

PWX

HORIZONTAL CHASSIS TYPE WATERSIDE FANCOILS FOR CONCEALED OR EXPOSED INSTALLATIONS

- Nominal sizes 60, 90, 120, 150, 180 and 205
- Volume flow rate range 50 - 636 l/s or 180 - 2289 m³/h
- Casing manufactured with 1.2 mm galvanised steel with powder-coat finish
- Condensate drip tray made of galvanised steel with powder-coat finish
- Heat exchanger for cooling (2-pipe) or cooling and heating (4-pipe) systems
- Easy filter change, no tools required
- Access hatch with integrated hinge
- Acoustically optimised EC/DC fans with low specific fan powers and variable supply air volume control (0-10v signal)

Optional equipment and accessories

- Integrated controls package
- Inlet attenuator
- Discharge attenuator
- Inlet plenum
- Electric heating
- Circular or rectangular discharge connection

APPLICATION



Application

- Waterside fancoil Type PWX designed to provide cooling and heating for comfort and industrial applications
- Acoustically optimised EC/DC fans with low specific fan powers and adjustable supply air volume control (0 - 10v signal)
- Acoustically lined inlet and discharge plenums provide low sound power levels and improved thermal insulation
- 2-pipe or 4-pipe heat exchangers enable high comfort levels
- For horizontal installation in ceiling voids, floor voids or exposed ceiling applications

Special characteristics

- Removable access hatch with integrated hinge to facilitate inspection and maintenance
- Independent fan mounting enables individual removal or replacement
- Fire resistant 'Class O' acoustic insulation provides low operating noise levels and improved thermal insulation

Nominal sizes

- PWX-60: 600 x 900 x 270 mm (W x L x H)
- PWX-90: 900 x 900 x 270 mm (W x L x H)
- PWX-120: 1200 x 900 x 270 mm (W x L x H)
- PWX-150: 1500 x 900 x 270 mm (W x L x H)
- PWX-180: 1800 x 900 x 270 mm (W x L x H)
- PWX-205: 2050 x 900 x 270 mm (W x L x H)

DESCRIPTION



Variants

- F7: Individual pod fans (single fan per motor)
- F10: Deck fans (2 or 3 fans per motor)

Parts and characteristics

- Heat exchanger is 2-pipe or 4-pipe system with Ø 15 mm or Ø 22 mm OD plain copper tails
- 200 mm wide condensate drip tray with Ø 15 mm OD drain connection
- EU2/G2 fabric inlet filter
- Ø 200 mm, Ø 250 mm or rectangular discharge connections

Attachments

- Controls enclosure

Accessories

- Inlet attenuator for noise critical applications
- Inlet plenum for ducted return air applications
- Discharge attenuator

Special characteristics

- Removable access hatch with integrated hinge to facilitate inspection and maintenance
- Independent fan mounting enables individual removal or replacement
- Fire resistant 'Class O' acoustic insulation provides low operating noise levels and improved thermal insulation

CONSTRUCTION



Casing

- PWX casing manufactured from 1.2 mm galvanised steel. Manufacturing process provides rigid, vibration free design with integrated supporting flanges.

Access hatch

- Access hatch manufactured from 1.2 mm galvanised steel
- Integrated hinge mechanism enables the panel to swing down without removal
- High density mesh-enforced gasket seal

Condensate drip tray

- Condensate drip tray manufactured from 1.2 mm galvanised steel with powder-coat finish, EAL 9005 (black)
- Unique, 2-way sloping design ensures effective removal of condensate along the full length of the tray
- Extended width design of 200 mm as standard provides condensate cover for pre-installed valve assemblies
- Externally insulated with 3 mm, fire resistant 'Class O' closed cell insulation
- Ø 15mm OD. drain tray connection manufactured from flame retardant PA6 GF20 polymer (UL 94V-0) tio suit Ø 15 mm ID. rubber flexible pipe/tube (by others)

Acoustic insulation

- Fire resistant 'Class O' acoustic insulation tested to BS476 Parts 6 & 7
- Low thermal conductivity of 0.036 W/m.K provides improved thermal resistance

