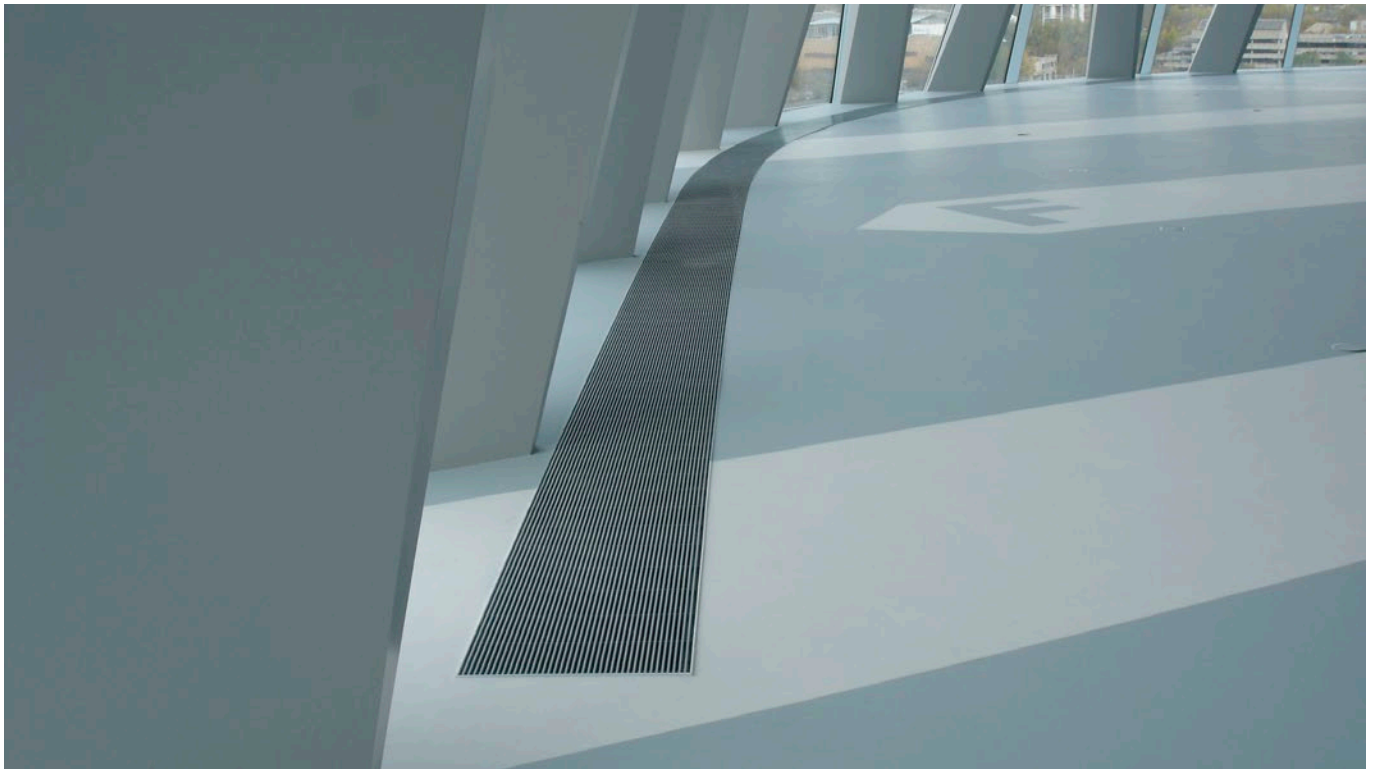


BIA-ID

Underfloor induction unit for cooling or heating



QUICK FACTS

- Heat exchanger available as 2- or 4-wire
- Well suited for offices and conference rooms
- Installed in raised and hollow-core floors
- Installed on the subfloor using adjustable feet to make it flush with the floor surface
- Can be installed as a single module or in continuous lengths
- Available with intermediate pieces, end pieces, mitred corners and column cut-outs for installation as continuous lengths
- Standard modular length: 600–1800 mm (other lengths upon request)

BIA-ID-1100/340/200, 2-wire - cooling capacity		
Primary volume flow (m ³ /h)	35	45
Inlet pressure (Pa)	68	110
Sound pressure level (dB(A))	29	33

Medium							
VL / RL* (°C)	RT** (°C)	Water output	Air output	Overall output	Water output	Air output	Overall output
15 / 17	30	333	143	476	390	184	574
	28	297	119	416	343	153	496
	26	241	95	336	294	122	416
	24	194	71	265	244	92	336

*VL = water flow, RL = water return, ** RT = room temperature
Given: Primary air temperature 18 °C

BIA-ID-1100/340/200, 2-wire - heating capacity		
Primary volume flow (m ³ /h)	35	45
Inlet pressure (Pa)	68	110
Sound pressure level (dB(A))	29	33

