

TWISTED 850 series - Tile



Twisted 850 Air supply diffuser

USE

- Air supply or return, high-induction fixed diffusion with swirl air jet.
- Wide airflow range from a single size of diffuser.
- Systems offer high mixing rate.
- Ideal for cold and hot air supply (air conditioning) with high T° differences under low ceiling heights.
- Ideal for variable-airflow systems (ducted convector fans).
- Ceiling diffuser designed to replace 600 x 600 mm, 625 x 625 mm or 675 x 675 mm suspended ceiling panels.
- Suited to Tbar and Fine-Line frames.

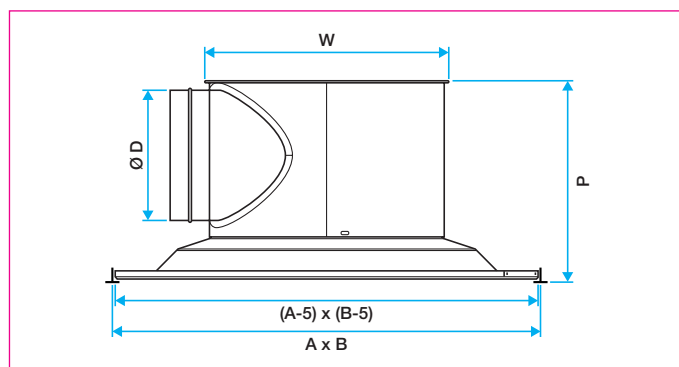
CONSTRUCTION

- Painted steel diffusion cone and central plate.
 - Steel compensation plate suited to 600 x 600 mm, 625 x 625 mm or 675 x 675 mm ceiling panels, with Tbar or Fine-Line frames.
 - Air supply model equipped with a fixed central plate serving as a deflector.
 - Return model equipped with removable central plate and elliptical filter. Access to filter by quick and easy opening of the central plate.
 - Galvanised steel cylindrical plenum for direct connection to a Ø 200
 - Version without plenum available for direct exhaust or direct connection to D200 or D250 circular connection.
- Non-opening diffuser only.
NB: use for exhaust / return only.

DESIGN

- High-induction air diffusion using air jet rotation inside plenum.
- By maintaining a sufficient discharge speed, the diffusion cone ensures a perfect Coanda effect (ceiling effect) and a swirl air jet. This swirl air jet will cause the ambient air to move, thereby mixing it with the air supply to ensure homogeneous temperatures in occupied areas.
- Aldes patent.

DIMENSIONS



Twisted 850 diffuser for square panels

STANDARD DIMENSIONS

COMFORT AIRFLOW LEVELS FOR LW < NR 40 DB(A) AND DIMENSIONS					
INSTALLATION	A x B* (MM)	Ø W (mm)	Ø D (MM)	D (MM)	AIRFLOW (M³/H)
Suspended ceilings	600 x 600	366	200	298	150 to 600
	625 x 625	366	200	298	150 to 600
	675 x 675	366	200	298	150 to 600

* Nominal ceiling panel dimensions.

TWISTED 850 series - Tile



Twisted 850 Air supply diffuser

FINISH

- Epoxy paint finish RAL 9003 matt 30 % brightness.
- RAL chart paint finish on diffuser and/or plenum. View the list of available colours in the appendix.
- AldesArchitect® finish.

ATTACHMENT

- Attachment to concrete ceiling using brackets on the plenum.
Note: the weight of the diffuser must not be borne by the suspended ceiling frame.
- Concealed screw attachment to plenum.

OPTIONS

- G2 elliptical flat filter supplied with the exhaust diffuser.
M1 fire protection rating.
- Acoustic insulation (15 mm-thick M1 melamine foam inside the plenum).
- Thermal insulation (5 mm-thick M1 polyurethane foam outside the plenum).

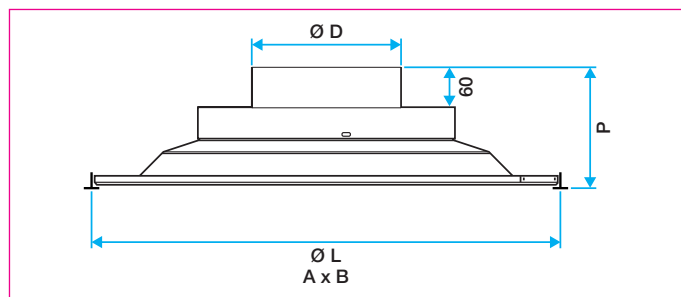
STANDARD DIMENSIONS

- Dimensions suited to standard suspended ceiling panels 600 x 600 mm, 625 x 625 mm or 675 x 675 mm (T-bar or Fine-Line systems).
- Circular connection diameter 200 mm.
- For further information refer to the Range pages below.

