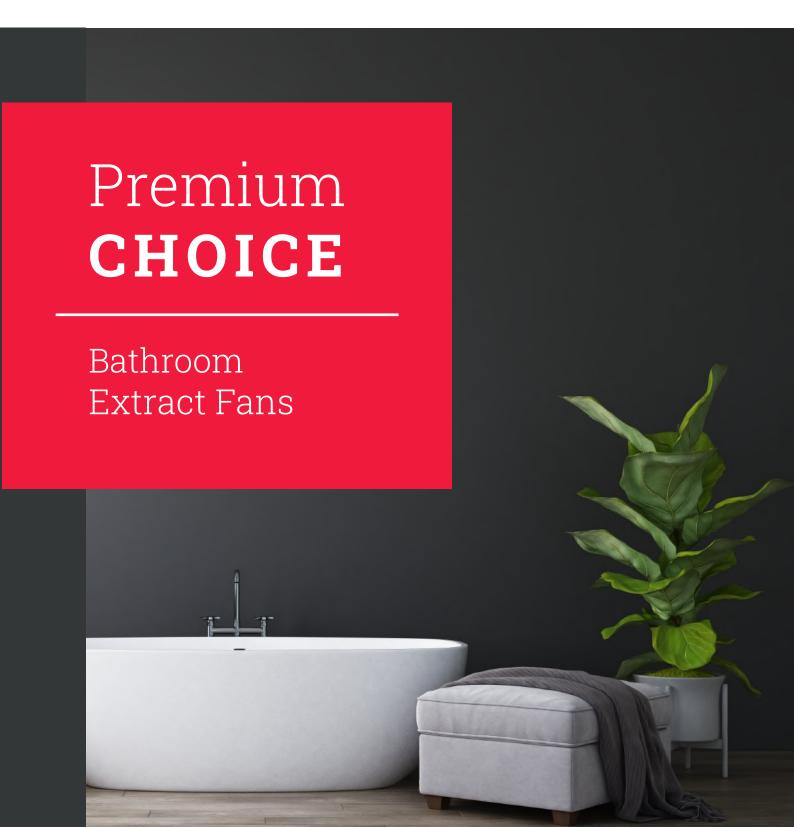


KCE-Premium Series Advancing Ventilation



Why KRUGER?

KRUGER has been a leading innovator and manufacturer of residential, commercial and industrial fan application solutions across Asia since 1985. Today with a direct presence in over 18 regions throughout Asia; world class R&D and manufacturing facilities; KRUGER are able to offer their customers unparalleled service and support at a local level. Our customers place their trust in KRUGER.



Why Improve IAQ with the KCE-Premium Choice?



Most people **spend 70%** time indoors.

Indoor Air can be **2-5 times** more polluted than outside air.





Indoor Air Pollutions is one of top five **Health Risk**.

66

As buildings are being built with higher quality construction methods, balanced ventilation methods are more important than ever. An unbalanced home results in poor Indoor Air Quality (IAQ), causing inadequate conditions for your home and the inhabitants. As codes change, it is important for you to understand why Indoor Air Quality is so important and the options available to you from Kruger.

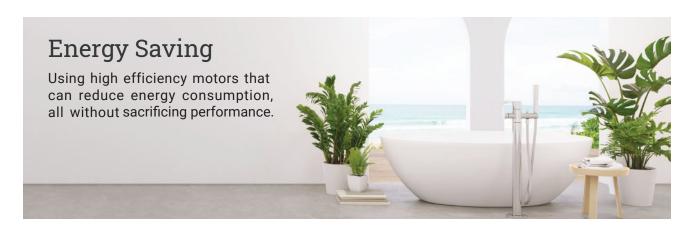
99

Why Choose KRUGER's KCE-Premium Choice Bathroom Extract Fans?

The KRUGER KCE-Premium Choice range provides a high quality, reliable and flexible ventilation system to suit any premium bathroom application. The simplicity of Kruger's KCE-P Premium Choice fans is in the options. While other premium fans come as humidity sensing fans; with a speed control or humidity sensor built-in, our KCE-P Premium Choice fans give you the flexibility to choose your grille and control separately. Our fans even allow you to change your mind after you install them! Our KCE-P Premium Choice fans come with standard grilles and you have the option of a motion sensing grille. You pick the fan model, the grille and the controls you need. The CHOICE is yours!



