

CENTRIFUGAL BACKWARD CURVED BLADE FAN HIGH CAPACITIES LOW PRESSURES



FIELD OF APPLICATION

BWA fans are designed for installations requiring large air deliveries with relatively low pressures, in duct mounted applications. For instance: ventilation and conditioning of industrial and commercial plants, car parks, marine and mining applications, etc.

SERIES

This line consists of 15 sizes with impeller diameter from 250 up to 1250 mm.

ADVANTAGES

BWA line is characterized by the extreme sturdiness due to the rigid construction in enamelled sheet metal and the thickness of the materials. Another feature is the variety of models and versions composing the series, consenting to find the suitable solution for many ventilation problems. Impeller is available in different classes (I-II-III) according to the maximum RPM admitted for the relevant diameter.

ARRANGEMENT

- Volute in epoxy painted enamelled steel sheet. Fixing flanges according to UNI EN ISO 13351/Tab.1 standards.
- High efficiency backward curved blade welded impeller. Balancing according to UNI ISO 21940-11.
- Asynchronous three or single phase, electric motor, protection IP 55, insulation class F, service S1, mounting type B3 or B5, construction according to IEC / EEC (UNEL MEC).
- Arrangement 4 or 5 (impeller directly coupled to motor shaft); arrangement 1, 9, 12 (belt driven, with impeller coupled to the motor by mean of transmission).

TECHNICAL DETAILS

BWA standard

- Conveyed air: clean, slightly dusty, not abrasive.
- Temperature of conveyed air: -20°C / +60°C.
- Voltage: three-phase version (T) 400 - 415V - 3Ph - 50Hz
single-phase version (M) 230 - 240V - 1Ph - 50Hz

ARRANGEMENTS

- BWA arrangement 4: impeller directly coupled to motor shaft, motor placed on the motor support.
- BWA arrangement 5: impeller directly coupled to motor shaft, motor flanged on the fan volute.
- BWA arrangement 1: bare shaft version, basic arrangement for belt coupling (without any coupling component).
- BWA arrangement 9: belt coupling version, with motor placed on the side of the support (including belt drive kit and motor).
- BWA arrangement 12: belt coupling version, with motor and fan placed on a common basement (including belt drive kit and motor).

OPTIONALS

- Inlet protection grid (IRP-BWA) (Necessary for use in free air).
- Outlet protection grid (ORP-BWA) (Necessary for use in free air).
- Inlet flexible joint (IFX-BWA).
- Outlet flexible joint (OFX-BWA).
- Inlet counter flange (ICF-BWA).
- Outlet counter flange (OCF-BWA).
- Inspection door (PI-BWA).
- AV mounts (AM).
- Condensation drain hole (TS-BWA).

ON DEMAND

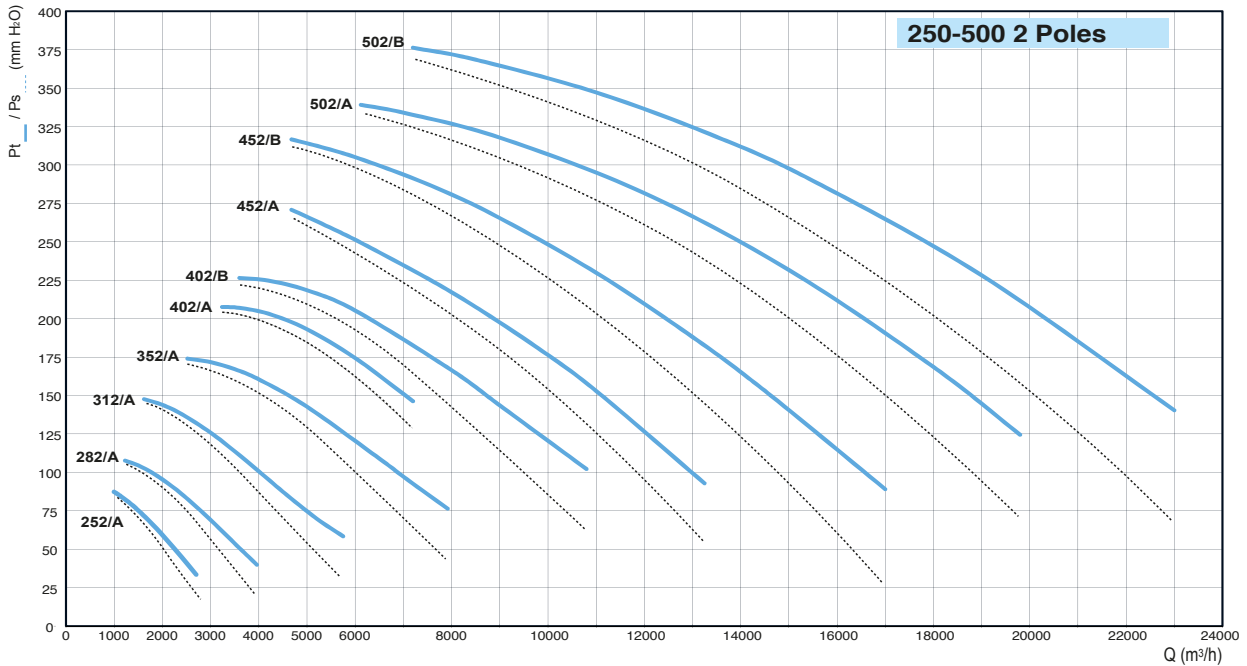
- Explosion proof versions (BWA Ex).
- Stainless steel versions.
- High temperature versions (150°C for direct coupling and 300°C for belt coupling versions).
- Special voltage and frequency



