

The ultimate solution
to your filtration problems



AI-138
AIR INTAKE SYSTEMS



REGISTERED ISO 9001 ASSURED QUALITY AND SERVICE



The Dollinger AI-138 two-stage filter/silencer is designed to efficiently remove submicron dust, dirt and other airborne contaminants from the atmosphere in two separate stages of panel filter elements protecting axial and centrifugal compressors and blowers and, at the same time, reducing compressor inlet noise.

The AI-138 is designed to be installed either directly on the compressor blower inlet or on remote inlet air piping. Dollinger manufactures 18 standard models, available with ranges up to 30,000 SCFM and bottom outlets ranging in size from 6" to 36" in diameter. The standard silencing feature provides sound attenuation up to 17.5 dB (A).

Larger capacities are available upon request.

HOUSING DESIGN AND CONSTRUCTION

The rigid, all-weather galvanized housing of the AI-138 provides strength and corrosion-resistant protection on outdoor installations. All surfaces are finished with blue hammertone enamel for long life and durability.

All models are furnished with weatherhoods for protection from outside elements such as rain and snow. All metal joints are welded and caulked as required to prevent dust from entering the unit. The standard conical safety screen over the filter outlet prevents small foreign objects from entering the exposed air intake passage when servicing or replacing panel elements. A 1/4" pressure tap attachment is standard on each housing. Lifting lugs are provided for ease in initial installation.

The filter housing may also be modified or customized to meet special application needs.

ELEMENT DESIGN AND CONSTRUCTION

The two-stage panel element design of the AI-138 provides clean air with low pressure loss and high efficiency. No special tools or parts are required to replace or service Dollinger panel filter elements. A pull strap provided across the face of each element allows fast and simple change out.

THE FIRST STAGE ELEMENT

The first stage element provides 98% retention efficiency of 4 microns. After extended use, the first stage elements may be cleaned with a mild detergent solution.

The first stage panel element incorporates a pleated media design which provides optimum filtration area with minimum pressure loss and large dirt holding capacity. An electrogalvanized steel frame and synthetic fiber filter medium combine to make the element cleanable and reusable. Rugged metal frame and wire mesh guards on the element face provide added durability and ensure against rough handling and moisture.

THE SECOND STAGE ELEMENT

The unparalleled design of the second stage panel element combines high efficiency and superior equipment protection. The unique microglass filter medium ensures high dirt holding capacity and low pressure drop. Dollinger's proprietary filter medium is molded continuously with an exclusive sealant to our patented extruded aluminum frame. This assures positive protection with no contaminant by-pass of unfiltered air at each stage. The superior design strength helps prevent collapse of the panel element.

The second stage element in the AI-138 provides an efficiency of 99.97% retention of 0.3 microns.

AVAILABLE OPTIONS

When desired, special options and accessories are also available. These include: Flange adaptors; Top and side outlet design; Pipe leg supports; Differential pressure gauges or indicators; Modified connection sizes and styles; Special finishes to customer required standards.

SILENCING DATA MODEL AI-138

Frequency Hertz	45	63	90	125	180	250	355	500	710	1000	1400	2000	2800	4000	5600	8000	11,200
Sound Level-dB RE .0002 Bar	80	79	76.5	72.5	75.5	79	85	85									

Data recorded on site where a Dollinger AI-128 Model was installed on the air intake of a centrifugal compressor. Readings were taken at a distance of 3 feet from the intake weather hood opening.

Frequency Hertz	45	63	90	125	180	250	355	500	710	1000	1400	2000	2800	4000	5600	8000	11,200
System Sound Attenuation dB RE .0002 Bar	12.75	13.75	14.75	15.8	17.1	18.5	23	23.5									

Attenuation on "A" weighted sound level 17.5 dB(A)

Data recorded in the research and development center of Dollinger Corporation on AI-128-0200-120 Model.

