Rooftop with 3 dampers Air Conditioning Technical Data

UATYA-BFC3Y1

UATYA25BFC3Y1
UATYA30BFC3Y1
UATYA40BFC3Y1
UATYA50BFC3Y1
UATYA60BFC3Y1
UATYA70BFC3Y1
UATYA80BFC3Y1
UATYA90BFC3Y1
UATYA100BFC3Y1
UATYA110BFC3Y1
UATYA120BFC3Y1
UATYA140BFC3Y1
UATYA150BFC3Y1
UATYA160BFC3Y1
UATYA180BFC3Y1
UATYA190BFC3Y1

EEDEN20A

Table of contents

UATYA-BFC3Y1

1 Features

1 - 1 UATYA-BFC3Y1

Integrated fresh air solution with extraction damper and thermodynamic heat recovery

- Integrated extraction damper and fan ensures an optimal pressure balance inside the building
- Thermo dynamic heat recovery, recovers waste heat through the outdoor heat exchanger
- Free cooling with up to 100% fresh air intake, saving on energy consumption and improving indoor air quality
- Reduced CO2 equivalent thanks to the use of lower GWP R-32 refrigerant
- Highly efficient ERP compliant models, meeting the latest eco-design requirements
- Easy to install 'plug and play' concept; no additional piping is required since this is a packaged unit
- Available as Made-To-Stock units and Made-To-Order units with extensive option package
- Demand controlled fresh air management thanks to the CO2 sensor connection available as accessory
- 25mm double skinned panels ensure long-lasting life and provide good thermal and sound insulation
- Lastest pCO5 controller allows direct integration with Daikin BMS, or third party BMS via BACnet or Modbus
- Clogged filter alarm indicates when filter requires cleaning, improving air quality and efficiency
- Flexible supply and return air connection
- Wide operation range in cooling (-15 ~ 48°C) and heating (-15 ~ 20°C)

Inverter

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications					UATYA25BFC3Y1	UATYA30BFC3Y1	UATYA40BFC3Y1	UATYA50BFC3Y1
Cooling capacity	Nom.			kW	25.8 (1)	33.4 (1)	38.7 (1)	45.7 (1)
	With 30% fresh air			kW	27.8 (1)	36.1 (1)	42.5 (1)	49.6 (1)
Heating capacity	Nom.			kW	25.3 (2)	31.1 (2)	36.3 (2)	46.2 (2)
	With 30% fresh air			kW	26.0 (2)	32.4 (2)	38.3 (2)	47.7 (2)
Power input	Cooling	Nom.		kW	9.1 (1)	10.8 (1)	12.7 (1)	15.4 (1)
	Heating	Nom.		kW	7.8 (2)	9.4 (2)	11.1 (2)	14.2 (2)
EER					2.83 (1) / 2.96 (3)	3.09 (1) / 3.20 (3)	3.06 (1) / 3.27 (3)	2.96 (1) / 3.12 (3)
COP					3.22 (2) / 3.38 (3)	3.31 (2) / 3.48 (3)	3.26 (2) / 3.51 (3)	3.24 (2) / 3.46 (3)
Space cooling	Capacity	Pdesign		kW	25.8	33.4	38.7	45.7
	SEER				4.62 (4)	4.89 (4)	5.48 (4)	5.34 (4)
	ηs,c			%	181.6	192.6	216.1	210.5
	Annual energy consumption			kWh/a	3,378	4,101	4,238	5,139
Space heating (Average climate)	Capacity	Pdesign		kW	25.3	31.1	36.3	46.2
	SCOP/A				3.35 (4)	3.38 (4)	3.67 (4)	3.65 (4)
	ηs,h			%	131.0	132.2	143.8	143.0
	Pdh Heating capacity at -10°			kW	15.2	20.1	21.9	28.0
	Annual energy consumption			kWh/a	7,210	9,558	9,427	12,223
	Required back up heating cap at design conditions			kW	0.00			
Space cooling	A Condition (35°C - 27/19)	Pdc		kW	25.8	33.4	38.7	45.7
		EERd			2.83	3.09	3.06	2.96
		Power input		kW	9.1	10.8	12.7	15.4
	B Condition (30°C - 27/19)	Pdc		kW	19.1	24.5	28.5	33.6
		EERd			4.06	4.38	4.52	4.42
		Power input		kW	4.7	5.6	6.3	7.6
	C Condition (25°C - 27/19)	Pdc		kW	12.6	15.7	18.3	21.6
		EERd			5.73	6.04	6.78	6.75
		Power input		kW	2.2	2.6	2.7	3.2
	D Condition (20°C - 27/19)	Pdc		kW	12.9	14.0	14.5	20.4
		EERd			6.79	7.37	8.53	8.16
		Power input		kW	1.9		1.7	2.5
Space heating (Average climate)	TOL	Tol (temperature operating limit)		°C	-10			
		Pdh (declared heating cap)		kW	15.2	20.1	21.9	28.0
		COPd (declared COP)			1.95	2.01	1.99	2.01
		Power input		kW	7.8	10.0	11.0	13.9
	TBivalent	Tbiv (bivalent temperature)		°C	-8			
		Pdh (declared heating cap)		kW	15.9	21.3	22.8	29.4
Space heating (Average climate)	TBivalent	COPd (declared COP)			2.01	2.11	2.07	2.10
		Power input		kW	7.9	10.1	11.0	14.0
	A Condition (-7°C)	Pdh (declared heating cap)		kW	15.3	20.4	21.8	28.1
		COPd (declared COP)			2.14	2.24	2.20	2.21
		Power input		kW	7.1	9.1	9.9	12.7
	B Condition (2°C)	Pdh (declared heating cap)		kW	9.4	12.5	13.4	17.2
		COPd (declared COP)			3.62	3.57	3.94	3.91
		Power input		kW	2.6	3.5	3.4	4.4
	C Condition (7°C)	Pdh (declared heating cap)		kW	9.3	10.5	9.9	14.2
		COPd (declared COP)			4.23	4.20	4.50	4.58
		Power input		kW	2.2	2.5	2.2	3.1
	D Condition (12°C)	Pdh (declared heating cap)		kW	10.6	11.9	11.2	16.1
		COPd (declared COP)			5.05	4.96	5.60	5.55
		Power input		kW	2.1	2.4	2.0	2.9
Evaporator	Supply side	Fan	Quantity		1			
			Air flow rate	m^3/h	4,500	5,800	7,500	9,000
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	425 (5)	727 (5)	510 (5)	439 (5)
		Filter	Thickness	mm	98			
	Return side	Fan	Quantity		1			
			Air flow rate	m^3/min	4,500	5,800	7,500	9,000
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	461 (5)	352 (5)	561 (5)	519 (5)
	Fresh air	Ratio	Standard	%	30			
			In free cooling	%	100			

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications				UATYA25BFC3Y1	UATYA30BFC3Y1	UATYA40BFC3Y1	UATYA50BFC3Y1
Condenser	Air flow rate	Cooling	m^3/h	15,725	16,038	16,374	16,341
	Fan	Motor Quantity		1			
	Compressor	Quantity		1			
	Refrigerant	GWP		675			
		Charge	TCO2Eq	4,725	6,750	8,100	10,125
		Charge	kg	7.0	10.0	12.0	15.0
		Circuits Quantity		1			
	Refrigerant oil	Charged volume	l	2	3		
Dimensions	Unit	Height	mm	1,924		2,374	
		Width	mm	2,250			
		Depth	mm	3,514			
Weight	Unit		kg	1,166	1,196	1,310	1,329
Sound pressure level	Cooling		dBA	63.9 (6)	66.0 (6)	68.0 (6)	67.3 (6)
Sound power level	Cooling		dBA	82.2 (7)	84.3 (7)	86.8 (7)	86.1 (7)
Operation range	Cooling	Min.	°CDB	-10			
		Max.	°CDB	48			
	Heating	Min.	°CWB	-15			
		Max.	°CWB	26			
Cooling	Cdc (Degradation cooling)			0.25			
Heating	Cdh (Degradation heating)			0.25			

Technical specifications				UATYA60BFC3Y1	UATYA70BFC3Y1	UATYA80BFC3Y1	UATYA90BFC3Y1
Cooling capacity	Nom.		kW	58.8 (1)	65.3 (1)	74.8 (1)	89.8 (1)
	With 30% fresh air		kW	63.7 (1)	70.5 (1)	81.3 (1)	96.8 (1)
Heating capacity	Nom.		kW	55.1 (2)	64.9 (2)	68.5 (2)	84.2 (2)
	With 30% fresh air		kW	57.1 (2)	68.6 (2)	71.6 (2)	87.2 (2)
Power input	Cooling	Nom.	kW	18.8 (1)	22.4 (1)	24.2 (1)	29.4 (1)
	Heating	Nom.	kW	16.9 (2)	20.2 (2)	20.3 (2)	26.1 (2)
EER				3.12 (1) / 3.23 (3)	2.92 (1) / 3.00 (3)	3.09 (1) / 3.21 (3)	3.06 (1) / 3.22 (3)
COP				3.25 (2) / 3.40 (3)	3.21 (2) / 3.39 (3)	3.37 (2) / 3.56 (3)	3.22 (2) / 3.45 (3)
Space cooling	Capacity	Pdesign	kW	58.8	65.3	74.8	89.8
	SEER			5.50 (4)	4.53 (4)	5.56 (4)	5.47 (4)
	ηs,c		%	217.1	178.1	219.4	215.8
	Annual energy consumption		kWh/a	6,411	8,652	8,124	9,852
Space heating (Average climate)	Capacity	Pdesign	kW	55.1	64.9	68.5	84.2
	SCOP/A			3.47 (4)	3.41 (4)	3.70 (4)	3.65 (4)
	ηs,h		%	135.6	133.5	145.2	143.0
	Pdh Heating capacity at -10°		kW	33.2	38.3	40.1	51.5
	Annual energy consumption		kWh/a	15,091	17,811	17,498	22,119
	Required back up heating cap at design conditions		kW	0.00			
Space cooling	A Condition (35°C - 27/19)	Pdc	kW	58.8	65.3	74.8	89.8
		EERd		3.12	2.92	3.09	3.06
		Power input	kW	18.8	22.4	24.2	29.4
	B Condition (30°C - 27/19)	Pdc	kW	43.2	48.1	55.4	66.1
		EERd		4.70	3.87	3.96	4.35
		Power input	kW	9.2	12.4	14.0	15.2
	C Condition (25°C - 27/19)	Pdc	kW	27.7	30.6	35.6	42.5
		EERd		6.76	5.67	6.72	6.64
		Power input	kW	4.1	5.4	5.3	6.4
	D Condition (20°C - 27/19)	Pdc	kW	22.1	23.9	25.8	35.3
		EERd		8.84	7.24	10.32	8.83
		Power input	kW	2.5	3.3	2.5	4.0
Space heating (Average climate)	TOL	Tol (temperature operating limit)	°C	-10			
		Pdh (declared heating cap)	kW	33.2	38.3	40.1	51.5
		COPd (declared COP)		1.96	1.93		1.96
		Power input	kW	16.9	19.9	20.8	26.3
	TBivalent	Tbiv (bivalent temperature)	°C	-8			
		Pdh (declared heating cap)	kW	34.5	40.1	42.7	53.2

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications					UATYA60BFC3Y1	UATYA70BFC3Y1	UATYA80BFC3Y1	UATYA90BFC3Y1
Space heating (Average climate)	TBivalent	COPd (declared COP)			2.04	2.02	2.04	2.03
		Power input		kW	16.9	19.9	20.9	26.2
	A Condition (-7°C)	Pdh (declared heating cap)		kW	33.0	42.3	44.5	55.3
		COPd (declared COP)			2.17	2.12	2.13	2.10
		Power input		kW	15.2	20.0	20.9	26.3
	B Condition (2°C)	Pdh (declared heating cap)		kW	20.3	23.5	25.0	19.6
		COPd (declared COP)			3.69	3.67	3.91	3.77
		Power input		kW	5.5	6.4		5.2
	C Condition (7°C)	Pdh (declared heating cap)		kW	14.9	16.0	15.3	22.4
		COPd (declared COP)			4.26	4.10	4.64	4.87
		Power input		kW	3.5	3.9	3.3	4.6
	D Condition (12°C)	Pdh (declared heating cap)		kW	16.9	18.4	17.7	25.4
		COPd (declared COP)			5.12	4.84	5.71	5.77
		Power input		kW	3.3	3.8	3.1	4.4
Evaporator	Supply side	Fan	Quantity		1		2	
			Air flow rate	m^3/h	11,000	13,000	14,500	16,500
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	629 (5)	410 (5)	526 (5)	493 (5)
		Filter	Thickness	mm	98			
	Return side	Fan	Quantity		1			2
			Air flow rate	m^3/min	11,000	13,000	14,500	16,500
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	426 (5)	474 (5)	596 (5)	543 (5)
	Fresh air	Ratio	Standard	%	30			
			In free cooling	%	100			
Condenser	Air flow rate	Cooling		m^3/h	31,183	32,203	35,774	37,285
	Fan	Motor	Quantity		2			
	Compressor	Quantity			1	2		
	Refrigerant	GWP			675			
		Charge		TCO2Eq	12,150		15,525	16,200
		Charge		kg	18.0		23.0	24.0
		Circuits	Quantity		1			
	Refrigerant oil	Charged volume		l	3	6		
Dimensions	Unit	Height		mm	1,924		2,374	
		Width		mm	2,250			
		Depth		mm	6,317			
Weight	Unit			kg	1,996	2,094	2,336	2,382
Sound pressure level	Cooling			dBA	69.0 (6)	68.1 (6)	72.6 (6)	68.7 (6)
Sound power level	Cooling			dBA	88.5 (7)	87.5 (7)	92.5 (7)	88.6 (7)
Operation range	Cooling	Min.		°CDB	-10			
		Max.		°CDB	48			
	Heating	Min.		°CWB	-15			
		Max.		°CWB	26			
Power consumption in other than active mode	Thermostat-off mode	Cooling	PTO	kW	1		-	
		Heating	PTO	kW	1		-	
Cooling	Cdc (Degradation cooling)				0.25			
Heating	Cdh (Degradation heating)				0.25			

Technical specifications				UATYA100BFC3Y1	UATYA110BFC3Y1	UATYA120BFC3Y1	UATYA140BFC3Y1
Cooling capacity	Nom.		kW	95.8 (1)	108.9 (1)	115.0 (1)	133.4 (1)
	With 30% fresh air		kW	104.3 (1)	118.0 (1)	124.5 (1)	145.6 (1)
Heating capacity	Nom.		kW	92.8 (2)	101.5 (2)	108.0 (2)	123.1 (2)
	With 30% fresh air		kW	97.9 (2)	107.0 (2)	112.3 (2)	132.0 (2)
Power input	Cooling	Nom.	kW	32.3 (1)	36.4 (1)	39.5 (1)	42.5 (1)
	Heating	Nom.	kW	29.0 (2)	30.3 (2)	33.2 (2)	35.8 (2)
EER				2.97 (1) / 3.14 (3)	2.99 (1) / 3.11 (3)	2.91 (1) / 3.01 (3)	3.14 (1) / 3.26 (3)
COP				3.20 (2) / 3.42 (3)	3.35 (2) / 3.57 (3)	3.25 (2) / 3.40 (3)	3.44 (2) / 3.62 (3)
Space cooling	Capacity	Pdesign	kW	95.8	108.9	115.0	133.4
	SEER			5.17 (4)	5.29 (4)	5.15 (4)	4.38 (4)
	ηs,c		%	203.7	208.6	203.0	172.1
	Annual energy consumption		kWh/a	11,122	12,348	13,397	18,280
Space heating (Average climate)	Capacity	Pdesign	kW	92.8	101.5	108.0	123.1
	SCOP/A			3.62 (4)	3.56 (4)	3.53 (4)	3.39 (4)
	ηs,h		%	141.6	139.3	138.3	132.5
	Pdh Heating capacity at -10°		kW	54.7	59.8	64.3	71.6
	Annual energy consumption		kWh/a	24,538	27,186	29,413	39,459
	Required back up heating cap at design conditions		kW	0.00			

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications					UATYA100BFC3Y1	UATYA110BFC3Y1	UATYA120BFC3Y1	UATYA140BFC3Y1
Space cooling	A Condition (35°C - 27/19)	Pdc		kW	95.8	108.9	115.0	133.4
		EERd			2.97	2.99	2.91	3.14
		Power input		kW	32.3	36.4	39.5	42.5
	B Condition (30°C - 27/19)	Pdc		kW	69.9	80.1	84.6	98.3
		EERd			3.97	4.09	3.90	4.15
		Power input		kW	17.6	19.6	21.7	23.7
	C Condition (25°C - 27/19)	Pdc		kW	45.3	51.4	54.3	63.2
		EERd			6.29	6.27	6.17	5.02
		Power input		kW	7.2	8.2	8.8	12.6
	D Condition (20°C - 27/19)	Pdc		kW	35.5	37.0	37.3	45.4
		EERd			8.66	9.25	9.10	5.47
		Power input		kW	4.1	4.0	4.1	8.3
Space heating (Average climate)	TOL	Tol (temperature operating limit)		°C	-10			
		Pdh (declared heating cap)		kW	54.7	59.8	64.3	71.6
		COPd (declared COP)			1.56	2.01	1.98	1.91
		Power input		kW	35.0	29.8	32.5	37.4
	TBivalent	Tbiv (bivalent temperature)		°C	-8			-6
		Pdh (declared heating cap)		kW	58.5	63.8	68.5	80.8
Space heating (Average climate)	TBivalent	COPd (declared COP)			1.71	2.10	2.08	2.15
		Power input		kW	34.3	30.4	33.0	37.6
	A Condition (-7°C)	Pdh (declared heating cap)		kW	60.1	66.0	70.2	80.0
		COPd (declared COP)			1.78	2.18	2.13	2.12
		Power input		kW	33.8	30.3	32.9	37.7
	B Condition (2°C)	Pdh (declared heating cap)		kW	34.3	37.3	40.1	51.5
		COPd (declared COP)			3.94	3.52		3.68
		Power input		kW	8.7	10.6	11.4	14.0
	C Condition (7°C)	Pdh (declared heating cap)		kW	22.5	22.6	22.7	34.4
		COPd (declared COP)			4.79	4.81	4.73	4.15
		Power input		kW	4.7		4.8	8.3
	D Condition (12°C)	Pdh (declared heating cap)		kW	25.5	25.6	25.8	38.3
		COPd (declared COP)			5.67	5.69	5.73	4.67
		Power input		kW		4.5		8.2
Evaporator	Supply side	Fan	Quantity			2		3
			Air flow rate	m^3/h	18,000	19,800	21,600	25,000
			Nominal ESP	Pa		300 (5)		
			High ESP	Pa	463 (5)	427 (5)	394 (5)	441 (5)
		Filter	Thickness	mm		98		
	Return side	Fan	Quantity			2		
			Air flow rate	m^3/min	18,000	19,800	21,600	25,000
			Nominal ESP	Pa		300 (5)		
			High ESP	Pa	519 (5)	483 (5)	438 (5)	324 (5)
	Fresh air	Ratio	Standard	%		30		
			In free cooling	%		100		
Condenser	Air flow rate	Cooling		m^3/h	36,195	38,143	36,865	70,704
	Fan	Motor	Quantity			2		4
	Compressor	Quantity				2		4
	Refrigerant	GWP				675		
		Charge		TCO2Eq	18,900	20,250	24,300	25,650
		Charge		kg	28.0	30.0	36.0	38.0
		Circuits	Quantity			1		2
	Refrigerant oil	Charged volume		l	6	8		14
Dimensions	Unit	Height		mm		2,374		
		Width		mm		2,250		
		Depth		mm		6,317		7,117
Weight	Unit			kg	2,452	2,548	2,558	3,024
Sound pressure level	Cooling			dBA	69.9 (6)	70.6 (6)	74.2 (6)	68.3 (6)
Sound power level	Cooling			dBA	89.8 (7)	90.5 (7)	94.1 (7)	88.6 (7)
Operation range	Cooling	Min.		°CDB		-10		
		Max.		°CDB		48		
	Heating	Min.		°CWB		-15		
		Max.		°CWB		26		
Power consumption in other than active mode	Thermostat-off mode	Cooling	PTO	kW	-	1		
		Heating	PTO	kW	-	1		
Cooling	Cdc (Degradation cooling)					0.25		
Heating	Cdh (Degradation heating)					0.25		

