AGRI-TEC Series Wall Mount Air Conditioner

The AGRI-TEC is one of the most advanced systems of its kind. Features include a hot gas bypass valve which is crucial to low indoor temperature cooling, high indoor duct static capability, and multiple user selectable indoor airflow and electric heat settings. Counterflow supply air circulation provides conditioned air at floor level where it is needed for plants and equipment. Simple yet flexible low-voltage control inputs give the user full control over unit operation. All these features and more make the AGRI-TEC the ideal product for both portable modular and permanent site projects.

- Complies with efficiency requirements of ANSI/ASHRAE/IES 90.1-2019.
- Certified to AHRI Standard 390-2021 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety of Household and Similar Electrical Appliances ANSI/UL STD 60335-1 & ANSI/UL STD 60335-2-40/CSA STD C22.2 No. 60335-1 & CSA STD C22.2 No. 60335-2-40 Third Edition.
- Commercial Product - Not intended for residential applications.
- Bard is an ISO 9001:2015 Certified Manufacturer.
- The AHRI Certified® mark indicates Bard Manufacturing Company participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.

Bard® SINCE 1914

////// AGRI-TEC Wall-Mount Nomenclature

Digit #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	A	3	6	R	Y	H	A	1	5	X	P	X	X	X	X

UNIT SERIES
AGRI-TEC

NOMINAL CAPACITY
36 - 3.0 Ton

TYPE AND CONTROL LOCATION
R - Counterflow Air conditioner

REVISION
Y - Revision

PLACEHOLDER
H - Standard Hot Gas Bypass Unit

VOLTAGE
A - 208/230 Volt - 60 Hz - 1 Phase
D - 220/200 Volt - 50 Hz - 1 Phase

ELECTRIC HEAT
15 - 15Kw with Circuit Breaker

VENT PACKAGE
X - Manual Damper (Intake only)
B - No vent

FILTER
P - 2" MERV8 Disposable Filter
M - 2" MERV11 Disposable Filter
N - 2" MERV13 Disposable Filter

COLOR AND CABINET FINISH
X - Beige baked enamel finish
1 - White baked enamel finish
4 - Buckeye Gray baked enamel finish

SUPPLY OUTLET
X - Standard

COIL & UNIT COATING OPTIONS
X - Standard Copper/Aluminum coils.
1 - Coated Evaporator coil.
2 - Coated Condenser coil.
3 - Coated Evaporator and Condenser coils.

ACCESSORIES AND CONTROLS OPTIONS
X - Standard controls (HPS, LPS, CCM) and Low Ambient Control (LAC), Filter indicator light.

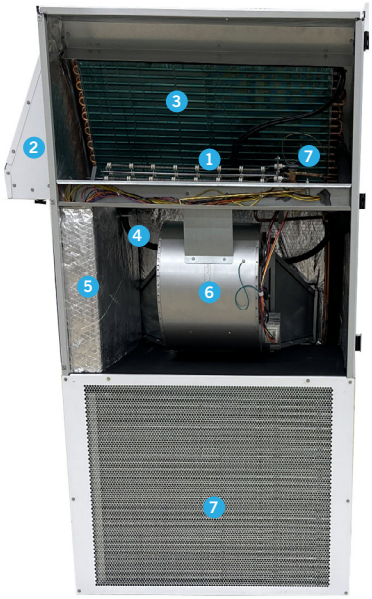
Nomenclature Notes:

- All units have an external data tag with the model and serial number on the left or right side of the unit. A secondary data tag with the model and serial number is located inside the control panel area on or near the low voltage terminal box.

ENGINEERED FEATURES - EXTERNAL

1. 20-ga. painted exterior exterior cabinet. Non-fiberglass foil faced insulation for moisture and sweat resistance.
2. Large front service door for access to indoor fan, indoor coil, electric heat, and other internal components.
3. Electrical entrances for high and low voltage field wiring to unit provided on both the left and right unit sides.
4. Unit control panel provided on left side of unit for easy access. Small lockable circuit breaker door for de-energizing unit.
5. Optional manually opened vent hood or side access door on left side of unit. Hinged for easy filter access behind hood or panel.
6. Easy to clean outdoor condenser coil.
7. Removable side grilles for service access to pressure ports, compressor, outdoor fan, and back side of condenser coil for cleaning.

ENGINEERED FEATURES - INTERNAL



1. Supplemental electric heater package standard with a maximum of 15kw electric heat. Electric heat is installed after the indoor evaporator coil for optional reheat operation.
2. Pleated 2" filter installation with extra-large filter area for extended filter life between filter changes.
3. Evaporator coils constructed with hydrophilic fin stock. Wettable surface with low contact angle – no bead-up condensate, lower wet-coil air-side pressure drop, improved draining & reduced re-entrainment of moisture back into the air stream in continuous blower operating modes. Antimicrobial properties provide microbial resistance to fungicidal growth. Resistant to Mold and Mildew, ASTM D3273 – no growth. Seals fin surface against aluminum oxide formation. Indoor evaporator coil frezze stat standard in all models.
4. Unit includes non-corrosive drain pans with no standing water. Dual evaporator condensate drains for redundancy regarding water removal.
5. Extra large left side control panel for easy access to all controls. Circuit Breakers on all models. 24VAC 50VA control transformer with circuit breaker. 24VAC low-voltage terminal strip for thermostat or DDC control.
6. ECM indoor and outdoor motors. Indoor fan system provides a constant CFM up to 1.0" W.C. ESP. Multiple indoor speed selection for latent and sensible capacity adjustment. Outdoor fan system uses EC technology for quiet operation.
7. 1-Stage scroll compressor with Hot Gas Bypass system. Crankcase heater standard in all models. High and Low Pressure switches with lockout circuit. Liquid line filter/drier. Cooling thermostatic expansion valve.

