

AL 1000 D4 04

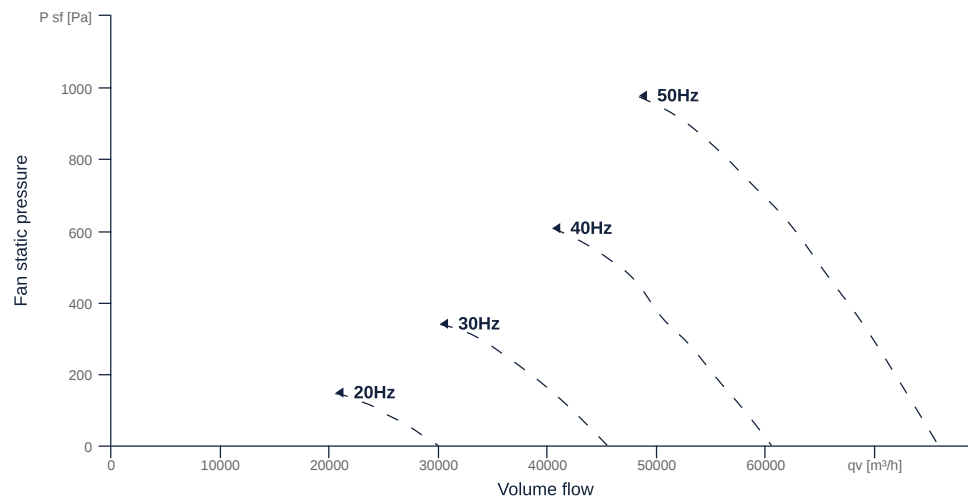
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- Innovative, high-efficiency axial fan
- Optimally tuned, CFD-optimized aerodynamics
- Housing weight optimized, powder coated
- Efficient IE3 motor, frequency controllable
- Conveyed medium temperature up to 60 °C in continuous operation
- Exceeds current ErP regulation by 15 - 20%



FAN CURVES

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



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ruck

GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		$W \times H_{\text{duct}}$
Pipe connection size (DN)	DN1000		DN
Rated voltage (entire device)	400	V	U_{rated}
Phases (entire device)	3~		phase
Electrical protection (entire device)	50 A		fuse
Housing material	Coated steel		matcasing
Impeller material	Coated steel		matimpeller
IP-protection class (entire device)	IPX4		IP_{compl}
IP-Protection class (terminal box)	IP55		IP_{ebox}
Weight	313	kg	m
Fan type	Axial		Fan _{type}
Category / Installation situation	B		cat

MAXIMAL DATA

Name	Value	Unit	Formula symbol
Max. power consumption (device)	22034	W	$P_{\text{ed, max}}$
Max. operating current (device)	41.1	A	$I_{\text{ed, max}}$
Max. speed	1490	1/min	n_{max}
Max. stat. efficiency	58.1	%	η_{es}
Max. fan efficiency	72.4	%	η_{e}
Max. flowrate	75810	m ³ /h	$q_{\text{v, max}}$
Max. stat pressure	980	Pa	$p_{\text{sf, max}}$
Max. medium temperature	60	°C	$T_{\text{m, max}}$
Max. environment temperature	60	°C	$T_{\text{amb, max}}$
Min. environment temperature	-20	°C	$T_{\text{amb, min}}$



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MOTOR DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Rated frequency (device)		50		f
Motor type		AC 3~		phase
Control type		frequency-controlled		ctrltype
Installation type		IRM (In)		install
Isolation class		ISO F		ISOclass
Protection class		IP55		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 3~		pwrSUPmotor
Number of poles (1)		4.000000		num polesw1
Connection	Δ			wiringw1
Connection (wiring 2)	Y			wiringw2
Rated voltage	400		V	U _{rated, f1}
Rated voltage (wiring 2)	690		V	U _{rated, f2}
Rated current	41.6		A	I _{rated, f1}
Rated current (wiring 2)	24.1		A	I _{rated, f2}
Shaft power	22000		W	P _{out, f1}
Shaft power (wiring 2)	22000		W	P _{out, f2}
Speed	1470		1/min	n _{f1}
Speed (wiring 2)	1470		1/min	n _{f2}
Starting current	354		A	I _{start, f1}
Starting current (wiring 2)	205		A	I _{start, f2}
Efficiency	93		%	η _{m, f1}
Efficiency (wiring 2)	93		%	η _{m, f2}
Efficiency class	IE3			IE _{motor}
Min. temperature	-20		°C	T _{motor, min}
Cos Phi	0.820000	0.000000		cos φ
UL-Certification motor		UL recognized		ULcert

ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	1478	1/min	n _{opt}
Efficiency level	72.5	%	N
Efficiency category	total		cat _{efficiency}
Input power of the motor at the energy efficiency optimum	22.22	kW	P _{e, opt}
Overall efficiency	71.9	%	η _{ges}
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	988	Pa	p _{f, opt}
Flowrate at energy efficiency optimum	58675	m³/h	Q _{v, opt}

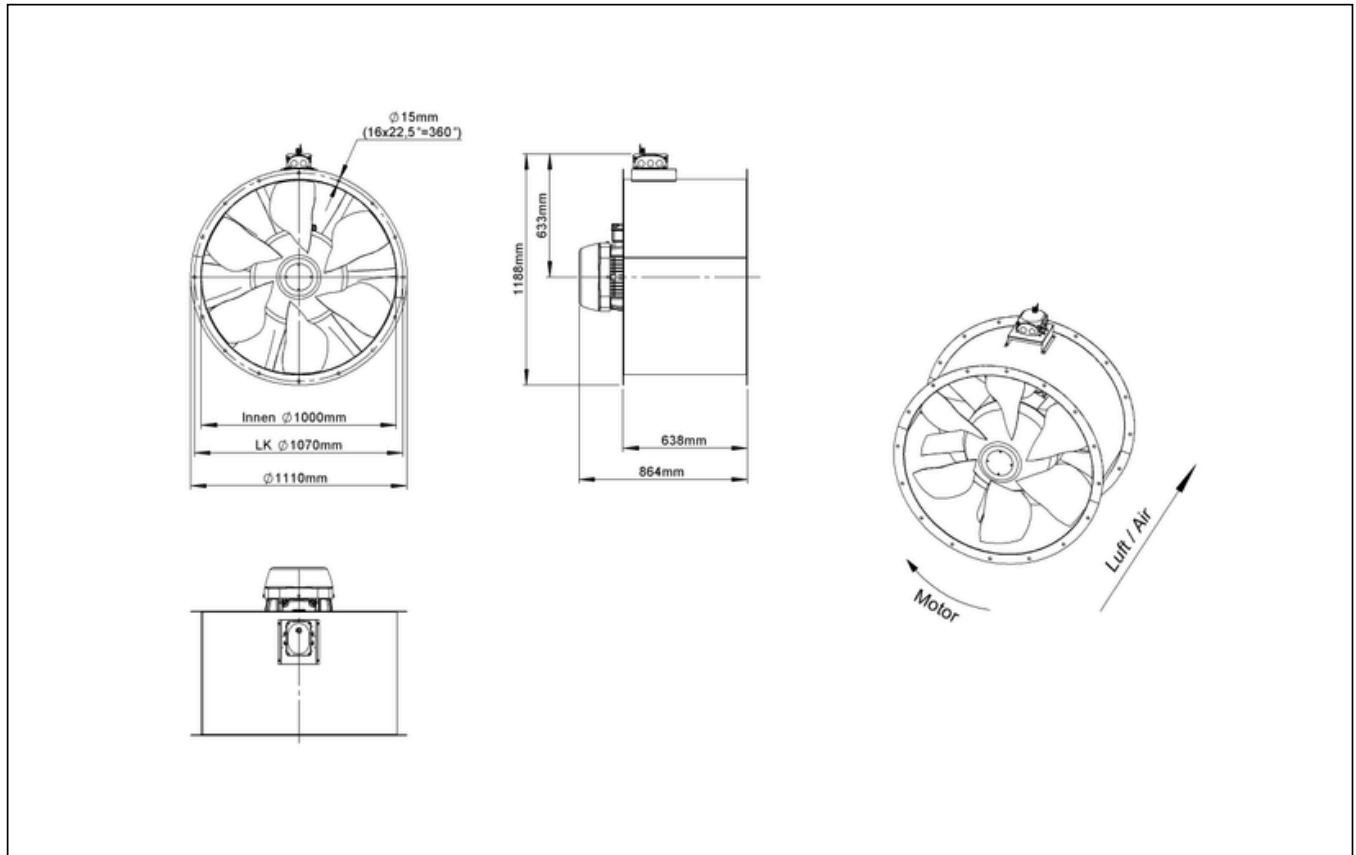


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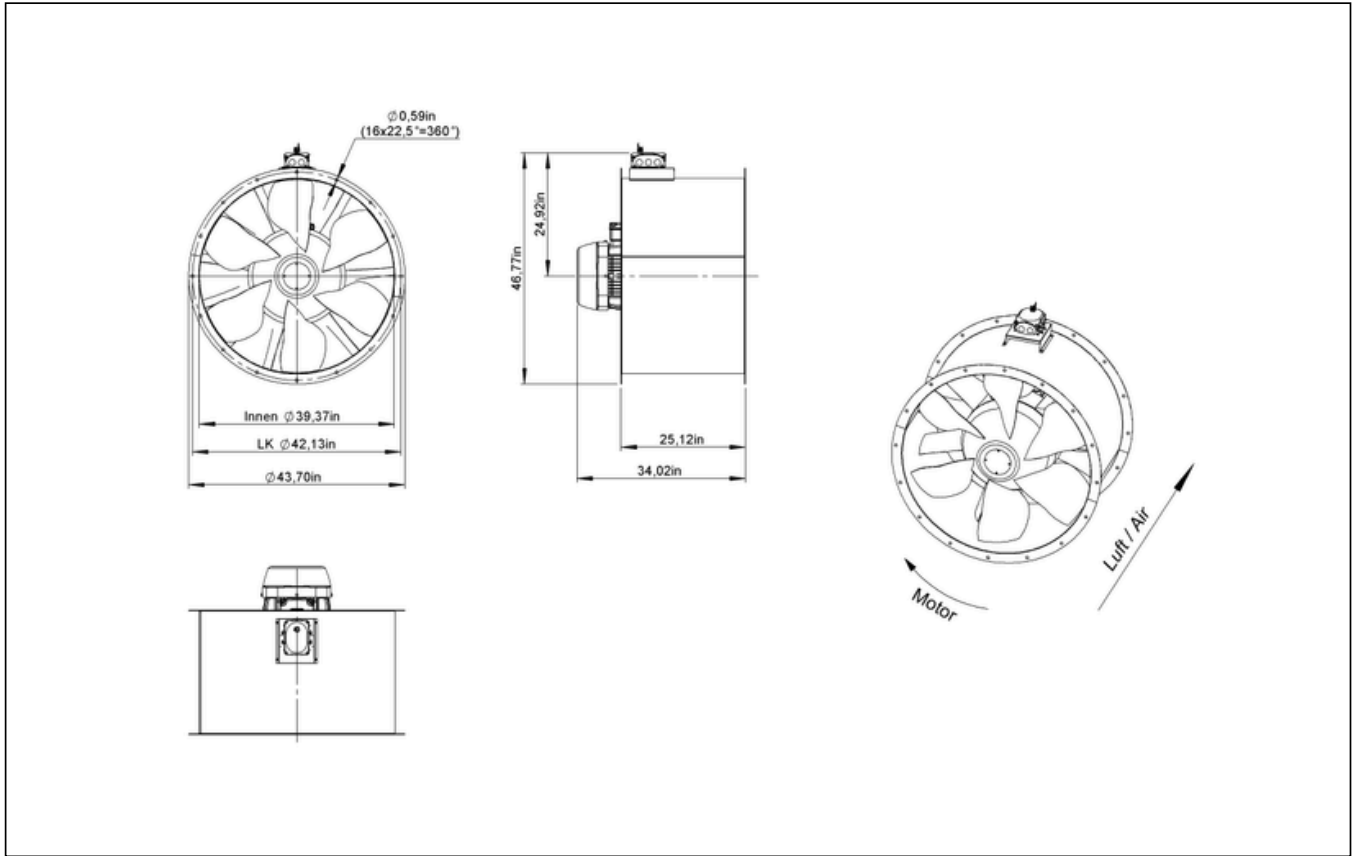
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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



