



**E.C.**  
**BRUSHLESS**  
IE4

- 40mm-thick sound insulation
- High energy efficiency and low consumption
- Models: CKD CKDR  
IE2-IE3 Motors
- Models: CKD/EW CKDR/EW  
High-efficiency IE4 Industrial  
Brushless EC Motors
- Easy installation, turnable



According ErP

FAN TYPE	MOTOR TYPE	ENERGY REQUIRED	ENERGY SAVE
CKD/EW	IE4+VSD	+++	45%
CKDR/EW	IE4+VSD	+++	45%
CKD	IE2	+	0%
CKDR	IE2	+	0%

EFFICIENT WORK

**SODECA**

# CKD CKDR CKD/EW CKDR/EW

EXTRACTION UNITS FOR  
INDUSTRIAL KITCHENS



EN-12101-3-2002  
Powered smoke and  
heat exhaust ventilators  
for use in Construction Works



# CKD CKDR



CKD



CKDR

## Extraction units F-400 with large hatch to facilitate maintenance and 40mm-thick sound insulation



### Fan:

- Galvanized sheet steel structure
- 40mm-thick sound insulation.
- CKD: Multi-blade impeller with blades made from galvanized sheet steel.
- CKDR: Impeller with backward-curved blades made from sheet steel.
- Approval according to Standard EN 12101-3:2002/AC:2006, with certification No: 0370-CPR-2358.
- Exchangeable hinges mean that the direction the hatch opens can be changed.
- Can be turned to different positions.
- Designed for continuous working at 120°C.

### Motor:

- Single-phase two-speed motors with IE-2 efficiency, except for capacities less than 0.75 kW.
- Class F motors, with ball bearings, IP55 protection.
- Single-phase 230V-50Hz, and three-phase 230/400V-50Hz
- Fan working temperature: -25°C +120°C.

### Finish:

- Anticorrosive galvanized sheet steel.

### On request:

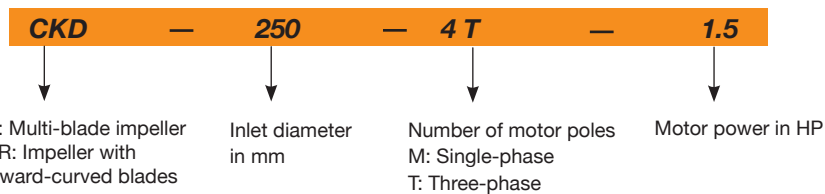
- Special windings for different voltages.



Grease drain



## Order code



## Technical characteristics

Model	Speed (r/min)	Maximum admissible current (A) 230V 400V		Installed power (kW)	Maximum airflow (m³/h)	Sound pressure level dB(A)	Weight approx. (Kg)
CKD-250-4T-1.5	1420	4.33	2.50	1.10	3160	69	44
CKD-280-4T-3	1445	8.36	4.83	2.20	4880	73	59
CKDR-280-2T-1	2840	2.91	1.68	0.75	2090	71	38
CKDR-280-2M-1	2810	4.62	-	0.75	2090	71	43
CKDR-315-2T-1.5	2860	4.20	2.40	1.10	3900	72	55
CKDR-355-4T-0.5	1370	2.02	1.17	0.37	2660	60	51
CKDR-355-4M-0.5	1400	2.76	-	0.37	2660	60	53
CKDR-400-4T-0.75	1370	2.87	1.66	0.55	3770	56	66
CKDR-400-4M-0.75	1400	3.93	-	0.55	3770	56	71
CKDR-450-4T-1	1410	3.10	1.79	0.75	5020	60	76
CKDR-450-4M-1	1410	5.05	-	0.75	5020	60	77
CKDR-500-4T-1.5	1420	4.33	2.50	1.10	7440	62	102
CKDR-560-4T-3	1445	8.36	4.83	2.20	11030	65	122



