Range of low profile plate mounted axial fans fitted with aluminium impellers and single phase motor (HCBB) or three phase motor (HCBT), IP65 (1), Class F insulation (2), equipped with thermal protection (3).
(1) Models 800, 900 and 1000 are IP55.
(2) Working temperatures from -40ºC up to +70ºC.
Except models 4-710 suitable up to +55ºC and models Ø 800, 900 and 1000 suitable for usage in environments from -20ºC to +40ºC.
(3) Except models Ø 800 to 1000.

Motors
Available, depending upon the model, with single or three phase motors in 4 or 6 poles. All motors are speed controllable by autotransformer except models /4-630, B/710, T/4-710, T/800, T/900 and T/1000. Three phase models are speed controllable by inverter.
Electrical supplies:
Single phase 220-240V-50Hz. (Capacitor located inside the wiring terminal box).
Three phase 220-240/380-415V-50Hz or 380-415V-50Hz.
(See characteristic chart).

Additional information
Standard air direction: form (A) configuration. (Motor over Impeller).

On request
Inlet finger proof guard for models Ø 800 to 1000.

Specific applications

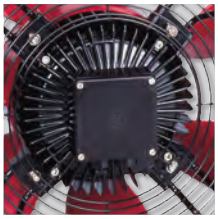
Versions

ErP OK

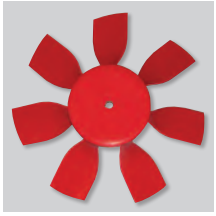
IP65(1)
PROTECTION

Compact design
Compact design created by the combination of the motor with the factory matched direct drive wrap around impeller hub.

Corrosion resistance
Mounting plate, motor support and finger proof guard protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box
Wiring terminal box with cable gland PG-11.



Impeller dynamically balanced
Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.

Manufacturing variations Multiple manufacturing variations, depending on the type of installation and use conditions.

Configuration for models Ø 800 to 1000
Special design of motor over impeller, which provides compactness and tightness IP55.

ATEX Versions HCBT
On request, explosion proof versions in accordance with ATEX Directive, for three phase models.
- Motors IP55, Class F
- ATEX Flameproof-Gas
  In standard ATEX version flameproof motors are without thermal protection.
  If used with frequency inverter, flameproof motors with a PTC-type thermal protection must be specified at order.
  For models 800 to 1000mm
  Ex II 2G Ex d IIB T4
  Ex II 2G Ex d IIB+H2 T4 (with Ex d IIC T4)
- ATEX Increased safety-Gas
  Except models HCBT/ 4-250, HCBT/ 6-355, HCBT/ 6-400
  Available model HCBT/ 6-400 with 230/400 V motor
  Available models to HCBT-1000
  Ex II 2G Ex e II T3
- ATEX Dust
  In standard ATEX version, ATEX motors for dust are without thermal protection.
  If used with frequency inverter, ATEX motors for dust with a PTC-type thermal protection must be specified at order.
  For models 800 to 1000mm
  Suspended flammable particles and non-conductive dust:
  Ex II 3D Ex tc IIIB T125ºC
  Conductive dust:
  Ex II 3D Ex tc IIIC T125ºC (with IP65 motor)

Working temperatures for ATEX versions:
-20ºC to +55ºC
  models HCBT/4-315 to HCBT/4-710
  models HCBT/6-450 to HCBT 6-710
-20ºC to +40ºC
  model HCBT/4-800 to 1000
  model HCBT/6-800 to 1000
To select HCBT ATEX refer to Easyvent.

Note electrical data may vary for ATEX motors.

TECHNICAL CHARACTERISTICS WITH ALUMINIUM IMPELLERS

Before making any electrical connection ensure that the voltage and frequency of the mains electrical supply matches that of the fan data plate label.

