

COMPACT CATALOGUE

Thermal Management
Signaling Technology
Process Cooling | Service

EDITION 20.1

THE PFANNENBERG GROUP:

A GLOBAL NETWORK TO PROVIDE THE BEST FOR YOU.

Pfannenberg is one of the largest globally active companies in the following sectors: thermal management for electrical enclosures, process cooling and signaling technology. An efficient sales and service network around the globe means we can be there for you quickly and individually worldwide.

To be one of the market leaders, you always have to achieve a little more. Pfannenberg has been doing so for over 60 years, when Otto Pfannenberg invented the filterfan and thus laid the foundation for thermal management of electrical enclosures.

Today, Pfannenberg offers components, integrated systems and tailor-made application solutions for different tasks in the entire field of manufacturing and processing in more than 42 countries worldwide.

Furthermore, we are also represented with our products in mechanical engineering, the automotive industry, in medical engineering, by the generation of conventional and renewable energy and infrastructure.

Hardly any other company can advise you so

comprehensively and supply you from one source like Pfannenberg can.

Whether it is the thermal management of electrical enclosures, process cooling, signaling technology, obstacle lighting or the worldwide art illuminations by Pfannenberg, which make the Eiffel Tower in Paris amongst other things, sparkle. As different as our applications may be, they all have one thing in common: they are energy efficient, durable, innovative and in regard to assembly and maintenance, absolutely service oriented.

Regardless of what you are planning, we are always open for requests of all sorts. We will be happy to advise you on combining safety and economic efficiency optimally.



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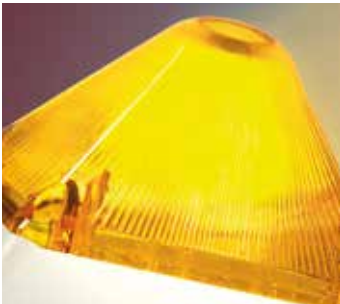
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THERMAL MANAGEMENT:

Determine the correct air conditioning products.



Cooling with filterfans.

A filterfan sends cool, filtered ambient air into the interior of the electrical enclosure. At the same time, it increases the pressure slightly, which prevents dust from infiltrating into the enclosure. Fitting a filterfan to the lower third of the electrical enclosure and placing the exhaust filter as high as possible also aids natural air convection processes and avoids the build-up of heat pockets.



Cooling with air/air heat exchangers.

An air/air heat exchanger is used when the ambient air is heavily contaminated (dust, fluids). The external and internal air circuits are isolated from each other in order to form a hermetic seal between the interior of the electrical enclosure and environmental influences.



Cooling with cooling units.

An active cooling unit takes in air from inside the electrical enclosure and lowers its temperature to a suitable level, in order to guarantee a defined temperature in the electrical enclosure. The lowest temperature inside the cabinet is not necessarily the best. Our units are pre-set to 35 °C, which achieves a good balance between useful lifetime and condensate build up. It is essential to have good air intake and air exhaust features in the cooling unit's external air circuit to ensure proper heat energy dispersal into the environment.



Cooling with air/water heat exchangers.

An air/water heat exchanger works without servicing and independently of ambient air quality. Suitable areas for use include extremely high ambient temperatures (>55 °C) and in oily, dusty, humid and aggressive ambient air (IP protection system up to IP 65). Since it uses water to dissipate thermal losses, it is also suitable for use in air-conditioned manufacturing areas in which additional heating is not allowed.



THE PFANNENBERG THERMAL MANAGEMENT CONCEPT:

1 Enclosure cut-out
4 Cooling technologies
11 Device versions

Easy installation



The Plug&Play system enables a single person installation within minutes.

Easy service



Few screws and the easy access of the components make the devices particularly service friendly.

Pfannenberg's unique thermal management concept

Our offer:

- Complete program of thermal management units:
 - air/air heat exchangers
 - active cooling units
 - air/water heat exchangers
- The cooling technologies are cut-out compatible designed to be mounted to cabinets from all electrical enclosure manufacturers.
- Efficient **ECOOL** technology.
- Pfannenberg Sizing Software: find the most suitable solution for individual application.
- **ECOOL**-Plant for cooling units – software service tool for all active cooling units of the the 6000-series.

Your benefit:

Manufacturers of machines, plant engineers, end users and distributors profit from increased flexibility and cost savings:

- The cooling technologies are completely interchangeable to suit customer's cooling demand.
- Through one standard cut-out size, only few enclosure variants are needed.
- Minimum logistic expenditure.
- Flexibility of appropriate cooling technology – even after the planning phase.
- Simple upgrade of the cooling technology when temperature conditions change.
- Easy and fast installation reduces service and maintenance costs.



Cut-out	Cooling unit 800–4000 Watt	Cooling unit X series 1000–4300 Watt	Air/water heat exchanger 500–5000 Watt	Air/air heat exchanger 20–100 W/K
Size 1	DTx 6801 DTx 6501 DTx 6401 DTx 6301 DTx 6201	DTx 6X1E DTx 6X2E	PWx 6502 PWx 6302	PAX 6203 PAX 6173
Size 2	DTx 6301C DTx 6201C		PWx 6302C PWx 6152	PAX 6133 PAX 6103 PAX 6073
Size 3	DTx 9041		PWx 6105 PWx 6052	PAX 6043

New: Quick reference web lookup.

Find additional information quickly for products of interest by entering the appropriate webcode into the search window at www.pfannenbergl.com.

You can find the webcodes under the product images on the left side of each page. Use our new service in order to get more detailed information about the products and other topics described here in the catalogue quickly and easily.



How to use:

1. Write down the “#” plus the short 4-digit number combination.
2. On the internet, visit pfannenbergl.com.
3. Type in the “#” followed by the 4-digit code in the search window on the top right and click “enter”.

PSS Pfannenbergl Sizing Software.

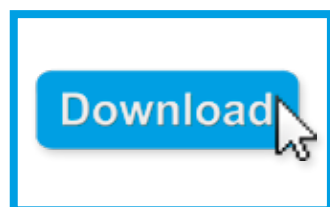


The Software

The Pfannenbergl Sizing Software is the free and easy tool we developed to help you determine your cooling requirements. You can easily get a recommendation for the correct device components needed in your project.

Visit our website and try the PSS software now!

Download it



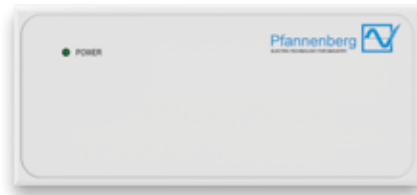
Online version



CD version



Controller at a glance.



Standard Controller (SC)



**Multi Controller (MC)
Extended Controller (XC)**

	SC	MC	XC
Status LED	•	•	•
Main fault contact	•	•	•
Door contact	•	•	•
Integrated self test	•	•	•
Service interface	•	•	•
ECOOL-Plant V2 communication	•	•	•
Anti freeze control	• ¹⁾	• ¹⁾	•
Energy saving mode	—	•	•
Temperature display	—	•	•
Set buttons	—	•	•
Multi Master	—	•	•
Modbus interface	—	—	•
BLDC technology	—	—	•
Cloud capable	—	—	•

¹⁾ Anti freeze functionality is standard for top mounted cooling units DTT.

Main fault contact

- T_{max} alert.
- Cabinet door is open.
- High pressure switch (e.g. high pressure in refrigerant circuit due to dirty heat exchanger or too high ambient temperature).
- Wrong settings on the controller board.
- Temperature sensor is broken.

Temperature display

- Set temperature (25–45 °C) and alarm temperature (45–60 °C) adjustable.

Status LED

- Ready.
- User fault (e.g. cabinet door open).
- System fault (e.g. high pressure switch).
- Self test.

Service interface at rear side of the cooling unit

- Adjustment of set temperature and switch hysteresis.
- Read outs and logging of temperature and error codes.
- Converter to USB interface is available as an accessory.

Energy saving mode

- Extended energy saving function and prolonged durability by switching the internal fan off.

Multi Master

The possibility to combine up to 6 cooling units for simultaneous operating mode by a simple two wire connection. No complicated setting or programming of master and slave units.

BLDC technology

The innovative; brushless direct current technology (brushless DC) makes an extreme energy efficiency (EER) of >6 possible. Thereby, the cooling occurs with high precision within a very tight tolerance range.

Modbus (only XC)

Open industry standard makes communication between the cooling unit and machine control possible. Pfannenberg X-series cooling units can now be directly integrated into any machine and any production process.

ECOOL FILTERFAN 4.0

- The patented 4 corner fastening system allows a tool-free installation in seconds and guarantees a secure hold.
- The design cover's fastening system enables a filter mat replacement in seconds.
- Airflow optimised fins and rotor blades guarantee maximal airflow with the minimal energy consumption.
- Filterfans 4.0 can be equipped with a thermostat: it only works when cooling is actually necessary, and so saves energy.
- With the fluted filter mats filterfans 4.0 reach IP 55 system of protection. The intervals in which they need to be replaced extend to 300 % longer than with conventional filter media.
- UL listed.



92 x 92 mm



WEBCODE #8001

PRODUCT	PF 11.000 IP 54
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz
Unimpeded airflow	19 24 m ³ /h
Airflow rate in combination (PF + PFA)	12 14 m ³ /h
Power consumption	12 11 W
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter
Type of connection	cable, 2-core, length 310 mm
Service life L ₁₀ (+40 °C)	52,500 hrs



Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	109 x 109 x 66 mm	
Cut-out (WxH)	92 x 92 mm	
Approvals	cULus CSA EAC	
ARTICLE NO. (RAL 7035)	11611101055	
ARTICLE NO. Spare part filter mats (5 pieces)	18611600029	
ARTICLE NO. Spare part fan 230 V AC	18611000032	

Please find further variants at www.pfannenbergl.com or in our main catalogues.

125 x 125 mm



WEBCODE #8002

PRODUCT	PF 22.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	60 66 m ³ /h	56 64 m ³ /h
Airflow rate in combination (PF + PFA)	38 42 m ³ /h	40 46 m ³ /h
Power consumption	19 18 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	terminal strip	
Service life L ₁₀ (+40 °C)	37,500 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	145 x 145 x 75 mm	
Cut-out (WxH)	125 x 125 mm	
Approvals	cULus CSA EAC	
ARTICLE NO. (RAL 7035)	11622101055	11622103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600030	18611600034
ARTICLE NO. Spare part fan 230 V AC	18611000016	

Please find further variants at www.pfannenbergl.com or in our main catalogues.

177 x 177 mm



WEBCODE #8003

PRODUCT	PF 32.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	98 108 m ³ /h	100 110 m ³ /h
Airflow rate in combination (PF + PFA)	73 80 m ³ /h	55 64 m ³ /h
Power consumption	19 18 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	terminal strip	
Service life L ₁₀ (+40 °C)	37,500 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	202 x 202 x 93 mm	
Cut-out (WxH)	177 x 177 mm	
Approvals	cULus CSA EAC	
ARTICLE NO. (RAL 7035)	11632101055	11632103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600031	18611600035
ARTICLE NO. Spare part fan 230 V AC	18611000016	

Please find further variants at www.pfannenbergl.com or in our main catalogues.

ECOOL FILTERFAN 4.0

223 x 223 mm



WEBCODE #8004

PRODUCT	PF 42.500	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	125 138 m ³ /h	145 160 m ³ /h
Airflow rate in combination (PF + PFA)	93 102 m ³ /h	109 113 m ³ /h
Power consumption	18 17 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L ₁₀ (+40 °C)	40,000 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	252 x 252 x 103 mm	
Cut-out (WxH)	223 x 223 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11642101055	11642103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600032	18611600036
ARTICLE NO. Spare part fan 230 V AC	18611000033	

Please find further variants at www.pfannenber.com or in our main catalogues.

223 x 223 mm



WEBCODE #8005

PRODUCT	PF 43.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	223 247 m ³ /h	233 265 m ³ /h
Airflow rate in combination (PF + PFA)	201 223 m ³ /h	180 207 m ³ /h
Power consumption	49 42 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L ₁₀ (+40 °C)	40,000 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	252 x 252 x 119 mm	
Cut-out (WxH)	223 x 223 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11643101055	11643103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600032	18611600036
ARTICLE NO. Spare part fan 230 V AC	18611000019	

Please find further variants at www.pfannenber.com or in our main catalogues.

291 x 291 mm



WEBCODE #8006

PRODUCT	PF 65.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	480 m ³ /h	505 m ³ /h
Airflow rate in combination (PF + PFA)	370 m ³ /h	380 m ³ /h
Power consumption	65 80 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L ₁₀ (+40 °C)	40,000 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	320 x 320 x 157 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11665102055	11665103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600033	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000044	

Please find further variants at www.pfannenber.com or in our main catalogues.

291 x 291 mm



WEBCODE #8007

PRODUCT	PF 66.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	640 653 m ³ /h	770 785 m ³ /h
Airflow rate in combination (PF + PFA)	445 445 m ³ /h	490 501 m ³ /h
Power consumption	115 150 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L ₁₀ (+40 °C)	40,000 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	320 x 320 x 157 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11666102055	11666103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600033	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000045	

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL FILTERFAN 4.0

291 x 291 mm



WEBCODE #8008

PRODUCT	PF 67.000	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	845 875 m³/h	925 950 m³/h
Airflow rate in combination (PF + PFA)	560 625 m³/h	570 625 m³/h
Power consumption	135 200 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L ₁₀ (+40 °C)	40,000 hrs	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	320 x 320 x 157 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11667102055	11667103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600033	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000046	

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL SLIM LINE FILTERFAN 4.0 – low installation depth

291 x 291 mm



WEBCODE #8009

PRODUCT	PF 65.000 SL
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz
Unimpeded airflow	500 550 m³/h
Airflow rate in combination (PF + PFA)	345 423 m³/h
Power consumption	64 80 W
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – fluted filter
Type of connection	screw terminal
Service life L ₁₀ (+40 °C)	40,000 hrs

Colour	RAL 7035 RAL 9011
Dimension (WxHxD)	320 x 320 x 131 mm
Cut-out (WxH)	291 x 291 mm
Approvals	cULus CSA

ARTICLE NO. (RAL 7035)	11675103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000001

Please find further variants at www.pfannenber.com or in our main catalogues.

291 x 291 mm



WEBCODE #8010

PRODUCT	PF 67.000 SL
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz
Unimpeded airflow	705 725 m³/h
Airflow rate in combination (PF + PFA)	530 580 m³/h
Power consumption	115 165 W
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – fluted filter
Type of connection	screw terminal
Service life L ₁₀ (+40 °C)	40,000 hrs

Colour	RAL 7035 RAL 9011
Dimension (WxHxD)	320 x 320 x 134 mm
Cut-out (WxH)	291 x 291 mm
Approvals	cULus CSA

ARTICLE NO. (RAL 7035)	11677103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000000

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL EXHAUST FILTER 4.0

- Snap fastener developed and patented by Pfannenberger.
- Mounting without screws in accordance with VDE 0113 (EN 60204).
- Simple filter mat exchange during operation.
- With integrated foam seal to enclosure.

92 x 92 mm



WEBCODE #8011

PRODUCT	PFA 10.000 IP 54
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter
Colour	RAL 7035 RAL 9011
Dimension (WxHxD)	109 x 109 x 23 mm
Cut-out (WxH)	92 x 92 mm
Approvals	cULus CSA EAC

ARTICLE NO. (RAL 7035)	11710001055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600029

Please find further variants at www.pfannenberger.com or in our main catalogues.

125 x 125 mm



WEBCODE #8012

PRODUCT	PFA 20.000	
	IP 54	IP 55
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	145 x 145 x 31 mm	
Cut-out (WxH)	125 x 125 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11720001055	11720003055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600030	18611600034

Please find further variants at www.pfannenberger.com or in our main catalogues.

177 x 177 mm



WEBCODE #8013

PRODUCT	PFA 30.000	
	IP 54	IP 55
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	202 x 202 x 40 mm	
Cut-out (WxH)	177 x 177 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11730001055	11730003055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600031	18611600035

Please find further variants at www.pfannenberger.com or in our main catalogues.

