

CENTRIFUGAL BACKWARD CURVED BLADE FAN HIGH CAPACITIES LOW AND MEDIUM PRESSURES



FIELD OF APPLICATION

BWB fans are designed for installations requiring medium-large air deliveries with low-medium pressures, in industrial duct mounted applications for conveyance of very dusty air. For instance: sawdust, woodchips, granulated materials, excluding fibrous materials.

SERIES

This line consists of 16 sizes with impeller diameter from 220 up to 1250 mm.

ADVANTAGES

BWB 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 special selfcleaning profile of the blade that allows the conveyance of material and the variety of models and versions.

ARRANGEMENT

- Volute in epoxy painted enamelled steel sheet. Fixing flanges according to UNI EN ISO 1335/Tab.1.
- 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) standards.
- Arrangement 4 or 5 (impeller directly coupled to motor shaft); execution 1, 9, 12 (belt driven, with impeller coupled to the motor by mean of transmission).

TECHNICAL DETAILS

BWB standard

- Conveyed air: very dusty, conveyance materials.
- 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

ARRANGEMENT

- BWB arrangement 4: impeller directly coupled to motor shaft, motor placed on the motor support.
- BWB arrangement 5: impeller directly coupled to motor shaft, motor flanged on the fan volute.
- BWB arrangement 1: bare shaft version, basic arrangement for belt coupling (without any coupling component).
- BWB arrangement 9: belt coupling version, with motor placed on the si BWB 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-BWB) (Necessary for use in free air)
- Outlet protection grid (ORP-BWB) (Necessary for use in free air)
- Inlet flexible joint (IFX-BWB)
- Outlet flexible joint (OFX-BWB)
- Inlet counter flange (ICF-SBB).
- Outlet counter flange (OCF-BWB).
- Inspection door. (PI-BWB)
- AV mounts (AM).
- Condensation drain hole (TS-BWB),

ON DEMAND

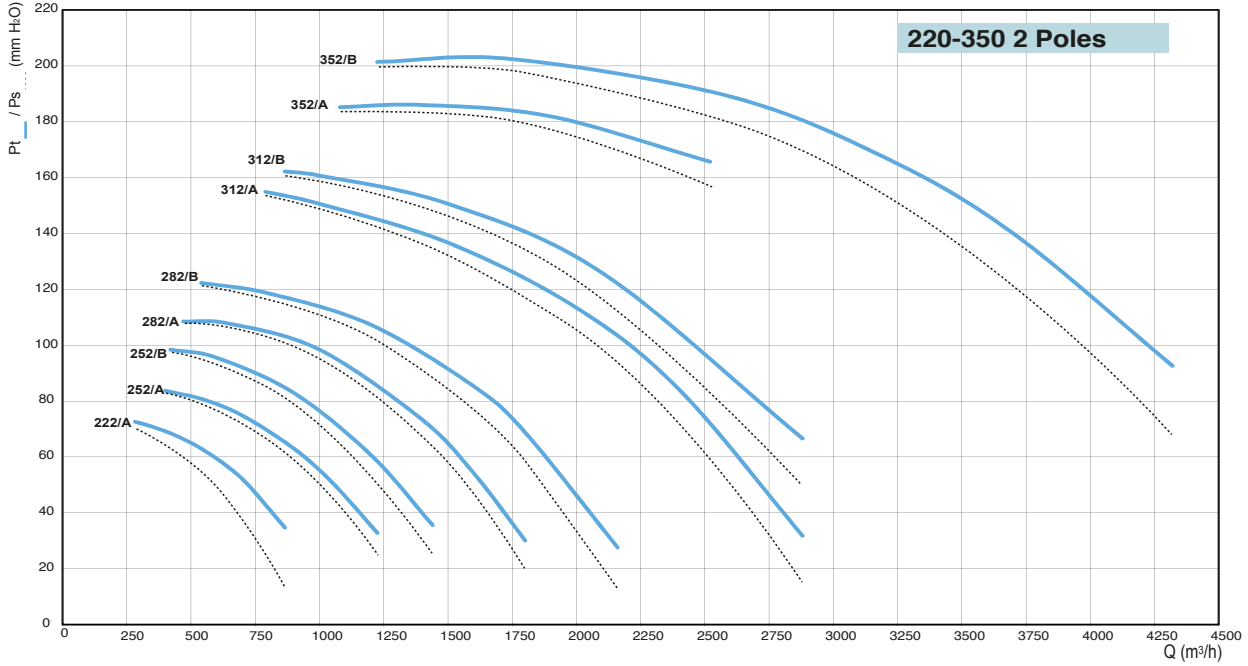
- Explosion proof versions (BWB Ex).
- Stainless steel versions.
- High temperature versions (150°C for direct coupling and 300°C for belt coupling versions).
- Special voltage and frequency