Model	Speed (r.p.m.)	Diameter (mm)	Maximum absorbed power (W)	Maximum current (A)		Sound pressure level* (dB(A))	Maximum airflow (m^3/h)	Weight (kg)	Speed controller		Inverter control	
				230 V	400 V				REB	RMB/T**	VFTM**	VFKB**
SINGLE PHASE 4 POLE												
HCBB/4-250/H	1325	250	84	0,4	–	49	1.130	5	REB-1	RMB-1,5	–	–
HCBB/4-315/H	1235	315	124	0,7	–	55	2.220	7	REB-1	RMB-1,5	–	–
HCBB/4-355/H	1385	355	193	0,9	–	59	3.590	8	REB-2,5	RMB-1,5	–	–
HCBB/4-400/H	1360	400	315	1,5	–	62	4.830	9	REB-2,5	RMB-3,5	–	–
HCBB/4-450/H	1410	450	626	2,8	–	65	7.180	13	REB-5	RMB-3,5	–	–
HCBB/4-500/H	1370	500	762	3,3	–	68	8.850	16	REB-5	RMB-3,5	–	–
HCBB/4-560/H	1390	560	1433	6,5	–	70	13.400	22	REB-10	RMB-8	–	–
HCBB/4-630/H	1360	630	1879	8,3	–	71	16.720	25	–	–	–	–
SINGLE PHASE 6 POLE												
HCBB/6-355/H	900	355	84	0,4	–	48	2.230	8	REB-1	RMB-1,5	–	–
HCBB/6-400/H	845	400	112	0,5	–	51	3.010	9	REB-1	RMB-1,5	–	–
HCBB/6-450/H	935	450	191	0,8	–	54	4.400	13	REB-2,5	RMB-1,5	–	–
HCBB/6-500/H	915	500	244	1,1	–	57	5.620	16	REB-2,5	RMB-3,5	–	–
HCBB/6-560/H	930	560	449	1,9	–	59	8.950	22	REB-2,5	RMB-3,5	–	–
HCBB/6-630/H	915	630	588	2,9	–	62	10.950	25	REB-5	RMB-3,5	–	–
THREE PHASE 4 POLE												
HCBT/4-250/H	1330	250	81	0,3	0,2	49	1.120	5	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-315/H	1330	315	125	0,5	0,3	55	2.380	7	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-355/H	1380	355	181	0,8	0,5	59	3.530	8	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-400/H	1340	400	283	1,2	0,7	62	5.020	9	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-450/H	1350	450	547	1,7	1,0	65	6.800	13	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-500/H	1390	500	809	2,7	1,6	68	9.140	16	–	RMT-2,5	VFTM-Tri 0,55	VFKB-45
HCBT/4-560/H	1390	560	1287	4,0	2,3	70	12.950	22	–	RMT-2,5	VFTM-Tri 0,75	VFKB-45
HCBT/4-630/H	1385	630	1736	5,4	3,1	73	16.840	25	–	–	VFTM-Tri 1,1	VFKB-45
HCBT/4-710/H	1350	710	2554	7,6	4,4	74	22.400	27	–	–	VFTM-Tri 2,2	VFKB-45
HCBT/4-800/L-X-1,5	1410	800	2632	7,3	4,2	78	23.290	37	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/4-800/H-X-3	1440	800	4595	12,8	7,4	84	33.100	52	–	–	VFTM-Tri 4	VFKB-48
HCBT/4-900/L-X-3	1450	900	3909	12,0	6,9	82	34.270	62	–	–	VFTM-Tri 3	VFKB-48
HCBT/4-900/H-X-5,5	1455	900	7893		13,4	87	46.270	96	–	–	VFTM-Tri 5,5	–
HCBT/4-1000/L-X-3	1415	1000	5048	14,2	8,2	86	39.910	67	–	–	VFTM-Tri 4	VFKB-48
HCBT/4-1000/H-X-7,5	1470	1000	8675		14,6	93	53.700	101	–	–	VFTM-Tri 7,5	–
THREE PHASE 6 POLE												
HCBT/6-355/H	900	355	91	0,3	0,2	48	2.270	8	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-400/H	840	400	120	0,5	0,3	51	3.050	9	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-450/H	925	450	198	0,9	0,5	54	4.620	13	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-500/H	905	500	282	1,1	0,6	57	6.190	16	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-560/H	895	560	401	1,4	0,8	59	8.650	22	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-630/H	910	630	596	2,3	1,3	62	10.950	25	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-710/H	950	710	953	4,7	2,7	65	15.350	27	–	RMT-5	VFTM-Tri 1,5	VFKB-45
HCBT/6-800/L-X-0,55	940	800	1025	3,3	1,9	73	17.600	31	–	–	VFTM-Tri 0,75	VFKB-45
HCBT/6-800/H-X-0,75	935	800	1309	4,2	2,4	75	20.630	36	–	–	VFTM-Tri 1,1	VFKB-45
HCBT/6-900/L-X-1,1	960	900	1341	4,8	2,8	74	23.700	54	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-900/H-X-1,5	955	900	2289	7,3	4,2	78	32.300	57	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-1000/L-X-1,1	940	1000	1855	5,9	3,4	79	28.810	56	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-1000/H-X-1,5	940	1000	2392	7,7	4,4	83	34.300	60	–	–	VFTM-Tri 2,2	VFKB-45

* Sound pressure level measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1,5 meters.
** Three phase speed controllers (RMT) or inverter control (VFKB/VFTM): three phase 400V.