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications					UATYA150BFC3Y1	UATYA160BFC3Y1	UATYA180BFC3Y1	UATYA190BFC3Y1
Cooling capacity	Nom.			kW	144.7 (1)	154.6 (1)	171.9 (1)	187.0 (1)
	With 30% fresh air			kW	156.8 (1)	168.3 (1)	186.5 (1)	204.4 (1)
Heating capacity	Nom.			kW	136.4 (2)	147.1 (2)	157.1 (2)	176.9 (2)
	With 30% fresh air			kW	147.5 (2)	160.0 (2)	173.5 (2)	191.6 (2)
Power input	Cooling	Nom.		kW	47.9 (1)	50.7 (1)	56.1 (1)	62.9 (1)
	Heating	Nom.		kW	40.9 (2)	45.1 (2)	47.2 (2)	54.2 (2)
EER					3.02 (1) / 3.14 (3)	3.05 (1) / 3.18 (3)	3.07 (1) / 3.21 (3)	2.97 (1) / 3.14 (3)
COP					3.33 (2) / 3.57 (3)	3.26 (2) / 3.49 (3)	3.33 (2) / 3.63 (3)	3.27 (2) / 3.50 (3)
Space cooling	Capacity	Pdesign		kW	144.7	154.6	171.9	187.0
	SEER				4.26 (4)	4.27 (4)	4.15 (4)	4.08 (4)
	ηs,c			%	167.2	167.6	162.8	160.2
	Annual energy consumption			kWh/a	20,374	21,779	24,876	27,540
Space heating (Average climate)	Capacity	Pdesign		kW	136.4	147.1	157.1	176.9
	SCOP/A				3.36 (4)	3.34 (4)	3.31 (4)	3.34 (4)
	ηs,h			%	131.4	130.8	129.5	130.6
	Pdh Heating capacity at -10°			kW	80.3	85.9	95.5	105.9
	Annual energy consumption			kWh/a	44,258	47,649	51,965	56,838
	Required back up heating cap at design conditions			kW	0.00			
Space cooling	A Condition (35°C - 27/19)	Pdc		kW	144.7	154.6	171.9	187.0
		EERd			3.02	3.05	3.07	2.97
		Power input		kW	47.9	50.7	56.1	62.9
	B Condition (30°C - 27/19)	Pdc		kW	106.5	114.1	126.7	138.0
		EERd			4.05	3.98	4.05	3.84
		Power input		kW	26.3	28.7	31.3	35.9
	C Condition (25°C - 27/19)	Pdc		kW	68.5	73.3	81.4	88.7
		EERd			4.86	4.92	4.82	
		Power input		kW	14.1	14.9	16.9	18.4
	D Condition (20°C - 27/19)	Pdc		kW	49.7	50.2	58.3	58.5
		EERd			5.29	5.34	5.03	5.00
		Power input		kW	9.4		11.6	11.7
Space heating (Average climate)	TOL	Tol (temperature operating limit)		°C	-10			
		Pdh (declared heating cap)		kW	80.3	85.9	95.5	105.9
		COPd (declared COP)			1.91	1.88	1.97	1.98
		Power input		kW	42.0	45.8	48.4	53.4
	TBivalent	Tbiv (bivalent temperature)		°C	-6			
		Pdh (declared heating cap)		kW	89.9	96.3	104.0	114.7
Space heating (Average climate)	TBivalent	COPd (declared COP)			2.12	2.08	2.14	2.13
		Power input		kW	42.5	46.4	48.7	53.9
	A Condition (-7°C)	Pdh (declared heating cap)		kW	86.4	93.6	103.4	113.7
		COPd (declared COP)			2.03		2.11	
		Power input		kW	42.5	46.2	49.1	53.8
	B Condition (2°C)	Pdh (declared heating cap)		kW	57.3	61.3	66.3	80.0
		COPd (declared COP)			3.67		3.60	3.67
		Power input		kW	15.6	16.7	18.4	21.8
	C Condition (7°C)	Pdh (declared heating cap)		kW	38.3	38.5	45.0	45.3
		COPd (declared COP)			4.12	4.10	4.02	4.01
		Power input		kW	9.3	9.4	11.2	11.3
	D Condition (12°C)	Pdh (declared heating cap)		kW	42.3		48.9	49.2
		COPd (declared COP)			4.60	4.55	4.45	4.43
		Power input		kW	9.2	9.3	11.0	11.1
Evaporator	Supply side	Fan	Quantity		3			
			Air flow rate	m^3/h	26,500	28,000	30,500	31,500
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	416 (5)	388 (5)	340 (5)	310 (5)
		Filter	Thickness	mm	98			
	Return side	Fan	Quantity		2			
			Air flow rate	m^3/min	26,500	28,000	30,500	31,500
			Nominal ESP	Pa	300 (5)			
			High ESP	Pa	445 (5)	353 (5)	497 (5)	428 (5)
	Fresh air	Ratio	Standard	%	30			
			In free cooling	%	100			

2 Specifications

1 - 1 UATYA-BFC3Y1

Technical specifications					UATYA150BFC3Y1	UATYA160BFC3Y1	UATYA180BFC3Y1	UATYA190BFC3Y1
Condenser	Air flow rate	Cooling		m^3/h	72,395	67,733	70,200	72,005
	Fan	Motor	Quantity		4			
	Compressor	Quantity			4			
	Refrigerant	GWP			675			
		Charge		TCO2Eq	25,650	31,050	33,750	
		Charge		kg	38.0	46.0	50.0	
		Circuits	Quantity		2			
	Refrigerant oil	Charged volume		l	14			16
Dimensions	Unit	Height		mm	2,374			
		Width		mm	2,250			
		Depth		mm	7,117			
Weight	Unit			kg	3,035	3,074	3,192	3,271
Sound pressure level	Cooling			dBA	68.3 (6)	68.7 (6)	69.1 (6)	70.0 (6)
Sound power level	Cooling			dBA	88.6 (7)	89.0 (7)	89.3 (7)	90.2 (7)
Operation range	Cooling	Min.		°CDB	-10			
		Max.		°CDB	48			
	Heating	Min.		°CWB	-15			
		Max.		°CWB	26			
Power consumption in other than active mode	Thermostat-off mode	Cooling	PTO	kW	1			2
		Heating	PTO	kW	1			
Cooling	Cdc (Degradation cooling)				0.25			
Heating	Cdh (Degradation heating)				0.25			

Electrical specifications					UATYA25BFC3Y1	UATYA30BFC3Y1	UATYA40BFC3Y1	UATYA50BFC3Y1
Power supply	Name				400/3/50±5%			
	Phase				3~			
	Frequency			Hz	50			
	Voltage			V	400			
Current	Nominal running current (RLA)	Cooling		A	15.4	24.7	27.6	35.8
	Recommended fuses			A	25	40		50
Wiring connections	For power supply	Quantity			4G			

Electrical specifications					UATYA60BFC3Y1	UATYA70BFC3Y1	UATYA80BFC3Y1	UATYA90BFC3Y1
Power supply	Name				400/3/50±5%			
	Phase				3~			
	Frequency			Hz	50			
	Voltage			V	400			
Current	Nominal running current (RLA)	Cooling		A	38.7	47.4	55.3	73.4
	Recommended fuses			A	50	63	80	100
Wiring connections	For power supply	Quantity			4G			

Electrical specifications					UATYA100BFC3Y1	UATYA110BFC3Y1	UATYA120BFC3Y1	UATYA140BFC3Y1
Power supply	Name				400/3/50±5%			
	Phase				3~			
	Frequency			Hz	50			
	Voltage			V	400			
Current	Nominal running current (RLA)	Cooling		A	73.4	76.8		107.0
	Recommended fuses			A	100			160
Wiring connections	For power supply	Quantity			4G			

Electrical specifications					UATYA150BFC3Y1	UATYA160BFC3Y1	UATYA180BFC3Y1	UATYA190BFC3Y1
Power supply	Name				400/3/50±5%			
	Phase				3~			
	Frequency			Hz	50			
	Voltage			V	400			
Current	Nominal running current (RLA)	Cooling		A	118.2	126.8	140.0	146.0
	Recommended fuses			A	160		200	
Wiring connections	For power supply	Quantity			4G			

(1)Conditions for calculation: Ambient air 27°C DB, 19°C WB; External air 35°C DB, 24°C WB. 100% recirculating air; calculated according to EN 14511/2018 |
(2)Conditions for calculation: Ambient air 20°C DB, 15°C WB; External air 7°C DB, 6°C WB. 100% recirculating air; calculated according to EN 14511/2018 |
(3)With 30% fresh air |
(4)Calculated according to EN 14825/2019 |
(5)Value refers to unit at nominal airflow, delivered with no accessories and with only G4 filters. |
(6)Average sound pressure level, at 1 meter from the unit, in free field on a reflective surface. Not binding value derived from the sound power level |

2 Specifications

1 - 1 UATYA-BFC3Y1

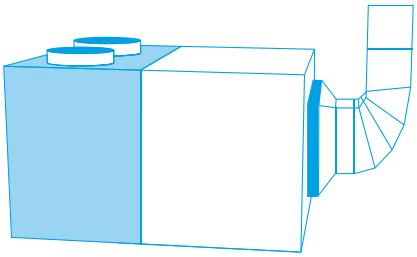
(7)Sound power level in free field calculated according to standard ISO 3744. Values refer only to the base unit version

3 Features and advantages

3 - 1 Features and Advantages

UATYA-BBAY1
UATYA-BFC2Y1
UATYA-BFC3Y1

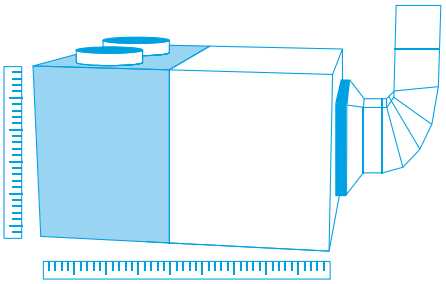
Made-To-Stock units (MTS)



48 predefined units readily available from stock

- Fast delivery
- 3 versions: Base, 2 dampers and 3 dampers
  - Thermodynamic heat recovery available on full FC3 range
- Extended capacity up to 190 kW!
- Comes with a wide range of standard integrated features

Made-To-Order units (MTO)



Fully customizable units for maximum flexibility

- Almost infinite configuration possibilities thanks to wide choice of options
- 4 versions: Base, 2 dampers, 3 dampers and 4 dampers
  - Thermodynamic heat recovery available on full FC3 range
  - Premium efficiency plate heat exchanger available on RS4 range
- Extended capacity up to 190 kW!
- Comes with a wide range of standard integrated features
- Easy selection via selection software: rooftop.daikin.eu

ECPEN21-117

3 Features and advantages

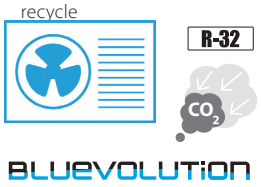
3 - 1 Features and Advantages

UATYA-BBAY1
UATYA-BFC2Y1
UATYA-BFC3Y1

Standard integrated features on all Made-To-Stock and Made-To-Order units

1 R-32 refrigerant

› Top sustainability thanks to the use of low GWP (675) refrigerant
› Single component refrigerant, easy to re-use and recycle



BLUEVOLUTION

2 Inverter driven compressors

› Great year-round seasonal efficiency
› Available up to 120 kW models

3 Increased capacity range up to 190 kW!

› More flexibility to tackle larger projects with a small footprint

4 25 mm double skinned panels

› Ensuring long-lasting life and providing good thermal and sound insulation

5 Full color touch display

› Intuitive to use
› Better visualisation of unit parameters

6 Integrated connectivity

› Direct integration into Daikin intelligent Touch Manager BMS (via BACNET protocol)
› Easy integration in 3rd party BMS systems via Ethernet port (BACnet TCP/IP & Modbus TCP/IP) or 3-cable port (Modbus over RS485)

7 Selection software

› Easy selection of the correction unit and options based on location conditions
› Direct availability of technical drawings

More standard integrated features

› ISO Coarse 75% filter (G4) (standard for MTS only)
› Standard clogged filter alarm
› Flexible air delivery
› Hydrophilic aluminum fins on indoor and outdoor unit side
› Mesh coil guard on outdoor heat exchanger
› Factory mounted drain pan with heater
› Single operation voltage-free contact
› Power supply connection safety through max/min voltage relay and reversed phase connection

ECPEN21-117

4 Options

4 - 1 Options

UATYA-BBAY1
UATYA-BFC2Y1
UATYA-BFC3Y1

		MTS - BASE series - UATYA-BBAY1					MTS - FC2 series - UATYA-BFC2Y1					MTS - FC3 series - UATYA-BFC3Y1				
		25-30	40-50	60-70	80-120	140-190	25-30	40	50	60-70	80-190	25-30	40-50	60-70	80-120	140-190
Air treatment	Filter ISO Coarse 75% (G4)	2x UATYAC75A + 2x UATYAC75B (Standard)	3x UATYAC75A + 3x UATYAC75B (Standard)	6x UATYAC75B (Standard)	12x UATYAC75C (Standard)	12x UATYAC75C (Standard)	2x UATYAC75A + 2x UATYAC75B (Standard)	3x UATYAC75A + 3x UATYAC75B (Standard)	3x UATYAC75A + 3x UATYAC75B (Standard)	6x UATYAC75B (Standard)	12x UATYAC75C (Standard)	2x UATYAC75A + 2x UATYAC75B (Standard)	3x UATYAC75A + 3x UATYAC75B (Standard)	6x UATYAC75B (Standard)	12x UATYAC75C (Standard)	12x UATYAC75C (Standard)
	Filter ISO ePM10 50% (M5/F5)	2x UATY-AEPM1050A + 2x UATYAEPM1050B	3x UATY-AEPM1050A + 3x UATYAEPM1050B	3x UATY-AEPM1050B	12x UATY-AEPM1050C	12x UATY-AEPM1050C	2x UATY-AEPM1050A + 2x UATYAEPM1050B	3x UATY-AEPM1050A + 3x UATYAEPM1050B	3x UATY-AEPM1050A + 3x UATYAEPM1050B	3x UATY-AEPM1050B	12x UATY-AEPM1050C	2x UATY-AEPM1050A + 2x UATYAEPM1050B	3x UATY-AEPM1050A + 3x UATYAEPM1050B	3x UATY-AEPM1050B	12x UATY-AEPM1050C	12x UATY-AEPM1050C
	Filter ISO ePM10 70% (M6)	2x UATY-AEPM1070A + 2x UATY-AEPM1070B	3x UATY-AEPM1070A + 3x UATY-AEPM1070B	6x UATY-AEPM1070B	12x UATY-AEPM1070C	12x UATY-AEPM1070C	2x UATY-AEPM1070A + 2x UATY-AEPM1070B	3x UATY-AEPM1070A + 3x UATY-AEPM1070B	3x UATY-AEPM1070A + 3x UATY-AEPM1070B	6x UATY-AEPM1070B	12x UATY-AEPM1070C	2x UATY-AEPM1070A + 2x UATYAEPM1070B	3x UATY-AEPM1070A + 3x UATYAEPM1070B	6x UATY-AEPM1070B	12x UATY-AEPM1070C	12x UATY-AEPM1070C
	Rigid bag filter ISO ePM1 50% (F7)	2x UATY-AEPM150A + 2x UATYAEPM150B	3x UATY-AEPM150A + 3x UATYAEPM150B	6x UATYAEPM150B	12x UATY-AEPM150C	12x UATY-AEPM150C	2x UATY-AEPM150A + 2x UATYAEPM150B	3x UATY-AEPM150A + 3x UATYAEPM150B	3x UATY-AEPM150A + 3x UATYAEPM150B	6x UATYAEPM150B	12x UATY-AEPM150C	2x UATY-AEPM150A + 2x UATYAEPM150B	3x UATY-AEPM150A + 3x UATYAEPM150B	6x UATYAEPM150B	12x UATY-AEPM150C	12x UATY-AEPM150C
	Rigid bag filter ISO ePM1 85% (F9)	2x UATY-AEPM185A + 2x UATYAEPM185B	3x UATY-AEPM185A + 3x UATYAEPM185B	6x UATYAEPM185B	12x UATY-AEPM185C	12x UATY-AEPM185C	2x UATY-AEPM185A + 2x UATYAEPM185B	3x UATY-AEPM185A + 3x UATYAEPM185B	3x UATY-AEPM185A + 3x UATYAEPM185B	6x UATYAEPM185B	12x UATY-AEPM185C	2x UATY-AEPM185A + 2x UATYAEPM185B	3x UATY-AEPM185A + 3x UATYAEPM185B	6x UATYAEPM185B	12x UATY-AEPM185C	12x UATY-AEPM185C
Control	**UATYAC02P** - Duct air quality CO2 probe	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	UATYACAP - Constant air pressure control airflow transducer	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	UATYAWRC - Remote touch screen wired remote controller	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	UATYARRP - Room temperature return probe (incl. housing)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	UATYASA - Fire and smoke alarm	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Other	Rubber antivibration mounts	2x UATYAAVM1	1x UATYAAVM1 + 1x UATYAAVM2	2x UATYAAVM1 + 1x UATYAAVM2	4x UATYAAVM1	2x UATYAAVM1 + 2x UATYAAVM2	2x UATYAAVM1	2x UATYAAVM1	1x UATYAAVM1 + 1x UATYAAVM2	3x UATYAAVM1 + 1x UATYAAVM2	2x UATYAAVM1 + 2x UATYAAVM2	1x UATYAAVM1 + 1x UATYAAVM2	1x UATYAAVM1 + 2x UATYAAVM2	2x UATYAAVM1 + 2x UATYAAVM2	2x UATYAAVM1 + 2x UATYAAVM2	3x UATYAAVM1 + 2x UATYAAVM2
	Rainproof hood with anti-intrusion grille						UATYARPH1	UATYARPH2	UATYARPH2	UATYARPH3	UATYARPH4	2x UATYARPH1	2x UATYARPH2	2x UATYARPH3	2x UATYARPH4	2x UATYARPH4

ECPEN21-117

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA25BBAY1
UATYA25BFC2Y1
UATYA25BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			25			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
4500	24	17	26,3	18,7	7,3	25,8	18,5	7,8	25,1	18,4	8,4	24,3	17,9	9,0	23,5	17,6	9,6	
	25	18	27,1	18,6	7,3	26,5	18,4	7,8	25,9	18,3	8,4	25,0	17,8	9,0	24,2	17,5	9,7	
	26	18	27,2	20,2	7,3	26,5	19,9	7,8	25,8	19,6	8,4	25,1	18,8	9,1	24,4	18,6	9,7	
	27	19	28,1	20,0	7,4	27,3	19,6	7,9	26,6	19,5	8,5	**25,8**	**19,3**	**9,1**	25,0	19,0	9,8	
	28	20	28,9	19,7	7,5	28,2	19,6	8,0	27,4	19,1	8,6	26,6	19,1	9,2	25,8	18,8	9,9	
	30	22	30,6	19,2	7,6	29,9	18,9	8,1	29,2	18,9	8,8	28,3	18,4	9,4	27,4	18,3	10,0	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
4500	-15	-16	14,0	6,4	13,9	6,5	14,3	6,8	13,9	7,0	14,2	7,2	14,4	7,4	14,3	7,6	14,0	7,8
	-10	-11	16,1	6,6	16,5	6,9	16,2	7,1	16,6	7,4	16,7	7,6	16,7	7,8	17,1	8,1	16,9	8,3
	-7	-8	17,9	6,8	18,0	7,0	17,8	7,2	18,0	7,4	18,1	7,7	18,0	7,9	17,7	8,1	18,2	8,4
	-3	-4	20,0	6,7	19,9	7,0	19,9	7,2	20,1	7,4	19,9	7,6	20,1	7,8	20,3	8,1	20,1	8,3
	0	-1	21,7	6,7	21,7	6,9	21,4	7,1	21,8	7,3	21,5	7,5	21,5	7,7	21,3	8,0	21,7	8,2
	2	1	22,6	6,7	22,7	6,8	22,7	7,1	22,7	7,3	22,6	7,5	22,5	7,7	22,4	7,9	22,5	8,2
	7	6	25,8	6,8	25,7	7,0	25,5	7,2	25,4	7,4	25,4	7,6	**25,3**	**7,9**	25,3	8,1	25,1	8,3
	12	11	28,7	7,1	28,7	7,3	28,4	7,5	28,1	7,7	28,2	8,0	28,1	8,2	28,2	8,5	27,9	8,7