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.

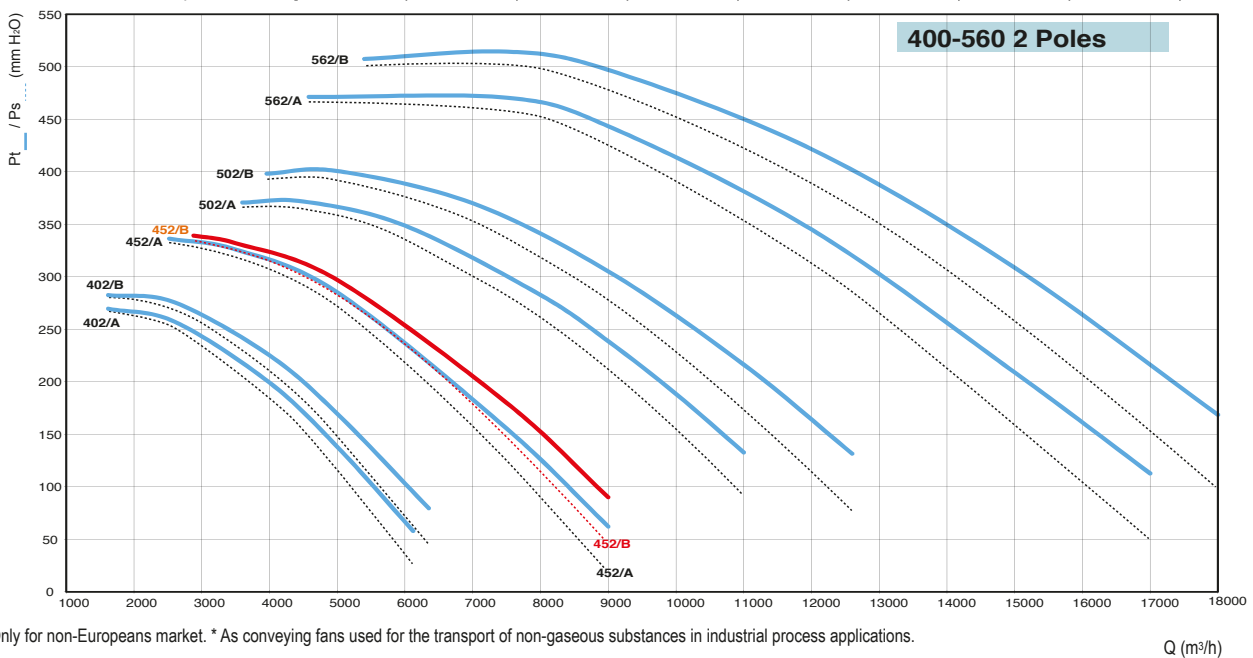
2 POLES (3000rpm) -T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	222/A T*	252/A T*	252/B T*	282/A T*	282/B T*	312/A T	312/B T	352/A T	352/B T
Pm (kW)	0,18	0,25	0,37	0,55	0,75	1,1	1,5	1,5	2,2
In max (A)	0,55	0,65	1	1,35	1,9	2,5	3,2	3,2	4,7
Mot (H)	63	63	71	71	80	80	90	90	90
LpA [dB(A)]	54	57	59	61	61	65	65	63	68



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

Model	402/A T	402/B T	452/A T	452/B T	502/A T	502/B T	562/A T	562/B T
Pm (kW)	3	4	5,5	7,5	11	15	18,5	22
In max (A)	6,1	7,5	10,4	13,9	19,9	26,2	32,1	40,4
Mot (H)	100	112	132	132	160	160	160	180
LpA [dB(A)]	70	71	74	73	77	77	81	81



* Only for non-European market. * As conveying fans used for the transport of non-gaseous substances in industrial process applications.

