

5. Návrh distribučních prvků

DID632-LR-4-Z-ML/1200x900x598/LE



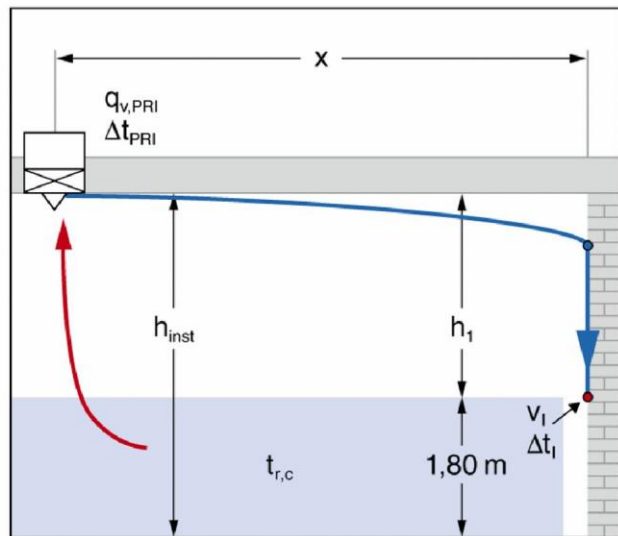
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	ML	Casing middle, water connection left
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	28 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-577 W
Thermal output - primary air $\Phi_{PRI,c}$	-75 W
Thermal output - water $\Phi_{w,c}$	-502 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	216 l/h
Pressure drop, water side $\Delta p_{w,c}$	5,4 kPa
Total thermal output – heating $\Phi_{t,h}$	766 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	766 W
Water flow rate $q_{v,w,h}$	66 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,2 kPa
Throw distance l_s	0,7 m
Velocity at l_s v_l	0,20 m/s
Temperature difference at l_s Δt_l	-2,12 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	111	19	22	< 15	< 15	< 15	< 15	< 15	< 15	< 15	15	18

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot,

DID632-LR-4-Z-ML/1200x900x598/LE



noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-ML/1200x900x598/LE



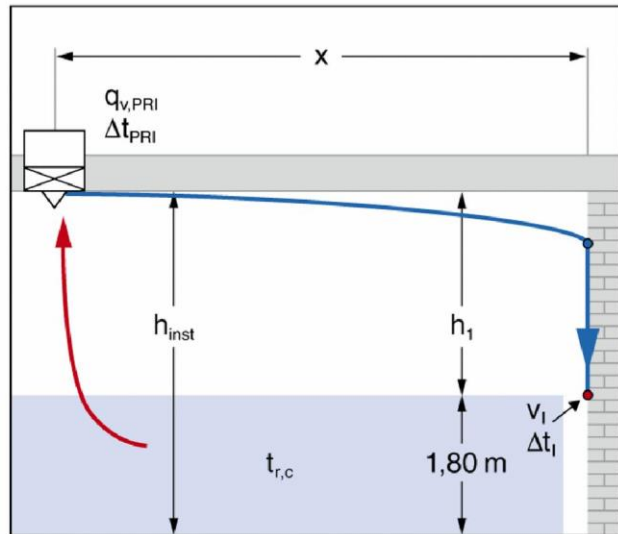
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	ML	Casing middle, water connection left
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	28 m ³ /h
Distance x	1,3 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-395 W
Thermal output - primary air $\Phi_{PRI,c}$	-75 W
Thermal output - water $\Phi_{w,c}$	-320 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	138 l/h
Pressure drop, water side $\Delta p_{w,c}$	2,4 kPa
Total thermal output – heating $\Phi_{t,h}$	399 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	399 W
Water flow rate $q_{v,w,h}$	34 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	0,7 m
Velocity at l_v	0,17 m/s
Temperature difference at l Δt_l	-1,58 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	56	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot,

DID632-LR-4-M-ML/1200x900x598/LE



noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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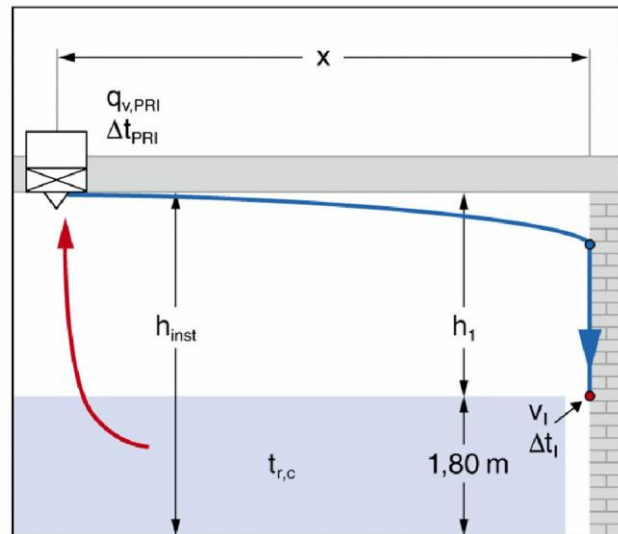
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AH	Extract air, spigot at the rear
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	28 m³/h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-577 W
Thermal output - primary air $\Phi_{PRI,c}$	-75 W
Thermal output - water $\Phi_{w,c}$	-502 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	216 l/h
Pressure drop, water side $\Delta p_{w,c}$	7,0 kPa
Total thermal output – heating $\Phi_{t,h}$	768 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	768 W
Water flow rate $q_{v,w,h}$	66 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,3 kPa
Throw distance l_s	0,6 m
Velocity at l_1	0,16 m/s
Temperature difference at l_1 Δt_i	-2,30 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_i	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	59	< 15	17	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

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installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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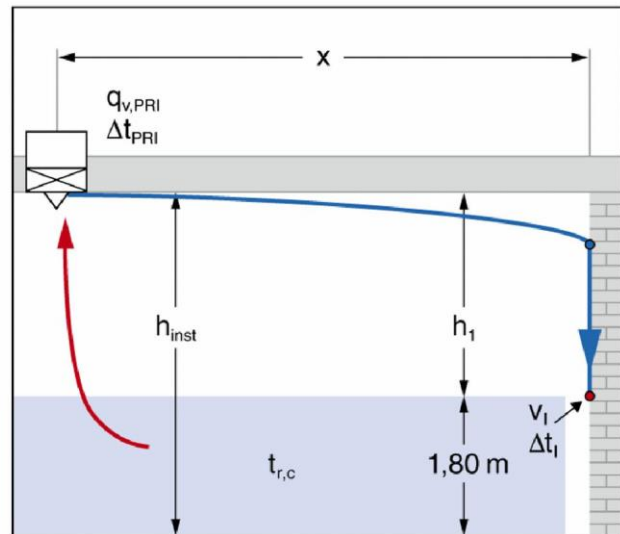
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AH	Extract air, spigot at the rear
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	36 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-751 W
Thermal output - primary air $\Phi_{PRI,c}$	-96 W
Thermal output - water $\Phi_{w,c}$	-655 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	282 l/h
Pressure drop, water side $\Delta p_{w,c}$	11,3 kPa
Throw distance l_s	0,8 m
Velocity at l v_l	0,21 m/s
Temperature difference at l Δt_l	-2,33 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	98	17	22	< 15	< 15	< 15	< 15	< 15	< 15	< 15	16	19

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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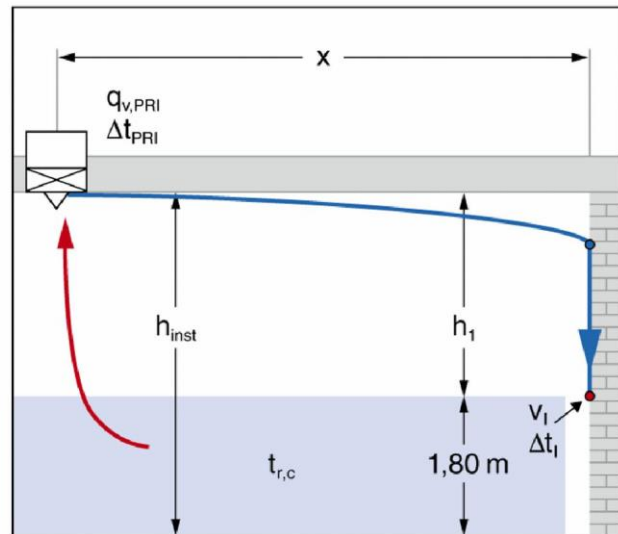
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AH	Extract air, spigot at the rear
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	44 m ³ /h
Distance x	1,3 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-671 W
Thermal output - primary air $\Phi_{PRI,c}$	-118 W
Thermal output - water $\Phi_{w,c}$	-553 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	238 l/h
Pressure drop, water side $\Delta p_{w,c}$	8,3 kPa
Total thermal output – heating $\Phi_{t,h}$	914 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	914 W
Water flow rate $q_{v,w,h}$	79 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,3 kPa
Throw distance l_s	1,0 m
Velocity at l v_l	0,22 m/s
Temperature difference at l Δt_l	-1,85 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	77	< 15	16	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-M-LL-AH/1500x1200x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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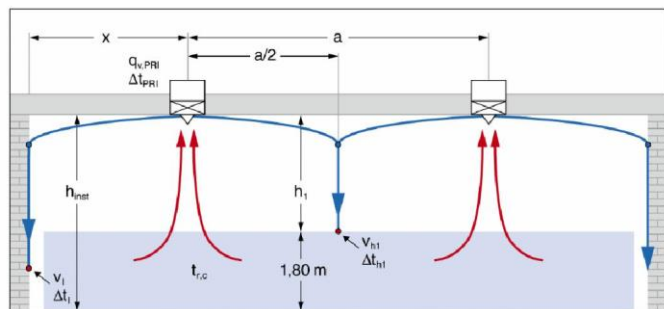
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	44 m³/h
Distance a *)	2,0 m
Distance x	1,3 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-671 W
Thermal output - primary air $\Phi_{PRI,c}$	-118 W
Thermal output - water $\Phi_{w,c}$	-553 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	238 l/h
Pressure drop, water side $\Delta p_{w,c}$	8,3 kPa
Throw distance l_s	1,0 m
Velocity at h_1 v_{h1}	0,14 m/s
Temperature difference at h_1 Δt_{h1}	-0,79 K
Velocity at l v_l	0,22 m/s
Temperature difference at l Δt_l	-1,85 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³

