Sound-insulated inline mixed-flow fan
inWave

Inline sound-insulated mixed-flow fan for supply, exhaust or supply and exhaust ventilation systems of various commercial and industrial premises with increased requirements for noise level. Combines wide capabilities and high performance features of axial and centrifugal fans, providing powerful air flow. Compatible with Ø150 mm air ducts. Equipped with energy efficient three-speed AC motors or EC motors.

Low Noise Level

The fan casing is specially designed to reduce the noise level during operation. This is achieved due to the special desig n of the inner part of the casing, impeller and rectifier. The casing is also equipped with an additional layer of noise-insulating material.

For permissions with high humidity

The fan casing and impeller are made of polymer. The fan is equipped with an alright terminal box for connection to power mains. This ensures high resistance to moisture.

High Performance

Due to the conically shaped impeller with specially profiled blades, the air steam circular velocity increases, which results in higher air flow pressure.

Low Weight

Due to fact that the casing and impeller are made of plastic, the fan is lightweight, which facilities installation and regular maintenance work.

Speed-controllable

The fans are contolled by either a three-step controller (for versions with AC motors) or a smooth speed controller (for AC and EC versions)

APPLICATION

- Supply and extract ventilation systems installed in various premises with high requirements to the noise level.
- For ventilation air ducts requiring high pressure, powerful air flow and low noise level.
- Compatible with Ø 100 up to Ø 160 mm air ducts.

Areas of Application : Best Solution for Ventilation in libraries, conference halls, educational institutions, kindergartens, health care and child care facilities etc. where noise is a major criteria.

DESIGN

- The casing is made of high-quality durable plastic, internally filled with 50 mm mineral wool thermal- and sound-insulating layer.
- Special inner perforation of the casing and sound-insulating material are designed for wide-frequency sound absorbing.
- Mixed-flow impeller made of high-quality plastic.
- The diffusor, the specially profiled impeller and directing vanes provide high performance and powerful pressure combined with low noise operation.
- External airtight terminal block on the fan casing for power supply.
- Mounting brackets on the fan casing for mounting to the floor, to the wall or ceiling.

MOTOR

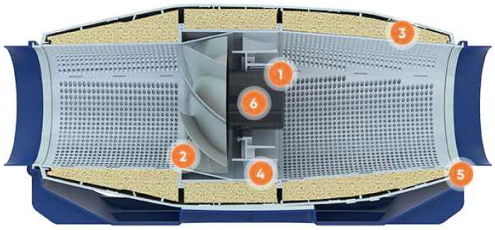
- Single-phase high-efficient motor with low energy demand on ball bearings.
- Overheating protection due to built-in thermal switches.
- Motor ingress protection rating IPX4.

SPEED CONTROL

- Speed selection with a built-in speed switch (US option) or an external multi-speed controller (specially ordered accessory).
- Smooth speed control is possible either with an integrated speed controller (FR1 option), an external thyristor or transformer speed controller (specially ordered accessory) when connected to the maximum speed terminal.

MOUNTING

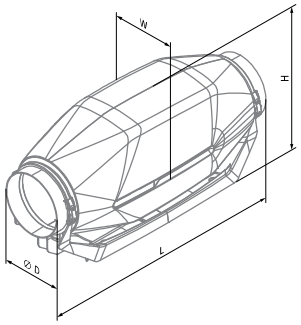
- Due to its compact design the fan is the ideal solution for mounting in limited spaces.
- The fan is suitable for mounting in any section of the ventilation system from intake to the end of the ductwork.
- Wall or ceiling mounting with a special bracket on the fan casing.

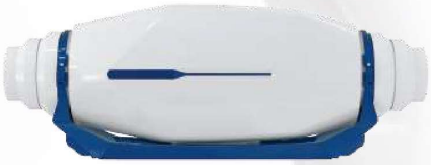


1. Energy efficient and reliable electric motor (AC or EC). Built-in thermal overload protection. Equipped with ball bearings
2. Plastic air tight casing and impeller
3. Soundproof casing
4. Unique aerodynamic shape of the diffuser and airflow rectifier
5. Special clamps for attaching the motor unit to the bracket
6. Additional options (speed controllers, temperature sensor)

