YORK
BY JOHNSON CONTROLS

DSV Model Air Cooled Self Contained Indoor Packaged Units 3-5 Tons

Preliminary Application Data

July 28, 2008

PROJECT:	TAG:

Gross Cooling Capacity [Btuh]:	37,800*
Design CFM:	1,200
Seasonal Energy Efficiency Ratio:	13.0 SEER**
Net Cooling Capacity [Btuh]:	37,000**
Net Cooling CFM:	1,200
Evaporator Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	10x8
Drive:	Adjustable Belt
Motor HP:	0.33
Condenser Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	12x12
Drive:	Adjustable Belt
Motor HP :	1.0

Evaporator Coil Face Area:	5.16 [sq ft]
Rows/FPI :	3 / 10
Refrigerant Control:	TX Valve
Condenser Coil Face Area:	7.03 [sq ft]
Rows/FPI:	3 / 12
Compressor No./Type:	1/Scroll
Refrigerant Circuits:	1/ Independent
Refrigerant:	**R-410A**
Filters - Qty./Size:	2/18x24x2
Operating Weight [lbs.]:	610
Shipping Weight [lbs.]:	650
Condensate Connection:	3 / 4 *NPT*

**Cooling performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F wet bulb and CFM listed. Gross capacity does not include the effect of fan motor heat.*

***Rated in accordance with ARI Standard 210/240-2006*

EVAPORATOR FAN PERFORMANCE

MODEL #	SUPPLY CFM	EXTERNAL STATIC PRESSURE - Inches W.C.									
		0.2		0.4		0.6		0.8		1.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV036A	1000	605	0.11	732	0.16	839	0.19	941	0.26	1051	0.31
	1200	675	0.17	788	0.23	890	0.29	988	0.34	-	-
	1400	749	0.26	849	0.32	-	-	-	-	-	-

NOTE:
1. At high evaporator air flows, and wet bulb conditions, condensate carry-over may occur. Adjust airflow downward as necessary.
2. Values include pressure drop from wet coil and clean filters.

CONDENSER FAN PERFORMANCE

MODEL #	OUTDOOR CFM	EXTERNAL STATIC PRESSURE - Inches W.C.									
		0.2		0.4		0.6		0.8		1.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV036A	2200	622	0.39	720	0.50	802	0.60	961	0.69	953	0.79

ELECTRICAL DATA

MODEL #	VOLTAGE	COMPRESSOR				CONDENSER FAN		MIN. CCT. AMPACITY	"MOP" Max Overcurrent Protection
		QTY		RLA	LRA	HP	FLA		
DSV036A1	208-230/1/60	1	@	14.1	77.0	1.00	6.7	27.53	40
DSV036A2	208-230/3/60	1	@	9.0	71.0	1.00	3.0	16.05	25
DSV036A4	460/3/60	1	@	5.6	38.0	1.00	1.4	9.20	15
DSV036A5	575/3/60	1	@	3.8	36.5	1.00	1.1	6.45	15

Johnson Controls maintains a continuous product improvement policy, therefore specifications are subject to change without notice.

Johnson Controls

DESCRIPTION:

DSV036 VERTICAL AIR-COOLED SELF-CONTAINED AIR CONDITIONER UNIT SPECIFICATIONS

Form 145.13-PA1 (1108)

DATE: November 2008

GENERAL

All models 3-5 tons ship as factory-charged unitized packages. All units may be field split and installed as separate modules to suit on-site requirements. All packages are designed for free standing mounting on the floor, or on a field fabricated structural steel stand.

CABINET

All cabinets are completely constructed of heavy gauge galvanized steel. The entire unit interior (both evaporator and condensing section) is insulated with 1/2" thick, 2-lb density insulation. Service panels are equipped with lifting handles for ease of removal and handling. Duct flanges for condenser discharge, condenser intake, and evaporator discharges are provided with the unit for field installation. Duct flange on evaporator return is incorporated into the filter frame.

