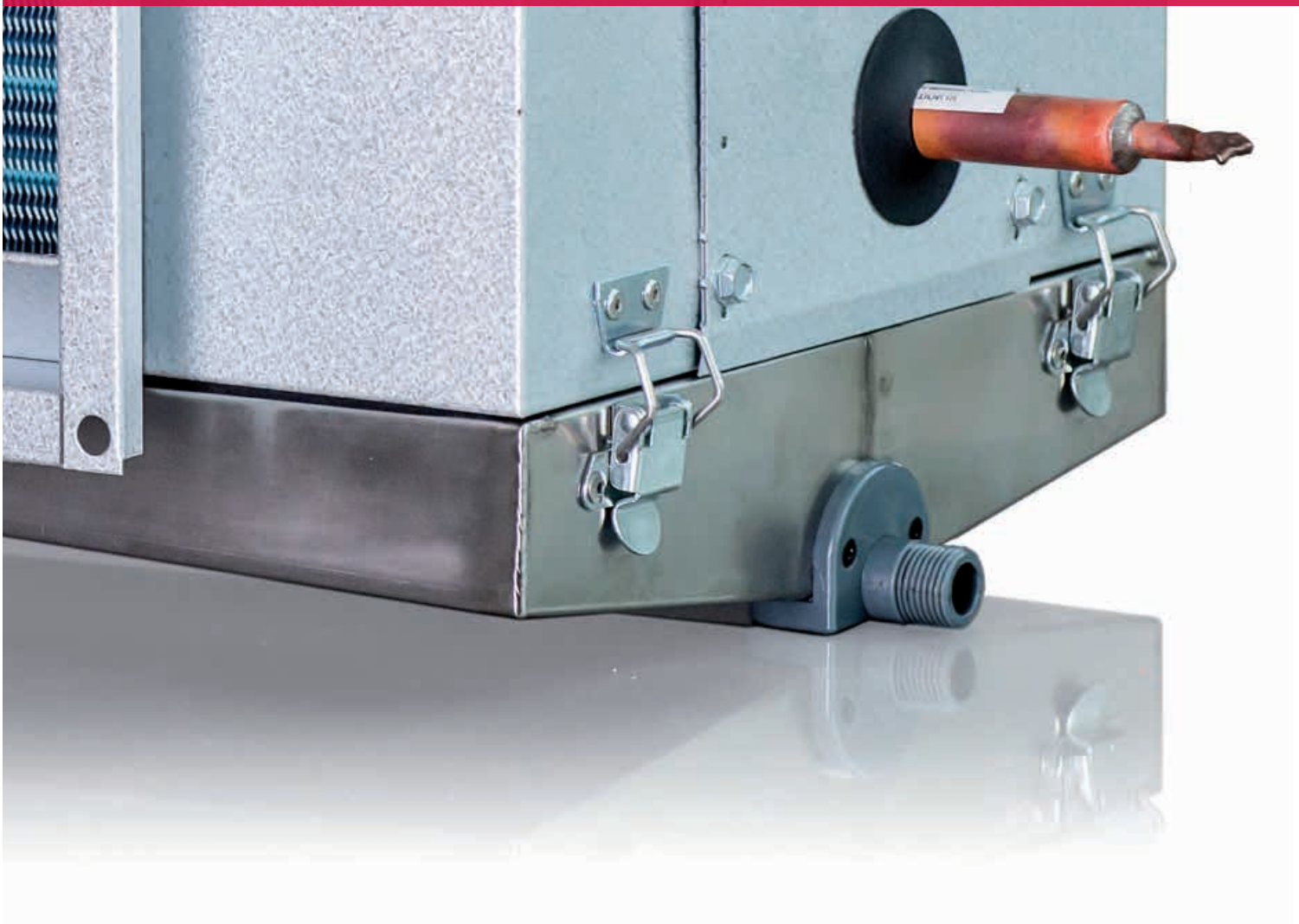


PGDX

Rectangular duct cooler for DX cooling
also suitable for cooling and heating
operation together with a heat pump



PGDX

Rectangular duct cooler for DX cooling, also suitable for cooling and heating operation using a heat pump with controller

The PGDX is used for central cooling of the ventilation air in a ventilation system. PGDX may also be used in conjunction with a heat pump with controller, which switches between heating and cooling (winter/summer).