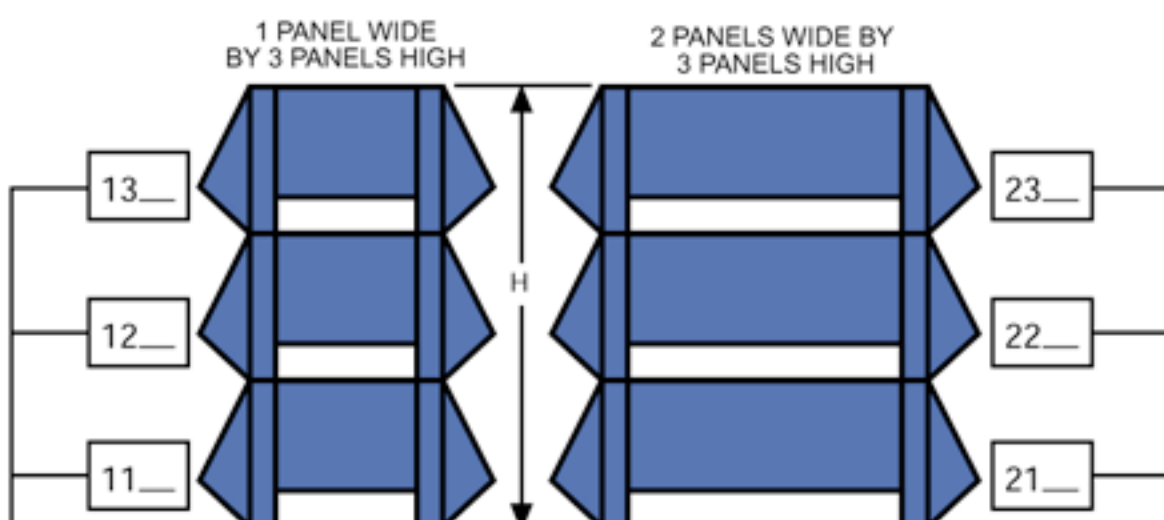
HOUSING DESIGN OPTIONS

Width and Height Styles

Side view of Model AI-138

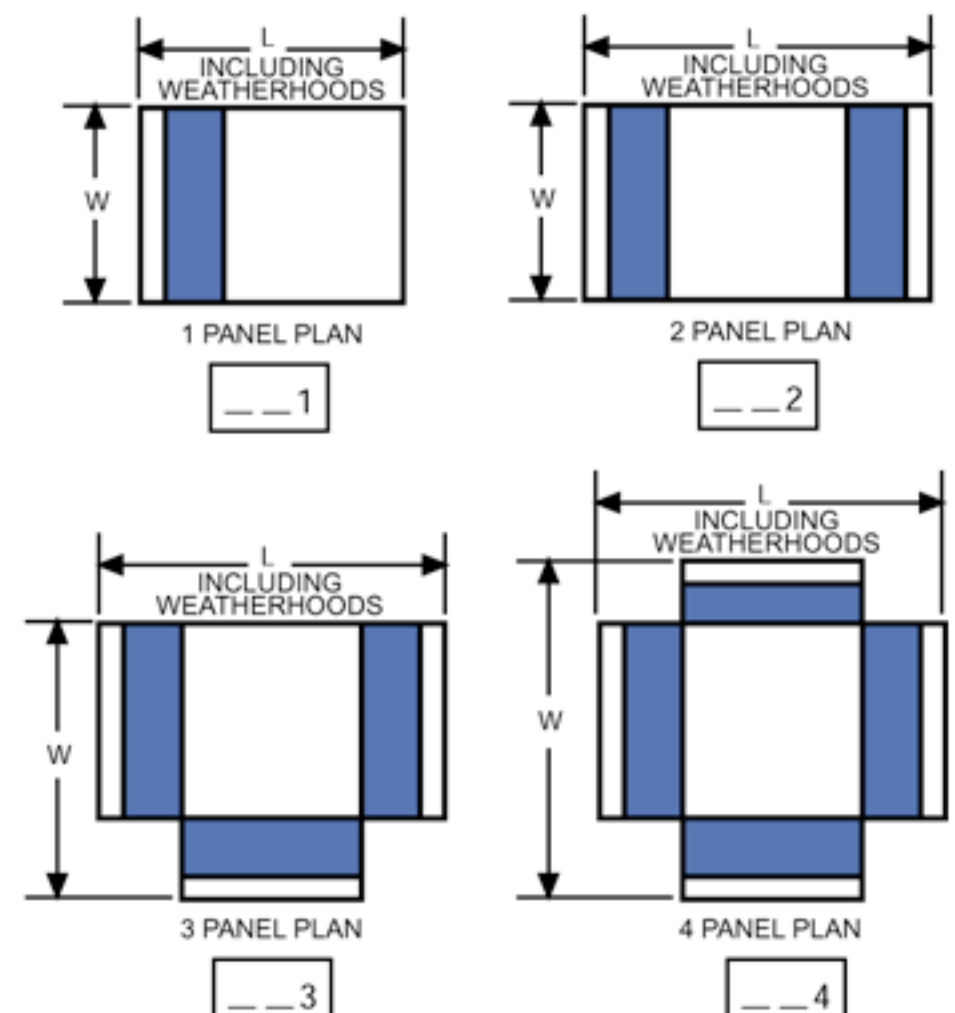
Ex: Model AI-138-0900-200 is Style 223

- 2 Panels Wide
- 2 Panels High
- 3 Panel Plan



PANEL PLANS

Plan View of Model AI-138-V
PANEL



Model AI-138 Two-Stage Filter/Silencer Absolute 0.3 micron

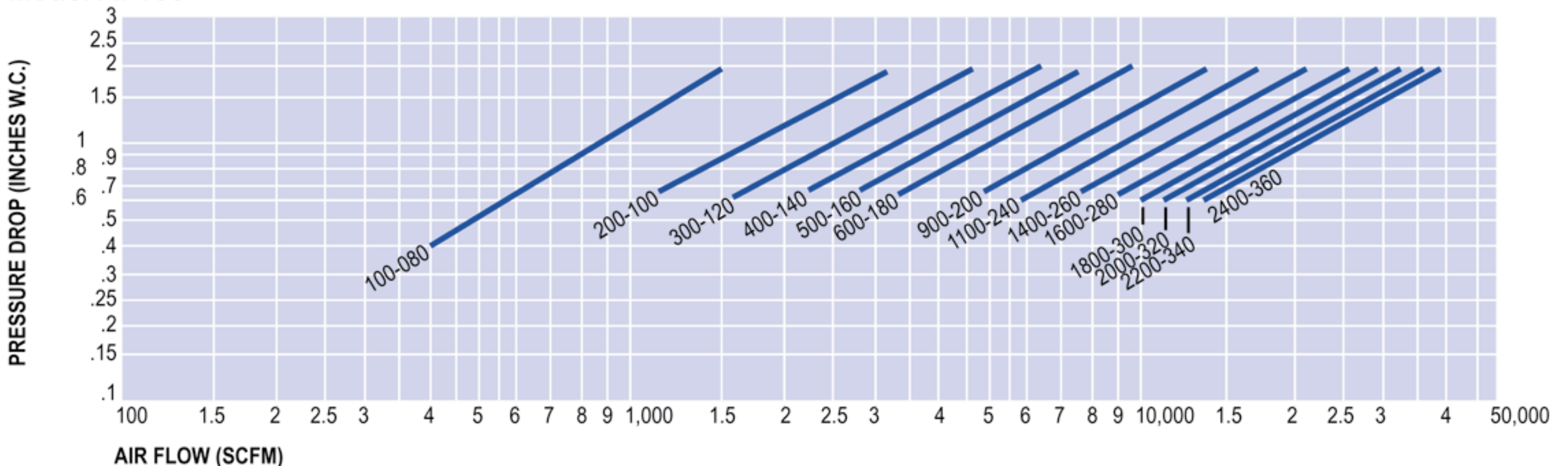
SPECIFICATIONS											
Model Number*	Maximum Capacity SCFM	Width, Height & Panel Plan	Panel Element			Outlet (Inches)		Approx. Dimensions (Inches)			Approx. Weight (lbs.)
			First	Number Req'd	Total Area Sq. Ft.	Std.	Max.	Length	Width	Height	
			Second								
AI-138-0100-080	1250	111	VE-1113-2424-099	1	30	8	12	41	25	30	155
			VE-3305-2424-166		230						
AI-138-0200-100	2500	112	VE-1113-2424-099	2	60	10	20	72	32	25	370
			VE-3305-2424-166		460						
AI-138-0300-120	3750	113	VE-1113-2424-099	3	90	12	20	72	52	25	450
			VE-3305-2424-166		690						
AI-138-0400-140	5000	114	VE-1113-2424-099	4	120	14	20	72	72	25	535
			VE-3305-2424-166		920						
AI-138-0500-160	6250	123	VE-1113-2424-099	5	150	16	20	72	52	49	700
			VE-3395-2424-166		1150						
AI-138-0600-180	7500	123	VE-1113-2424-099	6	180	18	20	72	52	49	775
			VE-3305-2424-166		1380						