Performance shown in the selection diagrams refer to air at 15°C temperature and 0 mt a.s.l. altitude, and they were obtained in installation type "D" with no grid nor accessories.

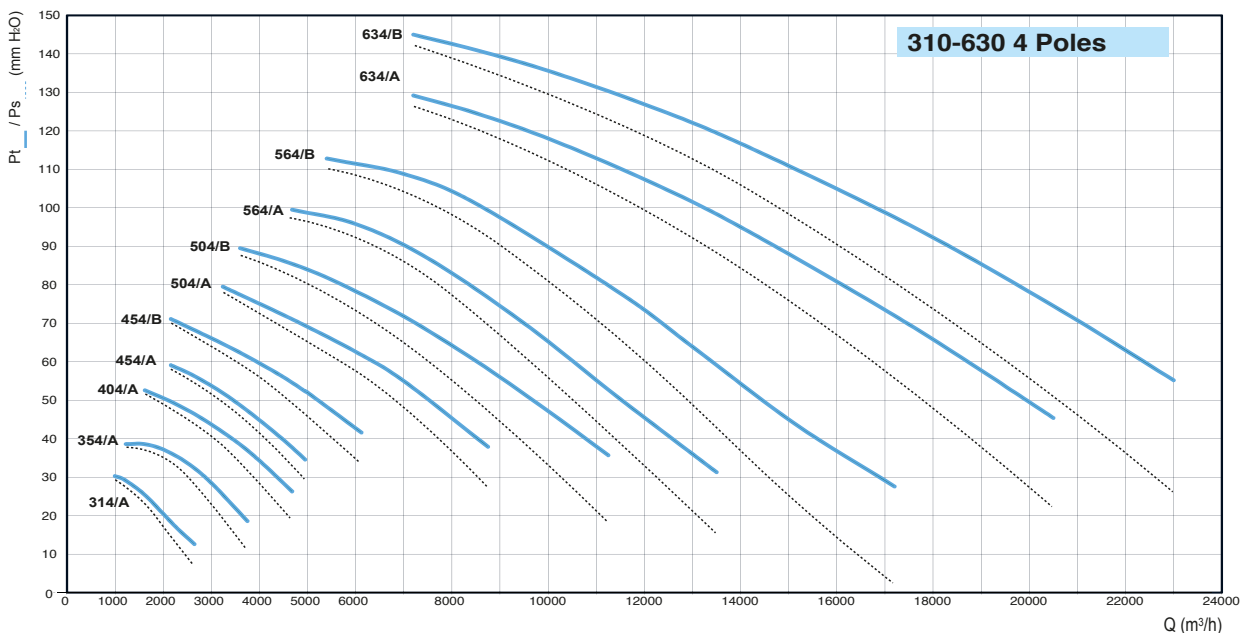
2 POLES (3000rpm) -T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	252/A T	282/A T	312/A T	352/A T	402/A T	402/B T	452/A T	452/B T	502/A T	502/B T
Pm (kW)	0,55	1,1	2,2	3	4	5,5	7,5	11	15	18,5
In max (A)	1,35	2,5	4,7	6,1	112	132	132	160	160	160
Mot (H)	71	80	90	100	7,5	10,4	13,9	19,9	26,2	32,1
LpA [dB(A)]	63	66	67	72	70	76	79	82	80	82