Unit Modes of Operation

Cooling Operation:
The AGRI-TEC uses an efficient scroll single stage compressor and R410A refrigerant. Scroll compressor technology delivers years of quiet, reliable operation. Multiple (4) indoor fan speeds available to adjust latent and sensible cooling provided to the indoor space. By adjusting indoor fan speeds, additional moisture can be removed from the indoor space while providing cooling for plants and lights or electronics and electrical equipment.

Indoor Low Temperature Cooling:
Additional refrigeration components including a Hot Gas Bypass Valve are used to extend the indoor cooling operating range down to 60°F (15.5°C). This allows for indoor temperatures to be lower than standard equipment and still provide cooling for indoor agricultural or other applications. As additional protection, a freeze stat is used to monitor indoor coil temperatures to reduce the chance of frost and ice buildup on the coil surface.

Low Outdoor Temperature Cooling Operation:
A low ambient control (LAC) is a standard feature to ensure cooling operation will be available even during low outdoor temperatures. The AGRI-TEC is rated for compressor cooling down to an outdoor temperature of -20°F (-28.8°C).

High Outdoor Temperature Cooling Operation:
The Bard AGRI-TEC Series products are designed and tested to use efficient condenser coils with high airflow condenser fan systems. This lowers energy use and provides cooling during extremely warm outdoor weather conditions.

Heating Operation:
15kw electric heat is standard in all models. Electric heat can be separated into different stages, 5kw, 10kw, and 15kw. The AGRI-TEC unit is capable of operating cooling and heating simultaneously for additional temperature control while removing moisture from the indoor airstream.

Filtration and Indoor Air Quality:
Providing the best air filtration solution is important to maintain a clean indoor environment. Bard provides several filter options based on MERV filtration (up to MERV13). Filter press. switch and external filter change indicator light is standard.

Manual Emergency Ventilation Damper:
An optional manually operated intake damper is available to provide emergency ventilation when paired with a field supplied room exhaust fan. By manually opening the intake damper and running a externally installed exhaust fan located away from the unit, outdoor air can be brought into the structure when needed.

Capacity and Efficiency Ratings

MODELS	A36RY
Cooling Capacity in BTUH ①	35,400 BTUH
Unit efficiency in EER	11.8 EER

① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.
② EER = Energy Efficiency Ratio and is certified in accordance with ANSI/ARI Standard 390-2003.
All ratings based on fresh air intake being 100% closed (no outside air introduction).

General Unit and Electrical Specifications

MODELS	A36RYHA	A36RYHD
Unit Voltage Rating	230/208-60-1	240/220-50-1
Operating Voltage Range	197-253 V	198-254 V
Compressor Electrical Circuit		
Voltage	230/208 V	240/220 V
Rated Load Amps	15.2A/17.3A	15.6A/17.4A
Branch Circuit Selection Current	16.7A	16.0A
Lock Rotor Amps	79A/79A	87A/87A
Compressor Type	Scroll	Scroll
Outdoor Fan Motor & Condenser Fan		
Outdoor Fan Motor Horsepower - RPM	1/2HP-1090RPM	1/2HP-1090RPM
Outdoor Fan Motor - Amps	4.2A/4.6A	4.2A/4.6A
Outdoor Fan--Diameter and CFM	24" - 2580	24" - 2580
Indoor Blower Motor & Indoor Airflow		
Indoor Blower Motor - HP - Speeds	3/4HP-VAR	3/4HP-VAR
Indoor Blower Motor - Amps	3.3A/3.6A	3.0A/3.3A
Indoor Motor Type	Constant Airflow ECM	Constant Airflow ECM
Rated indoor CFM and static pressure (ESP) with wet coil and Standard filter	.15" ESP	.15" ESP
Filter Sizes, 2 required	(1) 16x20x2 (1) 20x20x2	(1) 16x20x2 (1) 20x20x2
Basic Unit Weight lbs. (kg)	420	420

Note: All units have a Short Circuit Current Protection Rating (SCCR) of 5kA RMS Symmetrical.

Electric Heat Table (BTU Capacity Chart)

NOMINAL KW	AT 240V			AT 208V		
	KW	1-PH AMPS	BTUH	KW	1-PH AMPS	BTUH
5.0	5.0	20.8	17,065	3.75	18.0	12,799
6.0						
9.0						
10.0	10.0	41.7	34,130	7.50	36.1	25,598
15.0	15.0	62.5	51,195	11.25	54.1	38,396

R410A Unit Charge Rates

WALL-MOUNT UNIT MODEL	STANDARD UNIT CHARGE RATE
A36RY	6.938 lbs. (3.15kg.)