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
4500	-15	-16	12,7	6,4	12,6	6,5	13,0	6,8	12,7	7,0	12,9	7,2	13,1	7,4	13,0	7,6	12,8	7,8
	-10	-11	14,6	6,6	15,0	6,9	14,7	7,1	15,1	7,4	15,2	7,6	15,2	7,8	15,5	8,1	15,4	8,3
	-7	-8	16,3	6,8	16,4	7,0	16,2	7,2	16,3	7,4	16,5	7,7	16,4	7,9	16,1	8,1	16,5	8,4
	-3	-4	18,2	6,7	18,1	7,0	18,1	7,2	18,3	7,4	18,1	7,6	18,3	7,8	18,4	8,1	18,3	8,3
	0	-1	19,8	6,7	19,8	6,9	19,5	7,1	19,8	7,3	19,6	7,5	19,6	7,7	19,4	8,0	19,7	8,2
	2	1	20,6	6,7	20,6	6,8	20,6	7,1	20,6	7,3	20,5	7,5	20,5	7,7	20,4	7,9	20,4	8,2
	7	6	25,8	6,8	25,7	7,0	25,5	7,2	25,4	7,4	25,4	7,6	**25,3**	**7,9**	25,3	8,1	25,1	8,3
	12	11	28,7	7,1	28,7	7,3	28,4	7,5	28,1	7,7	28,2	8,0	28,1	8,2	28,2	8,5	27,9	8,7

Data calculated in accordance with EN 14511

UATYA25BBAY1
UATYA25BFC2Y1
UATYA25BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA30BBAY1
UATYA30BFC2Y1
UATYA30BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			30			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
5800	24	17	33,9	23,7	8,4	33,2	23,5	9,1	32,3	23,1	9,8	31,4	22,9	10,6	30,4	21,8	11,6	
	30	18	35,0	23,4	8,5	34,3	23,2	9,1	33,4	22,8	9,9	32,4	22,6	10,7	31,3	22,2	11,6	
	26	18	35,1	25,7	8,5	34,3	24,7	9,2	33,4	25,1	9,9	32,3	24,5	10,7	31,5	23,9	11,7	
	27	19	36,2	25,1	8,6	35,5	25,1	9,2	34,4	24,6	10,0	**33,5**	**24,6**	**10,8**	32,3	24,0	11,7	
	28	20	37,3	25,0	8,7	36,5	24,4	9,3	35,5	24,4	10,1	34,5	24,0	10,9	33,4	23,6	11,8	
	30	22	39,8	24,2	8,8	38,9	23,8	9,4	37,8	23,8	10,2	36,8	23,6	11,1	35,4	23,0	12,0	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
5800	-15	-16	17,2	7,6	17,4	7,9	17,2	8,1	17,5	8,4	17,4	8,7	17,9	9,0	18,0	9,3	18,0	9,7
	-10	-11	20,2	8,0	19,7	8,2	19,8	8,5	20,4	8,8	20,4	9,2	20,9	9,5	21,1	9,9	21,0	10,3
	-7	-8	22,0	8,0	22,2	8,3	22,3	8,6	22,2	8,9	22,2	9,3	22,0	9,6	22,6	10,0	21,9	10,3
	-3	-4	24,3	8,0	24,4	8,2	24,6	8,6	24,6	8,8	24,7	9,2	24,6	9,6	24,8	9,9	24,7	10,3
	0	-1	26,5	7,8	26,4	8,1	26,5	8,4	26,2	8,8	26,7	9,0	26,6	9,4	26,6	9,8	26,5	10,1
	2	1	28,2	7,7	27,8	8,0	27,8	8,3	27,8	8,6	27,8	8,9	27,9	9,2	28,0	9,6	27,8	10,0
	7	6	31,4	7,8	31,2	8,1	31,2	8,4	31,2	8,7	31,2	9,0	**31,2**	**9,4**	31,0	9,7	31,2	10,2
	12	11	34,7	8,0	34,6	8,4	34,5	8,7	34,4	9,0	34,3	9,4	34,2	9,7	34,2	10,1	34,2	10,5

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
5800	-15	-16	15,7	7,6	15,9	7,9	15,7	8,1	15,9	8,4	15,8	8,7	16,2	9,0	16,3	9,3	16,4	9,7
	-10	-11	18,4	8,0	17,9	8,2	18,0	8,5	18,6	8,8	18,6	9,2	19,0	9,5	19,2	9,9	19,1	10,3
	-7	-8	20,0	8,0	20,2	8,3	20,3	8,6	20,2	8,9	20,2	9,3	20,0	9,6	20,6	10,0	20,0	10,3
	-3	-4	22,1	8,0	22,2	8,2	22,4	8,6	22,4	8,8	22,4	9,2	22,4	9,6	22,5	9,9	22,4	10,3
	0	-1	24,1	7,8	24,0	8,1	24,1	8,4	23,8	8,8	24,3	9,0	24,2	9,4	24,2	9,8	24,1	10,1
	2	1	25,7	7,7	25,2	8,0	25,2	8,3	25,3	8,6	25,3	8,9	25,3	9,2	25,5	9,6	25,3	10,0
	7	6	31,4	7,8	31,2	8,1	31,2	8,4	31,2	8,7	31,2	9,0	**31,2**	**9,4**	31,0	9,7	31,2	10,2
	12	11	34,7	8,0	34,6	8,4	34,5	8,7	34,4	9,0	34,3	9,4	34,2	9,7	34,2	10,1	34,2	10,5

Data calculated in accordance with EN 14511

UATYA30BBAY1
UATYA30BFC2Y1
UATYA30BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA40BBAY1
UATYA40BFC2Y1
UATYA40BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
7500	**24**	**17**	39,2	27,6	10,1	38,4	27,1	10,8	37,4	26,8	11,6	36,5	26,5	12,4	35,2	26,0	13,4
	40	**18**	40,5	27,1	10,2	39,7	26,9	10,9	38,7	26,6	11,7	37,6	26,1	12,6	36,4	25,9	13,5
	26	**18**	40,4	29,3	10,2	39,6	29,3	10,9	39,0	28,8	11,7	37,6	28,0	12,6	36,4	27,2	13,6
	27	**19**	41,7	29,1	10,3	40,9	28,9	11,0	39,8	28,6	11,8	**38,8**	**28,4**	**12,7**	37,4	27,8	13,7
	28	**20**	43,1	28,7	10,3	42,2	28,4	11,1	41,2	28,2	11,9	40,1	27,9	12,8	38,8	27,7	13,8
	30	**22**	45,8	28,1	10,6	44,8	27,6	11,3	44,0	27,6	12,1	42,5	26,8	13,0	41,1	26,8	14,0

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
7500	**-15**	**-16**	19,8	8,7	20,0	9,1	19,8	9,3	20,3	9,7	20,1	9,9	20,7	10,4	20,5	10,7	20,9	11,1
	-10	**-11**	23,2	9,2	23,2	9,5	23,3	9,9	23,8	10,2	24,0	10,7	24,0	11,0	24,2	11,4	24,5	11,8
	-7	**-8**	25,5	9,3	25,1	9,6	25,2	10,0	25,7	10,3	25,4	10,7	25,8	11,1	25,8	11,5	26,0	11,9
	-3	**-4**	28,9	9,4	28,7	9,7	28,8	10,0	28,9	10,3	28,9	10,7	28,5	11,2	28,5	11,6	28,9	11,9
	0	**-1**	31,0	9,3	30,6	9,7	31,3	9,9	31,3	10,2	31,2	10,7	31,1	11,0	31,1	11,4	30,9	11,8
	2	**1**	32,8	9,2	32,6	9,5	32,6	9,9	32,5	10,2	32,4	10,5	32,5	11,0	32,4	11,3	32,4	11,7
	7	**6**	36,9	9,4	36,7	9,7	36,7	10,0	36,5	10,4	36,5	10,8	**36,3**	**11,1**	36,2	11,6	36,2	12,0
	12	**11**	40,5	9,8	40,3	10,1	40,2	10,5	40,0	10,8	39,8	11,2	39,7	11,6	39,5	12,0	39,4	12,4

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
7500	**-15**	**-16**	18,0	8,7	18,2	9,1	18,0	9,3	18,4	9,7	18,2	9,9	18,8	10,4	18,7	10,7	19,0	11,1
	-10	**-11**	21,1	9,2	21,1	9,5	21,2	9,9	21,7	10,2	21,8	10,7	21,9	11,0	22,0	11,4	22,3	11,8
	-7	**-8**	23,2	9,3	22,8	9,6	22,9	10,0	23,3	10,3	23,1	10,7	23,5	11,1	23,5	11,5	23,6	11,9
	-3	**-4**	26,3	9,4	26,1	9,7	26,2	10,0	26,3	10,3	26,2	10,7	25,9	11,2	26,0	11,6	26,3	11,9
	0	**-1**	28,2	9,3	27,8	9,7	28,5	9,9	28,5	10,2	28,3	10,7	28,3	11,0	28,3	11,4	28,1	11,8
	2	**1**	29,8	9,2	29,7	9,5	29,6	9,9	29,5	10,2	29,5	10,5	29,6	11,0	29,4	11,3	29,4	11,7
	7	**6**	36,9	9,4	36,7	9,7	36,7	10,0	36,5	10,4	36,5	10,8	**36,3**	**11,1**	36,2	11,6	36,2	12,0
	12	**11**	40,5	9,8	40,3	10,1	40,2	10,5	40,0	10,8	39,8	11,2	39,7	11,6	39,5	12,0	39,4	12,4

Data calculated in accordance with EN 14511

UATYA40BBAY1
UATYA40BFC2Y1
UATYA40BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA50BBAY1
UATYA50BFC2Y1
UATYA50BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
9000	24	17	46,3	31,9	12,2	45,2	31,5	13,1	44,2	31,2	14,1	43,0	30,6	15,2	42,1	30,9	16,4	
	40	18	47,7	31,3	12,4	46,7	30,7	13,2	45,8	30,7	14,2	44,3	29,8	15,3	43,8	31,0	16,5	
	26	18	47,8	34,6	12,4	46,6	33,6	13,2	45,6	33,6	14,2	44,4	33,0	15,3	43,3	33,0	16,5	
	27	19	49,1	33,4	12,5	48,1	33,4	13,4	47,0	32,8	14,3	**45,7**	**32,5**	**15,4**	44,4	32,5	16,7	
	28	20	50,5	32,6	12,6	49,6	32,6	13,5	48,4	32,0	14,5	47,1	32,0	15,6	45,8	32,0	16,8	
	30	22	53,6	32,5	12,8	52,5	32,5	13,7	51,3	31,9	14,7	49,9	31,2	15,8	48,1	30,3	17,1	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
9000	-15	-16	24,9	10,5	25,3	11,0	25,4	11,4	25,5	11,7	25,6	12,1	25,8	12,6	25,8	13,0	26,2	13,6
	-10	-11	30,0	11,5	29,8	11,9	29,9	12,3	30,2	12,8	30,4	13,3	30,8	13,9	31,1	14,5	31,6	15,0
	-7	-8	32,6	11,5	32,6	12,1	32,8	12,5	32,6	13,1	32,9	13,6	33,2	14,1	33,0	14,6	33,8	15,2
	-3	-4	36,6	11,7	36,4	12,1	36,3	12,6	36,8	13,2	36,3	13,6	36,6	14,1	37,1	14,6	37,3	15,2
	0	-1	39,5	11,7	39,5	12,1	39,5	12,6	39,5	13,1	39,6	13,6	39,7	14,0	39,7	14,6	39,8	15,2
	2	1	41,3	11,6	41,3	12,1	41,3	12,5	41,4	13,0	41,3	13,5	41,4	14,0	41,5	14,5	41,5	15,0
	7	6	46,4	11,7	46,3	12,2	46,3	12,7	46,3	13,2	46,2	13,7	**46,2**	**14,2**	45,7	14,7	45,9	15,3
	12	11	50,4	12,2	50,4	12,7	50,1	13,2	50,0	13,7	50,0	14,2	49,9	14,8	49,8	15,3	49,5	15,8

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
9000	-15	-16	22,7	10,5	23,0	11,0	23,1	11,4	23,2	11,7	23,3	12,1	23,5	12,6	23,5	13,0	23,8	13,6
	-10	-11	27,3	11,5	27,1	11,9	27,2	12,3	27,4	12,8	27,6	13,3	28,0	13,9	28,3	14,5	28,7	15,0
	-7	-8	29,6	11,5	29,7	12,1	29,9	12,5	29,6	13,1	30,0	13,6	30,1	14,1	30,0	14,6	30,7	15,2
	-3	-4	33,3	11,7	33,1	12,1	33,0	12,6	33,4	13,2	33,0	13,6	33,2	14,1	33,7	14,6	33,9	15,2
	0	-1	35,9	11,7	35,9	12,1	35,9	12,6	36,0	13,1	36,0	13,6	36,1	14,0	36,1	14,6	36,2	15,2
	2	1	37,5	11,6	37,6	12,1	37,6	12,5	37,6	13,0	37,6	13,5	37,6	14,0	37,7	14,5	37,7	15,0
	7	6	46,4	11,7	46,3	12,2	46,3	12,7	46,3	13,2	46,2	13,7	**46,2**	**14,2**	45,7	14,7	45,9	15,3
	12	11	50,4	12,2	50,4	12,7	50,1	13,2	50,0	13,7	50,0	14,2	49,9	14,8	49,8	15,3	49,5	15,8

Data calculated in accordance with EN 14511

UATYA50BBAY1
UATYA50BFC2Y1
UATYA50BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*

T_{indoor} is the temperature of the indoor ambient.

$T_{outdoor}$ is the temperature of the outdoor ambient.

$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.

(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA60BBAY1
UATYA60BFC2Y1
UATYA60BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
11000	24	17	59,9	40,9	14,8	58,7	40,1	15,9	56,9	39,4	17,1	55,2	39,0	18,5	53,6	38,6	20,1
	40	18	62,0	41,0	15,0	60,4	39,9	16,0	58,7	39,1	17,3	56,9	38,8	18,7	54,9	37,6	20,2
	26	18	61,8	43,8	14,9	60,3	43,0	16,0	58,8	42,7	17,2	56,8	41,9	18,7	55,0	41,2	20,2
	27	19	63,8	43,2	15,1	62,4	42,4	16,2	60,6	42,1	17,4	**58,8**	**41,3**	**18,8**	56,8	40,9	20,4
	28	20	66,0	43,0	15,2	64,5	42,2	16,3	62,7	41,4	17,5	60,8	41,1	19,0	58,5	40,3	20,5
	30	22	70,3	42,5	15,5	68,6	42,1	16,7	66,5	41,3	17,9	64,4	40,6	19,3	62,3	39,8	20,9

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
11000	-15	-16	30,3	13,7	29,6	13,9	30,2	14,5	30,4	15,0	30,6	15,5	31,0	16,0	31,1	16,6	31,6	17,1
	-10	-11	35,3	14,2	35,8	14,8	34,7	15,2	35,5	15,8	36,3	16,4	36,5	17,0	36,6	17,4	37,1	18,1
	-7	-8	38,5	14,4	38,7	14,9	38,2	15,4	38,8	15,9	39,2	16,5	38,3	17,0	38,6	17,5	38,9	18,1
	-3	-4	43,2	14,4	43,4	14,9	43,5	15,4	43,6	15,8	43,1	16,4	43,8	16,9	43,7	17,5	43,6	18,0
	0	-1	47,4	14,2	47,0	14,6	46,6	15,1	47,1	15,6	46,1	16,2	46,9	16,7	46,6	17,2	46,8	17,8
	2	1	49,4	14,1	49,3	14,5	49,5	14,9	48,6	15,5	48,9	16,0	48,9	16,5	48,8	17,1	49,0	17,6
	7	6	56,1	14,4	55,6	14,8	55,6	15,3	55,3	15,8	55,2	16,4	**55,0**	**16,9**	54,8	17,5	54,7	18,0
	12	11	61,8	14,9	61,5	15,4	61,3	16,0	61,1	16,5	60,5	17,0	60,3	17,6	60,1	18,2	60,0	18,8

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
11000	-15	-16	27,5	13,7	26,9	13,9	27,5	14,5	27,6	15,0	27,8	15,5	28,2	16,0	28,3	16,6	28,7	17,1
	-10	-11	32,1	14,2	32,5	14,8	31,5	15,2	32,3	15,8	33,0	16,4	33,2	17,0	33,3	17,4	33,7	18,1
	-7	-8	35,0	14,4	35,2	14,9	34,7	15,4	35,3	15,9	35,6	16,5	34,8	17,0	35,1	17,5	35,4	18,1
	-3	-4	39,3	14,4	39,5	14,9	39,6	15,4	39,6	15,8	39,2	16,4	39,8	16,9	39,8	17,5	39,6	18,0
	0	-1	43,1	14,2	42,8	14,6	42,4	15,1	42,8	15,6	41,9	16,2	42,6	16,7	42,3	17,2	42,6	17,8
	2	1	45,0	14,1	44,9	14,5	45,0	14,9	44,2	15,5	44,4	16,0	44,4	16,5	44,4	17,1	44,6	17,6
	7	6	56,1	14,4	55,6	14,8	55,6	15,3	55,3	15,8	55,2	16,4	**55,0**	**16,9**	54,8	17,5	54,7	18,0
	12	11	61,8	14,9	61,5	15,4	61,3	16,0	61,1	16,5	60,5	17,0	60,3	17,6	60,1	18,2	60,0	18,8

Data calculated in accordance with EN 14511

UATYA60BBAY1
UATYA60BFC2Y1
UATYA60BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA70BBAY1
UATYA70BFC2Y1
UATYA70BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
13000	24	17	66,6	45,1	17,6	65,2	44,2	18,9	63,4	43,8	20,3	61,3	43,4	22,0	59,2	42,0	23,8	
	40	18	68,7	45,3	17,8	67,3	44,4	19,0	65,2	43,1	20,5	63,2	42,6	22,2	61,1	41,7	24,0	
	26	18	68,6	48,1	17,8	67,2	47,7	19,0	65,4	47,2	20,5	63,3	46,8	22,2	61,1	46,3	24,0	
	27	19	70,9	47,8	18,0	69,3	47,4	19,2	67,7	46,9	20,7	65,4	46,0	22,4	63,0	45,6	24,2	
	28	20	73,1	47,5	18,2	71,5	46,6	19,4	69,7	45,7	20,9	67,6	45,3	22,6	64,9	44,4	24,4	
	30	22	77,9	46,9	18,5	76,0	46,0	19,8	73,7	45,6	21,3	71,5	44,2	22,9	69,2	44,2	24,8	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
13000	-15	-16	36,3	16,2	36,3	16,7	36,0	17,1	36,4	17,8	36,1	18,4	35,7	18,9	36,4	19,3	36,5	19,9
	-10	-11	42,3	16,8	43,4	17,4	43,5	18,0	42,6	18,6	41,5	19,1	42,2	19,8	43,6	20,6	42,1	21,2
	-7	-8	47,2	17,0	45,1	17,5	46,4	18,1	45,0	18,7	46,0	19,4	46,8	20,1	45,1	20,6	46,5	21,4
	-3	-4	50,0	17,1	51,9	17,6	50,4	18,3	50,4	18,8	50,4	19,5	50,4	20,2	52,3	20,9	50,5	21,6
	0	-1	55,2	16,9	55,2	17,4	54,9	18,0	54,2	18,7	54,7	19,3	55,1	19,9	54,5	20,6	54,9	21,2
	2	1	58,4	16,8	58,8	17,3	58,3	17,9	58,3	18,5	59,1	19,2	58,1	19,8	58,3	20,5	57,9	21,1
	7	6	65,8	17,0	65,7	17,6	65,5	18,2	65,3	18,9	65,1	19,5	64,6	20,1	65,0	20,9	64,3	21,5
	12	11	72,4	17,7	72,1	18,3	72,1	19,0	71,8	19,7	71,5	20,3	71,2	21,0	71,0	21,7	70,8	22,4

