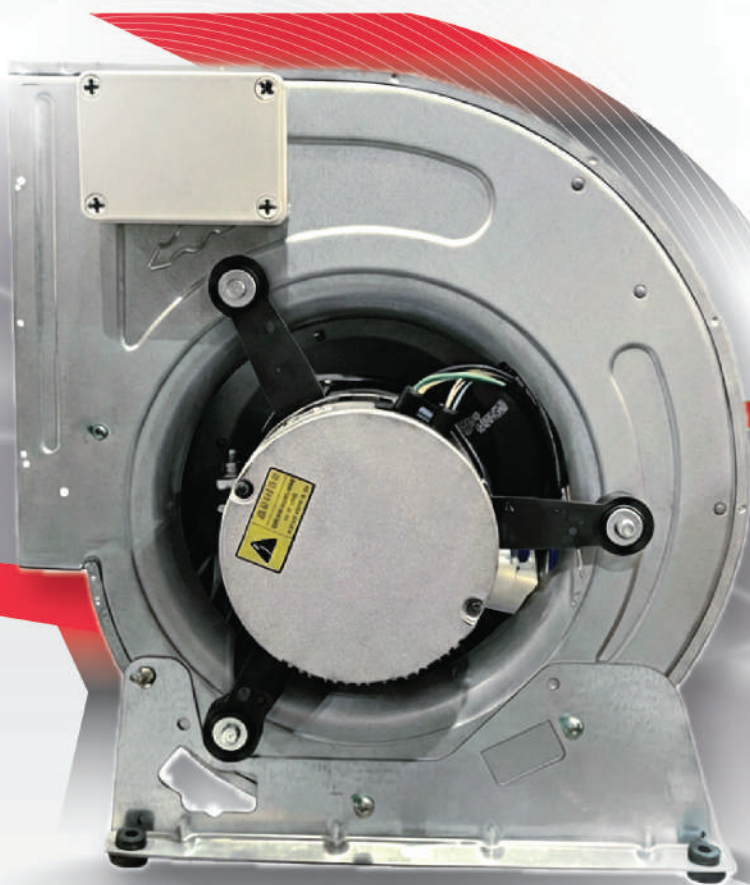


eKDD Series

Double Inlet Direct Driven

Low Pressure FC Centrifugal Fan with **EC Motor**



High EC Motor
Efficiency



Fan Speed
Control



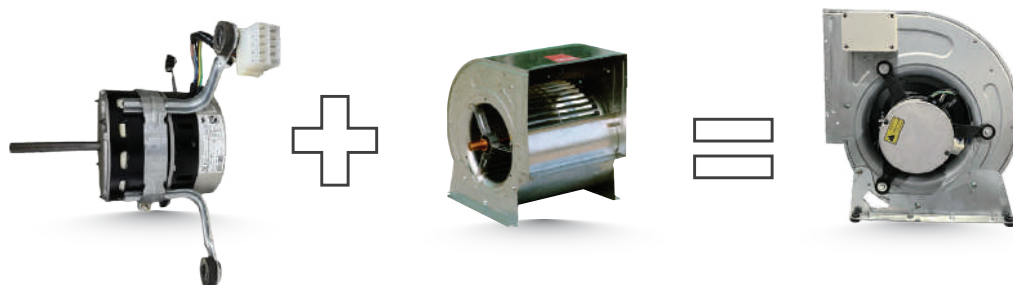
Energy
Saving

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.

eKDD

EC (Electronically Commutated) motors integrate advanced electronics directly into the motor, enabling precise speed control, superior efficiency, and intelligent operation. The eKDD Series combines this proven & affordable EC motor technology with KRUGER's highly efficient double-inlet centrifugal design.



Why use KRUGER eKDD?



High EC Motor Efficiency + Fan Speed Control = Energy Saving

- High-efficiency EC motor delivers superior performance at both full & part load conditions, achieving motor efficiency up to **84%**.
- Lower input power with up to **20%** more energy savings compared to conventional AC fans.
- Stepless speed regulation allows for added energy savings when operating at partial load conditions.



Quiet EC Motor + Low RPM Forward Curve Fan = Low Noise Operation



Performance + Longer Life

- Good efficiency EC motor & smooth speed ramp-up eliminates start-up spikes



Compact + Reliable Design

- The EC KDD Series retains the high air volume, compact footprint and ease of installation of the popular AC models.

General Fan Specifications

Fan Diameter	: 7-7, 8-8, 9-7, 9-9, 10-8, 10-10, 12-9, 12-10, 12-12
Airflow Range	: Up to 5000CMH
Static Pressure Range	: Up to 750Pa
Fan Type	: DIDW direct driven centrifugal with forward curved blades.
Impeller Material	: Housing and wheel are manufactured in galvanized plated steel with the housing constructed by "electric spot welding"
Operating Temp	: Recommended operating temperature between -20° C to +55° C.
Wheel Balancing	: Statistically & dynamically balanced according to ISO 1940 & AMCA 204 Standard 2.5G

