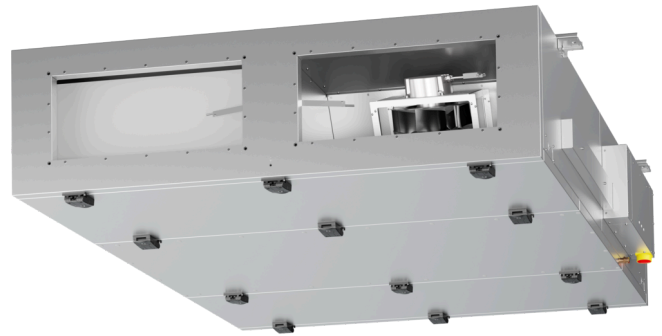


# ETA K 2800 F EOJR

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- Flat air handling unit with counter flow heat exchanger
- Ceiling mounting, version right
- Frameless, double wall housing made of galvanized steel sheet, insulated
- Constant air flow EC fans, integrated controls
- Automatic summer bypass
- Electric heating, without cooling, panel filter F7/M5
- Constructed acc. to VDI 6022



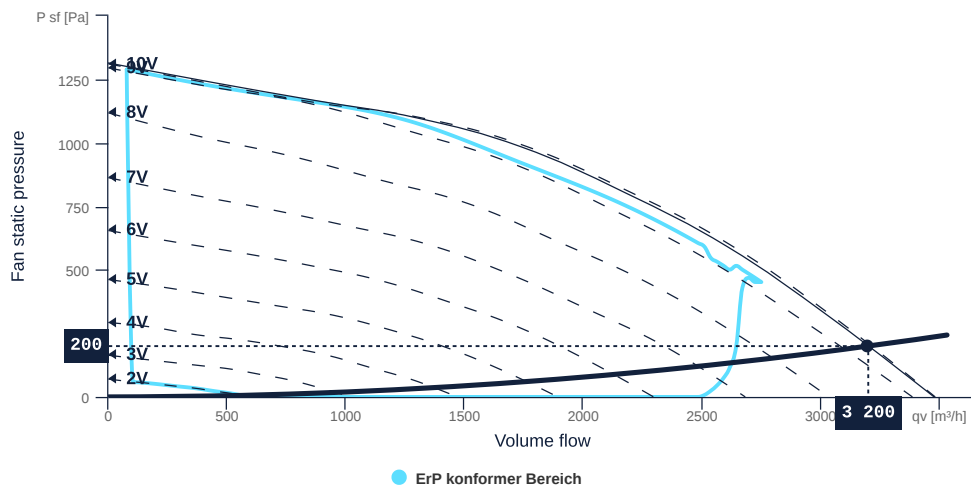
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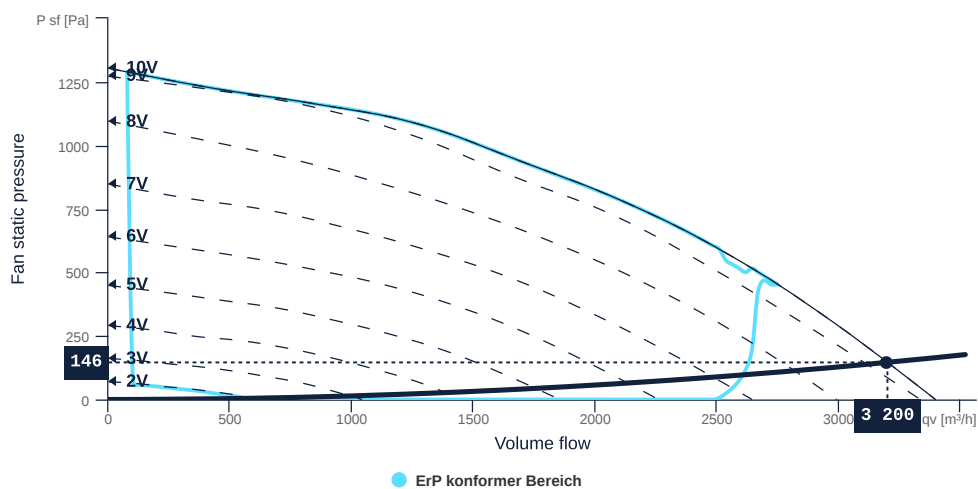
## MAP

