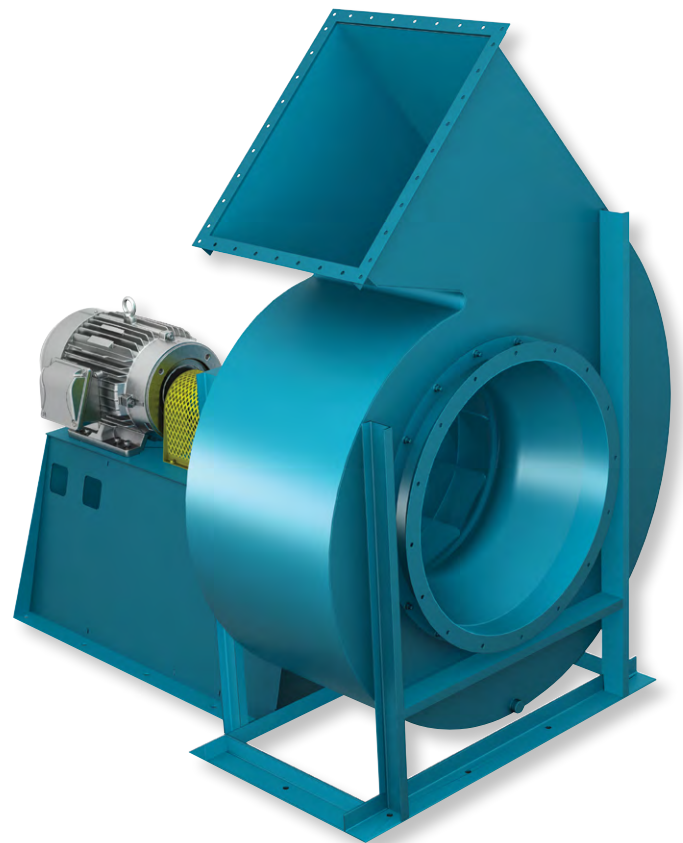




INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

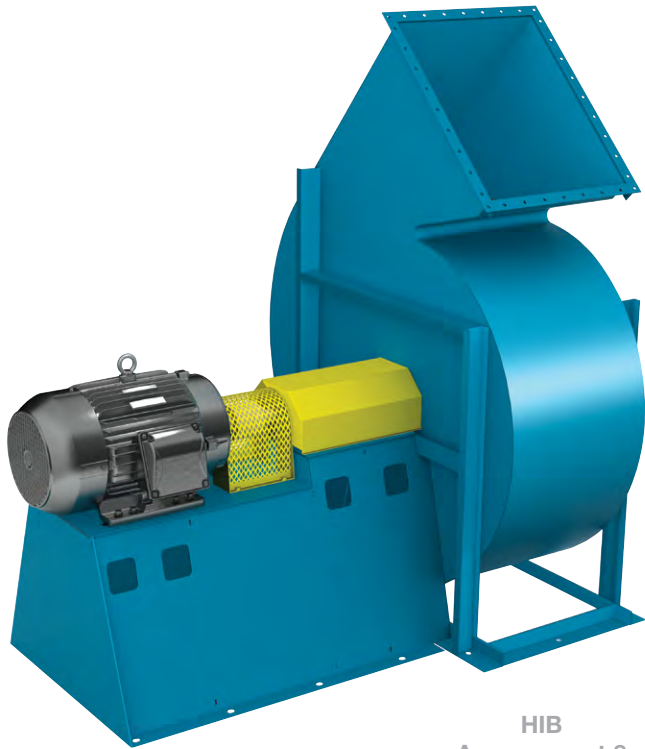
HIGH EFFICIENCY INDUSTRIAL BACKWARD CURVED FANS

MODEL HIB



Overview

Model HIB



HIB
Arrangement 8

Model HIB fans from Twin City Fan & Blower employ a high-efficiency backwardly-curved impeller in a robustly constructed fan housing. Designed to handle clean air or air with light dust loading, these fans are widely used on the clean side of baghouses, in high-efficiency filtration, forced-draft, and other high pressure process supply applications. The curve below shows the HIB's characteristic high efficiency over a broad range and its non-overloading power curve. Performance ratings shown in the curve are based on tests to AMCA Standard 210.

Standard Features

- High-efficiency, non-overloading impeller with continuously welded blades and a steel hub
- Statically and dynamically balanced rotor assembly
- Heavy duty self-aligning grease lubricated anti-friction split roller bearings
- Heavy-gauge reinforced housing and bearing pedestal for vibration-free service
- All fans standard with flanged inlet and outlet, access door, shaft seal, and drain
- Sizes 360 and larger fans are equipped with a pie-shaped split in the casing to permit the impeller and shaft to be removed without disturbing the inlet and outlet ductwork

Capabilities

Fan sizes from 180 to 800
Impeller diameters from 520 to 2,300 mm
High temperature construction to 425°C available

HIB Design 20

Suitable to 100 m/s tip speed
Pressure to 6,725 Pa

HIB Design 24

Suitable to 120 m/s tip speed
Pressure to 10,000 Pa



HIB High-Efficiency
Backward-Curved Impeller



Overview

Model HIB

Arrangement 1

The usual choice for many V-belt drive applications. Impeller is overhung. Steel bearing pedestal to size 730. Size 800 requires a concrete pedestal. Check with the factory for V-belt drive applications larger than 185 kW.

Arrangement 3SI

Single width-single inlet fan with integral inlet box and independent bearing pedestals. The impeller is supported between two bearings.

Arrangement 7SI

Arrangement 7SI is direct drive. Like the Arrangement 3SI, the impeller is mounted between the bearings. The Arrangement 7SI includes an integrated inlet box to locate the bearing outside of the airstream.

Arrangement 8

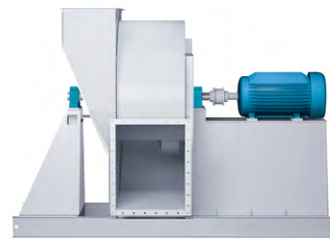
Direct coupled with a flexible coupling. The motor pedestal can be custom fabricated out of steel for up to 300 kW. On larger powered units, use of standard Arrangement 1 fan with a concrete pedestal for the motor is advisable. Variations in impeller diameters and impeller widths are available to match design performance at motor speeds. Characteristic curves showing performances at direct drive speeds are available on request.



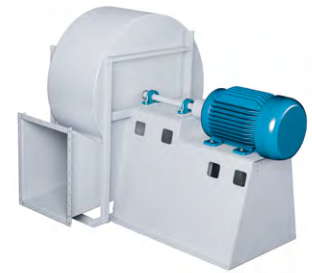
Arrangement 1



Arrangement 3SI



Arrangement 7SI



Arrangement 8

Options/Accessories

Inlet Box Dampers

Pre-spin design, heavy-duty construction. The damper will spin the air in the direction of impeller rotation resulting in a savings in power at reduced loads.

Variable Inlet Vanes

Works on the same principle as inlet box dampers. Nested and external type variable inlet vanes are available.

Evasé

Usually fabricated by customer as part of the ductwork. Fan outlet must be expanded to equal evasé area shown in the catalog to obtain rated performance. Same gauge as fan housing when purchased from the factory.

Temperature and Vibration Detectors

Thermocouples or RTDs can be installed on the bearings. Various types of vibration switches are available.

High Temperature Construction

150 to 260°C: Requires addition of shaft cooler and high temperature grease bearings.

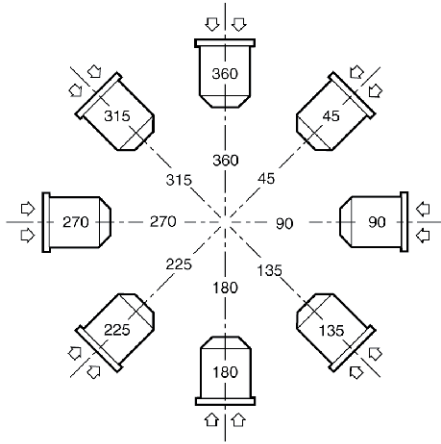
261 to 315°C: Above modifications plus high temperature aluminium paint.

316 to 425°C: Above modifications plus modified pedestal design.

Inlet Boxes

Integral or detached type generously designed to minimise pressure drop.

Inlet Box Positions For Centrifugal Fans



INLET BOX POSITIONS AND DESCRIPTIONS
45 — Angular Down Intake
90 — Horizontal Right Intake
135 — Angular Up Intake
180 — Bottom Up Intake
225 — Angular Up Intake
270 — Horizontal Left Intake
315 — Angular Down Intake
360 — Top Down Intake

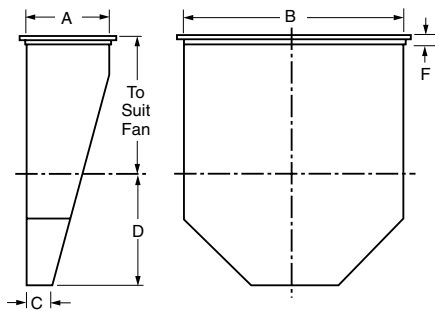
Reference line is the Top Vertical Axis through center of fan shaft.

Position of inlet box and air entry to inlet box is determined from drive side of fan.

Position of inlet box is designated in degrees clockwise from Top Vertical Axis as shown.

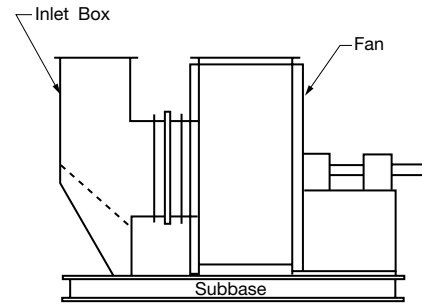
Positions 135° to 225° in some cases interfere seriously with floor structure.

Typical Inlet Box Dimensions

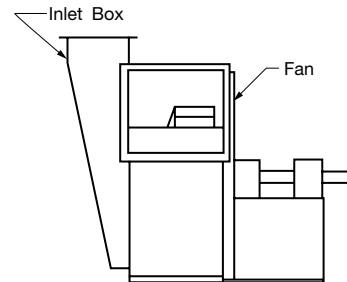


FAN SIZE	A	B	C	D	INLET AREA (m ²)	F
180	248	730	81	254	1.85	38 x 38
200	270	800	81	279	2.22	38 x 38
220	298	889	81	305	2.81	38 x 38
240	330	978	81	318	3.34	38 x 38
270	365	1080	81	356	4.10	38 x 38
300	403	1191	81	381	5.00	38 x 38
330	454	1324	81	419	6.11	50 x 50
360	492	1457	81	510	7.52	50 x 50
400	543	1610	81	556	9.20	65 x 65
450	594	1762	106	622	11.00	65 x 65
490	657	1952	106	678	13.60	65 x 65
540	724	2146	133	730	16.30	65 x 65
600	800	2375	133	784	20.00	75 x 75
660	886	2629	133	849	24.60	75 x 75
730	978	2908	159	940	30.00	90 x 90
800	1080	3213	159	1026	36.80	90 x 90

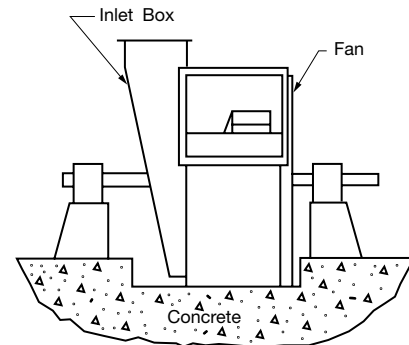
Inlet Box Arrangements



Arr. 1 fan with detached inlet box. Can also be supplied in Arr. 8.



Arr. 1 fan with attached or integral inlet box. Can also be supplied in Arr. 8.



Arr. 3 SI fan with integral inlet box, centrally supported impeller, independent bearings pedestals to be installed on concrete pedestals.

Dimensions are in mm unless otherwise indicated. Dimensions are not to be used for construction.

Performance Correction for Temperature and Altitude

The performance tables in this catalog are based on fans handling standard air at a density of 1.2 kg/m³. This is equivalent to 21°C at sea level (101.325 kPa barometric pressure). When specified performance is at a density different than standard, it must be converted to the equivalent standard conditions before entering the performance tables. The equivalent standard conditions can be calculated by using the “Temperature and Altitude Correction Factors” from the table below.