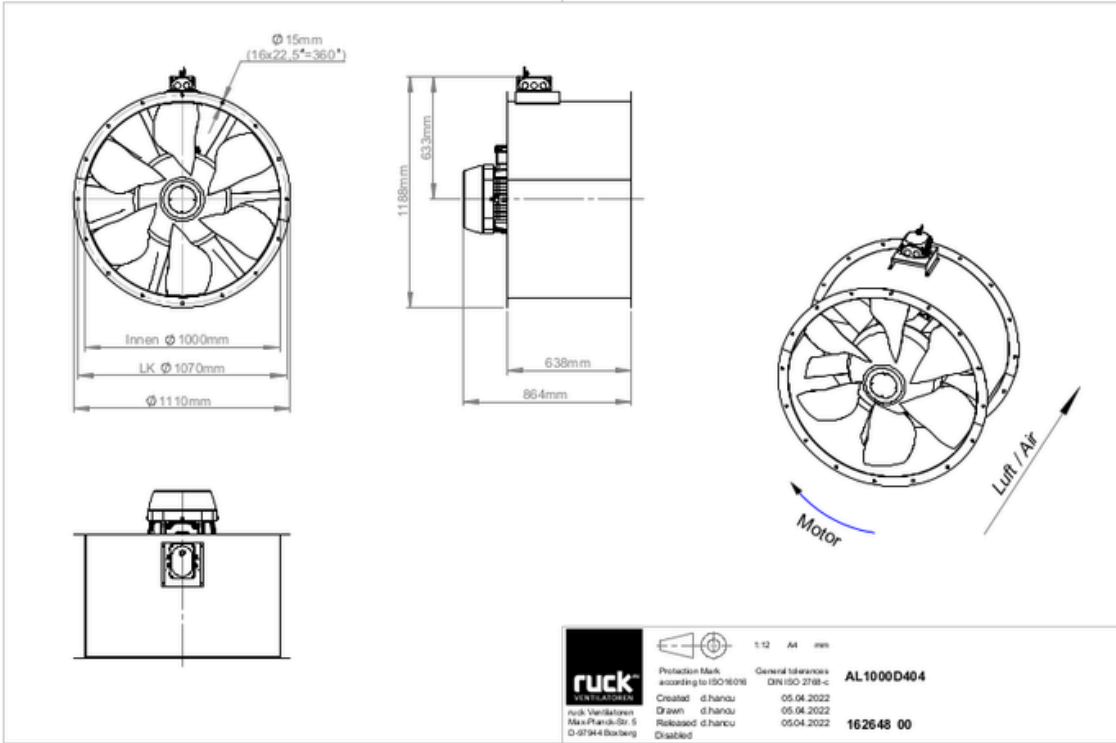
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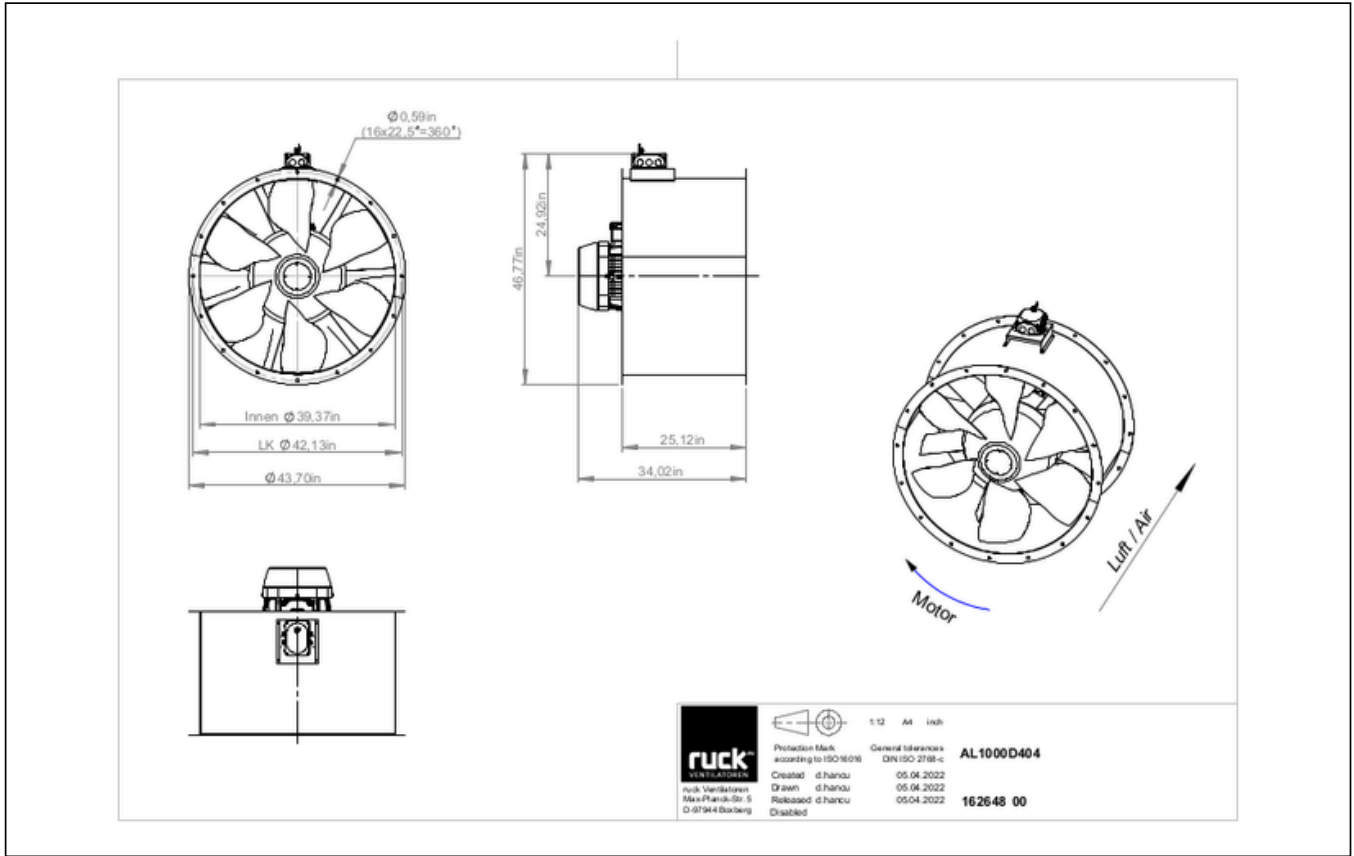
