



PLATE MOUNTED SICKLE BLADE AXIAL FANS WITH EXTERNAL ROTOR MOTOR

HXBR / HXTR Series



Range of plate mounted axial fans manufactured from high grade galvanised steel and provided with a **Sickle blade impeller**.

The motor and fan impeller are supported within this mounting plate by strong electro-welded steel support frame. All models include a steel finger guard as standard mounted to the inlet side of the fan. The whole fan assembly is protected against corrosion by **cataforesis primer and a polyester black paint finish** (1).

Available, depending upon the model, with single or three phase motors in 2, 4, 6, 8 or 12 poles

(1) Models 800, 910 and 1000, fitted as standard with not painted motor-impeller.

Motors

All the motors are IP54, Class F insulation, equipped with thermal protection.

Electrical supplies:

Single phase 230V-50Hz. (Capacitor located inside the wiring terminal box).

Three phase 400V-50Hz. (250 model: 230/400V-50Hz).

All single phase models are speed controllable excepted /4-560, /4-630 and 710 models. All three phase models are speed controllable by Autotransformer excepted /4-560, /4-630 and models **from 710 to 1000**.

Models from Ø800 to Ø1000 are speed controllable by inverter.

Additional Information

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

All models are supplied with a pre-wired wiring junction box located on the back of the motor hub for easy access wiring.

On request

Air direction: form (B) configuration (Impeller over Motor).

Three phase motors suitable for inverter control. (E22 version)

APPLICATIONS



Compact design



This very low profile design optimises airflow performances whilst minimising noise generation

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 (M20: from 800 to 1000 models)

High efficiency "Sickle blade" impeller



"Sickle Blade" impeller specifically designed to ensure the highest and most efficient **airflow performance with the lowest noise level**. **Dynamically balanced** to ISO 1940 standard. Manufactured from **aluminium** plate, except from 250 to 355 models which are manufactured from pressed sheet steel

■ Technical characteristics

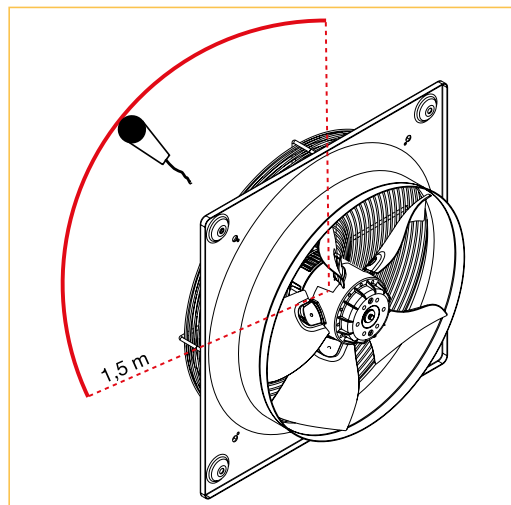
Before making any electrical connection ensure that the voltage and frequency of the mains electrical supply matches that of the fan data plate label.

