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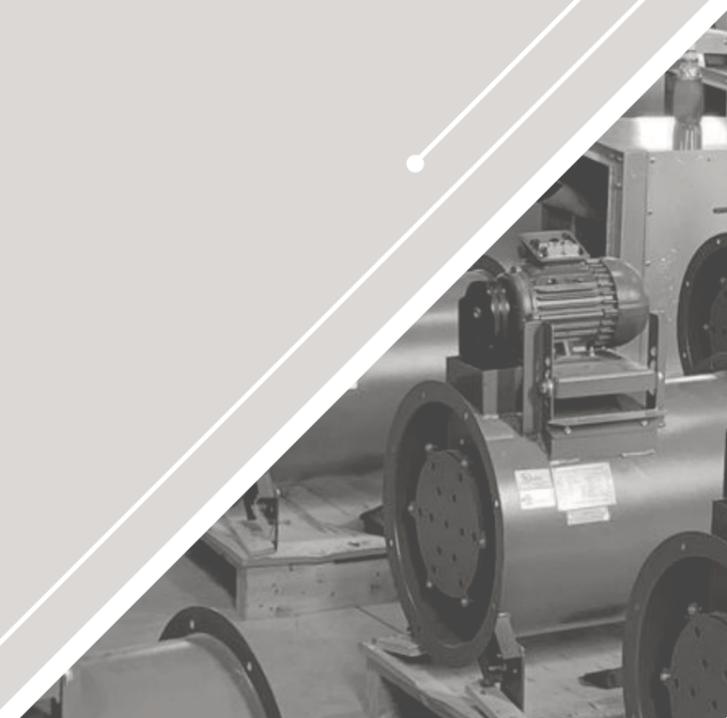
**INFINAIR ARABIA CO. LTD BRANCH**  
Kingdom of Saudi Arabia

P.O.Box 4831 Dammam  
info@infinair-arabia.com  
www.infinair-arabia.com



# RTC

**Power Ventilator Centrifugal  
(Down-Blast Rooftop Fan)**



INFINAIR ARABIA COMPANY LTD BRANCH, certifies that the Rooftop Centrifugal Fans (RTC) shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program



**INFINAIR™**  
**INFINAIR ARABIA CO. LTD.**



## ABOUT US:

INFINAIR ARABIA is one of the pioneer fans & manufacturing company in MENA. It is a partner to INFINAIR Corporation, which was established in 2003. In the last two decades, INFINAIR Corporation has expanded worldwide. In 2018, INFINAIR was established a production factory in the Kingdom of Jordan, Amman – Mowaqqar Industrial City, and in 2020, INFINAIR had expanded a new factory in Saudi Arabia. INFINAIR ARABIA focuses on Quality Management to develop the system, processes, and work professionalism. INFINAIR is a certified company by ISO9001, ISO14001, and ISO45001. INFINAIR ARABIA has invested in Research & Development to certify the products by AMCA, UL, ETL, SMOKE, and RoHS. Today, INFINAIR ARABIA supplies to all Middle East & North Africa Countries and participates in MENA projects.



INFINAIR ARABIA achieved SAUDI MADE Authorization & Accreditation Mark. It is contributing to Saudi Made local contents and fulfills the 2030 vision. INFINAIR ARABIA is very active in the Saudi Market and supports many projects.

**INFINAIR™**  
شركة إنفينير العربية  
INFINAIR ARABIA CO. LTD.

## PRODUCTION AND FABRICATIONS



INFINAIR ARABIA supplies to many factories, hospitals, universities, malls, towers, oil & gas plants, water desalination, and several others.

# RTC

## Rooftop Down-blast Centrifugal Fan

- Downblast discharge design for lower system resistance
- Automatic liquid contaminant separation and collection keeps roof clean
- High balancing grade up to G2.5 (AMCA 204)
- Isolated motor compartment with active cooling for extended service life
- High-strength aluminum construction for harsh environments

## 5G Wind-Surfer™ Wheel: Special for Aluminum Roof Fans

Novel design overturning the tradition

The first centrifugal wheel in China for aluminum roof fans

With innovation based on advanced passage through constraint idea from abroad

Leading efficiency and noise advantage

Highly efficient area width, no overload

Internationally advanced process is adopted for better conformity with characteristics of the flow field

Flow passage components are spin formed, in replacement of the traditional process

The blade is formed at one time by pressing, having ensured the processing quality

Special machine, mould and tooling design have ensured the molding and positioning precision

Wind-Surfer™ wheel comes to its fifth generation(5G)

Continuous improvement, constant promotion

Higher energy efficiency, lower energy waste

Less noise, more quietness



SS wheel is optional for smoke applications

Whole aluminum alloy, light weight and inborn explosion-proof

Metal texture promotes the taste

Light weight accounting for only 1/3 of that of the traditional

Having reached the highest explosion-proof class SPACK A

Carefully selected materials applicable to fire-fighting and coastal occasions

The strength is designed to be 200% of the highest rotating speed, and may fully satisfy the fire-fighting requirement

The material is resistant to neutral salt spray, and is widely used in the coastal regions

The rigorous experimental tests win trustworthiness

## Product Feature

Structure:  
Downblast exhaust air, no pollution and high pressure

Downblast direction, quickly dilute the polluted air, environmental friendly

Avoid pollution on the roof

Avoid polluted air re-circulate into building

Replace chimney, save investment and improve building appearance

Centrifugal principle: reducing concentration while exhausting air

Impeller rotate at high speed: Centrifugalize grease or liquid contamination

Swung to the windband, flow down to the collection box

Reducing the concentration of polluted air, in order to matched environment protection requirement

Isolated motor chamber: positive cooling system

Motor/drive located in independent chamber: isolated from exhaust air

Fresh air intake tube: cooling motor with fresh air

Auxiliary blades suck in fresh air: active cooling

Motor/bearing life extended, maintainess/cleaning easier

Material selection:  
beautiful appearance and endurable

Select high quality aluminum alloy with high strength

Light, reduce the load of the roof

Resist wind, endurable sunlight; load of heavy snow, endurable the hostile climate

