

AIR HANDLING UNIT (DOUBLE SKIN)

MODEL: DS-CW/DX-AHU-H

(Chilled Water or Direct Expansion)

CAPACITY: 3.3 to 125 Nominal Tons

39,000 to 1,500,000 BtuH

11.4 to 439.5 KW

1,300 to 50,000 CFM



Benefits

- Horizontal arrangements for heating, cooling, ventilation, and VAV applications
- Small footprint assures rigging ease and reduced space requirements
- High-efficiency fan minimizes surging and turbulence and reduces operating costs
- Exclusive Nu-Fin coil surface provides peak heat transfer. We delivers the air handler components for your stringent specification requirements. The DS-AHU series air handlers are compact and fully assembled; they combine versatility with economical, dependable performance.

Dependable performance

Prepainted galvanized steel panels ensure structural integrity under all operating conditions. Doublewalled hinged access doors also enhance structural stability and provide fast, easy access. Sloped, double-wall stainless steel drain pan controls condensate and is self-draining complies with ASHRAE Standard.

DS SERIES Features

- The Air handling Unit, available both in Chilled Water System, and D.X. System.
- They are available both in Single and Double Skin of 1" or 2" sandwich panels.
- The insulation materials are rubber foam insulation. P.U. Foam, Fibreglass are optional (on request).
- Standard coil are 1/2" copper Tube, Corrugated Aluminium fin.

The DS series are available in 14 sizes of Cabinet, capacity range from 40,000 to 1,000,000 BTU/h air side range from 1,200 cfm to 50,000 cfm.

Nominal there are 2 sections for each unit, Coil Section Which can be mounted from 3 Rows coil up to 10 rows coil and incorporated with air filter. Fan and motor drive Section which can be mounted either from vertical or horizontal discharge.

However, it is possible to add on extra section e.g. filter section for medium bag filter and/or HEPA filter, mixing box, Heating section, and etc., as requested.

Casing

The comers and frame has been designed by bearing in mind the air tight and cold bridge of the construction. All the panels are tightly fitted with gasket on rigid frame. The casing are put on the base frame with frame height vary according to size of casing.

All the frame and panel are manufactured by using heavy gauge electro-galvanized steel sheet and paint with polyester powder coated with a minimum of 60 microns both side to ensure the durability and excellent finishing. The poWder coating can easy penetrate to all the joints, edges by means of electro-static.

Option

Non CFC Poly Urethane Insulation 1/2", 1" ,2"

Cooling Coil

SEACON expertise in manufacturing cooling coils for over the past years is a great advantage fo selection cooling coils to suit any specific requirement for cooling need. However, a standard 1/2" coils with 4 Rows are standard.

SEACON has a capability of manufacturing coils up to the length of 150"(3,180mm) and 54" height (1,370 mm) with a single coil can accommodate up to 1,000,000 BTU/hr.

The coils are available both in DX and Chilled Water applications. Each coil is constructed from aluminium fins and mechanically expanded into the copper tube. Fin spacing is available from 6 fins per inch to 12 fins per inch depending on requirements. All coils are pressurized tested under water at 350 psig.

Optional

- Copper fin/Copper tube cooling coils.
- Drain Pan is constructed from heavy gauge galvanized iron sheet and coated with asphalt and insulated with rubber insulation.
- Stainless Steel

Blower & Drive

Air flow is designed for velocity to be less than 500 feet per minute. Standard Fan is forward curved double inlet and are constructed of Galvanized Iron Sheet and statically and dynamically balanced to ensure smooth performance and quiet in operation. Backward curved wheels are also available to cover required static pressure. The Motor is mounted on a bracket which can be adjusted to ensure proper belt tension and alignment. V-belt and pullets can be selected to suit various static pressure and air quantity required.

Filter

Standard 1" thick washable aluminum panel air filter normally constructed at the end of the return air cooling coil section. The combination of 12" x 24" or 24" x 24" is used.

Separate Medium air filter or Hepa air filter is available upon request.