Temperature and Altitude Correction Factors

AIR TEMP °C	ALTITUDE IN METRES ABOVE SEA LEVEL											
	0	300	600	900	1200	1500	1750	2000	2400	2800	3500	4500
	BAROMETRIC PRESSURE IN kPa											
	101.32	97.77	94.32	90.97	87.71	84.55	81.99	79.49	75.62	71.91	65.76	57.73
20	1.000	0.965	0.931	0.898	0.866	0.835	0.809	0.785	0.746	0.710	0.649	0.570
40	0.936	0.903	0.871	0.840	0.810	0.781	0.757	0.734	0.699	0.664	0.608	0.533
65	0.867	0.837	0.807	0.778	0.751	0.724	0.702	0.680	0.647	0.615	0.563	0.494
100	0.786	0.758	0.732	0.706	0.680	0.656	0.636	0.617	0.587	0.558	0.510	0.448
125	0.736	0.710	0.685	0.661	0.637	0.614	0.596	0.577	0.549	0.522	0.478	0.419
150	0.693	0.669	0.645	0.622	0.600	0.578	0.561	0.544	0.517	0.492	0.450	0.395
175	0.654	0.631	0.609	0.587	0.566	0.546	0.529	0.513	0.488	0.464	0.424	0.373
200	0.619	0.597	0.576	0.556	0.536	0.517	0.501	0.486	0.462	0.439	0.402	0.353
225	0.588	0.567	0.547	0.528	0.509	0.491	0.476	0.461	0.439	0.417	0.382	0.335
250	0.560	0.540	0.521	0.503	0.485	0.467	0.453	0.439	0.418	0.397	0.363	0.319
275	0.535	0.516	0.498	0.480	0.463	0.446	0.433	0.420	0.399	0.380	0.347	0.305
300	0.511	0.493	0.476	0.459	0.442	0.426	0.414	0.401	0.381	0.363	0.332	0.291
350	0.470	0.454	0.438	0.422	0.407	0.392	0.380	0.369	0.351	0.334	0.305	0.268
375	0.452	0.436	0.421	0.406	0.391	0.377	0.366	0.355	0.337	0.321	0.293	0.258
400	0.435	0.420	0.405	0.391	0.377	0.363	0.352	0.341	0.325	0.309	0.282	0.248
425	0.420	0.405	0.391	0.377	0.364	0.350	0.340	0.330	0.313	0.298	0.273	0.239
450	0.405	0.391	0.377	0.364	0.351	0.338	0.328	0.318	0.302	0.287	0.263	0.231
500	0.379	0.366	0.353	0.340	0.328	0.316	0.307	0.297	0.283	0.269	0.246	0.216
550	0.356	0.344	0.331	0.320	0.308	0.297	0.288	0.279	0.266	0.253	0.231	0.203
600	0.336	0.324	0.313	0.302	0.291	0.280	0.272	0.264	0.251	0.238	0.218	0.191

Example:

Assume a Model HIB 540 to handle 16.5 m³/sec at 3250 Pa SP at 250°C at an altitude of 900 m.

1. Knowing the operating conditions are 250°C and 900 m altitude, the correction factor can be found in the table above to be 0.503.

2. Divide the operating SP by this factor:

$$3250 \div 0.503 = 6460 \text{ Pa SP}$$

This is the equivalent SP at standard air density.

3. Enter the HIB 540 performance table with 16.5 m³/sec and 6460 Pa SP to find the fan RPM and power in kW.

The fan RPM is 1240. The absorbed power is 140 kW at standard conditions (140 kW is also sometimes referred to as “cold” or “starting” power).

To determine the power at operating conditions, multiply the absorbed power (kW) at standard conditions by the correction factor from the table above (140 kW x 0.503 = 70.5 kW). The absorbed power at operating conditions is 70.5 kW.

Derating Factors For High Temperature

TEMP. (°C)	STANDARD STEEL	STAINLESS STEEL	
		304	316
20	1.000	CONSULT FACTORY	CONSULT FACTORY
95	0.990		
150	0.975		
205	0.955		
260	0.930		
315	0.904		
370	0.880		
425	0.837		

Standard steel construction is suitable for use in gas temperatures to 425°C. Aluminum impellers are suitable for temperatures to 120°C only.

When a fan operates at temperatures higher than 20°C, the maximum RPMs allowable must be adjusted according to the de-rating factor found in the table at the left.

Stainless steel impellers must be derated even at ambient operating temperatures. Please consult factory for stainless steel derating factors.

Material and Mechanical Specifications

FAN SIZE	DESIGN	SHAFT DIA.	MAX. kW V-BELT DRIVE*	MIN. SHEAVE DIA.*	MAX. kW DIRECT DRIVE	MAX RPM**	IMPELLER GAUGES				WR ² VALUE (kg-m ²)	HSG. GAUGE (mm)
							BACK PLATE	BLADE	RING	IMPELLER CONE		
180	20	55	22	14	30	3724	6	3	---	3	0.80	5
	24	55	37	13	45	3839	8	5	---	3	0.97	5
200	20	55	22	15	37	3395	6	3	---	3	1.18	5
	24	60	37	14	55	3800	8	5	---	3	1.39	5
220	20	55	37	19	45	3058	6	3	---	3	1.77	5
	24	60	45	16	55	3670	8	5	---	3	2.06	5
240	20	55	45	21	55	2778	6	3	---	3	2.40	5
	24	70	55	18	75	3333	8	5	---	3	2.87	5
270	20	60	55	24	75	2515	8	3	3	3	5.31	5
	24	70	110	20	110	3018	8	5	5	3	5.94	5
300	20	70	75	28	110	2280	8	3	3	3	7.88	5
	24	75	150	22	150	2737	8	5	5	3	10.2	5
330	20	70	75	29	110	2065	8	3	3	3	11.9	5
	24	75	150	25	190	2478	8	5	5	3	14.3	5
360	20	75	110	32	110	1863	8	3	3	3	16.4	5
	24	90	190	29	225	2236	8	5	5	3	20.0	6
400	20	90	150	31	150	1688	8	3	3	5	27.7	5
	24	100	190	34	300	2026	10	5	5	5	36.1	6
450	20	90	150	37	190	1528	8	3	3	5	43.6	5
	24	100	190	29	375	1833	10	6	6	5	64.2	6
490	20	100	190	36	225	1386	10	5	5	5	82.3	5
	24	110	300	36	450	1790	12	6	6	5	101	6
540	20	100	190	44	300	1252	10	5	5	6	137	5
	24	110	300	44	525	1503	12	6	6	6	166	6
600	20	110	225	45	300	1132	12	5	6	6	229	6
	24	125	300	40	60	1358	12	6	8	6	249	6
660	20	110	225	53	375	1029	12	5	6	6	330	6
	24	125	300	47	745	1235	16	6	8	6	399	6
730	20	110	225	62	450	932	12	5	6	6	485	6
	24	125	300	55	900	1190	16	6	8	6	603	6
800†	20	125	300	65	525	842	12	5	6	6	721	6
	24	125	300	50	1045	1010	16	6	8	6	898	6

NOTES:

- * Minimum sheave diameter when using maximum motor power rating. Check with factory on applications over 200 kW.
- ** Maximum fan RPM listed is for carbon steel construction. For stainless steel construction, contact the factory.
- † Size 800 HIB is not supplied with conventional bearing pedestal. Instead, channel sub-bases are supplied. The sub-base is to be mounted on concrete pedestal in the field. Fan weights include weight of channel sub-base.

Bare Fan Weights (kg)

FAN SIZE	CLASS 20				CLASS 24			
	ARR. 1, 9	ARR. 4	ARR. 8	ARR. 9F	ARR. 1, 9	ARR. 4	ARR. 8	ARR. 9F
180	352	352	458	370	364	364	473	382
200	386	386	502	406	398	398	517	418
220	405	405	526	425	432	432	561	454
240	423	423	550	444	468	468	609	492
270	509	509	662	535	536	536	697	563
300	600	600	780	630	623	623	810	654
330	705	705	916	740	732	732	951	769
360	900	900	1170	945	1077	1077	1400	1131
400	1127	1127	1465	1184	1323	1323	1720	1389
450	1373	1373	1785	1441	1636	1636	2127	1718
490	1745	—	2269	1833	2027	—	2635	2129
540	2145	—	2789	2253	2523	—	3280	2649
600	2945	—	3829	3093	2995	—	3894	3145
660	3377	—	4390	3546	3591	—	4668	3770
730	4105	—	5336	4310	4359	—	5667	4577
800†	4036	—	5247	—	4377	—	5690	—

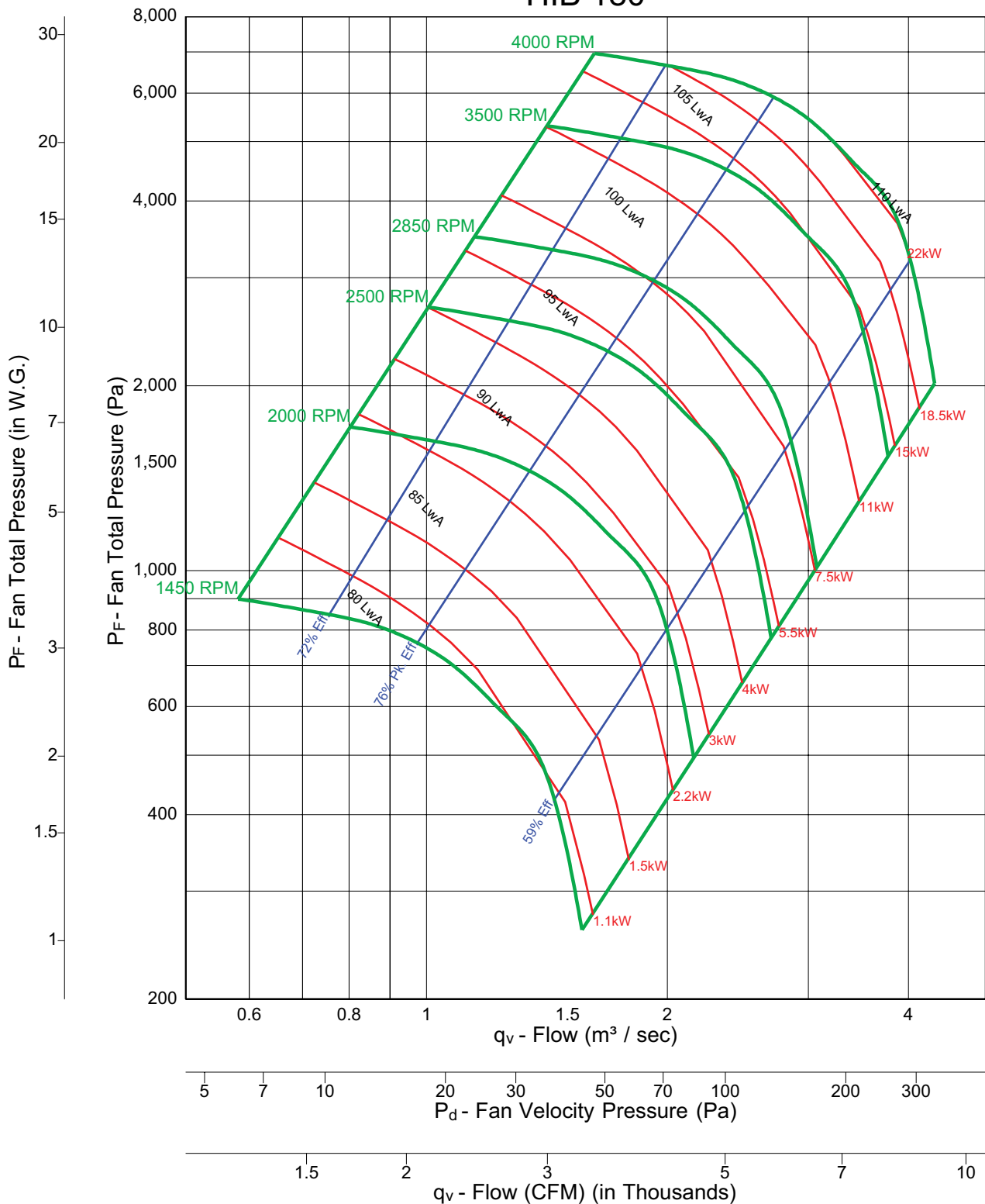
Impeller Weights (kg)

FAN SIZE	DESIGN	
	20	24
180	28	31
200	32	38
220	39	47
240	44	54
270	71	79
300	84	101
330	105	120
360	117	137
400	169	211
450	200	279
490	315	380
540	445	525
600	581	616
660	671	783
730	785	956
800	924	1144

NOTES:

- † Size 800 HIB is not supplied with conventional bearings pedestal. Instead, channel subbases are supplied. The subbase is to be mounted on concrete pedestal in the field. Fan weights include weight of channel subbase.