REFERENCE

H	C	F	T	/	4	-	4	0	0	/	H		A			
1	2	3	4		5		6				7		8	9		

1 - **H:** Compact plate axial fan.
2 - **C:** Series designation.
3 - Impeller type:
- **F:** Ø 250-Ø 630 Fixed blade plastic impeller.
  Ø 710 - Ø 1000 Aluminium impeller hub + adjustable plastic blade impellers.
- **G:** Adjustable plastic blade impellers.
- **B:** Ø 250-Ø 400 Fixed blade aluminium impeller Ø 450 - Ø 1000 Adjustable blade aluminium impeller.

4 - Electrical supply:
- **B:** Single phase.
- **T:** Three phase.

5 - Number of poles:
- **2:** (approx. 2900 rpm - 50 Hz)
- **4:** (approx. 1400 rpm - 50 Hz)
- **6:** (approx. 900 rpm - 50 Hz)

6 - Nominal diameter of impeller (mm).
7 - Pitch angle.
- **H:** High.
- **I, L:** Low.

8 - Direction of air:
- **A:** Motor over impeller.

9 - Special construction:
- **X:** Motor support without inlet finger guard.
- **L:** Weatherproof protected.
- **C:** Condensation drain holes on motor.
- **EX:** Explosion proof versions in accordance to ATEX Directive, for three phase models:
  -EXE: Increased safety Ⓔx II2G EExeIIT3
  -EXD: Flame proof, only for models 800 and 1000 Ⓔx II2G EExdIIBT5 or EExdIICT4
- **G:** Special corrosion treatment for agricultural applications.
- **TF:** With anticorrosive Teflon paint finish.

SUPPLY VOLTAGES AND FREQUENCIES

Mains supply voltage	Motor type	Connection	Speed
SINGLE PHASE 220V 50Hz, 240V 50Hz	**230V 50Hz**	**See wiring diagram**	**High**
THREE PHASE 220V 50Hz 240V 50Hz	**230/400V 50Hz**	△	**High**
		Y	**Low***
THREE PHASE 380V 50Hz 415V 50Hz	**230/400V 50Hz**	Y	**High**
	400V 50Hz	△	**High**
		Y	**Low***

* From sizes 450 up to 630 mm diameter.

ACOUSTIC CHARACTERISTICS

The sound levels shown in the technical characteristic chart and performance curves, correspond to the value of sound pressure dB(A), measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1.5 meters.

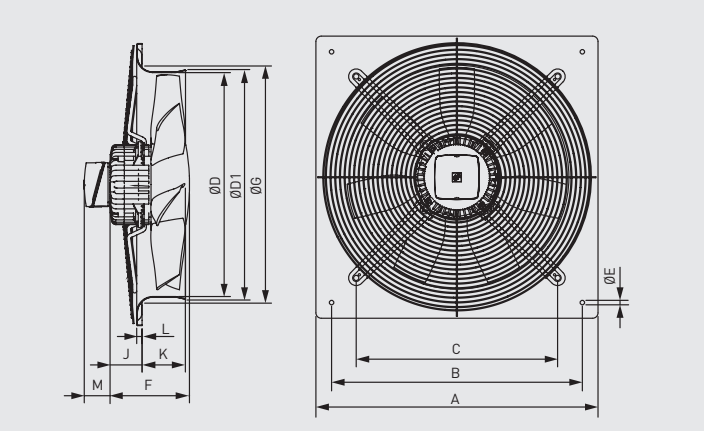
Sound power level spectrum in dB(A) at the corresponding frequency band in Hz and the point of maximum flow.

Model	63	125	250	500	1000	2000	4000	8000	LwA
HCGB/2-315	50	61	68	70	72	69	64	58	77
HCGT/2-315	55	66	73	75	77	74	69	63	82
HCGB/2-355	55	66	73	75	77	74	69	63	82
HCGT/2-355	55	70	69	77	82	78	73	66	85

