



FIXED GEOMETRY HIGH INDUCTION DIFFUSERS

KPQ
SERIES

TECHNICAL CHARACTERISTICS

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The KPQ series diffuser is a support panel on which a rose pattern of fixed deflectors is stamped.

This geometry achieves a circular air flow with a large induction effect.

For this reason, the diffuser is ideal both for heating and cooling even with large temperature differences between the injected air and the air in the room.

This particular diffuser series is normally used in spaces with ceilings heights between 2,6 and 4 metres.

DIFFUSER MATERIAL

The diffuser is made of carbon steel sheet.

Paint Finish : white colour RAL 9010.

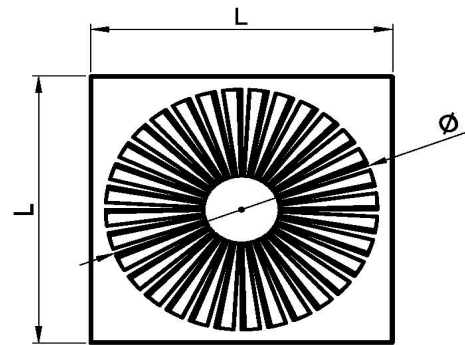
Possibility of producing AISI 304 or AISI 316 stainless steel versions with gloss or satin finish.

DIFFUSER FITTING

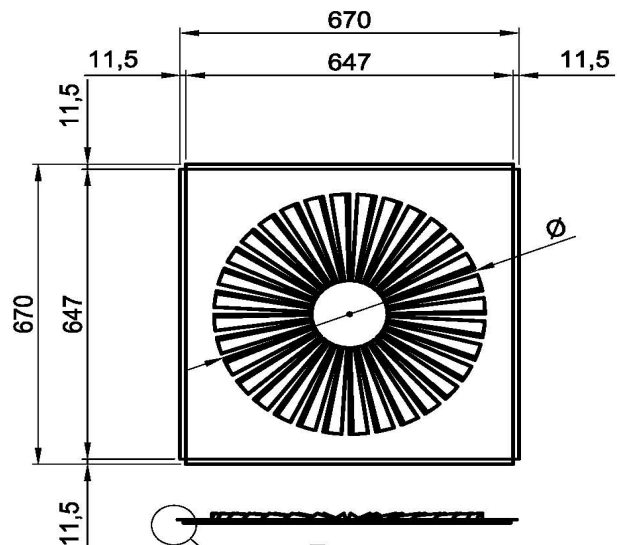
The diffuser is fixed with a central M5 type screw using a fixing bridge to the plenum or the duct. The screw is supplied, together with a white screw cover.

UNSUITABLE ENVIRONMENTS

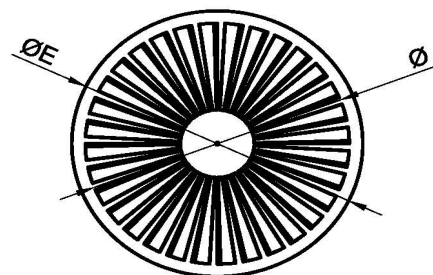
The products in painted carbon steel are not suitable for installation in environments with high humidity and in environments with a potentially explosive atmosphere or



Squared panel version



Fineline panel version

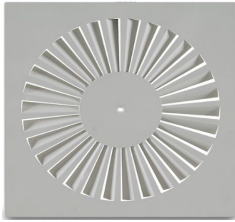


Circular panel version

SQUARED VERSIONS			
Codice	L mm	Ø mm	Ak m ²
KPQ300	296	236	0,010
KPQ400	396	336	0,016
KPQ500	496	436	0,033
KPQ600	596	536	0,049
KPQ625	621	536	0,049
KPQT300	596	236	0,010
KPQT400	596	336	0,016
KPQT500	596	436	0,033
KPQD300	621	236	0,010
KPQD400	621	336	0,016
KPQD500	621	436	0,033

