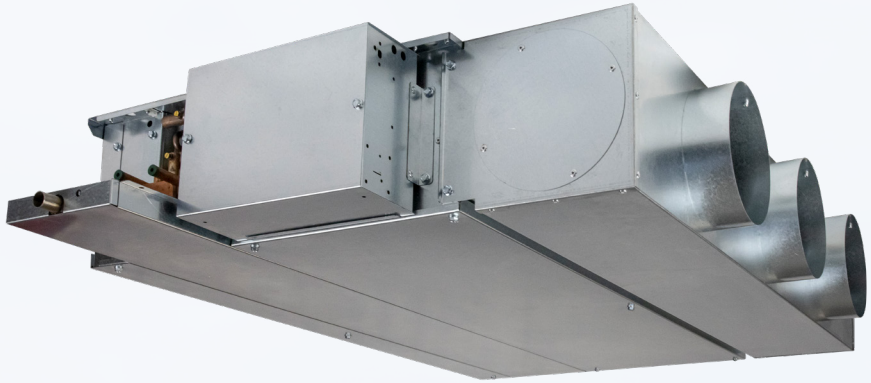
Diffusion



Multi Award Winning, Modular Highline Fan Coil Units Product Range Brochure

Build your project on trust.

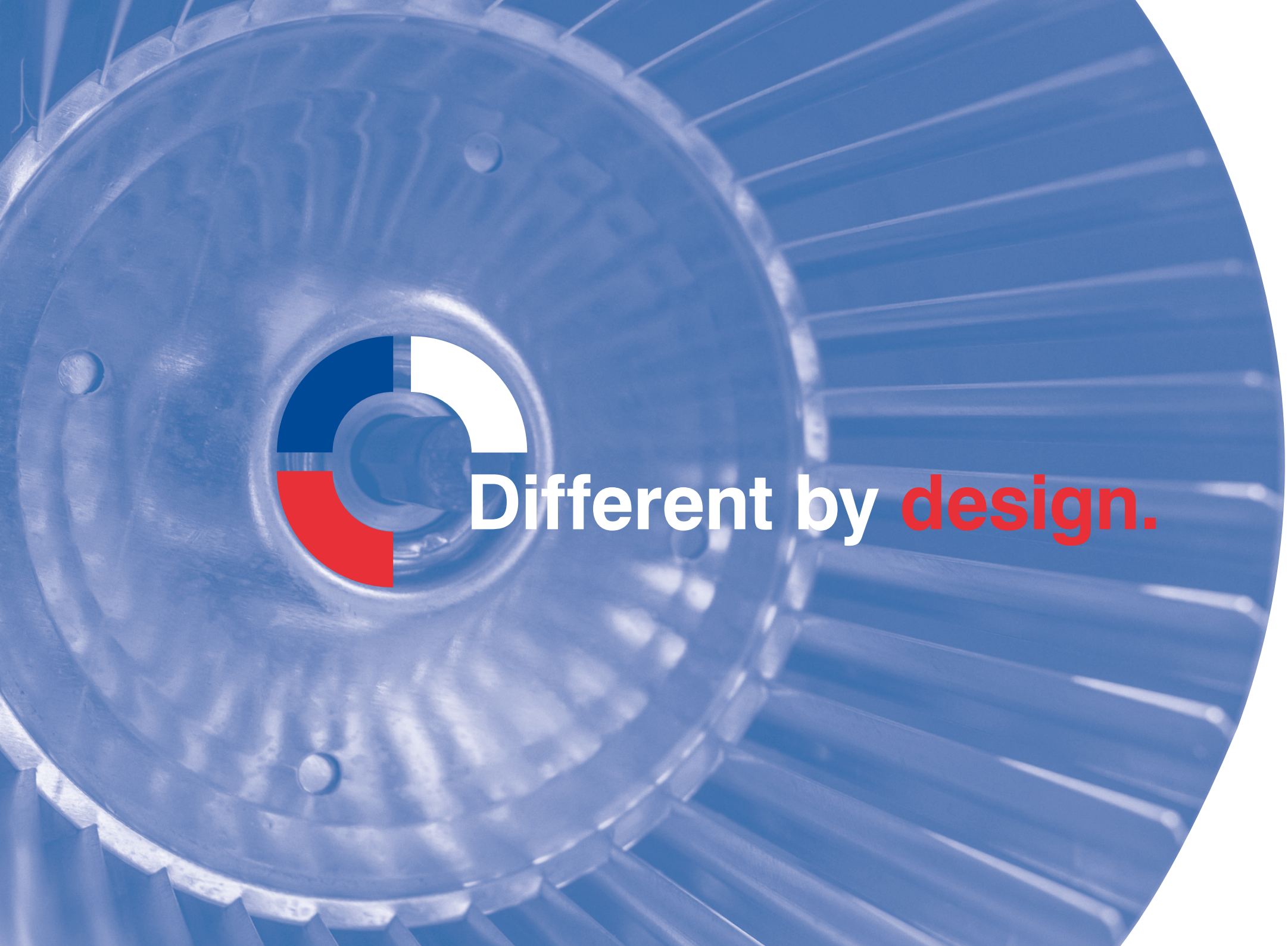

Turn to the experts.

Working closely with our customers enables us to design and manufacture a diverse range of energy-efficient, innovative, cost-saving fan coil units that not only meet building regulations, and exacting specifications, but also deliver improved environmental sustainability benefits.

The Diffusion team has more than 200 years of combined industry knowledge through working closely with our customers for over 60 years. This in-depth understanding of the project requirements has enabled Diffusion to design and manufacture the most advanced, energy-efficient products that comply with all relevant Building Regulations. The team at Diffusion is ready to provide you the very best, award winning fan coil modular products that meet your exacting project requirements large or small, simple or complex, every time.



We are trusted by numerous businesses throughout the construction supply chain having provided industry leading fan coil units to hundreds of projects including Landmark buildings throughout the UK such as The Walkie-Talkie building at Fenchurch Street, The Iconic Shard and the Grade 1 listed St Pancras Renaissance Hotel in London. In this project hundreds of bespoke Diffusion fan coil units are delivering exceptional internal thermal comfort as precisely today as they did the day they were installed.


Different by design.

Product development, design and test team.
Building your project on trust.

Having expert in-house knowledge offers incalculable benefits to our customers including Developers, Consultants and Contractors who can benefit from the knowledge that, not only do we have a diverse range of standard products but that we have the in-house capability to design and manufacture bespoke products for any specific project application they require.

Diffusion's facilities provide the opportunity for the client to observe the product during testing. These tests are conducted in accordance with a detailed method statement explaining each stage of the performance testing process therefore, the client can feel assured that the product will meet or exceed their precise project needs and be certified in their presence. Being able to invite customers to witness the product performance prior to taking delivery of the product helps to develop relationships, trust and enhances the overall experience, providing confidence, and delivering peace of mind.