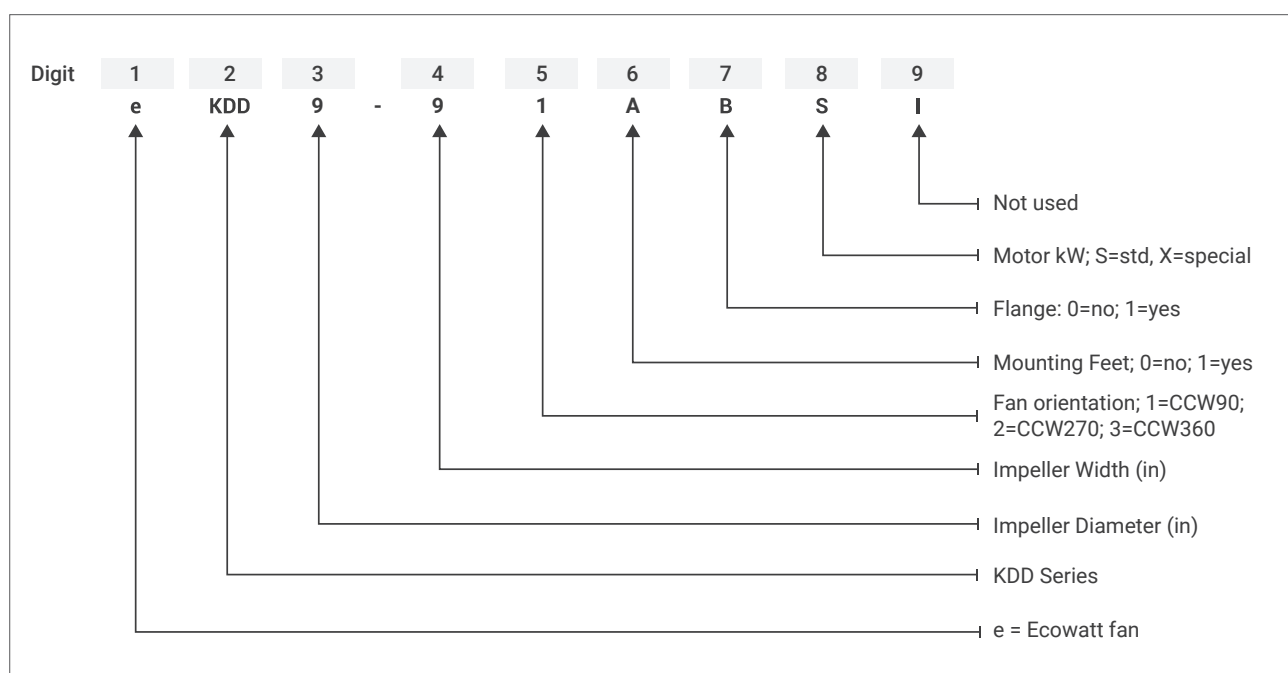


Fan Technical Table

Motor Specification			Fan Specification							
Motor Technology	EC	eKDD Model	7-7	8-8	9-7	9-9	10-8	10-10	12-9	12-12
Electrical Characteristics	1 Phase / 220-240V	Max Nominal RPM	1353	1200	1160	1160	1025	1050	970	935
Frequency	50 / 60 Hz	Max Input kW	0.27	0.31	0.53	0.76	0.78	1.08	1.05	1.05
IP	20	Max Output kW	0.19	0.19	0.375	0.55	0.55	0.75	0.75	0.75
Insulation Class	B	Max Input Current (A)	1.73	1.98	3.10	4.48	3.97	5.40	5.80	3.79
Speed Control	Modbus RTU	Weight (±1 kg)	7	9	9	10	11	12	19	20
	0-10 V (VSP)	Motor Code	MU150		MU220	MU230		MU260		
Permissible Amb Temp	-20° C to +50° C									

All dimension in mm.

Fan Nomanclature



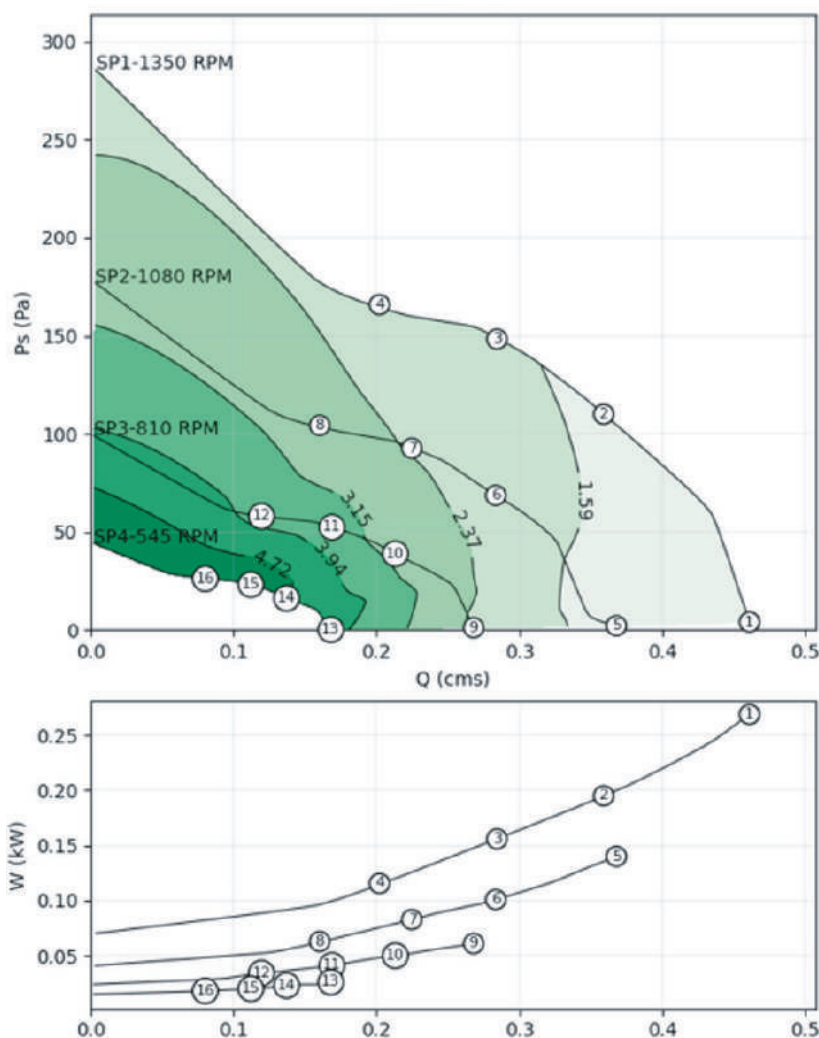
Characteristic Curve – eKDD 7-7

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	P_s (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	L_{wA} (dB)
Maximum Performance Curve 1352RPM (10V)									
1	50/60	240	1352	4	0.46	0.27	7	1.73	75
2	50/60	240	1352	110	0.36	0.20	24	1.27	70
3	50/60	240	1352	148	0.28	0.16	30	1.03	67
4	50/60	240	1352	166	0.2	0.12	30	0.77	66
Performance at 1078rpm									
5	50/60	240	1078	2	0.37	0.14	7	0.93	69
6	50/60	240	1077	69	0.28	0.10	23	0.7	64
7	50/60	240	1077	93	0.22	0.08	27	0.58	61
8	50/60	240	1077	104	0.16	0.06	28	0.45	59
Performance at 810rpm									
9	50/60	240	811	1	0.27	0.06	6	0.47	61
10	50/60	240	811	39	0.21	0.05	20	0.41	56
11	50/60	240	810	52	0.17	0.04	23	0.35	58
12	50/60	240	810	58	0.12	0.03	21	0.29	59
Performance at 545rpm									
11	50/60	240	545	0	0.17	0.03	3	0.23	52
12	50/60	240	545	16	0.14	0.02	11	0.21	49
13	50/60	240	545	23	0.11	0.02	14	0.19	49
14	50/60	240	545	26	0.08	0.02	12	0.18	49

