DWHA

Chilled Water
Double-Wall Air Handling Units
2,000-8,000 CFM 50Hz

Model Nomenclature

DW H A 40 A 0 1 R 0 0

- **DW** — Product Type: DW = Double Wall (Cooling Only)
- **H** — Airflow Configuration: H = Horizontal Installation
- **A** — Configuration: A = Development Sequence
- **40** — Size / Nominal Airflow: 20 = 2,000 CFM; 25 = 2,500 CFM; 34 = 3,400 CFM; 40 = 4,000 CFM; 50 = 5,000 CFM; 60 = 6,000 CFM; 70 = 7,000 CFM; 80 = 8,000 CFM
- **A** — Minor Design Sequence: A = First Design
- **0** — Factory Installed Options: 0 = No Option; A = 1 Hp Fan Motor; B = 2 Hp Fan Motor; C = 3 Hp Fan Motor; D = 5 Hp Fan Motor; E = 7.5 Hp Fan Motor
- **1** — Electrical Characteristics: 1 = 380-415V/50 Hz/3 PH
- **R** — Coil Connection: R = Right Hand Connection; L = Left Hand Connection
- **0** — Coil Row: 0 = Standard 3-row coil; 4 = Optional 4-row coil
- **0** — Future Used: 0 = None

General Data

Product Specification

MODEL		DWHA20	DWHA25	DWHA34	DWHA40	DWHA50	DWHA60	DWHA70	DWHA80
Rated - Volts/Ph/Hz		380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
SYSTEM DATA									
Nominal Airflow	CFM	2,000	2,500	3,400	4,000	5,000	6,000	7,000	8,000
Nominal Capacity	MBH	60	75	100	120	160	180	210	240
Water Inlet Connection Size	in	1 1/4	1 1/4	1 1/4	1 1/2	2	2	2	2
Water Outlet Connection Size	in	1 1/4	1 1/4	1 1/4	1 1/2	2	2	2	2
Water Connection Type		Steel Pipe - MPT							
COIL									
Fin Type		Slit Uncoated	Slit Uncoated	Slit Uncoated	Slit Uncoated	Slit Uncoated	Slit Uncoated	Slit Uncoated	Slit Uncoated
Fins per inch*									
3-Row coil		14	14	14	14	14	14	14	14
4-Row coil		12	13	14	13	14	14	14	14
Drain Connection Size	in	1	1	1	1	1	1	1	1
Fan Type		Double Inlet Centrifugal Forward Curved Wheel							
Dai. x Width		10 x 10	10 x 10	10 x 8	10 x 10	12 x 12	12 x 12	15 x 15	15 x 15
Qty		1	1	2	2	2	2	2	2
Drive Type		Belt Drive							
STANDARD FAN MOTOR									
Qty of Motor		1	1	1	1	1	1	1	1
Motor Output Power	hp	3/4	1	2	2	2	3	3	5.5
No. of Speed		1	1	1	1	1	1	1	1
V/ph/Hz		380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50
RLA	A	1.61	1.99	3.66	3.48	3.48	3.90	3.90	8.56
RETURN FILTER									
Filter Type		1-inch Washable Aluminium Air Filter							
DIMENSION (HxWxD)									
Unit (Net)	mm	541 x 1,460 x 862	541 x 1,460 x 862	541 x 1,784 x 862	641 x 1,784 x 862	795 x 2,053 x 1,160	795 x 2,053 x 1,160	845 x 2,320 x 1,195	845 x 2,320 x 1,195
WEIGHT									
Unit (Net) 3-Row Coil	kg	100	103	152	154	190	199	227	253
Unit (Net) 4-Row Coil	kg	102	107	158	161	200	210	239	265

*Note : 1. 3-Row coil is standard coil
2. 4-Row coil is optional coil

Performance Data - Cooling Capacities
Model DWHA

Cooling Capacity for 3-Row Coil

TC = Total Capacity, MBH
SC = Sensible Capacity, MBH
GPM = Water Flow Rate, gpm
PD = Water Pressure Drop, Ft of Water
EWT = Entering Water Temperature
WTR = Water Temperature Rise