KRUGER KCE-Premium Choice Bathroom Extract Fan Features



Powerful yet Ultra-Low Noise Extract Performance



Optimized centrifugal fan blowers combined with either AC or EC motor options deliver a powerful yet ultra-low noise extract performance. An integrated low noise damper also prevents backdrafts and loss of heat energy.

Long Life 🕑



Permanently lubricated motors are engineered for trouble-free continuous operations for **30,000 hours on AC motors and 60,000 hours on EC motors.** KCE-P fans feature robust steel housings and attractive, sturdy grilles making the KCE-P Series a fan you can fit and forget.

Safety 🕏

All fans are equipped with a certified safety thermal overload cut-off fuse.

Easy Installation 🎇

Kruger KCE-P fans are designed for easy installation for both new construction and retrofit installation. All models come with adjustable hanger bars, unique wiring design allowing for in-room or outside wiring.

Warranty

Kruger KCE-P fans come standard with the industry's longest warranty. AC motor include a 4-year warranty, while EC motor models have a 6-year warranty.





* Warranty terms and conditions, please consult nearest Kruger office.

Certification

Kruger KCE-PA series air and sound performance are certified by AMCA.



KRUVENT INDUSTRIES (M) SDN. BHD. Certifies that the KCE-PA Series 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. Model KCE-PD are not licensed by AMCA International.

How to Select a KRUGER KCE-Premium Bathroom Extract Fan

Step 1

Calculate the required extract airflow rate for the bathroom volume. This can be accomplished using the following simple formula:

Bathroom Width (m) x Length (m) x Height (m) x [* Recommended Air-Changes-per Hour (ACH)]

* Recommended Air-Changes-Per-Hour = the Local or National Building Regulation Code requirements. Please check with your local authorities.

Example:

A bathroom with a floor space of Width 4m x Length 4m x Height 2.5m = floor volume 40 m 3 . A local Building Regulation Code (for bathroom extract) requires 6 ACH. Total calculated extract airflow requirement = 40 m 3 x 6 ACH = 240 m 3 /hr Extract rate.

Using this calculated extract rate (240 m³/hr) we can then select the KCE-P by always selecting a marginally higher airflow rate then calculated.

In this example the calculated airflow rate = $240 \text{ m}^3/\text{hr}$, therefore KCE-P model selected = KCE 280PA which delivers $286 \text{ m}^3/\text{hr}$.

Step 2

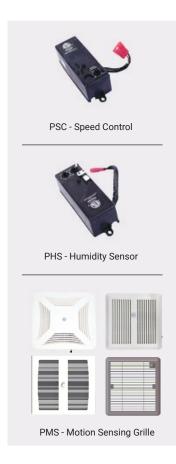
Select operating features. This is determined by deciding on how either the application or user requires the fan to be controlled.

Please see below the following control option accessories for the KCE-P Series.

Control Function / Fan-Accessory Part ID# Reference	KCE-P	KCE-P-S	KCE-P-H	KCE-P-M
Simple ON/OFF via switch (Not supplied)	X			
Continuous set low speed. Adjustable continuous set low speed then activated to operate at high/full speed via switch (Not supplied)		x		
Humidity activated control. Detects rapid rise in humidity (bath/shower) and switches the fan ON at high/full speed. Adjustable humidity sensitivity. Fan continues to operate for pre-selected time (mins) after humidity detection.			x	
Motion Sensing Grille. Automatically turns on fan when motion is sensed. Adjustable time delay shut-off from 3 to 30 minutes and speed reduced up to 50%.				X

^{*} All accessories are available for AC Motor Models only. Motion Sensing Grille is not available for KCE 100PA.