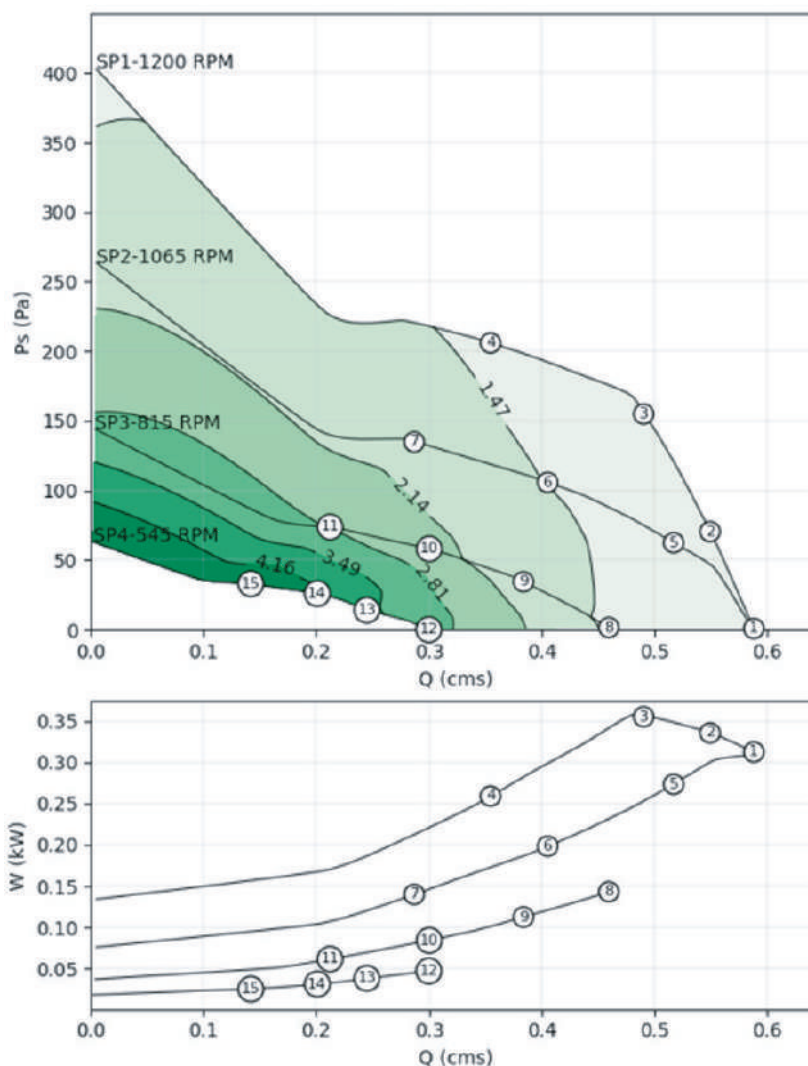
Characteristic Curve – eKDD 8-8

Performance data

Air density $\rho = 1.2 \text{ kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	Ps (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	LwA (dB)
Maximum Performance Curve 1200RPM (10V)									
1	50/60	240	1051	1	0.59	0.31	7	1.98	74
2	50/60	240	1171	70	0.55	0.34	17	2.12	74
3	50/60	240	1323	155	0.49	0.36	25	2.24	73
4	50/60	240	1350	206	0.35	0.26	30	1.65	72
Performance at 1091rpm									
5	50/60	240	1091	62	0.52	0.27	17	1.74	72
6	50/60	240	1091	106	0.41	0.20	25	1.29	70
7	50/60	240	1091	135	0.29	0.14	30	0.91	67
Performance at 815rpm									
9	50/60	240	815	2	0.46	0.14	8	0.94	68
10	50/60	240	815	34	0.38	0.11	17	0.75	65
11	50/60	240	815	58	0.3	0.08	24	0.58	62
12	50/60	240	815	74	0.21	0.06	27	0.43	59
Performance at 545rpm									
11	50/60	240	547	0	0.3	0.05	6	0.36	58
12	50/60	240	546	14	0.24	0.04	14	0.31	56
13	50/60	240	547	26	0.2	0.03	19	0.26	54
14	50/60	240	547	33	0.14	0.03	20	0.22	54

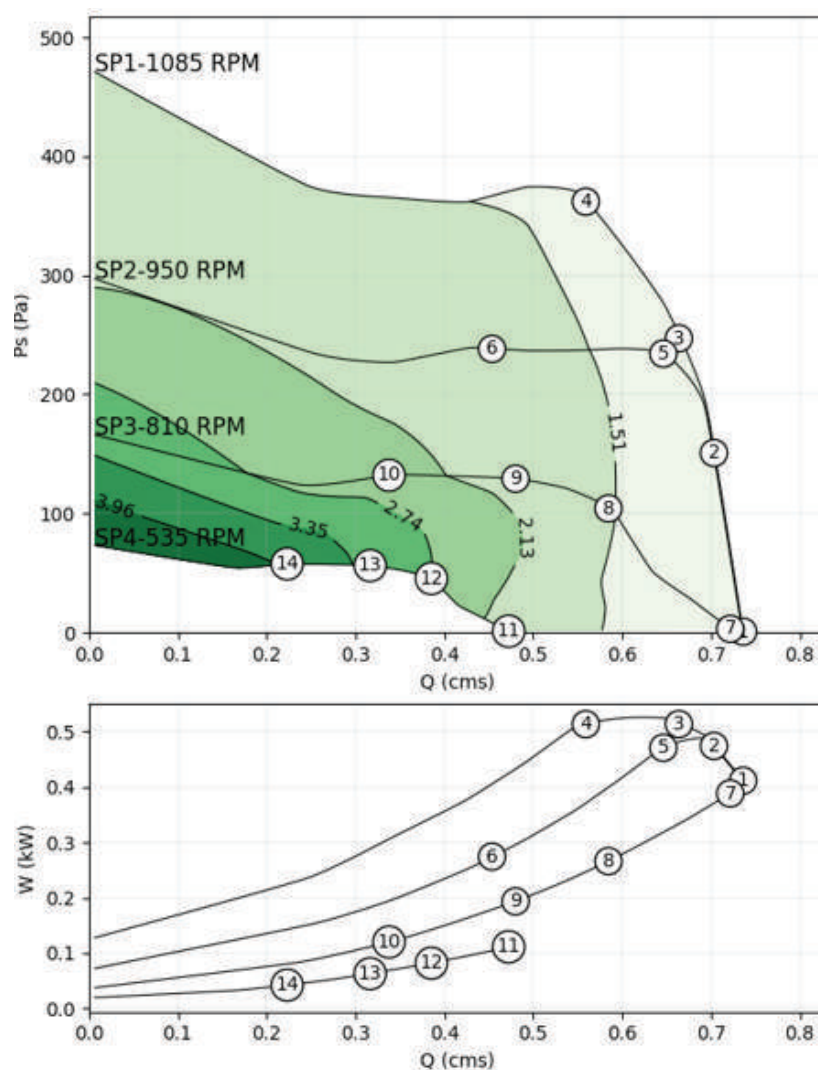
Characteristic Curve – eKDD 9-7

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	Ps (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	LwA (dB)
Maximum Performance Curve 1085RPM (10V)									
1	50/60	240	820	1	0.74	0.41	16	2.42	77
2	50/60	240	972	151	0.7	0.47	34	2.78	76
3	50/60	240	1108	247	0.66	0.51	41	3.02	76
4	50/60	240	1327	362	0.56	0.51	45	3.01	74
Performance at 950rpm									
5	50/60	240	1081	234	0.65	0.47	41	2.79	75
6	50/60	240	1081	238	0.45	0.27	45	1.66	70
Performance at 810rpm									
7	50/60	240	809	3	0.72	0.39	16	2.43	77
8	50/60	240	809	104	0.58	0.27	35	1.74	72
9	50/60	240	809	129	0.48	0.19	41	1.31	68
10	50/60	240	808	132	0.34	0.12	42	0.86	63
Performance at 535rpm									
11	50/60	240	536	1	0.47	0.11	16	0.79	66
12	50/60	240	536	45	0.39	0.08	33	0.61	62
13	50/60	240	536	56	0.32	0.06	36	0.48	58
14	50/60	240	536	58	0.22	0.04	35	0.32	53

