

TIP
Unit Heaters

# TIP

Unit heaters, wall- and ceiling-mounted units

► Technical Catalogue



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Kampmann Technical Catalogue – TIP



TIP unit heaters installed on the ceiling heat the showrooms belonging to the Seyfarth car dealership in Gotha.

# **01** Product Information



# TIP – Well-tempered 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. Standard equipment also includes single-row louvre and the motor guard.

## Functional principle

Air is drawn in through the sheet metal sickle-blade silently-operating fan and is blown through the copper/aluminium heat exchanger into the room. The models with large heat exchange depth are ideal for use with low temperature operation.

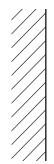
#### Air direction

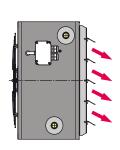
TIP unit heaters are supplied as standard with single-row louvre. The air can optionally be discharged through a double-row louvre of air diffuers, both available as an accessory.

#### Available ex-stock

Four different sizes are available with the motor versions, two-stage three-phase and/or single-stage single-phase ex-stock.

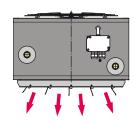
## Example of heating, wall-mounted





### Example of heating, ceiling-mounted





## **Product Data**



## **Product Features**

- ▶ Sickle-blade, whisper-quiet fan with optimised full nozzle
- ▶ Factory-fitted single-row ceiling- or wall-mounted louvre
- ▶ Easy to install
- Short delivery times
- Unbeatable in terms of value for money



## **Features**

- ▶ Four sizes
- ▶ 2-stage, three-phase or 1-stage, single-phase Whisper-quiet sickle-blade fan

## Heating

- ▶ LPHW
- Installation
- ▶ Wall-mounted or ceiling-mounted
- Air flow **Heat exchanger** → Copper/aluminium KaControl
  - ▶ Recirculating air

## **Heat output**

## Heat output 1) [kW]

▶ 11.1-77.2

## **Operating limits**

- Max. operating pressure: 16 bar
- ▶ Max. entering water temperature: 120 °C
- ▶ Max. entering air temperature: 40°C

### Uses

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



buildings





Retail chains



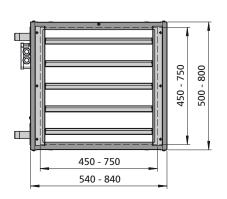
Commercial and industrial buildings

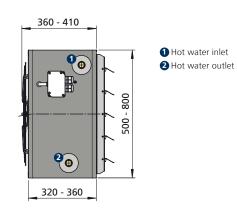
# Selection Aid: Overview of Models

Series	Dimensions (H x W x D)	Heat outputs <sup>1)</sup>	Air volume	Motor	Further information
	[mm]	[kW]	[m³/h]		
54	500 x 540 x 320	11.1–18.0	1480 – 2360	2-stage, 3-phase, 400 V	▶ Paαe 14−15
34	300 x 340 x 320	11.1-16.0	1460-2300	1-stage, single-phase, 230 V	▶ Page 14-15
55	600 x 640 x 320	17.7–30.9	2700-4140	2-stage, 3-phase, 400 V	<b>.</b> Build 45
55	600 x 640 x 320	17.7 – 30.9	2700-4140	1-stage, single-phase, 230 V	▶ Page 14-15
56	700 x 740 x 320	27.3-47.9	3720 – 5680	2-stage, 3-phase, 400 V	D. 10 47
50	700 x 740 x 320	27.5-47.9	3/20-3000	1-stage, single-phase, 230 V	▶ Page 16-17
57	800 x 840 x 360	43.4-77.2	6150 – 8770	2-stage, 3-phase, 400 V	
5/	800 X 840 X 360	45.4-77.2	0150-8770	1-stage, single-phase, 230 V	▶ Page 16-17

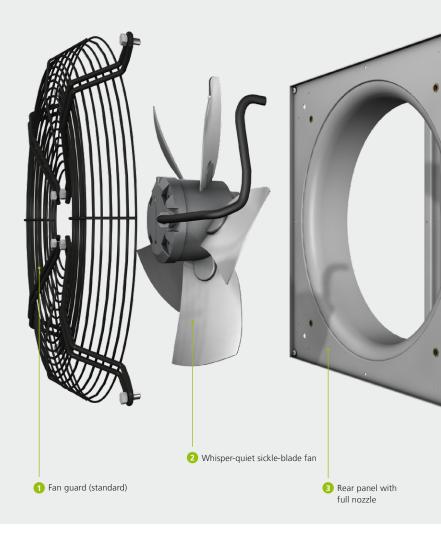
## Dimensions

Series 54–57





## TIP at a Glance



## **Features**

- 1 Fan guard (standard):
  - screw-fixed as standard with sickle-blade silent fan
- Sickle-blade, whisper-quiet fan, in line with ERP 2015 (2009/125/EC):
  - 2-stage, three-phase or 1-stage, single-phase sickle-blade, whisper-quiet fan with external terminal box
  - High-efficiency due to the aerodynamic design of the rotor housing
  - ▶ Electrical thermal class F
  - Motor protection: IP 54
  - Balancing at two levels; balancing quality according to G 6, DIN ISO 1940 part 1