Streamlining, refine artisanship

Appearance in silvery white, match to the modern aesthetic

High pressure wheel: for high resistance system exhaust

Static pressure up to 900Pa

Suitable for long/thin duct, welding, dust generating or workplace exhaust

Special Air exhaust

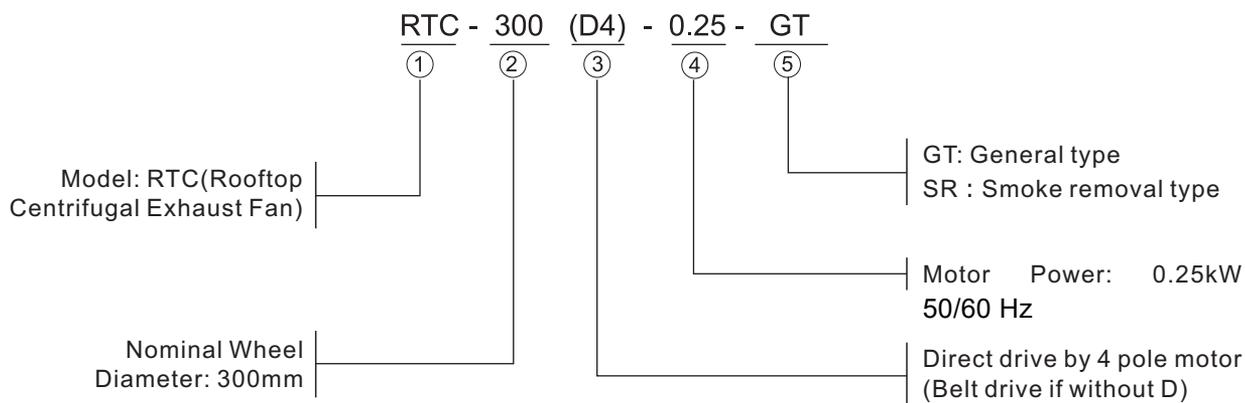
- AMCA Spark A Spark Resistance Construction Type A as per AMCA 99
- 100°C Max. 100°C high temperature exhaust, active cooling ensured

Saturated wet air exhaust: through special drain design

Laboratory exhaust

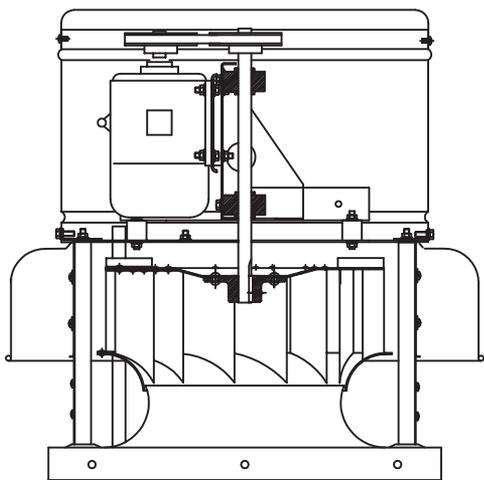
Sticky air exhaust: wheel protected by non-stick coating

## Naming Convention

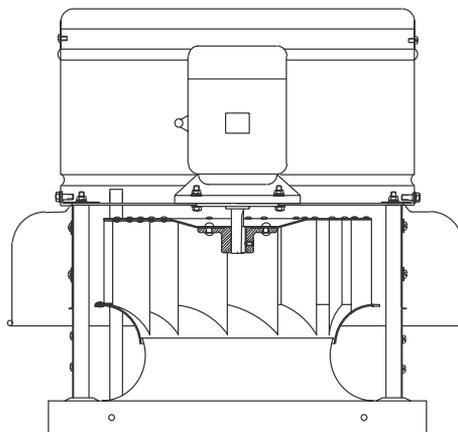


Note: The general type and smoke removal type have the same airflow capacity and air pressure.

## RTC Outline Drawing



RTC(Belt Drive)



RTC-D(Direct Drive)

RTC(Belt Drive)	
Smoke Removal	Available
Explosion Proof	Not Available
Wheel Finished with Epoxy Coatings	Available
Whole Product Finished with Epoxy Coatings	Available

RTC-D(Direct Drive)	
Smoke Removal	Available
Explosion Proof	Available
Wheel Finished with Epoxy Coatings	Available
Whole Product Finished with Epoxy Coatings	Available

## Installation

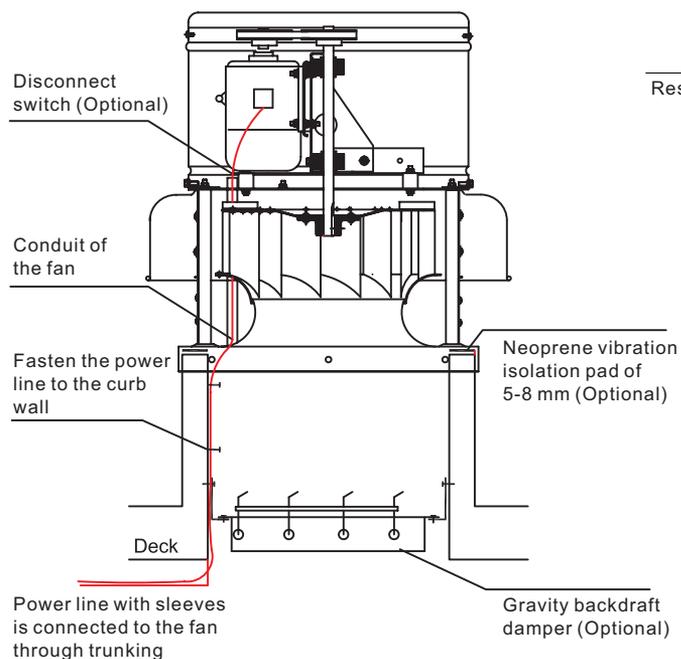


Figure1: Installation of RTC-GT Fans for General Type

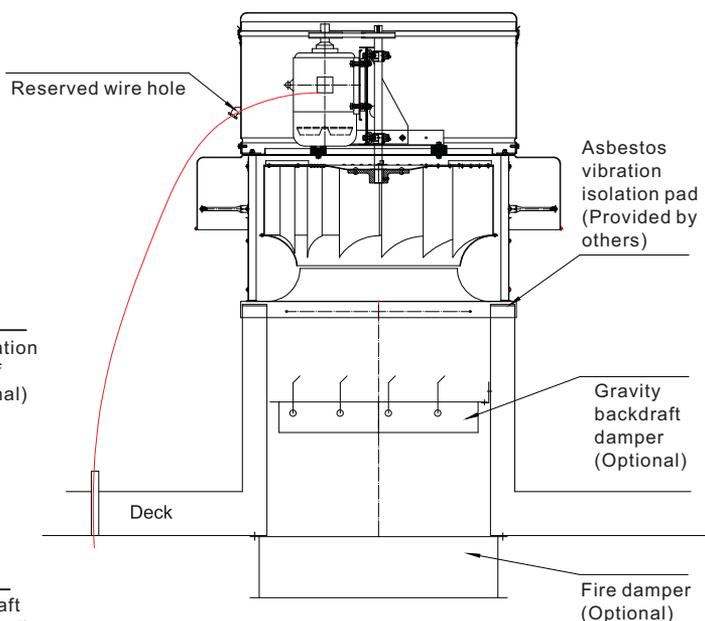


Figure2: Installation of RTC-SR Fans for Smoke Removal

- **Fan Size and Rooftop Structure Dimension**

Please see Page 17 for the fan size and roof opening dimension that shall be provided to the contractor in the early stage of construction.

- **Curb Construction**

**A.** The roof curb is used as a roof support structure. It is a raised frame from the roof opening used to mount mechanical units and to divert rain water away from roof. The contractor is responsible for the curb fabrication and manufacturing processes. Figure 1 and Figure 2 are for reference only. Different models of curbs shall have sides different in thickness (a 60-80 mm range is recommended).

