

# IHC

VARIZON® Displacement unit with induction chamber and adjustable spread pattern



IHC

## Quick facts

- Induction effect
- Suitable for ventilation systems with cooling
- Adjustable spread pattern
- Measuring point
- Can be cleaned
- Available in alternative colours
- Included in the MagiCAD and CadVent databases

## Quick guide

AIR FLOW - SOUND LEVEL			
IHC	l/s		
Size	25 dB(A)	30 dB(A)	35 dB(A)
200	100	120	142
250	150	180	210
315	240	280	330

Data for IHC + REG regulator unit are shown in a separate diagram.

## Technical description

### Design

A complete, semi-circular low-velocity air diffuser equipped with an induction chamber. The induction function is housed in the top of the diffuser behind the removable, perforated front plate. Also located behind the front plate is the VARIZON® air distribution system with its adjustable discs. On the left side of the unit, viewed in the airflow direction, behind the removable decor strip, is the measuring point and k-factor label for commissioning.

### Materials and surface treatment

The air diffuser is manufactured in galvanized sheet metal and aluminium profiles. The exterior is finished with our pure white standard paint, RAL 9010. The unit is also available in other standard colours: Dusty grey 7037, white aluminium RAL 9006, jet black RAL 9005, grey aluminium RAL 9007 and signal white RAL 9003 (NCS 0500).

### Special versions

In addition to the standard sizes, IHCa can be supplied in special dimensions, with reinforced front plates, alternative perforation patterns, etc. The duct covers, and plinths can also be supplied in different lengths. Please contact your nearest sales office for information.

### Accessories

#### Regulator:

REG - Combined unit with damper and sound attenuator for commissioning.

#### Duct cover:

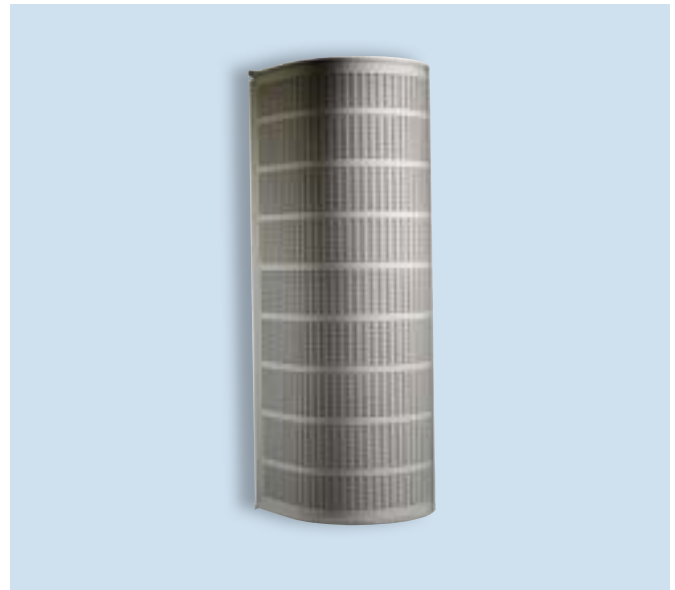
IHCT 1 - For the aesthetic concealment of the regulator and connecting circular duct.

#### Plinth:

IHCT 2 - For the aesthetic installation of the air diffuser on the floor.

### Planning

By adjusting the discs behind the front plate it is possible to alter the width of the affected area without affecting the airflow, pressure drop or sound level. This flexibility simplifies any future changes in the room layout.



### Installation

The displacement unit is secured to the wall using angle brackets. The base plinth is screwed to the bottom of the diffuser. The telescopic duct cover is attached to the wall using wall tracks, and the screws are concealed by side strips. The regulator, which has a connection spigot with rubber seal, is pressed into the inlet socket of the diffuser. See Figure 1.

### Commissioning

The measuring point is located on the left side of the diffuser behind the aluminium profile. The k-factor of the product is marked at the side of the measuring point. The k-factors are also given in the commissioning guide, which is available at [www.swegon.com](http://www.swegon.com). It is recommended that the REG regulator is used to adjust the airflow. See Figure 2.