- fan characteristic line coordinated to the unit housing enables the speed to be controlled by voltage reduction
- Integrable into the fan hub
- Rear panel with full nozzle:
  - Full nozzle, optimised to the flow characteristics of the fan
- 4 Unit heater housing:
  - Self-supporting, made of galvanized steel are sheet
  - Standard fixing holes for wall- or ceiling-mounting
  - Resistant to damage
  - Minimal depth, ideal for the straightforward attachment of outlet-side accessories (2-row louvre, four-way diffuser)

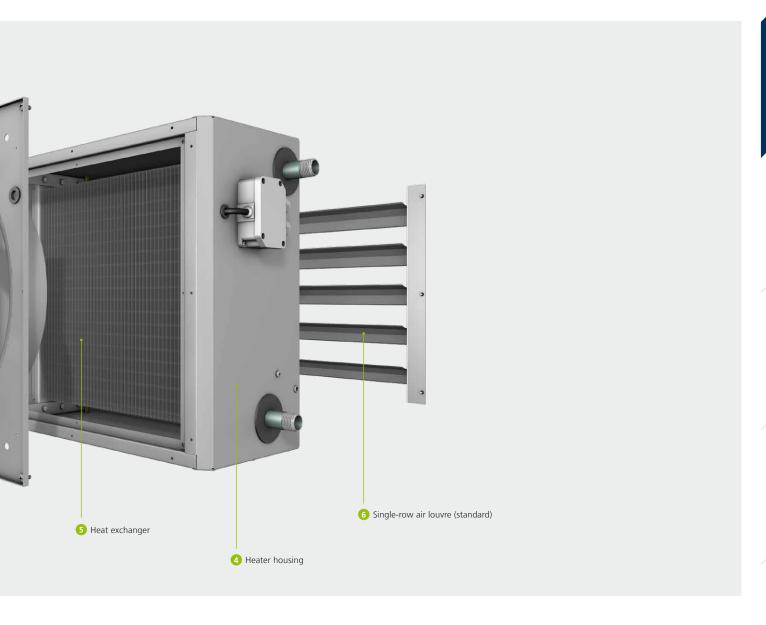
 Painted, to match the colour of the building ceiling on request

## 5 Heat exchanger::

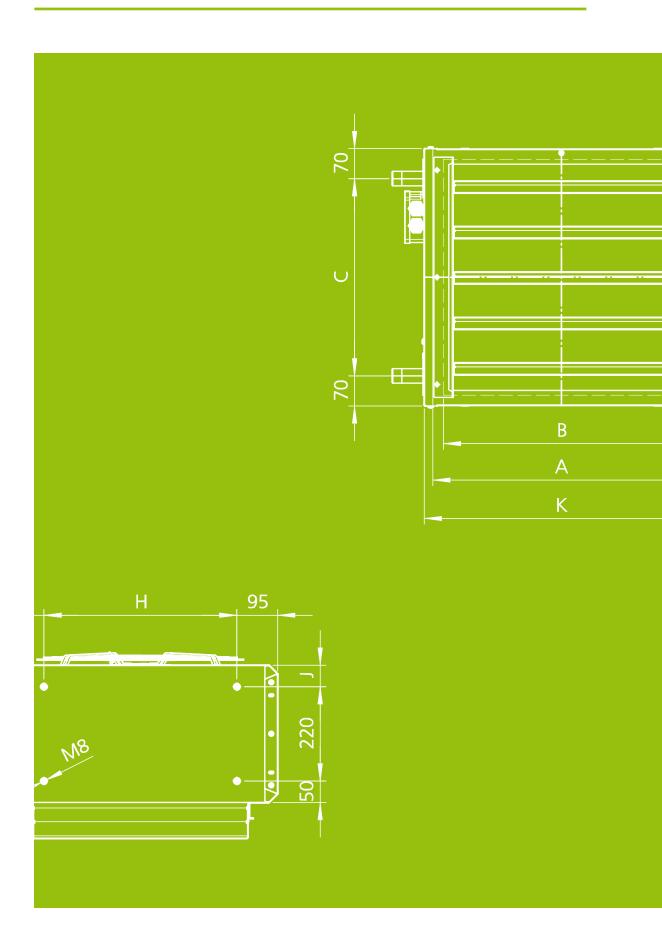
- Copper/aluminium heat exchanger, especially light, with high heat outputs from minimal dimensions
- Suitable for low temperature heating systems and LPHW heating systems
- Steel distributor and collector
- Not suitable for steam and thermal oil
- Hollow copper tubes with aluminium fins, connected by expanded pipes, perfect for lasting heat transfer
- Cannot be used in areas with high levels of dust or oil

### Single-row air louvre (standard):

- for wall or ceiling-mounting
- achieves excellent throw



# **02** Technical Data



## General

## EU Directive 2009/125/EU

#### **ERP 2015-conformity**

The European Commissions' ERP Directive ("Energy Related Products") evaluates and modifies the requirements of technical products in energy-related applications. According to the ERP Directive ("LOT 11"), the efficiency requirements have heightened on fans with an electric drive output of 125 watts to 500 kilowatts. A number of fans can no longer be marketed after the second stage enters into force on 1st January 2015.

