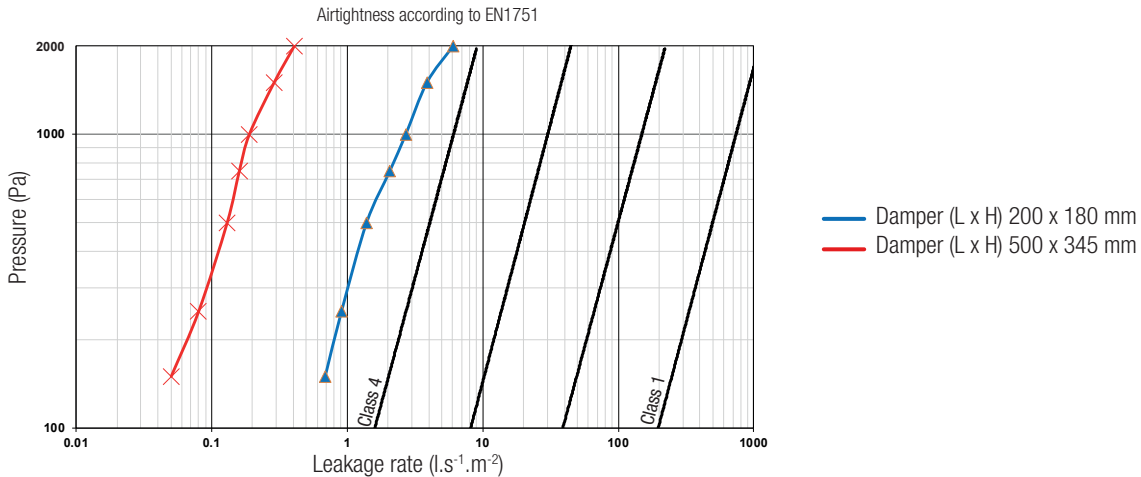
Other dimensions on request.



## WEIGHT (kg)

H \ L	200	300	400	500	600	700
180	4	5	7	9	11	13
345	6	8	10	12	14	16
520	9	11	13	15	17	19
695	12	14	16	18	20	22

## UPSTREAM / DOWNSTREAM AIRTIGHTNESS



Pressure (Pa)	Leakage rate (l.s <sup>-1</sup> .m <sup>2</sup> )		Class 4 requirements (EN1751)
	Damper (L x H) 500 x 345 mm	Damper (L x H) 200 x 180 mm	
250	0.08	0.91	2.7
500	0.13	1.39	4.0
1000	0.19	2.7	6.0
2000	0.41	6.02	9.0

Tests carried out according to the specifications of EN 1751 standard.

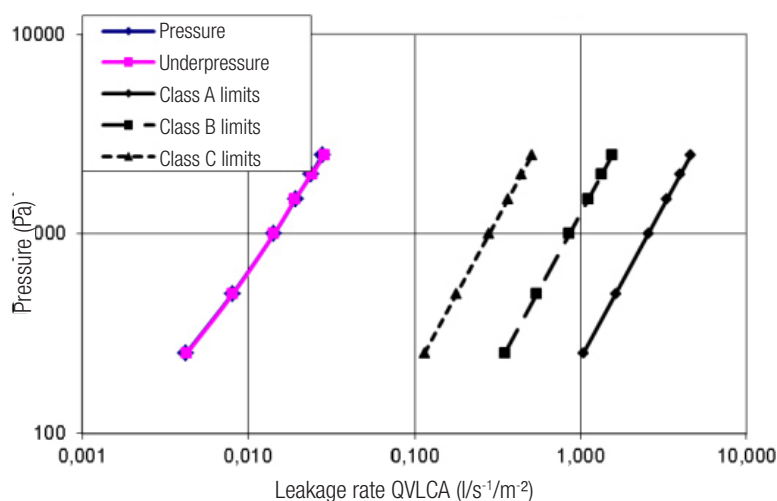
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## FRAME'S AIRTIGHTNESS

Pressure (Pa)	Leakage rate (l.s <sup>-1</sup> .m <sup>-2</sup> )	Class C requirements (EN1751) (l.s <sup>-1</sup> .m <sup>-2</sup> )
250	0.004	0.1
500	0.008	0.2
1000	0.014	0.3

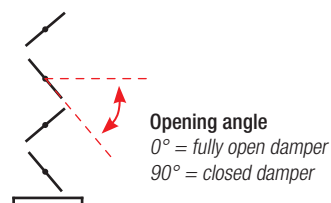
Tests carried out according to the specifications of **EN 1751** standard.



## PRESSURE LOSSES

The following pressure losses (Pa) are given according to the blades opening angle (in °) and air velocity (in m/s).

Air velocity (m/s)	Opening angle		
	0°	30°	60°
2	1	10	332
4	3	40	1329
6	7	89	
8	12	158	
10	19	247	
12	28	355	
15	43	555	

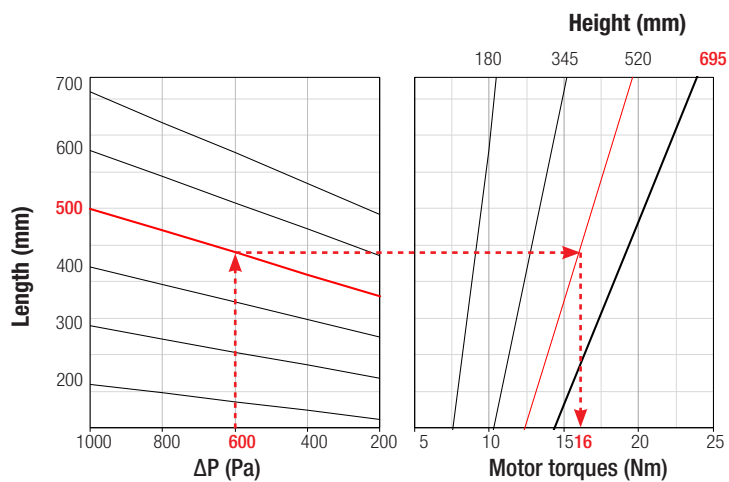


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## MOTOR TORQUES

The following motor torques are given in Nm for an airtight damper type RI.



### Example :

$\Delta P = 600$  Pa

Damper RI – L = 500 mm x H = 520 mm => motor torques = **16 Nm**