



PRESENTATION

The coolers are designed for outdoor applications. All technical data are based on different mixtures of cooling media i.e. ethylene glycol mixture. The coolers can be used for other mediums which do not attack copper. DXP100 is available in 15 sizes with velocities 865, 670, 450 and 355 r/min.

DESIGN

Model DXP100 have vertical airflow. Casings and the supporting structure are made of aluminium and hot galvanised steel. The coil is manufactured from copper tubes with mechanically bonded collar spaced aluminium fins. The fin spacing of 2,5mm is relatively wide which makes the cooler less sensitive to air side fouling leading to reduced performance. The fans (two speed) are direct driven by 3-phase 400V/50Hz, to IEC standard with protection to IP54. The fans are separated in pairs by partition walls, which makes it possible to regulate the capacity by separate running of the fans. The motors can be regulated by voltage transformer or frequency converters with sine filters for all poles.

INSTALLATION

The coolers can be floor or roof mounted. Each leg has a drilled hole, so that the cooler can be fixed via retaining bolts. Electrical connections are made through externally mounted 3-pol-safety breakers this is valid on all models. The rating plate on each unit, details the motordata and electrical connection at incoming air +20°C and max Ampere at -30°C. When sizing the overload protection Pls. see instructions. Overload protection shall have a range at +/- 20%. The cooler should be

fixed directly onto the ground by fixing bolts or secured on a framework with anti vibration pads to obtain best sound spectra.

CAPACITY

For calculating capacity, see 'AIA Calc' computer program. Capacity on page 2 is based on Eurovent standard EN 1048; Air inlet temperature 25°C, liquid temperatures inlet/outlet 40/35°C, water.

OPTIONS

- Epoxy coated fins
- Powder coated chassis
- Copper fins
- Water spray nozzles
- Flanges PN16

MODEL DESCRIPTION

DXP100 — 7 — A — 256 — X

Options over and above standard

Number of passes

A = 865 r/min Δ3/400 V
 B = 670 r/min Y3/400 V
 C = 450 r/min Δ3/400 V
 D = 355 r/min Y3/400 V

Size

Dry Cooler

AIA reserves the right to modify the design.



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MAIN DATA

DXP 100	Cooling surface m ²	Tube volume dm ³	Weight ¹⁾ kg	Shipping volume m ³	Standard No of passes				Alternative number of passes				
					speed A	speed B	speed C	speed D	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	922	296	1022	21,0	128	85	85	64	64	85	128	256	170*
2	1153	342	1131	21,0	106	106	80	80	80	106	160	320	212*
3	1383	385	1240	21,0	128	128	96	96	96	128	192	384	256*
4	1383	379	1452	30,5	128	128	128	85	64	85	128	256	170*
5	1729	446	1613	30,5	160	160	106	106	80	106	160	320	212*
6	2075	509	1774	30,5	192	192	128	128	96	128	192	384	256*
7	1844	464	1883	39,5	256	256	128	128	64	85	128	256	170*
8	2305	554	2096	39,5	320	160	160	160	80	106	160	320	212*
9	2766	638	2309	39,5	384	192	192	128	96	128	192	384	256*
10	2305	550	2320	49,0	256	256	256	128	64	85	128	256	170*
11	2881	660	2584	49,0	320	320	320	160	80	106	160	320	212*
12	3456	766	2849	49,0	384	384	192	192	96	128	192	384	256*
13	2766	636	2750	58,5	256	256	256	256	64	85	128	256	170*
14	3458	766	3067	58,5	320	320	320	320	80	106	160	320	212*
15	4149	894	3384	58,5	384	384	384	192	96	128	192	384	256*

¹⁾ Dry weight

* Connection opposite side

TECHNICAL DATA

Motor Rating $\Delta/3/400V$ 50Hz			
Fan speed A		865	r/min
Power input		1,6	kW ²⁾
Current		4	A ³⁾
DXP 100	Capacity kW ¹⁾	Airflow m ³ /s	Number of motors
1	282	21,9	4
2	312	21,7	4
3	327	21,4	4
4	431	32,9	6
5	467	32,5	6
6	491	32,1	6
7	565	43,9	8
8	613	43,4	8
9	647	42,8	8
10	713	54,8	10
11	773	54,2	10
12	814	53,6	10
13	860	65,8	12
14	934	65,0	12
15	982	64,3	12

Motor Rating $Y/3/400V$ 50Hz			
Fan speed B		670	r/min
Power input		0,92	kW ²⁾
Current		2	A ³⁾
DXP 100	Capacity kW ¹⁾	Airflow m ³ /s	Number of motors
1	237	16,9	4
2	254	16,7	4
3	263	16,5	4
4	355	25,4	6
5	380	25,1	6
6	395	24,8	6
7	466	33,9	8
8	510	33,5	8
9	530	33,0	8
10	589	42,3	10
11	630	41,8	10
12	656	41,3	10
13	710	50,8	12
14	760	50,2	12
15	790	49,6	12