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
13000	-15	-16	33,0	16,2	33,0	16,7	32,7	17,1	33,1	17,8	32,8	18,4	32,5	18,9	33,1	19,3	33,2	19,9
	-10	-11	38,4	16,8	39,4	17,4	39,5	18,0	38,7	18,6	37,8	19,1	38,3	19,8	39,7	20,6	38,3	21,2
	-7	-8	43,0	17,0	41,0	17,5	42,2	18,1	41,0	18,7	41,9	19,4	42,6	20,1	41,0	20,6	42,2	21,4
	-3	-4	45,5	17,1	47,2	17,6	45,8	18,3	45,8	18,8	45,8	19,5	45,8	20,2	47,5	20,9	45,9	21,6
	0	-1	50,2	16,9	50,2	17,4	49,9	18,0	49,2	18,7	49,7	19,3	50,1	19,9	49,6	20,6	49,9	21,2
	2	1	53,1	16,8	53,4	17,3	53,0	17,9	53,0	18,5	53,8	19,2	52,8	19,8	53,0	20,5	52,6	21,1
	7	6	65,8	17,0	65,7	17,6	65,5	18,2	65,3	18,9	65,1	19,5	64,6	20,1	65,0	20,9	64,3	21,5
	12	11	72,4	17,7	72,1	18,3	72,1	19,0	71,8	19,7	71,5	20,3	71,2	21,0	71,0	21,7	70,8	22,4

Data calculated in accordance with EN 14511

UATYA70BBAY1
UATYA70BFC2Y1
UATYA70BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA80BBAY1
UATYA80BFC2Y1
UATYA80BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
14500	24	17	76,0	55,3	19,3	74,4	54,8	20,6	72,7	54,3	22,1	70,3	53,3	23,8	67,8	52,8	25,7	
	40	18	78,5	54,5	19,5	77,7	55,5	21,0	74,9	53,5	22,3	72,7	53,0	24,0	70,1	52,0	26,0	
	26	18	78,3	59,7	19,5	76,6	58,7	20,8	74,6	58,2	22,3	73,0	57,2	24,0	70,4	56,2	26,0	
	27	19	81,0	59,4	19,7	79,4	59,4	21,0	77,2	57,9	22,5	**74,6**	**56,9**	**24,2**	72,1	56,4	26,2	
	28	20	83,5	58,6	19,9	81,7	57,6	21,2	79,7	57,6	22,7	77,6	57,6	24,5	74,6	56,1	26,4	
	30	22	89,1	56,9	20,4	86,9	56,4	21,7	84,9	56,4	23,1	82,2	55,4	24,9	79,4	54,9	26,9	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
14500	-15	-16	38,2	17,4	36,8	17,7	37,4	18,3	38,4	19,1	38,3	19,7	38,4	20,3	38,7	21,2	38,0	21,7
	-10	-11	43,8	17,8	43,7	18,3	44,3	18,9	45,0	19,5	43,5	20,2	44,1	20,8	44,1	21,5	44,2	22,3
	-7	-8	48,0	17,8	47,7	18,4	48,3	19,0	47,6	19,6	48,1	20,2	47,4	20,8	47,8	21,6	47,7	22,3
	-3	-4	54,1	17,9	55,4	18,3	53,1	19,0	53,6	19,6	53,9	20,2	54,1	20,9	53,6	21,6	53,4	22,3
	0	-1	59,4	17,6	59,4	18,1	58,9	18,7	58,6	19,3	58,2	19,9	58,7	20,4	58,8	21,1	58,7	21,8
	2	1	61,2	17,4	61,1	18,0	60,9	18,5	60,7	19,1	60,3	19,7	60,6	20,4	61,5	20,9	61,4	21,6
	7	6	70,0	17,3	69,0	17,9	69,4	18,5	69,2	19,1	68,9	19,7	**68,5**	**20,3**	68,6	21,1	67,8	21,7
	12	11	75,9	17,7	75,6	18,3	75,2	18,9	75,0	19,5	74,7	20,2	74,4	20,8	74,2	21,5	73,8	22,2

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
14500	-15	-16	34,8	17,4	33,5	17,7	34,0	18,3	34,9	19,1	34,9	19,7	34,9	20,3	35,2	21,2	34,5	21,7
	-10	-11	39,8	17,8	39,7	18,3	40,2	18,9	40,9	19,5	39,6	20,2	40,1	20,8	40,1	21,5	40,2	22,3
	-7	-8	43,6	17,8	43,4	18,4	43,9	19,0	43,2	19,6	43,7	20,2	43,1	20,8	43,4	21,6	43,4	22,3
	-3	-4	49,1	17,9	50,4	18,3	48,3	19,0	48,7	19,6	49,0	20,2	49,2	20,9	48,7	21,6	48,6	22,3
	0	-1	54,0	17,6	54,0	18,1	53,5	18,7	53,3	19,3	52,9	19,9	53,3	20,4	53,5	21,1	53,4	21,8
	2	1	55,7	17,4	55,6	18,0	55,4	18,5	55,2	19,1	54,8	19,7	55,1	20,4	55,9	20,9	55,8	21,6
	7	6	70,0	17,3	69,0	17,9	69,4	18,5	69,2	19,1	68,9	19,7	**68,5**	**20,3**	68,6	21,1	67,8	21,7
	12	11	75,9	17,7	75,6	18,3	75,2	18,9	75,0	19,5	74,7	20,2	74,4	20,8	74,2	21,5	73,8	22,2

Data calculated in accordance with EN 14511

UATYA80BBAY1
UATYA80BFC2Y1
UATYA80BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA90BBAY1
UATYA90BFC2Y1
UATYA90BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
16500	24	17	90,9	61,8	23,2	89,1	60,7	24,9	87,0	59,5	26,7	84,2	59,0	28,9	81,4	57,8	31,3	
	40	18	93,8	62,0	23,4	91,8	60,9	25,1	89,8	59,7	27,0	86,8	58,6	29,1	84,0	57,5	31,5	
	26	18	93,7	66,2	23,4	91,9	65,1	25,1	89,7	65,1	26,9	87,1	63,9	29,1	84,1	63,4	31,6	
	27	19	96,9	65,3	23,6	94,8	64,2	25,3	92,5	64,2	27,2	**89,8**	**63,0**	**29,4**	86,8	61,9	31,8	
	28	20	100,1	65,5	23,8	98,3	64,9	25,6	95,5	63,2	27,4	92,7	62,6	29,6	89,3	60,9	32,0	
	30	22	106,3	64,2	24,2	104,0	63,1	25,9	101,4	61,9	27,9	98,1	61,3	30,1	95,0	60,8	32,6	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
16500	-15	-16	46,1	20,6	46,2	21,3	46,4	22,0	47,0	22,7	47,0	23,8	47,5	24,7	47,7	25,6	47,5	26,6
	-10	-11	55,5	21,8	55,7	22,6	55,8	23,5	56,4	24,5	56,0	25,3	56,7	26,3	56,7	27,3	56,9	28,3
	-7	-8	59,3	21,9	59,9	22,8	60,0	23,7	61,2	24,6	59,9	25,4	59,3	26,2	60,7	27,3	60,7	28,3
	-3	-4	67,0	22,2	67,0	23,1	66,9	23,9	66,0	24,7	68,0	25,6	68,4	26,6	68,2	27,5	67,6	28,5
	0	-1	72,9	21,9	71,4	22,7	69,8	23,6	72,4	24,4	72,4	25,2	70,8	26,2	70,6	27,1	72,5	28,1
	2	1	75,7	21,7	75,6	22,5	75,9	23,4	76,2	24,2	75,8	25,2	76,0	25,9	75,7	26,8	75,6	27,7
	7	6	85,6	22,0	85,3	22,6	84,1	23,4	83,8	24,2	83,6	25,1	**84,2**	**26,1**	83,7	27,0	83,0	27,9
	12	11	91,4	22,4	91,5	23,0	92,0	24,2	90,2	25,1	90,7	26,0	90,8	26,9	90,7	27,8	90,1	29,0

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
16500	-15	-16	41,9	20,6	42,0	21,3	42,2	22,0	42,7	22,7	42,8	23,8	43,2	24,7	43,4	25,6	43,2	26,6
	-10	-11	50,5	21,8	50,6	22,6	50,8	23,5	51,2	24,5	50,9	25,3	51,5	26,3	51,6	27,3	51,8	28,3
	-7	-8	53,9	21,9	54,4	22,8	54,6	23,7	55,7	24,6	54,5	25,4	53,9	26,2	55,2	27,3	55,2	28,3
	-3	-4	60,9	22,2	60,9	23,1	60,8	23,9	60,0	24,7	61,8	25,6	62,2	26,6	62,0	27,5	61,4	28,5
	0	-1	66,3	21,9	64,9	22,7	63,5	23,6	65,8	24,4	65,8	25,2	64,4	26,2	64,1	27,1	65,9	28,1
	2	1	68,8	21,7	68,7	22,5	69,0	23,4	69,3	24,2	68,9	25,2	69,1	25,9	68,8	26,8	68,8	27,7
	7	6	85,6	22,0	85,3	22,6	84,1	23,4	83,8	24,2	83,6	25,1	**84,2**	**26,1**	83,7	27,0	83,0	27,9
	12	11	91,4	22,4	91,5	23,0	92,0	24,2	90,2	25,1	90,7	26,0	90,8	26,9	90,7	27,8	90,1	29,0

Data calculated in accordance with EN 14511

UATYA90BBAY1
UATYA90BFC2Y1
UATYA90BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA100BBAY1
UATYA100BFC2Y1
UATYA100BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
18000	24	17	96,6	65,3	26,0	94,7	64,7	27,7	93,0	64,1	29,5	90,6	63,5	31,7	87,1	61,6	34,3	
	40	18	99,8	64,9	26,2	97,7	64,3	27,9	95,5	63,1	29,9	92,5	61,8	32,0	89,8	61,2	34,4	
	26	18	99,9	70,1	26,2	98,0	69,5	27,8	96,3	70,1	29,8	93,5	68,2	32,2	90,3	68,2	34,6	
	27	19	102,9	69,1	26,5	100,9	67,8	28,2	98,6	67,8	30,1	**96,0**	**67,2**	**32,3**	92,7	66,0	34,8	
	28	20	106,2	69,3	26,7	104,1	68,1	28,4	101,6	66,8	30,4	98,9	66,2	32,6	95,4	64,3	35,1	
	30	22	113,2	66,6	27,2	110,7	66,6	28,9	108,0	65,4	30,9	105,0	64,1	33,2	101,1	63,5	35,8	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
18000	-15	-16	49,1	29,6	49,0	30,6	49,0	31,7	49,4	32,9	49,4	33,9	49,6	35,2	50,1	36,5	50,1	37,8
	-10	-11	58,4	29,4	59,3	30,4	58,7	31,6	59,7	32,6	59,4	33,7	60,2	35,0	60,3	36,3	60,3	37,6
	-7	-8	65,8	28,4	65,7	29,5	64,6	30,6	65,8	31,7	65,8	32,7	66,1	34,0	65,1	35,0	66,6	36,5
	-3	-4	73,4	27,0	73,1	27,9	73,6	28,9	73,8	29,9	73,6	30,9	72,8	31,9	74,0	33,1	74,5	34,2
	0	-1	81,2	25,4	80,9	26,4	80,8	27,2	80,6	28,2	80,7	29,1	80,7	30,1	80,7	31,1	80,6	32,4
	2	1	85,5	24,4	85,3	25,3	85,3	26,1	84,9	27,1	84,8	28,0	84,8	28,9	84,8	29,8	84,8	30,9
	7	6	95,7	24,7	95,4	25,6	95,1	26,4	94,8	27,4	94,6	28,3	**92,8**	**28,9**	94,0	30,2	91,9	30,9
	12	11	102,4	25,4	102,4	26,4	102,0	27,2	101,7	28,2	101,2	29,1	101,0	30,1	100,7	31,1	100,4	32,1

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
18000	-15	-16	44,6	29,6	44,5	30,6	44,5	31,7	44,9	32,9	44,9	33,9	45,1	35,2	45,5	36,5	45,6	37,8
	-10	-11	53,1	29,4	53,9	30,4	53,3	31,6	54,2	32,6	54,0	33,7	54,7	35,0	54,8	36,3	54,8	37,6
	-7	-8	59,8	28,4	59,7	29,5	58,8	30,6	59,8	31,7	59,8	32,7	60,1	34,0	59,2	35,0	60,6	36,5
	-3	-4	66,7	27,0	66,5	27,9	66,9	28,9	67,1	29,9	66,9	30,9	66,2	31,9	67,3	33,1	67,7	34,2
	0	-1	73,8	25,4	73,5	26,4	73,5	27,2	73,3	28,2	73,3	29,1	73,3	30,1	73,4	31,1	73,3	32,4
	2	1	77,7	24,4	77,6	25,3	77,6	26,1	77,2	27,1	77,1	28,0	77,1	28,9	77,1	29,8	77,1	30,9
	7	6	95,7	24,7	95,4	25,6	95,1	26,4	94,8	27,4	94,6	28,3	**92,8**	**28,9**	94,0	30,2	91,9	30,9
	12	11	102,4	25,4	102,4	26,4	102,0	27,2	101,7	28,2	101,2	29,1	101,0	30,1	100,7	31,1	100,4	32,1

Data calculated in accordance with EN 14511

UATYA100BBAY1
UATYA100BFC2Y1
UATYA100BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow,* $V_{exhaust}$, and the *total air flow on the external coils,* V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA110BBAY1
UATYA110BFC2Y1
UATYA110BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
19800	24	17	110,6	76,7	29,4	108,6	76,7	31,2	105,8	75,3	33,2	102,6	74,7	35,7	99,7	74,7	38,6	
	40	18	114,2	76,9	29,8	111,6	74,9	31,6	109,1	74,9	33,6	106,0	74,2	36,1	102,2	72,9	38,9	
	26	18	113,9	82,6	29,7	112,6	84,0	31,7	109,7	83,3	33,9	105,6	80,6	36,1	102,8	81,3	39,0	
	27	19	117,6	82,2	30,1	115,2	81,5	31,8	112,1	80,9	34,0	**108,9**	**80,2**	**36,4**	105,3	78,8	39,3	
	28	20	121,3	81,1	30,4	118,9	80,5	32,2	115,7	79,8	34,4	112,4	79,1	36,8	108,2	77,7	39,8	
	30	22	129,6	80,3	31,0	126,7	78,9	32,9	123,2	77,6	35,1	119,5	76,2	37,6	115,1	76,2	40,6	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
19800	-15	-16	55,1	24,1	56,0	25,0	56,0	25,3	56,4	26,7	55,8	27,3	56,9	28,4	57,3	29,5	57,3	30,5
	-10	-11	65,2	25,2	65,2	26,0	65,4	26,9	65,2	27,9	64,9	28,8	65,2	29,8	65,2	30,7	66,8	32,0
	-7	-8	72,2	25,7	72,8	26,5	71,8	27,4	71,3	28,3	73,1	29,4	73,4	30,4	72,5	31,4	74,0	32,6
	-3	-4	77,9	25,9	81,7	26,8	81,4	27,7	80,8	28,5	81,2	29,6	81,1	30,6	81,3	31,7	81,3	32,7
	0	-1	87,6	25,7	87,5	26,6	87,4	27,6	87,3	28,3	85,1	29,3	87,1	30,3	87,0	31,4	84,7	32,5
	2	1	89,0	26,1	91,7	26,4	91,6	27,3	91,3	28,2	91,3	29,2	91,1	30,1	91,0	31,2	90,9	32,2
	7	6	103,1	25,6	102,7	26,5	102,4	27,4	102,1	28,3	101,8	29,2	**101,5**	**30,3**	101,3	31,4	101,1	32,5
	12	11	111,1	26,4	110,0	27,3	109,6	28,2	109,4	29,1	109,5	30,1	108,5	31,2	108,3	32,3	107,8	33,4

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
19800	-15	-16	50,1	24,1	50,9	25,0	50,9	25,3	51,3	26,7	50,7	27,3	51,7	28,4	52,1	29,5	52,1	30,5
	-10	-11	59,3	25,2	59,3	26,0	59,5	26,9	59,2	27,9	59,0	28,8	59,2	29,8	59,3	30,7	60,7	32,0
	-7	-8	65,6	25,7	66,1	26,5	65,3	27,4	64,8	28,3	66,5	29,4	66,7	30,4	65,9	31,4	67,3	32,6
	-3	-4	70,8	25,9	74,3	26,8	74,0	27,7	73,4	28,5	73,8	29,6	73,7	30,6	73,9	31,7	73,9	32,7
	0	-1	79,6	25,7	79,5	26,6	79,4	27,6	79,3	28,3	77,4	29,3	79,2	30,3	79,1	31,4	77,0	32,5
	2	1	80,9	26,1	83,3	26,4	83,3	27,3	83,0	28,2	83,0	29,2	82,8	30,1	82,7	31,2	82,7	32,2
	7	6	103,1	25,6	102,7	26,5	102,4	27,4	102,1	28,3	101,8	29,2	**101,5**	**30,3**	101,3	31,4	101,1	32,5
	12	11	111,1	26,4	110,0	27,3	109,6	28,2	109,4	29,1	109,5	30,1	108,5	31,2	108,3	32,3	107,8	33,4

Data calculated in accordance with EN 14511

UATYA110BBAY1
UATYA110BFC2Y1
UATYA110BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA120BBAY1
UATYA120BFC2Y1
UATYA120BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
21600	24	17	117,0	82,3	32,1	114,3	81,5	34,0	111,1	80,8	36,3	108,2	80,1	38,6	104,5	78,6	41,5	
	40	18	120,6	81,8	32,5	117,8	81,1	34,4	114,7	79,6	36,7	111,5	78,8	39,1	107,9	77,4	42,0	
	26	18	120,9	90,3	32,6	117,3	88,1	34,4	117,6	90,3	37,0	111,3	85,8	39,1	107,9	85,8	42,1	
	27	19	124,1	88,4	32,9	121,4	86,9	34,8	118,6	86,9	37,1	**114,7**	**85,4**	**39,5**	111,1	84,6	42,5	
	28	20	128,0	87,2	33,3	125,3	85,7	35,2	122,0	84,9	37,5	118,5	84,1	40,0	114,4	83,4	43,0	
	30	22	136,5	85,5	34,1	133,2	83,9	36,1	129,9	83,2	38,3	126,1	82,4	40,8	121,5	80,9	43,6	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
21600	-15	-16	59,2	25,9	58,6	27,1	59,1	28,0	60,2	29,1	60,4	29,8	60,7	31,1	60,9	32,0	61,4	33,2
	-10	-11	69,3	27,5	69,4	28,4	70,4	29,4	69,5	30,4	69,7	31,5	70,1	32,5	70,1	33,4	69,9	34,5
	-7	-8	76,6	28,1	76,8	29,0	77,5	29,9	75,6	30,9	77,5	31,9	75,8	33,0	76,1	34,1	77,2	35,3
	-3	-4	84,7	28,5	84,3	29,4	86,4	30,3	86,5	31,2	86,4	32,3	86,6	33,5	87,0	34,6	87,2	35,8
	0	-1	93,4	28,3	93,3	29,2	92,9	30,1	92,9	31,1	92,9	32,1	91,7	33,3	92,9	34,5	92,5	35,4
	2	1	97,1	28,2	97,6	29,1	97,4	30,0	97,2	31,0	97,1	32,0	97,1	33,1	96,6	34,2	97,0	35,4
	7	6	109,1	28,2	96,6	28,9	108,5	30,0	108,6	31,1	108,3	32,1	**108,0**	**33,2**	107,8	34,3	107,5	35,5
	12	11	118,1	29,2	117,6	30,1	117,2	31,1	116,7	32,1	116,2	33,2	115,9	34,3	114,9	35,4	114,9	36,5

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
21600	-15	-16	53,8	25,9	53,3	27,1	53,7	28,0	54,7	29,1	54,9	29,8	55,2	31,1	55,3	32,0	55,8	33,2
	-10	-11	63,0	27,5	63,1	28,4	64,0	29,4	63,2	30,4	63,4	31,5	63,7	32,5	63,7	33,4	63,6	34,5
	-7	-8	69,7	28,1	69,8	29,0	70,5	29,9	68,8	30,9	70,5	31,9	68,9	33,0	69,2	34,1	70,2	35,3
	-3	-4	77,0	28,5	76,6	29,4	78,6	30,3	78,6	31,2	78,6	32,3	78,8	33,5	79,1	34,6	79,3	35,8
	0	-1	84,9	28,3	84,8	29,2	84,5	30,1	84,4	31,1	84,5	32,1	83,4	33,3	84,4	34,5	84,1	35,4
	2	1	88,2	28,2	88,7	29,1	88,5	30,0	88,4	31,0	88,3	32,0	88,3	33,1	87,9	34,2	88,2	35,4
	7	6	109,1	28,2	96,6	28,9	108,5	30,0	108,6	31,1	108,3	32,1	**108,0**	**33,2**	107,8	34,3	107,5	35,5
	12	11	118,1	29,2	117,6	30,1	117,2	31,1	116,7	32,1	116,2	33,2	115,9	34,3	114,9	35,4	114,9	36,5

