Chilled beams

Podium

Use

Lindab's supply air beam Podium is the lightest supply air beam available on the market.

Podium is mounted on the ceiling and supplies cooling through natural convection and radiation, which results in a draft-free climate.

35% of the cooling supplied by Podium comes from radiation and the rest from convection. Compared to a conventional beam, Podium provides a significantly higher cooling effect at lower room temperatures.

Podium offers many possibilities and great flexibility; for example, you can have Podium coated in any color you want.

Installation

Podium is installed either suspended or recessed in a ceiling.

Podium can be delivered with different connection alternatives. The connection dimensions depend on if the chilled beams are to be installed individually or in series.

Worth noting

Podium is the lightest supply air beam available on the market, a beam 236.2" long, with a width of 20.9" and a weight of only 28.8 kg. Podium has flat and easily accessible surfaces, which helps maintain a good indoor hygiene. Furthermore, the height of Podium is only 130 mm, which contributes to its great freedom of placement. Lindab's supply air beams are Eurovent-certified and tested according to EN-15116 and EN-14518.

Key figures

Length:	47.2" - 236.2"
Width:	6.7", 13.8", 20.9"
Height:	5.1"
Capacity:	Cooling effect of up to 2955 BTU
	Air quantity of up to 85 cfm

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Function

Podium has two functions, in part a supply air terminal, and in part a chilled beam. The supply air is fed and distributed inside the supply air beam. The air then passes through the gills on the bottom of the beam and ventilates the room. With its design, Podium scores a very high air-change efficiency value. Tests show that the supply air beam has an air-change efficiency of 64%, which is high compared to other methods of supplying air.

When cold-water passes through Podium, both the warm air from the room and the supply air is cooled on the beam's cold surfaces. A considerable mixing of warm room air takes place inside the supply air beam, which means that the temperature of the supply air released from the beam rises. The mixed air then streams through the supply air beam and down into the room. This leads to air circulation in the room, where warm air from the room is continually replaced by cooler air.

There are two decisive factors characterising Podium.

1. Low draft risk: Compared to other brands, Lindab's world-patented technology provides direct heat exchange between the cold surfaces of the beam and the warm surfaces of the room via low-temperature radiation. The radiation quotient for Podium is approx. 30 to 35 % of the total effect. This is a high radiation quotient compared to conventional beams with finned batteries, and this means that the convective share of the cooling effect is lower with Podium. With a given airflow, this results in a higher supply air temperature after the air has passed through the beam. This means that the risk of drafts under the beam is low.
2. Flexible placement: The supply air is fed to the room from the bottom of the beam. This results in a low draft risk. The design also allows the units to be installed at a distance of only 11.8" from each other. Conventional supply air beams normally require a significantly greater separation. This means that Podium offers increased flexibility and freedom of choice with regard to size, number and placement of beams, walls and other fittings in the room.

Design

The Podium's design is based on Lindab's world-patented method of metallurgically bonding copper and aluminium. The aluminium plate that constitutes the cooling fin is also metallurgically bonded to the copper pipe that transports the cold water. The shape of the copper pipe allows the easy creation of turbulent currents. This, together with the contact between the copper and the aluminium, boosts to the maximum the energy transport from the cooling surfaces to the cooling water.

The metallurgical bond between the copper and the aluminium also eliminates any risk of galvanic corrosion that could possibly be caused by condensation on the surfaces. The supply air can also be fed via a damper, which is supplied as an optional accessory.

The water pipes are made of copper. Nevertheless, the water should be oxygen-free to prevent corrosion.

Picture 1. Podium 17, 35 and 53.

Chilled beams

Podium

Versions

Size: Podium is produced in three different widths - 6.7" (model 17), 13.8"(model 35), 20.9" (model 53)- all of which have a height of 5.1".

Lengths: Podium is available in lengths from 70.9" to 236.2" in steps of 4".

Water connection: Podium can be supplied with four connections, depending on the width of the product – 0.4", 0.5", 0.6", and 0.9". This is to allow adjustment of the pressure drop and thus to ensure turbulent flow in different dimensioning cases. The heating pipes always have plain ends, o.d. 0.4".