Medium							
VL / RL* (°C)	RT** (°C)	Water output	Air output	Overall output	Water output	Air output	Overall output
75 / 65	15	1966	60	2026	2261	77	2338
	18	1859	24	1883	2138	31	2169
	20	1788	0	1788	2056	0	2056
	22	1716	-24	1692	1973	-31	1942

*VL = water flow, RL = water return, ** RT = room temperature
Given: Primary air temperature 20 °C

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Technical description

Design

The BIA-ID underfloor induction unit provides efficient cooling or heating for applications such as offices. It is specially ideal for rooms with floor-to-ceiling windows that have specific cooling and heating demands. BIA-ID can be installed as single module or in a continuous arrangement.

BIA-ID consists of a plenum box, air distribution plate, casing with feed-through for water connections and electrical cables, adjustable feet, heat exchanger, air deflectors, cover plate and grille.

The heat exchanger is available as 2-wire (change-over operation) or 4-wire.

Functionality

Primary air from the air handling unit provides BIA-ID with supply air via the plenum box. The supply air is forced in at high speed through the air distribution plate, resulting in the surrounding air being drawn in and mixed with the supply air. This generates negative pressure by the heat exchanger.

Room air is continuously drawn from the room through the heat exchanger fins where it is cooled or heated before it mixes with the supply air. The mixed air is then fed through the air deflectors and distributed into the room via the grille.

The proportion of the recirculated room air is much greater than the primary air.

Material and surface treatment

Casing, air distribution plate and plenum box

- Made of galvanized sheet steel.
- Exterior surfaces painted.
 - Standard colour: black

Grille

- Made of aluminium.
- Standard colour:
 - Natural anodised

Heat exchanger

- Made of copper pipes and aluminium fins.

Adaptation

- Other colours available on request.
- Grille in stainless steel with linear or transverse front profiles.

Installation

BIA-ID is installed in raised and hollow-core floors, placed on the subfloor using adjustable feet for adapting to construction tolerances, and forms one level with the raised floor.

The product can be installed in continuous lengths, using the available accessories.

Accessories

Intermediate pieces, end pieces, mitred corners, column cut-outs. For installing the product in continuous lengths.

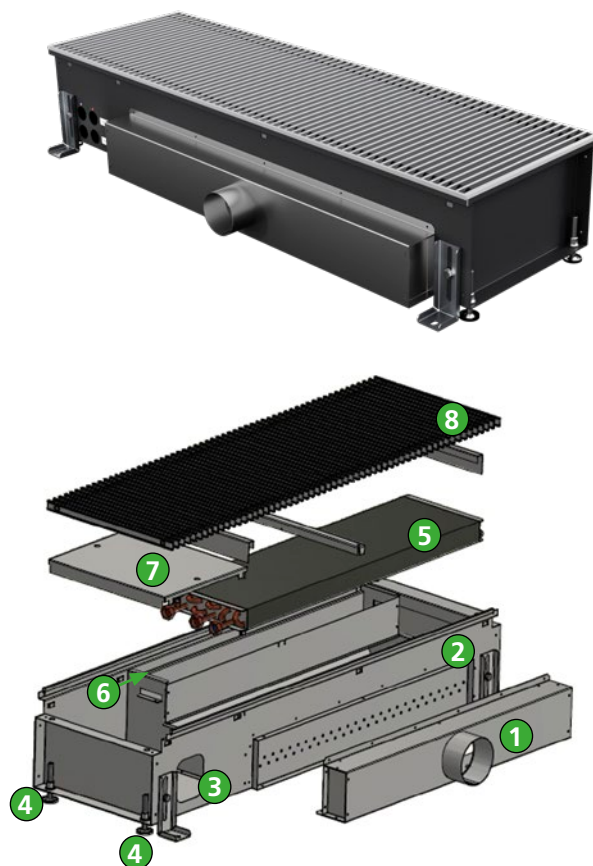


Figure 1. The structural design of BIA-ID.

1. Plenum box
2. Air distribution plate
3. Casing with feed-through for water connections and electrical cables
4. Adjustable feet
5. Heat exchanger
6. Air deflectors
7. Cover plate
8. Grille

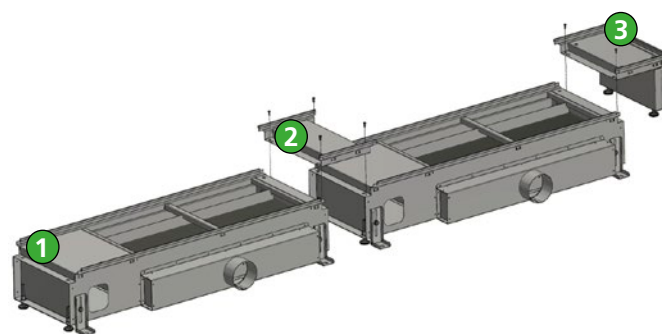


Figure 2. Continuous installation with connecting pieces.

