

EM 250 E2M 01

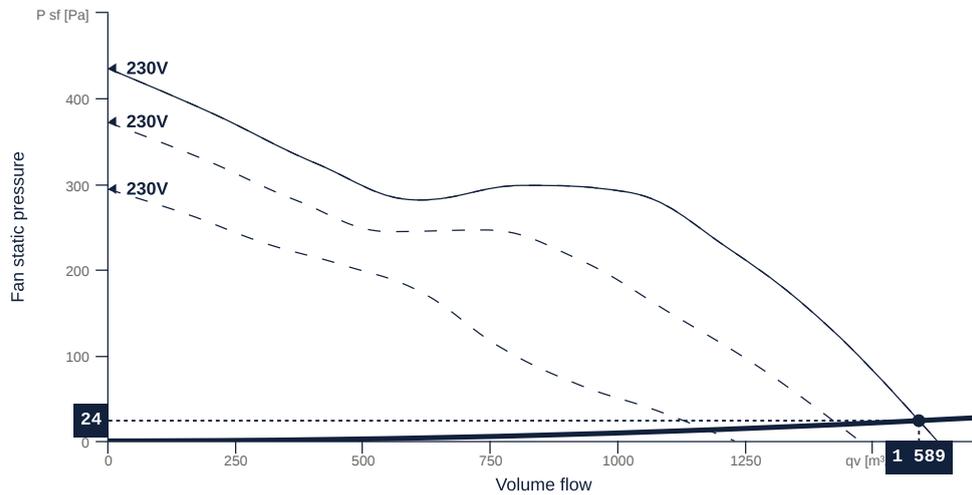
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- Housing made of impact-resistant, reinforced polypropylene
- Robust AC motor, 3-steps controllable
- Conveyed medium temperature up to 50 °C in continuous operation
- The benchmark for efficiency since 2012



FAN CURVES

Name	Value	Unit
Volume flow	1589.49	m³/h
Pressure	23.69	Pa



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TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volume flow	1589	m³/h	QV _{calc}
Pressure	23	Pa	psf _{calc}
Fan pressure	72	Pa	pf
Fan static pressure	23	Pa	psf
Current consumption Motor	0.7	A	I _e
Electrical power consumption	153	W	P _{ek}
Step	3		stage
Rotation speed	2847	1/min	N
Total static efficiency	6	%	etaFaPeK
Total efficiency	20	%	etatPeK
SFP (entire device)	347	W/(m³/s)	sfp _{device}
Sound power level inlet	74	dB(A)	LwA5
Sound power level outlet	77	dB(A)	LwA6
Sound power level housing radiation	58	dB(A)	LwA2

SOUND DATA

Sound power	mid-frequency tape										Unit	Formula symbol
	Σ	63	125	250	500	1000	2000	4000	8000	16000		
suction	75	34	46	61	69	70	68	67	60	39	dB(A)	LwA5
blowout	77	36	47	63	69	73	72	67	62	40	dB(A)	LwA6
Casing break out	59	43	43	54	50	54	51	45	38	13	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	53	57	16	29	43	52	52	50	49	43	22	dB(A)	LwA5
blowout	56	60	18	29	46	52	56	55	50	44	22	dB(A)	LwA6
Casing break out	36	41	26	26	36	32	36	34	28	21	0	dB(A)	LwA2



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GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		$W \times H_{duct}$
Pipe connection size (DN)	DN250		DN
Rated voltage (entire device)	230	v	U_{rated}
Phases (entire device)	1~		phase
Electrical protection (entire device)	6 A		fuse
Housing material	Plastic		mat_{casing}
Impeller material	Plastic		$mat_{impeller}$
IP-protection class (entire device)	IPX4		IP_{compl}
IP-Protection class (terminal box)	IP44		IP_{ebox}
Weight	5.88	kg	m
Fan type	Diagonal		Fan_{type}
Category / Installation situation	A		cat

MAXIMAL DATA

Name	Value	Unit	Formula symbol
Max. power consumption (device)	170	w	$P_{ed, max}$
Max. operating current (device)	0.81	A	$I_{ed, max}$
Max. speed	2880	rpm	n_{max}
Max. stat. efficiency	46.6	p	η_{es}
Max. fan efficiency	49.5	p	η_e
Max. flowrate	1625	CmH	$Q_{v, max}$
Max. stat pressure	435	Pa	$\rho_{sf, max}$
Max. medium temperature	50	°C	T_m, max
Max. environment temperature	50	°C	$T_{amb, max}$
Min. environment temperature	-25	°C	$T_{amb, min}$
Min. voltage	230	v	U_{min}
Stall current	2.3	A	I_{LRA}



