



**VERTICAL SINGLE AND DOUBLE WALL BELT DRIVE AIR HANDLER  
DX OR CHILLED WATER COOLING WITH HOT WATER  
OR ELECTRIC HEAT**



**MADE IN USA**



**SIZES FROM 600 CFM TO 4,000  
CFM**

All Technical Specifications are Subject to  
Change without Notice. For more  
information contact Customer Service  
Phone (817)624.0820 Fax (817)624.8581

## STANDARD FEATURES

### CONSTRUCTION

- Single and Double wall post and panel construction from heavy gauge galvanized steel.
- 1" Insulation sandwiched between double wall galvanized panels.
- 1" foil faced insulation on single wall units.
- IAQ drain pan sloped 3-ways.
- Drain pans made out of 304 stainless steel.
- Integral auxiliary drain pan.
- All cabinet parts are assembled with stainless steel hardware.

### BLOWER ASSEMBLY

- Blower sections feature base mounted motors and adjustable motor bases for ease of service mounted on RIS isolators for quite vibration free operation.
- All blowers are mounted to 12-gauge support channels on rubber isolators.
- Blower exits cabinet through flexible rubber isolators.
- A discharge duct flange is provided.

### FILTER SECTION

- 2" TA flat filters are single wall standard.
- Filter access from front only.

### COIL SECTION

- "A" type coils on all models
- 3/8" O.D. seamless copper tube on sizes 24 and 36.
- 1/2" O.D. seamless copper tube on sizes 48 to 120.
- Units can accept up to 6 rows of coil without modification.

### STANDARD MOTORS

- ODP Motor is mounted to a 12 gauge adjustable base attached to the unit floor with rubber isolators
- 115/230v 1ph, 277v 1ph, 208/230/460v 3ph.
- All units are ETL listed.
- Consult factory for single phase motors mounting options.

## OPTIONAL FEATURES

### CONSTRUCTION

- Liner options include stainless steel, aluminum, or Anti-microbial coating. (Double wall only)
- Stainless steel integral overflow pan.
- Powder coated cabinet.
- Pre-painted steel cabinet

### FILTER SECTION

- Double wall filter section accepts 2" & 4" flat filters.
- 2"/ 4" pleated (30%).

### -MIXING BOXES

- \*MB3-\*\* Mixing Box with 3 position Manual Control (None filtered)
- \*MBM-\*\* Mixing Box with Modulating Actuator Control (Non Filtered)
- \*FMB3-\*\* Filtered Mixing Box w/3position Manual Control (2" TA Filter)
- \*FMBM-\*\* Filtered Mixing Box w/ Mod. Act. Control (2" TA Filter)
- \*MSS-\*\* Motor Stop/Start Station
- VDP\*\* Vertical Discharge Plenum
- VRG\*\* Return Grill for Vertical Unit

### ELECTRIC HEAT SECTION

- Factory Supplied for Field Mounting
- Reheat Configurations.
- Single point power connection.
- Custom staging and controls.
- Available Voltages: Single phase (115v, 230v, 277v)  
Three phase (208v, 230v, 460v, 575v)

### VFD'S - Variable Frequency Drives

Available for Field installation for motors bigger than 1 hp

### COIL SECTION

- 2, 4, 6, row coil options
- Heating coils are factory installed in reheat positions.
- Steam coils-Low Pressure, less than 5 PSI.
- Optional tube diameters.
- Optional stainless steel end plates.
- Face split, row split, intertwined circuiting available.
- Automatic air vents.

### MOTOR OPTIONS

- TEFC
- High efficient.
- 2-speed 2-winding.
- 575 volt

## GUIDE SPECIFICATIONS

### Unit Description:

Vertical belt drive with optional chilled water, hot water, steam or DX coils. Galvanized steel cabinet can be double or single wall construction. Unit designated to be installed on the floor in vertical position. Units have full service access from the front of the cabinet.

### Quality Assurance:

Coils are factory tested under water at 500 psig for operating pressures to 400 psig. Insulation and adhesive shall meet the NFPA-90A standard for smoke and flame spread.

### Delivery, Handling and Storage:

Units have to be stored and handled in accordance with equipment manufacturer's recommendations.

## PRODUCTS

### Equipment:

- A. Factory assembled, vertical, draw-thru blower coil units, for installation on the floor in vertical position. Units shall be complete with chilled or hot water, steam or DX coils, fans and motor, belt and drives, drain pan and filter rack to accept 2" TA filters.

### Cabinet, Single wall:

- B. Post and panel construction shall be from heavy gauge galvanize steel, lined with 1" 1.5 lb density and 0.5" as an option fiber glass Thermal acoustical insulation 7/8" closed cell is offered as an option too. Units will mount on the floor with an optional stand factory or contractor manufactured. Supply and return flanges to be 1" long. Large removable access panels shall be on front of unit.

### Cabinet, Double wall:

- C. Post and panel construction shall be from heavy gauge galvanize steel, lined with 1" 1.5 lb density fiber glass Thermal acoustical insulation, lined with smooth galvanized steel. Units will mount on the floor with an optional stand factory or contractor manufactured. Supply and return flanges to be 1" long. Large removable access panels shall be on front of unit. **Drain Pan:**
- D. The primary shall be stainless steel and include a built in overflow pan with a 1" MPT secondary and a 1" MPT primary drain connection. Secondary drain shall be galvanized or stainless steel to prevent corrosion should an overflow occur.

### Coil Section:

- E. All coils are "A" type coils on vertical units. Coils can have heating and cooling combinations up to 6 rows. Entire coil section cabinet shall be double wall lined with smooth galvanized steel for easy cleaning and coil removal.

### Blowers:

- F. Belt Drive DWDI (double with, Double Inlet) fan wheel shall be forward curved blades and be factory statically and dynamically balanced. Blower's drives shall consist of cast iron variable pitch motor pulley and V-belt. Blowers and scrolls shall be manufactured from galvanized steel.

### Coils:

- G. "A" Type coil tube diameters shall be 0.375", 0.50" or 0.625" OD copper tubes, aluminum fins mechanically bonded to the tubes and have a working pressure of 250 psig at 200 °F. Each water coil shall have manual air vents and sweat connections, which have to be accessible from the exterior of cabinet.

