



Technical summary

Project name TFP Wessex Southampton 8613-24020

AHU	AHU series	Size	Flow	Fan power	SFP	Ext pressure	Heating exchanger type	η temp (dry)	Width (mm)	Height (mm)	Length (mm)
AHU1	Envistar Flex	480	1.96/1.82	2.46/1.23	1.88	600/350	Rotor	82.3	2200	2400	6610

Project, weighted values					SFP	η temp (dry)	Rot.	Count	Plate	Coils
TFP Wessex Southampton 8613-24020					1.88	82.3	82.3			



Envistar Flex

Dimension drawing

Project name

TFP Wessex Southampton 8613-24020

Name of AHU

AHU1

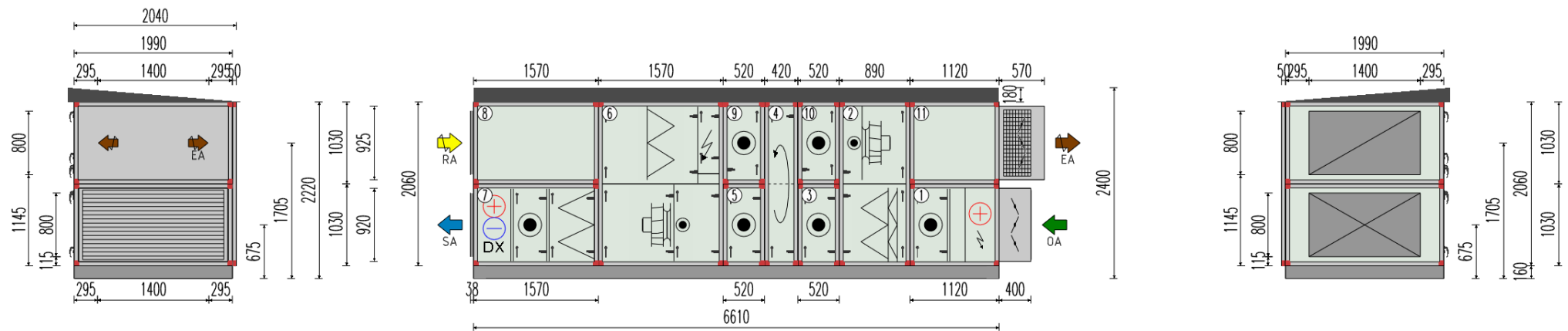
Size

480 1.96/1.82 m³/s



Total for AHU

Width	2200 mm	1) 194 kg	5) 63 kg	9) 63 kg
Height	2400 mm	2) 400 kg	6) 460 kg	10) 63 kg
Length	6610 mm	3) 63 kg	7) 299 kg	11) 141 kg
Weight	2625 kg	4) 311 kg	8) 185 kg	



Note! Consider the required space needed to open inspection doors and for plumbing. Additional space for pipes water coil 100 mm. Outdoor unit delivered assembled, not demountable. Outdoor version should be placed on a watertight roof on longitudinal base frames. Additional space for roof on outdoor unit max. 100mm (front and backside). If split unit is required, please contact IV Produkt for individual weights Access door with largest radius 920 mm is in module 6. Additional space for handle inspection door 60 mm. Additional space for connection frame 40 mm. Green colored unit parts delivered with ThermoLine casing in class T2.

Our reference: Darren Fereday (07854) 887063

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IV Produkt Designer G3 Version 305.27.5.0 4/19/2024