Notes *)

Distance a Distance a < 3,5 m is not recommended for comfort zones, and least of all for the area right below induction units. If necessary, leave more space between the units

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	77	< 15	16	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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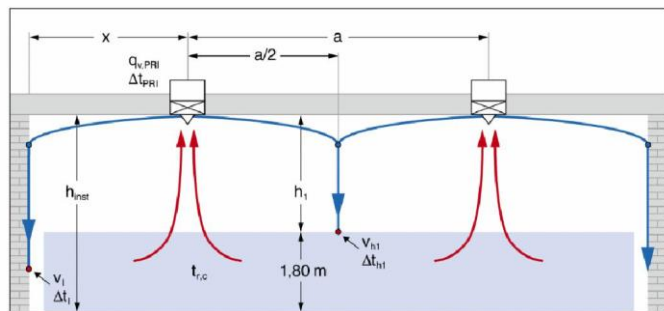
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	22 m³/h
Distance a *)	2,5 m
Distance x	1,5 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-447 W
Thermal output - primary air $\Phi_{PRI,c}$	-59 W
Thermal output - water $\Phi_{w,c}$	-389 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	167 l/h
Pressure drop, water side $\Delta p_{w,c}$	3,4 kPa
Total thermal output – heating $\Phi_{t,h}$	503 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	503 W
Water flow rate $q_{v,w,h}$	43 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	0,5 m
Velocity at h_1 v_{h1}	N.A. m/s
Temperature difference at h_1 Δt_{h1}	N.A. K
Velocity at l_s v_l	0,16 m/s
Temperature difference at l_s Δt_l	-2,14 K
Velocity at l_s v_s	0,23 m/s
Temperature difference at l_s Δt_s	-1,60 K
Air density ρ	1,2 kg/m³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	69	< 15	18	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-Z-LL-AV/1200x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

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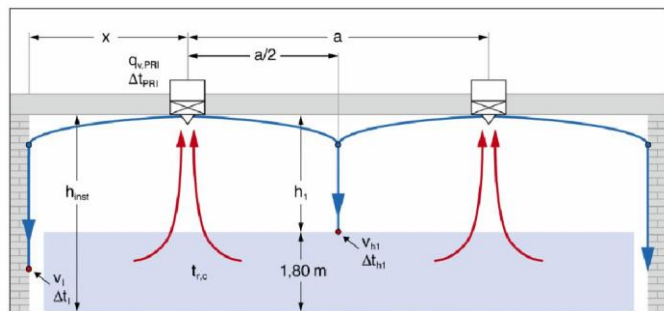
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	28 m ³ /h
Distance a *)	1,4 m
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-577 W
Thermal output - primary air $\Phi_{PRI,c}$	-75 W
Thermal output - water $\Phi_{w,c}$	-502 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	216 l/h
Pressure drop, water side $\Delta p_{w,c}$	7,0 kPa
Throw distance l_s	0,6 m
Velocity at h_1 v_{h1}	0,13 m/s
Temperature difference at h_1 Δt_{h1}	-1,12 K
Velocity at l v_l	0,19 m/s
Temperature difference at l Δt_l	-2,72 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	59	< 15	17	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

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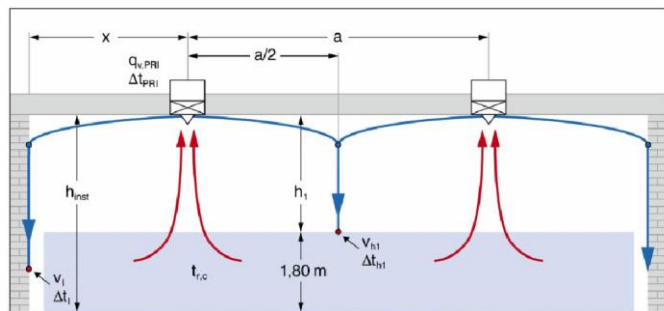
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	50 m ³ /h
Distance a *)	3,0 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-770 W
Thermal output - primary air $\Phi_{PRI,c}$	-134 W
Thermal output - water $\Phi_{w,c}$	-637 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	274 l/h
Pressure drop, water side $\Delta p_{w,c}$	10,7 kPa
Total thermal output – heating $\Phi_{t,h}$	1 146 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 146 W
Water flow rate $q_{v,w,h}$	99 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,5 kPa
Throw distance l_s	1,1 m
Velocity at h_1 v_{h1}	0,13 m/s
Temperature difference at h_1 Δt_{h1}	-0,72 K
Velocity at l_s v_l	0,26 m/s
Temperature difference at l_s Δt_l	-1,99 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	99	15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-M-LL-AV/1500x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



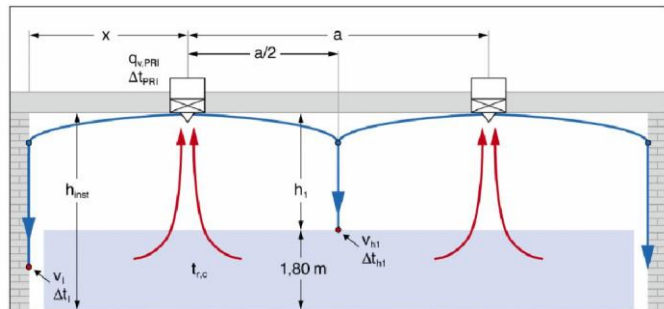
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	593	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	50 m ³ /h
Distance a *)	3,0 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-746 W
Thermal output - primary air $\Phi_{PRI,c}$	-134 W
Thermal output - water $\Phi_{w,c}$	-612 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	263 l/h
Pressure drop, water side $\Delta p_{w,c}$	7,8 kPa
Total thermal output – heating $\Phi_{t,h}$	1 079 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 079 W
Water flow rate $q_{v,w,h}$	93 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,4 kPa
Throw distance l_s	1,3 m
Velocity at h_1 v_{h1}	0,17 m/s
Temperature difference at h_1 Δt_{h1}	-0,64 K
Velocity at l_s v_l	0,33 m/s
Temperature difference at l_s Δt_l	-1,78 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	180	23	24	17	17	17	17	17	15	< 15	18	20

Description

DID632-LR-4-M-LL-AV/1200x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-M-LL-AV/1200x900x598/LE



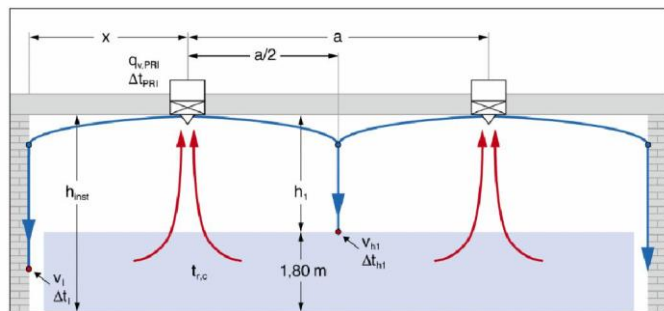
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	593	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	50 m³/h
Distance a *)	3,0 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-746 W
Thermal output - primary air $\Phi_{PRI,c}$	-134 W
Thermal output - water $\Phi_{w,c}$	-612 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	263 l/h
Pressure drop, water side $\Delta p_{w,c}$	7,8 kPa
Throw distance l_s	1,3 m
Velocity at h_1 v_{h1}	0,17 m/s
Temperature difference at h_1 Δt_{h1}	-0,64 K
Velocity at l v_l	0,27 m/s
Temperature difference at l Δt_l	-1,78 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	180	23	24	17	17	17	17	17	15	< 15	18	20

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-Z-LL-AV/2100x1800x598/LE



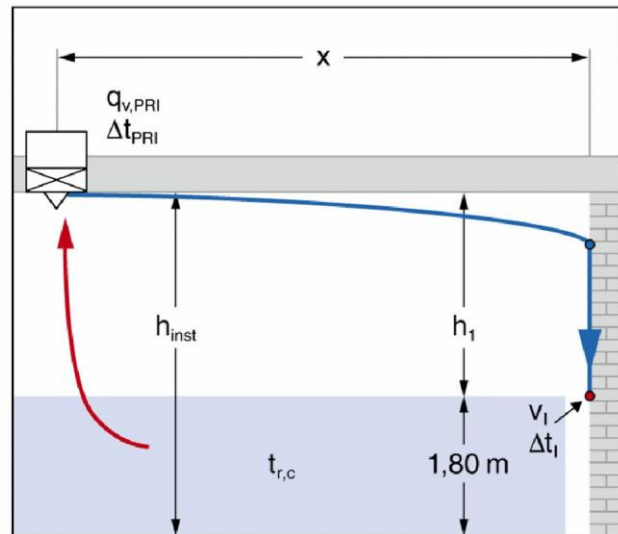
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	2100	
Nominal length	1800	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	58 m ³ /h
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,3 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-1 189 W
Thermal output - primary air $\Phi_{PRI,c}$	-155 W
Thermal output - water $\Phi_{w,c}$	-1 034 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	387 l/h
Pressure drop, water side $\Delta p_{w,c}$	28,7 kPa
Throw distance l_s	1,2 m
Velocity at l v_l	0,29 m/s
Temperature difference at l Δt_l	-3,01 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	104	19	24	< 15	< 15	< 15	< 15	< 15	< 15	< 15	17	20