Air connection: 4"Ø.

Surface treatment: Podium is powder-coated as standard in RAL 9010.

Plus features

Factory preinstalled.

Color: Podium can be coated in different special colors.

Hygiene cover: A cover that prevents the formation of air currents in the space above the suspended ceiling. Available only for Podium 53 with an increased width of 23.4".

Accessories

Delivered separately.

Control: Refer to the chapter Regula.

Damper: 4"Ø

Wall connection option: Connection cover to conceal visible piping to a wall, or between beams (see figure 1). The cover plate, however, provides access to the pipe fittings and damper. Indicate the length when you place your order.

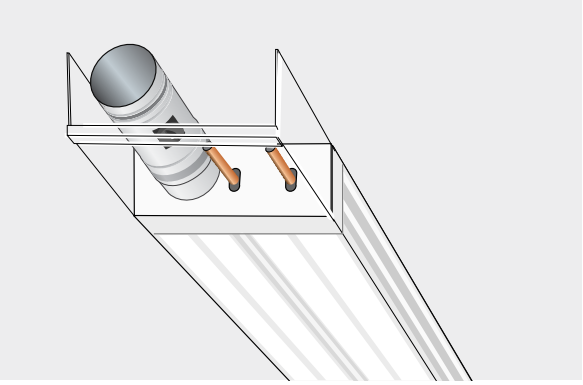


Figure 1. Podium 35 with connection cover.

Chilled beams Podium

Installation examples

Podium can be installed in two different ways. Suspended or recess mounted in a suspended ceiling (see figures 2 to 5).

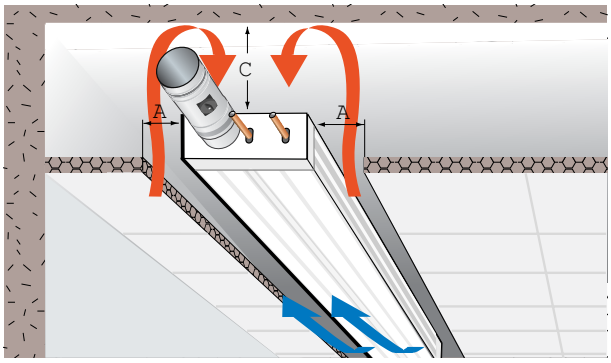


Figure 2. Installation dimensions when the room air reaches Podium from both sides.

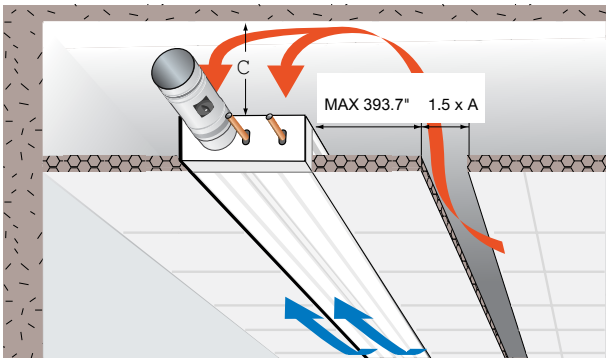


Figure 3. Installation dimensions when the room air only reaches Podium from one side.

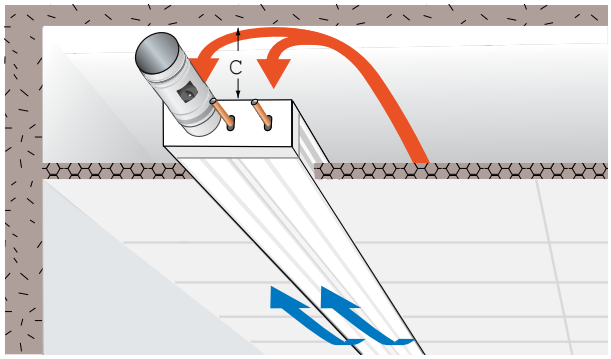


Figure 4. Installation dimensions when the room air reaches Podium from another opening in the suspended ceiling.