REFRIGERANT CIRCUITS

All models utilize "Scroll" type, R-410A, hermetic compressors. Compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. External high pressure and low pressure cut-out switches are included in each compressor control circuit. Crankcase heaters are standard on all models. The 3-5 ton units have a single refrigeration circuit.

EVAPORATOR AND CONDENSER COILS

The evaporator and condenser coils are constructed of internally enhanced copper tubes mechanically bonded to rippled aluminum plate fins. Both coils are employed in a draw-thru configuration. Large evaporator coil face area minimizes potential water blow-off.

INDOOR/OUTDOOR FANS

Forward curved, double inlet and double width centrifugal blowers are used for both evaporator and condenser air movement. Blower wheels are fabricated of galvanized steel. Blowers employ solid steel shafts, supported in permanently lubricated ball bearings. All blowers are belt driven. Variable-pitch motor sheaves allow for field adjustment of blower rpm. Motor shall be 1800 RPM, open drip proof design. Three-phase motors are provided with external manual reset overload protection. Single-phase motors feature auto reset internal overloads.

ELECTRICAL/CONTROLS

All units are completely factory wired with all necessary controls. A manual reset circuit is also provided on each compressor control circuit in the event of high/low pressure cut-out. A 24 volt control circuit, with oversize transformer, is provided for field connection.

FILTERS

All models are shipped with 2-inch thick medium-efficiency throwaway filters factory installed. Filter rack is external to the cabinet (shipped loose).

FACTORY INSTALLED OPTIONS

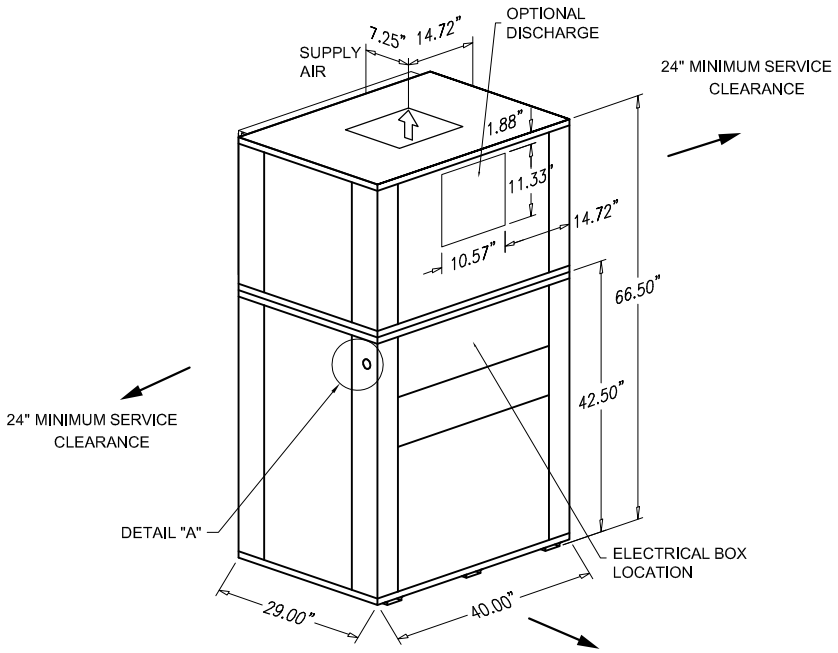
Corrosion Resistant Coatings. *Condenser coil shall receive a 1-mil thickness of a cathodic epoxy type electro-deposition coating, applied in a multiple dip and bake process.*

Anti-Short Cycle Timer. *Time delay relay will be provided for each compressor circuit. Compressor will be locked out for 5 minutes when thermostat* contact opens, or there is a momentary power outage.