FINELINE VERSIONS		
Codice	Ø mm	Ak m ²
KPQFC300	236	0,010
KPQFC400	336	0,016
KPQFC500	436	0,033
KPQFC600	536	0,049

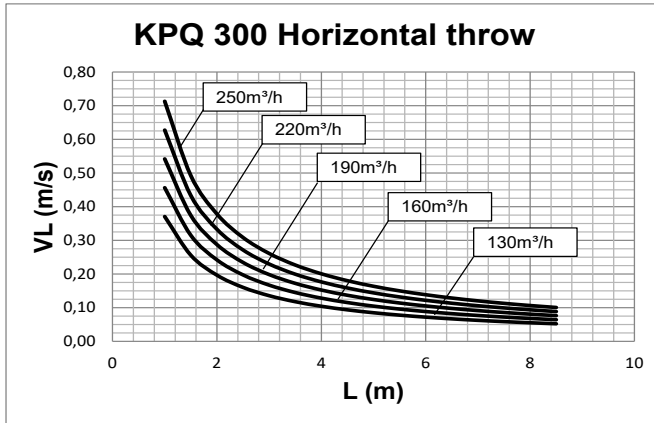
CIRCULAR VERSIONS			
Codice	ØE mm	Ø mm	Ak m ²
KPQR300	296	236	0,010
KPQR400	396	336	0,016
KPQR500	496	436	0,033
KPQR600	596	536	0,049
KPQR625	621	536	0,049



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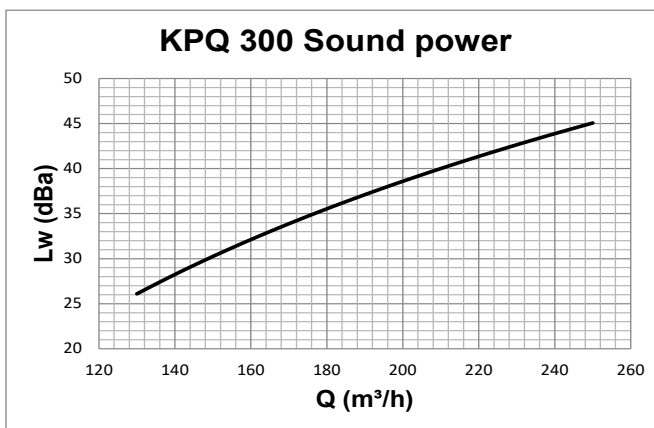
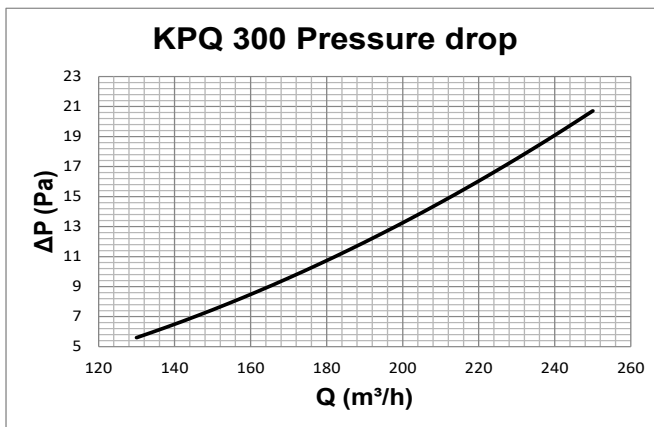
PERFORMANCE KPQ 300



Data measured operating in isothermal conditions in accordance with the international standard: **ISO 5219 1984: Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.**

L (m) horizontal distance in metres from the centre of the diffuser

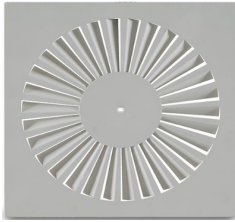
VL (m/s) maximum speed in the air stream at distance L



Data measured in reverberation room in accordance with international standards: **ISO 3741 1999: Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms**

ISO 5135 1997: Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.

