HEATING & COOLING COIL PRODUCTS

DRY AIR COOLERS

Small footprint low profile
6, 8, 10, 12 or 16 pole fan motors
Noise levels to ISO 3745
Wetted surface option
Variable fan speed option

H & C COILS

HEATING & COOLING COIL PRODUCTS

DRY AIR COOLERS

These ranges of Dry Air Coolers are designed with high quality features and low cost offering real value for money to the user for a diverse range of applications.

HCL	**37 - 550 kW** **6, 8 & 12 Pole Fans** **Horizontal or Vertical Air Flow**
M	**53 - 720 kW** **6, 8, 10, 12 & 16 Pole Fans** **Horizontal or Vertical Air Flow**
NV & NW	**48 - 1004 kW** **6, 8, 10, 12 & 16 Pole Fans** **Vertical Airflow V and W configuration coils.** **Low Profile**
V & BV	**142 - 1085 kW** **6, 8, 10, 12 & 16 Pole Fans** **Vertical Airflow V and W configuration coils.** **Higher Profile - Minimum Footprint.**

H & C COILS

APPLICATIONS

To dissipate heat from water/glycol cooling systems applied to water cooled air conditioning plant and winter free cooling systems for computer room installations. Other applications include industrial water cooling systems, furnaces, plastic moulding machines, transformers, engines and generators, combined heat & power schemes and waste heat dissipaters.

Specification

COIL. Manufactured from 1/2" o.d. seamless copper tube expanded into collared aluminium plate fins. Headers are copper with screwed BSP Male or BS4504 PN16 Bimetal Flanged Flow and Return connections. Brazed joints are made with silver bearing copper alloy for strength. Coils are pressure tested to 16 bar G. air under water.

CASING. Heavy gauge galvanised sheet steel finished in polyester powder coat to BS4800 00A05 Goose Wing Grey.

FANS. Reinforced multiblade polypropylene propeller fan with die cast hub, keyed and locked onto motor shaft. The fan runs in a formed bell mouth orifice for efficiency and low noise.

MOTORS. Totally enclosed foot mounting class f insulated metric frame to IP 55 specification 380/420 3ph 50Hz. Other voltages, 60Hz and Flameproof motors are available.

GUARDS. The fans are covered by a one piece circular formed steel wire compliance guard, plastic dip coated.

WIRING. All motors are wired with 4 core cable to separate terminals contained in a weatherproof enclosure mounted at the connection end of the unit.

OPTIONAL FEATURES

- Polyester Coated Aluminium Fins
- Copper Fins
- Tinned Copper Fins
- Fan Off Cycle Temperature Control Panel
- PWM Inverter Fan Speed Control Panel
- Wetted Surface Cooling

Selection

Capacity tables are based on 25% ethylene glycol/water. 5K ΔT between inlet and outlet water temperatures and 15K TD between inlet water temperature and ambient drybulb temperature.
The units are suitable for a wide range of capacities dependent on operating conditions, please contact our sales office for a quick selection for a particular application.

WETTED SURFACE "ADIABATIC" COOLING

Concept

Wetted Surface "Adiabatic" Cooling enables Dry Air Coolers to be designed to operate with an approach temperature of 6°C to ambient wetbulb temperature. Therefore with a design ambient of 20°C wetbulb it is possible to achieve fluid outlet temperatures of 26°C The water is only needed when the load and ambient dry bulb temperature exceeds a predetermined set point, with very few hours of wetted surface operation over a year. The question of causing possible conditions for legionella is no more than that of normal climate conditions of rain. The water used for wetting is quite small and is totally lost, not recycled or retained. Regional weather data analysis shows a typical 120 hours per year when ambient exceed 22°C.

Description

The V configuration Dry Air Coolers can be adapted to take advantage of latent cooling effect in adverse conditions of high ambient dry bulb temperatures. Reversion back to dry air cooling takes place on lowering of temperature. All features of temperature control by fan off cycling with low or residential fan speeds are retained.
The Wetted Surface option enables units to be economically sized for a lower ambient thus saving space and capital cost. Alternatively, units may be selected for cooling water solutions to a temperature below the ambient dry bulb approaching conditions near to evaporative towers.

Components

Each coil has a special water distribution system to ensure that each fin is evenly wetted. The very large surface areas of the coils assures that evaporation takes place efficiently with the very minimum of wastage. The normal dry air cooler is regulated by fan off cycling by thermostat switches; a further thermostatic switch brings on the wetting cycle, only after all the fans are running.
An electronic device controls the solenoid valve controlling the flow of water to reduce wastage of overspill water to a minimum. To prevent scale deposits the water can be pre-treated by proprietary scale prevention device. Connection to water mains requires a double check valve.

Selection

The evaporation produces an effective temperature drop of the circulating air to an equivalent ambient of 3°C above the prevailing wet bulb temperature.
Thus an ambient of 30°C dry bulb, 20°C wet bulb will be reduced to an ambient dry bulb for selection purposes of 20°C + 3°C = 23°C.
Evaporation loss of water per 100 kW heat rejection will be 0.25 kg per minute for every 1°C above selection dry bulb ambient.
Typical evaporation loss per annum in southern England will be 2500 kg per annum per 100 kW.

THE WETTED SURFACE PACKAGE COMPRISES OF:
Fresh water inlet manifold, inlet solenoid valve and evaporation controller, which can be added to the fan cycle control panel or interface with a process controller.

Temperature Control

All units can be supplied with a factory fitted control panel to control the outlet water/glycol temperature.

Fan Off Cycle Temperature Control

A temperature sensor is placed in a pocket in the outlet header, this monitors the leaving water temperature signaling the thermostat to switch fans on and off to maintain the outlet water/glycol temperature within the differential limits of the thermostat set point. The number of fans determines the number of steps of control available.

THE STANDARD PANEL COMPRISES OF THE FOLLOWING COMPONENTS: IP65 weatherproof enclosure with door interlocked isolator, main circuit breaker, control circuit breaker, fan contactors with motor rated overloads, anti-condensation heater, multi step thermostat.

OPTIONAL EXTRAS MAY INCLUDE: Common fan trip indication, individual fan trip indication, remote enable, BMS interface.

Inverter Fan Speed Control

A PWM (Pulse Width Modulation) frequency inverter is supplied which varies the AC frequency and voltage to vary the fan speed in response to a 0 - 10 V DC or 4 - 20 mA proportional signal input from a temperature interface module or external process. Standard fan motors are used.
The inverter has a simple alphanumeric display to enable a quick and easy set up without special equipment.
The package is supplied in a ventilated weatherproof enclosure with door interlocked isolator and motor contactors and overloads.

NOISE LEVELS

The Institute of Sound and Vibration Research Consultancy Services have carried out Independent noise tests at Southampton University. Sound Power levels were measured to ISO 3745, sound pressure levels are derived for a hemispherical free field on a single reflecting plane.

CORRECTION FACTORS FOR OTHER DISTANCES.

Distance M	5	6	8	10	12	16	32	64
db+/–	+6	+4.5	+2	1.0	–1.5	–4	–10	–16

HYDRAULIC RESISTANCE

The coils will be factory circuited to handle the required flow rate of fluid with a pressure drop in the order of 10 - 95 kPa.

HCL Capacities 37 - 460 kW

Vertical or Horizontal Airflow 6, 8 & 12 Pole Fans

HCL 6 POLE FANS 930 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
HCL/6 320	60	8	111	24	2	0.75	2.6	61
HCL/6 350	77	8	166	35	2	0.75	2.6	61
HCL/6 390	92	8	222	47	2	0.75	2.6	61
HCL/6 520	116	12	250	53	3	0.75	2.6	63
HCL/6 585	138	12	333	71	3	0.75	2.6	63
HCL/6 690	154	16	333	71	4	0.75	2.6	64
HCL/6 780	184	15	444	94	4	0.75	2.6	64
HCL/6 865	193	20	416	88	5	0.75	2.6	65
HCL/6 975	230	19	554	118	5	0.75	2.6	65
HCLD/6 1040	232	24	499	106	2x3	0.75	2.6	66
HCLD/6 1170	276	23	665	141	2x3	0.75	2.6	66
HCLD/6 1380	308	32	665	141	2x4	0.75	2.6	67
HCLD/6 1560	368	31	887	188	2x4	0.75	2.6	67
HCLD/6 1730	386	40	832	176	2x5	0.75	2.6	68
HCLD/6 1950	460	39	1109	235	2x5	0.75	2.6	68