**B.** For the fan to be placed on the curb, there shall be a vibration isolation pad of proper thickness in between (asbestos vibration isolation pad for smoke removal type). The vibration isolation pad will also act as a sealant. Its thickness shall be designed to ensure excellent elastic properties even with the load of the fan. The pad shall be provided by the construction unit.

- **Fan Fastening**

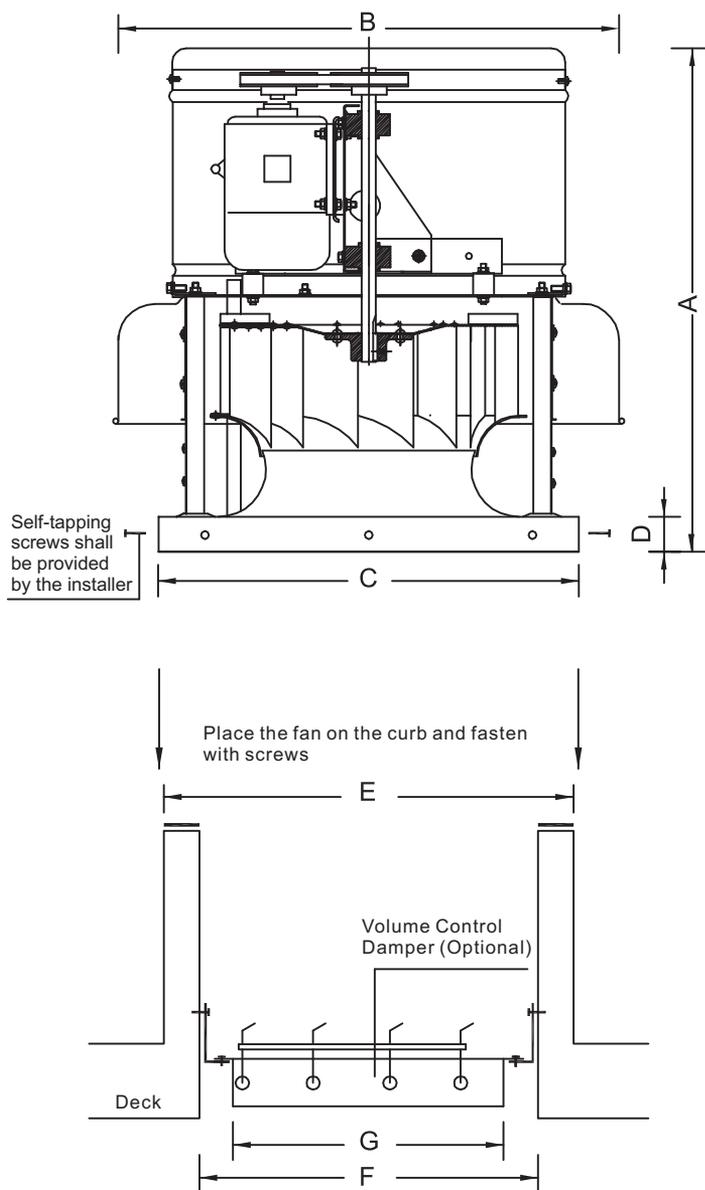
Secure fan's curb cap to the roof curb using self-tapping screws per side as shown in Figure 1 and Figure 2. The fan must not be tilted but kept stable and level.

- **Power Supply Wiring**

When used for general ventilation and explosion proof applications, the wiring routes go from inside the curb up through the conduit and lead to the motor, as shown in Figure 1. When used for smoke removal, the power supply line runs through the reserved wiring hole and lead to the motor, as shown in Figure 2

After the wiring work is completed, the unit must be energized for testing. The rotation must be checked to ensure it rotates in the right direction as specified. If it's the wrong direction, simply interchange any two of the three line leads. Reverse rotation is prohibited!

## Dimensions and Weight



The height of the curb (H) is generally identified by the design engineer. A 300 mm-500 mm range is recommended and can be chosen within the range based on the amount of local rainfall.

The vibration isolation pad and angle steel used for the gravity backdraft damper are generally provided by the installer and not included in the package provided by the manufacture.

The vibration isolation pad shall be thick enough to carry the fan weight. Its thickness is generally between 5 and 8 mm.

The dimensions below apply to all types of RTC fans.

Model	A(mm)	B(mm)	C(mm)	D(mm)	Weight(kg)
RTC-300	600 <sub>(max)</sub>	540	500	50	21
RTC-425	749 <sub>(max)</sub>	726	600	50	30
RTC-500	862 <sub>(max)</sub>	830	750	70	39
RTC-575	890 <sub>(max)</sub>	940	750	70	46
RTC-675	995 <sub>(max)</sub>	1100	900	53	67
RTC-750	1064 <sub>(max)</sub>	1200	900	53	71
RTC-900	1215 <sub>(max)</sub>	1438	1100	70	118
RTC-1000	1338 <sub>(max)</sub>	1588	1200	70	141

The fan weight above does not include motor weight

Below power kW hasn't used all in RTC fans

Power (kW)	Poles							
	2P	4P	6P	8P	10P	12P	14P	16P
0.09	5.5	5		10				
0.12	5.5	6		10	11	13	15	18
0.18	14	13.5	14	16	10	15	17	21
0.25	14.5	14	14.5	17	14	16	20	23
0.37	15	14.5	16	24	17	18	21	30
0.55	15.5	17	17	28	20	21	30	37
0.75	16	18	23	33	23	24	36	41
1.1	17	22	25	38	30	30	42	48
1.5	22	27	33	45	38	42	35	58
2.2	25	34	45	63	39	45	52	62
3	33	38	63	79	40	50	62	67
4	45	43	73	110	56	60	68	70
5.5	64	68	84	121				
7.5	70	81	121	147				
11	118	124	146	182				