AI-138-0700-200	8750	124	VE-1113-2424-099	7	210	20	20	72	72	49	870
			VE-3305-2424-166		1610						
AI-138-0800-200	10000	124	VE-1113-2424-099	8	240	20	20	72	72	49	950
			VE-3305-2424-166		1840						
AI-138-0900-200	11250	133	VE-1113-2424-099	9	270	20	20	72	52	73	1120
			VE-3305-2424-166		2070						
AI-138-1000-240	12500	223	VE-1113-2424-099	10	300	24	36	104	84	56	1580
			VE-3305-2424-166		2300						
AI-138-1100-240	13750	223	VE-1113-2424-099	11	330	24	36	104	84	56	1675
			VE-3305-2424-166		2530						
AI-138-1200-260	15000	223	VE-1113-2424-099	12	360	26	36	104	84	56	1770
			VE-3305-2424-166		2760						
AI-138-1400-260	17500	224	VE-1113-2424-099	14	420	26	36	104	104	56	1950
			VE-3305-2424-166		3220						
AI-138-1600-280	20000	224	VE-1113-2424-099	16	480	28	36	104	104	56	2110
			VE-3305-2424-166		3680						
AI-138-1800-300	22500	233	VE-1113-2424-099	18	540	30	36	104	84	80	2470
			VE-3305-2424-166		4140						
AI-138-2000-320	25000	234	VE-1113-2424-099	20	600	32	36	104	104	80	2680
			VE-3305-2424-166		4600						
AI-138-2200-340	27500	234	VE-1113-2424-099	22	660	34	36	104	104	80	2810
			VE-3305-2424-166		5060						
AI-138-2400-360	30000	234	VE-1113-2424-099	24	720	36	36	104	104	80	2990
			VE-3305-2424-166		5520						