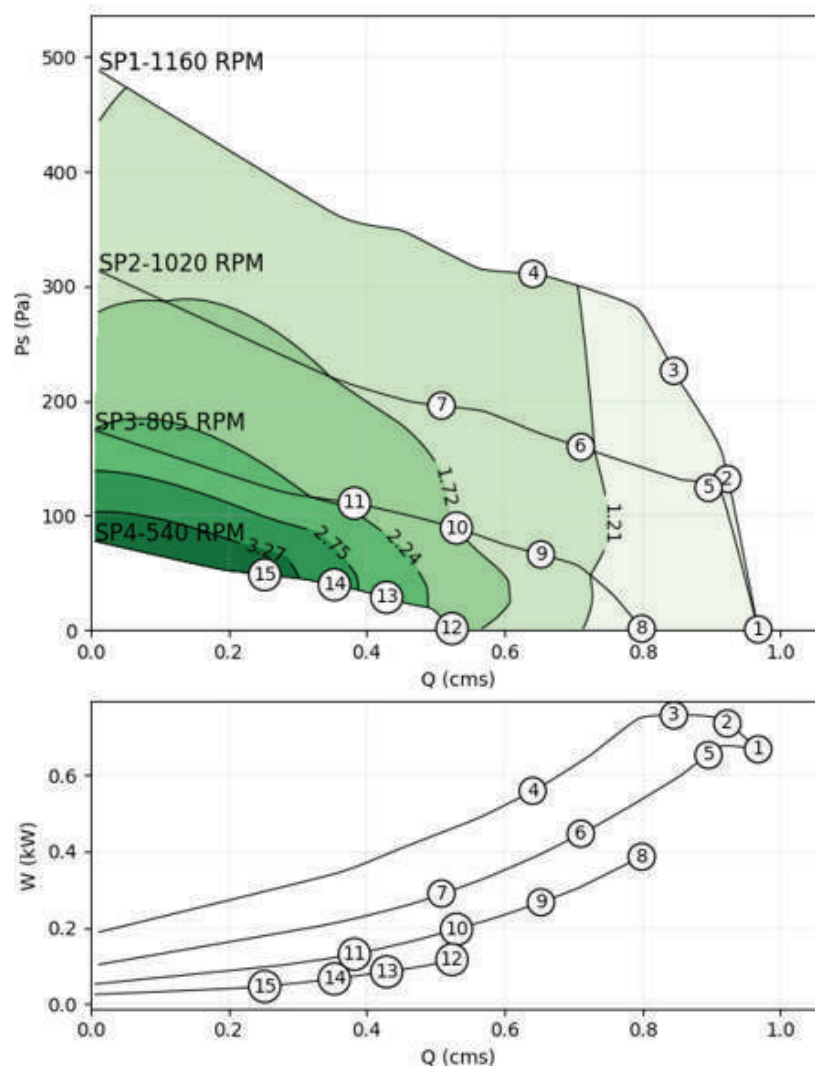
Characteristic Curve – eKDD 9-9

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	Ps (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	LwA (dB)
Maximum Performance Curve 1160RPM (10V)									
1	50/60	240	965	1	0.97	0.67	13	3.81	81
2	50/60	240	1124	132	0.92	0.74	27	4.33	80
3	50/60	240	1276	226	0.85	0.76	33	4.47	79
4	50/60	240	1351	311	0.64	0.56	40	3.32	76
Performance at 1020rpm									
5	50/60	240	1078	124	0.9	0.65	28	3.79	79
6			1078	160	0.71	0.45	33	2.64	76
7	50/60	240	1078	196	0.51	0.29	39	1.75	73
Performance at 805rpm									
8	50/60	240	807	1	0.8	0.39	13	2.34	77
9	50/60	240	807	66	0.65	0.27	26	1.73	72
10	50/60	240	807	89	0.53	0.20	32	1.28	68
11	50/60	240	807	111	0.38	0.13	37	0.91	64
Performance at 540rpm									
12	50/60	240	541	1	0.52	0.12	13	0.8	68
13	50/60	240	540	28	0.43	0.08	24	0.59	62
14	50/60	240	540	40	0.35	0.07	28	0.49	60
15	50/60	240	540	48	0.25	0.05	30	0.35	55

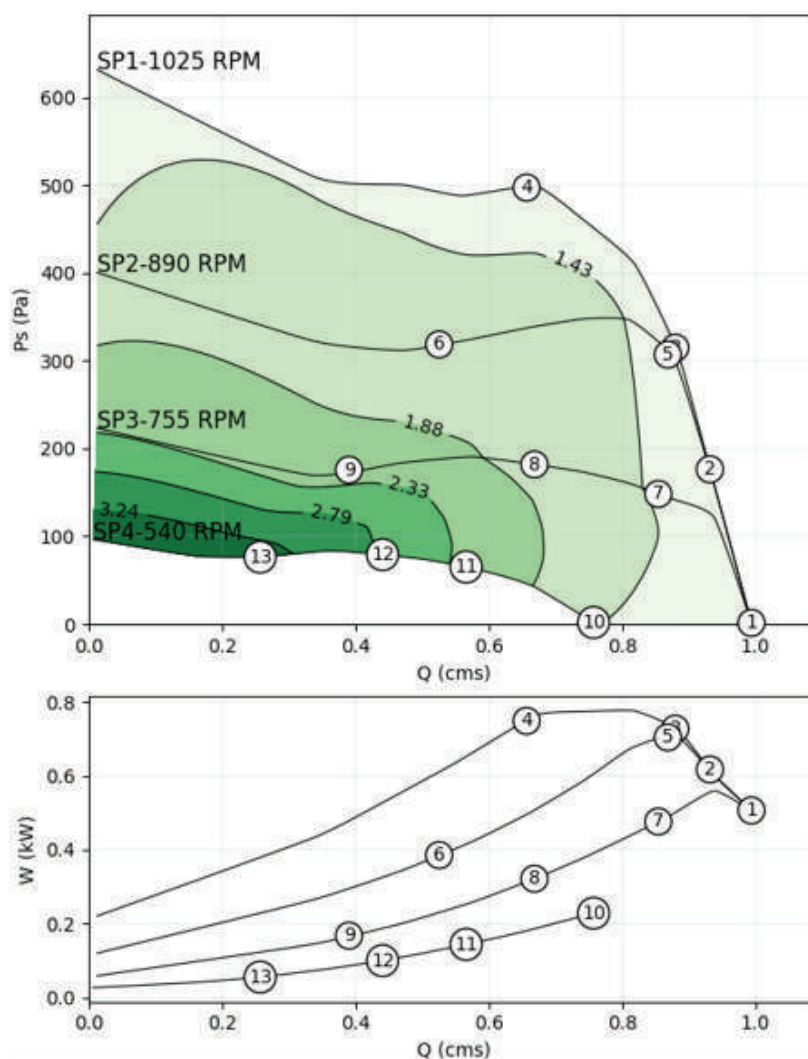
Characteristic Curve – eKDD 10-8

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	P_s (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	L_{wA} (dB)
Maximum Performance Curve 1025RPM (10V)									
1	50/60	240	698	1	0.99	0.50	20	2.69	77
2	50/60	240	872	176	0.93	0.62	40	3.27	77
3	50/60	240	1051	315	0.88	0.73	48	3.74	77
4	50/60	240	1345	497	0.66	0.75	47	3.84	78
Performance at 890rpm									
5	50/60	240	1037	307	0.87	0.70	47	3.64	77
6			1082	319	0.53	0.39	47	2.1	70
Performance at 755rpm									
7	50/60	240	809	148	0.85	0.48	40	2.55	76
8	50/60	240	810	182	0.67	0.32	47	1.77	71
9	50/60	240	810	176	0.39	0.17	45	0.97	58
Performance at 540rpm									
10	50/60	240	538	2	0.76	0.23	20	1.3	71
11	50/60	240	537	65	0.57	0.14	38	0.85	65
12	50/60	240	537	79	0.44	0.10	43	0.61	60
13	50/60	240	538	76	0.26	0.06	38	0.36	48