## Erp. BEP (best efficiency point) characteristics

<b>MC</b>	Measurement category	<b>ηe[%]</b>	Efficiency
<b>EC</b>	Efficiency category	<b>N</b>	Degree of efficiency
	<b>S</b> Static	<b>[kW]</b>	Input power
	<b>T</b> Total	<b>[m³/h]</b>	Airflow
<b>VSD</b>	Variable-speed drive	<b>[mmH₂O]</b>	Static or total pressure (According to EC)
<b>SR</b>	Specific ratio	<b>[RPM]</b>	Speed

Model	MC	EC	VSD	SR	ηe [%]	N	(kW)	[m³/h]	[mmH₂O]	(RPM)
CKD-250-4T-1.5	A	S	NO	1.00	38.3%	47.2	0.392	1177	46.77	1477
CKD-280-4T-3	A	S	NO	1.00	40.7%	48.5	0.589	1494	58.88	1488
CKDR-280-2T-1	A	S	NO	1.00	51.7%	65.2	0.529	1341	74.86	2913
CKDR-280-2M-1	A	S	NO	1.00	48.1%	61.2	0.569	1327	75.78	2896
CKDR-315-2T-1.5	A	S	NO	1.00	58.5%	68.7	1.063	2306	98.91	2892
CKDR-355-4T-0.5	A	S	NO	1.00	47.7%	63.9	0.287	1679	29.89	1434
CKDR-355-4M-0.5	A	S	NO	1.00	45.4%	61.4	0.299	1716	29.06	1450
CKDR-400-4T-0.75	A	S	NO	1.00	50.4%	64.3	0.482	2168	41.12	1424
CKDR-400-4M-0.75	A	S	NO	1.00	48.1%	61.8	0.504	2216	40.21	1441
CKDR-450-4T-1	A	S	NO	1.00	58.7%	70.6	0.746	3048	52.76	1429
CKDR-450-4M-1	A	S	NO	1.00	50.2%	61.3	0.873	3070	52.38	1429
CKDR-500-4T-1.5	A	S	NO	1.00	59.0%	68.2	1.325	4844	59.24	1422
CKDR-560-4T-3	A	S	NO	1.00	61.0%	67.9	2.217	6834	72.64	1453

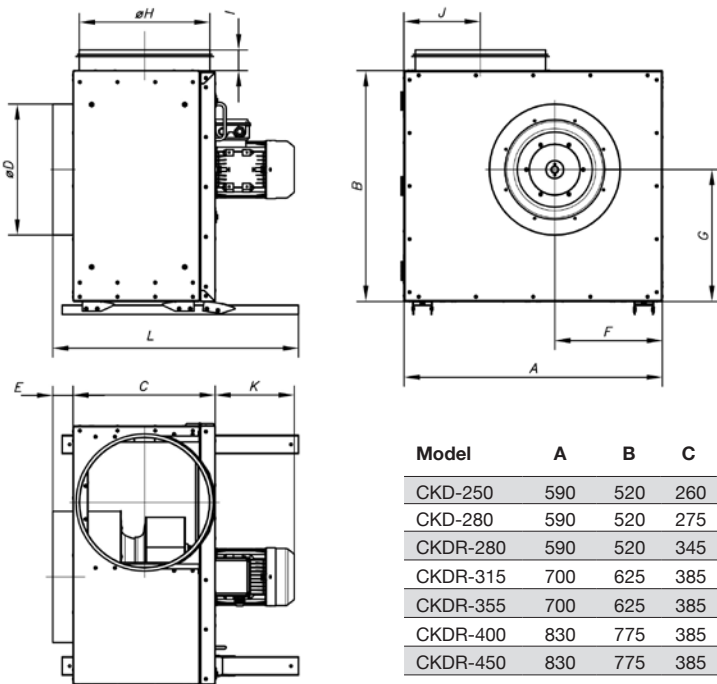
## Acoustic features

The specified values are determined according to free field measurements of pressure and sound levels in dB(A) at an equivalent distance of twice the fan's span plus the turbine's diameter, with a minimum of 1.5 m.

Sound power Lw(A) spectrum in dB(A) via frequency band in Hz. Values taken at outlet with average airflow.