### Maintenance

Clean the unit as necessary with lukewarm water and detergent. Access can be gained to the duct system by removing the front plate and the distribution plate inspection hatch. See Figure 2.

### Environment

The Declaration of construction materials is available at [www.swegon.com](http://www.swegon.com).

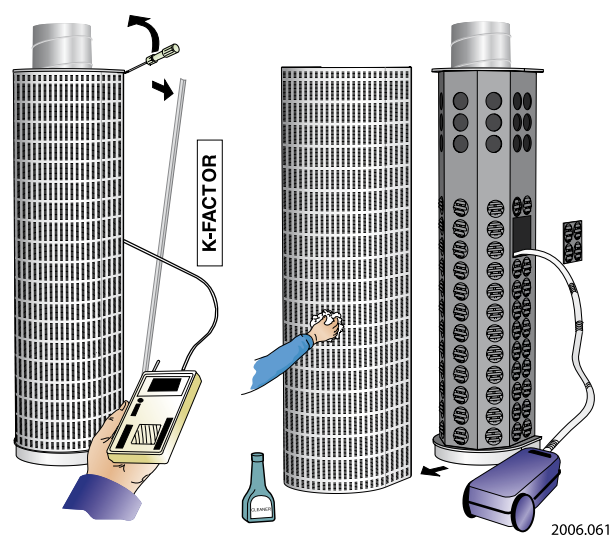
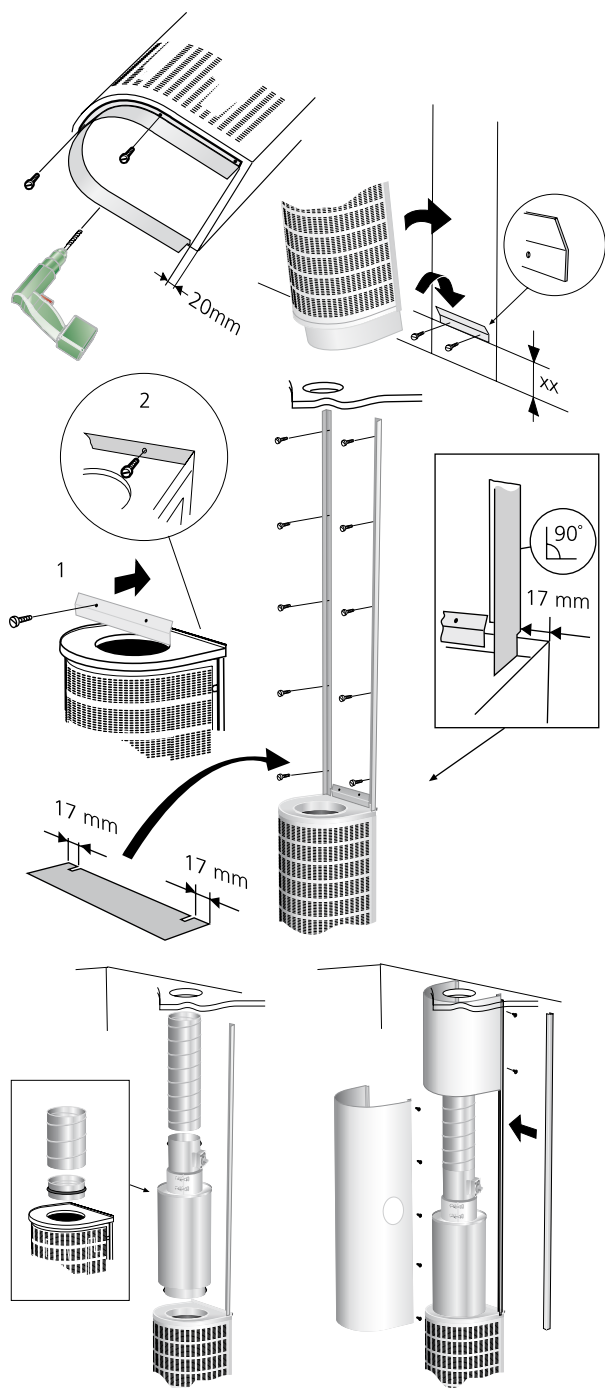


Figure 2. Commissioning. Maintenance.