Q (m³/h)

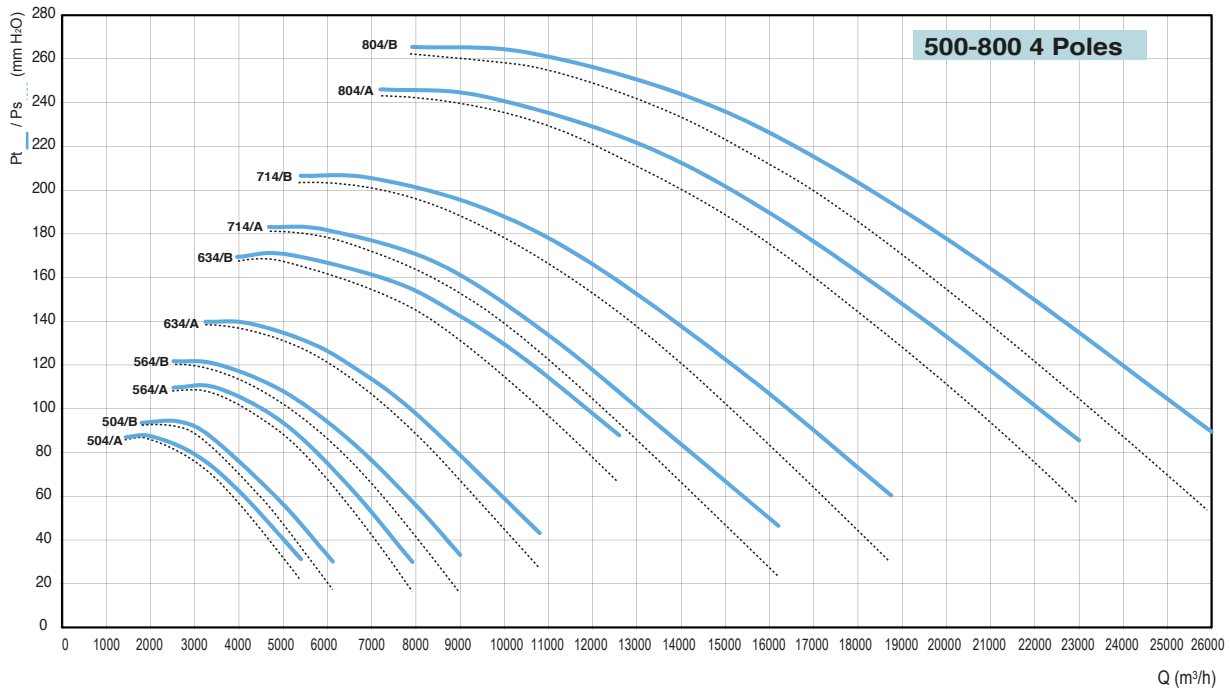
LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface.

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.

