THT/ROOF

400 ºC/2h and 300 ºC/2h roof mounted axial extract fans with vertical air outlets

Roof mounted axial extract fans with vertical air outlets, for immersed operation in fire risk zones, designed for smoke extraction in industrial or similar buildings.

Fan:
- Support base in galvanized steel sheet and anti-corrosive treatment.
- Adjustable cast aluminum impeller.
- Protection grid against contacts according to UNE-EN ISO 12499.
- Non-return damper in aluminum sheet to prevent the entry of water when the fan is not running.
- Approved in accordance with standard EN 12101-3, with certifications no.: 0370-CPR-3080 (F400) and 0370-CPR-3056 (F300).
- Airflow direction from motor to impeller.

Motor:
- Motors with IE3 efficiency for powers equal to or greater than 0.75 kW, except single-phase, 2-speed and 8-pole.
- Class H motors for S1 continuous operation and S2 emergency use. With ball bearings and IP55 protection.
- Three-phase 230/400 V 50 Hz (up to 3 kW) and 400/690 V 50 Hz (powers greater than 3 kW).
- Maximum temperature of air to be carried: S1 -25 ºC +40 ºC continuous service, also suitable for warm climates with temperatures up to 50 ºC. S2 operation, 300 ºC/2h, 400 ºC/2h.

Finish:
- Anti-corrosive finish in polyester resin, polymerised at 190 ºC, after degreasing with phosphate-free nanotechnology treatment.

On request:
- Fans with 2 speed motor.
- 2 and 8 pole fans according to diameter.

Order code

From size 40 to size 100

THT/ROOF	—	56	—	4T	—	2	—	F400
THT/ROOF: 400 ºC/2h and 300 ºC/2h roof mounted axial extract fans with vertical air outlets		Impeller diameter in cm		Number of motor poles 4=1500 r/min 50 Hz 6=1000 r/min 50 Hz T = Three-phase		Motor power (HP)		F300: 300 ºC/2h approved F400: 400 ºC/2h approved

Size 125

THT/ROOF	—	125	—	4T	/	9	—	25	—	F400
THT/ROOF: 400 ºC/2h and 300 ºC/2h roof mounted axial extract fans with vertical air outlets		Impeller diameter in cm		Number of motor poles 4=1500 r/min 50 Hz 6=1000 r/min 50 Hz	T = Three-phase	Number of blades: 6 blades 9 blades		Motor power (HP)		F300: 300 ºC/2h approved F400: 400 ºC/2h approved

Technical characteristics

Model	Speed	Maximum admissible current (A)			Installed power	Blade tilt angle	Maximum flow rate	Sound pressure level[1] dB (A)		Approx. weight
	(r/min)	230V	400V	690V	(kW)	(º)	(m^3/h)	Inlet	Exhaust	(Kg)
THT/ROOF-40-4T-0.75	1420	2.84	1.64		0.55	32	4800	45	44	39
THT/ROOF-40-6T-0.75	930	2.90	1.75		0.55	32	3150	36	35	44
THT/ROOF-45-4T-0.75	1420	2.84	1.64		0.55	36	7450	48	47	42
THT/ROOF-45-6T-0.75	930	2.90	1.75		0.55	30	4450	38	37	47
THT/ROOF-50-4T-1 IE3	1410	3.08	1.79		0.75	28	9730	50	49	51
THT/ROOF-50-6T-0.75	930	2.90	1.75		0.55	32	7000	42	41	54
THT/ROOF-56-4T-1 IE3	1410	3.08	1.79		0.75	22	11250	53	52	58
THT/ROOF-56-4T-1.5 IE3	1430	4.10	2.37		1.10	30	13600	53	52	58
THT/ROOF-56-4T-2 IE3	1435	5.89	3.38		1.50	36	15030	54	53	61
THT/ROOF-56-6T-0.75	930	2.90	1.75		0.55	38	10140	44	43	57
THT/ROOF-63-4T-1.5 IE3	1430	4.10	2.37		1.10	20	17800	56	55	67
THT/ROOF-63-4T-2 IE3	1435	5.89	3.38		1.50	24	19280	56	55	71
THT/ROOF-63-4T-3 IE3	1450	7.86	4.52		2.20	32	22150	58	57	76
THT/ROOF-63-4T-4 IE3	1455	11.01	6.33		3.00	38	24240	59	58	85
THT/ROOF-63-6T-0.75	930	2.90	1.75		0.55	28	13590	47	46	67
THT/ROOF-63-6T-1 IE3	935	3.36	1.93		0.75	38	15890	48	47	70
THT/ROOF-71-4T-2 IE3	1435	5.89	3.38		1.50	14	20900	60	59	78
THT/ROOF-71-4T-3 IE3	1450	7.86	4.52		2.20	22	25100	60	59	83
THT/ROOF-71-4T-4 IE3	1455	11.01	6.33		3.00	28	27480	60	59	92
THT/ROOF-71-6T-0.75	930	2.90	1.75		0.55	20	16100	50	49	74
THT/ROOF-71-6T-1 IE3	935	3.36	1.93		0.75	26	17300	50	49	77
THT/ROOF-71-6T-1.5 IE3	930	4.73	2.72		1.10	34	19930	51	50	83
THT/ROOF-80-4T-4 IE3	1455	11.01	6.33		3.00	16	30250	64	63	114
THT/ROOF-80-4T-5.5 IE3	1445		7.95	4.61	4.00	18	32750	63	62	121
THT/ROOF-80-6T-1.5 IE3	930	4.73	2.72		1.10	18	21450	53	52	105
THT/ROOF-80-6T-2 IE3	950	6.25	3.62		1.50	26	25950	54	53	114
THT/ROOF-80-6T-3 IE3	960	9.78	5.62		2.20	32	29930	55	54	120
THT/ROOF-90-4T-5.5 IE3	1445		7.95	4.61	4.00	12	38890	68	67	134
THT/ROOF-90-4T-7.5 IE3	1455		10.40	6.04	5.50	18	46140	67	66	161
THT/ROOF-90-4T-10 IE3	1460		14.20	8.17	7.50	22	50140	66	65	172
THT/ROOF-90-6T-2 IE3	950	6.25	3.62		1.50	16	28780	56	55	127
THT/ROOF-90-6T-3 IE3	960	9.78	5.62		2.20	24	34000	56	55	134
THT/ROOF-90-6T-4 IE3	970	12.80	6.36		3.00	30	38900	59	58	159
THT/ROOF-100-4T-7.5 IE3	1455		10.40	6.04	5.50	10	46850	72	71	172
THT/ROOF-100-4T-10 IE3	1460		14.20	8.17	7.50	16	57400	69	68	183
THT/ROOF-100-4T-15 IE3	1460		20.70	11.99	11.00	22	66300	69	68	236
THT/ROOF-100-4T-20 IE3	1460		27.80	16.03	15.00	28	76150	70	69	251
THT/ROOF-100-6T-3 IE3	960	9.78	5.62		2.20	16	37600	60	59	146
THT/ROOF-100-6T-4 IE3	970	12.80	6.36		3.00	20	41150	59	58	171
THT/ROOF-100-6T-5.5 IE3	970		8.37	4.82	4.00	26	47780	60	59	183
THT/ROOF-125-4T/6-25 IE3	1475		35.40	20.39	18.50	14	92550	70	69	413
THT/ROOF-125-4T/6-30 IE3	1475		42.20	24.44	22.00	16	98830	69	68	427
THT/ROOF-125-4T/6-40 IE3	1470		53.30	31.02	30.00	22	117450	69	68	507
THT/ROOF-125-4T/6-50 IE3	1480		66.80	38.70	37.00	26	131050	69	68	543
THT/ROOF-125-4T/9-25 IE3	1475		35.40	20.39	18.50	10	79650	77	76	422
THT/ROOF-125-4T/9-30 IE3	1475		42.20	24.44	22.00	12	88290	76	75	436
THT/ROOF-125-4T/9-40 IE3	1470		53.30	31.02	30.00	16	104040	75	74	516
THT/ROOF-125-4T/9-50 IE3	1480		66.80	38.70	37.00	20	118400	75	74	552
THT/ROOF-125-6T/6-5.5 IE3	970		8.37	4.82	4.00	10	51500	62	61	288
THT/ROOF-125-6T/6-7.5 IE3	970		12.30	7.07	5.50	14	60640	60	59	295
THT/ROOF-125-6T/6-10 IE3	970		15.20	8.83	7.50	20	72650	59	58	325
THT/ROOF-125-6T/6-15 IE3	970		22.50	13.07	11.00	26	85850	60	59	355
THT/ROOF-125-6T/6-20 IE3	970		29.00	16.78	15.00	30	92850	61	60	413
THT/ROOF-125-6T/9-10 IE3	970		15.20	8.83	7.50	14	63490	67	66	334
THT/ROOF-125-6T/9-15 IE3	970		22.50	13.07	11.00	20	77550	65	64	364
THT/ROOF-125-6T/9-20 IE3	970		29.00	16.78	15.00	26	92950	65	64	422

1 The noise level values are pressures in dB(A) measured at a distance of 10 metres in a free field.

Erp. (Energy Related Products)

Information on Directive 2009/125/EC can be downloaded from the SODECA website or the QuickFan selector programme.

Acoustic characteristics

Sound power spectrum Lw(A) in dB(A) per Hz frequency band

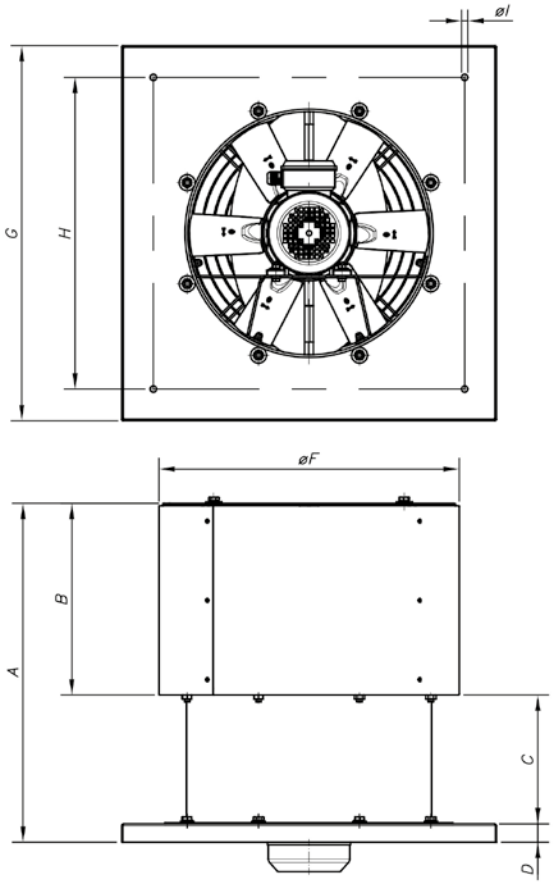
Values measured at inlet with maximum flow rate

	63	125	250	500	1000	2000	4000	8000
40-4-0.75	37	53	63	70	71	68	67	68
40-6-0.75	28	44	54	61	62	59	58	59
45-4-0.75	47	59	67	73	73	73	68	60
45-6-0.75	37	49	57	63	63	63	58	50
50-4-1	49	61	69	75	75	75	70	62
50-6-0.75	41	53	61	67	67	67	62	54
56-4-1	51	63	72	78	78	78	72	64
56-4-1.5	51	63	72	78	78	78	72	64
56-4-2	52	64	73	79	79	79	73	65
56-6-0.75	45	55	65	69	70	68	61	53
63-4-1.5	47	63	75	81	83	80	73	65
63-4-2	54	66	75	81	81	81	75	67
63-4-3	56	68	77	83	83	83	77	69
63-4-4	57	69	78	84	84	84	78	70
63-6-0.75	48	58	68	72	73	71	64	56
63-6-1	49	59	69	73	74	72	65	57
71-4-2	56	72	79	85	85	85	81	73
71-4-3	56	72	79	85	85	85	81	73
71-4-4	63	75	79	85	85	86	83	75
71-6-0.75	46	53	73	76	76	71	63	55
71-6-1	46	64	73	76	76	71	64	55
71-6-1.5	47	65	74	77	77	72	65	56
80-4-4	54	70	83	90	90	87	81	73
80-4-5.5	53	69	82	89	89	86	80	72
80-6-1.5	53	68	75	78	79	76	70	62
80-6-2	59	69	75	79	80	78	73	65
80-6-3	60	70	76	80	81	79	74	66
90-4-5.5	60	76	87	93	94	92	87	79
90-4-7.5	59	75	86	92	93	91	86	78
90-4-10	58	74	85	91	92	90	85	77
90-6-2	52	67	78	82	82	78	71	63
90-6-3	52	67	78	82	82	78	71	63
90-6-4	60	70	80	85	85	82	76	68
100-4-7.5	67	83	90	97	98	96	92	84
100-4-10	64	80	87	94	95	93	89	81
100-4-15	71	83	87	93	94	94	91	83
100-4-20	72	84	88	94	95	95	92	84
100-6-3	57	72	82	85	86	83	75	67
100-6-4	56	71	81	84	85	82	74	66
100-6-5.5	57	72	82	85	86	83	75	67
125-4/6-25	65	81	88	95	96	94	90	82
125-4/6-30	64	80	87	94	95	93	89	81
125-4/6-40	71	83	87	93	94	94	91	83
125-4/6-50	71	83	87	93	94	94	91	83
125-4/9-25	67	81	94	102	104	101	96	88
125-4/9-30	66	80	93	101	103	100	95	87
125-4/9-40	65	79	92	100	102	99	94	86
125-4/9-50	65	79	92	100	102	99	94	86
125-6/6-5.5	59	74	84	87	88	85	77	69
125-6/6-7.5	57	72	82	85	86	83	75	67
125-6/6-10	56	71	81	84	85	82	74	66
125-6/6-15	57	72	82	85	86	83	75	67
125-6/6-20	58	73	83	86	87	84	76	68
125-6/9-10	61	76	87	93	94	88	84	77
125-6/9-15	59	74	85	91	92	86	82	75
125-6/9-20	59	74	85	91	92	86	82	75

Values measured at exhaust with maximum flow rate

	63	125	250	500	1000	2000	4000	8000
40-4-0.75	36	52	62	69	70	67	66	67
40-6-0.75	27	43	53	60	61	58	57	58
45-4-0.75	46	58	66	72	72	72	67	59
45-6-0.75	36	48	56	62	62	62	57	49
50-4-1	48	60	68	74	74	74	69	61
50-6-0.75	40	52	60	66	66	66	61	53
56-4-1	50	62	71	77	77	77	71	63
56-4-1.5	50	62	71	77	77	77	71	63
56-4-2	51	63	72	78	78	78	72	64
56-6-0.75	44	54	64	68	69	67	60	52
63-4-1.5	46	62	74	80	82	79	72	64
63-4-2	53	65	74	80	80	80	74	66
63-4-3	55	67	76	82	82	82	76	68
63-4-4	56	68	77	83	83	83	77	69
63-6-0.75	47	57	67	71	72	70	63	55
63-6-1	48	58	68	72	73	71	64	56
71-4-2	55	71	78	84	84	84	80	72
71-4-3	55	71	78	84	84	84	80	72
71-4-4	62	74	78	84	84	85	82	74
71-6-0.75	45	52	72	75	75	70	62	54
71-6-1	45	63	72	75	75	70	63	54
71-6-1.5	46	64	73	76	76	71	64	55
80-4-4	53	69	82	89	89	86	80	72
80-4-5.5	52	68	81	88	88	85	79	71
80-6-1.5	52	67	74	77	78	75	69	61
80-6-2	58	68	74	78	79	77	72	64
80-6-3	59	69	75	79	80	78	73	65
90-4-5.5	59	75	86	92	93	91	86	78
90-4-7.5	58	74	85	91	92	90	85	77
90-4-10	57	73	84	90	91	89	84	76
90-6-2	51	66	77	81	81	77	70	62
90-6-3	51	66	77	81	81	77	70	62
90-6-4	59	69	79	84	84	81	75	67
100-4-7.5	66	82	89	96	97	95	91	83
100-4-10	63	79	86	93	94	92	88	80
100-4-15	70	82	86	92	93	93	90	82
100-4-20	71	83	87	93	94	94	91	83
100-6-3	56	71	81	84	85	82	74	66
100-6-4	55	70	80	83	84	81	73	65
100-6-5.5	56	71	81	84	85	82	74	66
125-4/6-25	64	80	87	94	95	93	89	81
125-4/6-30	63	79	86	93	94	92	88	80
125-4/6-40	70	82	86	92	93	93	90	82
125-4/6-50	70	82	86	92	93	93	90	82
125-4/9-25	66	80	93	101	103	100	95	87
125-4/9-30	65	79	92	100	102	99	94	86
125-4/9-40	64	78	91	99	101	98	93	85
125-4/9-50	64	78	91	99	101	98	93	85
125-6/6-5.5	58	73	83	86	87	84	76	68
125-6/6-7.5	56	71	81	84	85	82	74	66
125-6/6-10	55	70	80	83	84	81	73	65
125-6/6-15	56	71	81	84	85	82	74	66
125-6/6-20	57	72	82	85	86	83	75	67
125-6/9-10	60	75	86	92	93	87	83	76
125-6/9-15	58	73	84	90	91	85	81	74
125-6/9-20	58	73	84	90	91	85	81	74