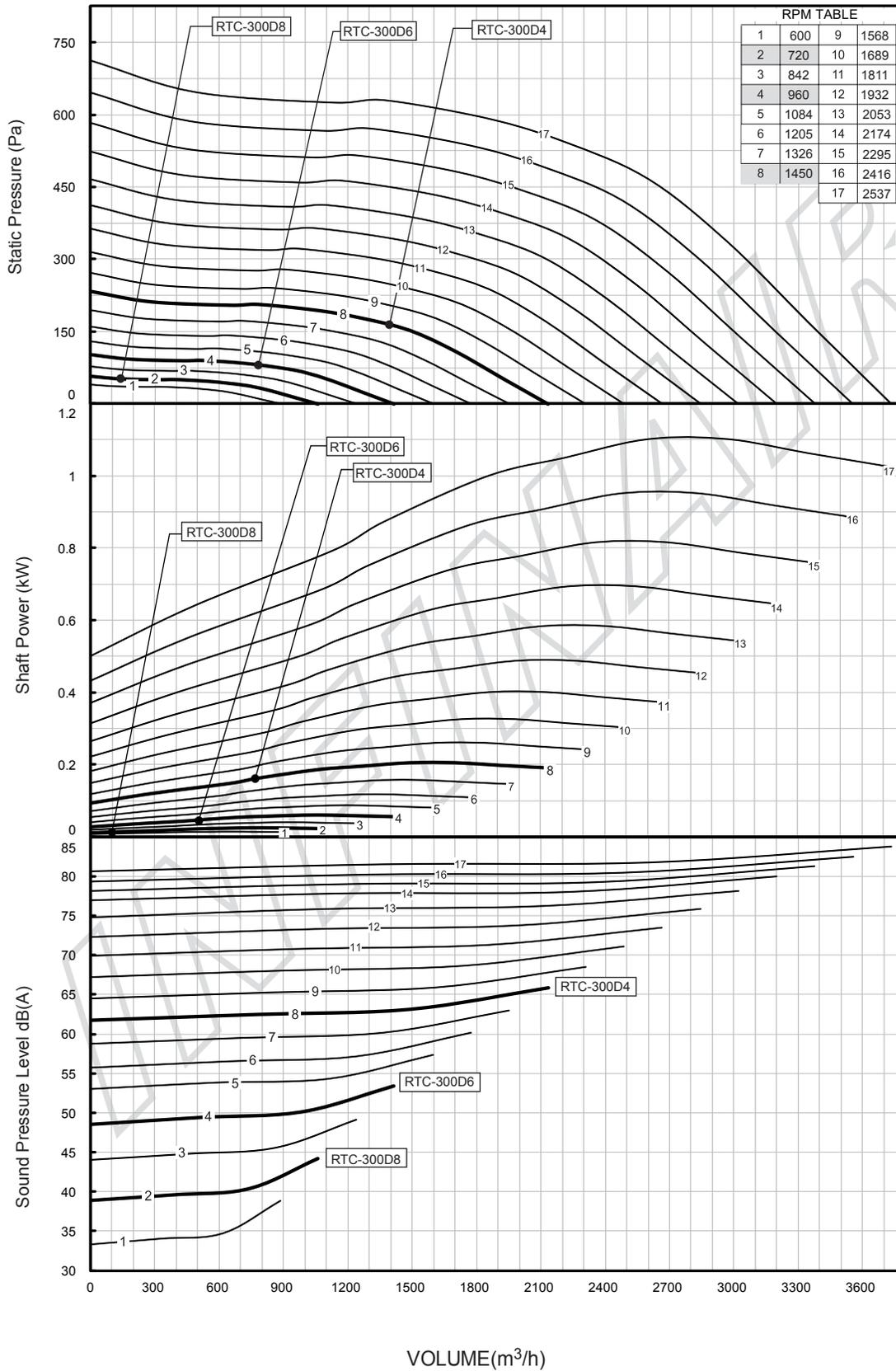
The dimensions below apply to all types of RTC fans.

Model	Outer Edge of Curb E (mm)	Roof Opening F (mm)	Gravity Backdraft Damper G (mm)	Fire Damper (mm)
RTC-300	490	370	300x300	420x420
RTC-425	590	470	400x400	520x520
RTC-500	740	620	550x550	670x670
RTC-575	740	620	550x550	670x670
RTC-675	890	730	650x650	780x780
RTC-750	890	730	650x650	780x780
RTC-900	1090	930	800x800	980x980
RTC-1000	1190	1030	900x900	1080x1080

**Note:** Please contact the sales office nearby you and ask for fan and motors exact dimensions and weight, the information mentioned above can be changed according to design and selection requirements