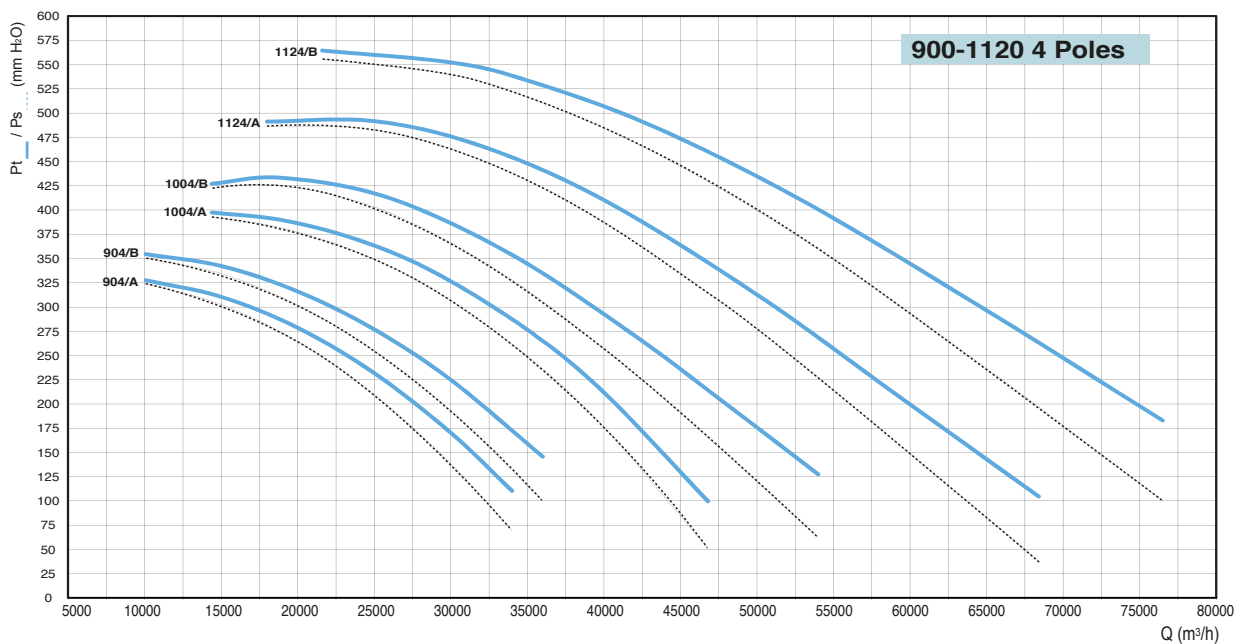
4 POLES (1500rpm)-T: three-phase (400 - 415V - 3Ph - 50Hz)

Model	504/A T	504/B T	564/A T	564/B T	634/A T	634/B T	714/A T	714/B T	804/A T	804/B T
Pm (kW)	1,1	1,5	2,2	3	4	5,5	7,5	11	15	18,5
In max (A)	2,6	3,5	4,8	6,6	8,3	11	14,6	20,9	27,7	32,8
Mot (H)	90	90	100	100	112	132	132	160	160	180
LpA [dB(A)]	62	64	66	67	69	70	72	74	75	76



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

Model	904/A	904/B	1004/A	1004/B	1124/A	1124/B
Pm (kW)	30	37	45	55	75	90
In max (A)	53	65,5	79	93	127	149
Mot (H)	200	225	225	250	280	280
LpA [dB(A)]	78	78	80	82	83	84



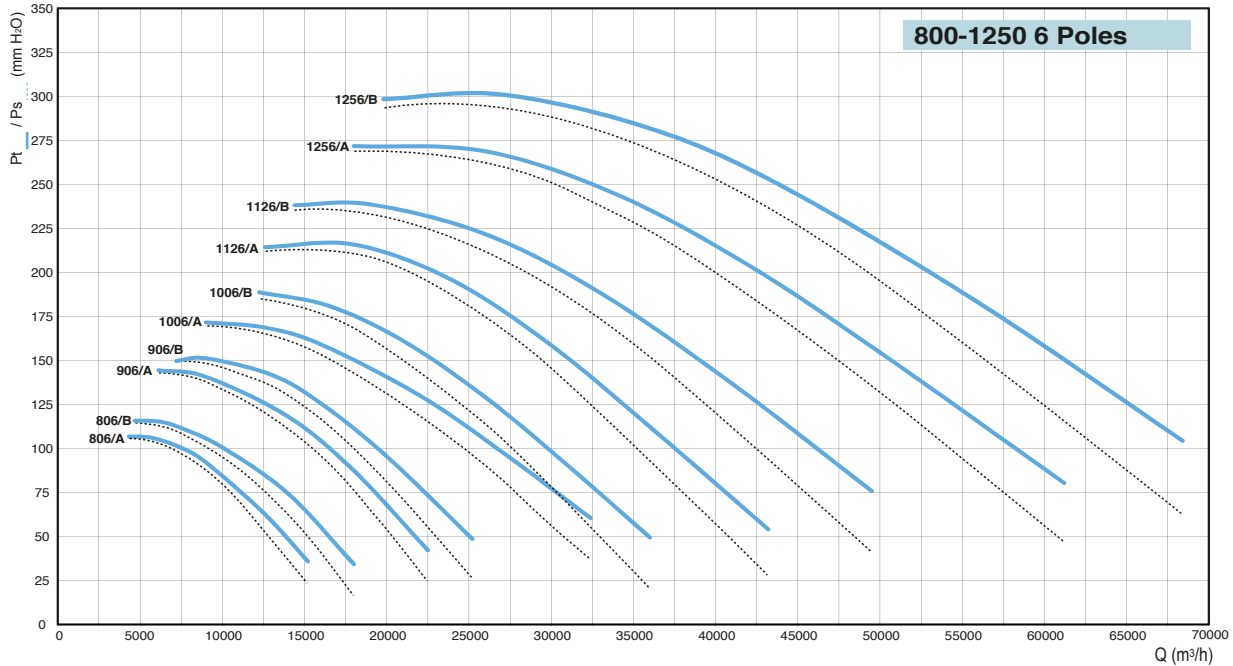
LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface.