EWT		Rated	WTR	Entering Air Temp - EDB/EWB (F)															
(F)	Unit	Airflow	(F)	72/61				74/63				80/67				84/71			
	Size	CFM		TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD	TC	SC	GPM	PD
40	20	2000	8	57.16	42.51	14.23	8.21	66.59	45.55	16.58	10.71	86.70	55.20	21.59	16.98	108.70	61.09	27.06	25.23
			10	51.09	39.84	10.18	4.56	60.02	42.68	11.95	6.03	80.18	52.41	15.97	9.98	102.10	58.31	20.35	15.23
			12	44.55	37.06	7.40	2.61	53.17	39.80	8.83	3.54	73.21	49.52	12.15	6.17	95.30	55.51	15.82	9.76
			15	33.09	32.40	4.40	1.05	41.51	35.11	5.51	1.55	62.31	45.16	8.28	3.14	84.16	51.13	11.18	5.29
	25	2500	8	69.39	52.00	17.27	12.73	80.71	55.66	20.09	16.57	104.80	67.35	26.09	26.18	131.10	74.38	32.65	38.80
			10	62.65	49.04	12.48	7.18	73.10	52.35	14.56	9.40	97.19	64.07	19.36	15.44	123.50	71.15	24.60	23.48
			12	55.79	46.09	9.26	4.26	65.77	49.23	10.92	5.66	89.15	60.71	14.80	9.61	115.50	67.87	19.17	15.11
			15	44.54	41.42	5.92	1.94	53.91	44.38	7.16	2.70	77.40	55.99	10.28	5.06	102.70	62.79	13.65	8.28
	34	3400	8	93.94	71.64	23.39	12.85	108.00	76.77	27.10	16.61	140.00	93.22	34.85	25.79	173.80	103.29	43.27	37.70
			10	84.83	67.55	16.90	7.25	98.71	72.23	19.66	9.44	130.00	88.72	25.88	15.25	163.80	98.87	32.63	22.87
			12	75.15	63.30	12.47	4.26	88.61	67.84	14.71	5.67	119.30	84.11	19.81	9.51	153.40	94.33	25.46	14.74
			15	58.13	56.15	7.72	1.84	71.38	60.61	9.48	2.63	103.30	77.40	13.72	4.98	136.70	87.32	18.15	8.11
	40	4000	8	113.70	87.06	28.31	9.88	131.40	93.09	32.71	12.71	169.00	113.01	42.00	19.74	209.90	125.08	52.24	28.84
			10	102.50	82.07	20.42	5.57	119.30	87.71	23.76	7.24	156.70	107.55	31.22	11.65	197.37	119.65	39.37	17.48
			12	90.30	76.73	14.99	3.24	106.70	82.24	17.71	4.32	144.00	101.99	23.90	7.28	184.90	114.14	30.69	11.25
			15	67.80	67.31	9.01	1.33	84.49	72.96	11.22	1.94	124.00	93.70	16.48	3.78	164.10	105.55	21.80	6.15
	50	5000	8	149.70	112.35	37.26	10.84	172.80	120.38	43.02	13.93	221.00	145.82	55.03	21.41	273.30	161.45	68.05	31.06
			10	136.00	106.17	27.09	6.19	158.00	113.65	31.47	8.04	206.60	139.26	41.15	12.82	259.10	154.99	51.61	19.04
			12	121.20	99.60	20.12	3.68	142.70	106.93	23.69	4.88	191.20	132.42	31.74	8.11	244.10	148.37	40.52	12.42
			15	95.90	88.81	12.74	1.65	116.80	95.86	15.51	2.32	166.80	122.01	22.15	4.31	219.60	137.96	29.17	6.95
	60	6000	8	172.40	130.85	42.91	15.23	198.60	139.83	49.45	19.51	253.70	169.06	63.16	29.93	313.50	186.58	78.04	43.38
			10	157.60	124.21	31.39	8.79	182.20	132.48	36.29	11.31	237.40	161.71	47.28	17.94	297.30	179.35	59.21	26.60
			12	142.40	117.51	23.64	5.34	166.10	125.38	27.57	6.98	220.10	154.16	36.53	11.38	280.30	171.93	46.53	17.36