Dimensions mm



	A	B	C	D	ØF	G	H	ØI
THT/ROOF-40	628	349	244	35	519	630	530	12
THT/ROOF-45	642	363	244	35	569	710	590	12
THT/ROOF-50	679	400	244	35	626	900	750	12
THT/ROOF-56	710	426	244	40	686	900	750	14
THT/ROOF-63	747	463	244	40	753	1000	850	14
THT/ROOF-71	830	498	292	40	833	1000	850	14
THT/ROOF-80	887	545	292	50	923	1150	1000	14
THT/ROOF-90	989	601	338	50	1031	1150	1000	14
THT/ROOF-100	1136	648	438	50	1128	1250	1100	14
THT/ROOF-125	1313	775	488	50	1386	1425	1275	17

Accessories


INT


IAT

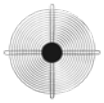

CABLE BOX


C2V


VSD3/A-RFT
- VSD1/A-RFM


CENTRAL CO


AET


RT

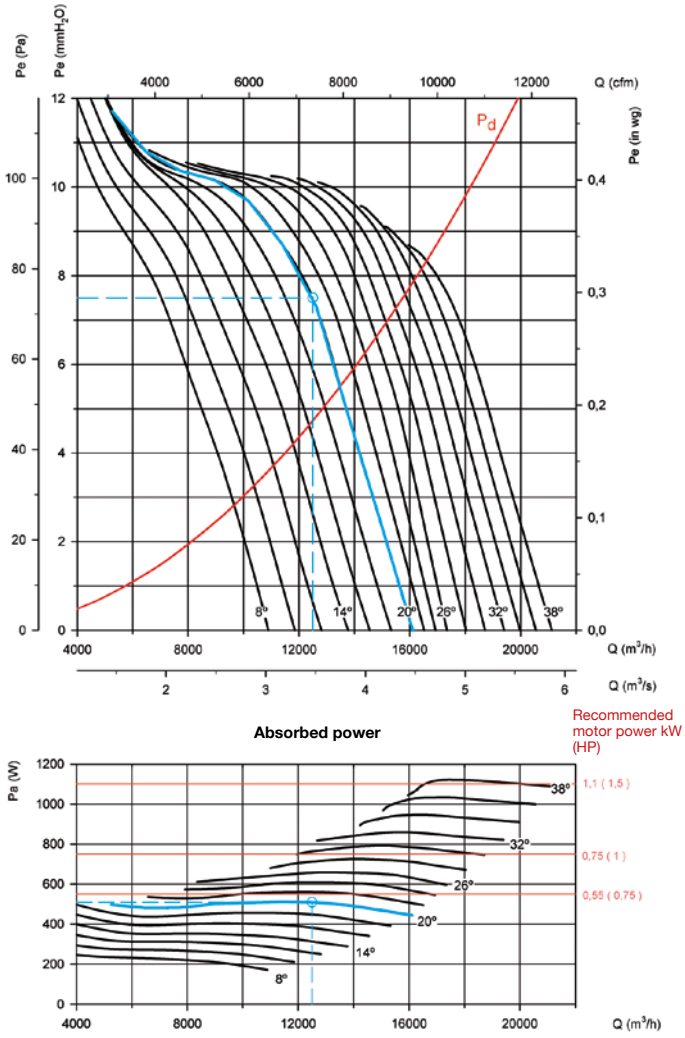
EXAMPLE OF SELECTION

Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm

Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 71 **Number of motor poles: 6** **Number of blades: 6**



Initial data
Working point:
- Flow rate: 12,500 m³/h
- Loss of load: 7.5 mmH_2O

Steps for the selection of equipment
On the pressure graph:
- Mark the working point, defined by the airflow (12,500 m³/h) and the loss of load (7.5 mmH_2O).
- Select the curve of the equipment which is closest above the working point. In our case, a curve with a blade angle of 20º is obtained.

On the power graph:
- Mark the working point, defined by the airflow (12,500 m³/h) and the selected blade angle (20º).
- Read the absorbed power on the power axis on the left. Pa= 510 W at the working point.
- Look for the straight red line which is closest to the working point above. On the right-hand side of the graph, the value of the installed motor power is obtained. In our case, this is 0.55 kW or 0.75 HP.

EXAMPLE OF ORDER CODE

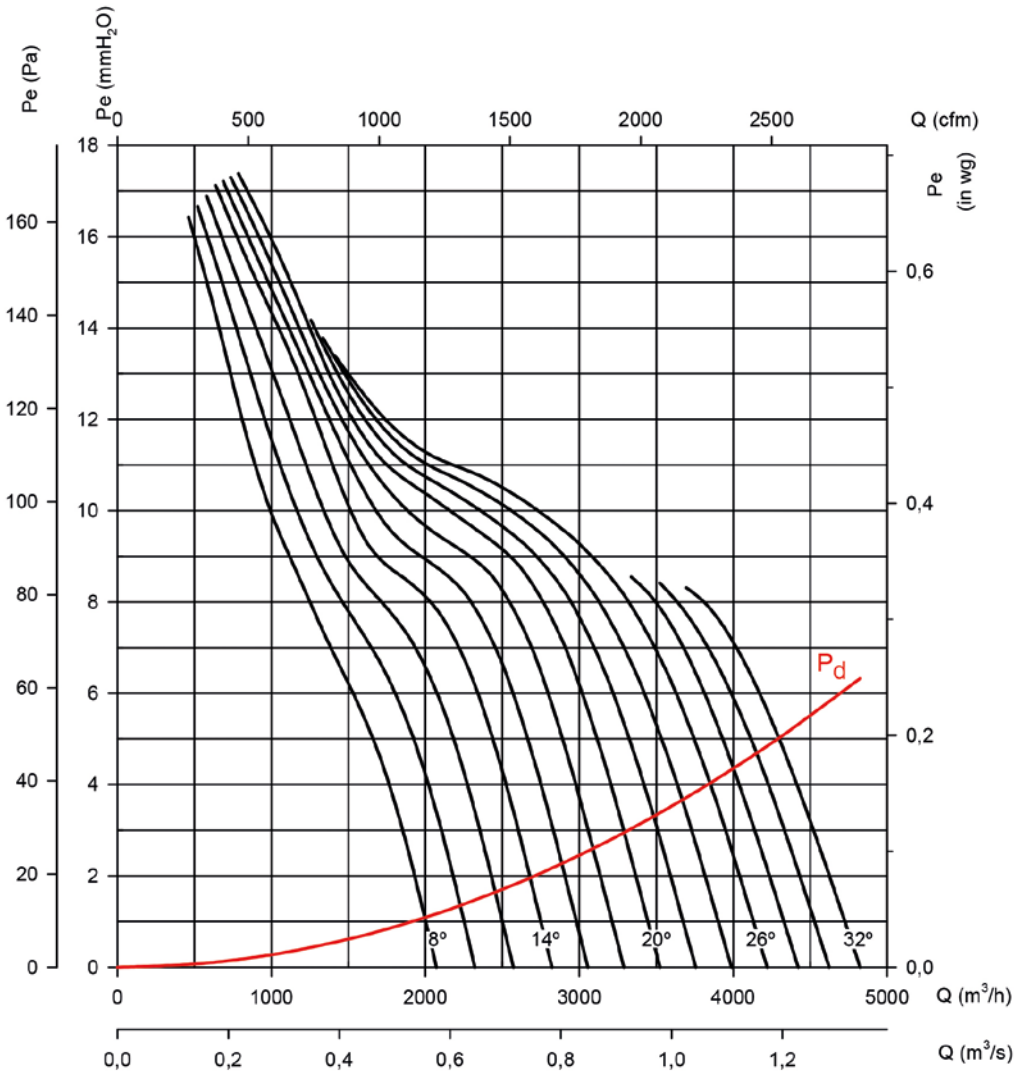
THT/ROOF	—	71	—	6T	—	0.75	—	F400
Name of series: THT/ROOF		Impeller diameter in cm		Number of motor poles 2=3000 r/min 50 Hz 4=1500 r/min 50 Hz 6=1000 r/min 50 Hz 8=750 r/min 50 Hz 12=500 r/min 50 Hz		Motor power (HP)		F300: 300 °C/2h approved F400: 400 °C/2h approved

T = Three-phase

Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

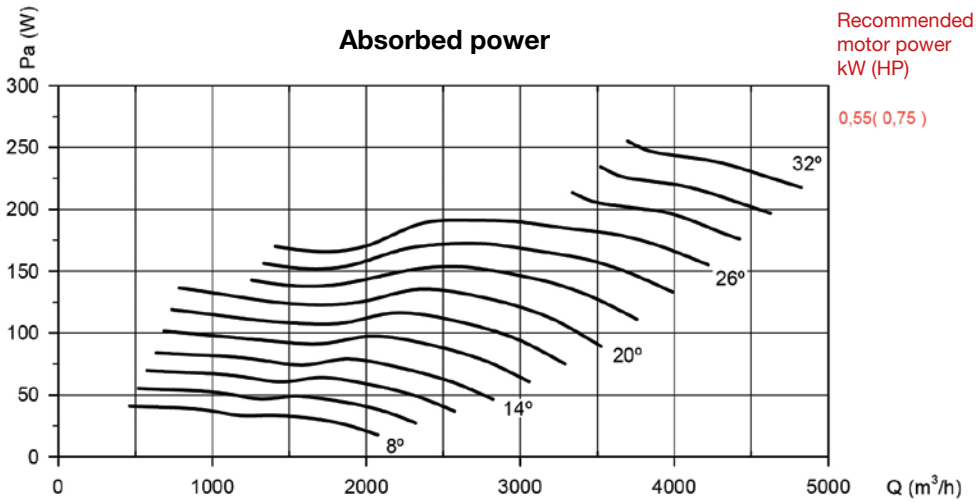
Impeller diameter in cm: 40 **Number of motor poles: 4** **Number of blades: 6**



Absorbed power

Recommended motor power kW (HP)

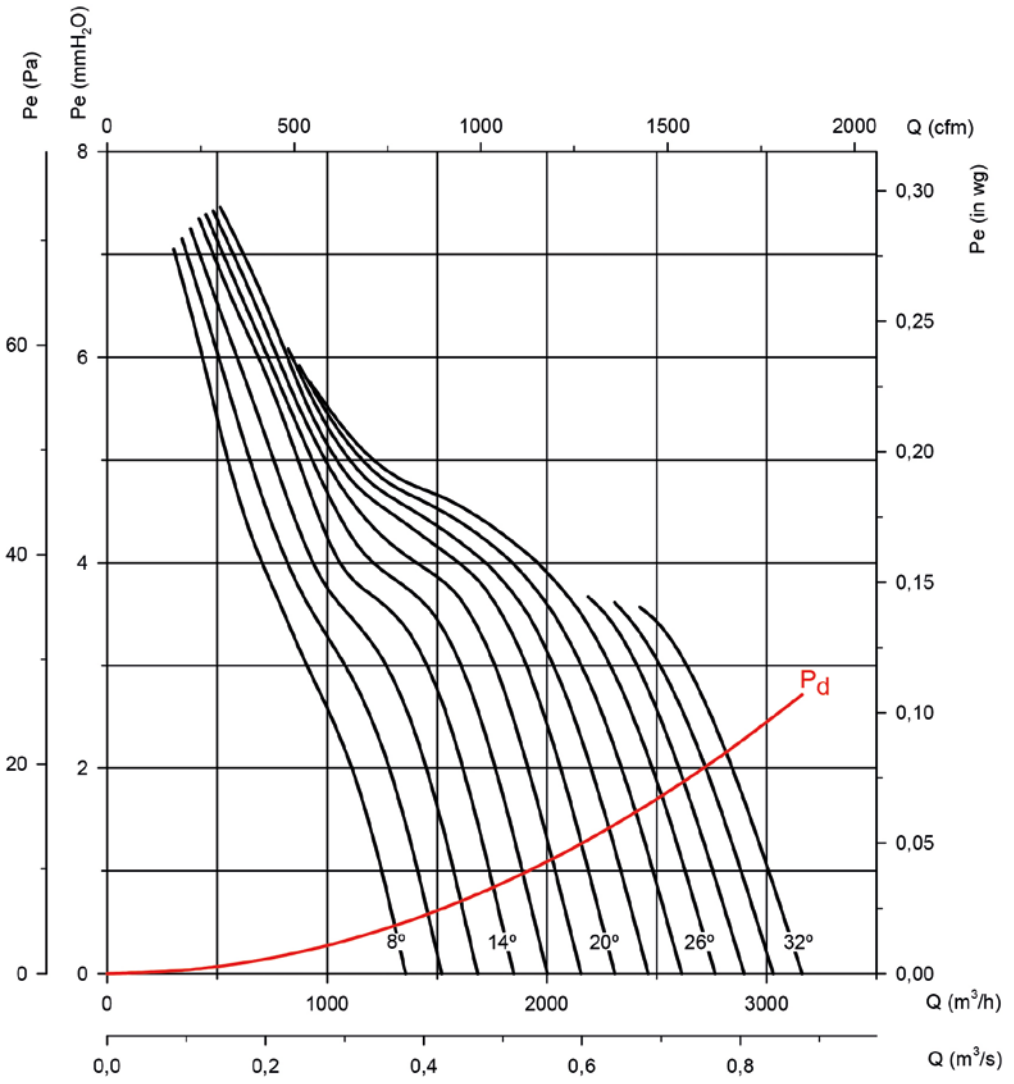
0,55(0,75)



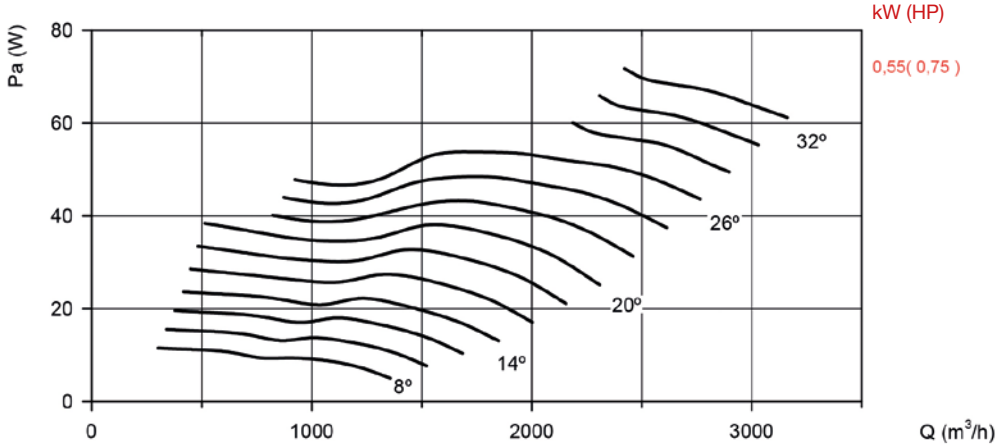
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 40 **Number of motor poles: 6** **Number of blades: 6**



Absorbed power



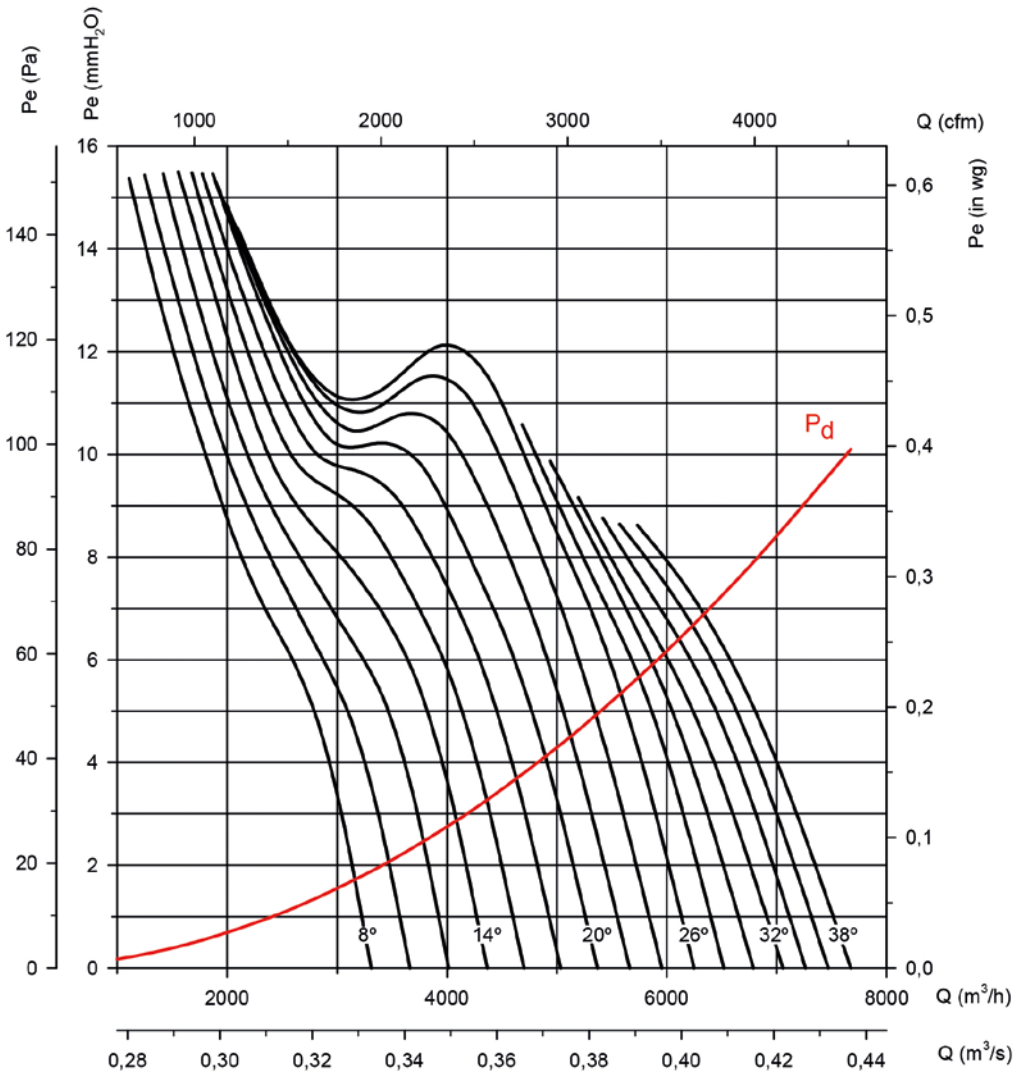
Recommended motor power kW (HP)