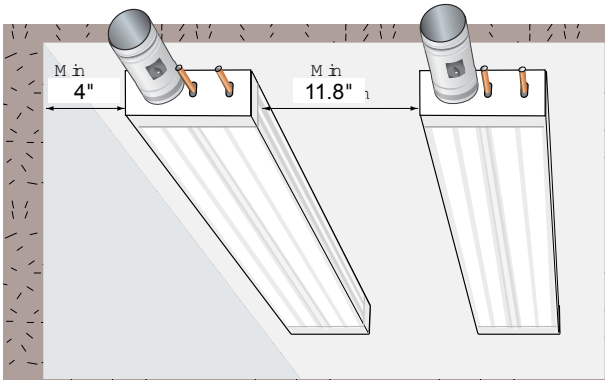


Figure 5. Minimum dimensions when two Podium beams are installed close to one another or near a wall.

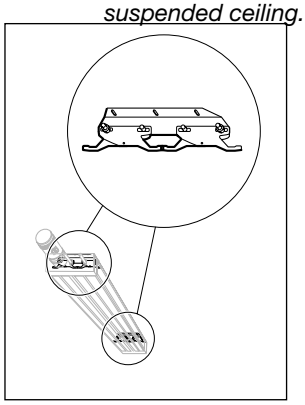


Figure 6. Installation directly on to the ceiling.

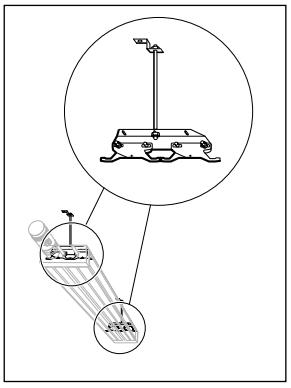


Figure 7. Suspended installation.

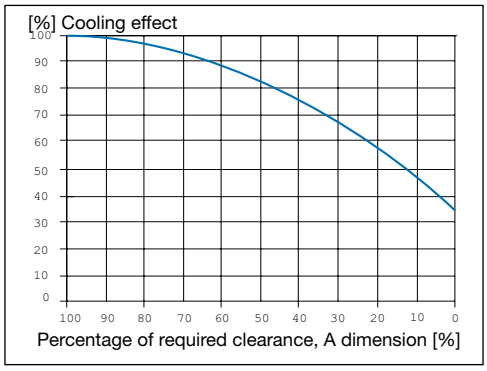


Diagram 3. Cooling effect with a reduced gap between the suspended ceiling and the supply air beam.

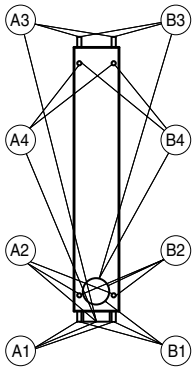
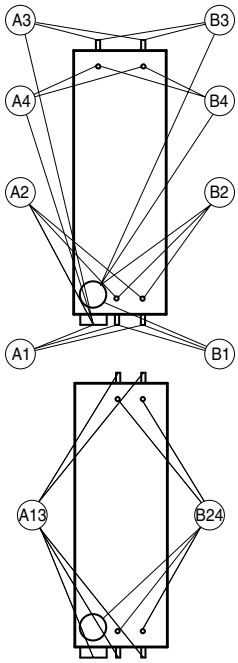
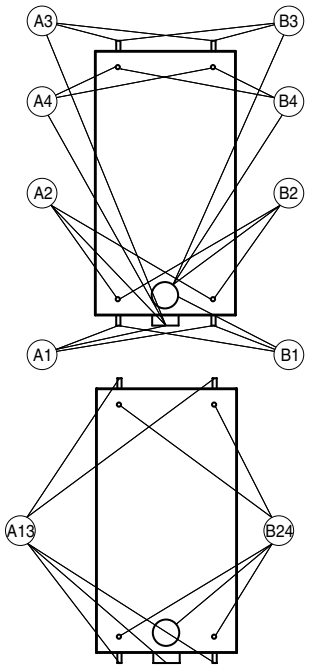
Installation dimensions						
	A			C		
Model	17	35	53	17	35	53
Figure 1 (in)	2.0	2.8	4	2.4	2.4	3.1
Figure 2 (in)	3.0	4.1	5.9	3.5	3.5	4.7
Figure 3	3.1 in^2	4.3 in^2	5.9 in^2			
	Free opening area per in of Podium					

Table 8. Podium 17, 35 & 53 dimensions and installation.