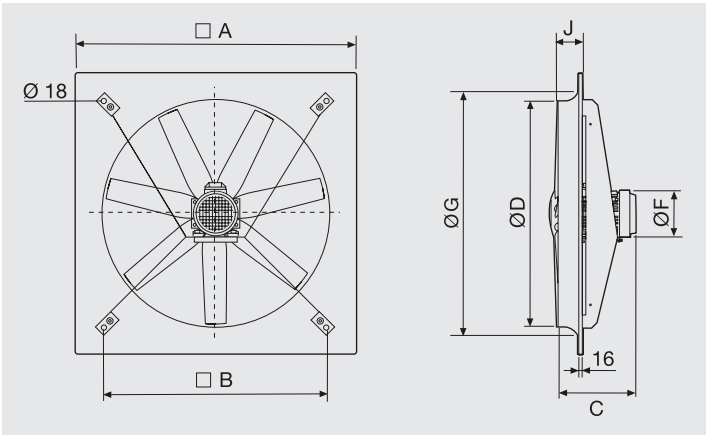
Model	63	125	250	500	1000	2000	4000	8000	LwA
/4-250/H	31	45	52	57	58	57	52	44	63
/4-315/H	42	53	60	62	64	61	56	50	69
/4-355/H	43	58	57	65	70	66	61	54	73
/4-400/H	48	61	62	68	73	69	66	57	76
/4-450/H	46	65	62	68	75	74	69	62	79
/4-500/H	49	68	68	74	78	76	72	65	82
/4-560/H	57	70	74	78	80	78	74	67	85
/4-630/H	57	72	76	81	85	82	79	72	89
/4-710/H	58	75	83	85	87	85	81	72	92
/4-800/L	58	77	87	93	93	89	83	76	97
/4-800/H	64	83	93	99	99	95	89	82	103
/4-900/L	59	81	91	97	98	94	88	80	102
/4-900/H	64	86	96	102	103	99	93	85	107
/4-1000/L	62	85	95	101	102	98	93	84	106
/4-1000/H	69	92	102	107	109	105	100	90	113

Model	63	125	250	500	1000	2000	4000	8000	LwA
/6-315/H	32	43	50	52	54	51	46	40	59
/6-355/H	32	47	46	54	59	55	50	43	62
/6-400/H	37	50	51	57	62	58	55	46	65
/6-450/H	35	54	51	57	64	63	58	51	68
/6-500/H	38	57	57	63	67	65	61	54	71
/6-560/H	46	59	63	67	69	67	63	56	74
/6-630/H	46	61	65	70	74	71	68	61	78
/6-710/H	49	66	74	76	78	76	72	63	83
/6-800/L	52	71	81	87	87	83	77	70	91
/6-800/H	54	73	83	89	89	85	79	72	93
/6-900/L	51	73	83	89	90	86	80	72	94
/6-900/H	55	77	87	93	94	90	84	76	98
/6-1000/L	56	78	89	94	96	92	86	77	100
/6-1000/H	60	83	93	99	100	96	91	82	104

DIMENSIONS (mm)

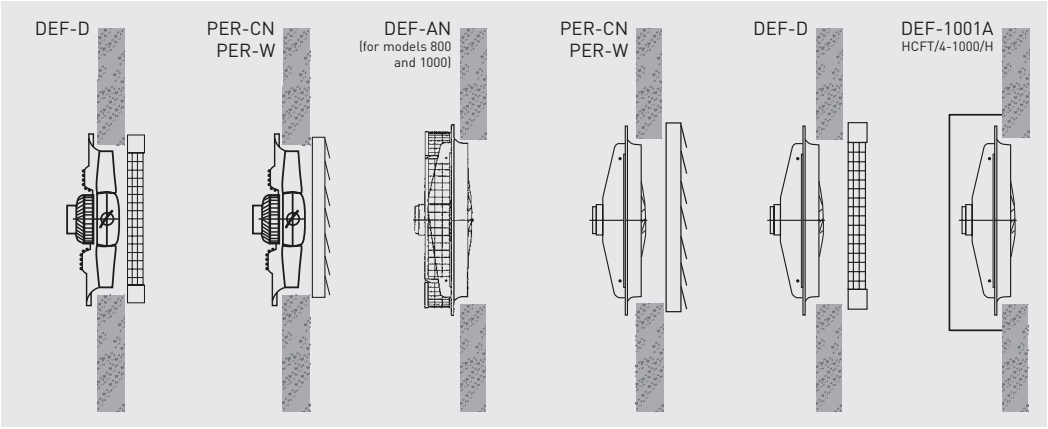


Model	A	B	C	Ø D	Ø D1	Ø E	F Number of poles /2	F Number of poles /4	F Number of poles /6	Ø G	J Number of poles /2	J Number of poles /4	J Number of poles /6	K	L	M Three phase	M Single phase
250	315	260	220	254	261	10		122		294		59		53	12	58	65
315	400	330	280	315	320	10	129	122	122	329	45	32	32	68	12	58	65
355	450	380	315	355	363	10	129	129	129	371	45	45	45	75	12	58	65
400	500	420	355	400	410	10		129	129	422		40,5	40,5	78	12	58	65
450	560	480	400	450	457	10		150	150	476		48	48	91	12	58	65
500	630	560	450	500	512	10		217	150	536		112	44,5	97	12	58	65
560	710	630	510	560	570	10		218,5	150	596		110,5	42	98,5	12	58	65
630	800	710	580	630	640	12		218,5	150	674		110,5	41	103	12	58	65
710	900	800	636	710	720	12		220	218,5	733		114	134	91,5	16,5	58	65



