

# EL 400 EC K 01

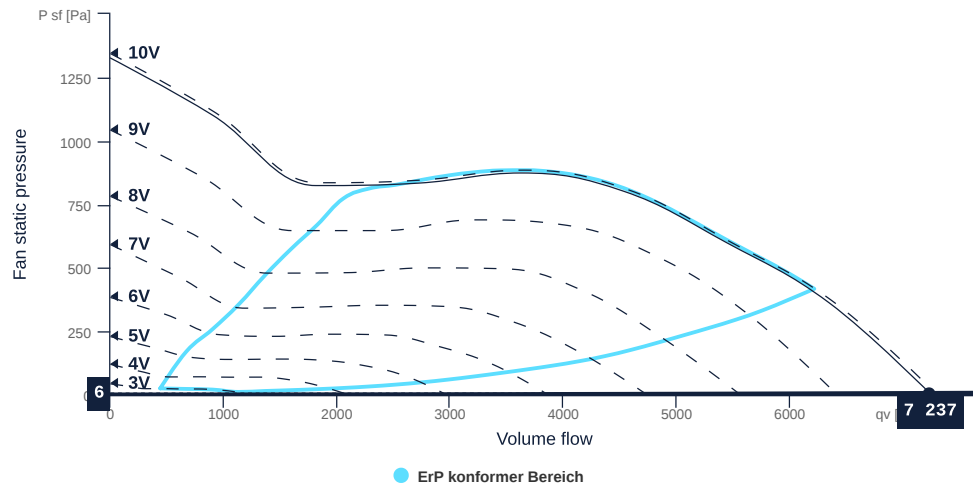
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- High efficiency EC motor, steplessly controllable
- Conveyed medium temperature up to 40 °C in continuous operation
- Housing made of aluminum



## FAN CURVES

Name	Value	Unit
Volume flow	7237	m³/h
Pressure	6	Pa



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## TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volume flow	7237	m <sup>3</sup> /h	qV <sub>calc</sub>
Pressure	6	Pa	psf <sub>calc</sub>
Fan pressure	68	Pa	pf
Fan static pressure	6	Pa	psf
Current consumption Motor	10	A	le
Current consumption Electric	10	A	led
Electrical power consumption	1477	W	PeK
Control voltage	9	V	U <sub>ctrl</sub>
Rotation speed	2986	1/min	N
Total static efficiency	0	%	etaFaPeK
Total efficiency	9	%	etatPeK
SFP (entire device)	735	W/(m <sup>3</sup> /s)	sfp <sub>device</sub>
Sound power level inlet	92	dB(A)	LwA5
Sound power level outlet	97	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	93	50	59	82	84	86	88	85	80	57	dB(A)	LwA5	
blowout	97	56	61	83	92	92	90	87	81	59	dB(A)	LwA6	
Casing break out	88	59	50	71	86	81	75	74	67	44	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	71	75	33	42	64	67	69	70	67	63	39	dB(A)	LwA5	
blowout	74	80	39	43	66	74	75	73	69	63	42	dB(A)	LwA6	
Casing break out	68	70	41	32	53	68	64	58	57	49	26	dB(A)	LwA2	



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## GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		WxH <sub>duct</sub>
Pipe connection size (DN)	DN400		DN
Rated voltage (entire device)	230	V	U <sub>rated</sub>
Phases (entire device)	1~		phase
Electrical protection (entire device)	16 A		fuse
Housing material	Aluminium		mat <sub>casing</sub>
Impeller material	Aluminium		mat <sub>impeller</sub>
IP-protection class (entire device)	IPX4		IP <sub>compl</sub>
IP-Protection class (terminal box)	IP66		IP <sub>ebox</sub>
Weight	16.5	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)	1637	1637	W	P <sub>ed, max</sub>
Max. operating current (device)	11.81	11.81	A	I <sub>ed, max</sub>
Max. speed	3010	3010	1/min	n <sub>max</sub>
Max. stat. efficiency	61.5	61.5	%	η <sub>es</sub>
Max. fan efficiency	63.6	63.6	%	η <sub>e</sub>
Max. flowrate	7300	7300	m <sup>3</sup> /h	Q <sub>v, max</sub>
Max. stat pressure	1340	1340	Pa	p <sub>st, max</sub>
Max. medium temperature	40	40	°C	T <sub>m, max</sub>
Max. environment temperature	40	40	°C	T <sub>amb, max</sub>
Min. environment temperature	-20	-20	°C	T <sub>amb, min</sub>