Figure 1. Installation.

## Sizing

- The sound level dB(A) applies to rooms of 10 m<sup>2</sup> equivalent sound absorption area.
- The maximum recommended temperature difference between room temperature and supply air temperature is:  
6 K for comfort installations  
9 K for industrial installations.
- To calculate the width of the air stream, air velocities in the zone of occupation or sound levels in rooms with other dimensions, please refer to our ProAir web program, which is available at [www.swegon.com](http://www.swegon.com).

## Sound data - IHC

### Sound power level $L_w$ (dB)

Table K<sub>OK</sub>

Size	Mid-frequency (octave band) Hz							
IHC	63	125	250	500	1000	2000	4000	8000
200	2	4	4	1	-1	-5	-10	-8
250	-1	5	5	2	-1	-6	-12	-11
315	1	6	6	3	-2	-8	-13	-8
Size	Mid-frequency (octave band) Hz							
IHC + REG	63	125	250	500	1000	2000	4000	8000
200	4	4	3	1	0	-7	-12	-10
250	2	4	4	2	-1	-7	-11	-9
315	-1	5	4	1	-1	-6	-10	-9
Tol. ±	2	2	2	2	2	2	2	2

### Sound attenuation $\Delta L$ (dB)

Table  $\Delta L$

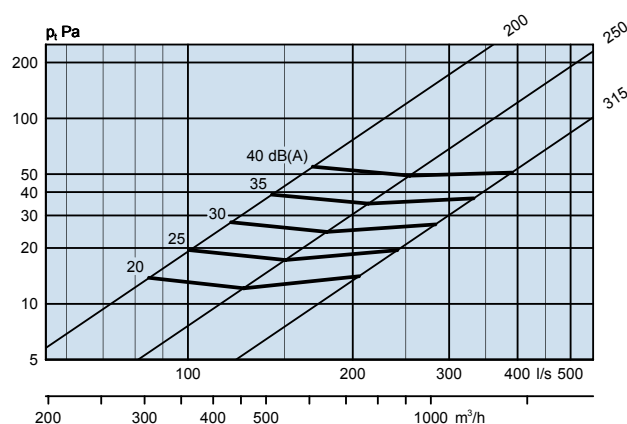
Size	Mid-frequency (octave band) Hz							
IHC	63	125	250	500	1000	2000	4000	8000
200	15	12	6	2	2	3	5	4
250	14	10	5	2	2	3	4	5
315	13	9	4	1	0	1	2	2
Size	Mid-frequency (octave band) Hz							
IHC + REG	63	125	250	500	1000	2000	4000	8000
200	20	13	9	14	29	28	23	21
250	17	11	7	11	26	23	18	18
315	15	10	6	14	24	21	19	21
Tol. ±	2	2	2	2	2	2	2	2

## Engineering graphs - IHC

### Air flow - Pressure drop - Sound level - Affected area

- The graphs are valid for primary air flows.
- The graphs must not be used for commissioning
- The dB(C) value is normally 6–9 dB higher than the dB(A) value.
- $\nabla$  = Min. airflow to obtain sufficient commissioning pressure
- For information on the affected area and minimum airflows, refer to the IHC + REG combination graphs.