Model	A	B	Ø D	J	Ø G	C /4 L	C /4 H	C /6 L	C /6 H	Ø F /4 L	Ø F /4 H	Ø F /6 L	Ø F /6 H
800	1000	800	800	92	926	345	380	310	345	181	203	162	181
900	1120	900	900	120	1060	392	439	350	392	203	280	181	203
1000	1250	1000	1000	110	1154	380	485	345	380	203	280	181	203

MOUNTING ACCESSORIES



Model HCFB/HCFT HCBB/HCBT	Wire Protection Guards		Exhaust Side Louvre Shutters		
	Outlet	Inlet	Plastic	Aluminium	ATEX version*
250	DEF-250 D	–	PER-250 W	PER-250 CN	PER-315 Ex
315	DEF-325 D	–	PER-355 W	PER-355 CN	PER-315 Ex
355	DEF-375 D	–	PER-355 W	PER-355 CN	PER-355 Ex
400	DEF-450 D	–	PER-400 W	PER-400 CN	PER-400 Ex
450	DEF-450 D	–	PER-450 W	PER-450 CN	PER-450 Ex
500	DEF-525 D	–	PER-500 W	PER-500 CN	PER-500 Ex
560	DEF-630 D	–	PER-560 W	PER-630 CN	PER-560 Ex
630	DEF-630 D	–	PER-630 W	PER-630 CN	PER-630 Ex
710	DEF-800 D	–	PER-710 W	PER-710 CN	PER-710 Ex
800	DEF-800 D	DEF-800 AN	PER-800 W	PER-800 CN	-
/4-900/H	DEF-1000 D	DEF-900 AN	PER-1000 W	PER-1000 CN	-
/4-900/L	DEF-1000 D	DEF-901 AN	PER-1000 W	PER-1000 CN	
/6-900	DEF-1000 D	DEF-901 AN	PER-1000 W	PER-1000 CN	-
1000	DEF-1000 D	DEF-1000 AN	PER-1000 W	PER-1000 CN	-
/4-1000 / H	DEF-1000 D	DEF-1001 AN	PER-1000 W	PER-1000 CN	-

* Three phase speed controllers (RMT) or inverter control (VFKB/VFTM): three phase 400V.

ELECTRICAL ACCESSORIES

REB-1N / REB-2,5N
Single phase electronic speed controllers.

REB-5
REB-10
Single phase electronic speed controllers.

RMB/RMT
Single and three phase auto transformer speed controllers.

REB-4 Auto
Electronic single phase speed controllers with temperature sensor. For agricultural applications.

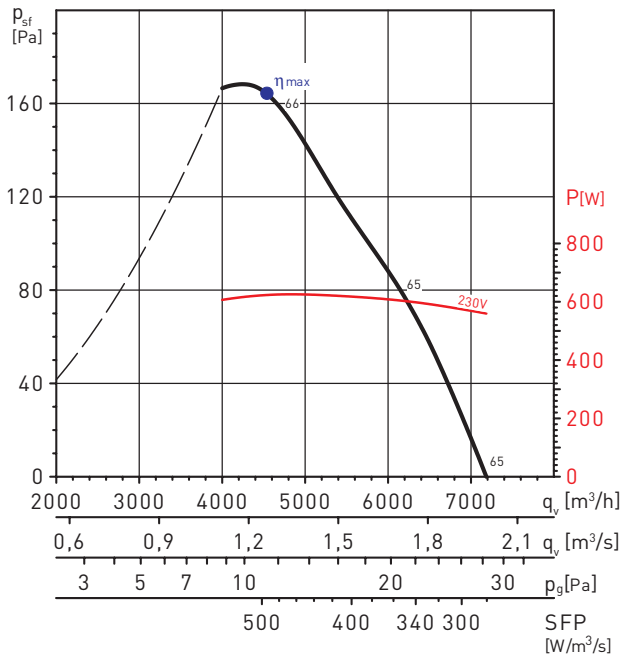
VFTM TRI IP54
Adjustable frequency drive for three phase motors from 0,37 to 15 kW. 230 V or 400 V.