Model	Voltage	Operating temperature range		Speed (r.p.m.)	Maximum power absorbed (W)	Maximum absorbed current		Sound pressure level (dB(A))	Maxi. air volume (m ³ /h)	Weight (kg)	Speed controller
		Minimum	Maximum			at 230 V	at 400 V				
SINGLE PHASE 2 POLES											
HXBR/2-250	230V 50Hz	-40°C	+60°C	2650	120	0,55		58	1650	7,0	REB-1N
SINGLE PHASE 4 POLES											
HXBR/4-250	230V 50Hz	-40°C	+60°C	1450	40	0,21		45	930	6,5	REB-1N
HXBR/4-315	230V 50Hz	-40°C	+40°C	1400	120	0,53		53	2074	7	REB-1N
HXBR/4-355	230V 50Hz	-40°C	+60°C	1400	120	0,55		59	2970	7,5	REB-1N
HXBR/4-400	230V 50Hz	-40°C	+65°C	1360	290	1,2		60	5080	9	REB-2,5N
HXBR/4-450	230V 50Hz	-40°C	+50°C	1370	410	1,85		64	7649	11,5	REB-2,5N
HXBR/4-500	230V 50Hz	-40°C	+70°C	1350	995	4,1		69	9957	16	REB-5
HXBR/4-560	230V 50Hz	-40°C	+45°C	1300	1300	6		70	12460	21,5	-
HXBR/4-630	230V 50Hz	-40°C	+40°C	1320	1300	5,7		72	14518	24	-
SINGLE PHASE 6 POLES											
HXBR/6-400	230V 50Hz	-40°C	+50°C	880	125	0,55		51	3387	9	REB-1N
HXBR/6-450	230V 50Hz	-40°C	+60°C	850	200	0,9		55	5099	11,5	REB-2,5N
HXBR/6-500	230V 50Hz	-40°C	+70°C	840	310	1,3		60	6638	16	REB-2,5N
HXBR/6-560	230V 50Hz	-40°C	+65°C	820	440	2,14		61	8307	21,5	REB-2,5N
HXBR/6-630	230V 50Hz	-40°C	+40°C	770	670	2,9		63	12315	24	REB-5
HXBR/6-710	230V 50Hz	-40°C	+40°C	835	850	3,6		66	16668	27	-
THREE PHASE 2 POLES											
HXTR/2-250	230/400V 50 Hz	-40°C	+60°C	2700	110	0,40	0,23	57	1650	7,0	RMT-1,5
THREE PHASE 4 POLES											
HXTR/4-250	230/400V 50 Hz	-40°C	+60°C	1450	50	0,35	0,2	46	930	6,5	RMT-1,5
HXTR/4-315	400V 50Hz	-40°C	+70°C	1420	130		0,46	53	2074	7	RMT-1,5
HXTR/4-355	400V 50Hz	-40°C	+70°C	1400	150		0,42	59	2970	7,5	RMT-1,5
HXTR/4-400	400V 50Hz	-40°C	+60°C	1340	300		1	60	5080	9	RMT-1,5
HXTR/4-450	400V 50Hz	-40°C	+60°C	1360	520		1,15	64	7649	11,5	RMT-1,5
HXTR/4-500	400V 50Hz	-40°C	+70°C	1370	970		1,9	69	9957	16	RMT-2,5
HXTR/4-560	400V 50Hz	-40°C	+70°C	1340	1400		2,5	70	12460	21,5	-
HXTR/4-630	400V 50Hz	-40°C	+60°C	1330	1400		2,5	73	14518	24	-
THREE PHASE 6 POLES											
HXTR/6-400	400V 50Hz	-40°C	+70°C	950	120		0,4	51	3387	9	RMT-1,5
HXTR/6-450	400V 50Hz	-40°C	+60°C	950	160		0,5	55	5099	11,5	RMT-1,5
HXTR/6-500	400V 50Hz	-40°C	+70°C	900	270		0,62	60	6638	16	RMT-1,5
HXTR/6-560	400V 50Hz	-40°C	+70°C	860	450		0,9	61	8307	21,5	RMT-1,5
HXTR/6-630	400V 50Hz	-40°C	+60°C	880	740		1,5	63	12315	24	RMT-2,5
HXTR/6-710	400V 50Hz	-40°C	+40°C	920	1000		2,6	66	16668	27	-
HXTR/6-800	400 V 50Hz	-40°C	+50°C	890	1900		3,5	67	25800	46	-
THREE PHASE 8 POLES											
HXTR/8-800	400 V 50Hz	-40°C	+70°C	630	760		1,83	60	19090	45	VFKB-45
THREE PHASE 12 POLES											
HXTR/12-800	400 V 50Hz	-40°C	+70°C	440	300		0,8	51	12640	43	VFKB-45
HXTR/12-910	400 V 50Hz	-40°C	+50°C	440	690		2,2	55	20600	55	VFKB-45
HXTR/12-1000	400 V 50Hz	-40°C	+50°C	420	890		1,9	56	26000	61	VFKB-45



Acoustic characteristics

The sound levels –NPS– shown in the technical characteristic chart, 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 octave band average frequencies in Hz.



LwA ASP Q max.	63	125	250	500	1000	2000	4000	8000
01/02/50	47	45	55	61	66	68	66	59
01/04/50	34	31	42	48	53	55	53	46
01/04/15	38	50	53	62	62	62	57	47
01/04/55	37	54	58	67	70	68	62	52
01/04/00	39	56	62	66	70	70	65	58
01/04/50	42	59	66	70	73	74	69	62
01/04/00	42	64	71	76	81	76	70	60
01/04/60	51	64	71	80	80	78	74	65
01/04/30	54	68	74	81	83	80	74	66
01/06/00	30	47	53	57	60	61	56	49
01/06/50	33	50	57	61	64	65	60	53
01/06/00	33	55	61	66	72	67	60	50
01/06/60	42	55	62	71	71	69	65	56
01/06/30	45	59	65	72	74	70	65	57
01/06/10	48	61	68	75	76	73	67	59
01/06/10	48	61	68	75	76	73	67	59
01/06/00	52	67	66	69	72	73	70	64
01/12/00	52	56	64	62	65	61	59	53