HCL 8 POLE FANS 700 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
HCL/8 320	52	6	111	24	2	0.40	1.8	52
HCL/8 350	64	6	166	35	2	0.40	1.8	52
HCL/8 390	73	6	222	47	2	0.40	1.8	52
HCL/8 520	96	9	250	53	3	0.40	1.8	54
HCL/8 585	110	9	333	71	3	0.40	1.8	54
HCL/8 690	128	12	333	71	4	0.40	1.8	55
HCL/8 780	146	12	444	94	4	0.40	1.8	55
HCL/8 865	160	15	416	88	5	0.40	1.8	56
HCL/8 975	183	14	554	118	5	0.40	1.8	56
HCLD/8 1040	192	18	499	106	2x3	0.40	1.8	57
HCLD/8 1170	220	17	665	141	2x3	0.40	1.8	57
HCLD/8 1380	256	24	665	141	2x4	0.40	1.8	58
HCLD/8 1560	292	23	887	188	2x4	0.40	1.8	58
HCLD/8 1730	320	30	832	176	2x5	0.40	1.8	59
HCLD/8 1950	366	29	1109	235	2x5	0.40	1.8	59

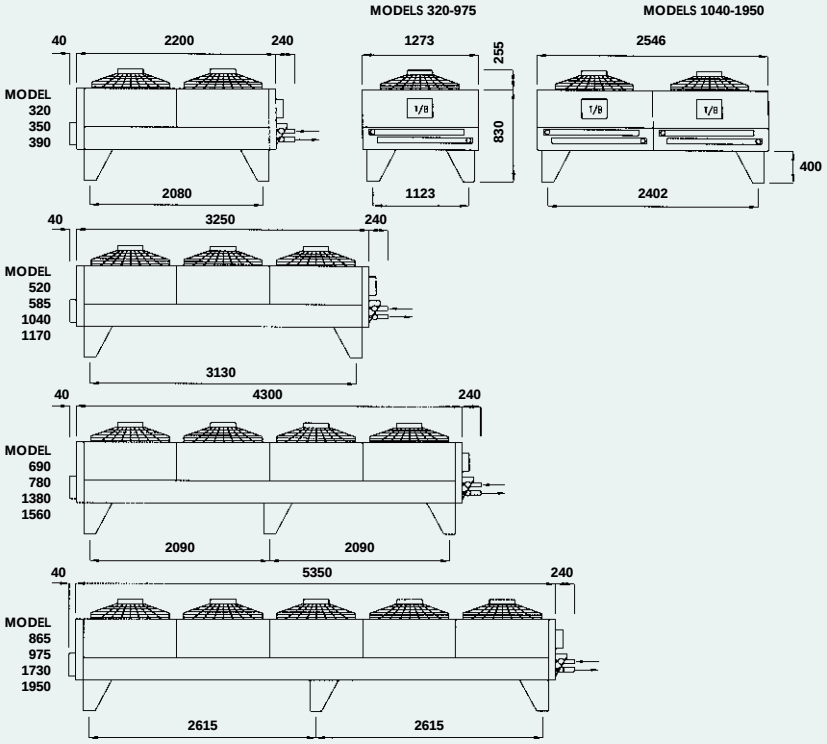
HCL 12 POLE FANS 460 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
HCL/12 320	37	4	111	24	2	0.15	1.1	41
HCL/12 350	38	4	166	35	2	0.15	1.1	41
HCL/12 390	52	4	222	47	2	0.15	1.1	41
HCL/12 520	57	6	250	53	3	0.15	1.1	43
HCL/12 585	78	6	333	71	3	0.15	1.1	43
HCL/12 690	76	8	333	71	4	0.15	1.1	44
HCL/12 780	104	8	444	94	4	0.15	1.1	44
HCL/12 865	95	10	416	88	5	0.15	1.1	45
HCL/12 975	130	10	554	118	5	0.15	1.1	45
HCLD/12 1040	114	12	499	106	2x3	0.15	1.1	46
HCLD/12 1170	156	12	665	141	2x3	0.15	1.1	46
HCLD/12 1380	152	16	665	141	2x4	0.15	1.1	47
HCLD/12 1560	208	15	887	188	2x4	0.15	1.1	47
HCLD/12 1730	190	20	832	176	2x5	0.15	1.1	48
HCLD/12 1950	260	19	1109	235	2x5	0.15	1.1	48

H & C COILS

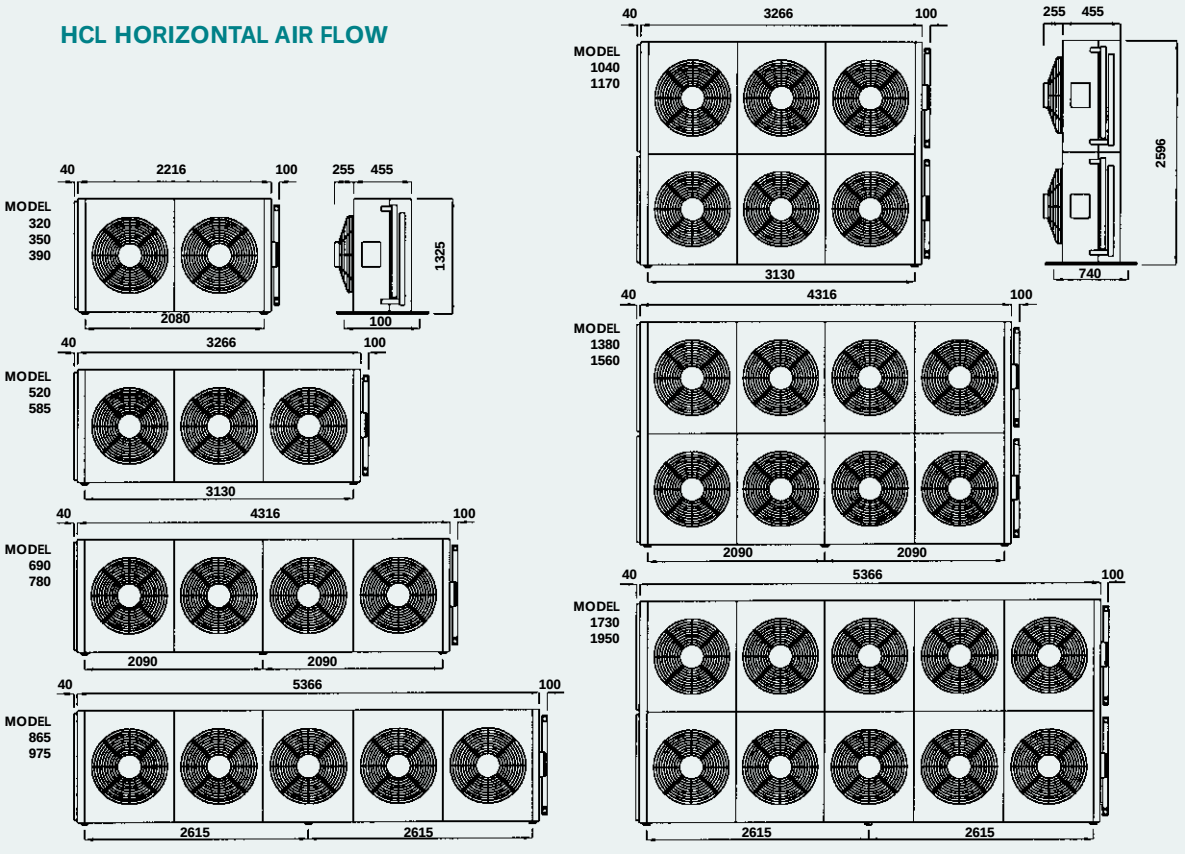
HCL Dimensions & Weights

HCL VERTICAL AIR FLOW



Model	Wt kg Al	Wt kg Cu
320	268	303
350	311	365
390	355	426
520	452	532
585	509	615
690	592	699
780	662	805
865	732	866
975	712	890
1040	720	800
1170	777	883
1380	952	1059
1560	1023	1165
1730	1185	1319
1950	1269	1447

HCL HORIZONTAL AIR FLOW



M Capacities 53 - 720 kW

Vertical or Horizontal Airflow 6, 8 10, 12 & 16 Pole Fans

MC 6 POLE FANS 930 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
MC	450	106	11.8	268	39	2	2.2	5.9	64
MC	520	120	11.0	358	53	2	2.2	5.9	64
MC	675	158	17.8	402	59	3	2.2	5.9	66
MC	800	180	16.5	536	79	3	2.2	5.9	66
MC	900	211	23.7	536	79	4	2.2	5.9	67
MC	1050	240	22.0	715	105	4	2.2	5.9	67
MC	1150	263	29.6	670	99	5	2.2	5.9	68
MC	1325	300	27.2	894	131	5	2.2	5.9	68
MCD	1400	316	35.6	804	118	2x3	2.2	5.9	69
MCD	1600	360	33.1	1073	158	2x3	2.2	5.9	69
MCD	1800	422	47.7	1072	158	2x4	2.2	5.9	70
MCD	2200	480	44.2	1430	210	2x4	2.2	5.9	70
MCD	2300	526	59.6	1340	197	2x5	2.2	5.9	71
MCD	2650	600	55.2	1788	263	2x5	2.2	5.9	71
MCD	2760	632	71.5	1608	237	2x6	2.2	5.9	72
MCD	3180	720	66.2	2145	315	2x6	2.2	5.9	72

