

# EL 450 EC O 01

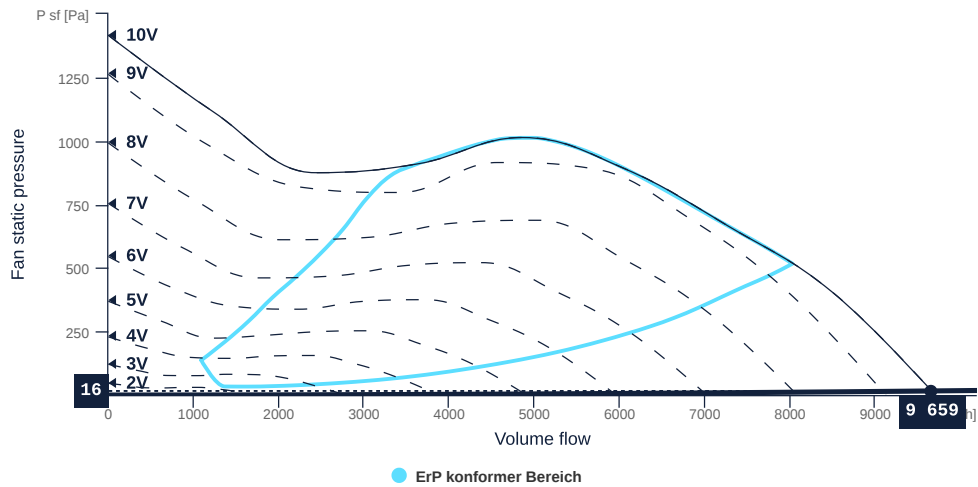
164261

- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- High efficiency EC motor, steplessly controllable
- Conveyed medium temperature up to 60 °C in continuous operation
- Housing made of aluminum



## FAN CURVES

Name	Value	Unit
Volume flow	9659	m³/h
Pressure	16	Pa



to the product detail page

## TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volume flow	9659	m³/h	QV <sub>calc</sub>
Pressure	16	Pa	psf <sub>calc</sub>
Fan pressure	186	Pa	pf
Fan static pressure	16	Pa	psf
Current consumption Motor	3	A	le
Current consumption Electric	3	A	led
Electrical power consumption	2253	W	PeK
Control voltage	9	V	U <sub>ctrl</sub>
Rotation speed	2698	1/min	N
Total static efficiency	1	%	etaFaPeK
Total efficiency	22	%	etatPeK
SFP (entire device)	839	W/(m³/s)	sfp <sub>device</sub>
Sound power level inlet	98	dB(A)	LwA5
Sound power level outlet	100	dB(A)	LwA6
Sound power level housing radiation	87	dB(A)	LwA2

## SOUND DATA

Sound power	mid-frequency tape										Unit	Formula symbol
	Σ	63	125	250	500	1000	2000	4000	8000	16000		
suction	98	48	63	84	88	97	89	86	82	58	dB(A)	LwA5
blowout	100	51	65	87	95	96	92	89	84	62	dB(A)	LwA6
Casing break out	88	56	52	73	81	84	78	76	78	48	dB(A)	LwA2

## SOUND PRESSURE LEVEL CALCULATOR

Name	Value	Unit
Enveloping surface	Halphsphere	
Distance	3	m

Sound pressure	NR	mid-frequency tape										Unit	Formula symbol
		Σ	63	125	250	500	1000	2000	4000	8000	16000		
suction	79	81	31	45	66	70	79	71	68	65	41	dB(A)	LwA5
blowout	78	83	33	48	70	78	78	75	72	67	45	dB(A)	LwA6
Casing break out	67	70	38	34	56	64	67	60	58	60	30	dB(A)	LwA2



to the product detail page

## GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		WxH <sub>duct</sub>
Pipe connection size (DN)	DN450		DN
Rated voltage (entire device)	400	V	U <sub>rated</sub>
Phases (entire device)	3~		phase
Electrical protection (entire device)	6 A		fuse
Housing material	Aluminium		mat <sub>casing</sub>
Impeller material	Aluminium		mat <sub>impeller</sub>
Weight	16.8	kg	m
Fan type	Diagonal		Fan <sub>type</sub>
Category / Installation situation	B		cat