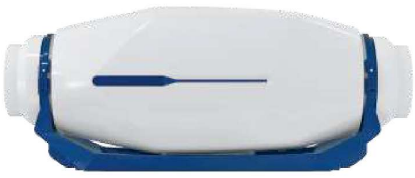
OVERALL DIMENSIONS

Type	Dimensions [mm]				Weight [kg]
	Ø D	H	L	W	
inWave 100/125 (Spigot 100 mm)	99	273	752	253	5.05
inWave 100/125 (Spigot 125 mm)	124	273	679	253	5.0
inWave 150/160	149	273	606	253	4.9





inWave 100/125 (spigot 100 mm)



inWave 100/125 (spigot 125 mm)

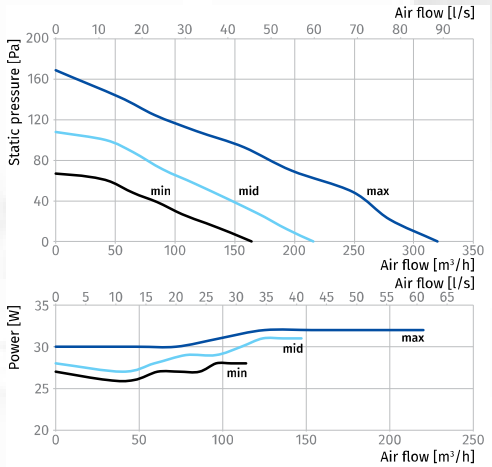
inWave 150/160

SPECIFICATIONS

Parameters	inWave 100/125			inWave 100/125			inWave 150/160		
Spigot	100			125			100		
Speed	min	mid	max	min	mid	max	min	mid	max
Voltage [V]	1 ~ 230			1 ~ 230			1 ~ 230		
Frequency [Hz]	50			50			50		
Power [W]	28	31	32	31	33	34	25	46	51
Current [A]	0.13	0.14	0.15	0.14	0.14	0.16	0.20	0.21	0.24
Maximum Air flow [m3/h (l/s)]	114 (32)	147 (41)	220 (61)	164 (46)	216 (60)	320 (89)	242 (67)	320 (89)	540 (150)
RPM [min-^{1}]	1568	1952	2362	1552	1952	2356	1952	2374	2738
Sound pressure at 3m [dBA]	19	23	27	20	22	28	20	26	33
Max. transported air temp [°C]	-25...+55			-25...+55			-25...+55		
IP rating	IPX4			IPX4			IPX4		
Motor IP rating	IP20			IP20			IP20		
ErP	2018			2018			2018		

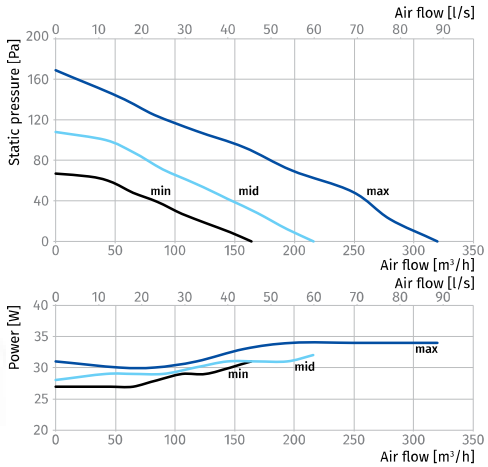
INWAVE 100/125 (SPIGOT 100 MM)

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L_{WA} to inlet [dBA]	**52**	28	46	50	41	35	33	36	29	**32**	**42**
L_{WA} to outlet [dBA]	**51**	25	43	50	40	32	31	36	31	**31**	**41**
L_{WA} to environment [dBA]	**48**	28	44	44	36	32	28	27	22	**27**	**37**



INWAVE 100/125 (SPIGOT 125 MM)

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L_{WA} to inlet [dBA]	**54**	31	49	52	43	37	34	37	30	**34**	**44**
L_{WA} to outlet [dBA]	**52**	26	44	51	41	33	32	37	31	**32**	**42**
L_{WA} to environment [dBA]	**48**	28	45	45	37	32	28	28	22	**28**	**38**



INWAVE 150/160

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
L_{WA} to inlet [dBA]	**61**	37	56	59	48	41	38	41	34	**41**	**51**
L_{WA} to outlet [dBA]	**60**	32	52	58	47	37	36	41	35	**39**	**49**
L_{WA} to environment [dBA]	**53**	33	50	49	40	35	30	30	24	**33**	**43**