*Specify required outlet size in model no. if other than standard. Example AI-138-0200-100 (10" outlet).

FLOW RATE (SCFM) VS PRESSURE DROP (INCHES W.C.)

Values based on actual tests performed at Dollinger R & D Laboratory. For sizing assistance contact your local representative or our Technical Sales Department. Pressure drop is based on loss through the panel element only. For drop through the housing, consult your local representative or Dollinger Corporation. Numbers on the flow rate line indicate AI-138 model number. Example: 100-080 is model number AI-138-0100-080.

Model AI-138



FIRST STAGE AI-138

PANEL ELEMENT NO. VE-1113-2424-099	
Air Flow (SCFM/Panel)	Initial Resistance (Inches W.C.)
1250	0.50
1000	0.40
750	0.27

Wt. = 16 lbs.



ELEMENT DESIGN SPECIFICATIONS:

1. Element to be panel type, 24" x 24" x 2" nominal.
2. Each panel to have a nominal rated capacity of 1250 SCFM of air.
3. Each panel incorporates 30 sq. ft. of filter area utilizing synthetic medium.
4. Efficiency to be 98% of 4 microns.*
5. Degradation pressure of 15" W.C. pressure differential (pressure at which filter efficiency begins to decrease).*
6. Panel to be cleanable by using compressed air or washing with a mild detergent solution.
7. Wire screen to be installed on upstream and downstream face of filter medium.
8. Pull strap across face of panel for easy removal and maintenance.

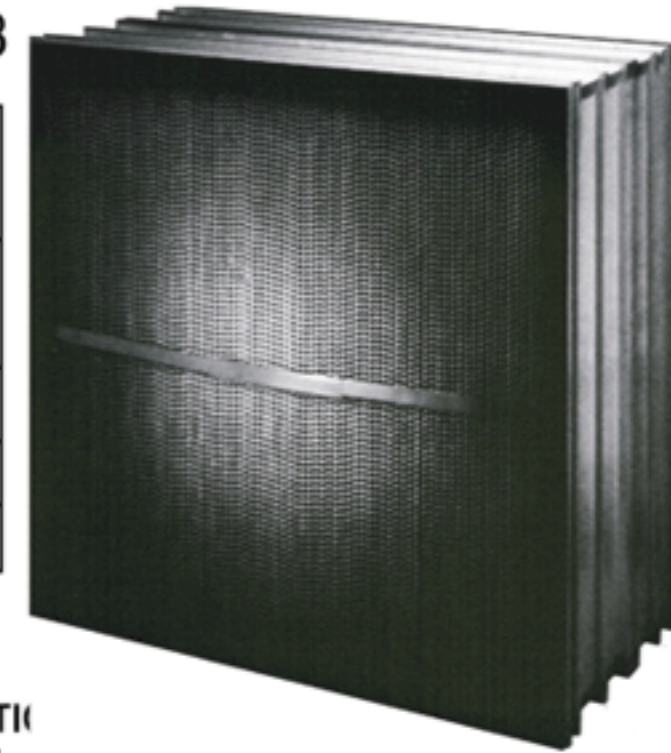
ELEMENT MATERIAL SPECIFICATIONS:

1. Panel frame to be electrogalvanized steel.
2. Filter medium to be synthetic fiber contained between upstream and downstream layer of galvanized wire screen.
3. Galvanized expanded metal safety screen to be used on downstream side of panel element.

SECOND STAGE AI-138

PANEL ELEMENT NO. VE-3305-2424-166	
Air Flow (SCFM/Panel)	Initial Resistance (Inches W.C.)
1250	1.00
1000	0.80
750	0.60

Wt. = 38 lbs.



ELEMENT DESIGN SPECIFICATIONS:

1. Element to be panel type, 24" x 24" x 1 1/2" nominal.
2. Each panel to have a nominal rated capacity of 1250 SCFM of air.
3. Each panel incorporates 230 sq. ft. of filter area utilizing Microglass medium.
4. Efficiency to be 99.97% of 0.3 microns.*
5. Degradation pressure of 30" W.C. pressure differential (pressure at which filter efficiency begins to decrease).*
6. Element to be disposable and replaceable with a new panel element.
7. Corrugated aluminum spacers to be used between each pleat.
8. Scrim cloth to be installed on upstream and downstream face of filter medium.
9. Sealing gasket to be permanently affixed to frame on two faces.
10. Pull strap across face of panel for easy removal.
11. Filter media pack to be encapsulated top and bottom with exclusive adhesive.

ELEMENT MATERIAL SPECIFICATIONS:

1. Panel frame to be patented extruded aluminum design (U.S. Patent 4,333,579).
2. Corrugated spacers to be aluminum.
3. Filter medium to be high efficiency glass fiber.

*Tests were conducted in accordance with ASHRAE Standard 52-76 in the Dollinger Research and Development Lab Facility.



CAPABILITIES

ADVANCED RESEARCH AND DEVELOPMENT

For almost a century, Dollinger Corporation has been an industry leader in solving filtration problems through extensive research and development. Our superior quality products are the results of this experience and innovation.

Dollinger maintains a technologically advanced, fully staffed R&D Laboratory. Here we test for pressure drop, chemical compatibility, temperature and abrasion resistance, degree of filtration, ASHRAE standards, contaminant level and other properties.

Our R&D enables us to analyze the performance of our filter system components under every conceivable condition-both in the lab and in the field. We invite you to submit samples for such testing and welcome you to witness the tests.

ENGINEERING EXPERTISE

In addition to the standard Dollinger product lines, our engineers can design custom filtration systems for virtually any air intake and compressed air and gas application. This engineering "know how" is supported by up-to-date computerized information access and an independent CAD system.

QUALITY MANUFACTURING

Modern manufacturing facilities and methods, specially designed fabrication equipment, and skilled employees sustain the Dollinger reputation for unequalled product quality.



EXTENSIVE CUSTOMER SERVICE

Our extensive domestic and international sales representative organization assures you of prompt customer service worldwide.

This organization is backed by Dollinger Engineering Specialists who are trained, experienced and prepared to discuss and satisfy all your filtration needs.

DOLLINGER MANUFACTURES A WIDE RANGE OF FILTRATION SYSTEMS AND EQUIPMENT

Single- and Multi-Stage Air Intake Filters
Compressed Air and Gas Pipeline Filters
Coalescing Filters
Vacuum/Exhaust Filters
Staynew@Spin Filters
Liquid Filters
OME-1000 Oil Mist Eliminators
Special Application & Custom Designed Filters.

Dollinger Corporation has representatives in major cities in the United States and Canada, as well as in many countries around the world.

For more information, call your local Dollinger sales representative listed in the Yellow Pages directory, or Dollinger's Technical Sales Office toll free at 1-800-344-2611.