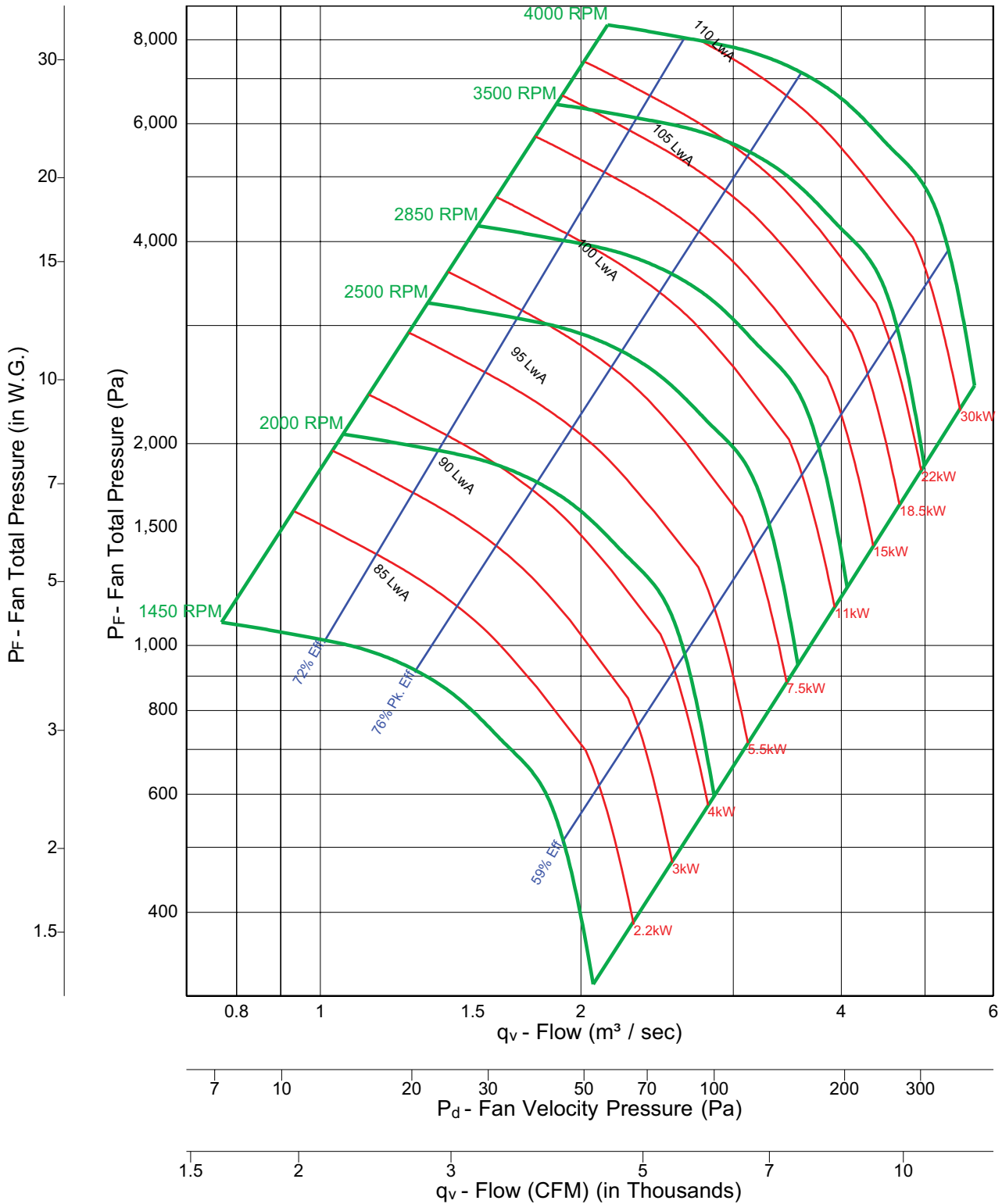
HIB 180



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwIA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

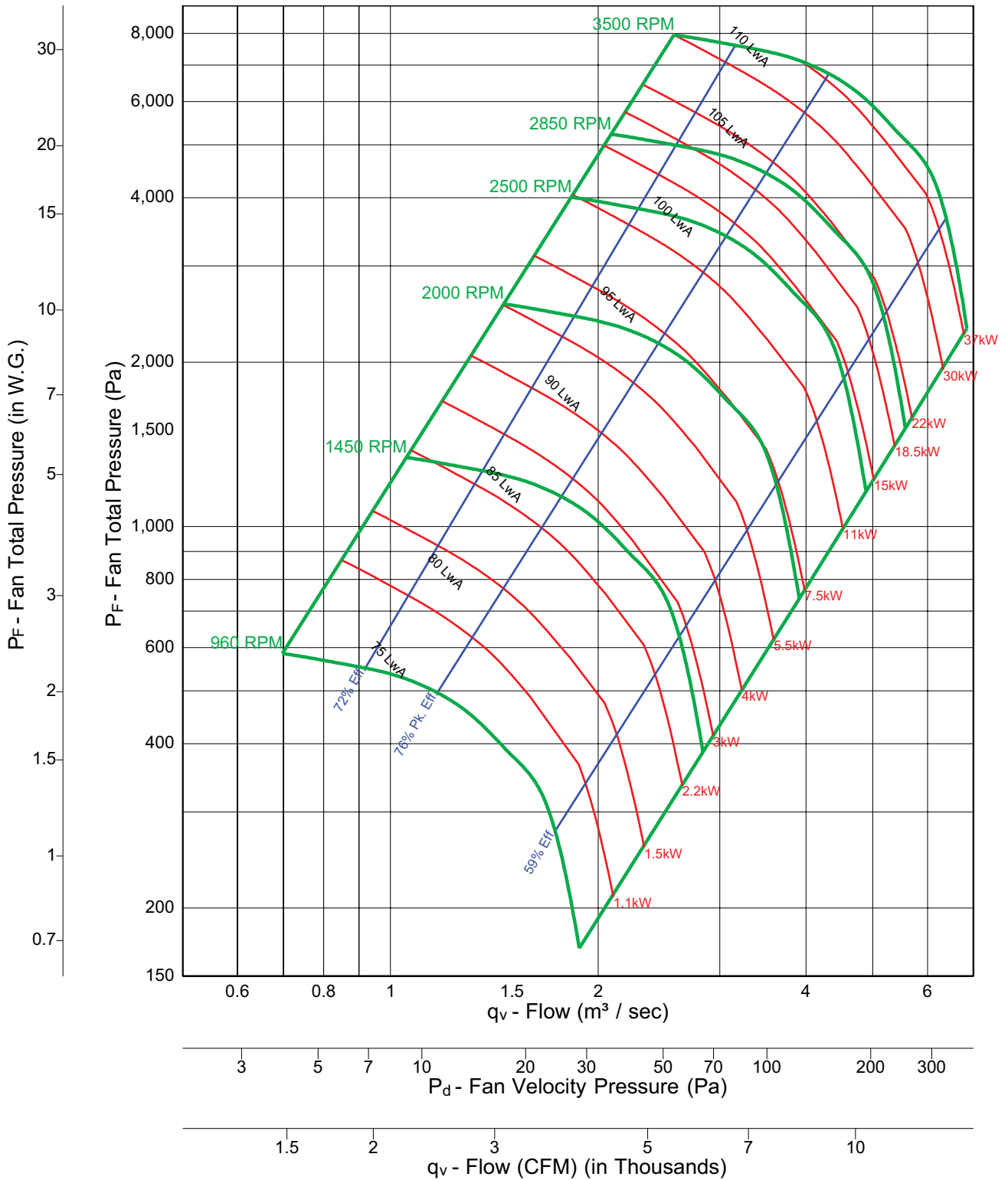
HIB 200



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

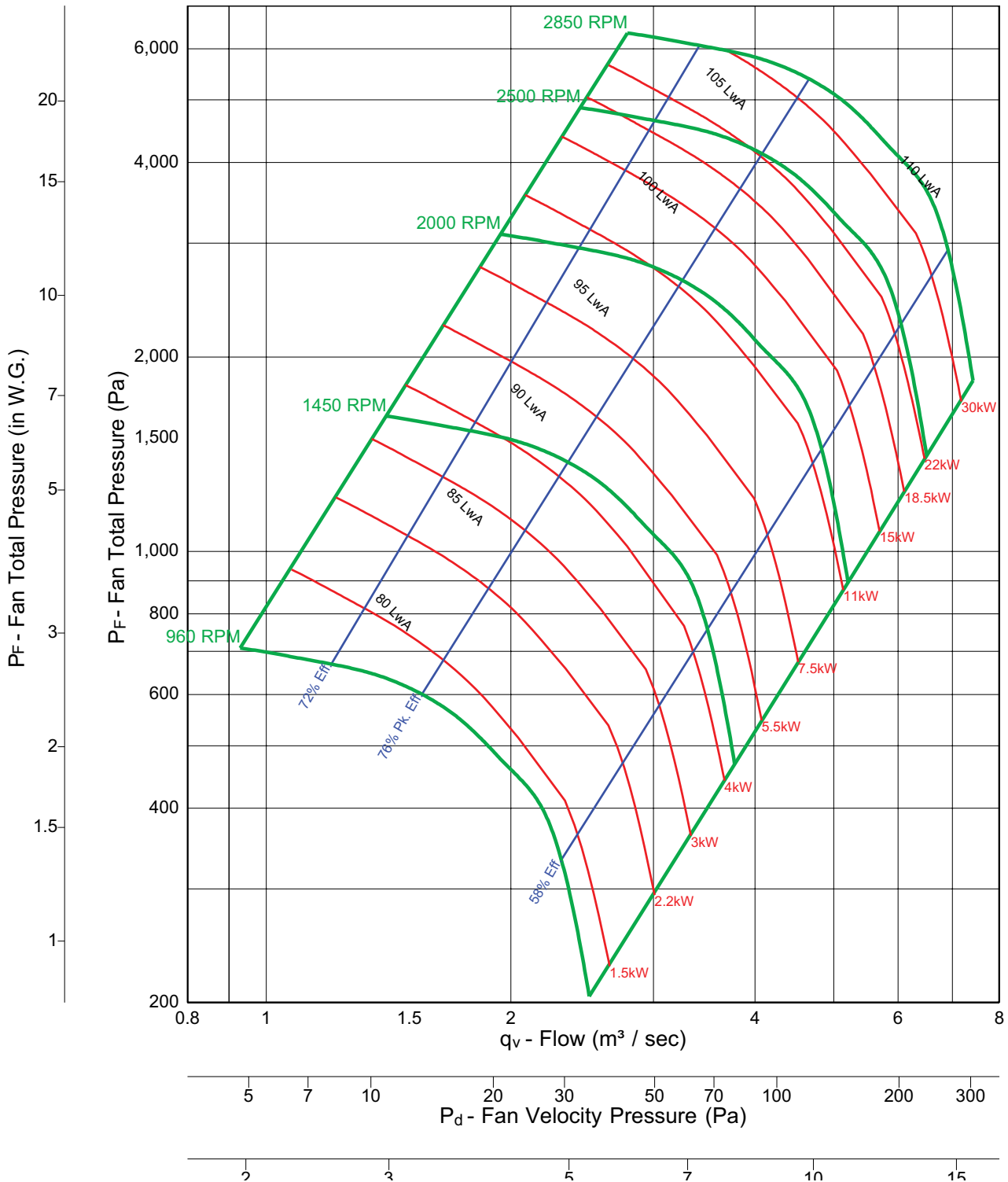
HIB 220



Notes:

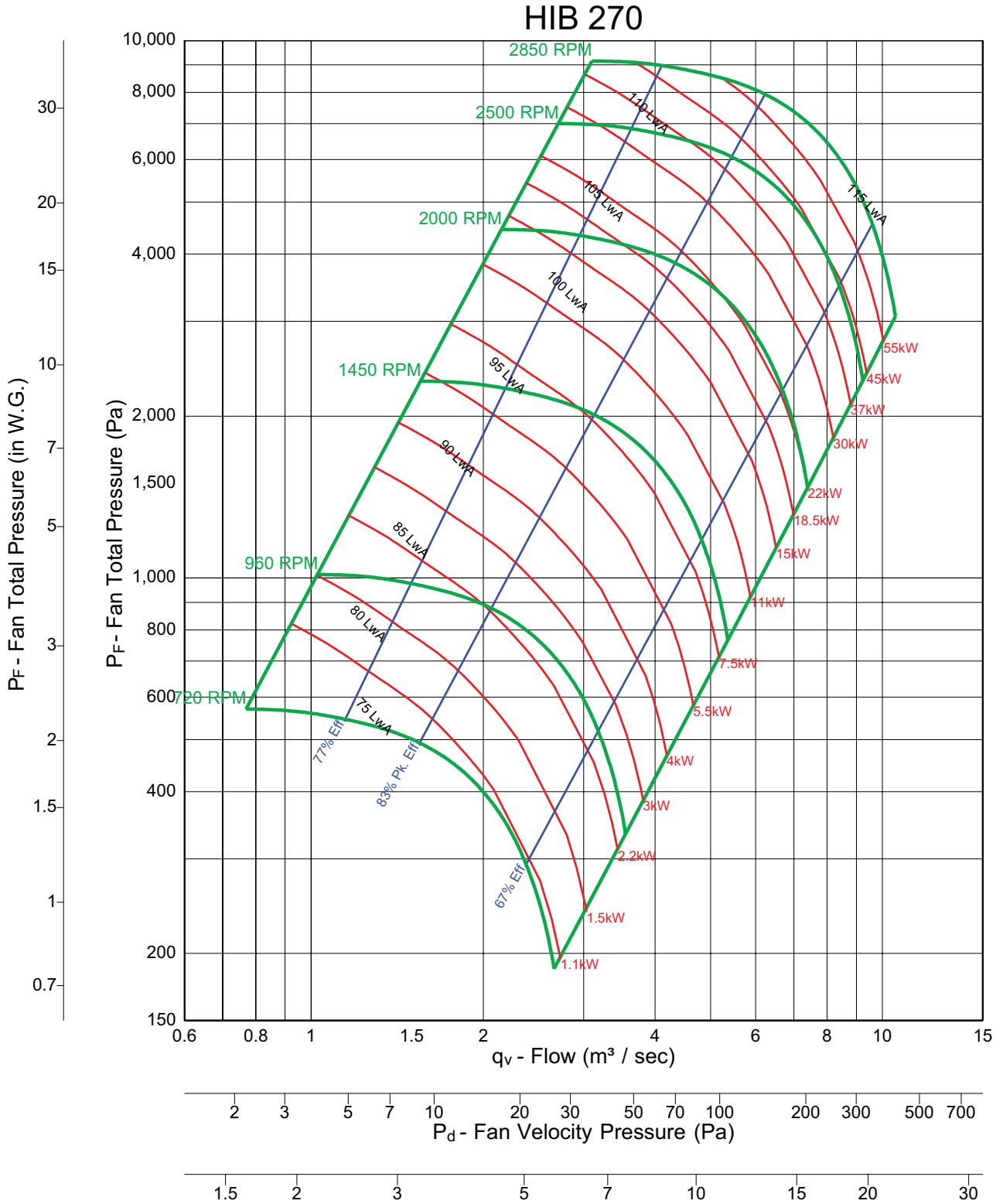
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

HIB 240



Notes:

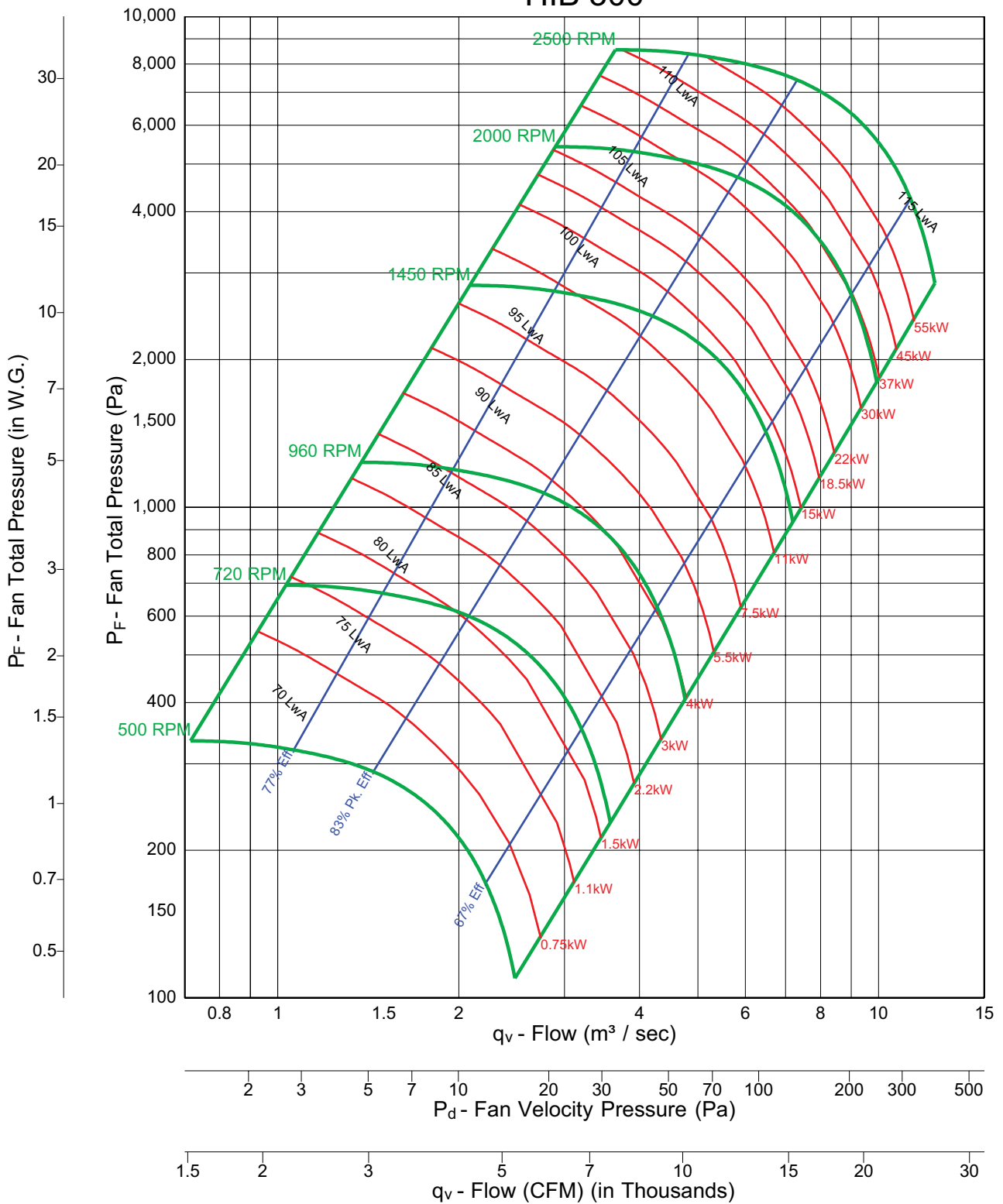
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