Mounting accessories



Model	Wire guard	Exhaust side Louvre shutters	
		Plastic	Aluminium
250	DEF-250 D	PER-250 W	PER-250 CN
315	DEF-325 D	PER-355 W	PER-355 CN
355	DEF-375 D	PER-355 W	PER-355 CN
400	DEF-450 D	PER-400 W	PER-400 CN
450	DEF-450 D	PER-450 W	PER-450 CN
500	DEF-525 D	PER-500 W	PER-500 CN
560	DEF-630 D	PER-560 W	PER-630 CN
630	DEF-630 D	PER-630 W	PER-630 CN
710	DEF-800 D	PER-710 W	PER-710 CN
800	DEF-800 D	PER-800 W	PER-800 CN
1000	DEF-1000 D	PER-1000 W	PER-1000 CN

Electrical accessories



REB-1N / REB-2,5N
Electronic, single phase speed controllers



REB-5
Electronic single phase speed controller



RMB/RMT
Auto-transformer speed controller.
RMB single phase 230V.
RMT three phase 400V.



REB-4 Auto
REB-5 Auto
Electronic single phase speed controllers with temperature sensor. For agricultural applications

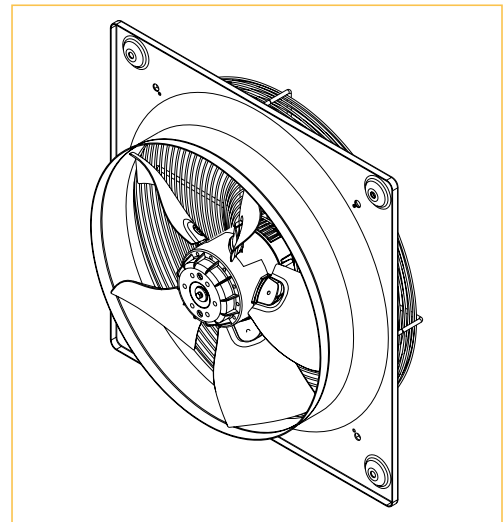
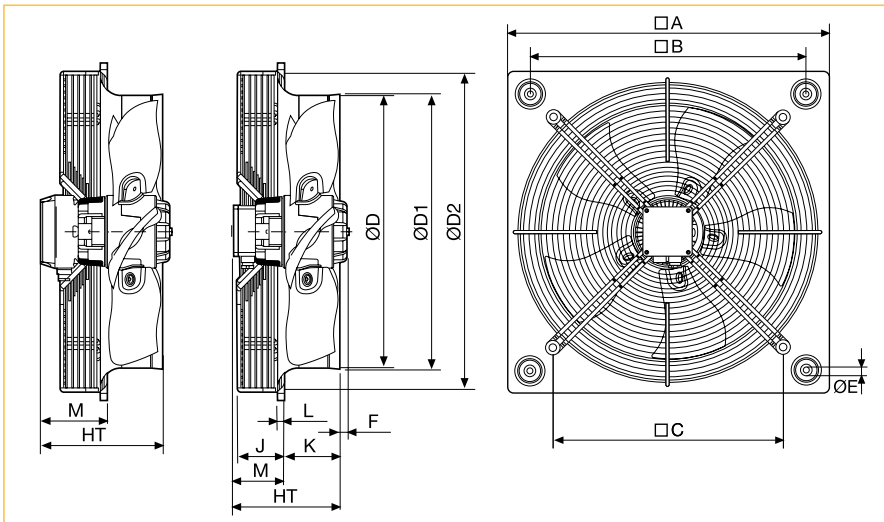


VFKB IP65
Adjustable frequency drives for three phase motors 400V

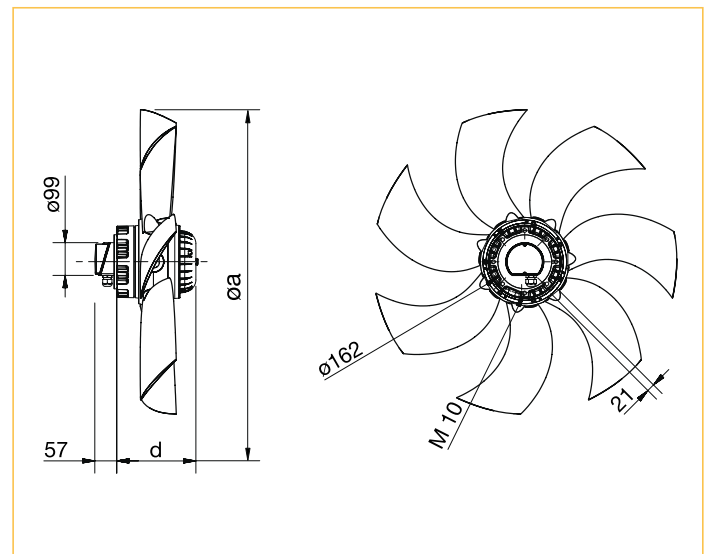
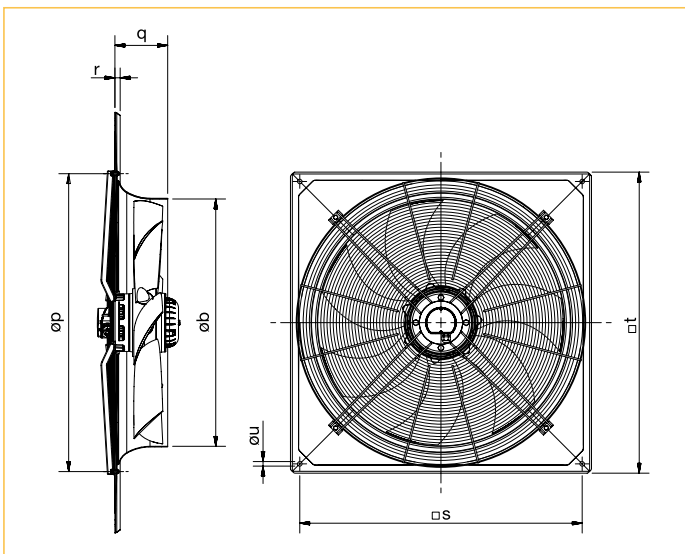