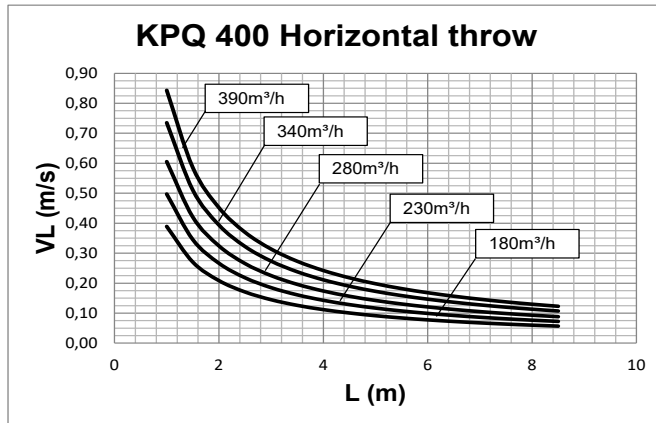
The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.



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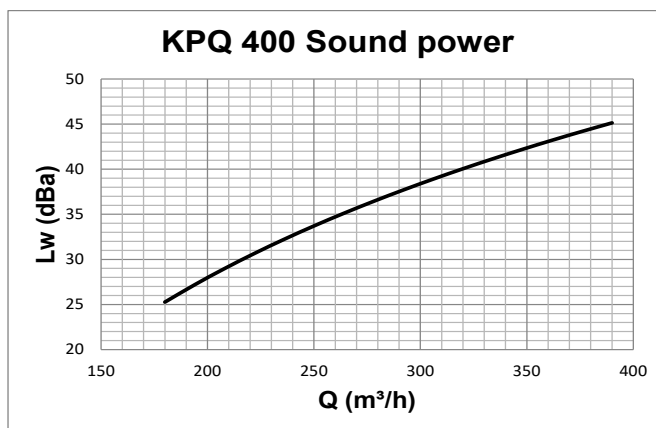
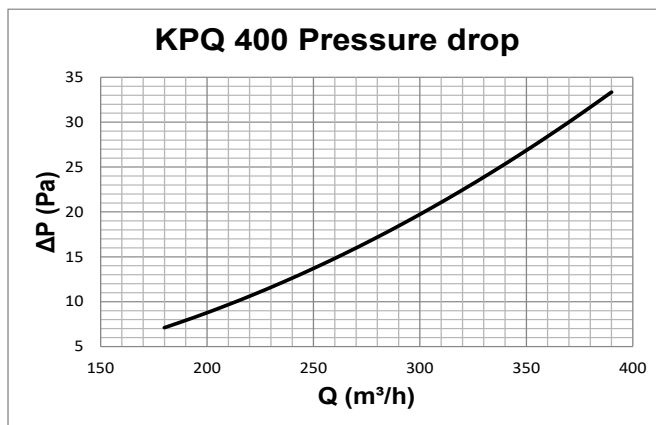
PERFORMANCE KPQ 400



Data measured operating in isothermal conditions in accordance with the international standard: **ISO 5219 1984: Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.**

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream at distance L



Data measured in reverberation room in accordance with international standards: **ISO 3741 1999: Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms**

ISO 5135 1997: Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.

