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KAT

DOUBLE INLET CENTRIFUGAL FAN

with Forward Wheels

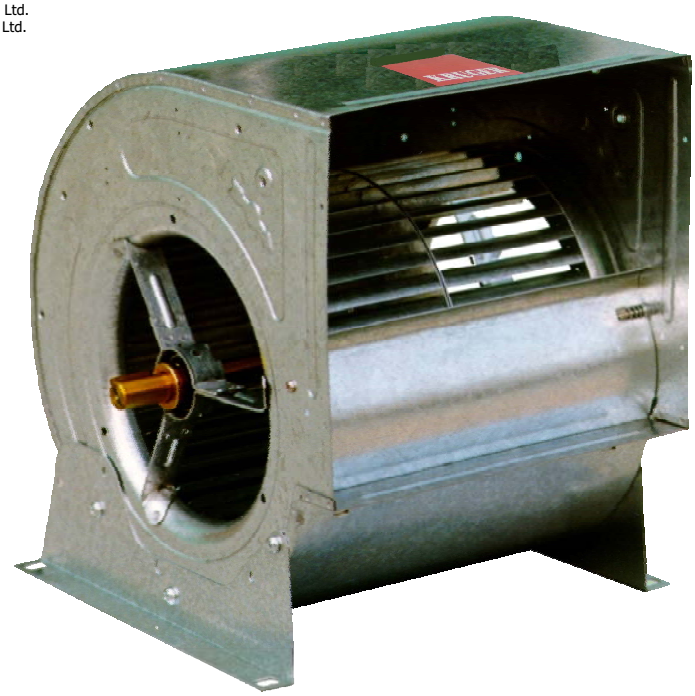
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KAT Series

DOUBLE INLET CENTRIFUGAL FAN with Forward Wheels

Kruger* certifies that the **KAT series: version S and C - model 9-7 to 18-18** shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211and AMCA publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

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*Kruger Ventilation Industries (North India) Pvt. Ltd.
*P.T. Kruger Ventilation Indonesia
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*Kruger M&E Industries Corporation
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KAT Series

Double Inlet Centrifugal Fans - Forward Wheel

The KAT series is DIDW centrifugal fans with forward curved impellers. The fans are suitable for supply or exhaust applications in commercial, process and industrial HVAC systems.

Type

The KAT series is available in type S and C as shown in Fig. 1 :-

Size: 7-7 to 18-18
Vol.: 1500 to 15000 m^3/h
Total Press. : up to 1500 Pa

Performance of 7-7 and 8-8 are not AMCA licensed.

KAT Twin Fan

KAT series is also available in twin fan version, with two double inlet fans mounted on the same shaft. To select for twin fans, use the curves of single fan with the following factors :-

Volume	x 2
Absorbed Power	x 2.15
Speed	x 1.05
Noise	+ 3 dB

This series is available in type S2 and C2 as shown in fig. 1 :-

Performance of twin fan series are not AMCA licensed.

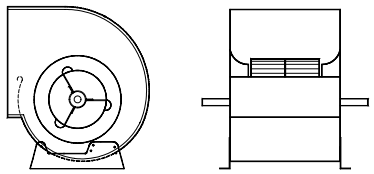
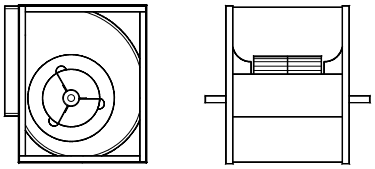
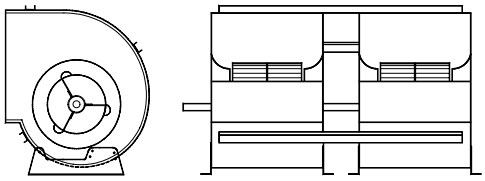
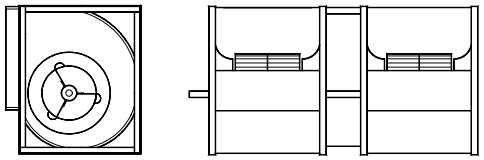
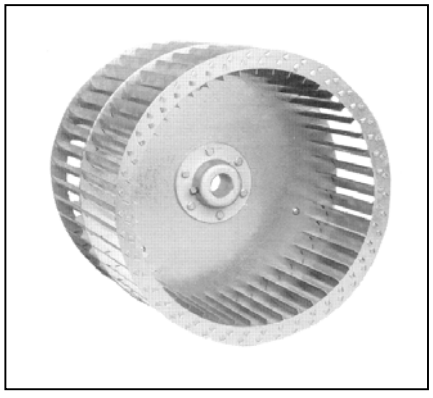
Type S This type are supplied with mounting feet and can be mounted in three different fan orientation.	
Type C This type has a frame on both side of the fans which gives better strength and rigidity. Possibilities of mounting in four different fan orientation.	
Type S2 Size: 7-7 to 18-18 Vol.: 3000 to 30000m^3/h	
Type C2 Size: 7-7 to 18-18 Vol.: 3000 to 30000m^3/h	

Fig.1



Technical Specification

Wheel

The wheel of KAT series is made of galvanised sheet steel forward curved blades. The wheels are specially profiled to obtain a maximum efficiency and low noise level.

Housing

The housing is manufactured in galvanized sheet steel with the housing fixed to the side plates by means of "electric spot welding".

A series of holes previously formed in the side plate enable the housing to mount in four different orientation. All the unused holes in the side plate are plugged with a plastic cap to prevent air leakage.





Frame

The frame is manufactured with galvanized angular bars. The frame is sheared, bent and spot welded in a way that ensures correct dimensions and also maximum rigidity.

Shaft

Shafts are manufactured from C45 carbon steel using an automatic process for positioning and cutting of the keyways. All dimensional tolerances of the shaft are fully checked to ensure a precision fit. All shafts are then coated with an anti-corrosion varnish after assembly.

Bearings

All bearings used are deep groove ball bearing type sealed at both sides. The bearings are self-aligning with an eccentric locking collar for clamping onto the shaft and is mounted in a rubber housing.

All the bearings are lubricated for life and maintenance-free under normal operating conditions.

Outlet Flanges

Outlet flanges are available upon request.

Balancing Quality

All wheels are statically and dynamically balanced to ISO1940 and AMCA 204 – G2.5 standards.

All fans after assembly are trim-balanced to ISO1940 and AMCA 204 – G2.5 standard.

Clean room application fans with balancing grade of G1.0 are available upon request.

Fan Rotation and Discharge

The rotation and discharge of the fan is in accordance with AMCA standard 99.
The direction of rotation is determined from the drive side of the fan [refer Fig. 2] :-

CW - clockwise rotation
CCW - counter-clockwise rotation

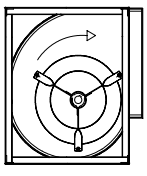
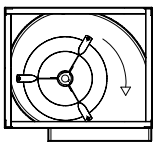
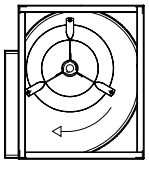
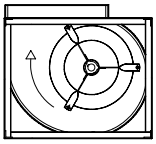
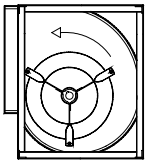
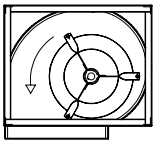
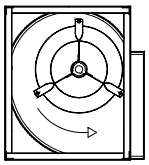
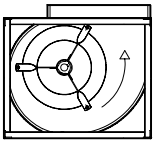
	90°	180°	270°	360°
CW				
CCW				

Fig. 2 - Fan rotation and discharge

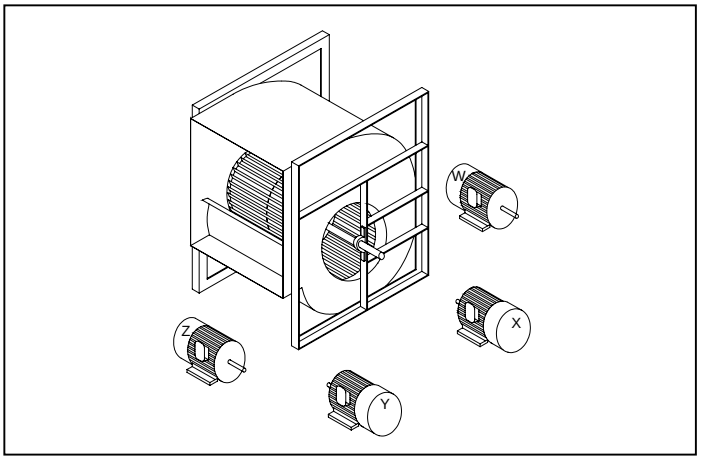


Fig. 3 - Motor Position

Motor Position

The position of the motor for belt drive centrifugal fan is in accordance with AMCA standard 99

Location of motor is determined by facing the drive side of fan and designating the positions by letters W, X, Y, or Z .
[refer to Fig.3]

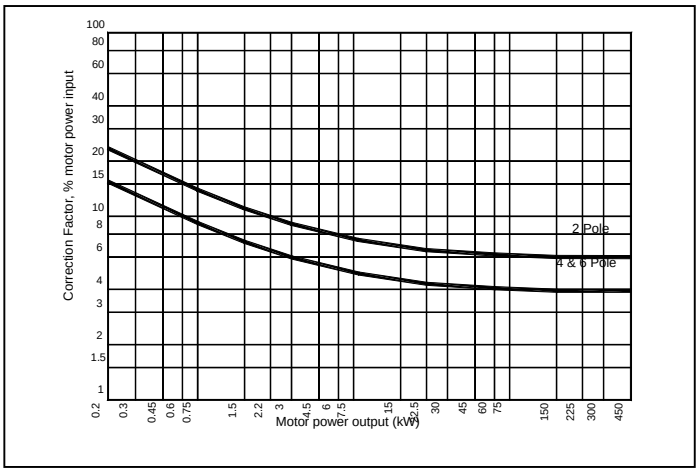


Fig. 4 – Recommended for compensation

Motor Selection

The power curves shown on each performance graph represent the absorbed power at the shaft of the fan measured in kW.

To determine the power of the motor to be installed, a correction factor as shown in fig. 4 should be applied to compensate for transmission losses.

For conversion to horsepower (HP), use multiplying factor 1.34.

Dynamic Pressure

Both dynamic pressure and outlet air velocity shown on each curve are calculated on the full air discharge area, i.e ducted outlet conditions.

With free outlet conditions, the velocity pressure is higher. To determine this new value, multiply the velocity pressure of the ducted outlet obtained from the fan curve by the following correction factor "K".

Fan performances calculated with this correction factors are not licensed by AMCA.

KAT 7 to 10 [K = 3.2] **KAT 12 to 18 [K = 2.6]**

Noise

The noise level shown on each graph refer to the "A-weighte d" sound power values and the data on the inlet side has been measured in accordance with AMCA Standard 300 diag. 2 - configuration "B". The noise levels of the fans are determined as follows:

- Sound power level - ("A" scale): Lw (A) as catalogue
- Octave band spectrum: Lw = Lw(A) + Lw rel. dB [table 1]
- Sound pressure level:

  a) free field
  $Lp(A) = Lw(A) - (20\log_{10}d) - 11$

  b) room conditions
  $Lp(A) = Lw(A) - (20\log_{10}d) - 8$

  where d = distance from fan (m)

Performance

The performance data shown on e ach diagram is derived from tests conducted in accordance to AMCA Standard 210- Fig 12- Installation type B (free inlet and duct outlet condition).