### Motors:

- H. Motors shall be Open Type, Drip Proof, single or 2 speed, 60 Hz 1750 RPM, 1 or 3 phases, suitable for continuous duty at 130 °F; single phase motors are capacitor start, include automatic reset thermal over-load protection and are available in 115, 208, 230 and 277 volts. Three phase motors are available in 208, 230, 460 or 575 volts. Motors shall be resilient base mounted up to 2 hp. From 3 hp and up shall be rigid base mounted.

### Electric Heat:

- I. Electric heat shall be designed to mount at the discharge air openings of the unit. Electric heat is factory supplied for field installation and shall include a de-energizing magnetic control contactor per stage with a capacity of 48 Amps per circuit and include a secondary over-temperature switch. Heaters shall include fan-interlocking, power and control terminal boards with grounding lugs. An automatic limit switch shall provide aver-temperature protection and a manual reset limit switch shall provide secondary over-temperature protection. Electric heat is factory supplied for field mounting.

### Filters:

- J. Standard filter rack shall include 2" TA filters, with option for 2" pleated filters. Filter racks have to be accessible from the front of unit.



**CAP DESCRIPTION MODEL NUMBER NOMENCLATURE - PAGE #1**

HP	H	W	E	D	A	0	9	0	B	3	2	2	5	1	.	2	5	2	4	2	A	R	H	6
TYPE		MODEL			CM	SIZE		BS	CFM			ESP		COIL ROWS		RF	CN	MOTOR						
<p><b>UNIT TYPE</b></p> <p>HP HIGH PERF EC ECM MOTOR BD BELT DRIVE</p> <p><b>UNIT CONFIGURATION</b></p> <p>H HORIZONTAL V VERTICAL M MODULAR R ROOFTOP</p> <p><b>COOLING OPTIONS</b></p> <p>W CHILLED WATER X DIRECT EXPANSION 0 NO COOLING</p> <p><b>HEATING OPTIONS</b></p> <p>H HOT WATER S STEAM E ELECTRIC NO O HEAT</p> <p><b>UNIT INSULATION</b></p> <p>S SINGLE WALL 1" F F FIBERGLAS D DOUBLE WALL U SINGLE WAL 7/8" CLOSED CELL X SPECIAL</p> <p><b>CABINET MATERIAL</b></p> <p>A GALVANIZED STEEL B PRE-PAINTED STEEL C POWDER PAINTED</p> <p><b>UNIT SIZE</b></p> <p>024 24000 036 36000 048 48000 060 60000 090 90000 120 120000 180 180000 240 240000</p> <p><b>BLOWER SIZE OPTIONS</b></p> <p>1 9 X 4 2 9 X 6 3 9 X 9 4 10 X 10 5 12 X 12 6 15 X 11 7 15 X 15 8 18 X 18</p> <p><b>PRE-HEAT</b></p> <p>0 NO PH 1 1- ROW 2 2-ROW</p> <p><b>COOLING</b></p> <p>0 NO COOLING 2 2-ROWS 4 4-ROWS 6 6-ROWS 8 8-ROWS</p> <p><b>RE-HEAT</b></p> <p>0 NO RH 1 1- ROW 2 2-ROW</p> <p><b>REFRIGERANT</b></p> <p>A R-410A B R-22 C R-NU22 D R-134A 0 NONE</p> <p><b>PIPING CONNECTIONS</b></p> <p>R RIGHT HAND L LEFT HAND ALL CONNECTIONS ARE SET LOOKING THE UNIT IN THE AIR FLOW DIRECTION</p> <p><b>MOTOR SIZE AND VOLTAGE OPTIONS</b></p> <p><b>1ST DIGIT</b></p> <p>A 0.25 HP B 0.33 HP C 0.50 HP D 0.75 HP E 1.00 HP F 1.50 HP G 2.00 HP H 3.00 HP J 7.50 HP K 10.0 HP</p> <p><b>2ND DIGIT</b></p> <p>1 115/1 ODP/HE 2 208/1 ODP/HE 3 230/1 ODP/HE 4 277/1 ODP 5 208/3/60/ODP/HE 6 230/3/60/ODP/HE 7 460/3/60/ODP/HE 8 575 /3/60/ ODP/HE</p>																								

## BELT DRIVE UNITS

### CAP DESCRIPTION MODEL NUMBER NOMENCLATURE - PAGE #2

B	B	C	0	E	1	0	0	.	0	C	0	0	C	F	0	1	1
OAO	UNIT ACCS			V	EH KW				HTR ACCS			V	VFD ACC S	REV.		REV.	

**OUTSIDE AIR OPTIONS**

- O NONE
- A MIXING BOX W/ PLEATED FILTER 2"
- B MB W/ 3 POSITION CONTROL PACKAGE
- C MB W/MODULATING CONTROL PACKAGE
- E FACE & BYPASS DAMPER W/FILTER SEC.
- F 100% OUTSIDE AIR HOOD W/DAMPER
- G 30% OUTSIDE AIR HOOD W/DAMPER
- X SPECIAL

**UNIT ACCESSORIES**

- O NONE
- A PLEATED FILTER 2"
- B DISCHARGE GRILL PLENUM
- C RETURN GRILL AIR PLENUM
- MOTOR START STOP STATION
- F ROOF CURB 12"
- G ROOF CURB 14"
- X SPECIAL

**HEATER VOLTAGE**

- O NO HEATERS
- A 115/1
- B 208/1
- C 230/1
- E 277/1
- F 208/3
- G 230/3
- H 460/3
- J 575/3

**HEATER CAPACITY**

- 1.0 to 100.0 KW IN .1 Kw increments
- O NO HEATERS

**HEATER ACCESSORIES**

- O NO ACCESSORIES
- A Single point line Conn.
- B SCR Controls
- C Start Stop Control St
- D None

FACTORY USE	
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**VFD ACCESSORIES**

- O NO ACCESSORIES
- A REM MTG KIT
- B LCP11 CONT PANEL
- C LCP12 CONT PANEL
- D NE/UL TY1 K FOR M1 FR
- E NE/UL TY1 K FOR M2 FR
- F NE/UL TY1 K FOR M3 FR
- G DECOUPLING PLT KIT FOR M1&M2 FRAME
- H DECOUPLING PLT KIT FOR M3 FRAME
- I IP21 FOR M1 FRAME
- J IP21 FOR M2 FRAME
- K IP21 FOR M3 FRAME
- L DIN RAIL MTG KIT