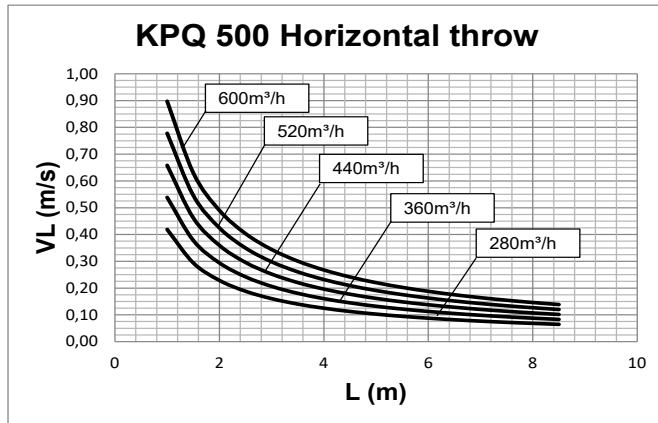
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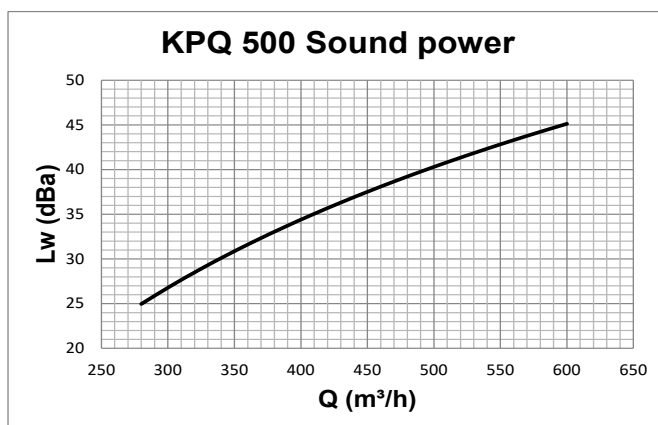
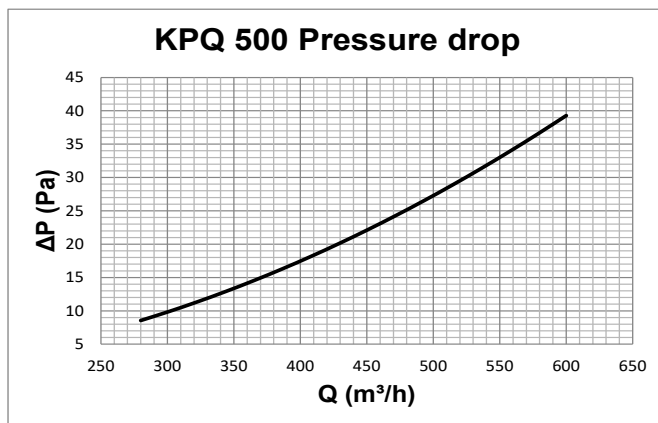
PERFORMANCE KPQ 500



Data measured operating in isothermal conditions in accordance with the international standard: **ISO 5219 1984: Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.**

L (m) horizontal distance in metres from the centre of the diffuser

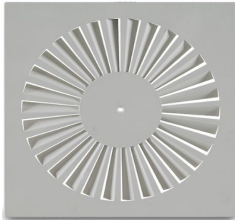
VL (m/s) maximum speed in the air stream at distance L



Data measured in reverberation room in accordance with international standards: **ISO 3741 1999: Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms**

ISO 5135 1997: Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.