Note: Charge rates provided on unit serial plate. Unit hi/low pressure chart for unit charging provided in unit installation manual and on inner control panel door.

Indoor EC Motor Blower Speeds

Indoor airflow is measured in Cubic Feet per Minute (CFM) and will be constant up to 1.0" WC External Static Pressure (ESP). The indoor fan motor has the capability of running at multiple speeds. Indoor blower speed is selected inside the control panel area by applying 24VAC to different terminals on the low voltage terminal block. Either a field supplied DDC controls system can be used, or one speed tap can be selected for unit operation when the indoor fan (G) is energized.

Blower Indoor Fan Speed 1: 700cfm fan speed at up to 1.0" ESP. Fan speed is energized by applying 24VAC power to Terminal 1.

Blower Indoor Fan Speed 2: 900cfm fan speed at up to 1.0" ESP. Fan speed is energized by applying 24VAC power to Terminal 2.

Blower Indoor Fan Speed 3: 1100cfm fan speed at up to 1.0" ESP. Fan speed is energized by applying 24VAC power to Terminal 2 and 3.

Blower Indoor Fan Speed 4: 1300cfm fan speed at up to 1.0" ESP. Fan speed is energized by applying 24VAC power to Terminal 3.

Cooling Application Data @ 1300 CFM Indoor Airflow

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA							
			-20°F -28.8°C	-10°F -23.3°C	0°F -17.7°C	10°F -12.2°C	20°F -6.6°C	30°F -1.1°C	40°F 4.4°C	50°F 10°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	37306	36810	36537	36363	36182	35901	35444	34752
		Sensible Cooling	23558	23283	23131	23027	22910	22728	22439	22012
		Latent Cooling	13748	13527	13406	13336	13271	13173	13005	12739
		Lbm H2O/Hr	12.93	12.73	12.61	12.55	12.49	12.39	12.24	11.99
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	43480	42902	42584	42381	42170	41842	41310	40503
		Sensible Cooling	25250	24955	24792	24681	24556	24360	24050	23593
		Latent Cooling	18230	17947	17792	17701	17614	17482	17260	16910
		Lbm H2O/Hr	17.20	16.93	16.78	16.70	16.62	16.49	16.28	15.95
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	47306	46677	46331	46111	45881	45524	44945	44067
		Sensible Cooling	25932	25629	25461	25347	25219	25018	24699	24230
		Latent Cooling	21374	21048	20870	20764	20662	20507	20246	19837
		Lbm H2O/Hr	20.22	19.91	19.74	19.64	19.54	19.40	19.15	18.76

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA						
			60°F 15.5°C	70°F 21.1°C	80°F 26.6°C	90°F 32.2°C	100°F 37.7°C	110°F 43.3°C	120°F 48.8°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	33779	32498	30896	28976	26757	24273	21575
		Sensible Cooling	21430	20682	19771	18710	17522	16244	14918
		Latent Cooling	12349	11816	11125	10266	9234	8029	6657
		Lbm H2O/Hr	11.62	11.12	10.47	9.66	8.69	7.55	6.26
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	39370	37877	36009	33771	31185	28290	25146
		Sensible Cooling	22969	22167	21191	20053	18781	17410	15990
		Latent Cooling	16401	15710	14819	13718	12404	10880	9156
		Lbm H2O/Hr	15.47	14.82	13.98	12.94	11.70	10.26	8.64
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	42834	41210	39178	36743	33929	30780	27359
		Sensible Cooling	23589	22765	21763	20595	19288	17880	16421
		Latent Cooling	19245	18444	17415	16148	14641	12899	10937
		Lbm H2O/Hr	18.20	17.45	16.47	15.27	13.85	12.20	10.35

Cooling Application Data @ 1100 CFM Indoor Airflow

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA							
			-20°F -28.8°C	-10°F -23.3°C	0°F -17.7°C	10°F -12.2°C	20°F -6.6°C	30°F -1.1°C	40°F 4.4°C	50°F 10°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	36970	36479	36208	36036	35856	35578	35125	34439
		Sensible Cooling	22757	22491	22344	22244	22131	21955	21676	21264
		Latent Cooling	14213	13987	13864	13792	13725	13622	13449	13175
		Lbm H2O/Hr	13.37	13.16	13.04	12.98	12.91	12.82	12.65	12.40
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	43089	42516	42200	42000	41790	41466	40938	40138
		Sensible Cooling	24392	24107	23949	23842	23721	23532	23232	22791
		Latent Cooling	18697	18409	18252	18158	18070	17934	17706	17347
		Lbm H2O/Hr	17.64	17.37	17.22	17.13	17.05	16.92	16.70	16.37
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	46880	46257	45914	45696	45468	45115	44541	43671
		Sensible Cooling	25050	24757	24595	24486	24361	24167	23860	23406
		Latent Cooling	21830	21500	21319	21211	21107	20948	20681	20264
		Lbm H2O/Hr	20.65	20.34	20.16	20.06	19.96	19.81	19.56	19.17