The inlet nozzles used in the unit has to be taken into account as well as the fan in terms of energy. The TIP range of unit heaters is solely fitted with ERF-compliant fans. The conformity of the TIP range has been laboratory-tested and proved. The measurements can be provided on request.

The TIP uni heater range and the 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 met.

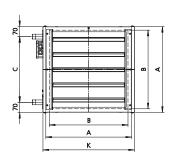


Test chamber for air performance measurements according to DIN EN ISO 5801; Kampmann R & D Centre (FEC)

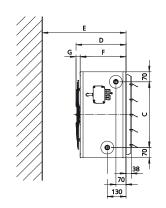
## **TIP**

## Series 54 and 55

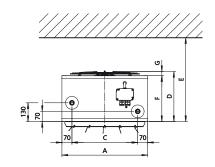
## **Technical Drawings** (Dimensions in mm)



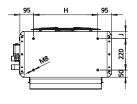
Front view



Side view, wall-mounted



Side view, ceiling-mounted



lop	view
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Туре	Α	В	С	D	E (min)	F	G	н	J	K	
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
5420											
5430	500	450	360	360	480	320	40	350	50	540	
5440											
5520											
5530	600	550	460	370	500	320	50	450	50	640	
5540											

## Specifications

## Weights

Туре	Weight	Water content
	[kg]	[1]
5420	27	1.6
5430	28	2.1
5440	29	2.6
5520	36	2.2
5530	37	3.0
5540	38	3.8

## **Nominal power**

Switching stage	
	[1/min]
1	1050
2	1350

## Connection

1 "

Make use of our online calculation programs to calculate your heat outputs and flow rates with a couple of clicks!

- ► Kampmann.co.uk/tip/calculation
- ► Kampmann.eu/tip/calculation

02 Technical Data

05 Ordering Information

## **Series 54 Outputs**



	tching stage ee-phase)	Heat outputs <sup>1)</sup>			(9 graduation of the ceiling of the					ngle-phase ss of control of contr		i power level			
Туре	Switchi (three-p	at LPHW	82/71 °C	at LPHW	75/65 °C	Air vo	Throw (wall-mo	Louvre	Air diffuser	Current uptake	Power consumption	Current uptake	Power consumption	Sound level <sup>2</sup>	Sound
		Q [kW]	t <sub>L2</sub> [°C]	Q [kW]	t <sub>L2</sub> [°C]	[m³/h]	[m]	[m]	[m]	[W]	[A]	[W]	[A]	[dB(A)]	[dB(A)]
5420	1	12,6	39,8	11.1	37.5	1870	13	4.7	3.0	75	0.2			49	65
5420	2	14,2	37,7	12.5	35.6	2360	18	5.5	3.5	103	0.2	130	0.7	55	71
5430	1	15,7	47,6	13.8	44.3	1670	13	4.5	2.9	75	0.2			49	65
3430	2	18,0	44,8	15.9	41.9	2140	17	5.2	3.3	103	0.2	130	0.7	55	71
5440*	1	17,5	54,7	15.4	50.6	1480	12	4.1	2.7	75	0.2			49	65
	2	20,4	51,8	18.0	48.0	1890	16	4.8	3.1	103	0.2	130	0.7	55	71

## **Series 55 Outputs**



	Switching stage (three-phase)	Heat outputs <sup>1)</sup>			volume	v mounted)	_	t when nounted ax.)		hree-phase 0 V		ngle-phase 0 V	Sound pressure level <sup>2)</sup>	d power level	
Туре	Switc (three	at LPHW	82/71 °C	at LPHW	75/65 °C	Air vo	Throw (wall-m	Louvre	Air diffuser	Current uptake	Power consumption	Current uptake	Power consumption	Sound level	Sound
		Q [kW]	t <sub>L2</sub> [°C]	Q [kW]	t <sub>L2</sub> [°C]	[m³/h]	[m]	[m]	[m]	[W]	[A]	[W]	[A]	[dB(A)]	[dB(A)]
5520	1	20,1	37,7	17.7	35.6	3330	17	5.7	3.6	176	0.5			51	67
3320	2	22,5	36,0	19.8	34.1	4140	23	6.5	4.1	234	0.5	256	1.1	59	75
5530	1	27,5	46,4	24.2	43.3	3060	16	5.4	3.4	176	0.5			51	67
5550	2	31,1	44,0	27.4	41.2	3810	21	6.2	3.9	234	0.5	256	1.1	59	75
EE40*	1	30,2	52,9	26.6	49.0	2700	13	5.0	3.2	176	0.5			51	67
5540*	2	35,1	50,1	30.9	46.5	3430	19	5.8	3.7	234	0.5	256	1.1	59	75

