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- Backward curved centrifugal impeller
- Swing out fan unit
- Sheet steel housing double-walled, 40 mm mineral wool
- IE3 motor outside the airflow, frequency controllable
- Smoke extract fan F400, 200 °C continuous operation
- With condensate and grease drain



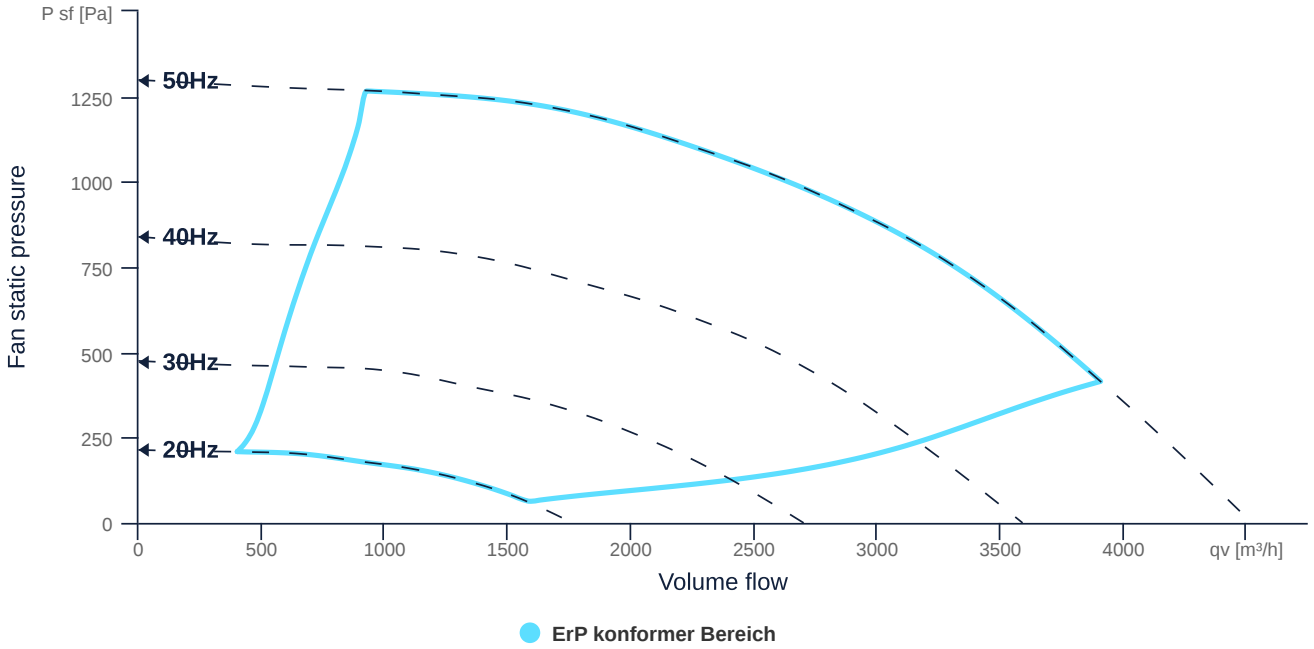
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FAN CURVES

Name	Value	Unit
Volume flow	1971.41	m³/h
Pressure	-170.73	Pa



ruck Ventilatoren GmbH certifies that the fan range MPS shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. / July 2026

F400

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TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volume flow	1971	m³/h	q_{vcalc}
Pressure	-171	Pa	psf_{calc}
Fan pressure	19	Pa	pf
Fan static pressure	-171	Pa	psf
Current consumption Motor	0.9	A	Ie
Current consumption Electric	0	A	Ied
Electrical power consumption	119	W	Pe_K
Electrical power consumption	162	W	Ped_K
Frequency	22	Hz	frq
Rotation speed	1287	1/min	N
Total static efficiency	-79	%	etaFaPeK
Total speed controlled static efficiency	-58	%	etaFaPedK
Total efficiency	9	%	etatPeK
Total speed controlled efficiency	6	%	etatPedK
SFP (entire device)	218	W/(m³/s)	sfp_{device}
Sound power level inlet	70	dB(A)	LwA5
Sound power level outlet	71	dB(A)	LwA6
Sound power level housing radiation	60	dB(A)	LwA2