Furthermore, to provide greater confidence in the Modular Highline Range acoustic performance, the sound data for all models has been measured independently at SRL Technical Services Limited.

Diffusion offer an enviable range of products from standard, specialised to bespoke. They can be designed and manufactured to meet many applications in a variety of configurations, sizes and finishes to achieve customer requirements.



The modular highline range of fan coil units

The new modular highline range is designed to create the perfect indoor environment for commercial, residential and hotel applications.





Innovation is at the heart of everything we do at Diffusion and the design of the Highline range is no exception. Its unique modular design, compact dimensions and advanced, energy-efficient components ensure its reliability and high performance.

Key Features

- **Each product range has 8 sizes with a choice of 13 models** eliminating the need to over-specify and ensuring the ideal product for your project
- Serviceable parts freely accessible in-situ for ease of maintenance.
- Variants for both HL235 and HL275 ranges are available with **side removal access of the fans**, ensuring accessibility even in restrictive installations.
- Compact dimensions to suit a wide range of applications.
- Aesthetically designed for exposed or concealed applications.
- Low noise levels from **NR25** to NR40 ensure it is ideal for commercial, residential and hotel applications.
- High efficiency EC/DC motor and fan assemblies provide market leading Specific Fan Power figures from **0.12 W/ls**, reducing overall building energy consumption.
- Modular design enables attenuator and plenum options to be easily configured.
- Diffusion Lifetime ‘Eco’ wire mesh filter is supplied as standard, ISO grade media filters can be supplied as an option.
- Performance compliant with:
  - SFP - BS 8850:2020 – Fan coil unit performance. Determination of Specific fan power.
  - Airflow - BS EN ISO 5801:2017 – Fan Performance testing using standardised airways.
  - Acoustic - BS EN 16583 – Heat exchangers, hydronic room fan coil units. Determination of sound power.

Contact us today and find out how we can help with your project. Call +44 (0) 20 8783 0033 or email cooling@diffusion-group.com

Build your project on trust.

The Modular Range of Highline units deliver optimum performance, very low noise and improved efficiency.



The new Modular Highline fan coil range delivers several advantages to the customer thanks to the advanced, energy-efficient components that deliver optimal product performance and lower sound levels whilst reducing energy consumption.

Low noise levels

Noise levels of just **NR25** to **NR40** ensure their suitability in both high end residential and commercial applications including hotels where quiet operation is vital.

Low specific fan power

Advanced fan design enables greater efficiencies delivering *Specific Fan Power levels as low as **0.12 W/l/s.**

Optimal performance

Heat exchangers specifically designed to achieve optimum heating and cooling performance using industry standard hot and chilled water temperatures.

Modular Design

Unique modular design delivers greater flexibility and ease of access to core components in-situ. The modularity enables the unit to be re-configured when required.

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* All catalogue SFP figures are established in accordance with BS 8850:2020 with synthetic media filters to ISO 30% coarse grade. Improved SFP's can be achieved using the Diffusion Lifetime Eco Filter constructed of wire mesh.

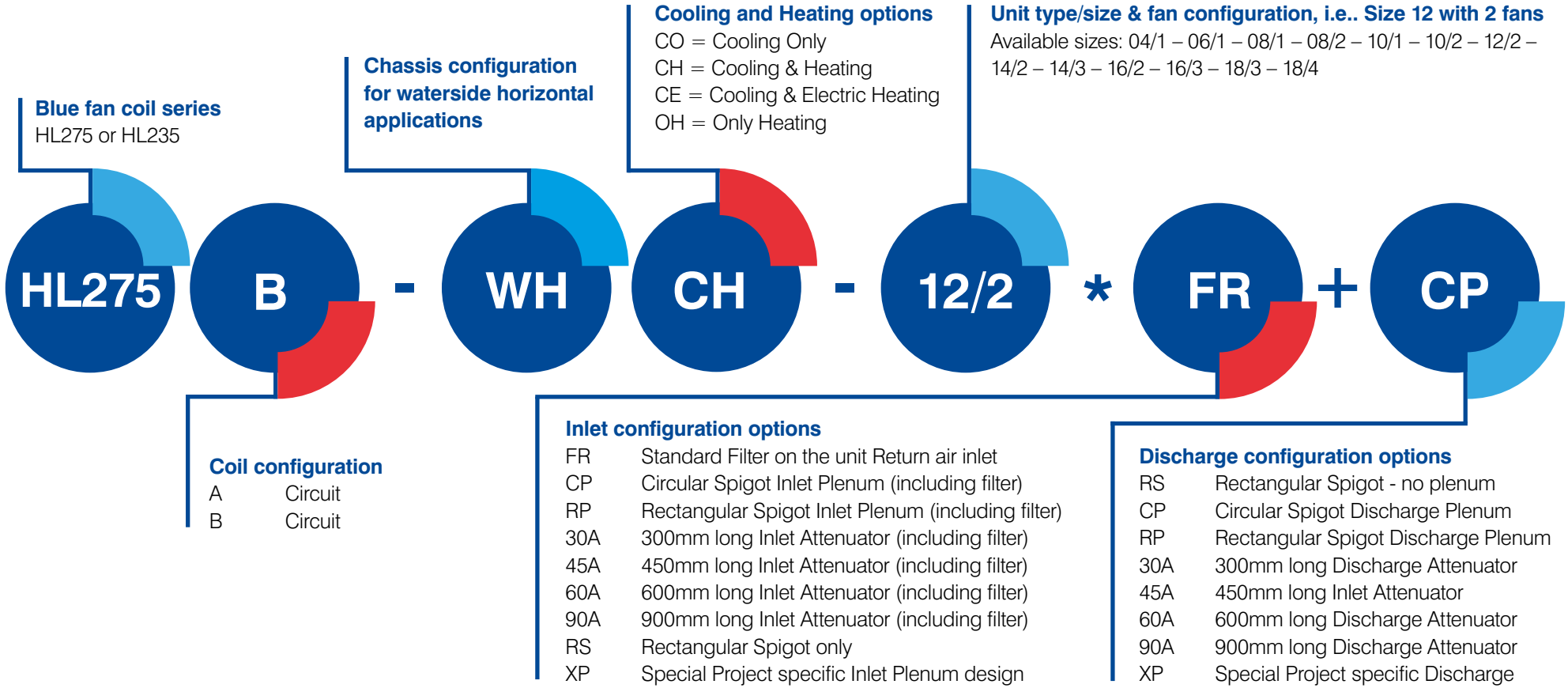
Your design,
Your choice.

The Modular Highline Range is designed to offer increased design flexibility with thousands of configurations to meet your specific project needs.