- 8 standard sizes
- Same model for left-hand or right-hand installation
- Stainless steel condensate drip tray
- A droplet eliminator can be fitted regardless of the direction of air flow
- Easily removable drip tray to simplify cleaning and inspection
- Fins with hydrophilic coating for better water run-off
- The coil is easily accessible for cleaning through the removable drip tray
- Designed for combined cooling and heating operation using a heat pump with controller

Design

The casing is made of Aluzinc-coated sheet steel, AZ 185. The coil has copper tubes and aluminium fins with hydrophilic coating. Stainless steel drip tray for condensate collection, with G $\frac{1}{2}$ " drain connection. Removable drip tray for inspection and cleaning of the coil.

Operating data

Max. operating pressure: 4.15 MPa (41.5 bar)
Test pressure: 4.8 MPa (48 bar)
The coils are pressure tested and tested for leakage.

Capacity

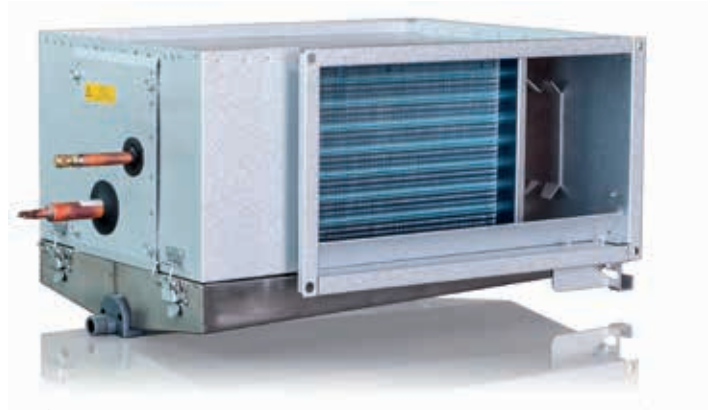
Pages 4 and 5 show examples of the cooling operation capacity. You can also do your own calculations using our web-based VEAB Select calculation program (www.veab.com), or get in touch with our sales technicians for assistance. Heating capacity can be calculated using VEAB Select.

Installation

The PGDX is intended for installation in a horizontal duct, with the air flow in either direction. On delivery, the coils are pressurized at 2 bar.



PGDX with DE droplet eliminator fitted



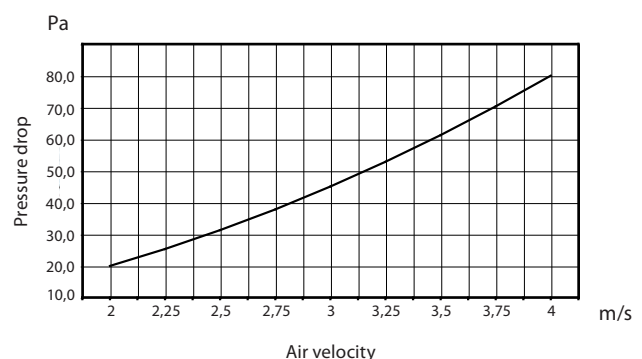
Hygiene

The design, that facilitates cleaning and the prevention of water accumulation, ensures that particles and stagnant water does not introduce bacteria to the air stream. In this way, fresh and healthy air is assured.