VFTM IP21/IP55
Adjustable frequency drives for three phase motors 400V

■ Dimensions (mm)



Model	A	B	C	D	D1	D2	E	F						FT		J	K	L	M	
								Single phase			Three phase			Single phase	Three phase				Single phase	Three phase
								/2	/4	/6	/2	/4	/6							
250	315	260	220	250	261	290	10	10,5	0	-	10,5	0	-	126	126	33	53	12	73	73
315	400	330	280	315	320	365	10	-	0	-	-	0	-	149	149	41	68	12	82	82
355	450	380	315	355	363	411	10	-	0	-	-	0	-	156	156	41	75	12	82	82
400	500	420	355	400	410	464	10	-	12	-	-	0	-	200	176	92	78	12	122	97
450	560	480	400	450	457	522	10	-	0	0	-	0	0	204	179	68	91	12	114	89
500	630	560	450	500	512	572	10	-	13	0	-	13	0	201	176	60	97	12	104	79
560	710	630	510	559	570	649	10	-	20	0	-	20	0	213	188	70	99	12	114	89
630	800	710	580	630	640	730	12	-	25	25	-	25	7	207	182	60	103	12	104	79
710	900	800	637	710		810	12	-	-	11	-	-	11	221	206	115	92	17	130	115



Model	a	d	p	b	r	q	s	t	u
HXTR/6-800	788	205	960	797	17	170	910	970	14,5
HXTR/8-800	788	188	960	797	17	170	910	970	14,5
HXTR/12-800	788	165	960	797	17	170	910	970	14,5
HXTR/12-910	905	205	1115	914	22	210	1010	1070	14,5
HXTR/12-1000	990	205	1140	1000	22	210	1110	1170	14,5

