



PRODUCT DIMENSIONS & SPECIFICATIONS

AFM SERIES HIGH EFFICIENCY MULTI-POSITION HYDRONIC HEAT AIR HANDLERS



Representative image only. Some models may vary in appearance. Due to continuous product improvement, specifications are subject to change without notice.

STANDARD FEATURES

APPLICATION VERSATILITY

Upflow or horizontal right as shipped (field-convertible for down-flow or horizontal left applications). Can be AHRI certified with most brands of air conditioners or heat pumps. ETL listed for use with either R22 or R410a when a proper metering device is used.

MOTOR

Constant torque ECM speeds and torques are controlled by software embedded in the motor to maintain constant torque. Motors are pre-programmed at the factory.

LOW LEAKAGE CABINET

Less than 2% air leakage from cabinet when tested in accordance with ASHRAE standard 193. Unit must be installed according to Airmark installation instructions. Sturdy, fully insulated galvanized steel cabinet with knockout for duct return.

BLOWER

Direct drive blowers circulate air quietly and efficiently. Motor speeds and torques programmed in the motor. Blowers mounted on rails so they can be easily removed for service.

ELECTRONIC CONTROL BOARD

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 coil freeze during off cycle.

MODULAR HYDRONIC HEAT KITS

Heat kits available with either circuit breakers or terminal blocks. Available in 2, 3 & 4 row. Heat kits are easily installed in the field using Molex plugs or can be ordered factory-installed. 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. Disconnect does not protrude through the wall panel. 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.

DX COIL

High efficiency rifled copper tubes/enhanced aluminum fins provide maximum heat transfer. All coils immersion tested at 500 psi then nitrogen pressurized and factory sealed for maximum reliability. Liquid-line Schrader allows pre-installation pressure testing. Available with either orifice or TXV metering device. Field-installable bolt-on TXVs are also available. Rugged, UV safe, GLP drain pan holds minimal condensate while eliminating the possibility of corrosion. Galvanized metal drain pan with bottom primary and secondary drain connections or alternate right side primary. All connections 3/4" FPT. Access door allows for coil cleaning.

WARRANTY

Five-year limited parts warranty.

OPTIONS

See options menu.

Phone: 281.441.6500
Toll Free: 800.423.9007
Fax: 281.441.6510
www.aspenmfg.com



* For complete warranty details visit www.aspenmfg.com.

Revised 12/02/20. In keeping with its policy of continuous progress and product improvement, Aspen reserves the right to make changes without notice and incurring obligation. © 2020

HEATING AND COOLING PERFORMANCE AND ELECTRICAL DATA

| Model | PERFORMANCE DATA | | | | | | | | ELECTRICAL DATA | |
|-------------|------------------|-------------------------|------|-----------|--|---------------------|-------|--------|--------------------------------|--------------------------|
| | Nominal Cooling | Hydronic Heat Kit Model | Rows | Coil P.D. | Heating Capacity BTU/HR Standard pump at 3.5 GPM Nominal Airflow | | | | MINIMUM CIRCUIT AMPACITY (MCA) | MAX BREAKER OR FUSE SIZE |
| | | | | | 3.5 GPM | Entering Water Temp | | | | |
| | | | | 120 | | 140 | 160 | 180 | | |
| AFM18/19 | 18,000 | W*2SP | 2 | 2.7 | 17770 | 24900 | 32250 | 39600 | 6.6 | 15 |
| | | W*3SP | 3 | 2.1 | 21600 | 30500 | 39450 | 48400 | | |
| AFM24/25 | 24,000 | W*2SP | 2 | 2.7 | 20200 | 28500 | 36950 | 45400 | 6.6 | 15 |
| | | W*3SP | 3 | 2.1 | 25000 | 35300 | 45800 | 56300 | | |
| AFM30/31 | 30,000 | W*2SP | 2 | 2.5 | 22100 | 31300 | 40645 | 49990 | 9.1 | 20 |
| | | W*3SP | 3 | 1.9 | 27700 | 39100 | 50750 | 62400 | | |
| | | W*4SP | 4 | 1.1 | 31000 | 43900 | 57000 | 70100 | | |
| AFM36/37 | 36,000 | W*2SP | 2 | 2.5 | 23700 | 33500 | 43550 | 53600 | 9.1 | 20 |
| | | W*3SP | 3 | 1.9 | 29800 | 42100 | 54700 | 67300 | | |
| | | W*4SP | 4 | 1.1 | 33500 | 47400 | 61600 | 75800 | | |
| AFM42/43 | 42,000 | W*2LP | 2 | 2.5 | 30200 | 42600 | 55300 | 68000 | 14.3 | 25 |
| | | W*3LP | 3 | 1.9 | 36300 | 51400 | 65000 | 78600 | | |
| | | W*4LP | 4 | 1.1 | 43600 | 61600 | 77250 | 92900 | | |
| AFM48/49 | 48,000 | W*2LP | 2 | 2.1 | 31700 | 44800 | 58100 | 71400 | 14.3 | 25 |
| | | W*3LP | 3 | 1.6 | 38200 | 54000 | 67300 | 80600 | | |
| | | W*4LP | 4 | 0.9 | 45900 | 64900 | 81450 | 98000 | | |
| AFM60/61/62 | 60,000 | W*2LP | 2 | 1.7 | 32900 | 46600 | 60500 | 74400 | 14.3 | 25 |
| | | W*3LP | 3 | 1.3 | 39700 | 56200 | 70100 | 84000 | | |
| | | W*4LP | 4 | 0.8 | 47800 | 67600 | 84900 | 102200 | | |
| AFM23 | 24000 | W*2SP | 2 | 2.7 | 20200 | 28500 | 36950 | 45400 | 6.6 | 15 |
| | | W*3SP | 3 | 2.1 | 25000 | 35300 | 45800 | 56300 | | |
| AFM35 | 36000 | W*2MP | 2 | 2.5 | 27040 | 38215 | 49610 | 61005 | 9.1 | 20 |
| | | W*3MP | 3 | 1.9 | 33185 | 46900 | 59540 | 72180 | | |
| | | W*4MP | 4 | 1.1 | 38750 | 54805 | 69815 | 84820 | | |
| AFM47 | 48000 | W*3XP | 3 | 1.3 | 38195 | 54020 | 65095 | 76170 | 14.3 | 25 |
| | | W*4XP | 4 | 0.8 | 48200 | 68125 | 83380 | 98640 | | |

