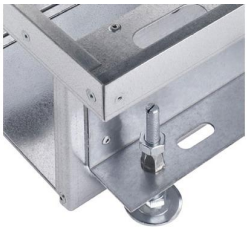
TROX® TECHNIK
The art of handling air



Conforme à VDI 6022

BID

UNDER FLOOR INDUCTION UNIT IN NOMINAL LENGTHS OF 900 TO 1500 MM, WITH HORIZONTAL HEAT EXCHANGER

Under floor induction unit with 2-pipe or 4-pipe heat exchanger for installation in false floors

- High heating and cooling capacity with a low conditioned primary air volume flow rate and low sound power level
- High comfort levels due to low airflow velocity in the occupied zone
- Four nozzle variants to optimise induction based on demand
- Levelling feet
- Continuous linear arrangement if required

Optional equipment and accessories

- Control package

- Various walk-on grilles, e.g. ARR roll down grille or AFN linear grille
- Heat exchanger powder-coated black
- Powder coating in many different colours, e.g. RAL CLASSIC or NCS

Application

Application

- Under floor induction units of Type BID for installation in false floors
- 2-pipe or 4-pipe heat exchangers enable good comfort levels with a low conditioned primary air volume flow rate
- Energy-efficient solution since water is used as a medium for heating and cooling
- Under floor induction units allow for floor-to-ceiling glazing

Special characteristics

- Supply air discharge as inducing displacement flow
- Horizontal heat exchanger as 2-pipe or 4-pipe system
- 4 levelling feet
- Water connections at the narrow side, Ø12 mm Cu pipe, either with plain tails or with G½" external thread and flat seal

Description

Variants

- E: Single unit
- B: Unit for continuous linear arrangement, i.e. open at the narrow sides

Construction

- Galvanised
- P1: Powder-coated RAL 9005, black, or in any other RAL colour, gloss level 70 %

Useful additions

- Connecting hoses
- Control equipment consisting of a control panel including a controller with integral room temperature sensor; valves and valve actuators; and compression couplers
- Floor grilles, e.g. Type ARR roll down grille or Type AFN linear grille

Construction features

- Spigot is suitable for circular ducts to EN 1506 or EN 13180
- Four nozzle variants to optimise induction based on demand
- Recess for floor grille

Materials and surfaces

- Casing and primary air plenum made of galvanised sheet steel
- Heat exchanger with copper tubes and aluminium fins
- Exposed surfaces either untreated or powder-coated in any RAL colour, e.g. RAL 9005, black
- Heat exchanger also in black (RAL 9005)

INFORMACIÓN TÉCNICA

Functional description

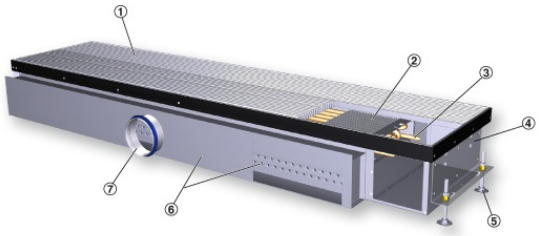
Under floor induction units provide centrally conditioned primary air (fresh air) to the room and use heat exchangers for additional cooling and/or heating.

The primary air is discharged through nozzles (four variants are available).

As a result of this, secondary air (room air) is induced and passes through the heat exchanger.

Primary and secondary air mix and are then supplied to the room as an inducing displacement flow.

Schematic illustration of BID



① Linear grille of Type AFN-0-A or aluminium roll down grille of Type ARR20 (to be ordered separately)
② Heat exchanger
③ Water connections, Ø12 x 1 mm Cu pipe, either with plain tails or with optional G½" external thread and flat seal
④ Casing
⑤ Levelling feet
⑥ Primary air plenum with integral nozzles
⑦ Primary air spigot

Nominal length	900, 1050, 1200, 1350, 1500 mm
Total length	1100 – 1849 mm
Width	403 mm
Height	191 mm
Primary air volume flow rate	4 – 40 l/s, 14 – 144 m^3/h
Cooling capacity	Up to 1030 W
Heating capacity	Up to 1225 W
Max. operating pressure, water side	6 bar
Max. operating temperature, water side	75 °C