SOUND DATA

Sound power	mid-frequency tape										Unit	Formula symbol
	∑	63	125	250	500	1000	2000	4000	8000	16000		
suction	70	37	61	64	66	61	62	57	53	38	dB(A)	LwA5
blowout	71	38	59	63	63	66	65	59	53	39	dB(A)	LwA6
Casing break out	60	39	56	55	46	48	50	44	48	40	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
		∑	63	125	250	500	1000	2000	4000	8000	16000		
suction	47	53	20	43	47	48	44	45	40	35	21	dB(A)	LwA5
blowout	49	54	20	42	45	46	49	48	42	35	21	dB(A)	LwA6
Casing break out	38	43	21	39	37	29	30	32	27	31	22	dB(A)	LwA2

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GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA, AMCA		
Duct size	-		WxH_{duct}
Pipe connection size (DN)	DN355		DN
Rated voltage (entire device)	400	v	U_{rated}
Phases (entire device)	3~		phase
Electrical protection (entire device)	6 A		fuse
Housing material	Galvanized steel		mat_{casing}
Impeller material	Coated steel		$mat_{impeller}$
Weight	54.88	kg	m
Nominal air flow rate, nominal point m³/h	3848.4	m³/h	qv_{nom}
Nominal external pressure, static	454	Pa	$p_{s,nom}$
Fan type	Radial		Fan_{type}
Category / Installation situation	A		cat
Length	365	mm	
Width	700	mm	
Height	790	mm	

MAXIMAL DATA

Name	Value	Unit	Formula symbol
Max. power consumption (device)	1221	w	$P_{ed,\ max}$
Max. operating current (device)	2.42	A	$I_{ed,\ max}$
Max. speed	2950	rpm	n_{max}
Max. stat. efficiency	57.8	p	η_{es}
Max. fan efficiency	60.2	p	η_{e}
Max. flowrate	4520	m³/h	$q_{v,\ max}$
Max. stat pressure	1300	Pa	$p_{sf,\ max}$
Max. medium temperature	200	°C	$T_{m,\ max}$
Max. environment temperature	50	°C	$T_{amb,\ max}$
Min. environment temperature	-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		AC 3~		phase
Control type		frequency-controlled		$ctrl_{type}$
Installation type		IRM (In)		install
Isolation class		ISO F		ISO_{class}
Protection class		IP55		IP_{motor}
Is pole-changeable		No		polexch
Type of power supply		AC 3~		$pwrsup_{motor}$
Number of poles (1)		2.000000		$num\ poles_{w1}$
Connection	Δ	Y		$wiring_{w1}$
Connection (wiring 2)	Y			$wiring_{w2}$
Rated voltage	230	460	v	$U_{rated,\ f1}$
Rated voltage (wiring 2)	400		v	$U_{rated,\ f2}$
Rated current	4.03	2.05	A	$I_{rated,\ f1}$
Rated current (wiring 2)	2.32		A	$I_{rated,\ f2}$
Nominal power	1100	1100	w	P_a
Nominal power (wiring 2)	1100		w	$P_{out,\ f2}$
Speed	2830	3450	rpm	n_{f1}
Speed (wiring 2)	2830		rpm	n_{f2}
Starting current	29.9	16.4	A	$I_{start,\ f1}$
Starting current (wiring 2)	17.2		A	$I_{start,\ f2}$
Efficiency	83.5	84	p	$\eta_{m,\ f1}$
Efficiency (wiring 2)	83.5		p	$\eta_{m,\ f2}$
Efficiency class	IE3	IE3		IE_{motor}
Min. temperature	-20	-20	°C	$T_{motor,\ min}$
Cos Phi	0.820000	0.800000		cos φ
UL-Certification motor		UL recognized		UL_{cert}

