# **AFM SERIES - AIR HANDLER**

# HYDRONIC MULTI-POSITION, COPPER COIL



Unit shown with service panels removed. Representative image only. Some models may vary in appearance.

### **APPLICATION VERSATILITY**

This unit is designed for use in upflow, downflow, horizontal left and horizontal right applications. Can be AHRI certified with most brands of air conditioners or heat pumps.

- A2L refrigerants require a Refrigerant Detection System (RDS) for compliance. In accordance to UL 60335 Refrigerant Detection Systems are factory-installed on A2L refrigerant ready air handlers.
- ETL and AHRI listed for R22, R410A, R454B, and R32 refrigerants [A2L refrigerants certified with Refrigerant Detection System (RDS)].

#### **120V CONSTANT TORQUE ECM MOTOR**

Air handler models come equipped with a multi-speed, constant torque ECM. Motor speed and torque are managed via integrated software to ensure consistent torque output across all operating conditions.

#### **BLOWER**

Direct drive blowers circulate air quietly and efficiently. Blowers mounted on rails so they can be easily removed for service.

#### **ELECTRONIC CONTROL BOARD**

Electronic circuit board provides 30 seconds of ON/OFF blower time delay extracting more heat/cool from the coil. An electronic board controls the functioning of the system reducing moving parts. The board provides for various hot water supply source connections and the blower time delay to maximize heat/cool extraction. As an enhanced feature the pump circulates hot water every 6 hours to prevent water stagnation and coil freezing.

#### **LOW LEAKAGE CABINET**

Less than 2% air leakage from cabinet when tested in accordance with ASHRAE standard 193. Sturdy, galvanized steel cabinet with painted front panels. Cabinet fully insulated with 1/2" faced insulation to encapsulate glass fibers, to prevent sweating, and to provide excellent R-value. Stick pins ensure insulation remains in place.

#### DX COIL

High-efficiency rifled copper tubes and enhanced aluminum fins provide maximum heat transfer. All coils are immersion tested at 500 psi, followed by nitrogen pressurization and factory sealing to ensure optimal system integrity and long-term reliability. Coil mounted Schrader allows pre-installation pressure assurance testing. Available with either flowrator or TXV metering device.

Field-installable TXVs are also available. Rugged GLP drain pan holds minimal condensate while eliminating the possibility of corrosion. Drain pans are UV safe. GLP drain pans with bottom primary and secondary drain connections or alternate right-side primary. All connections 3/4" NPT. Access door allows for coil cleaning.

#### **MODULAR HYDRONIC HEAT KITS**

Air Handlers are available with either factory-installed circuit breakers or terminal blocks. Hydronic Coils come in 2, 3 and 4 row with the options of pump or no pump configurations. Freeze stat is standard, wired into circulating pump control circuit. Controls are accessible from the front for easy service. Electrical connections can be made from the top or left. Fan time delay relay standard for increased efficiency. Heat kits are available with or without circulating pump and check valve. Units are provided with auxiliary relay for remote pump. Schrader ports are standard on water-out manifold, hose bib available as an option.

WARRANTY Hassle-free five-year limited parts warranty. OPTIONS Ask your local Aspen Sales Rep for customization options.

#### **CUSTOMIZATION OPTIONS\***

## **DUAL A2L REFRIGERANT TECHNOLOGY FOR R32 & R454B SYSTEMS**

Aspen coils and air handlers are engineered with Dual A2L Refrigerant Technology, allowing field configurability for either R32 or R454B refrigerants. Each unit ships with a factory-installed A2L metering device that can be easily swapped at installation, and includes the option for a factory- or field-installed universal Refrigerant Detection System (RDS) compatible with both refrigerants.

# **OTHER POPULAR CUSTOM OPTIONS:**

Factory or field-installed TXV available.