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA						
			60°F 15.5°C	70°F 21.1°C	80°F 26.6°C	90°F 32.2°C	100°F 37.7°C	110°F 43.3°C	120°F 48.8°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	33475	32206	30618	28715	26516	24054	21381
		Sensible Cooling	20701	19979	19099	18074	16927	15691	14411
		Latent Cooling	12774	12227	11519	10641	9589	8363	6970
		Lbm H2O/Hr	12.02	11.50	10.84	10.01	9.02	7.87	6.56
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	39015	37536	35685	33467	30904	28035	24920
		Sensible Cooling	22188	21413	20470	19372	18142	16818	15446
		Latent Cooling	16828	16122	15215	14096	12762	11217	9474
		Lbm H2O/Hr	15.88	15.21	14.35	13.30	12.04	10.58	8.94
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	42449	40839	38826	36413	33624	30503	27113
		Sensible Cooling	22787	21991	21023	19895	18632	17272	15863
		Latent Cooling	19662	18847	17803	16518	14992	13230	11250
		Lbm H2O/Hr	18.60	17.83	16.84	15.62	14.18	12.51	10.64

- 1000 BTUH = .29307 kW
- Total, Sensible, and Latent cooling capacity along with H2O/Hr will be approximately 91% of values provided for 50hz operation.

Cooling Application Data @ 900 CFM Indoor Airflow

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA							
			-20°F -28.8°C	-10°F -23.3°C	0°F -17.7°C	10°F -12.2°C	20°F -6.6°C	30°F -1.1°C	40°F 4.4°C	50°F 10°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	34786	34025	33675	33561	33533	33463	33251	32821
		Sensible Cooling	21508	20605	20174	20045	20070	20126	20114	19960
		Latent Cooling	13277	13420	13501	13516	13462	13337	13138	12861
		Lbm H2O/Hr	12.49	12.63	12.70	12.72	12.67	12.55	12.36	12.10
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	40543	39656	39249	39116	39082	39001	38755	38253
		Sensible Cooling	23053	22084	21623	21485	21511	21571	21558	21393
		Latent Cooling	17490	17572	17625	17631	17571	17430	17196	16860
		Lbm H2O/Hr	16.50	16.58	16.63	16.63	16.58	16.44	16.22	15.91
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	44110	43146	42702	42558	42521	42433	42165	41619
		Sensible Cooling	23675	22681	22207	22065	22092	22153	22140	21971
		Latent Cooling	20435	20465	20495	20493	20429	20280	20025	19649
		Lbm H2O/Hr	19.33	19.36	19.39	19.38	19.32	19.18	18.94	18.59

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA						
			60°F 15.5°C	70°F 21.1°C	80°F 26.6°C	90°F 32.2°C	100°F 37.7°C	110°F 43.3°C	120°F 48.8°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	32121	31122	29824	28248	26440	24473	22443
		Sensible Cooling	19615	19052	18272	17298	16178	14984	13812
		Latent Cooling	12506	12070	11552	10950	10262	9490	8631
		Lbm H2O/Hr	11.77	11.36	10.87	10.30	9.66	8.93	8.12
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	37437	36273	34760	32923	30816	28524	26157
		Sensible Cooling	21023	20421	19585	18540	17340	16060	14804
		Latent Cooling	16414	15853	15175	14382	13477	12464	11353
		Lbm H2O/Hr	15.48	14.96	14.32	13.57	12.71	11.76	10.71
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	40731	39465	37819	35820	33528	31034	28459
		Sensible Cooling	21591	20972	20113	19041	17808	16493	15204
		Latent Cooling	19140	18493	17706	16779	15720	14541	13255
		Lbm H2O/Hr	18.10	17.49	16.75	15.87	14.87	13.75	12.54

Cooling Application Data @ 700 CFM Indoor Airflow

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA							
			-20°F -28.8°C	-10°F -23.3°C	0°F -17.7°C	10°F -12.2°C	20°F -6.6°C	30°F -1.1°C	40°F 4.4°C	50°F 10°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	32879	32160	31829	31722	31694	31629	31429	31022
		Sensible Cooling	19714	18886	18492	18373	18396	18447	18436	18295
		Latent Cooling	13164	13273	13338	13348	13298	13181	12992	12727
		Lbm H2O/Hr	12.39	12.49	12.55	12.56	12.51	12.40	12.22	11.97
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	38320	37482	37097	36971	36940	36863	36630	36156
		Sensible Cooling	21130	20242	19820	19693	19717	19772	19760	19609
		Latent Cooling	17190	17240	17277	17279	17223	17091	16870	16547
		Lbm H2O/Hr	16.22	16.26	16.30	16.30	16.25	16.12	15.92	15.61
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	41692	40781	40361	40225	40190	40107	39853	39338
		Sensible Cooling	21701	20789	20355	20224	20249	20306	20294	20138
		Latent Cooling	19992	19992	20007	20000	19941	19801	19560	19200
		Lbm H2O/Hr	18.91	18.91	18.92	18.92	18.86	18.73	18.50	18.16