**VFD SIZE**

- O NO VFD
- A 0.25 HP 230/1
- B 0.50 HP 230/1
- C 1.00 HP 230/1
- D 2.00 HP 230/1
- E 3.00 HP 230/1
- F 0.33 HP 230/3
- G 0.50 HP230/3
- H 1.00 HP 230/3
- I 2.00 HP 230/3
- J 3.00 HP 230/3
- K 5.00 HP 230/3
- L 0.50 HP 460/3
- M 1.00 HP 460/3
- N 2.00 HP 460/3
- P 3.00 HP 460/3
- Q 5.00 HP 460/3
- R 7.50 HP 460/3
- S 10.0 HP 460/3

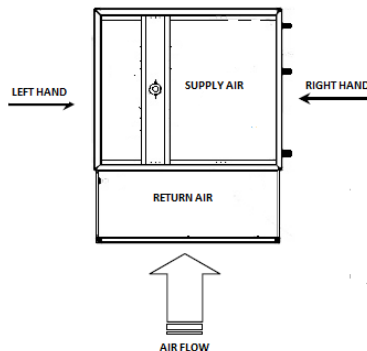
**For more information contact Customer Service**

Phone: 817-624-0820 Fax: 817-624-8581

VERTICAL UNITS COIL DATA								
MODEL	FIN BLOCK H X W	COIL TYPE	FACE AREA	ROWS	FPI	WATER CONN	DX CONN	
							SUCT	LIQ
24	14 X 20	HW	1.94	1	10	5/8	N/A	N/A
	14 X 20	HW	1.94	2		5/8	N/A	N/A
	(2) 12 X 16	CW/DX	2.66	4		7/8	7/8	3/8
	(2) 12 X 16	CW/DX	2.66	6		7/8	7/8	3/8
36	14 X 20	HW	1.94	1		7/8	N/A	N/A
	14 X 20	HW	1.94	2		7/8	N/A	N/A
	(2) 14 X 16	CW/DX	3.11	4		7/8	7/8	3/8
	(2) 14 X 16	CW/DX	3.11	6		7/8	7/8	3/8
48	18 X 20	HW	2.5	1		7/8	N/A	N/A
	18 X 20	HW	2.5	2		7/8	N/A	N/A
	(2) 15 X 18	CW/DX	3.75	4		1 1/8	7/8	1/2
	(2) 15 X 18	CW/DX	3.75	6		1 1/8	7/8	1/2
60	22.5 X 20	HW	3.47	1	7/8	N/A	N/A	
	22.5 X 20	HW	3.47	2	7/8	N/A	N/A	
	(2) 15 X 23	CW/DX	4.79	4	7/8	7/8	1/2	
	(2) 15 X 23	CW/DX	4.79	6	7/8	7/8	1/2	
90	39 X 22	HW	5.95	2	1 3/8	N/A	N/A	
	(2) 15 X 33	CW/DX	6.88	4	1 3/8	1 1/8	1/2	
	(2) 15 X 33	CW/DX	6.88	6	1 3/8	1 1/8	1/2	
120	43.5 X 22	HW	6.65	2	1 3/8	N/A	N/A	
	(2) 15 X 45	CW/DX	9.38	4	1 3/8	1 1/8	5/8	
	(2) 15 X 45	CW/DX	9.38	6	1 3/8	1 1/8	5/8	

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## VERTICAL BELT DRIVE FILTER ARRANGEMENTS