Model	63	125	250	500	1000	2000	4000	8000	Model	63	125	250	500	1000	2000	4000	8000
CKD-250-4	53	79	74	73	66	67	60	60	CKDR-400-4	41	60	62	63	65	64	58	53
CKD-280-4	53	82	78	76	70	71	63	63	CKDR-450-4	45	66	67	67	68	69	64	58
CKDR-280-2	53	67	73	74	76	77	73	71	CKDR-500-4	49	68	64	69	74	68	63	60
CKDR-315-2	50	67	77	77	79	79	74	71	CKDR-560-4	44	75	71	74	74	74	66	62
CKDR-355-4	43	62	64	65	68	67	61	55									

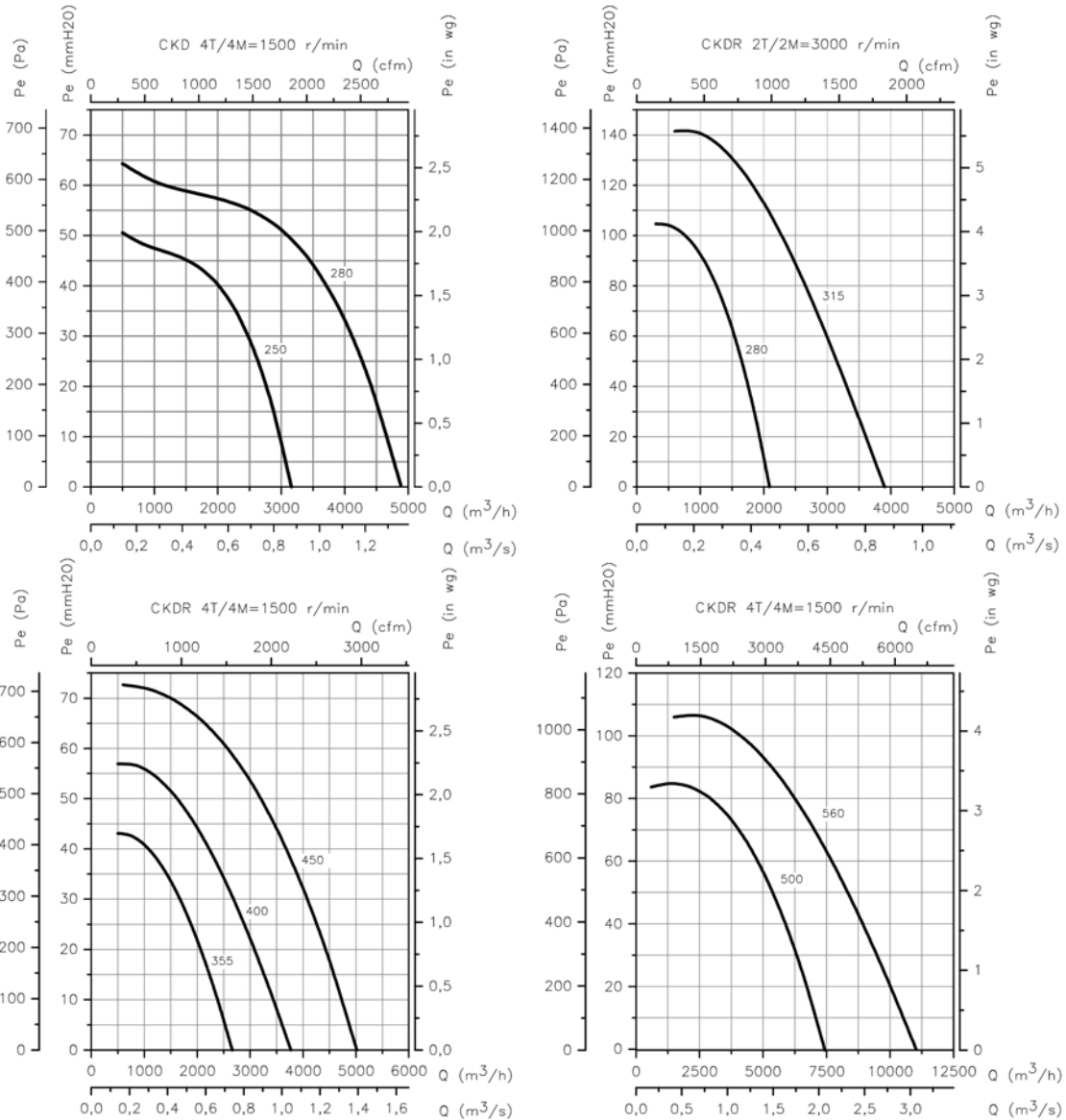
## Dimensions in mm



Model	A	B	C	ØD	E	F	G	ØH	I	J	K	L
CKD-250	590	520	260	250	50	245	290	250	48	160	223	560
CKD-280	590	520	275	315	50	245	290	250	48	160	283.5	600
CKDR-280	590	520	345	315	52	245	290	315	48	192.5	213	612
CKDR-315	700	625	385	355	55	290	356	355	56	207	213	665
CKDR-355	700	625	385	355	55	290	356	355	56	207	180	665
CKDR-400	830	775	385	355	55	354	418	355	56	212	212	660
CKDR-450	830	775	385	355	55	354	418	355	56	212	212	660
CKDR-500	1000	900	470	400	75	420	505	400	75	244	222	865
CKDR-560	1000	900	470	400	75	420	505	400	75	244	282.5	865

## Characteristic Curves

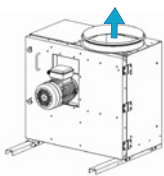
Q = Airflow in m<sup>3</sup>/h, m<sup>3</sup>/s and cfm Pe= Static pressure in mm H<sub>2</sub>O, Pa and inwg



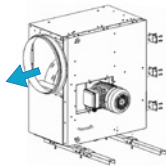
## Positions

LG 0 standard supply

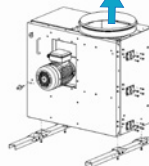
On request orientations LG 90 and LG 270. For different installation and assembly positions, the exchangeable hinges and brackets may be changed as required.



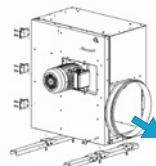
LG 0



LG 90



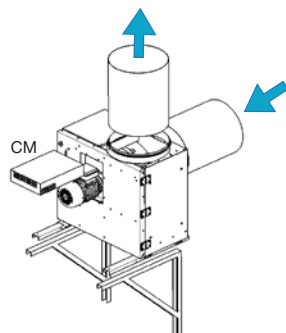
LG 0



