

Auto-MAX® Inlets

Tired of adjusting inlets? Automatic Auto-MAX[®] Needs No Adjusting

Auto-MAX inlets totally eliminate seasonal readjustment of weights or springs. Factory calibration keeps incoming air speed nearly constant in the desired 800-1000 FPM range. This insures maximum ventilation efficiency and draft-free mixing of



incoming air.

Every Auto-MAX inlet becomes part of a balanced ventilation system. Auto-MAX inlets automatically stay balanced all year long. Every inlet admits the same volume of air for uniform

Auto-MAX Ceiling Inlet

air distribution — no frustrating trial-and-error balancing by "tweaking" counterweights or springs!

Reliable Capacity at All Static Pressures – Even on Windy Days

Auto-MAX inlets always deliver their rated CFM capacity year-around both on still and windy days. Wind pressure effects on Auto-MAX are almost immeasurable because of the unique Auto-MAX design. University tests, using certified air testing methods*, show that other leading air inlets rarely approach their

rated capacity, even in still-air conditions and with continuous manual adjustment.

With wind pressure or low winter-time static pressure, only Auto-MAX continues to perform totally automatically, according to its rating.



Auto-MAX Hallway Inlet

Real Full-Range Performance — Not Just A Rating

In university tests*, the Auto-MAX inlet substantially outperformed all other inlets that were claimed to move comparable air volumes. Test data proves that the Auto-MAX inlet is the only inlet that automatically provides air velocities of 800-1000 FPM at all static pressures down to wintertime lows of .05 in. wg. This means that Auto-MAX inlets always provide exactly the right air volume and velocity throughout the year. Other inlets require seasonal and daily manual adjustment for minimum performance. Comparisons for Auto-MAX inlets and leading competitors' inlets are shown in the graphs following.

Auto-MAX Ceiling Inlet

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| | Catalog No. | FV-CI1500 | |
|---|--------------------------------|--|--|
| | Dimensions (L x H) | 22.25 in. (565 mm) x 15 in. (381 mm) | |
| 4 | Rough-In Dimensions (L x W) | 20.25 in. (514 mm) x 20.25 in. (514 mm) | |
| | Maximum Airflow | 1127 CFM | |

Auto-MAX Wall Inlet

| | Catalog No. | FV-WI1500 |
|---|--------------------------------|---|
| 4 | Dimensions (L x W x H) | 26.75 x 22.5 x 12.75 in. (68 x 57 x 32 cm) |
| | Rough-In Dimensions (W x H) | 22.5 in. (572 mm) x 12.75 in. (324 mm) |
| | Maximum Airflow | 647 CFM |

Auto-MAX Hallway Inlets

| | Catalog No. | FV-HI1500 |
|--|--------------------------------|--|
| | Dimensions (L x W x H) | 8 x 15.5 x 22.5 in. (20 x 39 x 57 cm) |
| | Rough-In Dimensions (W x H) | 22.5 in. (572 mm) x 15.5 in. (394 mm) |
| | Maximum Airflow | 1257 CFM |



Auto-MAX[®] Ceiling Inlet



Ceiling inlets feature a unique cantilever baffle operator.



- · Fully automatic baffle control operators
- · 360-degree unobstructed radial airflow
- · Precalibrated and ready for installation
- Corrosion-resistant components
- Strong but lightweight housings
- Frost-free structural foam for easy cleaning
- · Rough-in Dimensions:
 - 20 1/4-in. x 20 1/4-in. | 17 1/4-in. diameter
- Ideal for tunnel ventilated buildings in the wintertime

Output of Auto-MAX ceiling inlets is higher in summer and controllable in winter — automatically. The Volume graph shows that operating capacity of competitive inlets is too high in low static-pressure winter and too low (and over-rated) in high static pressure summer, requiring continuous seasonal readjustment. The Velocity graph shows that air velocity of Auto-MAX ceiling inlets is automatically in the range of 800 to 1000 FPM while other inlets are far below 800 FPM over most of their operating range. This means Auto-MAX ceiling inlets automatically distribute a controlled flow of fresh air without drafts in winter and makes smooth, healthy transitions in spring and fall weather changes. New baffle closure clips make the Auto-MAX ceiling inlet perfect for tunnel ventilated buildings, allowing the inlet to remain tightly closed while in the tunnel ventilating mode.

| Auto-MAX Ceiling Inlet Performance | | | |
|------------------------------------|------------------|------------------------|------------------------|
| Static Pressure (in w.g.) | Airflow (CFM) | Exit Velocity (FPM) | Baffle Opening (in) |
| 0.000 | 0 | 0 | 0.000 |
| 0.040 | 121 | 760 | 0.375 |
| 0.060 | 331 | 889 | 0.875 |
| 0.080 | 544 | 1023 | 1.250 |
| 0.100 | 830 | 1115 | 1.750 |
| 0.120 | 1062 | 1175 | 2.125 |
| 0.125 | 1127 | 1177 | 2.250 |
| | | | |