0,55(0,75)

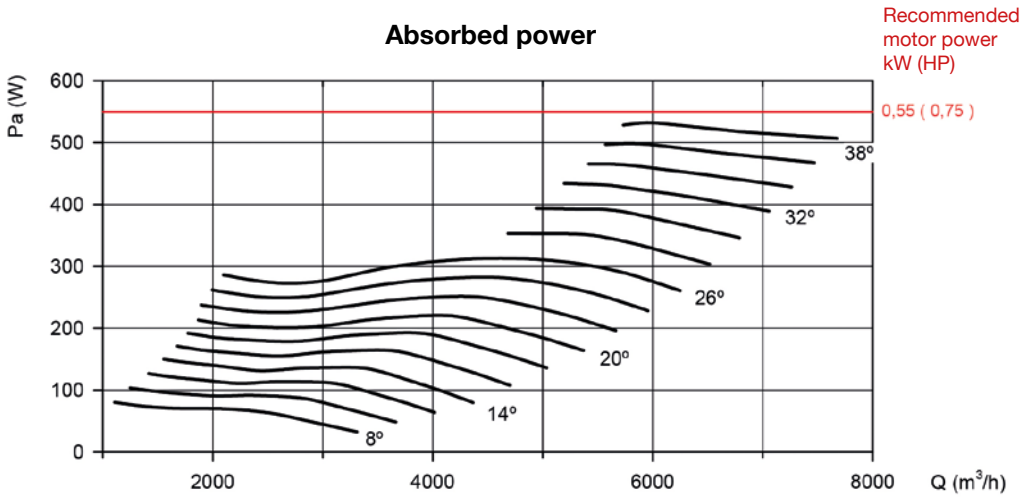
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 45 **Number of motor poles: 4** **Number of blades: 6**



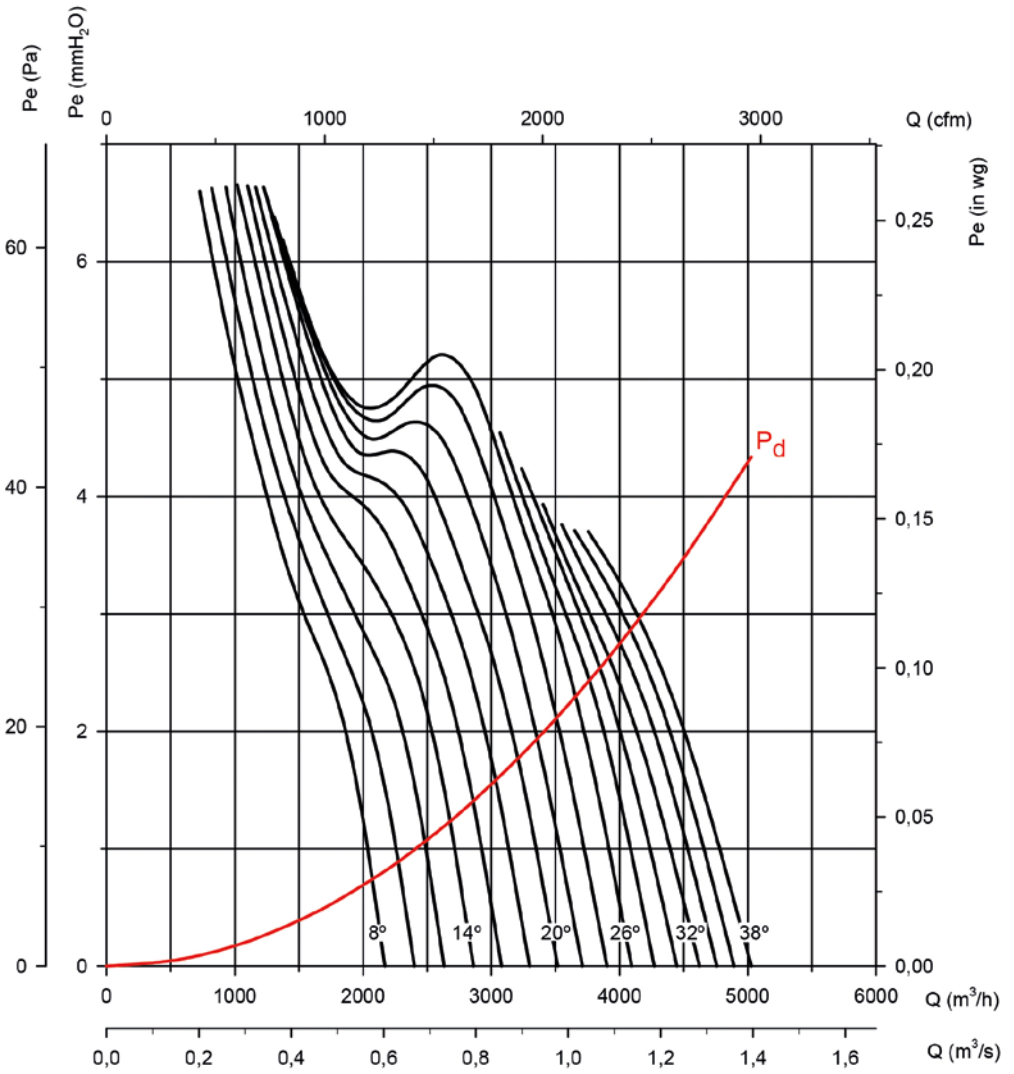
Absorbed power



Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

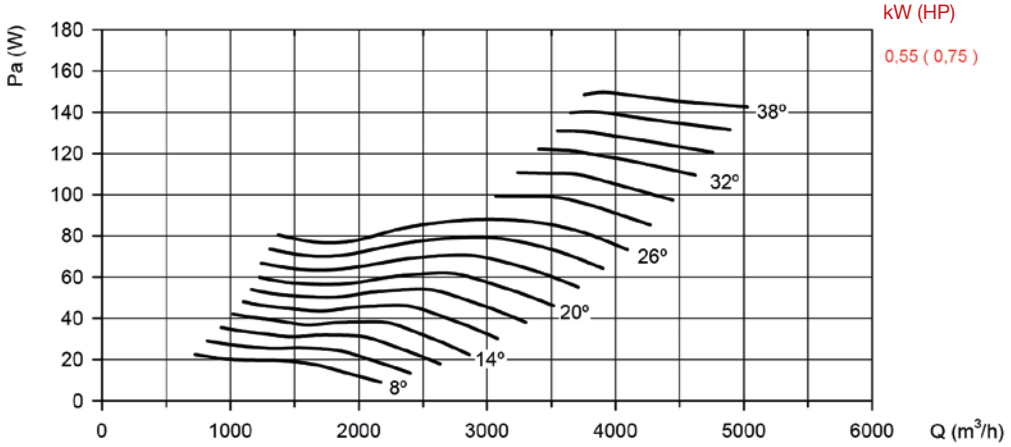
Impeller diameter in cm: 45 **Number of motor poles: 6** **Number of blades: 6**



Absorbed power

Recommended motor power kW (HP)

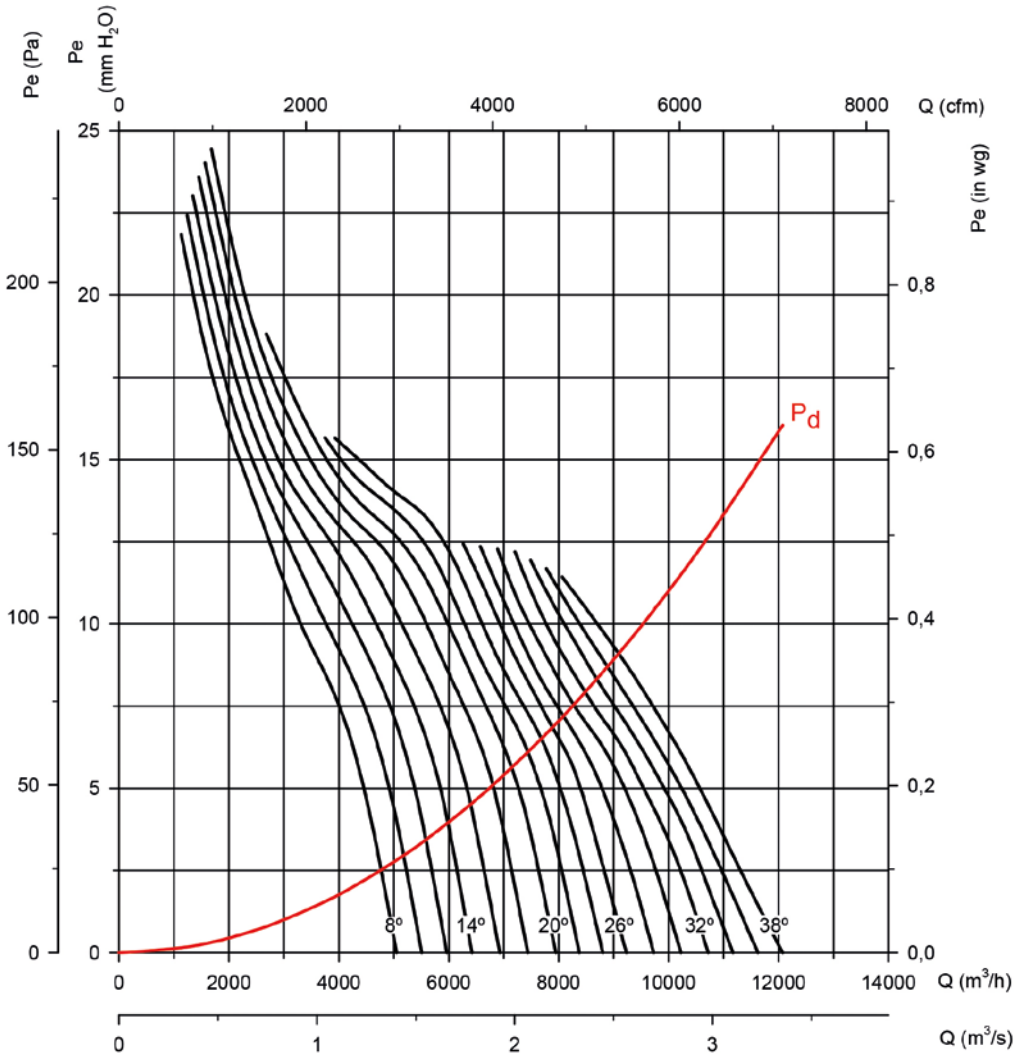
0,55 (0,75)



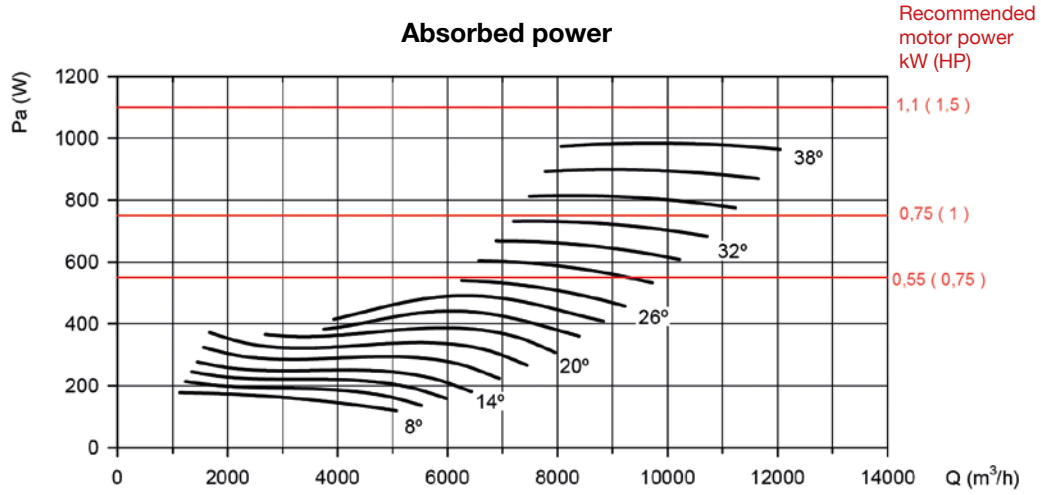
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 50 **Number of motor poles: 4** **Number of blades: 6**



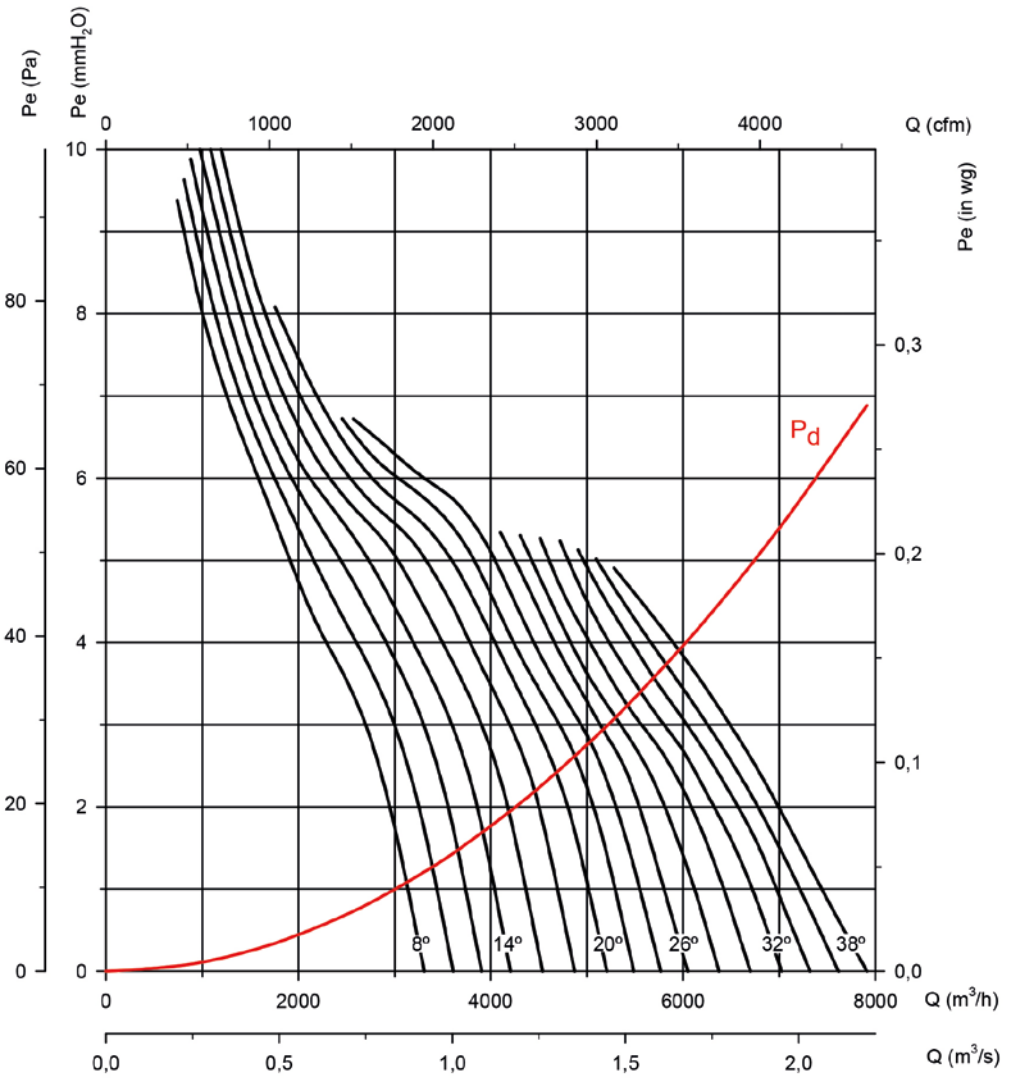
Absorbed power



Characteristic curves

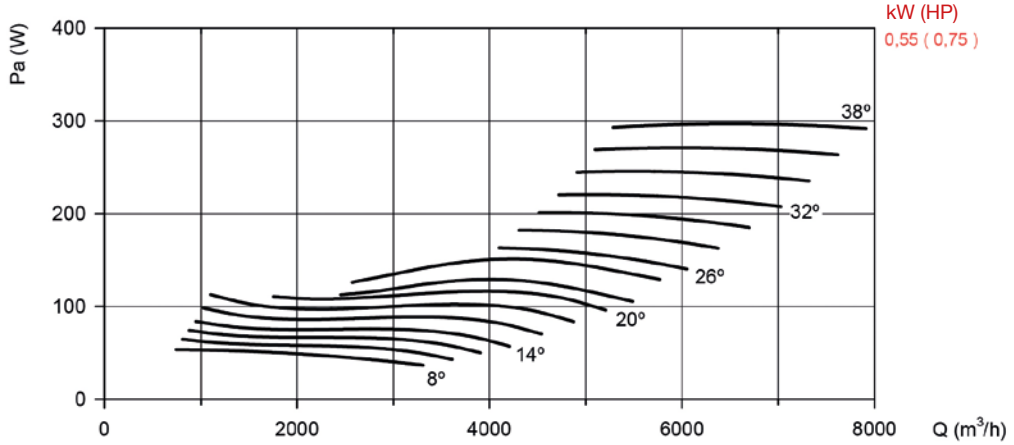
Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 50 **Number of motor poles: 6** **Number of blades: 6**