This page has been designed to assist you with understanding the meaning of Diffusion product codes:

New Highline 275 Range: Example Product Code **Fan Coil Product Codes: HL275B-WHCH-12/2 * FR+CP**



Additional fan coil unit configuration options:

Filter

- Eco filter supplied as standard, made of metal, woven fine wire mesh. Options are grades: Coarse 30% (G2) and Coarse 50% (G3) to ISO 16890.
- Filters can be split enabling easy access in installations with restricted access.
- Filters can be accessed beneath the unit or from the side of the unit for ease of maintenance.

Control Enclosure

- Standard fitted to the nominated access side of the fan coil, with remote mounting options on umbilical cabling.

Drain tray

- Units are fitted as standard with a short drain tray; and can be fitted with the optional extended length tray for PICV fitting.
- The drain connection and tray are made of stainless steel for longevity and rigidity.


Modular Assembly

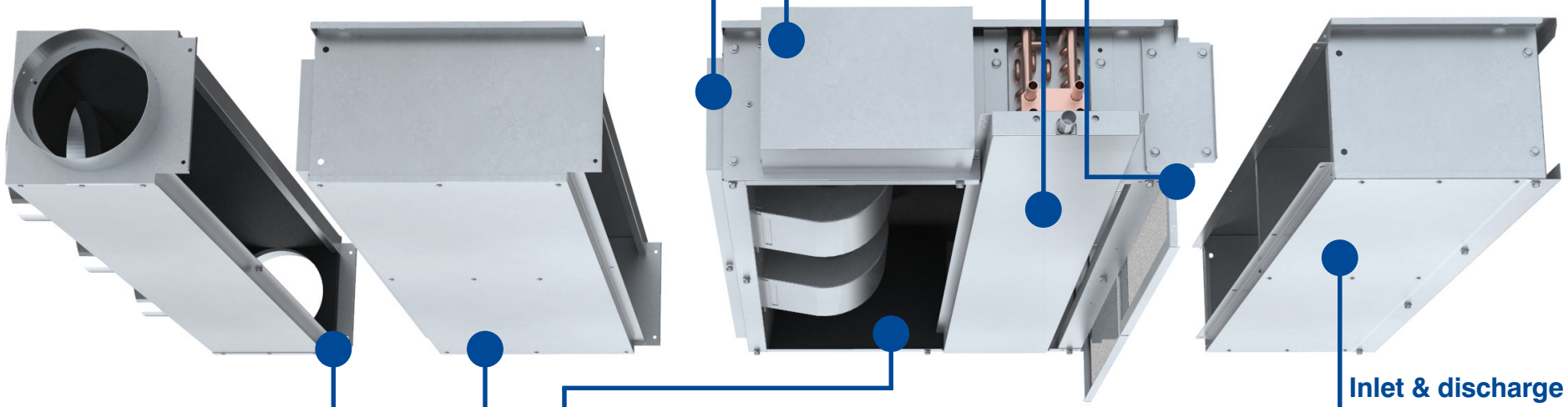
Modular fan coil units ensure greater flexibility and ease of maintenance

Controls enclosure, easily accessed
The controls enclosure is mounted on to the side of the unit. It can be mounted away from the unit to suit site requirements if preferred.

Maintenance access options
A variant is available for side removal of the fan, providing maintenance access in restrictive installations.

Control Valve Configurations
Removable compact or extended drain trays to accommodate fitting of control valve configurations.

Filters, easily accessed
The filter/s are easily accessed or removed on-site either from the side of the unit or beneath the unit making cleaning easy. Larger models have split filters to further enhance maintenance. Diffusion lifetime 'Eco' wire mesh filter supplied as standard, ISO grade media filters supplied as an option.



Discharge plenum
Available with circular or rectangular spigots.

Inlet & discharge attenuators
Available in different lengths to suit the specific sites acoustic requirements.

Inlet & discharge attenuators
Available in different lengths to suit the specific sites acoustic requirements.

Access panel to core

Access panel to filter/s

Core of the unit, easily accessed
The Core of the unit is designed to enclose the key components including filter, heat exchanger and fans. The core is the foundation of your selection and provides the base for the modular approach. All components are easily accessed via a full width panel for ease of maintenance.

Diffusion



Several sizes, ideal for your Specification

A wide choice of sizes to ensure the ideal model for your application.

Both the HL235 and the HL275 ranges have a choice of 8 sizes including 13 models to choose from, eliminating the need to over-specify. The Highline range is the ideal solution for many applications from hotel rooms to large capacity application such as reception areas and offices.



The Highline ranges incorporate many components that have been designed to improve quality, enhance efficiency and overall performance of the product whilst also reducing noise levels. These design enhancements are the direct result of Diffusion's close relationships with customers and their project needs.

Here are the key benefits:

Steel Casing

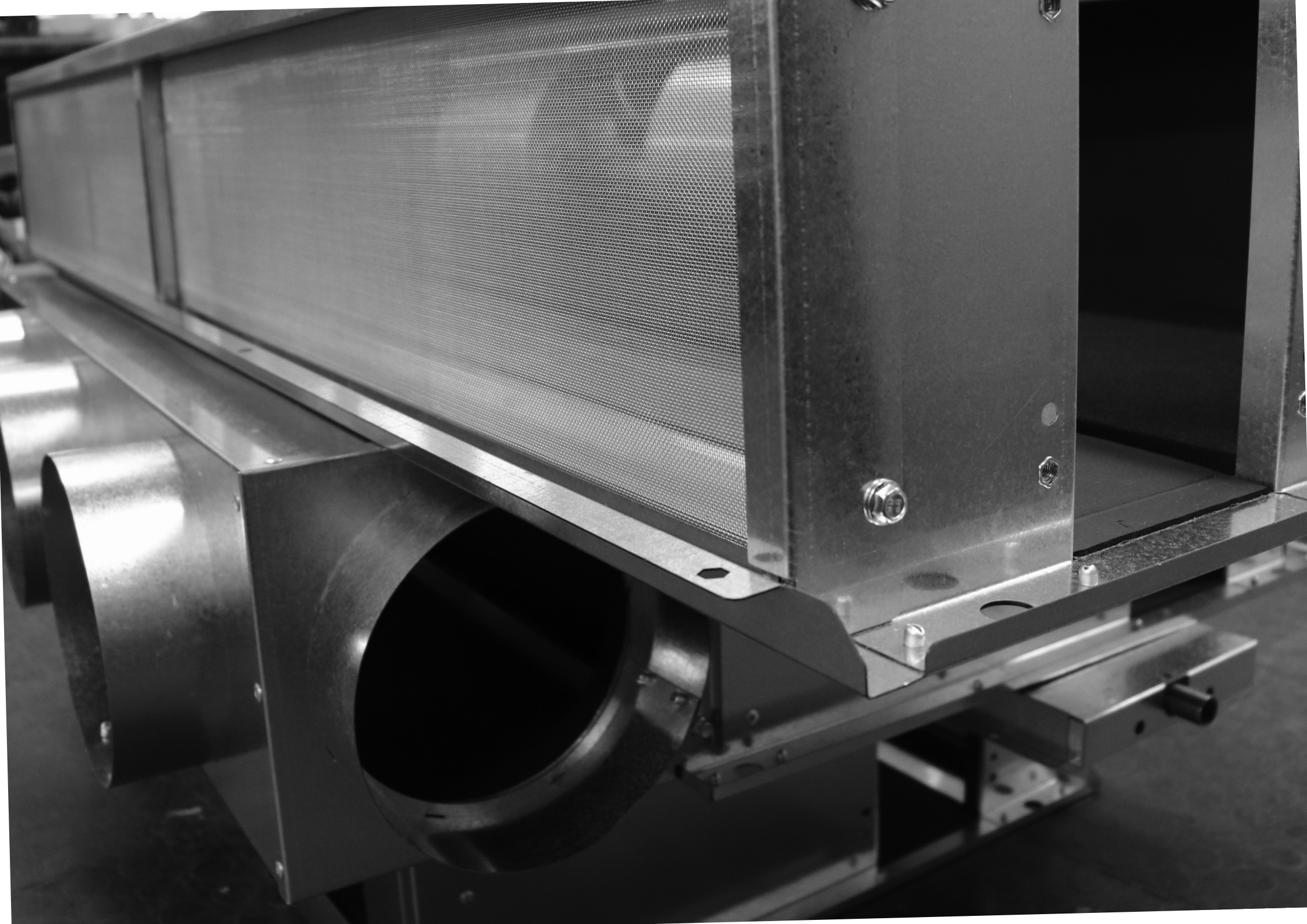
All elements have been designed with product performance, ease of installation, service and maintenance in mind. Key components are easily accessed via a full width removable panel. Core components are made from galvanised steel sheet for increased durability. All panels are precision cut by laser and strengthened to provide a rigid, distortion free construction. The modular design features provide flexibility of product configuration and ease of use for both initial product build and future modification. Adding attenuators or plenum options is easily achieved.