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MOTOR DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Rated frequency (device)		50		f
Motor type		AC 1~		phase
Installation type		IRM (In)		install
Rotation direction		right		rotation
Isolation class		ISO F		ISOclass
Motor-protection		TAI		protectmotor
Protection class		IP00		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 1~		pwrsupmotor
Capacity capacitor		5	µF	Ccond
Voltage capacitor		450	v	VUcond
Number of poles (1)		2.000000		num polesw1
Rated voltage	230		v	U _{rated, f1}
Rated current	0.75		A	I _{rated, f1}
Nominal power	100		w	P _a
UL-Certification motor		None		ULcert

ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2822	rpm	n _{opt}
Efficiency level	46	p	N
Efficiency category	statisch		cat _{efficiency}
Input power of the motor at the energy efficiency optimum	0.17	kw	P _{e, opt}
Overall efficiency	64.6	p	η _{ges}
Measurement category	A		meas cat
Fan pressure at energy efficiency optimum	278	Pa	p _{f, opt}
Flowrate at energy efficiency optimum	1066	CmH	Q _{v, opt}

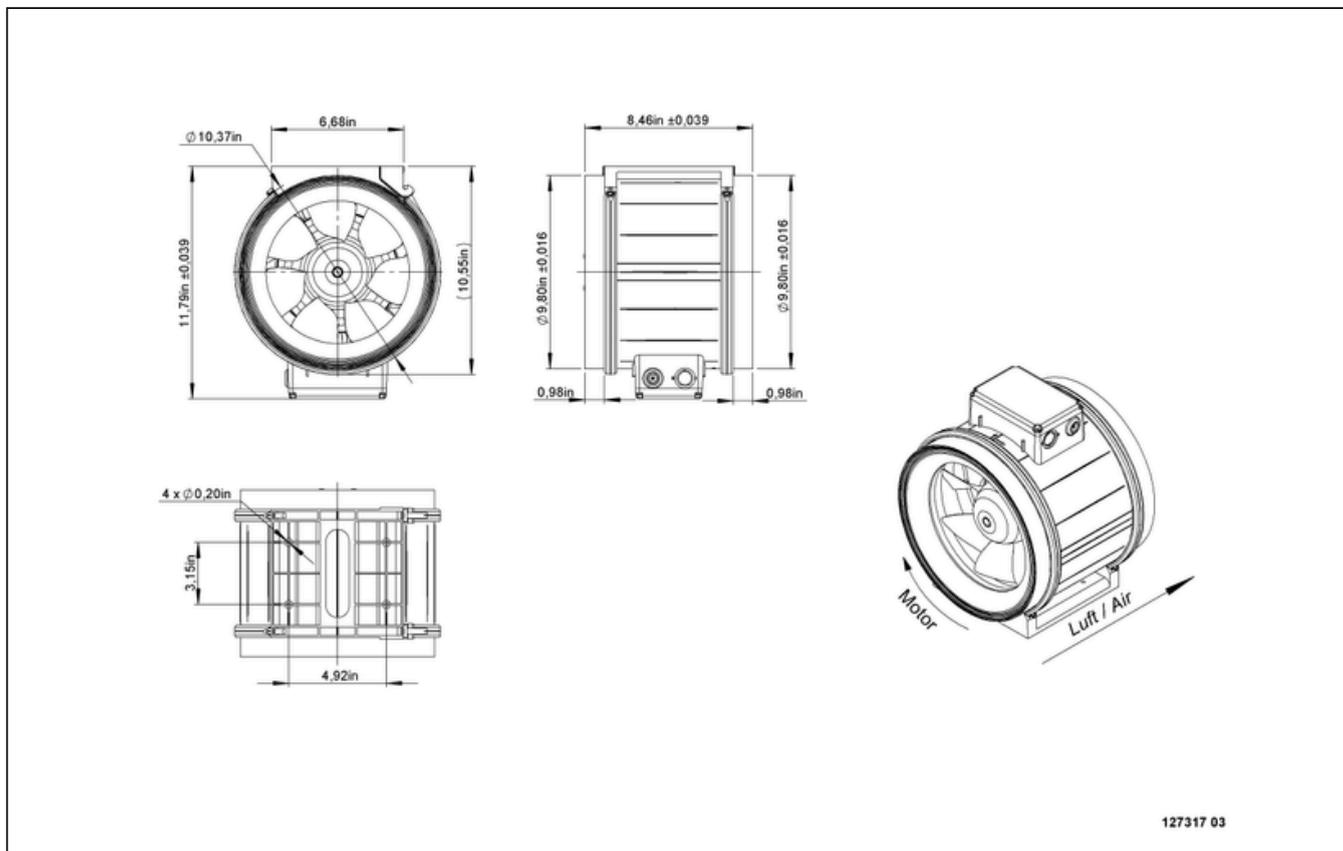


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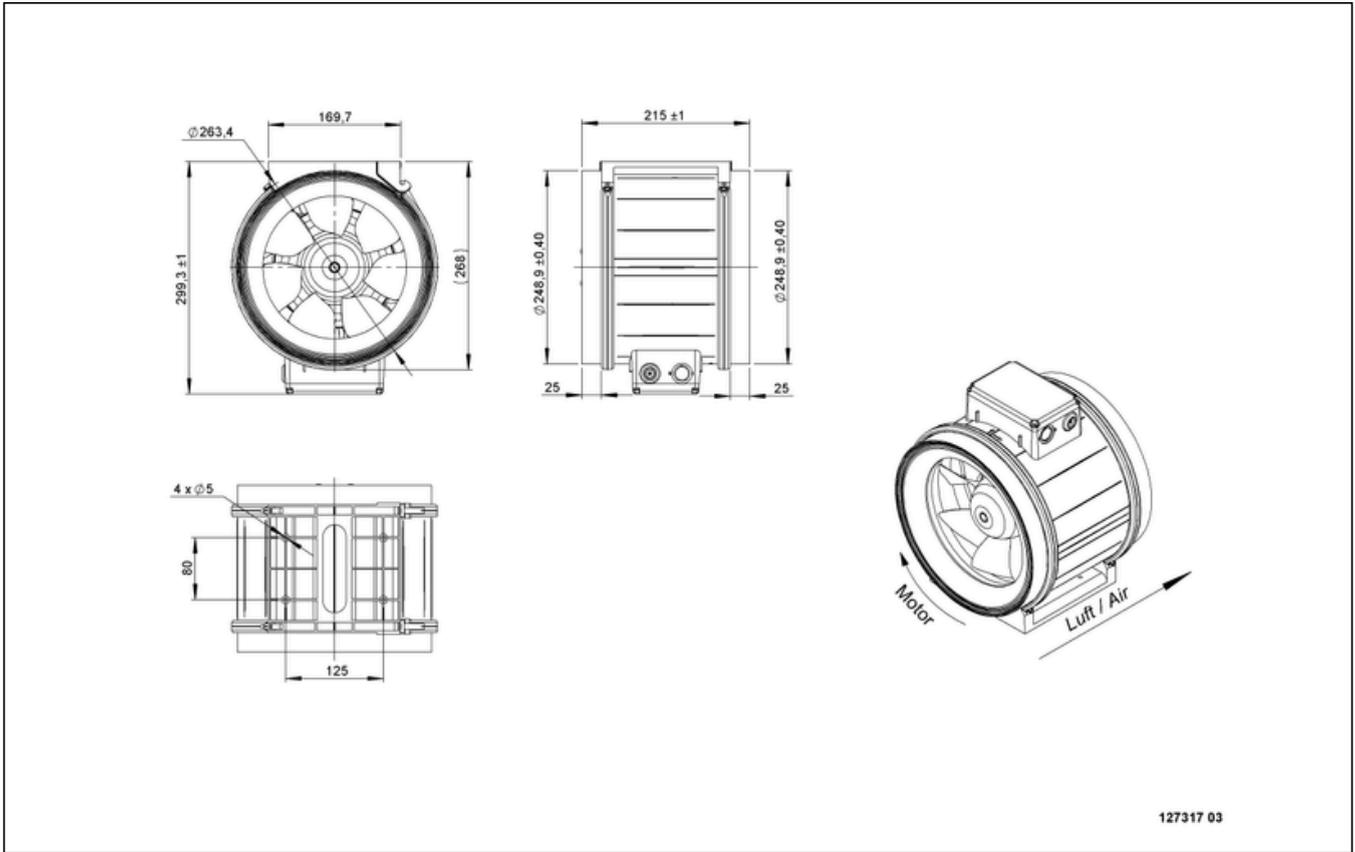
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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