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA						
			60°F 15.5°C	70°F 21.1°C	80°F 26.6°C	90°F 32.2°C	100°F 37.7°C	110°F 43.3°C	120°F 48.8°C
A36RY	65°F/58.5°F 18.3°C/14.7°C	Total Cooling	30360	29416	28189	26699	24991	23132	21213
		Sensible Cooling	17979	17463	16748	15855	14828	13734	12660
		Latent Cooling	12381	11953	11441	10844	10162	9398	8553
		Lbm H2O/Hr	11.65	11.25	10.76	10.20	9.56	8.84	8.05
	70°F/63.2°F 21.1°C/17.3°C	Total Cooling	35384	34285	32854	31118	29127	26960	24723
		Sensible Cooling	19270	18717	17951	16994	15893	14720	13569
		Latent Cooling	16115	15567	14903	14124	13234	12240	11154
		Lbm H2O/Hr	15.20	14.69	14.06	13.32	12.48	11.55	10.52
	75°F/67.8°F 23.8°C/19.8°C	Total Cooling	38498	37302	35746	33856	31690	29332	26899
		Sensible Cooling	19790	19223	18436	17453	16322	15117	13936
		Latent Cooling	18708	18079	17310	16403	15368	14215	12963
		Lbm H2O/Hr	17.70	17.10	16.37	15.52	14.54	13.45	12.26

- 1000 BTUH = .29307 kW
- Total, Sensible, and Latent cooling capacity along with H2O/Hr will be approximately 91% of values provided for 50hz operation.

Electrical Specifications

MODELS	Rated Volts & Phase	No. Field Power Circuits	Single Circuit		Multiple Circuits			
			③ Minimum Circuit Ampacity	① Maximum External Fuse or Ckt. Brkr.	③ Minimum Circuit Ampacity		① Maximum External Fuse or Ckt. Breaker	
					Ckt. A	Ckt. B	Ckt. A	Ckt. B
A36RYHA15	230/208-60-1	1 or 2	107	110	52	55	60	60
A36RYHD15	240/220-50-1	1 or 2	106	110	52	54	60	60

① Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.
② Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.
③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing.

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to Note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three current carrying conductors are in a raceway.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes.

Note: MOCP (Maximum Overcurrent Protection) value listed is the maximum value as per UL 1995 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Overcurrent Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 1995 allowable MOCP value, but still above the UL 1995 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.

Unit Filter Options

Unit filter options for the Bard Wall-Mount provide multiple solutions for air filtration and indoor air quality improvement. Filter options allow for both room air passing through the unit and outdoor air provided by ventilation options to be cleaned before entering the indoor environment. Various filter types are available between MERV8 and MERV13 ratings. It is important to review application requirements, state and local codes, and ASHRAE recommendations to provide a clean, safe indoor area for occupants or heat generating equipment. Filter cleaning or replacement is an important part of ensuring that your Bard equipment is operating at optimal performance and indoor sound levels. A routine filter maintenance program based on room conditions is important, and higher MERV rated filters will normally require frequent filter changes. Filter trays are built into the unit with low filter bypass. A filter switch is standard with all units, includes an external filter change indicator light, and can be used with a controls option to indicate filter change maintenance is needed.

"P" Filter Code Option – 2" Disposable MERV8 Filter

The 2" disposable pleated MERV8 filter is an optional feature on all models, and is normally used for moderate dust level areas where standard filtration is required. Media material is fiber based, provides high performance with an extended surface area that offers low-pressure drop. When maintenance is required, the filter is replaced. This option offers standard filtration, minimal air resistance, and average maintenance costs.

"M" Filter Code Option – 2" Disposable MERV11 Filter

The 2" disposable pleated MERV11 filter is an optional feature on all models, and is normally used for moderate to high filtration requirements. Media material is fiber based, provides high performance with an extended surface area that offers low-pressure drop. When maintenance is required, the filter is replaced. This option offers higher filtration, minimal air resistance, and average maintenance costs.

"N" Filter Code Option – 2" Disposable MERV13 Filter

The 2" disposable pleated MERV13 filter is an optional feature on all models, and is normally used for high filtration requirements. MERV13 filters are typically used where filtration of small particulates is required to offer a high level of indoor air quality. Often these filters are used in occupied areas including classrooms, gymnasiums, cafeterias, and other areas where filtration is at a high importance level. Media material is fiber based, provides high performance with an extended surface area that offers low-pressure drop. Filter replacement in 3-month or less intervals is recommended for the best filter and unit performance.

Filter Replacement Part Number Chart

UNIT MODEL	FILTER CODES	FILTER MERV RATINGS	NUMBER OF FILTERS USED (2 TOTAL)	BARD PART NUMBERS	FILTER SIZES	FILTRATION LEVEL
A36RY	**P**	**MERV 8**	1 filter of each size.	7004-035 7004-052	16 x 20 x 2 20 x 20 x 2	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	1 filter of each size.	7004-073 7004-060	16 x 20 x 2 20 x 20 x 2	Above Average Filtration, 2" Thickness Pleated Disposable Media.
	N	**MERV 13**	1 filter of each size.	7004-070 7004-063	16 x 20 x 2 20 x 20 x 2	High Filtration, 2" Thickness Pleated Disposable Media.