ML 8 POLE FANS 700 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
ML	450	93	9.4	268	39	2	1.1	3.4	55
ML	520	106	9.1	358	53	2	1.1	3.4	55
ML	675	139	14.0	402	59	3	1.1	3.4	56
ML	800	159	13.7	536	79	3	1.1	3.4	56
ML	900	185	18.8	536	79	4	1.1	3.4	58
ML	1050	211	18.2	715	105	4	1.1	3.4	58
ML	1150	231	23.6	670	99	5	1.1	3.4	59
ML	1325	264	22.8	894	131	5	1.1	3.4	59
MLD	1400	278	28.3	804	118	2x3	1.1	3.4	59
MLD	1600	318	27.4	1073	158	2x3	1.1	3.4	59
MLD	1800	370	37.9	1072	158	2x4	1.1	3.4	61
MLD	2200	422	36.7	1430	210	2x4	1.1	3.4	61
MLD	2300	462	47.2	1340	197	2x5	1.1	3.4	62
MLD	2650	528	45.7	1788	263	2x5	1.1	3.4	62
MLD	2760	554	56.7	1608	237	2x6	1.1	3.4	62
MLD	3180	634	54.9	2145	315	2x6	1.1	3.4	62

MQ 10 POLE FANS 560 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
MQ	450	77	8.2	160	40	2	0.55	2.5	48
MQ	520	88	7.6	214	54	2	0.55	2.5	48
MQ	675	115	12.3	240	60	3	0.55	2.5	49
MQ	800	132	11.5	320	81	3	0.55	2.5	49
MQ	900	153	16.6	320	81	4	0.55	2.5	51
MQ	1050	175	15.2	427	108	4	0.55	2.5	51
MQ	1150	192	20.7	401	101	5	0.55	2.5	52
MQ	1325	210	19.0	534	134	5	0.55	2.5	52
MQD	1400	230	24.7	481	121	2x3	0.55	2.5	52
MQD	1600	264	23.0	641	161	2x3	0.55	2.5	52
MQD	1800	306	33.2	641	161	2x4	0.55	2.5	54
MQD	2200	350	30.5	855	215	2x4	0.55	2.5	54
MQD	2300	384	41.4	801	202	2x5	0.55	2.5	55
MQD	2650	420	38.0	1068	269	2x5	0.55	2.5	55
MQD	2760	460	49.7	961	242	2x6	0.55	2.5	55
MQD	3180	504	45.6	1282	323	2x6	0.55	2.5	55

MR 12 POLE FANS 460 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
MR	450	68	6.8	225	39	2	0.25	1.6	44
MR	520	76	6.3	299	53	2	0.25	1.6	44
MR	675	101	10.2	337	59	3	0.25	1.6	45
MR	800	114	9.5	449	79	3	0.25	1.6	45
MR	900	135	13.7	449	79	4	0.25	1.6	47
MR	1050	152	12.6	599	105	4	0.25	1.6	47
MR	1150	169	17.1	561	99	5	0.25	1.6	48
MR	1325	190	15.7	748	131	5	0.25	1.6	48
MRD	1400	202	20.4	674	118	2x3	0.25	1.6	48
MRD	1600	228	19.0	898	158	2x3	0.25	1.6	48
MRD	1800	270	27.4	898	158	2x4	0.25	1.6	50
MRD	2200	304	25.2	1197	210	2x4	0.25	1.6	50
MRD	2300	338	34.2	1123	197	2x5	0.25	1.6	51
MRD	2650	380	31.4	1497	263	2x5	0.25	1.6	51
MRD	2760	405	41.1	1347	237	2x6	0.25	1.6	51
MRD	3180	456	37.7	1796	315	2x6	0.25	1.6	51

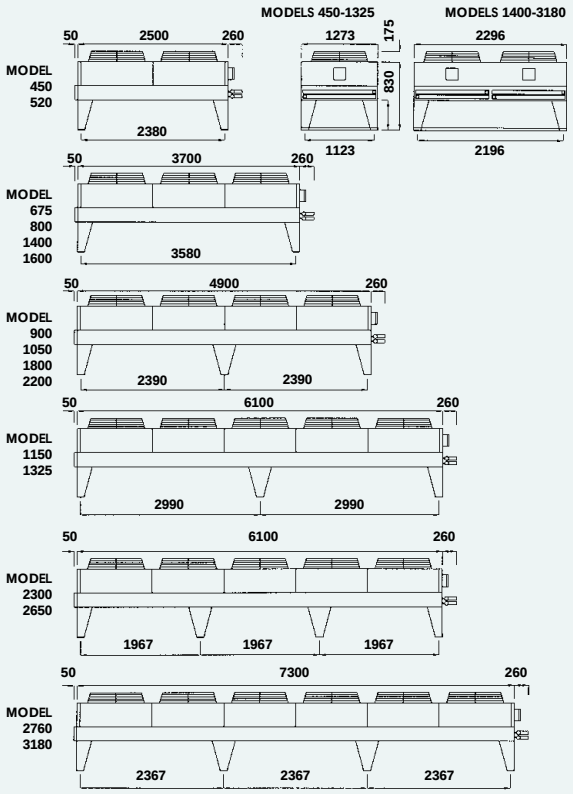
MZ 16 POLE FANS 930 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data kW	Fan data FLC	dbA @10m
MZ	450	53	4.7	225	39	2	0.15	1.2	37
MZ	520	56	4.4	299	53	2	0.15	1.2	37
MZ	675	79	7.0	337	59	3	0.15	1.2	39
MZ	800	84	6.6	449	79	3	0.15	1.2	39
MZ	900	105	9.4	449	79	4	0.15	1.2	40
MZ	1050	112	8.8	599	105	4	0.15	1.2	40
MZ	1150	132	11.7	561	99	5	0.15	1.2	41
MZ	1325	140	11.0	748	131	5	0.15	1.2	41
MZD	1400	158	14.0	674	118	2x3	0.15	1.2	42
MZD	1600	168	13.2	898	158	2x3	0.15	1.2	42
MZD	1800	210	18.8	898	158	2x4	0.15	1.2	43
MZD	2200	224	17.6	1197	210	2x4	0.15	1.2	43
MZD	2300	264	23.4	1123	197	2x5	0.15	1.2	44
MZD	2650	280	22.0	1497	263	2x5	0.15	1.2	44
MZD	2760	317	28.1	1347	237	2x6	0.15	1.2	45
MZD	3180	336	26.4	1796	315	2x6	0.15	1.2	45