4 POLES (1500rpm) -T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	314/A	354/A	404/A	454/A	454/B	504/A	504/B	564/A	564/B	634/A	634/B
Pm (kW)	0,18	0,37	0,75	0,75	1,1	1,5	2,2	3	4	5,5	7,5
In max (A)	0,6	1,1	1,5	1,9	2,6	3,5	4,8	6,6	8,3	11	14,6
Mot (H)	63	71	80	80	90	90	100	100	112	132	132
LpA [dB(A)]	52	57	60	59	60	67	69	70	72	73	73



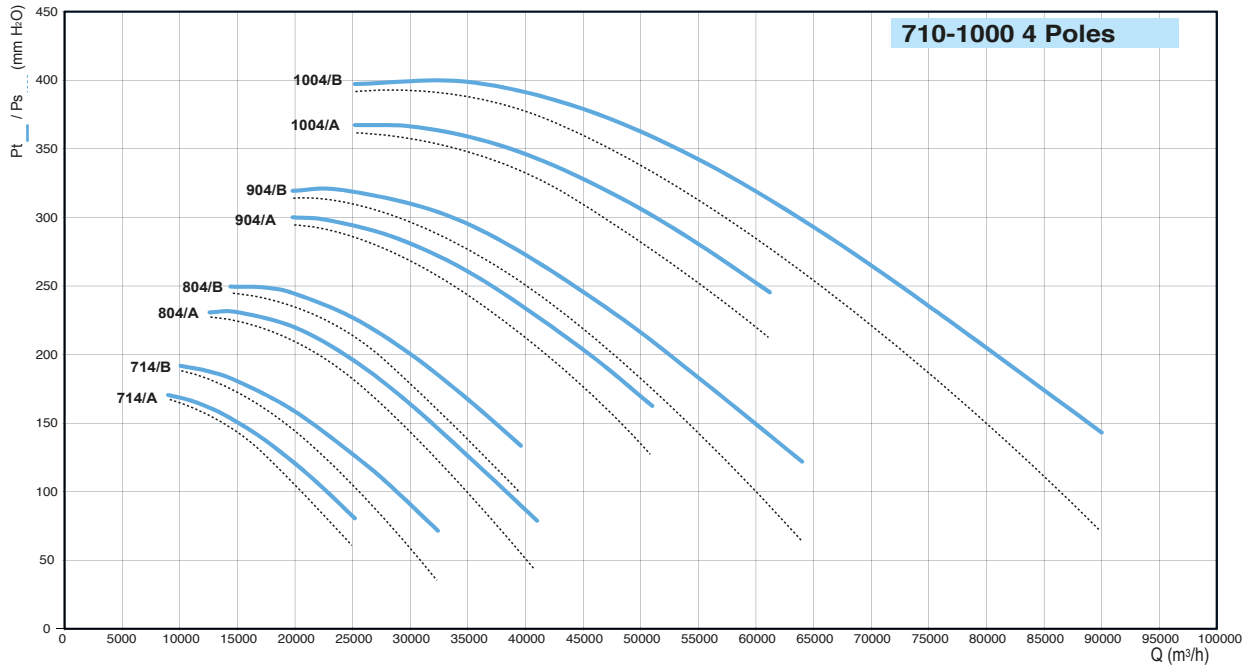
LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface.

Tolerances: performances and sound power levels within the tolerances allowed by the DIN 24166 standard for Class 2.

Performance shown in the selection diagrams refer to air at 15°C temperature and 0 mt a.s.l. altitude, and they were obtained in installation type "D" with no grid nor accessories.