SIZE 24 & 36 (2) **12 X 24 X 2**

SIZE 48 & 60 (2) **16 X 24 X 2**

SIZE 90 & 120 (4) **20X25X2**



SIZE 24 & 36



SIZE 48 & 60



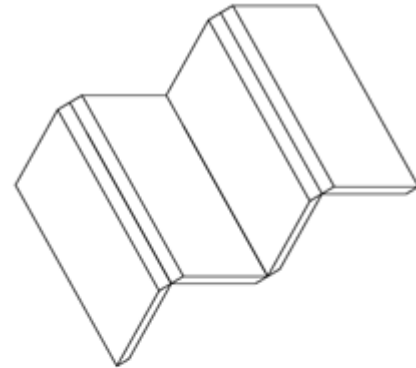
SIZE 90 & 120



SIZE 24 & 36



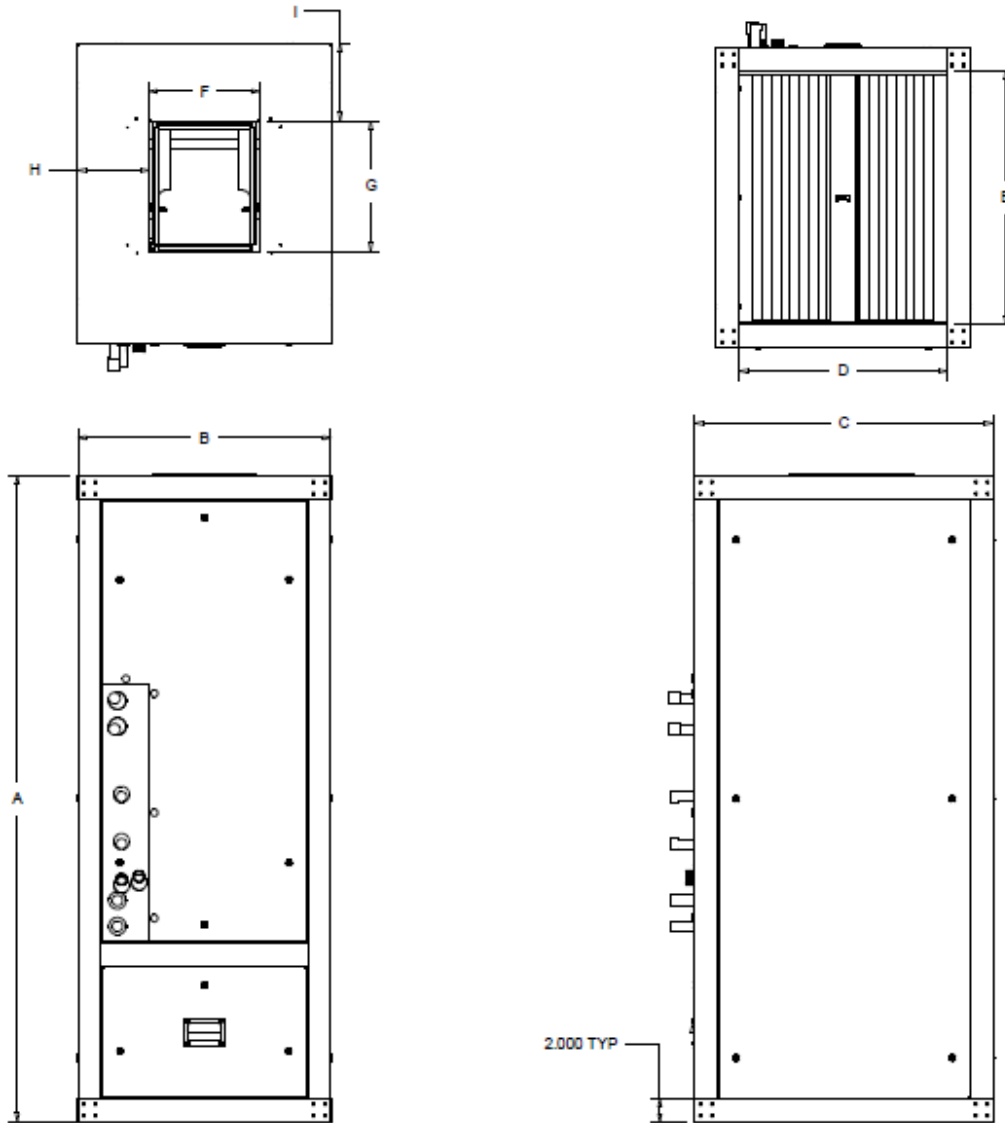
SIZE 48 & 60



SIZE 90 & 120

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[www.commercialaire.com](http://www.commercialaire.com)

## UNIT DIMENSIONS SINGLE AND DOUBLE WALL



VERTICAL UNITS DIMENSIONS

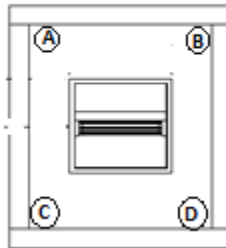
Unit Model	A	B	C	D	E	F	G	H	I
V***A - 024	56.00	22.00	26.00	18.00	22.00	9.13	11.13	5.88	7.88
V***A - 036	56.00	22.00	26.00	18.00	22.00	12.69	11.13	5.88	7.88
V***A - 048	66.00	30.00	26.00	26.00	22.00	14.00	12.25	9.50	7.50
V***A - 060	66.00	30.00	26.00	26.00	22.00	16.50	14.50	7.50	5.50
V***A - 090	75.00	52.00	30.00	48.00	26.00	19.50	16.75	18.00	7.00
V***A - 120	75.00	52.00	30.00	48.00	26.00	19.50	16.75	18.00	7.00

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VERTICAL UNITS WEIGHT AND DISTRIBUTION BASED ON 6 ROW "A" TYPE COIL									
Unit Model	Corner weights 6 Row "A" Type Coil				Total Weight	Correction Factors for Rows and Single Wall			
	A	B	C	D		4R	2R	Single Wall	
V***A - 024	55	58	54	52	<b>219</b>	-20	-28	-35	
V***A - 036	58	61	56	54	<b>229</b>	-27	-39	-35	
V***A - 048	72	83	67	74	<b>296</b>	-35	-50	-40	
V***A - 060	77	85	69	76	<b>307</b>	-45	-65	-40	
V***A - 090	98	108	102	101	<b>409</b>	-72	-103	-65	
V***A - 120	107	113	105	102	<b>427</b>	-95	-140	-65	

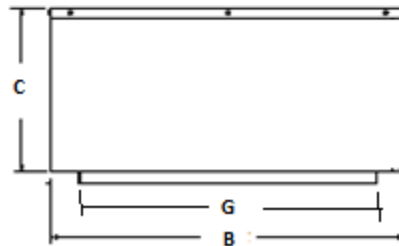
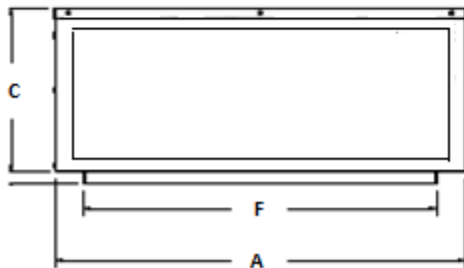
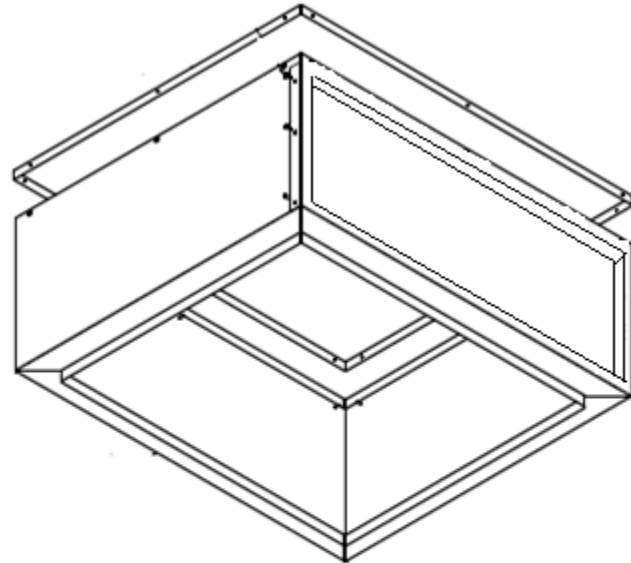
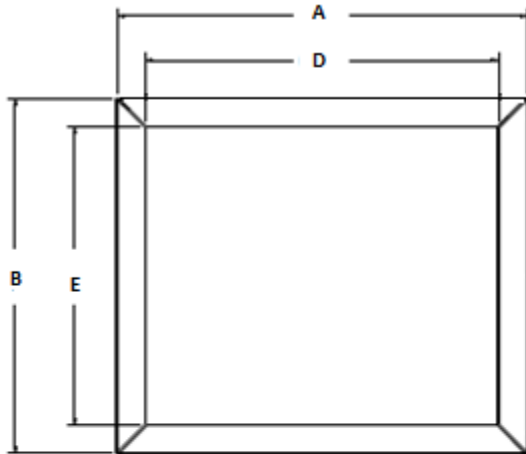
TOP VIEW



## SUPPLY AIR PLENUM WITH ADJUSTABLE FOUR WAY GRILL

**Notes:**

- The drawings and dimensions on this page are for illustration purpose
- Consult factory for final drawings for construction
- Units with supply air plenum cannot have electric heat
- Units with return air plenum cannot have mixing box, no face & by pass dampers
- Supply and return air plenums are made with heavy gauge galvanized steel



