



Process reliability even under extreme conditions

Air/Water Heat exchangers from the PWS and PWD series

The use of Pfannenberg air/water heat exchangers is particularly suitable where ambient temperatures are high or the atmosphere proves to be particularly oily or aggressive.

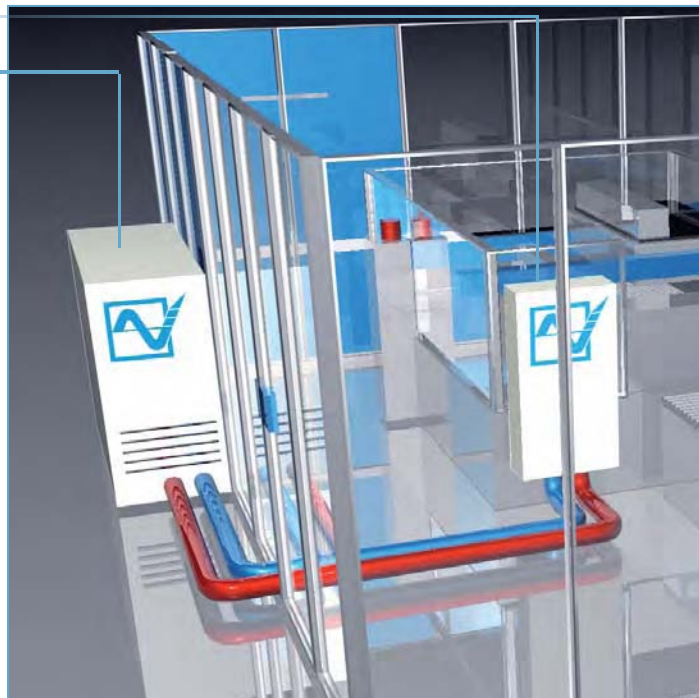
Their main advantages over other air conditioner units for control cabinets are their maintenance-free operation and extremely low noise emission.

Ideal areas of use for air/water heat exchangers are wherever machines or production processes are cooled by tempered water and water is thus already provided.

The biggest advantage of water cooling is the 100 % system solution

The combination of air/water heat exchangers and chillers offers an ideal system solution for the cooling of your processes, machines and controllers.

Chillers ensure central, economic cooling and provision of water as the cooling medium. All cooling tasks in a system or machine and also on a control cabinet can be accomplished simply and economically via a closed pipeline system.



The special product characteristics of the PWS series



Economy

- system-compatible with chillers
- can be integrated in existing cooling circuits
- integrated thermostat and solenoid valve for energy-efficient temperature control

Process reliability

- high air flow rate and cooling capacity
- any power losses that occur are not given off into the room
- integrated temperature monitoring with alarm contact

Resilience

- very high IP protection (up to IP 65)
- usable under aggressive environmental conditions
- independent from the ambient temperature at the place of installation

Service and mounting-friendliness

- compact design
- seal requires no elaborate reworking of the mounting cut-out
- maintenance-free

All air/water heat exchangers at a glance

Type	Cooling capacity	Rated voltage	Dimensions (HxWxD)	Approvals					Page
				UL	cUL	GOST	CSA	CE	
Heat exchangers from the PWS series – air/water heat exchangers for side and door mounting									
PWS 71002	10000 W	230 V / 400 V ¹	1800 x 600 x 315 mm	●	●	●		●	64
PWS 7702	7000 W	230 V / 400 V ¹	1800 x 460 x 310 mm	●	●	●		●	66
PWS 7702 SL	7000 W	230 V / 400 V	1800 x 460 x 255 mm	●	●	○		●	66
PWS 7502	5200 W	115 V / 230 V	1400 x 460 x 235 mm	●	●	●		●	68
PWS 7332	3150 W	115 V / 230 V	950 x 400 x 190 mm	●	●	●		●	70
PWS 7332 L	3150 W	115 V / 230 V	1350 x 400 x 190 mm	●	●	●		●	72
PWS 7152	1500 W	115 V / 230 V	950 x 400 x 115 mm	●	●	●		●	70
PWS 7102	950 W	115 V / 230 V	500 x 200 x 150 mm	●	●	●		●	74
PWS 7062	600 W	115 V / 230 V	500 x 200 x 100 mm	●	●	●		●	74
Roof-mounted heat exchangers from the PWD series – air/water heat exchangers for roof mounting									
PWD 5402	3400 W	230 V	190 x 720 x 465 mm			●		●	76
PWD 5302	2150 W	230 V	140 x 600 x 390 mm			●		●	76

¹ variant without UL

● available
○ pending



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PWS 71002

Air/water heat exchanger Cooling capacity 10000 W



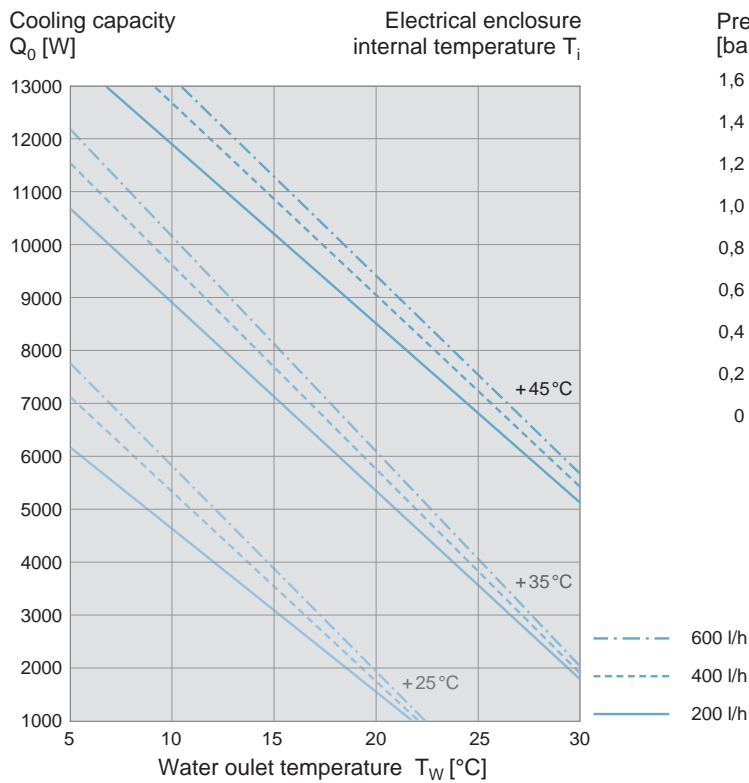
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact

Data		PWS 71002		Unit
Article number		12057802055	12057810055	
Rated voltage ± 10 %		AC 50 Hz / 60 Hz	AC 60 Hz	
		400 3~	230	V
Cooling performance at 600 l/h	W10/A35	10000		W
Power consumption	W10/A35	1050 / 1450	820 / 1200	
Current consumption	W10/A35	1.9 / 2.2	3.8 / 5.2	A
Starting current	W10/A35	8.3 / 9.4	13.5 / 18.8	
Unimpeded airflow (free flow)	internal	5900	6250	m³/h
Pre fuse T		10		A
Connection	electro	spring-type terminal included with plug		
	fluid	13 mm hose nozzle; other connectors on request		
Noise level (according to EN ISO 3741)		66		dB(A)
Weight (without packaging)		73	75	kg
Ambient temperature range		> +1 ... +70 / > +34 ... +158		
Control range (adjustable)		+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95		°C / °F
Water outlet temperature		> + 1 ... + 35 / > + 34 ... + 95		
Permissible operating pressure		max. 10		bar
Duty cycle		100%		
Condensate management		condensate drain		
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer		
	IP 65	on request		
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel		
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request		
Colour (cover)		RAL 7035 ¹		
Accessories		Piece	Article number	Information on page
External condensate evaporation system		1	18314000001	78
Condensate bottle		1	18314000100	78

¹ different colours on request
Approvals see page 63

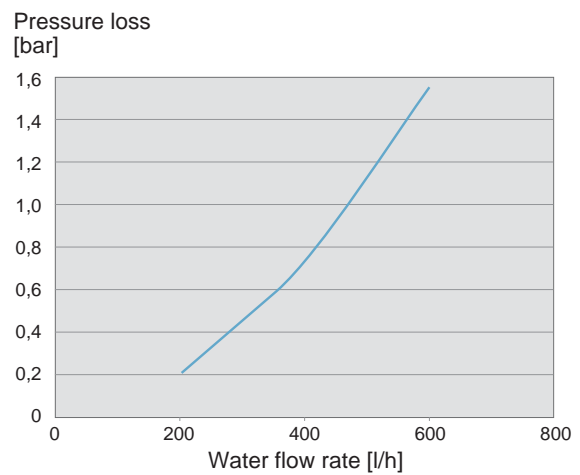
Cooling capacity performance curve

PWS 71002



Pressure loss performance curve

PWS 71002

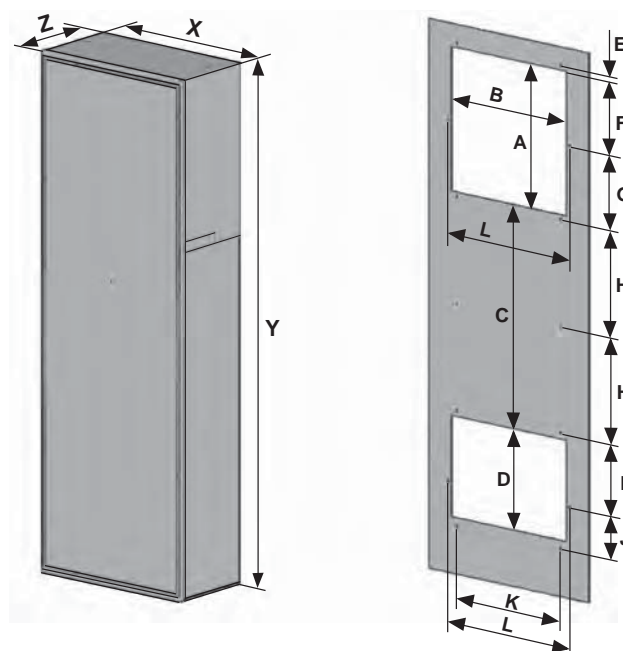


Dimensions

	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L
mm	600	1800	315	500	500	775	350	15	270	260	370	250	150	450	530

Mounting holes \varnothing 8 mm

PWS 71002



PWS 7702

Air/water heat exchanger

Cooling capacity 7000 W

PWS 7702 SL

Slim Line Air/water heat exchanger

Cooling capacity 7000 W



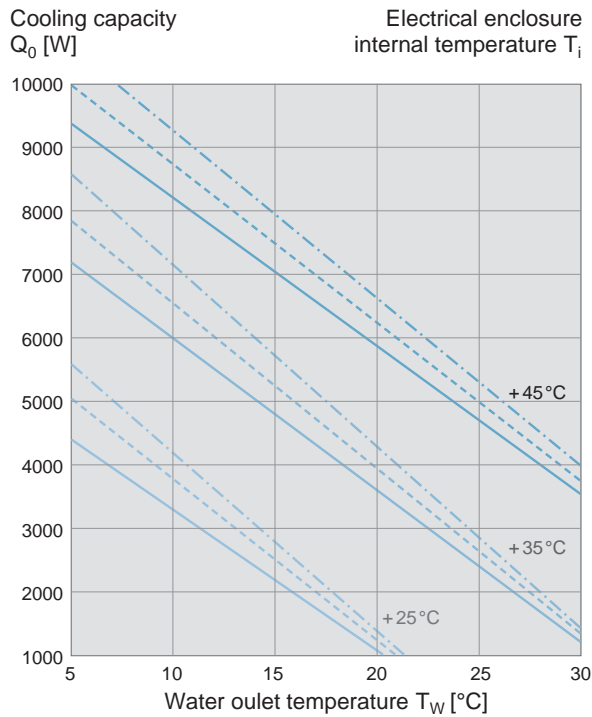
- Two performance classes, cut-out compatible
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact

Data	PWS 7702		PWS 7702 SL		Unit
Article number	12057702055	12057710055	12057702155	12057710155	
Rated voltage ± 10 %	AC 50 Hz / 60 Hz				V
	400 3~	230	400 3~	230	
Cooling performance at 500 l/h W10/A35	7000				W
Power consumption W10/A35	550 / 790	520 / 680	550 / 790	520 / 860	A
Current consumption W10/A35	0.8 / 0.95	2.4 / 3.2	0.8 / 0.95	2.4 / 3.2	
Starting current W10/A35	3.0 / 3.8	9.2 / 12	3.0 / 3.8	9.2 / 12	m³/h
Unimpeded airflow (free flow) internal	3630	4600	3630	4600	
Pre fuse T	10				A
Connection	electro	spring-type terminal included with plug			
	fluid	13 mm hose nozzle; other connectors on request			
Noise level (according to EN ISO 3741)	63				dB(A)
Weight (without packaging)	58		57		kg
Ambient temperature range	> + 1 ... + 70 / > + 34 ... + 158				°C / °F
Control range (adjustable)	+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95				
Water outlet temperature	> + 1 ... + 35 / > + 34 ... + 95				bar
Permissible operating pressure	max. 10				
Duty cycle	100 %				
Condensate management	condensate drain				
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer			
	IP 65	on request			
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel			
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request			
Colour (cover)	RAL 7035 ¹				
Accessories	Piece	Article number		Information on page	
External condensate evaporation system	1	18314000001		78	
Condensate bottle	1	18314000100		78	

¹ different colours on request
Approvals see page 63

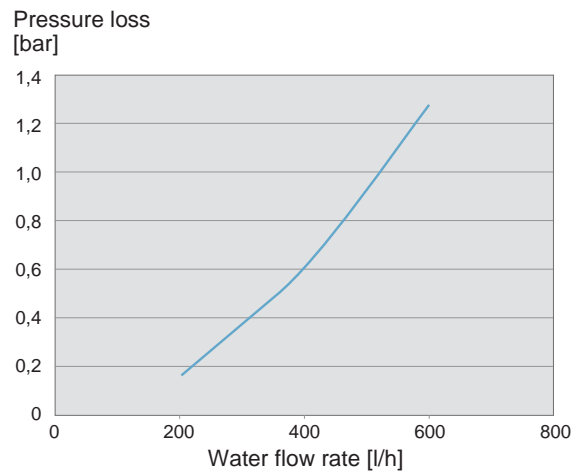
Cooling capacity performance curve

PWS 7702 / 7702 SL



Pressure loss performance curve

PWS 7702 / 7702 SL

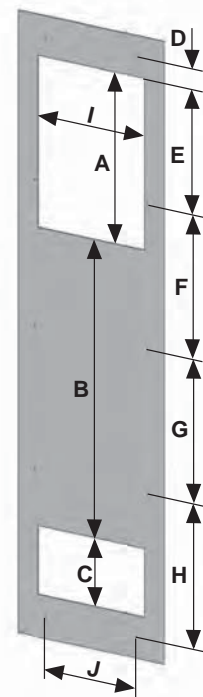


Dimensions

PWS 7702	X	Y	Z	A	B	C	D	E	F	G	H	I	J
mm	460	1800	310	530	865	230	15	442.5	442.5	442.5	442.5	417	350
PWS 7702 SL	X	Y	Z	A	B	C	D	E	F	G	H	I	J
mm	460	1800	255	530	865	230	15	442.5	442.5	442.5	442.5	417	350

Mounting holes \varnothing 8 mm

PWS 7702 / 7702 SL



PWS 7502

Air/water heat exchanger Cooling capacity 5200 W



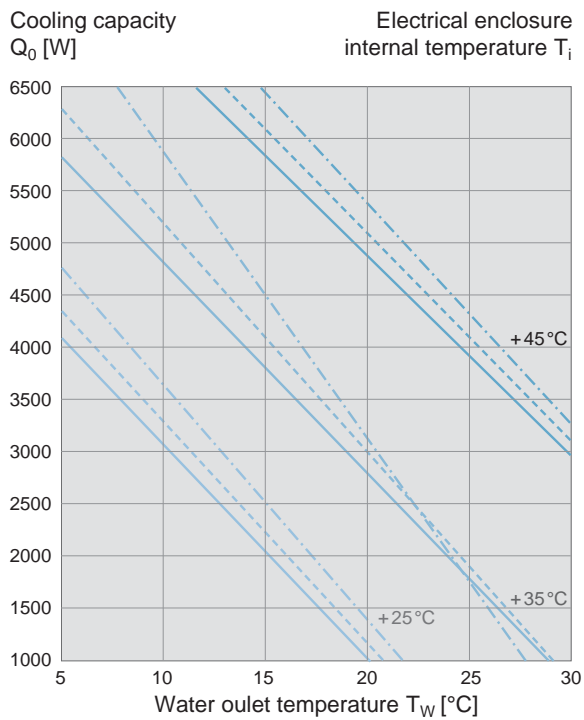
- Completely installable or mountable externally and internally
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact

Data		PWS 7502		Unit
Article number		12055010055	12055017055	
Rated voltage ± 10 %		AC 50 Hz / 60 Hz	AC 60 Hz	V
		230	115	
Cooling performance at 400 l/h	W10/A35	5200		W
Power consumption	W10/A35	295 / 385	384	
Current consumption	W10/A35	1.3 / 1.7	3.45	A
Starting current	W10/A35	5.8 / 6.6	8.33	
Unimpeded airflow (free flow)	internal	1670		m³/h
Pre fuse T		6		A
Connection	electro	spring-type terminal included with plug		
	fluid	13 mm hose nozzle; other connectors on request		
Noise level (according to EN ISO 3741)		57		dB(A)
Weight (without packaging)		39		kg
Ambient temperature range		> + 1 ... + 70 / > + 34 ... + 158		
Control range (adjustable)		+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95		°C / °F
Water outlet temperature		> + 1 ... + 35 / > + 34 ... + 95		
Permissible operating pressure		max. 10		bar
Duty cycle		100 %		
Condensate management		condensate drain		
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer		
	IP 65	on request		
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel		
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request		
Colour (cover)		RAL 7035 ¹		
Accessories		Piece	Article number	Information on page
External condensate evaporation system		1	18314000001	78
Condensate bottle		1	18314000100	78