Motor Rating $\Delta/3/400V$ 50Hz			
Fan speed C		450	r/min
Power input		0,29	kW ²⁾
Current		0,86	A ³⁾
DXP 100	Capacity kW ¹⁾	Airflow m ³ /s	Number of motors
1	176	11,4	4
2	184	11,3	4
3	188	11,1	4
4	263	17,2	6
5	277	16,9	6
6	282	16,7	6
7	354	22,9	8
8	368	22,6	8
9	376	22,2	8
10	436	28,6	10
11	456	28,2	10
12	471	27,8	10
13	526	34,3	12
14	550	33,8	12
15	561	33,4	12

Motor Rating $Y/3/400V$ 50Hz			
Fan speed D		355	r/min
Power input		0,18	kW ²⁾
Current		0,42	A ³⁾
DXP 100	Capacity kW ¹⁾	Airflow m ³ /s	Number of motors
1	145	9,0	4
2	150	8,9	4
3	152	8,8	4
4	218	13,5	6
5	225	13,4	6
6	228	13,2	6
7	290	18,0	8
8	300	17,8	8
9	304	17,6	8
10	364	22,5	10
11	375	22,3	10
12	380	22,0	10
13	433	27,1	12
14	447	26,7	12
15	456	26,4	12

¹⁾ Capacity is based on EN 1048; Air inlet temperature 25°C, liquid temperatures inlet/outlet 40/35°C, water.

²⁾ Current rating is valid air temperature of 20°C.

³⁾ The motor rating is valid at air inlet temperature of -30°C.

SOUND LEVEL

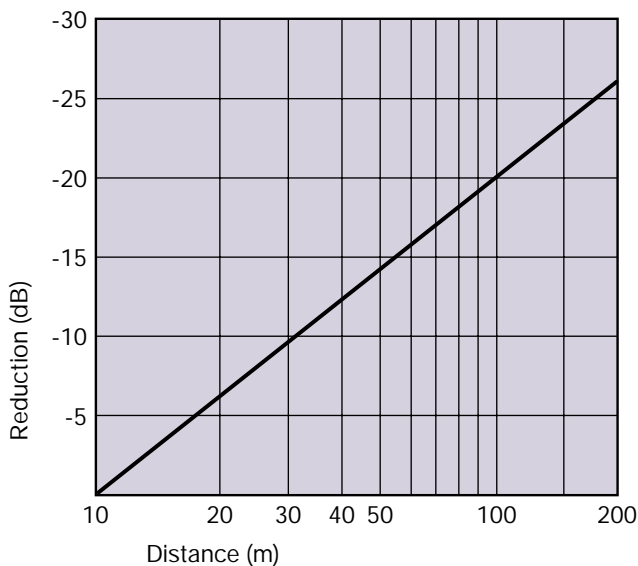
DXP 100	$L_p^{(1)}$		$L_w^{(2)}$ Octave band dB							$L_p^{(1)}$		$L_w^{(2)}$		$L_w^{(2)}$ Octave band dB						
			Hz											Hz						
	dB (A)	dB (A)	63	125	250	500	1k	2k	4k	dB (A)	dB (A)	63	125	250	500	1k	2k	4k		
Fan speed A, 865 r/min									Fan speed B, 670 r/min											
1	58	91	101	92	89	86	86	83	71	52	84	91	82	82	80	81	76	62		
2	58	91	101	92	89	86	86	83	71	52	84	91	82	82	80	81	76	62		
3	58	91	101	92	89	86	86	83	71	52	84	91	82	82	80	81	76	62		
4	60	92	103	94	91	88	88	85	73	53	86	93	84	83	82	83	77	64		
5	60	92	103	94	91	88	88	85	73	53	86	93	84	83	82	83	77	64		
6	60	92	103	94	91	88	88	85	73	53	86	93	84	83	82	83	77	64		
7	61	94	105	95	92	89	89	86	74	54	87	94	85	85	83	84	79	65		
8	61	94	105	95	92	89	89	86	74	54	87	94	85	85	83	84	79	65		
9	61	94	105	95	92	89	89	86	74	54	87	94	85	85	83	84	79	65		
10	62	95	105	96	93	90	90	87	75	55	88	95	86	86	84	85	80	66		
11	62	95	105	96	93	90	90	87	75	55	88	95	86	86	84	85	80	66		
12	62	95	105	96	93	90	90	87	75	55	88	95	86	86	84	85	80	66		
13	62	95	106	97	94	91	91	88	76	56	89	96	87	86	85	86	80	67		
14	62	95	106	97	94	91	91	88	76	56	89	96	87	86	85	86	80	67		
15	62	95	106	97	94	91	91	88	76	56	89	96	87	86	85	86	80	67		
Fan speed C, 450 r/min									Fan speed D, 355 r/min											
1	43	75	78	74	80	70	70	62	49	35	67	70	68	68	65	63	55	41		
2	43	75	78	74	80	70	70	62	49	35	67	70	68	68	65	63	55	41		
3	43	75	78	74	80	70	70	62	49	35	67	70	68	68	65	63	55	41		
4	44	77	79	76	81	72	72	64	51	36	69	72	70	69	66	65	57	43		
5	44	77	79	76	81	72	72	64	51	36	69	72	70	69	66	65	57	43		
6	44	77	79	76	81	72	72	64	51	36	69	72	70	69	66	65	57	43		
7	45	78	81	77	83	73	73	65	52	37	70	73	71	71	68	66	58	44		
8	45	78	81	77	83	73	73	65	52	37	70	73	71	71	68	66	58	44		
9	45	78	81	77	83	73	73	65	52	37	70	73	71	71	68	66	58	44		
10	46	79	82	78	84	74	74	66	53	38	71	74	72	72	69	67	59	45		
11	46	79	82	78	84	74	74	66	53	38	71	74	72	72	69	67	59	45		
12	46	79	82	78	84	74	74	66	53	38	71	74	72	72	69	67	59	45		
13	47	80	82	79	84	75	75	67	54	39	72	75	73	72	69	68	60	46		
14	47	80	82	79	84	75	75	67	54	39	72	75	73	72	69	68	60	46		
15	47	80	82	79	84	75	75	67	54	39	72	75	73	72	69	68	60	46		

