

TANNER MDA

Water-supplied air heater with axial fan

Water-supplied air heater with copper/aluminium heat exchanger. Output from 14,5 to 117 kW.



For more information, downloads and videos, visit the Tanner MDA page on our website

Get In Touch

Call: [0845 6880112](tel:08456880112)
 Email: info@adremit.co.uk

Our Address

Puravent, Adremit Limited, Unit 5a, Commercial Yard, Settle, North Yorkshire, BD24 9RH



The most versatile hot water air heater on the market



The TANNER MDA is a water-supplied suspended air heater which can expel air horizontally or vertically. The unit has a powerful axial fan which means it is suitable for many applications.

Mark offers a highly extensive range of accessories for the TANNER MDA allowing it to be aligned to all applications. For example, the unit can be made suitable for external air connection in combination with filtering and a mixing box for the destratification of fresh external air.

The unit is also available as an ATEX / EEX-model. (400V) - IP 44 (Ex II 2 G c Ex e IIB T3).

The TANNER MDA is designed for use in showrooms, changing rooms, industrial halls and garages.

There is also a TANNER MDA+ with integrated drip tray available that is suitable for both heating and cooling

Optional: speed controlled low noise EC-motor (230V/0-10V).

Advantages:

- The highest efficiency in case of speed control
- Up to 50% energy saving in case of partial load
- Almost completely linearly adjustable
- Long lifetime
- Low noise level
- Integrated electronic thermal protection

Product features

- Manufactured with a corrosion-resistant aluzinc housing as standard
- Copper/aluminium heat exchanger
- Highly versatile due to extensive configuration options
- Available as 230V or 400V
- IP class 54



Remote connection possible with the PinTherm Connect!

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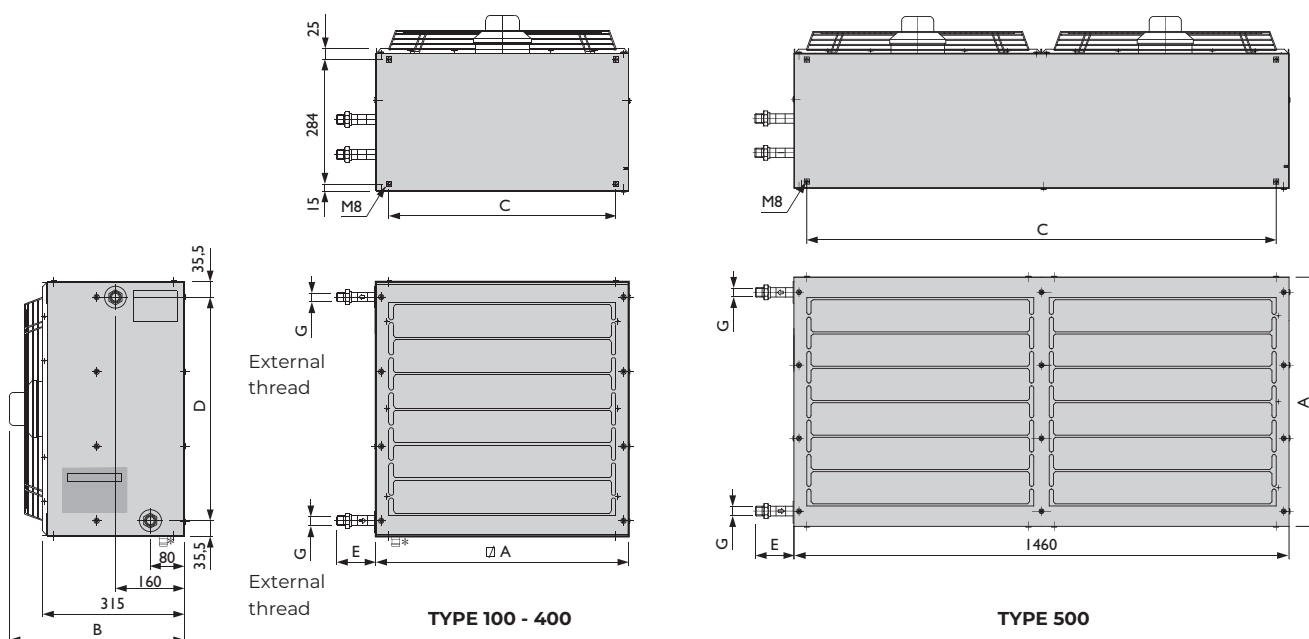