Droplet eliminator, DE

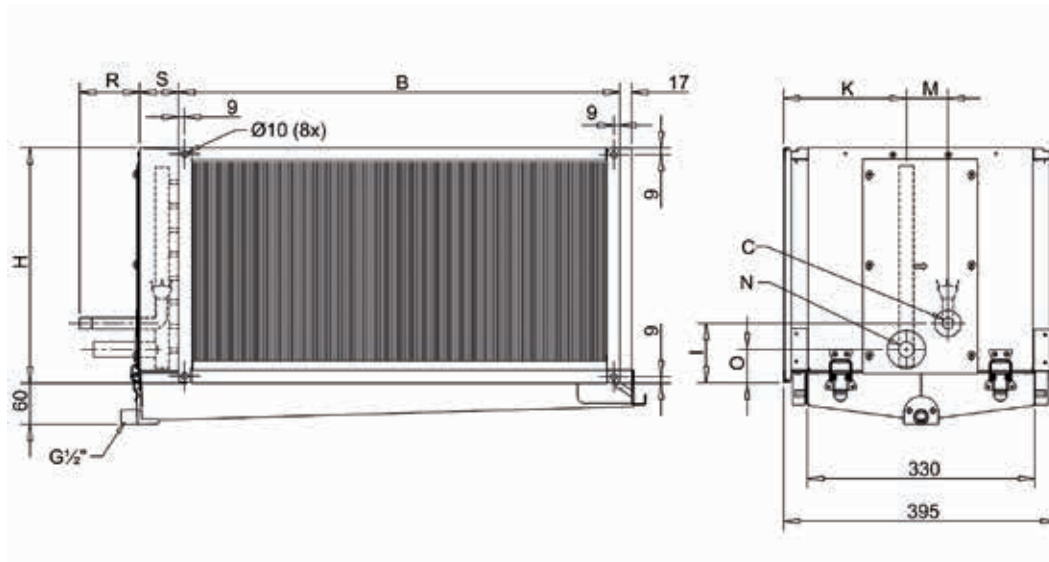
We recommend that a droplet eliminator should be installed on the outlet side of the coil if the air velocity is in excess of 2.5 m/s. This prevents water droplets being entrained by the air flow out into the duct system. The collected water is discharged through the stainless steel condensate drip tray. The droplet eliminator is easily accessible after the drip tray has been removed. The droplet eliminator must be ordered separately.

Pressure drop across droplet eliminator



Product range overview and dimensions

Modell	B mm	H mm	S mm	R mm	I mm	O mm	K mm	M mm	N Ø mm	C Ø	Coil inside volume, l	DE
PGDX 400x200-3-2.5	438	238	90	105	70	100	165	60	19	1/2"	0.69	DE 40x20
PGDX 500x250-3-2.5	538	288	90	105	120	30	165	60	22	1/2"	1.09	DE 50x25
PGDX 500x300-3-2.5	538	338	90	105	175	30	165	60	22	1/2"	1.30	DE 50x30
PGDX 600x300-3-2.5	638	338	90	105	170	30	165	60	22	5/8"	1.56	DE 60x30
PGDX 600x350-3-2.5	638	388	90	105	220	30	165	60	22	5/8"	1.82	DE 60x35
PGDX 700x400-3-2.5	738	438	120	115	250	30	160	75	35	5/8"	3.14	DE 70x40
PGDX 800x500-3-2.5	838	538	120	115	340	30	160	75	35	5/8"	4.49	DE 80x50
PGDX 1000x500-3-2.5	1038	538	120	115	350	30	160	75	35	5/8"	5.61	DE 100x50



Project design/ordering

Descriptive text - PGDX

VEAB type PGDX duct cooler with casing made of Aluzinc-coated sheet steel, AZ 185, coil with copper tubes and aluminium fins with hydrophilic coating. Stainless steel drip tray for condensate. Designed for combined cooling and heating operation using a heat pump with controller. The DE droplet eliminator should be ordered if the air velocity is higher than 2.5 m/s.