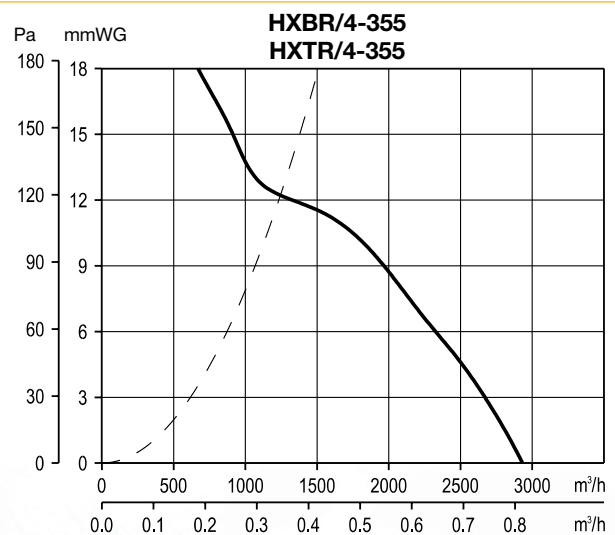
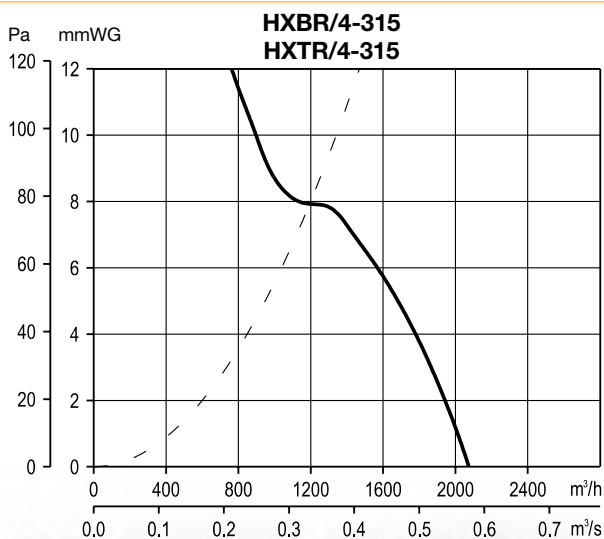
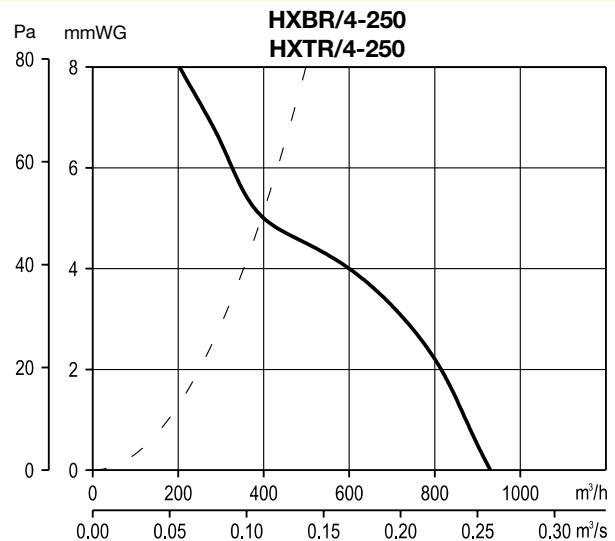
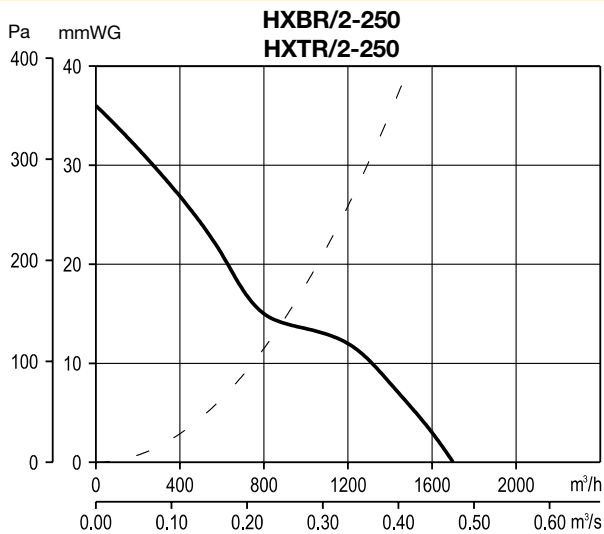
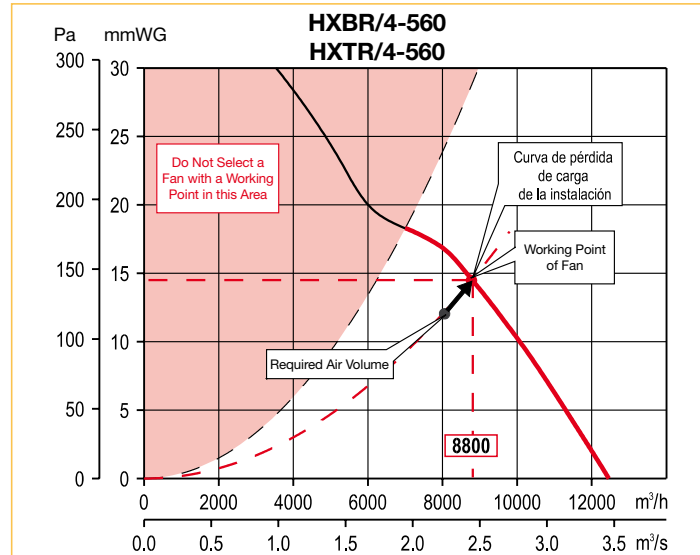
Performance curves

- Q = Air volume in, m³/hr and m³/s.
- Pe = Static pressure in mmWG and Pa.
- Dry air at 20°C and 760 mmHg.
- Air flow data in accordance with the following standards: UNE 100-212-89, BS 848, Part 1; AMCA 210-85 and ASHRAE 51-1985.