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1800x1200x598/LE



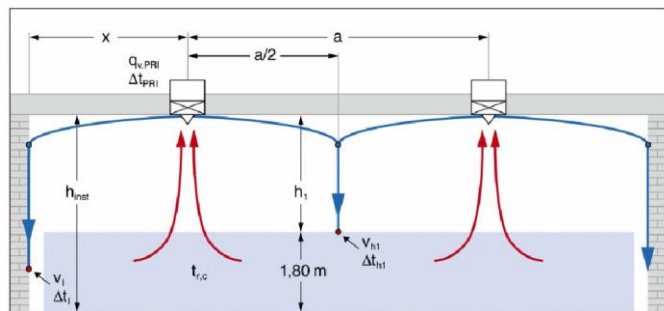
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1800	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	70 m³/h
Distance a *)	3,0 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-756 W
Thermal output - primary air $\Phi_{PRI,c}$	-187 W
Thermal output - water $\Phi_{w,c}$	-568 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	244 l/h
Pressure drop, water side $\Delta p_{w,c}$	8,7 kPa
Total thermal output – heating $\Phi_{t,h}$	957 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	957 W
Water flow rate $q_{v,w,h}$	82 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,4 kPa
Throw distance l_s	1,4 m
Velocity at h_1 v_{h1}	0,13 m/s
Temperature difference at h_1 Δt_{h1}	-0,52 K
Velocity at l_s v_l	0,26 m/s
Temperature difference at l_s Δt_l	-1,45 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	47	23	23	19	23	22	18	< 15	< 15	< 15	16	18

Description

DID632-LR-4-G-LL-AV/1800x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-M-LL-AV/1800x1200x598/LE



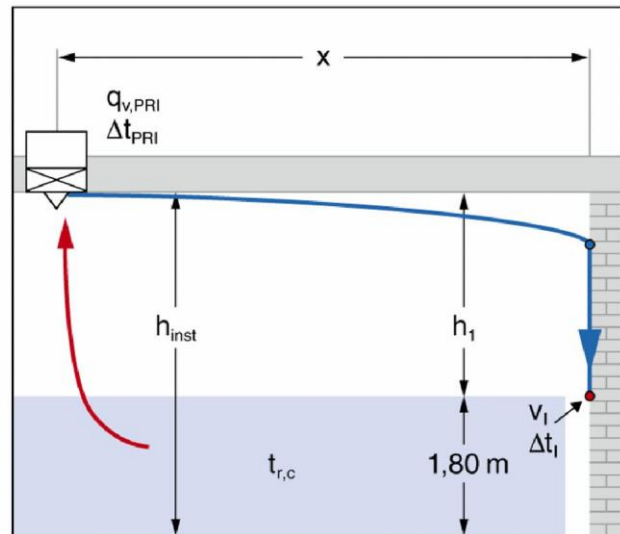
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1800	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	60 m ³ /h
Distance x	2,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-915 W
Thermal output - primary air $\Phi_{PRI,c}$	-161 W
Thermal output - water $\Phi_{w,c}$	-754 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	324 l/h
Pressure drop, water side $\Delta p_{w,c}$	14,6 kPa
Throw distance l_s	1,4 m
Velocity at l v_l	0,23 m/s
Temperature difference at l Δt_l	-1,63 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	143	21	23	15	18	17	16	< 15	< 15	< 15	< 15	17

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-Z-LL-AV/1200x900x598/LE



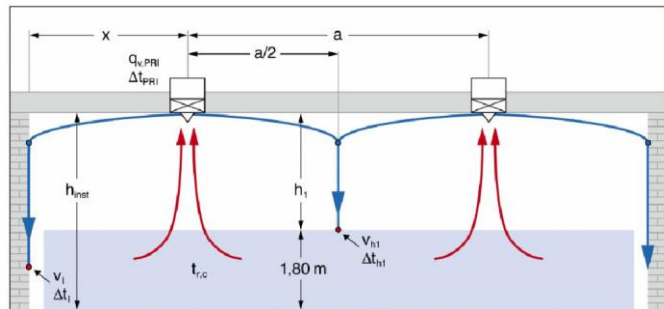
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	22 m ³ /h
Distance a *)	2,3 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-447 W
Thermal output - primary air $\Phi_{PRI,c}$	-59 W
Thermal output - water $\Phi_{w,c}$	-389 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	167 l/h
Pressure drop, water side $\Delta p_{w,c}$	3,4 kPa
Total thermal output – heating $\Phi_{t,h}$	504 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	504 W
Water flow rate $q_{v,w,h}$	43 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	0,5 m
Velocity at h_1 v_{h1}	N.A. m/s
Temperature difference at h_1 Δt_{h1}	N.A. K
Velocity at l_s v_l	0,18 m/s
Temperature difference at l_s Δt_l	-2,37 K
Velocity at l_s v_s	0,23 m/s
Temperature difference at l_s Δt_s	-1,60 K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	69	< 15	18	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-Z-LL-AV/1200x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



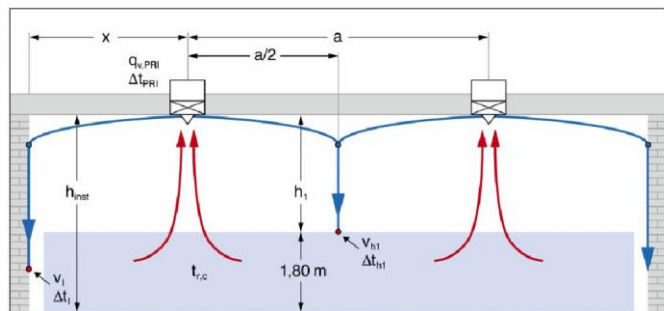
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	29 m ³ /h
Distance a *)	1,7 m
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-417 W
Thermal output - primary air $\Phi_{PRI,c}$	-78 W
Thermal output - water $\Phi_{w,c}$	-339 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	146 l/h
Pressure drop, water side $\Delta p_{w,c}$	2,7 kPa
Total thermal output – heating $\Phi_{t,h}$	425 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	425 W
Water flow rate $q_{v,w,h}$	37 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	0,7 m
Velocity at h_1 v_{h1}	0,12 m/s
Temperature difference at h_1 Δt_{h1}	-0,71 K
Velocity at l_s v_l	0,20 m/s
Temperature difference at l_s Δt_l	-1,80 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	60	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-M-LL-AV/1200x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



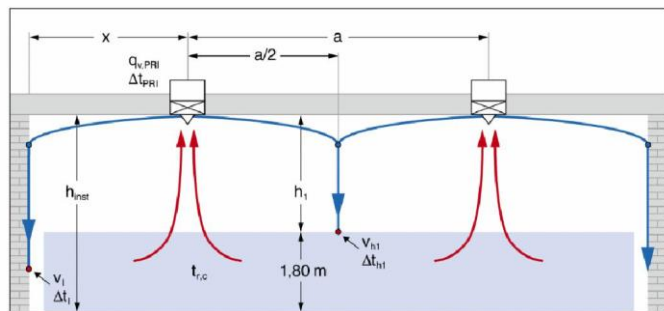
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	40 m ³ /h
Distance a *)	1,6 m
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-610 W
Thermal output - primary air $\Phi_{PRI,c}$	-107 W
Thermal output - water $\Phi_{w,c}$	-503 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	216 l/h
Pressure drop, water side $\Delta p_{w,c}$	5,4 kPa
Total thermal output – heating $\Phi_{t,h}$	769 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	769 W
Water flow rate $q_{v,w,h}$	66 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,2 kPa
Throw distance l_s	1,0 m
Velocity at h_1 v_{h1}	0,19 m/s
Temperature difference at h_1 Δt_{h1}	-0,76 K
Velocity at l_s v_l	0,28 m/s
Temperature difference at l_s Δt_l	-1,91 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	115	16	20	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-M-LL-AV/1200x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



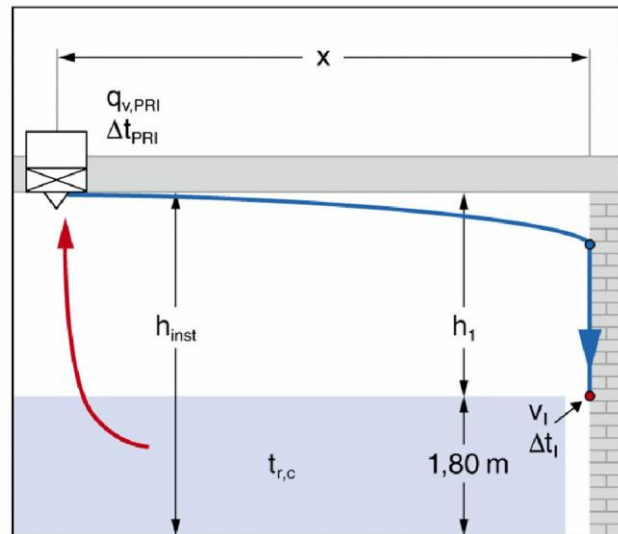
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	43 m ³ /h
Distance x	1,3 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-654 W
Thermal output - primary air $\Phi_{PRI,c}$	-115 W
Thermal output - water $\Phi_{w,c}$	-538 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	231 l/h
Pressure drop, water side $\Delta p_{w,c}$	6,1 kPa
Total thermal output – heating $\Phi_{t,h}$	871 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	871 W
Water flow rate $q_{v,w,h}$	75 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,2 kPa
Throw distance l_s	1,1 m
Velocity at l v_l	0,27 m/s
Temperature difference at l Δt_l	-1,70 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	133	18	21	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-M-LL-AV/1200x900x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1500x1200x598/LE