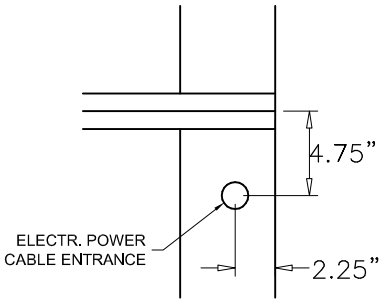
FIELD INSTALLED OPTIONS

Low Ambient Control. *Head pressure control damper kit will allow unit operation down to 0 F ambient. Damper assembly mounts on condenser air intake. The kit includes damper actuator and low pressure switch bypass timer(s).*

DSV036 DIMENSIONAL DATA



FRONT VIEW



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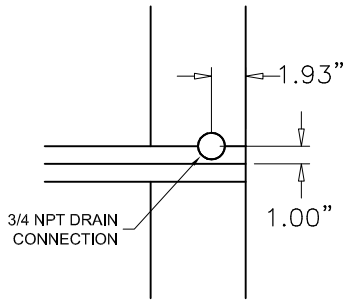

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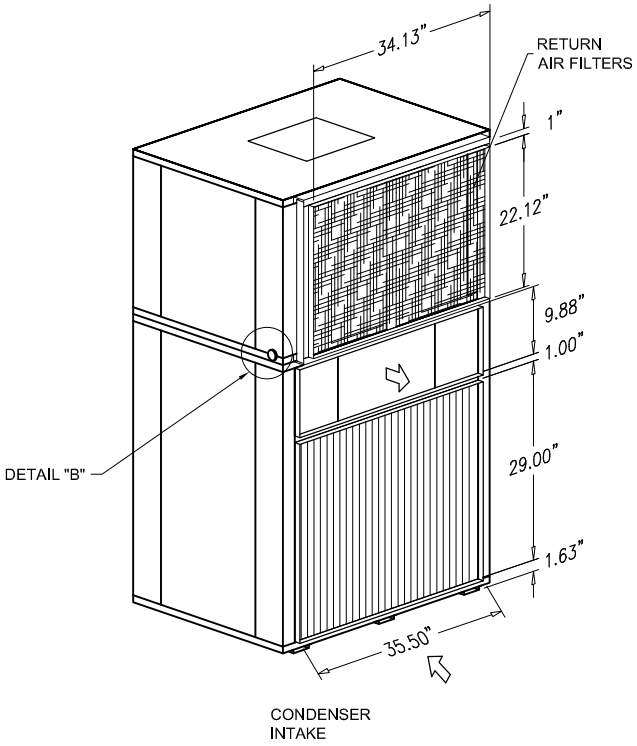


BACK VIEW

Johnson Controls	DESCRIPTION: DSV036 VERTICAL AIR-COOLED SELF-CONTAINED AIR CONDITIONERS SUBMITTAL DIMENSIONS	Form 145.13-PA1 (1108) DATE: November 2008

PROJECT:	TAG:

Gross Cooling Capacity [Btuh]:	50,100*
Design CFM:	1,600
Seasonal Energy Efficiency Ratio:	13.0 SEER**
Net Cooling Capacity [Btuh]:	49,000**
Net Cooling CFM:	1,600
Evaporator Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	10x10
Drive:	Adjustable Belt
Motor HP:	0.5
Condenser Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	12x15
Drive:	Adjustable Belt
Motor HP :	1.0

Evaporator Coil Face Area:	5.46 [sq ft]
Rows/FPI :	3 / 12
Refrigerant Control:	TX Valve
Condenser Coil Face Area:	7.94 [sq ft]
Rows/FPI:	4 / 14
Compressor No./Type:	1/Scroll
Refrigerant Circuits:	1/ Independent
Refrigerant:	**R-410A**
Filters - Qty./Size:	2/20x24x2
Operating Weight [lbs.]:	670
Shipping Weight [lbs.]:	715
Condensate Connection:	3 / 4 *NPT*

**Cooling performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F wet bulb and CFM listed. Gross capacity does not include the effect of fan motor heat.*

***Rated in accordance with ARI Standard 210/240-2006*

EVAPORATOR FAN PERFORMANCE

MODEL #	SUPPLY CFM	EXTERNAL STATIC PRESSURE - Inches W.C.									
		0.2		0.4		0.6		0.8		1.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV048A	1450	735	0.24	845	0.30	950	0.38	1037	0.45	1134	0.52
	1600	788	0.31	889	0.38	987	0.46	1076	0.55	-	-
	1800	870	0.43	962	0.51	-	-	-	-	-	-

NOTE:
1. At high evaporator air flows, and wet bulb conditions, condensate carry-over may occur. Adjust airflow downward as necessary.
2. Values include pressure drop from wet coil and clean filters.