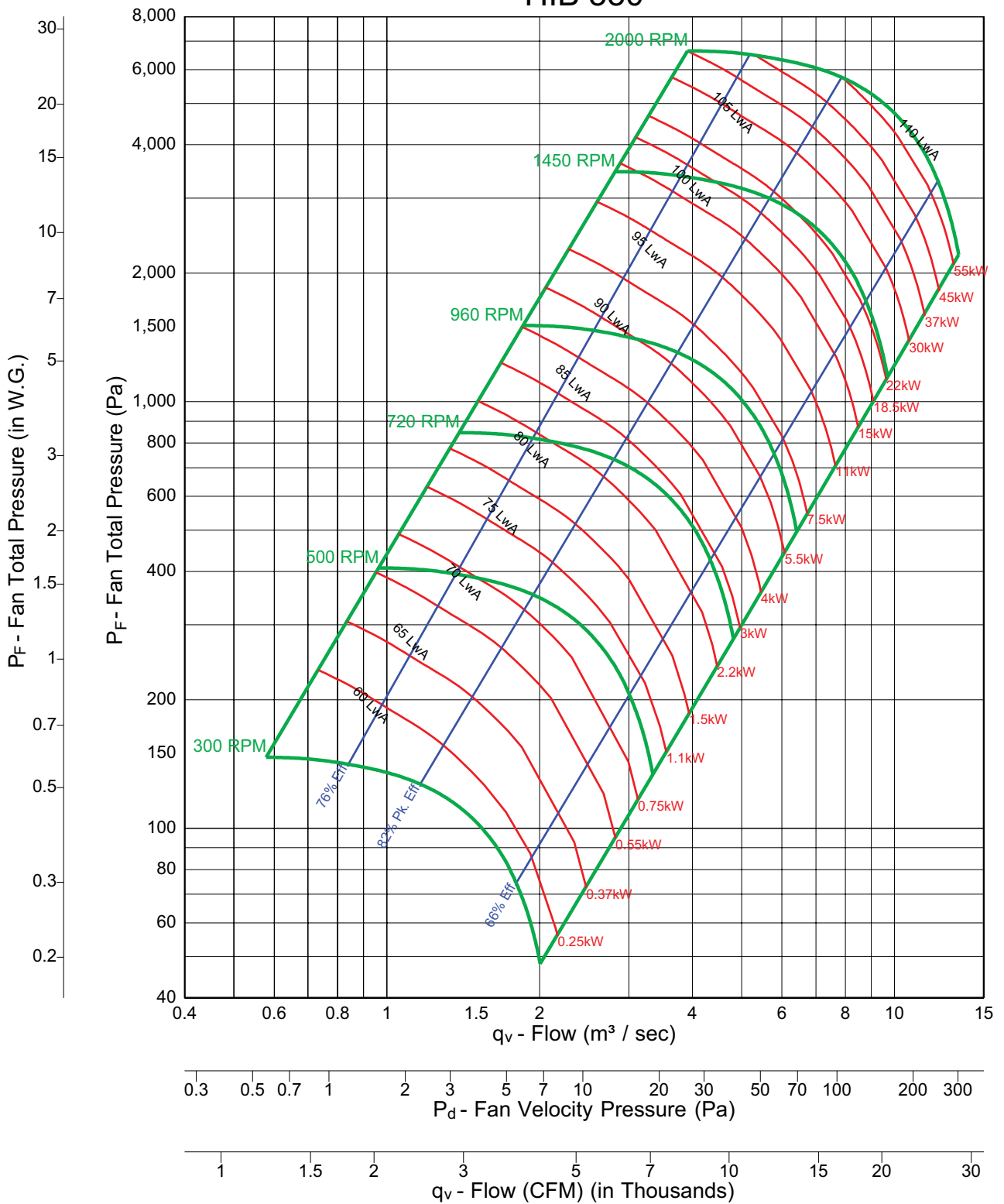
HIB 300



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

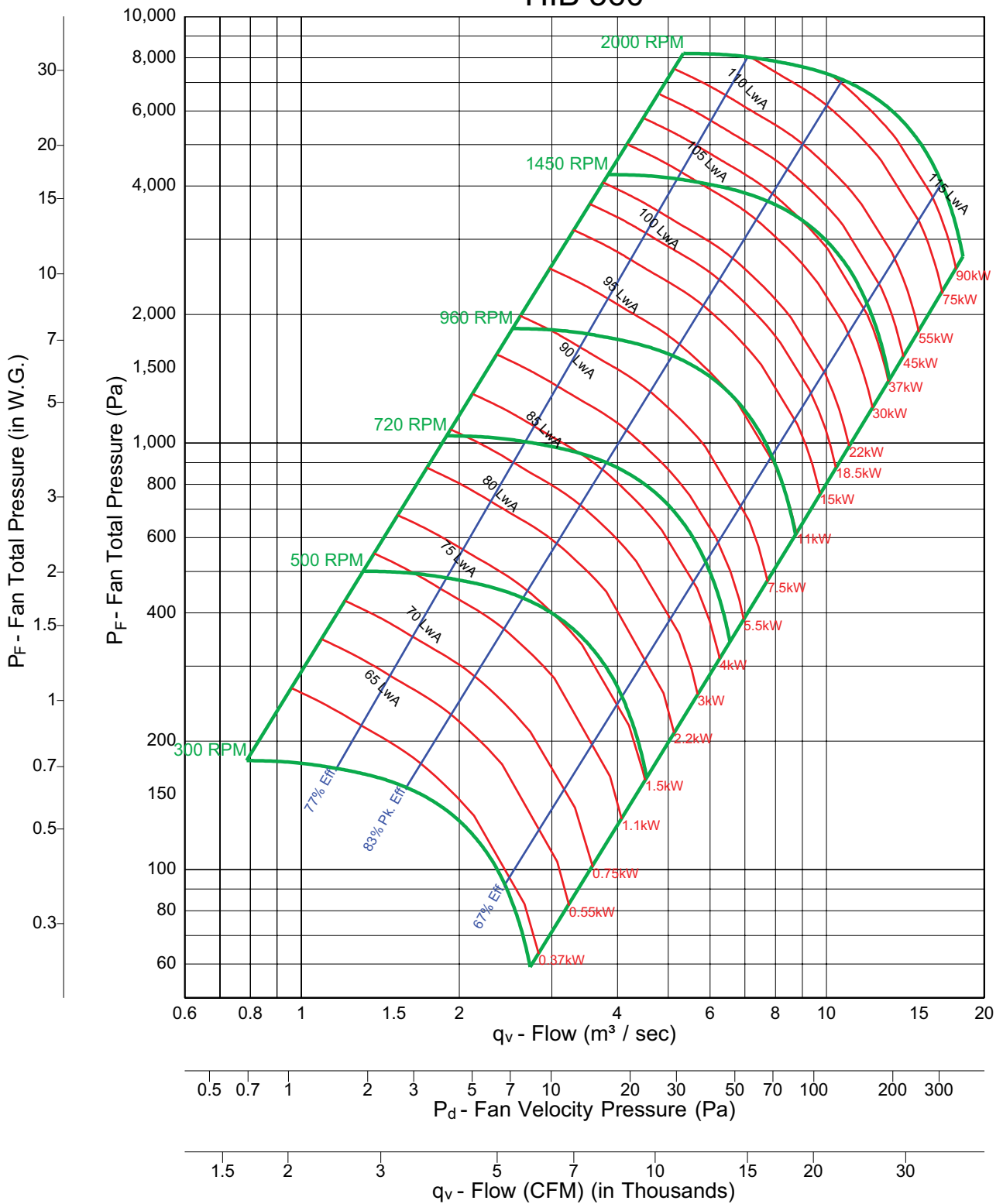
HIB 330



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

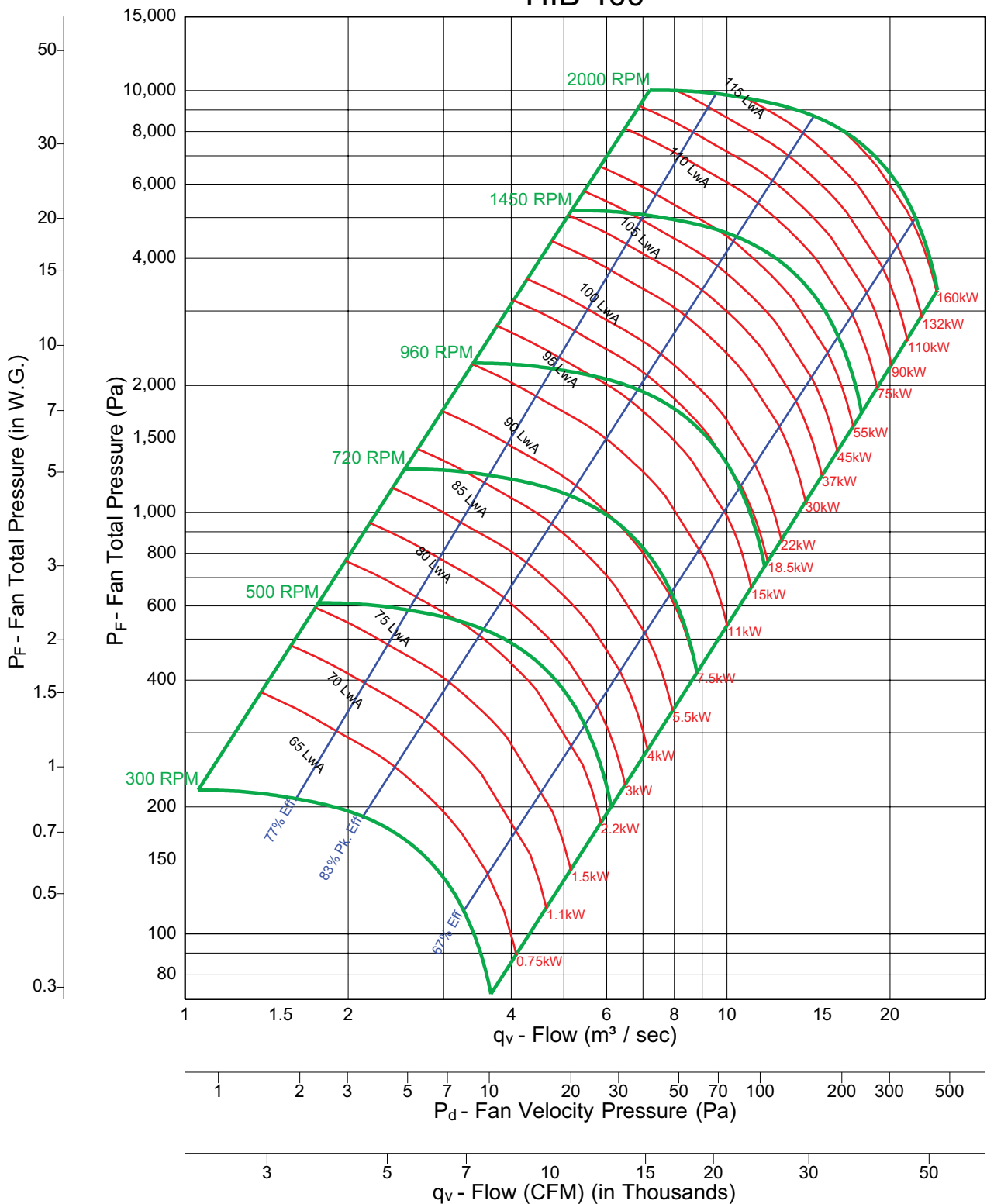
HIB 360



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

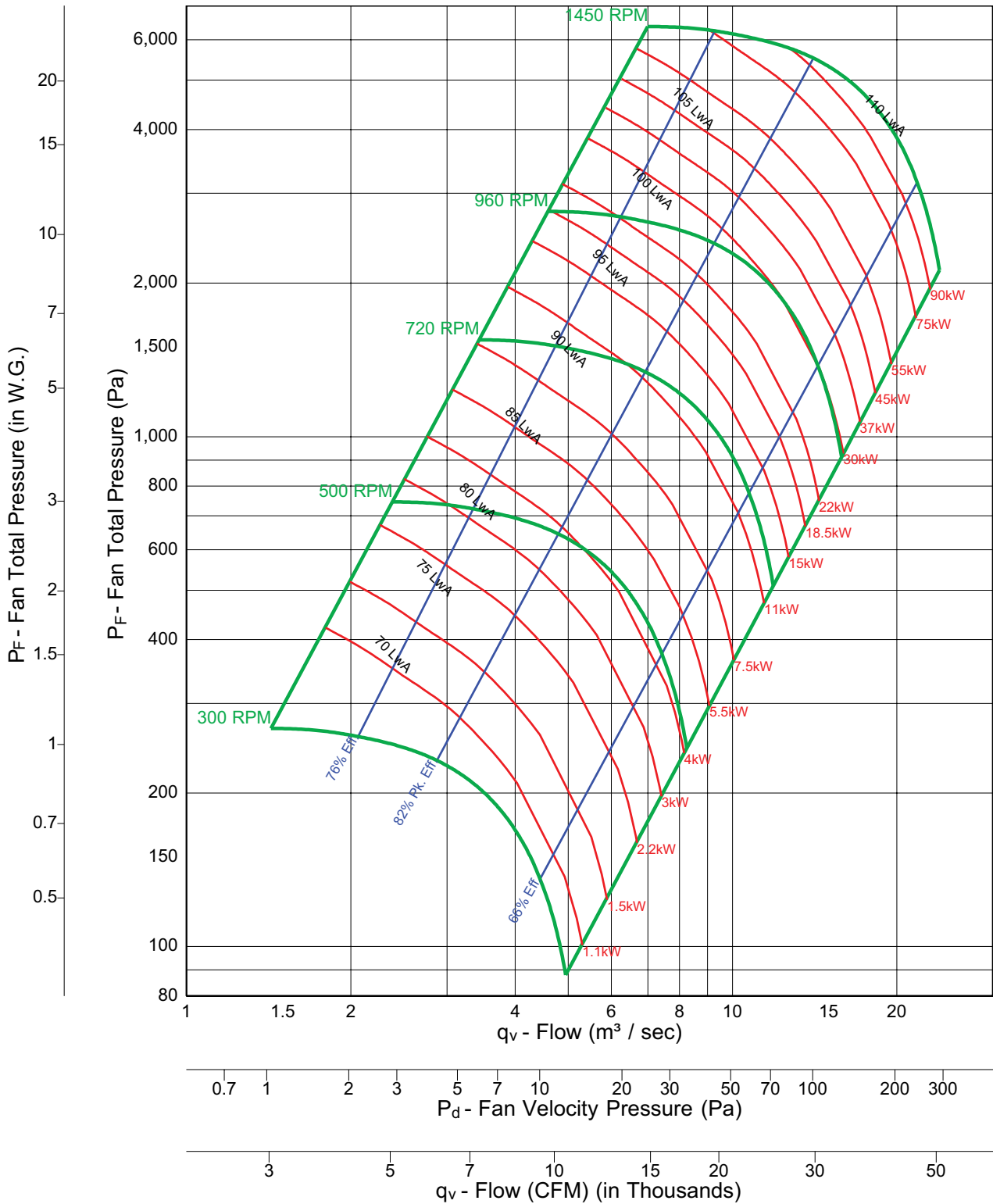
HIB 400