| Model | PERFORMANCE DATA | | | | | | | | ELECTRICAL DATA | |
|-------------|------------------|-------------------------|------|-----------|--|---------------------|-------|--------|--------------------------------|--------------------------|
| | Nominal Cooling | Hydronic Heat Kit Model | Rows | Coil P.D. | Heating Capacity BTU/HR High Pressure Drop pump at 5 GPM Nominal Airflow | | | | MINIMUM CIRCUIT AMPACITY (MCA) | MAX BREAKER OR FUSE SIZE |
| | | | | | 5 GPM | Entering Water Temp | | | | |
| | | | | 120 | | 140 | 160 | 180 | | |
| AFM18/19 | 18,000 | W*2S8 | 2 | 3.9 | 18700 | 26400 | 34150 | 41900 | 6.6 | 15 |
| | | W*3S8 | 3 | 2.9 | 22900 | 32300 | 41750 | 51200 | | |
| AFM24/25 | 24,000 | W*2S8 | 2 | 3.9 | 22600 | 31600 | 40550 | 49500 | 6.6 | 15 |
| | | W*3S8 | 3 | 2.9 | 26900 | 38000 | 49150 | 60300 | | |
| AFM30/31 | 30,000 | W*2S8 | 2 | 3.5 | 23900 | 33800 | 43800 | 53800 | 9.1 | 20 |
| | | W*3S8 | 3 | 2.6 | 30100 | 42500 | 55100 | 67700 | | |
| | | W*4S8 | 4 | 1.5 | 34000 | 48000 | 62300 | 76600 | | |
| AFM36/37 | 36,000 | W*2S8 | 2 | 3.5 | 25800 | 36500 | 47350 | 58200 | 9.1 | 20 |
| | | W*3S8 | 3 | 2.6 | 32800 | 46300 | 60000 | 73700 | | |
| | | W*4S8 | 4 | 1.5 | 37200 | 52600 | 68200 | 83800 | | |
| AFM42/43 | 42,000 | W*2L8 | 2 | 3.5 | 33200 | 46800 | 60650 | 74500 | 14.3 | 25 |
| | | W*3L8 | 3 | 2.6 | 40500 | 57300 | 70850 | 84400 | | |
| | | W*4L8 | 4 | 1.5 | 49000 | 69300 | 86450 | 103600 | | |
| AFM48/49 | 48,000 | W*2L8 | 2 | 3 | 34900 | 49300 | 63900 | 78500 | 14.3 | 25 |
| | | W*3L8 | 3 | 2.2 | 42750 | 60450 | 74825 | 89200 | | |
| | | W*4L8 | 4 | 1.3 | 52000 | 73500 | 91725 | 109950 | | |
| AFM60/61/62 | 60,000 | W*2L8 | 2 | 2.5 | 36600 | 51800 | 67150 | 82500 | 14.3 | 25 |
| | | W*3L8 | 3 | 1.9 | 45000 | 63600 | 78800 | 94000 | | |
| | | W*4L8 | 4 | 1.1 | 55000 | 77700 | 97000 | 116300 | | |
| AFM23 | 24000 | W*2S8 | 2 | 3.9 | 22600 | 31600 | 40550 | 49500 | 6.6 | 15 |
| | | W*3S8 | 3 | 2.9 | 26900 | 38000 | 49150 | 60300 | | |
| AFM35 | 36000 | W*2M8 | 2 | 3.5 | 29625 | 41875 | 54295 | 66715 | 9.1 | 15 |
| | | W*3M8 | 3 | 2.6 | 36870 | 52095 | 65800 | 79505 | | |
| | | W*4M8 | 4 | 1.5 | 43535 | 61545 | 78050 | 94560 | | |
| AFM47 | 48000 | W*3X8 | 3 | 1.9 | 43295 | 61300 | 73190 | 85075 | 14.3 | 25 |
| | | W*4X8 | 4 | 1.1 | 55360 | 78230 | 95070 | 111900 | | |