			15	117.40	106.83	15.59	2.58	139.90	114.25	18.58	3.49	194.60	143.35	25.84	6.18	252.90	160.47	33.60	9.76
	70	7000	8	198.00	151.06	49.29	13.41	228.30	161.39	56.82	17.18	292.10	195.19	72.71	26.44	361.20	215.47	89.93	38.40
			10	180.50	143.17	35.95	7.70	208.90	152.74	41.61	9.93	272.70	186.53	54.31	15.79	342.00	206.96	68.11	23.47
			12	161.90	135.04	26.88	4.62	189.50	144.23	31.46	6.08	252.20	177.65	41.87	9.98	321.80	198.23	53.42	15.27
			15	129.70	121.37	17.23	2.12	156.80	130.41	20.82	2.95	221.60	164.74	29.43	5.37	289.40	184.63	38.44	8.54
	80	8000	8	224.80	170.91	55.96	17.20	259.50	182.80	64.61	22.11	332.10	221.17	82.67	34.04	410.80	244.34	102.30	49.46
			10	205.00	161.97	40.84	9.88	237.30	172.82	47.27	12.74	310.20	211.36	61.78	20.33	389.00	234.71	77.49	30.24
			12	185.20	153.20	30.74	6.00	216.10	163.53	35.87	7.84	287.00	201.20	47.63	12.85	366.30	224.81	60.80	19.67
			15	152.00	139.05	20.19	2.87	181.60	148.86	24.12	3.91	253.10	186.88	33.61	6.95	329.70	209.45	43.79	11.01
43	20	2000	8	47.19	38.19	11.75	5.81	55.74	40.88	13.88	7.77	75.69	50.54	18.85	13.24	97.59	56.44	24.30	20.66
			10	41.51	35.81	8.27	3.14	49.55	38.32	9.87	4.27	68.84	47.74	13.72	7.56	90.76	53.69	18.08	12.25
			12	35.44	33.33	5.89	1.73	42.95	35.67	7.13	2.42	62.22	45.14	10.33	4.60	83.55	50.89	13.87	7.68
			15	23.86	23.54	3.17	0.59	31.55	30.10	4.19	0.96	51.60	41.10	6.86	2.24	71.81	46.50	9.54	3.97
	25	2500	8	57.44	46.79	14.30	9.05	67.65	50.02	16.85	12.04	91.55	61.71	22.80	20.42	117.80	68.79	29.33	31.77
			10	51.37	44.24	10.24	5.03	60.72	47.14	12.10	6.73	83.54	58.43	16.65	11.72	109.80	65.56	21.87	18.90
			12	45.08	41.64	7.49	2.91	53.79	44.32	8.93	3.95	76.05	55.44	12.63	7.21	101.40	62.28	16.84	11.90
			15	34.40	32.74	4.57	1.23	42.56	39.90	5.66	1.78	64.86	51.13	8.62	3.68	88.16	57.29	11.71	6.28
	34	3400	8	77.82	64.48	19.38	9.15	91.30	69.02	22.74	12.08	122.40	85.40	30.47	20.14	156.20	95.51	38.89	30.90
			10	69.42	60.87	13.83	5.06	81.98	65.04	16.33	6.76	111.80	80.90	22.28	11.60	145.80	91.08	29.04	18.43
			12	60.35	57.07	10.02	2.88	72.22	60.98	11.99	3.93	101.90	76.80	16.91	7.14	134.80	86.54	22.38	11.63
			15	38.51	37.97	5.14	1.00	55.28	54.15	7.35	1.67	86.23	70.53	11.46	3.60	117.30	79.61	15.58	6.15
	40	4000	8	94.37	78.51	23.50	7.06	110.50	83.85	27.51	9.29	147.60	103.55	36.76	15.40	188.40	115.70	46.93	23.62
			10	83.87	74.00	16.71	3.88	99.10	79.03	19.74	5.19	135.00	98.26	26.91	8.89	175.70	110.28	35.00	14.07
			12	72.29	69.14	12.00	2.18	86.78	73.91	14.41	2.99	123.00	93.27	20.43	5.47	162.20	104.77	26.94	8.86