1. Floor induction outlet
2. Intermediate piece
3. End piece

Technical data

Cooling capacity – 2-wire

BIA-ID-1100/340/200, 2-wire			
Primary volume flow (m ³ /h)	25	35	45
Inlet pressure (Pa)	36	68	110
Sound pressure level (dB(A))	24	29	33

Medium		Cooling capacity (W)								
VL / RL* (°C)	RT** (°C)	Water output	Air output	Overall output	Water output	Air output	Overall output	Water output	Air output	Overall output
15 / 17	30	217	102	319	333	143	476	390	184	574
	28	187	85	272	297	119	416	343	153	496
	26	156	68	224	241	95	336	294	122	416
	24	126	51	177	194	71	265	244	92	336
16 / 18	30	202	102	304	310	143	453	366	184	550
	28	172	85	257	264	119	383	318	153	471
	26	141	68	209	218	95	313	269	122	391
	24	111	51	162	171	71	242	218	92	310
16 / 19	30	194	102	296	298	143	441	354	184	538
	28	164	85	249	252	119	371	306	153	459
	26	134	68	202	206	95	301	257	122	379
	24	103	51	154	159	71	230	205	92	297

*VL = water flow, RL = water return, ** RT = room temperature

Given: Primary air temperature 18 °C

Heating capacity – 2-wire

BIA-ID-1100/340/200, 2-wire										
Primary volume flow (m ³ /h)	25			35			45			
Inlet pressure (Pa)	36			68			110			
Sound pressure level (dB(A))	24			29			33			
Medium		Heating capacity (W)								
VL / RL* (°C)	RT** (°C)	Water output	Air output	Overall output	Water output	Air output	Overall output	Water output	Air output	Overall output
75 / 65	15	1486	43	1529	1966	60	2026	2261	77	2338
	18	1410	17	1427	1859	24	1883	2138	31	2169
	20	1359	0	1359	1788	0	1788	2056	0	2056
	22	1308	-17	1291	1716	-24	1692	1973	-31	1942
70 / 55	15	1295	43	1338	1698	60	1758	1953	77	2030
	18	1218	17	1235	1590	24	1614	1829	31	1860
	20	1166	0	1166	1519	0	1519	1747	0	1747
	22	1115	-17	1098	1448	-24	1424	1665	-31	1634
55 / 45	15	972	43	1015	1251	60	1311	1439	77	1516
	18	893	17	910	1144	24	1168	1315	31	1346
	20	841	0	841	1073	0	1073	1233	0	1233
	22	788	-17	771	1001	-24	977	1151	-31	1120
45 / 40	15	745	43	788	983	60	1043	1130	77	1207
	18	695	17	712	876	24	900	1007	31	1038
	20	642	0	642	805	0	805	924	0	924
	22	588	-17	571	733	-24	709	842	-31	811
35 / 30	15	507	43	550	626	60	686	719	77	796
	18	425	17	442	519	24	543	596	31	627
	20	369	0	369	447	0	447	513	0	513
	22	313	-17	296	376	-24	352	431	-31	400

*VL = water flow, RL = water return, ** RT = room temperature,

Given: Primary air temperature 20 °C

Heating capacity – 4-wire

BIA-ID-1100/340/200, 4-wire			
Primary volume flow (m ³ /h)	25	35	45
Inlet pressure (Pa)	36	68	110
Sound pressure level (dB(A))	24	29	33

Medium		Heating capacity (W)								
VL / RL* (°C)	RT** (°C)	Water output	Air output	Overall output	Water output	Air output	Overall output	Water output	Air output	Overall output
75 / 65	15	1060	43	1103	1262	60	1322	1381	77	1458
	18	998	17	1015	1187	24	1211	1299	31	1330
	20	957	0	957	1138	0	1138	1245	0	1245
	22	915	-17	898	1088	-24	1064	1191	-31	1160
70 / 55	15	905	43	948	1076	60	1136	1178	77	1255
	18	844	17	861	1002	24	1026	1097	31	1128
	20	803	0	803	953	0	953	1044	0	1044
	22	762	-17	745	904	-24	880	990	-31	959
55 / 45	15	651	43	694	772	60	832	845	77	922
	18	591	17	608	701	24	725	767	31	798
	20	551	0	551	653	0	653	715	0	715
	22	512	-17	495	606	-24	582	663	-31	632
45 / 40	15	502	43	545	594	60	654	650	77	727
	18	443	17	460	524	24	548	573	31	604
	20	404	0	404	478	0	478	523	0	523
	22	366	-17	349	432	-24	408	472	-31	441
35 / 30	15	308	43	351	364	60	424	398	77	475
	18	252	17	269	297	24	321	324	31	355
	20	214	0	214	252	0	252	276	0	276
	22	178	-17	161	209	-24	185	228	-31	197