Typical fan selection:

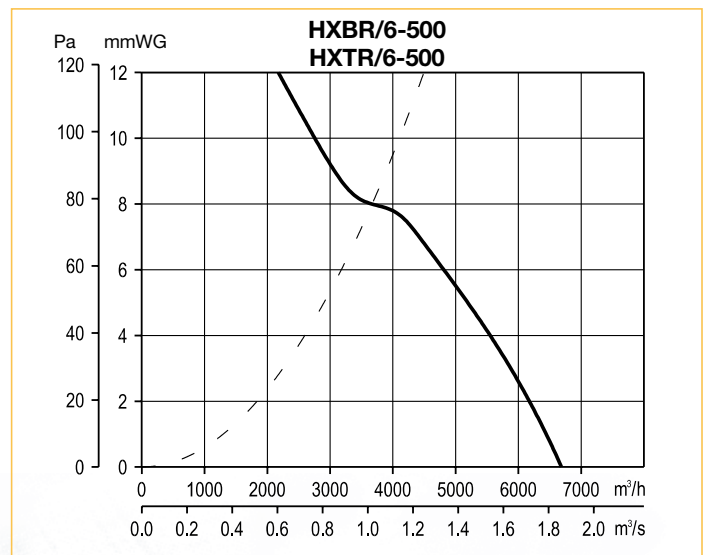
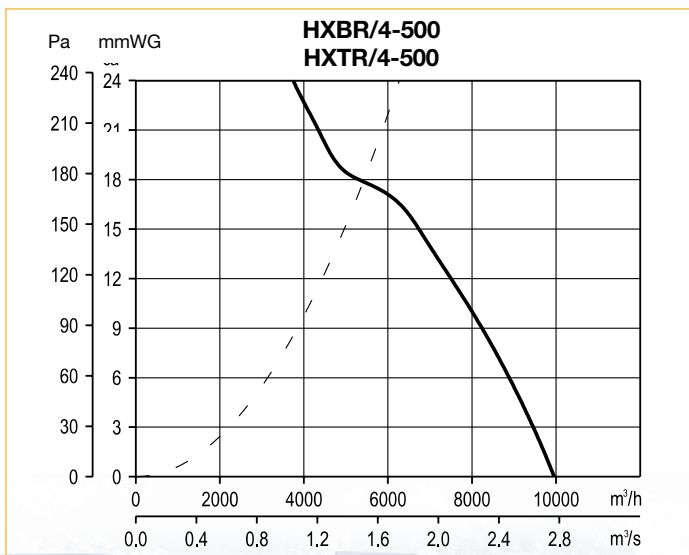
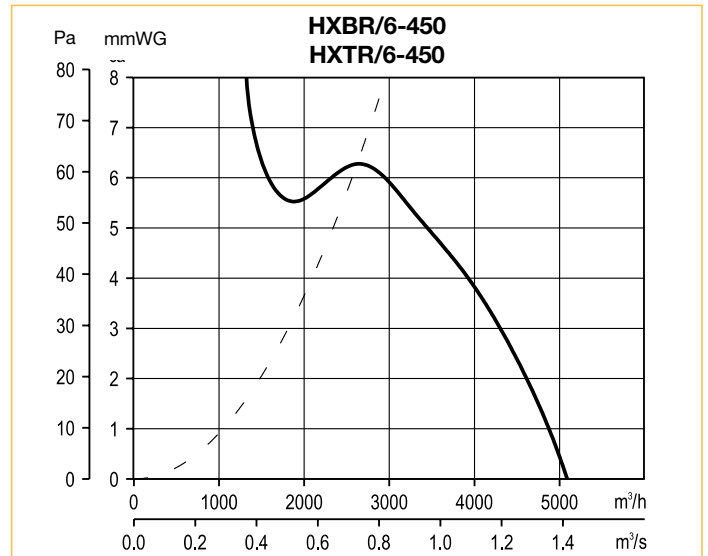
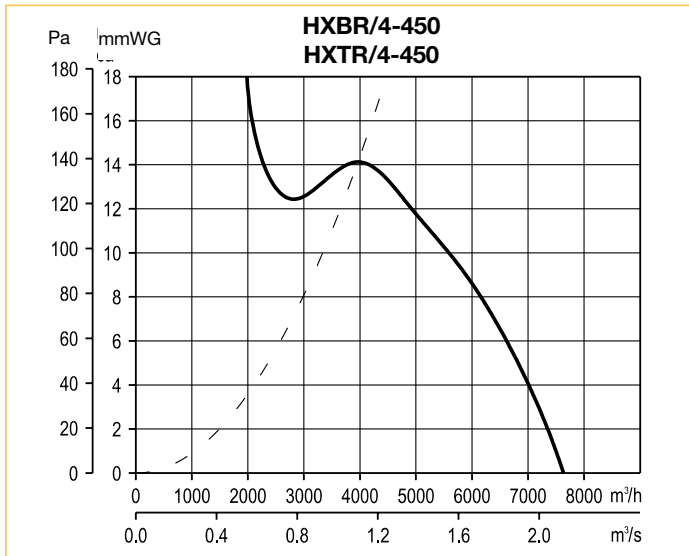
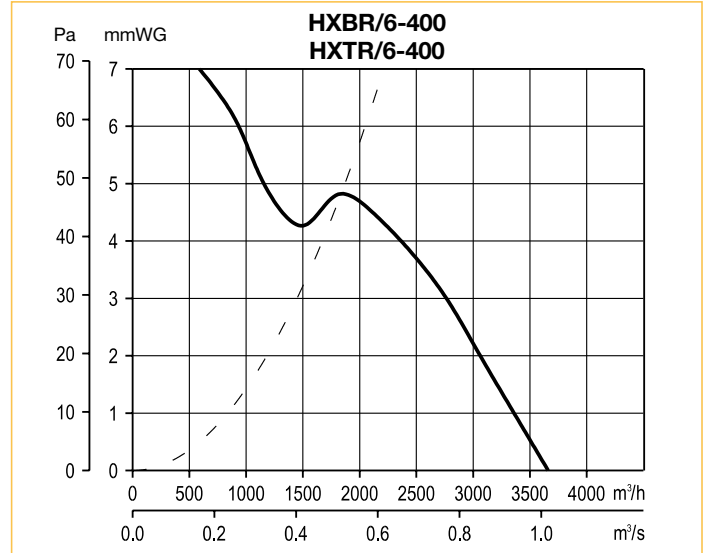