Quick selection

L_N	①	Primary air				②		Cooling				Heating		
		$\dot{V}_{Pr}$		Δp_t		L_{WA}		2-pipe and 4-pipe systems				4-pipe system		
				Ø98 mm	Ø123 mm	Ø98 mm	Ø123 mm	Q_{tot}	Q_{sensX}	Δt_W	Δp_W	$Q_{sen} = Q_{ref}$	Δt_W	Δp_W
		l/s	m³/h	Pa		dB (A)		W		K	kPa	W	K	kPa
900	M	4	14	52	52	<20	<20	229	181	1.4	3.1	244	4.2	0.24
		6	22	117	117	<20	<20	303	230	1.8	3.1	311	5.4	0.24
		9	32	264	264	27	23	400	291	2.3	3.1	395	6.8	0.24
	G	8	29	58	58	<20	<20	324	228	1.8	3.1	308	5.3	0.24
		12	43	130	129	23	<20	435	290	2.3	3.1	394	6.8	0.24
		17	61	262	260	33	28	560	355	2.8	3.1	483	8.3	0.24
	U	15	54	64	63	22	<20	457	276	2.2	3.1	374	6.4	0.24
		20	72	114	111	30	23	570	328	2.6	3.1	446	7.7	0.24
		30	108	256	250	42	35	778	417	3.3	3.1	569	9.8	0.24
	2U	23	83	43	40	34	20	540	263	2.1	3.1	310	5.3	0.24
		32	115	84	79	43	29	708	322	2.5	3.1	382	6.6	0.24
		41	148	138	126	50	36	867	373	2.9	3.1	445	7.7	0.24
1050	M	4	14	38	38	<20	<20	238	190	1.5	3.5	256	4.4	0.26
		8	29	151	151	20	<20	381	285	2.2	3.5	387	6.6	0.26
		11	40	285	285	29	25	474	341	2.7	3.5	468	8.0	0.26
	G	10	36	66	65	<20	<20	393	272	2.1	3.5	375	6.4	0.26
		15	54	148	146	27	21	526	345	2.7	3.5	466	8.0	0.26
		20	72	263	260	35	30	646	405	3.2	3.5	533	9.5	0.26
	U	15	54	47	46	20	<20	468	287	2.2	3.5	391	6.7	0.26
		25	90	131	126	35	27	691	389	3.0	3.5	513	9.0	0.26
		35	126	256	248	44	36	893	471	3.7	3.5	647	11.1	0.26
	2U	27	97	45	40	41	23	627	302	2.4	3.5	357	6.1	0.26
		37	133	85	76	50	32	811	364	2.8	3.5	435	7.5	0.26
		47	169	137	122	57	39	985	419	3.3	3.5	503	8.6	0.26
1200	M	5	18	45	45	<20	<20	286	226	1.8	3.8	306	5.3	0.29
		9	32	145	144	21	<20	425	317	2.5	3.8	431	7.4	0.29
		12	43	257	256	29	25	516	372	2.9	3.8	506	8.7	0.29
	G	10	36	50	49	<20	<20	403	282	2.2	3.8	383	6.6	0.29
		15	54	113	111	24	<20	538	357	2.8	3.8	486	8.4	0.29
		24	86	288	284	38	32	752	463	3.6	3.8	634	10.9	0.29
	U	16	58	41	40	21	<20	501	308	2.4	3.8	419	7.2	0.29
		24	86	93	89	32	23	682	392	3.1	3.8	535	9.2	0.29
		36	130	208	200	44	35	927	493	3.9	3.8	676	11.6	0.29
	2U	31	112	48	41	49	27	713	339	2.7	3.8	403	6.9	0.29
		39	140	76	65	55	34	858	388	3.0	3.8	464	8.0	0.29
		47	169	110	95	61	39	999	432	3.4	3.8	519	8.9	0.29

① Nozzle variant ② Air-regenerated noise

Reference values

Parameter	Cooling	Heating
t_R	26 °C	22 °C
t	24. °C	22 °C

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Under floor induction units of Type BID, with one-way air discharge and high thermal output.

For installation in false floors. The units consist of a casing with primary air plenum, non-combustible nozzles, and a horizontal heat exchanger.

Four nozzle variants to optimise induction based on demand.

Special characteristics

- Supply air discharge as inducing displacement flow
- Horizontal heat exchanger as 2-pipe or 4-pipe system
- 4 levelling feet
- Water connections at the narrow side, Ø12 mm Cu pipe, either with plain tails or with G½" external thread and flat seal

Materials and surfaces

- Casing and primary air plenum made of galvanised sheet steel
- Heat exchanger with copper tubes and aluminium fins
- Exposed surfaces either untreated or powder-coated in any RAL colour, e.g. RAL 9005, black
- Heat exchanger also in black (RAL 9005)

Construction

- Galvanised
- P1: Powder-coated RAL 9005, black, or in any other RAL colour, gloss level 70 %

Technical data

- Nominal length: 900, 1050, 1200, 1350, 1500 mm
- Total length: 1100 – 1849 mm
- Width: 403 mm
- Height: 191 mm
- Primary air volume flow rate: 4 – 40 l/s or 14 – 144 m³/h
- Cooling capacity up to 1030 W
- Heating capacity up to 1225 W
- Max. operating pressure: 6 bar
- Max. operating temperature: 75 °C

BID

BID – 2 – M – R – E / 1197 × 900 × 98 / K00 / P1 / G3 / VS

1 2 3 4 5 6 7 8 9 10 11

1 Type
BID Under floor induction unit

2 Heat exchanger
2 2-pipe
4 4-pipe

3 Nozzle variants
M Medium
G Large
U Extra large
2U 2 rows, extra large

4 Casing arrangement
R Right side
L Left side

5 Unit variant
E Single unit with perimeter frame
B Unit for continuous linear arrangement, i.e. open at the narrow sides

6 Total length (diffuser face) × nominal size [mm]
1100 - 1249 × 900
1250 - 1399 × 1050
1400 - 1549 × 1200
1550 - 1699 × 1350
1700 - 1849 × 1500

7 Spigot diameter [mm]
98
123

8 Water connection
No entry: Ø12 mm pipe with plain tails
E00 Ø12 mm pipe with plain tails and vent valve

A00 With G½" external thread and flat seal
K00 With G½" external thread and flat seal and vent valve

9 Surface of casing
No entry: untreated, galvanised steel
P1 Powder-coated RAL 9005, black, gloss level 70 %

10 Surface of heat exchanger
No entry: heat exchanger untreated
G3 RAL 9005, black

11 Valves and actuators
No entry: none
VS With