Chilled beams

Podium

Couplings & connections

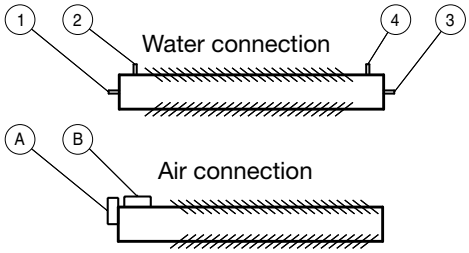
Model 7	Model 14	Model 21
		

Coupling options	Connection diameter
A1	.4 .5
A2	.4 .5
A3	.4 .5
A4	.4 .5
B1	.4 .5
B2	.4 .5
B3	.4 .5
B4	.4 .5

Coupling options	Connection diameter
A1	.4 .5 .6
A2	.4 .5 .6
A3	.4 .5 .6
A4	.4 .5 .6
A13	.4 .5 .6
A14	.4 .5 .6
A23	.6
A24	.6
B1	.6
B2	.6
B3	.4 .5 .6
B4	.4 .5 .6
B13	.4 .5 .6
B14	.6
B23	.6
B24	.6
	.6

Coupling options	Connection diameter
A1	.5 .6 .9
A2	.5 .6 .9
A3	.5 .6 .9
A4	.5 .6 .9
A13	.9
A14	.9
A23	.9
A24	.9
B1	.5 .6 .9
B2	.5 .6 .9
B3	.5 .6 .9
B4	.5 .6 .9
B13	.9
B14	.9
B23	.9
B24	.9

Podium from the side



Because of the beam's "gills", its surface structure looks different, depending on the direction from which it is viewed. If products connected in series are to have the same appearance, the connection point should be oriented in the same way throughout the room. Note! Connection options 3 and 24 can be turned in both directions.

Table 9. Podium 17, 35 and 54 are supplied in lengths from 70.9" - 236.2" in steps of 4". The connection dimension for the water is 0.4", 0.5", 0.6", and 0.9"*, and 4" for the air.*

NOTE! Coupling should be with compression couplings, press couplings or Tectite.

Chilled beams

Podium

Couplings & connections

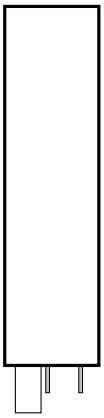
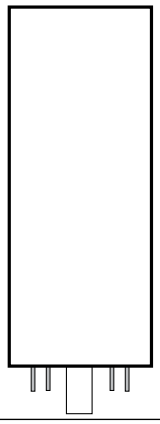
Model 17	Model14	Model 21
		
Water connection: plain Cu, pipe o.d., in 0.4" 0.5"	Water connection: plain Cu, pipe o.d., in 0.4" 0.5" 0.6"	Water connection: plain Cu, pipe o.d., in 0.5" 0.6" 0.9"
Supply air connection: Spiral duct, Ø in 4"	Supply air connection: Spiral duct, Ø in 4"	Supply air connection: Spiral duct, Ø in 4"

Table 10. Overview of connection dimensions for water and supply air, Podium 17, 35 & 53.

Chilled beams Podium

Width & height, (in)

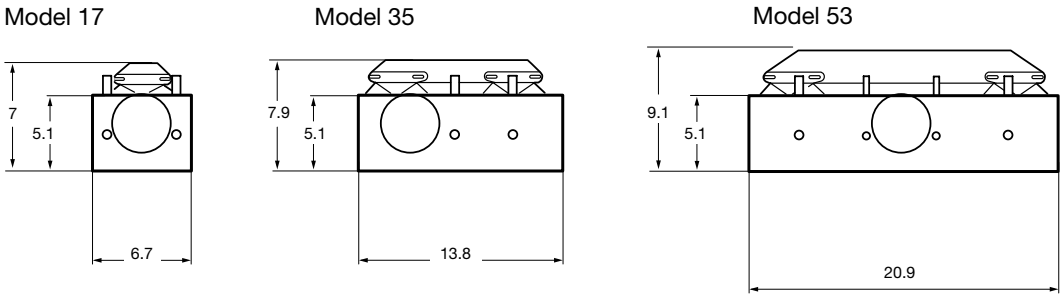


Figure 9. Podium 17, 35 and 53 are manufactured in three different widths and one height.