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Dimensions

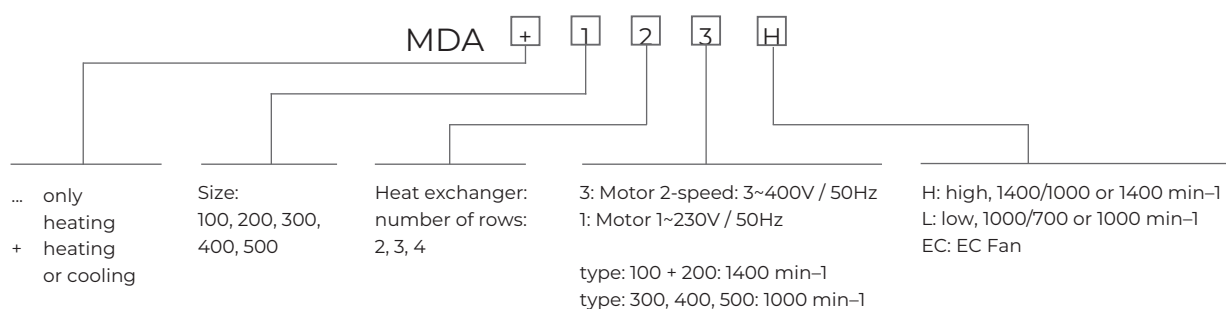


Type	A	B	C	D	E	G		
						2R	3R	4R
100	450	380	387	379	110	1"	1"	1"
200	580	385	517	509	113	1"	1"	1"
300	730	385	667	659	110	1"	1 1/4"	1 1/4"
400	860	405	797	789	115	1 1/4"	1 1/2"	1 1/2"
500	730	385	1392	659	80	-	2"	2"

* Condensate connection \varnothing 20 mm. Only for Tanner MDA+ for heating/cooling.

Technical information

TYPE DESIGNATION



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MDA low-speed - 1 phase 230V

Type		121L	131L	141L	221L	231L	241L	321L*	331L*	341L*	421L*	431L*	441L*	531L*	541L*	
heating	90/70 T 15	kW	14,5	17,0	19,0	25,1	30,8	33,3	52,7	65,9	72,1	80,0	101,0	110,0	142	168
	Water resistance T15	kPa	4	8	12	7	4	8	8	4	12	8	6	18	25	50
	Outlet temperature at the heat exchanger	°C	41,7	49,4	59,2	42,7	53,0	58,8	38,8	48,0	54,0	38,6	48,6	54,1	52,3	61,9
heating	80/60 T 15	kW	11,9	14,1	15,9	20,6	25,4	27,8	43,3	54,1	60,2	65,7	83,1	91,6	118	141
	Outlet temperature at the heat exchanger	°C	36,8	43,6	52,0	37,8	46,3	51,6	34,6	42,1	47,6	34,4	42,7	47,7	46	54,4
	40/30 T 15	kW	3,77	4,42	4,94	6,53	8,0	8,66	13,7	17,1	18,8	20,8	26,3	28,6	36,9	43,7
cooling	7/12 T 28 °C [RH50%] **	kW	3,6	4,37	6,15	6,32	7,71	10,4	13,3	16,4	22,3	20,1	25,4	35,4	44	57
	Blow-out temperature **	°C	21,1	18,8	17,2	20,7	18,1	17,2	21,8	19,5	18,2	21,8	19,2	18,3	19,5	16,9
	Water resistance T28 **	kPa	6	12	24	8	5	14	11	7	22	10	8	38	43	76
	Speed	rpm	900	900	900	830	830	830	845	845	845	925	925	925	845	845
	Air displacement	m ³ /h	1595	1446	1265	2656	2381	2233	6495	5857	5423	9933	8816	8217	11300	10600
	Noise at 5 m	dB(A)	49	49	49	49	48	48	52	53	53	61	59	58	56	56
	Weight without accessories	kg	22	23	24	32	34	36	43	46	49	55	59	63	95	98,5
	Horizontal throw	m	12	10	8	17	15	12	25	22	19	35	31	27	25	22
	Vertical throw	m	4	4	3,5	4,8	4,5	4	8,1	6,8	5,9	7,4	6,2	5,5	6,8	5,9
	Consumed current (AC fan)	A	0,35	0,35	0,35	0,49	0,49	0,49	1,5	1,5	1,5	1,8	1,8	1,8	3,0	3,0
Consumed current (EC fan)	A	-	-	-	-	-	-	1,65	1,65	1,65	2,7	2,7	2,7	3,3	3,3	
Nominal electric power (AC fan)	kW	0,077	0,077	0,077	0,113	0,113	0,113	0,33	0,33	0,33	0,4	0,4	0,4	0,66	0,66	
Nominal electric power (EC fan)	kW	-	-	-	-	-	-	0,24	0,24	0,24	0,62	0,62	0,62	0,48	0,48	

