

HX

Designed with energy, efficiency and easy use in mind



thermoscreens®



Air velocity projection and uniformity are two of the most important factors when determining the effectiveness of an air curtain to provide climate separation at a building opening. The HX range achieves an exceptional 90% uniformity when measured against the ISO 27327-1 test requirements, which surpasses many air curtains in the market today.

The application of 3 innovations within the air stream have allowed us to achieve these exceptional results:

Air Plenum

The air plenum is a pressure chamber which produces an even air flow along the length and width of the air curtain discharge nozzle, thus eliminating dead zones.

Converging Nozzles

The converging nozzle creates a Venturi effect which results in improved airstream projection providing an enhanced barrier of air.

Active Cellular Grille

The grill design used on the HX further enhances the air uniformity by shaping the air as it passes through the cells of the grille. This improves the uniformity and the efficiency of the air curtain.

Ecopower Controls drive efficiencies even further with a weather compensation strategy providing the user with the option to set the air curtain outlet temperature dependent on the outside temperature so heat is only applied when it is required.

With a range of sizes and water flow temperatures HX has the flexibility to cover a wide range of commercial, retail and light industrial applications. There are mounting options for surface and recessed, and units can be mounted up to 3.3m.

Key Features



- 2 year warranty
- Ecopower control supplied as standard
- Filters supplied as standard
- Integrated 3-way valve
- 2 row or 4 row heating coil options to cover a wide range of water temperatures
- High efficiency, low inertia, electric elements for instant heating
- Recessed version supplied with hinged grilles for easy access and maintenance
- Weather compensation control with optional outdoor air sensor
- IP21 rated

Water flow rate and pressure drop

HX Range Surface	2 row coil (based on 82/71°C)			4 row coil (based on 60/40°C)		
	Water Flow (l/min)	Valve ΔP (kPa)	Coil ΔP (kPa)	Water Flow (l/min)	Valve ΔP (kPa)	Coil ΔP (kPa)
HX1000W / HX1000WR	15.6	2.8	4.0	8.6	7.1	2.5
HX1500W / HX1500WR	23.4	6.4	7.0	12.9	6.8	3.5
HX2000W / HX2000WR	31.2	12.6	10.0	17.1	6.0	4.5

HX air curtains always have a control valve fitted inside the unit.

Water flow rate and pressure drop calculations for different water temperatures

To calculate water flow rate and pressure drop for coil and valve at different water temperatures than 82/71°C :-

For the new water temperatures use the Thermoscreens coil calculation programme to get the new water flow rate and the new water pressure drop (coil). Then calculate the *new* water pressure drop (valve) using the following formula:

$$\text{New Water Pressure Drop (valve)} = 82/71 \text{ Water Pressure Drop (valve)} \times \left(\frac{\text{New Water Flow Rate}}{82/71 \text{ Water Flow Rate}} \right)^2$$

Example: HX1000WR at 85/65°C, EAT = 20°C

82/71 Water flow rate = 15.6 l/min (from water flow rate and pressure drop table above)

New water flow rate = 9.0 l/min (from Thermoscreens coil calculation programme) using HX1000WR 2-row

New water pressure drop (coil) = 3.4 kPa (from Thermoscreens coil calculation programme)

using HX1000WR 2-row

Therefore:

$$\text{New water pressure drop (valve)} = 2.8 \times \left(\frac{9}{15.6} \right)^2 = 0.9 \text{ kPa}$$

Conversion factors:

1 kPa = 0.102m Water column

10 l per minute = 0.6 m³/h

Accessories

Description	Part Number
Door Limit Switch	T7260200
3 Way mid position valve	T7260111
End Caps	Lh T7661204 Rh T7661205
Eco power extension leads: 3m	T5951001
Eco power extension lead: 6m	T7263636
Eco power extension lead: 10m	T5951050
Eco power extension lead: 15m	T5951060
Eco power extension lead: 30m	T5951020
Extension lead coupler	T5951030
Joining kit	T7308230



thermoscreens®

HX



Surface Mounted

Model	Dimensions (L x D x H) (mm)	Supply (50Hz)	Loading (A) per phase	Heat output (kW)	Max velocity (m/s)	Max air volume (m³/h)	Weight (kg)	Noise output dB(A) @3m		
								H	M	L
Electric										
HX1000E	1300 x 468 x 306	400V~3P&N	18.2	6/12	9.0	1370	41	58	55	48
HX1500E	1825 x 468 x 306		27.3	12/18		2000	59	58	54	45
HX2000E	2350 x 468 x 306		36.2	12/24		2640	73	58	55	48
Water 2 row 82/71										
HX1000W	1300 x 468 x 306	230V~1P&N	0.8	6/12	9.0	1370	46	58	55	48
HX1500W	1825 x 468 x 306		1.2	9/18		2000	67	58	54	45
HX2000W	2350 x 468 x 306		1.4	12/24		2640	84	58	55	48
Water 4 row 60/40										
HX1000W	1300 x 468 x 306	230V~1P&N	0.8	6/12	9.0	1370	46	58	55	48
HX1500W	1825 x 468 x 306		1.2	9/18		2000	67	58	54	45
HX2000W	2350 x 468 x 306		1.4	12/24		2640	84	58	55	48
Water 4 row 45/32										
HX1000W	1300 x 468 x 306	230V~1P&N	0.8	3.6/7.3	9.0	1370	46	58	55	48
HX1500W	1825 x 468 x 306		1.2	5.5/10.9		2000	67	58	54	45
HX2000W	2350 x 468 x 306		1.4	7.3/14.5		2640	84	58	55	48
Ambient										
HX1000A	1300 x 468 x 306	230V~1P&N	0.8	-	9.0	1370	40	58	55	48
HX1500A	1825 x 468 x 306		1.2	-		2000	58	58	54	45
HX2000A	2350 x 468 x 306		1.4	-		2640	71	58	55	48