CONDENSER FAN PERFORMANCE

MODEL #	OUTDOOR CFM	EXTERNAL STATIC PRESSURE - Inches W.C.									
		0.2		0.4		0.6		0.8		1.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV048A	2600	719	0.61	800	0.71	870	0.85	940	0.98	-	-

ELECTRICAL DATA

MODEL #	VOLTAGE	COMPRESSOR			EVAPORATOR FAN		CONDENSER FAN		MIN. CCT. AMPACITY	"MOP" Max Overcurrent Protection
		QTY	RLA	LRA	HP	FLA	HP	FLA		
DSV048A1	208-230/1/60	1	@ 19.9	109.0	0.50	4.4	1.00	6.7	35.98	50
DSV048A2	208-230/3/60	1	@ 13.1	83.1	0.50	2.1	1.00	3.0	21.48	30
DSV048A4	460/3/60	1	@ 6.1	41.0	0.50	1.0	1.00	1.4	10.03	15
DSV048A5	575/3/60	1	@ 5.0	34.0	0.50	0.8	1.00	1.1	8.15	15

GENERAL

All models 3-5 tons ship as factory-charged unitized packages. All units may be field split and installed as separate modules to suit on-site requirements. All packages are designed for free standing mounting on the floor, or on a field fabricated structural steel stand.

CABINET

All cabinets are completely constructed of heavy gauge galvanized steel. The entire unit interior (both evaporator and condensing section) is insulated with 1/2" thick, 2-lb density insulation. Service panels are equipped with lifting handles for ease of removal and handling. Duct flanges for condenser discharge, condenser intake, and evaporator discharges are provided with the unit for field installation. Duct flange on evaporator return is incorporated into the filter frame.

REFRIGERANT CIRCUITS

All models utilize "Scroll" type, R-410A, hermetic compressors. Compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. External high pressure and low pressure cut-out switches are included in each compressor control circuit. Crankcase heaters are standard on all models. The 3-5 ton units have a single refrigeration circuit.

EVAPORATOR AND CONDENSER COILS

The evaporator and condenser coils are constructed of internally enhanced copper tubes mechanically bonded to rippled aluminum plate fins. Both coils are employed in a draw-thru configuration. Large evaporator coil face area minimizes potential water blow-off.

INDOOR/OUTDOOR FANS

Forward curved, double inlet and double width centrifugal blowers are used for both evaporator and condenser air movement. Blower wheels are fabricated of galvanized steel. Blowers employ solid steel shafts, supported in permanently lubricated ball bearings. All blowers are belt driven. Variable-pitch motor sheaves allow for field adjustment of blower rpm. Motor shall be 1800 RPM, open drip proof design. Three-phase motors are provided with external manual reset overload protection. Single-phase motors feature auto reset internal overloads.

ELECTRICAL/CONTROLS

All units are completely factory wired with all necessary controls. A manual reset circuit is also provided on each compressor control circuit in the event of high/low pressure cut-out. A 24 volt control circuit, with oversize transformer, is provided for field connection.

FILTERS

All models are shipped with 2-inch thick medium-efficiency throwaway filters factory installed. Filter rack is external to the cabinet (shipped loose).