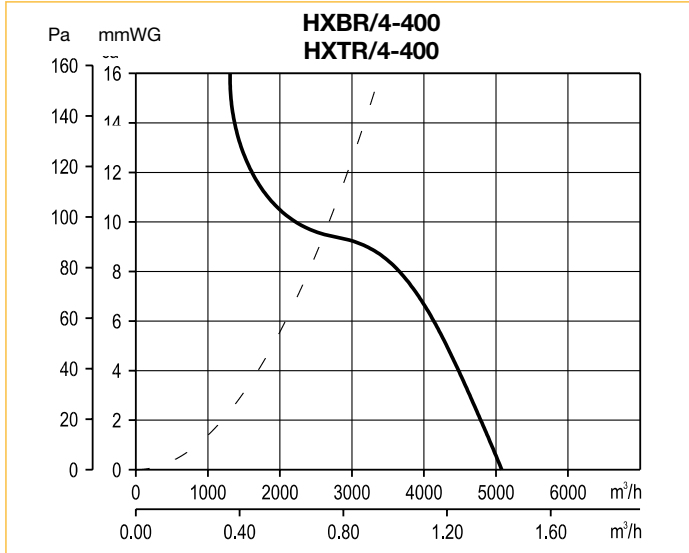
Do not select the working point in the coloured area. To find the working point first it is necessary to plot the system resistance curve. The working point lies at the intersection between that curve and the curve of the fan.