Auto-MAX CI1500 Airflow

Auto-MAX® Wall Inlet

- Fully automatic air delivery system
- Precalibrated and ready for installation
- Unobstructed exit airflow openings
- Corrosion-resistant components
- Durable all-weather RTMGlas[™] fiberglass housings
- Housing design offsets wind pressure and excludes exterior moisture and condensation
- Rough in dimensions: 12 3/4-in. high x 22 1/2-in. wide
- Overall length: 26 3/4-in.

| Auto-MAX Wall Inlet Performance | | | |
|---------------------------------|------------------|------------------------|------------------------|
| Static Pressure (in w.g.) | Airflow (CFM) | Exit Velocity (FPM) | Baffle Opening (in) |
| 0.000 | 0 | 0 | 0.000 |
| 0.040 | 19 | 1017 | 0.125 |
| 0.060 | 156 | 1033 | 1.000 |
| 0.080 | 350 | 1040 | 2.188 |
| 0.100 | 480 | 1092 | 2.875 |
| 0.120 | 607 | 1174 | 3.375 |
| 0.125 | 647 | 1212 | 3.500 |

Auto-MAX WI1500 Airflow/Unit Throat Area







Tests show that the Auto-MAX wall inlet delivers its rated CFM *automatically* while four popular alternatives fail to exceed 60% of their published ratings, even with best manual adjustment. The Volume graph shows the extra Auto-MAX capacity. Auto-MAX is the only inlet that maintains both air velocity and air volume at static pressures typical of real seasonal patterns as shown by the performance graphs. This means good airflow and distribution without drafts in winter and smooth, healthy transitions in spring and fall weather changes.

Testing Procedure

University tests used an air movement test chamber manufactured and calibrated to meet Standard 210-85 published by the Air Movement and Control Association, (AMCA, 1985) and were conducted at the Agricultural Engineering Air Movement Laboratory, Kansas State University, Manhattan, KS, by qualified University personnel.

***Technical References**

- 1. Kaiser, K.; Hosni, M; Heber, A. <u>Performance of Passively Automatic Ventilation Inlets For</u> <u>Agricultural Buildings</u>-ASHRAE Transactions-1995, Vol 101, Part I.
- 2. Kaiser, K., Heber, A., Hosni, M., Eakin, G. <u>Performance of New Ceiling and Wall Ventilation</u> <u>Air Inlets</u>-Applied Engineering in Agriculture-1996, Vol 12(2): 237-242.
- 3. Kaiser, K. Experimental, Analytical, and Numerical Evaluations of Commercial Ceiling and <u>Wall Ventilation Inlets</u>-Kansas State University-Dec. 20, 1993.

Auto-MAX[®] Hallway Inlets

- · Fully automatic air delivery system
- · Precalibrated and ready for installation
- · Unobstructed exit airflow openings
- Corrosion-resistant components
- Strong but lightweight housings
- · Frost-free structural foam for easy cleaning
- · Rough in dimensions:
 - HI1500: 15 1/2-in. high x 22 1/2-in. wide
 - HI2000: 12-in. high x 46-in. wide
- Overall length: 8-in.

Auto-MAX HI1500 Airflow 1600 1400 1200 1400 1000 1200 Exit Velocity Exit Velocity (FPM) 800 1000 Airflow (CFM) 800 600 Airflow 400 600 400 200 0 200 0.06 0.12 0.04 0.08 0.10 0.14 Static Pressure (in w.g.)

| Auto-MAX Hallway Inlet HI1500 Performance | | | |
|---|------------------|------------------------|------------------------|
| Static Pressure (in w.g.) | Airflow (CFM) | Exit Velocity (FPM) | Baffle Opening (in) |
| 0.000 | 0 | 0 | 0.000 |
| 0.040 | 69 | 1046 | 0.438 |
| 0.060 | 499 | 979 | 3.375 |
| 0.080 | 785 | 1094 | 4.750 |
| 0.100 | 1024 | 1193 | 5.688 |
| 0.120 | 1211 | 1248 | 6.281 |
| 0.125 | 1257 | 1268 | 6.563 |



The Auto-MAX hallway inlets have the same features as the Auto-MAX wall inlet and differ only in dimension length for installation in preheated hallways. The Volume graph shows the extra Auto-MAX hallway inlet capacity. Auto-MAX is the only inlet that maintains both air velocity and air volume at static pressures typical of real seasonal patterns as shown by the performance graphs. This means good airflow and distribution without drafts in winter and smooth, healthy transitions in spring and fall weather changes.

| Auto-MAX Hallway Inlet HI2000 Performance | | | |
|---|------------------|------------------------|------------------------|
| Static Pressure (in w.g.) | Airflow (CFM) | Exit Velocity (FPM) | Baffle Opening (in) |
| 0.000 | 0 | 0 | 0.00 |
| 0.040 | 298 | 834 | 1.06 |
| 0.060 | 941 | 920 | 3.13 |
| 0.080 | 1344 | 1014 | 4.13 |
| 0.100 | 1727 | 1129 | 4.75 |
| 0.120 | 1916 | 1170 | 5.13 |
| 0.125 | 1963 | 1180 | 5.25 |

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