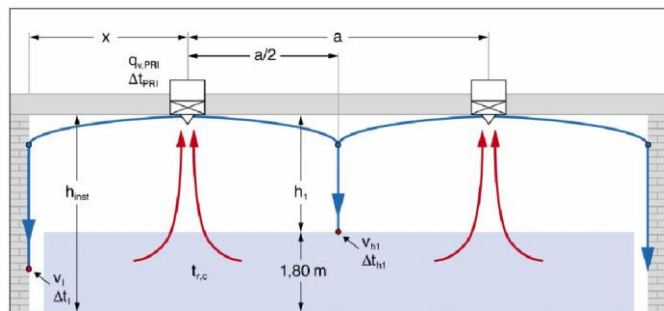
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	67 m ³ /h
Distance a *)	2,5 m
Distance x	1,3 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

- Distance a Distance a < 4 m is not recommended for comfort zones, and least of all for the area right below induction units. If necessary, leave more space between the units or arrange them differently.
- Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-719 W
Thermal output - primary air $\Phi_{PRI,c}$	-179 W
Thermal output - water $\Phi_{w,c}$	-539 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	232 l/h
Pressure drop, water side $\Delta p_{w,c}$	8,0 kPa
Total thermal output – heating $\Phi_{t,h}$	873 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	873 W
Water flow rate $q_{v,w,h}$	75 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,3 kPa
Throw distance l_s	1,3 m
Velocity at h_1 v_{h1}	0,14 m/s
Temperature difference at h_1 Δt_{h1}	-0,55 K
Velocity at l v_l	0,24 m/s
Temperature difference at l Δt_l	-1,35 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	43	21	22	18	22	21	17	< 15	< 15	< 15	15	17

Description

DID632-LR-4-G-LL-AV/1500x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1500x1200x598/LE



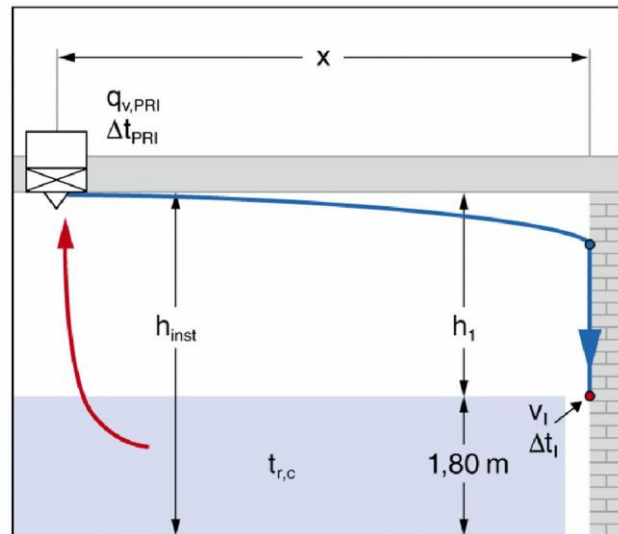
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	60 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-626 W
Thermal output - primary air $\Phi_{PRI,c}$	-161 W
Thermal output - water $\Phi_{w,c}$	-465 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	200 l/h
Pressure drop, water side $\Delta p_{w,c}$	6,1 kPa
Total thermal output – heating $\Phi_{t,h}$	668 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	668 W
Water flow rate $q_{v,w,h}$	57 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,2 kPa
Throw distance l_s	1,2 m
Velocity at l v_l	0,20 m/s
Temperature difference at l Δt_l	-1,24 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	35	18	20	15	19	18	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-G-LL-AV/1500x1200x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1200x900x598/LE



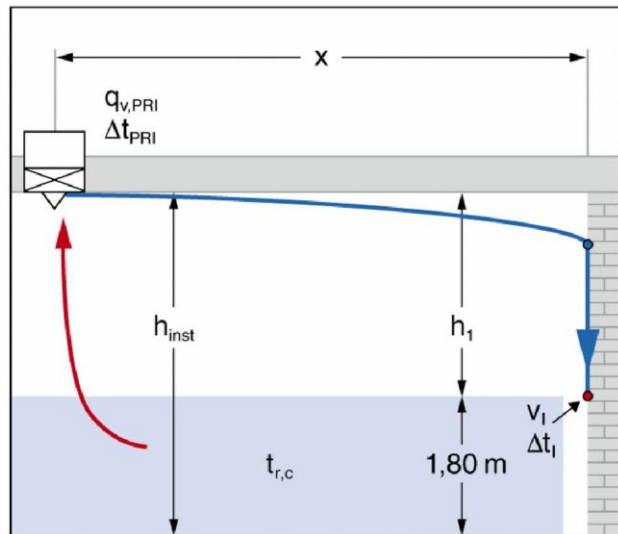
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	45 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-457 W
Thermal output - primary air $\Phi_{PRI,c}$	-120 W
Thermal output - water $\Phi_{w,c}$	-337 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	145 l/h
Pressure drop, water side $\Delta p_{w,c}$	2,6 kPa
Total thermal output – heating $\Phi_{t,h}$	421 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	421 W
Water flow rate $q_{v,w,h}$	36 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	1,0 m
Velocity at l v_l	0,19 m/s
Temperature difference at l Δt_l	-1,12 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	35	< 15	18	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-G-LL-AV/1200x900x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-G-LL-AV/1200x900x598/LE



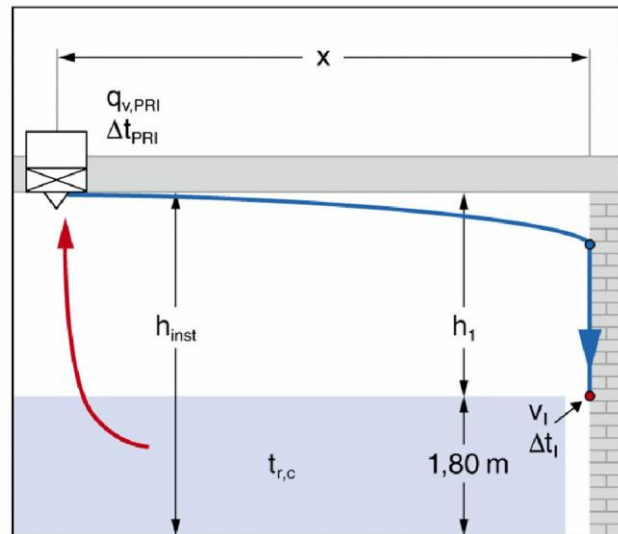
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	55 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water flow rate $q_{v,w,c}$	190 l/h

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-589 W
Thermal output - primary air $\Phi_{PRI,c}$	-147 W
Thermal output - water $\Phi_{w,c}$	-441 W
Dew point t_{dp}	13,2 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Pressure drop, water side $\Delta p_{w,c}$	4,3 kPa
Throw distance l_s	1,2 m
Velocity at l v_l	0,22 m/s
Temperature difference at l Δt_l	-1,18 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	52	19	22	15	18	18	15	< 15	< 15	< 15	< 15	15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1200x900x598/LE



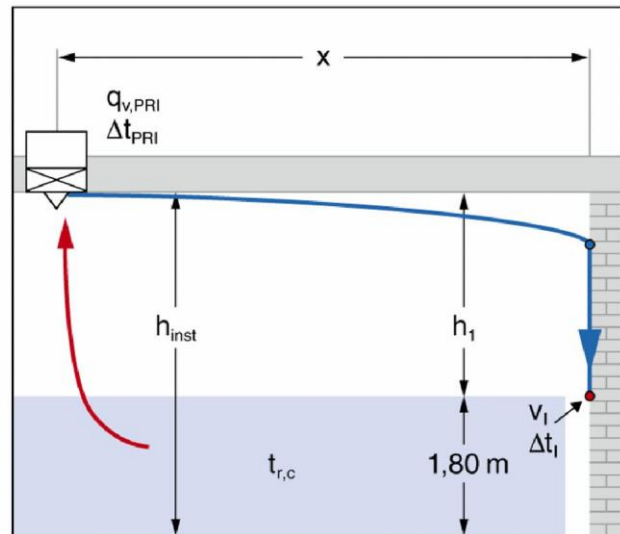
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	50 m ³ /h
Distance x	1,7 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-526 W
Thermal output - primary air $\Phi_{PRI,c}$	-134 W
Thermal output - water $\Phi_{w,c}$	-393 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	169 l/h
Pressure drop, water side $\Delta p_{w,c}$	3,5 kPa
Total thermal output – heating $\Phi_{t,h}$	511 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	511 W
Water flow rate $q_{v,w,h}$	44 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	1,1 m
Velocity at l v_l	0,20 m/s
Temperature difference at l Δt_l	-1,14 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	43	16	20	< 15	16	16	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-G-LL-AV/1200x900x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



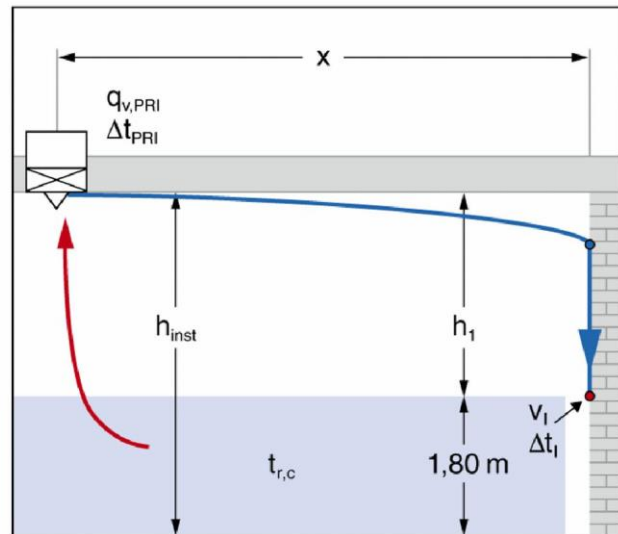
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	27 m³/h
Distance x	1,2 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-373 W
Thermal output - primary air $\Phi_{PRI,c}$	-72 W
Thermal output - water $\Phi_{w,c}$	-300 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	129 l/h
Pressure drop, water side $\Delta p_{w,c}$	2,1 kPa
Total thermal output – heating $\Phi_{t,h}$	373 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	373 W
Water flow rate $q_{v,w,h}$	32 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,1 kPa
Throw distance l_s	0,7 m
Velocity at l v_l	0,17 m/s
Temperature difference at l Δt_l	-1,58 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	52	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-M-LL-AV/1200x900x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-Z-LL-AV/2100x1800x598/LE