thermoscreens®

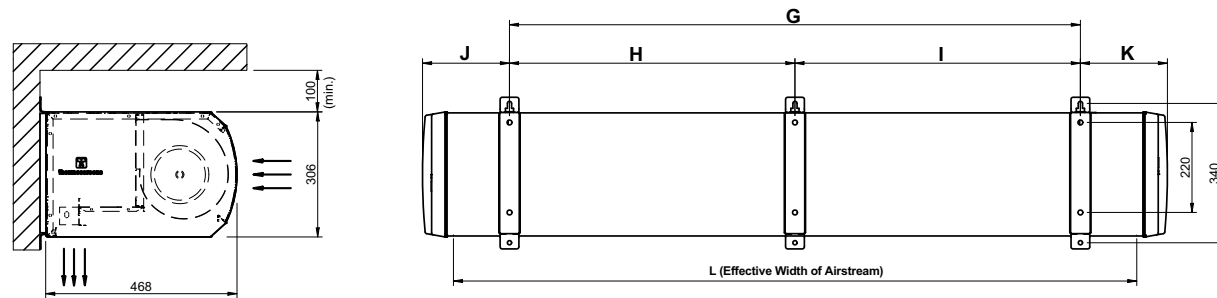
HX



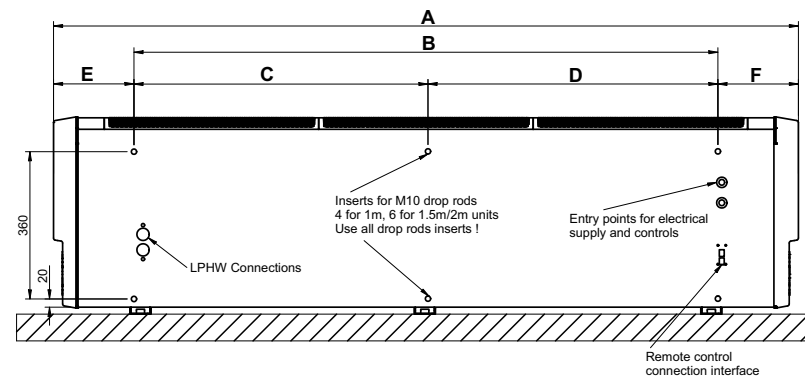
Recessed

Model	Dimensions (L x D x H) (mm)	Supply (50Hz)	Loading (A) per phase	Heat output (kW)	Max velocity (m/s)	Max air volume (m³/h)	Weight (kg)	Noise output dB(A) @3m		
								H	M	L
Electric										
HX1000ER	1185 x 485 x 348	400V~3P&N	18.2	6/12	9.0	1370	41	58	55	48
HX1500ER	1710 x 485 x 348		27.3	12/18		2000	59	58	54	45
HX2000ER	2235 x 485 x 348		36.2	12/24		2640	73	58	55	48
Water 2 row 82/71										
HX1000WR	1185 x 485 x 348	230V~1P&N	0.8	6/12	9.0	1370	46	58	55	48
HX1500WR	1710 x 485 x 348		1.2	9/18		2000	67	58	54	45
HX2000WR	2235 x 485 x 348		1.4	12/24		2640	84	58	55	48
Water 4 row 60/40										
HX1000WR	1185 x 485 x 348	230V~1P&N	0.8	6/12	9.0	1370	46	58	55	48
HX1500WR	1710 x 485 x 348		1.2	9/18		2000	67	58	54	45
HX2000WR	2235 x 485 x 348		1.4	12/24		2640	84	58	55	48
Water 4 row 45/32										
HX1000WR	1185 x 485 x 348	230V~1P&N	0.8	3.5/6.7	9.0	1370	46	58	55	48
HX1500WR	1710 x 485 x 348		1.2	5.5/10.7		2000	67	58	54	45
HX2000WR	2235 x 485 x 348		1.4	7/14.3		2640	84	58	55	48
Ambient										
HX1000AR	1185 x 485 x 348	230V~1P&N	0.8	-	9.0	1370	40	58	55	48
HX1500AR	1710 x 485 x 348		1.2	-		2000	58	58	54	45
HX2000AR	2235 x 485 x 348		1.4	-		2640	71	58	55	48

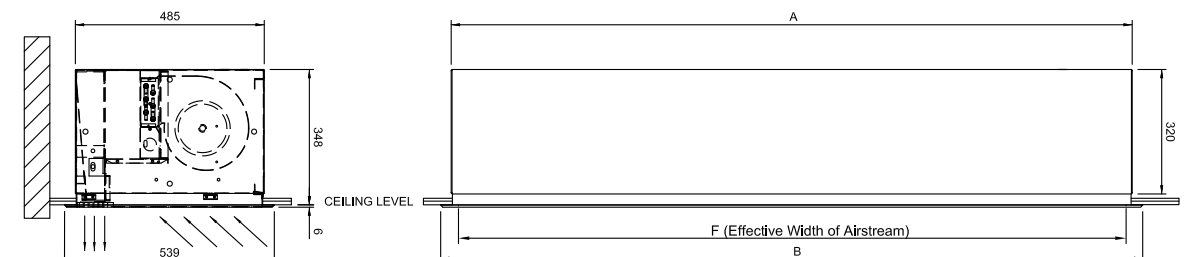
Surface Mounted



	HX1000	HX1500	HX2000
A (mm)	1300	1825	2350
B (mm)	895	1430	2005
C (mm)	-	720	1032
D (mm)	-	710	973
E (mm)	202	197	143
F (mm)	202	197	202
G (mm)	898	1398	1904
H (mm)	-	699	952
I (mm)	-	699	952
J (mm)	201	213	223
K (mm)	201	213	223
L (mm)	1100	1630	2150



Recessed



	HX1000R	HX1500R	HX2000R	
A (mm)	1185	1710	2235	
B (mm)	-	726	1077	
C (mm)	-	933	1109	
D (mm)	1238	1763	2290	
E (mm)	1100	1630	2150	
Cut-Out in Ceiling	Length (mm)	1185	1710	2235
Width (mm)	485	485	485	

