

EL 450 EC K 01

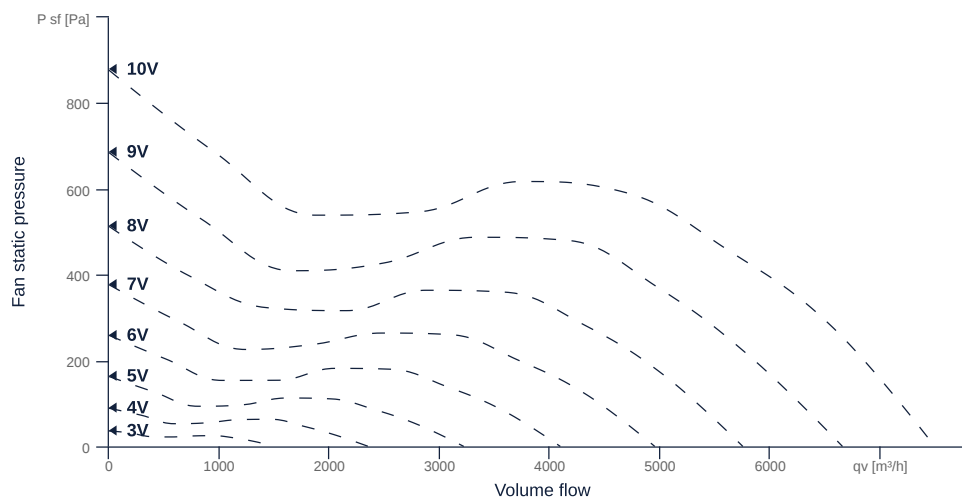
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- High efficiency EC motor, steplessly controllable
- Conveyor temperature up to 60 °C in continuous operation
- Aluminum AlMg3 housing



FAN CURVES

Name	Value	Unit
Volume flow	0	m³/h
Pressure	0	Pa



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GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		WxH _{duct}
Pipe connection size (DN)	DN450		DN
Rated voltage (entire device)	230	V	U _{rated}
Phases (entire device)	1~		phase
Electrical protection (entire device)	10 A		fuse
Housing material	Aluminium		mat _{casing}
Impeller material	Aluminium		mat _{impeller}
IP-protection class (entire device)	IPX4		IP _{compl}
IP-Protection class (terminal box)	IP55		IP _{ebox}
Weight	18.2	kg	m
Fan type	Diagonal		Fan _{type}
Category / Installation situation	B		cat

MAXIMAL DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Max. power consumption (device)	1144	1144	W	P _{ed, max}
Max. operating current (device)	8.2	8.2	A	I _{ed, max}
Max. speed	2100	2100	1/min	n _{max}
Max. stat. efficiency	64.5	64.5	%	η _{es}
Max. fan efficiency	69.2	69.2	%	η _e
Max. flowrate	7490	7490	m³/h	Q _{v, max}
Max. stat pressure	880	880	Pa	p _{st, max}
Max. medium temperature	60	60	°C	T _{m, max}
Max. environment temperature	60	60	°C	T _{amb, max}
Min. environment temperature	-20	-20	°C	T _{amb, min}



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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
Isolation class		ISO F		ISOclass
Motor-protection		TEC		protectmotor
Protection class		IP55		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 1~		pwrsupmotor
Rated voltage	220		V	U _{rated, f1}
Rated voltage (wiring 2)	277		V	U _{rated, f2}
Rated current	8.7		A	I _{rated, f1}
Rated current (wiring 2)	6.9		A	I _{rated, f2}
Shaft power	1100		W	P _{out, f1}
Shaft power (wiring 2)	1100		W	P _{out, f2}
Speed	3000		1/min	n _{f1}
Speed (wiring 2)	3000		1/min	n _{f2}
Efficiency	87.8		%	η _{m, f1}
Efficiency (wiring 2)	87.8		%	η _{m, f2}
Min. temperature	-20		°C	T _{motor, min}
UL-Certification motor		None		ULcert