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	806/A T	806/B T	906/A T	906/B T	1006/A T	1006/B T	1126/A T	1126/B T	1256/A T	1256/B T
Pm (kW)	4	5,5	7,5	11	15	18,5	22	30	37	45
In max (A)	8,6	11,8	15,2	21,9	29	34	40	53	65	81
Mot (H)	132	132	160	160	180	200	200	225	250	280
LpA [dB(A)]	66	68	70	71	73	73	74	76	78	78

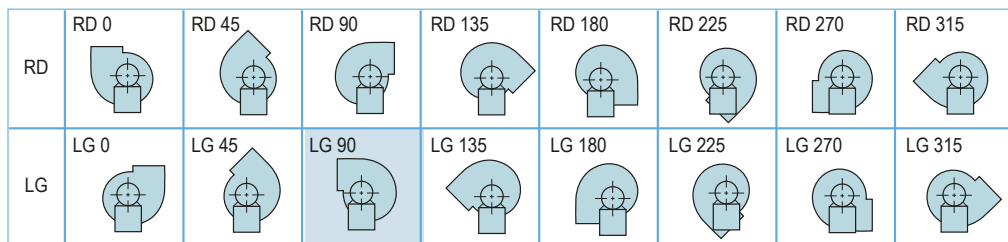


LpA [dB(A)]: Measurement of the sound power level was carried out in compliance with UNI EN ISO 3746:1997. The sound pressure was measured on the surface of a parallelepiped that encloses the machine at a distance of 2 meters from its surface".

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

BWB Discharge angles

Standard discharge angle LG 90



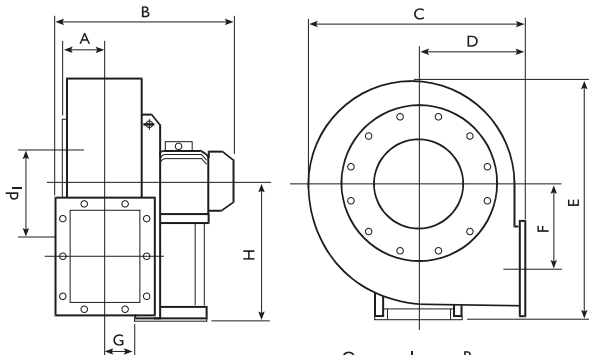
Discharge angles 180° - 225°: special arrangement