MODEL	A	B	C	D	E	F	G	GRILL
VSP - 024/036	22.0	26.0	14	18	22	12.69	11.13	12X18 4W
VSP - 048/060	30.0	26.0	18	26	22	16.5	14.5	16X26 4W
VSP - 090/120	52.0	30.0	20	48	26	19.5	16.75	18X48 4W

ALL DIMENSIONS SHOWN ARE APPROXIMATE AND ROUNDED, SUBJECT TO CHANGE WITHOUT NOTICE

## RETURN AIR PLENUM UNITS WITH FIX RETURN GRILL

**Notes:**

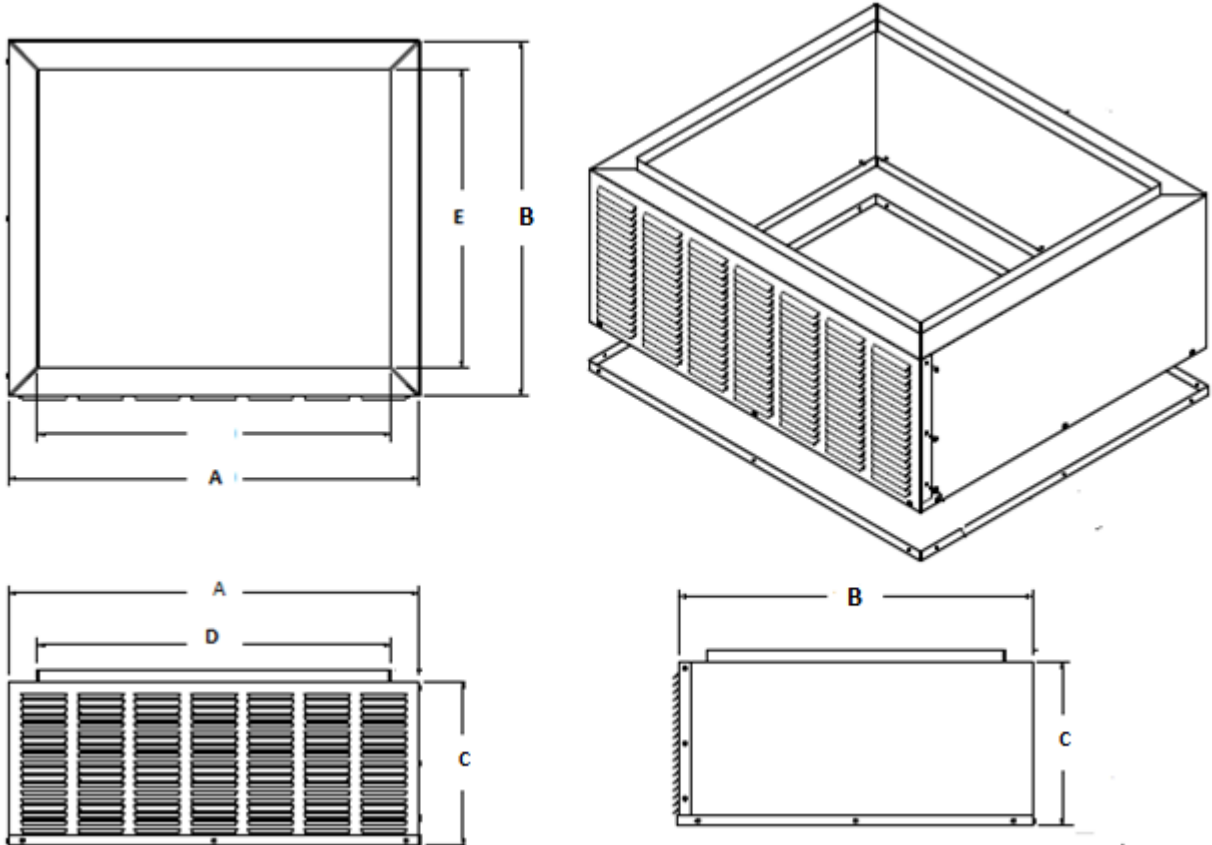
The drawings and dimensions on this page are for illustration purpose

Consult factory for final drawings for construction

Units with supply air plenum cannot have electric heat

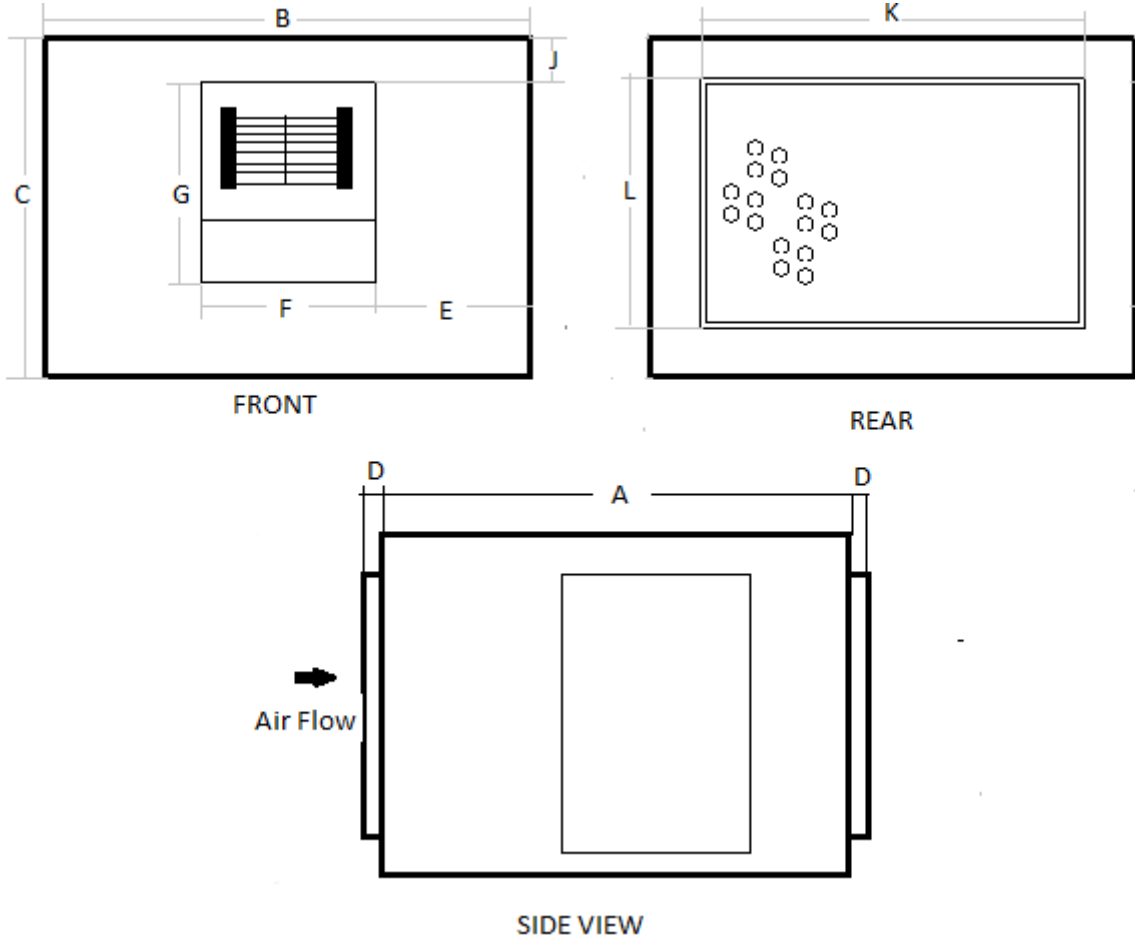
Units with return air plenum cannot have mixing box, no face & by pass dampers