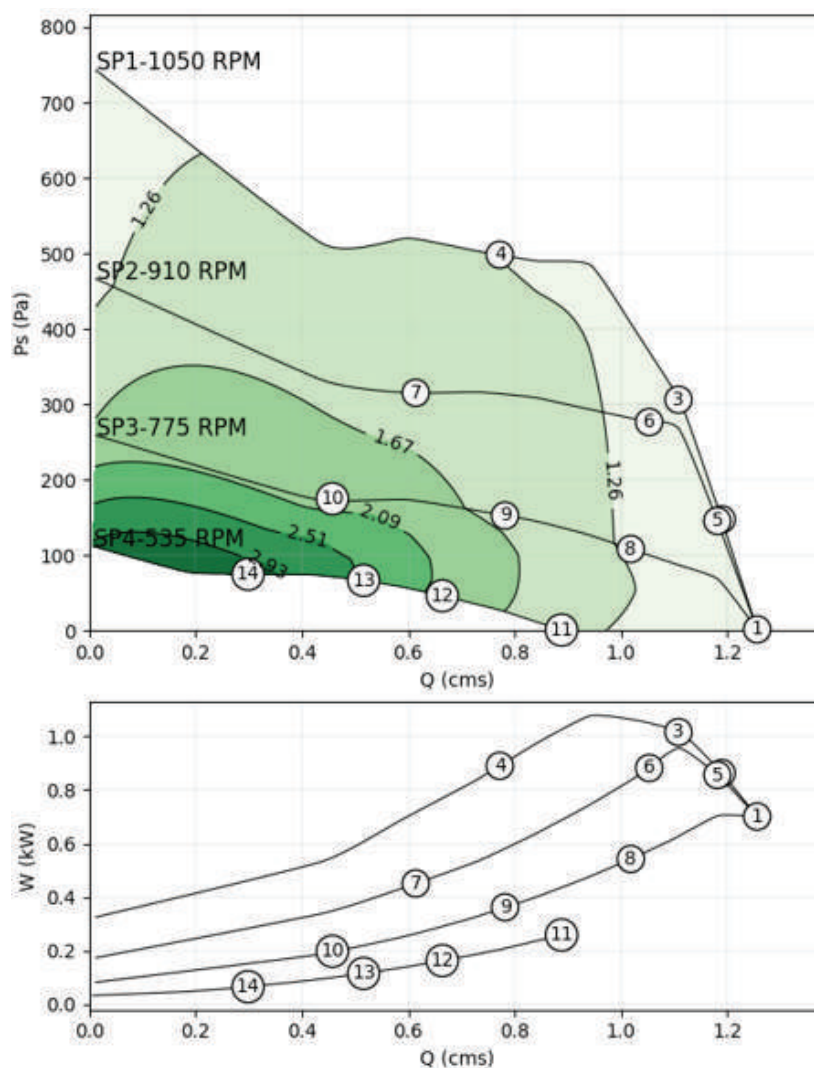
Characteristic Curve – eKDD 10-10

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	Ps (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	LwA (dB)
Maximum Performance Curve 1050RPM (10V)									
1	50/60	240	741	1	1.26	0.70	19	3.62	80
2	50/60	240	934	147	1.19	0.86	33	4.39	81
3	50/60	240	1129	306	1.11	1.02	42	5.1	82
4	50/60	240	1354	498	0.77	0.89	47	4.52	82
Performance at 910rpm									
5	50/60	240	931	145	1.18	0.86	33	4.35	80
6			1082	276	1.05	0.88	42	4.47	79
7			1082	315	0.61	0.45	46	2.41	76
Performance at 775rpm									
8	50/60	240	810	108	1.02	0.54	33	2.86	74
9	50/60	240	810	152	0.78	0.36	41	1.97	73
10	50/60	240	809	175	0.46	0.20	43	1.13	65
Performance at 535rpm									
11	50/60	240	537	1	0.89	0.26	18	1.45	72
12	50/60	240	537	46	0.66	0.16	30	0.94	67
13	50/60	240	537	66	0.52	0.12	37	0.68	64
14	50/60	240	537	75	0.3	0.07	36	0.41	61