TECHNICAL DETAILS

- See selection tables on following pages.
- See induction rates at end of chapter.

DIMENSIONS



Twisted 850 direct exhaust

STANDARD DIMENSIONS

DIMENSIONS A x B* (MM)	Ø D (MM)	P (MM)
600 x 600	200 or 250	170
625 x 625	200 or 250	170
675 x 675	200 or 250	170

* Nominal ceiling panel dimensions.

TWISTED 850 series - Circular



Twisted 850 circular
for plaster ceilings

USE

- Air supply or return, high-induction fixed diffusion with swirl air jet.
- Wide airflow range from a single size of diffuser.
- Systems offer high mixing rate.
- Ideal for cold and hot air supply (air conditioning) with high T° differences under low ceiling heights.
- Ideal for variable-airflow systems (ducted convector fans).
- Circular version compatible with non-removable plaster or BA13 plasterboard ceilings.

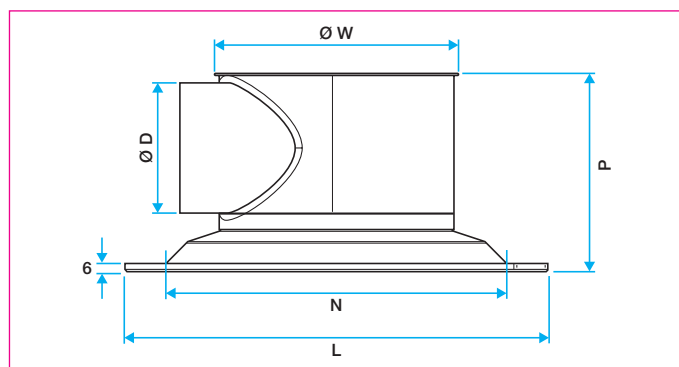
CONSTRUCTION

- Painted steel diffusion cone and central plate.
 - Return model equipped with removable central plate. Access to filter and supply by quick and easy opening of the central plate (option).
 - Galvanised steel cylindrical plenum for direct connection to a Ø 200.
 - Version without plenum available for direct exhaust or direct connection to D200 or D250 circular connection (opening on circular model). Non-opening diffuser only.
- NB: use for exhaust / return only.

DESIGN

- High-induction air diffusion using air jet rotation inside plenum.
- By maintaining a sufficient discharge speed, the diffusion cone ensures a perfect Coanda effect (ceiling effect) and a swirl air jet. This swirl air jet will cause the ambient air to move, thereby mixing it with the air supply to ensure homogeneous temperatures in occupied areas.
- Aides patent.

DIMENSIONS



Twisted 850 diffuser for plaster or BA13 plasterboard ceiling

STANDARD DIMENSIONS

COMFORT AIRFLOW LEVELS FOR LW < NR 40 DB(A) AND DIMENSIONS						
INSTALLATION	Ø L (MM)	OPENING Ø N (MM)	Ø W (MM)	Ø D (MM)	D (MM)	AIRFLOW (M³/H)
Plaster/BA13	555	545	366	200	298	150 to 600
Plaster/BA13	555	545	366	250	348	150 to 600

TWISTED 850 series - Circular



Twisted 850 opening
with exhaust filter

FINISH

- Epoxy paint finish RAL 9003 matt 30 % brightness.
- RAL chart paint finish on diffuser and/or plenum. View the list of available colours in the appendix.
- Black paint coating on plenum on request.
- AldesArchitect® finish.

ATTACHMENT

- Attachment to concrete ceiling using brackets on the plenum.
Note: the weight of the diffuser must not be borne by the suspended ceiling frame.
- Concealed screw attachment to plenum or F7 bridge (optional).

OPTIONS

- G2 or G4 elliptical flat filter supplied with the exhaust diffuser. M1 fire protection rating.
- Acoustic insulation (15 mm-thick M1 melamine foam inside the plenum).
- Thermal insulation (5 mm-thick M1 polyurethane foam outside the plenum).
- Bridge system to facilitate installation in non-removable ceilings (F7 attachment).