			15	62.75	61.85	8.37	0.87	64.42	60.63	8.56	1.20	103.30	85.41	13.73	2.72	141.00	96.39	18.74	4.67
	50	5000	8	124.40	101.01	30.97	7.76	145.70	108.17	36.28	10.22	193.90	133.62	48.28	16.83	246.20	149.30	61.32	25.58
			10	111.40	95.37	22.20	4.33	131.60	102.15	26.23	5.78	178.60	127.00	35.58	9.83	231.30	142.84	46.08	15.44
			12	97.53	89.51	16.20	2.49	116.60	95.86	19.37	3.40	163.70	120.76	27.18	6.12	215.40	136.17	35.76	9.87
			15	72.67	70.69	9.66	1.01	91.33	85.55	12.14	1.50	139.70	111.05	18.57	3.14	189.30	125.64	25.15	5.31
	60	6000	8	143.60	118.03	35.75	10.94	167.60	126.03	41.73	14.33	222.40	222.40	55.37	23.49	282.10	172.71	70.24	35.65
			10	130.10	112.17	25.91	6.22	152.40	119.52	30.37	8.20	205.30	147.84	40.90	13.77	265.10	165.55	52.83	21.53
			12	115.90	106.24	19.25	3.70	137.00	113.08	22.75	4.94	189.10	141.07	31.40	8.64	247.20	158.13	41.05	13.78
			15	92.19	89.84	12.25	1.68	111.90	102.86	14.87	2.35	164.30	131.11	21.84	4.56	218.80	146.80	29.07	7.50
	70	7000	8	164.80	136.41	41.04	9.63	192.40	145.52	47.91	12.61	255.70	179.17	63.67	20.71	324.80	199.44	80.88	31.51
			10	148.60	129.34	29.61	5.43	174.50	137.85	34.77	7.18	235.60	170.58	46.93	12.10	304.70	190.94	60.71	18.96
			12	131.10	121.98	21.77	3.17	155.70	130.03	25.86	4.27	216.40	162.61	35.94	7.56	283.40	182.20	47.06	12.10
			15	99.35	94.56	13.25	1.38	123.60	117.04	16.42	1.93	186.40	150.61	24.77	3.93	249.90	168.91	33.20	6.54
	80	8000	8	186.90	153.98	46.54	12.32	218.50	164.57	54.42	16.18	290.80	202.94	72.43	26.68	369.50	226.20	92.02	40.61
			10	169.10	146.26	33.70	6.98	198.20	155.89	39.49	9.20	267.80	193.04	53.35	15.55	346.80	216.48	24.45	8.64
			12	150.60	138.53	25.01	4.14	178.10	147.47	29.57	5.54	245.90	183.93	40.84	9.71	322.80	206.58	53.60	15.60
			15	118.70	115.53	15.78	1.85	144.90	133.93	19.26	2.61	213.60	170.91	28.38	5.12	284.60	191.39	37.82	8.43
45	20	2000	8	40.92	35.57	10.19	4.50	48.77	38.00	12.15	6.11	68.01	47.41	16.94	10.90	89.99	53.34	22.39	17.76
			10	35.70	33.44	7.11	2.40	42.88	35.63	8.55	3.30	61.49	44.85	12.25	6.17	82.82	50.60	16.51	10.37
			12	30.03	28.67	4.99	1.29	36.64	33.20	6.09	1.82	55.07	42.38	1.95	3.69	75.33	47.78	12.51	6.36
			15	17.59	17.36	2.34	0.35	25.21	24.82	3.35	0.64	44.87	38.63	5.97	1.74	63.75	43.62	8.47	3.21
	25	2500	8	50.02	43.67	12.46	7.06	59.28	46.55	14.77	9.49	82.33	57.94	20.51	16.83	108.50	65.05	27.02	27.31
			10	44.49	41.42	8.87	3.89	52.88	43.97	10.54	5.25	75.21	54.90	15.04	9.57	100.20	61.85	19.98	16.01
			12	38.69	36.97	6.43	2.22	46.38	41.39	7.70	3.03	67.63	52.19	11.23	5.83	91.53	58.54	15.20	9.88
			15	28.15	27.78	3.74	0.86	35.62	33.88	4.74	1.30	56.97	48.20	7.57	2.92	78.73	53.87	10.47	5.12