## Water resistance

## Type 5420

m	0.4	 	 			m³/h
$\Delta P_{\rm w}$	1			10		kPa

## Type 5520

m	0.6 0.7 0	.80.9 1		1.5	2	2.5 m <sup>3</sup> /l	
ΔP	1.5 2	3 4	5	10	15	20 25 kPa	

## Type 5430

m	 	0.70	 	1.	_	_	m³/h
ΔΡ				 10			

## Type 5530

m	0.8 0.9 1		 _	 _	3.5 m <sup>3</sup> /h
$\Delta P_{\rm w}$	2				

## Type 5440



## Type 5540



m = Water volumetric flow [m³/h]  $\Delta Pw = Pressure loss [kPa]$ 

<sup>\*)</sup> especially suitable for low temperature operation

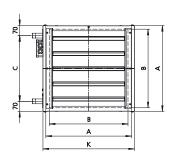
<sup>1)</sup> at room temperature t<sub>L1</sub> = 20 °C

<sup>2)</sup> In an open room at a distance of 5 m measured from the unit

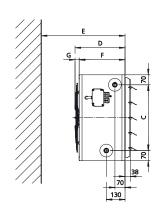
## **TIP**

## Series 56 and 57

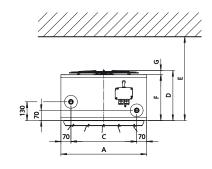
## **Technical Drawings** (Dimensions in mm)



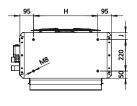
Front view



Side view, wall-mounted



Side view, ceiling-mounted



Top view

Туре	Α	В	С	D	E (min)	F	G	н	J	К
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
5620										
5630	700	650	560	380	550	320	60	550	50	740
5640										
5720										
5730	800	750	660	410	660	360	50	650	90	840
5740										

## Specifications

## Weights

Туре	Weight	Water content
	[kg]	[1]
5620	47	3.4
5630	49	4.5
5640	51	5.6
5720	64	4.8
5730	66	6.2
5740	68	7.6

## **Nominal power**

Switching stage	
	[1/min]
1	700
2	900

## Connection

1¼" (Series 56), 1½" (Series 57)

Make use of our online calculation programs to calculate your heat outputs and flow rates with a couple of clicks!

- ► Kampmann.co.uk/tip/calculation
- ► Kampmann.eu/tip/calculation

## **Series 56 Outputs**



	ning stage -phase)	Heat outputs <sup>1)</sup>		Heat outputs <sup>1)</sup>		volume	, mounted)	ceiling-r	t when nounted ax.)	_	hree-phase 0 V		ngle-phase 0 V	d pressure 2)	l power level
Туре	Switching (three-pha	at LPHW	82/71 °C	at LPHW	75/65 °C	Air vo	Throw (wall-mo	Louvre	Air diffuser	Current uptake	Power consumption	Current uptake	Power consumption	Sound level <sup>2</sup>	Punos
		Q [kW]	t <sub>L2</sub> [°C]	Q [kW]	t <sub>L2</sub> [°C]	[m³/h]	[m]	[m]	[m]	[W]	[A]	[W]	[A]	[dB(A)]	[dB(A)]
5620	1	31,0	40,3	27.3	37.9	4490	20	6.2	3.6	210	0.8			51	67
3620	2	35,6	38,2	30.9	36.0	5680	28	7.2	4.1	327	0.8	339	1.5	58	74
5630	1	41,1	49,3	36.2	45.8	4120	19	5.9	3.4	210	0.8			51	67
3030	2	47,5	46,6	41.9	43.4	5260	25	6.8	3.9	327	0.8	339	1.5	58	74
5640*	1	46,3	56,6	40.8	52.3	3720	17	5.1	3.0	210	0.8			51	67
304U^	2	54,4	53,6	47.9	49.7	4750	23	6.4	3.7	327	0.8	339	1.5	58	74

## **Series 57 Outputs**



	Switching stage (three-phase)	Heat outputs <sup>1)</sup>		volume	v :mounted)	_	t when nounted ax.)	_	nree-phase 0 V		ngle-phase 0 V	Sound pressure level <sup>2)</sup>	d power level		
Туре	Switc (three	at LPHW	82/71 °C	at LPHW	75/65 °C	Air vo	Throw (wall-m	Louvre	Air diffuser	Current uptake	Power consumption	Current uptake	Power consumption	Sound	Sound
		Q [kW]	t <sub>L2</sub> [°C]	Q [kW]	t <sub>L2</sub> [°C]	[m³/h]	[m]	[m]	[m]	[W]	[A]	[W]	[A]	[dB(A)]	[dB(A)]
5720	1	49,2	39,8	43.4	37.4	7320	28	7.2	3.9	322	0.9			57	73
3/20	2	54,1	38,1	47.7	36.0	8770	38	8.0	4.3	432	0.9	491	2.3	61	77
5730	1	64,0	48,0	56.4	44.6	6730	26	6.9	3.8	322	0.9			57	73
5/30	2	73,2	45,3	64.5	42.3	8500	36	7.9	4.2	432	0.9	491	2.3	61	77
5740*	1	74,3	55,5	65.5	51.3	6150	22	6.5	3.6	322	0.9			57	73
3740"	2	87,6	52,4	77.2	48.5	7960	32	7.6	4.1	432	0.9	491	2.3	61	77