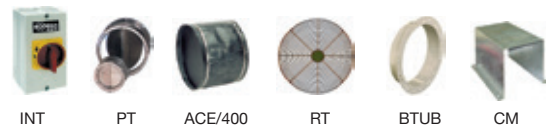
LG 270

## Installation and Assembly

CKD/CKDR fans may be wall-mounted with brackets; if the wall is exterior, the CM motor cover accessory should be installed.



## Accessories





# CKD/EW CKDR/EW

Extraction units F-400 with large hatch to facilitate maintenance and 40mm-thick sound insulation



INDUSTRIAL BRUSHLESS MOTOR E.C.



CKD/EW



CKDR/EW

Fan:

- Galvanized sheet steel structure
- 40mm-thick sound insulation
- CKD: Multi-blade impeller with blades made from galvanised sheet steel.
- CKDR: Impeller with backward-curved blades made from sheet steel.
- Approval according to Standard EN 12101-3:2002/AC:2006, with certification No: 0370-CPR-2358
- Exchangeable hinges mean that the direction the hatch opens can be changed.
- Can be turned to different positions
- Designed for continuous working at 120°C

Motor and electronic variable speed:

- High-efficiency (IE4) Industrial Brushless EC Motors, fitted with electronic variable speed (VSD), adjustable via external control input 0-10V. IP55 Protection.
- The external signal can be supplied through a manual or automatic control with 0-10 V output.
- Electronic variable speed drive (VSD), available with single-phase 220-240 V 50/60 Hz input (VSD1/B type) or three-phase 380-415 V 50/60 Hz (VSD3/B type). Standard protection: IP20, IP66 protection available on request.
- By default, the electronic variable speed drive (VSD) is delivered programmed for constant speed.
- Working fan temperature: -25 °C +120°C.
- Fan working temperature (VSD): -25 °C +50 °C.