**Modular Type, Single Skin, Double Skin of 1" Panel,
A Multiple Choice of Insulation Material 1/2" Chilled Water A.H.U.**

MODEL: DS-CW-AHU-H	001	002	003	004	005	006	007	008	009	010
Normal Capacity	Btu/h	39,000	54,000	75,000	112,500	150,000	187,500	225,000	262,500	315,000
Normal Tonnage	Tons	3.3	4.5	6.3	9.4	12.5	15.6	18.8	21.9	26.3
Normal Kilowatt-Hour	KWH	11.4	15.8	22.0	33.0	44.0	54.9	65.9	76.9	92.3
Air Flow	CFM	1,300	1,800	2,500	3,750	5,000	6,250	7,500	8,750	10,500
	CMH	2,209	3,058	4,248	6,371	8,495	10,619	12,743	14,866	17,840
Internal Static Pressure	in. wg	0.831	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
External Static Pressure	in. wg	0.401	0.401	0.5	0.5	0.75	0.75	0.75	1	1
Total Static Pressure	in. wg	1.232	1.761	1.86	1.86	2.11	2.11	2.11	2.36	2.36
Standard Width (mm)	Width (mm)	750	900	1050	1150	1500	1800	1900	1900	2000
Standard Height (mm)	Height (mm)	750	850	900	1050	1050	1050	1200	1350	1500
Coil Section										
4-6R section Length	(mm)	500	500	500	500	500	500	500	500	500
Tube	Inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Row		4	4	4	4	4	4	4	4	4
FPI		10	10	10	10	10	10	10	10	10
Fan Section	Length (mm)	900	950	1000	1050	1250	1250	1350	1350	1450
Motor										
Power	H.P.	1	2	3	4	5.5	5.5	7.5	10	10
Rev. (Full load speed)	R.P.M.	1420	1425	1425	1430	1440	1440	1445	1445	1445
Pole		4	4	4	4	4	4	4	4	4
Power Supply	VAC/Ph./Hz	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60
Rev. (Fan speed)	R.P.M.	1820	1790	1570	1270	1046	1053	918	875	885
Blower Small Size										
Model		ADZ-180	ADZ-200	ADZ-225	ADZ-280	ADZ-355	ADZ-355	ADZ-400	ADZ-450	ADZ-500
Motor Pulley		5.5 1A	7 1A	6 2A	5 2A	6 2A	6 2A	5 2B	5.5 2B	5 3B
Blower Pulley		4 1A	5.5 1A	5.5 2A	5.5 2A	8 2A	8 2A	8 2B	9 2B	9 3B
Blower Big Size										
Model		-	-	-	-	-	-	-	-	ADZ-500
Motor Pulley		-	-	-	-	-	-	-	-	5.5 2B
Blower Pulley		-	-	-	-	-	-	-	-	10 2B
Filter Box Panel, Short Length	mm	-	700	700	700	700	700	700	700	700

Modular Type, Single Skin, Double Skin of 1" Panel, A Multiple Choice of Insulation Material 1/2" Chilled Water A.H.U.

MODEL: DS-CW-AHU-H	011	012	013	014	015	016	017	018	019	020
Normal Capacity	Btu/h	450,000	525,000	600,000	750,000	900,000	990,000	1,125,000	1,300,000	1,500,000
Normal Tonnage	Tons	37.5	43.8	50.0	62.5	75.0	82.5	93.8	108.3	125.0
Normal Kilowatt-Hour	KWH	131.9	153.8	175.8	219.8	263.7	290.1	329.6	380.9	439.5
Air Flow	CFM	15,000	17,500	20,000	25,000	30,000	33,000	37,500	43,500	50,000
	CMH	25,485	29,733	33,980	42,475	50,970	56,067	63,713	73,907	84,951
Internal Static Pressure	in. wg	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
External Static Pressure	in. wg	1.25	1.5	1.5	1.5	2	2	2.5	2.5	2.5
Total Static Pressure	in. wg	2.61	2.86	2.86	2.86	3.36	3.36	3.86	3.86	3.86
Standard Width (mm)	Width (mm)	2300	2400	2550	2700	3100	3400	3500	3700	3700
Standard Height (mm)	Height (mm)	1700	1900	2150	2350	2350	2350	2600	2800	3200
Coil Section										
4-6R section Length	(mm)	500	500	500	500	500	500	500	500	500
Tube	Inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Row		4	4	4	4	4	4	4	4	4
FPI		10	10	10	8	8	8	8	8	8
Fan Section	Length (mm)	1750	2000	2150	2150	2250	2250	2400	2400	2400
Motor										
Power	H.P.	15	20	20	25	30	40	40	50	60
Rev. (Full load speed)	R.P.M.	1450	1455	1455	1455	965	965	965	965	970
Pole		4	4	4	4	6	6	6	6	6
Power Supply	VAC/Ph./Hz	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60
Rev. (Fan speed)	R.P.M.	750	685	617	618	582	584	542	561	562
Blower Small Size										
Model		ADZ-560	ADZ-630	ADZ-710	ADZ-710	ADZ-800K1	ADZ-800K1	ADZ-900K2	ADZ-900K2	ADZ-900K2
Motor Pulley		5.5 3B	-	6 4B	6 4B	-	-	-	-	-
Blower Pulley		10 3B	-	14 4B	14 4B	-	-	-	-	-
Blower Big Size										
Model		ADZ-630	ADZ-710	ADZ-800	ADZ-800	ADZ-900K1	ADZ-900K1	ADZ-1000K2	ADZ-1000K2	ADZ-1000K2
Motor Pulley		5.5 3B	6 4B	6 4B	6 4B	-	-	-	-	-
Blower Pulley		12 3B	14 4B	16 4B	16 4B	-	-	-	-	-
Filter Box Panel, Short Length	mm	700	700	700	700	700	700	700	700	700