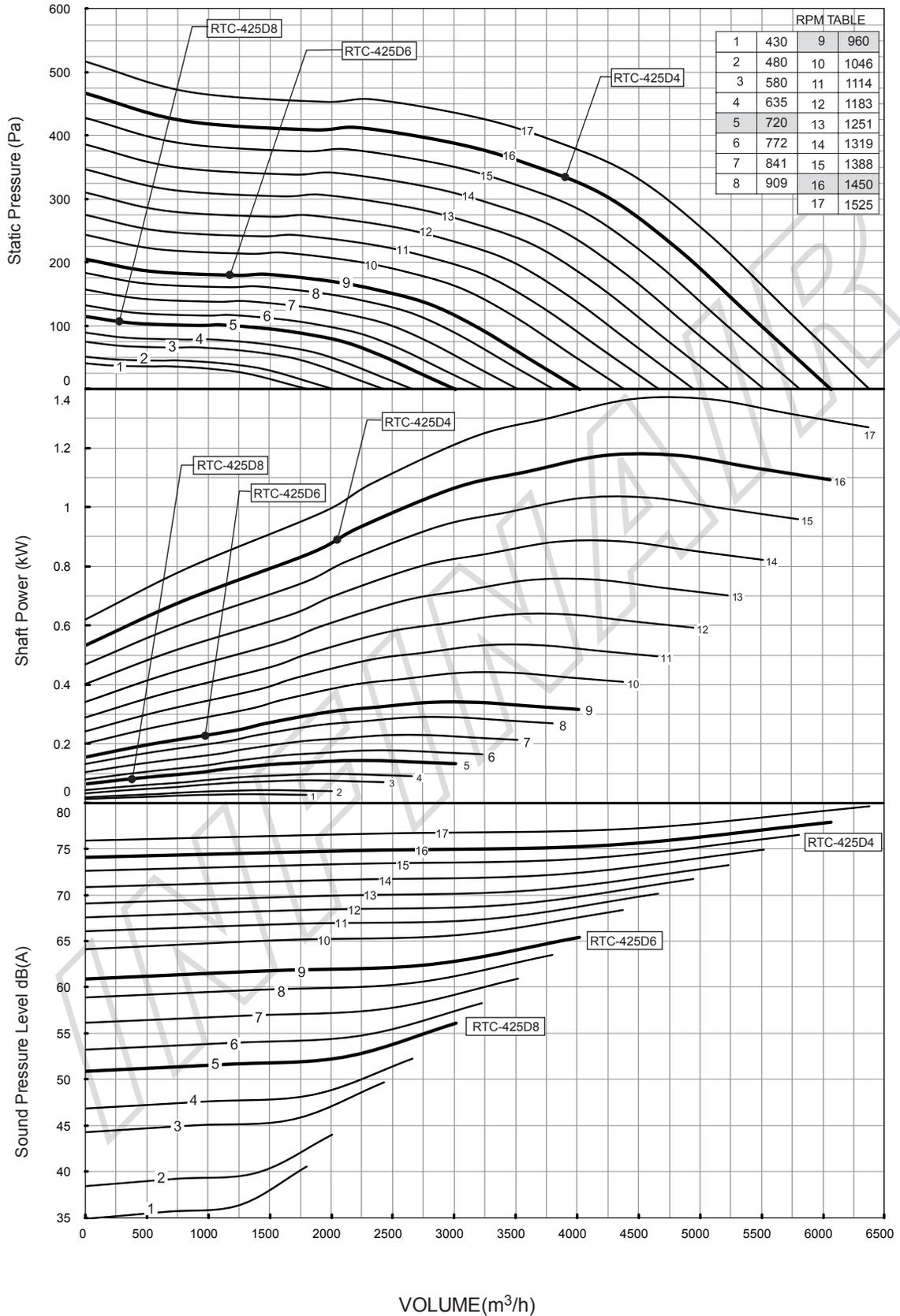
**PERFORMANCE CURVES**

Model: RTC-300



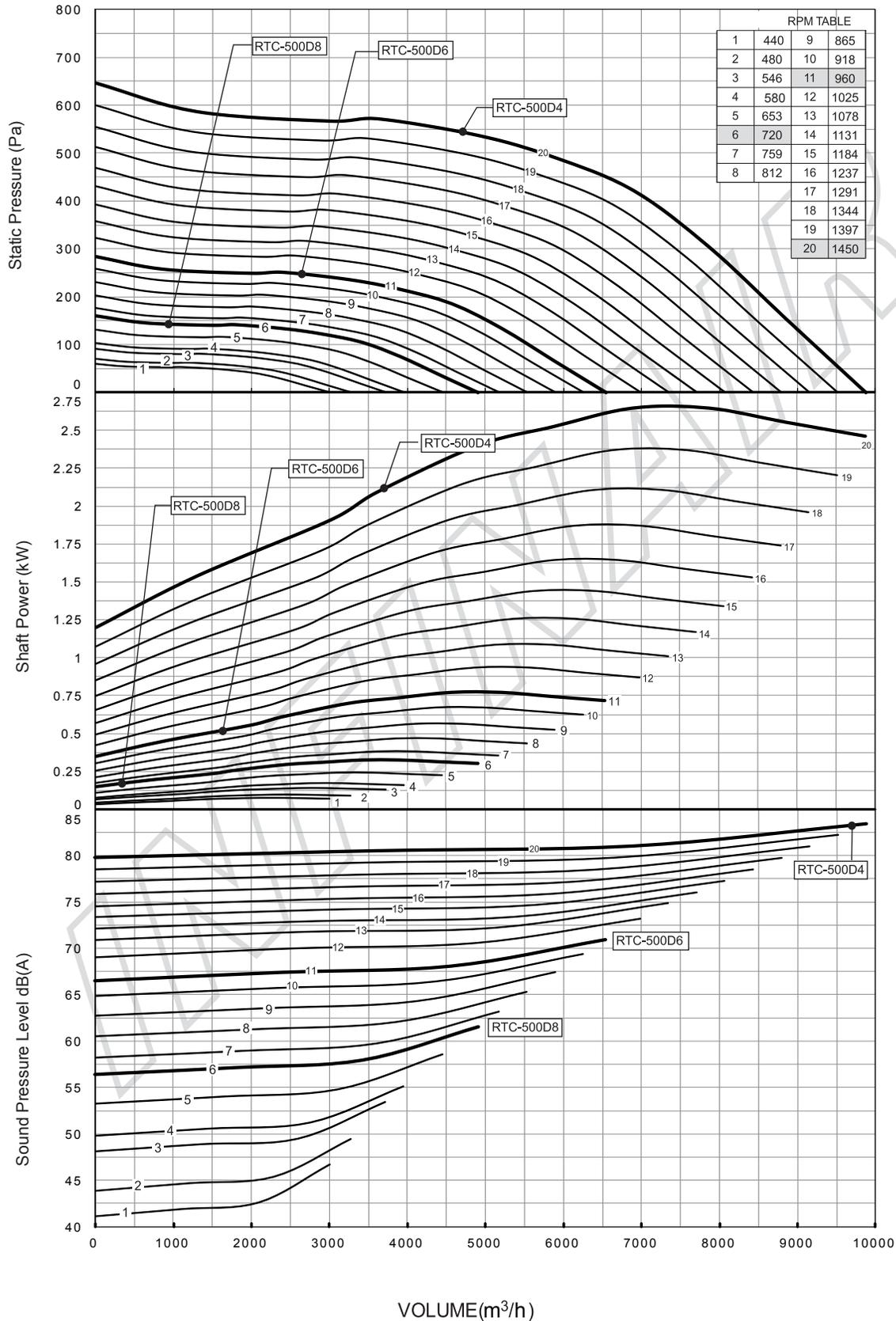
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet Lw(A) sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-425



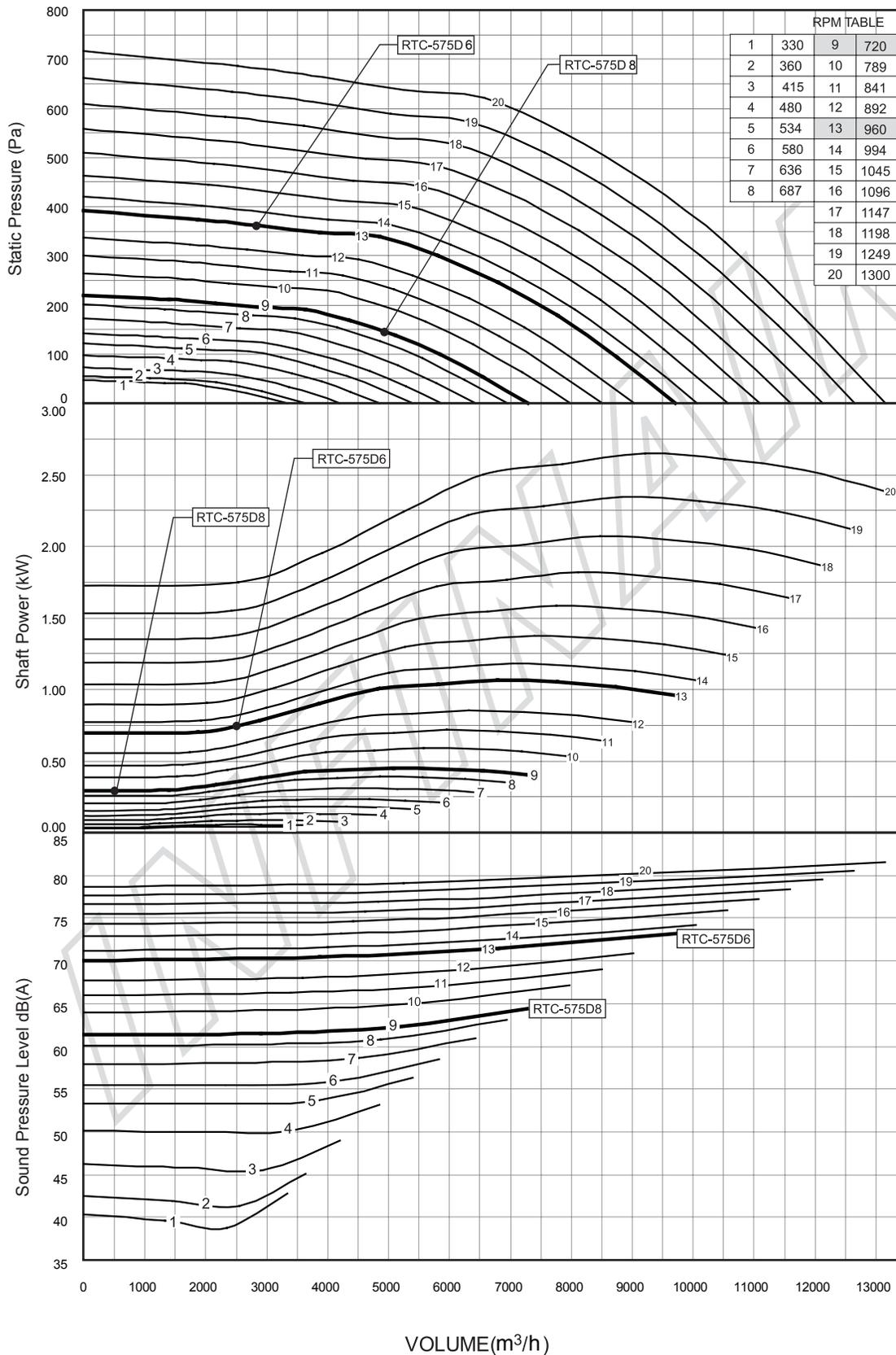
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwIA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-500