Heat exchanger

- Heat exchangers manufactured from seamless Ø 3/8" copper tube , expanded on to profiled aluminium fins
- All heat exchangers tested to 30 bar
- Max. operating pressure: 10 bar
- Max. test pressure for factory fitted control valves: 7 bar
- Key operated vents and drains incorporated within header block
- 4-pipe coil assembly provides optimised cooling & heating control
- 2-pipe coil assembly provides optimised cooling control. Can be used in conjunction with electric heating

Controls enclosure

- Controls enclosure manufactured from 1.0 mm galvanised steel
- Constructed in accordance with BS7671, IET wiring regulations
- Top cover to IP4X, all other surfaces to IP2X
- Enclosure mechanically fixed to PWX casing using pre-formed backplate
- Removable lid provides access to installed controls
- Supply voltage: 230 V AC ± 10%, 50/60 Hz

Inlet plenum

- Inlet plenum manufactured from 1.2 mm galvanised steel
- Fire resistant 'Class O' acoustic insulation applied to internal surfaces
- Ø 198 mm or Ø 248 mm spigots
- Installation bracket for quick coupling to PWX fancoil on site

Inlet attenuator

- Inlet attenuator manufactured from 1.2 mm galvanised steel
- Fire rated 'Class A1' mineral wool acoustic lining
- Installation bracket for quick coupling to PWX fancoil on site

Discharge attenuator

- Discharge attenuator manufactured from 1.2 mm galvanised steel
- Fire rated 'Class A1' mineral wool acoustic lining
- Installation bracket for quick coupling to PWX fancoil on site

Inlet filter

- S: Fabric filter, EU2/G2
- S3: Fabric filter, EU3/G3
- F: Washable foam filter, Class O, EU2/G2
- M: Washable mesh screen, stainless steel

TECHNICAL INFORMATION

Function, Technical data, Quick sizing, Specification text, Order code



- Waterside fancoil Type PWX designed to provide cooling and heating for comfort and industrial applications
- Acoustically optimised EC/DC fans with low specific fan powers and adjustable supply air volume control (0 - 10v signal)
- Acoustically lined inlet and discharge plenums provide low sound power levels and improved thermal insulation
- 2-pipe or 4-pipe heat exchangers enable high comfort levels
- For horizontal installation in ceiling voids, floor voids or exposed applications

Nominal Sizes	60, 90, 120, 150, 180 and 205
Volume flow rate range (l/s)	50 – 636 l/s
Volume flow rate range (m³/h)	180 – 2289 m³/h

The quick sizing tables provide reference outputs for Type PWX under typical design conditions.

For specific enquiries relating to project specific performance, please contact your TROX representative.

Quick sizing performance criteria:

Air entering temperature (cooling): 23 °C
Air entering temperature (heating): 21 °C
Relative humidity: 50%
CHW flow/return: 6 °C / 12 °C
LTHW flow/return: 80 °C / 60 °C
External static pressure: 30 Pa

Guide NR: 40

Fan type: F7

Model	Airside		Cooling				Heating			
	FCU Supply Volume		Total	Sens.	Water flow	Water ΔPt	Total	Water flow	Water ΔPt	SFP
	(l/s)	(m³/hr)	(kW)	(kW)	(kg/s)	(kPa)	(kW)	(kg/s)	(kPa)	(w/l/s)
PWX-60/1	164	590	2.50	2.07	0.100	18.6	2.57	0.034	1.7	0.25
PWX-90/1	186	670	3.09	2.56	0.123	12.8	3.69	0.049	4.5	0.29
PWX-90/2	290	1044	4.38	3.63	0.174	23.3	4.79	0.064	7.0	0.24
PWX-120/2	353	1271	5.55	4.60	0.221	22.5	5.72	0.076	2.3	0.28
PWX-120/3	394	1418	6.07	5.03	0.242	26.1	6.11	0.081	2.5	0.23
PWX-150/3	470	1692	7.33	6.07	0.292	20.7	7.80	0.104	4.6	0.25
PWX-180/3	485	1746	7.79	6.45	0.310	16.2	8.83	0.117	6.5	0.26
PWX-180/4	562	2023	8.77	7.27	0.350	19.5	9.64	0.128	7.6	0.24
PWX-205/4	615	2214	9.64	7.99	0.384	19.2	10.95	0.145	10.6	0.26