## MAXIMAL DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Max. power consumption (device)	2320	2320	W	P <sub>ed, max</sub>
Max. operating current (device)	3.56	3.56	A	I <sub>ed, max</sub>
Max. speed	2740	2740	1/min	n <sub>max</sub>
Max. stat. efficiency	64.3	64.3	%	η <sub>es</sub>
Max. fan efficiency	68.6	68.6	%	η <sub>e</sub>
Max. flowrate	9700	9700	m <sup>3</sup> /h	Q <sub>v, max</sub>
Max. stat pressure	1420	1420	Pa	p <sub>st, max</sub>
Max. medium temperature	60	60	°C	T <sub>m, max</sub>
Max. environment temperature	60	60	°C	T <sub>amb, max</sub>
Min. environment temperature	-20	-20	°C	T <sub>amb, min</sub>



to the product detail page

## MOTOR DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Rated frequency (device)		50		f
Motor type		EC		phase
Control type		stepless-controlled		ctrltype
Installation type		IRM (In)		install
Rotation direction		right		rotation
Isolation class		ISO F		ISOclass
Motor-protection		TEC		protectmotor
Protection class		IP55		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 3~		pwrsupmotor
Rated voltage	400		V	U <sub>rated, f1</sub>
Rated current	5		A	I <sub>rated, f1</sub>
Shaft power	2200		W	P <sub>out, f1</sub>
Speed	3000		1/min	n <sub>f1</sub>
Efficiency	88.9		%	η <sub>m, f1</sub>
UL-Certification motor		None		ULcert

## ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2584	1/min	n <sub>opt</sub>
Efficiency level	73.1	%	N
Efficiency category	total		catefficiency
Input power of the motor at the energy efficiency optimum	2.19	kW	P <sub>e, opt</sub>
Overall efficiency	80.1	%	η <sub>ges</sub>
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	879	Pa	p <sub>f, opt</sub>
Flowrate at energy efficiency optimum	6120	m³/h	q <sub>v, opt</sub>