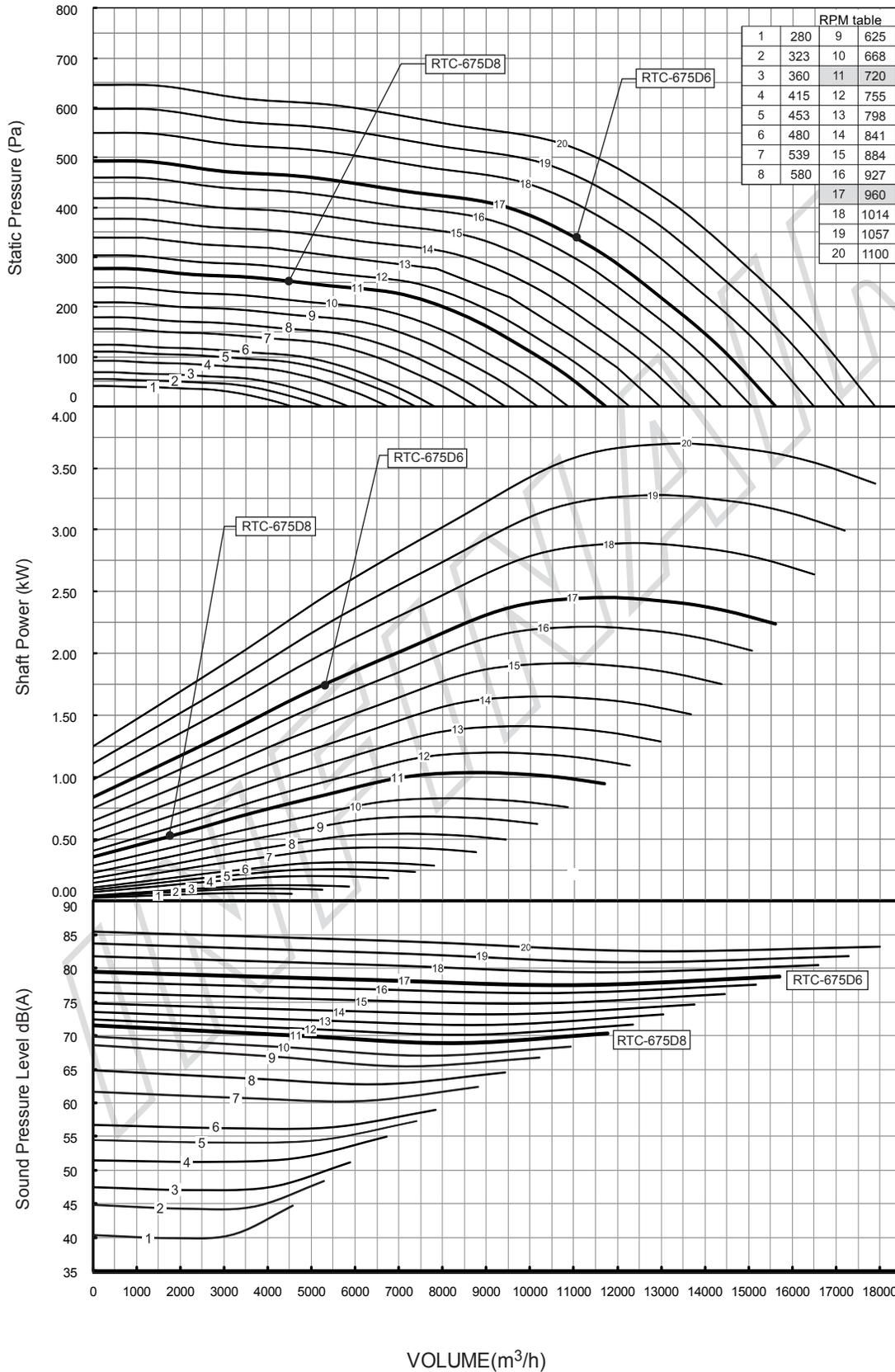
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwiA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-575



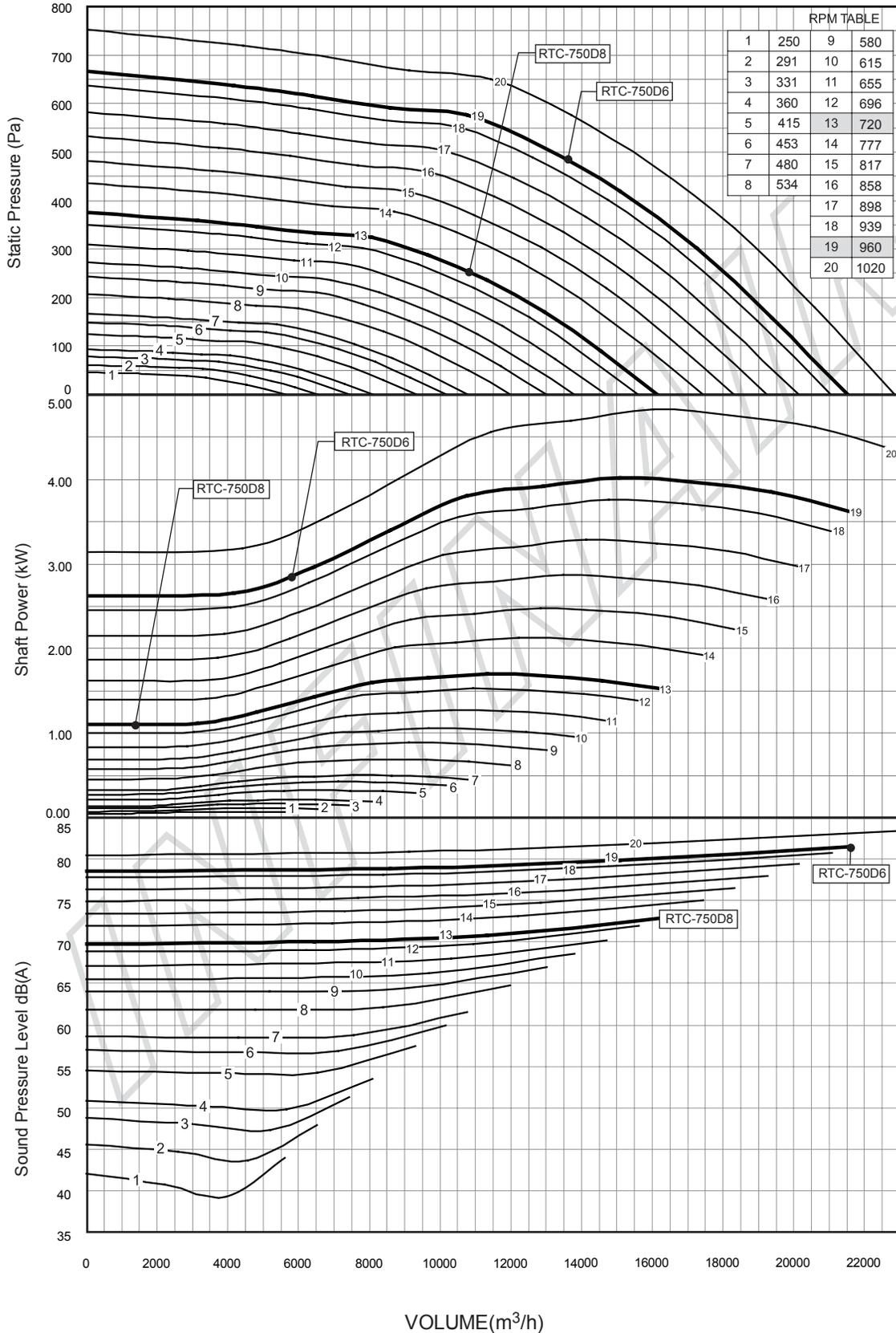
Performance certified is for installation type A - free inlet, free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwiA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-675