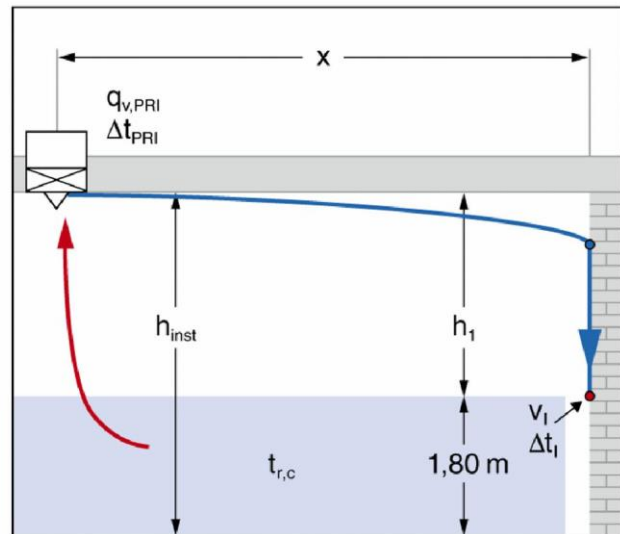
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	2100	
Nominal length	1800	
Width of front frame	593	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	60 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,4 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-1 217 W
Thermal output - primary air $\Phi_{PRI,c}$	-161 W
Thermal output - water $\Phi_{w,c}$	-1 057 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	379 l/h
Pressure drop, water side $\Delta p_{w,c}$	27,7 kPa
Throw distance l_s	1,2 m
Velocity at l v_l	0,25 m/s
Temperature difference at l Δt_l	-2,52 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	111	20	25	< 15	< 15	< 15	< 15	< 15	15	< 15	18	21

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1200x900x598/LE



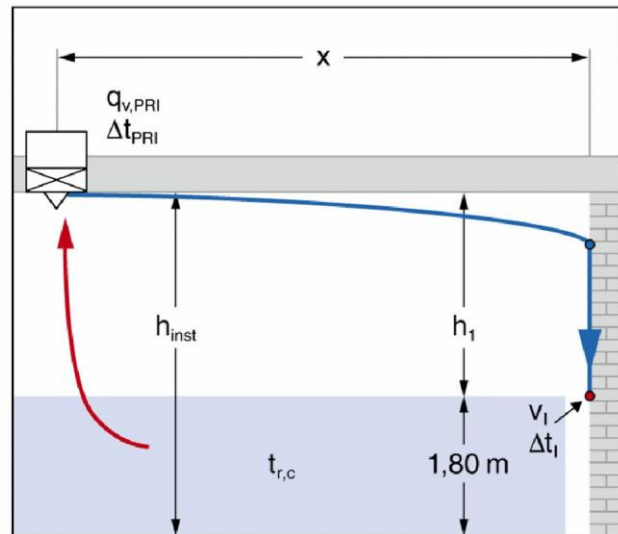
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	40 m ³ /h
Distance x	1,5 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-610 W
Thermal output - primary air $\Phi_{PRI,c}$	-107 W
Thermal output - water $\Phi_{w,c}$	-503 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	216 l/h
Pressure drop, water side $\Delta p_{w,c}$	5,4 kPa
Total thermal output – heating $\Phi_{t,h}$	769 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	769 W
Water flow rate $q_{v,w,h}$	66 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,2 kPa
Throw distance l_s	1,0 m
Velocity at l v_l	0,24 m/s
Temperature difference at l Δt_l	-1,65 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	115	16	20	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For

DID632-LR-4-M-LL-AV/1200x900x598/LE



installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-Z-LL-AV/1200x900x598/LE



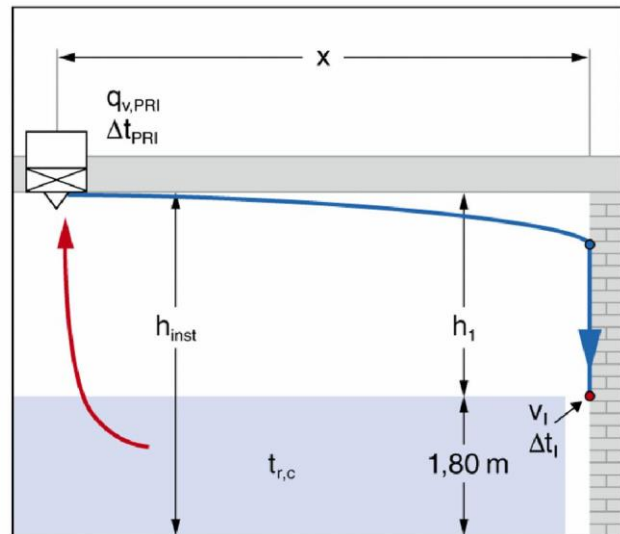
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1200	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Single arrangement, cooling

Primary air volume flow rate $q_{v,PRI}$	30 m ³ /h
Distance x	1,6 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-614 W
Thermal output - primary air $\Phi_{PRI,c}$	-80 W
Thermal output - water $\Phi_{w,c}$	-533 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	229 l/h
Pressure drop, water side $\Delta p_{w,c}$	6,0 kPa
Throw distance l_s	0,7 m
Velocity at l v_l	0,22 m/s
Temperature difference at l Δt_l	-2,11 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	128	21	24	< 15	< 15	< 15	16	16	< 15	< 15	17	20

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-M-LL-AV/1500x1200x598/LE



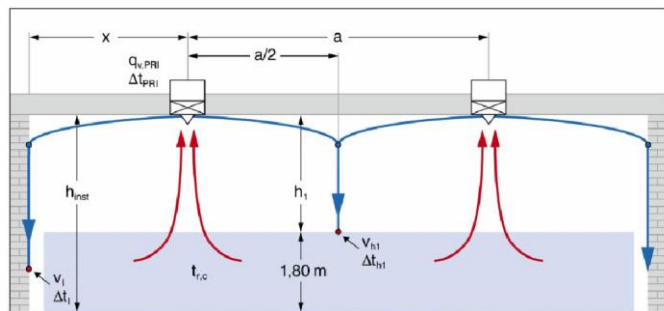
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	50 m ³ /h
Distance a *)	1,4 m
Distance x	0,7 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-770 W
Thermal output - primary air $\Phi_{PRI,c}$	-134 W
Thermal output - water $\Phi_{w,c}$	-637 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	274 l/h
Pressure drop, water side $\Delta p_{w,c}$	10,7 kPa
Total thermal output – heating $\Phi_{t,h}$	1 146 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 146 W
Water flow rate $q_{v,w,h}$	99 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,5 kPa
Throw distance l_s	1,1 m
Velocity at h_1 v_{h1}	0,19 m/s
Temperature difference at h_1 Δt_{h1}	-0,86 K
Velocity at l_s v_l	0,28 m/s
Temperature difference at l_s Δt_l	-2,14 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	99	15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

DID632-LR-4-M-LL-AV/1500x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-M-LL-AV/1500x1200x598/LE



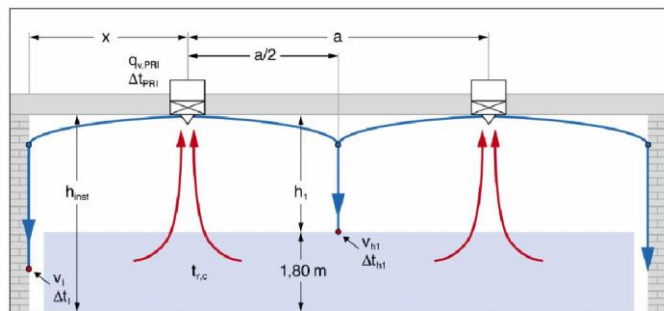
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	M	Medium
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	55 m³/h
Distance a *)	1,6 m
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-845 W
Thermal output - primary air $\Phi_{PRI,c}$	-147 W
Thermal output - water $\Phi_{w,c}$	-698 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	300 l/h
Pressure drop, water side $\Delta p_{w,c}$	12,7 kPa
Throw distance l_s	1,2 m
Velocity at h_1 v_{h1}	0,18 m/s
Temperature difference at h_1 Δt_{h1}	-0,83 K
Velocity at l v_l	0,27 m/s
Temperature difference at l Δt_l	-2,08 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m³

Acoustic results

	Δp_i [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	120	18	21	< 15	16	15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-G-LL-AV/1500x1200x598/LE



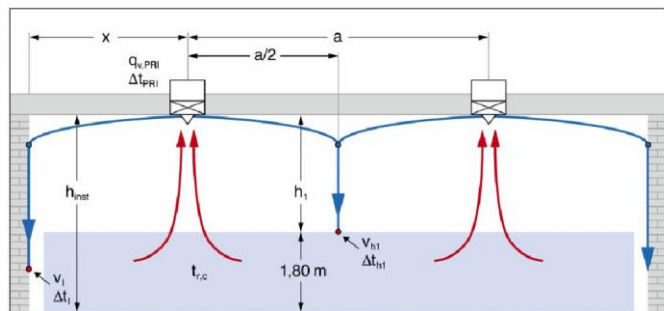
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	75 m ³ /h
Distance a *)	2,0 m
Distance x	1,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-815 W
Thermal output - primary air $\Phi_{PRI,c}$	-201 W
Thermal output - water $\Phi_{w,c}$	-614 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	264 l/h
Pressure drop, water side $\Delta p_{w,c}$	10,0 kPa
Total thermal output – heating $\Phi_{t,h}$	1 084 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 084 W
Water flow rate $q_{v,w,h}$	93 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,5 kPa
Throw distance l_s	1,5 m
Velocity at h_1 v_{h1}	0,17 m/s
Temperature difference at h_1 Δt_{h1}	-0,58 K
Velocity at l_s v_l	0,26 m/s
Temperature difference at l_s Δt_l	-1,46 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	54	25	24	20	25	24	21	< 15	< 15	< 15	19	21