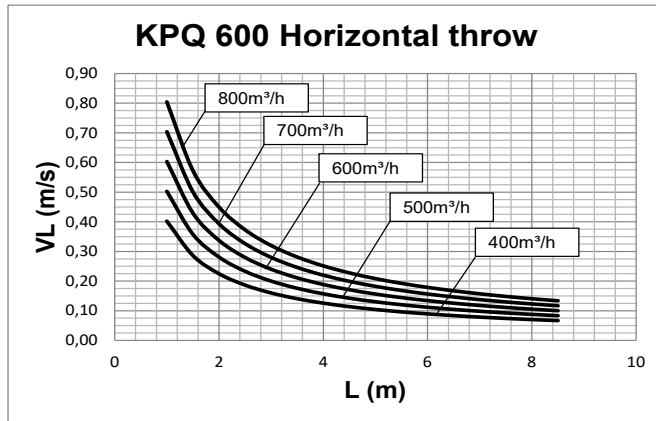
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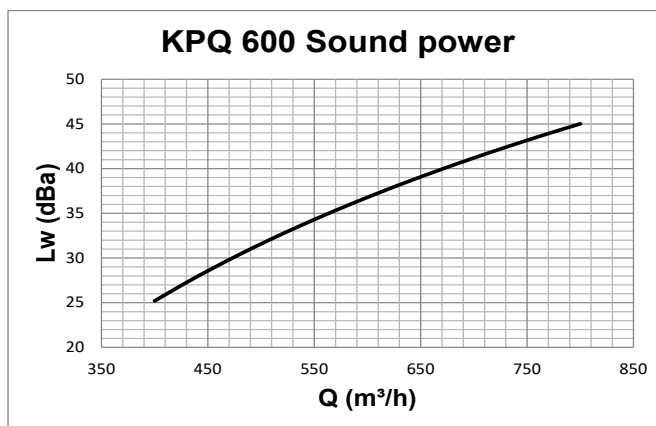
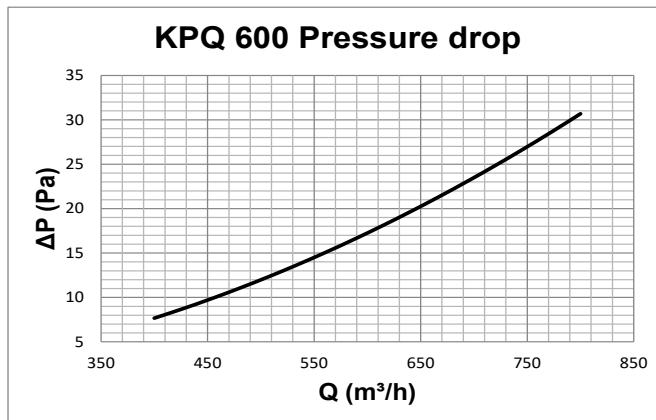
PERFORMANCE KPQ 600



Data measured operating in isothermal conditions in accordance with the international standard: **ISO 5219 1984: Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.**

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream at distance L



Data measured in reverberation room in accordance with international standards: **ISO 3741 1999: Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms**

ISO 5135 1997: Acoustic - determination of sound power levels of noise from air-terminal devices ; air terminal units; dampers and valves by measurement in a reverberation room.

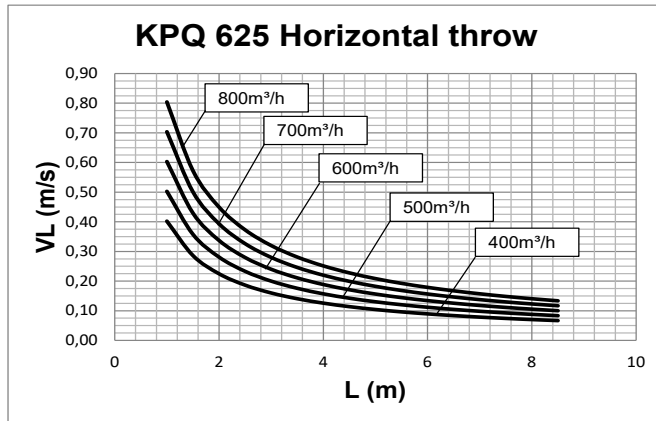
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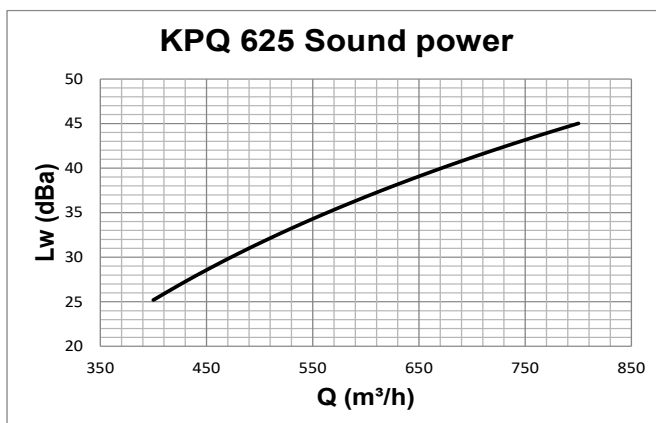
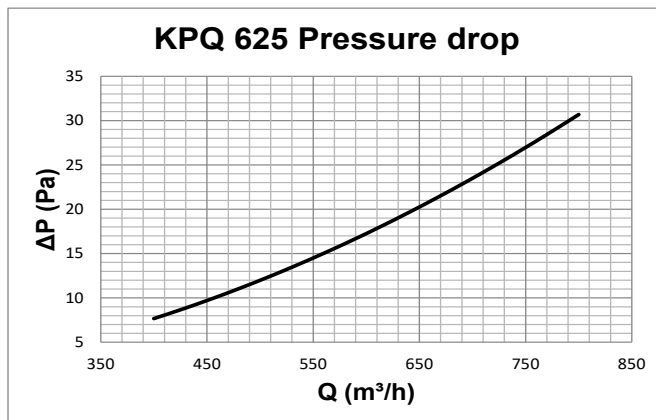
PERFORMANCE KPQ 625