¹ different colours on request
Approvals see page 63

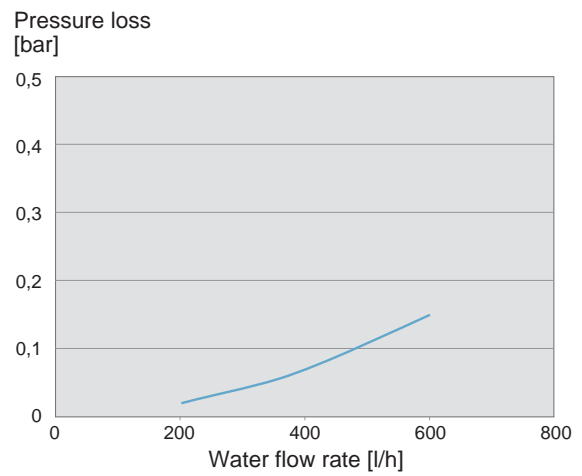
Cooling capacity performance curve

PWS 7502



Pressure loss performance curve

PWS 7502

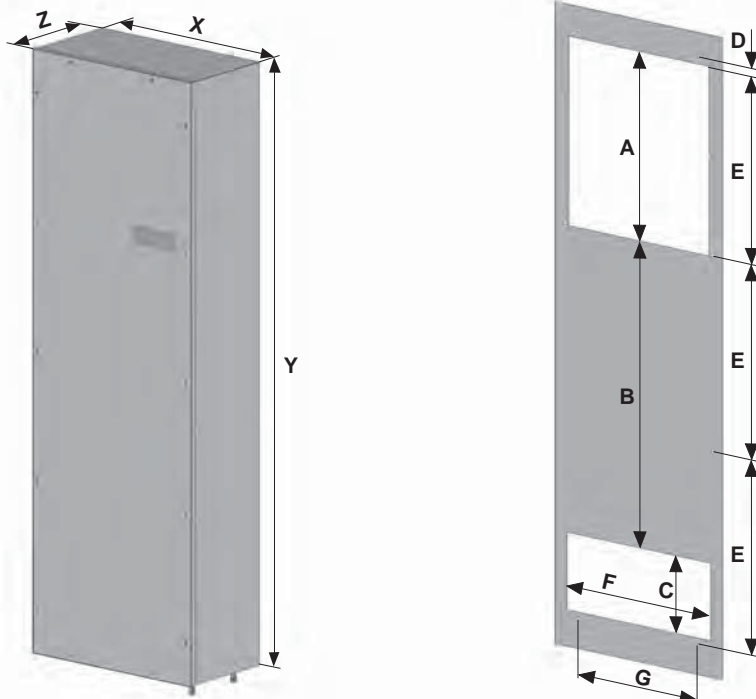


Dimensions

	X	Y	Z	A	B	C	D	E	F	G
mm	460	1400	235	440	711.5	180	20	455	420	350

Mounting holes \varnothing 8 mm

PWS 7502



PWS 7332

Air/water heat exchanger

Cooling capacity 3150 W

PWS 7152

Air/water heat exchanger

Cooling capacity 1500 W



- Two performance classes, cut-out compatible
- Completely installable or mountable externally and internally
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact

Data	PWS 7332		PWS 7152		Unit
Article number	12053010055	12053017055	12051510055	12051517055	
Rated voltage ± 10 %	AC 50 Hz / 60 Hz		AC 60 Hz		V
	230	115	230	115	
Cooling performance at 200 l/h W10/A35	3150		1500		W
Power consumption W10/A35	295 / 385	453	125 / 182	186	
Current consumption W10/A35	1.3 / 1.7	4.1	0.55 / 0.75	1.5	A
Starting current W10/A35	5.8 / 6.6	8.62	2 / 2	3.9	
Unimpeded airflow (free flow) internal	1670		850		m³/h
Pre fuse T	6	16	4	6	A
Connection	electro	spring-type terminal included with plug			
	fluid	13 mm hose nozzle; other connectors on request			
Noise level (according to EN ISO 3741)	54		53		dB(A)
Weight (without packaging)	23		21		kg
Ambient temperature range	> + 1 ... + 70 / > + 34 ... + 158				
Control range (adjustable)	+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95				°C / °F
Water outlet temperature	> + 1 ... + 35 / > + 34 ... + 95				
Permissible operating pressure	max. 10				bar
Duty cycle	100 %				
Condensate management	condensate drain				
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer			
	IP 65	on request			
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel			
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request			
Colour (cover)	RAL 7035 ¹				
Accessories	Piece	Article number		Information on page	
External condensate evaporation system	1	18314000001		78	
Condensate bottle	1	18314000100		78	

¹ different colours on request
Approvals see page 63

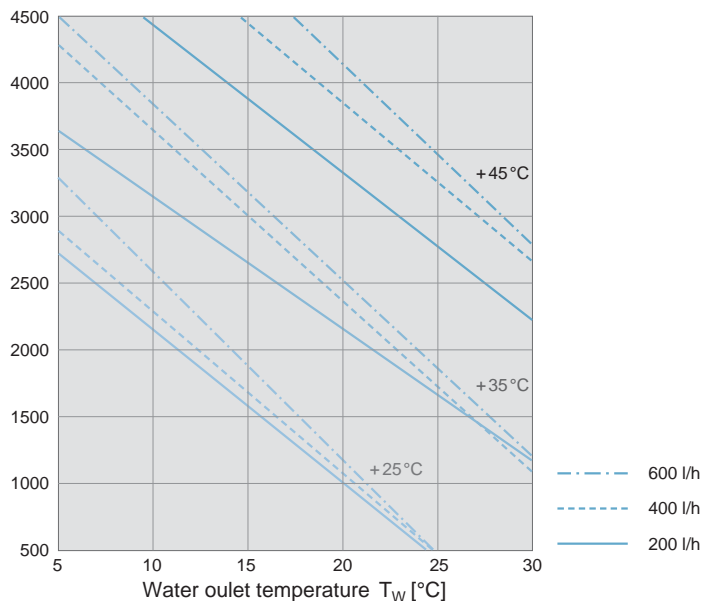
Cooling capacity performance curve

PWS 7332

PWS 7152

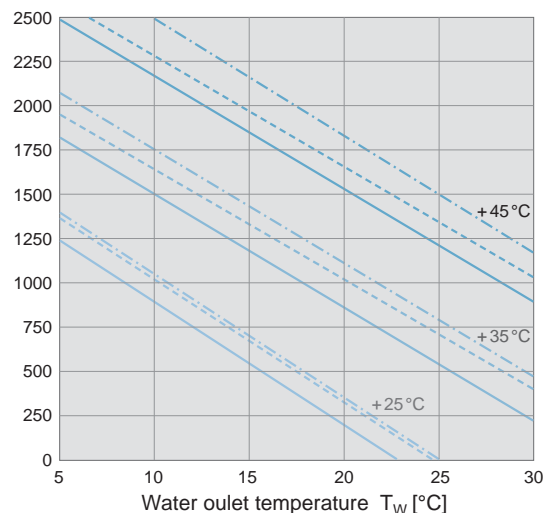
Cooling capacity
 Q_0 [W]