# **DOWNFLOW KIT OPTIONS:**

# Refrigerant Detection System (RDS) kit factory-installed. METAL DRAIN PANS 16" DWNELWM 16

- 16" DWNFLWM-16
- 18" DWNFLWM-18
- 22" DWNFLWM-22

DWNFLWP

**PLASTIC DRAIN PANS** 

AFM-SS-AH-011-A













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HEATING/COOLING PERFORMANCE & ELECTRICAL DATA											
			PERFOR	ELECTRICAL DATA							
MODEL				COIL	HEA	TING CAPA	CITY (BTL	J/HR)			
	NOM. COOLING	HYDRONIC HEAT KIT	# OF ROWS	P.D.	STANDARD PUMP @ 3.5 GPM NOM. AIRFLOW				MIN. CIRCUIT AMPACITY	MAX. BREAKER OR FUSE SIZE	
		MODEL	ROWS	3.5	ENTERING WATER TEMP.						
	BTU			GPM	120°	140°	160°	180°	MCA		
AFM	18,000	W*2SP	2	2.7	17770	24900	32250	39600	6.78	15	
18/19	,	W*3SP	3	2.1	21600	30500	39450	48400			
AFM	24.000	W*2SP	2	2.7	20200	28500	36950	45400	6.78	15	
23/24/25	24,000	W*3SP	3	2.1	25000	35300	45800	56300	0.70	10	
A = N 4		W*2SP	2	2.5	22100	31300	40645	49990		15	
AFM 30/31	30,000	W*3SP	3	1.9	27700	39100	50750	62400	9.28		
		W*4SP	4	1.1	31000	43900	57000	70100			
	36,000	W*2MP	2	2.5	27040	38215	49610	61005	9.28	15	
AFM 35		W*3MP	3	1.9	33185	46900	59540	72180			
		W*4MP	4	1.1	38750	54805	69815	84820			
		W*2SP	2	2.5	23700	33500	43550	53600		15	
AFM 36/37		W*3SP	3	1.9	29800	42100	54700	67300			
		W*4SP	4	1.1	33500	47400	61600	75800			
	42,000	W*2LP	2	2.5	30200	42600	55300	68000	15.16		
AFM 42/43		W*3LP	3	1.9	36300	51400	65000	78600		25	
		W*4LP	4	1.1	43600	61600	77250	92900			
AFM		W*3XP	3	1.3	38195	54020	65095	76170	15.16	25	
47		W*4XP	4	0.8	48200	68125	83380	98640	15.10		
	48,000	W*2LP	2	2.1	31700	44800	58100	71400			
AFM 48/49		W*3LP	3	1.6	38200	54000	67300	80600	15.16	25	
		W*4LP	4	0.9	45900	64900	81450	98000			
AFM		W*3XP	3	1.3	38195	54020	65095	76170	15.16	25	
59		W*4XP	4	0.8	48200	68125	83380	98640	15.16	25	
	60,000	W*2LP	2	1.7	32900	46600	60500	74400	15.16		
AFM 60/61/62		W*3LP	3	1.3	39700	56200	70100	84000		25	
30/01/02		W*4LP	4	0.8	47800	67600	84900	102200			

HYDRONIC HEAT NOMENCLATURE									
HEAT KIT	POWER CONNECTION	ROWS	CABINET SIZE & NOM.TON.	PUMP					
W	С	2	S	P					
HYDRONIC WATER HEAT	C = CIRCUIT BREAKER T = TERMINAL BLOCK	2 = 2 3 = 3 4 = 4	S = AFM18/19/23/24/ 25/30/31/36/37 M = AFM35 L = AFM42/43/48/49/60/61 X = AFM47/59	L = No Pump P = Standard Taco 006 Pump w/ Check Valve (factory-installed) 8 = Taco 008 Pump High Head (factory-installed) R = Taco 009 Pump High Head (to be mounted external to all units except for multi-position units)					

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AIR HANDLER CHASSIS NOMENCLATURE (HYDRONIC MULTI-POSITION)									
A E 14	NOM. TON.	METERING DEVICE	OPTION CODE						
AFM	MBTUH	4	-000						
	19 42	A1 REFRIGERANTS - R410A + R22	CUSTOM OPTIONS						
120V ECM MOTOR CONSTANT	19 43 23 47 24 48	<b>4</b> = R410A (TXV NON-BLEED AC/HP) <b>G</b> = R410A (FLOWRATOR) <b>B</b> = R22 (TXV 20% BLEED AC/HP) <b>X</b> = R22 (TXV NON-BLEED AC//HP) <b>F</b> = R22 (FLOWRATOR)							
TORQUE	25 49 30 59	A2L REFRIGERANTS - R454B + R32							
HYDRONIC MULTI-POSITION AIR HANDLER	31 60 35 61 36 62 37	J = R454B (TXV NON-BLEED AC/HP)       K = R454B (TXV 20% BLEED AC/HP)         N = R454B (PISTON)       M = R32 (PISTON)         D = R32 (TXV NON-BLEED AC/HP)       Z = R454B/R32 CONFIGURABLE (Shipped with R454B piston)							