VFKB IP65
Adjustable frequency drives for three phase motors from 0,37 to 4 kW 230 V or 400 V.

COM D/S
To connect three phase fans with 400 V motor.
For three phase models.

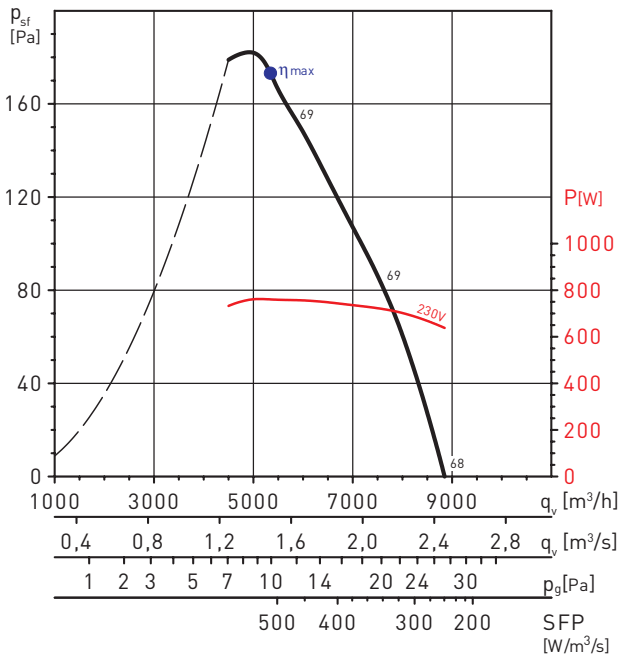
PERFORMANCE CURVES - 4 POLE MOTORS

HCBB/4-450/H



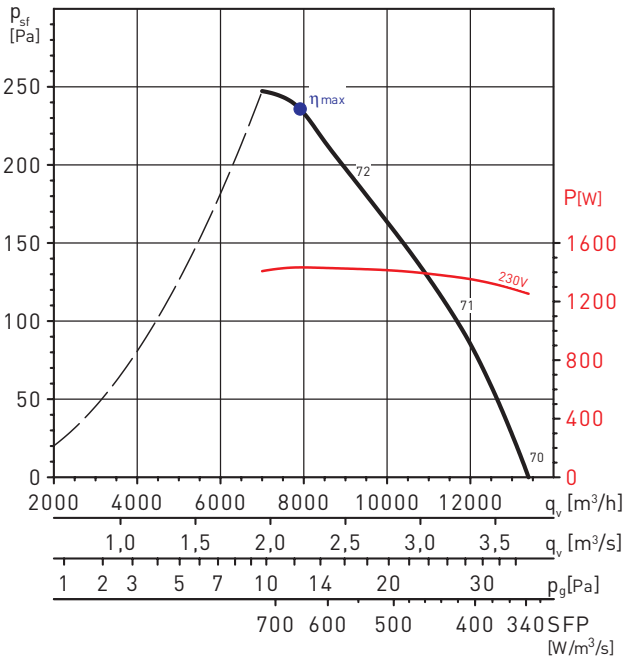
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	33,2	40,8	0,623	4538	164	1390

HCBB/4-500/H



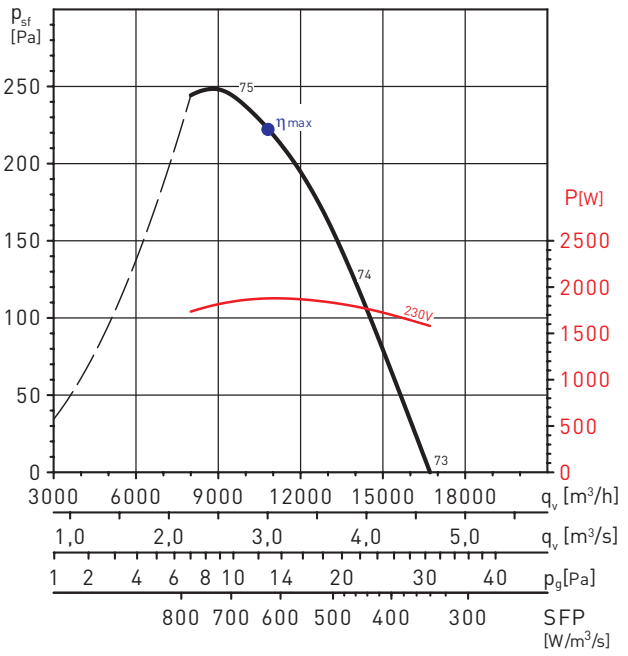
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	33,6	40,7	0,760	5336	172	1322