Finish:

- Anticorrosive galvanized sheet steel.



**VARIABLE SPEED DRIVE**  
VSD: Variable Speed Drive.  
- VSD1/B  
- VSD3/B

Supplied included with fan

**CONTROL**  
Supplied as optional accessory

**SUPPLY**  
VSD1/B:  
220-240 V 50/60 Hz  
VSD3/B:  
380-415 V 50/60 Hz

## Order code

**CKD/EW — 400 — 4 — 1.5 — B — T — D**

CKD/EW: Multi-blade impeller  
CKDR/EW: Impeller with backward-curved blades  
"Efficient work"

Inlet diameter in mm

Maximum speed:  
2=2850 rpm  
4=1410 rpm

Motor power (HP)

Motors: Brushless industrial E.C.

M: Fitted with VSD1/B, electronic variable speed drive, single-phase 220-240 V 50/60 Hz.

T: Fitted with VSD3/B, electronic variable speed drive, three-phase 380-415 V 50/60Hz.

D: Standard version, VSD supplied programmed for constant speed.

P: VSD supplied programmed to control pressure and Si-Presión pressure transmitter

K: VSD supplied programmed and built into a BOXPRES KIT/B box.

## Technical characteristics

Model	Speed (r/min)	Single-phase VSD 230 V 50/60 Hz		Three-phase VSD 400 V 50/60 Hz		Maximum electrical power (W)	Flow min/max (m3/h)	Sound pressure level min/max dB(A)	Weight approx. (kg)
		Maximum input current (A)	Model VSD	Maximum input current (A)	Model VSD				
CKD/EW-250-4-1.5	300/1410	11.25	VSD1/B-0,75	2.65	VSD3/B-1,5	1294	670/3160	35/69	44
CKDR/EW-280-2-1	300/2850	8.15	VSD1/B-0,75	1.92	VSD3/B-0,75	927	220/2090	22/71	38
CKDR/EW-315-2-1.5	300/2850	11.80	VSD1/B-0,75	2.78	VSD3/B-1,5	1343	410/3900	23/72	55
CKDR/EW-355-4-0.5	300/1410	3.96	VSD1/B-0,37	0.93	VSD3/B-0,75	451	570/2660	26/60	51
CKDR/EW-400-4-0.75	300/1410	5.82	VSD1/B-0,37	1.37	VSD3/B-0,75	662	800/3770	22/56	66
CKDR/EW-450-4-1	300/1410	7.94	VSD1/B-0,75	1.87	VSD3/B-0,75	903	1070/5020	26/60	76
CKDR/EW-500-4-1.5	300/1410	11.25	VSD1/B-0,75	2.65	VSD3/B-1,5	1294	1580/7440	28/62	102



**EFFICIENT  
WORK**



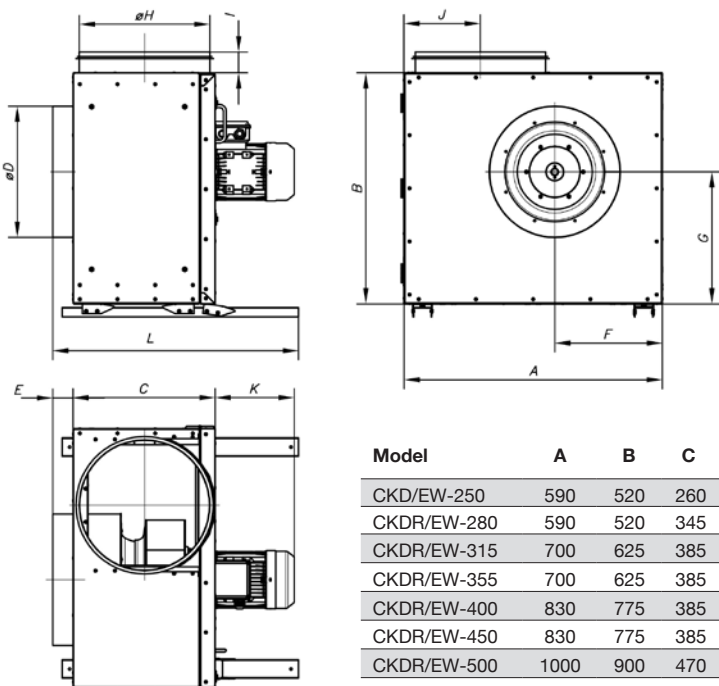
### Acoustic features

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Sound power Lw(A) spectrum in dB(A) via frequency band in Hz. Values at maximum speed taken at outlet with average airflow

