

SWIMMING POOL AIR HANDLING UNITS

ENVIRONMENTAL CONTROL SOLUTIONS FOR: PUBLIC AND COMMERCIAL SWIMMING POOLS



DELTA SYSTEMS

QUICK GUIDE

POOL TYPE



INDOOR



INSTALLATION



PLANT ROOM



OPERATION



HEATING, COOLING,
DEHUMIDIFICATION
& VENTILATION



APPLICATIONS



PUBLIC POOLS



HOTELS, SCHOOLS &
HEALTH CLUBS



HOLIDAY &
WATER PARKS



LEISURE CENTRES





DELTA 4

The Delta range are sophisticated air handling units incorporating hybrid heat pump and fresh air dehumidification technology. With dynamic heat recovery to swimming pool water and air using a heat pump, the Delta is the ultimate solution for a commercial or public indoor swimming pool.



- Dynamic heat pump heat recovery to pool and air
- Self-regulating fresh air control with heat recovery
- Automatic control of exhaust air volume to match pool usage
- Free-cooling (Delta 2)
- Free-cooling and heat pump air cooling (Delta 4-16)
- Integral LPHW heat exchangers for pool and air
- Speed controllable EC/inverter fans in all models
- PLC control with 5.7" touchscreen user interface
- Remote monitoring/control

Remote monitoring/control

As standard the following remote connectivity is available:

- Screen mirroring to Android/iOS mobile devices using third-party app
- Screen mirroring to web browser with ActiveX
- BMS interfaces for Modbus, BACnet IP and BACnet MS/TP
- Wired remote control interfaces



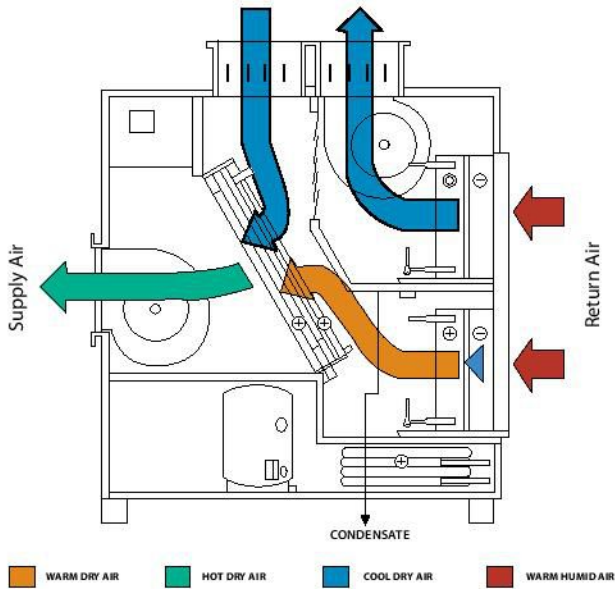
Delta touchscreen controls

SWIMMING POOL AIR HANDLING UNITS CALOREX DELTA 2-4-6-8-10-12-14-16



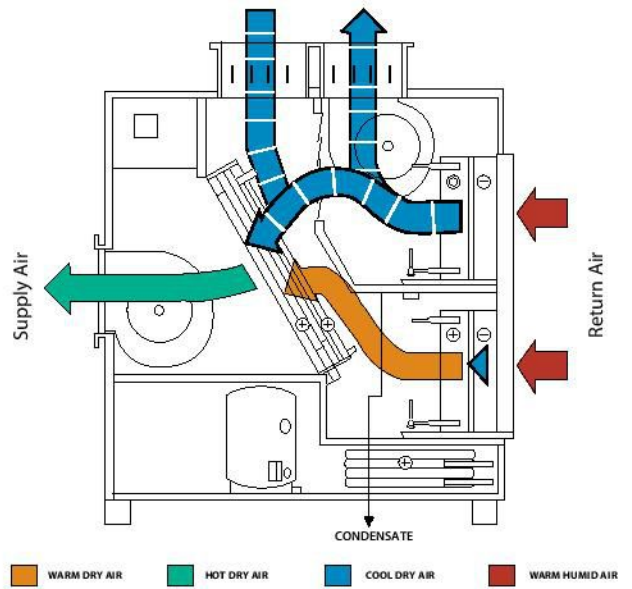
HOW THE AIR FLOWS THROUGH THE DELTA

Full dehumidification and heat recovery



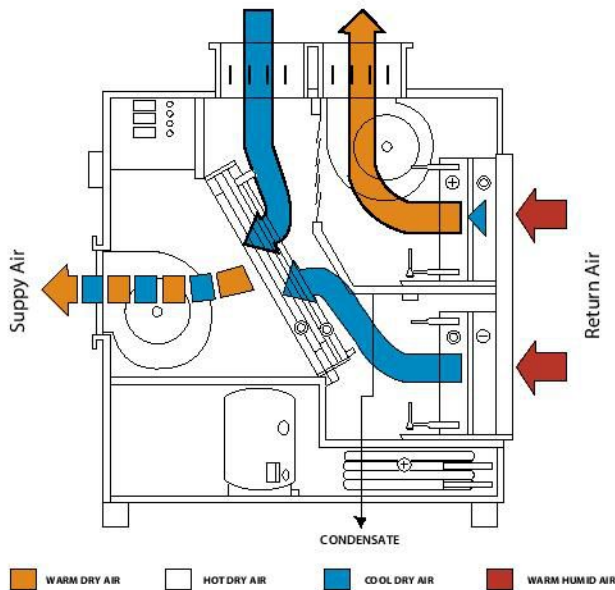
Delta operating on maximum dehumidification of pool air with full heat recovery to pool water and air. Available energy is removed from exhaust air stream. Supplementary heat, if required, supplied by LPHW (water or air).