Supply and return air plenums are made with heavy gauge galvanized steel



MODEL	A	B	C	D	E
VRTP - 024/036	22.0	26.0	12	18	22
VRTP - 048/060	30.0	26.0	12	26	22
VRTP - 090/120	52.0	30.0	12	48	26
ALL DIMENSIONS SHOWN ARE APROXIMATE AND ROUNDED, SUBJECT TO CHANGE WITHOUT NOTICE					

**FACE & BY-PASS DAMPER FOR SIZE 024 TO 120**

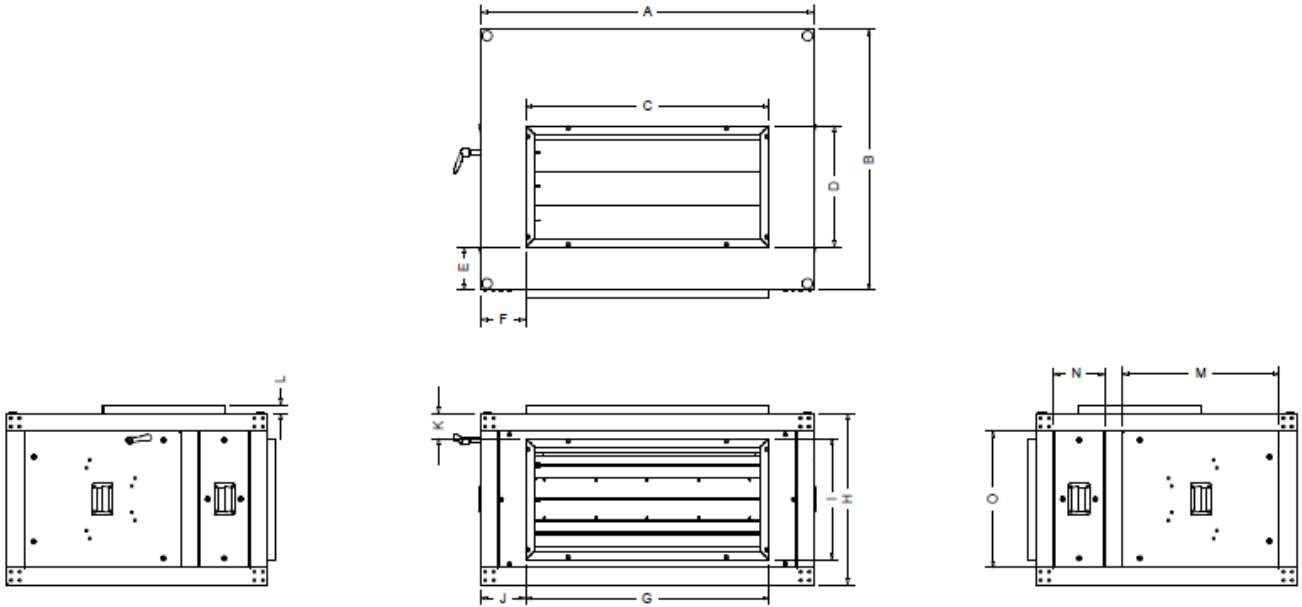


**DIMENSIONS**

MODEL		A	B	C	D	E	F	G	J	K	L
VFBDP	- 024/036	26.00	22.00	25.00	0.75	6.50	18.00	15.25	3.00	15.00	16.50
VFBDP	- 048/060	26.00	30.00	30.00	0.75	6.50	18.00	15.25	3.00	23.00	22.50
VFBDP	- 090/120	30.00	52.00	35.00	0.75	6.50	18.00	15.25	3.00	45.00	26.50

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### MIXING BOX FOR SIZE 024 TO 120



### DIMENSIONS

UNIT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
V*MB3 - 024	22.0	26.0	16.5	15.0	5.0	2.25	19.5	25.0	14.5	3.25	5.25	1.0	12.5	6.0	20.0
V*MB3 - 036	22.0	26.0	16.5	15.0	5.0	2.25	19.5	25.0	14.5	3.25	5.25	1.0	12.5	6.0	20.0
V*MB3 - 048	30.0	34.0	22.5	23.0	5.0	3.75	27.5	30.0	17.5	3.25	6.25	1.0	12.5	6.0	25.0
V*MB3 - 060	30.0	34.0	22.5	23.0	5.0	3.75	27.5	30.0	17.5	3.25	6.25	1.0	12.5	6.0	25.0
V*MB3 - 090	52.0	52.0	39.5	45.0	5.0	6.25	45.5	35.0	22.5	3.25	6.25	1.0	16.5	6.0	30.0
V*MB3 - 120	52.0	52.0	39.5	45.0	5.0	6.25	45.5	35.0	22.5	3.25	6.25	1.0	16.5	6.0	30.0