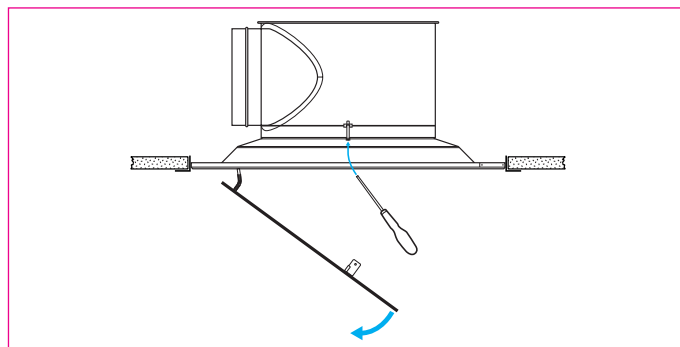
STANDARD DIMENSIONS

- Circular connection diameter 200 mm.
- For further information refer to the Range pages below.

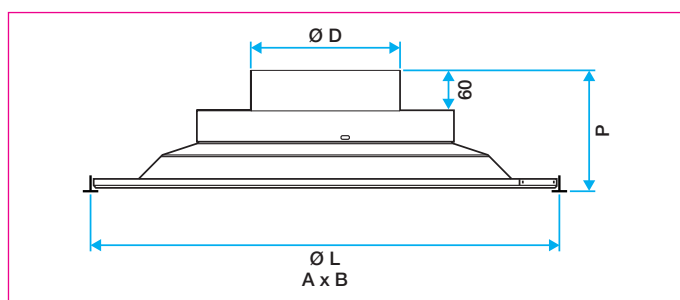
TECHNICAL DETAILS

- See selection tables on following pages.
- See induction rates at end of chapter.

DIMENSIONS



Installation of Twisted plaster ceiling version with F7 bridge



Twisted 850 direct exhaust

STANDARD DIMENSIONS

DIMENSIONS Ø L (MM)	Ø D (MM)	P (MM)
555	200 or 250	170

TWISTED 850 series

STANDARD RANGE

DIMENSIONS (MM)	AIR SUPPLY DIFFUSER TWISTED 850 600 x 600	TWISTED 850 THERMAL AND ACOUSTIC-INSULATED AIR SUPPLY DIFFUSER 600 X 600	TWISTED 850 W OPENING EXHAUST DIFFUSER WITH FILTER 600 x 600	SPARE FILTER W 850	CIRCULAR DIFFUSER (PLASTER/BA13) SUPPLY OR EXHAUST NO FILTER
	CODE	CODE	CODE	CODE	CODE
200	11051163	11051165	11051164	11053949 (G2) 11053948 (G4)	11051166
ATTACHMENT			FINISH		
• Concealed using brackets sealed into concrete slab.			• Steel with epoxy paint coating RAL 9003 white matt 30 % brightness.		

RANGE WITH CHOICE OF OPTIONS

DIMENSIONS (MM)	AIR SUPPLY DIFFUSER TWISTED 850	EXHAUST DIFFUSER TWISTED 850 W	DIRECT EXHAUST AIR DIFFUSER TWISTED 850 DIRECT
	CODE	CODE	CODE
600 x 600 panels	11003361	11003362	11003366
625 x 625 panels	11003365*	11003365	11003367
675 x 675 panels	11003363	11003364	11003368
Circular plaster	11003374*	11003374	11003376

* Opening.

OPTIONS

OPTIONS	OPTIONS
For T-bar or Fine Line ceiling systems (suspended ceiling models only)	Acoustic insulation
F7 mounting bridge (plaster models only)	Thermal and acoustic insulation
Epoxy paint according to RAL colour chart for diffuser and/or plenum	Connection Ø 200 or Ø 250 on direct type
G2 filters	
AldeArchitect® finish	Protective film

ACCESSORIES PROPOSED

- Spare G2 or G4 filter (M1 fire rating).

SELECTION - AIR SUPPLY WITH CEILING EFFECT

AK (M²)	DIMENSIONS	QV (M³/H)																					
		150		200		250		300		350		400		450		500		550		600		650	
0.022	Ø 200	24	0.30	25	0.39	26	3.52	28	2.59	29	0.65	30	0.71	35	0.85	37	0.91	39	0.96	40	1.02	43	1.10
		2.0	2	2.6	3	3.3	4	3.9	6	4.6	8	5.2	11	5.9	13	6.5	17	7.2	20	7.8	24	8.5	28
	Lw	Lt																					
	Vk	Pa																					

The Lw (dB(A)) values do not take into account any noise attenuation in the room. Vt = 0.37 m/s. Tests conducted with standard plenum.