Light dehumidification and heat recovery



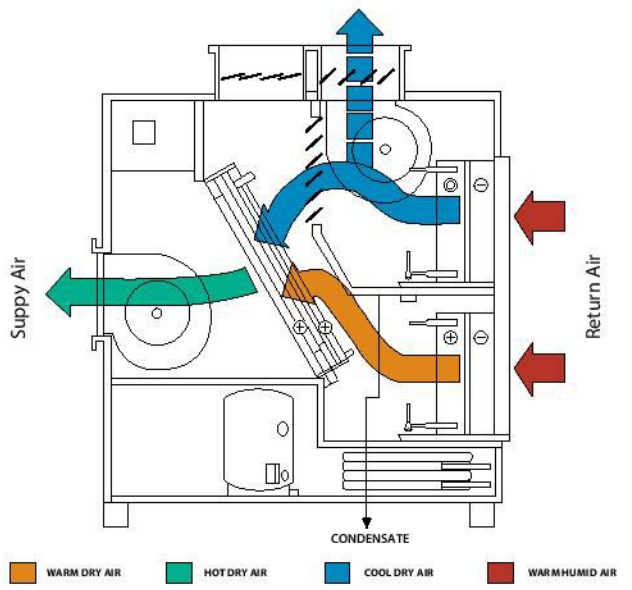
Delta operating on light dehumidification with full heat recovery and reduced fresh air stream – control system automatically selects correct operating mode and damper position. LPHW heat available when required.

Air-conditioning



Delta models 4 and above provide an air conditioning facility to minimise the effects of solar gain from larger glazed areas or very high usage. Automatic damper and mode control.

Night set back



Air temperature set back control is incorporated as standard in all Delta units and controlled by a time clock. Pool hall air is dropped to a lower temperature for maximum economy. Air recirculation is maintained, dampers allow low fresh air flow.



Specifications	Units	DT 2	DT 4	DT 6	DT 8	DT 10	DT 12	DT 14	DT 16
Nominal recirculation air flow	m ³ /h	2,600	3,000	4,000	5,000	6,000	7,000	10,000	12,000
Exhaust/fresh air flow (stepped control)	m ³ /h	130-1,300	150-1,500	200-2,000	250-2,500	300-3,000	350-3,500	670-6,700	850-8,000
Total dehumidification @ 28°C/60% RH by heat pump and maximum fresh air	l/h	10.9	12.5	16.6	20.8	25.0	29.2	56.5	62.4
Heat to air									
Via heat pump (Mode B)	kW	4.9	5.1	6.6	8.0	10.0	12.1	30.0	35.0
Via standard LPHW @ 80°C	kW	22	25	30	35	38	42	85	90
Via upgraded LPHW @ 55°C	kW	19	21	26	30	32	36	72	77
Total Mode B + standard LPHW	kW	26.9	30.1	36.6	43.0	48.0	54.1	115.0	125.0
Heat to pool water									
Via heat pump (Mode A)	kW	5.5	5.8	8.0	10.0	12.5	15.0	35.0	43.0
Via LPHW @ 80°C	kW	23	33	33	33	40	40	65	65
Via LPHW @ 55°C	kW	11	16	16	16	20	20	32	32
Total Mode A + LPHW	kW	28.5	38.8	41.0	43.0	52.5	55.0	100.0	108.0
Cooling duty									
Total	kW	0	-4.2	-5.5	-6.7	-8.4	-10.1	-23.0	-28.0
Sensible	kW	0	-2.9	-3.9	-4.7	-5.9	-7.1	-13.0	-15.0
Nominal power consumed	kW	2.9	2.9	3.4	4.4	5.9	7.4	12.3	17.0
R407C gas weight/CO ₂ equivalent	kg/t	3.0/5.32	6.0/10.64	7.8/13.84	7.8/13.84	9.0/15.97	8.0/14.19	22.5/38.14	22.5/38.14
Width	mm	1740	1840	1840	1840	1840	1840	2860	2860
Depth	mm	654	704	704	704	854	854	1126	1126
Height	mm	1685	1970	1970	1970	1970	1970	2120	2120
Weight	kg	310	350	360	370	410	460	954	1020

Options

- Delta 2-6 single or three phase
- Delta 8-16 three phase only
- Upgraded LPHW heat exchanger for air heating
- Left-hand or right-hand orientation (Delta 4-16)
- Top, side or bottom supply fan outlet
- Front or rear supply fan outlet (Delta 14-16)
- Rear exhaust and fresh air connections (Delta 14-16)
- Connection for RCU (Delta 16)