Model	Mot (H)	Pm (kW)	Kg	Fan									Basamento Base														
				A	B	C	D	E	F	G	H			I	J	K	L	M	N	O	P	Q	R	S	T	U	∅
											0° 135°	180° 225°	270° 315°														
222/A T	63	0,18	18	62	307	361	165	430	150	55	255	165	255	86	184	206	-	150	-	-	-	48	16	-	-	-	10
252/A T	63	0,25	24	86	366	441	195	527	175	76	315	195	315	86	184	206	-	150	-	-	-	48	16	-	-	-	10
252/B T	71	0,37	26		396									121	203	225	-	195	-	-	-	48	26	-	-	-	10
282/A T	71	0,55	30	95	414	475	200	606	202	86	375	200	375	121	203	225	-	196	-	-	-	49	26	-	-	-	10
282/B T	80	0,75	35		438									121	203	225	-	217	-	-	-	48	48	-	-	-	10
312/A T	80	1,1	42	105	458	527	225	658	229	96	400	225	400	121	203	225	-	211	-	-	-	45	45	-	-	-	10
312/B T	90	1,5	45		505									133	234	260	-	246	-	-	-	55	58	-	-	-	10
352/A T	90	1,5	66	115	530	600	255	738	253	106	450	255	450	133	234	260	-	246	-	-	-	55	58	-	-	-	10
352/B T	90	2,2	69		530									133	234	260	-	246	-	-	-	55	58	-	-	-	10
402/A T	100	3	85	127	585	655	285	811	286	118	500	285	500	197	289	324	-	276	-	-	-	30	49	-	-	-	12
402/B T	112	4	93		606									197	289	324	-	276	-	-	-	30	49	-	-	-	12
452/A T	132	5,5	115	141	673	735	320	914	321	132	560	320	560	237	337	372	-	336	-	-	-	40	59	-	-	-	12
452/B T	132	7,5	118		673									237	337	372	-	336	-	-	-	40	59	-	-	-	12
502/A T	160	11	175		810									337	395	440	-	436	-	-	-	50	49	-	-	-	14
502/B T	160	15	180	157	810	832	360	1000	355	148	600	360	600	337	395	440	-	436	-	-	-	50	49	-	-	-	14
504/A T	90	1,1	100		6136									133	234	260	-	246	-	-	-	55	58	-	-	-	10
504/B T	90	1,5	106		13									133	234	260	-	246	-	-	-	55	58	-	-	-	10
562/A T	160	18,5	270		857									337	395	440	-	436	-	-	-	49	410	815		14	
562/B T	180	22	276	177	938	940	400	1155	390	165	670	400	670	357	434	488	692	460	326	53	632	-	33	430	23	839	17
564/A T	100	2,2	128		691									197	289	324	-	276	-	-	-	49	390	655		12	
564/B T	100	3	136		691									197	289	324	-	276	-	-	-	49	390	655		12	
634/A T	112	4	190	195	752	1050	450	1300	439	185	750	450	750	197	289	324	762	276	366	53	702	-	49	430	23	694	12
634/B T	132	5,5	205		792									237	337	372	-	336	-	-	-	59	440	754		12	
714/A T	132	7,5	287	216	837	1190	500	1415	500	202	670	500	850	201	772	826	915	336	404	60	772	-	75	497	27	800	20
714/B T	160	11	338		942									316				436				66		900			
804/A T	160	15	504		1011									315				436				60		968			
804/B T	180	18,5	512	241	1092	1342	560	1591	560	226	755	560	950	361	862	926	1045	460	453	80	862	-	39	546	47	993	20
806/A T	132	4	391		906									201				336				75		869			
806/B T	132	5,5	395		906									201				336				75		869			
904/A T	200	30	6847		1254									401				500				39		1087			
904/B T	225	37	67	275	1236	1500	630	1781	630	253	850	630	1060	441	962	1026	1145	540	507	80	962	-	39	600	47	1127	20
906/A T	160	7,5	511		1065									316				436				60		1023			
906/B T	160	11	531		1065									316				436				60		1023			
1004/A T	225	45	963		1378									440				540				60		1209			
1004/B T	250	55	1081	308	1486	1686	710	1994	710	284	950	710	1180	500	1056	1128	1255	600	569	100	1056	-	45	657	67	1269	20
1006/A T	180	15	743		1279									360				460						1129			
1006/B T	200	18,5	850		1336									400				500						1169			
1124/A T	280	75	1445		1558									565				690						1428			
1124/B T	280	90	1486	350	1558	1884	800	2252	800	319	1060	800	1320	565	1178	1268	1400	690	638	100	1178	-	45	763	55	1428	24
1126/A T	200	22	955		1405									375				500						1238			
1126/B T	225	30	1156		1447									415				540						1278			
1256/A T	250	37	1430	388	1632	2114	900	2548	900	358	1190	900	1500	475	1310	1400	1530	600	716	100	1310	-	45	840	55	1415	24
1256/B T	280	45	1915		1635									565				690						1505			