MDA high-speed - 1 phase 230V

Type		121H*	131H*	141H*	221H*	231H*	241H*	
heating	90/70 T 15	kW	18,0	22,1	25,1	32,4	42,0	46,6
	Water resistance T15	kPa	7	13	20	9	5	13
	Outlet temperature at the heat exchanger	°C	37,4	43,9	53,4	37,6	46,4	51,6
heating	80/60 T 15	kW	14,7	18,3	20,9	26,6	34,5	38,7
	Outlet temperature at the heat exchanger	°C	33,3	38,9	47,1	33,6	40,8	45,5
	40/30 T 15	kW	4,68	5,75	6,53	8,42	10,9	12,1
cooling	7/12 T 28 °C [RH50%] **	kW	4,46	5,67	7,88	8,14	10,5	14,1
	Blow-out temperature **	°C	22,2	20,3	18,3	22,1	19,9	16,9
	Water resistance T28 **	kPa	10	16	37	12	7	25
	Speed	rpm	1400	1400	1400	1400	1400	1400
	Air displacement	m ³ /h	2365	2244	1914	4202	3932	3734
	Noise at 5 m	dB(A)	54	55	55	57	53	53
	Weight without accessories	kg	22	23	24	32	34	34
	Horizontal throw	m	15	13	11	20	19	17
	Vertical throw	m	6,9	6,8	6,3	7,7	7,6	7,2
	Consumed current (AC fan)	A	0,6	0,6	0,6	1,15	1,15	1,15
Consumed current (EC fan)	A	0,98	0,98	0,98	2,2	2,2	2,2	
Nominal electric power (AC fan)	kW	0,13	0,13	0,13	0,23	0,23	0,23	
Nominal electric power (EC fan)	kW	0,125	0,125	0,125	0,32	0,32	0,32	

* Available with speed controlled EC-motor.

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MDA low-speed - 3 phase 400V

Type		123L	133L	143L	223L	233L	243L	323L	333L	343L	423L	433L	443L	533L	543L	
heating	90/70 T15	kW	14,5	17,0	19,0	26,2	32,4	35,1	52,7	65,9	72,1	84,0	107,0	117,0	142	168
	Water resistance T15	kPa	4	8	12	6	4	9	8	4	12	9	7	21	25	50
	Outlet temperature at the heat exchanger	°C	41,7	49,4	59,2	41,9	52,0	57,7	38,8	48,0	54,0	37,7	47,3	52,7	52,3	61,9
heating	80/60 T15	kW	11,9	14,1	15,9	21,6	26,7	29,3	43,3	54,1	60,2	68,9	88,1	97,4	118	141
	Outlet temperature at the heat exchanger	°C	36,8	43,6	52,0	37,1	45,4	50,6	34,6	42,1	47,6	33,6	41,6	46,5	46	54,4
	40/30 T15	kW	3,77	4,42	4,94	6,81	8,42	9,13	13,7	17,1	18,8	21,8	27,8	30,4	36,9	43,7
cooling	7/12 T 28 °C [RH50%] **	kW	3,6	4,37	6,15	6,6	8,1	10,9	13,3	16,4	22,3	21,1	26,9	37,5	44	57
	Blow-out temperature **	°C	21,1	18,8	17,2	21	18,4	17,6	21,8	19,5	18,2	22,1	19,6	18,4	19,5	16,9
	Water resistance T28 **	kPa	6	12	24	8	6	16	11	7	22	11	9	42	43	76
Speed	rpm	1000	1000	1000	1000	1000	1000	910	910	910	870	870	870	910	910	
Air displacement	m³/h	1595	1446	1265	2865	2574	2414	6495	5857	5423	10868	9735	9064	11300	10600	
Noise at 5 m	dB(A)	48	49	49	49	48	48	52	53	53	61	59	59	56	56	
Weight without accessories	kg	22	23	24	32	34	36	43	46	46	52	61	64	95	98,5	
Horizontal throw	m	12	10	8	17	15	13	25	22	19	35	31	28	25	22	
Vertical throw	m	4	4	3,5	5,9	4,5	4	8,1	6,8	5,9	8,5	6,9	5,8	6,8	5,9	
Consumed current	A	0,1	0,1	0,1	0,3	0,3	0,3	0,85	0,85	0,85	1,25	1,25	1,25	1,7/0,88	1,7/0,88	
Nominal electric power	kW	0,05	0,05	0,05	0,12	0,12	0,12	0,38	0,38	0,38	0,6	0,6	0,6	1,2	1,2	