FACTORY INSTALLED OPTIONS

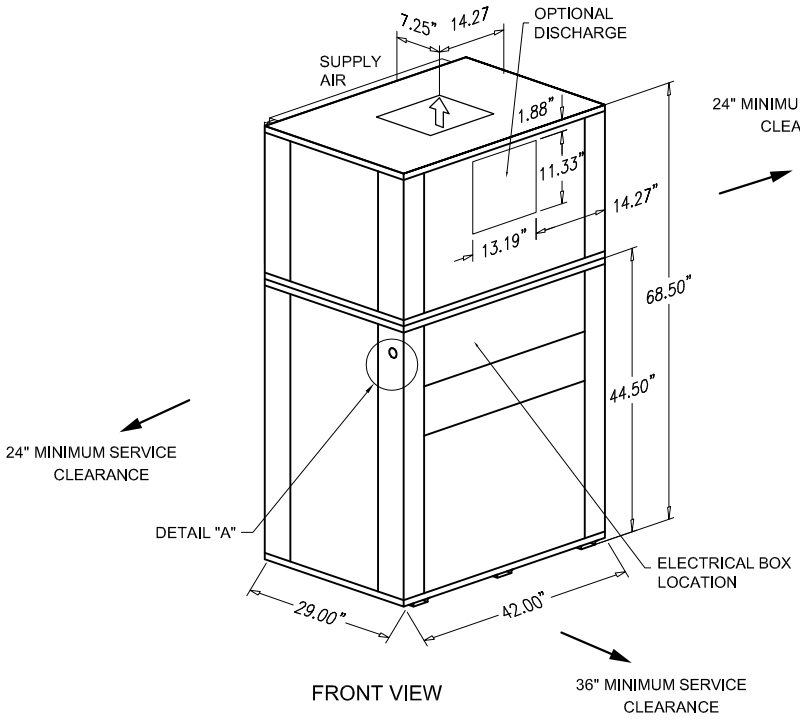
Corrosion Resistant Coatings. *Condenser coil shall receive a 1-mil thickness of a cathodic epoxy type electro-deposition coating, applied in a multiple dip and bake process.*

Anti-Short Cycle Timer. *Time delay relay will be provided for each compressor circuit. Compressor will be locked out for 5 minutes when thermostat* contact opens, or there is a momentary power outage.

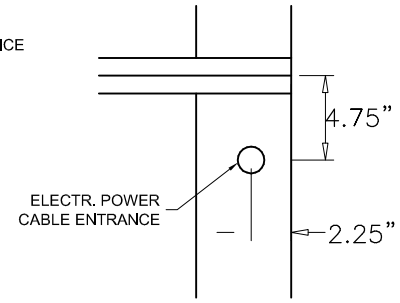
FIELD INSTALLED OPTIONS

Low Ambient Control. *Head pressure control damper kit will allow unit operation down to 0 F ambient. Damper assembly mounts on condenser air intake. The kit includes damper actuator and low pressure switch bypass timer(s).*

DSV048 & DSV060 DIMENSIONAL DATA



FRONT VIEW



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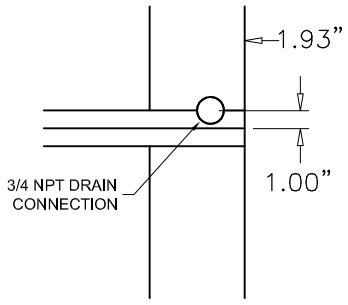