Fan type: F10

Model	Airside		Cooling				Heating			
	FCU Supply Volume		Total	Sens.	Water flow	Water ΔPt	Total	Water flow	Water ΔPt	SFP
	(l/s)	(m³/hr)	(kW)	(kW)	(kg/s)	(kPa)	(kW)	(kg/s)	(kPa)	(w/l/s)
PWX-60/1	-	-	-	-	-	-	-	-	-	-
PWX-90/1	-	-	-	-	-	-	-	-	-	-
PWX-90/2	311	1120	4.71	3.91	0.188	26.5	5.05	0.067	7.7	0.28
PWX-120/2	357	1285	5.60	4.64	0.223	22.8	5.76	0.076	2.3	0.29
PWX-120/3	438	1577	6.59	5.46	0.262	29.7	6.47	0.086	2.8	0.28
PWX-150/3	485	1746	7.51	6.22	0.299	21.6	7.95	0.106	4.7	0.29
PWX-180/3	518	1865	8.22	6.81	0.327	17.6	9.18	0.122	7.0	0.32
PWX-180/4	613	2207	9.41	7.79	0.375	21.5	10.13	0.134	8.3	0.27
PWX-205/4	628	2261	9.80	8.11	0.390	19.8	11.07	0.147	10.8	0.26

Waterside fancoil Type PWX designed to provide cooling and heating for comfort and industrial applications. Acoustically optimised EC/DC fans with low specific fan powers and adjustable supply air volume control (0-10v signal). Acoustically lined inlet and discharge plenum provide low sound power levels and improved thermal isolation. 2-pipe or 4-pipe heat exchangers enable high comfort levels. For horizontal installation in ceiling voids, floor voids or exposed ceiling applications.

Special characteristics:

- Removable access hatch with integrated hinge to facilitate inspection and maintenance
- Independent fan mounting enables individual removal or replacement
- Fire resistant 'Class O' acoustic insulation provides low operating noise levels
- Low thermal conductivity of 0.036 W/m.K provides improved thermal insulation
- Unique 2-way sloping condensate tray design ensures effective removal of condensate along the full length of the tray

Materials and surfaces:

- Casing manufactured from 1.2mm galvanised steel
- Condensate drip tray manufactured from 1.2mm galvanised steel, powder-coat finish, RAL 9005 (black), 3mm thick 'Class O', closed cell insulation
- Fire resistant 'Class O' acoustic insulation tested to BS476 Parts 6 & 7

Technical data:

Nominal sizes:

- PWX-60: 600 x 900 x 270 mm (W x L x H)
- PWX-90: 900 x 900 x 270 mm (W x L x H)
- PWX-120: 1200 x 900 x 270 mm (W x L x H)
- PWX-150: 1500 x 900 x 270 mm (W x L x H)
- PWX-180: 1800 x 900 x 270 mm (W x L x H)
- PWX-205: 2050 x 900 x 270 mm (W x L x H)

Minimum volume flow rate (supply air):

50 – 343 l/s or 180 – 1234 m³/h

Maximum volume flow rate (supply air), at NR 40 (standard room corrections) without attachments:

159 – 636 l/s or 572 - 2289 m³/hr

Sizing data

- Sensible cooling [kW]
- Total heating [kW]
- CHW flow / return [°C]
- LTHW flow / return [°C]
- Entering air temperature [°C]
- External static pressure [Pa]
- Room noise level [NR]