	34	3400	8	67.76	60.17	16.88	7.13	80.05	64.23	19.94	9.54	110.10	80.20	27.42	16.62	143.90	90.31	35.85	26.58
			10	60.00	56.92	11.96	3.90	71.31	60.57	14.21	5.26	100.30	76.03	19.94	9.48	133.20	85.88	26.54	15.62
			12	51.48	50.13	8.55	2.17	62.02	56.85	10.30	3.00	90.52	72.23	15.04	5.77	121.70	81.34	20.22	9.67
			15	25.71	25.49	3.43	0.44	44.43	44.30	5.91	1.14	75.43	66.37	10.03	2.84	104.60	74.78	13.91	5.00
	40	4000	8	82.22	73.30	20.48	5.51	97.00	78.16	24.16	7.35	132.80	97.30	33.08	12.71	173.60	109.41	43.23	20.30
			10	72.43	69.18	14.44	2.99	86.16	73.65	17.17	4.04	121.00	92.44	24.12	7.29	160.40	104.03	31.97	11.91
			12	61.44	59.85	10.21	1.63	74.36	68.92	12.35	2.27	109.30	87.75	18.16	4.43	146.50	98.52	24.34	7.37
			15	31.95	30.38	4.25	0.36	53.28	52.08	7.10	0.93	90.19	80.38	11.99	2.14	125.70	90.62	16.71	3.80
	50	5000	8	108.30	94.02	26.97	6.05	128.10	100.63	31.90	8.10	174.90	125.43	43.57	13.96	227.40	141.21	56.64	22.09
			10	96.23	88.97	19.18	3.33	114.60	94.99	22.84	4.51	160.20	119.30	31.93	8.08	211.90	134.76	42.23	13.15
			12	83.25	81.10	13.83	1.88	100.30	89.13	16.66	2.60	145.70	113.38	24.20	4.96	195.30	128.03	32.44	8.26
			15	57.77	56.47	7.68	0.68	70.33	66.46	9.38	1.04	122.40	104.27	16.27	2.48	169.30	117.94	22.51	4.34
	60	6000	8	125.50	110.21	31.25	8.59	147.50	117.44	36.75	11.39	200.60	145.82	49.96	19.46	260.30	163.53	64.84	30.74
			10	113.00	105.01	22.53	4.84	133.30	111.58	26.57	6.45	184.30	139.12	36.74	11.32	242.80	156.31	48.39	18.32
			12	99.93	99.60	16.60	2.84	118.70	105.59	19.72	3.82	168.80	132.87	28.05	7.04	224.10	148.88	37.23	11.53
			15	76.72	74.28	10.20	1.21	94.71	92.70	12.59	1.75	145.10	123.56	19.28	3.65	196.50	138.21	26.11	6.18
	70	7000	8	144.00	127.37	35.86	7.55	169.30	135.65	42.17	10.01	230.00	168.38	57.39	17.14	299.60	188.81	74.61	27.14
			10	128.90	121.06	25.70	4.21	152.40	128.66	30.38	5.63	211.40	160.56	42.13	9.94	278.70	180.31	55.56	16.12
			12	112.50	109.75	18.69	2.41	134.50	121.37	22.34	3.29	193.10	153.19	32.07	6.15	256.60	171.57	42.63	10.10
			15	79.12	76.63	10.52	0.89	92.47	88.33	12.33	1.29	164.00	141.87	21.80	3.12	223.90	158.96	29.76	5.37
	80	8000	8	163.20	143.74	40.64	9.65	192.10	153.29	47.86	12.83	262.20	190.70	65.31	22.08	340.90	214.05	84.92	35.00
			10	147.00	136.97	29.29	5.43	173.30	145.48	34.55	7.24	240.10	181.59	47.86	12.76	317.40	204.41	63.26	20.79
			12	129.70	122.91	21.55	3.17	154.30	137.75	25.63	4.29	219.50	173.25	36.46	7.10	292.40	194.43	48.57	13.03
			15	97.98	94.70	13.02	1.32	122.20	119.44	16.24	1.93	188.50	161.10	25.05	4.09	255.40	180.11	33.95	6.93