Calculated in version 305.27.3.0



Envistar Flex

Dimension drawing

Project name

TFP Wessex Southampton 8613-24020

Name of AHU

AHU1

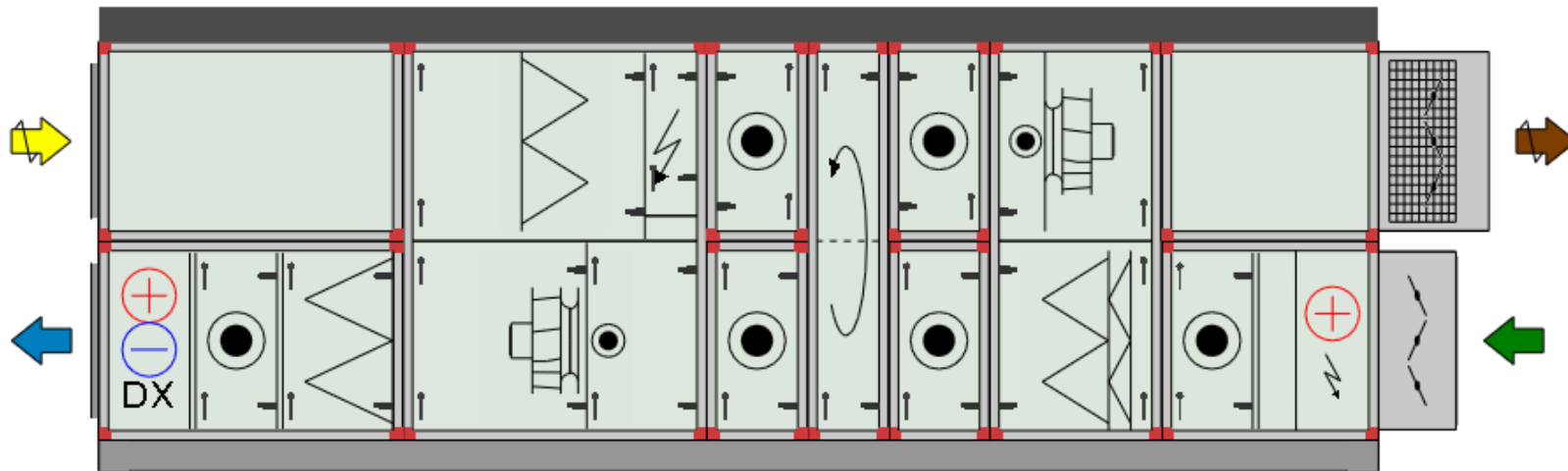
Size

480 1.96/1.82 m³/s



Total for AHU

Width	2200 mm	Outdoor	255 kg
Height	2400 mm	Sea transport fitti...	10 kg
Length	6610 mm	Intake louvre	60 kg
Weight	2625 kg	Exhaust hood	58 kg



Connection size: AHU 1400x800 mm.

* Technical data/dimensions are set and may be changed when placing an order.

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Project name TFP Wessex Southampton 8613-24020
Name of AHU AHU1
Size 480 1.96/1.82 m³/s

Specific fan power

Output Total for AHU 1.88 * kW/(m³/s)
 Ecodesign 2018-Approved

Dimension and weight

Width 2,200 mm
 Height 2,400 mm
 Length 6,610 mm
 Weight 2,625 kg

Design winter outdoor temperature -5.0 °C

CASING MODEL, EN1886

PA-50

BASIC DATA

		Supply air	Extract air	
Input	Flow	1.96	1.82	m³/s
	External pressure drop	600	350	Pa
	Distribution of external pressure drop			
	Outdoor air/Supply air Extract air/Exhaust air	(0/600)	(350/0)	Pa
Output	Cross sectional velocity	1.1	1.0	m/s
	Intake louver	9		Pa
	Exhaust hood		9	Pa
	Damper	2	1	Pa
	Air heater electric	3		Pa
	Pre-filter G4/Coarse-65%	67		Pa
	Initial pressure drop	(27)		Pa
	Final press. drop	(107)		Pa
	Filter Carbon filter C7/ePM1-70% / M6/ePM2.5-50%	79	62	Pa
	Initial pressure drop	(39)	(22)	Pa
	Final press. drop	(119)	(102)	Pa
	Rotary heat exch.	85	81	Pa
	Set of filters F9/ePM1-85%	102		Pa
	Initial pressure drop	(62)		Pa
	Final press. drop	(142)		Pa
	Air cooler, DX inverter (dry coil) *	12		Pa
	Built-in losses	6	5	Pa
	Total internal pressure	365	158	Pa



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Name of AHU AHU1
Size 480 1.96/1.82 m³/s

Fans

	Supply air	Extract air	
Output *			
Total static pressure	965	508	Pa
Fan rpm	1,819	1,403	r/m
Total efficiency	67.4	69.7	%
Fan power at dim press	2.81	1.33	kW
Fan power clean filter	2.46	1.23	kW
Motor output Power	4.80	3.50	kW
Motor current at 400V, 3-fase	7.8	5.6	A
Max. rpm	2,180	1,950	r/m
Capacity reserve	42	63	%
Temperature increase	1.19	0.61	°C
SFPint	174	148	W/(m³/s)
Fan type	EC500ZBLU-G1	EC500ZBLU-G1	
K-factor for air flow measuring	12.86	12.86	
Weight fan unit	59	45	kg
Maximum air temperature in the event of fire 60 mins	+70°C	+70°C	
See fan curve for rotation speed (rpm)			