PWX

PWX	-	90/2	-	F7	-	R	-	4	-	2	-	P15	-	25A	-	23	-	S	-	1	-	P2	-	1	-	0		
		1		2		3		4		5		6		7		8		9		10		11		12		13		14

<div>Unit type</div> <div>PWX</div>	<div>Active Spigots</div> <div>PWX-60 A,2,3,B PWX-90 A,2,3,B PWX-120 A,2,3,4,B PWX-150 A,2,3,4,5,B PWX-180 A,2,3,4,5,B PWX-205 A,2,3,4,5,6,B</div>
<div>Unit size</div> <div>60/1, 90/1, 90/2, 120/2, 120/3, 150/3, 180/3, 180/4, 205/4</div>	<div>Inlet filter</div> <div>S Standard (fabric) EU2/G2 S3 Fabric EU3/G3 M Mesh screen (S/steel) F Foam EU2/G2 `Class 0`</div>
<div>Fan type</div> <div>F7 Pod fans (1 fan per motor) F10 Deck fans (Up to 3 fans per motor)</div>	<div>Accessory fixing</div> <div>0 Standard 1 Inlet accessory fittings 2 Discharge accessory fittings 3 Inlet & discharge accessory fittings</div>
<div>Unit handing</div> <div>L Left hand controls R Right hand controls</div>	<div>Condensate pump</div> <div>0 Without P1 Condensate pump, supplied loose for installation, wiring & commissioning (by others) P2 Condensate pump, supplied loose for installation, wiring & commissioning (by others). Pump power cable prewired to controls enclosure.</div>
<div>Heat exchanger type</div> <div>4 3½ row cooling + ½ row heating 2 4 row cooling E2 4 row cooling + electric heating E4 3½ row cooling + electric heating</div>	<div>Controls</div> <div>0 Controls enclosure with provision for site fitted controls 1 BACnet controls 2 Room control (standalone) F Factory-fit free issue controls</div>
<div>Valve package</div> <div>0 Without valves 1 Cooling only 2 Cooling & heating (coil type 4 only) 3 Heating only (coil type 4 only) F1 Factory-fit free issue cooling valve F2 Factory-fit free issue cooling & heating F3 Factory-fit free issue heating valve</div>	<div>Packaging</div> <div>0 Standard (batch wrapped) A Individually wrapped (shrink wrap) B Active spigots capped (batch wrapped)</div>
<div>Condensate tray</div> <div>P15 Galv. steel tray (PPC RAL9005) with horizontal end outlet Ø15mm OD. spigot (PA6 GF20 polymer UL 94V-0) P15E Extended P15 (+100mm) (PWX 60-180 only)</div>	
<div>Discharge outlet type</div> <div>20A Ø198 spigots 25A Ø248 spigots 20R 198mm rectangular spigot</div>	

Variants and accessories, Dimensions, Spigot handing and weight

Variants

- F7: Individual pod fans (single fan per motor)
- F10: Deck fans (2 or 3 fans per motor)

Attachments

- Controls enclosure

Accessories

- Inlet attenuator for noise critical applications
- Inlet plenum for ducted return air applications
- Discharge attenuator

Type PWX Dimensions

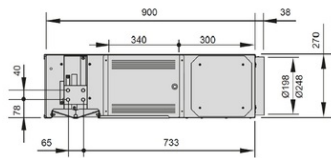
Dimensions
Unit shown within catalogue diagrams depict right hand control (...R). For left hand control, drip tray and coil connections will be on opposite side.

Handing is defined as the side on which coil connections and drip tray are located when looking into the FCU inlet.

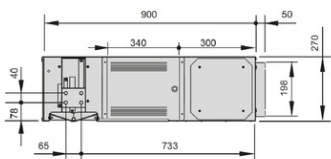
For 2-pipe & 4-pipe variants, electrical controls enclosure will be mounted on the same side as coil connections ⁽¹⁾

Where electric heating is specified (...E2, ...E4), controls enclosure will be mounted on opposite side to coil connections ⁽²⁾

PWX - * ... / R ... / **A (Circular discharge spigots)



PWX - * ... / R ... / 20R (Rectangular discharge spigot)



□

Type PWX spigot handing and weight

□

Installation examples





Images: Ben Blossom