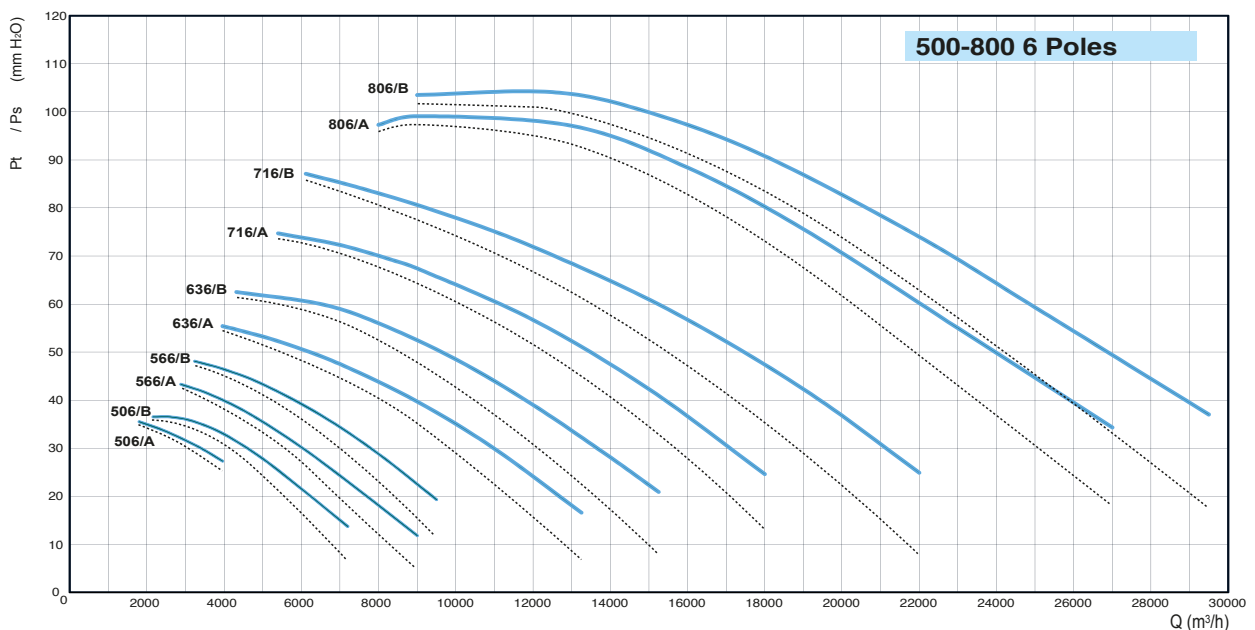
4 POLES (1500rpm)-T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	714/A T	714/B T	804/A T	804/B T	904/A T	904/B T	1004/A T	1004/B T
Pm (kW)	11	15	18,5	22	37	45	55	75
In max (A)	20,9	27,7	32,8	38,8	65,5	78,8	93	127
Mot (H)	160	160	180	180	225	225	250	280
LpA [dB(A)]	74	78	79	75	81	82	77	85



6 POLES (1000rpm)-T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	506/A T	506/B T	566/A T	566/B T	636/A T	636/B T	716/A T	716/B T	806/A T	806/B T
Pm (kW)	0,37	0,55	0,75	1,1	1,5	2,2	3	4	5,5	7,5
In max (A)	1,25	1,75	2,1	2,9	3,9	4,8	6,8	8,6	11,8	15,2
Mot (H)	80	80	90	90	100	112	132	132	132	160
LpA [dB(A)]	50	56	60	61	63	64	64	68	70	71