Sound data (sound power EN13053)

Frequency band	63	125	250	500	1k	2k	4k	8k		Total	
Supply air:										/	
To surroundings	69	79	61	53	47	45	42	32	dB	64	dB(A)
Outdoor air	66	80	73	67	65	60	56	50	dB	71	dB(A)
Supply air	72	85	75	75	71	64	61	53	dB	77	dB(A)
Extract air:											
To surroundings	62	69	54	46	39	37	34	23	dB	54	dB(A)
Extract air	62	71	63	60	50	46	36	27	dB	61	dB(A)
Exhaust air	67	78	73	74	71	68	65	59	dB	76	dB(A)
Total:											
To surroundings	70	79	62	54	48	46	43	33	dB	64	dB(A)

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ROTARY HEAT EXCH.

	Rotor variant	R40-25-N	
	Rotor diameter	D1	
Winter			
Input	Design outdoor temperature	-5.0	°C
	RH outdoor air	95	%
	Return air temperature	20.0	°C
	RH return air	30	%
Output	Supply air temp. after exch.	15.6	°C
	Temperature efficiency dry (EN308)	82.3	%
	Temperature efficiency dry at balanced flows 85.4%		
	Exhaust air temperature	-2.1	°C
Summer			
Input	Design outdoor temperature	30.0	°C
	RH outdoor air	40	%
	Return air temperature	24.0	°C
	RH return air	30	%
Output	Supply air temp. after exch.	25.1	°C
	Relative humidity supply air	52.9	%
	Temperature efficiency dry (EN308)	82.3	%

AIR HEATER ELECTRIC (Preheating)

Input	Design outdoor temperature	-5.0	°C
	Requested air temp out	8.0	°C
Output	Air temperature out	8.0	°C
	Power variant	03	
	Heating power obtained	40.0	kW
	Required heating power	31.0	kW
	Rated current	57.8	A

**Envistar Flex***Technical data*

4 (4)



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Name of AHU	AHU1
Size	480 1.96/1.82 m³/s

AIR COOLER, DX INVERTER *

Input	Air temperature in	30.0	°C
	Relative humidity in	40	%
	Temperature out requested	16.0	°C
Output	Air speed	1.2	m/s
	Power variant	02	
	Required cooling power	45.2	kW
	Required heating power	29.2	kW
	Outlet air temperature from heat exchange	15.6	°C

Check the following with the cooling/heat pump supplier:

- Location of coil in relation to type of heat exchanger and if a pre-heating coil is needed.
- Minimum required on coil air temperature is met for the intended cooling/heat pump.
- Sufficient supply air temperature is met during defrosting.
- Required cooling- and heating power is available from selected cooling/heat pump.
- Need of additional heating coil.
- Control function STD-13 described below is compatible with selected cooling/heat pump.

Control function STD-13:

1 pcs of 0-10V control signal for cooling.

When heating demand is present a potential free contact closes and the 0-10V signal is then used as signal for Heating controls of multiple cooling/heat pumps, contact IV Product Controls support.