Features and Benefits

DWHA with access door

Proportional Thermostat (Option)

PICV Valve (Otipon)

Trane Control Valve (Option)

AHU Starter Panel (Option)

Specialized Design

Trane DWHA Air Handlers are compact horizontal draw-through units for tight ceiling space.This is the latest attractive commercial solution for new and replacement buildings. And it is designed for use in offices, department stores, schools, hospitals and other applications where cooling is required in the limited space.

Ease of Service

Hinged doors allow easy access for fan(s), motor and belt maintenance.

General

Air handler units shall be completely factory assembled including coil, condensate drain pan, fan motor(s), filters in an insulated casing dedicated for horizontal application of DWHA model. Unit shall be rated in accordance with ARI Standard 210.

Unit Casing

Unit casing shall be constructed of 25 mm double-wall panels injected with polyurethane foam to provide a rigid, sturdy and easily cleaned enclosure.This double-wall construction keeps the insulation out of the air stream and contributes to improved.The panels shall be constructed of baked polyester powder painted steel sheet on exterior wall and galvanizes sheet on the inner wall.

Fans

Fans are double width, double inlet, multiblade centrifugal type. All fans statically and dynamically balanced and tested after being installed on properly sized hollow or solid shafts. Fan shafts do not passthrough their first critical speed as unit comes up to rated rpm.

Fan housings constructed with deformed, streamlined inlets and side sheets. Fan bearings are grease lubricated ball bearings selected for 200,000 hours average life.

Coils

Configured aluminium fin surface shall be mechanically bonded to internally enhanced copper tube and factory pressure and leak tested at 380 psig. Coil is arranged for draw through airflow and shall provide polyester powder painted drain pan constructed of galvanized steel with rubber insulator. All coil parts must stand inside the drain pan to prevent any condensation out of the drain pan.

Filter

1-inch, washable aluminium filter shall be standard on air handlers. Filters shall be accessible from the side coil panel.

Fan Motor

Motor bearings shall be permanently lubricated. oversized motor shall be available as an option for high static application.

Optional Accessories Oversized Motor

Field installed oversized motors shall be available for high static pressure applications.

Discharge Plenum

Accessory discharge plenum shall be available for free blow.For motor will be specially selected to property math with Free Blower Application.

Trane Proportional Thermostat

monitors the adjustable control valve by 0-10 Vdc signal, 5 °C - 34 °C temperature setting and connectable with external sensor.

"PICV" Pressure Independent Control Valves (Option-5 Years Warranty)

combines a differential pressure regulator with a 2-way control valve which supplies a specific constant flow for each degree of valve opening regardless of pressure variation in the system. Recommend to use with Trane Thermostat for precise temperature control.

Trane Control Valve

controls the opening and closing of the pipe in the HVAC system for room temperature monitor. Recommend to use with Trane Thermostat for precise temperature control.

*Control valve option cannot be factory installed inside unit. It will be provided separately.

Trane AHU Starter Panel

particularly controls the HVAC system. Integrated with motor and compressor protection system, reliable according to UL/IEC/NEMA standard and easy to install.

TRANE

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