Dimensioni in mm/Dimensions in mm

Weight of fan in kg (complete with motor)

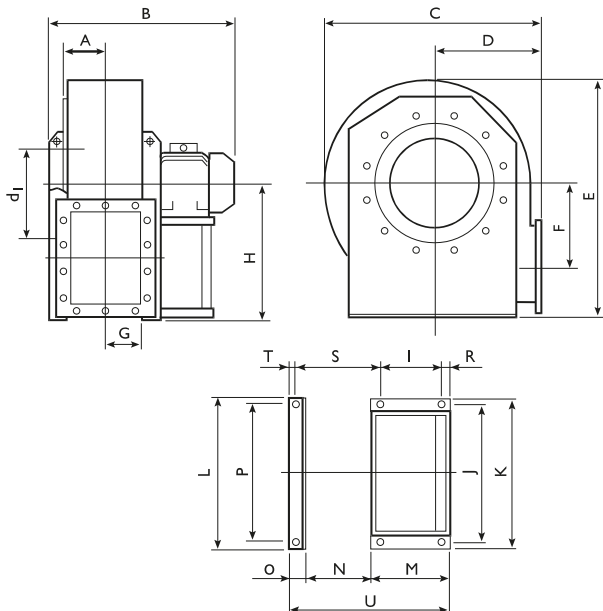
Model 250-500



Modello 220÷630: The fan is revolvable

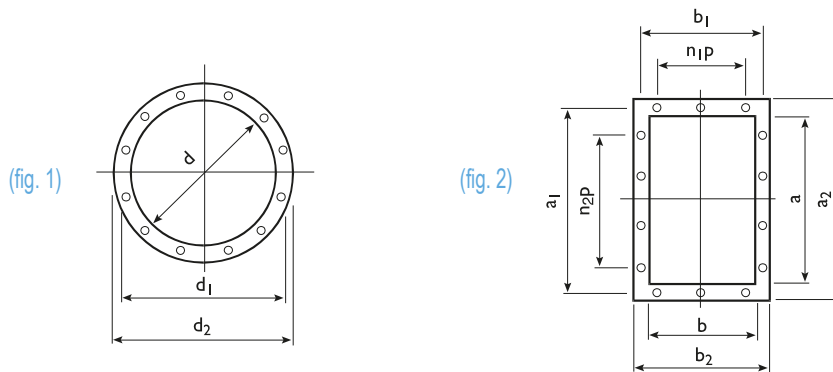
Modello 710÷1250: The fan is not revolvable

Model 560-1250



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
220	130	155	185	8	8	124	103	145	125	164	143	-	-	4	8
250	185	219	255	8	8	207	148	241	182	277	218	1x112	1x112	8	12
280	205	241	275	8	8	231	166	265	200	301	236	1x112	1x112	8	12
310	228	265	298	8	8	258	185	292	219	328	255	1x112	2x112	10	12
350	255	292	325	8	12	288	205	332	249	368	285	1x125	2x125	10	12
400	285	332	365	8	12	322	229	366	273	402	309	1x125	2x125	10	12
450	320	366	400	8	12	361	256	405	300	441	336	1x125	2x125	10	12
500	360	405	440	8	12	404	288	448	332	484	368	2x125	3x125	14	12
560	405	448	485	12	12	453	322	497	366	533	402	2x125	3x125	14	12
630	455	497	535	12	12	507	361	551	405	587	441	2x125	3x125	14	12
710	505	551	585	12	14	569	404	629	464	669	504	2x160	3x160	14	14
800	565	629	665	12	14	638	453	698	513	738	553	2x160	3x160	14	14
900	635	698	735	12	14	715	507	775	567	815	607	2x160	4x160	16	14
1000	715	775	815	16	14	801	569	871	639	921	689	2x200	3x200	14	14
1120	805	861	905	16	14	898	638	968	708	1018	758	3x200	4x200	18	14
1250	905	958	1005	16	14	1007	715	1077	785	1127	835	3x200	4x200	18	14