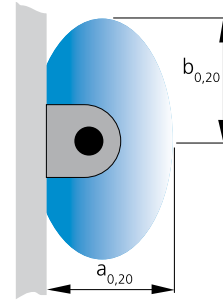
### IHC 200



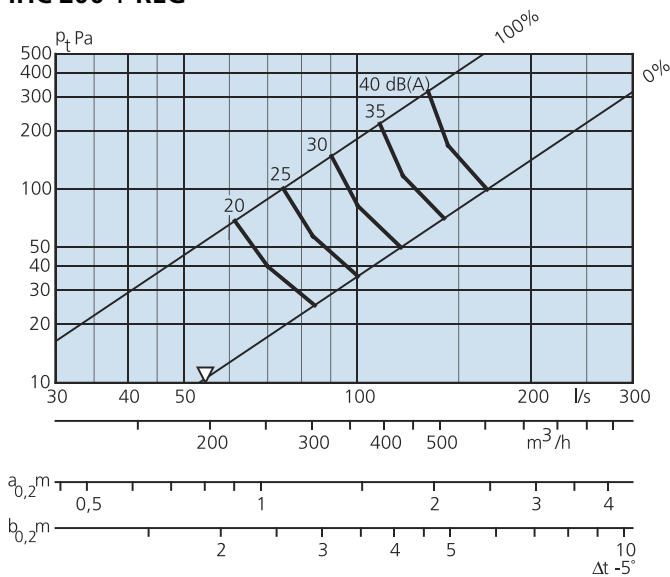
## Engineering graphs - IHC

### Air flow - Pressure drop - Sound level - Affected area

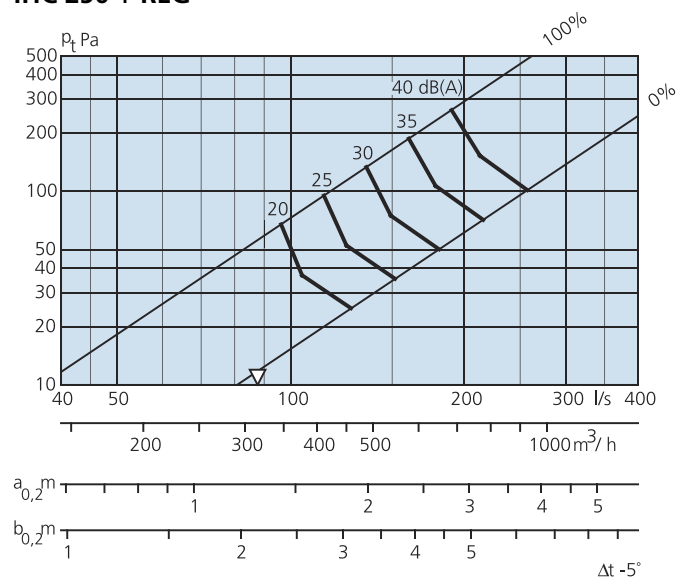
- The graphs are valid for primary air flows.
- The affected area refers to the distance to the isovel limit of 0.2 m/s at  $\Delta t$  5 K. In this case  $\Delta t$  signifies the difference between the room air temperature measured at 1.2 m above the floor and the primary supply air temperature (measured before the induction chamber), i.e. not the difference between the exhaust air and the supply air temperatures.
- The graphs give data for air diffusers equipped with regulators.
- The graphs must not be used for commissioning.
- The dB(C) value is normally 6–9 dB higher than the dB(A) value.
- $\nabla$  = Min. airflow to obtain sufficient commissioning pressure.



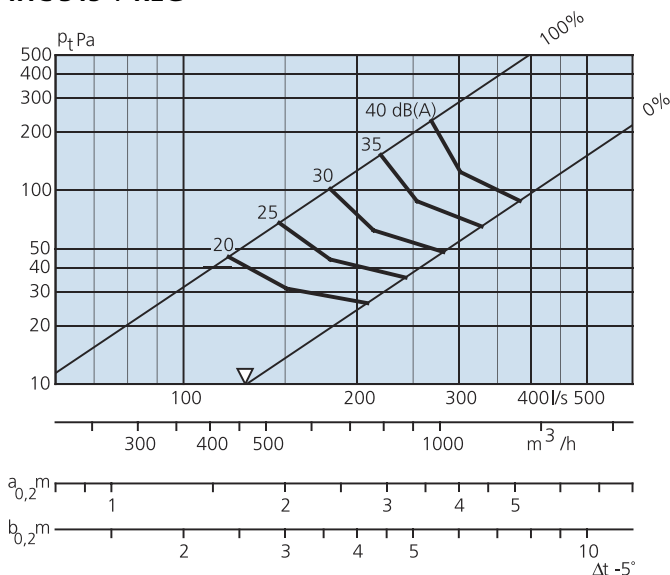
#### IHC 200 + REG



#### IHC 250 + REG



#### IHC 315 + REG



## Dimensions and weights

### IHC

Size	A	B	C	ØD	G	Weight, kg
200	370	2003	370	200	180	34,0
250	435	2003	435	250	210	40,0
315	525	2003	525	315	250	48,0