Data measured operating in isothermal conditions in accordance with the international standard: **ISO 5219 1984: Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.**

L (m) horizontal distance in metres from the centre of the diffuser

VL (m/s) maximum speed in the air stream at distance L



Data measured in reverberation room in accordance with international standards: **ISO 3741 1999: Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms**

ISO 5135 1997: Acoustic - determination of sound power levels of noise from air-terminal devices; air terminal units; dampers and valves by measurement in a reverberation room.

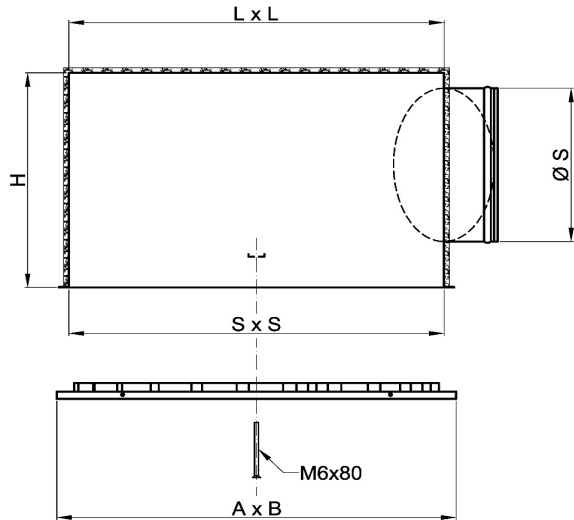
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FIXED GEOMETRY HIGH INDUCTION DIFFUSERS

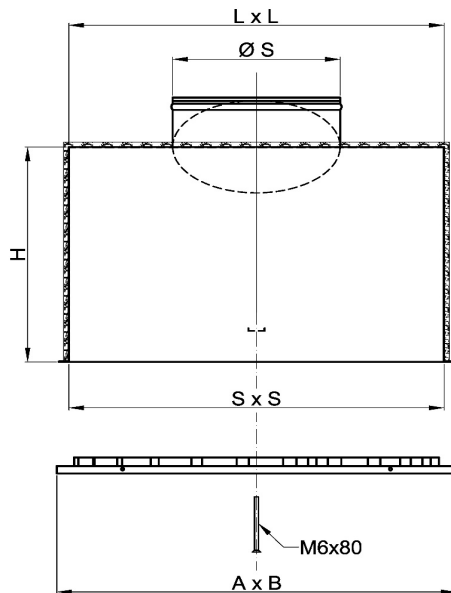
PP80
PP81

PLENUM IN SEEL SHEET



PLENUM PP80
Made of galvanized sheet steel.
Lateral connection.
Mounting bridge for mounting diffuser with central screw.
Complete with hooks for ceiling suspension.

optionals:
polyethylene insulation;
equalizer steel mesh;
control damper into the fitting.