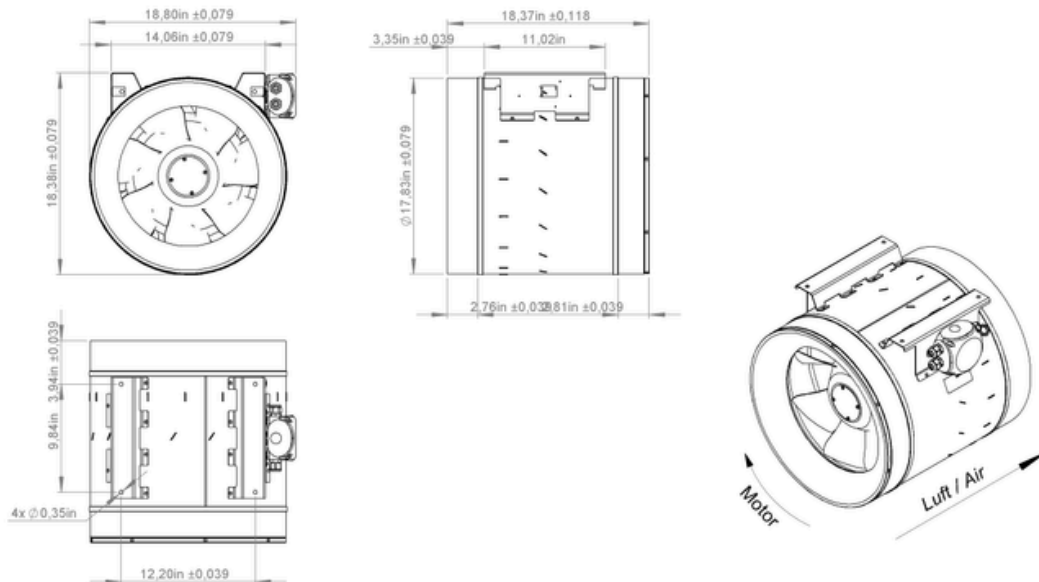
ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2061	1/min	n _{opt}
Efficiency level	74.6	%	N
Efficiency category	total		catefficiency
Input power of the motor at the energy efficiency optimum	1.11	kW	P _{e, opt}
Overall efficiency	84.7	%	η _{ges}
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	566	Pa	p _{f, opt}
Flowrate at energy efficiency optimum	4899	m³/h	Q _{v, opt}



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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS

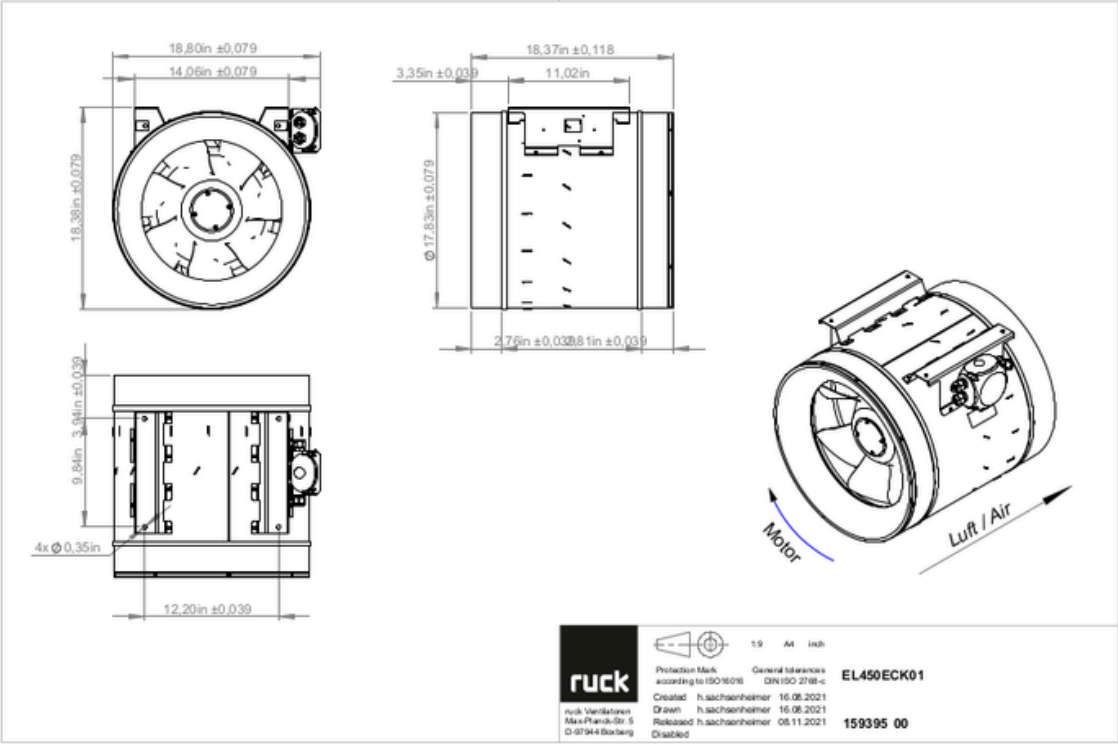


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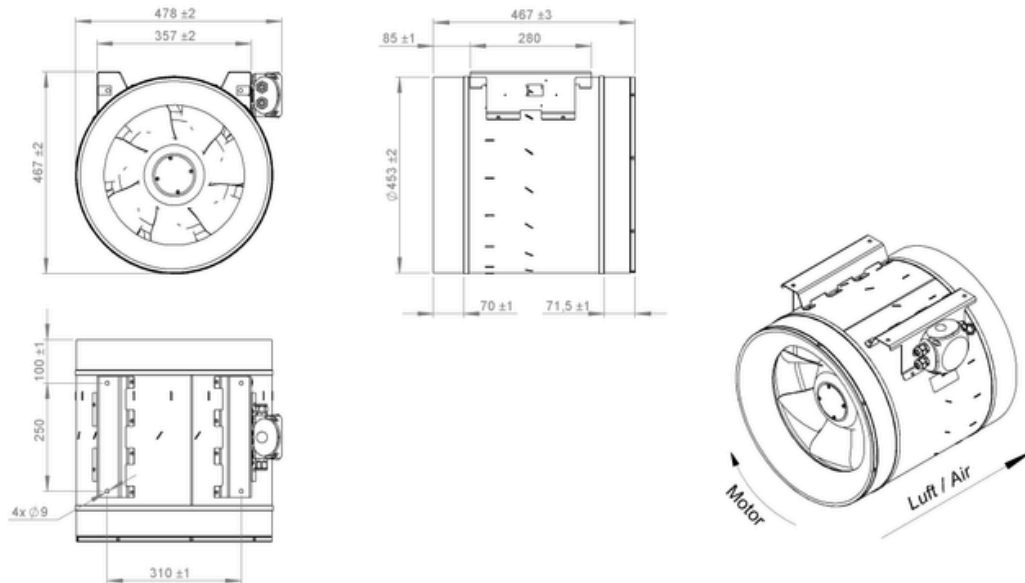