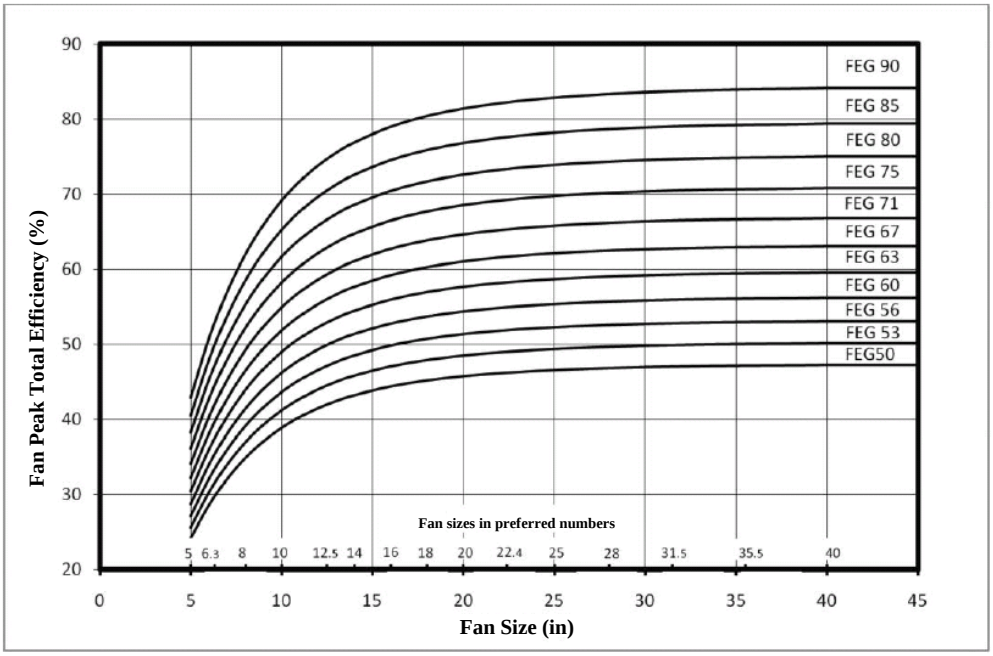
Ratings refer to standard air density with the total pressure as a function of the air volume, using logarithmic scale.

It is essential that the same installation type and test standards are used at all time when comparing fan performance.

According to AMCA 205, KAT series can be classify as FEG 71~85 based on fan peak efficiency. The follo wing is the explanation of FEG classification:

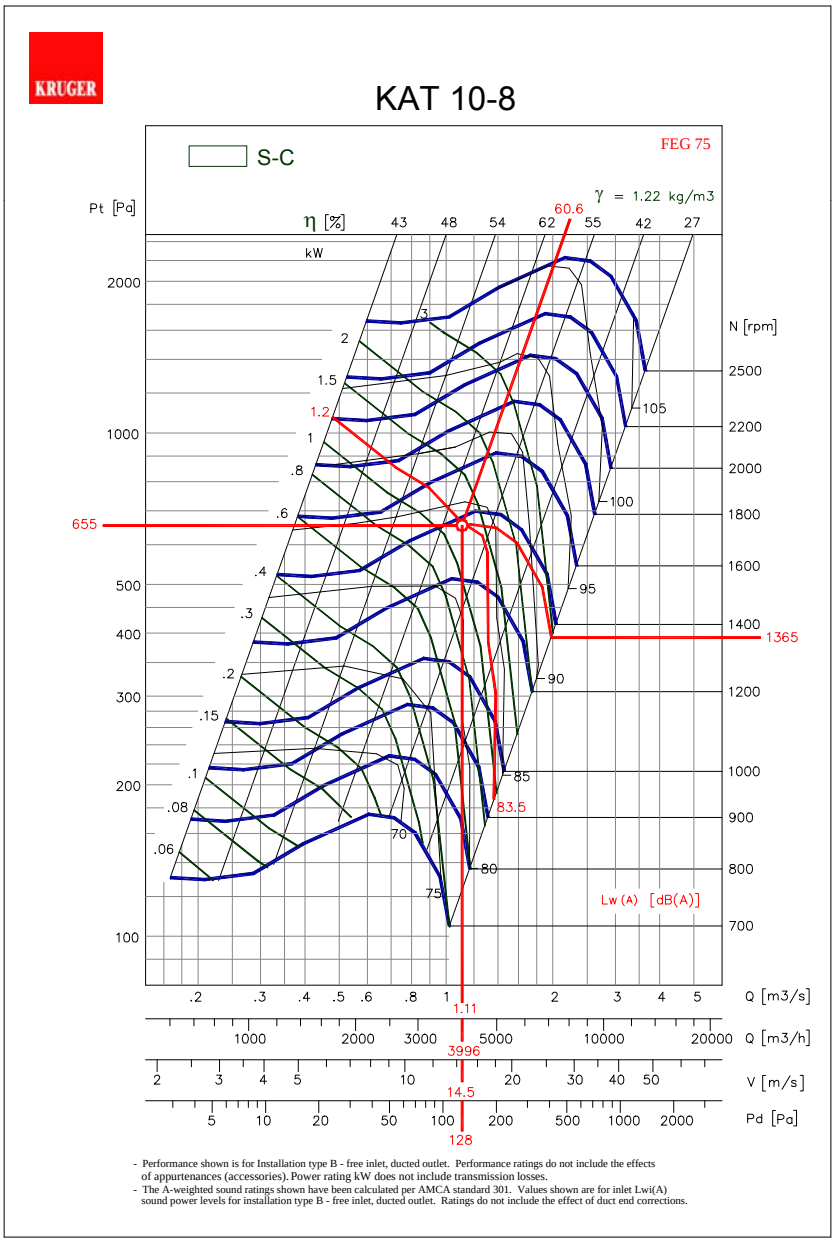
1. Fan size is the impeller diameter in mm.
2. The fan peak efficiency shall be calculated from t he fan (total) pressure.
3. If this method is used for a direct driven fan, the fan efficiency is the impeller efficiency.
4. The FEG label for a given fan size is assig ned when t he fan peak efficiency is equal to or lower than the efficiency at the grade upper limit, and higher than the efficiency at the grade upper limit of the next lower grade for the fan size.
5. For any fan sizes larger than 1016 mm, the values of the grade upper limits are the same as for a size of 1016 mm.
6. No labels are consid ered for t he fans wit h the fan p eak total efficiency below FEG 50.
7. The values of efficiencies are calculated for fan sizes in the preferred R40 Series.
8. Not all available fan sizes are shown.

Fan Efficiency Grades (FEG) for Fans without Drives (SI) – AMCA 205

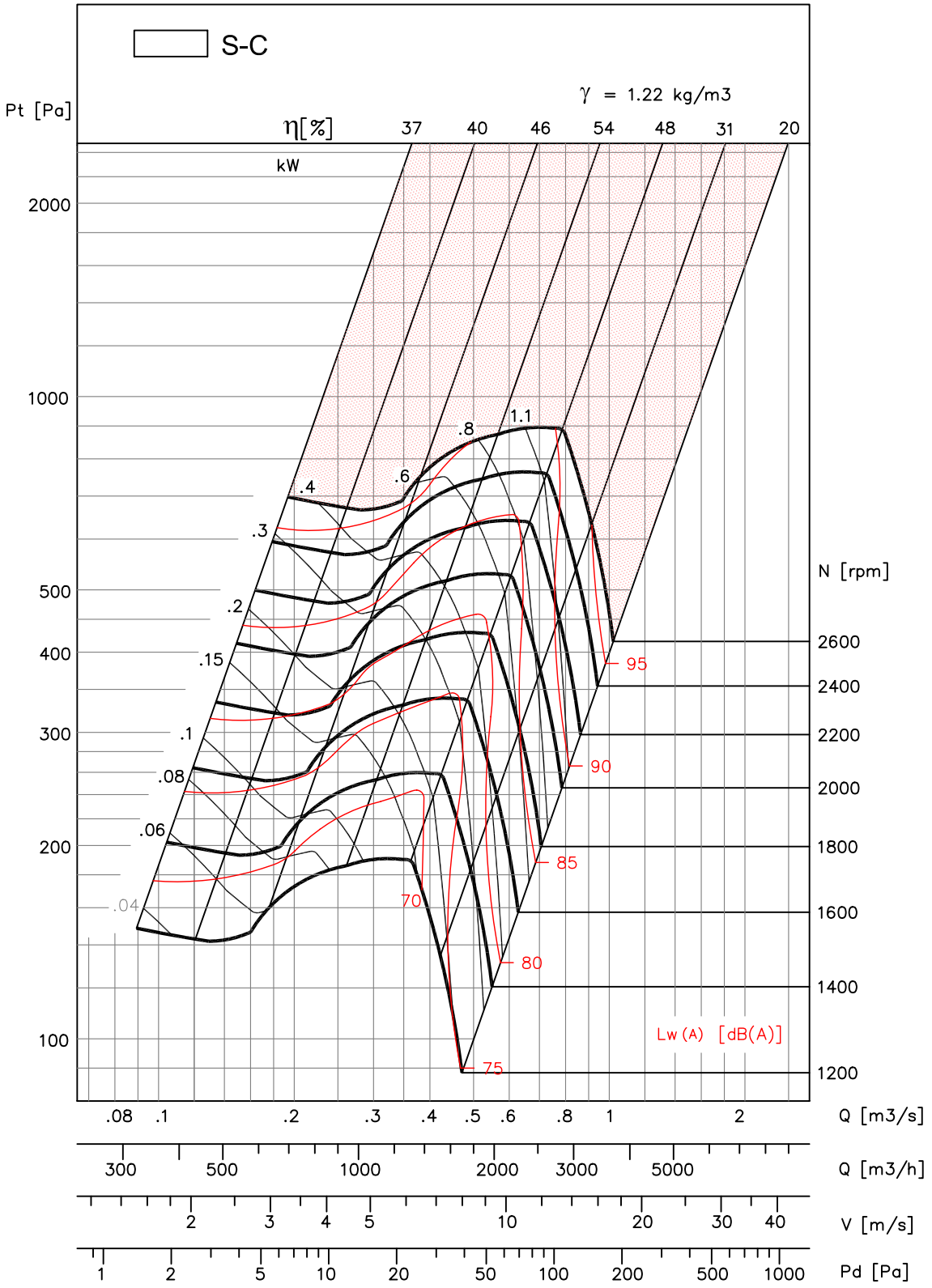


Example of Selection

Air Volume	Q = 3996 m^3/h
Outlet Velocity	V = 14.5 m/s
Dynamic Pressure	Pd = 128 Pa
Total Pressure	Pt = 655 Pa
Fan Speed	N = 1365 rpm
Absorbed Power	W = 1.2 kW
Total Efficiency	η = 60.6 %
Sound Power Level	Lw(A) = 83.5 dB(A)

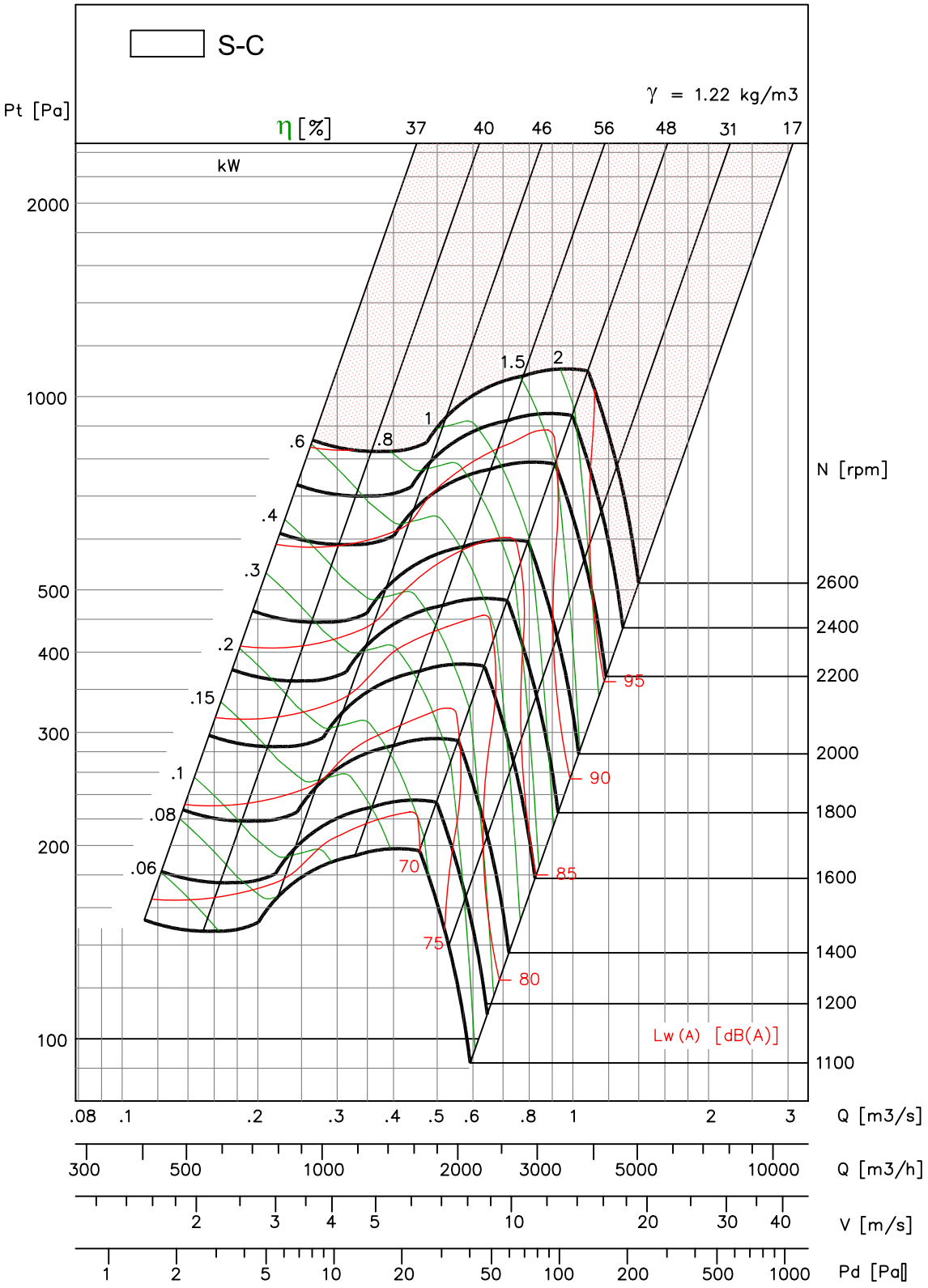


KAT 7-7



- Performance shown is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.
- Model KAT 7-7 is not licensed to bear the AMCA Certified Ratings Seal.