MDA high-speed - 3 phase 400V

Type		123H	133H	143H	223H	233H	243H	
heating	90/70 T15	kW	18,0	22,1	25,1	32,4	42,0	46,6
	Water resistance T15	kPa	7	13	20	9	5	13
	Outlet temperature at the heat exchanger	°C	37,4	43,9	53,4	37,6	46,4	51,6
heating	80/60 T15	kW	14,7	18,3	20,9	26,6	34,5	38,7
	Outlet temperature at the heat exchanger	°C	33,3	38,9	47,1	33,6	40,8	45,5
	40/30 T15	kW	4,68	5,75	6,53	8,42	10,9	12,1
cooling	7/12 T 28 °C [RH50%] **	kW	4,46	5,67	7,88	8,14	10,5	14,1
	Blow-out temperature **	°C	22,2	20,3	18,3	22,1	19,9	16,9
	Water resistance T28 **	kPa	10	16	37	12	7	25
Speed	rpm	1330	1330	1330	1350	1350	1350	
Air displacement	m³/h	2365	2244	1914	4202	3932	3734	
Noise at 5 m	dB(A)	54	55	55	57	53	53	
Weight without accessories	kg	22	23	24	32	34	36	
Horizontal throw	m	15	13	11	20	19	17	
Vertical throw	m	6,9	6,8	6,3	7,7	7,6	7,2	
Consumed current	A	0,36	0,36	0,36	0,51	0,51	0,51	
Nominal electric power	kW	0,16	0,16	0,16	0,216	0,216	0,216	

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Capacity calculation for other water temperatures

ΔT1	ΔT2															
	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
10	0.26	0.35	0.44	0.53	0.62	0.71	0.80	0.89	1.04	1.14	1.23	1.34	1.44	1.54	1.64	1.74
15	0.22	0.31	0.39	0.49	0.58	0.67	0.77	0.85	0.96	1.06	1.17	1.26	1.36	1.46	1.56	1.66
20	0.18	0.27	0.36	0.46	0.55	0.64	0.74	0.82	0.92	1.00	1.10	1.20	1.29	1.40	1.50	1.61
30	0.11	0.21	0.30	0.39	0.48	0.57	0.66	0.77	0.86	0.95	1.05	1.15	1.25	1.36	1.48	X
40	X	0.11	0.21	0.32	0.43	0.52	0.62	0.71	0.80	0.90	1.00	1.10	1.20	1.30	X	X
50	X	X	0.12	0.22	0.32	0.45	0.55	0.64	0.74	0.83	0.93	1.03	1.14	X	X	X
60	X	X	X	0.15	0.26	0.36	0.46	0.56	0.66	0.76	0.86	0.96	X	X	X	X

ΔT1= Temperature difference hot water inlet minus outlet ΔT2= Average water temperature minus air inlet temperature

Calculation example: Water temperature = 40/30 T inlet = 15 °C
ΔT1 = 40 - 30 = 10K ΔT2 = 35 - 15 °C = 20K

Tanner MDA 541L has a capacity of 168 kW at a water temperature of 90/70 T 15 °C
168 kW x factor 0,26 = 43,68 kW