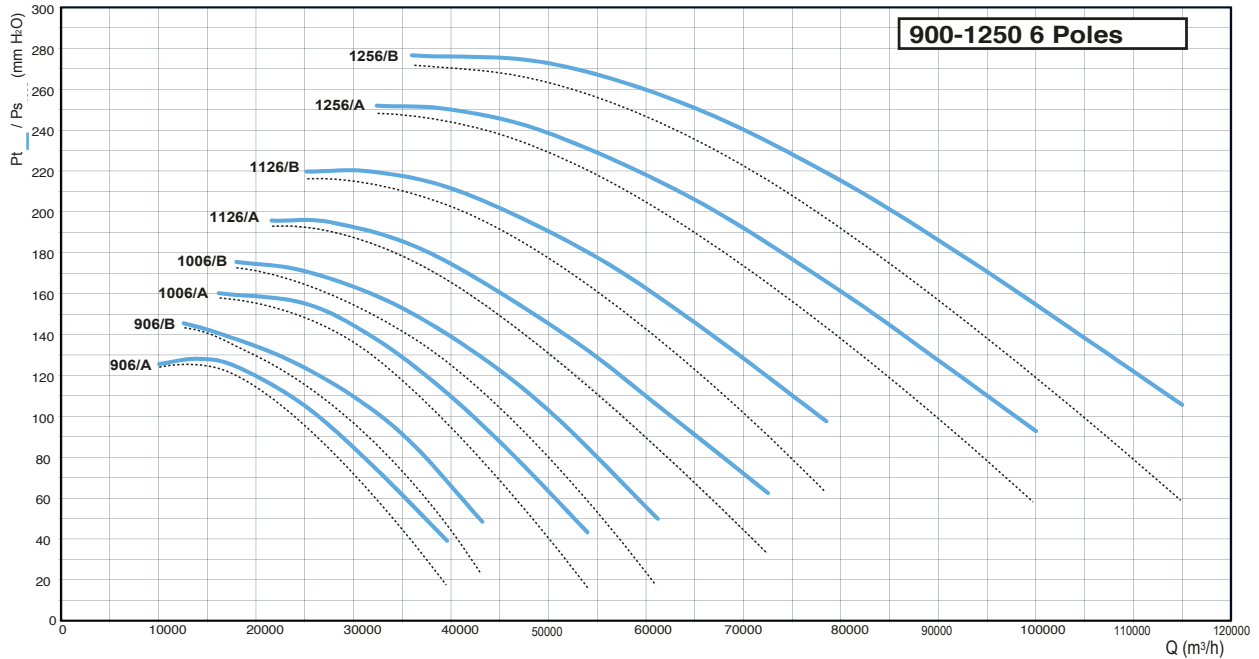
LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface".

Tolerances: performances and sound power levels within the tolerances allowed by the DIN 24166 standard for Class 2.

Performance shown in the selection diagrams refer to air at 15°C temperature and 0 mt a.s.l. altitude, and they were obtained in installation type "D" with no grid nor accessories.

6 POLES (1000rpm) - T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	906/A	906/B	1006/A	1006/B	1126/A	1126/B	1256/A	1256/B
Pm (kW)	11	15	18,5	22	30	37	55	75
In max (A)	21,9	29	33,7	40	53	64,6	95	131
Mot (H)	160	180	200	200	225	250	280	315
LpA [dB(A)]	73	74	75	76	78	78	81	82



LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface".

Tolerances: performances and sound power levels within the tolerances allowed by the DIN 24166 standard for Class 2.

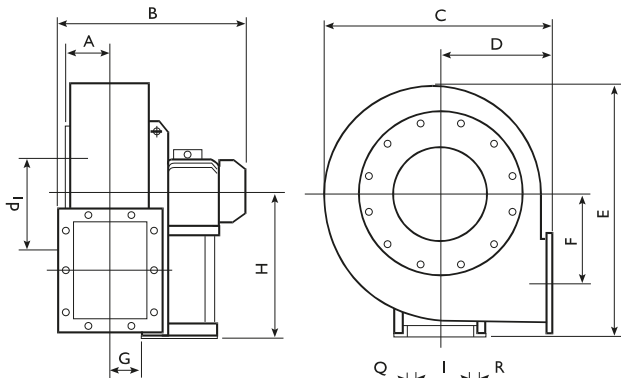
RD	RD 0	RD 45	RD 90	RD 135	RD 180	RD 225	RD 270	RD 315
LG	LG 0	LG 45	LG 90	LG 135	LG 180	LG 225	LG 270	LG 315