Absorbed power

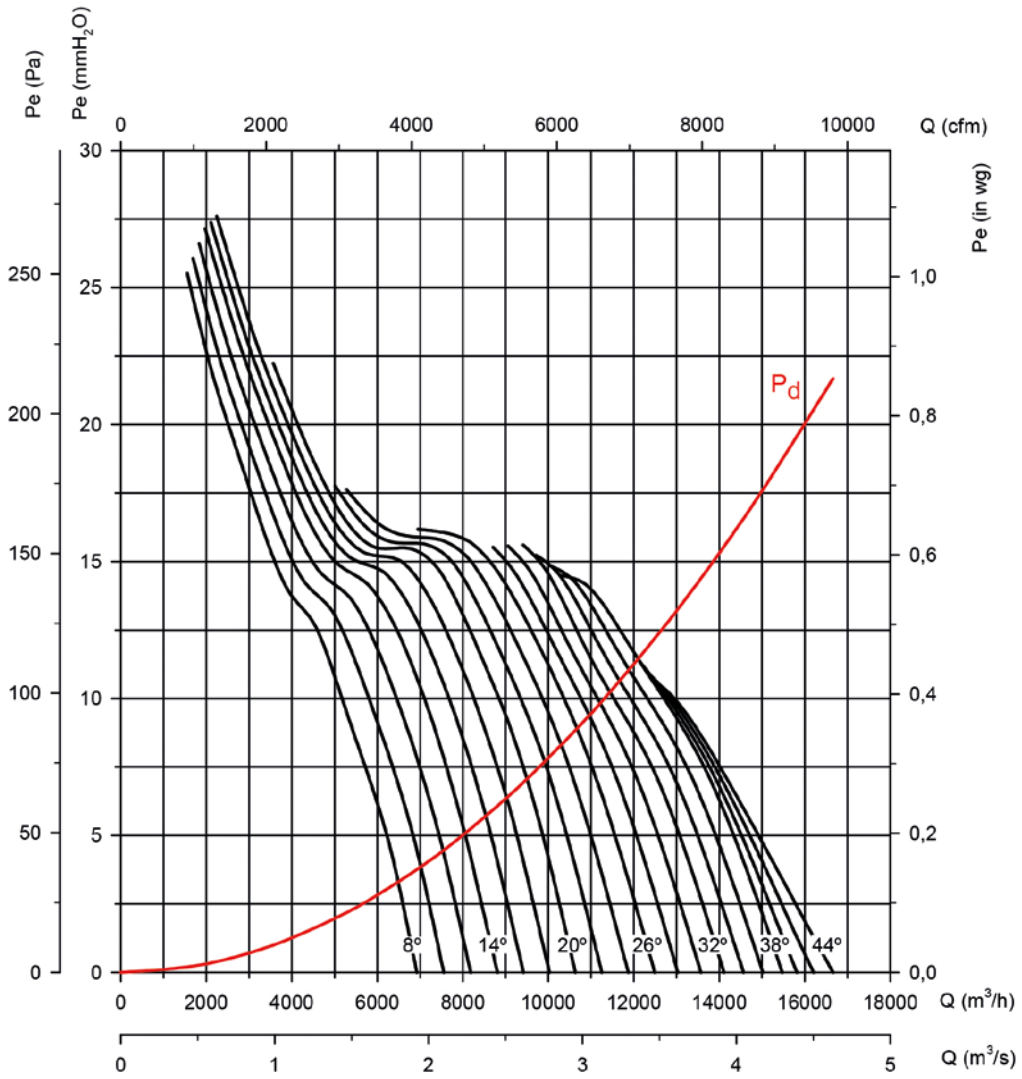
Recommended motor power kW (HP)
0,55 (0,75)



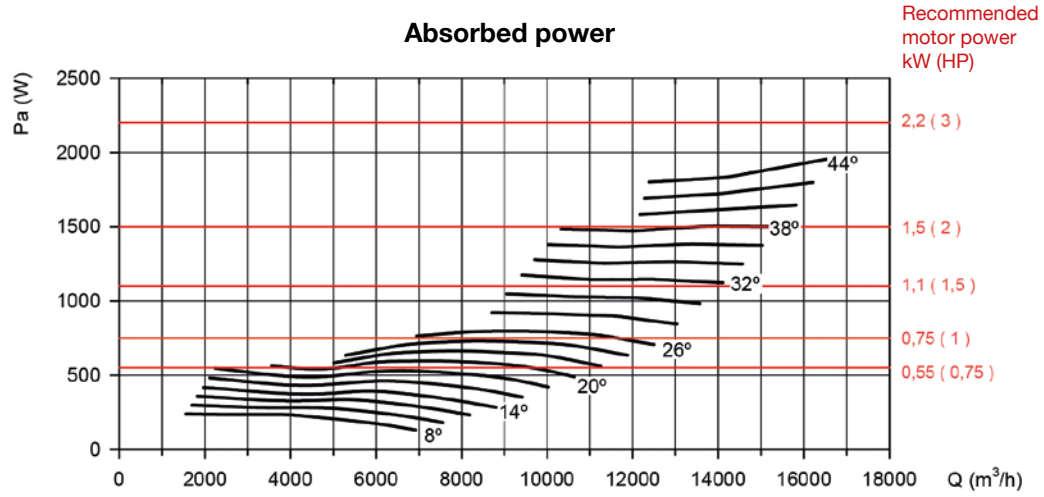
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 56 **Number of motor poles: 4** **Number of blades: 6**



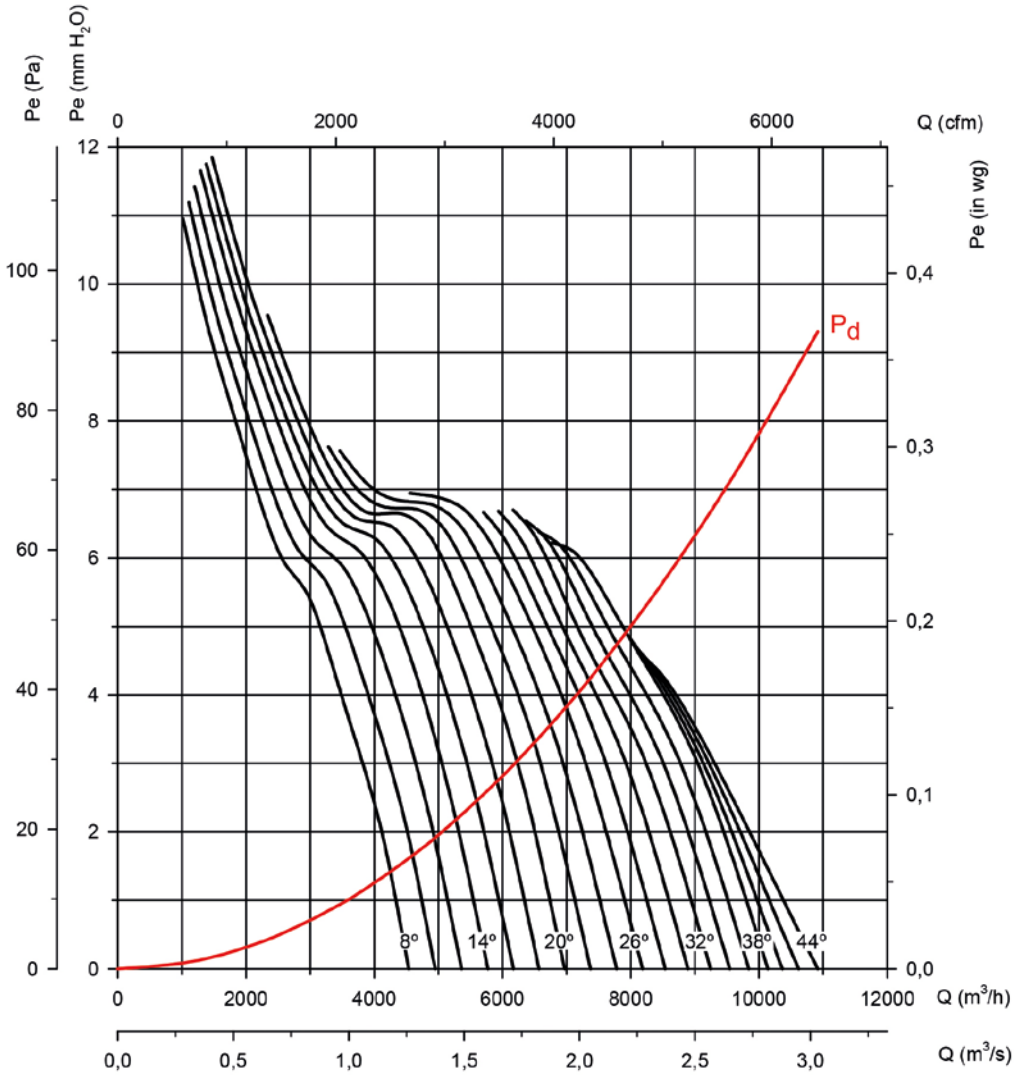
Absorbed power



Characteristic curves

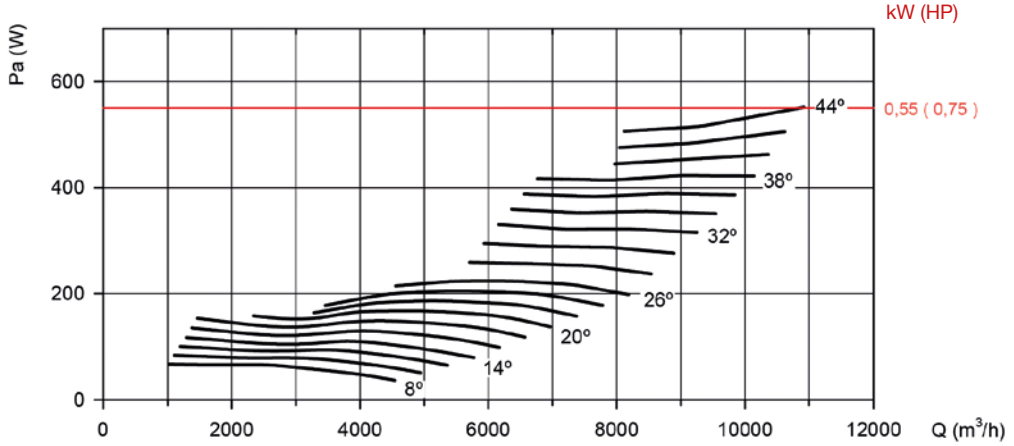
Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 56 **Number of motor poles: 6** **Number of blades: 6**



Absorbed power

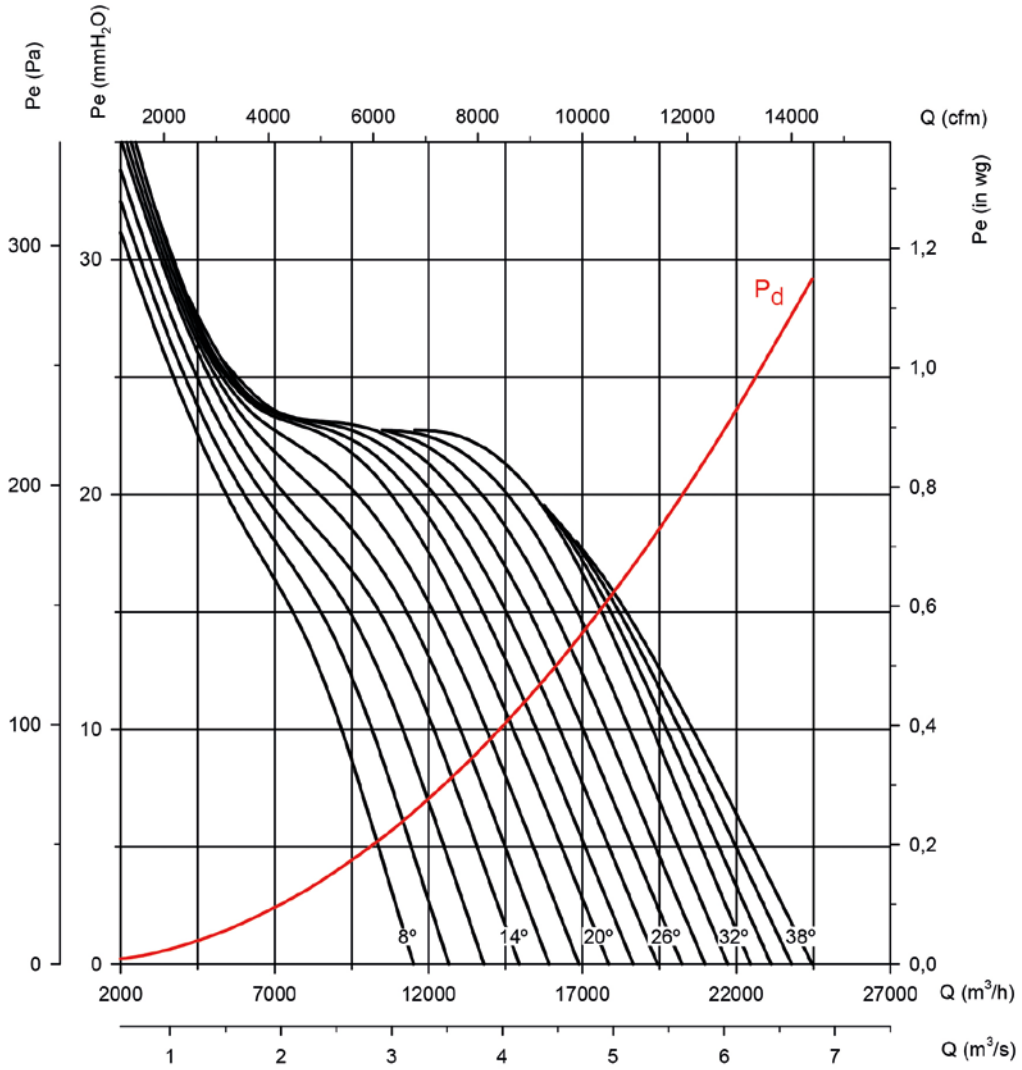
Recommended motor power kW (HP)



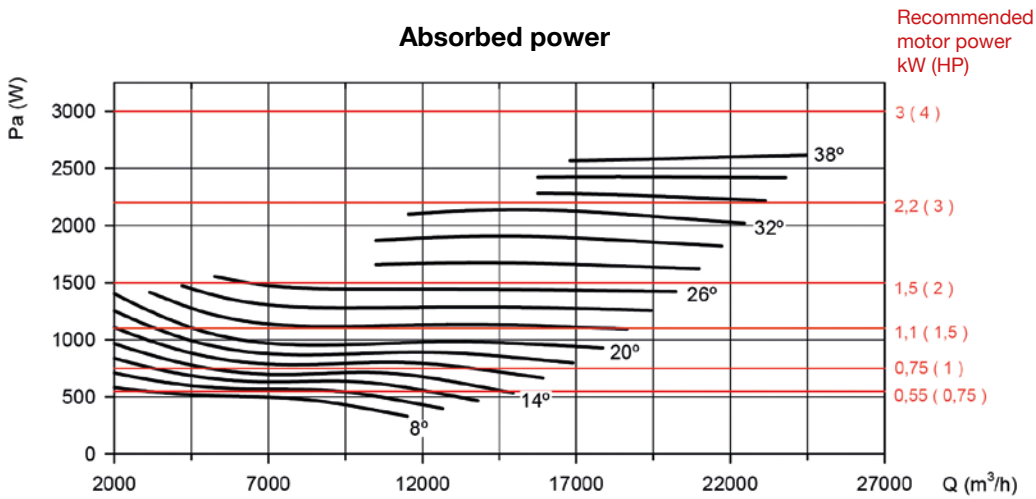
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 63 **Number of motor poles: 4** **Number of blades: 6**