Made of galvanized sheet steel.
Rear connection.
Mounting bridge for mounting diffuser with central screw.
Complete with hooks for ceiling suspension.

optionals:
polyethylene insulation;
equalizer steel mesh;
control damper into the fitting.

Nominal dimensions of the diffuser A x B	Real dimensions of the panel	L x L	S x S	H	N° connections	S	Connection and damper material raccordo
300 x 300	296	260	290	240	1	123	ABS (*)
400 x 400	396	360	390	290	1	199	ABS (*)
500 x 500	496	460	490	290	1	199	ABS (*)
600 x 600	596	560	590	290	1	250	ABS (*)
625 x 625	621	585	615	290	1	250	ABS (*)
800 x 800	796	760	790	400	1	301	steel
825 x 825	821	785	815	340	1	301	steel

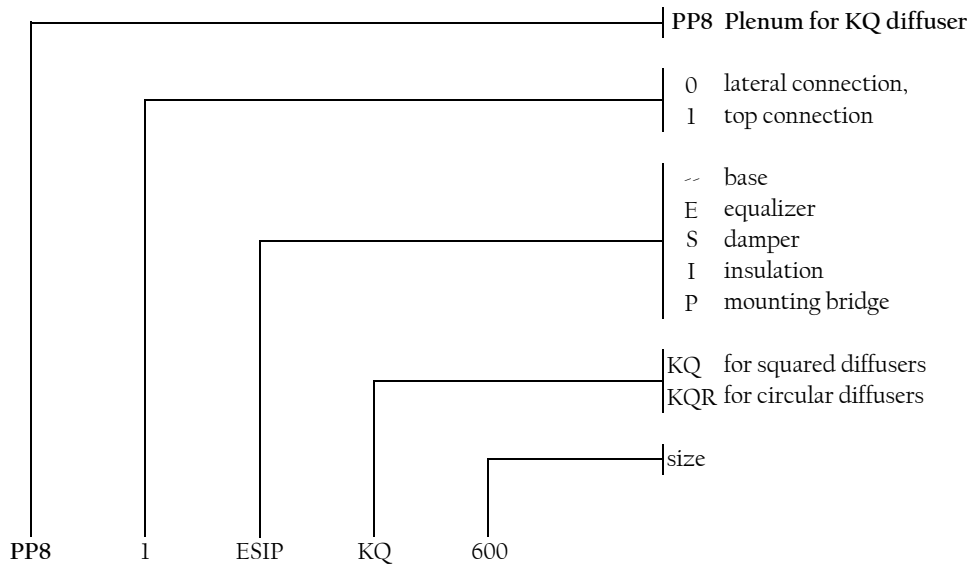
(*) Steel on request



FIXED GEOMETRY HIGH INDUCTION DIFFUSERS

PP80
PP81

HOW TO ORDER



Standard sizes
200
300
400
500
600
625
800
825



PS PLENUM

PPS SERIES

OVERVIEW

OVERVIEW :

The PPS series of polystyrene assemblable plenum boxes have a density of 45 kg/m³, with a Fire class I quality, eternally crystallised.

The transformation process and the special properties of the material, make the PPS a very compact and lightweight plenum.

These special features combined to the trapezoidal shape that distinguish it, allows the fixing of the unit in completed countersealing structure. This facilitates both the realisation and maintenance of the system. Given the light weight, the plenum is positioned on the structure of the counter ceiling, eliminating therefore the necessity of using hanging clips for fixing to the ceiling.

This has the advantage of reducing considerably the fitting time and a saving of the space used of over 50%, compared to a traditional plenum box.

The PPS has an excellent thermal acoustic insulation characteristic. It does not therefore require additional insulating material.