Electrical enclosure
internal temperature T_i



Cooling capacity
 Q_0 [W]

Electrical enclosure
internal temperature T_i

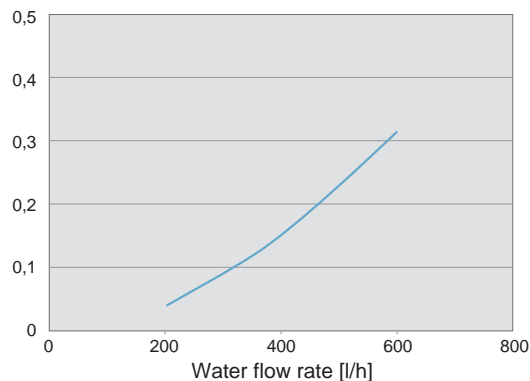


Pressure loss performance curve

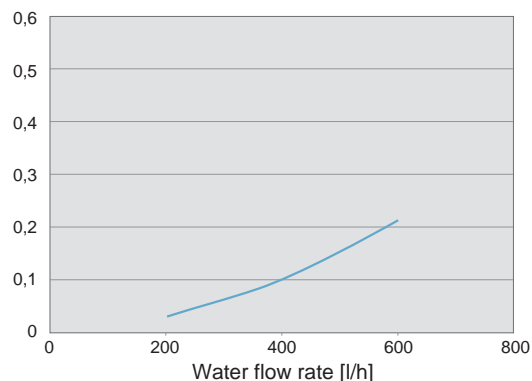
PWS 7332

PWS 7152

Pressure loss
[bar]



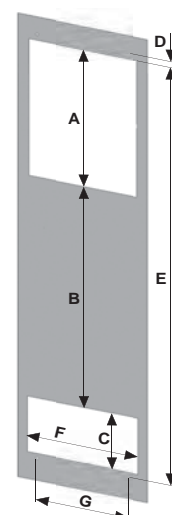
Pressure loss
[bar]



Dimensions

mm	PWS 7332	PWS 7152
X	400	
Y	950	
Z	190	115
A	280	
B	463	
C	112	
D	37	
E	904	
F	340	
G	280	

Mounting holes \varnothing 8 mm



PWS 7332 L

Air/water heat exchanger

Cooling capacity 3150 W



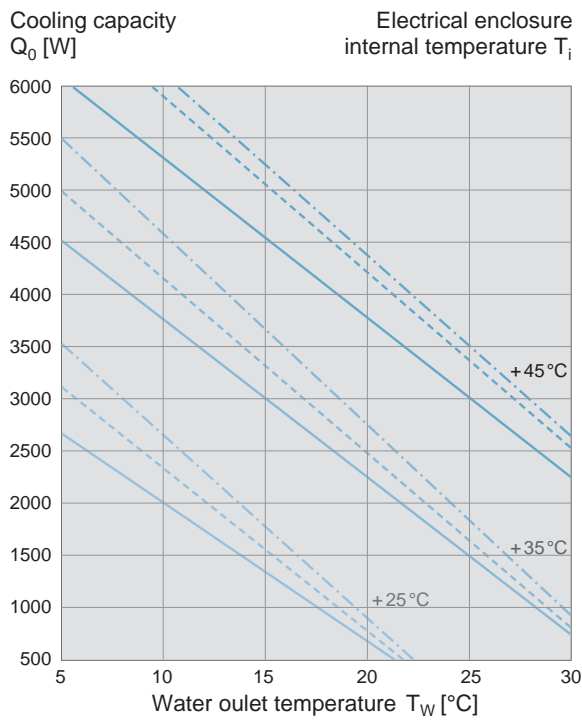
- Long passage of air
- compatible with DTS 9x41 air conditioner unit series
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact

Data		PWS 7332 L		Unit
Article number		12053010063	12053017063	
Rated voltage ± 10 %		AC 50 Hz / 60 Hz	AC 60 Hz	V
		230	115	
Cooling performance at 200 l/h	W10/A35	3150		W
Power consumption	W10/A35	295 / 385	453	
Current consumption	W10/A35	1.3 / 1.7	4.1	A
Starting current	W10/A35	5.8 / 6.6	8.62	
Unimpeded airflow (free flow)	internal	1670		m ³ /h
Pre fuse T		6	16	A
Connection	electro	spring-type terminal included with plug		
	fluid	13 mm hose nozzle; other connectors on request		
Noise level (according to EN ISO 3741)		54		dB(A)
Weight (without packaging)		35		kg
Ambient temperature range		> + 1 ... + 70 / > + 34 ... + 158		
Control range (adjustable)		+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95		°C / °F
Water outlet temperature		> + 1 ... + 35 / > + 34 ... + 95		
Permissible operating pressure		max. 10		bar
Duty cycle		100 %		
Condensate management		condensate drain		
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer		
	IP 65	on request		
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel		
	exchangeurs	copper pipe with aluminium fins; stainless steel piping on request		
Colour (cover)		RAL 7035 ¹		
Accessories		Piece	Article number	Information on page
External condensate evaporation system	1	18314000001		78
Condensate bottle	1	18314000100		78

