



► **TIP**  
Unit heaters

# TIP

Wall- and ceiling-mounted unit heaters


► **Technical catalogue**



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TIP:  
The economic miracle  
of unit heaters





Ceiling-mounted TIP unit heaters heat the showrooms belonging to the Seyfarth car dealership in Gotha, Germany.



# 01 ► Product information

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## TIP – Temperature-controlled air. As much as you need.

With its TIP unit heater, Kampmann has a simple solution for the optimum centrally controlled heating and ventilation of buildings of all kinds, industrial and commercial workplaces, warehouses or greenhouses.

With a housing made of sendzimir galvanised sheet steel with threaded rods fitted as standard, TIP unit heaters are ideal for wall-mounting as well as ceiling-mounting. Their standard equipment also includes a single-row louvre and motor guard.

### Operating principle

Air is drawn in through the whisper-quiet sickle-blade fan and is blown through the copper/aluminium heat exchanger into the room. Models with large heat exchanger capacity are ideal for use with low water temperatures.

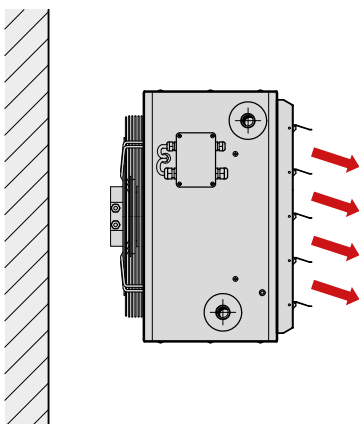
### Air guidance

TIP unit heaters are supplied as standard with a single-row louvre. The air can optionally be discharged through a double-row louvre or air diffuser, both available as an accessories.

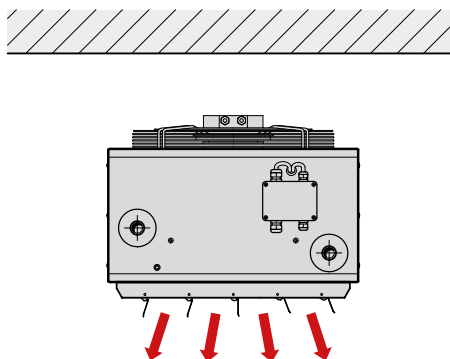
### Available ex-stock

Four different models are available ex-stock.

**Example of wall-mounted heating unit**



**Example of ceiling-mounted heating unit**



Product data



Product benefits

- ▶ Unbeatable in terms of value for money
- ▶ Sickle-blade, whisper-quiet fan with optimised full nozzle
- ▶ Neutral in colour, hard-wearing and tough
- ▶ Fully regulable and centrally controllable
- ▶ Copper/aluminium heat exchanger, suitable for use with low water temperature systems
- ▶ Single-row ceiling or wall louvre and motor guard as standard



Features

- ▶ Continuously variable single-phase EC motor
- ▶ Copper/aluminium heat exchanger
- ▶ Four sizes
- ▶ Different air outlets are available

Installation	▶ Wall- or ceiling-mounted
Air stream	▶ Recirculating air
Heating	▶ LPHW
Cooling	▶ ---
Hybrid Eco	▶ ---
KaControl	▶ ---

Performance data

Heat output [kW] <sup>1)</sup>	▶ 4.4 – 71.4
Air flow [m³/h]	▶ 260 – 9680
Sound pressure level [dB(A)] <sup>2)</sup>	▶ < 20 – 65
Sound power level [dB(A)]	▶ 31 – 81

<sup>1)</sup> at LPHW 75/65 °C, t<sub>l1</sub> = 20 °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

Operating limits

- ▶ Max. operating pressure: 16 bar
- ▶ Max. entering water temperature: 120 °C
- ▶ Min. entering water temperature: 35 °C
- ▶ Inlet air temperature: 40 °C
- ▶ Max. glycol volume: 50 %

Applications

Buildings of all kinds, which are to be ideally heated and ventilated with centralised or decentralised control.



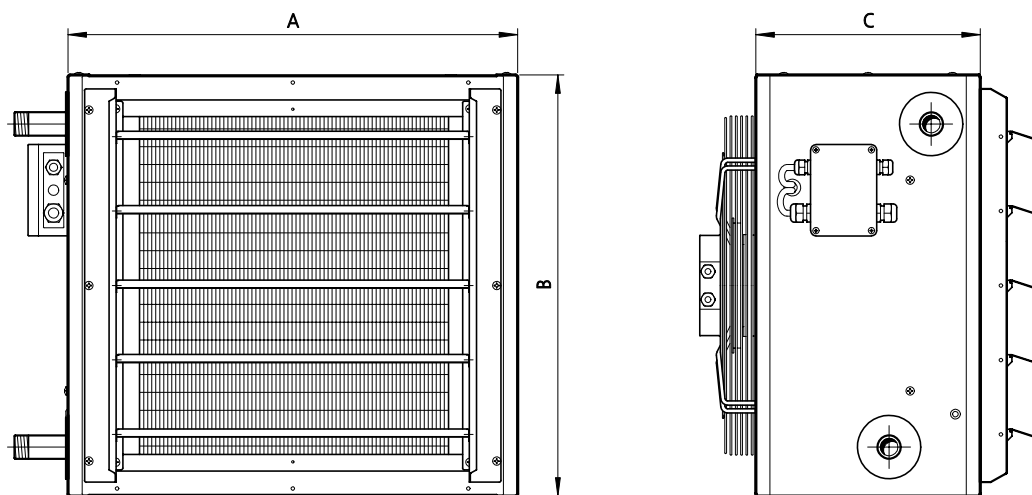


## Selection guide

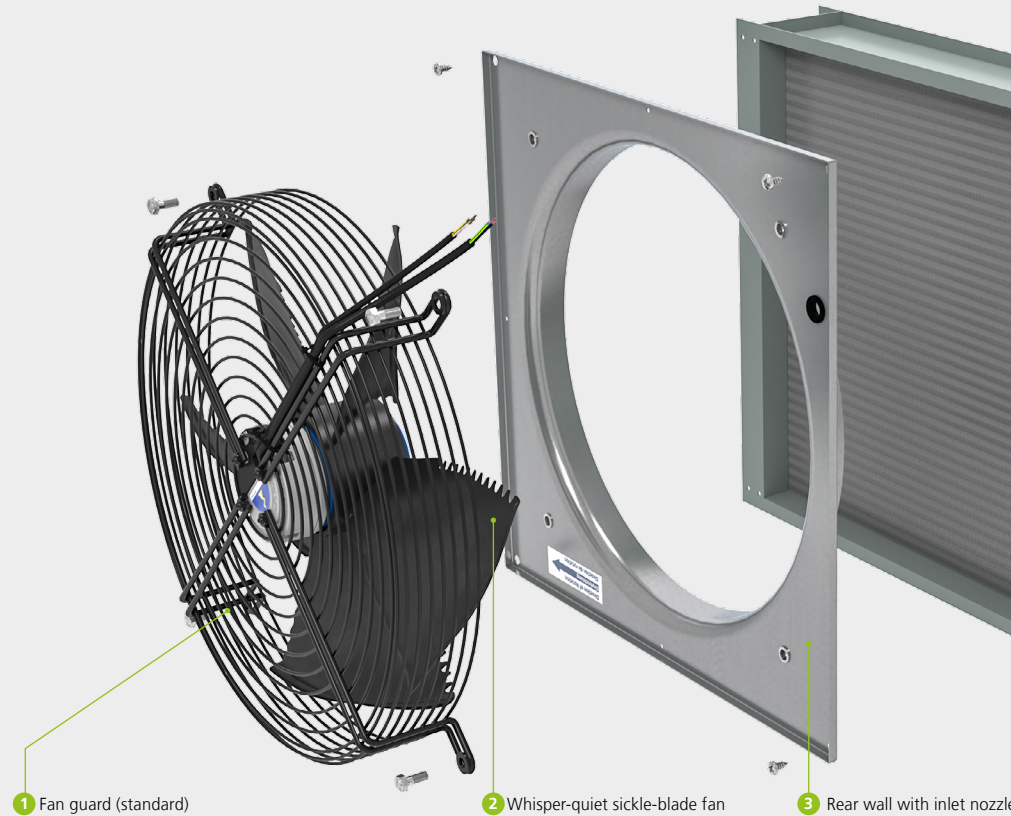
Fan version	Model size	Width (A) [mm]	Dimensions Height (B) [mm]	Depth (C) [mm]	Heat exchanger model copper/aluminium	
					Heat output <sup>1)</sup> [kW]	Air flow [m³/h]
EC fan, 230 V, high speed	4	540	500	320	6.4 – 18.4	520 – 2720
	5	640	600		4.4 – 37.5	260 – 4860
	6	740	700		6.9 – 48.7	430 – 6900
	7	840	800	360	14.2 – 71.4	970 – 9680
EC fan, 230 V, reduced speed	4	540	500	320	5.8 – 15.3	450 – 2210
	5	640	600		6.5 – 26.0	480 – 3370
	7	840	800	360	10.7 – 55.6	590 – 7820