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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 <sub>rated, f1</sub>
Rated voltage (wiring 2)	277		V	U <sub>rated, f2</sub>
Rated current	8.7		A	I <sub>rated, f1</sub>
Rated current (wiring 2)	6.9		A	I <sub>rated, f2</sub>
Shaft power	1100		W	P <sub>out, f1</sub>
Shaft power (wiring 2)	1100		W	P <sub>out, f2</sub>
Speed	3000		1/min	n <sub>f1</sub>
Speed (wiring 2)	3000		1/min	n <sub>f2</sub>
Efficiency	87.8		%	η <sub>m, f1</sub>
Efficiency (wiring 2)	87.8		%	η <sub>m, f2</sub>
Min. temperature	-20		°C	T <sub>motor, min</sub>
UL-Certification motor			None	ULcert

## ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2909	1/min	n <sub>opt</sub>
Efficiency level	68.8	%	N
Efficiency category	total		cat <sub>efficiency</sub>
Input power of the motor at the energy efficiency optimum	1.59	kW	P <sub>e, opt</sub>
Overall efficiency	77.2	%	η <sub>ges</sub>
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	823	Pa	p <sub>f, opt</sub>
Flowrate at energy efficiency optimum	4606	m³/h	q <sub>v, opt</sub>

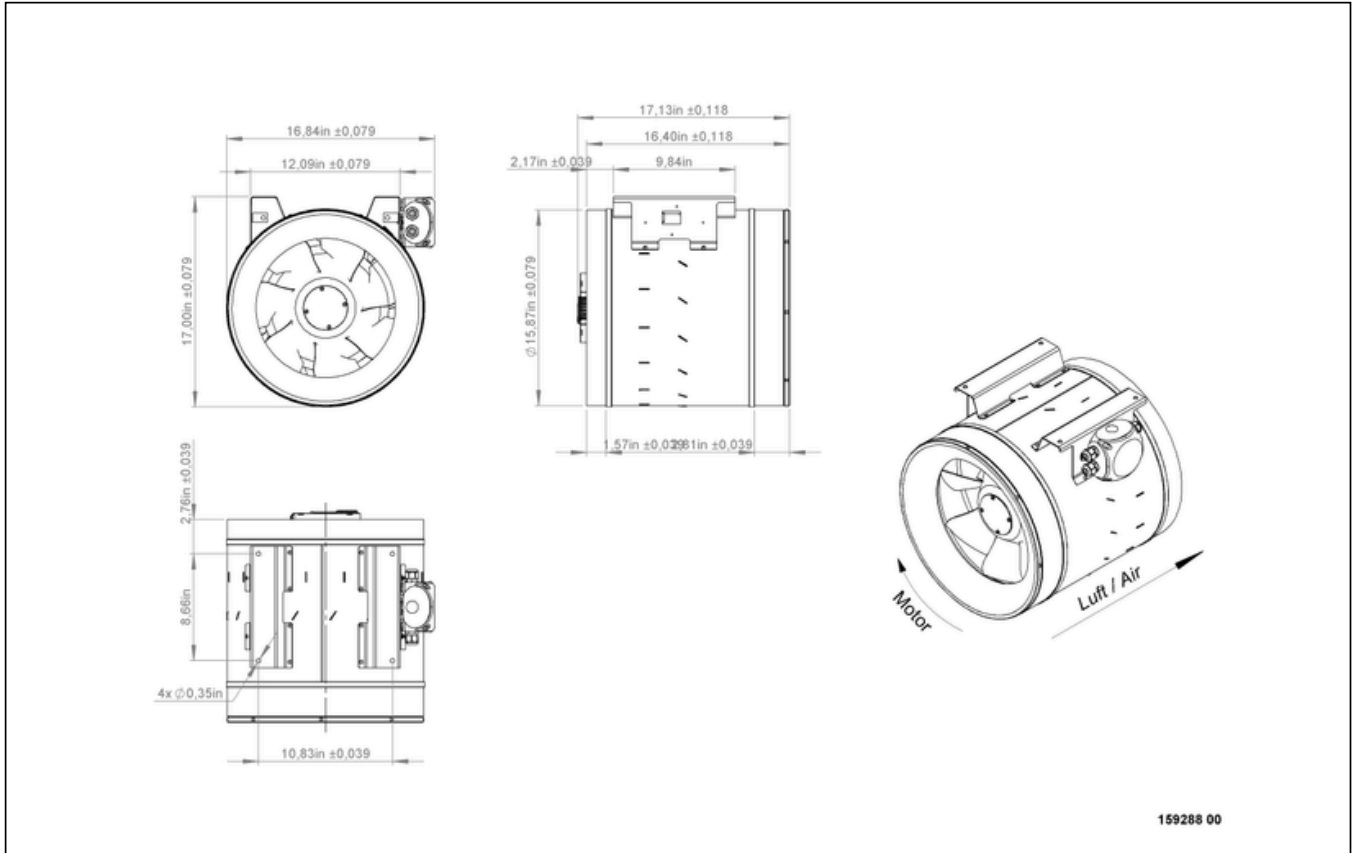


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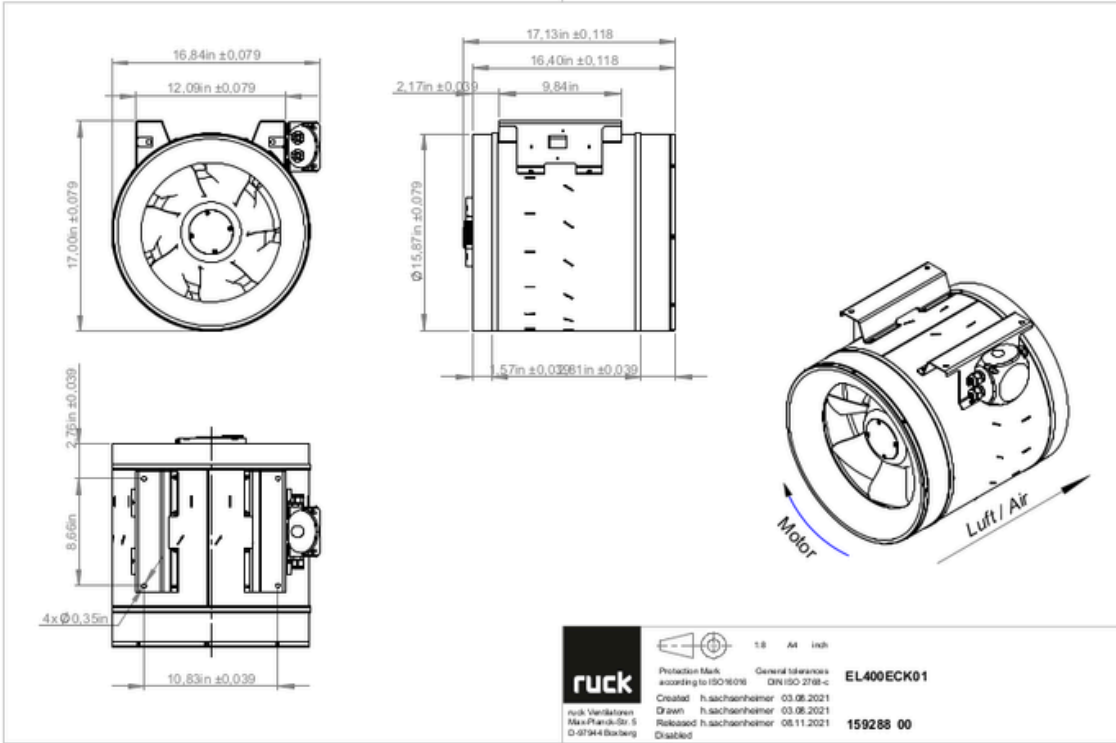
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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