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

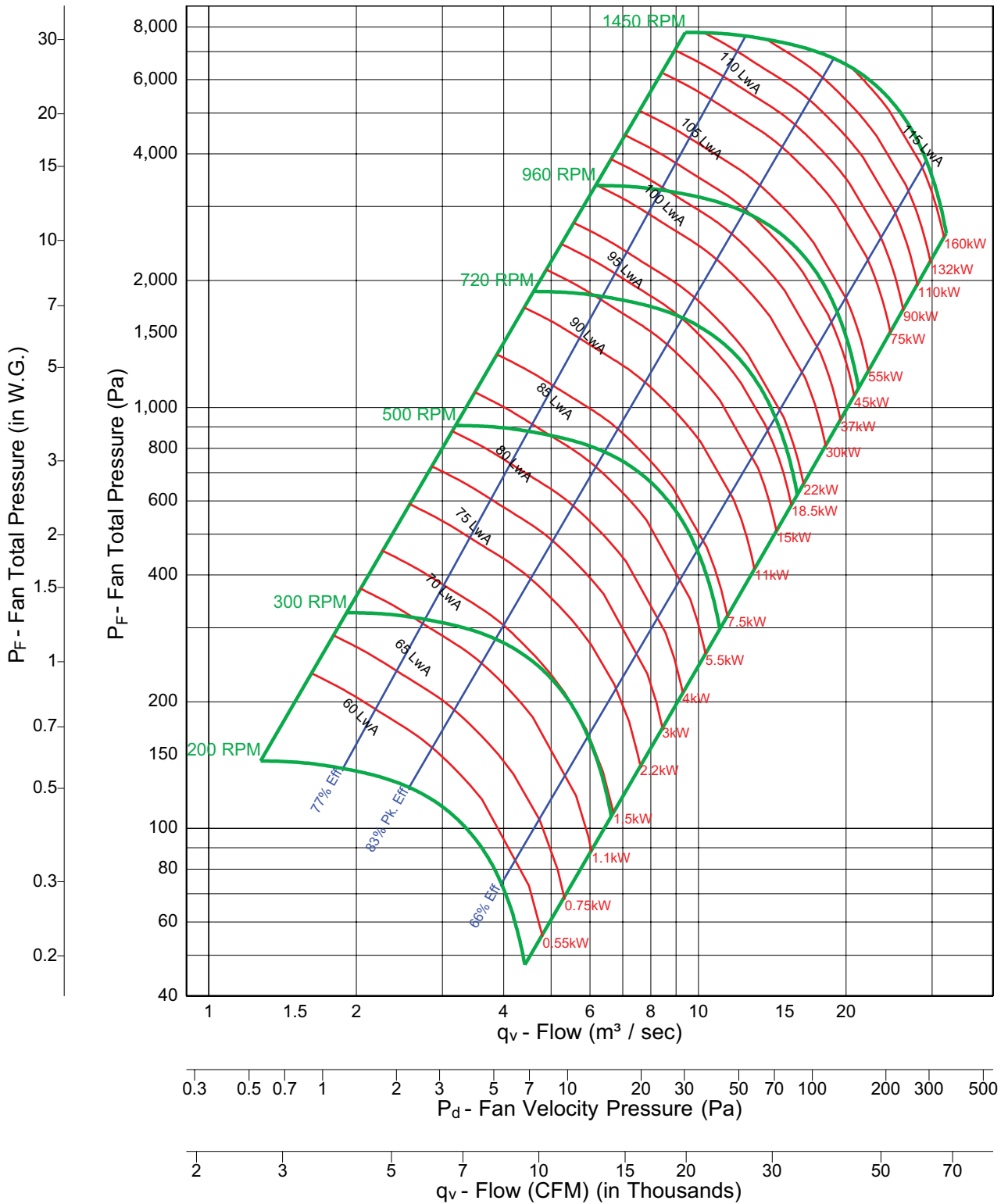
HIB 450



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

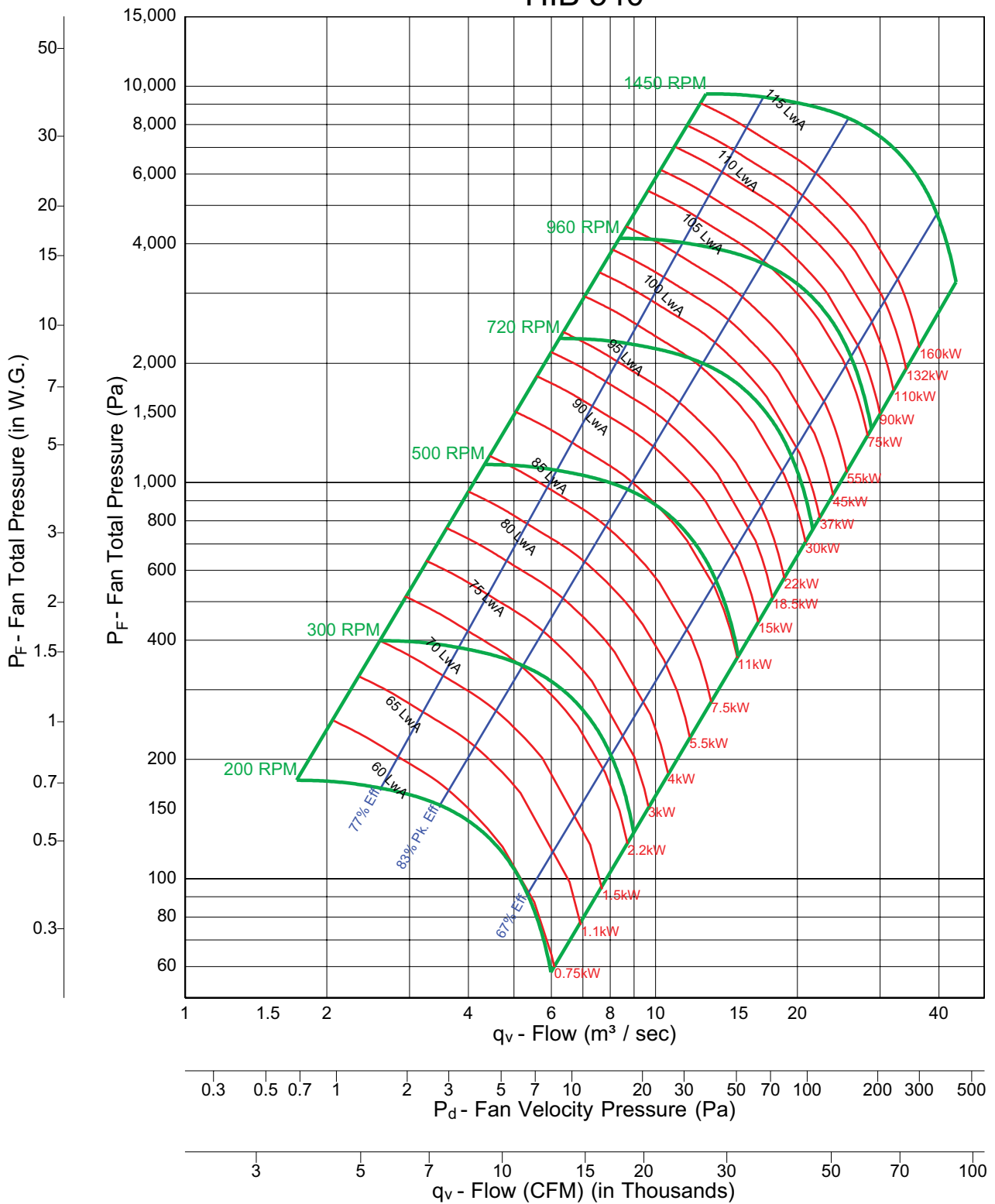
HIB 490



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

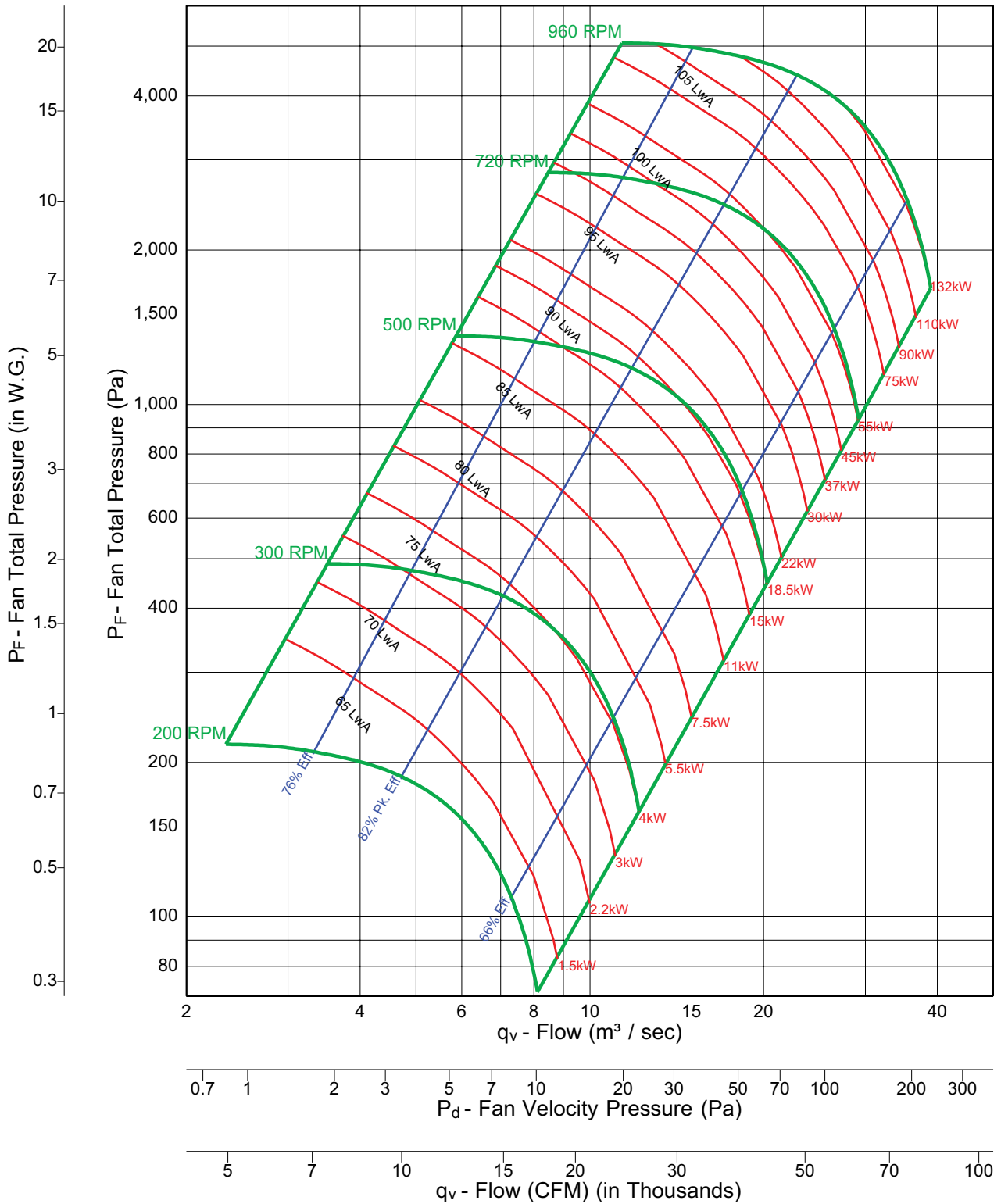
HIB 540



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

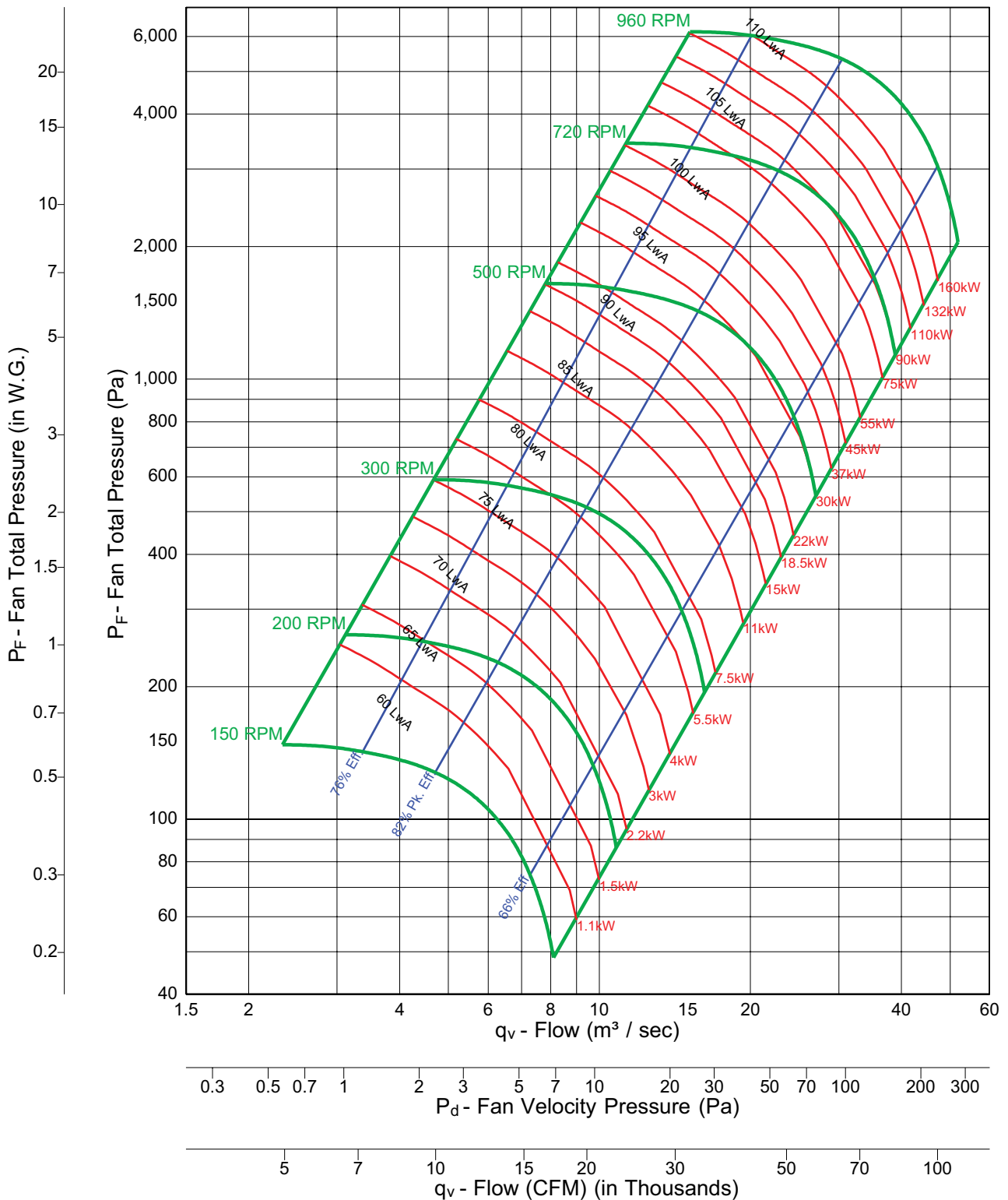