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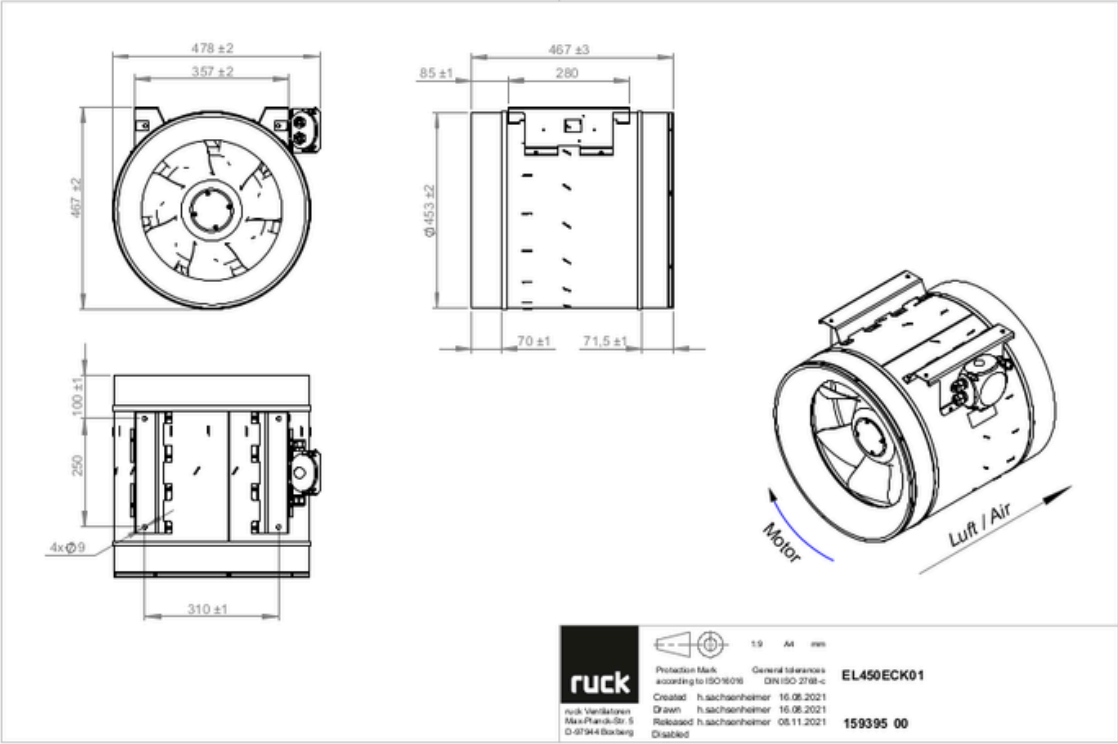
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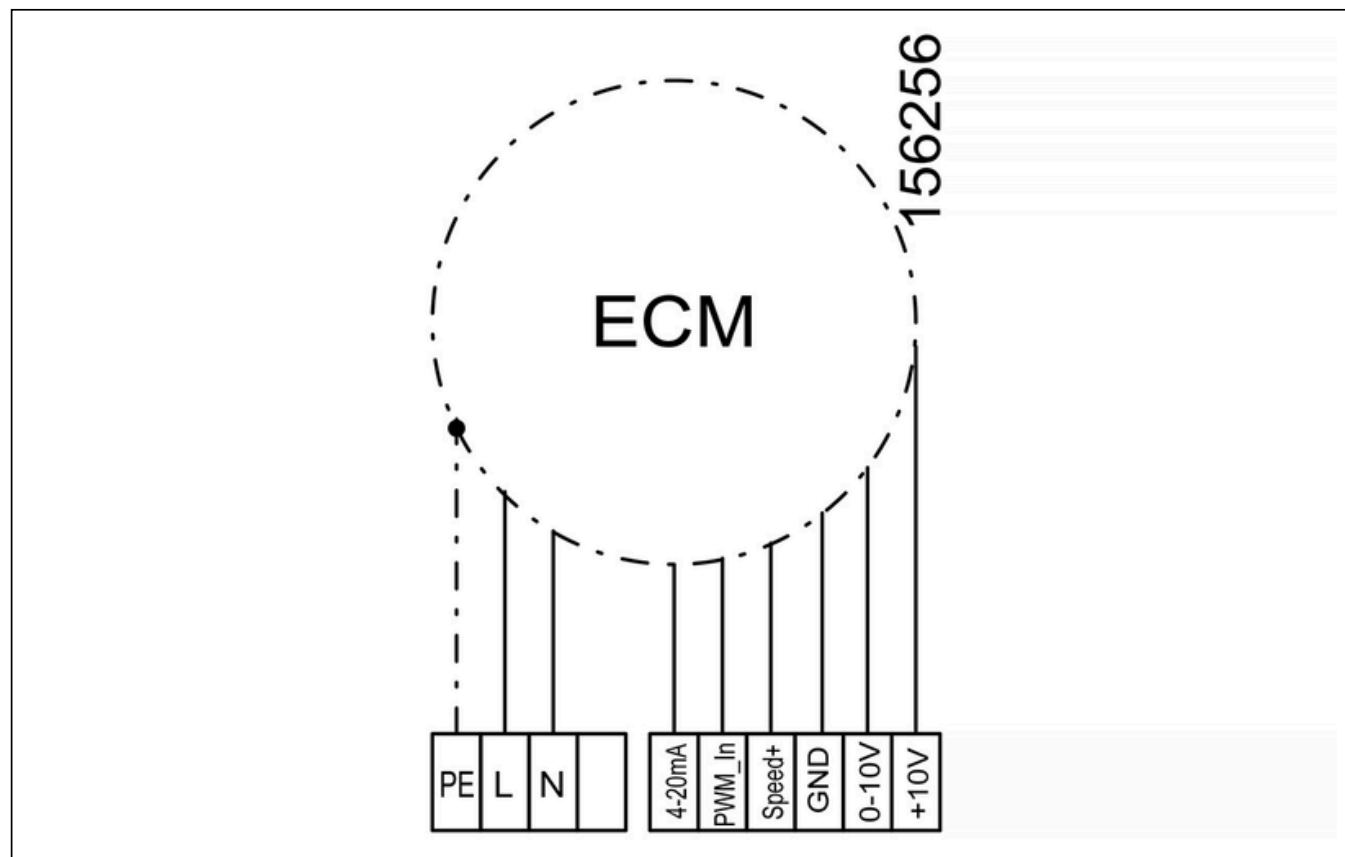
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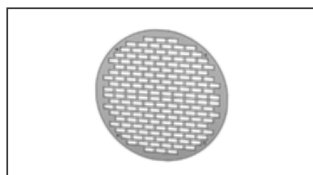
MECHANICAL ACCESSORIES