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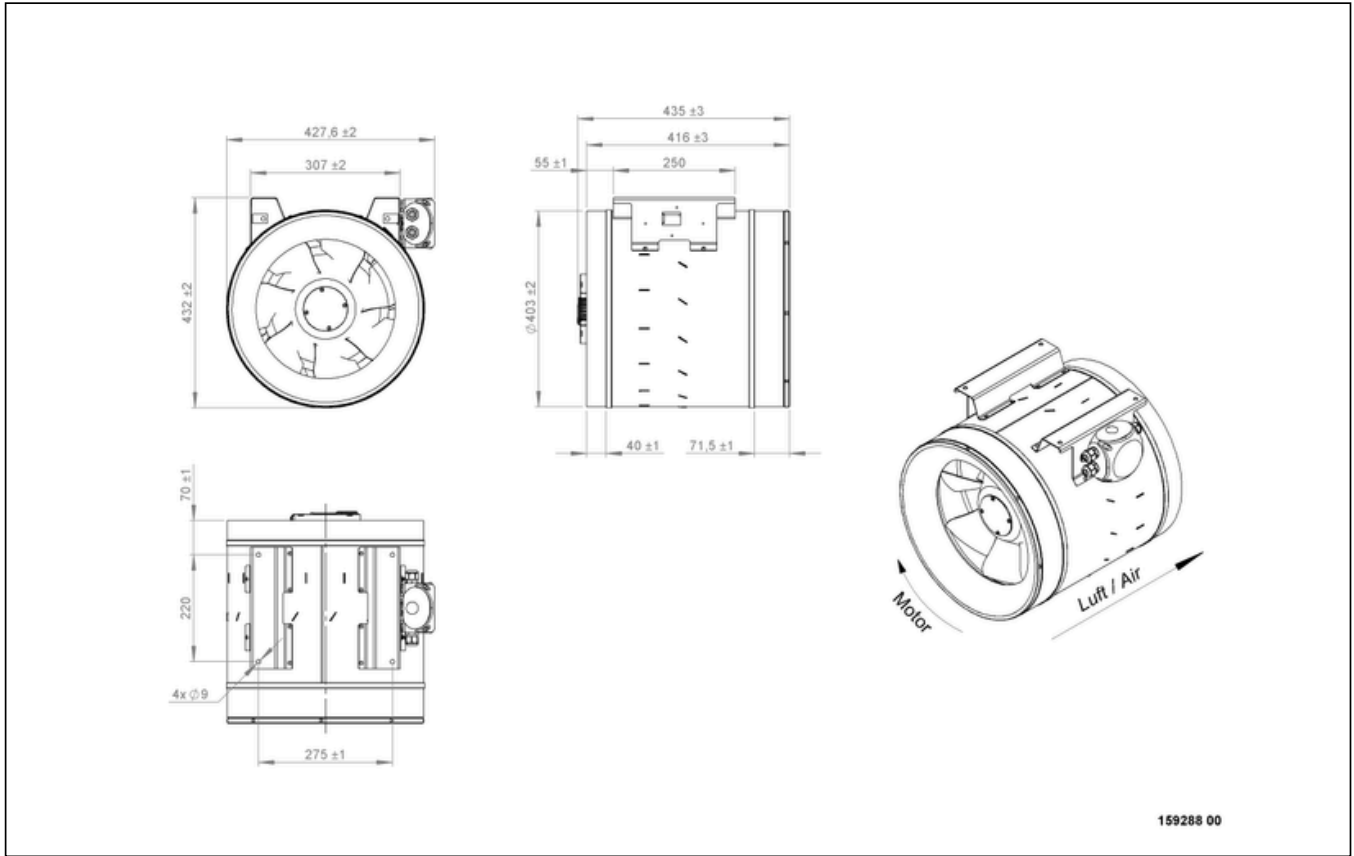
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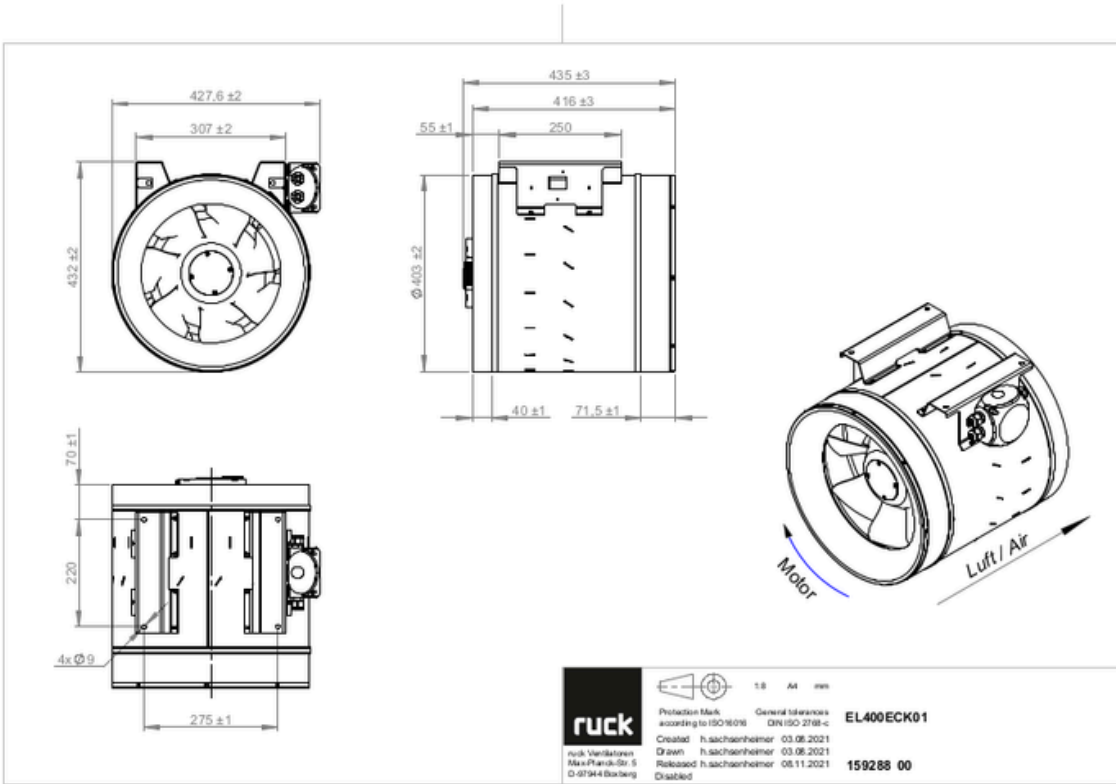
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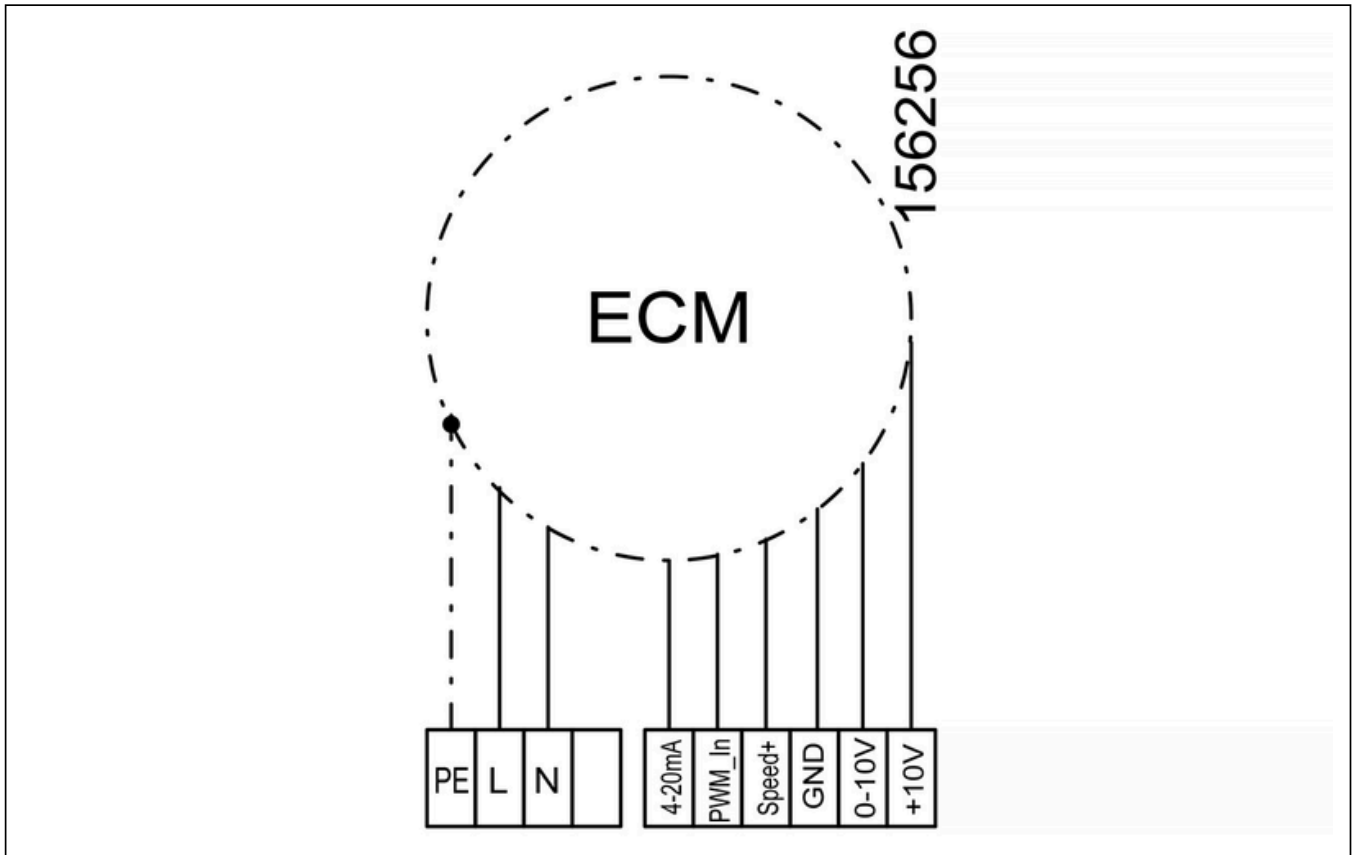
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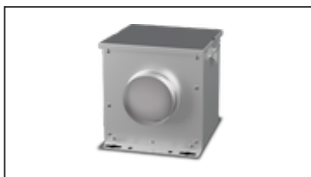
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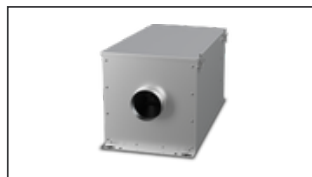
## MECHANICAL ACCESSORIES