<sup>1)</sup> at LPHW 75/65 °C,  $t_{l1} = 20$  °C

### Technical drawing (Dimensions in mm)

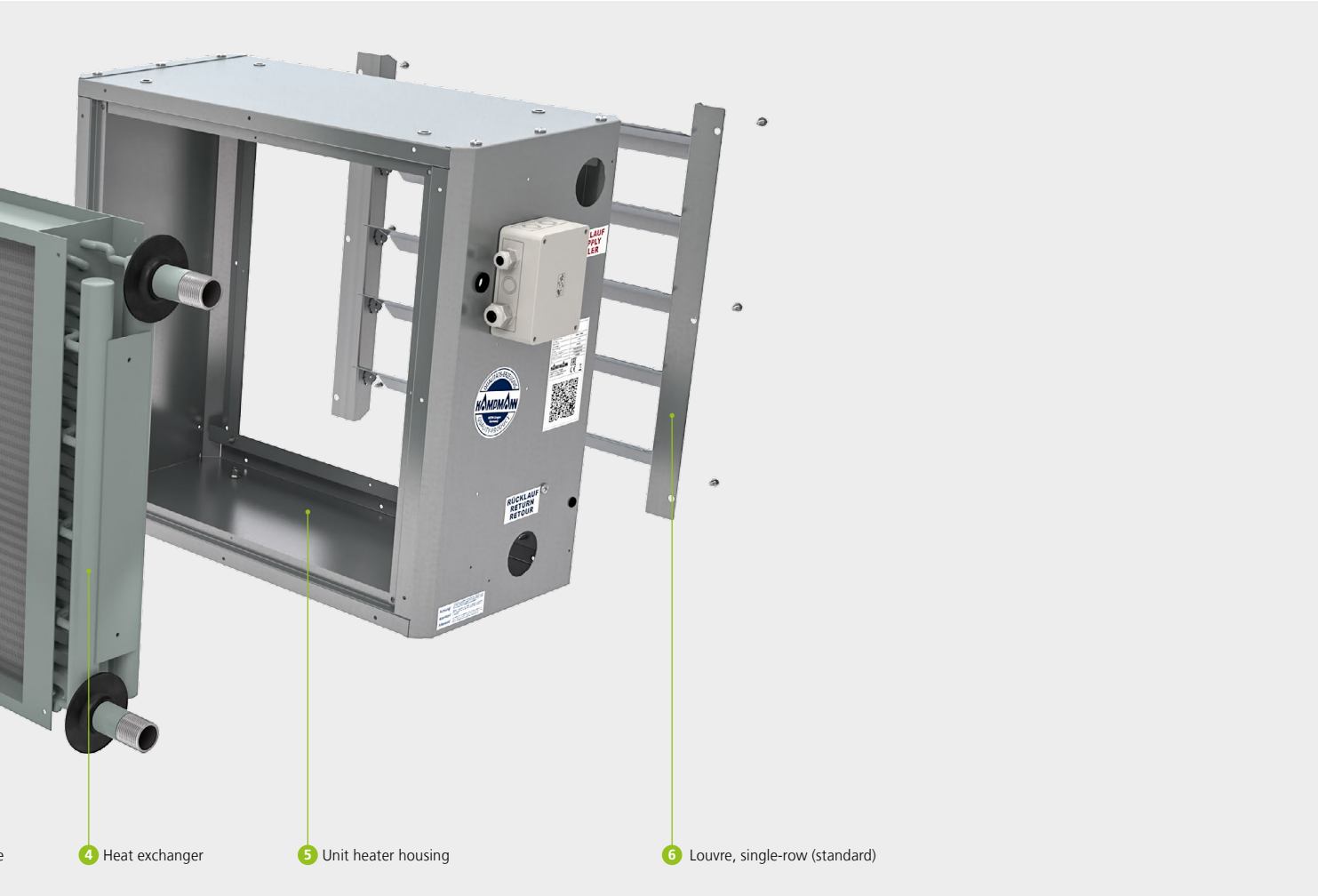


## TIP at a glance



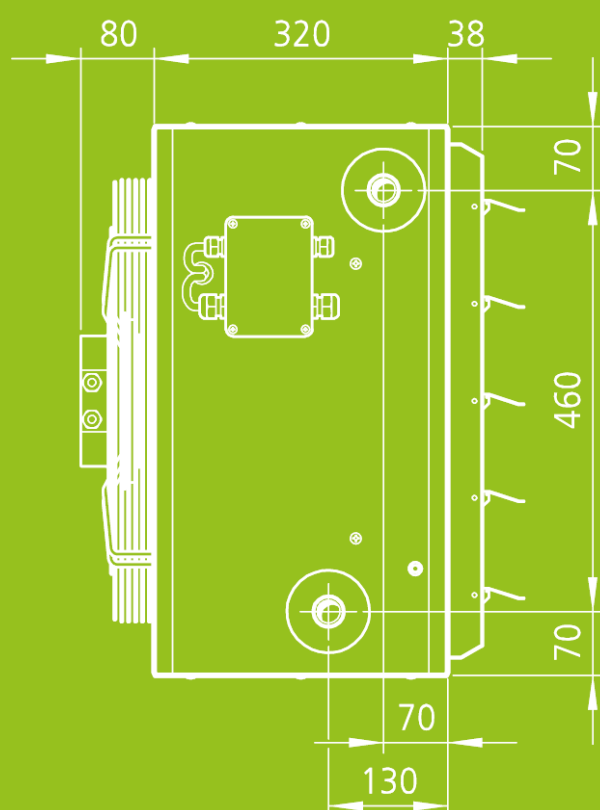
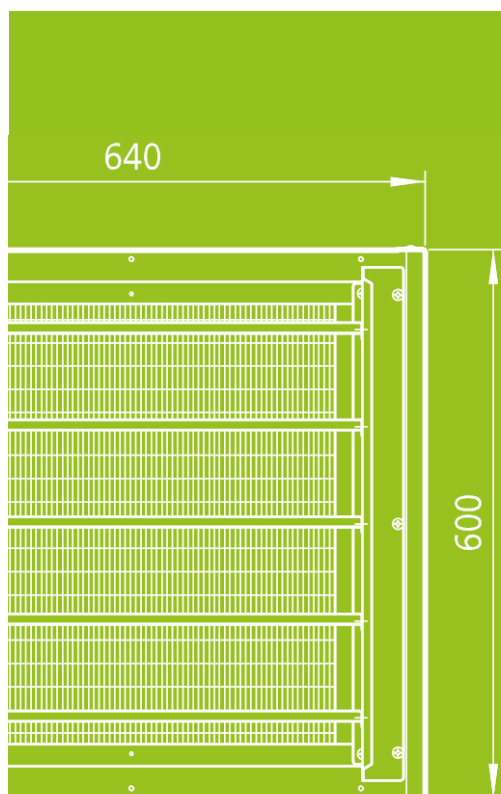
## Features

- 1 Fan guard (standard):**
  - › screw-fixed as standard with whisper-quiet sickle-blade fan
- 2 Whisper-quiet, sickle-blade fan, ErP 2015-compliant:**
  - › continuously variable EC single-phase whisper-quiet sickle-blade fan
  - › excellent efficiency due to the aerodynamic design of the rotor housing
  - › electrical thermal class F model
  - › motor protection: IP 54
  - › balanced at two levels; balancing quality according to G6, 3 DIN ISO 1940 Part 1
- 3 Rear wall with inlet nozzle:**
  - › fan characteristic line coordinated to the unit housing enables the speed to be controlled by voltage reduction
  - › external rotor motor integrated in the fan impeller
  - › complies with Directive (EU) 327/2011 ("LOT 11")
- 4 Heat exchanger:**
  - › copper/aluminium heat exchanger, especially lightweight, with high heat outputs from minimal dimensions
  - › suitable for low temperature heating systems and LPHW heating systems
  - › steel distributor and collector
  - › not suitable for steam and thermal oil
  - › hollow copper tubes with aluminium fins, connected by expanded pipes, perfect for lasting heat transfer
  - › cannot be used in areas with high levels of dust or oil in which extensive cleaning is needed
- 5 Unit heater housing:**
  - › self-supporting, made of galvanised sheet steel
  - › standard fixing holes for wall or ceiling-mounting
  - › resistant to damage
  - › shallow depth, ideal for the simple attachment of outlet-side accessories
- 6 Single-row air louvre (standard):**
  - › for wall- or ceiling-mounting
  - › achieves excellent throw





## 02 ► Technical data



## General

EU Directive 2009/125/EU

### Compliance with the ErP Directive 2015

The European Commission's ErP Directive ("Energy-related Products") evaluates and modifies the requirements of technical products in energy-related applications. According to the Directive (EU) 327/2011 ("LOT 11"), the efficiency requirements have become more stringent for fans with an electric drive output of 125 watts to 500 kilowatts. A number of fans can no longer be marketed since the second stage entered into force on 1st January 2015.

The inlet nozzle used in the unit must be taken into account along with the fan, in terms of energy.

The TIP range of unit heaters is solely fitted with ErP-compliant fans. The conformity of the TIP range has been laboratory-tested and proved. The measurements can be provided on request.

The TIP unit heater range and components used are produced and tested in line with the applicable state of the art. The requirements of the applicable norms, e.g. Machinery Directive, EN60335 (Safety of Electrical Equipment) and EMC are all met.



Test chamber for air performance measurements according to DIN EN ISO 5801, Kampmann R&D Centre

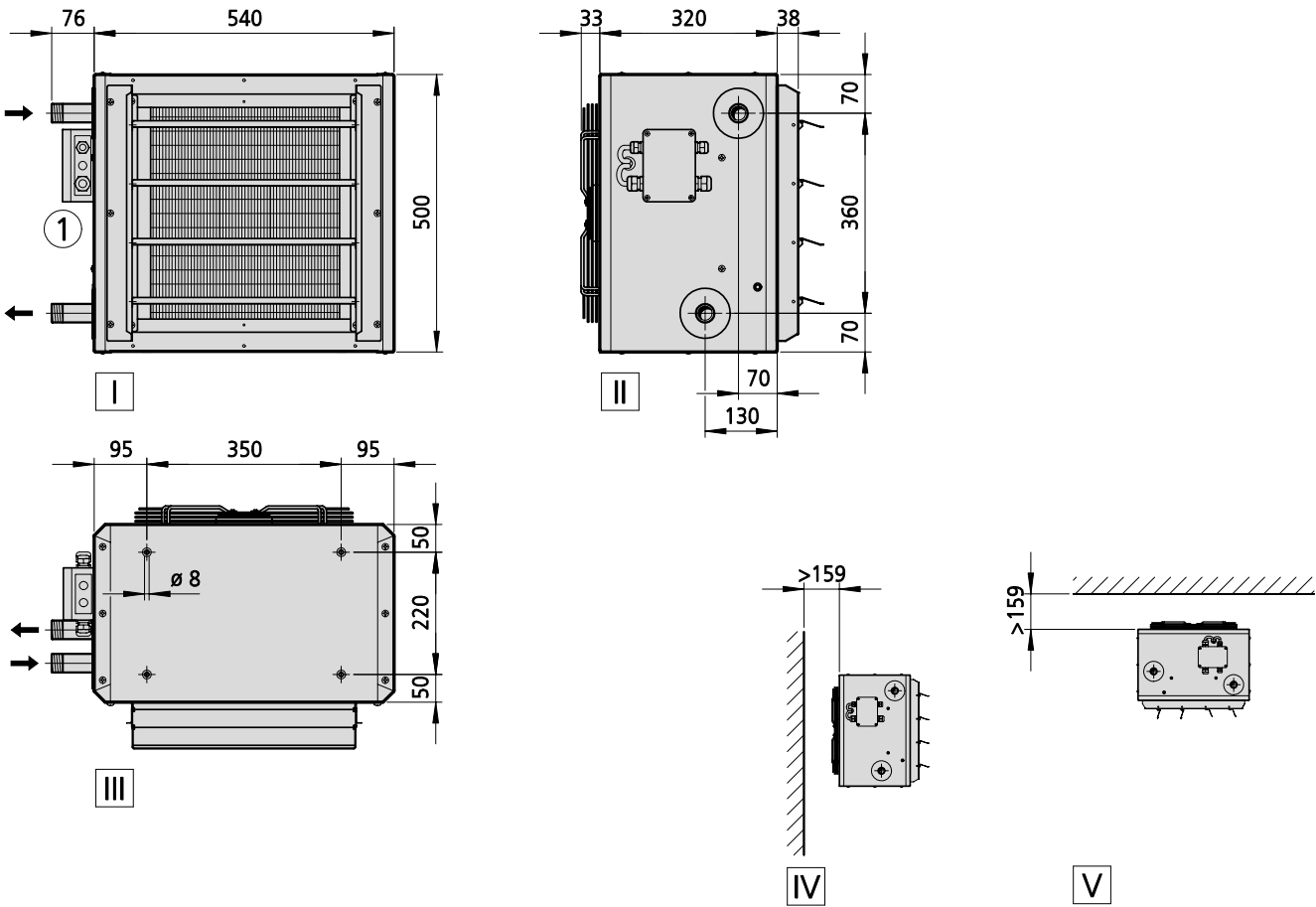
TIP

Heat exchanger copper/aluminium

Model size 4

EC fan, 230 V, high speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
542058	24	1.6	1"
543058	24	2.1	1"
544058	25	2.6	1"



**Performance data**

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
<b>542058</b>	20	10	12.7	34.1	2720	1520	165	1.5	21.0	6.1	3.9	57	73
		8	11.4	35.2	2270	1290	99	1.0	18.0	5.4	3.5	52	68
		6	9.8	37.2	1710	1000	46	0.5	13.0	4.2	3.0	46	62
		4	8.2	40.6	1200	735	22	0.3	9.0	3.1	2.4	38	54
		2	6.9	41.8	790	525	12	0.2	6.0	2.3	---	31	47
<b>543058</b>	20	10	15.0	38.4	2460	1520	165	1.5	19.0	5.2	3.7	55	71
		8	13.3	39.6	2050	1290	99	1.0	16.0	4.4	3.3	50	66
		6	11.1	42.0	1530	1000	46	0.5	12.0	3.5	2.8	44	60
		4	9.1	46.0	1050	735	22	0.3	8.0	2.5	2.3	36	52
		2	7.4	47.3	680	525	12	0.2	5.0	2.3	---	29	45
<b>544058</b>	20	10	18.4	47.2	2040	1520	165	1.5	16.0	3.8	3.3	53	69
		8	15.7	48.1	1690	1290	99	1.0	13.0	3.3	3.0	48	64
		6	12.3	49.7	1250	1000	46	0.5	10.0	2.6	2.5	42	58
		4	9.0	52.3	840	735	22	0.3	6.0	2.3	---	34	50
		2	6.4	53.3	520	525	12	0.2	4.0	2.3	---	27	43

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

► <https://www.kampmanngroup.com/hvac/products/unit-heaters/tip#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).

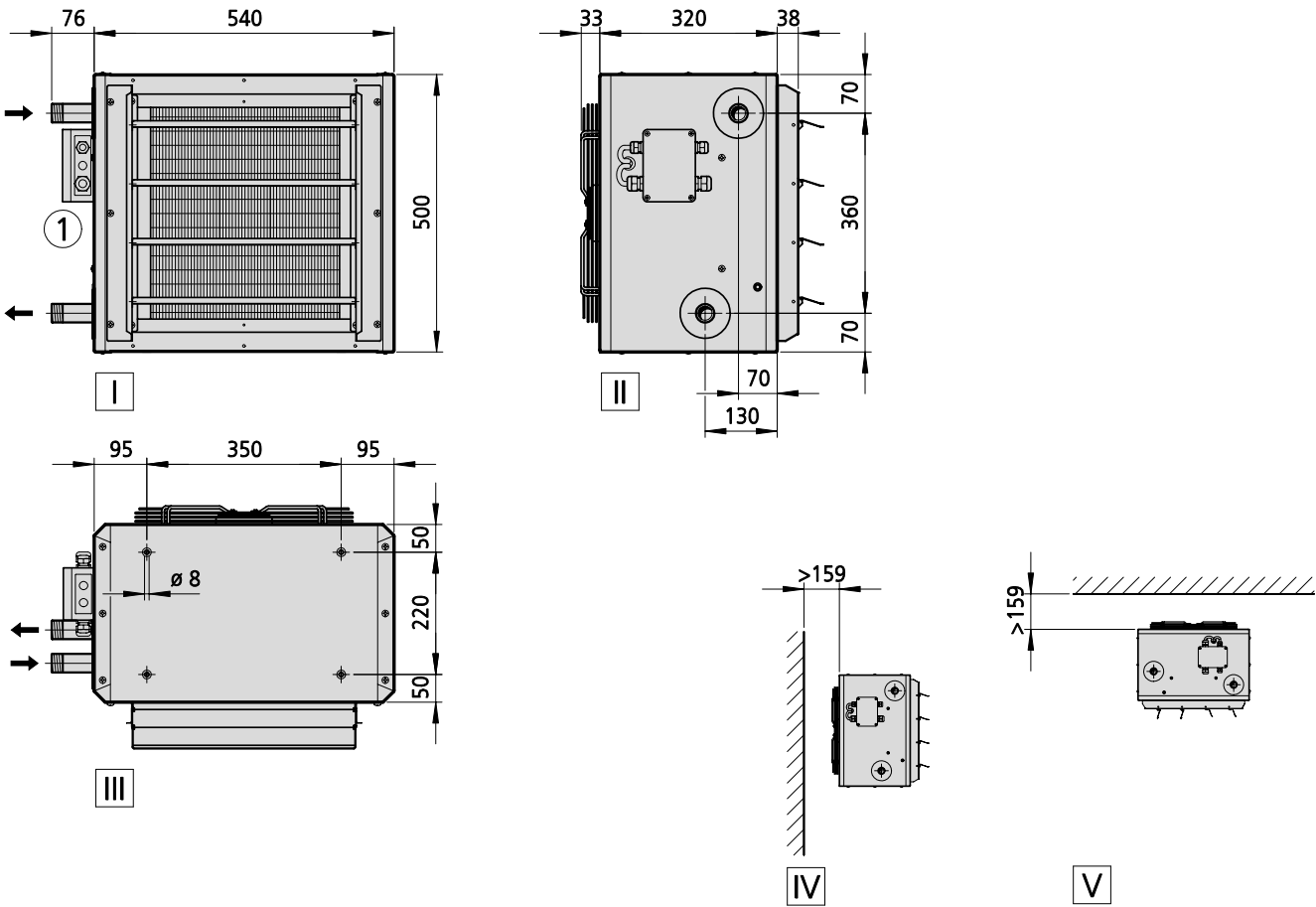
TIP

Heat exchanger copper/aluminium

Model size 4

EC fan, 230 V, reduced speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
542056	24	1.6	1"
543056	24	2.1	1"
544056	25	2.6	1"