Specify the following for project ordering:

- Air flow rate: - m³/h
- Inlet air temp.: - °C
- Outlet air temp. or required output: - °C or - kW
- Duct size: - mm
- Refrigerant type:
- Evaporation temperature: - °C
- Inlet air humidity: - % RH
- Droplet eliminator, if any:

Type designation PGDX 400x200 - 3 - 2.5

(example)

Size designation

Number of tube rows

Fin pitch, mm

Capacity PGDX 400×200-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
575	2	31	25	50	15.4	2.3	48.4	2.6
575	2	34	30	50	18.6	3.4	72.5	6.0
865	3	66	25	50	16.7	2.8	60.9	4.2
865	3	72	30	50	20.2	4.3	91.3	9.8
1150	4	110	25	50	17.5	3.3	70.6	5.7
1150	4	121	30	50	21.3	5.0	106.2	13.5

Capacity PGDX 500×250-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
900	2	31	25	50	15.4	3.5	76.0	2.8
900	2	34	30	50	18.5	5.3	113.7	6.3
1350	3	66	25	50	16.7	4.5	95.5	4.4
1350	3	72	30	50	20.2	6.7	142.9	10.3
1800	4	111	25	50	17.5	5.2	110.9	6.1
1800	4	122	30	50	21.3	7.8	166.4	14.3

Capacity PGDX 500×300-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
1080	2	32	25	50	15.3	4.3	92.3	4.6
1080	2	34	30	50	18.5	6.4	137.1	10.6
1620	3	66	25	50	16.6	5.4	116.1	7.5
1620	3	72	30	50	20.1	8.1	173.3	17.6
2160	4	112	25	50	17.5	6.3	135.0	10.4
2160	4	123	30	50	21.2	9.7	208.0	26.2

Capacity PGDX 600×300-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
1300	2	32	25	50	15.3	5.2	111.5	7.4
1300	2	34	30	50	18.3	8.0	172.1	18.5
1950	3	67	25	50	16.6	6.6	142.1	12.3
1950	3	74	30	50	19.8	10.4	224.0	32.8
2600	4	115	25	50	17.4	8.1	172.7	18.8
2600	4	126	30	50	21.0	12.3	263.3	46.9

Capacity PGDX 600×350-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
1510	2	28	25	50	15.1	6.3	134.1	5.9
1510	2	30	30	50	18.1	9.4	200.8	13.8
2270	3	58	25	50	16.4	7.9	169.0	9.6
2270	3	63	30	50	19.6	12.4	264.9	25.0
3025	4	98	25	50	17.2	9.3	199.0	13.6
3025	4	108	30	50	20.7	14.7	314.3	36.3

Capacity PGDX 700×400-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
2015	2	35	25	50	15.7	7.3	155.8	5.0
2015	2	37	30	50	18.9	10.9	233.9	11.8
3020	3	72	25	50	16.9	9.0	192.9	7.9
3020	3	79	30	50	20.4	14.2	303.8	20.8
4030	4	121	25	50	17.8	10.4	223.5	10.8
4030	4	135	30	50	21.5	16.9	361.7	30.5

Capacity PGDX 800×500-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
2880	2	35	25	50	15.7	10.4	223.7	6.0
2880	2	38	30	50	18.8	16.2	346.5	15.1
4320	3	72	25	50	16.9	12.9	277.5	9.5
4320	3	80	30	50	20.3	20.9	447.7	26.4
5760	4	122	25	50	17.6	15.4	330.8	13.8
5760	4	136	30	50	21.4	24.7	528.9	38.2

Capacity PGDX 1000×500-3-2.5

Refrigerant R 410A, evaporation temp.5°C

Calculated with 5 °C super heat and 3°C sub cooling

Air flow	Air velocity	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Press. drop refrigerant
m ³ /h	m/s	Pa	°C	% RH	°C	kW	kg/h	kPa
3600	3	35	25	50	15.4	14.0	300.6	12.3
3600	3	38	30	50	18.4	21.8	467.4	31.7
5400	4	75	25	50	16.6	18.4	394.4	22.0
5400	4	81	30	50	20.2	27.5	590.3	53.1
7200	4	127	25	50	17.4	21.9	469.2	32.2
7200	4	138	30	50	21.4	31.9	684.2	73.9



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