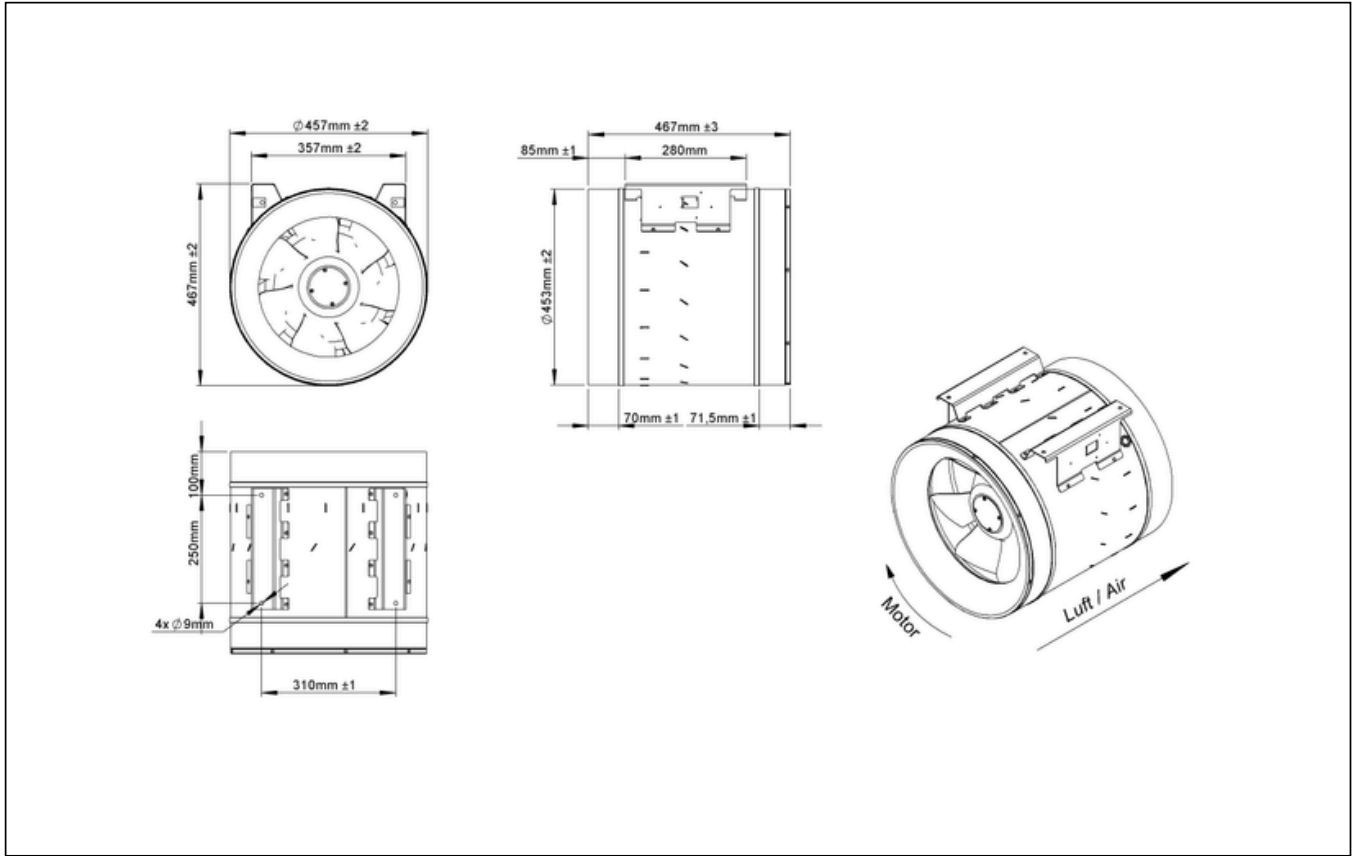


to the product detail page

**EL 450 EC O 01**

164261

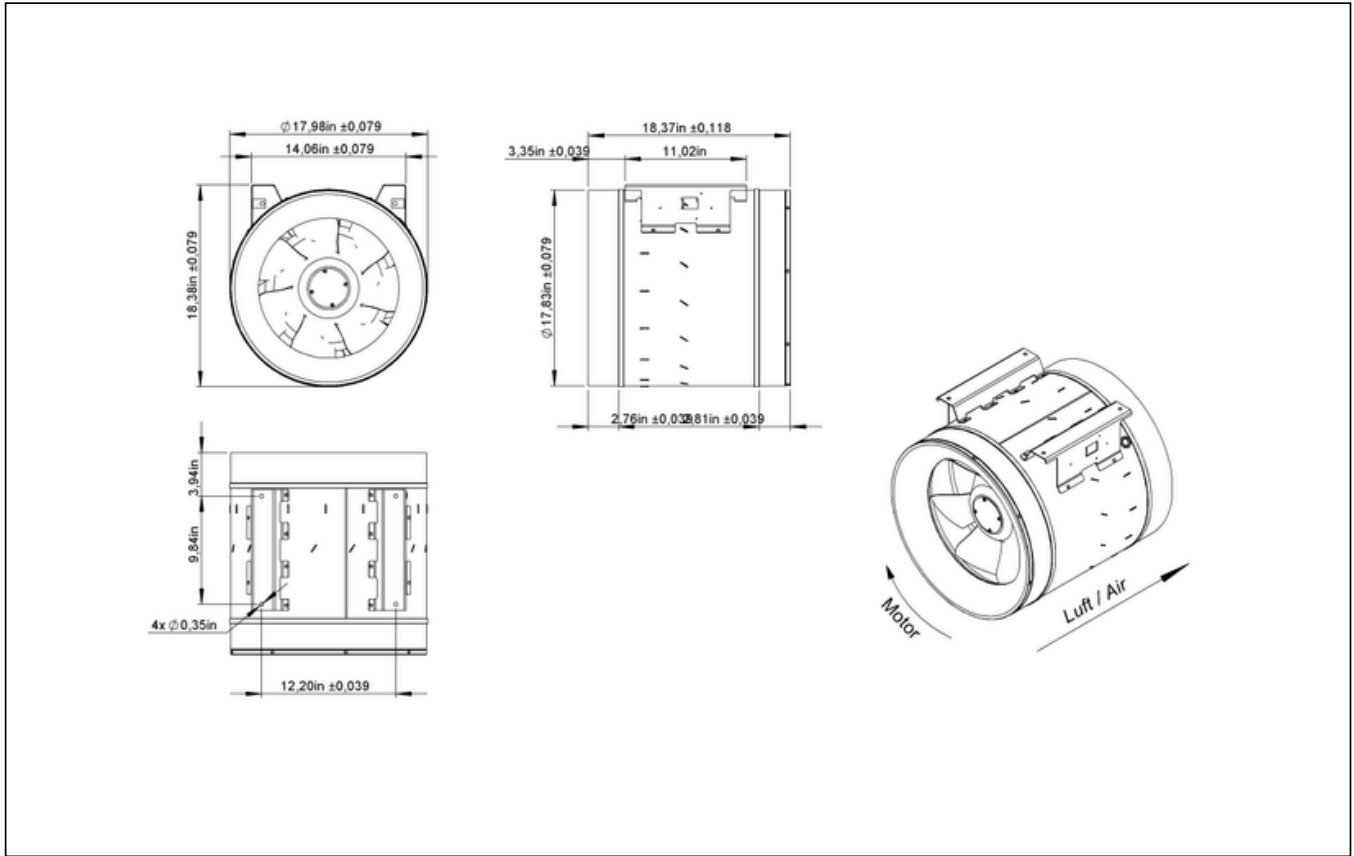
**CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS**