## Water resistance

## Typ 5620

m	0.9 1			2.		
$\Delta P_v$				10		

## Typ 5720

m	1.2	1.5	2	2.5	3	3.5	4	5 5.	5 m³/h
ΔΡ.,,									

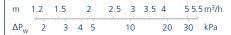
## Typ 5630

m			2.5	_	 	
$\Delta P_{w}$			10			

## Typ 5730

m			3.5 4		n³/h
$\Delta P_{w}$			10		кРа

## Typ 5640



## Typ 5740

m	2	2.5	3	3.5	4	5	6	/	8	m-/n
	+				41444				-	
$\Delta P_{\rm W}$	1.5	2 3	4	5		10		20	30	kPa

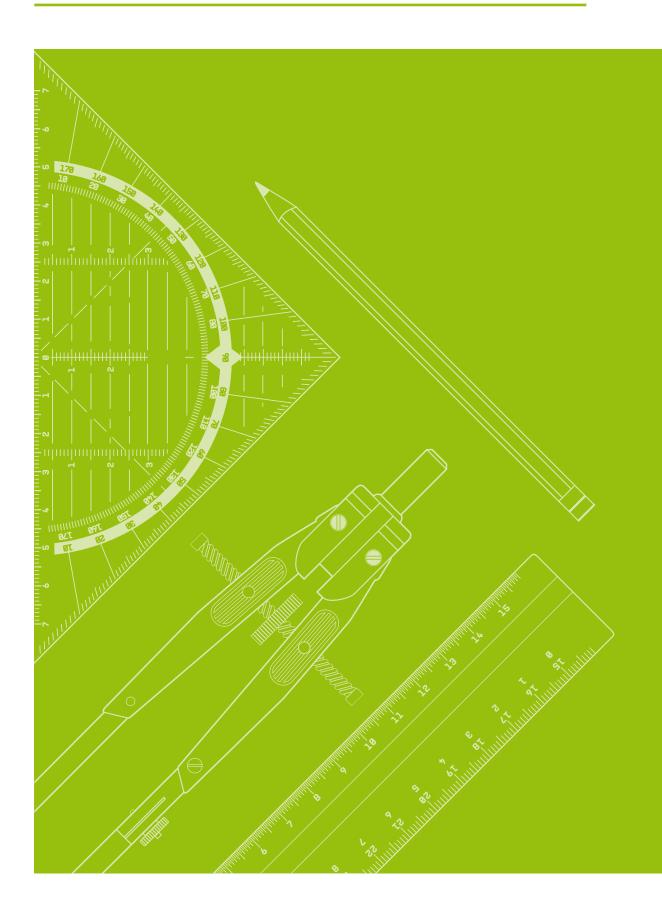
m = Water volumetric flow [m³/h]  $\Delta Pw = Pressure loss [kPa]$ 

<sup>\*)</sup> especially suitable for low temperature operation

<sup>1)</sup> at room temperature  $t_{L1} = 20 \,^{\circ}\text{C}$ 

<sup>2)</sup> In an open room at a distance of 5 m measured from the unit

# 03 Design Information



## Information on Planning and Design

The size of TIP unit heaters depends on the heat output calculated and also on the structural conditions.

#### Water resistance

Calculate the water resistance using the water resistance diagrams (pages 15 and 17). This is formed from:

- ▶ the heat output Q<sub>eff</sub>
- the water temperature difference
- $\Delta tw = t_{w1} t_{w2}$  $\Delta tw = t_{w1} - t_{w2}$ The volumetric flow rate  $m = \frac{Q_{eff}}{\Delta t_w} \times 0.86$

#### Noise

There is minimal noise from these units due to the aerodynamic design of the sickle-blade, whisper-quiet fan. Flow noise is reduced because of the sickle-shaped design of the profiled aluminium blades combined with the optimised inlet nozzle. The uniform spread over the entire frequency range, minimising blade passing noise, reduces unpleasant peaks of noise. Nevertheless, take into account the permissible noise levels when designing unit heaters. The A-rated total noise levels, for both sound pressure and sound power, are given in the performance tables on pages 15 and 17.

#### **Sound Pressure Level**

The A-rated sound pressure levels given in the technical data on pages 15 and 17 apply to the free-flowing air volume at a distance of 5 metres from the unit in an anechoic chamber. The actual sound pressure level may differ significantly from the given 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, independent of the space and distance. The sound pressure level can can be determined if the spatial geometry and absorption behaviour is known. The sound power levels were determined based on the enveloping surface method in line with DIN 45635-56.