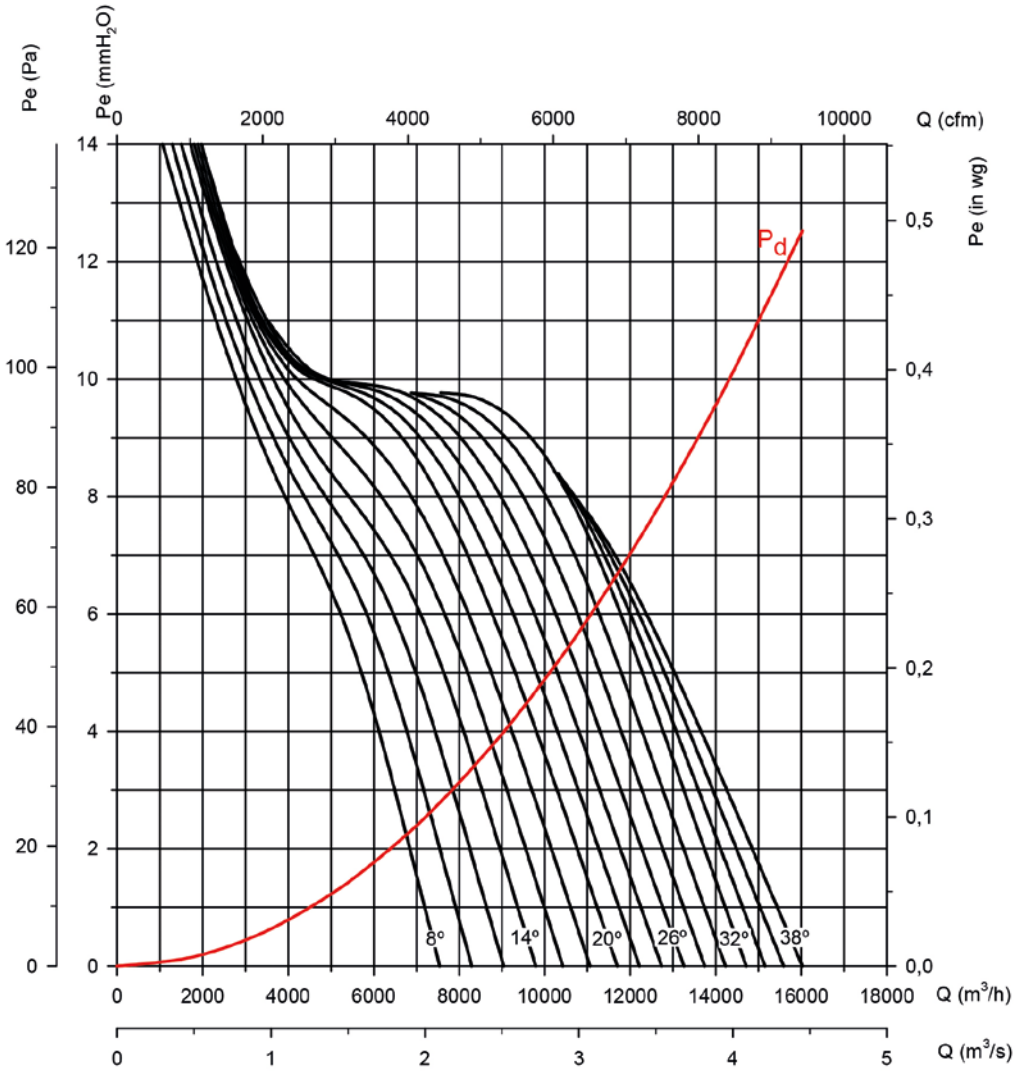
Absorbed power



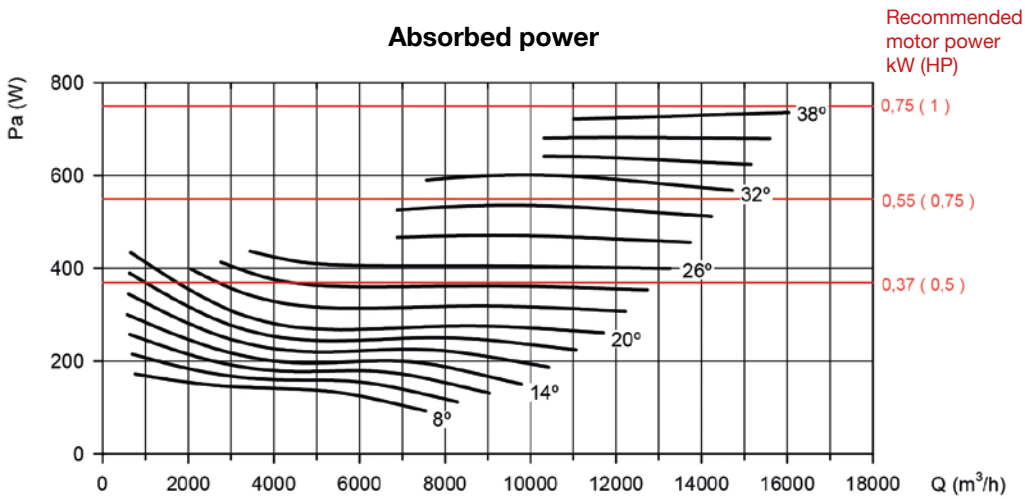
Characteristic curves

Q= Flow rate in m^3/h, m^3/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 63 **Number of motor poles: 6** **Number of blades: 6**



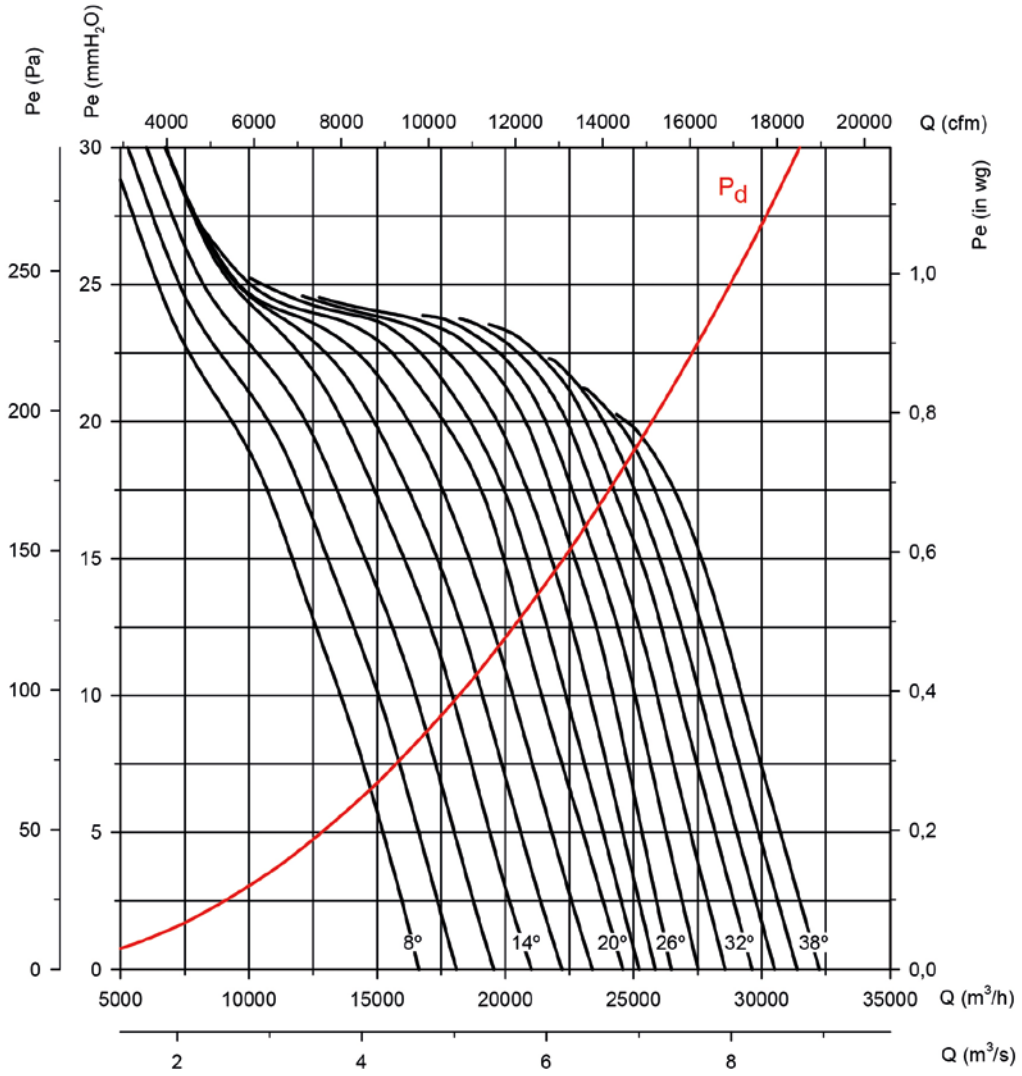
Absorbed power



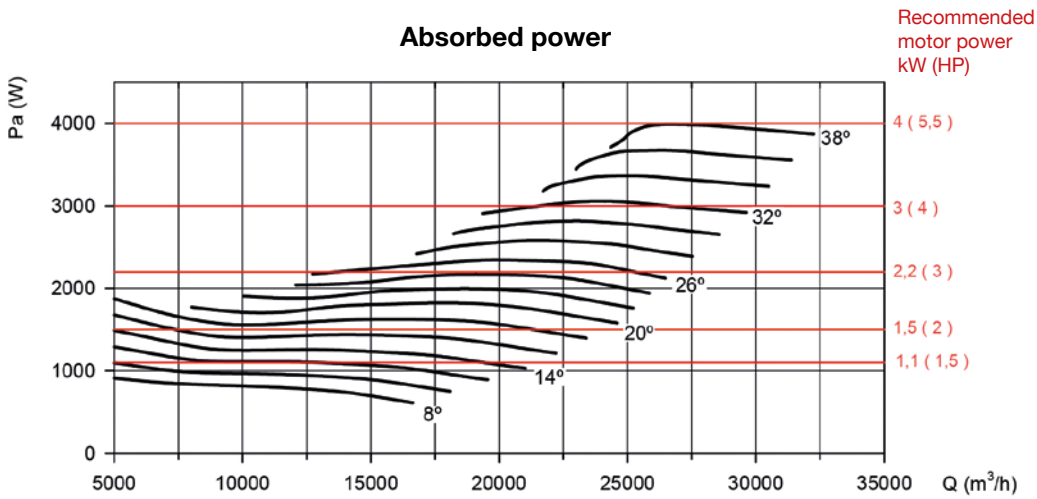
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 71 **Number of motor poles: 4** **Number of blades: 6**



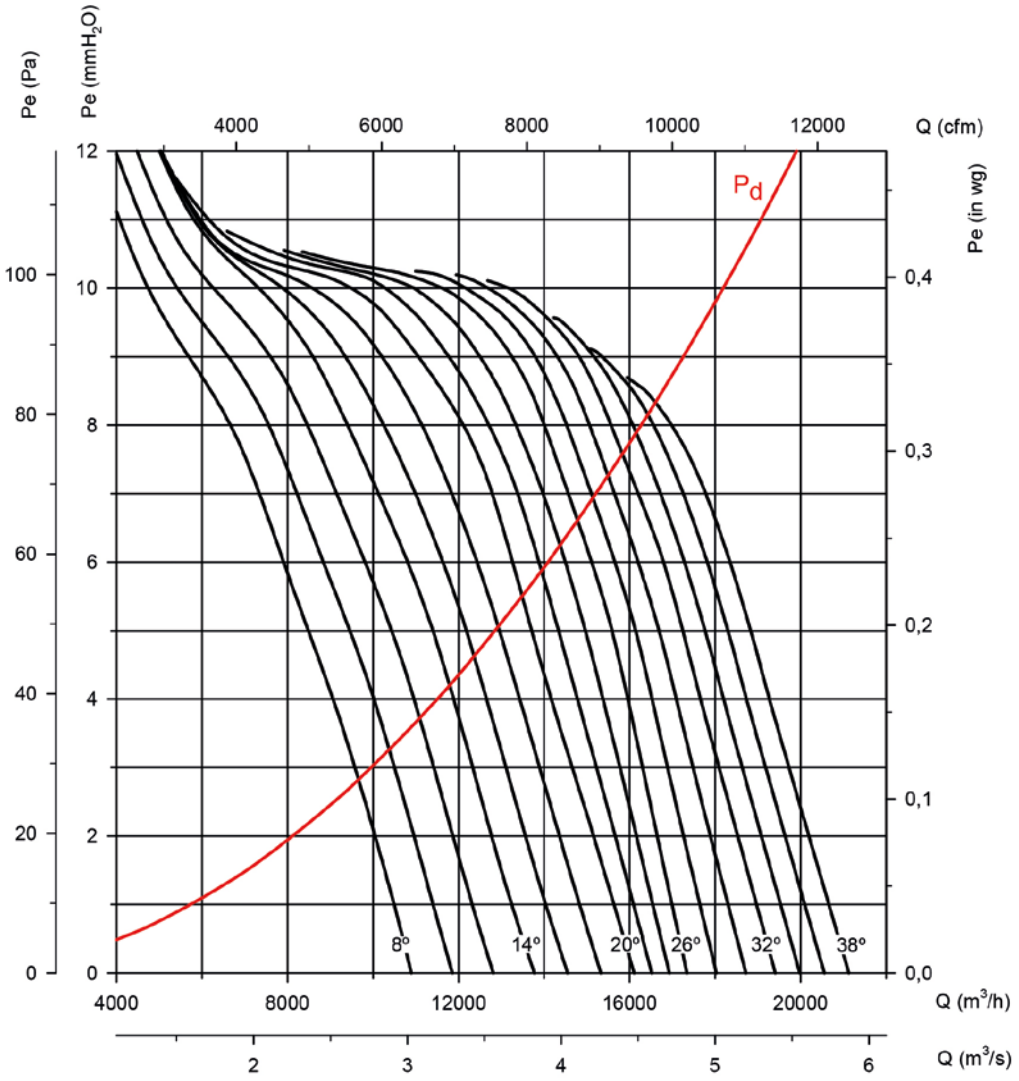
Absorbed power



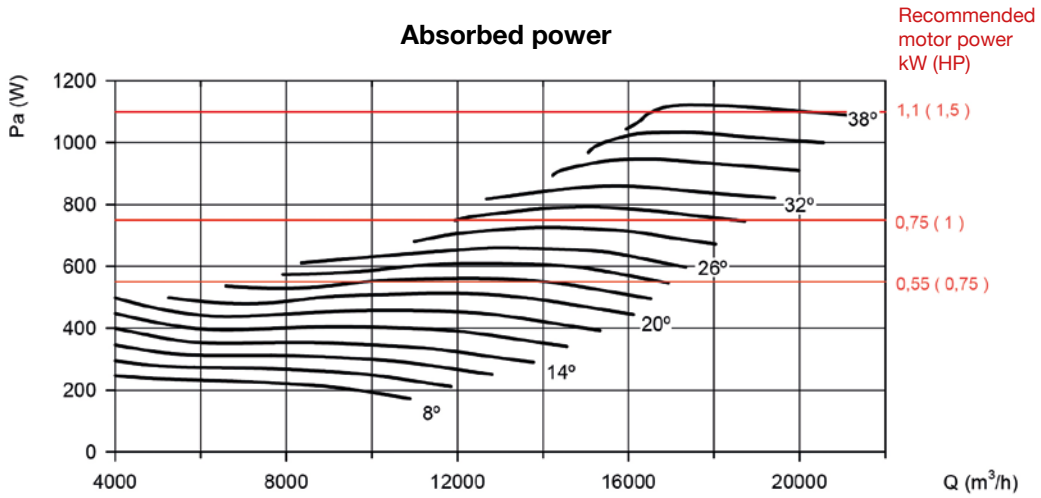
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 71 **Number of motor poles: 6** **Number of blades: 6**