to the product detail page

**EL 450 EC O 01**

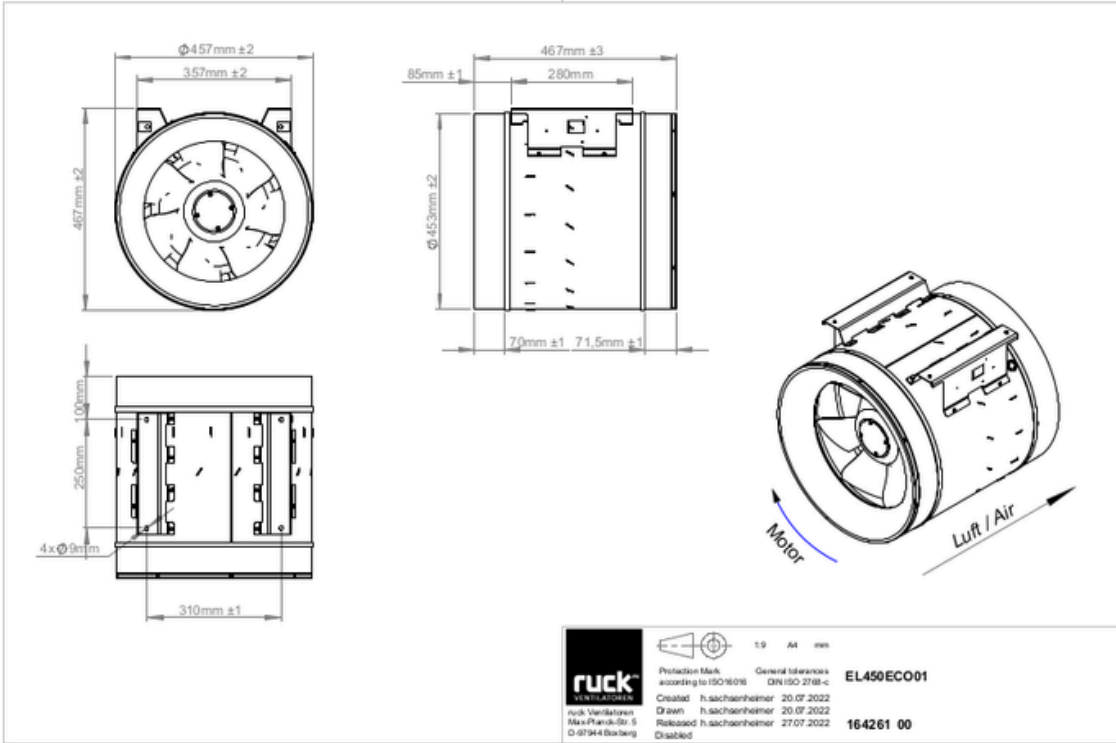
164261



