PGDX
Rectangular duct coolers with DX coil

Mech-Elec®

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PGDX

Rectangular duct coolers with DX coil

PGDX are used for central cooling of the ventilation air in ventilation systems. The PGDX is also used for individual cooling of the air supplied to individual rooms (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.

Operating data

Max. operating press.: 2,4 MPa (24 Bar)
The coils are tested for leakage.

Design

The casing is made of Aluzinc-coated sheet steel.
The coil has copper tubes and aluminium fins.
Stainless steel drip tray for collecting the condensate, with R1/2 drain connection.
Removable drip tray for inspection and cleaning of the coil.

Installation

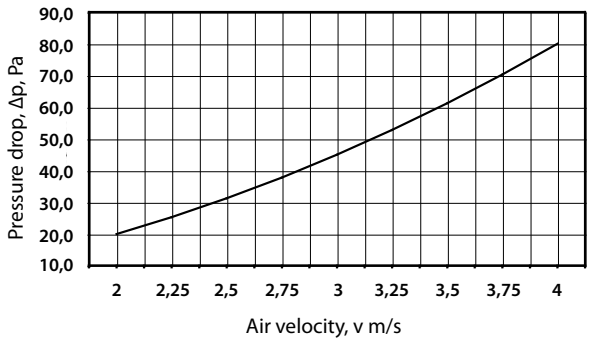
The PGDX is intended for installation in a horizontal duct, with the air flow in either direction (reversible coil).

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.

Droplet eliminator DE

Pressure drop across droplet eliminator



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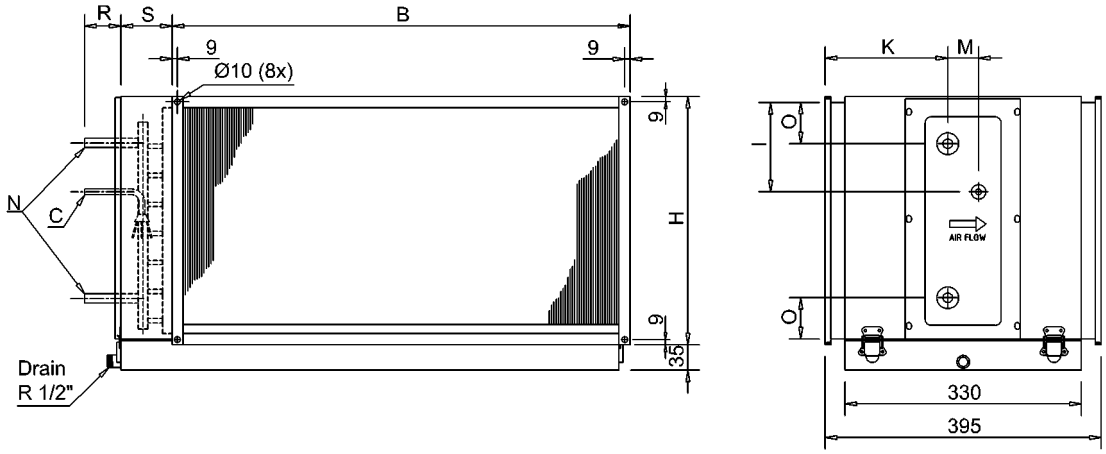
Standard sizes of PGDX

The tables on the following pages give examples of the capacity for each size.
If none of these is suitable, we shall be pleased to carry out a computer calculation.



PGDX duct cooler	B	H	S	R	I	O	K	M	N	C	Coil inside volume	Droplet eliminator
	mm	mm	mm	mm	mm	mm	mm	mm	Ø mm	Ø mm	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"	1,3	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

Type designation (example) PGDX 400x200 - 3 - 2,5

Size designation

Number of tube rows

Fin pitch, mm

Specify the following when placing your order

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

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Capacity of PGDX 400x200-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
575	32	25	50	15,8	2,2	51	3,0
575	36	30	50	18,8	3,2	75	6,1
865	60	25	50	16,9	2,7	63	4,3
865	68	30	50	20,4	3,9	90	8,7
1150	91	25	50	17,5	2,8	65	4,9
1150	107	30	50	21,2	4,4	104	11,3

Capacity factor for:	Factor
R410a	1,01
R134a	0,93
R404a	1,00
R507a	0,97

Capacity PGDX 500x250-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
900	32	25	50	15,8	3,4	80	3,2
900	36	30	50	18,7	5,0	118	6,6
1350	60	25	50	16,9	4,2	99	5,0
1350	69	30	50	20,1	6,3	147	9,8
1800	92	25	50	18,0	4,4	103	5,2
1800	108	30	50	21,2	7,1	165	12,1

Capacity PGDX 500x300-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
1080	32	25	50	15,5	4,3	101	6,1
1080	36	30	50	18,3	6,4	149	11,9
1620	62	25	50	16,6	5,4	126	8,8
1620	70	30	50	19,8	7,9	186	17,6
2160	97	25	50	17,3	6,3	147	11,6
2160	110	30	50	20,9	8,9	208	21,7

Capacity PGDX 600x300-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
1300	33	25	50	15,4	5,3	116	8,4
1300	37	30	50	17,8	8,2	180	18,5
1950	63	25	50	16,5	6,6	145	12,6
1950	71	30	50	19,6	9,7	213	25,2
2600	99	25	50	17,3	7,7	170	16,7
2600	112	30	50	20,8	11,0	241	31,5

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Capacity PGDX 600x350-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
1510	32	25	50	15,5	6,0	131	7,5
1510	36	30	50	18,4	8,7	192	12,8
2270	62	25	50	16,7	7,5	164	10,1
2270	70	30	50	19,8	11,0	242	18,6
3025	97	25	50	17,4	8,6	189	12,5
3025	110	30	50	21,0	12,4	272	22,6

Capacity factor for:	Factor
R410a	1,01
R134a	0,93
R404a	1,00
R507a	0,97

Capacity PGDX 700x400-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
2015	40	25	50	14,7	8,6	188	7,6
2015	44	30	50	17,4	12,5	274	13,3
3020	72	25	50	16,3	9,6	211	9,0
3020	83	30	50	19,3	14,7	323	17,4
4030	112	25	50	16,5	11,2	246	11,3
4030	130	30	50	20,2	16,9	370	20,0

Capacity PGDX 800x500-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
2880	39	25	50	14,6	12,4	272	8,8
2880	44	30	50	17,3	18,1	398	15,7
4320	73	25	50	16,2	14,1	309	10,6
4320	84	30	50	19,1	21,8	477	21,2
5760	113	25	50	16,4	16,2	356	13,2
5760	131	30	50	20,2	24,5	538	25,9

Capacity PGDX 1000x500-3-2,5 Refrigerant R 407C, 5°C

Air flow	Air pressure drop	Air in	Air in	Air out	Output	Refrigerant flow	Pressure drop refrigerant
m^3/h	Pa	°C	% RH	°C	kW	kg/h	kPa
3600	40	25	50	14,3	16,3	356	15,1
3600	45	30	50	16,9	23,6	517	28,0
5400	74	25	50	15,9	18,7	411	19,0
5400	86	30	50	18,6	29,1	638	40,2
7200	116	25	50	16,7	21,4	470	23,8
7200	134	30	50	19,9	31,9	699	47,0