## Performance data

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
542056	20	10	11.2	35.4	2210	1410	124	1.2	17.0	5.3	3.5	55	71
		8	10.0	36.9	1790	1150	64	0.7	14.0	4.4	3.1	50	66
		6	8.8	39.1	1390	905	32	0.4	11.0	3.5	2.7	43	59
		4	7.6	42.8	1000	665	14	0.2	8.0	2.6	---	35	51
		2	6.6	44.0	700	480	7	0.1	5.0	2.3	---	28	44
543056	20	10	13.1	39.9	1980	1410	124	1.2	15.0	4.3	3.3	53	69
		8	11.4	41.6	1600	1150	64	0.7	12.0	3.6	2.9	48	64
		6	9.9	44.1	1230	905	32	0.4	10.0	2.9	2.5	41	57
		4	8.3	48.6	880	665	14	0.2	7.0	2.3	---	33	49
		2	7.1	49.9	600	480	7	0.1	5.0	2.3	---	26	42
544056	20	10	15.3	48.2	1640	1410	124	1.2	13.0	3.2	2.9	51	67
		8	12.7	49.4	1300	1150	64	0.7	10.0	2.7	2.6	46	62
		6	10.2	51.1	990	905	32	0.4	8.0	2.3	---	39	55
		4	7.7	54.1	680	665	14	0.2	5.0	2.3	---	31	47
		2	5.8	55.0	450	480	7	0.1	3.0	2.3	---	24	40

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<sup>1)</sup> at LPHW 75/65 °C,  $t_{l1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).



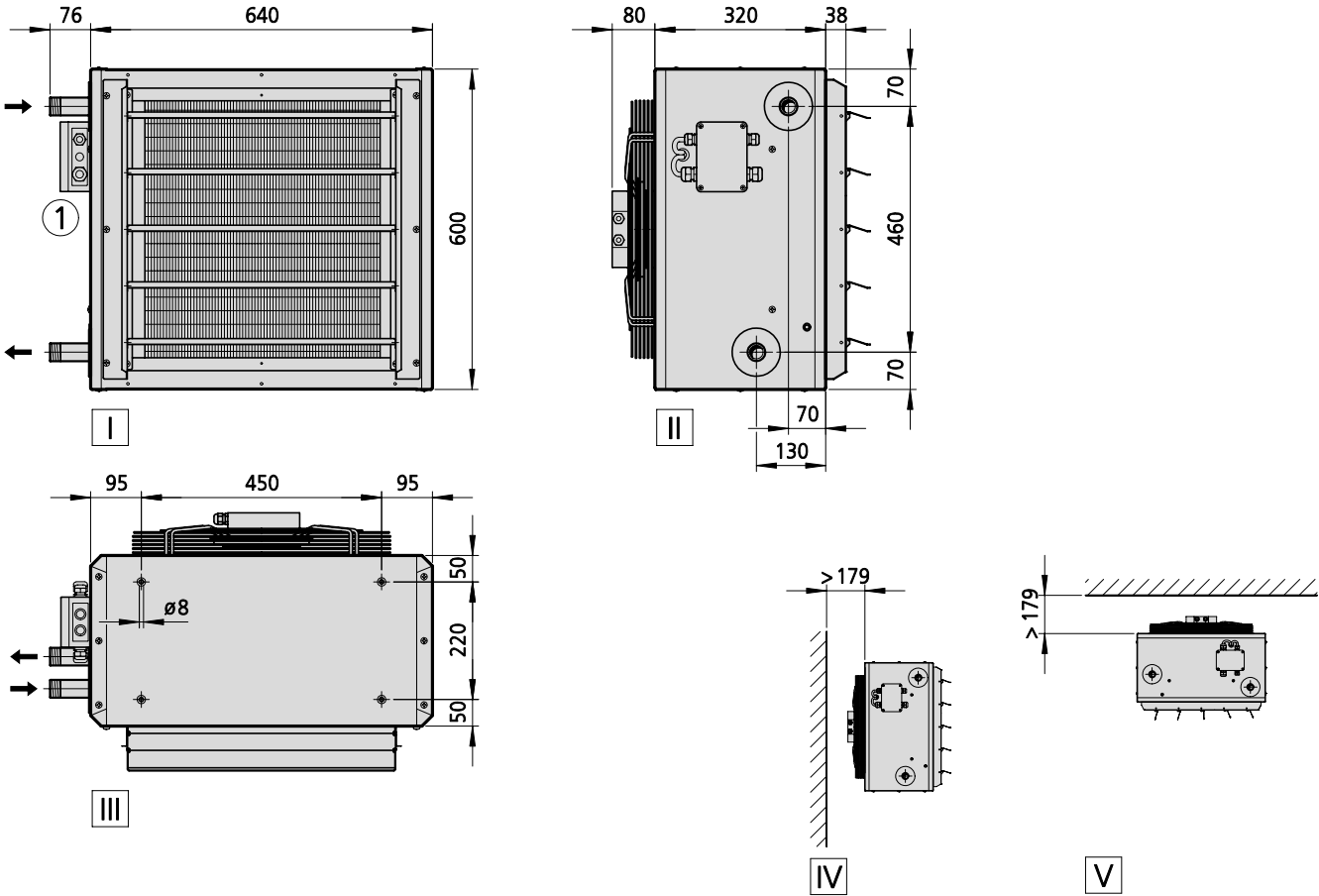
TIP

Heat exchanger copper/aluminium

Model size 5

EC fan, 230 V, high speed

Technical drawing (Dimensions in mm)



Specifications

Type	Weight [kg]	Water content [l]	Connection
552058	32	2.2	1"
553058	32	3.0	1"
554058	34	3.8	1"

## Performance data

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
552058	20	10	24.0	34.9	4860	1470	400	1.8	26.0	7.2	4.6	65	81
		8	20.2	35.8	3840	1180	208	0.9	21.0	6.1	4.1	59	75
		6	15.9	37.5	2740	865	88	0.4	15.0	4.7	3.4	51	67
		4	11.5	41.3	1630	550	20	0.2	8.0	3.1	2.5	40	56
		2	7.1	42.7	520	235	10	0.1	2.0	2.3	---	27	43
553058	20	10	28.9	39.4	4500	1470	400	1.8	24.0	6.1	4.4	63	79
		8	23.9	40.3	3540	1180	208	0.9	19.0	5.1	3.9	57	73
		6	18.3	42.0	2500	865	88	0.4	13.0	4.0	3.2	49	65
		4	12.6	46.0	1460	550	20	0.2	7.0	2.6	2.4	38	54
		2	6.8	47.5	420	235	10	0.1	2.0	2.3	---	25	41
554058	20	10	37.5	49.3	3860	1470	400	1.8	21.0	4.5	4.1	61	77
		8	30.0	50.1	3010	1180	208	0.9	16.0	3.8	3.5	55	71
		6	21.7	51.3	2100	865	88	0.4	11.0	3.0	2.9	47	63
		4	13.2	53.7	1180	550	20	0.2	6.0	2.3	---	36	52
		2	4.4	54.7	260	235	10	0.1	1.0	2.3	---	23	39

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<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).

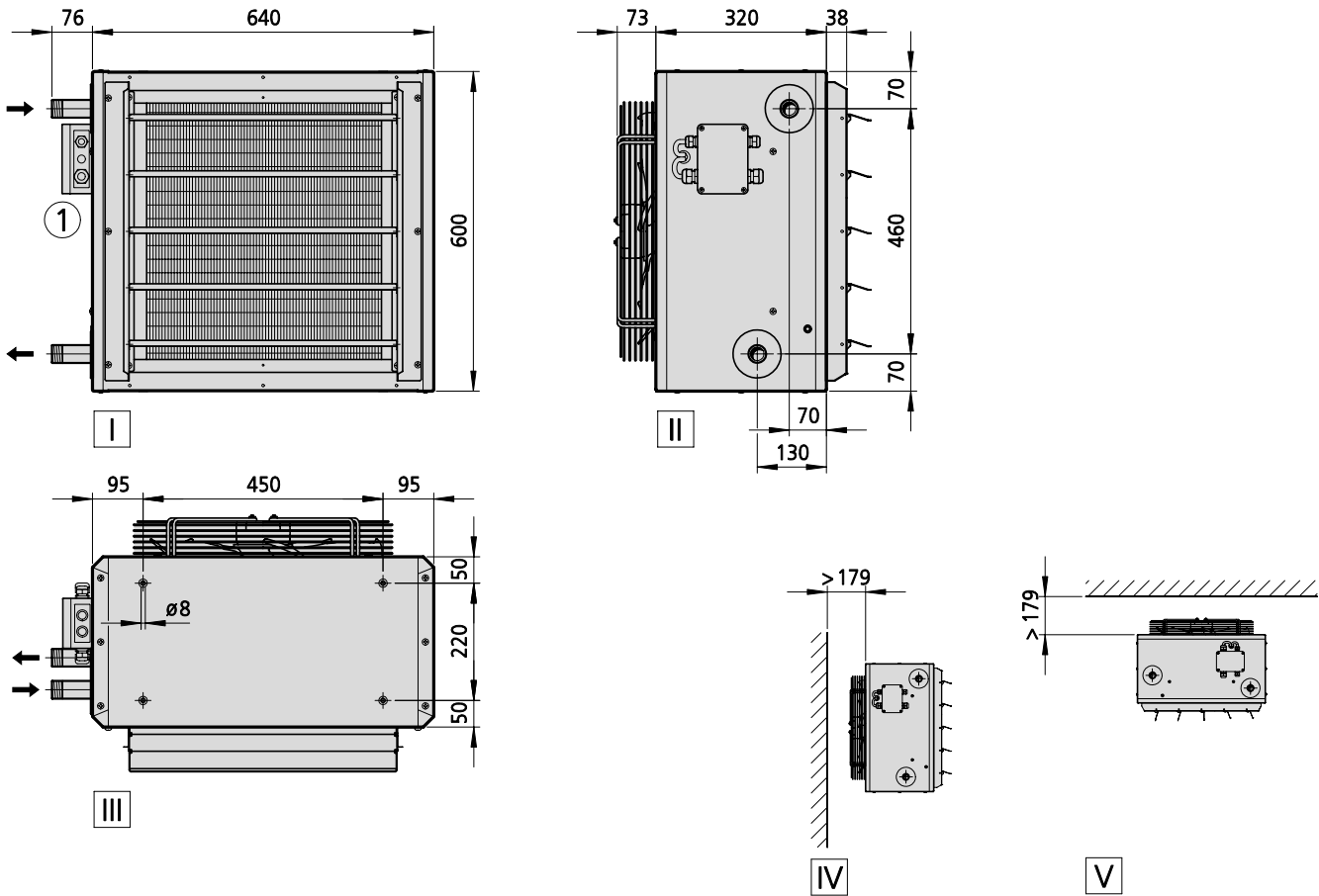
TIP

Heat exchanger copper/aluminium

Model size 5

EC fan, 230 V, reduced speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
552056	30	2.2	1"
553056	30	3.0	1"
554056	32	3.8	1"

**Performance data**

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
552056	20	10	18.3	36.4	3370	1080	162	1.5	18.0	5.5	3.8	56	72
		8	16.1	37.3	2810	925	93	1.0	15.0	4.8	3.4	52	68
		6	13.2	39.3	2060	720	46	0.5	11.0	3.8	2.9	45	61
		4	10.4	43.1	1360	530	22	0.3	7.0	2.7	2.3	36	52
		2	8.2	44.3	810	380	11	0.2	4.0	2.3	---	29	45
553056	20	10	21.3	41.0	3060	1080	162	1.5	16.0	4.6	3.6	54	70
		8	18.5	42.0	2530	925	93	1.0	13.0	4.0	3.2	50	66
		6	14.7	44.1	1830	720	46	0.5	10.0	3.1	2.7	43	59
		4	11.1	48.2	1190	530	22	0.3	6.0	2.3	---	34	50
		2	8.3	49.4	680	380	11	0.2	3.0	2.3	---	27	43
554056	20	10	26.0	50.6	2560	1080	162	1.5	14.0	3.4	3.2	52	68
		8	21.8	51.3	2100	925	93	1.0	11.0	3.0	2.9	48	64
		6	16.1	52.6	1490	720	46	0.5	8.0	2.4	2.4	41	57
		4	10.8	55.0	920	530	22	0.3	4.0	2.3	---	32	48
		2	6.5	55.8	480	380	11	0.2	2.0	2.3	---	25	41

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<sup>1)</sup> at LPHW 75/65 °C,  $t_{l1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).