Dimensions

Length L (mm)	Width B (mm)	B1 (mm)	B2 (mm)	Height H (mm)	H1 (mm)	Connection size Ød (mm)
600, 1100, 1450, 1800	340	308	385	200	90	78

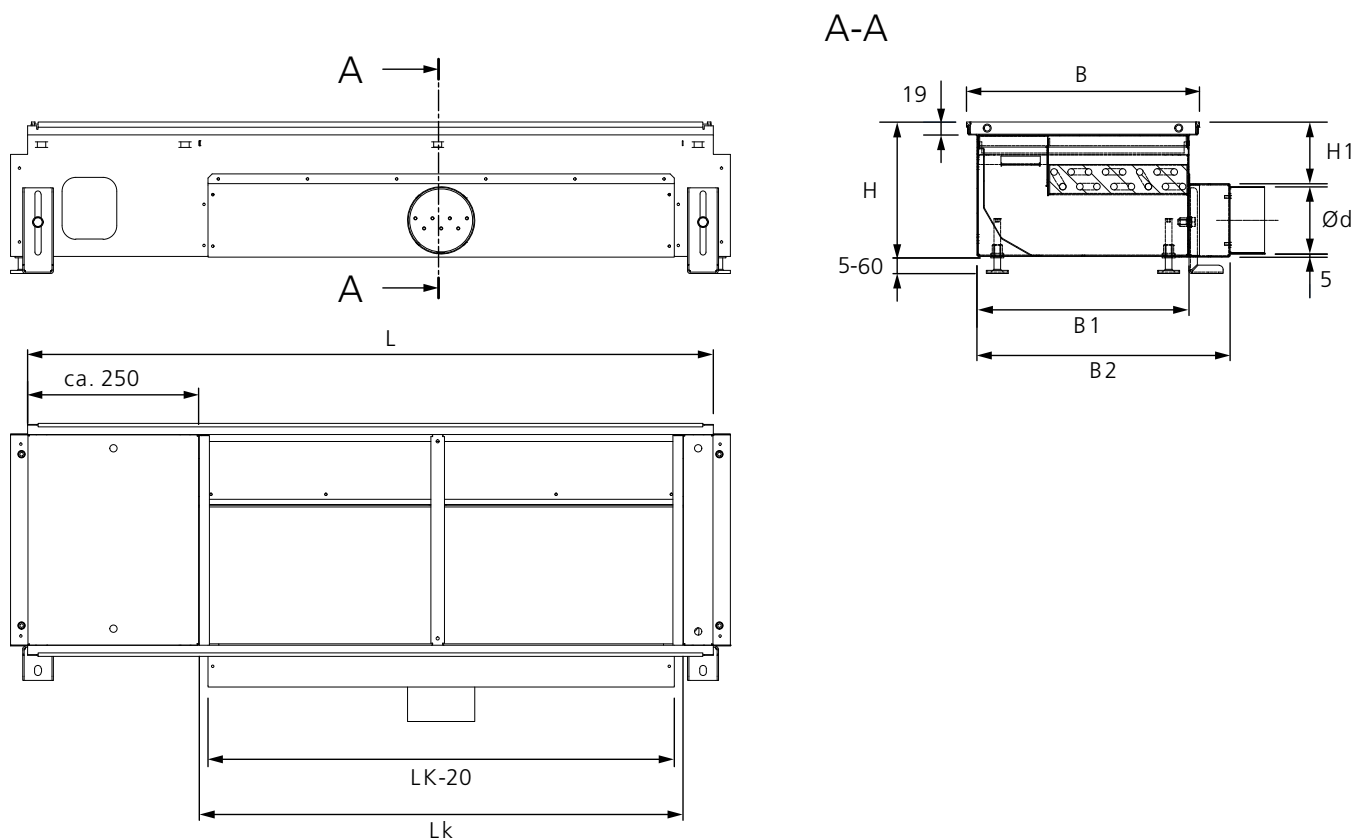


Figure 3. Dimensions, BIA-ID.

Specification

For ordering, contact your local Swegon sales office.

Specification text

Underfloor induction unit BIA-ID for cooling or heating with the following features:

- For installation in raised floors.
- Large thermal output, with induction function for supplying pre-conditioned primary air.
- Casing, air distribution plate and plenum box made of galvanized sheet steel, exterior surfaces painted black.
- Grille made of aluminium, natural anodised finish. Available as linear or roll grille, as well as in stainless steel with linear or transverse front profiles.
- Heat exchanger with copper pipes and aluminium fins. Available as 2-wire (change-over operation) or 4-wire.