RECOMMENDED FUSE

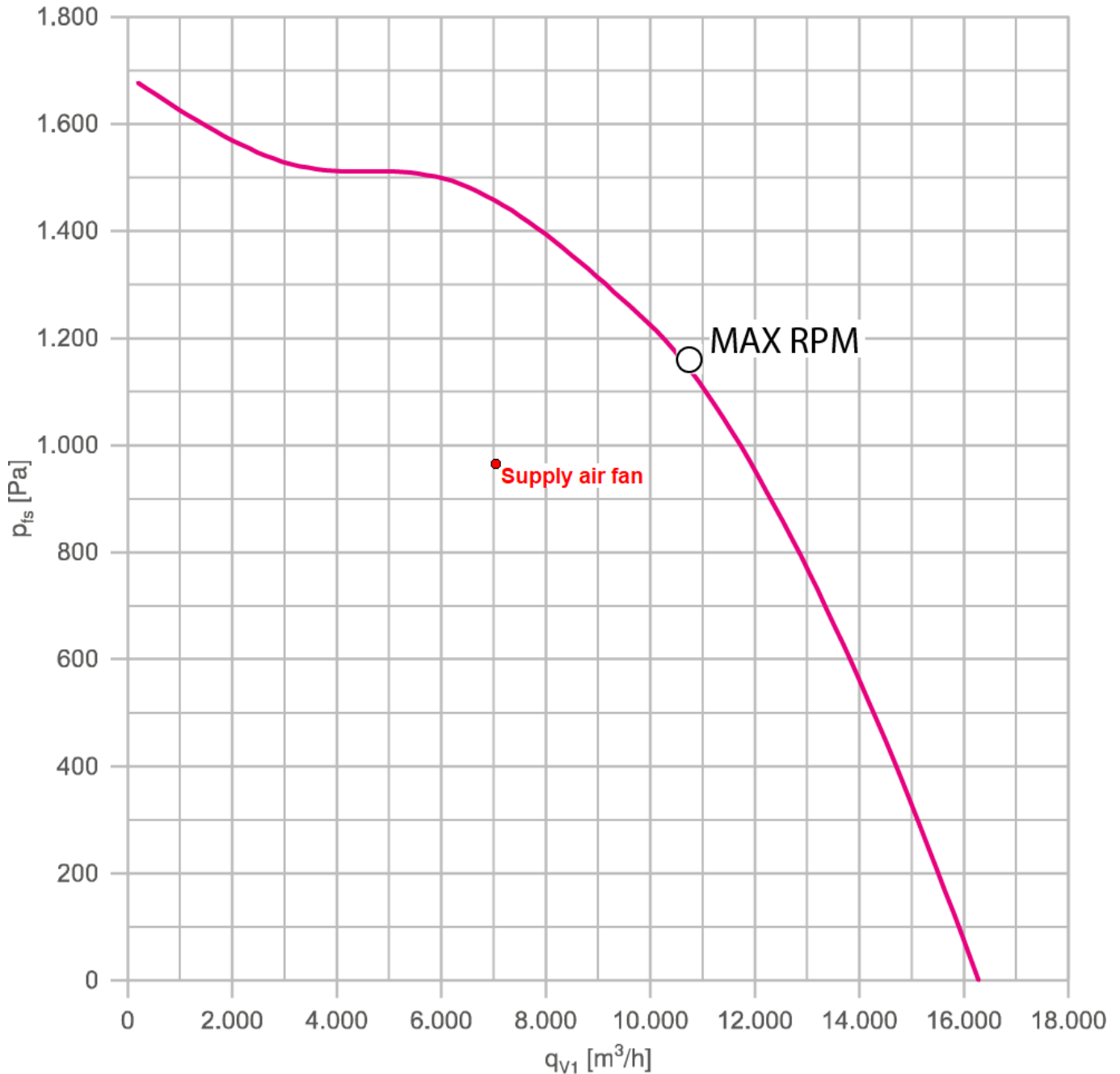
AHU	20A Type C 3x400V+N
El preheater	63A 3x400V

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Project name
Name of AHU
Size

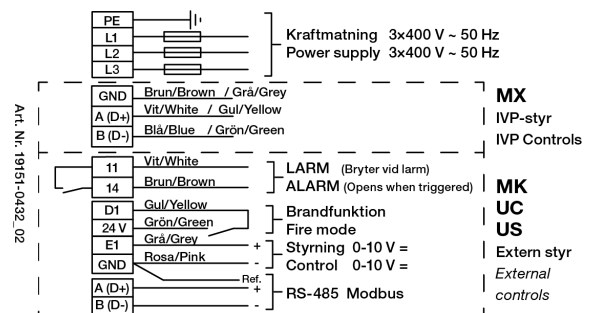
TFP Wessex Southampton 8613-24020
AHU1
480 1.96/1.82 m³/s

Operating point per fan. 1 of 1 supply air.



Supply air

Flow 1.96 m³/s
Total static pressure 965 Pa
Fan rpm 1819 r/m
Motor output Power 4.80 kW
Max. rpm 2180 r/m
Fan type EC500ZBLU-G1
K-factor for air flow measuring 12.86