**PRESSURE DROP FOR VERTICAL AHU FILTERS**

<b>Throwaway</b>						
<b>Model</b>	<b>CFM</b>	<b>Filter Size &amp; Qty.</b>	<b>Total Filter Area</b>	<b>Face Velocity FPM</b>	<b>2" Filter PD</b>	<b>4" Filter PD</b>
24	600	(2) 12X24	4.00	150.00	0.051	0.075
	700			175.00	0.059	0.088
	800			200.00	0.067	0.101
	900			225.00	0.076	0.113
	1000			250.00	0.084	0.126
36	900	(2) 12X24	4.00	225.00	0.076	0.113
	1050			262.50	0.089	0.132
	1200			300.00	0.101	0.151
	1350			337.50	0.114	0.170
	1500			375.00	0.126	0.189
48	1200	(3) 12X24	6.00	200.00	0.067	0.101
	1400			233.33	0.079	0.117
	1600			266.67	0.090	0.134
	1800			300.00	0.101	0.151
	2000			333.33	0.112	0.168
60	1500	(3) 12X24	6.00	250.00	0.084	0.126
	1750			291.67	0.098	0.147
	2000			333.33	0.112	0.168
	2250			375.00	0.126	0.189
	2500			416.67	0.141	0.210
90	2250	(4) 20X25	13.89	161.99	0.055	0.081
	2625			188.98	0.064	0.095
	3000			215.98	0.073	0.109
	3375			242.98	0.082	0.122
	3750			269.98	0.091	0.136
120	3000	(4) 20X25	13.89	215.98	0.073	0.109
	3500			251.98	0.085	0.127
	4000			287.98	0.097	0.145
	4500			323.97	0.109	0.163
	5000			359.97	0.121	0.181

**PRESSURE DROP FOR VERTICAL AHU FILTERS**

<b>Pleated</b>						
<b>Model</b>	<b>CFM</b>	<b>Filter Size &amp; Qty.</b>	<b>Total Filter Area</b>	<b>Face Velocity FPM</b>	<b>2" Filter PD</b>	<b>4" Filter PD</b>
24	600	(2) 12X24	4.00	150.00	0.075	0.084
	700			175.00	0.088	0.098
	800			200.00	0.101	0.112
	900			225.00	0.113	0.126
	1000			250.00	0.126	0.141
36	900	(2) 12X24	4.00	225.00	0.113	0.126
	1050			262.50	0.132	0.148
	1200			300.00	0.151	0.169
	1350			337.50	0.170	0.190
	1500			375.00	0.189	0.211
48	1200	(3) 12X24	6.00	200.00	0.101	0.112
	1400			233.33	0.117	0.131
	1600			266.67	0.134	0.150
	1800			300.00	0.151	0.169
	2000			333.33	0.168	0.187
60	1500	(3) 12X24	6.00	250.00	0.126	0.141
	1750			291.67	0.147	0.164
	2000			333.33	0.168	0.187
	2250			375.00	0.189	0.211
	2500			416.67	0.210	0.234
90	2250	(4) 20X25	13.89	161.99	0.081	0.091
	2625			188.98	0.095	0.106
	3000			215.98	0.109	0.121
	3375			242.98	0.122	0.137
	3750			269.98	0.136	0.152
120	3000	(4) 20X25	13.89	215.98	0.109	0.121
	3500			251.98	0.127	0.142
	4000			287.98	0.145	0.162
	4500			323.97	0.163	0.182
	5000			359.97	0.181	0.202

**INTERNAL STATIC PRESSURES FILTERS, DX, CHILLED AND HOT WATER COIL**

Air Volume Capacity - 4-Pipe, 4-Row Cooling and 2-Row Heating Coils							
	CFM	FV	1 ROW CW	2 ROW CW	4 ROW CW	4 ROW DX	TSP
			ISP	ISP	ISP	ISP	
24	600	225	0.03	0.06	0.13	0.13	
	700	257	0.04	0.08	0.17	0.17	
	800	300	0.05	0.10	0.21	0.21	
	900	332	0.06	0.13	0.25	0.25	
	1000	375	0.07	0.15	0.30	0.30	
36	900	300	0.06	0.12	0.21	0.21	
	1050	317	0.07	0.10	0.22	0.22	
	1200	400	0.10	0.20	0.34	0.34	
	1350	450	0.13	0.25	0.42	0.42	
	1500	500	0.15	0.30	0.49	0.49	
48	1200	288	0.05	0.07	0.26	0.26	
	1400	350	0.12	0.23	0.35	0.35	
	1600	400	0.19	0.38	0.44	0.44	
	1800	450	0.28	0.55	0.54	0.54	
	2000	500	0.37	0.72	0.64	0.64	
60	1500	313	0.06	0.10	0.29	0.29	
	1750	352	0.11	0.22	0.36	0.36	
	2000	391	0.18	0.36	0.43	0.43	
	2250	430	0.21	0.42	0.50	0.50	
	2500	469	0.24	0.48	0.57	0.57	
90	2250	304	0.08	0.17	0.48	0.48	
	2625	350	0.11	0.21	0.50	0.50	
	3000	396	0.12	0.26	0.63	0.54	
	3375	442	0.14	0.29	0.71	0.69	
	3750	488	0.16	0.35	0.81	0.80	
120	3000	291	0.06	0.21	0.40	0.36	
	3500	389	0.10	0.30	0.51	0.45	
	4000	387	0.12	0.38	0.61	0.53	
	4500	433	0.14	0.35	0.72	0.64	
	5000	484	0.17	0.51	0.82	0.74	

**Internal Static Pressure Calculation**

Select a Unit and Approximate CFM from the two left columns- Select the total number of rows and filter- Add filter to coil static pressure to obtain total ISP (internal static pressure) – Add the ISP to ESP for the system to obtain TSP (total static pressure)