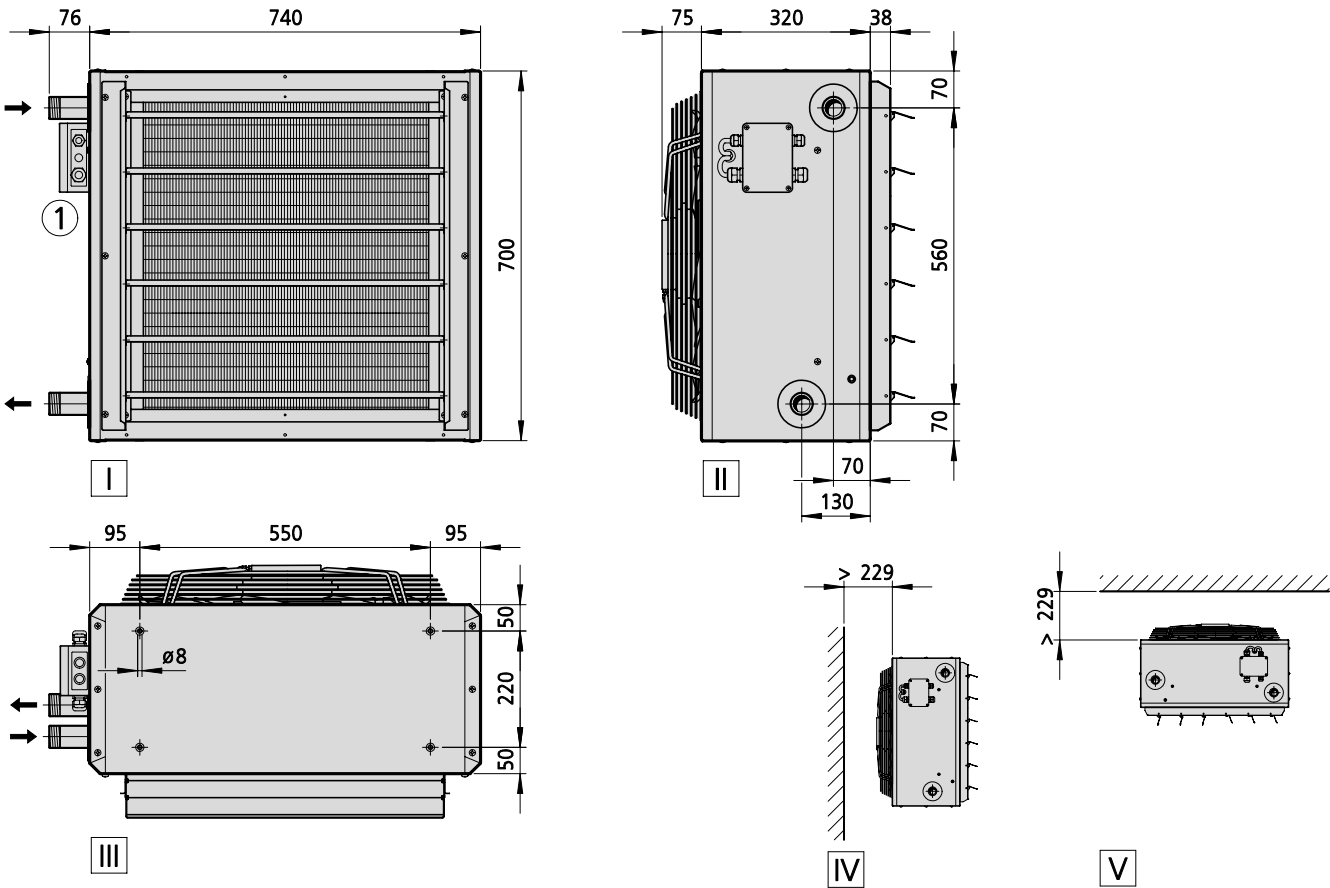
TIP

Heat exchanger copper/aluminium

Model size 6

EC fan, 230 V, high speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
562058	44	3.4	1 1/4"
563058	46	4.5	1 1/4"
564058	49	5.6	1 1/4"

**Performance data**

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
<b>562058</b>	20	10	31.8	33.9	6900	990	420	1.8	32.0	8.1	4.7	64	80
		8	26.8	34.9	5440	790	218	1.0	25.0	7.0	4.2	58	74
		6	21.4	36.5	3910	580	89	0.4	18.0	5.5	3.5	50	66
		4	15.8	40.0	2380	370	28	0.2	11.0	3.7	2.7	39	55
		2	10.0	41.4	850	160	20	0.1	3.0	2.3	---	25	41
<b>563058</b>	20	10	40.9	41.5	5730	990	420	1.8	27.0	6.0	4.3	62	78
		8	33.5	42.5	4480	790	218	1.0	21.0	5.1	3.7	56	72
		6	25.5	44.3	3160	580	89	0.4	14.0	4.0	3.1	48	64
		4	17.4	48.3	1850	370	28	0.2	8.0	2.7	2.3	37	53
		2	9.0	49.8	530	160	20	0.1	2.0	2.3	---	23	39
<b>564058</b>	20	10	48.7	49.9	4900	990	420	1.8	23.0	4.7	3.9	60	76
		8	39.1	50.8	3830	790	218	1.0	17.0	4.0	3.4	54	70
		6	28.7	52.1	2690	580	89	0.4	12.0	3.1	2.8	46	62
		4	18.0	54.6	1560	370	28	0.2	7.0	2.3	---	35	51
		2	6.9	55.8	430	160	20	0.1	1.0	2.3	---	21	37

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

► <https://www.kampmanngroup.com/hvac/products/unit-heaters/tip#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).

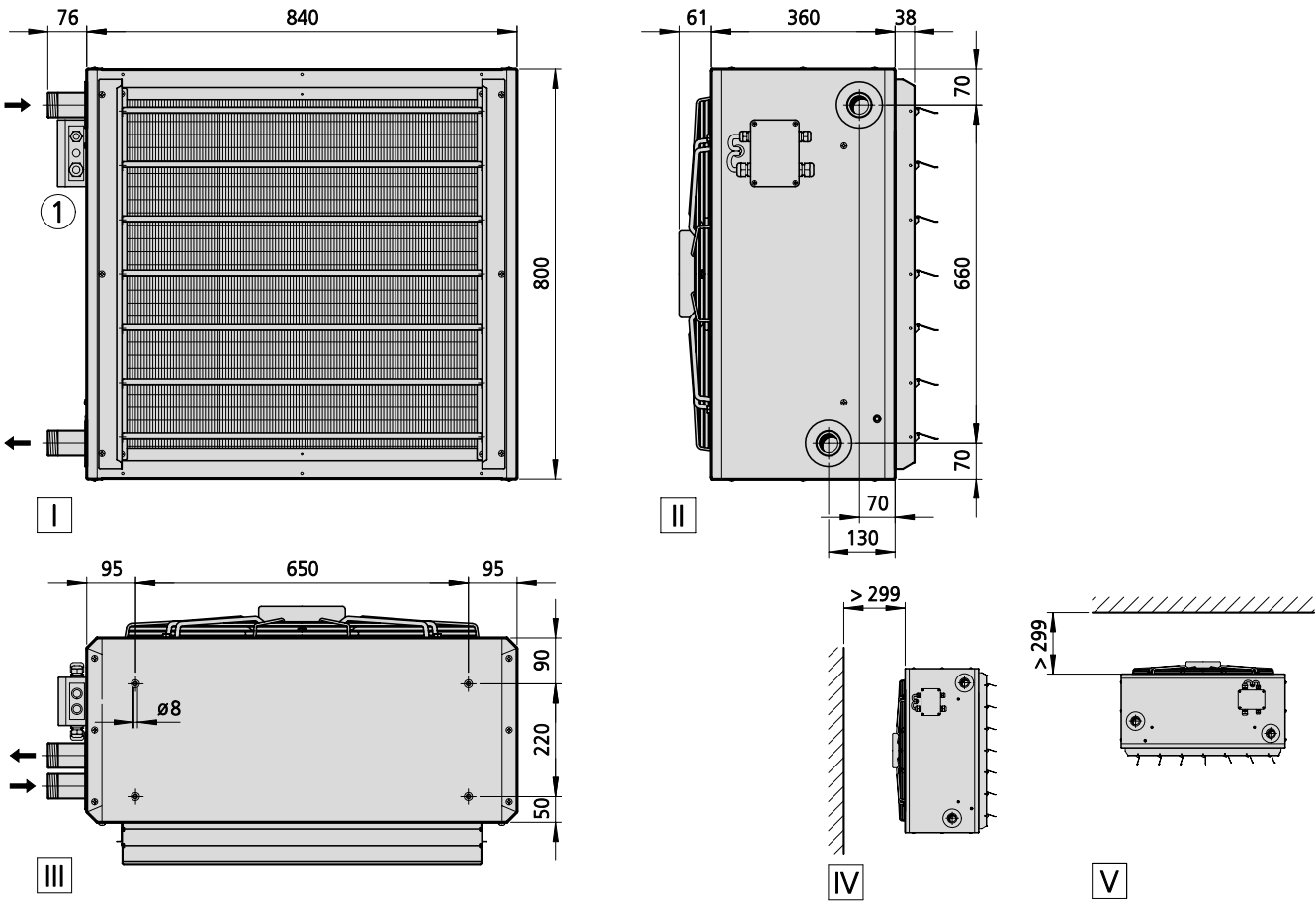
TIP

Heat exchanger copper/aluminium

Model size 7

EC fan, 230 V, high speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
572058	55	4.8	1 1/2"
573058	59	6.2	1 1/2"
574058	61	7.6	1 1/2"

**Performance data**

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
<b>572058</b>	20	10	42.0	33.1	9680	1000	685	3.0	40.0	8.5	4.7	65	81
		8	36.9	33.8	8050	835	361	1.6	33.0	7.7	4.3	60	76
		6	30.4	35.3	5960	625	152	0.7	24.0	6.4	3.7	52	68
		4	22.8	38.9	3630	390	50	0.3	14.0	4.3	2.8	40	56
		2	15.4	40.4	1450	170	13	0.3	4.0	2.4	---	26	42
<b>573058</b>	20	10	51.4	38.1	8560	1000	685	3.0	35.0	7.2	4.4	63	79
		8	44.9	39.0	7100	835	361	1.6	29.0	6.3	4.0	58	74
		6	36.3	40.9	5250	625	152	0.7	21.0	5.1	3.4	50	66
		4	26.4	45.1	3170	390	50	0.3	12.0	3.4	2.6	38	54
		2	16.8	46.9	1230	170	13	0.3	3.0	2.3	---	24	40
<b>574058</b>	20	10	71.4	48.3	7600	1000	685	3.0	31.0	5.4	4.2	61	77
		8	60.5	49.0	6280	835	361	1.6	25.0	4.8	3.8	56	72
		6	46.4	50.3	4600	625	152	0.7	18.0	3.9	3.2	48	64
		4	30.0	53.1	2730	390	50	0.3	10.0	2.7	2.4	36	52
		2	14.2	54.5	970	170	13	0.3	2.0	2.3	---	22	38

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

► <https://www.kampmanngroup.com/hvac/products/unit-heaters/tip#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C, t<sub>l1</sub> = 20 °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).