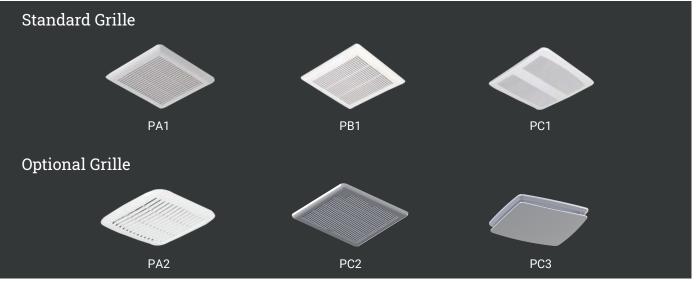
IMPORTANT: All KCE-Premium fan control options are supplied as simple "plug-&-play" accessories which are easily integrated inside the standard KCE-P fan unit.



Step 3

Select grille type to suit preferred bathroom environment. Please see below table for grille options by KCE-P model references.

Module / Grille		Standard			Optional		
Module / Grille	PA1	PB1	PC1	PA2	PC2	PC3	
KCE 100PA	✓			✓			
KCE 140PA		✓					
KCE 200PA			✓		✓	✓	
KCE 280PA			✓		✓	✓	
KCE 355PA			✓		✓	✓	
KCE 71PD	✓			✓			
KCE 140PD	✓			✓			
KCE 180PD		✓					
KCE 400PD			✓		✓	✓	
KCE 560PD			✓		✓	✓	

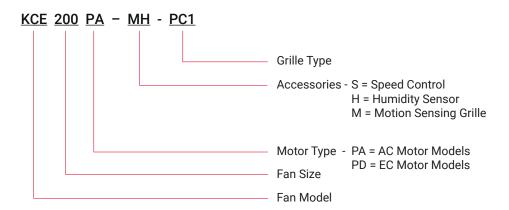


^{*} Pure white plastic grille (RAL 9016) is standard. Other grille specifications are available upon request.

Step 4

Please contact your local KRUGER company office for any questions or support.

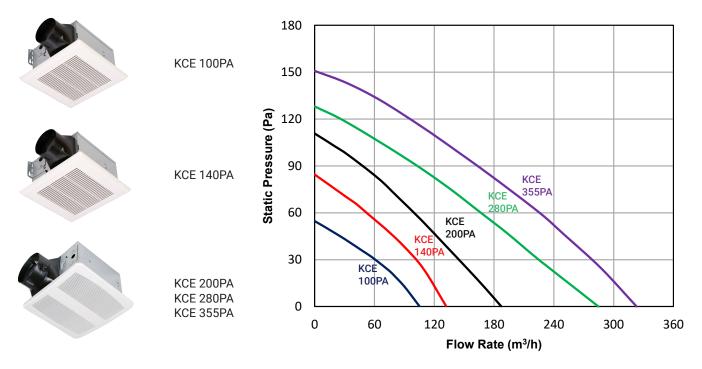
Model Number Nomenclature



AC Motor Models

The Kruger KCE - Premium CHOICE KCE-PA series (AC motor models, IP44, Insulation class A) is built for today's demanding IAQ requirements featuring seamless Plug-&-Play integration and a redesigned blower for a quiet, energy efficient performance.

			KCE-	Premium	Bathroom Extract Fa	ns – AC N	Motor Ted	hnical Da	ita							
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	10	20	30	40	50	55				
					Q (CMH)	105	95	80	61	37	14	0				
KCE 100PA	12	220	50	960	Lwi(A) (dB(A))	40	41	43	44	45	47	48				
100174					Lp(A) (dB(A))**	29	30	31	33	34	36	37				
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	15	30	45	60	75	85				
					Q (CMH)	132	119	102	80	53	23	0				
KCE 140PA	15	220	50	980	Lwi(A) (dB(A))	40	41	43	46	50	54	58				
THUFA					Lp(A) (dB(A))**	29	30	32	34	39	43	47				
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	20	40	60	80	100	112				
					Q (CMH)	188	161	131	100	69	30	0				
KCE 200PA	30	220	50	800	Lwi(A) (dB(A))	38	40	44	48	53	57	59				
200174					Lp(A) (dB(A))**	27	29	31	36	42	48	51				
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	20	40	60	80	100	120				
									Q (CMH)	286	249	208	169	128	81	30
KCE 280PA	33	220	50	810	Lwi(A) (dB(A))	44	44	46	48	51	54	57				
2001 A					Lp(A) (dB(A))**	33	33	35	38	40	42	44				
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	25	50	75	100	125	150				
		220	50	50 910	Q (CMH)	325	288	245	197	144	87	10				
KCE	47				Lwi(A) (dB(A))	47	47	49	51	53	56	58				
355PA					Lp(A) (dB(A))**	36	35	38	40	42	44	46				



^{*} Watts rating is maximum motor input power.