/////// Cabinet Finishes and Construction

Unit cabinet finish options provide a way to have the Bard Wall-Mount blend in with existing building colors, provide additional corrosion protection, or reduce unit product weight. Unit top, structural sides, and front service panels are constructed using 20 gauge materials. Base is constructed using 16 gauge galvanized steel. Cabinet components are insulated with a non-fiberglass formaldehyde free insulation that has a high "R" value, is easy to clean with a FSK foil backing, and resists delamination.

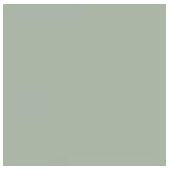
X—Beige

1—White

Painted Steel Finish

This cabinet option uses zinc coated steel panels that are cleaned, rinsed, sealed and dried before a polyurethane primer is applied. The cabinet paint coating is comprised of a baked on textured enamel. The resulting finish is designed to withstand over 1000 hours of salt spray tests per ASTM B117-03.

The following painted steel colors are available:
"X" Cabinet Finish Option – Beige
"1" Cabinet Finish Option – White
"4" Cabinet Finish Option – Gray



4—Gray

/////// Evaporator Coil, Condenser Coil, and Cabinet Coatings

Unit condenser and evaporator coils are designed, manufactured, and tested by Bard. A rifled copper hairpin design provides enhanced unit performance when used with a stamped aluminum fin for excellent heat transfer. End plate design includes extruded collars for hairpin tube protection. All coils are pressure tested before use and leak tested after unit construction. A copper tube and aluminum fin design coil is easy to clean and maintain through the life of the unit.

"X" Code Option – Standard Evaporator and Condenser Coils

Standard products include a green protective coating applied to the aluminum fin stock used for the evaporator coil. The evaporator coil coating is hydrophilic (attracts water) and allows for proper condensate drainage along with mild corrosion protection. Resistance to corrosive agents include ammonia, sodium hydroxide, sodium chloride, acidic solutions and solvents. Condenser coil construction is a copper hairpin with aluminum fin design that is easy to clean and maintain.
Unit coating options are also available that offer additional corrosion protection to the unit cabinet. Applications where external or internal cabinet components will be exposed to extremely harsh environments require additional protection to copper, steel, and other materials.

"1" Code Option – Corrosion Resistance Coated Evaporator and Standard Condenser Coil

Option includes a Technicoat AA protective coating applied to the entire evaporator coil. This provides the best resistance to corrosive agents, and the coating process ensures the core of the aluminum fin pack is covered. Standard condenser coil construction is a copper hairpin with aluminum fin design that is easy to clean and maintain. This option provides the best indoor coil protection when harmful chemicals or agents may be present in the indoor airstream.

"2" Code Option – Standard Evaporator and Corrosion Resistance Coated Condenser Coil

Option includes a green protective coating applied to the aluminum fin stock used for the evaporator coil. The evaporator coil coating is hydrophilic (attracts water) and allows for proper condensate drainage along with mild corrosion protection. Resistance to corrosive agents include ammonia, sodium hydroxide, sodium chloride, acidic solutions and solvents. A Technicoat AA protective coating is applied to the entire condenser coil. This provides the best resistance to corrosive agents, and the coating process ensures the core of the aluminum fin pack is covered. This option provides the best outdoor coil protection when harmful chemicals or agents may be present in the outdoor airstream. Also provides a level of protection when units are installed in applications near salt water.

"3" Code Option – Corrosion Resistance Coated Evaporator and Corrosion Resistance Coated Condenser Coil

Option includes a Technicoat AA protective coating applied to the entire evaporator coil. This provides the best resistance to corrosive agents, and the coating process ensures the core of the aluminum fin pack is covered. A Technicoat AA protective coating is applied to the entire condenser coil. This provides the best coil resistance to corrosive agents, and the coating process ensures the core of the aluminum fin pack is covered. This provides the best resistance to corrosive agents, and the coating process ensures the core of the aluminum fin pack is covered. This option provides the best indoor and outdoor coil protection when harmful chemicals or agents may be present in the indoor and outdoor airstream. Also provides a level of protection when units are installed in applications near salt water.

Cabinet and Clearance Dimensions

CLEARANCES REQUIRED FOR SERVICE ACCESS AND ADEQUATE CONDENSER INLET AIRFLOW		
MODELS	LEFT SIDE	RIGHT SIDE
A36RHY	20"	15"