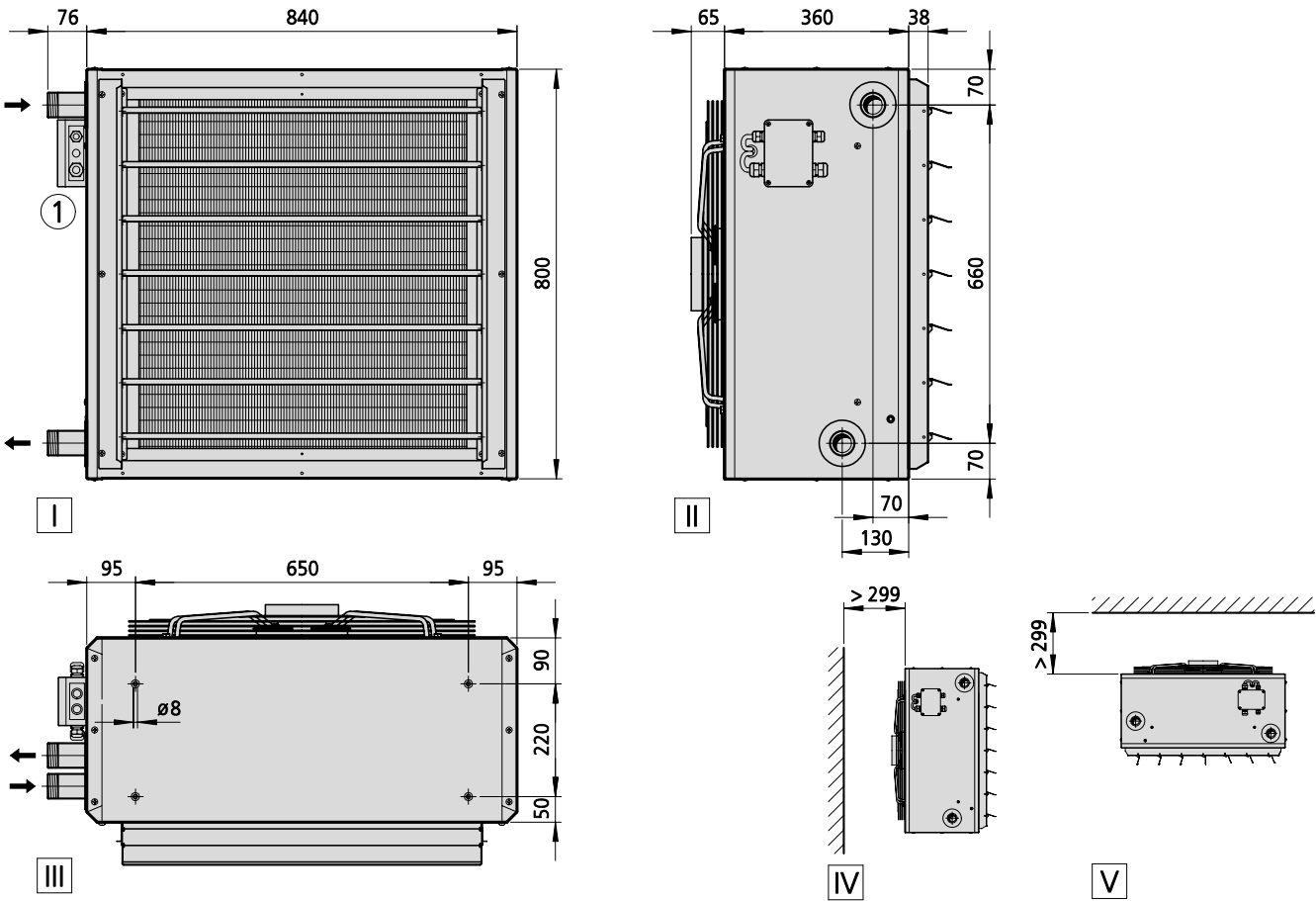
TIP

Heat exchanger copper/aluminium

Model size 7

EC fan, 230 V, reduced speed

Technical drawing (Dimensions in mm)



- View**
- I Front view
  - II Side view
  - III Top view
  - IV Wall-mounted
  - V Ceiling-mounted

**More information**

① Electrical connection for EC model, electromechanical

Specifications

Type	Weight [kg]	Water content [l]	Connection
572056	58	4.8	1 1/2"
573056	62	6.2	1 1/2"
574056	64	7.6	1 1/2"



**Performance data**

Type	Inlet air temperature	Control voltage	Heat output <sup>1)</sup>	Outlet air temperature	Air flow	Nominal fan speed	Power consumption	Amperage	Throw (wall-mounted)	Maximum installation height when ceiling-mounted <sup>3)</sup>		Sound pressure level <sup>2)</sup>	Sound power level
										Louvre	Diffuser		
	[°C]	[V]	[kW]	[°C]	[m³/h]	[1/min]	[W]	[A]	[m]	[m]	[m]	[dB(A)]	[dB(A)]
<b>572056</b>	20	10	36.2	34.0	7820	780	340	1.5	32.0	7.5	4.2	59	75
		8	31.2	35.1	6240	630	170	0.8	25.0	6.6	3.8	54	70
		6	25.4	37.3	4440	460	71	0.3	17.0	5.0	3.2	45	61
		4	19.6	42.0	2680	295	24	0.1	10.0	3.3	2.4	33	49
		2	14.3	43.5	1110	145	9	0.1	3.0	2.3	---	20	35
<b>573056</b>	20	10	42.7	39.4	6630	780	340	1.5	27.0	6.0	3.9	57	73
		8	36.4	40.8	5260	630	170	0.8	21.0	5.1	3.4	52	68
		6	28.9	43.6	3700	460	71	0.3	14.0	3.9	2.9	43	59
		4	21.5	49.9	2170	295	24	0.1	7.0	2.5	---	31	47
		2	14.7	51.8	810	145	9	0.1	1.0	2.3	---	20	33
<b>574056</b>	20	10	55.6	49.4	5690	780	340	1.5	23.0	4.5	3.6	55	71
		8	45.3	50.5	4490	630	170	0.8	17.0	3.8	3.2	50	66
		6	33.5	52.3	3120	460	71	0.3	11.0	3.0	2.6	41	57
		4	21.6	56.4	1790	295	24	0.1	6.0	2.3	---	29	45
		2	10.7	57.7	590	145	9	0.1	0.0	2.3	---	20	31

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

► <https://www.kampmanngroup.com/hvac/products/unit-heaters/tip#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m³ and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> The maximum mounting heights only apply for a leaving air temperature of up to 15 K above room temperature (see also design information).

## 03 ► Design information

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## Information on planning and design

The selection and configuration of TIP unit heaters depends on more than just the heat load calculated. The required air circulation, structural and acoustic conditions and unit-specific properties need to be taken into consideration, among other things.

### Water resistance

Please use our online calculation programs to determine the water resistance:

- ▶ [Kampmann.de/tip](http://Kampmann.de/tip)

The water resistance is formed from:

- ▶ the heat output  $Q_{\text{eff}}$
- ▶ the heating medium temperature difference

$$\Delta t_w = t_{w1} - t_{w2}$$

- ▶ the heating medium volumetric flow

$$m = \frac{Q_{\text{eff}}}{\Delta t_w} \times 0.86$$

### Noise

There is minimal noise from these units due to the aerodynamic design of the whisper-quiet sickle-blade fan. Flow noise is reduced because of the sickle-shaped design of the profiled blades combined with the optimised inlet nozzle.

The uniform spread over the entire frequency range, minimising blade passing noise, reduces unpleasant peaks of noise. Nonetheless, take into account the permissible noise levels when designing unit heaters.

### Sound pressure level

The A-rated sound pressure levels given in the technical data (pages 14 to 27) have been calculated with an assumed room insulation of 16 dB(A). This corresponds to a clearance of 5 m, a room volume of 3000 m<sup>3</sup> and a reverberation time of 2.0 s (in accordance with VDI 2081). The actual sound pressure level may differ significantly from the stated figures, depending on the room geometry, absorption capacity of the space, equipment, accessories etc.

### Sound power level

The sound power level describes the noise emission from the units, independently of the space and distance. The sound pressure levels can be calculated when the room geometry and absorption values are known. The sound power levels have been determined using the enveloping surface process according to DIN 45635-56.

## 04 ► Control

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## Control of TIP – electromechanical model

### Product features

The EC fans used can be continuously variably controlled by a 0-10 V DC signal.

The “intelligent” motor electronics detects any possible motor fault and automatically switches off the fan. This fault can be externally evaluated. The entire group or individual units are shut down in the event of a motor fault, depending on the control version. The speed can be limited to approx. 50 % of the maximum speed by the potentiometer in the junction box. Actuation by Modbus-RTU instead of by a 0-10 V DC signal is possible depending on the type of unit heater.

### Control units

Four different control units are available for operation and control.

#### Speed controller, type 30510

Continuously variable speed controller for use in conjunction with a thermostat for room temperature-dependent two-point control of heating or cooling units in closed rooms. The fan speed is set manually on the speed controller at between 0-100 %. The thermostats activate the ventilation units at the pre-set speed depending on the temperature. It is possible to automatically switch between day and night mode using timer program solutions (type 30056; type 30076).

#### Room thermostat, type 30155

The EC recirculating air control unit type 30155 enables the operation and temperature control of heating/cooling recirculating air units in 2- or 4-pipe mode. The room temperature can be set using a rotary dial. The temperature is controlled by a fan and valve. In principle, the ventilation unit is switched on and off depending on the temperature and, at the same time, the valve is opened/closed. The fan can be operated manually at 3 stages or continuously variably in automatic mode. The control unit is also equipped with a frost protection function.

#### Clock thermostat, type 30256

The EC recirculating air control unit type 30256 enables the operation and temperature control of heating/cooling recirculating air units in 2- or 4-pipe mode. The room temperature can be set using the functional keys. The temperature is controlled by a fan and valve. In principle, the ventilation unit is switched on and off depending on the temperature and, at the same time, the valve is opened/closed. The fan can be controlled at 10 stages, both in automatic mode as well as in manual mode. The control is also equipped with an automatic summer/winter changeover and a frost protection function. The built-in timer program also enables day or week programs to be set.

#### Electronic speed controller, type 30515

The continuously variable electronic compact controller is designed for the operation of up to 10 recirculating air units (2-pipe heating/cooling) with EC fans to heat or cool rooms. The controller has a temperature control, which works with a fan and shut-off valve. The temperature setpoint can be set for day and night mode. A digital timer, including day, night and week program, is also included. The room sensor supplied is installed separately. A mean value can optionally be formed using 2 or 4 room sensors. Apart from continuously variable speed control, the fan speed can also be manually set. In addition, the control has a frost protection function, an external enable switch and a potential-free operating and collective fault alert, among other things. If required, the fan can also be used for pure air circulation without heating or cooling.



### Cabling

The following points need to be taken into account with the cabling and wiring diagrams below:

- ▶ Comply with the details on the type of cable and cabling, taking into consideration VDE 0100.
- ▶ Without \*: NYM-J. The requisite number of wires, including protective conductor, is stated on the cable. Cross-sections are not stated, as the cable length is involved in the calculation of the cross-section.
- ▶ With \*: J-Y(ST)Y 0.8 mm, max. 100 m between the speed controller and the last unit heater; provide a shield on one side when longer than 20 m. Lay separately from power lines.
- ▶ With \*\*: Sensor line 1.5 mm<sup>2</sup>, e.g. J-Y(ST)Y, 4 x 2 x 0.8 mm, max. 100 m, lay separately from power lines.
- ▶ With \*\*\*: J-Y(ST)Y, 0.8 mm, max. 50 m, lay separately from power lines.
- ▶ With \*\*\*\*: J-Y(ST)Y, 0.8 mm, max. 100 m. Lay separately from power lines.
- ▶ If other types of cables are used, they must be at least equivalent.
- ▶ The terminals on the unit are suitable for a maximum wire cross-section of 2.5 mm<sup>2</sup>, the mains plug for max. 4.0 mm<sup>2</sup>.
- ▶ Any RCCBs used must be pulsating current-sensitive (type A). When the power supply to the unit is switched on, pulsating charging currents from the capacitors in the integral EMC filter can cause residual current protection devices to trip. We recommend the use of RCCBs with a tripping threshold of 300 mA.
- ▶ The electrical data listed in the following table needs to be considered when configuring the mains supply and fuses on site.