^{**} Inlet Lp(A) sound pressure levels at 1m are measured at free discharge in spherical free field condition, inlet Lp(A) (dB(A)) levels are not licensed by AMCA International.

⁻ Values shown are for inlet Lwi(A) sound power levels for installation type B – Free inlet, Ducted outlet. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

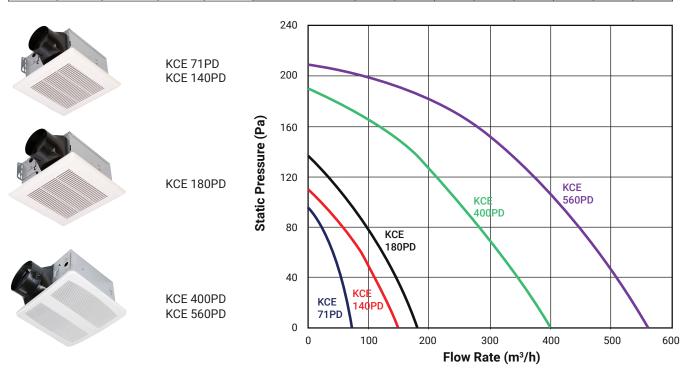
⁻ Performance certified is for installation type B - Free inlet, Ducted outlet. Performance ratings include the effects of inlet grille and backdraft damper.

⁻ Speed (RPM) shown is nominal. Performance is based on actual speed of test.

EC Motor Models

The Kruger KCE-Premium CHOICE KCE-PD series (EC motor models, IP53, insulation class A) features the most efficient EC motor with built-in control boards, having higher efficiency and longer life than AC motors.

			KCE-I	Premium	Bathroom Extract Fa	ns – EC	Motor T	echnica	l Data				
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	15	30	45	60	75	90	96
					Q (CMH)	73	68	60	52	43	30	11	0
KCE 71PD	8	240/220	50/60	940	Lwi(A) (dB(A))	52	47	44	47	48	49	50	51
7112					Lp(A) (dB(A))**	41	36	33	36	37	38	39	40
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	15	30	45	60	75	90	105
					Q (CMH)	150	135	121	105	89	68	42	10
KCE 140PD	11	240/220	50/60	50/60 1090	Lwi(A) (dB(A))	47	47	47	49	51	52	54	56
1401 D					Lp(A) (dB(A))**	36	36	36	38	40	41	43	45
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	20	40	60	80	100	120	125
		240/220	50/60	0/60 1130	Q (CMH)	180	163	144	122	97	66	31	22
KCE 180PD	11				Lwi(A) (dB(A))	47	47	48	50	53	56	59	60
1001 5					Lp(A) (dB(A))**	36	36	37	39	42	45	48	49
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	25	50	75	100	125	150	175
		240/220	50/60	50/60 1020	Q (CMH)	402	366	331	293	252	208	152	66
KCE 400PD	37				Lwi(A) (dB(A))	58	57	56	56	57	58	58	59
40010					Lp(A) (dB(A))**	47	46	45	45	46	47	47	48
Model	Watts*	Volt	Hz	RPM	Ps (Pa)	0	30	60	90	120	150	180	210
		240/220	50/60	50/60 1090	Q (CMH)	564	523	479	432	376	307	210	0
KCE 560PD	57				Lwi(A) (dB(A))	59	59	58	58	59	60	61	62
300FD					Lp(A) (dB(A))**	48	48	47	47	48	49	50	51



^{*} Watts rating is maximum motor input power.

^{**} Inlet Lp(A) sound pressure levels at 1m are measured at free discharge in spherical free field condition.