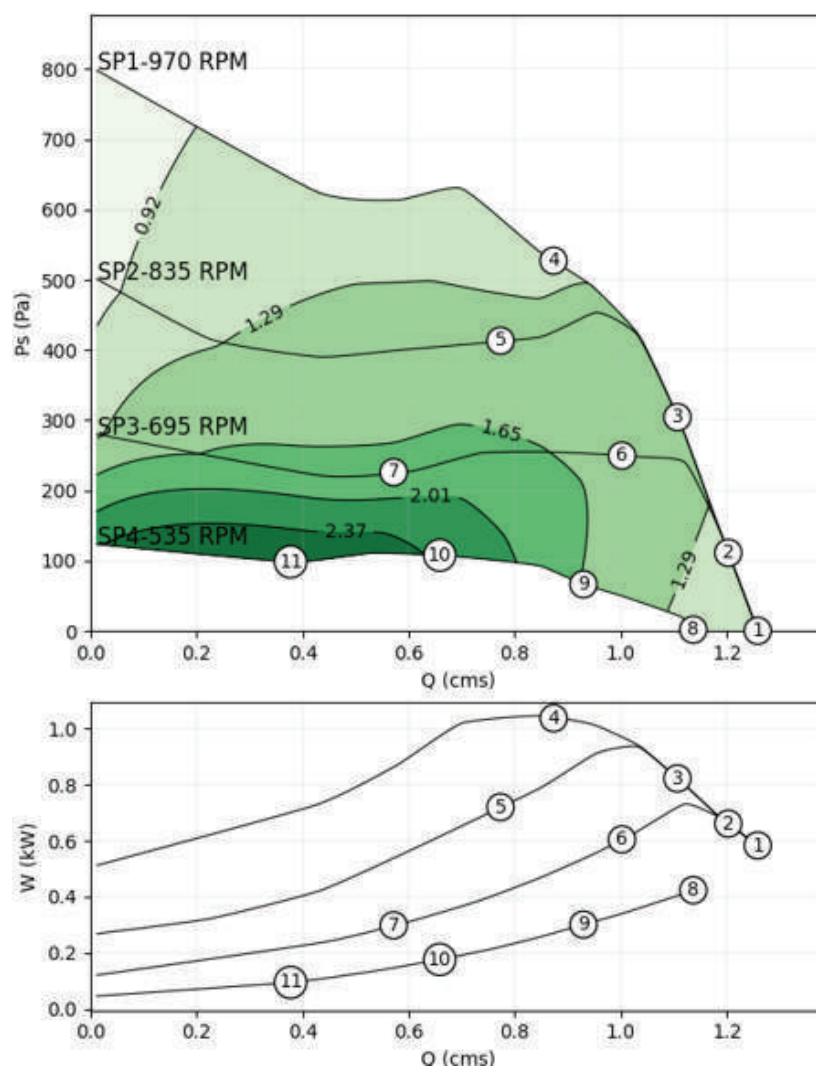
Characteristic Curve – eKDD 12-9

Performance data

Air density $\rho = 1.2 \text{ kg/m}^3$

Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	P_s (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	L_{wA} (dB)
Maximum Performance Curve 970RPM (10V)									
1	50/60	240	589	0	1.26	0.58	18	3.3	81
2	50/60	240	685	111	1.2	0.66	34	3.8	81
3	50/60	240	889	304	1.11	0.82	50	4.65	81
4	50/60	240	1210	527	0.87	1.04	48	5.76	83
Performance at 835rpm									
5	50/60	240	1078	413	0.77	0.72	48	4.07	80
Performance at 695rpm									
6	50/60	240	807	250	1	0.61	50	3.45	75
7	50/60	240	806	226	0.57	0.30	47	1.76	68
Performance at 535rpm									
8	50/60	240	534	2	1.14	0.42	19	2.46	75
9	50/60	240	534	67	0.93	0.30	35	1.78	71
10	50/60	240	534	108	0.66	0.18	49	1.08	64
11	50/60	240	534	98	0.38	0.10	42	0.61	52

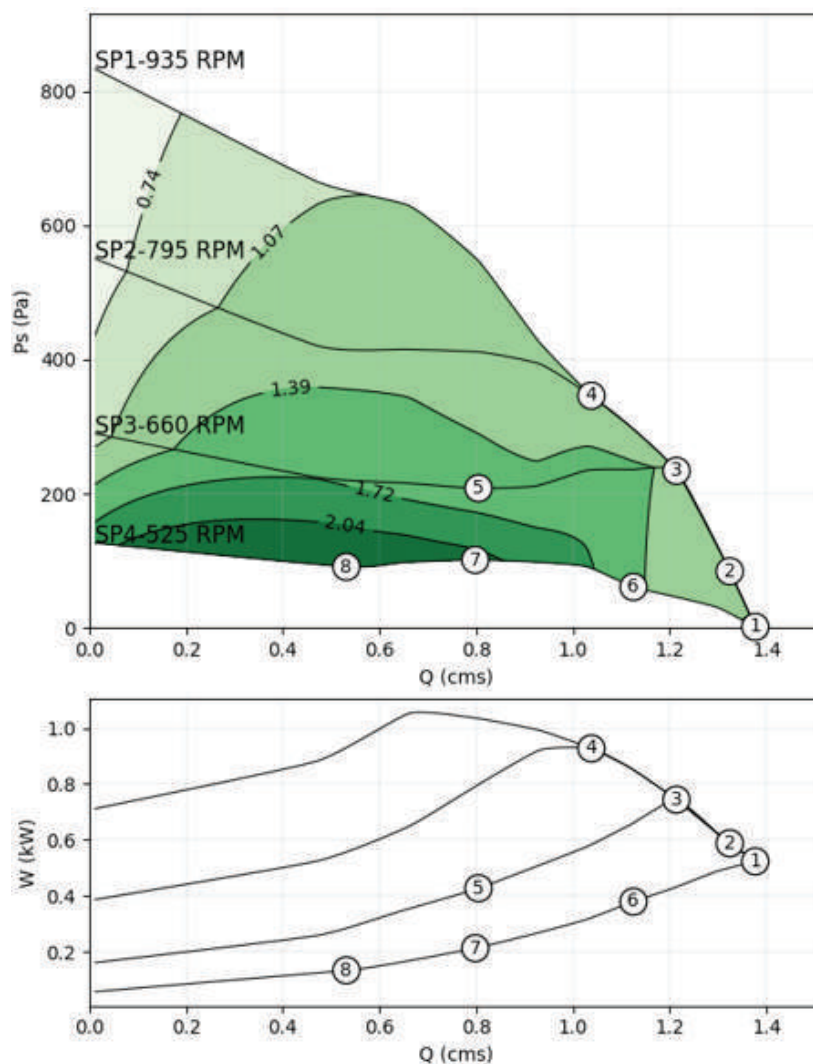
Characteristic Curve – eKDD 12-12

Performance data

Air density $\rho = 1.2\text{kg/m}^3$

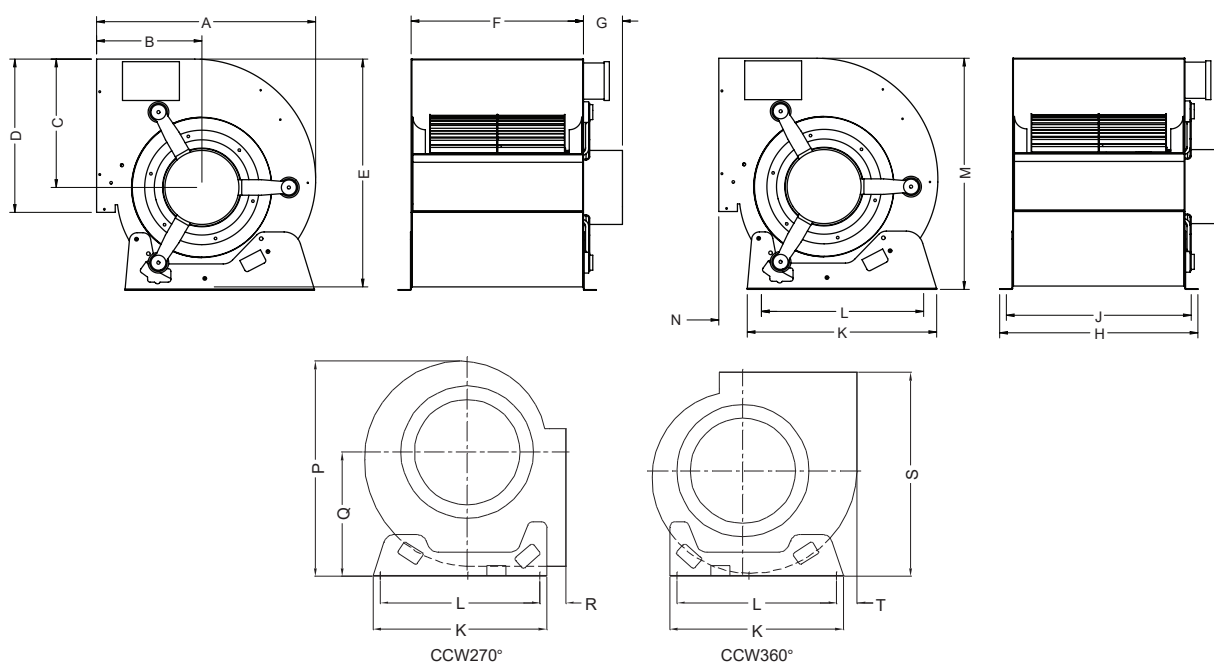
Installation type "B": free inlet, ducted outlet