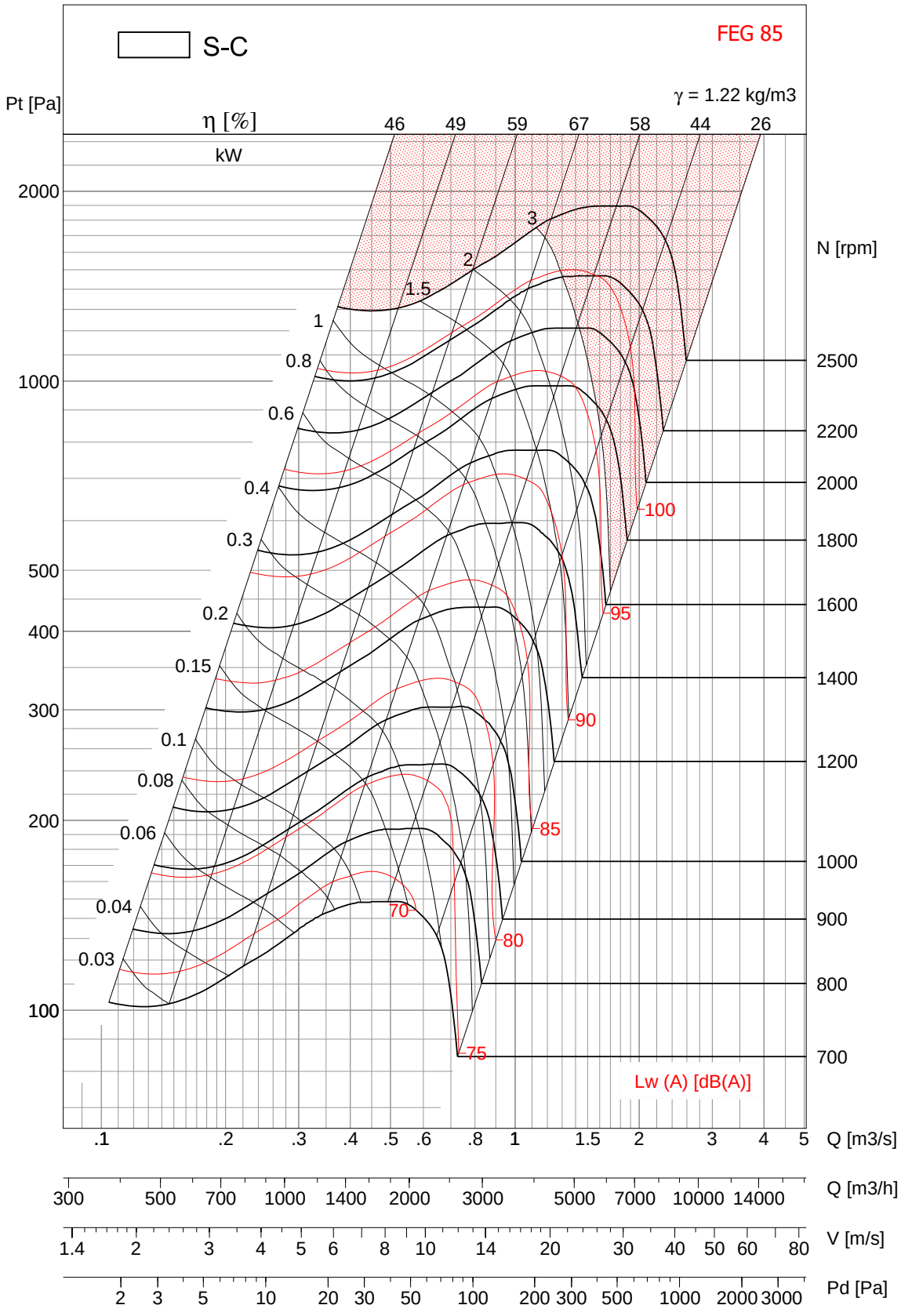
KAT 8-8



- Performance shown is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.
- Model KAT 8-8 is not licensed to bear the AMCA Certified Ratings Seal.

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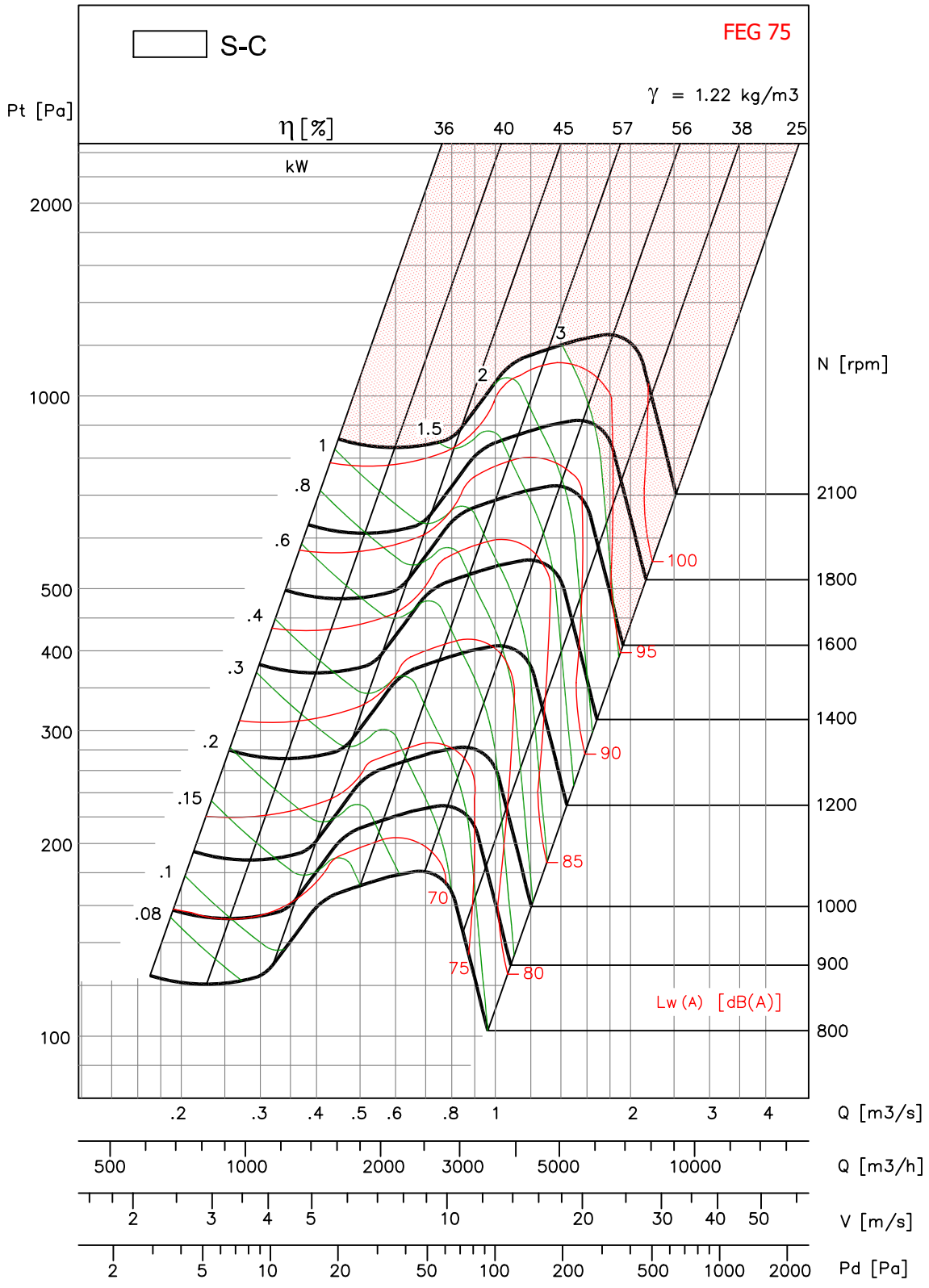
KAT 9-7



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

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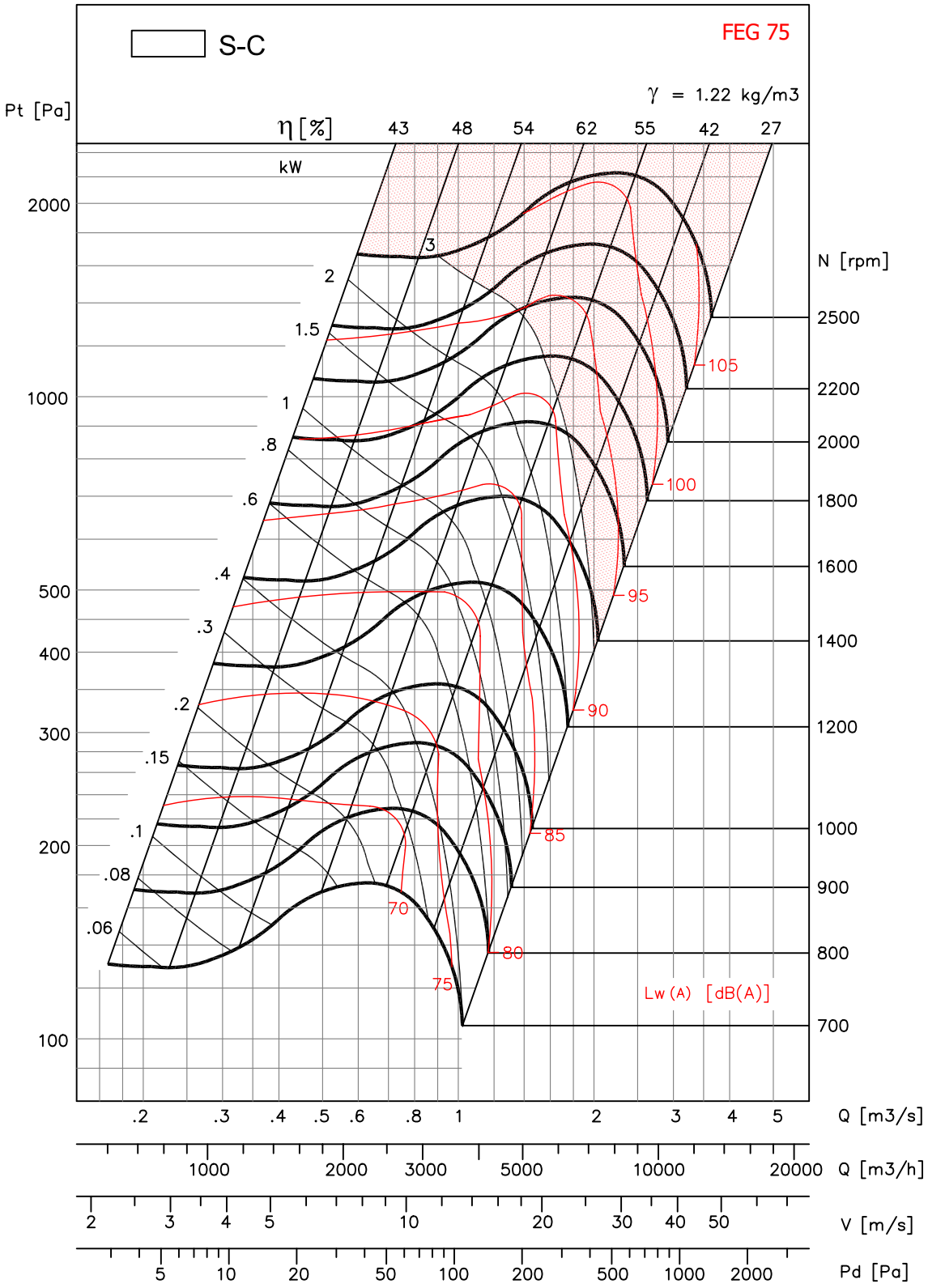
KAT 9-9