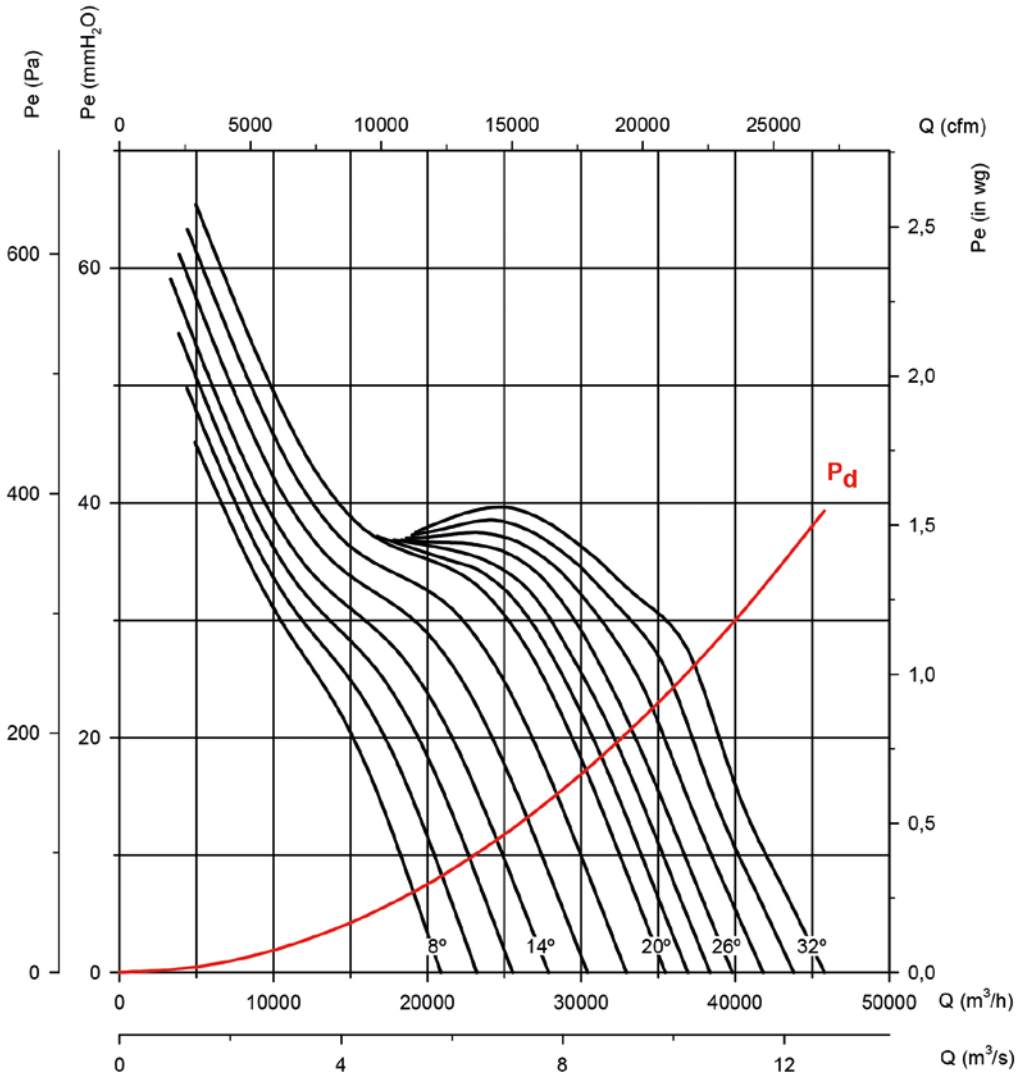
Absorbed power



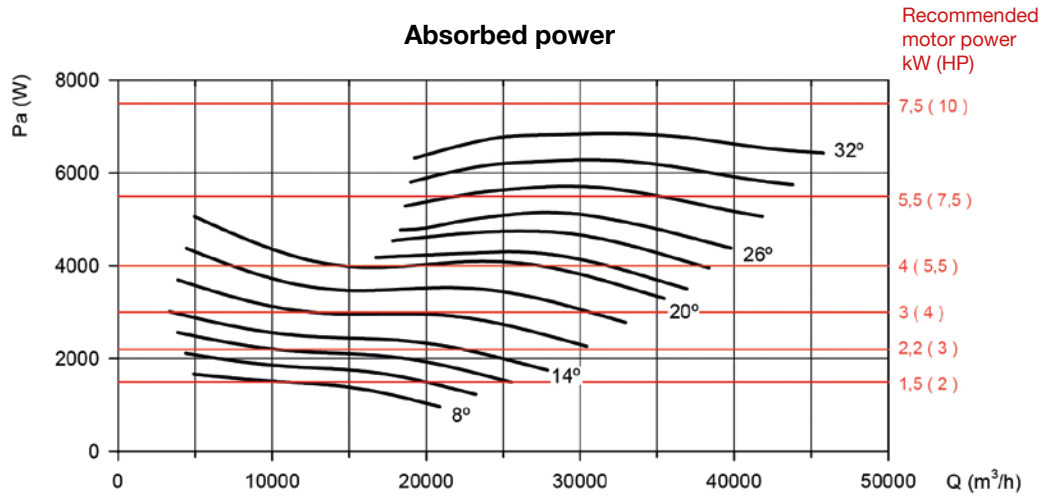
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 80 **Number of motor poles: 4** **Number of blades: 6**



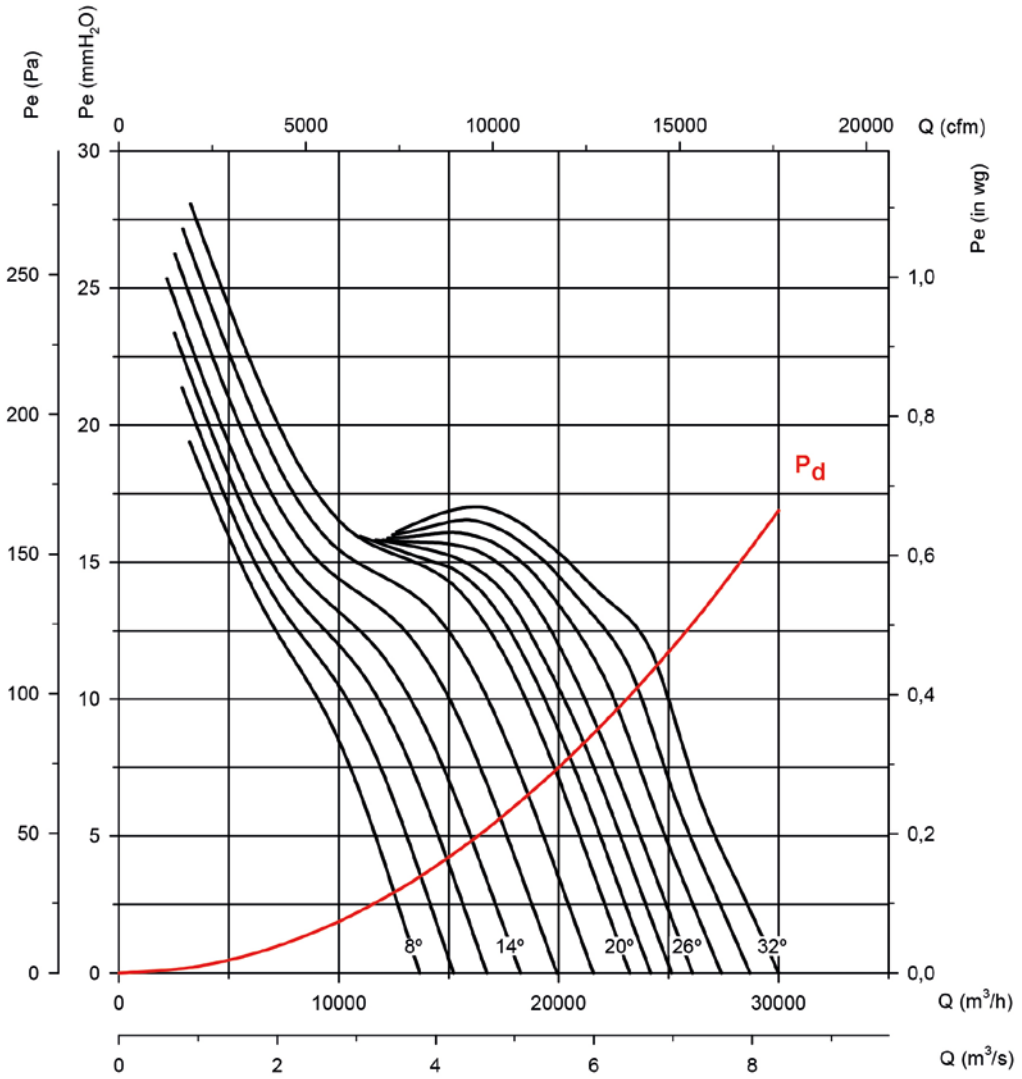
Absorbed power



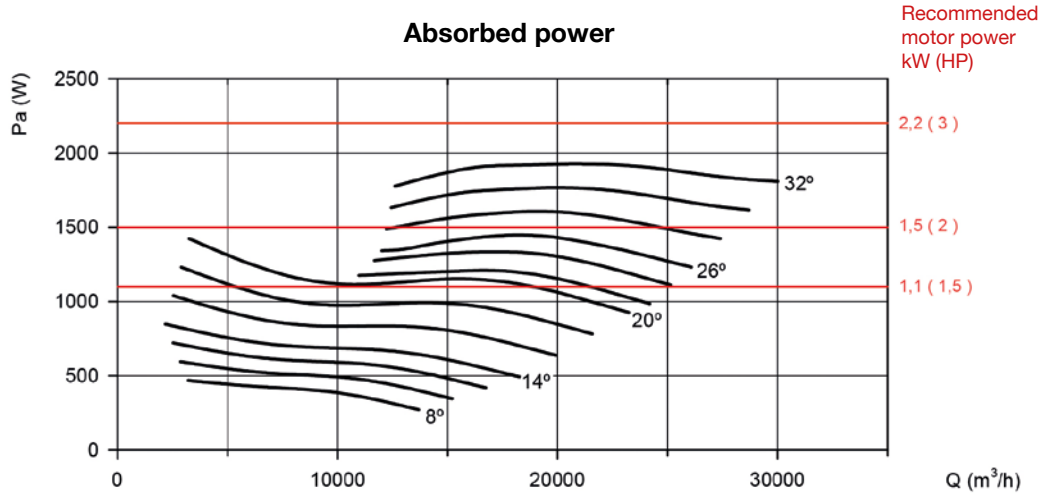
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 80 **Number of motor poles: 6** **Number of blades: 6**



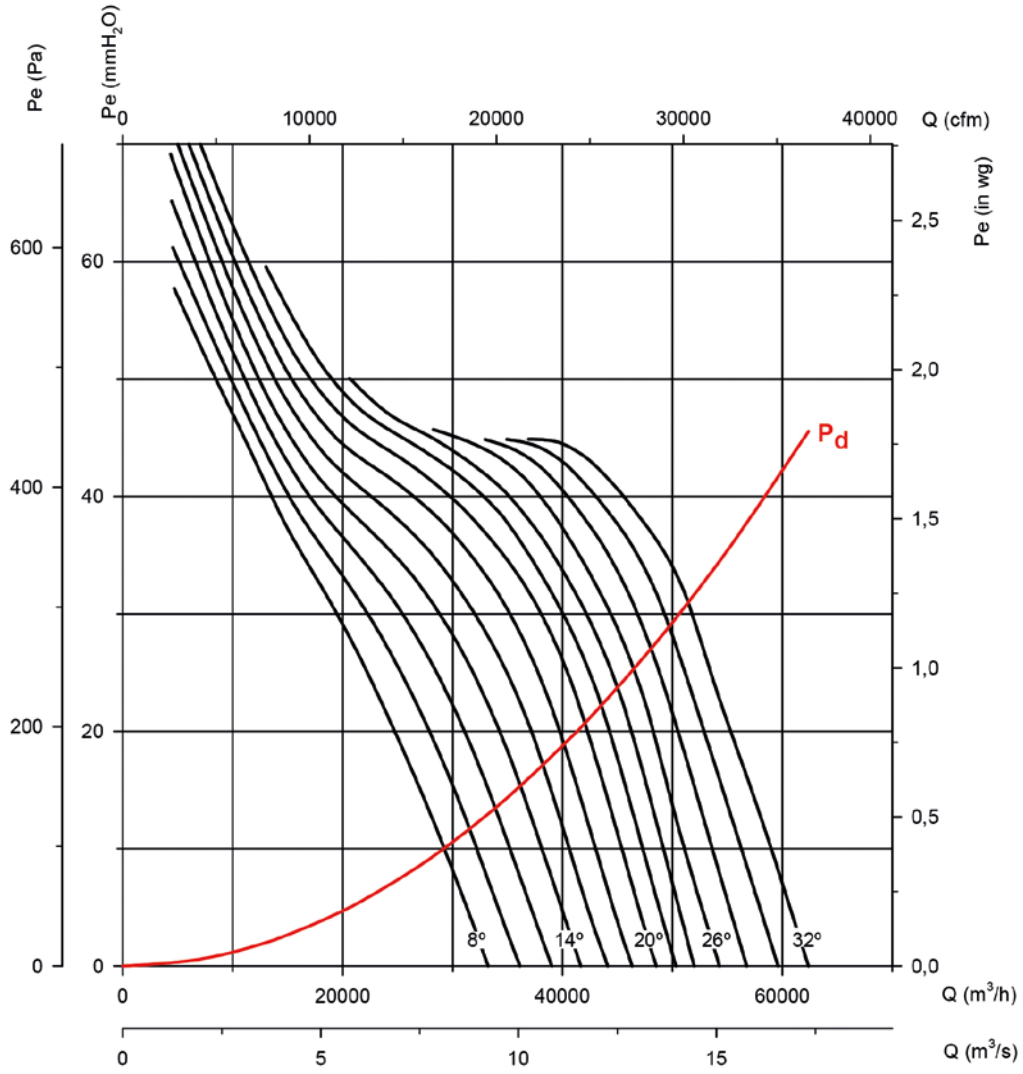
Absorbed power



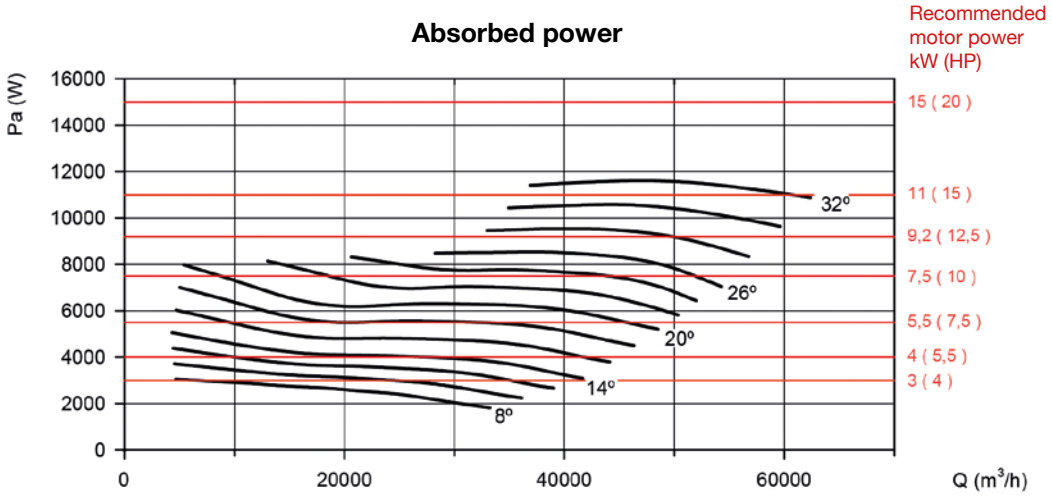
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 90 **Number of motor poles: 4** **Number of blades: 6**