Discharge angles 180° - 225°: special arrangement

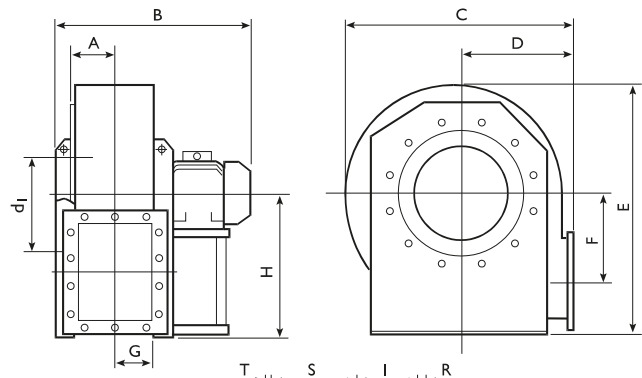
Model	Mot (H)	Pm (kW)	Kg	Fan										Base													
				A	B	C	D	E	F	G	H			I	J	K	L	M	N	O	P	Q	R	S	T	U	Ø
											0°	180°	270°														
											135°	225°	315°														
252/A T	71	0.55	37	94	464	441	195	527	149	96	315	195	315	121	203	225	-	196	-	-	-	49	26	-	-	-	10
282/A T	80	1.1	45	105	482	477	200	605	172	105	375	200	375	121	203	225	-	217	-	-	-	48	48	-	-	-	10
312/A T	90	2.2	57	117	553	527	225	656	196	117	400	225	400	133	234	260	-	246	-	-	-	55	58	-	-	-	10
314/A T	63	0.18	43	63	452									133	184	206	-	145	-	-	-	45	14	-	-	-	10
352/A T	100	3	80	130	611	600	255	739	216	131	450	255	450	197	289	324	-	276	-	-	-	30	49	-	-	-	12
354/A T	71	0.37	65	71	509									121	203	225	-	189	-	-	-	45	23	-	-	-	10
402/A T	112	4	95	147	664	655	285	811	245	147	500	285	500	197	289	324	-	276	-	-	-	30	49	-	-	-	12
402/B T	132	5.5	116		710									237	337	372	-	336	-	-	-	40	59	-	-	-	12
404/A T	80	0.55	75		565									121	203	225	-	211	-	-	-	45	45	-	-	-	10
452/A T	132	7.5	124		751									237	337	372	-	336	-	-	-	40	59	-	-	-	12
452/B T	160	11	161		860									337	395	440	-	436	-	-	-	50	49	-	-	-	14
454/A T	80	0.75	89	163	600	735	320	914	275	165	560	320	560	121	203	225	-	211	-	-	-	45	45	-	-	-	10
454/B T	90	1.1	94		647									133	234	260	-	246	-	-	-	55	58	-	-	-	10
502/A T	160	15	187		913									337	395	440	-	436	-	-	-	50	49	-	-	-	14
502/B T	160	18.5	196		913									337	395	440	-	436	-	-	-	50	49	-	-	-	14
504/A T	90	1.5	123		687	832	360	1001	303	185	600	360	600	133	234	260	-	246	-	-	-	55	58	-	-	-	10
504/B T	100	2.2	130	183	718									197	289	324	-	276	-	-	-	30	49	-	-	-	12
506/A T	80	0.37	115		640									121	203	225	-	211	-	-	-	45	45	-	-	-	10
506/B T	80	0.55	117		640									121	203	225	-	211	-	-	-	45	45	-	-	-	10
564/A T	100	3	153	205	774	940	400	1155	332	207	670	400	670	197	289	324	692	275	409	53	632	-	49	468	737	12	
564/B T	112	4	158		795									197	289	324		275				49	468	23	737	12	
566/A T	90	0.75	141		743									133	234	260		245				58	493	707	10		
566/B T	90	1.10	145		743									133	234	260		245				58	493	707	10		
634/A T	132	5.5	202	230	885	1052	450	1290	373	232	750	450	750	237	337	372		335	459	53	702	-	59	527	846		
634/B T	132	7.5	214		885									237	337	372		335				59	527	23	846	12	
636/A T	100	1.5	173		824									197	289	324	762	275				49	517	786			
636/B T	112	2.2	180		845									197	289	324		275				49	517	786			
714/A T	160	11	315	257	1045	1160	500	1418	427	254	850	500	850	316	439	439	832	439	508	60	772	-	60	606	27	1009	
714/B T	160	15	326		1045									316	439	439		439				60	606	27	1009	20	
716/A T	132	3	276		940									201	336	336		336				75	75		909		
716/B T	132	4	286		940									201	336	336		336				75	75		909		
804/A T	180	18.5	465	287	1188	1312	560	1602	478	285	950	560	950	361	463	463	932	463	570	60	862	-	39	668	27	1095	
804/B T	180	22	484		1239									361	463	463		463				39	668	27	1095	20	
806/A T	132	5.5	367		1002									201	336	336		336				75	75		971		
806/B T	160	7.5	397		1107									316	439	439		439				60	60		1071		
904/A T	225	37	840	322	1367	1500	630	1783	538	319	850	630	1060	441	540	540	1145	540	638	80	962	-	39	731	47	1258	
904/B T	225	45	847		1427									441	540	540		540				39	731	47	1258	20	
906/A T	160	11	556		1196									316	436	436		436				60	60		1154		
906/B T	180	15	658		1328									361	460	460		460				39	39		1178		
1004/A T	250	55	1105	360	1632	1686	710	1995	607	358	950	710	1180	500	600	600	1255	600	716	100	1056	-	45	803	67	1415	
1004/B T	280	75	1278		1635									590	690	690		690				45	803	67	1505	20	
1006/A T	200	18.5	879		1482									400	500	500		500				-	-	-	1315		
1006/B T	200	22	885		1482									400	500	500		500				-	-	-	1315		
1126/A T	225	30	1153	404	1611	1884	800	2252	684	401	1060	800	1320	415	540	540	1400	540	802	100	1178	-	45	926	55	1441	
1126/B T	250	37	1242		1719									475	600	600		600				45	926	55	1501	24	
1256/A T	280	55	1739	452	1818	2114	900	2548	770	449	1190	900	1500	565	690	690	1530	690	898	100	1310	-	45	1023	55	1688	
1256/B T	315	75	1980		2030									675	800	800		800				45	1023	55	1798	24	