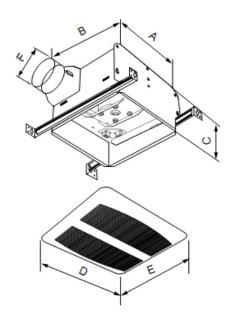
⁻ Values shown are for inlet Lwi(A) sound power levels for installation type B – Free inlet, Ducted outlet. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

⁻ Performance shown is for installation type B – Free inlet, Ducted outlet. Performance ratings include the effects of inlet grille and backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test.

⁻ Model KCE-PD are not licensed by AMCA International.

KCE-Premium Bathroom Extract Fans

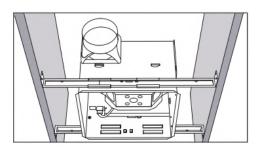
Dimension and Installation Data



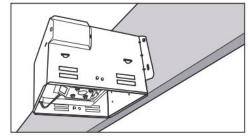
MODEL	Α	В	С	D	Е	ØF	Weight(kg)
KCE 100PA	184	190	143	220	241	100	2.1
KCE 140PA	230	230	146	290	300	100	2.5
KCE 200PA	267	289	194	330	350	148	4.5
KCE 280PA	267	289	194	330	350	148	4.5
KCE 355PA	267	289	194	330	350	148	4.5
KCE 71PD	184	190	143	222	232	100	2.1
KCE 140PD	184	190	143	222	232	100	2.1
KCE 180PD	230	230	146	290	300	100	2.5
KCE 400PD	267	289	194	330	350	148	4.5
KCE 560PD	267	289	194	330	350	148	4.5

All dimensions in mm.

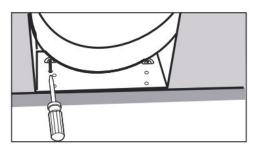
Multi Installation Options



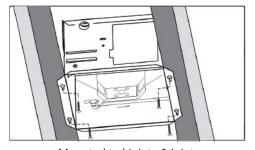
Mounted between trusses



Mounted to I-joists & joists



Mounted with additional mounting holes



Mounted to I-joists & joists (Available for KCE 100PA, KCE 140PA, KCE 71PD, KCE 140PD and KCE 180PD)

KRUGER Ventilation Group

THAILAND (Regional HQ)

KRUGER VENTILATION INDUSTRIES ASIA CO. LTD.
30/159 Moo 1, Sinsakorn Industrial Estate,
Chetsadawithi Road, Khok Kham Mueng, Samuthsakorn 74000, Thailand
Tel: +662 1054298 Fax: +662 0248256-9
Website: www.krugerfan.com

THAILAND

KRUGER VENTILATION IND. (THAILAND) CO. LTD. 30/105 Moo 1, Sinsakorn Industrial Estate,

Chetsadawithi Road, Khok Kham Mueng, Samuthsakorn 74000, Thailand Tel: +662 1050399 Fax: +662 1050370-2

Email: mktg@kruger.co.th

INDIA

KRUGER VENTILATION INDUSTRIES (INDIA) PVT. LTD.
Kruger Centre, Mumbai-Nasik Highway,
Kalamgaon, Shahapur, Thane 421601, Maharashtra, India
Tel: +91 9960558899/9975577211
Email: sales@krugerindia.com

INDIA (NORTH)

KRUGER VENTILATION INDUSTRIES (NORTH INDIA) PVT LTD Village Rohad, Tehsil Bahadurgarh, Jhajjar, Haryana-124507 Tel. +91-9958991652/9958991660/8586966303

Fax +91-1276-278096

NEOMATE CO. LTD.

 $Email: sales.kni@krugerindia.com\ , service@krugerindia.com$

KOREA

2-1010, Ace High Tech City B/D, 775 Gyeongin-ro,

Yeongdeungpo-gu, Seoul, Korea. Postal Code 07299 Tel: +82-2-2679-2052 Fax: +82-2-2679-2174

Email: y7890@neomate.co.kr

MYANMAR

KRUGER VENTILATION (MYANMAR) CO. LTD.
Room No. F21, Thiri Yadanar Whole Sale Market, (Htawunbe)
Toe Chae Ward, North Okkalapa Township, Yangon.
Tel: +959 763141081/2/3

Email: htoon@krugermm.com

SINGAPORE

KRUGER ENGINEERING PTE. LTD.
2 Venture Drive #20-23, Vision Exchange,
Singapore 608526.
Tel: +65 68631191 Fax: +65 68631151