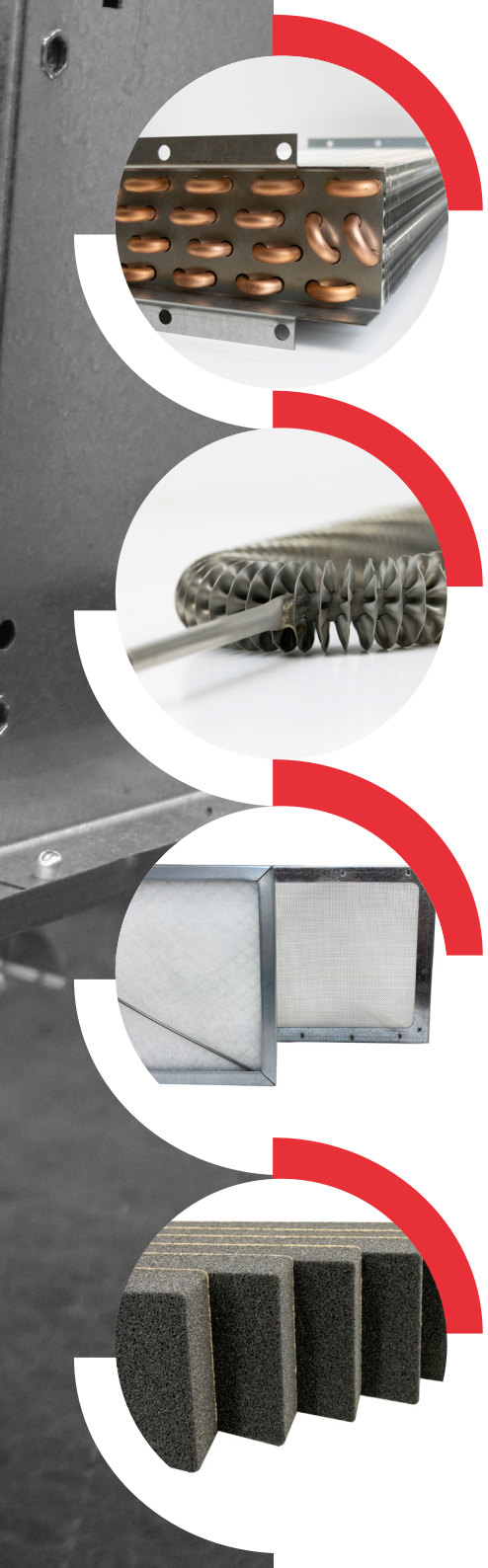
Fans

Forward curved centrifugal fans are used in all models providing the most efficient airflow and acoustic performance. Fan scrolls are manufactured from galvanised steel sheet and fitted with multi-bladed aluminium or galvanised steel impellers.

Motors

Fan assemblies incorporate the latest technology. Electronically commutated direct current EC/DC type motors, rated for continuous operation with inbuilt overload protection devices. Capable of performance modulation via 0 to 10 Volt dc control signal. Totally enclosed construction design with maintenance free, sealed for life ball bearings. Motors are compliant with all current EMC and electrical standards. Electrical supply requirements: 230V-1-ph-50Hz.





Heat Exchanger

Manufactured from solid drawn copper tubes, mechanically expanded into accurately pre-formed collars in rippled plate type aluminum fins. Incorporating multi circuit designs to ensure maximum thermal performance efficiency. Headers unifying the circuits terminate in plain tail connections on 40mm centres. The heating and cooling circuit headers incorporate easily accessed air vents. Heat exchangers can operate at system pressures up to 16 bar, manufacturer tested to 20 bar dry air / nitrogen under water.

Electric Elements

Electric elements are manufactured from 8mm Diameter fully sheathed stainless steel rod, with spiral wound fin for optimum heat transfer into the airflow. Overheat safety protection is provided by a manual re-set high temperature capillary type cut-out, directly wired to provide power supply isolation. A fan monitor relay is incorporated to provide additional safety, ensuring correct rotation of the motors before allowing operation of the heating elements.

Filters

The Diffusion ‘eco’ filter is fitted as standard, it is a woven mesh made of fine galvanised steel wire, welded to a rigid galvanised steel support frame. The ‘eco’ filter is a robust and environmentally conscious solution that can be vacuum cleaned whilst fitted to the fan coil. The filter/s can be easily removed from either side of the unit, or from below. Split filters on larger units are coupled together for ease of removal from all withdrawal orientations. Synthetic media filter options to grade ISO Coarse 30% and 50% are available.

Insulation

The Highline range of fan coil units are insulated throughout with class “0” fire rated foam, precision cut and bonded to the unit panels with a modified acrylic adhesive. The thickness of the insulation throughout the unit varies to ensure superior thermal and acoustic performance, 70% is either 12 or 25mm thick.