223 x 223 mm



WEBCODE #8014

PRODUCT	PFA 40.000	
	IP 54	IP 55
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	252 x 252 x 44 mm	
Cut-out (WxH)	223 x 223 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11740001055	11740003055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600032	18611600036

Please find further variants at www.pfannenberger.com or in our main catalogues.

291 x 291 mm



WEBCODE #8015

PRODUCT	PFA 60.000	
	IP 54	IP 55
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	320 x 320 x 46 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus CSA EAC	

ARTICLE NO. (RAL 7035)	11760002055	11760003055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600033	18611600037

Please find further variants at www.pfannenberger.com or in our main catalogues.

ECOOL FILTERFANS 4.0 EMC – Electromagnetic compatibility

126.5 x 126.5
mm



WEBCODE #8016

PRODUCT	PF 22.000 EMC	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	60 66 m³/h	56 64 m³/h
Airflow rate in combination (PF + PFA)	38 42 m³/h	40 46 m³/h
Power consumption	19 18 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	terminal strip	
Service life L_{10} (+40 °C)	37,500 hrs	
EMC screen	stainless steel	

Colour	RAL 7035	
Dimension (WxHxD)	145 x 145 x 75 mm	
Cut-out (WxH)	126.5 x 126.5 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11822101055	11822103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600030	18611600034
ARTICLE NO. Spare part fan 230 V AC	18611000016	

Please find further variants at www.pfannenber.com or in our main catalogues.

224 x 224 mm



WEBCODE #8017

PRODUCT	PF 43.000 EMC	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	223 247 m³/h	233 265 m³/h
Airflow rate in combination (PF + PFA)	201 223 m³/h	180 207 m³/h
Power consumption	49 42 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L_{10} (+40 °C)	40,000 hrs	
EMC screen	stainless steel	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	252 x 252 x 119 mm	
Cut-out (WxH)	224 x 224 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11843101055	11843103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600032	18611600036
ARTICLE NO. Spare part fan 230 V AC	18611000019	

Please find further variants at www.pfannenber.com or in our main catalogues.

292 x 292 mm



WEBCODE #8018

PRODUCT	PF 67.000 EMC	
	IP 54	IP 55
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Unimpeded airflow	845 875 m³/h	925 950 m³/h
Airflow rate in combination (PF + PFA)	560 625 m³/h	570 625 m³/h
Power consumption	135 200 W	
Degrees of protection (EN 60529 / UL 50)	NEMA type 12 – standard filter	NEMA type 12 – fluted filter
Type of connection	spring-type terminal	
Service life L_{10} (+40 °C)	40,000 hrs	
EMC screen	stainless steel	

Colour	RAL 7035 RAL 9011	
Dimension (WxHxD)	320 x 320 x 157 mm	
Cut-out (WxH)	292 x 292 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11867102055	11867103055
ARTICLE NO. Spare part filter mats (5 pieces)	18611600033	18611600037
ARTICLE NO. Spare part fan 230 V AC	18611000046	

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL FILTERFANS 4.0 FOR ROOF MOUNTING

500 m³/h



WEBCODE #8019

PRODUCT	PTF 60.500	
	IP 54	IP 33
Rated voltage ±10 %	230 V AC 50 60 Hz	
Unimpeded airflow	310 m³/h	500 m³/h
Airflow rate in combination (PF + PFA)	210 m³/h	268 m³/h
Power consumption	4 x 28 29 W	
Type of connection	terminal strip	
Service life L ₁₀ (+40 °C)	approx. 50,000 hrs	
Colour	RAL 7035	

Dimension (WxHxD)	436 x 106 x 436 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11685101055	11685100055
ARTICLE NO. Spare part filter mats (20 pieces)	18611600124	
ARTICLE NO. Spare part fan 230 V AC	18611000052	

Please find further variants at www.pfannenber.com or in our main catalogues.

700 m³/h



WEBCODE #8020

PRODUCT	PTF 60.700	
	IP 54	IP 33
Rated voltage ±10 %	230 V AC 50 60 Hz	
Unimpeded airflow	646 m³/h	700 m³/h
Airflow rate in combination (PF + PFA)	360 m³/h	427 m³/h
Power consumption	80 100 W	
Type of connection	terminal strip	
Service life L ₁₀ (+40 °C)	approx. 40,000 hrs	
Colour	RAL 7035	

Dimension (WxHxD)	470 x 152 x 470 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11687102055	11687100055
ARTICLE NO. Spare part filter mats (20 pieces)	18611600143	
ARTICLE NO. Spare part fan 230 V AC	18611000000	

Please find further variants at www.pfannenber.com or in our main catalogues.

1000 m³/h



WEBCODE #8021

PRODUCT	PTF 61.000	
	IP 54	IP 33
Rated voltage ±10 %	230 V AC 50 60 Hz	
Unimpeded airflow	1035 m³/h	1000 m³/h
Airflow rate in combination (PF + PFA)	570 m³/h	582 m³/h
Power consumption	120 160 W	
Type of connection	terminal strip	
Service life L ₁₀ (+40 °C)	approx. 40,000 hrs	
Colour	RAL 7035	

Dimension (WxHxD)	470 x 152 x 470 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11681102055	11681100055
ARTICLE NO. Spare part filter mats (20 pieces)	18611600143	
ARTICLE NO. Spare part fan 230 V AC	18611000000	

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL EXHAUST FILTER 4.0 FOR ROOF MOUNTING



WEBCODE #8022

PRODUCT	PTFA 60.000	
	IP 54	IP 33
Colour	RAL 7035	
Dimension (WxHxD)	320 x 320 x 46 mm	
Cut-out (WxH)	291 x 291 mm	
Approvals	cULus EAC	

ARTICLE NO. (RAL 7035)	11786001055	11786000055
ARTICLE NO. Spare part filter mats (20 pieces)	18611600124	

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL COOLING UNITS X-SERIES

- Thanks to highly efficient speed control, every unit covers a wide power range. This leads to a small amount of variants and correspondingly to a large design safety.
- XC Controller: The monitoring systems was developed especially for this series makes communication between the cooling unit and machine control possible and also the integration into production (see page 7).
- Cloud technology: The cloud solution developed in cooperation with Telekom Deutschland enables browser-based access to the time unit data and storage and analysis of log data. This optional functionality allows remote access to device data.
- The innovative, brushless direct current technology (Brushless DC) makes an extreme energy efficiency (EER) of >6 possible. The desired temperature is thus kept precisely.
- The communication interface "Modbus" to integrate the cooling unit into the existing machine control or in a cloud solution.
- The large distance between the cold air outlet (bottom) and warm air inlet (top), has aerodynamically improved circulation of the electrical enclosure which prevents hot spots on especially stressed components.

DTI: for partially recessed mounting in the door or side

- Tool-free mounting (DTI) by 1 person is possible in less than 3 minutes with 55 % lower mounting costs.
- Elegantly integrated in the machine design; transport and escape routes are kept clear.
- Spring plate enables 1 person to install the cooling unit. This prevents it from falling out when unsupervised.

DTS: for outer mounting on the door or side

- DTS units virtually do not need any space inside the enclosure.
- More components can be used inside the enclosure.
- For better service the steel hood can be removed easily.



1000–2600 W



WEBCODE #8105

PRODUCT	DTI 6X1E XC Controller	DTS 6X1E
Cooling capacity, regulated	1000–2600 W	
Rated voltage ±10 %	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	3500 W	
Power consumption	160–1400 W	
Current consumption	5.5 A	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	

Colour	RAL 7035	
Dimension (WxHxD)	DTI: 485 x 1538 x 278 mm DTS: 485 x 1547 x 278 mm	
Weight (net)	DTI: 70 kg DTS: 75 kg	
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings	

ARTICLE NO.	DTI	DTS
XC 230 V	13896331055	13886331055

Please find further variants at www.pfannenbergl.com or in our main catalogues.

2000–4300 W



WEBCODE #8106

PRODUCT	DTI 6X2E XC Controller	DTS 6X2E
Cooling capacity, regulated	2000–4300 W	
Rated voltage	360–460 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	4800 W	
Power consumption	440–2570 W	
Current consumption	4.5 A	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	

Colour	RAL 7035	
Dimension (WxHxD)	DTI: 485 x 1538 x 372 mm DTS: 485 x 1547 x 372 mm	
Weight (net)	DTI: 84 kg DTS: 87 kg	
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings	

ARTICLE NO.	DTI	DTS
XC 400 V	13896832055	13886832055

Please find further variants at www.pfannenbergl.com or in our main catalogues.

ECOOL COMPACT COOLING UNITS

- Compact design for smaller cabinets or to cool hot spots.
- Very high energy efficiency ratio (EER) for up to 43 % energy savings and operating costs reduction.
- Additional temperature sensor in the Multi Controller (MC) model allows the deactivation of the internal fan and condensate evaporation for additional 10 % energy savings and service life extension of the fan.
- Highest variability due to cut-out compatibility for 2 performance classes and to Pfannenber air/water and air/air heat exchangers.
- Interface to use ECOOL-Plant software at the Multi Controller (MC) model with operating hours counter and error history observation for preventive maintenance processes and exact error analysis.
- Service friendly due to direct access to the PCB and the fans, thus 80 % shorter repair times.
- Optional pre-filter upgradable with aluminium, vlies or fluted filter, for the application of the cooling units in different ambient conditions.
- Optional Multi Controller (see page 7).

DTI: for partially recessed mounting in the door or side

- Tool-free mounting (DTI) by 1 person is possible in less than 3 minutes with 55 % lower mounting costs.
- Elegantly integrated in the machine design; transport and escape routes are kept clear.
- Spring plate enables 1 person to install the cooling unit. This prevents it from falling out when unsupervised.

DTS: for outer mounting on the door or side

- DTS units virtually do not need any space inside the enclosure.
- More components can be used inside the enclosure.
- For better service the steel hood can be removed easily.

1000 W



WEBCODE #8023

PRODUCT	DTI 6201C Standard Controller	DTS 6201C
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	1000 W	
Power consumption	445 560 W	
Current consumption	2.4 2.9 A	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	

Dimension (WxHxD)	DTI: 410 x 962 x 253 mm DTS: 410 x 968 x 253 mm
Weight (net)	DTI: 40 kg DTS: 45 kg
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus

ARTICLE NO.	DTI	DTS
SC 230 V	13895211055	13885211055

Please find further variants at www.pfannenber.com or in our main catalogues.

1500 W



WEBCODE #8024

PRODUCT	DTI 6301C Standard Controller	DTS 6301C
Rated voltage $\pm 10\%$	400 V 2~ AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	1500 W	
Power consumption	770 820 W	
Current consumption	3.5 3.3 A	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	

Dimension (WxHxD)	DTI: 410 x 962 x 253 mm DTS: 410 x 968 x 253 mm
Weight (net)	DTI: 40 kg DTS: 45 kg
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus

ARTICLE NO.	DTI	DTS
SC 400 V	13895319055	13885319055

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL COOLING UNITS

- High EER (energy efficiency ratio).
- Condenser with large fin spacing for highly effective protection in strongly contaminated ambient air.
- Large distance between intake and exhaust vents, safe circulation within the electrical enclosure due to long passage of air, therefore hot spots are eliminated.
- Optional Multi Controller (see page 7).
- Optional filter (easy to retrofit).
- Energy-saving mode by default integrated into the Multi Controller.

DTI: for partially recessed mounting in the door or side

- DTI units can be installed within 3 minutes.
- One man installation with Pfannenberg's fastening clips.
- Due to partial integration DTI units need less space, so they do not block paths in the factory and do not disturb production processes.
- Easy upgrade: DTI units can be easily upgraded to a more powerful and secure air/water heat exchanger (PWI) due to cut-out compatibility (more infos in brochure »The Pfannenberg Thermal Management Concept«).

DTS: for outer mounting on the door or side

- DTS units virtually do not need any space inside the enclosure.
- More components can be used inside the enclosure.
- For better service the steel hood can be removed easily.
- Easy upgrade: DTS units can be easily upgraded to a more powerful and secure air/water heat exchanger (PWS) due to cut-out compatibility.



Installation of partially integrated thermal management unit (DTI/PWI).

1000–1500 W



WEBCODE #8025

PRODUCT	DTI 6201 DTS 6201	DTI 6301 DTS 6301
Standard Controller		
Rated voltage ±10 %	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	1000 W	1500 W
Power consumption	454 567 W	727 868 W
Current consumption	3.08 3.65 A	5.08 5.17 A
EER	2.2	2.06
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	

Dimension (WxHxD)	DTI: 485 x 1536 x 218 mm DTS: 485 x 1543 x 218 mm
Weight (net)	DTI: 50 kg DTS: 51 kg
Noise level	<62 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC

ARTICLE NO.	DTI	DTS
6201 SC	13896211055	13886211055
6301 SC	13896311055	13886311055

Please find further variants at www.pfannenberg.com or in our main catalogues.

2000–2500 W



WEBCODE #8026

PRODUCT	DTI 6401 DTS 6401	DTI 6501 DTS 6501
Standard Controller		
Rated voltage ±10 %	400/460 V 3~ AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	2000 W	2500 W
Power consumption	753 908 W	1048 1247 W
Current consumption	2.71 2.59 A	3.27 3.1 A
EER	2.66	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	

Dimension (WxHxD)	DTI: 485 x 1536 x 278 mm DTS: 485 x 1543 x 278 mm
Weight (net)	DTI: 67 kg DTS: 71 kg
Noise level	<65 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC

ARTICLE NO.	DTI	DTS
6401 SC	13896412055	13886412055
6501 SC	13896512055	13886512055

Please find further variants at www.pfannenberg.com or in our main catalogues.

4000 W



WEBCODE #8027

PRODUCT	DTI 6801 DTS 6801
Standard Controller	
Rated voltage ±10 %	400/460 V 3~ AC 50 60 Hz
Cooling capacity (EN 14511) @ A35/A35	4000 W
Power consumption	1918 2369 W
Current consumption	4.5 4.6 A
EER	2.09
Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Colour	RAL 7035

Dimension (WxHxD)	DTI: 485 x 1539 x 372 mm DTS: 485 x 1549 x 372 mm
Weight (net)	DTI: 91 kg DTS: 95 kg
Noise level	<70 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC

ARTICLE NO.	DTI	DTS
SC	13896812055	13886812055

Please find further variants at www.pfannenberg.com or in our main catalogues.

COOLING UNITS

DTI | DTFI: for partially recessed mounting in the door or side
DTS: for outer mounting on the door or side

- Optional Multi Controller (see page 7).

DTI 9011H | DTFI 9021 | DTI 9021 | DTI/DTS 9031 | DTI/DTS 9041:

- Small mounting area, ideal for small electrical enclosures and larger electrical enclosures for the cooling of hot spots.
- Ideal for flat control cabinets, control consoles and operating units.
- Simple and fast mounting with brackets for door or side mounting.

DTFI 9021:

- Cut-out compatible with 3rd and 4th Generation Filterfans, installation size 6.
- Integrated fault and door contact.
- Optionally available with integrated condensate evaporation system.



300 W



WEBCODE #8028

PRODUCT	DTS 9011H Standard Controller
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz
Cooling capacity (EN 14511) @ A35/A35	300 W
Power consumption	275 290 W
Current consumption	1.52 1.56 A
Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Colour	RAL 7035

Dimension (WxHxD)	495 x 300 x 140 mm
Weight (net)	15 kg
Noise level	<65 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC
ARTICLE NO.	DTS 9011H
SC	13242541055

Please find further variants at www.pfannenber.com or in our main catalogues.

320 W



WEBCODE #8029

PRODUCT	DTFI 9021 Standard Controller	DTI 9021 Standard Controller
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	320 W	
Power consumption	230 240 W	
Current consumption	1.6 A	
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	

Dimension (WxHxD) mm	385 x 326 x 245	385 x 329 x 245
Weight (net)	16 kg	17 kg
Noise level	<62 dB(A) (EN ISO 3741)	
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings	
Approvals	cURus EAC	
ARTICLE NO.	DTFI 9021	DTI 9021
SC	13293141055	13293041055

Please find further variants at www.pfannenber.com or in our main catalogues.