Example: Required air volume 10.000 m³/h at 3 mmWG.
Fan working point 11.300 m³/h at 4 mmWG.



■ Performance curves

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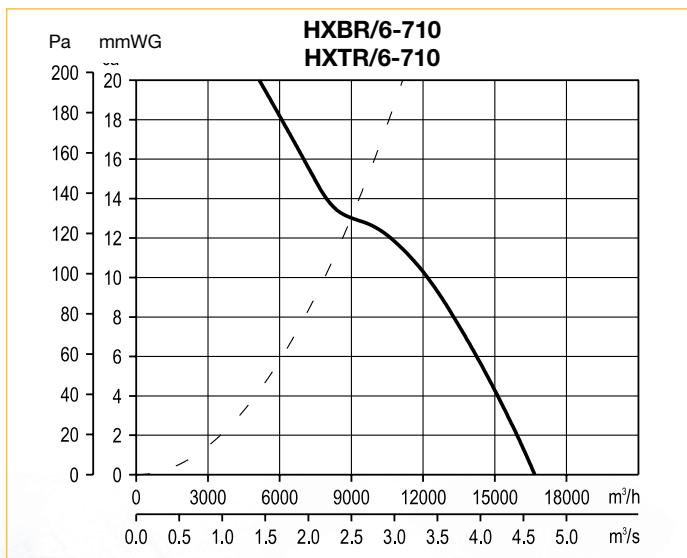
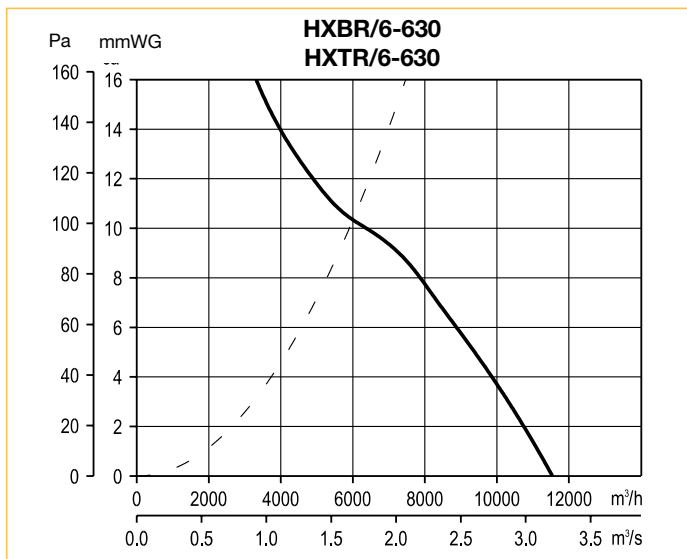
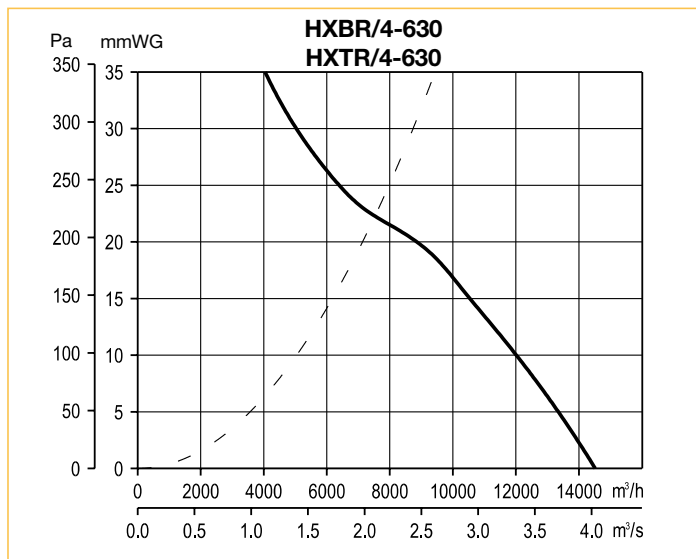
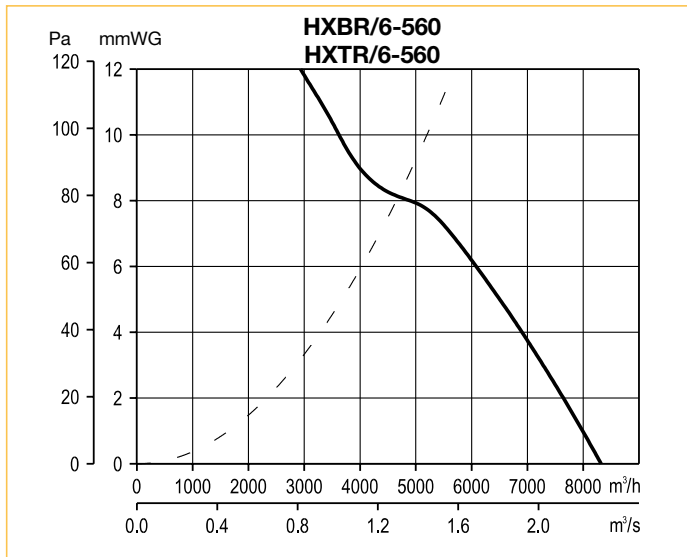
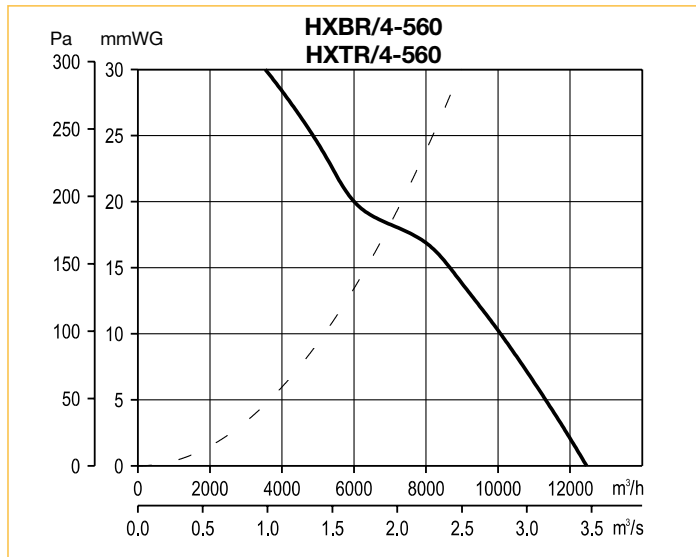


Performance curves

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HXBR/HXTR

Plate mounted axial flow fans



■ Performance curves

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- Air flow data in accordance with the following standards: UNE 100-212-89, BS 848, Part 1; AMCA 210-85 and ASHRAE 51-1985.