BLOWER DATA										
MODEL	1	CFM VS EXTERNAL STATIC (DRY COIL)								
WODEL	SPEED TAP	HP	FLA	0.1	0.2	0.3	0.4	0.5		
	T5	1/3	4.8A	900	853	797	738	673		
	T4	1/3	4.8A	670	646	613	592	553		
AFM 18/19/24/25	Т3	1/3	4.8A	500	476	452	421	400		
	T2	1/3	4.8A	400	381	360	339	312		
	T1	1/3	4.8A	900	853	797	738	673		
	T5	1/3	4.8A	895	860	815	770	705		
	T4	1/3	4.8A	825	795	770	750	700		
AFM 23	T3	1/3	4.8A	770	735	705	685	665		
	T2	1/3	4.8A	705	675	655	615	595		
	T1	1/3	4.8A	655	615	605	580	540		
	T5	1/2	6.8A	1150	1087	1030	975	910		
	T4	1/2	6.8A	1080	1048	1010	960	895		
AFM 30/31/36/37	T3	1/2	6.8A	900	862	825	796	745		
00/01/00/01	T2	1/2	6.8A	700	663	632	600	552		
	T1	1/2	6.8A	500	473	449	421	395		
	T5	1/2	6.8A	1245	1190	1130	1085	1020		
	T4	1/2	6.8A	1170	1130	1085	1045	1000		
AFM 35	T3	1/2	6.8A	935	910	865	840	805		
	T2	1/2	6.8A	815	785	745	715	685		
	T1	1/2	6.8A	685	655	605	580	520		
	T5	1	11.5A	1850	1806	1752	1700	1652		
AFM	T4	1	11.5A	1704	1656	1600	1532	1479		
42/43/48/	T3	1	11.5A	1494	1461	1426	1400	1364		
60/61/62	T2	1	11.5A	1350	1310	1272	1229	1175		
	T1	1	11.5A	676	652	621	600	559		
	T5	1	11.5A	1950	1880	1845	1805	1780		
	T4	1	11.5A	1765	1740	1725	1685	1660		
AFM 47/59	Т3	1	11.5A	1500	1480	1450	1415	1385		
47700	T2	1	11.5A	1245	1205	1185	1150	1105		
	T1	1	11.5A	1010	900	825	765	705		



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# FIGURE 1 **TOP VIEW FRONT VIEW** SIDE VIEW @ LV WATER IN **BOTTOM OPENING** В **(** ⊕8 S 🔘 P VIEW H-H [89]

**LIQUID LINE:** 3/8" **SUCTION LINE:** • 1.5T to 3.0T = 3/4" • 3.5T to 5.0T = 7/8"

DRAINS: P = PRIMARY/S = SECONDARY REFRIGERANT CONNECTIONS: SUC = SUCTION / LIQ = LIQUID WIRE CONNECTIONS: LV = LOW VOLTAGE / HV = HIGH VOLTAGE

AFM DIMENSIONS (In.)[mm.] - FIGURE 1												
MODEL	Α	В	С	D	Е	F	G	J	К	FILTER	SHIPPING INFO	
MODEL	^	_ B			_		G	_ <b>,</b>	^		WEIGHT	QTY
AFM18+W*	21 [533]	49.25 [1251]	20.5 [521]	18.75 [476]	12 [305]	5.75 [146]	9.75 [248]	18.5 [470]	18.5 [470]	16X20X1	99	4
AFM19/24/ 25+W*	21 [533]	49.25 [1251]	20.5 [521]	18.75 [476]	12 [305]	7.75 [197]	11.75 [298]	18.5 [470]	18.5 [470]	16X20X1	100	4
AFM30+W*	21 [533]	49.25 [1251]	20.5 [521]	18.75 [476]	12 [305]	10.5 [267]	14.5 [368]	18.5 [470]	18.5 [470]	16X20X1	118	4
AFM36+W*	21 [533]	49.25 [1251]	20.5 [521]	18.75 [476]	12 [305]	12.5 [317]	16.5 [419]	18.5 [470]	18.5 [470]	16X20X1	118	4
AFM31/ 37+W*	21 [533]	49.25 [1251]	20.5 [521]	18.75 [476]	12 [305]	14.75 [374]	18.75 [476]	18.5 [470]	18.5 [470]	16X20X1	147	4
AFM42+W*	24.5 [622]	57 [1448]	20.5 [521]	22.25 [565]	14.75 [375]	14.75 [374]	18.75 [476]	22 [559]	18.5 [470]	20X20X1	153	4
AFM48+W*	24.5 [622]	57 [1448]	20.5 [521]	22.25 [565]	14.75 [375]	16 [406]	20 [508]	22 [559]	18.5 [470]	20X20X1	180	4
AFM43/49/ 60/62+W*	24.5 [622]	57 [1448]	20.5 [521]	22.25 [565]	14.75 [375]	18 [457]	22 [559]	22 [559]	18.5 [470]	20X20X1	180	4
AFM61+W*	24.5 [622]	57 [1448]	20.5 [521]	22.25 [565]	14.75 [375]	20 [508]	24 [610]	22 [559]	18.5 [470]	20X20X1	200	4
AFM23+W*	21 [533]	40 [1016]	20.5 [521]	18 [457]	16 [406]	7 [178]	11 [279]	18.5 [470]	18.5 [470]	16X20X1	100	4
AFM35+W*	21 [533]	42 [1067]	23 [584]	18 [457]	19 [483]	8.75 [222]	12.75 [324]	18 [457]	20 [533]	20X20X1	170	4
AFM47/ 59+W*	21 [533]	48 [1219]	28 [711]	18 [457]	24 [610]	11.75 [298]	15.75 [400]	18 [457]	25 [660]	20X25X1	200	4



# **HELPFUL LINKS**



## **VIEW PRODUCT ONLINE**

For full warranty terms and conditions, please refer to the Warranty Information section on Aspen's official website.



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Aspen's A2L Refrigerant Technology for R32 and R454B Systems.

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