HCBB/4-560/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	36,0	41,3	1,433	7896	235	1367

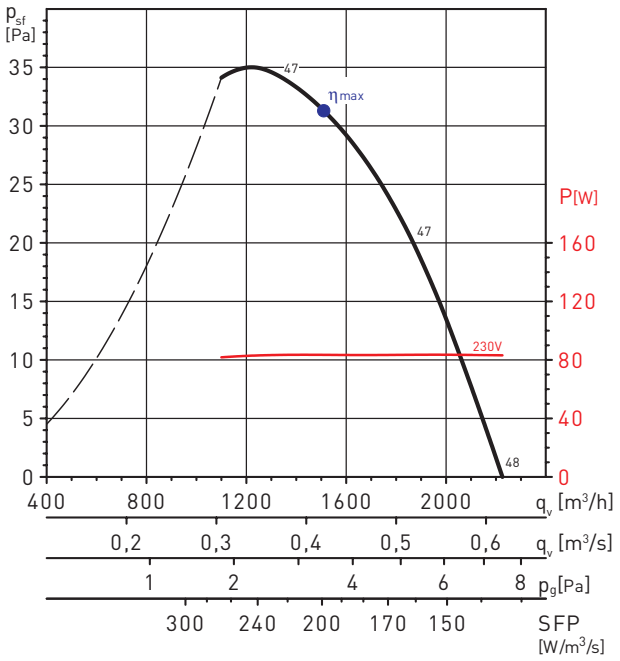
HCBB/4-630/H



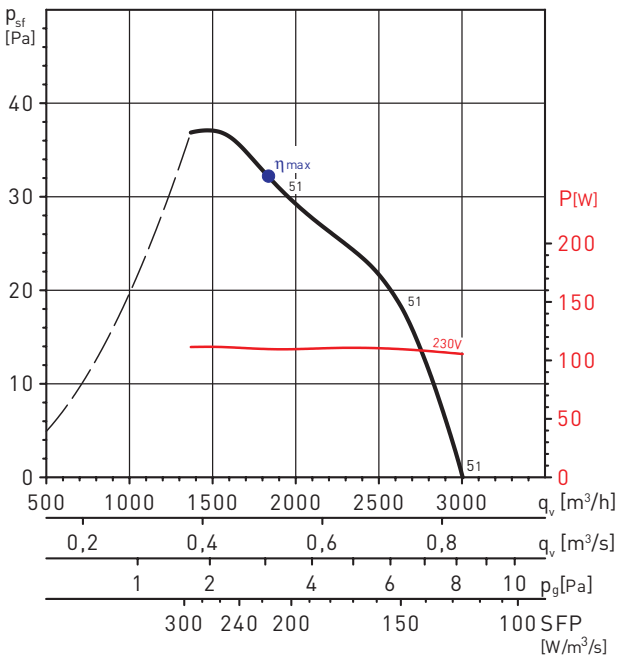
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	35,6	40,2	1,878	10817	223	1305