H & C COILS

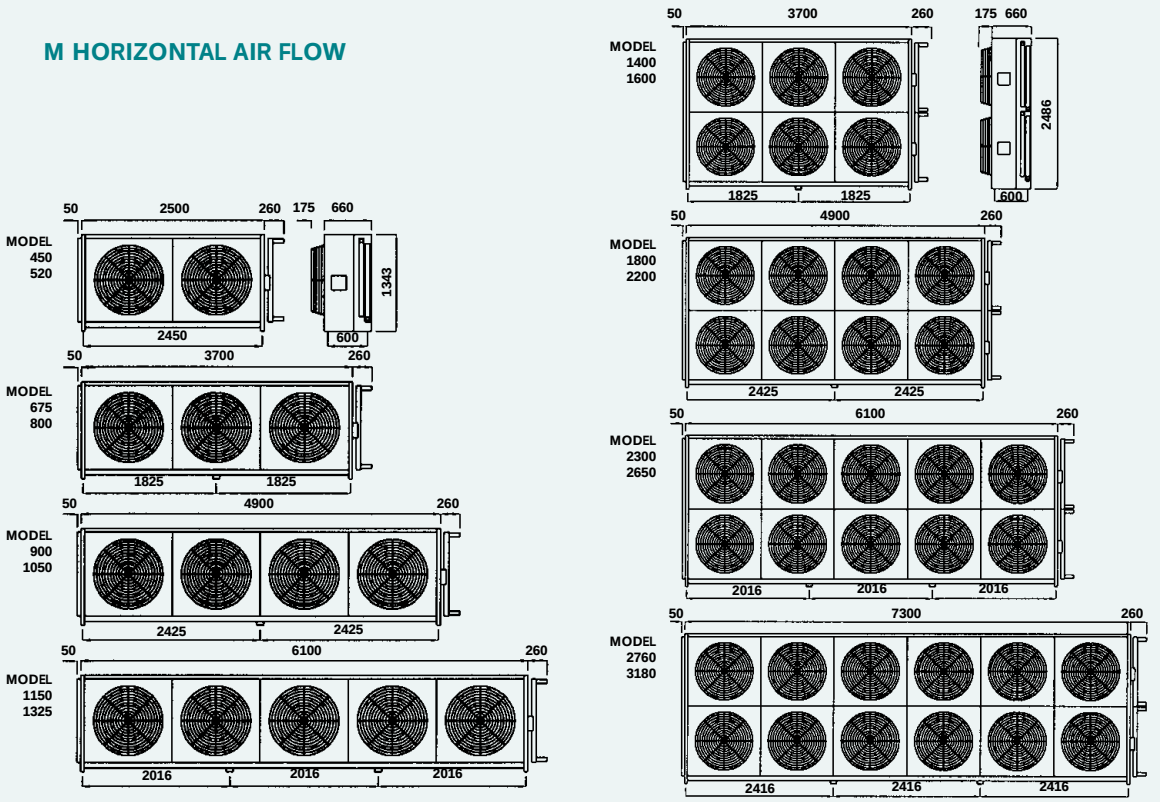
M Dimensions & Weights

M VERTICAL AIR FLOW



Model	Wt kg Al 6 & 8 Pole	Wt kg Cu 6 & 8 Pole	Wt kg Al 10, 12 & 16 Pole	Wt kg Cu 10, 12 & 16 Pole
450	377	438	369	420
520	428	509	417	485
675	558	650	546	622
800	623	745	608	709
900	739	861	723	825
1050	819	982	798	934
1150	920	1072	900	1027
1325	1015	1219	989	1158
1400	972	1155	949	1101
1600	1084	1328	1052	1255
1800	1290	1534	1259	1462
2200	1431	1756	1388	1660
2300	1608	1913	1569	1823
2650	1778	2184	1725	2064
2760	1926	2292	1879	2184
3180	2125	2613	2061	2468

M HORIZONTAL AIR FLOW



NV & NW Capacities 48 - 1004 kW

Vertical Airflow - V & W configuration coils 6, 8 10, 12 & 16 Pole Fans

NVI & NWI 6 POLE FANS 930 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVI 420	90	8.1	208	52.3	2	800	1.10	2.9	61
NVI 525	112	10.0	257	64.7	2	800	1.10	2.9	61
NVI 630	136	12.2	312	78.4	3	800	1.10	2.9	63
NVI 780	168	15.0	386	97.1	3	800	1.10	2.9	63
NVI 840	175	17.4	401	101.0	3	900	1.50	4.3	66
NVI 1000	215	19.5	494	124.3	3	900	1.50	4.3	66
NVI 1120	233	23.2	535	134.6	4	900	1.50	4.3	67
NVI 1330	287	26.0	658	165.7	4	900	1.50	4.3	67
NVI 1500	291	29.0	669	168.3	5	900	1.50	4.3	68
NVI 1660	358	32.5	823	207.1	5	900	1.50	4.3	68
NVI 1820	385	34.9	987	248.5	5	900	1.50	4.3	68
NVI 2000	430	39.0	987	248.5	6	900	1.50	4.3	69
NVI 2300	502	45.5	1152	289.9	7	900	1.50	4.3	69
NWI 1050	224	20.0	514	129.4	4	800	1.10	2.9	64
NWI 1260	272	24.4	623	156.8	6	800	1.10	2.9	66
NWI 1560	336	30.0	771	194.2	6	800	1.10	2.9	66
NWI 1680	350	34.8	802	201.9	6	900	1.50	4.3	69
NWI 2000	430	39.0	987	248.5	6	900	1.50	4.3	69
NWI 2240	466	46.4	1070	269.2	8	900	1.50	4.3	69
NWI 2660	574	52.0	1317	331.4	8	900	1.50	4.3	70
NWI 3000	582	58.0	1337	336.5	10	900	1.50	4.3	70
NWI 3320	716	65.0	1646	414.2	10	900	1.50	4.3	71
NWI 3640	770	69.8	1975	497.0	10	900	1.50	4.3	71
NWI 4000	860	78.0	1975	497.0	12	900	1.50	4.3	71
NWI 4600	1004	91.0	2304	579.9	14	900	1.50	4.3	72

NVL & NWL 8 POLE FANS 700 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVL 420	82	6.8	208	52.3	2	800	0.75	2.4	52
NVL 525	102	8.3	257	64.7	2	800	0.75	2.4	52
NVL 630	123	10.2	312	78.4	3	800	0.75	2.4	54
NVL 780	152	12.5	386	97.1	3	800	0.75	2.4	54
NVL 840	158	14.4	401	101.0	3	900	0.75	2.4	56
NVL 1000	195	16.2	494	124.3	3	900	0.75	2.4	56
NVL 1120	211	19.2	535	134.6	4	900	0.75	2.4	58
NVL 1330	260	21.5	658	165.7	4	900	0.75	2.4	58
NVL 1500	264	24.3	669	168.3	5	900	0.75	2.4	59
NVL 1660	325	26.9	823	207.1	5	900	0.75	2.4	59
NVL 1820	355	29.5	987	248.5	5	900	0.75	2.4	59
NVL 2000	390	32.4	987	248.5	6	900	0.75	2.4	59
NVL 2300	455	37.3	1152	289.9	7	900	0.75	2.4	60
NWL 1050	204	16.6	514	129.4	4	800	0.75	2.4	55
NWL 1260	246	20.4	623	156.8	6	800	0.75	2.4	57
NWL 1560	304	24.9	771	194.2	6	800	0.75	2.4	57
NWL 1680	316	28.8	802	201.9	6	900	0.75	2.4	59
NWL 2000	390	32.4	987	248.5	6	900	0.75	2.4	59
NWL 2240	422	38.4	1070	269.2	8	900	0.75	2.4	59
NWL 2660	520	43.1	1317	331.4	8	900	0.75	2.4	61
NWL 3000	528	48.6	1337	336.5	10	900	0.75	2.4	61
NWL 3320	650	53.8	1646	414.2	10	900	0.75	2.4	62
NWL 3640	710	59.0	1975	497.0	10	900	0.75	2.4	62
NWL 4000	780	64.8	1975	497.0	12	900	0.75	2.4	62
NWL 4600	910	74.5	2304	579.9	14	900	0.75	2.4	62

NVC & NWC 8 POLE FANS 700 RPM HD

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVC 420	85	7.6	208	52.3	2	800	1.10	3.4	55
NVC 525	105	9.2	257	64.7	2	800	1.10	3.4	55
NVC 630	127	11.3	312	78.4	3	800	1.10	3.4	57
NVC 780	158	13.9	386	97.1	3	800	1.10	3.4	57
NVC 840	164	16.0	401	101.0	3	900	1.10	3.4	59
NVC 1000	202	18.0	494	124.3	3	900	1.10	3.4	59
NVC 1120	219	21.3	535	134.6	4	900	1.10	3.4	61
NVC 1330	269	23.9	658	165.7	4	900	1.10	3.4	61
NVC 1500	274	27.0	669	168.3	5	900	1.10	3.4	62
NVC 1660	337	29.9	823	207.1	5	900	1.10	3.4	62
NVC 1820	368	32.8	987	248.5	5	900	1.10	3.4	62
NVC 2000	404	36.0	987	248.5	6	900	1.10	3.4	62
NVC 2300	471	41.4	1152	289.9	7	900	1.10	3.4	63
NWC 1050	254	22.7	458	97	4	800	1.10	3.4	60
NWC 1260	316	27.7	554	118	6	800	1.10	3.4	60
NWC 1560	328	32.0	686	146	6	900	1.10	3.4	62
NWC 1680	404	36.0	714	151	6	900	1.10	3.4	62
NWC 2000	438	42.7	879	186	6	900	1.10	3.4	62
NWC 2240	538	47.9	952	202	8	900	1.10	3.4	64
NWC 2660	548	54.0	1172	249	8	900	1.10	3.4	64
NWC 3000	674	59.8	1190	252	10	900	1.10	3.4	65
NWC 3320	736	65.5	1465	311	10	900	1.10	3.4	65
NWC 3640	808	72.0	1757	373	10	900	1.10	3.4	65
NWC 4000	942	82.8	1757	373	12	900	1.10	3.4	65
NWC 4600	529	82.8	2050	435	14	900	1.10	3.4	65