Dimensioni in mm/Dimensions in mm



BWB Arrangement on request



Arrangement 5



Arrangement 9



Arrangement 12

BWB

model	η_e [%]	category	N	VSD	Pe [kW]	Pt [mmH ₂ O]	q [m ³ /s]	kps
312/A T	55,5	B-total	65,5	NO	1,13	124,1	0,51	1,01
312/B T	54,8	B-total	64,0	NO	1,32	135,0	0,55	1,01
352/A T	62,8	B-total	70,5	NO	1,85	168,9	0,70	1,02
352/B T	64,1	B-total	70,9	NO	2,25	183,6	0,80	1,02
402/A T	67,1	B-total	72,4	NO	3,13	242,9	0,88	1,02
402/B T	68,3	B-total	73,2	NO	3,47	256,7	0,94	1,02
452/A T	69,9	B-total	72,6	NO	5,58	298,1	1,33	1,03
452/B T	71,5	B-total	74,0	NO	5,81	299,9	1,41	1,03
502/A T	65,1	B-total	65,2	NO	9,50	330,9	1,90	1,03
502/B T	65,7	B-total	65,6	NO	11,42	356,8	2,14	1,03
504/A T	59,8	B-total	69,8	NO	1,12	79,8	0,85	1,01
504/B T	57,3	B-total	66,1	NO	1,44	88,0	0,96	1,01
562/A T	67,0	B-total	66,4	NO	17,23	427,1	2,75	1,04
562/B T	67,2	B-total	66,5	NO	20,62	456,7	3,09	1,04
564/A T	58,7	B-total	65,9	NO	2,06	106,5	1,16	1,01
564/B T	60,7	B-total	67,0	NO	2,52	107,0	1,46	1,01
634/A T	61,9	B-total	66,8	NO	3,42	127,7	1,69	1,01
634/B T	63,0	B-total	65,8	NO	5,44	155,4	2,25	1,02
714/A T	67,1	B-total	69,6	NO	5,79	169,4	2,34	1,02
714/B T	67,7	B-total	68,1	NO	7,71	191,2	2,78	1,02
804/A T	68,4	B-total	68,3	NO	11,76	224,7	3,65	1,02
804/B T	68,8	B-total	68,5	NO	14,11	243,2	4,07	1,02
806/A T	62,8	B-total	67,5	NO	3,57	97,6	2,34	1,01
806/B T	62,1	B-total	65,5	NO	4,72	94,8	3,15	1,01
904/A T	70,8	B-total	69,8	NO	25,71	312,4	5,94	1,03
904/B T	71,0	B-total	70,1	NO	25,63	312,4	5,94	1,03
906/A T	68,0	B-total	70,1	NO	6,38	131,3	3,37	1,01
906/B T	69,0	B-total	69,3	NO	7,59	142,2	3,75	1,01
1004/A T	72,3	B-total	70,9	NO	36,36	356,8	7,51	1,03
1004/B T	74,2	B-total	72,6	NO	43,10	398,5	8,18	1,04
1006/A T	69,3	B-total	69,3	NO	10,82	154,8	4,94	1,01
1006/B T	70,5	B-total	70,3	NO	12,98	171,9	5,43	1,02
1124/A T	75,5	B-total	73,6	NO	57,65	457,0	9,71	1,04
1124/B T	75,4	B-total	73,2	NO	75,59	511,2	11,37	1,05
1126/A T	72,3	B-total	71,7	NO	17,15	209,7	6,03	1,02
1126/B T	73,5	B-total	72,6	NO	22,33	221,2	7,56	1,02
1256/A T	74,6	B-total	73,5	NO	30,55	252,5	9,21	1,02
1256/B T	75,1	B-total	73,7	NO	38,78	279,2	10,63	1,03