Sound power levels inlet side in dB(A)



Point	Freq (Hz)	Voltage (V)	Speed (RPM)	P_s (Pa)	Q (cms)	W (kW)	η_T (%)	I (A)	L_{wA} (dB)
Maximum Performance Curve 935RPM (10V)									
1	50/60	240	514	1	1.38	0.52	17	3	76
2	50/60	240	598	84	1.32	0.59	32	2.85	76
3	50/60	240	812	234	1.21	0.74	46	2.55	76
Performance at 795rpm									
4	50/60	240	1032	346	1.04	0.93	43	5.17	79
Performance at 660rpm									
5	50/60	240	810	208	0.8	0.43	43	1.35	69
Performance at 525rpm									
6	50/60	240	537	61	1.13	0.38	30	4.8	71
7	50/60	240	537	101	0.8	0.21	46	5.73	64
8	50/60	240	537	91	0.53	0.13	40	4.92	54

Dimension Table



Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	Wt (kg)
eKDD 7-7	312	152	192	228	328	259	83	299	279	210	180	358	63	354	224	63	317	111	7
eKDD 8-8	345	164	246	256	364	287	82	337	312	254	224	397	52	393	246	52	348	104	9
eKDD 9-7	380	185	216	262	387	232	85	282	257	326	300	393	62	404	233	49	383	40	10
eKDD 9-9	380	185	216	262	387	298	70	348	323	326	300	393	62	404	233	49	383	40	11
eKDD 10-8	425	203	249	289	443	265	88	315	290	366	340	448	68	481	287	67	431	41	10
eKDD 10-10	425	203	249	289	443	331	76	381	356	366	340	448	68	481	287	67	431	41	14
eKDD 12-9	491	230	294	341	521	309	76	359	335	434	408	525	69	557	332	69	496	39	19
eKDD 12-12	491	230	294	341	521	309	38	359	335	434	408	525	69	557	332	69	496	39	20

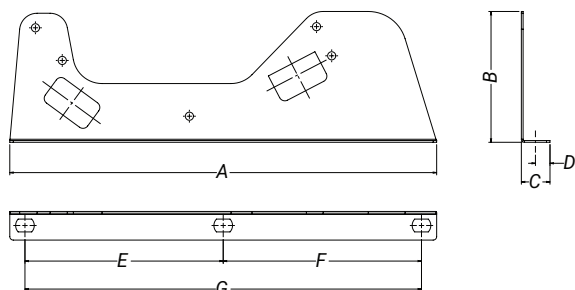
Note

1. Actual weight may vary +/- 2% (w/o mounting feet)

2. Actual dimension may vary +/- 5mm

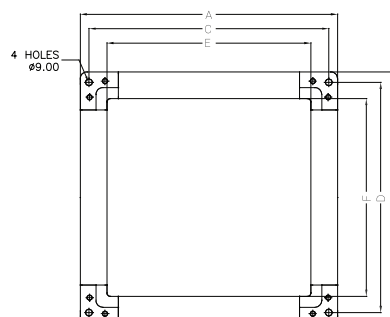
Accessory

Mounting Feet



Model	A	B	C	D	E	F	G
eKDD 7-7	210	60	20	10	90	90	180
eKDD 8-8	254	65	25	12.5	112	112	224
eKDD 9-7	326	102	25	12.5	135	165	300
eKDD 9-9	326	102	25	12.5	135	165	300
eKDD 10-8	366	113	25	12.5	170	170	340
eKDD 10-10	366	113	25	12.5	170	170	340
eKDD 12-9	434	144	25	12.5	189	219	408
eKDD 12-12	434	144	25	12.5	189	219	408

Outlet Flange



Model	A	B	C	D	E	F
eKDD 7-7	315	284	287	256	259	228
eKDD 8-8	343	312	315	284	287	256
eKDD 9-7	288	318	260	290	232	262
eKDD 9-9	354	318	326	290	298	262
eKDD 10-8	321	345	293	317	265	289
eKDD 10-10	387	345	359	317	331	289
eKDD 12-9	365	397	337	369	309	341
eKDD 12-12	451	397	423	369	395	341

Electrical & Controls Wiring Diagram

Power and Control Wiring

This section illustrates the terminal layouts and wiring procedures for the eKDD Ecowatt plug fans.

The eKDD fan supports multiple speed control functions:

- 1. Manual Speed Control via Potentiometer:** Analog signal 0–10 VDC.
 - 2. Automatic Speed Control via DCV or BMS:** Using analog signals (0–10 VDC) or Modbus RTU communication.
- For detailed training on the eKDD Modbus RTU interface PC program and configuration methods, please contact Kruger.