Email: mktg@krugerfan.com

AUSTRALIA

S&P KRUGER AUSTRALIA PTY. LTD. 2 Cunningham St, Moorebank N.S.W. 2170 Tel: +61 2-98227747

Fax: +61 2-98227757

Email: info@sandpkruger.com.au

DUBAI

KRUGER VENTILATION INDUSTRIES, GULF BRANCH.
Jebel Ali Free Zone Area (JAFZA) P.O. Box No. 262949, Dubai, UAE
Tel: +971 4 8819188/8832017

Fax: +971 4 8832018

Email: johncs@krugerasia.com

INDONESIA

P.T. KRUGER VENTILATION INDONESIA

JL. Teuku Umar No.20,

Karawaci - Tangerang 15115, Indonesia

Tel: +62 21-5512288/5513557 Fax: +62 21-5513502

Email: mktg@krugerindo.co.id

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CHINA (GUANGZHOU)

GUANGZHOU KRUGER VENTILATION CO. LTD.

No. 9 Huahui Road, Huashan, Huadu,

Guangzhou, P.R. China 510880

Tel: +86 20-66356635 Fax: +86 20-86786001/86786500

Email: gzkruger@krugergz.com

CHINA (TIANJIN)

TIANJIN KRUGER VENTILATION CO. LTD.

Jingjin Science and Technology Park

Wuqing District, Tianjin, China

Tel: +86 22-22143480/3481 Fax: +86 22-22143482

Email: krugertj@krugertj.com

CHINA (SHANGHAI)

Shanghai Kruger Ventilation Co.,Ltd.
No.500 Yuanguo Road, Anting, Jiading District,
Shanghai 201814. P.R. China

Tel: +86 21-69573266 Fax: +86 21-69573296

Email: shkruger@krugerchina.com

CHINA (WUHAN)

WUHAN KRUGER VENTILATION CO. LTD.

No. 805, Huian Ave, Dongxihu District, Wuhan, Hubei, P.R. China 430040

Tel: +86 27- 83248840/83060522/83097505

Fax: +86 27- 83261886

Email: whkruger@krugerwh.com

HONG KONG

KRUGER VENTILATION (HONG KONG) LIMITED.
Flat C, 9/F, Yeung Yiu Chung (No.8) Industrial Building,
20 Wang Hoi Road, Kowloon Bay, Kowloon, Hong Kong

Tel: +852 22469182 Fax: +852 22469187

Email: info@kruger.com.hk

TAIPEI

KRUGER VENTILATION (TAIWAN) CO. LTD.
No. 157, Ping-an Rd, Hengfeng Village,
Dayuan Shiang Taoyuan County 337, Taiwan
Tel: +886 3-3859119 Fax: +886 3-3859118
Email: sales@krugertwn.com.tw

MALAYSIA

KRUVENT INDUSTRIES (M) SDN. BHD.
Lot 850, Jalan Subang 7, Taman Perindustrian Subang,
47500, Subang Jaya, Selangor D.E.
Tel: +603 80743399 Fax: +603 80743388
Email: mktg@kruger.com.my

PHILIPPINES

KRUGER M & E INDUSTRIES CORPORATION B3 Welborne Industrial Park Bancal Carmona Cavite 4116, Philippines

Tel: +63-2-7 6223260 * +63-46 4129652

HP: +63 925 8018444

Email: mktg@krugerph.net

VIETNAM

KRUGER VENTILATION INDUSTRIES (VIETNAM) CO. LTD. Lot A7. 2-4, C2 Road, Thanh Thanh Cong IZ, Trang Bang Dist. Tay Ninh Province, Vietnam Tel: +84-276 3585200/01/02 Fax: +84-276 3585199 Email: mktg@krugervn.com



Kruger Ventilation Industries Asia Co., Ltd.

30/159 Moo 1, Sinsakorn Industrial Estate Chetsadawithi Road, Khok Kham Mueng, Samuthsakorn 74000, Thailand Tel: +662 1054298 Fax: +662 0248256-9 Website: www.krugerfan.com LEA157.E0.KVM December 2022

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