### Maximum connectible unit heaters with EC fan per speed control unit

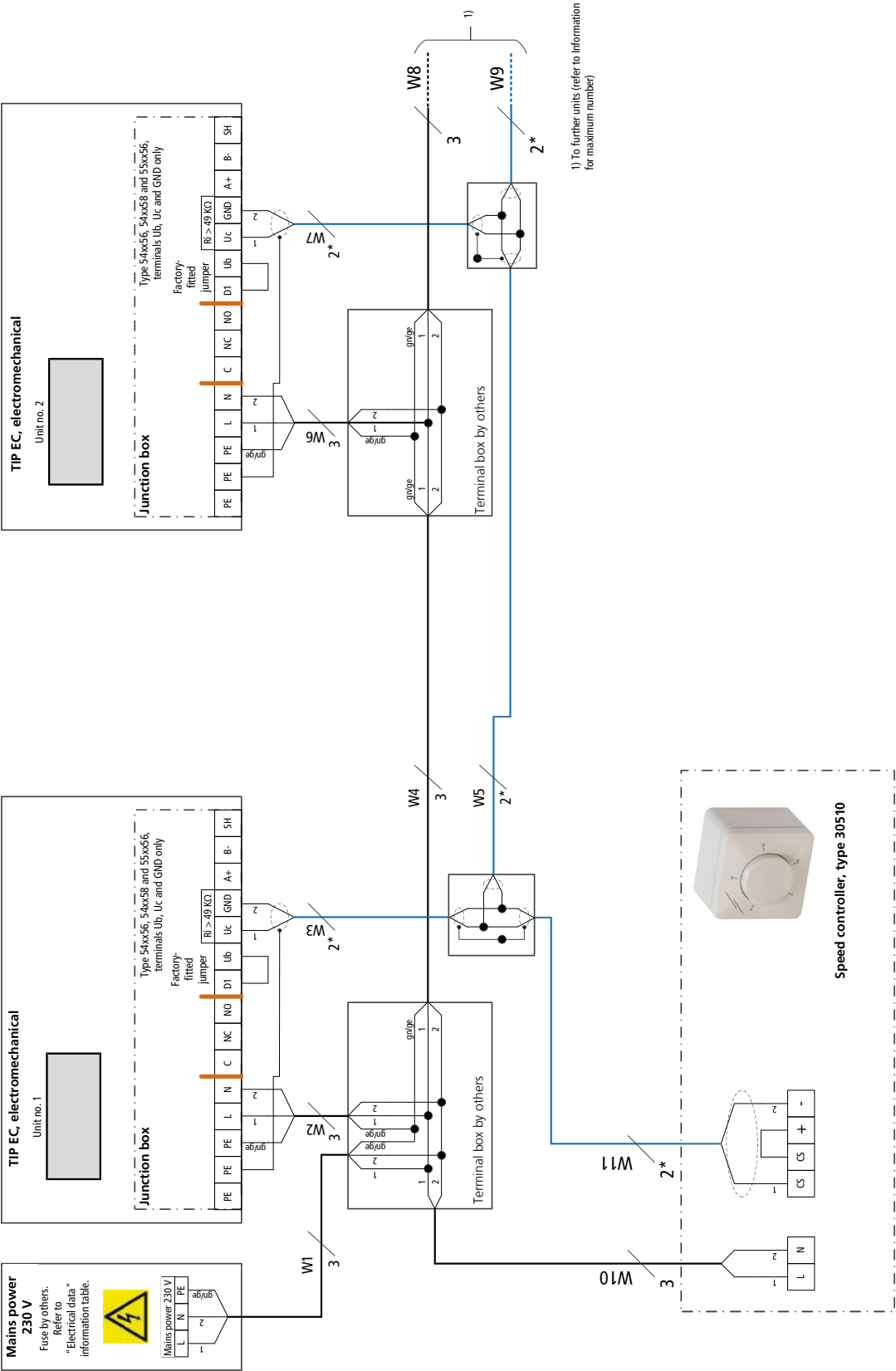
Speed control unit			
Type 30510	Type 30155	Type 30256	Type 30515
[Number]	[Number]	[Number]	[Number]
10	2	2	10

### Electrical data for TIP, electromechanical model

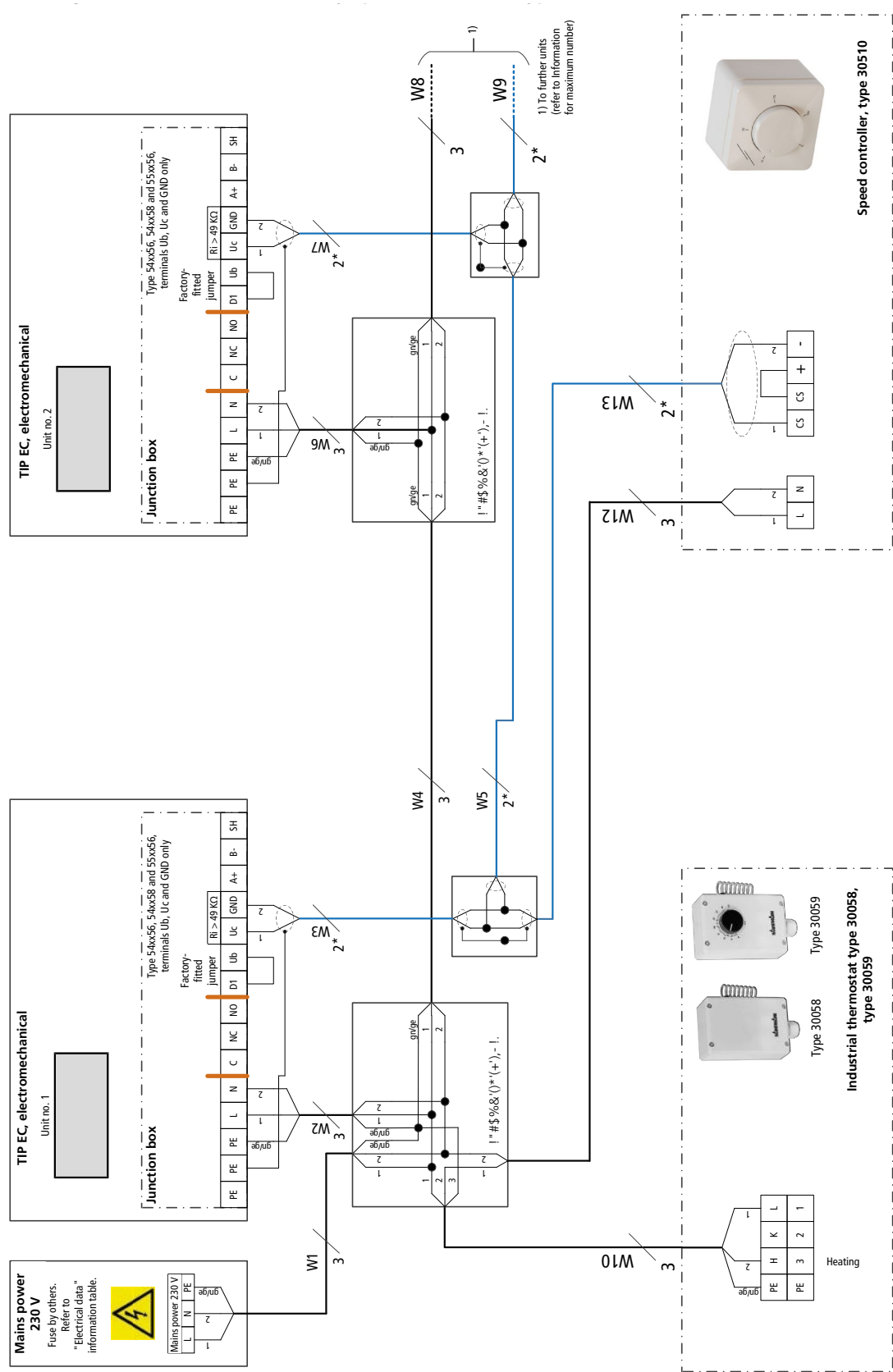
Unit heater type	Nominal voltage [V]	Mains frequency [Hz]	Active power [kW]	Nominal current [A]	Leakage current [mA]	Max. fuse [A]	IP protection rating	Protection class
54xx56	230	50/60	0.14	1.27	< 3.5	B10	54	I
54xx58	230	50/60	0.17	1.46	< 3.5	B10	54	I
55xx56	230	50/60	0.17	1.51	< 3.5	B10	54	I
55xx58	230	50/60	0.39	1.74	< 3.5	C16	54	I
56xx58	230	50/60	0.46	2.13	< 3.5	C16	54	I
57xx56	230	50/60	0.37	1.69	< 3.5	C16	54	I
57xx58	230	50/60	0.85	3.83	< 3.5	C16	54	I

xx Heat exchanger model

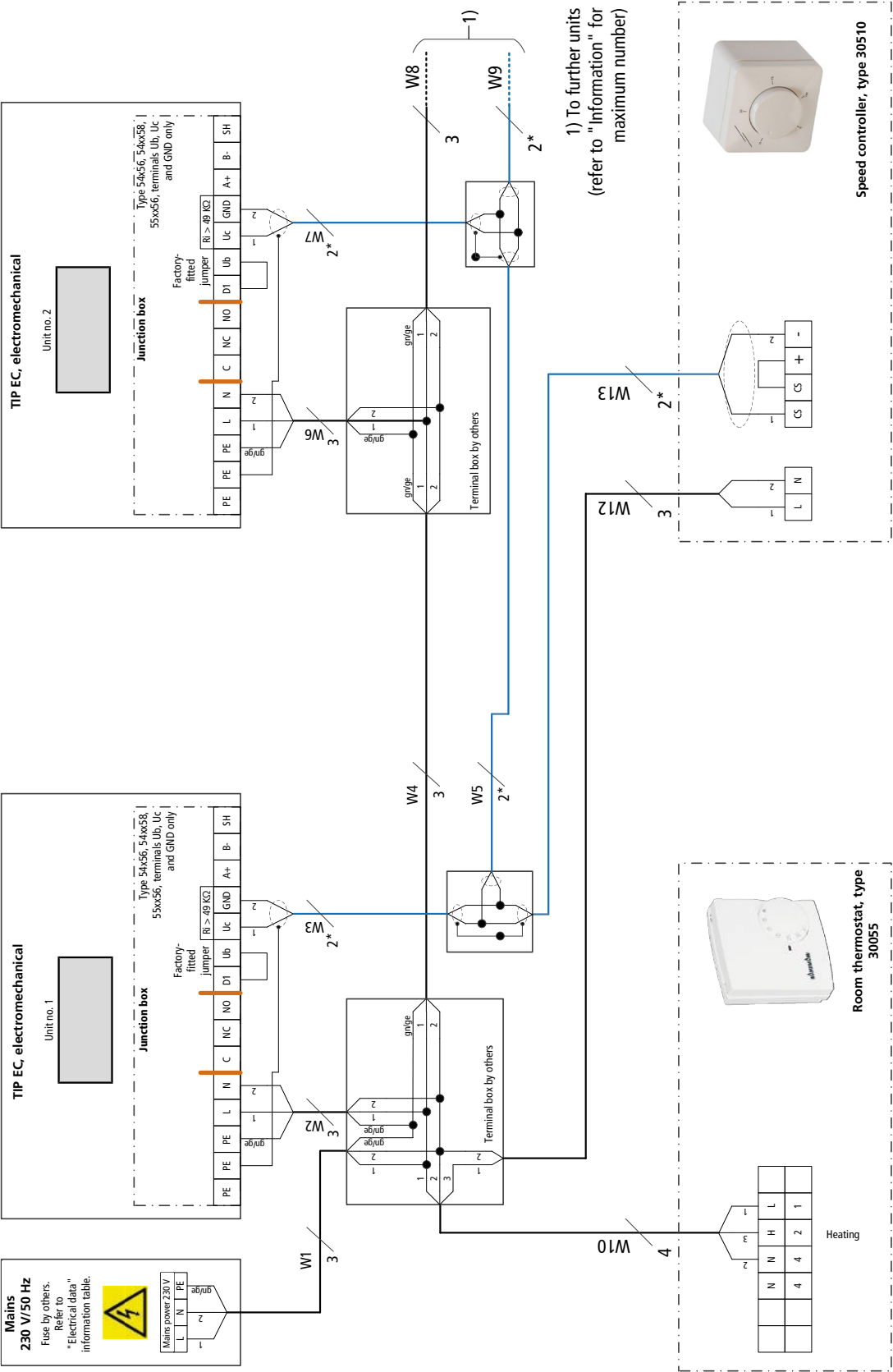
Cabling of TIP (\*\*00), actuation by speed controller type 30510



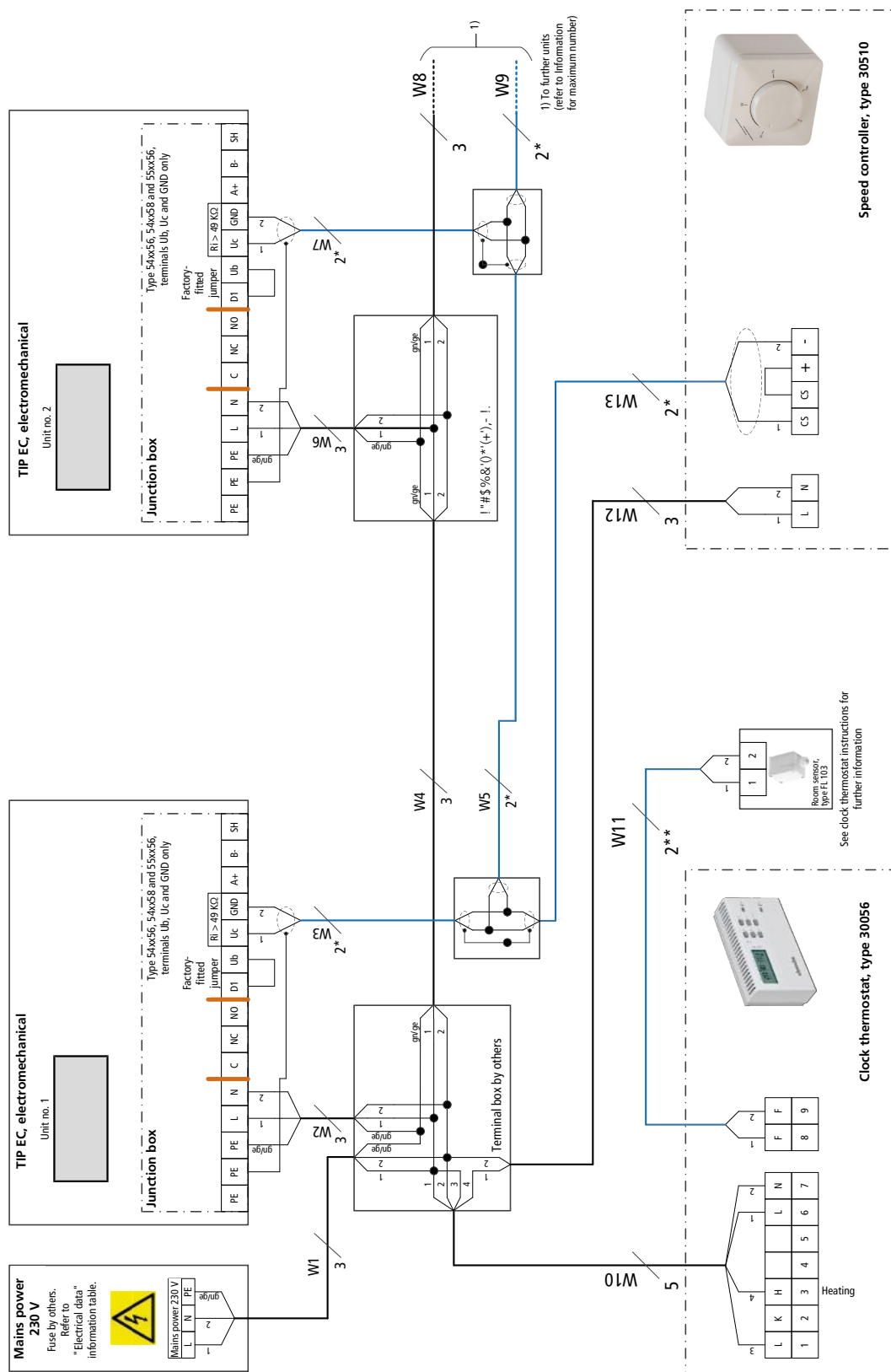
Cabling of TIP (\*\*00), actuation by speed controller type 30510 with industrial thermostat type 30058/30059