SMOKE EXTRACT DATA

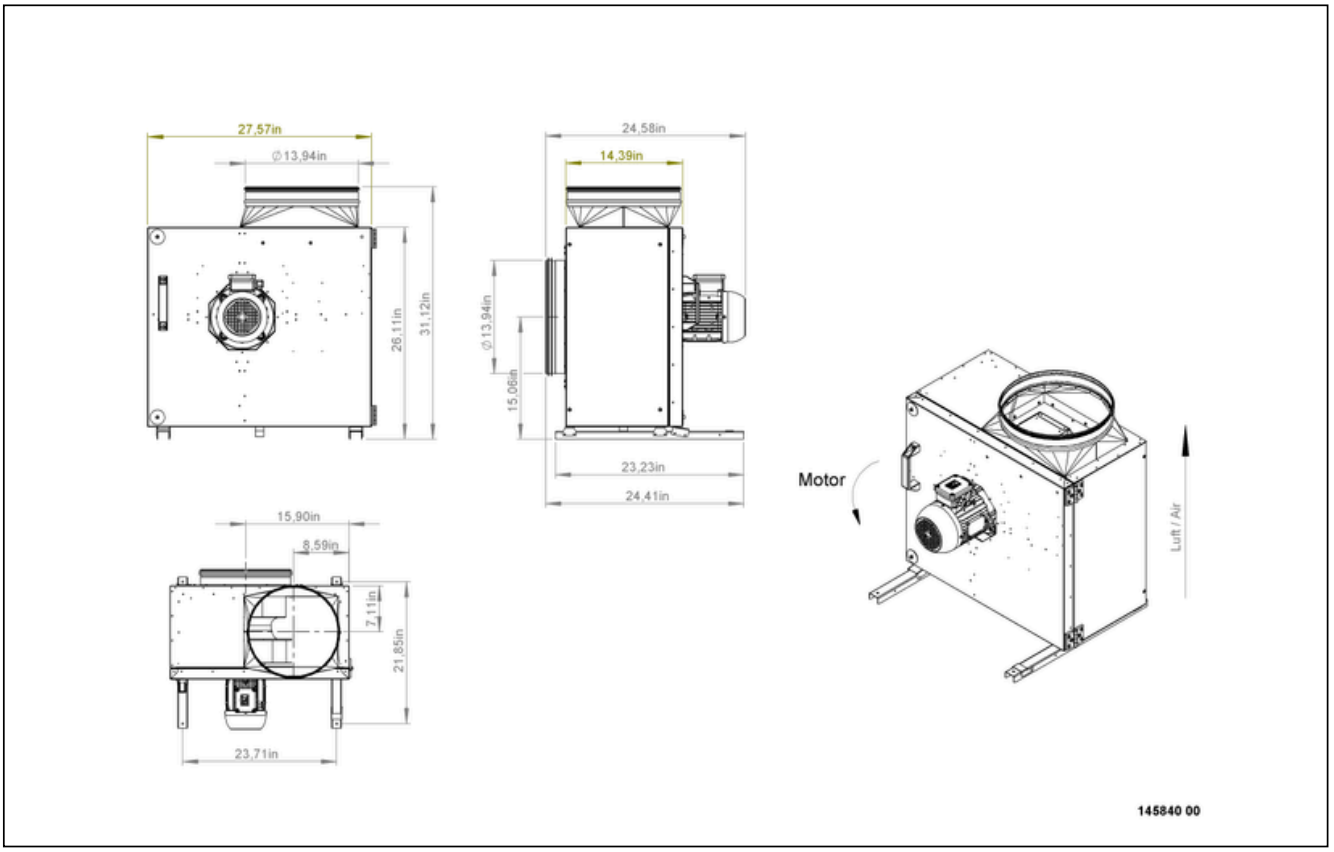
Name	Value	Unit	Formula symbol
Maximum resistance temperature	400	°C	T_{fire}
Maximum resistance time	120.000000		t_{fire}
Fire resistance class	F 400 (120)		F_{class}
Snow load class	-		SL_{class}

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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS

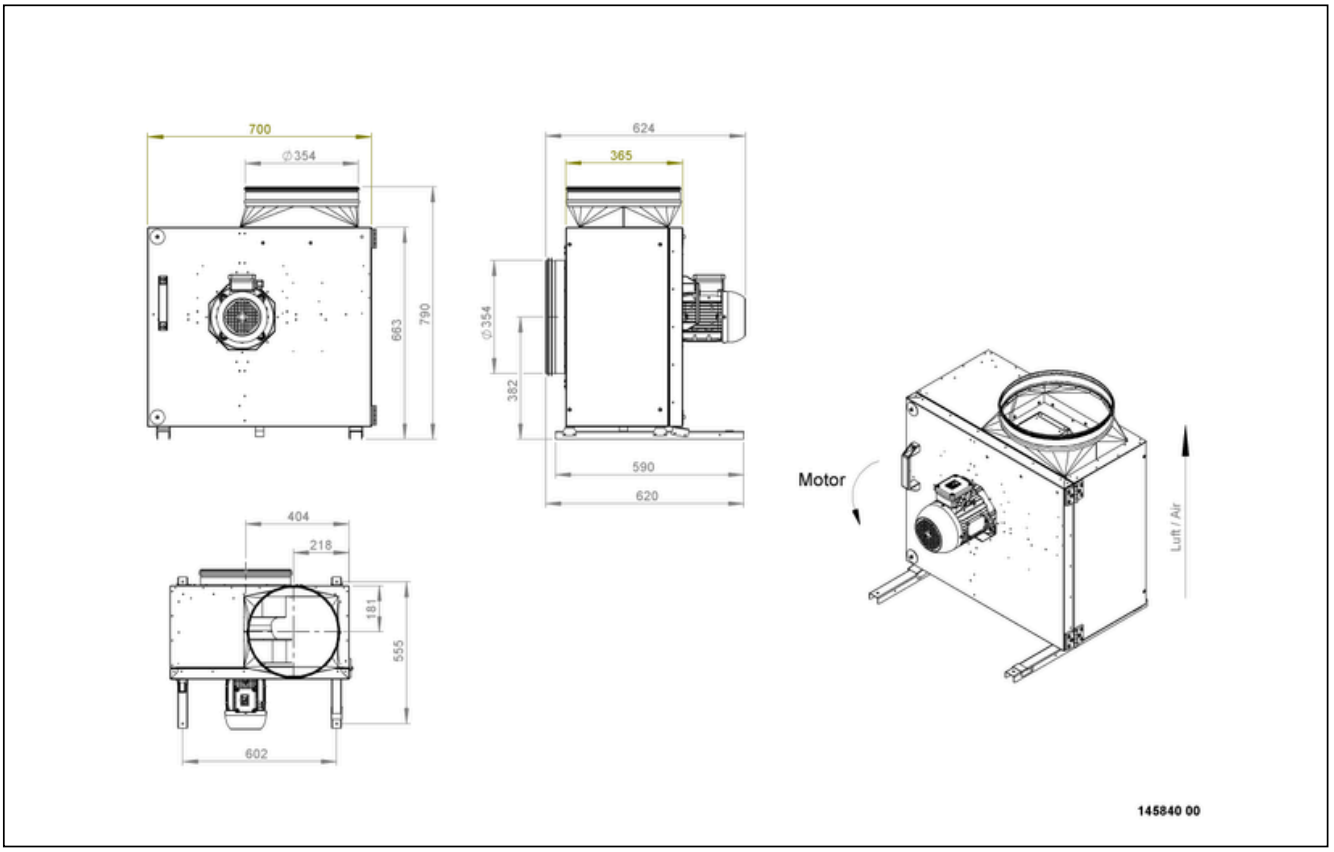


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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS

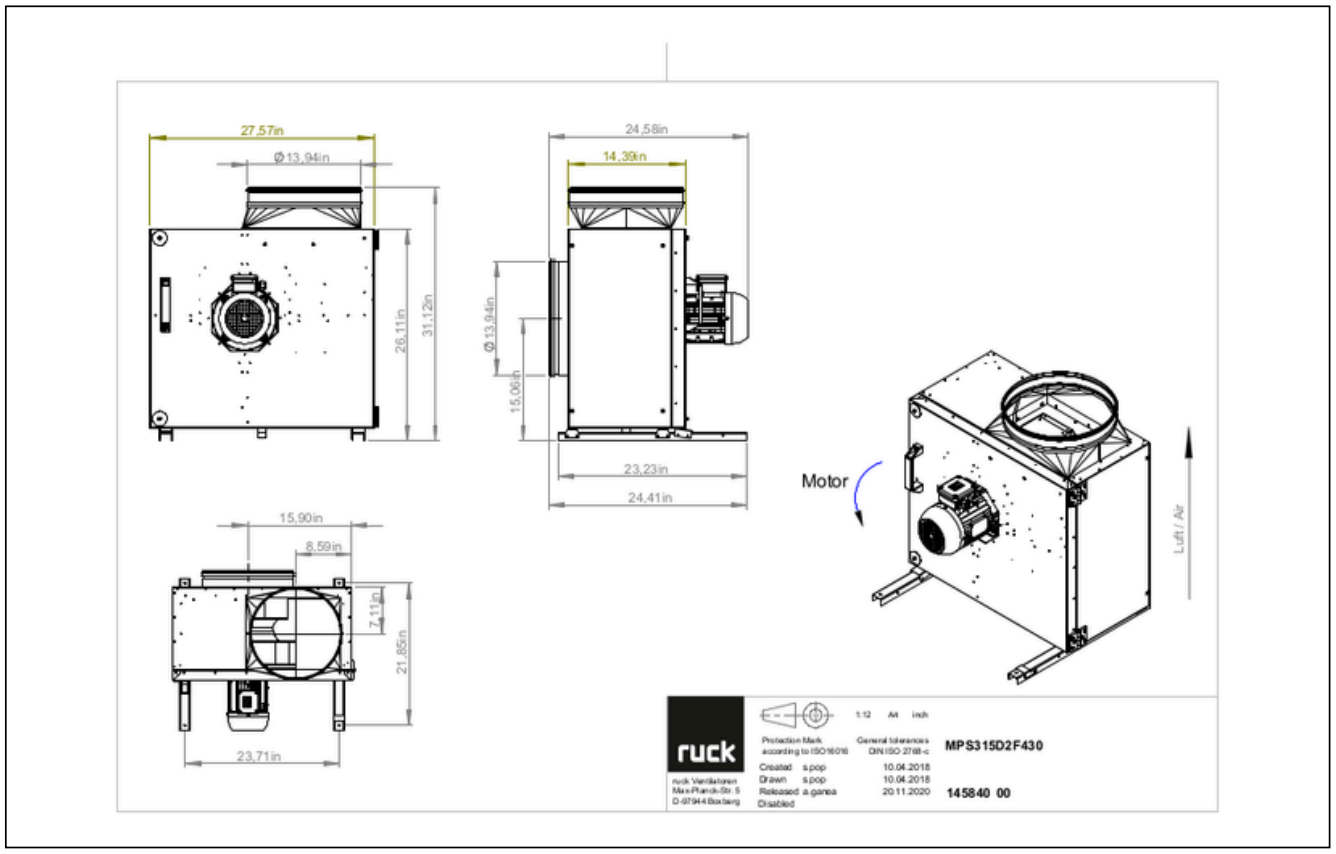


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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS

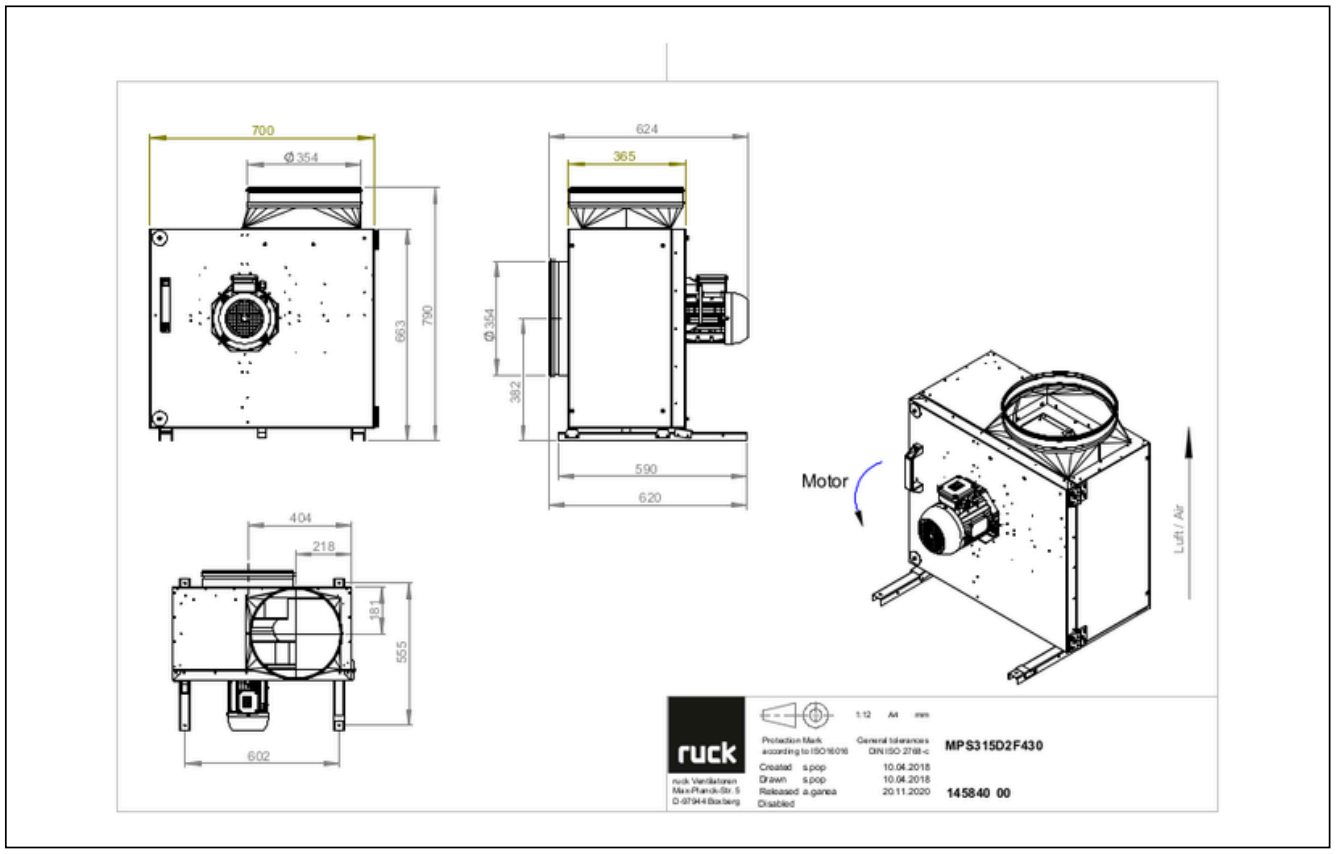


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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS

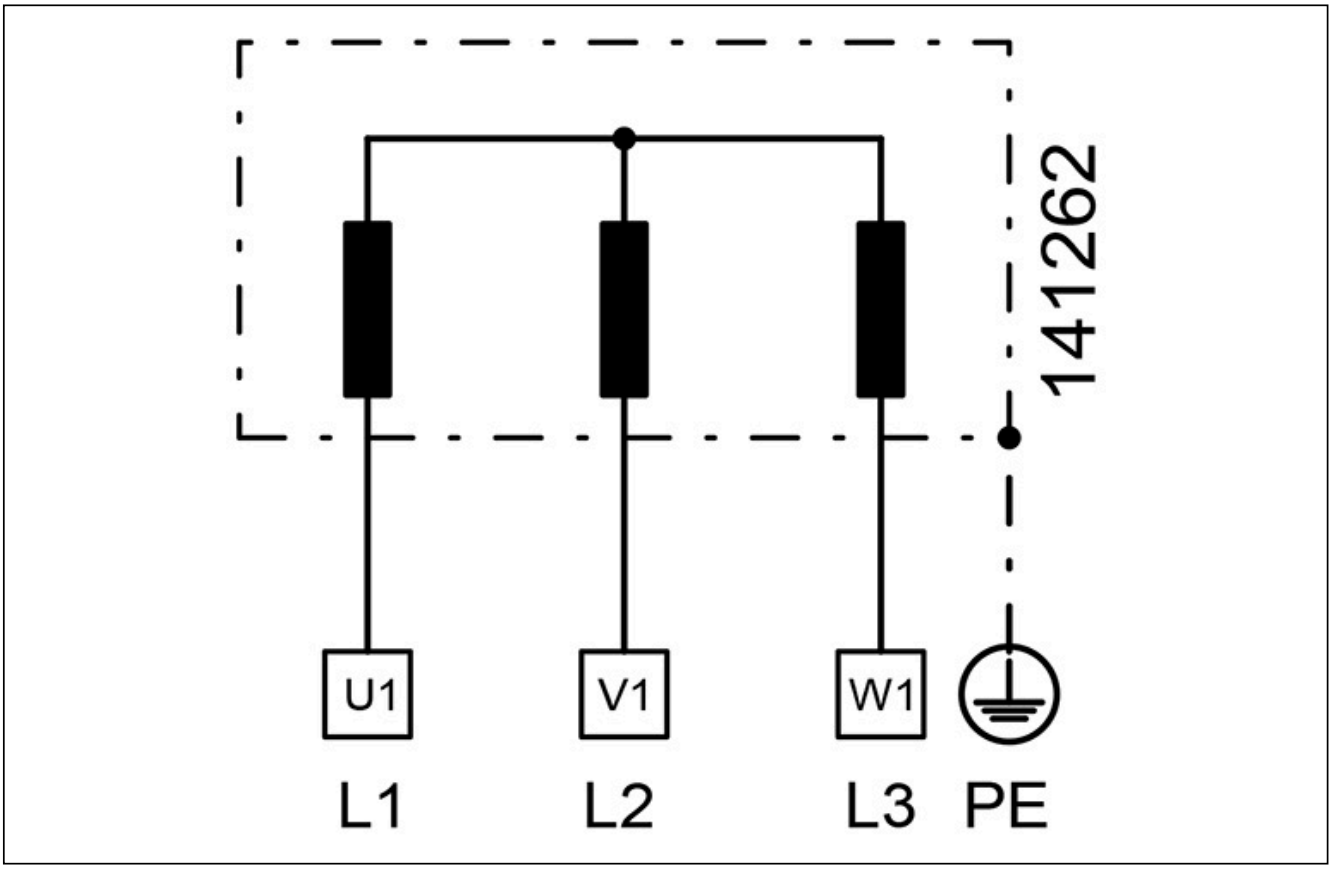


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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



MECHANICAL ACCESSORIES

WSH MPS | 103661



- Weather protection hood for motor
- Galvanized steel sheet

WK MPS 07 | 127953



- Wall mounting bracket for box fan
- Galvanized steel sheet
- 1 Pack = 2 pieces

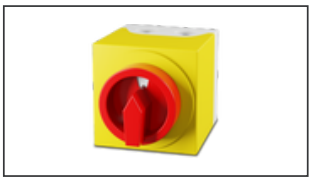
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ELECTRICAL ACCESSORIES

GS 03 | 107633



- Device switch
- Umax = 400 V, Imax = 25 A
- Switching capacity 400 V 3~ = 7,5 kW
- Protection class IP 55

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

MTP 20 | 128146



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

MS 02 | 140409



- Motor protection switch with Isolator switchfunktion
- Imax = 400 V, 50/60 Hz
- Max. 1.5 kW
- Protection class IP 55

FU 15 11 | 141850



- Frequency converter IP66
- Supply voltage 230 V 1~ 50/60 Hz
- Output voltage 0 - 230 V 3~
- Fire mode function (smoke extract fans)

FU 15 17 | 141872



- Frequency converter
- Supply voltage 400 V 3~ 50/60 Hz
- Output voltage 0 - 400 V 3~
- Fire mode function (smoke extract fans)

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

MTP 50 | 168752



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

MTP 30 | 177381



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

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