¹ different colours on request
Approvals see page 63

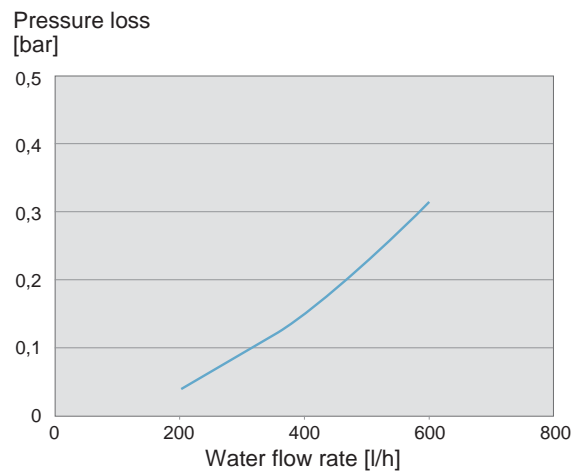
Cooling capacity performance curve

PWS 7332 L



Pressure loss performance curve

PWS 7332 L

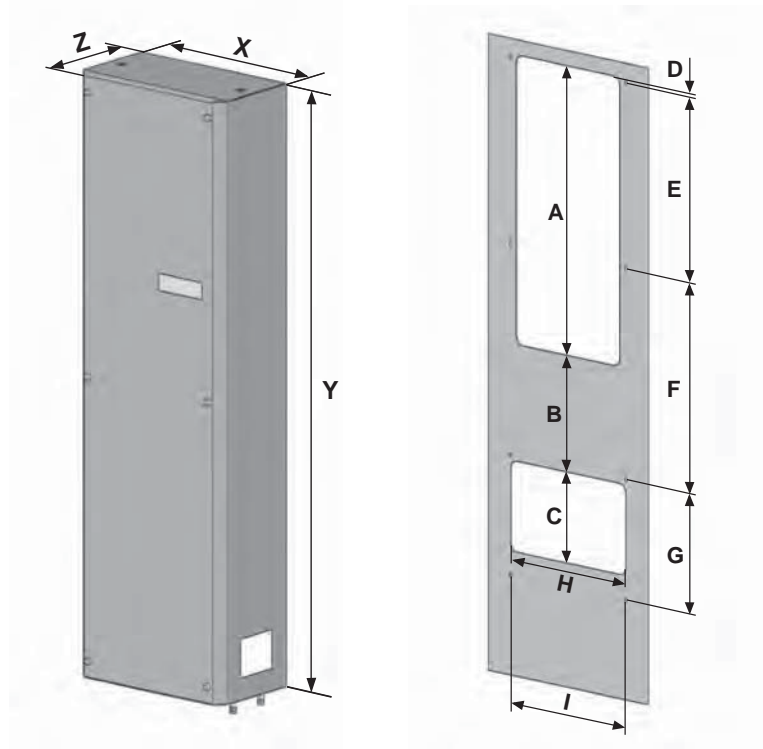


Dimensions

	X	Y	Z	A	B	C	D	E	F	G	H
mm	400	1350	190	700	315	220	315	450	510	290	350

Mounting holes \varnothing 8 mm and cut-out radii R20

PWS 7332 L



PWS 7102

Air/water heat exchanger

Cooling capacity 950 W

PWS 7062

Air/water heat exchanger

Cooling capacity 600 W

- Two performance classes, cut-out compatible
- Completely installable or mountable externally and internally
- Maintenance-free
- Mounting-friendly seal, no elaborate reworking of the mounting cut-out
- Integrated thermostat and solenoid valve for temperature control
- Integrated temperature monitoring with alarm contact



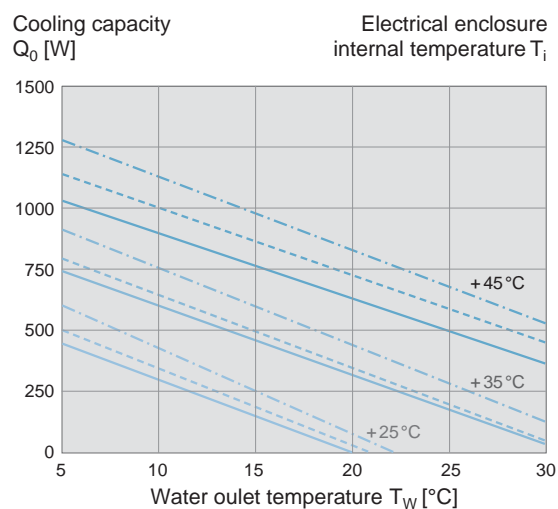
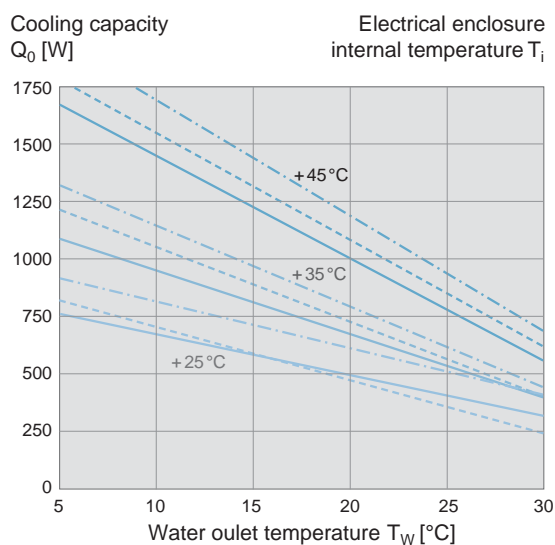
Data	PWS 7102		PWS 7062		Unit
Article number	12051010055	12051017055	12050610055	12050617055	
Rated voltage ± 10 %	AC 50 Hz / 60 Hz	AC 60 Hz	AC 50 Hz / 60 Hz	AC 60 Hz	V
	230	115	230	115	
Cooling performance at 200 l/h W10/A35	950		600		W
Power consumption W10/A35	82 / 84	82	68 / 70	60	
Current consumption W10/A35	0.35 / 0.4	0.69	0.35 / 0.38	0.65	A
Starting current W10/A35	1.7 / 1.95	1.4	1.5 / 1.8	1.3	
Unimpeded airflow (free flow) internal	570		440		
Pre fuse T	4				A
Connection	electro	spring-type terminal included with plug			
	fluid	13 mm hose nozzle; other connectors on request			
Noise level (according to EN ISO 3741)	≤48				dB(A)
Weight (without packaging)	7.5		6		kg
Ambient temperature range	> + 1 ... + 70 / > + 34 ... + 158				°C / °F
Control range (adjustable)	+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95				
Water outlet temperature	> + 1 ... + 35 / > + 34 ... + 95				
Permissible operating pressure	max. 10				bar
Duty cycle	100 %				
Condensate management	condensate drain				
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer			
	IP 65	on request			
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel			
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request			
Colour (cover)	RAL 7035 ¹				
Accessories	Piece	Article number		Information on page	
External condensate evaporation system	1	18314000001		78	
Condensate bottle	1	18314000100		78	