Name	Value	Unit
Volume flow	3200	m³/h
Pressure	200	Pa



## EXTRACT AIR MAP

Name	Value	Unit
Volume flow	3200	m³/h
Pressure	146	Pa



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## HEAT RECOVERY SUMMER

Name	Value	Unit
Outside air temperature	32	°C
Temperature exhaust air	24	°C
Relative humidity outside air	40	%
Relative humidity exhaust air	40	%

## HEAT RECOVERY WINTER

Name	Value	Unit
Outside air temperature	-12	°C
Temperature exhaust air	22	°C
Relative humidity outside air	90	%
Relative humidity exhaust air	40	%

## HEAT RECOVERY

Name	Value		Unit	Formula symbol
	summer	winter		
Supply air temperature	25.75	17.22	°C	$T_{sup}$
Supply air relative humidity	57	10	%	$\phi_{sup}$
Transferred power	6.77	31.39	kW	Q
Efficiency	78.2	86	%	$\eta$
Air pressure drop	187	187	Pa	$\Delta p_v$

## HEATER ELECTRICAL

Name	Value	Unit
Height above sea level	0	m
Intake air temperature	10	°C
Outlet air temperature	22	°C

Name	Value	Unit	Formula symbol
Supply air temperature	22.0	°C	$T_{sup}$
Transferred power	12.8	kW	Q
Power max.	18.0	kW	$P_{max}$
Air pressure drop	185	Pa	$\Delta p_v$



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## TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volumetric flow (supply air)	3200	m³/h	QVsup
Volumetric flow (extract air)	3200	m³/h	qVeta
Static pressure (supply air)	200	Pa	dpSext sup
Static pressure (extract air)	146	Pa	dpSext eta
Control voltage (supply air)	9	V	Uctrl sup
Rotation speed (supply air)	3400	1/min	Nsup
Control voltage (extract air)	10	V	Uctrl eta
Rotation speed (extract air)	3403	1/min	Neta
SFP (entire device)	2415	W/(m³/s)	sfpdevice
Current consumption Electric	2	A	Ied
Electrical power consumption	2146	W	Pedk
Sound power level outdoor air	75	dB(A)	LWAoda
Sound power level supply air	92	dB(A)	LWAsup
Sound power level extract air	73	dB(A)	LWAeta
Sound power level exhaust air	93	dB(A)	LWAeha
Sound power level housing	69	dB(A)	LWA casing

## SOUND DATA

Sound power	mid-frequency tape										Unit	Formula symbol
	Σ	63	125	250	500	1000	2000	4000	8000	16000		
outside air	75	49	50	72	70	66	62	51	41	17	dB(A)	LWAoda
supply air	93	54	62	89	86	86	84	79	76	54	dB(A)	LWAsup
exhaust air	73	48	53	67	71	64	60	50	42	19	dB(A)	LWAeta
exhaust air	93	54	64	88	85	88	86	82	79	57	dB(A)	LWAeha
housing	69	51	51	68	61	57	55	45	43	21	dB(A)	LWA casing

## 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		
outside air	54	58	31	33	55	53	48	45	33	23	0	dB(A)	LWAoda
supply air	73	75	36	45	71	68	69	67	62	59	36	dB(A)	LWAsup
exhaust air	26	32	24	29	23	25	21	16	13	7	0	dB(A)	LWAeta
exhaust air	42	47	32	39	37	40	43	40	33	28	12	dB(A)	LWAeha
housing	46	49	32	32	47	41	37	34	25	22	3	dB(A)	LWA casing