Condensate Drain Trays

Drain trays are manufactured from stainless steel sheet with a 22mm diameter stainless steel drain connection, the assembly is TIG welded on all joints and insulated with class “0” fire rated foam.
The external section of the drain tray is fitted with a void tray to aid the removal of condensate and stop large debris from entering the drain line. An extended drain tray option is available, providing cover and a means of support for PICV assemblies with integral flushing loop. The entire drain tray assembly is easily removable to facilitate maintenance and cleaning.

Controls Enclosures

Fan coils are supplied fitted with a control enclosure providing appropriate mounting and protection for controllers and control equipment. Pre-configured to allow incoming wiring for power and peripheral devices, all internal wiring configured with tri-rated cable to the latest electrical standards.

Quality Testing

When assembly is completed each fan coil is subjected to a thorough mechanical examination. Fan run and speed modulation is checked, controls operation is checked when possible, and electrical safety checked. Heat exchanger and valve assemblies are pressure decay leak tested. Having successfully passed all testing as detailed and in accordance with our quality standards procedures the finished unit is ready for packing and dispatch.

Condensate Pump

For condensate pump requirements Diffusion provide the MAXIBLUE rotary diaphragm pump.
Using patented sensing technology and diaphragm design, this solution offers virtually silent operation and unrivaled performance for condensate removal. Pump and sensing reservoir are mounted with bespoke metalwork providing a robust and aesthetic solution; for both factory build and retro-fitting.

Entering Air Design Conditions:		
Season	Temperature	Temperature
Summer	23.0 db °C	16.2 wb °C
Winter	21.0 db °C	
External system static pressure		30 Pa

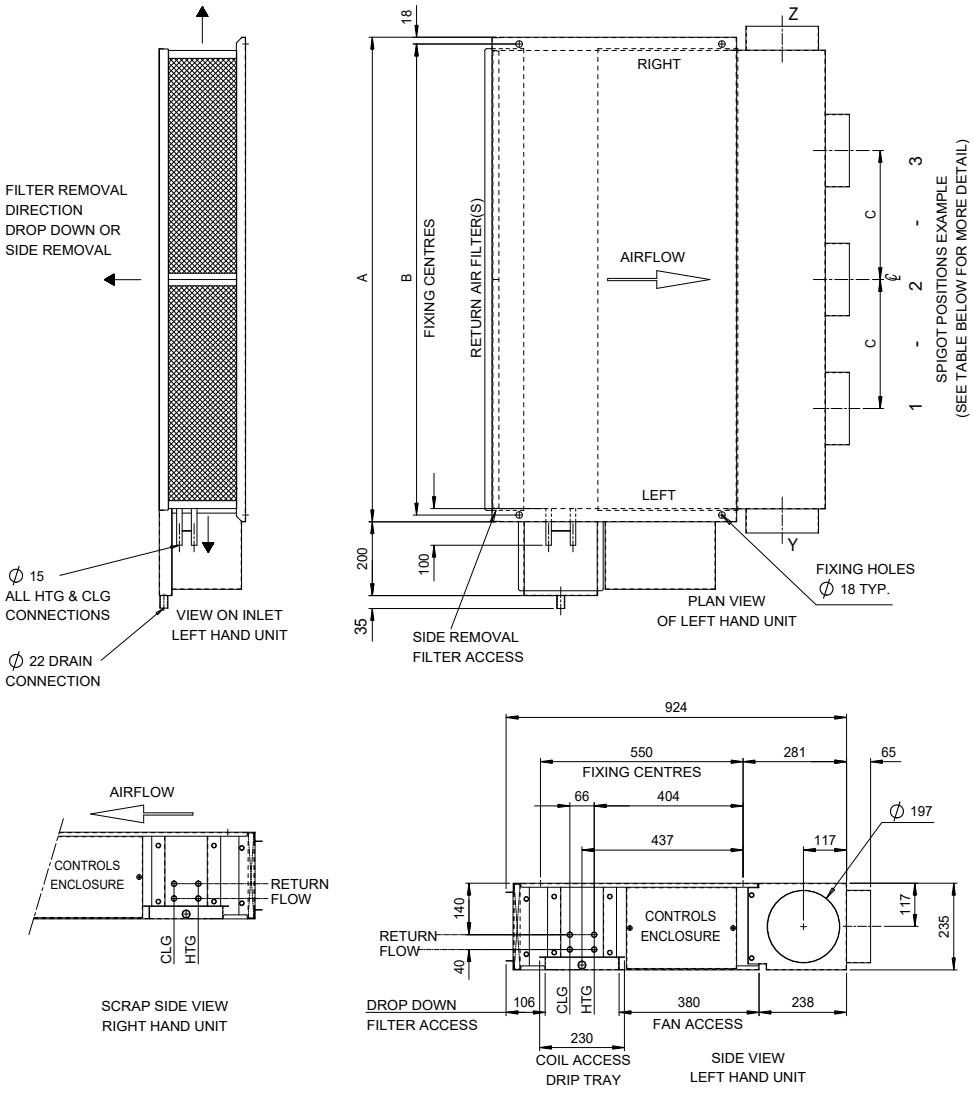
Cooling Design Conditions:		
Flow/Return Temp.	Flow/Return Temp.	Flow/Return Temp.
6/12 °C	8/14 °C	10/15 °C

Heating Design Conditions:		
Flow/Return Temp.	Flow/Return Temp.	Flow/Return Temp.
80/60 °C	60/40 °C	45/40 °C