¹ different colours on request
Approvals see page 63

Cooling capacity performance curve

PWS 7102

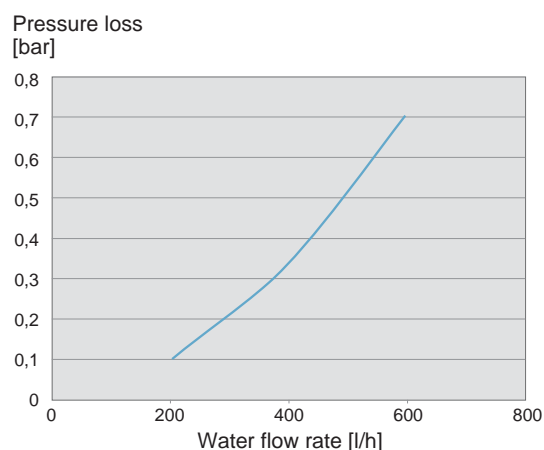
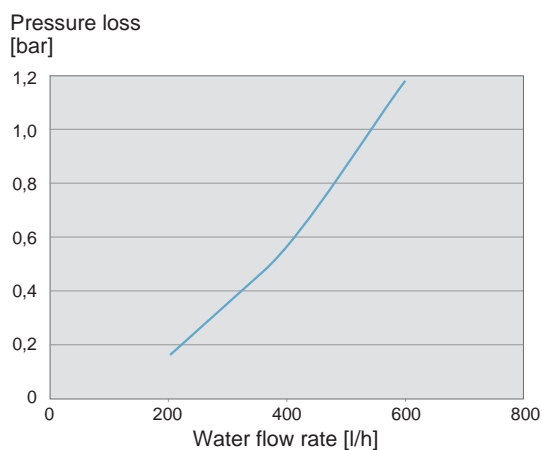
PWS 7062



Pressure loss performance curve

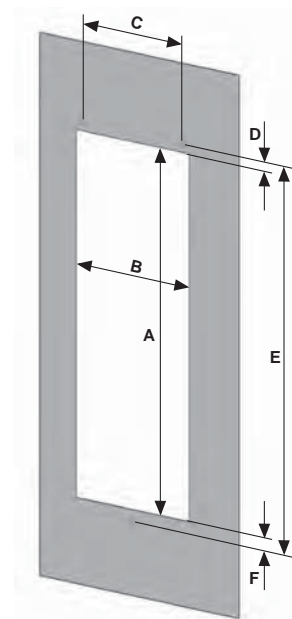
PWS 7102

PWS 7062



Dimensions

mm	PWS 7102	PWS 7062
X	200	
Y	500	
Z	150	100
A	440	
B	170	
C	150	
D	10	
E	465	
F	15	
Mounting holes \varnothing 8 mm		



PWD 5402

Air/water heat exchanger

Cooling capacity 3400 W

PWD 5302

Air/water heat exchanger

Cooling capacity 2150 W



- Water circuit pressure-tested to 30 bar
- Surface seal to protect against the penetration of water via the roof surface of the control cabinet
- Simple temperature control with integrated thermostat and solenoid valve
- 10 bar maximum operating pressure
- Piping and heat exchanger optionally available in V4A (1.4571)

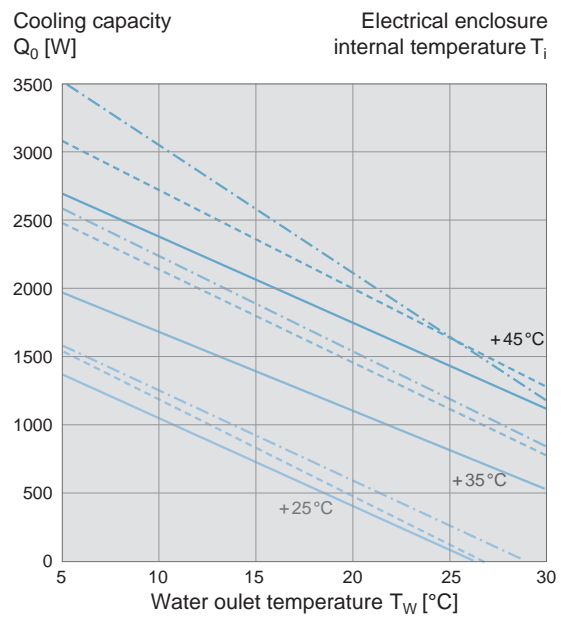
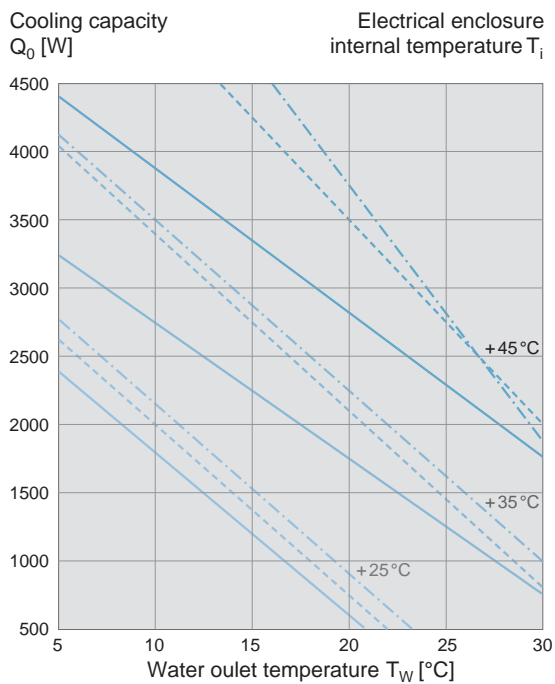
Data	PWD 5402	PWD 5302	Unit
Article number	12065410055	12065310055	
Rated voltage ± 10 %	AC 50 Hz / 60 Hz		V
	230		
Cooling performance at 400 l/h W10/A35	3400	2150	W
Power consumption W10/A35	115 / 165	85 / 100	
Current consumption W10/A35	0.84	0.4	A
Starting current W10/A35	4	3	
Unimpeded airflow (free flow) internal	720	500	m ³ /h
Pre fuse T	6		A
Connection	electro	3.5 metres of cable 3 x 0.75 mm ²	
	fluid	13 mm hose nozzle; other connectors on request	
Noise level (according to EN ISO 3741)	64	54	dB(A)
Weight (without packaging)	30	21	kg
Ambient temperature range	> + 1 ... + 70 / > + 34 ... + 158		
Control range (adjustable)	+ 8 ... + 50 / + 47 ... + 122; factory setting + 35 / + 95		°C / °F
Water outlet temperature	> + 1 ... + 35 / > + 34 ... + 95		
Permissible operating pressure	max. 10		bar
Duty cycle	100 %		
Condensate management	condensate drain		
System of protection according to EN 60529	IP 55	towards the electrical enclosure if used as intended by the manufacturer	
	IP 65	on request	
Design	housing	galvanised steel/electrostatically powder-coated (200 °C); on request: stainless steel	
	heat exchanger	copper pipe with aluminium fins; stainless steel piping on request	
Colour (cover)	RAL 7035 ¹		
Accessories	Piece	Article number	Information on page
External condensate evaporation system	1	18314000001	78
Condensate bottle	1	18314000100	78