**FV 400 | 112836**



- Air filter box with mat filter ISO Coarse 45 % (G3)
- Toggle-type fastener

**FT 400 | 112848**



- Air filter box for pocket filter
- Toggle-type fastener
- Galvanized steel sheet housing
- Without filter

**FTW 400 | 112857**



- Air filter box with pocket filter M5
- Integrated warm water heating coil
- Galvanized steel sheet housing
- Toggle-type fastener

**RSK 400 | 102691**



- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps

**RSK 400D | 113490**



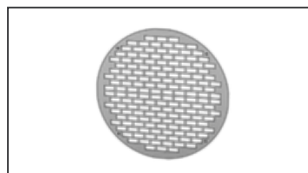
- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps
- Integrated gasket

**VM 400 | 102654**



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

**SG 400 02 | 123949**



- Inlet protection grille for Etaline
- Galvanized steel sheet



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## ELECTRICAL ACCESSORIES

GS 02 | 105386



- Isolator switch
- $U_{max} = 400 \text{ V}$ , 50/60 Hz
- Switching capacity 400 V 3~ = 5,5 kW
- $I_{max} = 16 \text{ A}$

MTP 20 | 128146



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

MTP 30 | 143289



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

MTP 40 | 147359



- Potentiometer 10 k $\Omega$
- 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



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