to the product detail page

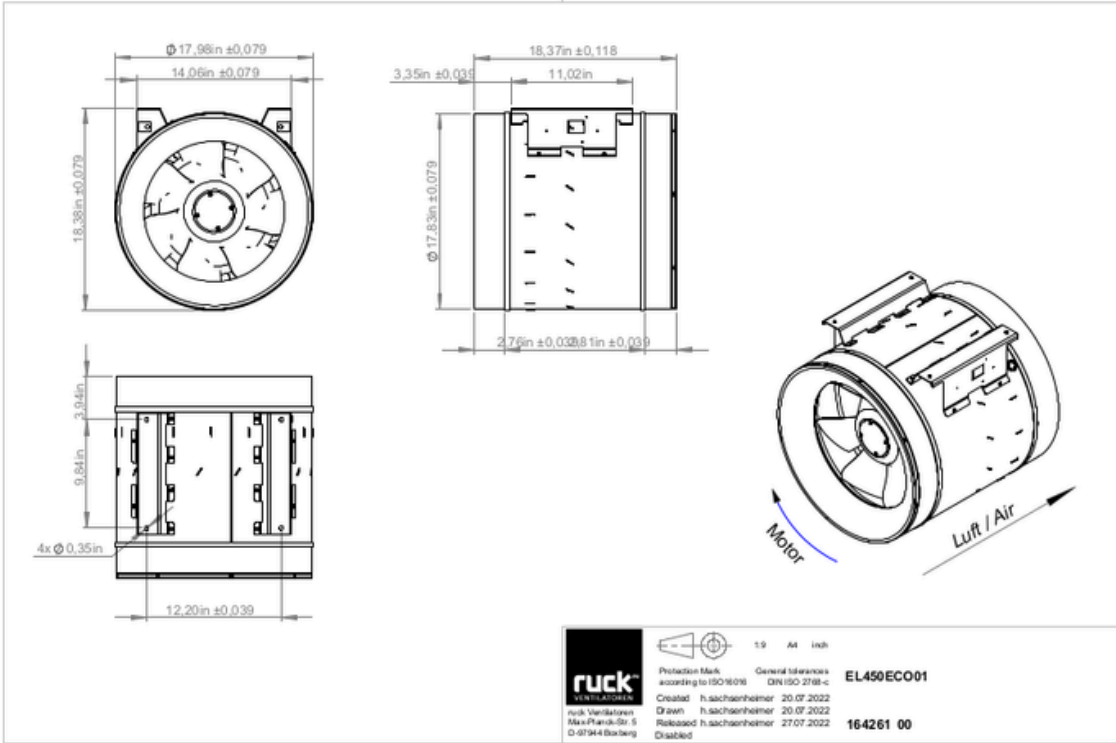
# EL 450 EC O 01

164261