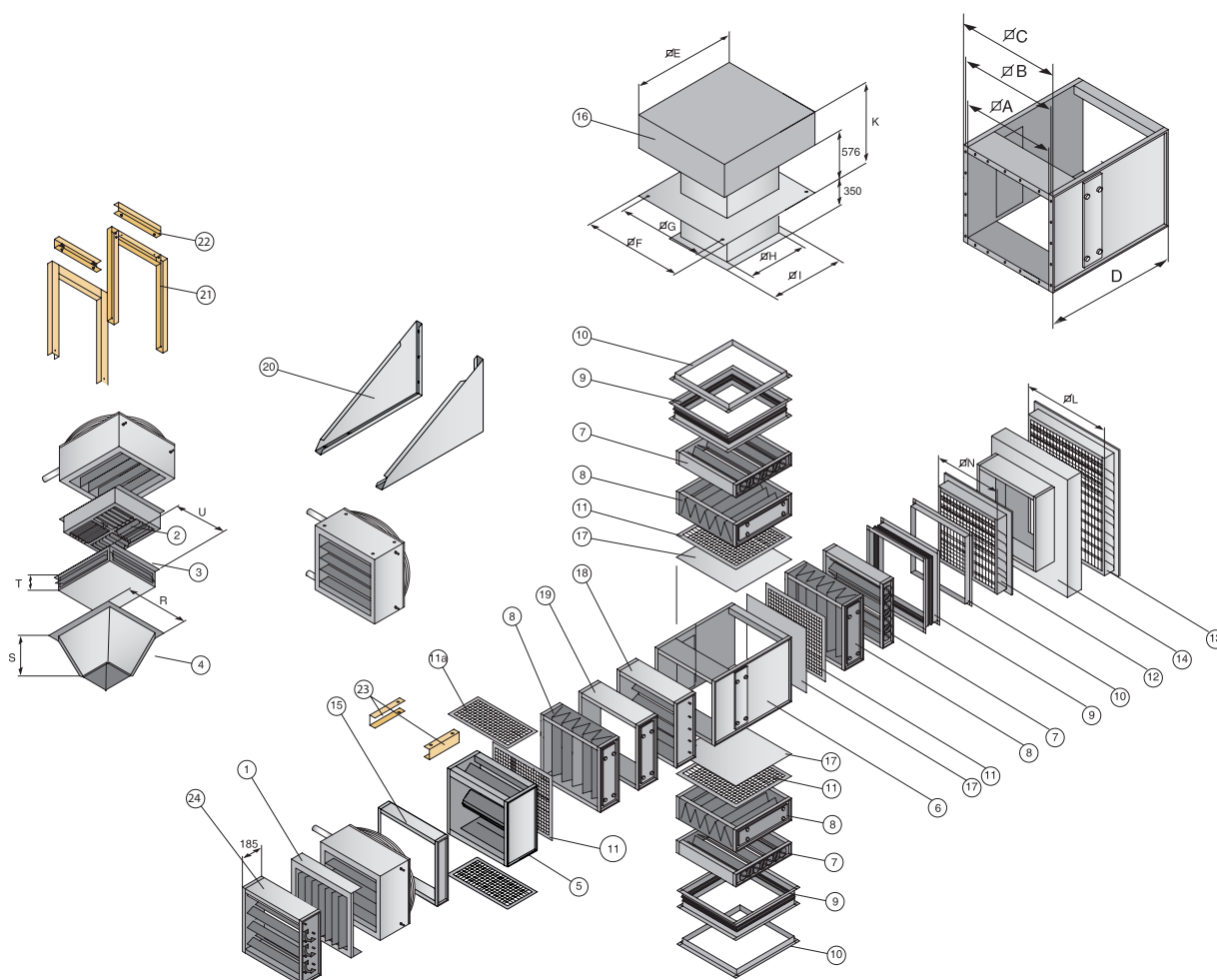
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Accessories – additional sections



Position Description

- 1 Vertical louvres
- 2 Downflow hood 4-sided vertical
- 3 Downflow hood 4-sided horizontal
- 4 Destratification hood
- 5 Mixing box (short) incl. dampers
- 6 Mixing box for dampers
- 7 Damper
- 8 Filter box with filter (EU 3)
- 9 Flexible connection
- 10 Corner profile
- 11 Mesh
- 11a Mesh

- 12 Weather grill ≤ 50% fresh air intake
- 13 Weather grill > 50%-100% fresh air intake
- 14 Transition piece for 13
- 15 Empty section 120 mm
- 16 Rain cap incl. adhesive plate (aluminium)
- 17 Blanking plate
- 18 Motor protection damper
- 19 Empty section 240 mm
- 20 Wall bracket
- 21 Ceiling bracket, vertical
- 22 Shock absorber set for 21
- 23 Ceiling bracket, horizontal
- 24 Induction damper