Data calculated in accordance with EN 14511

UATYA120BBAY1
UATYA120BFC2Y1
UATYA120BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA140BBAY1
UATYA140BFC2Y1
UATYA140BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
25000	**24**	**17**	136,2	98,0	33,1	133,6	97,1	35,5	129,7	95,4	38,4	125,7	94,5	41,7	121,1	92,8	45,4
	40	**18**	141,1	97,4	33,3	138,2	97,4	35,8	133,8	94,0	38,8	129,6	94,0	42,2	124,9	92,3	45,8
	26	**18**	140,6	105,5	33,3	137,3	104,7	35,7	133,5	103,0	38,7	129,7	98,6	42,2	125,7	103,8	46,2
	27	**19**	144,9	104,2	33,6	142,2	105,0	36,1	138,2	103,3	39,2	**133,5**	**100,7**	**42,5**	128,6	99,8	46,2
	28	**20**	149,8	103,6	33,8	146,0	102,8	36,4	142,4	101,9	39,1	137,5	100,2	42,9	133,0	100,2	46,8
	30	**22**	159,4	100,8	34,2	155,6	99,9	36,9	151,7	99,9	40,1	146,4	98,2	43,6	140,8	96,4	47,3

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
25000	**-15**	**-16**	66,3	30,1	67,3	31,2	66,7	32,0	66,5	33,2	68,6	34,5	66,9	35,5	67,5	37,0	67,4	38,2
	-10	**-11**	79,3	31,8	80,1	32,7	80,3	33,8	79,3	35,0	78,5	36,2	78,8	37,4	79,7	38,7	79,4	40,1
	-7	**-8**	86,9	32,0	87,0	33,0	86,5	34,0	86,4	35,1	87,5	36,4	88,7	37,6	84,9	38,9	86,3	40,3
	-3	**-4**	100,2	31,8	98,8	32,9	95,0	34,1	98,0	35,1	98,1	36,1	97,2	37,4	96,8	38,7	95,1	40,1
	0	**-1**	104,1	31,7	103,0	32,7	106,0	33,1	105,8	34,1	105,6	35,4	102,5	37,0	105,5	37,7	102,1	39,6
	2	**1**	109,4	30,9	109,4	31,7	109,5	32,8	107,7	34,0	107,9	35,0	107,4	36,4	107,7	37,4	108,2	38,7
	7	**6**	125,4	30,3	124,6	31,3	124,0	32,4	123,4	33,5	123,3	34,8	**123,1**	**35,8**	122,6	37,0	122,1	38,4
	12	**11**	135,3	30,7	134,5	31,8	134,4	32,8	132,5	34,0	133,7	35,1	133,1	36,3	132,5	37,6	131,9	38,9

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
25000	**-15**	**-16**	60,3	30,1	61,2	31,2	60,6	32,0	60,5	33,2	62,3	34,5	60,9	35,5	61,4	37,0	61,3	38,2
	-10	**-11**	72,1	31,8	72,8	32,7	73,0	33,8	72,1	35,0	71,4	36,2	71,6	37,4	72,4	38,7	72,2	40,1
	-7	**-8**	79,0	32,0	79,1	33,0	78,7	34,0	78,6	35,1	79,6	36,4	80,6	37,6	77,2	38,9	78,4	40,3
	-3	**-4**	91,1	31,8	89,8	32,9	86,4	34,1	89,1	35,1	89,2	36,1	88,4	37,4	88,0	38,7	86,5	40,1
	0	**-1**	94,6	31,7	93,6	32,7	96,3	33,1	96,2	34,1	96,0	35,4	93,2	37,0	95,9	37,7	92,8	39,6
	2	**1**	99,5	30,9	99,4	31,7	99,5	32,8	97,9	34,0	98,1	35,0	97,6	36,4	97,9	37,4	98,4	38,7
	7	**6**	125,4	30,3	124,6	31,3	124,0	32,4	123,4	33,5	123,3	34,8	**123,1**	**35,8**	122,6	37,0	122,1	38,4
	12	**11**	135,3	30,7	134,5	31,8	134,4	32,8	132,5	34,0	133,7	35,1	133,1	36,3	132,5	37,6	131,9	38,9

Data calculated in accordance with EN 14511

UATYA140BBAY1
UATYA140BFC2Y1
UATYA140BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*

T_{indoor} is the temperature of the indoor ambient.

$T_{outdoor}$ is the temperature of the outdoor ambient.

$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, $x = 30\%$, $V_{intake} = 4950$ mc/h , $V_{axial} = 11500$ mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA150BBAY1
UATYA150BFC2Y1
UATYA150BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
26500	**24**	**17**	147,6	104,5	37,4	144,3	103,6	40,2	140,3	102,7	43,4	136,1	100,9	47,1	131,5	100,0	51,1
	40	**18**	152,4	104,0	37,8	148,8	103,1	40,6	145,1	102,1	43,9	140,5	100,3	47,5	135,6	98,5	51,6
	26	**18**	152,5	113,6	37,7	149,0	111,7	40,5	145,1	111,7	43,9	140,3	108,9	47,5	137,3	108,0	51,7
	27	**19**	157,2	112,1	38,1	153,5	110,2	40,9	150,6	113,0	44,2	**144,9**	**108,4**	**48,0**	139,3	106,5	52,1
	28	**20**	162,1	110,6	38,4	158,2	109,7	41,3	153,7	107,8	44,6	149,1	106,9	48,3	143,6	105,9	52,4
	30	**22**	172,5	108,5	38,9	168,3	106,7	42,0	163,5	105,7	45,4	158,4	104,8	49,2	152,8	102,9	53,0

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
26500	**-15**	**-16**	74,8	33,5	75,0	34,6	75,8	35,9	74,7	36,8	74,9	38,1	74,3	39,4	74,4	40,7	77,1	43,0
	-10	**-11**	89,0	35,3	87,6	36,4	89,2	37,7	89,7	39,2	89,2	40,6	88,3	42,0	87,4	43,5	87,6	45,1
	-7	**-8**	97,5	36,0	96,6	37,1	96,5	38,3	93,9	39,6	97,8	41,2	95,0	42,5	96,9	44,1	96,4	45,5
	-3	**-4**	108,5	36,1	108,4	37,2	105,0	38,3	105,1	39,6	106,1	41,0	108,0	42,4	109,0	43,8	108,1	45,3
	0	**-1**	116,6	35,5	114,6	36,7	115,0	37,8	116,7	39,1	113,7	40,6	115,8	41,7	113,7	43,4	114,7	44,7
	2	**1**	123,6	34,8	123,5	36,0	122,8	37,1	123,1	38,3	121,0	39,7	122,1	40,9	122,0	42,4	119,0	44,1
	7	**6**	138,8	34,7	138,3	35,8	138,0	37,0	136,1	38,2	136,6	39,5	**136,4**	**40,9**	136,0	42,4	136,4	44,0
	12	**11**	150,0	35,3	150,1	36,6	149,7	37,8	147,3	39,0	147,3	40,4	145,3	41,6	146,6	43,4	146,4	44,9

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
26500	**-15**	**-16**	68,0	33,5	68,2	34,6	68,9	35,9	67,9	36,8	68,1	38,1	67,6	39,4	67,6	40,7	70,1	43,0
	-10	**-11**	80,9	35,3	79,7	36,4	81,1	37,7	81,5	39,2	81,1	40,6	80,3	42,0	79,4	43,5	79,7	45,1
	-7	**-8**	88,6	36,0	87,8	37,1	87,8	38,3	85,3	39,6	88,9	41,2	86,3	42,5	88,1	44,1	87,7	45,5
	-3	**-4**	98,7	36,1	98,6	37,2	95,5	38,3	95,6	39,6	96,5	41,0	98,1	42,4	99,1	43,8	98,3	45,3
	0	**-1**	106,0	35,5	104,2	36,7	104,5	37,8	106,1	39,1	103,4	40,6	105,3	41,7	103,4	43,4	104,3	44,7
	2	**1**	112,4	34,8	112,3	36,0	111,6	37,1	111,9	38,3	110,0	39,7	111,0	40,9	110,9	42,4	108,2	44,1
	7	**6**	138,8	34,7	138,3	35,8	138,0	37,0	136,1	38,2	136,6	39,5	**136,4**	**40,9**	136,0	42,4	136,4	44,0
	12	**11**	150,0	35,3	150,1	36,6	149,7	37,8	147,3	39,0	147,3	40,4	145,3	41,6	146,6	43,4	146,4	44,9

Data calculated in accordance with EN 14511

UATYA150BBAY1
UATYA150BFC2Y1
UATYA150BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA160BBAY1
UATYA160BFC2Y1
UATYA160BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Conditiion on Supply Coil		Air conditions on External Coil															
	T DB	TWB	20			40			30			35			40			
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	
28000	24	17	157,5	110,0	40,3	153,8	109,0	43,0	151,6	111,0	46,2	145,7	107,1	50,0	140,6	105,2	54,3	
	40	18	162,1	109,4	40,6	159,2	108,4	43,3	155,9	108,4	46,6	150,7	106,5	50,4	144,9	103,6	54,8	
	26	18	162,4	119,5	40,6	158,5	117,5	43,2	154,5	116,6	46,6	149,8	114,6	50,3	144,7	113,7	54,7	
	27	19	166,0	116,0	40,8	163,9	117,0	43,6	160,4	116,0	46,9	**154,6**	**114,0**	**50,7**	149,2	113,1	55,2	
	28	20	172,4	116,4	41,2	169,7	116,4	43,9	164,6	114,4	47,4	160,3	114,4	51,2	154,4	112,5	55,5	
	30	22	184,2	115,2	41,8	180,1	113,2	44,6	174,9	110,3	48,2	169,7	109,3	52,0	163,8	108,3	56,3	

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
28000	-15	-16	81,5	36,7	79,6	37,8	81,5	39,2	82,8	40,9	81,0	42,0	81,2	43,6	80,9	45,2	80,3	46,6
	-10	-11	93,8	38,3	98,2	39,9	94,0	41,0	95,0	42,6	94,5	44,9	94,7	45,8	94,5	47,5	95,1	49,3
	-7	-8	105,7	39,1	103,1	40,2	103,5	41,6	103,6	43,1	105,1	44,8	102,9	46,2	103,1	47,9	106,1	49,8
	-3	-4	115,9	39,6	119,6	40,6	114,6	42,0	113,3	43,4	115,9	45,1	115,5	46,6	114,8	48,5	114,8	49,9
	0	-1	124,3	39,0	123,9	40,2	125,8	41,3	125,6	42,7	125,5	44,2	127,3	45,5	125,4	47,2	125,1	48,7
	2	1	134,5	38,3	133,5	39,5	133,1	40,8	132,9	42,1	132,7	43,6	132,3	45,1	131,7	46,8	132,4	48,1
	7	6	149,8	38,2	149,4	39,5	148,7	41,0	147,3	42,0	148,0	43,7	**147,5**	**45,2**	146,8	46,7	146,9	48,6
	12	11	161,7	39,1	160,8	40,4	160,1	41,7	159,5	43,1	158,7	44,6	158,4	46,1	157,3	47,8	157,4	49,3

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
28000	-15	-16	74,1	36,7	72,4	37,8	74,1	39,2	75,3	40,9	73,6	42,0	73,9	43,6	73,5	45,2	73,0	46,6
	-10	-11	85,2	38,3	89,3	39,9	85,5	41,0	86,4	42,6	85,9	44,9	86,1	45,8	85,9	47,5	86,5	49,3
	-7	-8	96,1	39,1	93,8	40,2	94,1	41,6	94,2	43,1	95,6	44,8	93,6	46,2	93,8	47,9	96,5	49,8
	-3	-4	105,4	39,6	108,7	40,6	104,2	42,0	103,0	43,4	105,4	45,1	105,0	46,6	104,4	48,5	104,4	49,9
	0	-1	113,0	39,0	112,6	40,2	114,4	41,3	114,2	42,7	114,1	44,2	115,7	45,5	114,0	47,2	113,7	48,7
	2	1	122,3	38,3	121,4	39,5	121,0	40,8	120,8	42,1	120,6	43,6	120,3	45,1	119,7	46,8	120,4	48,1
	7	6	149,8	38,2	149,4	39,5	148,7	41,0	147,3	42,0	148,0	43,7	**147,5**	**45,2**	146,8	46,7	146,9	48,6
	12	11	161,7	39,1	160,8	40,4	160,1	41,7	159,5	43,1	158,7	44,6	158,4	46,1	157,3	47,8	157,4	49,3

Data calculated in accordance with EN 14511

UATYA160BBAY1
UATYA160BFC2Y1
UATYA160BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, $x = 30\%$, $V_{intake} = 4950$ mc/h , $V_{axial} = 11500$ mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA180BBAY1
UATYA180BFC2Y1
UATYA180BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
30500	24	17	175,1	122,7	44,7	171,2	121,7	47,4	167,0	119,6	51,1	162,2	119,6	55,2	155,9	116,5	59,8
	25	18	180,7	122,1	44,9	176,8	120,0	47,8	172,2	119,0	51,6	167,1	118,0	55,6	160,9	114,9	60,4
	26	18	180,4	131,9	45,0	176,5	130,8	47,9	171,9	129,8	51,5	166,9	127,7	55,6	161,3	122,5	60,4
	27	19	186,2	130,2	45,4	182,3	130,2	48,2	177,6	128,1	52,0	**173,4**	**129,2**	**56,2**	165,8	126,1	60,8
	28	20	192,2	129,6	45,7	187,4	127,5	48,7	183,2	127,5	52,5	177,8	126,5	56,6	170,8	124,4	61,3
	30	22	204,7	126,3	46,1	200,0	126,3	49,6	194,4	123,1	53,4	188,9	123,1	57,3	181,2	121,0	62,4

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
30500	-15	-16	88,1	38,6	88,2	39,8	88,3	41,1	88,4	42,8	86,7	43,8	86,8	45,4	88,5	47,5	86,2	48,4
	-10	-11	103,1	40,5	102,9	41,8	103,9	43,4	102,1	44,8	102,4	46,6	105,1	48,4	105,2	50,2	101,3	52,0
	-7	-8	111,4	40,9	110,0	42,3	110,6	43,7	115,1	45,4	115,2	47,0	113,4	48,7	110,1	50,4	105,8	51,9
	-3	-4	122,1	41,3	129,6	42,6	122,1	44,0	122,0	45,5	123,9	47,1	123,0	48,8	122,2	50,5	121,9	52,3
	0	-1	133,5	41,1	136,4	42,2	137,7	43,5	136,4	45,0	134,9	46,6	135,5	48,4	134,2	49,9	133,9	51,7
	2	1	143,0	40,3	142,2	41,6	141,9	43,0	143,4	44,4	141,6	45,8	142,3	47,3	137,9	49,4	138,4	51,0
	7	6	162,1	39,9	162,0	41,3	160,0	42,7	160,3	44,3	159,2	45,5	**157,2**	**47,2**	159,1	48,8	156,5	50,5
	12	11	172,7	40,6	172,4	42,0	171,7	43,4	171,0	44,9	170,2	46,6	169,7	48,0	168,9	49,7	168,2	51,4

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
30500	-15	-16	80,1	38,6	80,2	39,8	80,3	41,1	80,4	42,8	78,8	43,8	78,9	45,4	80,4	47,5	78,4	48,4
	-10	-11	93,7	40,5	93,6	41,8	94,4	43,4	92,9	44,8	93,1	46,6	95,5	48,4	95,6	50,2	92,1	52,0
	-7	-8	101,3	40,9	100,0	42,3	100,5	43,7	104,6	45,4	104,7	47,0	103,1	48,7	100,1	50,4	96,2	51,9
	-3	-4	111,0	41,3	117,8	42,6	111,0	44,0	110,9	45,5	112,6	47,1	111,8	48,8	111,1	50,5	110,8	52,3
	0	-1	121,4	41,1	124,0	42,2	125,2	43,5	124,0	45,0	122,6	46,6	123,2	48,4	122,0	49,9	121,7	51,7
	2	1	130,0	40,3	129,3	41,6	129,0	43,0	130,4	44,4	128,7	45,8	129,4	47,3	125,4	49,4	125,8	51,0
	7	6	162,1	39,9	162,0	41,3	160,0	42,7	160,3	44,3	159,2	45,5	**157,2**	**47,2**	159,1	48,8	156,5	50,5
	12	11	172,7	40,6	172,4	42,0	171,7	43,4	171,0	44,9	170,2	46,6	169,7	48,0	168,9	49,7	168,2	51,4

Data calculated in accordance with EN 14511

UATYA180BBAY1
UATYA180BFC2Y1
UATYA180BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup.coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup.coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup.coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext.coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext.coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*
T_{indoor} is the temperature of the indoor ambient.
$T_{outdoor}$ is the temperature of the outdoor ambient.
$x_{exhaust}$ is the ratio between the *exhaust air flow,* $V_{exhaust}$, and the *total air flow on the external coils,* V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.
(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

$$T_{in,ext.coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

5 Capacity tables

5 - 1 Cooling/Heating Capacity Tables

UATYA190BBAY1
UATYA190BFC2Y1
UATYA190BFC3Y1

Cooling Capacity and Power Input Table (EN 14511)

Air Flow	Air Condition on Supply Coil		Air conditions on External Coil														
	T DB	TWB	20			40			30			35			40		
[m³/h]	[°C]	[°C]	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI	TC	SHC	PI
31500	24	17	190,2	134,0	50,4	186,2	131,8	53,5	181,5	130,7	57,3	176,5	129,6	61,8	169,9	127,4	67,0
	40	18	196,3	133,3	50,8	192,0	131,1	54,0	187,2	130,0	57,9	181,9	127,9	62,3	174,9	125,7	67,6
	26	18	196,5	143,6	50,8	191,5	140,4	53,7	187,6	141,4	57,7	181,4	138,2	62,3	175,5	139,3	67,8
	27	19	202,2	141,9	51,3	197,7	140,8	54,5	193,8	140,8	58,6	**187,0**	**136,4**	**62,9**	180,3	136,4	68,3
	28	20	209,1	141,3	51,7	204,1	139,1	55,1	198,9	136,9	59,1	192,6	135,8	63,7	184,8	132,5	69,0
	30	22	222,1	138,9	52,7	217,1	136,7	56,2	211,4	134,4	60,3	204,4	132,2	65,1	196,8	131,1	70,3

PEAK Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
31500	-15	-16	97,9	42,9	99,5	44,3	98,0	45,7	96,6	46,9	99,8	49,1	97,2	50,2	98,6	52,2	98,1	54,1
	-10	-11	114,8	45,0	114,6	46,4	113,3	47,9	112,5	49,4	113,5	51,4	112,8	53,1	111,5	54,7	113,2	57,0
	-7	-8	126,3	45,7	123,0	47,0	125,2	48,7	127,1	50,4	124,4	51,9	125,1	53,9	123,1	55,7	125,0	57,7
	-3	-4	140,9	46,3	136,3	47,5	138,3	49,4	140,7	51,1	141,1	52,6	139,6	54,5	139,7	56,6	139,0	58,6
	0	-1	152,8	46,0	149,5	47,6	147,4	50,0	153,2	50,5	152,9	52,5	148,6	54,4	151,0	55,9	151,0	57,7
	2	1	157,6	45,7	159,1	47,3	160,1	48,6	159,1	50,1	157,3	52,1	155,8	53,8	153,3	55,6	155,4	57,5
	7	6	181,0	45,5	180,3	47,0	180,5	48,6	179,9	50,3	178,3	51,9	**177,1**	**54,2**	174,4	55,2	176,8	57,8
	12	11	193,2	46,7	193,4	48,4	191,3	49,6	192,0	51,6	189,8	53,2	190,3	55,4	190,0	57,2	189,3	59,3

INTEGRATED Heating Capacity and Power Input Table (EN 14511)

Air Flow	Air conditions on External Coil		Air Condition on Supply Coil															
	T DB	TWB	10		12		14		16		18		20		22		24	
[m³/h]	[°C]	[°C]	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI	PC	PI
31500	-15	-16	89,0	42,9	90,5	44,3	89,1	45,7	87,9	46,9	90,7	49,1	88,3	50,2	89,6	52,2	89,2	54,1
	-10	-11	104,4	45,0	104,2	46,4	103,0	47,9	102,3	49,4	103,2	51,4	102,5	53,1	101,4	54,7	102,9	57,0
	-7	-8	114,8	45,7	111,8	47,0	113,8	48,7	115,5	50,4	113,1	51,9	113,7	53,9	111,9	55,7	113,6	57,7
	-3	-4	128,1	46,3	123,9	47,5	125,7	49,4	127,9	51,1	128,3	52,6	126,9	54,5	127,0	56,6	126,4	58,6
	0	-1	138,9	46,0	135,9	47,6	134,0	50,0	139,3	50,5	139,0	52,5	135,1	54,4	137,3	55,9	137,3	57,7
	2	1	143,3	45,7	144,6	47,3	145,5	48,6	144,6	50,1	143,0	52,1	141,6	53,8	139,4	55,6	141,3	57,5
	7	6	181,0	45,5	180,3	47,0	180,5	48,6	179,9	50,3	178,3	51,9	**177,1**	**54,2**	174,4	55,2	176,8	57,8
	12	11	193,2	46,7	193,4	48,4	191,3	49,6	192,0	51,6	189,8	53,2	190,3	55,4	190,0	57,2	189,3	59,3

Data calculated in accordance with EN 14511

UATYA190BBAY1
UATYA190BFC2Y1
UATYA190BFC3Y1

Use as input for the tables, the air condition on supply coil and external coil, determined according to the following formulas.If air conditions on the supply coil and external coil are not present in the table, interpolation is required.