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

SDS 450 | 169613



- Rigid tube silencer
- Galvanized steel sheet
- Sound insulation packing 50 mm (mineral wool)



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 $10 \text{ k}\Omega$
- Switching contact $1\text{A}/250\text{V AC} - 2,5\text{A}/12\text{V DC}$
- Max. ambient temperature $50 \text{ }^{\circ}\text{C}$
- VDE

MTP 30 | 143289



- Stepped potentiometer $10 \text{ k}\Omega$
- Step 1 + 2 settable $10\% - 100\% \text{ Vdc}$
- Step 3 $100\% \text{ Vdc}$
- Supply voltage $+10 \text{ Vdc}$

MTP 40 | 147359



- Potentiometer $10 \text{ k}\Omega$
- Connection in terminal box
- Max. ambient temperature $50 \text{ }^{\circ}\text{C}$
- PU: 20 pieces

SEN AIR | 148641



- Airflow and temperature transducer
- Measuring range temperature $0...+50 \text{ }^{\circ}\text{C}$
- 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 $0-10 \text{ V DC} + \text{FC enable} + \text{setpoint reached}$
- Pressure setting by means of decade switch

MTP 50 | 168752



- Potentiometer with multifunction output
- $230 \text{ VAC} \pm 10\% / 50-60 \text{ Hz}$
- Selectable output: $1-10 \text{ VDC} / 2-20 \text{ mA} / 10-100\% \text{ PWM}$
- Min. and max. output value adjustable