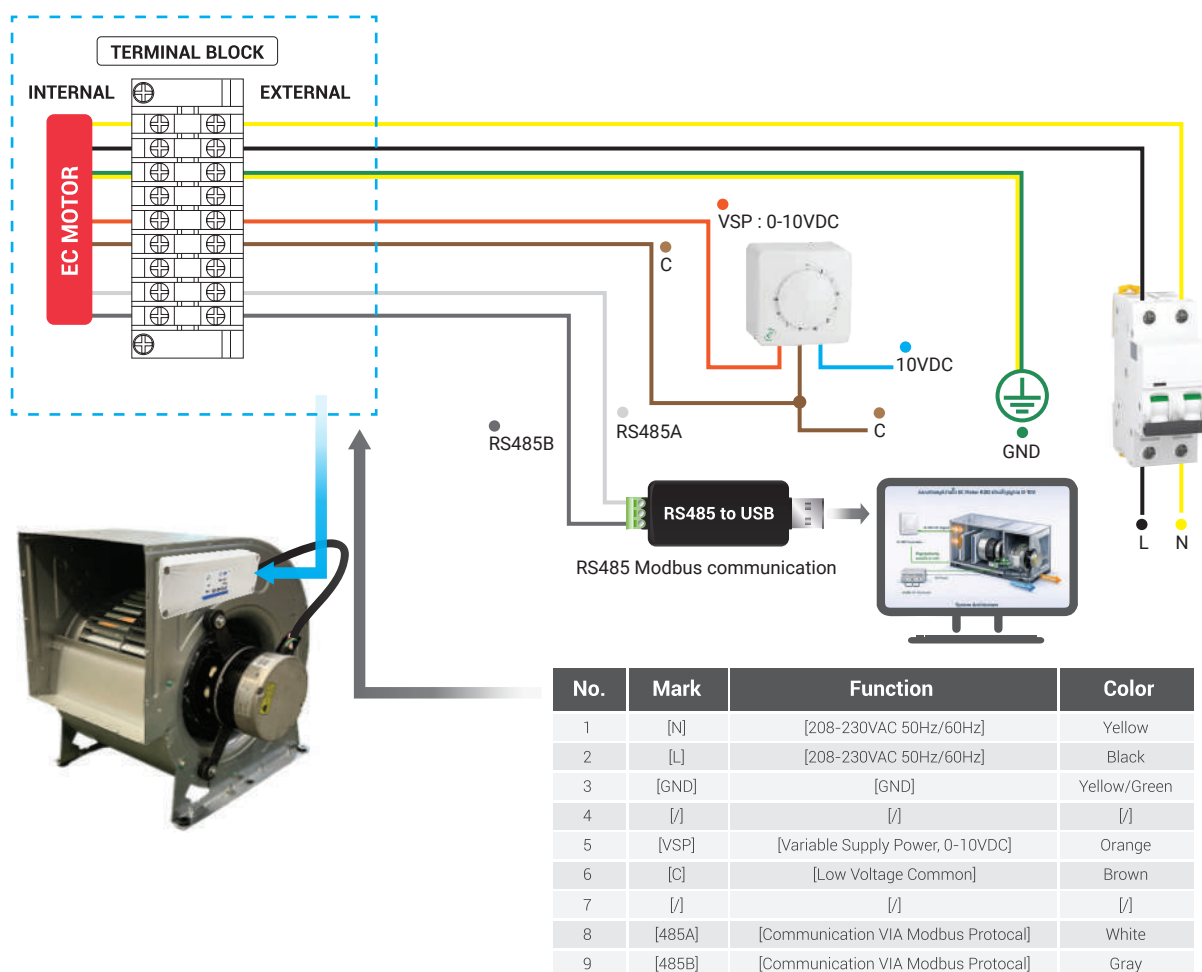
Power Wiring

- Select the cable size according to the motor's input current (A) for each model.
- Shielded cables are not required for power connections.
- When multiple fans are installed in a single AHU, each fan must have an individual circuit breaker.

Control Wiring

- Ensure all control cables (RS485A, RS485B, VSP, and C) for each fan are accessible at an external location, away from single-phase power supply connections.
- When using MODBUS over RS485, appropriate shielded cables must be used.

Wiring Diagram



KRUGER Ventilation Group

THAILAND (Regional Headquarters)

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
Email: mktg@krugerventasia.co.th
Website: www.krugerfan.com

INDIA (Haryana)

KRUGER VENTILATION INDUSTRIES (INDIA) PVT. LTD.

Plant-1 :Khasra No. 150/20/2/1, 151/16/2/2,
Village-Rohad, Bahadurgarh, Jhajjar, Haryana - 124507,
India Plant-2 : Khasra No.: 2-0, 14/3, 4-10, 15/1, 6-2, 20
Area: 4 Kanal 4 Marla, Khewat No.: 1007/868,
Khata No.: 1068, Killa No.: 146/6 (7-12, 7/1)
Village Rohad, Bahadurgarh-Rohtak Road,
Bahadurgarh, District Jhajjar - 124507, Haryana, India
Tel: +91 99589 91652, +91 99589 91660, +91 85869 66303
Email: sales.kni@krugerindia.com

INDIA (Mumbai)

KRUGER VENTILATION INDUSTRIES (INDIA) PVT. LTD.

Village-Kalamgaon, Mumbai-Nashik Highway,
Tal-Shahapur, Dist. Thane- 421 601. Maharashtra, India
Tel. : +91 99605 58899 / 84848 27940
Fax : +91 25272 40075
E-mail : sales@krugerindia.com

INDIA (Chennai)

KRUGER VENTILATION INDUSTRIES (INDIA) PVT. LTD.

Plot No: E-23/1, Survey No - 279, SIPCOT Industrial Park,
Irungattukottai, Sriperumbudur Taluk, Kancheepuram District,
Tamil Nadu, Pin - 602117, India.
Tel. : +91 97899 82290
E-mail : giriprabu@krugerindia.com

MIDDLE EAST

CONTACT : KRUGER VENTILATION INDUSTRIES (INDIA) PVT. LTD.

Tel. : +91 97663 23730 / +91 99755 77211
Email : rahul@krugerindia.com

MALAYSIA

KRUVENT INDUSTRIES (M) SDN. BHD.

Lot 850, Jalan Subang 7, Taman Perindustrian Subang,
47500, Subang Jaya, Selangor D.E., Malaysia
Tel: +603 80743399 Fax: +603 80743388
Email: mktg@kruger.com.my

INDONESIA

PT. KRUGER VENTILATION INDONESIA

Jl. Teuku Umar No. 20, Karawaci,
Tangerang 15115, Indonesia
Tel: +62 21-5512288
Fax: +62 21-5513502
Email: mktg@krugerindo.co.id

AUSTRALIA

S&P-KRUGER AUSTRALIA PTY. LTD.

2 Cunningham St, Moorebank N.S.W. 2170
Tel: +612-98227747
Fax: +612-98227757
Email: info@sandpkruger.com.au

VIETNAM

KRUGER VENTILATION INDUSTRIES (VIETNAM) CO., LTD.

Lot A7, 2-4, C2 Road, Thanh Thanh Cong IZ,
Trang Bang District, Tay Ninh Province, Vietnam
Tel: +84-276 3585200/01/02 Fax: +84-276 3585199
Email: mktg@krugervn.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: ksh@krugerfan.com.cn
Website: www.krugerfan.com.cn

CHINA (Tianjin)

TIANJIN KRUGER VENTILATION CO., LTD.

Jingjin Science and Technology Park,
Wuqing District, Tianjin 301700, P.R. China
Tel: +86 22-22143480 Fax: +86 22-22143482
Email: ktj@krugerfan.com.cn

CHINA (Guangzhou)

GUANGZHOU KRUGER VENTILATION CO., LTD.

No. 9 Huahui Road, Huashan Town,
Huadu District Guangzhou 510880, P.R. China
Tel: +86 20-66356635 Fax: +86 20-86786001/86786500
Email: kgv@krugerfan.com.cn

CHINA (Wuhan)

WUHAN KRUGER VENTILATION CO., LTD.

No. 805 Huian Avenue, Dongxihu District Wuhan,
Hubei 430040, P.R. China
Tel: +86 27- 83248840
Fax: +86 27- 83261886
Email: kwv@krugerfan.com.cn

HONG KONG

KRUGER VENTILATION (HONG KONG) LIMITED.

Flat E, 8/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

KOREA

NEOMATE CO., LTD.

80, Seogeunnae-gil, Paltan-myeon, Hwaseong-si,
Gyeonggi-do 18575, Korea
Tel: +82-2-2679-2052 Fax: +82-2-2679-2174
Email: y7890@neomate.co.kr

PHILIPPINES

KRUGER M & E INDUSTRIES CORP.

B3 Welborne Industrial Park, Bancal, Carmona,
Cavite, Philippines 4116
Tel: +63-917-561-9088, +63-917-596-7288,
+63-917-712-8438, +63-917-306-8288 Fax: -
Email: mktg.ph@krugerfan.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

A member of



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
CAT080.ED1 September 2026

A member of