Cabling of TIP (\*\*00), actuation by speed controller type 30510 with room thermostat type 30055

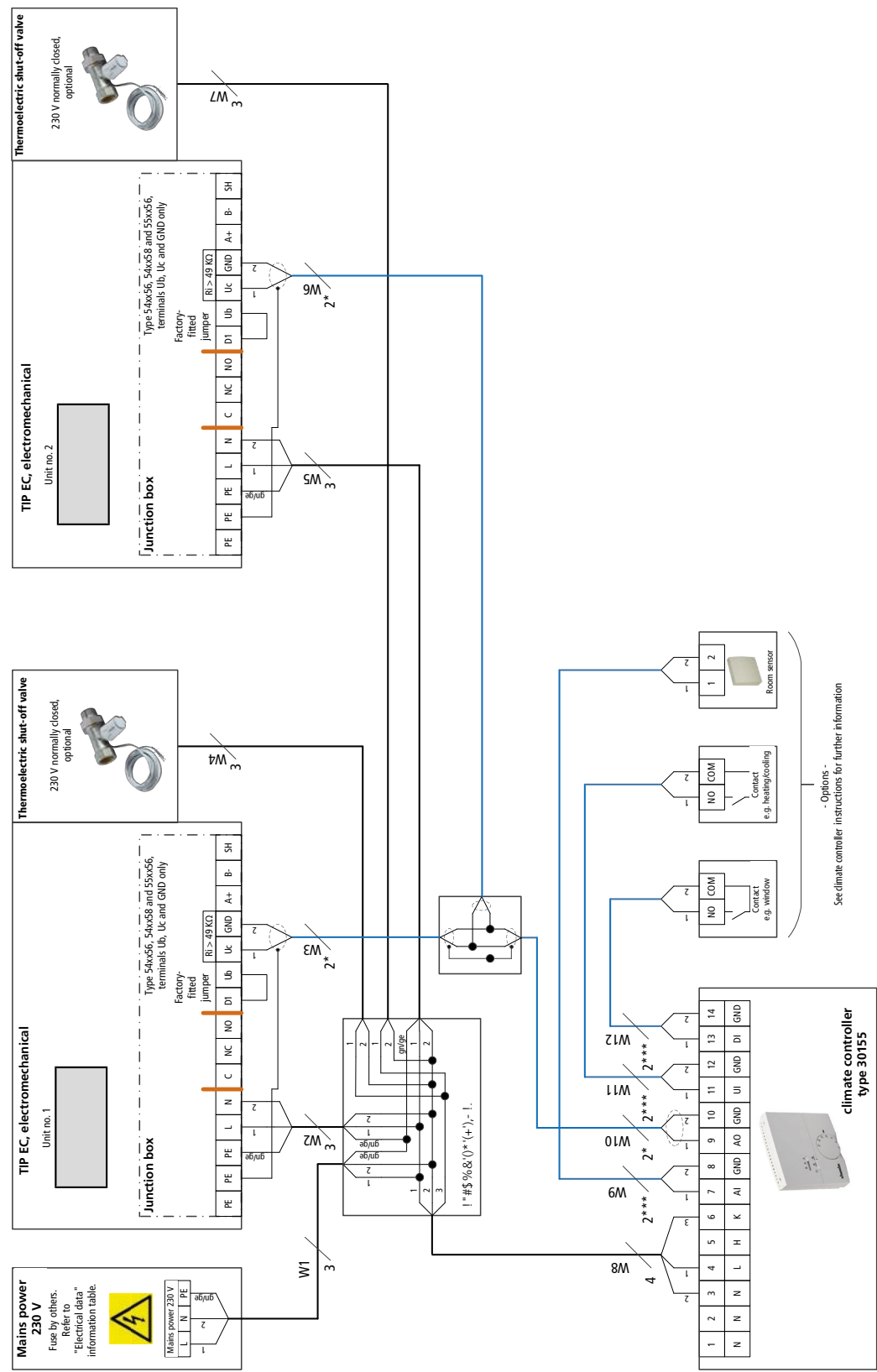


### Cabling of TIP(\*\*00), actuation by speed controller type 30510 with clock thermostat type 30056

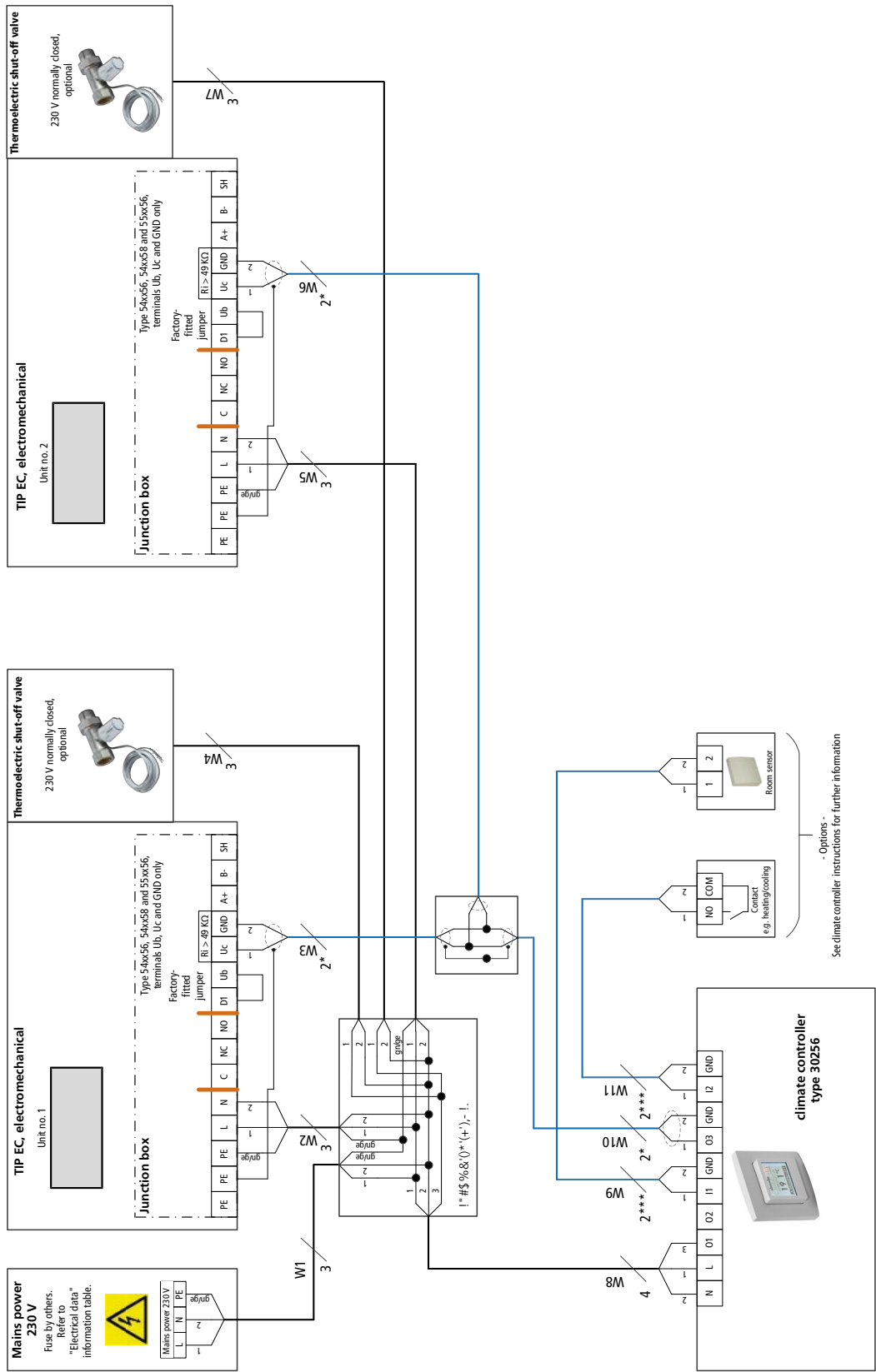




Cabling of TIP (\*\*00), actuation by climate controller type 30155, 2-pipe valve actuator 230 V AC, Open/Close

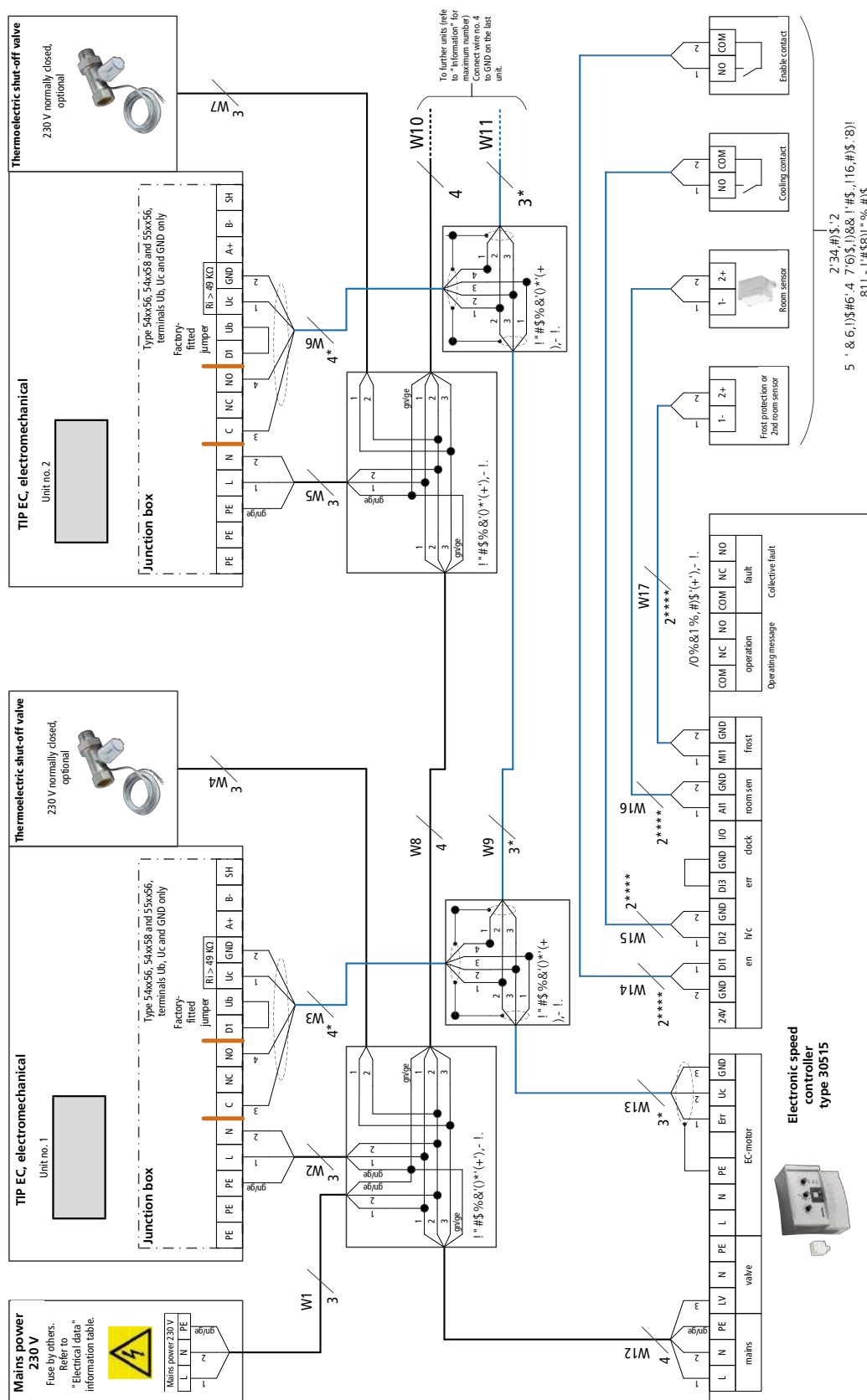


Cabling of TIP (\*\*00), actuation by climate controller type 30256, 2-pipe valve actuator 230 V AC, Open/Close