SELECTION - EXHAUST WITHOUT FILTER

AK (M²)	DIMENSIONS	QV (M³/H)																					
		150		200		250		300		350		400		450		500		550		600		650	
0.029	Ø 250	24	-	24	-	25	-	26	-	27	-	30	-	33	-	36	-	38	-	41	-	42	-
		1.4	2	1.9	3	2.4	5	2.9	7	4.6	10	3.8	13	4.3	16	4.8	20	5.3	24	5.7	29	6.2	34
	Ø 200 (Pa2)	-	4	-	7	-	11	-	16	-	21	-	28	-	35	-	44	-	53	-	63	-	74
	Lw	Lt																					
	Vk	Pa																					
		Lw																					
		Vk																					
		Pa																					

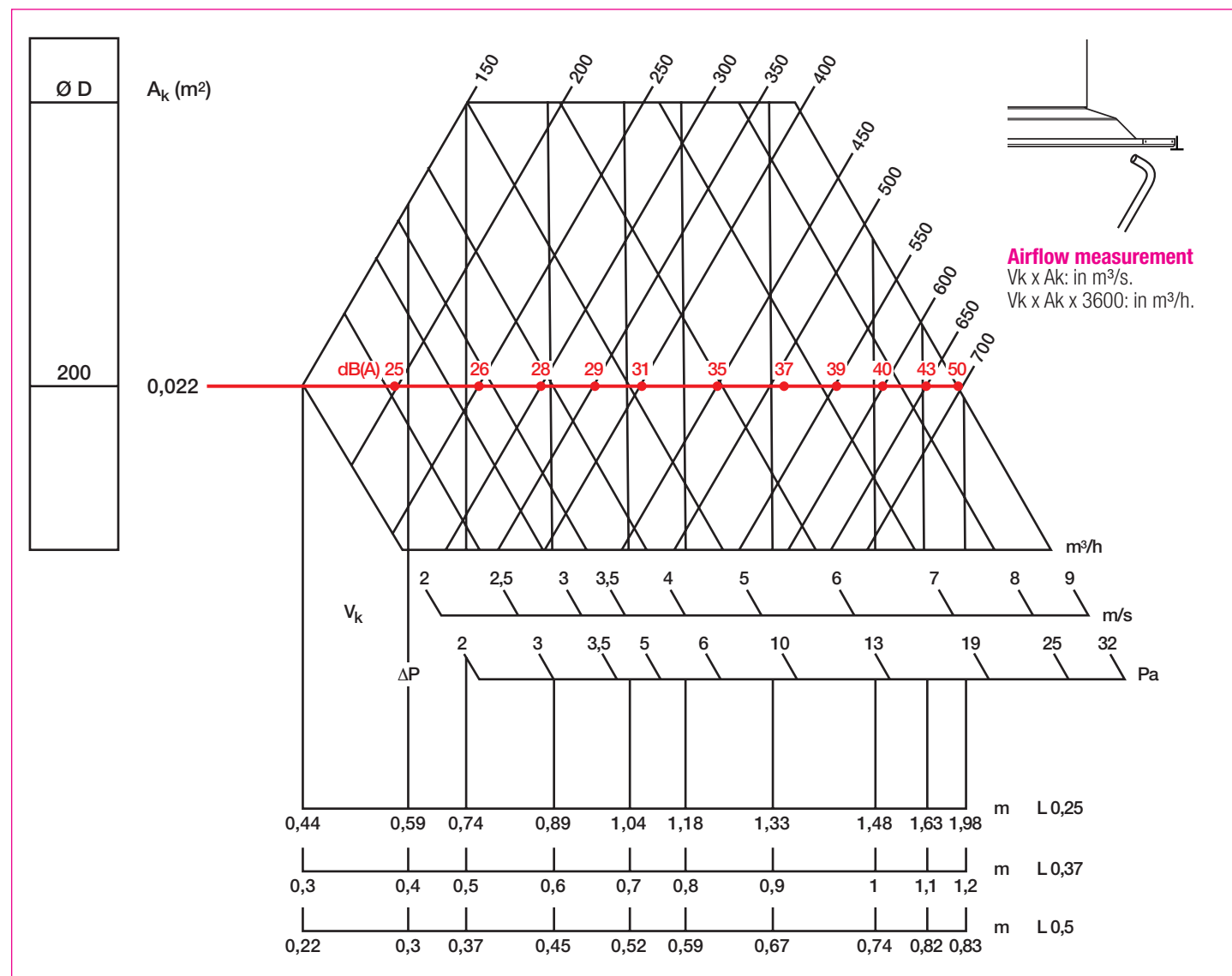
The Lw (dB(A)) values do not take into account any noise attenuation in the room. Tests conducted without plenum (direct model Ø 250) and using standard plenum (Pa2).

