

PGDX
Rectangular duct coolers
with DX coil

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Rectangular duct coolers with DX coil

The PGDX is used for central cooling of the ventilation air in a ventilation system. The PGDX is also used for cooling individual rooms or zones.

- 8 standard sizes
- Same model for left-hand or right-hand installation (reversible coil)
- 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

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 R $\frac{1}{2}$ " drain connection. Removable drip tray for inspection and cleaning of the coil.

Operating data

Max. operating press.: 3,3 MPa (33 bar)
The coils are tested for leakage.

Capacity

Examples of capacity for each size are given on pages 4 and 5. 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.

Installation

The PGDX is intended for installation in a horizontal duct, with the air flow in either direction (reversible coil).



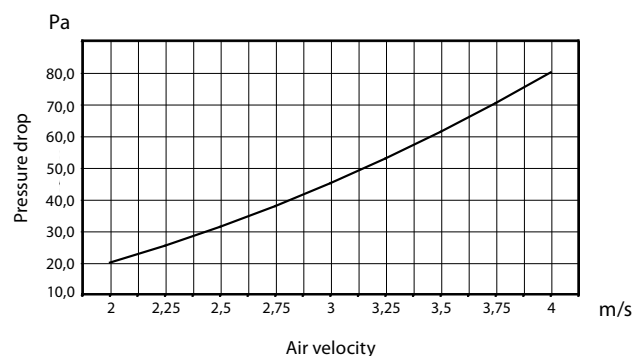
PGDX with DE droplet eliminator fitted



Droplet eliminator

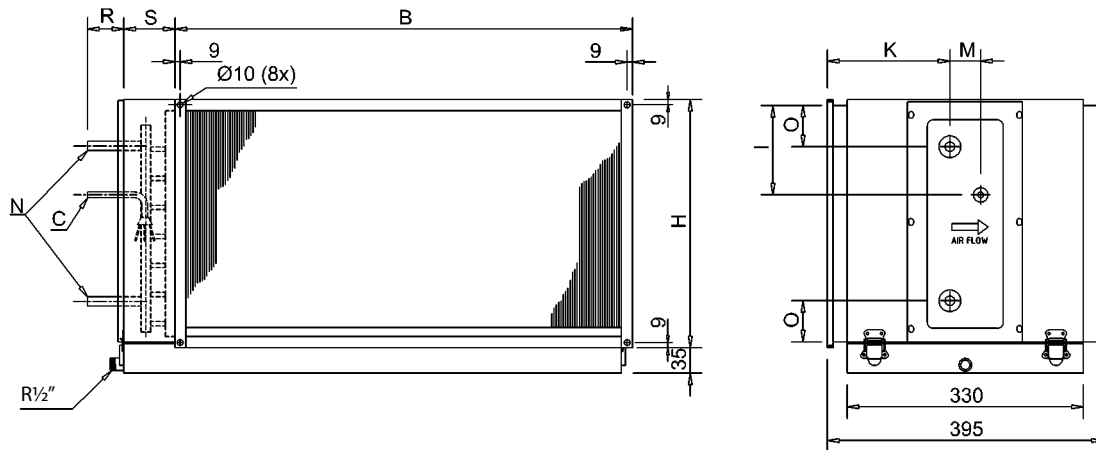
We recommend that a droplet eliminator should be installed on the outlet side of the coil if the air velocity is in excess of 2.5 m/s. This prevents water droplets being entrained by the air flow out into the duct system. The collected water is discharged through the stainless steel condensate drip tray.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



Overview of range 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	558	288	90	105	120	30	165	60	22	1/2"	1.09	DE 50x25
PGDX 500x300-3-2.5	558	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



PGDX

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. The DE droplet eliminator should be ordered if the air velocity is higher than 2.5 m/s.