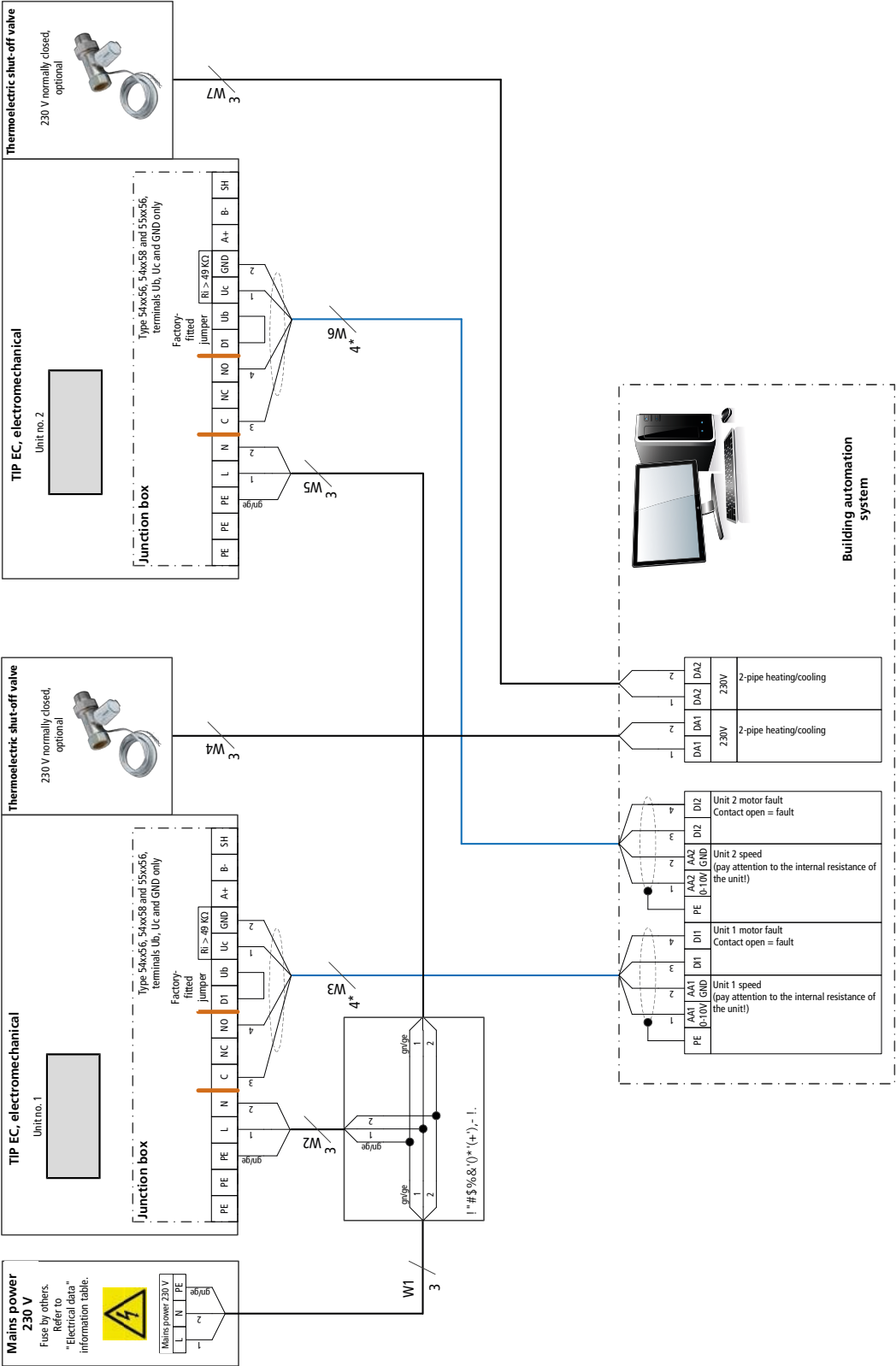


Options -  
See climate controller instructions for further information

### Cabling of TIP (\*00), actuation by speed controller type 30515



Cabling of TIP (\*\*00), actuation by DDC/BMS, 2-pipe valve actuator 230 V AC, Open/Close





# 05 ▶ Ordering information

## TIP





Fan version	Model size	Length	Width	Height	Nominal fan speed	Heat exchanger performance	Article no.
		[mm]	[mm]	[mm]	[1/min]		

Heat exchanger model copper/aluminium

EC fan, 230 V, high speed	4	320	540	500	525 – 1520	low, heat exchanger code no. 20	157000542058
						medium, heat exchanger code no. 30	157000543058
						high, heat exchanger code no. 40	157000544058
	5	320	640	600	235 – 1470	low, heat exchanger code no. 20	157000552058
						medium, heat exchanger code no. 30	157000553058
						high, heat exchanger code no. 40	157000554058
	6	320	740	700	160 – 990	low, heat exchanger code no. 20	157000562058
						medium, heat exchanger code no. 30	157000563058
						high, heat exchanger code no. 40	157000564058
	7	360	840	800	170 – 1000	low, heat exchanger code no. 20	157000572058
						medium, heat exchanger code no. 30	157000573058
						high, heat exchanger code no. 40	157000574058
EC fan, 230 V, reduced speed	4	320	540	500	480 – 1410	low, heat exchanger code no. 20	157000542056
						medium, heat exchanger code no. 30	157000543056
						high, heat exchanger code no. 40	157000544056
	5	320	640	600	380 – 1080	low, heat exchanger code no. 20	157000552056
						medium, heat exchanger code no. 30	157000553056
						high, heat exchanger code no. 40	157000554056
	7	360	840	800	145 – 780	low, heat exchanger code no. 20	157000572056
						medium, heat exchanger code no. 30	157000573056
						high, heat exchanger code no. 40	157000574056



## Accessories





Article	Article	Properties	Dimensions [mm]	Suitable for	Article no.
<b>Control accessories electromechanical 230 V</b>					
	Room thermostat	Heating/Cooling, 2- and 4-pipe, 3-stage. Only in conjunction with valves/valve kits with actuator, 230 V AC, Open/Closed, with OFF/Manual/Automatic fan switchover, Surface-mounted	110 x 111 x 26	EC units electromechanical, 5 Katherm HK Trench Technology, 2 TOP or Ultra Unit Heaters, 2 Venkon, KaCool D AF or KaCool W Fan Coils	<b>196000030155</b>
	Clock thermostat	Heating/Cooling, 2- and 4-pipe, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, flush-mounted	85 x 46 x 81	EC units electromechanical, 2 TOP or Ultra Unit Heaters, 5 Venkon Fan Coils, 2 KaCool D AF or KaCool W Fan Coils	<b>196000030256</b>
	Speed controller	continuously variable fan operation, 0-100% presettable, 230 V AC, 10 V, 0-100%, On/Off via room thermostat, surface-mounted protection class IP 54, flush-mounted protection class IP 44	82 x 82 x 68	EC units electromechanical, 2 ProtecTor Door Air Curtains, 5 UniLine or Tandem Door Air Curtains, 10 TOP or Ultra Unit Heaters, 10 Venkon Fan Coils, 2 KaCool D AF or KaCool W Fan Coils	<b>196000030510</b>
	Electronic speed controller	with integral digital timer, 230 V AC, with day, night, week programme, continuously variable fan operation 0 to 100 %, manual or automatic, 0-10 VDC, recirculation air, including sensor, Protection class IP 40	262 x 277 x 153	EC units electromechanical, 10 TIP, TOP or Ultra Unit Heaters, 10 Venkon Fan Coils, 2 KaCool D AF or KaCool W Fan Coils	<b>196000030515</b>

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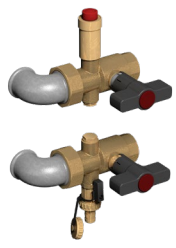
## Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		

### Thermostats


	Room thermostat	with thermal feedback, 230 V AC, Surface-mounted, Protection class IP 30	78 x 28 x 83	Unit Heaters, Galaxis Radiant Ceiling Panels	<b>196000030055</b>
	Industrial thermostat	with setpoint adjustment by tool, Protection class IP 54	113 x 71 x 158	Unit Heaters, ProtecTor Door Air Curtains, Galaxis Radiant Ceiling Panels	<b>196000030058</b>
	Industrial thermostat	with setpoint adjustment using a dial, Protection class IP 54	113 x 71 x 158	Unit Heaters, ProtecTor Door Air Curtains, Galaxis Radiant Ceiling Panels	<b>196000030059</b>
	Clock thermostat	with integral digital timer, with day/night/week programme, with night setback, Protection class IP 20	84 x 33 x 133	Unit Heaters, Galaxis Radiant Ceiling Panels	<b>196000030056</b>

### Valves


	Thermoelectric shut-off valve	230 V AC, Connection 1" Not in conjunction with 2-stage three-phase switch art. no. 196000030049!	200 x 50 x 300	all unit heaters	<b>196000030911</b>
	Thermoelectric shut-off valve	230 V AC, Connection 1 1/4" Not in conjunction with 2-stage three-phase switch art. no. 196000030049!	200 x 50 x 300	all unit heaters	<b>196000030912</b>
	Thermoelectric shut-off valve	230 V AC, Connection 1 1/2" Not in conjunction with 2-stage three-phase switch art. no. 196000030049!	200 x 50 x 300	all unit heaters	<b>196000030913</b>
	Unit heater shut-off set, angled version	Connection 1"	150 x 95 x 188	Model size 4	<b>198000034976</b>
		Connection 1 1/4"	145 x 160 x 170	Model size 5	<b>198000035976</b>
				Model size 6	<b>198000036976</b>
		Connection 1 1/2"	155 x 170 x 200	Model size 7	<b>198000037976</b>

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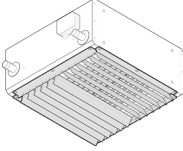
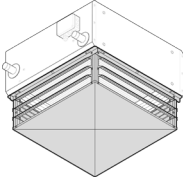
## Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	Unit heater shut-off set, straight version	Connection 1"	140 x 95 x 185	Model size 4	<b>198000034977</b>
				Model size 5	<b>198000035977</b>
		Connection 1 1/4"	165 x 100 x 220	Model size 6	<b>198000036977</b>
		Connection 1 1/2"	155 x 170 x 155	Model size 7	<b>198000037977</b>

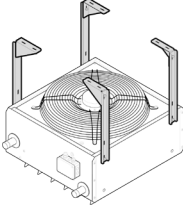
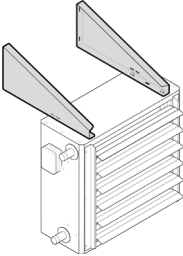
### Repair switch

	Repair switch	EC, Enables individual units in a switching group to be decommissioned by voltage disconnection. The thermal contacts are bridged in advance, and subsequently opened on the motor side so that the other units in the group can continue to operate without interruption., Protection class IP 65, 25 A, supplied separately	82 x 127 x 82	all unit heaters, air curtains with EC-motors	<b>196000030160</b>
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### Air outlets

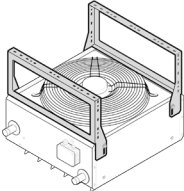
	Louvre	two-row for wall- and ceiling-mounted units	495 x 35 x 495	Model size 4	<b>198000034002</b>
			595 x 35 x 595	Model size 5	<b>198000035002</b>
			695 x 35 x 695	Model size 6	<b>198000036002</b>
			795 x 35 x 795	Model size 7	<b>198000037002</b>
	Diffuser	in four directions, for ceiling-mounted units	500 x 195 x 500	Model size 4	<b>198000034004</b>
			600 x 195 x 600	Model size 5	<b>198000035004</b>
			700 x 195 x 700	Model size 6	<b>198000036004</b>
			800 x 195 x 800	Model size 7	<b>198000037004</b>

### Brackets

	Universal 4-point brackets	recirculating air only, made of sendzimir galvanised sheet steel, as a 4-point fixing for ceiling installation, 1 complete set	172 x 498 x 165	Model size 4 - 7	<b>198000030042</b>
	Wall brackets	recirculating air only, made of sendzimir galvanised sheet steel for wall mounting, a complete set TIP and TOP unit heaters can be installed standing and also suspended.	251 x 50 x 585	Model size 4	<b>198000034044</b>
				Model size 5	<b>198000035044</b>
			268 x 50 x 635	Model size 6	<b>198000036044</b>
			286 x 50 x 685	Model size 7	<b>198000037044</b>

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Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
	Ceiling-wall brackets		[mm]		
			420 x 100 x 510	Model size 4	198000034049
			420 x 100 x 610	Model size 5	198000035049
			470 x 100 x 710	Model size 6	198000036049
			470 x 100 x 810	Model size 7	198000037049



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