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## GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	700x300		WxH <sub>duct</sub>
Rated voltage (entire device)	400	V	U <sub>rated</sub>
Phases (entire device)	3-N		phase
Electrical protection (entire device)	6 A		fuse
Housing material	Galvanized steel		mat <sub>casing</sub>
IP-protection class (casing)	IP41		IP <sub>casing</sub>
IP-protection class (entire device)	IP41		IP <sub>compl</sub>
IP-Protection class (terminal box)	IP44		IP <sub>ebox</sub>
Weight	345	kg	m
Nominal air flow rate, nominal point m <sup>3</sup> /h	2379.6	m <sup>3</sup> /h	q <sub>vnom</sub>
Nominal external pressure, static	200	Pa	p <sub>s,nom</sub>
Connection side supply air	Right		L/R
Type of the ventilation-unit	BVU - supply air		AHU <sub>type</sub>
Type of heat-recovery-system	recuperative		HRS <sub>type</sub>
Type of the heater	Electrical		H <sub>type</sub>
Type of cooler	No		C <sub>type</sub>
Outdoor installation	No		outdoor
Speed control	variable speed control		VSD <sub>type</sub>
Filter class extract air	ISO ePM10 50%		F <sub>class, eta</sub>
Filter class supply air	ISO ePM1 55%		F <sub>class, sup</sub>

## ERP DATA (LOT 6)

Name	Value	Unit	Formula symbol
Energy performance supply air filter		E	
Energy performance extract air filter		E	
Thermal efficiency HRS, Nominal-point	80.19	%	t <sub>NRVU</sub>
Nominal air flow rate, nominal point m <sup>3</sup> /s	0.66	m <sup>3</sup> /s	q <sub>v,nom</sub>
Actual electrical input power, nominal point	1.16	KW	P <sub>e,nom</sub>
Internal specific fan power, nominal point	1005.78	Ws/m <sup>3</sup>	SFP <sub>int</sub>
Face velocity, nominal point	1.74	m/s	V <sub>nom</sub>
Nominal external pressure, static	200	Pa	p <sub>s,nom</sub>
supply air fan static efficiency, nominal point	54.34	%	η <sub>es,SUP</sub>
static efficiency of the extract fan, nominal point	59.44	%	η <sub>es,EHA</sub>
Enclosure sound level, nominal point	60.63	dB(A)	L <sub>WA2</sub>
Rating	Product is compliant 2018		
Internal pressure drop of ventilation components supply air, nominal point	257.38	Pa	dp <sub>vent,nom,int,SUP</sub>
Internal pressure drop of ventilation components extract air, nominal point	316.35	Pa	dp <sub>vent,nom,int,EHA</sub>



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## MAXIMAL DATA

Name	Value	Unit	Formula symbol
Max. power consumption (device)	2250	W	$P_{ed, max}$
Max. operating current (device)	3.5	A	$I_{ed, max}$
Max. speed	3480	1/min	$n_{max}$
Max. stat. efficiency	42.6	%	$\eta_{es}$
Max. fan efficiency	42.7	%	$\eta_e$
Max. flowrate	3480	m <sup>3</sup> /h	$q_v, max$
Max. stat pressure	1310	Pa	$p_{sf, max}$
Max. medium temperature	40	°C	$T_m, max$
Max. environment temperature	40	°C	$T_{amb, max}$
Min. environment temperature	-20	°C	$T_{amb, min}$