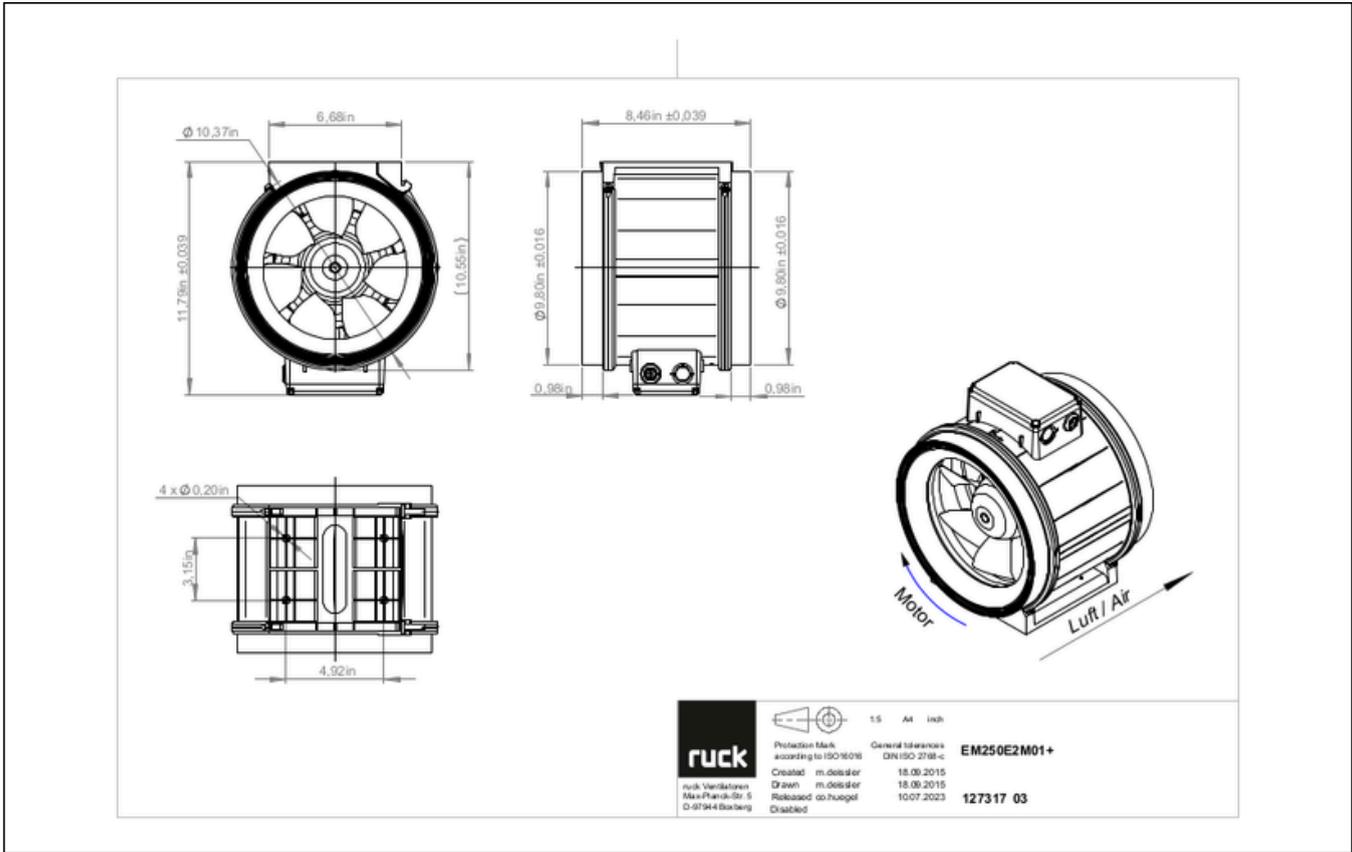
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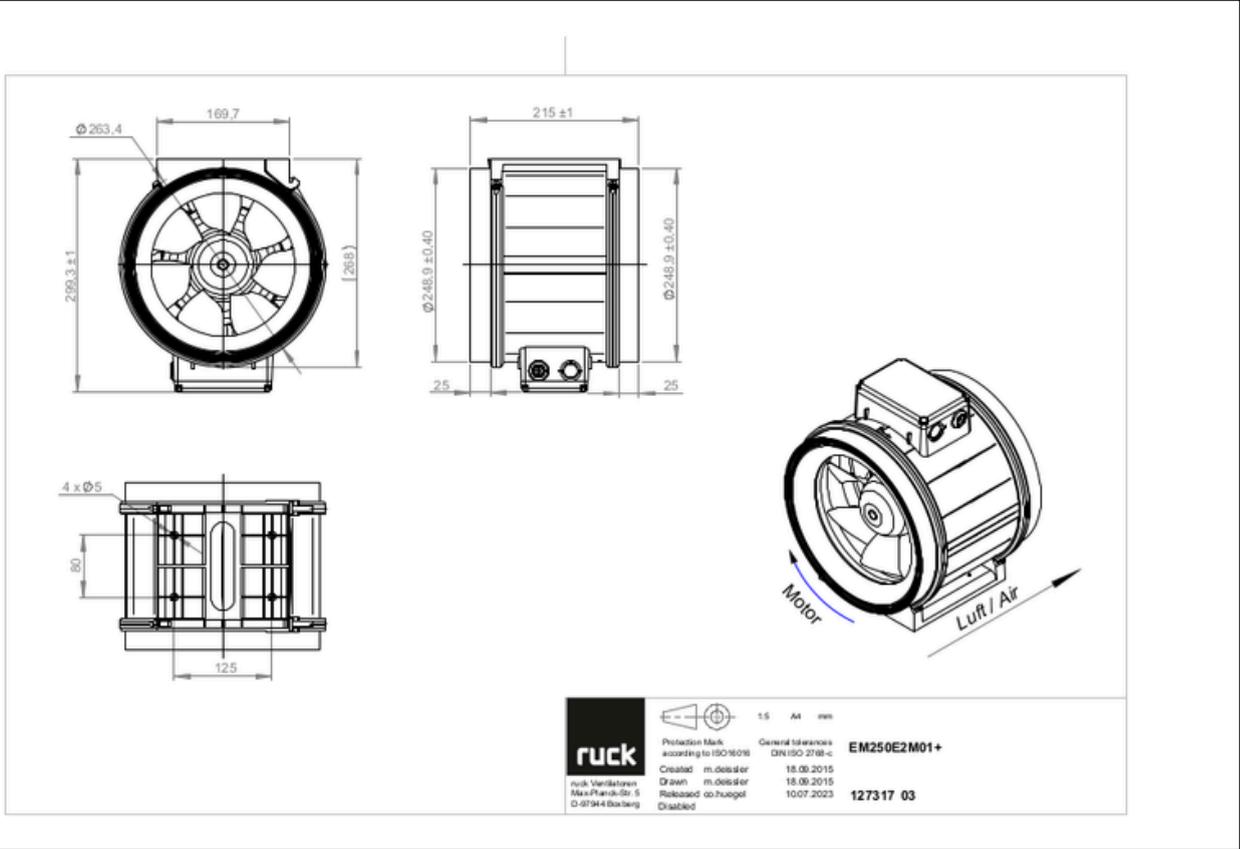
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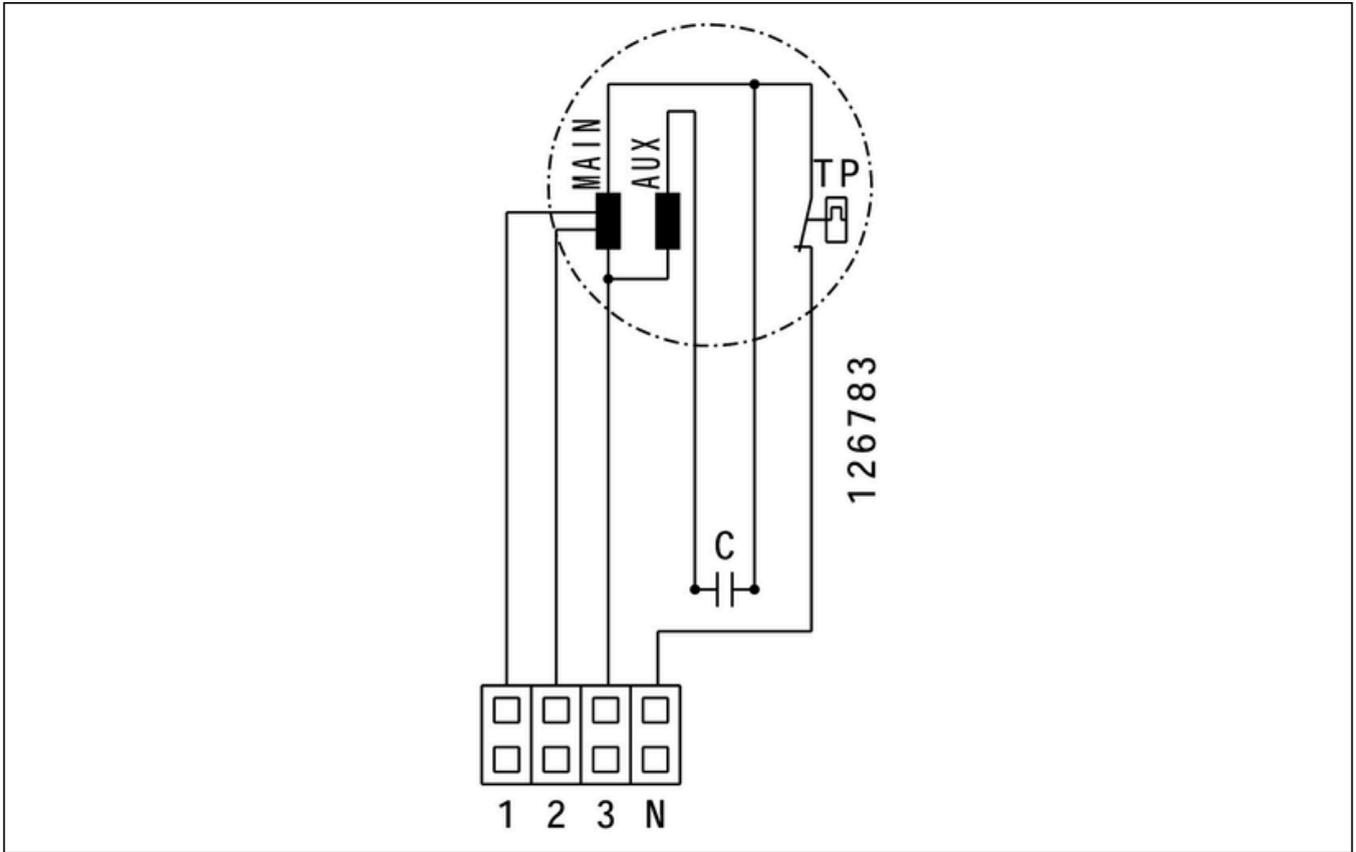
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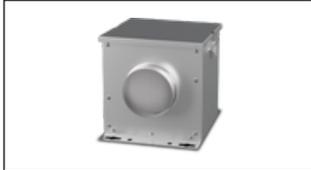
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MECHANICAL ACCESSORIES

FV 250 | 112833



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

FT 250 | 112845



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

FTW 250 | 112854



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

RSK 250D | 113488



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

VM 250 | 102651



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

KWR 250 02 | 124066



- Cold water cooler, uninsulated
- Version left
- Connection ND 250
- Galvanized steel sheet with condensate tray

RSK 250 | 102686



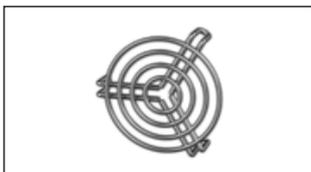
- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps

KWR 250 01 | 124065



- Cold water cooler, uninsulated
- Version right
- Connection ND 250
- Galvanized steel sheet with condensate tray

SG 250 01 | 169588



- Protection grille for tube connection
- Galvanized wire

SDS 250 | 169607



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

SDF 250 | 169644



- Flexible tube silencer
- Galvanized steel sheet
- Sound insulation packing 50 mm

ELECTRICAL ACCESSORIES

GS 03 | 107633



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

MTS 10 | 128145



- 3-step switch
- Max. ambient temperature $50\text{ }^{\circ}\text{C}$
- Surface and flush mounting
- IP 44



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