Type	A	B	C	D	E	F	G	H
100	390	415	443	463	690	740	690	380
200	520	545	573	593	920	920	820	510
300	670	695	723	743	1180	1240	975	665
400	800	835	853	873	1420	1240	1110	800

Type	I	K	L	N	R	S	T	U
100	440	800	516	386	439	212	120	406
200	570	895	666	516	573	253	151	530
300	720	940	796	666	724	300	175	680
400	860	1075	1005	796	853	329	220	815

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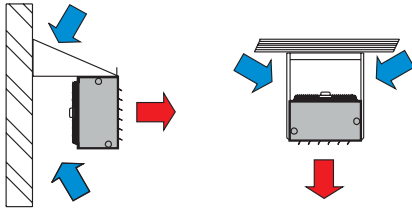
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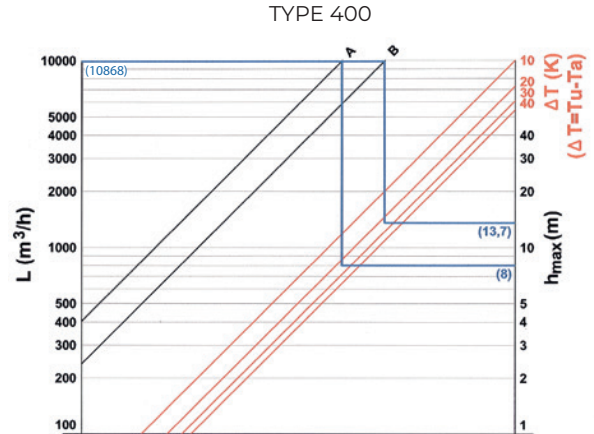
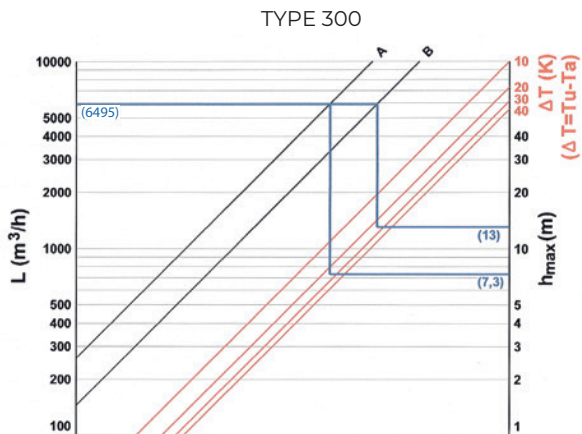
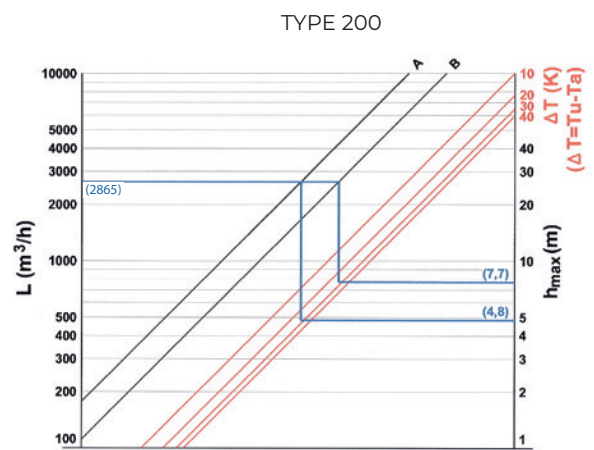
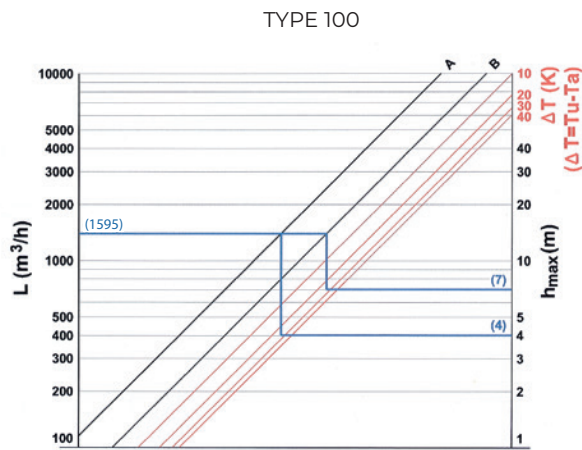
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Assembly/location suggestions



Tanner MDA maximum assembly height for



Calculation example:

Tanner MDA 123L (Type 100)

- The table indicates that the air displacement with this unit is: L = 1595 m³/h
- If the intake temperature (Ta) is 15 °C, the table shows that the outlet temperature (Tu) will be 41.7°C.