### REG

Size	ØC	Ød	G	H
200	300	199	230	500
250	350	249	250	500
315	415	314	260	800

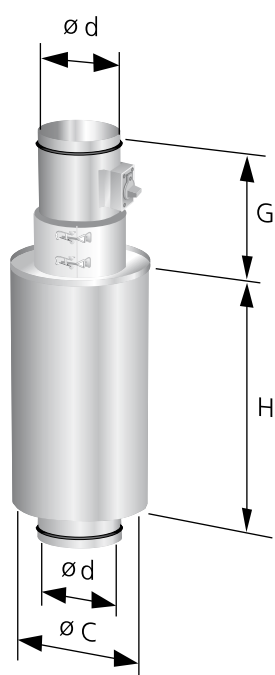


Figure 3. Regulator unit REG.

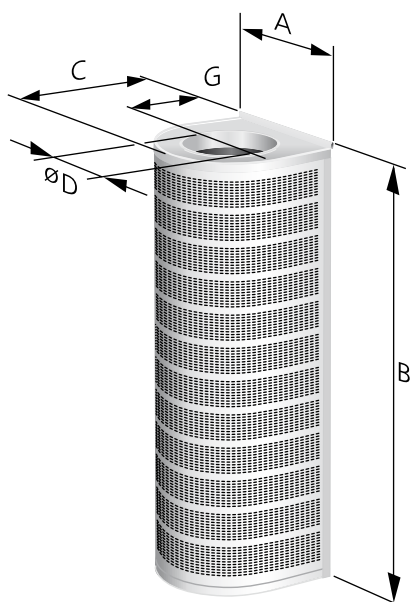
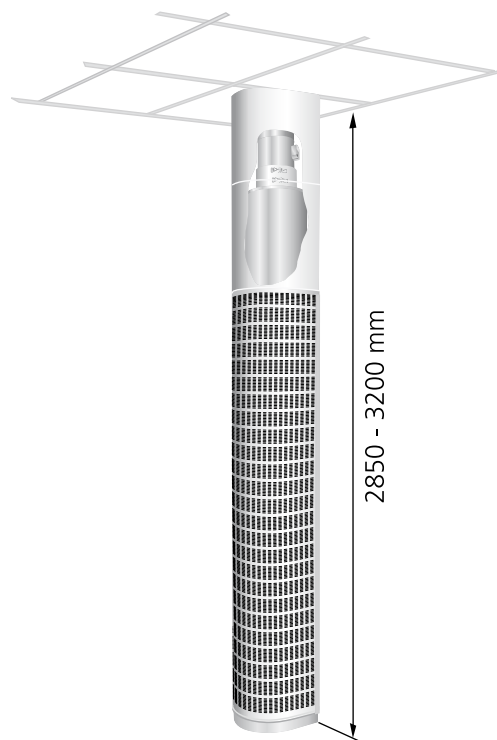


Figure 4. IHC.



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Figure 5. IHC with duct cover and plinth.  
If other lengths are required always state the total room height.

## Order key

### Product

Semi-circular displacement unit	IHC	a	-aaa
Version:			
Size:			
200, 250, 315			

### Accessories

Cover	IHCT 1	d	-aaa
Version:			
Size:			
200, 250, 315			

Please specify special lengths in plain text.  
State the total room height.

Plinth	IHCT 2	a	-aaa	70
Version				
Size:				
200, 250, 315				
Height mm.				
Please specify special heights in plain text.				

Regulator unit	REG	b	-aaa
Version			
Size:			
200, 250, 315			

## Specification example

SD XX  
Swegon's semi-circular, low-velocity VARIZON® IHCa air displacement unit, having the following functions:

- Induction
- Adjustable spread pattern
- Permanent measuring point
- Can be cleaned
- Cleanable
- Powder coated in white, RAL 9010

Size:	IHCa -aaa	xx items
Accessories.		
Duct cover:	IHCT 1d aaa	xx items
Plinth:	IHCT 2a aaa - 70	xx items