510–870 W



WEBCODE #8030

PRODUCT	DTI 9031 DTS 9031 Standard Controller	DTI 9041 DTS 9041 Standard Controller
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	510 W	870 W
Power consumption	283 337 W	524 634 W
Current consumption	1.58 1.64 A	3.06 3.34 A
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Colour	RAL 7035	
Noise level (EN ISO 3741)	63 dB(A)	<63 dB(A)

Dimension (WxHxD) mm	DTI	310 x 562 x 212	380 x 599 x 231
	DTS	310 x 565 x 212	380 x 604 x 231
Weight (net)	DTI	21 kg	29.5 kg
	DTS	22 kg	29.5 kg
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings		
Approvals	cURus EAC		
ARTICLE NO.	DTI	DTS	
9031 SC	13295041055	13245041055	
9041 SC	13299041055	13249041055	

Please find further variants at www.pfannenber.com or in our main catalogues.

OUTDOOR COOLING UNITS

DTS: for outer mounting on the door or side

- Robust cooling unit in compact design for smaller cabinets or to cool hot spots.
- In stainless steel with NEMA 4X approval or powder coated with IP 56 particularly suitable for outdoor applications.
- Optional pre-filter for even greater protection for oily air.
- Condenser with large fin spacing enables very long maintenance intervals even without additional Nano coating.
- Coated components in the external circuit actively prevent corrosion caused by aggressive media (copper pipe | solder joints | heat exchanger).
- Integrated condensate evaporation; no puddles of water under the device for increased operation safety.



320 W



WEBCODE #8107

PRODUCT	DTS 3031	DTS 3031 SS
	Standard Controller	
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	306 W	
Power consumption	253 W	
Current consumption	1.2 A	
Design (housing)	galvanised sheet steel	stainless steel 304
Design (cover)	electrostatically powder coated (200 °C), RAL 7035	stainless steel 304

Dimension (WxHxD)	177.8 x 393.7 x 191.4 mm	
Weight (net)	14 kg	
Noise level	<64 dB(A) (EN ISO 3741)	
Degrees of protection (NEMA)	Type 3R/4 towards the enclosure	Type 4/4X towards the surroundings
Approvals	cULus EAC	

ARTICLE NO.	DTS 3031	DTS 3031 SS
SC	13383141355	13383141158

Please find further variants at www.pfannenberg.com or in our main catalogues.

1235 W



WEBCODE #8109

PRODUCT	DTS 3161	DTS 3181
	Standard Controller	
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	1235 W	
Power consumption	795 W	
Current consumption	4 A	
Design (housing)	galvanised sheet steel	stainless steel 304
Design (cover)	electrostatically powder coated (200 °C), RAL 7035	stainless steel 304

Dimension (WxHxD)	395 x 748 x 237	
Weight (net)	40 kg	42 kg
Noise level	<70 dB(A) (EN ISO 3741)	
Degrees of protection (NEMA)	Type 3R/4 towards the enclosure	Type 4/4X towards the surroundings
Approvals	cULus EAC	

ARTICLE NO.	DTS 3161	DTS 3181
SC	13385441355	13385441158

Please find further variants at www.pfannenberg.com or in our main catalogues.

3325 W



WEBCODE #8111

PRODUCT	DTS 3265	DTS 3285
	Standard Controller	
Rated voltage $\pm 10\%$	400/460 V 3~ AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	3325 W	
Power consumption	1700 W	
Current consumption	2.6 A	
Design (housing)	galvanised sheet steel	stainless steel 304
Design (cover)	electrostatically powder coated (200 °C), RAL 7035	stainless steel 304

Dimension (WxHxD)	411 x 1347 x 365.2	
Weight (net)	68 kg	68 kg
Noise level	<73 dB(A) (EN ISO 3741)	
Degrees of protection (NEMA)	Type 3R/4 towards the enclosure	Type 4/4X towards the surroundings
Approvals	cULus EAC	

ARTICLE NO.	DTS 3265	DTS 3285
SC	13383836355	13383836158

Please find further variants at www.pfannenberg.com or in our main catalogues.

5795 W



WEBCODE #8113

PRODUCT	DTS 3661	DTS 3681
	Standard Controller	
Rated voltage $\pm 10\%$	400/460 V 3~ AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	5795 W	
Power consumption	2920 W	
Current consumption	6.3 A	
Design (housing)	galvanised sheet steel	stainless steel 304
Design (cover)	electrostatically powder coated (200 °C), RAL 7035	stainless steel 304

Dimension (WxHxD)	485 x 1665 x 520	
Weight (net)	109 kg	109 kg
Noise level	<73 dB(A) (EN ISO 3741)	
Degrees of protection (NEMA)	Type 3R/4 towards the enclosure	Type 4/4X towards the surroundings
Approvals	cULus EAC	

ARTICLE NO.	DTS 3661	DTS 3681
SC	13383936355	13383936158

Please find further variants at www.pfannenberg.com or in our main catalogues.

ECOOL TOP MOUNTING COOLING UNITS

DTT: for mounting on the top of enclosure

- Tool-less installation due to Pfannenber's fastening clips.
- Designed to be placed on top of the enclosure when there is a space shortage or aisles need to be kept clear.
- Patented condensate management provides the best security against dangerous condensate drops inside the enclosure.
- Service-friendly: robust cover completely removable towards the front. Easily accessible filter mats (optional) and control elements in front area.
- Energy efficiency: around 20 % saving on energy thanks to the use of more effective, lighter components.
- Design and colour matching: perfect mixture of functionality and design.
- Optional Multi Controller (see page 7).



Easy maintenance and quick installation.

640–1000 W



WEBCODE #8031

PRODUCT	DTT 6101	DTT 6201
	Standard Controller	
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	640 W	1000 W
Power consumption	450 540 W	440 570 W
Current consumption	2.1 2.3 A	2.4 2.7 A
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Weight (net)	33 kg	35 kg

Dimension (WxHxD)	588 x 451 x 393 mm
Colour	RAL 7035
Noise level	<62 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC NEMA Type 12

ARTICLE NO.	DTT 6101	DTT 6201
SC	13256141055	13256241055

Please find further variants at www.pfannenber.com or in our main catalogues.

1500–2000 W



WEBCODE #8032

PRODUCT	DTT 6301	DTT 6401
	Standard Controller	
Rated voltage $\pm 10\%$	AC 50 60 Hz	
	230 V	400/460 V 3~
Cooling capacity (EN 14511) @ A35/A35	1500 W	2000 W
Power consumption	980 1140 W	1300 1598 W
Current consumption	5.73 7 A	3 3.3 A
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Weight (net)	45 kg	51 kg

Dimension (WxHxD)	595 x 435 x 495 mm
Colour	RAL 7035
Noise level	<62 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC NEMA Type 12

ARTICLE NO.	DTT 6301	DTT 6401
230 V, SC	13256341055	
400/460 V, SC		13256432055

Please find further variants at www.pfannenber.com or in our main catalogues.

3000–4000 W



WEBCODE #8033

PRODUCT	DTT 6601	DTT 6801
	Standard Controller	
Rated voltage $\pm 10\%$	400/460 V 3~ AC 50 60 Hz	
Cooling capacity (EN 14511) @ A35/A35	3000 W	4000 W
Power consumption	1700 2100 W	1618 2050 W
Current consumption	3.16 4.5 A	7.07 5 A
Design (housing)	galvanised sheet steel	
Design (cover)	electrostatically powder coated (200 °C)	
Weight (net)	75 kg	77 kg

Dimension (WxHxD)	795 x 485 x 575 mm
Colour	RAL 7035
Noise level	<62 dB(A) (EN ISO 3741)
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus EAC NEMA Type 12

ARTICLE NO.	DTT 6601	DTT 6801
SC	13256632055	13256832055

Please find further variants at www.pfannenber.com or in our main catalogues.

ECOOL AIR/AIR HEAT EXCHANGERS

- If the ambient temperature is low enough but the use of filterfans is not possible due to rough ambient conditions – it is advised to use air/air heat exchangers.
- Available in six performance classes from 20 W/K to 100 W/K in three sizes.
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out.
- Integrated thermostat for temperature control.
- Additional thermostat for excessive temperature warning.
- Large distance between intake and exhaust vents, safe circulation within the electrical enclosure due to long passage of air, therefore hot spots are eliminated.

PAI: for partially recessed mounting in the door or side

- Easy mounting with click and fit system for partially sunk-in within 3 minutes.
- One man installation with Pfannenberg's fastening clips.
- Due to partial integration units need less space, so they do not block paths in the factory and do not disturb production processes.

PAS: for outer mounting on the door or side

- PAS units virtually do not need any space inside the enclosure.
- More components can be used inside the enclosure.
- For better service the steel hood can be removed easily.



Easy installation of partially integrated air/air heat exchanger (PAI).

20 W/K



WEBCODE #8034

PRODUCT	PAI 6043	PAS 6043
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Specific cooling capacity	20 W/K	
Power consumption	50 56 W	
Current consumption	0.25 0.26 A	
Ambient temperature	-25 ... +55 °C	
Thermostat control	+20 ... +55 °C	
control range alarm	+30 ... +65 °C	
Dimension (WxHxD)	380 x 612 x 212 mm	380 x 618 x 212 mm
Weight (net)	15.2 kg	15.5 kg
Noise level (EN ISO 3741)	<61 dB(A)	

Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Colour	RAL 7035
Type of connection	spring-type terminal included with plug
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus

ARTICLE NO.	PAI	PAS
6043	12991111055	12981111055

Please find further variants at www.pfannenberg.com or in our main catalogues.

35–65 W/K



WEBCODE #8035

PRODUCT	PAI 6073 PAS 6073	PAI 6103 PAS 6103	PAI 6133 PAS 6133
Rated voltage ±10 %	230 V AC 50 60 Hz		
Specific cooling capacity	35 W/K	50 W/K	65 W/K
Power consumption	170 180 W	170 180 W	310 420 W
Current consumption	0.8 1 A	0.8 1 A	1.3 1.8 A
Ambient temperature	-25 ... +55 °C		
Thermostat control range	control	+20 ... +55 °C	
	alarm	+30 ... +65 °C	
Dimension (WxHxD)	PAI PAS	410 x 933 x 199 mm 410 x 937 x 199 mm	
Weight (net)	PAI: 23.9 kg PAS: 24.9 kg		
Noise level (EN ISO 3741)	<64 dB(A)	<64 dB(A)	<70 dB(A)

Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Colour	RAL 7035
Type of connection	spring-type terminal included with plug
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus

ARTICLE NO.	PAI	PAS
6073	12992211055	12982211055
6103	12992311055	12982311055
6133	12992411055	12982411055

Please find further variants at www.pfannenberg.com or in our main catalogues.

85–100 W/K



WEBCODE #8036

PRODUCT	PAI 6173 PAS 6173	PAI 6203 PAS 6203
Rated voltage $\pm 10\%$	230 V AC 50 60 Hz	
Specific cooling capacity	85 W/K	100 W/K
Power consumption	310 420 W	
Current consumption	1.3 1.7 A	
Ambient temperature	-25 ... +55 °C	
Thermostat control	+20 ... +55 °C	
control range alarm	+30 ... +65 °C	
Dimension (WxHxD)	PAI: 485 x 1549 x 252 mm PAS: 485 x 1555 x 252 mm	
Weight (net)	PAI: 46 kg PAS: 46.3 kg	

Noise level (EN ISO 3741)	<69 dB(A)
Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Colour	RAL 7035
Type of connection	spring-type terminal included with plug
Degrees of protection (EN 60529)	IP 54 towards the enclosure, IP 34 towards the surroundings
Approvals	cURus

ARTICLE NO.	PAI	PAS
6173	12993511055	12983511055
6203	12993611055	12983611055

Please find further variants at www.pfannenberg.com or in our main catalogues.

ECOOL AIR/WATER HEAT EXCHANGERS

- Offers the highest degree of safety and energy efficiency.
- Perfect for very harsh (hot or dusty) ambient conditions up to +70 °C.
- Integrated thermostat and solenoid valve for temperature control.
- Integrated temperature monitoring with alarm contact.
- Optionally available with water connection on top.

PWI: for partially recessed mounting in the door or side

- Easy mounting with click and fit system for partially sunk-in within 3 minutes.
- One man installation with Pfannenber's fastening clips.
- Due to partial integration units need less space, so they do not block paths in the factory and do not disturb production processes.

PWS: for outer mounting on the door or side

- PWS units virtually do not need any space inside the enclosure.
- More components can be used inside the enclosure.
- For better service the steel hood can be removed easily.



Easy installation and connection to water circuit or chiller.

500–1000 W



WEBCODE #8037

PRODUCT		PWI 6052 PWS 6052	PWI 6102 PWS 6102
Rated voltage ± 10 %		230 V AC 50 60 Hz	
Cooling capacity		500 W	1000 W
Power consumption		68 78 W	
Current consumption		0.3 0.34 A	
Ambient temperature		+1 ... +70 °C	
Dimension (WxHxD)	PWI	380 x 615 x 142 mm	
	PWS	380 x 622.5 x 142 mm	
Weight (net)	PWI	10.5 kg	
	PWS	11 kg	
Noise level (EN ISO 3741)		≤48 dB(A)	
Colour		RAL 7035	

Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Design (heat exchanger)	copper pipe with aluminium fins
Type of connection	spring-type terminal included with plug 13 mm hose nozzle for fluid
Degrees of protection (EN 60529)	IP 55 towards the enclosure IP 65 on request
Approvals	cURus EAC

ARTICLE NO.	PWI	PWS
6052, 230 V	12891201055	12881201055
6102, 230 V	12891401055	12881401055

Please find further variants at www.pfannenber.com or in our main catalogues.

1500–3000 W



WEBCODE #8038

PRODUCT		PWI 6152 PWS 6152	PWI 6302C PWS 6302C
Rated voltage ± 10 %		230 V AC 50 60 Hz	400 V AC 50 60 Hz
Cooling capacity		1500 W	3000 W
Power consumption		91 122 W	78 78 W
Current consumption		0.47 0.54 A	0.36 0.35 A
Ambient temperature		+1 ... +70 °C	
Dimension (WxHxD)	PWI	410 x 938 x 142 mm	
	PWS	410 x 945.5 x 142 mm	
Weight (net)	PWI	15 kg	20 kg
	PWS	16 kg	21 kg
Noise level (EN ISO 3741)		53 dB(A)	54 dB(A)
Colour		RAL 7035	

Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Design (heat exchanger)	copper pipe with aluminium fins
Type of connection	spring-type terminal included with plug 13 mm hose nozzle for fluid
Degrees of protection (EN 60529)	IP 55 towards the enclosure IP 65 on request
Approvals	cURus EAC

ARTICLE NO.	PWI	PWS
6152, 230 V	12892301055	12882301055
6302C, 400 V	12892609055	12882609055

Please find further variants at www.pfannenber.com or in our main catalogues.

3000–5000 W



WEBCODE #8039

PRODUCT		PWI 6302 PWS 6302	PWI 6502 PWS 6502
Rated voltage ± 10 %		400/460 2~ AC 50 60 Hz	
Cooling capacity		3000 W	5000 W
Power consumption		53 75 W	79 130 W
Current consumption		0.47 0.49 A	0.69 0.83 A
Ambient temperature		+1 ... +70 °C	
Dimension (WxHxD)	PWI	485 x 1549 x 142 mm	485 x 1544 x 186 mm
	PWS	485 x 1556 x 142 mm	485 x 1556 x 186 mm
Weight (net)	PWI	26 kg	36.5 kg
	PWS	28 kg	31.5 kg
Noise level (EN ISO 3741)		54 dB(A)	57 dB(A)
Colour		RAL 7035	

Design (housing)	galvanised sheet steel
Design (cover)	electrostatically powder coated (200 °C)
Design (heat exchanger)	copper pipe with aluminium fins
Type of connection	spring-type terminal included with plug 13 mm hose nozzle for fluid
Degrees of protection (EN 60529)	IP 55 towards the enclosure IP 65 on request
Approvals	cURus EAC

ARTICLE NO.	PWI	PWS
6302, 400/460 V	12893309055	12883309055
6502, 400/460 V	12893509055	12883509055

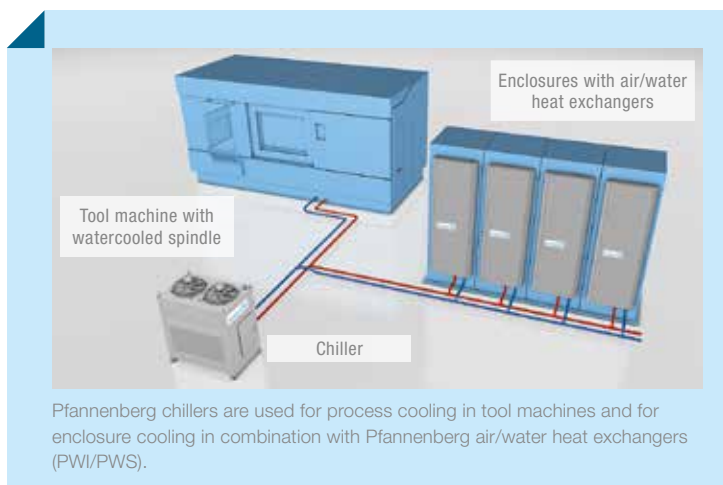
Please find further variants at www.pfannenber.com or in our main catalogues.