HIB 600



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

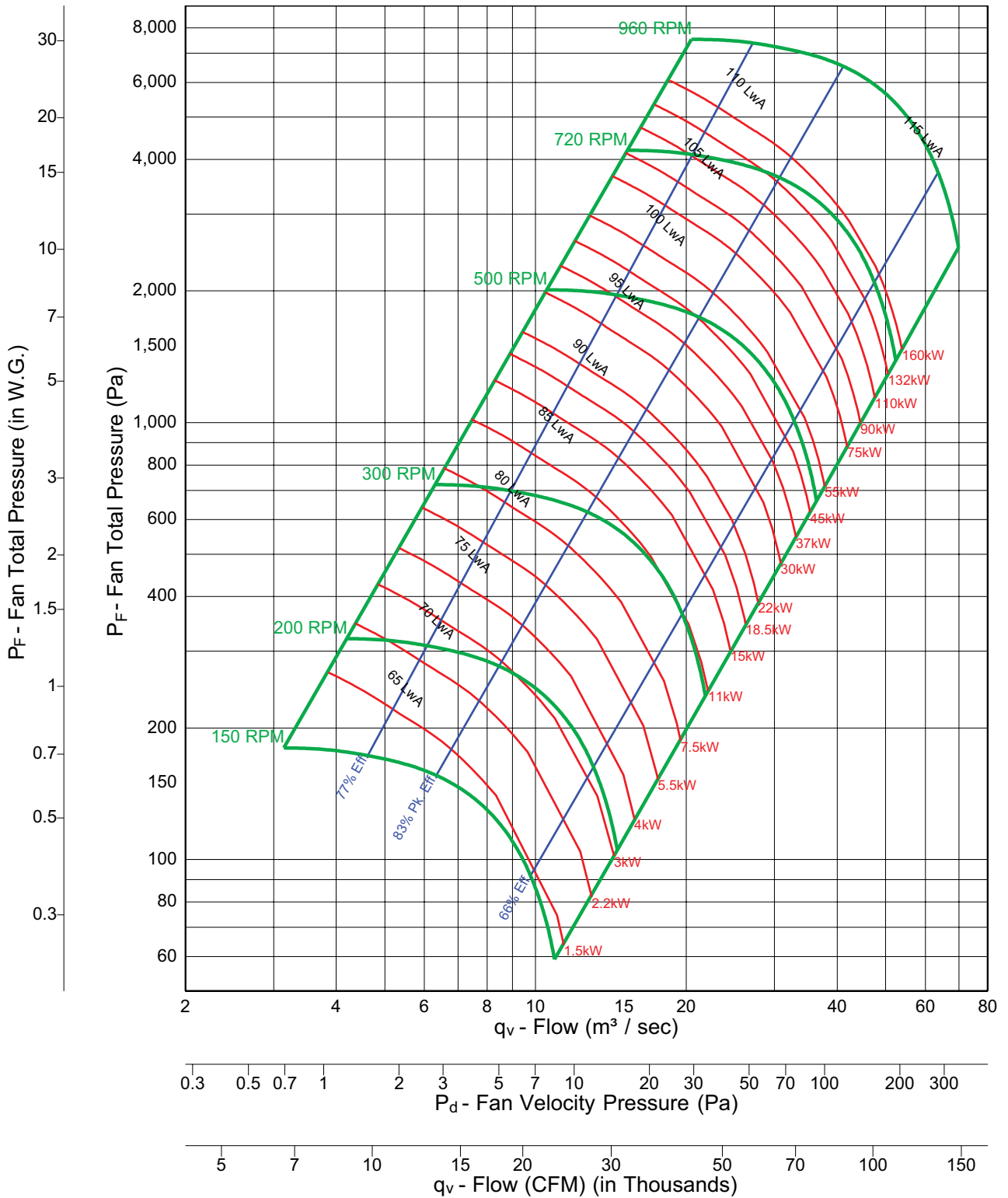
HIB 660



Notes:

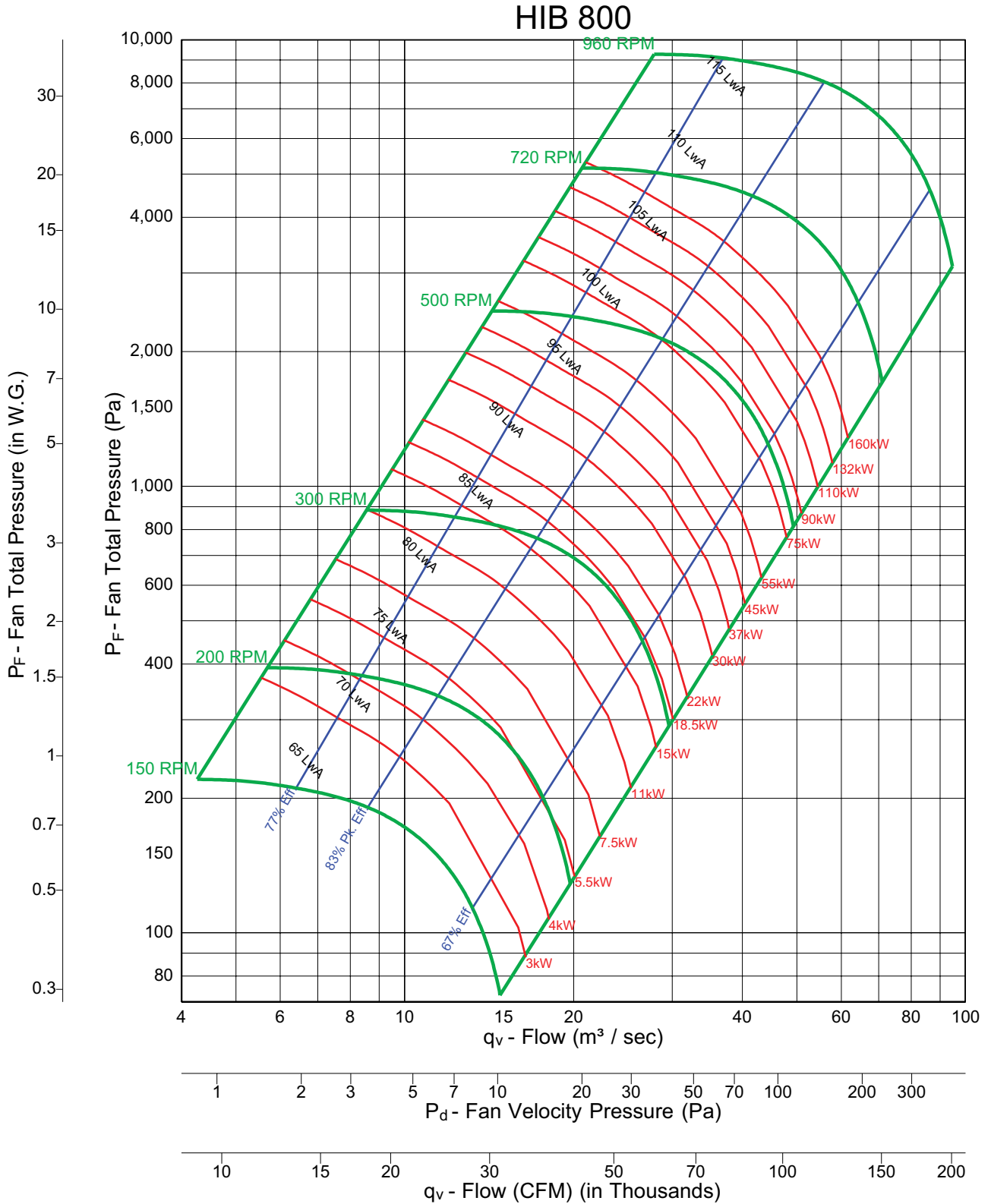
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

HIB 730



Notes:

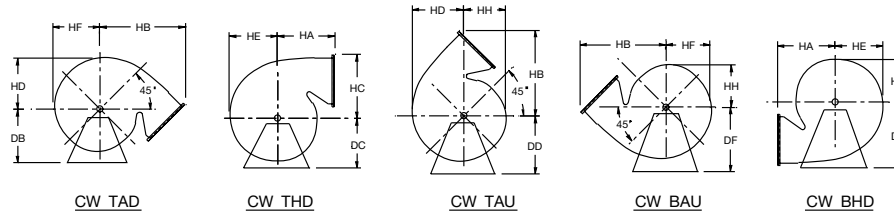
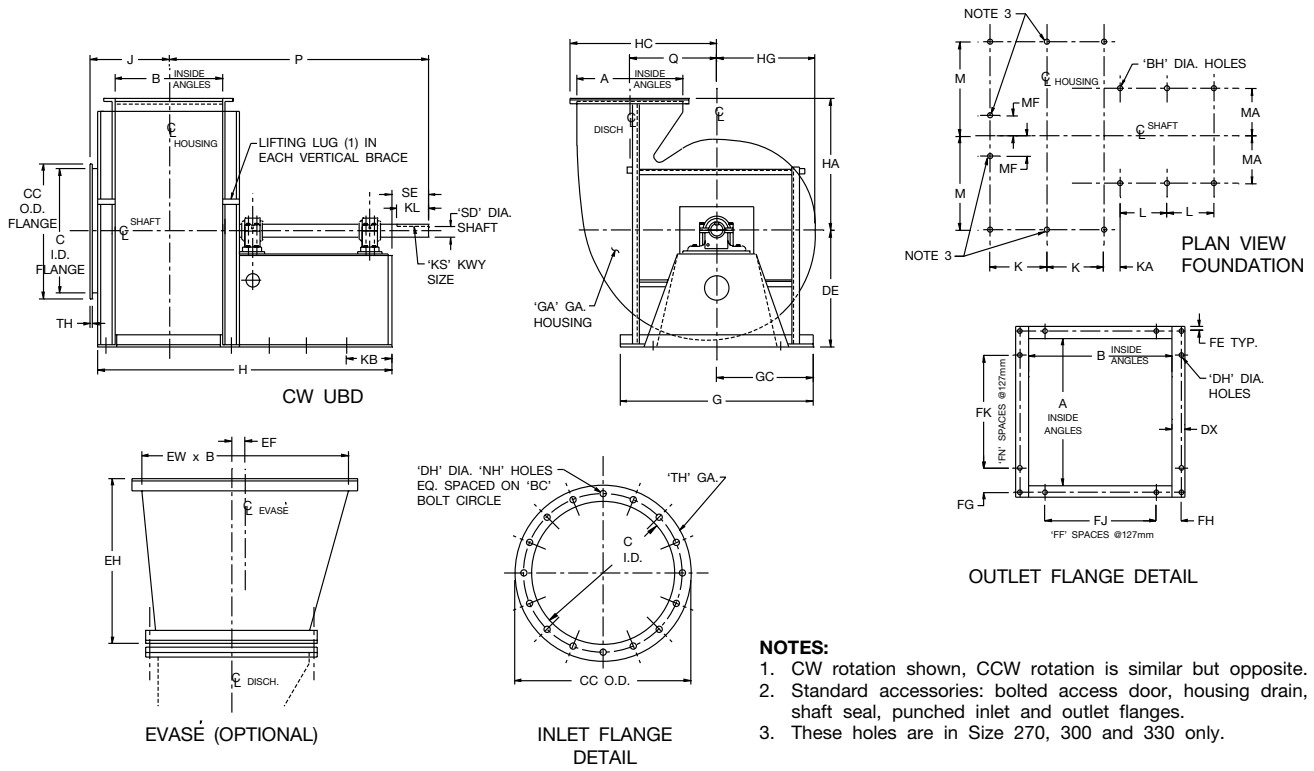
1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.