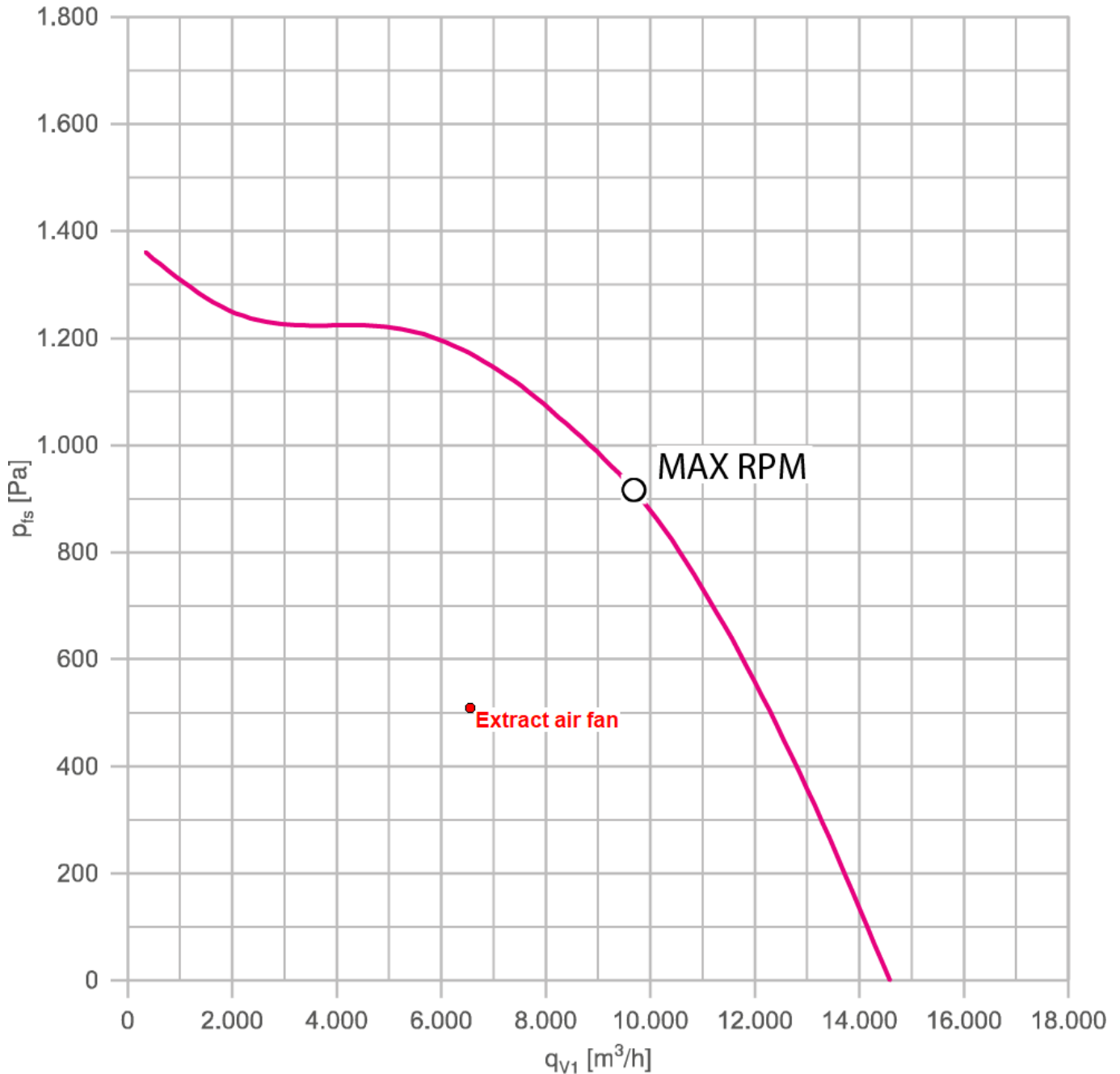


INKOPPLING / WIRING
Ziehl 3x400 V - DC, DG

Project name
Name of AHU
Size

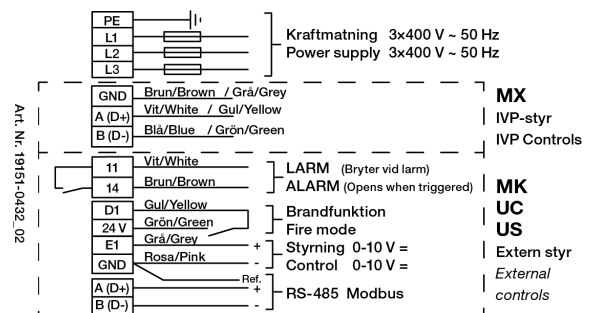
TFP Wessex Southampton 8613-24020
AHU1
480 1.96/1.82 m³/s

Operating point per fan. 1 of 1 extract air.



Extract air

Flow 1.82 m³/s
Total static pressure 508 Pa
Fan rpm 1403 r/m
Motor output Power 3.50 kW
Max. rpm 1950 r/m
Fan type EC500ZBLU-G1
K-factor for air flow measuring 12.86



INKOPPLING / WIRING
Zieh! 3x400 V - DC, DG