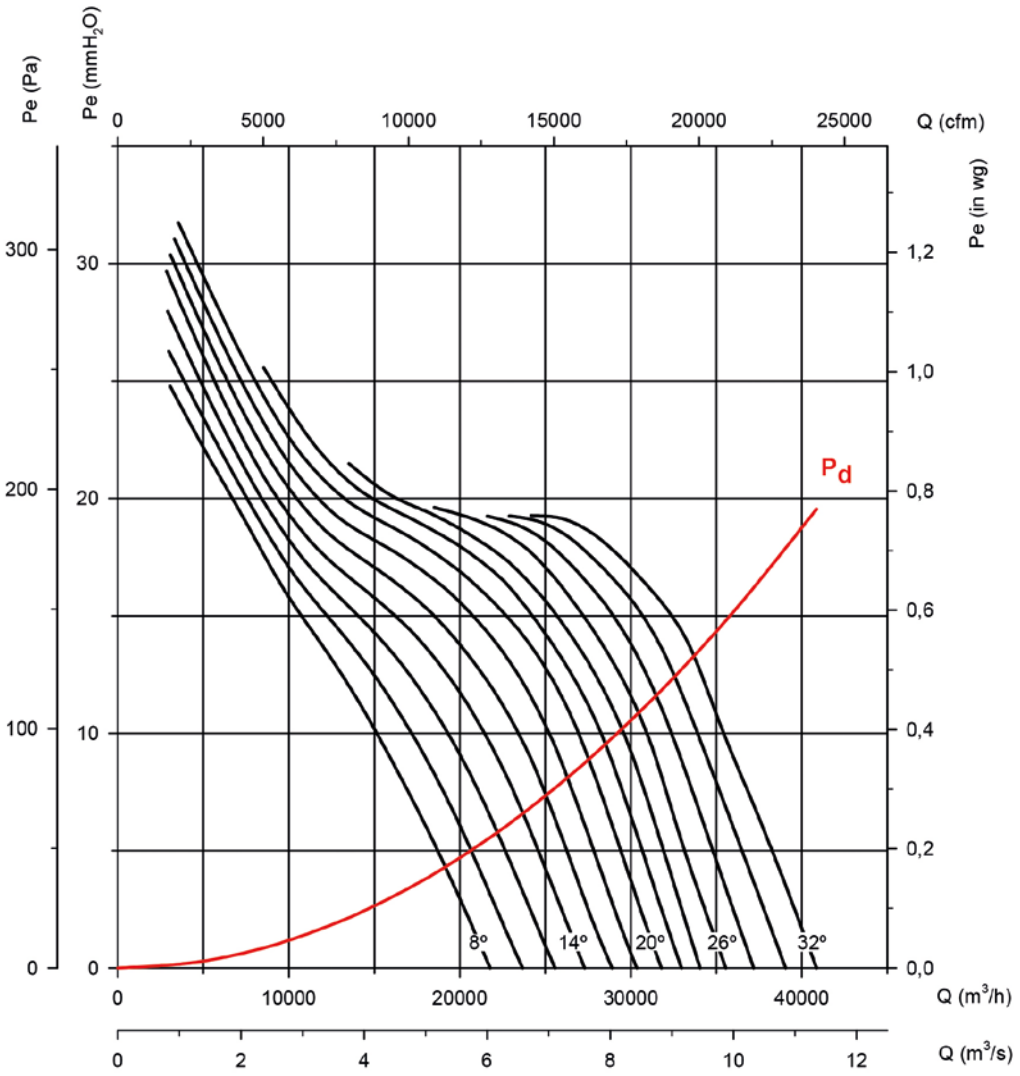
Absorbed power



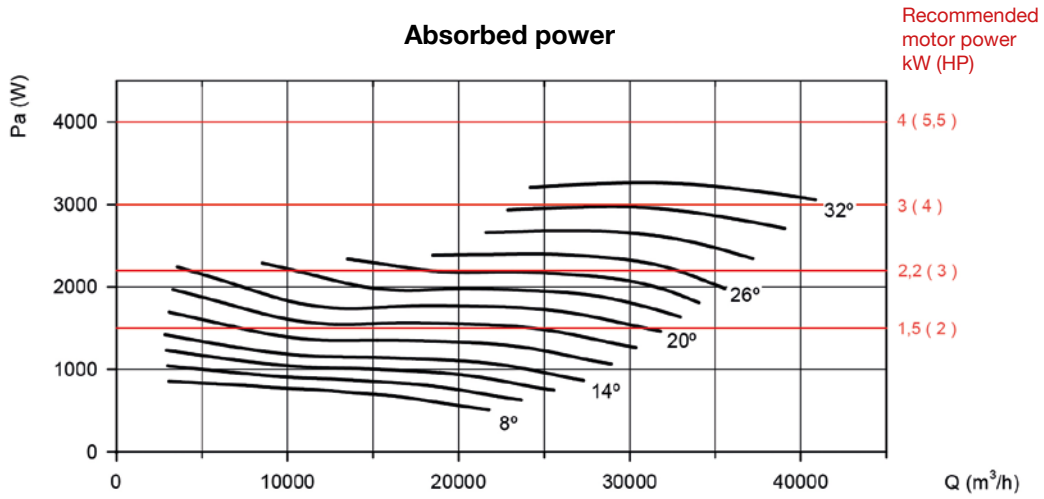
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 90 **Number of motor poles: 6** **Number of blades: 6**



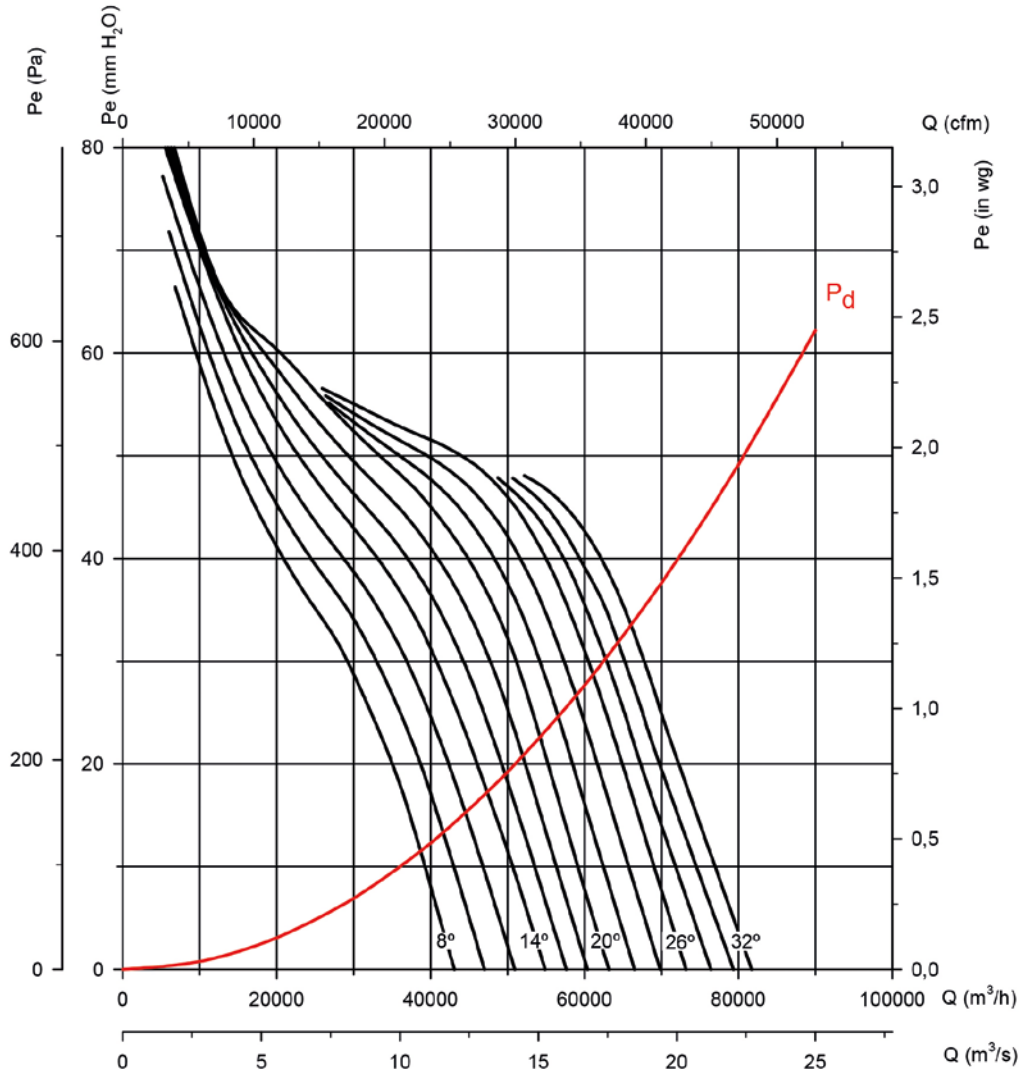
Absorbed power



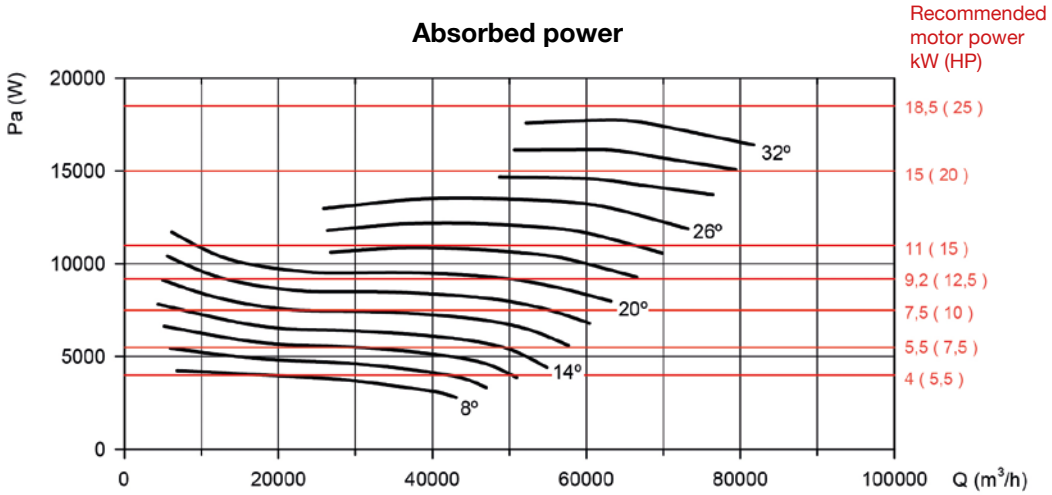
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 100 **Number of motor poles: 4** **Number of blades: 6**



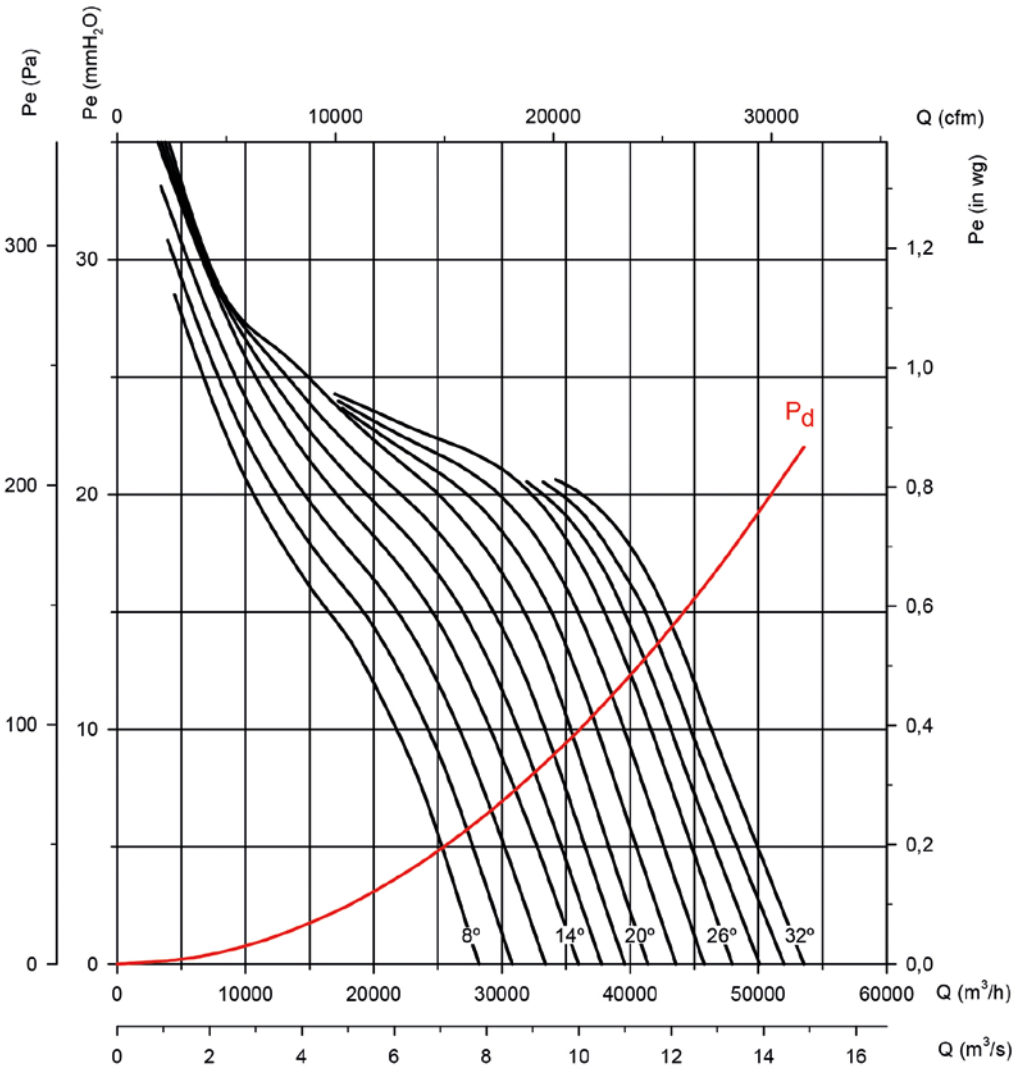
Absorbed power



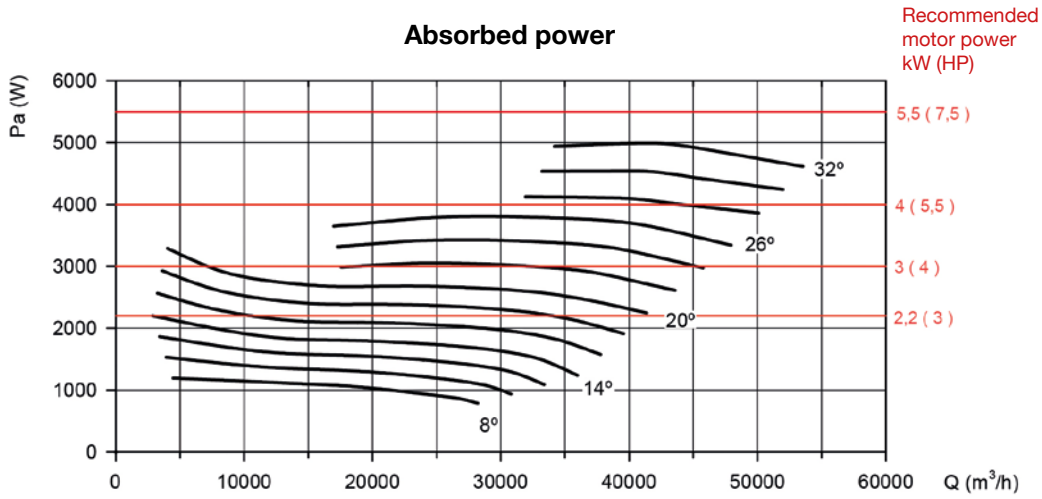
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 100 **Number of motor poles: 6** **Number of blades: 6**