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

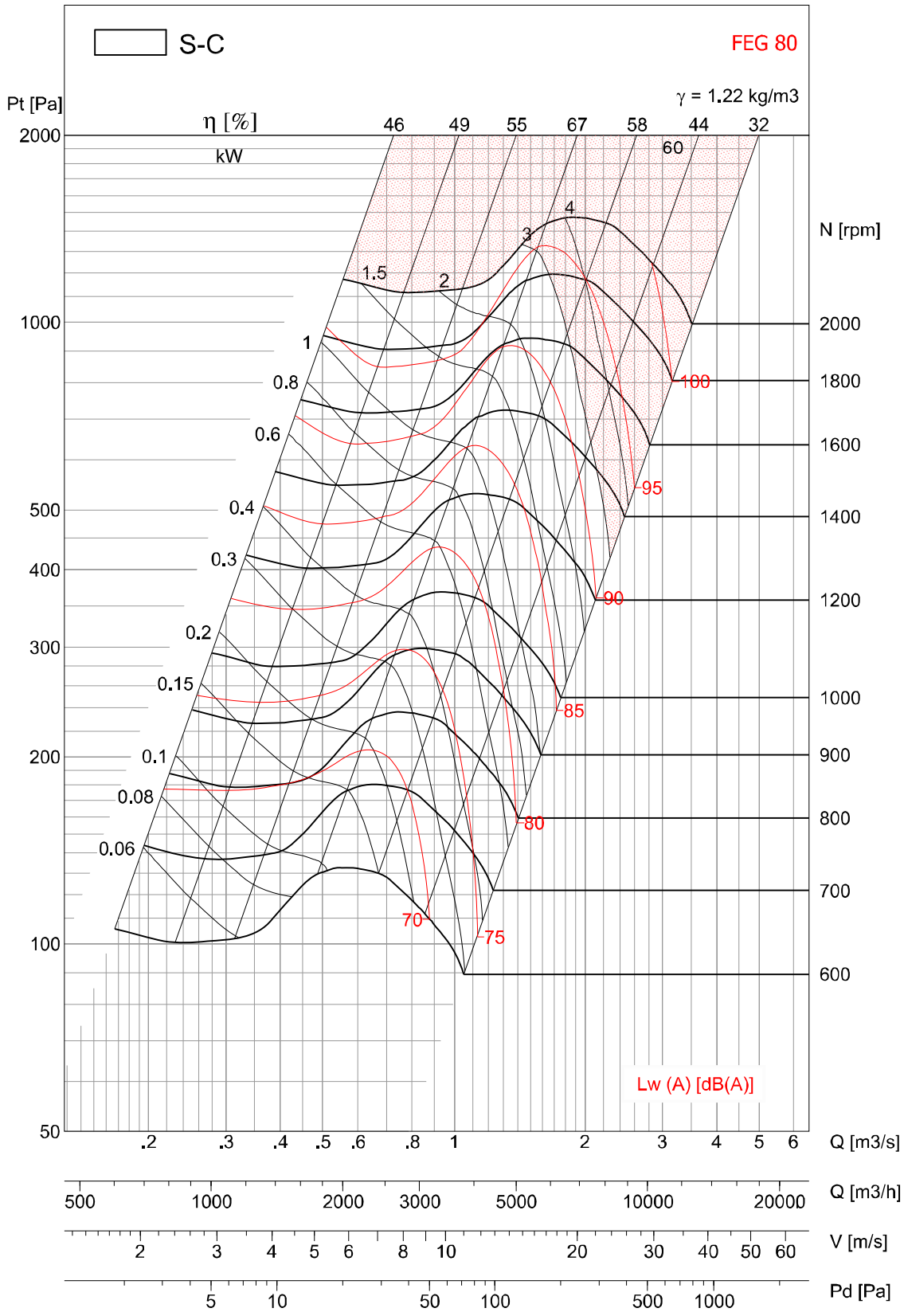
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KAT 10-8



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

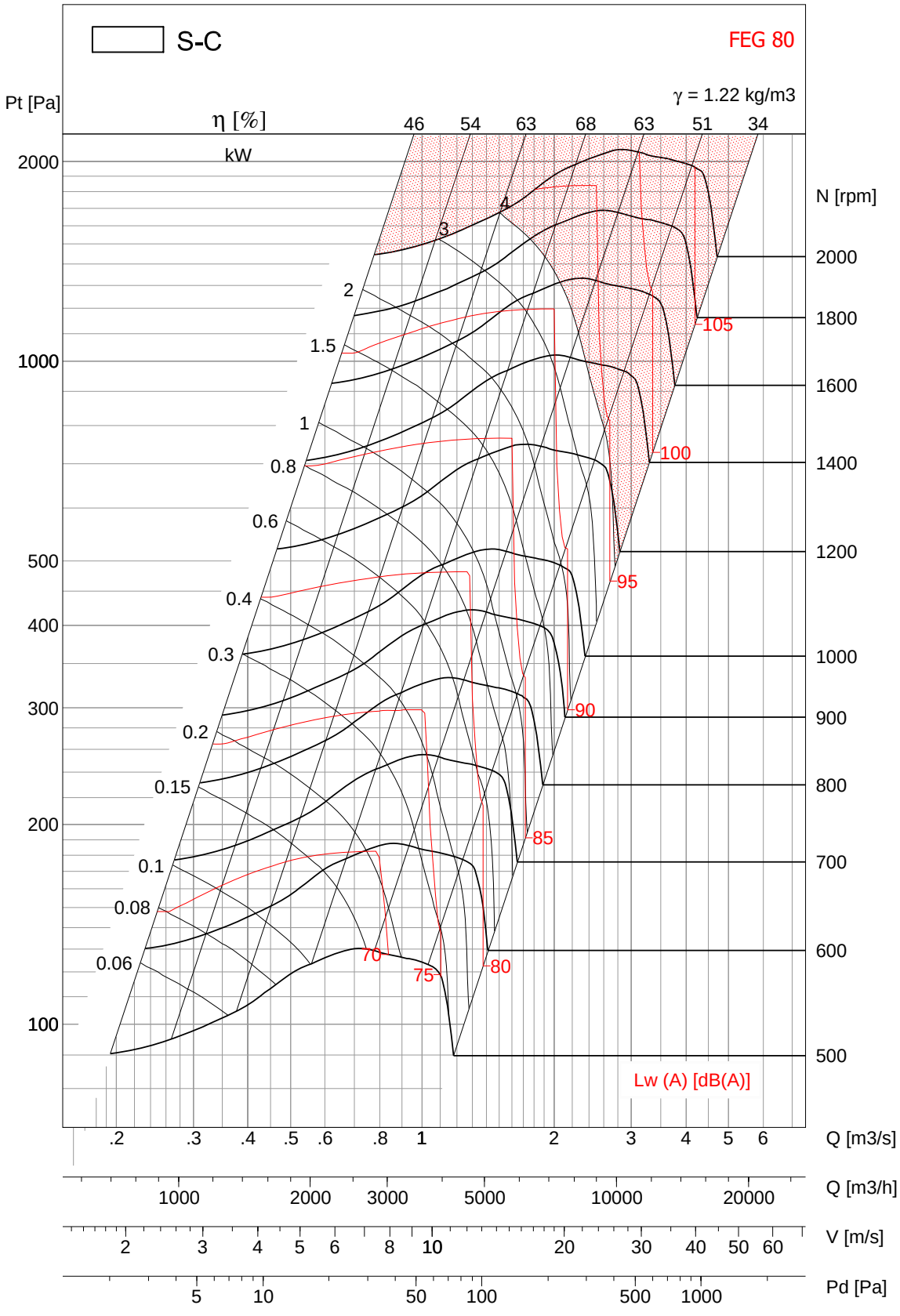
KAT 10-10



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

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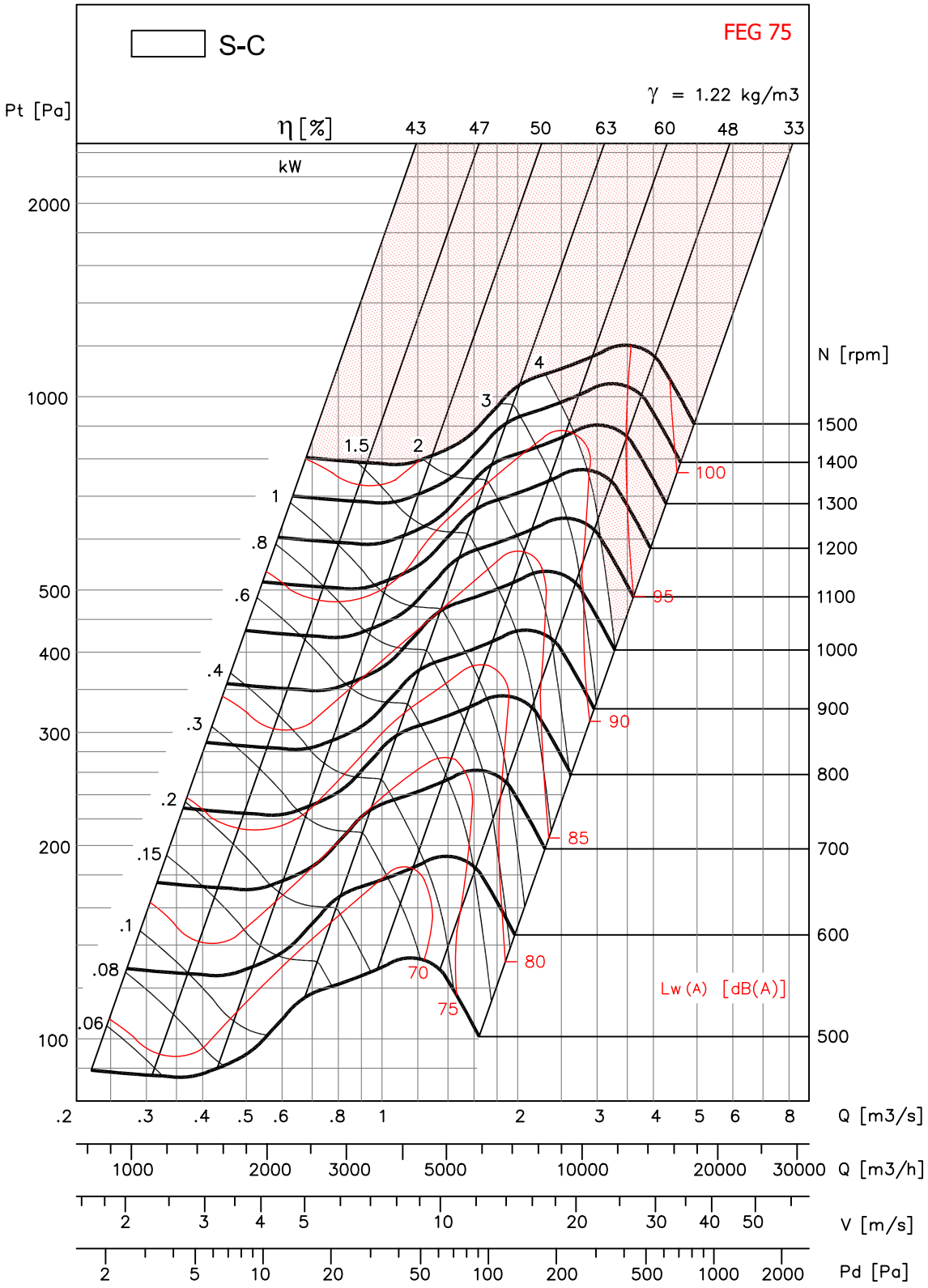
KAT 12-9