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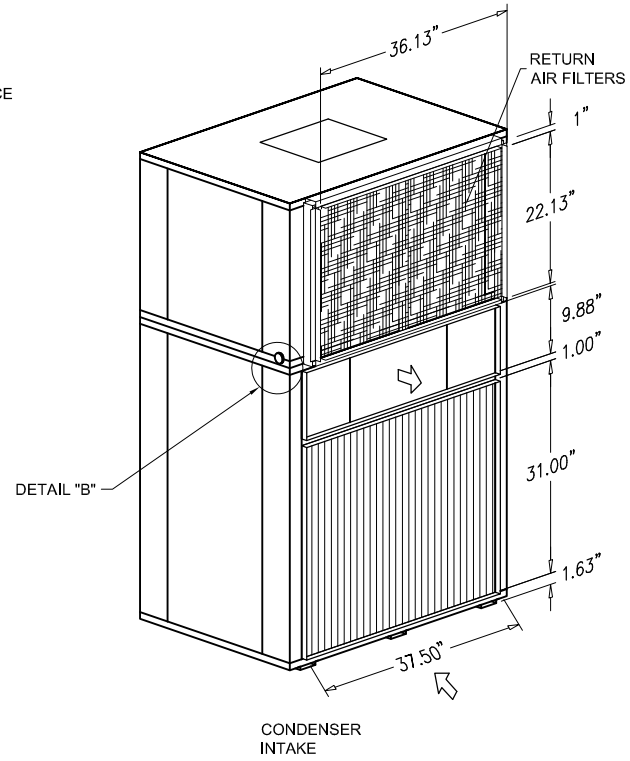

BACK VIEW

Johnson Controls	DESCRIPTION: DSV048/060 VERTICAL AIR-COOLED SELF-CONTAINED AIR CONDITIONERS SUBMITTAL DIMENSIONS	Form 145.13-PA2 (1108) DATE: November 2008

PROJECT:	TAG:

Gross Cooling Capacity [Btuh]:	62,900*
Design CFM:	2,000
Seasonal Energy Efficiency Ratio:	13.0 SEER**
Net Cooling Capacity [Btuh]:	61,000**
Net Cooling CFM:	2,000
Evaporator Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	10x10
Drive:	Adjustable Belt
Motor HP:	1.0
Condenser Fan No./Type:	1/CENTRIFUGAL
Diameter x Width [in]:	12x15
Drive:	Adjustable Belt
Motor HP :	1.5

Evaporator Coil Face Area:	5.46 [sq ft]
Rows/FPI :	3 / 12
Refrigerant Control:	TX Valve
Condenser Coil Face Area:	7.94 [sq ft]
Rows/FPI:	4 / 14
Compressor No./Type:	1/Scroll
Refrigerant Circuits:	1/ Independent
Refrigerant:	**R-410A**
Filters - Qty./Size:	2/20x24x2
Operating Weight [lbs.]:	720
Shipping Weight [lbs.]:	765
Condensate Connection:	3 / 4 *NPT*

**Cooling performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F wet bulb and CFM listed. Gross capacity does not include the effect of fan motor heat.*

***Rated in accordance with ARI Standard 210/240-2006*

EVAPORATOR FAN PERFORMANCE

MODEL #	SUPPLY CFM	EXTERNAL STATIC PRESSURE - Inches W.C.															
		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV060A	1800	860	0.41	945	0.50	1039	0.58	1130	0.67	1208	0.76	1280	0.83	1359	0.85	1435	0.96
	2000	926	0.55	1010	0.63	1098	0.72	1178	0.81	1250	0.90	1325	0.99	-	-	-	-
	2200	1007	0.72	1085	0.80	1160	0.90	1230	0.99	-	-	-	-	-	-	-	-

NOTE:
1. At high evaporator air flows, and wet bulb conditions, condensate carry-over may occur. Adjust airflow downward as necessary.
2. Values include pressure drop from wet coil and clean filters.

CONDENSER FAN PERFORMANCE

MODEL #	OUTDOOR CFM	EXTERNAL STATIC PRESSURE - Inches W.C.									
		0.2		0.4		0.6		0.8		1.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
DSV060A	3000	886	0.87	838	0.99	920	1.12	1002	1.29	1055	1.47

ELECTRICAL DATA

MODEL #	VOLTAGE	COMPRESSOR			EVAPORATOR FAN		CONDENSER FAN		MIN. CCT. AMPACITY	"MOP" Max Overcurrent Protection
		QTY	RLA	LRA	HP	FLA	HP	FLA		
DSV060A2	208-230/3/60	1 @	16.0	110.0	1.00	3.2	1.50	4.3	27.50	40
DSV060A4	460/3/60	1 @	7.8	52.0	1.00	1.5	1.50	2.1	13.35	20
DSV060A5	575/3/60	1 @	5.7	38.9	1.00	1.2	1.50	1.7	10.03	15

Johnson Controls maintains a continuous product improvement policy, therefore specifications are subject to change without notice.