NVQ & NWQ 10 POLE FANS 560 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVQ 420	74	6.1	208	52.3	2	800	0.55	2.5	49
NVQ 525	91	7.5	257	64.7	2	800	0.55	2.5	49
NVQ 630	110	9.1	312	78.4	3	800	0.55	2.5	51
NVQ 780	137	11.2	386	97.1	3	800	0.55	2.5	51
NVQ 840	142	12.1	401	101.0	3	900	0.55	2.5	54
NVQ 1000	175	14.4	494	124.3	3	900	0.55	2.5	54
NVQ 1120	190	16.4	535	134.6	4	900	0.55	2.5	55
NVQ 1330	233	19.2	658	165.7	4	900	0.55	2.5	55
NVQ 1500	237	21.6	669	168.3	5	900	0.55	2.5	56
NVQ 1660	292	23.9	823	207.1	5	900	0.55	2.5	56
NVQ 1820	350	26.2	987	248.5	5	900	0.55	2.5	56
NVQ 2000	350	28.8	987	248.5	6	900	0.55	2.5	57
NVQ 2300	408	33.1	1152	289.9	7	900	0.55	2.5	57
NWQ 1050	182	14.9	514	129.4	4	800	0.55	2.5	52
NWQ 1260	220	18.1	623	156.8	6	800	0.55	2.5	54
NWQ 1560	274	22.4	771	194.2	6	800	0.55	2.5	54
NWQ 1680	284	24.2	802	201.9	6	900	0.55	2.5	57
NWQ 2000	350	28.8	987	248.5	6	900	0.55	2.5	57
NWQ 2240	380	32.7	1070	269.2	8	900	0.55	2.5	57
NWQ 2660	466	38.3	1317	331.4	8	900	0.55	2.5	58
NWQ 3000	474	43.2	1337	336.5	10	900	0.55	2.5	58
NWQ 3320	584	47.8	1646	414.2	10	900	0.55	2.5	59
NWQ 3640	637	52.4	1975	497.0	10	900	0.55	2.5	59
NWQ 4000	700	57.6	1975	497.0	12	900	0.55	2.5	59
NWQ 4600	816	66.2	2304	579.9	14	900	0.55	2.5	60

H & C COILS

NVR & NWR 12 POLE FANS 460 RPM

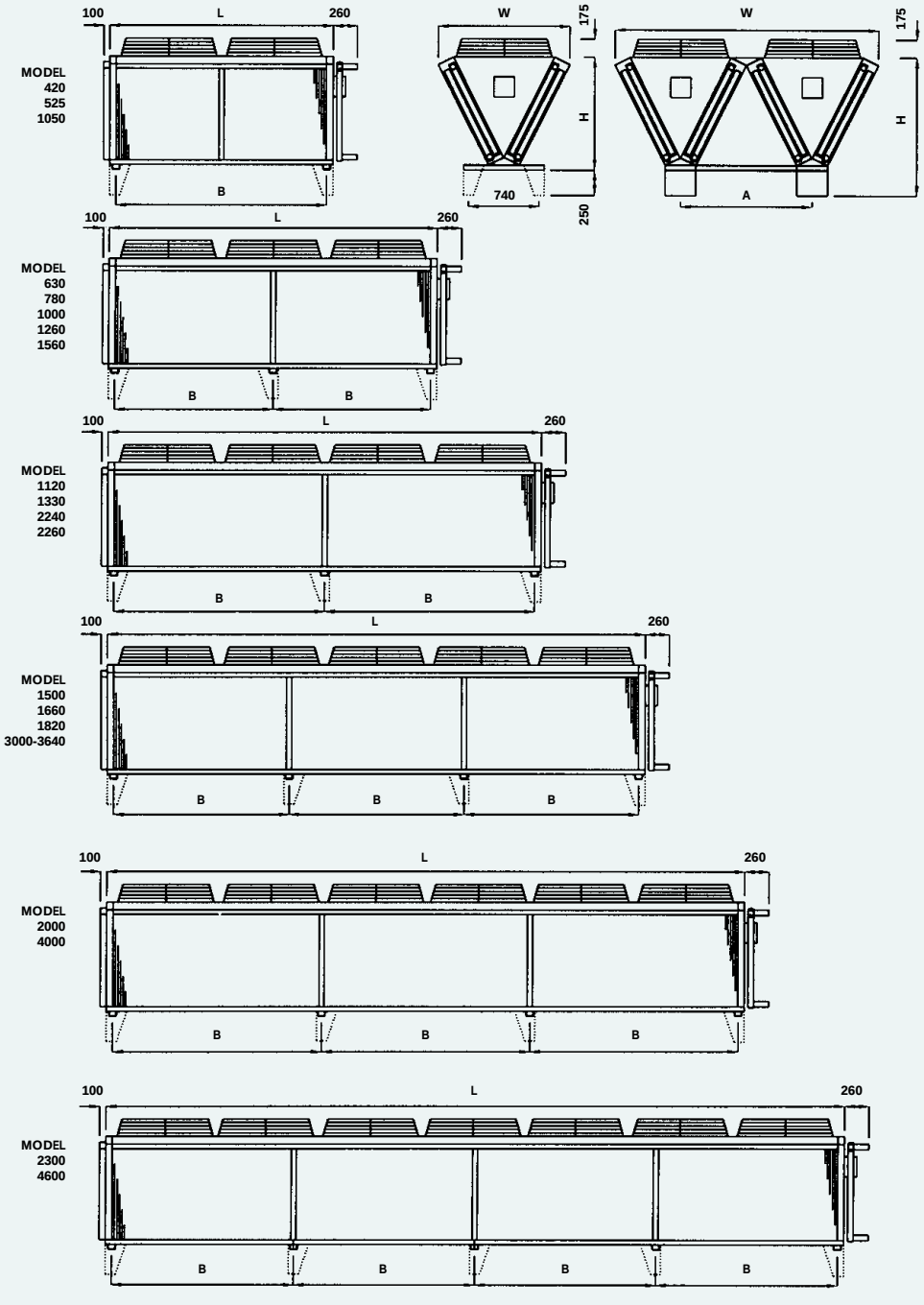
Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVR 420	63	5.0	208	52.3	2	800	0.25	1.6	44
NVR 525	78	6.2	257	64.7	2	800	0.25	1.6	44
NVR 630	95	7.6	312	78.4	3	800	0.25	1.6	46
NVR 780	117	9.4	386	97.1	3	800	0.25	1.6	46
NVR 840	122	10.1	401	101.0	3	900	0.25	1.6	48
NVR 1000	150	12.0	494	124.3	3	900	0.25	1.6	48
NVR 1120	162	13.5	535	134.6	4	900	0.25	1.6	50
NVR 1330	200	16.0	658	165.7	4	900	0.25	1.6	50
NVR 1500	203	18.0	669	168.3	5	900	0.25	1.6	51
NVR 1660	250	19.9	823	207.1	5	900	0.25	1.6	51
NVR 1820	300	21.8	987	248.5	5	900	0.25	1.6	51
NVR 2000	300	24.0	987	248.5	6	900	0.25	1.6	51
NVR 2300	350	27.6	1152	289.9	7	900	0.25	1.6	52
NWR 1050	156	12.5	514	129.4	4	800	0.25	1.6	47
NWR 1260	190	15.1	623	156.8	6	800	0.25	1.6	49
NWR 1560	234	18.7	771	194.2	6	800	0.25	1.6	49
NWR 1680	244	20.2	802	201.9	6	900	0.25	1.6	51
NWR 2000	300	24.0	987	248.5	6	900	0.25	1.6	51
NWR 2240	324	26.9	1070	269.2	8	900	0.25	1.6	51
NWR 2660	400	31.9	1317	331.4	8	900	0.25	1.6	53
NWR 3000	406	36.0	1337	336.5	10	900	0.25	1.6	53
NWR 3320	500	39.8	1646	414.2	10	900	0.25	1.6	54
NWR 3640	546	43.7	1975	497.0	10	900	0.25	1.6	54
NWR 4000	600	48.0	1975	497.0	12	900	0.25	1.6	54
NWR 4600	700	55.2	2304	579.9	14	900	0.25	1.6	54

NVZ & NWZ 16 POLE FANS 360 RPM

Model	Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
NVZ 420	48	3.8	208	52.3	2	800	0.15	1.2	37
NVZ 525	60	4.6	257	64.7	2	800	0.15	1.2	37
NVZ 630	73	5.7	312	78.4	3	800	0.15	1.2	39
NVZ 780	90	7.0	386	97.1	3	800	0.15	1.2	39
NVZ 840	93	7.6	401	101.0	3	900	0.15	1.2	42
NVZ 1000	115	9.0	494	124.3	3	900	0.15	1.2	42
NVZ 1120	125	10.1	535	134.6	4	900	0.15	1.2	43
NVZ 1330	153	12.0	658	165.7	4	900	0.15	1.2	43
NVZ 1500	156	13.5	669	168.3	5	900	0.15	1.2	44
NVZ 1660	192	14.9	823	207.1	5	900	0.15	1.2	44
NVZ 1820	210	16.4	987	248.5	5	900	0.15	1.2	44
NVZ 2000	230	18.0	987	248.5	6	900	0.15	1.2	45
NVZ 2300	268	20.7	1152	289.9	7	900	0.15	1.2	45
NWZ 1050	120	9.2	514	129.4	4	800	0.15	1.2	40
NWZ 1260	146	11.3	623	156.8	6	800	0.15	1.2	42
NWZ 1560	180	14.0	771	194.2	6	800	0.15	1.2	42
NWZ 1680	186	15.1	802	201.9	6	900	0.15	1.2	45
NWZ 2000	230	18.0	987	248.5	6	900	0.15	1.2	45
NWZ 2240	250	20.3	1070	269.2	8	900	0.15	1.2	45
NWZ 2660	306	23.9	1317	331.4	8	900	0.15	1.2	46
NWZ 3000	312	27.0	1337	336.5	10	900	0.15	1.2	46
NWZ 3320	384	29.9	1646	414.2	10	900	0.15	1.2	47
NWZ 3640	420	32.8	1975	497.0	10	900	0.15	1.2	47
NWZ 4000	460	36.0	1975	497.0	12	900	0.15	1.2	47
NWZ 4600	536	41.4	2304	579.9	14	900	0.15	1.2	48