DETERMINATION OF AIR TEMPERATURE ON SUPPLY COIL (use as input in the table)

$$T_{in\ ,sup\ .coil} = T_{indoor} * \left(1 - \frac{x}{100}\right) + T_{outdoor} * \frac{x}{100}$$

Where:

$T_{in\ ,sup\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on supply coil data set*

T_{indoor} is the temperature of the indoor ambient

$T_{outdoor}$ is the temperature of the of the outdoor ambient

For unit with dampers , x is the amount (in %) of the fresh air. As factory default this is set to 30%, therefore the above calculation is:

(e.g. with $T_{indoor} = 27°C$ and $T_{outdoor} = 35°C$)

$$T_{in\ ,sup\ .coil} = T_{indoor} * 0.7 + T_{outdoor} * 0.3 = 27 * 0.7 + 35 * 0.3 = 29.4\ °C$$

DETERMINATION OF AIR TEMPERATURE ON THE EXTERNAL COIL (use as input in the table)

For units basic units and two dampers units, the thermodynamic heat recovery on the external coil is not present. For this reason, use:

$$T_{in,ext\ .coil} = T_{outdoor}$$

For three dampers units, the thermodynamic heat recovery on the external coil is present. For this reason, use:

$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right)$$

Where:

$T_{in,ext\ .coil}$ is the temperature that has to be used as input for the table of the *air temperature on the outdoor coil data set*

T_{indoor} is the temperature of the indoor ambient.

$T_{outdoor}$ is the temperature of the outdoor ambient.

$x_{exhaust}$ is the ratio between the *exhaust air flow*, $V_{exhaust}$, and the *total air flow on the external coils*, V_{axial} :

$$x_{exhaust} = \frac{V_{exhaust}}{V_{axial}} = \frac{x * V_{intake}}{V_{axial}}$$

Where:

x is the amount (in %) of the fresh air. As factory default this is set to 30%

V_{intake} is the return air flow. As factory default, the return air flow is equal to the supply air flow.

(e.g. with $T_{indoor} = 27°C$, $T_{outdoor} = 35°C$, x = 30% , V_{intake} = 4950 mc/h , V_{axial} = 11500 mc/h)

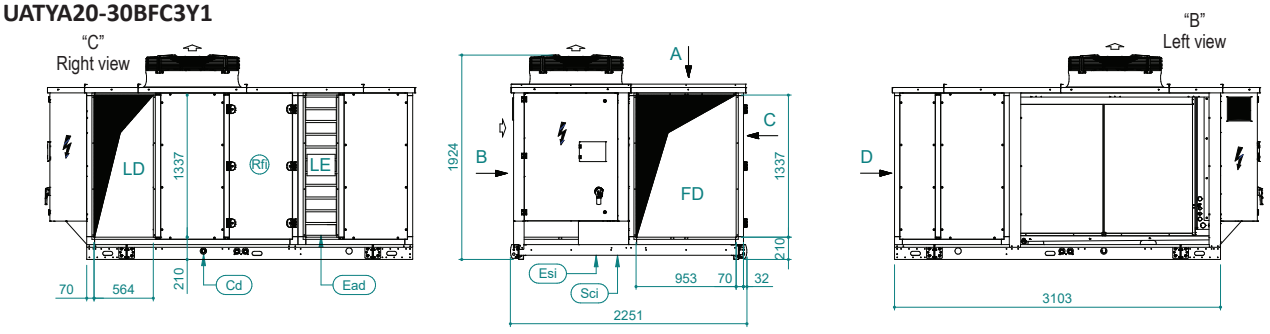
$$T_{in,ext\ .coil} = T_{indoor} * \frac{x_{exhaust}}{100} + T_{outdoor} * \left(1 - \frac{x_{exhaust}}{100}\right) = T_{indoor} * \frac{\frac{x * V_{intake}}{V_{axial}}}{100} + T_{outdoor} * \left(1 - \frac{\frac{x * V_{intake}}{V_{axial}}}{100}\right)$$

$$= T_{indoor} * \frac{\frac{30 * 4950}{11500}}{100} + T_{outdoor} * \left(1 - \frac{\frac{30 * 4950}{11500}}{100}\right) = 27 * 0{,}129 + 35 * (1 - 0{,}129) = 33{,}96\ °C$$

6 Dimensional drawings

6 - 1 Dimensional Drawings

UATYA20-30BFC3Y1

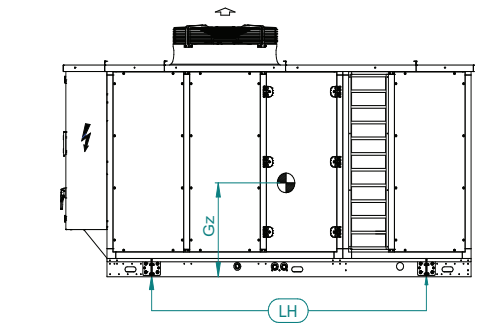


Air direction	Discharge	Intake	External
Left	LD	/	LE
Rear	/	RI	/
Front	FD	/	/

Sci	Signal cables inlet	Ead	External air damper	Esi	Electrical supply inlet
Cd	Condensate drain 1" male	Rfi	Remove for inspection		Clearances

DDIM000961A

UATYA20-30BFC3Y1

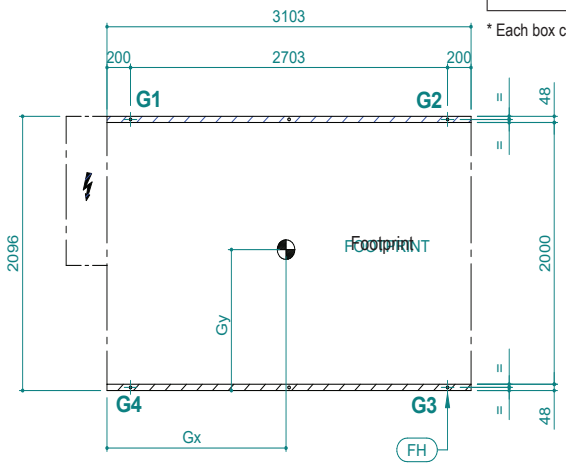


Fh	Fixing holes	Ø22	LH	Lifting point	G..	Vibration damper foot holds

Model	Weight (kg)						(mm)		
	Shipping	Operating	G1	G2	G3	G4	Gx	Gy	Gz
UATYA25BFC3Y1	1195	1166	423	218	179	346	1293	1096	847
UATYA30BFC3Y1	1225	1196	432	222	184	358	1285	1090	841

Model	Rubber anti-vibration mounts				Boxes to be ordered *
	G1	G2	G3	G4	
UATYA25BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM2	1 x UATYAAVM1 + 1 x UATYAAVM2
UATYA30BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM2	1 x UATYAAVM1 + 1 x UATYAAVM2

* Each box contains 2 mounts

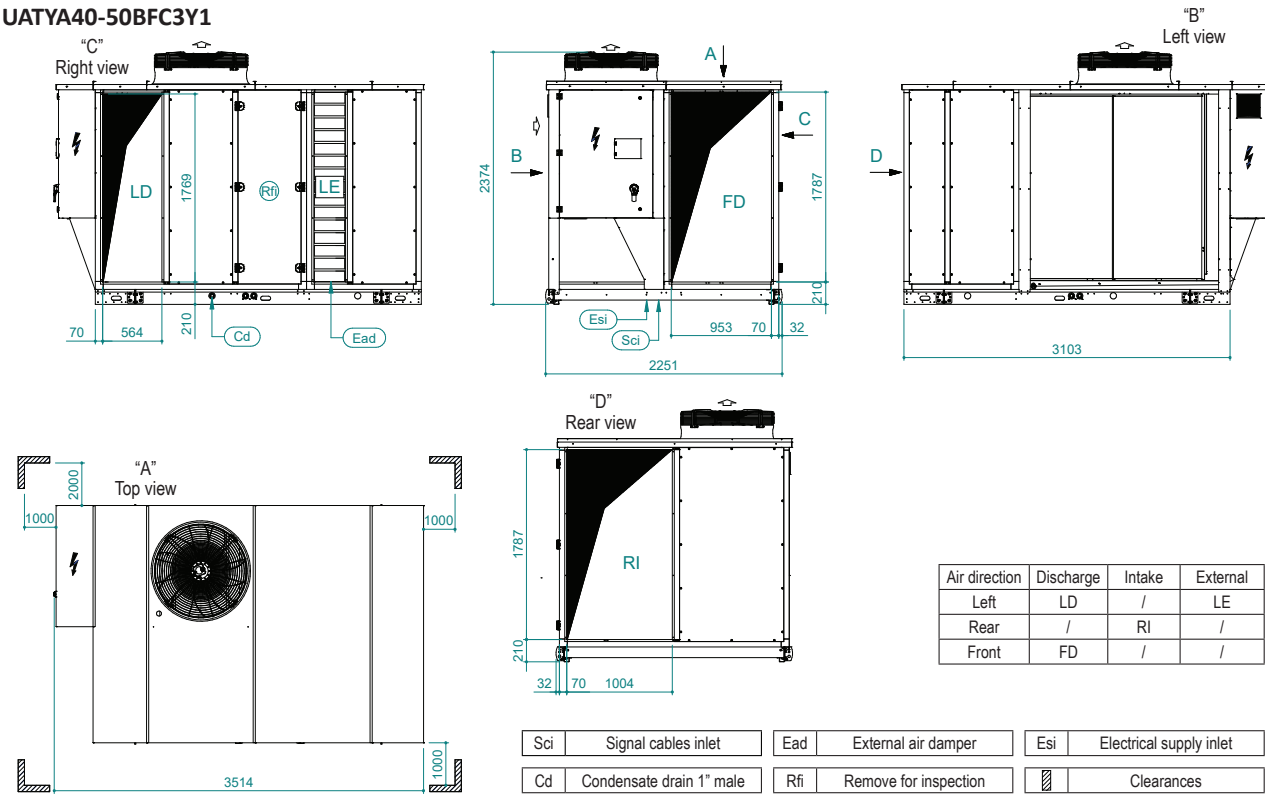


DDIM000961A

6 Dimensional drawings

6 - 1 Dimensional Drawings

UATYA40-50BFC3Y1

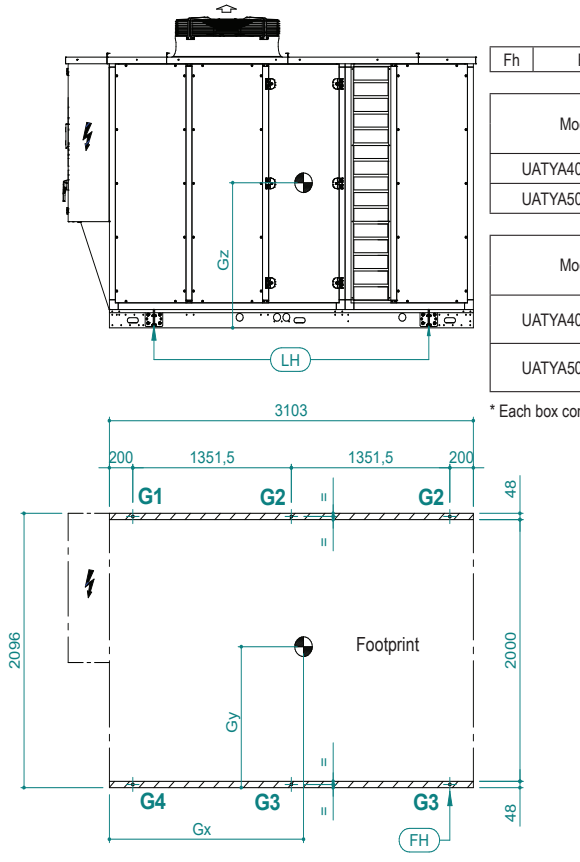


Air direction	Discharge	Intake	External
Left	LD	/	LE
Rear	/	RI	/
Front	FD	/	/

Sci	Signal cables inlet	Ead	External air damper	Esi	Electrical supply inlet
Cd	Condensate drain 1" male	Rfi	Remove for inspection		Clearances

DDIM000962A

UATYA40-50BFC3Y1



Fh	Fixing holes	Ø22	LH	Lifting point	G..	Vibration damper foot holds

Model	Weight (kg)						(mm)		
	Shipping	Operating	G1	G2	G3	G4	Gx	Gy	Gz
UATYA40BFC3Y1	1339	1310	284	414	363	249	1309	1064	1055
UATYA50BFC3Y1	1358	1329	287	422	369	251	1310	1064	1053

Model	Rubber anti-vibration mounts				Boxes to be ordered *
	G1	G2	G3	G4	
UATYA40BFC3Y1	UATYAAVM2	UATYAAVM2	UATYAAVM2	UATYAAVM2	1 x UATYAAVM1 + 2 x UATYAAVM2
UATYA50BFC3Y1	UATYAAVM2	UATYAAVM2	UATYAAVM2	UATYAAVM2	1 x UATYAAVM1 + 2 x UATYAAVM2

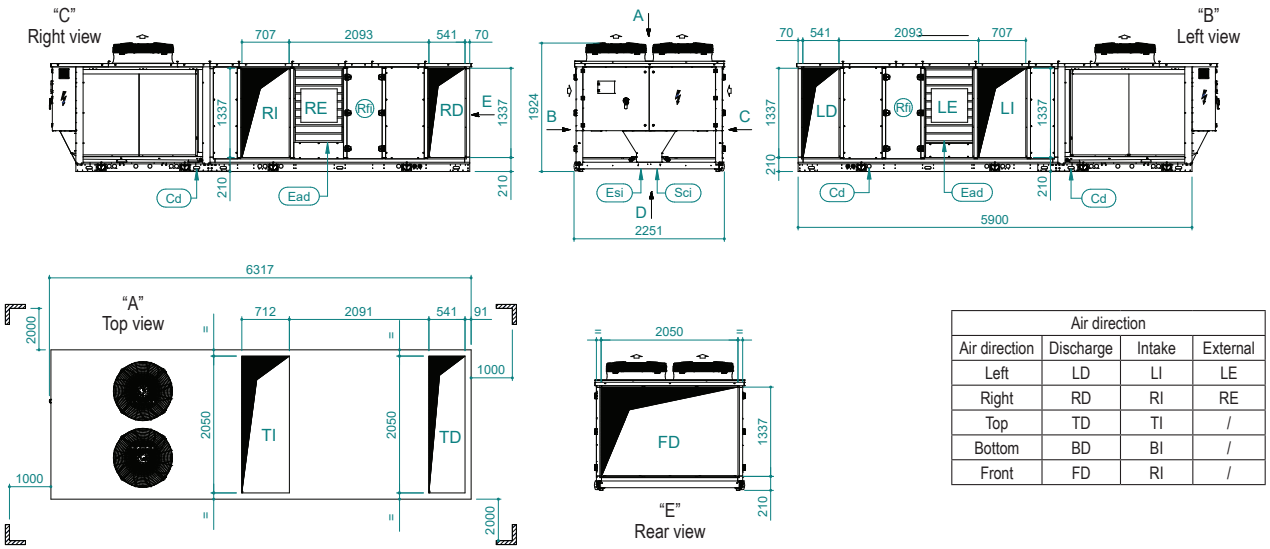
* Each box contains 2 mounts

DDIM000962A

6 Dimensional drawings

6 - 1 Dimensional Drawings

UATYA60-70BFC3Y1

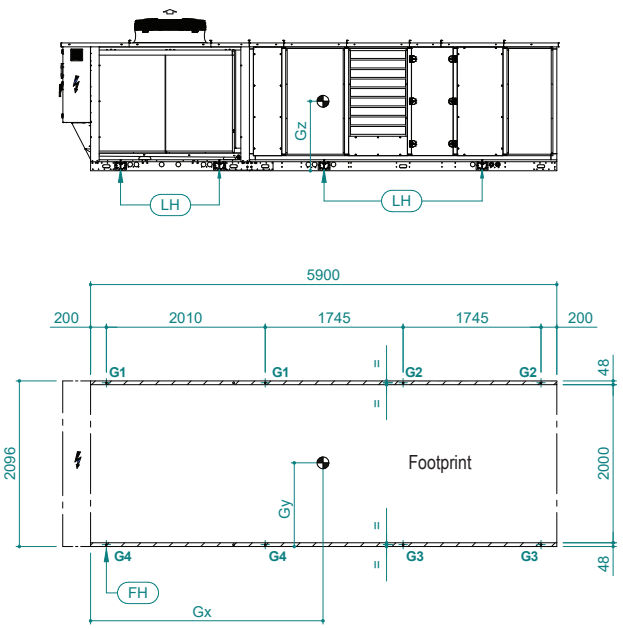


Air direction			
Air direction	Discharge	Intake	External
Left	LD	LI	LE
Right	RD	RI	RE
Top	TD	TI	/
Bottom	BD	BI	/
Front	FD	RI	/

Sci	Signal cables inlet	Ead	External air damper	Esi	Electrical supply inlet
Cd	Condensate drain 1" male	Rfi	Remove for inspection		Clearances

DDIM000963A

UATYA60-70BFC3Y1



Fh	Fixing holes	Ø22	LH	Lifting point	G..	Vibration damper foot holds	

Model	Weight (kg)						(mm)		
	Shipping	Operating	G1	G2	G3	G4	Gx	Gy	Gz
UATYA60BFC3Y1	2035	1996	358	178	153	309	2739	1137	838
UATYA70BFC3Y1	2133	2094	399	185	147	316	2661	1185	841

Model	Rubber anti-vibration mounts				Boxes to be ordered *
	G1	G2	G3	G4	
UATYA60BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2
UATYA70BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2