## **Rating data**

Unit heater	Voltage / Frequency	Power consumption	Current consumption	Speed
Туре	[V] / [Hz]	[KW]	[A]	[rpm]
54**31	230 / 50	0,156	0,90	1310
55**31	230 / 50	0,353	1,60	1350
56**31	230 / 50	0,390	1,80	910
57**31	230 / 50	0,735	3,40	870
54**36	400 / 50	0,145/0,098	0,3/0,3	1370/1130
55**36	400 / 50	0,333/0,231	0,6/0,6	1350/1110
56**36	400 / 50	0,491/0,244	1,1/0,9	890/630
57**36	400 / 50	0,710/0,435	1,2/1,2	910/740

20 Controls

# 04 Controls



## **Control Accessories**

Kampmann offers an extensive range of control accessories for each required function:

- ▶ Speed controllers 2-stage / 5-stage / 7-stage
- Continuously variable speed control; for maximum efficiency
- Thermostats and temperature controls; optionally with timer program
- Valves + valve actuators
- Repair switch

## **Motor Protection**

Thermal contacts (temperature monitors) are embedded in the motor windings, which open when the maximum winding temperature of 155 °C is exceeded.

Commercial motor protection switch or bi-metal trips are not suitable as motor protection with multi-stage operated motors.

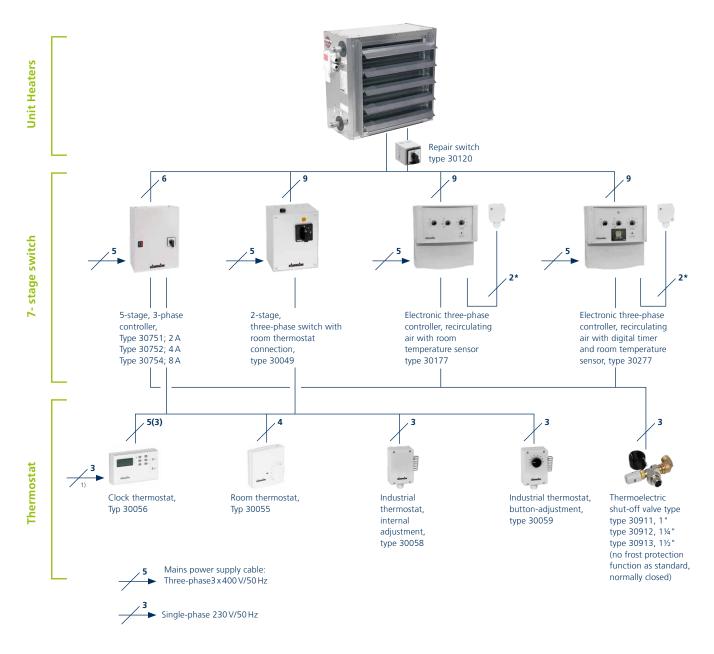
### In a Group Circuit

- ▶ Thermal contacts are connected in series. This configuration secures as many motors as needed by the motor protection device.
- Thermal contacts are connected in series. This configuration secures as many motors as needed by the motor protection device. Total power for the connected heaters should not exceed the maximum rating of the switching device. In the event of a fault (e.g. 2-phase, mechanical obstruction, bearing failure), ensure that the unit is not switched on again accidentally. All Kampmann speed controls are fitted with a switch-on lock in the event of a fault.
- Switch on again by turning the stage switch to
- Automatic restart after power failure with switch devices connected to a room thermostat

## 2-stage, 3-phase motor

## Maximum connectable unit heaters per switch

				Switching de	vice					
Unit heater with two-stage, three-phase motor	30751	30752	30754	2-stage, three-phase switch with room thermostat connection, type 30049	Electronic 2-stage, three-phase controller, recirculating air with digital timer, type 30277					
[Series]	[Quantity]	[Quantity]	[Quantity]		[Quantity]					
54	6	12	25		25					
55	3	6	11		11					
56	1	3	6	7						
57	1	3	5	5						



<sup>()</sup> If operated with 2-stage, 3-phase switch, type 30049

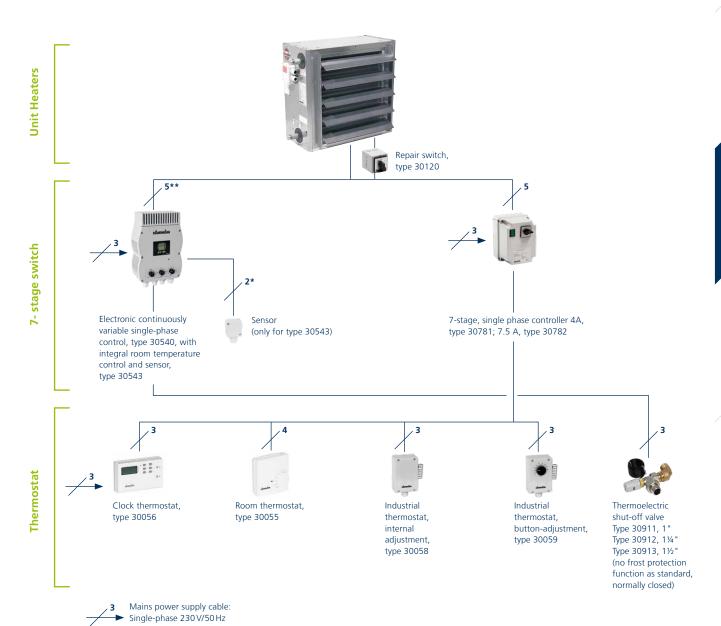
<sup>1)</sup> If operated with 2-stage, 3-phase switch, type 30049