NV & NW Dimensions & Weights

Model NV	NW	H	W NV	W NW	L	B	A	NV Wt kg Al	NV Wt kg Cu	NW Wt kg Al	NW Wt kg Cu
420	*	944	1356	*	2130	-	*	349	415	*	*
525	1050	944	1356	2710	3130	-	1575	380	462	761	924
630	1260	944	1356	2710	3130	1500	1575	490	589	980	1178
780	1560	944	1356	2710	3130	1500	1575	534	656	1067	1312
840	1680	944	1356	2710	3250	1560	1575	543	671	1087	1342
1000	2000	1144	1376	2754	3250	1560	1620	596	753	1193	1506
1120	2240	944	1356	2710	4290	2080	1575	700	870	1400	1739
1330	2660	1144	1376	2754	4290	2080	1620	767	976	1535	1953
1500	3000	944	1356	2710	5330	1733	1575	856	1069	1713	2137
1660	3320	1144	1376	2754	5330	1733	1620	939	1200	1877	2399
1820	3640	1144	1376	2754	6370	2080	1620	1038	1351	2076	2703
2000	4000	1144	1376	2754	6370	2080	1620	1110	1423	2219	2846
2300	4300	1144	1376	2754	7410	1820	1620	1281	1646	2562	3293



V & BV Capacities 142 - 1004 kW

Vertical Airflow - V configuration coils 6, 8 10, 12 & 16 Pole Fans

VI & BVI 6 POLE FANS 930 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
VI	1040	300	26.00	720	181	4	900	1.50	4.3	66
VI	1100	338	27.60	812	204	3	1000	2.20	5.9	67
VI	1300	395	32.50	947	238	3	1000	3.00	6.4	67
VI	1500	452	37.60	1085	273	4	1000	2.20	5.9	69
VI	1730	528	43.40	1266	319	4	1000	3.00	6.4	69
VI	2000	601	50.00	1441	363	5	1000	3.00	6.4	69
VI	2170	659	54.50	1583	398	5	1000	3.00	6.4	69
VI	2400	721	60.00	1730	435	6	1000	3.00	6.4	70
VI	2600	791	65.20	1899	478	6	1000	3.00	6.4	70
VI	3000	923	76.10	2216	558	7	1000	3.00	6.4	71
BVI	1560	475	39.20	1080	272	6	900	1.50	4.3	68
BVI	1800	543	45.20	1235	311	6	1000	2.20	5.9	70
BVI	2080	633	52.00	1440	362	8	900	1.50	4.3	69
BVI	2400	723	60.00	1646	414	8	1000	2.20	5.9	72
BVI	2600	791	65.20	1800	453	10	900	1.50	4.3	70
BVI	2800	904	70.20	2058	518	10	1000	2.20	5.9	73
BVI	3120	949	78.20	2160	544	12	900	1.50	4.3	71
BVI	3600	1085	90.40	2469	621	12	1000	2.20	5.9	73

VR & BVR 12 POLE FANS 460 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
VR	1040	169	13.00	720	181	4	900	0.25	1.6	50
VR	1100	191	13.80	812	204	3	1000	0.25	1.6	51
VR	1300	222	16.25	947	238	3	1000	0.25	1.6	51
VR	1500	255	18.80	1085	273	4	1000	0.25	1.6	52
VR	1730	297	21.70	1266	319	4	1000	0.25	1.6	52
VR	2000	338	25.00	1441	363	5	1000	0.25	1.6	53
VR	2170	371	27.25	1583	398	5	1000	0.25	1.6	53
VR	2400	406	30.00	1730	435	6	1000	0.25	1.6	54
VR	2600	446	32.60	1899	478	6	1000	0.25	1.6	54
VR	3000	520	38.05	2216	558	7	1000	0.25	1.6	55
BVR	1560	268	19.60	1080	272	6	900	0.25	1.6	51
BVR	1800	306	22.60	1235	311	6	1000	0.25	1.6	54
BVR	2080	357	26.00	1440	362	8	900	0.25	1.6	53
BVR	2400	408	30.00	1646	414	8	1000	0.25	1.6	55
BVR	2600	446	32.60	1800	453	10	900	0.25	1.6	54
BVR	2800	510	35.10	2058	518	10	1000	0.25	1.6	56
BVR	3120	535	39.10	2160	544	12	900	0.25	1.6	54
BVR	3600	612	45.20	2469	621	12	1000	0.25	1.6	57

VC & BVC 8 POLE FANS 700 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
VC	1040	238	19.47	720	181	4	900	0.75	2.6	60
VC	1100	268	20.67	812	204	3	1000	1.10	3.4	61
VC	1300	313	24.34	947	238	3	1000	1.50	5.0	61
VC	1500	359	28.16	1085	273	4	1000	1.10	3.4	62
VC	1730	419	32.51	1266	319	4	1000	1.50	5.0	62
VC	2000	476	37.45	1441	363	5	1000	1.50	5.0	63
VC	2170	523	40.82	1583	398	5	1000	1.50	5.0	63
VC	2400	572	44.94	1730	435	6	1000	1.50	5.0	64
VC	2600	628	48.83	1899	478	6	1000	1.50	5.0	64
VC	3000	732	57.00	2216	558	7	1000	1.50	5.0	65
BVC	1560	377	29.36	1080	272	6	900	0.75	2.6	61
BVC	1800	431	33.85	1235	311	6	1000	1.10	3.4	64
BVC	2080	502	38.95	1440	362	8	900	0.75	2.6	63
BVC	2400	574	44.94	1646	414	8	1000	1.10	3.4	65
BVC	2600	628	48.83	1800	453	10	900	0.75	2.6	64
BVC	2800	718	52.58	2058	518	10	1000	1.10	3.4	66
BVC	3120	754	58.57	2160	544	12	900	0.75	2.6	64
BVC	3600	861	67.71	2469	621	12	1000	1.10	3.4	67