BLOWER DATA

| MODEL | SPEED TAP | MOTOR HP | MOTOR AMPS | MOTOR VOLTAGE | CFM V. EXTERNAL STATIC * | | | | |
|-----------------------|-----------|----------|------------|---------------|--------------------------|------|------|------|------|
| | | | | | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 |
| AFM 18/19/24/25 | TAP 5 | 1/3 | 4.8 | 120 | 900 | 853 | 797 | 738 | 673 |
| | TAP 4 | | | | 670 | 646 | 613 | 592 | 553 |
| | TAP 3 | | | | 500 | 476 | 452 | 421 | 400 |
| | TAP 2 | | | | 400 | 381 | 360 | 339 | 312 |
| | TAP 1 | | | | 900 | 853 | 797 | 738 | 673 |
| AFM23 | TAP 5 | 1/5 | 4.8 | | 895 | 860 | 815 | 770 | 705 |
| | TAP 4 | | | | 825 | 795 | 770 | 750 | 700 |
| | TAP 3 | | | | 770 | 735 | 705 | 685 | 665 |
| | TAP 2 | | | | 705 | 675 | 655 | 615 | 595 |
| | TAP 1 | | | | 655 | 615 | 605 | 580 | 540 |
| AFM 30/31/36/37 | TAP 5 | 1/2 | 6.8 | | 1150 | 1087 | 1030 | 975 | 910 |
| | TAP 4 | | | | 1080 | 1048 | 1010 | 960 | 895 |
| | TAP 3 | | | | 900 | 862 | 825 | 796 | 745 |
| | TAP 2 | | | | 700 | 663 | 632 | 600 | 552 |
| | TAP 1 | | | | 500 | 473 | 449 | 421 | 395 |
| AFM35 | TAP 5 | 1/2 | 5.4 | 1245 | 1190 | 1130 | 1085 | 1020 | |
| | TAP 4 | | | 1170 | 1130 | 1085 | 1045 | 1000 | |
| | TAP 3 | | | 935 | 910 | 865 | 840 | 805 | |
| | TAP 2 | | | 815 | 785 | 745 | 715 | 685 | |
| | TAP 1 | | | 685 | 655 | 605 | 580 | 520 | |
| AFM 42/43/48/60/61/62 | TAP 5 | 1 | 10.9 | 1850 | 1806 | 1752 | 1700 | 1652 | |
| | TAP 4 | | | 1704 | 1656 | 1600 | 1532 | 1479 | |
| | TAP 3 | | | 1494 | 1461 | 1426 | 1400 | 1364 | |
| | TAP 2 | | | 1350 | 1310 | 1272 | 1229 | 1175 | |
| | TAP 1 | | | 676 | 652 | 621 | 600 | 559 | |
| AFM47 | TAP 5 | 1 | 10.9 | 1950 | 1880 | 1845 | 1805 | 1780 | |
| | TAP 4 | | | 1765 | 1740 | 1725 | 1685 | 1660 | |
| | TAP 3 | | | 1500 | 1480 | 1450 | 1415 | 1385 | |
| | TAP 2 | | | 1245 | 1205 | 1185 | 1150 | 1105 | |
| | TAP 1 | | | 1010 | 900 | 825 | 765 | 705 | |