Length, in

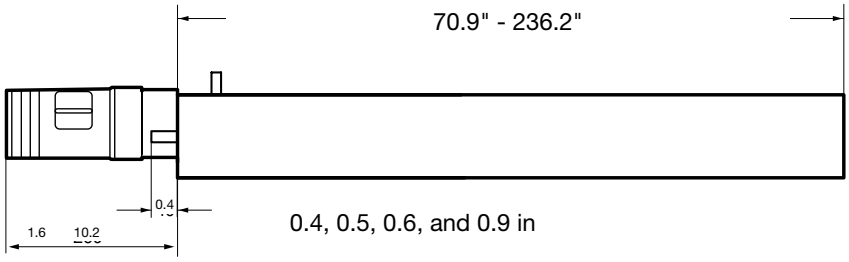


Figure 10. Podium 17, 35 and 53 are produced as standard in lengths from 70.9" - 236.2" in steps of 4". Actual dimensions are -0.3" in order to fit a standard T- support.

Dimensions, in

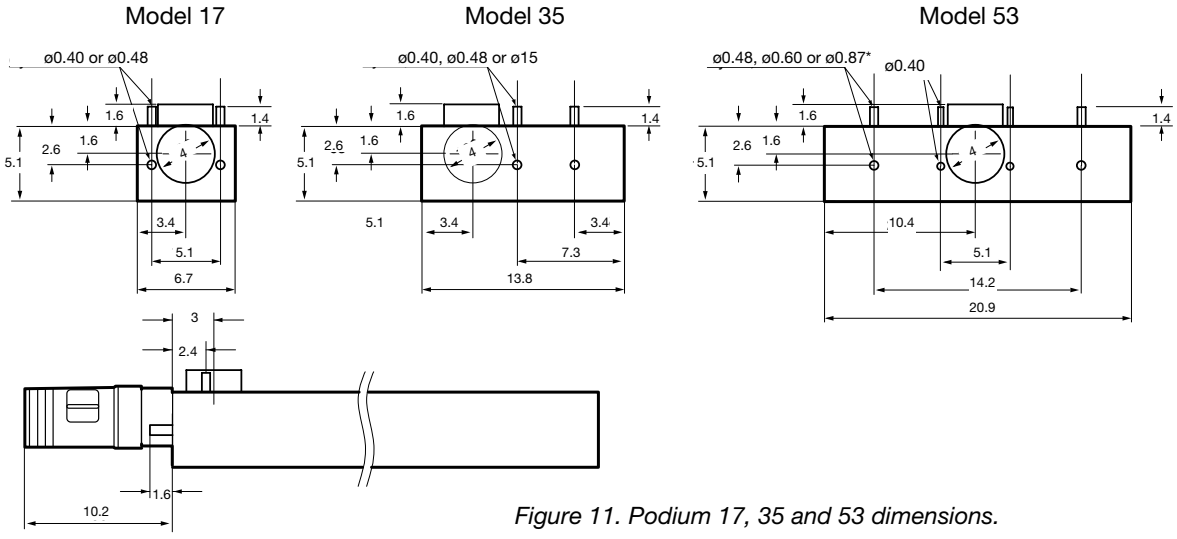


Figure 11. Podium 17, 35 and 53 dimensions.

Weight and water volume

	Podium 17	Podium 35	Podium 53
Weight, lb/ft	1.1	2.2	3.2
Water content, gal/ft	0.02	0.04	0.06
Copper pipes, quality	EN 12735-2 CU-DHP	EN 12735-2 CU-DHP	EN 12735-2 CU-DHP
Pressure class	PN10	PN10	PN10

Table 11. Podium 17, 35 & 53 weight and water volume.