The temperature difference is:

$$Dt = Tu - Ta$$

$$Dt = 42.8 - 15$$

$$Dt = 26.7K$$

- The table (TYPE 100) indicates that:
 - A or the basic model, without accessories, the max. suspension height is: = 4m
 - B or the combination with a destratification hood, the max. suspension height is: = 7m

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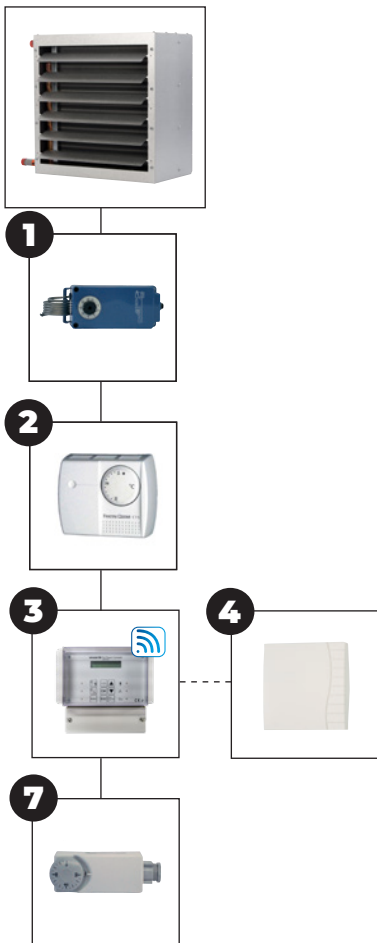




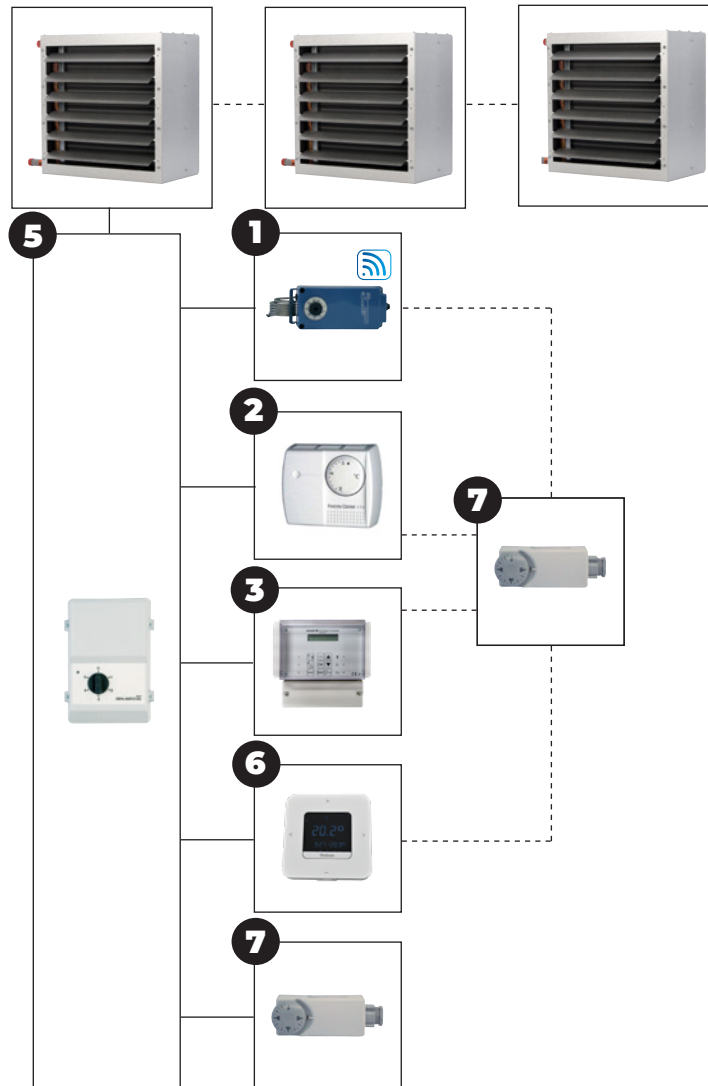
Controls (Not EEX)

AC-motor

230V - 1 unit



230V or 400V - multiple units



Maximum amount of units is depending on the selected 5-step regulator.