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

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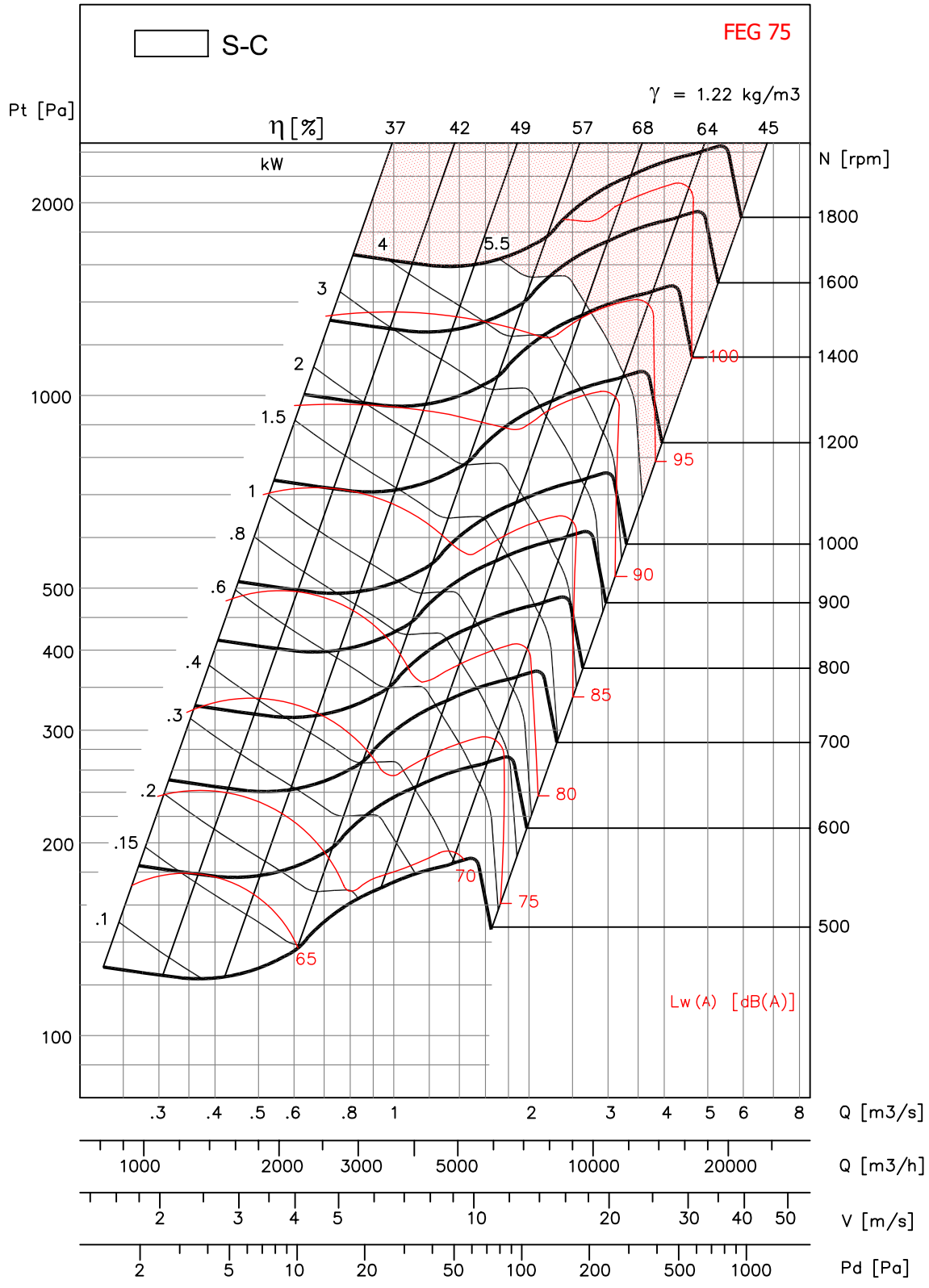
KAT 12-12



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

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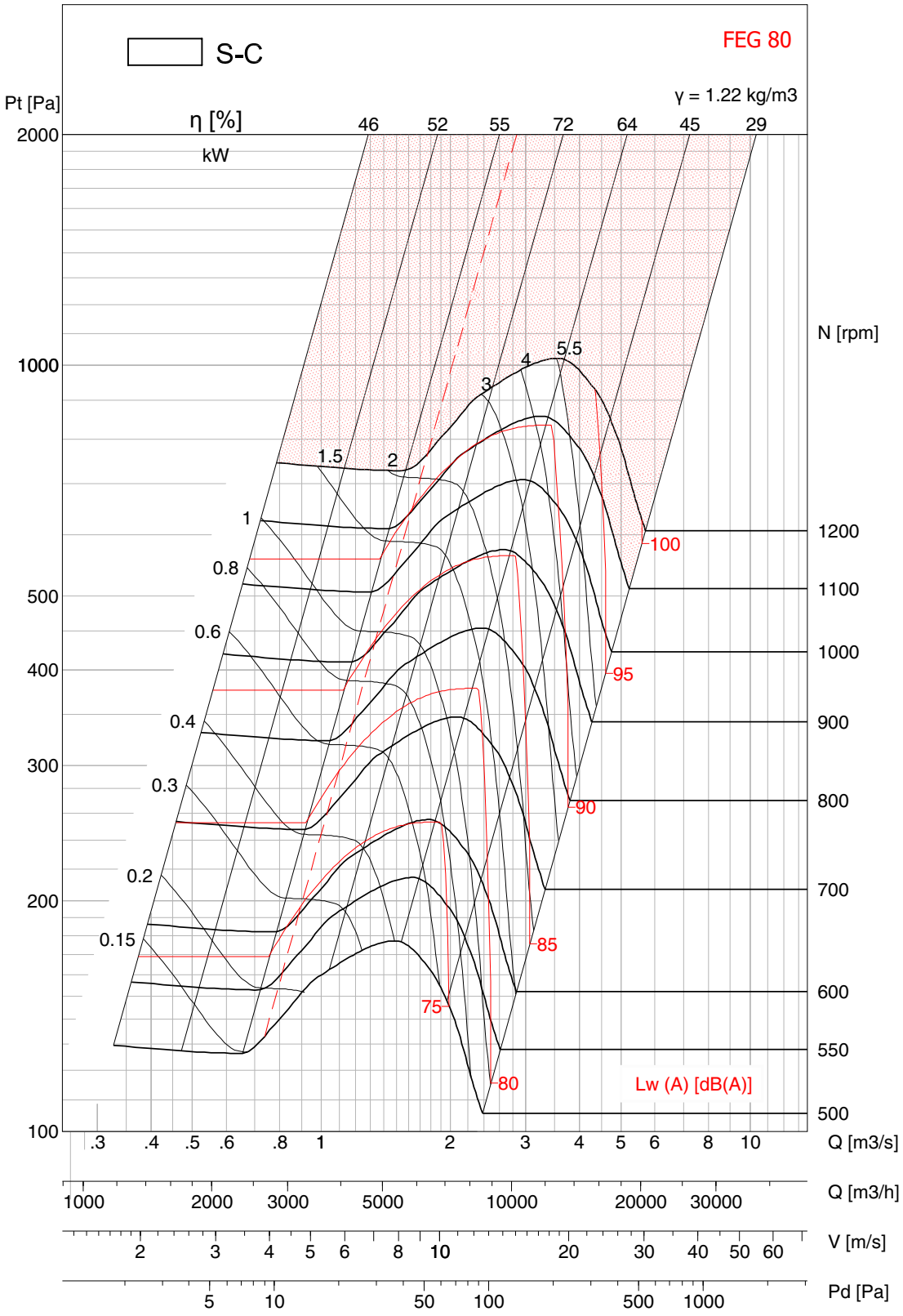
KAT 15-11



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

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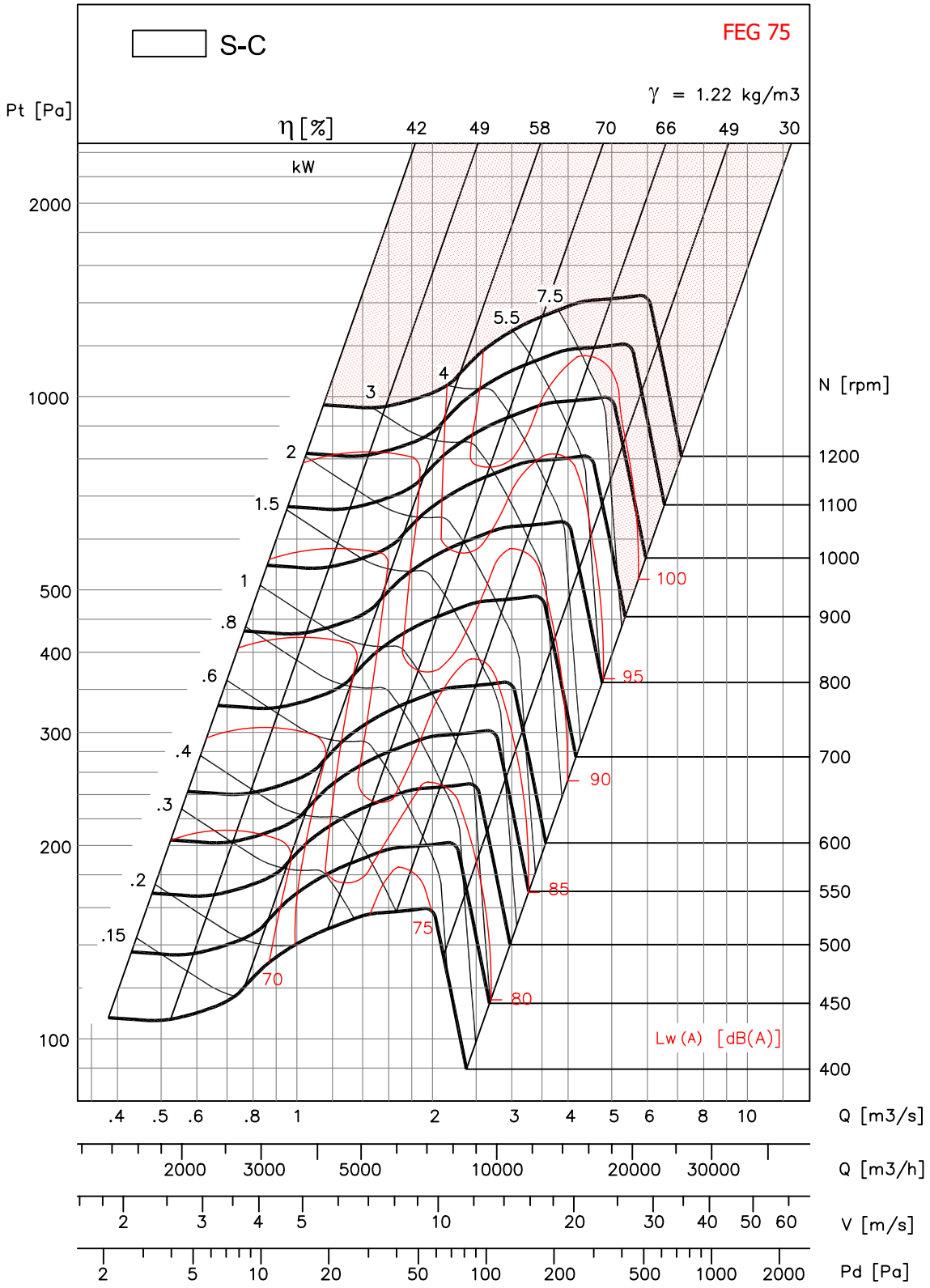
KAT 15-15



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound rating shown have been calculated per AMCA standard 301. Values shown are for inlet Lwi(A) sound power levels for installation type B - free inlet, ducted outlet.