SELECTION - EXHAUST - G2 FILTER ONLY

AK (M²)	DIMENSIONS	QV (M³/H)																					
		150		200		250		300		350		400		450		500		550		600		650	
	Ø 200	-	1	-	2	-	3	-	4	-	6	-	8	-	10	-	12	-	14	-	17	-	20
		Pa																					

TWISTED 850 series

AIR SUPPLY WITH CEILING EFFECT - LENGTH 1 M

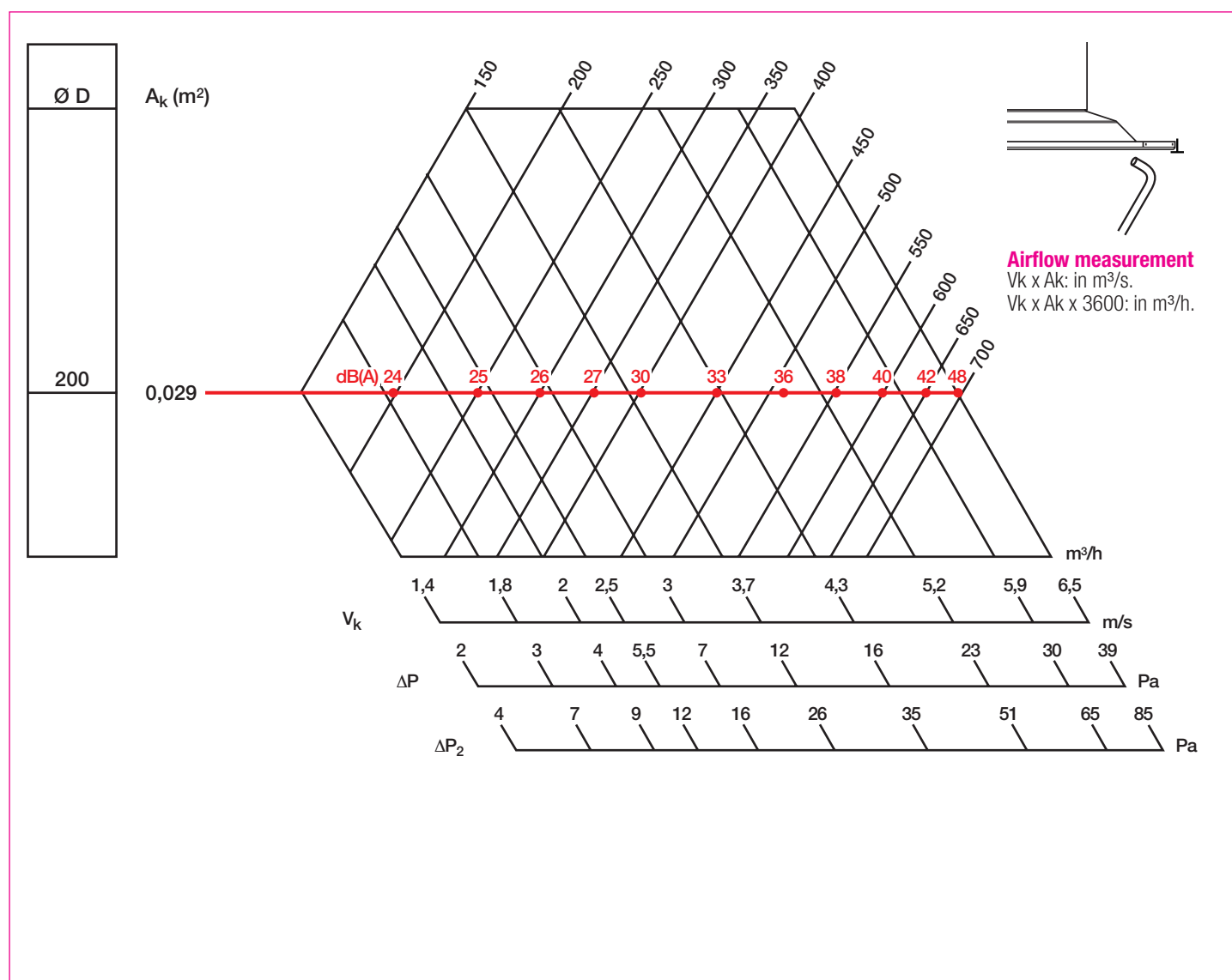


The Lw (dB(A)) values do not take into account any noise attenuation in the room. Tests conducted with standard plenum.

CORRECTIONS FOR OTHER V_t

V_t (M/S)	0.25	0.375	0.5	0.625
Lt (m)	x 1.5	x 1	x 0.75	x 0.6

TWISTED 850 series - Exhaust



The L_w (dB(A)) values do not take into account any noise attenuation in the room. Tests conducted without plenum (direct model ø 250) and using standard plenum (Pa2).

PRESSURE DROP ON FILTER ONLY