Control combination options AC Motor - 1 unit

- Tanner MDA + **1**
- Tanner MDA + **2**
- Tanner MDA + **3**
- Tanner MDA + **3** + **4**
- Tanner MDA + **7**

See price list for description and code numbers of the relevant items

Control combination options AC Motor - multiple units

- Tanner MDA + **5**
- Tanner MDA + **5** + **1**
- Tanner MDA + **5** + **2**
- Tanner MDA + **5** + **3**
- Tanner MDA + **5** + **6**
- Tanner MDA **5** + **7**
- Tanner MDA + **5** + **1** + **7**
- Tanner MDA + **5** + **2** + **7**
- Tanner MDA + **5** + **3** + **7**
- Tanner MDA + **5** + **6** + **7**

5 = - 5-step regulator for 230V (6A-14A) or 400V (2A-7A)
- High / Low / Off Control for 400V (7A). See pricelist

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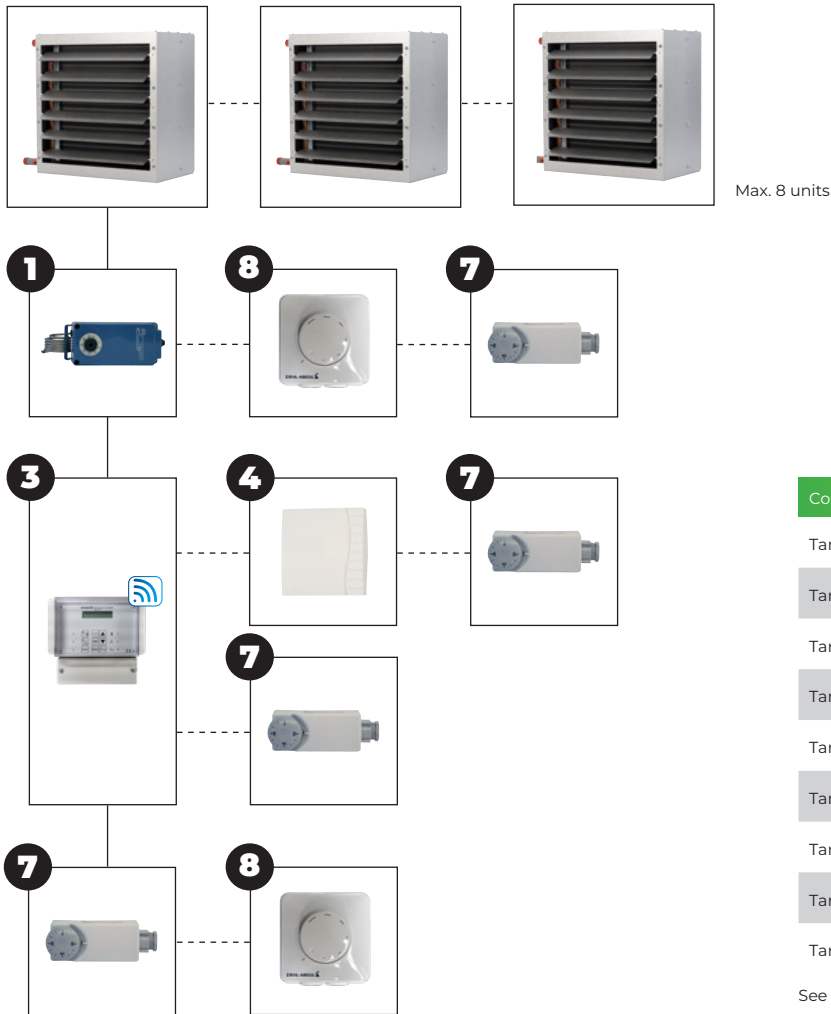
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EC-motor



Control combination options EC Motor - multiple units

- Tanner MDA + **1**
- Tanner MDA + **1** + **8**
- Tanner MDA + **1** + **8** + **7**
- Tanner MDA + **3**
- Tanner MDA + **3** + **4**
- Tanner MDA + **3** + **4** + **7**
- Tanner MDA + **3** + **7**
- Tanner MDA + **7**
- Tanner MDA + **7** + **8**

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