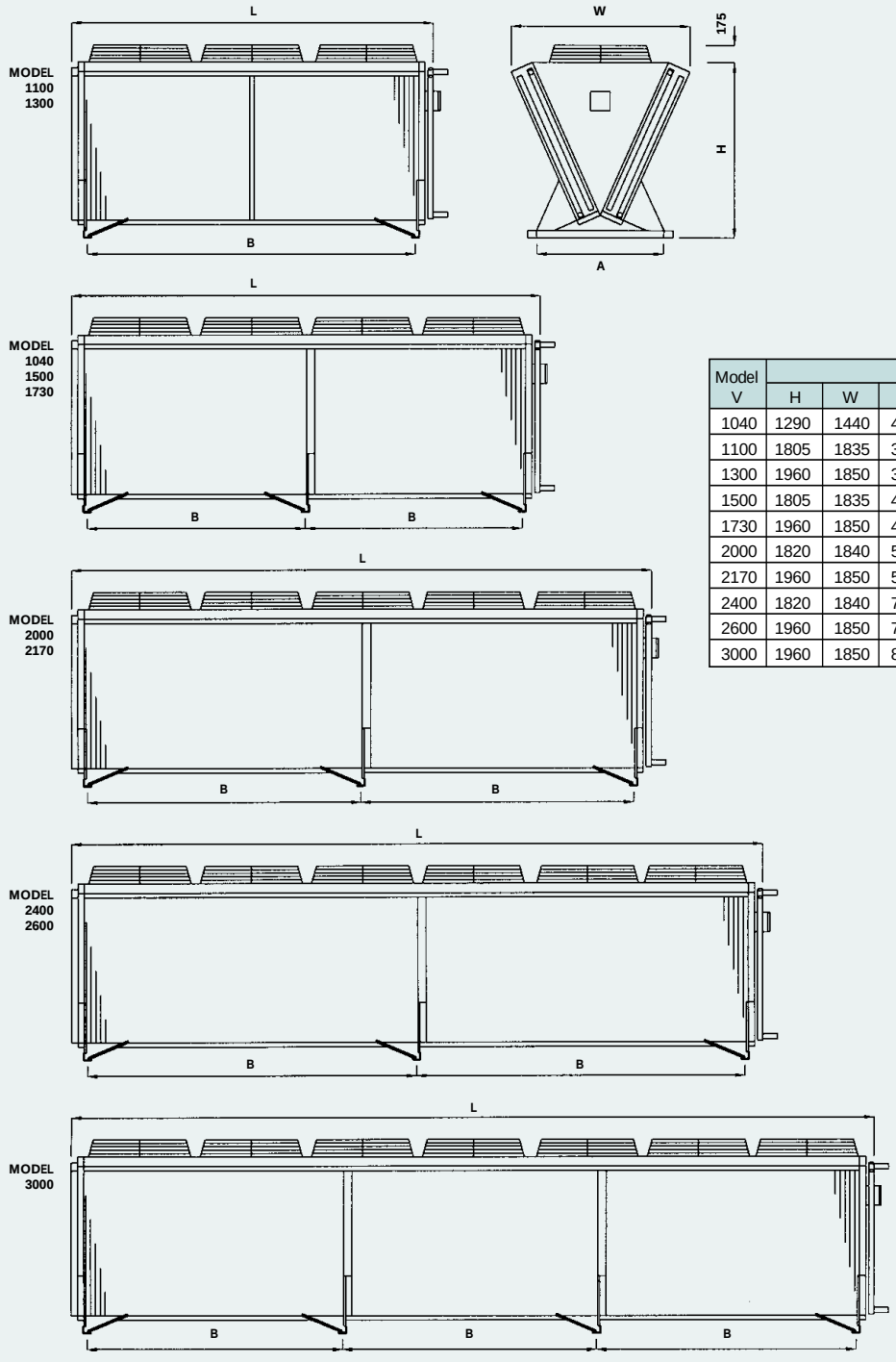
VZ & BVZ 16 POLE FANS 360 RPM

Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
VZ	1040	142	10.78	720	181	4	900	0.15	1.2	43
VZ	1100	160	11.44	812	204	3	1000	0.15	1.2	44
VZ	1300	187	13.47	947	238	3	1000	0.15	1.2	44
VZ	1500	214	15.59	1085	273	4	1000	0.15	1.2	46
VZ	1730	250	17.99	1266	319	4	1000	0.15	1.2	46
VZ	2000	284	20.73	1441	363	5	1000	0.15	1.2	46
VZ	2170	312	22.60	1583	398	5	1000	0.15	1.2	46
VZ	2400	341	24.88	1730	435	6	1000	0.15	1.2	47
VZ	2600	375	27.03	1899	478	6	1000	0.15	1.2	47
VZ	3000	437	31.55	2216	558	7	1000	0.15	1.2	48
BVZ	1560	225	16.25	1080	272	6	900	0.15	1.2	45
BVZ	1800	257	18.74	1235	311	6	1000	0.15	1.2	47
BVZ	2080	300	21.56	1440	362	8	900	0.15	1.2	46
BVZ	2400	343	24.88	1646	414	8	1000	0.15	1.2	49
BVZ	2600	375	27.03	1800	453	10	900	0.15	1.2	47
BVZ	2800	429	29.10	2058	518	10	1000	0.15	1.2	50
BVZ	3120	450	32.42	2160	544	12	900	0.15	1.2	48
BVZ	3600	514	37.48	2469	621	12	1000	0.15	1.2	50

VL & BVL 10 POLE FANS 560 RPM

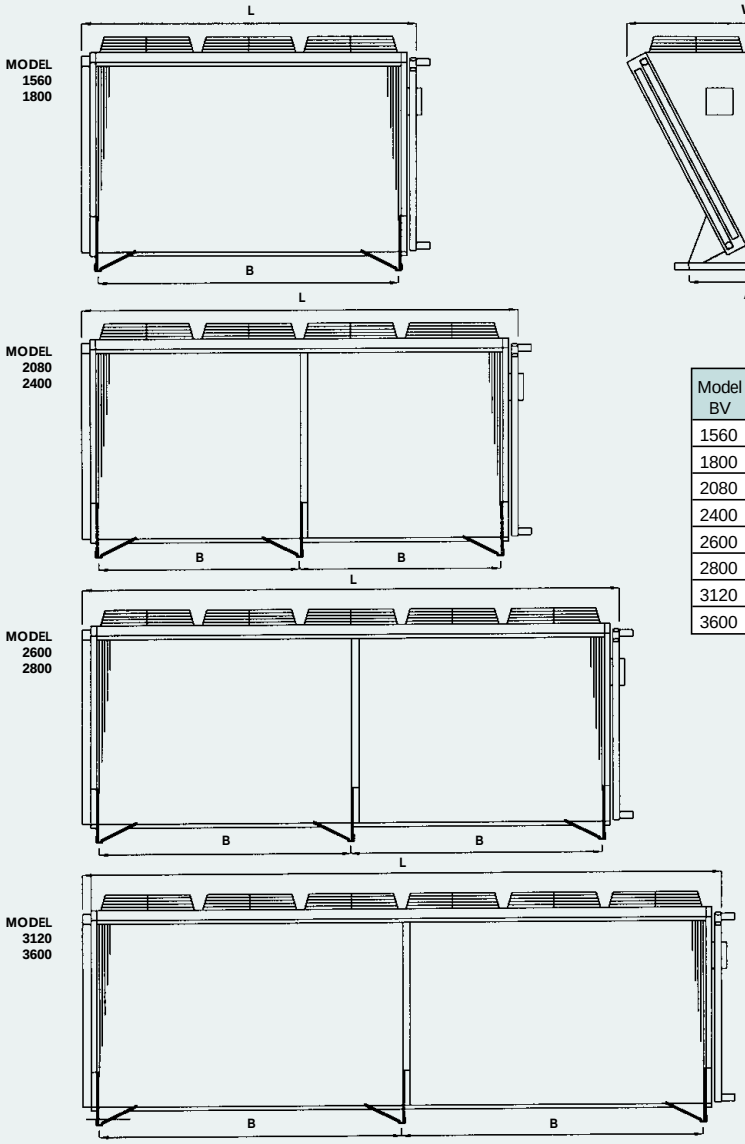
Model		Cap kW 5KRange 15KTD	Air Vol m3/s	Coil data Area m2	Coil data Vol dm3	Fan data No	Fan data Dia	Fan data kW	dbA FLC	@10m
VL	1040	196	15.60	720	181	4	900	0.55	1.8	55
VL	1100	221	16.56	812	204	3	1000	0.55	2.5	56
VL	1300	258	19.50	947	238	3	1000	0.75	3.0	56
VL	1500	295	22.56	1085	273	4	1000	0.55	2.5	57
VL	1730	345	26.04	1266	319	4	1000	0.75	3.0	57
VL	2000	392	30.00	1441	363	5	1000	0.75	3.0	58
VL	2170	431	32.70	1583	398	5	1000	0.75	3.0	58
VL	2400	471	36.00	1730	435	6	1000	0.75	3.0	59
VL	2600	517	39.12	1899	478	6	1000	0.75	3.0	59
VL	3000	603	45.66	2216	558	7	1000	0.75	3.0	60
BVL	1560	310	23.52	1080	272	6	900	0.55	1.8	57
BVL	1800	355	27.12	1235	311	6	1000	0.55	2.5	59
BVL	2080	414	31.20	1440	362	8	900	0.55	1.8	58
BVL	2400	473	36.00	1646	414	8	1000	0.55	2.5	60
BVL	2600	517	39.12	1800	453	10	900	0.55	1.8	59
BVL	2800	591	42.12	2058	518	10	1000	0.55	2.5	61
BVL	3120	620	46.92	2160	544	12	900	0.55	1.8	60
BVL	3600	709	54.24	2469	621	12	1000	0.55	2.5	62

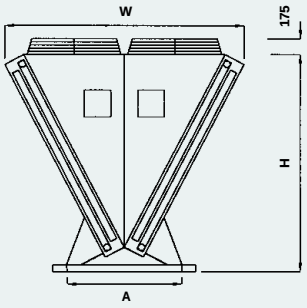
V Dimensions & Weights



Model V	H	W	L	B	A	Weight Kg Al	Kg Cu
1040	1290	1440	4420	2050	1065	958	1186
1100	1805	1835	3680	3360	1350	972	1230
1300	1960	1850	3680	3360	1400	1088	1389
1500	1805	1835	4832	2256	1350	1274	1618
1730	1960	1850	4832	2256	1400	1419	1821
2000	1820	1840	5975	2827	1400	1633	2091
2170	1960	1850	5975	2827	1500	1748	2250
2400	1820	1840	7118	3399	1400	1944	2493
2600	1960	1850	7118	3399	1500	2077	2679
3000	1960	1850	8260	2646	1500	2390	3093