Model	63	125	250	500	1000	2000	4000	8000	Model	63	125	250	500	1000	2000	4000	8000
CKD/EW-250-4	53	79	74	73	66	67	60	60	CKDR/EW-400-4	41	60	62	63	65	64	58	53
CKDR/EW-280-2	53	67	73	74	76	77	73	71	CKDR/EW-450-4	45	66	67	67	68	69	64	58
CKDR/EW-315-2	50	67	77	77	79	79	74	71	CKDR/EW-500-4	49	68	64	69	74	68	63	60
CKDR/EW-355-4	43	62	64	65	68	67	61	55									

### Dimensions in mm

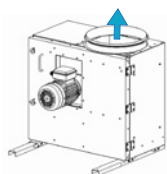


Model	A	B	C	ØD	E	F	G	ØH	I	J	K	L
CKD/EW-250	590	520	260	250	50	245	290	250	48	160	223	560
CKDR/EW-280	590	520	345	315	52	245	290	315	48	192.5	213	612
CKDR/EW-315	700	625	385	355	55	290	356	355	56	207	213	665
CKDR/EW-355	700	625	385	355	55	290	356	355	56	207	180	665
CKDR/EW-400	830	775	385	355	55	354	418	355	56	212	212	660
CKDR/EW-450	830	775	385	355	55	354	418	355	56	212	212	660
CKDR/EW-500	1000	900	470	400	75	420	505	400	75	244	222	865

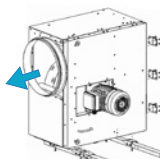
### Positions

LG 0 standard supply

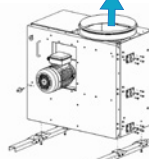
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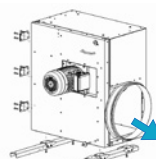
LG 0



LG 90



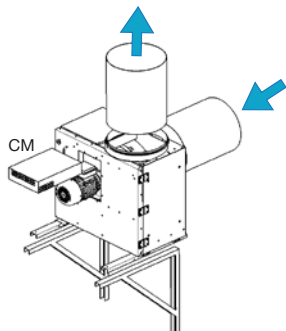
LG 0



LG 270

### Installation and Assembly

CKD/CKDR fans may be wall-mounted with brackets; if the wall is exterior, the CM motor cover accessory should be installed.



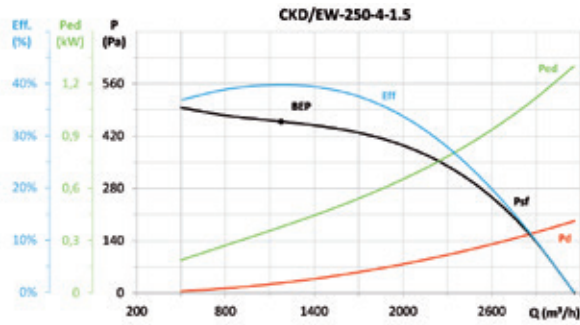
### Accessories



### Characteristic Curves

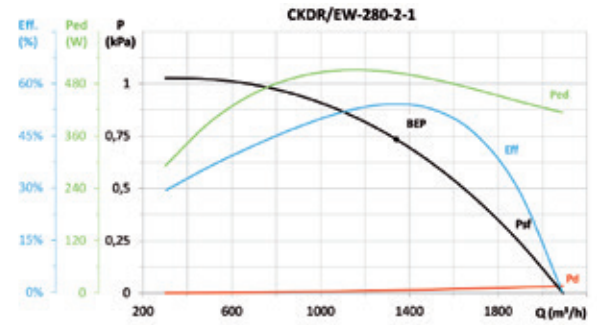
Q = Airflow in m<sup>3</sup>/h, m<sup>3</sup>/s and cfm