Dimensions in mm Weight of fan in kg (complete with motor)

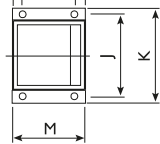
Model 250-500



Model 560-1250

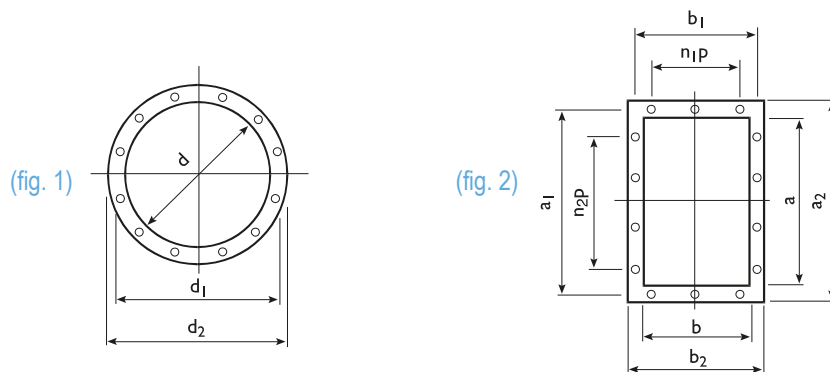


Model 710÷1250:
The fan is not revoluble



Model	Inlet flange (fig. 1)					Outlet flange (fig. 2)									
	d	d ₁	d ₂	n°	Ø	a	b	a ₁	b ₁	a ₂	b ₂	n ₁ xp	n ₂ xp	n°	Ø
250	255	292	325	8	10	258	185	292	219	328	255	1x112	2x112	10	12
280	285	332	365	8	12	288	205	332	249	368	285	1x125	2x125	10	12
310	320	366	400	8	12	322	229	366	273	402	309	1x125	2x125	10	12
350	360	405	440	8	12	361	256	405	300	441	336	1x125	2x125	10	12
400	405	448	485	8	12	404	288	448	332	484	368	2x125	3x125	14	12
450	455	497	535	8	12	453	322	497	366	533	402	2x125	3x125	14	12
500	505	551	585	8	14	507	361	551	405	587	441	2x125	3x125	14	12
560	565	629	665	16	14	569	404	629	464	669	504	2x160	3x160	14	14
630	635	698	735	16	14	638	453	698	513	738	553	2x160	3x160	14	14
710	715	775	815	16	14	715	507	775	567	815	607	2x160	4x160	16	14
800	805	861	905	16	14	801	569	871	639	921	689	2x200	3x200	14	14
900	905	958	1005	16	14	898	638	968	708	1018	758	3x200	4x200	18	14
1000	1007	1067	1107	16	14	1007	715	1077	785	1127	835	3x200	4x200	18	14
1120	1130	1200	1250	24	14	1130	801	1210	881	1270	941	3x200	5x200	20	18
1250	1260	1337	1380	24	17	1267	898	1347	978	1407	1038	4x200	6x200	24	18