BV Dimensions & Weights

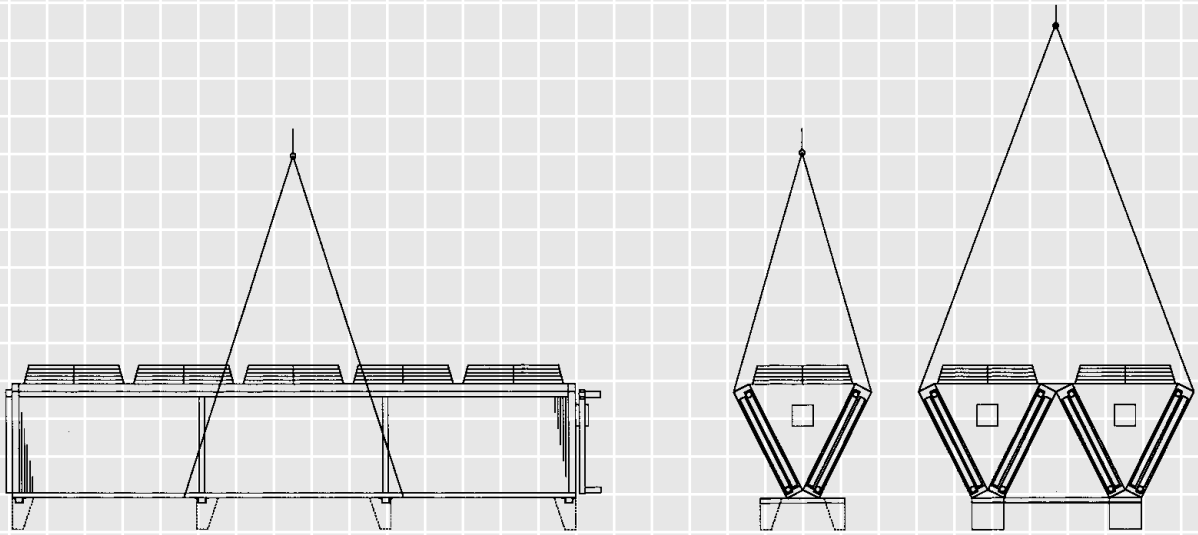




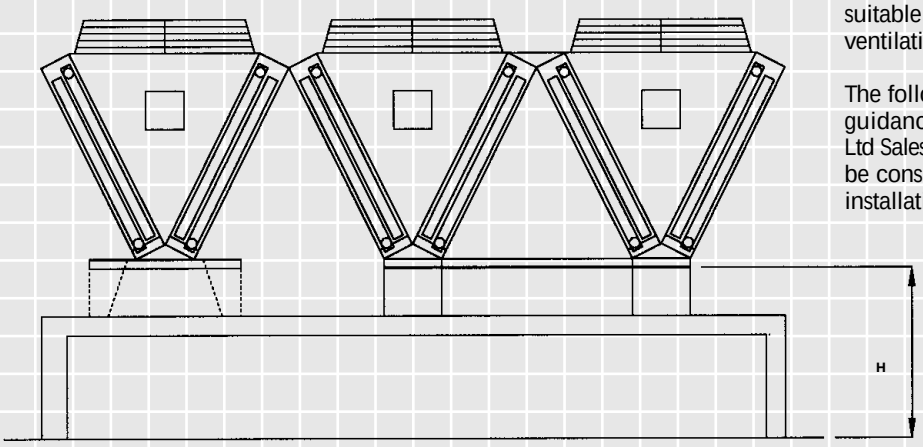
Model BV						Weight	
	H	W	L	B	A	Kg Al	Kg Cu
1560	2310	2640	3380	1830	3060	1297	1640
1800	2420	2650	3680	1830	3360	1426	1818
2080	2310	2640	4420	1830	2050	1701	2158
2400	2420	2650	4820	1830	2250	1867	2389
2600	2310	2640	5460	1830	2570	2105	2676
2800	2420	2650	5960	1830	2820	2307	2960
3120	2310	2640	6500	1830	3090	2509	3195
3600	2420	2650	7100	1830	3390	2747	3530

H & C COILS

Lifting of V & W Dry Air Coolers



Siting of V & W Dry Air Coolers



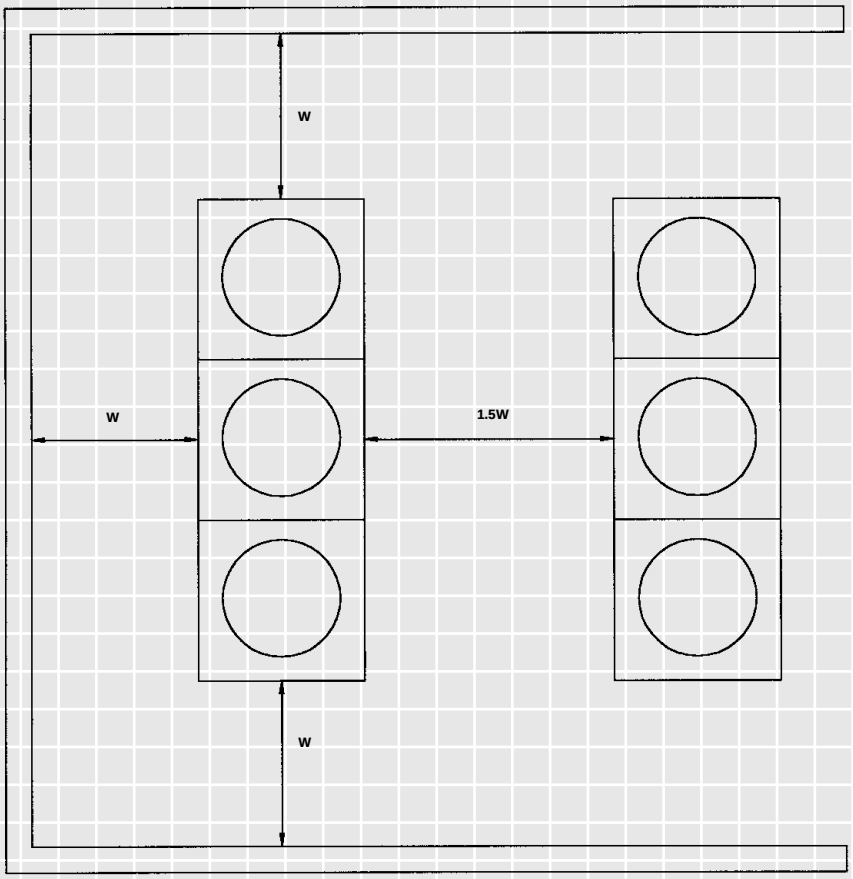
Min H = 500 for multiple units
May need to be increased for particular installations

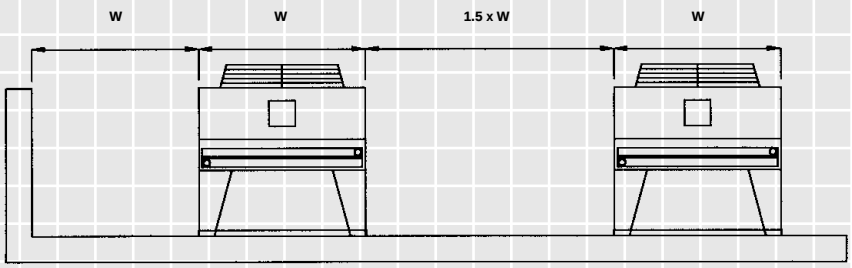
Installation and Siting V & W Type Dry Air Coolers

If a wall is adjacent it is recommended that the unit is placed against the wall to minimise recirculation. The V and W configuration units allow compact siting of multiple units. Closing the air gap between the units prevents recirculation. Multiple units should be raised on suitable supports to allow adequate ventilation to the central cells.

The following notes are for general guidance. Heating and Cooling Coils Ltd Sales Engineering Department should be consulted for advice on particular installations.

Installation & Siting of Flat Bed Dry Air Coolers





Installation and Siting Flat Bed Type Dry Air Coolers

Consideration must be given when siting a Dry Air Cooler to provide unrestricted ventilation to and from the unit whilst preventing recirculation. The units should preferably be sited in open space with no obstructions to airflow and no recycling of the air. If the site is confined by one or two sidewalls, care should be exercised in positioning. Flat Bed Type Dry Air Coolers require breathing space with adequate gaps between adjacent Dry Air Coolers or structures. If the space is restricted we would advise using our V configuration units.

The following notes are for general guidance. Heating and Cooling Coils Ltd Sales Engineering Department should be consulted for advice on particular installations.

H & C COILS

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Bulletin DAC 1/3/07