*Dry coil

AIR HANDLER CHASSIS NOMENCLATURE

| AFM | 18 | G | -001 |
|---|-------------------------|---|-------------|
| AFM = 120V Constant torque ECM Multi-Position Air Handler | Nominal tonnage (MBTUH) | <u>Metering device</u> 4 = non-bleed A/C or H/P R410 TXV B = 20% bleed A/C or H/P R22 TXV F = Flo-rater G = R410a Flo-rater X = non-bleed A/C or H/P R22 TXV | Option Code |

HYDRONIC HEAT KIT NOMENCLATURE

| W | C | 2 | S | P |
|-----------------------|--|---------------------------|--|---|
| Water heat (hydronic) | <u>Interruption</u> C = Circuit Breaker T = Terminal Block | <u>Row</u> 2 3 4 | S = ABM18,19,23,24,25,30,31,36,37 M = ABM35 L = ABM42,43,48,49,60,61,62 X = ABM47 | L = Less Pump and Check Valve P = with Standard Pump and Check Valve R = with 009 High Pressure Drop Pump 8 = with 008 High Pressure Drop Pump |

DIMENSIONS AND SPECIFICATIONS (In. [mm]) - Figure 1

| MODEL | A | B | C | D | E | F | G | J | K | FILTER SIZE | PISTON SIZE | SHIP WEIGHT (LBS) | SKID QTY |
|-------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|-------------|-------------------|----------|
| AFM18+W* | 21 [533] | 49-1/4 [1251] | 20-1/2 [521] | 18-3/4 [476] | 12 [305] | 7-1/4 [184] | 10-1/4 [260] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.055 | 99 | 4 |
| AFM19/24/25+W* | 21 [533] | 49-1/4 [1251] | 20-1/2 [521] | 18-3/4 [476] | 12 [305] | 8-1/4 [209] | 12-1/4 [311] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.059 | 100 | 4 |
| AFM30+W* | 21 [533] | 49-1/4 [1251] | 20-1/2 [521] | 18-3/4 [476] | 12 [305] | 8-1/4 [209] | 14-1/4 [362] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.068 | 118 | 4 |
| AFM36+W* | 21 [533] | 49-1/4 [1251] | 20-1/2 [521] | 18-3/4 [476] | 12 [305] | 10-1/4 [260] | 16-1/4 [412] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.068 | 118 | 4 |
| AFM31/37+W* | 21 [533] | 49-1/4 [1251] | 20-1/2 [521] | 18-3/4 [476] | 12 [305] | 10-1/4 [260] | 16-1/4 [412] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.074 | 147 | 4 |
| AFM42+W* | 24-1/2 [622] | 57 [1448] | 20-1/2 [521] | 22-1/4 [565] | 14-3/4 [375] | 11 [279] | 16 [406] | 22 [559] | 18-1/2 [470] | 20X20 | 0.080 | 153 | 4 |
| AFM48+W* | 24-1/2 [622] | 57 [1448] | 20-1/2 [521] | 22-1/4 [565] | 14-3/4 [375] | 13 [330] | 18 [457] | 22 [559] | 18-1/2 [470] | 20X20 | 0.084 | 180 | 4 |
| AFM43/49/60/62+W* | 24-1/2 [622] | 57 [1448] | 20-1/2 [521] | 22-1/4 [565] | 14-3/4 [375] | 13 [330] | 18 [457] | 22 [559] | 18-1/2 [470] | 20X20 | 0.084 | 180 | 4 |
| AFM61+W* | 24-1/2 [622] | 57 [1448] | 20-1/2 [521] | 22-1/4 [565] | 14-3/4 [375] | 15 [381] | 20 [508] | 22 [559] | 18-1/2 [470] | 20X20 | 0.092 | 200 | 4 |
| AFM23+W* | 21 [533] | 40 [1016] | 20-1/2 [521] | 18 [457] | 16 [406] | 6-3/4 [171] | 10-3/4 [273] | 18-1/2 [470] | 18-1/2 [470] | 16X20 | 0.059 | 100 | 4 |
| AFM35+W* | 21 [533] | 42 [1067] | 23 [584] | 18 [457] | 19 [483] | 8-3/4 [222] | 12-3/4 [324] | 18 [457] | 20 [533] | 20X20 | 0.068 | 170 | 4 |
| AFM47+W* | 21 [533] | 48 [1219] | 28 [711] | 18 [457] | 24 [610] | 11-3/4 [298] | 15-3/4 [400] | 18 [457] | 25 [660] | 20X25 | 0.084 | 200 | 4 |

Figure 1