Model Reference	Airflow / NR Guide / SFP			Cooling Output						Heating Output		
	Airflow l/s	Ind. Unit Guide NR	SFP W/l/s	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Sensible Duty Watts	Sensible Duty Watts
HL235B-WHCH-04/1 * FR+CP	74	30	0.19	985	1209	810	905	734	2345	1348	642	610
	108	35	0.25	1371	1650	1133	1253	1021	1089	1695	703	769
	140	40	0.35	1700	2011	1410	1553	1274	1356	1980	740	890
HL235B-WHCH-06/1 * FR+CP	89	30	0.20	1306	1675	1103	1275	984	1064	1800	754	802
	136	35	0.27	1878	2342	1597	1814	1423	1529	2337	863	1045
	184	40	0.40	2395	2908	2042	2288	1817	1943	2775	1109	1247
HL235B-WHCH-08/1 * FR+CP	112	30	0.21	1541	1918	1228	1372	1128	1206	2418	1070	1074
	170	35	0.34	2255	2762	1871	2093	1686	1803	3134	1464	1394
	191	40	0.42	2485	3016	2072	2310	1860	1988	3350	1566	1488
HL235B-WHCH-08/2 * FR+CP	102	30	0.17	1405	1751	1751	1296	1023	1094	2280	992	1016
	190	35	0.22	2475	3006	3006	2306	1852	1978	3340	1570	1490
	254	40	0.30	3139	3738	3738	2914	2365	2521	3960	1884	1762
HL235B-WHCH-10/1 * FR+CP	125	30	0.20	1873	2425	1557	1803	1401	1517	2888	1418	1278
	175	35	0.30	2524	3211	2135	2456	1909	2060	3568	1778	1588
	202	40	0.40	2854	3593	2429	2782	2163	2329	3919	1961	1735
HL235B-WHCH-10/2 * FR+CP	102	30	0.16	1543	2015	1259	1460	1141	1238	2570	1242	1136
	200	35	0.20	2803	3534	2376	2723	2109	2271	3897	1958	1728
	310	40	0.29	3974	4832	3359	3764	2973	3178	5004	2534	2234
HL235B-WHCH-12/2 * FR+CP	144	30	0.15	2123	2729	1698	1931	1552	1673	3213	957	1435
	237	35	0.20	3357	4233	2831	3235	2530	2723	4397	1129	1973
	370	40	0.33	4843	5896	4124	4625	3670	3924	5661	2061	2541
HL235B-WHCH-14/2 * FR+CP	169	30	0.14	2611	3432	2182	2568	1957	2134	3843	1127	1715
	255	35	0.20	3768	4848	3206	3729	2862	3100	4971	1881	2221
	354	40	0.26	4935	6180	4235	4840	3761	4046	6019	2563	2691
HL235B-WHCH-14/3 * FR+CP	162	30	0.18	2488	3276	2070	2437	1853	2021	3748	1110	1664
	290	35	0.23	4150	5291	3533	4085	3135	3387	5388	2178	2408
	402	40	0.34	5382	6682	4583	5199	4041	4335	6487	2829	2903
HL235B-WHCH-16/2 * FR+CP	202	30	0.16	2775	3453	2109	2332	2010	2149	4589	1821	2035
	310	35	0.22	4154	5113	3448	3865	3103	3319	6014	2724	2684
	380	40	0.27	4921	5963	4126	4602	3703	3957	6749	3129	3009
HL235B-WHCH-16/3 * FR+CP	200	30	0.17	2717	3379	2044	2258	1952	2087	4557	1798	2028
	356	35	0.24	4595	5595	3825	4275	3424	3660	6510	2996	2898
	470	40	0.34	5718	6829	4790	5303	4259	4541	7640	3610	3410
HL235B-WHCH-18/3 * FR+CP	243	30	0.18	3485	4422	2881	3283	2599	2799	5441	2499	2415
	387	35	0.24	5240	6481	4444	5014	3968	4251	7285	3537	3241
	512	40	0.33	6558	7916	5586	6237	4969	5308	8543	4265	3809
HL235B-WHCH-18/4 * FR+CP	177	30	0.16	2558	3272	1979	2227	1833	1969	4489	1901	1985
	340	35	0.19	4653	5809	3915	4440	3493	3751	6738	3238	2998
	514	40	0.26	6464	7799	5482	6120	4860	5191	8565	4279	3817

All sizes in the HL235 range have been independently acoustic tested across their performance envelope to establish the combined inlet and case radiated, discharge duct radiated, and in-duct sound power levels; testing was undertaken at SRL (Sound Research Laboratories) and conducted in accordance with BS EN 16583:2015. Diffusion NR guide figures have been calculated using our established acoustic modelling process, with calculations and allowances as detailed in CIBSE Guide B4:2016. Volumetric flow rates for all units determined on our, BS EN ISO 5801:2017, airflow measurement bench, detailing SFP figures in accordance with BS 8850:2020 with ISO coarse 30% filters to BS EN ISO 16890-3. Full NR guide details available on request.

Highline HL235-WH - General arrangements.



Units are handed looking against the direction of airflow, i.e. looking into the discharge of the unit, with the unit in its installed orientation. General arrangement detail shows a fan coil with left hand coil connections.

Spigot positions are identified from left to right when looking into the discharge, with the unit in its installed orientation. Spigot positions are regardless of coil tail handings.

Model Size	Dimensions mm		Spigot pitch	Spigot positions	Weight	Coil volume ltrs	
	A	B	C	Ø197	Kg.	Clg.	Htg.
04/1	565	528	250	Y-1-2-Z	28	1.00	0.15
06/1	715	678	350	Y-1-2-Z	33	1.25	0.18
08/1	915	878	350	Y-1-2-Z	39	1.60	0.22
08/2	915	878	350	Y-1-2-Z	46	1.60	0.22
10/1	1115	1078	350	Y-1-2-3-Z	45	2.00	0.26
10/2	1115	1078	350	Y-1-2-3-Z	52	2.00	0.26
12/2	1315	1278	350	Y-1-2-3-Z	58	2.40	0.30
14/2	1515	1478	350	Y-1-2-3-4-Z	65	2.75	0.35
14/3	1515	1478	350	Y-1-2-3-4-Z	65	2.75	0.35
16/2	1715	1678	350	Y-1-2-3-4-Z	70	3.15	0.39
16/3	1715	1678	350	Y-1-2-3-4-Z	70	3.15	0.39
18/3	1915	1878	350	Y-1-2-3-4-5-Z	75	3.50	0.43
18/4	1915	1878	350	Y-1-2-3-4-5-Z	87	3.50	0.43

Entering Air Design Conditions:		
Season	Temperature	Temperature
Summer	23.0 db °C	16.2 wb °C
Winter	21.0 db °C	
External system static pressure		30 Pa