Modular Type, Single Skin, Double Skin of 1" Panel, A Multiple Choice of Insulation Material 1/2" Direct Expansion A.H.U.

MODEL: DS-DX-AHU-H	001	002	003	004	005	006	007	008	009	010
Normal Capacity	39,000	54,000	75,000	112,500	150,000	187,500	225,000	262,500	315,000	375,000
Normal Tonnage	3.3	4.5	6.3	9.4	12.5	15.6	18.8	21.9	26.3	31.3
Normal Kilowatt-Hour	11.4	15.8	22.0	33.0	44.0	54.9	65.9	76.9	92.3	110.0
Air Flow										
CFM	1,300	1,800	2,500	3,750	5,000	6,250	7,500	8,750	10,500	12,500
CMH	2,209	3,058	4,248	6,371	8,495	10,619	12,743	14,866	17,840	21,238
Internal Static Pressure	0.831	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
External Static Pressure	0.401	0.401	0.5	0.5	0.75	0.75	0.75	1	1	1
Total Static Pressure	1.232	1.761	1.86	1.86	2.11	2.11	2.11	2.36	2.36	2.36
Standard Width (mm)	800	900	1150	1450	1800	1700	1700	1800	2100	2400
Standard Height (mm)	800	850	900	1050	1050	1150	1500	1500	1500	1500
Coil Section										
4-6R section Length	500	500	500	500	500	500	500	500	500	500
Tube	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
Row	4	4	4	4	4	4	4	4	4	4
FPI	14	14	14	14	14	12	12	12	10	10
Fan Section	900	950	1000	1050	1250	1250	1350	1350	1450	1650
Motor										
Power	1	2	3	4	5.5	5.5	7.5	10	10	15
Rev. (Full load speed)	1420	1425	1425	1430	1440	1440	1445	1445	1445	1450
Pole	4	4	4	4	4	4	4	4	4	4
Power Supply	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60
Rev. (Fan speed)	1820	1790	1570	1270	1046	1053	918	875	885	818
Blower Small Size										
Model	ADZ-180	ADZ-200	ADZ-225	ADZ-280	ADZ-355	ADZ-355	ADZ-400	ADZ-450	ADZ-450	ADZ-500
Motor Pulley	5.5 1A	7 1A	6 2A	5 2A	6 2A	6 2A	5 2B	5.5 2B	5.5 2B	5 3B
Blower Pulley	4 1A	5.5 1A	5.5 2A	5.5 2A	8 2A	8 2A	8 2B	9 2B	9 2B	9 3B
Blower Big Size										
Model	-	-	-	-	-	-	-	-	ADZ-500	ADZ-560
Motor Pulley	-	-	-	-	-	-	-	-	5.5 2B	5 3B
Blower Pulley	-	-	-	-	-	-	-	-	10 2B	10 3B
Filter Box Panel, Short Length	-	700	700	700	700	700	700	700	700	700
Filter										
Pre Filter 12"x24"x2"	-	-	1	-	1	2	-	2	-	2
Pre Filter 24"x24"x2"	1	1	1	2	2	2	4	4	6	6
Medium Filter 12"x24"x12"	-	-	1	-	1	2	-	2	-	2
Medium Filter 24"x24"x12"	1	1	1	2	2	2	4	4	6	6
Hepa Filter 12"x24"x12"	-	-	1	-	1	2	-	2	-	2
Hepa Filter 24"x24"x12" (625x625x305)	1	1	1	2	2	2	4	4	6	6