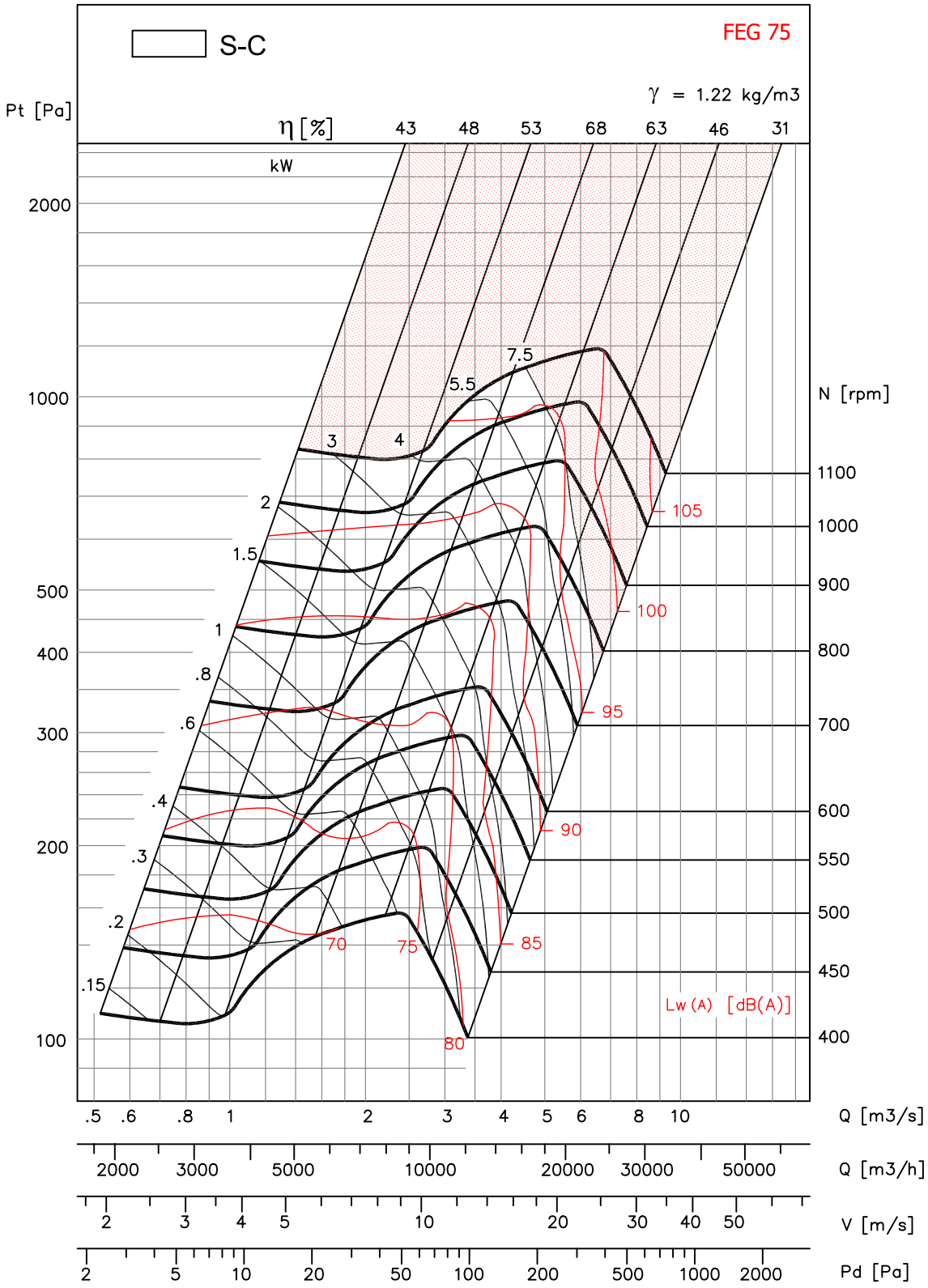
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KAT 18-13

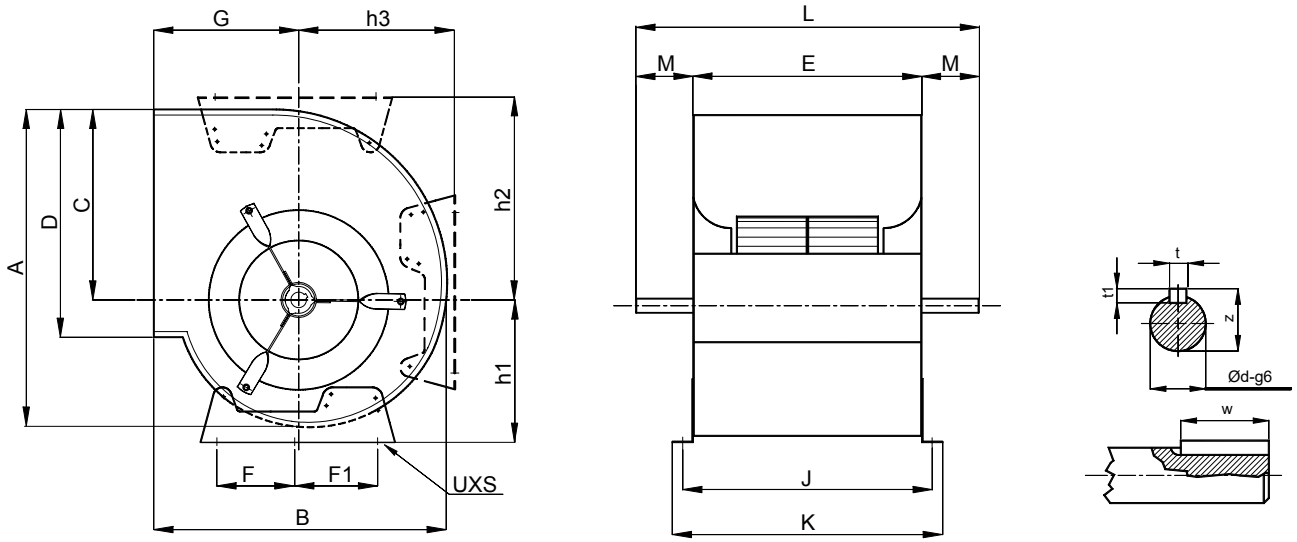


- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.

KAT 18-18



- Performance certified is for Installation type B - free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating kW does not include transmission losses.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lwi (A) sound power levels for installation type B - free inlet, ducted outlet.



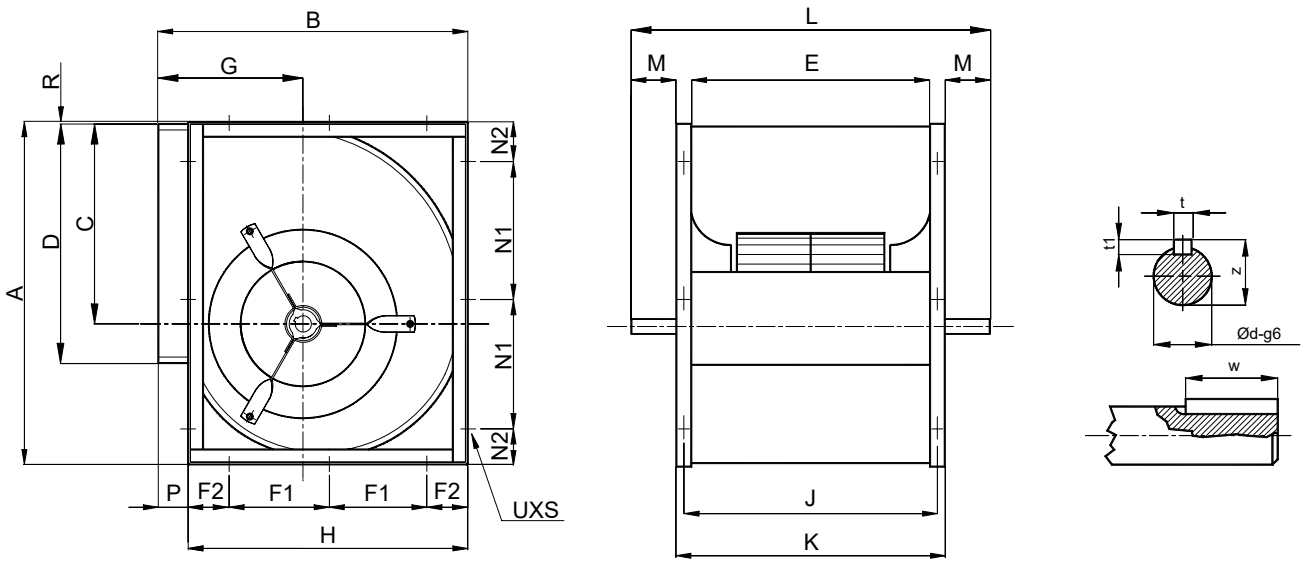
Model	A	B	C	D	E	F	F1	G	J	K	L	M	h1	h2	h3	t	t1	w	z	Ød	UxS
7-7	328	312	192	228	259	90	90	152	279	299	355	48	164	224	164	6	6	30	22.5	20	11x16
8-8	364	345	216	256	287	112	112	164	312	337	388	50.5	181	245	184	6	6	30	22.5	20	11x16
9-7	387	380	216	262	232	135	165	185	257	282	321	44.5	178	233	199	6	6	30	22.5	20	11x16
9-9	387	380	216	262	298	135	165	185	323	348	388	45	178	233	199	6	6	30	22.5	20	11x16
10-8	443	425	249	289	265	170	170	203	290	315	355	45	198	287	227	6	6	30	22.5	20	11x16
10-10	443	425	249	289	331	170	170	203	356	381	425	44.5	198	287	227	6	6	30	22.5	20	11x16
12-9	521	491	294	341	309	189	219	230	334	359	420	55.5	232	332	266	8	7	40	28	25	11x16
12-12	521	491	294	341	395	189	219	230	420	445	510	57.5	232	332	266	8	7	40	28	25	11x16
15-11	609	569	342	404	373	232.5	262.5	264	398	423	510	68.5	272	380	309	8	7	40	28	25	11x16
15-15	609	569	342	404	471	232.5	262.5	264	496	521	608	68.5	272	380	309	8	7	40	28	25	11x16
18-13	739	684	415	478	430	288	318	314	455	480	567	68.5	340	457	376	8	7	40	28	25	11x16
18-18	739	684	415	478	557	288	318	314	582	607	694	68.5	340	457	376	8	7	40	28	25	11x16

*** Optional**

Model	A	B	C	D	E	F	F1	G	J	K	L	M	h1	h2	h3	t	t1	w	z	Ød	UxS
15-15	609	569	342	404	471	232.5	262.5	264	496	521	608	68.5	272	380	309	8	7	40	33	30	11x16
18-13	739	684	415	478	430	288	318	314	455	480	567	68.5	340	457	376	8	7	40	33	30	11x16
18-18	739	684	415	478	557	288	318	314	582	607	694	68.5	340	457	376	8	7	40	33	30	11x16

All Dimensions in mm.

KAT 7-7--- 18-18 ‘C’