Notes:

1. Performance certified is for Installation Type B & D: Free or ducted inlet, ducted outlet.
2. Power rating (kW) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound power level ratings shown are in decibels, referred to 10 E-12 watts calculated per AMCA Standard 301.
5. Values shown are for inlet LwA sound power levels for Installation Type B: Free inlet, ducted outlet.
6. Ratings do not include the effects of duct end correction.
7. The A-weighted sound ratings shown have been calculated per AMCA Standard 301.

HIB, Arrangement 1, Sizes 180-330



FAN SIZE	A	B	BC	BH	C	CC	DB DC	DD DE	DF DG	DH	DX	EF	EH	EW	FE	FF	FG	FH	FJ	FK
180	376	305	457	21	400	502	381	438	527	14	38	83	457	603	16	2	83	48	254	254
200	411	334	502	21	445	546	432	476	572	14	38	93	495	660	16	2	101	62	254	254
220	456	370	546	21	489	591	470	527	629	14	38	106	552	743	16	2	123	80	254	254
240	500	406	591	21	533	635	514	572	686	14	38	118	610	819	16	2	145	99	254	254
270	552	448	654	21	597	699	572	635	794	14	38	134	667	907	16	2	108	119	254	254
300	608	492	711	21	654	756	629	699	864	14	38	148	737	998	16	3	136	78	381	381
330	670	543	781	21	724	826	686	762	953	14	51	163	813	1103	22	3	109	109	381	381

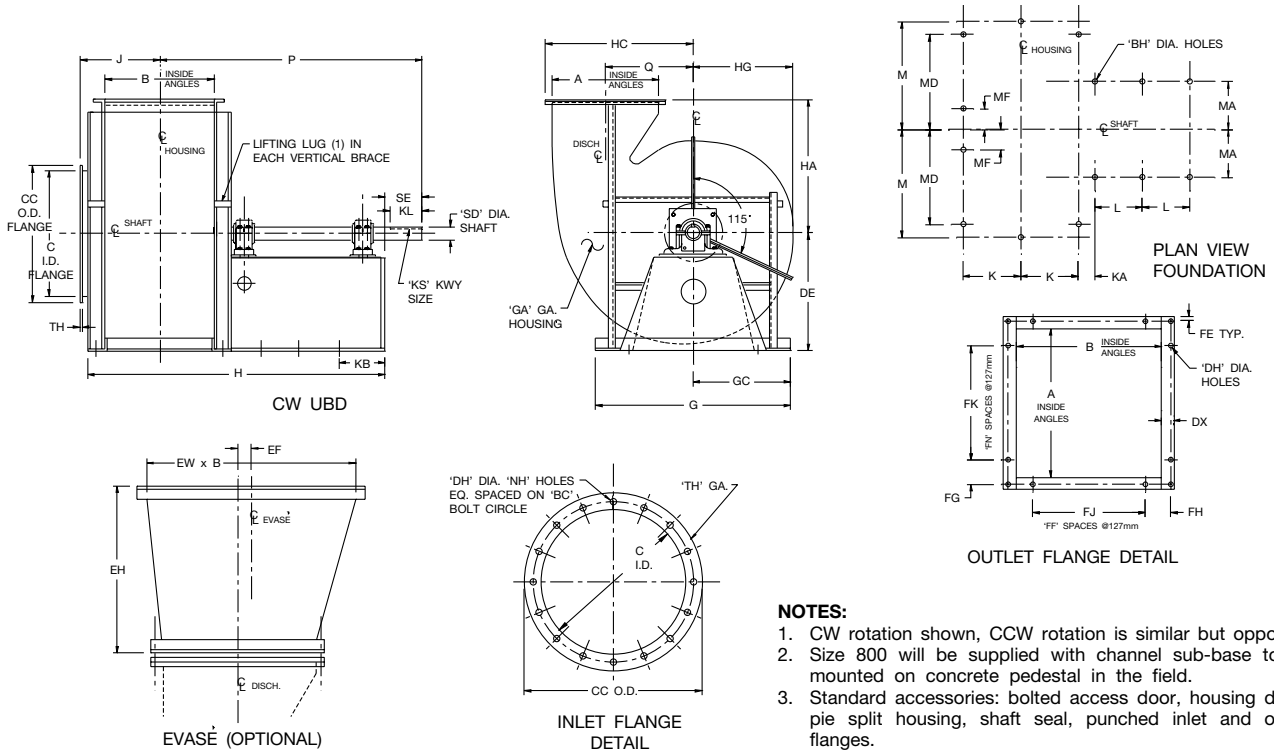
FAN SIZE	FN	G	GA	GC	H	HA	HB	HC	HD	HE	HF	HG	HH	J	K	KA	KB	KL
180	2	791	5	395	991	452	676	506	414	394	372	351	329	259	194	86	50	152
200	2	851	5	425	1045	495	740	552	454	430	406	384	360	273	208	86	50	165
220	2	914	5	457	1121	549	818	608	503	478	451	425	400	292	227	111	50	178
240	2	975	5	487	1181	602	895	665	554	526	497	468	440	310	245	111	50	178
270	3	1086	5	543	1254	664	986	730	611	579	549	516	486	330	265	130	50	191
300	3	1200	5	600	1330	730	1083	802	675	640	605	570	537	353	287	162	50	203
330	4	1289	5	645	1407	806	1202	892	744	706	668	630	592	378	313	187	50	210

FAN SIZE	KS		L	M	MA	MF	NH	P	Q	SD		SE	TH
	HIB-20	HIB-24								HIB-20	HIB-24		
180	16 x 10	16 x 10	216	360	216	—	12	940	281	55	55	178	5
200	16 x 10	18 x 11	229	391	241	—	12	992	310	55	60	191	5
220	16 x 10	18 x 11	235	422	279	—	12	1062	343	55	60	203	5
240	16 x 10	20 x 12	248	452	305	—	16	1105	378	55	70	203	5
270	18 x 11	20 x 12	254	508	356	165	16	1164	416	60	70	210	5
300	20 x 12	20 x 12	254	565	368	187	16	1230	461	70	75	222	5
330	20 x 12	20 x 12	254	610	381	203	16	1288	506	70	75	229	5

BC9987D

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.

HIB, Arrangement 1, Sizes 360-800



FAN SIZE	A	B	BC	BH	C	CC	DB DC	DD DE	DF DG	DH	DX	EF	EH	EW	FE	FF	FG	FH	FJ	FK
360	741	600	857	27	803	905	737	838	1054	14	51	177	908	1226	22	4	82	75	508	635
400	818	660	940	27	886	988	813	921	1168	14	64	196	1016	1353	29	4	126	111	508	635
450	902	730	1032	27	978	1080	889	1016	1283	14	64	217	1111	1496	29	5	105	83	635	762
490	994	803	1168	27	1080	1232	991	1118	1397	18	64	240	1213	1645	29	5	87	119	635	889
540	1099	892	1283	27	1194	1346	1086	1226	1505	18	64	265	1330	1819	29	6	76	100	762	1016
600	1216	984	1410	27	1321	1473	1194	1346	1676	18	76	294	1483	2013	35	7	141	89	889	1016
660	1340	1083	1543	27	1454	1607	1308	1448	1829	18	76	324	1616	2216	35	7	140	138	889	1143
730	1478	1194	1721	27	1607	1810	1448	1613	2007	18	89	356	1794	2448	41	8	152	137	1016	1270
800	1635	1321	1892	27	1778	1981	1600	1778	2210	18	89	397	1969	2708	41	9	167	137	1143	1270

FAN SIZE	FN	G	GA		GC	H	HA	HB	HC	HD	HE	HF	HG	HH	J	K	KA	KB	KL
			HIB-20	HIB-24															
360	5	1448	5	6	724	1540	892	1327	984	824	781	738	695	653	432	351	178	102	210
400	5	1549	5	6	775	1600	984	1468	1092	908	862	814	768	721	462	381	152	76	229
450	6	1651	5	6	826	1746	1086	1616	1200	1003	953	900	849	797	497	416	175	99	229
490	7	1778	5	6	889	1908	1194	1775	1316	1105	1048	991	933	876	535	452	171	121	254
540	8	1930	5	6	965	2023	1321	1959	1449	1224	1161	1097	1034	970	605	497	149	143	254
600	8	2032	6	6	1016	2153	1461	2172	1610	1353	1283	1213	1143	1073	651	543	156	137	273
660	9	2159	6	6	1080	2277	1607	2383	1764	1489	1413	1335	1259	1181	700	592	175	130	279
730	10	2337	6	6	1168	2464	1772	2634	1953	1635	1559	1475	1389	1305	783	648	165	140	279
800	10	2464	6	6	1232	2692	1959	2907	2151	1818	1724	1630	1537	1443	846	711	203	152	298

FAN SIZE	KS		L	M	MA	MD	MF	NH	P	Q	SD		SE	TH
	HIB-24	HIB-20									HIB-20	HIB-24		
360	20 x 12	25 x 14	254	673	406	584	165	24	1367	564	75	90	229	5
400	25 x 14	28 x 16	279	724	457	635	191	32	1422	621	90	100	254	5
450	25 x 14	28 x 16	295	775	508	635	216	32	1534	686	90	100	254	5
490	28 x 16	32 x 18	330	838	559	699	241	40	1684	756	100	115	279	6
540	28 x 16	32 x 18	330	889	610	749	267	40	1729	837	100	115	279	6
600	32 x 18	32 x 18	349	940	660	800	292	40	1832	926	115	125	298	6
660	32 x 18	32 x 18	356	1003	711	864	318	40	1913	1018	115	125	305	6
730	32 x 18	32 x 18	381	1067	762	927	343	48	2019	1125	115	125	305	8
800	32 x 18	Enquire	406	1130	813	991	368	48	2203	1245	125	Enquire	324	8

BC9986D

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.



Model HIB

Furnish and install as indicated on the plans, Twin City Fan & Blower model HIB industrial duty backward curved fans.

HOUSING — Fan housings shall be made of a heavy-gauge steel with continuously welded construction and braced with structural shapes to eliminate any resonant vibration and provide smooth operation. Sizes 360 and larger shall be equipped with a pie-shaped split in the casing to permit the impeller and shaft to be removed without disturbing the inlet and outlet ductwork. Casing split must be fully sealed and bolted together to prevent any leaks. Flanged inlet and outlet, access door, shaft seal, and drain shall be provided as standard equipment.

IMPELLER — Blade design shall be backward curved for high efficiency and have non-overloading performance characteristics. Blades shall be die-formed of special alloy material for strength and accuracy of contour and continuously welded to the impeller inlet cone and back-plate. A heavy steel (not cast iron) hub shall be provided. Impellers shall be shrunk fit on the shafts, and hubs shall include puller holes for use in the event of impeller removal. Impellers shall be statically and dynamically balanced on precision electronic machines, as well as balance tuned after complete assembly.

SHAFT — Shafts are to be solid material selected for AISI 1040 or 1045 hot rolled steel (or European equivalent), accurately turned, ground, polished and ring gauged for accuracy.

BEARINGS — Fans must be supplied with heavy-duty, self-aligning grease or oil lubricated anti-friction spherical roller bearings with split pillow block housings (bearing races not split) to provide long bearing life.

DRIVE — Cast iron, fixed pitch sheaves are recommended for best reliability. Variable pitch sheaves can be provided on applications up through 15 kW when specified. Drives and belts are located external to the fan casing and rated for 150% of the required motor rating (kW).

FINISH & COATING — The entire assembly, excluding the shaft, is thoroughly degreased and deburred before application of a protective coating to the entire assembly. The fan shaft is coated with a petroleum-based rust protectant.

ACCESSORIES — When specified, accessories such as belt guards, access doors, companion flanges, variable inlet vanes, outlet dampers, inlet boxes, inlet box dampers, easés, easé dampers, shaft coolers, shaft seals, inlet screens, drains, scroll and side liners, etc., shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY TEST RUN — All fans prior to shipment shall be completely assembled and test run as a unit at the specified operating speed or maximum RPM allowed for the particular construction type. Each impeller shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Vibration measurements shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

GUARANTEE — Manufacturer shall guarantee the workmanship and materials for its High Efficiency Industrial Backward Curved Fans for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



TWIN CITY FAN & BLOWER
WWW.TCF.COM

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