Modular Type, Single Skin, Double Skin of 1" Panel, A Multiple Choice of Insulation Material 1/2" Direct Expansion A.H.U.

MODEL: DS-AHU-H	011	012	013	014	015	016	017	018	019	020
Normal Capacity	Btu/h	450,000	525,000	600,000	675,000	750,000	900,000	1,125,000	1,300,000	1,500,000
Normal Tonnage	Tons	37.5	43.8	50.0	56.25	62.5	75.0	93.8	108.3	125.0
Normal Kilowatt-Hour	KWH	131.9	153.8	175.8	219.8	263.7	290.1	380.9	439.5	-
Air Flow	CFM	15,000	17,500	20,000	22,500	25,000	30,000	37,500	43,500	50,000
	CMH	25,485	29,733	33,980	38,250	42,475	50,970	63,713	73,907	84,951
Internal Static Pressure	in. wg	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
External Static Pressure	in. wg	1.25	1.5	1.5	1.5	1.5	2	2.5	2.5	2.5
Total Static Pressure	in. wg	2.61	2.86	2.86	2.86	2.86	3.36	3.86	3.86	3.86
Standard Width (mm)	Width (mm)	2400	2700	2700	2700	3050	3400	3650	3650	3950
Standard Height (mm)	Height (mm)	1800	1800	1900	2100	2100	2200	2700	3050	3050
Coil Section										
4-6R section Length	(mm)	500	500	500	500	500	500	500	500	500
Tube	Inch	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Row		4	4	4	4	4	4	4	4	4
FPI		10	10	10	10	10	10	10	10	10
Fan Section	Length (mm)	1750	2000	2150	2150	2150	2250	2400	2400	2400
Motor										
Power	H.P.	15	20	20	20	25	40	40	50	60
Rev. (Full load speed)	R.P.M.	1450	1455	1455	1455	1455	965	965	965	970
Pole		4	4	4	4	4	6	6	6	6
Power Supply	VAC/Ph./Hz	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60	440/3/60
Rev. (Fan speed)	R.P.M.	750	685	617	616	618	582	542	561	562
Blower Small Size										
Model		ADZ-560	ADZ-630	ADZ-710	ADZ-711	ADZ-710	ADZ-800K1	ADZ-900K2	ADZ-900K2	ADZ-900K2
Motor Pulley		5.5 3B	-	6 4B	6 4B	6 4B	-	-	-	-
Blower Pulley		10 3B	-	14 4B	14 4B	14 4B	-	-	-	-
Blower Big Size										
Model		ADZ-630	ADZ-710	ADZ-800	ADZ-801	ADZ-800	ADZ-900K1	ADZ-1000K2	ADZ-1000K2	ADZ-1000K2
Motor Pulley		5.5 3B	6 4B	6 4B	6 4B	6 4B	-	-	-	-
Blower Pulley		12 3B	14 4B	16 4B	16 4B	16 4B	-	-	-	-
Filter Box Panel, Short Length	mm	700	700	700	700	700	700	700	700	700
Filter										
Pre Filter 12"x24"x2"		3	4	4	-	3	-	-	5	6
Pre Filter 24"x24"x2"		6	8	8	12	15	20	20	20	24
Medium Filter 12"x24"x12"		3	4	4	-	3	-	-	5	6
Medium Filter 24"x24"x12"		6	8	8	12	15	20	20	20	24
Hepa Filter 12"x24"x12"		3	4	4	-	3	-	-	5	6
Hepa Filter 24"x24"x12" (625x625x305)		6	8	8	12	15	20	20	20	24