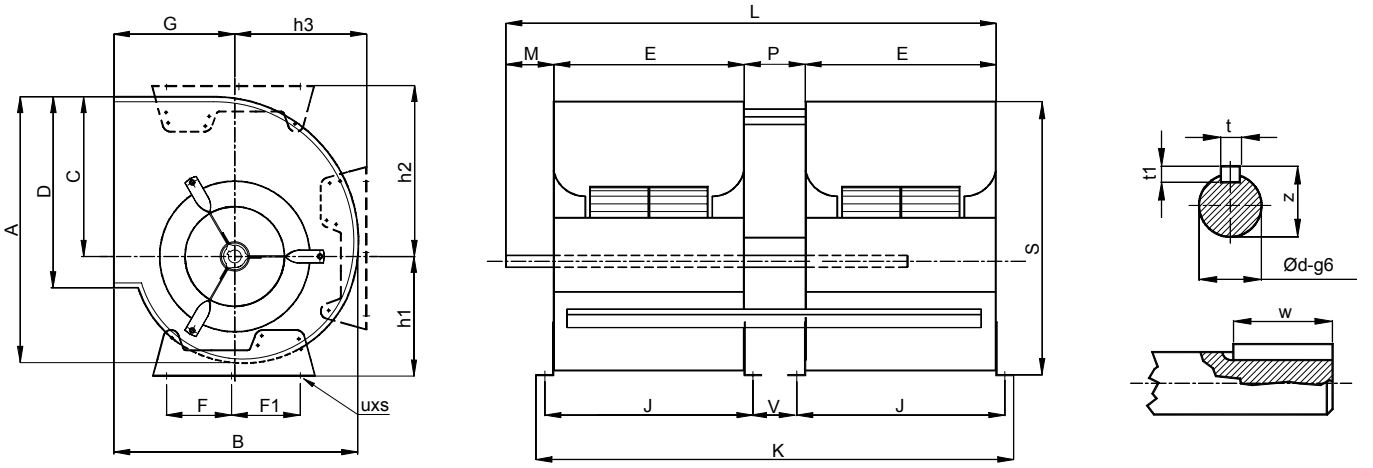
Model	A	B	C	D	E	F1	F2	G	H	J	K	L	M	N1	N2	P	R	t	t1	w	z	Ød	UxS
7-7	336	323	192	228	259	90	57	152	294	279	299	425	63	90	73	29	6	6	6	30	22.5	20	9x12
8-8	370	343	216	256	287	112	41	164	306	312	337	460	61.5	112	73	37	6	6	6	30	22.5	20	9x12
9-7	399	385	216	262	232	137	37.5	185	349	254	272	392	58	162	37.5	36	6	6	6	30	22.5	20	9x12
9-9	399	385	216	262	298	137	37.5	185	349	320	338	460	61	162	37.5	36	6	6	6	30	22.5	20	9x12
10-8	455	431	249	289	265	165	32.5	203	395	287	305	425	60	195	32.5	36	6	6	6	30	22.5	20	9x12
10-10	455	431	249	289	331	165	32.5	203	395	353	371	490	59.5	195	32.5	36	6	6	6	30	22.5	20	9x12
12-9	533	497	294	341	309	185.5	45	230	461	339	365	495	65	221.5	45	36	6	8	7	40	28	25	11x16
12-12	533	497	294	341	395	185.5	45	230	461	425	451	585	67	221.5	45	36	6	8	7	40	28	25	11x16
15-11	621	575	342	404	373	224.5	45	264	539	403	429	585	78	265.5	45	36	6	8	7	40	28	25	11x16
15-15	621	575	342	404	471	224.5	45	264	539	501	527	685	79	265.5	45	36	6	8	7	40	28	25	11x16
18-13	751	690	415	478	430	272	55	314	654	470	506	666	80	320.5	55	36	6	8	7	40	28	25	11x16
18-18	751	690	415	478	557	272	55	314	654	597	633	790	78.5	320.5	55	36	6	8	7	40	28	25	11x16

*** Optional**

Model	A	B	C	D	E	F1	F2	G	H	J	K	L	M	N1	N2	P	R	t	t1	w	z	Ød	UxS
15-15	621	575	342	404	471	224.5	45	264	539	501	527	685	79	265.5	45	36	6	8	7	40	33	30	11x16
18-13	751	690	415	478	430	272	55	314	654	470	506	666	80	320.5	55	36	6	8	7	40	33	30	11x16
18-18	751	690	415	478	557	272	55	314	654	597	633	790	78.5	320.5	55	36	6	8	7	40	33	30	11x16

All Dimensions in mm.

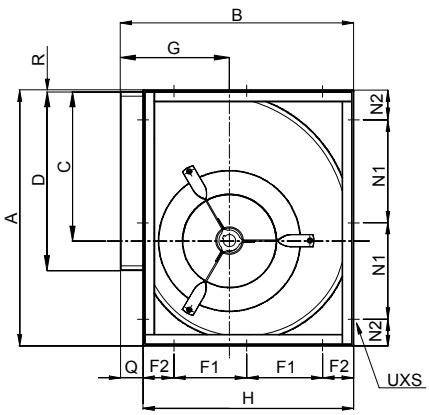
KAT 7-7--- 18-18 ‘S2’

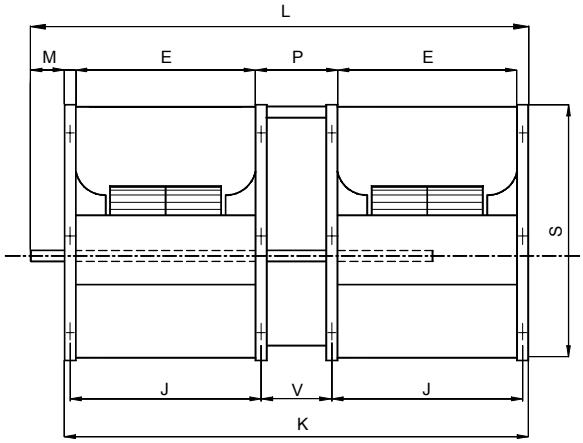


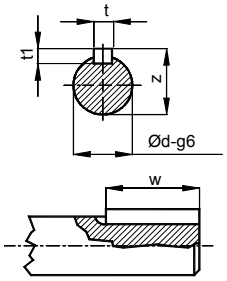
Model	A	B	C	D	E	F	F1	G	J	K	L	P	M	V	h1	h2	h3	t	t1	w	z	Ød	UxS	Max. kW	Max. rpm
7-7	328	312	192	228	259	90	90	152	279	742	782	184	80	164	164	224	164	6	6	60	22.5	20	11x16	2	2600
8-8	364	345	216	256	287	112	112	164	312	838	868	214	80	189	181	245	184	6	6	60	22.5	20	11x16	4	2600
9-7	387	380	216	262	232	135	165	185	257	698	728	184	80	159	178	233	199	6	6	60	22.5	20	11x16	4	2500
	387	380	216	262	232	135	165	185	257	698	745	184	97	159	178	233	199	8	7	60	28	25	11x16	6	2500
9-9	387	380	216	262	298	135	165	185	323	890	920	244	80	219	178	233	199	6	6	60	22.5	20	11x16	4	2100
	387	380	216	262	298	135	165	185	323	890	937	244	97	219	178	233	199	8	7	60	28	25	11x16	6	2100
10-8	443	425	249	289	265	170	170	203	290	794	841	214	97	189	198	287	227	8	7	60	28	25	11x16	6	2500
10-10	443	425	249	289	331	170	170	203	356	976	1006	264	80	239	198	287	227	8	7	60	28	25	11x16	6	2000
	443	425	249	289	331	170	170	203	356	976	1023	264	97	239	198	287	227	8	7	90	33	30	11x16	8.5	2000
12-9	521	491	294	341	309	189	219	230	334	912	942	244	80	219	232	332	266	8	7	60	28	25	11x16	6	2000
	521	491	294	341	309	189	219	230	334	912	959	244	97	219	232	332	266	8	7	90	33	30	11x16	8.5	2000
12-12	521	491	294	341	395	189	219	230	420	1164	1224	324	110	299	232	332	266	8	7	90	33	30	11x16	8.5	1500
15-11	609	569	342	404	373	232.5	262.5	264	398	1090	1170	294	130	269	272	380	309	8	7	90	33	30	11x16	11	2000
15-15	609	569	342	404	471	232.5	262.5	264	496	1376	1456	384	130	359	272	380	309	8	7	90	33	30	11x16	7	1200
	609	569	342	404	471	232.5	262.5	264	496	1376	1461	384	135	359	272	380	309	10	8	90	38	35	11x16	11	1200
18-13	739	684	415	478	430	288	318	314	455	1253	1333	343	130	318	340	457	376	10	8	90	38	35	11x16	10	1200
	739	684	415	478	430	288	318	314	455	1253	1338	343	135	318	340	457	376	12	8	90	43	40	11x16	15	1200
18-18	739	684	415	478	557	288	318	314	582	1622	1702	458	130	433	340	457	376	10	8	90	38	35	11x16	10	1100
	739	684	415	478	557	288	318	314	582	1622	1707	458	135	433	340	457	376	12	8	90	43	40	11x16	15	1100

All Dimensions in mm.

KAT 7-7--- 18-18 ‘C2’





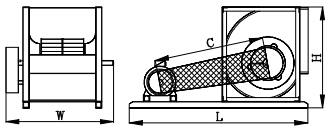


Model	A	B	C	D	E	F1	F2	G	H	J	K	L	M	N1	N2	P	Q	R	V	t	t1	w	z	Ød	UxS	Max. kW	Max. rpm
7-7	336	323	192	228	259	90	57	152	294	279	742	812	70	90	78	184	29	6	164	6	6	60	22.5	20	9x12	2	2600
8-8	370	343	215	256	287	112	41	164	306	312	838	908	70	112	73	214	37	6	189	6	6	60	22.5	20	9x12	4	2600
9-7	399	385	216	262	232	137	37.5	185	349	254	688	758	70	162	37.5	184	36	6	162	6	6	60	22.5	20	9x12	4	2500
	399	385	216	262	232	137	37.5	185	349	254	688	765	77	162	37.5	184	36	6	162	8	7	60	28	25	9x12	6	2500
9-9	399	385	216	262	298	137	37.5	185	349	320	880	950	70	162	37.5	244	36	6	222	6	6	60	22.5	20	9x12	4	2100
	399	385	216	262	298	137	37.5	185	349	320	880	957	77	162	37.5	244	36	6	222	8	7	60	28	25	9x12	6	2100
10-8	455	431	249	289	265	165	32.5	203	395	287	784	861	77	195	32.5	214	36	6	192	8	7	60	28	25	9x12	6	2500
10-10	455	431	249	289	331	165	32.5	203	395	353	966	1036	70	195	32.5	264	36	6	242	8	7	60	28	25	9x12	6	2000
	455	431	249	289	331	165	32.5	203	395	353	966	1048	82	195	32.5	264	36	6	242	8	7	90	33	30	9x12	8.5	2000
12-9	533	497	294	341	309	185.5	45	230	461	339	918	988	70	221.5	45	244	36	6	214	8	7	60	28	25	11x16	6	2000
	533	497	294	341	309	185.5	45	230	461	339	918	1000	82	221.5	45	244	36	6	214	8	7	90	33	30	11x16	8.5	2000
12-12	533	497	294	341	395	185.5	45	230	461	425	1170	1270	100	221.5	45	324	36	6	294	8	7	90	33	30	11x16	8.5	1500
15-11	621	575	342	404	373	224.5	45	264	539	403	1096	1196	100	265.5	45	294	36	6	264	8	7	90	33	30	11x16	11	2000
15-15	621	575	342	404	471	224.5	45	264	539	501	1382	1482	100	265.5	45	384	36	6	354	8	7	90	33	30	11x16	7	1200
	621	575	342	404	471	224.5	45	264	539	501	1382	1497	115	265.5	45	384	36	6	354	10	8	90	38	35	11x16	11	1200
18-13	751	690	415	478	430	272	55	314	654	470	1279	1379	100	320.5	55	343	36	6	303	10	8	90	38	35	11x16	10	1200
	751	690	415	478	430	272	55	314	654	470	1279	1394	115	320.5	55	343	36	6	303	12	8	90	43	40	11x16	15	1200
18-18	751	690	415	478	557	272	55	314	654	597	1648	1748	100	320.5	55	458	36	6	418	10	8	90	38	35	11x16	10	1100
	751	690	415	478	557	272	55	314	654	597	1648	1763	115	320.5	55	458	36	6	418	12	8	90	43	40	11x16	15	1100

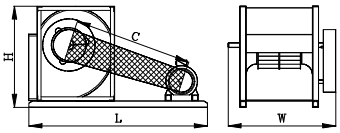
All Dimensions in mm.