Pe= Static pressure in mm H<sub>2</sub>O, Pa and inwg



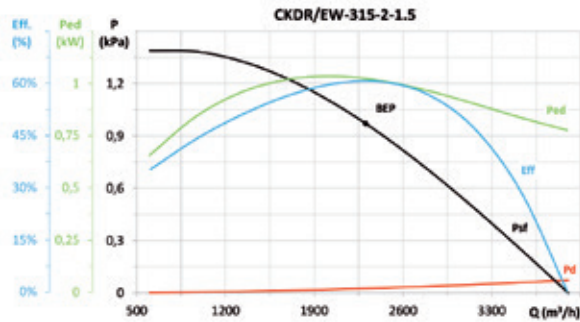
MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,12	44,4%	48,8	0,377	1177	459	1410	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



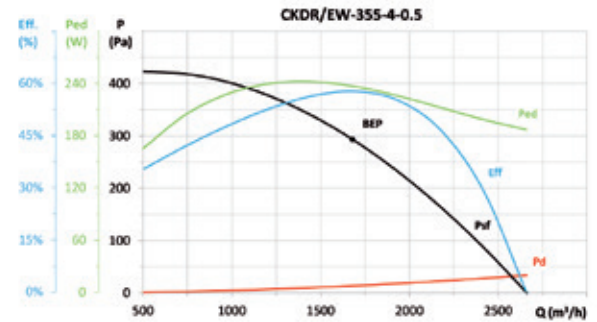
MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,11	60,0%	73,6	0,505	1341	734	2850	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



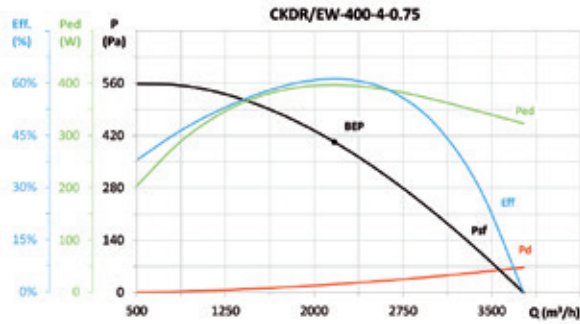
MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,09	66,0%	76,4	1,024	2305	970	2850	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



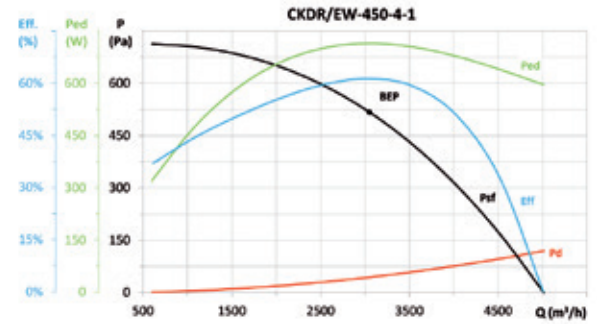
MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,13	65,3%	82,3	0,237	1679	293	1410	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



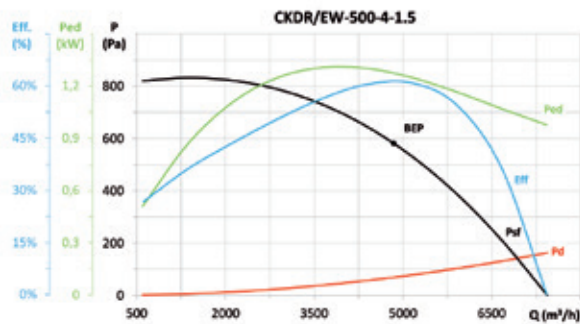
MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,12	68,3%	83,1	0,397	2168	403	1410	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,10	67,4%	79,4	0,715	3048	518	1410	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc



MC	EC	SR	Cc	$\eta_b$ (%)*	N	[kW]	[m <sup>3</sup> /h]	[Pa]	[rpm]	VSD
A	S	1,00	1,08	66,3%	75,7	1,275	4844	581	1410	INCLUDED

\* $\eta_e$  (%) = Eff. (%) x Cc

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