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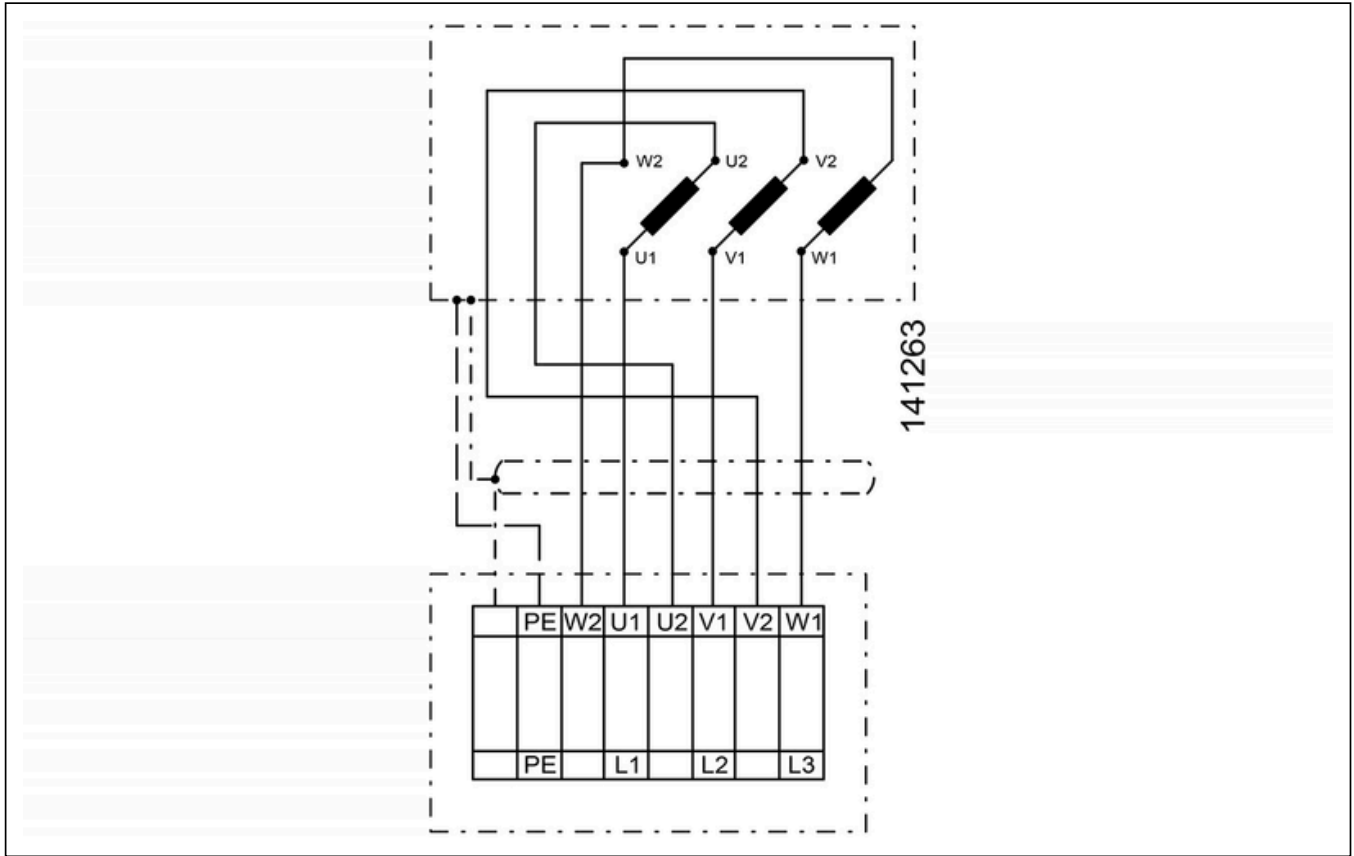
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MECHANICAL ACCESSORIES