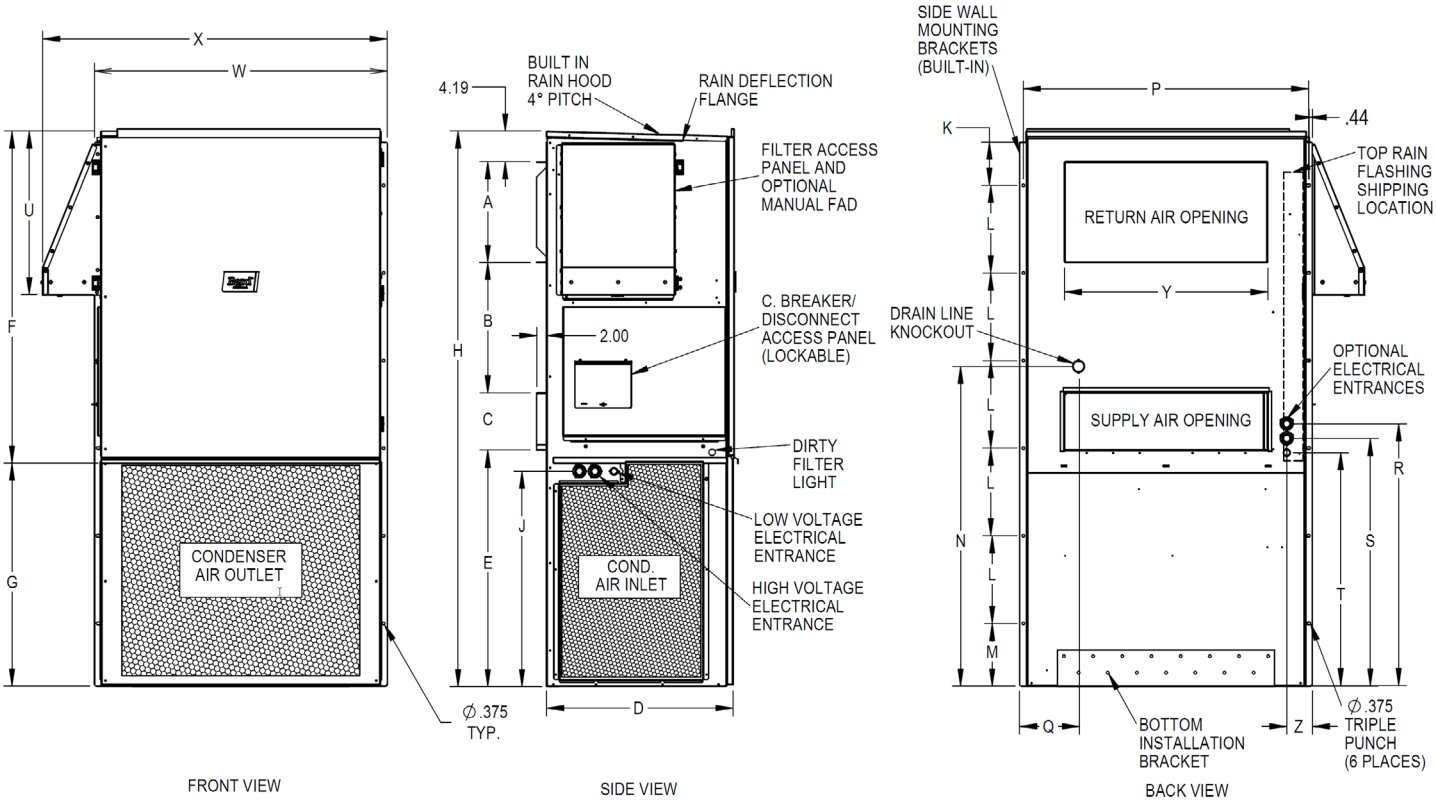
NOTE: For side-by-side installation of two (2) A36RHY models, there must be 20" between units.

MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS		
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
A36RHY	0"	0"

① Refer to the Installation Manual for more detailed information.

1.) Follow all national, state, and local codes and regulations regarding the installation of heating and cooling equipment regarding Single Packaged Vertical Units (SPVU) including electrical access clearances.
2.) Bard recommends a minimum of 10 ft. between the unit front condenser air outlet and solid objects including fences, walls, bushes, and other airflow obstructions and a minimum of 15 ft. between the condenser air outlets of 2 units that are facing each other.

DIMENSIONS OF A36RHY BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)																									
MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		ADDITIONAL DIMENSIONS																	
				C	Y	A	Y	B	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	X	Z	
A36RHY	38.20	25.50	75.94	7.88	27.88	13.78	27.78	17.86	32.32	45.56	30.47	29.43	5.94	12.00	8.61	42.99	39.10	7.37	35.95	33.95	31.48	22.40	47.52	3.53	



MIS-4440 A

Non-Ducted Supply and Return Grilles

Supply and return louver grilles are of a brushed aluminum finish. 2" flange versions are recommended for standard installations to allow grille attachment when large wall openings are present. Return filter grilles are available for filter access from an indoor area. Filter grilles do not include a filter, and are not recommended for unit with ventilation due to filter location.