1) Sound pressure level L_p , rel. 2×10^{-5} Pa is the A-weighted average sound pressure level on an enveloping area in the shape of a parallelepiped at the distance of 10 m.

2) Sound power level L_w , rel. 10^{-12} W determined by measurement of sound intensity in accordance with ISO 9614-2.

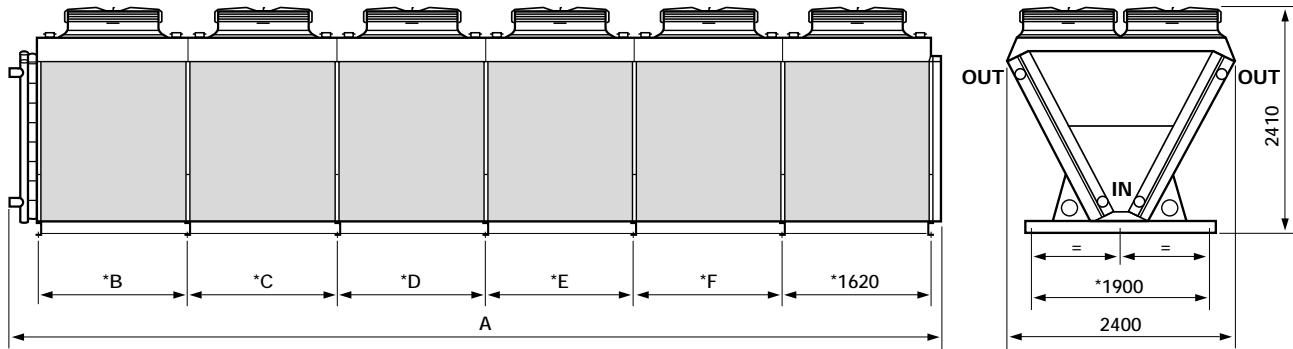
Correction at other distance

The diagram shows reduction of db (L_p) at distances over 10 m.



DIMENSION AND WEIGHT

DXP100



* Holes Ø 18 mm

Distance between connections on request

Vents are placed on top and bottom of headers.

DXP 100	Dimensions in mm					
	A	B	C	D	E	F
1	3610	1590	-	-	-	-
2	3610	1590	-	-	-	-
3	3610	1590	-	-	-	-
4	5200	1590	1590	-	-	-
5	5200	1590	1590	-	-	-
6	5200	1590	1590	-	-	-
7	6790	1590	1590	1590	-	-
8	6790	1590	1590	1590	-	-
9	6790	1590	1590	1590	-	-
10	8380	1590	1590	1590	1590	-
11	8380	1590	1590	1590	1590	-
12	8380	1590	1590	1590	1590	-
13	9970	1590	1590	1590	1590	1590
14	9970	1590	1590	1590	1590	1590
15	9970	1590	1590	1590	1590	1590

CONNECTION DIMENSIONS

DXP 100	Tube connections at alternative passes page 2					Flange connections at alternative passes page 2				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	2+2 76	2+2 76	2+2 88	4+4 100	4+4 100*	2+2 DN65	2+2 DN65	2+2 DN80	4+4 DN100	4+4 DN100*
2	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
3	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
4	2+2 76	2+2 76	2+2 88	4+4 100	4+4 100*	2+2 DN65	2+2 DN65	2+2 DN80	4+4 DN100	4+4 DN100*
5	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
6	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
7	2+2 76	2+2 76	2+2 88	4+4 100	4+4 100*	2+2 DN65	2+2 DN65	2+2 DN80	4+4 DN100	4+4 DN100*
8	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
9	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
10	2+2 76	2+2 76	2+2 88	4+4 100	4+4 100*	2+2 DN65	2+2 DN65	2+2 DN80	4+4 DN100	4+4 DN100*
11	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
12	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
13	2+2 76	2+2 76	2+2 88	4+4 100	4+4 100*	2+2 DN65	2+2 DN65	2+2 DN80	4+4 DN100	4+4 DN100*
14	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*
15	2+2 76	2+2 88	2+2 100	4+4 100	4+4 100*	2+2 DN65	2+2 DN80	2+2 DN100	4+4 DN100	4+4 DN100*

* Connection opposite side