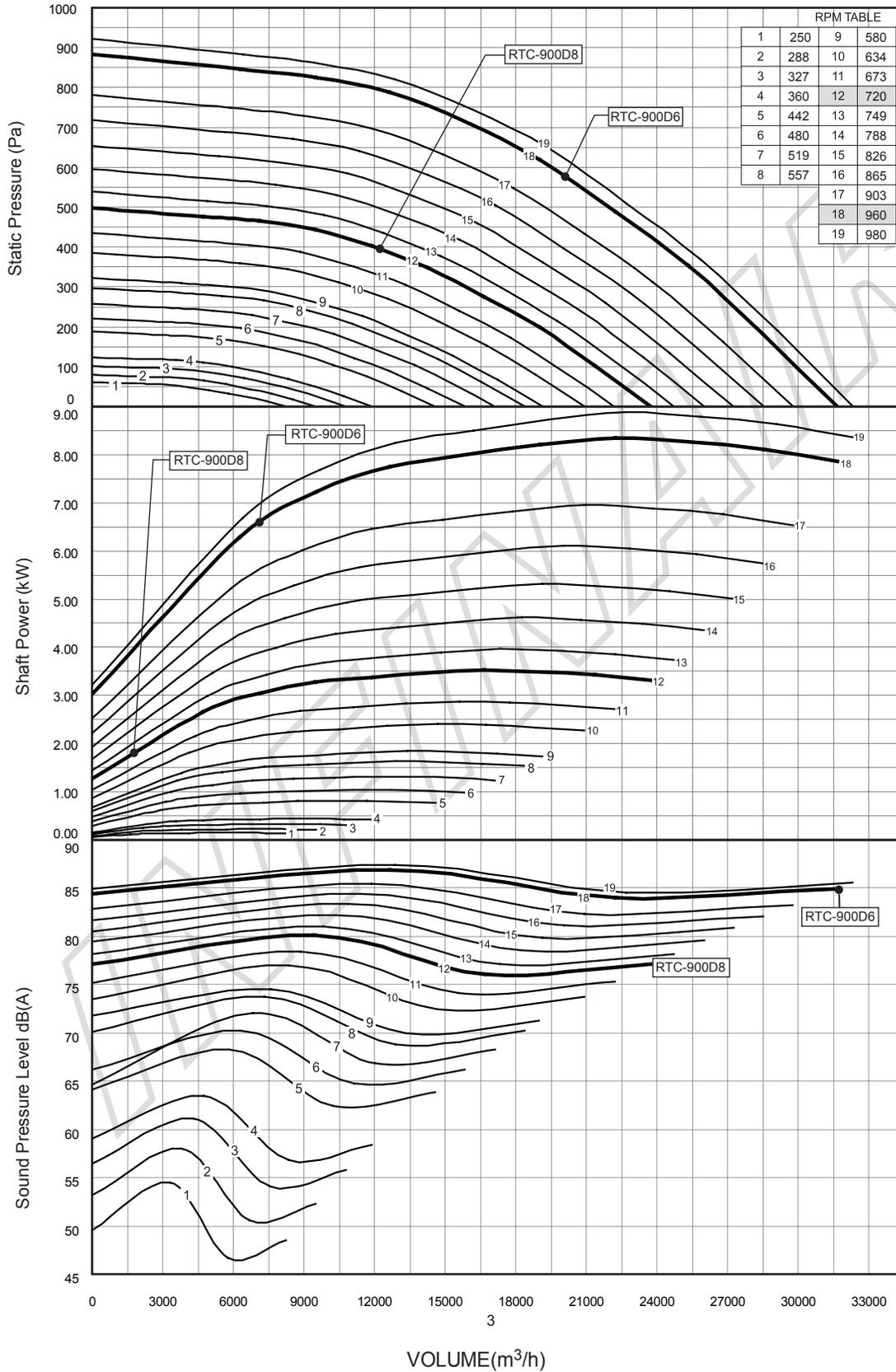
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwIA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-750