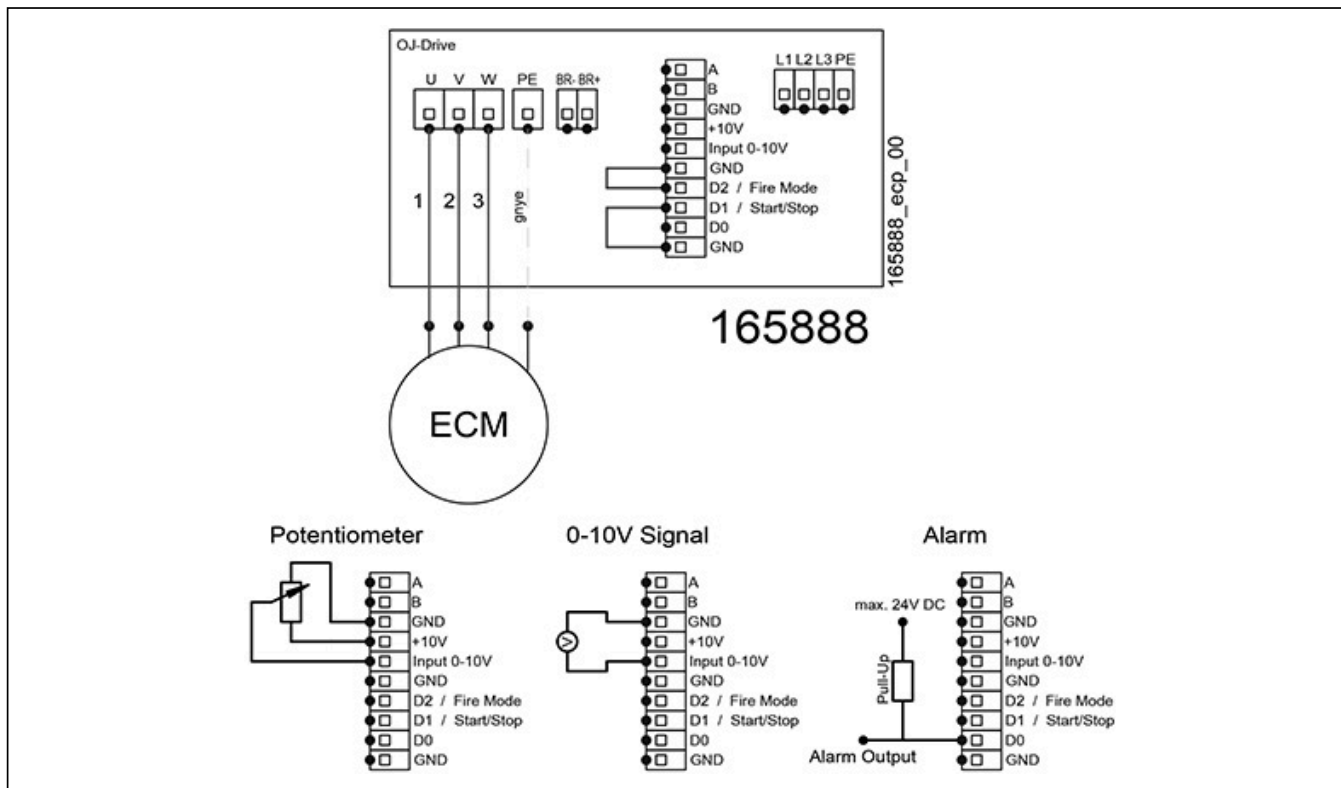
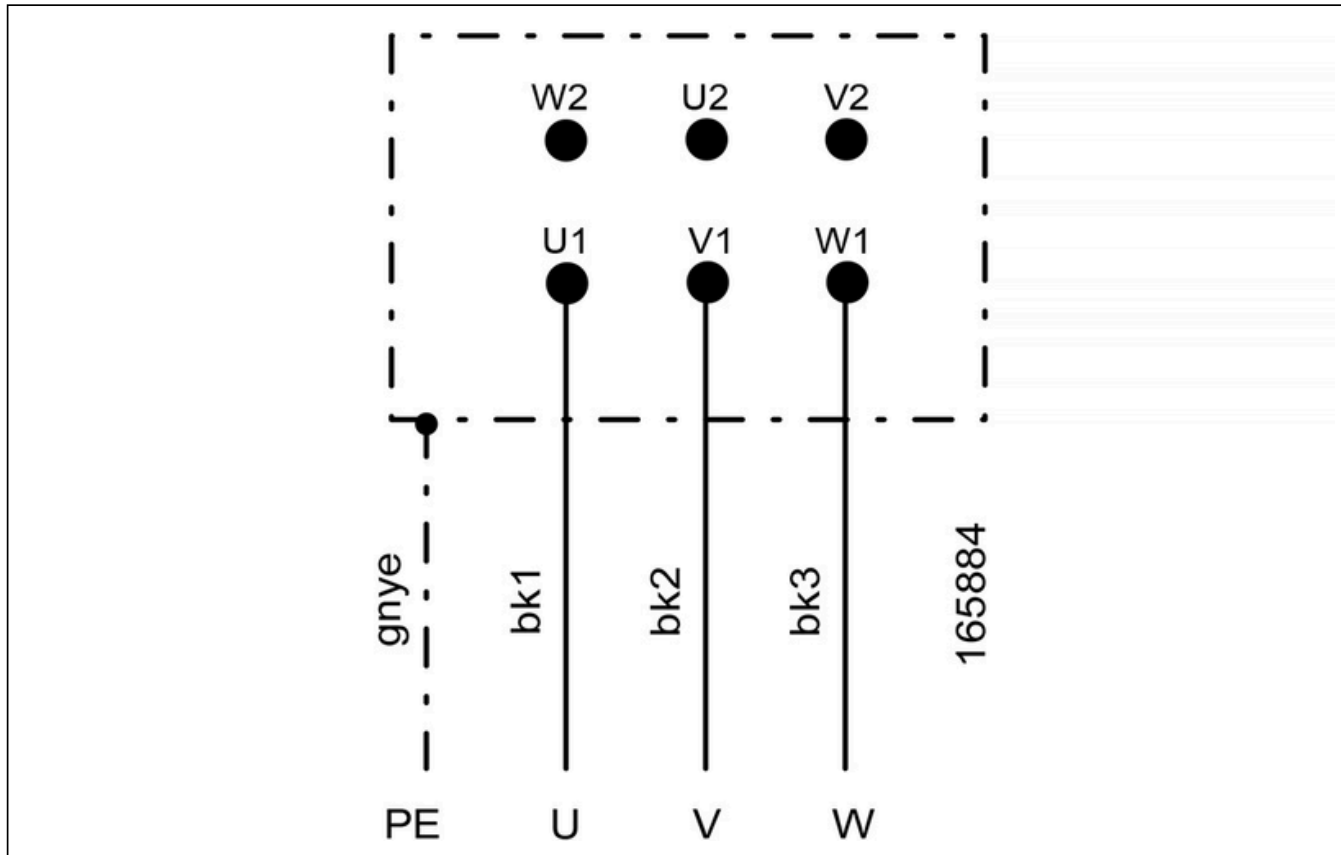
# EL 450 EC O 01