## FILTER DATA

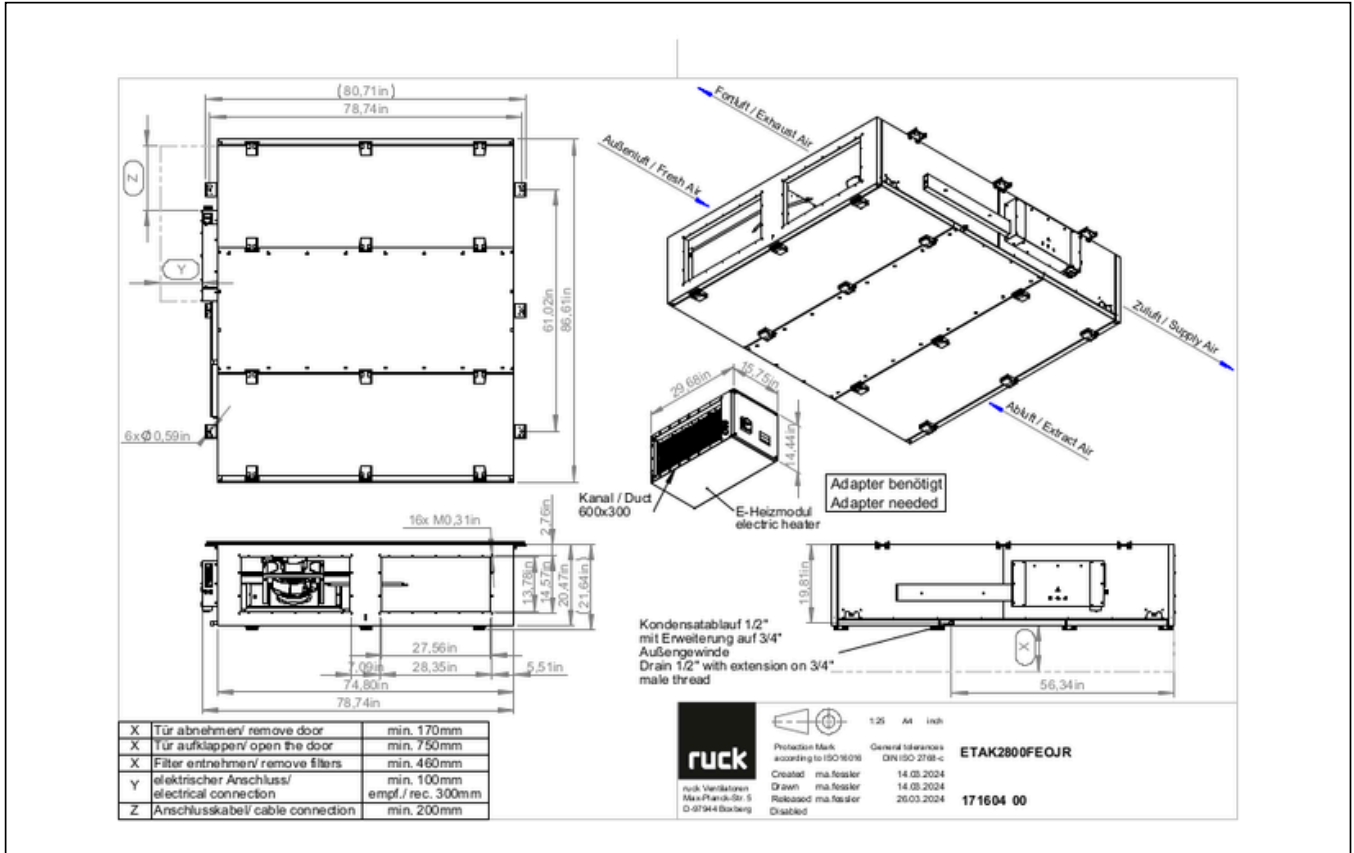
Name	Value	Unit	Formula symbol
Degree of separation (supply air)	55	%	
Degree of separation (extract air)	50	%	
Filter group (extract air)	ISO ePM10		
Filter group (supply air)	ISO ePM1		



# ETA K 2800 F EOJR

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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



# ETA K 2800 F EOJR

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Technical drawing of the ETA K 2800 F EOJR unit. The drawing includes a front view with dimensions (2050, 2000, 1550, 2200), a side view with dimensions (1900, 2000, 180, 700, 720, 140, 500, 520, 550, 70, 16x M8), and a perspective view showing air flow directions: 'Fonluft / Exhaust Air', 'Außenluft / Fresh Air', 'Zuluft / Supply Air', and 'Abluft / Extract Air'. A detail of the 'E-Heizmodul electric heater' is shown with dimensions (754, 400, 367). A note states 'Adapter benötigt Adapter needed'. A detail of the 'Kanal / Duct 600x300' is shown with dimensions (700, 140, 1900, 2000). A note for the drain connection states 'Kondensatablauf 1/2" mit Erweiterung auf 3/4" Außengewinde Drain 1/2" with extension on 3/4" male thread'. A table at the bottom left lists maintenance instructions for door removal, filter removal, electrical connection, and cable connection. A table at the bottom right provides technical specifications and a QR code.