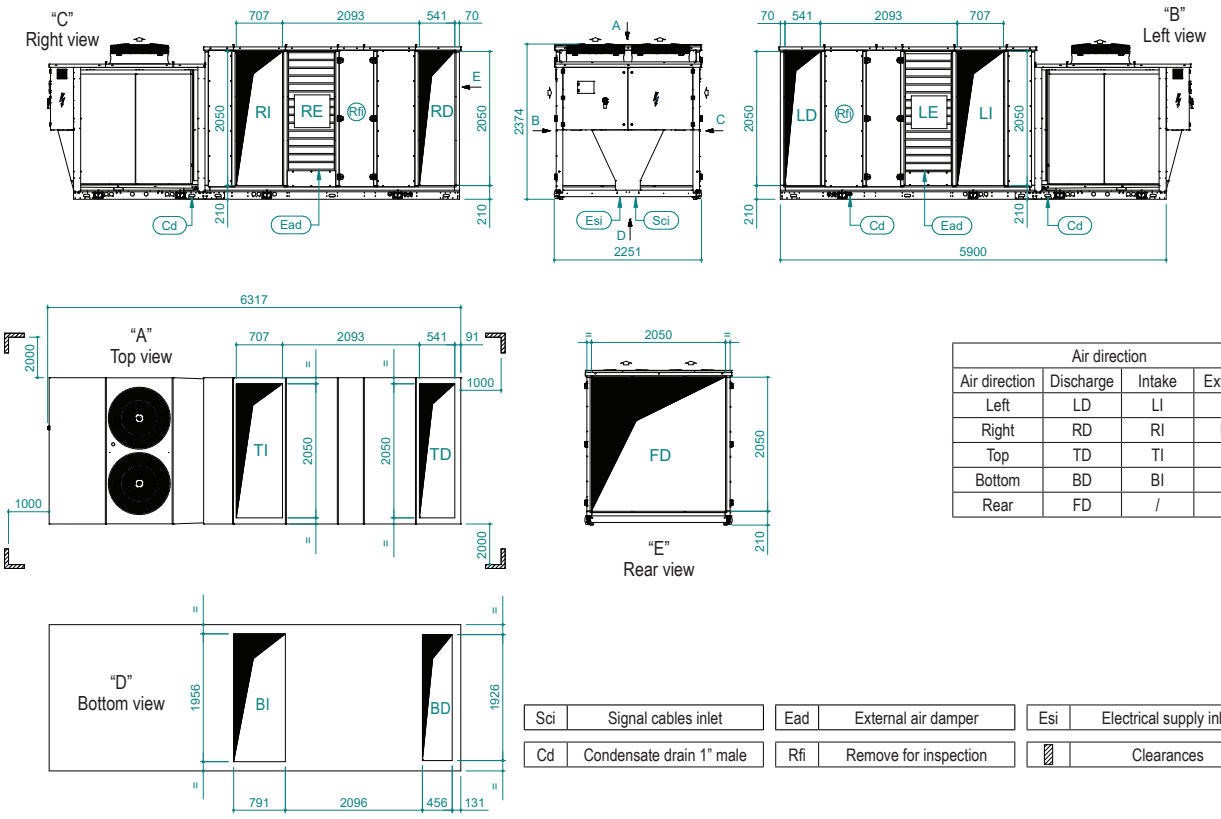
* Each box contains 2 mounts

DDIM000963A

6 Dimensional drawings

6 - 1 Dimensional Drawings

UATYA80-120BFC3Y1

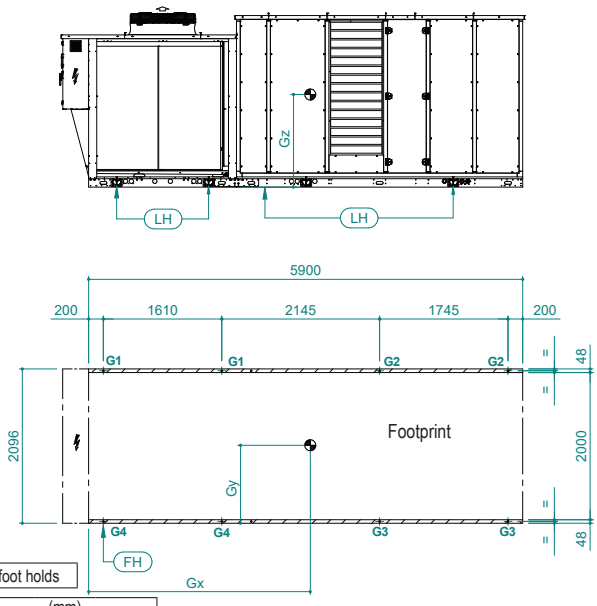


Air direction			
Air direction	Discharge	Intake	External
Left	LD	LI	LE
Right	RD	RI	RE
Top	TD	TI	/
Bottom	BD	BI	/
Rear	FD	/	/

Sci	Signal cables inlet	Ead	External air damper	Esi	Electrical supply inlet
Cd	Condensate drain 1" male	Rfi	Remove for inspection		Clearances

DDIM000964A

UATYA80-120BFC3Y1



Fh	Fixing holes	Ø22	LH	Lifting point	G..	Vibration damper foot holds			

Model	Weight (kg)						(mm)		
	Shipping	Operating	G1	G2	G3	G4	Gx	Gy	Gz
UATYA80BFC3Y1	2375	2336	405	243	195	325	2719	1178	1118
UATYA90BFC3Y1	2421	2382	411	239	199	342	2681	1156	1090
UATYA100BFC3Y1	2491	2452	419	247	208	352	2688	1150	1079
UATYA110BFC3Y1	2587	2548	441	269	214	350	2712	1183	1090
UATYA120BFC3Y1	2597	2558	436	280	220	243	2765	1188	1080

Model	Rubber anti-vibration mounts				Boxes to be ordered *
	G1	G2	G3	G4	
UATYA80BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2
UATYA90BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2
UATYA100BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2
UATYA110BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2
UATYA120BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	3 x UATYAAVM1 + 1 x UATYAAVM2

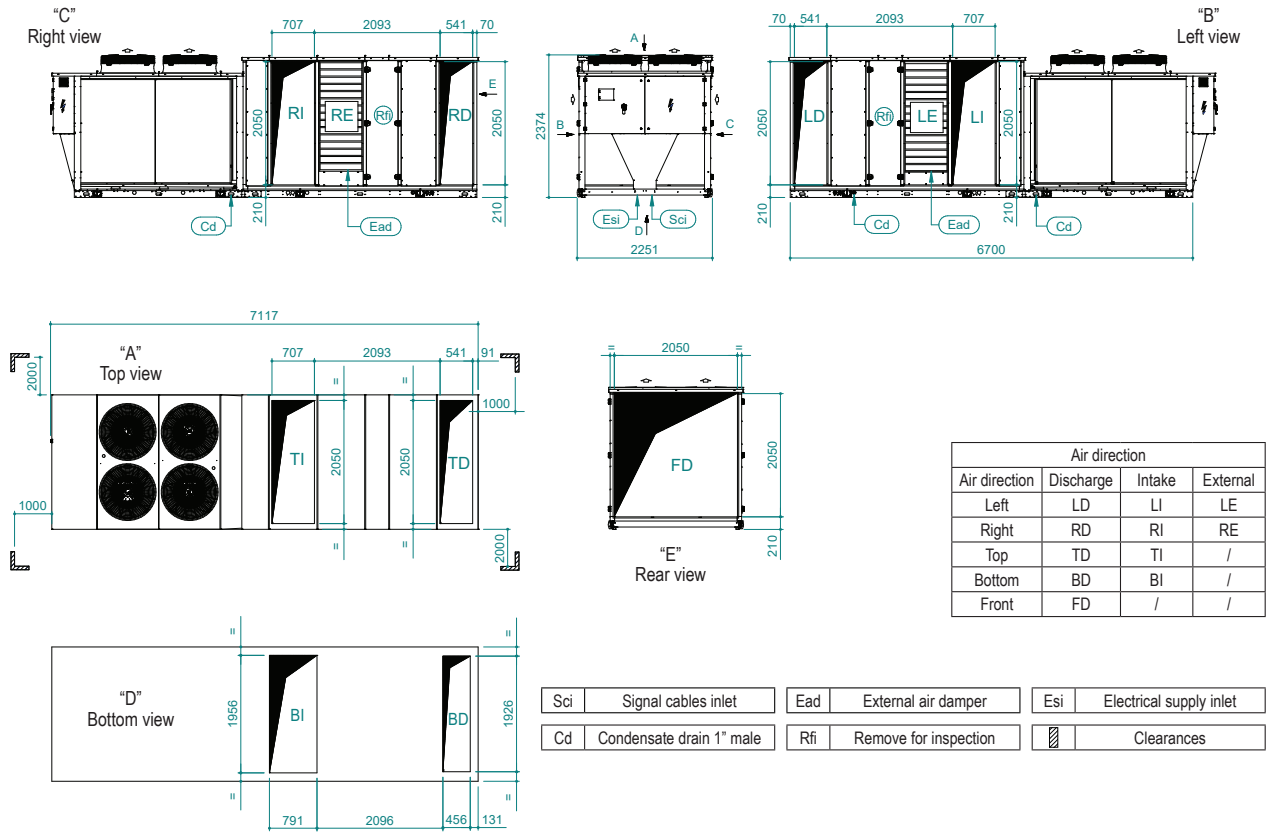
* Each box contains 2 mount

DDIM000964A

6 Dimensional drawings

6 - 1 Dimensional Drawings

UATYA140-190BFC3Y1

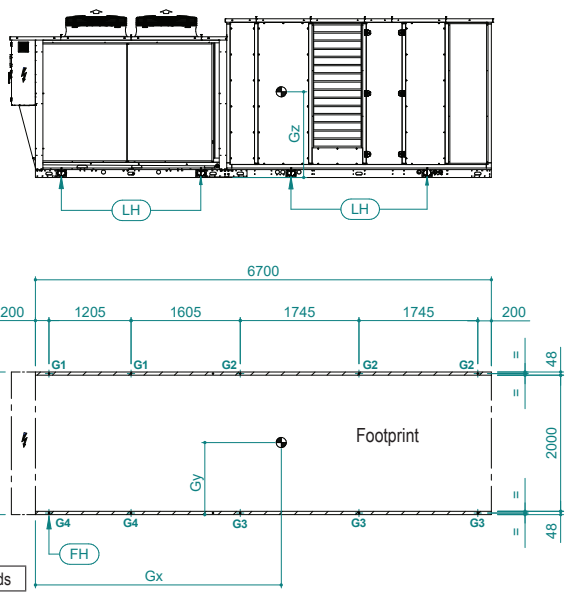


Air direction			
Air direction	Discharge	Intake	External
Left	LD	LI	LE
Right	RD	RI	RE
Top	TD	TI	/
Bottom	BD	BI	/
Front	FD	/	/

Sci	Signal cables inlet	Ead	External air damper	Esi	Electrical supply inlet
Cd	Condensate drain 1" male	Rfi	Remove for inspection		Clearances

DDIM000965A

UATYA140-190BFC3Y1



Fh	Fixing holes	Ø22	LH	Lifting point	G..	Vibration damper foot holds

Model	Weight (kg)						(mm)		
	Shipping	Operating	G1	G2	G3	G4	Gx	Gy	Gz
UATYA140BFC3Y1	3068	3024	390	305	239	306	3200	1188	1101
UATYA150BFC3Y1	3079	3035	368	287	258	332	3192	1108	1100
UATYA160BFC3Y1	3118	3074	379	286	258	342	3155	1107	1098
UATYA180BFC3Y1	3236	3192	380	311	275	337	3234	1117	1101
UATYA190BFC3Y1	3315	3271	395	314	279	351	3195	1116	1065

Model	Rubber anti-vibration mounts				Boxes to be ordered *
	G1	G2	G3	G4	
UATYA140BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	4 x UATYAAVM1 + 1 x UATYAAVM2
UATYA150BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	4 x UATYAAVM1 + 1 x UATYAAVM2
UATYA160BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	4 x UATYAAVM1 + 1 x UATYAAVM2
UATYA180BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM1	4 x UATYAAVM1 + 1 x UATYAAVM2
UATYA190BFC3Y1	UATYAAVM2	UATYAAVM1	UATYAAVM1	UATYAAVM2	4 x UATYAAVM1 + 1 x UATYAAVM2

* Each box contains 2 mounts

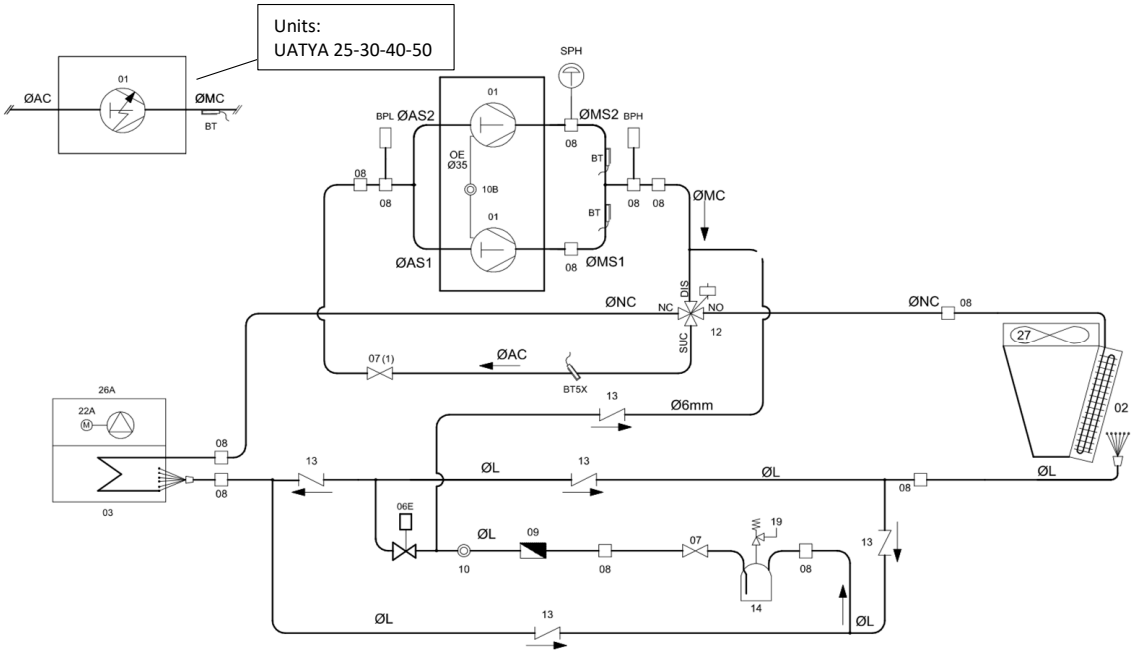
DDIM000965A

7 Piping diagrams

7 - 1 Piping Diagrams

UATYA25-50BBAY1
UATYA140-190BBAY1
UATYA25-50BFC2Y1
UATYA140-190BFC2Y1
UATYA25-50BFC3Y1
UATYA140-190BFC3Y1

		Ø							
Unit size	N° circuit	AS1	AS2	AC	MS1	MS2	MC	NC	L
UATYA25B***Y1	1	-	-	18	-	-	16	18	12
UATYA30B***Y1	1	-	-	22	-	-	18	22	16
UATYA40B***Y1	1	-	-	22	-	-	18	22	16
UATYA50B***Y1	1	-	-	28	-	-	22	28	18
UATYA140B***Y1	2	35	35	35	22	22	28	35	18
UATYA150B***Y1	2	35	35	35	22	22	28	35	18
UATYA160B***Y1	2	35	35	35	22	22	28	35	18
UATYA180B***Y1	2	35	35	42	22	22	28	35	22
UATYA190B***Y1	2	42	35	42	28	22	28	35	22



(1) Only in unit with ØAC larger or equal to 35mm

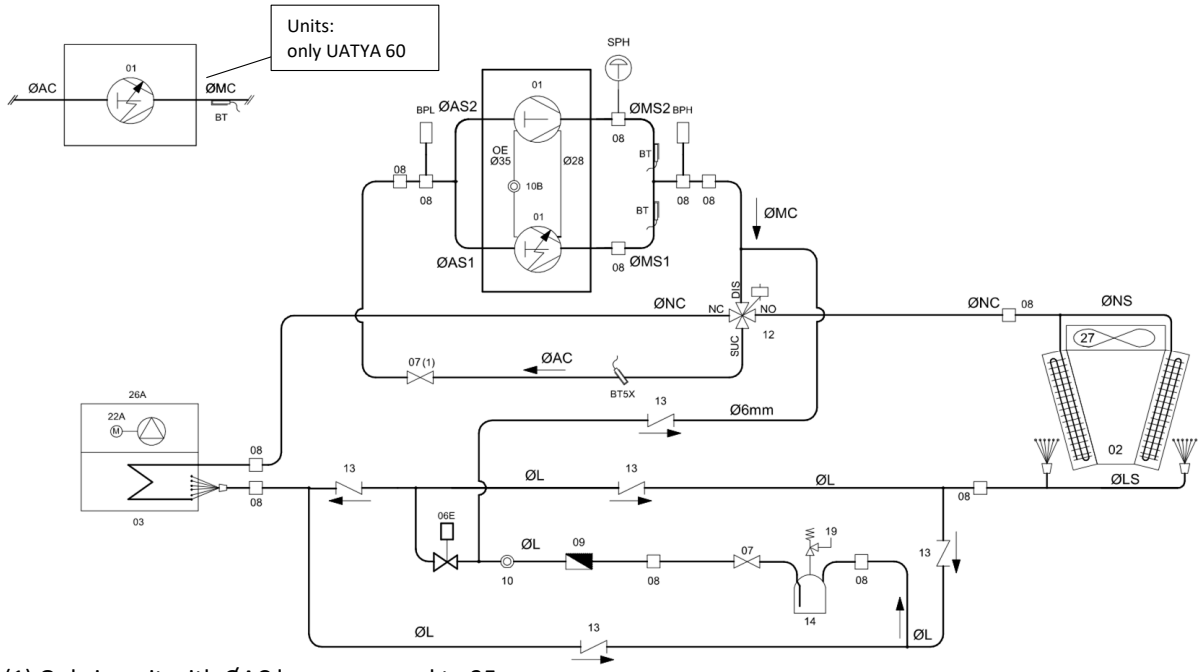
DFRI000228A

7 Piping diagrams

7 - 1 Piping Diagrams

UATYA60-120BBAY1
UATYA60-120BFC2Y1
UATYA60-120BFC3Y1

		Ø									
Unit size	N° circuit	AS1	AS2	AC	MS1	MS2	MC	NC	NS	L	LS
UATYA60B***Y1	1	-	-	28	-	-	22	28	18	18	16
UATYA70B***Y1	1	28	28	35	22	22	22	28	18	18	16
UATYA80B***Y1	1	28	28	35	22	22	22	28	22	18	16
UATYA90B***Y1	1	28	35	35	22	22	28	35	22	22	18
UATYA100B***Y1	1	28	35	42	22	22	28	35	28	22	18
UATYA110B***Y1	1	28	42	42	22	28	28	35	28	22	18
UATYA1200B***Y1	1	28	42	42	22	28	28	35	28	22	18



(1) Only in unit with ØAC larger or equal to 35mm

DFRI000229A

8 Wiring diagrams

8 - 1 Wiring Diagrams - Single Phase

UATYA-BBAY1
UATYA-BFC2Y1
UATYA-BFC3Y1

All wiring diagrams can be downloaded from the Daikin Europe Portal (my.daikin.eu) or your local country portal.