CHILLERS

Pfannenberg's chillers guarantee both a central and economic provision and cooling of the media water, emulsion and oil. All the cooling tasks are realised with devices which are both compact and maintenance friendly. The areas of applications for Pfannenberg's chillers range from tool machines, laser applications, x-ray devices and packaging industry.

The Pfannenberg group offers a variety of designs for your specific tasks:

- Air or water cooled active chillers
- Passive chillers
- Stand-alone design
- Enclosure chillers
- Closed and open cycle units



Pfannenberg chillers are used for process cooling in tool machines and for enclosure cooling in combination with Pfannenberg air/water heat exchangers (PWI/PWS).

CHILLERS (water)

Rack

1.1–2.4 kW

- Fluid cooling with water or water/glycol mixtures.
- Anodised aluminium housing cover.
- Robust laboratory and industry standard.



WEBCODE #8040

PRODUCT	Rack 1100	Rack 1700	Rack 2400
Rated voltage $\pm 10\%$	230 V 1~ AC 50 60 Hz		
Cooling capacity W18/A32	1100 W	1700 W	2400 W
Flow rate	12 l/min	12 l/min	14 l/min
Ambient temperature	+15 ... +45 °C		+15 ... +40 °C
Medium	water/glycol – 80/20		
Dimension (WxHxD)	450 x 395 x 480 mm		580 x 500 x 580 mm
Approvals	cULus EAC		
ARTICLE NO.	42030325001	42030445001	42030655001

Please find further variants at www.pfannenberg.com or in our main catalogues.

CCE

1.1–6.5 kW

NEW

Compact and efficient, the CCE line offers many features found only in larger models. These chillers are a top choice for integrated motor and/or process cooling required for high-speed machining centres. Due to single phase power requirements they can easily be installed in most commercial and industrial settings.

- Improved level indication on the coolant tank.
- Removable side and front panels and a well thought-out inner structure offer a full and quick access to internal components.
- Fluid cooling with water or water/glycol mixtures.
- Hydraulic circuit made with non-ferrous components.



WEBCODE #8041

PRODUCT CHARACTERISTIC	CONFIGURATION					
	BASIC	H	S	HS	SP	HSP
Hydraulic Protection H	—	+	—	+	—	+
Smart Cooling S	—	—	+	+	+	+
Precision Cooling P	—	—	—	—	+	+

PRODUCT	CCE 6101 S	CCE 6201 S	CCE 6301 S
Rated voltage $\pm 10\%$	230 V 1~ AC 50 60 Hz		
Cooling capacity W18/A32	1.1 kW	1.7 kW	2.4 kW
Flow rate	3,6 l/min	4,9 l/min	7,4 l/min
Ambient temperature	+15 ... +45 °C		
Dimension (WxHxD)	600 x 634 x 546 mm		
ARTICLE NO.	42130115003	42130175003	42130245005

PRODUCT	CCE 6401 S	CCE 6501 S	CCE 6601 S
Rated voltage $\pm 10\%$	400 V 3~ 460 V 3~ 50 60 Hz		
Cooling capacity W18/A32	3.5 kW	5 kW	6.5 kW
Flow rate	14 l/min	16 l/min	18 l/min
Ambient temperature	+15 ... +45 °C		
Dimension (WxHxD)	600 x 983 x 727 mm		
ARTICLE NO.	42130355004	42130505003	42130655003

Please find further variants at www.pfannenberg.com or in our main catalogues.

CHILLERS (water)

EB 2.0 3.2–16 kW

The EB 2.0 series is composed of innovative products of high quality, the design of which has been realised through the use of advanced components with the dual objective of ensuring maximum performance and optimum energy efficiency.

- Using microchannel heat exchangers for condenser coil design allows more efficient and compact solutions.
- Hydraulic connections and tank draining on the back. Horizontal centrifugal pump as a standard offering compact design, high reliability and wide performance range.



WEBCODE #8042

PRODUCT	EB 32 WT	EB 44 WT	EB 65 WT
Rated voltage $\pm 10\%$	400 V 3~ 50 Hz		400 V 3~ 460 V 3~ 50 60 Hz
Cooling capacity W18/A32	3.2 kW	4.4 kW	6.5 7.2 kW
Flow rate	8.6 l/min	12.3 l/min	17.2 l/min
Ambient temperature	+15 ... +45 °C		
Dimension (WxHxD)	600 x 1225 x 760 mm		
Approvals	cULus on request		
ARTICLE NO.	42030325001	42030445001	42030655001

PRODUCT	EB 80 WT	EB 95 WT	EB 140 WT	EB 160 WT
Rated voltage ±10 %	400 V 3~ 460 V 3~ 50 60 Hz			
Cooling capacity W18/A32	8 8.8 kW	9.5 10.6 kW	14 15.4 kW	16 17.6 kW
Flow rate	21.5 l/min	25.8 l/min	37.3 l/min	43 l/min
Ambient temperature	+15 ... +45 °C			
Dimension (WxHxD)	600 x 1225 x 760 mm		855 x 1400 x 800 mm	
Approvals	cULus on request			
ARTICLE NO.	42030805001	42030955001	42031405001	42031605001

Please find further variants at www.pfannenberger.com or in our main catalogues.

EB Large 19–40 kW

Specifically developed to meet the demanding requirements of today's industrial applications, the EB Large chillers allow higher cooling capacities in the smallest possible footprint. With a long list of standard features and many available options, Pfannenberger's EB Large series provides the best choice for cooling of machinery, hydraulics, automation components, etc.

- Possible use in different voltages. E.g. 400 V 50 Hz and 460 V 60 Hz.
- Huge airflow to guarantee operation at high ambient conditions.



WEBCODE #8043

PRODUCT	EB 190 WT	EB 250 WT
Rated voltage $\pm 10\%$	400 V 3~ 460 V 3~ 50 60 Hz	
Cooling capacity W18/A32	19 21 kW	25 27.7 kW
Flow rate	50 l/min	
Ambient temperature	+15 ... +40 °C	
Dimension (WxHxD)	1230 x 1410 x 790 mm	
Approvals	cULus EAC	
ARTICLE NO.	42031900001	42032500001

PRODUCT	EB 300 WT	EB 350 WT	EB 400 WT
Rated voltage $\pm 10\%$	400 V 3~ 460 V 3~ 50 60 Hz		
Cooling capacity W18/A32	30 32.8 kW	35 38.3 kW	40 44.4 kW
Flow rate	80 l/min		
Ambient temperature	+15 ... +40 °C		
Dimension (WxHxD)	1680 x 1410 x 790 mm		
Approvals	cULus EAC		
ARTICLE NO.	42033000001	42033500001	42034000001

Please find further variants at www.pfannenberger.com or in our main catalogues.

CHILLERS (water)

EB eXTreme
36.5–148.8 kW

Pfannenberg introduced a new product series to extend our portfolio with a new extreme performance range up to 150 kW in cooling capacity. The EB eXTreme consists of nine units in three different housing sizes following our high-level standards in efficiency, compact design and innovation in chiller technology.

- Variable speed control, EC motor technology, further increasing energy savings.
- Using microchannel heat exchangers for condenser coil design allows more efficient and compact solutions.
- Controller system and digital display of temperature, pressure, tank level and status values.



WEBCODE #8044

PRODUCT	EB XT 400 WT	EB XT 500 WT	EB XT 600 WT
Rated voltage ± 10 %	400 V 3~ 50 Hz		
Cooling capacity W18/A32	36.5 kW	47.3 kW	58.6 kW
Flow rate	117 l/min	150 l/min	183 l/min
Ambient temperature	+5 ... +50 °C		
Dimension (WxHxD)	830 x 2030 x 1240 mm		
ARTICLE NO.	42144005001	42145005001	42146005001

PRODUCT	EB XT 700 WT	EB XT 800 WT	EB XT 900 WT	EB XT 1000 WT
Rated voltage ± 10 %	400 V 3~ 50 Hz			
Cooling capacity W18/A32	66.5 kW	74.2 kW	82.1 kW	94.9 kW
Flow rate	200 l/min	233 l/min	267 l/min	300 l/min
Ambient temperature	+5 ... +50 °C			
Dimension (WxHxD)	830 x 2030 x 1840 mm			
ARTICLE NO.	42147005001	42148005001	42149005001	42151005001

PRODUCT	EB XT 1200 WT	EB XT 1600 WT
Rated voltage ± 10 %	400 V 3~ 50 Hz	
Cooling capacity W18/A32	115.8 kW	148.8 kW
Flow rate	333 l/min	367 l/min
Ambient temperature	+5 ... +50 °C	
Dimension (WxHxD)	1200 x 2030 x 2665 mm	
ARTICLE NO.	42151205001	42151605001

Please find further variants at www.pfannenberg.com or in our main catalogues.

CHILLERS (oil)

EB OIL 3–16 kW

Technology and performance common to all EB series are here addressed to all the applications in which the process liquid is oil or an emulsion with high viscosity. The majority of machine tools have a hydraulic circuit to be cooled. Depending on the temperature desired by the customer, it is possible to cool these process fluids directly with a standard solution or through an intermediate water/oil exchanger.

- Specialised pump and custom heat exchanger specifically sized for oil cooling.
- Ideal solution when a steady control of temperature is needed.
- Separate cooling circuit and hydraulic circuit. Air outlet from the top of the unit.



WEBCODE #8045

PRODUCT	EB 30 OIL	EB 45 OIL	EB 60 OIL
Rated voltage ±10 %	400 V 3~ 460 V 3~ 50 60 Hz		
Cooling capacity 026/A32	3 3.3 kW	4.3 4.7 kW	6 6.5 kW
Flow rate	10 l/min	25 l/min	
Medium	oil		
Ambient temperature	+15 ... +40 °C		+15 ... +45 °C
Dimension (WxHxD)	600 x 955 x 555 mm		
Approvals	cULus EAC		
ARTICLE NO.	43030300003	43030430003	43030600001

PRODUCT	EB 75 OIL	EB 90 OIL	EB 130 OIL	EB 150 OIL
Rated voltage ±10 %	400 V 3~ 460 V 3~ 50 60 Hz			
Cooling capacity 026/A32	7.5 8.3 kW	9 10 kW	13 14.3 kW	15 16.6 kW
Flow rate	35 l/min		60 l/min	
Medium	oil			
Ambient temperature	+15 ... +45 °C			
Dimension (WxHxD)	705 x 1337 x 750 mm			
Approvals	cULus EAC			
ARTICLE NO.	43030750001	43030900001	43031300001	43031500001

PRODUCT	EB 190 OIL	EB 250 OIL	EB 300 OIL	EB 350 OIL	EB 400 OIL
Rated voltage ±10 %	400 V 3~ 460 V 3~ 50 60 Hz				
Cooling capacity 026/A32	19 21 kW	25 27.7 kW	30 32.8 kW	35 38.3 kW	40 44.4 kW
Flow rate	60 l/min		80 l/min		
Medium	oil				
Ambient temperature	+15 ... +40 °C				
Dimension (WxHxD)	1230 x 1410 x 790 mm		1680 x 1410 x 790 mm		
Approvals	cULus EAC				
ARTICLE NO.	43031900001	43032500001	43033000001	43033500001	43034000001

Please find further variants at www.pfannenber.com or in our main catalogues.

PASSIVE COOLING SYSTEM

PWW 9–24 kW

- 3-way valve for primary water regulation.
- Multi stage pump for high flow rates even at high pressure resistance.
- Digital controller with clear error message and easily editable set point.



WEBCODE #8046

PRODUCT	PWW 9.000	PWW 12.000	PWW 18.000	PWW 24.000
Rated voltage ±10 %	230 V 1~ AC 50 60 Hz		400 V 3~ 460 V 3~ 50 60 Hz	
Cooling capacity WP15/WS20	9 kW	12 kW	18 kW	24 kW
Primary water inlet flow rate	min. 15 l/min	min. 18 l/min	min. 25 l/min	min. 35 l/min
Secondary water outlet flow rate	22 l/min	22 l/min	27 l/min	45 l/min
Ambient temperature	+10 ... +45 °C		+10 ... +50 °C	
Dimension (WxHxD)	580 x 475 x 580 mm			
Approvals	EAC cULus on request			
ARTICLE NO.	42120905001	42121205001	42121805001	42122405001

Please find further variants at www.pfannenber.com or in our main catalogues.

RADIANT HEATERS

10–30 W

Mini radiant heaters

- Particularly suitable for use in small housings or for the heating of isolated spots in sensitive areas.



WEBCODE #8047

PRODUCT	PRH 010-M	PRH 020-M	PRH 030-M
Heating performance	10 W	20 W	30 W
Rated voltage	230 V AC 50 60 Hz		
Operating range	110–250 V AC 50 60 Hz		
Starting current	1 A	1.1 A	1.2 A
Max. surface temperature	95 °C	115 °C	140 °C
Power consumption	10 W	20 W	30 W
Design	aluminium profile, black anodised		
Type of connection	connecting cable (300 mm)		
Type of mounting	35 mm profile bar		

Degrees of protection	IP 54 (EN 60529)
Operating temperature	–40 °C ... +70 °C
Dimension (WxHxD)	29.5 x 45 x 75 mm
Approvals	cURus EAC

ARTICLE NO.	230 V
PRH 010-M	17000105317
PRH 020-M	17000205317
PRH 030-M	17000305317

Please find further variants at www.pfannenbergl.com or in our main catalogues.

30–60 W

Radiant heaters

- For the avoidance of excessively low temperatures or excessively high humidity in the control cabinet.



WEBCODE #8048

PRODUCT	FLH 030	FLH 045	FLH 060
Heating performance	30 W	45 W	60 W
Rated voltage	230 V AC 50 60 Hz		
Operating range	110–250 V AC 50 60 Hz		
Starting current	1.2 A	1.8 A	2.5 A
Max. surface temperature	90 °C	105 °C	105 °C
Power consumption	30 W	45 W	60 W
Design	aluminium profile, brightly anodised		
Type of connection	connecting cable (500 mm) connecting terminal		
Type of mounting	35 mm profile bar		

Degrees of protection	IP 44 IP 20 (EN 60529)	
Operating temperature	–40 °C ... +70 °C	
Dimension (WxHxD)	FLH 030–045	70 x 105 x 50 mm
	FLH 060	70 x 175 x 50 mm
Approvals	cURus EAC	

ARTICLE NO.	cable IP 44	terminal IP 22
FLH 030	17003005017	17003005007
FLH 045	17004505017	17004505007
FLH 060	17006005017	17006005007

Please find further variants at www.pfannenbergl.com or in our main catalogues.

75–150 W

Radiant heaters

- For the avoidance of excessively low temperatures or excessively high humidity in the control cabinet.