Shielded cable (e.g. J-Y(ST)Y, 0.8 mm), max. 100 m, lay separately from high-voltage cables! The number of connecting wires required including fuses is given on the individual control units. **Electrical supply:** Observe the technical connection requirements laid down by utility companies!

## 1-stage, Single-phase

## Maximum connectable unit heaters per switch

Unit heater with	Switching device				
1-stage single-phase motor	Electronic continuously variable single-phase controller, recirculating air type 30540, type 30543	7-stage, single phase control with room thermostat connection			
		Type 30781	Type 30782		
[Series]	[Quantity]	[Quantity]	[Quantity]		
54	4	4	8		
55	2	2	4		
56	2	2	3		
57	1	1	2		



<sup>\*)</sup> Shielded cable (e.g. J-Y(ST)Y, 0.8 mm), max. 100 m, lay separately from high-voltage cables!

# **05** • Ordering Information

## TIP

Series	Motor	Heat output 1)	Air volume	Art. no.	Stock product <sup>2)</sup>
		[kW]	[m³/h]		
oper/aluminium h	neat exchanger				
5420	2-stage, three-phase motor	11.1-12.5	1870-2360	157000542036	
5420	Single-phase motor	12.5	2360	157000542031	
F420	2-stage, three-phase motor	13.8-15.9	1670-2140	157000543036	
5430	Single-phase motor	15.9	2140	157000543031	•
5440	2-stage, three-phase motor	15.4-18.0	1480-1890	157000544036	
5440	Single-phase motor	18.0	1890	157000544031	•
5520	2-stage, three-phase motor	17.7-19.8	3330-4140	157000552036	
5520	Single-phase motor	19.8	4140	157000552031	•
FF20	2-stage, three-phase motor	24.2-27.4	3060-3810	157000553036	
5530	Single-phase motor	27.4	3810	157000553031	•
	2-stage, three-phase motor	26.6-30.9	2700-3430	157000554036	•
5540	Single-phase motor	30.9	3430	157000554031	
	2-stage, three-phase motor	27.3-30.9	4490-5680	157000562036	•
5620	Single-phase motor	30.9	5680	157000562031	
	2-stage, three-phase motor	36.2-41.9	4120-5260	157000563036	•
5630	Single-phase motor	41.9	5260	157000563031	
	2-stage, three-phase motor	40.8-47.9	3720-4750	157000564036	•
5640	Single-phase motor	47.9	4750	157000564031	
	2-stage, three-phase motor	43.4-47.7	7320-8770	157000572036	•
5720	Single-phase motor	47.7	8770	157000572031	
	2-stage, three-phase motor	56.4-64.5	6730-8500	157000573036	•
5730	Single-phase motor	64.5	8500	157000573031	
	2-Stufen-Drehstrommotor	65.5-77.2	6150-7960	157000574036	
5740	Wechselstrommotor	77.2	7960	157000574031	

Figure	Article	Properties	Suitable for	Art. no.
	Compact controls for spe	eed control with integral room temperature control		
	Electronic continuously – variable single-phase control 1,03 KW/4,5 A	Type 30543 Master unit with integral temperature control and room temperature sensor in a separate IP65 housing with integral digital timer with day, night, week programme, slave units either via type 30540 or continuously via power module (type suffix V)	- Motor number 31	196000030543
absoration a		Type 30540 Slave unit without room temperature control and timer, for use with master unit type or for continuous 0-100% control via an external signal, configurable to 0-10 VDC, 0-5 VDC or potentiometer 0-100 Kohms		196000030540
duck Ess	Electronic 2-stage, 3-phase controller 4 KW / 10 A	Type 30277 with integral digital timer with day, night, week programme, room temperature control and room temperature sensor in a separate housing with IP54 degree of protection Protection class IP40 Dimensions W x H x D: 262 x 277 x 153 mm	- Motor number 36	196000030277
		Type 30177 with room temperature sensor in a separate housing with IP54 degree of protection, day/night switch-over via external potential-free contact (e.g. timer)		196000030177
	Stage-switch for speed c	ontrol		
	7-stage, single-phase controller	4 A, Typ 30781 Protection class IP40 Dimensions W x H x D: 150 x 200 x 170 mm	Motor number 31	196000030781
EE		7,5 A, Typ 30782 Protection class IP40 Dimensions W x H x D: 150 x 200 x 170 mm		196000030782
- common	2-stage, 3-phase switch	4KW/10 A, Type 30049 Protection class IP43 Dimensions W x H x D: 127 x 160 x 100 mm	Motor number 36	196000030049
	5-stage 3-phase controller	2 A, Typ 30751 Protection class IP20 Dimensions W x H x D: 260 x 340 x 150 mm		196000030751
		4 A, Typ 30752 Protection class IP20 Dimensions W x H x D: 260 x 340 x 150 mm	Motor number 36	196000030752
		8 A, Typ 30754		