Johnson Controls

DESCRIPTION:

DSV060A VERTICAL AIR-COOLED SELF-CONTAINED AIR CONDITIONER UNIT SPECIFICATIONS

Form 145.13-PA3 (1108)

DATE: November 2008

GENERAL

All models 3-5 tons ship as factory-charged unitized packages. All units may be field split and installed as separate modules to suit on-site requirements. All packages are designed for free standing mounting on the floor, or on a field fabricated structural steel stand.

CABINET

All cabinets are completely constructed of heavy gauge galvanized steel. The entire unit interior (both evaporator and condensing section) is insulated with 1/2" thick, 2-lb density insulation. Service panels are equipped with lifting handles for ease of removal and handling. Duct flanges for condenser discharge, condenser intake, and evaporator discharges are provided with the unit for field installation. Duct flange on evaporator return is incorporated into the filter frame.

REFRIGERANT CIRCUITS

All models utilize "Scroll" type, R-410A, hermetic compressors. Compressors are mounted on rubber isolators to minimize vibration transmission. Internal overload protection is provided. External high pressure and low pressure cut-out switches are included in each compressor control circuit. Crankcase heaters are standard on all models. The 3-5 ton units have a single refrigeration circuit.

EVAPORATOR AND CONDENSER COILS

The evaporator and condenser coils are constructed of internally enhanced copper tubes mechanically bonded to rippled aluminum plate fins. Both coils are employed in a draw-thru configuration. Large evaporator coil face area minimizes potential water blow-off.

INDOOR/OUTDOOR FANS

Forward curved, double inlet and double width centrifugal blowers are used for both evaporator and condenser air movement. Blower wheels are fabricated of galvanized steel. Blowers employ solid steel shafts, supported in permanently lubricated ball bearings. All blowers are belt driven. Variable-pitch motor sheaves allow for field adjustment of blower rpm. Motor shall be 1800 RPM, open drip proof design. Three-phase motors are provided with external manual reset overload protection. Single-phase motors feature auto reset internal overloads.

ELECTRICAL/CONTROLS

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FILTERS

All models are shipped with 2-inch thick medium-efficiency throwaway filters factory installed. Filter rack is external to the cabinet (shipped loose).

FACTORY INSTALLED OPTIONS

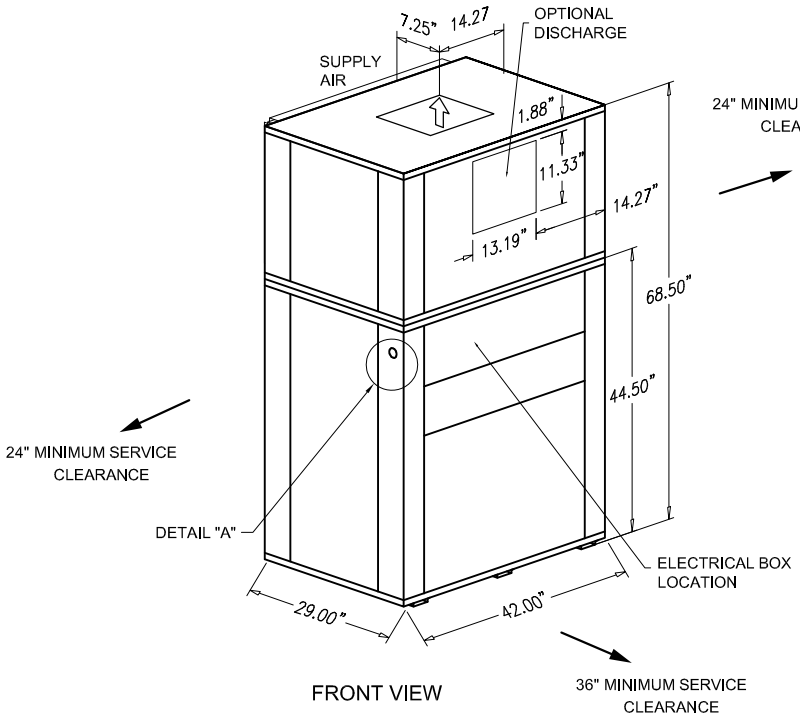
Corrosion Resistant Coatings. *Condenser coil shall receive a 1-mil thickness of a cathodic epoxy type electro-deposition coating, applied in a multiple dip and bake process.*