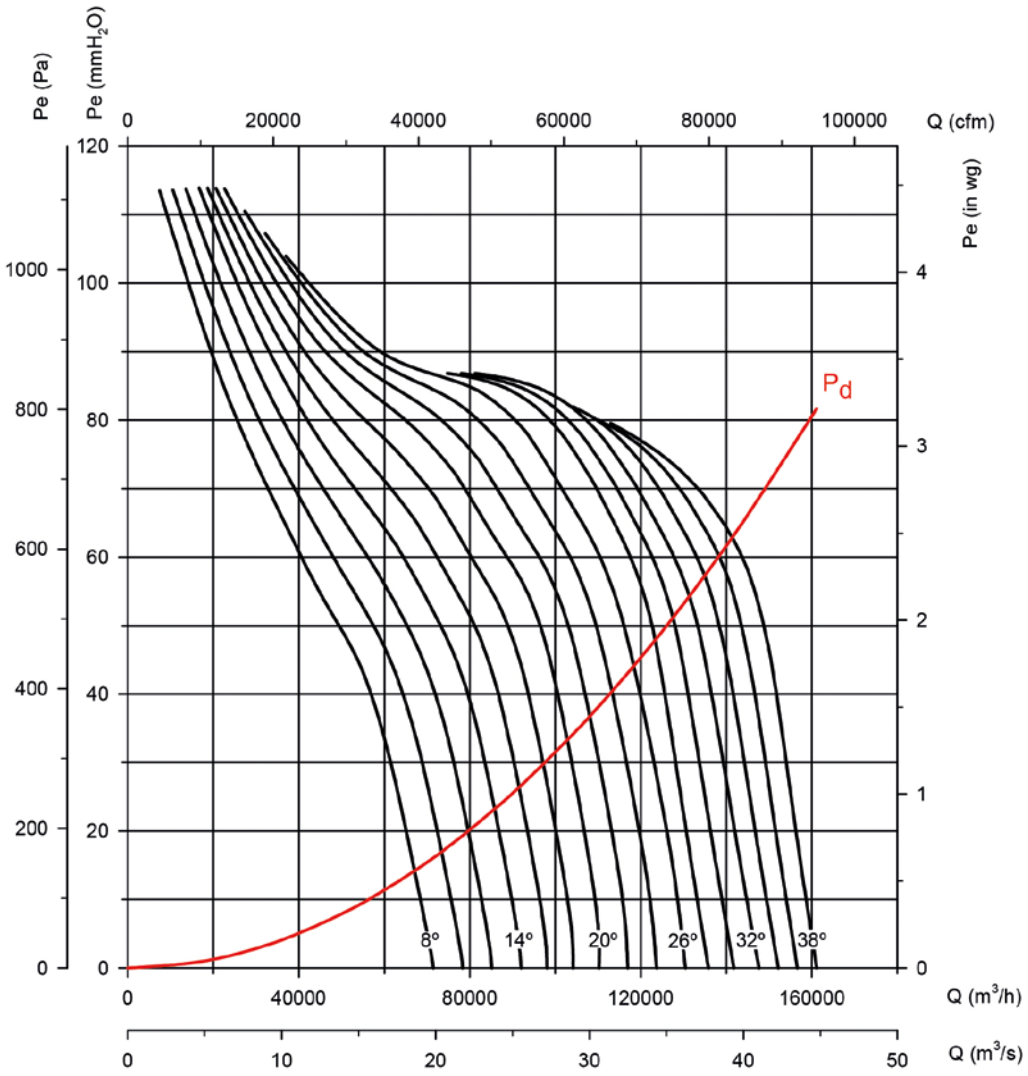
Absorbed power



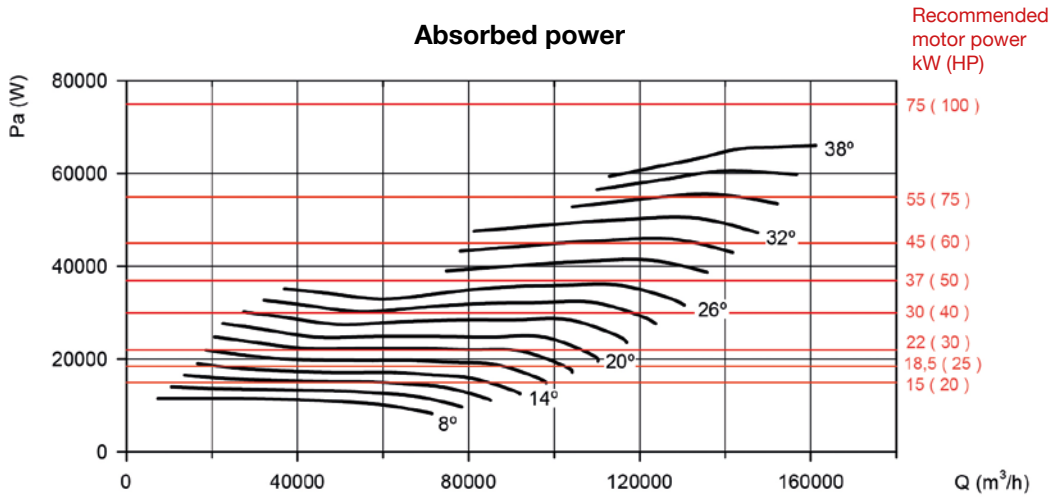
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 125 **Number of motor poles: 4** **Number of blades: 6**



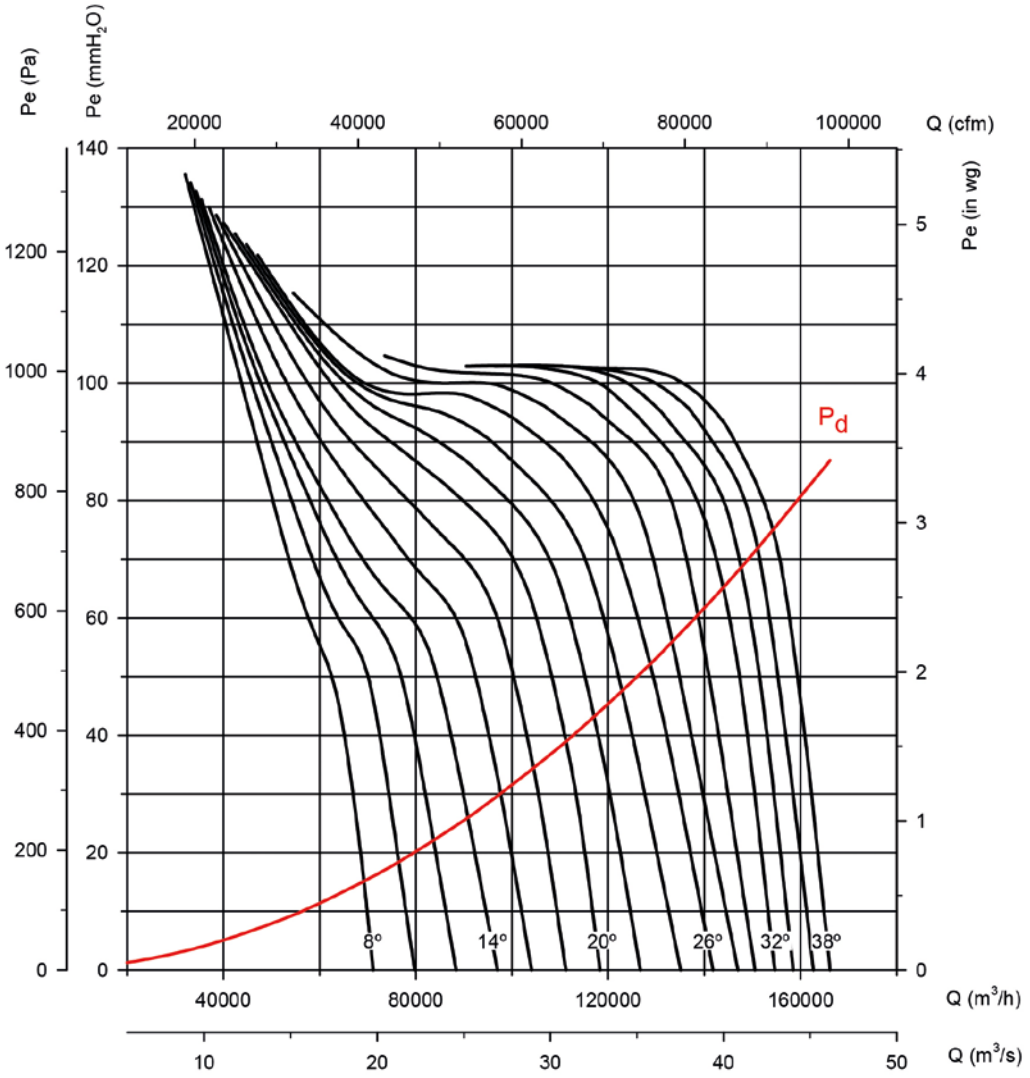
Absorbed power



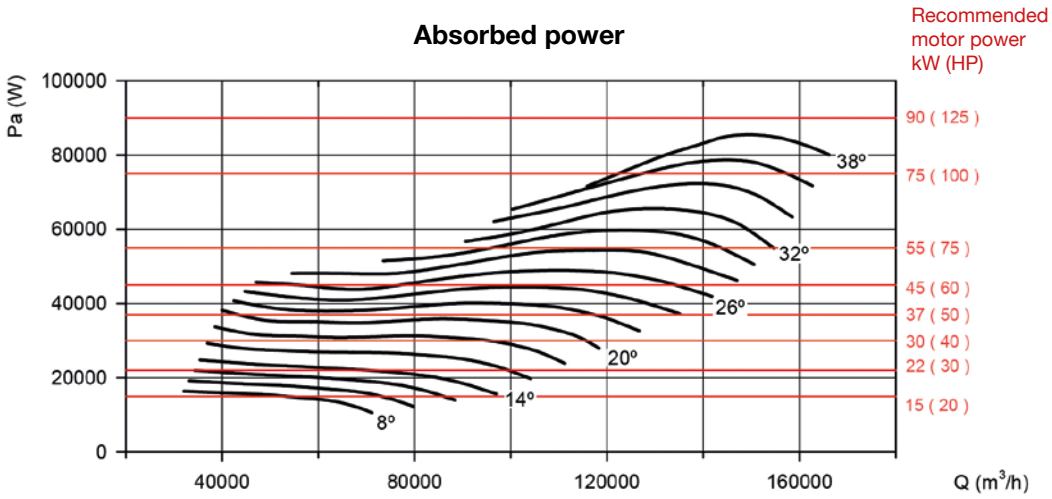
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 125 **Number of motor poles: 4** **Number of blades: 9**



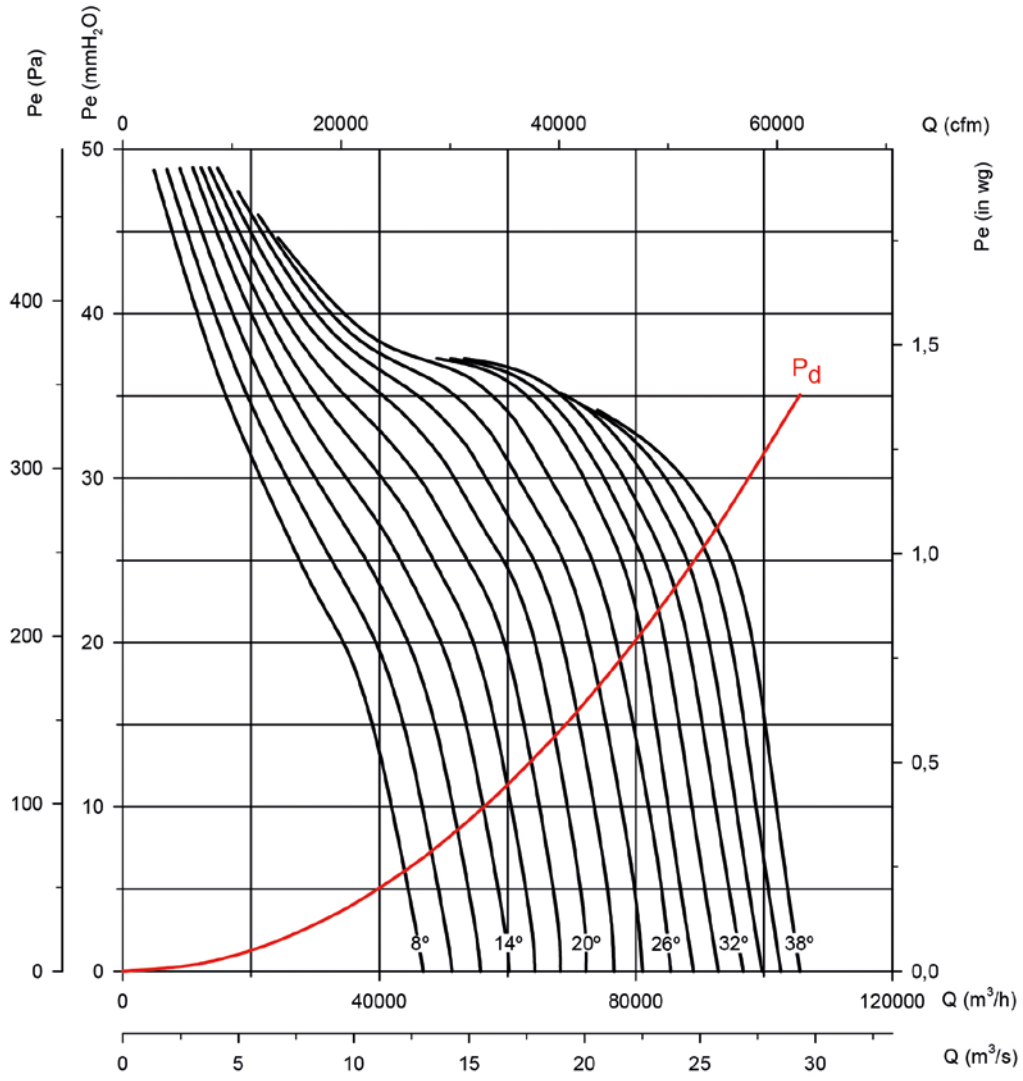
Absorbed power



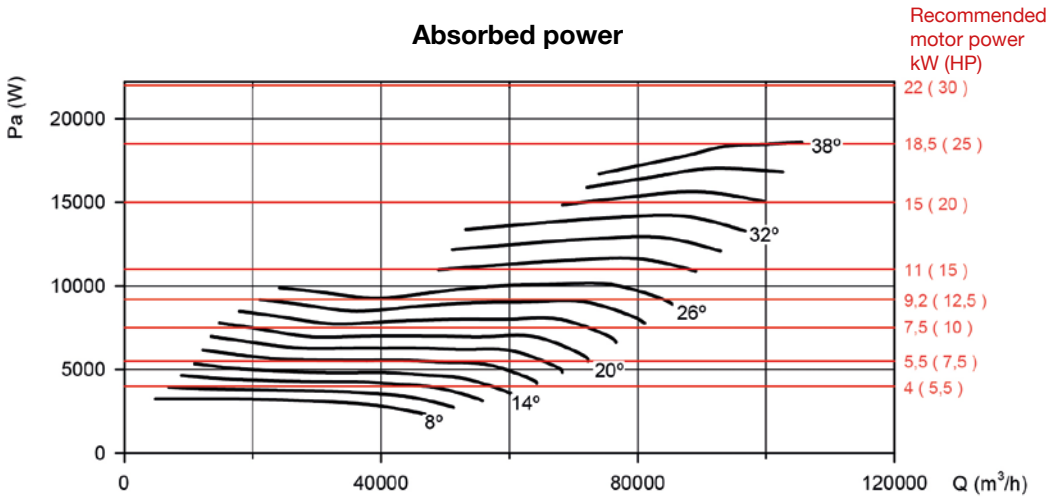
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 125 **Number of motor poles: 6** **Number of blades: 6**



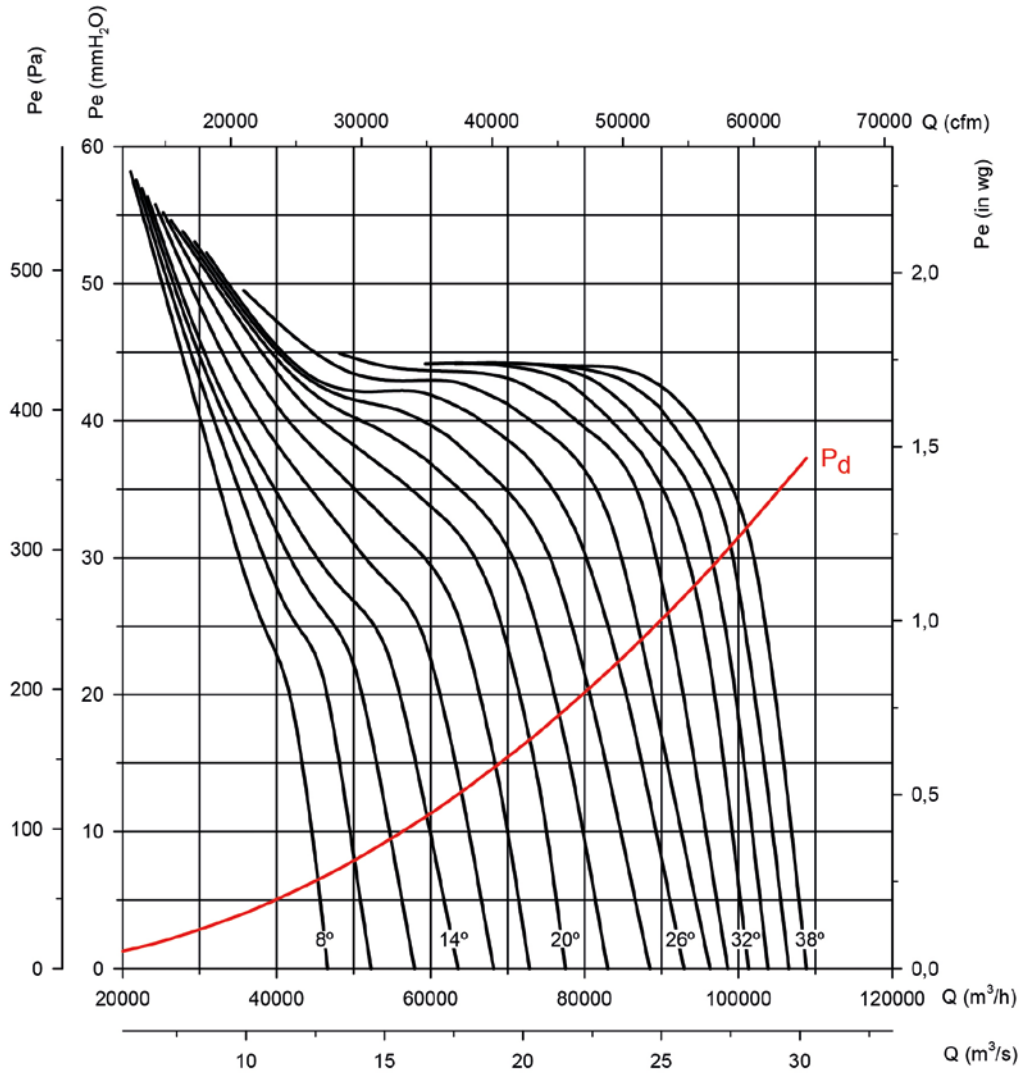
Absorbed power



Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg

Impeller diameter in cm: 125 **Number of motor poles: 6** **Number of blades: 9**



Absorbed power