9 Sound data

9 - 1 Sound Level Data

UATYA-BBAY1
UATYA-BFC2Y1
UATYA-BFC3Y1

MODEL	Octave Bands [dB]																TOT dB(A)	
	63 Hz		125 Hz		250 Hz		500 Hz		1000 Hz		2000 Hz		4000 Hz		8000 Hz			
	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp	Lw	Lp
UATYA25	87	69	84	66	79	60	75	57	72	54	68	50	64	46	55	37	82	64
UATYA30	88	69	85	66	80	61	79	61	79	60	78	60	76	58	70	52	84	66
UATYA40	85	66	82	63	83	64	77	59	81	63	80	62	79	60	65	47	87	68
UATYA50	88	69	85	66	79	61	80	61	80	62	81	62	77	59	73	54	86	67
UATYA60	91	71	88	68	83	64	81	61	82	62	81	62	83	64	75	55	89	69
UATYA70	92	72	89	69	85	66	81	61	82	63	81	62	79	60	67	48	88	68
UATYA80	97	77	94	74	88	69	84	64	85	65	82	62	89	69	77	57	93	73
UATYA90	97	77	94	74	85	65	83	63	83	63	82	62	79	59	73	53	89	69
UATYA100	97	77	94	74	85	66	83	63	84	64	82	63	83	63	75	55	90	70
UATYA110	97	77	94	74	86	66	83	63	84	64	84	64	84	64	75	55	90	71
UATYA120	97	77	94	74	88	68	85	65	87	67	86	66	90	70	79	59	94	74
UATYA140	100	80	97	77	87	67	84	64	84	63	79	59	77	56	68	48	89	68
UATYA150	100	80	97	77	88	67	84	64	83	63	79	59	77	56	68	47	89	68
UATYA160	100	80	97	77	88	67	85	64	84	63	80	60	77	57	69	49	89	69
UATYA180	100	80	97	77	88	67	85	64	84	64	81	61	78	57	71	50	89	69
UATYA190	100	80	97	77	88	67	85	65	84	64	84	64	78	58	70	50	90	70

Lw: Sound power level in free field calculated according to standard ISO 3744. Values refer only to the base unit version
Lp: Average sound pressure level, at 1 meter from the unit, in free field on a reflective surface. Not binding value derived from the sound power level

10 Fan characteristics

10 - 1 Fan Characteristics

UATYA25-80BBAY1
UATYA25-80BFC2Y1
UATYA25-80BFC3Y1

		UATYA25			UATYA30			UATYA40			UATYA50			UATYA60			UATYA70			UATYA80		
		MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*
DECLARED AIR FLOW	[mc/h]	**3600**	**4500**	**4950**	**4640**	**5800**	**6380**	**6000**	**7500**	**8250**	**7200**	**9000**	**9900**	**8800**	**11000**	**12100**	**10400**	**13000**	**14300**	**11600**	**14500**	**15950**
SUPPLY FAN (for version UATYA***BBAY1 / UATYA***BFC2Y1 / UATYA***BFC3Y1)																						
Available Pressure																						
50	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
100	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
150	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
200	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
250	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14062	11600	14500	15950
300	**Pa**	**3600**	**4500**	**4950**	**4640**	**5800**	**6380**	**6000**	**7500**	**8250**	**7200**	**9000**	**9900**	**8800**	**11000**	**12100**	**10400**	**13000**	**13742**	**11600**	**14500**	**15950**
RETURN FAN (only for version UATYA***BFC3Y1)																						
Available Pressure																						
50	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
100	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
150	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
200	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
250	Pa	3600	4500	4950	4640	5800	6380	6000	7500	8250	7200	9000	9900	8800	11000	12100	10400	13000	14300	11600	14500	15950
300	**Pa**	**3600**	**4500**	**4950**	**4640**	**5800**	**6211**	**6000**	**7500**	**8250**	**7200**	**9000**	**9900**	**8800**	**11000**	**12100**	**10400**	**13000**	**14221**	**11600**	**14500**	**15950**

* The maximum airflow is related to the available pressure required. Check the table below to get the maximum airflow for the different available pressures.

UATYA90-120BBAY1
UATYA90-120BFC2Y1
UATYA90-120BFC3Y1

		UATYA90			UATYA100			UATYA110			UATYA120		
		MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*
DECLARED AIR FLOW	[mc/h]	**13200**	**16500**	**18150**	**14400**	**18000**	**19800**	**15840**	**19800**	**21780**	**17280**	**21600**	**23760**
SUPPLY FAN (for version UATYA***BBAY1 / UATYA***BFC2Y1 / UATYA***BFC3Y1)													
Available Pressure													
50	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
100	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
150	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
200	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
250	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
300	**Pa**	**13200**	**16500**	**18150**	**14400**	**18000**	**19800**	**15840**	**19800**	**21780**	**17280**	**21600**	**23760**
RETURN FAN (only for version UATYA***BFC3Y1)													
Available Pressure													
50	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
100	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
150	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
200	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
250	Pa	13200	16500	18150	14400	18000	19800	15840	19800	21780	17280	21600	23760
300	**Pa**	**13200**	**16500**	**18150**	**14400**	**18000**	**19800**	**15840**	**19800**	**21780**	**17280**	**21600**	**23760**

* The maximum airflow is related to the available pressure required. Check the table below to get the maximum airflow for the different available pressures.

10 Fan characteristics

10 - 1 Fan Characteristics

UATYA140-190BBAY1
UATYA140-190BFC2Y1
UATYA140-190BFC3Y1

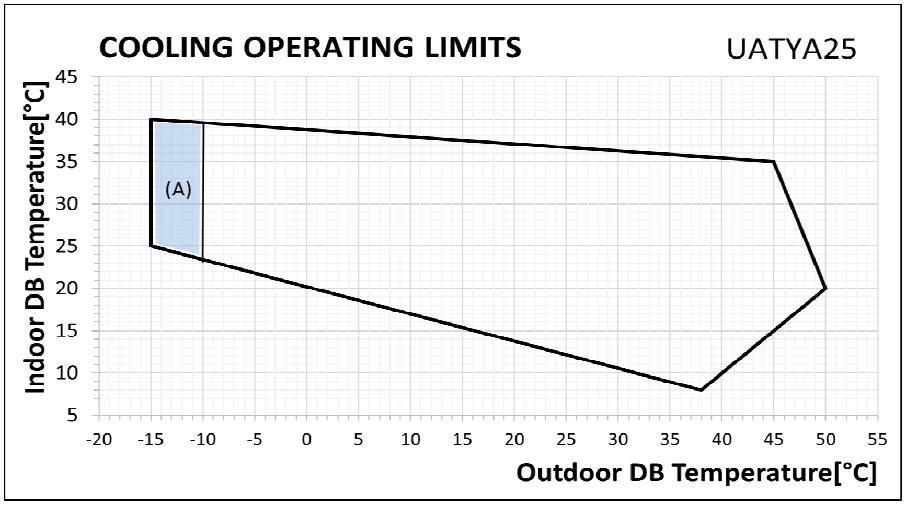
		UATYA140			UATYA150			UATYA160			UATYA180			UATYA190		
		MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*	MIN	NOMINAL	MAX*
DECLARED AIR FLOW	[mc/h]	**20000**	**25000**	**27500**	**21200**	**26500**	**29150**	**22400**	**28000**	**30800**	**24400**	**30500**	**32940**	**25200**	**31500**	**33075**
SUPPLY FAN (for version UATYA***BBAY1 / UATYA***BFC2Y1 / UATYA***BFC3Y1)																
Available Pressure																
50	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
100	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
150	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
200	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
250	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
300	**Pa**	**20000**	**25000**	**27500**	**21200**	**26500**	**29150**	**22400**	**28000**	**30800**	**24400**	**30500**	**30500**	**25200**	**31500**	**31500**
RETURN FAN (only for version UATYA***BFC3Y1)																
Available Pressure																
50	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
100	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30800	24400	30500	32940	25200	31500	33075
150	Pa	20000	25000	27500	21200	26500	29150	22400	28000	30792	24400	30500	32940	25200	31500	33075
200	Pa	20000	25000	27500	21200	26500	29150	22400	28000	29911	24400	30500	32940	25200	31500	33075
250	Pa	20000	25000	26738	21200	26500	29138	22400	28000	29138	24400	30500	32940	25200	31500	33075
300	**Pa**	**20000**	**25000**	**25690**	**21200**	**26500**	**28442**	**22400**	**28000**	**28442**	**24400**	**30500**	**32940**	**25200**	**31500**	**33036**

* The maximum airflow is related to the available pressure required. Check the table below to get the maximum airflow for the different available pressures.

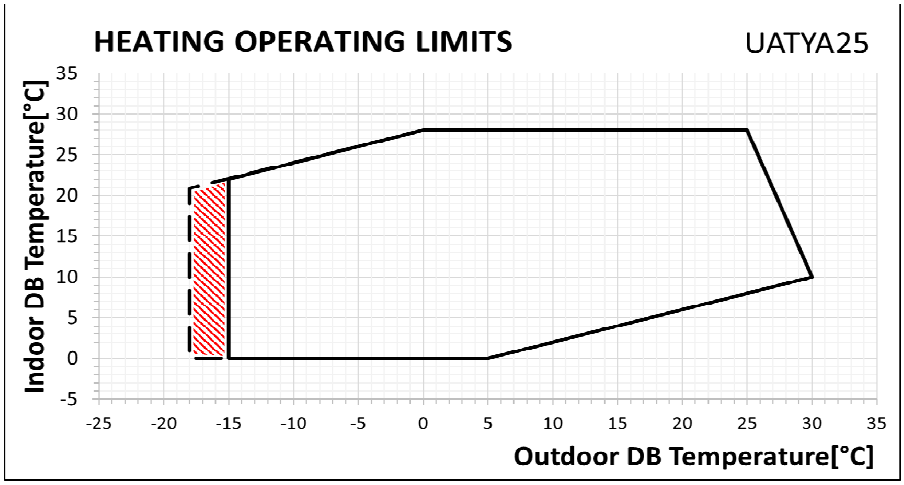
11 Operation range

11 - 1 Operation Range

UATYA25BBAY1
UATYA25BFC2Y1
UATYA25BFC3Y1



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the condensing coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the evaporating coil (dry bulb).



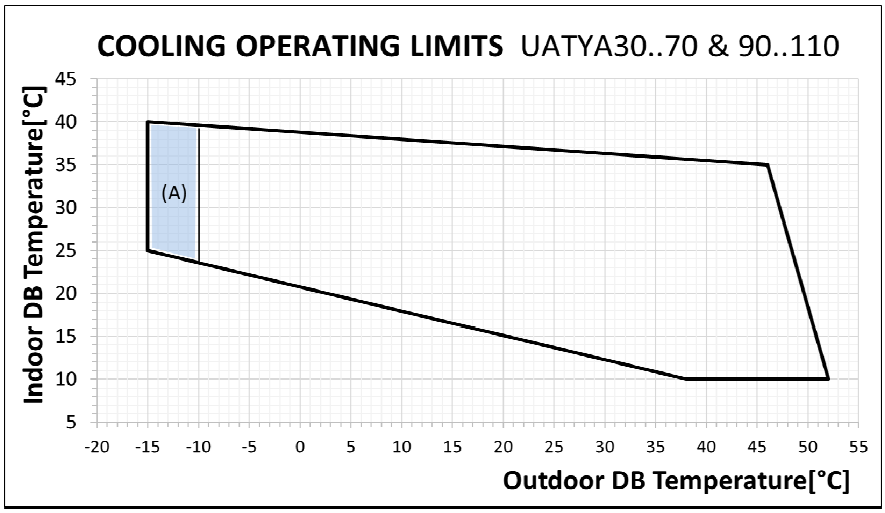
Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the evaporating coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the condensing coil (dry bulb).

	Performances and operation guaranteed.
	Operation guaranteed (COOLING OPERATION). The cooling capacity can be reduced up to 5% compared to the maximum achivable at full speed.
(A)	Performances and operation guaranteed with EC axial fans.
	Operation guaranteed (HEATING OPERATION).

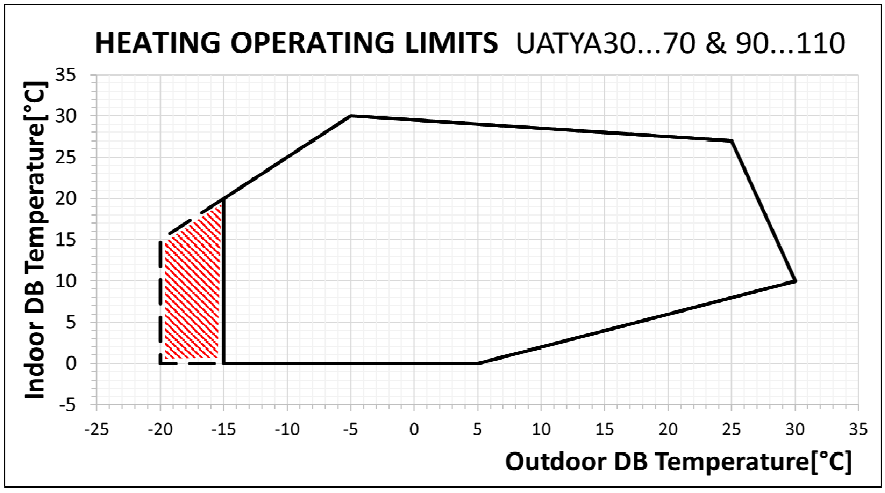
11 Operation range

11 - 1 Operation Range

UATYA30-70BBAY1
UATYA90-110BBAY1
UATYA30-70BFC2Y1
UATYA90-110BFC2Y1
UATYA30-70BFC3Y1
UATYA90-110BFC3Y1



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the condensing coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the evaporating coil (dry bulb).



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the evaporating coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the condensing coil (dry bulb).

Performances and operation guaranteed.

Operation guaranteed (COOLING OPERATION). The cooling capacity can be reduced up to 5% compared to the maximum achivable at full speed.

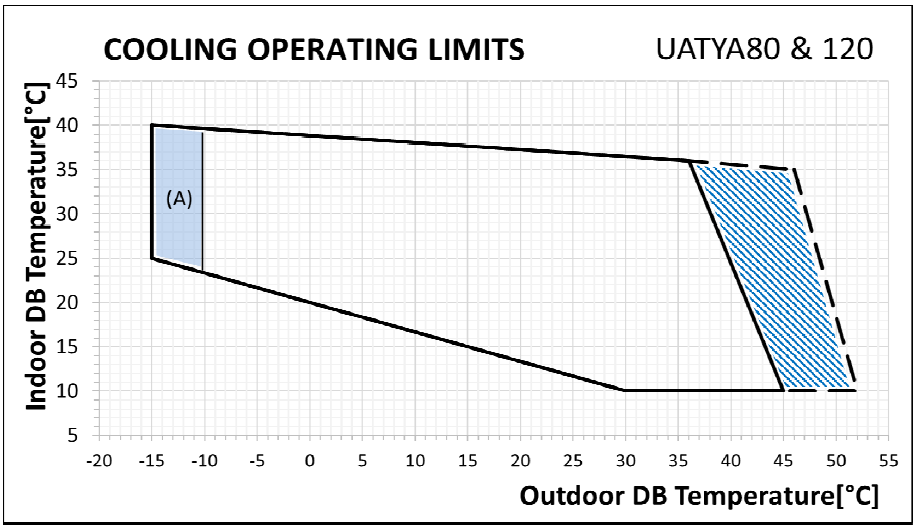
Performances and operation guaranteed with EC axial fans.

Operation guaranteed (HEATING OPERATION).

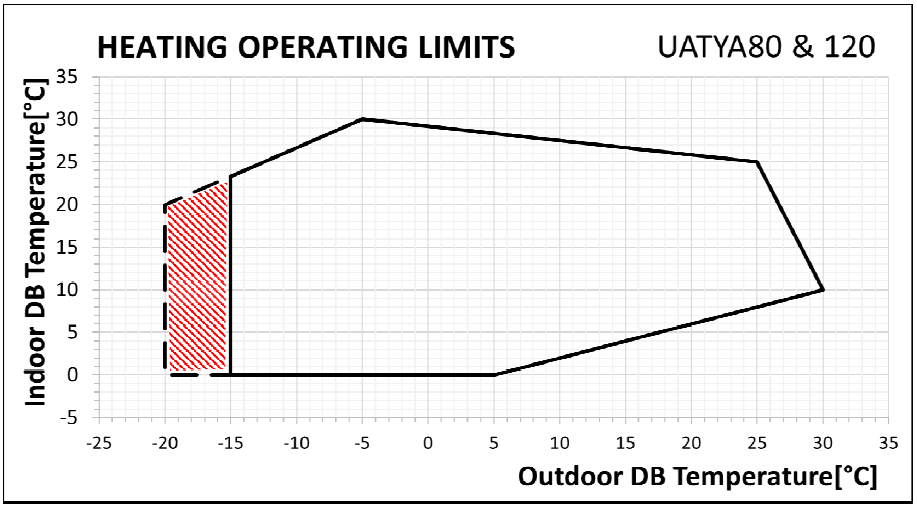
11 Operation range

11 - 1 Operation Range

UATYA80BBAY1
UATYA120BBAY1
UATYA80BFC2Y1
UATYA120BFC2Y1
UATYA80BFC3Y1
UATYA120BFC3Y1



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the condensing coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the evaporating coil (dry bulb).



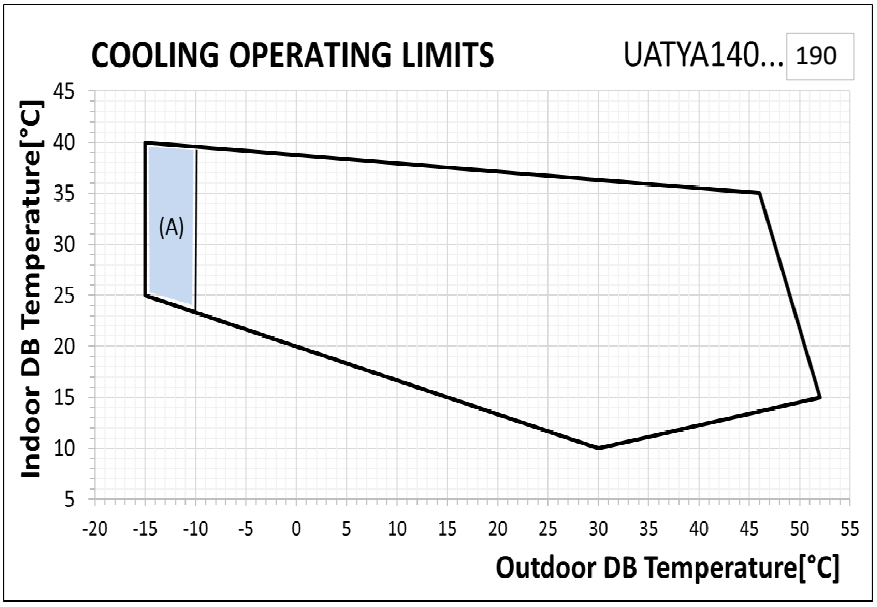
Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the evaporating coil (dry bulb)
Indoor DB Temperature [°C]: Indoor air temperature that strikes the condensing coil (dry bulb).

	Performances and operation guaranteed.
	Operation guaranteed (COOLING OPERATION). The cooling capacity can be reduced up to 5% compared to the maximum achivable at full speed.
(A)	Performances and operation guaranteed with EC axial fans.
	Operation guaranteed (HEATING OPERATION).

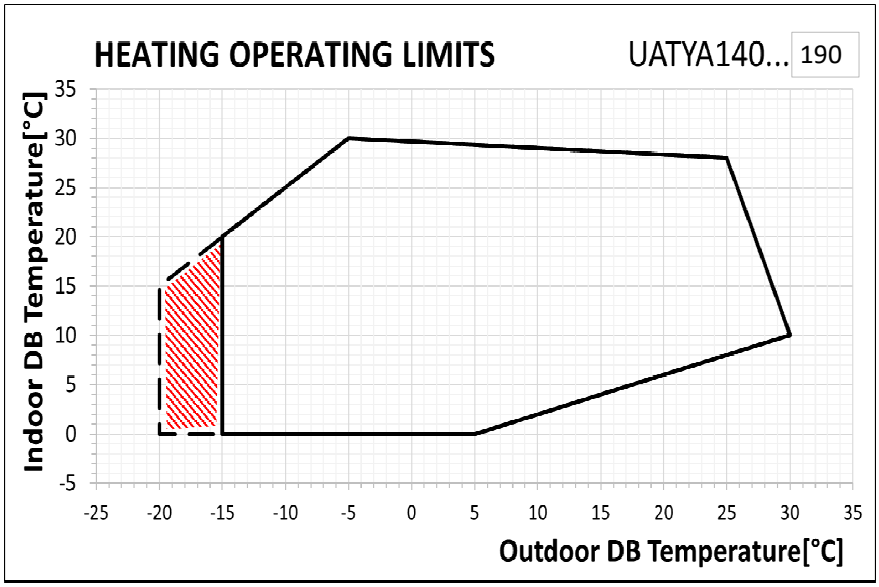
11 Operation range

11 - 1 Operation Range

UATYA140-190BBAY1
UATYA140-190BFC2Y1
UATYA140-190BFC3Y1



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the condensing coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the evaporating coil (dry bulb).



Outdoor DB Temperature [°C]: Outdoor air temperature that strikes the evaporating coil (dry bulb).
Indoor DB Temperature [°C]: Indoor air temperature that strikes the condensing coil (dry bulb).

Performances and operation guaranteed.

Operation guaranteed (COOLING OPERATION). The cooling capacity can be reduced up to 5% compared to the maximum achivable at full speed.

Performances and operation guaranteed with EC axial fans.

Operation guaranteed (HEATING OPERATION).

Daikin Europe N.V. Naamloze Vennootschap · Zandvoordestraat 300 · 8400 Oostende · Belgium · www.daikin.eu · BE 0412 120 336 · RPR Oostende (Responsible Editor)

EEDEN20A 12/2020

The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V. / Daikin Central Europe HandelsGmbH. Daikin Europe N.V. / Daikin Central Europe HandelsGmbH have compiled the content of this publication to the best of their knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. / Daikin Central Europe HandelsGmbH explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Daikin Europe N.V.