PERFORMANCE CURVES - 6 POLE MOTORS

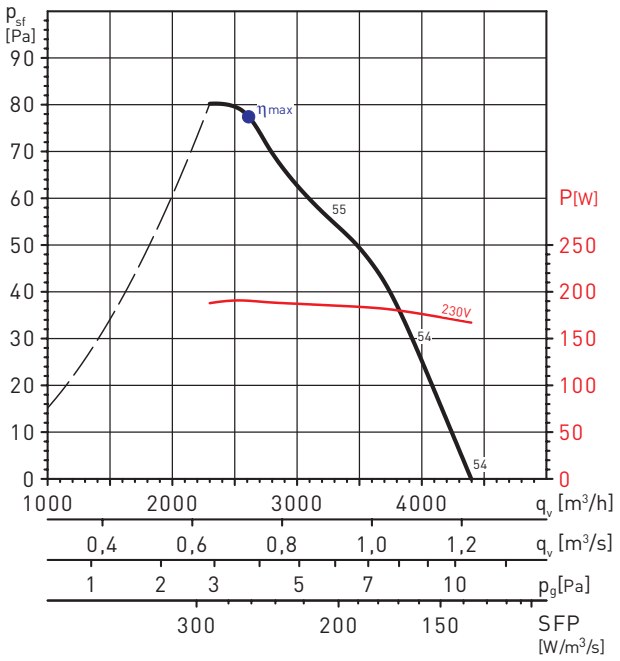
HCBB/6-355/H



HCBB/6-400/H

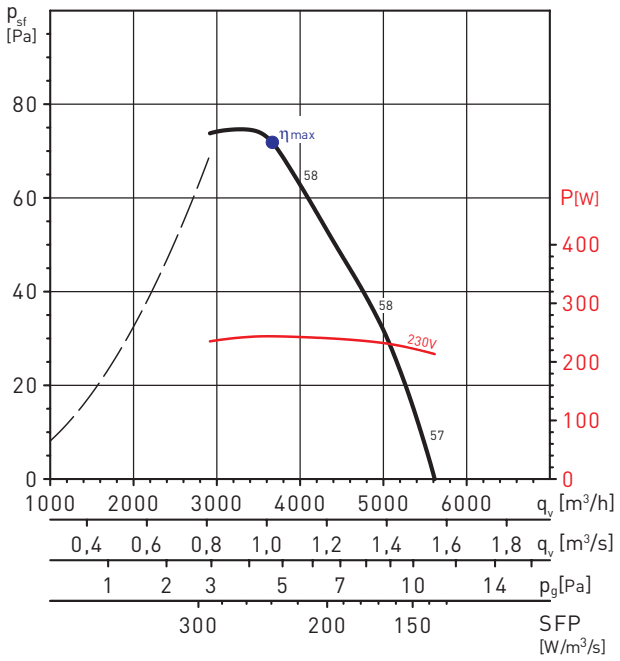


HCBB/6-450/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	29,3	40,2	0,190	2604	77	908

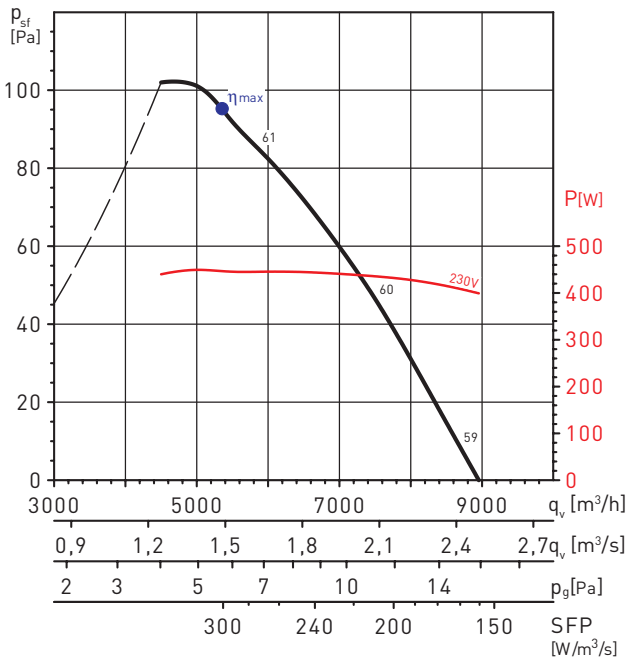
HCBB/6-500/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	29,9	40,1	0,244	3660	72	886

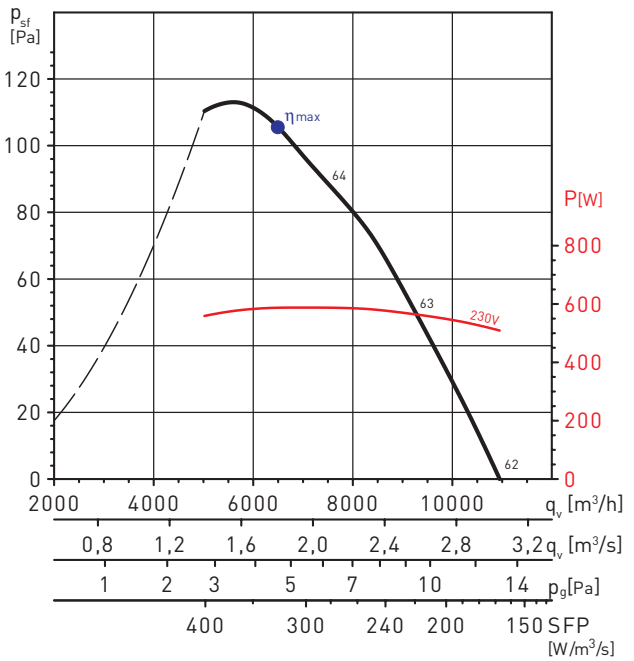
PERFORMANCE CURVES - 6 POLE MOTORS

HCBB/6-560/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	31,6	40,1	0,447	5347	95	903

HCBB/6-630/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	32,4	40,2	0,587	6492	106	888