### BLOWER PERFORMANCE TABLES

Air Volume Capacity - 2-Pipe, 4-Row Coil														
Model	Internal SP	cfm	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
V***A024	.18	600	864	0.12	998	0.17	1144	0.24	1288	0.32	1424	0.41	1549	0.49
	.23	700	966	0.18	1073	0.22	1193	0.29	1318	0.37	1443	0.46	1564	0.56
	.28	800	866	0.17	1025	0.22	1152	0.28	1267	0.34	1374	0.41	1475	0.47
	.34	900	955	0.22	1084	0.28	1202	0.35	1312	0.41	1415	0.48	1511	0.55
	.39	1000	1143	0.35	1143	0.35	1255	0.42	1359	0.49	1457	0.57	1550	0.64
V***A036	.29	900	1002	0.24	1416	0.48	1243	0.37	1350	0.44	1450	0.51	1545	0.60
	.27	1050	905	0.25	1195	0.40	1494	0.63	1403	0.55	1498	0.63	1575	0.70
	.44	1200	1041	0.33	1165	0.41	1281	0.50	1391	0.59	1551	0.77	1711	0.90
	.53	1350	1103	0.42	1219	0.50	1328	0.60	1431	0.69	1529	0.80	1745	1.00
	.62	1500	1166	0.52	1274	0.61	1377	0.71	1474	0.82	1568	0.93	1775	1.20
V***A048	.33	1200	988	0.30	1102	0.37	1222	0.45	1335	0.54	1441	0.60	1550	0.70
	.43	1400	1047	0.39	1165	0.48	1276	0.55	1381	0.67	1480	0.80	1580	0.90
	.53	1600	1126	0.53	1235	0.62	1337	0.72	1434	0.83	1527	0.90	1628	1.00
	.64	1800	952	0.54	1054	0.65	1151	0.76	1244	0.88	1333	1.00	1426	1.10
	.75	2000	1013	0.69	1108	0.80	1198	0.92	1285	1.05	1369	1.20	1456	1.30
V***A060	.31	1500	848	0.35	966	0.45	1076	0.55	1181	0.66	1281	0.78	1380	0.90
	.47	1750	905	0.48	1011	0.58	1112	0.69	1207	0.81	1299	0.93	1385	1.00
	.63	2000	973	0.64	1070	0.76	1162	0.87	1126	1.01	1335	1.13	1440	1.20
	.72	2250	1044	0.84	1133	0.97	1218	1.10	1300	1.23	1379	1.37	1475	1.30
	.81	2500	1115	1.08	1198	1.22	1277	1.36	1354	1.51	1427	1.65	1525	1.90
V***A090	.38	2250	801	0.64	910	0.79	1011	0.95	1103	1.10	1187	1.27	1260	1.50
	.54	2625	862	0.90	956	1.06	1049	1.23	1137	1.41	1220	1.60	1305	1.80
	.70	3000	933	1.24	1014	1.41	1096	1.59	1178	1.79	1257	1.99	1337	2.20
	.86	3375	1012	1.66	1082	1.84	1154	2.04	1228	2.25	1300	2.47	1383	2.70
	.99	3750	1094	2.18	1155	2.38	1218	2.58	1284	2.80	1350	3.03	1465	3.20
V***A120	.47	3000	646	0.76	718	0.90	785	1.05	849	1.20	910	1.36	970	1.60
	.59	3500	705	1.09	769	1.25	831	1.41	889	1.58	945	1.76	1000	2.00
	.71	4000	765	1.50	824	1.68	881	1.87	934	2.05	986	2.25	1012	2.50
	.83	4500	830	2.02	884	2.22	936	2.43	986	2.64	1034	2.85	1082	3.20
	.94	5000	898	2.66	948	2.89	995	3.11	1042	3.34	1087	3.57	1132	3.90



### BLOWER PERFORMANCE TABLES

Air Volume Capacity - 4-Pipe, 4-Row Cooling and 2-Row Heating Coils														
Model	Internal SP	cfm	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
V***A024	.24	600	731	0.07	890	0.11	1088	0.18	1209	0.23	1321	0.28	1440	0.37
	.31	700	754	0.10	761	0.13	1142	0.24	1253	0.28	1359	0.33	1458	0.39
	.38	800	878	0.13	980	0.18	1165	0.25	1303	0.35	1402	0.41	1496	0.46
	.46	900	930	0.16	1023	0.23	1218	0.30	1358	0.42	1496	0.50	1541	0.55
	.54	1000	981	0.20	1069	0.29	1269	0.37	1372	0.46	1596	0.55	1691	0.62
V***A036	.41	900	715	0.14	823	0.19	917	0.24	1238	0.31	1333	0.36	1415	0.42
	.52	1050	781	0.20	882	0.25	971	0.31	1051	0.37	1123	0.42	1195	0.49
	.64	1200	847	0.27	942	0.33	1026	0.39	1104	0.46	1176	0.52	1243	0.59
	.78	1350	918	0.36	1006	0.42	1086	0.49	1161	0.56	1230	0.64	1295	0.71
	.92	1500	986	0.46	1069	0.53	1145	0.61	1216	0.69	1282	0.76	1345	0.84
V***A048	.54	1200	806	0.24	905	0.30	993	0.37	1074	0.43	1147	0.50	1216	0.56
	.81	1400	876	0.38	1022	0.45	1101	0.53	1174	0.60	1243	0.67	1307	0.75
	1.08	1600	981	0.54	1129	0.64	1202	0.72	1270	0.80	1334	0.88	1394	0.97
	1.19	1800	1025	0.67	1184	0.79	1254	0.88	1320	0.97	1382	1.07	1442	1.16
	1.29	2000	1081	0.83	1143	0.92	1304	1.07	1368	1.17	1428	1.27	1486	1.37
V***A060	.42	1500	749	0.27	821	0.36	1010	0.48	1069	0.53	1145	0.61	1216	0.69
	.69	1750	888	0.44	936	0.54	1024	0.65	1179	0.76	1249	0.85	1315	0.94
	.99	2000	1020	0.66	1049	0.78	1128	0.90	1202	1.02	1355	1.15	1417	1.25
	1.14	2250	1078	0.84	1175	0.98	1181	1.12	1251	1.25	1318	1.38	1480	1.55
	1.29	2500	1136	1.06	1224	1.20	1311	1.36	1321	1.51	1365	1.65	1439	1.86
V***A090	.49	2250	604	0.44	702	0.59	776	0.73	868	0.89	931	1.04	981	1.17
	.54	2625	627	0.57	719	0.71	802	0.89	925	1.07	1002	1.23	1025	1.43
	.96	3000	775	0.96	857	1.18	923	1.35	980	1.56	1036	1.74	1091	1.93
	1.16	3375	837	1.28	908	1.47	979	1.72	1038	1.92	1095	2.13	1039	2.37
	1.36	3750	896	1.65	961	1.86	1025	2.07	1089	2.36	1162	2.78	1193	2.82
V***A120	.68	3000	683	0.78	765	0.94	845	1.12	916	1.33	973	1.54	1030	1.72
	.88	3500	758	1.14	829	1.33	899	1.52	968	1.72	1033	1.98	1089	2.19
	1.09	4000	831	1.59	895	1.80	957	2.01	1018	2.23	1078	2.46	1142	2.78
	1.28	4500	897	2.12	956	2.35	1011	2.58	1066	2.82	1121	3.06	1175	3.31
	1.46	5000	959	2.73	1012	2.98	1063	3.23	1114	3.49	1164	3.75	1213	4.02