Dimensions in mm



BWA Arrangement on request



Arrangement 5



Arrangement 9



Arrangement 12

BWA

model	η_e [%]	category	N	VSD	Pe [kW]	Pt [mmH ₂ O]	q [m ³ /s]	kps
252/A T	52,7	B-total	65,5	NO	0,61	72,3	0,46	1,01
282/B T	59,9	B-total	70,6	NO	0,96	87,6	0,67	1,01
312/A T	63,9	B-total	71,9	NO	1,75	109,9	1,04	1,01
352/A T	66,1	B-total	71,8	NO	2,88	154,8	1,26	1,01
354/A T	50,6	B-total	64,7	NO	0,45	35,9	0,64	1,00
402/A T	67,9	B-total	71,8	NO	4,20	185,2	1,57	1,02
402/B T	69,1	B-total	72,1	NO	5,14	201,6	1,79	1,02
404/A T	55,7	B-total	68,3	NO	0,64	45,9	0,79	1,00
452/A T	69,4	B-total	71,3	NO	6,70	234,8	2,02	1,02
452/B T	70,2	B-total	70,4	NO	9,39	272,6	2,47	1,03
454/A T	54,4	B-total	65,8	NO	0,83	54,7	0,84	1,01
454/B T	64,6	B-total	74,8	NO	1,08	57,5	1,23	1,01
502/A T	73,3	B-total	73,1	NO	12,53	295,7	3,17	1,03
502/B T	73,7	B-total	73,2	NO	16,08	327,2	3,69	1,03
504/A T	64,2	B-total	72,6	NO	1,61	64,8	1,62	1,01
504/B T	66,5	B-total	74,2	NO	1,88	82,6	1,54	1,01
506/A T	51,9	B-total	64,9	NO	0,58	28,2	1,08	1,00
506/B T	57,8	B-total	70,4	NO	0,63	33,9	1,08	1,00
564/A T	69,6	B-total	75,9	NO	2,51	92,6	1,93	1,01
564/B T	70,2	B-total	75,2	NO	3,36	104,3	2,31	1,01
566/A T	63,7	B-total	75,5	NO	0,75	37,8	1,30	1,00
566/B T	63,9	B-total	74,5	NO	0,98	42,5	1,50	1,00
634/A T	70,9	B-total	74,3	NO	4,81	116,5	2,99	1,01
634/B T	72,2	B-total	74,6	NO	5,93	128,1	3,40	1,01
636/A T	63,1	B-total	71,9	NO	1,48	47,8	1,99	1,00
636/B T	69,0	B-total	76,8	NO	1,82	56,8	2,25	1,01
714/A T	74,2	B-total	74,4	NO	8,40	154,9	4,10	1,02
714/B T	74,8	B-total	74,7	NO	11,18	173,1	4,92	1,02
716/A T	68,5	B-total	74,6	NO	2,63	64,9	2,83	1,01
716/B T	69,5	B-total	74,4	NO	3,46	73,0	3,35	1,01
804/A T	76,4	B-total	75,9	NO	17,34	210,4	6,42	1,02
804/B T	76,8	B-total	76,1	NO	20,86	227,2	7,19	1,02
806/A T	72,9	B-total	75,7	NO	5,37	91,0	4,38	1,01
806/B T	75,5	B-total	77,9	NO	6,02	92,2	5,03	1,01
904/A T	77,8	B-total	76,5	NO	32,13	270,9	9,40	1,03
904/B T	78,1	B-total	76,7	NO	37,75	291,7	10,30	1,03
906/A T	74,7	B-total	74,8	NO	9,59	114,0	6,41	1,01
906/B T	75,0	B-total	74,8	NO	12,00	118,3	7,75	1,01
1004/A T	78,5	B-total	76,8	NO	52,28	334,4	12,52	1,03
1004/B T	79,0	B-total	77,0	NO	64,58	364,0	14,29	1,04
1006/A T	75,9	B-total	75,4	NO	16,19	142,7	8,77	1,01
1006/B T	75,5	B-total	74,8	NO	20,31	146,9	10,64	1,01
1126/A T	76,9	B-total	75,9	NO	25,29	178,3	11,12	1,02
1126/B T	77,3	B-total	76,0	NO	33,68	200,5	13,24	1,02
1256/A T	78,1	B-total	76,4	NO	45,80	228,7	15,93	1,02
1256/B T	78,7	B-total	76,8	NO	58,28	252,0	18,56	1,02