X	Tür abnehmen/ remove door	min. 170mm
X	Tür aufklappen/ open the door	min. 750mm
X	Filter entnehmen/ remove filters	min. 460mm
Y	elektrischer Anschluss/ electrical connection	min. 100mm empf./ rec. 300mm
Z	Anschlusskabel/ cable connection	min. 200mm

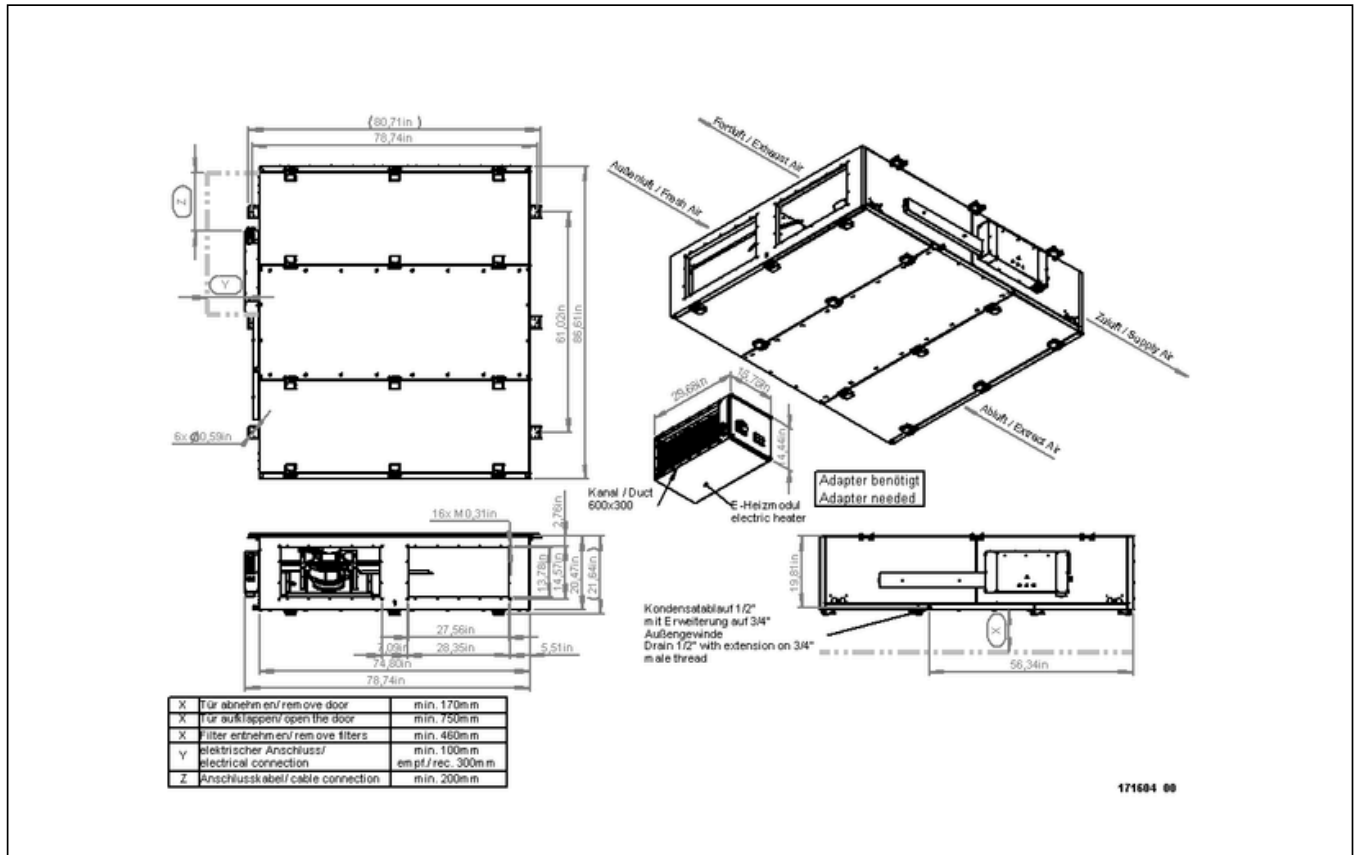
<b>ruck</b>	Protection Mark according to ISO 16016	General tolerances DIN ISO 2768-c	<b>ETAK2800FEOJR</b>
ruck Ventilatoren Max-Planck-Str. 5 D-97944 Boxberg	Created: ma.fessler Drawn: ma.fessler Released: ma.fessler Disabled:	14.03.2024 14.03.2024 26.03.2024	<b>171604 00</b>





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