Description

DID632-LR-4-G-LL-AV/1500x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-2-G-LL-AV/1500x1200x598/LE



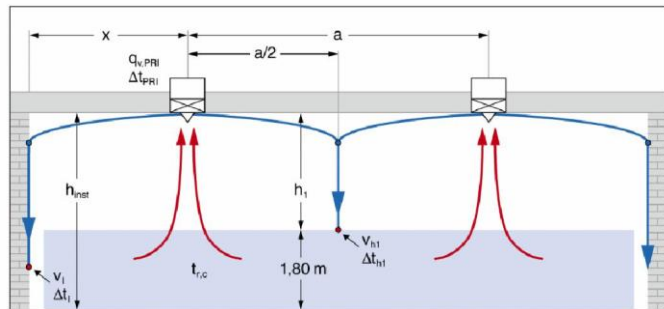
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	2	For 2-pipe systems
Nozzle variant	G	Large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	85 m ³ /h
Distance a *)	2,4 m
Distance x	1,2 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C

Functional diagram



Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-924 W
Thermal output - primary air $\Phi_{PRI,c}$	-228 W
Thermal output - water $\Phi_{w,c}$	-696 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	299 l/h
Pressure drop, water side $\Delta p_{w,c}$	12,6 kPa
Throw distance l_s	1,8 m
Velocity at h_1 v_{h1}	0,19 m/s
Temperature difference at h_1 Δt_{h1}	-0,56 K
Velocity at l v_l	0,28 m/s
Temperature difference at l Δt_l	-1,40 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
Active part	70	29	26	23	27	27	25	17	< 15	< 15	23	25

Description

Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-Z-LL-AV/1500x1200x598/LE



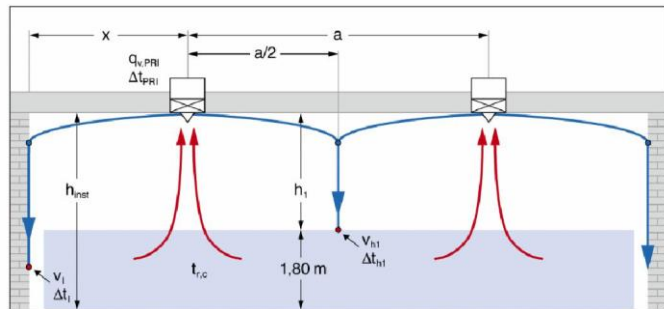
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	Z	Small
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	1200	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	33 m ³ /h
Distance a *)	2,0 m
Distance x	0,8 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-691 W
Thermal output - primary air $\Phi_{PRI,c}$	-88 W
Thermal output - water $\Phi_{w,c}$	-602 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	259 l/h
Pressure drop, water side $\Delta p_{w,c}$	9,7 kPa
Total thermal output – heating $\Phi_{t,h}$	1 053 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 053 W
Water flow rate $q_{v,w,h}$	91 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,4 kPa
Throw distance l_s	0,7 m
Velocity at h_1 v_{h1}	0,13 m/s
Temperature difference at h_1 Δt_{h1}	-1,05 K
Velocity at l_s v_l	0,23 m/s
Temperature difference at l_s Δt_l	-2,76 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	82	15	21	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	16

Description

DID632-LR-4-Z-LL-AV/1500x1200x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.

DID632-LR-4-U-LL-AV/1500x900x598/LE



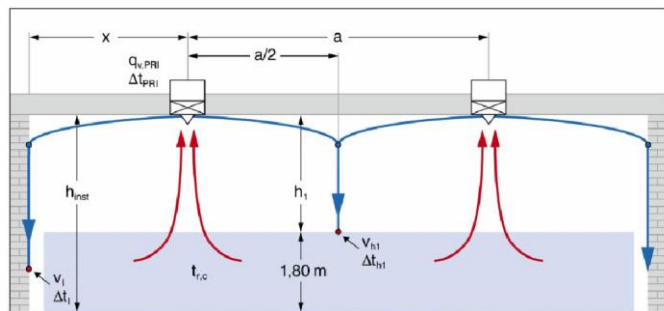
Induced air grille	LR	Perforated metal, circular holes
Heat exchanger	4	For 4-pipe systems
Nozzle variant	U	Extra large
Arrangement of casings and connections	LL	Casing left side, Water connections left side
Extract air spigot	AV	Extract air, spigot at the front
Total length	1500	
Nominal length	900	
Width of front frame	598	
Air control blades	LE	With air control blades
Total amount	1	

Input Data

Strategy: Arrangement in rows, cooling

Primary air volume flow rate $q_{v,PRI}$	125 m ³ /h
Distance a	5,0 m
Distance x	3,0 m
Installation height h_{inst}	3,0 m
Primary air temperature $t_{PRI,c}$	18,0 °C
Room temperature $t_{r,c}$	26,0 °C
Relative humidity of the air ϕ_p	45
Water flow temperature $t_{w,s,c}$	16,0 °C
Water return temperature $t_{w,r,c}$	18,0 °C
Primary air temperature $t_{PRI,h}$	20,0 °C
Room temperature $t_{r,h}$	20,0 °C
Water flow temperature $t_{w,s,h}$	50,0 °C
Water return temperature $t_{w,r,h}$	40,0 °C

Functional diagram



Notes *)

Air density ρ All aerodynamic, acoustic and capacity calculations are based on this air density value.

Results

Distance h_1	1,2 m
Height of occupied area h_{occ}	1,8 m
Total thermal output – cooling $\Phi_{t,c}$	-994 W
Thermal output - primary air $\Phi_{PRI,c}$	-335 W
Thermal output - water $\Phi_{w,c}$	-659 W
Dew point t_{dp}	13,2 °C
Water flow rate $q_{v,w,c}$	284 l/h
Pressure drop, water side $\Delta p_{w,c}$	8,9 kPa
Total thermal output – heating $\Phi_{t,h}$	1 195 W
Thermal output - primary air $\Phi_{PRI,h}$	0 W
Thermal output - water $\Phi_{w,h}$	1 195 W
Water flow rate $q_{v,w,h}$	101 l/h
Pressure drop, water side $\Delta p_{w,h}$	0,4 kPa
Throw distance l_s	2,6 m
Velocity at h_1 v_{h1}	0,16 m/s
Temperature difference at h_1 Δt_{h1}	-0,34 K
Velocity at l_s v_l	0,29 m/s
Temperature difference at l_s Δt_l	-0,80 K
Velocity at l_s v_s	N.A. m/s
Temperature difference at l_s Δt_s	N.A. K
Air density ρ	1,2 kg/m ³ *)

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
Active part	89	40	31	31	36	37	37	29	21	< 15	36	37

Description

DID632-LR-4-U-LL-AV/1500x900x598/LE



Active chilled beams of Type DID632, with twoway air discharge and high thermal output, providing high thermal comfort levels. For installation flush with the ceiling, preferably in rooms with a height up to 4.0 m. The units consist of a casing with suspension points, a spigot, noncombustible nozzles, and a horizontal heat exchanger. Nozzles in four sizes to optimise induction based on demand.



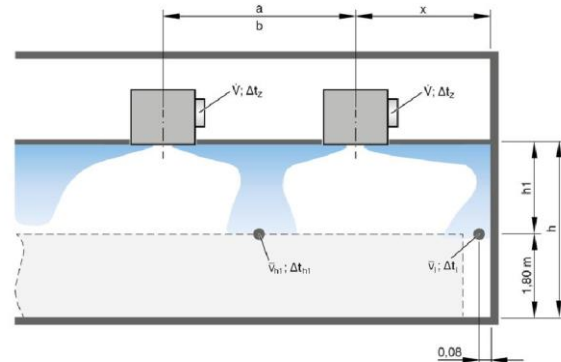
DLQ-ZH-M/300

Connection	ZH	Horizontal, supply air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	300	
Total amount	1	

Input Data

Strategy: Supply air	
Volume flow q_v	270 m ³ /h
Distance a	3,0 m
Distance x	1,5 m
Distance h_1	1,2 m
Supply air to room air temperature	-6 K
Room temperature $t_{r,c}$	26,0 °C

Schematic side view



Results

Distance ($h_1 + x$) l	2,7 m
Effective air velocity v_{eff}	4,3 m/s
Throw distance l_s	5,9 m
Velocity at h_1 v_{h1}	0,15 m/s
Temperature difference at h_1 Δt_{h1}	-0,43 K
Velocity at l v_l	0,25 m/s
Temperature difference at l Δt_l	-0,43 K
Thermal output – cooling Φ_c	-542 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	30	32	35	32	36	30	25	17	< 15	< 15	24	26
damper blade position 45°	42	34	34	33	37	32	30	23	16	< 15	28	30
damper blade position closed	93	41	38	35	40	35	36	34	26	21	35	37

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 50 m³/h

Results

Gap width s -4,5 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	53	23	31	17	23	20	18	16	< 15	< 15	16	19

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 80 m³/h

Results

Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	41	25	30	19	25	23	19	16	< 15	< 15	18	19

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 80 m³/h

Results

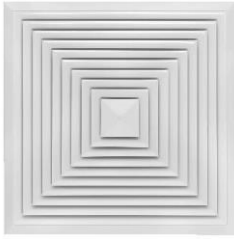
Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	41	25	30	19	25	23	19	16	< 15	< 15	18	19