GRILLE NO.	UNITS USING GRILLE	DESCRIPTION OF LOUVER GRILLE
SG-3	A36RY	8" x 28" with 1" Flange 4 way deflection supply grille.
RG-3	A36RY	14" x 28" with 1" Flange return grille.
SG-3W	A36RY	8" x 28" with 2" Flange 4 way deflection supply grille.
RG-3W	A36RY	14" x 28" with 2" Flange return grille.
RFG-3W	A36RY	14" x 28" with 2" Flange return grille with filter bracket.*

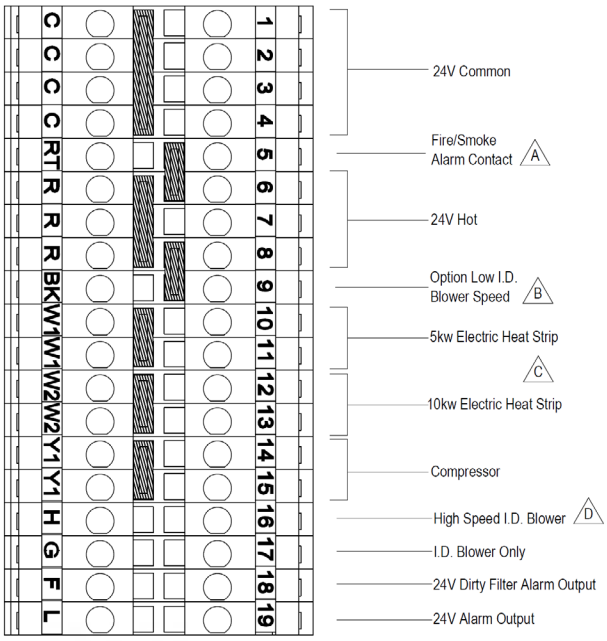
Non-Ducted Supply Grilles - Spread and Throw Characteristics

SUPPLY GRILLE	AIRFLOW CFM	DEFLECTION	VELOCITY	TOTAL PRESSURE	THROW
SG-3 SG-3W	885 CFM	0°	852	.054" WC	37-54 ft.
		22.5°	1075	.075" WC	35-49 ft.
		45°	1162	.113" WC	21-30 ft.
	1285 CFM	0°	1237	.108" WC	42-66 ft.
		22.5°	1359	.147" WC	35-50 ft.
		45°	1687	.249" WC	25-37 ft.

Low Voltage Control Connections

LOW VOLTAGE TERMINAL STRIP

UNIT SIDE CONNECTIONS



FIELD CONNECTIONS

A The RT terminal is the 24VAC transformer output, and the R terminal is the 24VAC hot terminal for the operation of the equipment. RT and R are connected with a jumper bar which can be removed and RT and R connected to an external NC (normally closed) contact such as fire/smoke detector that will cause shutdown of the equipment upon activation.

B The BK terminal controls the nominal speed selection in cooling mode. When the BK jumper is in place, the I.D. blower will provide 700cfm when Y1 is energized. When the BK jumper is removed, the I.D. blower will provide 600cfm when Y1 is energized.

C The B/W1 and W2 terminals are for the operation of the 5kw and 10kw heat strips, respectively. Both terminals may be energized for a total output of 15kw of electric heat.

D The H terminal can be energized in any mode of operation to initiate or increase I.D. blower speed to 1100cfm.

MIS-4400 A

Low Voltage Control Sequence of Operations Chart

Low Voltage Terminal	24V Hot	24V COM	Compressor	Electric Heat 5kw	Electric Heat 10kw	Low Speed I.D. Blower Terminal	High Speed I.D. Blower Terminal	I.D. Blower Only
	R	C	Y1	B/W1	W2	BK	H	G
Operating Mode	Provided by Unit		Provided by Customer Control Logic					
Blower Only - 700 CFM	X	COM				N/A		X
Blower Only - 1100 CFM	X	COM				X	X	X
Cooling - 600 CFM	X	COM	X					N/A
Cooling - 700 CFM	X	COM	X			X		N/A
Cooling - 1100 CFM	X	COM	X			N/A	X	N/A
Electric Heat Only - 5kw - 900 CFM	X	COM		X		N/A		N/A
Electric Heat Only - 5kw - 1100 CFM	X	COM		X		N/A	X	N/A
Electric Heat Only - 10kw - 900 CFM	X	COM			X	N/A		N/A
Electric Heat Only - 10kw - 1100 CFM	X	COM			X	N/A	X	N/A
Electric Heat Only - 15kw - 900 CFM	X	COM		X	X	N/A		N/A
Electric Heat Only - 15kw - 1100 CFM	X	COM		X	X	N/A	X	N/A
Dehum - 5kw - 900 CFM	X	COM	X	X		N/A		N/A
Dehum - 5kw - 1100 CFM	X	COM	X	X		N/A	X	N/A
Dehum - 10kw - 900 CFM	X	COM	X		X	N/A		N/A
Dehum - 10kw - 1100 CFM	X	COM	X		X	N/A	X	N/A
Dehum - 15kw - 900 CFM	X	COM	X	X	X	N/A		N/A
Dehum - 15kw - 1100 CFM	X	COM	X	X	X	N/A	X	N/A

NOTE: *The power status of terminals indicated by cells marked "N/A" will not affect the performance of the unit in the indicated mode.*

NOTE: *Airflow CFM is constant up to 1.0" W.C. static pressure.*

Bard Manufacturing Company, Inc.
1914 Randolph Dr., Bryan, OH 43506
419-636-1194
www.bardhvac.com

Due to our continuous product improvement policy, all specifications subject to change without notice.