¹ different colours on request
Approvals see page 63

Cooling capacity performance curve

PWD 5402

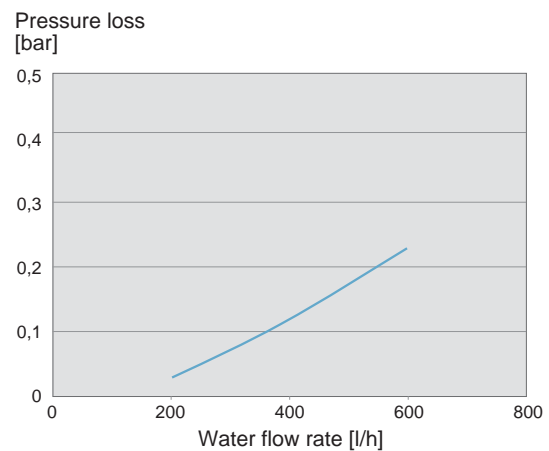
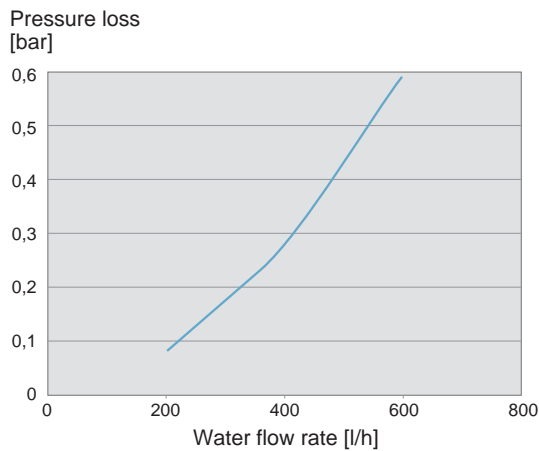
PWD 5302



Pressure loss performance curve

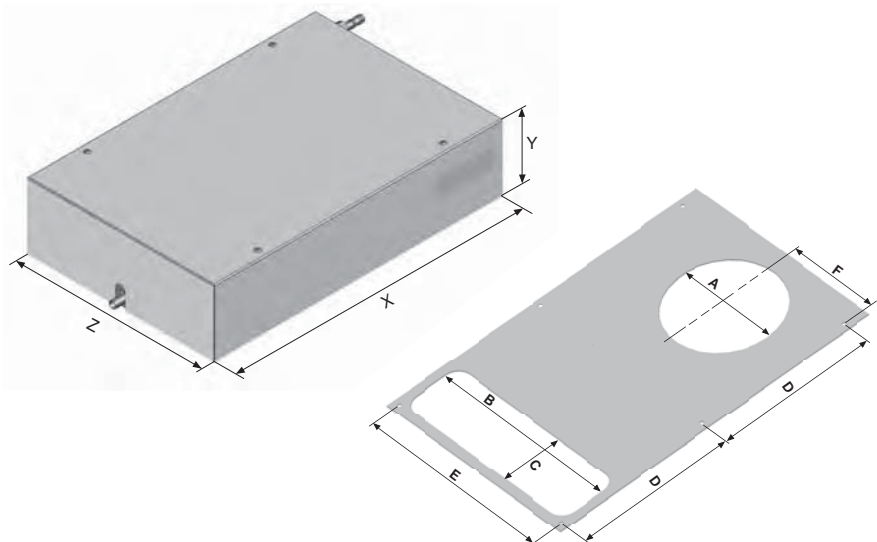
PWD 5402

PWD 5302



Dimensions

mm	PWD 5402	PWD 5302
X	720	600
Y	190	140
Z	465	390
A	230	230
B	425	360
C	128	105
D	330	270
E	434	358
F	191	143
Cut-out radii R30		



Accessories



Internal enclosure fan

Distribution of cold air inside the control cabinet

Product	Article number
PEF 180 mounting bracket 230V	1811000000
PEF 180 mounting bracket 115V	1811000001
PEF 180 mounting bracket 24V DC	1811000002



External condensate evaporation system 230 V 50 Hz / 60 Hz

External condensate evaporator for the accumulated condensed water

Suitable for ...	Article number
all units	1831400001



Condensate bottle

External container for collecting the accumulating condensed water

Suitable for ...	Article number
all units	18314000100



Device-side water connection with G 3/8" internal thread

variable connection possibilities:

- e.g.
- hose nozzle 3/8" x 12 with o-ring
 - double nipple 3/8"
 - quick-coupling 12 mm
 - quick-coupling 10 mm
- etc.

Suitable for ...	Article number
all heat exchangers	on request