164261



to the product detail page





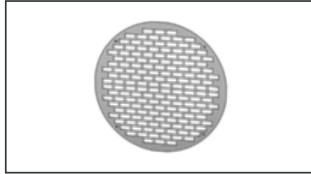
## MECHANICAL ACCESSORIES

VM 450 | 119495



- Fast clamps for sound decoupling and sealing
- Galvanized steel sheet, 5 mm Neopren gasket
- 1 Pack = 2 pieces

SG 450 02 | 119411



- Inlet protection grille for Etaline
- Galvanized steel sheet

## ELECTRICAL ACCESSORIES

GS 03 | 107633



- Device switch
- $U_{max} = 400\text{ V}$ ,  $I_{max} = 25\text{ A}$
- Switching capacity  $400\text{ V } 3\sim = 7,5\text{ kW}$
- Protection class IP 55

MTP 20 | 128146



- Potentiometer 10 kΩ
- Switching contact 1A/250V AC - 2,5A/12V DC
- Max. ambient temperature 50 °C
- VDE

MTP 30 | 143289



- Stepped potentiometer 10 kΩ
- Step 1 + 2 settable 10 % - 100 % Vdc
- Step 3 100 % Vdc
- Supply voltage +10 Vdc

MTP 40 | 147359



- Potentiometer 10 kΩ
- Connection in terminal box
- Max. ambient temperature 50 °C
- PU: 20 pieces

SEN AIR | 148641



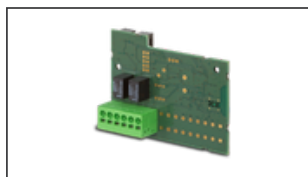
- Airflow and temperature transducer
- Measuring range temperature 0...+50 °C
- With adjustable switching threshold (air speed)
- Measuring range air velocity up to 20 m/s

CON P1000 | 115259



- Constant pressure control
- Actual value display possible via optional control unit
- Output 0-10 V DC + FC enable + setpoint reached
- Pressure setting by means of decade switch

OJ RM 02 | 141890



- Extension board Relais Modul
- For EC controller for alarm and operating message
- Electrical connection through 6 spring terminals (max. 2.5 mm<sup>2</sup>)
- Digital relay outputs: 2 potential-free changeover relays, max. 1 A, 30 V DC / 24 V AC