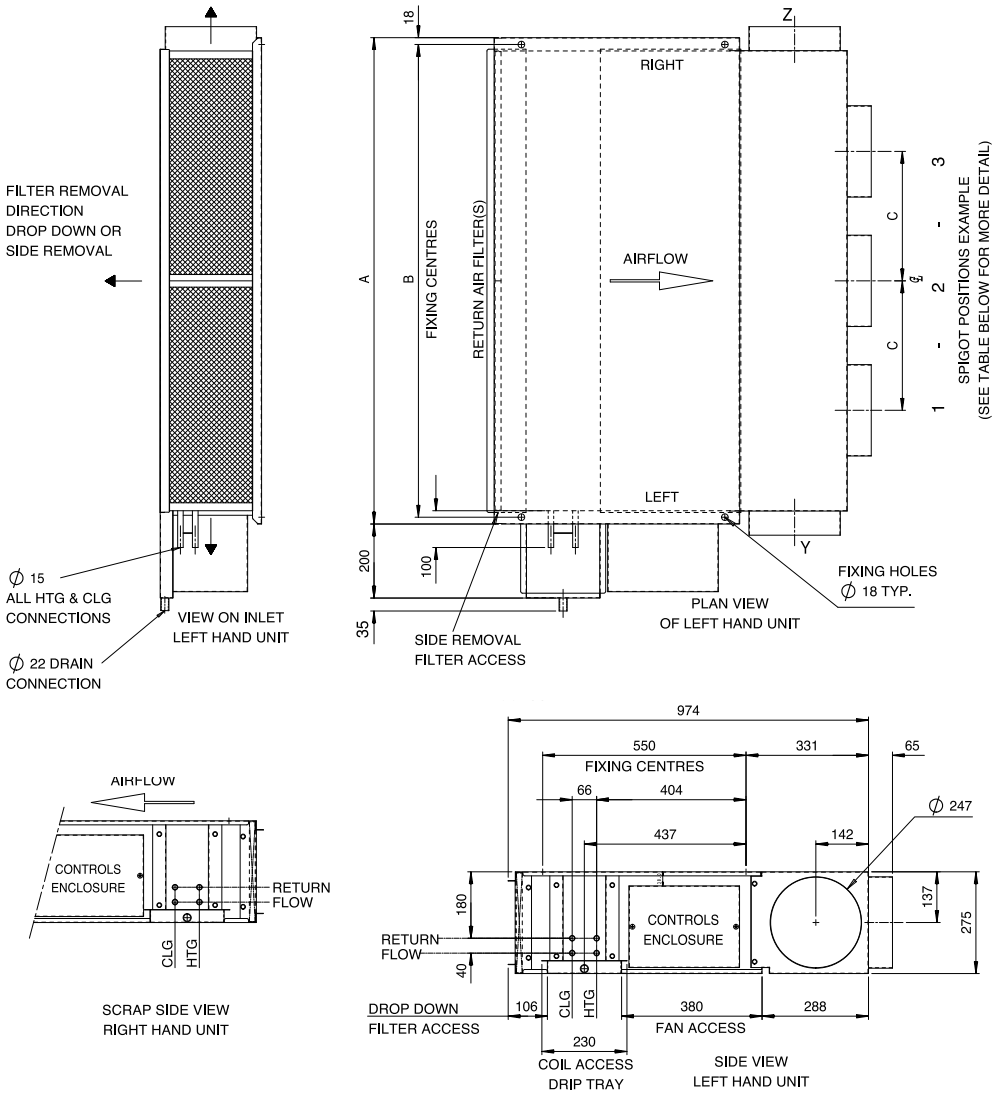
Cooling Design Conditions:		
Flow/Return Temp.	Flow/Return Temp.	Flow/Return Temp.
6/12 °C	8/14 °C	10/15 °C

Heating Design Conditions:		
Flow/Return Temp.	Flow/Return Temp.	Flow/Return Temp.
80/60 °C	60/40 °C	45/40 °C

Model Reference	Airflow / NR Guide / SFP			Cooling Output						Heating Output		
	Airflow l/s	Ind. Unit Guide NR	SFP W/l/s	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Total Duty Watts	Sensible Duty Watts	Sensible Duty Watts	Sensible Duty Watts
HL275A-WHCH-04/1 * FR+CP	93	30	0.18	1391	1807	1181	1387	1051	1144	2113	871	937
	149	35	0.25	2051	2570	1754	2007	1553	1671	2807	1221	1249
	167	37	0.29	2242	2784	1919	2180	1692	1816	3002	1324	1348
HL275A-WHCH-06/1 * FR+CP	116	30	0.17	1828	2438	1572	1901	1398	1544	2801	1347	1239
	163	35	0.24	2434	3165	2097	2481	1852	2019	3478	1696	1542
	183	37	0.29	2673	3445	2295	2690	2027	2201	3714	1822	1648
HL275A-WHCH-08/1 * FR+CP	130	30	0.17	2034	2701	1725	2064	1539	1691	3212	1042	1432
	184	35	0.25	2753	3583	2350	2772	2081	2267	4025	1189	1797
	194	36	0.27	2883	3743	2458	2892	2180	2373	4173	1207	1865
HL275A-WHCH-08/2 * FR+CP	167	30	0.17	2539	3325	2163	2561	1921	2097	3772	1144	1688
	253	35	0.23	3581	4542	3069	3542	2718	2934	4859	1717	2173
	341	40	0.32	4525	5594	3875	4390	3427	3676	5809	2295	2607
HL275A-WHCH-10/1 * FR+CP	149	30	0.17	2273	2982	1884	2209	1692	1843	3927	1411	1739
	179	33	0.21	2683	3492	2246	2627	2005	2179	4411	1765	1953
	201	35	0.26	2968	3841	2493	2905	2220	2408	4748	1984	2106
HL275A-WHCH-10/2 * FR+CP	187	30	0.16	2795	3628	2348	2743	2100	2282	4537	1849	2013
	290	35	0.22	4069	5137	3459	3970	3073	3312	5968	2678	2658
	420	40	0.33	5019	6201	4280	4840	3785	4056	6988	3216	3122
HL275A-WHCH-12/2 * FR+CP	214	30	0.16	3327	4405	2838	3393	2529	2776	5389	2533	2381
	320	35	0.22	4069	6059	4023	4711	3565	3870	6972	3392	3102
	420	40	0.33	5019	7302	4977	5718	4412	4757	8181	4021	3641
HL275A-WHCH-14/2 * FR+CP	226	30	0.16	3391	4411	2828	3298	3537	2756	5988	2984	2646
	336	35	0.22	4803	6120	4074	4701	3616	3904	7765	3941	3433
	421	38	0.28	5721	7151	4869	5552	4303	4626	8862	4548	3930
HL275A-WHCH-14/3 * FR+CP	222	30	0.15	3338	4344	2779	3241	2495	2711	5925	2947	2611
	400	35	0.21	5539	6952	4721	5400	4187	4507	8605	4425	3815
	503	38	0.28	6660	8217	5657	6384	5001	5354	9856	5044	4370
HL275A-WHCH-16/2 * FR+CP	259	30	0.17	3992	5264	3386	4024	3019	3304	6934	3588	3056
	350	35	0.23	5178	6702	4417	5182	3919	4260	8426	4426	3726
	436	40	0.32	6182	7866	5291	6122	4678	5054	9683	5059	4281
HL275A-WHCH-16/3 * FR+CP	263	30	0.15	4050	5336	3434	4077	3066	3354	7007	3625	3091
	447	35	0.23	6367	8100	5435	6280	4809	5193	9822	5134	4348
	566	38	0.31	7610	9457	6573	7496	5776	6205	11286	5872	4824
HL275A-WHCH-18/3 * FR+CP	315	30	0.15	4751	6193	4003	4701	3572	3887	8018	3688	3548
	492	35	0.23	6944	8796	5934	6839	5254	5668	10667	5180	4734
	582	38	0.29	7955	9949	6774	7727	5981	6430	11758	5760	5224
HL275A-WHCH-18/4 * FR+CP	310	30	0.15	4688	6117	3949	4640	3521	3833	7944	3644	3514
	522	35	0.20	7296	9189	6243	7170	5528	5957	11031	5373	4897
	710	40	0.30	9274	11377	7988	9017	7024	7518	13249	6619	5899

All sizes in the HL275 range have been independently acoustic tested across their performance envelope to establish the combined inlet and case radiated, discharge duct radiated, and in-duct sound power levels; testing was undertaken at SRL (Sound Research Laboratories) and conducted in accordance with BS EN 16583:2015. Diffusion NR guide figures have been calculated using our established acoustic modelling process, with calculations and allowances as detailed in CIBSE Guide B4:2016. Volumetric flow rates for all units determined on our, BS EN ISO 5801:2017, airflow measurement bench, detailing SFP figures in accordance with BS 8850:2020 with ISO coarse 30% filters to BS EN ISO 16890-3. Full NR guide details available on request.