WEBCODE #8049

PRODUCT	FLH 075	FLH 100	FLH 150
Heating performance	75 W	100 W	150 W
Rated voltage	230 V AC 50 60 Hz		
Operating range	110–250 V AC 50 60 Hz		
Starting current	4.5 A	5 A	7.5 A
Max. surface temperature	120 °C	130 °C	150 °C
Power consumption	75 W	100 W	150 W
Design	aluminium profile, brightly anodised		
Type of connection	connecting cable (500 mm) connecting terminal		
Type of mounting	35 mm profile bar		
Degrees of protection	IP 44 IP 20 (EN 60529)		

Operating temperature	–40 °C ... +70 °C	
Dimension (WxHxD)	FLH 075–100	70 x 175 x 50 mm
	FLH 150	70 x 250 x 50 mm
Approvals	cURus EAC	

ARTICLE NO.	cable IP 44	terminal IP 22
FLH 075	17007505017	17007505007
FLH 100	17010005017	17010005007
FLH 150	17015005017	17015005007

Please find further variants at www.pfannenbergl.com or in our main catalogues.

FAN HEATERS

250–400 W

Fan heaters

- Ideal for use in larger electrical enclosures.
- Integrated fan for fast and even distribution of the heat.



WEBCODE #8050

PRODUCT	FLH 250	FLH 400
Heating performance	250 W	400 W
Rated voltage	230 V AC 50 60 Hz	
Operating range	207–258 V AC 50 60 Hz	
Volumetric airflow	50 61 m³/h	
Starting current	1.1 A	1.8 A
Max. surface temperature	70 °C	85 °C
Power consumption	260 W	410 W
Design	aluminium profile, brightly anodised	
Type of connection	connecting terminal	
Type of mounting	35 mm profile bar	

Degrees of protection	IP 20 (EN 60529)	
Operating temperature	–40 °C ... +70 °C	
Dimension (WxHxD)	FLH 250	85 x 186.5 x 104 mm
	FLH 400	85 x 226.5 x 104 mm
Approvals	cURus EAC	

ARTICLE NO.	230 V
FLH 250	17025010007
FLH 400	17040010007

Please find further variants at www.pfannenbergl.com or in our main catalogues.

FAN HEATERS

200–500 W

Compact fan heaters

- Fast heating due to PTC technology.
- Low surface temperature.
- Ultra compact.



WEBCODE #8051

PRODUCT	PFH 200 PFH-T 200	PFH 300 PFH-T 300	PFH 400 PFH-T 400	PFH 500 PFH-T 500
Heating performance	200 W	300 W	400 W	500 W
Rated voltage	230 V AC 50 I 60 Hz			
Operating range	207–258 V AC 50 I 60 Hz			
Volumetric airflow	50 m³/h			
Starting current	9 A	12 A	15 A	20 A
Surface temperature	max. 55 °C			
Power consumption	215 W	315 W	415 W	545 W
Design	plastic UL 94V-0, black			
Type of connection	connecting terminal			
Type of mounting	4 x M5 screws (not included) I 35 mm profile bar			

Degrees of protection	IP 20 (EN 60529)
Operating temperature	–40 °C ... +70 °C
Dimension (WxHxD)	PFH 88 x 142 x 126 mm
	PFH-T 88 x 142 x 139 mm
Approvals	cURus I EAC

ARTICLE NO.	PFH without thermostat	PFH-T with thermostat
200 W	17020610030	17020710034
300 W	17030610030	17030710034
400 W	17040610030	17040710034
500 W	17050610030	17050710034

Please find further variants at www.pfannenber.com or in our main catalogues.

650–1200 W

Compact fan heaters

- Fast heating due to PTC technology.
- Low surface temperature.
- Ultra compact.



WEBCODE #8052

PRODUCT	PFH 600 PFH-T 650	PFH 800 PFH-T 800	PFH 1000 PFH-T 1000	PFH 1200 PFH-T 1200
Heating performance	650 W	800 W	1000 W	1200 W
Rated voltage	230 V AC 50 I 60 Hz			
Operating range	207–258 V AC 50 I 60 Hz			
Volumetric airflow	50 m³/h			
Starting current	25 A	31 A	25 A	31 A
Surface temperature	max. 70 °C			
Power consumption	665 W	815 W	1015 W	1215 W
Design	plastic UL 94V-0, black			
Type of connection	connecting terminal			
Type of mounting	4 x M5 screws (not included) I 35 mm profile bar			

Degrees of protection	IP 20 (EN 60529)
Operating temperature	–40 °C ... +70 °C
Dimension (WxHxD)	PFH 88 x 142 x 126 mm
	PFH-T 88 x 142 x 139 mm
Approvals	cURus I EAC

ARTICLE NO.	PFH without thermostat	PFH-T with thermostat
650 W	17065610030	17065710034
800 W	17080610030	17080710034
1000 W	17099610030	17099710034
1200 W	17099910030	17099810034

Please find further variants at www.pfannenber.com or in our main catalogues.

250 W

Fan heaters

- The heaters compact design make it ideal for use in enclosures where space is at a premium.



WEBCODE #8053

PRODUCT	FLH 250 SL
Heating performance	250 W
Rated voltage	230 V AC 50 I 60 Hz
Operating range	207–258 V AC 50 I 60 Hz
Volumetric airflow	160 m³/h
Starting current	2.4 A
Surface temperature	max. 70 °C
Power consumption	269 W
Design	galvanised sheet steel
Type of connection	connecting terminal

Type of mounting	M6 screw fastening
Degrees of protection	IP 20 (EN 60529)
Operating temperature	–40 °C ... +70 °C
Dimension (WxHxD)	126.5 x 170.5 x 103 mm
Approvals	cURus

ARTICLE NO.	230 V
FLH 250 SL	17025110007

Please find further variants at www.pfannenber.com or in our main catalogues.

400–1000 W

Vibration resistant fan heaters

- Developed for demanding environments, especially wind turbines and railway applications.



WEBCODE #8054

PRODUCT	FLH-T 400	FLH-T 600	FLH-T 800	FLH-T 1000
Heating performance	400 W	600 W	800 W	1000 W
Rated voltage	230 V AC 50 I 60 Hz			
Operating range	207–258 V AC 50 I 60 Hz			
Volumetric airflow	160 I 180 m³/h			
Starting current	2.6 A	3.4 A	4.3 A	5.2 A
Power consumption	450 W	650 W	850 W	1050 W
Design	plastic UL 94V-0, black			
Type of connection	2-pole terminal strip			
Type of mounting	4 x M5 screws (not included)			

Degrees of protection	IP 20 (EN 60529)
Operating temperature	–40 °C ... +70 °C
Dimension (WxHxD)	150 x 100 x 164 mm
Approvals	EAC

ARTICLE NO.	230 V
400 W	17040310007
600 W	17060310007
800 W	17080310007
1000 W	17099310007

Please find further variants at www.pfannenber.com or in our main catalogues.

THERMOSTATS

FLZ 510

Thermostat; changeover with spring contact.



WEBCODE #8055

PRODUCT		FLZ 510	
Switching temperature difference		1 K	3 K
Type of contact		changeover with spring contact	
Switching point tolerance		±3 K	
Max. switching power	N.C.	100–250 V AC / 10 A	
	N.O.	100–250 V AC / 5 A	
Degrees of protection		IP 20 (EN 60529)	
Type of connection		screw terminal	
Type of mounting		35 mm profile bar	

Operating temperature	–40 °C ... +80 °C	
Colour	RAL 7035	
Dimension (WxHxD)	37 x 59.5 x 47.5 mm	
Approvals	cURus EAC	

ARTICLE NO.	1 K	3 K
–20 °C ... +40 °C	17103000003	17105000003
0 °C ... +60 °C	17103000000	17105000000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

FLZ 520 | FLZ 530

Thermostats; N.C. | N.O.



WEBCODE #8056

PRODUCT		FLZ 520	FLZ 530
Switching temperature difference		<7 K	<7 K
Type of contact		N.C. with spring contact	N.O. with spring contact
Switching point tolerance		±4 K	
Max. switching power		240 V AC / 10 A 120 V AC / 15 A	
Type of connection		screw terminal	
Type of mounting		35 mm profile bar	
Degrees of protection		IP 20 (EN 60529)	

Operating temperature	–20 °C ... +80 °C	
Colour	RAL 7035	
Dimension (WxHxD)	40 x 72 x 36 mm	
Approvals	cURus CSA EAC	

ARTICLE NO.	FLZ 520	FLZ 530
–20 °C ... +40 °C	17111000003	17121000003
0 °C ... +60 °C	17111000000	17121000000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

FLZ 541 | FLZ 543

Twin thermostats; N.C./N.O. | N.O./N.O.



WEBCODE #8057

PRODUCT		FLZ 541	FLZ 543
Switching temperature difference		<7 K	<7 K
Type of contact		N.C./N.O.	N.O./N.O.
		with spring contact	
Switching point tolerance		±4 K	
Max. switching power		240 V AC / 10 A 120 V AC / 15 A	
Type of connection		screw terminal	
Type of mounting		35 mm profile bar	
Degrees of protection		IP 20 (EN 60529)	

Operating temperature	–20 °C ... +80 °C	
Colour	RAL 7035	
Dimension (WxHxD)	59 x 80.5 x 38 mm	
Approvals	cURus EAC	

ARTICLE NO.	0 °C ... +60 °C
FLZ 541	17141000000
FLZ 543	17143000000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

HYGROSTATS

FLZ 600 | FLZ 610

For controlling enclosure heaters or filterfans when the set relative air humidity is exceeded.



WEBCODE #8058

PRODUCT		FLZ 600	FLZ 610
Device implementation		mechanical hygrostat	electronic hygrostat-thermostat combination device
Type of contact		changeover with spring contact	changeover/relay
Setting range		40–90 % R.H.	0 ... +60 °C 40–90 % R.H.
Switching difference		approx. 5 %	approx. 2 K ±1 K approx. 4 % R.H. ±1 %
Max. switching power	N.C.	24–250 V AC / 2 A	240 V AC / 8 A
	N.O.	24–250 V AC / 5 A	24 V DC / 4 A
Operating temperature		0 ... +60 °C	–20 °C ... +60 °C

Type of connection	screw terminal	
Type of mounting	35 mm profile bar	
Degrees of protection	IP 30 (EN 60529)	IP 20 (EN 60529)
Colour	RAL 7035	
Dimension (WxHxD)	37 x 60 x 47 mm	59 x 80.5 x 38 mm
Approvals	cURus EAC	

ARTICLE NO.	FLZ 600	FLZ 610
	17207000000	17218100000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

SIGNALING TECHNOLOGY:

Signaling devices for all industrial areas and applications.



PFANNENBERG – YOUR COMPETENT PARTNER FOR VISUAL AND AUDIBLE INDICATION, WARNING AND ALARM SIGNALS.



An extended warranty for signaling devices worldwide.

Customer service and “service friendliness” are top priority for us: That’s why, with immediate effect, we provide a 10 year warranty on flashing lights, sounders and flashing sounders from the PATROL, PYRA®, DS and Quadro series. And by introducing the “Easy Replacement Process”, we have made it possible for our customers to exchange defective devices even more easily and quickly.

With our new series of flashing lights, PYRA M, Pfannenberg is responding to the increased demand for more process reliability in the field of mechanical engineering and construction. The pyramid-shaped flashing light, which is also available as a combination device with an integrated sounder, guarantees the largest possible signaling range thanks to efficient Xenon technology.

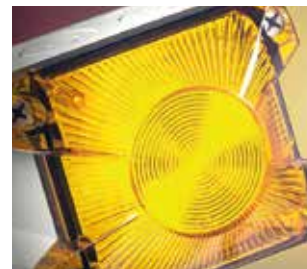
Certified according to EN 54-23, the new EU standard in the fire alarm sector, the flashing lights are consistent with the Pfannenberg company motto: “Protecting man, machine and the environment”.



VISUAL SIGNALING DEVICES

A flash says more than a thousand words!

Regardless of whether you use flashing lights or continuous lights – Pfannenberg's visual signaling devices are 'eye-catchers' that can save lives in every respect. They ensure any process status can be displayed in a timely manner. Thanks to their unmistakable demand for action, they offer the best prerequisites for running trouble-free production processes.



AUDIBLE SIGNALING DEVICES

Sound waves are a language that everybody understands!

A baby's cry, cars sounding their horns, the front door bell – acoustic signals are part of our life right from the very beginning. All over the world. Everybody who hears a loud acoustic signal feels called upon to act in some way, regardless of the situation. On the basis of these conditions, the use of acoustic signaling devices is also of great advantage in the industrial sector. Malfunctions are reported immediately, dangerous situations are displayed without delay. Benefit from our wide range of acoustic signaling devices, which are guaranteed to draw the necessary attention in your company – when it really matters.



VISUAL-AUDIBLE SIGNALING DEVICES

Seeing and hearing – double alarms warn better!

There are many industrial areas of use for signaling devices that are associated with adverse environmental conditions and higher demands, making the mutual assistance of acoustic and visual signals necessary. For example, when signals need to be noticed at great distances. Two scenarios make this clear. Visual signals, for example, are easily recognisable in the dark. However, as soon as there is sunlight, other lights, the factory lighting or welding flashes, the observer is faced with a barely distinguishable light smog. Therefore, acoustic assistance of the visual signal is necessary.

The same applies to acoustic signals that have to penetrate through machine noise, environmental noise, voice noise, echoes, running motors and hearing protection. They are only reliable in being noticed with visual assistance.



SIGNAL TOWERS

An important component for your process reliability!

You can assemble Pfannenberg signal lights with their stable stainless steel tubular stands individually according to this example and exactly as your machine pool demands it. One look at the signal tower and the observer knows and hears instantly which process state the machine in question is in. For example, 'start', 'warm-up phase', 'optimum operating temperature', 'overheating' etc.

Signaling technology can be as intelligent as that. Our signal lights can be supplied as continuous, LED, blinking or flashing lights for safety-relevant applications and carry UL and EAC approvals in addition to the obligatory CE marking.



PFANNENBERG 3D-COVERAGE:

A visual representation of device performance in any space.



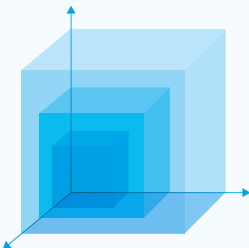
A holistic approach to alarm notification planning. Pfannenberg presents 3D-Coverage, a method for determining the actual effective coverage area for audible and visual signaling devices. Now planners can gain confidence in knowing whether signals can be perceived in relation to different environmental conditions and requirements.

The benefits 3D-Coverage planning method.

- Clear information about the coverage volume.
- The ideal solution for safety signaling.
- Confidence in design, costing, and acceptance.
- Prevents incorrect sizing.
- Getting it right the first time.
- Protecting man, machine and the environment.

3D-Coverage in the catalogue and on pfannenberg.com.

The main catalogue and the Pfannenberg homepage contain the guaranteed coverage volume of each signaling device under different environmental situations. An example can be found here:

	PA X 20-15		VISUAL		
	AUDIBLE	80 dB(A)	85.6 x 97.7 x 85.6 m	Indicate	84.6 x 74.7 x 144.5 m
		85 dB(A)	48.1 x 55 x 48.1 m	Warn	37.6 x 33.2 x 64.2 m
		90 dB(A)	27.1 x 30.9 x 27.1 m	Alarm	18.8 x 16.6 x 32.1 m
Coverage area with DIN tone and required sound levels of 80, 85 and 90 dB(A) and also to be used for the applications „Indicate“, „Warn“ and „Alarm“ (EN 54-23) with clear lens. To determine the exact signaling area for your needs, please use the online available Pfannenberg Sizing Software PSS.					

PSS – the perfect planning aid.

For the 3D-Coverage planning with individual values, Pfannenberg Sizing Software (PSS) is a user-friendly online tool which provides an instant, informed recommendation for the optimum signaling devices and their positioning. It enables you to avoid expensive over-specification and risky under-specification at the planning stage or when reviewing the configuration.

PSS is available online and to download at www.pfannenberg.com/pss.

PYRA® FLASHING LIGHTS

5 J

- The small flashing light is adaptable to many applications and is also impressive due to its safe and simple mounting.
- Suitable for panel mounting.



WEBCODE #8059

PRODUCT	PY X-S-05	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	187–255 V	18–30 V
Max. viewing distance	164 m	
Light source	xenon flash tube	
Light intensity	5 J, 50 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Housing colour	RAL 3000 RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	
Service life	light emission still 70 % after 8,000,000 flashes	
Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	109.5 x 85 x 80.6 mm	

Warranty	10 years	
Approvals	UL EAC option: GL MED CNBOP EN 54-23 (24 V) VdS (24 V)	
ARTICLE NO.	housing	housing
230 V	21510101000	21510101055
230 V	21510103000	21510103055
230 V	21510104000	21510104055
230 V	21510105000	21510105055
24 V	21510801000	21510801055
24 V	21510803000	21510803055
24 V	21510804000	21510804055
24 V	21510805000	21510805055

Please find further variants at www.pfannenbergl.com or in our main catalogues.