Figure	Article	Properties	Suitable for	Art. no.
	Thermostats			
shander # 1	Clock thermostat	Type 30056 Attractive combined clock/room thermostat with electronic 2-point room temperature control, 2-pipe heating/cooling and digital weekly timer, 4 hours of power reserve, party circuit, switching status display and Auto / Day / Night / Off operating mode switch.  Temperature setting range: 5 - 40 °C Night setback: 2 - 10 K Switching differential: settable Switching capacity: 230 VAC, 50 Hz, 10 (4) A Housing: Plastic, white, surface-mounted Protection class: IP20 Dimensions W x H x D: 132 x 82 x 32 mm	all series	196000030056
идовлядии	Industrial thermostat with setpoint adjustment by tool	Type 30058 Housing made of impact-resistant plastic, setpoint adjustment only possible after removing the housing cover. Protection class: IP54 Temperature setting range:0 – 40 degrees °C Switching capacity: 250 V AC, 50 Hz Heating: 16 (4) A Cooling: 8 (4) A	all series	196000030058
идаельндан	Industrial thermostat with dial-operated setpoint adjustment	Type 30059 Housing made of impact-resistant plastic, dial-operated setpoint adjustment. Protection class: IP54 Temperature setting range:0 – 40 degrees °C Switching capacity: 250 V AC, 50 Hz Heating: 16 (4) A Cooling: 8 (4) A	all series	196000030059
administration of the second o	Room thermostat with thermal feedback	Type 30055 In flat housing, white, with thermal setback Temperature setting range: 5–30 Grad °C, Range restriction possible. Protection class: IP30 Switching capacity: 250 V AC, 50 Hz, 10 (4) A Dimensions (W x H x D): 74x74x27 mm	all series	196000030055
	Repair switch			
	Repair switch	Type 30120 for 1-stage, single phase or 2-stage, 3-phase motors, supplied loose; enables individual TIP unit heaters 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 TIP unit heaters in the group can continue to operate without interruption. Protection class: IP55 Max. switching current 25 A	Motor number 31 und 36	196000030120
				more »

Figure	Article	Properties	Suitable for	Art. no.
	Valves/Return shut-off valves			
	Shut-off valve 230 VAC Power consumption approx. 3 W Connecting length approx. 3 m	Connection 1", Typ 30911	series 54, 55	196000030911
		Connection 1¼", Typ 30913	series 56	196000030913
		Connection 11/2", Typ 30912	series 57	196000030912
	Louvres			
	Louvre, two-row	type 34002	series 54	198000034002
		type 35002	series 55	198000035002
		type 36002	series 56	198000036002
		type 37002	series 57	198000037002
	4-way diffuser	type 34004	series 54	198000034004
		type 35004	series 55	198000035004
		type 36004	series 56	198000036004
		type 37004	series 57	198000037004
•				more »

Figure	Article	Properties Suitable for	Art. no.
	Brackets		
	Universal 4-point brackets	1 complete set, type 30042 all series	198000030042
	Wall bracket	type 34044 for wall-mounting, hanging or upright, made of sendzimir-galvanised sheet steel, complete set, consisting of 2 folded brackets with bolts. Length 585 mm  Series 54  A B C D E F Series 54  Series 54  Series 54	198000034044
		type 35044 for wall-mounting, hanging or upright, made of sendzimir-galvanised sheet steel, complete set, consisting of 2 folded brackets with bolts. Length 585 mm.  Series 55	198000035044
		Series 55 585 251 160 40 50 585  type 36044 for wall-mounting, hanging or upright, made of sendzimir-galvanised sheet steel, complete set, consisting of 2 folded brackets with bolts.  Length 635 mm.  Series 56	198000036044
		Series 56 A B C D E F 635 268 187 40 50 685	
		type 37044 for wall-mounting, hanging or upright, made of sendzimir-galvanised sheet steel, complete set, consisting of 2 folded brackets with bolts. Length 685 mm Series 57	198000037044
		Series 57 A B C D E F 685 286 204 40 50 785	
	Ceiling and wall brackets	Ceiling and wall brackets for the ceiling or wall mounting of TIP unit heaters as a complete set consisting of 2 multi-angled brackets with slots and bolts.  1 set, type 34049 Series 54 Series 55 1 set, type 35049 Series 56 1 set, type 37049 Series 57	198000034049 198000035049 198000036049 198000037049

Kampmann Technical Catalogue – TIP

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