Highline HL275-WH - General arrangements.



Units are handed looking against the direction of airflow, i.e. looking into the discharge of the unit, with the unit in its installed orientation. General arrangement detail shows a fan coil with left hand coil connections.

Spigot positions are identified from left to right when looking into the discharge, with the unit in its installed orientation. Spigot positions are regardless of coil tail handings.

Model Size	Dimensions mm		Spigot pitch	Spigot positions	Weight	Coil volume ltrs	
	A	B	C	Ø247	Kg.	Clg.	Htg.
04/1	565	528	-	Y-1-Z	33	0.96	0.20
06/1	715	678	350	Y-1-2-Z	39	1.21	0.25
08/1	915	878	350	Y-1-2-Z	45	1.56	0.31
08/2	915	878	350	Y-1-2-Z	51	1.56	0.31
10/1	1115	1078	350	Y-1-2-3-Z	52	1.91	0.37
10/2	1115	1078	350	Y-1-2-3-Z	58	1.91	0.37
12/2	1315	1278	350	Y-1-2-3-Z	66	2.26	0.43
14/2	1515	1478	350	Y-1-2-3-4-Z	73	2.60	0.49
14/3	1515	1478	350	Y-1-2-3-4-Z	76	2.60	0.49
16/2	1715	1678	350	Y-1-2-3-4-Z	80	2.94	0.55
16/3	1715	1678	350	Y-1-2-3-4-Z	83	2.94	0.55
18/3	1915	1878	350	Y-1-2-3-4-5-Z	91	3.28	0.61
18/4	1915	1878	350	Y-1-2-3-4-5-Z	97	3.28	0.61

Expand your knowledge.

Attend our CIBSE Approved CPD courses and Open days.



Diffusion invite you to expand your knowledge within the Heating, Ventilating and Air Conditioning industry by attending our free CIBSE Approved Continued Professional Development Courses (CPD).

Attending Continued Professional Development courses helps expand your company's knowledge whilst proactively enhancing your professional capabilities. We invite you to expand your knowledge by attending our course which is held online for your convenience.

CPD Course Title: Understanding Heating, Ventilating and Air Conditioning

What you can expect to learn on this 1 hour course:

- Understanding the concept of air conditioning
- Gain an understanding of fan coil units including the different types, benefits, constraints and components
- The difference between EC/DC and AC motor technology
- An understanding of Specific Fan Power (SFP) and why it is important
- Control options and systems for different sized buildings
- Application guidance
- Ducting and the importance of Noise Ratings (NR)
- The process from product selection, design and installation

For full details and to book a CPD, please visit www.diffusion-group.com/cpd or call +44(0)20 8783 0033

Diffusion



Case studies.

Diffusion have supplied thousands of fan coil units in a wide variety of projects in and around London.



The Shard Building

The Shard, Southwark's stunning skyscraper, created entirely of glass in the heart of London also benefits from Diffusion products that create occupant comfort all year round. Over 2,100 fan coil units were supplied to fulfill the complex needs of this stunning building. The tower has 61 habitable floors encompassing a mixture of premium office space, luxury apartments, a hotel, restaurants and retail spaces a spa and the phenomenally popular viewing gallery.



The Walkie-Talkie Building

The iconic Walkie-Talkie building also known as 20 Fenchurch Street, the fifth tallest building in London at 525 ft benefits from 2000 Diffusion fan coil units. The specification was for low SFP's of 0.19 W/l/s, Diffusion exceeded the expectation providing units with SFP's of just 0.17 W/l/s.



One Bishopsgate Plaza Building

The spectacular 41 story building at One Bishopsgate Plaza in London benefits from almost 1,000 Diffusion fan coil units. These serve a variety of purposes in this impressive building. A 380 seat ballroom, a 5 star hotel, shops, restaurants and luxury residential apartments that benefit from impressive views across London. Energy efficiency and thermal comfort were key requirements for this stunning project.

For full details please visit www.diffusion-group.com/project


Helping you build
your project and a
sustainable future.

Working harder and smarter, together to ensure a brighter future for our planet.

UK
manufactured

Diffusion proudly develops fan coil units that are British designed, manufactured and built, we have over 60 years experience in developing high performance fan coil units that operate efficiently in countless businesses across the construction supply chain, this is why we are, trusted.

Our mission is to design industry leading products that address the diverse needs of the construction industry, all while committing to achieving a Net-Zero build environment by 2050.

We are crucially aware of the need for low carbon products and we are making conscious efforts to achieve this.



Our achievements in sustainability.







UK Manufacturing

We prioritise sourcing our materials from UK manufacturers and suppliers wherever possible. Our products are designed to use less materials helping to lower our carbon footprint and support our sustainability goals. We use the most energy efficient components such as the heat exchanger and motor. By transporting approximately 60% of our units less than 30 miles, ensures low transported miles.

Our units can be re-configured and re-purposed to suit the new building objectives, avoiding costly refurbishment and product waste. Our Lifetime ‘Eco’ mesh filter, is made of sustainable, non-synthetic materials eliminating the use of synthetic filters that contribute to landfill.

Our Highline 275 was named Air Conditioning Product of the Year at the HVR Awards 2025, recognising our commitment to innovation and low carbon design. This follows our 2024 win at the CIBSE Building Performance Awards for Thermal Comfort, celebrating the Highline range’s contribution to occupant wellbeing and energy-efficient performance.

Embodied Carbon Calculations

A number of Diffusion’s fan coil units have achieved independently verified Environmental Product Declarations (EPDs) through EPD Hub, including our Modular Highline 235 and Modular Highline 275 ranges.

These independently verified declarations provide transparent, robust information on the environmental impact of our products throughout their lifecycle, helping consultants and specifiers make informed decisions and support more sustainable building design.

We’d love to hear from you and help you through every step of your project.

To find out how we can help contact us today on
cooling@diffusion-group.com or call **+44 (0) 20 8783 0033**

Diffusion