RVK H 1000 | 159573



- Automatic tube shutter
- Sheet steel, powder coated
- For horizontal installation
- Flange mounting

RVS 1000-01 | 157480



- Tube connection spigot
- Sheet steel, powder coated
- Suitable for outdoor installation
- Flange mounting

ESD 1000 | 157569



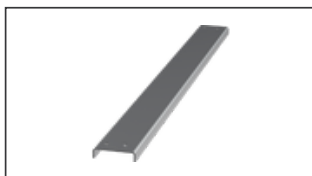
- Inlet cone
- Steel sheet, powder coated
- Flange mounting

FAL 1000 | 157899



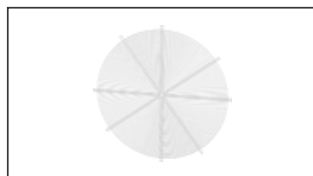
- Mounting foot
- Sheet steel, powder coated
- Flange mounting

TRA1000 | 162924



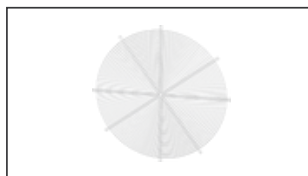
- Crossbeam
- Connection between mounting feet
- Galvanized steel sheet

SGW 1000 | 159542



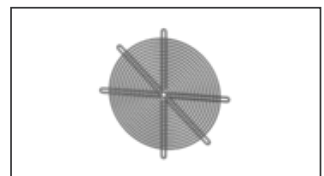
- Protection grille, wide meshed
- Steel sheet, galvanized
- Flange mounting

SGW 1120 | 159543



- Protection grille, wide meshed
- Steel sheet, galvanized
- Flange mounting

SGE 1000 | 159518



- Protection grille, narrow meshed
- Steel sheet, galvanized
- Flange mounting

FSD 08 | 162473



- Set of 4 vibration dampers
- Made of natural rubber, hardness 55 Shore A

RAF 1000 | 157414



- Round flange
- Sheet steel, powder coated

RAS 1000 | 157632



- Round spigot, flexible
- Galvanized steel sheet, plastic band (PES)
- Temperature resistant up to 75 °C
- Flange mounting

FSD 11 | 162489



- Set of 4 vibration dampers
- All metal design, galvanized

RVK 1000 | 157766



- Automatic tube shutter
- Sheet steel, powder coated
- For vertical installation
- Flange mounting

MR 1000 | 164951



- Mounting ring
- For vertical mounting
- Powder-coated sheet steel
- Flange mounting DN 1000



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ELECTRICAL ACCESSORIES

MS 10 | 160188



- Motor protection switch with device switch function
- For three phase motors
- $I_{max} = 50 \text{ A}$

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 $+10 \text{ Vdc}$

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 $0-10 \text{ V DC}$ + FC enable + setpoint reached
- Pressure setting by means of decade switch

FU 300 04 | 161410



- Frequency converter
- Supply voltage $400 \text{ V } 3\text{-} 50/60 \text{ Hz}$
- Output voltage $0 - 400 \text{ V } 3\text{-}$
- Fire mode function (smoke extract fans)

FU 300 03 | 161409



- Frequency converter
- Supply voltage $400 \text{ V } 3\text{-} 50/60 \text{ Hz}$
- Output voltage $0 - 400 \text{ V } 3\text{-}$
- Protection class IP 20, for switch cabinet