10 J

- Providing full synchronisation on multi-flashing light systems.
- 5 Joule version available.



reddot award 2015 winner



WEBCODE #8061

PRODUCT	PY X-M-10	
Rated voltage	230 V AC	24 V DC
Operating range	187–255 V	10–57 V
Max. viewing distance	283 m	
Light source	xenon flash tube	
Light intensity	10 J, 149 cd (DIN 5037)	
Flash rate	0.1 0.5 0.75 1 Hz (DIP switch)	
Lens colour		
Housing colour	RAL 3000 RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	
Service life	light emission still 70 % after 8,000,000 flashes	
Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	166 x 124 x 114 mm	

Warranty	10 years	
Approvals	EN 54-23 (SSM version, 24 V) VdS (SSM version, 24 V) UL EAC	
ARTICLE NO.	housing	housing
230 V	21551103000	21551103055
230 V	21551104000	21551104055
230 V	21551105000	21551105055
SSM 24 V	21551801005	–
24 V	21551813000	21551813055
24 V	21551814000	21551814055
24 V	21551815000	21551815055
SSM 24 V	21551805005	–

Please find further variants at www.pfannenbergl.com or in our main catalogues.

15 J

- Inrush current regulator (DC version) provides electrical protection for control devices such as switching components and relays.
- Redundant electrical contacts provides ease of wiring and daisy-chain connection.



WEBCODE #8103

PRODUCT	PY X-L-15		PY X-L-15-CPR
Rated voltage	230 V AC	24 V DC	24 V DC
Operating range	187–255 V	19.2–28.8 V	19.2–28.8 V
Max. viewing distance	320 m		
Light source	xenon flash tube		
Light intensity	15 J, 190 cd (DIN 5037)		
Flash rate	0.1 0.5 0.75 1 Hz (DIP switch)		
Lens colour			
Housing colour	RAL 3000 RAL 7035		
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)		
Service life	light emission still 70 % after 8,000,000 flashes		
Operating temperature	–40 °C ... +55 °C		
Dimension (WxHxD)	212 x 157 x 144 mm		

Warranty	10 years	
Approvals	UL EAC CPR version: EAC EN 54-23 (from 11/2017) VdS (from 11/2017)	
ARTICLE NO.	housing	housing
230 V	21561103000	21561103055
230 V	21561104000	21561104055
230 V	21561105000	21561105055
CPR 24 V	21561801020	on request
CPR 24 V	21561805020	on request
24 V	21561103000	21561803055
24 V	21561804000	21561804055
24 V	21561805000	21561805055

Please find further variants at www.pfannenbergl.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on [pfannenbergl.com](http://www.pfannenbergl.com) and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

FLASHING LIGHTS

5 J

- Sturdy metal housing.



WEBCODE #8062

PRODUCT	WBL	WBS
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	185–255 V	18–35 V
Max. viewing distance	181 m	
Light source	xenon flash tube	
Light intensity	5 J, 61 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Operating temperature	light emission still 70 % after 8,000,000 flashes	

Degrees of protection	IP 54 (EN 60529)
Operating temperature	–40 °C ... +55 °C
Dimension (WxH)	Ø 54 x 200 mm
Approvals	EAC option: GL

ARTICLE NO.	WBL 230 V AC	WBS 24 V DC
	21003103000	21003803000
	21003104000	21003804000
	21003105000	21003805000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

15 J

- Extremely bright and highly visible flashing light.



WEBCODE #8063

PRODUCT	ABL	ABS
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	185–255 V	18–30 V
Max. viewing distance	348 m	
Light source	xenon flash tube	
Flash energy	15 J	
Light intensity	226 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 54 (EN 60529)	

Service life	light emission still 70 % after 8,000,000 flashes
Operating temperature	–40 °C ... +55 °C
Dimension (WxH)	Ø 80 x 242 mm
Approvals	EAC option: GL

ARTICLE NO.	ABL 230 V AC	ABS 24 V DC
	21001103000	21001803000
	21001104000	21001804000
	21001105000	21001805000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

7 J

- Powerful 360° omnidirectional signaling for large distances (indoor and outdoor).



WEBCODE #8064

PRODUCT	PMF 2015 direct mounting bracket mounting	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	18–30 V
Operating mode	quad, double flash	
Max. viewing distance	366 m	
Light source	xenon flash tube	
Light intensity	7 J, 250 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 55 (EN 60529)	
Operating temperature	–40 °C ... +55 °C	

Service life	light emission still 70 % after 8,000,000 flashes	
Dimension (WxH)	direct	Ø 177 x 185 mm
	bracket	Ø 130 x 170.5 mm
Approvals	EAC	

ARTICLE NO.	direct mounting	bracket mounting
230 V	21010104000	21010104010
230 V	21010105000	21010105010
24 V	21010804000	21010804010
24 V	21010805000	21010805010

Please find further variants at www.pfannenbergl.com or in our main catalogues.

30 J

- Very good perceptibility over great distances; low power consumption.



WEBCODE #8065

PRODUCT	PMF 2030 direct mounting bracket mounting	
Rated voltage	230 V AC 50 60 Hz	
Operating range	195–253 V	
Max. viewing distance	898 m	
Light source	xenon flash tube	
Light intensity	max. 30 J switchable to 20 J, 1,500 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 55 (EN 60529)	

Operating temperature	–40 °C ... +55 °C	
Service life	light emission still 70 % after 8,000,000 flashes	
Dimension (WxH)	Ø 177 x 185 mm	Ø 130 x 170.5 mm
Approvals	EAC	

ARTICLE NO.	direct mounting	bracket mounting
	21010104000	21010104010
	21010105000	21010105010

Please find further variants at www.pfannenbergl.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenbergl.com and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

FLASHING LIGHTS

13 J

- Redundant electrical contacts provides ease of wiring and daisychain connection for multi-unit installations.



WEBCODE #8066

PRODUCT	Quadro F12	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	18–30 V
Max. viewing distance	374 m	
Light source	xenon flash tube	
Light intensity	13 J, 260 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Operating temperature	–40 °C ... +55 °C	

Service life	light emission still 70 % after 12,000,000 flashes
Dimension (WxHxD)	130 x 130 x 130 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	230 V AC	24 V DC
	21041103000	21041803000
	21041104000	21041804000
	21041105000	21041805000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

LED TRAFFIC LIGHTS

60 cd

- Simple to combine for horizontal or vertical configuration.



WEBCODE #8067

PRODUCT	P 450 TLA	
Rated voltage	115 / 230 V AC	12 / 24 V DC
Operating range	90–253 V	10–30 V
Max. viewing distance	180 m	
Light source	high output LED array	
Light intensity	60 cd (DIN 5037)	
Lens colour		
Degrees of protection	IP 65 (EN 60529)	
Operating temperature	–25 °C ... +50 °C	

Service life	>50,000 hrs @ 20 °C	
Dimension (WxHxD)	166.2 x Ø 140 mm	
Approvals	EAC	

ARTICLE NO.	115 / 230 V AC	12 / 24 V DC
	21355645000	21355635000
	21355646000	21355636000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

80 cd

- Face-on LEDs provide far-reaching signals for traffic control and machinery feedback applications.



WEBCODE #8068

PRODUCT	Quadro LED-TL	
Rated voltage	115 / 230 V AC	24 V DC
Operating range	85–265 V	10–30 V
Operating mode (adjustable)	continuous light blinking light	
Max. viewing distance	207 m	
Light source	high output LED array	
Light intensity	>75 cd (DIN 5037)	
Lens colour		

Degrees of protection	IP 65 (EN 60529) IK08 (EN 50102)	
Operating temperature	–30 °C ... +55 °C	
Service life	>50,000 hrs @ 20 °C	
Dimension (WxHxD)	396 x 130 x 130 mm	

ARTICLE NO.	115 / 230 V AC	24 V DC
	21106640008	21106630008

Please find further variants at www.pfannenbergl.com or in our main catalogues.

LED LIGHTS

5 cd

- LED light source for extremely long service life.
- Vibration/shock-resistant.



WEBCODE #8069

PRODUCT	PD 2100-LED	
Rated voltage	230 V AC 50 60 Hz	24 V AC/DC
Operating range	±10 %	AC: 18–30 V DC: 19–30 V
Max. viewing distance	52 m	
Light source	LED	
Light intensity	5 cd (DIN 5037)	
Lens colour		
Degrees of protection	IP 55 (EN 60529)	

Operating temperature	–25 °C ... +55 °C	
Service life	>50,000 hrs @ 20 °C	
Dimension (WxHxD)	166.2 x 128 x 111.2 mm	
Approvals	EAC	

ARTICLE NO.	230 V AC	24 V AC/DC
	21120615000	21120605000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenbergl.com and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

LED LIGHTS

75 cd

- For recognition over long distances.
- 3 selectable operating modes (internally and externally selectable).



WEBCODE #8070

PRODUCT	Quadro-LED-HI	
Rated voltage	230 V AC/DC	24 V DC
Operating range	90–253 V	11–60 V
Max. viewing distance	201 m	
Light source	4 high output LED	
Operating mode	continuous light blinking light (1 Hz 2 Hz) flashing light (0.1 Hz 0.5 Hz 1 Hz 2 Hz)	
Light intensity	75 cd, reducible (DIN 5037)	
Lens colour		
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C
Service life	≥50,000 hrs @ 20 °C
Dimension (WxHxD)	130 x 130 x 130 mm
Warranty	10 years

ARTICLE NO.	230 V AC	24 V DC
	21108643000	21108633000
	21108644000	21108634000
	21108645000	21108635000

Please find further variants at www.pfannenber.com or in our main catalogues.

FUNCTION-MONITORED LIGHTS

5 J

- Integrated flash monitoring and fault message contact.



WEBCODE #8071

PRODUCT	WBL-M
Rated voltage	230 V AC
Operating range	185–242 V
Max. viewing distance	181 m
Light source	xenon flash tube
Light intensity	5 J, 61 cd (DIN 5037)
Flash rate	1 Hz = 60 flashes/min
Lens colour	
Degrees of protection	IP 54 (EN 60529)

Operating temperature	–20 °C ... +55 °C
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxH)	Ø 80 x 242 mm
Approvals	GL EAC

ARTICLE NO.	230 V AC
	21003103156
	21003105156

Please find further variants at www.pfannenber.com or in our main catalogues.

7 J

- Internally monitored via an optical sensor and evaluation circuitry.



WEBCODE #8072

PRODUCT	PMF 2015-M
Rated voltage	24 V DC
Operating range	18–30 V
Operating mode	double flash
Max. viewing distance	366 m
Light source	xenon flash tube
Light intensity	7 J, 250 cd (DIN 5037)
Flash rate	1 Hz = 60 flashes/min
Lens colour	

Degrees of protection	IP 55 (EN 60529)
Operating temperature	–30 °C ... +55 °C
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxH)	Ø 130 x 170.5 mm
Approvals	EAC

ARTICLE NO.	bracket mounting
24 V	21007804012
24 V	21007805012

Please find further variants at www.pfannenber.com or in our main catalogues.

13 J

- Synchronised flashing of up to 10 beacons in series with no additional controller.
- Integrated function monitoring with fault message contact.



WEBCODE #8073

PRODUCT	Quadro S-M-Flex
Rated voltage	230 V AC 50 60 Hz
Operating range	195–253 V
Max. viewing distance	374 m
Light source	xenon flash tube
Light intensity	13 J, 260 cd (DIN 5037)
Flash rate	adjustable (1 Hz = 60 flashes/min factory setting)
Lens colour	
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)

Operating temperature	–25 °C ... +55 °C
Service life	light emission still 70 % after 12,000,000 flashes
Dimension (WxHxD)	130 x 130 x 130 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	230 V AC
	21042101179
	21042104179
	21042105179

Please find further variants at www.pfannenber.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenber.com and in the Pfannenber Sizing Software (PSS). Use the indicated web code at the product image for quick access.

FUNCTION-MONITORED LIGHTS

5 cd

- Control and function monitoring directly via AS-I field bus.
- Low current consumption.



WEBCODE #8074

PRODUCT	PD 2100-M-AS-i
Rated voltage	28 V (AS-i)
Operating range	26.5–32.6 V
Max. viewing distance	52 m
Light source	LED
Light intensity	5 cd (DIN 5037)
Lens colour	
AS-i specification	AS-i 2.1, A/B capable EN 50295

Degrees of protection	IP 55 (EN 60529)
Operating temperature	–25 °C ... +45 °C
Service life	>50,000 hrs
Dimension (WxHxD)	166.2 x 128 x 111.2 mm
Approvals	EAC

ARTICLE NO.	26.5–32.6 V
	21120505004

Please find further variants at www.pfannenber.com or in our main catalogues.

OBSTACLE LIGHTS

- LED obstacle lights, AVV-approved, compliant to ICAO, Annex 14, Volume 1, Chapter 6.
- Omnidirectional LED array. Light radiation of 360° offers superb marking of aviation obstructions for night time and twilight safety.
- Integrated functional fault monitoring with dry contact relay permits automatic switchover to backup lighting.
- POL 10-M-RA: Automatic switching over to standby light in case of error or by means of external control system.

LED – 32 cd

- ICAO.
- Low Intensity, type B.



WEBCODE #8075

PRODUCT	POL 32-M	
Rated voltage	115 / 230 V AC	12 / 24 V DC
Operating range	85–265 V	9.6–28.8 V
Operating mode	continuous light	
Version	monitored	
Beam angle	vertical approx. ±35° horizontal 360°	
Light source	LED array (red)	
Light intensity	32 cd (DIN 5037)	
Lens colour		

Light colour	aviation red	
Degrees of protection	IP 68 (EN 60529)	
Operating temperature	–40 °C ... +55 °C	
Service life	>50,000 hrs	
Dimension (HxW)	240 x Ø 118 mm	
Approvals	ICAO	

ARTICLE NO.	115 / 230 V AC	12 / 24 V DC
	21105685005	21105675005

Please find further variants at www.pfannenber.com or in our main catalogues.

LED – 18 cd

- AVV | ICAO.
- Low Intensity, type A.



WEBCODE #8076

PRODUCT	POL 10-M-RA	
Rated voltage	115 / 230 V AC	12 / 24 V DC
Operating range	85–265 V	9.6–28.8 V
Operating mode	continuous light	
Version	monitored redundant	
Beam angle	vertical approx. ±35° horizontal 360°	
Light source	LED array (red)	
Light intensity	18 cd (DIN 5037)	
Lens colour		

Light colour	aviation red	
Degrees of protection	IP 68 (EN 60529)	
Operating temperature	–40 °C ... +55 °C	
Service life	>50,000 hrs	
Dimension (HxW)	240 x Ø 118 mm	
Approvals	ICAO AVV	

ARTICLE NO.	115 / 230 V AC	12 / 24 V DC
	21105645010	21105635010

Please find further variants at www.pfannenber.com or in our main catalogues.

PATROL SOUNDERS

- Safe; an incorrect installation is virtually impossible.
- Easy; significantly shorter assembly and installation times.
- Economical; extremely high efficiency and good penetration of acoustical obstacles significantly reduce the required number of sounders.

100 dB(A)



WEBCODE #8077

PRODUCT	PA 1	
Rated voltage	230 V AC 50 60 Hz	12–48 V DC
Operating range	195–253 V	10–57 V
Sound pressure level	103 dB(A) @ DIN tone	
Sound level reduction	max. –16 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Colour	● RAL 3000 ● RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	109.5 x 86 x 80.6 mm	
Warranty	10 years	
Approvals	UL EAC option: GL MED CNBOP EN 54-3 (24 V) VdS (24 V)	

ARTICLE NO.	230 V AC	12–48 V DC
●	23310100055	23310630055
●	23310100000	23310630000

Please find further variants at www.pfannenber.com or in our main catalogues.