The PPS plenums can be supplied already assembled with a square 600x60mm diffuser panel, model KQ1, complete with regulation damper in ABS and equalizer, ready for installation.

As an alternative, there is also a version assembled but without the diffuser fitted.

Lastly a kit is also available, comprising the plenum, the connection "C", bar "A" and assembly diagram.

Installation: once the diffuser has been fitted to the plenum using the screw "V" (PPS-V680T) to bar "A", the plenum is positioned on the counter ceiling structure.

TECHNICAL CHARACTERISTICS:

fire reaction:

Class I - Test report CSI DC01/378F05.

Euroclass E - Test report CSI DC01/656F07

Mechanic resistance:

10% deformation with 226kPa pressure - Test report CSI 0936/FPM/MATs/07.

Water absorption:

Increase average volume 3,26% in full immersion, tested according to UNI EN 12087 method 2A - Test report CSI 0936/FPM/MATs/07_2.

Thermal conductivity:

Δ (average) 0,0320 W/mK - Test report CSI 0037/DC/TTS/07.

Thermal resistance:

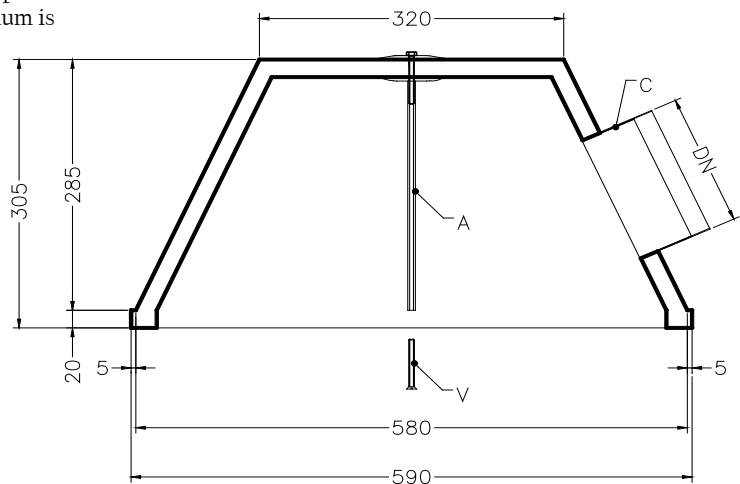
R (average) 0.637 m²K/W - Test report CSI 0037/DC/TTS/07.

Test certificate type:

Certificate CSI DE/1831/07 issued in conformity to directive 89/106/CEE on the basis of UNI EN 13163/2003 and UNI EN 13172/2003.

The documentation indicated above can be viewed in electronic form in Italian with prior agreement from the Technical Department.

ASSEMBLED PPS





PS PLENUM

CODES

PPS SERIES

Image	Description	Connector diameter	Code
	Plenum in PS already assembled with connector in ABS with damper and without equalizer.	125	PPS-PS125
		160	PPS-PS160
		200	PPS-PS200
		250	PPS-PS250
	Plenum in PS already assembled, complete with connector in ABS with damper and equalizer.	125	PPS-PES125
		160	PPS-PES160
		200	PPS-PES200
		250	PPS-PES250
	Plenum in PS already assembled, complete with connector in ABS with damper, equalizer and diffuser KQ1 600.	125	PPS-KQIPES125
		160	PPS-KQIPES160
		200	PPS-KQIPES200
		250	PPS-KQIPES250

ACCESSORIES

	Only PS bell shape body with fixing bar (without connector)		PPS-KIT
	Equalizer for plenum		PPS-E
	Connector in ABS	125	RR10-125
		160	RR10-160
		200	RR10-200
		250	RR10-250
	Damper for connectors in ABS	125	RRS10-125
		160	RRS10-160
		200	RRS10-200
		250	RRS10-250
	Fixing screw (usually already included in the DIFFUSER)		PPS-V680T