Specify the following for project ordering:

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

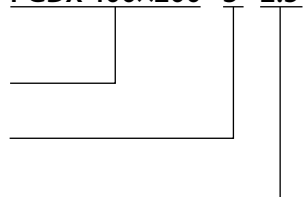
Type designation PGDX 400x200 - 3 - 2.5

(example)

Size designation

Number of tube rows

Fin pitch, mm



Capacity PGDX 400×200-3-2,5

Refrigerant R 407C, 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	34	25	50	16.0	2.5	72.6	3.6
575	2	34	30	50	18.3	3.9	112.8	7.7
865	3	69	25	50	17.1	3.3	96.1	5.8
865	3	68	30	50	19.7	5.2	149.5	12.7
1150	4	111	25	50	17.8	4.0	116.0	8.1
1150	4	110	30	50	20.6	6.2	180.7	17.8

Capacity PGDX 500×250-3-2,5

Refrigerant R 407C, 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	35	25	50	16.0	4.0	115.0	4.1
900	2	34	30	50	18.2	6.1	177.8	8.9
1350	3	69	25	50	17.0	5.2	151.9	6.7
1350	3	68	30	50	19.6	8.1	235.2	14.6
1800	4	112	25	50	17.7	6.3	183.6	9.4
1800	4	111	30	50	20.5	9.8	284.9	20.5

Capacity PGDX 500×300-3-2,5

Refrigerant R 407C, 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	35	25	50	15.7	5.0	144.5	7.3
1080	2	34	30	50	17.9	7.6	219.8	15.4
1620	3	69	25	50	16.8	6.6	190.8	12.0
1620	3	68	30	50	19.3	10.0	291.0	25.3
2160	4	112	25	50	17.5	8.0	230.8	16.8
2160	4	111	30	50	20.3	12.2	352.7	35.8

Capacity PGDX 600×300-3-2,5

Refrigerant R 407C, 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	35	25	50	16.7	5.0	146.4	1.5
1300	2	34	30	50	18.9	8.2	238.7	3.4
1950	3	69	25	50	17.6	6.7	194.5	2.4
1950	3	68	30	50	20.2	10.9	315.4	5.4
2600	4	112	25	50	18.3	8.1	235.4	3.3
2600	4	111	30	50	21.1	13.1	381.4	7.6

Capacity PGDX 600×350-3-2,5

Refrigerant R 407C, 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	30	25	50	16.3	6.2	180.8	1.8
1510	2	30	30	50	18.4	10.0	290.1	4.0
2270	3	60	25	50	17.2	8.3	240.8	2.9
2270	3	60	30	50	19.8	13.3	384.9	6.4
3025	4	97	25	50	17.9	10.1	291.7	4.0
3025	4	97	30	50	20.7	16.1	466.3	8.9

Capacity PGDX 700×400-3-2,5

Refrigerant R 407C, 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	42	25	50	16.8	7.5	217.5	1.1
2015	2	42	30	50	18.9	12.5	363.1	2.5
3020	3	83	25	50	17.7	9.9	286.7	1.7
3020	3	83	30	50	20.3	16.4	476.8	3.9
4030	4	136	25	50	18.4	11.9	345.0	2.3
4030	4	135	30	50	21.2	19.8	574.1	5.4

Capacity PGDX 800×500-3-2,5

Refrigerant R 407C, 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	42	25	50	17.7	8.5	247.7	0.6
2880	2	42	30	50	19.7	16.2	470.7	1.5
4320	3	84	25	50	18.4	11.7	339.5	0.9
4320	3	83	30	50	20.9	21.3	619.2	2.2
5760	4	136	25	50	19.0	14.2	413.0	1.2
5760	4	135	30	50	21.8	25.7	744.6	2.9

Capacity PGDX 1000×500-3-2,5

Refrigerant R 407C, 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	2	42	25	50	16.8	13.2	382.2	1.3
3600	2	42	30	50	19.0	22.2	643.0	2.7
5400	3	84	25	50	17.8	17.4	504.7	1.9
5400	3	83	30	50	20.3	29.1	844.8	4.2
7200	4	136	25	50	18.5	20.9	607.3	2.5
7200	4	135	30	50	21.3	35.0	1 016.57	5.6

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