105 dB(A)



WEBCODE #8078

PRODUCT	PA 5	
Rated voltage	230 V AC 50 60 Hz	12–48 V DC
Operating range	195–253 V	10–57 V
Sound pressure level	106 dB(A) @ DIN tone	
Sound level reduction	max. –16 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Colour	● RAL 3000 ● RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	163.4 x 135 x 132 mm	
Warranty	10 years	
Approvals	UL EAC option: GL MED CNBOP EN 54-3 (24 V) VdS (24 V)	

ARTICLE NO.	230 V AC	12–48 V DC
●	23350100055	23350630055
●	23350100000	23350630000

Please find further variants at www.pfannenber.com or in our main catalogues.

110 dB(A)



WEBCODE #8079

PRODUCT	PA 10	
Rated voltage	115–230 V AC 50/60 Hz	12–48 V DC
Operating range	95–265 V	10–60 V
Sound pressure level	116 dB(A) @ DIN tone	
Sound level reduction	max. –12 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Colour	● RAL 3000 ● RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	214 x 170 x 156 mm	
Warranty	10 years	
Approvals	UL EAC option: GL MED CNBOP EN 54-3 (24 V) VdS (24 V)	

ARTICLE NO.	115–230 V AC	12–48 V DC
●	23360640055	23360630055
●	23360640000	23360630000

Please find further variants at www.pfannenber.com or in our main catalogues.

120 dB(A)



WEBCODE #8080

PRODUCT	PA 20	
Rated voltage	115–230 V AC 50/60 Hz	12–48 V DC
Operating range	95–265 V	10–60 V
Sound pressure level	122 dB(A) @ DIN tone	
Sound level reduction	max. –12 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Colour	● RAL 3000 ● RAL 7035	
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C	
Dimension (WxHxD)	214 x 170 x 181 mm	
Warranty	10 years	
Approvals	UL EAC option: GL MED CNBOP EN 54-3 (24 V) VdS (24 V)	

ARTICLE NO.	115–230 V AC	12–48 V DC
●	23370640055	23370630055
●	23370640000	23370630000

Please find further variants at www.pfannenber.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenber.com and in the Pfannenber Sizing Software (PSS). Use the indicated web code at the product image for quick access.

DS SOUNDERS

- Die-cast aluminium housing resistant to UV light, seawater, and many chemicals. Sturdy construction resists vandalism to ensure a high degree of functional safety.
- Choice of 32 unique alarm tones with three stages of tone control for distinctive signaling of specific events.

105 dB(A)



WEBCODE #8081

PRODUCT	DS 5	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	19–29 V
Sound pressure level	108 dB(A) @ DIN tone	
Sound level reduction	by –20 dB via potentiometer (option)	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	● RAL 3000	
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Dimension (WxHxD)	133.5 x 133.5 x 143 mm	
Warranty	10 years	
Approvals	EN 54-3 VdS EAC option: GL cUL	

ARTICLE NO.	230 V AC	24 V DC
	23106100000	23106800000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

110 dB(A)



WEBCODE #8082

PRODUCT	DS 10	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	19–29 V
Sound pressure level	112 dB(A) @ DIN tone	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	● RAL 3000	
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Dimension (WxHxD)	133.5 x 133.5 x 143 mm	
Warranty	10 years	
Approvals	EN 54-3 VdS EAC option: GL cUL	

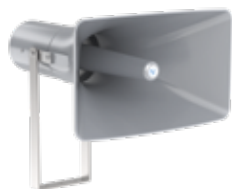
ARTICLE NO.	230 V AC	24 V DC
	23111100000	23111800000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

SOUNDER

130 dB(A)

- Secure alarming in the loudest environments and over large areas.



WEBCODE #8083

PRODUCT	PA 130	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	–25% / +15%	20–60 V
Sound pressure level	130 dB(A) @ DIN tone	
Alarm tones	80	
Remote controlled tones	9 tones, externally controllable	
Colour	● RAL 7035	
Degrees of protection	IP 54 (EN 60529)	
Operating temperature	–20 °C ... +50 °C	
Dimension (WxHxD)	490 x 295 x 622 mm	
Approvals	EAC	

ARTICLE NO.	230 V AC	24 V DC
	23026100000	23026910000

Please find further variants at www.pfannenbergl.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenbergl.com and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

PATROL FLASHING SOUNDERS

Three dimensional innovation;

- Safe; an incorrect installation is virtually impossible.
- Easy; significantly shorter assembly and installation times.
- Economical; extremely high efficiency and good penetration of acoustical obstacles significantly reduce the required number of sounders.
- Pre-wired sounder and light ex works.
- Corresponding light intensity available for every sound pressure level.

5 J / 100 dB(A)



WEBCODE #8084

PRODUCT	PA X 1-05	
Rated voltage	230 V AC 50 I 60 Hz	24 V DC
Operating range	187–255 V	18–30 V
Max. viewing distance	164 m	
Light source	xenon flash tube	
Flash rate	1 Hz = 60 flashes/min	
Light intensity	5 J, 44 cd (DIN 5037)	
Sound pressure level	103 dB(A) @ DIN tone	
Sound level reduction	max. –16 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Lens colour		
Housing colour	RAL 3000 I RAL 7035	
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)
Dimension (WxHxD)	109.5 x 172.4 x 80.6 mm
Warranty	10 years
Approvals	EN 54-3 I EN 54-23 I VdS I UL I EAC option: GL I MED I CNBOP standard

ARTICLE NO.	housing	housing
230 V	23311103000	23311103055
230 V	23311104000	23311104055
230 V	23311105000	23311105055
24 V	23311803000	23311803055
24 V	23311804000	23311804055
24 V	23311805000	23311805055

Please find further variants at www.pfannenber.com or in our main catalogues.

5 J / 105 dB(A)



WEBCODE #8085

PRODUCT	PA X 5-05	
Rated voltage	230 V AC 50 I 60 Hz	24 V DC
Operating range	187–255 V	18–30 V
Max. viewing distance	173 m	
Light source	xenon flash tube	
Flash rate	1 Hz = 60 flashes/min	
Light intensity	5 J, 47 cd (DIN 5037)	
Sound pressure level	106 dB(A) @ DIN tone	
Sound level reduction	max. –16 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Lens colour		
Housing colour	RAL 3000 I RAL 7035	
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)
Dimension (WxHxD)	163.4 x 215 x 132 mm
Warranty	10 years
Approvals	UL I EAC I option: GL I MED

ARTICLE NO.	housing	housing
230 V	23351103000	23351103055
230 V	23351104000	23351104055
230 V	23351105000	23351105055
24 V	23351803000	23351803055
24 V	23351804000	23351804055
24 V	23351805000	23351805055

Please find further variants at www.pfannenber.com or in our main catalogues.

10 J / 110 dB(A)



WEBCODE #8086

PRODUCT	PA X 10-10	
Rated voltage	230 V AC 50 I 60 Hz	24 V DC
Operating range	187–255 V	18–30 V
Max. viewing distance	283 m	
Light source	xenon flash tube	
Flash rate	1 Hz = 60 flashes/min	
Light intensity	10 J, 129 cd (DIN 5037)	
Sound pressure level	116 dB(A) @ DIN tone	
Sound level reduction	max. –12 dB via potentiometer	
Alarm tones	80 / 4 tones are externally selectable	
Lens colour		
Housing colour	RAL 3000 I RAL 7035	
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)
Dimension (WxHxD)	214 x 270 x 156 mm
Warranty	10 years
Approvals	UL I EAC I option: GL I MED

ARTICLE NO.	housing	housing
230 V	23361103000	23361103055
230 V	23361104000	23361104055
230 V	23361105000	23361105055
24 V	23361803000	23361803055
24 V	23361804000	23361804055
24 V	23361805000	23361805055

Please find further variants at www.pfannenber.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenber.com and in the Pfannenber Sizing Software (PSS). Use the indicated web code at the product image for quick access.

PATROL FLASHING SOUNDERS

15 J / 120 dB(A)



WEBCODE #8087

PRODUCT	PA X 20-15	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	187–255 V	18–30 V
Max. viewing distance	377 m	
Light source	xenon flash tube	
Flash rate	1 Hz = 60 flashes/min	
Light intensity	15 J, 190 cd (DIN 5037)	
Sound pressure level	122 dB(A) @ DIN tone	
Sound level reduction	max. –12 dB via potentiometer	
Alarm tones	80 4 tones are externally selectable	
Lens colour		
Housing colour		
Operating temperature	–40 °C ... +55 °C	

Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)
Dimension (WxHxD)	214 x 270 x 181 mm
Warranty	10 years
Approvals	UL EAC option: GL MED

ARTICLE NO.	housing	housing
230 V	23372103000	23372103055
230 V	23372104000	23372104055
230 V	23372105000	23372105055
24 V	23372803000	23372803055
24 V	23372804000	23372804055
24 V	23372805000	23372805055

Please find further variants at www.pfannenberg.com or in our main catalogues.

PYRA® FLASHING SOUNDERS

- Safe; an incorrect installation is virtually impossible.
- Economical; largest possible signaling range due to effective XENON technology.
- Integrated inrush current limitation and undervoltage detection.
- Light and sounder can be controlled separately.

5 J / 100 dB(A)



reddot award 2015
winner

WEBCODE #8088

PRODUCT	PY X-MA-05	
Rated voltage	230 V AC 50 60 Hz	24 V AC 50 60 Hz / DC
Operating range	187–255 V	AC: 18–30 V DC: 10–57 V
Max. viewing distance	173 m	
Light source	xenon flash tube	
Flash rate	0.1 0.5 0.75 1 Hz (DIP switch)	
Light intensity	5 J, 56 cd (DIN 5037)	
Sound pressure level	100 dB(A)	
Sound level reduction	max. –20 dB via potentiometer	
Alarm tones	8	
Lens colour		
Housing colour		
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxHxD)	166 x 134.2 x 114 mm
Warranty	10 years
Approvals	UL EAC

ARTICLE NO.	housing	housing
230 V	21554103000	21554103055
230 V	21554104000	21554104055
230 V	21554105000	21554105055
24 V	21554813000	21554813055
24 V	21554814000	21554814055
24 V	21554815000	21554815055

Please find further variants at www.pfannenberg.com or in our main catalogues.

10 J / 100 dB(A)



reddot award 2015
winner

WEBCODE #8089

PRODUCT	PY X-MA-10	
Rated voltage	230 V AC 50 60 Hz	24 V AC 50 60 Hz / DC
Operating range	187–255 V	AC: 18–30 V DC: 10–57 V
Max. viewing distance	283 m	
Light source	xenon flash tube	
Flash rate	0.1 0.5 0.75 1 Hz (DIP switch)	
Light intensity	10 J, 149 cd (DIN 5037)	
Sound pressure level	100 dB(A)	
Sound level reduction	max. –20 dB via potentiometer	
Alarm tones	8	
Lens colour		
Housing colour		
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxHxD)	166 x 134.2 x 114 mm
Warranty	10 years
Approvals	UL EAC

ARTICLE NO.	housing	housing
230 V	21555103000	21555103055
230 V	21555104000	21555104055
230 V	21555105000	21555105055
24 V	21555813000	21555813055
24 V	21555814000	21555814055
24 V	21555815000	21555815055

Please find further variants at www.pfannenberg.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenberg.com and in the Pfannenberg Sizing Software (PSS). Use the indicated web code at the product image for quick access.

PYRA® FLASHING SOUNDERS

15 J / 102 dB(A)



WEBCODE #8104

PRODUCT	PY X-LA-15	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	187–255 V	19.2–28.8 V
Max. viewing distance	320 m	
Light source	xenon flash tube	
Flash rate	0.1 0.5 0.75 1 Hz (DIP switch)	
Light intensity	15 J, 190 cd (DIN 5037)	
Sound pressure level	102 dB(A)	
Sound level reduction	max. –20 dB via potentiometer	
Alarm tones	8	
Lens colour		
Housing colour		
Degrees of protection	IP 66 (EN 60529) / NEMA 4/4X IK08 (EN 50102)	

Operating temperature	–40 °C ... +55 °C	
Service life	light emission still 70 % after 8,000,000 flashes	
Dimension (WxHxD)	216 x 172 x 144 mm	
Warranty	10 years	
Approvals	UL (pending) EAC	

ARTICLE NO.	housing	housing
230 V	21565103000	21565103055
230 V	21565104000	21565104055
230 V	21565105000	21565105055
24 V	21565803000	21565803055
24 V	21565804000	21565804055
24 V	21565805000	21565805055

Please find further variants at www.pfannenberg.com or in our main catalogues.

SAFETY-RELATED LIGHTS



Since 1st June 2015, the European Directive, Seveso III, has been implemented as national law. In Germany, this occurs with the Amendment to the Hazardous Incident Ordinance (12 BImSchV). Official, government inspections and monitoring will have even more influence in the new Hazardous Incident Ordinance. Basic obligations are to take precautions to prevent hazardous incidents and the possible consequences thereof. This includes equipping the operating area with sufficient warning, alerting and safety facilities.

- Devices be implemented in Safety Instrumented Systems (SIS) up to SIL 2/PLd.

10 J

- Extremely bright flashing light by light bundling with fensel lens, low power consumption.



WEBCODE #8090

PRODUCT	PMF 2015-SIL	
	direct mounting	bracket mounting
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	18–30 V
Max. viewing distance	348 m	
Light source	xenon flash tube	
Light intensity	10 J, 225 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 55 (EN 60529)	
Operating temperature	–30 °C ... +55 °C	

Service life	light emission still 70 % after 8,000,000 flashes	
Dimension (WxH)	Ø 177 x 185 mm	Ø 150 x 185 mm
Approvals	EAC	

ARTICLE NO.	direct mounting	bracket mounting
230 V	21007104601	21007104611
230 V	21007105601	21007105611
24 V	21007804601	21007804611
24 V	21007805601	21007805611

Please find further variants at www.pfannenberg.com or in our main catalogues.

10 J

- To signal dangerous situations in safety-relevant application such as process and plant safety.



WEBCODE #8091

PRODUCT	Quadro F12-SIL	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	18–30 V
Max. viewing distance	348 m	
Light source	xenon flash tube	
Light intensity	10 J, 225 cd (DIN 5037)	
Flash rate	1 Hz = 60 flashes/min	
Lens colour		
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Operating temperature	–30 °C ... +55 °C	

Service life	light emission still 70 % after 8,000,000 flashes	
Dimension (WxHxD)	130 x 130 x 130 mm	
Warranty	10 years	
Approvals	EAC	

ARTICLE NO.	230 V AC	24 V DC
	21041103601	21041803601
	21041104601	21041804601
	21041105601	21041805601

Please find further variants at www.pfannenberg.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenberg.com and in the Pfannenberg Sizing Software (PSS). Use the indicated web code at the product image for quick access.

SAFETY-RELATED SOUNDERS



- Integrated safety tough demands under industrial conditions.
- 32 different sounds selectable.
- Can be implemented in Safety Instrumented Systems (SIS) up to SIL 2/PLd.

105 dB(A)



WEBCODE #8092

PRODUCT	DS 5-SIL	
Rated voltage	115–230 V AC 50/60 Hz	24 V DC
Operating range	95–253 V	19–29 V
Sound pressure level	108 dB(A) @ DIN tone	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	RAL 3000	
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102) IP 66 I IP 67 (EN 60529)	
Cable entry	2 x M20	

Connecting terminals	max. 2.5 mm ²
Operating temperature	–25 °C ... +55 °C
Dimension (WxHxD)	133.5 x 133.5 x 143 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	115–230 V AC	24 V DC
	23106100601	23106800601

Please find further variants at www.pfannenbergl.com or in our main catalogues.

110 dB(A)



WEBCODE #8093

PRODUCT	DS 10-SIL	
Rated voltage	115–230 V AC 50/60 Hz	24 V DC
Operating range	95–253 V	19–29 V
Sound pressure level	112 dB(A) @ DIN tone	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	RAL 3000	
Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Cable entry	2 x M20	

Connecting terminals	max. 2.5 mm ²
Operating temperature	–25 °C ... +55 °C
Dimension (WxHxD)	133.5 x 133.5 x 143 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	115–230 V AC	24 V DC
	23111100601	23111800601

Please find further variants at www.pfannenbergl.com or in our main catalogues.