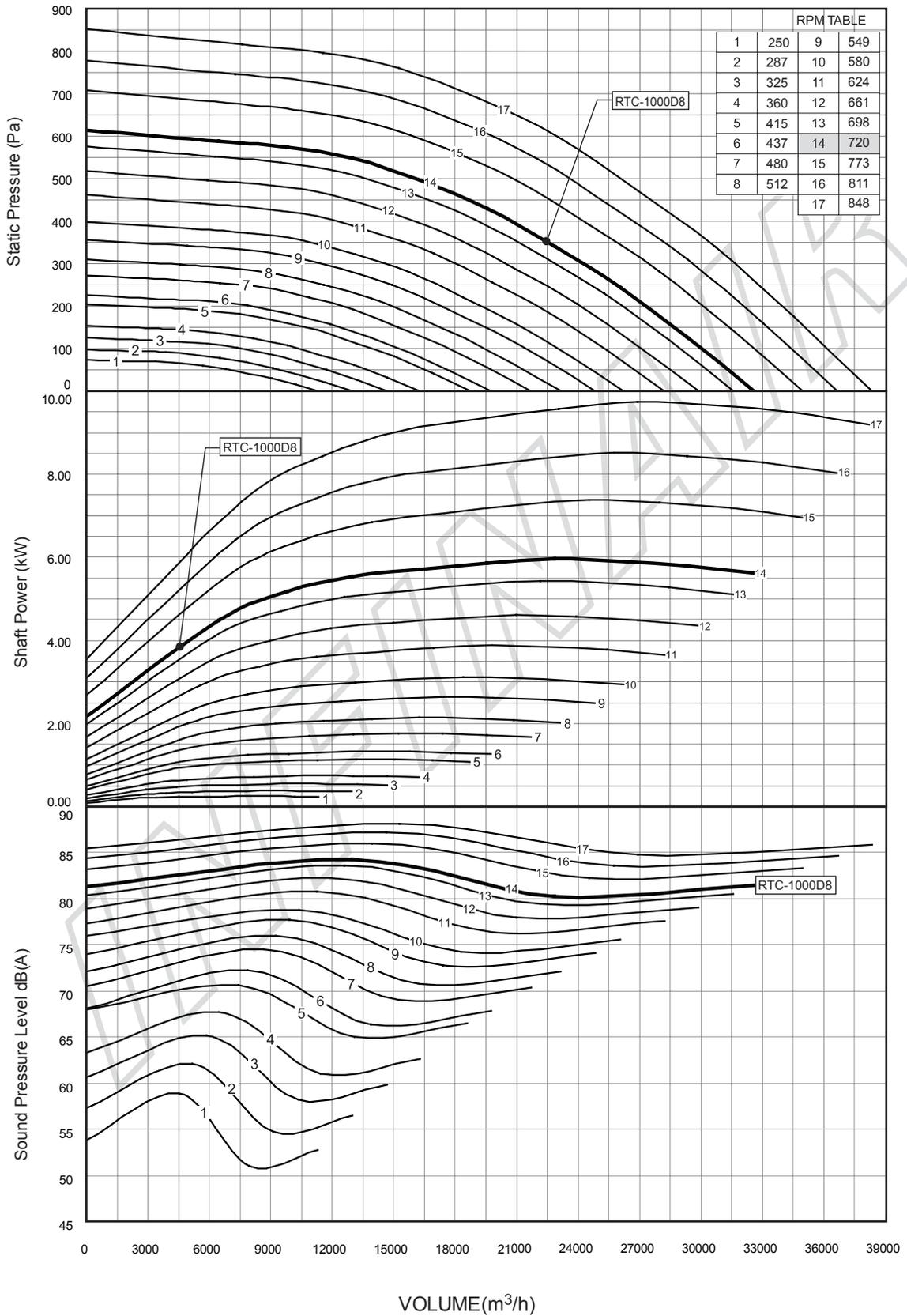
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwiA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-900



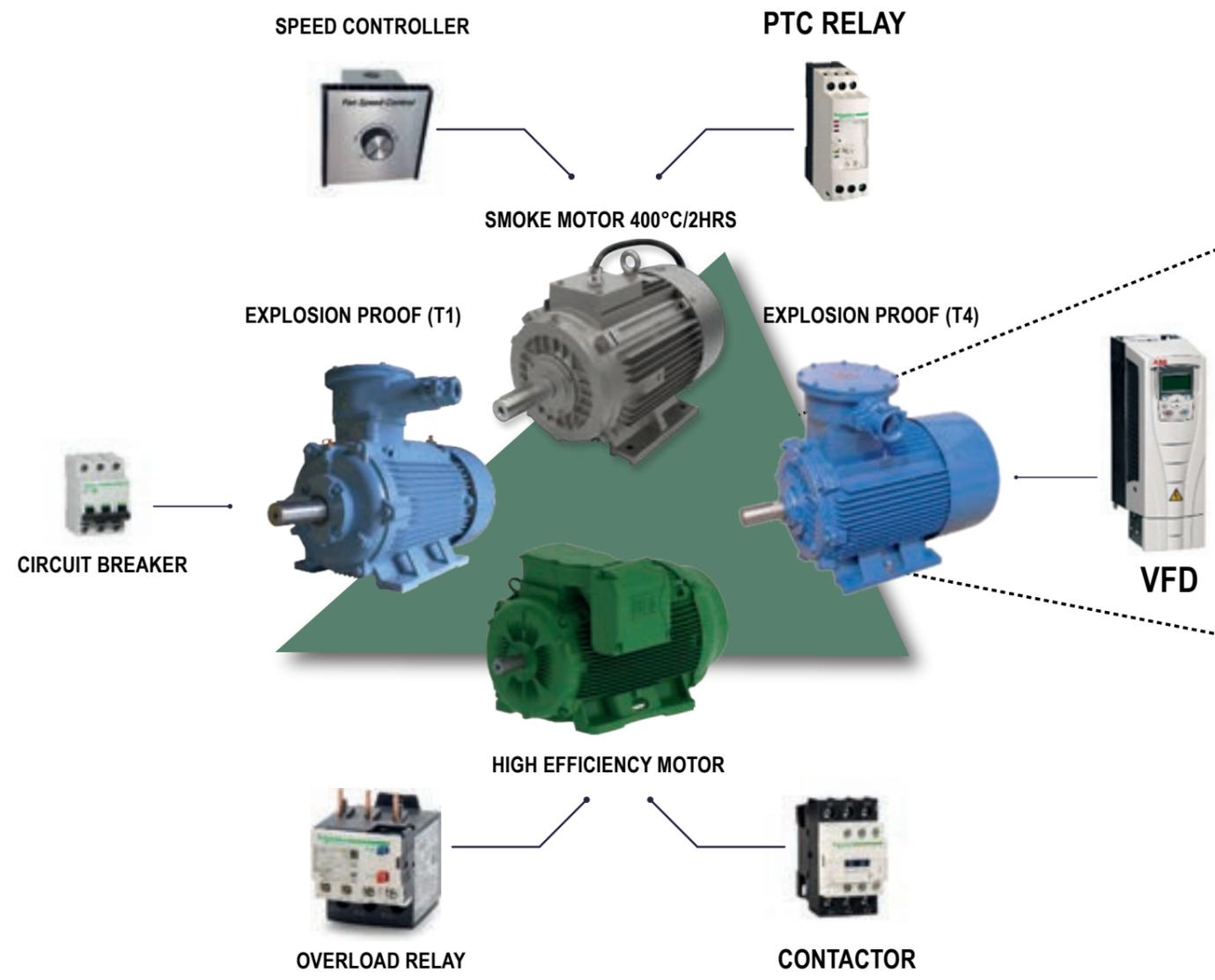
Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

Model: RTC-1000



Performance certified is for installation type A - free inlet, free outlet with partition, Performance ratings do not include the effects of appurtenances (accessories). Power rating (kW) includes transmission losses. Values shown are for inlet LwA sound power levels for Installation Type A: Free inlet, free outlet with partition. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. dB(A) A-weighted sound pressure level is based on 11.5 dB sound attenuation at 1.5 m. Note that dB(A) levels are not licensed by AMCA International.

# ACCESSORIES



INFINAIR ARABIA supplies many options along with the fan to help the customers select the best optimization and homogeneity. There are Electrical, Mechanical and Controller accessories like:

- \* Control Panels
- \* Electric Parts
- \* Duct Accessories
- \* Vibration Isolators
- \* Acoustic Media

The options will support easier operation, less time consuming for our clients to search the availability and granting the quality.