Anti-Short Cycle Timer. *Time delay relay will be provided for each compressor circuit. Compressor will be locked out for 5 minutes when thermostat* contact opens, or there is a momentary power outage.

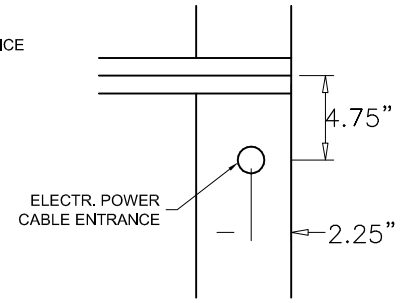
FIELD INSTALLED OPTIONS

Low Ambient Control. *Head pressure control damper kit will allow unit operation down to 0 F ambient. Damper assembly mounts on condenser air intake. The kit includes damper actuator and low pressure switch bypass timer(s).*

DSV048 & DSV060 DIMENSIONAL DATA



FRONT VIEW



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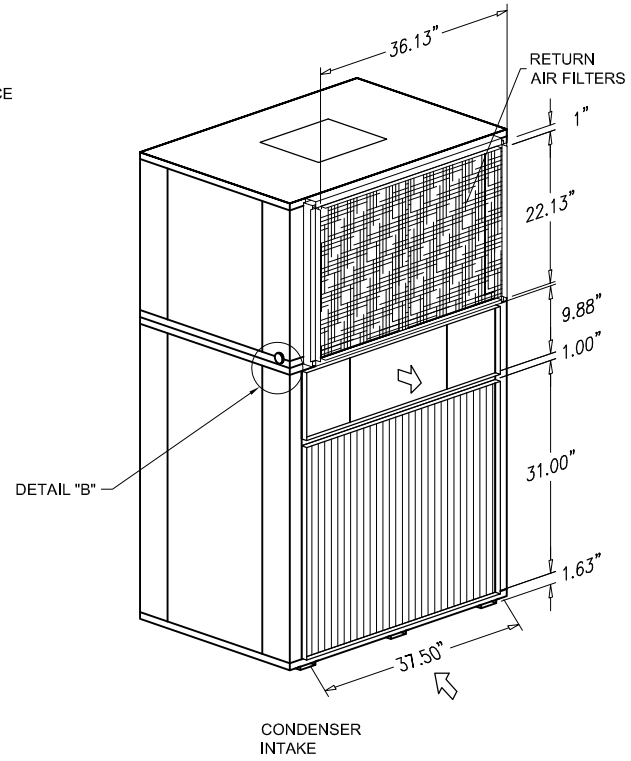
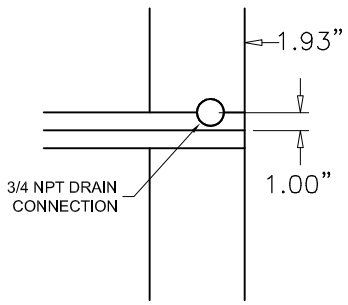


BACK VIEW



DETAIL "B"

Johnson Controls	DESCRIPTION: DSV048/060 VERTICAL AIR-COOLED SELF-CONTAINED AIR CONDITIONERS SUBMITTAL DIMENSIONS	Form 145.13-PA3 (1108) DATE: November 2008