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



Connection ZH
Damper blade for volume flow rate balancing M
Nominal size 250
Total amount 1

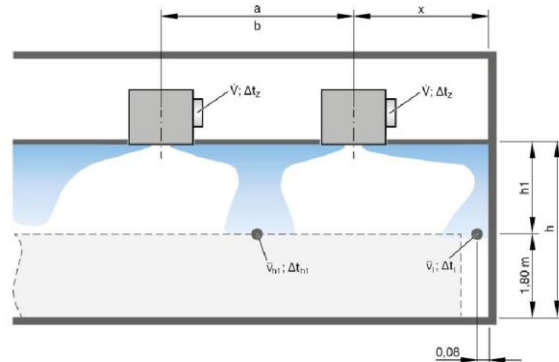
DLQ-ZH-M/250

Horizontal, supply air, with plenum box
With damper blade

Input Data

Strategy: Supply air
Volume flow q_v 125 m³/h
Distance a 2,3 m
Distance x 1,5 m
Distance h_1 1,2 m
Supply air to room air temperature -6 K
Room temperature $t_{r,c}$ 26,0 °C

Schematic side view



Results

Distance ($h_1 + x$) l 2,7 m
Effective air velocity v_{eff} 3,7 m/s
Throw distance l_s 4,3 m
Velocity at h_1 v_{h1} 0,12 m/s
Temperature difference at h_1 Δt_{h1} -0,32 K
Velocity at l v_l 0,15 m/s
Temperature difference at l Δt_l -0,25 K
Thermal output – cooling Φ_c -251 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	14	22	30	21	27	22	< 15	< 15	< 15	< 15	15	18
damper blade position 45°	15	22	31	22	27	21	< 15	< 15	< 15	< 15	< 15	16
damper blade position closed	31	24	28	22	30	23	15	< 15	< 15	< 15	16	19

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



DLQ-AH-M/250

Connection	AH	Horizontal, extract air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy: Extract air
Volume flow q_v 120 m³/h

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	15	26	30	24	32	23	16	< 15	< 15	< 15	18	22
damper blade position 45°	17	26	27	26	32	22	16	< 15	< 15	< 15	18	22
damper blade position closed	26	26	27	25	32	24	17	< 15	< 15	< 15	18	22

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



Connection ZH
Damper blade for volume flow rate balancing M
Nominal size 250
Total amount 1

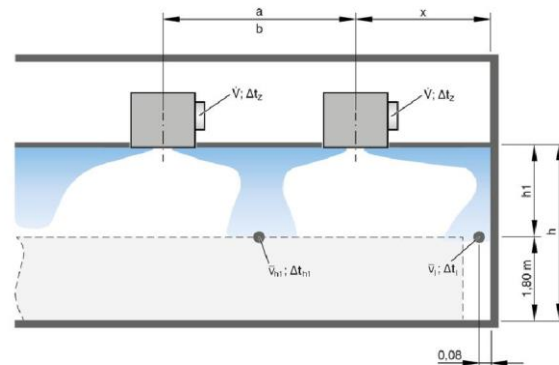
DLQ-ZH-M/250

Horizontal, supply air, with plenum box
With damper blade

Input Data

Strategy: Supply air
Volume flow q_v 126 m³/h
Distance a 2,5 m
Distance x 1,8 m
Distance h_1 1,2 m
Supply air to room air temperature -6 K
Room temperature $t_{r,c}$ 26,0 °C

Schematic side view



Results

Distance ($h_1 + x$) l 3,0 m
Effective air velocity v_{eff} 3,7 m/s
Throw distance l_s 4,3 m
Velocity at h_1 v_{h1} 0,10 m/s
Temperature difference at h_1 Δt_{h1} -0,30 K
Velocity at l v_l 0,13 m/s
Temperature difference at l Δt_l -0,21 K
Thermal output – cooling Φ_c -253 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	14	22	30	21	28	22	< 15	< 15	< 15	< 15	16	18
damper blade position 45°	16	22	31	22	27	21	< 15	< 15	< 15	< 15	< 15	17
damper blade position closed	31	24	29	22	30	23	15	< 15	< 15	< 15	16	19

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



DLQ-AH-M/250

Connection	AH	Horizontal, extract air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy: Extract air
Volume flow q_v 175 m³/h

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	32	37	37	35	41	35	31	25	16	< 15	30	31
damper blade position 45°	36	37	35	36	41	35	31	25	16	< 15	30	32
damper blade position closed	54	38	35	35	41	35	32	25	16	< 15	30	32

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 44 m³/h

Results

Gap width s -4,5 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	41	20	31	15	20	17	15	< 15	< 15	< 15	< 15	16

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 60 m³/h

Results

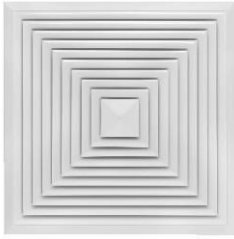
Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	23	18	29	< 15	19	16	< 15	< 15	< 15	< 15	< 15	< 15

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



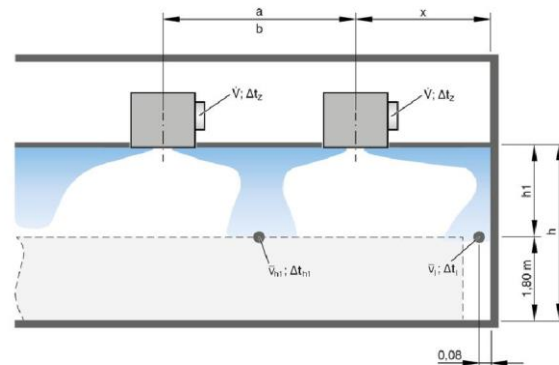
DLQ-ZH-M/250

Connection	ZH	Horizontal, supply air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy:	Supply air
Volume flow q_v	135 m ³ /h
Distance a	2,8 m
Distance x	1,5 m
Distance h_1	1,2 m
Supply air to room air temperature	-6 K
Room temperature $t_{r,c}$	26,0 °C

Schematic side view



Results

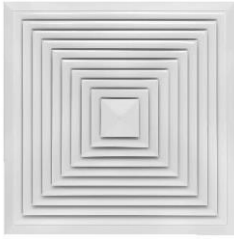
Distance $(h_1 + x) l$	2,7 m
Effective air velocity v_{eff}	3,9 m/s
Throw distance l_s	4,6 m
Velocity at h_1 v_{h1}	0,10 m/s
Temperature difference at h_1 Δt_{h1}	-0,27 K
Velocity at l v_l	0,16 m/s
Temperature difference at l Δt_l	-0,25 K
Thermal output – cooling Φ_c	-271 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	16	24	32	24	30	24	< 15	< 15	< 15	< 15	18	20
damper blade position 45°	18	24	33	24	30	23	< 15	< 15	< 15	< 15	16	19
damper blade position closed	36	27	30	25	32	25	18	< 15	< 15	< 15	18	21

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



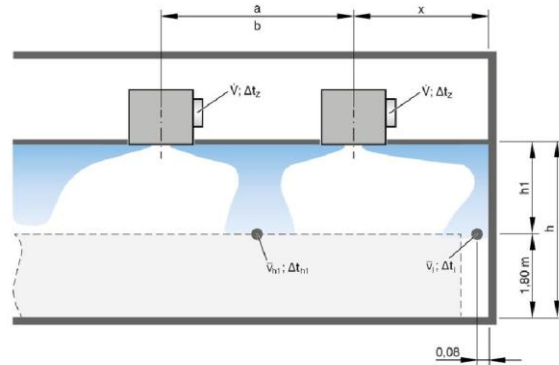
DLQ-ZH-M/250

Connection	ZH	Horizontal, supply air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy: Supply air	
Volume flow q_v	100 m ³ /h
Distance a	1,8 m
Distance x	1,7 m
Distance h_1	1,2 m
Supply air to room air temperature	-6 K
Room temperature $t_{r,c}$	26,0 °C

Schematic side view



Results

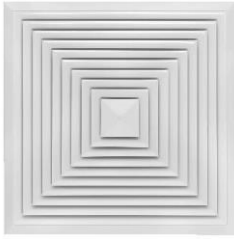
Distance ($h_1 + x$) l	2,9 m
Effective air velocity v_{eff}	2,9 m/s
Throw distance l_s	3,6 m
Velocity at h_1 v_{h1}	0,12 m/s
Temperature difference at h_1 Δt_{h1}	-0,39 K
Velocity at l v_l	0,11 m/s
Temperature difference at l Δt_l	-0,22 K
Thermal output – cooling Φ_c	-201 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	9	16	25	< 15	21	15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position 45°	10	15	26	15	21	< 15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position closed	20	17	23	15	23	16	< 15	< 15	< 15	< 15	< 15	< 15

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



DLQ-AH-M/250

Connection	AH	Horizontal, extract air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy: Extract air
Volume flow q_v 150 m³/h

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	24	33	34	31	38	30	25	17	< 15	< 15	25	28
damper blade position 45°	27	32	32	32	38	29	25	17	< 15	< 15	25	28
damper blade position closed	40	33	32	31	38	31	26	18	< 15	< 15	25	28

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



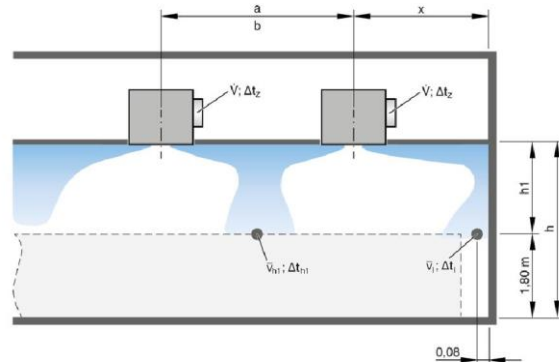
Connection	ZH	Horizontal, supply air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