FLASHING LIGHTS

7.5 J

- For use in potentially explosive areas in Zone 2 as per EN 60079-10 and Zone 22 as per EN 61241-1.



WEBCODE #8066

PRODUCT	Quadro F12-3G/3D	
Rated voltage	230 V AC 50 I 60 Hz	24 V DC
Operating range	195–253 V	18–30 V
Max. viewing distance	374 m	
Light source	flash tube	
Light intensity	7.5 J, 84 cd (DIN 5037)	
Flash rate	0,83 Hz = 50 flashes/min	
Explosion protection	II 3G Ex nR IIC T4 –20 °C Ta +45 °C II 3D Ex td A22 IP66 T105 °C –20 °C Ta +45 °C	
Lens colour		
Degrees of protection	IP 66 (EN 60529) IK08 (EN 50102)	

Operating temperature	–20 °C ... +45 °C
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxHxD)	130 x 130 x 130 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	230 V AC	24 V DC
	21041103008	21041803008
	21041104008	21041804008
	21041105008	21041805008

Please find further variants at www.pfannenbergl.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenbergl.com and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

Ex FLASHING LIGHTS

5 J

- Usable in all chemical and petrochemical plants as well as offshore plants.
- Zone 1/21.



WEBCODE #8095

PRODUCT	CWB-ATEX
Rated voltage	24–42 V AC / 12–48 V DC
Operating range	±10 %
Max. viewing distance	172 m
Light source	flash tube
Light intensity	5 J, 55 cd (DIN 5037)
Flash rate	approx. 1 Hz
Lens colour	
Explosion protection	II 2 G Ex d e IIC T6 Gb II 2 G Ex d e IIC T5 Gb II 2 D Ex tb IIIC T85°C Db IP66 (T6) II 2 D Ex tb IIIC T100°C Db IP66 (T5)
Degrees of protection	IP 66 (EN 60529)

Operating temperature	–40 °C ... +40 °C (T6) –40 °C ... +50 °C (T5)
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxHxD)	Ø 70 x 260 mm
Approvals	GL EAC

ARTICLE NO.	24–42 V AC / 12–48 V DC
	31006903000
	31006904000
	31006905000

Please find further variants at www.pfannenberg.com or in our main catalogues.

5 J

- Powerful visual safety for hazardous areas.
- Large connection box for simple mounting.
- Zone 1/21.



WEBCODE #8096

PRODUCT	BExBG05E
Rated voltage	24 V DC
Operating range	±25 %
Max. viewing distance	172 m
Light source	flash tube
Light intensity	5 J, 55 cd (DIN 5037)
Flash rate	60 flashes/min, stabilised
Lens colour	
Explosion protection	II2G Ex de IIC T4, T5 or T6 II2D Ex tD A21 IP67 T115
Operating temperature	T4 / T115°C @ Ta –50 °C ... +70 °C T5 / T100°C @ Ta –50 °C ... +55 °C T6 / T85°C @ Ta –50 °C ... +40 °C

Degrees of protection	IP 66 (EN 60529)
Service life	light emission still 70 % after 8,000,000 flashes
Dimension (WxHxD)	Ø 70 x 260 mm
Approvals	GL EAC

ARTICLE NO.	24 V DC
	31130803000
	31130804000
	31130805000

Please find further variants at www.pfannenberg.com or in our main catalogues.

LED – 9 cd

- 4 different alarms, internally and externally selectable as standard.
- For use in potentially explosive areas in Zone 2 and 22.



WEBCODE #8094

PRODUCT	Quadro-LED Flex-3G/3D
Rated voltage	24 V AC/DC
Operating range	AC: 15–40 V / DC: 10–60 V
Max. viewing distance	70 m
Light source	LED
Light intensity	9 cd (DIN 5037)
Operating mode	continuous light blinking light 1.5 Hz flashing light 1 Hz rotating all-round light 2.5 Hz
Explosion protection	II3G Ex nR II T5 X –20 °C ≤ Ta ≤ +55 °C II3G Ex nR II T6 X –20 °C ≤ Ta ≤ +50 °C II3D IP66 T 85°C X –20 °C ≤ Ta ≤ +55 °C
Lens colour	
Cable entry	2x M20 x 1.5

Degrees of protection	IP 66 (EN 60529) IK08 (EN 50102)
Operating temperature	–20 °C ... +50 °C (T6) –20 °C ... +55 °C (T5)
Service life	min. 50.000 hrs
Dimension (WxHxD)	130 x 130 x 130 mm
Warranty	10 years
Approvals	EAC

ARTICLE NO.	24 V AC/DC
	21104633009
	21104634009
	21104635009

Please find further variants at www.pfannenberg.com or in our main catalogues.

Detailed 3D-Coverage values (signaling ranges) can be found on pfannenberg.com and in the Pfannenberg Sizing Software (PSS). Use the indicated web code at the product image for quick access.

Ex SOUNDERS

105 dB(A)

- Satisfy requirements for device categories 3G (Zone 2) and 3D (Zone 22), in hazardous areas.



WEBCODE #8097

PRODUCT	DS 5 3G/3D	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	19–29 V
Sound pressure level	108 dB(A) @ DIN tone	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	RAL 3000	
Explosion protection	II 3G Ex nA II T4 II 3D Ex tD A22 IP 67 T135°C	
Temperature class	T4/T3 @ –25 °C ... +55 °C	

Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Dimension (WxHxD)	133.5 x 133.5 x 143 mm	
Warranty	10 years	
Approvals	EN 54-3 VdS EAC option: GL	
ARTICLE NO.	230 V AC	24 V DC
	23106100007	23106800007

Please find further variants at www.pfannenbergl.com or in our main catalogues.

110 dB(A)

- Satisfy requirements for device categories 3G (Zone 2) and 3D (Zone 22), in hazardous areas.



WEBCODE #8098

PRODUCT	DS 10 3G/3D	
Rated voltage	230 V AC 50 60 Hz	24 V DC
Operating range	195–253 V	19–29 V
Sound pressure level	112 dB(A) @ DIN tone	
Alarm tones	32 4 tones are externally selectable (option)	
Colour	RAL 3000	
Explosion protection	II 3G Ex nA II T4 II 3D Ex tD A22 IP 67 T135°C	
Temperature class	T4/T3 @ –25 °C ... +55 °C	

Degrees of protection	IP 66, IP 67 (EN 60529) IK08 (EN 50102)	
Dimension (WxHxD)	133.5 x 133.5 x 143 mm	
Warranty	10 years	
Approvals	EN 54-3 VdS EAC option: GL	
ARTICLE NO.	230 V AC	24 V DC
	23111100007	23111800007

Please find further variants at www.pfannenbergl.com or in our main catalogues.

110 dB(A)

- ATEX certified for Zone 1 / category 20.



WEBCODE #8101

PRODUCT	BExS 110D	
Rated voltage	230 V AC ±10 % 50 60 Hz	24 V ±25 % DC
Sound pressure level	110 dB(A)	
Sound level reduction	–9 dB	
Alarm tones	32	
Colour	RAL 3000	
Explosion protection	II 2G Ex d IIC T4 II 2G Ex d IIB T4	

Temperature class	IIC: T4 @ –50 °C ... +55 °C Ta IIB: T4 @ –50 °C ... +70 °C Ta	
Degrees of protection	IP 67 (EN 60529)	
Dimension (W/HxD)	Ø 181 x 275 mm	
Approvals	AC: EAC DC: EN 54-3 VdS EAC	
ARTICLE NO.	230 V AC	24 V DC
	32080100000	32080800000

Please find further variants at www.pfannenbergl.com or in our main catalogues.







Ex FLASHING SOUNDERS



5 J / 110 dB(A)

- Combined flashing light and powerful sounder for enhanced alarming and safety for Zone 1.



WEBCODE #8102

PRODUCT	BExCS 110-05D	
Rated voltage	230 V AC	24 V DC
Operating range	±10 %	sounder: ±25 % light: 20–28 V
Max. viewing distance	172 m	
Sound pressure level	110 dB(A)	
Sound level reduction	–9 dB	
Alarm tones	32	
Light source	xenon flash tube	
Light intensity	5 J, 55 cd (DIN 5037)	
Flash rate	1 Hz	
Lens colour	     	

Explosion protection	II 2G Ex d IIB T4 –50 °C ... +70 °C Ta	
Degrees of protection	IP 67 (EN 60529)	
Service life of light source	light emission still 70 % after 8,000,000 flashes	
Dimension (WxHxD)	Ø 181 x 368 mm	
Approvals	GL EAC	
ARTICLE NO.	230 V AC	24 V DC
	32074103000	32074803000
	32074105000	32074805000

Please find further variants at www.pfannenbergl.com or in our main catalogues.


Detailed 3D-Coverage values (signaling ranges) can be found on pfannenbergl.com and in the Pfannenbergl Sizing Software (PSS). Use the indicated web code at the product image for quick access.

BR 35 SIGNAL TOWERS Ø 35 mm

- Modular design with six different colour elements and four mounting methods offers endless combination possibilities.
- The light is amplified by the internal prisms of the impact-proof, heat-resistant and dust-proof polycarbonate lens and can be easily identified from all sides.
- Appealing design with a diameter of just 35 mm.
- For use in electronic production, in laboratories, in medical technology and in all other indoor applications.



WEBCODE #8099

MOUNTING		STAND MOUNTING		PLINTH MOUNTING		TUBE MOUNTING		PANEL MOUNTING	
Rated voltage		230 V AC 50 60 Hz	24 V DC	230 V AC 50 60 Hz	24 V DC	230 V AC 50 60 Hz	24 V DC	230 V AC 50 60 Hz	24 V DC
Operating range		−15% / + 10%	−15 % / +20 %	−15 % / +10 %	−15 % / +20 %	−15 % / +10 %	−15 % / +20 %	−15 % / +10 %	−15 % / +20 %
Light source		filament lamp BA9s (pre-installed)							
Light intensity		44 cd (DIN 5037)							
Lens colour									
Diameter globe		35 mm square-shaped							
Degrees of protection		IP 54 (EN 60529)							
Connecting terminals		single wire: 1.5 mm², fine wire: 0.14–1.5 mm²							
Type of connection						cable length 0.5 m		cable length 0.65 m	
Height	1-stage	228 mm				210 mm		91 mm	
	2-stage	276 mm				258 mm		142 mm	
	3-stage	324 mm				306 mm		190 mm	
	4-stage	372 mm				354 mm		238 mm	
ARTICLE NO.									
1-stage		22080101000	22080801000	22081101000	22081801000	22082101000	22082801000	22083101000	22083801000
2-stage		22080102000	22080802000	22081102000	22081802000	22082102000	22082802000	22083102000	22083802000
3-stage		22080103000	22080803000	22081103000	22081803000	22082103000	22082803000	22083103000	22083803000
4-stage		22080104000	22080804000	22081104000	22081804000	22082104000	22082804000	22083104000	22083804000

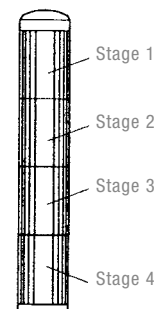
Please find further variants at www.pfannenberg.com or in our main catalogues.

ORDER STEPS

Step 1: ARTICLE NO.

Step 2: Lens colours (top-down) write down lens colours

1	
2	
3	
4	



Pfannenberg's PSS software tool provides easy signal tower configuration to suit individual requirements: pss-pfannenberg.de or pfannenberg.com.








BR 50 SIGNAL TOWERS Ø 50 mm

- Modular design with sturdy housing for all indoor and outdoor applications in tough conditions.
- Flexible building kit system guarantees easy handling.
- Up to 5 modules with 6 lens colours can be combined as desired by simply plugging together, even retrospectively.



MODULES

WEBCODE #8100

VERSIONS	CONTINUOUS LIGHT	BLINKING LIGHT (1.5 Hz)		FLASHING LIGHT		SOUNDER	
Rated voltage	12 V–253 V	230 V AC 50 60 Hz	24 V DC	230 V AC 50 60 Hz	24 V DC	230 V AC 50 60 Hz	24 V DC
Operating range	–	–15 % / +10 %	–15 % / +20 %	–10 % / +15 %	AC: 10–27 V DC: 10–35 V	–15 % / +10 %	–15 % / +20 %
Light source	BA15d LED (order separately)			xenon flash tube (pre-installed)		–	
Light intensity	5 W					–	
Sound pressure level						85 dB(A)	
Lens colour							
Diameter globe	Ø 50 mm						
Degrees of protection	IP 54 (EN 60529) option: IP 65					IP 43 (EN 60529)	
ARTICLE NO.							
	28250040010	28250051010	28250058010	28250071010	28250078010	28250081000	28250088000
	28250040030	28250051030	28250058030	28250071030	28250078030		
	28250040040	28250051040	28250058040	28250071040	28250078040		
	28250040050	28250051050	28250058050	28250071050	28250078050		
	28250040060	28250051060	28250058060	28250071060	28250078060		
	28250040070	28250051070	28250058070	28250071070	28250078070		

Please find further variants at www.pfannenbergl.com or in our main catalogues.

MOUNTING OPTIONS



SPECIAL MODULES

VARIATIONS	BASE AND END MODULE	TUBULAR STAND WITH PLINTH	TUBE WITH THREAD AND BRACKET	PRODUCT	BR 50 AS-I BUS SLAVE	
Tube thread		30 mm, M16 x 1.5		ARTICLE NO.	28250148300	28250178300
ARTICLE NO.				Modules	AS-i	AS-i-AB
Tube height	28250010000	28250150010	28250160010	Module types	LED, sounder, continuous light, blinking light	
250 mm		28250150020	28250160020	Segment stages	max. 4	max. 3
400 mm		28250150040	28250160040	Slave/Master	max. 31	max. 62

ACCESSORIES



LIGHT SOURCE	LED STANDARD		LED STANDARD PLUS		FILAMENT LAMP 5 W	
Rated voltage	230 V AC	24 V AC/DC	230 V AC	24 V AC/DC	230 V AC	24 V AC/DC
ARTICLE NO.						
	28213000014	28213000006	28213000013		28213000005	28213000001
	28213000015			28213000007		
	28213000016			28213000009		
	28213000018	28213000011	28213000017			
	28213000020	28213000012	28213000019			

* White LED can be used in combination with all lens colours.



WALL BRACKET WITH HOOD	
ARTICLE NO.	
BR50-W	28250200000

Pfannenbergl's PSS software tool provides easy signal tower configuration to suit individual requirements: pss-pfannenbergl.de or pfannenbergl.com.

SERVICE:

Pfannenberg cooling service for chillers and electrical enclosures cooling units.



Pfannenberg provides full service for chillers and cooling units for electrical enclosures from all manufacturers – with more knowledge and quicker action – selected carefully and ordered easily. To attractive conditions! Chillers and also cooling units in industrial applications have to perform and endure more. Qualified service protects your cooling system against installation and setting up errors, thus preventing considerable follow-up costs that may be incurred. Pfannenberg Service does much more than deliver spare parts and carry out specialist repairs: comprehensively and extremely reliably. It's therefore better to use the knowledge and experience of the company which understands the topic the best: Pfannenberg.

1. Commissioning

You can recognise the specialist from the beginning.

- Informing the customer about important functions.
- Checking the existing pipe-line systems.
- Connecting to the supply network professionally.
- Filling and initial setting up of the system.
- Compiling an acceptance protocol.

2. Maintenance

The most expensive machine is one that is idle.

- Checking the essential aggregate functions.
- Carrying out necessary cleaning and readjustments.
- Advising on maintenance intervals and potential for optimisation.
- Maintenance protocol and informing about parts that may be needed in the future.
- Warranty extension (in connection with a maintenance contract).

3. Spare part kits

Better to have them – the correct ones.

Electro kit:

- fans
- electrical components
- pump gasket kit (chiller)

Cooling kit:

- compressor
- expansion valve
- pressure switch

4. Leakage test

By a professional – with a professional measurement device.

- Checking for possible damages of chillers caused by vibrations, corrosion or fatigue caused by aging. Documentation on relevant regulations.
- Taking legal regulations into consideration: every 12 months from 3 kg refrigerant content, required according to EG directive 303/2008.

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