OVERALL DIMENSION – KAT "C" SERIES

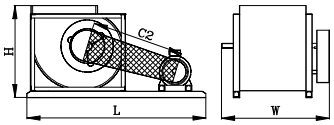
CW 90° (Pos Z)



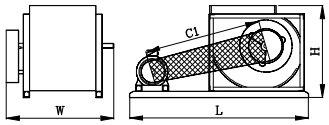
CW 270° (Pos W)



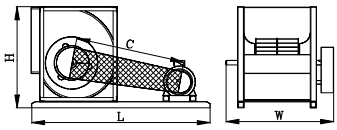
CW 360° (Pos W)



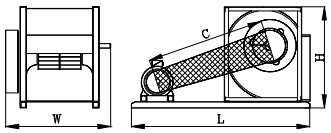
CW 360° (Pos Z)



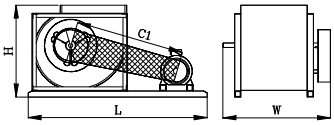
CCW 90° (Pos W)



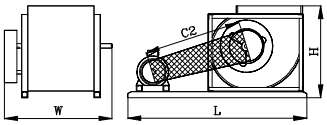
CCW 270° (Pos Z)



CCW 360° (Pos W)



CCW 360° (Pos Z)



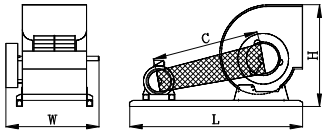
Model	Motor Frame Size	90°/ 270°						360°					
		C (90°)	C (270°)	L	W	H	* Wt (kg)	C1	C2	L	W	H	* Wt (kg)
7-7	63	308	320	560	455	376	13	338	279	600	455	363	13
	71	339	349	600	455	376	13	368	309	640	455	363	13
	80	349	358	620	455	376	13	397	338	680	455	363	13
	90	379	385	660	455	376	13	426	366	720	455	363	13
8-8	63	325	343	580	490	410	14	369	297	640	490	383	14
	71	336	352	600	490	410	14	379	307	660	490	383	14
	80	366	379	640	490	410	14	408	335	700	490	383	14
	90	395	406	680	490	410	14	437	363	740	490	383	14
9-7	71	358	369	640	418	439	15	394	350	700	418	425	15
	80	387	396	680	418	439	15	423	379	740	418	425	15
	90	416	423	720	418	439	15	450	406	780	418	425	15
	100	445	451	760	418	439	15	479	434	820	418	425	15
	112	492	496	820	418	439	15	505	461	860	418	425	15
9-9	71	358	369	640	490	439	17	394	350	700	490	425	17
	80	387	396	680	490	439	17	423	379	740	490	425	17
	90	416	423	720	490	439	17	450	406	780	490	425	17
	100	445	451	760	490	439	17	479	434	820	490	425	17
	112	492	496	820	490	439	17	505	461	860	490	425	17
10-8	71	404	419	700	455	495	18	437	384	760	455	471	18
	80	413	427	720	455	495	18	445	392	780	455	471	18
	90	441	453	760	455	495	18	472	419	820	455	471	18
	100	469	479	800	455	495	18	500	446	860	455	471	18
	112	515	523	860	455	495	18	545	491	920	455	471	18
10-10	80	413	427	720	520	495	19	445	392	780	520	471	19
	90	441	453	760	520	495	19	472	419	820	520	471	19
	100	469	479	800	520	495	19	500	446	860	520	471	19
	112	515	523	860	520	495	19	545	491	920	520	471	19
12-9	80	472	492	800	525	573	25	501	437	860	525	537	25
	90	499	517	840	525	573	25	527	463	900	525	537	25
	100	526	542	880	525	573	25	554	489	940	525	537	25
	112	552	566	920	525	573	25	598	533	1000	525	537	25
	132	609	619	1000	525	573	25	654	588	1080	525	537	25
12-12	80	472	492	800	615	573	28	501	437	860	615	537	28
	90	499	517	840	615	573	28	527	463	900	615	537	28
	100	526	542	880	615	573	28	554	489	940	615	537	28
	112	552	566	920	615	573	28	598	533	1000	615	537	28
	132	609	619	1000	615	573	28	654	588	1080	615	537	28
15-11	80	527	553	880	615	661	31	572	502	960	615	615	31
	90	553	577	920	615	661	31	597	526	1000	615	615	31
	100	579	601	960	615	661	31	623	551	1040	615	615	31
	112	604	624	1000	615	661	31	647	574	1080	615	615	31
	132	660	675	1080	615	661	31	701	628	1160	615	615	31
15-15	80	527	553	880	715	661	35	572	502	960	715	615	35
	90	553	577	920	715	661	35	597	526	1000	715	615	35
	100	579	601	960	715	661	35	623	551	1040	715	615	35
	112	604	624	1000	715	661	35	647	574	1080	715	615	35
	132	660	675	1080	715	661	35	701	628	1160	715	615	35
18-13	90	617	652	1020	696	791	46	678	594	1120	696	730	46
	100	643	675	1060	696	791	46	703	618	1160	696	730	46
	112	686	715	1120	696	791	46	773	687	1250	696	730	46
	132	739	764	1200	696	791	46	797	709	1300	696	730	46
	160	805	824	1300	696	791	46	860	771	1400	696	730	46
18-18	90	617	652	1020	820	791	52	678	594	1120	820	730	52
	100	643	675	1060	820	791	52	703	618	1160	820	730	52
	112	686	715	1120	820	791	52	773	687	1250	820	730	52
	132	739	764	1200	820	791	52	797	709	1300	820	730	52
	160	805	825	1300	820	791	52	860	771	1400	820	730	52

** The above weight does not include motor and drive unit as these will vary with supplier.*

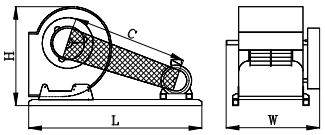
All Dimensions in mm.

OVERALL DIMENSION – KAT "S" SERIES

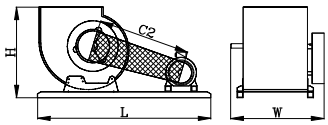
CW 90° (Pos Z)



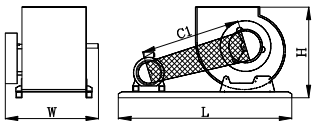
CW 270° (Pos W)



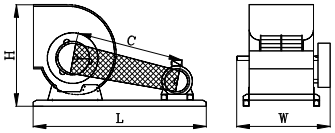
CW 360° (Pos W)



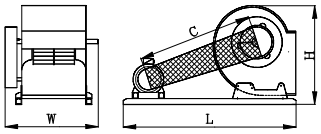
CW 360° (Pos Z)



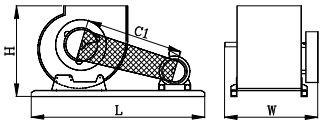
CCW 90° (Pos W)



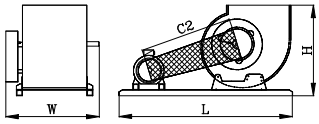
CCW 270° (Pos Z)



CCW 360° (Pos W)



CCW 360° (Pos Z)



Model	Motor Frame Size	90°/ 270°						360°					
		C (90°)	C (270°)	L	W	H	* Wt (kg)	C1	C2	L	W	H	* Wt (kg)
7-7	63	297	315	560	385	396	10	352	297	600	385	356	11
	71	327	342	600	385	396	10	383	327	640	385	356	11
	80	337	350	620	385	396	10	412	357	680	385	356	11
	90	366	376	660	385	396	10	441	386	720	385	356	11
8-8	63	309	331	580	418	437	11	384	318	640	418	388	12
	71	319	339	600	418	437	11	394	327	660	418	388	12
	80	347	364	640	418	437	11	423	356	700	418	388	12
	90	375	389	680	418	437	11	451	384	740	418	388	12
9-7	71	337	359	640	351	434	13	413	370	700	351	424	13
	80	366	385	680	351	434	13	442	398	740	351	424	13
	90	394	410	720	351	434	13	470	426	780	351	424	13
	100	423	436	760	351	434	13	499	454	820	351	424	13
	112	470	480	820	351	434	13	525	480	860	351	424	13
9-9	71	337	359	640	418	434	14	413	370	700	418	424	14
	80	366	385	680	418	434	14	442	398	740	418	424	14
	90	394	410	720	418	434	14	470	426	780	418	424	14
	100	423	436	760	418	434	14	499	454	820	418	424	14
	112	470	480	820	418	434	14	525	480	860	418	424	14
10-8	71	382	412	700	385	487	15	456	403	760	385	470	15
	80	391	418	720	385	487	15	464	411	780	385	470	15
	90	419	442	760	385	487	15	492	438	820	385	470	15
	100	447	467	800	385	487	15	519	465	860	385	470	15
	112	493	509	860	385	487	15	565	511	920	385	470	15
10-10	80	391	418	720	450	487	16	464	411	780	450	470	16
	90	419	442	760	450	487	16	492	438	820	450	470	16
	100	447	467	800	450	487	16	519	465	860	450	470	16
	112	493	509	860	450	487	16	565	511	920	450	470	16
12-9	80	450	485	800	450	566	20	520	456	860	450	536	20
	90	477	508	840	450	566	20	546	482	900	450	536	20
	100	504	532	880	450	566	20	573	508	940	450	536	20
	112	530	554	920	450	566	20	618	552	1000	450	536	20
	132	587	606	1000	450	566	20	674	607	1080	450	536	20
12-12	80	450	485	800	540	566	23	520	456	860	540	536	23
	90	477	508	840	540	566	23	546	482	900	540	536	23
	100	504	532	880	540	566	23	573	508	940	540	536	23
	112	530	554	920	540	566	23	618	552	1000	540	536	23
	132	587	606	1000	540	566	23	674	607	1080	540	536	23
15-11	80	505	548	880	540	654	26	590	520	960	540	613	26
	90	531	570	920	540	654	26	616	544	1000	540	613	26
	100	558	593	960	540	654	26	642	570	1040	540	613	26
	112	582	614	1000	540	654	26	666	593	1080	540	613	26
	132	638	663	1080	540	654	26	720	647	1160	540	613	26
15-15	80	505	548	880	638	654	29	590	520	960	638	613	30
	90	631	570	920	638	654	29	616	544	1000	638	613	30
	100	558	593	960	638	654	29	642	570	1040	638	613	30
	112	582	614	1000	638	654	29	666	593	1080	638	613	30
	132	638	663	1080	638	654	29	720	647	1160	638	613	30
18-13	90	600	650	1020	597	795	36	697	613	1120	597	730	37
	100	625	672	1060	597	795	36	722	636	1160	597	730	37
	112	667	709	1120	597	795	36	792	706	1250	597	730	37
	132	720	756	1200	597	795	36	816	728	1300	597	730	37
	160	785	814	1300	597	795	36	880	791	1400	597	730	37
18-18	90	600	650	1020	724	795	43	697	613	1120	724	730	43
	100	625	672	1060	724	795	43	722	636	1160	724	730	43
	112	667	709	1120	724	795	43	792	706	1250	724	730	43
	132	720	756	1200	724	795	43	816	728	1300	724	730	43
	160	785	814	1300	724	795	43	880	791	1400	724	730	43

** The above weight does not include motor and drive unit as these will vary with supplier.*

All Dimensions in mm.

Operational Limits - "KAT"

				7-7	8-8	9-7	9-9	10-8	10-10	12-9	12-12	15-11	15-15	18-13	18-18
Maximum Absorbed Power		**S-C**	kW	1.1	2	3	3	3	4	4	4	5.5	5.5	7.5	7.5
		S2	kW	2	4	6	6	6	8.5	8.5	8.5	11	11	15	15
		C2	kW	2	4	6	6	6	8.5	8.5	8.5	11	11	15	15
Maximum Fan Speed		**S-C**	rpm	2600	2600	2500	2100	2500	2000	2000	1500	2000	1200	1200	1100
		S2	rpm	2600	2600	2500	2100	2500	2000	2000	1500	2000	1200	1200	1100
		C2	rpm	2600	2600	2500	2100	2500	2000	2000	1500	2000	1200	1200	1100
Temperature Range / Min. -20°C		**S-C**	Max.°C	85	85	85	85	85	85	85	85	85	85	85	85
		S2-C2	Max.°C	85	85	85	85	85	85	85	85	85	85	85	85
Bearing Dynamic Load		**S-C**	N	9800	9800	9800	9800	9800	9800	10800	10800	10800	10800	10800	10800
		S2	N	9800	9800	9800	9800	10800	10800	10800	15000	15000	15000	19600	19600
		C2	N	9800	9800	9800	9800	10800	10800	10800	15000	15000	15000	19600	19600
Wheel	Diameter		mm	180	200	252	252	282	282	317	317	383	383	450	450
	Weight		kg	1.18	1.53	1.88	2.59	3.16	3.8	4.6	6.03	9.2	10.3	13.8	16.2
	$J = PD^2/4$		kgm^2	0.007	0.012	0.02	0.028	0.042	0.051	0.079	0.104	0.225	0.252	0.478	0.561
Fan weight		**S**	kg	5	5.8	6.6	7.9	8.3	9.3	12.7	15.2	17.7	20.6	27	32.5
		C	kg	7.7	8.5	9.3	10.4	11.2	12	17.4	20	22.9	26.7	36	41.5
		S2	kg	11.7	13	14.9	18.1	18.5	21.1	28.2	33.8	39.7	45.3	57.8	70.5
		C2	kg	19	22	23.5	27	27	31	45.5	51	57.4	68	91	106

* For operating limits of "KRUGER" twin fan series, please consult the technical department for details.

NOTES

NOTES

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The company is always improving and developing its products, therefore the company reserves the right of making changes to the illustrated products.
Certified dimension can be provided upon request.

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