DLQ-ZH-M/250

Input Data

Strategy:	Supply air
Volume flow q_v	75 m ³ /h
Distance a	1,4 m
Distance x	1,5 m
Distance h_1	1,2 m
Supply air to room air temperature	-6 K
Room temperature $t_{r,c}$	26,0 °C

Schematic side view



Results

Distance ($h_1 + x$) l	2,7 m
Effective air velocity v_{eff}	2,2 m/s
Throw distance l_s	2,9 m
Velocity at h_1 v_{h1}	0,11 m/s
Temperature difference at h_1 Δt_{h1}	-0,47 K
Velocity at l v_l	0,1 m/s
Temperature difference at l Δt_l	-0,25 K
Thermal output – cooling Φ_c	-151 W

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	5	< 15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position 45°	6	< 15	20	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position closed	11	9	15	< 15	15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



DLQ-AH-M/250

Connection	AH	Horizontal, extract air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Nominal size	250	
Total amount	1	

Input Data

Strategy: Extract air
Volume flow q_v 150 m³/h

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	24	33	34	31	38	30	25	17	< 15	< 15	25	28
damper blade position 45°	27	32	32	32	38	29	25	17	< 15	< 15	25	28
damper blade position closed	40	33	32	31	38	31	26	18	< 15	< 15	25	28

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 43 m³/h

Results

Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	12	< 15	27	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 67 m³/h

Results

Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	29	20	29	15	21	19	15	< 15	< 15	< 15	< 15	15

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 50 m³/h

Results

Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	16	< 15	28	< 15	15	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



LVS/100

Nominal size 100
Total amount 1

Input Data

Strategy: General
Volume flow q_v 75 m³/h

Results

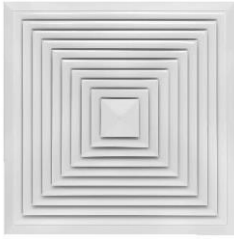
Gap width s 5,0 mm

Acoustic results

	Δp_t	LWA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	LWNC	LWNR
	[Pa]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
General	36	23	30	18	24	21	18	< 15	< 15	< 15	16	18

Description

Circular disc valves as extract air devices, preferably for small rooms. For installation into walls and suspended ceilings. Ready-to-install component which consists of a valve casing with cross bar, a valve disc with threaded spindle, and an installation subframe. The valve disc can be turned for volume flow rate balancing. The valve setting can be fixed with a lock nut. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



DLQ-AH-M-L/250

Connection	AH	Horizontal, extract air, with plenum box
Damper blade for volume flow rate balancing	M	With damper blade
Accessories	L	With lip seal
Nominal size	250	
Total amount	1	

Input Data

Strategy: Extract air
Volume flow q_v 75 m³/h

Acoustic results

	Δp_t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC [dB]	LWNR [dB]
damper blade position open	6	< 15	21	< 15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position 45°	7	< 15	15	< 15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15
damper blade position closed	10	12	17	< 15	19	< 15	< 15	< 15	< 15	< 15	< 15	< 15

Description

Ceiling diffusers with square diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal four-way air discharge. For installation into all types of suspended ceilings. Ready-to-install component which consists of the galvanised sheet steel diffuser face with fixed air control blades, a diffuser front frame with perimeter seal and connecting frame, opposed action blades, butterfly damper or a plenum box. Diffuser face suitable for central screw fixing. Sound power level of the air-regenerated noise measured according to EN ISO 5135.

LVC/200/BC0/V0/70-375m³/h



Nominal size	200	
Control component	BC0	BC0 volume flow;not contaminated air;no safety function
Operating mode	V	Variable
Signal voltage range	0	0-10 V DC
Vmin	70	
Vmax	375	
Unit	m ³ /h	
Total amount	1	

Input Data

Strategy: Operating values to calculate

Volume flow q_v	375 m ³ /h
Static differential pressure Δp_{st}	130 Pa

Notes *)

System The sound pressure level of air-regenerated noise is attenuation for air- calculated based on system attenuation values achieved regenerated noise under real conditions. These system attenuation values are the combined correction values for change of direction, distribution in the ductwork, end reflection and room attenuation.

ΔL_1

Results

Airflow velocity v	3,38 m/s
Static differential pressure, minimum	10 Pa
Air-regenerated noise $L_{p,A}$	45 dB(A)
Case-radiated noise $L_{p,A}$	29 dB(A)
System attenuation for air	8 dB *)
System attenuation for case-radiated	9 dB *)
Volume flow rate tolerance $[\pm\%] \Delta q_v$	8

Acoustic results

	$L_{W,A}$ [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	$L_{W,NC}$ [dB]	$L_{W,NR}$ [dB]
Air-regenerated noise, sound power level	53	58	55	50	50	47	46	39	30	46	48
Case-radiated noise, sound power level	38	32	26	29	34	34	33	26	23	33	36

Description

Circular VAV terminal units for variable air volume systems with low airflow velocities, suitable for supply or extract air, available in four nominal sizes. Measurement and control of low volume flow rates based on a new measurement principle. Plastic nozzle with damper blade for measuring the differential pressure upstream and downstream of the damper blade (effective pressure). The relation between damper blade position and differential pressure is stored as a characteristic relationship in the Easy or Compact controller. This results in high control accuracy even in case of unfavourable upstream conditions. Commissioning ready device, consisting of the mechanical components and the electronic control components. Units are equipped with a plastic nozzle with integral damper blade. The averaging differential pressure sensor is resistant to dust and pollution. Position of the damper blade indicated externally at shaft extension. Indicated Damper blade open at delivery, thereby air flow also given without control function.

LVC/125/BC0/V0/30-120m³/h



Nominal size	125	
Control component	BC0	BC0 volume flow;not contaminated air;no safety function
Operating mode	V	Variable
Signal voltage range	0	0-10 V DC
Vmin	30	Vmin
Vmax	120	
Unit	m ³ /h	
Total amount	1	

Input Data

Strategy: Operating values to calculate

Volume flow q_v	120 m ³ /h
Static differential pressure Δp_{st}	121 Pa

Notes *)

System The sound pressure level of air-regenerated noise is attenuation for air- calculated based on system attenuation values achieved regenerated noise under real conditions. These system attenuation values are the combined correction values for change of direction, distribution in the ductwork, end reflection and room attenuation.

ΔL_1

Results

Airflow velocity v	2,81 m/s
Static differential pressure, minimum	7 Pa
Air-regenerated noise $L_{p,A}$	45 dB(A)
Case-radiated noise $L_{p,A}$	26 dB(A)
System attenuation for air	8 dB *)
System attenuation for case-radiated	9 dB *)
Volume flow rate tolerance $[\pm\%] \Delta q_v$	9

Acoustic results

	$L_{W,A}$ [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	$L_{W,NC}$ [dB]	$L_{W,NR}$ [dB]
Air-regenerated noise, sound power level	53	59	56	54	52	45	41	32	28	48	49
Case-radiated noise, sound power level	35	30	26	28	29	32	28	25	23	30	32

Description

Circular VAV terminal units for variable air volume systems with low airflow velocities, suitable for supply or extract air, available in four nominal sizes. Measurement and control of low volume flow rates based on a new measurement principle. Plastic nozzle with damper blade for measuring the differential pressure upstream and downstream of the damper blade (effective pressure). The relation between damper blade position and differential pressure is stored as a characteristic relationship in the Easy or Compact controller. This results in high control accuracy even in case of unfavourable upstream conditions. Commissioning ready device, consisting of the mechanical components and the electronic control components. Units are equipped with a plastic nozzle with integral damper blade. The averaging differential pressure sensor is resistant to dust and pollution. Position of the damper blade indicated externally at shaft extension. Indicated Damper blade open at delivery, thereby air flow also given without control function.

LVC/200/BC0/V0/70-350m³/h



Nominal size	200	
Control component	BC0	BC0 volume flow;not contaminated air;no safety function
Operating mode	V	Variable
Signal voltage range	0	0-10 V DC
Vmin	70	
Vmax	350	
Unit	m³/h	
Total amount	1	

Input Data

Strategy: Operating values to calculate

Volume flow q_v	350 m³/h
Static differential pressure Δp_{st}	215 Pa

Notes *)

System The sound pressure level of air-regenerated noise is attenuation for air- calculated based on system attenuation values achieved regenerated noise under real conditions. These system attenuation values are the combined correction values for change of direction, distribution in the ductwork, end reflection and room attenuation.

ΔL_1

Results

Airflow velocity v	3,16 m/s
Static differential pressure, minimum	8 Pa
Air-regenerated noise $L_{p,A}$	50 dB(A)
Case-radiated noise $L_{p,A}$	35 dB(A)
System attenuation for air	8 dB *)
System attenuation for case-radiated	9 dB *)
Volume flow rate tolerance $[\pm\%] \Delta q_v$	8

Acoustic results

	$L_{W,A}$ [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	$L_{W,NC}$ [dB]	$L_{W,NR}$ [dB]
Air-regenerated noise, sound power level	57	58	57	53	54	52	52	45	37	52	55
Case-radiated noise, sound power level	44	32	28	31	38	38	39	33	30	39	42

Description

Circular VAV terminal units for variable air volume systems with low airflow velocities, suitable for supply or extract air, available in four nominal sizes. Measurement and control of low volume flow rates based on a new measurement principle. Plastic nozzle with damper blade for measuring the differential pressure upstream and downstream of the damper blade (effective pressure). The relation between damper blade position and differential pressure is stored as a characteristic relationship in the Easy or Compact controller. This results in high control accuracy even in case of unfavourable upstream conditions. Commissioning ready device, consisting of the mechanical components and the electronic control components. Units are equipped with a plastic nozzle with integral damper blade. The averaging differential pressure sensor is resistant to dust and pollution. Position of the damper blade indicated externally at shaft extension. Indicated Damper blade open at delivery, thereby air flow also given without control function.